

IIC/CI STARFISH DATABASE EXPANSION 1987

SINGLE JERSEY : RINGSPUN YARNS

Part 1 : Background and Interlaboratory Comparison

AUTHOR: JILL C. STEVENS

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FINISHED FABRIC

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1. BACKGROUND

In 1984 an agreement was made between the International Institute for Cotton (IIC) and Cotton Incorporated (CI) which provided for the transfer of a copy of the STARFISH computer model to CI for use by them in servicing cotton knitgoods manufacturers in the USA and Canada. At that time the computer programme was not available in a form which would run on industry-standard computers. Therefore copies of the programme coding (Tektronix BASIC) and the STARFISH coefficients for version 84:2.11 were given to CI to enable a direct translation to be made which would run on their IBM pc computer. Programme revisions/updates were supplied as they became available.

In 1986 CI took the decision to increase their involvement with the ongoing development of STARFISH by generating new data on US yarns and processing routes. The main objectives behind this decision were to:

1. develop in-house experience and a database of non-proprietary information relating specifically to US yarns and processing conditions, the details of which could be used directly by CI in their discussions with individual mills.
2. provide sufficient data for the development of STARFISH equations which directly model the behaviour of fabrics produced from US yarns and processed through common US dyeing and finishing procedures.
3. provide new data which could be used to expand the overall scope and relevance of the existing STARFISH database and consequently increase the applicability of the STARFISH model.

As a result of this decision a joint development project was agreed between CI and IIC which had as its long term objective the generation of new data for plain jersey, rib and interlock fabrics produced from both ring and rotor spun 100% cotton yarns.

For the first phase of this project it was decided to concentrate on plain jersey fabrics produced from ring spun yarns. The reasons for this were mainly that:

1. CI had a suitable range of knitting machines located in their technical centre which could be used for the production of the fabric,
2. the existing STARFISH database related almost exclusively to ring spun yarns, therefore full integration of the new data should be possible,
3. plain jersey was probably the fabric of most immediate relevance to the US knitting industry.

Consequently the arrangements for this first phase of the project were agreed, as follows:

1. CI would produce a range of single jersey fabrics on their in-house knitting facilities from locally purchased ring spun yarns. This would consist of 16 qualities (4 yarns x 4 stitch lengths) knitted on 3 gauges of machine.
2. The grey fabrics would be processed in full-scale through one or more processing routes, relevant to 'typical' US finishing conditions, to be nominated by CI.
3. Samples of yarn, grey and finished fabric would be sent to IIC for full testing and evaluation.
4. IIC would analyse the data and,
 - a) produce provisional STARFISH equations specific to the processing routes represented,
 - b) provide CI with an updated computer model which would run on IBM pc and compatible computers, containing the new equations.
 - c) evaluate the new data in terms of the existing database and if possible integrate the two data sets in order to allow new STARFISH equations to be developed which would have increased scope and be relevant to both the US and European industries.
 - d) Supply CI with a copy of STARFISH developed on the integrated database when available.

In addition it was decided that CI would also test the yarn, grey and finished fabric samples, following standard IIC STARFISH testing procedures, in order to provide data for a comprehensive interlaboratory comparison/correlation study. Measurements to be included were yarn count (Ne) and turns per inch from package; yarn count (Ne), stitch length (in), courses and wales per inch, weight (oz/yd²) on before wash samples; yarn count (Ne), stitch length (in) courses and wales per inch, weight (oz/yd²), length and width shrinkage on samples after relaxation to the reference state. Copies of the test data obtained by each laboratory would be exchanged, but IIC undertook to carry out the analysis for the interlaboratory comparison.

By the end of 1986 the fabrics had been knitted by CI and samples of yarn and grey fabric had been received by IIC.

Towards the end of 1986, however, the Textile Research Centre (TRC) of Texas Tech University, expressed an interest in becoming actively involved in the development of STARFISH and the expansion of the STARFISH database to include rotor spun yarns. Consequently a meeting was arranged between CI, TRC and IIC in order to discuss the possibilities. As a result, TRC offered to produce a range of rotor spun yarns of equivalent counts to those already used by CI for the production of the ring spun fabrics. The single jersey database expansion project already agreed by IIC and CI was thus expanded to include a duplicate set of fabrics produced from rotor spun yarns produced by TRC. CI undertook to knit the fabrics (to the same 16 qualities) and process them down the same finishing lines as would be used for the ring spun series. IIC undertook to carry out all the relevant yarn and fabric testing, data analysis and model building. In

addition it was also decided that samples of yarn, grey and finished fabric would also be tested by TRC and CI in order to provide data for a comprehensive 3-way interlaboratory comparison study.

Copies of the test data obtained by each laboratory would be exchanged but the detailed analysis of the data would be carried out by IIC. A copy of the STARFISH model suitable for running on IBM pc and compatible computers and containing the equations relating to the fabrics produced from rotor yarns would also be provided by IIC to both TRC and CI. In addition, and in order to provide background research data on the influence of fibre properties, yarn twist and spinning systems on fabric properties for the ongoing development of STARFISH, TRC decided to carry out supplementary small scale spinning and knitting trials in their research facility in Lubbock, Texas.

A press release announcing the collaboration between TRC, CI and IIC, approved by all parties was published in Cotton Technology (1/87) in February 1987.

By mid 1987 the rotor yarns had been spun by TRC and shipped to CI who had produced an equivalent range of fabrics (16 qualities) as had been previously produced from the ring yarns.

During a visit to CI in July 1987 details of the finishing plans for the two fabric sets were obtained. These included three wet processing routes combining different preparation, dyeing and drying machines and four finishing options; pure finish and resin finish followed by both calendering and compacting. For the ring spun series route 1 had already been fully completed and routes 2 and 3 had been processed to the drying stage. Final finishing operations were scheduled for later in the year. Processing of the rotor yarn fabrics was also scheduled to begin during the latter part of 1987, and plans were in hand to enable the same processing routes to be followed at the same finishing plants.

Copies of the IIC test results on the yarn and grey fabric samples had previously been sent to CI who had prepared a preliminary comparison with their test data. This showed that on average the two laboratories were in reasonable agreement. Copies of CI's grey test data were obtained for full analysis by IIC.

At this time also a new version of STARFISH (version 87:4.22) had been prepared by IIC. This version designed and written specifically for IBM pc and compatible computers provided information on an expanded database of yarn and fabric qualities and included additional runtime features over version 84:2.11. Copies of this programme and the accompanying user-manual were given to both CI and TRC for evaluation.

By the end of 1987 finished fabric samples from all three processing routes for the ring spun series had been received at IIC from CI. In addition test data for stitch length, courses, wales and weight both before wash and after relaxation to the reference state had also been received from CI, although data for yarn count and fabric shrinkage were not sent. Test data obtained by the IIC laboratory for all the fabrics became available early in 1988.

This report, the first in a series, sets out the knitting and finishing details for the ring spun fabrics as reported by CI and covers the first part of the data analysis; namely the interlaboratory comparison between the two laboratories, for the ring yarn fabrics.

2. KNITTING

Knitting was carried out by CI at their technical centre in Raleigh. Four ring spun yarns were purchased locally in nominal counts Ne 1/6, 1/14, 1/18, and 1/30. Each yarn was knitted to four different stitch lengths on 3 gauges of single jersey knitting machine.

1. Monarch PFW, 8 gauge, 26" diameter, 648 needles; yarn Ne 1/6.
2. Monarch RX-WS/Y, 16 gauge, 30" diameter, 1500 needles; yarn Ne 14, Ne 18
3. Monarch XL-JS, 28 gauge, 26" diameter, 2256 needles; yarn Ne 1/30

The four stitch lengths for each yarn count were determined by first finding the tightest possible construction, slackening off to a "commercial" tightness and then incrementing in 5% intervals for the remaining 3 qualities. All the fabrics were produced using positive feed.

Sufficient fabric was produced for each quality to enable 3 preparation/dyeing routes to be followed in full scale.

3. FINISHING

A flow chart summarising the finishing plan is included as Table 1, following the main text.

Three preparation, dyeing and drying route combinations were selected by CI to represent, at the extremes, traditional and state of the art US finishing practice. The middle route was supposed to represent conditions in mills who were in the transition phase of modernisation and therefore had a combination of traditional and modern processing equipment.

Route 1: Winch beck preparation followed by winch beck dyeing (direct dye, nominal concentration 1.5% blue), Fabcon crack pad extraction and Tubetex suction drum dryer.

Route 2: Argathen continuous preparation, followed by winch beck drying (reactive dye, nominal concentration 2.5% yellow), Fabcon crack pad extraction and Santex relax drying.

Route 3: Argathen continuous preparation, followed by (Rotostream?) overflow jet dyeing (reactive dye, nominal concentration 3.25% pink), Heliot wet spread extraction and Santex relax drying.

All 16 qualities were processed through each of the 3 routes. The fabrics for each route were dyed to a different shade to aid sample identification.

After drying each piece was split in half, one half retained and the other resin finished. Both halves were then split in half again and one half from each process (no resin, resin) was fully finished through a calender while the remainder went through a compactor.

The processing for route 1 was carried out at the commission finishing plant of E.J. Snyder. Nominal resin concentration used in this plant was 8%.

Routes 2 and 3 were followed at the Burlington Wake finishing plant. Nominal resin concentration used in this plant was 6%.

4. SAMPLING AND TESTING

4.1. Yarn

The yarns used were sampled at the end of knitting. 10 small cones were received by IIC and standard testing was carried out. CI measured the yarns for count (Ne) and turns per inch.

4.2. Grey Fabric

Samples of grey fabric were removed after knitting and sent to IIC for standard testing and evaluation both as received (before wash) and after relaxation to the reference state.

Samples of grey fabric were tested by CI for yarn count (Ne), stitch length (in) courses/wales per inch and weight (oz/yd²) before wash, and for yarn count (Ne) stitch length (in), courses/wales per inch, weight (oz/yd²), length and width shrinkage after relaxation to the reference state.

4.3. Finished Fabric

Finished fabric samples were taken for each route after each of the four final finishing operations. Nominally 64 samples for each route.

NB: For route 2, sets 1 and 2 only 15 samples were available due to an error in cutting prior to the final finishing operations. Consequently, data for sample D-3/Set 1 and D-4/Set 2 are not available.

Full standard IIC testing was carried out on all samples both as received (before wash) and after relaxation to the reference state.

Test data for stitch length (in), courses/wales per inch, and weight (oz/yd²) obtained from fabrics before wash and after relaxation to the reference state were received from CI.

Copies of the full IIC laboratory test reports for yarn, grey and finished fabric are included in Appendix 6.

5. PRESENTATION OF RESULTS

For the purposes of this analysis the data reported by CI in imperial units have been converted to metric units for direct comparison with the IIC laboratory results.

Standard IIC laboratory results for stitch length in mm and courses/wales per 3cm have been converted to units per cm.

The analysis of the data has been approached in two ways:

1. internal self-consistency
2. interlaboratory comparison

The internal self-consistency cross checks for CI are included for grey fabric only as results for yarn count (Ne) and shrinkage for the finished samples have not been made available.

A summary of the results obtained from an analysis of the IIC data is included as Table 2 at the end of the main text. Tables giving the individual results for each sample/process route are included in Appendix 1. The results obtained from the CI data for grey fabric are also included in this appendix.

The data from both CI and IIC included in the interlaboratory comparison are tabulated, together with figures illustrating the correspondence between laboratories, and arranged in separate appendices at the end of this report. Within each appendix the data is arranged in sets according to the particular final finishing process followed, e.g. Set 1: no resin, calender; Set 2: no resin, compact; Set 3: resin, calender; Set 4: resin, compact. Before wash and reference state data are tabulated and plotted separately.

Appendix 2 - Grey Fabric

Appendix 3 - Finished Fabric: Route 1, Sets 1-4

Appendix 4 - Finished Fabric: Route 2, Sets 1-4

Appendix 5 - Finished Fabric: Route 3, Sets 1-4

Tables comparing the data obtained on the yarn measured from the package (Table 3), and yarn extracted from grey fabric (Tables 4 and 5) are included at the end of the main text. Summaries of the results obtained from the statistical analysis are included in Tables 6-9 for the before wash measurements and in Tables 10-13 for the reference state measurements.

6. INTERNAL SELF-CONSISTENCY

For knitted fabrics there are certain relationships between the fabric test results which can be used on a routine basis to ensure that the results obtained from these tests are mutually compatible, e.g.

1. Mass per unit area = Tex.L.C.W.F

where, L is the stitch length in cm
C is the number of courses per cm
W is the number of wales per cm
F is a factor which is 0.1 for single jersey
0.2 for interlock and rib

2. Reference stitches per unit length = $\frac{100.B}{(100-S)}$

where, B is the number of stitches per unit length before relaxation
S is the corresponding measured shrinkage %

In the IIC laboratory these relationships are used on a routine basis to monitor the internal consistency of the test data by the calculation of internal consistency factors, i.e.

C1 = $\frac{\text{calculated mass/unit area}}{\text{measured mass/unit area}}$ (before wash)

C2 = $\frac{\text{calculated mass/unit area}}{\text{measured mass/unit area}}$ (after relaxation)

C3 = $\frac{\text{calculated course density}}{\text{measured course density}}$ (after relaxation)

C4 = $\frac{\text{calculated wale density}}{\text{measured wale density}}$ (after relaxation)

The acceptance range applied for each of the four consistency factors is 0.95 to 1.05. If the required acceptance range is not achieved then additional testing must be performed. Usually a complete series of retests will bring the particular C Factor within range. From time to time, however, this will not be the case and the data has to be accepted. This, notwithstanding, over a particular set of samples or over a period of time the mean values for the C Factors should not deviate significantly from 1.00. If this should happen, an investigation to discover the source of the discrepancy, e.g. testing procedure, measuring technique, technician training, should be investigated.

6.1. Discussion

The internal consistency factors calculated from the results obtained from the CI laboratory for grey fabric indicate that on average, quality control in the laboratory is good.

The ratio of courses is excellent 1.00 ± 0.02 , and is very good for wales 0.98 ± 0.02 . These are comparable with the results obtained by the IIC laboratory for the equivalent samples, i.e. courses 1.00 ± 0.01 , wales 0.98 ± 0.02 .

On average also, the ratios for fabric weight before and after relaxation are not significantly different from, 1.00, e.g. for weight BW 0.97 ± 0.05 and for weight AW 0.98 ± 0.04 . However, in both cases there are 4 samples with individual results outside the acceptance range 0.95 - 1.05, and this is reflected in the rather high standard deviations. Comparative results obtained by the IIC laboratory are 1.01 ± 0.03 and 1.02 ± 0.01 respectively.

The results obtained by the IIC laboratory for all samples tested, averaged over sets are given in Table 2. The overall mean results for the four C factors are:-

	<u>Mean</u>	<u>sd</u>
C1	1.01	0.02
C2	1.02	0.02
C3	1.01	0.01
C4	1.00	0.02

Of the 206 samples tested four samples (1.94%) gave out of range results for C1, and 2 samples (0.97%) gave out of range results for C2. All samples were within range for C3 and C4.

7. INTERLABORATORY COMPARISON

7.1. Yarn Taken from the Package

The results obtained by the two laboratories are compared in Table 3.

For yarn count (tex) the mean % difference between laboratories is -0.1%; % differences between individual counts do not exceed $\pm 2\%$ (Ne 1/14 = -2.0%; Ne 1/18 = 1.9%).

For turns per unit length, CI records on average 3.1% fewer turns per unit length than IIC, and consequently the calculated twist factor is also lower.

7.2. Yarn Extracted from Fabric

The agreement between laboratories for yarn count measured on yarns extracted from the grey fabric is variable.

In the before wash results, % differences vary between 0.4% for the Ne 1/18 and -4.7% for the Ne 1/30. On average CI is recording lower values for yarn tex than IIC by -2.1%.

In the reference state results, % differences vary between -1.5% for Ne 1/30 and -6.6% for Ne 1/6. On average, CI is recording consistently lower values for yarn tex than IIC by -3.8%.

An examination of the plots (appendix 2 Figure A2-1, A2-9) comparing the results obtained by CI and IIC for yarn tex suggest however that the source of the disagreement may be due either to variability in the measurements and/or a real difference between samples, rather than a fundamental difference between labs. This is particularly apparent in the Ne 1/6 yarn. However this question cannot be adequately resolved with only one set of data available for comparison.

7.3. Fabric As Received (Before Wash)

It is not unusual when measurements of before wash fabric dimensions are compared to find differences between laboratories. This can usually be explained by partial relaxation of the fabric during transportation and can therefore normally be ignored. However, this should not be the case for comparisons of yarn count and/or stitch length.

In tables 6-9 the results of the statistical comparison between laboratories for all fabrics/routes for stitch length, courses, wales and weight for before wash fabric are summarised. Although for certain sets statistically significant differences are calculated, in the majority of cases the differences are probably not of practical significance and where fairly large differences occur the discrepancies can usually be explained in terms of partial relaxation of the fabric during transportation. That is IIC is recording greater values than CI.

For all the samples/sets compared the overall mean results obtained were:-

	<u>% Difference</u>	<u>sd</u>	<u>r²</u>
Stitch length	- 0.2	0.3	0.999
Courses/cm	- 0.8	1.5	0.995
Wales/cm	- 1.5	0.9	0.996
Weight gsm	- 0.7	2.4	0.992

(A negative value means CI less than IIC)

Only in the case of measured wales do the results indicate an overall statistically significant difference. For all measurements however, the results obtained by the two laboratories are very highly correlated.

7.4. Fabric Reference State

In terms of the STARFISH model, agreement between laboratories in the determination of reference state dimensions is the most important as it is on these data that the STARFISH model is built.

In tables 10-13 the statistical comparisons of reference state measurements obtained by the two laboratories are summarised.

From these results there is an indication that CI is consistently measuring fewer courses in the reference state than IIC. However the maximum mean % difference between individual sets is only -2.1% and is therefore just within the limits of practical testing accuracy. (Accuracy limits for courses and wales in the IIC laboratory are currently set at $\pm 2\%$) and can therefore probably be ignored.

For all the sample/sets compared the overall mean results obtained were:-

	<u>% Difference</u>	<u>sd</u>	<u>r²</u>
Stitch length	0.1	0.5	0.999
Courses/cm	-1.3	1.0	0.999
Wales/cm	-0.3	1.0	0.998
Weight	-0.5	1.0	0.997

(A negative value means CI less than IIC).

For all data sets correlation between the results obtained by both laboratories is excellent with r^2 values better than 0.99.

8. CONCLUSIONS

1. The internal consistency factors calculated for grey fabric from the CI measurements indicate that on average quality control in the CI laboratory is good. Courses and wales are in excellent agreement and the ratios for weight are not significantly different from 1.00. However the results for weight also indicate that there is a potential problem with lack of consistency or variation in the measurements, e.g. for both C1 (weight BW), and C2 (weight after relaxation) 4 samples out of 16 (25%) give results which fall outside the range 0.95 - 1.05. The reason for this may be due to variation in the measurement of yarn count on yarn extracted from the fabric.
2. The internal consistency factors calculated for all the samples measured by IIC confirm that quality control in the IIC laboratory is generally very good. Of 206 individual samples measured, 4 samples (1.94%) give results for C1 (weight BW) outside the acceptance range 0.95-1.05, and 2 samples (0.97%) give results outside the acceptance range for C2 (weight after relaxation). Overall, mean values are not significantly different from 1.00.
3. Overall, correlation between the two laboratories is excellent; on average r^2 values are better than 0.992.

For before wash measurements, the r^2 values for individual sets range between 0.971 and 1.00. Mean % differences do not, on average, indicate a practical difference in results between laboratories. The difference recorded in wales is probably explained by partial

relaxation of the samples during transportation, i.e. IIC records higher values than CI.

For after wash (reference state) measurements, the r^2 values for individual sets range between 0.991 and 1.00. The mean % differences recorded between laboratories for courses, although indicating that a small consistent difference may exist are probably not large enough to be considered to be of practical importance.

4. Disagreement in the measurement of certain properties on certain individual samples may be due to a lack of self-consistency and/or variation in the results obtained by the CI laboratory. This cannot be properly identified/explained however without data for yarn count and shrinkage for the finished fabrics.
5. On the evidence of the grey fabric results only there is an indication that the measurement of yarn count on yarn extracted from the fabric may not be in good agreement. This is most noticeable in the reference state results. As this is one of the main parameters required for the development of STARFISH equations, further comparison studies should be carried out in order to resolve this question.
6. Overall, on the evidence of the data examined in this comparison, it appears that the mean results obtained by the CI laboratory are in good agreement with those obtained on similar samples by the IIC laboratory and that the two sets of data are highly correlated.

IIC/CI STARFISH DATABASE EXPANSION 1987

SINGLE JERSEY : RING SPUN YARNS

FINISHING PLAN FLOWCHART

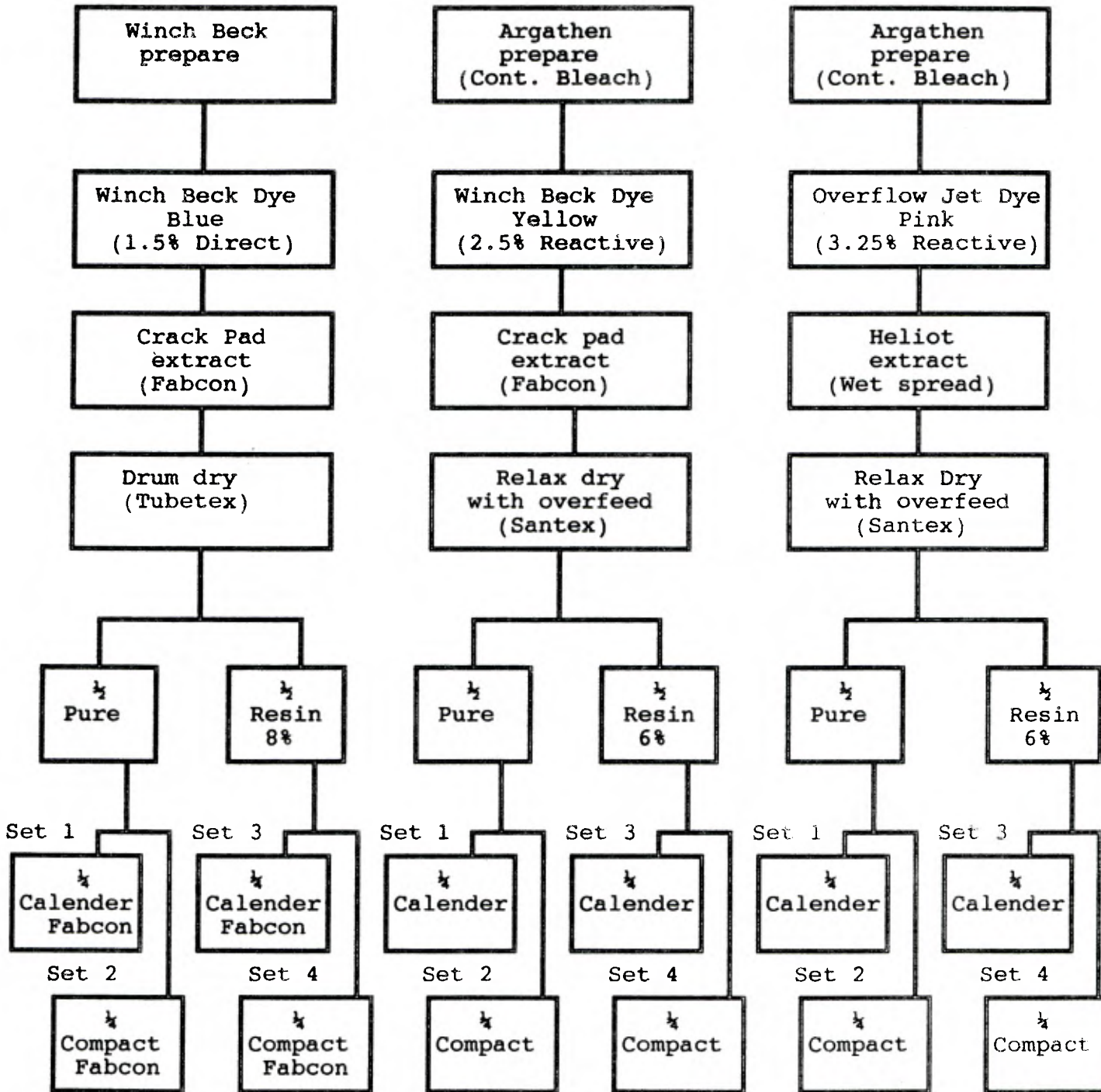
ROUTE 1

EJ Snyder

ROUTE 2

Burlington Wake Finishing Plant

ROUTE 3



IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

SUMMARY

Process	N	C1	sd	C2	sd	C3	sd	C4	sd
Grey	16	1.01	0.03	1.02	0.01	1	0.01	0.98	0.02
Finish 1: Winch Beck prepare + dye									
Set1 NRCAL	16	0.99	0.02	1.02	0.02	1.01	0.01	0.99	0.02
Set2 NRCOM	16	1	0.02	0.99	0.01	1.01	0.01	1	0.02
Set3 RCAL	16	1.02	0.03	1.03	0	1.01	0.01	1.01	0.02
Set4 RCOM	16	1.01	0.02	1.01	0.02	1.01	0.01	1.02	0.02
Finish 2: Argathen prepare, Winch Beck dye									
Set1 NRCAL	15	1	0.03	1.01	0.03	1.01	0.02	1	0.02
Set2 NRCOM	15	1.01	0.02	1.02	0.02	1	0.01	0.99	0.02
Set3 RCAL	16	1	0.02	1	0.02	1.02	0.02	1	0.02
Set4 RCOM	16	1.02	0.02	1.03	0.02	1.01	0.01	1	0.02
Finish 3: Argathen prepare, Overflow Jet dye									
Set1 NRCAL	16	1.01	0.02	1.02	0.02	1.01	0.02	1	0.02
Set2 NRCOM	16	1.02	0.02	1.02	0.02	1.01	0.02	0.99	0.02
Set3 RCAL	16	1.03	0.03	1.03	0.02	1	0.02	0.99	0.02
Set4 RCOM	16	1	0.03	1.02	0.02	1	0.02	0.99	0.01
mean		1.01	0.02	1.02	0.02	1.01	0.01	1	0.02
sd		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0

=====
N = Number of samples in each set

C1 = Calculated Weight BW / Measured Weight BW

C2 = Calculated Weight AW / Measured Weight AW

C3 = Calculated Courses AW / Measured Courses AW

C4 = Calculated Wales AW / Measured Wales AW

Total Number of Samples = 206

Samples Out of Range

C1 = 4 (1.94%)

C2 = 2 (0.97%)

C3 = 0

C4 = 0

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY: STARFISH DATABASE EXPANSION
RING SPUN YARNS

IIC/CI Test Data from Cone : Metric Units

Nominal Yarn	IIC Tex	CI Tex	Diff	ZDiff	IIC Tpm	CI Tpm	Diff	ZDiff	IIC aTex	CI aTex	Diff	ZDiff
Ne 1/6	98.2	97.4	-0.8	-0.8	323	322	-1	-0.2	32	31.8	-0.2	-0.5
Ne 1/14	42.7	41.9	-0.9	-2	576	552	-24	-4.2	37.6	35.7	-1.9	-5.1
Ne 1/18	33.5	34.1	0.6	1.9	580	562	-18	-3.1	33.6	32.8	-0.7	-2.2
Ne 1/30	20.6	20.7	0.1	0.3	823	781	-42	-5	37.4	35.5	-1.8	-4.9
mean			-0.2	-0.1			-21	-3.1			-1.2	-3.2
sd			0.7	1.7			17	2.1			0.9	2.2

Difference = (CI-IIC); ZDifference (CI-IIC)/IIC*100

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY: STARFISH DATABASE EXPANSION
RING SPUN YARNS: GREY FABRIC AS RECEIVED

IIC/CI Test Data : Tex

Nominal Yarn	IIC Tex	sd	CI Tex	sd	Diff (CI-IIC)	%Diff (BaseIIC)
Ne 1/6	97.94	2.72	95.39	4.34	-2.55	-2.6
Ne 1/14	42.56	0.48	41.93	2.51	-0.63	-1.48
Ne 1/18	33.23	0.33	33.37	0.37	0.14	0.42
Ne 1/30	20.67	0.09	19.7	0.11	-0.97	-4.69
	<u>mean</u>	<u>0.9</u>		<u>1.83</u>	<u>-1</u>	<u>-2.09</u>
	<u>sd</u>	<u>1.22</u>		<u>1.99</u>	<u>1.13</u>	<u>2.14</u>

TABLE 5

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY: STARFISH DATABASE EXPANSION
RING SPUN YARNS: GREY FABRIC REFERENCE STATE

IIC/CI Test Data : Tex

Nominal Yarn	IIC Tex	sd	CI Tex	sd	Diff (CI-IIC)	%Diff (BaseIIC)
Ne 1/6	95.89	2.71	89.6	3.96	-6.29	-6.56
Ne 1/14	42.02	0.29	40.03	1.71	-1.99	-4.74
Ne 1/16	32.46	0.17	31.7	1.3	-0.76	-2.34
Ne 1/30	20.39	0.09	20.09	0.44	-0.3	-1.47
	<u>mean</u>	<u>0.81</u>		<u>1.85</u>	<u>-2.33</u>	<u>-3.78</u>
	<u>sd</u>	<u>1.27</u>		<u>1.5</u>	<u>2.73</u>	<u>2.31</u>

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSTION
RING SPUN YARNS : FABRICS AS RECEIVED

IIC/CI Test Data : Summary Statistics : Stitch Length cm

Process	N	Mean Difference	%Mean Difference	sd of Differences	t	r sq
Grey	16	0.002	0.5	0.0074	1.18	0.999
Finish 1: Winch Beck prepare + dye						
Set 1 NR CAL	16	-0.003	-0.6	0.0047	2.24 *	0.999
Set 2 NR COM	16	1.0E-3	0.2	0.0023	1.34	1
Set 3 R CAL	16	1.0E-3	0.1	0.0049	0.49	0.999
Set 4 R COM	16	-0.002	-0.4	0.0055	1.34	0.999
Finish 2: Argathen prepare, Winch Beck dye						
Set 1 NR CAL	15	0	-0.1	0.0046	0.35	0.999
Set 2 NR COM	15	-0.003	-0.5	0.0026	3.86 **	1
Set 3 R CAL	16	-0.003	-0.6	0.0033	3.45 **	1
Set 4 R COM	16	0	-0.1	0.0035	0.41	1
Finish 3: Argathen prepare, Overflow Jet Dye						
Set 1 NR CAL	16	0	-0.1	0.0028	0.65	1
Set 2 NR COM	16	-0.002	-0.4	0.0054	1.54	0.999
Set 3 R CAL	16	-0.003	-0.6	0.0032	3.31 **	1
Set 4 R COM	16	-0.002	-0.5	0.0025	3.52 **	1
mean		-1.0E-3	-0.2	0.0041	1.82	0.999
sd		0.002	0.3	0.0015	1.3	0

STUDENTS t STATISTIC $[X_i - Y_i] = 0$

* = Significant at 95% level

** = Significant at 99% level

*** = Significant at 99.9% level

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FABRICS AS RECEIVED

IIC/CI Test Data : Summary Statistics : Courses/cm

Process	N	Mean Difference	%Mean Difference	sd of Differences	t	r sq
Grey	16	0.09	0.9	0.282	1.55	0.996
Finish 1: Winch Beck prepare + dye						
Set 1 NR CAL	16	-0.2	-1.9	0.612	1.25	0.974
Set 2 NR COM	16	0	0	0.188	0.06	0.998
Set 3 R CAL	16	-0.15	-1.5	0.199	2.93 *	0.997
Set 4 R COM	16	0.12	1.1	0.167	2.71 *	0.998
Finish 2: Argathen prepare, Winch Beck dye						
Set 1 NR CAL	15	-0.31	-3.1	0.235	4.93 ***	0.996
Set 2 NR COM	15	0.12	1.1	0.151	2.94 *	0.998
Set 3 R CAL	16	0.1	1	0.352	1.11	0.991
Set 4 R COM	16	-0.21	-2	0.259	3.16 **	0.995
Finish 3: Argathen prepare, Overflow Jet Dye						
Set 1 NR CAL	16	-0.24	-2.3	0.182	5.05 ***	0.998
Set 2 NR COM	16	0	0	0.206	0	0.998
Set 3 R CAL	16	-0.27	-2.6	0.244	4.23 ***	0.999
Set 4 R COM	16	-0.09	-0.9	0.237	1.5	0.997
mean		-0.08	-0.8	0.255	2.42	0.995
sd		0.16	1.5	0.12	1.68	0.007

STUDENTS t STATISTIC $[X_i - Y_i] = 0$

* = Significant at 95% level

** = Significant at 99% level

*** = Significant at 99.9% level

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FABRICS AS RECEIVED

IIC/CI Test Data : Summary Statistics : Wales/cm

Process	N	Mean Difference	%Mean Difference	sd of Differences	t	r sq
Grey	16	-0.19	-2.2	0.188	3.82 **	0.995
Finish 1: Winch Beck prepare + dye						
Set 1 NR CAL	16	-0.13	-1.4	0.17	2.89 *	0.997
Set 2 NR COM	16	-0.1	-1.2	0.083	4.85 ***	0.999
Set 3 R CAL	16	-0.09	-0.9	0.27	1.23	0.994
Set 4 R COM	16	-0.02	-0.3	0.11	0.87	0.999
Finish 2: Argathen prepare, Winch Beck dye						
Set 1 NR CAL	15	-0.19	-2.2	0.206	3.5 **	0.995
Set 2 NR COM	15	-0.09	-1	0.167	1.96	0.997
Set 3 R CAL	16	-0.16	-1.7	0.305	2.02	0.995
Set 4 R COM	16	-0.11	-1.2	0.154	2.79 *	0.998
Finish 3: Argathen prepare, Overflow Jet Dye						
Set 1 NR CAL	16	-0.36	-3.9	0.287	4.88 ***	0.995
Set 2 NR COM	16	-0.15	-1.7	0.228	2.61 *	0.995
Set 3 R CAL	16	-0.12	-1.3	0.317	1.48	0.99
Set 4 R COM	16	-0.05	-0.5	0.189	1.03	0.997
mean		-0.14	-1.5	0.206	2.61	0.996
sd		0.08	0.9	0.073	1.36	0.002

STUDENTS t STATISTIC $[X_i - Y_i] = 0$

* = Significant at 95% level

** = Significant at 99% level

*** = Significant at 99.9% level

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION

RING SPUN YARNS : FABRICS AS RECEIVED

IIC/CI Test Data : Summary Statistics : Measured Weight gsm

Process	N	Mean Difference	%Mean Difference	sd of Differences	t	r sq
Grey	16	2.26	1.3	6.305	1.39	0.985
Finish 1: Winch Beck prepare + dye						
Set 1 NR CAL	16	-1.11	-0.7	2.703	1.59	0.994
Set 2 NR COM	16	0.39	0.2	1.667	0.91	0.999
Set 3 R CAL	16	-0.26	-0.2	1.807	0.55	0.998
Set 4 R COM	16	2.69	1.6	2.261	4.61 ***	0.996
Finish 2: Argathen prepare, Winch Beck dye						
Set 1 NR CAL	15	-7.98	-5.2	5.726	5.22 ***	0.988
Set 2 NR COM	15	4.4	2.5	4.066	4.05 **	0.995
Set 3 R CAL	16	-0.5	-0.3	3.382	0.57	0.992
Set 4 R COM	16	-0.47	-0.3	3.258	0.56	0.99
Finish 3: Argathen prepare, Overflow Jet Dye						
Set 1 NR CAL	16	-7.87	-5.1	6.262	4.87 ***	0.983
Set 2 NR COM	16	1.39	0.8	3.688	1.46	0.993
Set 3 R CAL	16	-3.92	-2.7	3.015	5.03 ***	0.992
Set 4 R COM	16	-1.08	-0.7	4.647	0.9	0.991
mean		-0.93	-0.7	3.753	2.44	0.992
sd		3.72	2.4	1.581	1.95	0.005

STUDENTS t STATISTIC $[X_i - Y_i] = 0$

* = Significant at 95% level

** = Significant at 99% level

*** = Significant at 99.9% level

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FABRICS REFERENCE STATE

IIC/CI Test Data : Summary Statistics : Stitch Length cm

Process	N	Mean Difference	%Mean Difference	sd of Differences	t	r sq
Grey	16	0.004	0.8	0.0058	2.5 *	0.999
Finish 1: Winch Beck prepare + dye						
Set 1 NR CAL	16	1.0E-3	0.3	0.0066	0.82	1
Set 2 NR COM	16	1.0E-3	0.3	0.0082	0.65	0.999
Set 3 R CAL	16	0	-0.1	0.0063	0.23	0.999
Set 4 R COM	16	-0.005	-1.1	0.0046	4.31 ***	0.999
Finish 2: Argathen prepare, Winch Beck dye						
Set 1 NR CAL	15	1.0E-3	-0.2	0.0059	0.53	1
Set 2 NR COM	15	0.003	0.6	0.0095	1.11	0.999
Set 3 R CAL	16	-0.002	-0.3	0.006	1.03	1
Set 4 R COM	16	-1.0E-3	-0.2	0.0048	0.74	1
Finish 3: Argathen prepare, Overflow Jet Dye						
Set 1 NR CAL	16	0.002	0.5	0.0073	1.34	1
Set 2 NR COM	16	0.002	0.4	0.0057	1.19	0.999
Set 3 R CAL	16	0	0.1	0.0058	0.17	0.999
Set 4 R COM	16	1.0E-3	0.1	0.0092	0.25	0.997
mean		1.0E-3	0.1	0.0066	1.14	0.999
sd		0.002	0.5	0.0015	1.13	1.0E-3

STUDENTS t STATISTIC $[X_i - Y_i] = 0$

* = Significant at 95% level

** = Significant at 99% level

*** = Significant at 99.9% level

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION

RING SPUN YARNS : FABRICS REFERENCE STATE

IIC/CI Test Data : Summary Statistics : Courses/cm

Process	N	Mean Difference	%Mean Difference	sd of Differences	t	r sq
Grey	16	-0.08	-0.6	0.162	1.84	0.999
Finish 1: Winch Beck prepare + dye						
Set 1 NR CAL	16	-0.26	-2	0.13	7.74 ***	0.999
Set 2 NR COM	16	-0.25	-1.9	0.116	8.19 ***	0.999
Set 3 R CAL	16	-0.21	-1.9	0.147	5.55 ***	0.998
Set 4 R COM	16	-0.13	-1.2	0.18	2.78 *	0.998
Finish 2: Argathen prepare, Winch Beck dye						
Set 1 NR CAL	15	-0.22	-1.8	0.173	4.68 ***	0.998
Set 2 NR COM	15	-0.27	-2.1	0.167	5.94 ***	0.998
Set 3 R CAL	16	0.11	0.9	0.222	1.86	0.997
Set 4 R COM	16	-0.21	-1.7	0.153	5.33 ***	0.999
Finish 3: Argathen prepare, Overflow Jet Dye						
Set 1 NR CAL	16	0.04	0.3	0.334	0.45	0.998
Set 2 NR COM	16	-0.15	-1.1	0.112	5.06 ***	0.999
Set 3 R CAL	16	-0.24	-2	0.193	4.81 ***	0.997
Set 4 R COM	16	-0.16	-1.3	0.101	6.28 ***	0.999
mean		-0.16	-1.3	0.168	4.65	0.999
sd		0.12	1	0.06	2.32	1.0E-3

STUDENTS t STATISTIC $[X_i - Y_i] = 0$

* = Significant at 95% level

** = Significant at 99% level

*** = Significant at 99.9% level

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FABRICS REFERENCE STATE

IIC/CI Test Data : Summary Statistics : Wales/cm

Process	N	Mean Difference	%Mean Difference	sd of Differences	t	r sq
Grey	16	-0.28	-2.8	0.289	3.78 **	0.996
Finish 1: Winch Beck prepare + dye						
Set 1 NR CAL	16	-0.07	-0.7	0.149	1.75	0.998
Set 2 NR COM	16	0.16	1.7	0.104	6.1 ***	0.999
Set 3 R CAL	16	-0.04	-0.4	0.174	0.95	0.998
Set 4 R COM	16	-0.03	-0.3	0.183	0.64	0.997
Finish 2: Argathen prepare, Winch Beck dye						
Set 1 NR CAL	15	0	0	0.127	0.1	0.999
Set 2 NR COM	15	-0.01	-0.1	0.119	0.19	0.999
Set 3 R CAL	16	0.08	0.8	0.13	2.37 *	0.999
Set 4 R COM	16	-0.06	-0.6	0.086	2.72 *	0.999
Finish 3: Argathen prepare, Overflow Jet Dye						
Set 1 NR CAL	16	-0.05	-0.4	0.205	0.87	0.997
Set 2 NR COM	16	0.02	0.2	0.127	0.74	0.999
Set 3 R CAL	16	-0.02	-0.2	0.129	0.6	0.999
Set 4 R COM	16	-0.1	-1	0.343	1.17	0.991
mean		-0.03	-0.3	0.167	1.69	0.998
sd		0.1	1	0.075	1.7	0.002

STUDENTS t STATISTIC $[X_i - Y_i] = 0$

* = Significant at 95% level

** = Significant at 99% level

*** = Significant at 99.9% level

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION

RING SPUN YARNS : FABRICS REFERENCE STATE

IIC/CI Test Data : Summary Statistics : Measured Weight gsm

Process	N	Mean Difference	%Mean Difference	sd of Differences	t	r sq
Grey	16	-2.66	-1.2	3.698	2.79 *	0.997
Finish 1: Winch Beck prepare + dye						
Set 1 NR CAL	16	-1.94	-0.9	2.129	3.53 **	0.998
Set 2 NR COM	16	-1.85	-0.9	1.849	3.87 **	0.999
Set 3 R CAL	16	-2.66	-1.5	4.417	2.33 *	0.992
Set 4 R COM	16	-4.82	-2.6	3.906	4.78 ***	0.995
Finish 2: Argathen prepare, Winch Beck dye						
Set 1 NR CAL	15	-0.8	-0.4	1.608	1.85	0.999
Set 2 NR COM	15	-1.06	-0.5	2.599	1.52	0.997
Set 3 R CAL	16	0.51	0.3	1.632	1.2	0.999
Set 4 R COM	16	-0.4	-0.2	2.326	0.67	0.998
Finish 3: Argathen prepare, Overflow Jet Dye						
Set 1 NR CAL	16	1.71	0.8	2.573	2.57 *	0.998
Set 2 NR COM	16	1.97	0.9	2.561	2.99 *	0.998
Set 3 R CAL	16	0.89	0.4	1.647	2.09	0.999
Set 4 R COM	16	-1.85	-0.9	4.312	1.67	0.997
mean		-1	-0.5	2.712	2.45	0.997
sd		1.93	1	1.028	1.14	0.002

STUDENTS t STATISTIC [Xi - Yi] = 0

* = Significant at 95% level

** = Significant at 99% level

*** = Significant at 99.9% level

A P P E N D I X 1

INTERNAL CONSISTENCY CHECKS

CI	Grey Fabrics	Table A1/1
IIC	Grey Fabrics	Table A1/2
	Finished Fabrics	Route 1 Tables A1/3 - A1/6
		Route 2 Tables A1/7 - A1/10
		Route 3 Tables A1/11- A1/14

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
 CI TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS : GREY

Sample Ref No	C1	C2	C3	C4
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Ne 1/6

A-1	0.99	1.06 *	0.97	0.98
A-2	0.96	1.02	0.97	1.03
A-3	1.05	0.96	0.99	0.95
A-4	0.96	0.91 *	0.96	0.98

Ne 1/14

B-1	0.95	1	1	1
B-2	1.02	1.01	1	1.01
B-3	0.87 *	1	1.01	1
B-4	1	0.95	1	0.99

Ne 1/18

C-1	0.97	0.98	1	0.98
C-2	1	0.91 *	1	0.98
C-3	0.98	0.98	1.01	0.96
C-4	1.04	0.94 *	1	0.96

Ne 1/30

D-1	0.95	1.02	1.01	1
D-2	0.9 *	0.97	1	0.98
D-3	0.91 *	1	1.01	0.98
D-4	0.93 *	0.97	1	0.97
mean	0.97	0.98	1	0.98
sd	0.05	0.04	0.02	0.02

IIC Laboratory Acceptance Range 0.95 - 1.05

* Sample Out of Range

C1 = Calculated Weight BW / Measured Weight BW
 C2 = Calculated Weight AW / Measured Weight AW
 C3 = Calculated Courses AW / Measured Courses AW
 C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: GREY

Sample
Ref.No. C1 C2 C3 C4

Ne 1/6

A-1	0.98	1.02	0.98	0.98
A-2	1.01	1.01	0.97	1
A-3	0.96	1	0.99	0.95
A-4	0.97	1.03	0.96	0.98

Ne 1/14

B-1	1.02	1.03	1	1
B-2	1.01	1.04	1	1.01
B-3	1.02	1.04	1	1
B-4	1.05	1.05	1	0.99

Ne 1/18

C-1	1.01	1.03	1	0.98
C-2	1.04	1	1	0.98
C-3	1.03	1.01	1.01	0.96
C-4	1.04	1.03	1	0.96

Ne 1/30

D-1	1.04	1.02	1.01	1
D-2	1	1.02	1	0.98
D-3	1.02	1.02	1.01	0.98
D-4	1.01	1.02	1	0.97
mean	1.01	1.02	1	0.98
sd	0.03	0.01	0.01	0.02

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IIC Laboratory Acceptance Range 0.95 - 1.05

C1 = Calculated Weight BW / Measured Weight BW
C2 = Calculated Weight AW / Measured Weight AW
C3 = Calculated Courses AW / Measured Courses AW
C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: (FINISH1,SET1) Winch Beck prepare + dye, No Resin Calender

Sample
Ref.No. C1 C2 C3 C4

Ne 1/6

A-1	0.98	1.02	1.01	0.99
A-2	0.99	0.99	1	1.02
A-3	1.02	1	1.01	1.04
A-4	0.99	1	1.01	0.98

Ne 1/14

B-1	1.03	1.02	0.99	0.99
B-2	1.03	1.03	1	0.98
B-3	1	1.04	1	0.97
B-4	1.02	1.04	0.99	0.96

Ne 1/18

C-1	0.99	1.03	1.01	1.01
C-2	0.97	1.02	1.01	0.99
C-3	0.98	1.04	1.02	0.97
C-4	0.95	1.04	1.04	0.98

Ne 1/30

D-1	0.97	1	1	0.99
D-2	0.97	0.99	1	0.99
D-3	0.97	1	1	0.99
D-4	0.98	1.01	1.01	0.99
mean	0.99	1.02	1.01	0.99
sd	0.02	0.02	0.01	0.02

=====
IIC Laboratory Acceptance Range 0.95 - 1.05

C1 = Calculated Weight BW / Measured Weight BW
C2 = Calculated Weight AW / Measured Weight AW
C3 = Calculated Courses AW / Measured Courses AW
C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: (FINISH1,SET2) Winch Beck prepare + dye, No Resin Compact

Sample
Ref.No. C1 C2 C3 C4

Ne 1/6

A-1	0.99	1	0.99	1.01
A-2	1.01	0.99	1.01	1.02
A-3	0.98	0.98	1.02	1
A-4	1	0.99	1.02	0.99

Ne 1/14

B-1	1.03	0.99	1.01	1.02
B-2	0.98	0.98	1.01	1.01
B-3	0.99	0.99	1.01	1.01
B-4	1	0.99	0.99	1

Ne 1/18

C-1	0.99	1	1	0.99
C-2	1.01	0.99	1.01	0.99
C-3	1.02	1.01	1.02	0.97
C-4	1	1	1	0.96

Ne 1/30

D-1	0.99	0.99	1	1
D-2	0.99	1	0.99	1
D-3	1.03	0.98	1.03	1
D-4	1.01	1.01	1.01	0.99
mean	1	0.99	1.01	1
sd	0.02	0.01	0.01	0.02

=====

IIC Laboratory Acceptance Range 0.95 - 1.05

C1 = Calculated Weight BW / Measured Weight BW
C2 = Calculated Weight AW / Measured Weight AW
C3 = Calculated Courses AW / Measured Courses AW
C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS

IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: (FINISH1,SET3) Winch Beck prepare + dye, Resin Calender

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Sample Ref.No.	C1	C2	C3	C4

Ne 1/6				
A-1	1.05	1.04	1.01	1.03
A-2	1.05	1.06 *	1.01	1.03
A-3	1.06 *	1.05	1.02	1.02
A-4	1.05	1.08 *	1.03	1.01

Ne 1/14

B-1	1	1.02	1	0.99
B-2	1	1.01	1.01	0.99
B-3	0.99	1.03	1.01	0.99
B-4	0.99	1.05	0.99	0.99

Ne 1/18

C-1	1.04	1.05	1.03	1.03
C-2	1.04	1	1.02	1.04
C-3	1.03	1.04	1.04	1.03
C-4	1.05	1.03	1.04	1.04

Ne 1/30

D-1	1.01	1	1.01	1.01
D-2	0.98	1	1	1
D-3	0.99	1	1	1.02
D-4	1	0.99	1.01	1
mean	1.02	1.03	1.01	1.01
sd	0.03	0.03	0.01	0.02

IIC Laboratory Acceptance Range 0.95 - 1.05

* = Out of Range after Full Retest

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C1 = Calculated Weight BW / Measured Weight BW
C2 = Calculated Weight AW / Measured Weight AW
C3 = Calculated Courses AW / Measured Courses AW
C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: (FINISH1,SE14) Winch Beck prepare + dye, Resin Compact

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-----
Sample
Ref.No.      C1      C2      C3      C4
-----
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Ne 1/6

A-1	1.05	0.98	1.02	1.05
A-2	1.05	1.01	1.02	1.05
A-3	1.02	0.99	1.02	1.04
A-4	1.02	0.98	1.03	1.04

Ne 1/14

B-1	0.98	1	0.99	1.02
B-2	0.97	1.02	0.99	1
B-3	1	0.99	1	1.02
B-4	0.99	1.02	1.01	1.01

Ne 1/18

C-1	1.03	1.04	1.02	1.01
C-2	1.01	1.03	1.01	1
C-3	1.03	1.04	1.01	1
C-4	1.02	1.05	1.02	1

Ne 1/30

D-1	0.99	1.01	1	1.01
D-2	0.99	1	1.01	1
D-3	1.01	0.99	1.02	1.01
D-4	0.99	1.04	1	0.99
mean	1.01	1.01	1.01	1.02
sd	0.02	0.02	0.01	0.02

=====
IIC Laboratory Acceptance Range 0.95 - 1.05

C1 = Calculated Weight BW / Measured Weight BW
C2 = Calculated Weight AW / Measured Weight AW
C3 = Calculated Courses AW / Measured Courses AW
C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: (FINISH2,SET1) Argathen prepare, Winch Beck dye,
No Resin Calender

Sample
Ref.No. C1 C2 C3 C4

Ne 1/6

A-1	0.97	1.03	1	1
A-2	0.99	0.99	1.01	1.01
A-3	0.95	1.04	0.99	1
A-4	0.99	1.01	0.99	1.02

Ne 1/14

B-1	1.03	0.99	1.03	1.02
B-2	0.98	1.01	1.01	1.03
B-3	1.05	1.04	1.05	0.99
B-4	1.04	1.05	1.04	1.01

Ne 1/18

C-1	1.03	1.04	0.99	1.01
C-2	1	1.01	1.02	0.98
C-3	1.01	1.02	1	0.96
C-4	1	1.02	1.03	0.95

Ne 1/30

D-1	1	0.99	1.01	1.01
D-2	1.01	0.96	1.02	1
D-3	n.a.	n.a.	n.a.	n.a.
D-4	0.95	0.98	1	0.98
mean	1	1.01	1.01	1
sd	0.03	0.03	0.02	0.02

=====

IIC Laboratory Acceptance Range 0.95 - 1.05

C1 = Calculated Weight BW / Measured Weight BW
C2 = Calculated Weight AW / Measured Weight AW
C3 = Calculated Courses AW / Measured Courses AW
C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
 CI TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS : (FINISH2,SET2) Argathen prepare, Winch Beck dye
 No Resin Compact

```
-----
Sample
Ref No      C1      C2      C3      C4
-----
```

Ne 1/6

A-1	1.02	1.03	1	1.01
A-2	1.02	1.05	0.98	1
A-3	1.02	1.04	0.99	1
A-4	1.05	1.05	0.99	1

Ne 1/14

B-1	1.01	1.01	1	0.99
B-2	1.04	1.02	1	1
B-3	1.05	1.02	1	1.01
B-4	1.02	1.05	1	0.98

Ne 1/18

C-1	1.01	1	1.02	0.99
C-2	1	1	1.02	0.98
C-3	0.97	0.98	1.04	0.96
C-4	0.99	0.99	1.01	0.95

Ne 1/30

D-1	1.01	1.03	1	1
D-2	1.02	1	1	1
D-3	0.99	1.01	1	0.99
D-4	n.a.	n.a.	n.a.	n.a.
mean	1.01	1.02	1	0.99
sd	0.02	0.02	0.01	0.02

=====

IIC Laboratory Acceptance Range 0.95 - 1.05

C1 = Calculated Weight BW / Measured Weight BW
 C2 = Calculated Weight AW / Measured Weight AW
 C3 = Calculated Courses AW / Measured Courses AW
 C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: (FINISH2,SET3) Argathen prepare; Winch Beck dye. Resin Calender

Sample
Ref.No. C1 C2 C3 C4

Ne 1/6

A-1	0.99	0.99	1.02	1
A-2	1	0.97	1.03	1.01
A-3	1.01	0.99	1.04	0.99
A-4	0.97	0.98	1.01	1

Ne 1/14

B-1	0.98	1	1.01	0.99
B-2	1.01	1	1	1.02
B-3	1	0.98	1	1.01
B-4	0.97	1	0.99	0.97

Ne 1/18

C-1	1.01	1.03	1	1
C-2	1.01	1.03	1.01	0.98
C-3	1.05	1.01	1.01	0.98
C-4	1.05	1.01	1.02	0.96

Ne 1/30

D-1	1.02	0.97	1.04	1.01
D-2	1	1	1.03	1
D-3	1.02	0.98	1.04	1.05
D-4	0.99	1	1.02	0.99
mean	1	1	1.02	1
sd	0.02	0.02	0.02	0.02

=====

IIC Laboratory Acceptance Range 0.95 - 1.05

C1 = Calculated Weight BW / Measured Weight BW
C2 = Calculated Weight AW / Measured Weight AW
C3 = Calculated Courses AW / Measured Courses AW
C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: (FINISH2,SET4) Argathen prepare, Winch Beck dye, Resin Compact

Sample Ref.No.	C1	C2	C3	C4
-------------------	----	----	----	----

Ne 1/6

A-1	1.03	1.03	1.01	0.99
A-2	1.03	1.05	1	1
A-3	1.05	1.04	1	1.01
A-4	1.04	1.05	1.01	0.97

Ne 1/14

B-1	1.02	1.01	0.99	1.02
B-2	1.02	1.03	1	1.02
B-3	1	1.01	0.99	0.99
B-4	0.99	1.01	1	0.99

Ne 1/18

C-1	1.06 *	1.02	1	1.03
C-2	1.05	1.02	1.01	1.01
C-3	1.04	1.05	1.03	0.98
C-4	1.03	1.05	1.03	0.98

Ne 1/30

D-1	1.05	1.01	1.01	1.01
D-2	0.99	1.02	1	0.98
D-3	1	1.01	1.02	1
D-4	1	1.02	1.01	1
mean	1.02	1.03	1.01	1
sd	0.02	0.02	0.01	0.02

=====

IIC Laboratory Acceptance Range 0.95 - 1.05

* = Out of Range after Full Retest

C1 = Calculated Weight BW / Measured Weight BW
C2 = Calculated Weight AW / Measured Weight AW
C3 = Calculated Courses AW / Measured Courses AW
C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
 IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: (FINISH3,SET1) Argathen prepare, Overflow Jet Dye,
 No Resin Calender

 Sample
 Ref.No. C1 C2 C3 C4

Ne 1/6

A-1	1.02	1.03	1	1.01
A-2	1.02	1.04	0.99	1.01
A-3	1.04	1.04	0.99	1.02
A-4	1	1.05	0.97	0.98

Ne 1/14

B-1	1.04	1.01	1.01	1
B-2	1.03	1.04	1.01	1
B-3	1.02	1.02	0.99	0.99
B-4	0.98	1.02	1	0.98

Ne 1/18

C-1	0.97	1.01	1.01	0.97
C-2	1.01	1.02	0.99	0.99
C-3	1	1.03	0.99	0.97
C-4	1.03	1.03	1	0.97

Ne 1/30

D-1	1.01	0.99	1.04	1.02
D-2	1.04	0.98	1.05	1.02
D-3	1.01	0.97	1.03	1.03
D-4	1.01	0.99	1.05	1.04
mean	1.01	1.02	1.01	1
sd	0.02	0.02	0.02	0.02

=====

IIC Laboratory Acceptance Range 0.95 - 1.05

C1 = Calculated Weight BW / Measured Weight BW
 C2 = Calculated Weight AW / Measured Weight AW
 C3 = Calculated Courses AW / Measured Courses AW
 C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: (FINISH3,SET2) Argathen prepare, Overflow Jet Dye,
No Resin Compact

Sample
Ref.No. C1 C2 C3 C4

Ne 1/6

A-1	1.04	0.97	1.01	1.01
A-2	1.03	1.04	1.01	0.97
A-3	1.04	1.04	1.01	1
A-4	1.01	1.02	1.05	1.02

Ne 1/14

B-1	1.04	1	1	0.99
B-2	1.04	1.02	1.02	1
B-3	1.01	1.03	1.01	0.98
B-4	1.03	1.01	1	0.99

Ne 1/18

C-1	1.03	1.02	1.01	0.98
C-2	1.02	1.01	0.97	0.99
C-3	0.98	1.02	1	0.96
C-4	0.99	1.02	0.98	0.96

Ne 1/30

D-1	1.02	1.02	1.01	1
D-2	0.98	1.01	1.01	1
D-3	1.04	1.01	1.02	1
D-4	1.03	1.01	1.02	1.02
mean	1.02	1.02	1.01	0.99
sd	0.02	0.02	0.02	0.02

=====
IIC Laboratory Acceptance Range 0.95 - 1.05

C1 = Calculated Weight BW / Measured Weight BW
C2 = Calculated Weight AW / Measured Weight AW
C3 = Calculated Courses AW / Measured Courses AW
C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: (FINISH3,SET3) Argathen prepare, Overflow Jet Dye,
Resin Calender

Sample
Ref.No. C1 C2 C3 C4

Ne 1/6

A-1	1.08 *	1.05	1	1.01
A-2	1.03	1.05	1	1.01
A-3	1.03	1.05	0.98	1
A-4	1.06 *	1.04	1	1.02

Ne 1/14

B-1	1.02	1.04	0.99	0.99
B-2	1.05	1.04	0.98	1
B-3	0.99	1.04	0.99	0.99
B-4	0.98	1.01	0.99	0.95

Ne 1/18

C-1	1.03	1.04	1	1
C-2	1.04	1.03	1	0.98
C-3	1.05	1.03	1	0.98
C-4	0.97	1.04	1.01	0.95

Ne 1/30

D-1	1.04	0.99	1.05	1
D-2	0.99	1.02	1.02	1.01
D-3	1.02	1.04	0.99	1.01
D-4	1.05	1.04	1	0.97
mean	1.03	1.03	1	0.99
sd	0.03	0.02	0.02	0.02

=====
IIC Laboratory Acceptance Range 0.95 - 1.05
* = Out of Range after Full Retest

C1 = Calculated Weight BW / Measured Weight BW
C2 = Calculated Weight AW / Measured Weight AW
C3 = Calculated Courses AW / Measured Courses AW
C4 = Calculated Wales AW / Measured Wales AW

IIC/CI STARFISH DATABASE EXPANSION

SINGLE JERSEY FABRICS : RING SPUN YARNS
 IIC TEST DATA : INTERNAL CONSISTENCY CHECKS

PROCESS: (FINISH3,SET4) Argather: prepare, Overflow Jet Dye,
 Resin Compact

 Sample
 Ref.No. C1 C2 C3 C4

Ne 1/6

A-1	0.98	1.01	0.99	1
A-2	0.95	1.02	0.98	1
A-3	0.97	1.03	0.99	0.98
A-4	0.97	1.04	0.98	0.98

Ne 1/14

B-1	0.99	1.01	1	0.98
B-2	1.01	1.02	1	0.99
B-3	1	1.01	1	0.99
B-4	1.01	1.02	1	0.99

Ne 1/18

C-1	1.01	1.03	1.01	1
C-2	1.01	1.04	1.01	1
C-3	1.02	1.05	1	0.98
C-4	0.99	1.03	1.01	0.97

Ne 1/30

D-1	1.02	1.01	1.01	1
D-2	1.02	1.03	1.02	0.98
D-3	1.04	0.99	1.03	1
D-4	1.05	1.01	1.04	0.99
mean	1	1.02	1	0.99
sd	0.03	0.02	0.02	0.01

=====

IIC Laboratory Acceptance Range 0.95 - 1.05

C1 = Calculated Weight BW / Measured Weight BW
 C2 = Calculated Weight AW / Measured Weight AW
 C3 = Calculated Courses AW / Measured Courses AW
 C4 = Calculated Wales AW / Measured Wales AW

A P P E N D I X 2

GREY FABRIC

Before Wash

IIC/CI Tables A2-1, A2-2
Figures A2-1 to A2-8

Reference State

IIC/CI Tables A2-3, A2-4
Figures A2-9 to A2-18

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : GREY FABRICS : AS RECEIVED

IIC TEST DATA

Sample Ref. No.	Tex	SL cm	C/cm	W/cm	Wt gsm	CalcWt
A-1	96.18	0.6996	7.87	5.13	276.5	271.7
A-2	96.18	0.7338	7.17	5.07	254.1	256.3
A-3	97.46	0.7929	6.4	4.7	242.4	232.5
A-4	101.91	0.8176	5.97	4.73	242.1	235.3
mean	97.94					
sd	2.72					
B-1	42.49	0.4223	13.6	8.3	198.7	202.6
B-2	41.92	0.4466	12.27	8.3	189.4	190.6
B-3	42.9	0.466	11.38	8.2	183	186.6
B-4	42.95	0.4895	10.47	8.03	169	176.8
mean	42.56					
sd	0.48					
C-1	33.02	0.4051	14.23	8.23	155.8	156.8
C-2	33.72	0.4244	12.73	8.27	144.7	150.7
C-3	33.09	0.447	11.9	8.1	138.7	142.6
C-4	33.08	0.4721	10.73	8.1	130.5	135.8
mean	33.23					
sd	0.33					
D-1	20.78	0.2723	20.2	12.3	135.1	140.6
D-2	20.69	0.2886	17.73	12.17	128.7	128.9
D-3	20.62	0.301	16.27	12.37	122	124.9
D-4	20.58	0.313	15.27	12.3	120.3	121
mean	20.67					
sd	0.09					

TABLE A2-2

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : GREY FABRICS : AS RECEIVED

CI TEST DATA

Sample Ref. No.	Tex	SL cm	C/cm	W/cm	Wt gsm	CalcWt
A-1	92.27	0.7137	8.15	5.12	277.7	274.7
A-2	93.74	0.7391	7.24	5	261.1	251
A-3	101.82	0.7976	6.61	4.72	241.4	253.8
A-4	93.74	0.8331	6.26	4.72	241.8	231
mean	95.39					
sd	4.34					
B-1	42.18	0.4216	13.58	8.03	203.5	194
B-2	43.11	0.4496	12.32	8.67	189.6	192.7
B-3	38.35	0.4674	11.07	7.8	178	154
B-4	44.07	0.4928	10.67	7.6	176	176.1
mean	41.93					
sd	2.51					
C-1	33.55	0.3861	14.09	7.87	148.5	143.8
C-2	33.55	0.4242	12.52	7.87	139.7	140.3
C-3	32.81	0.447	11.54	7.87	135.3	133.2
C-4	33.55	0.4724	10.87	7.72	127.8	132.9
mean	33.37					
sd	0.37					
D-1	19.68	0.2743	20.91	12.48	148.2	140.9
D-2	19.55	0.2896	18.03	12.17	138	124.2
D-3	19.82	0.3023	16.57	12.24	133.6	121.6
D-4	19.75	0.3175	15.59	12.05	126.8	117.8
mean	19.7					
sd	0.11					

IIC/CI : SINGLE JERSEY : GREY FABRIC : AS RECEIVED

CI Test Data

TEX

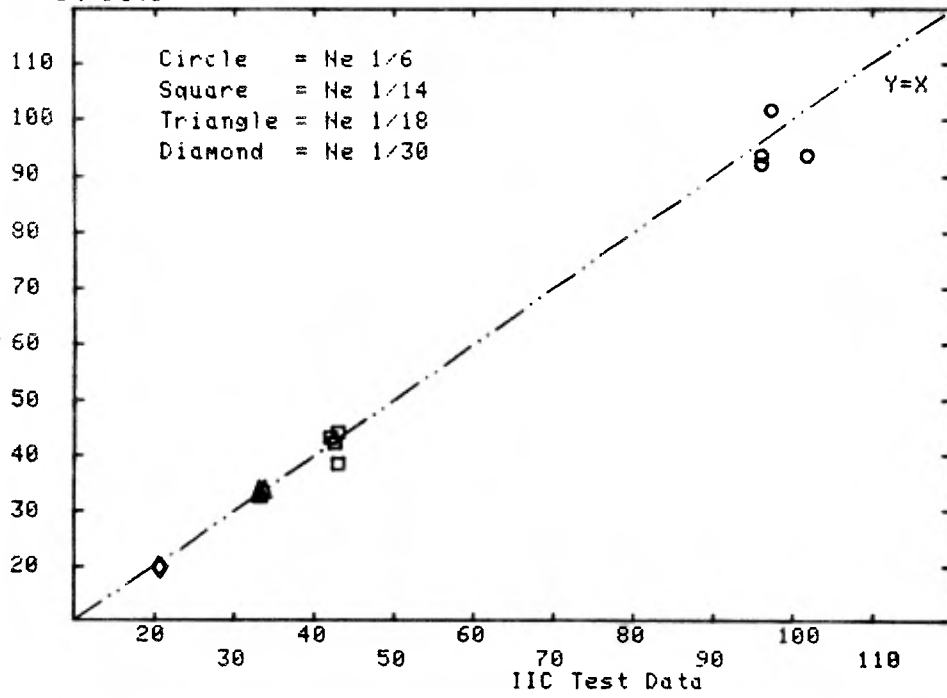
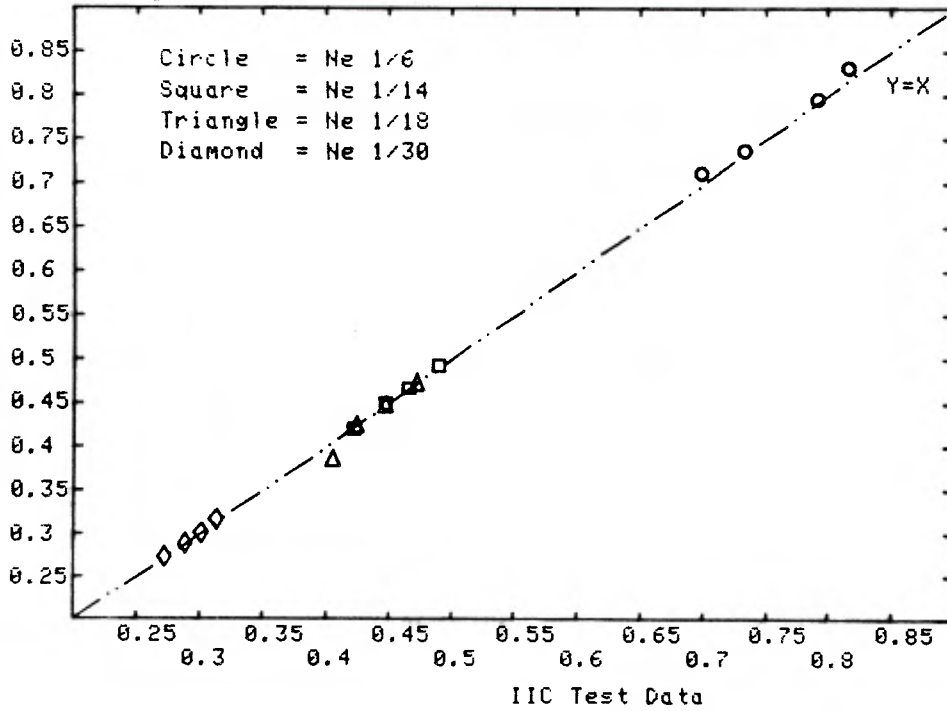


FIGURE A2-2

IIC/CI : SINGLE JERSEY : GREY FABRIC : AS RECEIVED

CI Test Data

STITCH LENGTH cm



IIC/CI : SINGLE JERSEY : GREY FABRIC : AS RECEIVED

CI Test Data

COURSES/CM

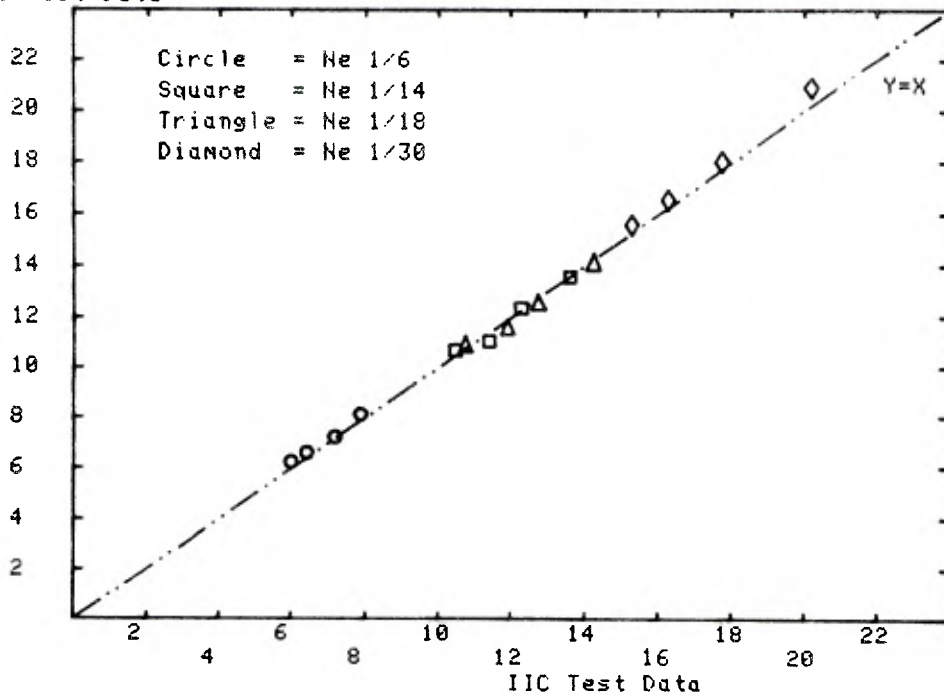
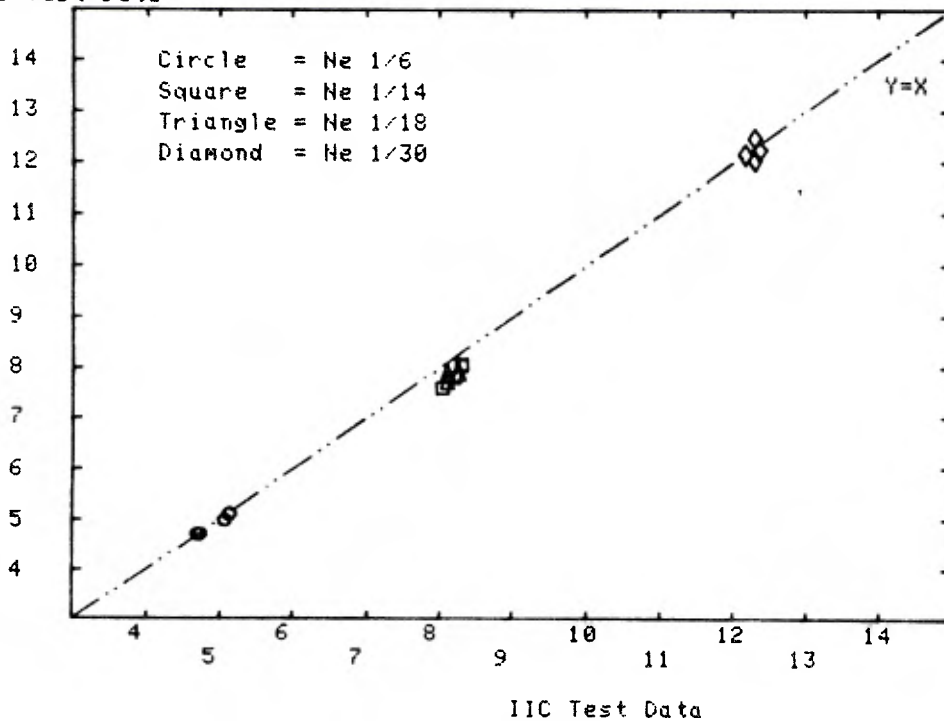


FIGURE A2-4

IIC/CI : SINGLE JERSEY : GREY FABRIC : AS RECEIVED

CI Test Data

WALES/CM



IIC/CI : SINGLE JERSEY : GREY FABRIC : AS RECEIVED

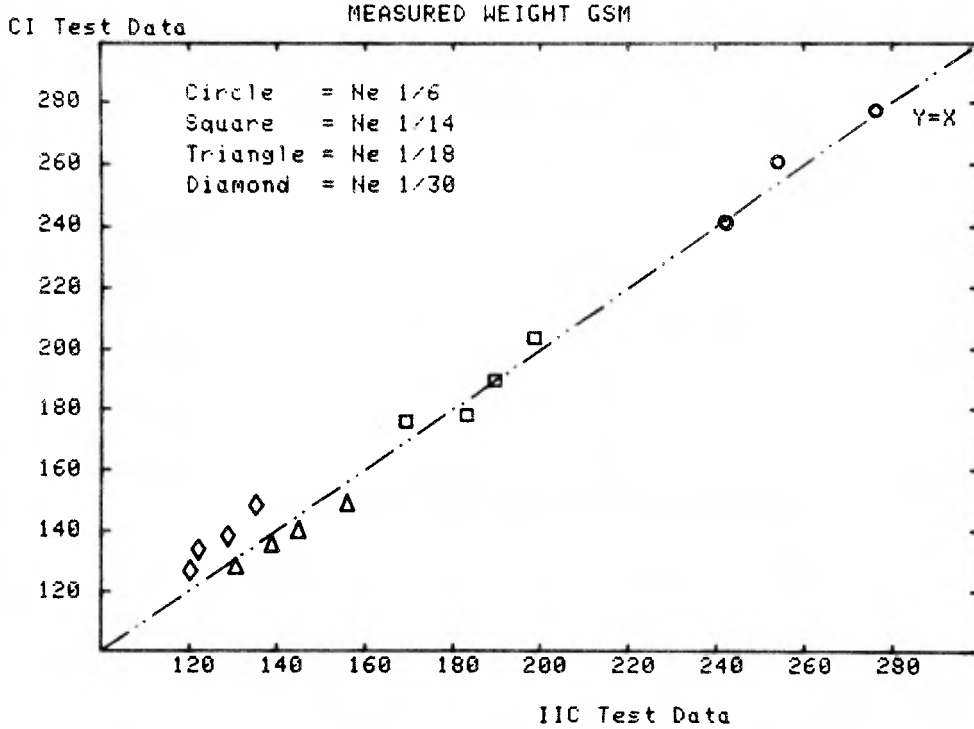
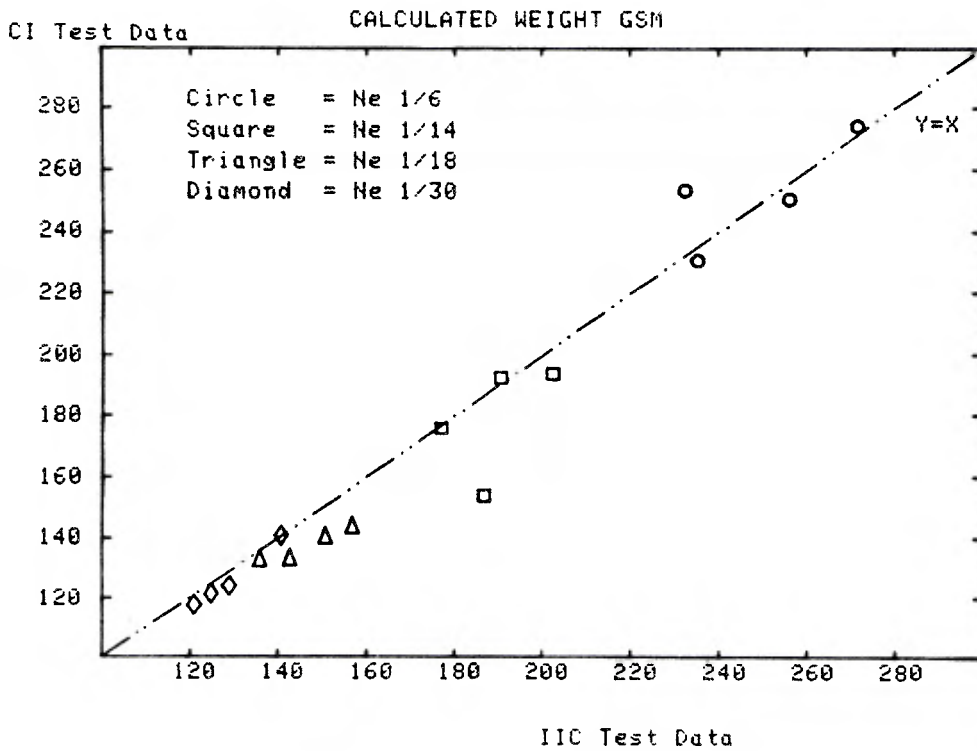
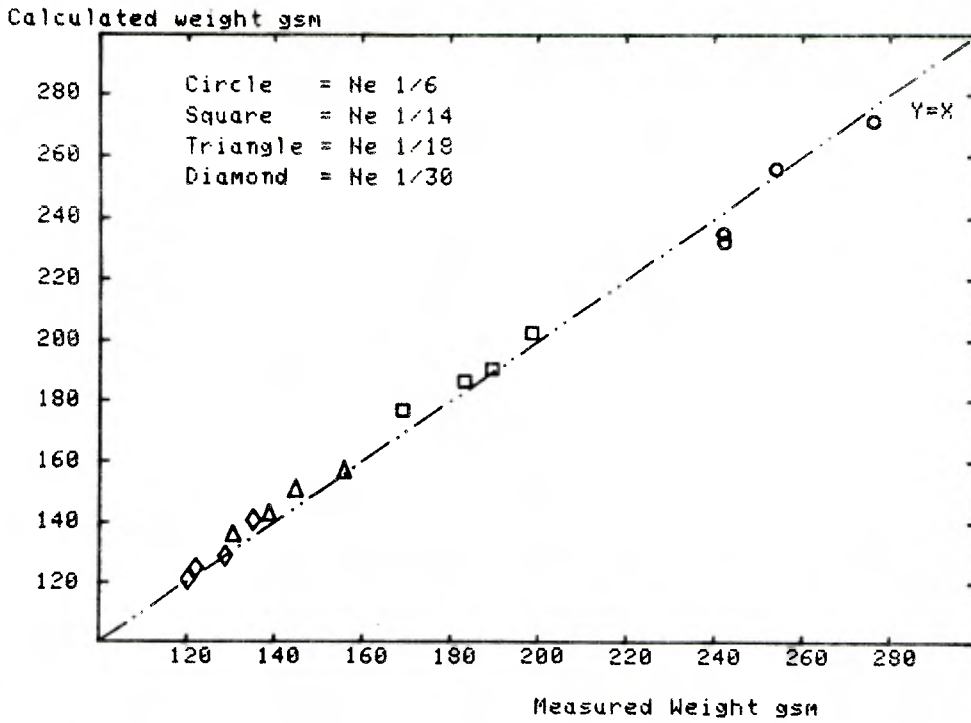


FIGURE A2-6

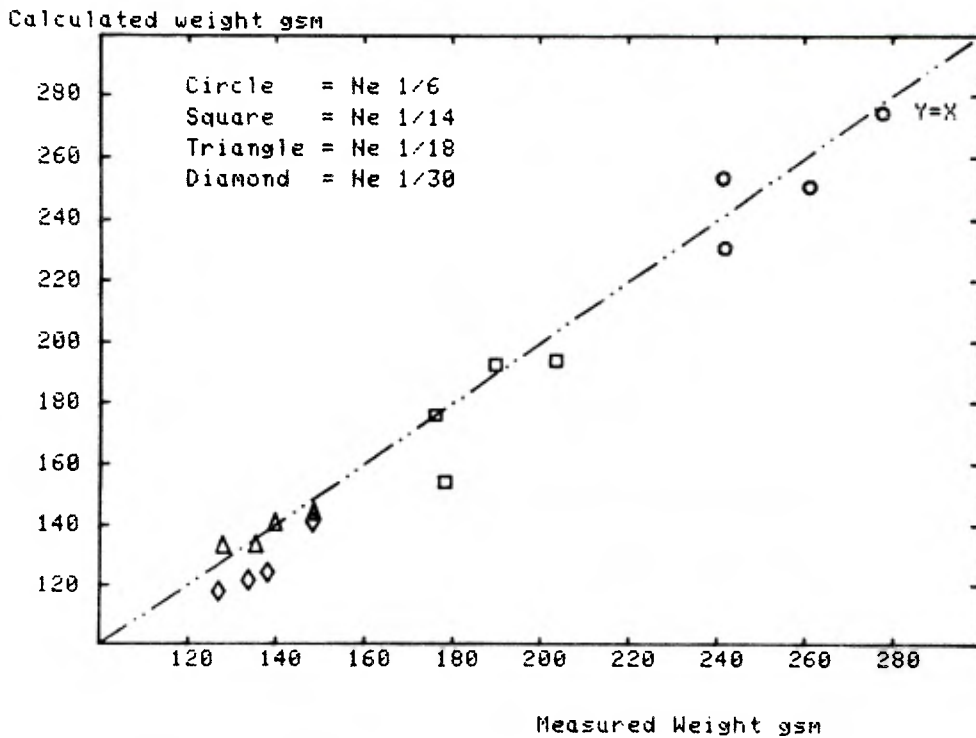
IIC/CI : SINGLE JERSEY : GREY FABRIC : AS RECEIVED



IIC : SINGLE JERSEY : GREY FABRIC : AS RECEIVED



CI : SINGLE JERSEY : GREY FABRIC : AS RECEIVED



IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : GREY FABRICS : REFERENCE STATE

IIC TEST DATA

Sample Ref. No.	Tex	SL cm	C/cm	W/cm	Wt gsm	CalcWt	5*LS%	5*MS%
A-1	94.11	0.694	8.8	5.8	327.8	333.4	8.5	9.8
A-2	94.35	0.7242	8.33	5.53	311.1	315.1	11.1	8.6
A-3	95.21	0.7802	7.5	5.25	293.3	292.5	13.5	6
A-4	99.9	0.8122	7.47	4.97	292.9	300.9	17.1	2.9
	mean	95.89						
	sd	2.71						
B-1	42.01	0.417	14.37	10.07	247.1	253.4	5.6	17.6
B-2	42.4	0.4392	13.65	9.7	236.7	246.6	10.1	14.9
B-3	41.60	0.4587	12.88	9.48	225.2	233.6	12.1	13.2
B-4	42.01	0.4816	12.33	9.12	216	227.5	14.8	11.1
	mean	42.02						
	sd	0.29						
C-1	32.54	0.3987	14.72	10.73	199.2	204.9	3.5	22
C-2	32.61	0.4176	13.78	10.33	193.7	194	7.9	18.4
C-3	32.22	0.4402	13.03	10	182.7	184.9	10	16
C-4	32.47	0.4639	12.37	9.63	174.7	179.4	13	12
	mean	32.46						
	sd	0.17						
D-1	20.46	0.269	21.97	15.5	183.2	187.4	8.5	20.6
D-2	20.47	0.2841	20.42	14.97	173.9	177.7	12.9	17.3
D-3	20.36	0.2973	19.47	14.5	166.7	170.8	17.2	13.2
D-4	20.27	0.309	18.53	14.17	161.9	164.4	17.9	10.9
	mean	20.39						
	sd	0.09						

TABLE A2-4

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : GREY FABRICS : REFERENCE STATE

CI TEST DATA

Sample Ref. No.	Tex	SL cm	C/cm	W/cm	Wt gsm	CalcWt	5*LS%	5*MS%
A-1	95.25	0.7	8.78	5.91	328.2	340.7	5.8	14.5
A-2	89.48	0.7	8.31	5.91	315.7	322.2	10.3	12.3
A-3	86.84	0.8	7.68	5.28	294	281.4	9.7	7.5
A-4	86.84	0.8	7.52	5.04	294.7	267.5	15.4	4.3
	mean	89.6						
	sd	3.96						
B-1	41.59	0.4	14.25	9.84	241.8	241.5	4.1	14.3
B-2	40.73	0.4	13.7	9.45	227.9	230.3	9.9	14.3
B-3	40.17	0.5	12.95	9.06	217	216.6	11.9	10.5
B-4	37.61	0.5	12.36	8.78	208.2	197	14	7.3
	mean	40.03						
	sd	1.71						
C-1	32.81	0.4	14.45	10.28	198	194.2	3.8	23
C-2	30.28	0.4	13.82	9.84	190.2	172.6	8.3	18
C-3	32.81	0.4	12.83	9.45	180.1	175.8	10.9	16.7
C-4	30.92	0.5	12.4	8.94	171.6	161	13.2	12.9
	mean	31.7						
	sd	1.3						
D-1	20.5	0.3	21.69	15.24	181.4	184.2	5.8	19
D-2	19.82	0.3	20	14.57	171.2	165.7	12.6	15.1
D-3	20.43	0.3	19.25	14.06	165.8	165.7	16	11.8
D-4	19.62	0.3	18.39	13.62	157.7	153.5	15.8	8.7
	mean	20.09						
	sd	0.44						

IIC/CI : SINGLE JERSEY : GREY FABRIC : REFERENCE STATE

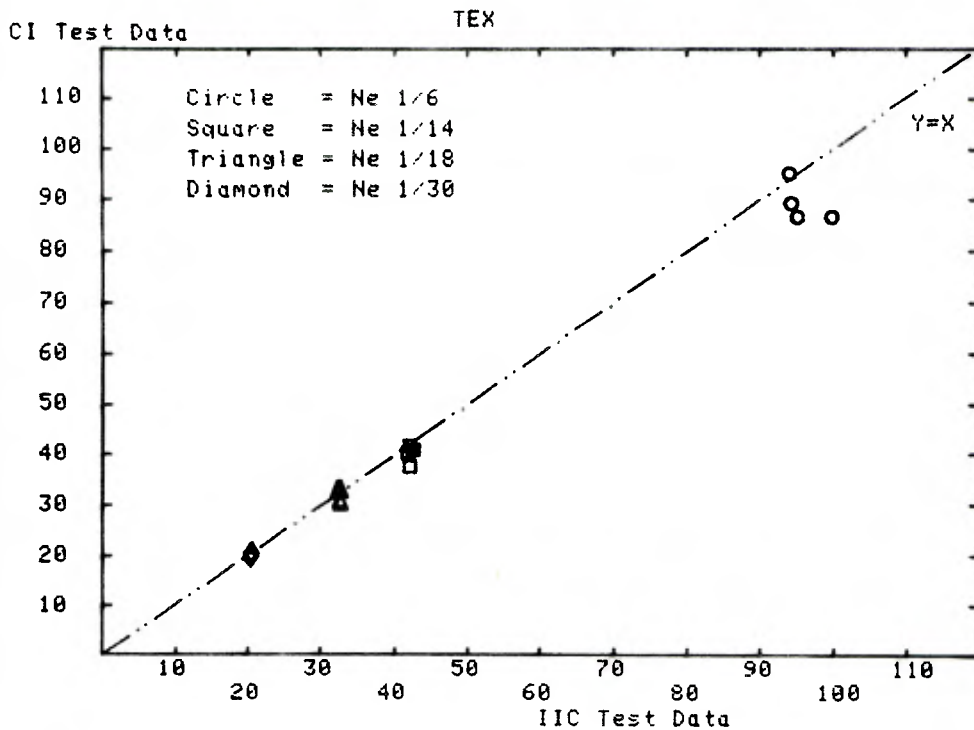
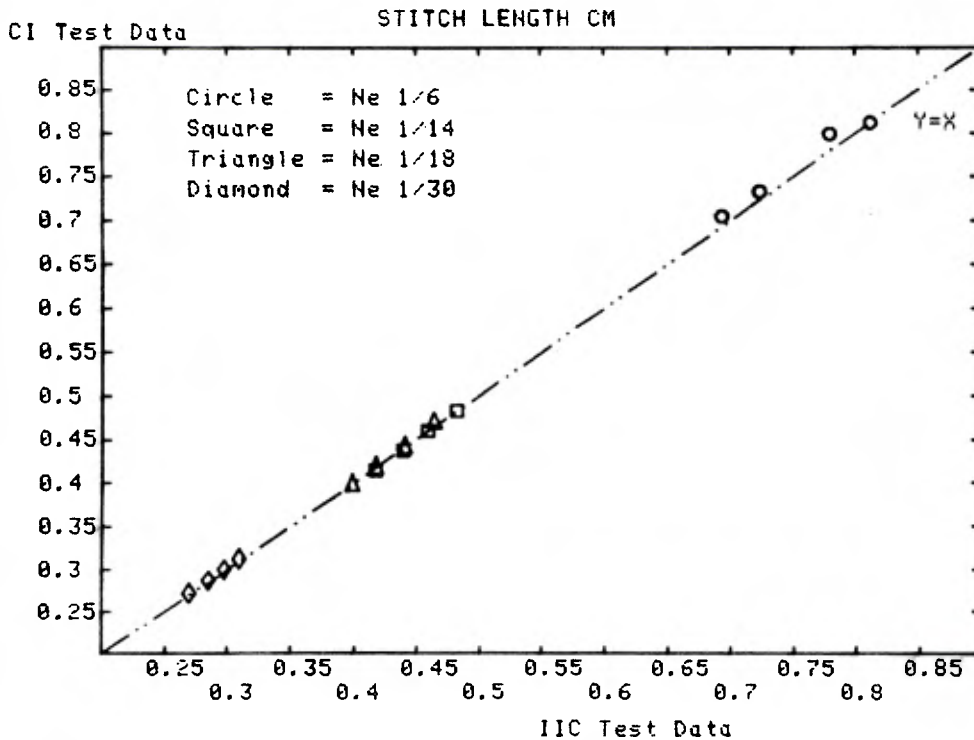


FIGURE A2-10

IIC/CI : SINGLE JERSEY : GREY FABRIC : REFERENCE STATE



IIC/CI : SINGLE JERSEY : GREY FABRIC : REFERENCE STATE

CI Test Data

COURSES/CM

FIGURE A2-11

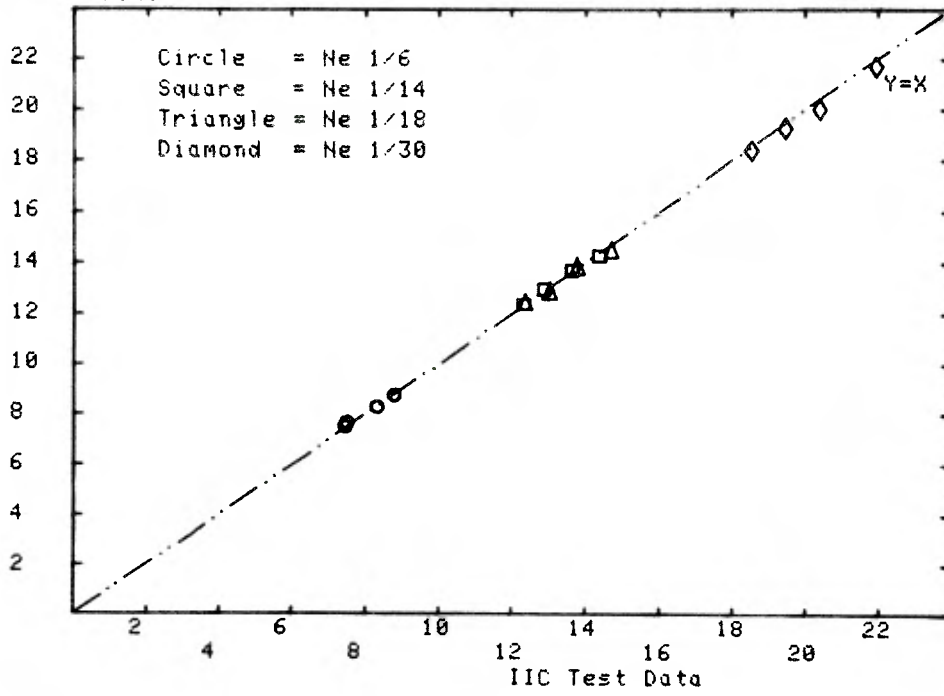
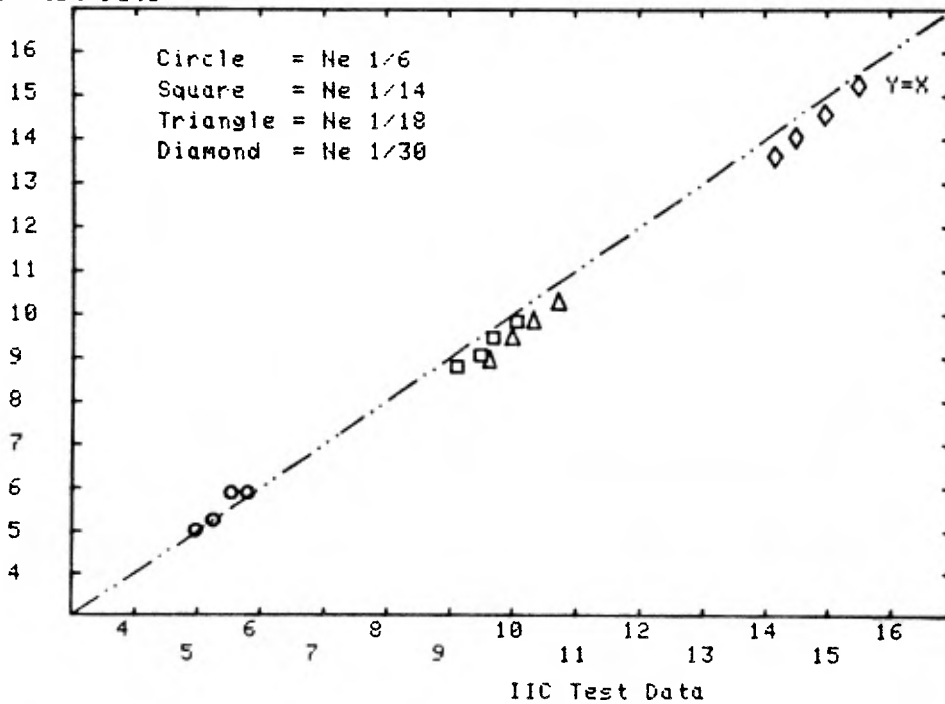


FIGURE A2-12

IIC/CI : SINGLE JERSEY : GREY FABRIC : REFERENCE STATE

CI Test Data

WALES/CM



IIC/CI : SINGLE JERSEY : GREY FABRIC : REFERENCE STATE

CI Test Data

MEASURED WEIGHT GSM

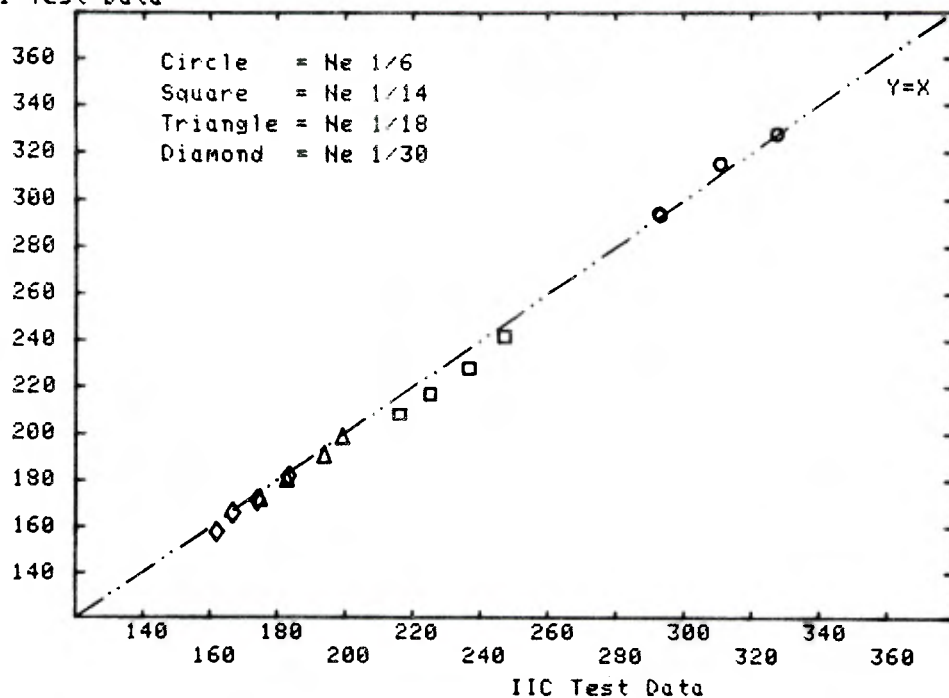
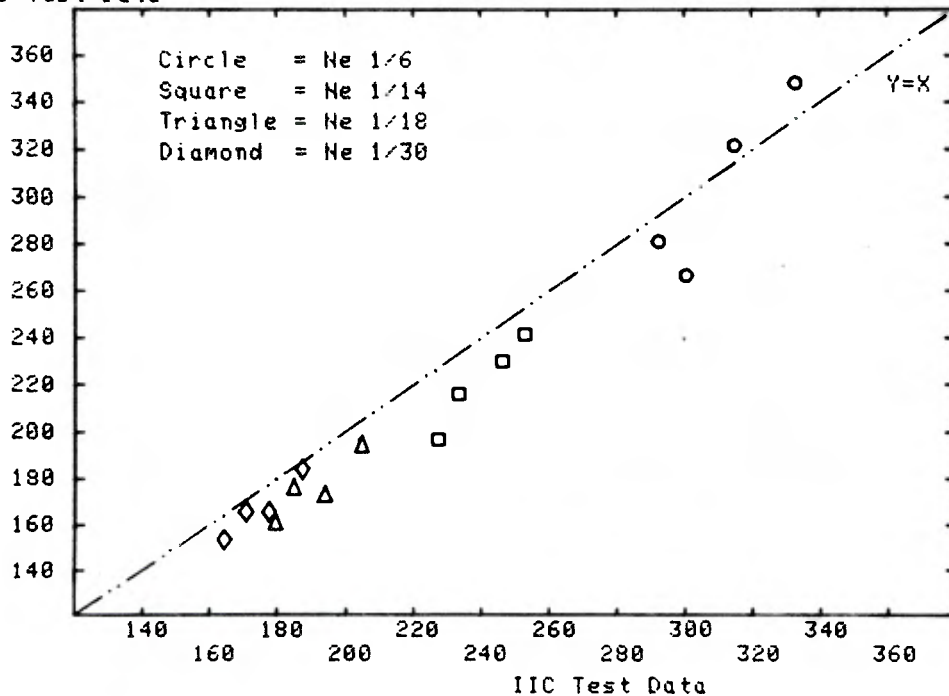


FIGURE A2-14

IIC/CI : SINGLE JERSEY : GREY FABRIC : REFERENCE STATE

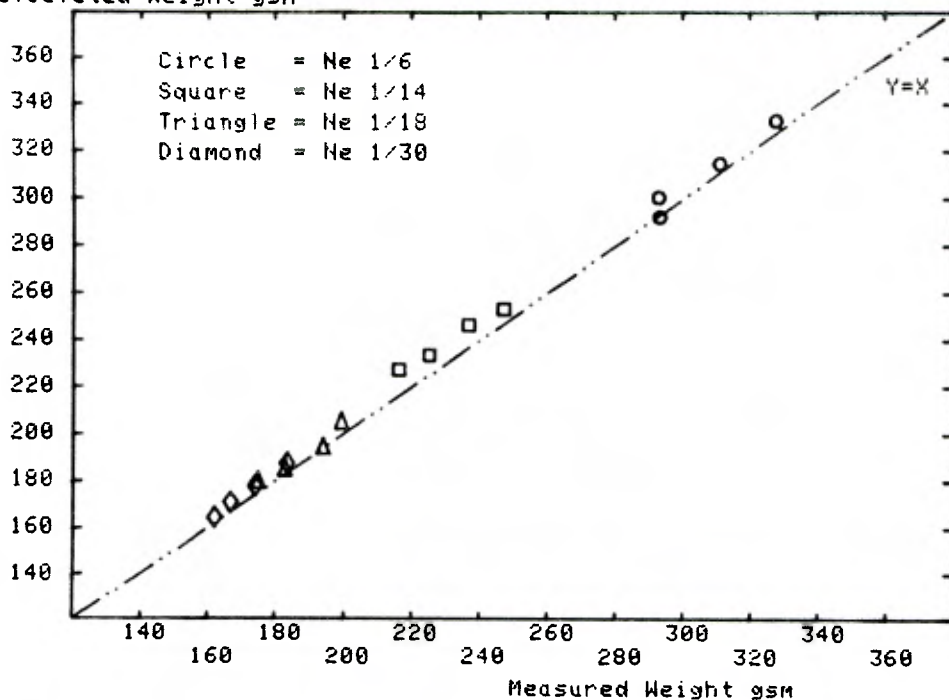
CI Test Data

CALCULATED WEIGHT GSM



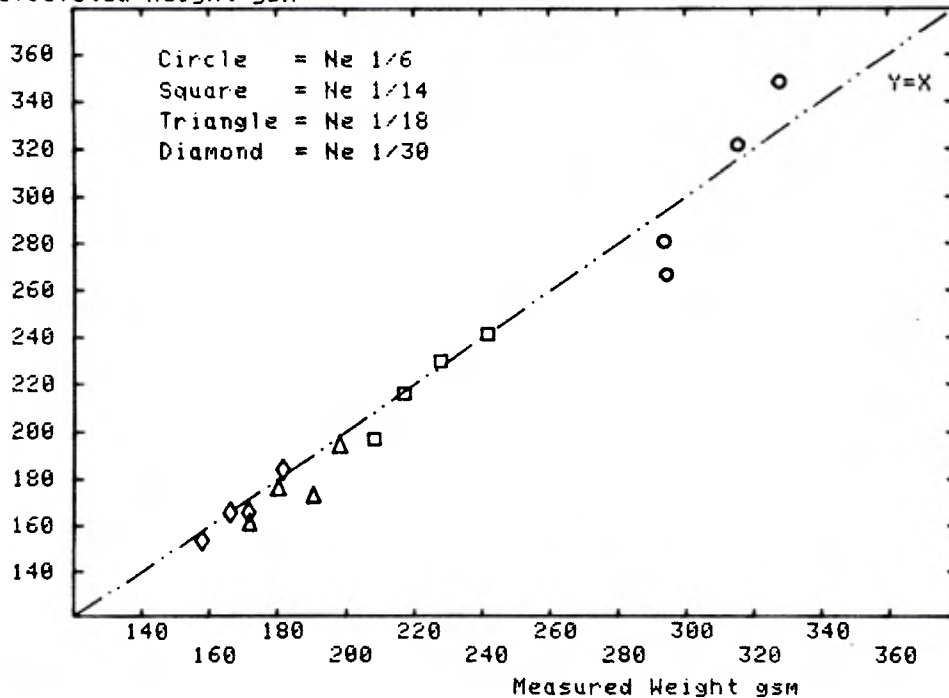
IIC : SINGLE JERSEY : GREY FABRIC : REFERENCE STATE

Calculated Weight gsm



CI : SINGLE JERSEY : GREY FABRIC : REFERENCE STATE

Calculated Weight gsm



CI Test Data

5*LENGTH SHRINKAGE %

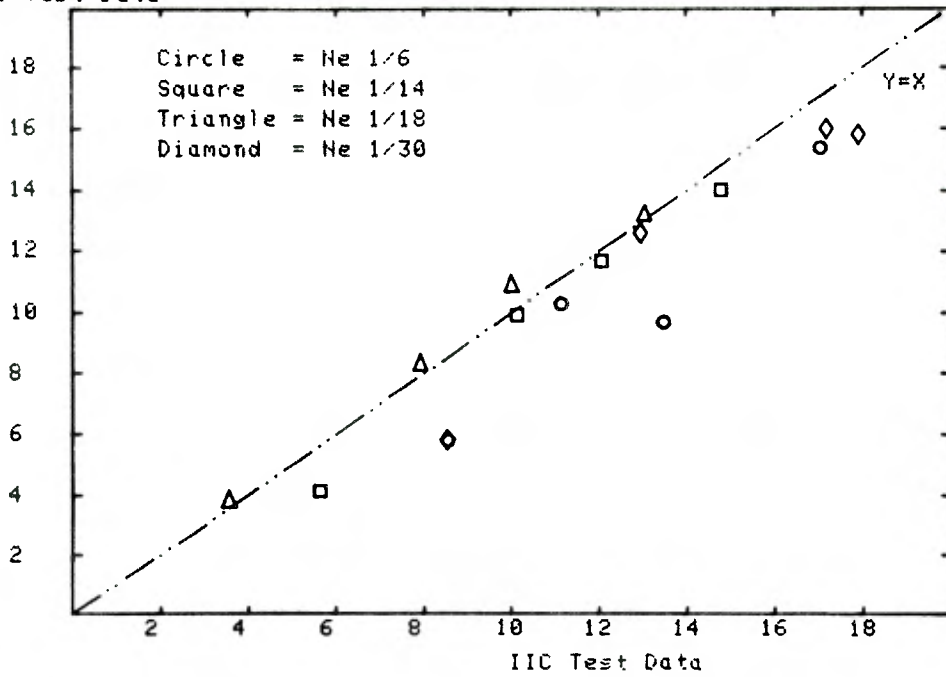
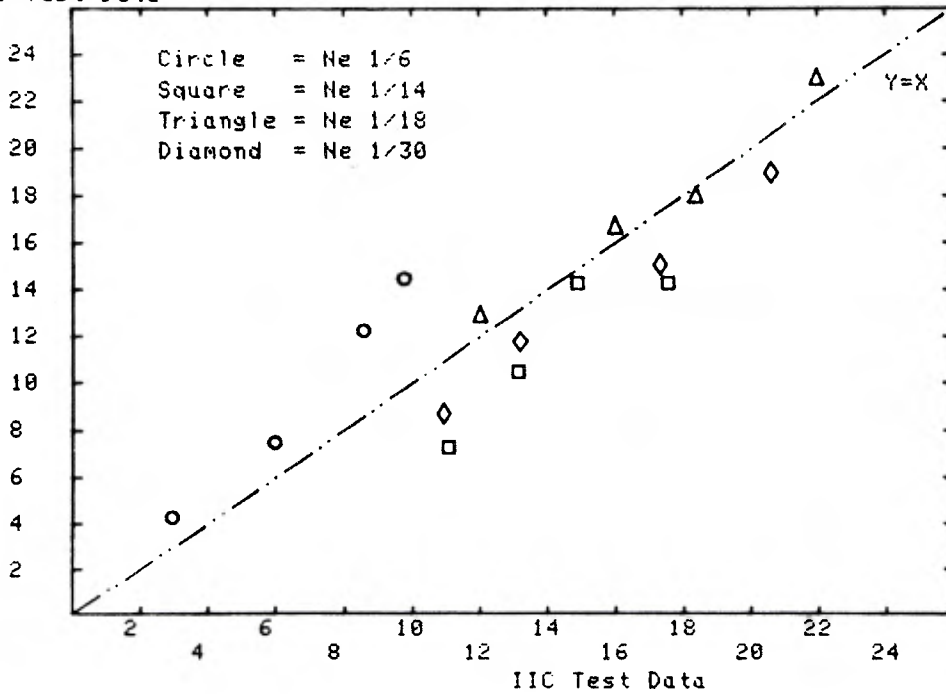


FIGURE A2-18

CI Test Data

5*WIDTH SHRINKAGE %



A P P E N D I X 3

FINISHED FABRIC

Route 1 : Winch beck prepare and dye

Set 1 Calender

Before Wash

Tables A3/1, A3/2

Figures A3/1 to A3/4

Reference State

Tables A3/3, A3/4

Figures A3/5 to A3/8

Set 2 Compact

Before Wash

Tables A3/5, A3/6

Figures A3/9 to A3/12

Reference State

Tables A3/7, A3/8

Figures A3/13 to A3/16

Set 3 Resin, Calender

Before Wash

Tables A3/9, A3/10

Figures A3/17 to A3/20

Reference State

Table A3/11, A3/12

Figures A3/21 to A3/24

Set 4 Resin, Compact

Before Wash

Tables A3/13, A3/14

Figures A3/25 to A3/28

Reference State

Tables A3/15, A3/16

Figures A3/29 to A3/32

I I C / C I INTERLABORATORY COMPARISON

TABLE A3/1

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 1 : Set 1 : Winch Beck prepare + dye, Calender
IIC Test Data

Sample Ref. No.	Tex	SL cm	C/cm	W/cm	Wtgsn
A-1	92.93	0.6923	7.23	4.6	217.5
A-2	92.17	0.7265	6.75	4.55	208.4
A-3	94.72	0.7856	5.52	4.85	195.6
A-4	90.4	0.8149	5.12	4.75	181.7
mean	92.55				
sd	1.79				
B-1	40.89	0.4188	11.67	8.9	173.3
B-2	40.68	0.4418	10.43	8.83	161.5
B-3	41.14	0.4616	9.67	8.8	161.2
B-4	40.79	0.4831	8.82	8.57	146.2
mean	40.87				
sd	0.2				
C-1	31.67	0.3958	11.72	9.13	135.9
C-2	31.58	0.4175	10.63	9.07	130.8
C-3	31.76	0.4411	9.78	8.78	123
C-4	30.25	0.4658	8.9	9	119.1
mean	31.32				
sd	0.71				
D-1	19.66	0.2715	18.3	13.15	132.4
D-2	19.89	0.2861	16.18	13.18	125.5
D-3	19.61	0.2987	15.02	12.95	117.9
D-4	19.65	0.3128	13.97	13.07	114
mean	19.7				
sd	0.13				

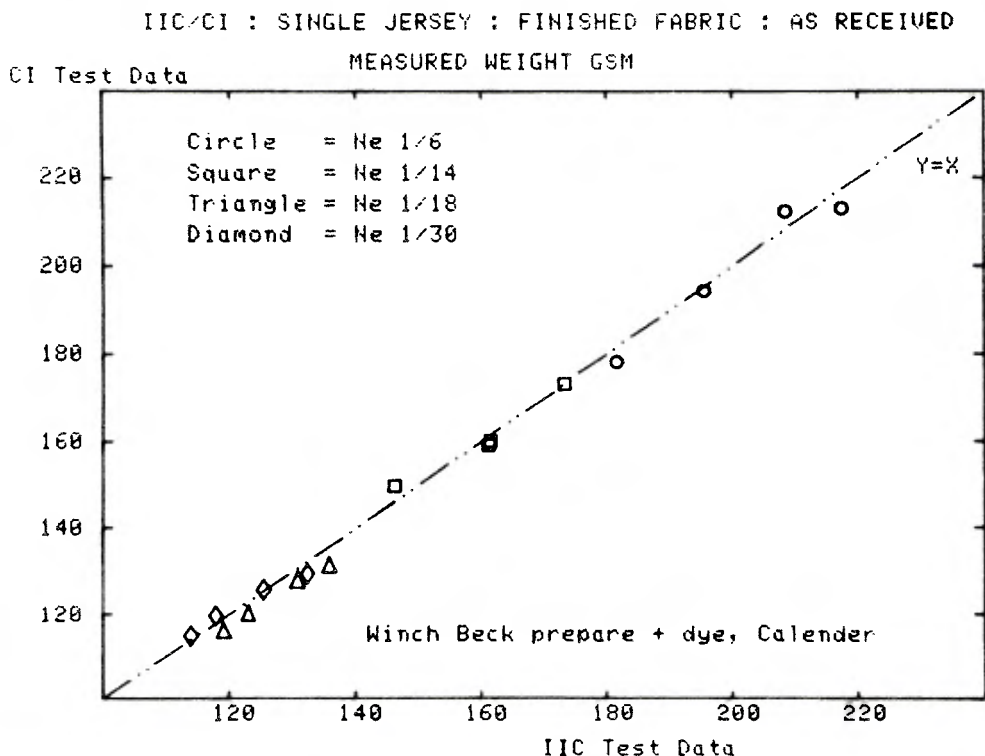
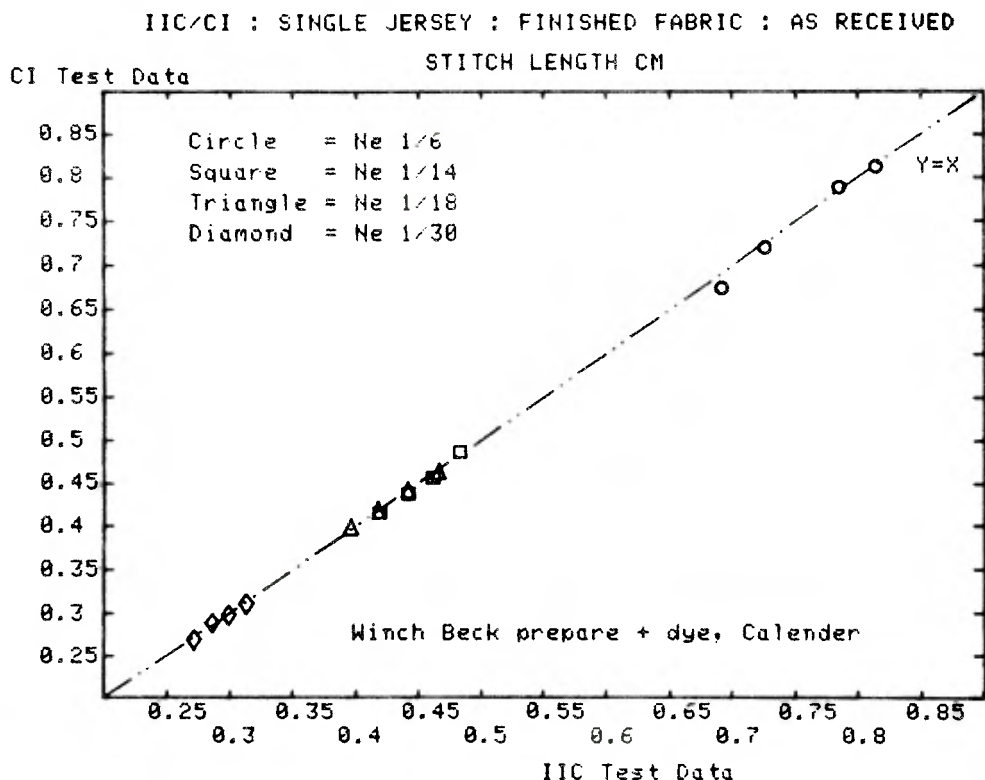
I I C / C I INTERLABORATORY COMPARISON

TABLE A3/2

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 1 : Set 1 : Winch Beck prepare + dye, Calender
CI Test Data

Sample Ref. No.	SL cm	C/cm	W/cm	Wtgsn
A-1	0.6756	7.09	4.72	213.3
A-2	0.7214	6.85	4.45	212.6
A-3	0.7894	5.51	4.72	194.6
A-4	0.8128	5.12	4.72	178.4
B-1	0.4148	11.46	8.74	173.3
B-2	0.4364	10.59	8.7	160.1
B-3	0.4562	9.53	8.82	159
B-4	0.4854	8.94	8.43	149.9
C-1	0.3967	11.5	8.74	131.2
C-2	0.4168	8.23	8.78	127.8
C-3	0.4397	9.61	8.54	128
C-4	0.4615	8.66	8.5	116
D-1	0.2685	18.19	13.19	129.5
D-2	0.288	16.54	12.99	125.8
D-3	0.2972	15	12.99	119.7
D-4	0.3186	13.74	13.11	115



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

CI Test Data

COURSES/CM

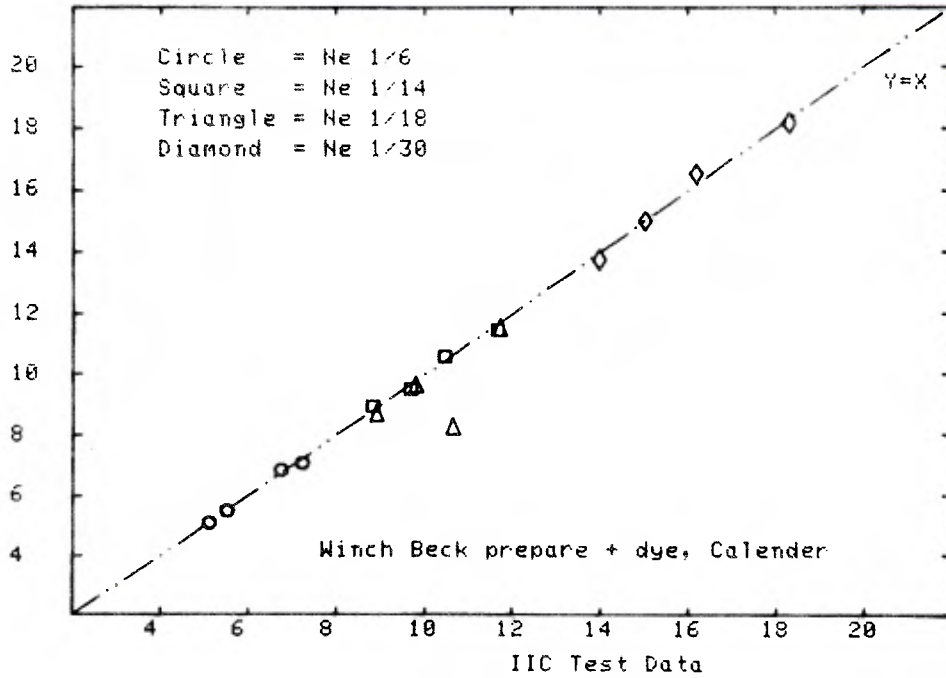
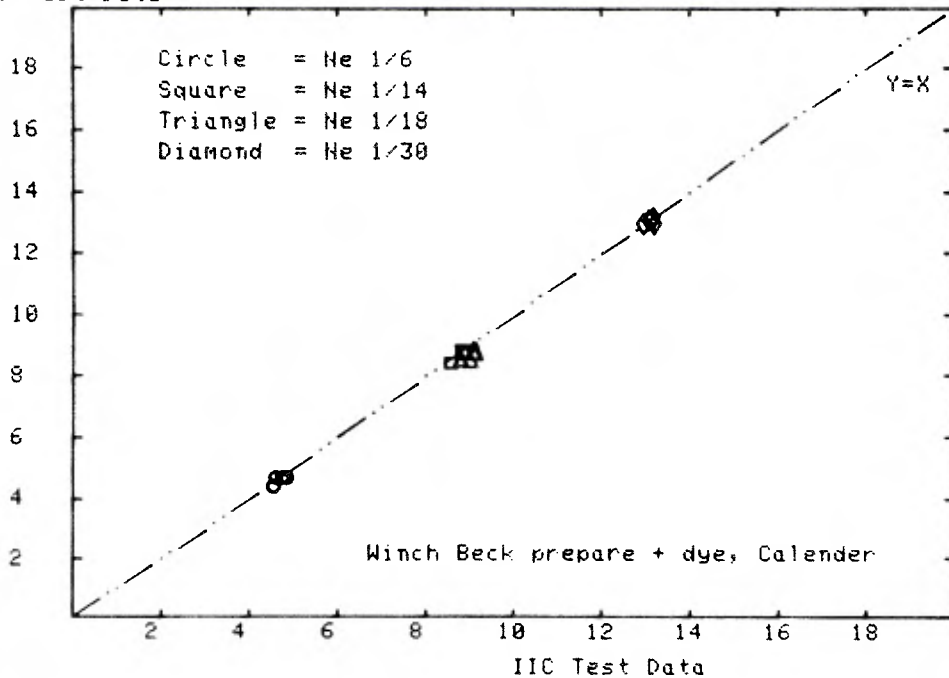


FIGURE A3/4

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

CI Test Data

WALES/CM



I I C / C I INTERLABORATORY COMPARISON

TABLE A3/3

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 1 : Set 1 : Winch Beck prepare + dye, Calender
IIC Test Data

Sample Ref. No.	Tex	SL cm	C/cm	W/cm	Wtgsa
A-1	93.9	0.6842	8.3	5.8	304.5
A-2	92.11	0.7172	7.92	5.57	292.8
A-3	94.77	0.7757	7.15	5.27	277.9
A-4	91.14	0.8051	6.77	5.3	263.6
mean	92.98				
sd	1.65				
B-1	40.63	0.4156	13.58	10.22	229.6
B-2	40.71	0.4372	12.67	9.87	216.8
B-3	41.05	0.4564	12.13	9.67	210.7
B-4	41.18	0.4795	11.52	9.37	204.2
mean	40.89				
sd	0.26				
C-1	32.44	0.3949	13.7	10.75	182.6
C-2	32.08	0.4152	12.85	10.6	177.8
C-3	31.84	0.4377	12.12	10.23	166.2
C-4	31.77	0.4622	11.27	10.08	160.4
mean	32.03				
sd	0.3				
D-1	19.59	0.2682	20.47	15.37	164.7
D-2	19.79	0.2844	18.68	14.95	158.8
D-3	19.78	0.2966	17.85	14.57	153
D-4	19.93	0.3083	16.95	14.38	148.7
mean	19.77				
sd	0.14				

TABLE A3/4

I I C / C I INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 1 : Set 1 : Winch Beck prepare + dye, Calender
CI Test Data

Sample Ref. No.	SL cm	C/cm	W/cm	Wtgsa
A-1	0.6988	7.99	5.91	301.8
A-2	0.7285	7.87	5.51	289.9
A-3	0.7887	7.89	5.47	278.7
A-4	0.8153	6.77	5.28	257.4
B-1	0.4122	13.31	10.04	226.2
B-2	0.4364	12.32	9.72	215.3
B-3	0.4552	11.81	9.49	210.2
B-4	0.4773	11.14	9.13	200.1
C-1	0.3917	13.39	10.59	179.4
C-2	0.415	12.52	10.55	172.9
C-3	0.4379	11.81	9.96	164.5
C-4	0.458	10.98	9.8	158.7
D-1	0.2659	20.08	15.39	166.2
D-2	0.2817	18.58	15.12	158
D-3	0.2939	17.48	14.57	153.3
D-4	0.3048	16.61	14.37	148.5

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

CI Test Data

STITCH LENGTH CM

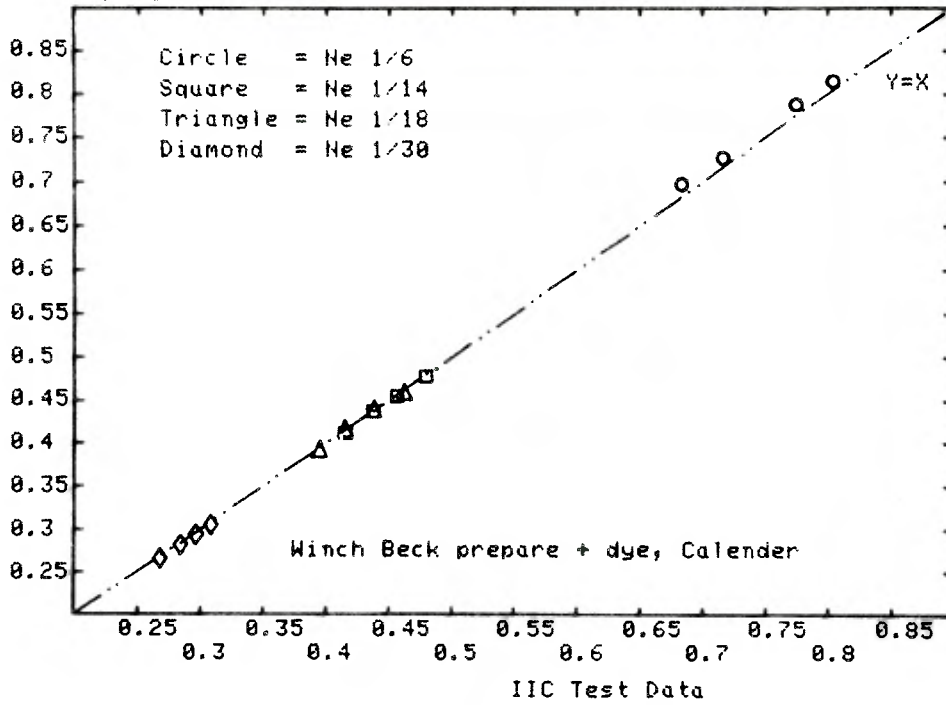
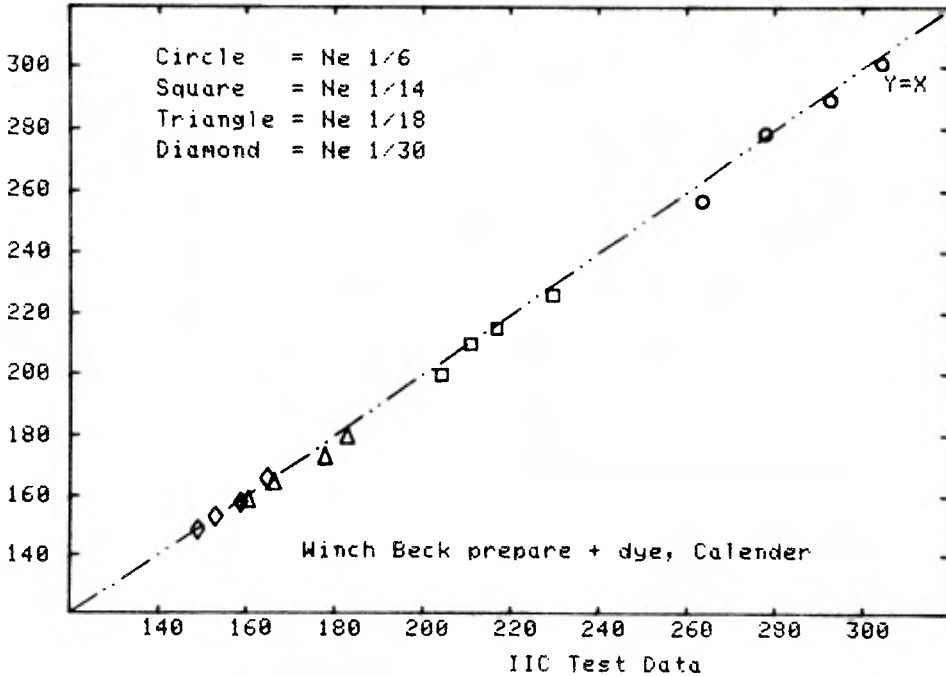


FIGURE A3/6

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

CI Test Data

MEASURED WEIGHT GSM



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

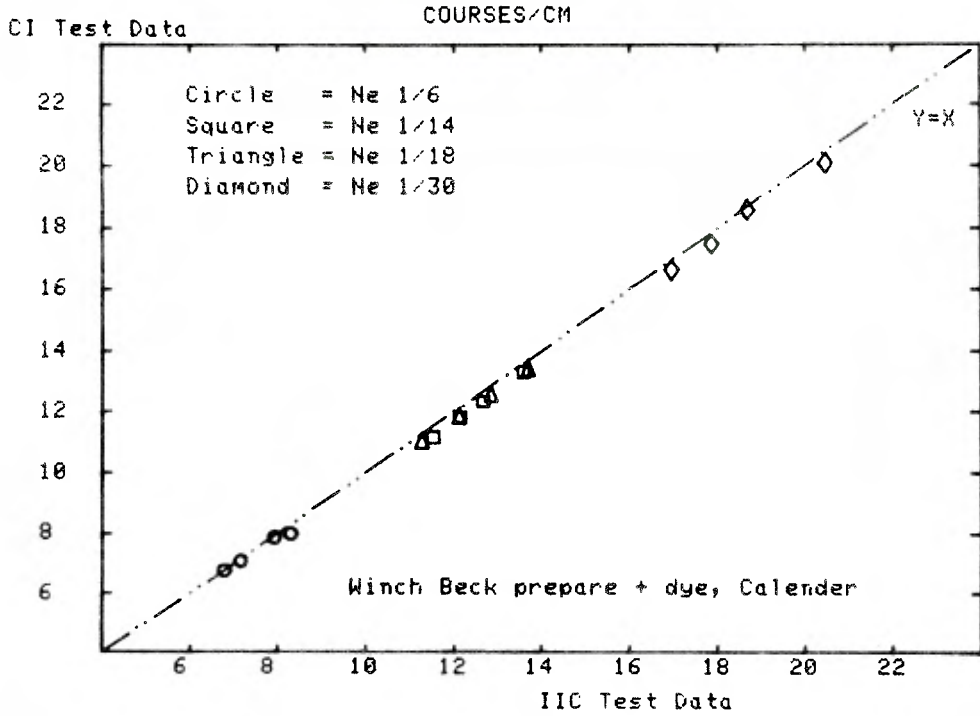
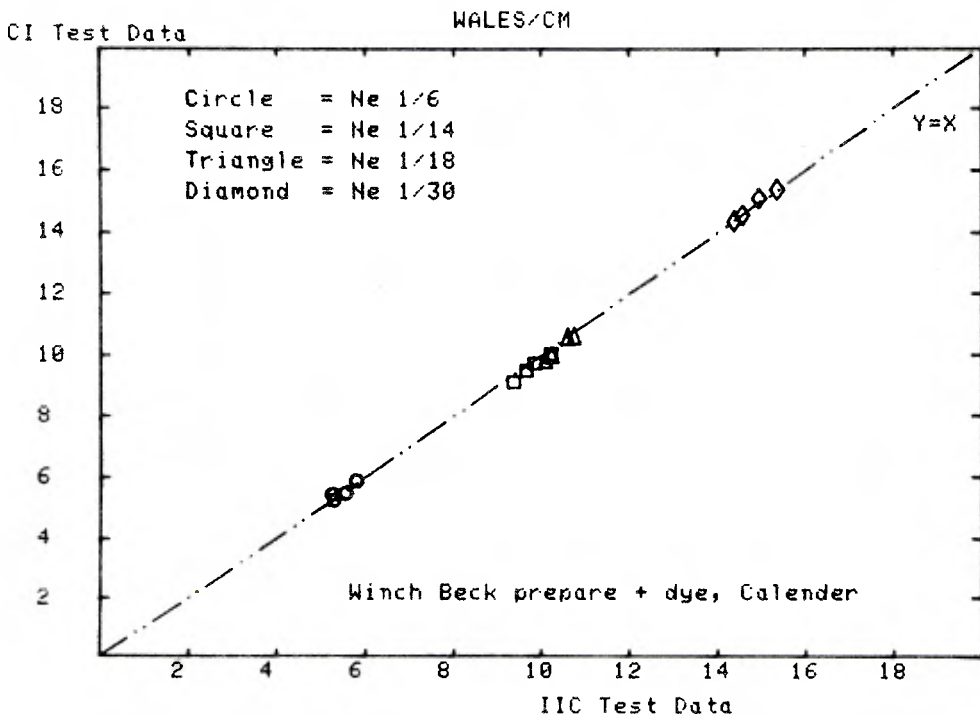


FIGURE A3/8

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE



I I C / C I INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 1 : Set 2 : Winch Beck prepare + dye, Compact
IIC Test Data

Sample Ref. No.	Tex	SL cm	C/cm	W/cm	Wtgs _m
A-1	93.29	0.691	8.53	4.27	237.4
A-2	92.47	0.7266	7.93	4.3	226.6
A-3	93.74	0.7819	6.48	4.3	209.5
A-4	91.17	0.8134	6.32	4.15	194.2
mean	92.67				
sd	1.13				
B-1	41.96	0.4172	12.75	8.58	186.8
B-2	40.75	0.4413	11.63	8.42	180.5
B-3	41.11	0.4611	10.85	8.45	175.1
B-4	41.06	0.4839	9.98	8.15	162.1
mean	41.22				
sd	0.52				
C-1	32.04	0.4002	12.55	8.75	141.5
C-2	32.21	0.4211	11.8	8.63	137.2
C-3	31.58	0.4421	11.05	8.47	128.1
C-4	31.64	0.4675	10	8.38	123.5
mean	31.87				
sd	0.31				
D-1	19.74	0.2717	20.03	12.95	140
D-2	19.81	0.2864	17.38	13.17	131.3
D-3	19.82	0.2988	16.5	13.03	123.1
D-4	20.02	0.3112	15.25	12.9	121.2
mean	19.86				
sd	0.12				

TABLE A3/6

I I C / C I INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 1 : Set 2 : Winch Beck prepare + dye, Compact
CI Test Data

Sample Ref. No.	SL cm	C/cm	W/cm	Wtgs _m
A-1	0.6937	8.62	4.21	235
A-2	0.7239	7.83	4.13	225.8
A-3	0.7887	6.46	4.33	210.6
A-4	0.8128	6.46	4.02	194.3
B-1	0.4191	12.64	8.58	186.5
B-2	0.4415	11.61	8.39	177.7
B-3	0.461	10.94	8.31	174.3
B-4	0.4862	10.04	8.19	163.4
C-1	0.4011	12.68	8.66	143.4
C-2	0.4196	11.69	8.46	140
C-3	0.444	10.75	8.39	129.2
C-4	0.4669	10.12	8.19	126.1
D-1	0.2713	20.31	12.72	139
D-2	0.286	17.72	13.03	132.2
D-3	0.2984	16.18	12.83	125.1
D-4	0.3145	15.04	12.8	121.4

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

FIGURE A3/9

CI Test Data

STITCH LENGTH CM

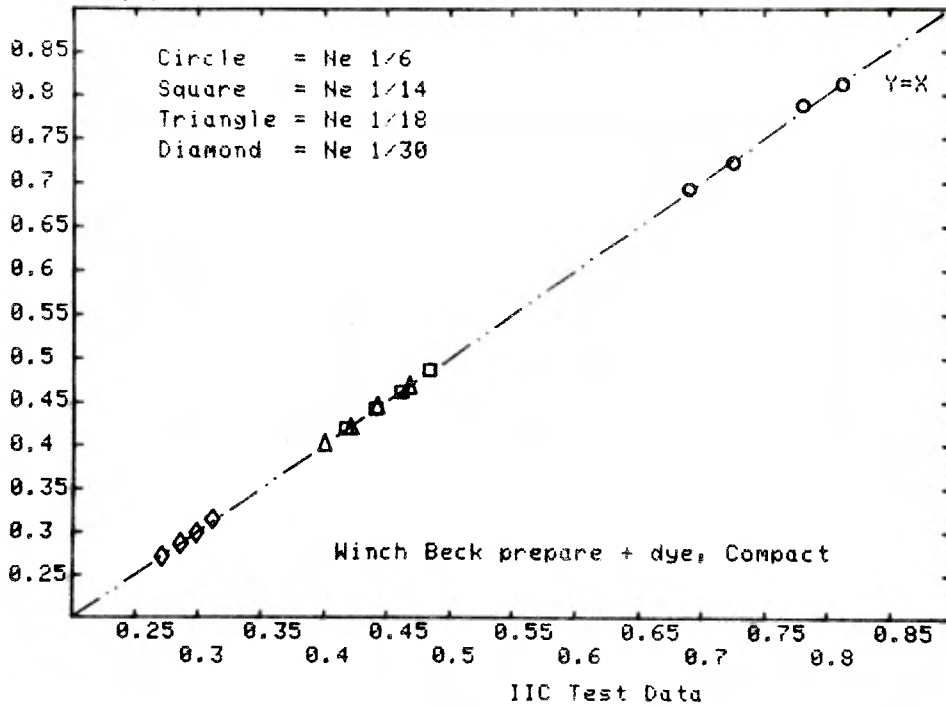
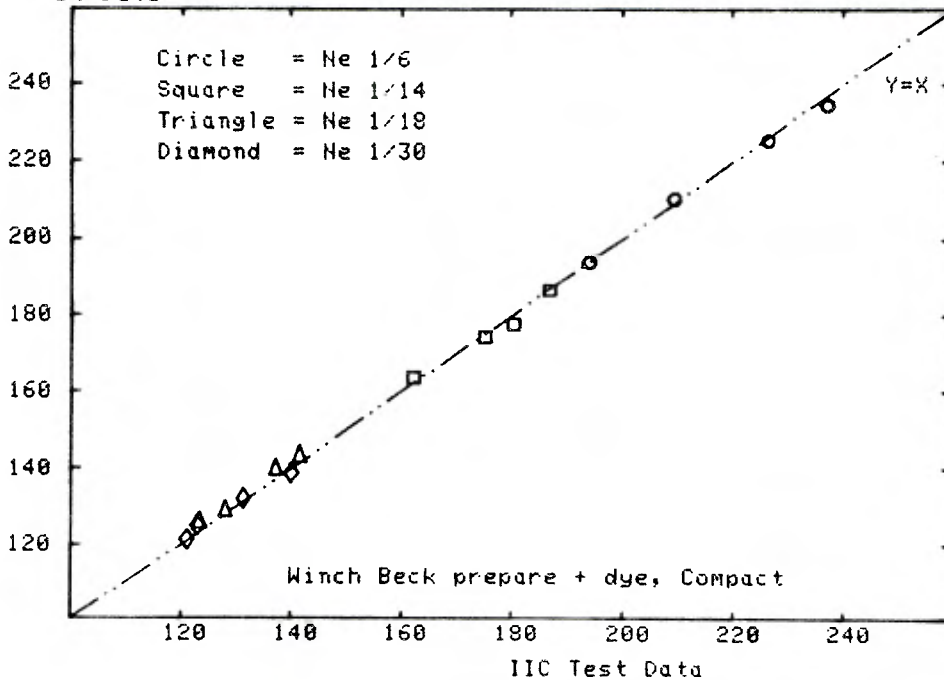


FIGURE A3/10

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

CI Test Data

MEASURED WEIGHT GSM



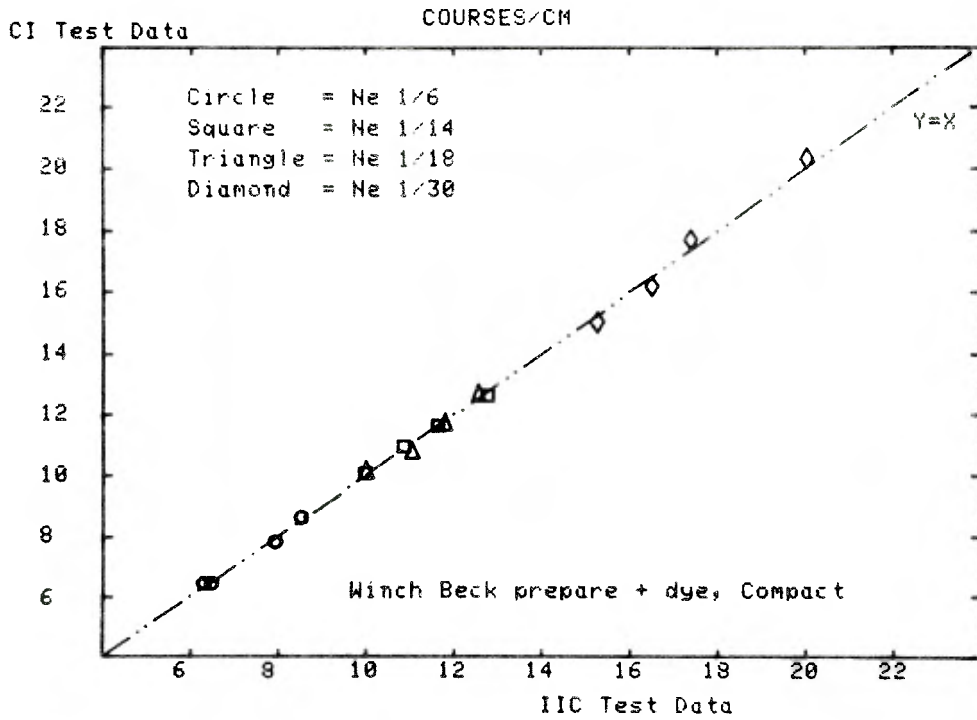
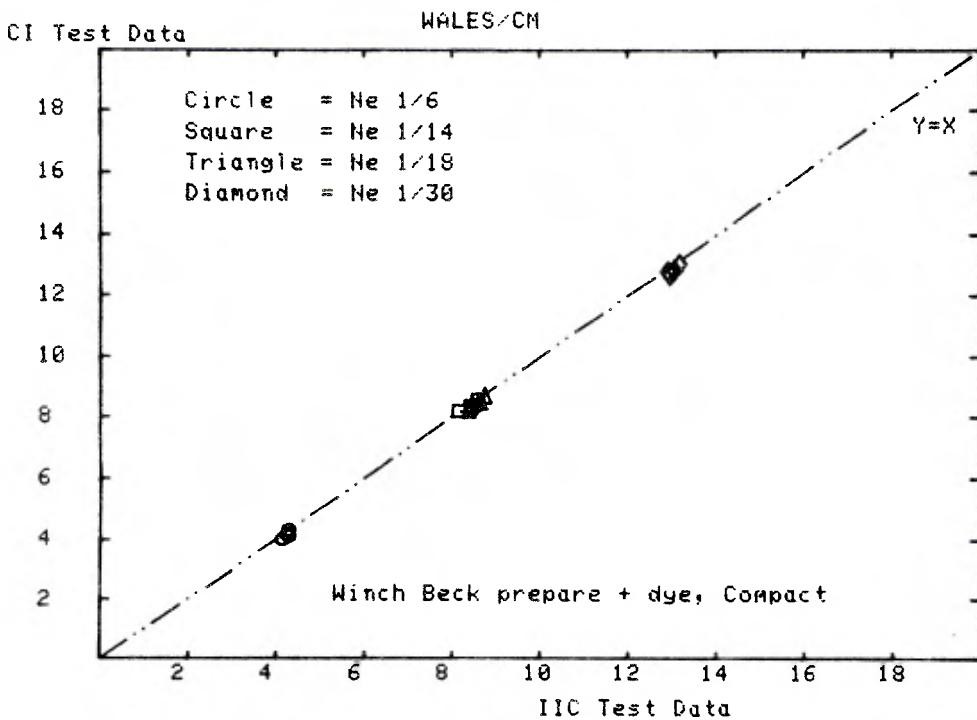


FIGURE A3/12



I I C / C I INTERLABORATORY COMPARISON

TABLE A3/7

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 1 : Set 2 : Winch Beck prepare + dye, Compact
IIC Test Data

Sample Ref. No.	Tex	SL cm	C/cm	W/cm	Wtgsa
A-1	94.38	0.6807	8.43	5.68	308.2
A-2	93.69	0.7149	7.98	5.5	297.8
A-3	93.62	0.7729	7.1	5.28	278.3
A-4	91.62	0.8011	6.9	5.08	261.3
mean	93.32				
sd	1.19				
B-1	41.19	0.4133	13.37	9.83	225.7
B-2	41.22	0.4375	12.6	9.45	218.4
B-3	41.74	0.4551	12	9.22	212.8
B-4	40.82	0.483	11.33	8.95	202.6
mean	41.24				
sd	0.38				
C-1	32.12	0.3973	13.58	10.48	181.3
C-2	32.01	0.4162	12.82	10.18	175.7
C-3	31.56	0.4397	12.13	9.93	165.7
C-4	31.72	0.4623	11.25	9.85	162.5
mean	31.85				
sd	0.26				
D-1	19.65	0.2698	20.47	15.23	166.5
D-2	19.65	0.2853	18.85	14.92	157.3
D-3	19.68	0.2971	17.65	14.4	152.3
D-4	20.03	0.3099	16.98	14.32	150
mean	19.75				
sd	0.19				

TABLE A3/8

I I C / C I INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 1 : Set 2 : Winch Beck prepare + dye, Compact
CI Test Data

Sample Ref. No.	SL cm	C/cm	W/cm	Wtgsa
A-1	0.696	8.19	5.87	302.8
A-2	0.7277	7.8	5.67	293.7
A-3	0.7892	7.09	5.51	278.4
A-4	0.8128	6.77	5.35	268.4
B-1	0.414	13.19	9.92	223.5
B-2	0.4293	12.32	9.8	216
B-3	0.4559	11.89	9.45	211.9
B-4	0.4846	11.02	9.17	201.8
C-1	0.3917	13.31	10.71	179
C-2	0.4092	12.6	10.43	172.9
C-3	0.4376	11.81	9.92	163.1
C-4	0.4585	10.83	9.92	158.7
D-1	0.2652	20.16	15.24	165.1
D-2	0.2885	18.46	15	159.4
D-3	0.2946	17.52	14.61	152.6
D-4	0.3038	16.57	14.37	147.5

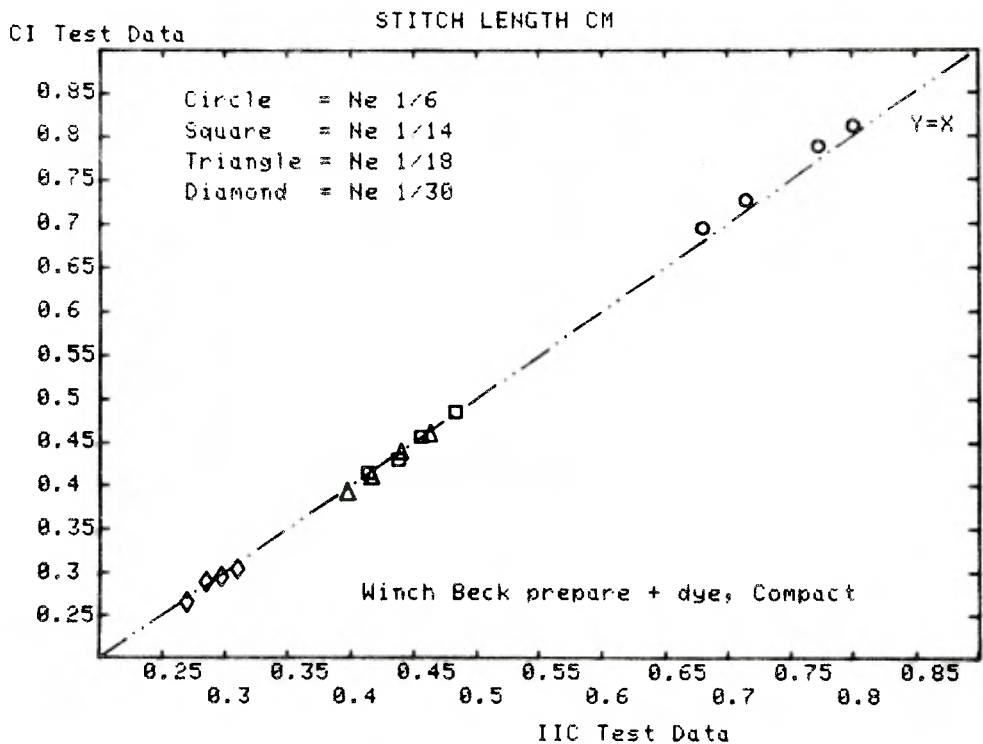
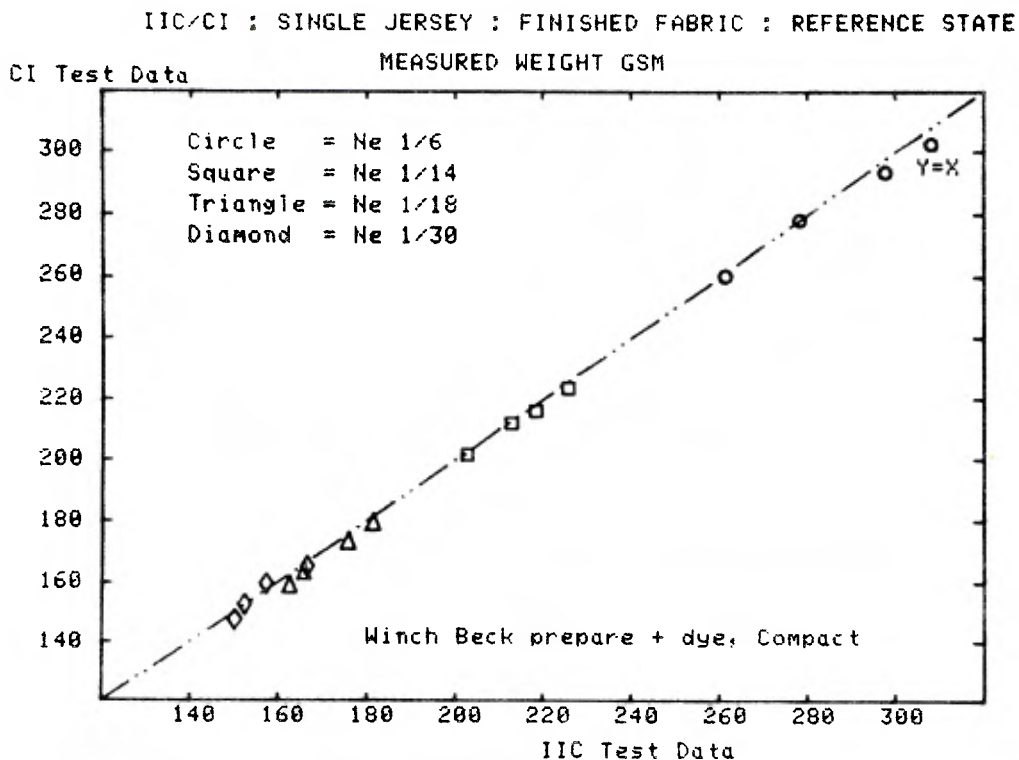


FIGURE A3/14



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

CI Test Data

COURSES/CM

FIGURE A3/15

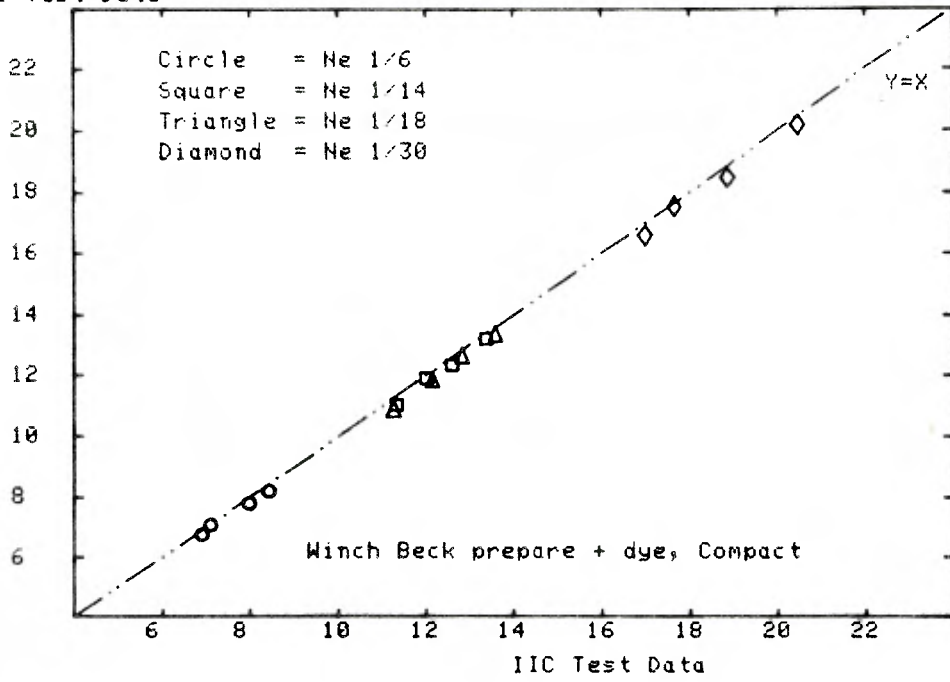
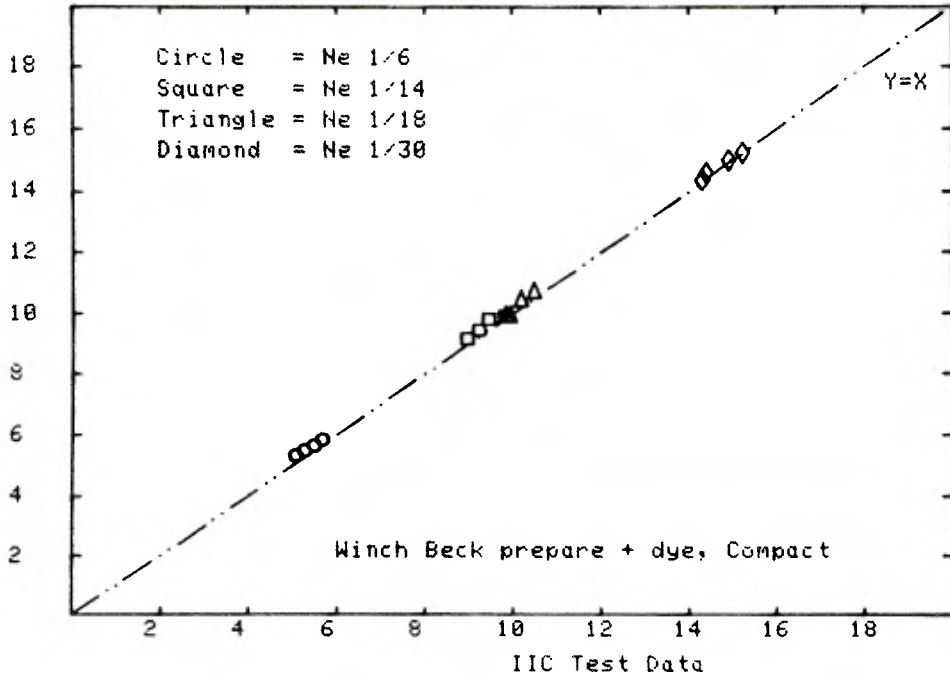


FIGURE A3/16

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

CI Test Data

WALES/CM



I I C / C I INTERLABORATORY COMPARISON

TABLE A3/9

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 1 : Set 3 : Winch Beck prepare + dye, Resin + Calender Finish
IIC Test Data

Sample Ref. No.	Tex	SL cm	C/cm	W/cm	Wtgs
A-1	98.15	0.6952	6.87	5	223.2
A-2	97.45	0.7276	6.39	4.88	218.2
A-3	98.97	0.7866	5.39	4.9	193.7
A-4	97.03	0.817	5.04	4.93	187.2
mean	97.9				
sd	0.85				
B-1	43.75	0.4179	10.9	8.92	177.9
B-2	43.6	0.4406	9.8	8.83	166.6
B-3	44.05	0.461	9.2	8.68	163.7
B-4	43.48	0.486	8.35	8.63	153.3
mean	43.72				
sd	0.25				
C-1	33.67	0.3884	11.27	9.58	135.2
C-2	32.8	0.4162	10.17	9.71	129.5
C-3	32.8	0.4373	9.37	9.47	123
C-4	34.21	0.4584	8.5	9.42	119.9
mean	33.37				
sd	0.69				
D-1	20.99	0.2716	17.53	13.48	133.3
D-2	21.26	0.2861	15.63	13.37	129.9
D-3	21.08	0.2991	14.32	13.4	122.2
D-4	21.2	0.3143	13.33	13.13	117.2
mean	21.13				
sd	0.12				

TABLE A3/10

I I C / C I INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 1 : Set 3 : Winch Beck prepare + dye, Resin + Calender Finish
CI Test Data

Sample Ref. No.	SL cm	C/cm	W/cm	Wtgs
A-1	0.7031	6.46	4.84	219.7
A-2	0.7277	6.3	4.72	208.5
A-3	0.7818	5.28	4.72	192.6
A-4	0.8136	5.12	4.72	183.5
B-1	0.4183	11.02	9.02	177
B-2	0.4394	9.88	8.94	166.2
B-3	0.4582	9.13	8.82	165.8
B-4	0.4856	8.35	8.74	155.6
C-1	0.4006	10.67	9.21	136
C-2	0.4196	9.88	9.06	128.9
C-3	0.4404	9.02	9.06	123.8
C-4	0.4656	8.23	9.02	119.4
D-1	0.269	17.24	13.7	136
D-2	0.2807	15.59	13.56	129.2
D-3	0.2979	14.21	13.46	122.1
D-4	0.3119	13.27	13.35	117.7

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

CI Test Data

STITCH LENGTH CM

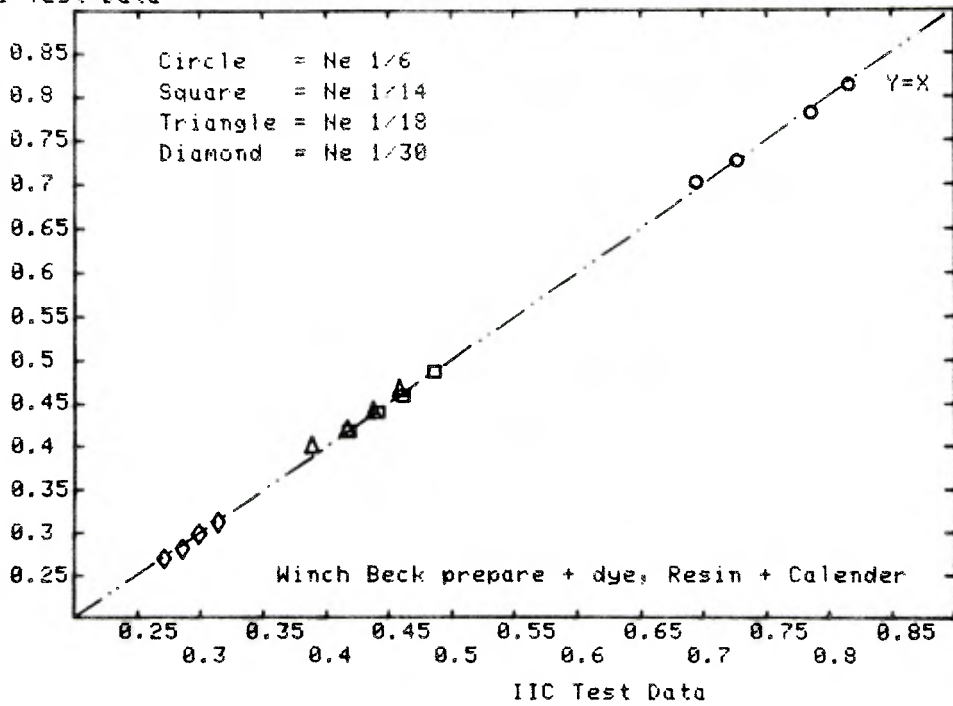
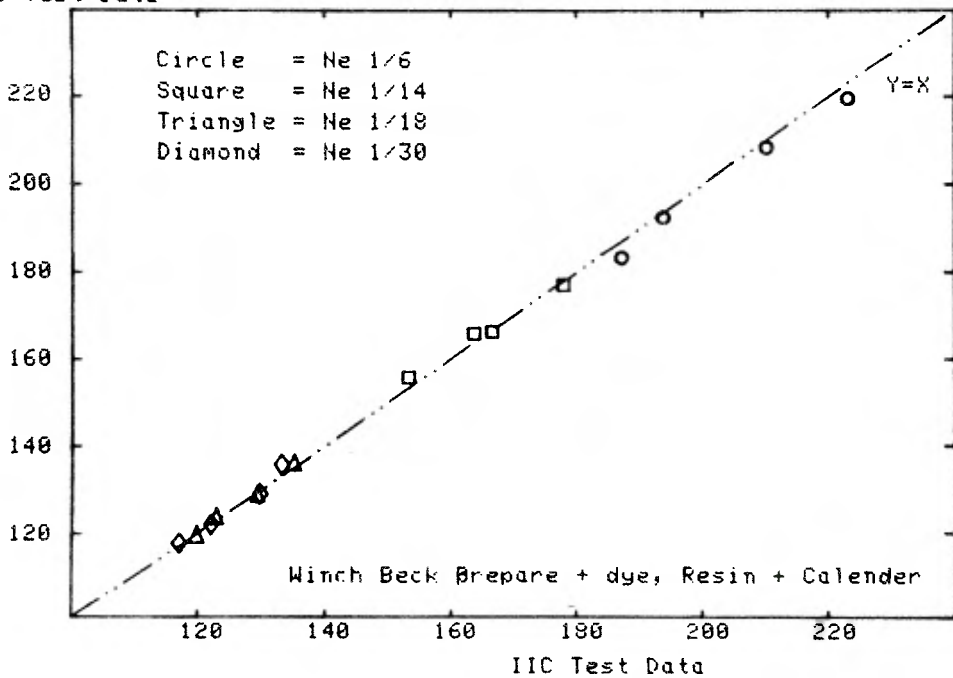


FIGURE A3/18

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

CI Test Data

MEASURED WEIGHT GSM



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

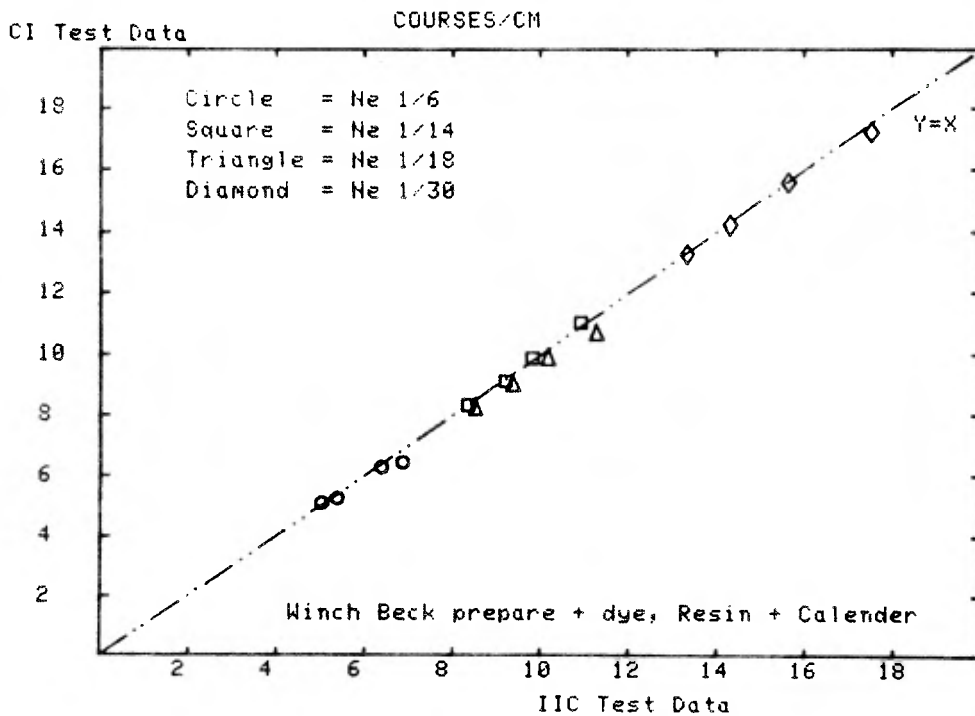
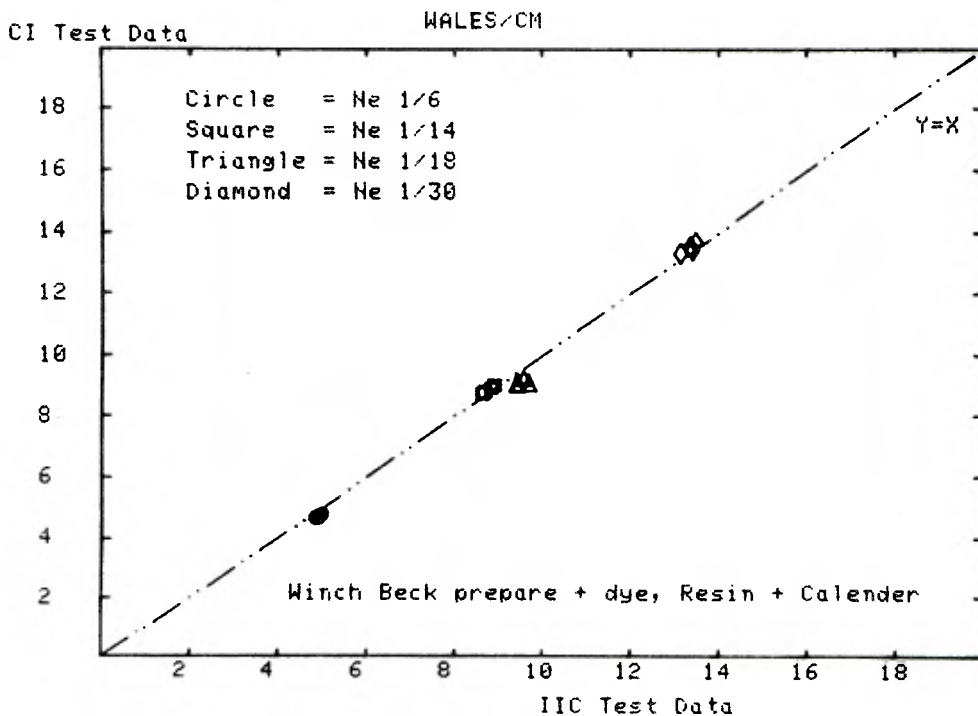


FIGURE A3/20

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED



I I C / C I INTERLABORATORY COMPARISON

TABLE A3/11

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 1 : Set 3 : Winch Beck prepare + dye, Resin + Calender Finish
IIC Test Data

Sample Ref. No.	Tex	SL cm	C/cm	W/cm	Wtgsa
A-1	95.53	0.6981	7.66	5.63	275.9
A-2	95.18	0.7282	7.13	5.51	257.5
A-3	95.17	0.7885	6.24	5.53	247.8
A-4	96	0.8148	5.78	5.52	231.1
mean	95.47				
sd	0.39				
B-1	42.33	0.4187	11.97	9.83	205
B-2	41.9	0.4416	10.82	9.7	191.7
B-3	42.96	0.4618	10.27	9.52	189.1
B-4	42.34	0.4881	9.58	9.4	177.7
mean	42.38				
sd	0.44				
C-1	32.96	0.3977	11.88	10.3	153.1
C-2	32.95	0.4024	10.93	10.25	148.8
C-3	33.09	0.439	10.85	10.88	141.5
C-4	33.36	0.4582	9.17	9.9	134.3
mean	33.09				
sd	0.19				
D-1	20.21	0.2785	18.35	14.62	147.1
D-2	20.6	0.2861	16.63	14.2	138.9
D-3	20.5	0.2992	15.42	14.88	133
D-4	20.42	0.3112	14.22	14	128.2
mean	20.43				
sd	0.16				

TABLE A3/12

I I C / C I INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 1 : Set 3 : Winch Beck prepare + dye, Resin + Calender Finish
CI Test Data

Sample Ref. No.	SL cm	C/cm	W/cm	Wtgsa
A-1	0.6955	7.68	5.83	285.2
A-2	0.7209	7.01	5.31	251.3
A-3	0.795	5.91	5.43	237.7
A-4	0.8217	5.67	5.35	224.5
B-1	0.4133	11.85	9.76	202.4
B-2	0.4374	10.83	9.65	192.3
B-3	0.4554	9.84	9.65	188.4
B-4	0.5014	9.37	9.25	177.7
C-1	0.3993	11.42	10.2	158.2
C-2	0.4079	10.67	9.88	144.1
C-3	0.4374	9.84	9.88	138.7
C-4	0.4651	8.98	9.72	131.9
D-1	0.2644	17.95	14.88	147.2
D-2	0.2817	16.38	14.33	137
D-3	0.2977	15.16	14.13	130.6
D-4	0.3043	14.17	14.13	127.2

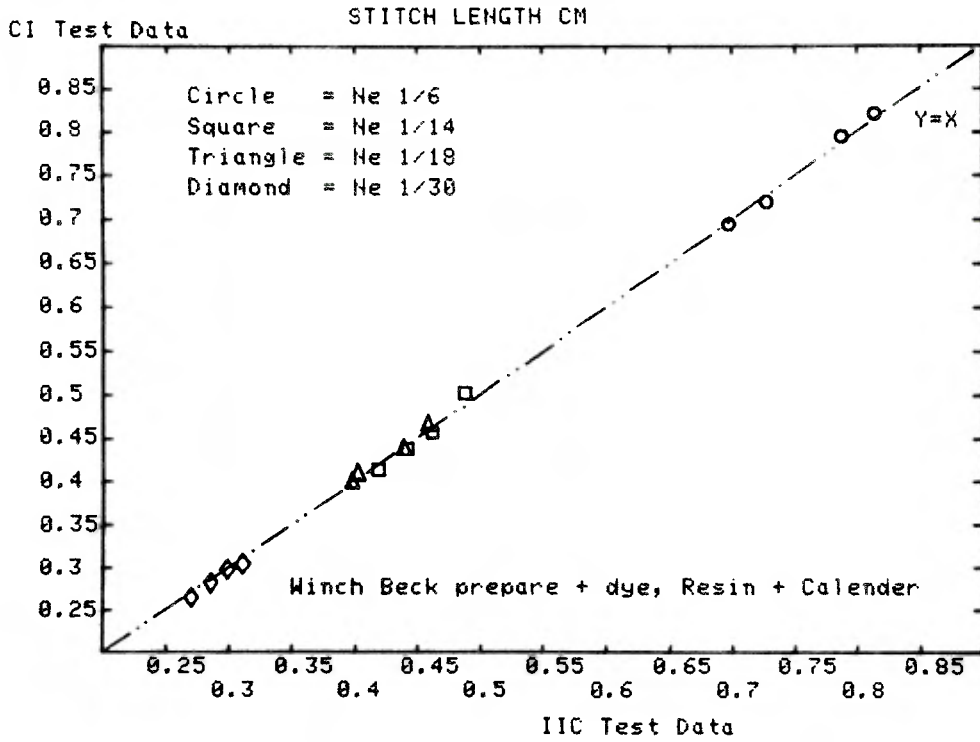
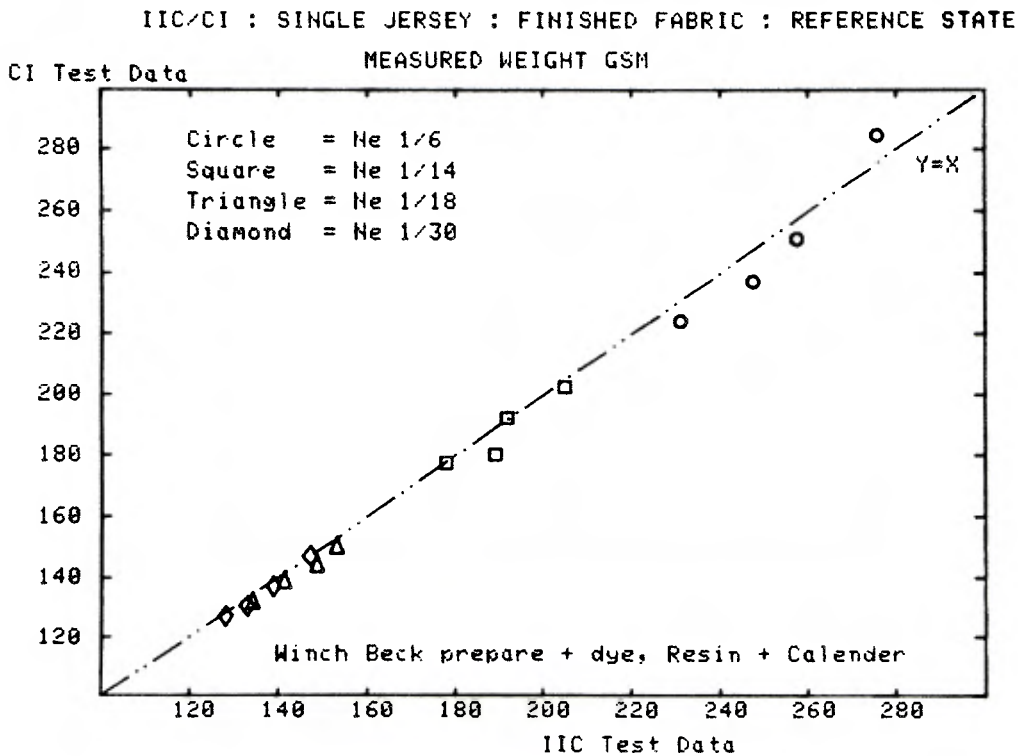


FIGURE A3/22



CI Test Data

COURSES/CM

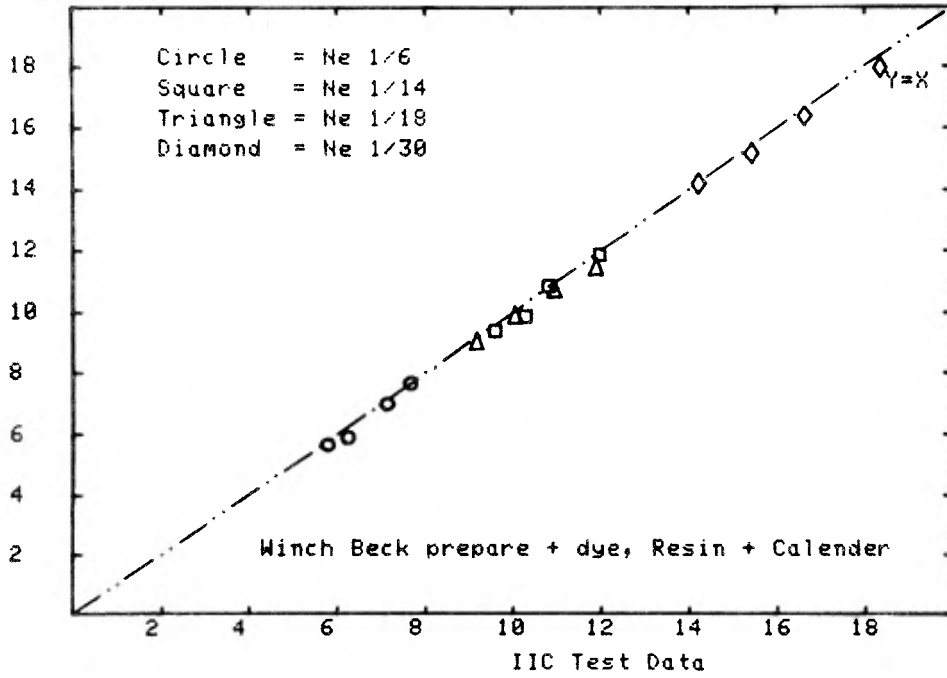
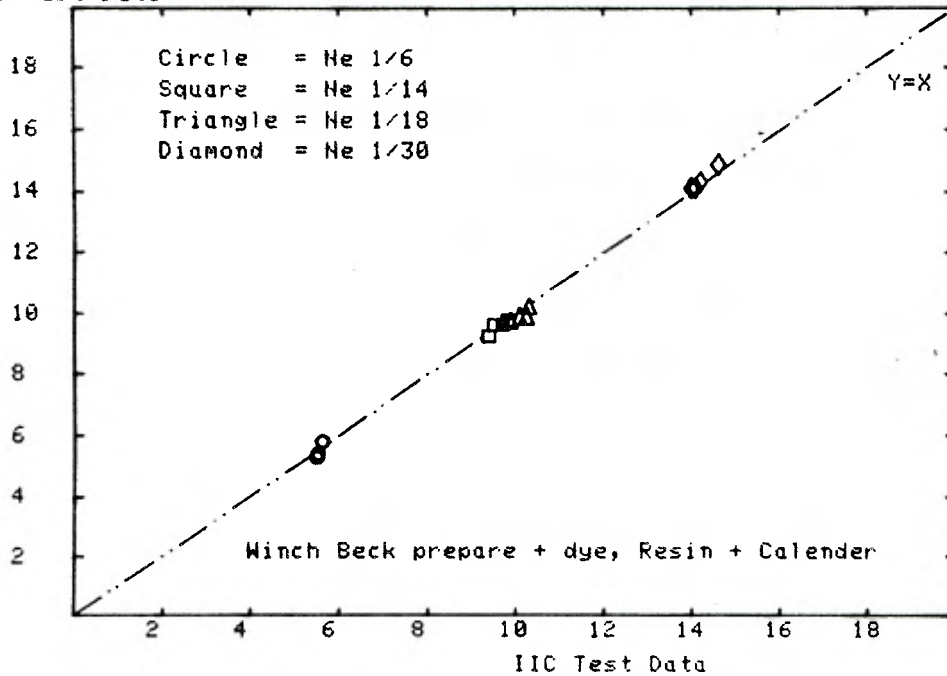


FIGURE A3/24

CI Test Data

WALES/CM



I I C / C I INTERLABORATORY COMPARISON

TABLE A3/13

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 1 : Set 4 : Winch Beck prepare + dye, Resin + Compact Finish
IIC Test Data

Sample Ref. No.	Tex	SL cm	C/cm	W/cm	Wtgs
A-1	97.9	0.6957	7.35	4.83	231.2
A-2	99.77	0.7177	6.77	4.82	222.3
A-3	99.02	0.7825	5.63	4.8	205.2
A-4	96.7	0.8134	5.22	4.87	195.7
mean	98.35				
sd	1.34				
B-1	43.63	0.4188	11.5	9.13	196.3
B-2	43.92	0.4404	10.28	9.02	185.5
B-3	44.75	0.4627	9.68	8.95	178.6
B-4	43.82	0.484	8.78	8.93	168.7
mean	44.83				
sd	0.5				
C-1	33.68	0.401	11.85	9.45	146.4
C-2	33.59	0.4201	10.58	9.43	139
C-3	33.65	0.4444	9.73	9.33	131.5
C-4	33.91	0.4678	8.82	9.33	127.8
mean	33.71				
sd	0.14				
D-1	20.93	0.2717	18.07	13.77	142.4
D-2	21.27	0.2864	16.07	13.72	135.8
D-3	21.04	0.2999	14.85	13.67	126.4
D-4	21.09	0.3114	13.62	13.43	121.3
mean	21.08				
sd	0.14				

TABLE A3/14

I I C / C I INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 1 : Set 4 : Winch Beck prepare + dye, Resin + Compact Finish
CI Test Data

Sample Ref. No.	SL cm	C/cm	W/cm	Wtgs
A-1	0.6955	7.44	4.72	233
A-2	0.7264	6.69	4.72	224.5
A-3	0.791	5.51	4.69	214.3
A-4	0.8115	5.16	4.65	199.4
B-1	0.4171	11.93	9.06	197
B-2	0.4376	10.67	9.09	186.8
B-3	0.458	9.84	9.02	180.1
B-4	0.4851	9.02	8.94	169.9
C-1	0.3965	11.77	9.33	147.5
C-2	0.4135	10.75	9.45	144.8
C-3	0.4295	9.88	9.17	135
C-4	0.4646	8.74	9.33	130.2
D-1	0.2687	18.31	13.9	143.8
D-2	0.285	16.3	13.86	136
D-3	0.2972	14.92	13.78	130.9
D-4	0.3109	13.74	13.39	124.1

CI Test Data

STITCH LENGTH CM

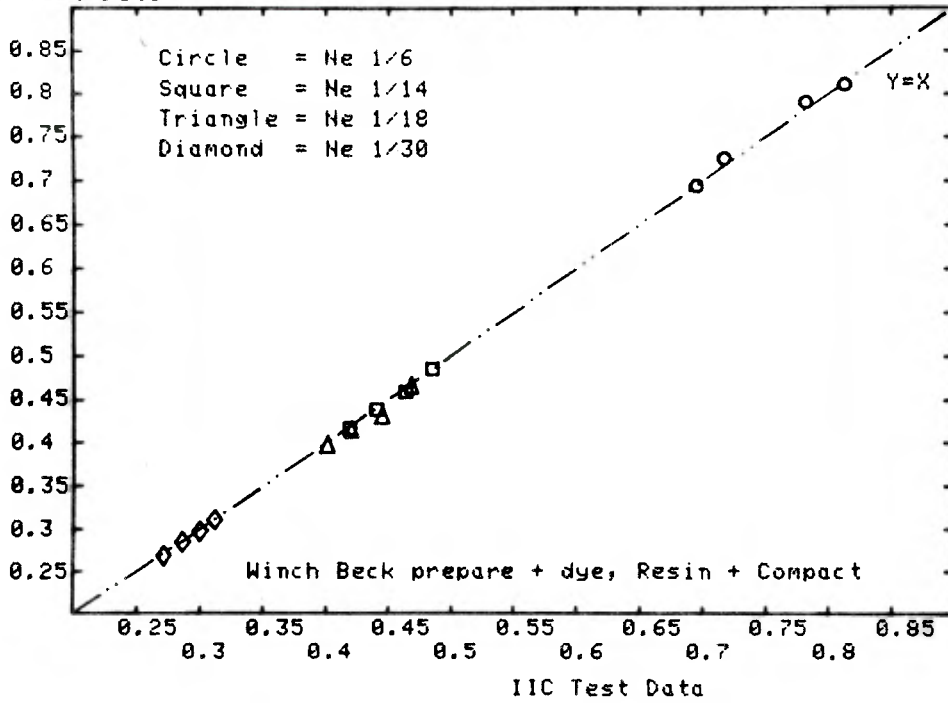
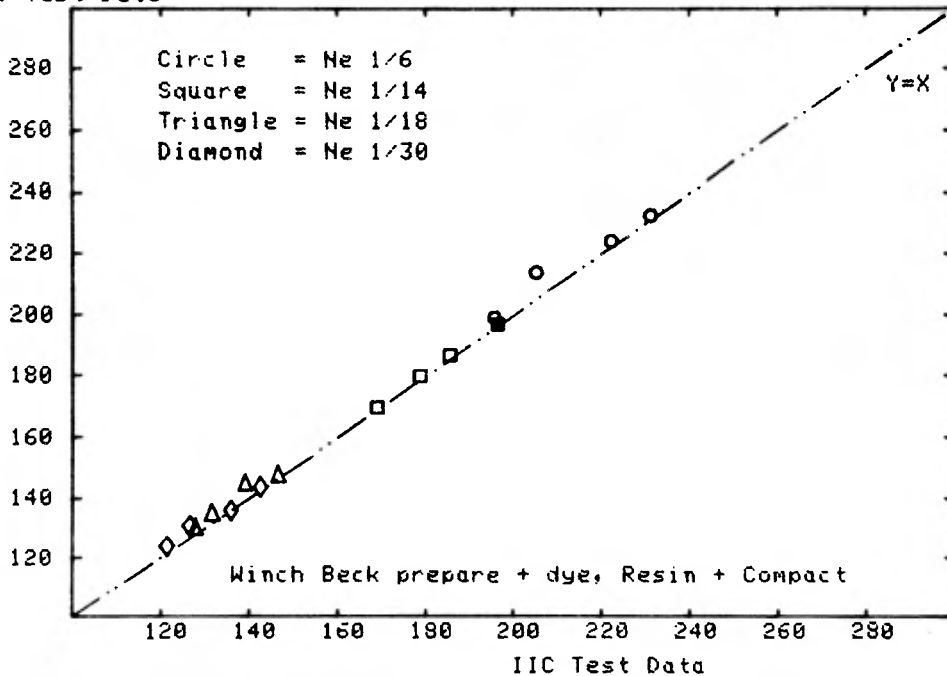


FIGURE A3/26

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

MEASURED WEIGHT GSM

CI Test Data



CI Test Data

COURSES/CM

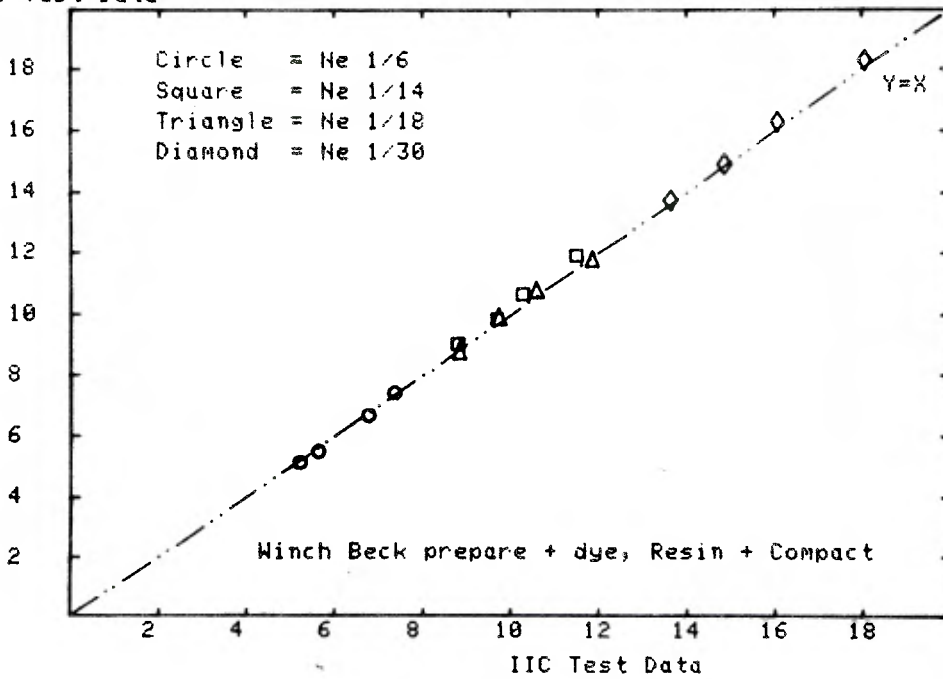
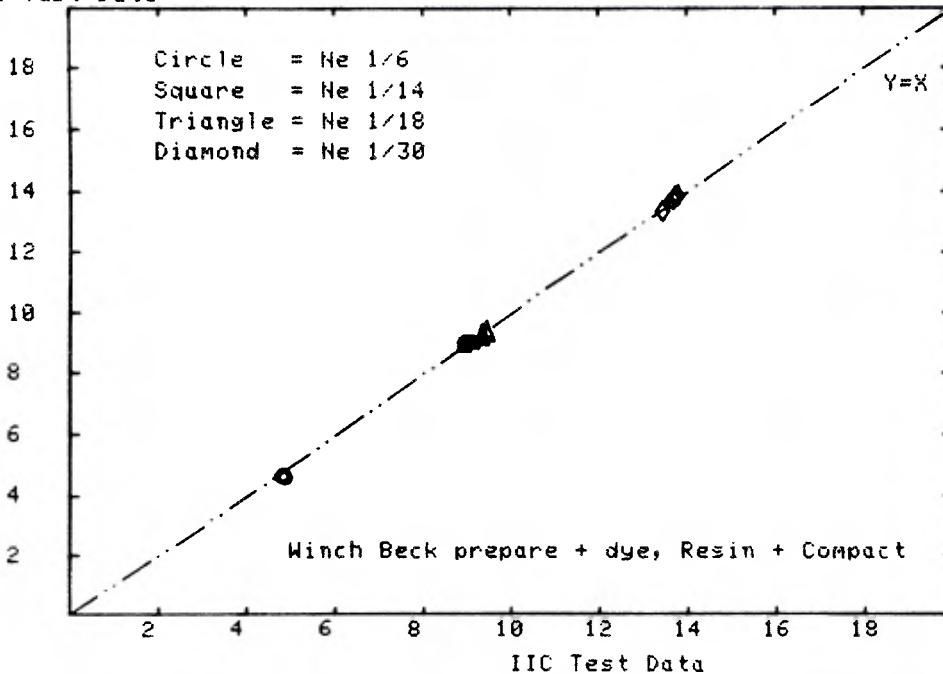


FIGURE A3/28

CI Test Data

WALES/CM



I I C / C I INTERLABORATORY COMPARISON

TABLE A3/15

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 1 : Set 4 : Winch Beck prepare + dye, Resin + Compact Finish
IIC Test Data

Sample Ref. No.	Ten	SL cm	C/cm	W/cm	Wtgs
A-1	97.14	0.6918	7.55	5.3	274.3
A-2	96.33	0.7309	7.07	5.27	260.7
A-3	96.21	0.7897	6.1	5.23	245.8
A-4	94.75	0.8164	5.63	5.3	235
mean	96.11				
sd	1				
B-1	42.1	0.4175	12.12	9.67	206.1
B-2	42.79	0.4402	10.95	9.58	194.7
B-3	42.58	0.4608	10.28	9.33	189.6
B-4	42.68	0.4867	9.37	9.3	177.7
mean	42.54				
sd	0.31				
C-1	33.09	0.4012	12.15	10.13	157.7
C-2	32.8	0.4208	11.13	10.18	152.5
C-3	33	0.443	10.23	10.06	144.1
C-4	33.3	0.4679	9.4	10.05	139.9
mean	33.05				
sd	0.21				
D-1	20.26	0.2715	18.68	14.5	147.8
D-2	20.32	0.2872	16.55	14.38	138.7
D-3	20.5	0.2986	15.32	14.15	133.7
D-4	20.96	0.3112	14.42	14.18	127.8
mean	20.51				
sd	0.32				

I I C / C I INTERLABORATORY COMPARISON

TABLE A3/16

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 1 : Set 4 : Winch Beck prepare + dye, Resin + Compact Finish
CI Test Data

Sample Ref. No.	SL cm	C/cm	W/cm	Wtgs
A-1	0.6921	7.48	5.43	263.1
A-2	0.7234	7.05	5.24	252
A-3	0.7887	6.06	5.31	238
A-4	0.7988	5.59	5.28	224.5
B-1	0.4143	12.13	9.69	204.5
B-2	0.4394	10.87	9.61	193.6
B-3	0.4524	10.24	9.61	187.2
B-4	0.4785	9.41	9.25	176
C-1	0.3965	11.77	9.92	150.6
C-2	0.4135	10.75	9.88	144.1
C-3	0.445	9.92	9.76	137.3
C-4	0.4608	9.09	9.76	133.6
D-1	0.2662	18.39	14.72	148.5
D-2	0.2847	16.81	14.29	136.7
D-3	0.2949	15.2	14.33	131.9
D-4	0.304	14.13	14.06	127.5

CI Test Data

STITCH LENGTH CM

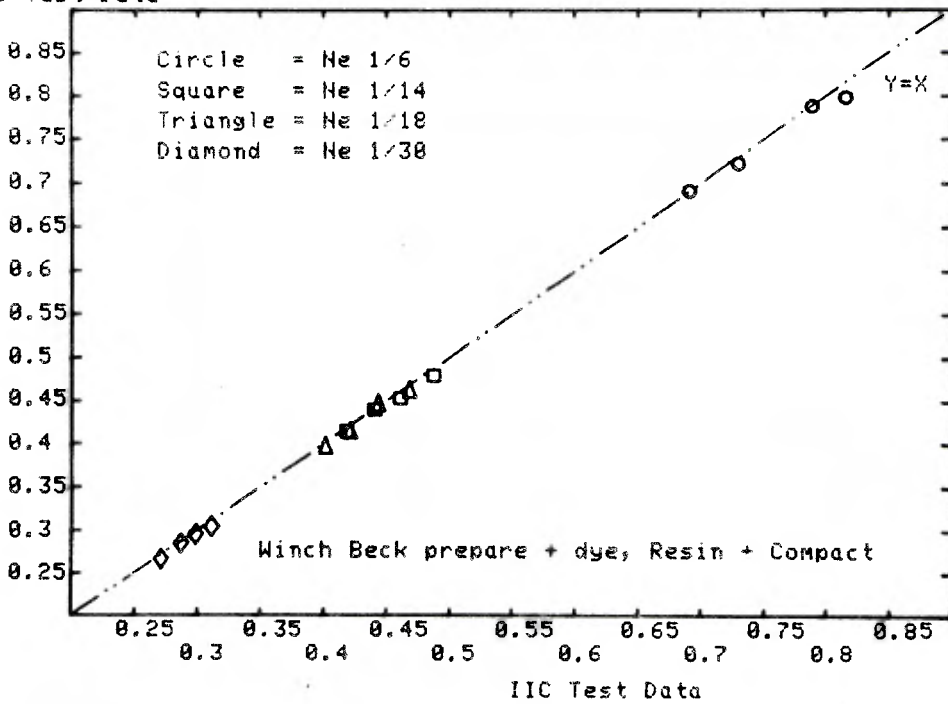
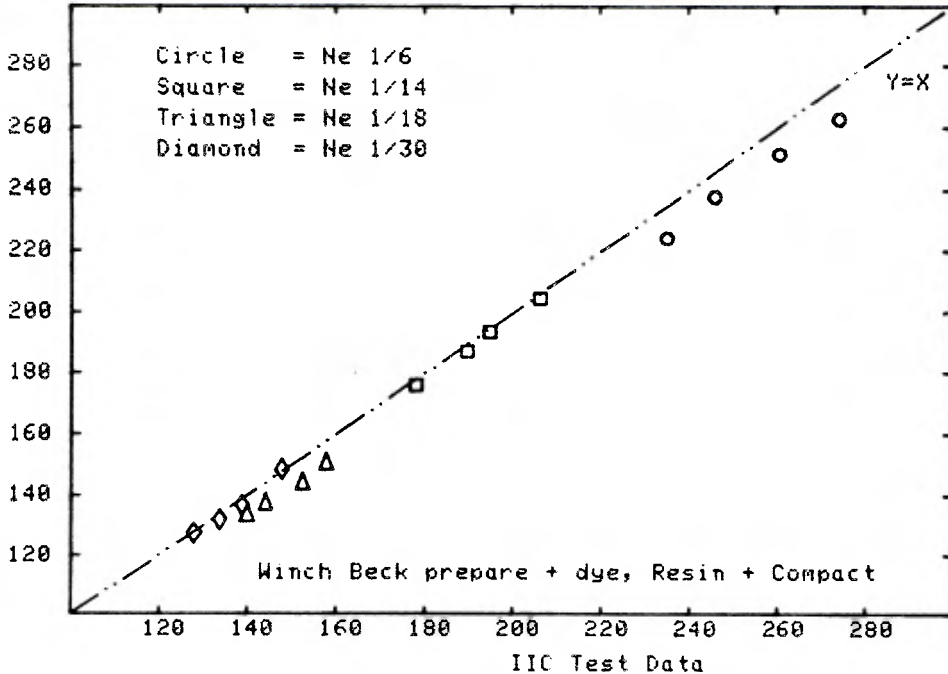


FIGURE A3/30

CI Test Data

MEASURED WEIGHT GSM



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

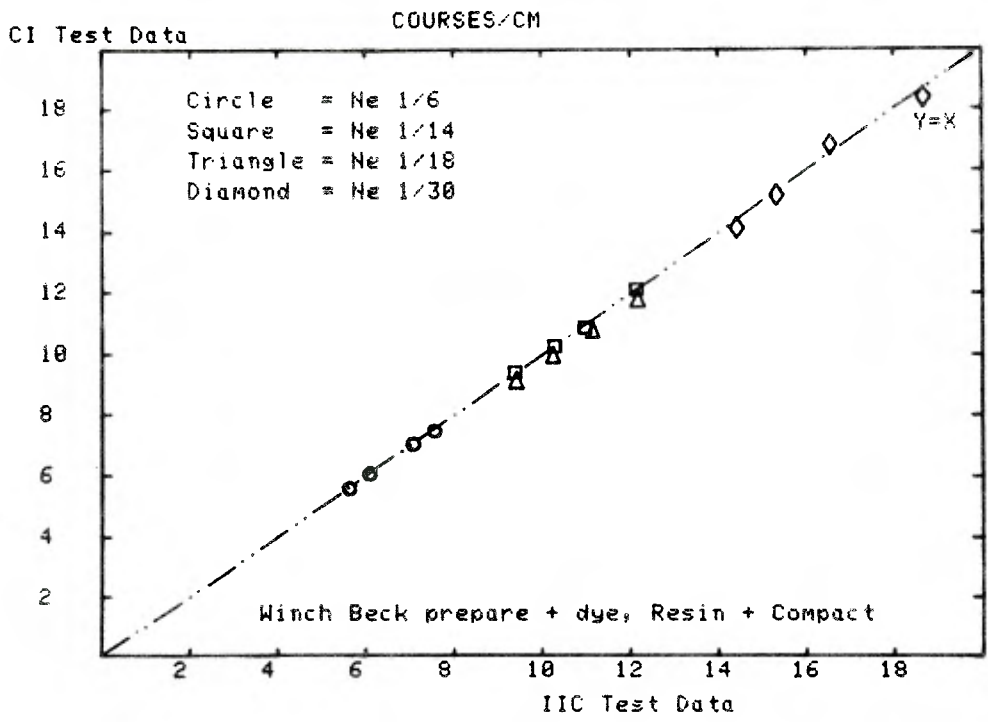
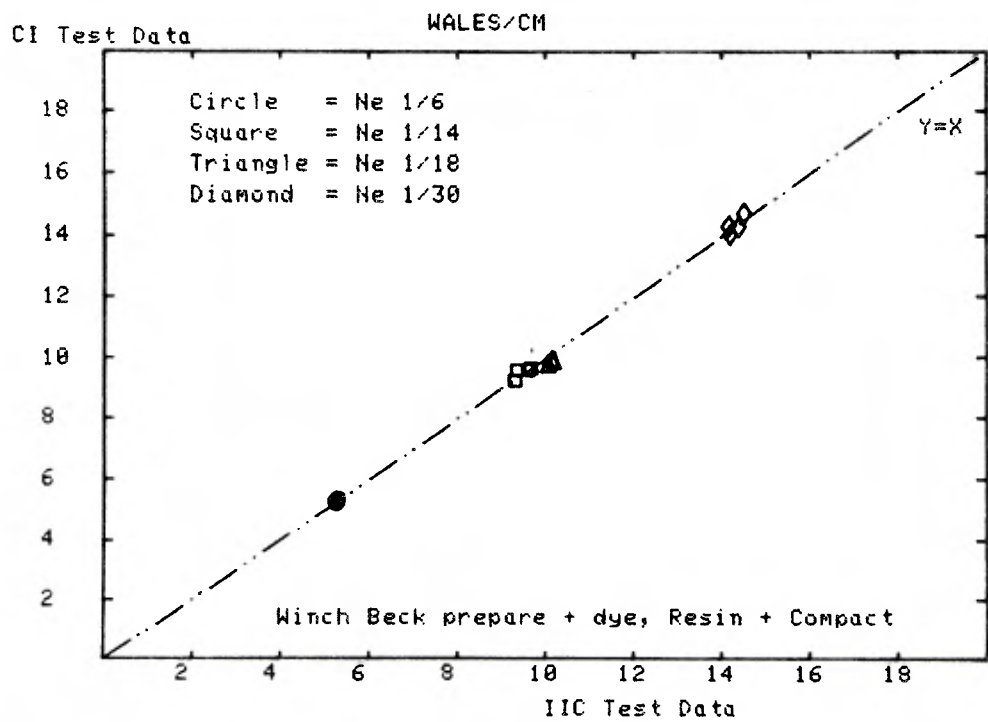


FIGURE A3/32

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE



A P P E N D I X 4

FINISHED FABRIC

Route 2 : Argathen Prepare; Winch Beck Dye

Set 1 Calender

Before Wash

Tables A4/1, A4/2

Figures A4/1 to A4/4

Reference State

Tables A4/3, A4/4

Figures A4/5 to A4/8

Set 2 Compact

Before Wash

Tables A4/5, A4/6

Figures A4/9 to A4/12

Reference State

Tables A4/7, A4/8

Figures A4/13 to A4/16

Set 3 Resin, Calender

Before Wash

Tables A4/9, A4/10

Figures A4/17 to A4/20

Reference State

Tables A4/11, A4/12

Figures A4/21 to A4/24

Set 4 Resin, Compact

Before Wash

Tables A4/13, A4/14

Figures A4/25 to A4/28

Reference State

Tables A4/15, A4/16

Figures A4/29 to A4/32

IIC/CI INTERLABORATORY COMPARISON

TABLE A4/1

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 2 : Set 1 : Argathen prepare, Winch Beck Dye, Calender
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wtgsm
A-1	91.6	0.7032	6.72	4.86	217.26
A-2	92.24	0.7321	6.27	5	213.93
A-3	93.19	0.7901	5.5	4.77	202.34
A-4	91.36	0.8151	5.28	4.77	189.32
mean	92.1				
sd	0.82				
B-1	40.72	0.4176	11.1	9.25	169.14
B-2	39.67	0.4349	9.6	9.37	157.51
B-3	41.43	0.4559	9.38	9.12	153.93
B-4	40.85	0.472	8.58	9.07	144.6
mean	40.67				
sd	0.74				
C-1	32.15	0.4002	11.23	9.38	131.69
C-2	32.31	0.4202	10.83	8.98	131.85
C-3	32.36	0.4423	9.67	8.95	122.34
C-4	31.93	0.4667	8.78	8.85	115.31
mean	32.19				
sd	0.19				
D-1	19.82	0.2711	17.38	13.65	127.3
D-2	19.95	0.2866	15.57	13.23	117.17
D-3	n.a.	n.a.	n.a.	n.a.	n.a.
D-4	19.76	0.3111	13.67	12.95	114.58
mean	19.84				
sd	0.1				

TABLE A4/2

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 2 : Set 1 : Argathen prepare, Winch Beck Dye, Calender
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wtgsm
A-1	0.6998	6.54	4.8	199.05
A-2	0.7264	6.38	4.72	202.1
A-3	0.7874	5.24	4.84	182.1
A-4	0.8169	5.12	4.76	175.31
B-1	0.4094	10.63	9.02	161.07
B-2	0.4397	9.57	8.7	153.95
B-3	0.461	8.66	8.78	148.86
B-4	0.4826	8.27	8.78	143.78
C-1	0.3978	10.98	8.9	125.47
C-2	0.4183	10.59	8.94	128.86
C-3	0.4397	9.06	8.98	115.29
C-4	0.4669	8.5	8.62	109.87
D-1	0.2708	16.65	13.39	118.68
D-2	0.286	15.28	13.11	114.62
D-3	n.a.	n.a.	n.a.	n.a.
D-4	0.3104	13.46	12.95	109.53

CI Test Data

STITCH LENGTH cm

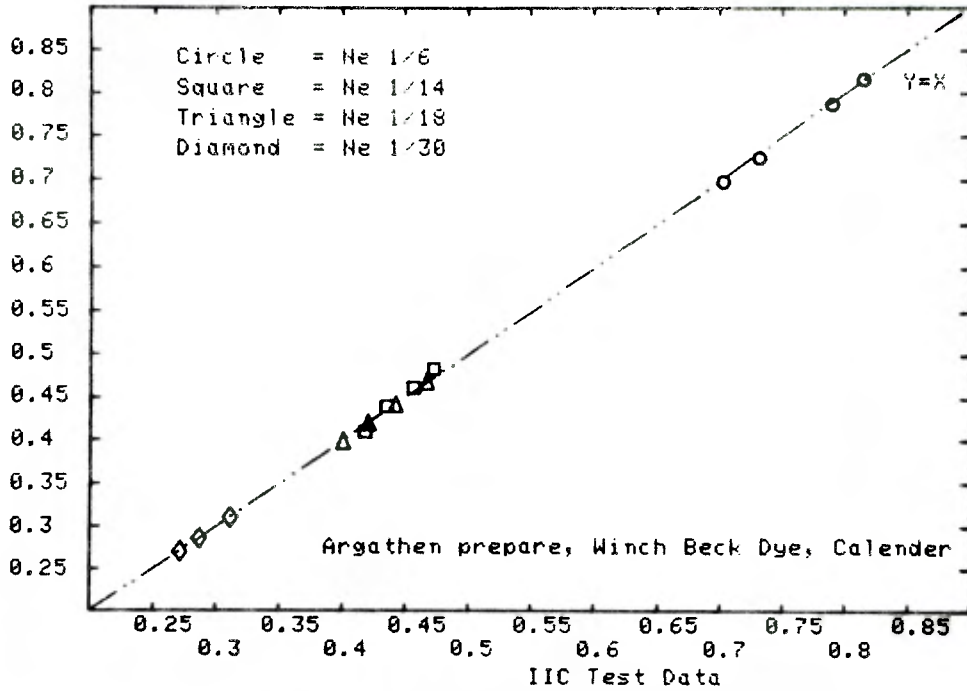
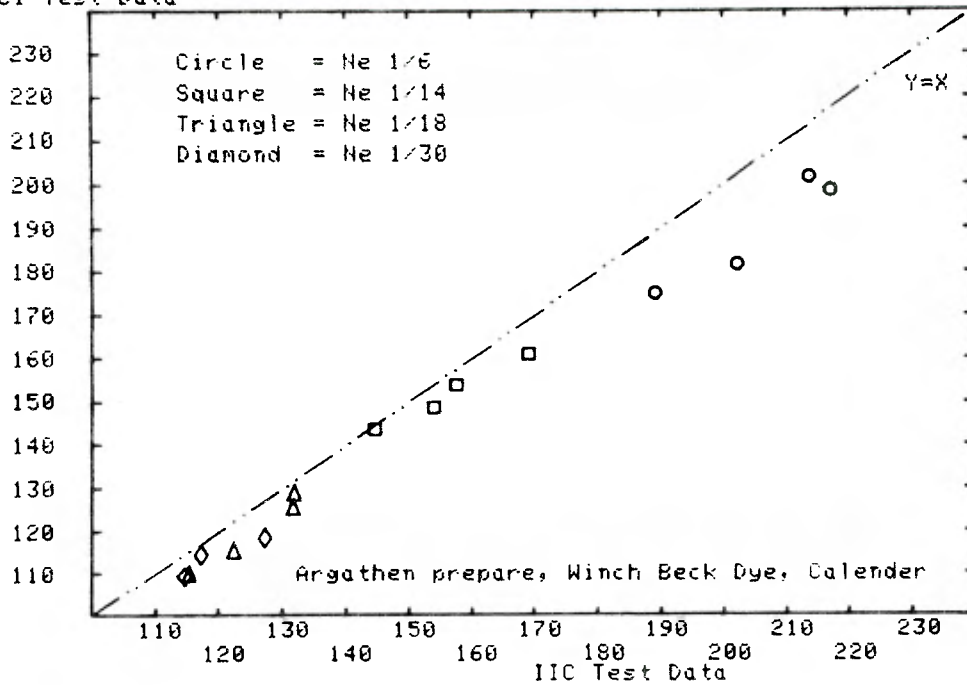


FIGURE A4/2

CI Test Data

MEASURED WEIGHT gsm



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

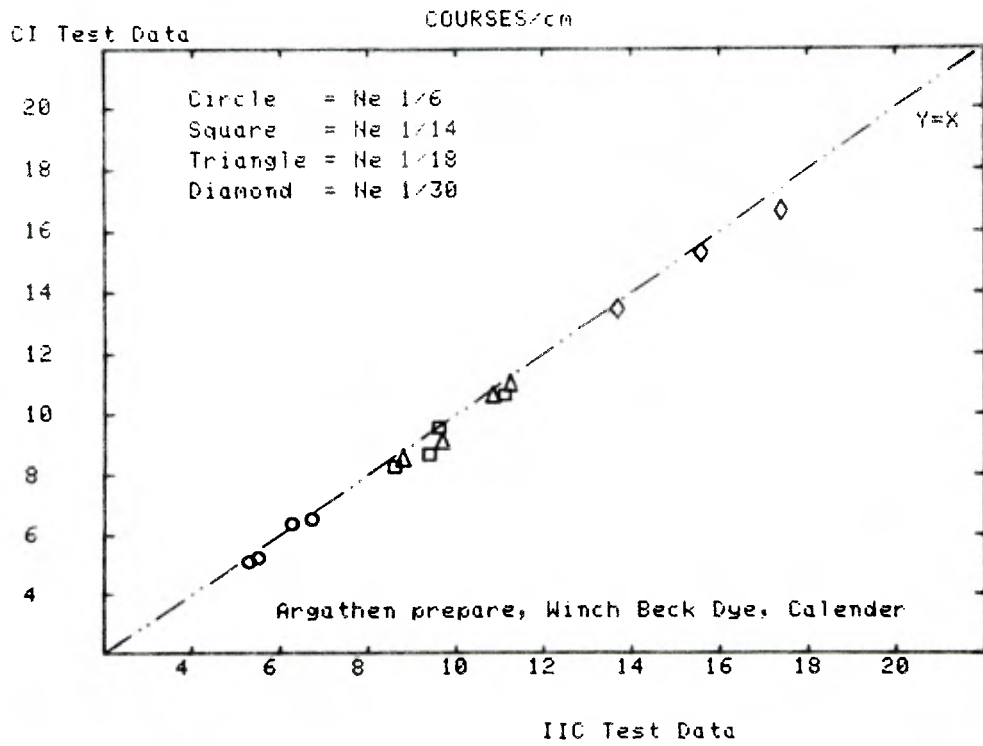


FIGURE A4/3

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

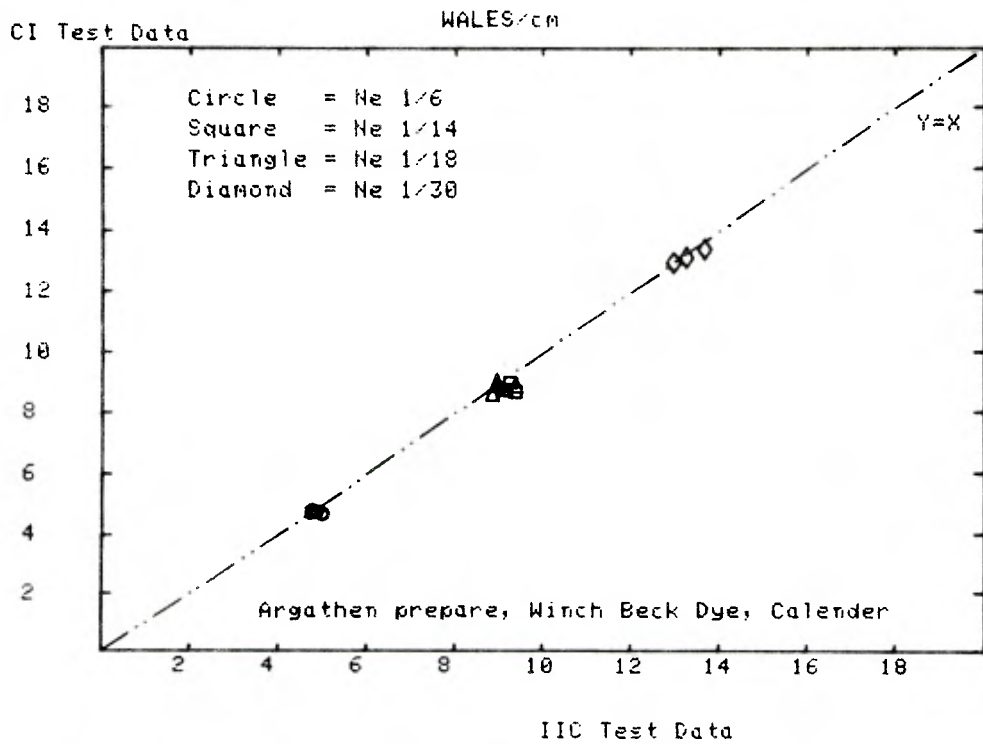


FIGURE A4/4

I I C / C I INTERLABORATORY COMPARISON

TABLE A4/3

SINGLE JERSEY : STARFISH DATABASE EXPANSION
 RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 1 : Set 1 : Argathen prepare, Winch Beck Dye, Calender
 IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wtgsa
A-1	92.95	0.6928	8.2	5.82	299.44
A-2	92.4	0.7208	7.78	5.58	291.75
A-3	93.76	0.7818	7.2	5.3	270.1
A-4	89.9	0.8075	6.92	5.17	256.81
mean	92.25				
sd	1.66				
B-1	40.89	0.4142	13.05	10.2	227.03
B-2	40.28	0.4368	12.28	9.9	211.65
B-3	40.93	0.4577	11.77	9.72	206.11
B-4	41.94	0.4795	11.13	9.37	199.95
mean	41.01				
sd	0.69				
C-1	32.17	0.398	13.32	10.95	180.26
C-2	32.26	0.4159	12.48	10.58	174.74
C-3	32.27	0.4374	11.72	10.5	170.37
C-4	31.93	0.4611	10.91	10.09	158.82
mean	32.16				
sd	0.16				
D-1	19.89	0.2668	19.77	15.62	166.12
D-2	19.58	0.283	18.08	15.12	157.91
D-3	n.a.	n.a.	n.a.	n.a.	n.a.
D-4	19.75	0.3075	16.43	14.45	147.4
mean	19.74				
sd	0.15				

TABLE A4/4

I I C / C I INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
 RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 2 : Set 1 : Argathen prepare, Winch Beck Dye, Calender
 Ci Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wtgsa
A-1	0.6998	7.87	5.91	301.12
A-2	0.729	7.56	5.75	289.59
A-3	0.7882	6.97	5.35	269.92
A-4	0.8219	6.69	5.2	255.68
B-1	0.414	12.83	10.24	224.82
B-2	0.4374	12.01	9.96	211.94
B-3	0.4567	11.57	9.45	207.53
B-4	0.475	10.98	9.25	199.39
C-1	0.3884	12.64	11.06	180.06
C-2	0.4133	12.28	10.59	172.6
C-3	0.4379	11.42	10.31	166.16
C-4	0.458	10.91	9.92	159.38
D-1	0.2664	19.49	15.75	164.8
D-2	0.2812	18.03	15.16	155.65
D-3	n.a.	n.a.	n.a.	n.a.
D-4	0.3066	16.54	14.41	147.85

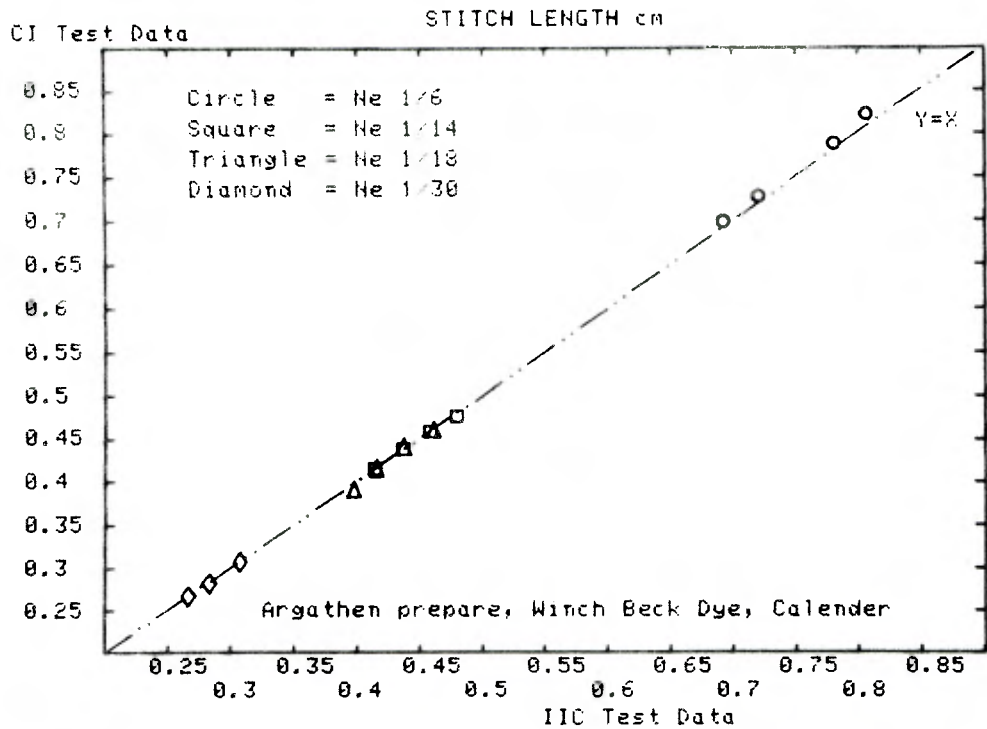
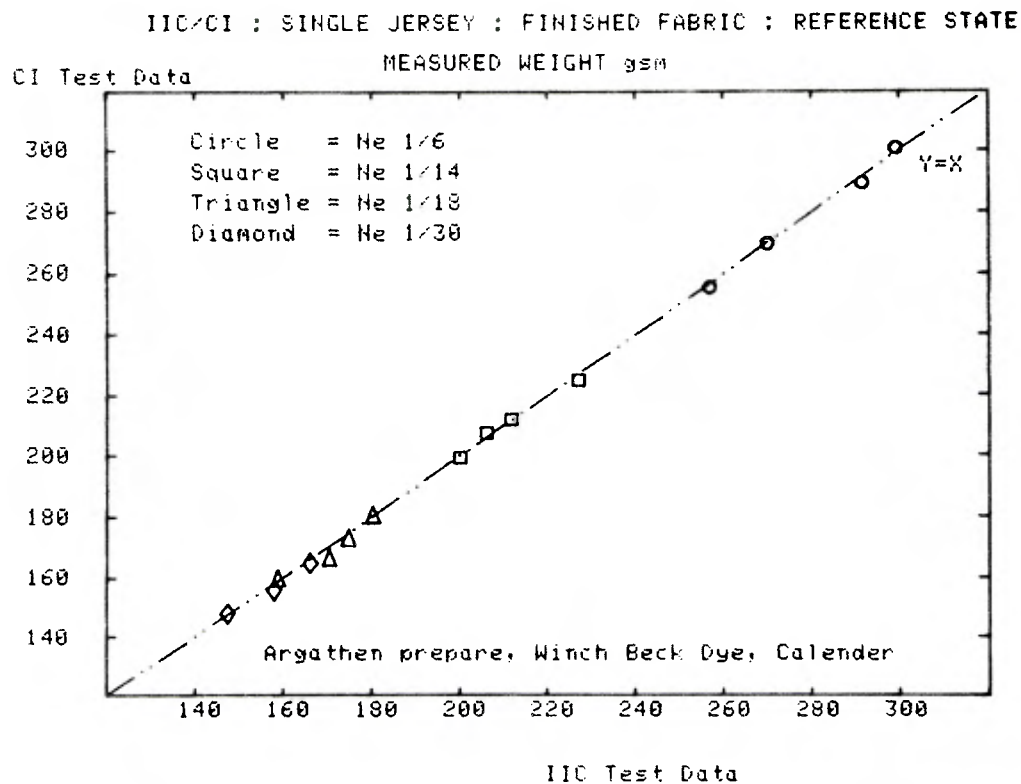


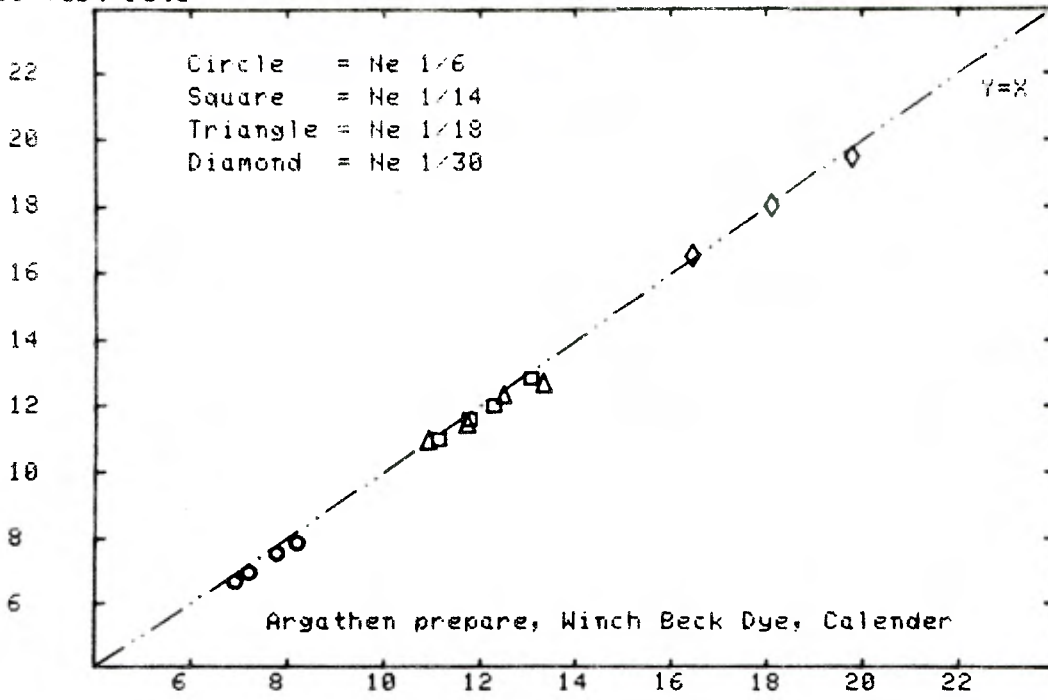
FIGURE A4/6



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

COURSES/cm

CI Test Data



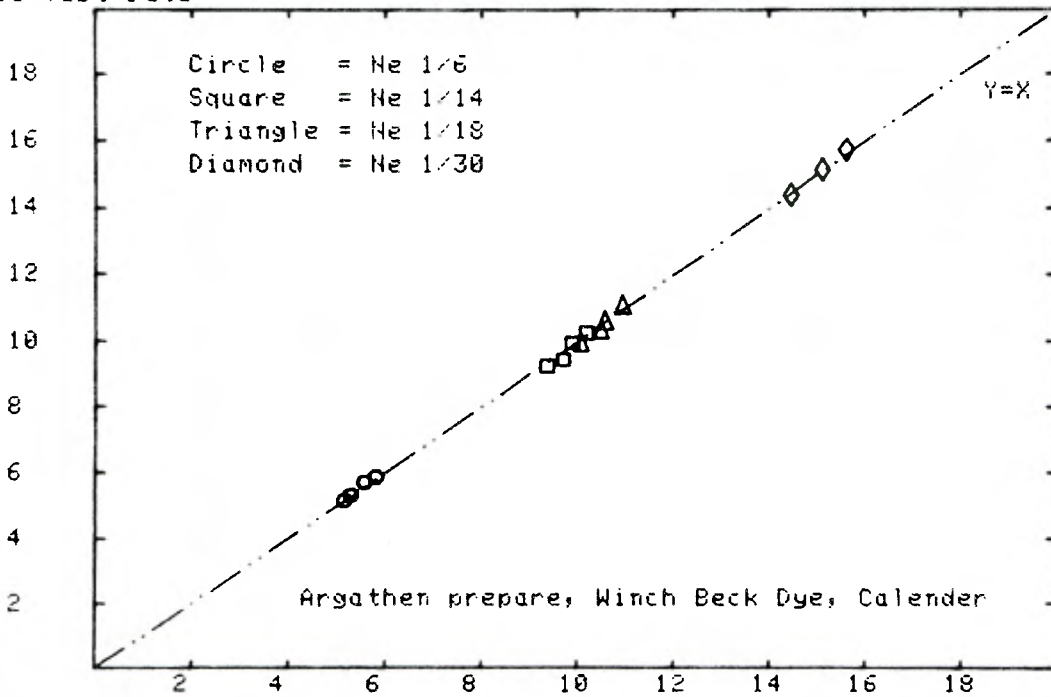
IIC Test Data

FIGURE A4/8

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

WALES/cm

CI Test Data



IIC Test Data

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 2 : Set 2 : Argathen prepare, Winch Beck Dye, Compact
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wtgsn
A-1	91.39	0.7013	7.82	5.03	248.32
A-2	91.08	0.7277	7.12	5.03	233.24
A-3	93.61	0.7847	6.53	4.88	230.8
A-4	92.01	0.8141	6.02	4.82	206.8
mean	92.02				
sd	1.13				
B-1	41.37	0.4193	12.48	9.07	194.17
B-2	41.01	0.4412	11.23	9.07	177.57
B-3	41.61	0.4599	10.88	8.85	175.74
B-4	40.64	0.4846	10.12	8.58	167.56
mean	41.16				
sd	0.42				
C-1	32.06	0.4009	12.73	9.3	151.23
C-2	32.19	0.4214	11.7	9.18	146.11
C-3	31.83	0.4419	10.73	8.93	138.74
C-4	32.18	0.4647	9.87	8.7	130.09
mean	32.06				
sd	0.17				
D-1	19.67	0.2712	19.02	13.8	138.42
D-2	19.77	0.2877	17.03	13.75	130.25
D-3	19.9	0.2999	16.05	13.45	129.94
D-4	n.a.	n.a.	n.a.	n.a.	n.a.
mean	19.78				
sd	0.11				

TABLE A4/6

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 2 : Set 2 : Argathen prepare, Winch Beck Dye, Compact
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wtgsn
A-1	0.696	7.87	4.92	254.32
A-2	0.7226	7.36	4.92	241.44
A-3	0.7836	6.69	4.72	236.69
A-4	0.8141	6.22	4.72	218.04
B-1	0.4176	12.52	9.02	197.02
B-2	0.4399	11.5	8.78	183.79
B-3	0.4582	10.79	8.66	188.54
B-4	0.4841	10.35	8.62	172.6
C-1	0.3965	12.76	9.13	152.26
C-2	0.4125	11.85	9.21	146.15
C-3	0.4437	10.91	8.94	139.71
C-4	0.4628	9.69	8.98	129.2
D-1	0.2667	19.02	13.43	141.07
D-2	0.285	17.44	13.5	133.61
D-3	0.2967	16.14	13.58	130.55
D-4	n.a.	n.a.	n.a.	n.a.

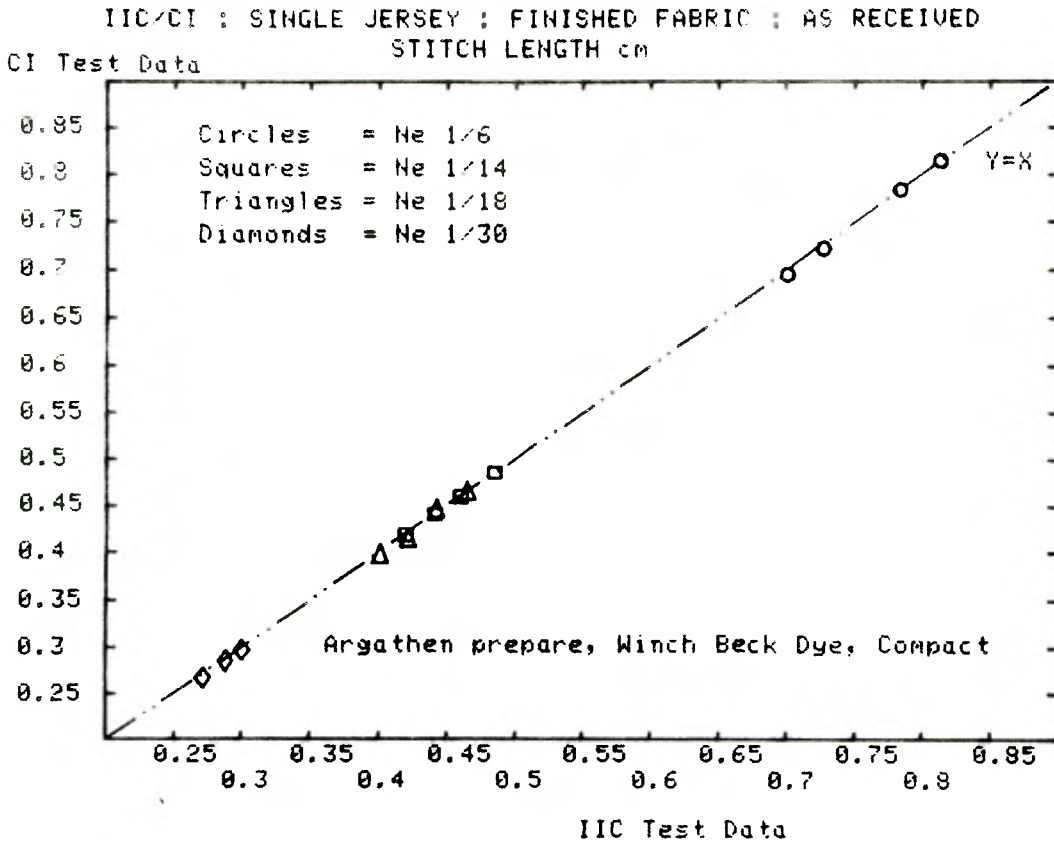
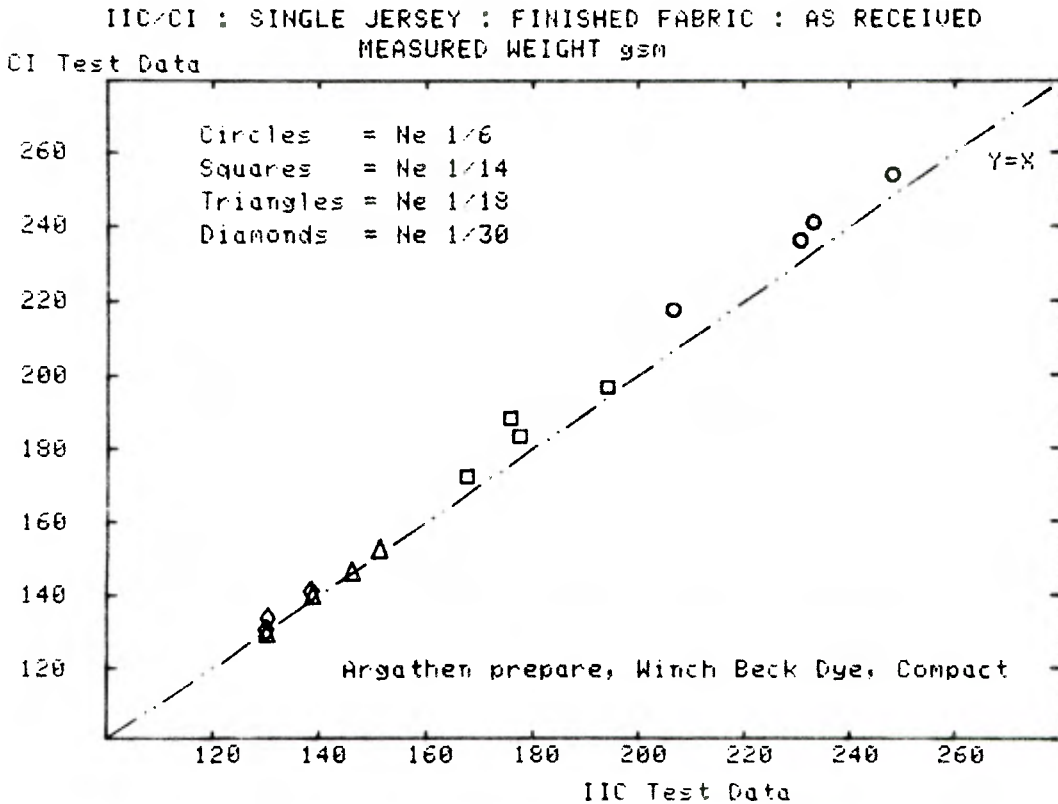


FIGURE A4/10



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED
COURSES/cm

CI Test Data

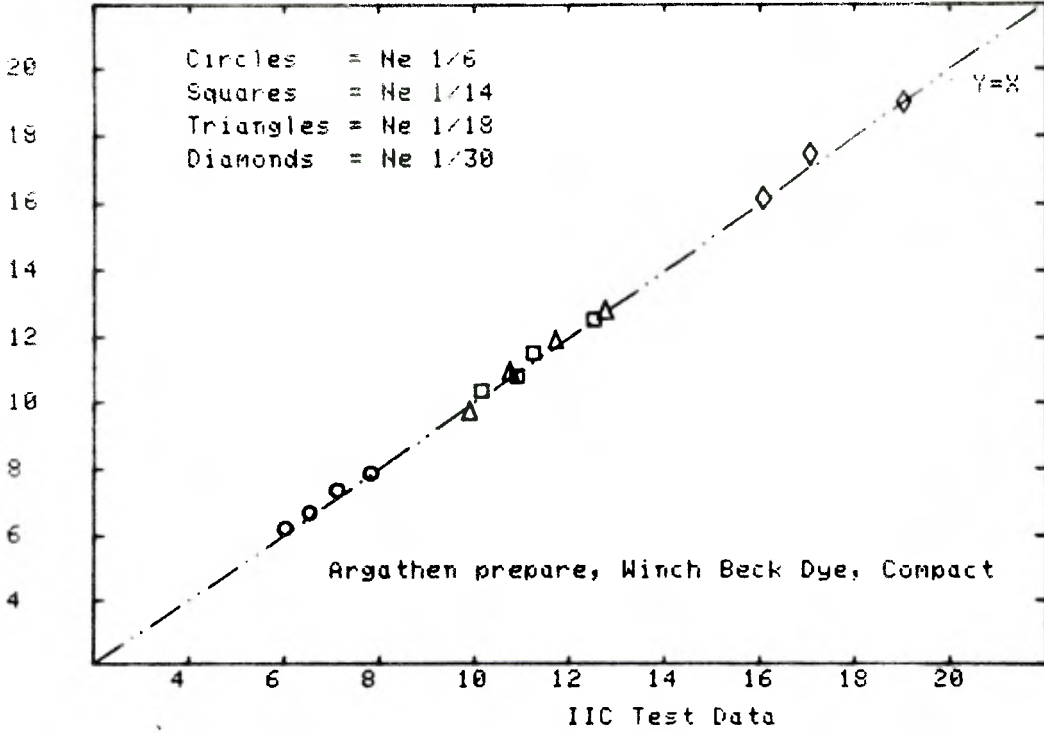
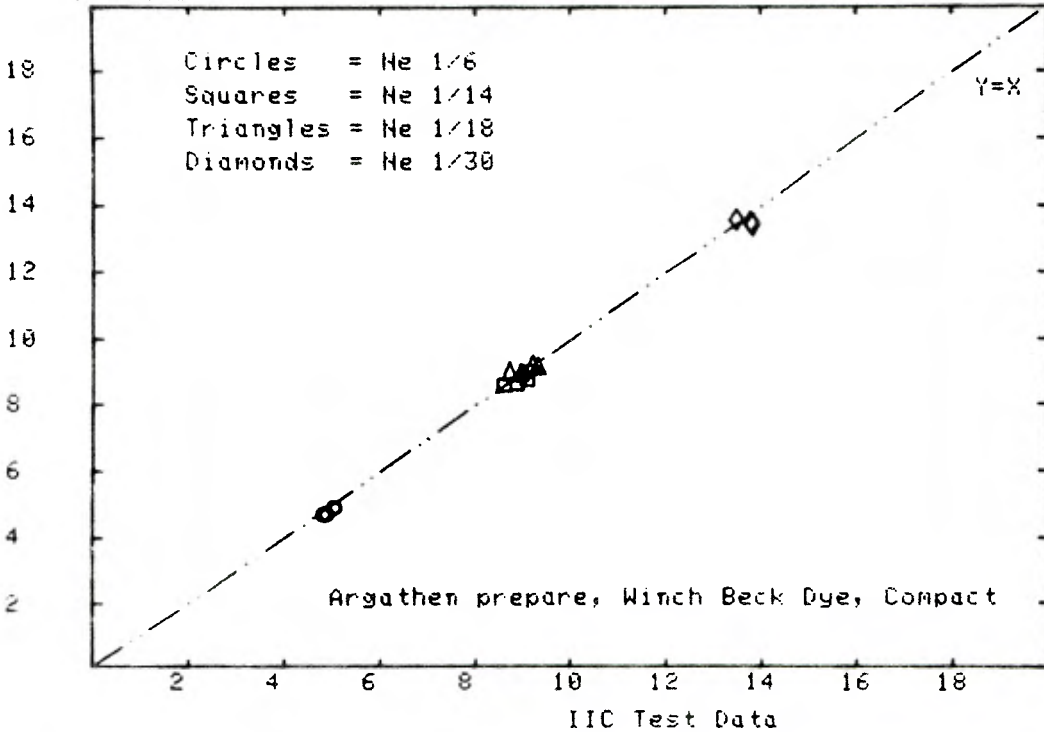


FIGURE A4/12

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED
WALES/cm

CI Test Data



IIC/CI INTERLABORATORY COMPARISON

TABLE A4/7

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 2 : Set 2 : Argathen prepare, Winch Beck Dye, Compact
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	WtgsM
A-1	91.25	0.6951	8.25	5.93	300.54
A-2	91.63	0.7223	7.9	5.8	288.05
A-3	93.89	0.7789	7.18	5.48	276.28
A-4	92.76	0.8042	6.92	5.37	263.42
mean	92.38				
sd	1.19				
B-1	40.94	0.4135	13.43	10.18	229.52
B-2	40.64	0.438	12.47	9.9	215.58
B-3	41.16	0.4562	12.13	9.52	212.5
B-4	41.01	0.4849	11.52	9.2	200.43
mean	40.94				
sd	0.22				
C-1	31.87	0.398	13.25	10.92	184.13
C-2	32.1	0.4165	12.58	10.48	176.51
C-3	31.83	0.4394	11.77	10.1	169.27
C-4	31.66	0.4623	11.15	9.98	164.53
mean	31.86				
sd	0.18				
D-1	19.84	0.2701	20.17	15.77	165.44
D-2	19.52	0.2857	18.62	15.25	157.92
D-3	19.73	0.2975	17.83	14.75	153.17
D-4	n.a.	n.a.	n.a.	n.a.	n.a.
mean	19.7				
sd	0.16				

IIC/CI INTERLABORATORY COMPARISON

TABLE A4/8

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 2 : Set 2 : Argathen prepare, Winch Beck Dye, Compact
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	WtgsM
A-1	0.7018	7.99	5.94	304.51
A-2	0.7341	7.68	5.71	287.56
A-3	0.8026	6.97	5.39	274.33
A-4	0.8268	6.73	5.47	258.73
B-1	0.4107	13.03	10.2	225.84
B-2	0.4364	12.24	9.88	217.7
B-3	0.4539	11.57	9.65	210.24
B-4	0.4793	11.06	9.25	199.05
C-1	0.3904	13.35	10.79	183.45
C-2	0.4155	12.36	10.67	174.64
C-3	0.4412	11.69	10.28	167.18
C-4	0.4633	10.98	9.84	159.04
D-1	0.2667	19.72	15.75	167.85
D-2	0.285	18.39	15.04	157.68
D-3	0.2967	17.4	14.69	153.61
D-4	n.a.	n.a.	n.a.	n.a.

FIGURE A4/13

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE
 STITCH LENGTH cm

CI Test Data

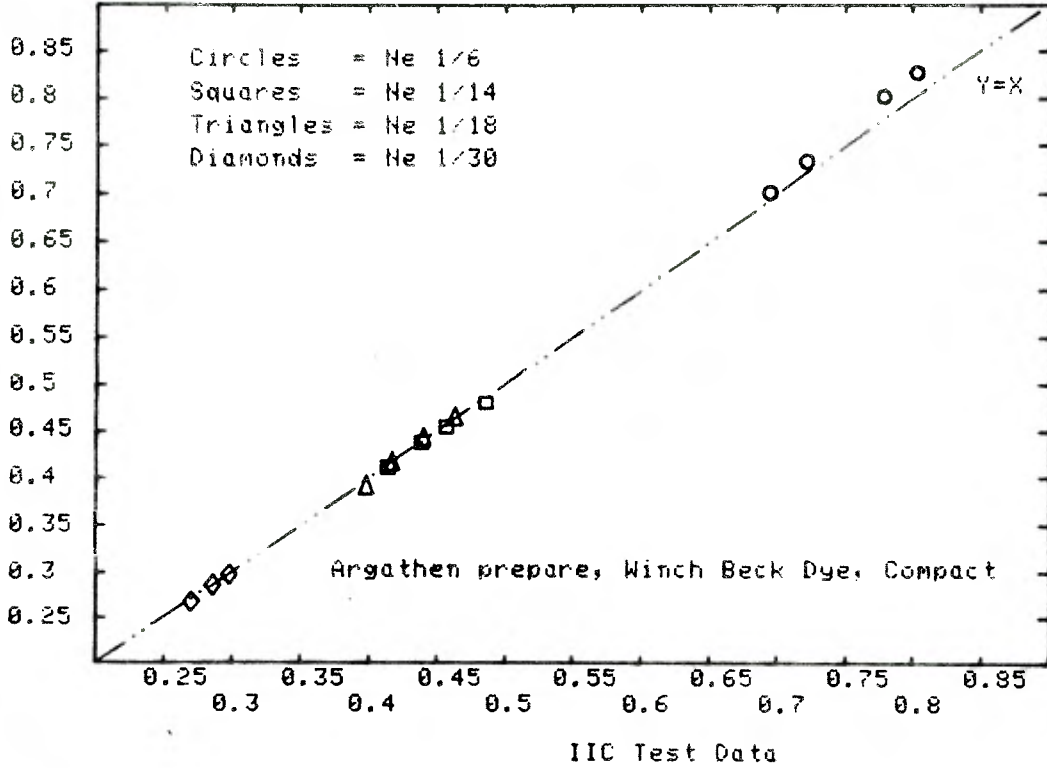
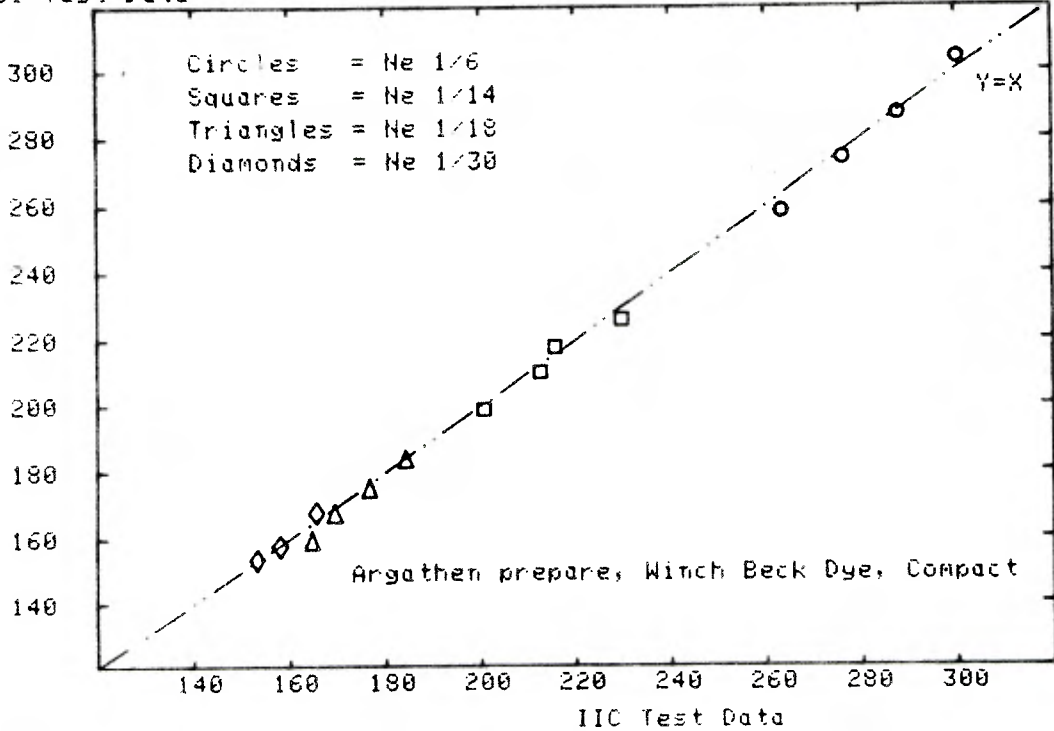


FIGURE A4/14

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE
 MEASURED WEIGHT gsm

CI Test Data



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE
COURSES/cm

FIGURE A4/15

CI Test Data

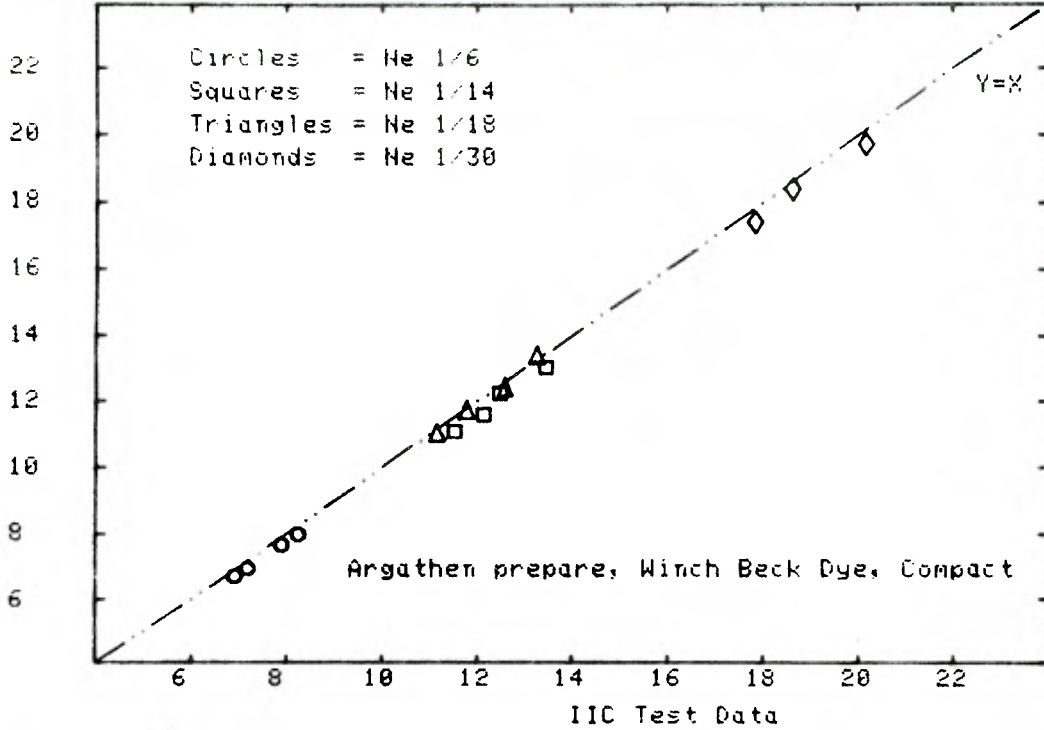
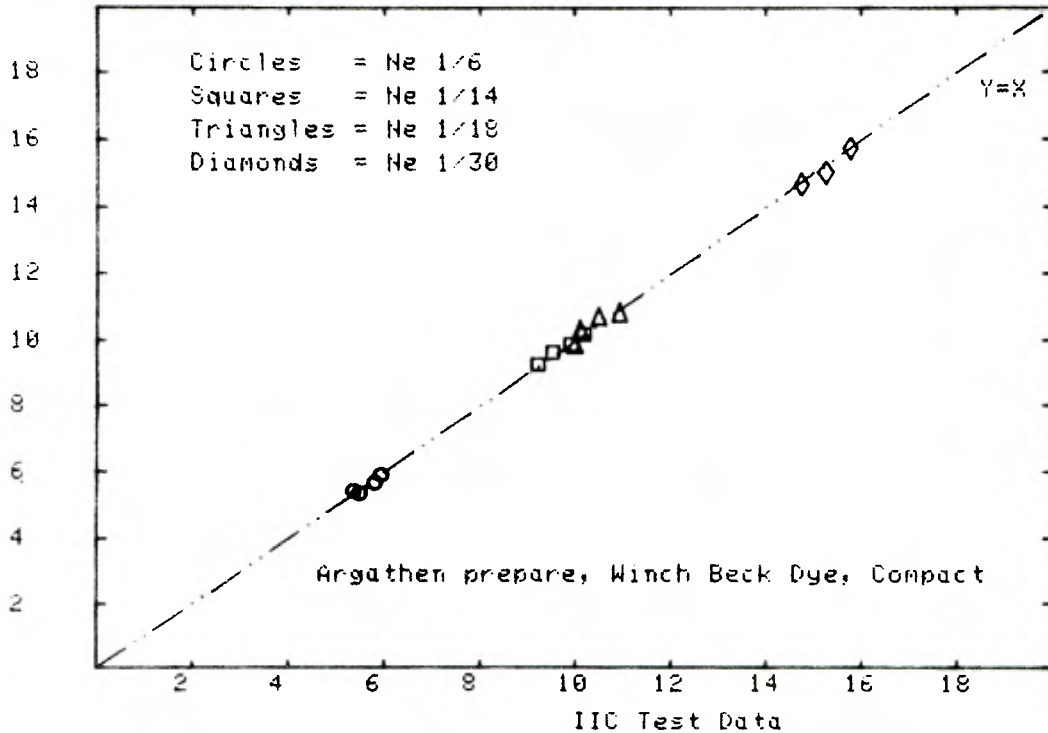


FIGURE A4/16

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE
WALES/cm

CI Test Data



IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
 RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

TABLE A4/9

Finish 2 : Set 3 : Argathen prepare, Winch Beck Dye, Resin + Calender
 IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wt gsm
A-1	92.45	0.7025	6.62	4.87	210.96
A-2	94.37	0.7324	6.1	4.91	207.04
A-3	93.98	0.7883	5.75	4.3	182.06
A-4	94.37	0.8169	5.28	4.27	179.16
mean	93.79				
sd	0.91				
B-1	41.02	0.419	10.58	9.03	166.96
B-2	41.18	0.4418	9.88	8.77	155.83
B-3	41.1	0.4629	8.98	8.8	151.01
B-4	41.36	0.488	8.18	8.68	147.31
mean	41.17				
sd	0.15				
C-1	32.41	0.4013	10.23	9.6	127.02
C-2	32.06	0.4218	9.25	9.63	119.85
C-3	32.23	0.4428	8.73	9.45	112.16
C-4	32.47	0.4669	8.18	9.2	108.31
mean	32.29				
sd	0.18				
D-1	19.85	0.2704	16.22	14.13	120.99
D-2	19.85	0.2843	14.98	13.82	116.77
D-3	19.8	0.2988	13.93	13.97	112.96
D-4	20.26	0.3085	13.3	13.05	110.06
mean	19.94				
sd	0.22				

IIC/CI INTERLABORATORY COMPARISON

TABLE A4/10

SINGLE JERSEY : STARFISH DATABASE EXPANSION
 RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 2 : Set 3 : Argathen prepare, Winch Beck Dye, Resin + Calender
 CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.6942	6.61	5	204.14
A-2	0.7239	6.06	4.96	205.83
A-3	0.7874	5.63	4.41	184.47
A-4	0.8141	5.31	4.25	172.6
B-1	0.4148	11.3	8.98	162.43
B-2	0.4369	9.61	8.86	158.02
B-3	0.4572	9.02	8.82	156.33
B-4	0.4864	8.27	8.86	147.85
C-1	0.3975	10.2	9.49	127.84
C-2	0.4178	9.65	9.13	118.35
C-3	0.4394	8.66	9.09	115.29
C-4	0.4643	7.99	8.98	109.19
D-1	0.2697	16.54	13.39	119.7
D-2	0.2885	15.35	12.99	117.33
D-3	0.2972	14.8	13.78	113.94
D-4	0.3104	12.83	12.95	107.16

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS DELIVERED

STITCH LENGTH cm

CI Test Data

FIGURE A4/17

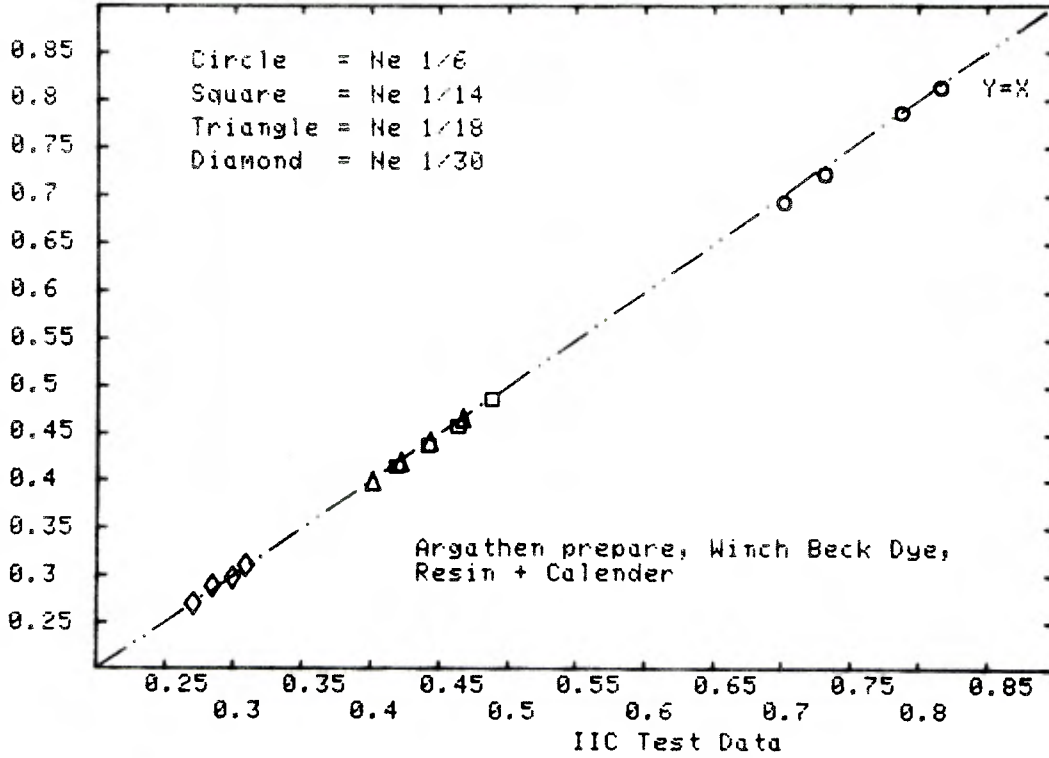
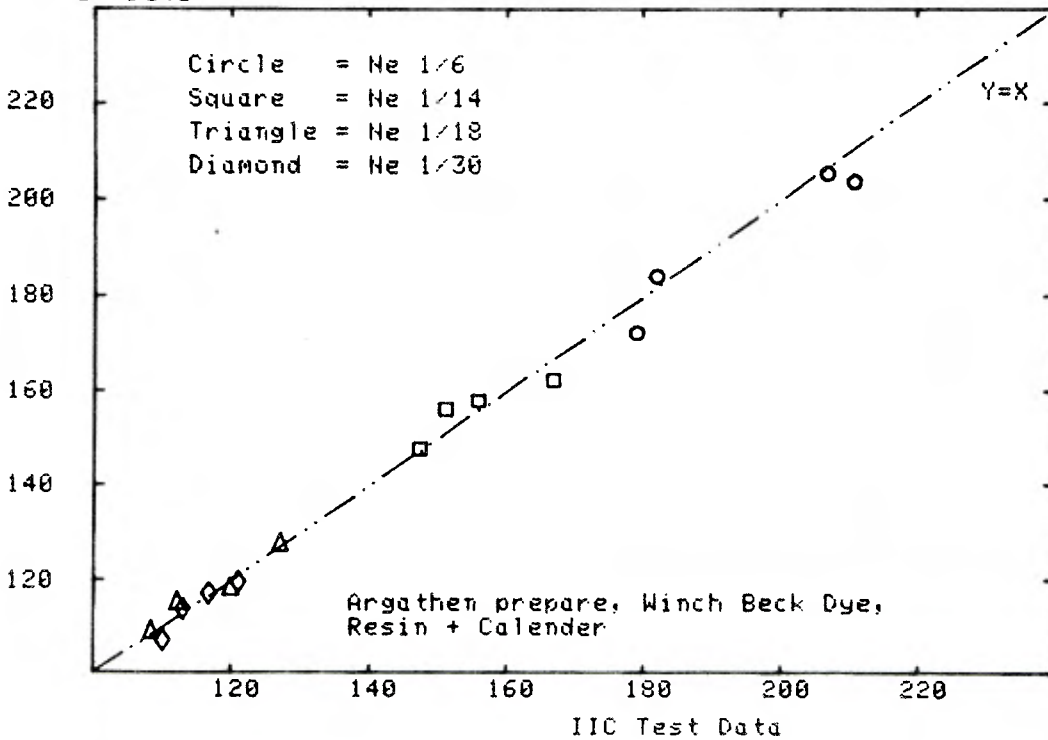


FIGURE A4/18

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS DELIVERED

MEASURED WEIGHT gsm

CI Test Data



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS DELIVERED

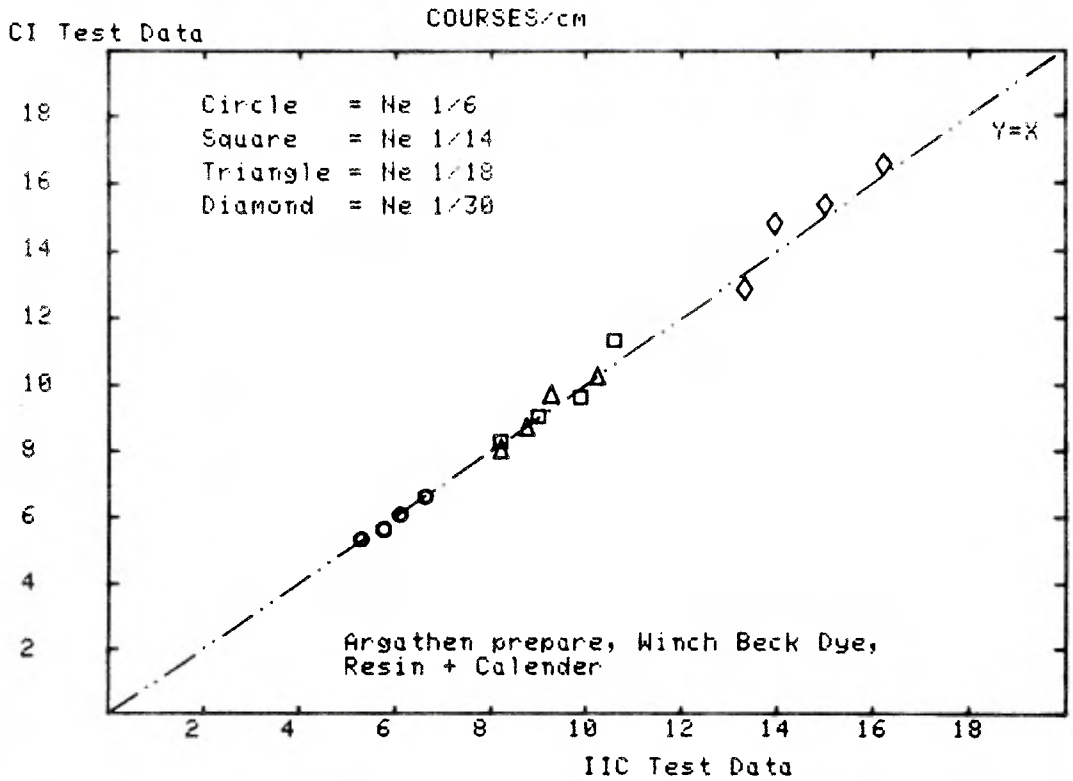


FIGURE A4/19

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS DELIVERED

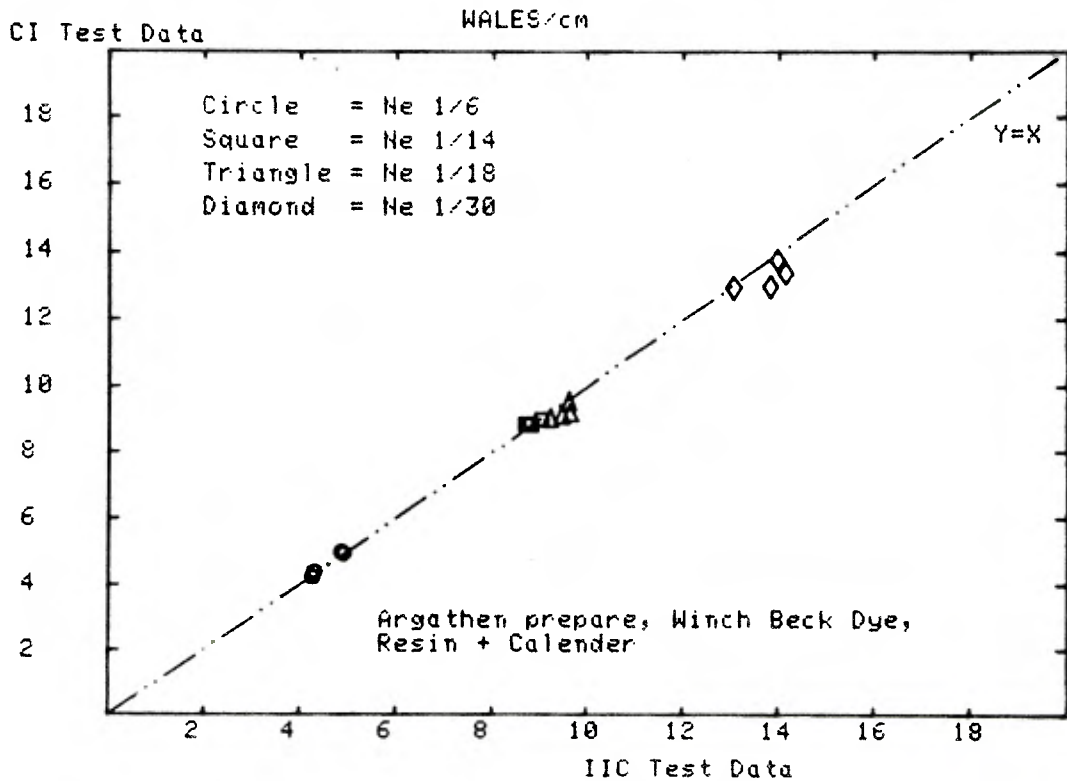


FIGURE A4/20

IIC/CI INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

TABLE A4/11

Finish 2 : Set 3 : Argathen prepare, Winch Beck Dye, Resin + Calender
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wt gsm
A-1	91.83	0.6961	7.87	5.75	290.99
A-2	92.45	0.7278	7.38	5.6	286.77
A-3	93.89	0.7886	6.65	5.37	264.89
A-4	93.99	0.8101	6.43	5.17	259.26
mean	93.04				
sd	1.07				
B-1	41.27	0.4158	12.72	10.12	220.03
B-2	41.09	0.4395	11.95	9.78	210.24
B-3	41.38	0.4587	11.27	9.45	205.82
B-4	41.26	0.4838	10.63	9.33	197.4
mean	41.25				
sd	0.12				
C-1	32.43	0.3989	12.82	11.05	178.74
C-2	31.99	0.4176	12.13	10.75	169.71
C-3	31.85	0.4387	11.37	10.52	164.71
C-4	31.88	0.4632	10.25	10.57	158.49
mean	32.04				
sd	0.27				
D-1	19.5	0.2714	18.73	15.5	158.15
D-2	20.28	0.2858	17.05	15.28	151.08
D-3	20.27	0.2986	16.25	14.48	145.97
D-4	19.91	0.3133	15.58	14.5	140.61
mean	19.99				
sd	0.37				

IIC/CI INTERLABORATORY COMPARISON

TABLE A4/12

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 2 : Set 3 : Argathen prepare, Winch Beck Dye, Resin + Calender
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.7023	7.87	5.87	295.36
A-2	0.7341	7.48	5.71	286.88
A-3	0.7925	6.89	5.47	266.19
A-4	0.8128	6.57	5.39	258.73
B-1	0.415	12.64	10.16	220.08
B-2	0.4346	11.85	9.8	211.6
B-3	0.4569	11.34	9.61	204.48
B-4	0.479	10.71	9.25	197.02
C-1	0.396	12.72	10.94	176.67
C-2	0.4138	12.09	10.75	170.23
C-3	0.4318	11.46	10.43	164.12
C-4	0.463	10.39	10.55	157
D-1	0.2662	19.25	15.71	160.39
D-2	0.283	17.56	15.28	152.26
D-3	0.2931	16.65	14.76	147.51
D-4	0.3007	15.31	14.8	142.42

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

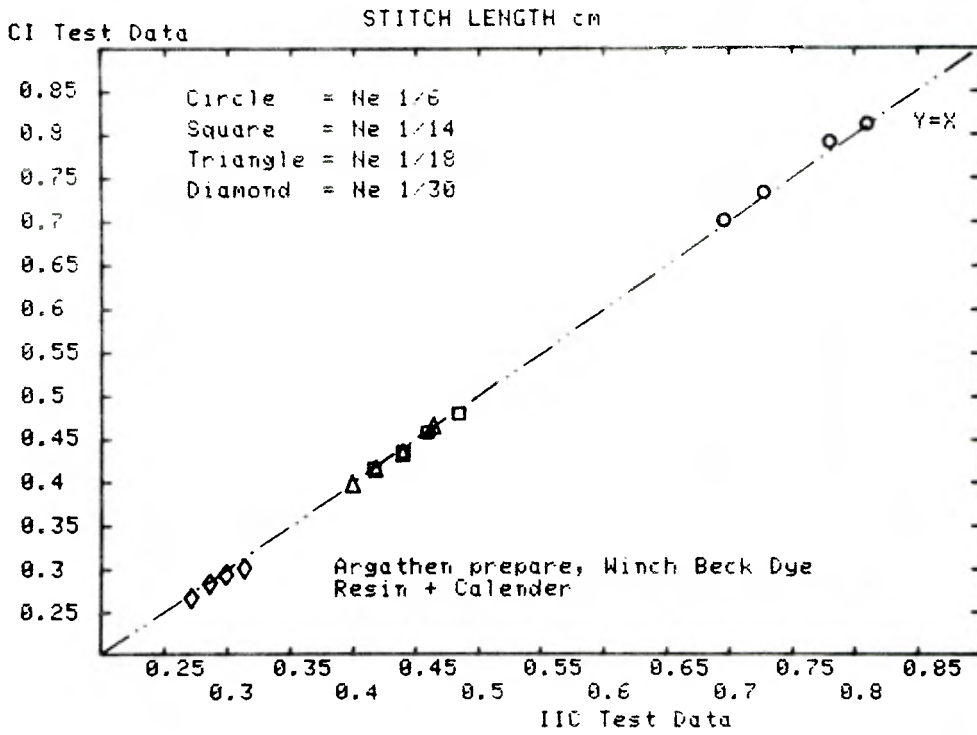


FIGURE A4/21

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

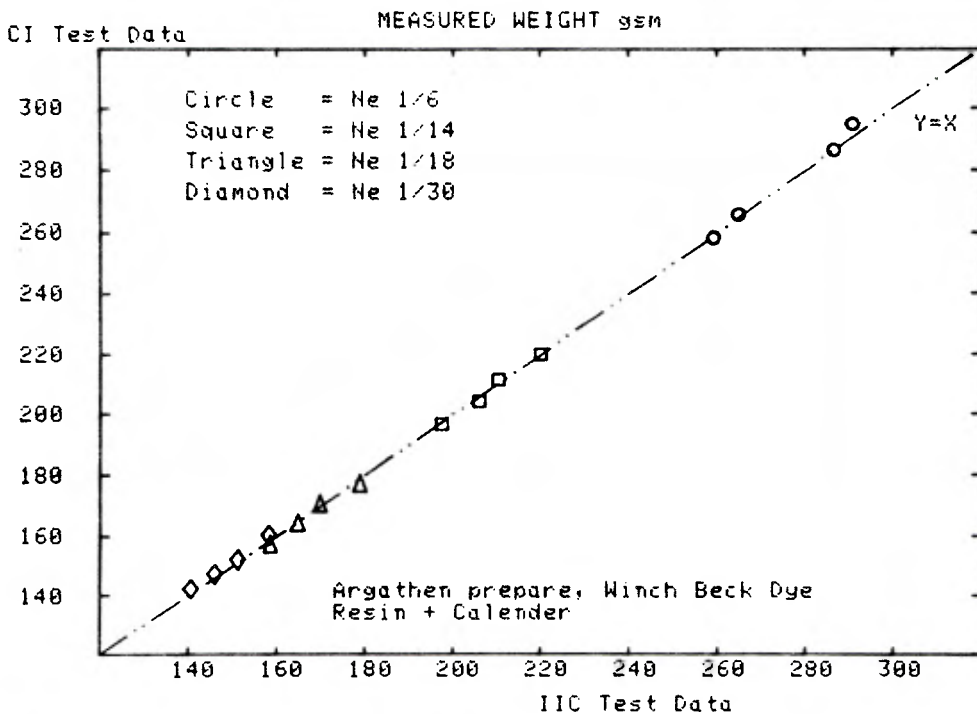


FIGURE A4/22

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

CI Test Data

COURSES/cm

FIGURE A4/23

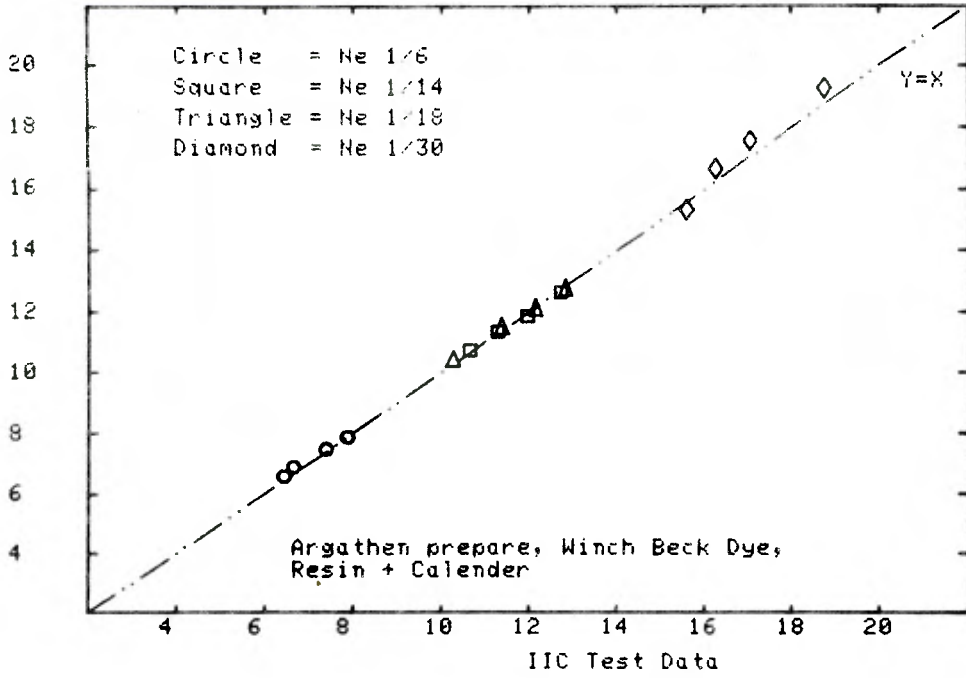
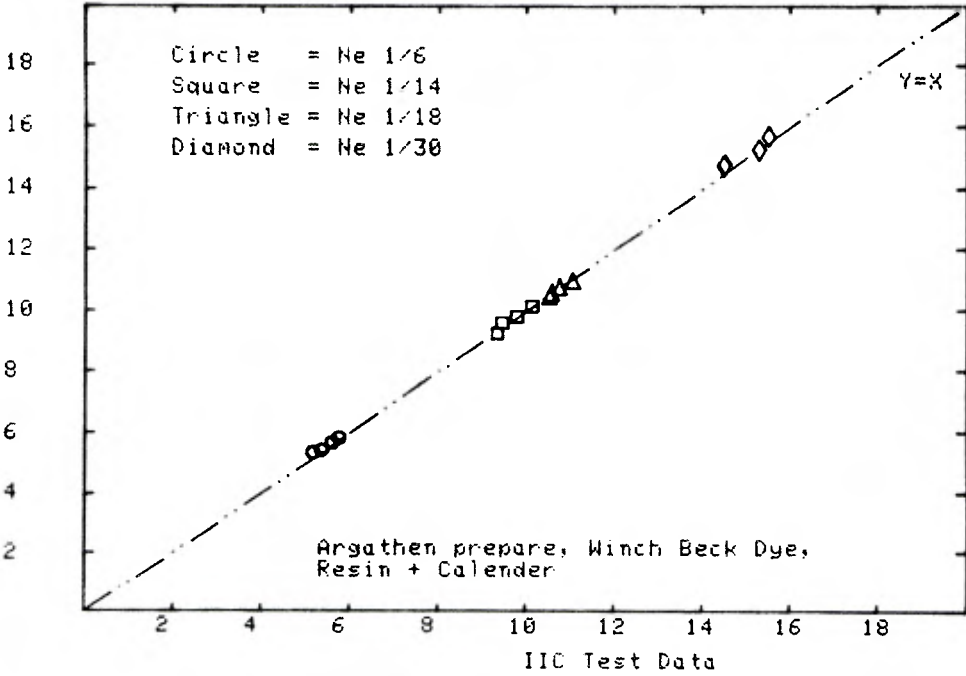


FIGURE A4/24

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

CI Test Data

WALES/cm



I I C / C I INTERLABORATORY COMPARISON

TABLE A4/13

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 2 : Set 4 : Argathen prepare, Winch Beck Dye, Resin + Compact
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wt gsm
A-1	92.98	0.6944	6.95	4.78	209.06
A-2	92.73	0.7311	6.58	4.72	203.51
A-3	94.07	0.7875	5.67	4.85	194.79
A-4	92.74	0.816	5.33	4.62	178.99
mean	93.13				
sd	0.63				
B-1	41.32	0.4163	11.47	9.22	177.98
B-2	41.06	0.4402	10.63	9.2	173.38
B-3	41.84	0.4615	9.87	8.93	169.58
B-4	41.71	0.4849	8.98	8.82	161.69
mean	41.48				
sd	0.36				
C-1	32.54	0.3993	11.37	9.85	136.88
C-2	32.12	0.4211	10.25	9.67	127.67
C-3	31.58	0.4396	9.78	9.38	123.04
C-4	31.91	0.4674	9.17	9.23	122.46
mean	32.04				
sd	0.4				
D-1	20.01	0.2697	17.69	14.17	129.47
D-2	20.21	0.2864	15.84	13.82	128.51
D-3	20.11	0.2977	14.72	13.77	121.2
D-4	19.75	0.3094	13.88	13.72	116.27
mean	20.02				
sd	0.2				

I I C / C I INTERLABORATORY COMPARISON

TABLE A4/14

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 2 : Set 4 : Argathen prepare, Winch Beck Dye, Resin + Compact
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.6921	6.81	4.61	203.8
A-2	0.729	6.3	4.69	200.75
A-3	0.7899	5.79	4.41	189.56
A-4	0.8255	5.28	4.57	182.1
B-1	0.4163	11.54	9.17	182.44
B-2	0.4384	10.51	9.09	176.67
B-3	0.4585	9.8	8.9	167.85
B-4	0.4826	9.09	8.82	162.77
C-1	0.3998	11.02	9.65	137.34
C-2	0.4173	10.04	9.53	130.21
C-3	0.442	9.33	9.45	124.11
C-4	0.4633	8.46	8.98	117.67
D-1	0.2672	17.09	13.86	128.86
D-2	0.2896	15.55	13.7	123.77
D-3	0.2979	14.8	13.98	121.4
D-4	0.3076	13.39	13.58	117.67

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS DELIVERED

CI Test Data

STITCH LENGTH cm

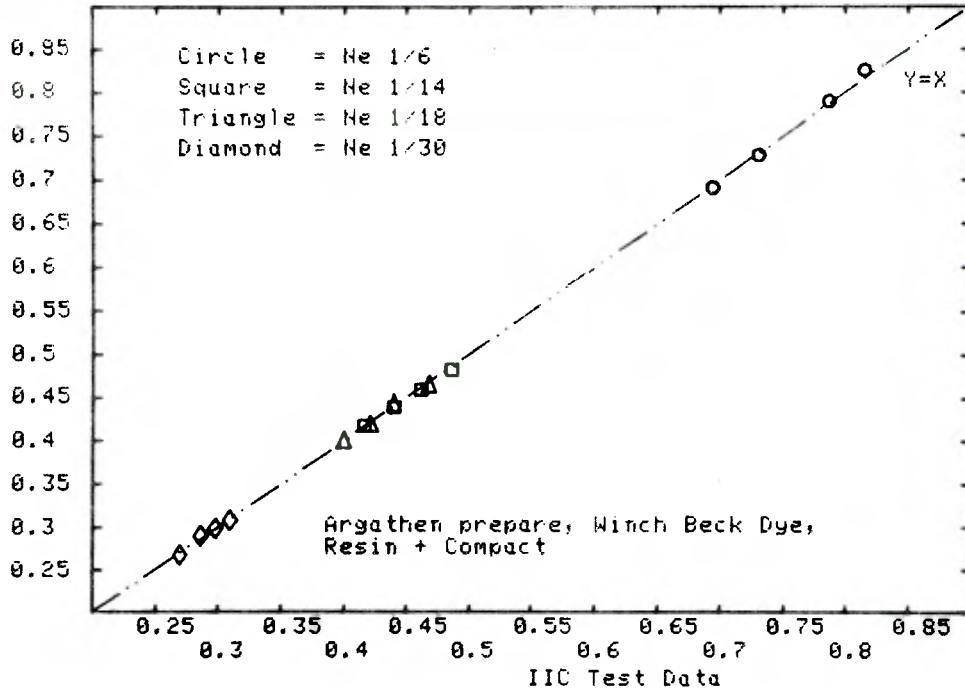


FIGURE A4/25

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS DELIVERED

CI Test Data

MEASURED WEIGHT gsm

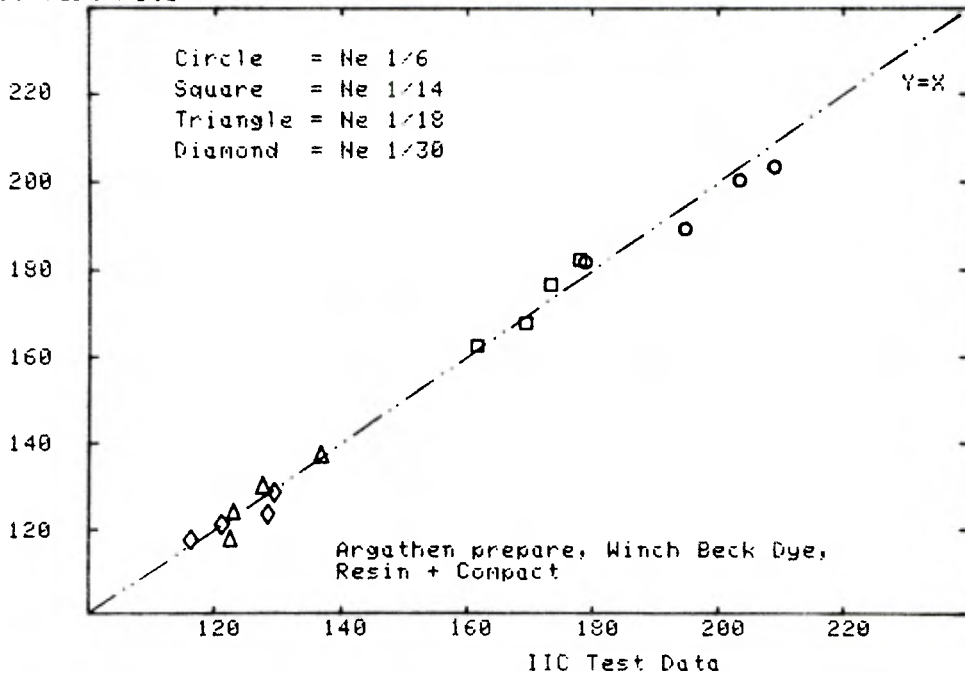
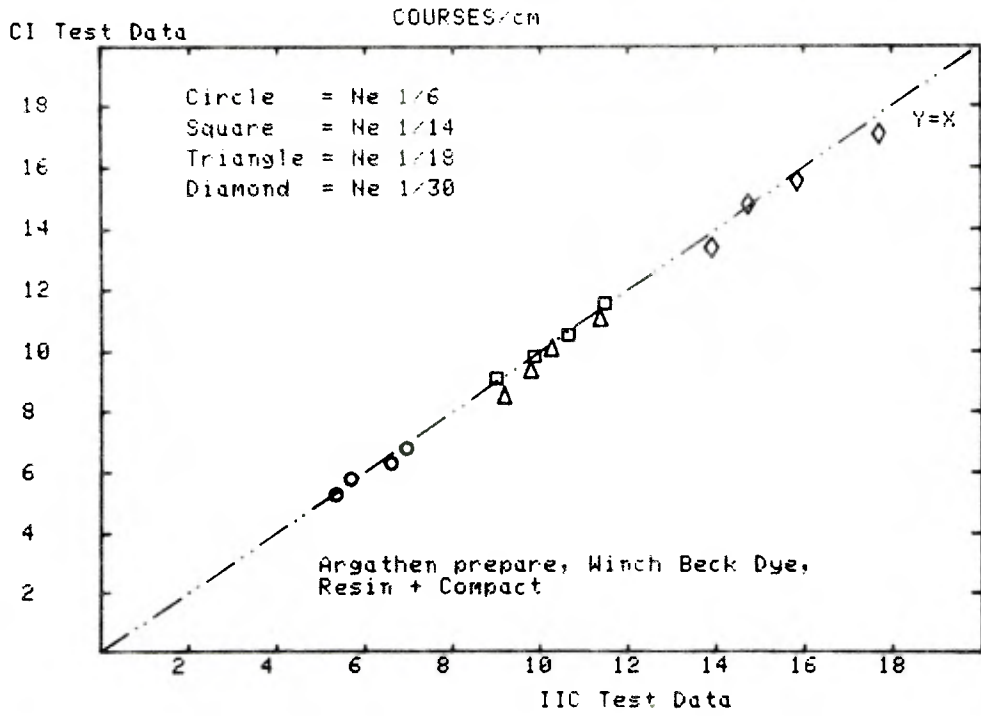


FIGURE A4/26

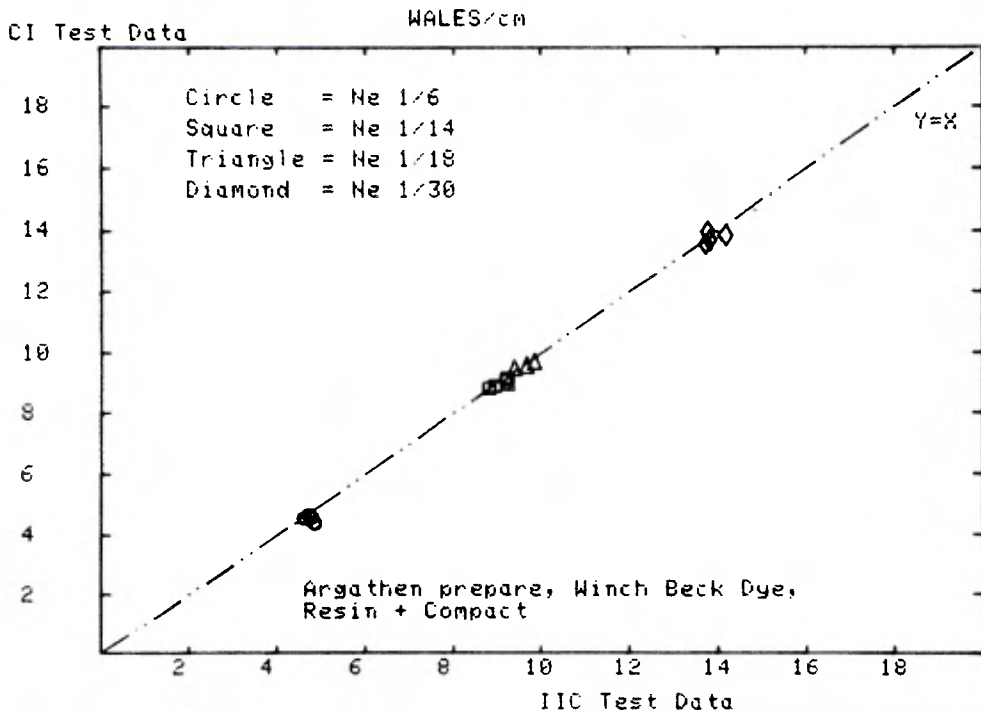
IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS DELIVERED

FIGURE A4/27



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS DELIVERED

FIGURE A4/28



I I C / C I INTERLABORATORY COMPARISON

TABLE A4/15

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 2 : Set 4 : Argathen prepare, Winch Beck Dye, Resin + Compact
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wt gsm
A-1	91.33	0.6962	7.97	5.92	291.41
A-2	91.7	0.7239	7.7	5.8	283.4
A-3	93.15	0.7816	6.86	5.56	265.56
A-4	92.18	0.8122	6.62	5.42	255.33
mean	92.09				
sd	0.79				
B-1	41.33	0.4148	12.95	10.07	220.45
B-2	41.21	0.4385	12.13	9.83	209.25
B-3	40.93	0.4552	11.53	9.63	205.46
B-4	41.04	0.4831	10.68	9.43	196.92
mean	41.13				
sd	0.18				
C-1	32.33	0.3981	13	10.9	179.46
C-2	32.57	0.4172	12.85	10.63	170.86
C-3	32.18	0.4397	11.43	10.54	161.96
C-4	31.95	0.4629	10.85	10.27	156.58
mean	32.26				
sd	0.26				
D-1	19.88	0.2686	19.85	15.93	160.45
D-2	20.01	0.2845	17.5	15.57	152.76
D-3	20.07	0.2964	16.68	15.02	148.25
D-4	19.79	0.3088	15.9	14.87	141.29
mean	19.94				
sd	0.13				

I I C / C I INTERLABORATORY COMPARISON

TABLE A4/16

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 2 : Set 4 : Argathen prepare, Winch Beck Dye, Resin + Compact
CI Test Data

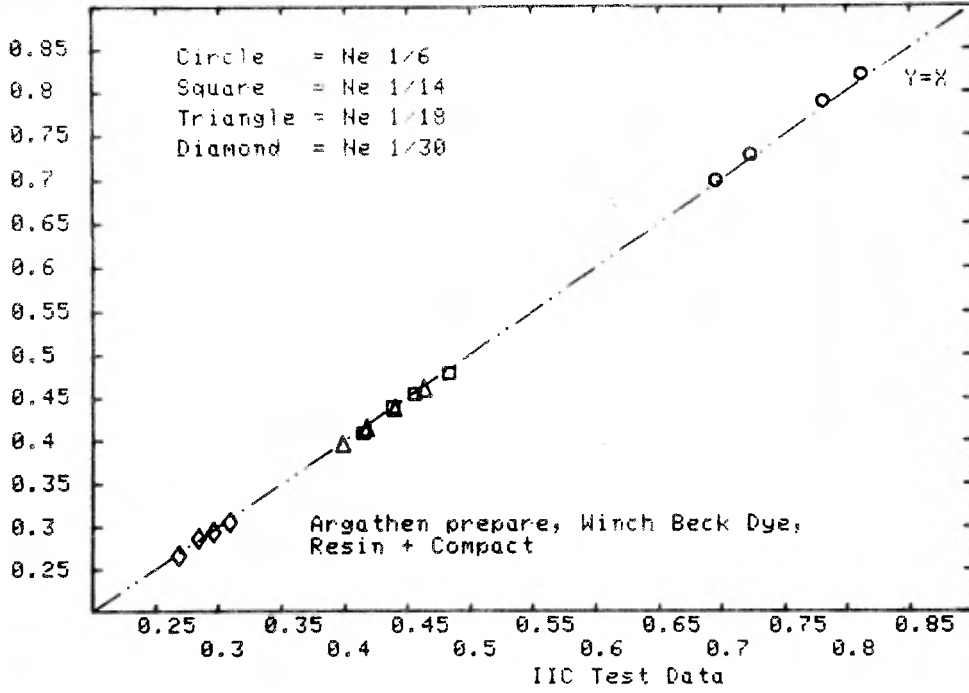
Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.6998	7.76	5.91	292.3
A-2	0.729	7.4	5.71	281.11
A-3	0.7894	6.69	5.51	264.84
A-4	0.8284	6.38	5.35	248.9
B-1	0.4079	12.6	10.08	219.74
B-2	0.4387	11.89	9.84	212.28
B-3	0.4531	11.26	9.69	206.51
B-4	0.4775	10.51	9.29	196.34
C-1	0.3945	12.6	10.91	177.35
C-2	0.413	11.77	10.71	167.85
C-3	0.4359	11.22	10.47	162.77
C-4	0.4585	10.35	10.16	154.97
D-1	0.2657	19.06	15.83	161.75
D-2	0.286	17.6	15.31	153.61
D-3	0.2934	16.69	14.96	149.2
D-4	0.3048	15.75	14.69	143.44

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

CI Test Data

STITCH LENGTH cm

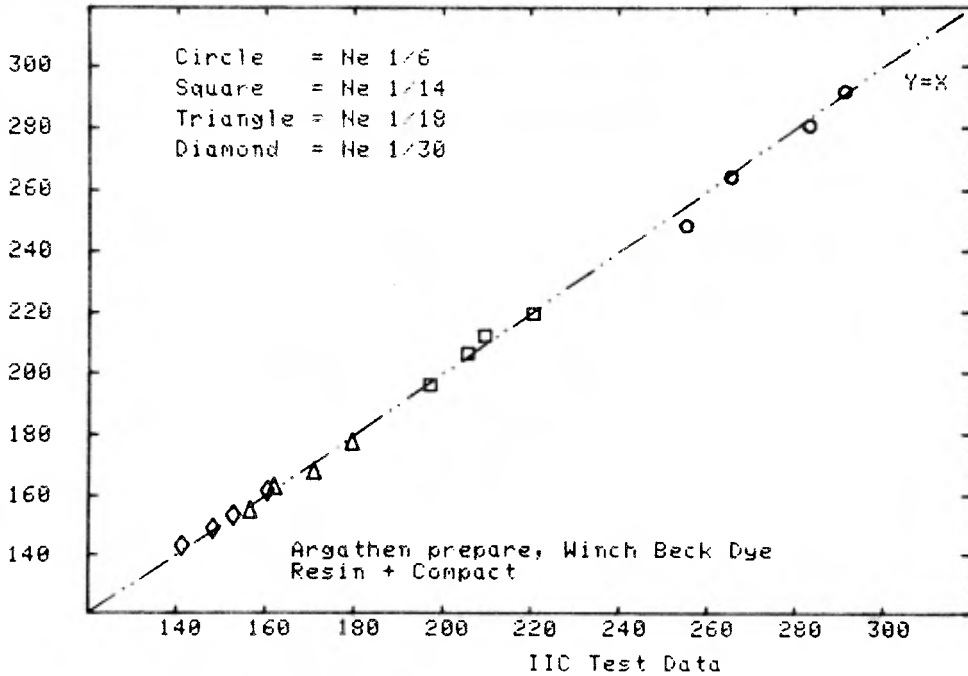
FIGURE A4/29



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE FIGURE A4/30

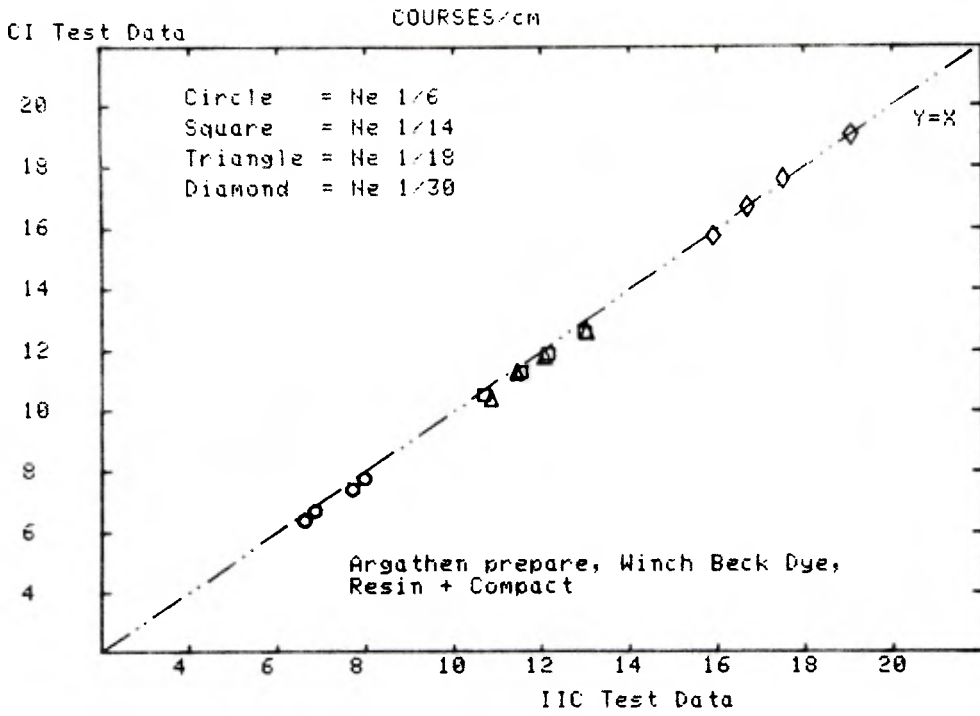
CI Test Data

MEASURED WEIGHT gsm



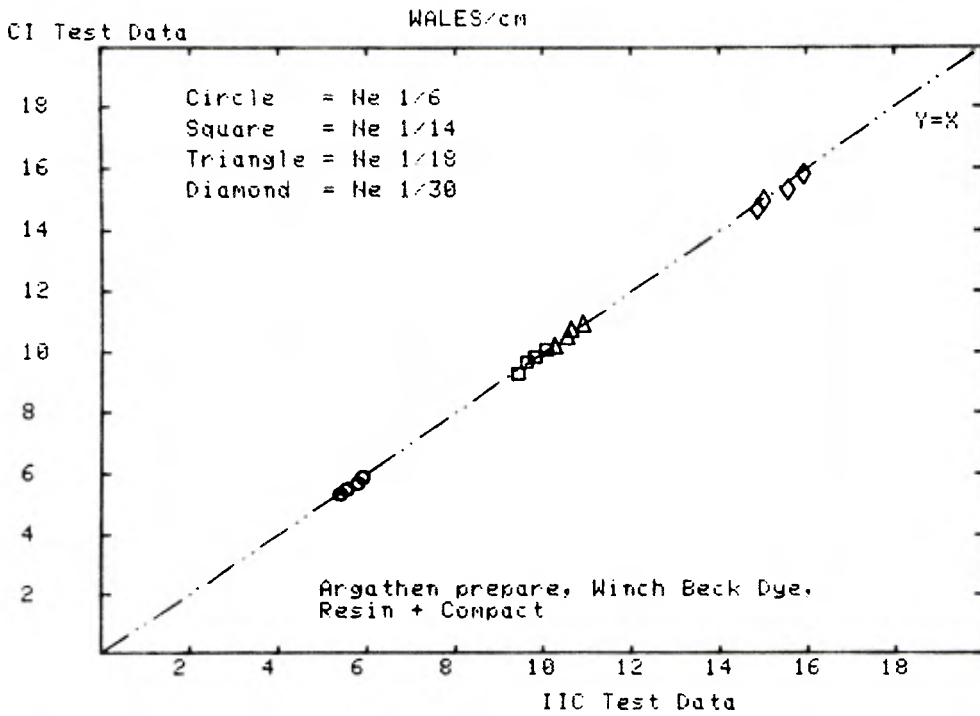
IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

FIGURE A4/31



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

FIGURE A4/32



IIC/CI INTERLABORATORY COMPARISON

TABLE A5/1

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 3 : Set 1 : Argathen prepare, Overflow Jet Dye, Calender
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wt gsm
A-1	93.13	0.6976	7.02	5.09	226.46
A-2	93.22	0.7233	6.6	5	217.77
A-3	96	0.7814	5.77	4.95	206.5
A-4	95.95	0.8127	5.4	4.82	202.91
mean	94.57				
sd	1.61				
B-1	41.95	0.4167	11.22	9.1	171.27
B-2	40.81	0.4398	10.25	9.05	161.53
B-3	41.3	0.4601	9.48	8.92	157.2
B-4	41.46	0.4843	8.57	8.7	152.92
mean	41.38				
sd	0.47				
C-1	31.83	0.3995	11.47	8.85	133.6
C-2	31.92	0.4174	10.38	9.23	126.08
C-3	31.95	0.44	9.62	9.17	124.33
C-4	31.49	0.4648	8.72	9.2	114.15
mean	31.8				
sd	0.21				
D-1	20.04	0.2711	17.55	14	132.84
D-2	19.75	0.2849	16.35	13.8	121.88
D-3	20	0.2988	14.92	13.31	117.88
D-4	20.03	0.309	14.27	13.83	121.05
mean	19.96				
sd	0.14				

=====

IIC/CI INTERLABORATORY COMPARISON

TABLE A5/2

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 3 : Set 1 : Argathen prepare, Overflow Jet Dye, Calender
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.6972	6.77	4.72	207.19
A-2	0.7214	6.3	4.76	200.07
A-3	0.7874	5.51	4.72	189.56
A-4	0.8179	5.12	4.72	189.9
B-1	0.4161	10.94	8.9	166.84
B-2	0.4369	10.2	8.7	161.75
B-3	0.4577	9.41	8.54	152.59
B-4	0.4872	8.82	8.54	153.27
C-1	0.3962	11.14	9.06	128.86
C-2	0.4163	10.2	8.82	121.06
C-3	0.4384	9.33	8.86	114.62
C-4	0.4628	8.54	8.78	110.21
D-1	0.2677	17.28	13.15	122.08
D-2	0.2852	15.79	13.07	121.06
D-3	0.2974	14.65	12.99	111.22
D-4	0.3084	13.78	12.87	112.24

=====

CI Test Data

STITCH LENGTH cm

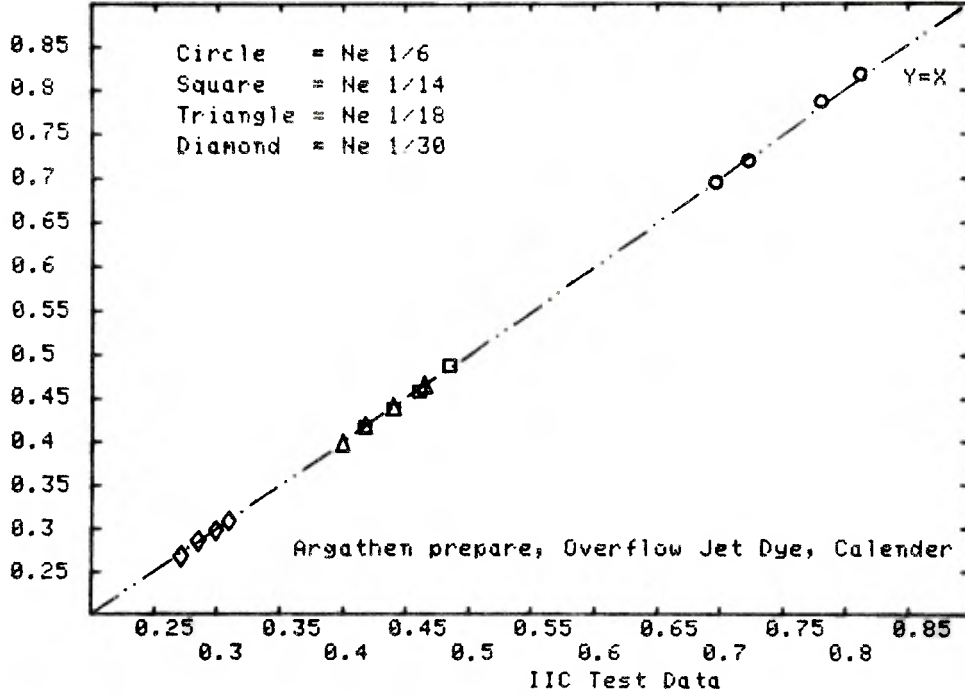
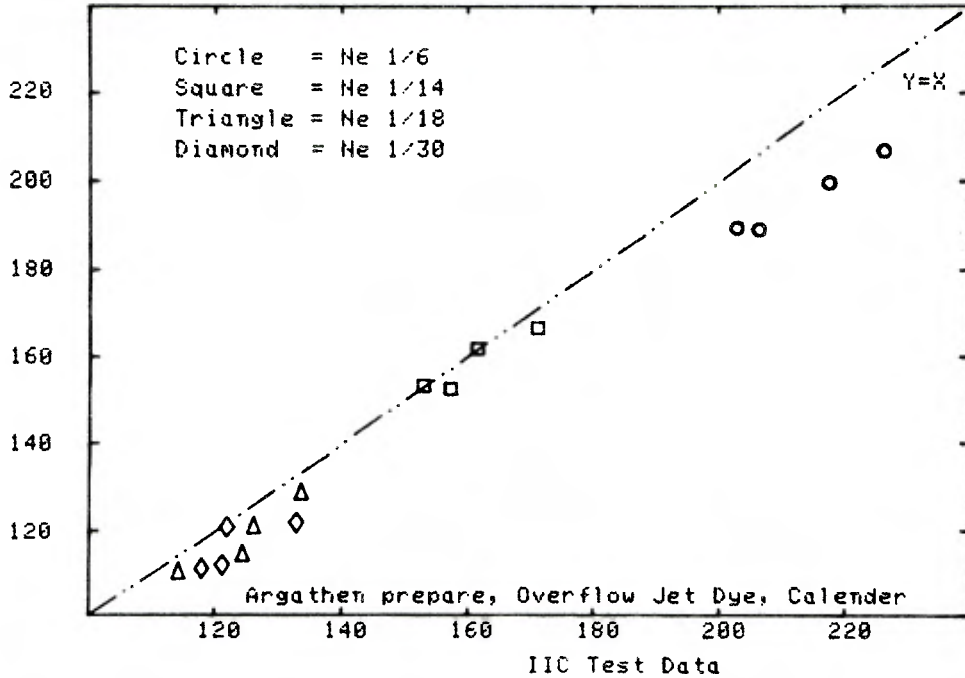


FIGURE A5/2

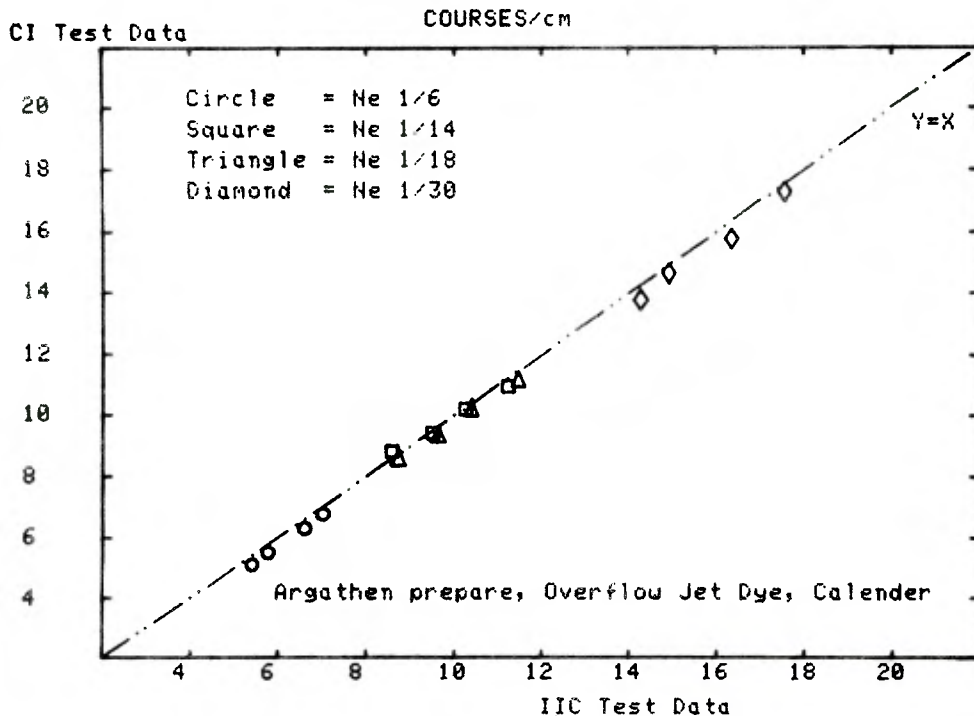
CI Test Data

MEASURED WEIGHT gsm



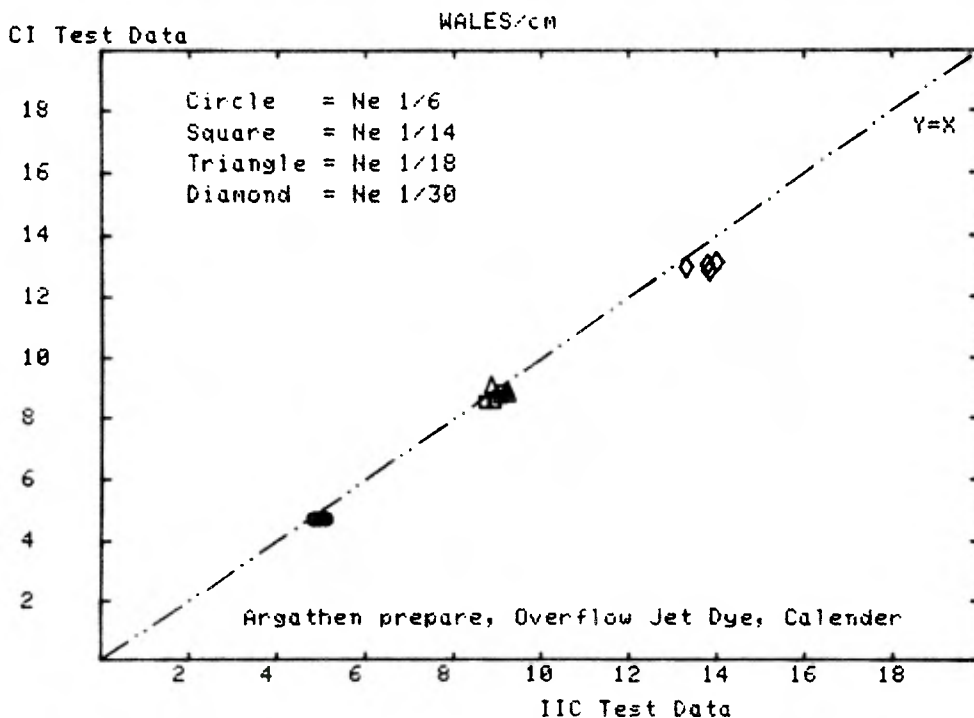
IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

FIGURE A5/3



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

FIGURE A5/4



I I C / C I INTERLABORATORY COMPARISON

TABLE A5/3

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 3 : Set 1 : Argathen prepare, Overflow Jet Dye, Calender
IIC Test Data

Sample Ref.No.	Ten	SL cm	C/cm	W/cm	Wt gsm
A-1	91.7	0.6921	8.33	6.02	308.14
A-2	93.24	0.7161	7.98	5.82	297.51
A-3	93.52	0.7736	7.35	5.38	274.97
A-4	94.19	0.8036	7.07	5.33	271.85
mean	93.16				
sd	1.05				
B-1	40.77	0.412	13.25	10.23	225.44
B-2	41.16	0.4363	12.58	9.95	216.89
B-3	39.93	0.4556	11.98	9.6	206.03
B-4	41.58	0.4766	11.17	9.32	202.59
mean	40.85				
sd	0.7				
C-1	31.86	0.3958	13.37	10.95	182.51
C-2	32.15	0.4136	12.58	10.73	176.73
C-3	32.12	0.4354	11.82	10.48	167.67
C-4	32.06	0.4594	11.88	10.27	162.08
mean	32.05				
sd	0.13				
D-1	19.93	0.2678	19.07	15.83	163.13
D-2	19.58	0.2848	18.16	15.22	156.69
D-3	19.71	0.2996	17.24	14.38	150.57
D-4	19.91	0.3092	16.34	14.53	147.3
mean	19.78				
sd	0.17				

I I C / C I INTERLABORATORY COMPARISON

TABLE A5/4

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 3 : Set 1 : Argathen prepare, Overflow Jet Dye, Calender
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.701	8.11	6.06	308.58
A-2	0.729	7.76	5.71	296.03
A-3	0.7882	7.09	5.47	274.67
A-4	0.8219	6.77	5.31	273.31
B-1	0.414	13.11	10.2	229.57
B-2	0.4374	12.56	9.84	217.7
B-3	0.4567	11.81	9.57	211.6
B-4	0.475	11.1	9.09	203.12
C-1	0.3917	13.23	11.14	185.15
C-2	0.415	12.52	10.67	175.31
C-3	0.4379	11.93	10.12	168.87
C-4	0.458	11.1	9.92	159.72
D-1	0.2659	20	15.71	168.53
D-2	0.2817	18.62	15.16	160.73
D-3	0.2939	17.48	14.88	155.99
D-4	0.3048	16.81	14.45	148.53

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

CI Test Data

STITCH LENGTH cm

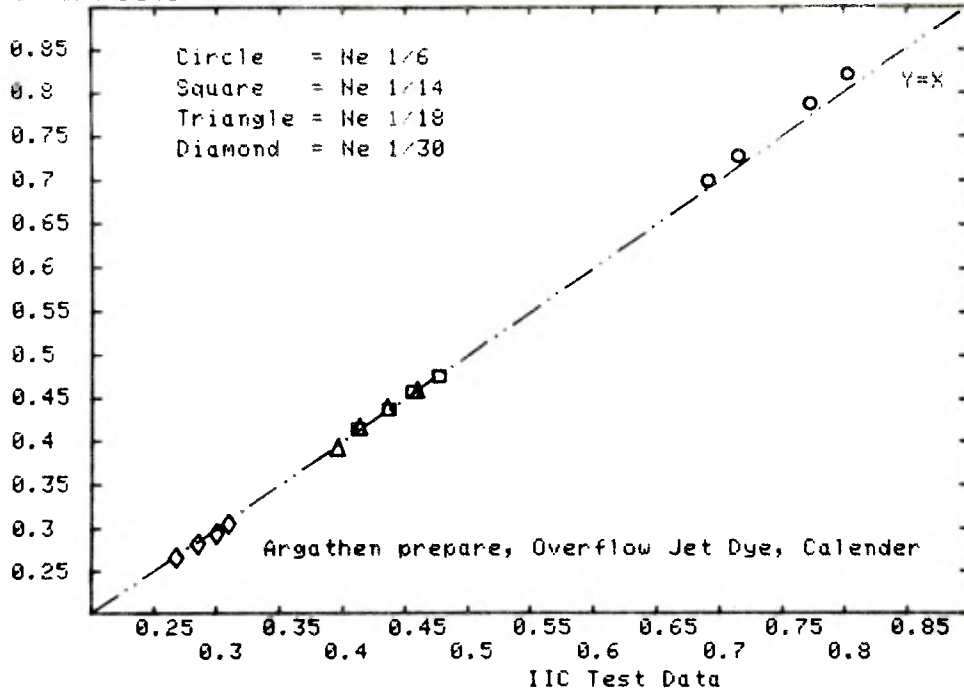
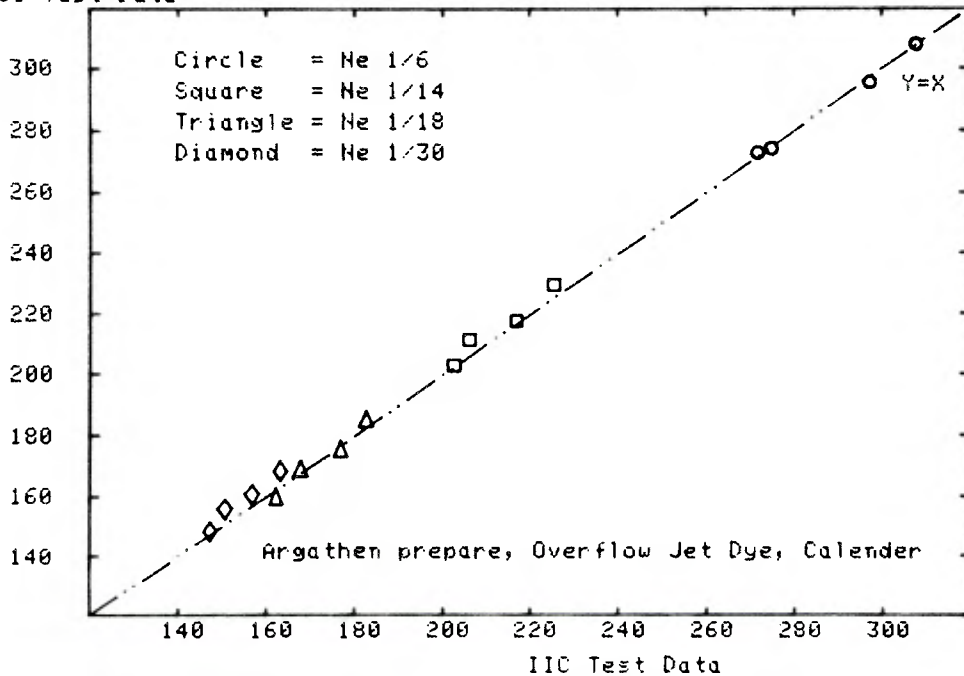


FIGURE A5/6

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

CI Test Data

MEASURED WEIGHT gsm



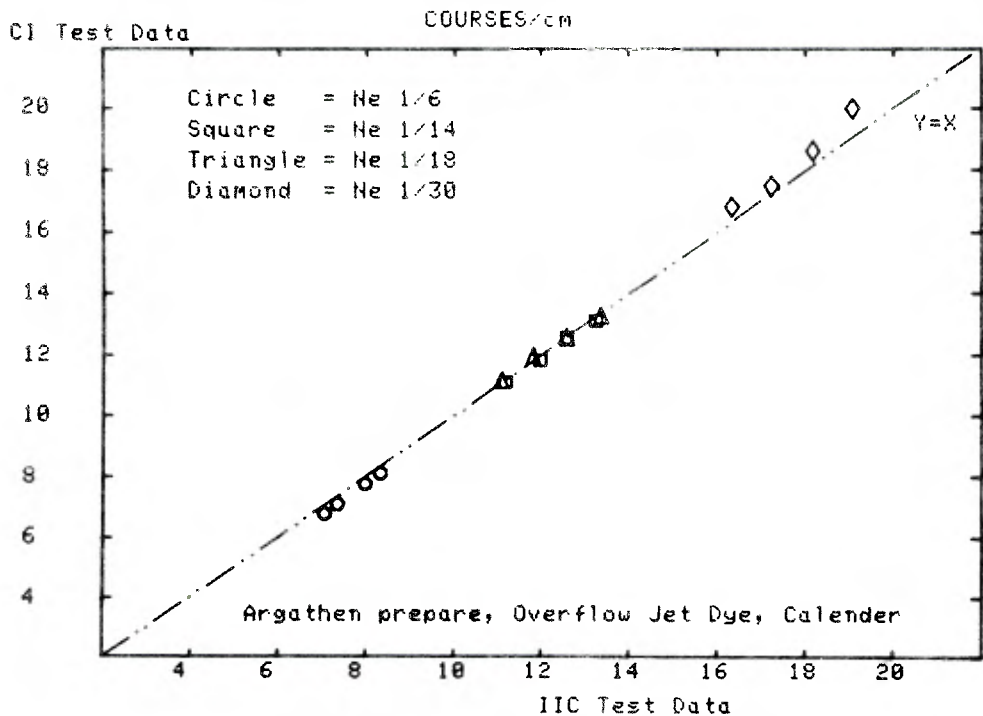
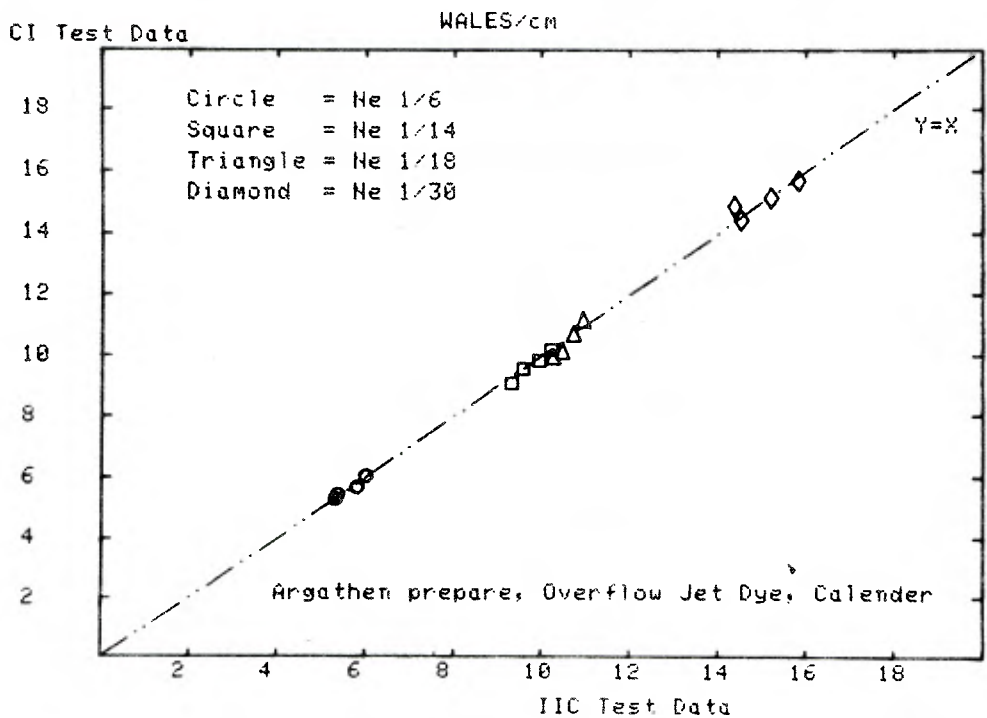


FIGURE A5/8



SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 3 : Set 2 : Argathen prepare, Overflow Jet Dye, Compact
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wt gsm
A-1	93.85	0.7017	7.82	5.07	251.18
A-2	92.36	0.7265	7.57	4.88	240.32
A-3	93.03	0.7056	6.73	4.75	224.76
A-4	95.78	0.812	6.27	4.83	232.8
mean	93.75				
sd	1.48				
B-1	41.49	0.4182	12.37	9.38	193.81
B-2	40.77	0.4389	11.6	9.02	180.1
B-3	41.48	0.4595	10.93	8.72	179.95
B-4	41.09	0.4857	10.02	8.7	168.06
mean	41.21				
sd	0.34				
C-1	32.19	0.3986	13.02	9.35	152.27
C-2	31.9	0.4199	12.42	8.93	145.92
C-3	31.94	0.4419	11.3	8.72	141.98
C-4	32.28	0.4638	9.77	8.9	131.37
mean	32.06				
sd	0.18				
D-1	19.91	0.2703	19.45	14.12	144.36
D-2	19.65	0.2858	18.33	13.42	140.62
D-3	20.12	0.2976	17.18	13.48	133.23
D-4	20.06	0.31	15.62	13.53	127.19
mean	19.94				
sd	0.21				

I I C / C I INTERLABORATORY COMPARISON

TABLE A5/6

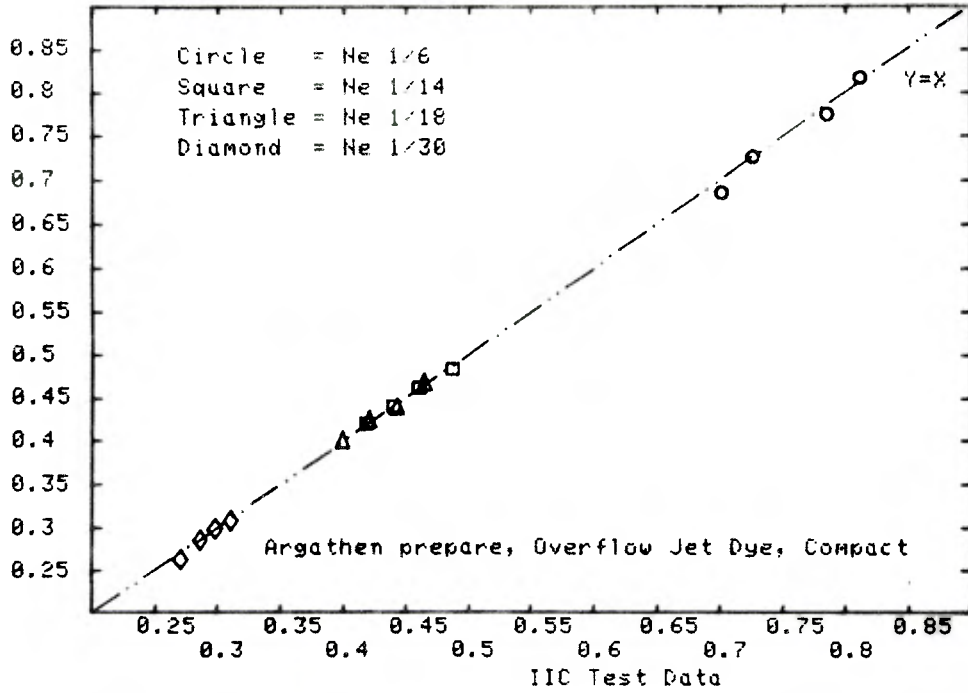
SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 3 : Set 2 : Argathen prepare, Overflow Jet Dye, Compact
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.6858	7.87	4.96	252.29
A-2	0.7264	7.48	4.88	244.15
A-3	0.7747	6.65	4.69	231.61
A-4	0.8166	6.3	4.65	228.21
B-1	0.4191	12.64	8.86	197.7
B-2	0.4394	11.65	8.82	186.17
B-3	0.4608	11.02	8.5	180.4
B-4	0.4829	10.2	8.23	171.25
C-1	0.3988	13.03	9.33	144.8
C-2	0.4221	12.09	9.06	146.83
C-3	0.4376	11.18	8.66	141.07
C-4	0.4653	10.2	9.06	134.96
D-1	0.2621	19.25	13.7	144.46
D-2	0.285	18.03	13.54	140.05
D-3	0.2979	17.01	13.43	135.3
D-4	0.3078	15.79	12.99	130.89

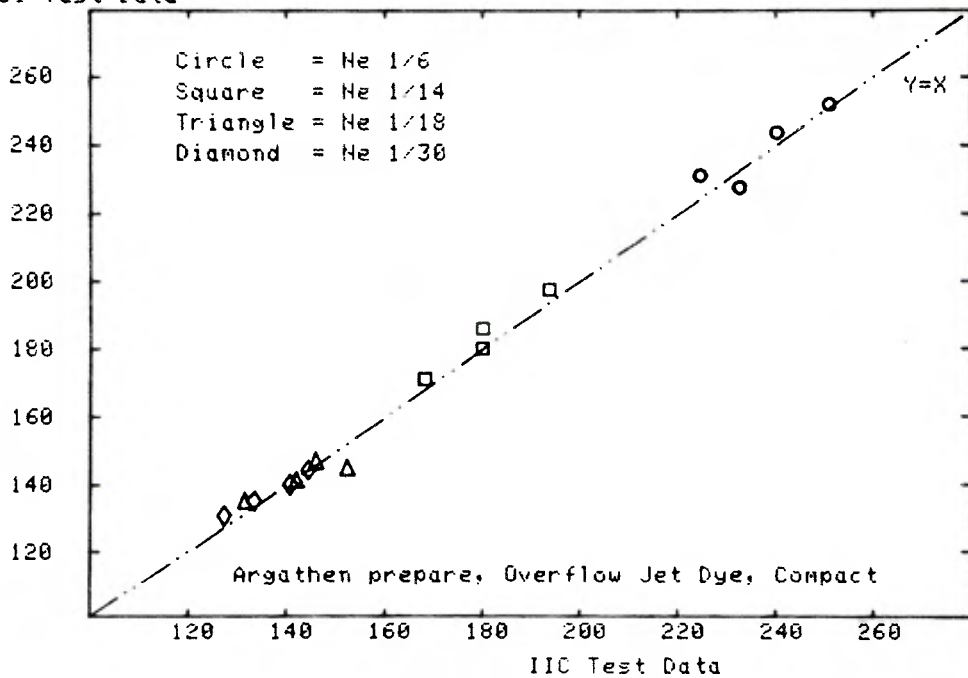
CI Test Data

STITCH LENGTH cm



CI Test Data

MEASURED WEIGHT gsm



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED

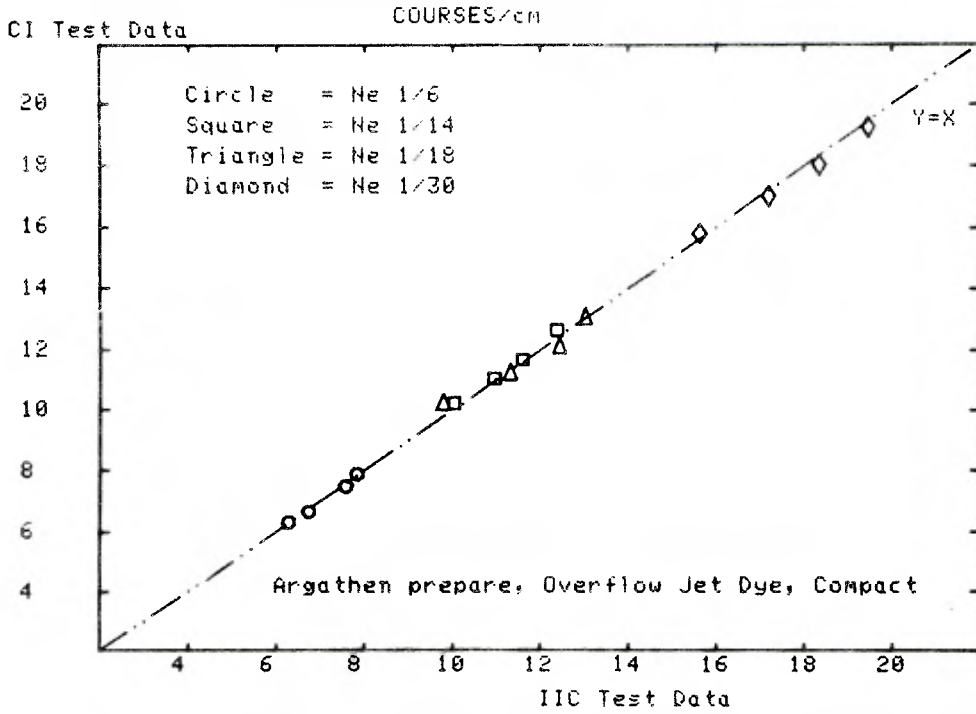
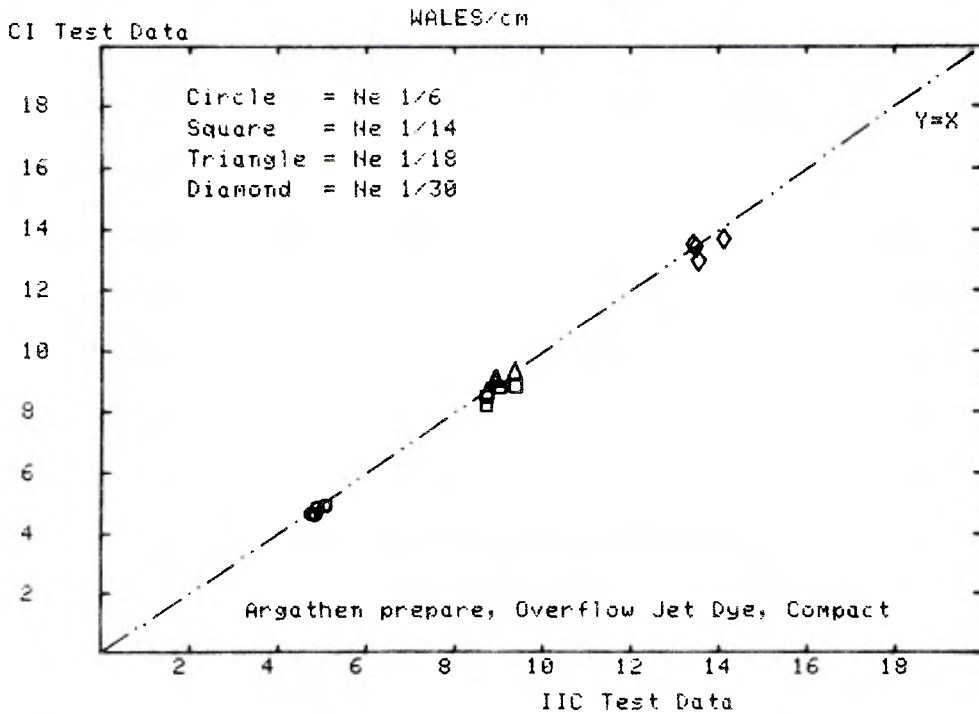


FIGURE A5/12

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : AS RECEIVED



I I C / C I INTERLABORATORY COMPARISON

TABLE A5/7

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 3 : Set 2 : Argathen prepare, Overflow Jet Dye, Compact
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wt gsm
A-1	88.92	0.6921	8.32	5.98	314.99
A-2	89.62	0.718	8.03	5.92	294.03
A-3	92.1	0.782	7.31	5.42	273.42
A-4	94.91	0.798	7.13	5.21	275.57
mean	91.39				
sd	2.72				
B-1	40.89	0.4138	13.33	10.32	231.68
B-2	41.5	0.4349	12.48	9.88	218.38
B-3	41.31	0.4536	11.92	9.73	211.36
B-4	40.81	0.4785	11.25	9.35	202.43
mean	41.13				
sd	0.33				
C-1	31.88	0.395	13.52	11.03	183.98
C-2	31.43	0.4142	12.92	10.53	174.53
C-3	31.64	0.436	12.03	10.28	166.92
C-4	31.75	0.4612	11.2	9.97	159.99
mean	31.68				
sd	0.19				
D-1	19.84	0.2673	20.3	15.95	168.52
D-2	19.81	0.2832	18.95	15.03	158.5
D-3	19.87	0.2953	17.68	15.02	154.52
D-4	19.96	0.307	16.77	14.43	146.17
mean	19.87				
sd	0.07				

I I C / C I INTERLABORATORY COMPARISON

TABLE A5/8

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 3 : Set 2 : Argathen prepare, Overflow Jet Dye, Compact
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.696	8.19	6.1	311.29
A-2	0.7277	7.87	5.79	297.05
A-3	0.7892	7.09	5.51	281.45
A-4	0.8128	6.77	5.35	278.4
B-1	0.414	13.35	10.24	230.93
B-2	0.4293	12.44	9.84	222.11
B-3	0.4559	11.85	9.61	210.92
B-4	0.4846	11.14	9.25	203.46
C-1	0.3917	13.39	10.98	185.49
C-2	0.4092	12.56	10.75	176.67
C-3	0.4376	11.81	10.35	170.57
C-4	0.4585	11.02	10.04	163.45
D-1	0.2652	20.24	15.91	169.55
D-2	0.2885	18.7	15.16	160.73
D-3	0.2946	17.6	14.88	154.97
D-4	0.3038	16.77	14.69	149.54

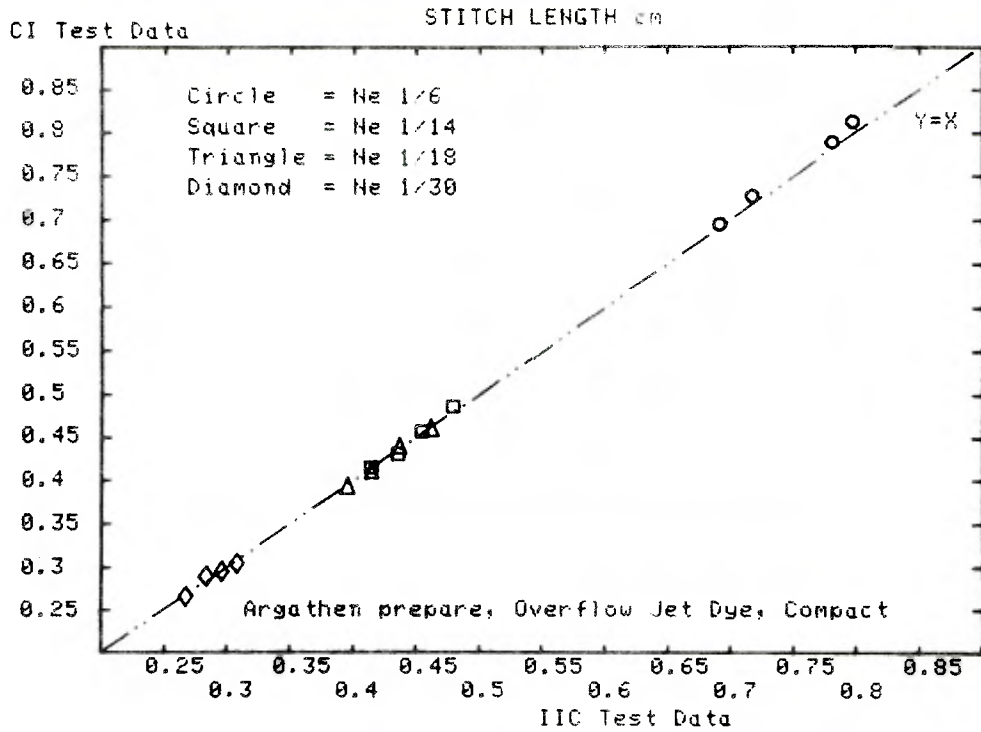
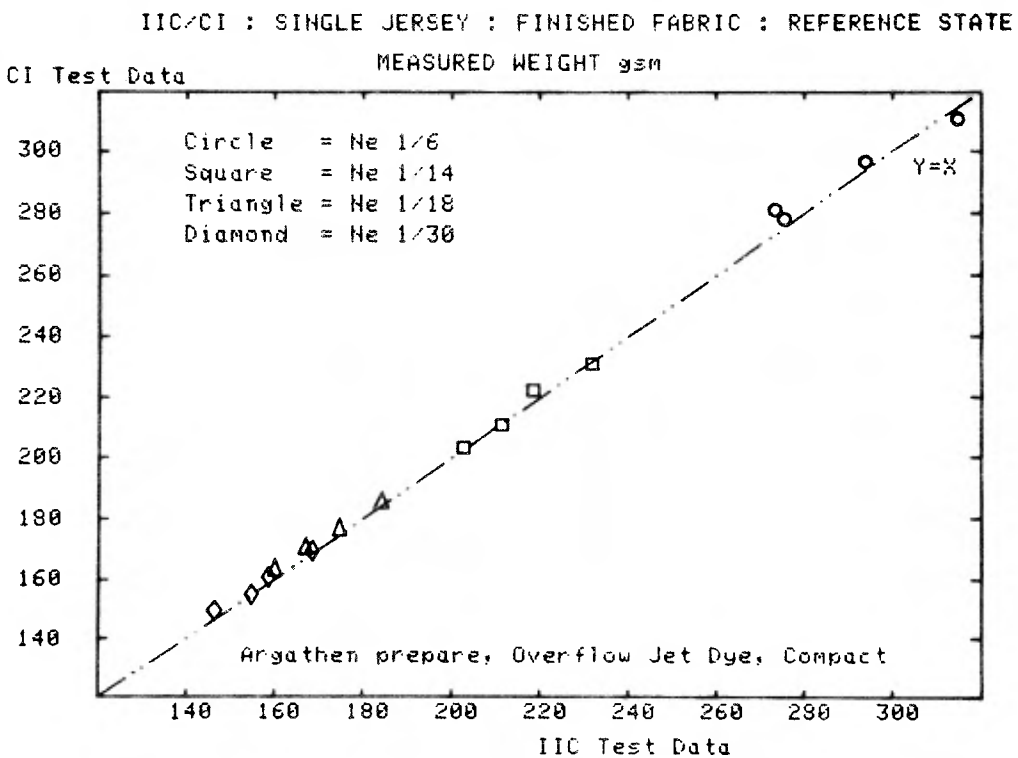


FIGURE A5/14



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

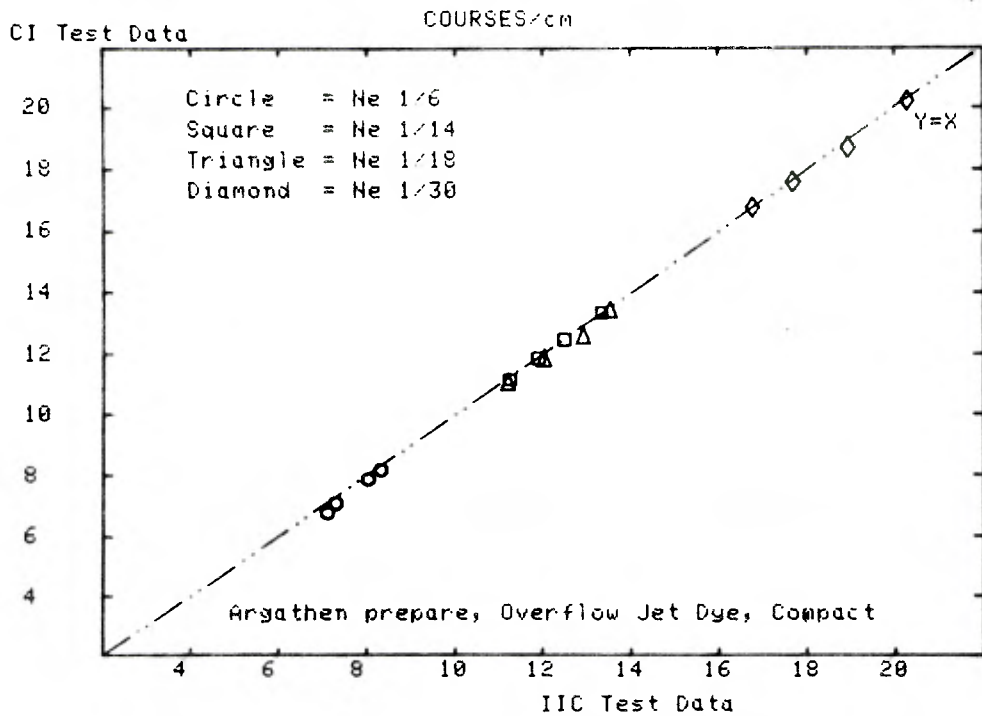
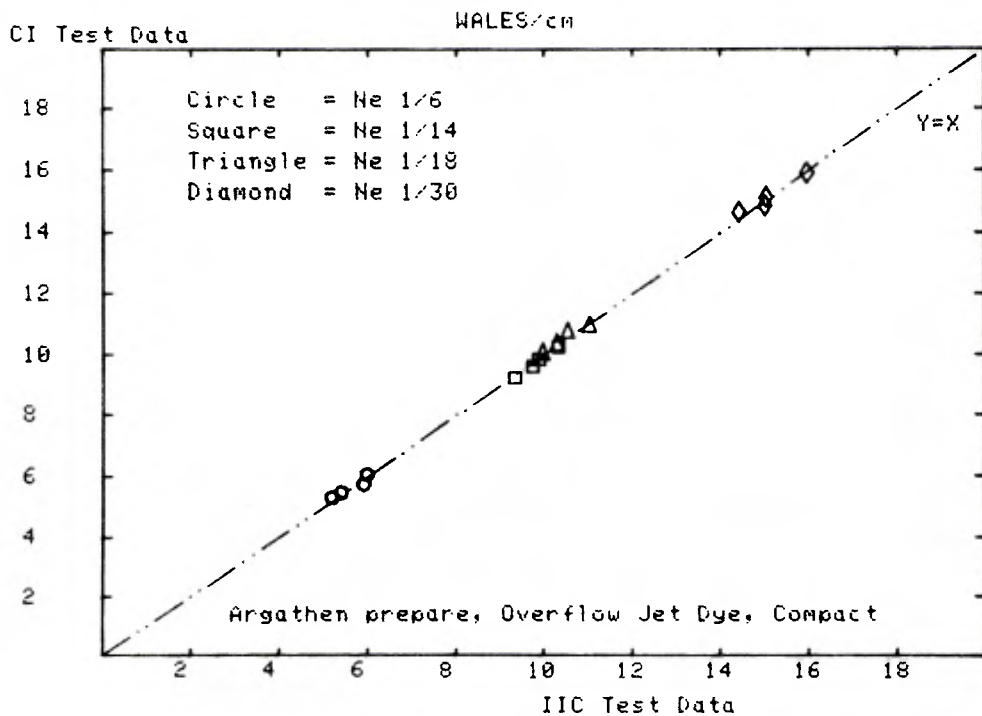


FIGURE A5/16

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE



I I C / C I INTERLABORATORY COMPARISON

TABLE A5/9

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 3 : Set 3 : Argathen prepare, Overflow Jet Dye, Resin + Calender
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wt gsm
A-1	93.03	0.7006	6.69	5.1	206.1
A-2	93.01	0.7299	6.17	5.02	203.76
A-3	95.23	0.7866	5.82	4.3	181.99
A-4	96.26	0.8149	5.72	4.16	175.51
mean	94.38				
sd	1.63				
B-1	41.45	0.4172	10.42	9.33	164.61
B-2	42.08	0.4406	10.03	8.78	155.98
B-3	42.52	0.461	9.43	8.9	166.07
B-4	41.86	0.4078	8.53	8.71	154.89
mean	41.98				
sd	0.45				
C-1	32.2	0.4027	10.48	9.82	129.37
C-2	32.2	0.4209	9.92	9.3	120.62
C-3	32.32	0.4422	9.15	9.17	113.97
C-4	32.18	0.466	8.48	8.63	112.05
mean	32.22				
sd	0.86				
D-1	20.19	0.2714	17.47	13.82	127.49
D-2	19.7	0.2857	15.8	13.32	119.48
D-3	19.91	0.2971	14.58	13.07	110.07
D-4	21.15	0.3124	13.57	12.6	107.8
mean	20.24				
sd	0.64				

=====

TABLE A5/10

I I C / C I INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

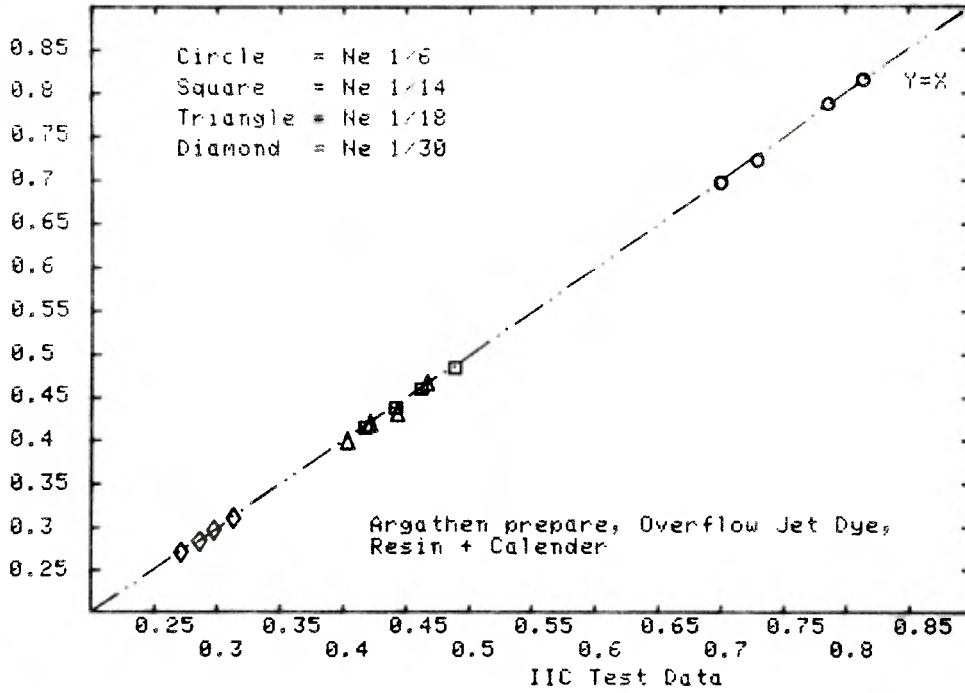
Finish 3 : Set 3 : Argathen prepare, Overflow Jet Dye, Resin + Calender
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.6985	6.69	4.8	204.48
A-2	0.7239	6.06	4.8	196.68
A-3	0.7074	5.71	4.25	178.03
A-4	0.8153	5.59	3.98	167.05
B-1	0.4145	10.35	9.09	165.82
B-2	0.4371	9.76	8.62	155.99
B-3	0.4595	9.13	8.9	156.66
B-4	0.4851	8.35	8.66	149.54
C-1	0.3978	10.31	10.31	127.5
C-2	0.4181	9.76	9.76	119.36
C-3	0.4295	9.02	8.5	110.21
C-4	0.4651	8.27	8.43	107.16
D-1	0.2697	16.54	13.43	122.08
D-2	0.2842	15.12	12.91	112.92
D-3	0.2974	14.17	12.72	109.19
D-4	0.3101	13.15	12.91	104.44

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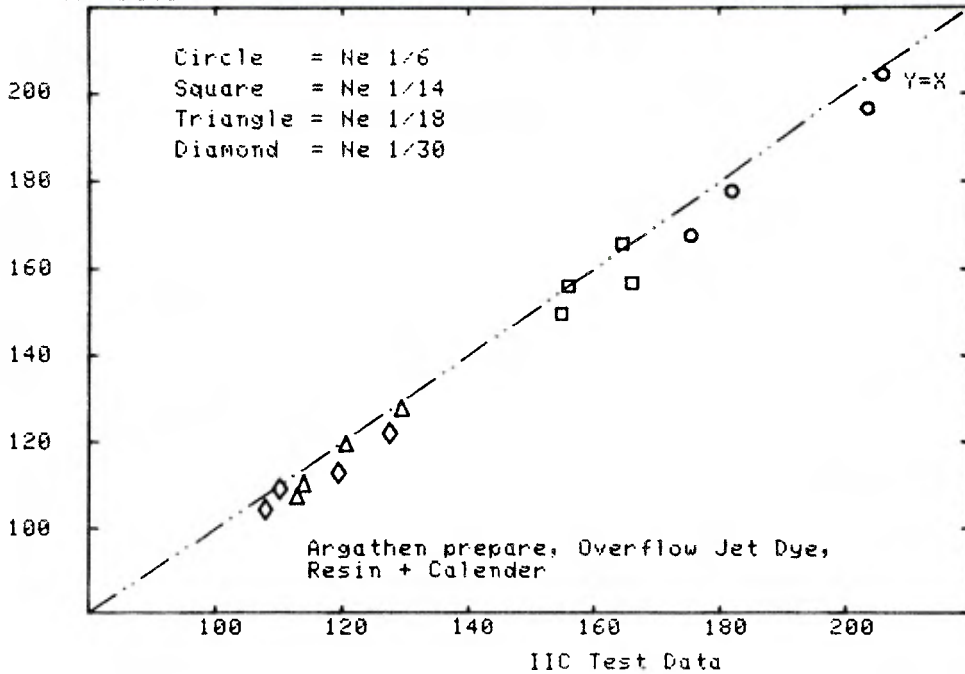
CI Test Data

STITCH LENGTH cm



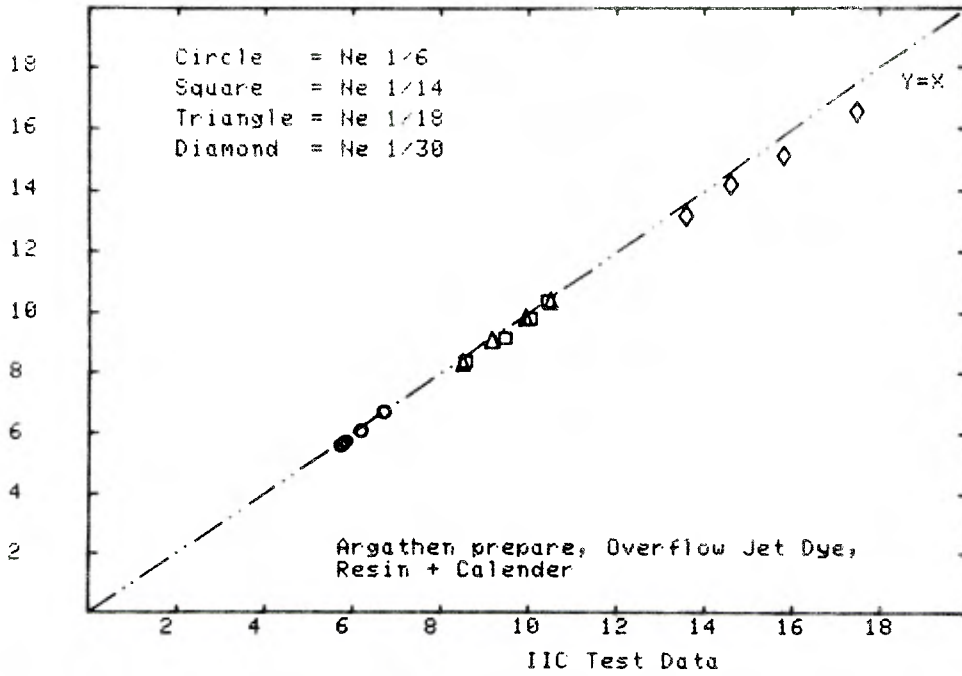
CI Test Data

MEASURED WEIGHT gsm



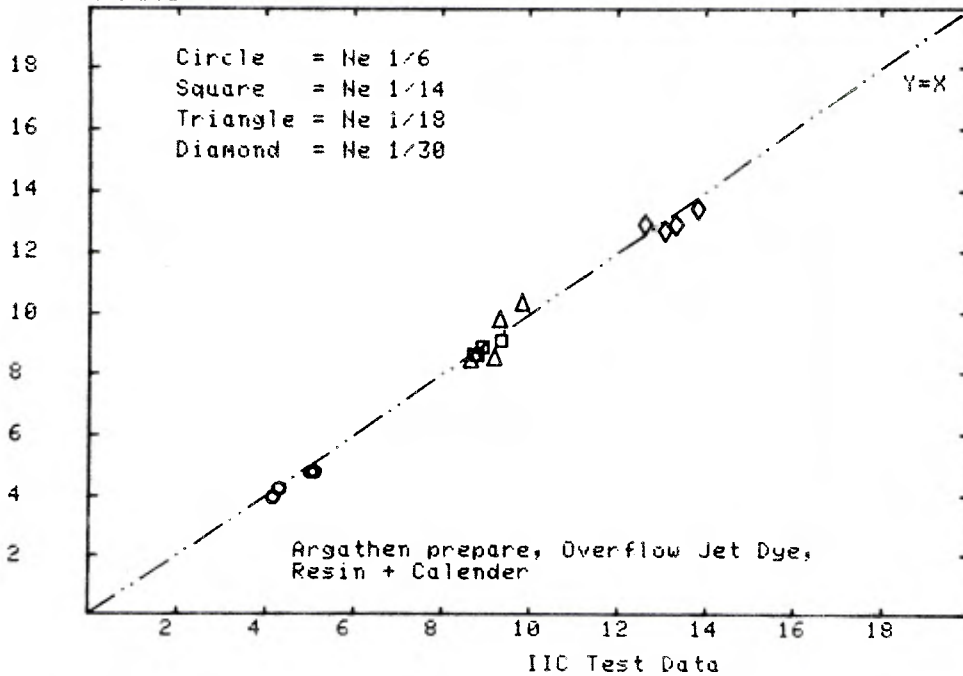
CI Test Data

COURSES/cm



CI Test Data

WALES/cm



I I C / C I INTERLABORATORY COMPARISON

TABLE A5/11

SINGLE JERSEY ; STARFISH DATABASE EXPANSION
RING SPUN YARNS ; FINISHED FABRICS ; REFERENCE STATE

Finish 3 ; Set 3 ; Argathen prepare, Overflow Jet Dye, Resin + Calender
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wt gsm
A-1	92.69	0.692	8.03	6	293.79
A-2	91.8	0.7256	7.62	5.8	280.05
A-3	94.39	0.7802	7.07	5.43	269.88
A-4	93.67	0.8095	6.65	5.35	258.66
mean	93.14				
sd	1.13				
B-1	41.24	0.4144	13.05	10.13	217.54
B-2	41.38	0.4377	12.2	10	212.44
B-3	41.82	0.4588	11.67	9.53	204.78
B-4	41.95	0.4822	10.78	9.26	199
mean	41.6				
sd	0.34				
C-1	32.11	0.3986	12.93	11.03	176.4
C-2	32.16	0.418	12.13	10.77	170.15
C-3	31.66	0.4401	11.35	10.68	163.3
C-4	32.06	0.4637	10.53	10.38	155.98
mean	32				
sd	0.23				
D-1	20.14	0.2667	19.13	15.67	162.68
D-2	19.9	0.2852	17.83	15.2	151.17
D-3	20.07	0.2989	17.3	14.73	146.49
D-4	20.15	0.31	16.13	14.72	142.55
mean	20.07				
sd	0.12				

TABLE A5/12

I I C / C I INTERLABORATORY COMPARISON

SINGLE JERSEY ; STARFISH DATABASE EXPANSION
RING SPUN YARNS ; FINISHED FABRICS ; REFERENCE STATE

Finish 3 ; Set 3 ; Argathen prepare, Overflow Jet Dye, Resin + Calender
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.701	7.87	5.83	292.3
A-2	0.7341	7.48	5.71	283.49
A-3	0.7849	6.97	5.35	269.25
A-4	0.8166	6.46	5.31	259.75
B-1	0.415	12.8	10.08	218.38
B-2	0.4351	11.81	9.84	211.26
B-3	0.4585	11.3	9.61	205.49
B-4	0.4666	10.63	9.21	197.36
C-1	0.3962	12.36	11.14	176.67
C-2	0.4191	11.81	10.67	171.58
C-3	0.4422	10.94	10.75	163.45
C-4	0.4613	10.47	10.24	157.68
D-1	0.2644	19.25	15.67	163.45
D-2	0.2832	17.83	15.12	154.97
D-3	0.2972	16.73	15.08	148.86
D-4	0.3109	15.87	14.76	145.13

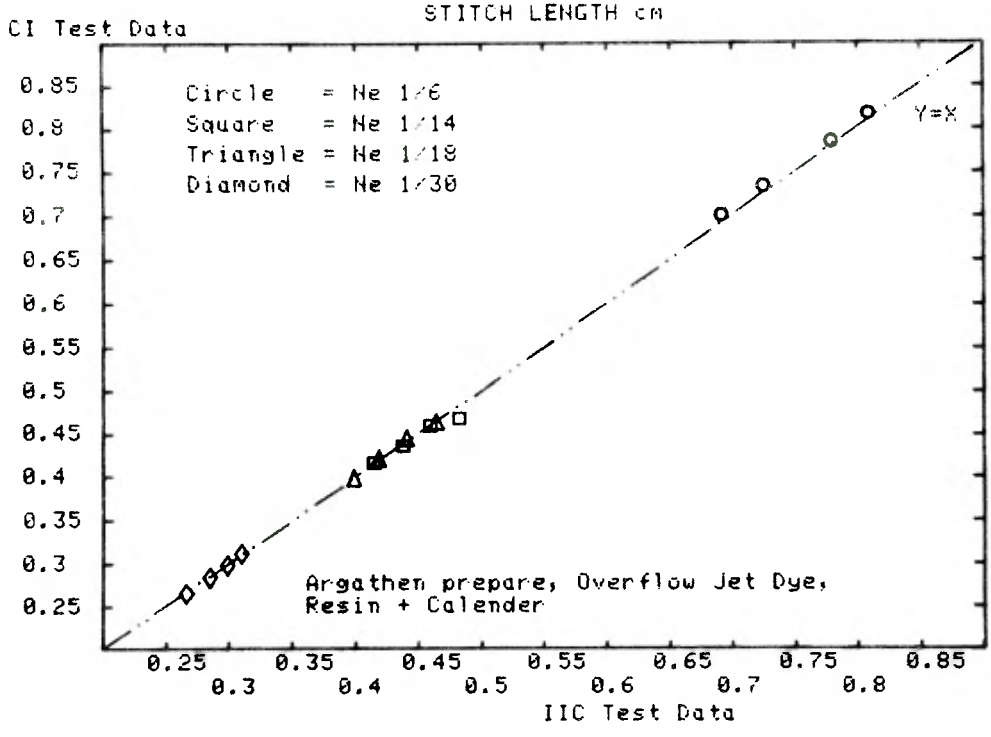
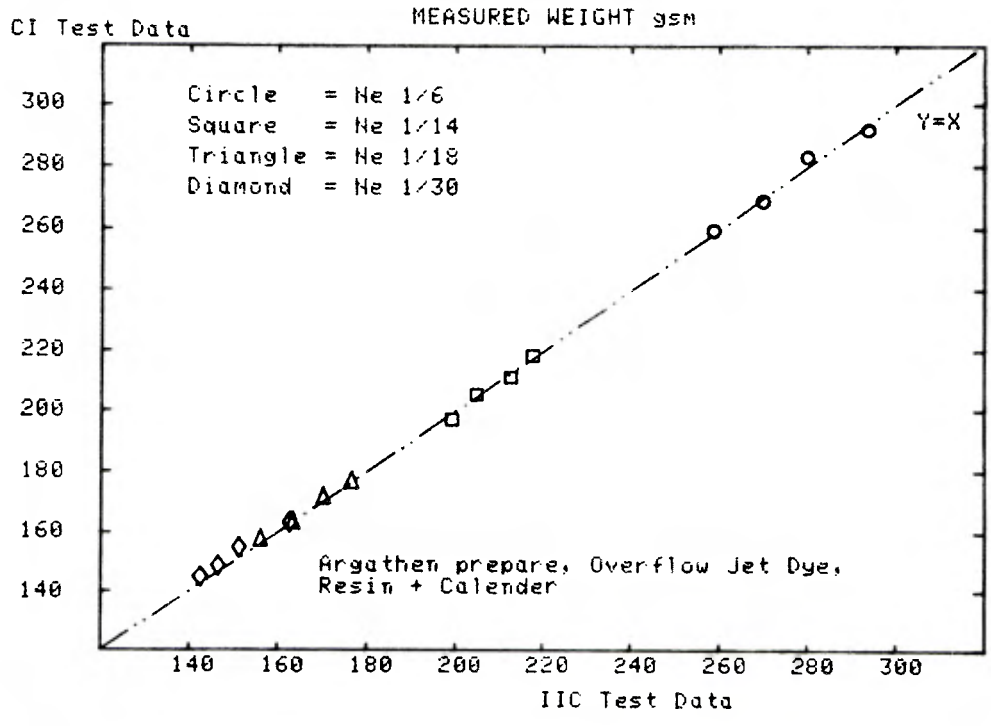
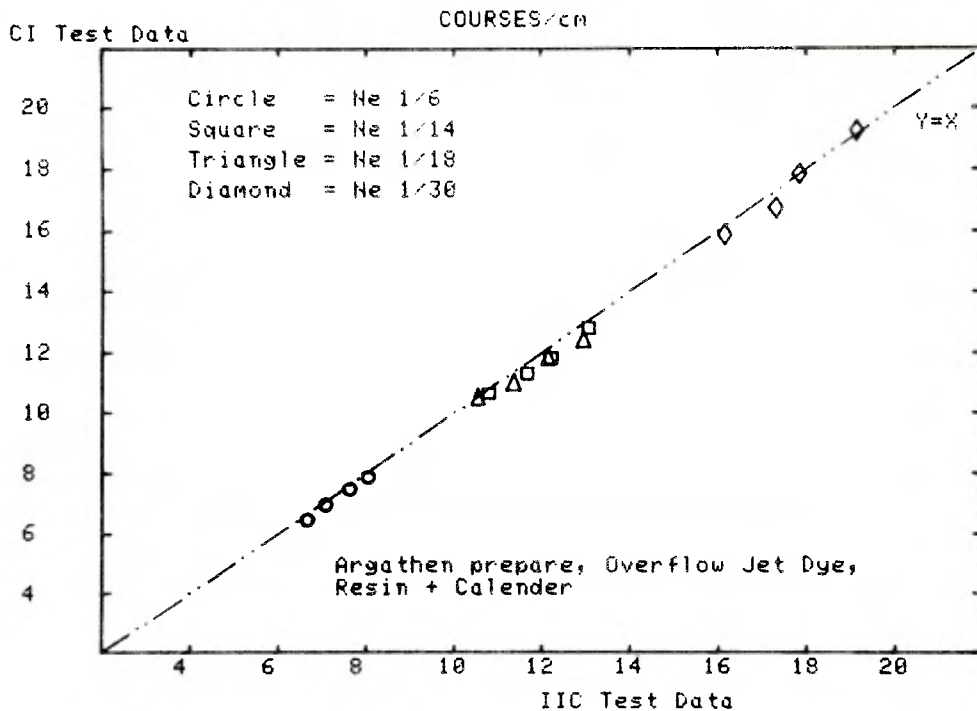


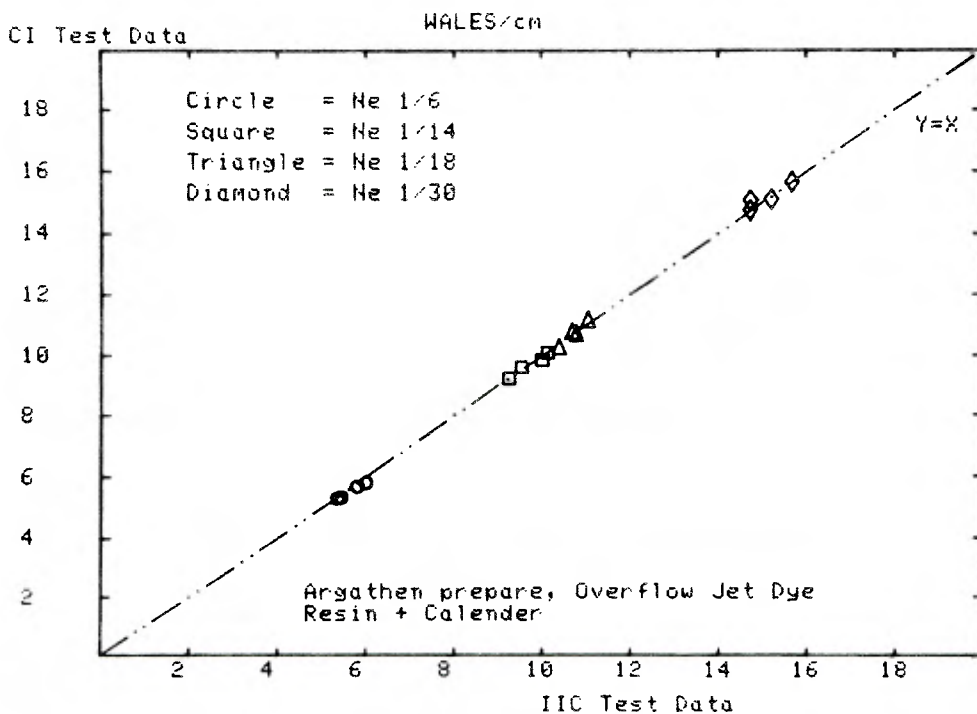
FIGURE A5/22



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE



I I C / C I INTERLABORATORY COMPARISON

TABLE A5/13

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 3 : Set 4 : Argathen prepare, Overflow Jet Dye, Resin + Compact
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wt gsm
A-1	93.21	0.7001	7.1	4.72	222.79
A-2	93.16	0.7262	6.5	4.65	215.58
A-3	94.45	0.7831	5.7	4.53	197.66
A-4	97.32	0.815	5.42	4.42	195.24
mean	94.54				
sd	1.95				
B-1	41.18	0.4183	11.12	9.23	178.45
B-2	41.12	0.4421	10.02	9.22	166.61
B-3	41.88	0.4608	9.5	8.93	163.7
B-4	41.85	0.4871	8.4	9.02	153.45
mean	41.51				
sd	0.41				
C-1	32.23	0.4004	11.32	9.57	138.48
C-2	32.4	0.4208	10.27	9.6	133.19
C-3	32.39	0.4427	9.38	9.45	125.08
C-4	32.38	0.4656	8.73	9.22	122.95
mean	32.35				
sd	0.08				
D-1	20.2	0.2702	17.47	14.13	131.56
D-2	19.82	0.288	16.13	13.5	121.62
D-3	20.04	0.2972	14.93	13.83	118.03
D-4	20.05	0.3112	14.25	13.48	114.16
mean	20.03				
sd	0.15				

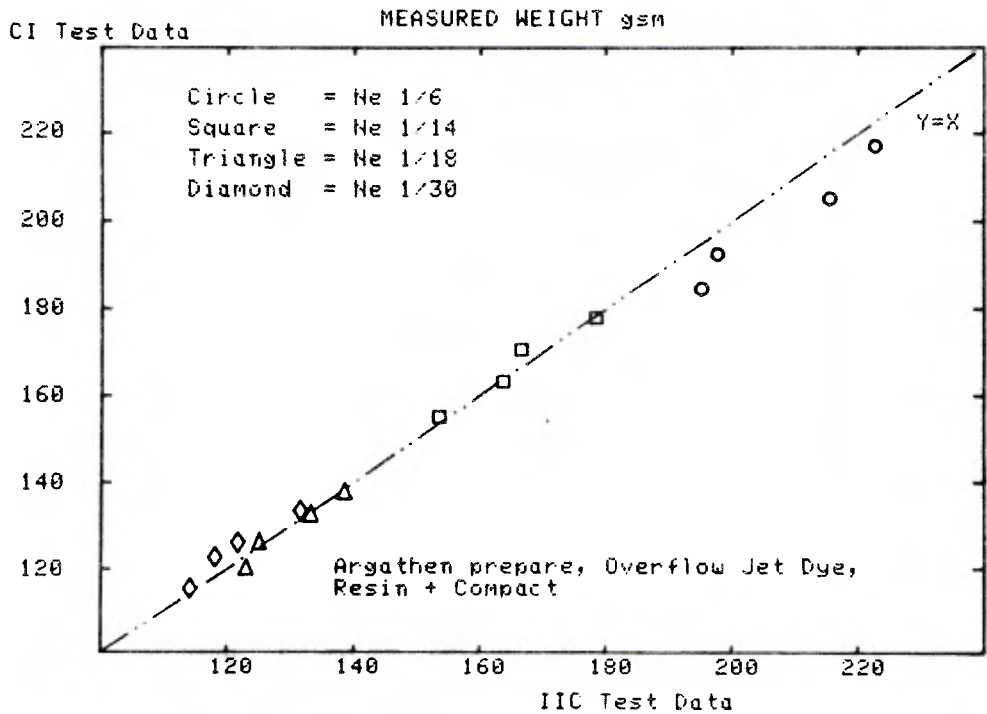
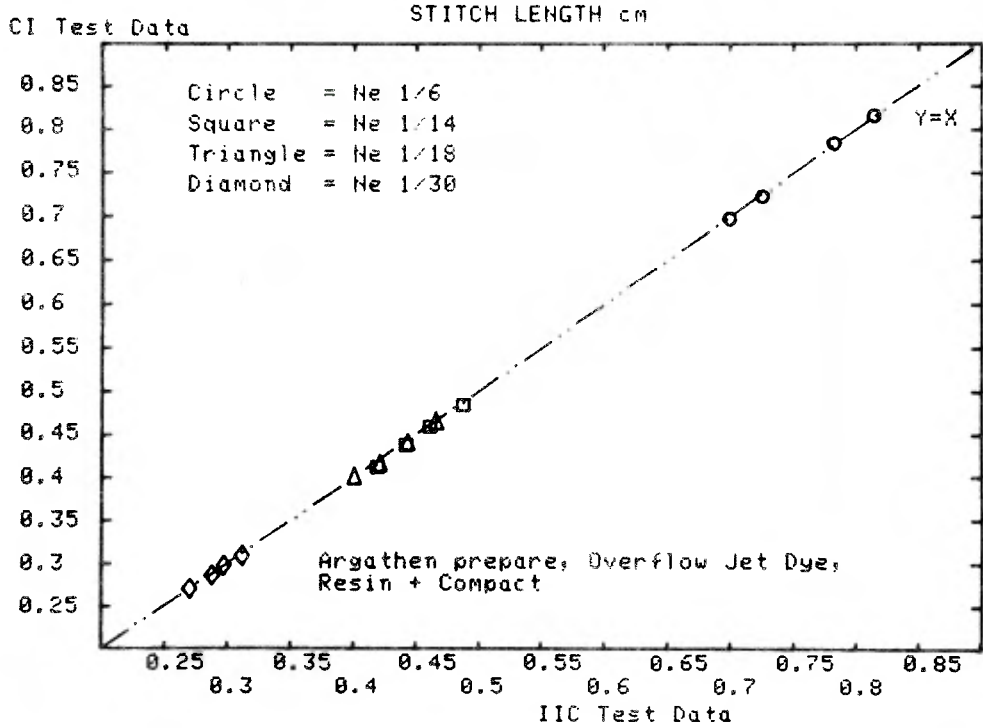
TABLE A5/14

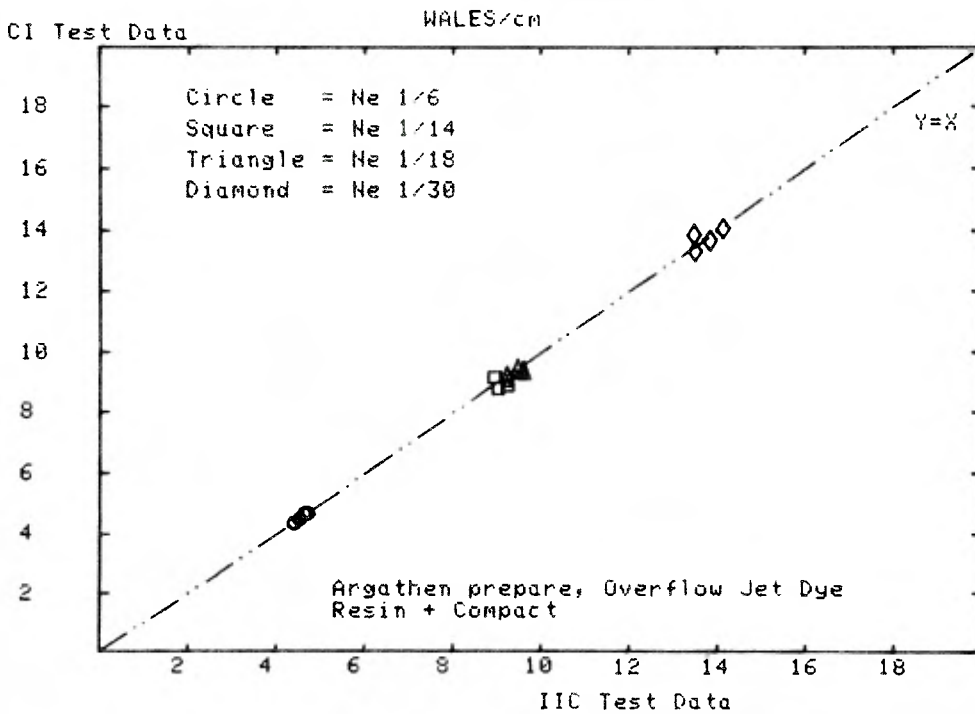
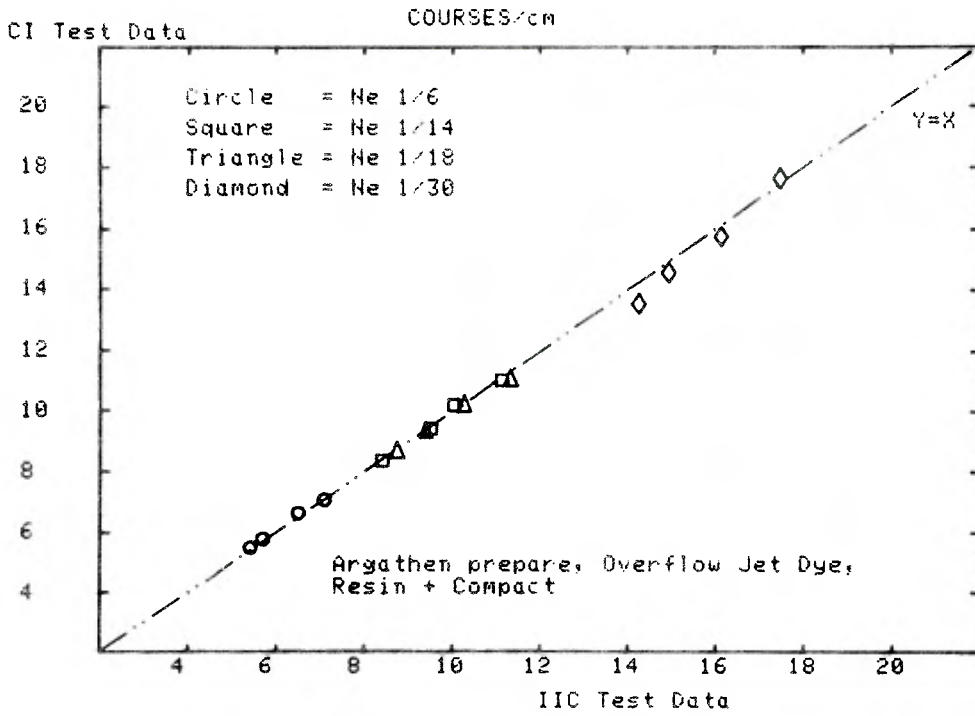
I I C / C I INTERLABORATORY COMPARISON

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : AS DELIVERED

Finish 3 : Set 4 : Argathen prepare, Overflow Jet Dye, Resin + Compact
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.6985	7.09	4.72	217.36
A-2	0.7239	6.65	4.72	205.49
A-3	0.7849	5.79	4.53	192.61
A-4	0.8166	5.51	4.41	184.81
B-1	0.4117	11.02	9.06	178.03
B-2	0.4369	10.2	8.9	170.57
B-3	0.4582	9.41	9.17	163.11
B-4	0.4839	8.35	8.78	154.97
C-1	0.3998	11.06	9.37	137.67
C-2	0.4145	10.2	9.33	132.59
C-3	0.4387	9.33	9.45	126.15
C-4	0.463	8.66	9.21	120.04
D-1	0.2703	17.64	14.09	133.61
D-2	0.2857	15.75	13.35	126.15
D-3	0.2974	14.57	13.7	122.75
D-4	0.3089	13.54	13.9	115.29





IIC/CI INTERLABORATORY COMPARISON

TABLE A5/15

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 3 : Set 4 : Argathen prepare, Overflow Jet Dye, Resin + Compact
IIC Test Data

Sample Ref.No.	Tex	SL cm	C/cm	W/cm	Wt gsm
A-1	94.22	0.6072	8.03	5.93	304.06
A-2	92.37	0.7227	7.63	5.77	287.84
A-3	93.94	0.7807	6.97	5.47	271.25
A-4	97.18	0.8092	6.7	5.32	270.18
mean	94.43				
sd	2.01				
B-1	41.21	0.4153	12.78	10.28	221.01
B-2	41.23	0.4404	11.93	9.98	212.46
B-3	41.12	0.4601	11.38	9.57	205.02
B-4	41.78	0.4833	10.45	9.42	194.94
mean	41.34				
sd	0.3				
C-1	31.8	0.3982	13	11.1	176.18
C-2	32.09	0.4178	12.1	10.9	170.57
C-3	32.25	0.4302	11.37	10.68	163.11
C-4	32.05	0.4623	10.67	10.33	158.04
mean	32.05				
sd	0.19				
D-1	19.57	0.2767	19.38	15.85	165.32
D-2	20.04	0.2839	18.12	15.07	151.2
D-3	20.21	0.2906	16.87	15.17	151.33
D-4	20.06	0.3032	16.25	14.57	141.95
mean	19.97				
sd	0.28				

IIC/CI INTERLABORATORY COMPARISON

TABLE A5/16

SINGLE JERSEY : STARFISH DATABASE EXPANSION
RING SPUN YARNS : FINISHED FABRICS : REFERENCE STATE

Finish 3 : Set 4 : Argathen prepare, Overflow Jet Dye, Resin + Compact
CI Test Data

Sample Ref.No.	SL cm	C/cm	W/cm	Wt gsm
A-1	0.6985	7.87	5.91	298.75
A-2	0.729	7.48	5.71	284.17
A-3	0.8001	6.77	5.39	263.48
A-4	0.8128	6.54	5.43	258.06
B-1	0.4191	12.64	10.24	219.74
B-2	0.4361	11.85	9.8	209.9
B-3	0.4577	11.22	9.72	204.02
B-4	0.4826	10.51	9.37	196.34
C-1	0.399	12.64	11.02	173.96
C-2	0.412	11.89	9.61	171.92
C-3	0.4171	11.14	10.55	165.48
C-4	0.4661	10.63	10.08	156.33
D-1	0.2644	19.17	15.98	164.46
D-2	0.2865	17.83	15.28	156.33
D-3	0.2911	16.81	15	150.22
D-4	0.3073	16.02	14.65	144.46

CI Test Data

STITCH LENGTH cm

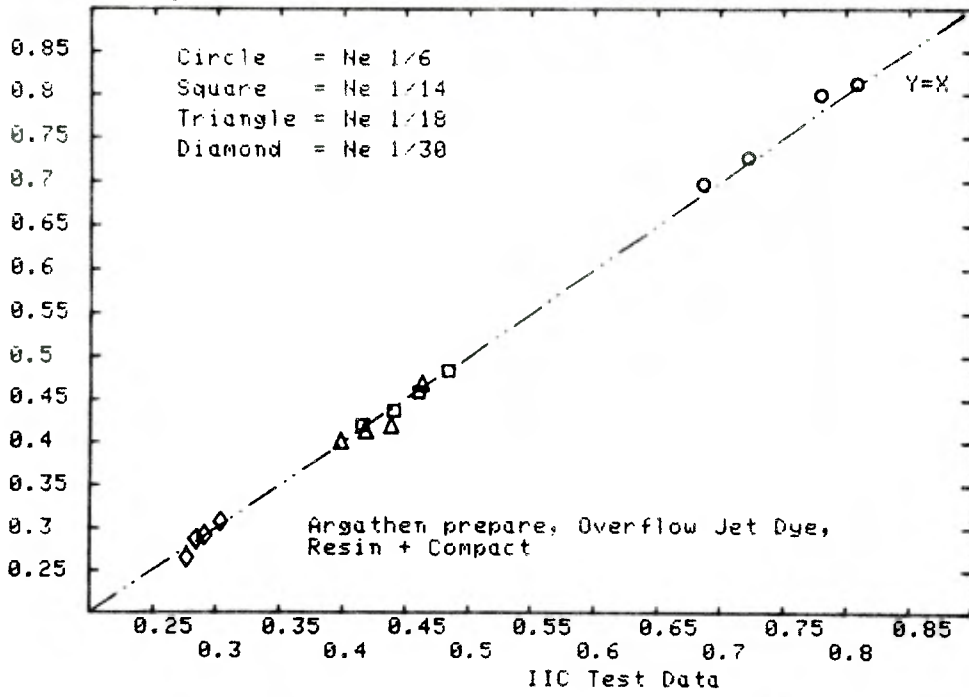
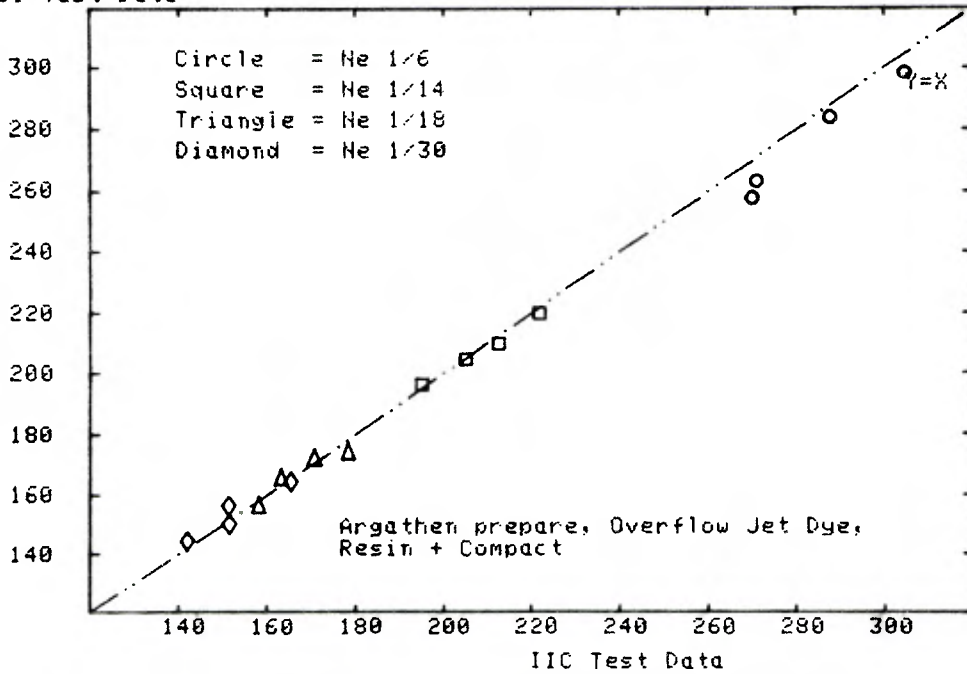


FIGURE A5/30

CI Test Data

MEASURED WEIGHT gsm



IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE

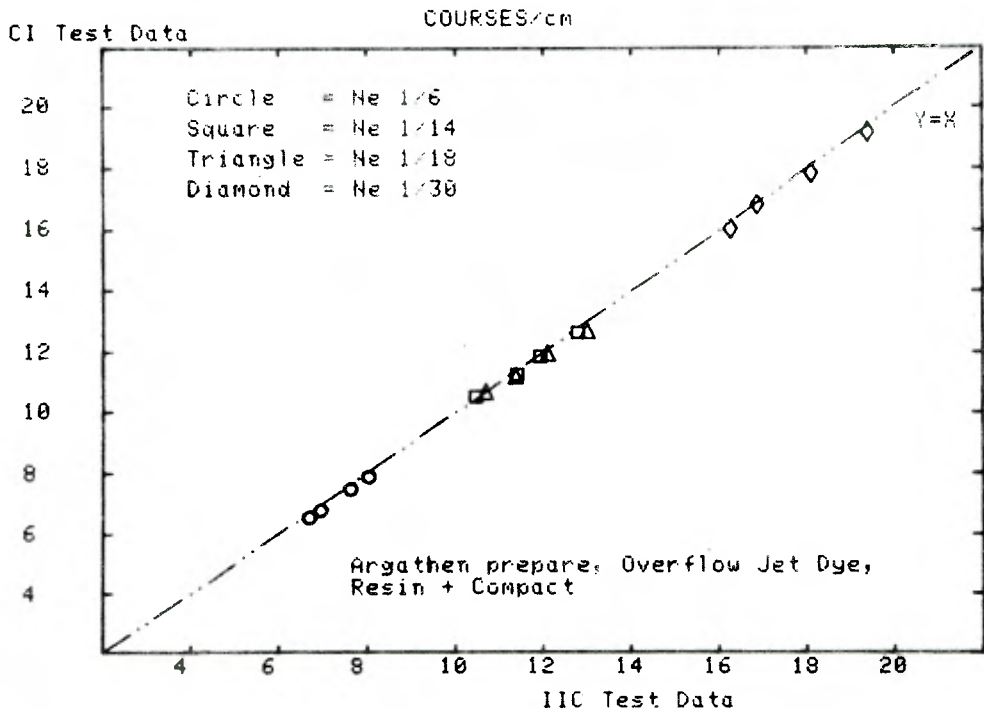
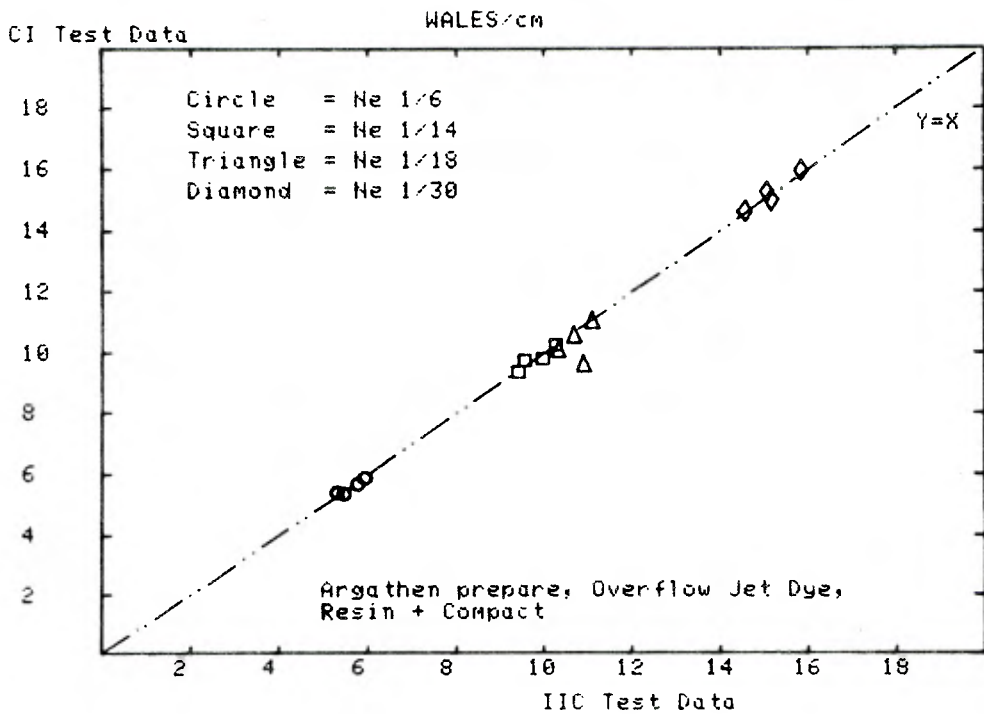


FIGURE A5/32

IIC/CI : SINGLE JERSEY : FINISHED FABRIC : REFERENCE STATE



A P P E N D I X 6

IIC LABORATORY TEST REPORTS

Yarn	A6/1
Grey Fabric	A6/2, A6/3
Finished Fabric Route 1	A6/4 - A6/11
Finished Fabric Route 2	A6/12 - A6/19
Finished Fabric Route 3	A6/20 - A6/27

Cotton Incorporated - Yarns

YARN

SAMPLE NO.	1	2	3	4
Yarn count (Tex)	98.21	42.71	33.47	20.60
Twist (turns per metre)	323	576	580	823
Single end strength (g)	1604.48	705.15	539.02	338.91
Extension at break (%)	8.53	7.73	6.92	6.73
Coefficient of friction (μ)	0.23	0.22	0.17	0.18
Twist liveliness (tpm)	28.85	41.30	46.05	62.15
Yarn count (Ne)	6.01	13.83	17.64	28.66
Turns per inch	8.20	14.63	14.73	20.90
Twist Factor - alpha Tex	32.01	37.65	33.56	37.36
Twist Factor - English	3.35	3.94	3.51	3.90
Tenacity (g./Tex)	16.34	16.51	16.10	16.45

Cotton Inc. - Interlaboratory Trial

GREY

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), 5x	8.54	11.15	13.48	17.06	5.62	10.12	12.06	14.79
Width shrinkage (%), 5x	9.77	8.59	5.96	2.94	17.57	14.91	13.16	11.07
Weight (gsm), BW	276.46	254.09	242.38	242.11	196.68	189.42	182.98	168.98
Weight (gsm), AW	327.81	311.09	293.26	292.93	247.11	236.74	225.16	216.03
Courses per 3cm, BW	23.60	21.50	19.20	17.90	40.80	36.80	34.15	31.40
Courses per 3cm, AW	26.40	25.00	22.50	22.40	43.10	40.95	38.65	37.00
Wales per 3cm, BW	15.40	15.20	14.10	14.20	24.90	24.90	24.60	24.10
Wales per 3cm, AW	17.40	16.60	15.75	14.90	30.20	29.10	28.45	27.35
Stitch length (mm) BW	7.00	7.34	7.93	8.18	4.22	4.47	4.66	4.90
Stitch length (mm) AW	6.94	7.24	7.80	8.12	4.17	4.39	4.59	4.82
Burst strength (kPa), BW	1207.10	1209.20	1125.60	1098.20	889.70	909.00	793.70	796.70
Burst strength (kPa), AW	1073.00	1056.10	1026.00	970.00	828.30	813.60	766.50	711.00
Distension at burst (mm), BW	20.03	19.63	19.98	18.83	18.62	19.28	18.58	18.68
Distension at burst (mm), AW	22.29	22.70	22.25	22.13	21.70	22.42	21.66	22.32
Angle of spirality, BW	12.11	14.07	14.11	17.65	12.68	16.61	17.61	18.84
Angle of spirality, AW	12.43	13.74	15.99	16.06	13.59	16.17	17.48	19.10
Width (cm), BW	63.60	62.87	66.70	68.43	92.60	94.67	94.27	95.40
Yarn strength (g), BW	1512.80	1496.27	1516.27	1484.10	661.15	680.32	689.56	677.91
Yarn strength (g), AW	1321.73	1355.33	1430.13	1406.00	622.40	655.13	595.09	614.61
Yarn ext. at break (%), BW	9.46	9.61	9.29	9.25	8.73	9.07	8.48	8.73
Yarn ext. at break (%), AW	9.48	9.48	10.30	10.19	9.46	9.95	9.07	9.33
Yarn count (tex), BW	96.18	96.18	97.46	101.91	42.49	41.92	42.90	42.95
Yarn count (tex), AW	94.11	94.35	95.21	99.90	42.01	42.40	41.68	42.01
Thickness (mm x 1000), BW	1237	1217	1206	1233	828	832	854	874
Thickness (mm x 1000), AW	1557	1565	1614	1655	1065	1081	1182	1196
Turns per metre, BW	353	358	361	348	617	627	584	595
Turns per metre, AW	352	351	365	378	628	624	591	572
Twist liveliness, t/m, BW	33.20	35.90	34.00	31.25	49.35	50.80	52.95	54.75
Twist liveliness, t/m, AW	26.70	26.35	28.10	26.75	45.40	47.85	50.90	50.55

DATA CHECKS

Calc/Obs Wt BW	0.98	1.01	0.96	0.97	1.02	1.01	1.02	1.05
Calc/Obs Wt AW	1.02	1.01	1.00	1.03	1.03	1.04	1.04	1.05
Calc/Obs Courses/3cm AW	0.98	0.97	0.99	0.96	1.00	1.00	1.00	1.00
Calc/Obs Wales/3cm AW	0.98	1.00	0.95	0.98	1.00	1.01	1.00	0.99

Cotton Inc. - Interlaboratory Trial

GREY

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), 5x	3.54	7.89	10.00	13.03	8.51	12.94	17.19	17.90
Width shrinkage (%), 5x	21.99	18.39	16.02	12.02	20.64	17.33	13.22	10.93
Weight (gsm), BW	155.77	144.69	138.68	130.50	135.13	128.67	122.05	120.28
Weight (gsm), AW	199.22	193.72	182.71	174.73	183.19	173.91	166.68	161.86
Courses per 3cm, BW	42.70	38.20	35.70	32.20	60.60	53.20	48.80	45.80
Courses per 3cm, AW	44.15	41.35	39.10	37.10	65.90	61.25	58.40	55.60
Wales per 3cm, BW	24.70	24.80	24.30	24.30	36.90	36.50	37.10	36.90
Wales per 3cm, AW	32.20	31.00	30.00	28.90	46.50	44.90	43.50	42.50
Stitch length (mm) BW	4.05	4.24	4.47	4.72	2.72	2.89	3.01	3.13
Stitch length (mm) AW	3.99	4.18	4.40	4.64	2.69	2.84	2.97	3.09
Burst strength (kPa), BW	806.30	759.00	722.20	686.80	675.30	667.00	642.10	629.10
Burst strength (kPa), AW	704.40	698.60	667.10	632.40	671.70	658.50	579.50	587.70
Distension at burst (mm), BW	18.86	18.46	18.08	17.85	17.19	16.69	17.54	17.61
Distension at burst (mm), AW	21.30	21.08	20.80	20.74	20.65	20.91	21.46	21.16
Angle of spirality, BW	15.71	15.93	18.11	17.68	8.74	9.66	11.64	15.34
Angle of spirality, AW	18.58	20.70	22.47	25.39	11.57	13.27	14.90	17.17
Width (cm), BW	92.70	92.17	94.73	95.77	91.13	91.57	91.93	94.53
Yarn strength (g), BW	509.11	497.40	512.99	463.05	323.63	329.75	329.51	314.39
Yarn strength (g), AW	487.97	473.65	484.49	467.20	299.97	302.27	305.17	300.67
Yarn ext. at break (%), BW	7.95	7.89	7.88	7.24	6.80	7.06	7.29	6.86
Yarn ext. at break (%), AW	8.64	8.61	8.67	8.46	7.79	7.83	7.94	7.93
Yarn count (tex), BW	33.02	33.72	33.09	33.08	20.78	20.69	20.62	20.58
Yarn count (tex), AW	32.54	32.61	32.22	32.47	20.46	20.47	20.36	20.27
Thickness (mm x 1000), BW	792	793	786	800	622	603	606	621
Thickness (mm x 1000), AW	1027	1051	1066	1061	864	875	871	872
Turns per metre, BW	640	626	641	636	839	798	909	840
Turns per metre, AW	595	614	610	611	805	783	837	812
Twist liveliness, t/m, BW	51.15	53.65	48.00	53.75	69.75	69.75	70.40	70.10
Twist liveliness, t/m, AW	40.45	44.20	44.85	43.70	58.90	58.95	59.60	61.85

DATA CHECKS

Calc/Obs Wt BW	1.01	1.04	1.03	1.04	1.04	1.00	1.02	1.01
Calc/Obs Wt AW	1.03	1.00	1.01	1.03	1.02	1.02	1.02	1.02
Calc/Obs Courses/3cm AW	1.00	1.00	1.01	1.00	1.01	1.00	1.01	1.00
Calc/Obs Wales/3cm AW	0.98	0.98	0.96	0.96	1.00	0.98	0.98	0.97

COTTON INC. - ROUTE 1, SETS 1 & 2

Set 1 - No resin, calendered

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	10.93	12.23	20.53	21.55	11.61	15.16	17.63	19.68
Width shrinkage (%), TD	19.26	18.63	11.68	9.97	11.00	8.81	6.35	5.78
Length shrinkage (%), 5x	13.41	14.91	23.73	24.93	13.40	17.57	20.10	22.66
Width shrinkage (%), 5x	20.25	19.56	11.63	8.92	11.63	8.92	6.37	4.53
Weight (gsm), BW	217.51	208.45	195.59	181.67	173.33	161.47	161.20	146.17
Weight (gsm), AW	304.55	292.88	277.91	263.57	229.62	216.75	210.75	204.24
Courses per 3cm, BW	21.70	20.25	16.55	15.35	35.00	31.30	29.00	26.45
Courses per 3cm, AW	24.90	23.75	21.45	20.30	40.75	38.00	36.40	34.55
Wales per 3cm, BW	13.80	13.65	14.55	14.25	26.70	26.50	26.40	25.70
Wales per 3cm, AW	17.40	16.70	15.80	15.90	30.65	29.60	29.00	28.10
Stitch length (mm) BW	6.92	7.27	7.86	8.15	4.19	4.42	4.62	4.83
Stitch length (mm) AW	6.84	7.17	7.76	8.05	4.16	4.37	4.56	4.80
Burst strength (kPa), BW	962.00	940.40	968.50	883.70	844.80	821.90	795.90	766.20
Burst strength (kPa), AW	904.10	941.40	933.20	886.90	776.50	798.10	786.90	741.40
Distension at burst (mm), BW	15.65	15.60	15.62	14.71	16.37	17.62	17.48	15.10
Distension at burst (mm), AW	20.68	20.82	19.95	20.17	19.87	20.00	21.46	19.82
Angle of spirality, BW	4.44	5.07	4.88	3.13	2.12	4.55	5.05	3.91
Angle of spirality, AW	9.75	11.19	13.32	14.94	10.51	12.47	13.91	15.22
Width (cm), BW	69.83	71.03	68.43	67.93	85.63	85.97	85.97	88.03
Yarn strength (g), BW	1564.93	1570.00	1568.27	1425.33	668.65	667.96	684.89	695.27
Yarn strength (g), AW	1511.73	1482.53	1491.87	1482.00	677.57	673.85	667.07	691.52
Yarn ext. at break (%), BW	8.15	8.26	8.32	7.99	7.96	7.99	8.51	8.64
Yarn ext. at break (%), AW	8.35	8.59	8.41	8.66	8.14	8.24	8.48	8.52
Yarn count (tex), BW	92.93	92.17	94.72	90.40	40.89	40.68	41.14	40.79
Yarn count (tex), AW	93.90	92.11	94.77	91.14	40.63	40.71	41.05	41.18
Thickness (mm x 1000), BW	931	930	947	942	642	643	648	637
Thickness (mm x 1000), AW	1494	1505	1545	1530	983	1001	1028	1056
Turns per metre, BW	340	330	323	319	613	601	610	608
Colour - X value	31.64	30.98	31.02	31.06	33.08	32.51	32.06	32.29
Colour - Y value	34.40	33.68	33.69	33.74	35.86	35.36	34.86	35.10
Colour - Z value	56.71	55.78	55.80	56.08	58.72	58.42	57.71	58.19
Turns per metre, AW	313	321	323	305	594	579	610	613
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	0.98	0.99	1.02	0.99	1.03	1.03	1.00	1.02
Calc/Obs Wt AW	1.02	0.99	1.00	1.00	1.02	1.03	1.04	1.04
Calc/Obs Courses/3cm AW	1.01	1.00	1.01	1.01	0.99	1.00	1.00	0.99
Calc/Obs Wales/3cm AW	0.99	1.02	1.04	0.98	0.99	0.98	0.97	0.96

COTTON INC. - ROUTE 1, SETS 1 & 2

Set 1 - No resin, calendered

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), TD	13.10	15.25	18.10	20.38	8.66	11.44	13.63	14.65
Width shrinkage (%), TD	15.37	13.44	11.02	9.33	13.03	10.36	9.90	7.90
Length shrinkage (%), 5x	15.43	17.77	20.92	23.72	10.52	13.43	16.12	18.04
Width shrinkage (%), 5x	16.08	13.27	11.47	9.00	13.63	10.52	9.86	7.81
Weight (gsm), BW	135.86	130.81	123.03	119.14	132.42	125.47	117.85	114.03
Weight (gsm), AW	182.57	177.77	166.16	160.35	164.73	158.77	152.96	148.67
Courses per 3cm, BW	35.15	31.90	29.35	26.70	54.90	48.55	45.05	41.90
Courses per 3cm, AW	41.10	38.55	36.35	33.80	61.40	56.05	53.55	50.85
Wales per 3cm, BW	27.40	27.20	26.35	27.00	39.45	39.55	38.85	39.20
Wales per 3cm, AW	32.25	31.80	30.70	30.25	46.10	44.85	43.70	43.15
Stitch length (mm) BW	3.96	4.18	4.41	4.66	2.72	2.86	2.99	3.13
Stitch length (mm) AW	3.95	4.15	4.38	4.62	2.68	2.84	2.97	3.08
Burst strength (kPa), BW	714.20	671.60	656.70	638.90	645.50	622.30	587.50	559.50
Burst strength (kPa), AW	702.80	657.00	626.20	618.70	633.70	630.00	592.40	594.20
Distension at burst (mm), BW	15.59	15.72	14.49	14.84	16.70	15.91	15.58	15.81
Distension at burst (mm), AW	19.31	18.85	18.31	18.90	19.24	18.73	19.07	19.36
Angle of spirality, BW	3.67	5.31	4.59	4.93	3.60	4.73	2.32	4.69
Angle of spirality, AW	12.45	14.16	16.21	19.02	9.20	11.44	12.04	13.76
Width (cm), BW	85.63	84.97	85.73	85.87	85.50	85.90	86.27	86.87
Yarn strength (g), BW	525.09	492.76	497.08	502.07	326.44	326.45	321.43	311.39
Yarn strength (g), AW	539.87	539.16	541.01	482.15	357.08	350.87	327.41	339.99
Yarn ext. at break (%), BW	7.16	7.08	7.15	7.33	6.77	6.73	6.64	6.41
Yarn ext. at break (%), AW	7.36	7.47	7.58	7.16	6.93	6.88	6.88	6.86
Yarn count (tex), BW	31.67	31.58	31.76	30.25	19.66	19.89	19.61	19.65
Yarn count (tex), AW	32.44	32.08	31.84	31.77	19.59	19.79	19.78	19.93
Thickness (mm x 1000), BW	602	575	580	571	461	462	459	458
Thickness (mm x 1000), AW	839	869	863	883	694	706	718	729
Turns per metre, BW	596	613	583	568	770	750	791	795
Colour - X value	31.85	32.98	31.68	31.18	32.42	32.51	31.59	32.16
Colour - Y value	34.60	35.84	34.45	33.93	35.32	35.40	34.36	34.97
Colour - Z value	57.41	59.44	57.67	57.16	59.26	59.16	58.27	58.86
Turns per metre, AW	589	566	607	597	751	801	767	785
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	0.99	0.97	0.98	0.95	0.97	0.97	0.97	0.98
Calc/Obs Wt AW	1.03	1.02	1.04	1.04	1.00	0.99	1.00	1.01
Calc/Obs Courses/3cm AW	1.01	1.01	1.02	1.04	1.00	1.00	1.00	1.01
Calc/Obs Wales/3cm AW	1.01	0.99	0.97	0.98	0.99	0.99	0.99	0.99

COTTON INC. - ROUTE 1, SETS 1 & 2

Set 2 - No resin, compacted

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	-3.77	-0.97	6.67	7.68	3.52	5.95	7.54	8.19
Width shrinkage (%), TD	24.28	22.39	18.72	18.06	13.21	11.37	9.53	9.03
Length shrinkage (%), 5x	-2.01	1.13	10.08	10.15	5.93	8.81	10.39	11.33
Width shrinkage (%), 5x	25.96	23.30	18.77	17.86	14.28	11.94	9.60	8.98
Weight (gsm), BW	237.36	226.61	209.46	194.24	186.84	180.48	175.10	162.06
Weight (gsm), AW	308.23	297.79	278.28	261.30	225.68	218.37	212.81	202.61
Courses per 3cm, BW	25.60	23.80	19.45	18.95	38.25	34.98	32.55	29.95
Courses per 3cm, AW	25.30	23.95	21.30	20.70	40.10	37.80	36.00	34.00
Wales per 3cm, BW	12.80	12.90	12.90	12.45	25.75	25.25	25.35	24.45
Wales per 3cm, AW	17.05	16.50	15.85	15.25	29.50	28.35	27.65	26.85
Stitch length (mm) BW	6.91	7.27	7.82	8.13	4.17	4.41	4.61	4.84
Stitch length (mm) AW	6.81	7.15	7.73	8.01	4.13	4.38	4.55	4.83
Burst strength (kPa), BW	1017.40	952.60	956.00	897.60	836.60	832.90	814.30	758.00
Burst strength (kPa), AW	960.10	934.40	938.00	861.60	765.30	787.70	755.30	745.40
Distension at burst (mm), BW	17.48	17.47	17.06	17.01	18.60	18.28	19.10	17.90
Distension at burst (mm), AW	19.91	19.67	20.07	19.62	19.30	19.75	19.70	20.08
Angle of spirality, BW	2.53	4.02	2.88	2.57	2.27	4.24	4.72	4.77
Angle of spirality, AW	9.86	11.08	13.50	14.91	10.94	13.08	14.40	16.34
Width (cm), BW	76.53	76.27	74.98	77.38	88.97	88.98	90.38	91.58
Yarn strength (g), BW	1521.07	1534.40	1482.13	1444.93	695.53	657.17	682.67	665.00
Yarn strength (g), AW	1564.27	1566.93	1526.40	1545.07	716.52	685.64	713.53	688.40
Yarn ext. at break (%), BW	8.26	8.68	8.27	8.29	8.51	8.27	8.51	8.37
Yarn ext. at break (%), AW	8.60	8.76	8.68	8.70	8.85	8.90	9.42	9.27
Yarn count (tex), BW	93.29	92.47	93.74	91.17	41.96	40.75	41.11	41.06
Yarn count (tex), AW	94.38	93.69	93.62	91.62	41.19	41.22	41.74	40.82
Thickness (mm x 1000), BW	928	926	952	941	664	670	693	686
Thickness (mm x 1000), AW	1507	1502	1584	1562	1020	1038	1079	1073
Turns per metre, BW	315	344	329	333	587	575	569	555
Colour - X value	31.89	31.98	32.09	31.99	34.37	34.02	33.40	33.02
Colour - Y value	34.61	34.67	34.89	34.77	37.36	37.05	36.37	35.87
Colour - Z value	56.88	57.01	57.54	57.33	60.49	60.29	59.74	58.97
Turns per metre, AW	318	346	340	349	560	568	551	549
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	0.99	1.01	0.98	1.00	1.03	0.98	0.99	1.00
Calc/Obs Wt AW	1.00	0.99	0.98	0.99	0.99	0.98	0.99	0.99
Calc/Obs Courses/3cm AW	0.99	1.01	1.02	1.02	1.01	1.01	1.01	0.99
Calc/Obs Wales/3cm AW	1.01	1.02	1.00	0.99	1.02	1.01	1.01	1.00

COTTON INC. - ROUTE 1, SETS 1 & 2

Set 2 - No resin, compacted

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), TD	5.59	6.69	8.71	8.76	2.22	5.89	7.61	9.71
Width shrinkage (%), TD	15.00	13.31	12.17	11.28	14.13	11.56	9.99	9.59
Length shrinkage (%), 5x	7.57	8.72	10.56	11.25	2.57	6.97	9.11	10.83
Width shrinkage (%), 5x	15.90	14.12	12.35	11.34	14.57	11.58	9.69	8.65
Weight (gsm), BW	141.55	137.21	128.07	123.46	140.03	131.35	123.06	121.16
Weight (gsm), AW	181.30	175.70	165.75	162.50	166.54	157.28	152.31	150.03
Courses per 3cm, BW	37.65	35.40	33.15	30.00	60.10	52.15	49.50	45.75
Courses per 3cm, AW	40.75	38.45	36.40	33.75	61.40	56.55	52.95	50.95
Wales per 3cm, BW	26.25	25.90	25.40	25.15	38.85	39.50	39.10	38.70
Wales per 3cm, AW	31.45	30.55	29.80	29.55	45.70	44.75	43.20	42.95
Stitch length (mm) BW	4.00	4.21	4.42	4.68	2.72	2.86	2.99	3.11
Stitch length (mm) AW	3.97	4.16	4.40	4.62	2.70	2.85	2.97	3.10
Burst strength (kPa), BW	601.70	703.20	643.60	627.00	623.20	600.00	566.70	575.90
Burst strength (kPa), AW	654.90	665.50	633.40	646.00	667.00	610.20	596.90	603.60
Distension at burst (mm), BW	16.38	18.24	17.41	17.93	17.81	16.60	16.46	17.14
Distension at burst (mm), AW	18.89	19.02	19.20	19.06	18.61	18.61	19.08	19.48
Angle of spirality, BW	3.13	2.11	4.74	4.02	3.26	2.41	4.06	5.07
Angle of spirality, AW	13.02	14.77	15.89	18.96	10.17	11.90	12.02	12.50
Width (cm), BW	87.10	87.47	89.30	90.40	88.65	88.50	88.57	88.57
Yarn strength (g), BW	515.60	514.69	505.20	498.11	336.61	320.65	311.48	322.32
Yarn strength (g), AW	567.11	571.63	532.09	531.36	345.71	360.93	341.77	336.04
Yarn ext. at break (%), BW	7.38	7.25	7.29	6.94	6.72	6.67	6.46	6.48
Yarn ext. at break (%), AW	7.38	7.62	7.18	7.33	6.45	6.89	6.70	6.75
Yarn count (tex), BW	32.04	32.21	31.58	31.64	19.74	19.81	19.82	20.02
Yarn count (tex), AW	32.12	32.01	31.56	31.72	19.65	19.65	19.68	20.03
Thickness (mm x 1000), BW	563	582	570	585	471	469	470	470
Thickness (mm x 1000), AW	806	902	914	933	701	710	723	727
Turns per metre, BW	562	579	578	579	707	778	793	791
Colour - X value	31.76	31.86	31.28	31.76	33.70	33.15	32.27	32.33
Colour - Y value	34.53	34.65	33.93	34.55	36.64	36.07	35.06	35.00
Colour - Z value	57.83	58.10	57.18	58.10	60.75	60.11	59.10	58.82
Turns per metre, AW	566	551	566	564	700	766	755	752
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	0.99	1.01	1.02	1.00	0.99	0.99	1.03	1.01
Calc/Obs Wt AW	1.00	0.99	1.01	1.00	0.99	1.00	0.98	1.01
Calc/Obs Courses/3cm AW	1.00	1.01	1.02	1.00	1.00	0.99	1.03	1.01
Calc/Obs Wales/3cm AW	0.99	0.99	0.97	0.96	1.00	1.00	1.00	0.99

COTTON INC. - ROUTE 1, SETS 3 & 4

Set 3 - Resin, calendered

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	10.70	10.33	14.29	13.37	8.84	9.74	10.32	11.44
Width shrinkage (%), TD	12.79	12.76	12.64	10.51	8.34	7.43	7.15	6.79
Length shrinkage (%), 5x	11.65	11.57	15.56	15.00	9.35	10.52	11.63	11.93
Width shrinkage (%), 5x	13.70	13.66	13.34	11.36	8.68	7.55	7.48	7.06
Weight (gsm), BW	223.19	210.18	193.74	187.16	177.86	166.62	163.74	153.29
Weight (gsm), AW	275.93	257.45	247.77	231.06	205.02	191.66	189.10	177.74
Courses per 3cm, BW	20.60	19.18	16.18	15.13	32.70	29.40	27.60	25.05
Courses per 3cm, AW	22.98	21.38	18.73	17.35	35.90	32.45	30.80	28.75
Wales per 3cm, BW	15.00	14.63	14.70	14.80	26.75	26.50	26.05	25.90
Wales per 3cm, AW	16.90	16.53	16.60	16.58	29.50	29.10	28.55	28.20
Stitch length (mm) BW	6.95	7.28	7.87	8.17	4.18	4.41	4.61	4.86
Stitch length (mm) AW	6.98	7.28	7.88	8.15	4.19	4.42	4.62	4.88
Burst strength (kPa), BW	687.50	507.70	477.90	388.40	518.20	498.30	395.20	410.10
Burst strength (kPa), AW	639.90	548.50	586.70	422.50	552.40	457.00	486.20	401.00
Distension at burst (mm), BW	13.81	15.66	11.82	10.55	14.68	14.94	12.83	13.18
Distension at burst (mm), AW	18.52	16.97	18.38	16.93	17.21	17.29	17.73	16.47
Angle of spirality, BW	2.67	3.38	2.90	2.52	3.64	3.48	5.38	3.28
Angle of spirality, AW	5.36	6.07	8.33	9.10	6.91	7.26	9.28	7.65
Width (cm), BW	66.90	69.23	68.70	67.60	85.50	84.70	85.97	86.27
Yarn strength (g), BW	893.07	728.97	728.60	634.89	392.39	369.44	364.93	369.45
Yarn strength (g), AW	731.59	679.55	793.56	626.47	368.69	344.79	380.67	329.59
Yarn ext. at break (%), BW	6.63	5.45	5.22	5.00	5.77	5.77	5.59	5.61
Yarn ext. at break (%), AW	6.83	5.87	6.36	5.36	5.77	5.55	6.01	5.45
Yarn count (tex), BW	98.15	97.45	98.97	97.03	43.75	43.60	44.05	43.48
Yarn count (tex), AW	95.53	95.18	95.17	96.80	42.33	41.90	42.96	42.34
Thickness (mm x 1000), BW	868	887	884	875	626	611	620	619
Thickness (mm x 1000), AW	1164	1129	1193	1157	827	799	810	818
Turns per metre, BW	346	328	355	329	577	565	590	575
Colour - X value	31.98	31.61	31.01	31.82	33.30	33.13	33.26	33.90
Colour - Y value	34.81	55.32	33.71	34.58	36.28	36.13	36.25	36.95
Colour - Z value	55.67	55.32	54.08	55.67	57.95	58.06	58.21	58.78
Turns per metre, AW	346	358	357	347	562	581	579	554
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.05	1.05	1.06	1.05	1.00	1.00	0.99	0.99
Calc/Obs Wt AW	1.04	1.06	1.05	1.08	1.02	1.01	1.03	1.05
Calc/Obs Courses/3cm AW	1.01	1.01	1.02	1.03	1.00	1.01	1.01	0.99
Calc/Obs Wales/3cm AW	1.03	1.03	1.02	1.01	0.99	0.99	0.99	0.99

COTTON INC. - ROUTE 1, SETS 3 & 4

Set 3 - Resin, calendered

	C-1	C-2	C-3	C-4	O-1	O-2	O-3	O-4
Length shrinkage (%), TD	7.71	8.76	9.74	10.01	4.58	5.43	6.07	6.42
Width shrinkage (%), TD	9.32	8.92	8.48	8.51	7.72	5.84	5.87	5.42
Length shrinkage (%), 5x	7.72	9.17	10.52	10.79	5.13	6.14	6.90	7.11
Width shrinkage (%), 5x	9.75	9.28	8.79	8.42	8.22	6.32	6.49	5.98
Weight (gsm), BW	135.22	129.47	123.04	119.89	133.31	129.89	122.24	117.16
Weight (gsm), AW	153.12	148.77	141.46	134.34	147.15	138.94	133.04	128.23
Courses per 3cm, BW	33.80	30.50	28.10	25.50	52.60	46.90	42.95	40.00
Courses per 3cm, AW	35.65	32.80	30.15	27.50	55.05	49.90	46.25	42.65
Wales per 3cm, BW	28.75	29.13	28.40	28.25	40.45	40.10	40.20	39.40
Wales per 3cm, AW	30.90	30.75	30.25	29.70	43.85	42.60	42.25	42.00
Stitch length (mm) BW	3.88	4.16	4.37	4.58	2.72	2.86	2.99	3.14
Stitch length (mm) AW	3.98	4.02	4.39	4.58	2.71	2.86	2.99	3.11
Burst strength (kPa), BW	380.60	363.70	314.20	297.00	409.60	325.00	325.00	290.20
Burst strength (kPa), AW	401.90	356.60	359.40	330.70	413.90	328.00	338.50	322.90
Distension at burst (mm), BW	12.13	12.24	11.27	11.24	13.17	13.58	12.95	12.10
Distension at burst (mm), AW	15.45	14.52	15.46	14.23	15.00	15.43	15.59	15.55
Angle of spirality, BW	3.74	2.94	3.09	4.32	3.35	2.37	3.93	4.03
Angle of spirality, AW	5.88	6.09	6.99	8.04	7.08	4.25	7.17	6.44
Width (cm), BW	83.00	82.87	82.67	83.17	83.73	84.47	84.83	85.23
Yarn strength (g), BW	243.09	248.47	261.99	250.49	196.13	155.96	177.28	152.21
Yarn strength (g), AW	4.13	3.89	244.19	234.80	179.32	159.60	151.59	154.48
Yarn ext. at break (%), BW	4.26	4.40	4.52	4.37	4.76	3.69	4.30	3.73
Yarn ext. at break (%), AW	4.13	3.83	4.13	3.93	4.24	3.99	3.85	3.71
Yarn count (tex), BW	33.67	32.80	32.80	34.21	20.99	21.26	21.08	21.20
Yarn count (tex), AW	32.96	32.95	33.09	33.36	20.21	20.60	20.50	20.42
Thickness (mm x 1000), BW	534	554	543	538	445	450	444	446
Thickness (mm x 1000), AW	654	654	665	662	568	543	555	543
Turns per metre, BW	584	595	623	579	783	792	764	774
Colour - X value	32.10	32.37	31.85	32.05	32.61	32.56	32.52	32.49
Colour - Y value	34.91	35.20	34.58	34.86	35.65	35.47	35.43	35.32
Colour - Z value	56.75	57.08	56.31	56.70	58.06	58.03	58.04	57.80
Turns per metre, AW	577	605	606	619	799	827	794	797
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.04	1.04	1.03	1.05	1.01	0.98	0.99	1.00
Calc/Obs Wt AW	1.05	1.00	1.04	1.03	1.00	1.00	1.00	0.99
Calc/Obs Courses/3cm AW	1.03	1.02	1.04	1.04	1.01	1.00	1.00	1.01
Calc/Obs Wales/3cm AW	1.03	1.04	1.03	1.04	1.01	1.00	1.02	1.00

COTTON INC. - ROUTE 1, SETS 3 & 4

Set 4 - Resin, compacted

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	4.63	5.98	8.77	9.46	4.49	5.33	6.11	7.59
Width shrinkage (%), TD	12.88	12.66	11.23	11.02	6.77	6.12	5.49	5.15
Length shrinkage (%), 5x	4.88	6.41	9.42	9.79	4.45	5.29	5.95	7.22
Width shrinkage (%), 5x	13.50	12.75	12.16	11.38	6.99	6.32	5.93	5.34
Weight (gsm), BW	231.19	222.27	205.23	195.70	196.31	185.49	178.65	168.72
Weight (gsm), AW	274.27	260.71	245.84	235.00	206.09	194.70	189.59	177.74
Courses per 3cm, BW	22.05	20.30	16.90	15.65	34.50	30.85	29.05	26.35
Courses per 3cm, AW	22.65	21.20	18.30	16.90	36.35	32.85	30.65	28.10
Wales per 3cm, BW	14.50	14.45	14.40	14.60	27.40	27.05	26.85	26.80
Wales per 3cm, AW	15.90	15.80	15.70	15.90	29.00	28.75	28.00	27.90
Stitch length (mm) BW	6.96	7.18	7.82	8.13	4.19	4.40	4.63	4.84
Stitch length (mm) AW	6.92	7.31	7.90	8.16	4.18	4.40	4.61	4.87
Burst strength (kPa), BW	582.10	558.10	483.50	423.70	525.90	493.00	495.40	425.90
Burst strength (kPa), AW	593.30	554.30	493.70	454.40	565.30	502.10	486.30	426.60
Distension at burst (mm), BW	14.43	13.64	13.74	12.23	16.35	15.12	14.59	14.76
Distension at burst (mm), AW	19.01	18.73	16.62	16.11	17.22	16.00	15.96	16.38
Angle of spirality, BW	2.94	2.93	3.69	4.14	2.95	3.24	4.12	1.78
Angle of spirality, AW	4.91	5.55	7.23	7.00	5.76	6.65	8.28	9.59
Width (cm), BW	69.40	70.13	68.63	68.53	84.03	83.73	84.50	84.87
Yarn strength (g), BW	732.49	693.96	651.61	664.20	374.16	381.12	351.18	359.64
Yarn strength (g), AW	718.57	658.08	666.92	656.17	393.28	378.65	361.07	361.30
Yarn ext. at break (%), BW	5.36	5.00	4.78	4.38	5.75	5.86	5.60	5.54
Yarn ext. at break (%), AW	4.56	4.55	4.35	4.34	6.12	5.88	5.74	5.77
Yarn count (tex), BW	97.90	99.77	99.02	96.70	43.63	43.92	44.75	43.82
Yarn count (tex), AW	97.14	96.33	96.21	94.75	42.10	42.79	42.58	42.68
Thickness (mm x 1000), BW	913	908	915	907	643	640	658	653
Thickness (mm x 1000), AW	1144	1142	1168	1166	814	794	809	805
Turns per metre, BW	336	346	330	318	564	583	573	543
Colour - X value	31.63	32.07	31.82	32.08	34.08	33.18	33.03	33.64
Colour - Y value	34.42	34.86	34.58	34.93	37.19	36.10	35.94	36.63
Colour - Z value	55.32	55.79	55.54	55.84	59.12	57.93	57.77	58.24
Turns per metre, AW	350	336	343	346	555	571	573	556
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.05	1.05	1.02	1.02	0.98	0.97	1.00	0.99
Calc/Obs Wt AW	0.98	1.01	0.99	0.98	1.00	1.02	0.99	1.02
Calc/Obs Courses/3cm AW	1.02	1.02	1.02	1.03	0.99	0.99	1.00	1.01
Calc/Obs Wales/3cm AW	1.05	1.05	1.04	1.04	1.02	1.00	1.02	1.01

COTTON INC. - ROUTE 1, SETS 3 & 4

Set 4 - Resin, compacted

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), TD	3.53	5.08	5.48	6.73	2.99	4.04	4.56	4.88
Width shrinkage (%), TD	6.92	6.29	6.10	6.07	5.32	4.84	4.67	4.22
Length shrinkage (%), 5x	3.99	5.99	6.07	7.61	2.91	4.05	4.72	5.45
Width shrinkage (%), 5x	7.55	7.20	6.94	7.01	5.63	5.03	4.84	4.52
Weight (gsm), BW	146.39	138.98	131.51	127.79	142.38	135.83	126.43	121.32
Weight (gsm), AW	157.74	152.52	144.14	139.86	147.80	138.72	133.65	127.81
Courses per 3cm, BW	35.55	31.75	29.20	26.45	54.20	48.20	44.55	40.85
Courses per 3cm, AW	36.45	33.40	30.70	28.20	56.05	49.65	45.95	43.25
Wales per 3cm, BW	28.35	28.30	28.00	28.00	41.30	41.15	41.00	40.30
Wales per 3cm, AW	30.40	30.55	30.18	30.15	43.50	43.15	42.45	42.55
Stitch length (mm) BW	4.01	4.20	4.44	4.68	2.72	2.86	3.00	3.11
Stitch length (mm) AW	4.01	4.21	4.43	4.68	2.72	2.87	2.99	3.11
Burst strength (kPa), BW	377.50	399.30	318.10	305.00	410.90	340.70	306.10	291.20
Burst strength (kPa), AW	401.80	384.20	339.70	330.00	399.60	370.90	340.40	317.00
Distension at burst (mm), BW	12.65	13.03	12.25	10.71	14.54	13.77	13.66	13.29
Distension at burst (mm), AW	15.19	16.33	14.51	15.52	15.74	14.95	15.55	14.72
Angle of spirality, BW	3.41	4.22	2.92	2.07	3.02	3.22	2.73	2.90
Angle of spirality, AW	4.82	6.93	8.68	7.83	4.94	5.71	4.67	6.19
Width (cm), BW	81.10	80.60	81.67	81.53	82.07	82.67	82.87	84.00
Yarn strength (g), BW	253.91	248.72	265.92	255.84	170.80	157.57	160.65	158.15
Yarn strength (g), AW	255.91	254.99	227.80	242.27	161.01	149.92	152.31	154.76
Yarn ext. at break (%), BW	4.79	4.74	4.78	4.96	3.90	3.75	3.93	3.94
Yarn ext. at break (%), AW	4.90	5.07	4.48	4.61	4.01	3.69	3.75	3.71
Yarn count (tex), BW	33.68	33.59	33.65	33.91	20.93	21.27	21.04	21.09
Yarn count (tex), AW	33.09	32.80	33.00	33.30	20.26	20.32	20.50	20.96
Thickness (mm x 1000), BW	564	559	562	563	465	461	454	452
Thickness (mm x 1000), AW	695	702	705	711	558	542	542	535
Turns per metre, BW	591	616	599	597	778	839	819	787
Colour - λ value	32.92	33.10	32.31	32.65	33.59	33.38	33.09	32.38
Colour - γ value	35.79	36.04	35.13	35.54	36.64	36.32	36.06	35.26
Colour - Z value	57.94	57.99	56.97	57.52	59.30	58.59	58.73	57.69
Turns per metre, AW	600	602	626	600	800	819	827	813
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.03	1.01	1.03	1.02	0.99	0.99	1.01	0.99
Calc/Obs Wt AW	1.04	1.03	1.04	1.05	1.01	1.00	0.99	1.04
Calc/Obs Courses/3cm AW	1.02	1.01	1.01	1.02	1.00	1.01	1.02	1.00
Calc/Obs Wales/3cm AW	1.01	1.00	1.00	1.00	1.01	1.00	1.01	0.99

COTTON INC. - ROUTE 2, SETS 1 & 2

NO RESIN CALENDERED

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	15.08	17.20	19.62	19.72	14.54	19.88	22.16	23.57
Width shrinkage (%), TD	14.80	11.27	10.85	10.09	11.03	8.75	5.17	4.88
Length shrinkage (%), 5x	17.77	20.50	22.50	22.62	17.10	22.52	24.41	26.16
Width shrinkage (%), 5x	16.28	11.44	10.20	9.22	11.24	8.01	5.17	4.54
Weight (gsm), BW	217.26	213.93	202.34	189.32	169.14	157.51	153.93	144.60
Weight (gsm), AW	299.44	291.75	270.10	256.81	227.03	211.65	206.11	199.95
Courses per 3cm, BW	20.15	18.80	16.50	15.85	33.30	28.80	28.13	25.75
Courses per 3cm, AW	24.60	23.35	21.60	20.75	39.15	36.85	35.30	33.40
Wales per 3cm, BW	14.58	15.00	14.30	14.30	27.75	28.10	27.35	27.20
Wales per 3cm, AW	17.45	16.75	15.90	15.50	30.60	29.70	29.15	28.10
Stitch length (mm) BW	7.03	7.32	7.90	8.15	4.18	4.35	4.56	4.72
Stitch length (mm) AW	6.93	7.21	7.82	8.08	4.14	4.37	4.58	4.80
Burst strength (kPa), BW	1028.60	1090.00	1051.90	980.60	811.50	814.90	818.30	758.30
Burst strength (kPa), AW	1005.20	925.00	963.00	886.90	825.10	774.70	758.40	739.90
Distension at burst (mm), BW	14.42	15.62	15.55	17.14	16.47	14.75	14.20	15.90
Distension at burst (mm), AW	19.48	18.97	19.57	19.52	19.58	19.83	19.90	19.23
Angle of spirality, BW	5.18	8.57	3.69	4.03	7.16	2.76	6.24	6.49
Angle of spirality, AW	8.07	8.84	11.20	10.86	10.57	13.97	15.10	14.75
Width (cm), BW	64.67	64.63	67.00	67.90	84.08	83.67	84.47	85.10
Yarn strength (g), BW	1586.00	1526.87	1638.50	1494.80	714.87	660.17	673.59	689.57
Yarn strength (g), AW	1596.80	1612.53	1671.20	1594.93	689.45	699.88	720.64	695.18
Yarn ext. at break (%), BW	7.88	7.79	7.98	7.75	7.92	7.62	7.72	7.75
Yarn ext. at break (%), AW	7.10	7.92	7.66	7.55	7.69	7.74	8.09	7.32
Yarn count (tex), BW	91.60	92.24	93.19	91.36	40.72	39.67	41.43	40.85
Yarn count (tex), AW	92.95	92.40	93.76	89.90	40.89	40.28	40.93	41.94
Thickness (mm x 1000), BW	876	888	910	893	613	612	622	606
Thickness (mm x 1000), AW	1408	1428	1481	1468	950	976	963	1026
Turns per metre, BW	314	330	332	325	600	561	579	569
Colour - X value	66.67	66.64	66.76	67.25	68.88	68.41	68.46	68.04
Colour - Y value	70.58	70.53	70.72	71.30	73.19	72.57	72.65	72.16
Colour - Z value	34.31	34.26	35.26	35.74	37.05	36.81	37.45	36.16
Turns per metre, AW	318	318	318	310	578	595	551	576
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	0.97	0.99	0.95	0.99	1.03	0.98	1.05	1.04
Calc/Obs Wt AW	1.03	0.99	1.04	1.01	0.99	1.01	1.04	1.05
Calc/Obs Courses/3cm AW	1.00	1.01	0.99	0.99	1.03	1.01	1.05	1.04
Calc/Obs Wales/3cm AW	1.00	1.01	1.00	1.02	1.02	1.03	0.99	1.01

COTTON INC. - ROUTE 2, SETS 1 & 2

NO RESIN CALENDERED

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), TD	13.37	12.30	15.21	19.20	11.62	13.70		14.83
Width shrinkage (%), TD	15.17	13.28	12.07	10.13	13.42	12.33		9.49
Length shrinkage (%), 5x	15.19	14.97	17.90	21.70	13.06	15.68		16.88
Width shrinkage (%), 5x	15.33	13.06	11.29	8.10	13.82	12.29		8.85
Weight (gsm), BW	131.69	131.85	122.34	115.31	127.30	117.17		114.58
Weight (gsm), AW	180.26	174.74	170.37	158.82	166.12	157.91		147.40
Courses per 3cm, BW	33.70	32.50	29.00	26.35	52.15	46.70		41.00
Courses per 3cm, AW	39.95	37.45	35.15	32.73	59.30	54.25		49.30
Wales per 3cm, BW	28.15	26.93	26.85	26.55	40.95	39.70		38.85
Wales per 3cm, AW	32.85	31.75	31.50	30.28	46.85	45.35		43.35
Stitch length (mm) BW	4.00	4.20	4.42	4.67	2.71	2.87		3.11
Stitch length (mm) AW	3.98	4.16	4.37	4.61	2.67	2.83		3.08
Burst strength (kPa), BW	677.40	673.40	663.70	596.00	659.90	593.80		566.90
Burst strength (kPa), AW	675.30	682.80	658.10	612.30	655.00	637.00		601.30
Distension at burst (mm), BW	14.70	15.58	14.98	15.02	13.58	15.18		14.98
Distension at burst (mm), AW	18.22	18.91	18.27	19.18	18.15	17.36		19.07
Angle of spirality, BW	5.37	8.13	5.65	6.11	7.23	5.98		7.35
Angle of spirality, AW	12.44	14.38	16.09	18.57	8.55	8.96		12.77
Width (cm), BW	83.10	83.30	83.70	85.58	84.33	85.47		86.17
Yarn strength (g), BW	547.81	539.63	535.59	515.72	307.55	304.31		289.20
Yarn strength (g), AW	554.37	549.19	570.81	553.72	339.76	338.89		333.27
Yarn ext. at break (%), BW	8.22	8.18	8.04	7.68	6.16	6.21		6.08
Yarn ext. at break (%), AW	8.03	7.87	8.22	6.26	7.24	7.35		7.26
Yarn count (tex), BW	32.15	32.31	32.36	31.93	19.82	19.95		19.76
Yarn count (tex), AW	32.17	32.26	32.27	31.93	19.89	19.58		19.75
Thickness (mm x 1000), BW	542	561	563	538	449	443		460
Thickness (mm x 1000), AW	885	903	917	923	710	698		744
Turns per metre, BW	591	618	605	614	759	760		744
Colour - X value	68.33	68.40	68.43	68.15	69.21	69.15		68.81
Colour - Y value	72.47	72.58	72.56	72.29	73.65	73.51		73.09
Colour - Z value	36.42	36.23	36.46	35.82	37.30	37.27		36.37
Turns per metre, AW	617	626	608	615	815	759		772
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.03	1.00	1.01	1.00	1.00	1.01		0.95
Calc/Obs Wt AW	1.04	1.01	1.02	1.02	0.99	0.96		0.98
Calc/Obs Courses/3cm AW	0.99	1.02	1.00	1.03	1.01	1.02		1.00
Calc/Obs Wales/3cm AW	1.01	0.98	0.96	0.95	1.01	1.00		0.98

COTTON INC. - ROUTE 2, SETS 1 & 2

NO RESIN COMPACTED

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	2.82	5.53	6.14	9.20	4.55	7.19	7.76	9.46
Width shrinkage (%), TD	15.36	13.00	10.91	10.76	10.00	9.16	7.51	6.16
Length shrinkage (%), 5x	4.96	8.21	8.45	11.93	6.93	10.00	10.31	12.20
Width shrinkage (%), 5x	16.25	13.27	11.32	10.02	9.97	8.65	7.78	5.00
Weight (gsm), BW	248.32	233.24	230.00	206.80	194.17	177.57	175.74	167.56
Weight (gsm), AW	300.54	288.05	276.28	263.42	229.52	215.58	212.50	200.43
Courses per 3cm, BW	23.45	21.35	19.68	18.05	37.45	33.70	32.64	30.35
Courses per 3cm, AW	24.75	23.70	21.55	20.75	40.30	37.40	36.40	34.55
Wales per 3cm, BW	15.10	15.10	14.65	14.45	27.20	27.20	26.56	25.75
Wales per 3cm, AW	17.00	17.40	16.45	16.10	30.55	29.70	28.55	27.60
Stitch length (mm) BW	7.01	7.28	7.85	8.14	4.19	4.41	4.60	4.85
Stitch length (mm) AW	6.95	7.22	7.79	8.04	4.14	4.38	4.56	4.85
Burst strength (kPa), BW	1009.50	997.40	981.30	923.70	833.70	798.70	770.30	728.00
Burst strength (kPa), AW	989.20	978.50	931.70	889.70	802.90	719.00	703.00	695.90
Distension at burst (mm), BW	17.18	18.48	18.22	18.31	18.41	17.49	19.27	18.22
Distension at burst (mm), AW	20.21	19.81	20.12	20.62	18.63	18.82	19.34	19.50
Angle of spirality, BW	6.18	6.29	7.88	3.35	7.49	5.27	8.15	5.90
Angle of spirality, AW	10.17	12.56	14.25	15.85	11.06	14.22	15.02	16.06
Width (cm), BW	65.50	65.77	67.93	69.50	83.37	84.67	86.63	88.13
Yarn strength (g), BW	1544.67	1464.87	1544.80	1518.40	651.79	675.76	672.95	643.03
Yarn strength (g), AW	1571.73	1648.80	1606.40	1567.87	707.15	695.33	686.99	672.17
Yarn ext. at break (%), BW	8.10	8.23	8.53	8.69	6.96	7.14	7.35	7.17
Yarn ext. at break (%), AW	7.02	7.58	7.10	7.40	7.25	6.91	7.00	7.09
Yarn count (tex), BW	91.39	91.08	93.61	92.01	41.37	41.01	41.61	40.64
Yarn count (tex), AW	91.25	91.63	93.89	92.76	40.94	40.64	41.16	41.01
Thickness (mm x 1000), BW	958	985	1011	999	698	685	741	723
Thickness (mm x 1000), AW	1452	1491	1555	1540	988	1014	1033	1047
Turns per metre, BW	355	354	331	362	575	603	563	559
Colour - X value	68.08	68.08	67.85	67.58	69.90	69.26	68.98	68.87
Colour - Y value	72.28	72.25	71.99	71.60	74.47	73.65	73.38	73.17
Colour - Z value	36.37	36.65	36.21	35.13	39.32	38.21	37.24	37.08
Turns per metre, AW	368	347	363	361	568	562	574	579
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.02	1.02	1.02	1.05	1.01	1.04	1.05	1.02
Calc/Obs Wt AW	1.03	1.05	1.04	1.05	1.01	1.02	1.02	1.05
Calc/Obs Courses/3cm AW	1.00	0.98	0.99	0.99	1.00	1.00	1.00	1.00
Calc/Obs Wales/3cm AW	1.01	1.00	1.00	1.00	0.99	1.00	1.01	0.98

Lab Ref No. 1295

13-OCT-88

LABDATA12R

COTTON INC. - ROUTE 2, SETS 1 & 2

NO RESIN COMPACTED

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), TD	4.30	7.57	10.62	10.81	4.28	6.14	7.27	
Width shrinkage (%), TD	13.30	11.97	9.64	10.07	11.70	9.75	7.55	
Length shrinkage (%), 5x	5.96	8.94	12.12	12.09	5.96	8.38	10.06	
Width shrinkage (%), 5x	13.59	10.85	7.74	8.09	12.05	10.11	7.51	
Weight (gsm), BW	151.23	146.11	138.74	130.09	138.42	130.25	129.94	
Weight (gsm), AW	184.13	176.51	169.27	164.53	165.44	157.92	153.17	
Courses per 3cm, BW	38.20	35.10	32.20	29.60	57.05	51.10	48.15	
Courses per 3cm, AW	39.75	37.75	35.30	33.45	60.50	55.85	53.50	
Wales per 3cm, BW	27.90	27.55	26.80	26.10	41.40	41.25	40.35	
Wales per 3cm, AW	32.75	31.45	30.30	29.95	47.30	45.75	44.25	
Stitch length (mm) BW	4.01	4.21	4.42	4.65	2.71	2.88	3.00	
Stitch length (mm) AW	3.98	4.17	4.39	4.62	2.70	2.86	2.98	
Burst strength (kPa), BW	707.40	685.80	651.80	649.20	641.80	644.80	603.90	
Burst strength (kPa), AW	657.00	634.80	627.90	626.90	632.60	621.20	587.20	
Distension at burst (mm), BW	17.88	18.08	16.94	16.79	16.43	17.34	18.03	
Distension at burst (mm), AW	18.49	18.98	19.97	19.30	18.83	19.55	18.73	
Angle of spirality, BW	5.60	8.69	7.84	7.85	5.88	4.03	5.70	
Angle of spirality, AW	10.66	12.49	13.56	14.33	9.94	10.03	11.15	
Width (cm), BW	82.33	83.20	84.23	85.23	82.63	83.37	84.80	
Yarn strength (g), BW	539.63	523.59	520.25	532.00	310.08	314.41	315.76	
Yarn strength (g), AW	568.44	571.96	545.01	531.36	352.07	329.08	342.68	
Yarn ext. at break (%), BW	7.48	7.24	7.28	7.19	7.53	7.68	7.51	
Yarn ext. at break (%), AW	7.25	7.18	7.12	6.82	6.73	6.43	6.76	
Yarn count (tex), BW	32.06	32.19	31.83	32.18	19.67	19.77	19.90	
Yarn count (tex), AW	31.87	32.10	31.83	31.66	19.84	19.52	19.73	
Thickness (mm x 1000), BW	617	611	601	592	497	493	497	
Thickness (mm x 1000), AW	890	901	919	938	715	719	733	
Turns per metre, BW	585	578	579	577	795	791	792	
Colour - X value	69.46	69.43	69.24	68.89	70.27	69.67	69.46	
Colour - Y value	73.83	73.82	73.57	73.12	74.97	74.12	73.95	
Colour - Z value	37.38	38.05	37.65	37.02	39.63	38.23	37.27	
Turns per metre, AW	576	576	580	576	814	810	820	
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.01	1.00	0.97	0.99	1.01	1.02	0.99	
Calc/Obs Wt AW	1.00	1.00	0.98	0.99	1.03	1.00	1.01	
Calc/Obs Courses/3cm AW	1.02	1.02	1.04	1.01	1.00	1.00	1.00	
Calc/Obs Wales/3cm AW	0.99	0.98	0.96	0.95	1.00	1.00	0.99	

COTTON INC. - ROUTE 2, SETS 3 & 4

RESIN CALENDERED

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	15.96	18.88	15.93	17.55	16.36	16.44	18.83	20.85
Width shrinkage (%), TD	15.84	12.76	19.24	18.45	9.30	11.78	7.77	4.79
Length shrinkage (%), 5x	17.19	19.66	16.67	18.44	17.87	17.65	20.43	22.44
Width shrinkage (%), 5x	15.69	13.03	19.06	17.67	9.67	12.18	7.89	4.02
Weight (gsm), BW	210.96	207.04	182.06	179.16	166.96	155.83	151.01	147.31
Weight (gsm), AW	290.99	286.77	264.89	259.26	220.03	210.24	205.82	197.40
Courses per 3cm, BW	19.85	18.30	17.25	15.85	31.75	29.65	26.95	24.55
Courses per 3cm, AW	23.60	22.15	19.95	19.30	38.15	35.85	33.80	31.90
Wales per 3cm, BW	14.60	14.73	12.98	12.88	27.10	26.30	26.40	26.05
Wales per 3cm, AW	17.25	16.80	16.10	15.50	30.35	29.35	28.35	28.00
Stitch length (mm) BW	7.03	7.32	7.88	8.17	4.19	4.42	4.63	4.88
Stitch length (mm) AW	6.96	7.28	7.81	8.10	4.16	4.40	4.59	4.84
Burst strength (kPa), BW	937.80	952.90	898.40	868.80	825.30	780.00	802.40	774.10
Burst strength (kPa), AW	844.60	847.90	833.50	805.20	717.80	722.70	739.50	673.30
Distension at burst (mm), BW	14.29	14.80	13.72	14.63	14.96	14.62	14.36	14.30
Distension at burst (mm), AW	18.97	19.34	19.95	19.77	19.32	19.13	20.59	19.43
Angle of spirality, BW	0.19	5.99	3.12	4.10	7.67	8.24	5.90	0.87
Angle of spirality, AW	8.06	8.30	11.37	12.38	8.51	12.07	14.29	15.40
Width (cm), BW	67.03	67.07	75.87	76.60	84.07	87.37	86.37	88.47
Yarn strength (g), BW	1332.33	1376.40	1334.40	1230.67	705.76	671.83	653.09	670.01
Yarn strength (g), AW	1338.80	1272.00	1309.60	1350.13	648.87	658.27	659.12	656.77
Yarn ext. at break (%), BW	7.09	7.02	7.40	7.00	7.59	7.60	7.43	7.26
Yarn ext. at break (%), AW	7.60	7.42	7.61	7.74	7.43	7.37	7.67	7.50
Yarn count (tex), BW	92.45	94.37	93.98	94.37	41.02	41.18	41.10	41.36
Yarn count (tex), AW	91.83	92.45	93.89	93.99	41.27	41.09	41.38	41.26
Thickness (mm x 1000), BW	882	892	863	869	588	577	599	596
Thickness (mm x 1000), AW	1389	1413	1439	1455	897	916	924	942
Turns per metre, BW	326	317	344	320	557	554	564	546
Colour - X value	64.35	66.57	66.61	66.45	69.21	68.33	68.16	68.46
Colour - Y value	68.24	70.44	70.50	70.22	73.58	72.47	72.30	72.63
Colour - Z value	34.06	35.47	35.56	34.70	38.61	37.51	36.96	37.30
Turns per metre, AW	349	332	333	332	557	563	567	541
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	0.99	1.00	1.01	0.97	0.98	1.01	1.00	0.97
Calc/Obs Wt AW	0.99	0.97	0.99	0.98	1.00	1.00	0.98	1.00
Calc/Obs Courses/3cm AW	1.02	1.03	1.04	1.01	1.01	1.00	1.00	0.99
Calc/Obs Wales/3cm AW	1.00	1.01	0.99	1.00	0.99	1.02	1.01	0.97

COTTON INC. - ROUTE 2, SETS 3 & 4

RESIN CALENDERED

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), TD	18.27	22.90	22.66	19.40	15.42	13.37	16.41	15.76
Width shrinkage (%), TD	13.37	8.84	9.72	11.21	9.55	9.77	7.86	9.70
Length shrinkage (%), 5x	20.20	24.29	24.20	21.92	16.87	15.00	17.92	16.59
Width shrinkage (%), 5x	13.25	8.10	8.60	9.60	10.04	9.61	8.05	9.24
Weight (gsm), BW	127.02	119.85	112.16	108.31	120.99	116.77	112.96	110.06
Weight (gsm), AW	178.74	169.71	164.71	158.49	158.15	151.08	145.97	140.61
Courses per 3cm, BW	30.70	27.75	26.20	24.55	48.65	44.95	41.80	39.90
Courses per 3cm, AW	38.45	36.40	34.10	30.75	56.20	51.15	48.75	46.75
Wales per 3cm, BW	28.80	28.90	28.35	27.60	42.40	41.45	41.90	39.15
Wales per 3cm, AW	33.15	32.25	31.55	31.70	46.50	45.85	43.45	43.50
Stitch length (mm) BW	4.01	4.22	4.43	4.67	2.70	2.84	2.99	3.09
Stitch length (mm) AW	3.99	4.18	4.39	4.63	2.71	2.86	2.99	3.13
Burst strength (kPa), BW	717.70	652.40	640.80	562.20	587.80	548.00	559.70	520.40
Burst strength (kPa), AW	661.30	631.30	628.90	629.10	610.70	555.60	548.90	543.00
Distension at burst (mm), BW	14.43	11.21	12.41	12.51	13.45	14.43	13.46	13.26
Distension at burst (mm), AW	19.72	18.80	19.66	19.27	17.43	17.58	18.86	18.45
Angle of spirality, BW	4.61	2.53	1.68	4.41	4.06	6.62	4.14	4.87
Angle of spirality, AW	8.75	12.34	11.83	16.01	10.29	11.93	9.42	10.69
Width (cm), BW	79.97	79.70	81.20	85.03	81.93	82.23	83.30	86.30
Yarn strength (g), BW	513.55	511.97	502.80	500.72	299.75	278.96	274.76	303.79
Yarn strength (g), AW	532.79	504.37	521.11	483.56	304.11	284.45	286.17	295.07
Yarn ext. at break (%), BW	7.35	6.90	7.12	6.95	4.91	4.89	5.12	4.89
Yarn ext. at break (%), AW	7.72	7.31	7.67	7.45	5.38	5.48	5.21	5.43
Yarn count (tex), BW	32.41	32.06	32.23	32.47	19.85	19.85	19.80	20.26
Yarn count (tex), AW	32.43	31.99	31.85	31.88	19.50	20.28	20.27	19.91
Thickness (mm x 1000), BW	515	504	510	518	428	428	431	428
Thickness (mm x 1000), AW	850	889	885	868	685	678	687	693
Turns per metre, BW	591	611	592	585	788	779	824	808
Colour - X value	68.25	68.01	68.26	67.80	69.20	69.13	69.20	68.40
Colour - Y value	72.31	72.06	72.32	71.83	73.51	73.55	73.64	72.58
Colour - Z value	36.39	36.62	36.81	35.97	37.91	38.16	39.12	36.35
Turns per metre, AW	598	622	615	605	805	768	761	773
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.01	1.01	1.05	1.05	1.02	1.00	1.02	0.99
Calc/Obs Wt AW	1.03	1.03	1.01	1.01	0.97	1.00	0.98	1.00
Calc/Obs Courses/3cm AW	1.00	1.01	1.01	1.02	1.04	1.03	1.04	1.02
Calc/Obs Wales/3cm AW	1.00	0.98	0.98	0.96	1.01	1.00	1.05	0.99

COTTON INC. - ROUTE 2, SETS 3 & 4

RESIN COMPACTED

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	11.87	12.35	14.84	17.95	6.26	9.71	10.82	13.43
Width shrinkage (%), TD	17.21	17.85	13.06	12.31	9.66	8.14	6.11	6.13
Length shrinkage (%), 5x	13.93	14.36	17.69	20.13	10.65	12.72	13.71	16.05
Width shrinkage (%), 5x	18.44	18.53	13.52	12.53	9.83	8.02	5.88	5.41
Weight (gsm), BW	209.06	203.51	194.79	178.99	177.98	173.38	169.58	161.69
Weight (gsm), AW	291.41	283.40	265.56	255.33	220.45	209.25	205.46	196.92
Courses per 3cm, BW	20.85	19.75	17.00	16.00	34.40	31.90	29.60	26.95
Courses per 3cm, AW	23.90	23.10	20.57	19.85	38.85	36.40	34.60	32.05
Wales per 3cm, BW	14.35	14.15	14.55	13.85	27.65	27.60	26.80	26.45
Wales per 3cm, AW	17.75	17.40	16.67	16.25	30.20	29.50	28.90	28.30
Stitch length (mm) BW	6.94	7.31	7.87	8.16	4.16	4.40	4.62	4.85
Stitch length (mm) AW	6.96	7.24	7.82	8.12	4.15	4.39	4.55	4.83
Burst strength (kPa), BW	896.70	935.70	899.70	855.40	824.00	794.90	786.30	663.60
Burst strength (kPa), AW	818.70	814.90	843.60	828.80	775.10	760.50	739.20	694.80
Distension at burst (mm), BW	14.57	15.32	14.55	13.84	17.19	17.53	16.29	15.87
Distension at burst (mm), AW	19.78	19.57	20.36	20.46	19.20	19.52	20.11	20.75
Angle of spirality, BW	4.86	5.41	7.98	6.51	6.92	5.38	1.71	6.42
Angle of spirality, AW	8.67	6.97	13.25	13.40	8.71	12.33	11.59	11.52
Width (cm), BW	70.77	71.23	72.43	73.70	82.90	83.80	84.50	85.60
Yarn strength (g), BW	1336.13	1368.27	1382.93	1282.00	662.88	661.56	685.24	630.73
Yarn strength (g), AW	1331.33	1286.93	1382.27	1291.20	723.59	638.25	687.88	658.39
Yarn ext. at break (%), BW	7.33	7.62	7.89	7.44	8.03	7.98	8.26	7.92
Yarn ext. at break (%), AW	7.72	7.85	7.84	7.93	8.25	8.14	8.62	8.30
Yarn count (tex), BW	92.98	92.73	94.07	92.74	41.32	41.86	41.84	41.71
Yarn count (tex), AW	91.33	91.70	93.15	92.18	41.33	41.21	40.93	41.04
Thickness (mm x 1000), BW	867	865	886	855	628	627	622	634
Thickness (mm x 1000), AW	1443	1430	1478	1486	954	970	993	1016
Turns per metre, BW	347	349	364	369	545	552	554	561
Colour - X value	66.35	67.34	67.55	67.11	69.61	69.63	69.30	68.98
Colour - Y value	70.33	71.31	71.73	71.14	74.10	74.07	73.66	73.23
Colour - Z value	35.53	36.32	37.26	36.27	38.78	39.84	38.59	38.27
Turns per metre, AW	359	362	359	351	545	569	579	547
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.03	1.03	1.05	1.04	1.02	1.02	1.00	0.99
Calc/Obs Wt AW	1.03	1.05	1.04	1.05	1.01	1.03	1.01	1.01
Calc/Obs Courses/3cm AW	1.01	1.00	1.00	1.01	0.99	1.00	0.99	1.00
Calc/Obs Wales/3cm AW	0.99	1.00	1.01	0.97	1.02	1.02	0.99	0.99

COTTON INC. - ROUTE 2, SETS 3 & 4

RESIN COMPACTED

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), TD	11.01	13.22	13.47	14.55	6.27	7.47	11.03	11.06
Width shrinkage (%), TD	11.56	10.33	8.69	8.26	11.49	8.03	8.01	7.52
Length shrinkage (%), 5x	12.85	15.38	16.73	17.72	7.75	9.03	13.22	13.15
Width shrinkage (%), 5x	12.38	10.32	8.77	8.35	12.19	9.45	8.24	7.48
Weight (gsm), BW	136.88	127.67	123.04	122.46	129.47	128.51	121.20	116.27
Weight (gsm), AW	179.46	170.86	161.96	156.58	160.45	152.76	148.25	141.29
Courses per 3cm, BW	34.10	30.75	29.35	27.50	53.08	47.53	44.15	41.65
Courses per 3cm, AW	39.00	36.15	34.30	32.55	57.15	52.50	50.05	47.70
Wales per 3cm, BW	29.55	29.00	28.15	27.70	42.53	41.45	41.30	41.15
Wales per 3cm, AW	32.70	31.90	31.63	30.80	47.80	46.70	45.05	44.60
Stitch length (mm) BW	3.99	4.21	4.40	4.67	2.70	2.86	2.98	3.09
Stitch length (mm) AW	3.98	4.17	4.40	4.63	2.69	2.85	2.96	3.09
Burst strength (kPa), BW	710.60	672.30	657.90	601.60	601.90	587.80	562.40	540.20
Burst strength (kPa), AW	675.60	623.60	642.30	590.30	606.20	596.80	560.30	537.90
Distension at burst (mm), BW	17.57	15.89	16.10	14.08	14.33	16.64	14.52	15.16
Distension at burst (mm), AW	19.44	19.32	18.90	19.84	18.91	17.30	16.24	17.78
Angle of spirality, BW	5.00	4.67	3.26	8.26	6.81	7.63	3.86	8.87
Angle of spirality, AW	12.66	12.60	13.91	14.68	8.60	9.12	11.92	12.45
Width (cm), BW	80.50	80.87	81.33	82.50	82.60	82.80	82.70	84.40
Yarn strength (g), BW	526.97	503.87	499.15	493.71	296.15	282.51	296.37	282.93
Yarn strength (g), AW	506.67	508.68	469.01	477.16	318.56	317.07	301.04	274.40
Yarn ext. at break (%), BW	6.54	6.01	6.22	6.46	6.51	6.70	6.52	6.55
Yarn ext. at break (%), AW	6.68	6.38	6.30	6.39	7.05	7.01	6.90	6.82
Yarn count (tex), BW	32.54	32.12	31.58	31.91	20.01	20.21	20.11	19.75
Yarn count (tex), AW	32.33	32.57	32.18	31.95	19.88	20.01	20.07	19.79
Thickness (mm x 1000), BW	555	560	566	563	463	466	447	457
Thickness (mm x 1000), AW	882	885	904	891	694	697	704	705
Turns per metre, BW	576	579	576	583	844	843	802	833
Colour - X value	68.92	68.25	68.90	68.52	69.00	69.34	69.49	69.35
Colour - Y value	73.15	72.31	73.17	72.72	73.44	73.74	73.87	73.70
Colour - Z value	37.78	36.28	38.12	37.00	37.44	38.29	39.17	37.39
Turns per metre, AW	601	596	618	611	820	819	821	838
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.06	1.05	1.04	1.03	1.05	0.99	1.00	1.00
Calc/Obs Wt AW	1.02	1.02	1.05	1.05	1.01	1.02	1.01	1.02
Calc/Obs Courses/3cm AW	1.00	1.01	1.03	1.03	1.01	1.00	1.02	1.01
Calc/Obs Wales/3cm AW	1.03	1.01	0.98	0.98	1.01	0.98	1.00	1.00

COTTON INC. - ROUTE 3, SETS 1 & 2

NO RESIN CALENDERED

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	12.97	14.21	17.31	19.03	13.51	16.32	17.55	20.29
Width shrinkage (%), TD	16.34	14.90	10.49	9.23	10.35	8.81	6.66	5.26
Length shrinkage (%), 5x	15.58	16.57	20.79	21.43	16.20	19.06	20.29	23.20
Width shrinkage (%), 5x	16.25	14.80	9.57	7.83	10.63	8.91	5.86	4.90
Weight (gsm), BW	226.46	217.77	206.50	202.91	171.27	161.53	157.20	152.92
Weight (gsm), AW	308.14	297.51	274.97	271.85	225.44	216.89	206.03	202.59
Courses per 3cm, BW	21.05	19.80	17.30	16.20	33.65	30.75	28.45	25.70
Courses per 3cm, AW	25.00	23.95	22.05	21.20	39.75	37.75	35.95	33.50
Wales per 3cm, BW	15.28	15.00	14.85	14.45	27.30	27.15	26.75	26.10
Wales per 3cm, AW	18.05	17.45	16.15	16.00	30.70	29.85	28.80	27.95
Stitch length (mm) BW	6.98	7.23	7.81	8.13	4.17	4.40	4.60	4.84
Stitch length (mm) AW	6.92	7.16	7.74	8.04	4.12	4.36	4.56	4.77
Burst strength (kPa), BW	966.60	973.60	889.30	913.40	823.20	792.30	764.60	731.00
Burst strength (kPa), AW	981.00	964.60	924.60	845.10	733.20	768.80	710.70	687.20
Distension at burst (mm), BW	16.84	16.88	16.88	17.56	16.35	15.14	16.00	15.52
Distension at burst (mm), AW	20.28	20.40	20.95	20.59	19.71	20.11	19.10	19.87
Angle of spirality, BW	5.53	6.30	6.34	5.96	5.49	6.78	3.98	8.65
Angle of spirality, AW	10.56	11.30	13.99	14.71	10.71	12.61	13.73	15.65
Width (cm), BW	67.17	67.20	68.07	68.37	85.23	86.00	86.70	87.50
Yarn strength (g), BW	1542.60	1519.60	1350.13	1384.93	638.16	670.24	663.03	649.60
Yarn strength (g), AW	1525.07	1570.13	1477.87	1618.13	716.05	714.87	740.95	654.68
Yarn ext. at break (%), BW	7.90	7.57	7.36	7.64	8.59	8.60	8.57	8.75
Yarn ext. at break (%), AW	8.27	8.97	8.55	8.63	8.41	8.57	8.39	8.09
Yarn count (tex), BW	93.13	93.22	96.00	95.95	41.95	40.81	41.30	41.46
Yarn count (tex), AW	91.70	93.24	93.52	94.19	40.77	41.16	39.93	41.58
Thickness (mm x 1000), BW	923	929	939	966	637	642	637	636
Thickness (mm x 1000), AW	1464	1486	1539	1575	991	1026	1028	1066
Turns per metre, BW	336	332	343	342	548	597	578	584
Colour - X value	63.36	63.58	63.61	63.74	65.20	64.26	65.04	64.71
Colour - Y value	57.35	57.54	57.55	57.83	59.37	58.20	59.12	58.70
Colour - Z value	61.91	62.10	62.03	62.12	61.64	62.42	63.16	62.33
Turns per metre, AW	318	336	320	309	534	560	545	536
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.02	1.02	1.04	1.00	1.04	1.03	1.02	0.98
Calc/Obs Wt AW	1.03	1.04	1.04	1.05	1.01	1.04	1.02	1.02
Calc/Obs Courses/3cm AW	1.00	0.99	0.99	0.97	1.01	1.01	0.99	1.00
Calc/Obs Wales/3cm AW	1.01	1.01	1.02	0.98	1.00	1.00	0.99	0.98

COTTON INC. - ROUTE 3, SETS 1 & 2

NO RESIN CALENDERED

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), TD	12.26	14.30	15.94	18.12	11.11	12.61	13.89	13.92
Width shrinkage (%), TD	16.65	13.76	10.87	8.71	13.16	11.71	10.84	9.00
Length shrinkage (%), 5x	14.71	16.62	18.01	21.20	11.93	14.59	16.23	16.51
Width shrinkage (%), 5x	16.75	12.00	10.31	7.58	13.18	11.51	10.55	8.47
Weight (gsm), BW	133.60	126.00	124.33	114.15	132.84	121.88	117.88	121.05
Weight (gsm), AW	182.51	176.73	167.67	162.00	163.13	156.69	150.57	147.30
Courses per 3cm, BW	34.40	31.15	28.85	26.15	52.65	49.05	44.75	42.80
Courses per 3cm, AW	40.10	37.75	35.45	33.25	57.23	54.48	51.73	49.03
Wales per 3cm, BW	26.55	27.70	27.50	27.60	42.00	41.40	39.93	41.50
Wales per 3cm, AW	32.85	32.20	31.45	30.80	47.50	45.65	43.13	43.60
Stitch length (mm) BW	4.00	4.17	4.40	4.65	2.71	2.85	2.99	3.09
Stitch length (mm) AW	3.96	4.14	4.35	4.59	2.68	2.85	3.00	3.09
Burst strength (kPa), BW	709.00	656.20	605.00	591.70	618.60	600.60	565.60	534.70
Burst strength (kPa), AW	677.70	647.40	635.70	576.80	610.80	593.20	561.20	547.00
Distension at burst (mm), BW	16.65	15.25	14.98	15.57	15.58	14.02	15.10	15.22
Distension at burst (mm), AW	19.12	18.92	19.22	19.56	18.27	19.03	18.88	18.93
Angle of spirality, BW	4.62	3.85	3.86	4.23	7.77	5.51	4.17	5.81
Angle of spirality, AW	13.74	15.59	17.52	20.29	9.93	11.75	12.38	13.34
Width (cm), BW	84.03	85.70	85.90	86.30	85.40	86.20	86.93	87.13
Yarn strength (g), BW	534.96	531.40	506.71	490.49	309.84	305.84	316.35	309.75
Yarn strength (g), AW	580.71	545.77	573.57	535.19	351.15	345.87	347.28	314.57
Yarn ext. at break (%), BW	7.53	7.41	7.54	7.32	7.13	7.04	7.15	7.16
Yarn ext. at break (%), AW	7.74	7.88	8.38	7.80	6.99	7.10	7.28	7.07
Yarn count (tex), BW	31.83	31.92	31.95	31.49	20.04	19.75	20.00	20.03
Yarn count (tex), AW	31.86	32.15	32.12	32.06	19.93	19.58	19.71	19.91
Thickness (mm x 1000), BW	580	571	557	561	459	460	456	464
Thickness (mm x 1000), AW	902	910	923	933	717	757	740	745
Turns per metre, BW	589	571	566	587	797	796	813	790
Colour - X value	64.58	64.48	64.40	64.10	65.98	65.82	66.21	65.75
Colour - Y value	58.27	58.10	58.00	57.62	59.89	59.70	60.11	59.59
Colour - Z value	63.13	62.78	62.60	62.12	64.51	64.61	65.01	64.40
Turns per metre, AW	613	606	615	583	736	700	765	766
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	0.97	1.01	1.00	1.03	1.01	1.04	1.01	1.01
Calc/Obs Wt AW	1.01	1.02	1.03	1.03	0.99	0.98	0.97	0.99
Calc/Obs Courses/3cm AW	1.01	0.99	0.99	1.00	1.04	1.05	1.03	1.05
Calc/Obs Wales/3cm AW	0.97	0.99	0.97	0.97	1.02	1.02	1.03	1.04

COTTON INC. - ROUTE 3, SETS 1 & 2

NO RESIN COMPACTED

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	4.54	5.10	7.02	9.61	4.34	5.98	6.71	8.11
Width shrinkage (%), TD	14.83	14.94	12.41	10.83	8.36	8.38	8.33	5.97
Length shrinkage (%), 5x	6.86	6.94	8.68	16.54	7.03	8.60	9.23	11.13
Width shrinkage (%), 5x	16.32	15.29	12.02	8.85	8.60	8.55	8.59	5.61
Weight (gsm), BW	251.18	240.32	224.76	232.80	193.81	180.10	179.95	168.06
Weight (gsm), AW	314.99	294.03	273.43	275.57	231.68	218.38	211.36	202.43
Courses per 3cm, BW	23.45	22.70	20.20	18.80	37.10	34.80	32.80	30.05
Courses per 3cm, AW	24.95	24.10	21.93	21.38	40.00	37.45	35.75	33.75
Wales per 3cm, BW	15.23	14.65	14.25	14.50	28.13	27.05	26.15	26.10
Wales per 3cm, AW	17.95	17.75	16.25	15.63	30.95	29.65	29.20	28.05
Stitch length (mm) BW	7.02	7.27	7.86	8.12	4.18	4.39	4.60	4.86
Stitch length (mm) AW	6.92	7.18	7.82	7.98	4.14	4.35	4.54	4.79
Burst strength (kPa), BW	959.50	948.00	875.30	923.80	805.10	787.00	744.30	706.40
Burst strength (kPa), AW	937.60	869.30	862.40	861.90	776.20	736.20	722.80	681.20
Distension at burst (mm), BW	19.28	18.87	19.30	19.78	18.26	18.34	20.28	18.24
Distension at burst (mm), AW	20.74	20.92	21.64	20.68	20.71	20.31	21.16	21.15
Angle of spirality, BW	5.99	6.21	6.77	7.27	7.74	5.32	8.46	7.20
Angle of spirality, AW	10.77	11.70	13.92	14.33	11.81	13.07	14.31	16.80
Width (cm), BW	66.23	68.17	70.97	70.10	82.53	85.67	87.73	88.93
Yarn strength (g), BW	1299.97	1460.93	1461.20	1473.87	649.39	631.47	642.16	615.17
Yarn strength (g), AW	1511.07	1524.40	1566.13	1576.00	702.89	689.44	654.29	662.47
Yarn ext. at break (%), BW	8.14	7.74	7.85	8.16	9.35	10.52	10.67	9.23
Yarn ext. at break (%), AW	10.17	10.93	11.42	10.90	10.15	10.64	10.07	10.64
Yarn count (tex), BW	93.85	92.36	93.03	95.78	41.49	40.77	41.48	41.09
Yarn count (tex), AW	88.92	89.62	92.10	94.91	40.89	41.50	41.31	40.81
Thickness (mm x 1000), BW	1024	1019	1040	1056	708	697	685	735
Thickness (mm x 1000), AW	1555	1587	1599	1666	1004	1035	1052	1081
Turns per metre, BW	329	293	324	310	598	582	582	588
Colour - X value	64.42	65.18	64.80	64.42	66.26	66.09	66.05	65.33
Colour - Y value	58.68	59.44	59.09	58.48	60.64	60.48	60.56	59.31
Colour - Z value	62.65	64.22	63.74	62.95	65.49	65.21	65.13	64.01
Turns per metre, AW	310	293	312	302	577	582	609	560
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.04	1.03	1.04	1.01	1.04	1.04	1.01	1.03
Calc/Obs Wt AW	0.97	1.04	1.04	1.02	1.00	1.02	1.03	1.01
Calc/Obs Courses/3cm AW	1.01	1.01	1.01	1.05	1.00	1.02	1.01	1.00
Calc/Obs Wales/3cm AW	1.01	0.97	1.00	1.02	0.99	1.00	0.98	0.99

COTTON INC. - ROUTE 3, SETS 1 & 2

NO RESIN COMPACTED

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), TD	2.62	0.61	4.07	8.97	3.26	2.38	2.50	8.36
Width shrinkage (%), TD	13.56	14.18	11.73	8.81	10.84	10.19	9.87	7.64
Length shrinkage (%), 5x	4.26	1.19	6.32	11.19	4.99	4.42	4.88	8.88
Width shrinkage (%), 5x	13.83	14.31	11.40	7.44	11.76	10.76	10.52	7.89
Weight (gsm), BW	152.27	145.92	141.98	131.37	144.36	140.62	133.23	127.19
Weight (gsm), AW	183.98	174.53	166.92	159.99	168.52	158.50	154.52	146.17
Courses per 3cm, BW	39.05	37.28	33.90	29.30	58.35	55.00	51.55	46.85
Courses per 3cm, AW	40.55	38.75	36.10	33.60	60.90	56.85	53.05	50.30
Wales per 3cm, BW	28.05	26.80	26.15	26.70	42.35	40.25	40.45	40.68
Wales per 3cm, AW	33.10	31.60	30.85	29.90	47.85	45.10	45.05	43.30
Stitch length (mm) BW	3.99	4.20	4.42	4.64	2.70	2.86	2.98	3.10
Stitch length (mm) AW	3.95	4.14	4.36	4.61	2.67	2.83	2.95	3.07
Burst strength (kPa), BW	687.30	638.40	653.60	603.00	611.20	612.60	576.70	569.80
Burst strength (kPa), AW	670.00	664.20	629.10	597.50	593.40	590.10	573.30	568.90
Distension at burst (mm), BW	18.65	18.48	18.51	18.02	19.61	17.84	17.53	17.66
Distension at burst (mm), AW	19.58	19.12	19.99	18.75	17.73	19.31	18.55	19.52
Angle of spirality, BW	7.19	6.55	5.83	5.86	5.30	6.72	4.73	8.49
Angle of spirality, AW	12.97	15.32	16.19	18.33	9.24	10.45	11.34	13.36
Width (cm), BW	82.57	85.17	85.83	84.13	82.47	84.67	85.40	86.17
Yarn strength (g), BW	526.97	497.57	490.83	488.76	298.67	300.99	311.52	330.08
Yarn strength (g), AW	564.08	543.32	530.21	522.43	330.11	341.76	326.98	347.83
Yarn ext. at break (%), BW	9.79	9.30	9.26	9.37	8.59	9.10	9.24	8.88
Yarn ext. at break (%), AW	8.90	9.02	8.88	8.66	8.28	8.45	8.81	8.88
Yarn count (tex), BW	32.19	31.90	31.94	32.28	19.91	19.65	20.12	20.06
Yarn count (tex), AW	31.88	31.43	31.64	31.75	19.84	19.81	19.87	19.96
Thickness (mm x 1000), BW	676	682	657	627	508	525	512	531
Thickness (mm x 1000), AW	920	956	972	984	736	735	746	752
Turns per metre, BW	594	615	583	583	822	776	850	823
Colour - X value	65.70	65.76	65.10	65.11	67.89	66.90	66.72	65.96
Colour - Y value	59.82	59.86	58.85	58.84	61.26	61.03	60.75	59.93
Colour - Z value	64.73	64.87	63.61	63.27	66.20	66.18	65.79	64.82
Turns per metre, AW	596	576	603	590	800	803	798	822
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.03	1.02	0.98	0.99	1.02	0.98	1.04	1.03
Calc/Obs Wt AW	1.02	1.01	1.02	1.02	1.02	1.01	1.01	1.01
Calc/Obs Courses/3cm AW	1.01	0.97	1.00	0.98	1.01	1.01	1.02	1.02
Calc/Obs Wales/3cm AW	0.98	0.99	0.96	0.96	1.00	1.00	1.00	1.02

COTTON INC. - ROUTE 3, SETS 3 & 4

RESIN CALENDERED

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	15.10	17.83	14.94	13.19	18.26	14.78	16.93	19.00
Width shrinkage (%), TD	14.38	13.78	20.36	23.36	6.96	11.37	5.37	1.98
Length shrinkage (%), 5x	16.87	19.25	16.08	14.46	19.48	15.85	18.55	20.88
Width shrinkage (%), 5x	15.52	14.38	20.97	23.73	6.97	12.45	5.66	1.17
Weight (gsm), BW	206.10	203.76	181.99	175.51	164.61	155.98	166.87	154.89
Weight (gsm), AW	293.79	280.85	269.88	258.66	217.54	212.44	204.78	199.88
Courses per 3cm, BW	20.88	18.58	17.45	17.15	31.25	30.10	28.30	25.68
Courses per 3cm, AW	24.18	22.85	21.20	19.95	39.15	36.60	35.00	32.35
Wales per 3cm, BW	15.30	15.85	12.98	12.48	28.88	26.35	26.78	26.13
Wales per 3cm, AW	18.88	17.48	16.38	16.85	38.48	38.88	28.68	27.78
Stitch length (mm) BW	7.81	7.38	7.87	8.15	4.17	4.41	4.61	4.88
Stitch length (mm) AW	6.92	7.26	7.88	8.89	4.14	4.38	4.59	4.82
Burst strength (kPa), BW	988.28	978.78	981.88	835.18	787.28	773.88	748.38	692.38
Burst strength (kPa), AW	912.38	948.58	856.28	847.58	745.58	728.68	719.88	623.98
Distension at burst (mm), BW	13.73	14.28	14.66	15.88	16.36	17.74	16.85	15.56
Distension at burst (mm), AW	19.85	19.73	28.86	28.77	28.86	28.44	28.51	28.24
Angle of spirality, BW	5.42	2.19	5.98	3.85	5.32	6.15	6.82	4.89
Angle of spirality, AW	9.42	11.35	13.48	14.58	9.84	12.52	12.28	13.81
Width (cm), BW	66.88	67.37	76.37	84.18	82.48	87.13	84.17	82.67
Yarn strength (g), BW	1388.88	1351.87	1319.28	1279.47	578.89	623.13	598.51	576.48
Yarn strength (g), AW	1345.47	1328.48	1388.48	1283.33	618.57	598.32	633.22	688.53
Yarn ext. at break (%), BW	9.29	9.12	9.16	9.89	8.82	8.89	8.79	8.11
Yarn ext. at break (%), AW	9.74	9.84	9.78	9.42	8.56	7.86	8.68	8.23
Yarn count (tex), BW	93.83	93.81	95.23	96.26	41.45	42.88	42.52	41.86
Yarn count (tex), AW	92.69	91.88	94.39	93.67	41.24	41.38	41.82	41.95
Thickness (mm x 1000), BW	893	884	871	898	595	685	646	617
Thickness (mm x 1000), AW	1412	1489	1437	1474	976	969	995	1887
Turns per metre, BW	333	354	348	348	548	544	564	534
Colour - X value	62.83	62.28	61.96	68.99	64.86	63.54	64.38	65.58
Colour - Y value	57.84	56.46	56.88	54.84	59.34	57.79	58.68	59.93
Colour - Z value	61.28	68.46	59.71	57.84	61.17	61.49	62.78	64.36
Turns per metre, AW	348	362	354	339	547	563	542	523
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.08	1.83	1.83	1.86	1.82	1.85	8.99	8.98
Calc/Obs Wt AW	1.85	1.85	1.85	1.84	1.84	1.84	1.84	1.81
Calc/Obs Courses/3cm AW	1.88	1.88	8.98	1.88	8.99	8.98	8.99	8.99
Calc/Obs Wales/3cm AW	1.81	1.81	1.88	1.82	8.99	1.88	8.99	8.95

COTTON INC. - ROUTE 3, SETS 3 & 4

RESIN CALENDERED

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), TD	16.90	16.63	17.05	17.66	12.54	11.88	13.52	14.78
Width shrinkage (%), TD	10.26	11.66	11.77	12.47	11.91	13.74	12.59	12.76
Length shrinkage (%), 5x	18.76	18.56	19.07	19.94	13.09	13.16	14.73	15.78
Width shrinkage (%), 5x	10.90	12.15	12.02	12.79	11.62	13.61	11.86	11.80
Weight (gsm), BW	129.37	120.62	113.97	112.05	127.49	119.48	110.07	107.80
Weight (gsm), AW	176.40	170.13	163.30	155.90	162.68	151.17	146.49	142.55
Courses per 3cm, BW	31.45	29.75	27.45	25.45	52.40	47.40	43.75	40.70
Courses per 3cm, AW	38.80	36.40	34.05	31.60	57.40	53.50	51.90	48.40
Wales per 3cm, BW	29.47	27.90	27.53	25.90	41.45	39.95	39.20	37.80
Wales per 3cm, AW	33.10	32.30	32.05	31.15	47.00	45.60	44.20	44.15
Stitch length (mm) BW	4.03	4.21	4.42	4.66	2.71	2.86	2.97	3.12
Stitch length (mm) AW	3.99	4.18	4.40	4.64	2.67	2.85	2.99	3.10
Burst strength (kPa), BW	638.90	611.90	565.40	559.60	569.30	565.20	529.10	472.20
Burst strength (kPa), AW	604.00	622.50	587.40	559.90	595.60	580.30	547.70	530.00
Distension at burst (mm), BW	13.57	14.54	14.76	14.67	17.89	17.15	15.53	15.49
Distension at burst (mm), AW	18.48	19.47	19.69	19.75	19.34	20.29	19.60	19.50
Angle of spirality, BW	4.40	3.66	5.64	8.02	3.92	2.49	4.10	2.81
Angle of spirality, AW	10.95	13.15	14.45	17.05	7.63	10.09	10.47	10.37
Width (cm), BW	79.27	82.73	84.83	87.07	83.23	88.10	87.00	88.73
Yarn strength (g), BW	484.11	464.84	437.41	426.61	368.02	357.37	322.04	300.27
Yarn strength (g), AW	483.60	477.40	457.12	453.28	281.79	288.37	286.68	286.12
Yarn ext. at break (%), BW	9.54	9.79	8.77	8.96	6.02	5.59	7.07	7.25
Yarn ext. at break (%), AW	9.61	9.63	9.36	9.41	6.80	8.34	7.77	8.00
Yarn count (tex), BW	32.20	32.20	32.32	32.18	20.19	19.70	19.91	21.15
Yarn count (tex), AW	32.11	32.16	31.66	32.06	20.14	19.90	20.07	20.15
Thickness (mm x 1000), BW	541	537	537	531	449	429	440	442
Thickness (mm x 1000), AW	896	888	916	911	697	699	716	714
Turns per metre, BW	574	604	593	579	756	752	782	740
Colour - X value	64.64	63.68	64.00	64.28	65.11	64.72	65.10	64.64
Colour - Y value	59.06	57.67	58.08	58.38	59.35	58.78	59.18	59.32
Colour - Z value	63.37	61.59	62.19	62.47	63.51	62.88	63.44	64.26
Turns per metre, AW	617	588	621	608	765	723	730	727
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	1.03	1.04	1.05	0.97	1.04	0.99	1.02	1.05
Calc/Obs Wt AW	1.04	1.03	1.03	1.04	0.99	1.02	1.04	1.04
Calc/Obs Courses/3cm AW	1.00	1.00	1.00	1.01	1.05	1.02	0.99	1.00
Calc/Obs Wales/3cm AW	1.00	0.98	0.98	0.95	1.00	1.01	1.01	0.97

COTTON INC. - ROUTE 3, SETS 3 & 4

RESIN COMPACTED

	A-1	A-2	A-3	A-4	B-1	B-2	B-3	B-4
Length shrinkage (%), TD	9.22	11.92	15.59	15.97	11.98	14.58	14.81	18.32
Width shrinkage (%), TD	20.14	18.92	15.43	15.98	8.80	6.72	5.76	3.93
Length shrinkage (%), 5x	10.30	13.04	17.38	17.22	13.44	15.88	16.44	19.73
Width shrinkage (%), 5x	20.76	19.14	15.13	15.24	8.76	6.44	5.49	3.42
Weight (gsm), BW	222.79	215.58	197.66	195.24	178.45	166.61	163.70	153.45
Weight (gsm), AW	304.86	287.84	271.25	270.18	221.81	212.46	205.02	194.94
Courses per 3cm, BW	21.30	19.50	17.10	16.25	33.35	30.05	28.50	25.20
Courses per 3cm, AW	24.10	22.90	20.90	20.10	38.35	35.80	34.15	31.35
Wales per 3cm, BW	14.15	13.95	13.60	13.25	27.78	27.65	26.80	27.05
Wales per 3cm, AW	17.80	17.30	16.40	15.95	30.85	29.95	28.70	28.25
Stitch length (mm) BW	7.00	7.26	7.83	8.15	4.18	4.42	4.61	4.87
Stitch length (mm) AW	6.87	7.23	7.81	8.09	4.15	4.40	4.60	4.83
Burst strength (kPa), BW	924.30	910.80	873.70	821.00	717.30	745.60	714.40	706.50
Burst strength (kPa), AW	830.20	866.90	876.00	832.20	725.10	742.00	693.20	644.40
Distension at burst (mm), BW	15.83	15.29	15.44	15.16	16.59	17.06	16.25	16.01
Distension at burst (mm), AW	19.63	19.41	20.25	20.17	20.48	19.68	19.56	19.44
Angle of spirality, BW	7.22	7.05	2.27	4.93	4.41	5.59	5.61	6.60
Angle of spirality, AW	8.62	9.72	11.07	12.40	9.38	10.88	13.29	15.22
Width (cm), BW	69.43	70.33	71.13	72.13	81.57	82.30	83.90	83.83
Yarn strength (g), BW	1356.40	1322.27	1285.73	1164.93	604.72	548.65	564.79	573.43
Yarn strength (g), AW	1350.27	1369.20	1280.53	1270.53	635.31	631.92	608.81	629.88
Yarn ext. at break (%), BW	9.12	8.83	8.83	8.19	9.04	8.17	8.75	8.50
Yarn ext. at break (%), AW	8.27	8.21	7.96	8.19	8.67	8.74	8.53	8.73
Yarn count (tex), BW	93.21	93.16	94.45	97.32	41.18	41.12	41.88	41.85
Yarn count (tex), AW	94.22	92.37	93.94	97.18	41.21	41.23	41.12	41.78
Thickness (mm x 1000), BW	902	880	901	903	613	621	611	611
Thickness (mm x 1000), AW	1437	1458	1480	1494	917	942	968	976
Turns per metre, BW	322	311	323	317	565	585	567	561
Colour - X value	63.38	62.77	63.47	63.29	65.98	65.77	65.07	65.08
Colour - Y value	57.70	57.01	57.93	57.60	60.63	60.35	57.44	59.39
Colour - Z value	61.80	61.09	61.97	60.48	64.93	64.56	63.38	63.43
Turns per metre, AW	317	317	333	321	552	572	553	529
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

DATA CHECKS

Calc/Obs Wt BW	0.98	0.95	0.97	0.97	0.99	1.01	1.00	1.01
Calc/Obs Wt AW	1.01	1.02	1.03	1.04	1.01	1.02	1.01	1.02
Calc/Obs Courses/3cm AW	0.99	0.98	0.99	0.98	1.00	1.00	1.00	1.00
Calc/Obs Wales/3cm AW	1.00	1.00	0.98	0.98	0.98	0.99	0.99	0.99

COTTON INC. - ROUTE 3, SETS 3 & 4

RESIN COMPACTED

	C-1	C-2	C-3	C-4	D-1	D-2	D-3	D-4
Length shrinkage (%), TD	11.51	13.79	14.49	16.29	11.87	11.88	13.51	14.50
Width shrinkage (%), TD	13.05	11.25	9.49	8.08	11.20	9.55	9.28	7.88
Length shrinkage (%), 5x	13.84	16.86	17.10	18.69	10.64	12.88	14.24	15.83
Width shrinkage (%), 5x	14.11	12.28	10.17	8.36	11.22	8.86	9.07	6.62
Weight (gsm), BW	138.48	133.19	125.08	122.95	131.56	121.62	118.03	114.16
Weight (gsm), AW	178.18	170.57	163.11	158.04	165.32	151.20	151.33	141.95
Courses per 3cm, BW	33.95	30.80	28.15	26.20	52.40	48.40	44.80	42.75
Courses per 3cm, AW	39.00	36.30	34.10	32.00	58.15	54.35	50.60	48.75
Wales per 3cm, BW	28.78	28.80	28.35	27.65	42.40	40.50	41.50	40.45
Wales per 3cm, AW	33.30	32.70	32.05	31.00	47.55	45.20	45.50	43.70
Stitch length (mm) BW	4.00	4.21	4.43	4.66	2.70	2.88	2.97	3.11
Stitch length (mm) AW	3.98	4.18	4.38	4.62	2.77	2.84	2.91	3.03
Burst strength (kPa), BW	644.00	615.40	595.90	561.50	553.20	546.90	549.60	503.10
Burst strength (kPa), AW	638.50	617.70	615.30	584.40	613.70	560.60	573.40	568.40
Distension at burst (mm), BW	16.54	14.30	15.08	15.41	17.33	15.94	16.46	18.16
Distension at burst (mm), AW	18.94	20.53	19.03	19.12	18.58	18.99	19.32	19.74
Angle of spirality, BW	7.30	6.85	5.12	6.12	5.23	4.91	4.39	4.39
Angle of spirality, AW	11.28	13.15	12.19	13.27	6.88	8.82	9.99	10.98
Width (cm), BW	80.07	80.33	81.13	82.10	81.23	82.50	82.27	82.87
Yarn strength (g), BW	435.61	448.68	456.84	445.52	277.08	289.40	287.21	268.35
Yarn strength (g), AW	469.93	478.07	470.81	482.55	293.79	292.84	298.03	291.67
Yarn ext. at break (%), BW	9.26	9.13	9.15	8.96	8.51	8.18	8.07	7.97
Yarn ext. at break (%), AW	8.60	9.06	8.79	9.05	8.80	8.98	9.01	9.02
Yarn count (tex), BW	32.23	32.40	32.39	32.38	20.28	19.82	20.04	20.85
Yarn count (tex), AW	31.80	32.09	32.25	32.05	19.57	20.04	20.21	20.86
Thickness (mm x 1000), BW	553	539	552	563	470	459	467	464
Thickness (mm x 1000), AW	883	885	901	912	695	721	739	722
Turns per metre, BW	588	556	599	581	739	741	754	708
Colour - X value	64.72	64.89	64.04	65.01	65.11	65.86	65.91	66.14
Colour - Y value	58.86	59.13	58.14	59.21	59.58	60.27	60.21	60.58
Colour - Z value	63.89	63.42	62.22	63.34	63.65	64.68	64.87	65.85
Turns per metre, AW	580	580	608	598	725	749	743	726
Twist liveliness, t/m, BW								
Twist liveliness, t/m, AW								

ATA CHECKS

Calc/Obs Wt BW	1.01	1.01	1.02	0.99	1.02	1.02	1.04	1.05
Calc/Obs Wt AW	1.03	1.04	1.05	1.03	1.01	1.03	0.99	1.01
Calc/Obs Courses/3cm AW	1.01	1.01	1.00	1.01	1.01	1.02	1.03	1.04
Calc/Obs Wales/3cm AW	1.00	1.00	0.98	0.97	1.00	0.98	1.00	0.99