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THE FMT VARIABLE WEIGHT PROJECT – PART 1

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CONTENTS

Note:

This is an electronic version of Research Record 244. It was made, during 2005, by scanning the original text into MS Word and re-constructing the figures with MS Excel. In principle, the text has not been altered (though a few errors were found) but, because of the different software for data analysis, the figures may not correspond exactly to the originals In particular, regression equations shown on the figures may not be identical to those in the tables and the text. Also, the results of Appendix 14 are slightly different.

Please note that, in Figures 6 and 10, any negative coefficients of the $(PL/PH)^2$ equations have been plotted as positive numbers.

1. SUMMARY

Measurements have been made on the IIC-Shirley Fineness/Maturity Tester of the pressure drops, PL and PH, at both low and high specimen compression levels using specimen weights between 3.5 and 4.5 grams on a series of twenty different cottons, in two replications.

The relationships between specimen weight and PL or PH could be adequately modelled by simple power-law or exponential equations over the range of specimen weights used.

The exponents of these equations seem to be determined mainly by the maturity of the cotton and could be satisfactorily predicted by the ratio $(PL/PH)^2$.

Therefore a procedure could be erected for calculating PL and PH for a specimen weight of exactly 4.00 g starting from the PL and PH values recorded for some other specimen weight within the range 3.5 to 4.5 g.

Estimates of fineness and maturity using this variable-weight procedure have variation coefficients ranging from 1.4 to 3.6% for FIN and 1.1 to 3.6% for MAT which are similar to those which would be expected from the standard (fixed weight) procedure.

However it must be recognised that this new procedure is an approximation and that it is based on a limited data set. It will be necessary to broaden the range of cottons which have been evaluated, to verify the validity of the procedure itself and to obtain better empirical estimates of the values of the five constants which have to be assumed.

It is also possible that a better procedure can be devised based on a different approach - for example by using the basic airflow equations presented by Lord in 1955, or by the use of alternative forms of regression equations.

It would also be wise to check the sensitivity of the new procedure to the sample preparation technique e.g. Shirley Analyser vs SDL Fibre opener/blender.

2. INTRODUCTION

Some three years ago IIC proposed to SDL that the IIC-Shirley Fineness/Maturity Tester (FMT) should be developed further into an instrument which could be compatible with High Volume Instrument (HVI) testing lines. In order to be compatible with HVI, the time of testing would have to be cut to below 30 sec.

An essential requirement for such a radical improvement in testing time (i.e. by more than one order of magnitude) is the removal of the necessity for weighing each test specimen to exactly 4.00 grams. IIC offered to forego all royalties on the FMT for the remainder of the contract period (up to mid 1988) and to collaborate on the basic research as a contribution to this effort.

As a result of this initiative a research project was drawn up by SDL in January 1985, to investigate the influence of specimen weight on PL and PH and to develop the necessary correction equations and the software which would allow specimen weights in the range 3.8 to 4.2 grams to be tested.

However, during 1985 the priority of the project was downgraded, probably because of fears that the near infra-red reflection (NIR) technique seemed likely to pre-empt the market, a fear which could well be justified in principle but which has so far turned out to be groundless in practice because the progenitors of the NIR method seem to have failed to do sufficient background research of the required depth and quality.

IIC was still anxious to do the variable specimen weight research study so the original SDL project proposal was rewritten according to our own perception of the work needed and it was included in our research programme for 1986. However, for various reasons actual experimental work did not begin until the first quarter of 1987.

At about the same time SDL decided to resurrect the HVI/FMT concept as a matter of urgency with the target of producing a working prototype in time for the ITMA exhibition of October 1987. Therefore, our testing programme was accelerated so that a first approximation for the appropriate weight-correction equations could be ready by August. An intensive testing programme was carried out during April, May, June and July of 1987 with preliminary data analysis occupying most of July. The results were communicated to SDL in August. Further testing and analytical work continued and indeed at the time of writing there is still further analytical work which could be done on the large amount of data which have been collected.

This report summarises the early test results and the preliminary data analysis which evaluated three alternative techniques for deriving weight-correction equations.

Subsequent reports will deal with:

(1) Comparison of the results from the variable weight procedure with those of the standard (fixed weight) procedure and an appraisal of the value (if any) of making two measurements per specimen.

(2) A test of the new equations for their sensitivity to small variations in the value of the empirically determined "constants" which appear in the preliminary analysis.

(3) Comparison of the results with basic airflow theory to see whether an alternative approach can be found.

In addition it will be very desirable to extend the experimental measurements to a wider range of cottons than could be gathered in the time available for this preliminary work, in order to test the robustness of the equations which have been derived and to validate the empirical constants.

3. EXPERIMENTAL

3.1 Materials

Mini-bales of eight different cottons were available in our store room:

Deltapine 16	Acala 1517	Menoufi	Lankart 57
Lambert G6L	Uganda	Coker 201	Tanguis

These bales are all at least ten years old.

In addition we had sufficiently large samples of two of the International Calibration Cotton Standards (ICCS) in our laboratory, namely,

ICCS B19	ICCS D3

Finally a complete new set of ICCS samples was ordered from USDA, being

ICCS K	ICCS B23	ICCS E3	ICCS H2	ICCS C33
ICCS F2	ICCS A16	ICCS I25	ICCS G12	ICCS D3

3.2 Summary procedure

Three series of measurements were made.

a) Variable weight, Replication 1

25 specimens whose weight varied randomly between 3.5 and 4.5 g were tested. For the mini-bale samples, enough cotton was prepared by two passages over the Shirley Analyser so that all 25 specimens could be tested from the same preparation lot. The ICCS cottons were given no preparation. After measurement, each specimen was re-opened by hand, re-inserted and remeasured, making two PL and two PH readings per specimen.

b) Variable weight, Replication 2

Fresh samples of the mini-bale cottons, sufficient for 25 specimens, were prepared by two passages over the Shirley Analyser. 25 specimens with weights between 3.5 and 4.5 g were tested as in series (a) for all 20 cottons.

c) Fixed weight

The 50 specimens remaining for each cotton from series (a) and series (b) tests were combined and mixed by one passage through the Shirley Analyser. Ten replications of the standard fixed-weight test were carried out on each cotton i.e. 2 specimens per sample, each specimen being measured twice making four PL and four PH readings per replication.

3.3 Detailed procedure

March/April 1987

At least 24 hours before weighing, a sample was withdrawn from a mini-bale, sufficient for 25 specimens, and was run twice through the Shirley Analyser. It was left to condition in the testing lab. One cotton was tested in a day. The FMT was allowed to warm up whilst the first 12 or so weighings were being made. These were then measured for PL and PH and the machine was switched off. After approx. 45 min, the FMT was switched on again and left to warm up whilst the balance of the 25 specimens was weighed. These were then measured for PL and PH. The same operator made all the preparations, weighings, and measurements.

After all eight mini-bale samples had been tested, the two ICCS cottons which were in stock, namely B19 and D3 were sampled, weighed and measured in the same way except that there was no preparation given to these cottons (they are supposed to be randomised card-web and should need no further preparation).

May/June 1987

Since the whole exercise was to be repeated and since the new set of ten ICCS cottons had not yet arrived, the second replication was begun on the eight mini-bales. In order to speed up the work, a second technician was brought in who re-sampled each mini-bale and ran all of the samples twice through the Shirley Analyser.

The Tanguis and the Deltapine cotton had been retested, using the same procedure as before, when the new set of ICCS cottons arrived. Therefore, testing was suspended on the mini-bale samples whilst the new set of cottons was measured, each with 25 specimens having weights between 3.5 and 4.5 g as before.

The exception to this procedure was with ICCS G12. With this cotton, a very immature one, it was found that when the specimen weight was greater than about 4.2 g, the PL reading went off-scale and therefore could not be registered.

July 1987

After completing the first replication for the ICCS cottons, their second replication was also carried out. However, in order to speed up the work, a third technician was employed to carry out the weighings whilst the first was making measurements. This allowed two cottons to be measured in a single day. For the second replication of ICCS D3 (old stock) there was only enough material for 18 specimens.

August 1987

All of the twenty cottons were retested using the standard fixed weight procedure. For this purpose, for each cotton the 50 specimens remaining from the two series of variable weight measurements were mixed together and all of the resulting samples, including the ICCS cottons, were passed once through the Shirley Analyser before returning to the conditioned lab.

For this series of tests two technicians were working: one weighing and one measuring. Each morning a full set of the 20 cottons could be measured. The machine was then shut down and restarted in the afternoon when another full set of 20 cottons would be measured. This procedure was repeated up to a total of ten replications. For each measurement, two specimens were taken and weighed to within 0.0001 g of four grams. Each specimen was measured twice, as with the normal procedure, making four PL and four PH readings per replication.

4. RESULTS

The raw data are tabulated in Appendix 1 (Replication 1), Appendix 2 (Replication 2) and Appendix 3 (Fixed weight series). In addition to the mean PL and PH values for each specimen (App. 1 & 2) or pair of specimens (App. 3) the value of $(PL/PH)^2$ has been calculated and tabulated for reasons which will become clear in the analytical section.

At this stage, no attempt has been made to separately tabulate the results from the two individual measurements per specimen.

This aspect of the data will be examined in a separate report.

In Appendix 3, in addition to tabulating PL, PH, and $(PL/PH)^2$, the standard FMT equations have been applied to calculate Micronaire, Maturity Ratio, and Fineness. In addition, the standard Fineness (Hs) has been calculated as the quotient FIN/MAT and, furthermore, our standard check-test has been applied in which the product MAT.FIN is compared with the result of the function

$$F(x) = 2.07\ Mic^2 + 32.09\ Mic - 12.68$$

Finally the mean, standard deviation, and coefficient of variation have been calculated for each parameter over all ten replications.

Figure 1 gives a graphical representation of the variation in PL with specimen weight for Replication 1.

Figure 2 shows the corresponding graphs for PH and Figure 3 gives those for $(PL/PH)^2$.

It is clear from these plots that the data are very well behaved and that there are pretty strict simple curvilinear relationships between the specimen weight and PL, PH, or $(PL/PH)^2$, although the scatter is significantly greater for the last of these - as could be expected.

Appendix 4 gives the results of simple regression analysis on the data from Replication 1.

The corresponding results for Replication 2 are in Appendix 5.

Correlation coefficients are high for all of the regression models except $y = a.x$. However, on the average, the models with the best correlation, the lowest maximum absolute residuals, and the lowest residual errors are:

for PL and PH	$Y = a \cdot X^b$	[1]
	$Y = a \cdot e^{(b.X)}$	[2]
for $(PL/PH)^2$	$Y = a \cdot e^{(b.X)}$	[3]
	$Y = a + b/X$	[4]

The parameters for these equations are given in Tables 1 to 3.

Inspection of these tables plus a few simple statistical tests yields the following interesting observations.

In the case of PL and PH

1. There is a very high correlation between the coefficients (a) of the equations [1] or [2] for the Replication 1 series against those for the Replication 2 series (Figure 4). In all cases the R^2 value for this correlation, Rep. 1 vs. Rep 2, is greater than 0.94. (Table 4). Furthermore the slope of the correlation line is always between 0.95 and 0.97.
2. On the other hand, the correlation between the exponents (b) of these same equations is rather lower with R^2 values between 0.67 and 0.87. Furthermore the slope of the correlation line is only 0.76 to 0.87 (Table 4, Figure 5).
3. The correlation between the coefficients and the exponents for these two equations is mostly poor to mediocre, with values ranging from only 0.45 to 0.81 (Table 4).
4. The coefficient of variation between cottons for the coefficients (a) is about 30% for both equations [1] and [2] for both PL and PH whereas the variation in the exponents (b) is only 3 to 5% (Table 5).
5. Taken together, these four observations suggest that the regression equations for PL and PH for different cottons are determined mainly by the coefficients; the exponent tends to have about the same value regardless of cotton type.

In the case of $(PL/PH)^2$

1. There is no correlation at all between the Rep. 1 and Rep. 2 series for the coefficients of equations [3] and [4]. The R^2 values are 0.13 and 0.03 (Table 6).
2. There is a mediocre correlation between the exponents of the equations, with R^2 values of 0.66 and 0.53 (Table 6, Figure 6).
3. There is no correlation between the equation parameters themselves; R^2 ranges from zero to 0.09.
4. The range of variation in the parameters is similar for both equations and both replications (Table 7).
5. Taken together, these observations suggest that there is not much in the way of predictability about the $(PL/PH)^2$ equations. It seems that the coefficients may take any value, almost at random, within plus or minus about 10% of their mean. The exponents are not quite so free to "wander" since there is at least a degree of association between the values found for Rep. 1 with those found for Rep. 2. One is entitled to question whether the simple regression models are adequate for describing

$(PL/PH)^2$ and this point should be taken up in a later study.

5. ANALYSIS

The objective of the analytical section is to arrive at a technique for estimating PL and PH for a 4.000 gram specimen weight, starting with the measured PL and PH at some other specimen weight, using the equations derived in the previous section.

There was only a limited amount of time available for this exercise and so it was not possible to start with (for example) a deeper study of the data to try to find better regression models.

Throughout the rest of this report, the following definitions apply:

PLi, PHi	Experimental PL and PH readings for a specimen weight of Xi grams
PL4, PH4	PL and PH values, calculated from regression equations or other procedures, for a specimen weight of 4.00 grams.
Zi	$(PLi/PHi)^2$
Z4	$(PL/PH)^2$ values, calculated from regression equations or other procedures, for a specimen weight of 4.00 grams.
aPL, aPH	coefficients of equations [1] or [2]
bPL, bPH	exponents of equations [1] or [2]
aZ	coefficients of equations [3] or [4]
bZ	exponents of equations [3] or [4]

Note that the terms "coefficient" and "exponent" are used somewhat loosely in the case of equation [4].

Three basic techniques were evaluated. They were given the shorthand names QUICKFIX, BIASFIX and SIMTEQ, for reasons which will become apparent.

QUICKFIX

This technique was based on the observation that the PL and PH equations for a given cotton seemed to be more heavily dependent on the coefficient (a) of the regression equation rather than the exponent (b) which had a CV of only 3 to 5%.

Equation [1] was selected, namely

$$Y = a \cdot X^b$$

and the mean of all the exponents for the 20 cottons was calculated for the Replication 1 series. This mean is 2.0674 for bPL and 2.8338 for bPH.

Thus our equations become:-

$$PL = a \cdot X^{2.07} \qquad [5]$$

$$PH = a \cdot X^{2.83} \qquad [6]$$

From these expressions, coefficients can be calculated, for each of the experimental measurements, using the transformations,

$$aPL = 10\wedge [\ \log_{10}(PLi) - 2.07.\ \log_{10}(Xi)\ ] \quad [7]$$

$$aPH = 10\wedge [\ \log_{10}(PHi) - 2.83.\ \log_{10}(Xi)\ ] \quad [8]$$

When both the coefficients and the exponents are known, it is a simple matter to apply equation [5] and equation [6] to find PL and PH for a specimen weight of 4.000 grams.

Appendix 6 shows the results of applying the QUICKFIX technique to the Replication 1 series. In addition to PL4 and PH4, calculations of Micronaire, Maturity Ratio, and Fineness have been made. Furthermore, the mean, standard deviation, and CV% have been calculated over the 25 experimental values and, in addition, the mean difference from the target value and the number of estimates out of tolerance are indicated.

The target values for PL4 and PH4 (and hence for Mic, MAT, and FIN) are those given by applying the unmodified Rep. 1 regression equations to a weight of 4.000 grams. The tolerances were set, arbitrarily, at ± 2.5% for PL and PH, ± 0.07 units for Micronaire, and ± 3.5% for MAT and FIN.

The only assumptions that QUICKFIX makes are that the regression model is a valid one and that the exponent can be set to a constant (2.07 or 2.83) regardless of the cotton.

Appendix 7 shows the results of applying the QUICKFIX technique to the Replication 2 series. The mean exponents for equation [1] are still those calculated from the Rep. 1 series but the targets are those calculated from the individual Rep.2 regression equations.

In both Appendix 6 and Appendix 7 it can be seen that the mean differences from target values are always very close to zero. This is to be expected as it is in the nature of the method and the data set. What is more important is whether there is any bias in the calculations i.e. whether the error gets systematically greater as the specimen weight gets further from 4.000 grams. This is indicated to some extent by the coefficients of variation of the calculated parameters and by the number of estimates which fall outside the tolerances. This information is summarised in Tables 8 and 9 and is illustrated graphically in Appendix 8.

For the most part, the coefficients of variation are very good. It is important to note that the assumed QUICKFIX exponents are based only on the Rep. 1 series and yet the variation in the predicted PL and PH values is just as good for Rep. 2.

Inspection of the graphs in Appendix 8 confirms that the predictions are almost always within the ± 2.5% tolerance bands but there are two worrying aspects.

- There are often odd data points which fall significantly outside the tolerance bands due, apparently, to random scatter. The most obvious example is in the Menoufi cotton, Rep. 2, but there are plenty of less obvious examples.
- With certain cottons there is clear evidence of systematic bias in the results, which is apparent in both the Rep. 1 and the Rep. 2 series so can not be arising by chance. The most obvious example is the ICCS G12 cotton (which is very immature) but see also the Lankart, the ICCS K, the ICCS E3, the ICCS H2 and the ICCS F2.

The inference to be drawn by the first of these observations is that it may be unacceptable to test only two specimens. At least it will probably be necessary to compare the results of two specimens and make a decision as to whether a third specimen should be tested.

The inference of the second observation is that the basic assumption of QUICKFIX, namely that the value of the exponent can be set at a single average value, is in error. Whether the error is great enough to reject the technique is a matter of judgement - after all in most cases the estimated PL and PH values are still within the ± 2.5% tolerance bands. In any case one would probably have to limit the range of specimen weights to less than that used here - perhaps to within ± 0.3 or ± 0.2 grams of the nominal 4.000 gram standard.

Since the results for Replication 2 were as good as those for Replication 1, the estimates for the average exponents should presumably be adjusted to take account of both test series.

These recalculated values are:-

bPL = 2.077 bPH = 2.833

BIASFIX

This technique was prompted by the observation of systematic bias in some of the results from QUICKFIX - especially in those cottons which were either very mature or very immature - together with the fact that there is some correlation between the exponents of the PL and PH equations for Rep. 1 with those of Rep. 2.

Taken together these two facts suggest that there may be some systematic variation in the exponents with maturity. The practical problem is to discover exactly how to bias the exponents when the only information available is the PL and PH values for a certain specimen weight.

Figure 7 shows the variation in the exponents of equation [1] for the different cottons with the maturity of the cotton. The MAT data in these graphs are taken from the results of the fixed-weight series and, therefore, are the same for both replications. It is quite clear that there is a pretty strong association between the exponent and the maturity, though the amount of scatter suggests some other factor is at work - maybe the standard fineness.

From the basic FMT equation for maturity, namely

$$MAT = 0.247.PL^{0.125} \ . \ (PL/PH)^2$$

it would seem that $(PL/PH)^2$ should be a reasonable surrogate for the maturity and Figure 8 shows that this is indeed the case. In this graph the scatter around the average line can almost certainly be attributed to the effect of standard fineness and Figure 8 is a neat illustration of the reason why E. Lord was obliged to introduce the extra term into his equation.

Figure 9 shows the variation in the exponents of equation [1] with the value of $(PL/PH)^2$ for a specimen weight of 4.000 grams. This value was calculated separately for the Rep. 1 and Rep. 2 series using equation [4] with the appropriate parameters for each cotton. The relationship seems linear and the parameters of the least-squares simple linear regression are given in Table 10. The values of slope and intercept are very similar for the two replications and, since the correlation coefficients are not as good as one would hope for, it was decided to combine the two data sets to arrive at the average equations which turned out to be the following:

$$bPL = 2.4856 - 0.2329 \ . \ Z4 \qquad [9]$$

$$bPH = 3.5609 - 0.4152 \ . \ Z4 \qquad [10]$$

It remained to devise a method for finding an estimate of Z4, i.e. $(PL/PH)^2$ at a specimen weight of 4.000 grams, and the method had to be analogous to the QUICKFIX routine, i.e. one of the parameters of the regression equations [3] or [4] had to be assumed constant over all cottons.

In section 4 it was found that there was no correlation at all between the Rep. 1 and the Rep. 2 series for the coefficients of equation [3] or equation [4] and, furthermore, there was no correlation at all between the exponents and the coefficients.

In addition, Figure 10 and Table 11 demonstrate that there is no correlation between the coefficients (a) and the maturity (or any other property) of the cottons whereas there is a strong association between the exponents (b) and maturity (but no other property). In addition, there is some association between the exponents for Rep. 1 and those for Rep. 2 (Table 6).

Obviously, then, in devising a QUICKFIX type routine for $(PL/PH)^2$ it is the coefficient which must be fixed at the average value and the exponent which must be estimated from the test data. The following average values were found for the coefficients (Table 3).

Equation	Rep 1	Rep 2	Mean
[3]	8.159	7.664	7.9115
[4]	-0.914	-0.824	-0.869

The transformations for finding the exponents are,

$$bZ = 1/Xi \,.\, [\, \log_n (Zi) - \log_n (aZ) \,] \qquad [11]$$

$$bZ = Xi \,.\, (Zi - aZ) \qquad [12]$$

The results of the QUICKFIX operation on the $(PL/PH)^2$ data are given in Appendix 9 for both the Replication 1 series and for Replication 2. In both cases, the assumed value of the coefficients was the mean taken over both replications. The reason for this was that a preliminary run, using the mean of only the Rep. 1 series, had shown no significant differences in the accuracy of the predictions for the two series. Therefore it was assumed that the technique was relatively insensitive to the values of aZ, at least in the range aZ = 7.6 to 8.2 for equation [3] and -0.82 to -0.92 for equation [4].

Presumably the grand means of the two series are the best estimates for aZ that we can derive from this data set.

Both equations were evaluated. The targets for each cotton, within a replication, were calculated from the unmodified equations of Table 3. It was felt that the tolerances should be increased over the ± 2.5% selected for PL and PH in order to allow for the fact that we are dealing with the square of the ratio of our two experimental parameters so that greater variation is to be expected. However, since PL and PH are themselves very highly correlated it should not be necessary to increase the tolerance to its square, or even by 2-fold. A value of ± 3.5% was chosen for the tolerances on a purely intuitive basis. The results are given graphically in Appendix 10 where we can see that there is indeed more scatter for $(PL/PH)^2$ estimated for a 4.000 g specimen than was found for PL or PH in Appendix 8. Nevertheless it is gratifying to find that there is little or no evidence of systematic bias in these predictions. Thus the choice of a constant coefficient seems reasonable.

Having obtained a method for estimating $(PL/PH)^2$ at a specimen weight of 4.000 g, all the elements were in place for the BIASFIX operation which can be summarised as follows.

1. Assume a value of aZ = -0.869 in equation [4]

   thus $Zi = bZ / Xi - 0.869$

2. Using the measured values of PLi and PHi for specimen weight Xi, find the exponent using equation [12]

   thus $bZ = Xi . [Zi + 0.869]$

3. Estimate $(PL/PH)^2$ for a specimen weight of 4.000 g using equation [4]. Let this be Z4

   thus $Z4 = bZ / 4 - 0.869$

4. Substitute this value into equations [9] and [10] to find the exponents of the PL and PH equations

   thus $bPL = 2.485 - 0.233 . Z4$

   and $bPH = 3.561 - 0.415 . Z4$

5. Using the measured values of PLi and PHi for specimen weight Xi, find the coefficients of equations [1] using equations [7] and [8].

   thus $aPL = 10\^{} [\log_{10} (PLi) - bPL . \log_{10} (Xi)]$

   and $aPH = 10\^{} [\log_{10} (PHi) - bPH . \log_{10} (Xi)]$

6. Estimate PL and PH for a specimen weight of 4.000 g using equation [1]

   thus $PL4 = aPL . 4\^{}bPL$

   and $PH4 = aPH . 4\^{}bPH$

BIASFIX makes more assumptions than QUICKFIX. Firstly it assumes that its FIVE regression models are valid (QUICKFIX has only two models). Secondly, it assumes values for FIVE parameters (QUICKFIX has only two).

Therefore one might expect BIASFIX to give more variable results than QUICKFIX for those cottons where there were no systematic errors in the PL, PH predictions (i.e. cottons of average maturity). For cottons of very low or very high maturity BIASFIX would be expected to perform better provided that

a) it successfully removes the systematic error.

b) any extra variation introduced is less than that removed as a result of (a).

Appendix 11 shows the results of a BIASFIX run on the Replication 1 series, and Appendix 12 gives the results for Replication 2. They are summarised graphically in Appendix 13 and the basic statistics are given in Tables 12 and 13. The same targets and tolerances were used as for the QUICKFIX series for PL and PH (Appendix 6 and 7).

Comparison of these results with those from the QUICKFIX series leads to the following conclusions:

- Practically all trace of systematic bias seems to have been eliminated.
- For those cottons which showed clear systematic bias with the QUICKFIX routine, BIASFIX consistently gives a lower variation with fewer specimens out of tolerance.
- For those cottons which did not show obvious systematic bias, the variation is about the same.
- Notwithstanding the overall improvement brought about by BIASFIX, there are still occasional specimens whose estimated PL and PH values fall out of tolerance due to random scatter. Some cottons (Menoufi, Uganda, ICCS K, ICCS E3) are consistently

worse than others in this regard.

SIMTEQ

The SIMTEQ procedure is based on the idea that, when two specimens are tested with different weights, then the PL and PH equations [1] and [2] can be treated as two sets of simultaneous equations which can be solved in the usual way.

Thus, for equation [1]

$$PL1 = a.X1^b$$

$$PL2 = a.X2^b$$

and

$$\log_{10} PL1 = \log_{10} a + b. \log_{10} X1$$

$$\log_{10} PL2 = \log_{10} a + b. \log_{10} X2$$

therefore

$$b = (\log_{10} PL1 – \log_{10} PL2) / (\log_{10} X1 - \log_{10} X2) \qquad [13]$$

where PL1 is the PL reading for specimen weight X1

PL2 is the PL reading for specimen weight X2

Alternatively

$$PL1 / PL2 = (a.b^{X1}) / (a.b^{X2}) = b^{(X1 - X2)}$$

thus

$$b = (PL1 / PL2)^{1/(X1 - X2)} \qquad [14]$$

and similarly for PH1, X1 and PH2, X2.

Having found bPL and bPH in this way, aPL and aPH can be found by substituting back into equations [7] and [8].

SIMTEQ makes only one assumption, that the regression models are valid but it has the disadvantage that the results from two specimens are consumed in a single estimation of PL4 and PH4.

Appendix 14 shows the results from a SIMTEQ run using equations [13] (method 1) and equations [14] (method 2) on the Rep. 1 series, taking two specimens at a time. Targets and tolerances were the same as for QUICKFIX and BIASFIX. Coefficients of variation and number of results out of tolerance are given in Tables 14 and 15.

Inspection of these results shows that SIMTEQ is inferior by far to both QUICKFIX and BIASFIX. There appear to be two main reasons for this.

1. The intrinsic random variation between specimens which was found in both QUICKFIX and BIASFIX. In the case of SIMTEQ, its effect seems to be exaggerated.
2. Cases where, by chance, the two specimen weights - and hence the two PL, PH values - are very close to each other. In such cases we are dealing with the ratios of very small differences so that small variations in the test data can have a very large influence on the preliminary estimates for bPL and bPH using equations [13] and [14]. In the extreme case, when the specimen weights are almost identical and the PL values are identical, the result is an estimate of zero for bPL. This effect caused a few

drastically bad estimates for PL4 and PH4 in almost every cotton, although the impression is that, whenever the specimen weights were well separated (more than 0.1 g), then reasonably good estimates were obtained.

In an attempt to improve the variation with SIMTEQ, a new series was run in which the procedure was applied to triplets of specimens rather than pairs. With a triplet, one may make calculations for three separate pairs and thus it should be possible to obtain better estimates for bPL and bPH. In fact it turned out that the results were no better because all that happened was that the probability of including a defective pair into the estimate was increased.

Thus there seemed no point in proceeding with SIMTEQ because:

- the basic underlying variation seemed to be higher than QUICKFIX, and
- in order to eliminate the problem of occasional wild results, it would be necessary to prevent the presentation of specimens whose weights were too close and also to devise a fairly sophisticated piece of checking software. Although this would not be too difficult, there seemed to be no real incentive to make the attempt in view of the relatively good performance of QUICKFIX and BIASFIX.

6 CONCLUSIONS

1. The experimental data for PL and PH with different specimen weights between 3.5 and 4.5 g are very well behaved. They can be modelled by simple power-law or exponential equations with correlation coefficients in the range R = 0.995 to R = 0.999.
2. The simple model equations for PL and PH against weight have two parameters; a coefficient (a) and an exponent (b)

   thus, for example PLi = aPL . Xi^ bPL

   and PHi = aPH . Xi^ bPH

   where PLi is the PL value recorded for specimen weight Xi

   PHi is the PH value recorded for specimen weight Xi.
3. There was a very high correlation between the coefficients (aPL or aPH) of the Replication 1 series with those of the Replication 2 series, whereas the correlations between the corresponding exponents (bPL or bPH) were much lower.
4. Over the range of cottons used, the range of values in the coefficients was wide (about 30% CV) whereas that for the exponents was narrow (about 3-5% CV).
5. Therefore, for a given cotton, the characteristic equations for PL and PH are primarily determined by the coefficients, with the exponents tending to take more-or-less constant values regardless of cotton type. Thus the exponents of these equations can be approximated by averaging over cottons. For the simple power-law equations given above, these averages (over both replications) were:

   bPL = 2.077 bPH = 2.833
6. By assuming such average values for the exponents it is a simple matter to deduce the value of the corresponding coefficients, using the measured values of PLi and PHi, and hence to calculate the values of PL and PH which would have been found for a specimen weight of 4.000 grams. This is the basis for the QUICKFIX estimation procedure.

7. The QUICKFIX procedure returns estimates of PL4 and PH4 which are mostly within ± 2.5% of the true values. For a single cotton the coefficients of variation between specimens in PL4 and PH4 are within the range 0.8 to 3.5%, with an average CV over all cottons of 1.25 for PL and 1.63 for PH. The variation within a cotton is mainly random in nature, but there is also a systematic component which depends on the average maturity. For very mature or very immature cottons, the results of QUICKFIX are slightly biased i.e. the error increases systematically as specimen weight deviates further and further from the standard 4.000 grams.

8. The source of the bias in QUICKFIX is the assumption of a constant exponent, independent of the cotton, in the characteristic equations for PL and PH. In fact these exponents are not constant over cottons, but vary according to the maturity (and maybe also according to some other, unidentified fibre property, or properties, and maybe the sample preparation).

9. The BIASFIX procedure attempts to make allowance for the variation in the exponents of the characteristic PL, PH equations for individual cottons by using the quantity $(PL/PH)^2$ as a surrogate for the maturity.

10. BIASFIX returns estimates of PL4 and PH4 which are as good as, or better than those provided by QUICKFIX, with the advantage that essentially all trace of systematic bias seems to be eliminated. For a single cotton, the coefficients of variation between specimens in PL4 and PH4 are within the range 0.7 to 3.6% with an average CV over all cottons of 1.16% for PL and 1.46% for PH.

11. The SIMTEQ procedure, which uses the data from two test specimens to solve the characteristic PL, PH equations by the method of simultaneous equations, was found to be unreliable and was not developed beyond a preliminary stage.

Thus, this preliminary analysis has delivered two possible techniques for implementing a variable specimen weight procedure on the FMT.

The advantage of QUICKFIX is that it is simple and makes relatively few assumptions. Its drawback is that it is liable to systematic errors, especially with very immature cottons. These systematic errors can be contained by limiting the specimen weight to within about ± 0.2 grams of the nominal 4.000 g.

The advantage of BIASFIX is that it apparently eliminates the source of systematic error so that, in principle, a wider range of specimen weights can be accepted. However, BIASFIX is much more dependent upon assumptions about certain "constants" and may therefore be more susceptible to unforeseen fluctuations in testing conditions (for example the method of sample preparation).

It has to be emphasised that the range of cottons and the range of experimental conditions which have been examined here represent the bare minimum of what is required to achieve a reasonable level of confidence in the procedures which have been developed. It would be wise to pursue the project much further.

Finally it may be noted that, for very immature cottons, the PL reading is likely to be close to the maximum of the pressure scale or even off-scale for specimen weights greater than about 4.2g. Attention should presumably be given to the provision of a wider pressure range for the new machine.

7. APPENDICES

1.	Raw test data	Replication 1
2.	Raw test data	Replication 2
3.	Raw test data	Fixed weight series
4.	Simple regression analysis	Replication 1
5.	Simple regression analysis	Replication 2
6.	QUICKFIX results for PL, PH	Replication 1
7.	QUICKFIX results for PL, PH	Replication 2
8.	QUICKFIX results for PL, PH	Graphs
9.	QUICKFIX results for $(PL/PH)^2$	Replications 1 & 2
10.	QUICKFIX results for $(PL/PH)^2$	Graphs
11.	BIASFIX results	Replication 1
12.	BIASFIX results	Replication 2
13.	BIASFIX results	Graphs
14.	SIMTEQ results	

TABLE 1

FMT VARIABLE WEIGHT PROJECT

Parameters of simple regression equations for PL

	Y = a . X^b				**Y = a . Exp(bX)**			
	Rep 1		**Rep 2**		**Rep 1**		**Rep 2**	
	a	b	a	b	a	b	a	b
Deltapine	10.733	2.084	11.294	2.042	23.711	0.522	24.682	0.511
Acala	9.492	2.11	9.87	2.075	21.6	0.524	22.232	0.515
Menoufi	13.535	2.064	12.713	2.108	29.74	0.517	28.027	0.532
Lankart	11.972	2.185	11.417	2.234	28.144	0.542	26.606	0.561
Lambert	11.300	2.098	11.307	2.113	25.946	0.518	25.254	0.530
Uqanda	11.530	2.078	11.429	2.089	25.736	0.518	24.47	0.532
Coker	9.929	2.107	10.395	2.069	22.512	0.524	22.642	0.521
Tanguis	8.198	2.037	8.398	2.027	18.224	0.505	18.265	0.507
Old B19	9.942	2.078	9.790	2.091	21.770	0.523	21.722	0.524
Old D3	13.458	2.049	11.932	2.125	29.71	0.511	26.634	0.534
ICCS K	5.366	1.981	5.234	1.996	11.632	0.492	11.45	0.495
ICCS B23	10.319	2.025	9.238	2.099	22.208	0.509	21.057	0.520
ICCS E3	15.196	2.186	14.403	2.227	35.335	0.545	33.477	0.559
ICCS H2	7.587	1.976	7.171	2.000	16.853	0.484	15.833	0.494
ICCS C33	12.639	2.147	13.878	2.092	29.458	0.531	31.22	0.521
ICCS F2	5.930	1.939	5.182	2.029	12.675	0.481	11.658	0.499
ICCS A16	8.433	2.000	8.017	2.041	18.057	0.501	17.646	0.509
ICCS I25	9.526	2.009	8.814	2.063	20.548	0.503	19.41	0.516
ICCS G12	19.774	2.164	19.231	2.169	41.760	0.563	40.915	0.562
ICCS D3	13.608	2.032	13.505	2.046	30.040	0.505	29.401	0.513
mean	**10.923**	**2.067**	**10.661**	**2.087**	**24.283**	**0.516**	**23.630**	**0.523**
sd	**3.313**	**0.07**	**3.28**	**0.065**	**7.353**	**0.020**	**7.169**	**0.020**

TABLE 2

FMT VARIABLE WEIGHT PROJECT

Parameters of simple regression equations for PH

	Y = a * X^b				**Y = a * Exp(bX)**			
	Rep. 1		**Rep. 2**		**Rep. 1**		**Rep. 2**	
	a	b	a	b	a	b	a	b
Deltapine	2.644	2.894	3.013	2.795	7.947	0.726	8.785	0.700
Acala	2.564	2.828	2.735	2.798	7.720	0.702	8.165	0.694
Menoufi	3.475	2.849	3.545	2.85	10.299	0.713	10.333	0.718
Lankart	3.109	3.052	3.328	3.034	10.260	0.757	10.494	0.762
Lambert	2.828	2.880	3.165	2.838	8.848	0.711	9.297	0.712
Uganda	2.794	2.894	3.057	2.850	8.548	0.721	8.639	0.726
Coker	2.715	2.842	2.761	2.845	8.194	0.707	8.040	0.717
Tanguis	2.044	2.818	2.256	2.738	6.164	0.699	6.436	0.685
Old B19	2.685	2.810	2.644	2.817	7.752	0.707	7.724	0.706
Old D3	3.539	2.793	3.416	2.828	10.406	0.696	9.967	0.711
ICCS K	1.343	2.694	1.353	2.700	3.841	0.669	3.896	0.669
ICCS B23	2.553	2.791	2.559	2.802	7.343	0.701	7.673	0.694
ICCS E3	4.366	2.971	4.044	3.036	13.717	0.741	12.766	0.763
ICCS H2	1.924	2.686	1.966	2.678	5.681	0.658	5.68	0.661
ICCS C33	3.340	2.930	3.631	2.884	10.585	0.725	11.127	0.717
ICCS F2	1.587	2.629	1.475	2.702	4.441	0.652	4.333	0.665
ICCS A16	2.335	2.687	2.131	2.755	6.486	0.674	6.187	0.687
ICCS I25	2.391	2.803	2.320	2.811	7.004	0.700	6.789	0.704
ICCS G12	5.112	3.102	5.229	3.057	14.961	0.806	15.178	0.792
ICCS D3	3.983	2.724	3.526	2.804	11.514	0.676	10.234	0.704
mean	**2.866**	**2.834**	**2.908**	**2.831**	**6.586**	**0.707**	**8.587**	**0.709**
sd	**0.917**	**0.121**	**0.903**	**0.106**	**2.839**	**0.035**	**2.747**	**0.033**

TABLE 3

FMT VARIABLE WEIGHT PROJECT

Parameters of simple regression equations for $(PL/PH)^2$

	Y= a * Exp(bX)				Y= a + b/X			
	Rep. 1		Rep. 2		Rep. 1		Rep. 2	
	a	b	a	b	a	b	a	b
Deltapine	8.901	-0.406	7.894	-0.377	-1.09	11.361	-0.887	10.53
Acala	7.828	-0.357	7.413	-0.359	-0.813	10.754	-0.759	10.074
Menoufi	8.338	-0.393	7.357	-0.374	-0.978	10.819	-0.827	9.897
Lankart	7.524	-0.431	6.428	-0.402	-0.979	9.286	-0.774	8.238
Lambert	8.599	-0.386	7.379	-0.365	-1.001	11.323	-0.753	9.865
Uqanda.	9.065	-0.407	8.023	-0.388	-1.119	11.594	-0.905	10.413
Coker	7.547	-0.366	7.932	-0.392	-0.818	10.248	-0.904	10.229
Tanguis	8.741	-0.388	8.053	-0.357	-1.008	11.437	-0.799	10.914
Old B19	7.886	-0.368	7.909	-0.364	-0.847	10.613	-0.814	10.607
Old D3	8.151	-0.371	7.142	-0.352	-0.896	10.959	-0.733	9.894
ICCS K	9.174	-0.355	8.636	-0.349	-0.913	12.508	-0.84	11.872
ICCS B23	9.146	-0.385	7.532	-0.349	-1.052	12.042	-0.728	10.347
ICCS E3	6.636	-0.392	6.877	-0.407	-0.767	8.597	-0.837	8.747
ICCS H2	8.801	-0.349	7.770	-0.334	-0.864	12.152	-0.711	10.985
ICCS C33	7.745	-0.389	7.872	-0.393	-0.892	10.106	-0.968	10.395
ICCS F2	8.147	-0.343	7.239	-0.333	-0.755	11.272	-0.633	10.171
ICCS A16	7.751	-0.345	8.134	-0.355	-0.713	10.635	-0.839	11.191
ICCS I25	8.607	-0.395	8.175	-0.375	-1.067	11.334	-0.887	10.828
ICCS G12	7.791	-0.486	7.267	-0.460	-1.066	8.716	-0.966	8.480
ICCS D3	6.807	-0.344	8.254	-0.381	-0.649	9.458	-0.919	10.86
mean	**8.159**	**-0.383**	**7.664**	**-0.373**	**-0.914**	**10.761**	**-0.824**	**10.227**
sd	**0.730**	**0.034**	**0.529**	**0.029**	**0.135**	**1.090**	**0.089**	**0.898**
CV%	**8.9**	**8.8**	**6.9**	**7.7**	**14.7**	**10.1**	**10.8**	**8.8**

TABLE 4

Linear correlations between parameters
of the PL and PH equations

	Y = a.X^b		Y = a.e^bX	
	slope	**R-square**	**slope**	**R-square**
Rep. 1 vs Rep. 2				
PL				
Coefficients (a)	0.97	0.96	0.96	0.98
Exponents (b)	0.76	0.67	0.87	0.76
PH				
Coefficients (a)	0.96	0.94	0.95	0.97
Exponents (b)	0.80	0.83	0.87	0.87
Coefficient vs Exponent				
PL				
Rep. 1	-	0.51	-	0.69
Rep. 2	-	0.45	-	0.66
PH				
Rep. 1	-	0.49	-	0.61
Rep. 2	-	0.73	-	0.81

TABLE 5

Coefficients of variation between cottons
of the parameters in the PL and PH equations

	Rep. 1		Rep. 2	
	PL	**PH**	**PL**	**PH**
Y = a.X^b				
CV of a	30.3	32.0	30.3	33.1
CV of b	3.4	4.3	3.9	4.9
Y = a.e^bX				
CV of a	30.8	31.0	30.3	32.0
CV of b	3.1	3.7	3.8	4.6

TABLE 6

Linear correlations between parameters
of the $(PL/PH)^2$ equations

	Y = a.e^bX		Y = a + b/X	
	slope	**R-square**	**slope**	**R-square**
Rep. 1 vs Rep. 2				
Coefficients (a)	0.27	0.13	0.14	0.03
Exponents (b)	0.71	0.66	0.61	0.53
Coefficient vs Exponent				
Rep. 1	-	0.00	-	0.09
Rep. 2	-	0.08	-	0.00

TABLE .7

Coefficients of variation between cottons
of the parameters in the $(PL/PH)^2$ equations

	Rep. 1	**Rep. 2**
Y = a.e^bX		
CV of a	8.8	6.9
CV of b	8.9	7.8
Y = a + b/X		
CV of a	14.6	10.8
CV of b	10.1	8.8

TABLE 8

QUICKFIX

Coefficients of variation of PL4 and PH4

between specimens

	PL4		PH4	
	Rep. 1	**Rep. 2**	**Rep. 1**	**Rep. 2**
Deltapine	1.1	0.9	1.1	1.1
Acala	1.8	2.3	2.4	3.5
Menoufi	1.4	1.5	2.1	2.0
Lankart	1.4	1.5	1.7	1.3
Lambert	1.4	1.9	1.8	2.3
Uqanda.	1.3	1.2	1.4	1.6
Coker	0.8	1.1	1.1	1.7
Tanguis	0.9	0.7	1.1	0.8
Old B19	1.2	1.4	1.8	1.3
Old D3	1.2	0.8	2.1	0.9
ICCS K	1.4	1.5	1.8	2.1
ICCS B23	0.9	1.0	1.0	1.5
ICCS E3	1.7	1.9	2.4	2.3
ICCS H2	1.2	1.2	1.7	1.6
ICCS C33	1.0	1.1	1.4	1.4
ICCS F2	1.6	1.1	2.6	1.1
ICCS A16	1.1	0.9	1.5	1.3
ICCS I25	1.3	0.8	1.1	1.0
ICCS G12	1.1	1.3	1.7	1.7
ICCS D3	1.0	1.2	1.4	1.4
mean	**1.24**	**1.27**	**1.66**	**1.6**
sd	**0.23**	**0.41**	**0.48**	**0.62**

TABLE 9

QUICKFIX

Number of specimens out of tolerance

	PL4		**PH4**		**Total**
	Rep. 1	**Rep. 2**	**Rep. 1**	**Rep. 2**	
Deltapine	1	0	7	1	9
Acala	1	0	1	0	2
Menoufi	4	3	7	8	22
Lankart	1	1	6	5	13
Lambert	1	1	3	0	5
Uqanda.	4	5	5	5	19
Coker	2	1	1	3	7
Tanguis	0	0	0	4	4
Old B19	0	0	0	0	0
Old D3	0	2	4	0	6
ICCS K	2	3	5	8	18
ICCS B23	0	1	0	2	3
ICCS E3	3	3	6	7	19
ICCS H2	2	1	4	2	9
ICCS C33	1	1	2	0	4
ICCS F2	3	0	8	0	11
ICCS A16	1	0	2	1	4
ICCS I25	1	0	1	0	2
ICCS G12	0	1	6	3	10
ICCS D3	0	1	2	1	4
Total	**27**	**24**	**70**	**50**	**171**

TABLE 10

Simple linear regression of the exponents
from the PL and PH equations on Z4
(where Z4 is $(PL/PH)^2$ for a specimen of 4.000g)

Model : Y = a + b.Z4			
Y	**a**	**b**	**R-square**
bPL Rep. 1	2.4675	-0.2253	0.726
bPL Rep. 2	2.4997	-0.2383	0.792
bPL Rep. 1+2	2.4856	-0.2329	0.756
bPH Rep. 1	3.5675	-0.4132	0.813
bPH Rep. 2	3.5686	-0.4257	0.945
bPH Rep. 1+2	3.5609	-0.4152	0.862

TABLE 11

Correlation between the parameters of
the $(PL/PH)^2$ equations and cotton fibre properties

	R – squared values				
	Mic	**MAT**	**FIN**	**Hs**	**M.H**
Y = a.e^bX					
Rep. 1 (a)	0.24	0.21	0.19	0.12	0.23
Rep. 1 (b)	0.39	0.72	0.27	0.09	0.37
Rep. 2 (a)	0.21	0.40	0.12	0.03	0.20
Rep. 2 (b)	0.57	0.81	0.43	0.20	0.54
Y = a + b/X					
Rep. 1 (a)	0.04	0.07	0.03	0.01	0.04
Rep. 1 (b)	0.52	0.63	0.39	0.20	0.49
Rep. 2 (a)	0.25	0.15	0.24	0.20	0.24
Rep. 2 (b)	0.48	0.80	0.32	0.10	0.45

TABLE 12

BIASFIX

Coefficients of variation of PL4 and PH4

between specimens

	PL4		PH4	
	Rep. 1	**Rep. 2**	**Rep. 1**	**Rep. 2**
Deltapine	1.2	0.8	2.2	0.9
Acala	1.1	0.9	1.2	1.2
Menoufi	1.8	2.3	2.3	3.6
Lankart	1.1	1.0	1.2	1.3
Lambert	1.4	1.4	1.7	1.3
Uqanda.	1.4	1.8	1.8	2.3
Coker	1.3	1.2	1.4	1.6
Tanguis	0.8	1.0	1.1	1.6
Old B19	0.9	0.7	1.2	0.8
Old D3	1.2	1.4	1.8	1.3
ICCS K	1.3	1.3	1.5	1.8
ICCS B23	0.8	1.0	1.0	1.5
ICCS E3	1.4	1.5	2.1	1.7
ICCS H2	0.9	1.1	1.2	1.2
ICCS C33	0.9	1.0	1.3	1.3
ICCS F2	1.3	1.0	2.2	0.8
ICCS A16	0.9	0.9	1.1	1.2
ICCS I25	1.2	0.8	1.0	1.1
ICCS G12	1.0	1.2	0.7	1.1
ICCS D3	1.1	1.2	1.5	1.4
mean	**1.15**	**1.17**	**1.47**	**1.45**
sd	**0.25**	**0.38**	**0.46**	**0.62**

TABLE 13

BIASFIX

Number of specimens out of tolerance

	PL4		PH4		Total
	Rep.1	**Rep.2**	**Rep.1**	**Rep.2**	
Deltapine	1	0	7	0	8
Acala	1	0	1	0	2
Menoufi	4	3	7	6	20
Lankart	1	0	1	1	3
Lambert	2	1	3	0	6
Uganda	3	5	4	5	17
Coker	2	1	1	2	6
Tanguis	0	0	0	3	3
Old B19	0	0	0	0	0
Old D3	0	2	4	0	6
ICCS K	1	3	1	5	10
ICCS B23	0	1	0	0	1
ICCS E3	1	2	8	2	13
ICCS H2	0	0	1	1	2
ICCS C33	0	1	1	1	3
ICCS F2	2	0	3	0	5
ICCS A16	1	0	1	0	2
ICCS I25	1	0	1	0	2
ICCS G12	0	1	0	0	1
ICCS D3	0	1	3	1	5
Total	**20**	**21**	**47**	**27**	**115**

TABLE 14

SIMTEQ (Rep. 1)

Coefficients of variation of PL4 and PH4

between specimens

	PL4		**PH4**	
	Eq[13]	**Eq[14]**	**Eq[13]**	**Eq[14]**
Deltapine	2.4	2.9	3.4	5.8
Acala	1.2	2.0	1.6	3.6
Menoufi	5.3	3.8	5.7	6.2
Lankart	1.9	2.9	2.0	5.5
Lambert	2.3	2.1	2.6	4.0
Uganda	3.5	3.0	3.5	5.0
Coker	2.7	2.5	3.5	4.9
Tanguis	1.2	2.2	1.6	4.4
Old B19	1.2	2.3	1.8	4.7
Old D3	1.4	2.3	2.6	4.1
ICCS K	1.9	5.2	2.1	19.0
ICCS B23	1.0	2.2	1.8	4.4
ICCS E3	2.0	2.7	3.0	5.1
ICCS H2	1.5	1.0	4.1	0.6
ICCS C33	1.5	2.5	1.6	4.6
ICCS F2	9.2	7.0	10.5	7.0
ICCS A16	2.3	2.0	3.9	4.1
ICCS I25	5.4	3.4	5.1	5.5
ICCS G12	4.4	2.7	2.6	3.2
ICCS D3	2.1	2.8	2.5	5.2
Mean	**2.72**	**2.87**	**3.27**	**5.34**
Sd	**2.01**	**1.28**	**2.06**	**3.47**

TABLE 15

SIMTEQ (Rep. 1)

Number of specimens out of tolerance

	PL4		**PH4**		**Total**
	Eq[13]	**Eq[14]**	**Eq[13]**	**Eq[14]**	
Deltapine	5	8	11	13	37
Acala	1	7	3	10	21
Menoufi	7	7	9	16	39
Lankart	4	8	4	16	32
Lambert	5	5	7	12	29
Uganda	4	7	7	15	33
Coker	2	6	4	16	28
Tanguis	2	5	5	16	28
Old B19	2	6	3	17	28
Old D3	1	7	5	13	26
ICCS K	6	9	5	17	37
ICCS B23	1	5	3	13	22
ICCS E3	2	7	7	13	29
ICCS H2	3	9	4	13	29
ICCS C33	3	7	2	13	25
ICCS F2	7	7	9	14	37
ICCS A16	1	5	2	13	21
ICCS I25	3	8	3	13	27
ICCS G12	5	10	2	17	34
ICCS D3	4	9	5	17	35
Total	**68**	**142**	**100**	**287**	**597**

Figure 1a

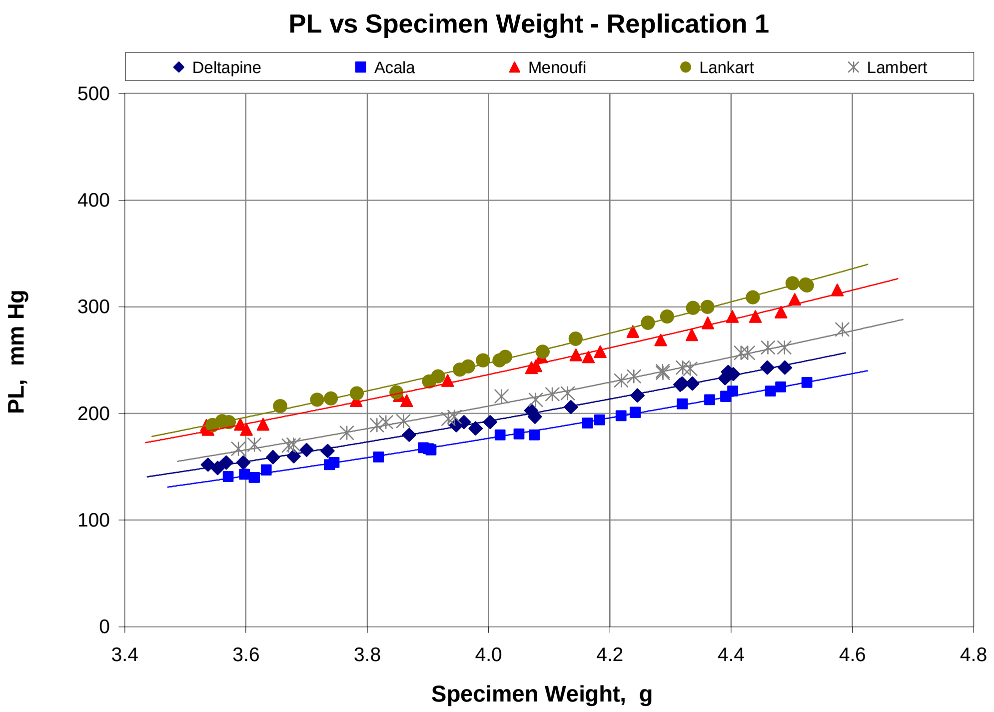


Figure 1b

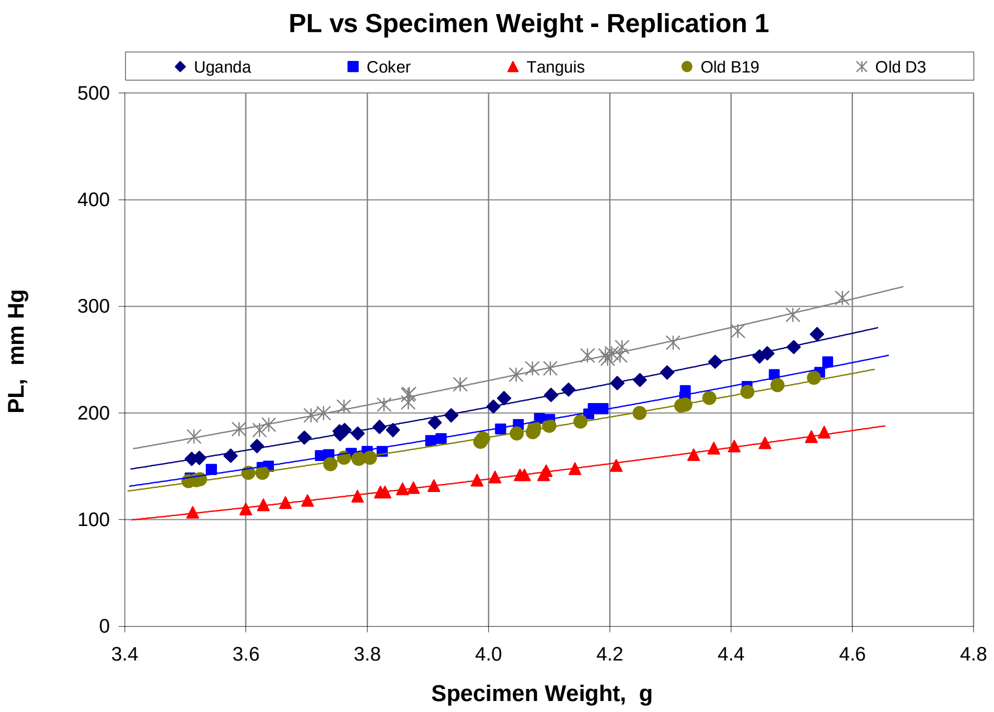


Figure 1c

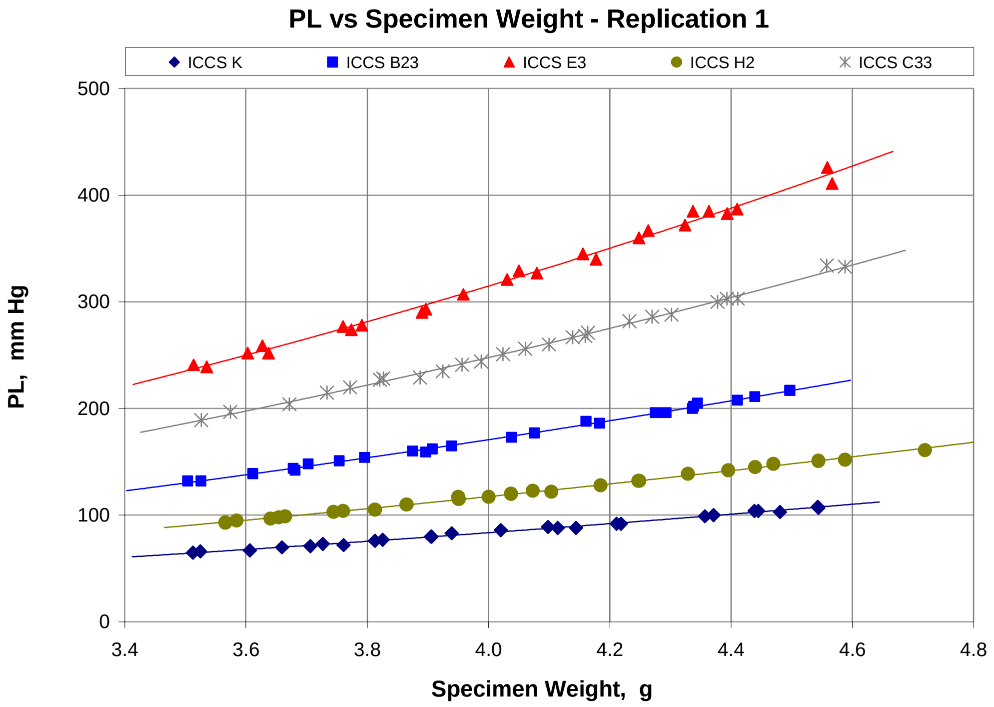


Figure 1d

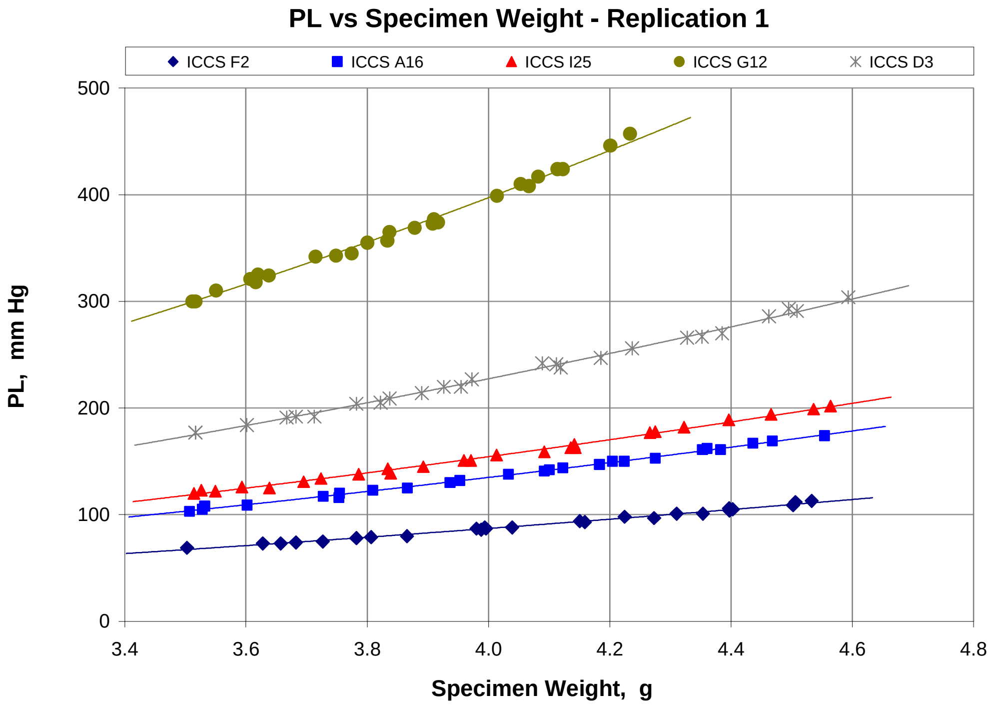


Figure 2a

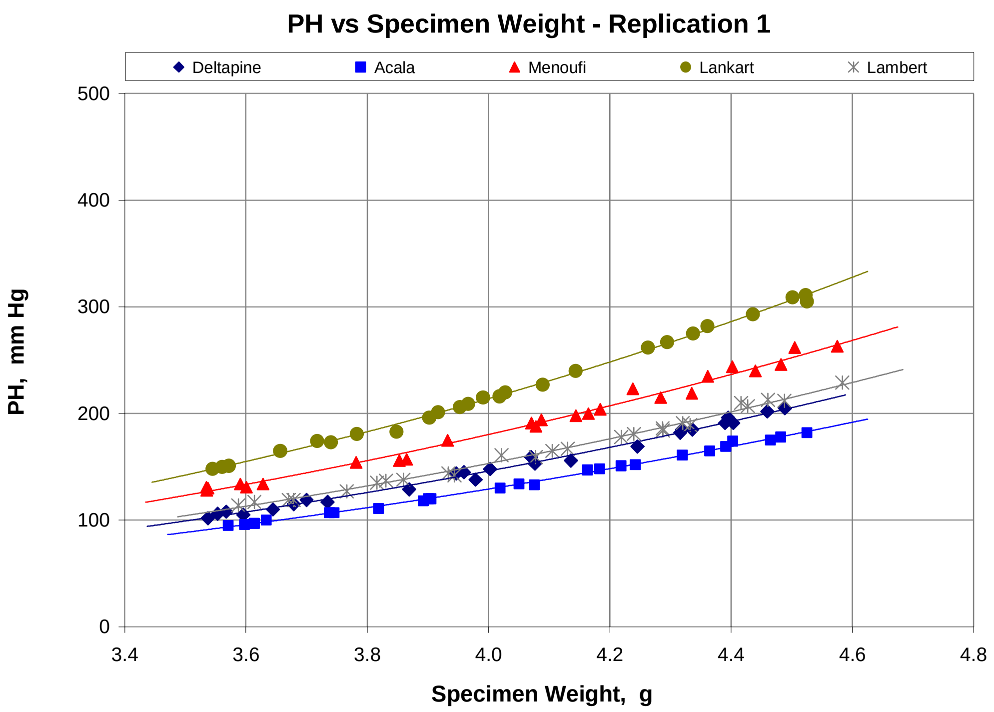


Figure 2b

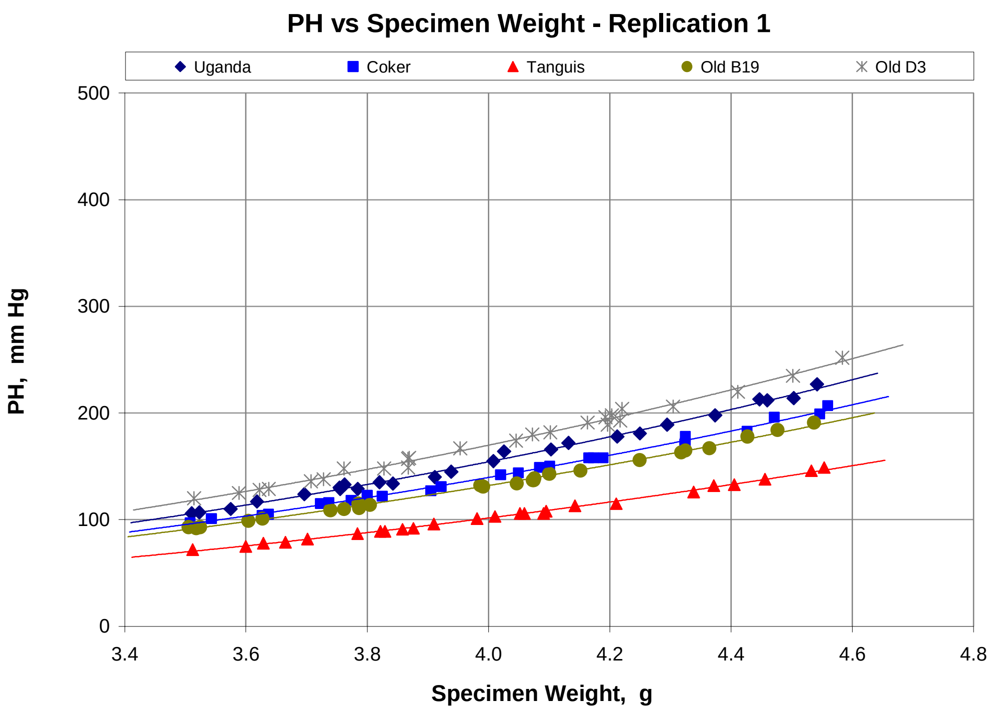


Figure 2c

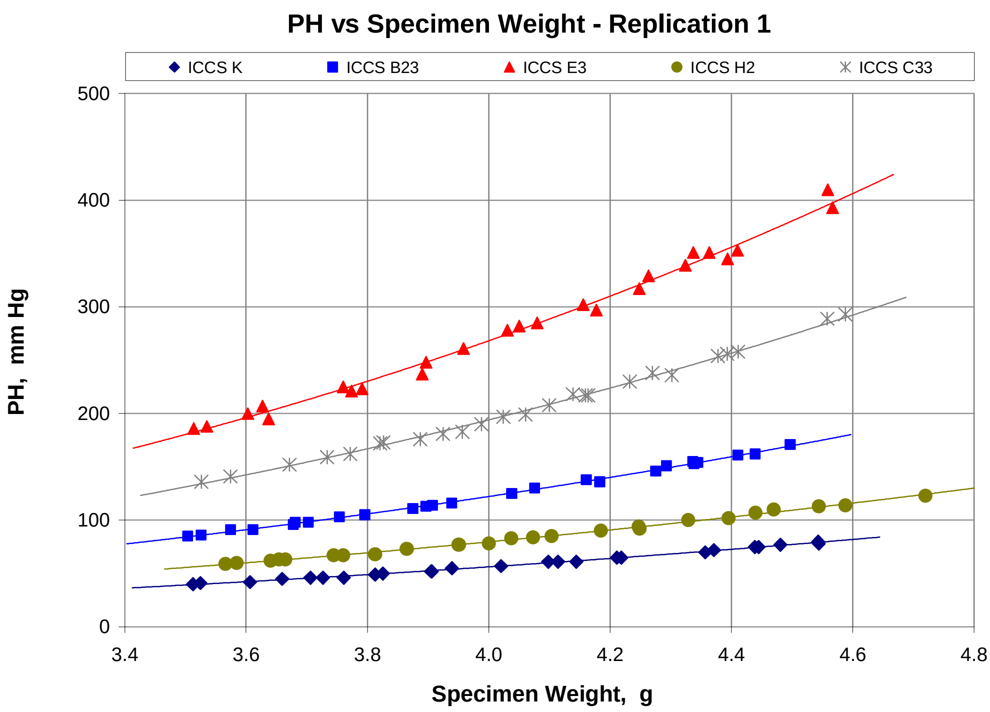


Figure 2d

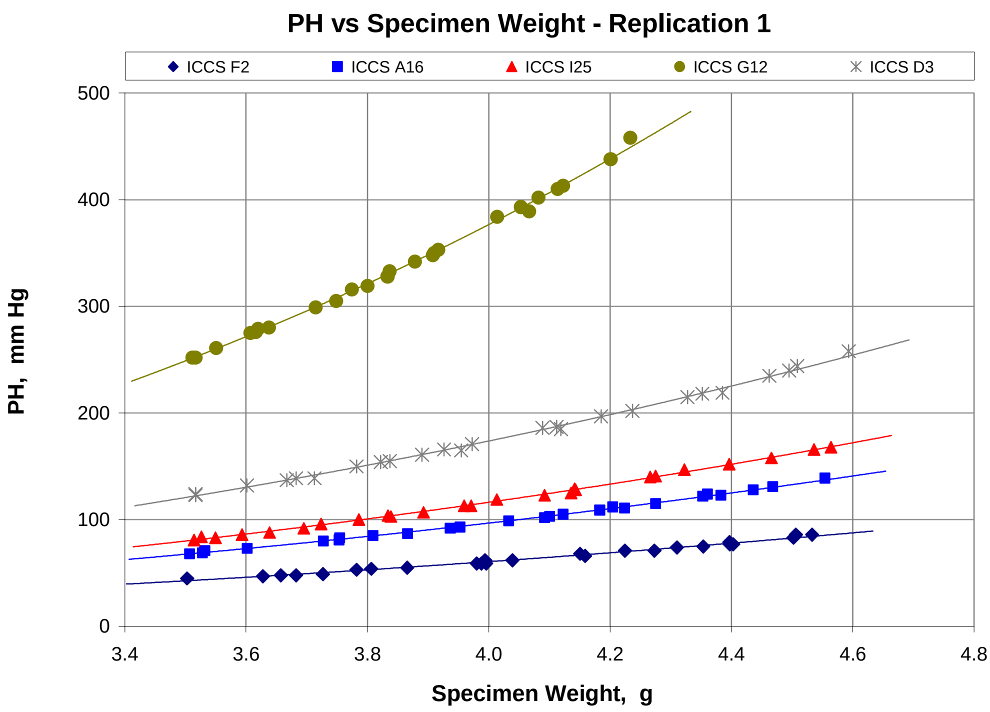


Figure 3a

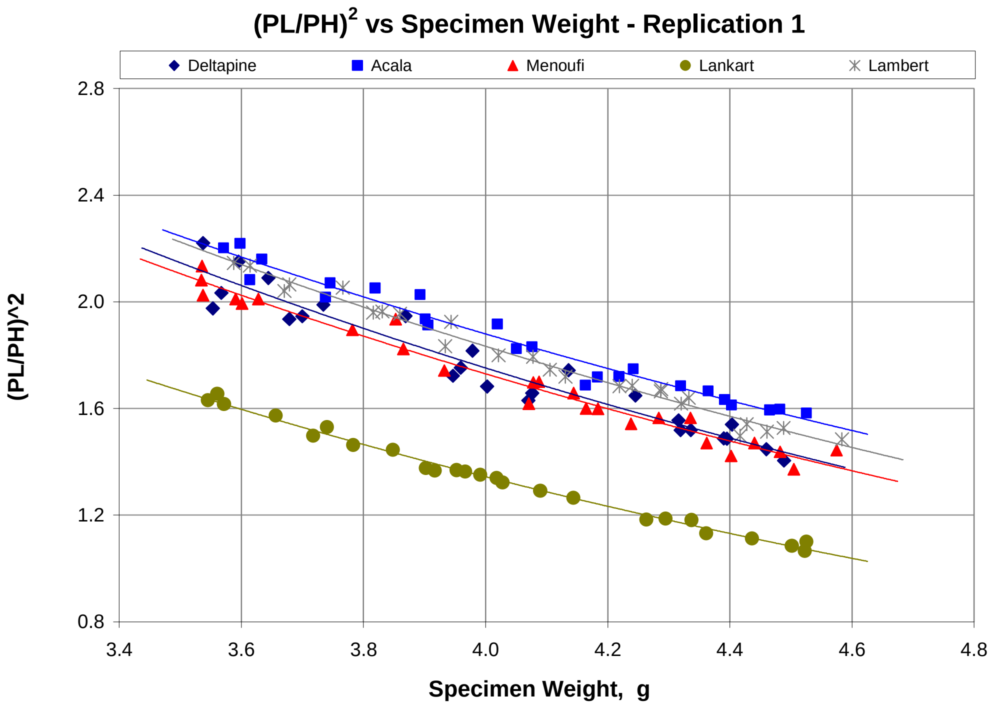


Figure 3b

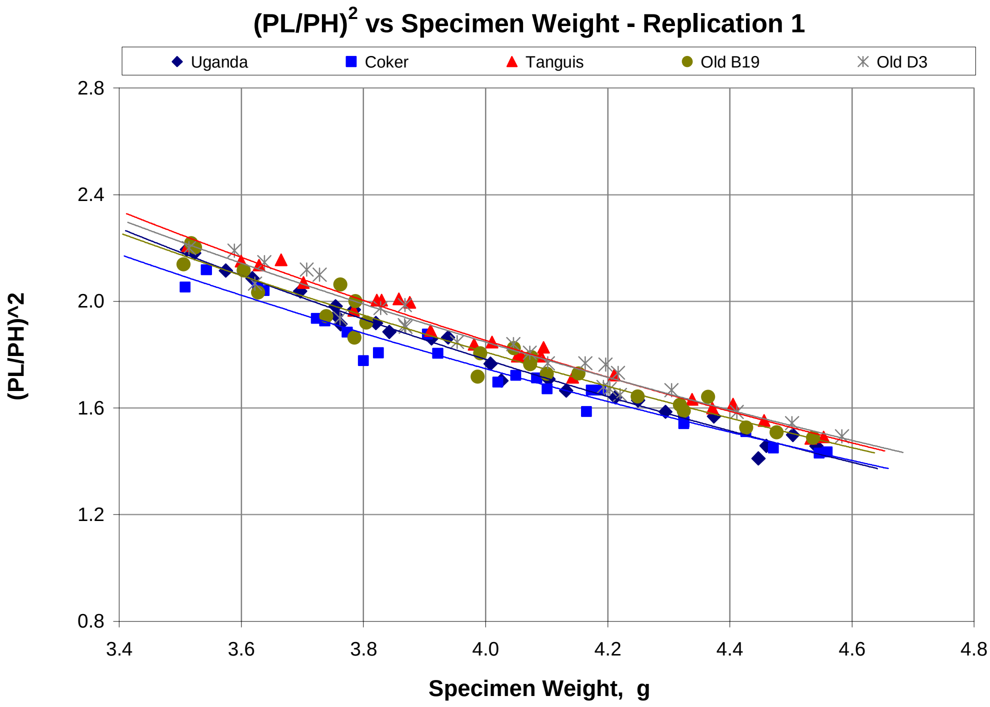


Figure 3c

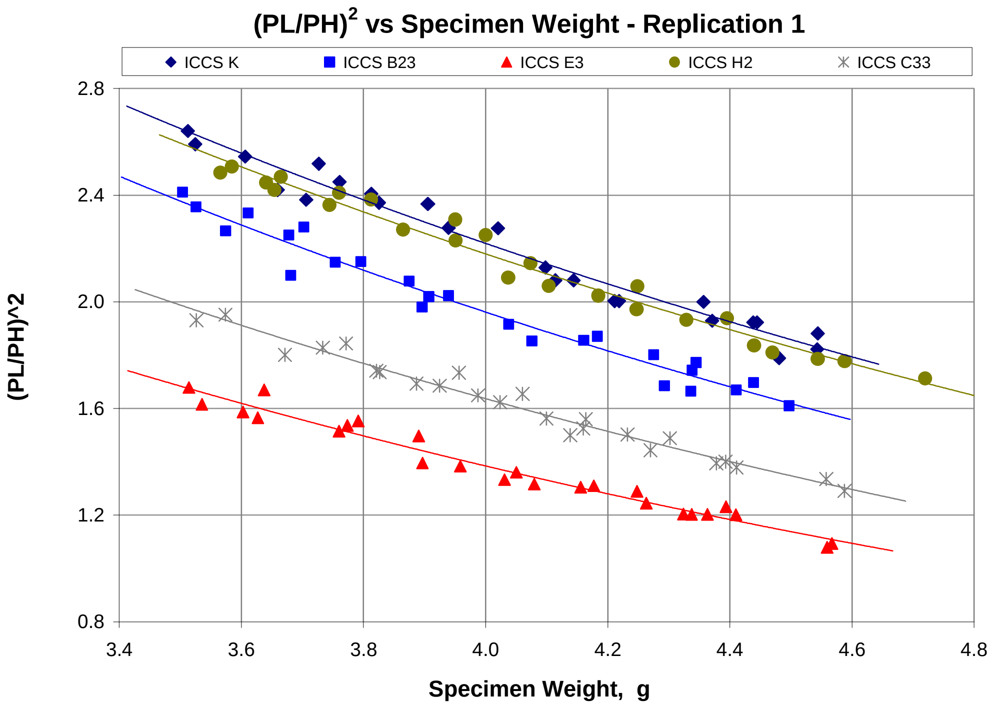


Figure 3d

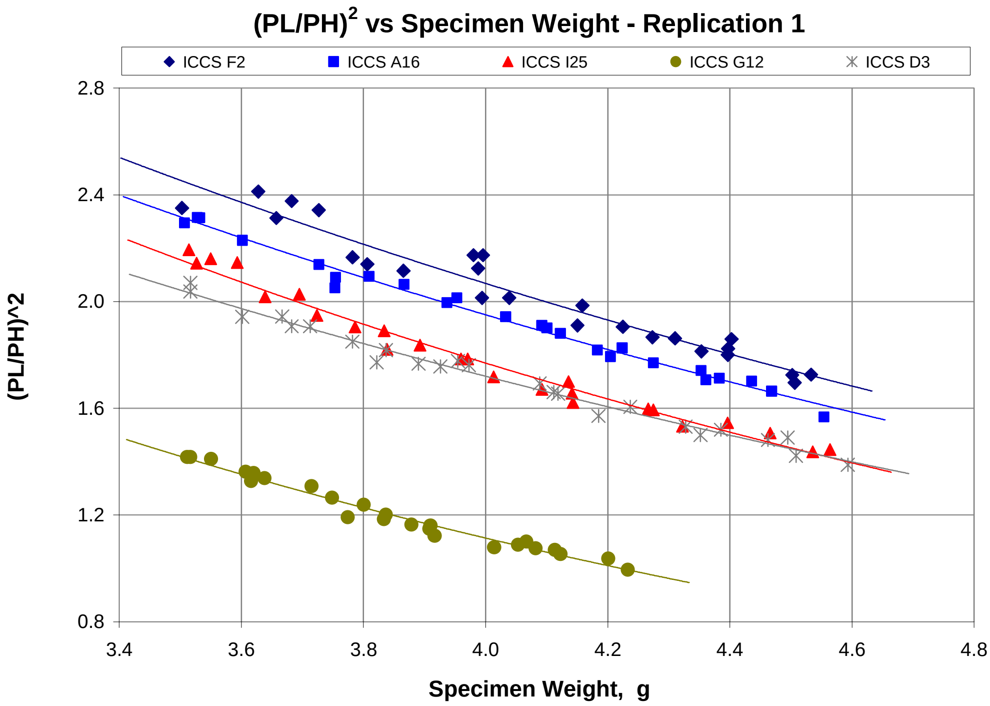


Figure 4a

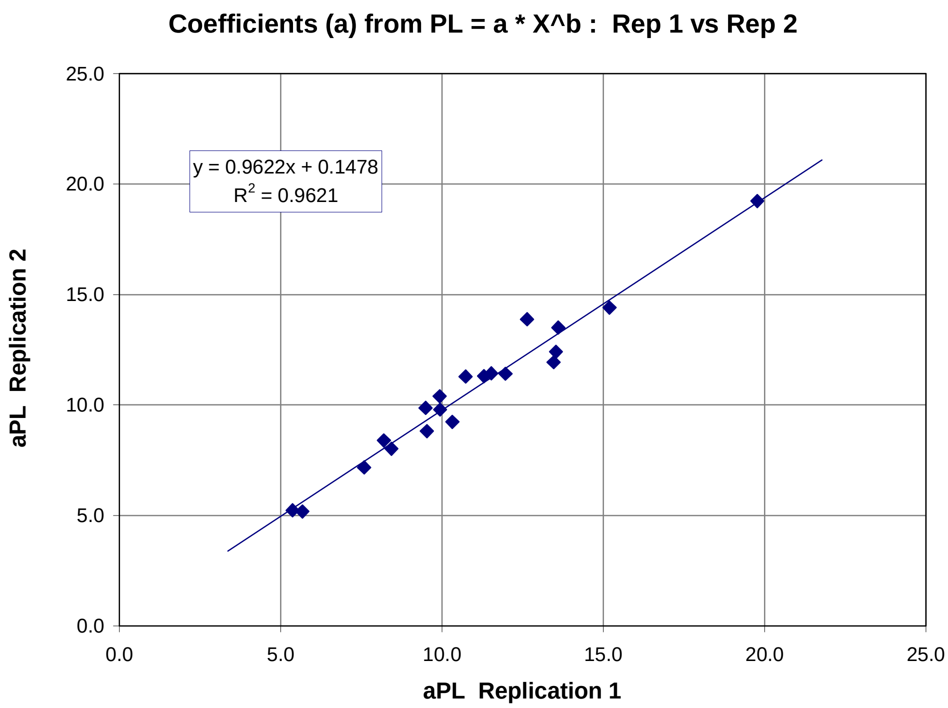


Figure 4b

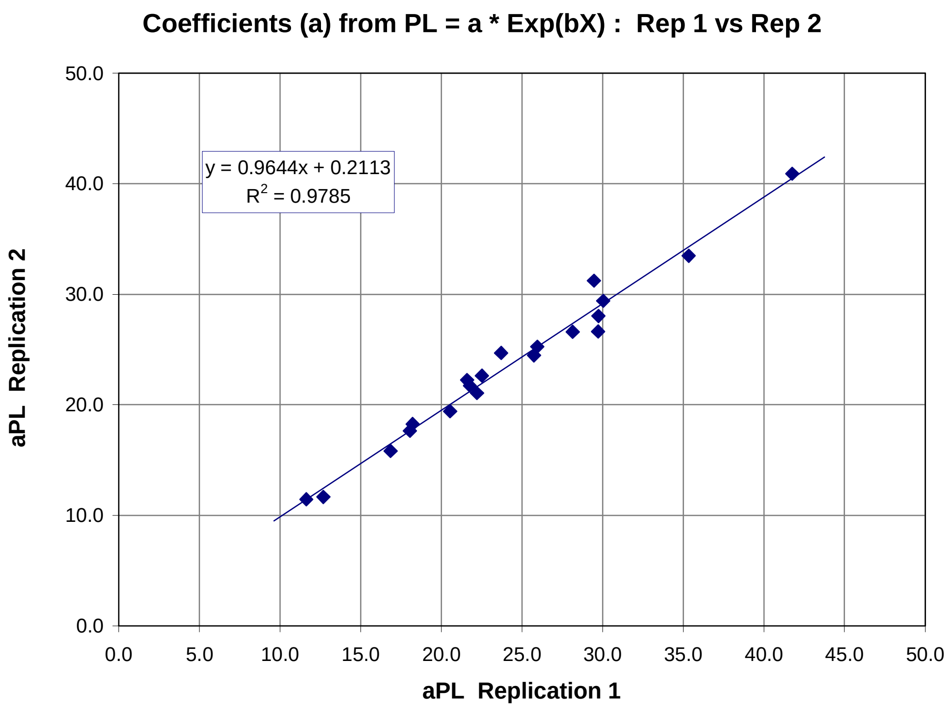


Figure 4c

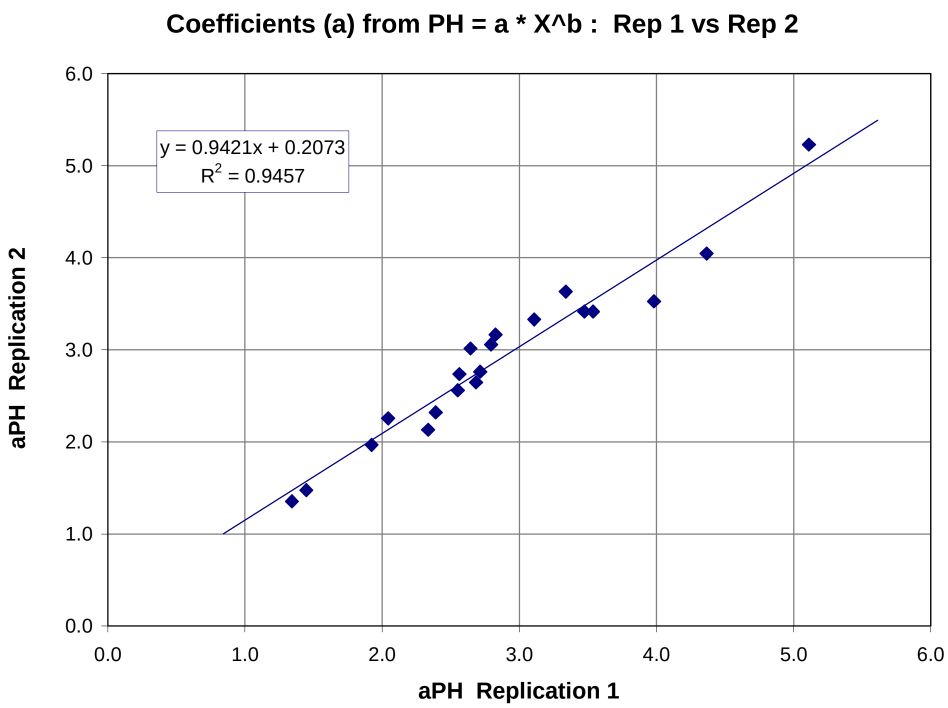


Figure 4d

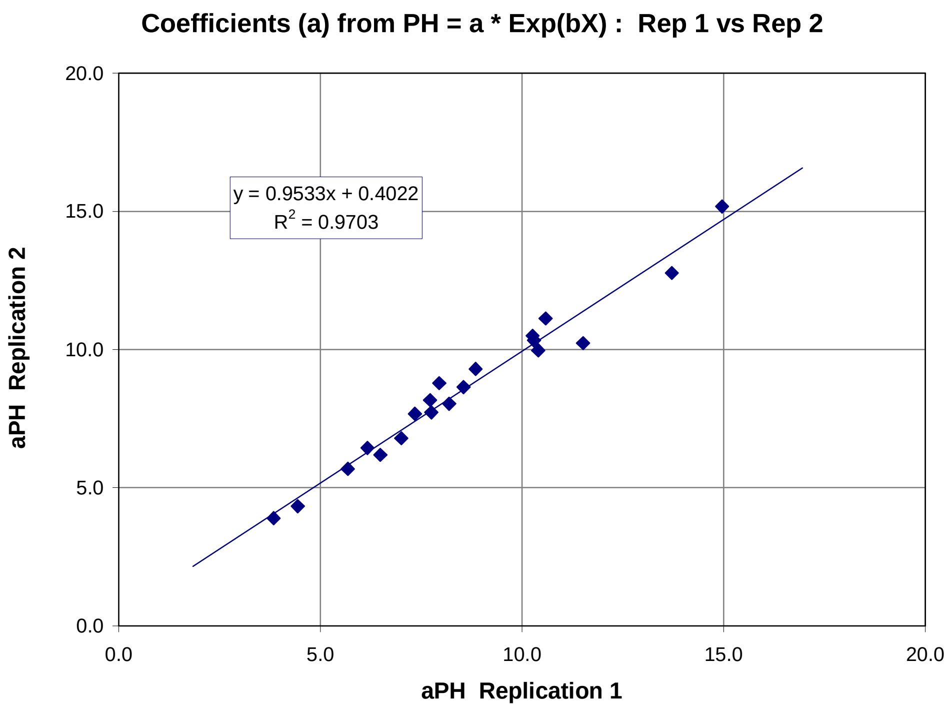


Figure 5a

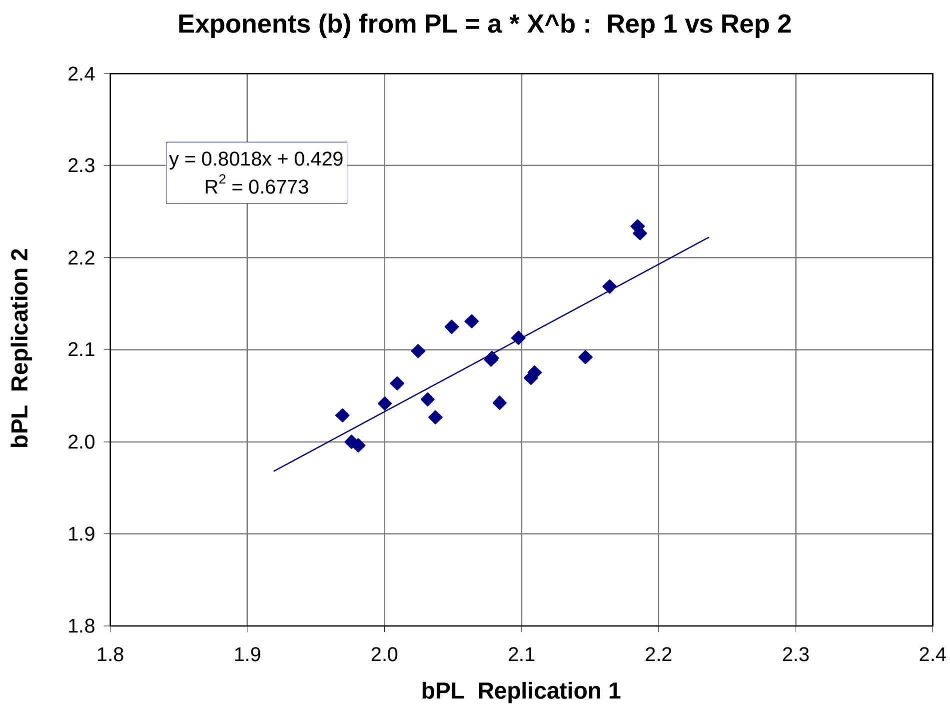


Figure 5b

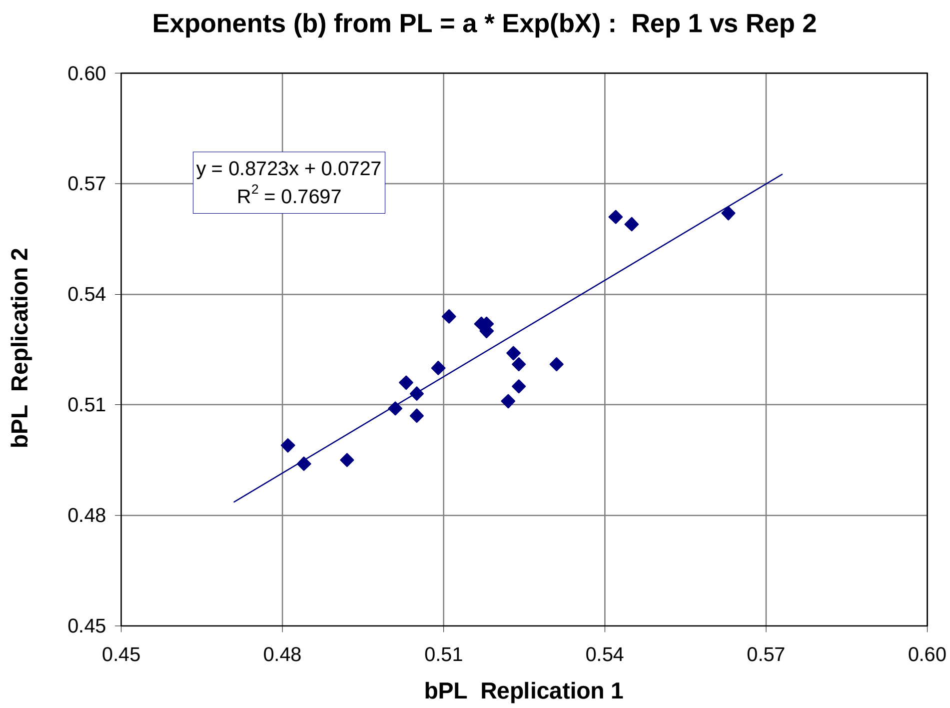


Figure 5c

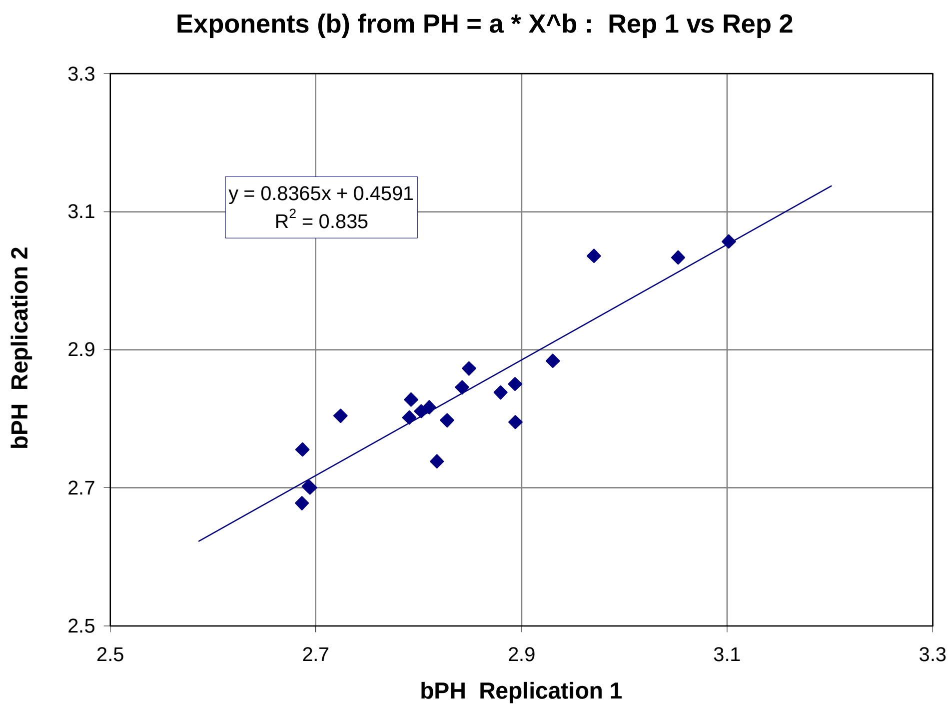


Figure 5d

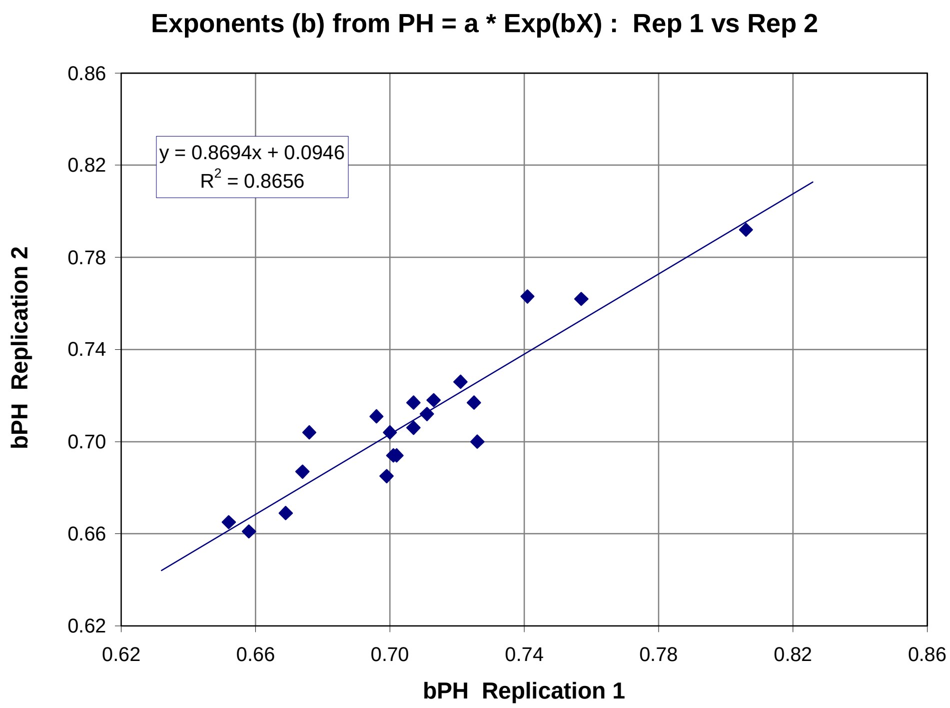


Figure 6a

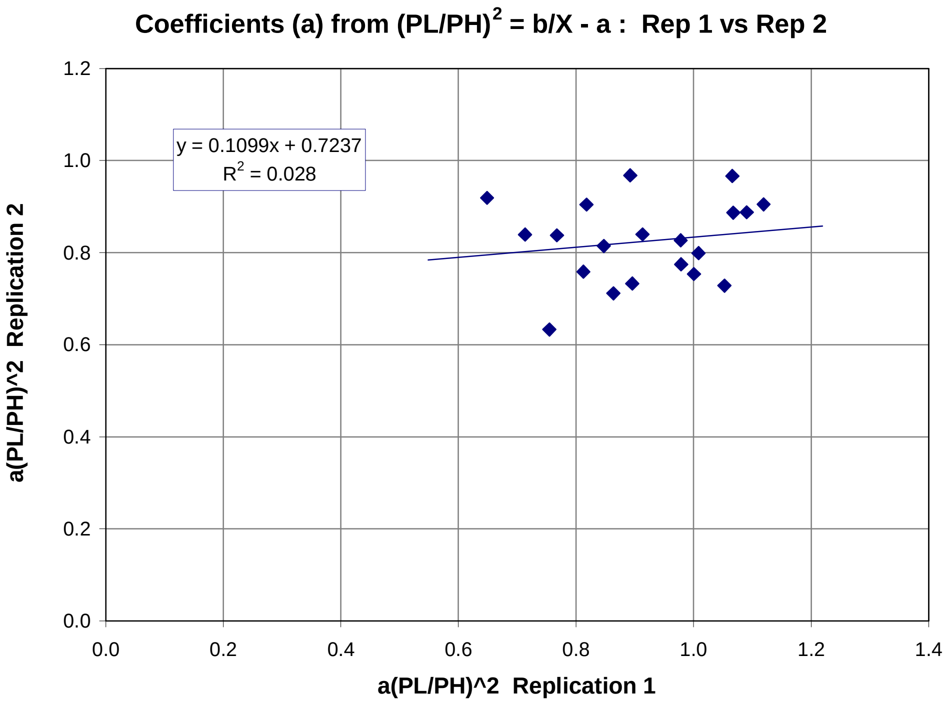


Figure 6b

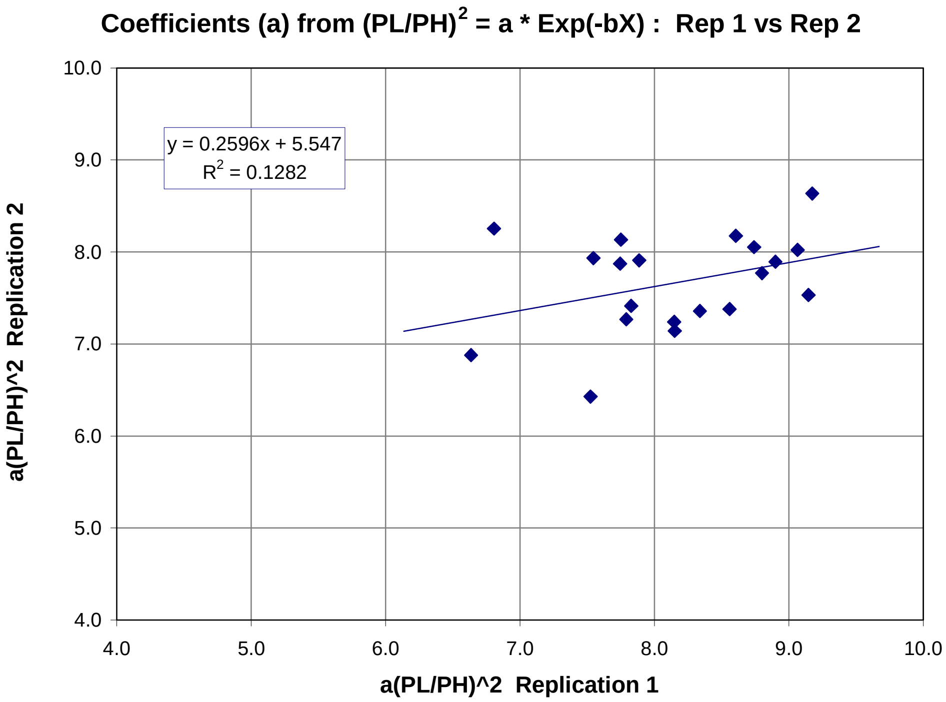


Figure 6c

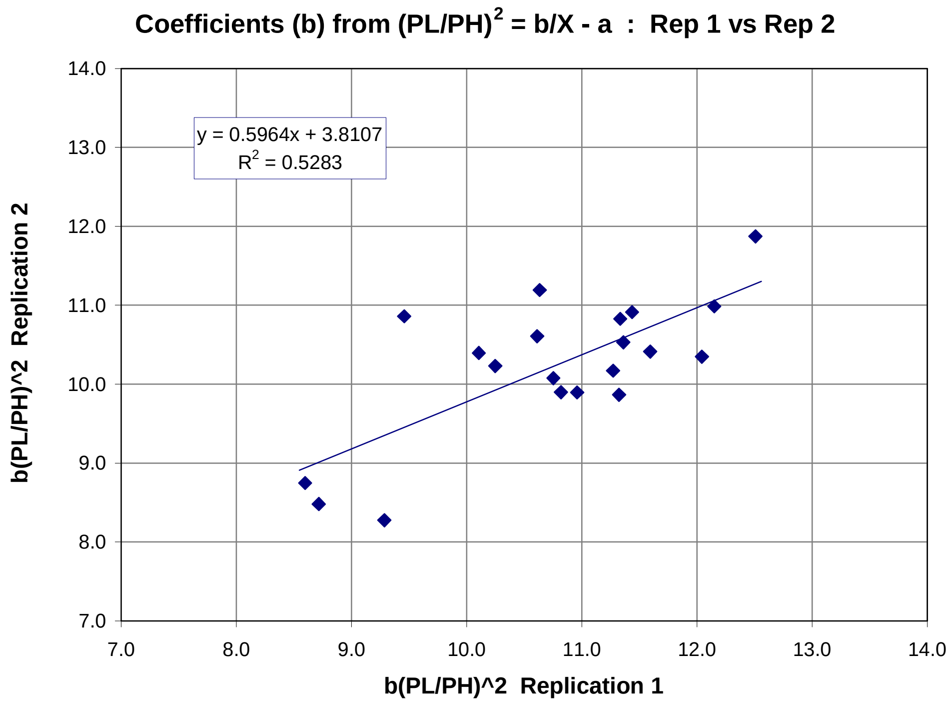


Figure 6d

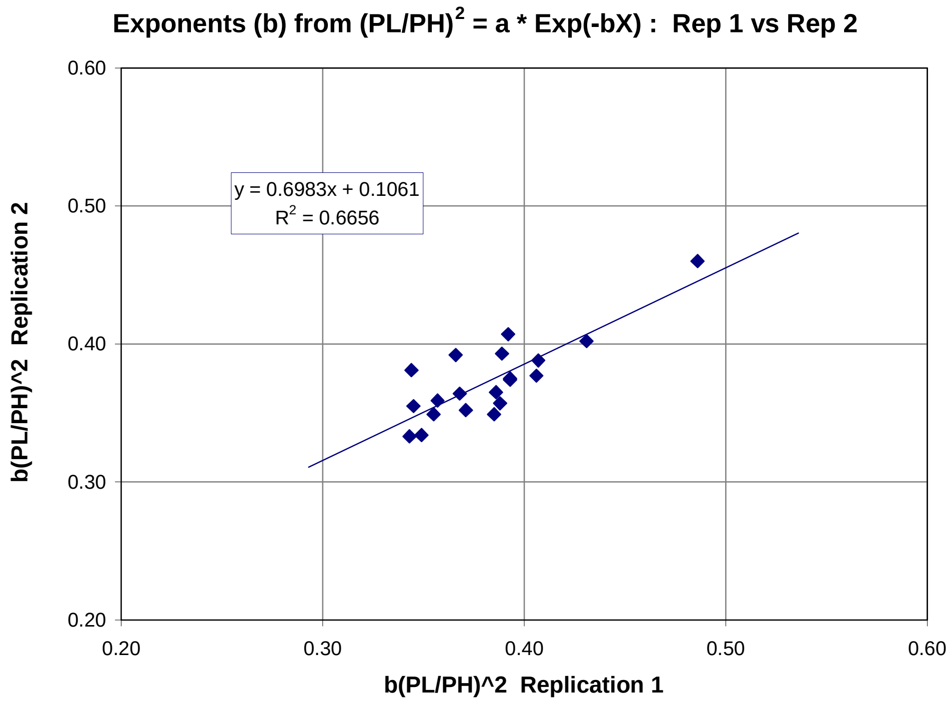


Figure 7a

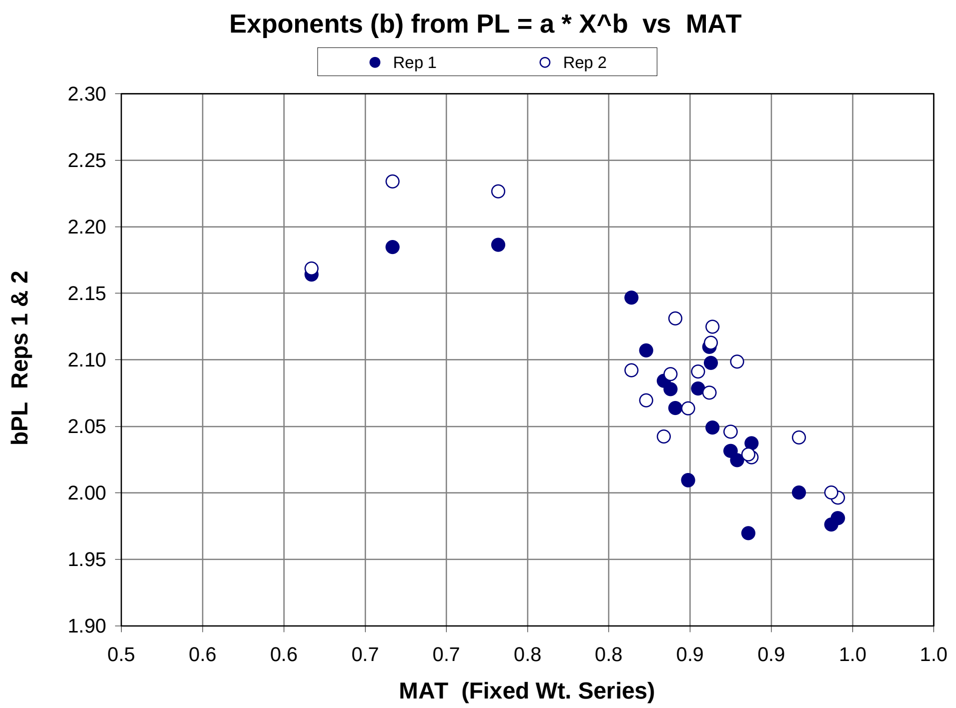


Figure 7b

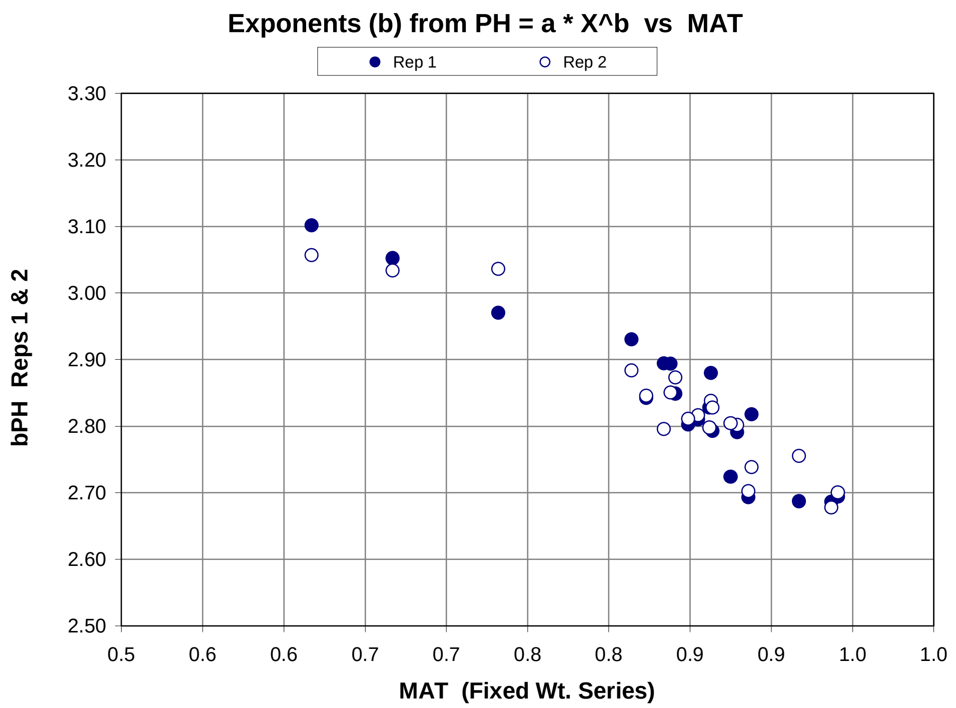


Figure 8

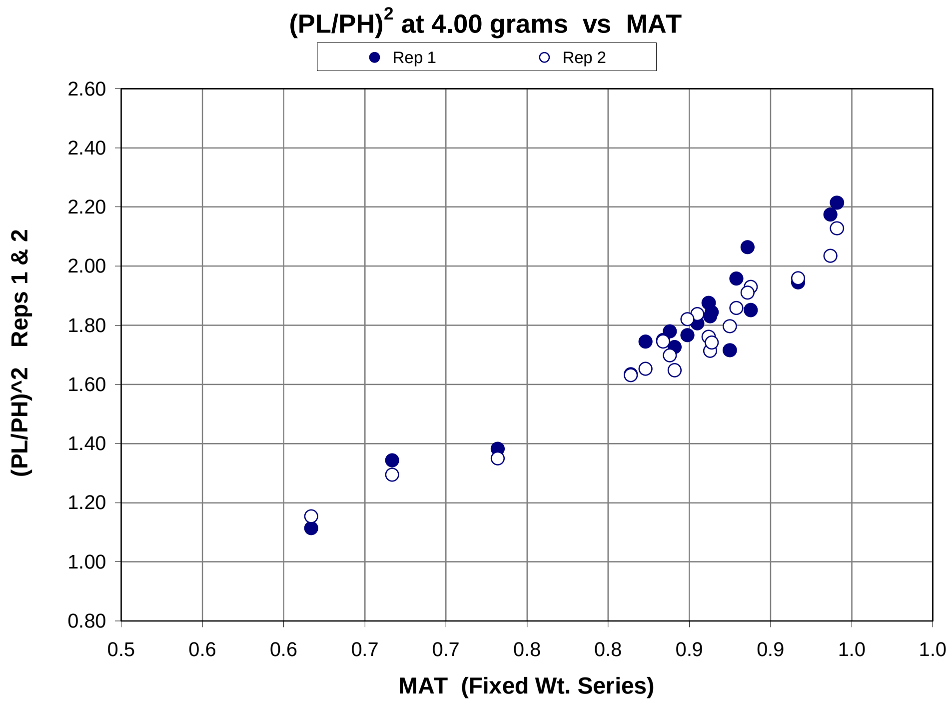


Figure 9

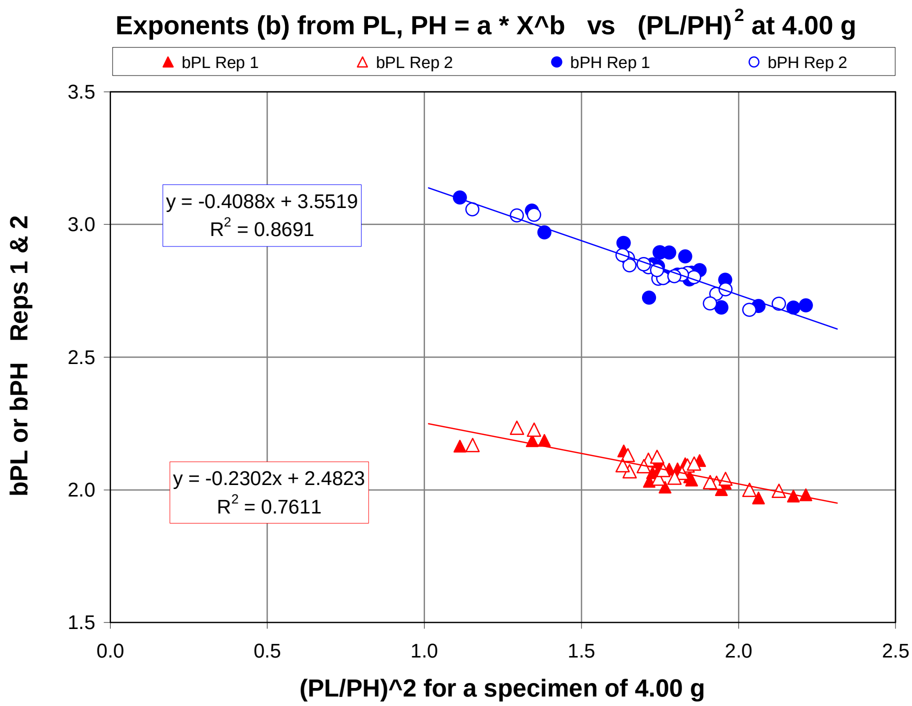


Figure 10a

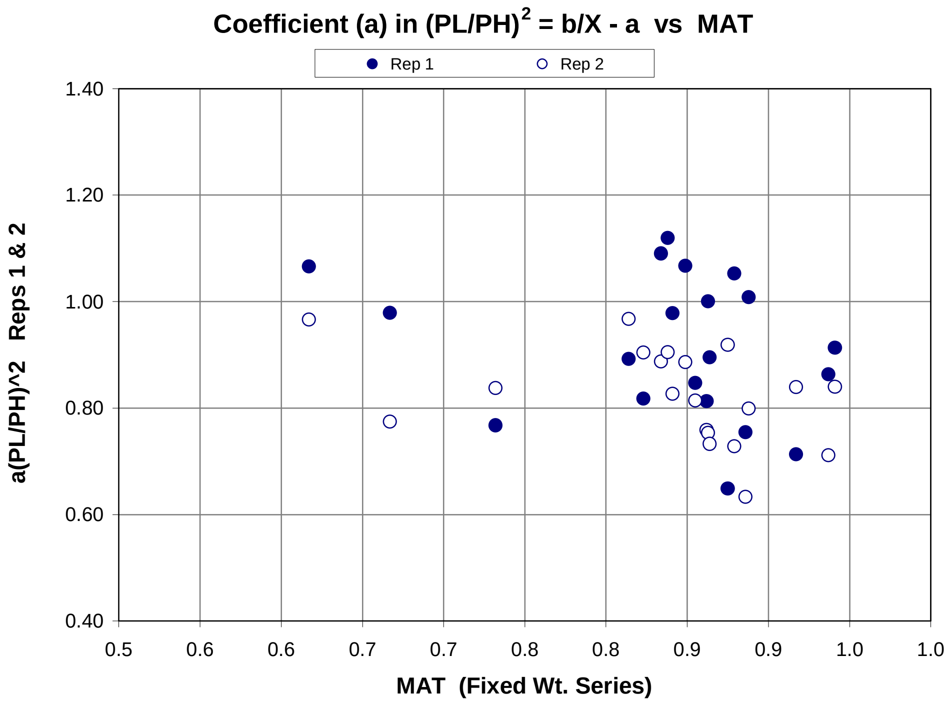


Figure 10b

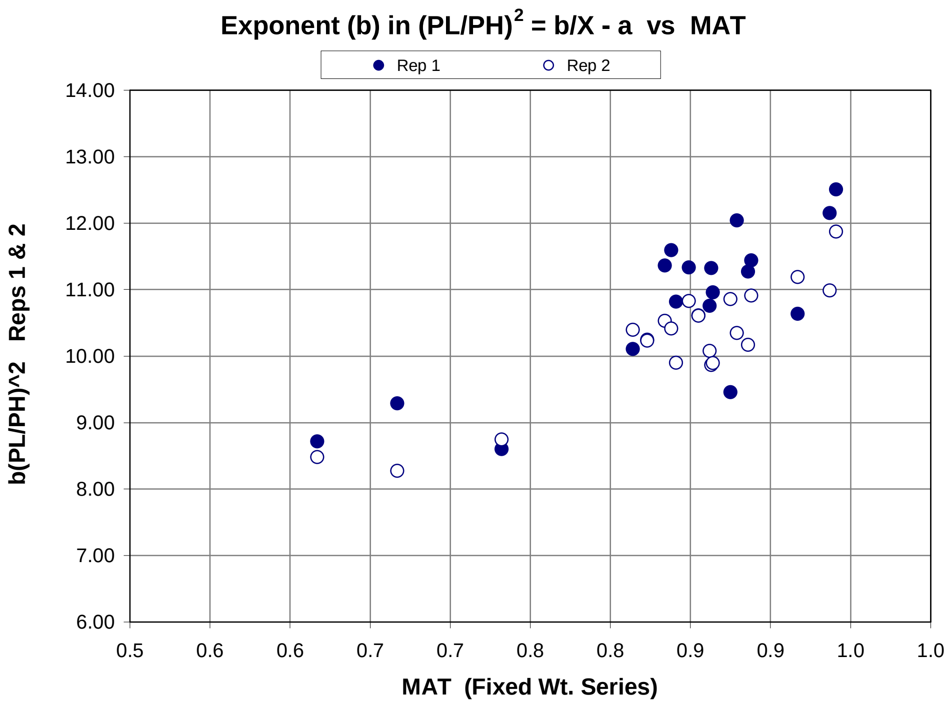


Figure 10c

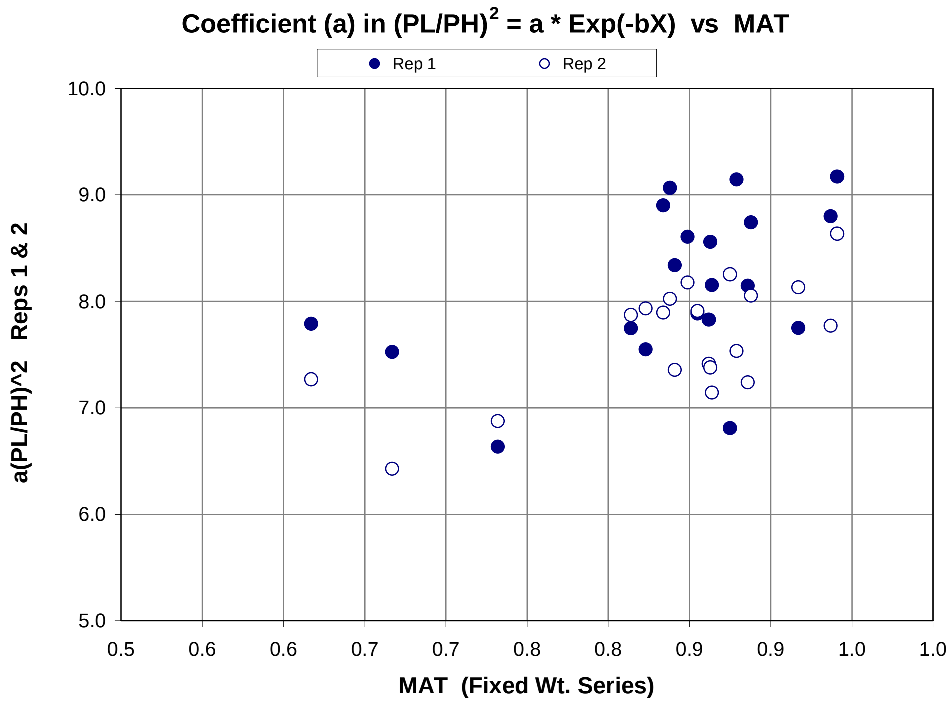
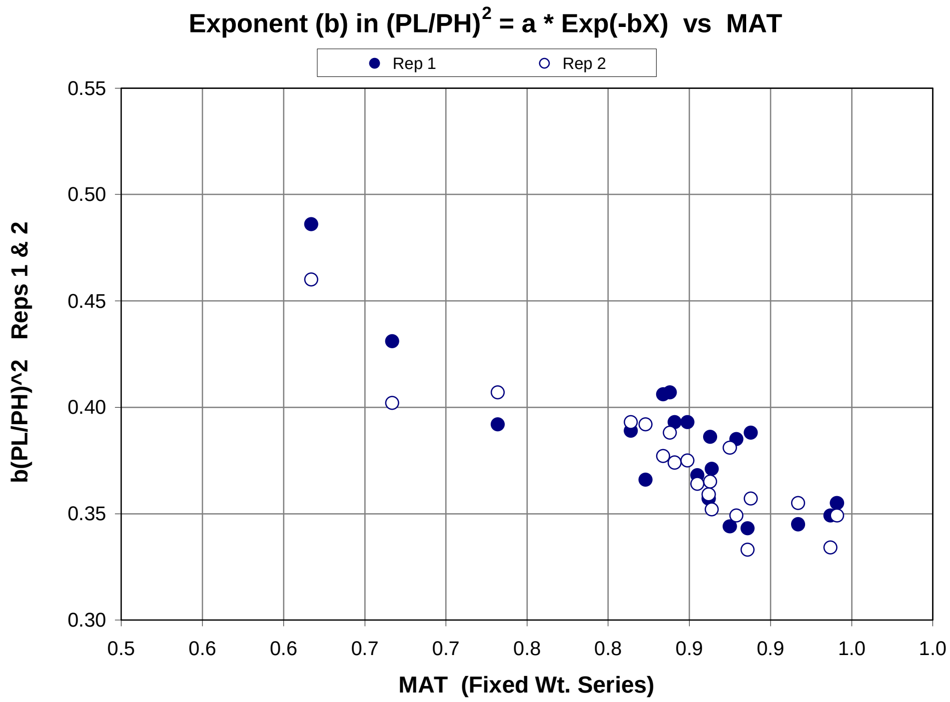


Figure 10d



Appendix 1: Mean Test Data - Replication No 1

	Cotton 01 - Deltapine				Cotton 02 - Acala				Cotton 03 - Menoufi			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	3.679	160	115	1.936	3.614	140	97	2.083	4.482	295	246	1.438
2	4.076	197	153	1.658	4.482	225	178	1.598	4.335	274	219	1.565
3	4.460	243	202	1.447	3.745	154	107	2.071	3.628	190	134	2.010
4	4.336	228	185	1.519	4.242	201	152	1.749	3.853	217	156	1.935
5	3.553	149	106	1.976	4.525	229	182	1.583	4.284	269	215	1.565
6	4.390	233	191	1.488	4.020	180	130	1.917	4.078	245	188	1.698
7	4.319	228	185	1.519	4.320	209	161	1.685	4.575	316	263	1.444
8	4.489	243	205	1.405	3.819	159	111	2.052	4.144	255	198	1.659
9	4.316	227	182	1.556	3.598	143	96	2.219	4.087	253	194	1.701
10	4.395	239	196	1.487	3.901	167	120	1.937	3.535	189	131	2.082
11	3.960	192	145	1.753	4.392	216	169	1.634	3.782	212	154	1.895
12	4.002	192	148	1.683	3.571	141	95	2.203	4.238	277	223	1.543
13	3.947	189	144	1.723	4.365	213	165	1.666	3.535	187	128	2.134
14	3.700	166	119	1.946	4.051	181	134	1.825	3.591	190	134	2.010
15	3.567	154	108	2.033	3.893	168	118	2.027	4.362	285	235	1.471
16	4.070	203	159	1.630	4.219	198	151	1.719	4.071	243	191	1.619
17	3.644	159	110	2.089	3.906	166	120	1.914	4.184	258	204	1.599
18	4.403	237	191	1.540	4.163	191	147	1.688	3.932	231	175	1.742
19	3.596	154	105	2.151	4.465	221	175	1.595	3.601	185	131	1.994
20	3.734	165	117	1.989	3.633	147	100	2.161	3.537	185	130	2.025
21	3.869	180	129	1.947	4.403	221	174	1.613	4.164	253	200	1.600
22	3.537	152	102	2.221	3.738	152	107	2.018	4.440	291	240	1.470
23	4.136	206	156	1.744	4.076	180	133	1.832	3.865	212	157	1.823
24	4.246	217	169	1.649	4.183	194	148	1.718	4.402	291	244	1.422
25	3.979	186	138	1.817					4.505	307	262	1.373

	Cotton 04 - Lankart				Cotton 05 - Lambert				Cotton 06 - Uganda			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	4.018	250	216	1.340	4.417	257	210	1.498	4.460	256	212	1.458
2	3.561	193	150	1.656	3.587	167	114	2.146	3.755	183	130	1.982
3	3.741	214	173	1.530	4.461	262	213	1.513	4.374	248	198	1.569
4	3.967	244	209	1.363	4.021	216	161	1.800	3.523	158	107	2.180
5	4.338	299	275	1.182	4.219	231	178	1.684	3.575	160	110	2.116
6	4.526	320	305	1.101	3.766	182	127	2.054	3.939	198	145	1.865
7	4.263	285	262	1.183	3.831	192	137	1.964	4.503	262	214	1.499
8	4.436	309	293	1.112	3.671	170	119	2.041	3.762	184	133	1.914
9	3.572	192	151	1.617	3.860	193	138	1.956	3.510	157	106	2.194
10	4.295	291	267	1.188	3.614	171	117	2.136	3.820	187	135	1.919
11	3.545	189	148	1.631	4.488	262	212	1.527	4.213	228	178	1.641
12	3.783	219	181	1.464	4.287	240	186	1.665	3.911	191	140	1.861
13	3.917	235	201	1.367	4.131	219	167	1.720	4.542	274	227	1.457
14	4.523	321	311	1.065	3.934	195	144	1.834	4.132	222	172	1.666
15	3.848	220	183	1.445	4.428	257	207	1.541	4.026	214	164	1.703
16	4.361	300	282	1.132	3.679	171	119	2.065	3.755	180	129	1.947
17	3.903	230	196	1.377	4.240	235	181	1.686	4.250	231	181	1.629
18	3.657	207	165	1.574	4.584	279	229	1.484	4.447	253	213	1.411
19	3.991	250	215	1.352	4.288	238	184	1.673	3.618	169	117	2.086
20	4.028	253	220	1.323	4.105	218	165	1.746	3.696	177	124	2.038
21	4.144	270	240	1.266	4.320	243	191	1.619	4.295	238	189	1.586
22	4.090	258	227	1.292	3.944	197	142	1.925	4.008	206	155	1.766
23	4.502	322	309	1.086	4.333	242	189	1.639	3.784	181	129	1.969
24	3.718	213	174	1.499	3.816	189	135	1.960	3.842	184	134	1.885
25	3.953	241	206	1.369	4.078	213	159	1.795	4.103	217	166	1.709

Appendix 1: Mean Test Data - Replication No 1

	Cotton 07 - Coker				Cotton 08 - Tanguis				Cotton 09 - Old B-19			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	3.825	164	122	1.807	4.533	178	146	1.486	4.537	233	191	1.488
2	4.560	248	207	1.435	4.406	169	133	1.615	4.100	188	143	1.728
3	4.173	204	158	1.667	4.091	142	106	1.795	4.152	192	146	1.729
4	4.189	204	158	1.667	3.702	118	82	2.071	3.627	144	101	2.033
5	3.723	160	115	1.936	3.599	110	75	2.151	4.249	200	156	1.644
6	3.627	149	104	2.053	4.143	148	113	1.715	4.325	208	165	1.589
7	4.049	189	144	1.723	3.784	122	87	1.966	3.505	136	93	2.139
8	3.638	150	105	2.041	3.981	137	101	1.840	4.427	220	178	1.528
9	4.020	185	142	1.697	4.211	151	115	1.724	3.785	157	115	1.864
10	4.546	238	199	1.430	3.876	130	92	1.997	3.991	176	131	1.805
11	4.325	214	172	1.548	3.858	129	91	2.010	4.075	183	137	1.784
12	4.427	225	183	1.512	4.095	146	108	1.828	3.518	137	92	2.218
13	3.774	162	118	1.885	4.338	161	126	1.633	3.739	152	109	1.945
14	3.905	174	127	1.877	4.059	142	106	1.795	3.805	158	114	1.921
15	4.324	215	171	1.581	4.456	172	138	1.553	4.076	186	139	1.791
16	4.166	199	158	1.586	3.829	126	89	2.004	4.477	226	184	1.509
17	4.471	236	196	1.450	3.665	116	79	2.156	3.987	173	132	1.718
18	3.543	147	101	2.118	3.910	132	96	1.891	4.318	207	163	1.613
19	3.922	176	131	1.805	3.629	114	78	2.136	4.073	182	137	1.765
20	4.084	195	149	1.713	3.512	107	72	2.209	3.762	158	110	2.063
21	4.325	221	178	1.542	4.011	140	103	1.847	3.524	138	93	2.202
22	3.737	161	116	1.926	4.554	182	149	1.492	3.604	144	99	2.116
23	3.508	139	97	2.053	3.822	126	89	2.004	3.787	157	111	2.001
24	4.101	194	150	1.673	4.052	142	106	1.795	4.047	181	134	1.825
25	3.800	164	123	1.778	4.372	167	132	1.601	4.365	214	167	1.642

	Cotton 10 - Old D-3				Cotton 11 - ICCS K				Cotton 12 - ICCS B23			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	3.728	200	138	2.100	4.481	103	77	1.789	4.411	208	161	1.669
2	3.868	210	149	1.986	4.218	92	65	2.003	3.754	151	103	2.149
3	4.197	251	189	1.764	4.114	88	61	2.081	3.796	154	105	2.151
4	4.412	277	220	1.585	4.144	88	61	2.081	4.161	188	138	1.856
5	4.046	236	174	1.840	4.543	108	80	1.823	4.439	211	162	1.696
6	4.217	254	193	1.732	3.825	77	50	2.372	4.038	173	125	1.915
7	3.707	198	136	2.120	3.905	80	52	2.367	3.907	162	114	2.019
8	4.304	266	206	1.667	3.706	71	46	2.382	3.703	148	98	2.281
9	3.589	185	125	2.190	3.660	70	45	2.420	3.875	160	111	2.078
10	4.102	242	182	1.768	3.524	66	41	2.591	3.526	132	86	2.356
11	4.502	292	235	1.544	3.512	65	40	2.641	4.183	186	136	1.870
12	3.622	184	128	2.066	4.371	100	72	1.929	3.611	139	91	2.333
13	3.828	208	148	1.975	4.020	86	57	2.276	3.678	144	96	2.250
14	3.638	189	129	2.147	4.445	104	75	1.923	4.345	205	154	1.772
15	3.953	227	167	1.848	3.939	83	55	2.277	3.504	132	85	2.412
16	4.072	242	180	1.808	4.098	89	61	2.129	3.939	165	116	2.023
17	4.584	308	252	1.494	4.439	104	75	1.923	4.276	196	146	1.802
18	3.867	217	157	1.910	3.727	73	46	2.518	4.338	202	153	1.743
19	3.514	178	120	2.200	4.357	99	70	2.000	4.497	217	171	1.610
20	4.163	254	191	1.768	3.813	76	49	2.406	4.076	177	130	1.854
21	4.220	262	204	1.649	3.761	72	46	2.450	3.896	159	113	1.980
22	3.762	206	148	1.937	3.906	80	52	2.367	4.293	196	151	1.685
23	4.203	256	198	1.672	3.607	67	42	2.545	3.681	142	98	2.100
24	3.869	218	158	1.904	4.211	92	65	2.003	4.336	200	155	1.665
25	4.193	254	196	1.679	4.544	107	78	1.882	3.574	137	91	2.267

Appendix 1: Mean Test Data - Replication No 1

	Cotton 13 - ICCS E3				Cotton 14 - ICCS H2				Cotton 15 - ICCS C33			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	4.080	327	285	1.316	3.865	110	73	2.271	3.887	229	176	1.693
2	3.603	252	200	1.588	4.104	122	85	2.060	4.164	271	217	1.560
3	4.338	385	351	1.203	3.585	95	60	2.507	4.588	333	293	1.292
4	3.627	259	207	1.566	3.760	104	67	2.409	3.772	220	162	1.844
5	4.559	426	410	1.080	4.329	139	100	1.932	4.061	256	199	1.655
6	4.364	385	351	1.203	3.744	103	67	2.363	4.302	288	236	1.489
7	3.897	293	248	1.396	3.654	98	63	2.420	3.956	241	183	1.734
8	3.535	239	188	1.616	3.951	115	77	2.231	3.672	204	152	1.801
9	4.410	387	353	1.202	4.037	120	83	2.090	3.526	189	136	1.931
10	4.324	372	339	1.204	4.470	148	110	1.810	4.270	286	238	1.444
11	4.567	411	393	1.094	4.248	132	94	1.972	4.411	303	258	1.379
12	3.760	277	225	1.516	4.588	152	114	1.778	3.925	235	181	1.686
13	4.031	321	278	1.333	4.395	142	102	1.938	3.733	215	159	1.828
14	3.959	307	261	1.384	4.440	145	107	1.836	4.100	260	208	1.563
15	4.156	345	302	1.305	3.566	93	59	2.485	4.378	300	254	1.395
16	4.263	367	329	1.244	3.641	97	62	2.448	4.558	334	289	1.336
17	3.514	241	186	1.679	3.813	105	68	2.384	3.821	227	172	1.742
18	4.050	329	282	1.361	3.950	117	77	2.309	4.160	268	217	1.525
19	3.791	278	223	1.554	4.073	123	84	2.144	3.827	228	173	1.737
20	4.248	360	317	1.290	4.185	128	90	2.023	4.233	282	230	1.503
21	4.177	340	297	1.311	4.544	151	113	1.786	4.024	251	197	1.623
22	3.774	274	221	1.537	3.665	99	63	2.469	3.988	244	190	1.649
23	4.394	383	345	1.232	4.249	132	92	2.059	4.393	303	256	1.401
24	3.890	290	237	1.497	4.000	117	78	2.250	3.574	197	141	1.952
25	3.637	252	195	1.670	4.720	161	123	1.713	4.139	267	218	1.500

	Cotton 16 - ICCS F2				Cotton 17 - ICCS A16				Cotton 18 - ICCS I25			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	3.994	88	62	2.015	3.532	108	71	2.314	4.136	163	125	1.700
2	4.039	88	62	2.015	4.361	162	124	1.707	4.564	202	168	1.446
3	3.657	73	48	2.313	4.033	138	99	1.943	4.143	163	128	1.622
4	3.503	69	45	2.351	4.183	147	109	1.819	3.839	139	103	1.821
5	4.150	94	68	1.911	3.953	132	93	2.015	4.466	194	158	1.508
6	4.506	112	86	1.696	4.383	161	123	1.713	4.266	177	140	1.598
7	4.533	113	86	1.726	4.205	150	112	1.794	3.514	120	81	2.195
8	3.782	78	53	2.166	3.754	116	81	2.051	3.724	134	96	1.948
9	3.806	79	54	2.140	3.866	125	87	2.064	3.695	131	92	2.028
10	3.628	73	47	2.412	4.554	174	139	1.567	3.971	151	113	1.786
11	4.397	106	79	1.800	3.602	109	73	2.229	4.092	159	123	1.671
12	4.225	98	71	1.905	4.469	169	131	1.664	4.396	189	152	1.546
13	4.159	93	66	1.986	4.224	150	111	1.826	4.536	199	166	1.437
14	3.682	74	48	2.377	4.092	141	102	1.911	3.550	122	83	2.161
15	4.273	97	71	1.866	3.507	103	68	2.294	4.275	178	141	1.594
16	3.980	87	59	2.174	4.101	142	103	1.901	3.960	151	113	1.786
17	4.502	109	83	1.725	3.528	105	69	2.316	3.893	145	107	1.836
18	4.354	101	75	1.814	3.809	123	85	2.094	3.639	125	88	2.018
19	3.988	86	59	2.125	4.436	167	128	1.702	3.594	126	86	2.147
20	3.866	80	55	2.116	4.353	161	122	1.742	3.786	138	100	1.904
21	3.727	75	49	2.343	3.754	120	83	2.090	4.013	156	119	1.719
22	4.403	105	77	1.860	3.727	117	80	2.139	3.834	143	104	1.891
23	4.397	104	77	1.824	3.937	130	92	1.997	4.142	166	129	1.656
24	4.310	101	74	1.863	4.123	144	105	1.881	4.323	182	147	1.533
25	3.996	87	59	2.174	4.275	153	115	1.770	3.527	123	84	2.144

Appendix 1: Mean Test Data - Replication No 1

Specimen	Cotton 19 - ICCS G12				Cotton 20 - ICCS D3			
	Weight	PL	PH	$(PL/PH)^2$	Weight	PL	PH	$(PL/PH)^2$
1	4.201	446	438	1.037	4.463	286	235	1.481
2	3.837	365	333	1.201	4.112	241	187	1.661
3	4.053	410	393	1.088	3.926	220	166	1.756
4	3.607	321	275	1.363	3.782	204	150	1.850
5	3.801	355	319	1.238	4.328	266	215	1.531
6	3.774	345	316	1.192	4.185	247	197	1.572
7	3.517	300	252	1.417	3.517	177	124	2.038
8	3.551	310	261	1.411	3.682	192	139	1.908
9	3.638	324	280	1.339	3.890	214	161	1.767
10	4.123	424	413	1.054	3.667	191	137	1.944
11	4.014	399	384	1.080	4.089	242	186	1.693
12	3.917	374	353	1.123	4.237	256	202	1.606
13	4.082	417	402	1.076	4.593	304	258	1.388
14	3.620	325	279	1.357	3.822	205	154	1.772
15	4.114	424	410	1.069	4.495	293	240	1.490
16	3.512	300	252	1.417	3.973	227	171	1.762
17	3.833	357	328	1.185	4.385	270	219	1.520
18	3.715	342	299	1.308	3.602	184	132	1.943
19	4.067	408	389	1.100	3.713	192	139	1.908
20	3.910	377	350	1.160	3.517	177	123	2.071
21	3.748	343	305	1.265	3.955	220	165	1.778
22	3.878	369	342	1.164	3.837	209	155	1.818
23	3.616	318	276	1.328	4.352	267	218	1.500
24	3.908	373	348	1.149	4.509	291	244	1.422
25	4.233	457	458	0.996	4.119	238	185	1.655

Appendix 2: Mean Test Data - Replication No 2

	Cotton 01 - Deltapine				Cotton 02 - Acala				Cotton 03 - Menoufi			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	3.533	149	103	2.093	3.574	140	98	2.041	3.682	196	142	1.905
2	4.406	229	186	1.516	4.571	232	195	1.415	3.756	204	149	1.875
3	4.203	213	167	1.627	4.127	188	144	1.704	4.461	301	255	1.393
4	4.089	202	156	1.677	3.649	145	102	2.021	4.027	235	186	1.596
5	3.721	165	118	1.955	4.136	188	144	1.704	3.712	202	148	1.863
6	3.677	162	115	1.984	4.074	183	140	1.709	4.101	245	189	1.680
7	3.833	176	128	1.891	4.383	213	171	1.552	3.631	193	139	1.928
8	3.956	190	142	1.790	4.386	211	171	1.523	4.472	297	250	1.411
9	4.190	210	165	1.620	4.043	180	137	1.726	4.134	246	193	1.625
10	4.353	229	184	1.549	3.886	163	121	1.815	4.202	262	212	1.527
11	3.742	167	119	1.969	3.722	151	108	1.955	3.933	232	181	1.643
12	4.274	219	175	1.566	3.942	170	127	1.792	4.280	275	225	1.494
13	3.872	178	133	1.791	4.205	194	150	1.673	3.513	181	128	2.000
14	4.091	198	153	1.675	3.644	145	103	1.982	3.860	239	190	1.582
15	3.590	154	108	2.033	4.411	218	177	1.517	3.542	186	132	1.986
16	4.389	230	189	1.481	3.667	145	104	1.944	3.933	229	175	1.712
17	3.675	161	115	1.960	4.134	189	144	1.723	3.899	217	167	1.688
18	3.917	183	136	1.811	4.430	216	175	1.523	4.005	235	183	1.649
19	4.157	209	164	1.624	4.101	181	139	1.696	4.397	291	245	1.411
20	4.443	240	196	1.499	4.599	235	198	1.409	4.318	278	229	1.474
21	3.769	168	122	1.896	3.582	142	99	2.057	3.629	190	137	1.923
22	3.920	183	137	1.784	3.864	163	120	1.845	3.520	177	126	1.973
23	4.186	209	164	1.624	4.049	176	134	1.725	4.184	261	212	1.516
24	4.357	230	185	1.546	3.610	141	98	2.070	3.766	210	160	1.723
25	4.058	200	153	1.709	3.995	174	131	1.764	3.999	233	184	1.604

	Cotton 04 - Lankart				Cotton 05 - Lambert				Cotton 06 - Uganda			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	3.701	213	176	1.465	4.415	265	215	1.519	3.641	168	119	1.993
2	3.930	239	208	1.320	3.614	175	124	1.992	4.347	255	213	1.433
3	3.768	219	187	1.372	4.469	261	218	1.433	4.347	256	210	1.486
4	4.418	315	300	1.103	3.649	177	125	2.005	3.575	163	115	2.009
5	4.331	301	281	1.147	3.916	201	151	1.772	3.659	174	125	1.938
6	3.554	195	157	1.543	3.881	197	146	1.821	3.757	181	132	1.880
7	3.918	240	207	1.344	4.198	234	184	1.617	4.111	216	168	1.653
8	4.494	327	319	1.051	4.129	235	179	1.724	3.559	166	114	2.120
9	4.344	301	286	1.108	4.242	240	192	1.563	4.027	212	162	1.713
10	3.615	203	165	1.514	3.838	193	143	1.822	4.354	244	199	1.503
11	3.857	233	198	1.385	3.972	208	158	1.733	4.207	225	179	1.580
12	3.835	229	195	1.379	3.796	187	137	1.863	4.383	250	205	1.487
13	4.089	271	246	1.214	3.590	168	120	1.960	3.990	205	157	1.705
14	4.228	288	268	1.155	3.527	162	115	1.984	4.150	220	173	1.617
15	4.120	269	242	1.236	3.614	171	121	1.997	3.757	177	129	1.883
16	4.194	280	255	1.206	4.088	221	173	1.632	3.989	199	153	1.692
17	3.678	207	169	1.500	4.003	215	165	1.698	3.781	184	135	1.858
18	4.091	270	240	1.266	4.381	257	213	1.456	4.290	241	196	1.512
19	3.599	201	164	1.502	4.484	272	229	1.411	4.031	208	160	1.690
20	3.774	219	185	1.401	4.344	252	205	1.511	3.999	205	159	1.662
21	4.277	296	278	1.134	4.243	235	187	1.579	3.526	159	112	2.015
22	3.577	198	160	1.531	4.108	221	173	1.632	3.775	189	141	1.797
23	3.655	206	171	1.451	3.707	179	129	1.925	3.506	157	111	2.001
24	4.250	287	265	1.173	3.973	207	158	1.716	3.552	163	115	2.009
25	4.034	261	234	1.244	3.595	166	119	1.946				

Appendix 2: Mean Test Data - Replication No 2

	Cotton 07 - Coker				Cotton 08 - Tanguis				Cotton 09 - Old B-19			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	4.483	233	198	1.385	3.790	124	86	2.079	3.540	137	93	2.170
2	3.500	138	97	2.024	3.587	113	75	2.270	3.830	162	115	1.984
3	4.080	189	147	1.653	3.926	132	92	2.059	3.924	170	123	1.910
4	4.182	192	153	1.575	4.497	177	138	1.645	4.493	225	182	1.528
5	3.858	170	127	1.792	4.136	149	109	1.869	4.452	222	177	1.573
6	3.546	143	102	1.965	4.191	153	112	1.866	3.779	157	111	2.001
7	4.367	218	182	1.435	3.812	126	87	2.098	4.179	194	148	1.718
8	4.305	214	176	1.478	3.616	113	75	2.270	3.514	135	91	2.201
9	3.670	155	113	1.882	4.046	140	101	1.921	3.723	151	106	2.029
10	4.191	205	165	1.544	4.263	158	119	1.763	3.611	143	99	2.086
11	4.024	187	147	1.618	4.342	164	125	1.721	4.201	197	150	1.725
12	3.811	164	123	1.778	3.910	133	94	2.002	3.840	165	117	1.989
13	3.756	161	119	1.830	3.759	122	85	2.060	4.057	183	135	1.838
14	4.145	198	158	1.570	4.454	173	136	1.618	4.357	214	169	1.603
15	4.401	223	189	1.392	4.111	150	111	1.826	4.392	216	172	1.577
16	3.701	155	114	1.849	3.816	125	87	2.064	4.282	204	159	1.646
17	3.683	154	113	1.857	4.311	163	125	1.700	3.648	148	102	2.105
18	3.977	182	141	1.666	3.574	110	75	2.151	3.835	162	117	1.917
19	3.902	171	131	1.704	4.037	142	104	1.864	4.177	195	148	1.736
20	4.221	205	167	1.507	3.681	120	82	2.142	4.017	180	132	1.860
21	4.443	229	197	1.351	4.271	159	122	1.699	3.903	168	122	1.896
22	3.634	152	110	1.909	3.673	118	80	2.176	4.437	222	177	1.573
23	4.081	194	152	1.629	4.093	147	106	1.923	3.556	141	96	2.157
24	4.261	210	172	1.491	3.906	136	96	2.007	3.890	168	122	1.896
25	3.557	144	103	1.955	4.227	157	119	1.741	4.053	184	137	1.804

	Cotton 10 - Old D-3				Cotton 11 - ICCS K				Cotton 12 - ICCS B23			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	4.075	236	179	1.738	4.100	90	63	2.041	3.658	141	99	2.028
2	3.880	212	155	1.871	3.887	79	53	2.222	3.630	140	97	2.083
3	3.943	220	163	1.822	3.589	69	44	2.459	4.139	180	137	1.726
4	3.540	179	122	2.153	3.918	80	55	2.116	4.232	192	148	1.683
5	4.407	286	230	1.546	4.355	99	72	1.891	4.098	179	134	1.784
6	4.494	294	242	1.476	4.137	90	63	2.041	3.756	148	104	2.025
7	4.101	237	181	1.715	4.503	105	79	1.767	3.900	160	117	1.870
8	3.870	206	157	1.722	3.980	82	56	2.144	4.276	193	150	1.656
9	3.684	190	135	1.981	4.251	94	68	1.911	3.834	155	111	1.950
10	3.551	177	124	2.038	3.525	64	41	2.437	3.913	161	116	1.926
11	4.335	264	214	1.522	3.632	69	44	2.459	3.520	126	88	2.050
12	4.168	250	196	1.627	3.796	75	49	2.343	3.769	151	106	2.029
13	3.614	186	132	1.986	4.492	105	78	1.812	4.527	221	179	1.524
14	3.792	201	150	1.796	4.420	102	75	1.850	4.332	201	158	1.618
15	3.912	216	163	1.756	3.670	71	46	2.382	4.449	214	171	1.566
16	4.265	261	208	1.575	4.161	89	63	1.996	3.509	130	85	2.339
17	4.054	233	178	1.713	4.017	83	56	2.197	3.877	159	112	2.015
18	3.792	200	147	1.851	3.875	79	53	2.222	4.390	207	161	1.653
19					4.056	84	57	2.172	3.948	166	118	1.979
20					4.584	109	83	1.725	4.573	222	180	1.521
21					3.959	79	54	2.140	3.711	146	100	2.132
22					3.528	64	40	2.560	4.111	181	131	1.909
23					4.320	97	71	1.866	4.071	172	128	1.806
24					4.294	96	68	1.993	4.044	173	126	1.885
25					4.586	111	84	1.746	4.560	223	178	1.570

Appendix 2: Mean Test Data - Replication No 2

	Cotton 13 - ICCS E3				Cotton 14 - ICCS H2				Cotton 15 - ICCS C33			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	3.818	289	240	1.450	3.594	94	62	2.299	4.091	265	212	1.563
2	3.534	241	189	1.626	4.146	125	89	1.973	4.343	300	250	1.440
3	4.233	367	331	1.229	3.892	108	75	2.074	3.719	215	161	1.783
4	3.781	281	230	1.493	3.977	114	79	2.082	4.126	271	218	1.545
5	4.419	395	366	1.165	3.523	89	57	2.438	4.224	283	234	1.463
6	4.514	415	396	1.098	4.257	130	94	1.913	3.890	234	183	1.635
7	3.586	248	196	1.601	4.198	126	92	1.876	4.549	331	290	1.303
8	3.622	252	200	1.588	4.354	136	102	1.778	4.443	318	273	1.357
9	4.000	314	272	1.333	3.698	99	65	2.320	3.542	198	141	1.972
10	4.027	328	283	1.343	4.554	150	114	1.731	4.358	302	258	1.370
11	4.177	343	304	1.273	3.840	107	72	2.209	3.772	221	169	1.710
12	4.376	377	351	1.154	4.466	145	110	1.738	3.623	208	151	1.897
13	4.089	329	286	1.323	3.712	98	66	2.205	4.249	287	238	1.454
14	3.878	293	250	1.374	4.100	119	85	1.960	3.921	235	186	1.596
15	4.134	346	304	1.295	3.906	109	75	2.112	3.667	212	156	1.847
16	4.078	326	284	1.318	3.883	107	74	2.091	4.128	270	211	1.637
17	4.458	404	380	1.130	3.713	98	66	2.205	3.514	196	136	2.077
18	4.315	371	345	1.156	4.072	116	83	1.953	4.335	301	248	1.473
19	3.738	272	225	1.461	4.176	123	89	1.910	3.952	243	187	1.689
20	3.557	244	192	1.615	4.393	138	103	1.795	3.899	237	181	1.715
21	3.670	258	206	1.569	4.483	145	111	1.706	3.613	203	146	1.933
22	3.858	279	232	1.446	4.097	119	84	2.007	4.441	313	263	1.416
23	4.093	330	286	1.331	4.577	151	116	1.694	4.012	252	197	1.636
24	3.573	246	193	1.625	3.999	115	81	2.016	3.725	218	159	1.880
25	4.252	363	335	1.174	3.734	102	68	2.250	4.584	337	291	1.341

	Cotton 16 - ICCS F2				Cotton 17 - ICCS A16				Cotton 18 - ICCS I25			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	4.136	94	69	1.856	4.4992	174	134	1.6861	4.2448	172	133	1.672
2	4.349	103	79	1.700	3.5826	108	71	2.3138	3.8231	139	100	1.932
3	4.566	113	89	1.612	3.6338	111	75	2.1904	3.5571	120	81	2.195
4	4.253	98	73	1.802	4.3219	159	119	1.7853	4.4505	190	153	1.542
5	3.518	66	44	2.250	4.0158	137	97	1.9948	3.6921	129	90	2.054
6	4.453	107	84	1.623	4.3756	162	123	1.7347	4.3645	185	145	1.628
7	3.731	76	52	2.136	4.1193	143	103	1.9275	3.9697	153	112	1.866
8	4.032	88	64	1.891	3.7152	116	78	2.2117	4.1648	166	127	1.708
9	3.689	73	50	2.132	4.2464	152	113	1.8094	4.0698	158	118	1.793
10	4.223	98	73	1.802	3.8971	129	91	2.0095	4.4267	190	153	1.542
11	3.843	80	56	2.041	4.1309	144	106	1.8455	3.7745	137	98	1.954
12	3.891	82	58	1.999	4.3445	161	124	1.6858	4.0091	154	115	1.793
13	3.725	75	51	2.163	4.4572	172	133	1.6725	3.5164	117	81	2.086
14	3.986	85	62	1.880	3.9043	129	91	2.0095	4.3515	184	147	1.567
15	3.727	74	52	2.025	4.2569	153	115	1.7701	3.8289	141	101	1.949
16	3.963	85	61	1.942	3.6648	115	77	2.2306	4.4013	188	151	1.550
17	3.703	72	51	1.993	3.8403	125	87	2.0643	3.5897	124	85	2.128
18	3.946	85	60	2.007	4.1921	150	112	1.7937	4.2685	178	138	1.664
19	4.221	96	72	1.778	3.8077	123	85	2.0940	4.1516	167	127	1.729
20	4.057	89	65	1.875	3.9124	130	91	2.0408	3.7535	138	97	2.024
21	4.100	90	66	1.860	3.9294	129	92	1.9661	3.9242	149	108	1.903
22	4.586	112	90	1.549	4.2489	153	114	1.8012	4.3700	186	148	1.579
23	4.294	99	76	1.697	3.8291	125	87	2.0643	4.4499	191	155	1.518
24	4.364	103	79	1.700	3.5098	106	69	2.3600	4.3067	179	139	1.658
25	4.437	105	82	1.640	4.4948	175	137	1.6317	3.6239	126	86	2.147

Appendix 2: Mean Test Data - Replication No 2

	Cotton 19 - ICCS G12				Cotton 20 - ICCS D3			
Specimen	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**
1	3.550	300	252	1.417	3.939	224	164	1.866
2	4.085	414	392	1.115	4.428	283	228	1.541
3	3.678	328	286	1.315	3.529	178	122	2.129
4	3.887	368	331	1.236	3.711	200	142	1.984
5	4.172	429	415	1.069	3.846	215	156	1.899
6	4.228	440	430	1.047	4.551	303	253	1.434
7	3.706	327	290	1.271	3.617	189	133	2.019
8	3.620	316	269	1.380	4.007	229	170	1.815
9	3.867	358	325	1.213	4.229	259	200	1.677
10	3.724	331	289	1.312	4.108	247	188	1.726
11	3.993	391	363	1.160	4.353	275	220	1.563
12	3.538	309	252	1.504	4.411	281	226	1.546
13	3.750	338	296	1.304	4.066	234	176	1.768
14	4.109	413	398	1.077	3.593	185	127	2.122
15	3.556	301	253	1.415	3.700	193	136	2.014
16	3.927	367	335	1.200	3.708	194	137	2.005
17	3.914	367	335	1.200	4.229	261	202	1.669
18	4.056	397	375	1.121	3.534	184	124	2.202
19	4.139	422	407	1.075	3.637	189	131	2.082
20	3.668	316	275	1.320	4.085	242	183	1.749
21	3.951	377	344	1.201	3.868	214	156	1.882
22	3.810	349	313	1.243	3.906	216	158	1.869
23	3.659	317	272	1.358	4.042	232	175	1.758
24	3.721	328	289	1.288	4.324	269	215	1.565
25	4.017	390	360	1.174	3.868	213	155	1.888

Appendix 3

FIXED WEIGHT (4.00 g) SERIES : MEAN TEST DATA

Cotton # 1 - DELTAPINE

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	186.5	141.0	4.35	0.831	197.2	237.4	163.8	166.2
2	188.5	142.5	4.32	0.832	195.1	234.5	162.3	164.6
3	189.5	143.5	4.30	0.830	194.6	234.6	161.5	163.8
4	187.5	144.5	4.34	0.800	202.8	253.6	162.3	165.4
5	190.0	143.5	4.30	0.834	193.2	231.6	161.2	163.4
6	192.5	145.0	4.26	0.840	189.8	225.9	159.5	161.4
7	191.5	144.0	4.27	0.843	190.2	225.8	160.3	162.2
8	190.0	141.5	4.30	0.858	188.5	219.7	161.8	163.4
9	189.0	142.5	4.31	0.837	193.7	231.5	162.0	164.2
10	190.5	143.5	4.29	0.839	191.8	228.6	161.0	163.0
Mean	**189.6**	**143.2**	**4.30**	**0.834**	**193.7**	**232.3**	**161.6**	**163.7**
sd	**1.79**	**1.27**	**0.03**	**0.01**	**4.16**	**9.09**	**1.19**	**1.44**
CV%	**0.94**	**0.89**	**0.67**	**1.75**	**2.15**	**3.91**	**0.74**	**0.88**

Cotton # 2 - ACALA

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	175.5	129	4.54	0.872	199.5	228.7	174.0	175.9
2	176.5	130.5	4.53	0.863	200.4	232.3	172.9	175.0
3	176.5	130.5	4.53	0.863	200.4	232.3	172.9	175.0
4	175.5	132	4.54	0.833	207.7	249.3	173.0	175.9
5	177	132	4.52	0.848	202.9	239.2	172.1	174.5
6	177.5	132.5	4.51	0.847	202.6	239.3	171.6	174.1
7	177	130	4.52	0.874	197.5	225.9	172.7	174.5
8	177	129.5	4.52	0.881	196.2	222.6	172.9	174.5
9	178.5	130.5	4.49	0.884	194.3	219.9	171.7	173.1
10	178.5	132.5	4.49	0.857	199.5	232.8	171.0	173.1
Mean	**177.0**	**130.9**	**4.52**	**0.862**	**200.1**	**232.2**	**172.5**	**174.6**
sd	**1.04**	**1.26**	**0.02**	**0.02**	**3.77**	**8.74**	**0.87**	**0.95**
CV%	**0.59**	**0.97**	**0.42**	**1.89**	**1.88**	**3.76**	**0.51**	**0.55**

Cotton # 3 - MENOUFI

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	233.0	176.5	3.71	0.851	158.4	186.2	134.8	135.0
2	233.5	175.5	3.71	0.864	155.9	180.3	134.8	134.8
3	237.5	180.0	3.66	0.852	155.5	182.5	132.5	132.6
4	234.0	182.0	3.70	0.807	165.2	204.5	133.4	134.5
5	235.0	181.5	3.69	0.819	162.5	198.3	133.1	134.0
6	236.0	181.0	3.68	0.831	159.8	192.2	132.8	133.4
7	237.0	179.5	3.67	0.853	155.7	182.5	132.8	132.9
8	233.5	178.0	3.71	0.840	159.8	190.2	134.3	134.8
9	237.5	180.0	3.66	0.852	155.5	182.5	132.5	132.6
10	234.0	179.0	3.70	0.835	160.4	192.2	133.9	134.5
Mean	**235.1**	**179.3**	**3.69**	**0.841**	**158.9**	**189.2**	**133.5**	**133.9**
sd	**1.76**	**2.11**	**0.02**	**0.02**	**3.31**	**7.87**	**0.89**	**0.93**
CV%	**0.75**	**1.18**	**0.53**	**2.08**	**2.08**	**4.16**	**0.67**	**0.70**

Appendix 3

FIXED WEIGHT (4.00 g) SERIES : MEAN TEST DATA

Cotton # 4 - LANKART

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	248.0	211.5	3.55	0.677	183.1	270.7	123.9	127.4
2	248.0	212.0	3.55	0.673	183.9	273.1	123.8	127.4
3	248.0	212.0	3.55	0.673	183.9	273.1	123.8	127.4
4	243.5	212.5	3.60	0.645	194.2	301.2	125.2	129.6
5	249.5	217.5	3.54	0.648	189.1	291.9	122.6	126.7
6	251.5	217.5	3.52	0.659	185.0	280.7	121.9	125.7
7	253.0	216.5	3.50	0.674	180.6	268.0	121.6	125.0
8	248.5	211.5	3.55	0.679	182.1	268.0	123.7	127.2
9	250.5	213.0	3.53	0.681	180.3	264.7	122.9	126.2
10	249.0	215.0	3.54	0.660	186.4	282.2	123.1	126.9
Mean	**249.0**	**213.9**	**3.54**	**0.667**	**184.9**	**277.4**	**123.2**	**126.9**
sd	**2.54**	**2.48**	**0.03**	**0.01**	**4.20**	**11.70**	**1.05**	**1.22**
CV%	**1.02**	**1.16**	**0.73**	**1.97**	**2.27**	**4.22**	**0.85**	**0.96**

Cotton # 5 - LAMBERT

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	208.5	154.5	4.02	0.877	170.3	194.2	149.3	149.8
2	207.5	155	4.03	0.862	173.6	201.2	149.7	150.5
3	211.5	157.5	3.98	0.870	169.4	194.7	147.3	147.8
4	208.5	158	4.02	0.838	177.1	211.2	148.5	149.8
5	211.5	158.5	3.98	0.859	171.2	199.4	147.1	147.8
6	213.5	160.5	3.95	0.855	170.6	199.6	145.7	146.5
7	212.5	159.5	3.97	0.857	170.9	199.5	146.4	147.2
8	208.5	155.5	4.02	0.866	172.2	199.0	149.1	149.8
9	211.5	158	3.98	0.864	170.3	197.0	147.2	147.8
10	212.5	157	3.97	0.884	166.2	188.0	147.0	147.2
Mean	**210.6**	**157.4**	**3.99**	**0.863**	**171.2**	**198.4**	**147.7**	**148.4**
sd	**2.13**	**1.94**	**0.03**	**0.01**	**2.82**	**5.94**	**1.33**	**1.41**
CV%	**1.01**	**1.23**	**0.72**	**1.46**	**1.65**	**2.99**	**0.90**	**0.95**

Cotton # 6 - UGANDA

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	204.0	153.0	4.08	0.854	177.8	208.3	151.8	152.9
2	203.5	152.0	4.09	0.860	176.9	205.6	152.2	153.2
3	205.0	155.0	4.07	0.840	179.4	213.5	150.8	152.2
4	200.5	153.5	4.13	0.817	187.5	229.4	153.3	155.4
5	204.0	156.5	4.08	0.816	185.0	226.7	150.9	152.9
6	206.5	158.0	4.05	0.821	181.9	221.4	149.4	151.2
7	211.0	160.0	3.99	0.839	175.2	208.9	146.9	148.1
8	205.0	154.0	4.07	0.851	177.4	208.4	151.1	152.2
9	207.0	156.5	4.04	0.842	177.7	211.1	149.5	150.8
10	206.5	156.0	4.05	0.843	177.9	211.1	149.9	151.2
Mean	**205.3**	**155.5**	**4.07**	**0.838**	**179.7**	**214.4**	**150.6**	**152.0**
sd	**2.75**	**2.44**	**0.04**	**0.02**	**3.91**	**8.35**	**1.77**	**1.89**
CV%	**1.34**	**1.57**	**0.95**	**1.84**	**2.18**	**3.89**	**1.17**	**1.25**

Appendix 3

FIXED WEIGHT (4.00 g) SERIES : MEAN TEST DATA

Cotton # 7 - COKER

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	184.0	138.5	4.39	0.837	198.4	237.1	165.9	168.3
2	183.5	137.5	4.40	0.844	197.3	233.8	166.5	168.7
3	185.0	140.5	4.38	0.822	200.4	243.7	164.8	167.5
4	181.5	140.0	4.44	0.795	209.9	263.9	166.9	170.5
5	182.5	140.0	4.42	0.805	206.7	256.9	166.4	169.6
6	184.0	140.5	4.39	0.813	203.4	250.2	165.4	168.3
7	186.5	142.0	4.35	0.819	199.7	243.8	163.5	166.2
8	183.0	138.5	4.41	0.827	201.3	243.5	166.5	169.2
9	187.5	141.5	4.34	0.834	195.5	234.4	163.1	165.4
10	184.5	139.5	4.39	0.829	199.4	240.4	165.4	167.9
Mean	**184.2**	**139.9**	**4.39**	**0.823**	**201.2**	**244.8**	**165.4**	**168.2**
sd	**1.80**	**1.40**	**0.03**	**0.01**	**4.38**	**9.73**	**1.29**	**1.52**
CV%	**0.98**	**1.00**	**0.69**	**1.82**	**2.17**	**3.98**	**0.78**	**0.91**

Cotton # 8 - TANGUIS

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	138.0	98.5	5.38	0.898	241.0	268.5	216.3	219.6
2	138.5	99.5	5.36	0.886	242.9	274.0	215.3	218.9
3	141.0	100.5	5.30	0.903	235.3	260.7	212.3	215.3
4	138.5	101.0	5.36	0.860	249.3	289.8	214.5	218.9
5	139.5	100.0	5.34	0.891	240.2	269.6	214.0	217.5
6	139.0	101.5	5.35	0.858	249.0	290.1	213.7	218.2
7	141.5	101.5	5.28	0.892	237.1	265.9	211.4	214.6
8	137.5	98.0	5.39	0.900	241.2	268.1	217.1	220.4
9	140.0	100.0	5.32	0.898	237.8	264.9	213.6	216.7
10	141.0	101.0	5.30	0.894	237.3	265.6	212.1	215.3
Mean	**139.5**	**100.2**	**5.34**	**0.888**	**241.1**	**271.7**	**214.0**	**217.5**
sd	**1.38**	**1.20**	**0.04**	**0.02**	**4.81**	**10.20**	**1.83**	**1.98**
CV%	**0.99**	**1.20**	**0.68**	**1.78**	**1.99**	**3.75**	**0.86**	**0.91**

Cotton # 9 - Old B19

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	177.5	130.5	4.51	0.873	197.3	226.0	172.3	174.1
2	176.5	129.5	4.53	0.876	197.7	225.7	173.2	175.0
3	178.5	131.0	4.49	0.877	195.6	223.1	171.5	173.1
4	177.0	135.0	4.52	0.811	211.0	260.2	171.1	174.5
5	178.5	134.5	4.49	0.832	204.8	246.3	170.4	173.1
6	179.0	136.0	4.48	0.818	207.3	253.3	169.6	172.7
7	181.0	134.5	4.45	0.857	197.2	230.1	168.9	170.9
8	177.0	129.5	4.52	0.881	196.2	222.6	172.9	174.5
9	178.0	131.0	4.50	0.872	197.1	226.2	171.8	173.6
10	176.5	131.0	4.53	0.856	201.8	235.7	172.7	175.0
Mean	**178.0**	**132.3**	**4.50**	**0.855**	**200.6**	**234.9**	**171.4**	**173.6**
sd	**1.38**	**2.46**	**0.02**	**0.03**	**5.37**	**13.58**	**1.44**	**1.25**
CV%	**0.78**	**1.86**	**0.55**	**3.03**	**2.68**	**5.78**	**0.84**	**0.72**

Appendix 3

FIXED WEIGHT (4.00 g) SERIES : MEAN TEST DATA

Cotton # 10 - Old D3

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	227.5	169.0	3.78	0.882	156.8	177.7	138.3	138.1
2	228.5	173.0	3.77	0.850	161.4	189.9	137.1	137.5
3	225.0	168.0	3.81	0.872	159.9	183.4	139.4	139.5
4	228.5	174.0	3.77	0.840	163.0	194.1	136.9	137.5
5	228.5	173.0	3.77	0.850	161.4	189.9	137.1	137.5
6	229.0	174.0	3.76	0.844	162.0	192.0	136.7	137.2
7	226.5	167.5	3.79	0.890	156.2	175.6	139.0	138.7
8	228.0	169.5	3.77	0.881	156.6	177.8	138.0	137.8
9	226.5	169.0	3.79	0.874	158.7	181.6	138.7	138.7
10	230.5	174.0	3.74	0.856	159.1	186.0	136.2	136.4
Mean	**227.9**	**171.1**	**3.77**	**0.864**	**159.5**	**184.8**	**137.7**	**137.9**
sd	**1.55**	**2.72**	**0.02**	**0.02**	**2.43**	**6.56**	**1.09**	**0.88**
CV%	**0.68**	**1.59**	**0.49**	**2.08**	**1.52**	**3.55**	**0.79**	**0.63**

Cotton # 11 - ICCS K

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	83.5	55.5	7.48	0.972	351.6	361.7	341.8	343.3
2	84.0	56.5	7.45	0.950	356.8	375.6	339.0	341.6
3	84.0	56.0	7.45	0.967	351.3	363.3	339.7	341.6
4	83.0	58.0	7.51	0.879	386.1	439.3	339.3	345.1
5	84.0	57.0	7.45	0.933	362.4	388.3	338.2	341.6
6	84.5	57.5	7.43	0.929	362.0	389.7	336.2	339.9
7	86.0	58.0	7.35	0.948	350.2	369.5	331.8	334.8
8	84.0	56.5	7.45	0.950	356.8	375.6	339.0	341.6
9	85.0	57.5	7.40	0.941	356.2	378.7	335.0	338.1
10	83.5	56.5	7.48	0.938	362.7	386.7	340.2	343.3
Mean	**84.2**	**56.9**	**7.45**	**0.941**	**359.6**	**382.9**	**338.0**	**341.1**
sd	**0.85**	**0.84**	**0.05**	**0.03**	**10.40**	**22.14**	**2.90**	**2.93**
CV%	**1.01**	**1.48**	**0.63**	**2.73**	**2.89**	**5.78**	**0.86**	**0.86**

Cotton # 12 - ICCS B23

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	169.0	121.5	4.67	0.907	199.3	219.6	180.8	182.2
2	168.0	123.0	4.69	0.874	207.0	236.7	180.9	183.2
3	169.5	122.5	4.66	0.898	200.5	223.2	180.1	181.7
4	168.0	127.0	4.69	0.820	218.9	266.9	179.5	183.2
5	169.5	125.5	4.66	0.856	209.2	244.4	179.0	181.7
6	169.5	125.5	4.66	0.856	209.2	244.4	179.0	181.7
7	176.0	127.5	4.54	0.898	193.9	215.9	174.2	175.4
8	174.0	126.0	4.57	0.898	196.0	218.4	176.0	177.3
9	174.5	126.0	4.56	0.903	194.5	215.3	175.6	176.8
10	173.0	126.5	4.59	0.880	200.5	227.9	176.4	178.3
Mean	**171.1**	**125.1**	**4.63**	**0.879**	**202.9**	**231.3**	**178.2**	**180.1**
sd	**2.96**	**2.04**	**0.06**	**0.03**	**7.99**	**16.71**	**2.41**	**2.87**
CV%	**1.73**	**1.63**	**1.21**	**3.18**	**3.94**	**7.23**	**1.35**	**1.60**

Appendix 3

FIXED WEIGHT (4.00 g) SERIES : MEAN TEST DATA

Cotton # 13 - ICCS E3

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	314.5	255.5	3.00	0.768	132.6	172.7	101.9	102.1
2	308.5	260.5	3.04	0.709	144.7	204.0	102.6	104.0
3	308.0	253.0	3.04	0.749	138.1	184.3	103.4	104.1
4	308.0	261.0	3.04	0.704	145.8	207.1	102.6	104.1
5	308.0	261.0	3.04	0.704	145.8	207.1	102.6	104.1
6	312.5	263.0	3.01	0.715	142.0	198.6	101.5	102.7
7	307.0	250.5	3.05	0.759	136.9	180.4	103.9	104.4
8	308.5	255.5	3.04	0.737	139.8	189.7	103.1	104.0
9	315.0	260.0	2.99	0.744	136.1	183.0	101.3	102.0
10	307.5	256.0	3.05	0.729	141.6	194.1	103.2	104.3
Mean	**309.8**	**257.6**	**3.03**	**0.732**	**140.3**	**192.1**	**102.6**	**103.6**
sd	**3.03**	**4.07**	**0.02**	**0.02**	**4.43**	**12.03**	**0.85**	**0.93**
CV%	**0.98**	**1.58**	**0.69**	**3.18**	**3.16**	**6.26**	**0.83**	**0.90**

Cotton # 14 - ICCS H2

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	116.0	79.0	6.05	0.965	264.1	273.7	254.8	257.2
2	116.5	81.0	6.03	0.926	272.6	294.4	252.5	256.2
3	115.5	78.5	6.07	0.968	264.3	273.0	255.9	258.2
4	115.0	80.5	6.08	0.912	279.5	306.4	255.0	259.2
5	116.5	82.0	6.03	0.904	278.6	308.3	251.7	256.2
6	115.5	80.5	6.07	0.921	276.2	300.0	254.3	258.2
7	115.0	78.5	6.08	0.959	267.5	278.8	256.6	259.2
8	115.5	79.0	6.07	0.956	267.2	279.6	255.5	258.2
9	116.5	80.5	6.03	0.938	269.7	287.6	252.9	256.2
10	116.5	81.0	6.03	0.926	272.6	294.4	252.5	256.2
Mean	**115.9**	**80.1**	**6.05**	**0.937**	**271.2**	**289.6**	**254.2**	**257.5**
sd	**0.63**	**1.21**	**0.02**	**0.02**	**5.60**	**13.05**	**1.65**	**1.25**
CV%	**0.54**	**1.51**	**0.36**	**2.47**	**2.07**	**4.51**	**0.65**	**0.49**

Cotton # 15 - ICCS C33

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	257.0	197.0	3.46	0.841	146.6	174.3	123.3	123.2
2	263.0	203.5	3.41	0.828	145.6	175.9	120.6	120.6
3	257.5	198.0	3.46	0.836	147.1	176.0	123.0	123.0
4	254.0	204.5	3.49	0.761	161.6	212.3	123.1	124.6
5	259.0	203.5	3.44	0.801	151.9	189.6	121.7	122.3
6	259.5	205.0	3.44	0.793	153.1	193.0	121.4	122.1
7	258.0	197.5	3.45	0.844	145.7	172.7	122.9	122.8
8	255.0	197.5	3.48	0.823	150.5	182.8	123.8	124.1
9	257.0	200.5	3.46	0.812	151.2	186.2	122.8	123.2
10	259.0	203.5	3.44	0.801	151.9	189.6	121.7	122.3
Mean	**257.9**	**201.1**	**3.45**	**0.814**	**150.5**	**185.2**	**122.4**	**122.8**
sd	**2.50**	**3.28**	**0.02**	**0.03**	**4.81**	**11.97**	**1.03**	**1.11**
CV%	**0.97**	**1.63**	**0.69**	**3.15**	**3.20**	**6.46**	**0.84**	**0.90**

Appendix 3

FIXED WEIGHT (4.00 g) SERIES : MEAN TEST DATA

Cotton # 16 - ICCS F2

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	88.0	60.5	7.24	0.915	353.9	387.0	323.7	328.2
2	88.0	61.5	7.24	0.885	364.2	411.5	322.4	328.2
3	87.0	60.0	7.29	0.908	359.9	396.6	326.7	331.4
4	87.5	63.5	7.27	0.820	391.3	477.1	320.9	329.8
5	88.0	62.0	7.24	0.871	369.4	424.2	321.7	328.2
6	88.0	62.0	7.24	0.871	369.4	424.2	321.7	328.2
7	86.0	60.0	7.35	0.886	371.6	419.6	329.0	334.8
8	87.0	60.0	7.29	0.908	359.9	396.6	326.7	331.4
9	88.5	60.5	7.21	0.926	348.4	376.4	322.5	326.6
10	87.5	61.5	7.27	0.874	370.0	423.1	323.5	329.8
Mean	**87.6**	**61.2**	**7.26**	**0.886**	**365.8**	**413.6**	**323.9**	**329.7**
sd	**0.72**	**1.16**	**0.04**	**0.03**	**11.74**	**27.99**	**2.68**	**2.37**
CV%	**0.83**	**1.89**	**0.52**	**3.41**	**3.21**	**6.77**	**0.83**	**0.72**

Cotton # 17 - ICCS A16

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	138.0	96.0	5.38	0.945	230.4	243.8	217.7	219.6
2	139.0	97.0	5.35	0.940	230.0	244.7	216.2	218.2
3	139.0	98.0	5.35	0.921	234.2	254.3	215.6	218.2
4	139.5	100.5	5.34	0.882	242.3	274.6	213.8	217.5
5	139.5	100.0	5.34	0.891	240.2	269.6	214.0	217.5
6	140.5	99.5	5.31	0.914	233.5	255.5	213.4	216.0
7	143.0	100.5	5.24	0.930	226.3	243.4	210.5	212.6
8	139.0	97.5	5.35	0.930	232.1	249.5	215.9	218.2
9	139.0	99.0	5.35	0.902	238.4	264.2	215.1	218.2
10	139.5	98.5	5.34	0.918	233.9	254.7	214.8	217.5
Mean	**139.6**	**98.7**	**5.33**	**0.917**	**234.1**	**255.4**	**214.7**	**217.3**
sd	**1.35**	**1.53**	**0.04**	**0.02**	**4.92**	**10.94**	**1.95**	**1.90**
CV%	**0.97**	**1.55**	**0.66**	**2.23**	**2.10**	**4.28**	**0.91**	**0.87**

Cotton # 18 - ICCS I25

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	152.5	111.5	5.02	0.866	227.5	262.6	197.0	200.3
2	151.0	110.5	5.05	0.864	230.1	266.4	198.7	202.2
3	153.0	111.5	5.00	0.872	225.4	258.4	196.6	199.7
4	153.0	115.0	5.00	0.820	237.9	290.2	195.1	199.7
5	152.5	114.5	5.02	0.821	238.3	290.1	195.7	200.3
6	152.5	114.0	5.02	0.829	236.5	285.4	195.9	200.3
7	156.5	115.0	4.93	0.860	223.6	259.9	192.4	195.6
8	152.5	111.0	5.02	0.874	225.7	258.2	197.2	200.3
9	152.5	112.5	5.02	0.851	231.0	271.5	196.6	200.3
10	152.5	113.5	5.02	0.836	234.6	280.7	196.1	200.3
Mean	**152.9**	**112.9**	**5.01**	**0.849**	**231.1**	**272.3**	**196.1**	**199.9**
sd	**1.40**	**1.71**	**0.03**	**0.02**	**5.50**	**13.13**	**1.65**	**1.66**
CV%	**0.91**	**1.52**	**0.63**	**2.48**	**2.38**	**4.82**	**0.84**	**0.83**

Appendix 3

FIXED WEIGHT (4.00 g) SERIES : MEAN TEST DATA

Cotton # 19 - ICCS G12

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	386.5	350.5	2.59	0.632	130.8	206.9	82.7	84.4
2	385.0	352.0	2.60	0.622	133.2	214.2	82.9	84.7
3	381.0	346.5	2.62	0.628	133.4	212.5	83.7	85.6
4	380.0	356.5	2.62	0.590	141.2	239.5	83.3	85.8
5	388.0	358.0	2.59	0.611	134.3	219.8	82.1	84.1
6	387.0	356.0	2.59	0.615	134.0	217.9	82.4	84.3
7	381.0	344.5	2.62	0.635	132.0	207.9	83.8	85.6
8	378.5	348.0	2.63	0.614	136.8	223.0	84.0	86.1
9	381.0	346.0	2.62	0.630	133.0	211.3	83.8	85.6
10	386.0	361.0	2.60	0.595	138.3	232.5	82.2	84.5
Mean	**383.4**	**351.9**	**2.61**	**0.617**	**134.7**	**218.6**	**83.1**	**85.1**
sd	**3.43**	**5.71**	**0.02**	**0.02**	**3.14**	**10.60**	**0.72**	**0.70**
CV%	**0.89**	**1.62**	**0.62**	**2.51**	**2.33**	**4.85**	**0.87**	**0.82**

Cotton # 20 - ICCS D3

Rep.	PL	PH	Mic	Mat	Fin	Hs	MH	F(x)
1	227.0	168.5	3.78	0.883	156.9	177.7	138.6	138.4
2	225.0	166.0	3.81	0.893	156.6	175.4	139.9	139.5
3	228.5	169.0	3.77	0.890	154.9	174.0	137.9	137.5
4	227.0	172.5	3.78	0.843	163.5	194.0	137.8	138.4
5	228.5	172.5	3.77	0.855	160.5	187.9	137.2	137.5
6	230.5	174.0	3.74	0.856	159.1	186.0	136.2	136.4
7	231.5	172.5	3.73	0.879	154.9	176.3	136.1	135.9
8	225.5	168.0	3.80	0.876	159.0	181.5	139.3	139.2
9	228.5	169.5	3.77	0.885	155.7	175.9	137.8	137.5
10	229.5	170.0	3.75	0.888	154.6	174.1	137.3	137.0
Mean	**228.2**	**170.3**	**3.77**	**0.875**	**157.6**	**180.3**	**137.8**	**137.7**
sd	**2.07**	**2.53**	**0.02**	**0.02**	**2.91**	**6.86**	**1.21**	**1.17**
CV%	**0.91**	**1.49**	**0.65**	**2.00**	**1.85**	**3.81**	**0.88**	**0.85**

REPLICATION 1 - Simple Regressions

COTTON # 1 - DELTAPINE

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
49.11338		299.48560	0.73044	25.51456	Y = A*X
-209.05426	100.84665	7.21879	0.99350	6.17422	Y = A + B*X
23.71080	0.52250	5.54297	0.99501	4.47529	Y = A*Exp(B*X)
0.01628	-0.00275	14.88265	0.98660	10.41332	Y = 1 / (A + B*X)
594.34877	-1589.98099	17.41814	0.98432	8.71548	Y = A + B/X
-360.97512	401.48220	11.28551	0.98984	7.44370	Y = A + B*Log(X)
10.73251	2.08411	5.18816	0.99533	4.81141	Y = A*X^B
0.04364	-0.00569	5.81050	0.99477	5.02355	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
37.87421		531.26363	0.57452	34.99023	Y = A*X
-277.63556	106.57884	15.78388	0.98736	8.39903	Y = A + B*X
7.94738	0.72566	9.34943	0.99251	6.60232	Y = A*Exp(B*X)
0.02742	-0.00508	28.52234	0.97716	12.08968	Y = 1 / (A + B*X)
570.69326	-1677.40247	31.46655	0.97480	11.08705	Y = A + B/X
-437.67045	423.92698	22.50058	0.98198	9.74303	Y = A + B*Log(X)
2.64433	2.89416	9.40685	0.99247	5.89048	Y = A*X^B
0.08085	-0.01325	12.28941	0.99016	7.80596	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.43018		0.14770	-1.46732	0.69905	Y = A*X
4.63212	-0.71610	0.00421	0.92975	0.12155	Y = A + B*X
8.90113	-0.40633	0.00403	0.93261	0.12504	Y = A*Exp(B*X)
-0.35578	0.23288	0.00414	0.93090	0.14411	Y = 1 / (A + B*X)
-1.09039	11.36067	0.00403	0.93268	0.13095	Y = A + B/X
5.72316	-2.85972	0.00407	0.93208	0.12151	Y = A + B*Log(X)
16.47301	-1.62011	0.00406	0.93218	0.13610	Y = A*X^B
-3.67140	1.49940	0.00467	0.92201	0.16930	Y = X / (A + B*X)

Equation Y = A + B/X has largest R-square
Equation Y = A + B*Log(X) has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 2 - ACALA

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
45.44418		248.97957	0.72399	24.22619	Y = A*X
-200.41837	94.59372	5.61531	0.99378	5.14565	Y = A + B*X
21.59999	0.52407	3.52958	0.99609	3.93611	Y = A*Exp(B*X)
0.01754	-0.00294	11.34479	0.98742	8.28406	Y = 1 / (A + B*X)
559.77293	-1518.54445	15.10318	0.98326	7.21541	Y = A + B/X
-347.75158	380.00060	9.46236	0.98951	6.19339	Y = A + B*Log(X)
9.49207	2.10958	3.48948	0.99613	4.52947	Y = A*X^B
0.04766	-0.00622	3.76911	0.99582	3.77979	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
33.93282		364.64267	0.58722	28.44381	Y = A*X
-243.12411	93.55529	6.51505	0.99262	5.20725	Y = A + B*X
7.72007	0.70240	3.09939	0.99649	3.88455	Y = A*Exp(B*X)
0.02961	-0.00541	19.86358	0.97751	12.69941	Y = 1 / (A + B*X)
508.32364	-1500.26810	17.65031	0.98002	7.25002	Y = A + B/X
-388.56191	375.63004	11.20243	0.98732	6.24191	Y = A + B*Log(X)
2.56351	2.82770	2.60128	0.99706	4.50304	Y = A*X^B
0.08765	-0.01406	5.88025	0.99334	6.31825	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.45108		0.12718	-1.76454	0.59597	Y = A*X
4.55063	-0.66489	0.00171	0.96274	0.09418	Y = A + B*X,
7.82824	-0.35665	0.00154	0.96658	0.08514	Y = A*Exp(B*X)
-0.23506	0.19256	0.00156	0.96602	0.08696	Y = 1 / (A + B*X)
-0.81252	10.75365	0.00152	0.96686	0.08215	Y = A + B/X
5.60023	-2.68102	0.00157	0.96581	0.08797	Y = A + B*Log(X)
13.71045	-1.43624	0.00153	0.96668	0.08300	Y = A*X^B
-3.09845	1.31422	0.00195	0.95762	0.10592	Y = X / (A + B*X)

Equation Y = A + B/X has largest R-square
Equation Y = A + B/X has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 3 - MENOUFI

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
60.79317		499.91173	0.73234	37.87734	Y = A*X
-253.68213	123.02856	25.18942	0.98651	9.87249	Y = A + B*X
29.73992	0.51660	19.40107	0.98961	11.39604	Y = A*Exp(B*X)
0.01315	-0.00221	39.71368	0.97874	13.70253	Y = 1 / (A + B*X)
727.36921	-1941.64753	48.92842	0.97380	13.05443	Y = A + B/X
-439.49938	490.29534	34.96134	0.98128	11.41187	Y = A + B*Log(X)
13.53534	2.06374	19.72630	0.98944	10.41823	Y = A*X^B
0.03515	-0.00453	19.78059	0.98941	11.52854	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
47.51723		878.92612	0.58293	47.93486	Y = A*X
-338.00802	130. 44016	36.14674	0.98285	12.37511	Y = A + B*X
10.29934	0.71318	22.44829	0.98935	11.38887	Y = A*Exp(B*X)
0.02187	-0.00403	77.96127	0.96301	26.73991	Y = 1 / (A + B*X)
701.20776	-2054.85139	70.30685	0.96664	16.91908	Y = A + B/X
-534.35575	519.35633	50.90129	0.97585	14.62690	Y = A + B*Log(X)
3.47460	2.84894	22.25952	0.98944	10.31359	Y = A*X^B
0.06422	-0.01041	30.38328	0.98558	12.39171	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.41558		0.14903	-1.56074	0.66513	Y = A*X
4.46606	-0.68007	0.00190	0.96740	0.08920	Y = A + B*X
8.33798	-0.39316	0.00172	0.97053	0.10188	Y = A*Exp(B*X)
-0.33500	0.22955	0.00191	0.96722	0.11502	Y = 1 / (A + B*X)
-0.97824	10.81856	0.00173	0.97024	0.10536	Y = A + B/X
5.50843	-2.72113	0.00174	0.97003	0.09693	Y = A + B*Log(X)
15.17497	-1.57041	0.00179	0.96928	0.11028	Y = A*X^B
-3.62662	1.49644	0.00264	0.95457	0.13379	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 4 - LANKART

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
63.25096		565.12309	0.70534	37.26949	Y = A*X
-298.26630	136.89173	9.72380	0.99493	8.54785	Y = A + B*X
28.14428	0.54190	11.34694	0.99408	6.91793	Y = A*Exp(B*X)
0.01285	-0.00218	43.71668	0.97721	16.08237	Y = 1 / (A + B*X)
802.24081	-2199.08106	29.41623	0.98466	10.81345	Y = A + B/X
-512.13265	550.39919	17.02887	0.99112	9.61694	Y = A + B*Log(X)
11.97199	2.18468	7.56177	0.99606	7.41392	Y = A*X^B
0.03544	-0.00479	13.89955	0.99275	8.63278	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
55.86276		1299.81691	0.54900	58.32158	Y = A*X
-452.79295	167.65556	19.85735	0.99311	9.41269	Y = A + B*X
10.26025	0.75718	12.30628	0.99573	10.72646	Y = A*Exp(B*X)
0.01898	-0.00354	111.06867	0.96146	30.27917	Y = 1 / (A + B*X)
893.44229	-2686.91678	62.77054	0.97822	12.46045	Y = A + B/X
-713.61594	673.29555	37.53968	0.98697	10.75583	Y = A + B*Log(X)
3.10923	3.05226	6.95806	0.99759	7.14191	Y = A*X^B
0.05754	-0.00963	36.35788	0.98738	18.78473	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.32766		0.08354	-1.46341	0.48884	Y = A*X
3.64693	-0.57275	0.00051	0.98497	0.04792	Y = A + B*X
7.52427	-0.43055	0.00026	0.99240	0.03116	Y = A*Exp(B*X)
-0.55871	0.32726	0.00028	0.95187	0.03175	Y = 1 / (A + B*X)
-0.97879	9.28592	0.00024	0.99291	0.02766	Y = A + B/X
4.55640	-2.31340	0.00033	0.99021	0.03698	Y = A + B*Log(X)
14.82614	-1.73515	0.00023	0.99324	0.02733	Y = A*X^B
-5.25855	2.07254	0.00071	0.97917	0.06627	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 5 - LAMBERT

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
53.57001		323.17955	0.72403	33.46188	Y = A*X
-235.72681	110.99187	11.10380	0.99052	5.99556	Y = A + B*X
25.94637	0.51785	7.04603	0.99398	7.81142	Y = A*Exp(B*X)
0.01471	-0.00245	15.60704	0.98667	10.17351	Y = 1 / (A + B*X)
661.67332	-1804.20302	24.47234	0.97910	10.95666	Y = A + B/X.
-412.53858	448.64623	16.65083	0.98578	8.49134	Y = A + B*Log(X)
11.30035	2.09767	7.71948	0.99341	6.65937	Y = A*X^B
0.04016	-0.00518	7.15285	0.99389	7.93492	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation, Y = A + B*X has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
40.77641		534.35243	0.57469	42.10131	Y = A*X
-303.74231	114.76651	16.20584	0.98710	6.86239	Y = A + B*X
8.84836	0.71101	6.58256	0.99476	6.61806	Y = A*Exp(B*X)
0.02480	-0.00452	26.69963	0.97875	16.37027	Y = 1 / (A + B*X)
623.33281	-1862.13194	35.00136	0.97214	11.93575	Y = A + B/X
-485.96903	463.47804	24.40163	0.98058	9.34091	Y = A + B*Log(X)
2.82800	2.87973	7.62034	0.99393	6.20910	Y = A*X^B
0.07420	-0.01193	8.82621	0.99297	7.64143	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.43167		0.12043	-1.61848	0.59738	Y = A*X
4.61404	-0.69228	0.00087	0.98113	0.05873	Y = A + B*X
8.59861	-0.38634	0.00080	0.98250	0.06321	Y = A*Exp(B*X)
-0.32026	0.21727	0.00099	0.97841	0.06633	Y = 1 / (A + B*X)
-1.00055	11.32349	0.00083	0.98197	0.06553	Y = A + B/X
5.72916	-2.80707	0.00080	0.98256	0.06185	Y = A + B*Log(X)
15.96702	-1.56411	0.00089	0.98071	0.06623	Y = A*X^B
-3.53208	1.43651	0.00160	0.96523	0.07586	Y = X / (A + B*X)

Equation Y = A + B*Log(X) has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 6 - UGANDA

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
52.01005		351.14135	0.72420	37.78074	Y = A*X
-224.17398	107.79154	11.01086	0.99135	8.60635	Y = A + B*X
25.73619	0.51780	8.90206	0.99301	7.06712	Y = A*Exp(B*X)
0.01508	-0.00253	22.27118	0.98251	9.85001	Y = 1 / (A + B*X)
638.68530	-1716.08118	25.53672	0.97994	13.15635	Y = A + B/X
-389.76699	431.44047	16.71067	0.98687	10.85802	Y = A + B*Log(X)
11.53044	2.07790	8.32193	0.99346	6.39192	Y = A*X^B
0.04068	-0.00527	9.27818	0.99271	7.16990	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
39.60580		616.69622	0.56620	47.11839	Y = A*X
-298.10037	113.78248	15.24527	0.98928	8.32310	Y = A + B*X
8.54809	0.72110	8.36242	0.99412	8.19083	Y = A*Exp(B*X)
0.02558	-0.00472	41.86772	0.97055	16.65545	Y = 1 / (A + B*X)
611.83349	-1807.95763	36.79991	0.97411	13.23723	Y = A + B/X
-472.29385	454.98302	24.27844	0.98292	10.75740	Y = A + B*Log(X)
2.79418	2.89375	7.58377	0.99467	6.77765	Y = A*X^B
0.07604	-0.01242	14.49164	0.98981	9.91695	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.44388		0.14977	-1.58853	0.63555	Y = A*X
4.68344	-0.72151	0.00131	0.97739	0.07617	Y = A + B*X
9.06463	-0.40660	0.00094	0.98374	0.07535	Y = A*Exp(B*X)
-0.36021	0.23151	0.00097	0.98332	0.08323	Y = 1 / (A + B*X)
-1.11921	11.59412	0.00091	0.98431	0.07711	`/ = A + B/X
5.81043	-2.90131	0.00104	0.98207	0.07015	Y = A + B*Log(X)
17.02881	-1.63170	0.00090	0.98444	0.08101	Y = A*X^B
-3.69017	1.49411	0.00165	0.97140	0.09448	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A + B*Log(X) has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 7 - COKER

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
47.08125		288.92463	0.71980	33.32361	Y = A*X
-208.11053	98,40972	9.26804	0.99101	7.39174	Y = A + B*X
22.51160	0.52397	6.65786	0.99354	5.75152	Y = A*Exp(B*X)
0.01688	-0.00284	19.48122	0.98111	12.95321	Y = 1 / (A + B*X)
581.00141	-1572.39249	22.83595	0.97785	11.84419	Y = A + B/X
-360.35869	394.63008	14.72154	0.98572	9.60351	Y = A + B*Log(X)
9.92876	2.10688	6.39358	0.99380	5.22899	Y = A*X^B
0.04582	-0.00599	7.05468	0.99316	6.51500	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
36.35714		465.39413	0.57826	41.22235	Y = A*X
-264.92881	101.69929	12.18847	0.98895	8.21057	Y = A + B*X
8.19418	0.70683	5.35139	0.99515	4.74606	Y = A*Exp(B*X)
0.02765	-0.00506	33.70709	0.96945	17.05713	Y = 1 / (A + B*X)
549.79944	-1621.90227	30.71860	0.97216	12.90429	Y = A + B/X
-421.72970	407.43575	20.06515	0.98182	10.54503	Y = A + B*Log(X)
2.71543	2.84230	5.14256	0.99534	4.35513	Y = A*X^B
0.08198	-0.01322	9.71191	0.99120	8.87165	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.42541		0.12120	-1.73087	0.61111	Y = A*X
4.29985	-0.63511	0.00182	0.95896	0.10865	Y = A + B*X
7.54747	-0.36572	0.00158	0.96434	0.10262	Y = A*Exp(B*X)
-0.27372	0.21243	0.00158	0.96446	0.09665	Y = 1 / (A + B*X)
-0.81798	10.24840	0.00155	0.96508	0.10119	Y = A + B/X
5.29985	-2.55937	0.00163	0.96325	0.10531	Y = A + B*Log(X)
13.36940	-1.47084	0.00155	0.96507	0.09870	Y = A*X^B
-3.40061	1.43126	0.00201	0.95465	0.11165	Y = X / (A + B*X)

Equation Y = A + B/X has largest R-square
Equation Y = 1 / (A + B*X) has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 8 - TANGUIS

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
35.09693		128.84014	0.73563	22.18264	Y = A*X
-146.94465	71.45887	2.66169	0.99454	3.54953	Y = A + B*X
18.22365	0.50497	1.52423	0.99687	2.20246	Y = A*Exp(B*X)
0.02185	-0.00362	6.70178	0.98625	6.18166	Y = 1 / (A + B*X)
427.72228	-1149.17499	9.02442	0.98148	6.64398	Y = A + B/X
-258.87491	287.48166	5.18400	0.98936	5.07624	Y = A + B*Log(X)
8.19772	2.03720	1.43153	0.99706	2.58109	Y = A*X^B
0.05893	-0.00745	1.60889	0.99670	2.17610	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
26.25132		222.30412	0.57583	29.46200	Y = A*X
-192.63122	73.91856	5.46831	0.98957	5.03566	Y = A + B*X
6.16377	0.69879	1.13003	0.99784	1.88184	Y = A*Exp(B*X)
0.03732	-0.00680	11.24740	0.97854	8.33527	Y = 1 / (A + B*X)
400.95497	-1185.28710	15.23776	0.97093	8.54136	Y = A + B/X
-307.81975	296.94892	9.65186	0.98158	6.79677	Y = A + B*Log(X)
2.04395	2.81792	1.48289	0.99717	2.55816	Y = A*X^B
0.11071	-0.01771	2.36296	0.99549	2.81132	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.45461		0.12955	-1.68420	0.61194	Y = A*X
4.69240	-0.70654	0.00088	0.98179	0.05314	Y = A + B*X
8.74133	-0.38765	0.00083	0.98272	0.05115	Y = A*Exp(B*X)
-0.31540	0.21457	0.00118	0.97563	0.07370	Y = 1 / (A + B*X)
-1.00826	11.43711	0.00088	0.98169	0.05420	Y = A + B/X
5.81211	-2.85181	0.00081	0.98312	0.05052	Y = A + B*Log(X)
16.08585	-1.56145	0.00099	0.97956	0.05709	Y = A*X^B
-3.44494	1.40873	0.00221	0.95416	0.12888	Y = X / (A + B*X)

Equation Y = A + B*Log(X) has largest R-square
Equation Y = A + B*Log(X) has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 9 - Old B19

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
44.85273		246.22269	0.72732	29.51212	Y = A*X
-191.95740	92.62402	6.26133	0.99307	4.74072	Y = A + B*X
21.76971	0.52279	1.55119	0.99828	2.69295	Y = A*Exp(B*X)
0.01775	-0.00300	9.70753	0.98925	8.54110	Y = 1 / (A + B*X)
542.40565	-1446.68987	20.32436	0.97749	9.47326	Y = A + B/X
-329.43778	367.22693	12.16507	0.98653	7.10916	Y = A + B*Log(X)
9.94191	2.07836	2.57679	0.99715	3.10875	Y = A*X^B
0.04735	-0.00616	1.61888	0.99821	2.80705	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
33.80867		385.32543	0.58329	37.61685	Y = A*X
-240.02059	93.54116	10.15499	0.98902	6.64307	Y = A + B*X
7.75240	0.70676	1.56633	0.99831	2.46434	Y = A*Exp(B*X)
0.02983	-0.00550	21.10469	0.97718	14.50600	Y = 1 / (A + B*X)
501.00415	-1458.59390	27.47833	0.97028	11.49865	Y = A + B/X
-378.43159	370.55142	17.70262	0.98086	9.07561	Y = A + B*Log(X)
2.68500	2.81026	2.54822	0.99724	2.81779	Y = A*X^B
0.08710	-0.01409	3.59655	0.99611	4.64309	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.45046		0.13487	-1.71995	0.63279	Y = A*X
4.51052	-0.67205	0.00238	0.95201	0.11352	Y = A + B*X
7.88555	-0.36793	0.00212	0.95721	0.10112	Y = A*Exp(B*X)
-0.25668	0.20323	0.00211	0.95754	0.09408	Y = 1 / (A + B*X)
-0.84710	10.61315	0.00208	0.95800	0.09729	Y = A + B/X
5.52832	-2.67915	0.00217	0.95620	0.10540	Y = A + B*Log(X)
13.71047	-1.46380	0.00208	0.95802	0.09306	Y = A*X^B
-3.18353	1.35694	0.00252	0.94918	0.10507	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 10 - Old D3

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
58.36195		342.55694	0.73467	40.49219	Y = A*X
-243.20261	118.75113	9.37922	0.99274	6.89495	Y = A + B*X
29.71043	0.51085	10.17301	0.99212	5.90971	Y = A*Exp(B*X)
0.01333	-0.00223	33.63919	0.97394	13.77824	Y = 1 / (A + B*X)
706.35371	-1888.34752	22.55316	0.98253	13.62542	Y = A + B/X
-425.45032	474.99949	14.33559	0.98890	10.27086	Y = A + B*Log(X)
13.45763	2.04913	7.85330	0.99392	5.13472	Y = A*X^B
0.03587	-0.00460	11.07885	0.99142	6.55709	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
43.56083		554.05806	0.58382	52.33459	Y = A*X
-309.01135	120.29085	16.17440	0.98785	9.64619	Y = A + B*X
10.40631	0.69639	11.85868	0.99109	7.35707	Y = A*Exp(B*X)
0.02263	-0.00415	61.37199	0.95390	23.40043	Y = 1 / (A + B*X)
651.67103	-1908.10537	36.11657	0.97287	16.61865	Y = A + B/X
-492.79440	480.56085	24.51162	0.98159	13.14785	Y = A + B*Log(X)
3.53853	2.79272	9.97707	0.99251	6.65408	Y = A*X^B
0.06673	-0.01072	20.17815	0.98484	8.70223	Y = Xi(A + 8*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.45686		0.12066	-1.72494	0.60026	Y = A*X
4.59411	-0.68389	0.00177	0.95998	0.08423	Y = A + B*X
8.15125	-0.37107	0.00157	0.96464	0.08110	Y = A*Exp(B*X)
-0.26743	0.20298	0.00162	0.96336	0.07840	Y = 1 / (A + B*X)
-0.89554	10.95926	0.00155	0.96489	0.08056	Y = A + B/X
5.65847	-2.74621	0.00161	0.96375	0.08281	Y = A + B*Log(X)
14.46415	-1.48718	0.00157	0.96451	0.07920	Y = A*X^B
-3.22736	1.35553	0.00213	0.95190	0.08696	Y = X / (A + B*X)

Equation Y = A + B/X has largest R-square
Equation Y = 1 / (A + B*X) has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 11 - ICCS K

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
21.34738		49.48764	0.75374	11.01673	Y = A*X
-83.22584	41.84214	1.27131	0.99367	2.17636	Y = A + B*X
11.63236	0.49152	1.40458	0.99301	2.36154	Y = A*Exp(B*X)
0.03563	-0.00586	3.84819	0.98085	4.11385	Y = 1 / (A + B*X)
253.27558	-672.18257	3.10482	0.98455	3.44698	Y = A + B/X
-148.54221	168.23780	1.93650	0.99036	2.64311	Y = A + B*Log(X)
5.36556	1.98097	1.09722	0.99454	1.99901	Y = A*X^B
0.09505	-0.01173	1.45261	0.99277	2.41084	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
14.63963		68.34328	0.60507	13.49069	Y = A*X
-98.12228	38.80272	1.32195	0.99236	2.36599	Y = A + B*X
3.84057	0.66891	0.71598	0.99586	2.24849	Y = A*Exp(B*X)
0.06572	-0.01184	4.22752	0.97557	6.01560	Y = 1 / (A + B*X)
213.52304	-621.70126	3.80040	0.97804	3.87614	Y = A + B/X
-158.40951	155.81250	2.34230	0.98646	3.13091	Y = A + B*Log(X)
1.34274	2.69436	0.57764	0.99666	1.64335	Y = A*X^B
0.19218	-0.03001	1.25029	0.99278	3.38544	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.53855		0.20096	-1.81912	0.74904	Y = A*X
5.33808	-0.77598	0.00261	0.96342	0.07981	Y = A + B*X
9.17370	-0.35478	0.00264	0.96292	0.08461	Y = A*Exp(B*X)
-0.20009	0,16343	0.00313	0.95605	0.09290	Y = 1 / (A + B*X)
-0.91307	12.50832	0.00277	0.96107	0.08919	Y = A + B/X
6.55691	-3.12544	0.00260	0.96353	0.08244	Y = A + B*Log(X)
15.96785	-1.42678	0.00291	0.95914	0.08962	Y = A*X^B
-2.61849	1.11251	0.00458	0.93579	0.11471	Y = X / (A + B*X)

Equation Y = A + B*Log(X) has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 12 - ICCS B23

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
43.17344		203.20582	0.74371	22.84904	Y = A*X
-174.46137	86.59615	3.53097	0.99555	3.95186	Y = A + B*X
22.20764	0.50853	2.18443	0.99724	3.72269	Y = A*Exp(B*X)
0.01807	-0.00303	8.27910	0.98956	7.24378	Y = 1 / (A + B*X)
514.00374	-1360.01754	11.15121	0.98594	6.17344	Y = A + B/X
-304.05273	344.09834	6.55607	0.99173	4.93926	Y = A + B*Log(X)
10.31939	2.02461	2.05592	0.99741	3.00858	Y = A*X^B
0.04791	-0.00609	2.27687	0.99713	3.74142	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
31.27013		317.23202	0.59111	30.37824	Y = A*X
-218.22958	85.58656	4.80251	0.99381	4.34683	Y = A + B*X
7.34341	0.70095	1.69229	0.99782	2.93458	Y = A*Exp(B*X)
0.03201	-0.00589	14.24520	0.98164	10.16136	Y = 1 / (A + B*X)
461.75799	-1342.37152	14.27860	0,98160	7.74580	Y = A + B/X
-345.99705	339.86006	8.78056	0.98868	6.04786	Y = A + B*Log(X)
2.55259	2.79090	1.46664	0.99811	2.53072	Y = A*X^B
0.09341	-0.01505	3.60931	0.99535	4.82850	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.48858		0.16795	-1.64310	0.69982	Y = A*X
5.02074	-0.76106	0.00257	0.95949	0.11960	Y = A + B*X
9.14554	-0.38484	0.00229	0.96396	0.11841	Y = A*Exp(B*X)
-0.27145	0.19624	0.00229	0.96398	0.11803	Y = 1 / (A + B*X)
-1.05242	12.04205	0.00226	0.96450	0.11927	Y = A + B/X.
6.17519	-3.03537	0.00236	0.96293	0.11984	Y = A + B*Log(X)
16.34359	-1.53258	0.00225	0.96455	0.11827	Y = A*X^B
-3.08636	1.28981	0.00279	0.95610	0.11581	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 13 - ICCS E3

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
80.81649		984.77015	0.70582	57.54147	Y = A*X
-377.88763	173.82561	28.71440	0.99142	11.38193	Y = A + B*X
35.33487	0.54507	26.29053	0.99215	14.89842	Y = A*Exp(B*X)
0.01021	-0.00174	85.23105	0.97454	31.40740	Y = 1 / (A + B*X)
1013.01960	-2764.76243	67.42198	0.97986	19.39434	Y = A + B/X
-644.45415	695.43191	43.90044	0.98689	15.38160	Y = A + B*Log(X)
15.19632	2.18638	21.86612	0.99347	9.67257	Y = A*X^B
0.02796	-0.00379	29.95935	0.99105	17.26018	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
70.39774		2039.19902	0.55996	89.04264	Y = A*X,
-541.90916	203.77731	73.07529	0.98423	22.84763	Y = A + B*X
13.71705	0.74095	37.52807	0.99190	11.45511	Y = A*Exp(B*X)
0.01501	-0.00278	175.40896	0.96215	43.73762	Y = 1 / (A + B*X)
1086.16138	-3231.11436	154.15940	0.96673	32.54066	Y = A + B/X
-852.62967	813.98444	108.15326	0.97666	27.69548	Y = A + B*Log(X)
4.36568	2.97051	37.83652	0.99184	14.36900	Y = A*X^B
0.04479	-0.00740	58.89796	0.98729	22.27834	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.33517		0.08533	-1.59487	0.50110	Y = A*X
3.54641	-0.53771	0.00113	0.96570	0.07940	Y = A + B*X
6.63569	-0.39175	0.00113	0.96558	0.07394	Y = A*Exp(B*X)
-0.42530	0.28832	0.00136	0.95850	0.06732	Y = 1 / (A + B*X)
-0.76741	8.59746	0.00117	0.96451	0.07371	Y = A + B/X
4.37884	-2.15686	0.00111	0.96632	0.07619	Y = A + B*Log(X)
12.11639	-1.56826	0.00124	0.96232	0.07071	Y = A*X^B
-4.57283	1.87850	0.00197	0.94005	0.09307	Y = X / (A + B*X)

Equation Y = A + B*Log(X) has largest R-square
Equation Y = 1 / (A + B*X) has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 14 - ICCS H2

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
30.20565		105.14989	0.75605	18.43236	Y = A*X
-118.73820	59.23183	1.23036	0.99715	2.32552	Y = A + B*X
16.85260	0.48378	2.68633	0.99377	4.32118	Y = A*Exp(B*X)
0.02473	-0.00401	12.23797	0.97161	11.87452	Y = 1 / (A + B*X)
363.77947	-976.04339	4.86178	0.98872	4.01376	Y = A + B/X
-215.52432	241.28604	2.43881	0.99434	3.13890	Y = A + B*Log(X)
7.58704	1.97612	1.26732	0.99706	2.42656	Y = A*X^B
0.06688	-0.00815	3.02584	0.99298	5.13589	Y = X / (A + B*X)

Equation Y = A + B*X has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
21.02154		153.69978	0.60281	23.78045	Y = A*X
-143.07995	55.99818	2.80515	0.99275	2.92959	Y = A + B*X
5.68056	0.65823	2.03450	0.99474	3.95239	Y = A*Exp(B*X)
0.04480	-0.00797	17.16355	0.95565	15.86076	Y = 1 / (A + B*X)
312.28317	-919.47946	8.75303	0.97738	5.52593	Y = A + B/X
-234.01602	227.70865	5.24382	0.98645	3.67228	Y = A + B*Log(X)
1.92396	2.68643	1.25172	0.99677	2.55199	Y = A*X^B
0.13272	-0.02045	4.42535	0.98856	7.43543	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.51997		0.19609	-1.88611	0.74089	Y = A*X
5.13591	-0.73553	0.00167	0.97547	0.07846	Y = A + B*X
8.80140	-0.34890	0.00173	0.97450	0.09069	Y = A*Exp(B*X)
-0.20568	0.16686	0.00229	0.96630	0.10348	Y = 1 / (A + B*X)
-0.86364	12.15158	0.00189	0.97223	0.09634	Y = A + B/X
6.34339	-3.00025	0.00168	0.97533	0.08714	Y = A + B*Log(X)
15.55082	-1.42061	0.00204	0.96993	0.09994	Y = A*X^B
-2.73687	1.15043	0.00378	0.94433	0.12674	Y = X / (A + B*X)

Equation Y = A + B*X has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 15 - ICCS C33

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
63.74599		478.82359	0.71226	43.44578	Y = A*X
-293.95389	135.81691	10.99848	0.99339	8.90044	Y = A + B*X
29.45777	0.53111	4.92115	0.99704	3.81605	Y = A*Exp(B*X)
0.01255	-0.00211	28.05604	0.98314	16.56298	Y = 1 / (A + B*X)
799.59683	-2190.00124	36.58380	0.97802	14.87734	Y = A + B/X
-507.87561	547.19000	21.41234	0.98713	11.85189	Y = A + B*Log(X)
12.63942	2.14665	5.02951	0.99698	5.99281	Y = A*X^B
0.03451	-0.00457	5.69539	0.99658	5.41220	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
51.09647		870.85597	0.56189	58.58473	Y = A*X
-395.07783	147.96071	25.79039	0.98703	9.67291	Y = A + B*X
10.58476	0.72539	4.75342	0.99761	4.93778	Y = A*Exp(B*X)
0.01997	-0.00367	60.51190	0.96956	25.25966	Y = 1 / (A + B*X)
794.37284	-2378.23362	68.41359	0.96558	17.02061	Y = A +B /X
-626.81075	595.17463	44.30199	0.97771	13.13432	Y = A + B*Log(X)
3.33959	2.93039	6.56475	0.99670	4.93886	Y = A*X^B
0.05999	-0.00977	12.03874	0.99394	9.68297	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.39176		0.09366	-1.62068	0.55191	Y = A*X
4.13663	-0.62245	0.00102	0.97151	0.06045	Y = A + B*X
7.74529	-0.38856	0.00103	0.97119	0.06937	Y = A*Exp(B*X)
-0.36420	0.24471	0.00136	0.96186	0.07857	Y = 1 / (A + B*X)
-0.89225	10.10600	0.00108	0.96972	0.07224	Y = A + B/X
5.12921	-2.51647	0.00100	0.97211	0.06611	Y = A + B*Log(X)
14.32409	-1.56749	0.00118	0.96689	0.07548	Y = A*X^B
-3.93873	1.60434	0.00224	0.93734	0.12065	Y = X / (A + B*X)

Equation Y = A + B*Log(X) has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 16 - ICCS F2

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
22.40121		44.90278	0.76104	11.45530	Y = A*X
-84.51370	43.02979	1.91826	0.98979	2.79325	Y = A + B*X
12.67505	0.48067	1.07150	0.99430	1.85483	Y = A*Exp(B*X)
0.03341	-0.00544	1.86880	0.99005	3.05456	Y = 1 / (A + B*X)
261.86207	-693.00777	4.47046	0.97621	4.98752	Y = A + B/X
-151.98583	173.18760	2.97684	0.98416	3.88927	Y = A + B*Log(X)
5.93046	1.93878	1.32426	0.99295	2.18365	Y = A*X^B
0.08835	-0.01056	1.07515	0.99428	1.82661	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
15.97675		67.36701	0.61228	14.00718	Y = A*X
-103.51161	41.24244	2.88539	0.98339	4.05171	Y = A + B*X
4.44064	0.65205	1.23426	0.99290	2.15229	Y = A*Exp(B*X)
0.05911	-0.01055	2.51601	0.98552	3.15950	Y = 1 / (A + B*X)
228.12381	-662.79282	5.95436	0.96573	6.09959	Y = A + B/X
-167.93263	165.81656	4.22049	0.97571	5.07591	Y = A + B*Log(X)
1.58690	2.62908	1.57919	0.99091	2.92938	Y = A*X^B
0.17154	-0.02622	1.22266	0.99296	2.21888	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.49111		0.14555	-1.81129	0.63090	Y = A*X
4.86700	-0.69685	0.00299	0.94222	0.09173	Y = A + B*X
8.14720	-0.34275	0.00311	0.94000	0.10308	Y = A*Exp(B*X)
-0.19267	0.16972	0.00351	0.93225	0.13759	Y = 1 / (A + B*X)
-0.75454	11.27203	0.00324	0.93742	0.11244	Y = A + B/X
5.96834	-2.81089	0.00306	0.94099	0.09967	Y = A + B*Log(X)
13.96613	-1.38060	0.00335	0.93534	0.12331	Y = A*X^B
-2.72983	1.17265	0.00460	0.91117	0.19147	Y = X / (A + B*X)

Equation Y = A + B*X has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 17 - ICCS A16

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
34.40920		119.88106	0.75348	17.66617	Y = A*X
-134.92616	67.68718	2.16027	0.99556	3.84148	Y = A + B*X
18.05702	0.50138	1.83391	0.99623	3.13662	Y = A*Exp(B*X)
0.02263	-0.00377	8.37137	0.98279	9.22355	Y = 1 / (A + B*X)
403.80875	-1065.27128	7.54443	0.98449	5.77986	Y = A + B/X
-236.77645	269.37601	4.23873	0.99128	4.84524	Y = A + B*Log(X)
8.43310	2.00034	1.33778	0.99725	2.86508	Y = A*X^B
0.05992	-0.00753	1.96611	0.99596	3.57753	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
25.10401		178.91866	0.61090	24.67133	Y = A*X
-164.57904	65.69554	3.76874	0.99180	4.38841	Y = A + B*X
6.48572	0.67384	0.73521	0.99840	1.73295	Y = A*Exp(B*X)
0.03906	-0.00710	10.19786	0.97782	10.05893	Y = 1 / (A + B*X)
357.56971	-1030.98505	11.40309	0.97520	7.81144	Y = A + B/X
-262.90951	261.07382	7.03188	0.98471	6.10858	Y = A + B*Log(X)
2.33528	2.68711	0.89215	0.99806	1.83338	Y = A*X^B
0.11301	-0.01778	1.78926	0.99611	3.19713	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.47490		0.14054	-1.90350	0.64025	Y = A*X
4.65115	-0.67226	0.00065	0.98662	0.07693	Y = A + B*X
7.75133	-0.34492	0.00063	0.98695	0.07287	Y = A*Exp(B*X)
-0.19773	0.17835	0.00085	0.98249	0.06910	Y = 1 / (A + B*X)
-0.71313	10.63484	0.00069	0.98578	0.06927	Y = A + B/X
5.67217	-2.68219	0.00061	0.98739	0.07356	Y = A + B*Log(X)
13.04060	-1.37355	0.00075	0.98451	0.06882	Y = A*X^B
-2.79981	1.22001	0.00156	0.96779	0.08525	Y = X / (A + B*X)

Equation Y = A + B*Log(X) has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 18 - ICCS I25

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
39.05904		177.74485	0.74039	23.72674	Y = A*X
-158.29303	78.43122	5.51284	0.99195	4.70534	Y = A + B*X
20.54822	0.50262	2.38402	0.99652	2.95223	Y = A*Exp(B*X)
0.01969	-0.00327	9.23690	0.98651	8.28841	Y = 1 / (A + B*X)
467.02683	-1238.50733	16.27107	0.97623	7.17332	Y = A + B/X
-277.09259	312.71603	9.97629	0.98543	5.97474	Y = A + B*Log(X)
9.52611	2.00938	2.97501	0.99565	3.14887	Y = A*X^B
0.05222	-0.00654	2.46080	0.99641	2.96547	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
29.83282		315.03835	0.58499	31.83703	Y = A*X
-212.25271	82.62638	5.36999	0.99293	4.87079	Y = A + B*X
7.00415	0.70033	2.22127	0.99707	3.22348	Y = A*Exp(B*X)
0.03337	-0.00612	27.41205	0.96389	16.00573	Y = 1 / (A + B*X)
446.42586	-1304.40121	17.70998	0.97667	7.45964	Y = A + B/X
-337.34137	329.39546	10.53851	0.98612	6.20234	Y = A + B*Log(X)
2.39078	2.80253	1.34079	0.99823	2.79736	Y = A*X^B
0.09809	-0.01579	6.51155	0.99142	7.42809	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.44019		0.14791	-1.59587	0.64796	Y = A*X
4.60805	-0.70597	0.00196	0.96566	0.07693	Y = A + B*X
8.60673	-0.39543	0.00117	0.97943	0.06823	Y = A*Exp(B*X)
-0.32541	0.22376	0.00074	0.98709	0.05742	Y = 1 / (A + B*X)
-1.06744	11.33417	0.00100	0.98238	0.06406	Y = A + B/X
5.70971	-2.83819	0.00141	0.97533	0.07085	Y = A + B*Log(X)
15.87639	-1.58628	0.00084	0.98518	0.05946	Y = A*X^B
-3.56116	1.46558	0.00073	0.98719	0.05005	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 19 - ICCS G12

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
95.74010		651.63667	0.70245	51.71300	Y = A*X
-431.37553	207.41632	20.86182	0.99047	10.34077	Y = A + B*X
41.76019	0.56273	8.40878	0.99616	4.81818	Y = A*Exp(B*X)
0.00870	-0.00154	9.56273	0.99563	5.87297	Y = 1 / (A + B*X)
1161.53867	-3048.73070	43.73145	0.98003	15.65662	Y = A + B/X
-705.30647	796.49279	30.95386	0.98587	13.00066	Y = A + B*Log(X)
19.77352	2.16419	12.72313	0.99419	7.92783	Y = A*X^B
0.02279	-0.00317	7.91513	0.99639	4.67018	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
88.40321		1733.90737	0.53891	83.77153	Y = A*X
-709.68571	272.12948	26.66385	0.99291	15.70721	Y = A + B*X
14.96125	0.80585	7.11843	0.99811	7.51521	Y = A*Exp(B*X)
0.01241	-0.00243	47.32449	0.98742	17.64537	Y = 1 / (A + B*X)
1380.52877	-4001.13952	63.78424	0.98304	22.65207	Y = A + B/X
-1069.30265	1045.15947	42.87085	0.98860	19.18121	Y = A + B*Log(X)
5.11244	3.10160	8.43554	0.99776	8.94103	Y = A*X^B
0.03606	-0.00635	13.49478	0.99641	9.13440	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.31004		0.04128	-1.29847	0.32854	Y = A*X
3.46448	-0.58686	0.00060	0.96684	0.05752	Y = A + B*X
7.79092	-0.48625	0.00043	0.97610	0.05124	Y = A*Exp(B*X)
-0.72236	0.40560	0.00035	0.98073	0.04488	Y = 1 / (A + B*X)
-1.06589	8.71584	0.00042	0.97667	0.05140	Y = A + B/X
4.25537	-2.26535	0.00050	0.97242	0.05454	Y = A + B*Log(X)
14.95930	-1.87481	0.00037	0.97925	0.04812	Y = A*X^B
-5.99581	2.40145	0.00035	0.98036	0.03847	Y = X / (A + B*X)

Equation Y = 1 / (A + B*X) has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

REPLICATION 1 - Simple Regressions

COTTON # 20 - ICCS D3

Weight vs. PL

A	B	Res. Error	R-square	Max Deviation	Equation
58.07900		410.61301	0.73804	37.23154	Y = A*X
-240.56148	117.39426	10.60848	0.99323	5.87430	Y = A + B*X
30.04048	0.50452	5.38034	0.99657	5.63291	Y = A*Exp(B*X)
0.01330	-0.00220	19.87764	0.98732	10.99300	Y = 1 / (A + B*X)
702.27356	-1880.95348	32.18426	0.97947	11.23473	Y = A + B/X
-423.06171	471.46249	19.34188	0.98766	8.28087	Y = A + B*Log(X)
13.60791	2.03163	5.93304	0.99621	4.66341	Y = A*X^B
0.03569	-0.00450	5.48770	0.99650	5.68946	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max Deviation	Equation
45.17621		681.41750	0.59650	50.49661	Y = A*X
-310.33277	121.69498	15.73370	0.99068	9.36338	Y = A + B*X
11.51382	0.67646	2.96198	0.99825	4.63696	Y = A*Exp(B*X)
0.02143	-0.00387	33.39087	0.98023	16.60428	Y = 1 / (A + B*X)
666.07177	-1945.97335	45.49336	0.97306	15.59220	Y = A + B/X
-498.83920	488.24567	28.44473	0.98316	12.47110	Y = A + B*Log(X)
3.98278	2.72386	4.13203	0.99755	4.66608	Y = A*X^B
0.06283	-0.00987	6.15020	0.99636	5.26532	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max Deviation	Equation
0.41874		0.11532	-1.92468	0.59820	Y = A*X
4.07095	-0.58503	0.00076	0.98064	0.06300	Y = A + B*X
6.80730	-0.34387	0.00062	0.98427	0.05694	Y = A*Exp(B*X)
-0.23004	0.20373	0.00067	0.98303	0.05078	Y = 1 / (A + B*X)
-0.64861	9.45761	0.00061	0.98444	0.05396	Y = A + B/X
4.99491	-2.35993	0.00064	0.98380	0.05882	Y = A + B*Log(X)
11.67374	-1.38444	0.00063	0.98400	0.05221	Y = A*X^B
-3.26813	1.40717	0.00113	0.97128	0.05801	Y = X / (A + B*X)

Equation Y = A + B/X has largest R-square
Equation Y = 1 / (A + B*X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 1 - DELTAPINE

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
48.57279		200.30236	0.74100	24.18139	Y = A*X
-199.39768	97.99782	3.60609	0.99534	3.97376	Y = A + B*X
24.68219	0.51121	3.87837	0.99499	5.67848	Y = A*Exp(B*X)
0.01608	-0.00270	11.11970	0.98562	9.08806	Y = 1 / (A + B*X)
582.24229	-1551.34478	9.08934	0.98825	6.90805	Y = A + B/X
-348.27908	390.81210	5.63212	0.99272	5.43176	Y = A + B*Log(X)
11.29401	2.04241	3.00102	0.99612	4.42584	Y = A*X^B
0.04302	-0.00551	4.09482	0.99471	6.06467	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
37.27776		340.32163	0.59313	30.36746	Y = A*X
-260.77430	101.91632	3.89877	0.99534	3.93972	Y = A + B*X
8.78459	0.69967	2.91079	0.99652	5.59653	Y = A*Exp(B*X)
0.02669	-0.00491	17.95609	0.97853	11.26980	Y = 1 / (A + B*X)
551.58342	-1611.23134	12.02562	0.98562	7.44265	Y = A + B/X
-415.23652	406.17071	7.18565	0.99141	5.56624	Y = A + B*Log(X)
3.01337	2.79529	1.85581	0.99778	4.19708	Y = A*X^B
0.07834	-0.01262	5.78716	0.99308	7.60413	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.42997		0.09642	-1.70879	0.57348	Y = A*X
4.40201	-0.66116	0.00056	0.98430	0.05109	Y = A + B*X
7.89449	-0.37692	0.00040	0.98873	0.04354	Y = A*Exp(B*X)
-0.28969	0.21620	0.00040	0.98874	0.04411	Y = 1 / (A + B*X)
-0.88742	10.53018	0.00038	0.98923	0.04301	Y = A + B/X
5.41761	-2.64471	0.00044	0.98770	0.04637	Y = A + B*Log(X)
14.04721	-1.50576	0.00038	0.98926	0.04375	Y = A*X^B
-3.42555	1.43550	0.00068	0.98093	0.05342	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A + B/X has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 2 - ACALA

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
44.76540		245.86009	0.72726	29.14632	Y = A*X
-193.81805	92.56133	5.56854	0.99382	4.95352	Y = A + B*X
22.23160	0.51469	2.69523	0.99701	2.71199	Y = A*Exp(B*X)
0.01745	-0.00291	14.78348	0.98360	10.66332	Y = 1 / (A + B*X)
550.29370	-1486.67170	18.37862	0.97961	8.00122	Y = A + B/X
-338.39110	372.15440	10.81555	0.98800	6.04644	Y = A + B*Log(X)
9.86990	2.07522	2.69403	0.99701	3.75095	Y = A*X^B
0.04724	-0.00607	2.97986	0.99669	2.77568	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
34.39663		405.71232	0.58073	39.82710	Y = A*X
-248.34485	95.63898	11.20021	0.98843	6.54898	Y = A + B*X
8.16506	0.69415	1.42292	0.99853	2.49592	Y = A*Exp(B*X)
0.02857	-0.00519	23.95595	0.97524	15.30152	V = 1/(A + B*X)
519.39032	-1531.62211	30.36895	0.96862	11.67962	Y = A + B/X
-396.93393	383.95987	19.61194	0.97973	9.11477	Y = A + B*Log(X)
2.73506	2.79774	2.62083	0.99729	3.10187	Y = A*X^B
0.08444	-0.01344	3.65997	0.99622	5.02319	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.42921		0.11692	-1.84718	0.56506	Y = A*X
4.26599	-0.62279	0.00051	0.98770	0.05236	Y = A + B*X
7.41350	-0.35891	0.00047	0.98848	0.04446	Y = A*Exp(B*X)
-0.26424	0.20865	0.00067	0.98367	0.05293	Y = 1 / (A + B*X)
-0.75855	10.07447	0.00051	0.98754	0.04512	Y = A + B/X
5.25109	-2.51289	0.00046	0.98889	0.04480	Y = A + B*Log(X)
13.02238	-1.44503	0.00057	0.98608	0.04815	Y = A*X^B
-3.34608	1.41182	0.00127	0.96908	0.06261	Y = X / (A + B*X)

Equation Y = A + B*Log(X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 3 - MENOUFI

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
59.11581		421.31596	0.70919	37.28438	Y = A*X
-258.20341	123.99749	31.05338	0.97857	18.59788	Y = A + B*X
28.02663	0.53154	28.53053	0.98031	20.93743	Y = A*Exp(B*X)
0.01357	-0.00231	45.50984	0.96859	23.16799	Y = 1 / (A + B*X)
722.50980	-1928.71345	47.09972	0.96749	16.18279	Y = A + B/X
-440.83716	490.45689	37.44743	0.97415	17.41855	Y = A + B*Log(X)
12.71308	2.10799	27.87881	0.98076	19.85961	Y = A*X^B
0.03639	-0.00484	29.11384	0.97990	21.13857	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A + B/X has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
46.30430		699.71507	0.56573	48.43652	Y = A*X
-334.30489	130.30886	45.50318	0.97176	21.33874	Y = A + B*X
10.33297	0.71835	40.98172	0.97456	24.65426	Y = A*Exp(B*X)
0.02190	-0.00408	85.20053	0.94712	27.75707	Y = 1 / (A + B*X)
695.79233	-2024.78315	66.43093	0.95877	18.79007	Y = A + B/X
-525.86534	515.15184	54.19056	0.96637	20.09334	Y = A + B*Log(X)
3.54453	2.85001	39.10945	0.97573	23.55309	Y = A*X^B
0.06424	-0.01055	49.44043	0.96932	25.75415	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A + B/X has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.42058		0.10511	-1.66239	0.52210	Y = A*X
4.17596	-0.62876	0.00303	0.92337	0.16679	Y = A + B*X
7.35685	-0.37363	0.00266	0.93255	0.15701	Y = A*Exp(B*X)
-0.28562	0.22381	0.00248	0.93721	0.14709	Y = 1 / (A + B*X)
-0.82669	9.89701	0.00257	0.93490	0.15513	Y = A + B/X
5.12246	-2.50183	0.00275	0.93023	0.16114	Y = A + B*Log(X)
12.86429	-1.48405	0.00251	0.93632	0.15108	Y = A*X^B
-3.49783	1.48873	0.00254	0.93555	0.13440	Y = X / (A + B*X)

Equation Y = 1 / (A + B*X) has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 4 - LANKART

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
63.50389		543.55238	0.69404	41.59445	Y = A*X
-308.72353	140.80243	7.65646	0.99569	5.65817	Y = A + B*X
26.60623	0.56130	8.27395	0.99534	6.96096	Y = A*Exp(B*X)
0.01311	-0.00227	32.45629	0.98173	16.56056	Y = 1 / (A + B*X)
810.26340	-2211.71285	21.01475	0.98817	8.85169	Y = A + B/X
-519.50122	559.35145	12.77198	0.99281	7.07770	Y = A + B*Log(X)
11.41720	2.23403	5.80546	0.99673	5.64146	Y = A*X^B
0.03591	-0.00499	10.14511	0.99429	7.22915	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
56.52024		1159.03608	0.54993	64.98111	Y = A*X
-450.26304	169.25758	19.11820	0.99258	8.56867	Y = A + B*X
10.49373	0.76236	11.80507	0.99542	9.07276	Y = A*Exp(B*X)
0.01872	-0.00353	77.57893	0.96988	27.92473	Y = 1 / (A + B*X)
893.67983	-2654.00701	47.33879	0.98162	15.84751	Y = A + B/X
-702.81463	671.79485	31.03790	0.98795	12.23466	Y = A + B*Log(X)
3.32809	3.03373	9.09079	0.99647	7.46690	Y = A*X^B
0.05584	-0.00941	25.22737	0.99020	12.48035	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.32522		0.06478	-1.61862	0.41084	Y = A*X
3.38223	-0.52163	0.00046	0.98138	0.04510	Y = A + B*X
6.42846	-0.40211	0.00039	0.98436	0.04120	Y = A*Exp(B*X)
-0.46715	0.31235	0.00043	0.58279	0.03721	Y = 1 / (A + B*X)
-0.77436	8.23755	0.00039	0.98441	0.04018	Y = A + B/X
4.17071	-2.07775	0.00040	0.98376	0.04284	Y = A + B*Log(X)
11.76868	-1.59941	0.00040	0.98397	0.03858	Y = A*X^B
-4.90486	2.01479	0.00063	0.97435	0.03999	Y = X / (A + B*X)

Equation Y = A + B/X has largest R-square
Equation Y = 1 / (A + B*X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 5 - LAMBERT

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
53.43799		345.31135	0.71857	32.38403	Y = A*X
-234.55628	111.88248	11.87646	0.99032	7.63826	Y = A + B*X
25.25418	0.52990	11.43771	0.99068	9.85695	Y = A*Exp(B*X)
0.01500	-0.00255	26.41804	0.97847	15.10110	Y = 1 / (A + B*X)
655.83974	-1761.57232	23.01085	0.98125	9.01760	Y = A + B/X
-402.87856	445.14203	16.18442	0.98681	6.93604	Y = A + B*Log(X)
11.30653	2.11292	10.12976	0.99174	8.80996	Y = A*X^B
0.04045	-0.00535	12.11775	0.99012	9.94281	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A + B*Log(X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
41.29988		553.73943	0.57827	43.81135	Y = A*X
-298.67375	115.72054	13.09590	0.99003	8.78283	Y = A + B*X
9.29679	0.71221	4.92491	0.99625	6.13395	Y = A*Exp(B*X)
0.02437	-0.00450	28.36968	0.97839	16.57681	Y = 1 / (A + B*X)
620.99629	-1816.96000	32.12598	0.97553	13.21335	Y = A + B/X
-471.88764	459.77338	21.29736	0.98378	10.99056	Y = A + B*Log(X)
3.16462	2.83809	5.24408	0.99601	5.22870	Y = A*X^B
0.07149	-0.01160	8.10244	0.99383	9.43407	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.42819		0.10929	-1.80756	0.50919	Y = A*X
4.22695	-0.62504	0.00100	0.97425	0.07717	Y = A + B*X
7.37905	-0.36462	0.00109	0.97204	0.08588	Y = A*Exp(B*X)
-0.27074	0.21424	0.00138	0.96448	0.09436	Y = 1 / (A + B*X)
-0.75340	9.86528	0.00117	0.97006	0.08748	Y = A + B/X
5.17155	-2.48991	0.00104	0.97321	0.08256	Y = A + B*Log(X)
12.76485	-1.45032	0.00125	0.96784	0.09089	Y = A*X^B
-3.36135	1.43129	0.00207	0.94689	0.10686	Y = X / (A + B*X)

Equation Y = A + B*X has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 6 - UGANDA

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
51.38749		315.48476	0.71316	32.64429	Y = A*X
-220.62416	107.22134	21.42170	0.98052	10.58662	Y = A + B*X
24.47016	0.53238	14.38112	0.98692	8.49210	Y = A*Exp(B*X)
0.01564	-0.00268	15.66799	0.98575	7.99261	Y = 1 / (A + B*X)
619.65928	-1637.14808	35.38463	0.96783	12.99966	Y = A + B/X
-372.84853	419.96010	27.53904	0.97496	11.77137	Y = A + B*Log(X)
11.42854	2.08924	16.89633	0.98464	9.84092	Y = A*X^B
0.04125	-0.00545	14.21598	0.98707	8.53088	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = 1 / (A + B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
39.44343		517.29642	0.56688	41.55519	Y = A*X
-285.05228	111.58225	26.40737	0.97789	13.04889	Y = A + B*X
8.63915	0.72626	14.36267	0.98797	10.03253	Y = A*Exp(B*X)
0.02588	-0.00485	21.09203	0.98234	11.26440	Y = 1 / (A + B*X)
588.89266	-1701.72351	44.24866	0.96295	15.61416	Y = A + B/X
-443.11803	436.78454	34.39354	0.97120	14.30948	Y = A + B*Log(X)
3.05696	2.85028	16.97883	0.98578	11.53696	Y = A*X^B
0.07473	-0.01230	13.83514	0.98842	8.55503	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.44161		0.11939	-1.69276	0.54882	Y = A*X
4.42091	-0.67720	0.00132	0.97023	0.10931	Y = A + B*X
8.02291	-0.38775	0.00126	0.97159	0.10166	Y = A*Exp(B*X)
-0.30314	0.22368	0.00139	0.96865	0.09129	Y = 1 / (A + B*X)
-0.90478	10.41256	0.00128	0.97115	0.09909	Y = A + B/X
5.39514	-2.66178	0.00126	0.97156	0.10399	Y = A + B*Log(X)
13.97663	-1.52209	0.00132	0.97025	0.09589	Y = A*X^B
-3.42116	1.45130	0.00185	0.95831	0.10285	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = 1 / (A + B*X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 7 - COKER

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
46.23538		236.47382	0.73139	25.74993	Y = A*X
-193.80329	94.52236	7.36320	0.99164	9.44197	Y = A + B*X
22.64190	0.52114	6.22640	0.99293	8.12570	Y = A*Exp(B*X)
0.01722	-0.00291	14.96221	0.98300	7.71350	Y = 1 / (A + B*X)
555.43475	-1476.20994	15.69002	0.98218	10.40117	Y = A + B/X
-333.87627	374.53780	10.65909	0.98789	9.96374	Y = A + B*Log(X)
10.39535	2.06944	5.80782	0.99340	6.74655	Y = A*X^B
0.04591	-0.00598	6.45183	0.99267	8.12202	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = 1 / (A + B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
36.40851		430.60114	0.57848	35.25520	Y = A*X
-261.60548	101.58873	13.13946	0.98714	10.18778	Y = A + B*X
8.03950	0.71694	5.56996	0.99455	8.13319	Y = A*Exp(B*X)
0.02803	-0.00520	21.58538	0.97887	13.59235	Y = 1 / (A + B*X)
542.55265	-1582.23625	28.20598	0.97239	11.16302	Y = A + B/X
-411.38718	401.98536	19.70172	0.98071	10.72123	Y = A + B*Log(X)
2.76078	2.84545	6.40231	0.99373	8.80936	Y = A*X^B
0.08194	-0.01337	7.31755	0.99284	7.55438	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.41331		0.11203	-1.66659	0.57730	Y = A*X
4.27761	-0.65247	0.00042	0.99011	0.03747	Y = A + B*X
7.93172	-0.39159	0.00045	0.98927	0.04792	Y = A*Exp(B*X)
-0.33993	0.23699	0.00071	0.98307	0.05808	Y = 1 / (A + B*X)
-0.90418	10.22942	0.00049	0.98826	0.04997	Y = A + B/X
5.25137	-2.59034	0.00041	0.99017	0.04390	Y = A + B*Log(X)
14.17794	-1.55203	0.00058	0.98628	0.05399	Y = A*X^B
-3.69058	1.53591	0.00135	0.96794	0.06911	Y = X / (A + B*X)

Equation Y = A + B*Log(X) has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 8 - TANGUIS

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
35.19419		104.82599	0.74107	18.72116	Y = A*X
-143.28688	70.84139	2.47403	0.99389	3.30904	Y = A + B*X
18.26510	0.50693	2.35760	0.99418	3.69733	Y = A*Exp(B*X)
0.02196	-0.00367	6.74986	0.98333	6.45474	Y = 1 / (A + B*X)
421.96012	-1122.33065	5.84067	0.98557	4.59642	Y = A + B/X
-251.10418	282.64932	3.76906	0.99069	3.93495	Y = A + B*Log(X)
8.39759	2.02657	1.97829	0.99511	3.14913	Y = A*X^B
0.05860	-0.00744	2.46604	0.99391	3.73234	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
25.60477		159.46829	0.59255	22.84767	Y = A*X
-176.27691	69.45929	4.56016	0.98835	4.42027	Y = A + B*X
6.43637	0.68532	2.66940	0.99318	3.29720	Y = A*Exp(B*X)
0.03782	-0.00691	9.67958	0.97527	9.92779	Y = 1 / (A + B*X)
377.28204	-1097.80475	9.62773	0.97540	5.65781	Y = A + B/X
-281.53279	276.80410	6.72511	0.98282	5.03033	Y = A + B*Log(X)
2.25574	2.73829	2.65017	0.99323	3.43280	Y = A*X^B
0.11030	-0.01751	3.57928	0.99085	4.49373	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.47982		0.11140	-1.81556	0.54908	Y = A*X
4.69081	-0.68717	0.00171	0.95689	0.08382	Y = A + B*X
8.05309	-0.35679	0.00177	0.95535	0.09891	Y = A*Exp(B*X)
-0.22549	0.18636	0.00201	0.94919	0.11874	Y = 1 / (A + B*X)
-0.79888	10.91353	0.00184	0.95356	0.10368	Y = A + B/X
5.74141	-2.74517	0.00173	0.95621	0.09389	Y = A + B*Log(X)
13.85894	-1.42344	0.00191	0.95178	0.11023	Y = A*X^B
-2.94420	1.25942	0.00262	0.93390	0.14448	Y = X / (A + B*X)

Equation Y = A + B*X has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 9 - OLD B19

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
44.84283		231.68718	0.72819	23.53909	Y = A*X
-193.26129	93.03541	2.28405	0.99732	3.39017	Y = A + B*X
21.72177	0.52400	2.30386	0.99730	3.70850	Y = A*Exp(B*X)
0.01772	-0.00300	13.39510	0.98429	10.03004	Y = 1 / (A + B*X)
547.36642	-1465.63074	10.67762	0.98747	5.74434	Y = A + B/X
-333.50203	370.36179	5.44857	0.99361	4.60596	Y = A + B*Log(X)
9.78975	2.09113	1.16839	0.99863	2.00258	Y = A*X^B
0.04768	-0.00626	2.82038	0.99669	4.57148	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
33.44264		358.12436	0.58277	31.75559	Y = A*X
-239.52552	93.17189	5.74281	0.99331	4.16901	Y = A + B*X
7.72394	0.70618	1.13902	0.99867	2.36480	Y = A*Exp(B*X)
0.02986	-0.00550	18.30021	0.97868	12.36243	Y = 1 / (A + B*X)
501.15788	-1463.69366	18.85587	0.97803	6.64315	Y = A + B/X
-379.26037	370.38957	11.27630	0.98686	5.32906	Y = A + B*Log(X)
2.64428	2.81660	0.94782	0.99890	1.98440	Y = A*X^B
0.08760	-0.01417	3.83881	0.99553	5.64976	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.46027		0.12669	-1.84388	0.58353	Y = A*X
4.53468	-0.67052	0.00039	0.99121	0.04581	Y = A + B*X
7.90883	-0.36436	0.00040	0.99098	0.03809	Y = A*Exp(B*X)
-0.25147	0.19946	0.00067	0.98500	0.04674	Y = 1 / (A + B*X)
-0.81421	10.60693	0.00046	0.98960	0.04060	Y = A + B/X
5.55301	-2.67475	0.00037	0.99160	0.04025	Y = A + B*Log(X)
13.70658	-1.45095	0.00054	0.98784	0.04281	Y = A*X^B
-3.13362	1.33422	0.00145	0.96756	0.05949	Y = X / (A + B*X)

Equation Y = A + B*Log(X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 10 - OLD D3

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
56.95819		390.72246	0.70589	38.01852	Y = A*X
-258.52027	121.73998	17.70443	0.98667	8.01219	Y = A + B*X
26.63416	0.53440	7.36010	0.99446	6.03473	Y = A*Exp(B*X)
0.01400	-0.00238	14.34487	0.98920	8.88229	Y = 1 / (A + B*X)
706.64759	-1903.52293	41.19805	0.96899	11.28409	Y = A + B/X
-439.69560	482.81011	27.82921	0.97905	9.59444	Y = A + B*Log(X)
11.93233	2.12493	10.50014	0.99210	7.07545	Y = A*X^B
0.03763	-0.00497	7.33613	0.99448	5.84337	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
43.43178		576.27134	0.57317	46.80890	Y = A*X
-316.75069	122.80535	16.28715	0.98794	6.83888	Y = A + B*X
9.96651	0.71061	3.87437	0.99713	3.35756	Y = A*Exp(B*X)
0.02286	-0.00422	28.84767	0.97863	15.88916	Y = 1 / (A + B*X)
656.70613	-1919.55899	41.04239	0.96960	12.41305	Y = A + B/X
-499.39345	486.94951	27.05608	0.97996	9.61172	Y = A + B*Log(X)
3.41577	2.82787	5.34038	0.99604	3.78188	Y = A*X^B
0.06699	-0.01087	6.48278	0.99520	5.51598	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.44080		0.10347	-1.77989	0.59251	Y = A*X
4.24477	-0.62289	0.00291	0.92190	0.11265	Y = A + B*X
7.14154	-0.35242	0.00256	0.93120	0.10435	Y = A*EXP(B*X)
-0.22737	0.20092	0.00235	0.93692	0.09602	Y = 1 / (A + B*X)
-0.73268	9.89408	0.00244	0.93436	0.10238	Y = A + B/X
5.19843	-2.48969	0.00264	0.92919	0.10770	Y = A + B*Log(X)
12.20317	-1.40586	0.00239	0.93577	0.09912	Y = A*X^B
-3.16655	1.37186	0.00231	0.93804	0.08471	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 11 - ICCS K

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
21.43405		51.41359	0.74957	12.70989	Y = A*X
-85.07869	42.22960	1.73484	0.99155	3.10829	Y = A + B*X
11.44975	0.49455	1.35717	0.99339	3.03753	Y = A*Exp(B*X)
0.03580	-0.00589	4.07164	0.98017	4.72778	Y = 1 / (A + B*X)
254.68934	-678.95336	4.53501	0.97791	4.36949	Y = A + B/X
-151.19486	169.93901	2.83522	0.98619	3.63977	Y = A + B*Log(X)
5.23395	1.99624	1.24449	0.99394	2.61195	Y = A*X^B
0.09588	-0.01189	1.39978	0.99318	3.03824	Y = X / (A + B*X)

Equation Y = A*X ^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
15.06366		72.74081	0.60317	14.92256	Y = A*X
-101.24365	39.81037	2.39072	0.98696	3.23518	Y = A + B*X
3.89626	0.66929	1.00403	0.99452	2.42384	Y = A*Exp(B*X)
0.06447	-0.01160	5.27917	0.97120	5.66890	Y = 1 / (A + B*X)
218.58639	-638.14513	5.94404	0.96757	4.57342	Y = A + B/X
-163.23846	159.96513	3.90400	0.97870	3.75217	Y = A + B*Log(X)
1.35309	2.70031	1.06922	0.99417	2.35221	Y = A*X^B
0.18908	-0.02951	1.51410	0.99174	2.78775	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.50857		0.17911	-1.82957	0.76588	Y = A*X
5.08168	-0.73354	0.00188	0.97033	0.09184	Y = A + B*X
8.63566	-0.34948	0.00182	0.97123	0.08269	Y = A*Exp(B*X)
-0.20002	0.16791	0.00219	0.96544	0.11526	Y = 1 / (A + B*X)
-0.83966	11.87235	0.00191	0.96982	0.09174	Y = A + B/X
6.24397	-2.96176	0.00180	0.97156	0.08359	Y = A + B*Log(X)
14.96253	-1.40814	0.00201	0.96817	0.10158	Y = A*X^B
-2.69519	1.14985	0.00342	0.94594	0.15903	Y = X / (A + B*X)

Equation Y = A + B*Log(X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 12 - ICCS B23

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
43.34561		246.73381	0.72476	26.57221	Y = A*X
-190.23765	90.22559	4.42949	0.99506	5.07074	Y = A + B*X
21.05727	0.51973	4.14671	0.99537	5.19153	Y = A*Exp(B*X)
0.01821	-0.00305	18.88838	0.97893	12.05309	Y = 1 / (A + B*X)
535.83912	-1451.72759	15.35955	0.98287	7.91173	Y = A + B/X
-331.70086	363.18658	8.58649	0.99042	6.17266	Y = A + B*Log(X)
9.23776	2.09861	2.85481	0.99682	3.82912	Y = A*X^B
0.04967	-0.00648	4.92605	0.99450	5.90750	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
32.43210		374.47847	0.58221	32.19609	Y = A*X
-233.43623	89.95745	9.63653	0.98925	5.36085	V = A + B*X
7.67269	0.69440	3.91916	0.99563	4.02366	Y = A*Exp(B*X)
0.03043	-0.00553	28.32082	0.96840	14.98739	Y = 1 / (A + B*X)
489.28498	-1442.61264	26.30173	0.97066	8.55980	Y = A + B/X
-373.65238	361.51311	16.66253	0.98141	6.78602	Y = A + B*Log(X)
2.55923	2.80181	3.62240	0.99596	3.34306	Y = A*X^B
0.09018	-0.01438	7.76937	0.99133	7.45271	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.45273		0.13573	-1.77388	0.75061	Y = A*X
4.43568	-0.64035	0.00400	0.91820	0.15021	Y = A + B*X
7.53198	-0.34933	0.00406	0.91693	0.15227	Y = A*Exp(B*X)
-0.22848	0.19224	0.00445	0.90907	0.18118	Y = 1 / (A + B*X)
-0.72832	10.34685	0.00418	0.91464	0.16110	Y = A + B/X
5.44735	-2.58312	0.00402	0.91783	0.14656	Y = A + B*Log(X)
13.02910	-1.40640	0.00428	0.91244	0.16948	Y = A*X^B
-3.08197	1.31574	0.00554	0.88688	0.22181	Y = X / (A + B*X)

Equation Y = A + B*X has largest R-square
Equation Y = A + B*Log(X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 13 - ICCS E3

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
79.83526		946.92959	0.69394	54.65559	Y = A*X
-385.01198	175.75211	28.75722	0.99071	13.95178	Y = A + B*X
33.47650	0.55923	24.54097	0.99207	10.47874	Y = A*Exp(B*X)
0.01047	-0.00181	68.50019	0.97786	18.51761	Y = 1 / (A + B*X)
1011.27463	-2757.26060	61.41297	0.98015	17.49547	Y = A + B/X
-647.72837	698.06447	41.83661	0.98648	15.67215	Y = A + B*Log(X)
14.40297	2.22660	22.00920	0.99289	12.01868	Y = A*X^B
0.02866	-0.00397	27.30401	0.99117	10.80358	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
69.70166		1941.32176	0.55033	81.39457	Y = A*X
-552.66417	207.38519	49.42103	0.98855	15.32421	Y = A + B*X
12.76565	0.76260	25.55706	0.99408	9.89301	Y = A*Exp(B*X)
0.01538	-0.00289	151.90952	0.96481	34.55814	Y = 1 / (A + B*X)
1093.21332	-3246.69639	112.61213	0.97392	22.10083	Y = A + B/X
-861.46383	822.83652	76.60900	0.98226	17.38136	Y = A + B*Log(X)
4.04404	3.03588	23.21344	0.99462	11.65283	Y = A*X^B
0.04589	-0.00773	49.43628	0.98855	14.37711	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.33736		0.07982	-1.57340	0.43375	Y = A*X
3.57583	-0.55348	0.00062	0.98008	0.05568	Y = A + B*X
6.87692	-0.40674	0.00050	0.98381	0.04649	Y = A*Exp(B*X)
-0.46095	0.30164	0.00057	0.98173	0.04285	Y = 1 / (A + B*X)
-0.83738	8.74673	0.00050	0.98388	0.04546	Y = A + B/X
4.41430	-2.20641	0.00053	0.98306	0.05016	Y = A + B*Log(X)
12.68448	-1.61856	0.00052	0.98331	0.04434	Y = A*X B
-4.73315	1.93571	0.00089	0.97119	0.05080	Y = X / (A + B*X)

Equation Y = A + B/X has largest R-square
Equation Y = 1 / (A + B*X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 14 - ICCS H2

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
29.39852		87.84893	0.74288	16.44295	Y = A*X
-119.50633	58.71783	2.92947	0.99143	3.60440	Y = A + B*X
15.83316	0.49384	1.30648	0.99618	2.31729	Y = A*Exp(B*X)
0.02571	-0.00422	3.79942	0.98888	4.75949	Y = 1 / (A + B*X)
354.61288	-951.80547	8.16179	0.97611	4.88038	Y = A + B/X
-212.77229	237.16470	5.09257	0.98509	4.25045	Y = A + B*Log(X)
7.17125	2.00010	1.69210	0.99505	2.93537	Y = A*X^B
0.06909	-0.00851	1.30441	0.99618	2.33329	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
21.03206		123.47453	0.60238	19.73628	Y = A*X
-142.28022	55.93863	3.10557	0.99000	3.23678	Y = A + B*X
5.68002	0.66105	0.75058	0.99758	1.30642	Y = A*Exp(B*X)
0.04483	-0.00802	6.24253	0.97990	7.20592	Y = 1 / (A + B*X)
309.07667	-905.45866	8.71930	0.97192	4.95145	Y = A + B/X
-230.90843	225.77948	5.50095	0.98229	4.07646	Y = A + B*Log(X)
1.96611	2.67783	0.96764	0.99688	1.87422	V = A*X^B
0.13176	-0.02037	1.31548	0.99576	2.78948	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.49027		0.13458	-1.94878	0.71085	Y = A*X
4.73140	-0.67052	0.00147	0.96786	0.06867	Y = A + B*X
7.77026	-0.33443	0.00125	0.97271	0.06412	Y = A*Exp(B*X)
-0.17900	0.16796	0.00125	0.97269	0.06278	Y = 1 / (A + B*X)
-0.71148	10.98497	0.00122	0.97337	0.06105	Y = A + B/X
5.81654	-2.72264	0.00128	0.97193	0.06417	Y = A + B*Log(X)
13.30379	-1.35548	0.00122	0.97323	0.06136	Y = A*X^B
-2.73156	1.17943	0.00172	0.96230	0.08575	Y = X / (A + B*X)

Equation Y = A + B/X has largest R-square
Equation Y = A + B/X has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 15 - ICCS C33

Weight vs. PL

64.48708		568.20929	0.72360	41.42349	Y = A*X
-282.48090	134.15471	14.06946	0.99316	8.53973	Y = A + B*X
31.22029	0.52068	4.93549	0.99760	5.48424	Y = A*Exp(B*X)
0.01226	-0.00205	25.12451	0.98778	14.13324	Y = 1 / (A + B*X)
793.01090	-2141.58239	44.23376	0.97848	12.36265	Y = A + B/X
-489.53788	537.70330	26.61648	0.98705	10.15126	Y = A + B*Log(X)
13.87831	2.09205	6.42732	0.99687	6.96352	Y = A*X^B
0.03311	-0.00428	5.37238	0.99739	5.39416	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
51.63077		1043.45266	0.57357	55.13161	Y = A*X
-383.38833	146.18499	22.70364	0.99072	9.04869	Y = A + B*X
11.12719	0.71723	9.64062	0.99606	6.91219	Y = A*Exp(B*X)
0.01976	-0.00363	80.00945	0.96730	29.70957	Y = 1 / (A + B*X)
788.19836	-2332.22924	61.38287	0.97491	14.49217	Y = A + B/X
-608.75609	585.73680	39.12182	0.98401	11.41905	Y = A + B*Log(X)
3.63139	2.88391	8.24069	0.99663	5.65983	Y = A*X^B
0.05875	-0.00955	21.51552	0.99121	14.52181	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.39773		0.12625	-1.54480	0.67919	Y = A*X
4.21447	-0.64167	0.00290	0.94151	0.11761	Y = A + B*X
7.87232	-0.39309	0.00234	0.95278	0.09942	Y = A*Exp(B*X)
-0.35639	0.24340	0.00201	0.95944	0.09500	Y = 1 / (A + B*X)
-0.96764	10.39527	0.00222	0.95533	0.08726	Y = A + B/X
5.23104	2.59072	0.00251	0.94949	0.10214	Y = A + B*Log(X)
14.60588	-1.58372	0.00210	0.95765	0.09081	Y = A*X^B
-3.90981	1.60095	0.00198	0.75999	0.10788	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = A + B/X has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 16 - ICCS F2

Weight vs. PL

22.19914		46.70023	0.74642	12.09881	Y = A*X
-90.64019	44.34586	0.70665	0.99616	1.57252	Y = A + B*X
11.65842	0.49912	1.56851	0.99148	2.98870	Y = A*Exp(B*X)
0.03457	-0.00570	5.31297	0.97115	6.57608	Y = 1 / (A + B*X)
268.76664	-724.41375	1.81587	0.99014	3.14386	Y = A + B/X
-162.03351	179.78122	1.02013	0.99446	2.03068	Y = A + B*Log(X)
5.18164	2.02872	0.88890	0.99517	1.83379	Y = A*X^B
0.09407	-0.01186	1.79978	0.99023	3.57773	Y = X / (A + B*X)

Equation Y = A + B*X has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
16.42885		69.83996	0.60740	14.66220	Y = A*X
-111.12004	43.57954	0.71414	0.99599	1.80285	Y = A + B*X
4.33319	0.66541	0.52223	0.99706	1.62412	Y = A*Exp(B*X)
0.05809	-0.01042	5.65121	0.96823	7.03622	Y = 1 / (A + B*X)
241.45456	-709.37805	3.02869	0.98297	4.18213	Y = A + B/X
-180.84175	176.36207	1.64195	0.99077	2.99219	Y = A + B*Log(X)
1.47501	2.70219	0.18834	0.99894	0.77623	Y = A*X^B
0.17201	-0.02680	1.44854	0.99186	3.40892	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.45565		0.11048	-1.93071	0.64697	Y = A*X
4.40932	-0.62171	0.00164	0.95650	0.11406	Y = A + B*X
7.23874	-0.33259	0.00168	0.95554	0.11939	Y = A*Exp(B*X)
-0.19157	0.17913	0.00190	0.94951	0.12669	Y = 1 / (A + B*X)
-0.63305	10.17078	0.00175	0.95351	0.12050	Y = A + B/X
5.41275	-2.52224	0.00165	0.95624	0.11769	Y = A + B*Log(X)
12.34090	-1.34694	0.00181	0.95190	0.12303	Y = A*X^B
-2.90990	1.25619	0.00260	0.93114	0.13291	Y = X / (A + B*X)

Equation Y = A + B*X has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 17 - ICCS A16

Weight vs. PL

34.67752		122.55111	0.73698	19.13148	Y = A*X
-144.46649	70.27308	3.19525	0.99314	3.82202	Y = A + B*X
17.64649	0.50890	0.91213	0.99804	1.57617	Y = A*Exp(B*X)
0.02243	-0.00374	3.12504	0.99329	4.01279	Y = 1 / (A + B*X)
417.99654	-1119.39291	9.51286	0.97958	6.93699	Y = A + B/X
-252.51387	281.25321	5.83940	0.98747	5.38385	Y = A + B*Log(X)
8.01663	2.04148	1.54795	0.99668	2.62022	Y = A*X^B
0.06008	-0.00762	0.88504	0.99810	1.58022	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
25.23519		179.11337	0.59433	23.57285	Y = A*X
-174.76915	68.29712	4.43503	0.98996	4.78724	Y = A + B*X
6.18722	0.68663	1.37960	0.99688	1.95499	Y = A*Exp(B*X)
0.03890	-0.00708	7.38301	0.98328	7.95248	Y = 1 / (A + B*X)
371.62872	-1086.91493	11.19658	0.97464	7.18736	Y = A + B/X
-279.60448	273.21998	7.32954	0.98340	5.97639	Y = A + B*Log(X)
2.13110	2.75535	1.70328	0.99614	3.01674	Y = A*X^B
0.11409	-0.01810	1.98513	0.99550	3.70557	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.47625		0.13056	-1.80320	0.68847	Y = A*X
4.75455	-0.69524	0.00128	0.97244	0.05959	Y = A + B*X
8.13441	-0.35545	0.00101	0.97830	0.05064	Y = A*Exp(B*X)
-0.21965	0.18300	0.00094	0.97983	0.05552	Y = 1 / (A + B*X)
-0.83921	11.19141	0.00095	0.97951	0.05098	Y = A + B/X
5.84383	-2.79714	0.00107	0.97705	0.04989	Y = A + B*Log(X)
14.15071	-1.42775	0.00094	0.97988	0.05267	Y = A*X^B
-2.92668	1.24798	0.00126	0.97303	0.06910	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A + B*Log(X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 18 - ICCS I25

Weight vs. PL

39.42021		170.19948	0.74182	21.61724	Y = A*X
-163.13365	79.53224	2.06065	0.99687	2.60940	Y = A + B*X
19.41006	0.51617	2.51619	0.99618	3.27405	Y = A*Exp(B*X)
0.02021	-0.00340	8.55097	0.98703	6.41237	Y = 1 / (A + B*X)
471.90319	-1259.86558	6.27913	0.99047	4.33870	Y = A + B/X
-283.96006	317.33886	3.58395	0.99456	3.45482	Y = A + B*Log(X)
8.81384	2.06336	1.69865	0.99742	2.96932	Y = A*X^B
0.05422	-0.00701	2.75855	0.99582	3.52770	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
29.85899		277.78467	0.59517	25.21141	Y = A*X
-208.03276	81.01100	4.35580	0.99365	4.16567	Y = A + B*X
6.78863	0.70365	1.57920	0.99770	2.53206	Y = A*Exp(B*X)
0.03412	-0.00627	9.91714	0.98555	7.81910	Y = 1 / (A + B*X)
438.02832	-1280.14286	12.05194	0.98244	7.02096	Y = A + B/X
-330.55588	322.84482	7.59534	0.98893	5.59862	Y = A + B*Log(X)
2.31960	2.81110	1.53453	0.99776	2.22548	Y = A*X^B
0.10007	-0.01613	2.83368	0.99587	4.28026	Y = X / (A + B*X)

Equation Y = A*X^B has largest R-square
Equation Y = A*X^B has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.44044		0.13265	-1.69154	0.62810	Y = A*X
4.56636	-0.68236	0.00091	0.98152	0.08050	Y = A + B*X
8.17502	-0.37496	0.00098	0.98003	0.10068	Y = A*Exp(B*X)
-0.27834	0.20756	0.00130	0.97370	0.12827	Y = 1 / (A + B*X)
-0.88665	10.82778	0.00106	0.97858	0.10615	Y = A + B/X
5.60631	-2.72502	0.00094	0.98095	0.09335	Y = A + B*Log(X)
14.43786	-1.49549	0.00115	0.97665	0.11559	Y = A*X^B
-3.27673	1.37617	0.00209	0.95768	0.16417	Y = X / (A + B*X)

Equation Y = A + B*X has largest R-square
Equation Y = A + B*X has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 19 - ICCS G12

Weight vs. PL

93.67500		582.48160	0.69826	43.96085	Y = A*X
-425.58834	203.81907	24.23746	0.98744	13.41534	Y = A + B*X
40.91525	0.56244	14.77955	0.99234	9.66295	Y = A*Exp(B*X)
0.00884	-0.00156	16.66379	0.99137	8.18066	Y = 1 / (A + B*X)
1144.34599	-3014.58486	42.14048	0.97817	16.64080	Y = A + B/X
-697.96061	784.96426	32.11538	0.98336	15.04337	Y = A + B*Log(X)
19.23115	2.16859	17.90693	0.99072	11.06704	Y = A*X^B
0.02324	-0.00323	14.65993	0.99241	9.32570	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = 1 / (A + B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
85.06582		1438.40075	0.54067	70.35872	Y = A*X
-675.67481	259.93333	31.31624	0.99000	10.13537	Y = A + B*X
15.17782	0.79243	11.73559	0.99625	6.05117	Y = A*Exp(B*X)
0.01261	-0.00245	31.07590	0.99008	18.15118	Y = 1 / (A + B*X)
1326.32870	-3843.94367	61.39099	0.98040	12.87790	Y = A + B/X
-1022.91399	1000.98618	44.68304	0.98573	11.36173	Y = A + B*Log(X)
5.22869	3.05684	14.73400	0.99529	7.30342	Y = A*X^B
0.03655	-0.00636	13.19233	0.99579	7.92238	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.31948		0.03695	-1.38546	0.37312	Y = A*X
3.43192	-0.56871	0.00065	0.95811	0.08391	Y = A + B*X
7.26694	-0.45998	0.00056	0.96382	0.07624	Y = A*Exp(B*X)
-0.62900	0.37438	0.00051	0.96709	0.06607	Y = 1 / (A + B*X)
-0.96636	8.47959	0.00055	0.96453	0.07339	Y = A + B/X)
4.20370	-2.19902	0.00059	0.96179	0.07863	Y = A + B*Log(X)
13.52770	-1.77649	0.00053	0.96598	0.07039	Y = A*X^B
-5.55592	2.25955	0.00051	0.96727	0.05285	Y = X / (A + B*X)

Equation Y = X / (A + B*X) has largest R-square
Equation Y = X / (A + B*X) has smallest max. absolute residual

REPLICATION 2 - Simple Regressions

Cotton # 20 - ICCS D3

Weight vs. PL

A	B	Res. Error	R-square	Max. Deviation	Equation
57.83911		365.96890	0.73063	39.77420	Y = A*X
-242.25734	118.49828	10.81845	0.99204	7.44887	Y = A + B*X
24.40141	0.51318	6.07394	0.99553	5.00041	Y = A*Exp(B*X)
0.01344	-0.00225	19.57020	0.98560	11.89149	Y = 1 / (A + B*X)
700.14998	-1863.35144	28.93046	0.97871	12.28782	Y = A + B/X
-420.30604	471.28963	18.27024	0.98655	9.29569	Y = A + B*Log(X)
13.50538	2.04602	6.62311	0.99513	5.20974	Y = A*X^B
0.03580	-0.00458	6.26818	0.99539	5.08954	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. PH

A	B	Res. Error	R-square	Max. Deviation	Equation
43.51708		614.48151	0.57619	54.95375	Y = A*X
-314.08625	122.16160	17.50624	0.98793	11.12882	Y = A + B*X
10.23403	0.70357	3.70611	0.99744	3.86924	Y = A*Exp(B*X)
0.02265	-0.00417	30.57294	0.97891	17.86123	Y = 1 / (A + B*X)
656.24421	-1916.17341	43.78336	0.96980	17.80027	Y = A + B/X
-496.79640	485.24696	29.01443	0.97999	14.47889	Y = A + B*Log(X)
3.52578	2.80439	5.60721	0.99613	5.91509	Y = A*X^B
0.06625	-0.01067	6.05268	0.99583	4.88638	Y = X / (A + B*X)

Equation Y = A*Exp(B*X) has largest R-square
Equation Y = A*Exp(B*X) has smallest max. absolute residual

Weight vs. $(PL/PH)^2$

A	B	Res. Error	R-square	Max. Deviation	Equation
0.45460		0.12612	-1.75690	0.63459	Y = A*X
4.55407	-0.68570	0.00062	0.98647	0.07126	Y = A + B*X
8.25359	-0.38078	0.00056	0.98776	0.06234	Y = A*Exp(B*X)
-0.29391	0.21333	0.00075	0.98351	0.07366	Y = 1 / (A + B*X)
-0.91875	10.85953	0.00059	0.98719	0.06388	Y = A + B/X
5.59765	-2.73680	0.00055	0.98798	0.05947	Y = A + B*Log(X)
14.67249	-1.51676	0.00065	0.98585	0.06775	Y = A*X^B
-3.35142	1.40187	0.00139	0.96969	0.08409	Y = X / (A + B*X)

Equation Y = A + B*Log(X) has largest R-square
Equation Y = A + B*Log(X) has smallest max. absolute residual

Appendix 6: Quickfix - Replication No 1

Calculated from a.X^b using average Rep 1 b values
(bPL = 2.07 and bPH = 2.83)

Cotton 01 - Deltapine

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.679	160	115	10.793	2.883	190.3	145.8	4.29	0.811	197.8
2	4.076	197	153	10.745	2.868	189.4	145.0	4.30	0.812	198.5
3	4.460	243	202	11.003	2.936	194.0	148.5	4.23	0.815	193.7
4	4.336	228	185	10.943	2.912	192.9	147.2	4.25	0.819	193.8
5	3.553	149	106	10.799	2.931	190.4	148.2	4.29	0.786	203.3
6	4.390	233	191	10.900	2.903	192.2	146.8	4.26	0.817	194.8
7	4.319	228	185	11.031	2.944	194.5	148.9	4.22	0.815	193.2
8	4.489	243	205	10.857	2.926	191.4	147.9	4.27	0.798	199.7
9	4.316	227	182	11.000	2.903	193.9	146.8	4.23	0.833	190.0
10	4.395	239	196	11.155	2.969	196.7	150.1	4.19	0.820	190.2
11	3.960	192	145	11.122	2.952	196.1	149.2	4.20	0.825	189.8
12	4.002	192	148	10.877	2.922	191.8	147.7	4.27	0.803	198.3
13	3.947	189	144	11.022	2.958	194.3	149.6	4.23	0.806	195.3
14	3.700	166	119	11.065	2.935	195.1	148.4	4.22	0.825	190.5
15	3.567	154	108	11.071	2.954	195.2	149.3	4.21	0.816	192.4
16	4.070	203	159	11.106	2.993	195.8	151.4	4.20	0.800	195.2
17	3.644	159	110	10.935	2.831	192.8	143.2	4.25	0.865	184.9
18	4.403	237	191	11.018	2.878	194.3	145.5	4.23	0.850	186.3
19	3.596	154	105	10.892	2.808	192.0	142.0	4.26	0.872	184.2
20	3.734	165	117	10.789	2.811	190.2	142.1	4.29	0.853	189.4
21	3.869	180	129	10.937	2.803	192.8	141.7	4.25	0.883	181.6
22	3.537	152	102	11.120	2.857	196.1	144.5	4.20	0.880	179.3
23	4.136	206	156	10.904	2.807	192.2	141.9	4.26	0.874	183.5
24	4.246	217	169	10.880	2.824	191.8	142.8	4.27	0.860	186.6
25	3.979	186	138	10.668	2.771	188.1	140.1	4.33	0.856	190.6
Mean				**10.945**	**2.891**	**193.0**	**146.2**	**4.25**	**0.832**	**191.3**
sd				**0.129**	**0.062**	**2.27**	**3.14**	**0.04**	**0.029**	**6.00**
CV%				**1.17**	**2.15**	**1.2**	**2.1**	**0.84**	**3.45**	**3.1**
Targets						**192.9**	**146.1**	**4.25**	**0.832**	**191.1**

Cotton 02 - Acala

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.614	140	97	9.798	2.557	172.7	129.3	4.60	0.840	209.2
2	4.482	225	178	10.084	2.551	177.8	129.0	4.50	0.897	192.5
3	3.745	154	107	10.009	2.549	176.5	128.9	4.53	0.884	196.2
4	4.242	201	152	10.095	2.546	178.0	128.7	4.50	0.903	191.2
5	4.525	229	182	10.061	2.539	177.4	128.4	4.51	0.901	192.0
6	4.020	180	130	10.107	2.536	178.2	128.2	4.50	0.912	189.3
7	4.320	209	161	10.111	2.562	178.3	129.5	4.49	0.894	192.5
8	3.819	159	111	9.926	2.503	175.0	126.5	4.55	0.901	194.4
9	3.598	143	96	10.100	2.563	178.1	129.6	4.50	0.892	193.2
10	3.901	167	120	9.977	2.548	175.9	128.8	4.54	0.879	197.8
11	4.392	216	169	10.098	2.566	178.0	129.8	4.50	0.889	193.7
12	3.571	141	95	10.115	2.590	178.3	131.0	4.49	0.875	196.0
13	4.365	213	165	10.085	2.549	177.8	128.9	4.50	0.898	192.2
14	4.051	181	134	10.003	2.558	176.4	129.3	4.53	0.877	197.7
15	3.893	168	118	10.080	2.520	177.7	127.4	4.50	0.918	188.6
16	4.219	198	151	10.059	2.569	177.3	129.9	4.51	0.880	196.2
17	3.906	166	120	9.893	2.539	174.4	128.4	4.56	0.869	201.3
18	4.163	191	147	9.972	2.596	175.8	131.3	4.54	0.846	204.6
19	4.465	221	175	9.983	2.535	176.0	128.2	4.54	0.889	195.8
20	3.633	147	100	10.173	2.596	179.4	131.3	4.47	0.882	193.7
21	4.403	221	174	10.276	2.623	181.2	132.6	4.44	0.883	191.8
22	3.738	152	107	9.921	2.564	174.9	129.6	4.56	0.857	203.1
23	4.076	180	133	9.819	2.494	173.1	126.1	4.59	0.887	199.0
24	4.183	194	148	10.028	2.578	176.8	130.4	4.52	0.868	199.1
25										
Mean				**10.032**	**2.555**	**176.9**	**129.2**	**4.52**	**0.884**	**195.9**
sd				**0.109**	**0.029**	**1.92**	**1.47**	**0.03**	**0.019**	**4.96**
CV%				**1.09**	**1.14**	**1.1**	**1.1**	**0.77**	**2.14**	**2.5**
Targets						**176.9**	**129.3**	**4.52**	**0.883**	**196**

Appendix 6: Quickfix - Replication No 1

Calculated from a.X^b using average Rep 1 b values
(bPL = 2.07 and bPH = 2.83)

Cotton 03 - Menoufi

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.482	295	246	13.220	3.525	233.1	178.2	3.71	0.835	161.0
2	4.335	274	219	13.155	3.449	231.9	174.4	3.73	0.863	157.0
3	3.628	190	134	13.188	3.493	232.5	176.6	3.72	0.846	159.5
4	3.853	217	156	13.300	3.430	234.5	173.4	3.70	0.893	150.9
5	4.284	269	215	13.239	3.502	233.4	177.1	3.71	0.848	158.5
6	4.078	245	188	13.350	3.520	235.4	178.0	3.69	0.855	156.3
7	4.575	316	263	13.574	3.557	239.3	179.8	3.64	0.867	152.1
8	4.144	255	198	13.442	3.543	237.0	179.1	3.67	0.856	155.1
9	4.087	253	194	13.722	3.609	241.9	182.5	3.61	0.862	151.4
10	3.535	189	131	13.849	3.677	244.2	185.9	3.59	0.847	152.5
11	3.782	212	154	13.504	3.569	238.1	180.5	3.66	0.852	155.2
12	4.238	277	223	13.938	3.744	245.7	189.3	3.57	0.828	154.7
13	3.535	187	128	13.696	3.591	241.5	181.5	3.62	0.868	150.8
14	3.591	190	134	13.476	3.597	237.6	181.9	3.66	0.835	158.2
15	4.362	285	235	13.512	3.637	238.2	183.9	3.66	0.821	160.2
16	4.071	243	191	13.290	3.594	234.3	181.7	3.70	0.812	164.1
17	4.184	258	204	13.333	3.552	235.1	179.6	3.69	0.837	159.4
18	3.932	231	175	13.573	3.632	239.3	183.6	3.64	0.832	157.8
19	3.601	185	131	13.043	3.488	230.0	176.4	3.75	0.829	164.0
20	3.537	185	130	13.535	3.641	238.6	184.1	3.65	0.823	159.7
21	4.164	253	200	13.202	3.529	232.8	178.5	3.72	0.830	161.9
22	4.440	291	240	13.297	3.532	234.4	178.6	3.70	0.842	159.0
23	3.865	212	157	12.908	3.421	227.6	173.0	3.78	0.843	163.1
24	4.402	291	244	13.537	3.680	238.7	186.1	3.65	0.806	162.6
25	4.505	307	262	13.614	3.701	240.0	187.1	3.64	0.806	161.7
Mean				**13.420**	**3.569**	**236.6**	**180.4**	**3.67**	**0.841**	**157.9**
sd				**0.246**	**0.084**	**4.35**	**4.26**	**0.05**	**0.021**	**4.15**
CV%				**1.84**	**2.36**	**1.8**	**2.4**	**1.31**	**2.47**	**2.6**
Targets						**236.7**	**180.4**	**3.67**	**0.842**	**157.7**

Cotton 04 - Lankart

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.018	250	216	14.047	4.217	247.7	213.2	3.55	0.664	186.5
2	3.561	193	150	13.928	4.124	245.6	208.5	3.58	0.682	183.5
3	3.741	214	173	13.946	4.137	245.9	209.2	3.57	0.679	183.9
4	3.967	244	209	14.083	4.233	248.3	214.0	3.55	0.662	186.4
5	4.338	299	275	14.341	4.325	252.8	218.7	3.50	0.659	184.0
6	4.526	320	305	14.058	4.254	247.8	215.1	3.55	0.653	188.9
7	4.263	285	262	14.168	4.327	249.8	218.8	3.53	0.642	190.5
8	4.436	309	293	14.146	4.323	249.4	218.6	3.54	0.641	191.0
9	3.572	192	151	13.767	4.114	242.7	208.0	3.61	0.668	188.8
10	4.295	291	267	14.247	4.318	251.2	218.3	3.52	0.652	186.9
11	3.545	189	148	13.763	4.119	242.6	208.3	3.61	0.666	189.3
12	3.783	219	181	13.941	4.191	245.8	211.9	3.57	0.661	188.3
13	3.917	235	201	13.920	4.218	245.4	213.3	3.58	0.651	191.2
14	4.523	321	311	14.117	4.344	248.9	219.6	3.54	0.632	193.7
15	3.848	220	183	13.517	4.037	238.3	204.1	3.65	0.667	192.0
16	4.361	300	282	14.227	4.367	250.8	220.8	3.52	0.636	191.3
17	3.903	230	196	13.729	4.157	242.1	210.2	3.61	0.651	193.6
18	3.657	207	165	14.139	4.207	249.3	212.7	3.54	0.676	182.4
19	3.991	250	215	14.246	4.279	251.2	216.4	3.52	0.664	184.0
20	4.028	253	220	14.147	4.267	249.4	215.7	3.54	0.658	186.6
21	4.144	270	240	14.235	4.295	251.0	217.2	3.52	0.658	185.6
22	4.090	258	227	13.979	4.217	246.4	213.2	3.57	0.657	189.0
23	4.502	322	309	14.302	4.375	252.1	221.2	3.51	0.641	189.2
24	3.718	213	174	14.058	4.233	247.8	214.0	3.55	0.660	187.3
25	3.953	241	206	14.012	4.214	247.0	213.1	3.56	0.661	187.5
Mean				**14.043**	**4.236**	**247.6**	**214.2**	**3.56**	**0.658**	**188.1**
sd				**0.199**	**0.088**	**3.50**	**4.45**	**0.04**	**0.013**	**3.14**
CV%				**1.41**	**2.08**	**1.4**	**2.1**	**1.02**	**1.93**	**1.7**
Targets						**247.6**	**213.8**	**3.56**	**0.659**	**187.6**

(bPL = 2.07 and bPH = 2.83)

Cotton 05 - Lambert

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.417	257	210	11.874	3.138	209.3	158.6	4.01	0.839	176.4
2	3.587	167	114	11.866	3.068	209.2	155.1	4.01	0.876	169.9
3	4.461	262	213	11.858	3.094	209.1	156.4	4.01	0.860	172.8
4	4.021	216	161	12.118	3.137	213.6	158.6	3.95	0.876	166.7
5	4.219	231	178	11.733	3.027	206.9	153.1	4.04	0.879	171.2
6	3.766	182	127	11.695	2.979	206.2	150.6	4.05	0.901	168.0
7	3.831	192	137	11.909	3.062	210.0	154.8	4.00	0.886	167.7
8	3.671	170	119	11.520	3.002	203.1	151.8	4.10	0.859	177.4
9	3.860	193	138	11.787	3.019	207.8	152.7	4.03	0.892	168.3
10	3.614	171	117	11.966	3.084	211.0	155.9	3.99	0.883	167.5
11	4.488	262	212	11.710	3.027	206.5	153.1	4.05	0.875	172.1
12	4.287	240	186	11.794	3.024	207.9	152.9	4.03	0.890	168.5
13	4.131	219	167	11.622	3.016	204.9	152.5	4.07	0.868	174.6
14	3.934	195	144	11.450	2.986	201.9	151.0	4.11	0.857	178.8
15	4.428	257	207	11.813	3.071	208.3	155.3	4.02	0.866	172.4
16	3.679	171	119	11.536	2.983	203.4	150.8	4.09	0.873	174.9
17	4.240	235	181	11.815	3.036	208.3	153.5	4.02	0.887	168.8
18	4.584	279	229	11.938	3.081	210.5	155.8	3.99	0.880	168.4
19	4.288	238	184	11.693	2.990	206.1	151.2	4.05	0.894	169.2
20	4.105	218	165	11.717	3.032	206.6	153.3	4.05	0.873	172.3
21	4.320	243	191	11.751	3.038	207.2	153.6	4.04	0.875	171.5
22	3.944	197	142	11.507	2.923	202.9	147.8	4.10	0.904	169.9
23	4.333	242	189	11.633	2.981	205.1	150.7	4.07	0.890	170.7
24	3.816	189	135	11.818	3.051	208.4	154.2	4.02	0.878	170.1
25	4.078	213	159	11.610	2.978	204.7	150.6	4.07	0.888	171.3
Mean				**11.749**	**3.033**	**207.1**	**153.4**	**4.04**	**0.878**	**171.2**
sd				**0.159**	**0.051**	**2.80**	**2.59**	**0.04**	**0.015**	**3.22**
CV%				**1.35**	**1.69**	**1.4**	**1.7**	**0.96**	**1.67**	**1.9**
Targets						**207.1**	**153.3**	**4.04**	**0.879**	**171**

Cotton 06 - Uganda

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.460	256	212	11.591	3.081	204.4	155.8	4.08	0.826	182.6
2	3.755	183	130	11.834	3.076	208.6	155.5	4.02	0.867	172.0
3	4.374	248	198	11.690	3.041	206.1	153.7	4.05	0.864	174.3
4	3.523	158	107	11.656	3.031	205.5	153.3	4.06	0.864	174.8
5	3.575	160	110	11.454	2.991	201.9	151.2	4.11	0.855	179.1
6	3.939	198	145	11.595	2.996	204.4	151.5	4.08	0.875	173.7
7	4.503	262	214	11.628	3.026	205.0	153.0	4.07	0.862	175.4
8	3.762	184	133	11.847	3.128	208.9	158.2	4.02	0.840	176.6
9	3.510	157	106	11.668	3.034	205.7	153.4	4.06	0.865	174.5
10	3.820	187	135	11.665	3.041	205.7	153.8	4.06	0.860	175.3
11	4.213	228	178	11.618	3.041	204.8	153.7	4.07	0.853	177.3
12	3.911	191	140	11.348	2.950	200.1	149.2	4.14	0.862	179.4
13	4.542	274	227	11.948	3.134	210.6	158.5	3.99	0.852	173.1
14	4.132	222	172	11.773	3.103	207.6	156.9	4.03	0.842	177.1
15	4.026	214	164	11.978	3.185	211.2	161.1	3.98	0.829	176.8
16	3.755	180	129	11.635	3.050	205.1	154.2	4.07	0.850	177.6
17	4.250	231	181	11.558	3.016	203.8	152.5	4.09	0.857	177.3
18	4.447	253	213	11.524	3.121	203.2	157.8	4.10	0.795	189.8
19	3.618	169	117	11.799	3.074	208.0	155.4	4.03	0.862	173.2
20	3.696	177	124	11.821	3.066	208.4	155.0	4.02	0.870	171.5
21	4.295	238	189	11.653	3.057	205.4	154.6	4.06	0.849	177.5
22	4.008	206	155	11.635	3.048	205.1	154.1	4.07	0.851	177.3
23	3.784	181	129	11.514	2.984	203.0	150.9	4.10	0.868	175.9
24	3.842	184	134	11.342	2.969	200.0	150.1	4.14	0.850	181.7
25	4.103	217	166	11.675	3.054	205.8	154.4	4.06	0.854	176.3
Mean				**11.658**	**3.052**	**205.5**	**154.3**	**4.06**	**0.853**	**176.8**
sd				**0.160**	**0.055**	**2.82**	**2.76**	**0.04**	**0.017**	**3.82**
CV%				**1.37**	**1.79**	**1.4**	**1.8**	**0.98**	**1.98**	**2.2**
Targets						**205.5**	**154.4**	**4.06**	**0.852**	**176.9**

Appendix 6: Quickfix - Replication No 1

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 07 - Coker

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.825	164	122	10.206	2.739	179.9	138.5	4.46	0.798	210.9
2	4.560	248	207	10.726	2.826	189.1	142.9	4.31	0.833	194.3
3	4.173	204	158	10.599	2.772	186.9	140.1	4.35	0.844	194.1
4	4.189	204	158	10.515	2.742	185.4	138.6	4.37	0.849	194.6
5	3.723	160	115	10.529	2.787	185.6	140.9	4.37	0.824	199.5
6	3.627	149	104	10.351	2.714	182.5	137.2	4.42	0.838	199.6
7	4.049	189	144	10.451	2.751	184.3	139.1	4.39	0.832	199.0
8	3.638	150	105	10.357	2.717	182.6	137.4	4.42	0.837	199.7
9	4.020	185	142	10.385	2.769	183.1	140.0	4.41	0.810	204.9
10	4.546	238	199	10.357	2.740	182.6	138.5	4.42	0.823	202.6
11	4.325	214	172	10.326	2.727	182.0	137.9	4.43	0.825	202.7
12	4.427	225	183	10.347	2.717	182.4	137.4	4.42	0.835	200.2
13	3.774	162	118	10.366	2.752	182.8	139.2	4.42	0.817	203.7
14	3.905	174	127	10.373	2.689	182.9	135.9	4.41	0.857	195.2
15	4.324	215	171	10.379	2.713	183.0	137.2	4.41	0.843	198.0
16	4.166	199	158	10.379	2.786	183.0	140.9	4.41	0.799	207.5
17	4.471	236	196	10.629	2.828	187.4	143.0	4.34	0.816	199.5
18	3.543	147	101	10.718	2.816	189.0	142.4	4.31	0.838	193.5
19	3.922	176	131	10.398	2.739	183.3	138.5	4.41	0.830	200.4
20	4.084	195	149	10.595	2.779	186.8	140.5	4.35	0.839	195.1
21	4.325	221	178	10.665	2.823	188.0	142.7	4.33	0.825	197.0
22	3.737	161	116	10.514	2.782	185.4	140.6	4.37	0.824	199.7
23	3.508	139	97	10.345	2.781	182.4	140.6	4.42	0.796	208.7
24	4.101	194	150	10.450	2.764	184.2	139.8	4.39	0.824	200.8
25	3.800	164	123	10.344	2.813	182.4	142.2	4.42	0.779	212.9
Mean				**10.452**	**2.763**	**184.3**	**139.7**	**4.39**	**0.825**	**200.6**
sd				**0.137**	**0.040**	**2.41**	**2.00**	**0.04**	**0.018**	**5.25**
CV%				**1.31**	**1.43**	**1.3**	**1.4**	**0.92**	**2.20**	**2.6**
Targets						**184.3**	**139.6**	**4.39**	**0.826**	**200.3**

Cotton 08 - Tanguis

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.533	178	146	7.794	2.027	137.4	102.5	5.39	0.822	261.4
2	4.406	169	133	7.849	2.001	138.4	101.2	5.37	0.855	250.7
3	4.091	142	106	7.688	1.967	135.5	99.5	5.44	0.847	257.6
4	3.702	118	82	7.858	2.019	138.5	102.1	5.36	0.842	253.9
5	3.599	110	75	7.762	2.000	136.9	101.1	5.41	0.837	258.1
6	4.143	148	113	7.807	2.024	137.6	102.3	5.38	0.827	259.5
7	3.784	122	87	7.762	2.013	136.9	101.8	5.41	0.826	261.2
8	3.981	137	101	7.848	2.025	138.4	102.4	5.37	0.836	256.0
9	4.211	151	115	7.701	1.967	135.8	99.4	5.44	0.851	256.3
10	3.876	130	92	7.870	1.989	138.8	100.6	5.36	0.871	246.2
11	3.858	129	91	7.885	1.994	139.0	100.8	5.35	0.871	245.9
12	4.095	146	108	7.888	1.999	139.1	101.1	5.35	0.867	246.7
13	4.338	161	126	7.720	1.981	136.1	100.1	5.43	0.843	257.7
14	4.059	142	106	7.813	2.011	137.7	101.7	5.38	0.839	256.1
15	4.456	172	138	7.802	2.011	137.6	101.7	5.39	0.837	257.0
16	3.829	126	89	7.821	1.991	137.9	100.7	5.38	0.858	250.9
17	3.665	116	79	7.885	2.001	139.0	101.2	5.35	0.864	247.5
18	3.910	132	96	7.848	2.025	138.4	102.4	5.37	0.835	256.0
19	3.629	114	78	7.909	2.032	139.4	102.7	5.34	0.844	252.1
20	3.512	107	72	7.945	2.058	140.1	104.1	5.32	0.830	254.6
21	4.011	140	103	7.897	2.022	139.2	102.2	5.34	0.849	251.0
22	4.554	182	149	7.894	2.042	139.2	103.2	5.34	0.832	255.7
23	3.822	126	89	7.855	2.003	138.5	101.3	5.36	0.855	250.6
24	4.052	142	106	7.842	2.021	138.3	102.2	5.37	0.837	255.7
25	4.372	167	132	7.882	2.030	139.0	102.7	5.35	0.838	254.2
Mean				**7.833**	**2.010**	**138.1**	**101.6**	**5.37**	**0.844**	**254.1**
sd				**0.066**	**0.022**	**1.17**	**1.11**	**0.03**	**0.014**	**4.46**
CV%				**0.85**	**1.09**	**0.8**	**1.1**	**0.59**	**1.66**	**1.8**
Targets						**138.1**	**101.6**	**5.37**	**0.844**	**254.3**

Appendix 6: Quickfix - Replication No 1

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 09 - Old B19

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.537	233	191	10.183	2.645	179.5	133.7	4.47	0.852	199.6
2	4.100	188	143	10.130	2.637	178.6	133.3	4.49	0.848	201.4
3	4.152	192	146	10.081	2.598	177.7	131.4	4.50	0.864	198.9
4	3.627	144	101	10.000	2.634	176.3	133.2	4.53	0.826	208.3
5	4.249	200	156	10.010	2.600	176.5	131.5	4.53	0.850	203.1
6	4.325	208	165	10.038	2.617	177.0	132.3	4.52	0.844	203.8
7	3.505	136	93	10.138	2.672	178.7	135.1	4.49	0.826	205.8
8	4.427	220	178	10.115	2.642	178.3	133.6	4.49	0.842	202.9
9	3.785	157	115	9.982	2.659	176.0	134.4	4.54	0.808	212.8
10	3.991	176	131	10.028	2.607	176.8	131.8	4.52	0.849	203.0
11	4.075	183	137	9.990	2.571	176.1	130.0	4.53	0.865	200.3
12	3.518	137	92	10.137	2.617	178.7	132.3	4.49	0.862	198.4
13	3.739	152	109	9.912	2.609	174.8	131.9	4.56	0.827	209.9
14	3.805	158	114	9.941	2.598	175.3	131.4	4.55	0.839	206.7
15	4.076	186	139	10.149	2.607	178.9	131.8	4.48	0.870	196.5
16	4.477	226	184	10.154	2.646	179.0	133.8	4.48	0.846	201.4
17	3.987	173	132	9.880	2.635	174.2	133.2	4.57	0.805	215.5
18	4.318	207	163	10.021	2.596	176.7	131.3	4.52	0.854	201.9
19	4.073	182	137	9.943	2.574	175.3	130.1	4.55	0.855	203.3
20	3.762	158	110	10.175	2.588	179.4	130.9	4.47	0.888	192.6
21	3.524	138	93	10.173	2.632	179.4	133.1	4.48	0.858	198.4
22	3.604	144	99	10.135	2.630	178.7	133.0	4.49	0.853	200.2
23	3.787	157	111	9.974	2.563	175.8	129.6	4.54	0.868	200.1
24	4.047	181	134	10.023	2.565	176.7	129.7	4.52	0.876	197.6
25	4.365	214	167	10.133	2.580	178.7	130.5	4.49	0.885	193.8
Mean				**10.058**	**2.613**	**177.3**	**132.1**	**4.51**	**0.850**	**202.2**
sd				**0.091**	**0.030**	**1.61**	**1.51**	**0.03**	**0.021**	**5.41**
CV%				**0.91**	**1.14**	**0.9**	**1.1**	**0.64**	**2.46**	**2.7**
Targets						**177.2**	**132**	**4.51**	**0.85**	**202.3**

Cotton 10 - Old D3

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.728	200	138	13.124	3.331	231.4	168.4	3.73	0.921	148.8
2	3.868	210	149	12.771	3.241	225.2	163.9	3.81	0.917	152.9
3	4.197	251	189	12.891	3.264	227.3	165.0	3.78	0.923	150.8
4	4.412	277	220	12.829	3.298	226.2	166.8	3.79	0.895	155.6
5	4.046	236	174	13.075	3.332	230.5	168.5	3.74	0.913	150.4
6	4.217	254	193	12.914	3.287	227.7	166.2	3.78	0.914	151.9
7	3.707	198	136	13.146	3.336	231.8	168.7	3.73	0.921	148.4
8	4.304	266	206	12.962	3.311	228.5	167.4	3.77	0.908	152.3
9	3.589	185	125	13.137	3.361	231.6	170.0	3.73	0.906	150.7
10	4.102	242	182	13.030	3.352	229.7	169.5	3.75	0.895	153.4
11	4.502	292	235	12.967	3.326	228.6	168.2	3.76	0.900	153.4
12	3.622	184	128	12.815	3.352	225.9	169.5	3.80	0.864	160.6
13	3.828	208	148	12.922	3.315	227.8	167.6	3.77	0.899	153.9
14	3.638	189	129	13.048	3.338	230.0	168.8	3.75	0.906	151.7
15	3.953	227	167	13.192	3.414	232.6	172.6	3.72	0.886	153.1
16	4.072	242	180	13.226	3.384	233.2	171.1	3.71	0.907	149.7
17	4.584	308	252	13.178	3.390	232.3	171.4	3.72	0.897	151.7
18	3.867	217	157	13.199	3.416	232.7	172.7	3.72	0.886	153.1
19	3.514	178	120	13.198	3.423	232.7	173.1	3.72	0.882	153.6
20	4.163	254	191	13.263	3.374	233.8	170.6	3.70	0.918	147.7
21	4.220	262	204	13.300	3.467	234.5	175.3	3.70	0.874	153.8
22	3.762	206	148	13.269	3.483	233.9	176.1	3.70	0.862	156.0
23	4.203	256	198	13.103	3.403	231.0	172.1	3.74	0.879	155.1
24	3.869	218	158	13.246	3.433	233.5	173.6	3.71	0.884	152.9
25	4.193	254	196	13.068	3.392	230.4	171.5	3.74	0.880	155.4
Mean				**13.075**	**3.361**	**230.5**	**169.9**	**3.74**	**0.897**	**152.7**
sd				**0.155**	**0.060**	**2.72**	**3.05**	**0.03**	**0.018**	**2.76**
CV%				**1.18**	**1.80**	**1.2**	**1.8**	**0.85**	**1.99**	**1.8**
Targets						**230.5**	**170**	**3.74**	**0.896**	**152.8**

Appendix 6: Quickfix - Replication No 1

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 11 - ICCS K

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.481	103	77	4.619	1.105	81.4	55.8	7.60	0.910	380.8
2	4.218	92	65	4.674	1.106	82.4	55.9	7.54	0.931	369.3
3	4.114	88	61	4.708	1.114	83.0	56.3	7.51	0.932	366.6
4	4.144	88	61	4.639	1.091	81.8	55.2	7.58	0.941	368.6
5	4.543	108	80	4.707	1.104	83.0	55.8	7.51	0.949	361.0
6	3.825	77	50	4.790	1.122	84.5	56.7	7.43	0.953	354.1
7	3.905	80	52	4.769	1.101	84.1	55.7	7.45	0.981	346.7
8	3.706	71	46	4.716	1.129	83.1	57.1	7.50	0.911	373.7
9	3.660	70	45	4.773	1.145	84.2	57.9	7.45	0.909	370.4
10	3.524	66	41	4.865	1.160	85.8	58.7	7.36	0.921	359.8
11	3.512	65	40	4.825	1.143	85.1	57.8	7.40	0.933	358.5
12	4.371	100	72	4.720	1.108	83.2	56.0	7.50	0.948	360.6
13	4.020	86	57	4.827	1.111	85.1	56.2	7.39	0.988	341.0
14	4.445	104	75	4.742	1.101	83.6	55.7	7.48	0.969	352.0
15	3.939	83	55	4.859	1.136	85.7	57.4	7.36	0.959	347.9
16	4.098	89	61	4.802	1.127	84.7	57.0	7.42	0.950	354.3
17	4.439	104	75	4.756	1.105	83.8	55.9	7.46	0.968	351.6
18	3.727	73	46	4.794	1.111	84.5	56.2	7.43	0.973	347.6
19	4.357	99	70	4.705	1.087	82.9	55.0	7.51	0.977	352.0
20	3.813	76	49	4.761	1.110	83.9	56.1	7.46	0.961	353.5
21	3.761	72	46	4.640	1.083	81.8	54.8	7.58	0.956	363.5
22	3.906	80	52	4.766	1.100	84.0	55.6	7.45	0.981	346.8
23	3.607	67	42	4.709	1.114	83.0	56.3	7.51	0.933	366.3
24	4.211	92	65	4.691	1.111	82.7	56.2	7.53	0.929	368.9
25	4.544	107	78	4.661	1.075	82.2	54.4	7.56	0.979	354.4
Mean				**4.741**	**1.112**	**83.6**	**56.2**	**7.48**	**0.950**	**358.8**
sd				**0.068**	**0.020**	**1.20**	**1.00**	**0.07**	**0.024**	**9.97**
CV%				**1.43**	**1.78**	**1.4**	**1.8**	**0.89**	**2.53**	**2.8**
Targets						**83.6**	**56.2**	**7.48**	**0.95**	**358.3**

Cotton 12 - ICCS B23

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.411	208	161	9.637	2.415	169.9	122.1	4.65	0.909	198.1
2	3.754	151	103	9.769	2.439	172.2	123.3	4.60	0.917	194.1
3	3.796	154	105	9.736	2.409	171.6	121.8	4.62	0.933	191.7
4	4.161	188	138	9.827	2.441	173.3	123.4	4.59	0.927	191.3
5	4.439	211	162	9.646	2.386	170.1	120.6	4.65	0.933	193.4
6	4.038	173	125	9.622	2.407	169.6	121.7	4.65	0.912	197.8
7	3.907	162	114	9.645	2.409	170.0	121.8	4.65	0.915	196.8
8	3.703	148	98	9.851	2.412	173.7	122.0	4.58	0.954	186.1
9	3.875	160	111	9.692	2.402	170.9	121.4	4.63	0.930	193.2
10	3.526	132	86	9.721	2.430	171.4	122.9	4.62	0.914	195.6
11	4.183	186	136	9.616	2.370	169.5	119.8	4.66	0.939	192.8
12	3.611	139	91	9.743	2.404	171.8	121.5	4.61	0.939	190.7
13	3.678	144	96	9.718	2.408	171.3	121.8	4.62	0.930	192.6
14	4.345	205	154	9.797	2.410	172.7	121.9	4.60	0.945	188.6
15	3.504	132	85	9.850	2.446	173.7	123.7	4.58	0.928	190.8
16	3.939	165	116	9.660	2.396	170.3	121.1	4.64	0.928	194.1
17	4.276	196	146	9.685	2.391	170.8	120.9	4.63	0.937	192.1
18	4.338	202	153	9.685	2.405	170.8	121.6	4.63	0.926	194.0
19	4.497	217	171	9.658	2.428	170.3	122.8	4.64	0.903	198.7
20	4.076	177	130	9.656	2.438	170.2	123.3	4.64	0.895	200.3
21	3.896	159	113	9.522	2.407	167.9	121.7	4.69	0.892	203.6
22	4.293	196	151	9.604	2.445	169.3	123.6	4.66	0.880	204.3
23	3.681	142	98	9.565	2.452	168.6	124.0	4.67	0.868	207.6
24	4.336	200	155	9.598	2.439	169.2	123.3	4.66	0.883	203.9
25	3.574	137	91	9.808	2.474	172.9	125.1	4.59	0.899	196.9
Mean				**9.692**	**2.418**	**170.9**	**122.3**	**4.63**	**0.917**	**195.6**
sd				**0.089**	**0.024**	**1.56**	**1.21**	**0.03**	**0.022**	**5.27**
CV%				**0.91**	**0.99**	**0.9**	**1.0**	**0.64**	**2.39**	**2.7**
Targets						**170.9**	**122.3**	**4.63**	**0.918**	**195.4**

Appendix 6: Quickfix - Replication No 1

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 13 - ICCS E3

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.080	327	285	17.805	5.330	313.9	269.5	3.00	0.687	146.4
2	3.603	252	200	17.749	5.318	312.9	268.9	3.01	0.686	147.1
3	4.338	385	351	18.466	5.520	325.6	279.1	2.93	0.693	140.8
4	3.627	259	207	17.990	5.401	317.2	273.1	2.98	0.685	145.6
5	4.559	426	410	18.429	5.599	324.9	283.1	2.93	0.670	145.1
6	4.364	385	351	18.239	5.427	321.6	274.4	2.95	0.698	141.4
7	3.897	293	248	17.546	5.283	309.3	267.1	3.03	0.678	150.0
8	3.535	239	188	17.504	5.273	308.6	266.6	3.04	0.677	150.5
9	4.410	387	353	17.936	5.297	316.2	267.8	2.99	0.707	141.9
10	4.324	372	339	17.959	5.379	316.6	272.0	2.98	0.688	145.2
11	4.567	411	393	17.718	5.341	312.4	270.1	3.01	0.678	148.9
12	3.760	277	225	17.858	5.302	314.9	268.1	3.00	0.699	143.8
13	4.031	321	278	17.918	5.379	315.9	272.0	2.99	0.684	146.2
14	3.959	307	261	17.793	5.317	313.7	268.8	3.00	0.690	146.0
15	4.156	345	302	18.082	5.361	318.8	271.1	2.97	0.702	141.7
16	4.263	367	329	18.242	5.432	321.6	274.7	2.95	0.697	141.5
17	3.514	241	186	17.874	5.308	315.1	268.4	2.99	0.699	143.8
18	4.050	329	282	18.183	5.383	320.6	272.2	2.96	0.705	140.5
19	3.791	278	223	17.618	5.133	310.6	259.5	3.02	0.725	141.0
20	4.248	360	317	18.029	5.288	317.9	267.4	2.98	0.717	139.5
21	4.177	340	297	17.628	5.195	310.8	262.7	3.02	0.709	143.8
22	3.774	274	221	17.531	5.153	309.1	260.6	3.04	0.712	144.0
23	4.394	383	345	17.887	5.231	315.4	264.5	2.99	0.721	139.9
24	3.890	290	237	17.422	5.071	307.2	256.4	3.05	0.725	142.4
25	3.637	252	195	17.403	5.047	306.8	255.2	3.05	0.730	141.7
Mean				**17.872**	**5.311**	**315.1**	**268.5**	**2.99**	**0.698**	**143.9**
sd				**0.295**	**0.127**	**5.20**	**6.43**	**0.03**	**0.017**	**3.10**
CV%				**1.65**	**2.39**	**1.6**	**2.4**	**1.17**	**2.39**	**2.2**
Targets						**314.7**	**268.4**	**3.00**	**0.697**	**144.4**

Cotton 14 - ICCS H2

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.865	110	73	6.699	1.591	118.1	80.5	5.98	0.966	259.5
2	4.104	122	85	6.563	1.564	115.7	79.1	6.06	0.958	266.3
3	3.585	95	60	6.762	1.619	119.2	81.8	5.94	0.953	260.6
4	3.760	104	67	6.704	1.578	118.2	79.8	5.97	0.984	255.3
5	4.329	139	100	6.694	1.581	118.0	80.0	5.98	0.977	257.2
6	3.744	103	67	6.699	1.598	118.1	80.8	5.98	0.959	261.4
7	3.654	98	63	6.702	1.609	118.2	81.4	5.97	0.946	264.3
8	3.951	115	77	6.692	1.577	118.0	79.7	5.98	0.982	256.2
9	4.037	120	83	6.678	1.599	117.7	80.9	5.99	0.950	264.1
10	4.470	148	110	6.670	1.589	117.6	80.3	5.99	0.961	261.9
11	4.248	132	94	6.612	1.569	116.6	79.3	6.03	0.967	262.3
12	4.588	152	114	6.491	1.529	114.4	77.3	6.10	0.978	264.1
13	4.395	142	102	6.626	1.545	116.8	78.1	6.02	1.002	253.9
14	4.440	145	107	6.627	1.575	116.8	79.6	6.02	0.964	262.6
15	3.566	93	59	6.691	1.615	118.0	81.7	5.98	0.936	267.2
16	3.641	97	62	6.685	1.600	117.9	80.9	5.98	0.951	263.6
17	3.813	105	68	6.577	1.540	116.0	77.9	6.05	0.992	257.9
18	3.950	117	77	6.810	1.578	120.1	79.8	5.91	1.018	244.3
19	4.073	123	84	6.719	1.578	118.5	79.8	5.96	0.989	253.7
20	4.185	128	90	6.612	1.567	116.6	79.2	6.03	0.970	261.7
21	4.544	151	113	6.577	1.558	116.0	78.8	6.05	0.970	262.9
22	3.665	99	63	6.731	1.596	118.7	80.7	5.96	0.970	257.5
23	4.249	132	92	6.608	1.534	116.5	77.6	6.03	1.010	252.7
24	4.000	117	78	6.635	1.542	117.0	78.0	6.01	1.008	252.2
25	4.720	161	123	6.483	1.523	114.3	77.0	6.11	0.984	263.0
Mean				**6.654**	**1.574**	**117.3**	**79.6**	**6.00**	**0.974**	**259.5**
sd				**0.078**	**0.027**	**1.37**	**1.37**	**0.05**	**0.021**	**5.32**
CV%				**1.17**	**1.72**	**1.2**	**1.7**	**0.79**	**2.17**	**2.0**
Targets						**117.4**	**79.7**	**6.00**	**0.973**	**259.2**

Appendix 6: Quickfix - Replication No 1

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 15 - ICCS C33

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin

1	3.887	229	176	13.783	3.775	243.0	190.9	3.60	0.795	161.8
2	4.164	271	217	14.144	3.830	249.4	193.7	3.54	0.816	154.6
3	4.588	333	293	14.221	3.931	250.7	198.8	3.52	0.784	159.4
4	3.772	220	162	14.093	3.784	248.5	191.3	3.55	0.830	152.8
5	4.061	256	199	14.075	3.772	248.2	190.7	3.55	0.833	152.5
6	4.302	288	236	14.051	3.799	247.7	192.1	3.55	0.818	155.2
7	3.956	241	183	13.983	3.733	246.5	188.8	3.57	0.839	152.5
8	3.672	204	152	13.816	3.831	243.6	193.7	3.60	0.776	165.0
9	3.526	189	136	13.917	3.843	245.4	194.3	3.58	0.784	162.6
10	4.270	286	238	14.170	3.913	249.8	197.8	3.53	0.785	159.6
11	4.411	303	258	14.037	3.869	247.5	195.6	3.56	0.787	160.7
12	3.925	235	181	13.864	3.778	244.4	191.0	3.59	0.804	159.4
13	3.733	215	159	14.066	3.822	248.0	193.3	3.55	0.810	156.4
14	4.100	260	208	14.014	3.837	247.1	194.0	3.56	0.798	159.0
15	4.378	300	254	14.116	3.891	248.9	196.7	3.54	0.788	159.8
16	4.558	334	289	14.457	3.950	254.9	199.7	3.48	0.804	153.6
17	3.821	227	172	14.155	3.872	249.6	195.8	3.54	0.800	157.2
18	4.160	268	217	14.017	3.841	247.1	194.2	3.56	0.796	159.3
19	3.827	228	173	14.175	3.879	249.9	196.1	3.53	0.800	157.1
20	4.233	282	230	14.230	3.877	250.9	196.0	3.52	0.807	155.3
21	4.024	251	197	14.062	3.831	247.9	193.7	3.55	0.806	157.1
22	3.988	244	190	13.928	3.791	245.6	191.7	3.58	0.807	158.4
23	4.393	303	256	14.156	3.884	249.6	196.4	3.54	0.795	158.0
24	3.574	197	141	14.107	3.835	248.7	193.9	3.54	0.810	156.1
25	4.139	267	218	14.112	3.915	248.8	198.0	3.54	0.778	161.6
Mean				**14.070**	**3.843**	**248.1**	**194.3**	**3.55**	**0.802**	**157.8**
sd				**0.143**	**0.055**	**2.53**	**2.78**	**0.03**	**0.017**	**3.27**
CV%				**1.02**	**1.43**	**1.0**	**1.4**	**0.73**	**2.06**	**2.1**
Targets						**247.9**	**194**	**3.55**	**0.804**	**157.5**

Cotton 16 - ICCS F2

Spec.	**Weight**	**PL**	**PH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.994	88	62	5.007	1.231	88.3	62.3	7.23	0.869	369.0
2	4.039	88	62	4.892	1.193	86.3	60.3	7.33	0.882	372.1
3	3.657	73	48	4.984	1.223	87.9	61.9	7.25	0.872	369.3
4	3.503	69	45	5.152	1.296	90.8	65.5	7.10	0.834	373.1
5	4.150	94	68	4.939	1.211	87.1	61.3	7.29	0.873	372.2
6	4.506	112	86	4.964	1.214	87.5	61.4	7.27	0.878	368.5
7	4.533	113	86	4.947	1.194	87.2	60.4	7.28	0.902	361.2
8	3.782	78	53	4.968	1.228	87.6	62.1	7.26	0.859	375.3
9	3.806	79	54	4.966	1.229	87.6	62.1	7.26	0.857	376.2
10	3.628	73	47	5.068	1.225	89.4	62.0	7.17	0.901	353.8
11	4.397	106	79	4.944	1.196	87.2	60.5	7.28	0.897	362.9
12	4.225	98	71	4.964	1.203	87.5	60.8	7.27	0.894	362.7
13	4.159	93	66	4.867	1.169	85.8	59.1	7.36	0.908	364.4
14	3.682	74	48	4.982	1.200	87.8	60.7	7.25	0.906	357.6
15	4.273	97	71	4.799	1.165	84.6	58.9	7.42	0.888	376.2
16	3.980	87	59	4.986	1.183	87.9	59.8	7.25	0.933	348.2
17	4.502	109	83	4.840	1.175	85.3	59.4	7.38	0.889	372.9
18	4.354	101	75	4.807	1.167	84.8	59.0	7.41	0.887	375.7
19	3.988	86	59	4.908	1.177	86.5	59.5	7.32	0.912	360.0
20	3.866	80	55	4.871	1.198	85.9	60.6	7.35	0.866	379.6
21	3.727	75	49	4.925	1.184	86.8	59.9	7.30	0.908	360.4
22	4.403	105	77	4.883	1.161	86.1	58.7	7.34	0.927	356.5
23	4.397	104	77	4.849	1.165	85.5	58.9	7.37	0.907	365.7
24	4.310	101	74	4.908	1.185	86.5	59.9	7.32	0.900	364.3
25	3.996	87	59	4.946	1.171	87.2	59.2	7.28	0.937	349.2
Mean				**4.935**	**1.198**	**87.0**	**60.6**	**7.29**	**0.891**	**365.9**
sd				**0.078**	**0.030**	**1.38**	**1.54**	**0.07**	**0.025**	**8.65**
CV%				**1.59**	**2.54**	**1.6**	**2.5**	**0.99**	**2.76**	**2.4**
Targets						**87.2**	**60.7**	**7.28**	**0.89**	**365.5**

Appendix 6: Quickfix - Replication No 1

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 17 - ICCS A16

Spec.	**Weight**	**PL**	**PH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**

1	3.532	108	71	7.924	1.997	139.7	101.0	5.33	0.877	243.2
2	4.361	162	124	7.684	1.921	135.5	97.1	5.44	0.888	247.3
3	4.033	138	99	7.696	1.913	135.7	96.7	5.44	0.898	244.6
4	4.183	147	109	7.600	1.899	134.0	96.0	5.49	0.887	250.0
5	3.953	132	93	7.672	1.902	135.3	96.2	5.45	0.903	244.1
6	4.383	161	123	7.558	1.878	133.2	95.0	5.51	0.896	248.9
7	4.205	150	112	7.673	1.923	135.3	97.2	5.45	0.883	248.9
8	3.754	116	81	7.505	1.918	132.3	97.0	5.53	0.847	263.2
9	3.866	125	87	7.607	1.894	134.1	95.8	5.48	0.893	248.2
10	4.554	174	139	7.545	1.904	133.0	96.3	5.51	0.869	256.2
11	3.602	109	73	7.681	1.942	135.4	98.2	5.45	0.867	252.6
12	4.469	169	131	7.622	1.894	134.4	95.8	5.47	0.898	246.8
13	4.224	150	111	7.601	1.882	134.0	95.1	5.48	0.904	245.9
14	4.092	141	102	7.629	1.891	134.5	95.6	5.47	0.902	245.6
15	3.507	103	68	7.671	1.952	135.2	98.7	5.45	0.857	255.5
16	4.101	142	103	7.650	1.899	134.9	96.0	5.46	0.900	245.4
17	3.528	105	69	7.723	1.947	136.2	98.4	5.42	0.873	249.8
18	3.809	123	85	7.719	1.930	136.1	97.6	5.43	0.887	246.4
19	4.436	167	128	7.646	1.889	134.8	95.5	5.46	0.908	243.5
20	4.353	161	122	7.665	1.899	135.1	96.0	5.45	0.903	244.2
21	3.754	120	83	7.760	1.964	136.8	99.3	5.41	0.867	250.3
22	3.727	117	80	7.681	1.932	135.4	97.7	5.45	0.876	250.2
23	3.937	130	92	7.621	1.904	134.4	96.2	5.47	0.888	249.1
24	4.123	144	105	7.672	1.906	135.3	96.4	5.45	0.898	245.2
25	4.275	153	115	7.562	1.884	133.3	95.3	5.50	0.892	249.9
Mean				**7.655**	**1.915**	**135.0**	**96.8**	**5.46**	**0.886**	**248.6**
sd				**0.082**	**0.029**	**1.45**	**1.44**	**0.04**	**0.016**	**4.59**
CV%				**1.07**	**1.49**	**1.1**	**1.5**	**0.73**	**1.81**	**1.8**
Targets						**134.9**	**96.8**	**5.46**	**0.885**	**248.8**

Cotton 18 - ICCS I25

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.136	163	125	8.627	2.249	152.1	113.7	5.02	0.828	237.1
2	4.564	202	168	8.719	2.287	153.7	115.6	4.99	0.819	237.2
3	4.143	163	128	8.597	2.292	151.6	115.9	5.04	0.791	247.5
4	3.839	139	103	8.586	2.289	151.4	115.7	5.04	0.791	247.8
5	4.466	194	158	8.759	2.288	154.4	115.7	4.97	0.827	234.3
6	4.266	177	140	8.786	2.307	154.9	116.7	4.96	0.818	235.9
7	3.514	120	81	8.900	2.311	156.9	116.9	4.92	0.838	228.4
8	3.724	134	96	8.814	2.325	155.4	117.5	4.95	0.811	236.9
9	3.695	131	92	8.756	2.277	154.4	115.2	4.97	0.833	232.7
10	3.971	151	113	8.696	2.282	153.3	115.4	5.00	0.818	238.0
11	4.092	159	123	8.603	2.281	151.7	115.3	5.03	0.800	244.9
12	4.396	189	152	8.816	2.301	155.4	116.3	4.95	0.828	232.5
13	4.536	199	166	8.700	2.300	153.4	116.3	5.00	0.806	240.9
14	3.550	122	83	8.861	2.302	156.2	116.4	4.93	0.837	229.4
15	4.275	178	141	8.798	2.310	155.1	116.8	4.96	0.818	235.5
16	3.960	151	113	8.747	2.300	154.2	116.3	4.98	0.815	237.5
17	3.893	145	107	8.700	2.285	153.4	115.6	5.00	0.817	238.3
18	3.639	125	88	8.625	2.275	152.1	115.0	5.03	0.809	242.1
19	3.594	126	86	8.922	2.303	157.3	116.5	4.91	0.848	225.5
20	3.786	138	100	8.770	2.311	154.6	116.8	4.97	0.813	237.6
21	4.013	156	119	8.788	2.332	154.9	117.9	4.96	0.801	240.1
22	3.834	143	104	8.856	2.319	156.1	117.3	4.93	0.823	232.9
23	4.142	166	129	8.762	2.312	154.5	116.9	4.97	0.810	238.5
24	4.323	182	147	8.792	2.334	155.0	118.0	4.96	0.800	240.3
25	3.527	123	84	9.055	2.373	159.6	120.0	4.86	0.824	228.0
Mean				**8.761**	**2.302**	**154.5**	**116.4**	**4.97**	**0.817**	**236.8**
sd				**0.110**	**0.024**	**1.95**	**1.23**	**0.04**	**0.014**	**5.66**
CV%				**1.26**	**1.05**	**1.3**	**1.1**	**0.88**	**1.75**	**2.4**
Targets						**154.3**	**116.5**	**4.97**	**0.814**	**237.5**

Appendix 6: Quickfix - Replication No 1

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 19 - ICCS G12

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.201	446	438	22.853	7.539	402.9	381.2	2.52	0.584	135.2

2	3.837	365	333	22.570	7.411	397.9	374.7	2.54	0.589	135.7
3	4.053	410	393	22.630	7.488	399.0	378.6	2.54	0.580	137.2
4	3.607	321	275	22.555	7.289	397.7	368.5	2.54	0.608	132.1
5	3.801	355	319	22.385	7.292	394.7	368.7	2.56	0.597	135.0
6	3.774	345	316	22.068	7.366	389.1	372.5	2.58	0.568	142.9
7	3.517	300	252	22.214	7.175	391.6	362.8	2.57	0.607	134.0
8	3.551	310	261	22.504	7.233	396.8	365.7	2.55	0.614	131.1
9	3.638	324	280	22.365	7.243	394.3	366.2	2.56	0.604	133.7
10	4.123	424	413	22.590	7.498	398.3	379.1	2.54	0.576	138.2
11	4.014	399	384	22.468	7.520	396.1	380.2	2.55	0.566	141.0
12	3.917	374	353	22.157	7.409	390.6	374.6	2.57	0.566	142.8
13	4.082	417	402	22.678	7.506	399.8	379.5	2.53	0.580	137.0
14	3.620	325	279	22.668	7.320	399.6	370.1	2.53	0.609	131.3
15	4.114	424	410	22.694	7.490	400.1	378.7	2.53	0.583	136.2
16	3.512	300	252	22.282	7.205	392.8	364.3	2.56	0.606	133.9
17	3.833	357	328	22.113	7.317	389.9	370.0	2.58	0.578	140.4
18	3.715	342	299	22.605	7.289	398.5	368.6	2.54	0.610	131.3
19	4.067	408	389	22.362	7.341	394.2	371.2	2.56	0.588	137.0
20	3.910	377	350	22.417	7.384	395.2	373.3	2.55	0.585	137.4
21	3.748	343	305	22.255	7.250	392.4	366.6	2.57	0.597	135.7
22	3.878	369	342	22.312	7.382	393.4	373.3	2.56	0.579	139.1
23	3.616	318	276	22.228	7.263	391.9	367.2	2.57	0.593	136.7
24	3.908	373	348	22.202	7.352	391.4	371.7	2.57	0.578	140.0
25	4.233	457	458	23.052	7.716	406.4	390.1	2.50	0.568	137.4
Mean				**22.449**	**7.371**	**395.8**	**372.7**	**2.55**	**0.589**	**136.5**
sd				**0.242**	**0.127**	**4.27**	**6.44**	**0.02**	**0.015**	**3.35**
CV%				**1.08**	**1.73**	**1.1**	**1.7**	**0.75**	**2.58**	**2.5**
Targets						**397.1**	**376.9**	**2.54**	**0.580**	**137.8**

Cotton 20 - ICCS D3

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.463	286	235	12.934	3.410	228.0	172.4	3.77	0.852	161.3
2	4.112	241	187	12.913	3.421	227.7	173.0	3.78	0.843	163.0
3	3.926	220	166	12.969	3.461	228.7	175.0	3.76	0.832	164.3
4	3.782	204	150	12.994	3.476	229.1	175.8	3.76	0.828	164.7
5	4.328	266	215	12.818	3.403	226.0	172.1	3.80	0.839	164.7
6	4.185	247	197	12.758	3.428	224.9	173.3	3.81	0.818	169.1
7	3.517	177	124	13.106	3.531	231.1	178.5	3.74	0.817	165.3
8	3.682	192	139	12.925	3.475	227.9	175.7	3.77	0.819	167.0
9	3.890	214	161	12.859	3.446	226.7	174.2	3.79	0.824	166.9
10	3.667	191	137	12.969	3.465	228.7	175.2	3.76	0.830	164.7
11	4.089	242	186	13.117	3.457	231.3	174.8	3.73	0.854	159.0
12	4.237	256	202	12.890	3.395	227.3	171.6	3.78	0.853	161.6
13	4.593	304	258	12.951	3.450	228.3	174.4	3.77	0.834	164.1
14	3.822	205	154	12.777	3.465	225.3	175.2	3.80	0.804	171.5
15	4.495	293	240	13.053	3.412	230.1	172.5	3.75	0.868	157.4
16	3.973	227	171	13.060	3.448	230.3	174.4	3.75	0.850	160.2
17	4.385	270	219	12.660	3.339	223.2	168.8	3.83	0.849	164.9
18	3.602	184	132	12.969	3.513	228.6	177.6	3.76	0.807	168.7
19	3.713	192	139	12.708	3.395	224.0	171.7	3.82	0.828	168.0
20	3.517	177	123	13.106	3.502	231.1	177.1	3.74	0.830	163.0
21	3.955	220	165	12.777	3.370	225.3	170.4	3.80	0.849	163.5
22	3.837	209	155	12.921	3.449	227.8	174.4	3.77	0.831	165.0
23	4.352	267	218	12.718	3.396	224.2	171.7	3.82	0.829	167.7
24	4.509	291	244	12.884	3.439	227.1	173.9	3.78	0.830	165.5
25	4.119	238	185	12.706	3.368	224.0	170.3	3.82	0.841	165.8
Mean				**12.902**	**3.437**	**227.5**	**173.8**	**3.78**	**0.834**	**164.7**
sd				**0.134**	**0.046**	**2.37**	**2.35**	**0.03**	**0.015**	**3.23**
CV%				**1.04**	**1.35**	**1.0**	**1.4**	**0.75**	**1.85**	**2.0**
Targets						**227.6**	**173.9**	**3.78**	**0.834**	**164.5**

Appendix 7: Quickfix - Replication No 2

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 01 - Deltapine

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.533	149	103	10.926	2.894	192.6	146.3	4.25	0.826	192.5
2	4.406	229	186	10.636	2.799	187.5	141.5	4.34	0.834	195.6
3	4.203	213	167	10.905	2.871	192.3	145.2	4.26	0.836	190.9
4	4.089	202	156	10.947	2.899	193.0	146.6	4.25	0.827	192.1
5	3.721	165	118	10.872	2.864	191.7	144.8	4.27	0.834	191.7
6	3.677	162	115	10.936	2.885	192.8	145.9	4.25	0.833	191.1
7	3.833	176	128	10.906	2.857	192.3	144.5	4.26	0.844	189.2
8	3.956	190	142	11.027	2.898	194.4	146.5	4.23	0.840	188.2
9	4.190	210	165	10.822	2.862	190.8	144.7	4.28	0.828	193.9
10	4.353	229	184	10.901	2.864	192.2	144.8	4.26	0.840	190.2
11	3.742	167	119	10.872	2.842	191.7	143.7	4.27	0.848	189.0
12	4.274	219	175	10.830	2.869	190.9	145.1	4.28	0.825	194.3
13	3.872	178	133	10.802	2.885	190.4	145.9	4.29	0.811	197.6
14	4.091	198	153	10.720	2.840	189.0	143.6	4.31	0.824	196.2
15	3.590	154	108	10.930	2.902	192.7	146.7	4.25	0.822	193.3
16	4.389	230	189	10.766	2.875	189.8	145.4	4.30	0.811	198.2
17	3.675	161	115	10.885	2.891	191.9	146.2	4.27	0.821	194.2
18	3.917	183	136	10.840	2.854	191.1	144.3	4.28	0.835	192.0
19	4.157	209	164	10.944	2.908	193.0	147.0	4.25	0.821	193.3
20	4.443	240	196	10.952	2.879	193.1	145.6	4.25	0.839	189.6
21	3.769	168	122	10.779	2.856	190.0	144.4	4.29	0.824	195.2
22	3.920	183	137	10.824	2.869	190.8	145.1	4.28	0.824	194.6
23	4.186	209	164	10.788	2.851	190.2	144.2	4.29	0.828	194.3
24	4.357	230	185	10.928	2.872	192.7	145.2	4.25	0.839	189.9
25	4.058	200	153	11.013	2.906	194.2	146.9	4.23	0.833	189.7
Mean				**10.870**	**2.872**	**191.6**	**145.2**	**4.27**	**0.830**	**192.7**
sd				**0.090**	**0.025**	**1.59**	**1.25**	**0.03**	**0.009**	**2.75**
CV%				**0.83**	**0.86**	**0.8**	**0.9**	**0.59**	**1.12**	**1.4**
Targets						**191.5**	**145.1**	**4.27**	**0.83**	**192.8**

Cotton 02 - Acala

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.574	140	98	10.024	2.665	176.7	134.7	4.52	0.811	211.2
2	4.571	232	195	9.984	2.644	176.0	133.7	4.53	0.817	210.6
3	4.127	188	144	9.996	2.607	176.2	131.8	4.53	0.843	204.8
4	3.649	145	102	9.948	2.617	175.4	132.3	4.55	0.828	208.9
5	4.136	188	144	9.949	2.590	175.4	131.0	4.55	0.845	205.2
6	4.074	183	140	9.995	2.630	176.2	133.0	4.53	0.828	208.0
7	4.383	213	171	9.998	2.611	176.3	132.0	4.53	0.841	205.2
8	4.386	211	171	9.892	2.606	174.4	131.8	4.56	0.825	210.7
9	4.043	180	137	9.985	2.628	176.0	132.9	4.53	0.827	208.4
10	3.886	163	121	9.816	2.597	173.1	131.3	4.59	0.817	213.9
11	3.722	151	108	9.942	2.619	175.3	132.4	4.55	0.826	209.6
12	3.942	170	127	9.940	2.618	175.3	132.4	4.55	0.826	209.6
13	4.205	194	150	9.921	2.575	174.9	130.2	4.56	0.850	204.6
14	3.644	145	103	9.974	2.652	175.8	134.1	4.54	0.811	212.3
15	4.411	218	177	10.097	2.654	178.0	134.2	4.50	0.831	205.5
16	3.667	145	104	9.847	2.631	173.6	133.0	4.58	0.801	216.9
17	4.134	189	144	10.014	2.595	176.5	131.2	4.53	0.854	202.1
18	4.430	216	175	9.919	2.593	174.9	131.1	4.56	0.838	207.3
19	4.101	181	139	9.752	2.563	171.9	129.6	4.61	0.828	212.7
20	4.599	235	198	9.987	2.639	176.1	133.4	4.53	0.821	209.7
21	3.582	142	99	10.123	2.676	178.5	135.3	4.49	0.821	207.1
22	3.864	163	120	9.934	2.618	175.1	132.4	4.55	0.825	209.9
23	4.049	176	134	9.735	2.561	171.6	129.5	4.62	0.826	213.5
24	3.610	141	98	9.890	2.591	174.4	131.0	4.57	0.834	208.7
25	3.995	174	131	9.894	2.600	174.4	131.4	4.56	0.829	209.6
Mean				**9.942**	**2.615**	**175.3**	**132.2**	**4.55**	**0.828**	**209.0**
sd				**0.091**	**0.030**	**1.60**	**1.51**	**0.03**	**0.012**	**3.40**
CV%				**0.91**	**1.14**	**0.9**	**1.1**	**0.65**	**1.49**	**1.6**
Targets						**175.2**	**132.3**	**4.55**	**0.827**	**209.4**

Appendix 7: Quickfix - Replication No 2

Calculated from a.X^b using average Rep 1 b values
(bPL = 2.07 and bPH = 2.83)

Cotton 03 - Menoufi

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.682	196	142	13.200	3.552	232.7	179.6	3.72	0.820	163.8
2	3.756	204	149	13.181	3.521	232.4	178.1	3.72	0.831	162.0
3	4.461	301	255	13.622	3.704	240.2	187.3	3.63	0.806	161.7
4	4.027	235	186	13.148	3.610	231.8	182.5	3.73	0.787	170.4
5	3.712	202	148	13.371	3.615	235.7	182.8	3.68	0.813	163.1
6	4.101	245	189	13.197	3.483	232.7	176.1	3.72	0.852	158.4
7	3.631	193	139	13.372	3.614	235.8	182.7	3.68	0.814	163.0
8	4.472	297	250	13.373	3.606	235.8	182.3	3.68	0.818	162.3
9	4.134	246	193	13.033	3.477	229.8	175.8	3.75	0.832	163.5
10	4.202	262	212	13.421	3.648	236.6	184.4	3.67	0.805	164.0
11	3.933	232	181	13.631	3.756	240.3	189.9	3.63	0.785	165.4
12	4.280	275	225	13.559	3.674	239.0	185.8	3.65	0.811	161.5
13	3.513	181	128	13.432	3.656	236.8	184.8	3.67	0.803	164.2
14	3.860	239	190	14.595	4.157	257.3	210.2	3.46	0.741	163.6
15	3.542	186	132	13.573	3.684	239.3	186.3	3.64	0.808	161.8
16	3.933	229	175	13.450	3.630	237.1	183.5	3.67	0.817	161.6
17	3.899	217	167	12.979	3.552	228.8	179.6	3.76	0.791	171.6
18	4.005	235	183	13.294	3.606	234.4	182.3	3.70	0.807	165.0
19	4.397	291	245	13.572	3.708	239.3	187.5	3.64	0.798	163.6
20	4.318	278	229	13.456	3.646	237.2	184.4	3.67	0.810	162.7
21	3.629	190	137	13.179	3.568	232.4	180.4	3.72	0.810	165.8
22	3.520	177	126	13.083	3.579	230.7	181.0	3.74	0.792	170.1
23	4.184	261	212	13.490	3.692	237.8	186.7	3.66	0.794	165.2
24	3.766	210	160	13.495	3.753	237.9	189.8	3.66	0.769	169.8
25	3.999	233	184	13.223	3.642	233.1	184.1	3.71	0.783	170.3
Mean				**13.397**	**3.645**	**236.2**	**184.3**	**3.68**	**0.804**	**164.6**
sd				**0.312**	**0.129**	**5.50**	**6.54**	**0.06**	**0.022**	**3.38**
CV%				**2.33**	**3.55**	**2.3**	**3.6**	**1.60**	**2.73**	**2.1**
Targets						**236.3**	**184.3**	**3.68**	**0.804**	**164.4**

Cotton 04 - Lankart

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.701	213	176	14.189	4.337	250.2	219.3	3.53	0.641	190.5
2	3.930	239	208	14.059	4.324	247.9	218.6	3.55	0.632	194.3
3	3.768	219	187	14.056	4.379	247.8	221.4	3.55	0.616	198.8
4	4.418	315	300	14.546	4.479	256.4	226.5	3.47	0.634	188.2
5	4.331	301	281	14.482	4.438	255.3	224.4	3.48	0.639	187.4
6	3.554	195	157	14.125	4.338	249.0	219.3	3.54	0.635	192.9
7	3.918	240	207	14.210	4.341	250.5	219.5	3.53	0.642	190.0
8	4.494	327	319	14.573	4.537	256.9	229.4	3.46	0.620	191.5
9	4.344	301	286	14.390	4.478	253.7	226.4	3.49	0.620	193.8
10	3.615	203	165	14.195	4.344	250.3	219.7	3.53	0.639	190.8
11	3.857	233	198	14.247	4.340	251.2	219.4	3.52	0.646	188.5
12	3.835	229	195	14.173	4.345	249.9	219.7	3.53	0.637	191.7
13	4.089	271	246	14.690	4.573	259.0	231.2	3.44	0.621	190.0
14	4.228	288	268	14.567	4.532	256.8	229.1	3.46	0.621	191.4
15	4.120	269	242	14.351	4.401	253.0	222.5	3.50	0.638	189.5
16	4.194	280	255	14.402	4.412	253.9	223.1	3.49	0.639	188.4
17	3.678	207	169	13.969	4.238	246.3	214.3	3.57	0.649	191.0
18	4.091	270	240	14.616	4.453	257.7	225.2	3.46	0.648	183.9
19	3.599	201	164	14.184	4.372	250.1	221.1	3.53	0.630	193.4
20	3.774	219	185	14.013	4.314	247.1	218.1	3.56	0.631	195.3
21	4.277	296	278	14.615	4.548	257.7	230.0	3.46	0.621	190.9
22	3.577	198	160	14.157	4.343	249.6	219.6	3.54	0.636	192.1
23	3.655	206	171	14.084	4.366	248.3	220.7	3.55	0.623	196.7
24	4.250	287	265	14.359	4.415	253.2	223.2	3.50	0.634	190.2
25	4.034	261	234	14.548	4.519	256.5	228.5	3.47	0.623	191.1
Mean				**14.312**	**4.407**	**252.3**	**222.8**	**3.51**	**0.633**	**191.3**
sd				**0.218**	**0.088**	**3.85**	**4.43**	**0.04**	**0.010**	**3.09**
CV%				**1.53**	**1.99**	**1.5**	**2.0**	**1.09**	**1.53**	**1.6**
Targets						**252.7**	**223.3**	**3.50**	**0.632**	**191.2**

Appendix 7: Quickfix - Replication No 2

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 05 - Lambert

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.415	265	215	12.253	3.216	216.0	162.6	3.92	0.854	168.9
2	3.614	175	124	12.243	3.267	215.9	165.2	3.92	0.826	174.1
3	4.469	261	218	11.770	3.151	207.5	159.3	4.03	0.816	182.1
4	3.649	177	125	12.144	3.207	214.1	162.2	3.95	0.842	172.3
5	3.916	201	151	11.915	3.172	210.1	160.4	4.00	0.827	178.1
6	3.881	197	146	11.897	3.146	209.7	159.1	4.00	0.838	176.3
7	4.198	234	184	12.012	3.175	211.8	160.5	3.98	0.840	174.5
8	4.129	235	179	12.484	3.237	220.1	163.7	3.87	0.877	162.3
9	4.242	240	192	12.057	3.217	212.6	162.6	3.97	0.824	176.7
10	3.838	193	143	11.923	3.179	210.2	160.7	4.00	0.825	178.4
11	3.972	208	158	11.968	3.187	211.0	161.1	3.99	0.827	177.4
12	3.796	187	137	11.822	3.143	208.4	158.9	4.02	0.828	179.1
13	3.590	168	120	11.920	3.223	210.1	163.0	4.00	0.801	183.0
14	3.527	162	115	11.925	3.248	210.2	164.2	4.00	0.790	185.2
15	3.614	171	121	11.964	3.188	210.9	161.2	3.99	0.825	177.7
16	4.088	221	173	11.984	3.217	211.3	162.7	3.98	0.813	179.7
17	4.003	215	165	12.176	3.256	214.7	164.7	3.94	0.821	175.7
18	4.381	257	213	12.078	3.257	212.9	164.7	3.96	0.807	179.8
19	4.484	272	229	12.179	3.278	214.7	165.7	3.94	0.811	177.6
20	4.344	252	205	12.052	3.211	212.5	162.4	3.97	0.827	176.3
21	4.243	235	187	11.796	3.129	208.0	158.2	4.03	0.832	178.8
22	4.108	221	173	11.863	3.173	209.1	160.4	4.01	0.819	180.4
23	3.707	179	129	11.882	3.163	209.5	160.0	4.01	0.826	178.6
24	3.973	207	158	11.907	3.185	209.9	161.1	4.00	0.819	179.8
25	3.595	166	119	11.744	3.184	207.1	161.0	4.04	0.796	186.5
Mean				**11.998**	**3.200**	**211.5**	**161.8**	**3.98**	**0.824**	**177.6**
sd				**0.174**	**0.041**	**3.06**	**2.08**	**0.04**	**0.018**	**4.92**
CV%				**1.45**	**1.29**	**1.4**	**1.3**	**1.02**	**2.17**	**2.8**
Targets						**211.6**	**161.8**	**3.98**	**0.825**	**177.3**

Cotton 06 - Uganda

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.641	168	119	11.579	3.072	204.1	155.3	4.08	0.830	182.2
2	4.347	255	213	12.178	3.330	214.7	168.4	3.94	0.786	182.6
3	4.347	256	210	12.226	3.283	215.6	166.0	3.93	0.815	176.2
4	3.575	163	115	11.669	3.127	205.7	158.1	4.06	0.814	184.0
5	3.659	174	125	11.866	3.180	209.2	160.8	4.01	0.815	181.0
6	3.757	181	132	11.689	3.117	206.1	157.6	4.05	0.822	182.1
7	4.111	216	168	11.577	3.075	204.1	155.5	4.08	0.828	182.6
8	3.559	166	114	11.994	3.139	211.5	158.7	3.98	0.856	171.7
9	4.027	212	162	11.860	3.144	209.1	159.0	4.01	0.833	177.6
10	4.354	244	199	11.611	3.096	204.7	156.5	4.07	0.822	183.3
11	4.207	225	179	11.497	3.070	202.7	155.2	4.10	0.818	185.5
12	4.383	250	205	11.736	3.130	206.9	158.3	4.04	0.822	181.5
13	3.990	205	157	11.687	3.127	206.1	158.1	4.05	0.817	183.2
14	4.150	220	173	11.566	3.084	203.9	155.9	4.08	0.821	184.0
15	3.757	177	129	11.428	3.046	201.5	154.0	4.12	0.821	186.1
16	3.989	199	153	11.351	3.049	200.1	154.2	4.14	0.807	189.9
17	3.781	184	135	11.727	3.131	206.8	158.3	4.04	0.820	181.9
18	4.290	241	196	11.828	3.181	208.5	160.8	4.02	0.810	182.6
19	4.031	208	160	11.608	3.095	204.7	156.5	4.07	0.822	183.3
20	3.999	205	159	11.637	3.148	205.2	159.2	4.07	0.798	187.6
21	3.526	159	112	11.709	3.165	206.4	160.0	4.05	0.800	186.2
22	3.775	189	141	12.084	3.285	213.1	166.1	3.96	0.794	182.1
23	3.506	157	111	11.701	3.189	206.3	161.2	4.05	0.787	189.0
24	3.552	163	115	11.823	3.183	208.4	161.0	4.02	0.807	183.1
25										
Mean				**11.735**	**3.144**	**206.9**	**159.0**	**4.04**	**0.815**	**182.9**
sd				**0.219**	**0.074**	**3.86**	**3.72**	**0.05**	**0.015**	**3.87**
CV%				**1.87**	**2.34**	**1.9**	**2.3**	**1.32**	**1.88**	**2.1**
Targets						**206.9**	**158.9**	**4.04**	**0.815**	**182.8**

Appendix 7: Quickfix - Replication No 2

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 07 - Coker

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.483	233	198	10.440	2.837	184.1	143.4	4.39	0.781	210.7
2	3.500	138	97	10.318	2.799	181.9	141.5	4.43	0.782	212.5
3	4.080	189	147	10.290	2.749	181.4	139.0	4.44	0.806	207.5
4	4.182	192	153	9.934	2.669	175.1	134.9	4.55	0.794	217.0
5	3.858	170	127	10.390	2.782	183.2	140.6	4.41	0.804	206.3
6	3.546	143	102	10.409	2.837	183.5	143.5	4.40	0.775	212.5
7	4.367	218	182	10.308	2.807	181.7	141.9	4.43	0.776	214.2
8	4.305	214	176	10.423	2.827	183.8	142.9	4.40	0.784	210.3
9	3.670	155	113	10.504	2.851	185.2	144.1	4.37	0.783	208.9
10	4.191	205	165	10.560	2.861	186.2	144.6	4.36	0.786	207.2
11	4.024	187	147	10.477	2.859	184.7	144.5	4.38	0.774	211.5
12	3.811	164	123	10.284	2.790	181.3	141.1	4.44	0.781	213.3
13	3.756	161	119	10.404	2.813	183.4	142.2	4.40	0.788	209.6
14	4.145	198	158	10.430	2.825	183.9	142.8	4.40	0.786	209.6
15	4.401	223	189	10.381	2.853	183.0	144.3	4.41	0.762	216.2
16	3.701	155	114	10.326	2.809	182.0	142.0	4.43	0.778	213.5
17	3.683	154	113	10.365	2.824	182.7	142.8	4.42	0.776	213.2
18	3.977	182	141	10.449	2.835	184.2	143.4	4.39	0.783	210.0
19	3.902	171	131	10.212	2.780	180.0	140.6	4.46	0.776	216.1
20	4.221	205	167	10.402	2.836	183.4	143.4	4.40	0.775	212.8
21	4.443	229	197	10.453	2.895	184.3	146.4	4.39	0.751	217.6
22	3.634	152	110	10.517	2.855	185.4	144.3	4.37	0.783	208.8
23	4.081	194	152	10.555	2.840	186.1	143.6	4.36	0.797	204.8
24	4.261	210	172	10.452	2.845	184.3	143.9	4.39	0.778	211.1
25	3.557	144	103	10.416	2.841	183.6	143.6	4.40	0.775	212.5
Mean				**10.388**	**2.821**	**183.1**	**142.6**	**4.41**	**0.781**	**211.5**
sd				**0.127**	**0.044**	**2.24**	**2.24**	**0.04**	**0.011**	**3.32**
CV%				**1.22**	**1.57**	**1.2**	**1.6**	**0.88**	**1.47**	**1.6**
Targets						**183.0**	**142.5**	**4.41**	**0.781**	**211.7**

Cotton 08 - Tanguis

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.790	124	86	7.865	1.982	138.7	100.2	5.36	0.876	245.1
2	3.587	113	75	8.033	2.020	141.6	102.1	5.28	0.882	239.1
3	3.926	132	92	7.782	1.918	137.2	97.0	5.40	0.914	238.3
4	4.497	177	138	7.877	1.959	138.9	99.1	5.35	0.900	239.2
5	4.136	149	109	7.886	1.961	139.0	99.2	5.35	0.900	238.9
6	4.191	153	112	7.880	1.941	138.9	98.2	5.35	0.917	235.2
7	3.812	126	87	7.896	1.972	139.2	99.7	5.34	0.892	240.3
8	3.616	113	75	7.897	1.973	139.2	99.8	5.34	0.892	240.5
9	4.046	140	101	7.757	1.934	136.8	97.8	5.41	0.893	244.1
10	4.263	158	119	7.857	1.966	138.5	99.4	5.36	0.888	242.4
11	4.342	164	125	7.849	1.960	138.4	99.1	5.37	0.892	241.7
12	3.910	133	94	7.907	1.982	139.4	100.2	5.34	0.886	241.7
13	3.759	122	85	7.871	2.005	138.8	101.4	5.35	0.858	249.5
14	4.454	173	136	7.855	1.984	138.5	100.3	5.36	0.872	246.5
15	4.111	150	111	8.039	2.032	141.7	102.7	5.28	0.873	241.0
16	3.816	125	87	7.818	1.967	137.8	99.4	5.38	0.878	245.8
17	4.311	163	125	7.917	2.000	139.6	101.1	5.33	0.873	244.5
18	3.574	110	75	7.877	2.040	138.9	103.2	5.35	0.830	256.7
19	4.037	142	104	7.901	2.003	139.3	101.3	5.34	0.866	246.7
20	3.681	120	82	8.086	2.053	142.6	103.8	5.26	0.866	241.4
21	4.271	159	122	7.873	2.004	138.8	101.3	5.35	0.859	249.2
22	3.673	118	80	7.986	2.014	140.8	101.9	5.30	0.876	241.8
23	4.093	147	106	7.949	1.964	140.1	99.3	5.32	0.913	234.3
24	3.906	136	96	8.103	2.031	142.9	102.7	5.25	0.889	235.6
25	4.227	157	119	7.942	2.013	140.0	101.8	5.32	0.867	245.1
Mean				**7.908**	**1.987**	**139.4**	**100.5**	**5.34**	**0.882**	**242.6**
sd				**0.085**	**0.034**	**1.51**	**1.73**	**0.04**	**0.020**	**4.99**
CV%				**1.08**	**1.72**	**1.1**	**1.7**	**0.74**	**2.23**	**2.1**
Targets						**139.5**	**100.4**	**5.34**	**0.884**	**242.0**

Appendix 7: Quickfix - Replication No 2

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 09 - Old B19

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.540	137	93	10.009	2.600	176.5	131.5	4.53	0.850	203.1
2	3.830	162	115	10.055	2.572	177.3	130.1	4.51	0.876	196.9
3	3.924	170	123	10.033	2.568	176.9	129.9	4.52	0.875	197.5
4	4.493	225	182	10.035	2.591	176.9	131.0	4.52	0.860	200.5
5	4.452	222	177	10.090	2.586	177.9	130.8	4.50	0.874	196.8
6	3.779	157	111	10.018	2.579	176.6	130.4	4.52	0.865	199.7
7	4.179	194	148	10.051	2.586	177.2	130.8	4.51	0.866	198.9
8	3.514	135	91	10.013	2.597	176.5	131.3	4.53	0.852	202.5
9	3.723	151	106	9.936	2.568	175.2	129.9	4.55	0.857	202.9
10	3.611	143	99	10.024	2.615	176.7	132.2	4.52	0.842	204.4
11	4.201	197	150	10.098	2.583	178.0	130.6	4.50	0.877	196.0
12	3.840	165	117	10.186	2.598	179.6	131.4	4.47	0.883	193.3
13	4.057	183	135	10.081	2.565	177.7	129.7	4.50	0.886	194.6
14	4.357	214	169	10.167	2.623	179.3	132.6	4.48	0.863	197.6
15	4.392	216	172	10.098	2.612	178.0	132.1	4.50	0.858	199.8
16	4.282	204	159	10.051	2.594	177.2	131.2	4.51	0.861	200.0
17	3.648	148	102	10.156	2.617	179.0	132.3	4.48	0.865	197.4
18	3.835	162	117	10.024	2.606	176.7	131.8	4.52	0.848	203.1
19	4.177	195	148	10.111	2.589	178.3	130.9	4.49	0.875	196.1
20	4.017	180	132	10.120	2.579	178.4	130.4	4.49	0.884	194.3
21	3.903	168	122	10.024	2.586	176.7	130.7	4.52	0.862	200.4
22	4.437	222	177	10.159	2.610	179.1	132.0	4.48	0.870	196.3
23	3.556	141	96	10.201	2.648	179.8	133.9	4.47	0.853	199.1
24	3.890	168	122	10.095	2.611	178.0	132.0	4.50	0.858	199.9
25	4.053	184	137	10.158	2.611	179.1	132.0	4.48	0.869	196.5
Mean				**10.080**	**2.596**	**177.7**	**131.3**	**4.50**	**0.865**	**198.7**
sd				**0.066**	**0.020**	**1.17**	**1.00**	**0.02**	**0.012**	**3.00**
CV%				**0.66**	**0.76**	**0.7**	**0.8**	**0.46**	**1.35**	**1.5**
Targets						**177.7**	**131.3**	**4.50**	**0.864**	**198.8**

Cotton 10 - Old D3

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.075	236	179	12.881	3.359	227.1	169.8	3.78	0.870	158.9
2	3.880	212	155	12.807	3.341	225.8	169.0	3.80	0.869	160.0
3	3.943	220	163	12.858	3.359	226.7	169.8	3.79	0.867	159.6
4	3.540	179	122	13.078	3.411	230.6	172.5	3.74	0.872	156.5
5	4.407	286	230	13.274	3.458	234.0	174.8	3.70	0.875	153.9
6	4.494	294	242	13.103	3.442	231.0	174.0	3.74	0.859	158.2
7	4.101	237	181	12.766	3.336	225.1	168.7	3.81	0.866	160.9
8	3.870	206	157	12.512	3.410	220.6	172.4	3.86	0.794	176.7
9	3.684	190	135	12.777	3.370	225.3	170.4	3.80	0.850	163.4
10	3.551	177	124	12.845	3.435	226.5	173.7	3.79	0.827	166.5
11	4.335	264	214	12.681	3.372	223.6	170.5	3.83	0.835	167.0
12	4.168	250	196	13.024	3.451	229.6	174.5	3.75	0.844	161.6
13	3.614	186	132	13.019	3.480	229.5	176.0	3.75	0.829	164.2
14	3.792	201	150	12.731	3.450	224.5	174.4	3.81	0.805	171.9
15	3.912	216	163	12.826	3.432	226.1	173.5	3.79	0.826	167.0
16	4.265	261	208	12.964	3.431	228.6	173.5	3.77	0.845	162.0
17	4.054	233	178	12.855	3.390	226.6	171.4	3.79	0.851	162.3
18	3.792	200	147	12.673	3.383	223.4	171.0	3.83	0.829	168.2
19										
20										
21										
22										
23										
24										
25										
Mean				**12.871**	**3.406**	**226.9**	**172.2**	**3.78**	**0.845**	**163.3**
sd				**0.182**	**0.044**	**3.21**	**2.21**	**0.04**	**0.024**	**5.59**
CV%				**1.41**	**1.28**	**1.4**	**1.3**	**1.01**	**2.80**	**3.4**
Targets						**227.0**	**172.2**	**3.78**	**0.845**	**163.0**

Appendix 7: Quickfix - Replication No 2

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 11 - ICCS K

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.100	90	63	4.851	1.162	85.5	58.8	7.37	0.913	363.7
2	3.887	79	53	4.755	1.137	83.8	57.5	7.46	0.914	369.8
3	3.589	69	44	4.899	1.183	86.4	59.8	7.33	0.899	365.2
4	3.918	80	55	4.736	1.153	83.5	58.3	7.48	0.880	383.4
5	4.355	99	72	4.709	1.119	83.0	56.6	7.51	0.923	369.7
6	4.137	90	63	4.761	1.133	83.9	57.3	7.46	0.923	366.1
7	4.503	105	79	4.661	1.117	82.2	56.5	7.56	0.906	379.1
8	3.980	82	56	4.700	1.123	82.9	56.8	7.52	0.913	374.0
9	4.251	94	68	4.701	1.132	82.9	57.2	7.52	0.899	378.9
10	3.525	64	41	4.716	1.160	83.1	58.6	7.50	0.863	391.7
11	3.632	69	44	4.778	1.143	84.2	57.8	7.44	0.913	368.4
12	3.796	75	49	4.741	1.124	83.6	56.8	7.48	0.929	365.4
13	4.492	105	78	4.684	1.111	82.6	56.2	7.53	0.927	370.1
14	4.420	102	75	4.706	1.118	83.0	56.6	7.51	0.924	369.8
15	3.670	71	46	4.813	1.161	84.9	58.7	7.41	0.899	371.0
16	4.161	89	63	4.653	1.115	82.0	56.4	7.57	0.908	379.2
17	4.017	83	56	4.668	1.095	82.3	55.4	7.55	0.948	364.2
18	3.875	79	53	4.785	1.147	84.4	58.0	7.43	0.910	368.9
19	4.056	84	57	4.629	1.084	81.6	54.8	7.59	0.950	366.1
20	4.584	109	83	4.662	1.116	82.2	56.4	7.56	0.909	377.9
21	3.959	79	54	4.577	1.100	80.7	55.6	7.64	0.901	387.3
22	3.528	64	40	4.708	1.129	83.0	57.1	7.51	0.908	375.3
23	4.320	97	71	4.691	1.129	82.7	57.1	7.53	0.900	379.3
24	4.294	96	68	4.701	1.100	82.9	55.6	7.52	0.953	360.3
25	4.586	111	84	4.745	1.128	83.7	57.1	7.47	0.923	367.2
Mean				**4.721**	**1.129**	**83.2**	**57.1**	**7.50**	**0.913**	**372.5**
sd				**0.070**	**0.023**	**1.23**	**1.18**	**0.07**	**0.020**	**7.88**
CV%				**1.47**	**2.08**	**1.5**	**2.1**	**0.91**	**2.18**	**2.1**
Targets						**83.3**	**57.1**	**7.49**	**0.912**	**372.5**

Cotton 12 - ICCS B23

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.658	141	99	9.623	2.521	169.7	127.5	4.65	0.831	214.5
2	3.630	140	97	9.709	2.525	171.2	127.7	4.62	0.844	209.9
3	4.139	180	137	9.511	2.459	167.7	124.3	4.69	0.852	212.0
4	4.232	192	148	9.691	2.496	170.9	126.2	4.63	0.861	206.6
5	4.098	179	134	9.656	2.475	170.2	125.1	4.64	0.869	205.6
6	3.756	148	104	9.564	2.458	168.6	124.3	4.67	0.863	208.7
7	3.900	160	117	9.566	2.487	168.6	125.7	4.67	0.844	212.8
8	4.276	193	150	9.533	2.455	168.1	124.2	4.69	0.859	210.1
9	3.834	155	111	9.596	2.475	169.2	125.1	4.66	0.858	209.1
10	3.913	161	116	9.557	2.441	168.5	123.4	4.68	0.873	206.6
11	3.520	126	88	9.312	2.499	164.2	126.4	4.76	0.789	231.1
12	3.769	151	106	9.689	2.482	170.8	125.5	4.63	0.871	204.7
13	4.527	221	179	9.704	2.495	171.1	126.1	4.63	0.864	205.7
14	4.332	201	158	9.666	2.494	170.4	126.1	4.64	0.858	207.8
15	4.449	214	171	9.738	2.503	171.7	126.5	4.62	0.865	204.9
16	3.509	130	85	9.671	2.436	170.5	123.2	4.64	0.900	199.1
17	3.877	159	112	9.623	2.421	169.7	122.4	4.65	0.902	199.7
18	4.390	207	161	9.685	2.447	170.8	123.7	4.63	0.894	200.0
19	3.948	166	118	9.674	2.422	170.6	122.5	4.64	0.911	197.0
20	4.573	222	180	9.545	2.437	168.3	123.2	4.68	0.874	206.7
21	3.711	146	100	9.674	2.446	170.6	123.7	4.64	0.893	200.5
22	4.111	181	131	9.702	2.398	171.0	121.3	4.63	0.935	192.1
23	4.071	172	128	9.407	2.409	165.8	121.8	4.73	0.868	210.7
24	4.044	173	126	9.593	2.416	169.1	122.2	4.66	0.899	200.8
25	4.560	223	178	9.644	2.430	170.0	122.9	4.65	0.899	199.8
Mean				**9.613**	**2.461**	**169.5**	**124.4**	**4.66**	**0.871**	**206.3**
sd				**0.100**	**0.036**	**1.76**	**1.81**	**0.03**	**0.030**	**7.52**
CV%				**1.04**	**1.45**	**1.0**	**1.5**	**0.74**	**3.39**	**3.6**
Targets						**169.6**	**124.5**	**4.66**	**0.871**	**206.0**

Appendix 7: Quickfix - Replication No 2

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 13 - ICCS E3

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.818	289	240	18.054	5.416	318.3	273.9	2.97	0.686	144.9
2	3.534	241	189	17.665	5.307	311.4	268.3	3.02	0.682	148.5
3	4.233	367	331	18.513	5.577	326.4	282.0	2.92	0.682	142.3
4	3.781	281	230	17.908	5.334	315.7	269.7	2.99	0.695	144.3
5	4.419	395	366	18.229	5.460	321.4	276.1	2.95	0.689	143.1
6	4.514	415	396	18.331	5.564	323.2	281.3	2.94	0.671	145.6
7	3.586	248	196	17.637	5.281	311.0	267.0	3.02	0.686	147.8
8	3.622	252	200	17.554	5.238	309.5	264.9	3.03	0.691	147.6
9	4.000	314	272	17.811	5.380	314.0	272.0	3.00	0.675	148.6
10	4.027	328	283	18.352	5.493	323.5	277.8	2.94	0.690	142.0
11	4.177	343	304	17.785	5.318	313.6	268.9	3.00	0.689	146.2
12	4.376	377	351	17.752	5.382	313.0	272.1	3.01	0.670	150.1
13	4.089	329	286	17.833	5.316	314.4	268.8	3.00	0.693	145.1
14	3.878	293	250	17.717	5.396	312.4	272.8	3.01	0.664	151.6
15	4.134	346	304	18.331	5.477	323.2	276.9	2.94	0.693	141.7
16	4.078	326	284	17.766	5.318	313.2	268.9	3.01	0.687	146.7
17	4.458	404	380	18.308	5.530	322.8	279.6	2.94	0.678	144.6
18	4.315	371	345	17.992	5.508	317.2	278.5	2.98	0.658	150.6
19	3.738	272	225	17.750	5.390	312.9	272.5	3.01	0.668	150.5
20	3.557	244	192	17.650	5.295	311.2	267.7	3.02	0.684	148.2
21	3.670	258	206	17.489	5.198	308.3	262.8	3.04	0.696	147.2
22	3.858	279	232	17.059	5.084	300.8	257.1	3.09	0.690	151.6
23	4.093	330	286	17.848	5.300	314.7	268.0	3.00	0.699	144.0
24	3.573	246	193	17.622	5.252	310.7	265.6	3.02	0.693	146.7
25	4.252	363	335	18.142	5.573	319.8	281.8	2.96	0.654	150.3
Mean				**17.884**	**5.376**	**315.3**	**271.8**	**2.99**	**0.683**	**146.8**
sd				**0.335**	**0.125**	**5.91**	**6.34**	**0.04**	**0.012**	**3.02**
CV%				**1.87**	**2.33**	**1.9**	**2.3**	**1.33**	**1.78**	**2.1**
Targets						**315.7**	**272.1**	**2.99**	**0.683**	**146.5**

Cotton 14 - ICCS H2

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.594	94	62	6.654	1.660	117.3	83.9	6.00	0.875	284.7
2	4.146	125	89	6.583	1.590	116.1	80.4	6.05	0.932	272.0
3	3.892	108	75	6.483	1.603	114.3	81.0	6.11	0.888	287.6
4	3.977	114	79	6.544	1.588	115.4	80.3	6.07	0.923	275.8
5	3.523	89	57	6.566	1.615	115.8	81.7	6.06	0.899	281.4
6	4.257	130	94	6.482	1.559	114.3	78.8	6.11	0.939	274.0
7	4.198	126	92	6.465	1.587	114.0	80.2	6.12	0.901	284.7
8	4.354	136	102	6.473	1.587	114.1	80.3	6.12	0.903	283.9
9	3.698	99	65	6.605	1.605	116.4	81.1	6.03	0.922	273.9
10	4.554	150	114	6.504	1.562	114.7	79.0	6.10	0.942	272.4
11	3.840	107	72	6.603	1.598	116.4	80.8	6.03	0.929	272.0
12	4.466	145	110	6.548	1.593	115.4	80.5	6.07	0.919	276.8
13	3.712	98	66	6.487	1.612	114.4	81.5	6.11	0.879	290.1
14	4.100	119	85	6.415	1.568	113.1	79.3	6.15	0.908	285.0
15	3.906	109	75	6.495	1.587	114.5	80.2	6.10	0.910	281.1
16	3.883	107	74	6.455	1.592	113.8	80.5	6.13	0.892	287.7
17	3.713	98	66	6.486	1.612	114.3	81.5	6.11	0.879	290.1
18	4.072	116	83	6.340	1.560	111.8	78.9	6.20	0.894	291.8
19	4.176	123	89	6.383	1.559	112.5	78.8	6.17	0.909	285.9
20	4.393	138	103	6.447	1.563	113.7	79.0	6.13	0.924	279.3
21	4.483	145	111	6.496	1.590	114.5	80.4	6.10	0.907	282.1
22	4.097	119	84	6.424	1.553	113.3	78.5	6.15	0.928	279.0
23	4.577	151	116	6.480	1.567	114.2	79.2	6.11	0.929	276.7
24	3.999	115	81	6.527	1.603	115.1	81.1	6.08	0.901	282.5
25	3.734	102	68	6.671	1.634	117.6	82.6	5.99	0.908	275.0
Mean				**6.505**	**1.590**	**114.7**	**80.4**	**6.10**	**0.910**	**281.0**
sd				**0.079**	**0.026**	**1.40**	**1.30**	**0.05**	**0.019**	**6.08**
CV%				**1.22**	**1.62**	**1.2**	**1.6**	**0.81**	**2.07**	**2.2**
Targets						**114.7**	**80.5**	**6.09**	**0.907**	**281.4**

Appendix 7: Quickfix - Replication No 2

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 15 - ICCS C33

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin

1	4.091	265	212	14.345	3.933	252.9	198.9	3.50	0.798	155.8
2	4.343	300	250	14.352	3.918	253.0	198.1	3.50	0.805	154.5
3	3.719	215	161	14.177	3.912	249.9	197.8	3.53	0.786	159.4
4	4.126	271	218	14.412	3.948	254.1	199.6	3.49	0.800	154.8
5	4.224	283	234	14.342	3.967	252.9	200.6	3.50	0.784	158.3
6	3.890	234	183	14.063	3.917	247.9	198.1	3.55	0.771	163.3
7	4.549	331	290	14.386	3.986	253.6	201.5	3.49	0.782	158.2
8	4.443	318	273	14.512	4.011	255.9	202.8	3.47	0.786	156.1
9	3.542	198	141	14.445	3.934	254.7	198.9	3.48	0.809	152.9
10	4.358	302	258	14.344	4.003	252.9	202.4	3.50	0.770	160.7
11	3.772	221	169	14.158	3.948	249.6	199.6	3.53	0.770	162.5
12	3.623	208	151	14.483	3.953	255.3	199.9	3.48	0.806	153.1
13	4.249	287	238	14.363	3.967	253.2	200.6	3.50	0.786	157.6
14	3.921	235	186	13.891	3.892	244.9	196.8	3.58	0.761	167.1
15	3.667	212	156	14.395	3.946	253.8	199.5	3.49	0.799	155.2
16	4.128	270	211	14.348	3.817	253.0	193.0	3.50	0.847	147.7
17	3.514	196	136	14.533	3.880	256.2	196.2	3.47	0.843	146.7
18	4.335	301	248	14.456	3.907	254.9	197.5	3.48	0.822	150.7
19	3.952	243	187	14.132	3.827	249.1	193.5	3.54	0.816	154.7
20	3.899	237	181	14.177	3.850	250.0	194.7	3.53	0.812	155.0
21	3.613	203	146	14.214	3.851	250.6	194.7	3.53	0.816	154.0
22	4.441	313	263	14.295	3.868	252.0	195.6	3.51	0.819	152.7
23	4.012	252	197	14.204	3.863	250.4	195.3	3.53	0.810	155.1
24	3.725	218	159	14.328	3.846	252.6	194.5	3.50	0.832	150.3
25	4.584	337	291	14.420	3.915	254.2	197.9	3.49	0.814	152.3
Mean				**14.311**	**3.914**	**252.3**	**197.9**	**3.51**	**0.802**	**155.6**
sd				**0.152**	**0.054**	**2.68**	**2.73**	**0.03**	**0.023**	**4.70**
CV%				**1.06**	**1.38**	**1.1**	**1.4**	**0.76**	**2.83**	**3.0**
Targets						**252.3**	**197.9**	**3.51**	**0.801**	**155.5**

Cotton 16 - ICCS F2

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.136	94	69	4.975	1.241	87.7	62.8	7.26	0.844	380.9
2	4.349	103	79	4.914	1.233	86.6	62.4	7.31	0.833	389.6
3	4.566	113	89	4.875	1.211	85.9	61.2	7.35	0.849	385.6
4	4.253	98	73	4.896	1.214	86.3	61.4	7.33	0.853	382.6
5	3.518	66	44	4.883	1.251	86.1	63.3	7.34	0.798	406.6
6	4.453	107	84	4.862	1.227	85.7	62.0	7.36	0.823	397.4
7	3.731	76	52	4.979	1.252	87.8	63.3	7.25	0.830	386.0
8	4.032	88	64	4.909	1.237	86.5	62.6	7.32	0.826	392.9
9	3.689	73	50	4.895	1.243	86.3	62.9	7.33	0.813	399.2
10	4.223	98	73	4.969	1.239	87.6	62.6	7.26	0.845	380.6
11	3.843	80	56	4.929	1.240	86.9	62.7	7.30	0.829	390.1
12	3.891	82	58	4.924	1.240	86.8	62.7	7.30	0.827	391.1
13	3.725	75	51	4.930	1.234	86.9	62.4	7.30	0.838	386.4
14	3.986	85	62	4.857	1.239	85.6	62.6	7.37	0.805	405.3
15	3.727	74	52	4.858	1.256	85.6	63.5	7.37	0.784	415.0
16	3.963	85	61	4.914	1.238	86.6	62.6	7.31	0.826	392.3
17	3.703	72	51	4.791	1.255	84.5	63.4	7.43	0.762	430.5
18	3.946	85	60	4.960	1.233	87.4	62.4	7.27	0.849	379.9
19	4.221	96	72	4.872	1.223	85.9	61.9	7.35	0.831	393.1
20	4.057	89	65	4.902	1.235	86.4	62.4	7.32	0.826	393.1
21	4.100	90	66	4.851	1.217	85.5	61.5	7.37	0.832	394.6
22	4.586	112	90	4.787	1.209	84.4	61.1	7.43	0.820	404.2
23	4.294	99	76	4.849	1.230	85.5	62.2	7.37	0.814	402.1
24	4.364	103	79	4.878	1.221	86.0	61.7	7.35	0.836	390.6
25	4.437	105	82	4.806	1.210	84.7	61.2	7.41	0.826	400.3
Mean				**4.891**	**1.233**	**86.2**	**62.4**	**7.33**	**0.825**	**394.8**
sd				**0.053**	**0.014**	**0.93**	**0.70**	**0.05**	**0.021**	**11.60**
CV%				**1.08**	**1.13**	**1.1**	**1.1**	**0.68**	**2.51**	**2.9**
Targets						**86.3**	**62.5**	**7.33**	**0.824**	**394.6**

Appendix 7: Quickfix - Replication No 2

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

Cotton 17 - ICCS A16

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin

1	4.499	174	134	7.737	1.900	136.4	96.1	5.42	0.921	238.2
2	3.583	108	71	7.695	1.918	135.7	97.0	5.44	0.893	245.8
3	3.634	111	75	7.680	1.946	135.4	98.4	5.45	0.864	253.5
4	4.322	159	119	7.683	1.891	135.5	95.6	5.44	0.916	240.7
5	4.016	137	97	7.707	1.897	135.9	95.9	5.43	0.916	240.0
6	4.376	162	123	7.631	1.887	134.5	95.4	5.47	0.906	244.4
7	4.119	143	103	7.632	1.875	134.6	94.8	5.47	0.919	241.5
8	3.715	116	78	7.666	1.901	135.2	96.1	5.45	0.902	244.5
9	4.246	152	113	7.618	1.887	134.3	95.4	5.48	0.903	245.6
10	3.897	129	91	7.722	1.938	136.2	98.0	5.43	0.882	247.7
11	4.131	144	106	7.641	1.914	134.7	96.8	5.47	0.884	249.6
12	4.345	161	124	7.696	1.941	135.7	98.1	5.44	0.872	250.9
13	4.457	172	133	7.798	1.936	137.5	97.9	5.39	0.901	241.0
14	3.904	129	91	7.693	1.927	135.6	97.5	5.44	0.884	248.1
15	4.257	153	115	7.629	1.907	134.5	96.4	5.47	0.887	249.2
16	3.665	115	77	7.818	1.951	137.8	98.6	5.38	0.893	242.4
17	3.840	125	87	7.714	1.931	136.0	97.6	5.43	0.886	247.0
18	4.192	150	112	7.721	1.940	136.1	98.1	5.43	0.879	248.4
19	3.808	123	85	7.726	1.933	136.2	97.7	5.42	0.887	246.4
20	3.912	130	91	7.719	1.916	136.1	96.9	5.43	0.901	243.2
21	3.929	129	92	7.592	1.914	133.8	96.8	5.49	0.872	254.1
22	4.249	153	114	7.659	1.901	135.0	96.1	5.46	0.900	245.0
23	3.829	125	87	7.761	1.947	136.8	98.4	5.41	0.882	246.5
24	3.510	106	69	7.881	1.976	138.9	99.9	5.35	0.885	242.4
25	4.495	175	137	7.797	1.948	137.5	98.5	5.39	0.890	243.5
Mean				**7.705**	**1.921**	**135.8**	**97.1**	**5.43**	**0.893**	**245.6**
sd				**0.068**	**0.025**	**1.21**	**1.26**	**0.03**	**0.015**	**4.06**
CV%				**0.89**	**1.30**	**0.9**	**1.3**	**0.61**	**1.70**	**1.7**
Targets						**135.8**	**97.1**	**5.44**	**0.892**	**245.8**

Cotton 18 - ICCS I25

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	4.245	172	133	8.627	2.223	152.1	112.4	5.02	0.847	232.4
2	3.823	139	100	8.658	2.248	152.6	113.7	5.01	0.835	234.6
3	3.557	120	81	8.678	2.233	153.0	112.9	5.00	0.851	230.4
4	4.451	190	153	8.641	2.237	152.3	113.1	5.02	0.840	233.9
5	3.692	129	90	8.636	2.233	152.3	112.9	5.02	0.842	233.5
6	4.365	185	145	8.760	2.241	154.4	113.3	4.97	0.862	225.9
7	3.970	153	112	8.816	2.263	155.4	114.4	4.95	0.856	225.9
8	4.165	166	127	8.661	2.241	152.7	113.3	5.01	0.841	233.1
9	4.070	158	118	8.647	2.222	152.4	112.4	5.02	0.852	230.8
10	4.427	190	153	8.737	2.271	154.0	114.8	4.98	0.834	233.0
11	3.775	137	98	8.762	2.284	154.5	115.5	4.97	0.830	233.4
12	4.009	154	115	8.694	2.260	153.3	114.3	5.00	0.834	234.1
13	3.516	117	81	8.665	2.307	152.8	116.6	5.01	0.794	244.9
14	4.352	184	147	8.767	2.291	154.6	115.8	4.97	0.826	234.3
15	3.829	141	101	8.755	2.261	154.4	114.3	4.97	0.846	229.8
16	4.401	188	151	8.749	2.278	154.2	115.2	4.98	0.831	233.4
17	3.590	124	85	8.799	2.284	155.1	115.5	4.96	0.838	230.6
18	4.269	178	138	8.826	2.271	155.6	114.8	4.95	0.852	226.5
19	4.152	167	127	8.770	2.261	154.6	114.3	4.97	0.849	228.7
20	3.754	138	97	8.929	2.297	157.4	116.1	4.91	0.854	223.8
21	3.924	149	108	8.793	2.255	155.0	114.0	4.96	0.858	226.1
22	4.370	186	148	8.784	2.279	154.9	115.2	4.96	0.838	230.9
23	4.450	191	155	8.689	2.267	153.2	114.6	5.00	0.827	235.9
24	4.307	179	139	8.713	2.230	153.6	112.8	4.99	0.860	227.4
25	3.624	126	86	8.768	2.249	154.6	113.7	4.97	0.857	226.9
Mean				**8.733**	**2.259**	**154.0**	**114.2**	**4.98**	**0.842**	**231.2**
sd				**0.073**	**0.024**	**1.30**	**1.19**	**0.03**	**0.015**	**4.44**
CV%				**0.84**	**1.04**	**0.8**	**1.0**	**0.59**	**1.74**	**1.9**
Targets						**153.9**	**114.3**	**4.98**	**0.841**	**231.5**

Appendix 7: Quickfix - Replication No 2

Calculated from a.X^b using average Rep 1 b values

(bPL = 2.07 and bPH = 2.83)

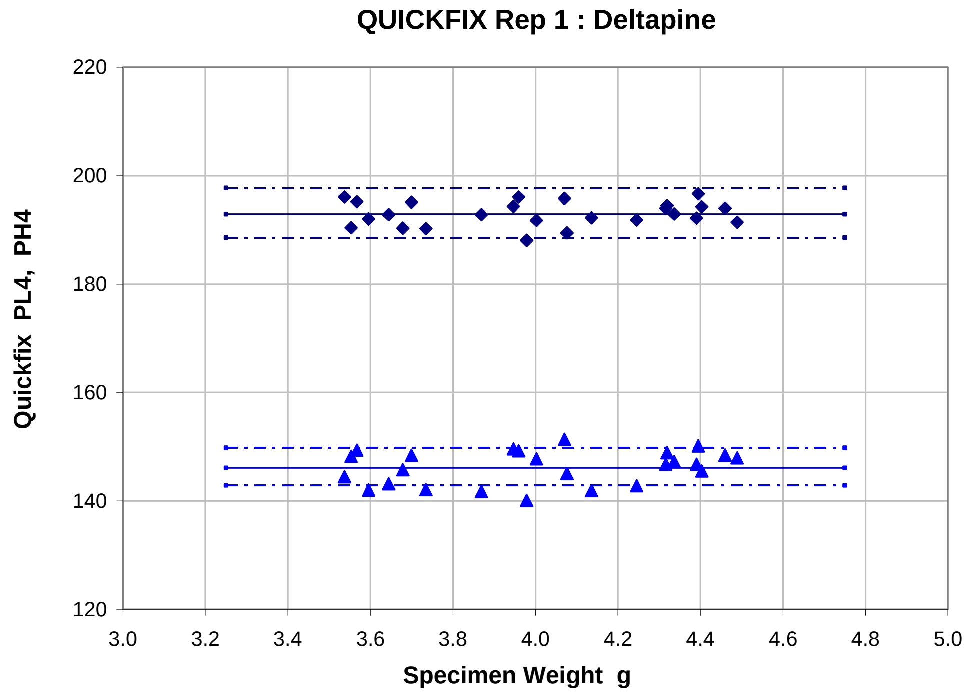
Cotton 19 - ICCS G12

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.550	300	252	21.790	6.989	384.2	353.4	2.60	0.614	134.9

2	4.085	414	392	22.483	7.305	396.4	369.4	2.55	0.601	133.8
3	3.678	328	286	22.130	7.171	390.2	362.6	2.58	0.603	135.3
4	3.887	368	331	22.153	7.101	390.6	359.1	2.57	0.616	132.6
5	4.172	429	415	22.298	7.284	393.1	368.3	2.56	0.594	136.2
6	4.228	440	430	22.253	7.271	392.3	367.6	2.57	0.594	136.5
7	3.706	327	290	21.724	7.119	383.0	360.0	2.61	0.588	140.5
8	3.620	316	269	22.042	7.059	388.6	356.9	2.58	0.617	133.0
9	3.867	358	325	21.775	7.072	383.9	357.6	2.61	0.599	138.0
10	3.724	331	289	21.769	6.997	383.8	353.8	2.61	0.611	135.6
11	3.993	391	363	22.262	7.216	392.5	364.9	2.57	0.603	134.6
12	3.538	309	252	22.592	7.052	398.3	356.6	2.54	0.651	124.1
13	3.750	338	296	21.911	7.027	386.3	355.3	2.59	0.615	134.2
14	4.109	413	398	22.156	7.294	390.6	368.8	2.57	0.584	138.9
15	3.556	301	253	21.781	6.981	384.0	353.0	2.60	0.615	134.8
16	3.927	367	335	21.623	6.979	381.2	352.9	2.62	0.606	137.5
17	3.914	367	335	21.776	7.047	383.9	356.3	2.61	0.603	137.1
18	4.056	397	375	21.879	7.130	385.7	360.5	2.60	0.595	138.2
19	4.139	422	407	22.302	7.308	393.2	369.5	2.56	0.590	136.9
20	3.668	316	275	21.440	6.948	378.0	351.3	2.63	0.600	139.6
21	3.951	377	344	21.941	7.047	386.8	356.3	2.59	0.613	134.3
22	3.810	349	313	21.897	7.106	386.1	359.3	2.60	0.600	137.1
23	3.659	317	272	21.622	6.922	381.2	350.0	2.62	0.616	135.5
24	3.721	328	289	21.604	7.012	380.9	354.5	2.62	0.599	139.0
25	4.017	390	360	21.931	7.036	386.7	355.8	2.59	0.614	134.2
Mean				**21.965**	**7.099**	**387.3**	**358.9**	**2.59**	**0.606**	**135.7**
sd				**0.292**	**0.119**	**5.16**	**6.02**	**0.02**	**0.014**	**3.20**
CV%				**1.33**	**1.68**	**1.3**	**1.7**	**0.92**	**2.24**	**2.4**
Targets						**388.9**	**362.2**	**2.58**	**0.600**	**136.2**

Cotton 20 - ICCS D3

Spec.	Weight	PL	PH	aPL	aPH	PL4	PH4	Meq	Mat	Fin
1	3.939	224	164	13.119	3.389	231.3	171.4	3.73	0.889	153.4
2	4.428	283	228	13.006	3.382	229.3	171.0	3.76	0.876	156.6
3	3.529	178	122	13.087	3.440	230.7	173.9	3.74	0.858	158.6
4	3.711	200	142	13.246	3.471	233.5	175.5	3.71	0.865	155.9
5	3.846	215	156	13.226	3.447	233.2	174.3	3.71	0.874	154.6
6	4.551	303	253	13.157	3.473	232.0	175.6	3.73	0.852	158.9
7	3.617	189	133	13.200	3.496	232.7	176.8	3.72	0.846	159.3
8	4.007	229	170	12.944	3.346	228.2	169.2	3.77	0.886	155.7
9	4.229	259	200	13.091	3.379	230.8	170.8	3.74	0.890	153.6
10	4.108	247	188	13.261	3.449	233.8	174.4	3.70	0.878	153.7
11	4.353	275	220	13.093	3.425	230.8	173.2	3.74	0.866	157.2
12	4.411	281	226	13.015	3.388	229.5	171.3	3.75	0.874	156.8
13	4.066	234	176	12.831	3.324	226.2	168.0	3.79	0.881	157.7
14	3.593	185	127	13.105	3.404	231.1	172.1	3.74	0.879	155.1
15	3.700	193	136	12.868	3.355	226.9	169.6	3.79	0.870	159.0
16	3.708	194	137	12.871	3.357	226.9	169.7	3.78	0.870	159.1
17	4.229	261	202	13.195	3.414	232.6	172.6	3.72	0.887	153.0
18	3.534	184	124	13.484	3.481	237.7	176.0	3.66	0.893	149.1
19	3.637	189	131	13.055	3.392	230.2	171.5	3.75	0.878	155.8
20	4.085	242	183	13.143	3.411	231.7	172.5	3.73	0.881	154.4
21	3.868	214	156	13.010	3.392	229.4	171.5	3.76	0.871	157.3
22	3.906	216	158	12.869	3.342	226.9	169.0	3.78	0.877	157.9
23	4.042	232	175	12.878	3.360	227.0	169.9	3.78	0.869	159.1
24	4.324	269	215	12.986	3.411	228.9	172.5	3.76	0.858	159.6
25	3.868	213	155	12.950	3.371	228.3	170.4	3.77	0.874	157.5
Mean				**13.068**	**3.404**	**230.4**	**172.1**	**3.74**	**0.874**	**156.4**
sd				**0.155**	**0.047**	**2.73**	**2.37**	**0.03**	**0.012**	**2.56**
CV%				**1.19**	**1.38**	**1.2**	**1.4**	**0.84**	**1.34**	**1.6**
Targets						**230.3**	**172.0**	**3.74**	**0.874**	**156.3**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Quickfix PL4, PH4
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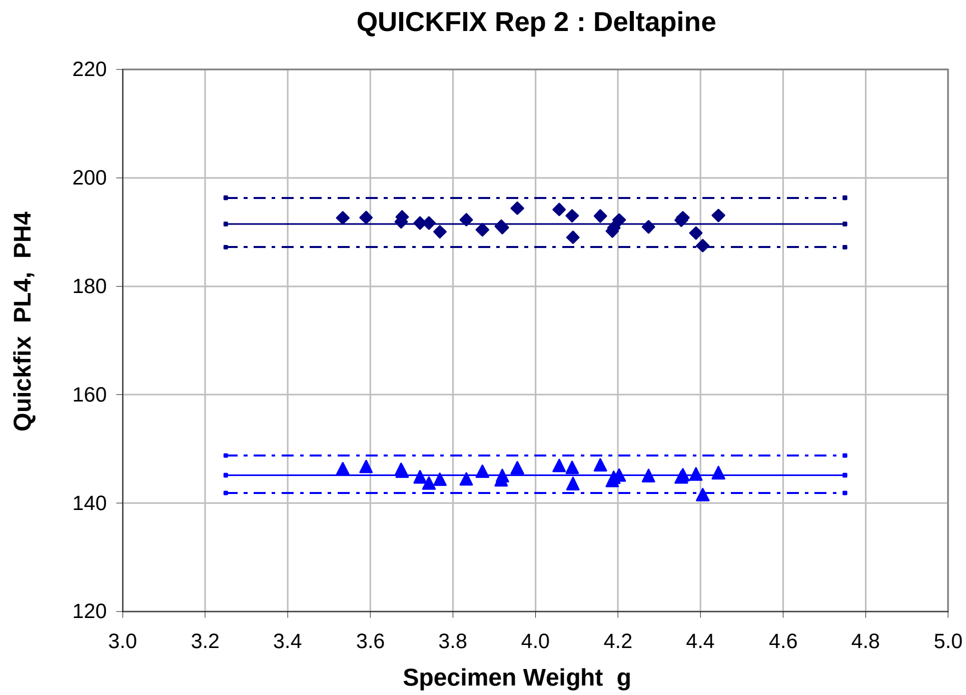
QUICKFIX Rep 2 : Deltapine
Quickfix PL4, PH4
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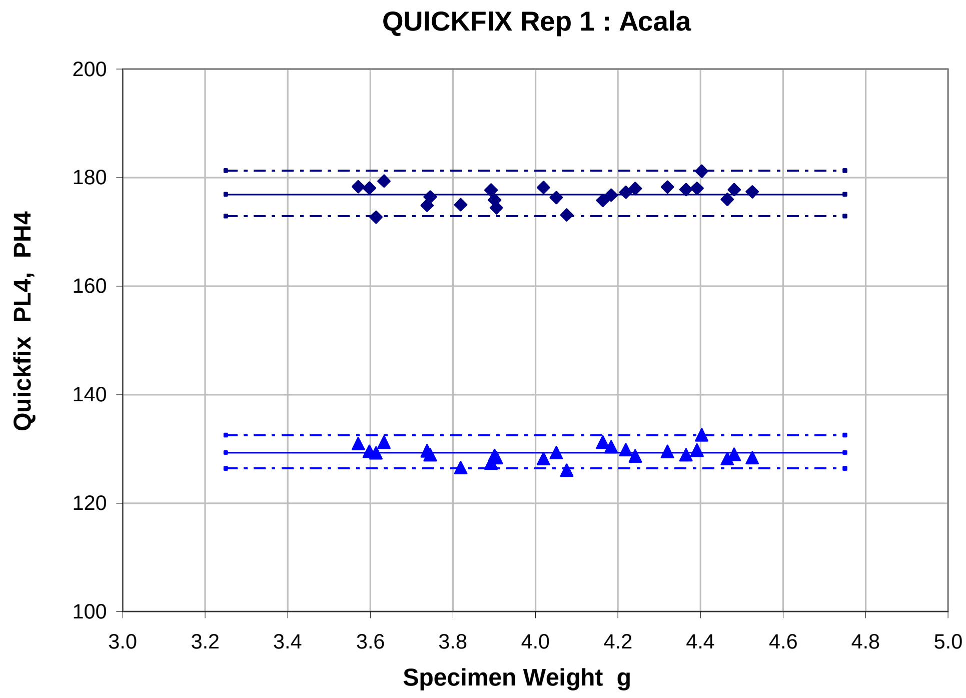
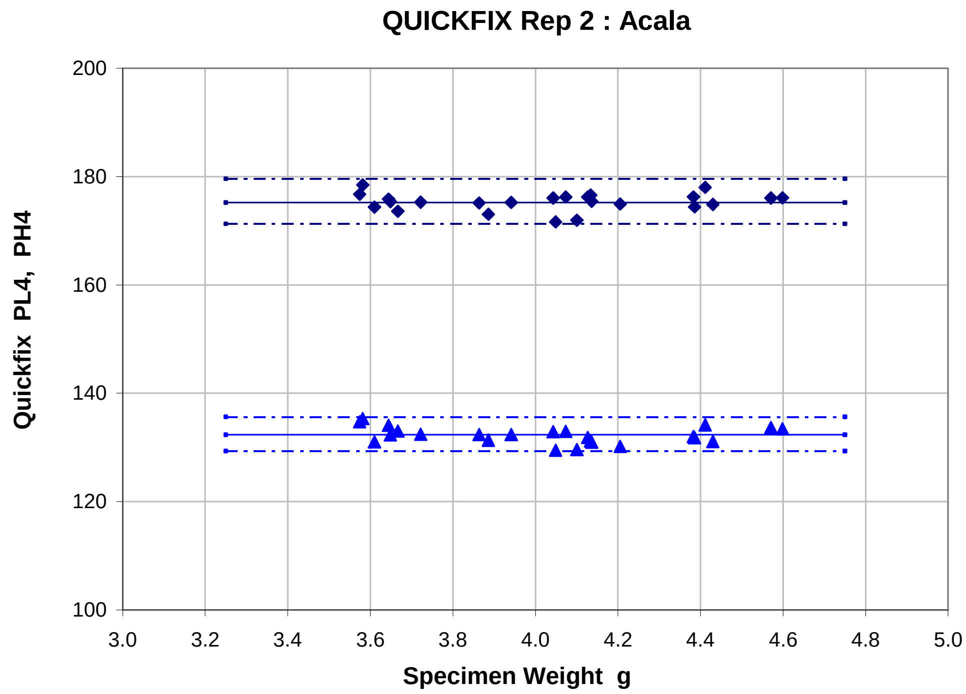
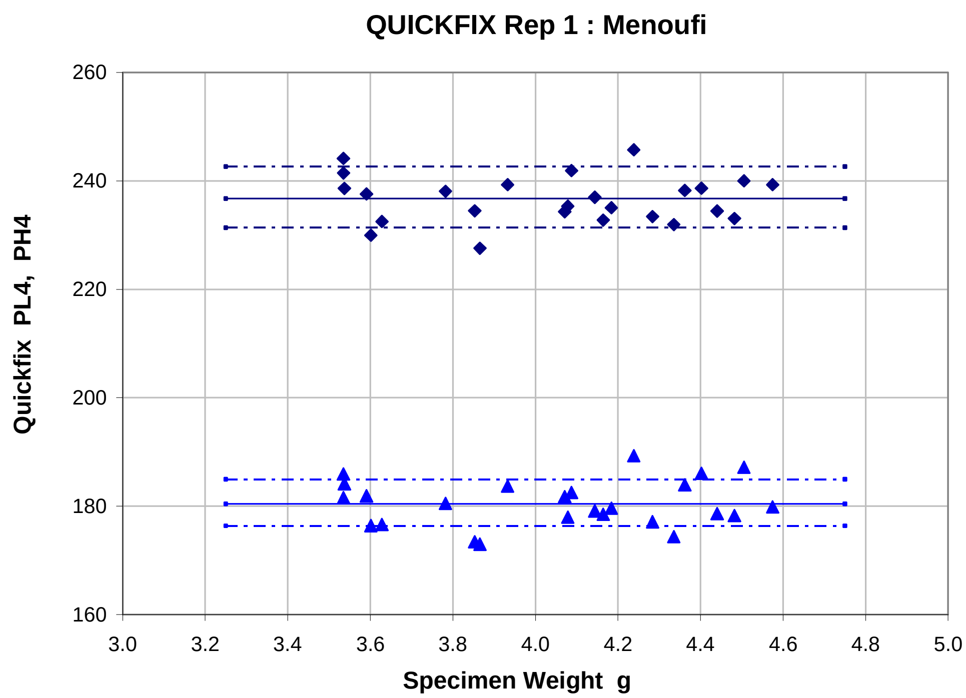
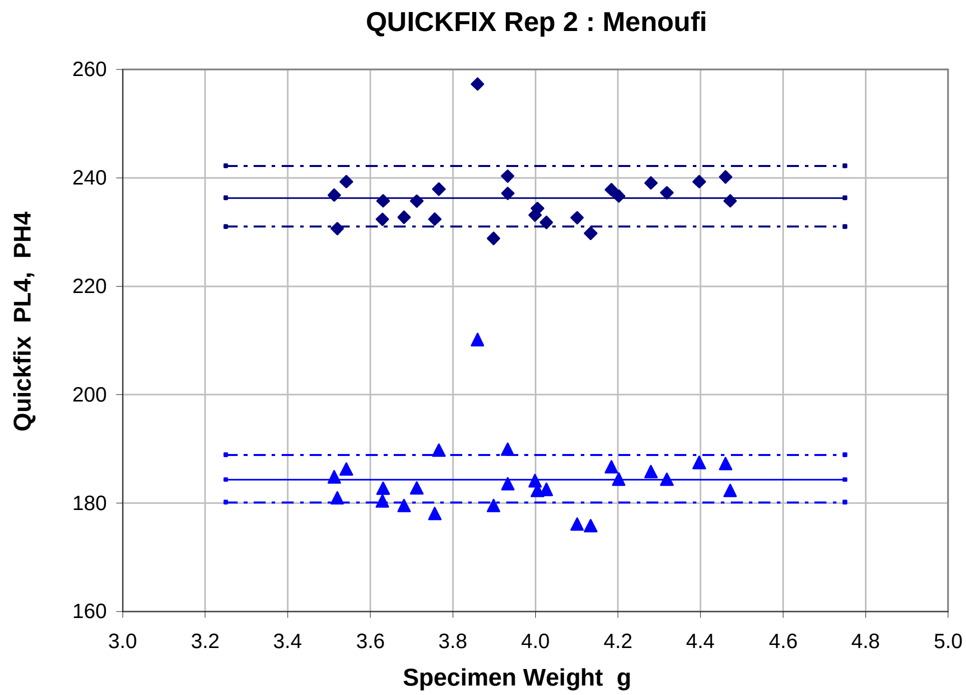
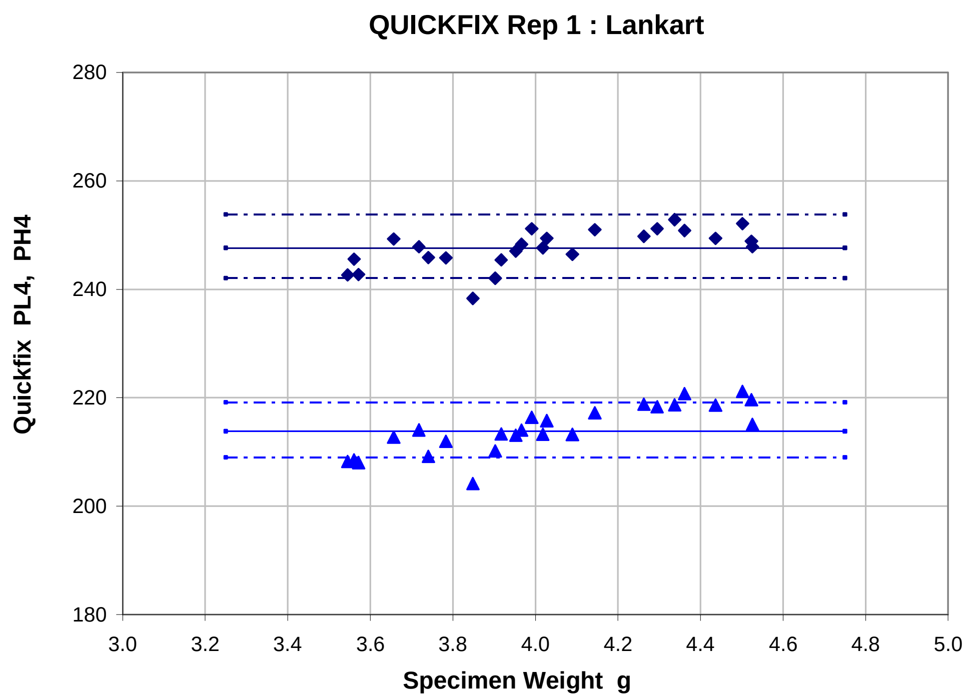
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

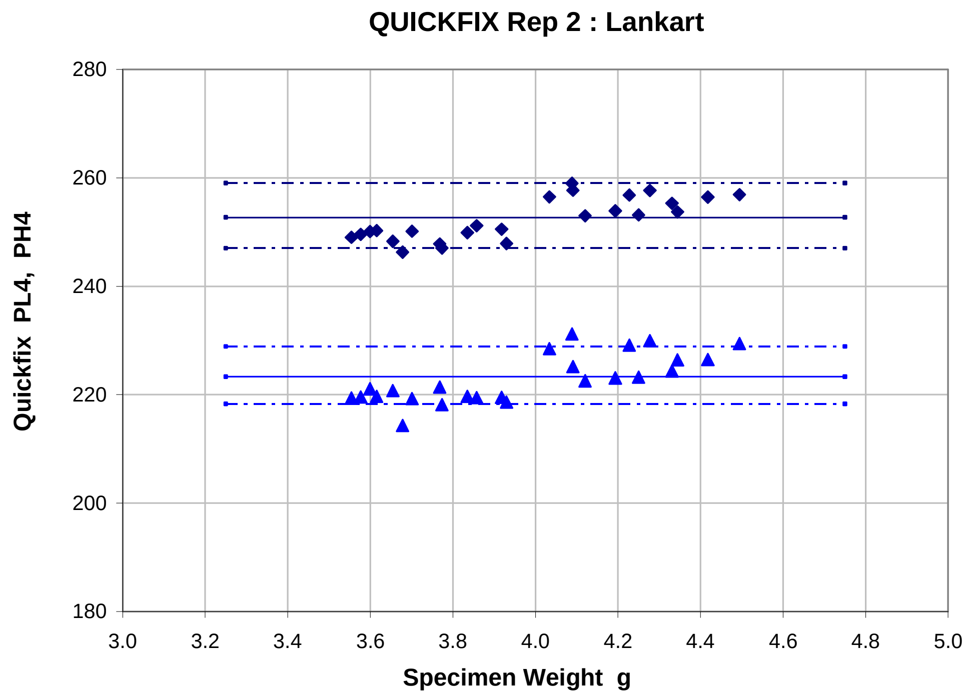

QUICKFIX Rep 1 : Acala
Quickfix PL4, PH4
200
180
160
140
120
100
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

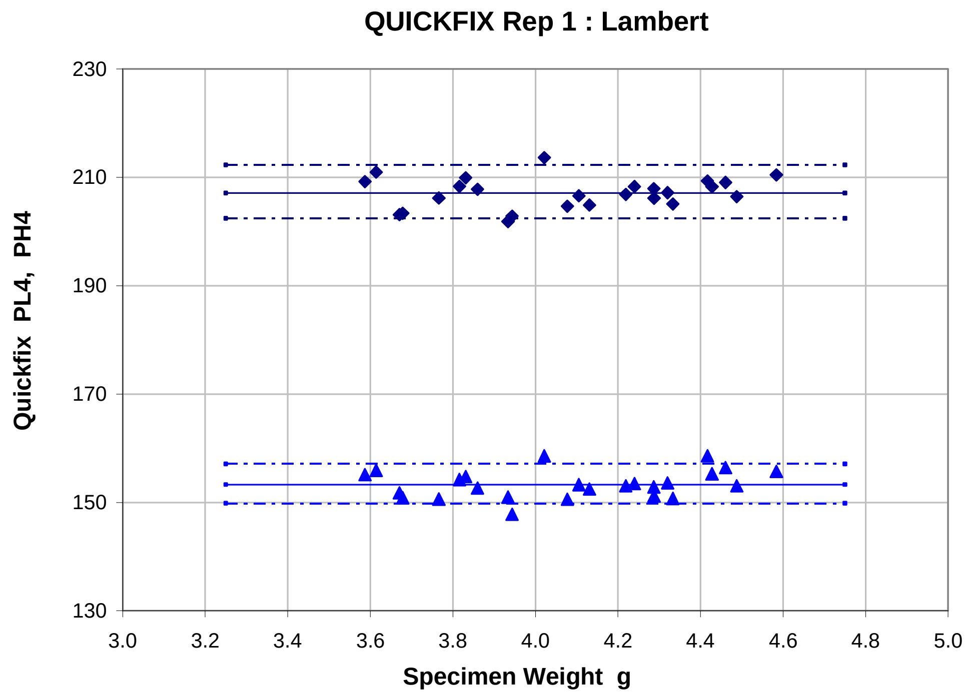

QUICKFIX Rep 2 : Acala
Quickfix PL4, PH4
200
180
160
140
120
100
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

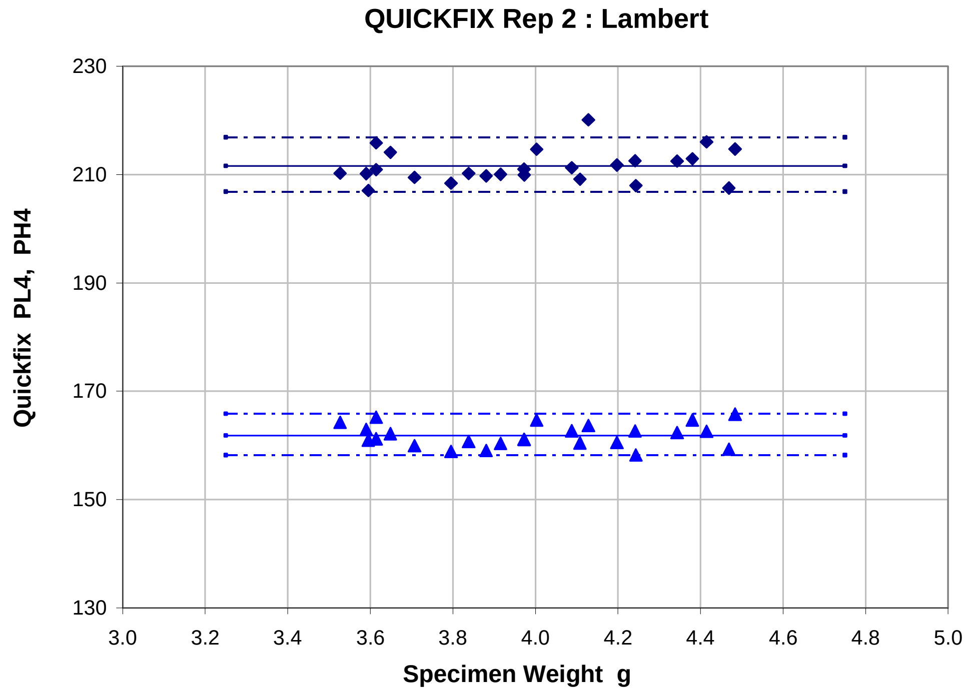

QUICKFIX Rep 1 : Menoufi
Quickfix PL4, PH4
260
240
220
200
180
160
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

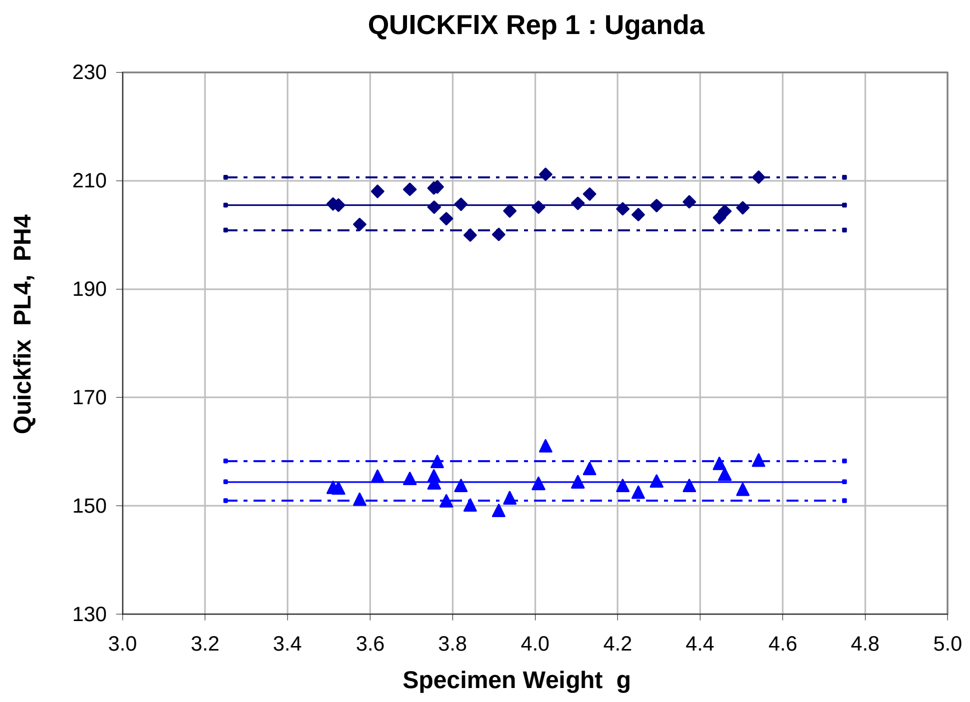

QUICKFIX Rep 2 : Menoufi
Quickfix PL4, PH4
260
240
220
200
180
160
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

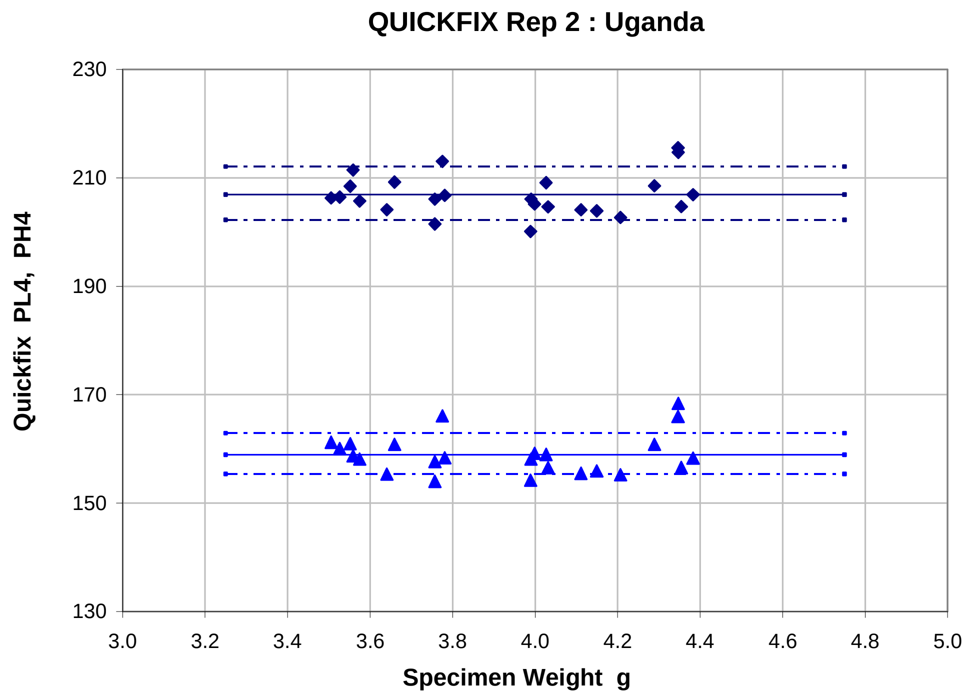

QUICKFIX Rep 1 : Lankart
280
260
240
220
200
180
Quickfix PL4, PH4
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

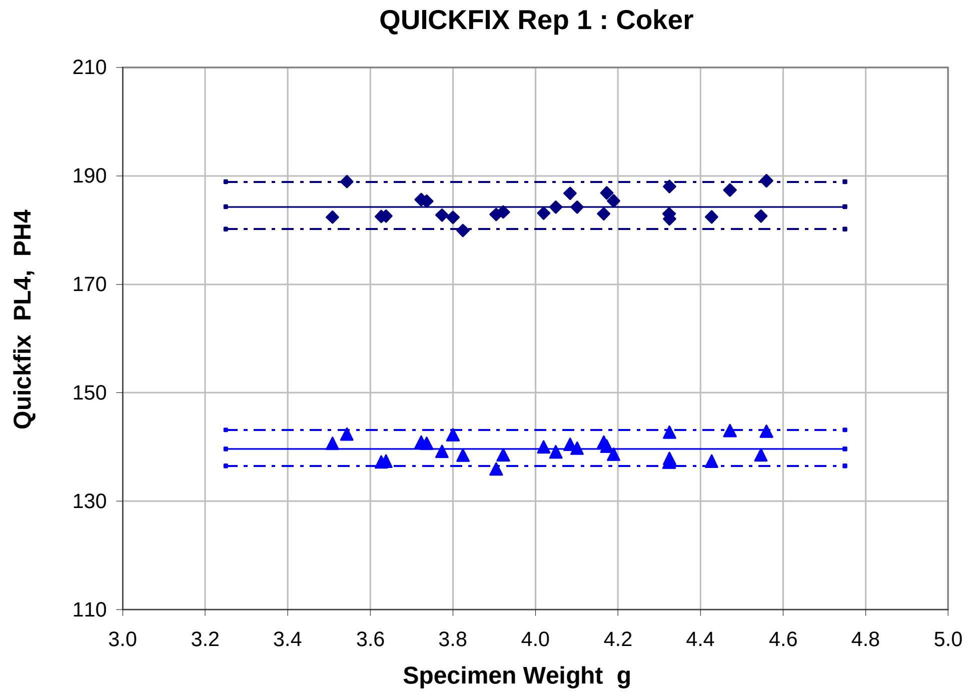

QUICKFIX Rep 2 : Lankart
280
260
240
220
200
180
Quickfix PL4, PH4
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

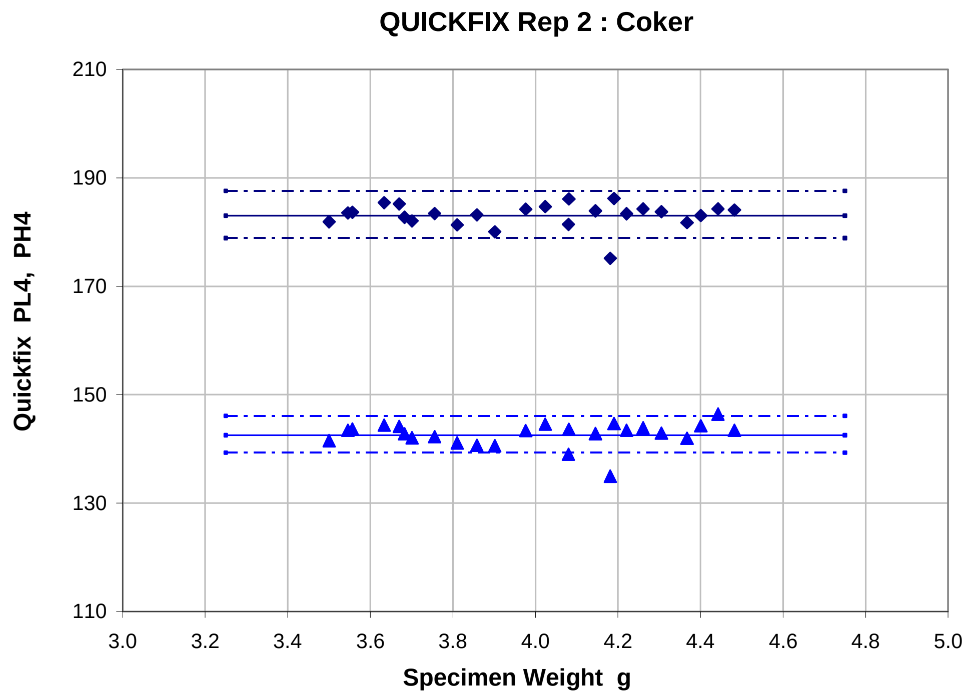

QUICKFIX Rep 1 : Lambert
Quickfix PL4, PH4
230
210
190
170
150
130
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

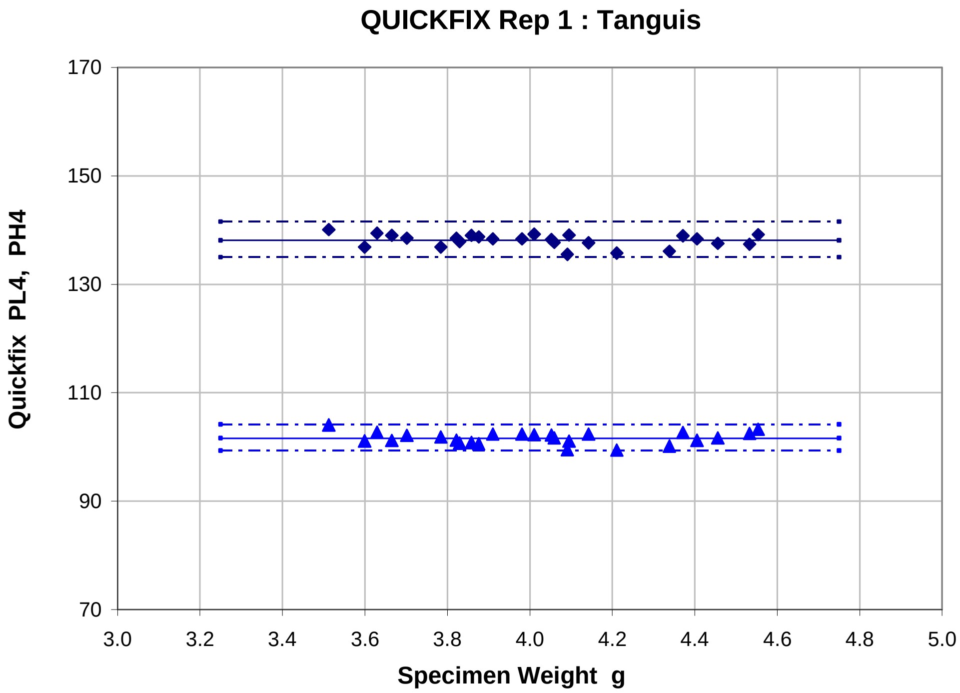

QUICKFIX Rep 2 : Lambert
Quickfix PL4, PH4
230
210
190
170
150
130
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

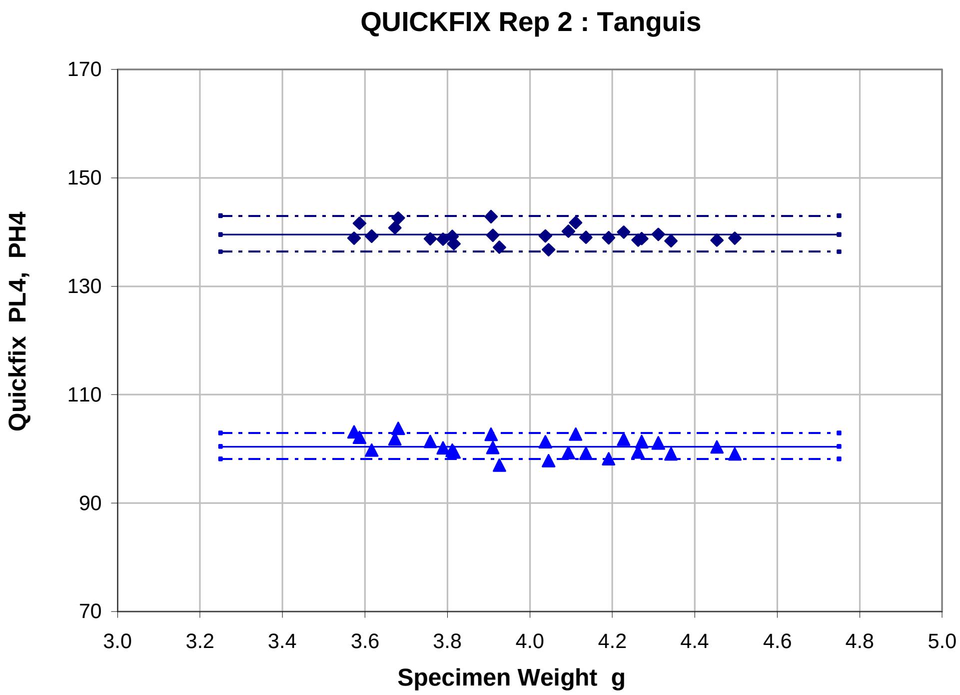

QUICKFIX Rep 1 : Uganda
Quickfix PL4, PH4
230
210
190
170
150
130
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

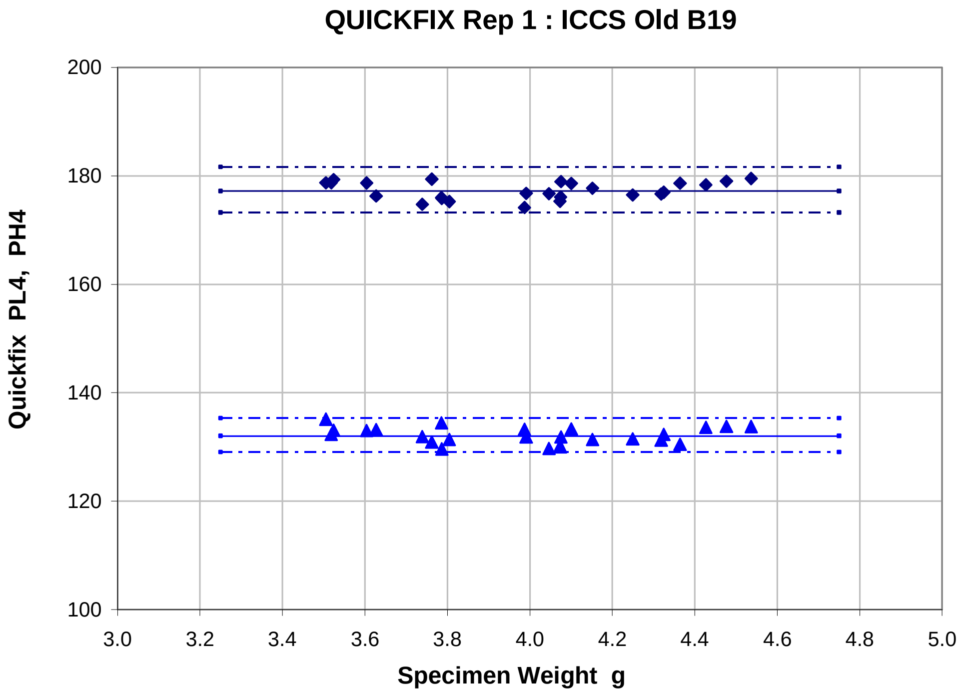

QUICKFIX Rep 2 : Uganda
Quickfix PL4, PH4
230
210
190
170
150
130
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

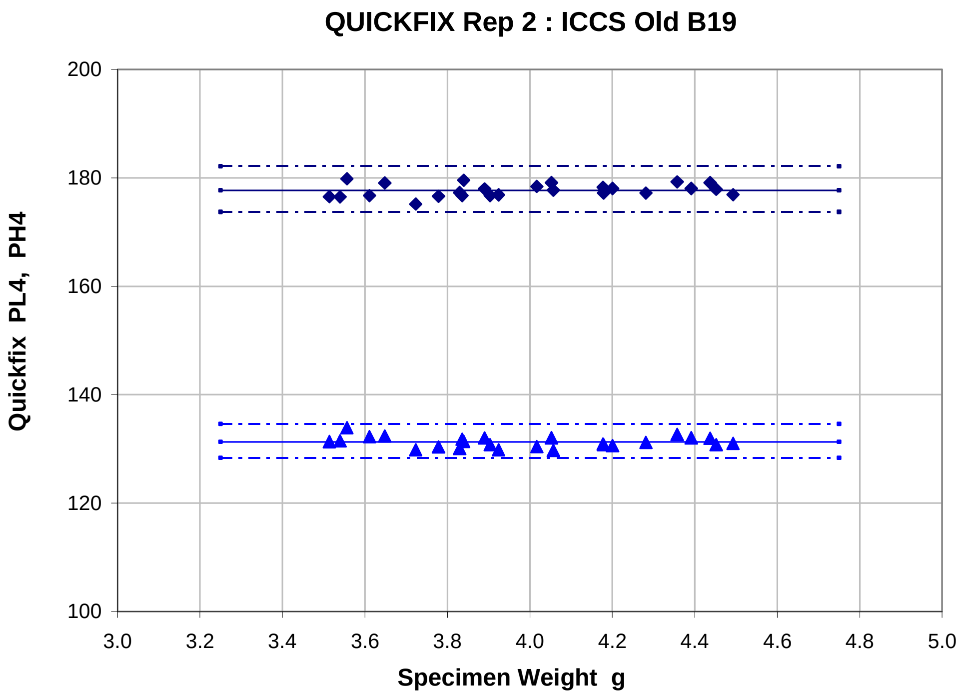

QUICKFIX Rep 1 : Coker
Quickfix PL4, PH4
Specimen Weight g
210
190
170
150
130
110
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0

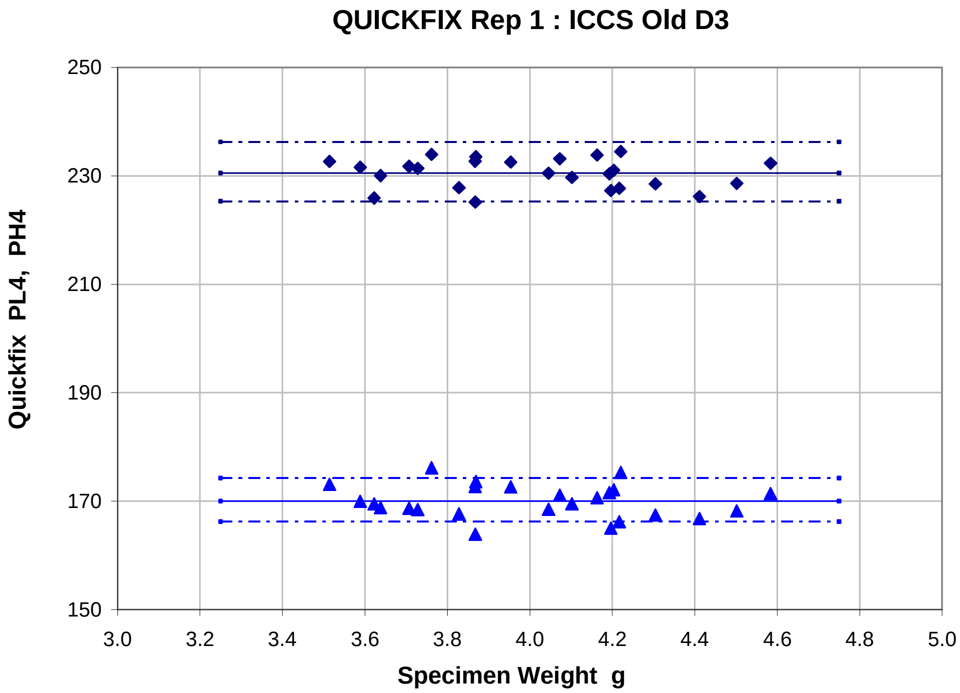

QUICKFIX Rep 2 : Coker
Quickfix PL4, PH4
Specimen Weight g
210
190
170
150
130
110
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0

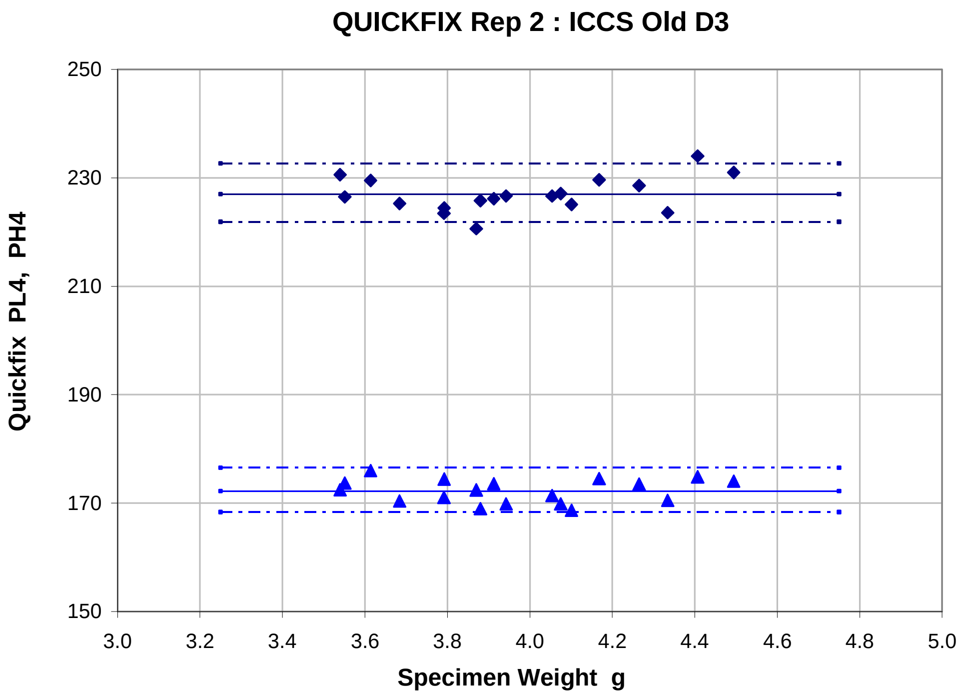

QUICKFIX Rep 1 : Tanguis
Quickfix PL4, PH4
170
150
130
110
90
70
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

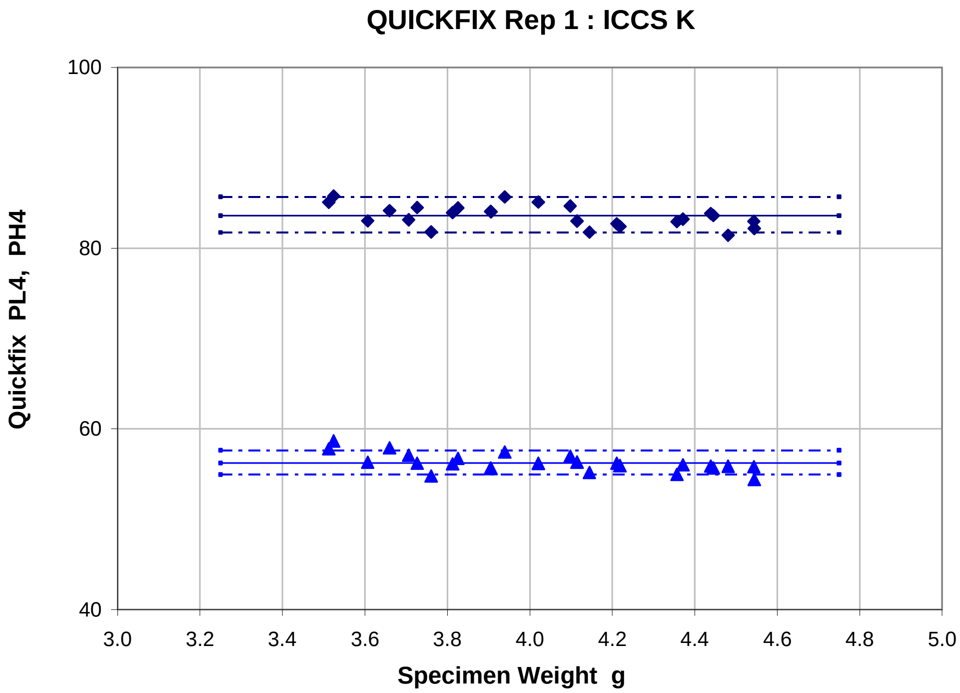

QUICKFIX Rep 2 : Tanguis
Quickfix PL4, PH4
170
150
130
110
90
70
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

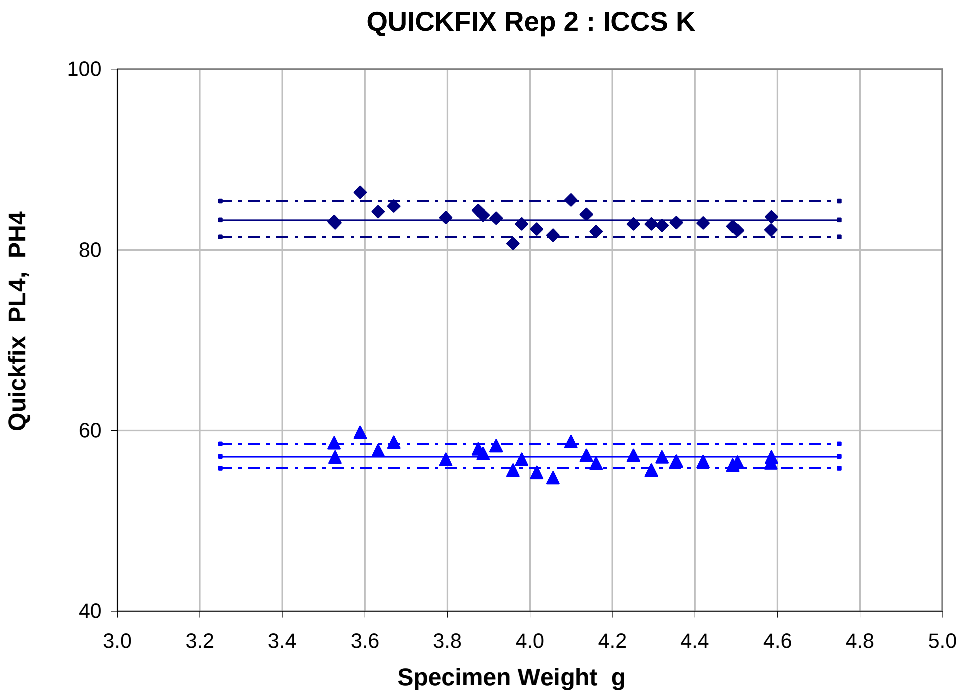

QUICKFIX Rep 1 : ICCS Old B19
Quickfix PL4, PH4
200
180
160
140
120
100
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

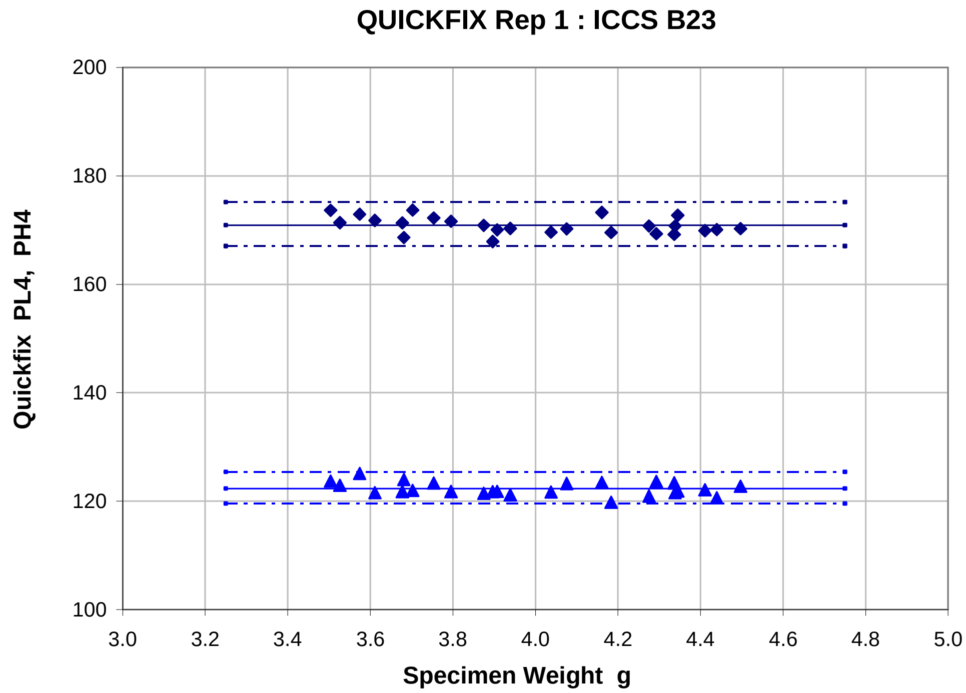

QUICKFIX Rep 2 : ICCS Old B19
Quickfix PL4, PH4
200
180
160
140
120
100
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

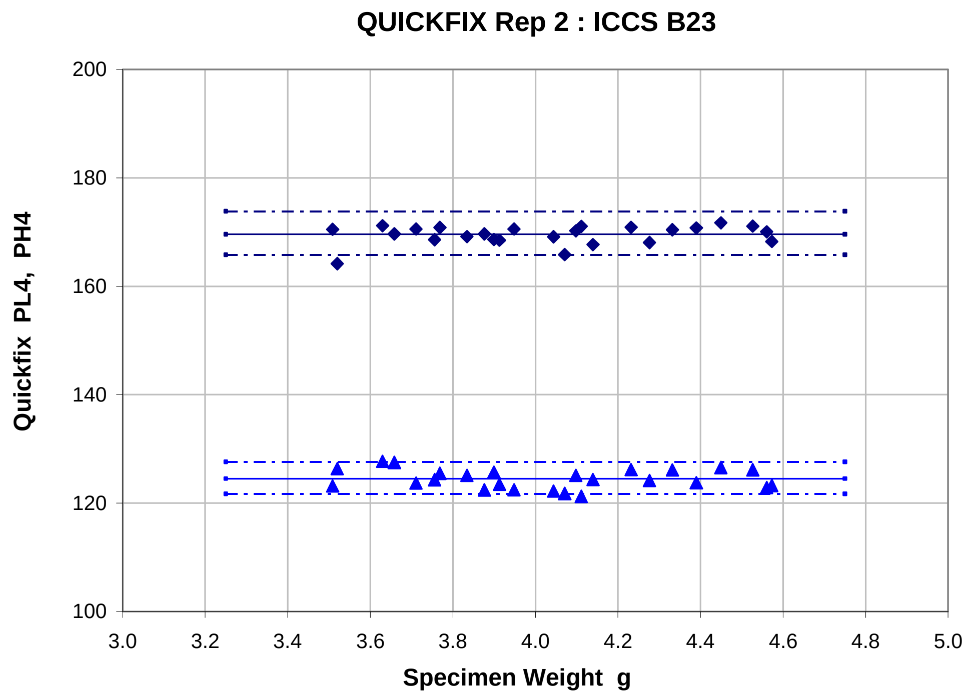

QUICKFIX Rep 1 : ICCS Old D3
Quickfix PL4, PH4
250
230
210
190
170
150
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

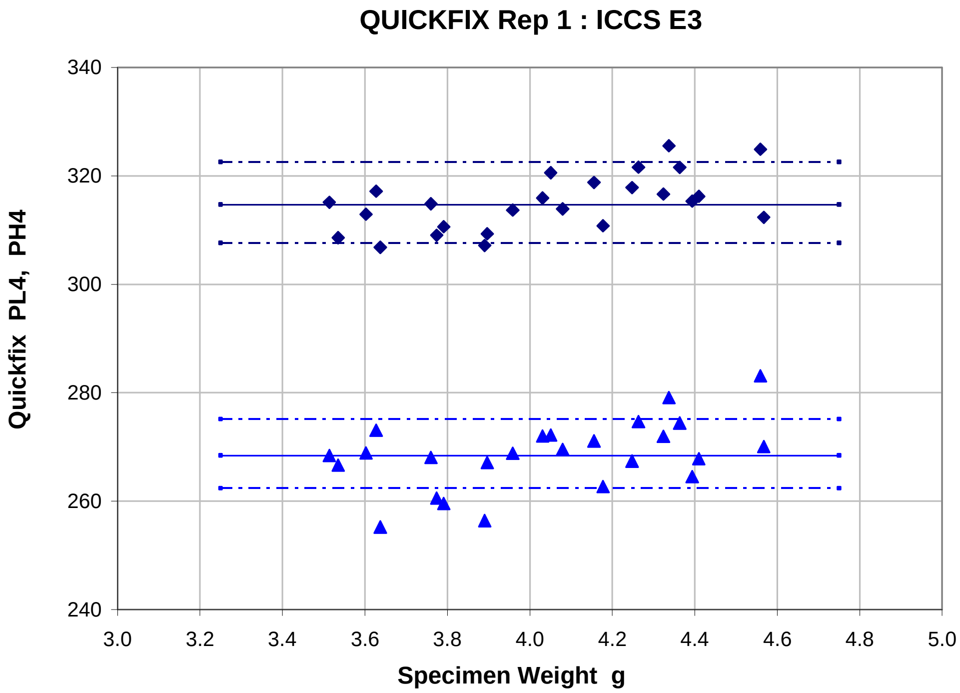

QUICKFIX Rep 2 : ICCS Old D3
Quickfix PL4, PH4
250
230
210
190
170
150
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

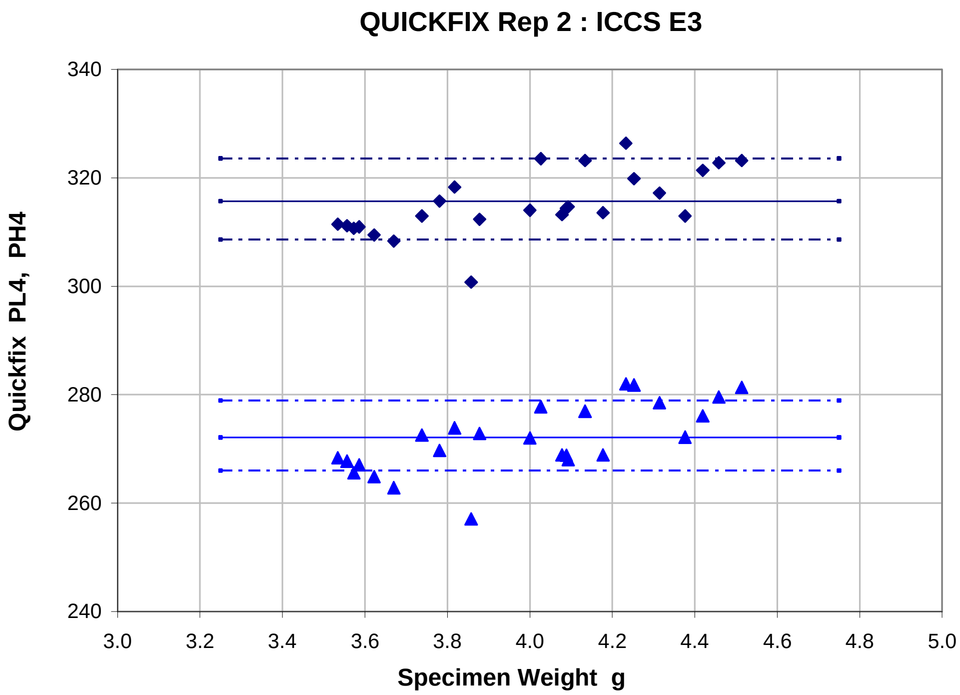

QUICKFIX Rep 1 : ICCS K
Quickfix PL4, PH4
100
80
60
40
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

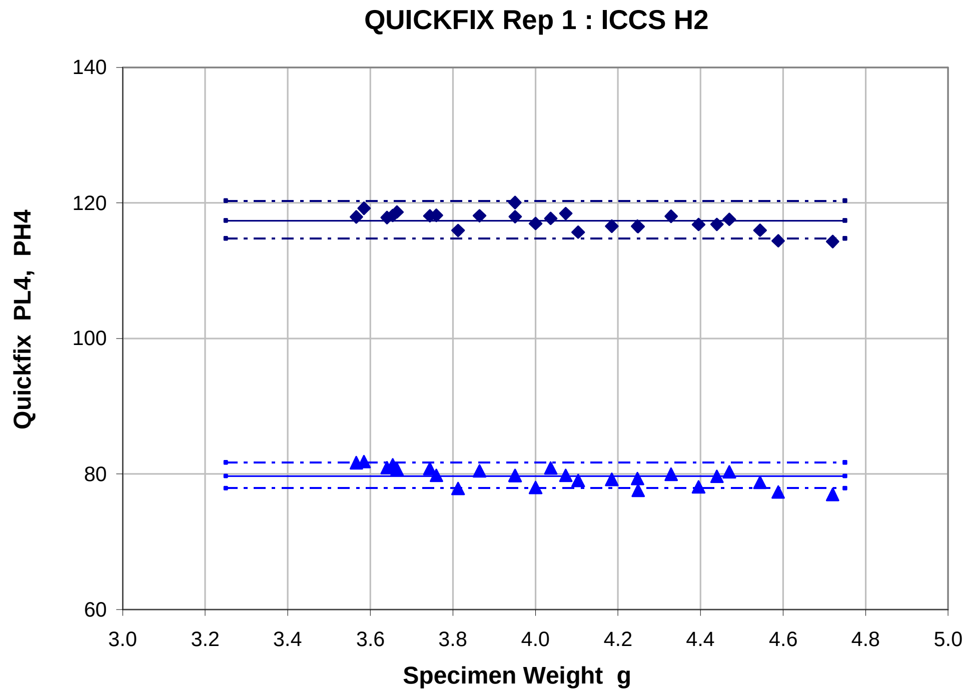

QUICKFIX Rep 2 : ICCS K
Quickfix PL4, PH4
100
80
60
40
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

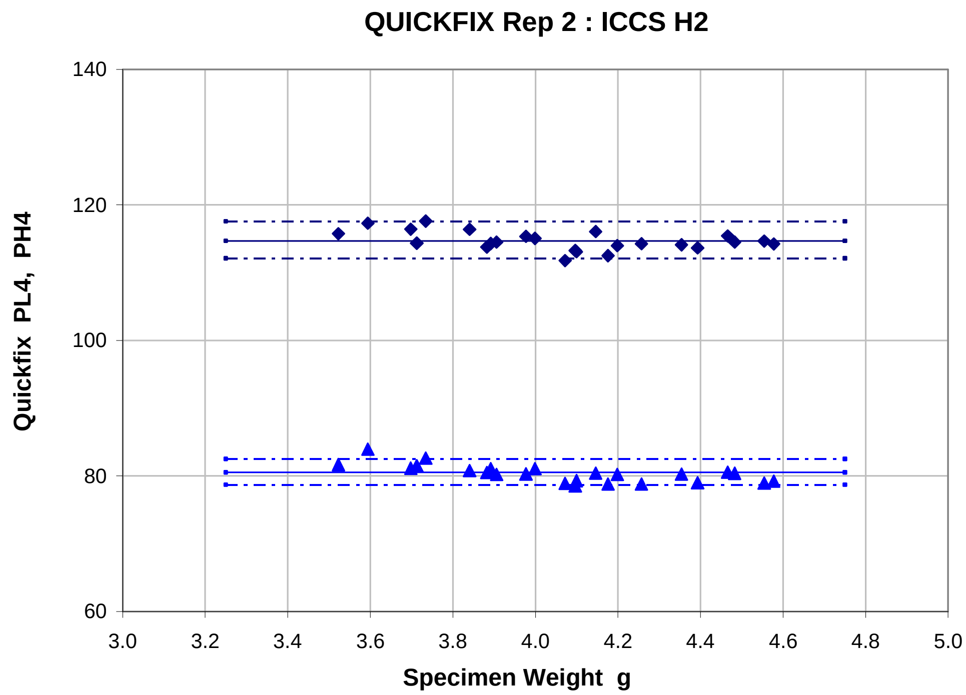

QUICKFIX Rep 1 : ICCS B23
Quickfix PL4, PH4
200
180
160
140
120
100
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

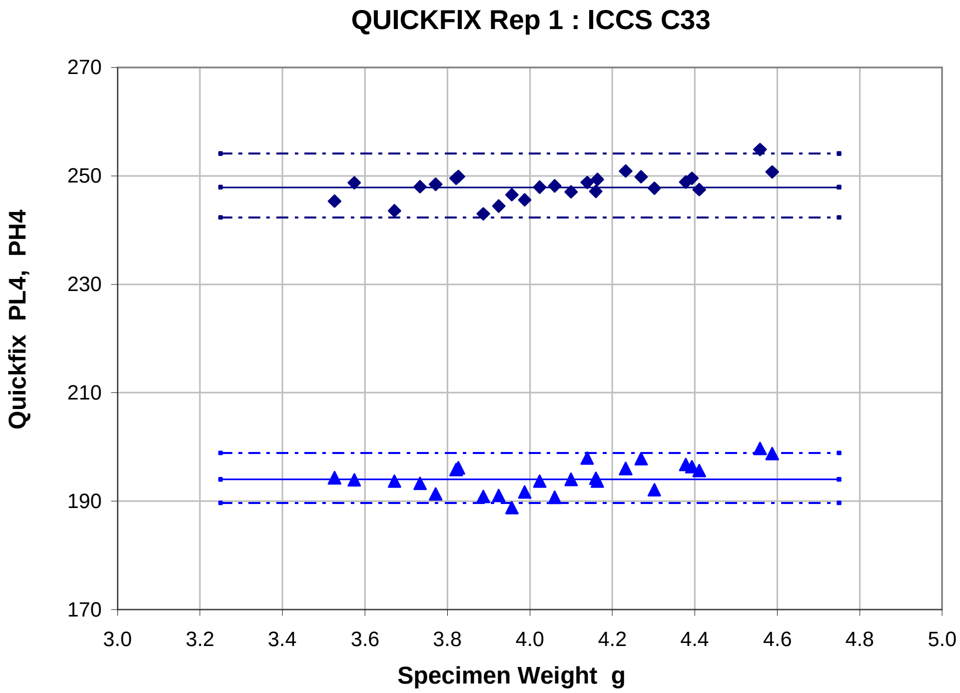

QUICKFIX Rep 2 : ICCS B23
Quickfix PL4, PH4
200
180
160
140
120
100
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

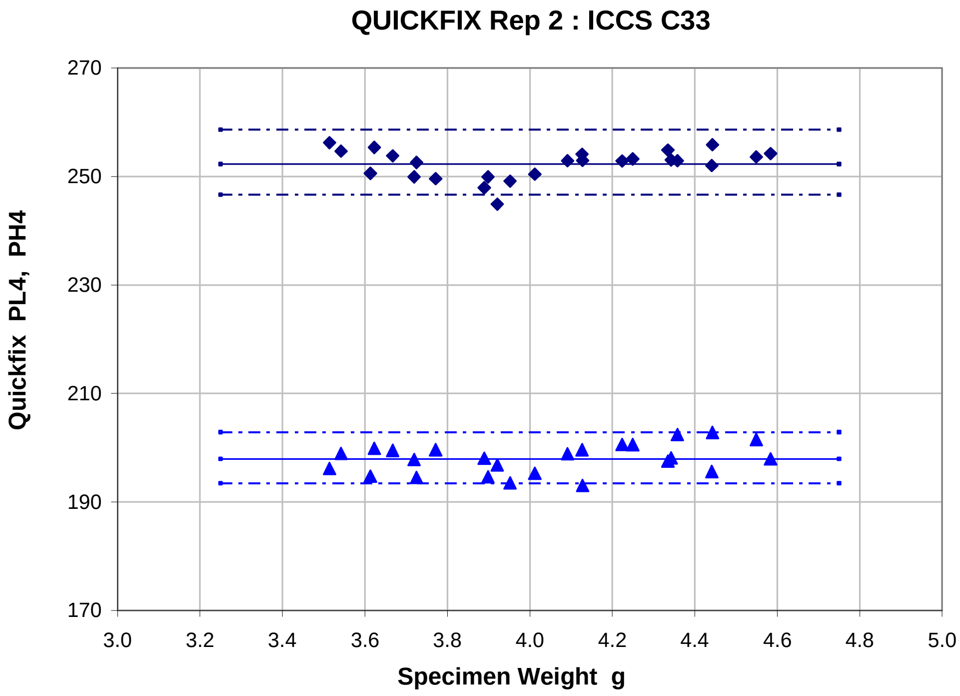

QUICKFIX Rep 1 : ICCS E3
Quickfix PL4, PH4
340
320
300
280
260
240
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g


QUICKFIX Rep 2 : ICCS E3
Quickfix PL4, PH4
340
320
300
280
260
240
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

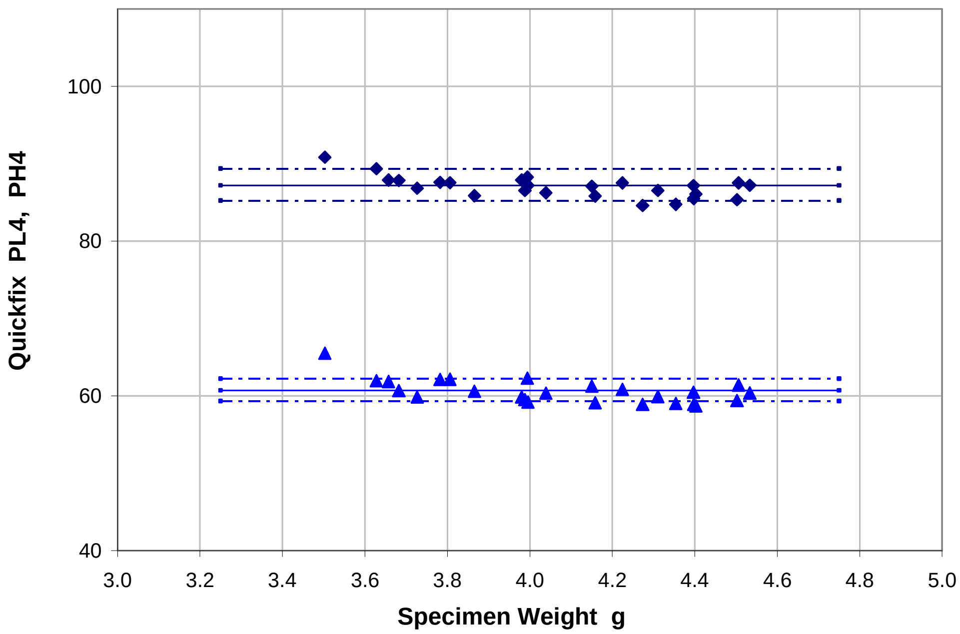

QUICKFIX Rep 1 : ICCS H2
Quickfix PL4, PH4
Specimen Weight g
140
120
100
80
60
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0


QUICKFIX Rep 2 : ICCS H2
Quickfix PL4, PH4
Specimen Weight g
140
120
100
80
60
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0

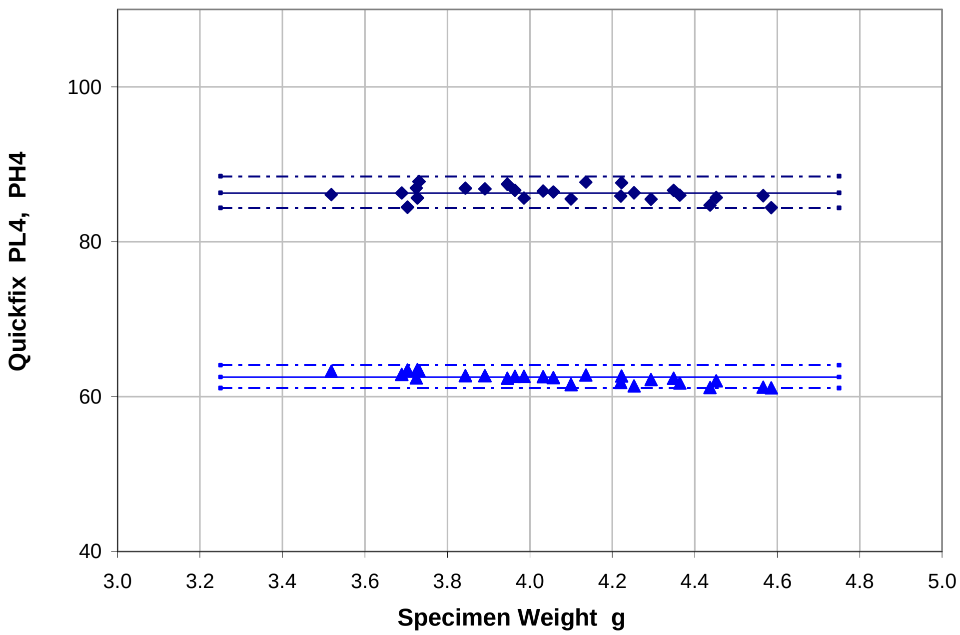

QUICKFIX Rep 1 : ICCS C33
Quickfix PL4, PH4
270
250
230
210
190
170
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g


QUICKFIX Rep 2 : ICCS C33
Quickfix PL4, PH4
270
250
230
210
190
170
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

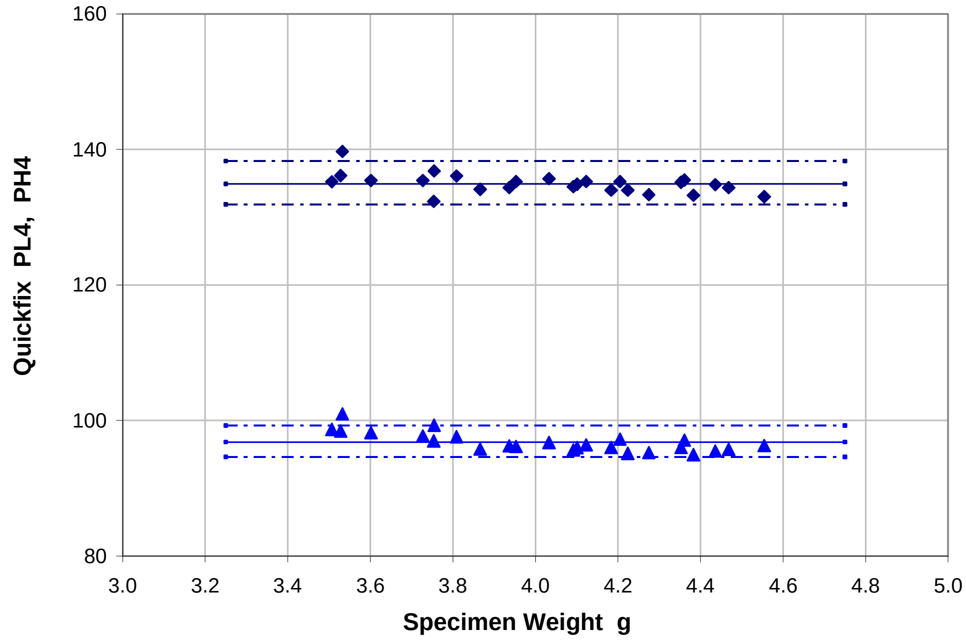
QUICKFIX Rep 1 : ICCS F2



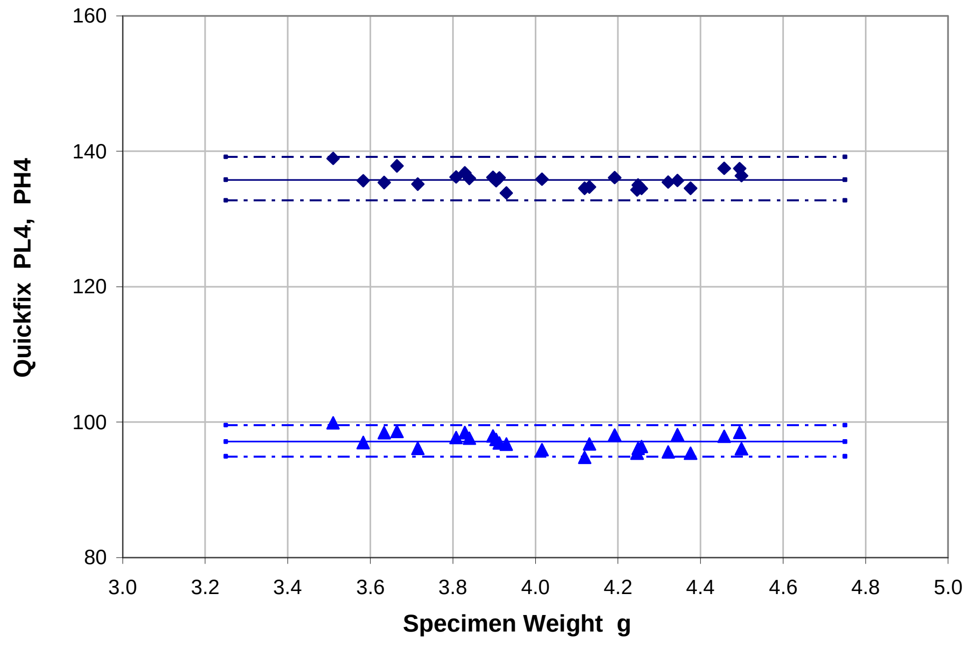
QUICKFIX Rep 2 : ICCS F2

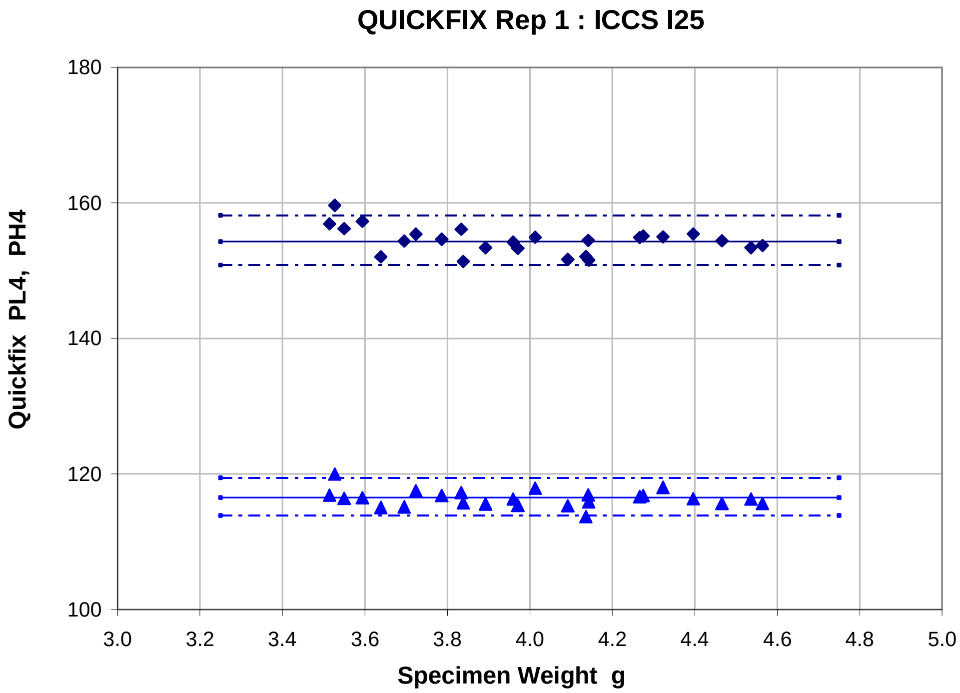


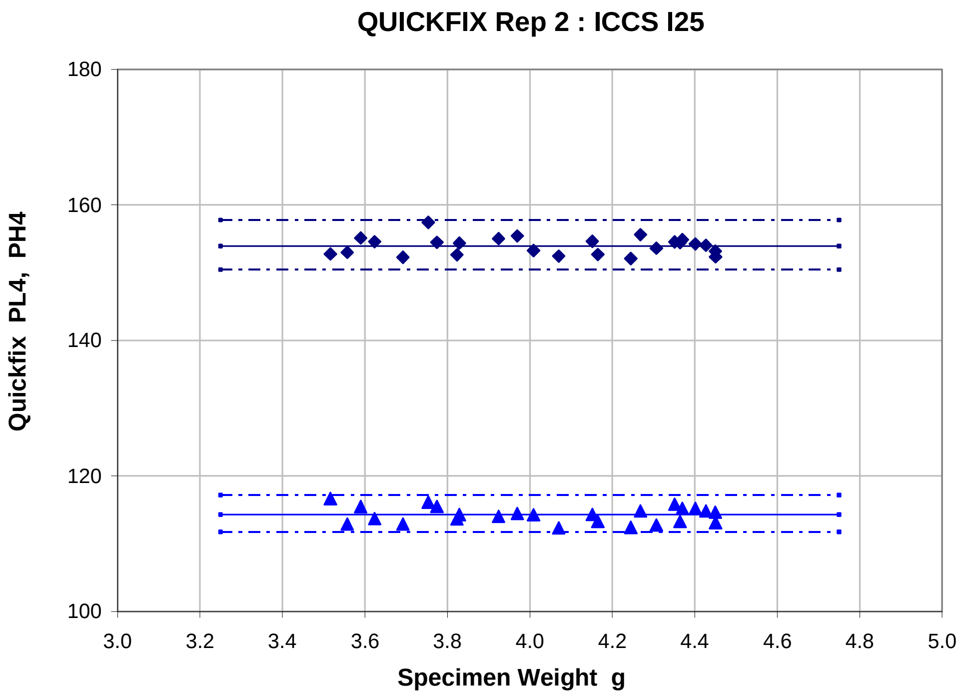
QUICKFIX Rep 1 : ICCS A16

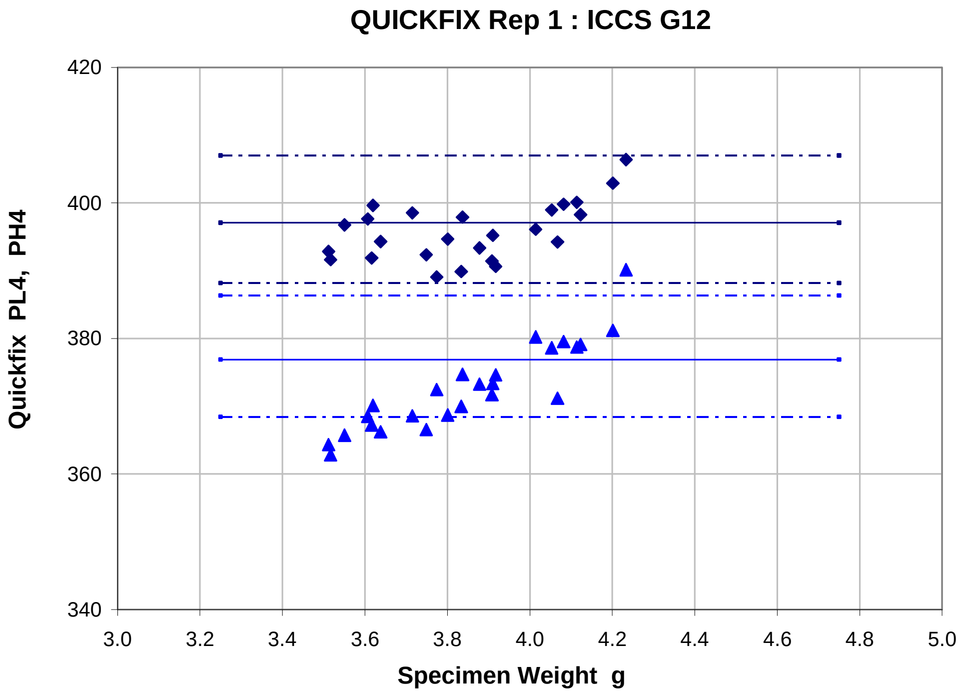


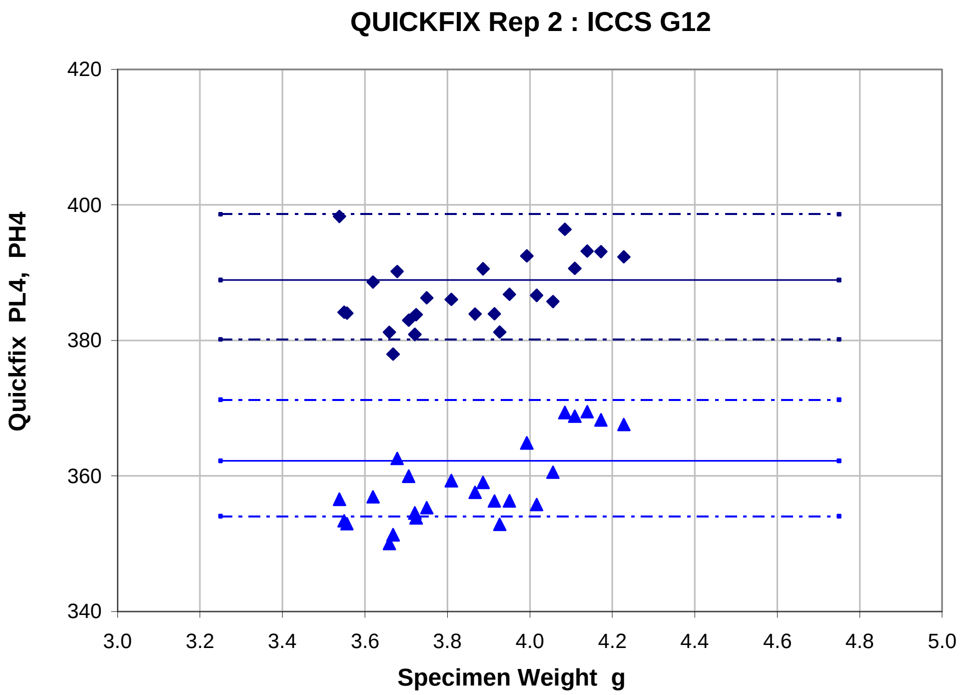
QUICKFIX Rep 2 : ICCS A16

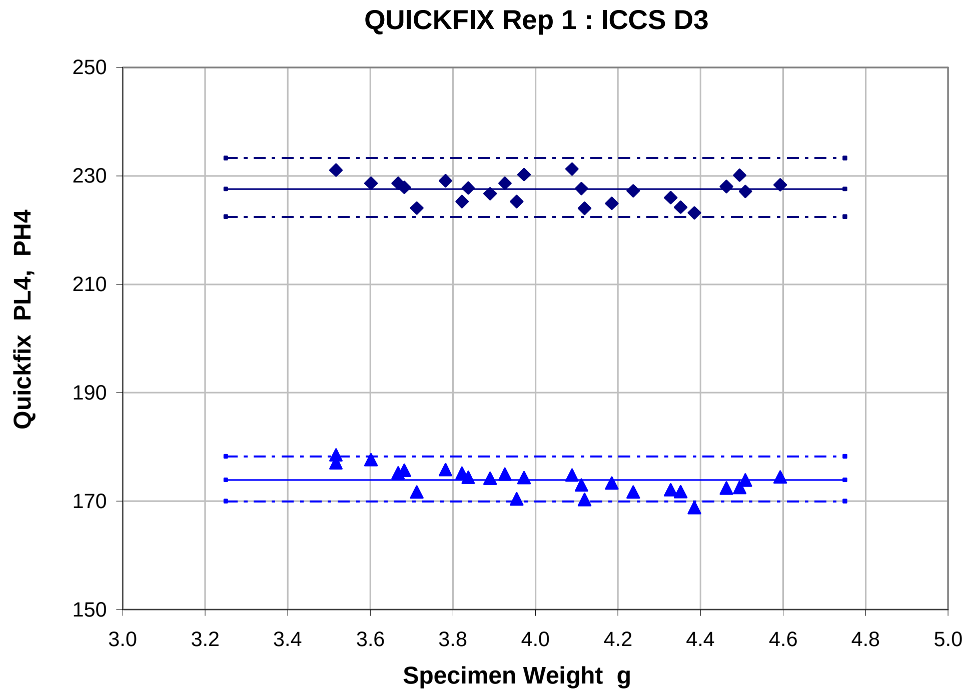


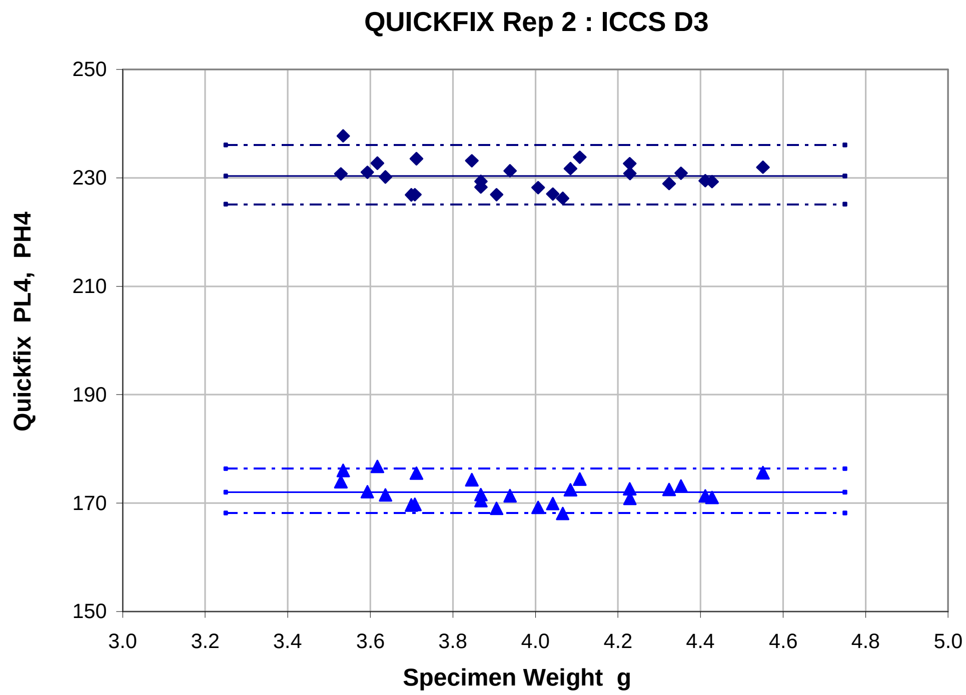

QUICKFIX Rep 1 : ICCS I25
Quickfix PL4, PH4
180
160
140
120
100
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g


QUICKFIX Rep 2 : ICCS I25
Quickfix PL4, PH4
180
160
140
120
100
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g


QUICKFIX Rep 1 : ICCS G12
420
400
380
360
340
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g
Quickfix PL4, PH4


QUICKFIX Rep 2 : ICCS G12
420
400
380
360
340
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g
Quickfix PL4, PH4


QUICKFIX Rep 1 : ICCS D3
Quickfix PL4, PH4
250
230
210
190
170
150
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g


QUICKFIX Rep 2 : ICCS D3
Quickfix PL4, PH4
250
230
210
190
170
150
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
Specimen Weight g

Appendix 9 - QUICKFIX for $(PL/PH)^2$

Equation (3) : Zi = aZ * Exp(bZ * Xi) with aZ = 7.9115
Equation (4) : Zi = aZ + bZ / Xi with aZ = -0.869

Deltapine Rep 1

		Measured			Eq(3)		Eq(4)	
						1.754		1.750
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	3.679	160	115	1.936	-0.383	1.712	10.317	1.710
2	4.076	197	153	1.658	-0.383	1.707	10.301	1.706
3	4.460	243	202	1.447	-0.381	1.724	10.330	1.713
4	4.336	228	185	1.519	-0.381	1.726	10.354	1.720
5	3.553	149	106	1.976	-0.390	1.660	10.109	1.658
6	4.390	233	191	1.488	-0.381	1.726	10.348	1.718
7	4.319	228	185	1.519	-0.382	1.716	10.314	1.710
8	4.489	243	205	1.405	-0.385	1.696	10.208	1.683
9	4.316	227	182	1.556	-0.377	1.752	10.465	1.747
10	4.395	239	196	1.487	-0.380	1.728	10.354	1.720
11	3.960	192	145	1.753	-0.381	1.727	10.383	1.727
12	4.002	192	148	1.683	-0.387	1.685	10.214	1.685
13	3.947	189	144	1.723	-0.386	1.687	10.228	1.688
14	3.700	166	119	1.946	-0.379	1.737	10.415	1.735
15	3.567	154	108	2.033	-0.381	1.724	10.353	1.719
16	4.070	203	159	1.630	-0.388	1.675	10.172	1.674
17	3.644	159	110	2.089	-0.365	1.835	10.781	1.826
18	4.403	237	191	1.540	-0.372	1.789	10.606	1.783
19	3.596	154	105	2.151	-0.362	1.858	10.859	1.846
20	3.734	165	117	1.989	-0.370	1.803	10.672	1.799
21	3.869	180	129	1.947	-0.362	1.857	10.896	1.855
22	3.537	152	102	2.221	-0.359	1.881	10.929	1.863
23	4.136	206	156	1.744	-0.366	1.833	10.806	1.832
24	4.246	217	169	1.649	-0.369	1.805	10.689	1.803
25	3.979	186	138	1.817	-0.370	1.802	10.685	1.802
Mean					**-0.377**	**1.754**	**10.472**	**1.749**
sd					**0.009**	**0.064**	**0.248**	**0.062**
CV%					**-2.38**	**3.62**	**2.37**	**3.55**
Mean Difference						**0.000**		**-0.001**

Deltapine Rep 2

		Measured			Eq(3)		Eq(4)	
						1.747		1.746
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	3.533	149	103	2.093	-0.376	1.755	10.464	1.747
2	4.406	229	186	1.516	-0.375	1.765	10.506	1.758
3	4.203	213	167	1.627	-0.376	1.756	10.490	1.753
4	4.089	202	156	1.677	-0.379	1.734	10.409	1.733
5	3.721	165	118	1.955	-0.376	1.760	10.508	1.758
6	3.677	162	115	1.984	-0.376	1.758	10.493	1.754
7	3.833	176	128	1.891	-0.373	1.776	10.577	1.775
8	3.956	190	142	1.790	-0.376	1.761	10.520	1.761
9	4.190	210	165	1.620	-0.379	1.740	10.427	1.738
10	4.353	229	184	1.549	-0.375	1.768	10.526	1.763
11	3.742	167	119	1.969	-0.372	1.790	10.622	1.787
12	4.274	219	175	1.566	-0.379	1.737	10.408	1.733
13	3.872	178	133	1.791	-0.384	1.705	10.299	1.706
14	4.091	198	153	1.675	-0.380	1.734	10.406	1.733
15	3.590	154	108	2.033	-0.379	1.741	10.418	1.735
16	4.389	230	189	1.481	-0.382	1.718	10.314	1.709
17	3.675	161	115	1.960	-0.380	1.732	10.396	1.730
18	3.917	183	136	1.811	-0.376	1.755	10.496	1.755
19	4.157	209	164	1.624	-0.381	1.724	10.365	1.722
20	4.443	240	196	1.499	-0.374	1.770	10.523	1.762
21	3.769	168	122	1.896	-0.379	1.737	10.421	1.736
22	3.920	183	137	1.784	-0.380	1.731	10.400	1.731
23	4.186	209	164	1.624	-0.378	1.743	10.437	1.740
24	4.357	230	185	1.546	-0.375	1.767	10.521	1.761
25	4.058	200	153	1.709	-0.378	1.746	10.459	1.746
Mean					**-0.377**	**1.748**	**10.456**	**1.745**
sd					**0.003**	**0.020**	**0.076**	**0.019**
CV%					**-0.74**	**1.12**	**0.73**	**1.10**
Mean Difference						**0.001**		**-0.001**

Acala Rep 1

		Measured			Eq(3)		Eq(4)	
						1.877		1.876
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	3.614	140	97	2.083	-0.369	1.806	10.668	1.798
2	4.482	225	178	1.598	-0.357	1.898	11.056	1.895
3	3.745	154	107	2.071	-0.358	1.891	11.013	1.884
4	4.242	201	152	1.749	-0.356	1.906	11.104	1.907
5	4.525	229	182	1.583	-0.356	1.908	11.097	1.905
6	4.020	180	130	1.917	-0.353	1.930	11.199	1.931
7	4.320	209	161	1.685	-0.358	1.889	11.033	1.889
8	3.819	159	111	2.052	-0.353	1.925	11.155	1.920
9	3.598	143	96	2.219	-0.353	1.925	11.109	1.908
10	3.901	167	120	1.937	-0.361	1.869	10.945	1.867
11	4.392	216	169	1.634	-0.359	1.880	10.990	1.878
12	3.571	141	95	2.203	-0.358	1.889	10.969	1.873
13	4.365	213	165	1.666	-0.357	1.898	11.066	1.898
14	4.051	181	134	1.825	-0.362	1.858	10.910	1.859
15	3.893	168	118	2.027	-0.350	1.952	11.274	1.949
16	4.219	198	151	1.719	-0.362	1.861	10.920	1.861
17	3.906	166	120	1.914	-0.363	1.849	10.867	1.848
18	4.163	191	147	1.688	-0.371	1.794	10.647	1.793
19	4.465	221	175	1.595	-0.359	1.884	11.001	1.881
20	3.633	147	100	2.161	-0.357	1.896	11.009	1.883
21	4.403	221	174	1.613	-0.361	1.866	10.929	1.863
22	3.738	152	107	2.018	-0.366	1.834	10.791	1.829
23	4.076	180	133	1.832	-0.359	1.882	11.008	1.883
24	4.183	194	148	1.718	-0.365	1.837	10.823	1.837
25								
Mean					**-0.359**	**1.880**	**10.983**	**1.877**
sd					**0.005**	**0.038**	**0.151**	**0.038**
CV%					**-1.42**	**2.03**	**1.37**	**2.01**
Mean Difference						**0.003**		**0.001**

Acala Rep 2

		Measured			Eq(3)		Eq(4)	
						1.763		1.760
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	3.574	140	98	2.041	-0.379	1.737	10.401	1.731
2	4.571	232	195	1.415	-0.376	1.755	10.442	1.742
3	4.127	188	144	1.704	-0.372	1.787	10.620	1.786
4	3.649	145	102	2.021	-0.374	1.772	10.544	1.767
5	4.136	188	144	1.704	-0.371	1.793	10.644	1.792
6	4.074	183	140	1.709	-0.376	1.757	10.500	1.756
7	4.383	213	171	1.552	-0.372	1.789	10.609	1.783
8	4.386	211	171	1.523	-0.376	1.760	10.488	1.753
9	4.043	180	137	1.726	-0.377	1.755	10.493	1.754
10	3.886	163	121	1.815	-0.379	1.738	10.429	1.738
11	3.722	151	108	1.955	-0.376	1.761	10.510	1.759
12	3.942	170	127	1.792	-0.377	1.753	10.488	1.753
13	4.205	194	150	1.673	-0.370	1.804	10.688	1.803
14	3.644	145	103	1.982	-0.380	1.731	10.389	1.728
15	4.411	218	177	1.517	-0.374	1.769	10.525	1.762
16	3.667	145	104	1.944	-0.383	1.711	10.314	1.709
17	4.134	189	144	1.723	-0.369	1.810	10.714	1.809
18	4.430	216	175	1.523	-0.372	1.787	10.598	1.780
19	4.101	181	139	1.696	-0.376	1.761	10.516	1.760
20	4.599	235	198	1.409	-0.375	1.763	10.474	1.749
21	3.582	142	99	2.057	-0.376	1.758	10.482	1.751
22	3.864	163	120	1.845	-0.377	1.753	10.486	1.753
23	4.049	176	134	1.725	-0.376	1.757	10.503	1.757
24	3.610	141	98	2.070	-0.371	1.791	10.610	1.784
25	3.995	174	131	1.764	-0.376	1.761	10.520	1.761
Mean					**-0.375**	**1.764**	**10.520**	**1.761**
sd					**0.003**	**0.023**	**0.094**	**0.023**
CV%					**-0.88**	**1.32**	**0.89**	**1.33**
Mean Difference						**0.001**		**0.001**

Appendix 9 - QUICKFIX for $(PL/PH)^2$

Equation (3) : Zi = aZ * Exp(bZ * Xi) with aZ = 7.9115
Equation (4) : Zi = aZ + bZ / Xi with aZ = -0.869

Menoufi Rep 1

		Measured			Eq(3)		Eq(4)	
						1.731		1.727
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	4.482	295	246	1.438	-0.380	1.728	10.341	1.716
2	4.335	274	219	1.565	-0.374	1.774	10.554	1.769
3	3.628	190	134	2.010	-0.378	1.747	10.447	1.743
4	3.853	217	156	1.935	-0.365	1.834	10.804	1.832
5	4.284	269	215	1.565	-0.378	1.743	10.429	1.738
6	4.078	245	188	1.698	-0.377	1.749	10.470	1.749
7	4.575	316	263	1.444	-0.372	1.788	10.580	1.776
8	4.144	255	198	1.659	-0.377	1.751	10.475	1.750
9	4.087	253	194	1.701	-0.376	1.758	10.504	1.757
10	3.535	189	131	2.082	-0.378	1.746	10.429	1.738
11	3.782	212	154	1.895	-0.378	1.745	10.454	1.744
12	4.238	277	223	1.543	-0.386	1.691	10.223	1.687
13	3.535	187	128	2.134	-0.371	1.797	10.618	1.785
14	3.591	190	134	2.010	-0.382	1.720	10.339	1.716
15	4.362	285	235	1.471	-0.386	1.691	10.206	1.682
16	4.071	243	191	1.619	-0.390	1.664	10.127	1.663
17	4.184	258	204	1.599	-0.382	1.716	10.328	1.713
18	3.932	231	175	1.742	-0.385	1.698	10.269	1.698
19	3.601	185	131	1.994	-0.383	1.712	10.311	1.709
20	3.537	185	130	2.025	-0.385	1.694	10.237	1.690
21	4.164	253	200	1.600	-0.384	1.704	10.283	1.702
22	4.440	291	240	1.470	-0.379	1.737	10.387	1.728
23	3.865	212	157	1.823	-0.380	1.733	10.407	1.733
24	4.402	291	244	1.422	-0.390	1.664	10.087	1.653
25	4.505	307	262	1.373	-0.389	1.671	10.100	1.656
Mean					**-0.380**	**1.730**	**10.376**	**1.725**
sd					**0.006**	**0.042**	**0.170**	**0.042**
CV%					**-1.58**	**2.42**	**1.63**	**2.46**
Mean Difference						**-0.001**		**-0.002**

Menoufi Rep 2

		Measured			Eq(3)		Eq(4)	
						1.648		1.647
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	3.682	196	142	1.905	-0.387	1.684	10.213	1.684
2	3.756	204	149	1.875	-0.383	1.707	10.305	1.707
3	4.461	301	255	1.393	-0.389	1.667	10.092	1.654
4	4.027	235	186	1.596	-0.398	1.613	9.927	1.613
5	3.712	202	148	1.863	-0.390	1.665	10.142	1.666
6	4.101	245	189	1.680	-0.378	1.746	10.455	1.745
7	3.631	193	139	1.928	-0.389	1.670	10.157	1.670
8	4.472	297	250	1.411	-0.385	1.693	10.198	1.680
9	4.134	246	193	1.625	-0.383	1.710	10.309	1.708
10	4.202	262	212	1.527	-0.391	1.653	10.069	1.648
11	3.933	232	181	1.643	-0.400	1.599	9.878	1.601
12	4.280	275	225	1.494	-0.389	1.666	10.113	1.659
13	3.513	181	128	2.000	-0.392	1.652	10.077	1.650
14	3.860	239	190	1.582	-0.417	1.492	9.462	1.496
15	3.542	186	132	1.986	-0.390	1.660	10.110	1.658
16	3.933	229	175	1.712	-0.389	1.668	10.153	1.669
17	3.899	217	167	1.688	-0.396	1.622	9.971	1.624
18	4.005	235	183	1.649	-0.392	1.652	10.085	1.652
19	4.397	291	245	1.411	-0.392	1.648	10.023	1.637
20	4.318	278	229	1.474	-0.389	1.668	10.117	1.660
21	3.629	190	137	1.923	-0.390	1.665	10.135	1.665
22	3.520	177	126	1.973	-0.395	1.633	10.004	1.632
23	4.184	261	212	1.516	-0.395	1.630	9.977	1.625
24	3.766	210	160	1.723	-0.405	1.567	9.760	1.571
25	3.999	233	184	1.604	-0.399	1.603	9.888	1.603
Mean					**-0.392**	**1.649**	**10.065**	**1.647**
sd					**0.008**	**0.050**	**0.195**	**0.049**
CV%					**-1.98**	**3.05**	**1.93**	**2.95**
Mean Difference						**0.001**		**0.000**

Lankart Rep 1

		Measured			Eq(3)		Eq(4)	
						1.342		1.343
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	4.018	250	216	1.340	-0.442	1.350	8.875	1.350
2	3.561	193	150	1.656	-0.439	1.365	8.989	1.378
3	3.741	214	173	1.530	-0.439	1.365	8.974	1.375
4	3.967	244	209	1.363	-0.443	1.343	8.853	1.344
5	4.338	299	275	1.182	-0.438	1.371	8.897	1.355
6	4.526	320	305	1.101	-0.436	1.384	8.914	1.360
7	4.263	285	262	1.183	-0.446	1.330	8.749	1.318
8	4.436	309	293	1.112	-0.442	1.349	8.789	1.328
9	3.572	192	151	1.617	-0.445	1.337	8.879	1.351
10	4.295	291	267	1.188	-0.442	1.353	8.834	1.339
11	3.545	189	148	1.631	-0.445	1.332	8.862	1.347
12	3.783	219	181	1.464	-0.446	1.329	8.826	1.337
13	3.917	235	201	1.367	-0.448	1.317	8.758	1.321
14	4.523	321	311	1.065	-0.443	1.343	8.749	1.318
15	3.848	220	183	1.445	-0.442	1.352	8.906	1.358
16	4.361	300	282	1.132	-0.446	1.330	8.726	1.312
17	3.903	230	196	1.377	-0.448	1.318	8.765	1.322
18	3.657	207	165	1.574	-0.442	1.352	8.932	1.364
19	3.991	250	215	1.352	-0.443	1.347	8.864	1.347
20	4.028	253	220	1.323	-0.444	1.339	8.827	1.338
21	4.144	270	240	1.266	-0.442	1.349	8.845	1.342
22	4.090	258	227	1.292	-0.443	1.344	8.836	1.340
23	4.502	322	309	1.086	-0.441	1.355	8.800	1.331
24	3.718	213	174	1.499	-0.448	1.321	8.802	1.331
25	3.953	241	206	1.369	-0.444	1.340	8.844	1.342
Mean					**-0.443**	**1.345**	**8.844**	**1.342**
sd					**0.003**	**0.016**	**0.069**	**0.017**
CV%					**-0.69**	**1.22**	**0.78**	**1.28**
Mean Difference						**0.003**		**-0.001**

Lankart Rep 2

		Measured			Eq(3)		Eq(4)	
						1.287		1.286
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	3.701	213	176	1.465	-0.456	1.278	8.637	1.290
2	3.930	239	208	1.320	-0.456	1.279	8.604	1.282
3	3.768	219	187	1.372	-0.465	1.231	8.443	1.242
4	4.418	315	300	1.103	-0.446	1.328	8.710	1.308
5	4.331	301	281	1.147	-0.446	1.330	8.733	1.314
6	3.554	195	157	1.543	-0.460	1.257	8.572	1.274
7	3.918	240	207	1.344	-0.452	1.295	8.671	1.299
8	4.494	327	319	1.051	-0.449	1.312	8.628	1.288
9	4.344	301	286	1.108	-0.453	1.294	8.587	1.278
10	3.615	203	165	1.514	-0.457	1.269	8.614	1.284
11	3.857	233	198	1.385	-0.452	1.298	8.694	1.304
12	3.835	229	195	1.379	-0.456	1.279	8.621	1.286
13	4.089	271	246	1.214	-0.459	1.264	8.515	1.260
14	4.228	288	268	1.155	-0.455	1.281	8.556	1.270
15	4.120	269	242	1.236	-0.451	1.304	8.671	1.299
16	4.194	280	255	1.206	-0.449	1.315	8.700	1.306
17	3.678	207	169	1.500	-0.452	1.297	8.714	1.310
18	4.091	270	240	1.266	-0.448	1.318	8.733	1.314
19	3.599	201	164	1.502	-0.462	1.249	8.535	1.265
20	3.774	219	185	1.401	-0.459	1.263	8.568	1.273
21	4.277	296	278	1.134	-0.454	1.286	8.566	1.272
22	3.577	198	160	1.531	-0.459	1.261	8.586	1.277
23	3.655	206	171	1.451	-0.464	1.237	8.480	1.251
24	4.250	287	265	1.173	-0.449	1.312	8.678	1.301
25	4.034	261	234	1.244	-0.459	1.264	8.524	1.262
Mean					**-0.455**	**1.284**	**8.614**	**1.284**
sd					**0.005**	**0.027**	**0.081**	**0.020**
CV%					**-1.17**	**2.13**	**0.93**	**1.57**
Mean Difference						**-0.003**		**-0.002**

Appendix 9 - QUICKFIX for $(PL/PH)^2$

Equation (3) : $Z_i = aZ * \exp(bZ * X_i)$ with aZ = 7.9115
Equation (4) : $Z_i = aZ + bZ / X_i$ with aZ = -0.869

Lambert Rep 1

	Measured				Eq(3)		Eq(4)	
						1.836		1.830
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	4.417	257	210	1.498	-0.377	1.752	10.453	1.744
2	3.587	167	114	2.146	-0.364	1.847	10.816	1.835
3	4.461	262	213	1.513	-0.371	1.795	10.626	1.787
4	4.021	216	161	1.800	-0.368	1.814	10.733	1.814
5	4.219	231	178	1.684	-0.367	1.825	10.772	1.824
6	3.766	182	127	2.054	-0.358	1.889	11.007	1.883
7	3.831	192	137	1.964	-0.364	1.847	10.853	1.844
8	3.671	170	119	2.041	-0.369	1.807	10.681	1.801
9	3.860	193	138	1.956	-0.362	1.859	10.903	1.857
10	3.614	171	117	2.136	-0.362	1.857	10.860	1.846
11	4.488	262	212	1.527	-0.366	1.826	10.755	1.820
12	4.287	240	186	1.665	-0.364	1.848	10.863	1.847
13	4.131	219	167	1.720	-0.369	1.805	10.693	1.804
14	3.934	195	144	1.834	-0.372	1.789	10.632	1.789
15	4.428	257	207	1.541	-0.369	1.805	10.673	1.799
16	3.679	171	119	2.065	-0.365	1.836	10.792	1.829
17	4.240	235	181	1.686	-0.365	1.840	10.832	1.839
18	4.584	279	229	1.484	-0.365	1.837	10.787	1.828
19	4.288	238	184	1.673	-0.362	1.857	10.899	1.856
20	4.105	218	165	1.746	-0.368	1.815	10.734	1.814
21	4.320	243	191	1.619	-0.367	1.821	10.747	1.818
22	3.944	197	142	1.925	-0.358	1.886	11.017	1.885
23	4.333	242	189	1.639	-0.363	1.850	10.869	1.848
24	3.816	189	135	1.960	-0.366	1.832	10.795	1.830
25	4.078	213	159	1.795	-0.364	1.846	10.861	1.846
Mean					**-0.366**	**1.831**	**10.786**	**1.828**
sd					**0.004**	**0.030**	**0.123**	**0.031**
CV%					**-1.13**	**1.65**	**1.14**	**1.68**
Mean Difference						**-0.005**		**-0.002**

Lambert Rep 2

	Measured				Eq(3)		Eq(4)	
						1.714		1.713
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	4.415	265	215	1.519	-0.374	1.774	10.544	1.767
2	3.614	175	124	1.992	-0.382	1.719	10.340	1.716
3	4.469	261	218	1.433	-0.382	1.715	10.289	1.703
4	3.649	177	125	2.005	-0.376	1.757	10.486	1.753
5	3.916	201	151	1.772	-0.382	1.716	10.341	1.716
6	3.881	197	146	1.821	-0.379	1.740	10.438	1.740
7	4.198	234	184	1.617	-0.378	1.743	10.437	1.740
8	4.129	235	179	1.724	-0.369	1.807	10.704	1.807
9	4.242	240	192	1.563	-0.382	1.714	10.313	1.709
10	3.838	193	143	1.822	-0.383	1.712	10.327	1.713
11	3.972	208	158	1.733	-0.382	1.715	10.336	1.715
12	3.796	187	137	1.863	-0.381	1.724	10.370	1.724
13	3.590	168	120	1.960	-0.389	1.671	10.156	1.670
14	3.527	162	115	1.984	-0.392	1.648	10.063	1.647
15	3.614	171	121	1.997	-0.381	1.724	10.359	1.721
16	4.088	221	173	1.632	-0.386	1.688	10.223	1.687
17	4.003	215	165	1.698	-0.384	1.700	10.275	1.700
18	4.381	257	213	1.456	-0.386	1.686	10.184	1.677
19	4.484	272	229	1.411	-0.385	1.699	10.223	1.687
20	4.344	252	205	1.511	-0.381	1.722	10.338	1.715
21	4.243	235	187	1.579	-0.380	1.732	10.388	1.728
22	4.108	221	173	1.632	-0.384	1.701	10.274	1.699
23	3.707	179	129	1.925	-0.381	1.722	10.360	1.721
24	3.973	207	158	1.716	-0.385	1.699	10.272	1.699
25	3.595	166	119	1.946	-0.390	1.661	10.120	1.661
Mean					**-0.382**	**1.716**	**10.326**	**1.713**
sd					**0.005**	**0.034**	**0.136**	**0.034**
CV%					**-1.28**	**1.97**	**1.31**	**1.98**
Mean Difference						**0.002**		**0.000**

Uganda Rep 1

	Measured				Eq(3)		Eq(4)	
						1.780		1.780
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	4.460	256	212	1.458	-0.379	1.736	10.379	1.726
2	3.755	183	130	1.982	-0.369	1.810	10.703	1.807
3	4.374	248	198	1.569	-0.370	1.802	10.663	1.797
4	3.523	158	107	2.180	-0.366	1.831	10.743	1.817
5	3.575	160	110	2.116	-0.369	1.808	10.669	1.798
6	3.939	198	145	1.865	-0.367	1.823	10.767	1.823
7	4.503	262	214	1.499	-0.369	1.805	10.663	1.797
8	3.762	184	133	1.914	-0.377	1.750	10.471	1.749
9	3.510	157	106	2.194	-0.365	1.834	10.751	1.819
10	3.820	187	135	1.919	-0.371	1.795	10.650	1.793
11	4.213	228	178	1.641	-0.373	1.776	10.572	1.774
12	3.911	191	140	1.861	-0.370	1.801	10.679	1.801
13	4.542	274	227	1.457	-0.373	1.783	10.564	1.772
14	4.132	222	172	1.666	-0.377	1.751	10.474	1.750
15	4.026	214	164	1.703	-0.382	1.719	10.353	1.719
16	3.755	180	129	1.947	-0.373	1.777	10.575	1.775
17	4.250	231	181	1.629	-0.372	1.787	10.615	1.785
18	4.447	253	213	1.411	-0.388	1.678	10.139	1.666
19	3.618	169	117	2.086	-0.368	1.813	10.693	1.804
20	3.696	177	124	2.038	-0.367	1.823	10.744	1.817
21	4.295	238	189	1.586	-0.374	1.771	10.542	1.767
22	4.008	206	155	1.766	-0.374	1.772	10.563	1.772
23	3.784	181	129	1.969	-0.368	1.819	10.739	1.816
24	3.842	184	134	1.885	-0.373	1.778	10.584	1.777
25	4.103	217	166	1.709	-0.373	1.776	10.578	1.775
Mean					**-0.372**	**1.785**	**10.595**	**1.780**
sd					**0.005**	**0.037**	**0.146**	**0.037**
CV%					**-1.41**	**2.07**	**1.38**	**2.06**
Mean Difference						**0.005**		**0.000**

Uganda Rep 2

	Measured				Eq(3)		Eq(4)	
						1.699		1.698
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	3.641	168	119	1.993	-0.379	1.739	10.420	1.736
2	4.347	255	213	1.433	-0.393	1.642	10.007	1.633
3	4.347	256	210	1.486	-0.385	1.698	10.236	1.690
4	3.575	163	115	2.009	-0.383	1.707	10.287	1.703
5	3.659	174	125	1.938	-0.384	1.700	10.270	1.699
6	3.757	181	132	1.880	-0.382	1.713	10.329	1.713
7	4.111	216	168	1.653	-0.381	1.724	10.368	1.723
8	3.559	166	114	2.120	-0.370	1.801	10.638	1.790
9	4.027	212	162	1.713	-0.380	1.730	10.395	1.730
10	4.354	244	199	1.503	-0.381	1.721	10.330	1.713
11	4.207	225	179	1.580	-0.383	1.710	10.302	1.707
12	4.383	250	205	1.487	-0.381	1.721	10.327	1.713
13	3.990	205	157	1.705	-0.385	1.698	10.270	1.699
14	4.150	220	173	1.617	-0.383	1.712	10.316	1.710
15	3.757	177	129	1.883	-0.382	1.716	10.339	1.716
16	3.989	199	153	1.692	-0.387	1.685	10.215	1.685
17	3.781	184	135	1.858	-0.383	1.708	10.309	1.708
18	4.290	241	196	1.512	-0.386	1.691	10.213	1.684
19	4.031	208	160	1.690	-0.383	1.710	10.316	1.710
20	3.999	205	159	1.662	-0.390	1.661	10.121	1.661
21	3.526	159	112	2.015	-0.388	1.677	10.170	1.674
22	3.775	189	141	1.797	-0.393	1.645	10.063	1.647
23	3.506	157	111	2.001	-0.392	1.648	10.060	1.646
24	3.552	163	115	2.009	-0.386	1.690	10.222	1.687
25								
Mean					**-0.384**	**1.702**	**10.272**	**1.699**
sd					**0.005**	**0.034**	**0.132**	**0.033**
CV%					**-1.29**	**1.99**	**1.29**	**1.95**
Mean Difference						**0.003**		**0.001**

Appendix 9 - QUICKFIX for $(PL/PH)^2$

Equation (3) : Zi = aZ * Exp(bZ * Xi) with aZ = 7.9115
Equation (4) : Zi = aZ + bZ / Xi with aZ = -0.869

	Coker Rep 1								Coker Rep 2							
	Measured				Eq(3)		Eq(4)		Measured				Eq(3)		Eq(4)	
						1.746		1.744						1.654		1.653
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	3.825	164	122	1.807	-0.386	1.689	10.235	1.690	4.483	233	198	1.385	-0.389	1.671	10.103	1.657
2	4.560	248	207	1.435	-0.374	1.770	10.507	1.758	3.500	138	97	2.024	-0.389	1.666	10.126	1.663
3	4.173	204	158	1.667	-0.373	1.778	10.583	1.777	4.080	189	147	1.653	-0.384	1.705	10.290	1.703
4	4.189	204	158	1.667	-0.372	1.789	10.624	1.787	4.182	192	153	1.575	-0.386	1.689	10.219	1.686
5	3.723	160	115	1.936	-0.378	1.743	10.442	1.741	3.858	170	127	1.792	-0.385	1.697	10.266	1.698
6	3.627	149	104	2.053	-0.372	1.786	10.596	1.780	3.546	143	102	1.965	-0.393	1.644	10.051	1.644
7	4.049	189	144	1.723	-0.376	1.755	10.495	1.755	4.367	218	182	1.435	-0.391	1.656	10.061	1.646
8	3.638	150	105	2.041	-0.372	1.783	10.584	1.777	4.305	214	176	1.478	-0.390	1.665	10.107	1.658
9	4.020	185	142	1.697	-0.383	1.710	10.317	1.710	3.670	155	113	1.882	-0.391	1.654	10.095	1.655
10	4.546	238	199	1.430	-0.376	1.757	10.454	1.744	4.191	205	165	1.544	-0.390	1.663	10.110	1.659
11	4.325	214	172	1.548	-0.377	1.750	10.454	1.744	4.024	187	147	1.618	-0.394	1.634	10.008	1.633
12	4.427	225	183	1.512	-0.374	1.773	10.538	1.766	3.811	164	123	1.778	-0.392	1.651	10.086	1.653
13	3.774	162	118	1.885	-0.380	1.729	10.392	1.729	3.756	161	119	1.830	-0.390	1.664	10.138	1.666
14	3.905	174	127	1.877	-0.368	1.812	10.723	1.812	4.145	198	158	1.570	-0.390	1.662	10.112	1.659
15	4.324	215	171	1.581	-0.372	1.784	10.593	1.779	4.401	223	189	1.392	-0.395	1.631	9.950	1.619
16	4.166	199	158	1.586	-0.386	1.691	10.228	1.688	3.701	155	114	1.849	-0.393	1.644	10.058	1.646
17	4.471	236	196	1.450	-0.379	1.734	10.368	1.723	3.683	154	113	1.857	-0.394	1.639	10.040	1.641
18	3.543	147	101	2.118	-0.372	1.787	10.584	1.777	3.977	182	141	1.666	-0.392	1.651	10.081	1.651
19	3.922	176	131	1.805	-0.377	1.753	10.488	1.753	3.902	171	131	1.704	-0.394	1.639	10.039	1.641
20	4.084	195	149	1.713	-0.375	1.767	10.544	1.767	4.221	205	167	1.507	-0.393	1.644	10.029	1.638
21	4.325	221	178	1.542	-0.378	1.743	10.425	1.737	4.443	229	197	1.351	-0.398	1.611	9.863	1.597
22	3.737	161	116	1.926	-0.378	1.744	10.446	1.742	3.634	152	110	1.909	-0.391	1.655	10.096	1.655
23	3.508	139	97	2.053	-0.384	1.700	10.252	1.694	4.081	194	152	1.629	-0.387	1.681	10.195	1.680
24	4.101	194	150	1.673	-0.379	1.738	10.424	1.737	4.261	210	172	1.491	-0.392	1.651	10.054	1.644
25	3.800	164	123	1.778	-0.393	1.643	10.058	1.645	3.557	144	103	1.955	-0.393	1.642	10.042	1.642
Mean					**-0.377**	**1.748**	**10.454**	**1.745**					**-0.391**	**1.656**	**10.089**	**1.653**
sd					**0.006**	**0.039**	**0.150**	**0.038**					**0.003**	**0.021**	**0.091**	**0.023**
CV%					**-1.48**	**2.22**	**1.44**	**2.15**					**-0.81**	**1.27**	**0.90**	**1.37**
Mean Difference						**0.002**		**0.001**						**0.002**		**0.000**

	Tanguis Rep 1								Tanguis Rep 2							
	Measured				Eq(3)		Eq(4)		Measured				Eq(3)		Eq(4)	
						1.852		1.851						1.931		1.930
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	4.533	178	146	1.486	-0.369	1.809	10.677	1.800	3.790	124	86	2.079	-0.353	1.930	11.172	1.924
2	4.406	169	133	1.615	-0.361	1.869	10.942	1.866	3.587	113	75	2.270	-0.348	1.966	11.259	1.946
3	4.091	142	106	1.795	-0.363	1.855	10.897	1.855	3.926	132	92	2.059	-0.343	2.007	11.494	2.004
4	3.702	118	82	2.071	-0.362	1.859	10.882	1.852	4.497	177	138	1.645	-0.349	1.957	11.307	1.958
5	3.599	110	75	2.151	-0.362	1.861	10.871	1.849	4.136	149	109	1.869	-0.349	1.959	11.323	1.962
6	4.143	148	113	1.715	-0.369	1.808	10.706	1.808	4.191	153	112	1.866	-0.345	1.993	11.462	1.997
7	3.784	122	87	1.966	-0.368	1.816	10.729	1.813	3.812	126	87	2.098	-0.348	1.964	11.308	1.958
8	3.981	137	101	1.840	-0.366	1.827	10.784	1.827	3.616	113	75	2.270	-0.345	1.988	11.352	1.969
9	4.211	151	115	1.724	-0.362	1.861	10.919	1.861	4.046	140	101	1.921	-0.350	1.952	11.289	1.953
10	3.876	130	92	1.997	-0.355	1.911	11.107	1.908	4.263	158	119	1.763	-0.352	1.934	11.219	1.936
11	3.858	129	91	2.010	-0.355	1.911	11.105	1.907	4.342	164	125	1.721	-0.351	1.941	11.248	1.943
12	4.095	146	108	1.828	-0.358	1.891	11.042	1.892	3.910	133	94	2.002	-0.351	1.940	11.226	1.937
13	4.338	161	126	1.633	-0.364	1.846	10.853	1.844	3.759	122	85	2.060	-0.358	1.890	11.010	1.883
14	4.059	142	106	1.795	-0.365	1.834	10.812	1.834	4.454	173	136	1.618	-0.356	1.902	11.078	1.900
15	4.456	172	138	1.553	-0.365	1.835	10.794	1.830	4.111	150	111	1.826	-0.357	1.900	11.080	1.901
16	3.829	126	89	2.004	-0.359	1.885	11.003	1.882	3.816	125	87	2.064	-0.352	1.934	11.192	1.929
17	3.665	116	79	2.156	-0.355	1.914	11.087	1.903	4.311	163	125	1.700	-0.357	1.900	11.078	1.900
18	3.910	132	96	1.891	-0.366	1.829	10.790	1.829	3.574	110	75	2.151	-0.364	1.842	10.794	1.829
19	3.629	114	78	2.136	-0.361	1.868	10.905	1.857	4.037	142	104	1.864	-0.358	1.889	11.035	1.890
20	3.512	107	72	2.209	-0.363	1.850	10.808	1.833	3.681	120	82	2.142	-0.355	1.912	11.080	1.901
21	4.011	140	103	1.847	-0.363	1.855	10.895	1.855	4.271	159	122	1.699	-0.360	1.873	10.967	1.873
22	4.554	182	149	1.492	-0.366	1.827	10.751	1.819	3.673	118	80	2.176	-0.352	1.939	11.182	1.927
23	3.822	126	89	2.004	-0.359	1.880	10.981	1.876	4.093	147	106	1.923	-0.346	1.986	11.430	1.988
24	4.052	142	106	1.795	-0.366	1.829	10.793	1.829	3.906	136	96	2.007	-0.351	1.942	11.234	1.939
25	4.372	167	132	1.601	-0.366	1.833	10.796	1.830	4.227	157	119	1.741	-0.358	1.888	11.032	1.889
Mean					**-0.363**	**1.855**	**10.877**	**1.850**					**-0.352**	**1.933**	**11.194**	**1.929**
sd					**0.004**	**0.031**	**0.123**	**0.031**					**0.005**	**0.041**	**0.165**	**0.041**
CV%					**-1.15**	**1.67**	**1.13**	**1.66**					**-1.51**	**2.12**	**1.48**	**2.14**
Mean Difference						**0.003**		**-0.001**						**0.002**		**-0.001**

Appendix 9 - QUICKFIX for $(PL/PH)^2$

Equation (3) : Zi = aZ * Exp(bZ * Xi) with aZ = 7.9115
Equation (4) : Zi = aZ + bZ / Xi with aZ = -0.869

Old B19 Rep 1 / Old B19 Rep 2

	Rep 1 Measured				Eq(3)		Eq(4)		Rep 2 Measured				Eq(3)		Eq(4)	
						1.810		1.806						1.844		1.838
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	4.537	233	191	1.488	-0.368	1.813	10.694	1.804	3.540	137	93	2.170	-0.365	1.834	10.757	1.820
2	4.100	188	143	1.728	-0.371	1.794	10.650	1.794	3.830	162	115	1.984	-0.361	1.866	10.928	1.863
3	4.152	192	146	1.729	-0.366	1.828	10.789	1.828	3.924	170	123	1.910	-0.362	1.858	10.906	1.857
4	3.627	144	101	2.033	-0.375	1.768	10.526	1.762	4.493	225	182	1.528	-0.366	1.830	10.770	1.824
5	4.249	200	156	1.644	-0.370	1.802	10.677	1.800	4.452	222	177	1.573	-0.363	1.853	10.872	1.849
6	4.325	208	165	1.589	-0.371	1.793	10.631	1.789	3.779	157	111	2.001	-0.364	1.846	10.844	1.842
7	3.505	136	93	2.139	-0.373	1.778	10.543	1.767	4.179	194	148	1.718	-0.365	1.834	10.812	1.834
8	4.427	220	178	1.528	-0.371	1.790	10.610	1.783	3.514	135	91	2.201	-0.364	1.844	10.787	1.828
9	3.785	157	115	1.864	-0.382	1.717	10.345	1.717	3.723	151	106	2.029	-0.365	1.834	10.791	1.829
10	3.991	176	131	1.805	-0.370	1.799	10.673	1.799	3.611	143	99	2.086	-0.369	1.807	10.672	1.799
11	4.075	183	137	1.784	-0.366	1.834	10.811	1.834	4.201	197	150	1.725	-0.363	1.855	10.895	1.855
12	3.518	137	92	2.218	-0.362	1.863	10.858	1.846	3.840	165	117	1.989	-0.360	1.877	10.973	1.874
13	3.739	152	109	1.945	-0.375	1.763	10.521	1.761	4.057	183	135	1.838	-0.360	1.876	10.980	1.876
14	3.805	158	114	1.921	-0.372	1.786	10.614	1.785	4.357	214	169	1.603	-0.366	1.828	10.773	1.824
15	4.076	186	139	1.791	-0.365	1.841	10.839	1.841	4.392	216	172	1.577	-0.367	1.821	10.742	1.816
16	4.477	226	184	1.509	-0.370	1.800	10.644	1.792	4.282	204	159	1.646	-0.367	1.825	10.769	1.823
17	3.987	173	132	1.718	-0.383	1.709	10.313	1.709	3.648	148	102	2.105	-0.363	1.853	10.852	1.844
18	4.318	207	163	1.613	-0.368	1.813	10.717	1.810	3.835	162	117	1.917	-0.370	1.804	10.686	1.803
19	4.073	182	137	1.765	-0.368	1.813	10.728	1.813	4.177	195	148	1.736	-0.363	1.851	10.882	1.851
20	3.762	158	110	2.063	-0.357	1.895	11.031	1.889	4.017	180	132	1.860	-0.360	1.871	10.960	1.871
21	3.524	138	93	2.202	-0.363	1.853	10.823	1.837	3.903	168	122	1.896	-0.366	1.830	10.794	1.829
22	3.604	144	99	2.116	-0.366	1.830	10.757	1.820	4.437	222	177	1.573	-0.364	1.844	10.836	1.840
23	3.787	157	111	2.001	-0.363	1.852	10.866	1.848	3.556	141	96	2.157	-0.365	1.834	10.762	1.822
24	4.047	181	134	1.825	-0.363	1.856	10.900	1.856	3.890	168	122	1.896	-0.367	1.821	10.757	1.820
25	4.365	214	167	1.642	-0.360	1.873	10.960	1.871	4.053	184	137	1.804	-0.365	1.839	10.832	1.839
Mean					**-0.369**	**1.811**	**10.701**	**1.806**					**-0.364**	**1.842**	**10.825**	**1.837**
sd					**0.006**	**0.044**	**0.173**	**0.043**					**0.003**	**0.020**	**0.084**	**0.021**
CV%					**-1.67**	**2.45**	**1.62**	**2.40**					**-0.73**	**1.06**	**0.77**	**1.14**
Mean Difference						**0.001**		**0.000**						**-0.002**		**-0.001**

Old D3 Rep 1 / Old D3 Rep 2

	Rep 1 Measured				Eq(3)		Eq(4)		Rep 2 Measured				Eq(3)		Eq(4)	
						1.848		1.844						1.747		1.741
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	3.728	200	138	2.100	-0.356	1.907	11.070	1.898	4.075	236	179	1.738	-0.372	1.787	10.625	1.787
2	3.868	210	149	1.986	-0.357	1.895	11.044	1.892	3.880	212	155	1.871	-0.372	1.789	10.630	1.789
3	4.197	251	189	1.764	-0.358	1.892	11.048	1.893	3.943	220	163	1.822	-0.372	1.783	10.608	1.783
4	4.412	277	220	1.585	-0.364	1.842	10.827	1.838	3.540	179	122	2.153	-0.368	1.817	10.695	1.805
5	4.046	236	174	1.840	-0.361	1.870	10.958	1.871	4.407	286	230	1.546	-0.370	1.798	10.644	1.792
6	4.217	254	193	1.732	-0.360	1.873	10.968	1.873	4.494	294	242	1.476	-0.374	1.775	10.539	1.766
7	3.707	198	136	2.120	-0.355	1.910	11.079	1.901	4.101	237	181	1.715	-0.373	1.780	10.595	1.780
8	4.304	266	206	1.667	-0.362	1.861	10.917	1.860	3.870	206	157	1.722	-0.394	1.636	10.025	1.637
9	3.589	185	125	2.190	-0.358	1.890	10.979	1.876	3.684	190	135	1.981	-0.376	1.759	10.499	1.756
10	4.102	242	182	1.768	-0.365	1.835	10.817	1.835	3.551	177	124	2.038	-0.382	1.716	10.321	1.711
11	4.502	292	235	1.544	-0.363	1.852	10.863	1.847	4.335	264	214	1.522	-0.380	1.728	10.363	1.722
12	3.622	184	128	2.066	-0.371	1.796	10.633	1.789	4.168	250	196	1.627	-0.379	1.734	10.402	1.732
13	3.828	208	148	1.975	-0.363	1.856	10.887	1.853	3.614	186	132	1.986	-0.383	1.713	10.315	1.710
14	3.638	189	129	2.147	-0.359	1.885	10.970	1.873	3.792	201	150	1.796	-0.391	1.656	10.105	1.657
15	3.953	227	167	1.848	-0.368	1.816	10.740	1.816	3.912	216	163	1.756	-0.385	1.698	10.270	1.699
16	4.072	242	180	1.808	-0.363	1.856	10.900	1.856	4.265	261	208	1.575	-0.379	1.741	10.421	1.736
17	4.584	308	252	1.494	-0.364	1.847	10.830	1.839	4.054	233	178	1.713	-0.377	1.749	10.469	1.748
18	3.867	217	157	1.910	-0.367	1.819	10.749	1.818	3.792	200	147	1.851	-0.383	1.709	10.313	1.709
19	3.514	178	120	2.200	-0.364	1.844	10.787	1.828								
20	4.163	254	191	1.768	-0.360	1.875	10.980	1.876								
21	4.220	262	204	1.649	-0.372	1.790	10.629	1.788								
22	3.762	206	148	1.937	-0.374	1.772	10.556	1.770								
23	4.203	256	198	1.672	-0.370	1.802	10.679	1.801								
24	3.869	218	158	1.904	-0.368	1.814	10.728	1.813								
25	4.193	254	196	1.679	-0.370	1.804	10.685	1.802								
Mean					**-0.364**	**1.848**	**10.853**	**1.844**					**-0.378**	**1.743**	**10.436**	**1.740**
sd					**0.005**	**0.039**	**0.150**	**0.038**					**0.007**	**0.049**	**0.189**	**0.047**
CV%					**-1.44**	**2.09**	**1.38**	**2.04**					**-1.88**	**2.83**	**1.81**	**2.72**
Mean Difference						**0.000**		**0.000**						**-0.004**		**-0.001**

Appendix 9 - QUICKFIX for $(PL/PH)^2$

Equation (3) : $Zi = aZ * Exp(bZ * Xi)$ with aZ = 7.9115
Equation (4) : $Zi = aZ + bZ / Xi$ with aZ = -0.869

ICCS K Rep 1

		Measured			Eq(3)		Eq(4)	
						2.217		2.214
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	4.481	103	77	1.789	-0.332	2.099	11.911	2.109
2	4.218	92	65	2.003	-0.326	2.151	12.117	2.160
3	4.114	88	61	2.081	-0.325	2.160	12.138	2.166
4	4.144	88	61	2.081	-0.322	2.180	12.226	2.188
5	4.543	108	80	1.823	-0.323	2.172	12.228	2.188
6	3.825	77	50	2.372	-0.315	2.245	12.397	2.230
7	3.905	80	52	2.367	-0.309	2.298	12.636	2.290
8	3.706	71	46	2.382	-0.324	2.166	12.050	2.144
9	3.660	70	45	2.420	-0.324	2.167	12.035	2.140
10	3.524	66	41	2.591	-0.317	2.229	12.196	2.180
11	3.512	65	40	2.641	-0.312	2.268	12.327	2.213
12	4.371	100	72	1.929	-0.323	2.175	12.231	2.189
13	4.020	86	57	2.276	-0.310	2.291	12.646	2.292
14	4.445	104	75	1.923	-0.318	2.215	12.409	2.233
15	3.939	83	55	2.277	-0.316	2.234	12.394	2.230
16	4.098	89	61	2.129	-0.320	2.197	12.284	2.202
17	4.439	104	75	1.923	-0.319	2.211	12.392	2.229
18	3.727	73	46	2.518	-0.307	2.316	12.624	2.287
19	4.357	99	70	2.000	-0.316	2.239	12.501	2.256
20	3.813	76	49	2.406	-0.312	2.269	12.485	2.252
21	3.761	72	46	2.450	-0.312	2.274	12.482	2.251
22	3.906	80	52	2.367	-0.309	2.299	12.640	2.291
23	3.607	67	42	2.545	-0.315	2.249	12.312	2.209
24	4.211	92	65	2.003	-0.326	2.146	12.096	2.155
25	4.544	107	78	1.882	-0.316	2.235	12.500	2.256
Mean					**-0.318**	**2.219**	**12.330**	**2.214**
sd					**0.006**	**0.057**	**0.207**	**0.052**
CV%					**-2.01**	**2.56**	**1.68**	**2.34**
Mean Difference						**0.002**		**0.000**

ICCS K Rep 2

		Measured			Eq(3)		Eq(4)	
						2.138		2.128
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	4.100	90	63	2.041	-0.331	2.109	11.929	2.113
2	3.887	79	53	2.222	-0.327	2.141	12.013	2.134
3	3.589	69	44	2.459	-0.326	2.151	11.944	2.117
4	3.918	80	55	2.116	-0.337	2.058	11.695	2.055
5	4.355	99	72	1.891	-0.329	2.125	12.018	2.136
6	4.137	90	63	2.041	-0.328	2.134	12.038	2.140
7	4.503	105	79	1.767	-0.333	2.089	11.868	2.098
8	3.980	82	56	2.144	-0.328	2.130	11.992	2.129
9	4.251	94	68	1.911	-0.334	2.078	11.817	2.085
10	3.525	64	41	2.437	-0.334	2.079	11.652	2.044
11	3.632	69	44	2.459	-0.322	2.185	12.089	2.153
12	3.796	75	49	2.343	-0.321	2.195	12.192	2.179
13	4.492	105	78	1.812	-0.328	2.130	12.044	2.142
14	4.420	102	75	1.850	-0.329	2.123	12.015	2.135
15	3.670	71	46	2.382	-0.327	2.139	11.932	2.114
16	4.161	89	63	1.996	-0.331	2.105	11.919	2.111
17	4.017	83	56	2.197	-0.319	2.208	12.314	2.209
18	3.875	79	53	2.222	-0.328	2.133	11.977	2.125
19	4.056	84	57	2.172	-0.319	2.211	12.334	2.214
20	4.584	109	83	1.725	-0.332	2.094	11.890	2.103
21	3.959	79	54	2.140	-0.330	2.111	11.914	2.109
22	3.528	64	40	2.560	-0.320	2.201	12.097	2.155
23	4.320	97	71	1.866	-0.334	2.077	11.818	2.086
24	4.294	96	68	1.993	-0.321	2.191	12.291	2.204
25	4.586	111	84	1.746	-0.329	2.118	11.992	2.129
Mean					**-0.328**	**2.133**	**11.991**	**2.129**
sd					**0.005**	**0.044**	**0.169**	**0.042**
CV%					**-1.58**	**2.07**	**1.41**	**1.99**
Mean Difference						**-0.005**		**0.001**

ICCS B23 Rep 1

		Measured			Eq(3)		Eq(4)	
						1.961		1.959
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	4.411	208	161	1.669	-0.353	1.929	11.195	1.930
2	3.754	151	103	2.149	-0.347	1.973	11.329	1.963
3	3.796	154	105	2.151	-0.343	2.006	11.464	1.997
4	4.161	188	138	1.856	-0.348	1.963	11.338	1.966
5	4.439	211	162	1.696	-0.347	1.976	11.389	1.978
6	4.038	173	125	1.915	-0.351	1.941	11.244	1.942
7	3.907	162	114	2.019	-0.349	1.955	11.286	1.953
8	3.703	148	98	2.281	-0.336	2.064	11.662	2.046
9	3.875	160	111	2.078	-0.345	1.990	11.419	1.986
10	3.526	132	86	2.356	-0.344	2.002	11.371	1.974
11	4.183	186	136	1.870	-0.345	1.992	11.460	1.996
12	3.611	139	91	2.333	-0.338	2.046	11.564	2.022
13	3.678	144	96	2.250	-0.342	2.015	11.471	1.999
14	4.345	205	154	1.772	-0.344	1.996	11.475	2.000
15	3.504	132	85	2.412	-0.339	2.038	11.494	2.005
16	3.939	165	116	2.023	-0.346	1.981	11.393	1.979
17	4.276	196	146	1.802	-0.346	1.982	11.421	1.986
18	4.338	202	153	1.743	-0.349	1.961	11.332	1.964
19	4.497	217	171	1.610	-0.354	1.920	11.150	1.918
20	4.076	177	130	1.854	-0.356	1.905	11.098	1.906
21	3.896	159	113	1.980	-0.356	1.908	11.100	1.906
22	4.293	196	151	1.685	-0.360	1.872	10.963	1.872
23	3.681	142	98	2.100	-0.360	1.872	10.928	1.863
24	4.336	200	155	1.665	-0.359	1.879	10.988	1.878
25	3.574	137	91	2.267	-0.350	1.953	11.208	1.933
Mean					**-0.348**	**1.965**	**11.310**	**1.958**
sd					**0.007**	**0.052**	**0.191**	**0.048**
CV%					**-1.92**	**2.67**	**1.69**	**2.44**
Mean Difference						**0.004**		**-0.001**

ICCS B23 Rep 2

		Measured			Eq(3)		Eq(4)	
						1.865		1.859
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	3.658	141	99	2.028	-0.372	1.786	10.599	1.781
2	3.630	140	97	2.083	-0.368	1.818	10.715	1.810
3	4.139	180	137	1.726	-0.368	1.817	10.743	1.817
4	4.232	192	148	1.683	-0.366	1.832	10.800	1.831
5	4.098	179	134	1.784	-0.363	1.849	10.874	1.849
6	3.756	148	104	2.025	-0.363	1.853	10.870	1.848
7	3.900	160	117	1.870	-0.370	1.802	10.681	1.801
8	4.276	193	150	1.656	-0.366	1.832	10.796	1.830
9	3.834	155	111	1.950	-0.365	1.835	10.809	1.833
10	3.913	161	116	1.926	-0.361	1.867	10.938	1.866
11	3.520	126	88	2.050	-0.384	1.705	10.275	1.700
12	3.769	151	106	2.029	-0.361	1.867	10.922	1.862
13	4.527	221	179	1.524	-0.364	1.846	10.833	1.839
14	4.332	201	158	1.618	-0.366	1.828	10.775	1.825
15	4.449	214	171	1.566	-0.364	1.844	10.834	1.840
16	3.509	130	85	2.339	-0.347	1.972	11.256	1.945
17	3.877	159	112	2.015	-0.353	1.929	11.181	1.926
18	4.390	207	161	1.653	-0.357	1.900	11.071	1.899
19	3.948	166	118	1.979	-0.351	1.943	11.244	1.942
20	4.573	222	180	1.521	-0.361	1.870	10.930	1.863
21	3.711	146	100	2.132	-0.353	1.924	11.134	1.914
22	4.111	181	131	1.909	-0.346	1.984	11.420	1.986
23	4.071	172	128	1.806	-0.363	1.853	10.889	1.853
24	4.044	173	126	1.885	-0.355	1.915	11.138	1.915
25	4.560	223	178	1.570	-0.355	1.914	11.120	1.911
Mean					**-0.362**	**1.863**	**10.914**	**1.859**
sd					**0.008**	**0.062**	**0.244**	**0.061**
CV%					**-2.30**	**3.31**	**2.23**	**3.28**
Mean Difference						**-0.002**		**0.000**

Appendix 9 - QUICKFIX for $(PL/PH)^2$

Equation (3) : $Zi = aZ * Exp(bZ * Xi)$ with $aZ = 7.9115$
Equation (4) : $Zi = aZ + bZ / Xi$ with $aZ = -0.869$

	ICCS E3 Rep 1								ICCS E3 Rep 2							
		Measured			Eq(3)		Eq(4)			Measured			Eq(3)		Eq(4)	
						1.383		1.382						1.350		1.350
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	4.080	327	285	1.316	-0.440	1.363	8.916	1.360	3.818	289	240	1.450	-0.444	1.337	8.853	1.344
2	3.603	252	200	1.588	-0.446	1.330	8.850	1.344	3.534	241	189	1.626	-0.448	1.320	8.817	1.335
3	4.338	385	351	1.203	-0.434	1.393	8.988	1.378	4.233	367	331	1.229	-0.440	1.362	8.883	1.352
4	3.627	259	207	1.566	-0.447	1.325	8.830	1.339	3.781	281	230	1.493	-0.441	1.355	8.930	1.363
5	4.559	426	410	1.080	-0.437	1.378	8.884	1.352	4.419	395	366	1.165	-0.434	1.397	8.987	1.378
6	4.364	385	351	1.203	-0.432	1.407	9.042	1.391	4.514	415	396	1.098	-0.437	1.375	8.879	1.351
7	3.897	293	248	1.396	-0.445	1.333	8.825	1.337	3.586	248	196	1.601	-0.446	1.331	8.857	1.345
8	3.535	239	188	1.616	-0.449	1.312	8.786	1.327	3.622	252	200	1.588	-0.443	1.343	8.898	1.355
9	4.410	387	353	1.202	-0.427	1.432	9.133	1.414	4.000	314	272	1.333	-0.445	1.333	8.806	1.333
10	4.324	372	339	1.204	-0.435	1.387	8.964	1.372	4.027	328	283	1.343	-0.440	1.359	8.908	1.358
11	4.567	411	393	1.094	-0.433	1.398	8.964	1.372	4.177	343	304	1.273	-0.437	1.376	8.948	1.368
12	3.760	277	225	1.516	-0.439	1.364	8.966	1.373	4.376	377	351	1.154	-0.440	1.361	8.852	1.344
13	4.031	321	278	1.333	-0.442	1.352	8.877	1.350	4.089	329	286	1.323	-0.437	1.376	8.963	1.372
14	3.959	307	261	1.384	-0.440	1.358	8.917	1.360	3.878	293	250	1.374	-0.451	1.300	8.697	1.305
15	4.156	345	302	1.305	-0.434	1.396	9.034	1.390	4.134	346	304	1.295	-0.438	1.374	8.948	1.368
16	4.263	367	329	1.244	-0.434	1.395	9.010	1.384	4.078	326	284	1.318	-0.440	1.364	8.917	1.360
17	3.514	241	186	1.679	-0.441	1.355	8.953	1.369	4.458	404	380	1.130	-0.436	1.380	8.913	1.359
18	4.050	329	282	1.361	-0.435	1.391	9.033	1.389	4.315	371	345	1.156	-0.446	1.330	8.739	1.316
19	3.791	278	223	1.554	-0.429	1.421	9.187	1.428	3.738	272	225	1.461	-0.452	1.298	8.711	1.309
20	4.248	360	317	1.290	-0.427	1.434	9.170	1.424	3.557	244	192	1.615	-0.447	1.325	8.835	1.340
21	4.177	340	297	1.311	-0.430	1.415	9.105	1.407	3.670	258	206	1.569	-0.441	1.356	8.946	1.367
22	3.774	274	221	1.537	-0.434	1.393	9.081	1.401	3.858	279	232	1.446	-0.441	1.358	8.931	1.364
23	4.394	383	345	1.232	-0.423	1.456	9.233	1.439	4.093	330	286	1.331	-0.435	1.386	9.006	1.383
24	3.890	290	237	1.497	-0.428	1.429	9.206	1.432	3.573	246	193	1.625	-0.443	1.345	8.911	1.359
25	3.637	252	195	1.670	-0.428	1.430	9.235	1.440	4.252	363	335	1.174	-0.449	1.315	8.688	1.303
Mean					**-0.436**	**1.386**	**9.008**	**1.383**					**-0.442**	**1.350**	**8.873**	**1.349**
sd					**0.007**	**0.038**	**0.134**	**0.033**					**0.005**	**0.026**	**0.089**	**0.022**
CV%					**-1.59**	**2.76**	**1.49**	**2.42**					**-1.11**	**1.96**	**1.00**	**1.64**
Mean Difference						**0.003**		**0.001**						**0.000**		**-0.001**

	ICCS H2 Rep 1								ICCS H2 Rep 2							
		Measured			Eq(3)		Eq(4)			Measured			Eq(3)		Eq(4)	
						2.179		2.174						2.043		2.035
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	3.865	110	73	2.271	-0.323	2.174	12.134	2.164	3.594	94	62	2.299	-0.344	1.999	11.385	1.977
2	4.104	122	85	2.060	-0.328	2.131	12.020	2.136	4.146	125	89	1.973	-0.335	2.072	11.782	2.076
3	3.585	95	60	2.507	-0.321	2.194	12.101	2.156	3.892	108	75	2.074	-0.344	1.998	11.453	1.994
4	3.760	104	67	2.409	-0.316	2.234	12.328	2.213	3.977	114	79	2.082	-0.336	2.066	11.738	2.065
5	4.329	139	100	1.932	-0.326	2.151	12.126	2.162	3.523	89	57	2.438	-0.334	2.079	11.650	2.043
6	3.744	103	67	2.363	-0.323	2.176	12.102	2.157	4.257	130	94	1.913	-0.334	2.084	11.841	2.091
7	3.654	98	63	2.420	-0.324	2.163	12.018	2.136	4.198	126	92	1.876	-0.343	2.008	11.523	2.012
8	3.951	115	77	2.231	-0.320	2.196	12.246	2.193	4.354	136	102	1.778	-0.343	2.007	11.523	2.012
9	4.037	120	83	2.090	-0.330	2.116	11.947	2.118	3.698	99	65	2.320	-0.332	2.099	11.793	2.079
10	4.470	148	110	1.810	-0.330	2.114	11.976	2.125	4.554	150	114	1.731	-0.334	2.083	11.842	2.092
11	4.248	132	94	1.972	-0.327	2.138	12.067	2.148	3.840	107	72	2.209	-0.332	2.094	11.819	2.086
12	4.588	152	114	1.778	-0.325	2.153	12.143	2.167	4.466	145	110	1.738	-0.339	2.035	11.641	2.041
13	4.395	142	102	1.938	-0.320	2.200	12.338	2.216	3.712	98	66	2.205	-0.344	1.997	11.411	1.984
14	4.440	145	107	1.836	-0.329	2.122	12.011	2.134	4.100	119	85	1.960	-0.340	2.028	11.597	2.030
15	3.566	93	59	2.485	-0.325	2.158	11.959	2.121	3.906	109	75	2.112	-0.338	2.046	11.644	2.042
16	3.641	97	62	2.448	-0.322	2.180	12.075	2.150	3.883	107	74	2.091	-0.343	2.008	11.492	2.004
17	3.813	105	68	2.384	-0.315	2.248	12.404	2.232	3.713	98	66	2.205	-0.344	1.997	11.412	1.984
18	3.950	117	77	2.309	-0.312	2.273	12.553	2.269	4.072	116	83	1.953	-0.344	2.002	11.493	2.004
19	4.073	123	84	2.144	-0.321	2.195	12.273	2.199	4.176	123	89	1.910	-0.340	2.028	11.604	2.032
20	4.185	128	90	2.023	-0.326	2.148	12.101	2.156	4.393	138	103	1.795	-0.338	2.050	11.703	2.057
21	4.544	151	113	1.786	-0.328	2.134	12.063	2.147	4.483	145	111	1.706	-0.342	2.013	11.546	2.017
22	3.665	99	63	2.469	-0.318	2.220	12.234	2.189	4.097	119	84	2.007	-0.335	2.073	11.782	2.076
23	4.249	132	92	2.059	-0.317	2.227	12.438	2.241	4.577	151	116	1.694	-0.337	2.058	11.733	2.064
24	4.000	117	78	2.250	-0.314	2.250	12.477	2.250	3.999	115	81	2.016	-0.342	2.015	11.536	2.015
25	4.720	161	123	1.713	-0.324	2.164	12.188	2.178	3.734	102	68	2.250	-0.337	2.057	11.646	2.043
Mean					**-0.322**	**2.178**	**12.173**	**2.174**					**-0.339**	**2.040**	**11.624**	**2.037**
sd					**0.005**	**0.045**	**0.170**	**0.043**					**0.004**	**0.034**	**0.143**	**0.036**
CV%					**-1.58**	**2.05**	**1.40**	**1.95**					**-1.25**	**1.69**	**1.23**	**1.76**
Mean Difference						**-0.001**		**0.000**						**-0.003**		**0.002**

Appendix 9 - QUICKFIX for $(PL/PH)^2$

Equation (3) : Zi = aZ * Exp(bZ * Xi) with aZ = 7.9115
Equation (4) : Zi = aZ + bZ / Xi with aZ = -0.869

ICCS C33 Rep 1 / ICCS C33 Rep 2

	Rep 1	Measured			Eq(3)		Eq(4)		Rep 2	Measured			Eq(3)		Eq(4)	
						1.634		1.635						1.634		1.631
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	3.887	229	176	1.693	-0.397	1.619	9.958	1.621	4.091	265	212	1.563	-0.396	1.620	9.948	1.618
2	4.164	271	217	1.560	-0.390	1.663	10.113	1.659	4.343	300	250	1.440	-0.392	1.647	10.028	1.638
3	4.588	333	293	1.292	-0.395	1.629	9.913	1.609	3.719	215	161	1.783	-0.401	1.594	9.865	1.597
4	3.772	220	162	1.844	-0.386	1.689	10.233	1.689	4.126	271	218	1.545	-0.396	1.625	9.963	1.622
5	4.061	256	199	1.655	-0.385	1.694	10.249	1.693	4.224	283	234	1.463	-0.400	1.599	9.848	1.593
6	4.302	288	236	1.489	-0.388	1.674	10.145	1.667	3.890	234	183	1.635	-0.405	1.564	9.740	1.566
7	3.956	241	183	1.734	-0.384	1.706	10.300	1.706	4.549	331	290	1.303	-0.397	1.620	9.879	1.601
8	3.672	204	152	1.801	-0.403	1.578	9.804	1.582	4.443	318	273	1.357	-0.397	1.618	9.889	1.603
9	3.526	189	136	1.931	-0.400	1.598	9.874	1.600	3.542	198	141	1.972	-0.392	1.648	10.063	1.647
10	4.270	286	238	1.444	-0.398	1.608	9.877	1.600	4.358	302	258	1.370	-0.402	1.582	9.758	1.571
11	4.411	303	258	1.379	-0.396	1.623	9.917	1.610	3.772	221	169	1.710	-0.406	1.558	9.727	1.563
12	3.925	235	181	1.686	-0.394	1.636	10.026	1.638	3.623	208	151	1.897	-0.394	1.635	10.022	1.637
13	3.733	215	159	1.828	-0.392	1.647	10.071	1.649	4.249	287	238	1.454	-0.399	1.606	9.872	1.599
14	4.100	260	208	1.563	-0.396	1.625	9.969	1.623	3.921	235	186	1.596	-0.408	1.546	9.666	1.548
15	4.378	300	254	1.395	-0.396	1.620	9.911	1.609	3.667	212	156	1.847	-0.397	1.618	9.959	1.621
16	4.558	334	289	1.336	-0.390	1.661	10.049	1.643	4.128	270	211	1.637	-0.382	1.719	10.346	1.718
17	3.821	227	172	1.742	-0.396	1.623	9.976	1.625	3.514	196	136	2.077	-0.381	1.727	10.353	1.719
18	4.160	268	217	1.525	-0.396	1.625	9.960	1.621	4.335	301	248	1.473	-0.388	1.677	10.152	1.669
19	3.827	228	173	1.737	-0.396	1.622	9.972	1.624	3.952	243	187	1.689	-0.391	1.657	10.108	1.658
20	4.233	282	230	1.503	-0.392	1.647	10.041	1.641	3.899	237	181	1.715	-0.392	1.648	10.072	1.649
21	4.024	251	197	1.623	-0.394	1.639	10.029	1.638	3.613	203	146	1.933	-0.390	1.662	10.125	1.662
22	3.988	244	190	1.649	-0.393	1.641	10.042	1.641	4.441	313	263	1.416	-0.387	1.680	10.150	1.669
23	4.393	303	256	1.401	-0.394	1.636	9.972	1.624	4.012	252	197	1.636	-0.393	1.644	10.052	1.644
24	3.574	197	141	1.952	-0.392	1.652	10.082	1.652	3.725	218	159	1.880	-0.386	1.691	10.240	1.691
25	4.139	267	218	1.500	-0.402	1.586	9.805	1.582	4.584	337	291	1.341	-0.387	1.681	10.130	1.664
Mean					**-0.394**	**1.638**	**10.011**	**1.634**					**-0.394**	**1.635**	**9.998**	**1.631**
sd					**0.005**	**0.031**	**0.128**	**0.032**					**0.007**	**0.047**	**0.183**	**0.046**
CV%					**-1.22**	**1.92**	**1.28**	**1.96**					**-1.82**	**2.88**	**1.83**	**2.81**
Mean Difference						**0.004**		**-0.001**						**0.001**		**0.000**

ICCS F2 Rep 1 / ICCS F2 Rep 2

	Rep 1	Measured			Eq(3)		Eq(4)		Rep 2	Measured			Eq(3)		Eq(4)	
						2.066		2.063						1.911		1.910
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bZ**	**Z4**
1	3.994	88	62	2.015	-0.342	2.011	11.517	2.010	4.136	94	69	1.856	-0.351	1.947	11.270	1.949
2	4.039	88	62	2.015	-0.339	2.041	11.646	2.043	4.349	103	79	1.700	-0.354	1.923	11.172	1.924
3	3.657	73	48	2.313	-0.336	2.061	11.637	2.040	4.566	113	89	1.612	-0.348	1.963	11.327	1.963
4	3.503	69	45	2.351	-0.346	1.979	11.279	1.951	4.253	98	73	1.802	-0.348	1.968	11.360	1.971
5	4.150	94	68	1.911	-0.342	2.012	11.538	2.015	3.518	66	44	2.250	-0.357	1.894	10.973	1.874
6	4.506	112	86	1.696	-0.342	2.016	11.558	2.021	4.453	107	84	1.623	-0.356	1.906	11.094	1.904
7	4.533	113	86	1.726	-0.336	2.065	11.765	2.072	3.731	76	52	2.136	-0.351	1.944	11.212	1.934
8	3.782	78	53	2.166	-0.343	2.010	11.478	2.001	4.032	88	64	1.891	-0.355	1.912	11.128	1.913
9	3.806	79	54	2.140	-0.343	2.002	11.454	1.994	3.689	73	50	2.132	-0.355	1.909	11.070	1.898
10	3.628	73	47	2.412	-0.327	2.136	11.904	2.107	4.223	98	73	1.802	-0.350	1.948	11.279	1.951
11	4.397	106	79	1.800	-0.337	2.058	11.736	2.065	3.843	80	56	2.041	-0.353	1.931	11.184	1.927
12	4.225	98	71	1.905	-0.337	2.055	11.720	2.061	3.891	82	58	1.999	-0.354	1.923	11.159	1.921
13	4.159	93	66	1.986	-0.332	2.093	11.871	2.099	3.725	75	51	2.163	-0.348	1.965	11.292	1.954
14	3.682	74	48	2.377	-0.327	2.142	11.952	2.119	3.986	85	62	1.880	-0.361	1.870	10.955	1.870
15	4.273	97	71	1.866	-0.338	2.047	11.689	2.053	3.727	74	52	2.025	-0.366	1.833	10.787	1.828
16	3.980	87	59	2.174	-0.325	2.160	12.113	2.159	3.963	85	61	1.942	-0.354	1.917	11.140	1.916
17	4.502	109	83	1.725	-0.338	2.044	11.677	2.050	3.703	72	51	1.993	-0.372	1.784	10.598	1.781
18	4.354	101	75	1.814	-0.338	2.044	11.679	2.051	3.946	85	60	2.007	-0.348	1.969	11.348	1.968
19	3.988	86	59	2.125	-0.330	2.116	11.939	2.116	4.221	96	72	1.778	-0.354	1.922	11.171	1.924
20	3.866	80	55	2.116	-0.341	2.021	11.537	2.015	4.057	89	65	1.875	-0.355	1.913	11.132	1.914
21	3.727	75	49	2.343	-0.327	2.143	11.969	2.123	4.100	90	66	1.860	-0.353	1.926	11.187	1.928
22	4.403	105	77	1.860	-0.329	2.123	12.013	2.134	4.586	112	90	1.549	-0.356	1.907	11.087	1.903
23	4.397	104	77	1.824	-0.334	2.083	11.843	2.092	4.294	99	76	1.697	-0.359	1.885	11.017	1.885
24	4.310	101	74	1.863	-0.336	2.067	11.775	2.075	4.364	103	79	1.700	-0.352	1.933	11.211	1.934
25	3.996	87	59	2.174	-0.323	2.171	12.160	2.171	4.437	105	82	1.640	-0.355	1.914	11.130	1.914
Mean					**-0.336**	**2.068**	**11.738**	**2.066**					**-0.355**	**1.916**	**11.131**	**1.914**
sd					**0.007**	**0.054**	**0.218**	**0.055**					**0.006**	**0.042**	**0.172**	**0.043**
CV%					**-1.95**	**2.62**	**1.86**	**2.64**					**-1.56**	**2.17**	**1.54**	**2.24**
Mean Difference						**0.002**		**0.003**						**0.005**		**0.004**

Appendix 9 - QUICKFIX for $(PL/PH)^2$

Equation (3) : Zi = aZ * Exp(bZ * Xi) with aZ = 7.9115
Equation (4) : Zi = aZ + bZ / Xi with aZ = -0.869

ICCS A16 Rep 1 / ICCS A16 Rep 2

	Rep 1 Measured				Eq(3)		Eq(4)		Rep 2 Measured				Eq(3)		Eq(4)	
						1.950		1.946						1.966		1.959
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	3.532	108	71	2.314	-0.348	1.966	11.242	1.942	4.499	174	134	1.686	-0.344	2.002	11.496	2.005
2	4.361	162	124	1.707	-0.352	1.938	11.233	1.939	3.583	108	71	2.314	-0.343	2.005	11.403	1.982
3	4.033	138	99	1.943	-0.348	1.965	11.341	1.966	3.634	111	75	2.190	-0.353	1.924	11.117	1.910
4	4.183	147	109	1.819	-0.351	1.940	11.244	1.942	4.322	159	119	1.785	-0.344	1.995	11.471	1.999
5	3.953	132	93	2.015	-0.346	1.982	11.399	1.981	4.016	137	97	1.995	-0.343	2.006	11.500	2.006
6	4.383	161	123	1.713	-0.349	1.958	11.318	1.960	4.376	162	123	1.735	-0.347	1.976	11.393	1.979
7	4.205	150	112	1.794	-0.353	1.928	11.196	1.930	4.119	143	103	1.928	-0.343	2.008	11.520	2.011
8	3.754	116	81	2.051	-0.360	1.877	10.960	1.871	3.715	116	78	2.212	-0.343	2.006	11.445	1.992
9	3.866	125	87	2.064	-0.347	1.971	11.341	1.966	4.246	152	113	1.809	-0.347	1.971	11.373	1.974
10	4.554	174	139	1.567	-0.356	1.908	11.094	1.905	3.897	129	91	2.010	-0.352	1.938	11.218	1.935
11	3.602	109	73	2.229	-0.352	1.938	11.160	1.921	4.131	144	106	1.845	-0.352	1.933	11.213	1.934
12	4.469	169	131	1.664	-0.349	1.960	11.320	1.961	4.345	161	124	1.686	-0.356	1.906	11.099	1.906
13	4.224	150	111	1.826	-0.347	1.974	11.384	1.977	4.457	172	133	1.672	-0.349	1.961	11.328	1.963
14	4.092	141	102	1.911	-0.347	1.973	11.376	1.975	3.904	129	91	2.010	-0.351	1.943	11.239	1.941
15	3.507	103	68	2.294	-0.353	1.928	11.093	1.904	4.257	153	115	1.770	-0.352	1.937	11.234	1.940
16	4.101	142	103	1.901	-0.348	1.968	11.358	1.970	3.665	115	77	2.231	-0.345	1.987	11.359	1.971
17	3.528	105	69	2.316	-0.348	1.965	11.236	1.940	3.840	125	87	2.064	-0.350	1.952	11.265	1.947
18	3.809	123	85	2.094	-0.349	1.959	11.287	1.953	4.192	150	112	1.794	-0.354	1.920	11.162	1.922
19	4.436	167	128	1.702	-0.346	1.980	11.406	1.982	3.808	123	85	2.094	-0.349	1.958	11.282	1.952
20	4.353	161	122	1.742	-0.348	1.969	11.364	1.972	3.912	130	91	2.041	-0.346	1.980	11.384	1.977
21	3.754	120	83	2.090	-0.355	1.916	11.110	1.909	3.929	129	92	1.966	-0.354	1.918	11.140	1.916
22	3.727	117	80	2.139	-0.351	1.944	11.211	1.934	4.249	153	114	1.801	-0.348	1.964	11.346	1.967
23	3.937	130	92	1.997	-0.350	1.953	11.281	1.951	3.829	125	87	2.064	-0.351	1.944	11.232	1.939
24	4.123	144	105	1.881	-0.348	1.963	11.337	1.965	3.510	106	69	2.360	-0.345	1.993	11.333	1.964
25	4.275	153	115	1.770	-0.350	1.949	11.282	1.951	4.495	175	137	1.632	-0.351	1.941	11.240	1.941
Mean					**-0.350**	**1.951**	**11.263**	**1.947**					**-0.349**	**1.963**	**11.312**	**1.959**
sd					**0.003**	**0.025**	**0.112**	**0.028**					**0.004**	**0.032**	**0.123**	**0.031**
CV%					**-0.92**	**1.28**	**1.00**	**1.44**					**-1.16**	**1.62**	**1.09**	**1.57**
Mean Difference						**0.001**		**0.001**						**-0.003**		**0.000**

ICCS I25 Rep 1 / ICCS I25 Rep 2

	Rep 1 Measured				Eq(3)		Eq(4)		Rep 2 Measured				Eq(3)		Eq(4)	
						1.773		1.767						1.824		1.820
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	4.136	163	125	1.700	-0.372	1.789	10.627	1.788	4.245	172	133	1.672	-0.366	1.829	10.788	1.828
2	4.564	202	168	1.446	-0.372	1.784	10.565	1.772	3.823	139	100	1.932	-0.369	1.810	10.709	1.808
3	4.143	163	128	1.622	-0.383	1.713	10.319	1.711	3.557	120	81	2.195	-0.360	1.871	10.898	1.856
4	3.839	139	103	1.821	-0.383	1.712	10.327	1.713	4.451	190	153	1.542	-0.367	1.820	10.731	1.814
5	4.466	194	158	1.508	-0.371	1.792	10.614	1.784	3.692	129	90	2.054	-0.365	1.836	10.794	1.829
6	4.266	177	140	1.598	-0.375	1.766	10.527	1.763	4.365	185	145	1.628	-0.362	1.858	10.897	1.855
7	3.514	120	81	2.195	-0.365	1.838	10.766	1.823	3.970	153	112	1.866	-0.364	1.846	10.858	1.845
8	3.724	134	96	1.948	-0.376	1.756	10.491	1.754	4.165	166	127	1.708	-0.368	1.815	10.735	1.815
9	3.695	131	92	2.028	-0.368	1.812	10.703	1.807	4.070	158	118	1.793	-0.365	1.839	10.833	1.839
10	3.971	151	113	1.786	-0.375	1.766	10.541	1.766	4.427	190	153	1.542	-0.369	1.805	10.673	1.799
11	4.092	159	123	1.671	-0.380	1.731	10.394	1.730	3.775	137	98	1.954	-0.370	1.798	10.657	1.795
12	4.396	189	152	1.546	-0.371	1.791	10.617	1.785	4.009	154	115	1.793	-0.370	1.799	10.673	1.799
13	4.536	199	166	1.437	-0.376	1.758	10.461	1.746	3.516	117	81	2.086	-0.379	1.737	10.392	1.729
14	3.550	122	83	2.161	-0.366	1.832	10.754	1.819	4.352	184	147	1.567	-0.372	1.786	10.599	1.781
15	4.275	178	141	1.594	-0.375	1.767	10.528	1.763	3.829	141	101	1.949	-0.366	1.831	10.790	1.828
16	3.960	151	113	1.786	-0.376	1.759	10.511	1.759	4.401	188	151	1.550	-0.370	1.798	10.647	1.793
17	3.893	145	107	1.836	-0.375	1.764	10.532	1.764	3.590	124	85	2.128	-0.366	1.832	10.759	1.821
18	3.639	125	88	2.018	-0.376	1.762	10.504	1.757	4.269	178	138	1.664	-0.365	1.835	10.811	1.834
19	3.594	126	86	2.147	-0.363	1.852	10.836	1.840	4.152	167	127	1.729	-0.366	1.828	10.786	1.828
20	3.786	138	100	1.904	-0.376	1.757	10.500	1.756	3.754	138	97	2.024	-0.363	1.851	10.859	1.846
21	4.013	156	119	1.719	-0.380	1.727	10.384	1.727	3.924	149	108	1.903	-0.363	1.852	10.879	1.851
22	3.834	143	104	1.891	-0.373	1.777	10.580	1.776	4.370	186	148	1.579	-0.369	1.810	10.700	1.806
23	4.142	166	129	1.656	-0.378	1.747	10.457	1.745	4.450	191	155	1.518	-0.371	1.794	10.624	1.787
24	4.323	182	147	1.533	-0.380	1.733	10.382	1.727	4.307	179	139	1.658	-0.363	1.854	10.885	1.852
25	3.527	123	84	2.144	-0.370	1.799	10.626	1.787	3.624	126	86	2.147	-0.360	1.875	10.928	1.863
Mean					**-0.374**	**1.771**	**10.542**	**1.766**					**-0.367**	**1.824**	**10.756**	**1.820**
sd					**0.005**	**0.037**	**0.133**	**0.033**					**0.004**	**0.030**	**0.121**	**0.030**
CV%					**-1.37**	**2.06**	**1.26**	**1.88**					**-1.14**	**1.66**	**1.13**	**1.66**
Mean Difference						**-0.002**		**-0.001**						**0.000**		**0.000**

Appendix 9 - QUICKFIX for $(PL/PH)^2$

Equation (3) : Zi = aZ * Exp(bZ * Xi) with aZ = 7.9115
Equation (4) : Zi = aZ + bZ / Xi with aZ = -0.869

ICCS G12 Rep 1

		Measured			Eq(3)		Eq(4)	
						1.115		1.113
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	4.201	446	438	1.037	-0.484	1.143	8.007	1.133
2	3.837	365	333	1.201	-0.491	1.109	7.943	1.117
3	4.053	410	393	1.088	-0.489	1.117	7.933	1.114
4	3.607	321	275	1.363	-0.488	1.125	8.049	1.143
5	3.801	355	319	1.238	-0.488	1.124	8.009	1.133
6	3.774	345	316	1.192	-0.501	1.064	7.779	1.076
7	3.517	300	252	1.417	-0.489	1.119	8.040	1.141
8	3.551	310	261	1.411	-0.486	1.134	8.094	1.155
9	3.638	324	280	1.339	-0.488	1.122	8.033	1.139
10	4.123	424	413	1.054	-0.489	1.119	7.928	1.113
11	4.014	399	384	1.080	-0.496	1.087	7.822	1.086
12	3.917	374	353	1.123	-0.499	1.077	7.800	1.081
13	4.082	417	402	1.076	-0.489	1.120	7.940	1.116
14	3.620	325	279	1.357	-0.487	1.128	8.057	1.145
15	4.114	424	410	1.069	-0.486	1.130	7.974	1.125
16	3.512	300	252	1.417	-0.490	1.116	8.028	1.138
17	3.833	357	328	1.185	-0.495	1.091	7.872	1.099
18	3.715	342	299	1.308	-0.484	1.140	8.089	1.153
19	4.067	408	389	1.100	-0.485	1.136	8.008	1.133
20	3.910	377	350	1.160	-0.491	1.110	7.934	1.114
21	3.748	343	305	1.265	-0.489	1.118	7.998	1.130
22	3.878	369	342	1.164	-0.494	1.096	7.885	1.102
23	3.616	318	276	1.328	-0.494	1.098	7.943	1.117
24	3.908	373	348	1.149	-0.494	1.098	7.886	1.102
25	4.233	457	458	0.996	-0.490	1.116	7.893	1.104
Mean					**-0.490**	**1.113**	**7.958**	**1.120**
sd					**0.004**	**0.020**	**0.087**	**0.022**
CV%					**-0.90**	**1.76**	**1.09**	**1.94**
Mean Difference						**-0.002**		**0.007**

ICCS G12 Rep 2

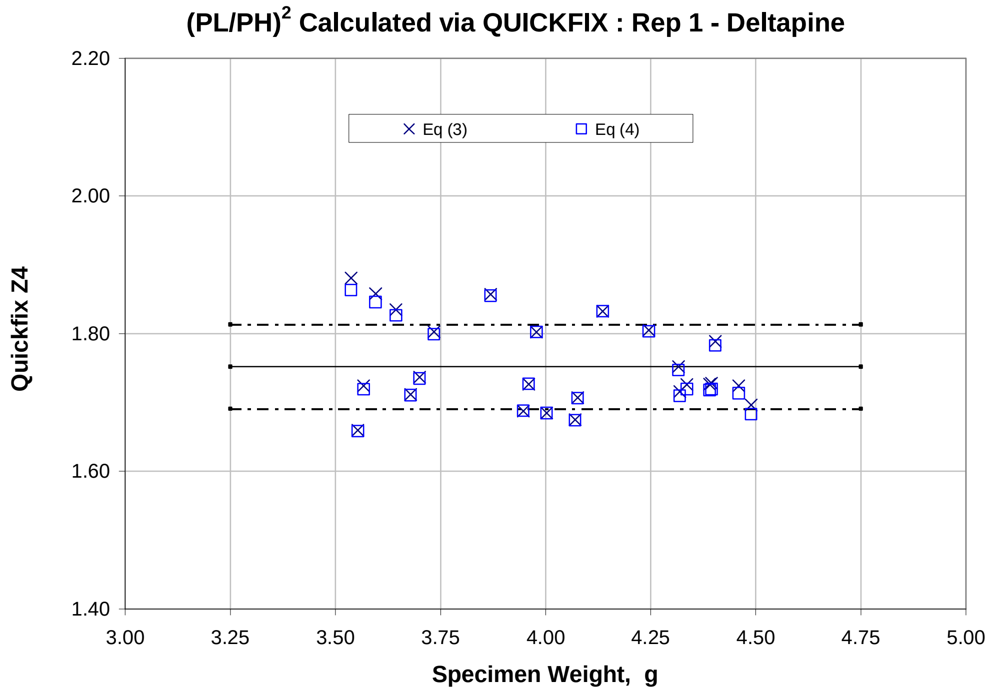
		Measured			Eq(3)		Eq(4)	
						1.154		1.154
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	3.550	300	252	1.417	-0.484	1.139	8.115	1.160
2	4.085	414	392	1.115	-0.480	1.162	8.106	1.158
3	3.678	328	286	1.315	-0.488	1.124	8.034	1.140
4	3.887	368	331	1.236	-0.478	1.171	8.182	1.176
5	4.172	429	415	1.069	-0.480	1.161	8.084	1.152
6	4.228	440	430	1.047	-0.478	1.168	8.101	1.156
7	3.706	327	290	1.271	-0.493	1.100	7.932	1.114
8	3.620	316	269	1.380	-0.482	1.149	8.140	1.166
9	3.867	358	325	1.213	-0.485	1.138	8.053	1.144
10	3.724	331	289	1.312	-0.483	1.148	8.121	1.161
11	3.993	391	363	1.160	-0.481	1.156	8.102	1.157
12	3.538	309	252	1.504	-0.469	1.211	8.395	1.230
13	3.750	338	296	1.304	-0.481	1.156	8.148	1.168
14	4.109	413	398	1.077	-0.485	1.135	7.995	1.130
15	3.556	301	253	1.415	-0.484	1.142	8.123	1.162
16	3.927	367	335	1.200	-0.480	1.159	8.126	1.163
17	3.914	367	335	1.200	-0.482	1.151	8.098	1.156
18	4.056	397	375	1.121	-0.482	1.151	8.071	1.149
19	4.139	422	407	1.075	-0.482	1.150	8.046	1.143
20	3.668	316	275	1.320	-0.488	1.123	8.032	1.139
21	3.951	377	344	1.201	-0.477	1.173	8.178	1.175
22	3.810	349	313	1.243	-0.486	1.133	8.047	1.143
23	3.659	317	272	1.358	-0.482	1.153	8.150	1.168
24	3.721	328	289	1.288	-0.488	1.124	8.027	1.138
25	4.017	390	360	1.174	-0.475	1.183	8.205	1.182
Mean					**-0.482**	**1.150**	**8.105**	**1.157**
sd					**0.005**	**0.022**	**0.087**	**0.022**
CV%					**-1.00**	**1.93**	**1.07**	**1.87**
Mean Difference						**-0.004**		**0.003**

ICCS D3 Rep 1

		Measured			Eq(3)		Eq(4)	
						1.719		1.716
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	4.463	286	235	1.481	-0.375	1.762	10.488	1.753
2	4.112	241	187	1.661	-0.380	1.733	10.402	1.732
3	3.926	220	166	1.756	-0.383	1.707	10.308	1.708
4	3.782	204	150	1.850	-0.384	1.701	10.282	1.701
5	4.328	266	215	1.531	-0.380	1.733	10.385	1.727
6	4.185	247	197	1.572	-0.386	1.688	10.216	1.685
7	3.517	177	124	2.038	-0.386	1.691	10.221	1.686
8	3.682	192	139	1.908	-0.386	1.688	10.226	1.687
9	3.890	214	161	1.767	-0.385	1.693	10.253	1.694
10	3.667	191	137	1.944	-0.383	1.711	10.314	1.710
11	4.089	242	186	1.693	-0.377	1.750	10.474	1.750
12	4.237	256	202	1.606	-0.376	1.756	10.487	1.753
13	4.593	304	258	1.388	-0.379	1.738	10.369	1.723
14	3.822	205	154	1.772	-0.391	1.653	10.094	1.654
15	4.495	293	240	1.490	-0.371	1.791	10.606	1.782
16	3.973	227	171	1.762	-0.378	1.744	10.453	1.744
17	4.385	270	219	1.520	-0.376	1.757	10.476	1.750
18	3.602	184	132	1.943	-0.390	1.663	10.128	1.663
19	3.713	192	139	1.908	-0.383	1.709	10.310	1.708
20	3.517	177	123	2.071	-0.381	1.722	10.338	1.716
21	3.955	220	165	1.778	-0.378	1.748	10.467	1.748
22	3.837	209	155	1.818	-0.383	1.708	10.311	1.709
23	4.352	267	218	1.500	-0.382	1.716	10.310	1.709
24	4.509	291	244	1.422	-0.381	1.726	10.331	1.714
25	4.119	238	185	1.655	-0.380	1.731	10.396	1.730
Mean					**-0.381**	**1.721**	**10.346**	**1.717**
sd					**0.005**	**0.032**	**0.121**	**0.030**
CV%					**-1.23**	**1.87**	**1.17**	**1.76**
Mean Difference						**0.002**		**0.001**

ICCS D3 Rep 2

		Measured			Eq(3)		Eq(4)	
						1.798		1.796
Spec.	Weight	PL	PH	$(PL/PH)^2$	bZ	Z4	bZ	Z4
1	3.939	224	164	1.866	-0.367	1.824	10.770	1.824
2	4.428	283	228	1.541	-0.370	1.805	10.670	1.798
3	3.529	178	122	2.129	-0.372	1.786	10.578	1.776
4	3.711	200	142	1.984	-0.373	1.781	10.588	1.778
5	3.846	215	156	1.899	-0.371	1.794	10.648	1.793
6	4.551	303	253	1.434	-0.375	1.764	10.482	1.752
7	3.617	189	133	2.019	-0.377	1.748	10.448	1.743
8	4.007	229	170	1.815	-0.368	1.819	10.752	1.819
9	4.229	259	200	1.677	-0.367	1.824	10.767	1.823
10	4.108	247	188	1.726	-0.371	1.796	10.660	1.796
11	4.353	275	220	1.563	-0.373	1.782	10.584	1.777
12	4.411	281	226	1.546	-0.370	1.800	10.653	1.794
13	4.066	234	176	1.768	-0.369	1.811	10.721	1.811
14	3.593	185	127	2.122	-0.366	1.828	10.746	1.817
15	3.700	193	136	2.014	-0.370	1.802	10.665	1.797
16	3.708	194	137	2.005	-0.370	1.800	10.658	1.796
17	4.229	261	202	1.669	-0.368	1.816	10.734	1.815
18	3.534	184	124	2.202	-0.362	1.860	10.853	1.844
19	3.637	189	131	2.082	-0.367	1.822	10.730	1.814
20	4.085	242	183	1.749	-0.370	1.804	10.693	1.804
21	3.868	214	156	1.882	-0.371	1.792	10.640	1.791
22	3.906	216	158	1.869	-0.369	1.805	10.695	1.805
23	4.042	232	175	1.758	-0.372	1.785	10.616	1.785
24	4.324	269	215	1.565	-0.375	1.767	10.526	1.763
25	3.868	213	155	1.888	-0.370	1.798	10.666	1.797
Mean					**-0.370**	**1.801**	**10.662**	**1.796**
sd					**0.003**	**0.023**	**0.093**	**0.023**
CV%					**-0.88**	**1.30**	**0.87**	**1.29**
Mean Difference						**0.003**		**0.000**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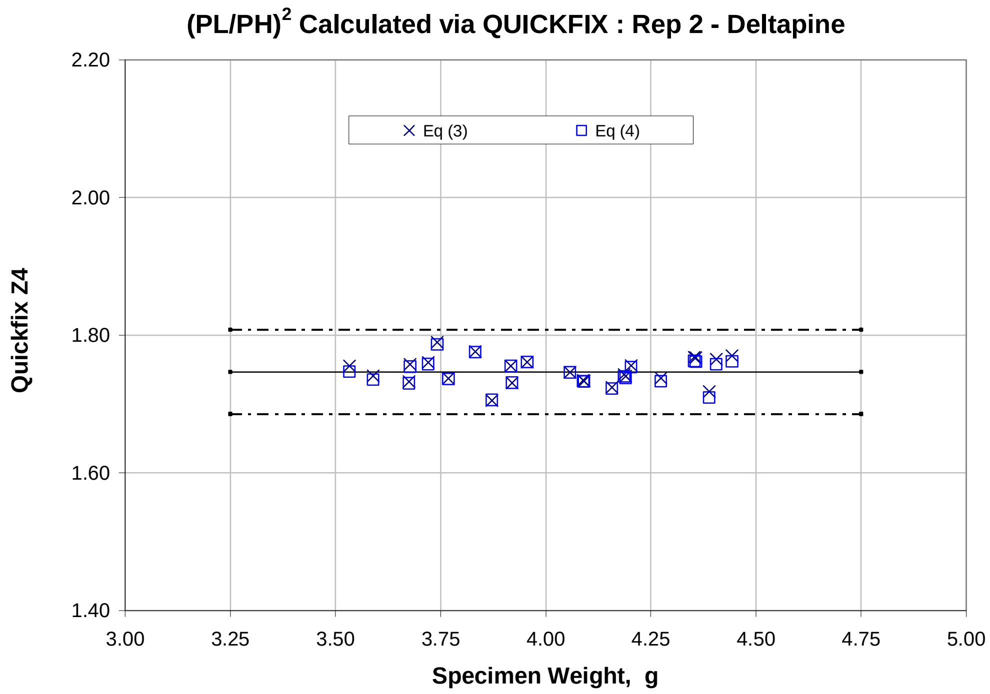
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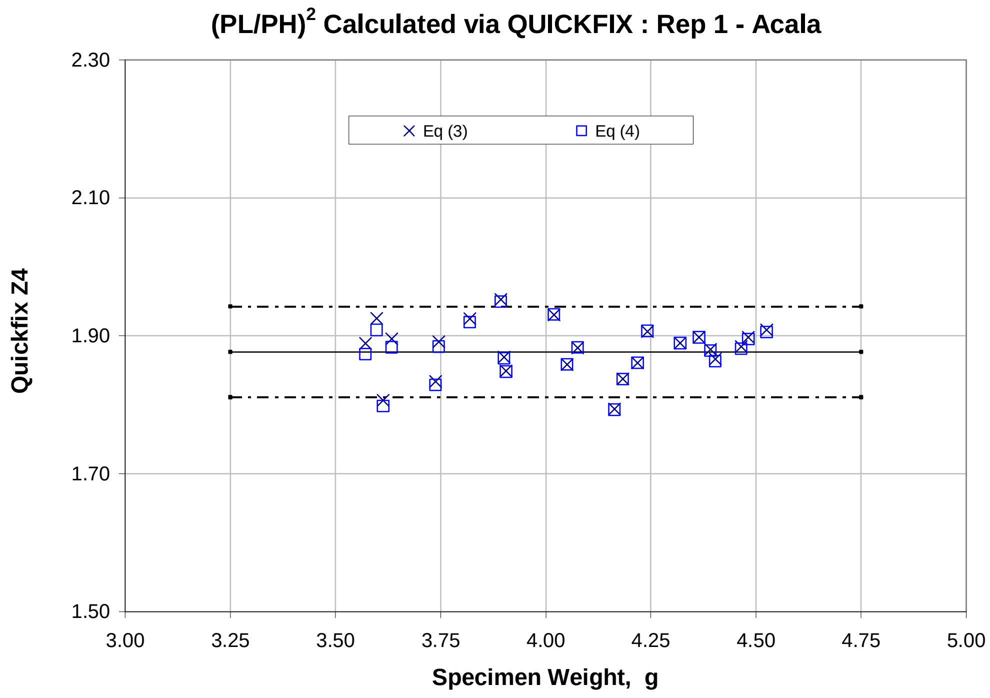
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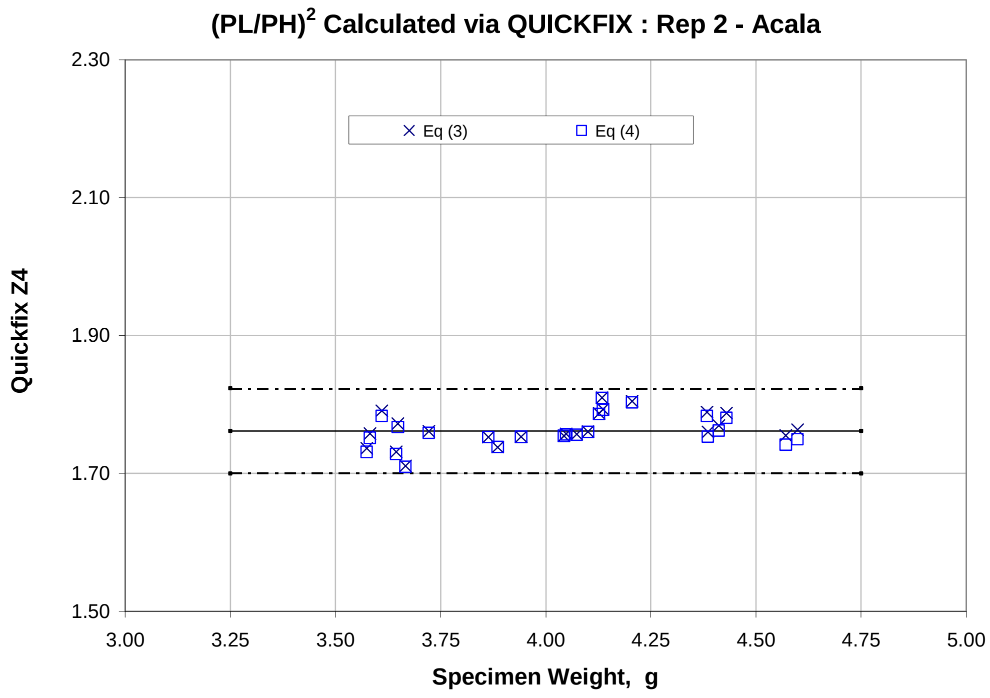
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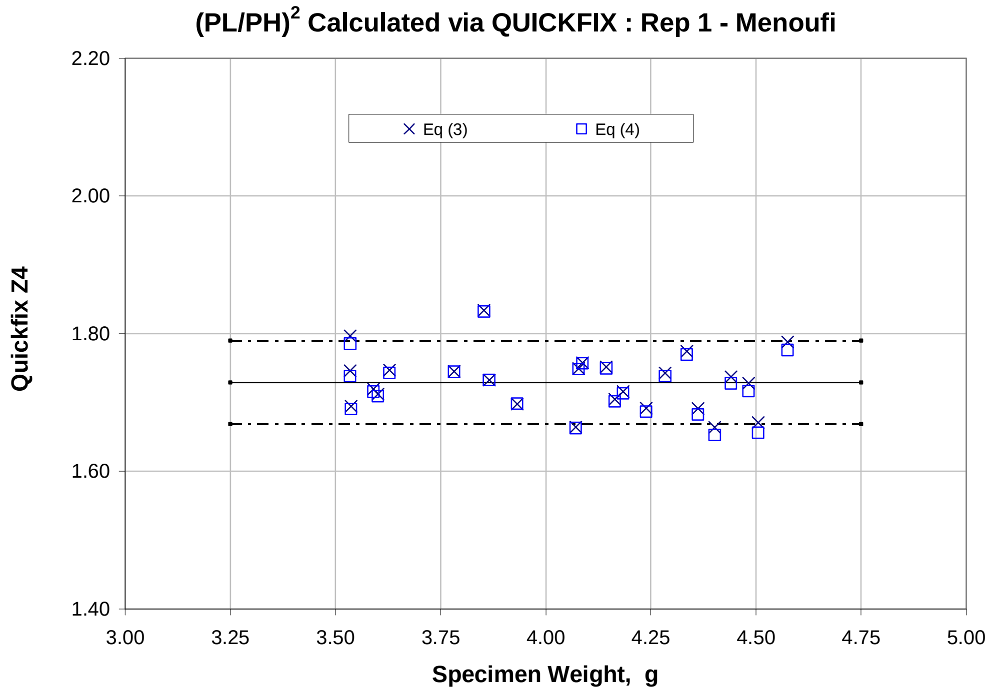
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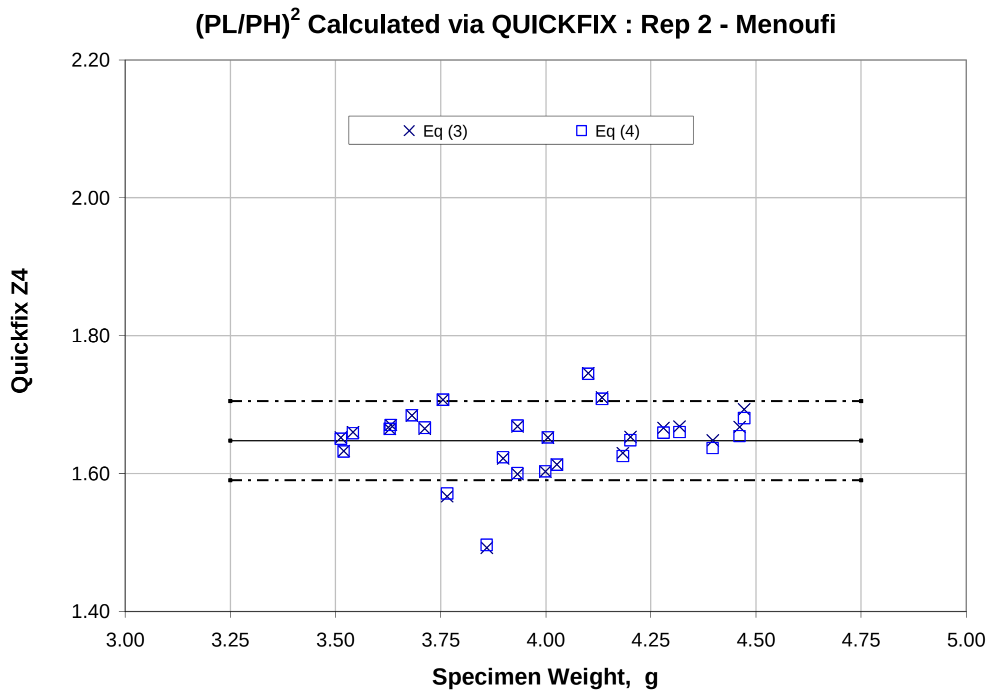
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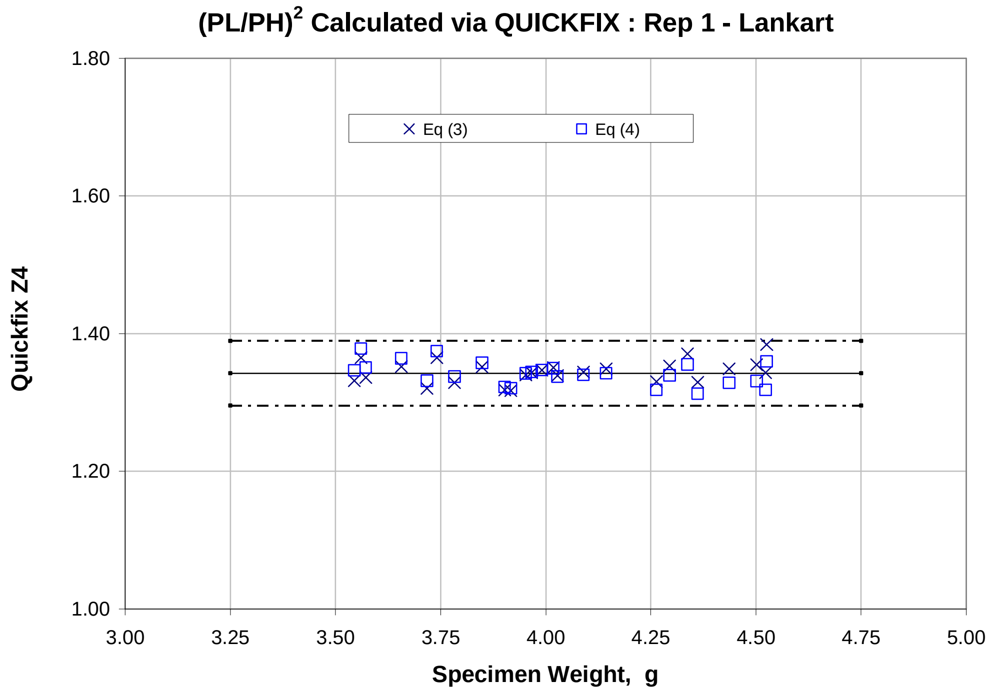
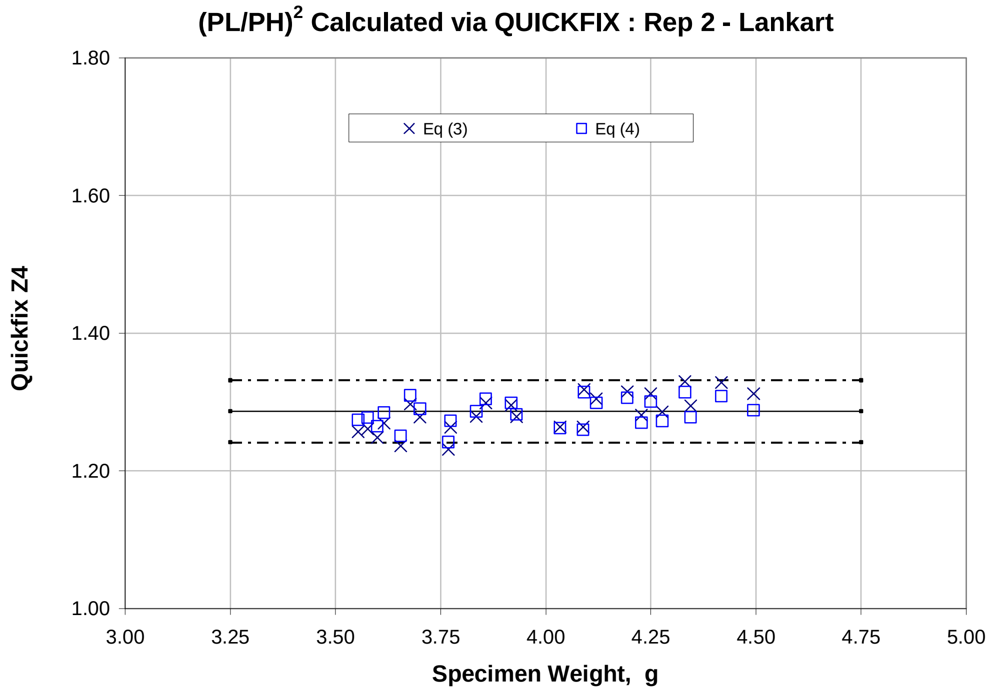
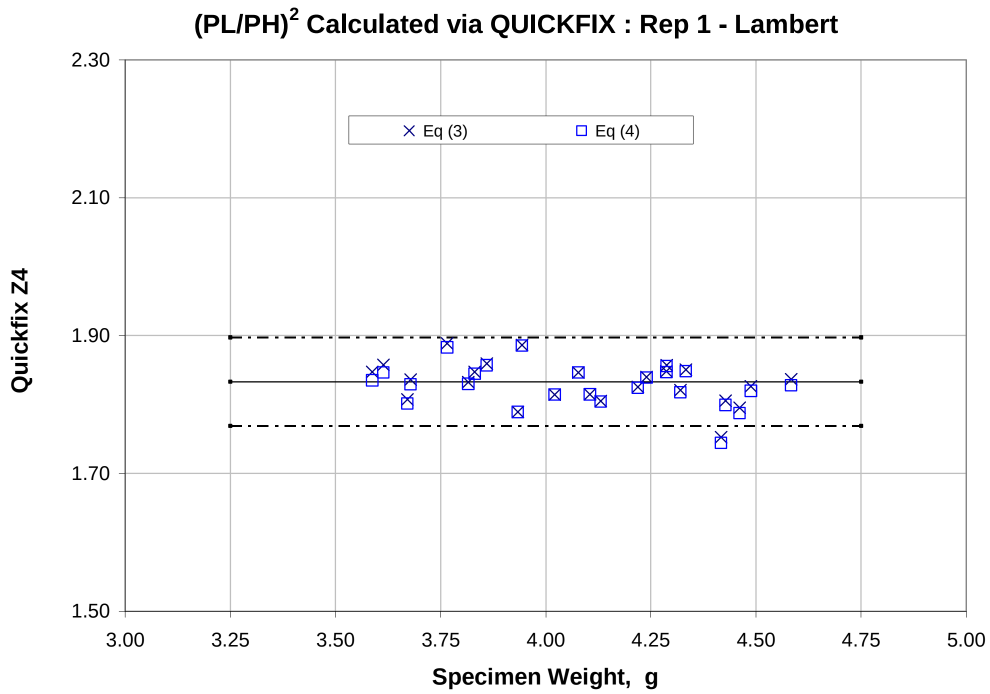
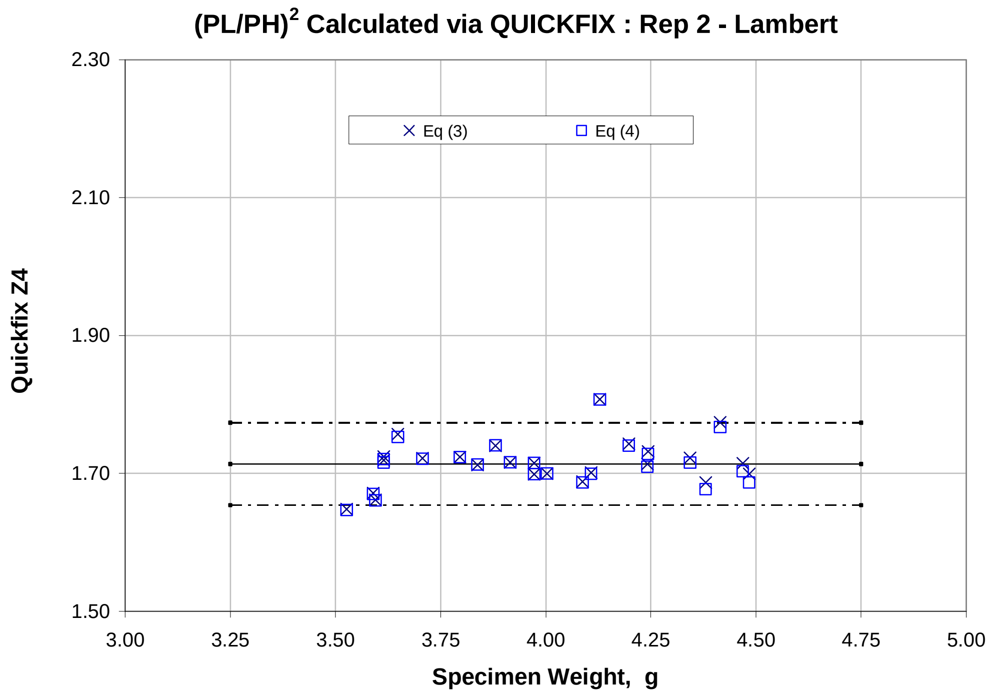
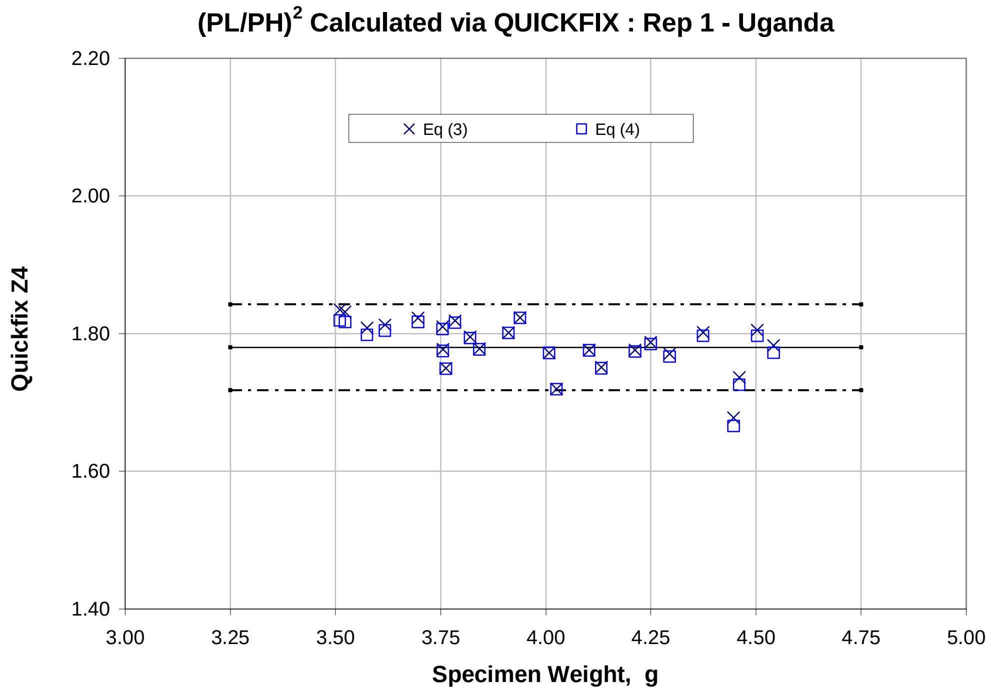
4.75
5.00

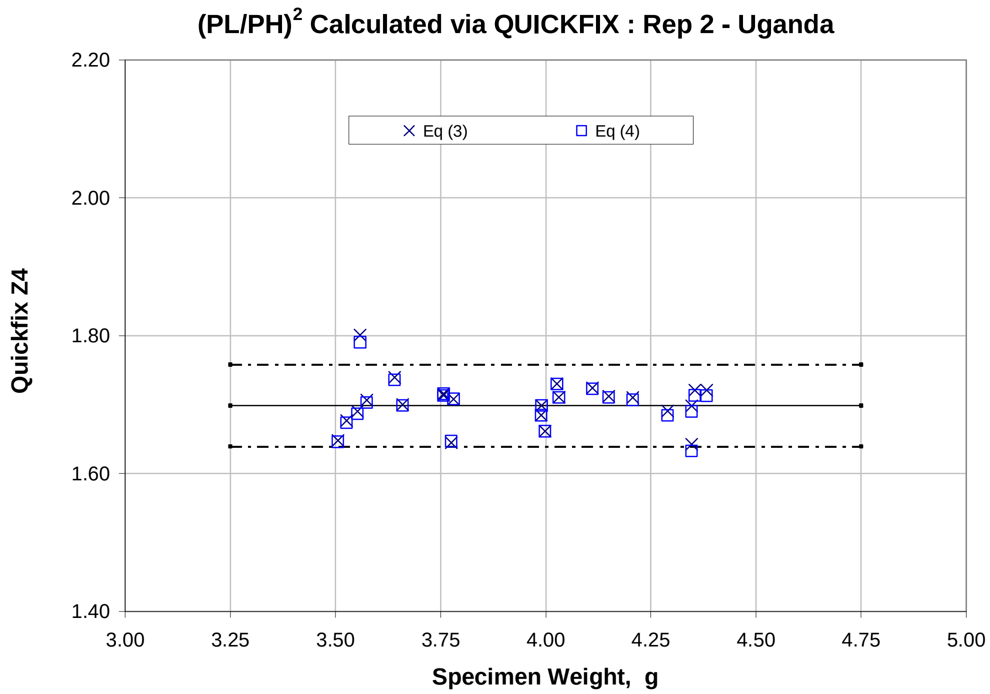

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - Lankart
Eq (3)
Eq (4)
Quickfix Z4
1.80
1.60
1.40
1.20
1.00
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

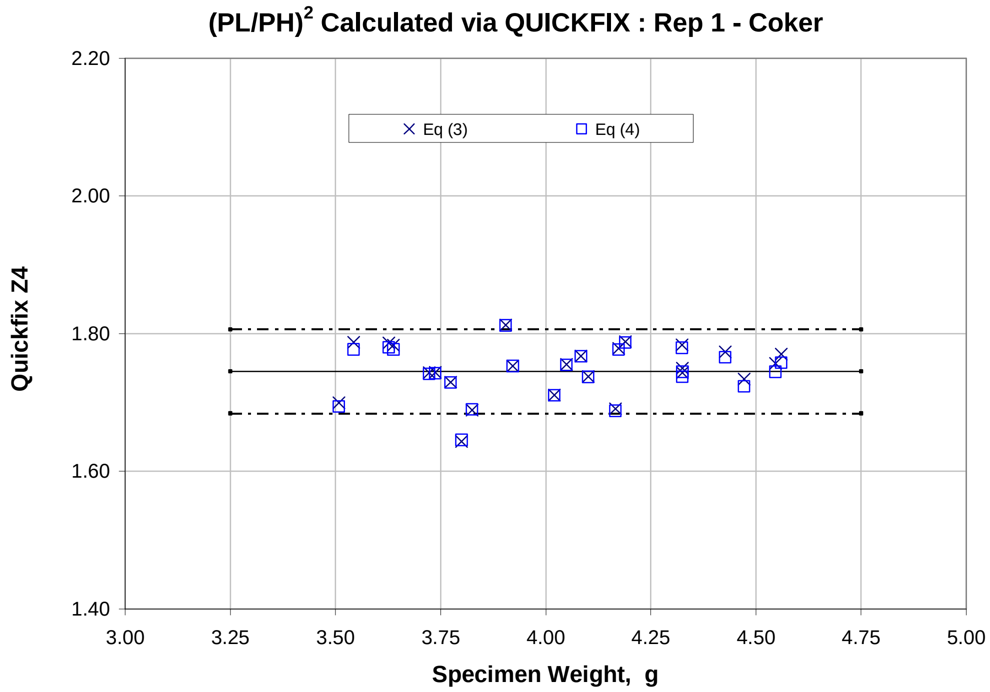

(PL/PH)2 Calculated via QUICKFIX : Rep 2 - Lankart
Eq (3)
Eq (4)
Quickfix Z4
1.80
1.60
1.40
1.20
1.00
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

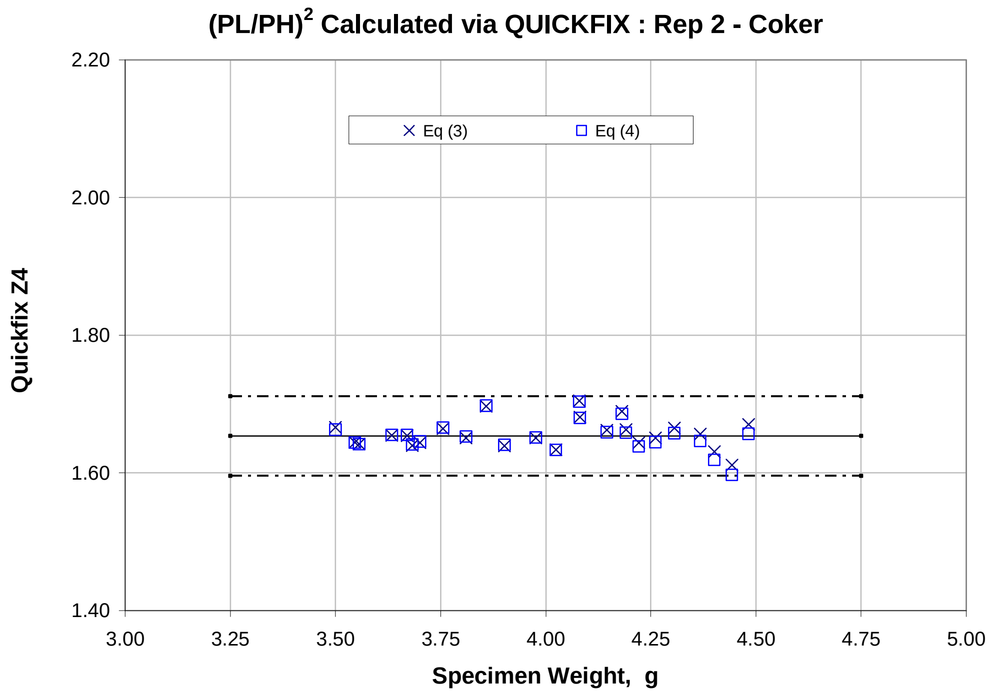

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - Lambert
Eq (3)
Eq (4)
Quickfix Z4
Specimen Weight, g
2.30
2.10
1.90
1.70
1.50
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00


(PL/PH)2 Calculated via QUICKFIX : Rep 2 - Lambert
Eq (3)
Eq (4)
Quickfix Z4
Specimen Weight, g
2.30
2.10
1.90
1.70
1.50
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00

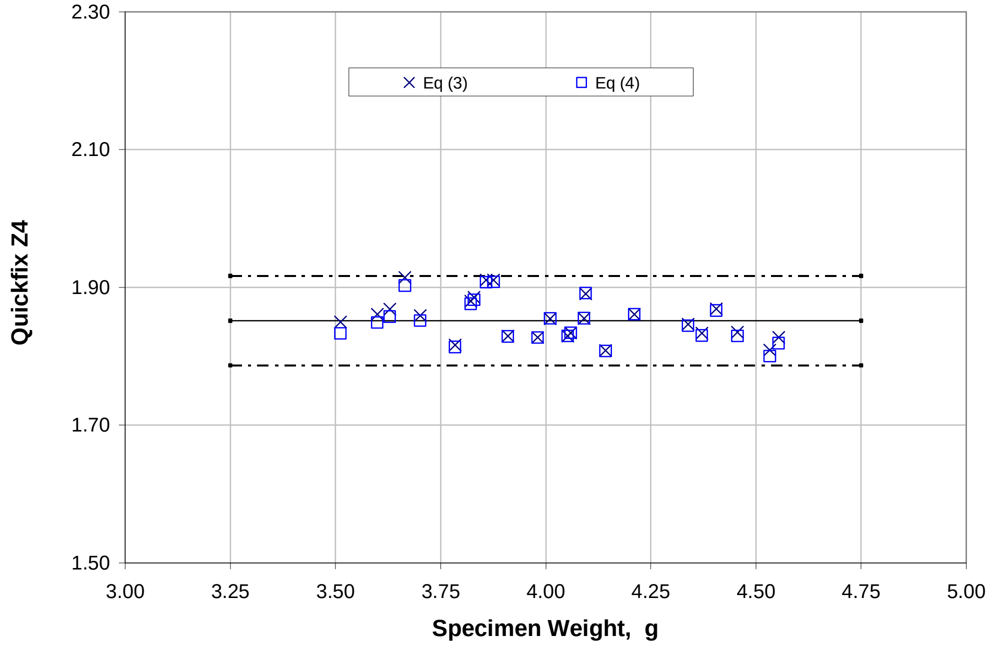

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - Uganda
Eq (3)
Eq (4)
Quickfix Z4
2.20
2.00
1.80
1.60
1.40
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g


(PL/PH)2 Calculated via QUICKFIX : Rep 2 - Uganda
Eq (3)
Eq (4)
Quickfix Z4
2.20
2.00
1.80
1.60
1.40
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

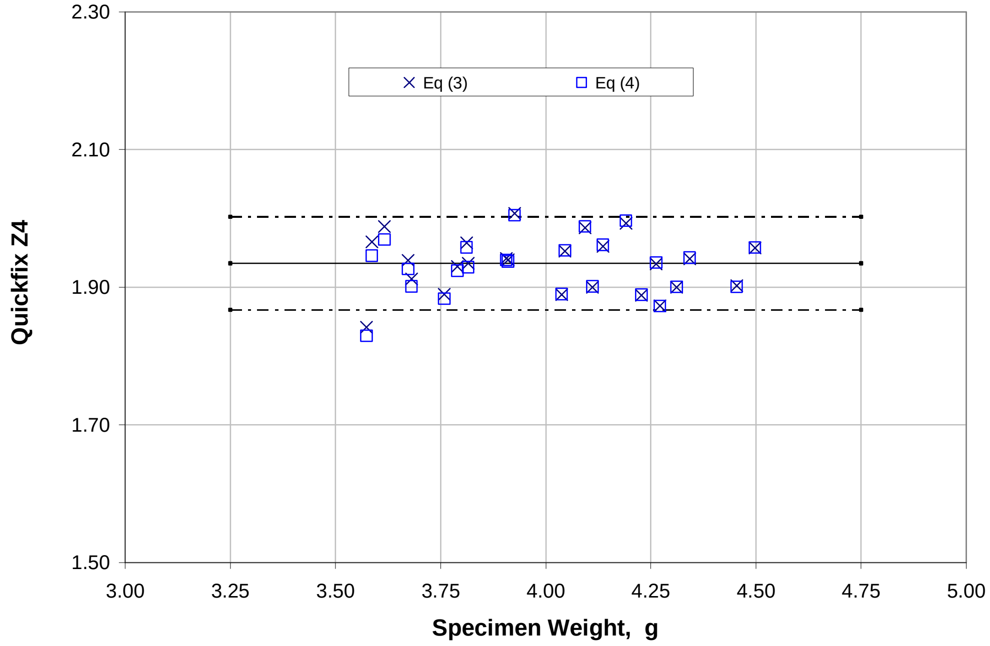

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - Coker
Eq (3)
Eq (4)
Quickfix Z4
2.20
2.00
1.80
1.60
1.40
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

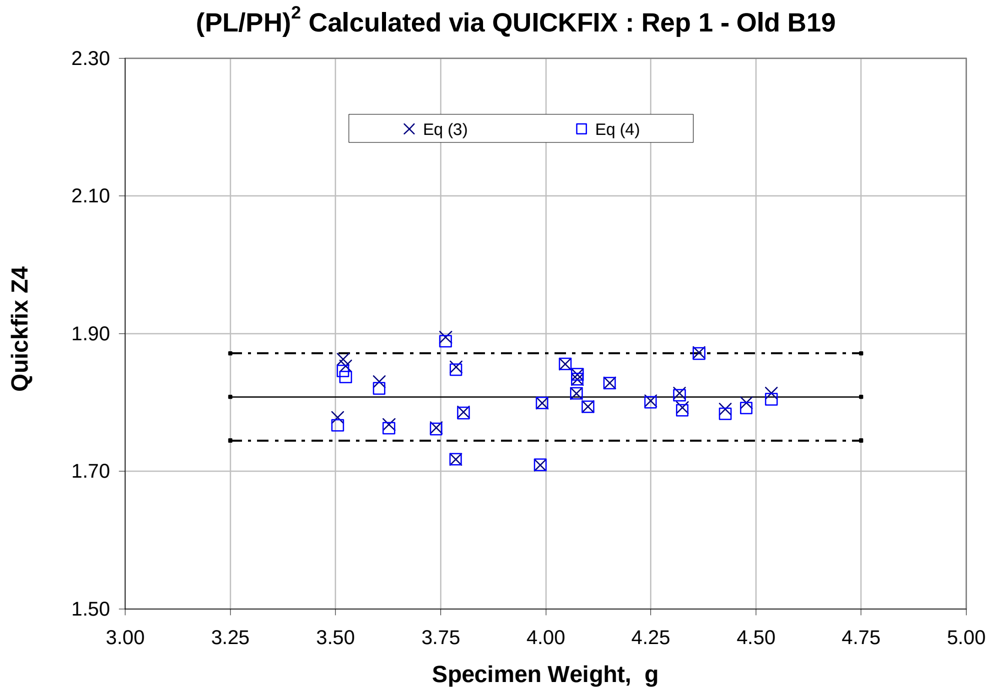

(PL/PH)2 Calculated via QUICKFIX : Rep 2 - Coker
Eq (3)
Eq (4)
Quickfix Z4
2.20
2.00
1.80
1.60
1.40
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

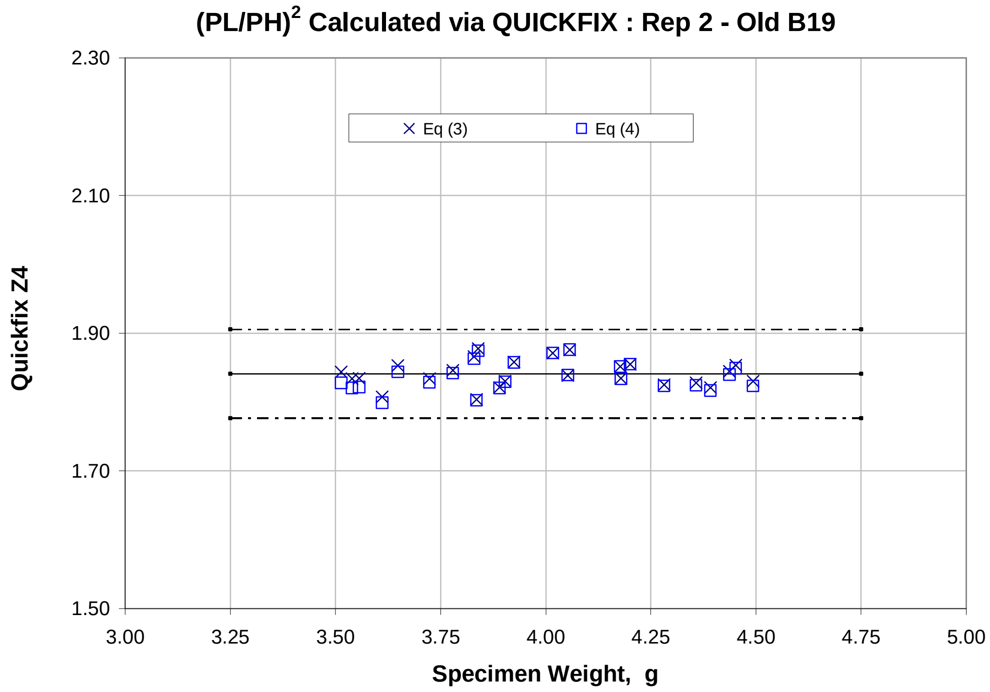
(PL/PH)^2 Calculated via QUICKFIX : Rep 1 - Tanguis

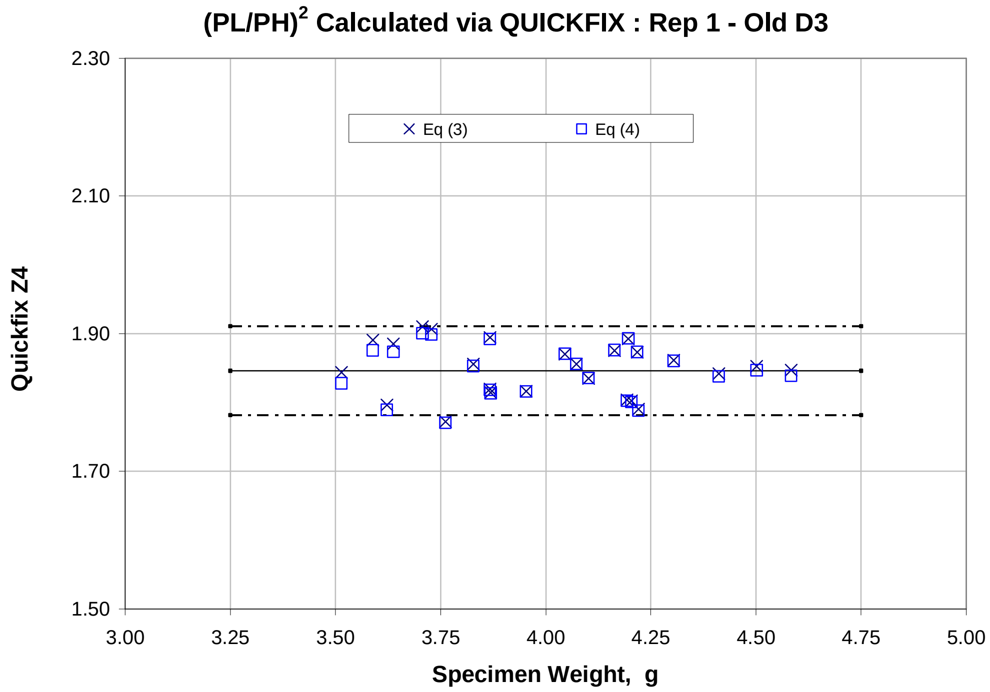


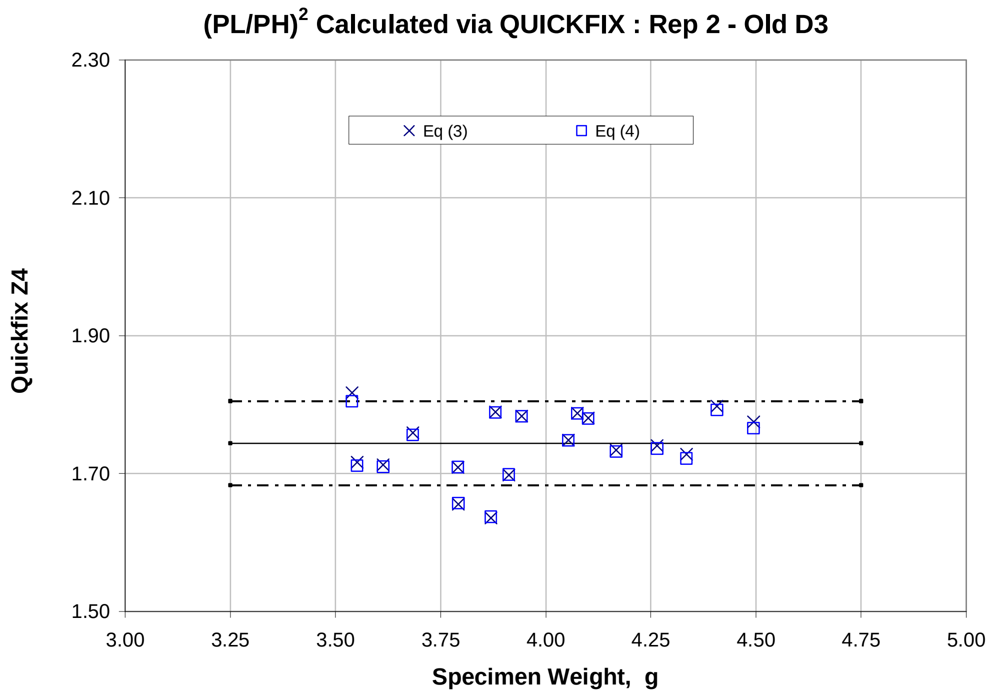
(PL/PH)^2 Calculated via QUICKFIX : Rep 2 - Tanguis

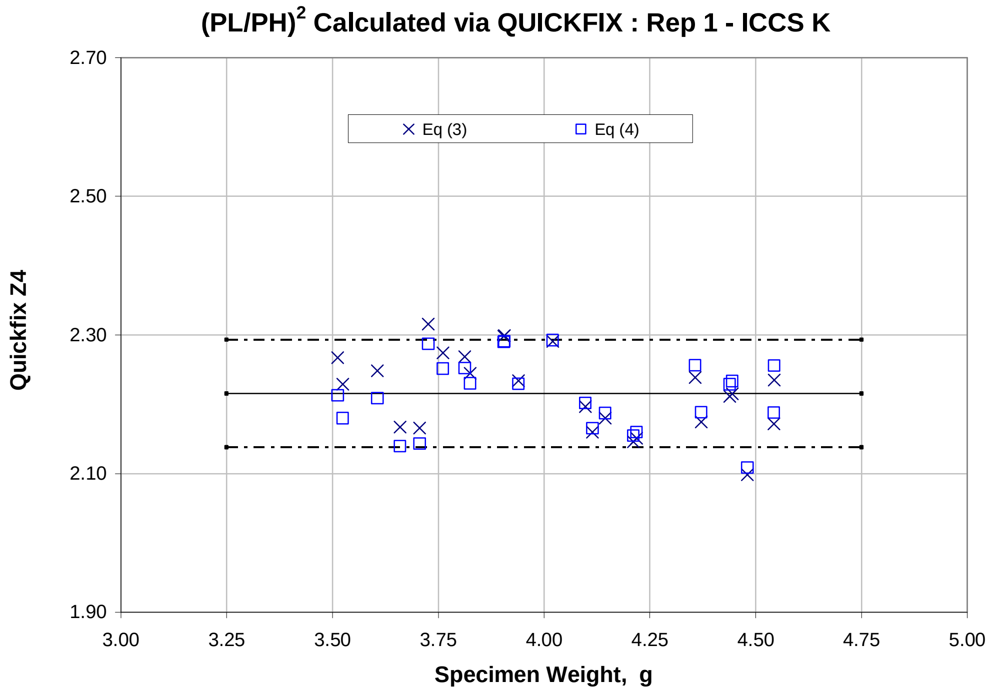


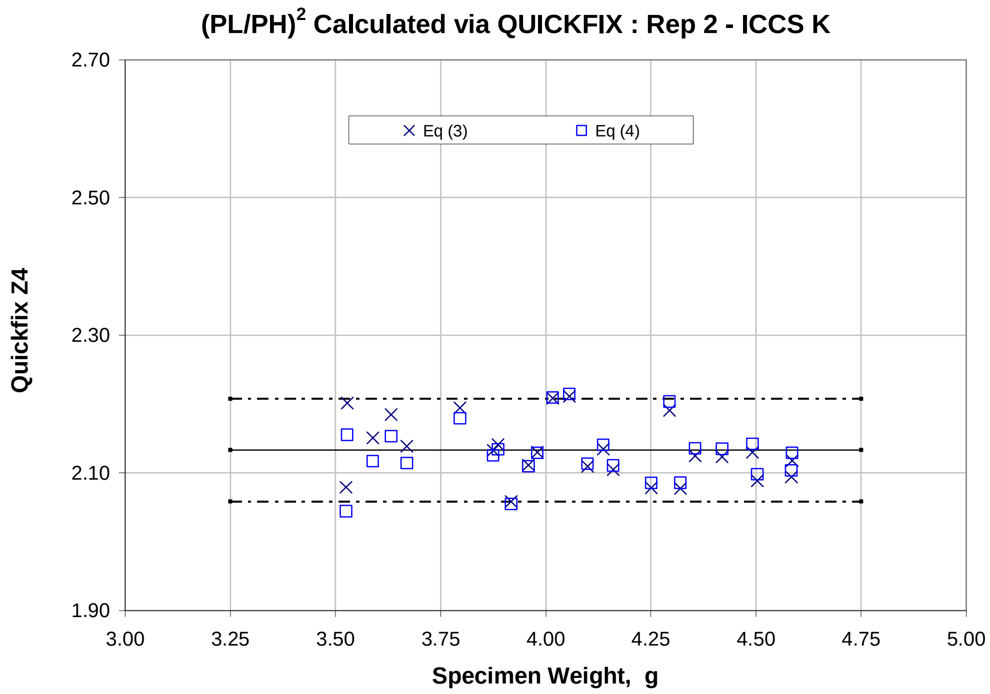

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - Old B19
Quickfix Z4
2.30
2.10
1.90
1.70
1.50
Eq (3)
Eq (4)
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g


(PL/PH)2 Calculated via QUICKFIX : Rep 2 - Old B19
Quickfix Z4
2.30
2.10
1.90
1.70
1.50
Eq (3)
Eq (4)
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

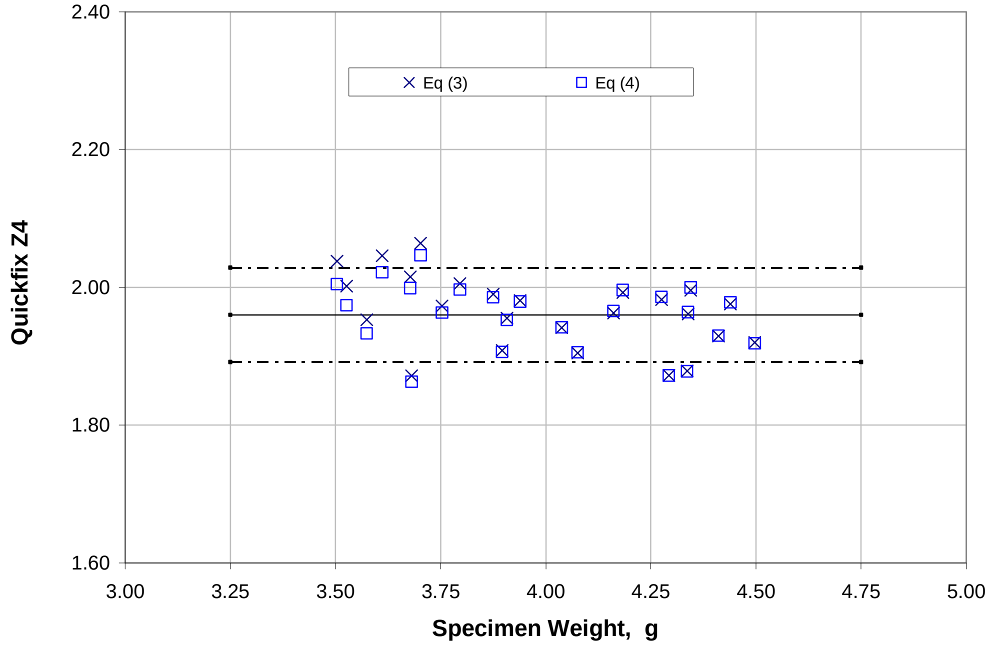

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - Old D3
Eq (3)
Eq (4)
Quickfix Z4
2.30
2.10
1.90
1.70
1.50
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g


(PL/PH)2 Calculated via QUICKFIX : Rep 2 - Old D3
Eq (3)
Eq (4)
Quickfix Z4
2.30
2.10
1.90
1.70
1.50
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

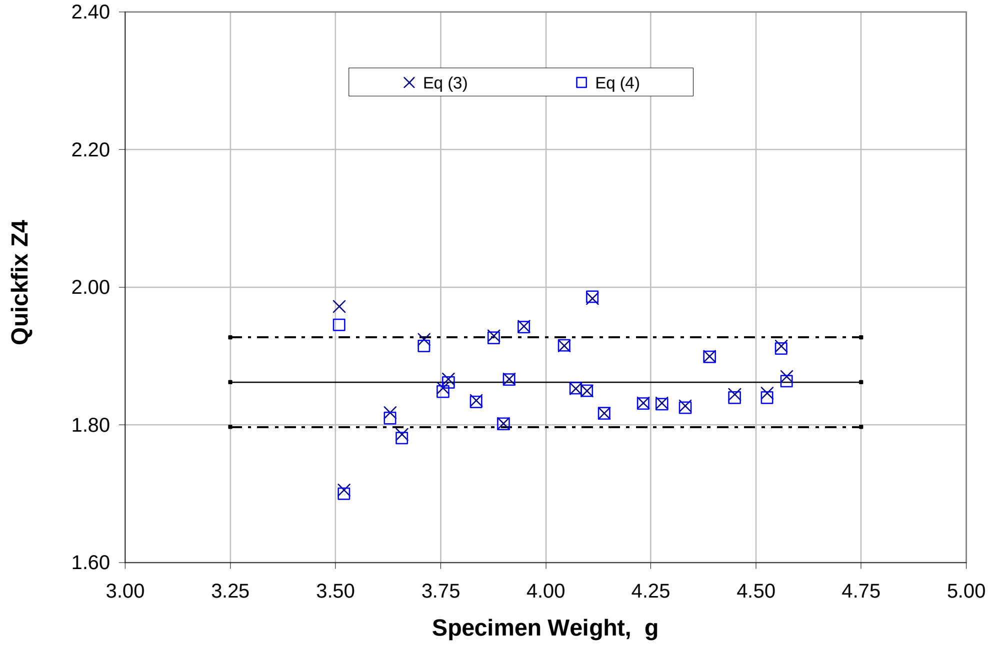

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - ICCS K
Eq (3)
Eq (4)
Quickfix Z4
2.70
2.50
2.30
2.10
1.90
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

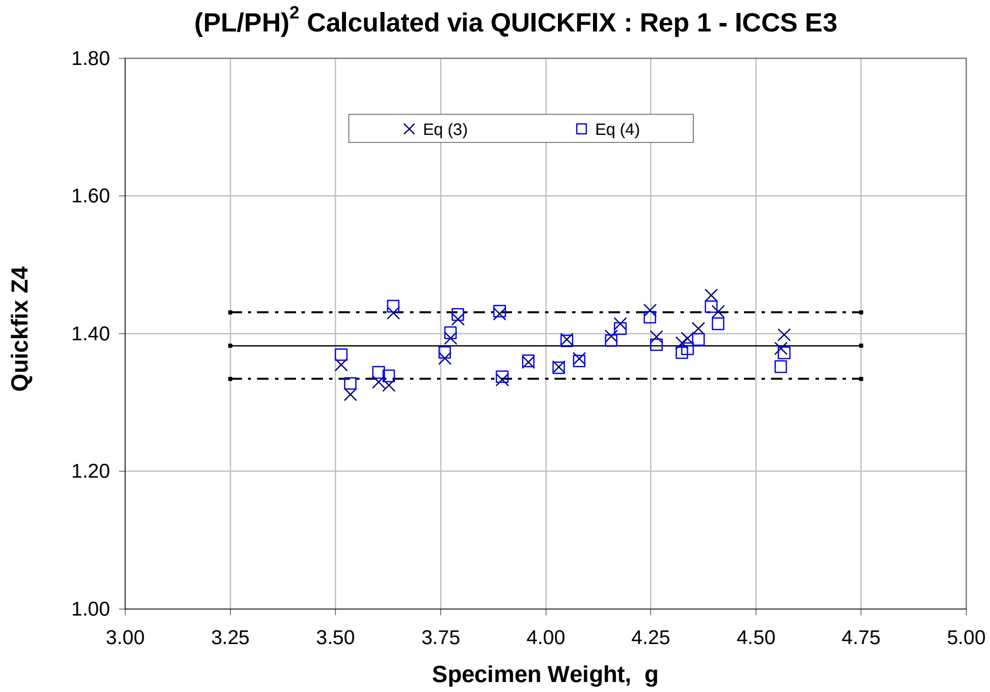

(PL/PH)2 Calculated via QUICKFIX : Rep 2 - ICCS K
Eq (3)
Eq (4)
Quickfix Z4
2.70
2.50
2.30
2.10
1.90
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

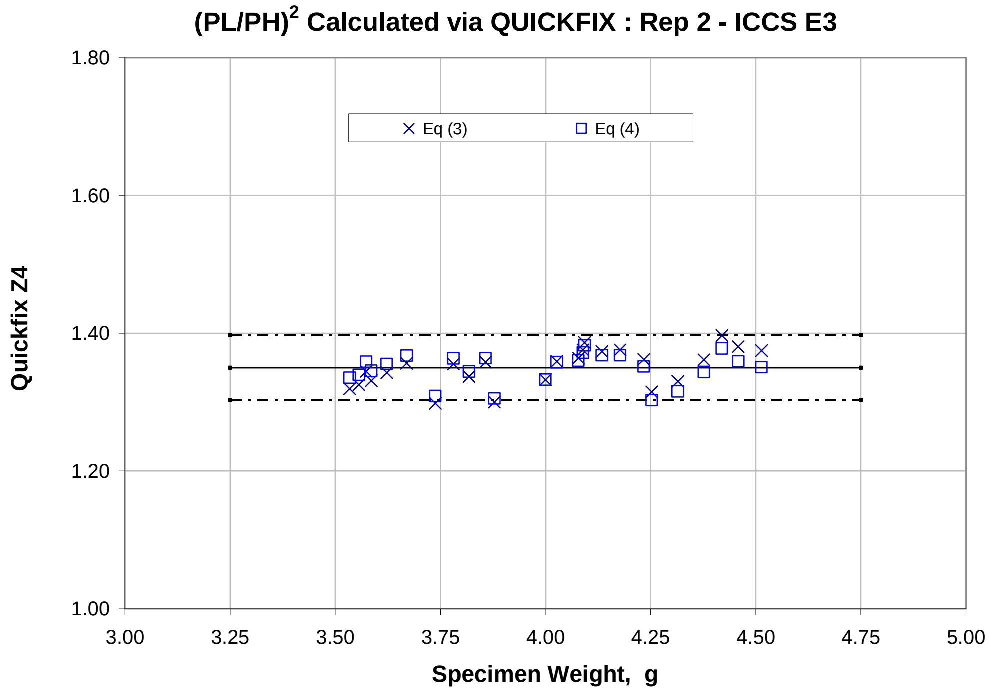
$(PL/PH)^2$ Calculated via QUICKFIX : Rep 1 - ICCS B23

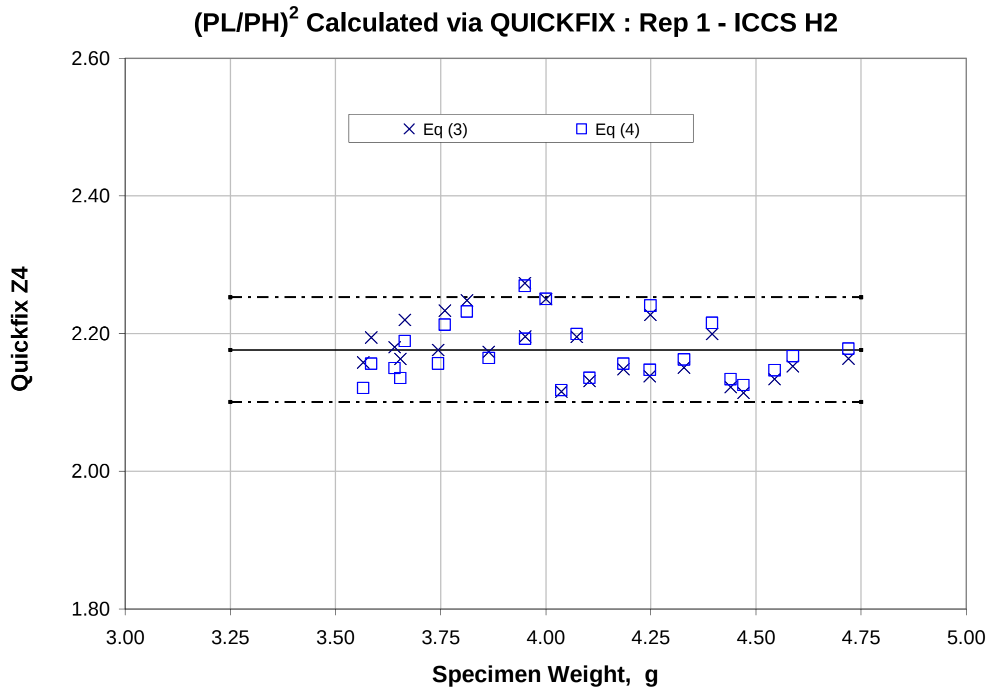


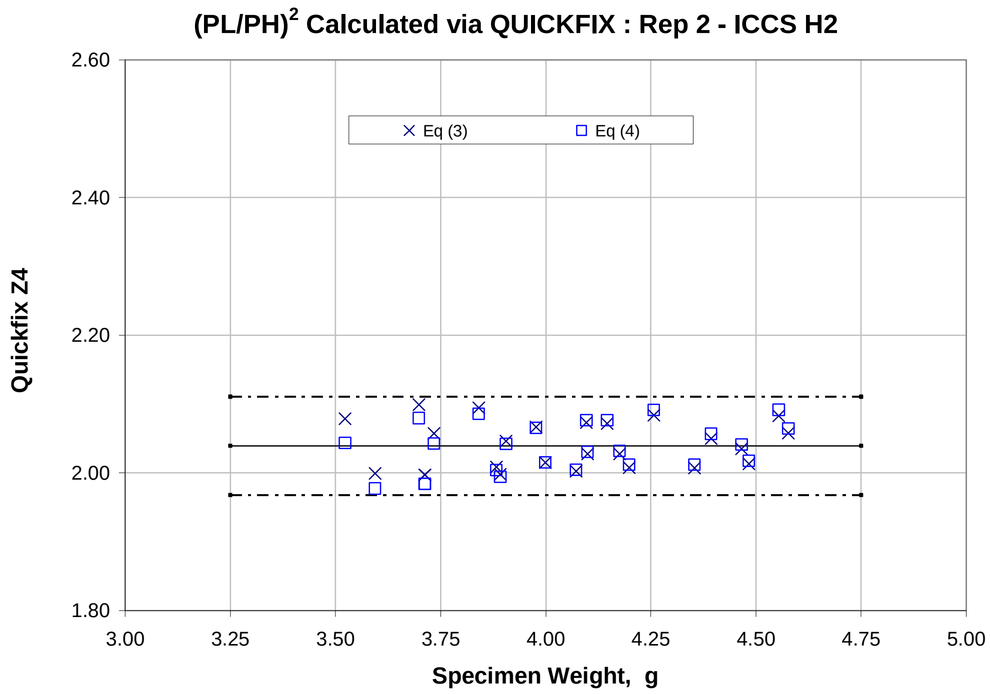
$(PL/PH)^2$ Calculated via QUICKFIX : Rep 2 - ICCS B23

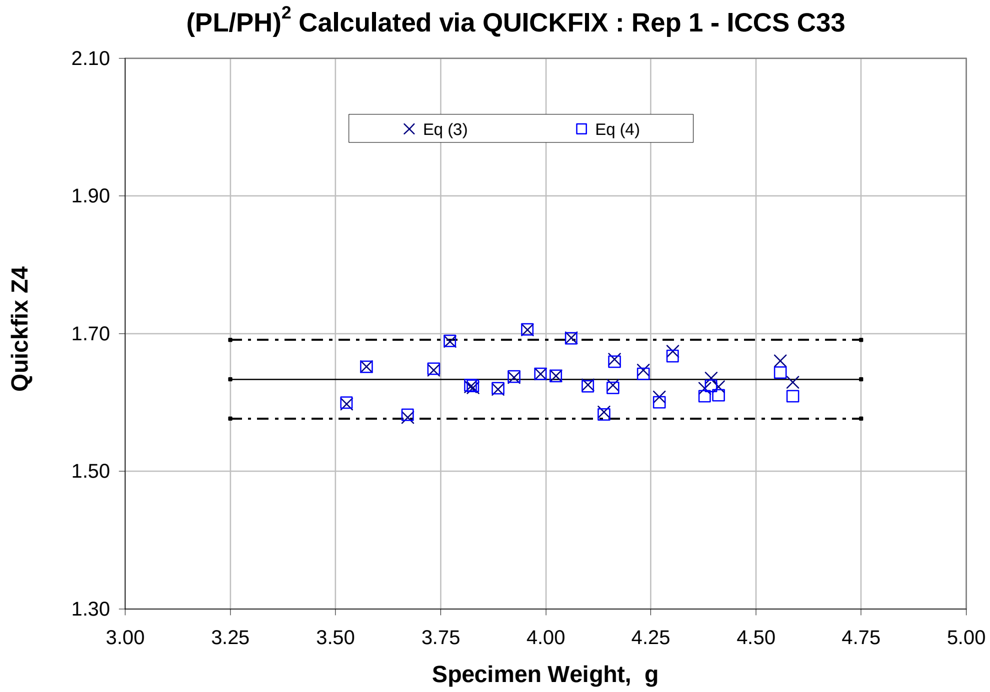


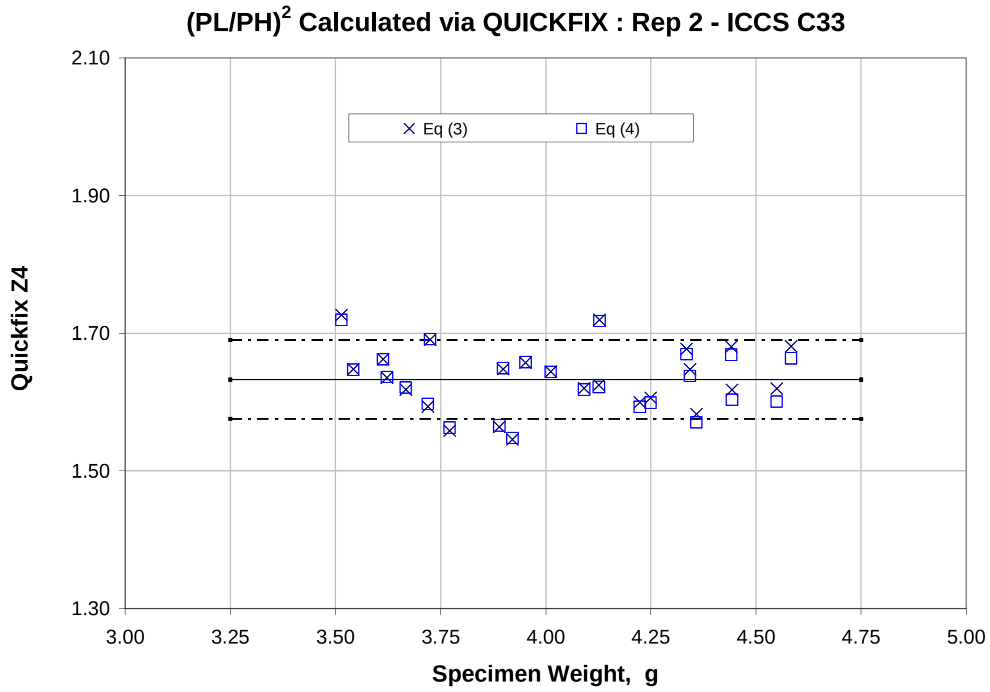

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - ICCS E3
Eq (3)
Eq (4)
Quickfix Z4
1.80
1.60
1.40
1.20
1.00
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

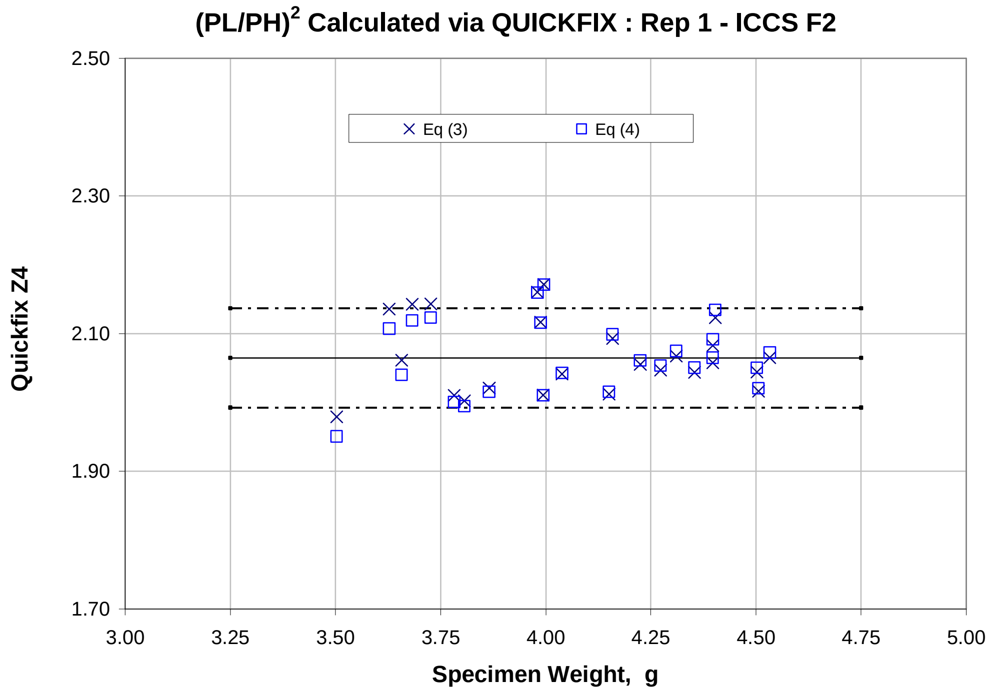

(PL/PH)2 Calculated via QUICKFIX : Rep 2 - ICCS E3
Eq (3)
Eq (4)
Quickfix Z4
1.80
1.60
1.40
1.20
1.00
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

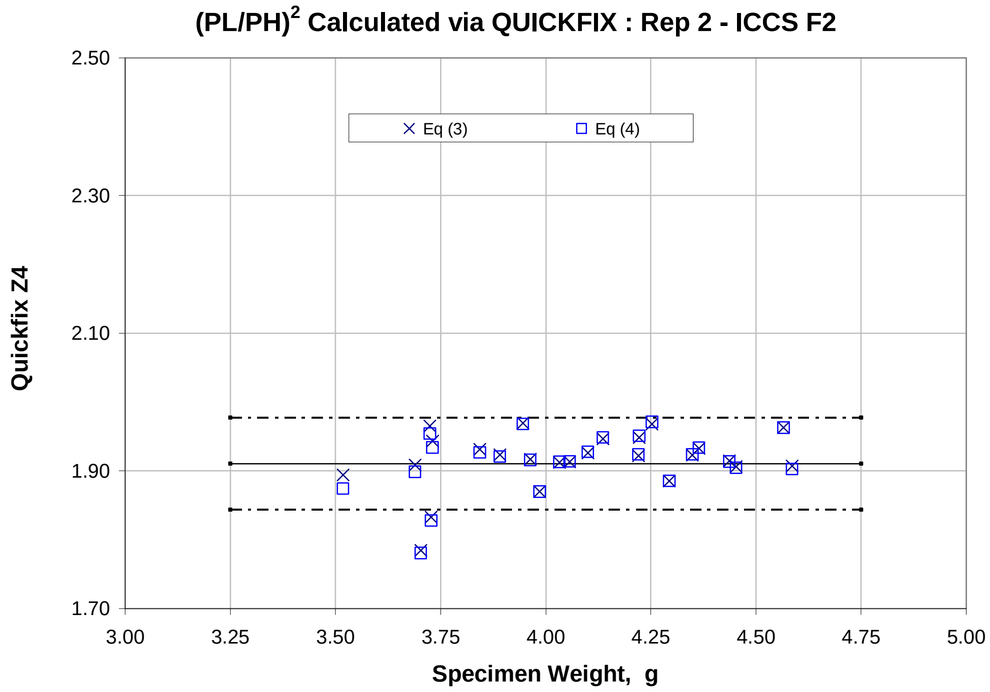

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - ICCS H2
Eq (3)
Eq (4)
Quickfix Z4
2.60
2.40
2.20
2.00
1.80
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

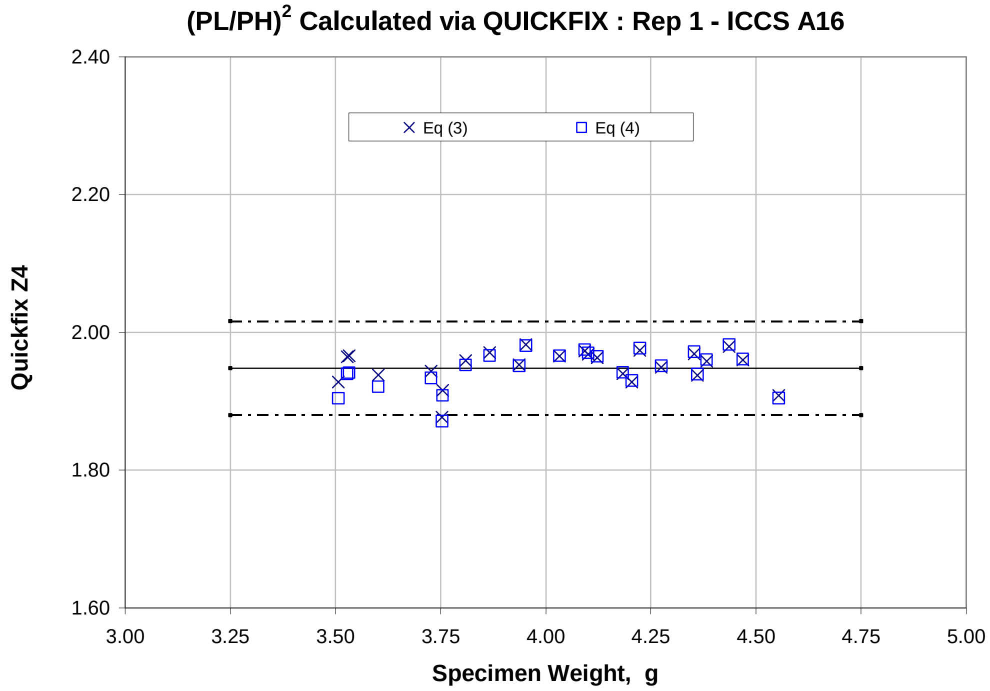

(PL/PH)2 Calculated via QUICKFIX : Rep 2 - ICCS H2
Eq (3)
Eq (4)
Quickfix Z4
2.60
2.40
2.20
2.00
1.80
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

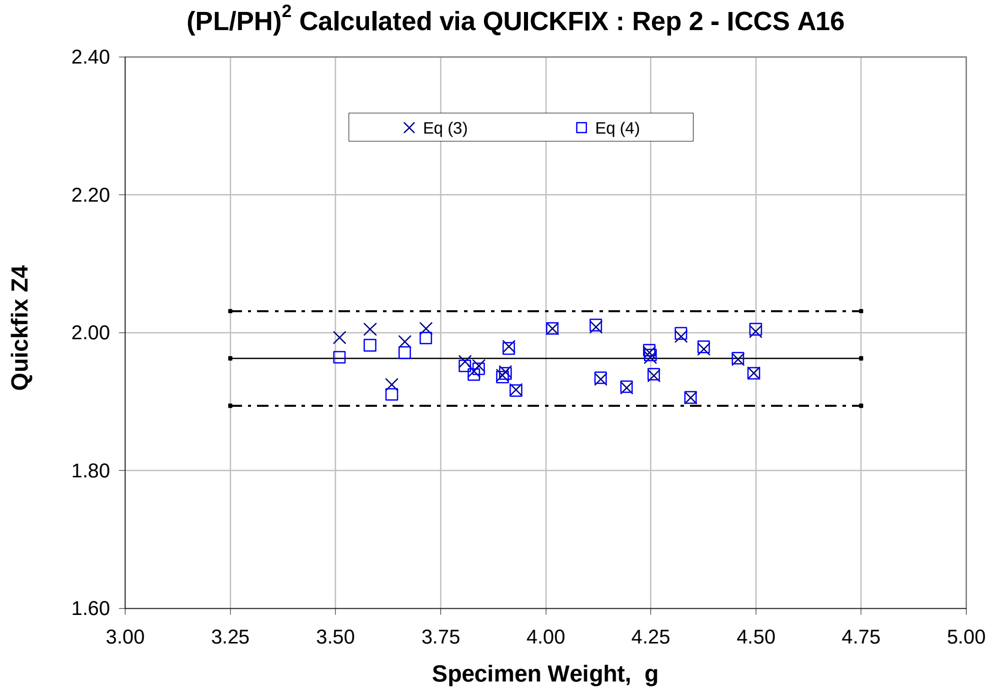

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - ICCS C33
Eq (3)
Eq (4)
Quickfix Z4
2.10
1.90
1.70
1.50
1.30
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

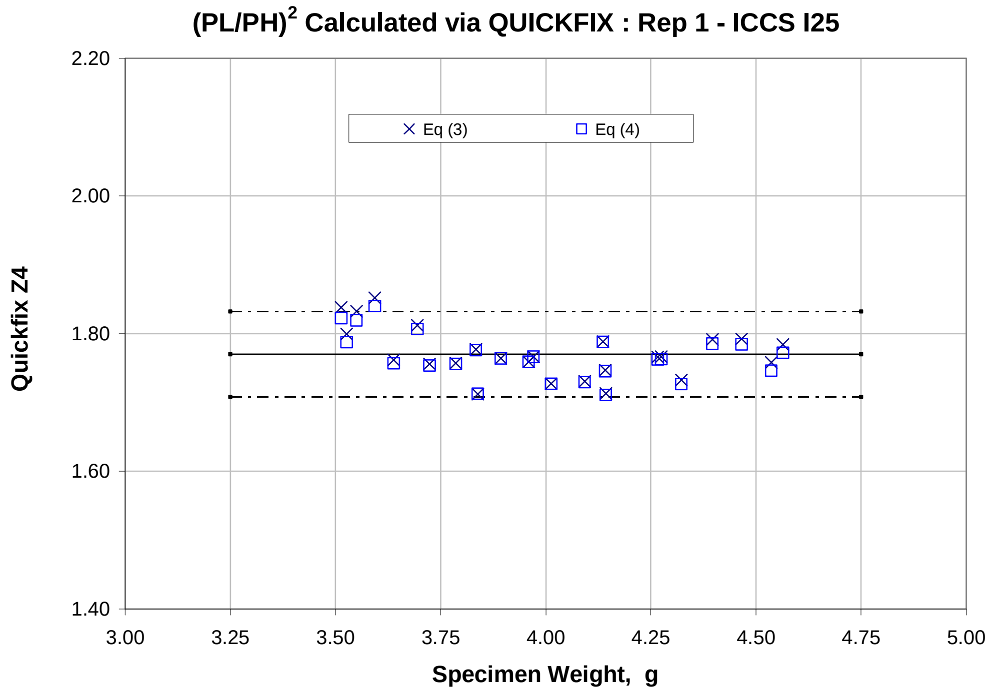

(PL/PH)2 Calculated via QUICKFIX : Rep 2 - ICCS C33
Eq (3)
Eq (4)
Quickfix Z4
2.10
1.90
1.70
1.50
1.30
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

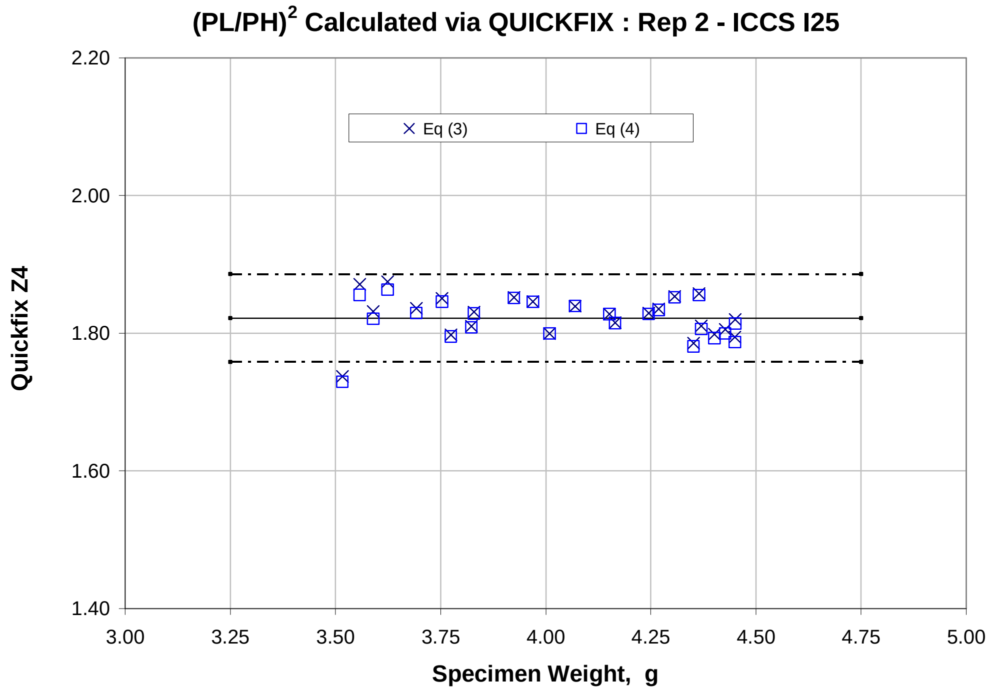

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - ICCS F2
Eq (3)
Eq (4)
Quickfix Z4
2.50
2.30
2.10
1.90
1.70
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

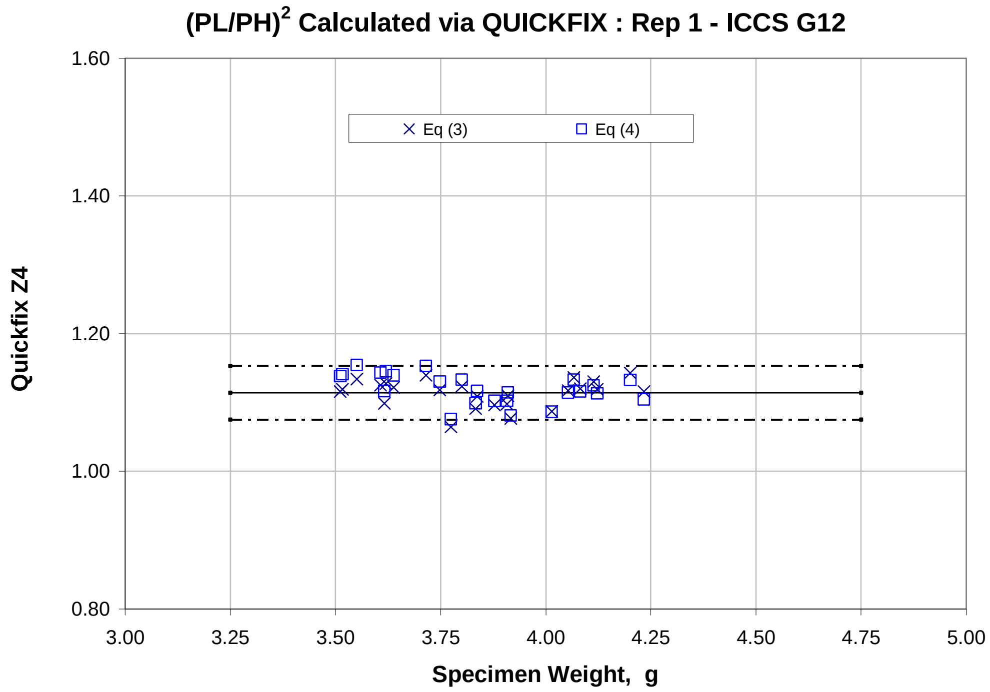

(PL/PH)2 Calculated via QUICKFIX : Rep 2 - ICCS F2
Eq (3)
Eq (4)
Quickfix Z4
2.50
2.30
2.10
1.90
1.70
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

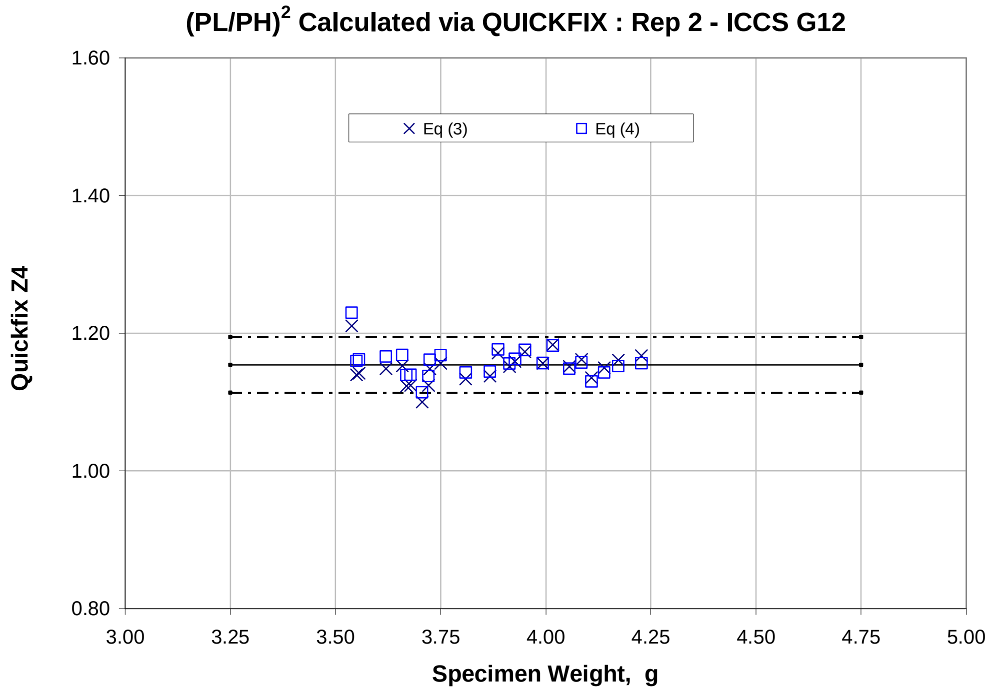

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - ICCS A16
Eq (3)
Eq (4)
Quickfix Z4
2.40
2.20
2.00
1.80
1.60
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

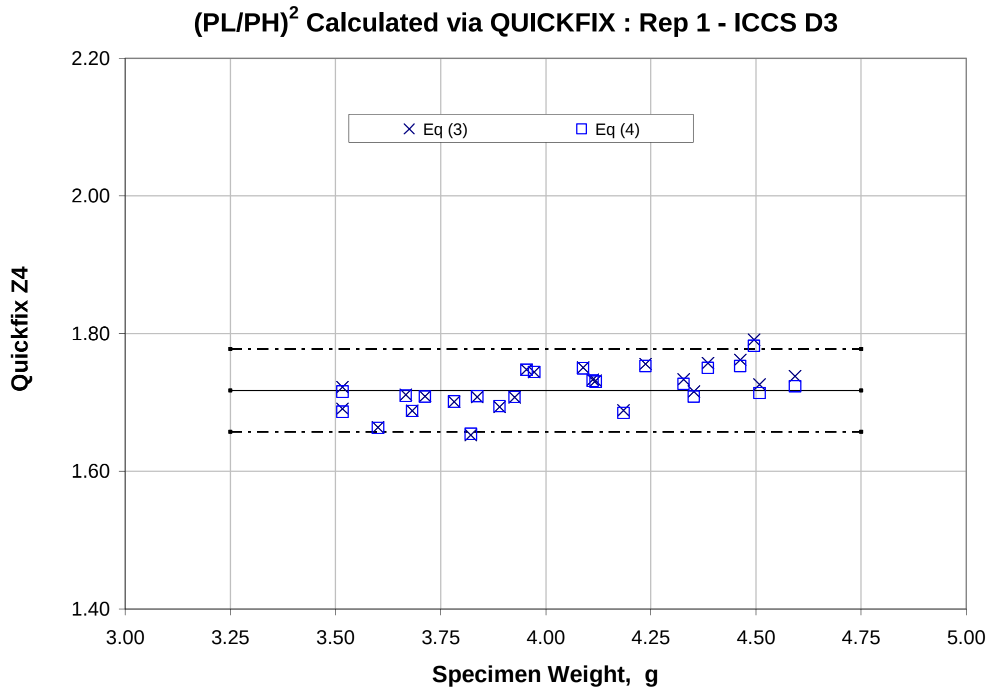

(PL/PH)2 Calculated via QUICKFIX : Rep 2 - ICCS A16
Eq (3)
Eq (4)
Quickfix Z4
2.40
2.20
2.00
1.80
1.60
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

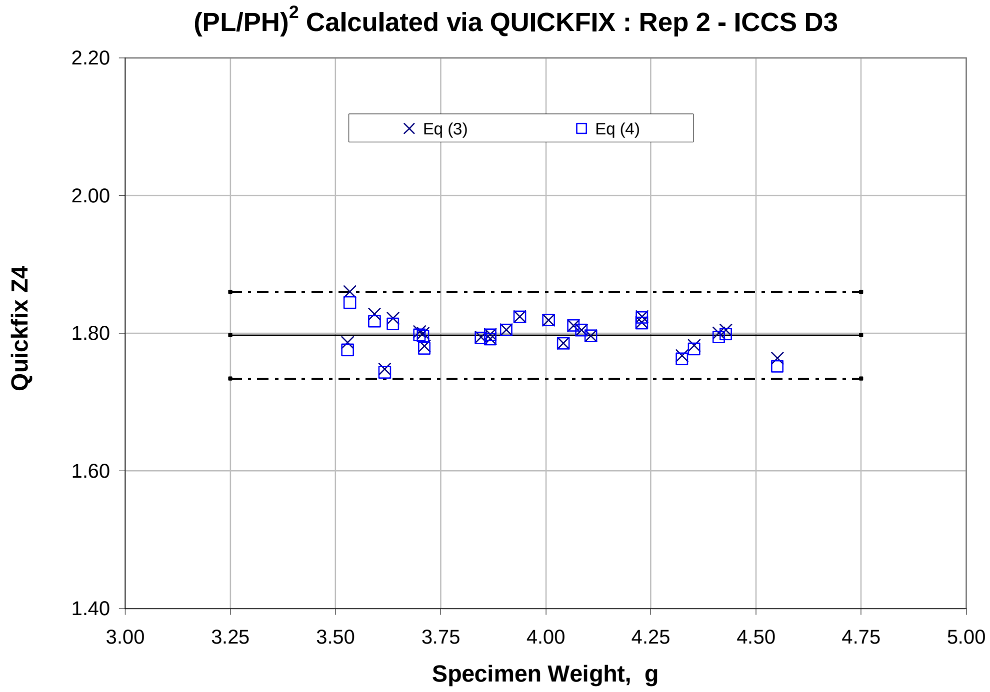

(PL/PH)2 Calculated via QUICKFIX : Rep 1 - ICCS I25
Eq (3)
Eq (4)
Quickfix Z4
2.20
2.00
1.80
1.60
1.40
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

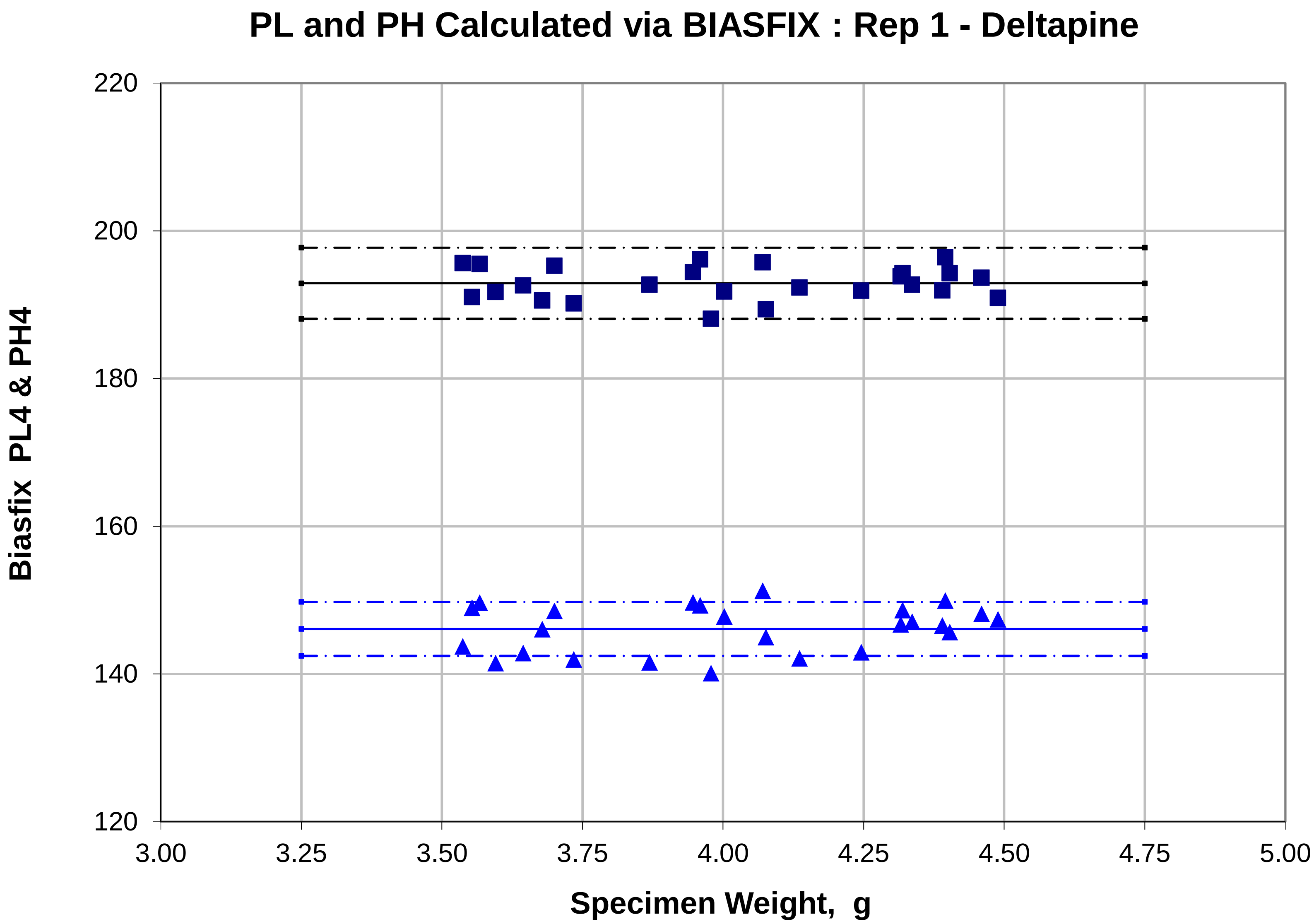

(PL/PH)2 Calculated via QUICKFIX : Rep 2 - ICCS I25
Eq (3)
Eq (4)
Quickfix Z4
2.20
2.00
1.80
1.60
1.40
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g


$(PL/PH)^2$ Calculated via QUICKFIX : Rep 1 - ICCS G12
Eq (3)
Eq (4)
Quickfix Z4
Specimen Weight, g
1.60
1.40
1.20
1.00
0.80
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00


$(PL/PH)^2$ Calculated via QUICKFIX : Rep 2 - ICCS G12
Eq (3)
Eq (4)
Quickfix Z4
Specimen Weight, g
1.60
1.40
1.20
1.00
0.80
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00


(PL/PH)2 Calculated via QUICKFIX : Rep 1 - ICCS D3
Eq (3)
Eq (4)
Quickfix Z4
2.20
2.00
1.80
1.60
1.40
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g


(PL/PH)2 Calculated via QUICKFIX : Rep 2 - ICCS D3
Eq (3)
Eq (4)
Quickfix Z4
2.20
2.00
1.80
1.60
1.40
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g


PL and PH Calculated via BIASFIX : Rep 1 - Deltapine
Biasfix PL4 & PH4
220
200
180
160
140
120
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

Appendix 11 - BIASFIX Replication 1

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

Deltapine - Rep 1

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.679	160	115	1.936	10.317	1.710	2.086	2.851	10.564	2.804	190.6	146.0	4.29	0.811	197.6
2	4.076	197	153	1.658	10.301	1.706	2.087	2.853	10.484	2.777	189.4	145.0	4.31	0.812	198.5
3	4.460	243	202	1.447	10.330	1.713	2.086	2.850	10.746	2.850	193.7	148.1	4.24	0.815	193.9
4	4.336	228	185	1.519	10.354	1.720	2.084	2.847	10.715	2.839	192.7	147.0	4.25	0.819	193.9
5	3.553	149	106	1.976	10.109	1.658	2.099	2.873	10.414	2.776	191.0	149.0	4.28	0.783	203.2
6	4.390	233	191	1.488	10.348	1.718	2.085	2.848	10.666	2.827	191.9	146.5	4.27	0.817	195.0
7	4.319	228	185	1.519	10.314	1.710	2.087	2.852	10.765	2.853	194.2	148.6	4.23	0.815	193.3
8	4.489	243	205	1.405	10.208	1.683	2.093	2.863	10.490	2.786	190.9	147.4	4.28	0.799	199.8
9	4.316	227	182	1.556	10.465	1.747	2.078	2.836	10.874	2.878	193.8	146.7	4.24	0.833	190.1
10	4.395	239	196	1.487	10.354	1.720	2.084	2.847	10.921	2.894	196.4	149.9	4.20	0.820	190.4
11	3.960	192	145	1.753	10.383	1.727	2.083	2.844	10.930	2.894	196.1	149.3	4.20	0.825	189.7
12	4.002	192	148	1.683	10.214	1.685	2.093	2.862	10.542	2.796	191.8	147.7	4.27	0.803	198.3
13	3.947	189	144	1.723	10.228	1.688	2.092	2.860	10.699	2.837	194.4	149.6	4.23	0.805	195.3
14	3.700	166	119	1.946	10.415	1.735	2.081	2.841	10.910	2.892	195.2	148.5	4.21	0.825	190.4
15	3.567	154	108	2.033	10.353	1.719	2.084	2.848	10.870	2.888	195.5	149.6	4.21	0.815	192.2
16	4.070	203	159	1.630	10.172	1.674	2.095	2.866	10.724	2.845	195.7	151.3	4.21	0.800	195.3
17	3.644	159	110	2.089	10.781	1.826	2.059	2.803	11.085	2.932	192.6	142.8	4.25	0.867	184.5
18	4.403	237	191	1.540	10.606	1.783	2.070	2.821	11.024	2.916	194.3	145.6	4.23	0.849	186.6
19	3.596	154	105	2.151	10.859	1.846	2.055	2.795	11.104	2.936	191.7	141.4	4.27	0.875	183.8
20	3.734	165	117	1.989	10.672	1.799	2.066	2.814	10.849	2.869	190.2	142.0	4.29	0.854	189.2
21	3.869	180	129	1.947	10.896	1.855	2.053	2.791	11.194	2.954	192.7	141.5	4.25	0.884	181.4
22	3.537	152	102	2.221	10.929	1.863	2.051	2.788	11.392	3.013	195.6	143.7	4.21	0.885	178.8
23	4.136	206	156	1.744	10.806	1.832	2.058	2.801	11.091	2.927	192.3	142.1	4.26	0.873	183.6
24	4.246	217	169	1.649	10.689	1.803	2.065	2.813	10.962	2.896	191.9	142.9	4.27	0.859	186.7
25	3.979	186	138	1.817	10.685	1.802	2.065	2.813	10.741	2.837	188.1	140.1	4.33	0.857	190.6
Target											**192.9**	**146.1**	**4.25**	**0.832**	**191.1**
Mean					**10.472**	**1.749**	**2.078**	**2.835**	**10.830**	**2.869**	**192.9**	**146.1**	**4.25**	**0.832**	**191.3**
sd					**0.248**	**0.062**	**0.014**	**0.026**	**0.241**	**0.059**	**2.226**	**3.203**	**0.035**	**0.029**	**6.069**
CV%					**2.37**	**3.55**	**0.70**	**0.91**	**2.22**	**2.07**	**1.15**	**2.19**	**0.82**	**3.54**	**3.17**
Mean Difference											**0.01**	**0.00**	**0.00**	**0.000**	**0.19**

Acala - Rep 1

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.614	140	97	2.083	10.668	1.798	2.066	2.815	9.848	2.607	172.7	129.1	4.60	0.841	208.8
2	4.482	225	178	1.598	11.056	1.895	2.043	2.775	10.494	2.773	178.3	129.8	4.49	0.891	193.0
3	3.745	154	107	2.071	11.013	1.884	2.046	2.779	10.332	2.727	176.2	128.5	4.53	0.887	195.9
4	4.242	201	152	1.749	11.104	1.907	2.041	2.770	10.533	2.778	178.3	129.2	4.49	0.899	191.5
5	4.525	229	182	1.583	11.097	1.905	2.041	2.770	10.510	2.778	178.0	129.3	4.50	0.895	192.6
6	4.020	180	130	1.917	11.199	1.931	2.035	2.760	10.610	2.796	178.2	128.3	4.50	0.912	189.3
7	4.320	209	161	1.685	11.033	1.889	2.045	2.777	10.490	2.768	178.6	130.1	4.49	0.891	192.8
8	3.819	159	111	2.052	11.155	1.920	2.038	2.764	10.365	2.733	174.7	126.2	4.56	0.903	194.2
9	3.598	143	96	2.219	11.109	1.908	2.040	2.769	10.491	2.771	177.5	128.7	4.51	0.897	192.6
10	3.901	167	120	1.937	10.945	1.867	2.050	2.786	10.253	2.705	175.8	128.7	4.54	0.880	197.7
11	4.392	216	169	1.634	10.990	1.878	2.047	2.781	10.443	2.757	178.4	130.3	4.49	0.885	194.1
12	3.571	141	95	2.203	10.969	1.873	2.049	2.784	10.396	2.748	177.9	130.3	4.50	0.880	195.5
13	4.365	213	165	1.666	11.066	1.898	2.043	2.773	10.497	2.771	178.2	129.5	4.50	0.894	192.6
14	4.051	181	134	1.825	10.910	1.859	2.052	2.790	10.258	2.706	176.4	129.4	4.53	0.876	197.8
15	3.893	168	118	2.027	11.274	1.949	2.031	2.752	10.632	2.802	177.5	127.2	4.51	0.920	188.5
16	4.219	198	151	1.719	10.920	1.861	2.051	2.789	10.332	2.726	177.5	130.2	4.51	0.878	196.4
17	3.906	166	120	1.914	10.867	1.848	2.054	2.794	10.105	2.667	174.4	128.3	4.57	0.870	201.2
18	4.163	191	147	1.688	10.647	1.793	2.067	2.817	10.010	2.644	175.8	131.3	4.54	0.845	204.8
19	4.465	221	175	1.595	11.001	1.881	2.047	2.780	10.338	2.731	176.5	128.9	4.53	0.884	196.3
20	3.633	147	100	2.161	11.009	1.883	2.046	2.779	10.491	2.771	179.0	130.6	4.48	0.887	193.3
21	4.403	221	174	1.613	10.929	1.863	2.051	2.788	10.572	2.792	181.5	133.1	4.44	0.879	192.2
22	3.738	152	107	2.018	10.791	1.829	2.059	2.802	10.067	2.660	174.8	129.4	4.56	0.859	202.8
23	4.076	180	133	1.832	11.008	1.883	2.046	2.780	10.152	2.677	173.2	126.2	4.59	0.886	199.1
24	4.183	194	148	1.718	10.823	1.837	2.057	2.799	10.217	2.696	176.9	130.5	4.52	0.866	199.3
25															
Target											**176.9**	**129.3**	**4.52**	**0.883**	**196.0**
Mean					**10.983**	**1.877**	**2.048**	**2.782**	**10.351**	**2.733**	**176.9**	**129.3**	**4.52**	**0.884**	**195.9**
sd					**0.151**	**0.038**	**0.009**	**0.016**	**0.203**	**0.053**	**2.000**	**1.526**	**0.036**	**0.018**	**4.869**
CV%					**1.37**	**2.01**	**0.43**	**0.56**	**1.96**	**1.93**	**1.13**	**1.18**	**0.80**	**2.08**	**2.48**
Mean Difference											**0.03**	**-0.01**	**0.00**	**0.001**	**-0.07**

Appendix 11 - BIASFIX Replication 1

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

Menoufi - Rep 1

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.482	295	246	1.438	10.341	1.716	2.085	2.849	12.923	3.427	232.7	177.9	3.72	0.835	161.2
2	4.335	274	219	1.565	10.554	1.769	2.073	2.827	13.103	3.466	231.9	174.4	3.73	0.862	157.2
3	3.628	190	134	2.010	10.447	1.743	2.079	2.838	13.038	3.458	232.7	176.7	3.72	0.846	159.3
4	3.853	217	156	1.935	10.804	1.832	2.058	2.801	13.514	3.568	234.4	173.2	3.70	0.894	150.8
5	4.284	269	215	1.565	10.429	1.738	2.080	2.840	13.048	3.453	233.3	177.0	3.71	0.848	158.7
6	4.078	245	188	1.698	10.470	1.749	2.078	2.835	13.208	3.493	235.3	177.9	3.69	0.855	156.3
7	4.575	316	263	1.444	10.580	1.776	2.071	2.824	13.549	3.590	239.3	180.0	3.64	0.866	152.4
8	4.144	255	198	1.659	10.475	1.750	2.077	2.835	13.303	3.518	236.9	179.1	3.67	0.856	155.2
9	4.087	253	194	1.701	10.504	1.757	2.076	2.832	13.614	3.600	241.9	182.5	3.62	0.862	151.5
10	3.535	189	131	2.082	10.429	1.738	2.080	2.840	13.675	3.632	244.5	186.1	3.59	0.847	152.3
11	3.782	212	154	1.895	10.454	1.744	2.079	2.837	13.352	3.536	238.2	180.6	3.66	0.852	155.1
12	4.238	277	223	1.543	10.223	1.687	2.092	2.861	13.502	3.580	245.4	189.0	3.58	0.829	154.7
13	3.535	187	128	2.134	10.618	1.785	2.069	2.820	13.714	3.636	241.4	181.3	3.62	0.869	150.6
14	3.591	190	134	2.010	10.339	1.716	2.085	2.849	13.216	3.511	238.0	182.3	3.66	0.835	158.1
15	4.362	285	235	1.471	10.206	1.682	2.093	2.863	13.062	3.466	237.7	183.4	3.66	0.823	160.2
16	4.071	243	191	1.619	10.127	1.663	2.098	2.871	12.785	3.393	234.2	181.6	3.70	0.813	164.1
17	4.184	258	204	1.599	10.328	1.713	2.086	2.850	13.034	3.452	234.9	179.5	3.69	0.837	159.5
18	3.932	231	175	1.742	10.269	1.698	2.089	2.856	13.219	3.504	239.4	183.7	3.64	0.832	157.8
19	3.601	185	131	1.994	10.311	1.709	2.087	2.852	12.764	3.392	230.4	176.8	3.74	0.828	163.9
20	3.537	185	130	2.025	10.237	1.690	2.091	2.860	13.178	3.508	239.2	184.8	3.64	0.821	159.6
21	4.164	253	200	1.600	10.283	1.702	2.089	2.855	12.858	3.407	232.6	178.3	3.72	0.831	162.0
22	4.440	291	240	1.470	10.387	1.728	2.082	2.844	13.052	3.459	234.1	178.3	3.70	0.842	159.2
23	3.865	212	157	1.823	10.407	1.733	2.081	2.842	12.712	3.366	227.7	173.0	3.78	0.843	163.1
24	4.402	291	244	1.422	10.087	1.653	2.100	2.875	12.950	3.442	238.0	185.3	3.66	0.808	162.7
25	4.505	307	262	1.373	10.100	1.656	2.099	2.874	13.030	3.465	239.2	186.2	3.64	0.809	161.8
Target											**236.7**	**180.4**	**3.67**	**0.842**	**157.7**
Mean					**10.376**	**1.725**	**2.083**	**2.845**	**13.176**	**3.493**	**236.5**	**180.4**	**3.67**	**0.842**	**157.9**
sd					**0.170**	**0.042**	**0.010**	**0.018**	**0.289**	**0.075**	**4.319**	**4.164**	**0.048**	**0.021**	**4.165**
CV%					**1.63**	**2.46**	**0.47**	**0.62**	**2.19**	**2.15**	**1.83**	**2.31**	**1.30**	**2.44**	**2.64**
Mean Difference											**-0.17**	**-0.05**	**0.00**	**0.000**	**0.18**

Lankart - Rep 1

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.018	250	216	1.340	8.875	1.350	2.171	3.001	12.214	3.325	247.5	213.1	3.56	0.664	186.4
2	3.561	193	150	1.656	8.989	1.378	2.164	2.989	12.363	3.369	248.3	212.4	3.55	0.672	183.9
3	3.741	214	173	1.530	8.974	1.375	2.165	2.991	12.308	3.347	247.4	211.4	3.56	0.674	184.1
4	3.967	244	209	1.363	8.853	1.344	2.172	3.003	12.240	3.335	248.5	214.3	3.55	0.661	186.4
5	4.338	299	275	1.182	8.897	1.355	2.169	2.999	12.398	3.377	250.8	215.7	3.52	0.666	183.7
6	4.526	320	305	1.101	8.914	1.360	2.168	2.997	12.120	3.307	244.9	210.7	3.58	0.664	188.4
7	4.263	285	262	1.183	8.749	1.318	2.178	3.014	12.117	3.314	248.1	216.2	3.55	0.648	190.2
8	4.436	309	293	1.112	8.789	1.328	2.176	3.010	12.088	3.307	246.7	214.6	3.56	0.650	190.5
9	3.572	192	151	1.617	8.879	1.351	2.170	3.000	12.116	3.312	245.5	212.1	3.58	0.658	189.2
10	4.295	291	267	1.188	8.834	1.339	2.173	3.005	12.263	3.345	249.3	215.6	3.54	0.658	186.6
11	3.545	189	148	1.631	8.862	1.347	2.171	3.002	12.108	3.312	245.6	212.6	3.58	0.656	189.8
12	3.783	219	181	1.464	8.826	1.337	2.173	3.006	12.150	3.317	247.2	214.0	3.56	0.656	188.6
13	3.917	235	201	1.367	8.758	1.321	2.177	3.013	12.023	3.286	246.0	214.1	3.57	0.649	191.3
14	4.523	321	311	1.065	8.749	1.318	2.178	3.014	11.997	3.291	245.6	214.7	3.58	0.643	193.1
15	3.848	220	183	1.445	8.906	1.358	2.169	2.998	11.834	3.221	239.2	205.5	3.64	0.664	192.2
16	4.361	300	282	1.132	8.726	1.312	2.179	3.016	12.114	3.319	248.5	217.3	3.55	0.644	190.9
17	3.903	230	196	1.377	8.765	1.322	2.177	3.012	11.869	3.243	242.7	211.1	3.61	0.648	193.7
18	3.657	207	165	1.574	8.932	1.364	2.167	2.995	12.466	3.398	251.5	215.9	3.52	0.669	182.7
19	3.991	250	215	1.352	8.864	1.347	2.171	3.002	12.386	3.373	251.2	216.5	3.52	0.664	184.0
20	4.028	253	220	1.323	8.827	1.338	2.173	3.006	12.250	3.340	249.2	215.5	3.54	0.659	186.6
21	4.144	270	240	1.266	8.845	1.342	2.172	3.004	12.310	3.354	250.1	215.9	3.53	0.661	185.5
22	4.090	258	227	1.292	8.836	1.340	2.173	3.005	12.095	3.296	245.9	212.4	3.57	0.659	188.9
23	4.502	322	309	1.086	8.800	1.331	2.175	3.009	12.214	3.344	249.0	216.6	3.54	0.651	188.7
24	3.718	213	174	1.499	8.802	1.331	2.175	3.008	12.251	3.349	249.8	216.9	3.53	0.653	187.6
25	3.953	241	206	1.369	8.844	1.342	2.172	3.004	12.174	3.318	247.3	213.5	3.56	0.660	187.6
Target											**247.6**	**213.8**	**3.56**	**0.659**	**187.6**
Mean					**8.844**	**1.342**	**2.172**	**3.004**	**12.179**	**3.324**	**247.4**	**213.9**	**3.56**	**0.658**	**188.0**
sd					**0.069**	**0.017**	**0.004**	**0.007**	**0.154**	**0.040**	**2.732**	**2.601**	**0.028**	**0.008**	**3.043**
CV%					**0.78**	**1.28**	**0.18**	**0.24**	**1.27**	**1.19**	**1.10**	**1.22**	**0.80**	**1.26**	**1.62**
Mean Difference											**-0.17**	**0.14**	**0.00**	**-0.001**	**0.43**

Appendix 11 - BIASFIX Replication 1

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

Lambert - Rep 1

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.417	257	210	1.498	10.453	1.744	2.079	2.837	11.723	3.105	209.2	158.5	4.01	0.838	176.6
2	3.587	167	114	2.146	10.816	1.835	2.057	2.799	12.058	3.190	208.9	154.6	4.01	0.879	169.6
3	4.461	262	213	1.513	10.626	1.787	2.069	2.819	11.884	3.144	209.1	156.6	4.01	0.858	173.1
4	4.021	216	161	1.800	10.733	1.814	2.062	2.808	12.248	3.234	213.6	158.6	3.95	0.876	166.8
5	4.219	231	178	1.684	10.772	1.824	2.060	2.804	11.903	3.143	207.0	153.3	4.04	0.877	171.4
6	3.766	182	127	2.054	11.007	1.883	2.046	2.780	12.068	3.185	205.9	150.2	4.06	0.904	167.7
7	3.831	192	137	1.964	10.853	1.844	2.055	2.796	12.147	3.207	209.8	154.6	4.00	0.888	167.5
8	3.671	170	119	2.041	10.681	1.801	2.065	2.814	11.590	3.067	203.0	151.5	4.10	0.861	177.2
9	3.860	193	138	1.956	10.903	1.857	2.052	2.790	12.071	3.185	207.7	152.5	4.03	0.893	168.2
10	3.614	171	117	2.136	10.860	1.846	2.055	2.795	12.201	3.226	210.6	155.4	3.99	0.886	167.2
11	4.488	262	212	1.527	10.755	1.820	2.061	2.806	11.869	3.139	206.7	153.5	4.05	0.872	172.5
12	4.287	240	186	1.665	10.863	1.847	2.055	2.795	12.059	3.183	208.2	153.3	4.03	0.888	168.7
13	4.131	219	167	1.720	10.693	1.804	2.065	2.812	11.711	3.093	204.9	152.6	4.07	0.867	174.7
14	3.934	195	144	1.834	10.632	1.789	2.068	2.819	11.478	3.033	201.9	150.9	4.11	0.858	178.7
15	4.428	257	207	1.541	10.673	1.799	2.066	2.814	11.887	3.143	208.4	155.5	4.02	0.864	172.6
16	3.679	171	119	2.065	10.792	1.829	2.059	2.802	11.705	3.094	203.2	150.5	4.10	0.875	174.6
17	4.240	235	181	1.686	10.832	1.839	2.057	2.798	12.047	3.180	208.5	153.8	4.02	0.885	169.0
18	4.584	279	229	1.484	10.787	1.828	2.059	2.803	12.137	3.212	210.8	156.4	3.99	0.876	168.8
19	4.288	238	184	1.673	10.899	1.856	2.053	2.791	11.993	3.165	206.4	151.6	4.05	0.891	169.4
20	4.105	218	165	1.746	10.734	1.814	2.062	2.808	11.847	3.128	206.6	153.4	4.05	0.873	172.4
21	4.320	243	191	1.619	10.747	1.818	2.061	2.807	11.899	3.143	207.3	153.9	4.04	0.874	171.7
22	3.944	197	142	1.925	11.017	1.885	2.046	2.779	11.896	3.137	202.8	147.7	4.10	0.905	169.9
23	4.333	242	189	1.639	10.869	1.848	2.054	2.794	11.903	3.143	205.3	151.2	4.06	0.887	170.9
24	3.816	189	135	1.960	10.795	1.830	2.059	2.802	11.999	3.169	208.2	154.0	4.02	0.880	170.0
25	4.078	213	159	1.795	10.861	1.846	2.055	2.795	11.860	3.129	204.7	150.7	4.07	0.887	171.4
Target											**207.1**	**153.3**	**4.04**	**0.879**	**171.0**
Mean					**10.786**	**1.828**	**2.059**	**2.803**	**11.927**	**3.151**	**207.1**	**153.4**	**4.04**	**0.878**	**171.2**
sd					**0.123**	**0.031**	**0.007**	**0.013**	**0.187**	**0.049**	**2.797**	**2.604**	**0.039**	**0.015**	**3.232**
CV%					**1.14**	**1.68**	**0.35**	**0.45**	**1.57**	**1.55**	**1.35**	**1.70**	**0.96**	**1.69**	**1.89**
Mean Difference											**0.05**	**0.08**	**0.00**	**-0.001**	**0.23**

Uganda - Rep 1

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.460	256	212	1.458	10.379	1.726	2.083	2.845	11.370	3.014	204.1	155.5	4.08	0.827	182.8
2	3.755	183	130	1.982	10.703	1.807	2.064	2.811	11.927	3.153	208.6	155.3	4.02	0.868	171.8
3	4.374	248	198	1.569	10.663	1.797	2.066	2.815	11.754	3.107	206.2	153.9	4.05	0.862	174.5
4	3.523	158	107	2.180	10.743	1.817	2.062	2.807	11.779	3.120	205.3	152.8	4.07	0.867	174.4
5	3.575	160	110	2.116	10.669	1.798	2.066	2.815	11.512	3.049	201.8	151.0	4.11	0.857	178.8
6	3.939	198	145	1.865	10.767	1.823	2.060	2.805	11.751	3.102	204.4	151.4	4.08	0.875	173.6
7	4.503	262	214	1.499	10.663	1.797	2.066	2.815	11.692	3.094	205.1	153.3	4.07	0.860	175.8
8	3.762	184	133	1.914	10.471	1.749	2.078	2.835	11.729	3.106	209.0	158.2	4.01	0.840	176.5
9	3.510	157	106	2.194	10.751	1.819	2.061	2.806	11.798	3.126	205.5	152.9	4.06	0.868	174.1
10	3.820	187	135	1.919	10.650	1.793	2.067	2.817	11.711	3.096	205.6	153.7	4.06	0.861	175.2
11	4.213	228	178	1.641	10.572	1.774	2.072	2.825	11.591	3.064	204.8	153.8	4.07	0.852	177.4
12	3.911	191	140	1.861	10.679	1.801	2.065	2.814	11.419	3.016	200.0	149.1	4.14	0.862	179.3
13	4.542	274	227	1.457	10.564	1.772	2.072	2.826	11.910	3.155	210.6	158.5	3.99	0.851	173.4
14	4.132	222	172	1.666	10.474	1.750	2.077	2.835	11.651	3.081	207.5	156.9	4.03	0.842	177.2
15	4.026	214	164	1.703	10.353	1.719	2.084	2.848	11.740	3.108	211.2	161.0	3.98	0.829	176.8
16	3.755	180	129	1.947	10.575	1.775	2.071	2.824	11.612	3.073	205.1	154.2	4.07	0.851	177.4
17	4.250	231	181	1.629	10.615	1.785	2.069	2.820	11.572	3.058	203.8	152.6	4.09	0.857	177.4
18	4.447	253	213	1.411	10.139	1.666	2.097	2.870	11.071	2.942	202.6	157.2	4.10	0.797	189.9
19	3.618	169	117	2.086	10.693	1.804	2.065	2.812	11.881	3.145	207.9	155.2	4.03	0.864	172.9
20	3.696	177	124	2.038	10.744	1.817	2.062	2.807	11.951	3.160	208.3	154.8	4.02	0.872	171.3
21	4.295	238	189	1.586	10.542	1.767	2.073	2.828	11.595	3.066	205.4	154.6	4.06	0.848	177.7
22	4.008	206	155	1.766	10.563	1.772	2.072	2.826	11.600	3.066	205.1	154.1	4.07	0.851	177.3
23	3.784	181	129	1.969	10.739	1.816	2.062	2.807	11.638	3.075	202.9	150.7	4.10	0.870	175.7
24	3.842	184	134	1.885	10.584	1.777	2.071	2.824	11.327	2.995	200.0	150.1	4.14	0.850	181.6
25	4.103	217	166	1.709	10.578	1.775	2.071	2.824	11.653	3.080	205.8	154.5	4.06	0.854	176.4
Target											**205.5**	**154.4**	**4.06**	**0.852**	**176.9**
Mean					**10.595**	**1.780**	**2.070**	**2.822**	**11.649**	**3.082**	**205.5**	**154.2**	**4.06**	**0.853**	**176.8**
sd					**0.146**	**0.037**	**0.009**	**0.015**	**0.202**	**0.052**	**2.839**	**2.760**	**0.040**	**0.017**	**3.868**
CV%					**1.38**	**2.06**	**0.41**	**0.54**	**1.73**	**1.69**	**1.38**	**1.79**	**0.99**	**1.99**	**2.19**
Mean Difference											**-0.04**	**-0.19**	**0.00**	**0.001**	**-0.13**

Appendix 11 - BIASFIX Replication 1

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

Coker - Rep 1

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.825	164	122	1.807	10.235	1.690	2.091	2.860	9.919	2.632	180.1	138.7	4.46	0.797	210.8
2	4.560	248	207	1.435	10.507	1.758	2.075	2.832	10.638	2.820	189.0	142.9	4.31	0.832	194.6
3	4.173	204	158	1.667	10.583	1.777	2.071	2.824	10.584	2.797	186.9	140.2	4.35	0.844	194.2
4	4.189	204	158	1.667	10.624	1.787	2.069	2.819	10.536	2.784	185.4	138.7	4.37	0.848	194.7
5	3.723	160	115	1.936	10.442	1.741	2.079	2.838	10.402	2.757	185.8	141.0	4.37	0.824	199.4
6	3.627	149	104	2.053	10.596	1.780	2.070	2.822	10.348	2.741	182.5	137.1	4.42	0.839	199.3
7	4.049	189	144	1.723	10.495	1.755	2.076	2.833	10.361	2.740	184.2	139.1	4.39	0.832	199.1
8	3.638	150	105	2.041	10.584	1.777	2.071	2.823	10.344	2.740	182.6	137.3	4.42	0.838	199.5
9	4.020	185	142	1.697	10.317	1.710	2.087	2.851	10.149	2.688	183.1	140.0	4.41	0.810	204.9
10	4.546	238	199	1.430	10.454	1.744	2.079	2.837	10.223	2.710	182.4	138.4	4.42	0.822	202.9
11	4.325	214	172	1.548	10.454	1.744	2.079	2.837	10.197	2.699	181.9	137.8	4.43	0.825	202.8
12	4.427	225	183	1.512	10.538	1.766	2.074	2.828	10.292	2.724	182.4	137.4	4.42	0.834	200.5
13	3.774	162	118	1.885	10.392	1.729	2.082	2.843	10.200	2.703	182.9	139.3	4.41	0.817	203.6
14	3.905	174	127	1.877	10.723	1.812	2.063	2.809	10.475	2.766	182.9	135.9	4.41	0.858	195.2
15	4.324	215	171	1.581	10.593	1.779	2.070	2.823	10.372	2.742	183.0	137.3	4.41	0.842	198.2
16	4.166	199	158	1.586	10.228	1.688	2.092	2.861	10.062	2.667	182.8	140.7	4.41	0.800	207.5
17	4.471	236	196	1.450	10.368	1.723	2.084	2.846	10.416	2.762	187.1	142.7	4.34	0.816	199.7
18	3.543	147	101	2.118	10.584	1.777	2.071	2.824	10.705	2.839	189.0	142.3	4.31	0.839	193.1
19	3.922	176	131	1.805	10.488	1.753	2.077	2.834	10.305	2.726	183.3	138.5	4.41	0.830	200.3
20	4.084	195	149	1.713	10.544	1.767	2.073	2.828	10.546	2.788	186.8	140.5	4.35	0.839	195.2
21	4.325	221	178	1.542	10.425	1.737	2.080	2.840	10.506	2.781	187.9	142.6	4.33	0.825	197.1
22	3.737	161	116	1.926	10.446	1.742	2.079	2.838	10.389	2.753	185.5	140.7	4.37	0.824	199.5
23	3.508	139	97	2.053	10.252	1.694	2.090	2.858	10.085	2.685	182.9	141.1	4.41	0.795	208.5
24	4.101	194	150	1.673	10.424	1.737	2.080	2.840	10.299	2.725	184.2	139.7	4.39	0.824	200.9
25	3.800	164	123	1.778	10.058	1.645	2.102	2.878	9.917	2.638	182.7	142.6	4.42	0.777	212.9
Target											**184.3**	**139.6**	**4.39**	**0.826**	**200.3**
Mean					**10.454**	**1.745**	**2.079**	**2.837**	**10.331**	**2.736**	**184.3**	**139.7**	**4.39**	**0.825**	**200.6**
sd					**0.150**	**0.038**	**0.009**	**0.016**	**0.206**	**0.052**	**2.362**	**2.009**	**0.040**	**0.018**	**5.232**
CV%					**1.44**	**2.15**	**0.42**	**0.55**	**1.99**	**1.89**	**1.28**	**1.44**	**0.90**	**2.23**	**2.61**
Mean Difference											**-0.02**	**0.10**	**0.00**	**-0.001**	**0.28**

Tanguis - Rep 1

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.533	178	146	1.486	10.677	1.800	2.066	2.814	7.846	2.077	137.5	102.7	5.39	0.819	261.9
2	4.406	169	133	1.615	10.942	1.866	2.050	2.786	8.084	2.135	138.6	101.6	5.36	0.852	251.3
3	4.091	142	106	1.795	10.897	1.855	2.053	2.791	7.877	2.078	135.6	99.5	5.44	0.846	257.7
4	3.702	118	82	2.071	10.882	1.852	2.054	2.793	8.028	2.121	138.4	101.8	5.37	0.845	253.5
5	3.599	110	75	2.151	10.871	1.849	2.054	2.794	7.920	2.094	136.6	100.7	5.41	0.840	257.5
6	4.143	148	113	1.715	10.706	1.808	2.064	2.811	7.876	2.080	137.7	102.4	5.38	0.826	259.6
7	3.784	122	87	1.966	10.729	1.813	2.062	2.808	7.840	2.072	136.8	101.7	5.41	0.827	261.0
8	3.981	137	101	1.840	10.784	1.827	2.059	2.803	7.964	2.102	138.3	102.4	5.37	0.836	256.0
9	4.211	151	115	1.724	10.919	1.861	2.051	2.789	7.909	2.087	135.9	99.7	5.43	0.849	256.5
10	3.876	130	92	1.997	11.107	1.908	2.040	2.769	8.192	2.160	138.6	100.4	5.36	0.873	246.0
11	3.858	129	91	2.010	11.105	1.907	2.041	2.769	8.205	2.163	138.9	100.6	5.35	0.872	245.7
12	4.095	146	108	1.828	11.042	1.892	2.044	2.776	8.180	2.157	139.2	101.2	5.34	0.866	246.9
13	4.338	161	126	1.633	10.853	1.844	2.055	2.796	7.888	2.083	136.3	100.4	5.42	0.841	258.1
14	4.059	142	106	1.795	10.812	1.834	2.058	2.800	7.949	2.098	137.8	101.7	5.38	0.839	256.1
15	4.456	172	138	1.553	10.794	1.830	2.059	2.802	7.935	2.098	137.7	102.0	5.38	0.834	257.5
16	3.829	126	89	2.004	11.003	1.882	2.047	2.780	8.072	2.129	137.8	100.5	5.38	0.860	250.7
17	3.665	116	79	2.156	11.087	1.903	2.042	2.771	8.181	2.160	138.7	100.7	5.36	0.868	247.0
18	3.910	132	96	1.891	10.790	1.829	2.059	2.802	7.967	2.103	138.3	102.3	5.37	0.836	255.9
19	3.629	114	78	2.136	10.905	1.857	2.052	2.790	8.093	2.139	139.2	102.3	5.34	0.847	251.6
20	3.512	107	72	2.209	10.808	1.833	2.058	2.800	8.067	2.136	139.9	103.6	5.33	0.834	254.0
21	4.011	140	103	1.847	10.895	1.855	2.053	2.791	8.087	2.133	139.2	102.2	5.34	0.849	251.0
22	4.554	182	149	1.492	10.751	1.819	2.061	2.806	7.999	2.117	139.3	103.6	5.34	0.829	256.3
23	3.822	126	89	2.004	10.981	1.876	2.048	2.782	8.091	2.135	138.3	101.0	5.37	0.857	250.3
24	4.052	142	106	1.795	10.793	1.829	2.059	2.802	7.966	2.102	138.3	102.2	5.37	0.837	255.8
25	4.372	167	132	1.601	10.796	1.830	2.059	2.802	8.015	2.117	139.1	102.9	5.35	0.836	254.6
Target											**138.1**	**101.6**	**5.37**	**0.844**	**254.3**
Mean					**10.877**	**1.850**	**2.054**	**2.793**	**8.009**	**2.115**	**138.1**	**101.6**	**5.37**	**0.845**	**254.1**
sd					**0.123**	**0.031**	**0.007**	**0.013**	**0.112**	**0.029**	**1.123**	**1.111**	**0.030**	**0.015**	**4.589**
CV%					**1.13**	**1.66**	**0.35**	**0.46**	**1.40**	**1.36**	**0.81**	**1.09**	**0.56**	**1.74**	**1.81**
Mean Difference											**-0.02**	**0.01**	**0.00**	**0.001**	**-0.20**

Appendix 11 - BIASFIX Replication 1

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

Old B19 - Rep 1

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.537	233	191	1.488	10.694	1.804	2.065	2.812	10.267	2.717	179.7	134.0	4.47	0.849	200.0
2	4.100	188	143	1.728	10.650	1.794	2.067	2.817	10.172	2.687	178.6	133.4	4.49	0.847	201.5
3	4.152	192	146	1.729	10.789	1.828	2.059	2.802	10.240	2.703	177.8	131.5	4.50	0.863	199.1
4	3.627	144	101	2.033	10.526	1.762	2.074	2.830	9.944	2.636	176.4	133.2	4.53	0.827	208.1
5	4.249	200	156	1.644	10.677	1.800	2.066	2.814	10.074	2.661	176.5	131.6	4.53	0.849	203.3
6	4.325	208	165	1.589	10.631	1.789	2.068	2.819	10.064	2.660	177.0	132.4	4.52	0.843	204.0
7	3.505	136	93	2.139	10.543	1.767	2.073	2.828	10.095	2.679	178.8	135.1	4.48	0.828	205.4
8	4.427	220	178	1.528	10.610	1.783	2.069	2.821	10.123	2.678	178.3	133.7	4.49	0.840	203.2
9	3.785	157	115	1.864	10.345	1.717	2.085	2.848	9.786	2.594	176.1	134.6	4.53	0.808	212.7
10	3.991	176	131	1.805	10.673	1.799	2.066	2.814	10.087	2.664	176.8	131.8	4.52	0.849	203.0
11	4.075	183	137	1.784	10.811	1.834	2.058	2.800	10.164	2.682	176.2	130.1	4.53	0.865	200.3
12	3.518	137	92	2.218	10.858	1.846	2.055	2.795	10.330	2.734	178.4	131.7	4.49	0.866	197.9
13	3.739	152	109	1.945	10.521	1.761	2.075	2.830	9.852	2.608	174.8	131.9	4.56	0.827	209.7
14	3.805	158	114	1.921	10.614	1.785	2.069	2.820	9.952	2.632	175.3	131.3	4.55	0.839	206.5
15	4.076	186	139	1.791	10.839	1.841	2.056	2.797	10.350	2.731	179.0	131.9	4.48	0.870	196.5
16	4.477	226	184	1.509	10.644	1.792	2.067	2.817	10.193	2.697	179.1	134.0	4.48	0.844	201.7
17	3.987	173	132	1.718	10.313	1.709	2.087	2.852	9.653	2.557	174.2	133.3	4.57	0.805	215.5
18	4.318	207	163	1.613	10.717	1.810	2.063	2.810	10.120	2.674	176.8	131.5	4.52	0.853	202.2
19	4.073	182	137	1.765	10.728	1.813	2.063	2.809	10.047	2.653	175.3	130.2	4.55	0.854	203.3
20	3.762	158	110	2.063	11.031	1.889	2.045	2.777	10.519	2.775	179.1	130.4	4.48	0.891	192.3
21	3.524	138	93	2.202	10.823	1.837	2.057	2.799	10.340	2.737	179.1	132.6	4.48	0.862	198.0
22	3.604	144	99	2.116	10.757	1.820	2.061	2.806	10.254	2.713	178.5	132.6	4.49	0.855	199.9
23	3.787	157	111	2.001	10.866	1.848	2.055	2.794	10.182	2.688	175.7	129.4	4.54	0.869	199.8
24	4.047	181	134	1.825	10.900	1.856	2.053	2.791	10.270	2.709	176.7	129.7	4.52	0.875	197.6
25	4.365	214	167	1.642	10.960	1.871	2.049	2.785	10.451	2.759	179.0	131.0	4.48	0.882	194.1
Target											**177.2**	**132.0**	**4.51**	**0.850**	**202.3**
Mean					**10.701**	**1.806**	**2.064**	**2.811**	**10.141**	**2.681**	**177.3**	**132.1**	**4.51**	**0.850**	**202.2**
sd					**0.173**	**0.043**	**0.010**	**0.018**	**0.201**	**0.051**	**1.584**	**1.531**	**0.029**	**0.021**	**5.388**
CV%					**1.62**	**2.40**	**0.49**	**0.64**	**1.98**	**1.90**	**0.89**	**1.16**	**0.63**	**2.48**	**2.66**
Mean Difference											**0.12**	**0.11**	**0.00**	**0.000**	**-0.08**

Old D3 - Rep 1

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.728	200	138	2.100	11.070	1.898	2.043	2.773	13.605	3.590	230.9	167.8	3.74	0.924	148.5
2	3.868	210	149	1.986	11.044	1.892	2.044	2.776	13.224	3.488	225.0	163.6	3.81	0.919	152.7
3	4.197	251	189	1.764	11.048	1.893	2.044	2.775	13.383	3.529	227.6	165.4	3.78	0.921	150.9
4	4.412	277	220	1.585	10.827	1.838	2.057	2.798	13.083	3.457	226.5	167.3	3.79	0.892	155.9
5	4.046	236	174	1.840	10.958	1.871	2.049	2.785	13.461	3.550	230.6	168.6	3.74	0.912	150.4
6	4.217	254	193	1.732	10.968	1.873	2.049	2.784	13.319	3.514	227.9	166.6	3.77	0.911	152.1
7	3.707	198	136	2.120	11.079	1.901	2.042	2.772	13.635	3.598	231.3	167.9	3.73	0.925	148.2
8	4.304	266	206	1.667	10.917	1.860	2.052	2.789	13.316	3.515	228.8	167.9	3.76	0.905	152.5
9	3.589	185	125	2.190	10.979	1.876	2.048	2.783	13.512	3.571	231.1	169.1	3.74	0.911	150.3
10	4.102	242	182	1.768	10.817	1.835	2.057	2.799	13.264	3.500	229.8	169.6	3.75	0.894	153.5
11	4.502	292	235	1.544	10.863	1.847	2.055	2.795	13.269	3.508	229.0	168.9	3.76	0.896	153.7
12	3.622	184	128	2.066	10.633	1.789	2.068	2.818	12.846	3.402	225.9	169.3	3.80	0.866	160.3
13	3.828	208	148	1.975	10.887	1.853	2.053	2.792	13.215	3.488	227.7	167.3	3.78	0.901	153.8
14	3.638	189	129	2.147	10.970	1.873	2.048	2.784	13.416	3.544	229.6	168.0	3.75	0.910	151.4
15	3.953	227	167	1.848	10.740	1.816	2.062	2.807	13.340	3.522	232.6	172.6	3.72	0.886	153.1
16	4.072	242	180	1.808	10.900	1.856	2.053	2.791	13.554	3.575	233.3	171.2	3.71	0.906	149.7
17	4.584	308	252	1.494	10.830	1.839	2.057	2.798	13.449	3.559	232.8	172.2	3.72	0.892	152.1
18	3.867	217	157	1.910	10.749	1.818	2.061	2.806	13.354	3.527	232.6	172.6	3.72	0.887	153.0
19	3.514	178	120	2.200	10.787	1.828	2.059	2.803	13.379	3.543	232.4	172.5	3.72	0.886	153.3
20	4.163	254	191	1.768	10.980	1.876	2.048	2.782	13.688	3.610	234.0	170.9	3.70	0.916	147.9
21	4.220	262	204	1.649	10.629	1.788	2.068	2.819	13.331	3.522	234.5	175.4	3.70	0.873	153.9
22	3.762	206	148	1.937	10.556	1.770	2.073	2.826	13.224	3.500	234.0	176.1	3.70	0.863	155.9
23	4.203	256	198	1.672	10.679	1.801	2.065	2.814	13.190	3.484	231.1	172.2	3.74	0.878	155.2
24	3.869	218	158	1.904	10.728	1.813	2.063	2.809	13.380	3.534	233.5	173.5	3.71	0.885	152.8
25	4.193	254	196	1.679	10.685	1.802	2.065	2.813	13.161	3.476	230.4	171.7	3.74	0.879	155.5
Target											**230.5**	**170.0**	**3.74**	**0.896**	**152.8**
Mean					**10.853**	**1.844**	**2.055**	**2.796**	**13.344**	**3.524**	**230.5**	**169.9**	**3.74**	**0.898**	**152.7**
sd					**0.150**	**0.038**	**0.009**	**0.016**	**0.184**	**0.047**	**2.688**	**3.042**	**0.031**	**0.018**	**2.773**
CV%					**1.38**	**2.04**	**0.43**	**0.56**	**1.38**	**1.33**	**1.17**	**1.79**	**0.84**	**2.02**	**1.82**
Mean Difference											**0.01**	**-0.08**	**0.00**	**0.002**	**-0.14**

Appendix 11 - BIASFIX Replication 1

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

ICCS K - Rep 1

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.481	103	77	1.789	11.911	2.109	1.994	2.686	5.179	1.371	82.1	56.8	7.56	0.897	382.6
2	4.218	92	65	2.003	12.117	2.160	1.982	2.665	5.308	1.403	82.8	56.4	7.52	0.924	370.3
3	4.114	88	61	2.081	12.138	2.166	1.980	2.662	5.344	1.412	83.2	56.6	7.50	0.928	367.1
4	4.144	88	61	2.081	12.226	2.188	1.975	2.653	5.307	1.403	82.1	55.5	7.56	0.936	369.2
5	4.543	108	80	1.823	12.228	2.188	1.975	2.653	5.433	1.443	84.0	57.1	7.46	0.931	363.3
6	3.825	77	50	2.372	12.397	2.230	1.965	2.635	5.512	1.457	84.1	56.2	7.45	0.960	353.3
7	3.905	80	52	2.367	12.636	2.290	1.951	2.611	5.605	1.484	83.8	55.4	7.46	0.985	346.2
8	3.706	71	46	2.382	12.050	2.144	1.986	2.671	5.268	1.390	82.6	56.4	7.53	0.920	372.4
9	3.660	70	45	2.420	12.035	2.140	1.986	2.673	5.320	1.403	83.5	57.1	7.48	0.920	368.9
10	3.524	66	41	2.591	12.196	2.180	1.977	2.656	5.469	1.444	84.8	57.4	7.41	0.939	357.6
11	3.512	65	40	2.641	12.327	2.213	1.969	2.643	5.475	1.446	84.0	56.4	7.46	0.953	356.1
12	4.371	100	72	1.929	12.231	2.189	1.975	2.653	5.430	1.439	83.9	56.9	7.46	0.935	362.2
13	4.020	86	57	2.276	12.646	2.292	1.951	2.610	5.697	1.510	85.2	56.2	7.39	0.987	341.1
14	4.445	104	75	1.923	12.409	2.233	1.965	2.634	5.549	1.474	84.5	56.8	7.43	0.952	354.0
15	3.939	83	55	2.277	12.394	2.230	1.966	2.636	5.608	1.483	85.5	57.3	7.37	0.961	347.6
16	4.098	89	61	2.129	12.284	2.202	1.972	2.647	5.514	1.458	84.9	57.2	7.41	0.946	354.8
17	4.439	104	75	1.923	12.392	2.229	1.966	2.636	5.556	1.475	84.8	57.0	7.41	0.951	353.6
18	3.727	73	46	2.518	12.624	2.287	1.952	2.612	5.598	1.481	83.8	55.3	7.47	0.986	346.2
19	4.357	99	70	2.000	12.501	2.256	1.959	2.625	5.537	1.470	83.7	55.9	7.47	0.963	353.7
20	3.813	76	49	2.406	12.485	2.252	1.960	2.626	5.514	1.458	83.5	55.6	7.48	0.969	352.5
21	3.761	72	46	2.450	12.482	2.251	1.960	2.627	5.365	1.418	81.3	54.1	7.61	0.966	362.3
22	3.906	80	52	2.367	12.640	2.291	1.951	2.610	5.604	1.484	83.8	55.3	7.47	0.986	346.3
23	3.607	67	42	2.545	12.312	2.209	1.970	2.644	5.351	1.413	82.2	55.2	7.56	0.949	364.4
24	4.211	92	65	2.003	12.096	2.155	1.983	2.667	5.317	1.405	83.1	56.7	7.51	0.922	369.7
25	4.544	107	78	1.882	12.500	2.256	1.959	2.625	5.511	1.467	83.3	55.8	7.49	0.957	356.9
Target											**83.6**	**56.2**	**7.48**	**0.950**	**358.3**
Mean					**12.330**	**2.214**	**1.969**	**2.642**	**5.455**	**1.444**	**83.6**	**56.3**	**7.48**	**0.949**	**358.9**
sd					**0.207**	**0.052**	**0.012**	**0.021**	**0.131**	**0.036**	**1.046**	**0.817**	**0.058**	**0.024**	**10.098**
CV%					**1.68**	**2.34**	**0.61**	**0.81**	**2.40**	**2.51**	**1.25**	**1.45**	**0.78**	**2.51**	**2.81**
Mean Difference											**0.02**	**0.07**	**0.00**	**-0.001**	**0.58**

ICCS B23 - Rep 1

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.411	208	161	1.669	11.195	1.930	2.035	2.760	10.145	2.678	170.5	122.9	4.64	0.903	198.6
2	3.754	151	103	2.149	11.329	1.963	2.028	2.746	10.334	2.724	171.8	122.6	4.61	0.922	193.7
3	3.796	154	105	2.151	11.464	1.997	2.020	2.732	10.411	2.744	171.2	121.2	4.62	0.938	191.4
4	4.161	188	138	1.856	11.338	1.966	2.027	2.745	10.448	2.754	173.5	123.8	4.58	0.924	191.5
5	4.439	211	162	1.696	11.389	1.978	2.024	2.740	10.329	2.728	170.9	121.8	4.63	0.925	194.1
6	4.038	173	125	1.915	11.244	1.942	2.033	2.755	10.139	2.672	169.7	121.8	4.65	0.911	197.8
7	3.907	162	114	2.019	11.286	1.953	2.030	2.751	10.185	2.684	169.9	121.6	4.65	0.916	196.7
8	3.703	148	98	2.281	11.662	2.046	2.008	2.712	10.681	2.816	172.8	120.8	4.59	0.962	185.6
9	3.875	160	111	2.078	11.419	1.986	2.022	2.737	10.338	2.724	170.6	121.1	4.64	0.932	193.0
10	3.526	132	86	2.356	11.371	1.974	2.025	2.742	10.286	2.716	170.4	121.5	4.64	0.923	194.9
11	4.183	186	136	1.870	11.460	1.996	2.020	2.733	10.330	2.724	169.9	120.3	4.65	0.936	193.1
12	3.611	139	91	2.333	11.564	2.022	2.014	2.722	10.470	2.762	170.8	120.2	4.63	0.948	190.0
13	3.678	144	96	2.250	11.471	1.999	2.019	2.732	10.382	2.738	170.6	120.8	4.64	0.937	192.1
14	4.345	205	154	1.772	11.475	2.000	2.019	2.731	10.559	2.787	173.5	122.9	4.58	0.938	189.1
15	3.504	132	85	2.412	11.494	2.005	2.018	2.729	10.514	2.776	172.5	122.0	4.60	0.939	189.9
16	3.939	165	116	2.023	11.393	1.979	2.024	2.740	10.292	2.712	170.2	121.0	4.64	0.929	194.0
17	4.276	196	146	1.802	11.421	1.986	2.022	2.737	10.382	2.738	171.3	121.7	4.62	0.931	192.5
18	4.338	202	153	1.743	11.332	1.964	2.027	2.746	10.310	2.721	171.3	122.4	4.62	0.920	194.4
19	4.497	217	171	1.610	11.150	1.918	2.038	2.765	10.134	2.678	170.9	123.7	4.63	0.897	199.3
20	4.076	177	130	1.854	11.098	1.906	2.041	2.770	10.057	2.651	170.3	123.4	4.64	0.895	200.4
21	3.896	159	113	1.980	11.100	1.906	2.041	2.770	9.907	2.612	167.7	121.5	4.69	0.893	203.5
22	4.293	196	151	1.685	10.963	1.872	2.049	2.784	9.905	2.614	169.6	124.0	4.66	0.877	204.7
23	3.681	142	98	2.100	10.928	1.863	2.051	2.788	9.806	2.590	168.4	123.5	4.68	0.871	207.3
24	4.336	200	155	1.665	10.988	1.878	2.047	2.782	9.921	2.619	169.5	123.8	4.66	0.879	204.2
25	3.574	137	91	2.267	11.208	1.933	2.035	2.759	10.260	2.709	172.2	124.1	4.60	0.905	196.3
Target											**170.9**	**122.3**	**4.63**	**0.918**	**195.4**
Mean					**11.310**	**1.958**	**2.029**	**2.748**	**10.261**	**2.707**	**170.8**	**122.2**	**4.63**	**0.918**	**195.5**
sd					**0.191**	**0.048**	**0.011**	**0.020**	**0.219**	**0.057**	**1.406**	**1.228**	**0.027**	**0.023**	**5.376**
CV%					**1.69**	**2.44**	**0.55**	**0.72**	**2.13**	**2.12**	**0.82**	**1.01**	**0.58**	**2.52**	**2.75**
Mean Difference											**-0.09**	**-0.12**	**0.00**	**0.000**	**0.12**

Appendix 11 - BIASFIX Replication 1

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

ICCS E3 - Rep 1

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.080	327	285	1.316	8.916	1.360	2.168	2.997	15.511	4.217	313.3	268.6	3.01	0.689	146.3
2	3.603	252	200	1.588	8.850	1.344	2.172	3.003	15.575	4.258	316.3	273.8	2.99	0.677	147.4
3	4.338	385	351	1.203	8.988	1.378	2.164	2.989	16.088	4.370	323.1	275.5	2.94	0.699	140.5
4	3.627	259	207	1.566	8.830	1.339	2.173	3.006	15.752	4.308	320.4	277.8	2.96	0.676	145.9
5	4.559	426	410	1.080	8.884	1.352	2.170	3.000	15.835	4.327	320.7	276.9	2.96	0.682	144.7
6	4.364	385	351	1.203	9.042	1.391	2.161	2.984	15.955	4.328	319.0	270.8	2.97	0.705	141.1
7	3.897	293	248	1.396	8.825	1.337	2.173	3.006	15.243	4.158	310.2	268.3	3.03	0.676	150.1
8	3.535	239	188	1.616	8.786	1.327	2.176	3.010	15.317	4.201	312.7	272.6	3.01	0.666	151.0
9	4.410	387	353	1.202	9.133	1.414	2.155	2.974	15.799	4.277	313.6	264.1	3.00	0.714	141.6
10	4.324	372	339	1.204	8.964	1.372	2.165	2.992	15.620	4.245	314.3	268.6	3.00	0.694	145.0
11	4.567	411	393	1.094	8.964	1.372	2.165	2.992	15.329	4.178	308.4	264.3	3.04	0.688	148.5
12	3.760	277	225	1.516	8.966	1.373	2.165	2.991	15.743	4.281	316.7	270.7	2.98	0.694	144.0
13	4.031	321	278	1.333	8.877	1.350	2.170	3.001	15.579	4.241	315.7	271.6	2.99	0.685	146.1
14	3.959	307	261	1.384	8.917	1.360	2.168	2.997	15.547	4.228	314.0	269.3	3.00	0.689	146.0
15	4.156	345	302	1.305	9.034	1.390	2.161	2.984	15.879	4.303	317.7	269.5	2.98	0.705	141.6
16	4.263	367	329	1.244	9.010	1.384	2.163	2.987	15.949	4.327	319.7	271.9	2.96	0.702	141.4
17	3.514	241	186	1.679	8.953	1.369	2.166	2.993	15.844	4.326	319.1	274.1	2.97	0.688	144.1
18	4.050	329	282	1.361	9.033	1.389	2.161	2.984	16.003	4.337	320.2	271.7	2.96	0.706	140.5
19	3.791	278	223	1.554	9.187	1.428	2.152	2.969	15.787	4.267	312.0	261.4	3.01	0.721	141.2
20	4.248	360	317	1.290	9.170	1.424	2.153	2.970	15.982	4.317	316.3	265.1	2.99	0.722	139.3
21	4.177	340	297	1.311	9.105	1.407	2.157	2.977	15.563	4.210	309.6	261.0	3.03	0.712	143.7
22	3.774	274	221	1.537	9.081	1.401	2.159	2.980	15.586	4.225	310.7	262.8	3.02	0.707	144.1
23	4.394	383	345	1.232	9.233	1.439	2.150	2.964	15.898	4.292	313.0	261.2	3.01	0.727	139.7
24	3.890	290	237	1.497	9.206	1.432	2.151	2.967	15.602	4.212	307.9	257.4	3.04	0.723	142.4
25	3.637	252	195	1.670	9.235	1.440	2.150	2.963	15.704	4.248	309.1	258.5	3.03	0.724	141.9
Target											**314.7**	**268.4**	**3.00**	**0.697**	**144.4**
Mean					**9.008**	**1.383**	**2.163**	**2.987**	**15.708**	**4.267**	**314.9**	**268.3**	**3.00**	**0.699**	**143.9**
sd					**0.134**	**0.033**	**0.008**	**0.014**	**0.225**	**0.056**	**4.317**	**5.736**	**0.029**	**0.017**	**3.182**
CV%					**1.49**	**2.42**	**0.36**	**0.46**	**1.43**	**1.30**	**1.37**	**2.14**	**0.97**	**2.48**	**2.21**
Mean Difference											**0.24**	**-0.09**	**0.00**	**0.002**	**-0.47**

ICCS H2 - Rep 1

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.865	110	73	2.271	12.134	2.164	1.981	2.663	7.559	1.995	117.8	80.0	5.99	0.971	259.0
2	4.104	122	85	2.060	12.020	2.136	1.987	2.675	7.376	1.947	116.0	79.4	6.05	0.955	266.6
3	3.585	95	60	2.507	12.101	2.156	1.983	2.666	7.560	1.995	118.1	80.4	5.98	0.968	259.3
4	3.760	104	67	2.409	12.328	2.213	1.969	2.643	7.660	2.023	117.5	78.9	6.00	0.994	254.5
5	4.329	139	100	1.932	12.126	2.162	1.981	2.664	7.625	2.018	118.9	81.0	5.95	0.966	258.1
6	3.744	103	67	2.363	12.102	2.157	1.983	2.666	7.519	1.984	117.4	79.9	6.00	0.968	260.6
7	3.654	98	63	2.420	12.018	2.136	1.987	2.675	7.459	1.968	117.3	80.2	6.00	0.958	263.2
8	3.951	115	77	2.231	12.246	2.193	1.974	2.651	7.634	2.016	117.8	79.6	5.99	0.983	256.1
9	4.037	120	83	2.090	11.947	2.118	1.992	2.682	7.450	1.966	117.8	81.0	5.99	0.949	264.2
10	4.470	148	110	1.810	11.976	2.125	1.990	2.679	7.520	1.991	118.6	81.7	5.96	0.947	263.1
11	4.248	132	94	1.972	12.067	2.148	1.985	2.670	7.482	1.978	117.2	80.1	6.01	0.959	263.0
12	4.588	152	114	1.778	12.143	2.167	1.980	2.662	7.443	1.976	115.9	79.1	6.05	0.959	265.8
13	4.395	142	102	1.938	12.338	2.216	1.969	2.642	7.698	2.042	117.9	79.5	5.98	0.987	255.2
14	4.440	145	107	1.836	12.011	2.134	1.988	2.675	7.491	1.983	117.8	80.9	5.99	0.950	263.8
15	3.566	93	59	2.485	11.959	2.121	1.991	2.681	7.399	1.952	116.9	80.3	6.02	0.950	265.9
16	3.641	97	62	2.448	12.075	2.150	1.984	2.669	7.470	1.971	116.9	79.7	6.02	0.964	262.5
17	3.813	105	68	2.384	12.404	2.232	1.965	2.635	7.570	2.000	115.4	77.2	6.07	1.000	257.2
18	3.950	117	77	2.309	12.553	2.269	1.956	2.619	7.962	2.108	119.9	79.6	5.92	1.020	244.2
19	4.073	123	84	2.144	12.273	2.199	1.973	2.648	7.705	2.037	118.7	80.1	5.96	0.986	253.9
20	4.185	128	90	2.023	12.101	2.156	1.983	2.666	7.494	1.981	117.0	79.8	6.01	0.964	262.2
21	4.544	151	113	1.786	12.063	2.147	1.985	2.670	7.483	1.984	117.2	80.4	6.01	0.953	264.5
22	3.665	99	63	2.469	12.234	2.189	1.975	2.652	7.617	2.011	117.7	79.5	5.99	0.983	256.4
23	4.249	132	92	2.059	12.438	2.241	1.963	2.631	7.715	2.045	117.3	78.5	6.01	1.000	253.5
24	4.000	117	78	2.250	12.477	2.250	1.961	2.627	7.721	2.043	117.0	78.0	6.01	1.008	252.3
25	4.720	161	123	1.713	12.188	2.178	1.978	2.657	7.484	1.992	116.1	79.2	6.05	0.960	265.1
Target											**117.4**	**79.7**	**6.00**	**0.973**	**259.2**
Mean					**12.173**	**2.174**	**1.978**	**2.659**	**7.564**	**2.000**	**117.4**	**79.8**	**6.00**	**0.972**	**259.6**
sd					**0.170**	**0.043**	**0.010**	**0.018**	**0.130**	**0.036**	**1.007**	**0.979**	**0.035**	**0.020**	**5.448**
CV%					**1.40**	**1.95**	**0.50**	**0.66**	**1.73**	**1.78**	**0.86**	**1.23**	**0.58**	**2.10**	**2.10**
Mean Difference											**0.04**	**0.05**	**0.00**	**-0.001**	**0.41**

Appendix 11 - BIASFIX Replication 1

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

ICCS C33 - Rep 1

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.887	229	176	1.693	9.958	1.621	2.107	2.888	13.100	3.487	243.3	191.2	3.60	0.795	161.8
2	4.164	271	217	1.560	10.113	1.659	2.098	2.872	13.583	3.605	249.1	193.3	3.54	0.817	154.6
3	4.588	333	293	1.292	9.913	1.609	2.110	2.893	13.379	3.571	249.4	197.1	3.54	0.788	159.4
4	3.772	220	162	1.844	10.233	1.689	2.091	2.860	13.698	3.636	248.8	191.6	3.54	0.829	152.8
5	4.061	256	199	1.655	10.249	1.693	2.090	2.858	13.677	3.625	248.1	190.6	3.55	0.833	152.5
6	4.302	288	236	1.489	10.145	1.667	2.097	2.869	13.518	3.588	247.3	191.5	3.56	0.820	155.2
7	3.956	241	183	1.734	10.300	1.706	2.088	2.853	13.650	3.617	246.6	188.8	3.57	0.839	152.5
8	3.672	204	152	1.801	9.804	1.582	2.116	2.904	13.007	3.477	244.6	194.9	3.59	0.773	165.0
9	3.526	189	136	1.931	9.874	1.600	2.112	2.897	13.194	3.531	246.7	196.0	3.57	0.779	162.6
10	4.270	286	238	1.444	9.877	1.600	2.112	2.897	13.329	3.550	249.1	197.0	3.54	0.788	159.6
11	4.411	303	258	1.379	9.917	1.610	2.110	2.893	13.231	3.525	246.5	194.4	3.57	0.790	160.7
12	3.925	235	181	1.686	10.026	1.638	2.103	2.881	13.244	3.521	244.6	191.2	3.59	0.804	159.4
13	3.733	215	159	1.828	10.071	1.649	2.101	2.877	13.506	3.594	248.5	193.9	3.55	0.809	156.4
14	4.100	260	208	1.563	9.969	1.623	2.107	2.887	13.305	3.538	246.8	193.7	3.56	0.799	159.0
15	4.378	300	254	1.395	9.911	1.609	2.110	2.893	13.304	3.544	248.0	195.6	3.55	0.791	159.8
16	4.558	334	289	1.336	10.049	1.643	2.102	2.879	13.769	3.666	253.8	198.4	3.49	0.807	153.6
17	3.821	227	172	1.742	9.976	1.625	2.106	2.887	13.481	3.589	250.0	196.3	3.53	0.799	157.2
18	4.160	268	217	1.525	9.960	1.621	2.107	2.888	13.291	3.535	246.8	193.8	3.56	0.797	159.3
19	3.827	228	173	1.737	9.972	1.624	2.107	2.887	13.495	3.593	250.3	196.6	3.53	0.798	157.1
20	4.233	282	230	1.503	10.041	1.641	2.103	2.880	13.576	3.607	250.4	195.5	3.53	0.809	155.3
21	4.024	251	197	1.623	10.029	1.638	2.103	2.881	13.425	3.568	247.9	193.6	3.55	0.806	157.1
22	3.988	244	190	1.649	10.042	1.641	2.103	2.880	13.315	3.538	245.6	191.7	3.58	0.807	158.4
23	4.393	303	256	1.401	9.972	1.624	2.107	2.887	13.409	3.569	248.7	195.3	3.54	0.798	158.0
24	3.574	197	141	1.952	10.082	1.652	2.100	2.876	13.575	3.619	249.6	194.9	3.54	0.807	156.0
25	4.139	267	218	1.500	9.805	1.582	2.116	2.904	13.213	3.522	248.4	197.5	3.55	0.779	161.6
Target											**247.9**	**194.0**	**3.55**	**0.804**	**157.5**
Mean					**10.011**	**1.634**	**2.104**	**2.883**	**13.411**	**3.569**	**247.9**	**194.2**	**3.55**	**0.802**	**157.8**
sd					**0.128**	**0.032**	**0.007**	**0.013**	**0.195**	**0.047**	**2.222**	**2.459**	**0.023**	**0.016**	**3.277**
CV%					**1.28**	**1.96**	**0.35**	**0.46**	**1.46**	**1.33**	**0.90**	**1.27**	**0.64**	**2.05**	**2.08**
Mean Difference											**0.04**	**0.18**	**0.00**	**-0.002**	**0.30**

ICCS F2 - Rep 1

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.994	88	62	2.015	11.517	2.010	2.017	2.727	5.391	1.421	88.3	62.3	7.23	0.869	369.0
2	4.039	88	62	2.015	11.646	2.043	2.009	2.713	5.327	1.404	86.3	60.4	7.33	0.881	372.2
3	3.657	73	48	2.313	11.637	2.040	2.010	2.714	5.390	1.421	87.4	61.2	7.27	0.880	368.1
4	3.503	69	45	2.351	11.279	1.951	2.030	2.751	5.413	1.430	90.3	64.8	7.12	0.842	371.6
5	4.150	94	68	1.911	11.538	2.015	2.015	2.725	5.339	1.408	87.3	61.5	7.28	0.870	372.7
6	4.506	112	86	1.696	11.558	2.021	2.014	2.722	5.399	1.427	88.1	62.2	7.24	0.868	370.1
7	4.533	113	86	1.726	11.765	2.072	2.002	2.701	5.481	1.451	88.0	61.3	7.24	0.889	363.0
8	3.782	78	53	2.166	11.478	2.001	2.019	2.731	5.318	1.402	87.3	61.8	7.28	0.864	374.6
9	3.806	79	54	2.140	11.454	1.994	2.020	2.733	5.307	1.399	87.3	61.9	7.28	0.861	375.6
10	3.628	73	47	2.412	11.904	2.107	1.994	2.687	5.589	1.474	88.7	61.1	7.20	0.912	352.4
11	4.397	106	79	1.800	11.736	2.065	2.004	2.704	5.452	1.441	87.7	61.2	7.26	0.888	364.2
12	4.225	98	71	1.905	11.720	2.061	2.005	2.706	5.453	1.439	87.8	61.2	7.25	0.889	363.5
13	4.159	93	66	1.986	11.871	2.099	1.996	2.690	5.408	1.427	86.1	59.4	7.34	0.903	364.9
14	3.682	74	48	2.377	11.952	2.119	1.991	2.682	5.520	1.456	87.3	59.9	7.28	0.915	356.3
15	4.273	97	71	1.866	11.689	2.053	2.007	2.709	5.262	1.389	85.0	59.4	7.40	0.881	377.2
16	3.980	87	59	2.174	12.113	2.159	1.982	2.665	5.631	1.487	87.9	59.8	7.25	0.933	348.2
17	4.502	109	83	1.725	11.677	2.050	2.007	2.710	5.319	1.407	86.0	60.2	7.35	0.878	374.6
18	4.354	101	75	1.814	11.679	2.051	2.007	2.710	5.273	1.392	85.2	59.6	7.39	0.879	376.9
19	3.988	86	59	2.125	11.939	2.116	1.992	2.683	5.467	1.442	86.5	59.5	7.32	0.913	360.0
20	3.866	80	55	2.116	11.537	2.015	2.015	2.725	5.243	1.382	85.7	60.4	7.36	0.868	379.1
21	3.727	75	49	2.343	11.969	2.123	1.990	2.680	5.470	1.443	86.3	59.2	7.33	0.916	359.3
22	4.403	105	77	1.860	12.013	2.134	1.988	2.675	5.516	1.460	86.8	59.6	7.31	0.916	358.0
23	4.397	104	77	1.824	11.843	2.092	1.998	2.693	5.397	1.427	86.1	59.7	7.34	0.897	367.1
24	4.310	101	74	1.863	11.775	2.075	2.002	2.700	5.424	1.432	87.0	60.5	7.29	0.893	365.4
25	3.996	87	59	2.174	12.160	2.171	1.979	2.660	5.609	1.481	87.2	59.2	7.28	0.937	349.2
Target											**87.2**	**60.7**	**7.28**	**0.890**	**365.5**
Mean					**11.738**	**2.066**	**2.004**	**2.704**	**5.416**	**1.430**	**87.1**	**60.7**	**7.29**	**0.890**	**366.1**
sd					**0.218**	**0.055**	**0.013**	**0.023**	**0.106**	**0.028**	**1.176**	**1.306**	**0.062**	**0.024**	**8.770**
CV%					**1.86**	**2.64**	**0.63**	**0.84**	**1.95**	**1.99**	**1.35**	**2.15**	**0.85**	**2.67**	**2.40**
Mean Difference											**-0.10**	**-0.01**	**0.01**	**0.000**	**0.62**

Appendix 11 - BIASFIX Replication 1

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

ICCS A16 - Rep 1

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.532	108	71	2.314	11.242	1.942	2.033	2.755	8.307	2.194	139.1	100.0	5.35	0.885	242.4
2	4.361	162	124	1.707	11.233	1.939	2.033	2.756	8.112	2.141	135.9	97.7	5.43	0.883	247.9
3	4.033	138	99	1.943	11.341	1.966	2.027	2.745	8.173	2.154	135.7	96.8	5.44	0.897	244.7
4	4.183	147	109	1.819	11.244	1.942	2.033	2.755	8.018	2.114	134.2	96.3	5.48	0.884	250.3
5	3.953	132	93	2.015	11.399	1.981	2.024	2.739	8.179	2.155	135.2	96.1	5.45	0.903	244.0
6	4.383	161	123	1.713	11.318	1.960	2.028	2.747	8.039	2.122	133.8	95.7	5.49	0.890	249.6
7	4.205	150	112	1.794	11.196	1.930	2.035	2.760	8.065	2.126	135.5	97.6	5.44	0.880	249.3
8	3.754	116	81	2.051	10.960	1.871	2.049	2.785	7.716	2.037	132.1	96.7	5.54	0.849	262.8
9	3.866	125	87	2.064	11.341	1.966	2.027	2.745	8.064	2.125	133.9	95.5	5.49	0.896	248.0
10	4.554	174	139	1.567	11.094	1.905	2.041	2.771	7.881	2.084	133.5	97.0	5.50	0.862	257.0
11	3.602	109	73	2.229	11.160	1.921	2.037	2.764	8.009	2.115	135.0	97.5	5.46	0.873	251.9
12	4.469	169	131	1.664	11.320	1.961	2.028	2.747	8.115	2.144	135.0	96.6	5.46	0.890	247.6
13	4.224	150	111	1.826	11.384	1.977	2.024	2.741	8.118	2.141	134.3	95.6	5.48	0.900	246.3
14	4.092	141	102	1.911	11.376	1.975	2.025	2.741	8.130	2.143	134.6	95.8	5.47	0.900	245.7
15	3.507	103	68	2.294	11.093	1.904	2.041	2.771	7.953	2.102	134.7	97.9	5.46	0.863	254.7
16	4.101	142	103	1.901	11.358	1.970	2.026	2.743	8.141	2.146	135.0	96.2	5.46	0.898	245.6
17	3.528	105	69	2.316	11.236	1.940	2.033	2.756	8.092	2.137	135.5	97.5	5.44	0.881	248.9
18	3.809	123	85	2.094	11.287	1.953	2.030	2.751	8.143	2.147	135.8	97.2	5.43	0.891	246.1
19	4.436	167	128	1.702	11.406	1.982	2.023	2.738	8.200	2.166	135.5	96.4	5.44	0.900	244.3
20	4.353	161	122	1.742	11.364	1.972	2.026	2.743	8.183	2.160	135.7	96.7	5.44	0.897	244.8
21	3.754	120	83	2.090	11.110	1.909	2.040	2.769	8.071	2.129	136.6	98.9	5.41	0.870	249.9
22	3.727	117	80	2.139	11.211	1.934	2.034	2.758	8.049	2.123	135.1	97.2	5.45	0.881	249.8
23	3.937	130	92	1.997	11.281	1.951	2.030	2.751	8.047	2.121	134.3	96.1	5.48	0.889	248.9
24	4.123	144	105	1.881	11.337	1.965	2.027	2.745	8.153	2.149	135.4	96.6	5.45	0.896	245.4
25	4.275	153	115	1.770	11.282	1.951	2.030	2.751	8.011	2.113	133.7	95.8	5.49	0.887	250.4
Target											**134.9**	**96.8**	**5.46**	**0.885**	**248.8**
Mean					**11.263**	**1.947**	**2.031**	**2.753**	**8.079**	**2.131**	**135.0**	**96.9**	**5.46**	**0.886**	**248.6**
sd					**0.112**	**0.028**	**0.007**	**0.012**	**0.116**	**0.030**	**1.275**	**1.061**	**0.035**	**0.014**	**4.482**
CV%					**1.00**	**1.44**	**0.32**	**0.42**	**1.43**	**1.41**	**0.94**	**1.10**	**0.64**	**1.54**	**1.80**
Mean Difference											**0.11**	**0.07**	**0.00**	**0.001**	**-0.15**

ICCS I25 - Rep 1

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.136	163	125	1.700	10.627	1.788	2.068	2.819	8.646	2.284	152.1	113.8	5.02	0.828	237.2
2	4.564	202	168	1.446	10.565	1.772	2.072	2.826	8.692	2.303	153.7	115.7	4.99	0.817	237.6
3	4.143	163	128	1.622	10.319	1.711	2.086	2.851	8.399	2.224	151.5	115.8	5.04	0.792	247.6
4	3.839	139	103	1.821	10.327	1.713	2.086	2.850	8.403	2.227	151.5	115.8	5.04	0.791	247.7
5	4.466	194	158	1.508	10.614	1.784	2.069	2.820	8.770	2.321	154.4	115.8	4.97	0.825	234.7
6	4.266	177	140	1.598	10.527	1.763	2.074	2.830	8.731	2.309	154.9	116.7	4.96	0.817	236.1
7	3.514	120	81	2.195	10.766	1.823	2.060	2.805	9.008	2.386	156.7	116.5	4.92	0.841	227.8
8	3.724	134	96	1.948	10.491	1.754	2.076	2.833	8.740	2.315	155.5	117.6	4.95	0.811	236.7
9	3.695	131	92	2.028	10.703	1.807	2.064	2.811	8.824	2.334	154.3	115.0	4.97	0.835	232.4
10	3.971	151	113	1.786	10.541	1.766	2.073	2.828	8.654	2.288	153.3	115.4	5.00	0.818	237.9
11	4.092	159	123	1.671	10.394	1.730	2.082	2.843	8.459	2.239	151.6	115.3	5.04	0.800	244.9
12	4.396	189	152	1.546	10.617	1.785	2.069	2.820	8.829	2.335	155.4	116.5	4.95	0.827	232.8
13	4.536	199	166	1.437	10.461	1.746	2.078	2.836	8.594	2.278	153.2	116.2	5.00	0.806	241.3
14	3.550	122	83	2.161	10.754	1.819	2.061	2.806	8.962	2.373	156.1	116.1	4.94	0.840	229.0
15	4.275	178	141	1.594	10.528	1.763	2.074	2.829	8.744	2.312	155.1	116.8	4.96	0.818	235.7
16	3.960	151	113	1.786	10.511	1.759	2.075	2.831	8.684	2.297	154.2	116.3	4.98	0.815	237.4
17	3.893	145	107	1.836	10.532	1.764	2.074	2.829	8.653	2.288	153.4	115.5	4.99	0.817	238.2
18	3.639	125	88	2.018	10.504	1.757	2.076	2.832	8.562	2.270	152.1	115.1	5.02	0.809	241.9
19	3.594	126	86	2.147	10.836	1.840	2.056	2.797	9.080	2.402	157.1	116.1	4.91	0.851	225.0
20	3.786	138	100	1.904	10.500	1.756	2.076	2.832	8.703	2.304	154.7	116.8	4.97	0.813	237.4
21	4.013	156	119	1.719	10.384	1.727	2.083	2.844	8.636	2.286	154.9	117.9	4.96	0.801	240.1
22	3.834	143	104	1.891	10.580	1.776	2.071	2.824	8.841	2.338	156.1	117.2	4.93	0.824	232.8
23	4.142	166	129	1.656	10.457	1.745	2.078	2.837	8.658	2.290	154.4	116.9	4.97	0.810	238.6
24	4.323	182	147	1.533	10.382	1.727	2.083	2.844	8.630	2.285	154.9	117.9	4.96	0.800	240.4
25	3.527	123	84	2.144	10.626	1.787	2.069	2.819	9.072	2.405	159.6	119.8	4.86	0.826	227.6
Target											**154.3**	**116.5**	**4.97**	**0.814**	**237.5**
Mean					**10.542**	**1.766**	**2.073**	**2.828**	**8.719**	**2.308**	**154.4**	**116.3**	**4.97**	**0.817**	**236.8**
sd					**0.133**	**0.033**	**0.008**	**0.014**	**0.181**	**0.048**	**1.916**	**1.199**	**0.043**	**0.015**	**5.785**
CV%					**1.26**	**1.88**	**0.37**	**0.49**	**2.07**	**2.07**	**1.24**	**1.03**	**0.86**	**1.83**	**2.44**
Mean Difference											**0.13**	**-0.17**	**0.00**	**0.003**	**-0.75**

Appendix 11 - BIASFIX Replication 1

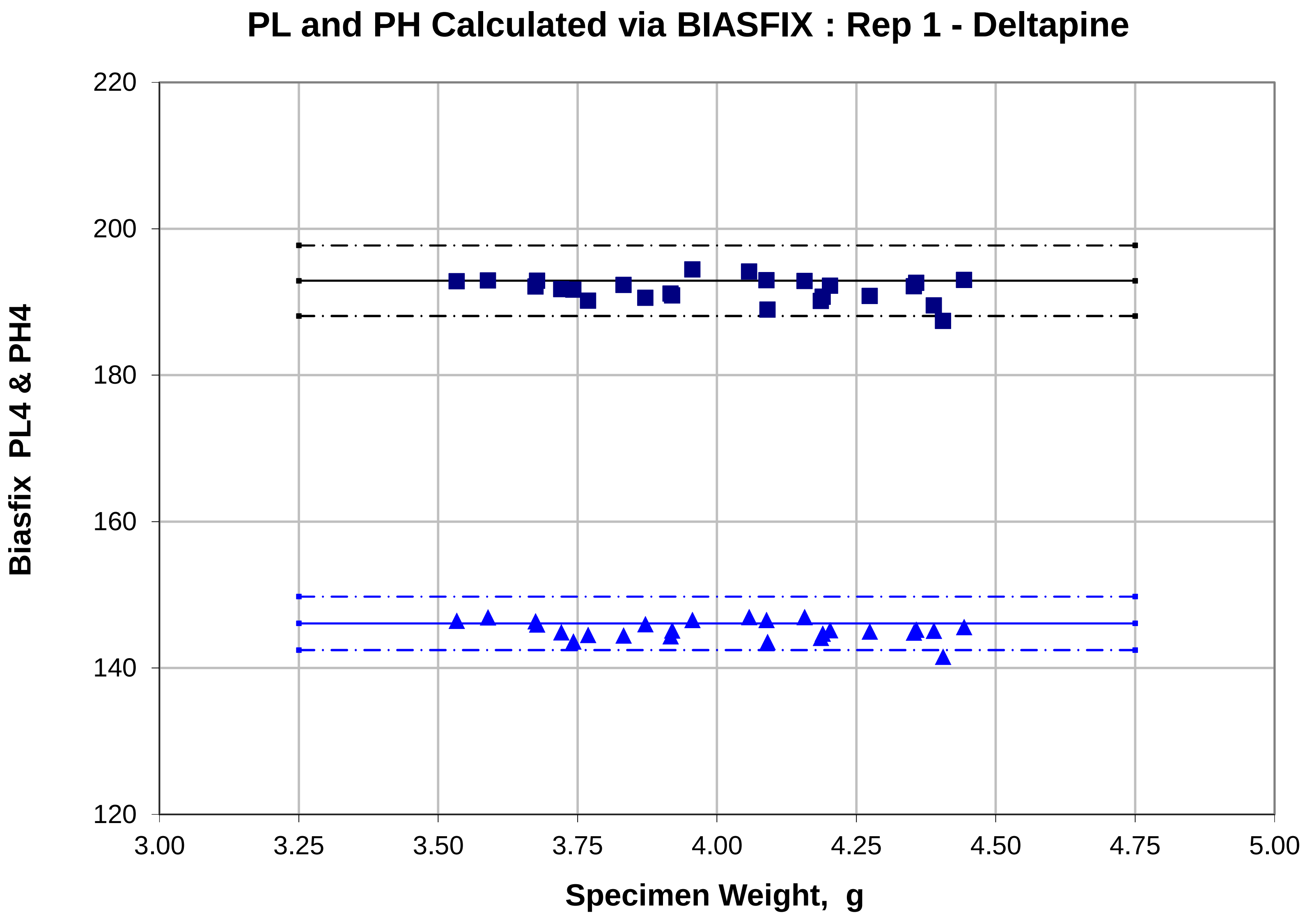
Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

ICCS G12 - Rep 1

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.201	446	438	1.037	8.007	1.133	2.221	3.091	18.398	5.184	399.9	376.4	2.53	0.590	134.9
2	3.837	365	333	1.201	7.943	1.117	2.225	3.098	18.329	5.172	400.5	378.9	2.53	0.584	136.0
3	4.053	410	393	1.088	7.933	1.114	2.225	3.099	18.208	5.142	398.2	377.3	2.54	0.581	137.1
4	3.607	321	275	1.363	8.049	1.143	2.219	3.087	18.639	5.244	403.8	378.4	2.52	0.595	132.6
5	3.801	355	319	1.238	8.009	1.133	2.221	3.091	18.300	5.149	397.7	373.6	2.54	0.591	135.2
6	3.774	345	316	1.192	7.779	1.076	2.234	3.115	17.740	5.047	392.8	378.7	2.56	0.561	143.3
7	3.517	300	252	1.417	8.040	1.141	2.219	3.087	18.415	5.191	399.2	375.0	2.54	0.592	134.7
8	3.551	310	261	1.411	8.094	1.155	2.216	3.082	18.704	5.257	403.7	376.9	2.52	0.600	131.8
9	3.638	324	280	1.339	8.033	1.139	2.220	3.088	18.436	5.189	399.9	375.3	2.53	0.593	134.2
10	4.123	424	413	1.054	7.928	1.113	2.226	3.099	18.120	5.122	396.4	376.1	2.55	0.580	138.0
11	4.014	399	384	1.080	7.822	1.086	2.232	3.110	17.942	5.095	395.9	379.8	2.55	0.567	141.0
12	3.917	374	353	1.123	7.800	1.081	2.233	3.112	17.733	5.039	392.0	376.9	2.57	0.564	142.9
13	4.082	417	402	1.076	7.940	1.116	2.225	3.098	18.236	5.150	398.6	377.5	2.54	0.582	136.9
14	3.620	325	279	1.357	8.057	1.145	2.218	3.086	18.735	5.268	405.6	379.7	2.51	0.597	131.8
15	4.114	424	410	1.069	7.974	1.125	2.223	3.094	18.278	5.154	398.4	375.9	2.54	0.586	136.1
16	3.512	300	252	1.417	8.028	1.138	2.220	3.089	18.459	5.206	400.6	376.8	2.53	0.590	134.6
17	3.833	357	328	1.185	7.872	1.099	2.229	3.105	17.861	5.057	392.5	374.3	2.57	0.573	140.7
18	3.715	342	299	1.308	8.089	1.153	2.216	3.082	18.656	5.234	402.9	375.5	2.52	0.602	131.7
19	4.067	408	389	1.100	8.008	1.133	2.221	3.091	18.092	5.092	393.3	369.6	2.56	0.590	136.9
20	3.910	377	350	1.160	7.934	1.114	2.225	3.098	18.139	5.120	396.6	375.6	2.55	0.582	137.5
21	3.748	343	305	1.265	7.998	1.130	2.222	3.092	18.215	5.129	396.3	372.8	2.55	0.589	136.1
22	3.878	369	342	1.164	7.885	1.102	2.228	3.104	18.007	5.095	395.3	376.4	2.55	0.575	139.3
23	3.616	318	276	1.328	7.943	1.117	2.225	3.098	18.217	5.149	398.1	377.3	2.54	0.581	137.2
24	3.908	373	348	1.149	7.886	1.102	2.228	3.104	17.897	5.064	392.9	374.1	2.56	0.575	140.2
25	4.233	457	458	0.996	7.893	1.104	2.228	3.103	18.361	5.206	402.8	384.2	2.52	0.575	137.1
Target											**397.1**	**376.9**	**2.54**	**0.580**	**137.8**
Mean					**7.958**	**1.120**	**2.224**	**3.096**	**18.245**	**5.150**	**398.2**	**376.5**	**2.54**	**0.584**	**136.7**
sd					**0.087**	**0.022**	**0.005**	**0.009**	**0.283**	**0.065**	**3.843**	**2.759**	**0.017**	**0.011**	**3.221**
CV%					**1.09**	**1.94**	**0.23**	**0.29**	**1.55**	**1.27**	**0.97**	**0.73**	**0.67**	**1.88**	**2.36**
Mean Difference											**1.05**	**-0.38**	**0.00**	**0.004**	**-1.09**

ICCS D3 - Rep 1

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.463	286	235	1.481	10.488	1.753	2.077	2.834	12.807	3.392	227.9	172.3	3.77	0.851	161.5
2	4.112	241	187	1.661	10.402	1.732	2.082	2.842	12.703	3.362	227.6	172.9	3.78	0.843	163.0
3	3.926	220	166	1.756	10.308	1.708	2.087	2.852	12.670	3.357	228.7	175.1	3.76	0.831	164.3
4	3.782	204	150	1.850	10.282	1.701	2.089	2.855	12.677	3.363	229.3	176.0	3.76	0.827	164.7
5	4.328	266	215	1.531	10.385	1.727	2.083	2.844	12.585	3.333	225.8	171.9	3.80	0.839	164.9
6	4.185	247	197	1.572	10.216	1.685	2.092	2.862	12.355	3.276	224.7	173.1	3.81	0.819	169.1
7	3.517	177	124	2.038	10.221	1.686	2.092	2.861	12.747	3.395	231.7	179.2	3.73	0.815	165.2
8	3.682	192	139	1.908	10.226	1.687	2.092	2.861	12.562	3.338	228.3	176.1	3.77	0.818	166.9
9	3.890	214	161	1.767	10.253	1.694	2.090	2.858	12.511	3.318	226.8	174.4	3.79	0.824	166.9
10	3.667	191	137	1.944	10.314	1.710	2.087	2.852	12.691	3.369	229.0	175.5	3.76	0.829	164.6
11	4.089	242	186	1.693	10.474	1.750	2.077	2.835	12.982	3.433	231.2	174.8	3.73	0.854	159.0
12	4.237	256	202	1.606	10.487	1.753	2.077	2.834	12.767	3.377	227.2	171.6	3.78	0.853	161.7
13	4.593	304	258	1.388	10.369	1.723	2.084	2.846	12.687	3.368	227.9	174.1	3.77	0.835	164.3
14	3.822	205	154	1.772	10.094	1.654	2.100	2.874	12.281	3.264	225.6	175.5	3.80	0.803	171.5
15	4.495	293	240	1.490	10.606	1.782	2.070	2.821	13.059	3.457	230.1	172.7	3.75	0.866	157.7
16	3.973	227	171	1.762	10.453	1.744	2.079	2.837	12.906	3.414	230.3	174.4	3.75	0.850	160.2
17	4.385	270	219	1.520	10.476	1.750	2.077	2.835	12.525	3.316	223.0	168.7	3.83	0.848	165.1
18	3.602	184	132	1.943	10.128	1.663	2.098	2.871	12.519	3.334	229.3	178.4	3.76	0.805	168.7
19	3.713	192	139	1.908	10.310	1.708	2.087	2.852	12.429	3.298	224.3	171.9	3.82	0.827	167.9
20	3.517	177	123	2.071	10.338	1.716	2.085	2.849	12.857	3.419	231.5	177.5	3.73	0.830	162.8
21	3.955	220	165	1.778	10.467	1.748	2.078	2.836	12.641	3.344	225.3	170.4	3.80	0.849	163.4
22	3.837	209	155	1.818	10.311	1.709	2.087	2.852	12.631	3.348	228.0	174.5	3.77	0.831	164.9
23	4.352	267	218	1.500	10.310	1.709	2.087	2.852	12.406	3.288	223.9	171.4	3.82	0.829	167.9
24	4.509	291	244	1.422	10.331	1.714	2.086	2.850	12.582	3.338	226.7	173.5	3.79	0.831	165.7
25	4.119	238	185	1.655	10.396	1.730	2.082	2.843	12.493	3.306	223.9	170.2	3.82	0.841	165.8
Target											**227.6**	**173.9**	**3.78**	**0.834**	**164.5**
Mean					**10.346**	**1.717**	**2.085**	**2.848**	**12.643**	**3.352**	**227.5**	**173.9**	**3.78**	**0.834**	**164.7**
sd					**0.121**	**0.030**	**0.007**	**0.013**	**0.190**	**0.049**	**2.501**	**2.558**	**0.030**	**0.016**	**3.185**
CV%					**1.17**	**1.76**	**0.34**	**0.44**	**1.50**	**1.45**	**1.10**	**1.47**	**0.79**	**1.87**	**1.93**
Mean Difference											**-0.08**	**-0.05**	**0.00**	**0.000**	**0.21**


PL and PH Calculated via BIASFIX : Rep 1 - Deltapine
Biasfix PL4 & PH4
220
200
180
160
140
120
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

Appendix 12 - BIASFIX Replication 2

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

Deltapine - Rep 2

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.533	149	103	2.093	10.464	1.747	2.078	2.836	10.817	2.872	192.8	146.4	4.25	0.827	192.2
2	4.406	229	186	1.516	10.506	1.758	2.075	2.832	10.550	2.792	187.4	141.5	4.34	0.833	195.8
3	4.203	213	167	1.627	10.490	1.753	2.076	2.833	10.804	2.857	192.2	145.1	4.26	0.836	191.0
4	4.089	202	156	1.677	10.409	1.733	2.081	2.842	10.777	2.852	193.0	146.5	4.25	0.827	192.1
5	3.721	165	118	1.955	10.508	1.758	2.075	2.831	10.795	2.859	191.8	144.9	4.27	0.835	191.5
6	3.677	162	115	1.984	10.493	1.754	2.076	2.833	10.847	2.874	192.9	145.9	4.25	0.833	190.9
7	3.833	176	128	1.891	10.577	1.775	2.071	2.824	10.886	2.879	192.3	144.4	4.26	0.845	189.1
8	3.956	190	142	1.790	10.520	1.761	2.075	2.830	10.956	2.897	194.4	146.5	4.23	0.840	188.1
9	4.190	210	165	1.620	10.427	1.738	2.080	2.840	10.667	2.822	190.7	144.7	4.28	0.828	194.0
10	4.353	229	184	1.549	10.526	1.763	2.074	2.830	10.832	2.866	192.1	144.8	4.26	0.839	190.4
11	3.742	167	119	1.969	10.622	1.787	2.069	2.820	10.890	2.881	191.7	143.6	4.27	0.849	188.8
12	4.274	219	175	1.566	10.408	1.733	2.081	2.842	10.654	2.820	190.8	145.0	4.28	0.825	194.5
13	3.872	178	133	1.791	10.299	1.706	2.088	2.853	10.548	2.796	190.5	146.0	4.29	0.811	197.5
14	4.091	198	153	1.675	10.406	1.733	2.081	2.842	10.551	2.792	189.0	143.5	4.31	0.824	196.3
15	3.590	154	108	2.033	10.418	1.735	2.081	2.841	10.782	2.862	192.9	146.9	4.25	0.822	193.1
16	4.389	230	189	1.481	10.314	1.709	2.087	2.852	10.503	2.784	189.5	145.1	4.30	0.812	198.3
17	3.675	161	115	1.960	10.396	1.730	2.082	2.843	10.717	2.843	192.1	146.4	4.26	0.821	194.1
18	3.917	183	136	1.811	10.496	1.755	2.076	2.833	10.750	2.844	191.1	144.3	4.28	0.835	192.0
19	4.157	209	164	1.624	10.365	1.722	2.084	2.846	10.732	2.841	192.8	146.9	4.25	0.821	193.3
20	4.443	240	196	1.499	10.523	1.762	2.075	2.830	10.878	2.880	193.0	145.6	4.25	0.838	189.8
21	3.769	168	122	1.896	10.421	1.736	2.080	2.840	10.631	2.817	190.2	144.5	4.29	0.824	195.1
22	3.920	183	137	1.784	10.400	1.731	2.082	2.843	10.653	2.820	190.9	145.1	4.28	0.824	194.6
23	4.186	209	164	1.624	10.437	1.740	2.080	2.839	10.642	2.816	190.1	144.1	4.29	0.828	194.3
24	4.357	230	185	1.546	10.521	1.761	2.075	2.830	10.854	2.872	192.6	145.2	4.25	0.839	190.1
25	4.058	200	153	1.709	10.459	1.746	2.078	2.836	10.887	2.880	194.1	146.9	4.23	0.833	189.8
Target											**191.5**	**145.1**	**4.27**	**0.830**	**192.8**
Mean					**10.456**	**1.745**	**2.078**	**2.837**	**10.744**	**2.845**	**191.6**	**145.2**	**4.27**	**0.830**	**192.7**
sd					**0.076**	**0.019**	**0.004**	**0.008**	**0.127**	**0.033**	**1.627**	**1.281**	**0.026**	**0.009**	**2.762**
CV%					**0.73**	**1.10**	**0.21**	**0.28**	**1.18**	**1.16**	**0.85**	**0.88**	**0.61**	**1.12**	**1.43**
Mean Difference											**0.14**	**0.10**	**0.00**	**0.000**	**-0.13**

Acala - Rep 2

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.574	140	98	2.041	10.401	1.731	2.082	2.843	9.876	2.623	177.0	134.9	4.52	0.811	211.0
2	4.571	232	195	1.415	10.442	1.742	2.079	2.838	9.845	2.611	175.8	133.5	4.54	0.817	210.9
3	4.127	188	144	1.704	10.620	1.786	2.069	2.820	10.013	2.645	176.2	131.9	4.53	0.842	204.9
4	3.649	145	102	2.021	10.544	1.767	2.073	2.828	9.906	2.625	175.4	132.3	4.55	0.829	208.6
5	4.136	188	144	1.704	10.644	1.792	2.067	2.817	9.986	2.638	175.4	131.0	4.55	0.845	205.3
6	4.074	183	140	1.709	10.500	1.756	2.076	2.832	9.914	2.621	176.2	133.0	4.53	0.828	208.0
7	4.383	213	171	1.552	10.609	1.783	2.069	2.821	10.006	2.646	176.3	132.1	4.53	0.839	205.5
8	4.386	211	171	1.523	10.488	1.753	2.077	2.833	9.797	2.593	174.3	131.7	4.57	0.824	210.9
9	4.043	180	137	1.726	10.493	1.754	2.076	2.833	9.898	2.617	176.0	132.9	4.53	0.827	208.4
10	3.886	163	121	1.815	10.429	1.738	2.080	2.840	9.683	2.563	173.1	131.4	4.59	0.817	213.8
11	3.722	151	108	1.955	10.510	1.759	2.075	2.831	9.873	2.615	175.3	132.4	4.55	0.826	209.4
12	3.942	170	127	1.792	10.488	1.753	2.077	2.834	9.851	2.606	175.3	132.4	4.55	0.826	209.5
13	4.205	194	150	1.673	10.688	1.803	2.065	2.813	9.994	2.640	175.0	130.3	4.55	0.849	204.8
14	3.644	145	103	1.982	10.389	1.728	2.082	2.844	9.816	2.605	176.1	134.3	4.53	0.811	212.1
15	4.411	218	177	1.517	10.525	1.762	2.074	2.830	10.032	2.655	177.9	134.2	4.50	0.830	205.8
16	3.667	145	104	1.944	10.314	1.709	2.087	2.852	9.636	2.558	173.9	133.3	4.57	0.801	216.7
17	4.134	189	144	1.723	10.714	1.809	2.063	2.810	10.108	2.669	176.6	131.3	4.52	0.853	202.2
18	4.430	216	175	1.523	10.598	1.780	2.070	2.822	9.917	2.624	174.9	131.2	4.56	0.837	207.6
19	4.101	181	139	1.696	10.516	1.760	2.075	2.831	9.685	2.561	171.9	129.6	4.61	0.827	212.8
20	4.599	235	198	1.409	10.474	1.749	2.077	2.835	9.876	2.619	175.9	133.3	4.54	0.820	210.1
21	3.582	142	99	2.057	10.482	1.751	2.077	2.834	10.034	2.662	178.6	135.4	4.49	0.822	206.9
22	3.864	163	120	1.845	10.486	1.753	2.077	2.834	9.845	2.605	175.2	132.4	4.55	0.825	209.8
23	4.049	176	134	1.725	10.503	1.757	2.076	2.832	9.658	2.554	171.6	129.5	4.62	0.826	213.5
24	3.610	141	98	2.070	10.610	1.784	2.069	2.821	9.897	2.622	174.3	130.9	4.57	0.835	208.4
25	3.995	174	131	1.764	10.520	1.761	2.075	2.830	9.830	2.599	174.4	131.4	4.56	0.829	209.6
Target											**175.2**	**132.3**	**4.55**	**0.827**	**209.4**
Mean					**10.520**	**1.761**	**2.075**	**2.830**	**9.879**	**2.615**	**175.3**	**132.3**	**4.55**	**0.828**	**209.1**
sd					**0.094**	**0.023**	**0.005**	**0.010**	**0.123**	**0.031**	**1.602**	**1.522**	**0.029**	**0.012**	**3.335**
CV%					**0.89**	**1.33**	**0.26**	**0.34**	**1.24**	**1.20**	**0.91**	**1.15**	**0.65**	**1.46**	**1.60**
Mean Difference											**0.11**	**-0.04**	**0.00**	**0.001**	**-0.34**

Appendix 12 - BIASFIX Replication 2

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

Menoufi - Rep 2

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.682	196	142	1.905	10.213	1.684	2.093	2.862	12.818	3.407	233.2	180.1	3.71	0.819	163.7
2	3.756	204	149	1.875	10.305	1.707	2.087	2.853	12.884	3.418	232.6	178.3	3.72	0.831	161.9
3	4.461	301	255	1.393	10.092	1.654	2.100	2.875	13.032	3.465	239.4	186.4	3.64	0.808	161.7
4	4.027	235	186	1.596	9.927	1.613	2.109	2.892	12.448	3.313	231.7	182.5	3.73	0.787	170.4
5	3.712	202	148	1.863	10.142	1.666	2.097	2.869	12.911	3.433	236.2	183.3	3.68	0.812	163.0
6	4.101	245	189	1.680	10.455	1.745	2.078	2.837	13.040	3.449	232.6	176.1	3.72	0.852	158.4
7	3.631	193	139	1.928	10.157	1.670	2.096	2.868	12.934	3.442	236.3	183.4	3.68	0.812	162.9
8	4.472	297	250	1.411	10.198	1.680	2.093	2.864	12.911	3.429	235.2	181.6	3.69	0.819	162.4
9	4.134	246	193	1.625	10.309	1.708	2.087	2.852	12.722	3.370	229.7	175.7	3.75	0.833	163.5
10	4.202	262	212	1.527	10.069	1.648	2.101	2.877	12.838	3.410	236.3	184.0	3.68	0.806	164.0
11	3.933	232	181	1.643	9.878	1.601	2.112	2.897	12.868	3.428	240.5	190.1	3.63	0.784	165.4
12	4.280	275	225	1.494	10.113	1.659	2.098	2.872	13.011	3.455	238.6	185.2	3.65	0.812	161.5
13	3.513	181	128	2.000	10.077	1.650	2.100	2.876	12.927	3.450	237.8	186.0	3.66	0.800	164.2
14	3.860	239	190	1.582	9.462	1.496	2.136	2.940	13.344	3.583	257.9	211.0	3.45	0.739	163.7
15	3.542	186	132	1.986	10.110	1.658	2.099	2.873	13.091	3.490	240.1	187.3	3.63	0.806	161.7
16	3.933	229	175	1.712	10.153	1.669	2.096	2.868	12.978	3.445	237.2	183.7	3.67	0.816	161.6
17	3.899	217	167	1.688	9.971	1.624	2.107	2.887	12.347	3.286	229.0	179.8	3.76	0.790	171.5
18	4.005	235	183	1.649	10.085	1.652	2.100	2.875	12.752	3.386	234.4	182.3	3.70	0.807	165.0
19	4.397	291	245	1.411	10.023	1.637	2.104	2.882	12.913	3.435	238.5	186.6	3.65	0.800	163.7
20	4.318	278	229	1.474	10.117	1.660	2.098	2.872	12.913	3.429	236.7	183.8	3.67	0.812	162.7
21	3.629	190	137	1.923	10.135	1.665	2.097	2.870	12.726	3.388	233.0	181.1	3.71	0.808	165.7
22	3.520	177	126	1.973	10.004	1.632	2.105	2.884	12.524	3.345	231.7	182.2	3.73	0.789	170.1
23	4.184	261	212	1.516	9.977	1.625	2.106	2.887	12.806	3.405	237.4	186.2	3.66	0.796	165.2
24	3.766	210	160	1.723	9.760	1.571	2.119	2.909	12.647	3.380	238.6	190.7	3.65	0.767	169.8
25	3.999	233	184	1.604	9.888	1.603	2.112	2.896	12.483	3.324	233.1	184.1	3.71	0.783	170.3
Target											**236.3**	**184.3**	**3.68**	**0.804**	**164.4**
Mean					**10.065**	**1.647**	**2.101**	**2.877**	**12.835**	**3.415**	**236.3**	**184.5**	**3.68**	**0.804**	**164.6**
sd					**0.195**	**0.049**	**0.011**	**0.020**	**0.222**	**0.061**	**5.521**	**6.646**	**0.059**	**0.022**	**3.372**
CV%					**1.93**	**2.95**	**0.54**	**0.70**	**1.73**	**1.78**	**2.34**	**3.60**	**1.60**	**2.79**	**2.05**
Mean Difference											**0.01**	**0.16**	**0.00**	**0.000**	**0.16**

Lankart - Rep 2

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.701	213	176	1.465	8.637	1.290	2.184	3.026	12.217	3.358	252.4	222.6	3.51	0.634	190.9
2	3.930	239	208	1.320	8.604	1.282	2.186	3.029	11.991	3.293	248.4	219.4	3.55	0.631	194.4
3	3.768	219	187	1.372	8.443	1.242	2.196	3.046	11.897	3.289	249.7	224.3	3.53	0.610	199.2
4	4.418	315	300	1.103	8.710	1.308	2.180	3.018	12.350	3.388	253.7	222.3	3.49	0.643	187.7
5	4.331	301	281	1.147	8.733	1.314	2.179	3.016	12.348	3.381	253.1	221.1	3.50	0.647	187.1
6	3.554	195	157	1.543	8.572	1.274	2.188	3.032	12.159	3.356	252.5	224.7	3.51	0.623	193.6
7	3.918	240	207	1.344	8.671	1.299	2.182	3.022	12.188	3.340	251.1	220.4	3.52	0.640	190.1
8	4.494	327	319	1.051	8.628	1.288	2.185	3.026	12.262	3.377	253.5	224.2	3.50	0.631	190.9
9	4.344	301	286	1.108	8.587	1.278	2.187	3.031	12.113	3.334	251.3	222.7	3.52	0.627	193.3
10	3.615	203	165	1.514	8.614	1.284	2.186	3.028	12.234	3.369	253.2	224.1	3.50	0.630	191.4
11	3.857	233	198	1.385	8.694	1.304	2.181	3.020	12.263	3.359	252.2	220.9	3.51	0.642	188.7
12	3.835	229	195	1.379	8.621	1.286	2.185	3.027	12.139	3.334	251.1	221.5	3.52	0.633	191.9
13	4.089	271	246	1.214	8.515	1.260	2.191	3.038	12.380	3.411	258.3	230.2	3.45	0.623	189.8
14	4.228	288	268	1.155	8.556	1.270	2.189	3.034	12.269	3.377	255.1	226.6	3.48	0.626	191.0
15	4.120	269	242	1.236	8.671	1.299	2.182	3.022	12.240	3.354	252.2	221.3	3.51	0.640	189.3
16	4.194	280	255	1.206	8.700	1.306	2.181	3.019	12.289	3.365	252.6	221.1	3.51	0.644	188.2
17	3.678	207	169	1.500	8.714	1.310	2.180	3.018	12.106	3.320	248.6	217.7	3.55	0.642	191.4
18	4.091	270	240	1.266	8.733	1.314	2.179	3.016	12.540	3.429	257.1	224.2	3.46	0.650	183.8
19	3.599	201	164	1.502	8.535	1.265	2.190	3.036	12.158	3.358	253.3	225.9	3.50	0.620	194.0
20	3.774	219	185	1.401	8.568	1.273	2.188	3.033	11.974	3.296	248.8	220.7	3.54	0.625	195.7
21	4.277	296	278	1.134	8.566	1.272	2.189	3.033	12.302	3.387	255.6	226.9	3.48	0.627	190.5
22	3.577	198	160	1.531	8.586	1.277	2.187	3.031	12.190	3.362	252.9	224.6	3.50	0.625	192.7
23	3.655	206	171	1.451	8.480	1.251	2.194	3.042	12.001	3.318	251.1	225.0	3.52	0.614	197.2
24	4.250	287	265	1.173	8.678	1.301	2.182	3.021	12.211	3.347	251.4	220.6	3.52	0.640	189.9
25	4.034	261	234	1.244	8.524	1.262	2.191	3.037	12.290	3.384	256.2	228.1	3.47	0.623	191.0
Target											**252.7**	**223.3**	**3.50**	**0.632**	**191.2**
Mean					**8.614**	**1.284**	**2.186**	**3.028**	**12.204**	**3.355**	**252.6**	**223.2**	**3.51**	**0.632**	**191.4**
sd					**0.081**	**0.020**	**0.005**	**0.008**	**0.142**	**0.035**	**2.517**	**2.908**	**0.025**	**0.010**	**3.290**
CV%					**0.93**	**1.57**	**0.21**	**0.28**	**1.16**	**1.03**	**1.00**	**1.30**	**0.71**	**1.63**	**1.72**
Mean Difference											**-0.09**	**-0.05**	**0.01**	**0.000**	**0.15**

Appendix 12 - BIASFIX Replication 2

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

Lambert - Rep 2

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.415	265	215	1.519	10.544	1.767	2.073	2.828	12.193	3.227	216.0	162.6	3.92	0.853	169.1
2	3.614	175	124	1.992	10.340	1.716	2.085	2.849	12.007	3.189	216.2	165.5	3.92	0.825	173.9
3	4.469	261	218	1.433	10.289	1.703	2.088	2.854	11.454	3.039	207.1	158.9	4.04	0.817	182.2
4	3.649	177	125	2.005	10.486	1.753	2.077	2.834	12.040	3.192	214.2	162.2	3.94	0.843	172.1
5	3.916	201	151	1.772	10.341	1.716	2.085	2.849	11.671	3.092	210.1	160.4	4.00	0.827	178.1
6	3.881	197	146	1.821	10.438	1.740	2.079	2.839	11.745	3.109	209.8	159.1	4.00	0.838	176.2
7	4.198	234	184	1.617	10.437	1.740	2.080	2.839	11.848	3.135	211.7	160.5	3.98	0.839	174.6
8	4.129	235	179	1.724	10.704	1.807	2.064	2.811	12.591	3.325	220.1	163.8	3.87	0.876	162.4
9	4.242	240	192	1.563	10.313	1.709	2.087	2.852	11.769	3.118	212.4	162.4	3.97	0.825	176.8
10	3.838	193	143	1.822	10.327	1.713	2.086	2.850	11.671	3.093	210.3	160.8	4.00	0.824	178.4
11	3.972	208	158	1.733	10.336	1.715	2.085	2.849	11.717	3.103	211.0	161.1	3.99	0.827	177.4
12	3.796	187	137	1.863	10.370	1.724	2.083	2.846	11.613	3.078	208.6	159.0	4.02	0.828	179.0
13	3.590	168	120	1.960	10.156	1.670	2.096	2.868	11.532	3.070	210.7	163.6	3.99	0.800	182.9
14	3.527	162	115	1.984	10.063	1.647	2.101	2.878	11.464	3.059	211.1	165.2	3.99	0.787	185.2
15	3.614	171	121	1.997	10.359	1.721	2.084	2.847	11.750	3.120	211.2	161.5	3.98	0.825	177.5
16	4.088	221	173	1.632	10.223	1.687	2.092	2.861	11.619	3.080	211.2	162.6	3.98	0.814	179.8
17	4.003	215	165	1.698	10.275	1.700	2.089	2.856	11.860	3.143	214.7	164.6	3.94	0.821	175.7
18	4.381	257	213	1.456	10.184	1.677	2.094	2.865	11.652	3.093	212.5	164.2	3.97	0.808	179.9
19	4.484	272	229	1.411	10.223	1.687	2.092	2.861	11.784	3.129	214.2	165.2	3.94	0.812	177.8
20	4.344	252	205	1.511	10.338	1.715	2.085	2.849	11.785	3.123	212.2	162.1	3.97	0.827	176.5
21	4.243	235	187	1.579	10.388	1.728	2.082	2.844	11.588	3.068	207.8	158.1	4.03	0.832	178.9
22	4.108	221	173	1.632	10.274	1.699	2.089	2.856	11.548	3.060	209.0	160.3	4.01	0.819	180.4
23	3.707	179	129	1.925	10.360	1.721	2.084	2.847	11.666	3.095	209.7	160.2	4.00	0.826	178.5
24	3.973	207	158	1.716	10.272	1.699	2.089	2.856	11.597	3.073	209.9	161.1	4.00	0.819	179.8
25	3.595	166	119	1.946	10.120	1.661	2.098	2.872	11.330	3.018	207.7	161.7	4.03	0.794	186.5
Target											**211.6**	**161.8**	**3.98**	**0.825**	**177.3**
Mean					**10.326**	**1.713**	**2.086**	**2.850**	**11.740**	**3.113**	**211.6**	**161.9**	**3.98**	**0.824**	**177.6**
sd					**0.136**	**0.034**	**0.008**	**0.014**	**0.260**	**0.065**	**3.017**	**2.112**	**0.040**	**0.018**	**4.897**
CV%					**1.31**	**1.98**	**0.38**	**0.49**	**2.22**	**2.09**	**1.43**	**1.30**	**1.01**	**2.20**	**2.76**
Mean Difference											**-0.02**	**0.08**	**0.00**	**-0.001**	**0.27**

Uganda - Rep 2

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.641	168	119	1.993	10.420	1.736	2.081	2.841	11.423	3.030	204.4	155.5	4.08	0.830	182.0
2	4.347	255	213	1.433	10.007	1.633	2.105	2.883	11.575	3.078	214.1	167.6	3.95	0.788	182.6
3	4.347	256	210	1.486	10.236	1.690	2.091	2.860	11.851	3.143	215.2	165.6	3.93	0.816	176.3
4	3.575	163	115	2.009	10.287	1.703	2.088	2.854	11.401	3.031	206.2	158.5	4.05	0.813	183.8
5	3.659	174	125	1.938	10.270	1.699	2.089	2.856	11.574	3.075	209.6	161.2	4.01	0.814	180.9
6	3.757	181	132	1.880	10.329	1.713	2.086	2.850	11.447	3.036	206.3	157.8	4.05	0.821	182.0
7	4.111	216	168	1.653	10.368	1.723	2.084	2.846	11.358	3.007	204.0	155.4	4.08	0.828	182.6
8	3.559	166	114	2.120	10.638	1.790	2.068	2.818	12.027	3.187	211.4	158.5	3.98	0.858	171.4
9	4.027	212	162	1.713	10.395	1.730	2.082	2.843	11.664	3.087	209.1	159.0	4.01	0.833	177.6
10	4.354	244	199	1.503	10.330	1.713	2.086	2.850	11.345	3.006	204.4	156.3	4.08	0.822	183.4
11	4.207	225	179	1.580	10.302	1.707	2.087	2.853	11.214	2.971	202.5	155.0	4.10	0.819	185.6
12	4.383	250	205	1.487	10.327	1.713	2.086	2.850	11.463	3.038	206.6	158.0	4.05	0.822	181.6
13	3.990	205	157	1.705	10.270	1.699	2.089	2.856	11.380	3.016	206.1	158.1	4.05	0.817	183.2
14	4.150	220	173	1.617	10.316	1.710	2.087	2.851	11.296	2.992	203.8	155.8	4.09	0.821	184.1
15	3.757	177	129	1.883	10.339	1.716	2.085	2.849	11.200	2.970	201.7	154.2	4.12	0.820	186.0
16	3.989	199	153	1.692	10.215	1.685	2.092	2.862	11.004	2.918	200.1	154.2	4.14	0.807	189.9
17	3.781	184	135	1.858	10.309	1.708	2.087	2.852	11.466	3.041	207.0	158.5	4.04	0.820	181.8
18	4.290	241	196	1.512	10.213	1.684	2.093	2.862	11.446	3.036	208.2	160.5	4.02	0.810	182.7
19	4.031	208	160	1.690	10.316	1.710	2.087	2.851	11.344	3.005	204.6	156.5	4.07	0.822	183.3
20	3.999	205	159	1.662	10.121	1.661	2.098	2.872	11.195	2.972	205.2	159.2	4.07	0.798	187.6
21	3.526	159	112	2.015	10.170	1.674	2.095	2.866	11.345	3.023	207.1	160.8	4.04	0.798	186.0
22	3.775	189	141	1.797	10.063	1.647	2.101	2.878	11.592	3.084	213.4	166.5	3.95	0.793	182.1
23	3.506	157	111	2.001	10.060	1.646	2.101	2.878	11.248	3.003	207.1	162.3	4.04	0.784	188.9
24	3.552	163	115	2.009	10.222	1.687	2.092	2.861	11.498	3.061	209.0	161.6	4.01	0.806	183.0
25															
Target											**206.9**	**158.9**	**4.04**	**0.815**	**182.8**
Mean					**10.272**	**1.699**	**2.089**	**2.856**	**11.431**	**3.034**	**207.0**	**159.0**	**4.04**	**0.815**	**182.9**
sd					**0.132**	**0.033**	**0.008**	**0.014**	**0.217**	**0.058**	**3.808**	**3.713**	**0.053**	**0.016**	**3.890**
CV%					**1.29**	**1.95**	**0.37**	**0.48**	**1.90**	**1.90**	**1.84**	**2.33**	**1.30**	**1.94**	**2.13**
Mean Difference											**0.06**	**0.12**	**0.00**	**0.000**	**0.05**

Appendix 12 - BIASFIX Replication 2

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

Coker - Rep 2

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.483	233	198	1.385	10.103	1.657	2.099	2.873	9.996	2.658	183.5	142.7	4.40	0.783	210.8
2	3.500	138	97	2.024	10.126	1.663	2.098	2.871	9.967	2.658	182.6	142.3	4.42	0.780	212.4
3	4.080	189	147	1.653	10.290	1.703	2.088	2.854	10.031	2.658	181.4	138.9	4.44	0.806	207.5
4	4.182	192	153	1.575	10.219	1.686	2.092	2.861	9.623	2.551	175.0	134.8	4.55	0.794	217.1
5	3.858	170	127	1.792	10.266	1.698	2.089	2.857	10.120	2.684	183.3	140.8	4.41	0.803	206.2
6	3.546	143	102	1.965	10.051	1.644	2.102	2.879	9.996	2.667	184.2	144.3	4.39	0.773	212.4
7	4.367	218	182	1.435	10.061	1.646	2.101	2.878	9.842	2.616	181.2	141.3	4.44	0.778	214.2
8	4.305	214	176	1.478	10.107	1.658	2.099	2.873	9.995	2.654	183.4	142.5	4.41	0.785	210.3
9	3.670	155	113	1.882	10.095	1.655	2.099	2.874	10.110	2.691	185.7	144.7	4.37	0.781	208.9
10	4.191	205	165	1.544	10.110	1.659	2.099	2.873	10.137	2.691	185.9	144.4	4.36	0.787	207.2
11	4.024	187	147	1.618	10.008	1.633	2.104	2.883	9.986	2.654	184.7	144.5	4.38	0.775	211.5
12	3.811	164	123	1.778	10.086	1.653	2.100	2.875	9.880	2.627	181.6	141.4	4.44	0.780	213.3
13	3.756	161	119	1.830	10.138	1.666	2.097	2.870	10.040	2.669	183.7	142.6	4.40	0.787	209.5
14	4.145	198	158	1.570	10.112	1.659	2.098	2.872	10.017	2.659	183.7	142.6	4.40	0.787	209.7
15	4.401	223	189	1.392	9.950	1.619	2.108	2.889	9.815	2.613	182.4	143.4	4.42	0.765	216.2
16	3.701	155	114	1.849	10.058	1.646	2.102	2.878	9.907	2.638	182.5	142.6	4.42	0.776	213.4
17	3.683	154	113	1.857	10.040	1.641	2.103	2.880	9.933	2.646	183.2	143.4	4.41	0.774	213.2
18	3.977	182	141	1.666	10.081	1.651	2.100	2.876	10.022	2.662	184.3	143.4	4.39	0.783	210.0
19	3.902	171	131	1.704	10.039	1.641	2.103	2.880	9.767	2.597	180.2	140.7	4.46	0.775	216.1
20	4.221	205	167	1.507	10.029	1.638	2.103	2.881	9.915	2.635	183.1	143.0	4.41	0.776	212.8
21	4.443	229	197	1.351	9.863	1.597	2.113	2.898	9.805	2.615	183.5	145.3	4.40	0.755	217.6
22	3.634	152	110	1.909	10.096	1.655	2.099	2.874	10.126	2.697	185.9	145.0	4.36	0.781	208.7
23	4.081	194	152	1.629	10.195	1.680	2.094	2.864	10.210	2.708	186.0	143.5	4.36	0.798	204.8
24	4.261	210	172	1.491	10.054	1.644	2.102	2.879	9.980	2.652	183.9	143.4	4.40	0.779	211.1
25	3.557	144	103	1.955	10.042	1.642	2.103	2.880	9.995	2.667	184.4	144.5	4.39	0.772	212.4
Target											**183.0**	**142.5**	**4.41**	**0.781**	**211.7**
Mean					**10.089**	**1.653**	**2.100**	**2.875**	**9.969**	**2.651**	**183.2**	**142.6**	**4.41**	**0.781**	**211.5**
sd					**0.091**	**0.023**	**0.005**	**0.009**	**0.131**	**0.035**	**2.273**	**2.227**	**0.040**	**0.011**	**3.320**
CV%					**0.90**	**1.37**	**0.25**	**0.33**	**1.32**	**1.30**	**1.24**	**1.56**	**0.90**	**1.42**	**1.57**
Mean Difference											**0.16**	**0.14**	**0.00**	**0.000**	**-0.20**

Tanguis - Rep 2

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.790	124	86	2.079	11.172	1.924	2.037	2.763	8.222	2.168	138.4	99.8	5.36	0.879	244.7
2	3.587	113	75	2.270	11.259	1.946	2.032	2.754	8.436	2.227	141.0	101.3	5.30	0.889	238.3
3	3.926	132	92	2.059	11.494	2.004	2.018	2.729	8.356	2.202	137.1	96.8	5.40	0.916	238.2
4	4.497	177	138	1.645	11.307	1.958	2.029	2.749	8.380	2.214	139.5	100.0	5.33	0.892	240.0
5	4.136	149	109	1.869	11.323	1.962	2.028	2.747	8.372	2.207	139.2	99.4	5.34	0.898	239.1
6	4.191	153	112	1.866	11.462	1.997	2.020	2.732	8.468	2.233	139.3	98.6	5.34	0.913	235.5
7	3.812	126	87	2.098	11.308	1.958	2.029	2.748	8.344	2.199	138.9	99.3	5.35	0.896	240.0
8	3.616	113	75	2.270	11.352	1.969	2.026	2.744	8.354	2.204	138.6	98.9	5.36	0.899	239.8
9	4.046	140	101	1.921	11.289	1.953	2.030	2.750	8.204	2.162	136.8	97.9	5.41	0.892	244.1
10	4.263	158	119	1.763	11.219	1.936	2.034	2.758	8.278	2.183	138.8	99.9	5.35	0.885	242.8
11	4.342	164	125	1.721	11.248	1.943	2.032	2.755	8.295	2.189	138.8	99.7	5.35	0.887	242.3
12	3.910	133	94	2.002	11.226	1.937	2.034	2.757	8.309	2.190	139.3	100.1	5.34	0.887	241.5
13	3.759	122	85	2.060	11.010	1.883	2.046	2.779	8.123	2.144	138.6	101.0	5.36	0.860	249.2
14	4.454	173	136	1.618	11.078	1.900	2.042	2.772	8.188	2.163	138.9	100.9	5.35	0.866	247.1
15	4.111	150	111	1.826	11.080	1.901	2.042	2.772	8.363	2.205	141.8	102.9	5.27	0.872	241.2
16	3.816	125	87	2.064	11.192	1.929	2.036	2.760	8.187	2.159	137.6	99.1	5.39	0.881	245.5
17	4.311	163	125	1.700	11.078	1.900	2.042	2.772	8.245	2.175	139.9	101.5	5.33	0.869	245.0
18	3.574	110	75	2.151	10.794	1.829	2.059	2.802	7.991	2.115	138.7	102.8	5.36	0.833	256.2
19	4.037	142	104	1.864	11.035	1.890	2.045	2.777	8.185	2.158	139.3	101.3	5.34	0.865	246.7
20	3.681	120	82	2.142	11.080	1.901	2.042	2.772	8.386	2.214	142.2	103.3	5.26	0.871	241.0
21	4.271	159	122	1.699	10.967	1.873	2.049	2.784	8.120	2.143	139.0	101.6	5.35	0.856	249.6
22	3.673	118	80	2.176	11.182	1.927	2.036	2.761	8.346	2.202	140.4	101.3	5.31	0.881	241.2
23	4.093	147	106	1.923	11.430	1.988	2.022	2.736	8.509	2.243	140.3	99.5	5.31	0.911	234.5
24	3.906	136	96	2.007	11.234	1.939	2.033	2.756	8.520	2.246	142.7	102.5	5.25	0.890	235.5
25	4.227	157	119	1.741	11.032	1.889	2.045	2.777	8.235	2.172	140.2	102.1	5.32	0.865	245.5
Target											**139.5**	**100.4**	**5.34**	**0.884**	**242.0**
Mean					**11.194**	**1.929**	**2.035**	**2.760**	**8.297**	**2.189**	**139.4**	**100.5**	**5.34**	**0.882**	**242.6**
sd					**0.165**	**0.041**	**0.010**	**0.017**	**0.128**	**0.033**	**1.441**	**1.630**	**0.038**	**0.019**	**4.959**
CV%					**1.48**	**2.14**	**0.47**	**0.62**	**1.54**	**1.50**	**1.03**	**1.62**	**0.71**	**2.17**	**2.04**
Mean Difference											**-0.08**	**0.07**	**0.00**	**-0.002**	**0.57**

Appendix 12 - BIASFIX Replication 2

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

Old B19 - Rep 2

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.540	137	93	2.170	10.757	1.820	2.061	2.806	10.125	2.681	176.3	131.1	4.53	0.853	202.7
2	3.830	162	115	1.984	10.928	1.863	2.051	2.788	10.315	2.722	177.1	129.8	4.51	0.878	196.7
3	3.924	170	123	1.910	10.906	1.857	2.052	2.790	10.280	2.712	176.8	129.8	4.52	0.876	197.4
4	4.493	225	182	1.528	10.770	1.824	2.060	2.804	10.185	2.694	177.1	131.4	4.51	0.857	200.9
5	4.452	222	177	1.573	10.872	1.849	2.054	2.794	10.331	2.730	178.2	131.3	4.50	0.870	197.2
6	3.779	157	111	2.001	10.844	1.842	2.056	2.797	10.208	2.696	176.5	130.1	4.53	0.867	199.5
7	4.179	194	148	1.718	10.812	1.834	2.058	2.800	10.229	2.700	177.3	130.9	4.51	0.865	199.1
8	3.514	135	91	2.201	10.787	1.828	2.059	2.803	10.151	2.688	176.3	130.9	4.53	0.856	202.0
9	3.723	151	106	2.029	10.791	1.829	2.059	2.802	10.082	2.664	175.0	129.6	4.55	0.859	202.6
10	3.611	143	99	2.086	10.672	1.799	2.066	2.814	10.078	2.668	176.7	132.0	4.52	0.844	204.1
11	4.201	197	150	1.725	10.895	1.855	2.053	2.791	10.350	2.731	178.2	130.9	4.50	0.875	196.2
12	3.840	165	117	1.989	10.973	1.874	2.048	2.783	10.488	2.767	179.4	131.1	4.47	0.885	193.1
13	4.057	183	135	1.838	10.980	1.876	2.048	2.782	10.398	2.742	177.8	129.8	4.50	0.885	194.6
14	4.357	214	169	1.603	10.773	1.824	2.060	2.804	10.319	2.726	179.4	132.9	4.47	0.861	197.9
15	4.392	216	172	1.577	10.742	1.816	2.062	2.807	10.222	2.702	178.2	132.3	4.50	0.856	200.1
16	4.282	204	159	1.646	10.769	1.823	2.060	2.804	10.195	2.692	177.3	131.4	4.51	0.859	200.2
17	3.648	148	102	2.105	10.852	1.844	2.055	2.796	10.350	2.736	178.8	131.9	4.48	0.868	197.1
18	3.835	162	117	1.917	10.686	1.803	2.065	2.813	10.091	2.667	176.7	131.7	4.52	0.849	203.0
19	4.177	195	148	1.736	10.882	1.851	2.054	2.793	10.351	2.731	178.4	131.1	4.49	0.874	196.3
20	4.017	180	132	1.860	10.960	1.871	2.049	2.784	10.420	2.748	178.4	130.5	4.49	0.884	194.3
21	3.903	168	122	1.896	10.794	1.829	2.059	2.802	10.179	2.687	176.7	130.7	4.52	0.862	200.3
22	4.437	222	177	1.573	10.836	1.840	2.056	2.797	10.369	2.740	179.4	132.4	4.47	0.867	196.7
23	3.556	141	96	2.157	10.762	1.822	2.061	2.805	10.324	2.733	179.6	133.5	4.47	0.856	198.7
24	3.890	168	122	1.896	10.757	1.820	2.061	2.806	10.221	2.699	177.9	131.9	4.50	0.859	199.8
25	4.053	184	137	1.804	10.832	1.839	2.057	2.798	10.351	2.731	179.1	132.1	4.48	0.869	196.5
Target											**177.7**	**131.3**	**4.50**	**0.864**	**198.8**
Mean					**10.825**	**1.837**	**2.057**	**2.799**	**10.264**	**2.712**	**177.7**	**131.2**	**4.50**	**0.865**	**198.7**
sd					**0.084**	**0.021**	**0.005**	**0.009**	**0.112**	**0.028**	**1.207**	**1.014**	**0.022**	**0.011**	**2.896**
CV%					**0.77**	**1.14**	**0.24**	**0.31**	**1.09**	**1.02**	**0.68**	**0.77**	**0.48**	**1.29**	**1.46**
Mean Difference											**0.01**	**-0.06**	**0.00**	**0.001**	**-0.12**

Old D3 - Rep 2

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.075	236	179	1.738	10.625	1.787	2.069	2.819	12.906	3.410	227.1	169.9	3.78	0.870	158.9
2	3.880	212	155	1.871	10.630	1.789	2.068	2.819	12.837	3.393	225.8	168.9	3.80	0.869	159.9
3	3.943	220	163	1.822	10.608	1.783	2.070	2.821	12.866	3.400	226.7	169.8	3.79	0.867	159.6
4	3.540	179	122	2.153	10.695	1.805	2.064	2.812	13.170	3.489	230.4	172.1	3.74	0.874	156.2
5	4.407	286	230	1.546	10.644	1.792	2.067	2.817	13.324	3.523	234.1	175.1	3.70	0.873	154.2
6	4.494	294	242	1.476	10.539	1.766	2.074	2.828	13.032	3.451	230.9	174.1	3.74	0.858	158.5
7	4.101	237	181	1.715	10.595	1.780	2.070	2.822	12.761	3.372	225.1	168.7	3.81	0.865	161.0
8	3.870	206	157	1.722	10.025	1.637	2.103	2.881	11.958	3.180	220.8	172.7	3.86	0.793	176.7
9	3.684	190	135	1.981	10.499	1.756	2.076	2.832	12.679	3.359	225.4	170.4	3.80	0.850	163.2
10	3.551	177	124	2.038	10.321	1.711	2.086	2.851	12.583	3.346	226.9	174.1	3.78	0.826	166.3
11	4.335	264	214	1.522	10.363	1.722	2.084	2.846	12.426	3.292	223.3	170.3	3.83	0.835	167.1
12	4.168	250	196	1.627	10.402	1.732	2.082	2.842	12.811	3.390	229.5	174.4	3.75	0.844	161.7
13	3.614	186	132	1.986	10.315	1.710	2.087	2.851	12.744	3.386	229.9	176.4	3.75	0.828	164.1
14	3.792	201	150	1.796	10.105	1.657	2.099	2.873	12.251	3.257	224.8	174.8	3.81	0.804	171.9
15	3.912	216	163	1.756	10.270	1.699	2.089	2.856	12.494	3.312	226.2	173.6	3.79	0.826	166.9
16	4.265	261	208	1.575	10.421	1.736	2.080	2.840	12.769	3.380	228.4	173.4	3.77	0.845	162.1
17	4.054	233	178	1.713	10.469	1.748	2.078	2.836	12.718	3.364	226.6	171.4	3.79	0.851	162.4
18	3.792	200	147	1.851	10.313	1.709	2.087	2.852	12.394	3.287	223.6	171.2	3.82	0.828	168.2
19															
20															
21															
22															
23															
24															
25															
Target											**227.0**	**172.2**	**3.78**	**0.845**	**163.0**
Mean					**10.436**	**1.740**	**2.080**	**2.839**	**12.707**	**3.366**	**227.0**	**172.3**	**3.78**	**0.845**	**163.3**
sd					**0.189**	**0.047**	**0.011**	**0.020**	**0.326**	**0.082**	**3.164**	**2.311**	**0.038**	**0.024**	**5.563**
CV%					**1.81**	**2.72**	**0.53**	**0.69**	**2.57**	**2.43**	**1.39**	**1.34**	**0.99**	**2.84**	**3.41**
Mean Difference											**-0.02**	**0.09**	**0.00**	**0.000**	**0.27**

Appendix 12 - BIASFIX Replication 2

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

ICCS K - Rep 2

		Measured			Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.100	90	63	2.041	11.929	2.113	1.993	2.684	5.411	1.428	85.7	59.0	7.36	0.910	364.1
2	3.887	79	53	2.222	12.013	2.134	1.988	2.675	5.317	1.403	83.6	57.2	7.47	0.917	369.3
3	3.589	69	44	2.459	11.944	2.117	1.992	2.682	5.414	1.428	85.6	58.9	7.37	0.912	363.5
4	3.918	80	55	2.116	11.695	2.055	2.006	2.708	5.167	1.362	83.4	58.2	7.49	0.882	383.1
5	4.355	99	72	1.891	12.018	2.136	1.987	2.675	5.317	1.407	83.6	57.4	7.48	0.913	371.1
6	4.137	90	63	2.041	12.038	2.140	1.986	2.673	5.362	1.416	84.2	57.6	7.45	0.919	366.7
7	4.503	105	79	1.767	11.868	2.098	1.996	2.690	5.208	1.379	82.9	57.4	7.52	0.893	381.0
8	3.980	82	56	2.144	11.992	2.129	1.989	2.677	5.257	1.387	82.8	56.8	7.52	0.913	373.9
9	4.251	94	68	1.911	11.817	2.085	1.999	2.696	5.208	1.375	83.2	57.7	7.50	0.893	379.8
10	3.525	64	41	2.437	11.652	2.044	2.009	2.713	5.094	1.344	82.5	57.8	7.54	0.874	389.8
11	3.632	69	44	2.459	12.089	2.153	1.983	2.667	5.344	1.410	83.5	56.9	7.48	0.926	366.8
12	3.796	75	49	2.343	12.192	2.179	1.977	2.657	5.365	1.416	83.2	56.3	7.50	0.937	364.5
13	4.492	105	78	1.812	12.044	2.142	1.986	2.672	5.315	1.408	83.4	57.2	7.49	0.912	372.0
14	4.420	102	75	1.850	12.015	2.135	1.988	2.675	5.319	1.408	83.7	57.4	7.47	0.911	371.4
15	3.670	71	46	2.382	11.932	2.114	1.992	2.684	5.324	1.404	84.3	58.0	7.44	0.909	369.6
16	4.161	89	63	1.996	11.919	2.111	1.993	2.685	5.191	1.370	82.3	56.7	7.55	0.903	379.8
17	4.017	83	56	2.197	12.314	2.209	1.970	2.644	5.363	1.418	82.3	55.4	7.55	0.947	364.3
18	3.875	79	53	2.222	11.977	2.125	1.990	2.679	5.334	1.407	84.2	57.7	7.45	0.914	368.4
19	4.056	84	57	2.172	12.334	2.214	1.969	2.642	5.332	1.410	81.7	54.9	7.58	0.948	366.4
20	4.584	109	83	1.725	11.890	2.103	1.995	2.688	5.227	1.385	83.0	57.5	7.51	0.894	380.1
21	3.959	79	54	2.140	11.914	2.109	1.994	2.686	5.086	1.341	80.6	55.5	7.65	0.902	387.1
22	3.528	64	40	2.560	12.097	2.155	1.983	2.667	5.255	1.387	82.1	55.9	7.56	0.924	373.1
23	4.320	97	71	1.866	11.818	2.086	1.999	2.696	5.204	1.375	83.2	57.7	7.50	0.892	380.5
24	4.294	96	68	1.993	12.291	2.204	1.972	2.646	5.426	1.437	83.5	56.3	7.48	0.942	361.6
25	4.586	111	84	1.746	11.992	2.129	1.989	2.677	5.368	1.424	84.6	58.3	7.42	0.907	369.4
Target											**83.3**	**57.1**	**7.49**	**0.912**	**372.5**
Mean					**11.991**	**2.129**	**1.989**	**2.678**	**5.288**	**1.397**	**83.3**	**57.2**	**7.49**	**0.912**	**372.7**
sd					**0.169**	**0.042**	**0.010**	**0.018**	**0.094**	**0.026**	**1.116**	**1.020**	**0.062**	**0.019**	**7.865**
CV%					**1.41**	**1.99**	**0.50**	**0.66**	**1.78**	**1.83**	**1.34**	**1.78**	**0.83**	**2.05**	**2.11**
Mean Difference											**0.02**	**0.09**	**0.00**	**0.000**	**0.20**

ICCS B23 - Rep 2

		Measured			Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.658	141	99	2.028	10.599	1.781	2.070	2.822	9.622	2.548	169.7	127.4	4.65	0.832	214.2
2	3.630	140	97	2.083	10.715	1.810	2.063	2.810	9.794	2.592	171.1	127.4	4.63	0.846	209.5
3	4.139	180	137	1.726	10.743	1.817	2.062	2.807	9.623	2.541	167.7	124.4	4.69	0.851	212.2
4	4.232	192	148	1.683	10.800	1.831	2.058	2.801	9.855	2.602	171.0	126.4	4.63	0.860	206.8
5	4.098	179	134	1.784	10.874	1.849	2.054	2.793	9.876	2.605	170.3	125.2	4.64	0.868	205.7
6	3.756	148	104	2.025	10.870	1.848	2.054	2.794	9.764	2.579	168.4	124.0	4.68	0.865	208.4
7	3.900	160	117	1.870	10.681	1.801	2.065	2.813	9.627	2.543	168.6	125.7	4.67	0.844	212.7
8	4.276	193	150	1.656	10.796	1.830	2.059	2.802	9.692	2.559	168.2	124.4	4.68	0.857	210.4
9	3.834	155	111	1.950	10.809	1.833	2.058	2.800	9.754	2.575	169.1	125.0	4.67	0.859	209.0
10	3.913	161	116	1.926	10.938	1.866	2.050	2.787	9.817	2.590	168.4	123.3	4.68	0.874	206.5
11	3.520	126	88	2.050	10.275	1.700	2.089	2.856	9.093	2.420	164.6	126.8	4.75	0.788	230.9
12	3.769	151	106	2.029	10.922	1.862	2.051	2.788	9.933	2.622	170.6	125.2	4.64	0.873	204.4
13	4.527	221	179	1.524	10.833	1.839	2.056	2.798	9.905	2.620	171.4	126.7	4.62	0.860	206.2
14	4.332	201	158	1.618	10.775	1.825	2.060	2.804	9.811	2.592	170.6	126.3	4.64	0.856	208.1
15	4.449	214	171	1.566	10.834	1.840	2.056	2.798	9.938	2.627	171.9	127.0	4.61	0.862	205.3
16	3.509	130	85	2.339	11.256	1.945	2.032	2.754	10.146	2.680	169.7	121.9	4.65	0.908	198.4
17	3.877	159	112	2.015	11.181	1.926	2.036	2.762	10.075	2.656	169.5	122.1	4.66	0.904	199.5
18	4.390	207	161	1.653	11.071	1.899	2.043	2.773	10.086	2.663	171.2	124.4	4.62	0.890	200.5
19	3.948	166	118	1.979	11.244	1.942	2.033	2.755	10.185	2.684	170.5	122.3	4.64	0.912	196.9
20	4.573	222	180	1.521	10.930	1.863	2.051	2.788	9.827	2.599	168.7	123.9	4.67	0.869	207.3
21	3.711	146	100	2.132	11.134	1.914	2.039	2.767	10.077	2.659	170.2	123.1	4.64	0.897	200.1
22	4.111	181	131	1.909	11.420	1.986	2.022	2.737	10.379	2.736	171.3	121.6	4.62	0.933	192.3
23	4.071	172	128	1.806	10.889	1.853	2.053	2.792	9.631	2.541	165.9	121.9	4.73	0.867	210.8
24	4.044	173	126	1.885	11.138	1.915	2.039	2.766	10.022	2.642	169.2	122.3	4.66	0.898	200.8
25	4.560	223	178	1.570	11.120	1.911	2.040	2.768	10.097	2.669	170.7	123.9	4.63	0.892	200.5
Target											**169.6**	**124.5**	**4.66**	**0.871**	**206.0**
Mean					**10.914**	**1.859**	**2.052**	**2.789**	**9.865**	**2.606**	**169.5**	**124.5**	**4.66**	**0.871**	**206.3**
sd					**0.244**	**0.061**	**0.014**	**0.025**	**0.255**	**0.064**	**1.732**	**1.875**	**0.034**	**0.030**	**7.481**
CV%					**2.23**	**3.28**	**0.69**	**0.91**	**2.59**	**2.46**	**1.02**	**1.51**	**0.73**	**3.42**	**3.63**
Mean Difference											**-0.07**	**0.00**	**0.00**	**0.000**	**0.30**

Appendix 12 - BIASFIX Replication 2

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

ICCS E3 - Rep 2

		Measured			Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.818	289	240	1.450	8.853	1.344	2.172	3.003	15.753	4.295	319.8	276.1	2.96	0.682	145.1
2	3.534	241	189	1.626	8.817	1.335	2.174	3.007	15.494	4.245	315.5	274.3	2.99	0.671	148.9
3	4.233	367	331	1.229	8.883	1.352	2.170	3.000	16.024	4.363	324.6	279.3	2.93	0.687	142.1
4	3.781	281	230	1.493	8.930	1.363	2.167	2.995	15.733	4.282	317.5	272.2	2.98	0.690	144.4
5	4.419	395	366	1.165	8.987	1.378	2.164	2.989	15.853	4.310	318.4	271.7	2.97	0.697	142.8
6	4.514	415	396	1.098	8.879	1.351	2.170	3.000	15.760	4.304	319.3	275.6	2.97	0.682	145.3
7	3.586	248	196	1.601	8.857	1.345	2.172	3.003	15.492	4.236	314.4	272.1	3.00	0.677	148.2
8	3.622	252	200	1.588	8.898	1.355	2.169	2.998	15.450	4.217	312.5	269.3	3.01	0.682	148.0
9	4.000	314	272	1.333	8.806	1.333	2.175	3.008	15.409	4.204	314.0	272.0	3.00	0.675	148.6
10	4.027	328	283	1.343	8.908	1.358	2.169	2.997	15.997	4.351	323.3	277.5	2.94	0.691	142.0
11	4.177	343	304	1.273	8.948	1.368	2.166	2.993	15.498	4.211	312.3	267.0	3.01	0.693	146.1
12	4.376	377	351	1.154	8.852	1.344	2.172	3.003	15.274	4.168	310.1	267.9	3.03	0.678	149.8
13	4.089	329	286	1.323	8.963	1.372	2.165	2.992	15.593	4.234	313.8	267.9	3.00	0.695	145.0
14	3.878	293	250	1.374	8.697	1.305	2.181	3.019	15.245	4.175	313.4	274.4	3.01	0.661	151.7
15	4.134	346	304	1.295	8.948	1.368	2.166	2.993	15.990	4.344	322.2	275.4	2.95	0.695	141.6
16	4.078	326	284	1.318	8.917	1.360	2.168	2.996	15.479	4.208	312.6	268.0	3.01	0.689	146.6
17	4.458	404	380	1.130	8.913	1.359	2.168	2.997	15.807	4.309	319.4	274.6	2.97	0.687	144.2
18	4.315	371	345	1.156	8.739	1.316	2.178	3.015	15.354	4.202	314.6	274.6	3.00	0.665	150.3
19	3.738	272	225	1.461	8.711	1.309	2.180	3.018	15.353	4.208	315.3	276.0	2.99	0.661	150.8
20	3.557	244	192	1.615	8.835	1.340	2.173	3.005	15.491	4.241	315.0	273.3	2.99	0.673	148.6
21	3.670	258	206	1.569	8.946	1.367	2.166	2.993	15.429	4.203	310.9	266.6	3.02	0.689	147.4
22	3.858	279	232	1.446	8.931	1.364	2.167	2.995	14.960	4.069	301.8	258.6	3.09	0.687	151.7
23	4.093	330	286	1.331	9.006	1.383	2.163	2.987	15.658	4.247	314.0	267.0	3.00	0.701	143.9
24	3.573	246	193	1.625	8.911	1.359	2.168	2.997	15.546	4.245	314.2	270.6	3.00	0.683	147.1
25	4.252	363	335	1.174	8.688	1.303	2.181	3.020	15.440	4.231	317.7	278.5	2.98	0.660	150.0
Target											**315.7**	**272.1**	**2.99**	**0.683**	**146.5**
Mean					**8.873**	**1.349**	**2.171**	**3.001**	**15.563**	**4.244**	**315.5**	**272.0**	**2.99**	**0.682**	**146.8**
sd					**0.089**	**0.022**	**0.005**	**0.009**	**0.256**	**0.065**	**4.712**	**4.681**	**0.032**	**0.012**	**3.091**
CV%					**1.00**	**1.64**	**0.24**	**0.31**	**1.65**	**1.54**	**1.49**	**1.72**	**1.07**	**1.71**	**2.11**
Mean Difference											**-0.24**	**-0.07**	**0.00**	**-0.001**	**0.31**

ICCS H2 - Rep 2

		Measured			Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.594	94	62	2.299	11.385	1.977	2.024	2.740	7.054	1.861	116.7	83.1	6.02	0.883	283.7
2	4.146	125	89	1.973	11.782	2.076	2.001	2.699	7.259	1.915	116.3	80.8	6.04	0.928	272.4
3	3.892	108	75	2.074	11.453	1.994	2.020	2.733	6.935	1.828	114.1	80.8	6.11	0.891	287.3
4	3.977	114	79	2.082	11.738	2.065	2.004	2.704	7.170	1.890	115.3	80.2	6.07	0.924	275.8
5	3.523	89	57	2.438	11.650	2.043	2.009	2.713	7.092	1.871	114.9	80.5	6.09	0.911	280.1
6	4.257	130	94	1.913	11.841	2.091	1.998	2.693	7.197	1.901	114.8	79.5	6.09	0.932	274.7
7	4.198	126	92	1.876	11.523	2.012	2.016	2.726	6.984	1.842	114.3	80.6	6.11	0.897	285.1
8	4.354	136	102	1.778	11.523	2.012	2.016	2.726	7.006	1.849	114.6	81.0	6.10	0.896	284.7
9	3.698	99	65	2.320	11.793	2.079	2.001	2.698	7.233	1.907	115.8	80.3	6.06	0.930	273.0
10	4.554	150	114	1.731	11.842	2.092	1.998	2.693	7.258	1.922	115.7	80.4	6.06	0.928	273.8
11	3.840	107	72	2.209	11.819	2.086	1.999	2.695	7.264	1.915	116.1	80.4	6.05	0.934	271.6
12	4.466	145	110	1.738	11.641	2.041	2.009	2.714	7.169	1.895	116.2	81.6	6.04	0.908	278.0
13	3.712	98	66	2.205	11.411	1.984	2.023	2.738	6.901	1.820	114.0	81.0	6.12	0.885	289.4
14	4.100	119	85	1.960	11.597	2.030	2.012	2.718	6.963	1.836	113.3	79.5	6.15	0.905	285.2
15	3.906	109	75	2.112	11.644	2.042	2.009	2.714	7.056	1.860	114.3	80.0	6.11	0.912	280.9
16	3.883	107	74	2.091	11.492	2.004	2.018	2.729	6.926	1.825	113.6	80.3	6.13	0.894	287.4
17	3.713	98	66	2.205	11.412	1.984	2.023	2.738	6.901	1.819	113.9	80.9	6.12	0.885	289.4
18	4.072	116	83	1.953	11.493	2.004	2.018	2.729	6.820	1.798	111.9	79.0	6.20	0.892	291.9
19	4.176	123	89	1.910	11.604	2.032	2.012	2.718	6.939	1.830	112.8	79.2	6.16	0.905	286.3
20	4.393	138	103	1.795	11.703	2.057	2.006	2.707	7.090	1.873	114.4	79.9	6.11	0.914	280.3
21	4.483	145	111	1.706	11.546	2.017	2.015	2.724	7.055	1.865	115.2	81.4	6.08	0.897	283.2
22	4.097	119	84	2.007	11.782	2.076	2.001	2.699	7.079	1.867	113.4	78.8	6.14	0.926	279.2
23	4.577	151	116	1.694	11.733	2.064	2.004	2.704	7.164	1.897	115.3	80.6	6.07	0.915	278.2
24	3.999	115	81	2.016	11.536	2.015	2.016	2.725	7.038	1.855	115.1	81.1	6.08	0.901	282.5
25	3.734	102	68	2.250	11.646	2.043	2.009	2.713	7.229	1.906	117.1	82.0	6.01	0.915	274.3
Target											**114.7**	**80.5**	**6.09**	**0.907**	**281.4**
Mean					**11.624**	**2.037**	**2.010**	**2.716**	**7.071**	**1.866**	**114.8**	**80.5**	**6.09**	**0.908**	**281.1**
sd					**0.143**	**0.036**	**0.008**	**0.015**	**0.130**	**0.036**	**1.265**	**0.953**	**0.045**	**0.016**	**5.930**
CV%					**1.23**	**1.76**	**0.41**	**0.55**	**1.84**	**1.91**	**1.10**	**1.18**	**0.74**	**1.76**	**2.11**
Mean Difference											**0.07**	**0.01**	**0.00**	**0.001**	**-0.26**

Appendix 12 - BIASFIX Replication 2

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

ICCS C33 - Rep 2

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.091	265	212	1.563	9.948	1.618	2.108	2.890	13.597	3.617	252.7	198.6	3.50	0.798	155.8
2	4.343	300	250	1.440	10.028	1.638	2.103	2.881	13.666	3.634	252.3	197.3	3.51	0.807	154.5
3	3.719	215	161	1.783	9.865	1.597	2.113	2.898	13.401	3.577	250.7	198.8	3.52	0.784	159.4
4	4.126	271	218	1.545	9.963	1.622	2.107	2.888	13.673	3.636	253.8	199.3	3.49	0.801	154.8
5	4.224	283	234	1.463	9.848	1.593	2.114	2.900	13.464	3.587	252.2	199.8	3.51	0.786	158.2
6	3.890	234	183	1.635	9.740	1.566	2.120	2.911	13.138	3.509	248.3	198.5	3.55	0.770	163.4
7	4.549	331	290	1.303	9.879	1.601	2.112	2.897	13.499	3.603	252.3	199.8	3.51	0.786	158.2
8	4.443	318	273	1.357	9.889	1.603	2.111	2.896	13.643	3.637	254.7	201.4	3.48	0.790	156.1
9	3.542	198	141	1.972	10.063	1.647	2.101	2.878	13.884	3.704	255.6	200.1	3.48	0.806	152.8
10	4.358	302	258	1.370	9.758	1.571	2.119	2.909	13.345	3.563	251.8	201.1	3.51	0.773	160.6
11	3.772	221	169	1.710	9.727	1.563	2.121	2.912	13.233	3.538	250.4	200.6	3.53	0.768	162.6
12	3.623	208	151	1.897	10.022	1.637	2.104	2.882	13.869	3.698	256.2	200.9	3.47	0.803	153.0
13	4.249	287	238	1.454	9.872	1.599	2.112	2.897	13.508	3.598	252.6	199.7	3.51	0.789	157.5
14	3.921	235	186	1.596	9.666	1.548	2.124	2.919	12.896	3.448	245.2	197.2	3.58	0.760	167.1
15	3.667	212	156	1.847	9.959	1.621	2.107	2.888	13.713	3.657	254.6	200.5	3.49	0.796	155.1
16	4.128	270	211	1.637	10.346	1.718	2.085	2.848	14.050	3.720	252.9	192.9	3.50	0.847	147.8
17	3.514	196	136	2.077	10.353	1.719	2.084	2.847	14.272	3.795	256.7	196.6	3.46	0.842	146.6
18	4.335	301	248	1.473	10.152	1.669	2.096	2.868	13.913	3.693	254.3	196.9	3.49	0.823	150.8
19	3.952	243	187	1.689	10.108	1.658	2.099	2.873	13.585	3.608	249.2	193.6	3.54	0.816	154.7
20	3.899	237	181	1.715	10.072	1.649	2.101	2.877	13.595	3.613	250.1	194.9	3.53	0.812	155.0
21	3.613	203	146	1.933	10.125	1.662	2.098	2.871	13.716	3.653	251.3	195.5	3.52	0.814	153.9
22	4.441	313	263	1.416	10.150	1.669	2.096	2.869	13.747	3.652	251.3	194.8	3.52	0.821	152.8
23	4.012	252	197	1.636	10.052	1.644	2.102	2.879	13.587	3.610	250.4	195.3	3.53	0.810	155.1
24	3.725	218	159	1.880	10.240	1.691	2.091	2.859	13.937	3.701	253.0	194.9	3.50	0.831	150.2
25	4.584	337	291	1.341	10.130	1.664	2.097	2.871	13.831	3.680	253.3	196.8	3.50	0.817	152.4
Target											**252.3**	**197.9**	**3.51**	**0.801**	**155.5**
Mean					**9.998**	**1.631**	**2.105**	**2.884**	**13.630**	**3.629**	**252.2**	**197.8**	**3.51**	**0.802**	**155.5**
sd					**0.183**	**0.046**	**0.011**	**0.019**	**0.295**	**0.073**	**2.567**	**2.522**	**0.026**	**0.023**	**4.709**
CV%					**1.83**	**2.81**	**0.51**	**0.66**	**2.17**	**2.01**	**1.02**	**1.27**	**0.73**	**2.81**	**3.03**
Mean Difference											**-0.06**	**-0.07**	**0.00**	**0.001**	**0.04**

ICCS F2 - Rep 2

	Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.136	94	69	1.856	11.270	1.949	2.031	2.752	5.258	1.386	87.8	62.9	7.25	0.842	381.2
2	4.349	103	79	1.700	11.172	1.924	2.037	2.763	5.160	1.362	86.9	62.7	7.30	0.828	390.4
3	4.566	113	89	1.612	11.327	1.963	2.028	2.746	5.198	1.375	86.4	61.9	7.32	0.841	387.1
4	4.253	98	73	1.802	11.360	1.971	2.026	2.743	5.220	1.377	86.6	61.7	7.32	0.849	383.4
5	3.518	66	44	2.250	10.973	1.874	2.048	2.783	5.018	1.327	85.9	62.9	7.35	0.803	405.5
6	4.453	107	84	1.623	11.094	1.904	2.041	2.771	5.075	1.340	86.0	62.4	7.35	0.818	398.5
7	3.731	76	52	2.136	11.212	1.934	2.034	2.758	5.218	1.376	87.6	63.0	7.26	0.834	385.2
8	4.032	88	64	1.891	11.128	1.913	2.039	2.767	5.124	1.351	86.6	62.6	7.32	0.825	392.9
9	3.689	73	50	2.132	11.070	1.898	2.043	2.773	5.073	1.339	86.1	62.6	7.34	0.817	398.4
10	4.223	98	73	1.802	11.279	1.951	2.030	2.751	5.261	1.387	87.8	62.9	7.25	0.842	381.2
11	3.843	80	56	2.041	11.184	1.927	2.036	2.761	5.159	1.360	86.8	62.5	7.30	0.831	389.7
12	3.891	82	58	1.999	11.159	1.921	2.037	2.764	5.147	1.357	86.7	62.6	7.31	0.829	390.8
13	3.725	75	51	2.163	11.292	1.954	2.030	2.750	5.199	1.371	86.7	62.0	7.31	0.842	385.6
14	3.986	85	62	1.880	10.955	1.870	2.049	2.785	4.998	1.318	85.6	62.6	7.37	0.805	405.3
15	3.727	74	52	2.025	10.787	1.828	2.059	2.802	4.928	1.302	85.6	63.4	7.37	0.785	414.5
16	3.963	85	61	1.942	11.140	1.916	2.039	2.766	5.131	1.353	86.6	62.6	7.31	0.827	392.2
17	3.703	72	51	1.993	10.598	1.781	2.070	2.822	4.790	1.268	84.5	63.4	7.43	0.763	430.0
18	3.946	85	60	2.007	11.348	1.968	2.026	2.744	5.265	1.387	87.4	62.3	7.27	0.850	379.7
19	4.221	96	72	1.778	11.171	1.924	2.037	2.763	5.111	1.348	86.1	62.1	7.34	0.828	393.6
20	4.057	89	65	1.875	11.132	1.914	2.039	2.767	5.119	1.349	86.5	62.5	7.32	0.825	393.2
21	4.100	90	66	1.860	11.187	1.928	2.036	2.761	5.090	1.342	85.6	61.7	7.37	0.830	394.8
22	4.586	112	90	1.549	11.087	1.903	2.042	2.771	4.998	1.322	84.7	61.6	7.41	0.813	405.6
23	4.294	99	76	1.697	11.017	1.885	2.046	2.779	5.024	1.326	85.6	62.4	7.37	0.811	402.8
24	4.364	103	79	1.700	11.211	1.934	2.034	2.759	5.141	1.357	86.3	62.1	7.33	0.832	391.5
25	4.437	105	82	1.640	11.130	1.914	2.039	2.767	5.032	1.329	85.0	61.6	7.40	0.821	401.3
Target											**86.3**	**62.5**	**7.33**	**0.824**	**394.6**
Mean					**11.131**	**1.914**	**2.039**	**2.767**	**5.109**	**1.348**	**86.3**	**62.4**	**7.33**	**0.824**	**395.0**
sd					**0.172**	**0.043**	**0.010**	**0.018**	**0.112**	**0.028**	**0.874**	**0.512**	**0.047**	**0.020**	**11.453**
CV%					**1.54**	**2.24**	**0.49**	**0.64**	**2.19**	**2.11**	**1.01**	**0.82**	**0.64**	**2.38**	**2.90**
Mean Difference											**-0.01**	**-0.06**	**0.00**	**0.000**	**0.38**

Appendix 12 - BIASFIX Replication 2

Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

ICCS A16 - Rep 2

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.4992	174	134	1.686	11.496	2.005	2.018	2.729	8.368	2.212	137.2	97.2	5.40	0.911	239.1
2	3.5826	108	71	2.314	11.403	1.982	2.023	2.739	8.168	2.155	135.0	96.0	5.46	0.901	244.9
3	3.6338	111	75	2.190	11.117	1.910	2.040	2.768	7.984	2.108	135.0	97.8	5.46	0.869	252.9
4	4.3219	159	119	1.785	11.471	1.999	2.019	2.731	8.276	2.184	136.0	96.3	5.43	0.910	241.3
5	4.0158	137	97	1.995	11.500	2.006	2.018	2.728	8.290	2.185	135.9	96.0	5.43	0.916	240.1
6	4.3756	162	123	1.735	11.393	1.979	2.024	2.740	8.169	2.156	135.1	96.2	5.45	0.900	245.1
7	4.1193	143	103	1.928	11.520	2.011	2.016	2.726	8.233	2.170	134.8	95.1	5.46	0.916	241.7
8	3.7152	116	78	2.212	11.445	1.992	2.021	2.734	8.178	2.156	134.7	95.5	5.47	0.907	243.9
9	4.2464	152	113	1.809	11.373	1.974	2.025	2.742	8.131	2.144	134.7	95.9	5.47	0.899	246.0
10	3.8971	129	91	2.010	11.218	1.935	2.034	2.758	8.110	2.138	136.0	97.8	5.43	0.883	247.6
11	4.1309	144	106	1.845	11.213	1.934	2.034	2.758	8.038	2.119	134.9	97.0	5.46	0.882	249.8
12	4.3445	161	124	1.686	11.099	1.906	2.041	2.770	8.032	2.120	136.0	98.6	5.43	0.868	251.4
13	4.4572	172	133	1.672	11.328	1.963	2.028	2.746	8.307	2.194	138.1	98.8	5.37	0.894	241.8
14	3.9043	129	91	2.010	11.239	1.941	2.033	2.756	8.093	2.133	135.5	97.3	5.44	0.885	247.9
15	4.2569	153	115	1.770	11.234	1.940	2.033	2.756	8.048	2.123	134.8	96.9	5.46	0.883	249.6
16	3.6648	115	77	2.231	11.359	1.971	2.026	2.743	8.280	2.184	137.3	97.9	5.39	0.899	241.7
17	3.8403	125	87	2.064	11.265	1.947	2.031	2.753	8.126	2.142	135.8	97.3	5.44	0.888	246.7
18	4.1921	150	112	1.794	11.162	1.922	2.037	2.764	8.091	2.134	136.3	98.4	5.42	0.877	248.7
19	3.8077	123	85	2.094	11.282	1.952	2.030	2.751	8.147	2.148	135.9	97.3	5.43	0.890	246.0
20	3.9124	130	91	2.041	11.384	1.977	2.024	2.741	8.216	2.165	136.0	96.7	5.43	0.902	243.1
21	3.9294	129	92	1.966	11.140	1.916	2.039	2.766	7.925	2.089	133.8	96.6	5.49	0.873	253.9
22	4.2489	153	114	1.801	11.346	1.967	2.027	2.745	8.155	2.151	135.4	96.6	5.45	0.896	245.5
23	3.8291	125	87	2.064	11.232	1.939	2.033	2.756	8.154	2.149	136.6	98.1	5.41	0.885	246.2
24	3.5098	106	69	2.360	11.333	1.964	2.027	2.746	8.315	2.196	138.2	98.8	5.37	0.894	241.5
25	4.4948	175	137	1.632	11.240	1.941	2.033	2.755	8.246	2.179	138.1	99.3	5.37	0.883	244.3
Target											**135.8**	**97.1**	**5.44**	**0.892**	**245.8**
Mean					**11.312**	**1.959**	**2.029**	**2.748**	**8.163**	**2.153**	**135.9**	**97.2**	**5.43**	**0.892**	**245.6**
sd					**0.123**	**0.031**	**0.007**	**0.013**	**0.111**	**0.030**	**1.173**	**1.124**	**0.032**	**0.014**	**3.958**
CV%					**1.09**	**1.57**	**0.35**	**0.46**	**1.35**	**1.39**	**0.86**	**1.16**	**0.59**	**1.55**	**1.61**
Mean Difference											**0.08**	**0.08**	**-0.01**	**0.000**	**-0.17**

ICCS I25 - Rep 2

		Measured				Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns	
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	4.245	172	133	1.672	10.788	1.828	2.059	2.802	8.764	2.314	152.2	112.6	5.02	0.846	232.7
2	3.823	139	100	1.932	10.709	1.808	2.064	2.811	8.732	2.307	152.6	113.6	5.01	0.836	234.4
3	3.557	120	81	2.195	10.898	1.856	2.053	2.791	8.871	2.346	152.7	112.4	5.01	0.855	229.9
4	4.451	190	153	1.542	10.731	1.814	2.062	2.808	8.739	2.311	152.5	113.4	5.02	0.837	234.4
5	3.692	129	90	2.054	10.794	1.829	2.059	2.802	8.764	2.317	152.1	112.6	5.02	0.844	233.1
6	4.365	185	145	1.628	10.897	1.855	2.053	2.791	8.986	2.373	154.7	113.7	4.97	0.859	226.3
7	3.970	153	112	1.866	10.858	1.845	2.055	2.795	9.000	2.375	155.4	114.4	4.95	0.856	225.9
8	4.165	166	127	1.708	10.735	1.815	2.062	2.808	8.758	2.312	152.7	113.4	5.01	0.840	233.2
9	4.070	158	118	1.793	10.833	1.839	2.056	2.798	8.813	2.325	152.5	112.4	5.02	0.852	230.9
10	4.427	190	153	1.542	10.673	1.799	2.066	2.814	8.793	2.325	154.1	115.0	4.98	0.832	233.4
11	3.775	137	98	1.954	10.657	1.795	2.067	2.816	8.800	2.327	154.5	115.4	4.97	0.831	233.2
12	4.009	154	115	1.793	10.673	1.799	2.066	2.814	8.745	2.310	153.3	114.3	5.00	0.834	234.1
13	3.516	117	81	2.086	10.392	1.729	2.082	2.843	8.534	2.268	153.0	116.8	5.00	0.794	244.6
14	4.352	184	147	1.567	10.599	1.781	2.070	2.822	8.766	2.318	154.6	115.9	4.97	0.825	234.6
15	3.829	141	101	1.949	10.790	1.828	2.059	2.802	8.885	2.347	154.3	114.2	4.98	0.847	229.6
16	4.401	188	151	1.550	10.647	1.793	2.067	2.817	8.784	2.323	154.3	115.3	4.98	0.830	233.8
17	3.590	124	85	2.128	10.759	1.821	2.061	2.805	8.904	2.356	155.0	115.2	4.96	0.840	230.2
18	4.269	178	138	1.664	10.811	1.834	2.058	2.800	8.984	2.372	155.7	115.0	4.94	0.851	226.8
19	4.152	167	127	1.729	10.786	1.828	2.059	2.803	8.906	2.351	154.7	114.4	4.97	0.848	228.9
20	3.754	138	97	2.024	10.859	1.846	2.055	2.795	9.108	2.406	157.3	115.9	4.91	0.856	223.5
21	3.924	149	108	1.903	10.879	1.851	2.054	2.793	8.990	2.372	155.0	113.9	4.96	0.858	226.0
22	4.370	186	148	1.579	10.700	1.806	2.064	2.812	8.860	2.342	155.0	115.4	4.96	0.836	231.2
23	4.450	191	155	1.518	10.624	1.787	2.069	2.819	8.706	2.303	153.2	114.8	5.00	0.826	236.2
24	4.307	179	139	1.658	10.885	1.852	2.053	2.792	8.926	2.356	153.8	113.1	4.99	0.857	227.8
25	3.624	126	86	2.147	10.928	1.863	2.051	2.788	8.986	2.375	154.3	113.3	4.98	0.861	226.4
Target											**153.9**	**114.3**	**4.98**	**0.841**	**231.5**
Mean					**10.756**	**1.820**	**2.061**	**2.806**	**8.844**	**2.337**	**154.0**	**114.3**	**4.98**	**0.842**	**231.2**
sd					**0.121**	**0.030**	**0.007**	**0.013**	**0.125**	**0.031**	**1.275**	**1.211**	**0.029**	**0.015**	**4.450**
CV%					**1.13**	**1.66**	**0.34**	**0.45**	**1.42**	**1.33**	**0.83**	**1.06**	**0.58**	**1.77**	**1.92**
Mean Difference											**0.07**	**-0.05**	**0.00**	**0.001**	**-0.26**

Appendix 12 - BIASFIX Replication 2

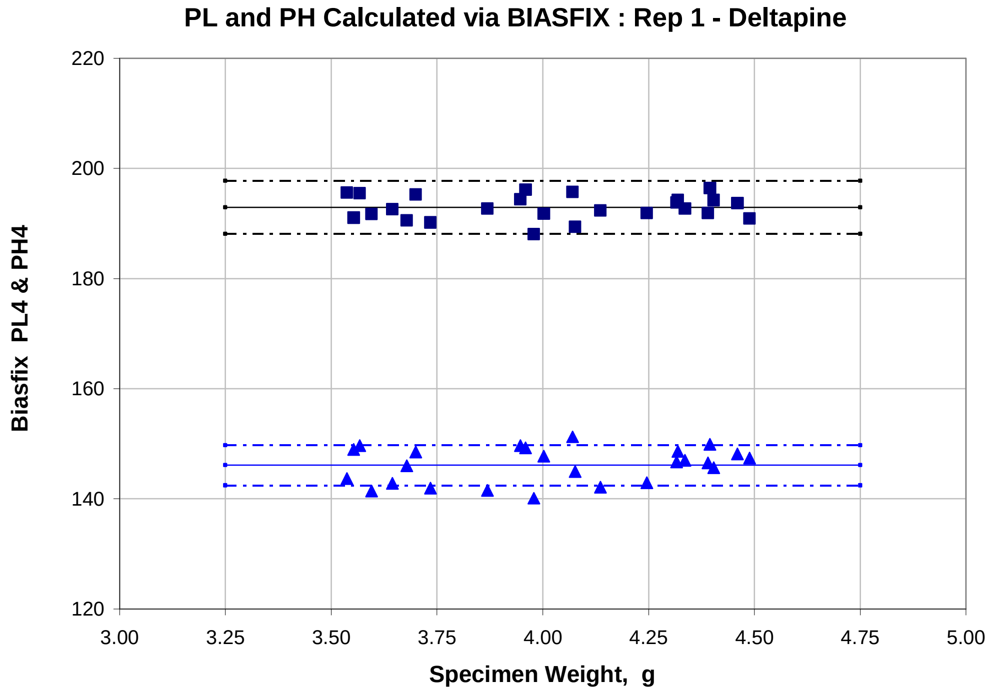
Bias from Equation (4): Zi = aZ + bZ / Xi with aZ = -0.869
then bPL = 2.485 - 0.233 * Z4 and bPH = 3.561 - 0.415 * Z4

ICCS G12 - Rep 2

		Measured			Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.550	300	252	1.417	8.115	1.160	2.215	3.080	18.139	5.094	390.9	364.1	2.57	0.600	135.6
2	4.085	414	392	1.115	8.106	1.158	2.215	3.081	18.325	5.134	395.2	367.4	2.55	0.603	133.7
3	3.678	328	286	1.315	8.034	1.140	2.219	3.088	18.215	5.124	395.1	370.5	2.55	0.593	135.7
4	3.887	368	331	1.236	8.182	1.176	2.211	3.073	18.296	5.107	392.2	361.6	2.57	0.613	132.7
5	4.172	429	415	1.069	8.084	1.152	2.217	3.083	18.086	5.075	390.7	364.4	2.57	0.599	135.9
6	4.228	440	430	1.047	8.101	1.156	2.216	3.081	18.040	5.062	389.2	362.5	2.58	0.600	136.2
7	3.706	327	290	1.271	7.932	1.114	2.225	3.099	17.722	5.007	387.6	367.4	2.59	0.579	141.0
8	3.620	316	269	1.380	8.140	1.166	2.213	3.077	18.332	5.137	394.2	365.8	2.56	0.605	133.5
9	3.867	358	325	1.213	8.053	1.144	2.218	3.086	17.815	5.001	385.8	360.7	2.60	0.595	138.2
10	3.724	331	289	1.312	8.121	1.161	2.214	3.079	18.004	5.043	387.8	360.2	2.59	0.603	136.0
11	3.993	391	363	1.160	8.102	1.157	2.216	3.081	18.199	5.098	392.6	365.0	2.56	0.603	134.6
12	3.538	309	252	1.504	8.395	1.230	2.198	3.051	19.206	5.336	404.6	366.3	2.51	0.638	124.6
13	3.750	338	296	1.304	8.148	1.168	2.213	3.076	18.142	5.075	389.9	361.0	2.58	0.607	134.5
14	4.109	413	398	1.077	7.995	1.130	2.222	3.092	17.880	5.036	389.0	366.2	2.58	0.587	138.8
15	3.556	301	253	1.415	8.123	1.162	2.214	3.079	18.138	5.091	390.6	363.4	2.57	0.601	135.4
16	3.927	367	335	1.200	8.126	1.163	2.214	3.079	17.754	4.967	382.2	354.5	2.61	0.604	137.6
17	3.914	367	335	1.200	8.098	1.156	2.216	3.081	17.849	5.000	385.2	358.3	2.60	0.601	137.3
18	4.056	397	375	1.121	8.071	1.149	2.217	3.084	17.800	4.994	384.9	359.3	2.60	0.597	138.1
19	4.139	422	407	1.075	8.046	1.143	2.219	3.087	18.054	5.074	391.2	366.3	2.57	0.594	136.7
20	3.668	316	275	1.320	8.032	1.139	2.220	3.088	17.650	4.966	382.9	359.3	2.61	0.590	140.1
21	3.951	377	344	1.201	8.178	1.175	2.211	3.073	18.074	5.046	387.5	357.4	2.59	0.612	134.4
22	3.810	349	313	1.243	8.047	1.143	2.219	3.087	17.947	5.041	388.9	363.8	2.58	0.595	137.3
23	3.659	317	272	1.358	8.150	1.168	2.213	3.076	17.967	5.030	386.1	357.8	2.59	0.606	136.0
24	3.721	328	289	1.288	8.027	1.138	2.220	3.089	17.742	4.990	385.0	361.2	2.60	0.591	139.4
25	4.017	390	360	1.174	8.205	1.182	2.210	3.070	18.063	5.037	386.4	355.4	2.59	0.615	134.1
Target											**388.9**	**362.2**	**2.58**	**0.600**	**136.2**
Mean					**8.105**	**1.157**	**2.215**	**3.081**	**18.057**	**5.063**	**389.4**	**362.4**	**2.58**	**0.601**	**135.9**
sd					**0.087**	**0.022**	**0.005**	**0.009**	**0.308**	**0.076**	**4.745**	**4.068**	**0.022**	**0.011**	**3.157**
CV%					**1.07**	**1.87**	**0.23**	**0.29**	**1.71**	**1.49**	**1.22**	**1.12**	**0.84**	**1.87**	**2.32**
Mean Difference											**0.53**	**0.19**	**0.00**	**0.001**	**-0.30**

ICCS D3 - Rep 2

		Measured			Eq(4), Eq(9) & Eq(10)				Eq(1), Eq(7) & Eq(8)				FMT Equ'ns		
Spec.	**Weight**	**PL**	**PH**	**$(PL/PH)^2$**	**bZ**	**Z4**	**bPL**	**bPH**	**aPL**	**aPH**	**PL4**	**PH4**	**Meq**	**Mat**	**Fin**
1	3.939	224	164	1.866	10.770	1.824	2.060	2.804	13.298	3.511	231.3	171.3	3.73	0.889	153.4
2	4.428	283	228	1.541	10.670	1.798	2.066	2.815	13.085	3.460	229.4	171.3	3.76	0.874	156.8
3	3.529	178	122	2.129	10.578	1.776	2.071	2.824	13.066	3.466	230.8	173.8	3.74	0.860	158.3
4	3.711	200	142	1.984	10.588	1.778	2.071	2.823	13.233	3.503	233.5	175.4	3.71	0.866	155.7
5	3.846	215	156	1.899	10.648	1.793	2.067	2.817	13.275	3.509	233.2	174.2	3.71	0.874	154.5
6	4.551	303	253	1.434	10.482	1.752	2.077	2.834	13.021	3.451	231.8	175.5	3.73	0.851	159.1
7	3.617	189	133	2.019	10.448	1.743	2.079	2.838	13.051	3.462	232.9	176.9	3.71	0.846	159.2
8	4.007	229	170	1.815	10.752	1.819	2.061	2.806	13.104	3.459	228.2	169.2	3.77	0.886	155.8
9	4.229	259	200	1.677	10.767	1.823	2.060	2.805	13.276	3.505	230.9	171.1	3.74	0.889	153.7
10	4.108	247	188	1.726	10.660	1.796	2.067	2.816	13.326	3.520	233.8	174.5	3.70	0.877	153.7
11	4.353	275	220	1.563	10.584	1.777	2.071	2.824	13.075	3.458	230.8	173.3	3.74	0.865	157.4
12	4.411	281	226	1.546	10.653	1.794	2.067	2.816	13.075	3.458	229.5	171.6	3.75	0.872	157.0
13	4.066	234	176	1.768	10.721	1.811	2.063	2.809	12.958	3.421	226.2	168.1	3.79	0.881	157.7
14	3.593	185	127	2.122	10.746	1.817	2.062	2.807	13.248	3.506	230.8	171.7	3.74	0.882	154.8
15	3.700	193	136	2.014	10.665	1.797	2.066	2.815	12.931	3.421	226.8	169.4	3.79	0.872	158.8
16	3.708	194	137	2.005	10.658	1.796	2.067	2.816	12.928	3.420	226.9	169.6	3.79	0.871	158.9
17	4.229	261	202	1.669	10.734	1.815	2.062	2.808	13.344	3.524	232.7	172.8	3.72	0.885	153.1
18	3.534	184	124	2.202	10.853	1.844	2.055	2.796	13.738	3.636	237.3	175.3	3.67	0.897	148.8
19	3.637	189	131	2.082	10.730	1.814	2.062	2.808	13.183	3.488	230.0	171.1	3.75	0.880	155.5
20	4.085	242	183	1.749	10.693	1.804	2.065	2.812	13.243	3.497	231.7	172.5	3.73	0.880	154.5
21	3.868	214	156	1.882	10.640	1.791	2.068	2.818	13.052	3.449	229.4	171.5	3.76	0.872	157.2
22	3.906	216	158	1.869	10.695	1.805	2.065	2.812	12.966	3.425	226.9	168.9	3.79	0.878	157.9
23	4.042	232	175	1.758	10.616	1.785	2.069	2.820	12.894	3.407	227.0	169.9	3.78	0.869	159.1
24	4.324	269	215	1.565	10.526	1.763	2.074	2.830	12.904	3.413	228.9	172.5	3.76	0.858	159.8
25	3.868	213	155	1.888	10.666	1.797	2.066	2.815	13.017	3.440	228.3	170.4	3.77	0.875	157.5
Target											**230.3**	**172.0**	**3.74**	**0.874**	**156.3**
Mean					**10.662**	**1.796**	**2.066**	**2.815**	**13.132**	**3.472**	**230.4**	**172.1**	**3.74**	**0.874**	**156.3**
sd					**0.093**	**0.023**	**0.005**	**0.010**	**0.189**	**0.050**	**2.701**	**2.337**	**0.031**	**0.012**	**2.588**
CV%					**0.87**	**1.29**	**0.26**	**0.34**	**1.44**	**1.43**	**1.17**	**1.36**	**0.84**	**1.37**	**1.66**
Mean Difference											**0.06**	**0.07**	**0.00**	**0.000**	**0.03**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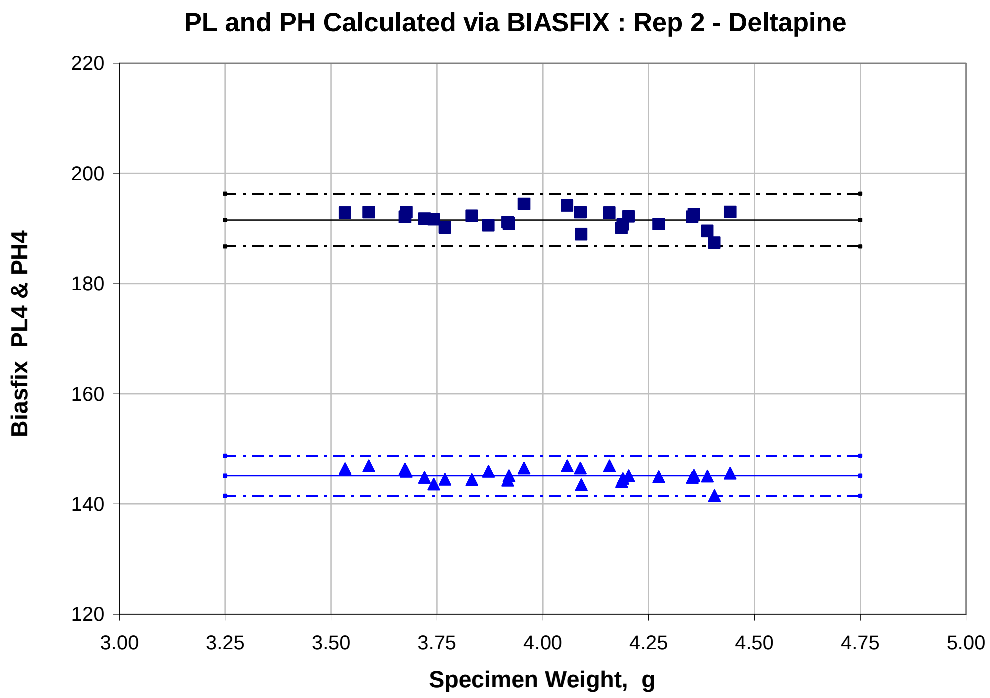
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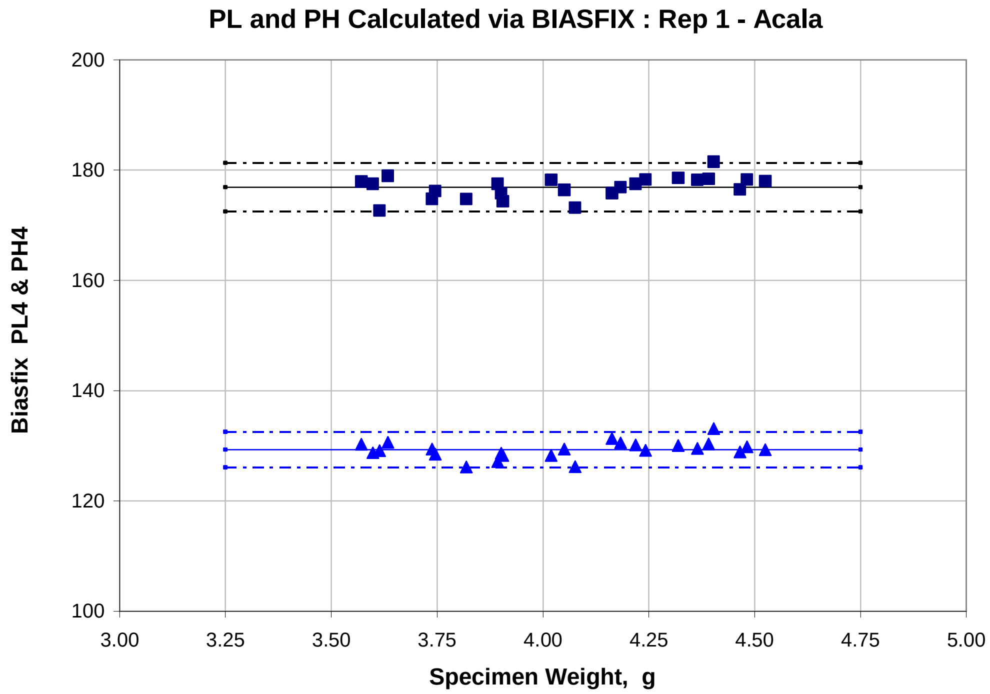
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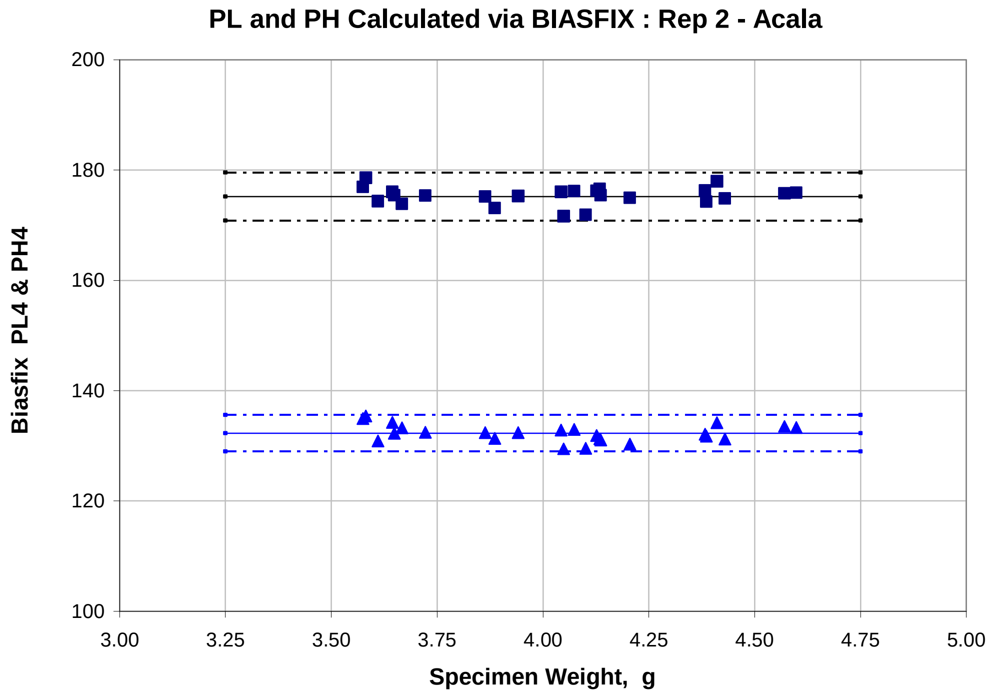
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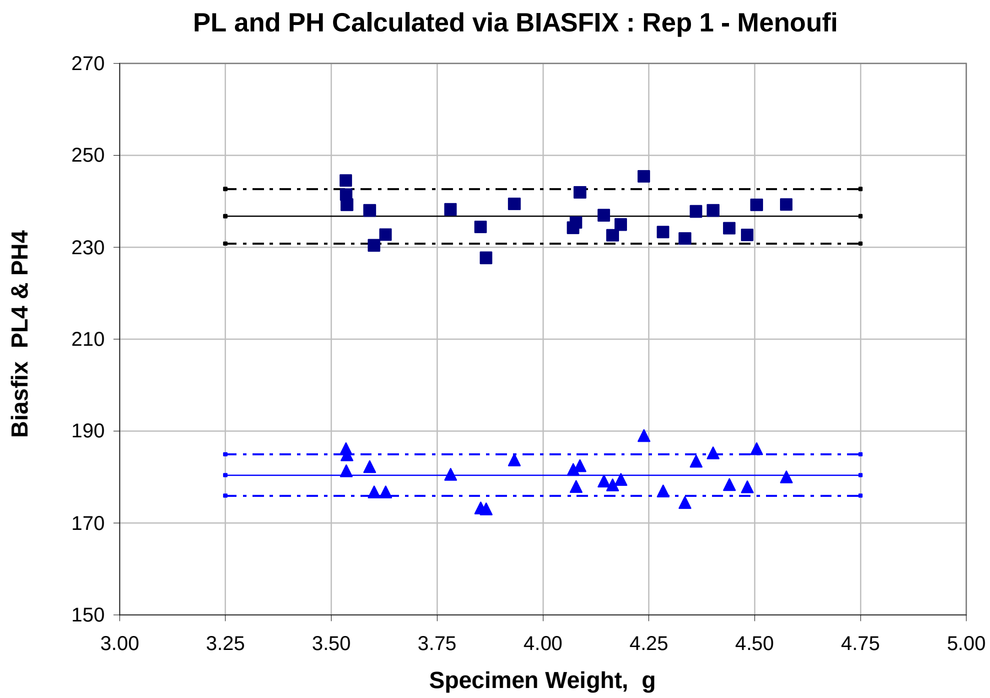
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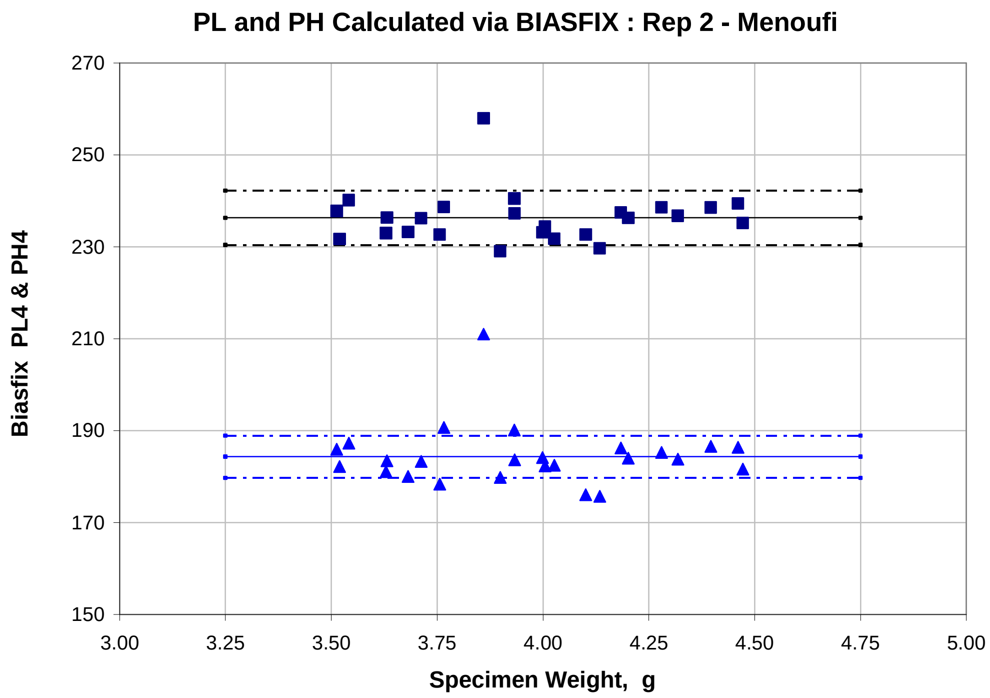
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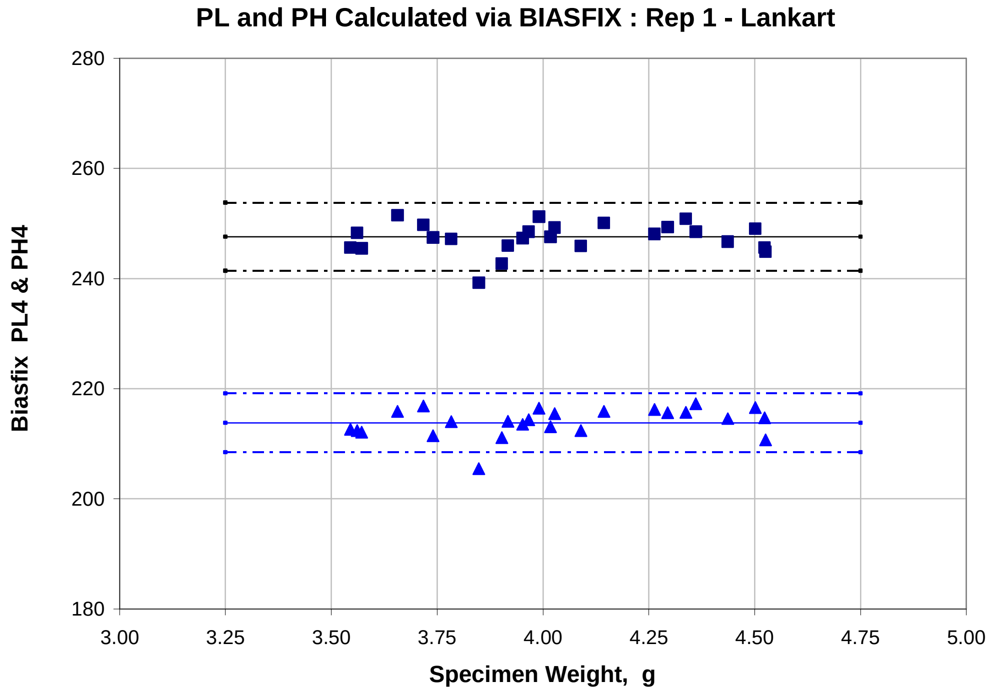
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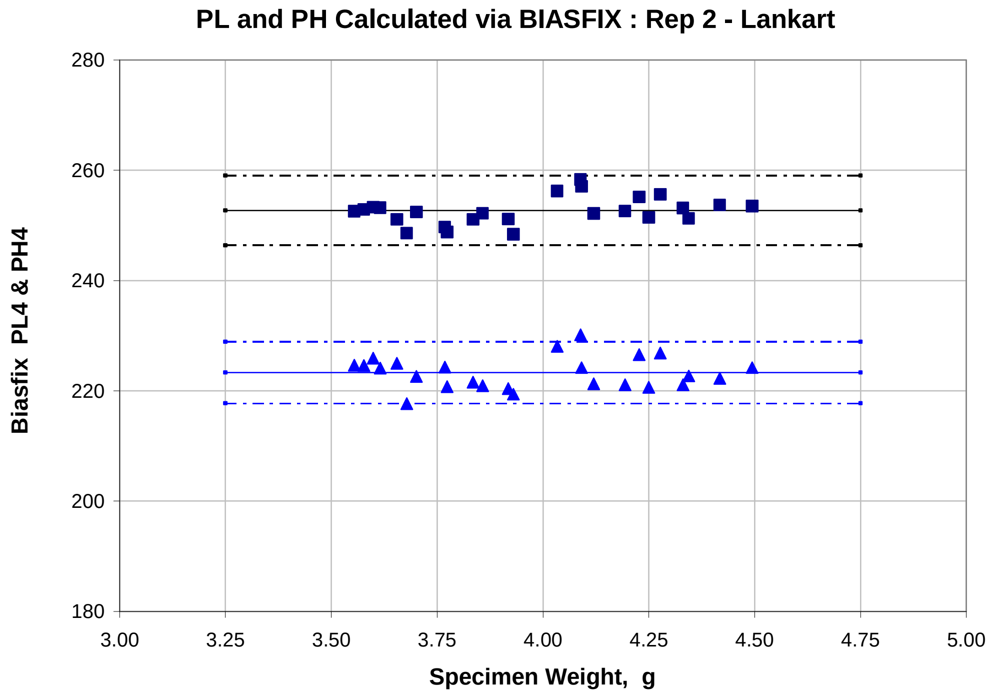
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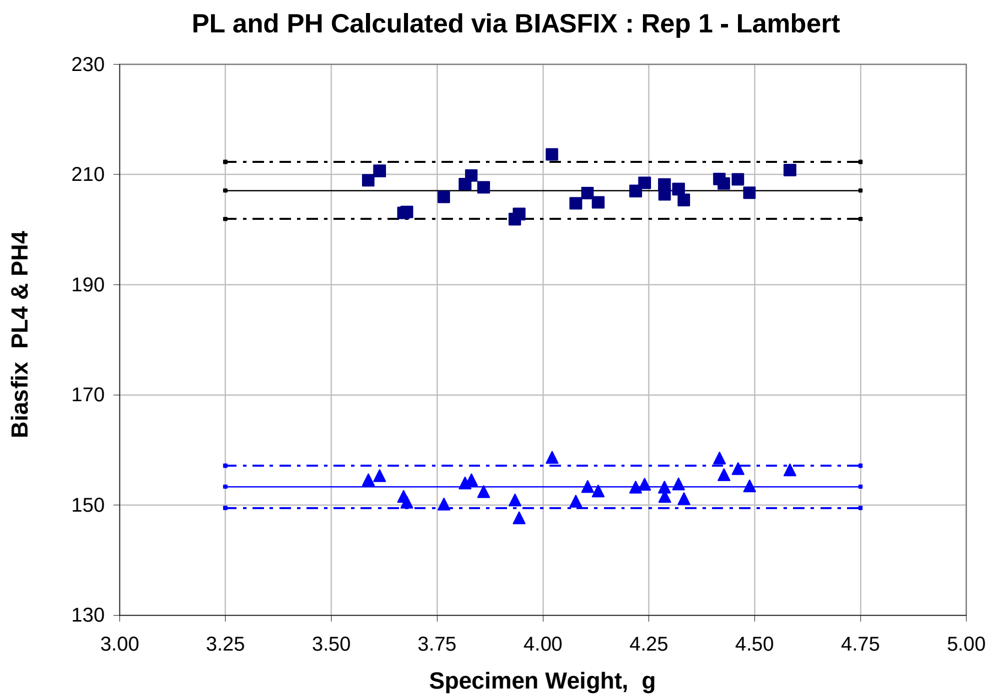
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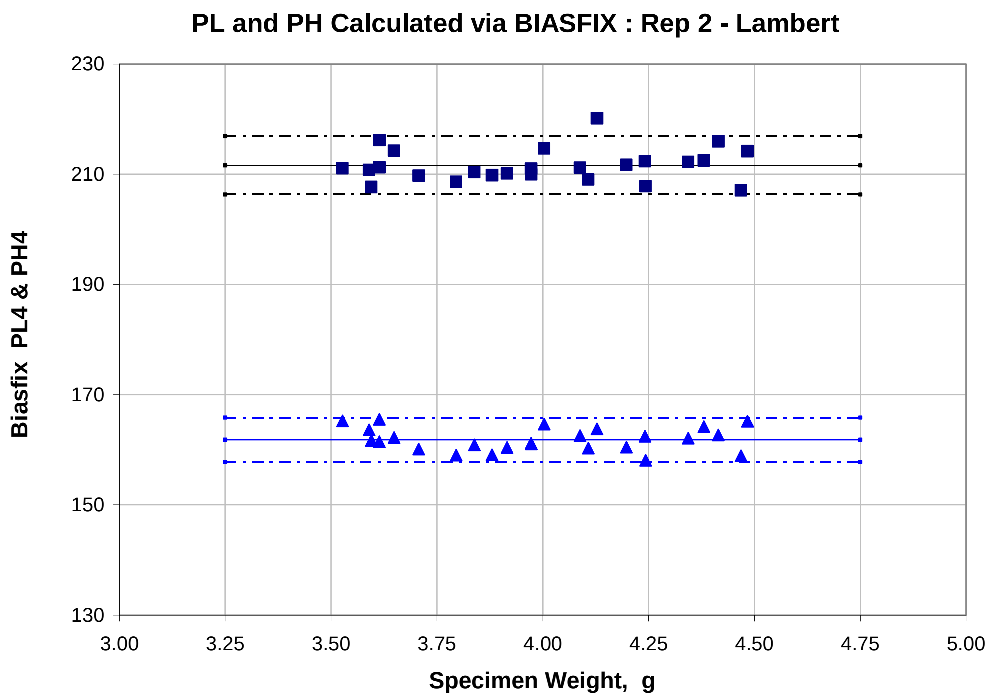
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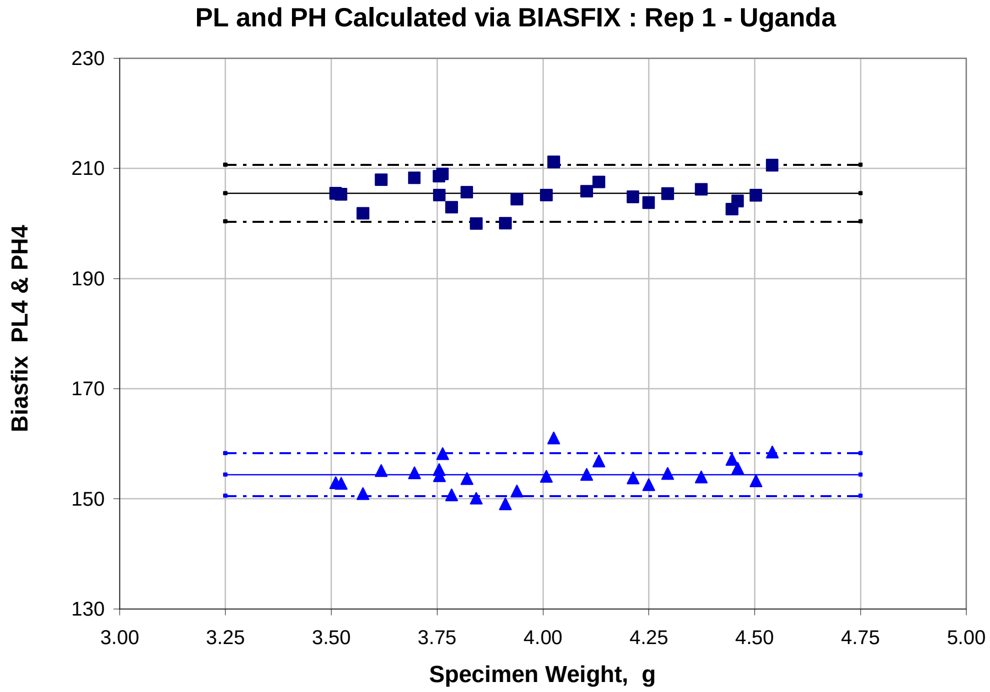
Specimen Weight, g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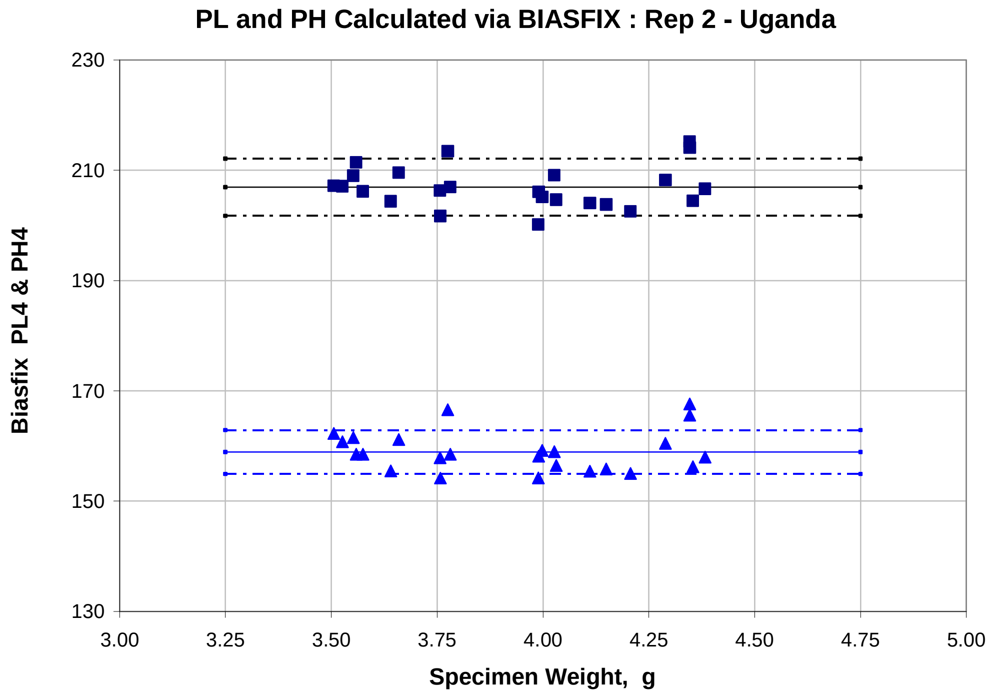
Specimen Weight, g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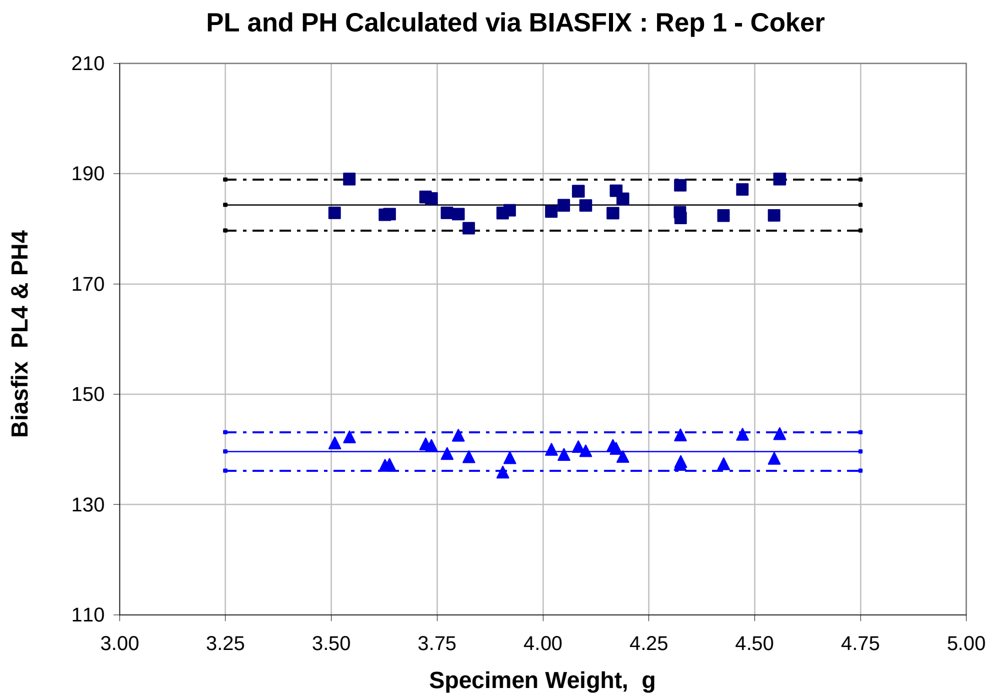
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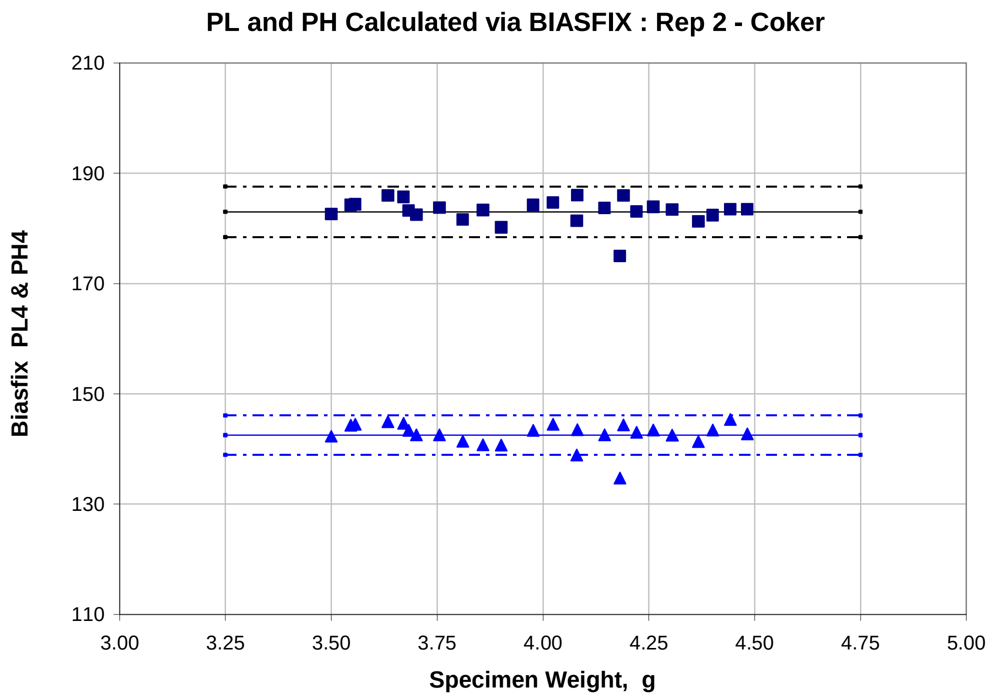
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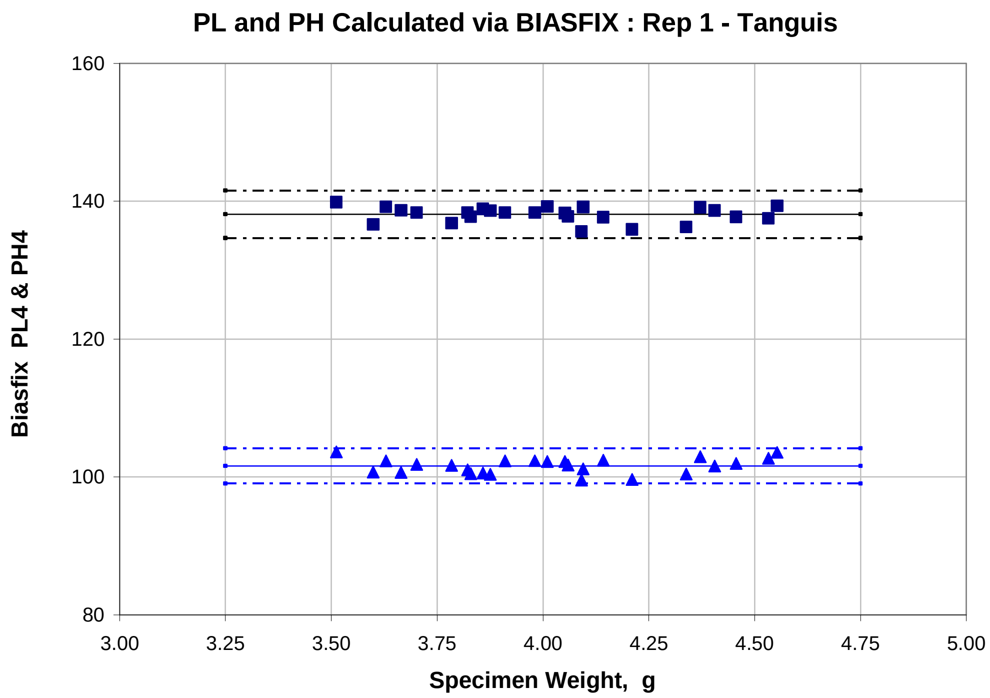
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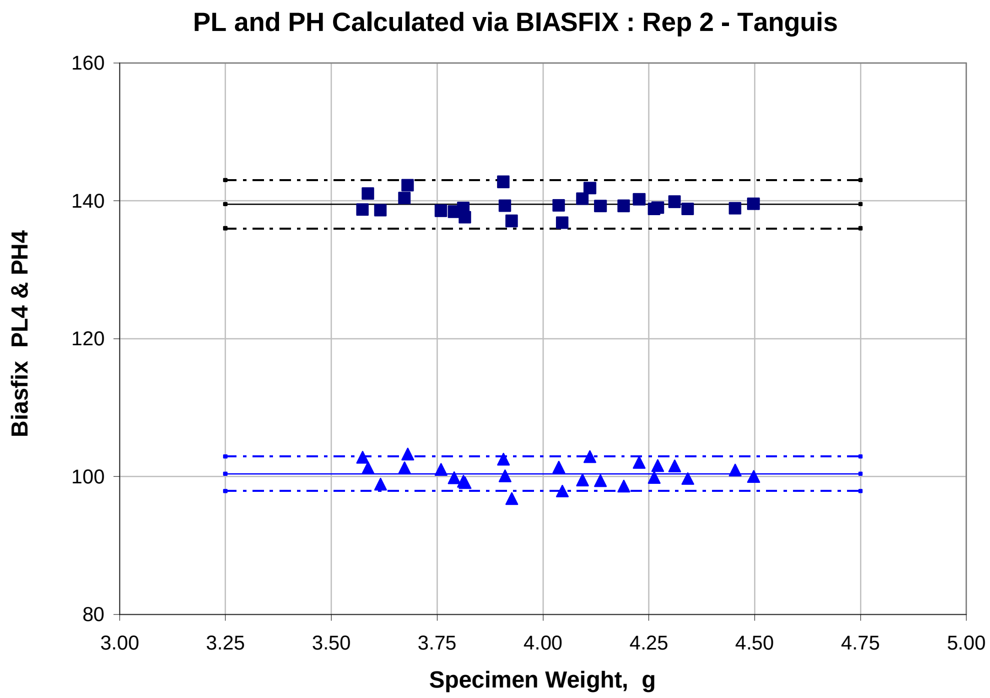
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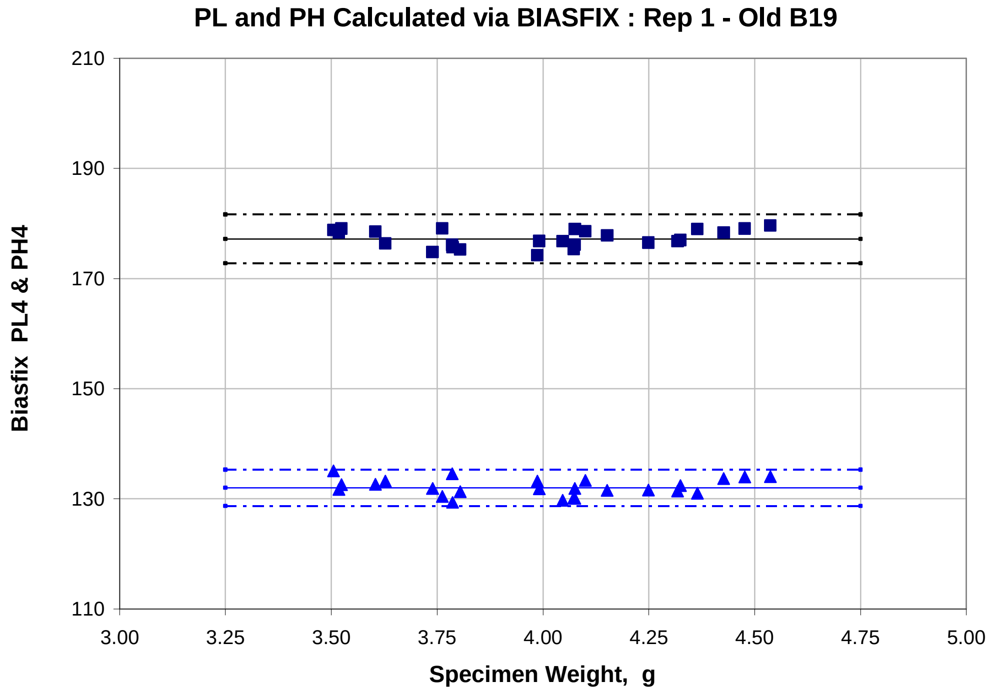
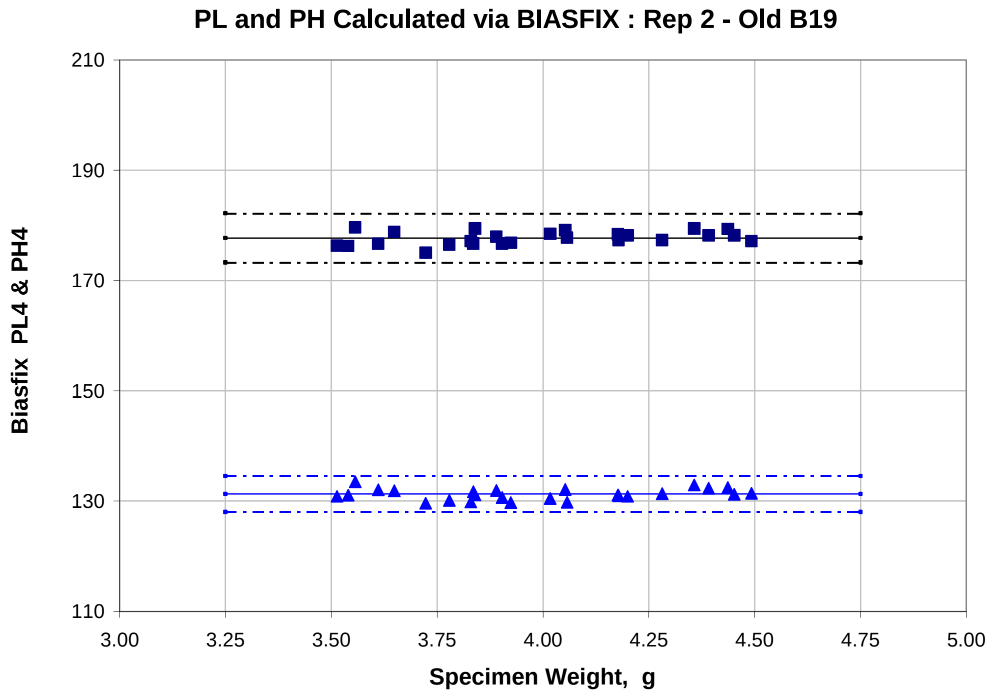
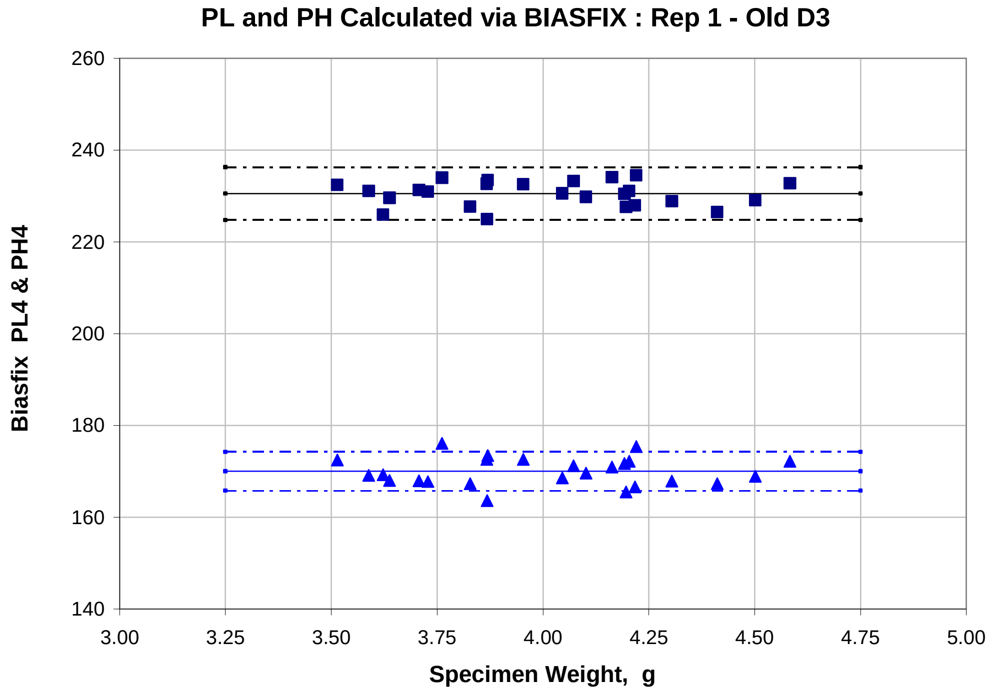
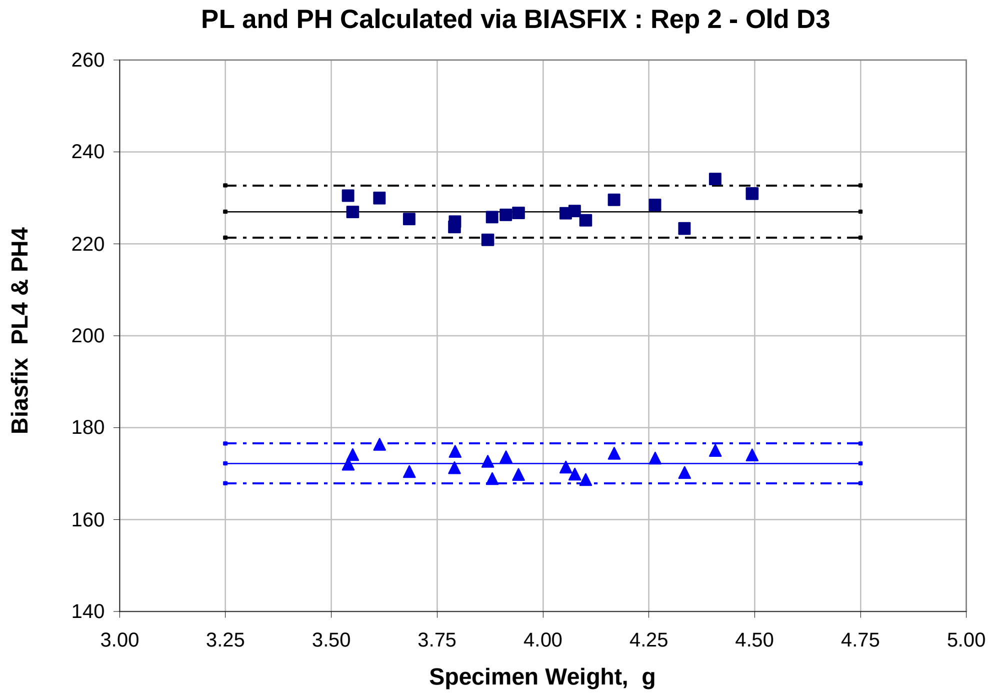
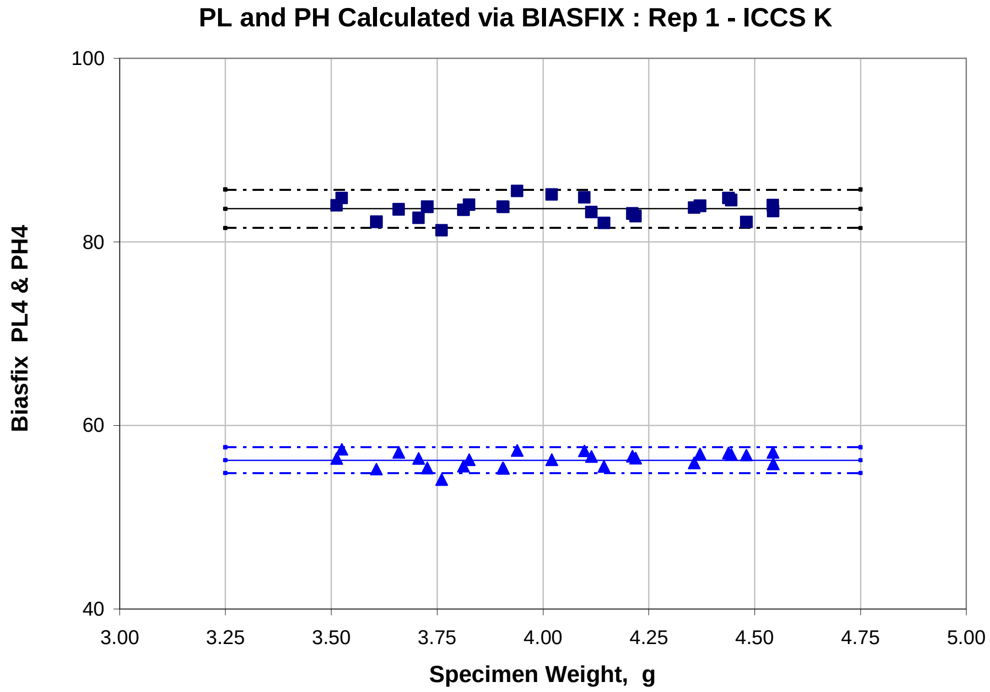
160
140
120
100
80
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

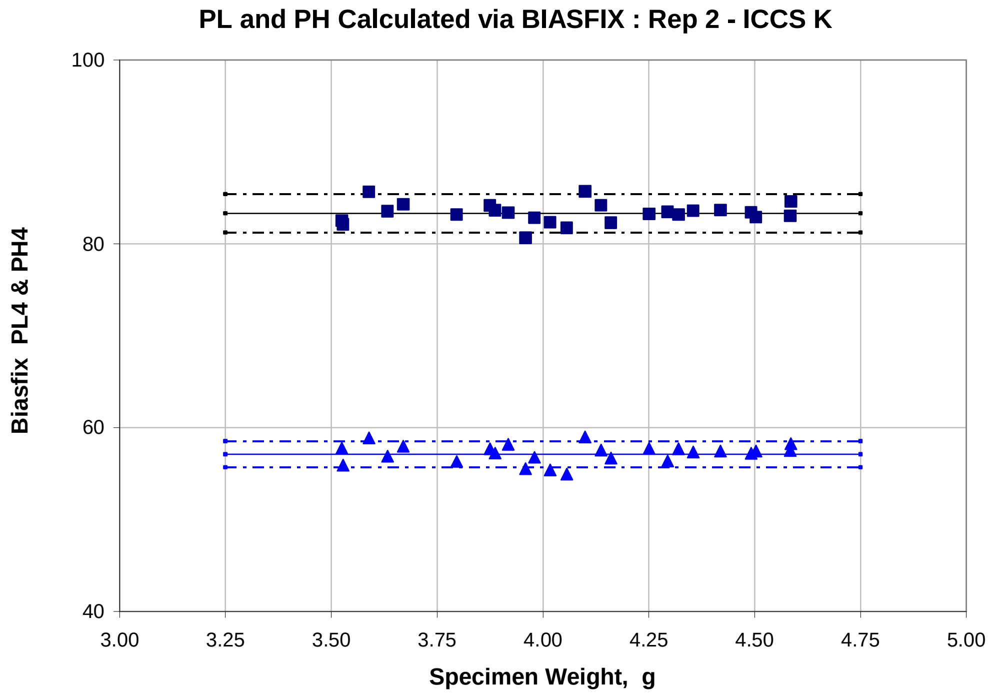

PL and PH Calculated via BIASFIX : Rep 1 - Old B19
Biasfix PL4 & PH4
210
190
170
150
130
110
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g


PL and PH Calculated via BIASFIX : Rep 2 - Old B19
Biasfix PL4 & PH4
210
190
170
150
130
110
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

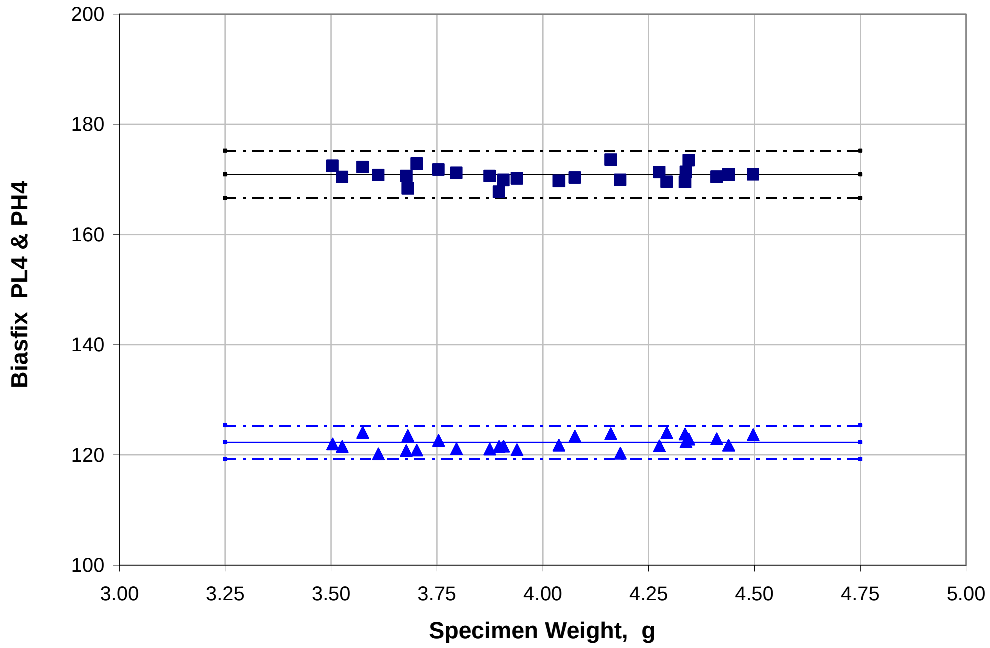

PL and PH Calculated via BIASFIX : Rep 1 - Old D3
Biasfix PL4 & PH4
Specimen Weight, g
260
240
220
200
180
160
140
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00


PL and PH Calculated via BIASFIX : Rep 2 - Old D3
Biasfix PL4 & PH4
Specimen Weight, g
260
240
220
200
180
160
140
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00

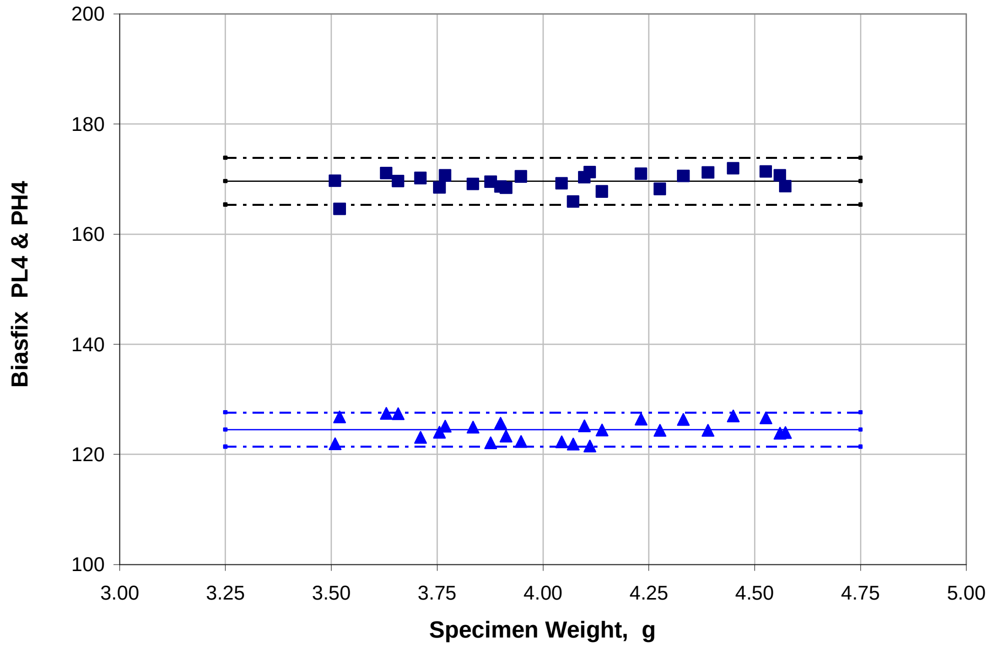

PL and PH Calculated via BIASFIX : Rep 1 - ICCS K
100
80
60
40
Biasfix PL4 & PH4
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

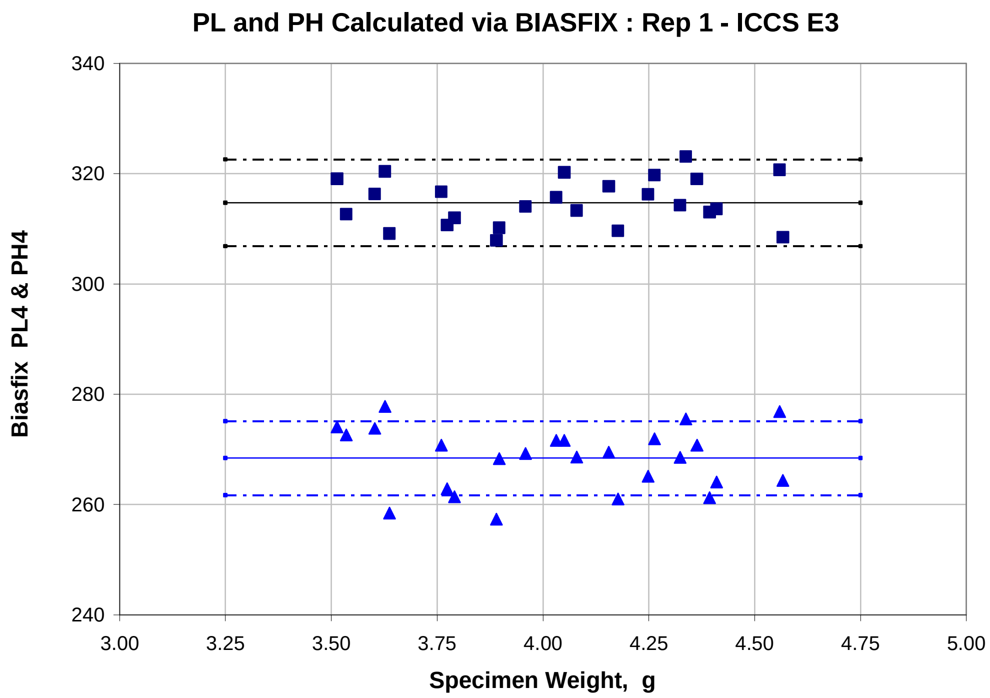

PL and PH Calculated via BIASFIX : Rep 2 - ICCS K
100
80
60
40
Biasfix PL4 & PH4
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

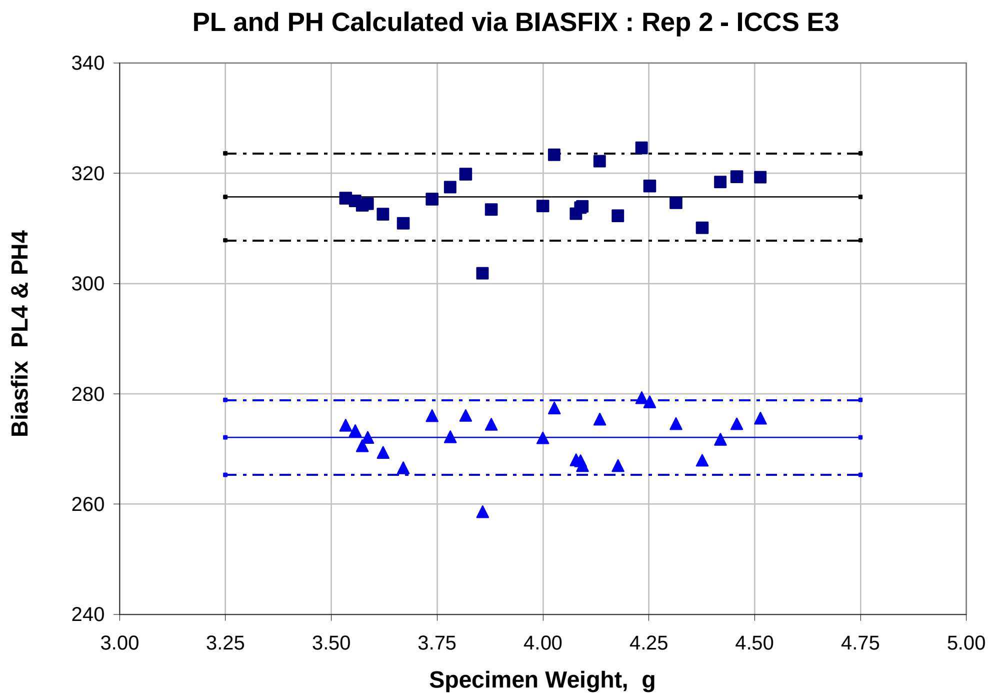
PL and PH Calculated via BIASFIX : Rep 1 - ICCS B23

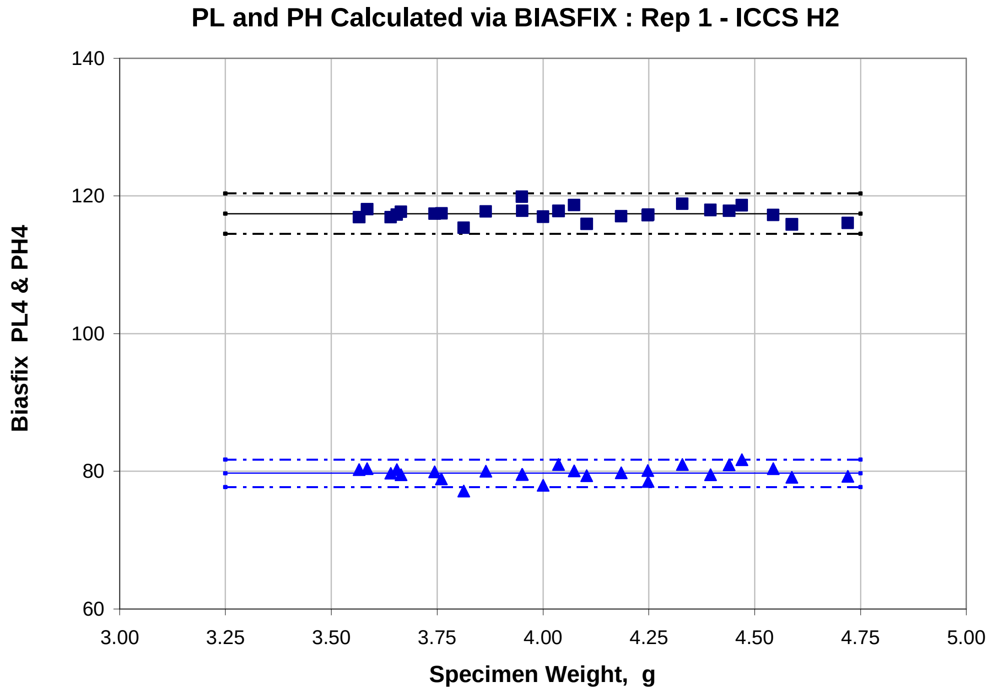


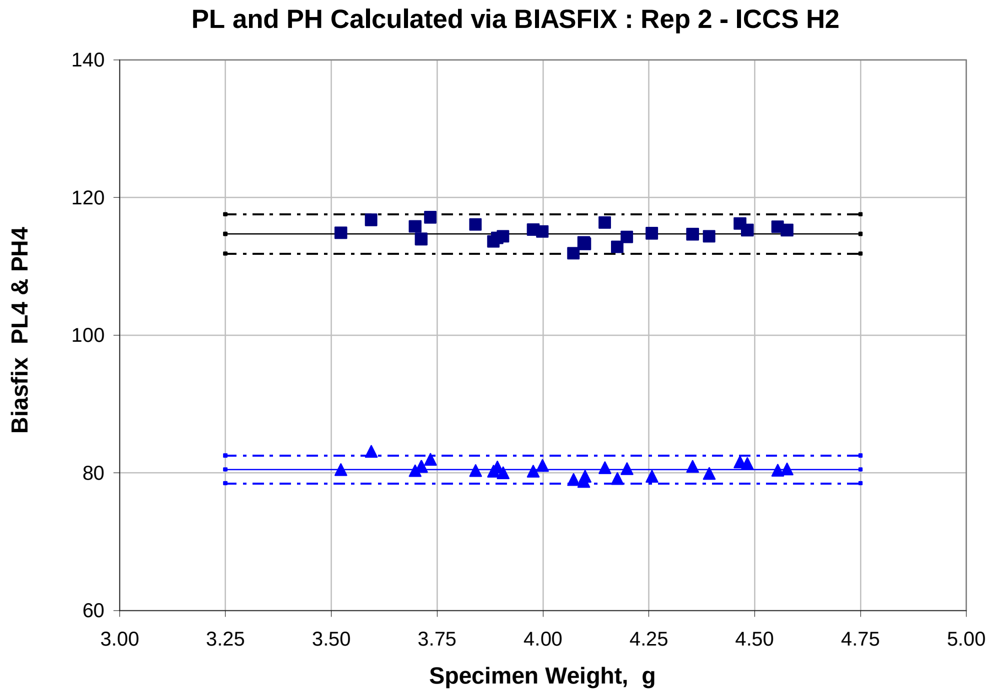
PL and PH Calculated via BIASFIX : Rep 2 - ICCS B23

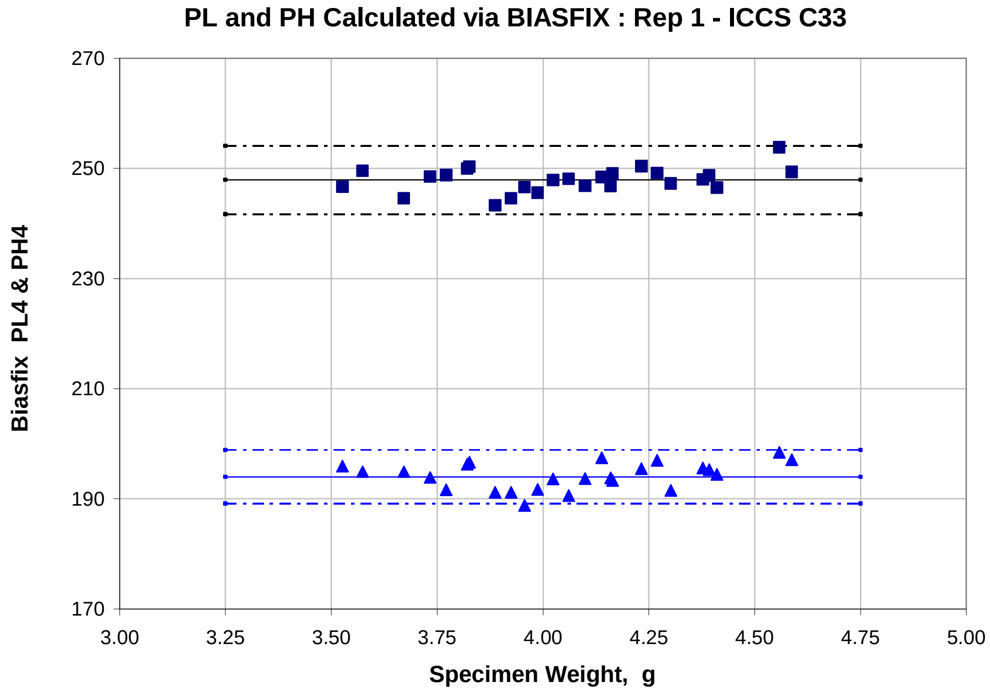


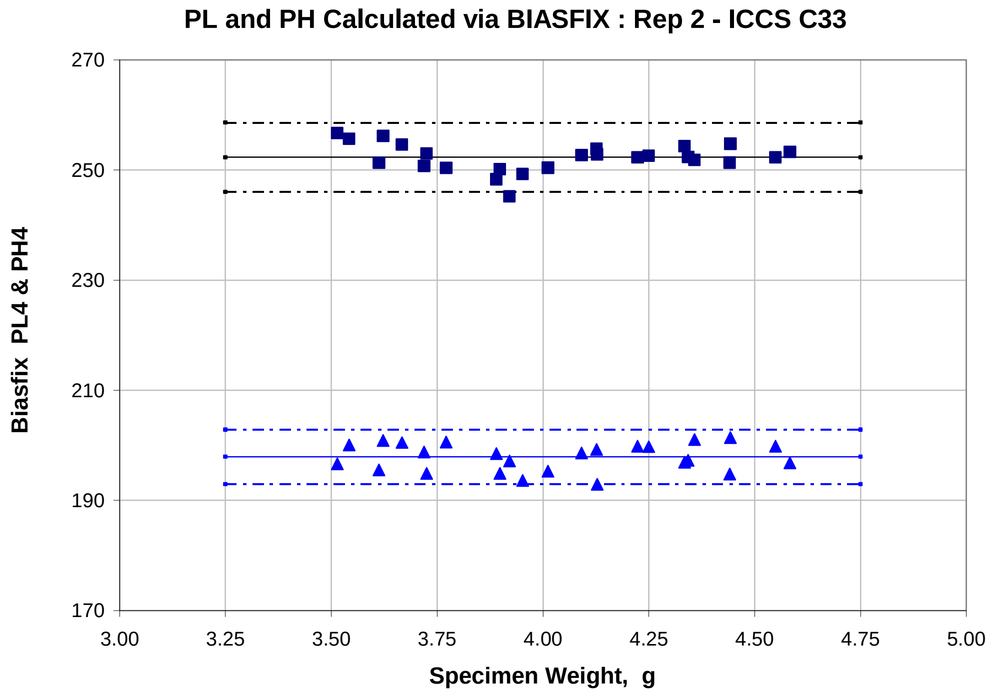

PL and PH Calculated via BIASFIX : Rep 1 - ICCS E3
340
320
300
280
260
240
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g
Biasfix PL4 & PH4

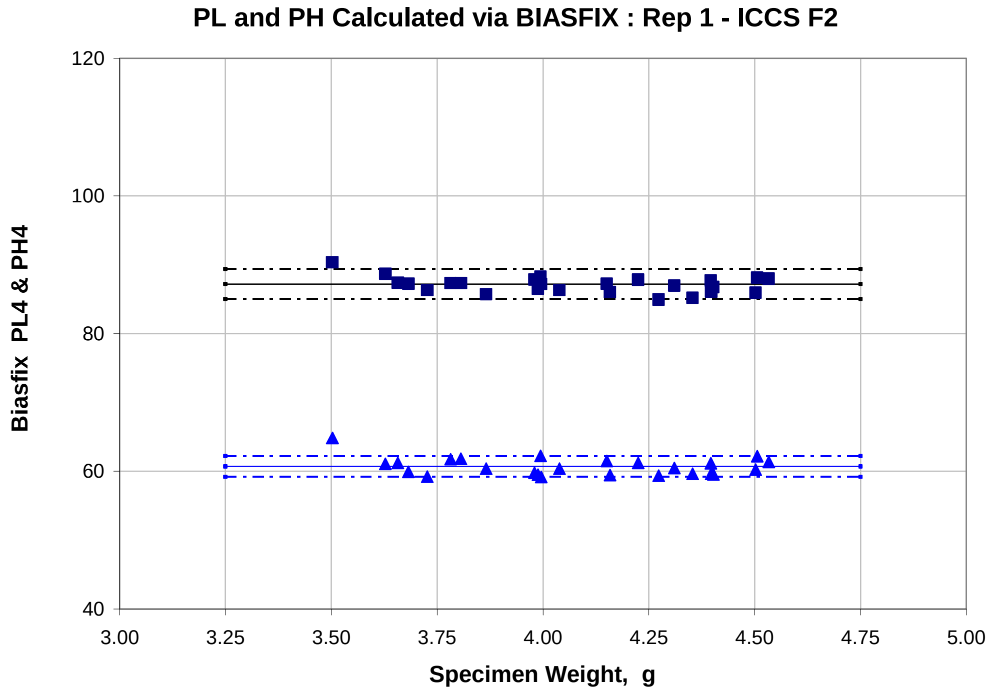

PL and PH Calculated via BIASFIX : Rep 2 - ICCS E3
340
320
300
280
260
240
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g
Biasfix PL4 & PH4

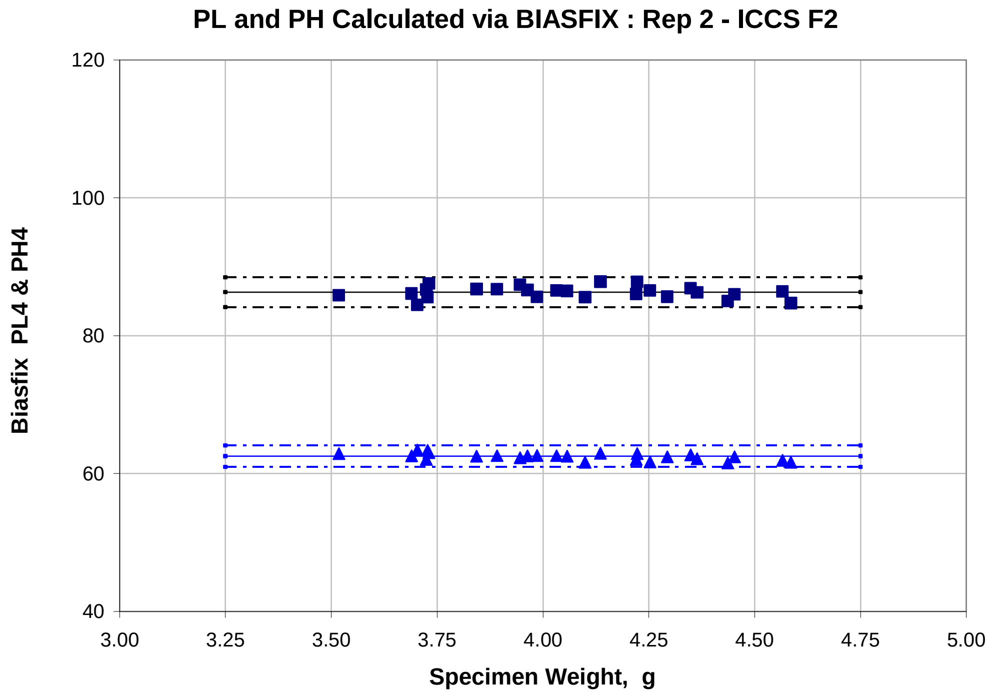

PL and PH Calculated via BIASFIX : Rep 1 - ICCS H2
Biasfix PL4 & PH4
140
120
100
80
60
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

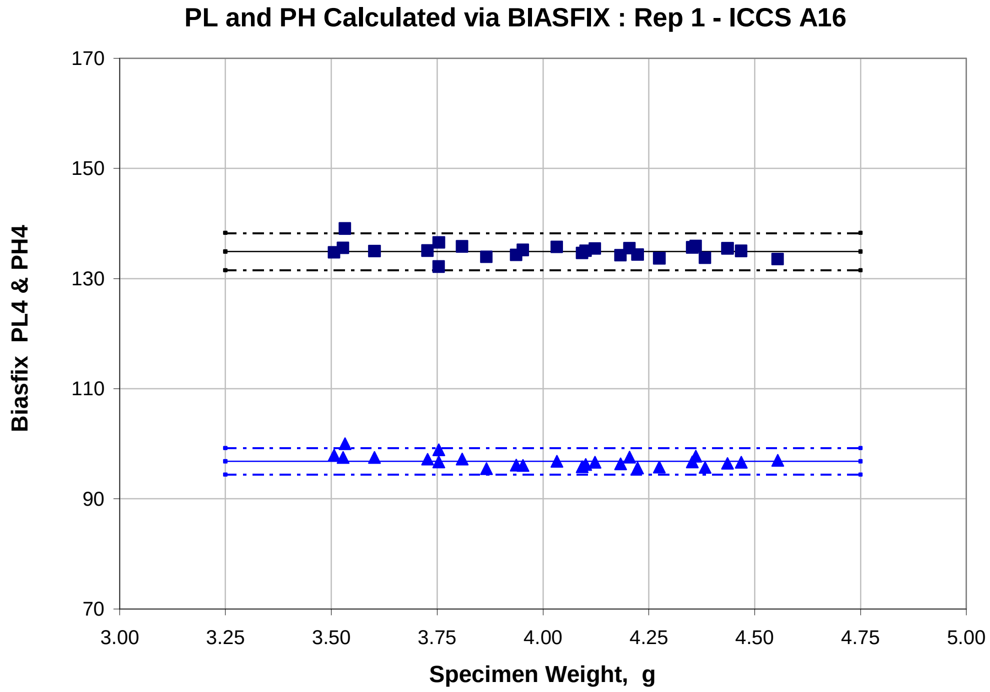

PL and PH Calculated via BIASFIX : Rep 2 - ICCS H2
Biasfix PL4 & PH4
140
120
100
80
60
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

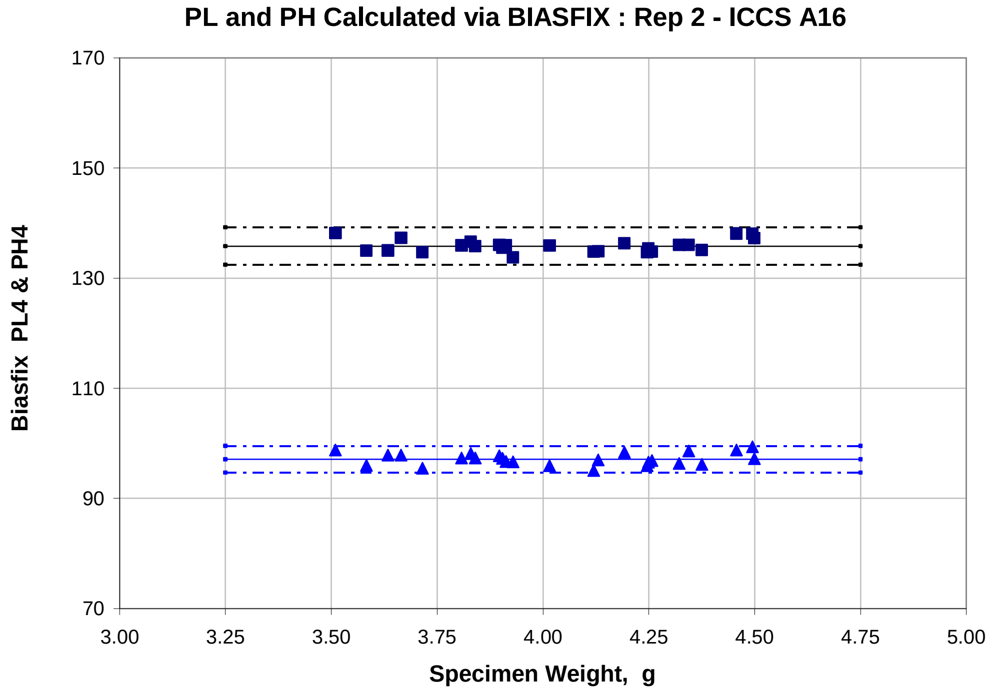

PL and PH Calculated via BIASFIX : Rep 1 - ICCS C33
Biasfix PL4 & PH4
270
250
230
210
190
170
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

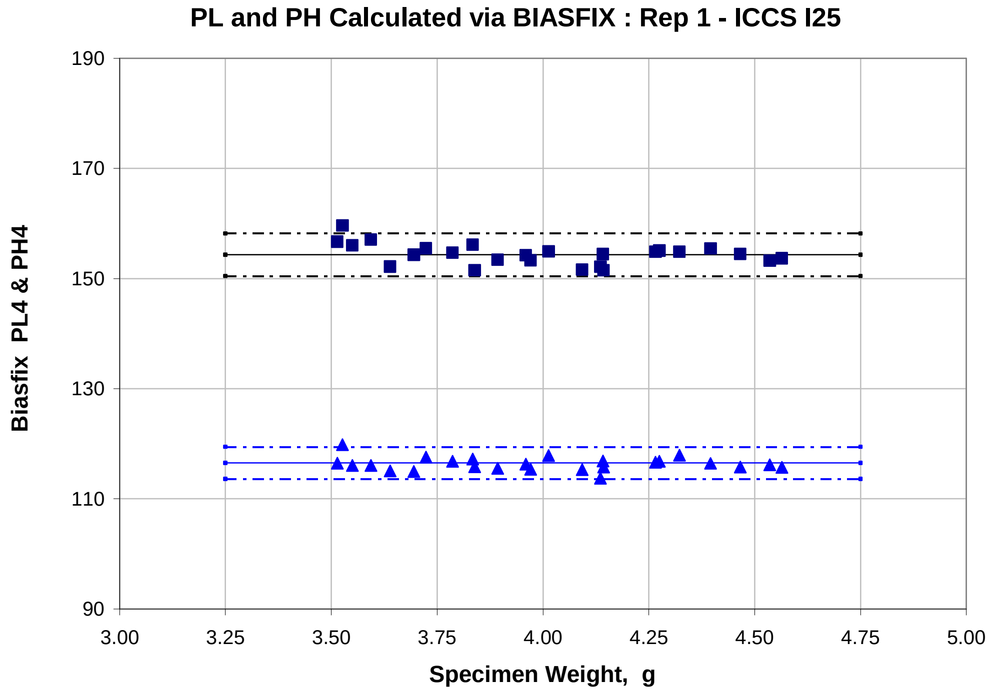

PL and PH Calculated via BIASFIX : Rep 2 - ICCS C33
Biasfix PL4 & PH4
270
250
230
210
190
170
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

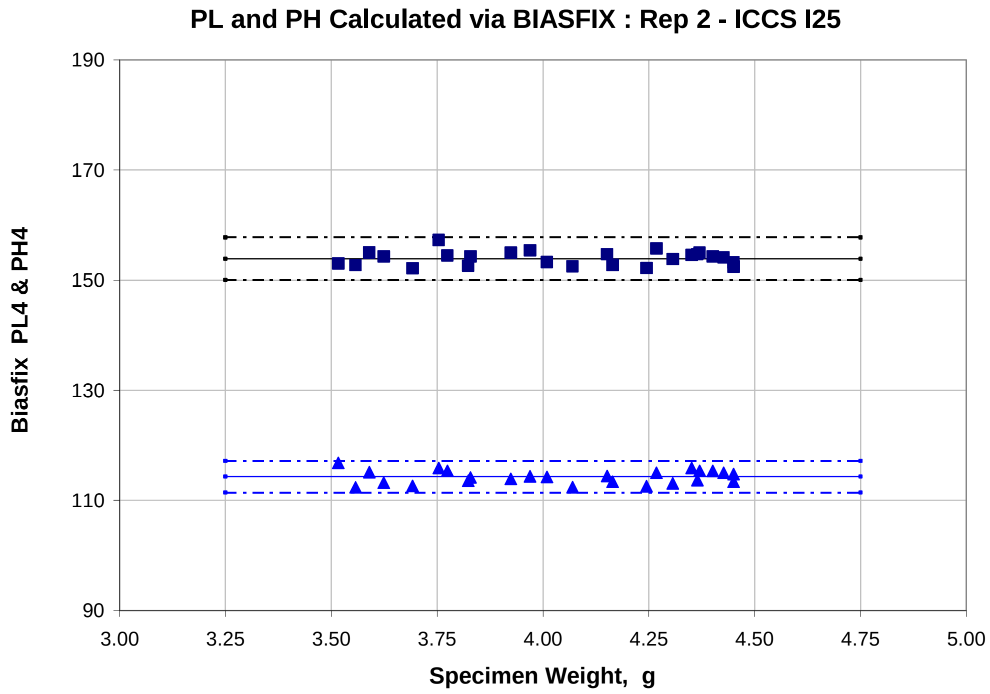

PL and PH Calculated via BIASFIX : Rep 1 - ICCS F2
Biasfix PL4 & PH4
120
100
80
60
40
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

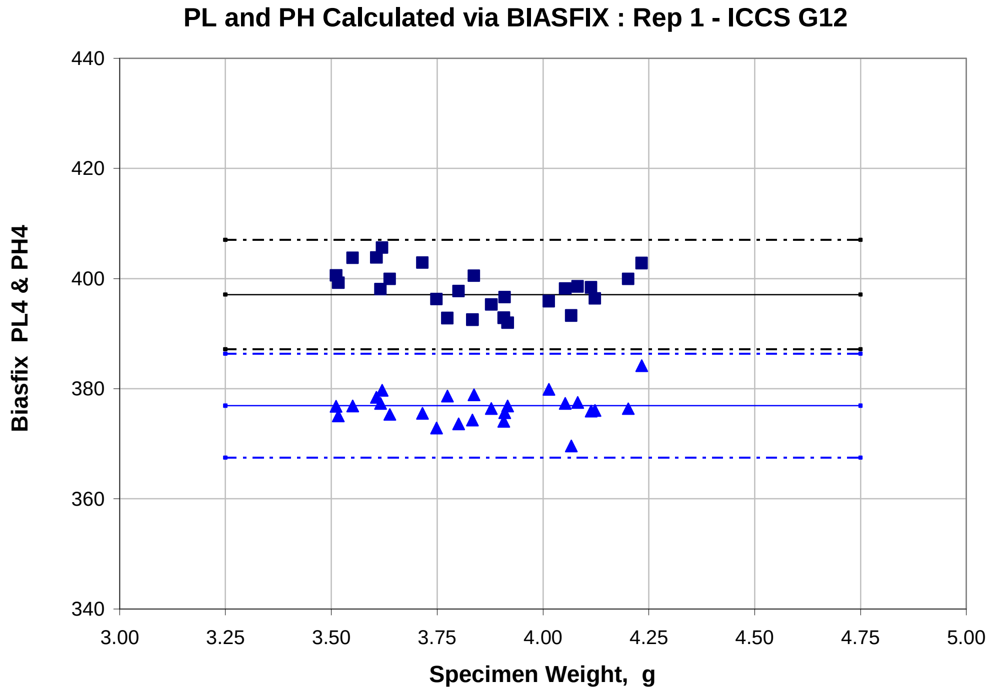

PL and PH Calculated via BIASFIX : Rep 2 - ICCS F2
Biasfix PL4 & PH4
120
100
80
60
40
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

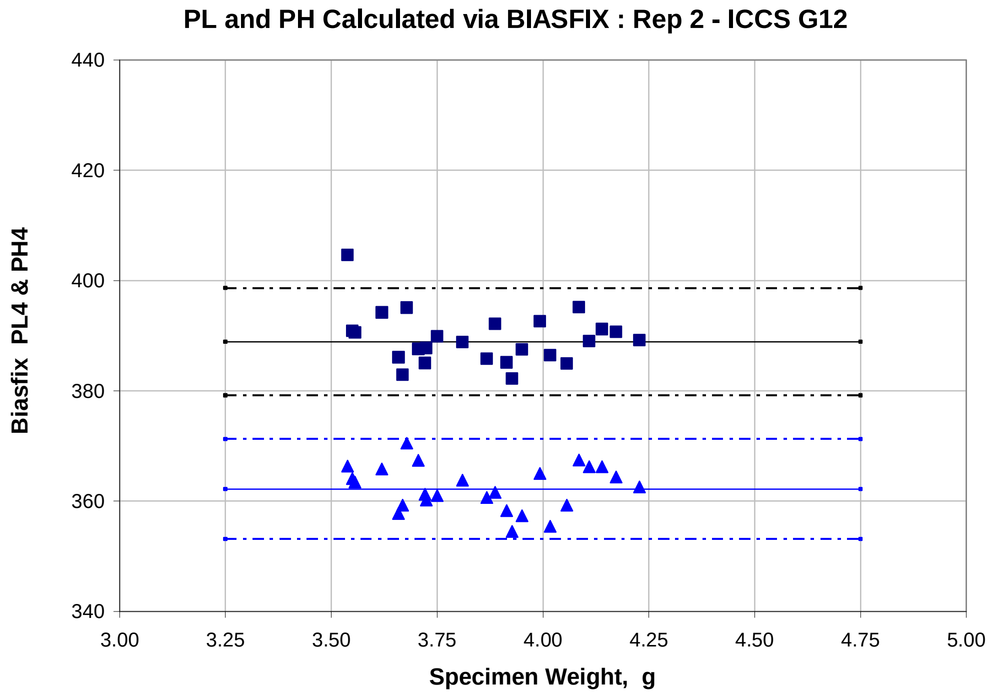

PL and PH Calculated via BIASFIX : Rep 1 - ICCS A16
Biasfix PL4 & PH4
170
150
130
110
90
70
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

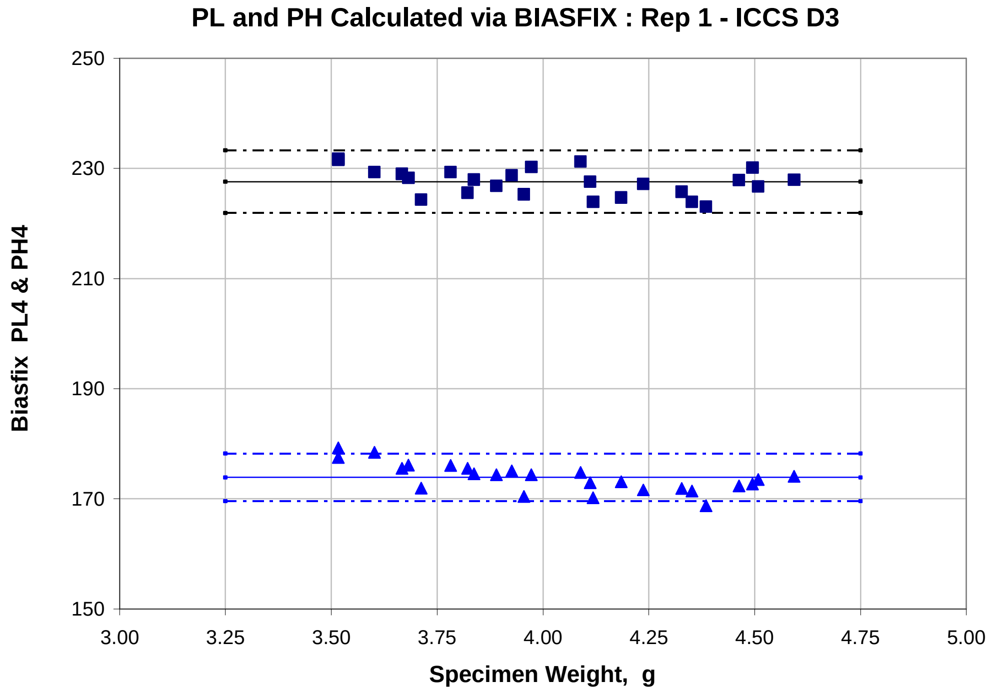

PL and PH Calculated via BIASFIX : Rep 2 - ICCS A16
Biasfix PL4 & PH4
170
150
130
110
90
70
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g

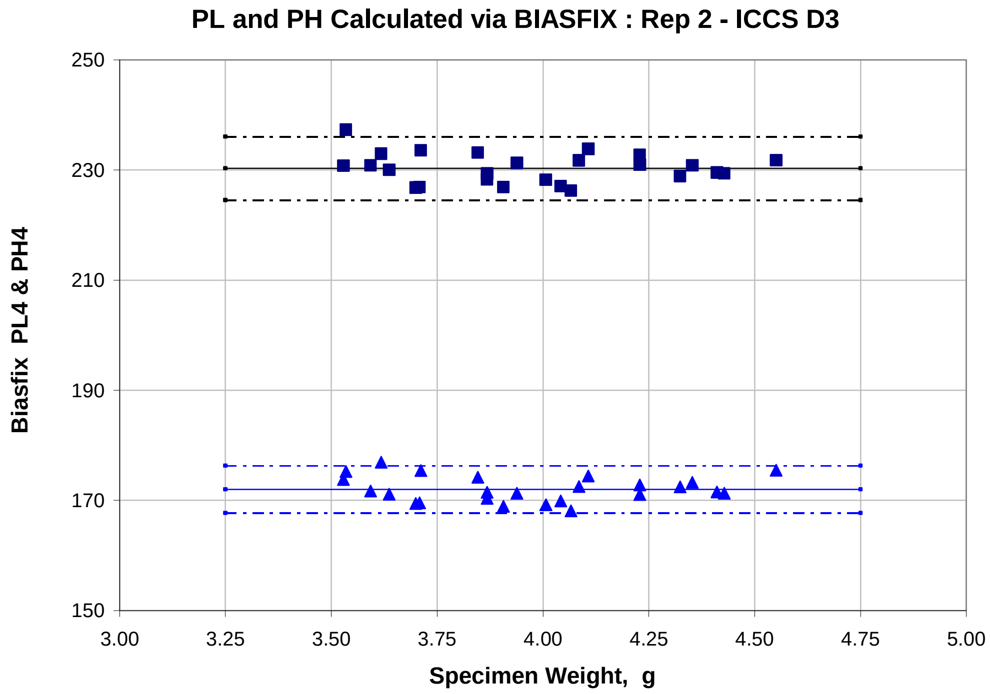

PL and PH Calculated via BIASFIX : Rep 1 - ICCS I25
Biasfix PL4 & PH4
190
170
150
130
110
90
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g


PL and PH Calculated via BIASFIX : Rep 2 - ICCS I25
Biasfix PL4 & PH4
190
170
150
130
110
90
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g


PL and PH Calculated via BIASFIX : Rep 1 - ICCS G12
440
420
400
380
360
340
Biasfix PL4 & PH4
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g


PL and PH Calculated via BIASFIX : Rep 2 - ICCS G12
440
420
400
380
360
340
Biasfix PL4 & PH4
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Specimen Weight, g


PL and PH Calculated via BIASFIX : Rep 1 - ICCS D3
250
230
210
190
170
150
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Biasfix PL4 & PH4
Specimen Weight, g


PL and PH Calculated via BIASFIX : Rep 2 - ICCS D3
250
230
210
190
170
150
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
Biasfix PL4 & PH4
Specimen Weight, g

Appendix 14 : SIMTEQ - Replication No 1

Estimate bPL, bPH in a.X^b using consecutive pairs

Cotton 01 - Deltapine

		Specimen 1			Specimen 2				Method 1 - Eqn (13)						Method 2 - Eqn (14)				Mean 1&2	
Spec.	W1	PL1	PH1	W2	PL2	PH2	bPL	aPL	bPH	aPH	PL4	PH4	bPL	aPL	bPH	aPH	PL4	PH4	PL4	PH4
1	3.679	160	115	4.076	197	153	2.026	11.431	2.780	3.075	189.6	145.2	1.687	17.775	2.050	7.965	184.3	136.5	186.9	140.8
2	4.076	197	153	4.460	243	202	2.334	7.414	3.090	1.990	188.5	144.3	1.728	17.364	2.064	8.420	190.7	147.1	189.6	145.7
3	4.460	243	202	4.336	228	185	2.263	8.240	3.123	1.895	189.9	143.8	1.673	19.917	2.034	9.649	202.5	161.9	196.2	152.8
4	4.336	228	185	3.553	149	106	2.137	9.924	2.797	3.056	191.9	147.6	1.722	18.235	2.037	9.321	198.4	157.0	195.2	152.3
5	3.553	149	106	4.390	233	191	2.114	10.211	2.784	3.105	191.4	147.4	1.706	17.127	2.021	8.173	182.4	134.7	186.9	141.0
6	4.390	233	191	4.319	228	185	1.334	32.370	1.963	10.466	205.8	159.1	1.359	31.228	1.570	18.733	205.3	165.0	205.6	162.1
7	4.319	228	185	4.489	243	205	1.655	20.237	2.667	3.738	200.8	150.7	1.456	27.076	1.832	12.672	203.9	160.7	202.3	155.7
8	4.489	243	205	4.316	227	182	1.735	17.953	3.031	2.162	198.9	144.5	1.483	26.206	1.991	10.311	204.8	163.0	201.9	153.7
9	4.316	227	182	4.395	239	196	2.840	3.568	4.086	0.463	182.9	133.4	1.920	13.708	2.555	4.339	196.2	149.9	189.5	141.6
10	4.395	239	196	3.960	192	145	2.098	10.696	2.888	2.724	196.1	149.3	1.653	20.671	1.998	10.180	204.5	162.4	200.3	155.9
11	3.960	192	145	4.002	192	148	0.000	192.000	1.900	10.609	192.0	147.8	1.000	48.491	1.612	15.779	194.0	147.4	193.0	147.6
12	4.002	192	148	3.947	189	144	1.122	40.521	1.952	9.881	191.9	147.8	1.326	30.519	1.634	15.349	191.8	147.9	191.9	147.8
13	3.947	189	144	3.700	166	119	2.010	11.965	2.954	2.495	194.2	149.8	1.692	18.518	2.166	7.359	193.3	148.3	193.8	149.0
14	3.700	166	119	3.567	154	108	2.054	11.294	2.656	3.687	194.8	146.4	1.760	16.594	2.077	7.860	190.4	139.9	192.6	143.2
15	3.567	154	108	4.070	203	159	2.094	10.741	2.932	2.596	195.7	151.1	1.732	17.024	2.157	6.950	187.8	138.3	191.8	144.7
16	4.070	203	159	3.644	159	110	2.210	9.120	3.333	1.477	195.3	150.0	1.775	16.812	2.375	5.668	196.8	152.6	196.1	151.3
17	3.644	159	110	4.403	237	191	2.110	10.386	2.917	2.531	193.5	144.3	1.692	17.830	2.069	7.576	186.1	133.4	189.8	138.8
18	4.403	237	191	3.596	154	105	2.127	10.127	2.952	2.403	193.2	143.8	1.705	18.925	2.097	8.529	201.2	156.1	197.2	150.0
19	3.596	154	105	3.734	165	117	1.820	14.994	2.855	2.720	187.0	142.4	1.643	18.804	2.179	6.456	183.5	132.5	185.2	137.4
20	3.734	165	117	3.869	180	129	2.454	6.507	2.753	3.109	195.3	141.4	1.907	13.375	2.063	7.718	188.1	134.8	191.7	138.1
21	3.869	180	129	3.537	152	102	1.885	14.054	2.618	3.736	191.6	140.7	1.664	18.942	2.029	8.290	190.2	138.0	190.9	139.4
22	3.537	152	102	4.136	206	156	1.944	13.033	2.718	3.293	193.1	142.5	1.662	18.627	2.034	7.814	186.5	131.0	189.8	136.7
23	4.136	206	156	4.246	217	169	1.985	12.296	3.055	2.040	192.8	140.9	1.606	21.069	2.073	8.223	195.2	145.6	194.0	143.2
24	4.246	217	169	3.979	186	138	2.373	7.018	3.120	1.857	188.4	140.3	1.781	16.516	2.136	7.701	195.1	148.8	191.8	144.6
25	3.979	186	138	3.679	160	115	1.921	13.112	2.326	5.561	187.9	139.7	1.652	19.004	1.836	10.930	187.7	139.4	187.8	139.5
Targets							**2.084**	**10.732**			**192.9**	**146.1**	**2.084**	**10.732**			**192.9**	**146.1**	**192.9**	**146.1**
Mean							**1.946**	**20.368**	**2.810**	**3.627**	**192.9**	**145.4**	**1.639**	**20.814**	**2.028**	**9.279**	**193.6**	**146.9**	**193.5**	**146.3**
sd							**0.530**	**36.620**	**0.455**	**2.696**	**4.69**	**5.06**	**0.19**	**7.32**	**0.21**	**3.276**	**7.15**	**10.77**	**4.98**	**6.695**
CV%							**27.24**	**179.79**	**16.19**	**74.35**	**2.4**	**3.5**	**11.7**	**35.2**	**10.6**	**35.31**	**3.7**	**7.3**	**2.57**	**4.57**
Mean Difference							**-0.138**	**9.636**			**0.005**	**-0.724**	**-0.445**	**10.082**			**0.733**	**0.776**	**0.607**	**0.236**

Cotton 02 - Acala

		Specimen 1			Specimen 2				Method 1 - Eqn (13)						Method 2 - Eqn (14)				Mean 1&2	
Spec.	W1	PL1	PH1	W2	PL2	PH2	bPL	aPL	bPH	aPH	PL4	PH4	bPL	aPL	bPH	aPH	PL4	PH4	PL4	PH4
1	3.614	140	97	4.482	225	178	2.204	8.253	2.820	2.592	175.1	129.2	1.727	15.220	2.012	7.312	166.8	119.0	171.0	124.1
2	4.482	225	178	3.745	154	107	2.111	9.476	2.834	2.535	177.0	128.9	1.673	18.291	1.995	8.922	186.0	141.8	181.5	135.4
3	3.745	154	107	4.242	201	152	2.139	9.140	2.819	2.587	177.3	128.8	1.710	16.110	2.027	7.357	172.3	122.3	174.8	125.5
4	4.242	201	152	4.525	229	182	2.017	10.894	2.786	2.712	178.5	129.1	1.585	20.358	1.889	9.923	183.1	136.0	180.8	132.5
5	4.525	229	182	4.020	180	130	2.031	10.666	2.839	2.505	178.2	128.2	1.610	20.160	1.945	9.658	187.7	143.2	183.0	135.7
6	4.020	180	130	4.320	209	161	2.075	10.044	2.970	2.087	178.2	128.1	1.645	18.255	2.039	7.617	178.6	128.7	178.4	128.4
7	4.320	209	161	3.819	159	111	2.220	8.120	3.019	1.943	176.2	127.7	1.727	16.708	2.102	7.433	183.0	137.0	179.6	132.3
8	3.819	159	111	3.598	143	96	1.778	14.688	2.433	4.259	172.6	124.2	1.615	18.257	1.928	8.385	171.3	121.4	172.0	122.8
9	3.598	143	96	3.901	167	120	1.918	12.278	2.758	2.810	175.2	128.6	1.668	16.896	2.087	6.631	170.7	119.8	172.9	124.2
10	3.901	167	120	4.392	216	169	2.172	8.680	2.891	2.345	176.3	129.0	1.690	16.743	2.010	7.780	174.2	126.2	175.3	127.6
11	4.392	216	169	3.571	141	95	2.062	10.219	2.785	2.744	178.2	130.3	1.682	17.940	2.018	8.537	184.6	140.0	181.4	135.1
12	3.571	141	95	4.365	213	165	2.055	10.308	2.750	2.867	178.0	129.8	1.682	16.585	2.005	7.406	170.6	119.3	174.3	124.5
13	4.365	213	165	4.051	181	134	2.180	8.579	2.786	2.718	176.1	129.4	1.679	17.939	1.940	9.466	184.0	139.3	180.0	134.3
14	4.051	181	134	3.893	168	118	1.876	13.127	3.200	1.524	176.8	128.7	1.604	19.204	2.238	5.850	177.4	130.3	177.1	129.5
15	3.893	168	118	4.219	198	151	2.044	10.448	3.067	1.826	177.6	128.3	1.656	17.704	2.131	6.516	175.7	125.0	176.7	126.6
16	4.219	198	151	3.906	166	120	2.285	7.380	2.979	2.073	175.3	128.9	1.756	15.815	2.083	7.532	180.3	135.2	177.8	132.0
17	3.906	166	120	4.163	191	147	2.194	8.358	3.174	1.590	174.9	129.5	1.723	15.877	2.197	6.019	173.0	126.5	174.0	128.0
18	4.163	191	147	4.465	221	175	2.086	9.747	2.493	4.198	175.7	133.0	1.622	18.890	1.783	11.563	179.0	136.9	177.3	135.0
19	4.465	221	175	3.633	147	100	1.978	11.451	2.715	3.010	177.8	129.8	1.633	19.203	1.960	9.320	184.7	141.1	181.2	135.4
20	3.633	147	100	4.403	221	174	2.122	9.510	2.883	2.424	180.3	131.9	1.699	16.428	2.054	7.067	173.1	121.8	176.7	126.9
21	4.403	221	174	3.738	152	107	2.285	7.474	2.968	2.137	177.5	130.9	1.755	16.387	2.077	8.009	186.7	142.6	182.1	136.7
22	3.738	152	107	4.076	180	133	1.951	11.601	2.510	3.907	173.5	126.9	1.648	17.298	1.902	8.714	170.0	121.7	171.7	124.3
23	4.076	180	133	4.183	194	148	2.880	3.147	4.109	0.414	170.5	123.1	2.009	10.705	2.705	2.974	173.3	126.4	171.9	124.8
24	4.183	194	148	3.614	140	97	2.229	7.990	2.887	2.378	175.6	130.0	1.773	15.339	2.100	7.333	179.2	134.7	177.4	132.4
25																				
Targets							**2.109**	**9.492**			**176.9**	**129.3**	**2.109**	**9.492**			**176.9**	**129.3**	**176.9**	**129.3**
Mean							**2.120**	**9.649**	**2.895**	**2.508**	**176.4**	**128.8**	**1.690**	**17.180**	**2.051**	**7.805**	**177.7**	**130.7**	**177.3**	**130.0**
sd							**0.206**	**2.273**	**0.320**	**0.835**	**2.11**	**2.07**	**0.08**	**1.99**	**0.17**	**1.682**	**6.19**	**8.41**	**3.43**	**4.458**
CV%							**9.71**	**23.56**	**11.06**	**33.31**	**1.2**	**1.6**	**5.0**	**11.6**	**8.4**	**21.55**	**3.5**	**6.4**	**1.93**	**3.43**
Mean Difference							**0.011**	**0.157**			**-0.548**	**-0.457**	**-0.419**	**7.688**			**0.828**	**1.366**	**0.387**	**0.672**

Appendix 14 : SIMTEQ - Replication No 1

Estimate bPL, bPH in a.X^b using consecutive pairs

Cotton 03 - Menoufi

	Specimen 1			Specimen 2			Method 1 - Eqn (13)						Method 2 - Eqn (14)						Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	4.482	295	246	4.335	274	219	2.216	10.617	3.489	1.312	229.2	165.4	1.653	24.704	2.207	8.982	244.4	191.4	236.8	178.4
2	4.335	274	219	3.628	190	134	2.056	13.431	2.759	3.830	232.2	175.4	1.678	23.374	2.003	11.601	239.4	186.4	235.8	180.9
3	3.628	190	134	3.853	217	156	2.210	11.007	2.529	5.150	235.7	171.5	1.806	18.535	1.966	10.629	226.6	162.3	231.2	166.9
4	3.853	217	156	4.284	269	215	2.027	14.099	3.027	2.631	234.1	174.7	1.646	23.548	2.106	9.113	230.8	168.8	232.5	171.8
5	4.284	269	215	4.078	245	188	1.901	16.930	2.730	4.052	236.1	178.3	1.576	27.172	1.921	13.137	241.5	188.5	238.8	183.4
6	4.078	245	188	4.575	316	263	2.215	10.892	2.922	3.094	234.7	177.6	1.669	23.445	1.966	11.856	237.2	181.0	236.0	179.3
7	4.575	316	263	4.144	255	198	2.169	11.683	2.870	3.345	236.2	178.9	1.645	25.896	1.933	13.918	253.4	202.9	244.8	190.9
8	4.144	255	198	4.087	253	194	0.572	113.148	1.481	24.099	249.9	187.9	1.149	49.788	1.433	25.807	244.8	188.2	247.4	188.0
9	4.087	253	194	3.535	189	131	2.007	15.002	2.702	4.324	242.3	183.0	1.695	23.277	2.034	11.064	243.9	185.7	243.1	184.3
10	3.535	189	131	3.782	212	154	1.697	22.167	2.391	6.401	233.2	176.1	1.591	25.365	1.923	11.559	230.1	166.2	231.6	171.1
11	3.782	212	154	4.238	277	223	2.347	9.340	3.249	2.043	241.8	184.8	1.797	19.425	2.251	7.715	234.5	174.7	238.1	179.7
12	4.238	277	223	3.535	187	128	2.166	12.126	3.061	2.682	244.4	186.8	1.749	22.165	2.203	9.264	250.3	196.3	247.4	191.6
13	3.535	187	128	3.591	190	134	1.025	51.225	2.951	3.080	212.2	184.3	1.333	34.715	2.290	7.104	220.5	169.8	216.4	177.1
14	3.591	190	134	4.362	285	235	2.084	13.242	2.887	3.345	237.9	183.0	1.692	21.858	2.072	9.485	228.1	167.6	233.0	175.3
15	4.362	285	235	4.071	243	191	2.310	9.490	3.004	2.816	233.3	181.2	1.730	22.299	2.039	11.655	245.3	196.9	239.3	189.1
16	4.071	243	191	4.184	258	204	2.188	11.265	2.405	6.527	233.8	183.1	1.699	22.371	1.791	15.457	235.8	185.1	234.8	184.1
17	4.184	258	204	3.932	231	175	1.782	20.122	2.472	5.926	238.1	182.5	1.552	27.996	1.839	14.665	240.6	187.8	239.4	185.2
18	3.932	231	175	3.601	185	131	2.522	7.306	3.289	1.936	241.1	185.1	1.954	15.901	2.396	6.579	238.8	182.3	240.0	183.7
19	3.601	185	131	3.537	185	130	0.000	185.000	0.429	75.640	185.0	137.0	1.000	51.375	1.128	30.891	205.5	147.5	195.2	142.3
20	3.537	185	130	4.164	253	200	1.918	16.407	2.639	4.635	234.2	179.8	1.647	23.089	1.987	10.557	226.5	166.0	230.4	172.9
21	4.164	253	200	4.440	291	240	2.181	11.263	2.842	3.469	231.7	178.4	1.661	23.674	1.936	12.628	236.6	185.0	234.2	181.7
22	4.440	291	240	3.865	212	157	2.284	9.660	3.061	2.504	229.2	174.3	1.735	21.913	2.092	10.610	242.8	192.9	236.0	183.6
23	3.865	212	157	4.402	291	244	2.436	7.868	3.391	1.602	230.4	176.3	1.804	18.487	2.274	7.255	225.5	169.7	228.0	173.0
24	4.402	291	244	4.505	307	262	2.316	9.395	3.080	2.539	233.1	181.7	1.682	24.047	1.997	12.645	247.7	201.5	240.4	191.6
25	4.505	307	262	4.482	295	246	7.893	0.002	12.474	0.000	120.1	59.5	5.792	0.050	16.053	0.000	154.2	38.9	137.2	49.2
Targets							**2.064**	**13.535**			**236.7**	**180.4**	**2.064**	**13.535**			**236.7**	**180.4**	**236.7**	**180.4**
Mean							**2.181**	**24.507**	**3.125**	**7.079**	**228.4**	**173.1**	**1.797**	**24.579**	**2.554**	**11.767**	**233.0**	**175.3**	**230.7**	**174.3**
sd							**1.326**	**39.912**	**2.046**	**14.953**	**25.59**	**25.65**	**0.86**	**9.78**	**2.82**	**5.943**	**19.49**	**31.50**	**22.11**	**27.996**
CV%							**60.79**	**162.86**	**65.47**	**211.22**	**11.2**	**14.8**	**47.6**	**39.8**	**110.6**	**50.51**	**8.4**	**18.0**	**9.58**	**16.06**
Mean Difference							**0.117**	**10.972**			**-8.294**	**-7.339**	**-0.267**	**11.044**			**-3.706**	**-5.071**	**-6.004**	**-6.123**

Cotton 04 - Lankart

	Specimen 1			Specimen 2			Method 1 - Eqn (13)						Method 2 - Eqn (14)						Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	4.018	250	216	3.561	193	150	2.140	12.739	3.016	3.256	247.6	213.1	1.760	21.610	2.219	9.871	248.0	213.8	247.8	213.4
2	3.561	193	150	3.741	214	173	2.095	13.485	2.894	3.801	246.3	210.1	1.776	20.243	2.210	9.062	237.3	194.0	241.8	202.0
3	3.741	214	173	3.967	244	209	2.236	11.199	3.222	2.465	248.6	214.7	1.787	20.260	2.308	8.234	241.3	202.0	244.9	208.4
4	3.967	244	209	4.338	299	275	2.273	10.640	3.069	3.044	248.7	214.5	1.730	22.509	2.095	11.649	247.6	212.7	248.1	213.6
5	4.338	299	275	4.526	320	305	1.600	28.592	2.440	7.661	262.7	225.7	1.435	36.420	1.735	21.578	266.2	239.0	264.4	232.3
6	4.526	320	305	4.263	285	262	1.939	17.127	2.544	6.549	251.9	222.8	1.555	30.594	1.785	20.618	264.1	244.7	258.0	233.8
7	4.263	285	262	4.436	309	293	2.030	15.009	2.808	4.467	250.4	219.1	1.595	28.216	1.907	16.492	257.5	232.0	253.9	225.6
8	4.436	309	293	3.572	192	151	2.195	11.736	3.058	3.077	246.2	213.5	1.734	23.336	2.153	11.856	258.2	234.5	252.2	224.0
9	3.572	192	151	4.295	291	267	2.256	10.862	3.092	2.946	247.9	214.3	1.778	19.977	2.200	9.176	234.8	193.7	241.3	204.0
10	4.295	291	267	3.545	189	148	2.250	10.955	3.077	3.015	248.0	214.6	1.779	21.785	2.197	10.858	256.4	228.4	252.2	221.5
11	3.545	189	148	3.783	219	181	2.268	10.708	3.099	2.930	248.5	215.1	1.858	18.008	2.331	7.750	236.5	196.1	242.5	205.6
12	3.783	219	181	3.917	235	201	2.027	14.756	3.013	3.285	245.2	214.1	1.693	23.016	2.187	9.855	240.7	204.5	242.9	209.3
13	3.917	235	201	4.523	321	311	2.167	12.189	3.033	3.195	245.9	214.2	1.673	23.946	2.055	12.161	243.4	209.8	244.7	212.0
14	4.523	321	311	3.848	220	183	2.339	9.413	3.282	2.195	240.8	207.7	1.750	22.864	2.194	11.337	258.9	237.5	249.8	222.6
15	3.848	220	183	4.361	300	282	2.479	7.790	3.456	1.736	242.1	209.1	1.831	18.661	2.324	7.990	236.1	200.2	239.1	204.7
16	4.361	300	282	3.903	230	196	2.390	8.875	3.273	2.274	244.0	212.5	1.784	21.664	2.210	10.884	257.1	232.9	250.5	222.7
17	3.903	230	196	3.657	207	165	1.618	25.400	2.644	5.353	239.4	209.2	1.535	28.460	2.014	12.635	238.9	206.0	239.1	207.6
18	3.657	207	165	3.991	250	215	2.156	12.644	3.024	3.272	251.2	216.5	1.758	21.185	2.206	9.445	242.4	201.1	246.8	208.8
19	3.991	250	215	4.028	253	220	1.303	41.176	2.512	6.650	250.7	216.2	1.384	36.813	1.871	16.139	250.8	215.9	250.8	216.1
20	4.028	253	220	4.144	270	240	2.290	10.406	3.064	3.078	249.0	215.4	1.752	22.039	2.117	11.518	250.0	216.8	249.5	216.1
21	4.144	270	240	4.090	258	227	3.453	1.993	4.230	0.587	239.0	206.7	2.314	10.069	2.794	4.521	248.8	217.5	243.9	212.1
22	4.090	258	227	4.502	322	309	2.308	9.997	3.212	2.462	245.2	211.4	1.712	23.141	2.113	11.568	248.4	216.6	246.8	214.0
23	4.502	322	309	3.718	213	174	2.160	12.491	3.002	3.379	249.5	216.7	1.694	25.174	2.080	13.509	263.6	241.7	256.5	229.2
24	3.718	213	174	3.953	241	206	2.017	15.078	2.757	4.662	246.9	212.9	1.692	23.088	2.052	11.753	241.1	202.2	244.0	207.5
25	3.953	241	206	4.018	250	216	2.224	11.339	2.875	3.960	247.5	213.2	1.747	21.834	2.058	12.184	246.1	211.1	246.8	212.2
Targets							**2.185**	**11.972**			**247.6**	**213.8**	**2.185**	**11.972**			**247.6**	**213.8**	**247.6**	**213.8**
Mean							**2.169**	**13.864**	**3.028**	**3.572**	**247.3**	**214.1**	**1.724**	**23.397**	**2.137**	**11.706**	**248.6**	**216.2**	**247.9**	**215.2**
sd							**0.376**	**7.700**	**0.353**	**1.595**	**4.71**	**4.22**	**0.17**	**5.53**	**0.21**	**3.786**	**9.47**	**15.89**	**6.08**	**9.003**
CV%							**17.35**	**55.54**	**11.67**	**44.66**	**1.9**	**2.0**	**9.8**	**23.6**	**9.6**	**32.34**	**3.8**	**7.3**	**2.45**	**4.18**
Mean Difference							**-0.016**	**1.892**			**-0.274**	**0.334**	**-0.461**	**11.425**			**0.961**	**2.388**	**0.336**	**1.375**

Appendix 14 : SIMTEQ - Replication No 1

Estimate bPL, bPH in a.X^b using consecutive pairs

Cotton 05 - Lambert

		Specimen 1			Specimen 2				Method 1 - Eqn (13)						Method 2 - Eqn (14)				Mean 1&2	
Spec.	W1	PL1	PH1	W2	PL2	PH2	bPL	aPL	bPH	aPH	PL4	PH4	bPL	aPL	bPH	aPH	PL4	PH4	PL4	PH4
1	4.417	257	210	3.587	167	114	2.073	11.823	2.938	2.674	209.3	157.0	1.682	21.138	2.089	9.433	217.5	170.7	213.4	163.8
2	3.587	167	114	4.461	262	213	2.067	11.919	2.868	2.921	209.1	155.8	1.675	19.665	2.045	8.359	200.4	142.4	204.8	149.1
3	4.461	262	213	4.021	216	161	1.861	16.209	2.698	3.770	213.9	158.7	1.551	25.749	1.890	12.613	221.2	173.3	217.5	166.0
4	4.021	216	161	4.219	231	178	1.398	30.860	2.091	8.778	214.4	159.2	1.404	30.608	1.661	15.956	214.4	159.6	214.4	159.4
5	4.219	231	178	3.766	182	127	2.099	11.261	2.972	2.469	206.5	151.9	1.692	20.205	2.107	8.577	211.1	159.1	208.8	155.5
6	3.766	182	127	3.831	192	137	3.130	2.866	4.436	0.354	219.8	165.9	2.280	8.853	3.215	1.788	208.8	154.2	214.3	160.0
7	3.831	192	137	3.671	170	119	2.847	4.194	3.295	1.639	217.1	158.0	2.137	10.891	2.408	5.398	210.6	152.0	213.8	155.0
8	3.671	170	119	3.860	193	138	2.526	6.367	2.949	2.572	211.2	153.3	1.956	13.356	2.189	6.910	201.1	143.6	206.2	148.5
9	3.860	193	138	3.614	171	117	1.840	16.080	2.510	4.653	206.1	150.9	1.637	21.166	1.958	9.805	204.6	148.0	205.4	149.5
10	3.614	171	117	4.488	262	212	1.970	13.607	2.744	3.442	208.8	154.6	1.629	21.078	1.974	9.261	201.7	143.0	205.3	148.8
11	4.488	262	212	4.287	240	186	1.914	14.797	2.856	2.913	210.2	152.6	1.547	25.677	1.917	11.916	219.3	170.0	214.7	161.3
12	4.287	240	186	4.131	219	167	2.465	6.632	2.901	2.726	202.3	152.1	1.797	17.561	1.993	10.231	211.9	162.0	207.1	157.1
13	4.131	219	167	3.934	195	144	2.375	7.537	3.032	2.263	202.9	151.5	1.803	16.984	2.122	8.236	206.7	156.0	204.8	153.7
14	3.934	195	144	4.428	257	207	2.334	7.979	3.068	2.156	202.8	151.6	1.749	17.779	2.085	8.287	200.8	149.1	201.8	150.3
15	4.428	257	207	3.679	171	119	2.198	9.767	2.986	2.434	205.6	152.8	1.723	19.809	2.094	9.185	215.7	167.3	210.7	160.1
16	3.679	171	119	4.240	235	181	2.238	9.269	2.952	2.545	206.3	152.4	1.762	17.240	2.110	7.616	198.2	142.0	202.2	147.2
17	4.240	235	181	4.584	279	229	2.203	9.747	3.020	2.308	206.7	151.8	1.648	21.731	1.983	10.313	213.5	161.2	210.1	156.5
18	4.584	279	229	4.288	238	184	2.381	7.437	3.277	1.559	201.7	146.6	1.711	20.627	2.094	9.445	221.0	172.2	211.4	159.4
19	4.288	238	184	4.105	218	165	2.021	12.551	2.510	4.765	206.8	154.6	1.619	22.547	1.819	13.030	212.7	162.2	209.8	158.4
20	4.105	218	165	4.320	243	191	2.127	10.814	2.867	2.879	206.3	153.2	1.657	20.999	1.975	10.141	208.8	156.7	207.5	155.0
21	4.320	243	191	3.944	197	142	2.301	8.382	3.250	1.642	203.5	148.7	1.746	18.884	2.197	7.668	212.4	161.3	208.0	155.0
22	3.944	197	142	4.333	242	189	2.186	9.814	3.038	2.198	203.2	148.2	1.697	19.208	2.085	8.128	201.8	146.3	202.5	147.3
23	4.333	242	189	3.816	189	135	1.946	13.955	2.649	3.889	207.1	152.9	1.613	22.728	1.917	11.364	212.7	162.1	209.9	157.5
24	3.816	189	135	4.078	213	159	1.802	16.914	2.467	4.961	205.7	151.6	1.579	22.808	1.869	11.053	203.6	147.4	204.7	149.5
25	4.078	213	159	4.417	257	210	2.351	7.817	3.484	1.188	203.6	148.7	1.740	18.459	2.272	6.524	206.0	152.2	204.8	150.4
Targets							**2.098**	**11.300**			**207.1**	**153.3**	**2.098**	**11.300**			**207.1**	**153.3**	**207.1**	**153.3**
Mean							**2.186**	**11.144**	**2.954**	**2.948**	**207.6**	**153.4**	**1.721**	**19.830**	**2.083**	**9.250**	**209.5**	**156.6**	**208.3**	**154.6**
sd							**0.348**	**5.504**	**0.429**	**1.636**	**4.69**	**4.10**	**0.18**	**4.52**	**0.28**	**2.752**	**6.78**	**9.80**	**4.30**	**5.063**
CV%							**15.90**	**49.39**	**14.54**	**55.49**	**2.3**	**2.7**	**10.5**	**22.8**	**13.5**	**29.75**	**3.2**	**6.3**	**2.06**	**3.28**
Mean Difference							**0.088**	**-0.156**			**0.543**	**0.086**	**-0.377**	**8.530**			**2.363**	**3.261**	**1.200**	**1.251**

Cotton 06 - Uganda

		Specimen 1			Specimen 2				Method 1 - Eqn (13)						Method 2 - Eqn (14)				Mean 1&2	
Spec.	W1	PL1	PH1	W2	PL2	PH2	bPL	aPL	bPH	aPH	PL4	PH4	bPL	aPL	bPH	aPH	PL4	PH4	PL4	PH4
1	4.460	256	212	3.755	183	130	1.949	13.879	2.840	3.035	207.1	155.6	1.609	23.080	2.000	10.656	214.9	170.5	211.0	163.1
2	3.755	183	130	4.374	248	198	1.990	13.152	2.755	3.397	207.6	154.8	1.633	21.087	1.972	9.568	202.9	147.3	205.3	151.0
3	4.374	248	198	3.523	158	107	2.084	11.457	2.844	2.977	205.9	153.5	1.699	20.225	2.061	9.458	213.1	164.7	209.5	159.1
4	3.523	158	107	3.575	160	110	0.865	53.153	1.902	9.757	176.3	136.2	1.276	31.679	1.709	12.438	185.8	132.9	181.1	134.6
5	3.575	160	110	3.939	198	145	2.197	9.744	2.848	2.923	204.8	151.5	1.795	16.249	2.136	7.243	195.8	139.9	200.3	145.7
6	3.939	198	145	4.503	262	214	2.091	11.270	2.906	2.701	204.5	151.7	1.642	20.843	1.993	9.443	203.1	149.5	203.8	150.6
7	4.503	262	214	3.762	184	133	1.966	13.596	2.646	3.992	207.5	156.4	1.611	23.191	1.900	12.262	216.5	170.8	212.0	163.6
8	3.762	184	133	3.510	157	106	2.289	8.863	3.273	1.739	211.7	162.5	1.877	15.297	2.461	5.103	206.4	154.6	209.1	158.6
9	3.510	157	106	3.820	187	135	2.067	11.713	2.859	2.926	205.6	154.0	1.758	17.262	2.182	6.842	197.5	140.9	201.6	147.5
10	3.820	187	135	4.213	228	178	2.028	12.333	2.829	3.043	205.3	153.8	1.658	20.271	2.024	8.958	201.8	148.2	203.5	151.0
11	4.213	228	178	3.911	191	140	2.388	7.358	3.238	1.691	201.5	150.5	1.801	17.117	2.220	7.309	207.7	158.7	204.6	154.6
12	3.911	191	140	4.542	274	227	2.415	7.089	3.234	1.699	201.6	150.5	1.773	17.025	2.153	7.432	198.7	146.9	200.2	148.7
13	4.542	274	227	4.132	222	172	2.226	9.434	2.935	2.674	206.5	156.4	1.671	21.840	1.968	11.544	221.6	176.8	214.0	166.6
14	4.132	222	172	4.026	214	164	1.407	30.163	1.826	12.899	212.1	162.1	1.412	29.949	1.565	18.684	212.0	163.5	212.1	162.8
15	4.026	214	164	3.755	180	129	2.488	6.689	3.452	1.339	210.6	160.4	1.896	15.258	2.430	5.562	211.4	161.5	211.0	160.9
16	3.755	180	129	4.250	231	181	2.017	12.487	2.738	3.446	204.4	153.3	1.656	20.119	1.984	9.348	199.8	146.2	202.1	149.8
17	4.250	231	181	4.447	253	213	2.006	12.686	3.589	1.005	204.6	145.6	1.586	23.277	2.283	6.654	209.8	157.6	207.2	151.6
18	4.447	253	213	3.618	169	117	1.956	13.666	2.904	2.795	205.7	156.6	1.627	22.322	2.060	9.848	212.9	171.2	209.3	163.9
19	3.618	169	117	3.696	177	124	2.157	10.545	2.710	3.585	209.9	153.6	1.804	16.614	2.098	7.876	202.5	144.4	206.2	149.0
20	3.696	177	124	4.295	238	189	1.974	13.400	2.810	3.148	206.8	154.8	1.641	20.726	2.023	8.807	201.5	145.5	204.2	150.1
21	4.295	238	189	4.008	206	155	2.091	11.294	2.873	2.873	205.1	154.1	1.655	21.325	1.998	10.275	211.6	164.0	208.4	159.0
22	4.008	206	155	3.784	181	129	2.253	9.027	3.197	1.831	205.1	154.0	1.783	17.328	2.272	6.611	205.3	154.3	205.2	154.1
23	3.784	181	129	3.842	184	134	1.081	42.952	2.500	4.629	192.2	148.2	1.328	30.924	1.926	9.934	194.8	143.5	193.5	145.8
24	3.842	184	134	4.103	217	166	2.510	6.272	3.259	1.668	203.5	152.8	1.881	14.619	2.272	6.297	198.5	146.8	201.0	149.8
25	4.103	217	166	4.460	256	212	1.983	13.194	2.935	2.633	206.3	154.0	1.590	23.004	1.986	10.061	208.4	157.8	207.3	155.9
Targets							**2.078**	**11.530**			**205.5**	**154.4**	**2.078**	**11.530**			**205.5**	**154.4**	**205.5**	**154.4**
Mean							**2.019**	**14.617**	**2.876**	**3.376**	**204.5**	**153.5**	**1.667**	**20.825**	**2.067**	**9.129**	**205.4**	**154.3**	**204.7**	**153.6**
sd							**0.387**	**11.115**	**0.400**	**2.580**	**7.02**	**5.21**	**0.16**	**4.66**	**0.20**	**2.815**	**8.08**	**11.42**	**6.72**	**7.189**
CV%							**19.17**	**76.05**	**13.90**	**76.42**	**3.4**	**3.4**	**9.4**	**22.4**	**9.6**	**30.83**	**3.9**	**7.4**	**3.28**	**4.68**
Mean Difference							**-0.059**	**3.087**			**-1.013**	**-0.925**	**-0.411**	**9.295**			**-0.126**	**-0.076**	**-0.787**	**-0.848**

Appendix 14 : SIMTEQ - Replication No 1

Estimate bPL, bPH in a.X^b using consecutive pairs

Cotton 07 - Coker

		Specimen 1			Specimen 2				Method 1 - Eqn (13)						Method 2 - Eqn (14)				Mean 1&2	
Spec.	W1	PL1	PH1	W2	PL2	PH2	bPL	aPL	bPH	aPH	PL4	PH4	bPL	aPL	bPH	aPH	PL4	PH4	PL4	PH4
1	3.825	164	122	4.560	248	207	2.353	6.981	3.008	2.156	182.2	139.6	1.755	15.563	2.053	7.765	177.4	133.8	179.8	136.7
2	4.560	248	207	4.173	204	158	2.204	8.747	3.049	2.027	185.8	138.9	1.657	20.063	2.011	9.789	199.6	159.1	192.7	149.0
3	4.173	204	158	4.189	204	158	0.000	204.000	0.000	158.000	204.0	158.0	1.000	48.885	1.000	37.862	195.5	151.4	199.8	154.7
4	4.189	204	158	3.723	160	115	2.059	10.686	2.692	3.341	185.5	139.5	1.684	18.287	1.976	9.314	188.7	144.2	187.1	141.9
5	3.723	160	115	3.627	149	104	2.721	4.476	3.840	0.738	194.5	151.5	2.097	10.165	2.844	2.737	186.0	141.0	190.3	146.3
6	3.627	149	104	4.049	189	144	2.157	9.254	2.952	2.320	184.1	138.9	1.755	15.529	2.159	6.438	177.0	128.5	180.5	133.7
7	4.049	189	144	3.638	150	105	2.154	9.287	2.944	2.344	184.1	138.9	1.753	16.292	2.153	7.091	185.0	140.2	184.5	139.6
8	3.638	150	105	4.020	185	142	2.098	9.995	3.019	2.128	183.1	139.9	1.730	16.060	2.202	6.117	176.8	129.4	179.9	134.7
9	4.020	185	142	4.546	238	199	2.048	10.715	2.743	3.125	183.1	140.1	1.614	19.589	1.899	10.115	183.5	140.7	183.3	140.4
10	4.546	238	199	4.325	214	172	2.130	9.456	2.922	2.383	181.2	136.9	1.617	20.578	1.933	10.662	193.5	155.4	187.4	146.1
11	4.325	214	172	4.427	225	183	2.159	9.068	2.670	3.448	180.8	139.6	1.638	19.445	1.841	11.611	188.3	149.0	184.5	144.3
12	4.427	225	183	3.774	162	118	2.058	10.529	2.749	3.063	182.6	138.5	1.654	19.218	1.958	9.940	190.3	150.1	186.5	144.3
13	3.774	162	118	3.905	174	127	2.089	10.104	2.149	6.799	183.0	133.7	1.723	16.428	1.750	11.544	179.1	130.7	181.0	132.2
14	3.905	174	127	4.324	215	171	2.075	10.297	2.918	2.385	182.9	136.2	1.657	18.214	2.034	7.956	181.1	133.4	182.0	134.8
15	4.324	215	171	4.166	199	158	2.071	10.367	2.117	7.703	183.0	145.0	1.629	19.799	1.647	15.339	189.4	150.4	186.2	147.7
16	4.166	199	158	4.471	236	196	2.406	6.423	3.041	2.061	180.5	139.7	1.746	16.473	2.023	8.813	185.4	145.6	183.0	142.6
17	4.471	236	196	3.543	147	101	2.034	11.216	2.849	2.750	188.1	142.7	1.665	19.491	2.042	9.200	196.0	156.1	192.1	149.4
18	3.543	147	101	3.922	176	131	1.772	15.632	2.559	3.967	182.2	137.8	1.608	19.225	1.986	8.188	178.7	128.5	180.5	133.1
19	3.922	176	131	4.084	195	149	2.534	5.513	3.183	1.691	185.0	139.5	1.884	13.414	2.215	6.349	182.7	136.8	183.8	138.2
20	4.084	195	149	4.325	221	178	2.185	9.016	3.104	1.889	186.4	139.7	1.682	18.298	2.093	7.840	188.3	142.7	187.3	141.2
21	4.325	221	178	3.737	161	116	2.168	9.241	2.931	2.436	186.6	141.6	1.714	17.964	2.072	8.569	193.3	151.4	190.0	146.5
22	3.737	161	116	3.508	139	97	2.325	7.508	2.831	2.777	188.6	140.7	1.901	13.144	2.185	6.506	183.2	134.6	185.9	137.6
23	3.508	139	97	4.101	194	150	2.135	9.540	2.791	2.921	183.9	139.9	1.755	15.371	2.086	7.078	175.0	127.5	179.5	133.7
24	4.101	194	150	3.800	164	123	2.204	8.653	2.603	3.807	183.6	140.6	1.747	16.476	1.933	9.797	185.7	142.9	184.7	141.8
25	3.800	164	123	3.825	164	122	0.000	164.000	-1.255	656.870	164.0	115.3	1.000	43.158	0.720	47.069	172.6	127.6	168.3	121.5
Targets							2.107	9.929			184.3	139.6	2.107	9.929			184.3	139.6	184.3	139.6
Mean							2.006	23.228	2.576	35.325	184.4	139.7	1.667	19.485	1.953	11.348	185.3	141.2	185.0	140.6
sd							0.631	48.776	1.034	133.151	6.48	6.99	0.23	8.40	0.39	9.755	7.11	9.86	5.81	7.078
CV%							31.44	209.99	40.15	376.93	3.5	5.0	13.6	43.1	20.2	85.96	3.8	7.0	3.14	5.03
Mean Difference							-0.101	13.299			0.055	0.103	-0.440	9.556			0.987	1.642	0.700	0.990

Cotton 08 - Tanguis

		Specimen 1			Specimen 2				Method 1 - Eqn (13)						Method 2 - Eqn (14)				Mean 1&2	
Spec.	W1	PL1	PH1	W2	PL2	PH2	bPL	aPL	bPH	aPH	PL4	PH4	bPL	aPL	bPH	aPH	PL4	PH4	PL4	PH4
1	4.533	178	146	4.406	169	133	1.821	11.348	3.274	1.036	141.7	97.0	1.503	18.356	2.080	6.292	147.5	112.6	144.6	104.8
2	4.406	169	133	4.091	142	106	2.350	5.180	3.064	1.415	134.7	98.9	1.739	12.817	2.058	6.293	142.9	109.0	138.8	104.0
3	4.091	142	106	3.702	118	82	1.851	10.459	2.567	2.848	136.2	100.1	1.609	14.719	1.934	6.954	137.0	101.5	136.6	100.8
4	3.702	118	82	3.599	110	75	2.505	4.446	3.184	1.271	143.3	105.0	1.986	8.768	2.392	3.581	137.6	98.7	140.5	101.8
5	3.599	110	75	4.143	148	113	2.111	7.364	2.916	1.790	137.5	102.0	1.727	12.048	2.127	4.921	132.0	93.9	134.7	97.9
6	4.143	148	113	3.784	122	87	2.134	7.131	2.888	1.864	137.3	102.1	1.714	12.952	2.073	5.933	139.4	105.1	138.4	103.6
7	3.784	122	87	3.981	137	101	2.285	5.832	2.940	1.739	138.5	102.4	1.802	11.096	2.133	5.092	134.8	97.9	136.7	100.2
8	3.981	137	101	4.211	151	115	1.734	12.487	2.313	4.135	138.1	102.1	1.527	16.613	1.759	8.888	138.0	101.8	138.1	102.0
9	4.211	151	115	3.876	130	92	1.807	11.232	2.693	2.394	137.6	100.1	1.564	15.939	1.947	6.995	139.3	104.1	138.5	102.1
10	3.876	130	92	3.858	129	91	1.659	13.735	2.348	3.822	137.0	99.1	1.536	16.231	1.835	7.655	136.4	97.5	136.7	98.3
11	3.858	129	91	4.095	146	108	2.076	7.817	2.873	1.882	139.1	101.0	1.686	13.244	2.060	5.639	137.1	98.0	138.1	99.5
12	4.095	146	108	4.338	161	126	1.695	13.381	2.672	2.498	140.3	101.4	1.495	17.743	1.885	7.576	141.0	103.3	140.6	102.4
13	4.338	161	126	4.059	142	106	1.889	10.066	2.600	2.775	138.1	102.0	1.568	16.115	1.858	8.246	141.8	108.4	139.9	105.2
14	4.059	142	106	4.456	172	138	2.055	7.978	2.829	2.015	137.8	101.7	1.621	14.656	1.944	6.956	138.7	103.0	138.2	102.4
15	4.456	172	138	3.829	126	89	2.054	7.995	2.894	1.826	137.8	101.0	1.643	14.762	2.014	6.809	144.0	111.0	140.9	106.0
16	3.829	126	89	3.665	116	79	1.885	10.034	2.716	2.320	136.8	100.2	1.654	13.680	2.065	5.564	135.4	97.4	136.1	98.8
17	3.665	116	79	3.910	132	96	1.997	8.672	3.012	1.580	138.1	102.8	1.695	12.842	2.216	4.445	134.5	95.9	136.3	99.4
18	3.910	132	96	3.629	114	78	1.966	9.047	2.784	2.156	138.0	102.3	1.685	13.268	2.094	5.526	137.2	100.7	137.6	101.5
19	3.629	114	78	3.512	107	72	1.934	9.429	2.442	3.348	137.6	98.9	1.719	12.438	1.982	6.061	134.8	94.6	136.2	96.8
20	3.512	107	72	4.011	140	103	2.025	8.412	2.697	2.433	139.2	102.3	1.714	12.420	2.050	5.480	133.7	94.0	136.5	98.1
21	4.011	140	103	4.554	182	149	2.067	7.934	2.908	1.813	139.2	102.2	1.621	14.726	1.974	6.638	139.4	102.5	139.3	102.3
22	4.554	182	149	3.822	126	89	2.098	7.562	2.940	1.727	138.7	101.8	1.653	14.862	2.022	6.953	146.9	114.6	142.8	108.2
23	3.822	126	89	4.052	142	106	2.042	8.154	2.986	1.625	138.3	102.0	1.680	13.248	2.135	5.082	136.0	98.1	137.2	100.0
24	4.052	142	106	4.372	167	132	2.137	7.143	2.890	1.858	138.1	102.1	1.661	13.893	1.987	6.575	139.0	103.3	138.6	102.7
25	4.372	167	132	4.533	178	146	1.761	12.442	2.782	2.179	142.8	103.1	1.485	18.678	1.868	8.390	146.4	111.8	144.6	107.5
Targets							2.037	8.198			138.1	101.6	2.037	8.198			138.1	101.6	138.1	101.6
Mean							1.997	9.011	2.809	2.174	138.5	101.3	1.651	14.244	2.020	6.342	138.8	102.3	138.4	101.7
sd							0.204	2.445	0.235	0.748	1.91	1.66	0.11	2.29	0.13	1.268	4.16	6.05	2.23	2.926
CV%							10.20	27.13	8.36	34.41	1.4	1.6	6.6	16.1	6.6	20.00	3.0	5.9	1.61	2.88
Mean Difference							-0.040	0.813			0.378	-0.259	-0.386	6.046			0.731	0.750	0.293	0.119

Appendix 14 : SIMTEQ - Replication No 1

Estimate bPL, bPH in a.X^b using consecutive pairs

Cotton 09 - Old B19

		Specimen 1			Specimen 2				Method 1 - Eqn (13)						Method 2 - Eqn (14)				Mean 1&2	
Spec.	W1	PL1	PH1	W2	PL2	PH2	bPL	aPL	bPH	aPH	PL4	PH4	bPL	aPL	bPH	aPH	PL4	PH4	PL4	PH4
1	4.537	233	191	4.100	188	143	2.122	9.416	2.862	2.521	178.4	133.2	1.635	19.655	1.941	10.145	189.6	149.6	184.0	141.4
2	4.100	188	143	4.152	192	146	1.684	17.477	1.660	13.738	180.3	137.2	1.504	22.520	1.495	17.336	181.1	137.8	180.7	137.5
3	4.152	192	146	3.627	144	101	2.130	9.258	2.728	3.004	177.3	131.9	1.730	16.347	2.019	8.248	180.0	135.4	178.7	133.6
4	3.627	144	101	4.249	200	156	2.076	9.923	2.747	2.930	176.4	132.1	1.696	16.193	2.012	7.560	170.0	123.0	173.2	127.5
5	4.249	200	156	4.325	208	165	2.230	7.942	3.189	1.547	174.8	128.6	1.682	17.539	2.104	7.431	180.7	137.4	177.7	133.0
6	4.325	208	165	3.505	136	93	2.023	10.755	2.730	3.030	177.6	133.3	1.680	17.778	2.013	8.651	182.4	141.0	180.0	137.2
7	3.505	136	93	4.427	220	178	2.061	10.258	2.781	2.841	178.5	134.2	1.685	16.426	2.023	7.356	169.9	121.5	174.2	127.9
8	4.427	220	178	3.785	157	115	2.155	8.916	2.790	2.803	176.8	134.1	1.692	17.753	1.976	9.418	185.3	145.7	181.1	139.9
9	3.785	157	115	3.991	176	131	2.158	8.880	2.461	4.347	176.8	131.7	1.742	15.444	1.883	9.376	172.8	127.6	174.8	129.6
10	3.991	176	131	4.075	183	137	1.884	12.978	2.163	6.563	176.7	131.6	1.595	19.344	1.710	12.290	176.6	131.5	176.7	131.6
11	4.075	183	137	3.518	137	92	1.971	11.485	2.711	3.041	176.4	130.3	1.682	17.227	2.045	7.749	177.4	131.9	176.9	131.1
12	3.518	137	92	3.739	152	109	1.703	16.081	2.779	2.789	170.5	131.5	1.599	18.327	2.152	6.143	168.2	121.3	169.4	126.4
13	3.739	152	109	3.805	158	114	2.240	7.925	2.595	3.559	176.8	129.8	1.811	13.952	1.990	7.904	171.7	124.6	174.2	127.2
14	3.805	158	114	4.076	186	139	2.371	6.648	2.882	2.425	177.9	131.7	1.826	13.776	2.078	7.092	173.1	126.5	175.5	129.1
15	4.076	186	139	4.477	226	184	2.075	10.077	2.988	2.089	178.9	131.4	1.625	18.960	2.012	8.226	180.4	133.9	179.7	132.7
16	4.477	226	184	3.987	173	132	2.306	7.126	2.866	2.506	174.3	133.3	1.726	17.013	1.970	9.602	186.1	147.4	180.2	140.3
17	3.987	173	132	4.318	207	163	2.247	7.734	2.642	3.418	174.3	133.2	1.718	16.066	1.890	9.670	174.0	132.8	174.1	133.0
18	4.318	207	163	4.073	182	137	2.204	8.242	2.975	2.100	174.9	129.8	1.691	17.444	2.032	8.336	181.9	139.5	178.4	134.7
19	4.073	182	137	3.762	158	110	1.779	14.957	2.762	2.833	176.2	130.3	1.575	19.919	2.025	7.978	176.9	132.1	176.5	131.2
20	3.762	158	110	3.524	138	93	2.074	10.127	2.572	3.642	179.4	128.8	1.767	15.198	2.026	7.505	176.1	124.6	177.8	126.7
21	3.524	138	93	3.604	144	99	1.903	12.552	2.796	2.748	175.6	132.5	1.706	16.096	2.191	5.885	171.3	122.7	173.4	127.6
22	3.604	144	99	3.787	157	111	1.747	15.336	2.312	5.107	172.8	126.0	1.605	18.407	1.870	9.006	170.2	120.3	171.5	123.1
23	3.787	157	111	4.047	181	134	2.144	9.041	2.838	2.537	176.6	129.7	1.729	15.706	2.064	7.105	172.6	124.3	174.6	127.0
24	4.047	181	134	4.365	214	167	2.215	8.189	2.911	2.290	176.4	129.6	1.694	16.964	1.999	8.197	177.5	130.9	177.0	130.2
25	4.365	214	167	4.537	233	191	2.197	8.404	3.468	1.008	176.7	123.4	1.638	19.142	2.180	6.724	185.5	138.1	181.1	130.7
Targets							**2.078**	**9.942**			**177.2**	**132.0**	**2.078**	**9.942**			**177.2**	**132.0**	**177.2**	**132.0**
Mean							**2.068**	**10.389**	**2.728**	**3.417**	**176.5**	**131.2**	**1.681**	**17.328**	**1.988**	**8.597**	**177.3**	**132.1**	**176.6**	**131.2**
sd							**0.189**	**2.935**	**0.339**	**2.417**	**2.11**	**2.78**	**0.07**	**1.97**	**0.14**	**2.279**	**5.89**	**8.51**	**3.08**	**4.327**
CV%							**9.16**	**28.25**	**12.44**	**70.76**	**1.2**	**2.1**	**4.3**	**11.4**	**7.3**	**26.51**	**3.3**	**6.4**	**1.74**	**3.30**
Mean Difference							**-0.010**	**0.447**			**-0.743**	**-0.827**	**-0.397**	**7.386**			**0.055**	**0.050**	**-0.616**	**-0.764**

Cotton 10 - Old D3

		Specimen 1			Specimen 2				Method 1 - Eqn (13)						Method 2 - Eqn (14)				Mean 1&2	
Spec.	W1	PL1	PH1	W2	PL2	PH2	bPL	aPL	bPH	aPH	PL4	PH4	bPL	aPL	bPH	aPH	PL4	PH4	PL4	PH4
1	3.728	200	138	3.868	210	149	1.327	34.880	2.086	8.865	219.6	159.8	1.418	30.937	1.732	14.125	221.0	155.9	220.3	157.9
2	3.868	210	149	4.197	251	189	2.185	10.929	2.914	2.895	226.0	164.4	1.720	20.507	2.061	9.177	222.5	159.7	224.3	162.0
3	4.197	251	189	4.412	277	220	1.973	14.822	3.040	2.415	228.3	163.4	1.582	25.972	2.027	10.329	232.7	171.5	230.5	167.4
4	4.412	277	220	4.046	236	174	1.851	17.768	2.710	3.941	231.1	168.7	1.549	27.779	1.899	13.135	238.0	182.7	234.5	175.7
5	4.046	236	174	4.217	254	193	1.772	19.817	2.499	5.292	231.3	169.1	1.536	27.584	1.831	13.459	231.9	170.4	231.6	169.8
6	4.217	254	193	3.707	198	136	1.932	15.746	2.716	3.876	229.4	167.2	1.630	24.339	1.986	11.067	233.0	173.8	231.2	170.5
7	3.707	198	136	4.304	266	206	1.976	14.871	2.779	3.566	230.1	168.0	1.639	23.117	2.004	9.848	224.3	158.4	227.2	163.2
8	4.304	266	206	3.589	185	125	1.996	14.434	2.746	3.741	229.8	168.4	1.661	23.558	2.009	10.968	235.5	177.8	232.6	173.1
9	3.589	185	125	4.102	242	182	2.009	14.209	2.810	3.450	230.1	169.6	1.687	21.422	2.079	8.778	222.2	156.6	226.1	163.1
10	4.102	242	182	4.502	292	235	2.018	14.013	2.747	3.770	230.0	169.8	1.599	25.322	1.894	12.554	232.5	173.5	231.2	171.7
11	4.502	292	235	3.622	184	128	2.124	11.949	2.795	3.507	227.2	168.9	1.691	22.951	1.995	11.680	239.1	185.6	233.1	177.3
12	3.622	184	128	3.828	208	148	2.221	10.555	2.630	4.337	229.3	166.1	1.815	17.784	2.026	9.432	220.3	156.5	224.8	161.3
13	3.828	208	148	3.638	189	129	1.880	16.686	2.696	3.968	225.9	166.6	1.655	22.564	2.059	9.327	223.7	162.0	224.8	164.3
14	3.638	189	129	3.953	227	167	2.201	11.013	3.102	2.348	232.9	173.2	1.787	18.815	2.266	6.919	223.9	160.0	228.4	166.6
15	3.953	227	167	4.072	242	180	2.158	11.695	2.528	5.173	232.8	172.0	1.712	21.576	1.878	12.645	231.6	170.7	232.2	171.4
16	4.072	242	180	4.584	308	252	2.039	13.807	2.845	3.311	233.3	171.0	1.603	25.488	1.931	11.953	235.1	173.9	234.2	172.5
17	4.584	308	252	3.867	217	157	2.061	13.362	2.785	3.632	232.6	172.5	1.631	25.730	1.936	13.223	246.7	193.6	239.6	183.0
18	3.867	217	157	3.514	178	120	2.070	13.191	2.809	3.516	232.7	172.6	1.753	20.262	2.142	8.668	230.2	168.8	231.5	170.7
19	3.514	178	120	4.163	254	191	2.099	12.726	2.744	3.815	233.6	171.2	1.730	20.236	2.047	9.156	222.7	156.4	228.1	163.8
20	4.163	254	191	4.220	262	204	2.272	9.937	4.825	0.196	231.9	157.5	1.720	21.859	3.162	2.101	237.1	168.3	234.5	162.9
21	4.220	262	204	3.762	206	148	2.090	12.924	2.789	3.677	234.2	175.7	1.689	23.014	2.013	11.242	239.3	183.1	236.8	179.4
22	3.762	206	148	4.203	256	198	1.957	15.416	2.621	4.595	232.3	173.9	1.635	23.601	1.932	11.439	227.8	166.7	230.0	170.3
23	4.203	256	198	3.869	218	158	1.940	15.803	2.724	3.963	232.5	173.0	1.617	25.099	1.965	11.792	236.3	179.6	234.4	176.3
24	3.869	218	158	4.193	254	196	1.902	16.633	2.682	4.196	232.2	172.7	1.603	24.910	1.946	11.359	229.9	168.6	231.1	170.6
25	4.193	254	196	3.728	200	138	2.033	13.772	2.985	2.717	230.8	170.3	1.672	23.119	2.127	9.298	234.8	177.3	232.8	173.8
Targets							**2.049**	**13.458**			**230.5**	**170.0**	**2.049**	**13.458**			**230.5**	**170.0**	**230.5**	**170.0**
Mean							**2.003**	**14.838**	**2.824**	**3.791**	**230.4**	**169.0**	**1.653**	**23.502**	**2.038**	**10.547**	**230.9**	**170.1**	**231.1**	**170.0**
sd							**0.186**	**4.790**	**0.460**	**1.451**	**3.19**	**4.33**	**0.08**	**2.97**	**0.26**	**2.505**	**6.92**	**10.31**	**3.78**	**5.740**
CV%							**9.28**	**32.28**	**16.28**	**38.29**	**1.4**	**2.6**	**5.1**	**12.6**	**12.6**	**23.75**	**3.0**	**6.1**	**1.64**	**3.38**
Mean Difference							**-0.046**	**1.380**			**-0.097**	**-0.974**	**-0.396**	**10.044**			**0.385**	**0.055**	**0.552**	**0.025**

Appendix 14 : SIMTEQ - Replication No 1

Estimate bPL, bPH in a.X^b using consecutive pairs

Cotton 11 - ICCS K

	Specimen 1			Specimen 2			Method 1 - Eqn (13)						Method 2 - Eqn (14)						Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	4.481	103	77	4.218	92	65	1.872	6.214	2.808	1.141	83.3	56.0	1.538	10.256	1.908	4.405	86.5	62.0	84.9	59.0
2	4.218	92	65	4.114	88	61	1.781	7.089	2.544	1.669	83.7	56.8	1.533	10.122	1.842	4.587	84.8	58.9	84.2	57.9
3	4.114	88	61	4.144	88	61	0.000	88.000	0.000	61.000	88.0	61.0	1.000	21.388	1.000	14.826	85.6	59.3	86.8	60.2
4	4.144	88	61	4.543	108	80	2.228	3.703	2.951	0.920	81.3	54.9	1.671	8.180	1.973	3.689	82.9	56.9	82.1	55.9
5	4.543	108	80	3.825	77	50	1.968	5.495	2.733	1.277	84.1	56.5	1.602	9.554	1.925	4.343	88.1	62.6	86.1	59.5
6	3.825	77	50	3.905	80	52	1.856	6.384	1.904	3.884	83.6	54.4	1.616	8.804	1.637	5.562	82.8	53.8	83.2	54.1
7	3.905	80	52	3.706	71	46	2.284	3.563	2.346	2.127	84.5	55.0	1.823	6.679	1.853	4.167	83.6	54.4	84.0	54.7
8	3.706	71	46	3.660	70	45	1.119	16.400	1.733	4.749	77.3	52.5	1.355	12.034	1.601	5.648	78.7	52.0	78.0	52.2
9	3.660	70	45	3.524	66	41	1.564	9.200	2.475	1.815	80.5	56.1	1.546	9.423	1.992	3.396	80.3	53.7	80.4	54.9
10	3.524	66	41	3.512	65	40	4.476	0.235	7.240	0.004	116.3	102.5	3.569	0.736	7.828	0.002	103.7	110.4	110.0	106.5
11	3.512	65	40	4.371	100	72	1.969	5.475	2.687	1.368	84.0	56.7	1.651	8.164	1.983	3.314	80.6	51.8	82.3	54.2
12	4.371	100	72	4.020	86	57	1.803	7.000	2.793	1.171	85.2	56.2	1.537	10.358	1.946	4.079	87.2	60.6	86.2	58.4
13	4.020	86	57	4.445	104	75	1.894	6.168	2.735	1.269	85.2	56.2	1.565	9.748	1.909	4.002	85.3	56.4	85.2	56.3
14	4.445	104	75	3.939	83	55	1.868	6.412	2.568	1.626	85.4	57.2	1.562	10.115	1.847	4.771	88.2	61.7	86.8	59.5
15	3.939	83	55	4.098	89	61	1.767	7.361	2.621	1.512	85.3	57.3	1.552	9.880	1.920	3.954	85.0	56.6	85.1	56.9
16	4.098	89	61	4.439	104	75	1.950	5.685	2.587	1.587	84.9	57.3	1.580	9.590	1.834	4.592	85.7	58.4	85.3	57.8
17	4.439	104	75	3.727	73	46	2.025	5.087	2.797	1.161	84.2	56.1	1.644	8.971	1.987	3.880	87.6	61.0	85.9	58.5
18	3.727	73	46	4.357	99	70	1.950	5.613	2.687	1.341	83.8	55.6	1.622	8.646	1.947	3.552	81.9	52.8	82.8	54.2
19	4.357	99	70	3.813	76	49	1.981	5.364	2.672	1.371	83.6	55.7	1.625	9.053	1.925	4.115	86.2	59.4	84.9	57.5
20	3.813	76	49	3.761	72	46	3.952	0.383	4.618	0.101	91.9	61.2	2.840	1.699	3.386	0.527	87.1	57.6	89.5	59.4
21	3.761	72	46	3.906	80	52	2.779	1.813	3.234	0.634	85.5	56.2	2.065	4.671	2.325	2.114	81.8	53.1	83.6	54.6
22	3.906	80	52	3.607	67	42	2.222	3.874	2.676	1.356	84.3	55.4	1.807	6.816	2.040	3.228	83.5	54.6	83.9	55.0
23	3.607	67	42	4.211	92	65	2.046	4.856	2.818	1.131	82.8	56.2	1.690	7.671	2.059	2.993	79.8	52.0	81.3	54.1
24	4.211	92	65	4.544	107	78	1.985	5.300	2.396	2.073	83.1	57.5	1.574	9.570	1.729	5.410	84.8	59.5	84.0	58.5
25	4.544	107	78	4.481	103	77	2.716	1.753	0.920	19.381	75.7	69.4	1.826	6.748	1.226	12.190	84.8	66.7	80.2	68.0
Targets							**1.981**	**5.366**			**83.6**	**56.2**	**1.981**	**5.366**			**83.6**	**56.2**	**83.6**	**56.2**
Mean							**2.082**	**8.737**	**2.702**	**4.627**	**85.1**	**58.8**	**1.736**	**8.755**	**2.145**	**4.534**	**85.1**	**59.4**	**85.0**	**59.0**
sd							**0.823**	**16.807**	**1.242**	**12.313**	**7.18**	**9.63**	**0.49**	**3.70**	**1.25**	**3.030**	**4.71**	**11.32**	**5.75**	**10.372**
CV%							**39.53**	**192.37**	**45.98**	**266.13**	**8.4**	**16.4**	**28.3**	**42.3**	**58.3**	**66.82**	**5.5**	**19.0**	**6.76**	**17.58**
Mean Difference							**0.101**	**3.371**			**1.496**	**2.593**	**-0.245**	**3.389**			**1.458**	**3.248**	**1.425**	**2.809**

Cotton 12 - ICCS B23

	Specimen 1			Specimen 2			Method 1 - Eqn (13)						Method 2 - Eqn (14)						Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	4.411	208	161	3.754	151	103	1.985	10.928	2.769	2.644	171.3	122.8	1.628	18.568	1.973	8.609	177.4	132.8	174.4	127.8
2	3.754	151	103	3.796	154	105	1.760	14.728	1.720	10.585	168.9	114.9	1.594	18.339	1.577	12.787	167.1	113.9	168.0	114.4
3	3.796	154	105	4.161	188	138	2.172	8.501	2.975	1.985	172.6	122.7	1.727	15.389	2.113	6.264	168.6	117.3	170.6	120.0
4	4.161	188	138	4.439	211	162	1.783	14.801	2.477	4.040	175.2	125.2	1.514	21.713	1.779	10.920	177.1	128.6	176.2	126.9
5	4.439	211	162	4.038	173	125	2.096	9.275	2.737	2.739	169.6	121.8	1.640	18.299	1.908	9.423	177.8	132.8	173.7	127.3
6	4.038	173	125	3.907	162	114	1.997	10.659	2.800	2.511	169.8	121.7	1.653	17.218	2.023	7.419	170.3	122.6	170.0	122.2
7	3.907	162	114	3.703	148	98	1.678	16.456	2.808	2.484	168.5	121.7	1.554	19.474	2.092	6.588	168.0	119.7	168.3	120.7
8	3.703	148	98	3.875	160	111	1.712	15.739	2.735	2.730	168.9	121.1	1.571	18.921	2.059	6.620	167.1	114.9	168.0	118.0
9	3.875	160	111	3.526	132	86	2.038	10.118	2.704	2.850	170.7	120.9	1.735	15.250	2.078	6.655	169.1	118.6	169.9	119.8
10	3.526	132	86	4.183	186	136	2.007	10.530	2.682	2.931	170.0	120.6	1.685	15.789	2.008	6.844	163.3	110.8	166.6	115.7
11	4.183	186	136	3.611	139	91	1.981	10.923	2.733	2.724	170.2	120.3	1.664	17.192	2.019	7.567	172.6	124.2	171.4	122.3
12	3.611	139	91	3.678	144	96	1.934	11.605	2.927	2.122	169.4	122.8	1.700	15.668	2.233	5.177	165.4	114.3	167.4	118.5
13	3.678	144	96	4.345	205	154	2.119	9.122	2.835	2.393	172.0	121.8	1.698	15.779	2.031	6.820	166.1	113.8	169.1	117.8
14	4.345	205	154	3.504	132	85	2.045	10.160	2.761	2.666	173.1	122.5	1.687	17.188	2.027	7.845	178.3	130.2	175.7	126.4
15	3.504	132	85	3.939	165	116	1.904	12.126	2.653	3.052	169.9	120.8	1.669	16.283	2.042	6.571	164.7	111.4	167.3	116.1
16	3.939	165	116	4.276	196	146	2.102	9.251	2.808	2.470	170.4	121.1	1.669	16.750	1.982	7.665	169.3	119.6	169.8	120.3
17	4.276	196	146	4.338	202	153	2.068	9.715	3.212	1.373	170.8	117.9	1.616	18.724	2.108	6.827	176.0	126.9	173.4	122.4
18	4.338	202	153	4.497	217	171	1.994	10.832	3.096	1.628	171.8	119.0	1.570	20.160	2.015	7.947	177.8	129.9	174.8	124.5
19	4.497	217	171	4.076	177	130	2.073	9.617	2.789	2.583	170.2	123.4	1.622	18.928	1.918	9.569	179.4	136.6	174.8	130.0
20	4.076	177	130	3.896	159	113	2.380	6.247	3.110	1.645	169.2	122.6	1.817	13.780	2.182	6.058	171.0	124.8	170.1	123.7
21	3.896	159	113	4.293	196	151	2.159	8.438	2.991	1.933	168.3	122.2	1.695	15.859	2.077	6.699	166.2	119.3	167.2	120.8
22	4.293	196	151	3.681	142	98	2.097	9.240	2.812	2.509	169.0	123.8	1.694	16.619	2.027	7.873	173.9	130.8	171.5	127.3
23	3.681	142	98	4.336	200	155	2.091	9.305	2.799	2.552	168.9	123.7	1.687	15.762	2.013	7.107	163.4	115.8	166.1	119.7
24	4.336	200	155	3.574	137	91	1.958	11.312	2.756	2.718	170.8	124.1	1.643	17.955	2.012	8.102	175.2	131.8	173.0	127.9
25	3.574	137	91	4.411	208	161	1.986	10.914	2.714	2.869	171.3	123.5	1.648	16.799	1.978	7.322	164.9	113.7	168.1	118.6
Targets							**2.025**	**10.319**			**170.9**	**122.3**	**2.025**	**10.319**			**170.9**	**122.3**	**170.9**	**122.3**
Mean							**2.005**	**10.822**	**2.776**	**2.829**	**170.4**	**121.7**	**1.655**	**17.296**	**2.011**	**7.651**	**170.8**	**122.2**	**170.5**	**121.7**
sd							**0.154**	**2.397**	**0.271**	**1.702**	**1.61**	**2.14**	**0.06**	**1.80**	**0.13**	**1.627**	**5.30**	**7.82**	**2.99**	**4.159**
CV%							**7.69**	**22.15**	**9.76**	**60.16**	**0.9**	**1.8**	**3.9**	**10.4**	**6.3**	**21.26**	**3.1**	**6.4**	**1.75**	**3.42**
Mean Difference							**-0.020**	**0.503**			**-0.467**	**-0.583**	**-0.370**	**6.977**			**-0.102**	**-0.091**	**-0.423**	**-0.557**

Appendix 14 : SIMTEQ - Replication No 1

Estimate bPL, bPH in a.X^b using consecutive pairs

Cotton 13 - ICCS E3

	Specimen 1			Specimen 2			Method 1 - Eqn (13)						Method 2 - Eqn (14)						Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	4.080	327	285	3.603	252	200	2.095	17.183	2.848	5.194	313.8	269.4	1.727	28.854	2.101	14.853	316.0	273.4	314.9	271.4
2	3.603	252	200	4.338	385	351	2.283	13.504	3.030	4.114	320.0	274.6	1.780	25.730	2.150	12.714	303.6	250.4	311.8	262.5
3	4.338	385	351	3.627	259	207	2.216	14.906	2.952	4.616	321.7	276.4	1.747	29.659	2.103	16.046	334.2	296.0	328.0	286.2
4	3.627	259	207	4.559	426	410	2.175	15.705	2.988	4.407	320.5	277.3	1.705	28.777	2.082	14.165	306.1	253.8	313.3	265.6
5	4.559	426	410	4.364	385	351	2.307	12.871	3.541	1.903	315.0	257.9	1.677	33.447	2.212	14.298	342.1	307.0	328.5	282.5
6	4.364	385	351	3.897	293	248	2.412	11.014	3.069	3.818	312.1	268.8	1.795	27.370	2.104	15.818	329.4	292.3	320.7	280.5
7	3.897	293	248	3.535	239	188	2.095	16.967	2.848	5.154	309.5	267.2	1.758	26.823	2.153	13.258	306.8	262.4	308.2	264.8
8	3.535	239	188	4.410	387	353	2.180	15.227	2.850	5.141	312.8	267.3	1.735	26.718	2.055	14.029	296.1	242.3	304.5	254.8
9	4.410	387	353	4.324	372	339	2.005	19.754	2.052	16.792	318.2	288.9	1.583	36.963	1.600	32.860	331.6	302.0	324.9	295.5
10	4.324	372	339	4.567	411	393	1.823	25.795	2.702	6.485	322.8	274.7	1.507	40.953	1.837	23.027	330.8	293.8	326.8	284.3
11	4.567	411	393	3.760	277	225	2.029	18.847	2.868	5.039	314.1	268.7	1.631	34.535	1.996	18.960	331.1	301.6	322.6	285.2
12	3.760	277	225	4.031	321	278	2.118	16.752	3.039	4.018	315.8	271.6	1.723	28.281	2.183	12.496	308.2	257.5	312.0	264.5
13	4.031	321	278	3.959	307	261	2.457	10.447	3.477	2.184	315.0	270.6	1.850	24.356	2.388	9.965	316.4	272.9	315.7	271.8
14	3.959	307	261	4.156	345	302	2.402	11.275	3.003	4.192	314.8	269.3	1.808	25.525	2.096	14.585	312.8	266.8	313.8	268.0
15	4.156	345	302	4.263	367	329	2.414	11.081	3.344	2.579	314.6	265.8	1.774	27.551	2.213	12.911	322.4	277.5	318.5	271.7
16	4.263	367	329	3.514	241	186	2.175	15.660	2.950	4.566	319.5	272.6	1.753	28.902	2.140	14.769	328.2	287.0	323.8	279.8
17	3.514	241	186	4.050	329	282	2.191	15.361	2.929	4.688	320.1	271.8	1.786	25.530	2.172	12.134	303.8	246.5	311.9	259.2
18	4.050	329	282	3.791	278	223	2.548	9.318	3.551	1.964	318.7	269.7	1.916	22.564	2.474	8.853	321.2	273.4	319.9	271.6
19	3.791	278	223	4.248	360	317	2.273	13.449	3.092	3.618	314.0	263.2	1.761	26.589	2.160	12.533	305.5	250.4	309.8	256.8
20	4.248	360	317	4.177	340	297	3.411	2.593	3.889	1.144	293.2	250.9	2.247	13.956	2.517	8.316	314.5	272.5	303.9	261.7
21	4.177	340	297	3.774	274	221	2.125	16.304	2.910	4.635	310.1	261.8	1.707	29.611	2.080	15.173	315.7	271.4	312.9	266.6
22	3.774	274	221	4.394	383	345	2.202	14.703	2.929	4.519	311.5	262.1	1.717	28.031	2.052	14.491	302.8	249.0	307.1	255.5
23	4.394	383	345	3.890	290	237	2.286	12.986	3.086	3.579	309.0	258.2	1.738	29.244	2.109	15.217	325.3	283.0	317.2	270.6
24	3.890	290	237	3.637	252	195	2.087	17.024	2.898	4.620	307.3	256.9	1.741	27.225	2.161	12.590	304.4	251.7	305.8	254.3
25	3.637	252	195	4.080	327	285	2.269	13.455	3.305	2.732	312.7	267.0	1.802	24.605	2.358	9.290	299.1	244.0	305.9	255.5
Targets							**2.186**	**15.196**			**314.7**	**268.4**	**2.186**	**15.196**			**314.7**	**268.4**	**314.7**	**268.4**
Mean							**2.263**	**14.487**	**3.046**	**4.468**	**314.3**	**268.1**	**1.759**	**28.072**	**2.140**	**14.534**	**316.3**	**271.1**	**315.3**	**269.5**
sd							**0.287**	**4.251**	**0.348**	**2.857**	**6.04**	**7.81**	**0.13**	**5.02**	**0.18**	**4.906**	**12.66**	**20.09**	**7.56**	**11.399**
CV%							**12.69**	**29.34**	**11.41**	**63.94**	**1.9**	**2.9**	**7.4**	**17.9**	**8.6**	**33.75**	**4.0**	**7.4**	**2.40**	**4.23**
Mean Difference							**0.077**	**-0.709**			**-0.431**	**-0.291**	**-0.427**	**12.876**			**1.624**	**2.745**	**0.588**	**1.106**

Cotton 14 - ICCS H2

	Specimen 1			Specimen 2			Method 1 - Eqn (13)						Method 2 - Eqn (14)						Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	3.865	110	73	4.104	122	85	1.727	10.652	2.538	2.360	116.7	79.7	1.543	13.664	1.891	5.660	116.0	77.9	116.4	78.8
2	4.104	122	85	3.585	95	60	1.850	8.959	2.575	2.240	116.4	79.6	1.619	12.404	1.956	5.370	117.1	80.9	116.7	80.2
3	3.585	95	60	3.760	104	67	1.891	8.492	2.306	3.160	116.9	77.3	1.674	11.211	1.874	5.485	114.1	73.7	115.5	75.5
4	3.760	104	67	4.329	139	100	2.060	6.797	2.843	1.551	118.1	79.9	1.665	11.457	2.022	4.601	115.3	75.9	116.7	77.9
5	4.329	139	100	3.744	103	67	2.066	6.737	2.760	1.752	118.1	80.4	1.670	12.035	1.984	5.466	121.8	85.5	119.9	82.9
6	3.744	103	67	3.654	98	63	2.050	6.879	2.536	2.356	117.9	79.2	1.740	10.350	1.985	4.876	115.6	76.4	116.7	77.8
7	3.654	98	63	3.951	115	77	2.051	6.873	2.572	2.247	117.9	79.5	1.715	10.615	1.968	4.920	114.4	75.3	116.2	77.4
8	3.951	115	77	4.037	120	83	1.974	7.634	3.481	0.645	117.8	80.4	1.639	12.092	2.390	2.885	117.4	79.3	117.6	79.8
9	4.037	120	83	4.470	148	110	2.058	6.787	2.764	1.753	117.7	80.9	1.623	12.459	1.916	5.723	118.2	81.5	118.0	81.2
10	4.470	148	110	4.248	132	94	2.241	5.165	3.079	1.095	115.4	78.1	1.672	12.099	2.027	5.289	122.9	87.8	119.1	83.0
11	4.248	132	94	4.588	152	114	1.829	9.363	2.502	2.522	118.3	80.9	1.513	14.791	1.762	7.350	120.5	84.6	119.4	82.7
12	4.588	152	114	4.395	142	102	1.587	13.550	2.594	2.193	122.3	79.9	1.424	17.371	1.782	7.554	125.0	89.3	123.7	84.6
13	4.395	142	102	4.440	145	107	2.080	6.528	4.761	0.089	116.7	65.1	1.601	13.262	2.938	1.316	122.1	77.3	119.4	71.2
14	4.440	145	107	3.566	93	59	2.026	7.071	2.716	1.866	117.4	80.6	1.662	12.167	1.976	5.623	121.9	87.1	119.6	83.8
15	3.566	93	59	3.641	97	62	2.031	7.028	2.392	2.817	117.4	77.7	1.757	9.958	1.942	4.992	113.8	73.7	115.6	75.7
16	3.641	97	62	3.813	105	68	1.716	10.565	2.000	4.678	114.0	74.8	1.585	12.514	1.710	6.800	112.6	72.8	113.3	73.8
17	3.813	105	68	3.950	117	77	3.054	1.761	3.508	0.621	121.6	80.5	2.197	5.550	2.469	2.496	116.7	76.5	119.1	78.5
18	3.950	117	77	4.073	123	84	1.631	12.447	2.838	1.561	119.4	79.8	1.502	14.867	2.029	4.743	119.2	79.0	119.3	79.4
19	4.073	123	84	4.185	128	90	1.477	15.458	2.557	2.315	119.7	80.2	1.430	16.507	1.858	6.183	119.8	81.2	119.8	80.7
20	4.185	128	90	4.544	151	113	2.005	7.257	2.761	1.728	116.9	79.5	1.584	13.267	1.883	6.074	119.2	82.7	118.0	81.1
21	4.544	151	113	3.665	99	63	1.962	7.742	2.716	1.852	117.6	79.9	1.616	13.078	1.943	5.966	122.9	88.2	120.2	84.1
22	3.665	99	63	4.249	132	92	1.945	7.916	2.560	2.266	117.4	78.8	1.636	11.821	1.912	5.258	114.3	74.5	115.8	76.7
23	4.249	132	92	4.000	117	78	2.002	7.288	2.740	1.747	117.0	78.0	1.625	12.576	1.944	5.529	119.7	81.8	118.3	79.9
24	4.000	117	78	4.720	161	123	1.930	8.058	2.753	1.715	117.0	78.0	1.558	13.487	1.883	5.731	117.0	78.0	117.0	78.0
25	4.720	161	123	3.865	110	73	1.906	8.365	2.610	2.142	117.4	79.9	1.561	14.278	1.841	7.070	124.3	90.7	120.9	85.3
Targets							**1.976**	**7.587**			**117.4**	**79.7**	**1.976**	**7.587**			**117.4**	**79.7**	**117.4**	**79.7**
Mean							**1.966**	**8.215**	**2.779**	**1.971**	**117.7**	**78.7**	**1.633**	**12.555**	**1.995**	**5.318**	**118.5**	**80.5**	**118.1**	**79.6**
sd							**0.287**	**2.747**	**0.520**	**0.890**	**1.70**	**3.15**	**0.14**	**2.28**	**0.26**	**1.414**	**3.56**	**5.33**	**2.15**	**3.494**
CV%							**14.62**	**33.44**	**18.70**	**45.17**	**1.4**	**4.0**	**8.8**	**18.1**	**12.8**	**26.59**	**3.0**	**6.6**	**1.82**	**4.39**
Mean Difference							**-0.010**	**0.628**			**0.324**	**-0.966**	**-0.343**	**4.968**			**1.071**	**0.764**	**0.739**	**-0.064**

Appendix 14 : SIMTEQ - Replication No 1

Estimate bPL, bPH in a.X^b using consecutive pairs

Cotton 15 - ICCS C33

	Specimen 1			Specimen 2			Method 1 - Eqn (13)						Method 2 - Eqn (14)						Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	3.887	229	176	4.164	271	217	2.446	8.270	3.042	2.830	245.6	192.0	1.837	18.921	2.130	9.767	241.4	187.1	243.5	189.6
2	4.164	271	217	4.588	333	293	2.126	13.057	3.099	2.611	248.8	191.6	1.626	26.639	2.031	11.968	253.9	200.0	251.3	195.8
3	4.588	333	293	3.772	220	162	2.116	13.250	3.026	2.918	249.1	193.5	1.662	26.480	2.067	12.567	265.2	220.7	257.1	207.1
4	3.772	220	162	4.061	256	199	2.053	14.407	2.787	4.005	248.2	190.8	1.690	23.347	2.038	10.826	243.0	182.6	245.6	186.7
5	4.061	256	199	4.302	288	236	2.040	14.672	2.954	3.170	248.3	190.4	1.629	26.103	2.027	11.616	249.8	193.0	249.0	191.7
6	4.302	288	236	3.956	241	183	2.128	12.911	3.038	2.805	246.7	189.2	1.675	25.013	2.088	11.217	255.0	202.7	250.8	196.0
7	3.956	241	183	3.672	204	152	2.231	11.205	2.484	6.005	247.0	188.1	1.795	20.399	1.919	13.072	245.8	186.9	246.4	187.5
8	3.672	204	152	3.526	189	136	1.890	17.458	2.753	4.236	239.9	192.4	1.691	22.621	2.149	9.290	235.8	182.7	237.8	187.6
9	3.526	189	136	4.270	286	238	2.164	12.356	2.924	3.414	248.3	196.6	1.745	20.953	2.122	9.379	235.5	177.7	241.9	187.2
10	4.270	286	238	4.411	303	258	1.779	21.633	2.485	6.452	254.6	202.3	1.507	32.108	1.773	18.148	259.2	212.0	256.9	207.2
11	4.411	303	258	3.925	235	181	2.176	11.991	3.035	2.854	244.9	191.7	1.687	24.796	2.073	11.897	256.9	210.7	250.9	201.2
12	3.925	235	181	3.733	215	159	1.780	20.611	2.593	5.220	243.1	190.1	1.592	26.653	1.969	12.263	242.2	187.9	242.7	189.0
13	3.733	215	159	4.100	260	208	2.030	14.828	2.869	3.629	247.3	193.8	1.680	23.519	2.082	10.244	241.4	183.6	244.4	188.7
14	4.100	260	208	4.378	300	254	2.181	11.980	3.045	2.832	246.4	193.0	1.673	24.529	2.052	11.503	249.5	197.7	247.9	195.4
15	4.378	300	254	4.558	334	289	2.661	5.894	3.200	2.252	235.9	190.3	1.814	20.588	2.047	12.364	254.7	211.2	245.3	200.7
16	4.558	334	289	3.821	227	172	2.190	12.058	2.942	3.331	250.9	196.8	1.689	25.777	2.022	13.453	267.9	221.9	259.4	209.4
17	3.821	227	172	4.160	268	217	1.954	16.528	2.736	4.395	248.2	194.9	1.632	25.448	1.986	12.009	244.6	188.4	246.4	191.7
18	4.160	268	217	3.827	228	173	1.936	16.966	2.714	4.531	248.4	195.1	1.624	26.457	1.974	13.013	251.5	200.9	250.0	198.0
19	3.827	228	173	4.233	282	230	2.108	13.463	2.825	3.906	250.3	196.1	1.688	23.660	2.017	11.548	245.7	189.2	248.0	192.6
20	4.233	282	230	4.024	251	197	2.305	10.134	3.066	2.759	247.6	193.4	1.748	22.641	2.102	11.085	255.5	204.2	251.5	198.8
21	4.024	251	197	3.988	244	190	3.121	3.253	3.993	0.759	246.4	192.4	2.180	12.070	2.709	4.532	247.7	193.8	247.1	193.1
22	3.988	244	190	4.393	303	256	2.237	11.051	3.080	2.682	245.7	191.8	1.706	23.034	2.087	10.596	245.3	191.2	245.5	191.5
23	4.393	303	256	3.574	197	141	2.087	13.811	2.891	3.550	249.2	195.2	1.692	24.783	2.071	11.935	258.6	210.8	253.9	203.0
24	3.574	197	141	4.139	267	218	2.073	14.060	2.970	3.208	248.8	197.0	1.713	22.220	2.163	8.966	238.9	179.9	243.9	188.5
25	4.139	267	218	3.887	229	176	2.447	8.263	3.411	1.716	245.6	194.1	1.840	19.555	2.340	7.849	250.8	201.3	248.2	197.7
Targets							**2.147**	**12.639**			**247.9**	**194.0**	**2.147**	**12.639**			**247.9**	**194.0**	**247.9**	**194.0**
Mean							**2.170**	**12.964**	**2.959**	**3.443**	**247.0**	**193.3**	**1.713**	**23.532**	**2.082**	**11.244**	**249.4**	**196.7**	**248.4**	**195.2**
sd							**0.281**	**4.080**	**0.303**	**1.247**	**3.59**	**3.07**	**0.12**	**3.70**	**0.16**	**2.400**	**8.48**	**12.66**	**4.98**	**6.686**
CV%							**12.92**	**31.47**	**10.24**	**36.23**	**1.5**	**1.6**	**7.2**	**15.7**	**7.9**	**21.34**	**3.4**	**6.4**	**2.00**	**3.43**
Mean Difference							**0.023**	**0.325**			**-0.888**	**-0.690**	**-0.434**	**10.893**			**1.526**	**2.724**	**0.495**	**1.195**

Cotton 16 - ICCS F2

	Specimen 1			Specimen 2			Method 1 - Eqn (13)						Method 2 - Eqn (14)						Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	3.994	88	62	4.039	88	62	0.000	88.000	0.000	62.000	88.0	62.0	1.000	22.032	1.000	15.523	88.1	62.1	88.1	62.0
2	4.039	88	62	3.657	73	48	1.882	6.357	2.578	1.696	86.4	60.5	1.626	9.021	1.955	4.046	86.6	60.8	86.5	60.7
3	3.657	73	48	3.503	69	45	1.306	13.431	1.495	6.906	82.1	54.9	1.440	11.280	1.519	6.700	83.1	55.0	82.6	54.9
4	3.503	69	45	4.150	94	68	1.822	7.027	2.433	2.131	87.9	62.2	1.612	9.149	1.892	4.202	85.5	57.8	86.7	60.0
5	4.150	94	68	4.506	112	86	2.131	4.530	2.856	1.167	86.9	61.2	1.637	9.154	1.935	4.329	88.5	63.3	87.7	62.3
6	4.506	112	86	4.533	113	86	1.493	11.825	0.000	86.000	93.7	86.0	1.392	13.785	1.000	19.085	94.9	76.3	94.3	81.2
7	4.533	113	86	3.782	78	53	2.047	5.124	2.673	1.514	87.5	61.6	1.638	9.500	1.905	4.829	92.1	67.8	89.8	64.7
8	3.782	78	53	3.806	79	54	2.006	5.413	2.943	1.057	87.3	62.5	1.697	8.165	2.172	2.948	85.8	59.9	86.5	61.2
9	3.806	79	54	3.628	73	47	1.645	8.759	2.892	1.131	85.7	62.3	1.557	9.858	2.178	2.940	85.4	60.2	85.5	61.3
10	3.628	73	47	4.397	106	79	1.941	5.989	2.702	1.446	88.2	61.2	1.624	9.000	1.965	3.736	85.6	56.9	86.9	59.1
11	4.397	106	79	4.225	98	71	1.966	5.764	2.675	1.503	88.0	61.3	1.578	10.242	1.860	5.026	91.3	66.3	89.7	63.8
12	4.225	98	71	4.159	93	66	3.326	0.813	4.638	0.089	81.7	55.1	2.211	4.051	3.024	0.910	86.8	60.2	84.3	57.6
13	4.159	93	66	3.682	74	48	1.879	6.392	2.618	1.582	86.4	59.6	1.616	9.298	1.952	4.089	87.3	61.2	86.9	60.4
14	3.682	74	48	4.273	97	71	1.819	6.914	2.630	1.556	86.0	59.7	1.581	9.424	1.940	3.830	84.3	56.4	85.2	58.0
15	4.273	97	71	3.980	87	59	1.532	10.486	2.607	1.611	87.7	59.8	1.450	11.814	1.881	4.621	88.1	62.7	87.9	61.2
16	3.980	87	59	4.502	109	83	1.829	6.951	2.770	1.286	87.8	59.8	1.540	10.365	1.923	4.143	87.7	59.6	87.7	59.7
17	4.502	109	83	4.354	101	75	2.271	3.576	3.020	0.883	83.3	58.1	1.670	8.832	1.978	4.233	89.5	65.7	86.4	61.9
18	4.354	101	75	3.988	86	59	1.833	6.813	2.736	1.341	86.5	59.5	1.552	10.295	1.928	4.401	88.6	63.7	87.5	61.6
19	3.988	86	59	3.866	80	55	2.318	3.483	2.250	2.624	86.6	59.4	1.805	7.085	1.774	5.073	86.5	59.3	86.5	59.4
20	3.866	80	55	3.727	75	49	1.765	7.358	3.159	0.768	85.0	61.3	1.592	9.296	2.298	2.459	84.5	59.5	84.7	60.4
21	3.727	75	49	4.403	105	77	2.018	5.272	2.711	1.384	86.5	59.4	1.645	8.616	1.951	3.761	84.3	56.3	85.4	57.8
22	4.403	105	77	4.397	104	77	7.656	0.001	0.000	77.000	50.4	77.0	5.697	0.023	1.000	17.489	60.8	70.0	55.6	73.5
23	4.397	104	77	4.310	101	74	1.465	11.883	1.989	4.049	90.5	63.8	1.400	13.080	1.579	7.429	91.1	66.3	90.8	65.0
24	4.310	101	74	3.996	87	59	1.968	5.695	2.988	0.940	87.2	59.2	1.607	9.658	2.054	3.681	89.6	63.5	88.4	61.3
25	3.996	87	59	3.994	88	62	***	***	***	***	***	***	***	***	***	***	***	***		
Targets							**1.939**	**5.930**			**87.2**	**60.7**	**1.939**	**5.930**			**87.2**	**60.7**	**87.2**	**60.7**
Mean							**2.080**	**9.911**	**2.390**	**10.903**	**85.3**	**62.0**	**1.757**	**9.709**	**1.861**	**5.812**	**86.5**	**62.1**	**85.9**	**62.0**
sd							**1.308**	**16.931**	**1.065**	**25.039**	**7.83**	**6.50**	**0.86**	**3.77**	**0.43**	**4.666**	**6.15**	**4.88**	**6.87**	**5.345**
CV%							**62.90**	**170.84**	**44.58**	**229.66**	**9.2**	**10.5**	**49.1**	**38.8**	**23.2**	**80.28**	**7.1**	**7.9**	**8.00**	**8.62**
Mean Difference							**0.141**	**3.981**			**-1.894**	**1.267**	**-0.182**	**3.779**			**-0.712**	**1.408**	**-1.339**	**1.281**

Appendix 14 : SIMTEQ - Replication No 1

Estimate bPL, bPH in a.X^b using consecutive pairs

Cotton 17 - ICCS A16

		Specimen 1			Specimen 2				Method 1 - Eqn (13)						Method 2 - Eqn (14)				Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	3.532	108	71	4.361	162	124	1.924	9.529	2.646	2.519	137.2	98.7	1.631	13.788	1.960	5.987	132.3	90.6	134.7	94.6
2	4.361	162	124	4.033	138	99	2.050	7.914	2.879	1.788	135.7	96.7	1.630	14.685	1.986	6.653	140.7	104.4	138.2	100.6
3	4.033	138	99	4.183	147	109	1.725	12.443	2.628	2.535	136.1	96.9	1.522	16.524	1.896	7.036	136.3	97.5	136.2	97.2
4	4.183	147	109	3.953	132	93	1.902	9.671	2.805	1.969	135.0	96.1	1.596	14.974	1.993	6.292	136.9	99.7	135.9	97.9
5	3.953	132	93	4.383	161	123	1.924	9.375	2.709	2.247	135.0	96.0	1.587	14.895	1.916	6.675	134.5	95.1	134.8	95.6
6	4.383	161	123	4.205	150	112	1.706	12.944	2.258	4.372	137.8	100.1	1.488	17.864	1.692	10.091	140.5	105.4	139.1	102.7
7	4.205	150	112	3.754	116	81	2.264	5.803	2.855	1.856	134.0	97.1	1.768	11.844	2.051	5.890	137.3	101.1	135.7	99.1
8	3.754	116	81	3.866	125	87	2.524	4.119	2.413	3.328	136.2	94.4	1.940	8.919	1.884	6.701	131.2	91.3	133.7	92.9
9	3.866	125	87	4.554	174	139	2.020	8.142	2.861	1.816	133.9	95.9	1.617	14.029	1.976	6.011	132.1	93.0	133.0	94.5
10	4.554	174	139	3.602	109	73	1.994	8.469	2.745	2.165	134.3	97.3	1.634	14.608	1.967	7.051	140.8	107.7	137.5	102.5
11	3.602	109	73	4.469	169	131	2.034	8.042	2.712	2.259	134.9	97.0	1.659	13.010	1.964	5.896	129.7	89.7	132.3	93.3
12	4.469	169	131	4.224	150	111	2.119	7.087	2.943	1.599	133.7	94.6	1.628	14.763	1.969	6.877	141.1	105.3	137.4	99.9
13	4.224	150	111	4.092	141	102	1.953	8.992	2.669	2.371	134.9	96.0	1.600	14.967	1.900	7.182	137.5	100.1	136.2	98.0
14	4.092	141	102	3.507	103	68	2.034	8.024	2.626	2.520	134.6	96.1	1.710	12.672	1.999	6.100	135.6	97.5	135.1	96.8
15	3.507	103	68	4.101	142	103	2.052	7.843	2.654	2.434	134.9	96.4	1.717	11.944	2.012	5.447	129.1	88.6	132.0	92.5
16	4.101	142	103	3.528	105	69	2.007	8.365	2.663	2.402	135.1	96.4	1.694	13.005	2.013	6.015	136.1	98.0	135.6	97.2
17	3.528	105	69	3.809	123	85	2.063	7.790	2.719	2.238	136.1	97.1	1.755	11.484	2.099	4.891	130.9	89.8	133.5	93.4
18	3.809	123	85	4.436	167	128	2.007	8.392	2.687	2.336	135.7	96.9	1.629	13.925	1.922	6.506	133.2	93.4	134.4	95.2
19	4.436	167	128	4.353	161	122	1.937	9.319	2.542	2.902	136.7	98.4	1.554	16.493	1.783	8.984	142.2	106.4	139.4	102.4
20	4.353	161	122	3.754	120	83	1.987	8.664	2.604	2.649	136.1	97.9	1.634	14.557	1.903	7.425	140.2	103.9	138.2	100.9
21	3.754	120	83	3.727	117	80	3.482	1.199	5.063	0.102	149.6	114.4	2.537	4.186	3.871	0.496	140.9	106.1	145.3	110.2
22	3.727	117	80	3.937	130	92	1.927	9.275	2.556	2.772	134.1	95.8	1.654	13.286	1.949	6.161	131.5	91.8	132.8	93.8
23	3.937	130	92	4.123	144	105	2.214	6.254	2.861	1.823	134.7	96.3	1.733	12.102	2.034	5.663	133.6	95.0	134.2	95.7
24	4.123	144	105	4.275	153	115	1.672	13.476	2.509	3.002	136.9	97.3	1.489	17.464	1.818	7.995	137.7	99.4	137.3	98.4
25	4.275	153	115	3.532	108	71	1.825	10.797	2.527	2.928	135.5	97.2	1.598	15.007	1.914	7.129	137.6	101.3	136.5	99.2
Targets							**2.000**	**8.433**			**134.9**	**96.8**	**2.000**	**8.433**			**134.9**	**96.8**	**134.9**	**96.8**
Mean							**2.054**	**8.477**	**2.765**	**2.357**	**135.9**	**97.5**	**1.680**	**13.640**	**2.019**	**6.446**	**136.0**	**98.1**	**136.0**	**97.9**
sd							**0.346**	**2.572**	**0.503**	**0.748**	**3.04**	**3.72**	**0.20**	**2.79**	**0.40**	**1.659**	**4.00**	**6.02**	**2.84**	**4.008**
CV%							**16.84**	**30.34**	**18.19**	**31.73**	**2.2**	**3.8**	**12.0**	**20.5**	**19.6**	**25.73**	**2.9**	**6.1**	**2.09**	**4.09**
Mean Difference							**0.054**	**0.044**			**1.040**	**0.684**	**-0.320**	**5.207**			**1.082**	**1.283**	**1.067**	**1.070**

Cotton 18 - ICCS I25

		Specimen 1			Specimen 2				Method 1 - Eqn (13)						Method 2 - Eqn (14)				Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	4.136	163	125	4.564	202	168	2.178	7.406	3.001	1.764	151.6	113.1	1.650	15.654	1.995	7.363	154.2	116.9	152.9	115.0
2	4.564	202	168	4.143	163	128	2.216	6.990	2.809	2.363	150.8	116.0	1.664	16.147	1.907	9.285	162.2	130.6	156.5	123.3
3	4.143	163	128	3.839	139	103	2.087	8.390	2.848	2.236	151.5	115.8	1.687	14.807	2.042	7.026	153.6	119.1	152.5	117.5
4	3.839	139	103	4.466	194	158	2.202	7.187	2.826	2.300	152.2	115.7	1.701	14.099	1.978	7.202	149.1	111.7	150.6	113.7
5	4.466	194	158	4.266	177	140	2.004	9.673	2.643	3.028	155.6	118.1	1.582	18.168	1.832	10.187	163.0	129.1	159.3	123.6
6	4.266	177	140	3.514	120	81	2.004	9.673	2.821	2.338	155.6	116.7	1.676	15.550	2.070	6.951	158.9	122.5	157.2	119.6
7	3.514	120	81	3.724	134	96	1.903	10.979	2.930	2.039	153.5	118.4	1.692	14.310	2.247	4.806	149.4	108.4	151.5	113.4
8	3.724	134	96	3.695	131	92	2.916	2.897	5.482	0.071	165.1	142.1	2.195	7.478	4.383	0.302	156.8	131.4	160.9	136.7
9	3.695	131	92	3.971	151	113	1.974	9.930	2.856	2.201	153.2	115.4	1.674	14.694	2.107	5.856	149.6	108.7	151.4	112.1
10	3.971	151	113	4.092	159	123	1.714	14.202	2.816	2.327	152.9	115.4	1.530	18.311	2.011	7.062	152.7	114.7	152.8	115.0
11	4.092	159	123	4.396	189	152	2.411	5.319	2.953	1.917	150.5	115.0	1.765	13.215	2.006	7.283	152.7	117.5	151.6	116.2
12	4.396	189	152	4.536	199	166	1.647	16.493	2.815	2.354	161.8	116.5	1.446	22.211	1.878	9.421	164.9	127.3	163.3	121.9
13	4.536	199	166	3.550	122	83	1.995	9.742	2.826	2.312	154.8	116.3	1.642	16.615	2.019	7.838	161.9	128.8	158.4	122.6
14	3.550	122	83	4.275	178	141	2.032	9.304	2.850	2.245	155.5	116.7	1.683	14.462	2.076	5.982	149.2	106.4	152.3	111.5
15	4.275	178	141	3.960	151	113	2.146	7.874	2.888	2.122	154.3	116.4	1.685	15.399	2.018	7.521	159.1	123.3	156.7	119.8
16	3.960	151	113	3.893	145	107	2.383	5.685	3.207	1.370	154.7	116.7	1.835	12.088	2.263	5.018	153.8	115.6	154.3	116.2
17	3.893	145	107	3.639	125	88	2.199	7.304	2.896	2.089	153.9	115.8	1.793	12.671	2.158	5.694	152.2	113.5	153.1	114.6
18	3.639	125	88	3.594	126	86	-0.637	284.769	1.839	8.181	117.7	104.7	0.838	42.328	1.663	10.272	135.3	103.0	126.5	103.9
19	3.594	126	86	3.786	138	100	1.742	13.565	2.889	2.137	151.9	117.2	1.604	16.198	2.188	5.235	149.6	108.7	150.7	113.0
20	3.786	138	100	4.013	156	119	2.105	8.375	2.986	1.877	154.9	117.8	1.716	14.055	2.151	5.705	151.6	112.5	153.3	115.2
21	4.013	156	119	3.834	143	104	1.903	11.090	2.946	1.984	155.0	117.9	1.624	16.328	2.119	6.261	155.2	118.2	155.1	118.0
22	3.834	143	104	4.142	166	129	1.932	10.662	2.790	2.446	155.2	117.1	1.624	16.132	2.014	6.944	153.2	113.3	154.2	115.2
23	4.142	166	129	4.323	182	147	2.150	7.820	3.052	1.687	154.0	116.0	1.662	15.642	2.057	6.936	156.7	120.1	155.4	118.1
24	4.323	182	147	3.527	123	84	1.925	10.872	2.749	2.627	156.8	118.8	1.636	16.599	2.020	7.644	160.3	125.7	158.5	122.2
25	3.527	123	84	4.136	163	125	1.766	13.280	2.493	3.627	153.7	115.0	1.587	16.641	1.920	7.474	150.2	107.0	151.9	111.0
Targets							**2.009**	**9.526**			**154.3**	**116.5**	**2.084**	**10.732**			**154.3**	**116.5**	**154.3**	**116.5**
Mean							**1.956**	**20.379**	**2.928**	**2.386**	**153.1**	**117.0**	**1.648**	**16.392**	**2.125**	**6.851**	**154.2**	**117.4**	**153.7**	**117.2**
sd							**0.600**	**55.162**	**0.585**	**1.353**	**8.02**	**5.86**	**0.21**	**6.00**	**0.49**	**2.003**	**6.17**	**8.27**	**6.57**	**6.095**
CV%							**30.68**	**270.68**	**19.99**	**56.72**	**5.2**	**5.0**	**13.0**	**36.6**	**23.0**	**29.23**	**4.0**	**7.0**	**4.27**	**5.20**
Mean Difference							**-0.053**	**10.853**			**-1.235**	**0.479**	**-0.436**	**5.660**			**-0.080**	**0.862**	**-0.601**	**0.730**

Appendix 14 : SIMTEQ - Replication No 1

Estimate bPL, bPH in a.X^b using consecutive pairs

Cotton 19 - ICCS G12

	Specimen 1			Specimen 2			Method 1 - Eqn (13)						Method 2 - Eqn (14)						Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	4.201	446	438	3.837	365	333	2.208	18.755	3.019	5.748	400.2	377.7	1.733	37.084	2.121	20.870	409.6	394.7	404.9	386.2
2	3.837	365	333	4.053	410	393	2.119	21.136	3.019	5.746	398.7	377.7	1.711	36.559	2.150	18.486	392.0	364.2	395.4	371.0
3	4.053	410	393	3.607	321	275	2.099	21.742	3.062	5.413	398.8	377.5	1.731	36.380	2.226	17.429	400.8	381.7	399.8	379.6
4	3.607	321	275	3.801	355	319	1.926	27.146	2.839	7.207	391.8	368.9	1.682	37.099	2.153	17.382	382.0	343.6	386.9	356.2
5	3.801	355	319	3.774	345	316	4.130	1.430	1.366	51.498	438.5	342.1	2.976	6.677	1.434	47.006	413.4	343.3	426.0	342.7
6	3.774	345	316	3.517	300	252	1.977	24.968	3.201	4.498	387.0	380.6	1.720	35.110	2.407	12.913	381.3	363.4	384.1	372.0
7	3.517	300	252	3.551	310	261	3.428	4.027	3.669	2.500	466.5	404.2	2.638	10.871	2.824	7.228	421.4	362.5	443.9	383.3
8	3.551	310	261	3.638	324	280	1.814	31.114	2.886	6.735	384.8	368.2	1.657	37.994	2.232	15.423	377.7	340.6	381.3	354.4
9	3.638	324	280	4.123	424	413	2.150	20.163	3.107	5.066	397.3	376.0	1.742	34.175	2.229	15.734	382.2	345.9	389.8	361.0
10	4.123	424	413	4.014	399	384	2.272	16.961	2.722	8.734	395.8	380.4	1.748	35.638	1.953	25.985	402.2	389.3	399.0	384.8
11	4.014	399	384	3.917	374	353	2.640	10.180	3.434	3.249	395.3	379.4	1.946	26.700	2.377	14.106	396.3	380.8	395.8	380.1
12	3.917	374	353	4.082	417	402	2.633	10.276	3.145	4.823	395.3	377.1	1.932	26.763	2.195	17.623	389.5	369.7	392.4	373.4
13	4.082	417	402	3.620	325	279	2.074	22.556	3.039	5.596	399.8	377.9	1.715	37.387	2.204	18.119	402.7	384.4	401.3	381.2
14	3.620	325	279	4.114	424	410	2.079	22.408	3.010	5.810	400.0	376.8	1.713	35.869	2.180	16.888	385.7	346.9	392.8	361.9
15	4.114	424	410	3.512	300	252	2.186	19.268	3.075	5.296	398.8	376.1	1.776	34.385	2.244	17.158	403.4	385.0	401.1	380.6
16	3.512	300	252	3.833	357	328	1.983	24.845	3.005	5.782	388.4	372.7	1.717	34.728	2.268	14.598	375.2	338.6	381.8	355.7
17	3.833	357	328	3.715	342	299	1.368	56.782	2.951	6.222	378.4	371.9	1.437	51.769	2.185	17.396	379.5	360.0	379.0	365.9
18	3.715	342	299	4.067	408	389	1.950	26.451	2.908	6.578	395.0	370.7	1.651	39.159	2.113	18.686	386.4	349.5	390.7	360.1
19	4.067	408	389	3.910	377	350	2.007	24.423	2.683	9.017	394.7	372.1	1.654	40.071	1.960	24.881	397.0	376.6	395.8	374.3
20	3.910	377	350	3.748	343	305	2.242	17.732	3.264	4.083	396.8	377.1	1.796	32.569	2.346	14.287	392.8	369.2	394.8	373.1
21	3.748	343	305	3.878	369	342	2.145	20.163	3.361	3.595	394.3	379.4	1.755	33.743	2.414	12.555	384.4	356.8	389.4	368.1
22	3.878	369	342	3.616	318	276	2.124	20.735	3.062	5.392	394.0	375.9	1.763	33.821	2.265	15.884	389.7	366.8	391.8	371.4
23	3.616	318	276	3.908	373	348	2.055	22.663	2.986	5.944	391.3	373.1	1.727	34.534	2.212	16.064	378.6	345.1	384.9	359.1
24	3.908	373	348	4.233	457	458	2.540	11.697	3.435	3.222	395.7	377.0	1.867	29.276	2.326	14.603	389.6	367.4	392.7	372.2
25	4.233	457	458	4.201	446	438	3.211	4.444	5.884	0.094	381.0	328.1	2.141	20.800	4.036	1.354	404.8	364.4	392.9	346.3
Targets							**2.164**	**19.773**			**397.1**	**376.9**	**2.164**	**19.773**			**397.1**	**376.9**	**397.1**	**376.9**
Mean							**2.294**	**20.083**	**3.125**	**7.114**	**398.3**	**373.5**	**1.837**	**32.766**	**2.282**	**17.306**	**392.7**	**363.6**	**395.2**	**368.2**
sd							**0.567**	**10.761**	**0.705**	**9.434**	**17.75**	**13.47**	**0.32**	**9.12**	**0.43**	**7.835**	**12.13**	**16.54**	**13.67**	**11.515**
CV%							**24.73**	**53.59**	**22.57**	**132.61**	**4.5**	**3.6**	**17.5**	**27.8**	**18.9**	**45.27**	**3.1**	**4.5**	**3.46**	**3.13**
Mean Difference							**0.130**	**0.310**			**1.233**	**-3.359**	**-0.327**	**12.993**			**-4.385**	**-13.287**	**-1.889**	**-8.695**

Cotton 20 - ICCS D3

	Specimen 1			Specimen 2			Method 1 - Eqn (13)						Method 2 - Eqn (14)						Mean 1&2	
Spec.	**W1**	**PL1**	**PH1**	**W2**	**PL2**	**PH2**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**bPL**	**aPL**	**bPH**	**aPH**	**PL4**	**PH4**	**PL4**	**PH4**
1	4.463	286	235	4.112	241	187	2.090	12.556	2.789	3.625	227.5	173.2	1.629	25.028	1.917	13.354	239.3	190.5	233.4	181.9
2	4.112	241	187	3.926	220	166	1.975	14.772	2.580	4.870	228.3	174.2	1.635	23.893	1.901	12.731	230.4	177.5	229.3	175.8
3	3.926	220	166	3.782	204	150	2.019	13.901	2.710	4.076	228.4	174.6	1.689	21.846	2.021	10.471	227.0	172.4	227.7	173.5
4	3.782	204	150	4.328	266	215	1.969	14.864	2.671	4.295	227.8	174.2	1.626	23.447	1.934	11.446	223.5	167.2	225.6	170.7
5	4.328	266	215	4.185	247	197	2.210	10.438	2.608	4.713	223.5	175.1	1.681	22.667	1.845	14.397	233.0	185.9	228.3	180.5
6	4.185	247	197	3.517	177	124	1.915	15.920	2.661	4.368	226.5	174.7	1.646	23.393	1.999	11.263	229.3	180.0	227.9	177.3
7	3.517	177	124	3.682	192	139	1.768	19.165	2.482	5.471	222.2	170.7	1.634	22.668	1.993	10.117	218.5	160.3	220.4	165.5
8	3.682	192	139	3.890	214	161	1.977	14.591	2.678	4.238	226.1	173.5	1.686	21.325	2.029	9.874	220.7	164.4	223.4	168.9
9	3.890	214	161	3.667	191	137	1.926	15.637	2.734	3.924	225.8	173.8	1.665	22.289	2.062	9.775	224.2	170.5	225.0	172.1
10	3.667	191	137	4.089	242	186	2.174	11.327	2.809	3.561	230.7	174.9	1.753	19.584	2.065	9.364	222.4	163.9	226.6	169.4
11	4.089	242	186	4.237	256	202	1.580	26.169	2.318	7.113	233.8	176.8	1.462	30.900	1.745	15.930	234.4	179.0	234.1	177.9
12	4.237	256	202	4.593	304	258	2.128	11.849	3.030	2.542	226.5	169.7	1.620	24.691	1.987	11.462	233.2	180.2	229.9	174.9
13	4.593	304	258	3.822	205	154	2.143	11.580	2.807	3.573	226.0	175.0	1.667	23.951	1.952	13.151	241.4	197.0	233.7	186.0
14	3.822	205	154	4.495	293	240	2.202	10.708	2.735	3.935	226.6	174.4	1.700	20.984	1.933	11.531	221.5	168.2	224.1	171.3
15	4.495	293	240	3.973	227	171	2.066	13.135	2.744	3.884	230.2	174.3	1.630	25.290	1.913	13.529	242.3	192.0	236.3	183.1
16	3.973	227	171	4.385	270	219	1.755	20.164	2.503	5.413	229.8	174.0	1.522	27.794	1.821	13.867	229.4	173.2	229.6	173.6
17	4.385	270	219	3.602	184	132	1.948	15.172	2.571	4.896	225.7	172.9	1.631	24.221	1.908	13.052	232.4	183.8	229.1	178.3
18	3.602	184	132	3.713	192	139	1.401	30.569	1.701	14.933	213.1	157.8	1.467	28.091	1.592	17.162	214.6	156.0	213.9	156.9
19	3.713	192	139	3.517	177	123	1.501	26.820	2.256	7.209	214.7	164.5	1.515	26.326	1.867	12.009	215.0	159.8	214.8	162.1
20	3.517	177	123	3.955	220	165	1.853	17.215	2.503	5.283	224.7	169.8	1.643	22.417	1.956	10.513	218.7	158.2	221.7	164.0
21	3.955	220	165	3.837	209	155	1.699	21.276	2.071	9.570	224.3	168.9	1.547	26.233	1.702	15.900	223.9	168.2	224.1	168.6
22	3.837	209	155	4.352	267	218	1.945	15.293	2.708	4.063	226.6	173.5	1.609	24.019	1.939	11.425	223.5	168.0	225.0	170.8
23	4.352	267	218	4.509	291	244	2.436	7.420	3.189	2.002	217.4	166.6	1.733	20.869	2.054	10.626	230.7	183.3	224.0	175.0
24	4.509	291	244	4.119	238	185	2.224	10.218	3.062	2.425	223.0	169.1	1.675	23.349	2.035	11.394	238.1	191.3	230.6	180.2
25	4.119	238	185	4.463	286	235	2.292	9.284	2.984	2.708	222.6	169.5	1.706	21.259	2.005	10.822	226.4	174.5	224.5	172.0
Targets							**2.032**	**13.608**			**227.6**	**173.9**	**2.032**	**13.608**			**227.6**	**173.9**	**227.6**	**173.9**
Mean							**1.968**	**15.602**	**2.636**	**4.908**	**225.3**	**171.8**	**1.631**	**23.861**	**1.927**	**12.207**	**227.8**	**174.6**	**226.3**	**172.9**
sd							**0.250**	**5.722**	**0.316**	**2.653**	**4.71**	**4.19**	**0.08**	**2.58**	**0.12**	**2.066**	**7.83**	**11.49**	**5.22**	**6.601**
CV%							**12.69**	**36.67**	**11.99**	**54.06**	**2.1**	**2.4**	**4.7**	**10.8**	**6.0**	**16.93**	**3.4**	**6.6**	**2.31**	**3.82**
Mean Difference							**-0.064**	**1.994**			**-2.318**	**-2.080**	**-0.401**	**10.253**			**0.151**	**0.704**	**-1.316**	**-1.006**