International Cotton Advisory Committee

CSITC
Global - Round Trial 2018 - 1
General Evaluation

Section One: Result Distribution
Section Two: Instrument Evaluation
Section Three: Within Limits Evaluation

Section One: Result Distribution

Content:

Mandatory Parameters
- -Summary Table
- -Distribution Graphs

Optional Parameters
- -Summary Table
- -Distribution Graphs

Executed By:
Faserinstitut Bremen e.V., Bremen, Germany*
USDA-AMS, Memphis, TN, USA

System Provided by:
Generation 10 Limited

This report is an outcome of the Project CFC/ICAC/33 – CSITC,
which benefitted from support from the Common Fund for Commodities
and the European Union, partners in Commodity Development.

** Faserinstitut Bremen are a Cooperation Partner with ICA Bremen*

Global - Round Trial 2018 - 1

Inter-Instrument Averages, Inter-Instrument Variations, Typical within-instrument Variations

Micronaire							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			3.784	4.356	4.816	5.474	
Reference Values for Evaluation			3.784	4.356	4.816	5.474	
Number Of Instruments			124	124	124	121	**123**
Inter-Instrument Variation	based on 30 tests	SD	0.065	0.059	0.047	0.046	**0.054**
		CV %	1.7	1.4	1.0	0.8	**1.2**
	based on 6 tests	SD	0.070	0.065	0.052	0.055	**0.060**
		CV %	1.8	1.5	1.1	1.0	**1.4**
	based on single tests	SD	0.080	0.073	0.062	0.065	**0.070**
		CV %	2.1	1.7	1.3	1.2	**1.6**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.030	0.023	0.024	0.027	**0.026**
		CV %	0.8	0.5	0.5	0.5	**0.6**
	between single tests on one day	SD	0.040	0.033	0.031	0.035	**0.035**
		CV %	1.1	0.8	0.6	0.6	**0.8**
	between all tests on different days	SD	0.049	0.041	0.040	0.045	**0.044**
		CV %	1.3	0.9	0.8	0.8	**1.0**

Strength							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			23.913	27.363	31.115	27.835	
Reference Values for Evaluation			23.913	27.363	31.115	27.835	
Number Of Instruments			125	125	125	122	**124**
Inter-Instrument Variation	based on 30 tests	SD	0.693	0.623	0.810	0.703	**0.707**
		CV %	2.9	2.3	2.6	2.5	**2.6**
	based on 6 tests	SD	0.778	0.755	1.036	0.780	**0.837**
		CV %	3.3	2.8	3.3	2.8	**3.0**
	based on single tests	SD	1.017	0.930	1.199	0.928	**1.018**
		CV %	4.3	3.4	3.9	3.3	**3.7**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.336	0.365	0.370	0.342	**0.353**
		CV %	1.4	1.3	1.2	1.2	**1.3**
	between single tests on one day	SD	0.591	0.503	0.536	0.498	**0.532**
		CV %	2.5	1.8	1.7	1.8	**2.0**
	between all tests on different days	SD	0.656	0.598	0.640	0.611	**0.626**
		CV %	2.7	2.2	2.1	2.2	**2.3**

Length							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			0.9909	1.0929	1.1096	1.0333	
Reference Values for Evaluation			0.9909	1.0929	1.1096	1.0333	
Number Of Instruments			125	125	125	122	**124**
Inter-Instrument Variation	based on 30 tests	SD	0.0103	0.0081	0.0076	0.0081	**0.0086**
		CV %	1.0	0.7	0.7	0.8	**0.8**
	based on 6 tests	SD	0.0123	0.0097	0.0102	0.0101	**0.0106**
		CV %	1.2	0.9	0.9	1.0	**1.0**
	based on single tests	SD	0.0172	0.0140	0.0137	0.0146	**0.0149**
		CV %	1.7	1.3	1.2	1.4	**1.4**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.0064	0.0050	0.0050	0.0056	**0.0055**
		CV %	0.6	0.5	0.5	0.5	**0.5**
	between single tests on one day	SD	0.0116	0.0093	0.0093	0.0092	**0.0098**
		CV %	1.2	0.8	0.8	0.9	**0.9**
	between all tests on different days	SD	0.0129	0.0108	0.0105	0.0111	**0.0113**
		CV %	1.3	1.0	0.9	1.1	**1.1**

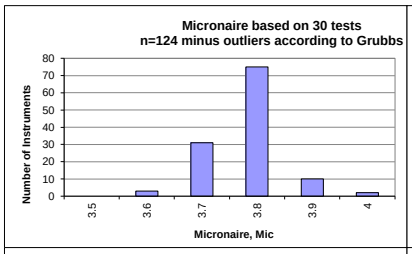
Uniformity							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			77.600	81.355	82.043	80.605	
Reference Values for Evaluation			77.600	81.355	82.043	80.605	
Number Of Instruments			125	125	125	122	**124**
Inter-Instrument Variation	based on 30 tests	SD	0.525	0.486	0.424	0.383	**0.455**
		CV %	0.7	0.6	0.5	0.5	**0.6**
	based on 6 tests	SD	0.641	0.515	0.486	0.491	**0.533**
		CV %	0.8	0.6	0.6	0.6	**0.7**
	based on single tests	SD	0.878	0.719	0.716	0.685	**0.749**
		CV %	1.1	0.9	0.9	0.8	**0.9**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.344	0.271	0.256	0.258	**0.282**
		CV %	0.4	0.3	0.3	0.3	**0.4**
	between single tests on one day	SD	0.614	0.506	0.478	0.486	**0.521**
		CV %	0.8	0.6	0.6	0.6	**0.6**
	between all tests on different days	SD	0.712	0.555	0.535	0.531	**0.583**
		CV %	0.9	0.7	0.7	0.7	**0.7**

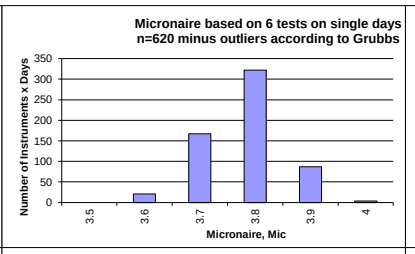
Color Rd							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			75.245	78.416	80.956	78.739	
Reference Values for Evaluation			75.245	78.416	80.956	78.739	
Number Of Instruments			122	122	122	119	**121**
Inter-Instrument Variation	based on 30 tests	SD	0.558	0.489	0.558	0.498	**0.526**
		CV %	0.7	0.6	0.7	0.6	**0.7**
	based on 6 tests	SD	0.608	0.521	0.597	0.510	**0.559**
		CV %	0.8	0.7	0.7	0.6	**0.7**
	based on single tests	SD	0.654	0.578	0.611	0.526	**0.592**
		CV %	0.9	0.7	0.8	0.7	**0.8**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.199	0.156	0.140	0.156	**0.163**
		CV %	0.3	0.2	0.2	0.2	**0.2**
	between single tests on one day	SD	0.172	0.158	0.133	0.165	**0.157**
		CV %	0.2	0.2	0.2	0.2	**0.2**
	between all tests on different days	SD	0.297	0.255	0.203	0.236	**0.248**
		CV %	0.4	0.3	0.3	0.3	**0.3**

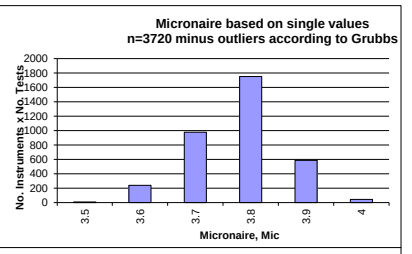
Color +b							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			14.021	12.323	10.817	9.438	
Reference Values for Evaluation			14.021	12.323	10.817	9.438	
Number Of Instruments			122	122	122	119	**121**
Inter-Instrument Variation	based on 30 tests	SD	0.365	0.249	0.245	0.229	**0.272**
		CV %	2.6	2.0	2.3	2.4	**2.3**
	based on 6 tests	SD	0.352	0.272	0.263	0.267	**0.288**
		CV %	2.5	2.2	2.4	2.8	**2.5**
	based on single tests	SD	0.373	0.296	0.289	0.285	**0.311**
		CV %	2.7	2.4	2.7	3.0	**2.7**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.114	0.114	0.098	0.091	**0.104**
		CV %	0.8	0.9	0.9	1.0	**0.9**
	between single tests on one day	SD	0.107	0.088	0.089	0.085	**0.092**
		CV %	0.8	0.7	0.8	0.9	**0.8**
	between all tests on different days	SD	0.171	0.138	0.133	0.122	**0.141**
		CV %	1.2	1.1	1.2	1.3	**1.2**

Test Result Distributions
Micronaire

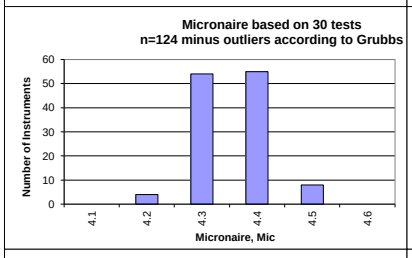
Cotton 1

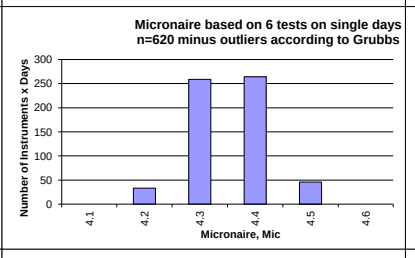


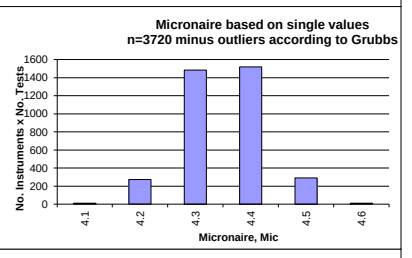




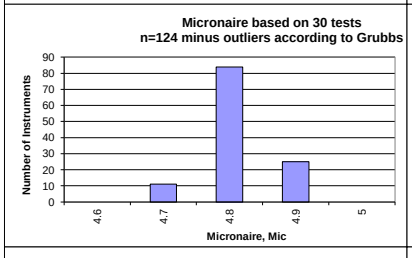
Cotton 2

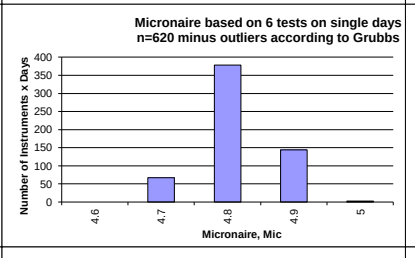


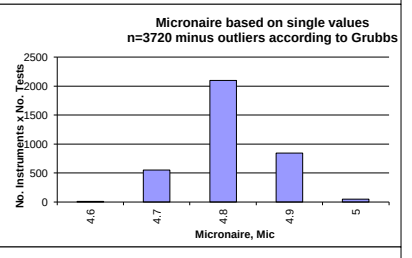




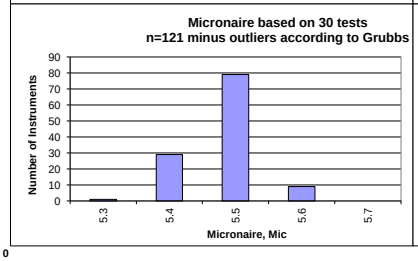
Cotton 3

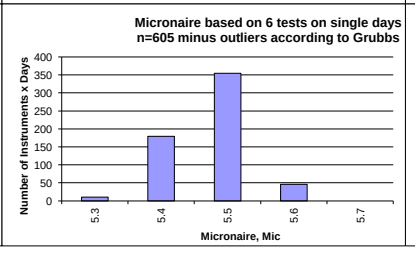


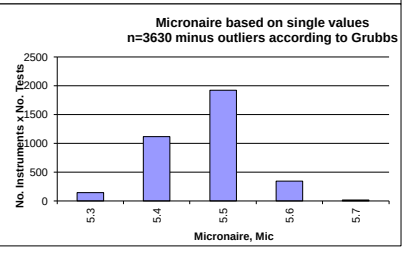




Cotton 4





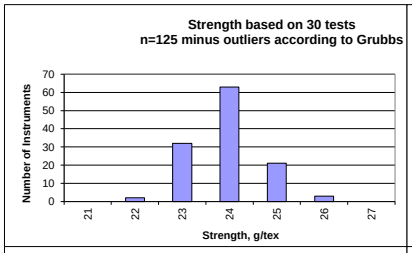


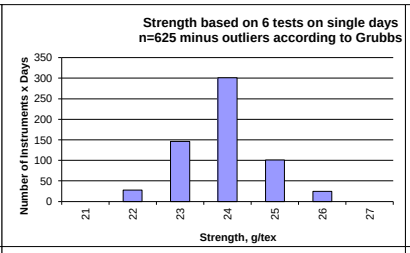
0

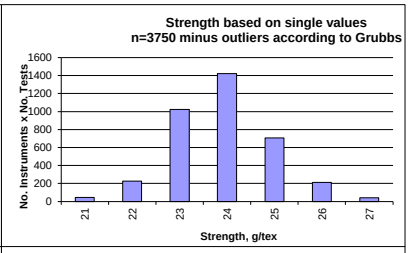
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method.)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Strength

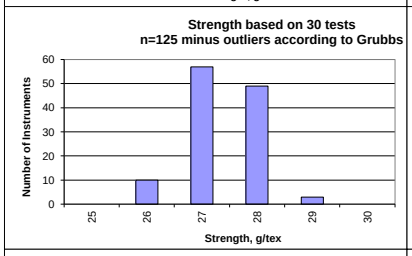
Cotton 1

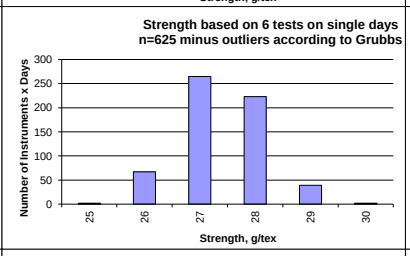


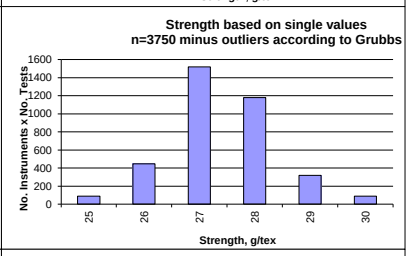




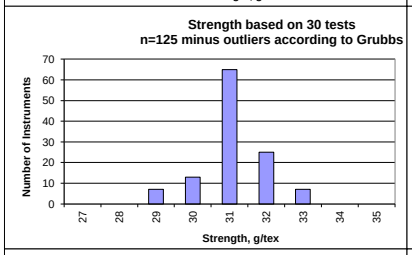
Cotton 2

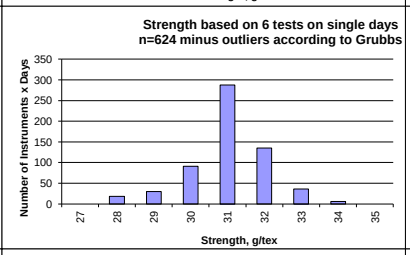


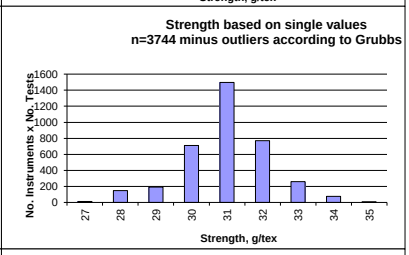




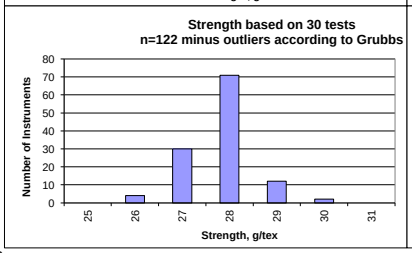
Cotton 3

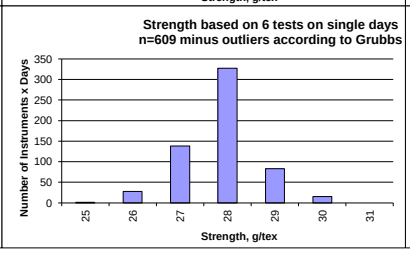


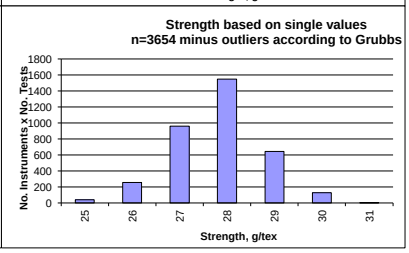




Cotton 4





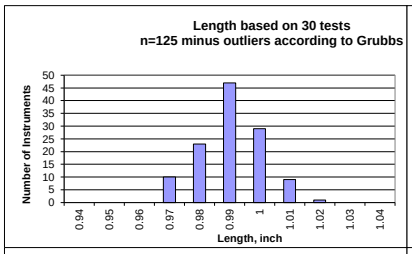


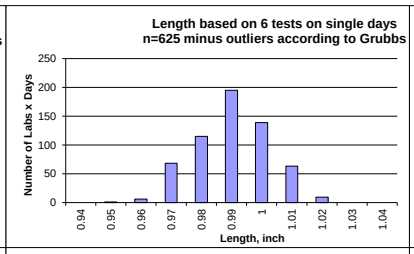
0

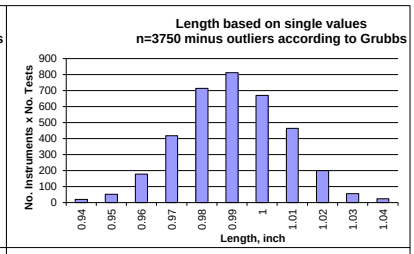
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Length

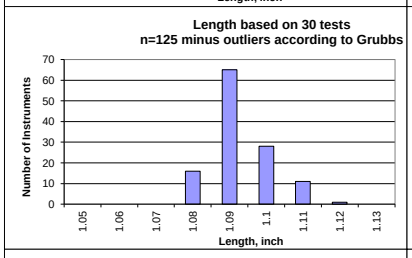
Cotton 1

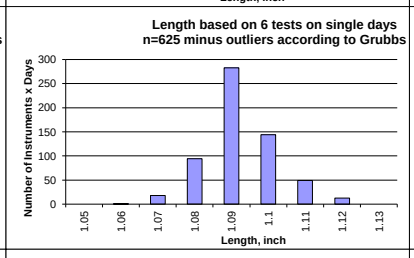


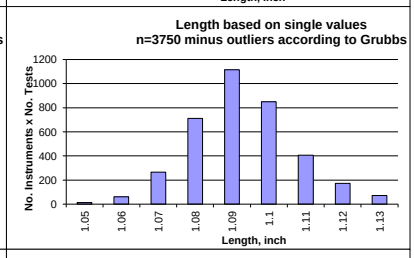




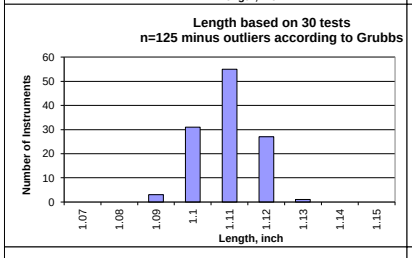
Cotton 2

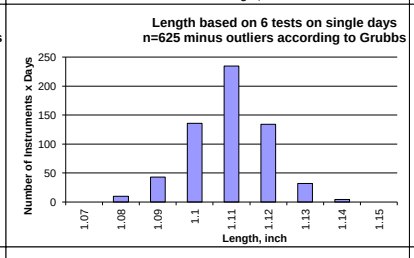


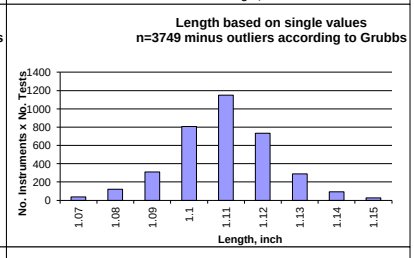




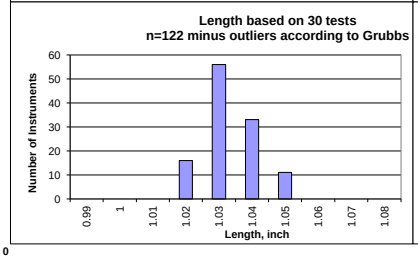
Cotton 3

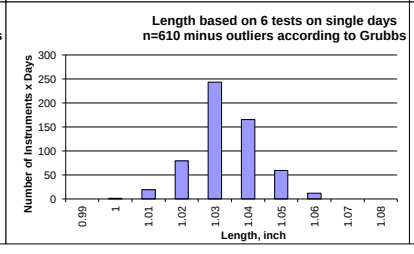


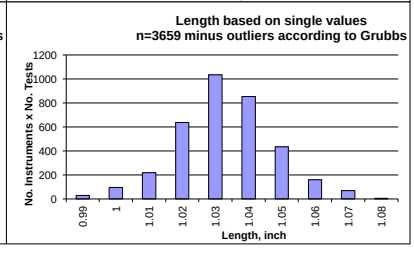




Cotton 4





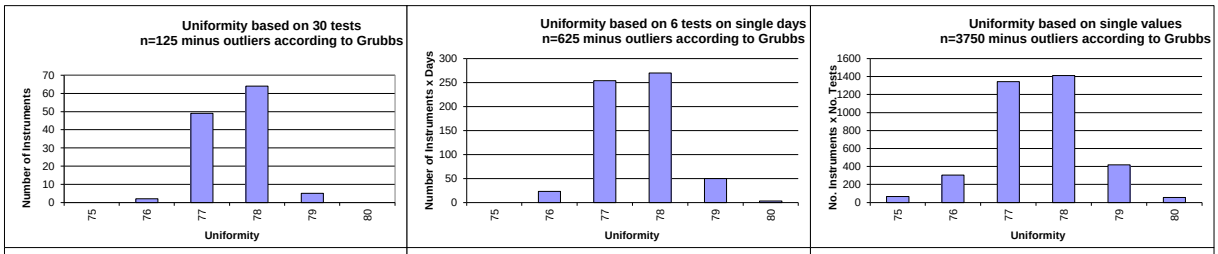


0

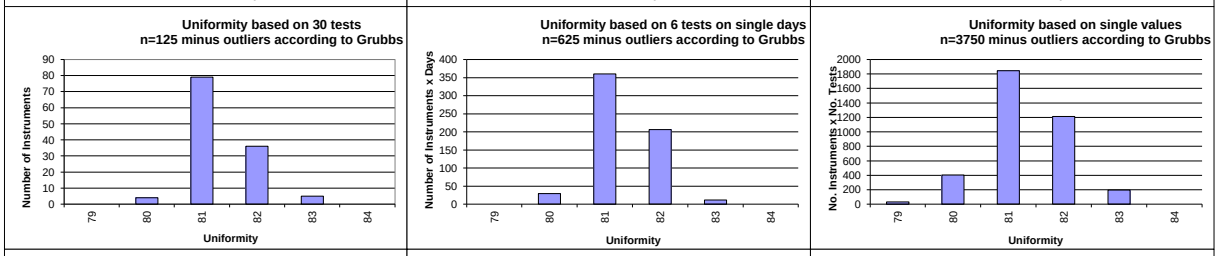
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Uniformity

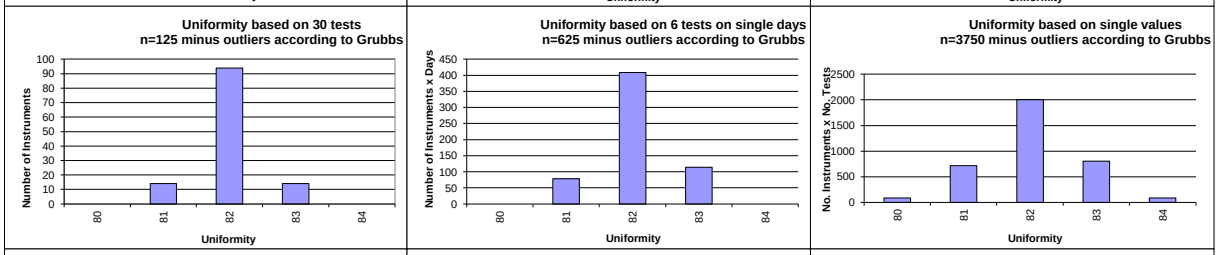
Cotton 1



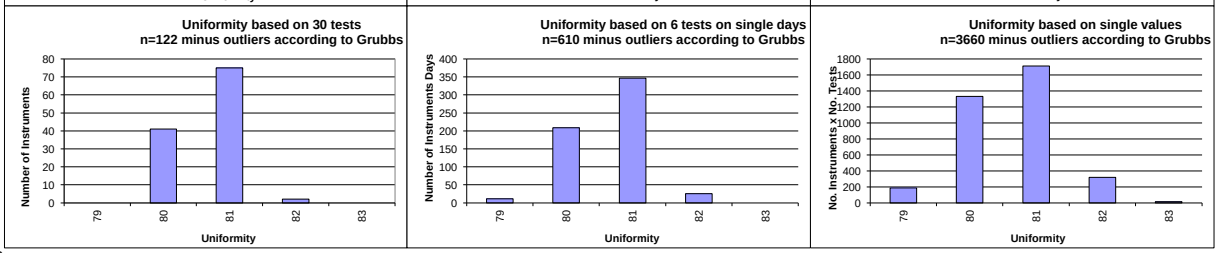
Cotton 2



Cotton 3



Cotton 4

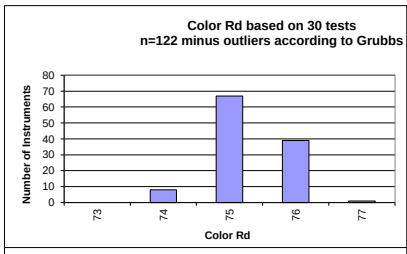


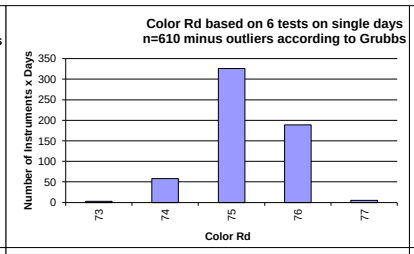
0

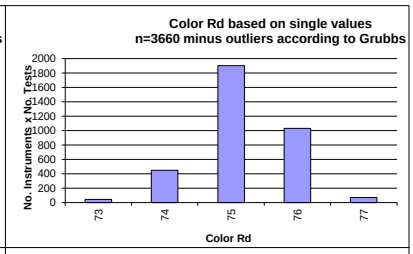
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Color Rd

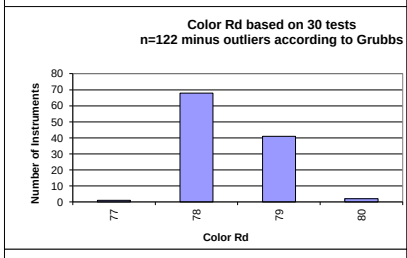
Cotton 1

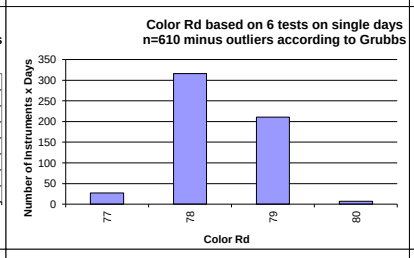


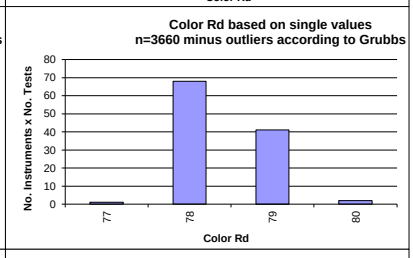




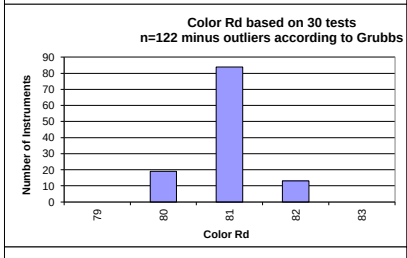
Cotton 2

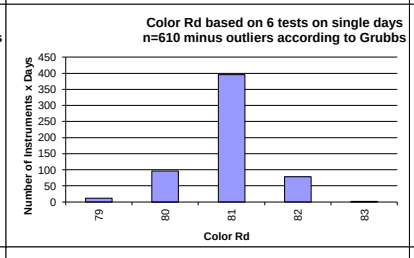


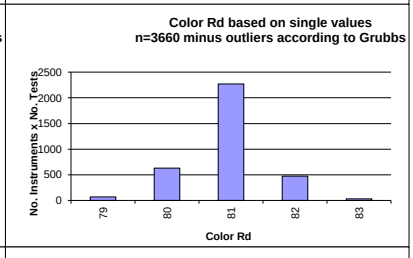




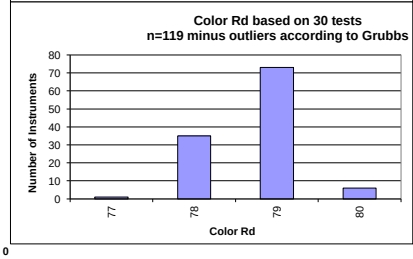
Cotton 3

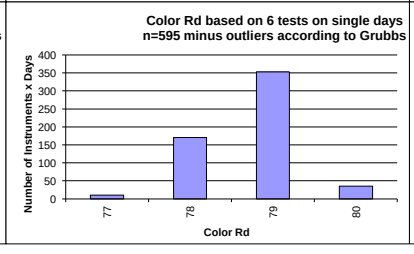


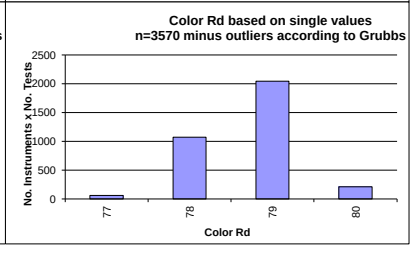




Cotton 4





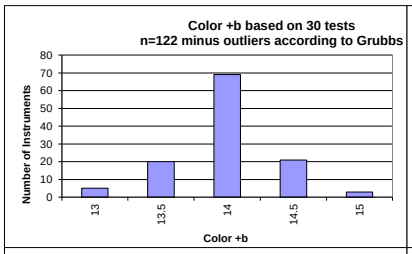


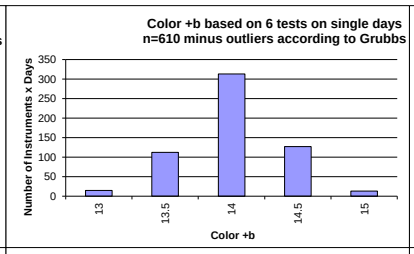
0

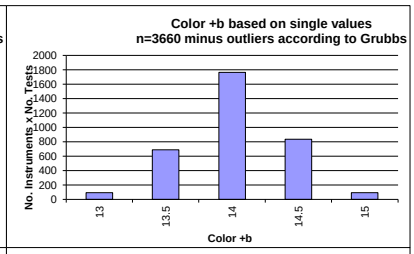
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Color +b

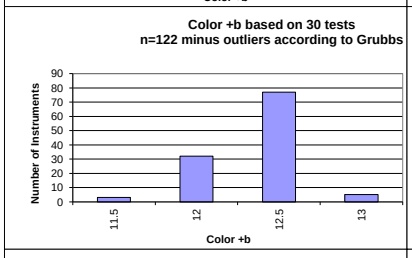
Cotton 1

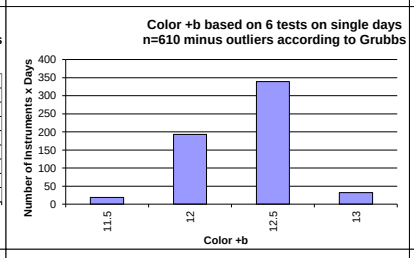


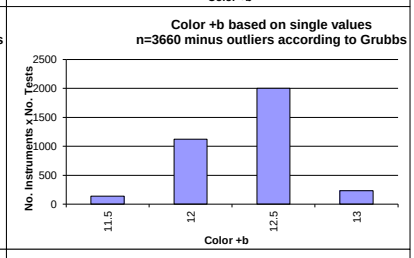




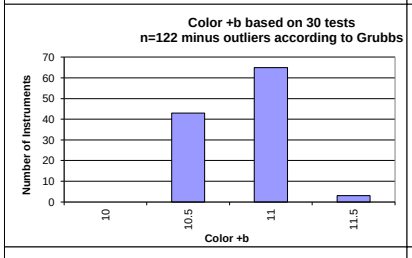
Cotton 2

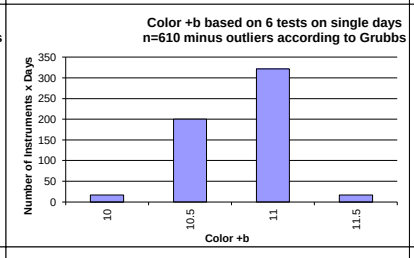


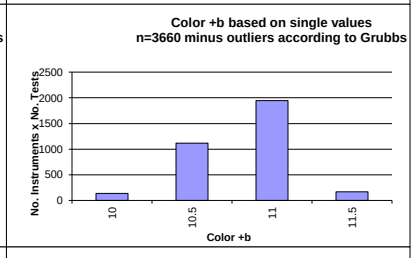




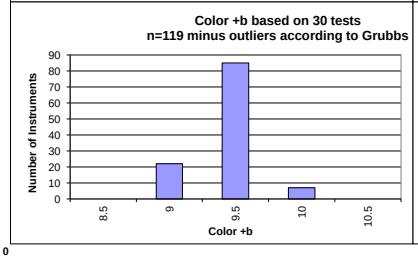
Cotton 3

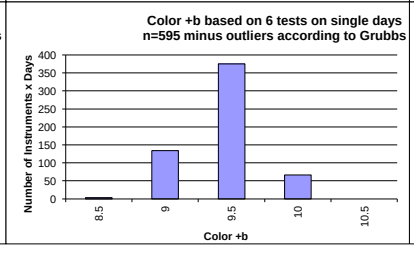


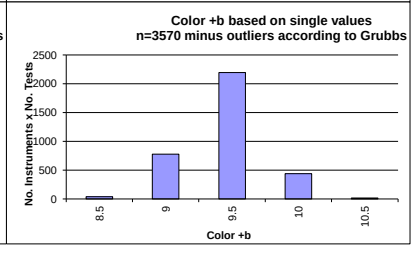




Cotton 4







0

(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Optional Parameters

Inter-Instrument Averages, Inter-Instrument Variations, Typical within-instrument Variations

Trash Count							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			18.37	20.87	11.44	13.26	
Reference Values for Evaluation			18.37	20.87	11.44	13.26	
Number Of Instruments			87	87	86	86	**87**
Inter-Instrument Variation	based on 30 tests	SD	6.43	7.39	4.27	4.33	**5.61**
		CV %	35.0	35.4	37.3	32.7	**35.1**
	based on 6 tests	SD	6.44	7.67	4.54	4.39	**5.76**
		CV %	35.0	36.8	39.7	33.1	**36.2**
	based on single tests	SD	6.74	8.13	4.92	4.98	**6.19**
		CV %	36.7	38.9	43.0	37.5	**39.0**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	1.62	1.75	1.39	1.33	**1.52**
		CV %	8.8	8.4	12.1	10.0	**9.8**
	between single tests on one day	SD	2.01	2.54	1.64	1.83	**2.01**
		CV %	11.0	12.2	14.3	13.8	**12.8**
	between all tests on different days	SD	2.74	3.33	2.20	2.60	**2.72**
		CV %	14.9	15.9	19.2	19.6	**17.4**

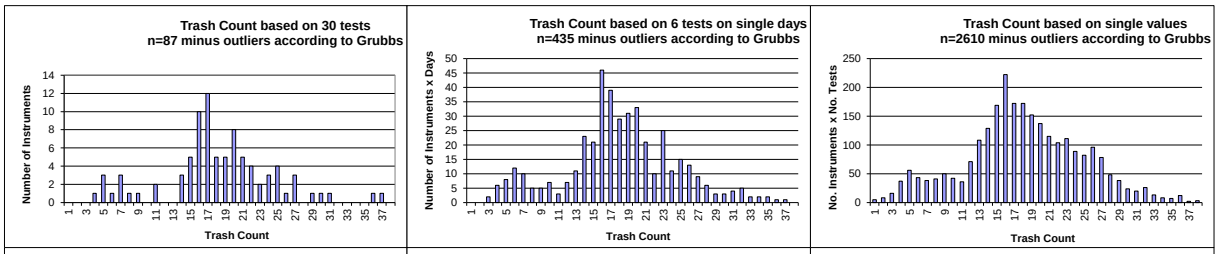
Trash Area							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			0.169	0.173	0.099	0.122	
Reference Values for Evaluation			0.169	0.173	0.099	0.122	
Number Of Instruments			87	87	86	86	**87**
Inter-Instrument Variation	based on 30 tests	SD	0.053	0.048	0.022	0.026	**0.037**
		CV %	31.6	28.0	22.4	21.2	**25.8**
	based on 6 tests	SD	0.060	0.051	0.028	0.031	**0.042**
		CV %	35.8	29.4	28.2	25.0	**29.6**
	based on single tests	SD	0.065	0.056	0.035	0.038	**0.048**
		CV %	38.5	32.6	35.0	30.8	**34.2**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.021	0.022	0.010	0.014	**0.017**
		CV %	12.4	12.5	10.5	11.2	**11.7**
	between single tests on one day	SD	0.024	0.025	0.016	0.018	**0.021**
		CV %	14.3	14.4	16.3	14.8	**14.9**
	between all tests on different days	SD	0.035	0.033	0.020	0.026	**0.029**
		CV %	20.6	19.1	20.6	21.4	**20.4**

Maturity							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			84.38	85.15	86.63	88.47	
Reference Values for Evaluation			84.38	85.15	86.63	88.47	
Number Of Instruments			83	83	82	82	**83**
Inter-Instrument Variation	based on 30 tests	SD	1.16	1.52	1.92	1.78	**1.60**
		CV %	1.4	1.8	2.2	2.0	**1.8**
	based on 6 tests	SD	1.14	1.51	1.90	1.78	**1.58**
		CV %	1.4	1.8	2.2	2.0	**1.8**
	based on single tests	SD	1.20	1.55	1.83	1.83	**1.61**
		CV %	1.4	1.8	2.1	2.1	**1.9**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.16	0.15	0.15	0.15	**0.15**
		CV %	0.2	0.2	0.2	0.2	**0.2**
	between single tests on one day	SD	0.22	0.19	0.26	0.18	**0.21**
		CV %	0.3	0.2	0.3	0.2	**0.2**
	between all tests on different days	SD	0.35	0.31	0.38	0.31	**0.33**
		CV %	0.4	0.4	0.4	0.3	**0.4**

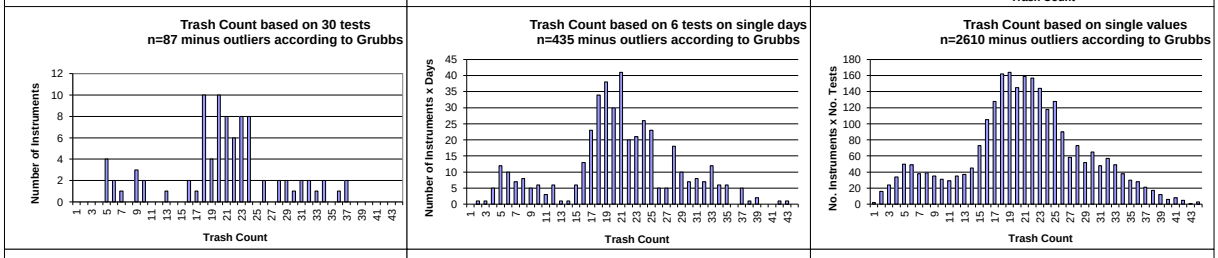
SFI							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			15.55	10.25	9.16	10.81	
Reference Values for Evaluation			15.55	10.25	9.16	10.81	
Number Of Instruments			91	91	90	90	**91**
Inter-Instrument Variation	based on 30 tests	SD	1.60	0.91	0.74	0.86	**1.03**
		CV %	10.3	8.9	8.1	8.0	**8.8**
	based on 6 tests	SD	1.67	0.96	0.77	0.93	**1.08**
		CV %	10.8	9.3	8.4	8.6	**9.3**
	based on single tests	SD	1.87	1.07	0.87	1.06	**1.22**
		CV %	12.0	10.4	9.5	9.8	**10.5**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.46	0.27	0.21	0.31	**0.31**
		CV %	2.9	2.6	2.3	2.8	**2.7**
	between single tests on one day	SD	0.84	0.53	0.42	0.53	**0.58**
		CV %	5.4	5.2	4.6	4.9	**5.0**
	between all tests on different days	SD	0.93	0.58	0.48	0.63	**0.66**
		CV %	6.0	5.7	5.2	5.8	**5.7**

Test Result Distributions
Trash Count

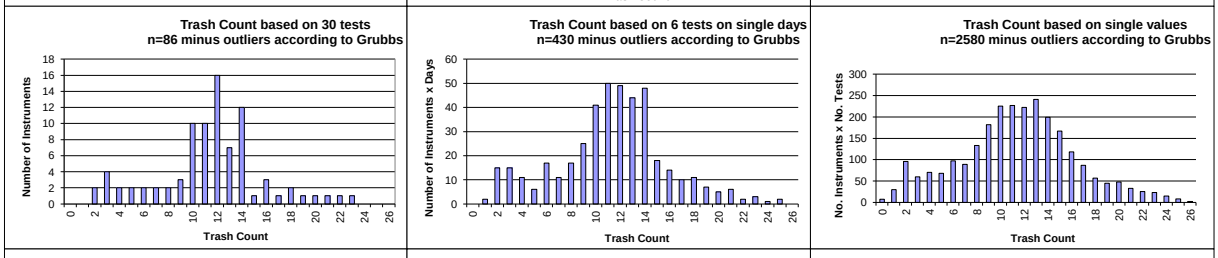
Cotton 1



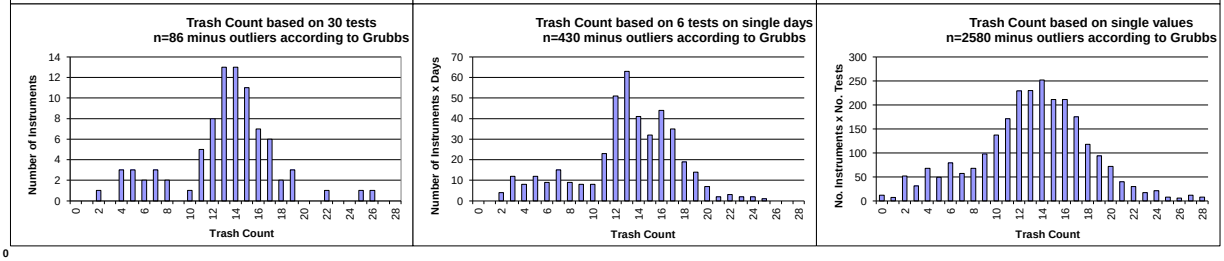
Cotton 2



Cotton 3



Cotton 4

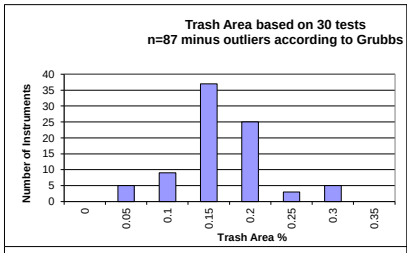


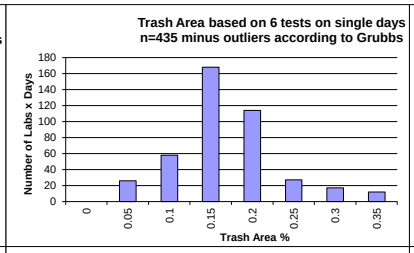
0

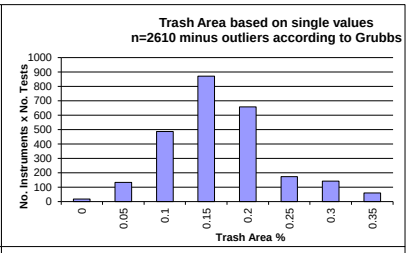
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Trash Area

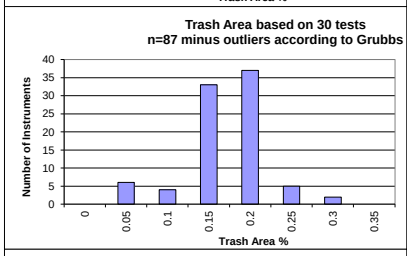
Cotton 1

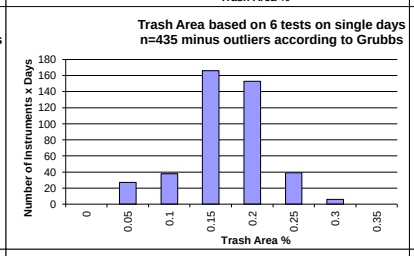


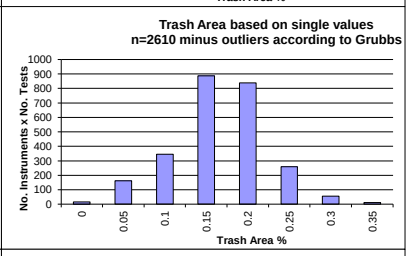




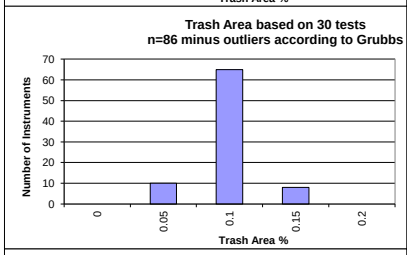
Cotton 2

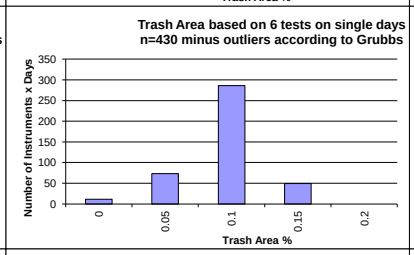


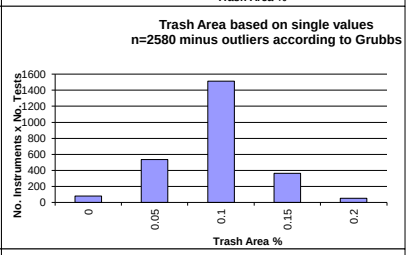




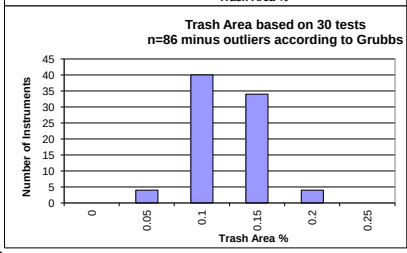
Cotton 3

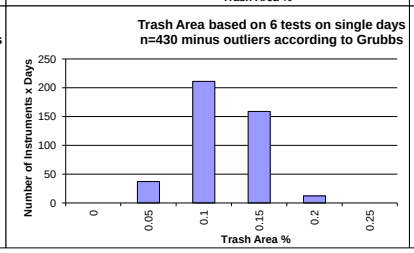


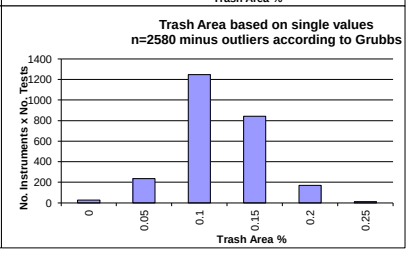




Cotton 4





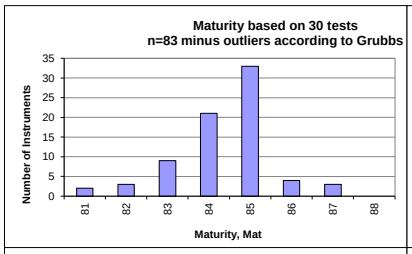


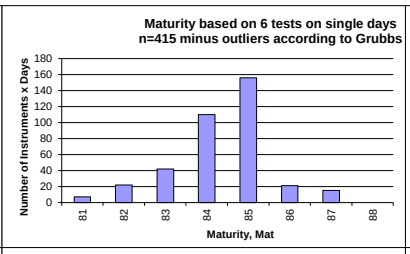
0

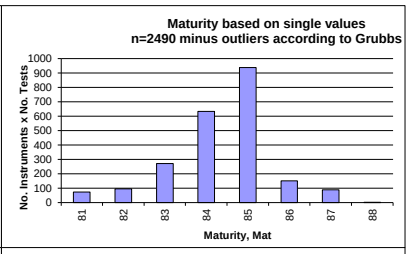
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Maturity

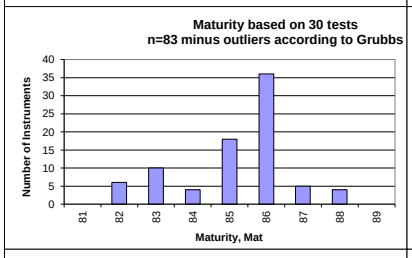
Cotton 1

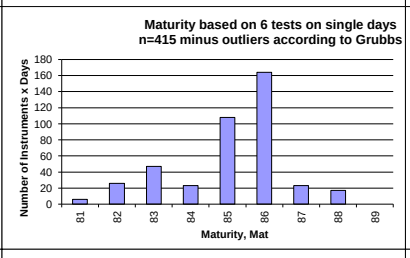


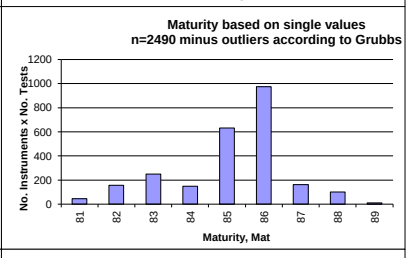




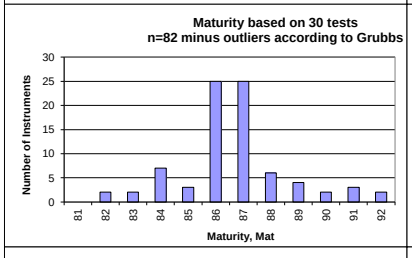
Cotton 2

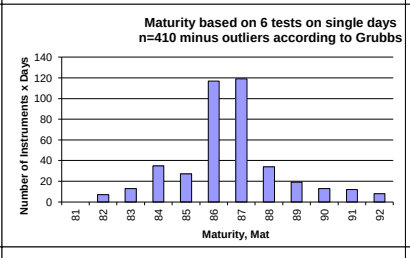


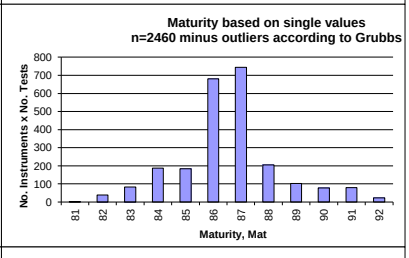




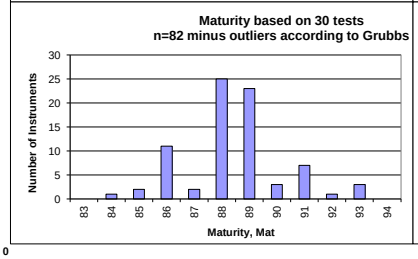
Cotton 3

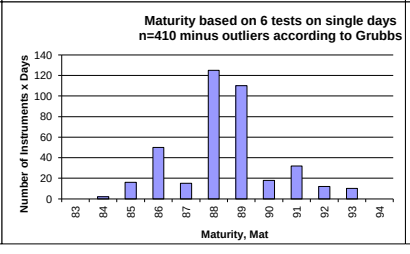


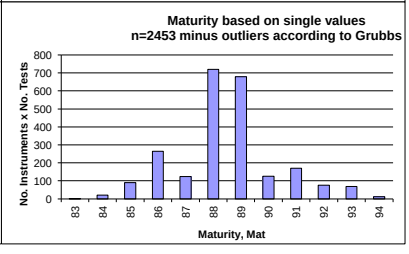




Cotton 4





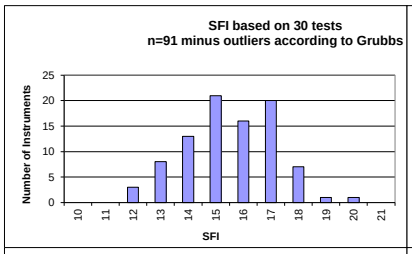


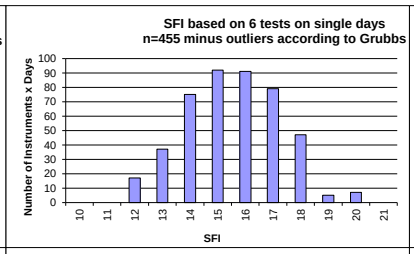
0

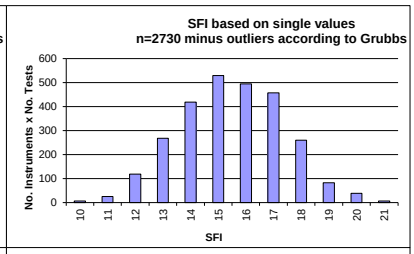
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method.)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
SFI

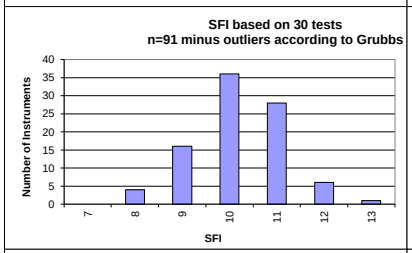
Cotton 1

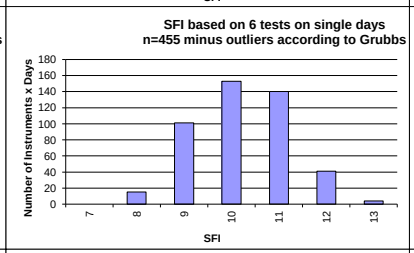


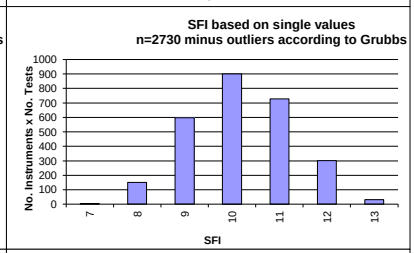




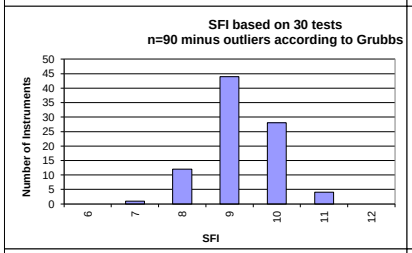
Cotton 2

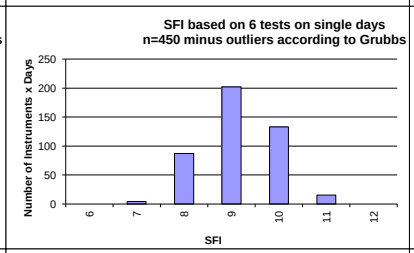


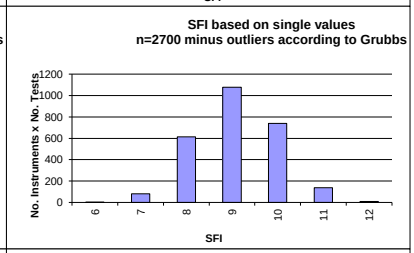




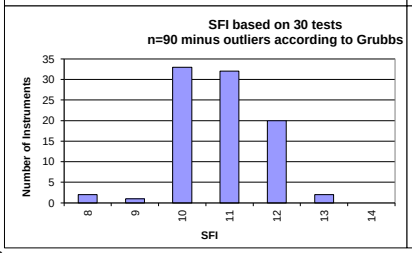
Cotton 3

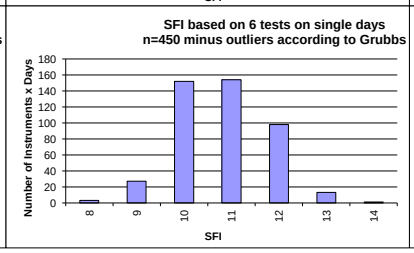


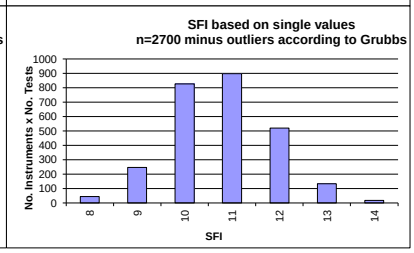




Cotton 4







0

(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

International Cotton Advisory Committee

CSITC
Global - Round Trial 2018 - 1
General Evaluation

Section One: Result Distribution
Section Two: Instrument Evaluation
Section Three: Within Limits Evaluation

Section Two: Instrument Evaluation

Content:

-Evaluation of Combined Parameters
-Evaluation of Single Parameters

Executed By:
Faserinstitut Bremen e.V., Bremen, Germany*
USDA-AMS, Memphis, TN, USA

System Provided by:
Generation 10 Limited

This report is an outcome of the Project CFC/ICAC/33 – CSITC,
which benefitted from support from the Common Fund for Commodities
and the European Union, partners in Commodity Development.

** Faserinstitut Bremen are a Cooperation Partner with ICA Bremen*

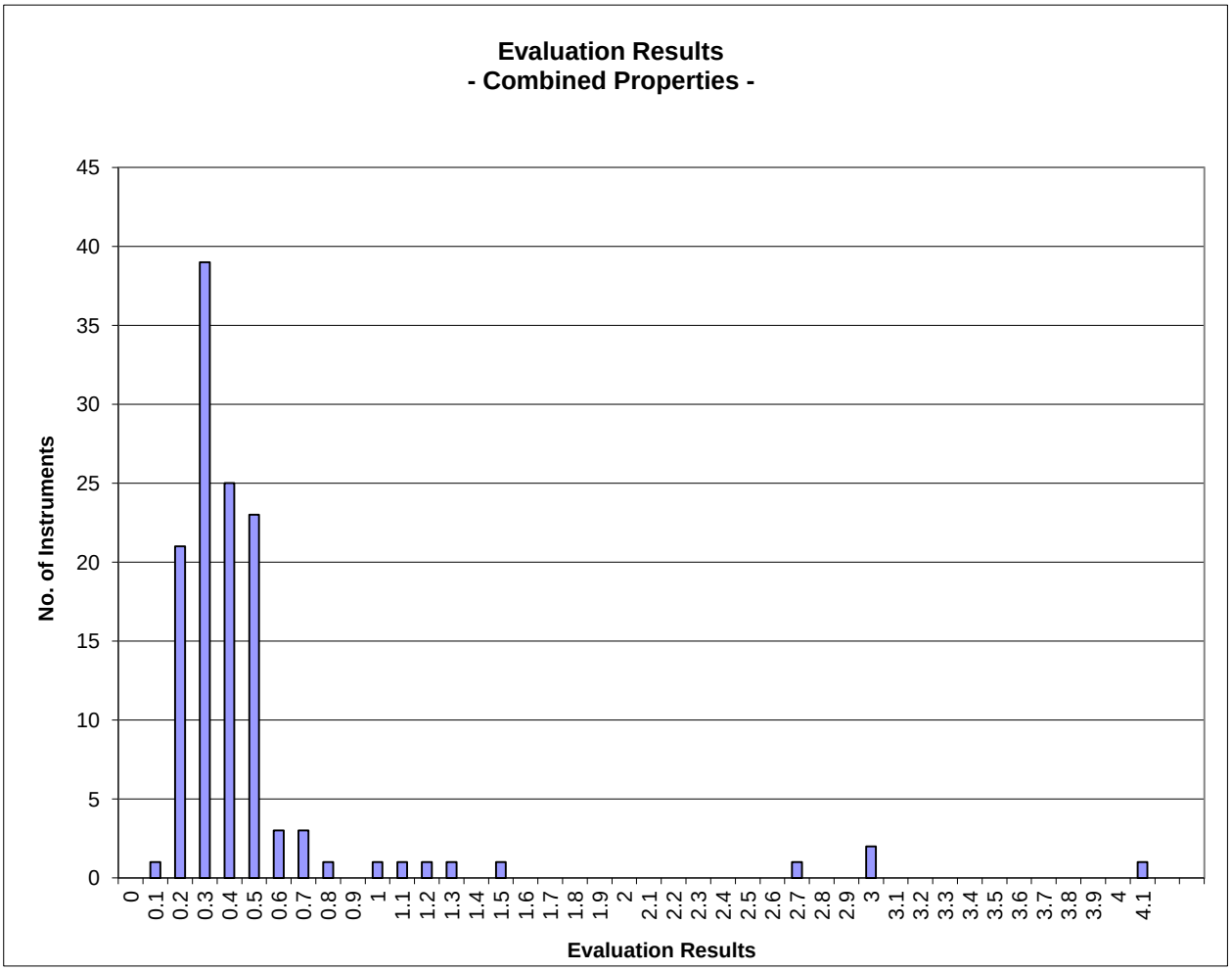
Instrument Evaluation

- Graph of Combined Properties -

According to ICAC CSITC Task Force Recommendations

Global - Round Trial 2018 - 1

		Evaluation Combined Prop.
Statistics	Average	0.49
	Median	0.35
	Best Instrument	0.14
	Worst Instrument	4.07



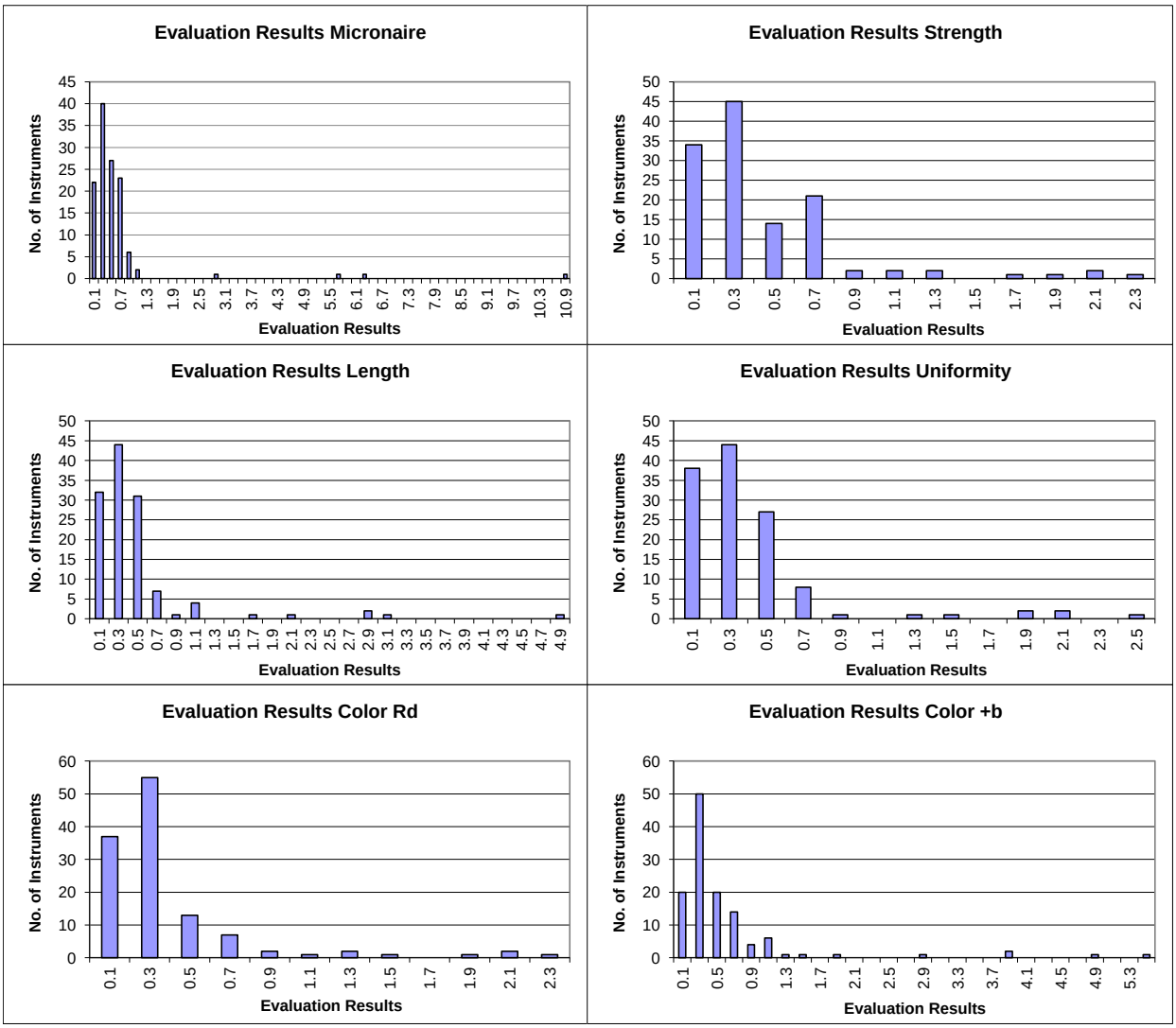
x-Axis shows midpoints of classes

The evaluation results are entered based on the unrounded values

(classes are defined as > lower limit and <= upper limit)

Instrument Evaluation
- Graph of Single Properties -
According to ICAC CSITC Task Force Recommendations
Global - Round Trial 2018 - 1

		Evaluation Micronaire	Evaluation Strength	Evaluation Length	Evaluation Uniformity	Evaluation Color Rd	Evaluation Color +b
Statistics	Average	0.62	0.44	0.48	0.41	0.37	0.60
	Median	0.40	0.28	0.34	0.31	0.27	0.35
	Best Instr.	0.06	0.04	0.07	0.06	0.05	0.08
	Worst Instr.	11.00	2.31	4.84	2.45	2.22	5.60



x-Axis shows midpoints of classes
The evaluation results are entered based on the unrounded values

International Cotton Advisory Committee

CSITC
Global - Round Trial 2018 - 1
General Evaluation

Section One: Result Distribution
Section Two: Instrument Evaluation
Section Three: Within Limits Evaluation

Section Three: Within Limits Evaluation

Content:

-Based on Average of 30 Test Results
-Based on Single Test Results

Executed By:
Faserinstitut Bremen e.V., Bremen, Germany*
USDA-AMS, Memphis, TN, USA

System Provided by:
Generation 10 Limited

This report is an outcome of the Project CFC/ICAC/33 – CSITC,
which benefitted from support from the Common Fund for Commodities
and the European Union, partners in Commodity Development.

** Faserinstitut Bremen are a Cooperation Partner with ICA Bremen*

Within Limits Evaluation

Based on average of 30 test results for each sample

	Micronaire	Strength	Length	Uniformity	Color Rd	Color +b
Limits	0.20	2.0	0.030	2.0	1.5	0.5
	units	g/tex	inch	%	units	units
Average % Results within Limits	97.2	94.9	95.4	98.2	93.8	88.5
Completely within limits	96.8	91.2	92.8	96.0	90.2	77.9
% of Instruments ≥75% within limits	96.8	94.4	95.2	96.0	92.6	88.5
% of Instruments ≥50% within limits	97.6	96.0	95.2	99.2	94.3	92.6

Percentage of Results Within Limits						
Instrument	**Micronaire**	**Strength**	**Length**	**Uniformity**	**Color Rd**	**Color +b**
GL181-001-03	100	100	100	100	100	100
GL181-001-06	100	100	100	100	100	100
GL181-002-01	100	100	100	100	100	100
GL181-003-02	100	100	100	100	100	100
GL181-003-06	100	100	100	100	0	75
GL181-003-07	100	100	100	100	100	100
GL181-003-08	100	100	100	100	100	100
GL181-004-01	100	100	100	100	100	100
GL181-004-02	100	100	100	100	100	100
GL181-004-03	100	100	100	100	100	100
GL181-004-04	100	100	100	100	100	100
GL181-005-06	100	75	100	100	100	75
GL181-008-01	100	100	100	100	50	100
GL181-009-01	100	100	100	100	100	100
GL181-009-02	100	100	100	100	100	100
GL181-009-03	100	100	100	100	100	100
GL181-009-04	100	100	100	100	100	75
GL181-011-02	100	100	100	100	100	100
GL181-011-03	100	100	100	100	100	100
GL181-012-53	100	100	100	100	100	100
GL181-012-60	100	100	100	100	100	100
GL181-014-01	100	100	100	100	100	100
GL181-016-04	100	100	100	100	100	75
GL181-016-05	100	100	100	100	100	75
GL181-016-06	100	100	100	100	100	100
GL181-018-05	100	100	100	100	75	25
GL181-018-06	100	100	100	100	100	50
GL181-019-01	100	100	100	100	100	75
GL181-019-02	100	100	100	100	100	100
GL181-020-01	100	100	100	100	100	100
GL181-022-01	100	100	100	100	100	100
GL181-022-03	100	100	100	100	100	100
GL181-023-01	100	100	100	100	100	100
GL181-023-02	100	100	100	100	100	100

GL181-024-01	100	100	100	100	100	100
GL181-026-01	0	0	33	67	0	0
GL181-026-02	0	0	33	67	33	0
GL181-026-03	0	33	33	67	33	0
GL181-028-01	100	100	100	100	100	100
GL181-028-02	100	100	100	100	100	100
GL181-029-01	100	100	100	100	100	100
GL181-031-01	100	100	100	100	100	100
GL181-031-02	100	100	100	100	100	100
GL181-033-01	100	100	75	25		
GL181-034-01	100	100	75	100	100	25
GL181-035-01	100	100	100	100	100	50
GL181-036-03	100	100	100	100	75	0
GL181-037-01	100	0	0	100	100	100
GL181-038-04	100	100	100	100	100	100
GL181-039-01	100	100	100	100	100	100
GL181-039-02	100	100	100	100	100	100
GL181-040-01	100	100	100	100	100	25
GL181-041-01	100	100	100	100	100	50
GL181-042-01	100	100	100	100	100	100
GL181-043-31	100	100	100	100	100	100
GL181-043-33	100	100	100	100	100	100
GL181-044-21	100	100	100	100	100	100
GL181-044-25	100	100	100	100	100	100
GL181-045-01	100	100	100	100	100	100
GL181-047-01	100	100	100	100	100	100
GL181-048-19	100	100	100	100	100	100
GL181-049-01	100	100	100	100	100	100
GL181-050-02	100	100	100	100	100	100
GL181-050-03	100	100	100	100	100	75
GL181-050-07	100	100	100	100	50	100
GL181-050-08	100	100	100	100	100	100
GL181-051-01	100	100	100	100	100	75
GL181-052-41	100	100	100	100	100	100
GL181-052-42	100	100	100	100	100	100
GL181-053-01	100	100	100	100	100	100
GL181-056-01	100	100	100	100	100	100
GL181-057-02	100	100	100	100		
GL181-057-03	100	100	100	100	100	100
GL181-058-02	100	100	100	100	100	100
GL181-059-01	100	75	100	100	100	75
GL181-059-02	100	75	100	100	100	75
GL181-061-03	100	100	100	100	100	50
GL181-061-04	100	100	100	100	100	75
GL181-061-05	100	100	100	100	100	75
GL181-062-01	100	100	100	100	100	100
GL181-064-01	100	100	100	100	100	100
GL181-064-02	100	100	100	100	100	100
GL181-066-04	50	50	0	50	25	0
GL181-067-15		100	100	100		
GL181-068-01	100	100	100	100	100	100
GL181-069-02	100	75	100	100	25	0
GL181-070-08	100	100	100	100	100	100
GL181-070-09	100	100	100	100	100	100
GL181-071-01	100	100	100	100	100	100

GL181-071-02	100	100	100	100	100	100
GL181-071-06	100	100	100	100	100	100
GL181-072-01	100	50	100	100	0	100
GL181-073-03	100	100	100	100	100	100
GL181-074-01	100	100	100	100	100	100
GL181-074-02	100	100	100	100	100	100
GL181-074-04	100	100	100	100	100	100
GL181-075-01	100	100	0	100	100	100
GL181-076-01	100	100	100	100	100	100
GL181-078-32	100	100	100	100	100	100
GL181-078-33	100	100	100	100	100	100
GL181-079-01	100	100	100	100	100	100
GL181-079-02	100	100	100	100	100	100
GL181-080-05	100	100	75	100	100	100
GL181-080-12	100	100	100	100	100	100
GL181-081-01	100	100	100	100	100	100
GL181-082-03	100	100	100	100	100	100
GL181-083-01	100	100	100	100	100	100
GL181-084-21	100	100	100	100	100	100
GL181-084-22	100	100	100	100	100	100
GL181-085-01	100	100	100	100	100	100
GL181-085-02	100	100	100	100	100	75
GL181-086-01	100	100	100	100	100	100
GL181-086-02	100	100	100	100	100	100
GL181-087-02	100	100	100	100	100	100
GL181-088-01	100	100	100	100	100	100
GL181-088-02	100	100	100	100	100	100
GL181-089-01	100	100	100	100	100	100
GL181-089-02	100	100	100	100	100	100
GL181-090-01	100	100	100	100	100	50
GL181-091-03	100	100	100	100	100	100
GL181-091-06	100	100	100	100	100	100
GL181-092-01	100	100	100	100	100	100
GL181-092-03	100	100	100	100	100	100
GL181-093-01	100	25	100	100	75	100
GL181-094-03	100	100	100	100	100	100

Within Limits Evaluation

Based on Single Test Results

	Micronaire	Strength	Length	Uniformity	Color Rd	Color +b
Limits	0.20	2.0	0.030	2.0	1.5	0.5
	units	g/tex	inch	%	units	units
Average % Results within Limits	95.8	90.9	93.4	96.3	92.2	84.0
% of Instruments 100% within limits	60.5	36.8	33.6	50.4	60.7	31.1
% of Instruments ≥95% within limits	88.7	64.0	76.8	86.4	79.5	44.3
% of Instruments ≥75% within limits	96.0	90.4	93.6	96.0	91.0	80.3
% of Instruments ≥65% within limits	96.0	93.6	95.2	97.6	91.8	84.4
% of Instruments ≥50% within limits	96.8	96.0	96.0	98.4	93.4	91.0

Percentage of Results Within Limits						
Instrument	**Micronaire**	**Strength**	**Length**	**Uniformity**	**Color Rd**	**Color +b**
GL181-001-03	100	100	100	100	100	100
GL181-001-06	100	100	100	100	100	100
GL181-002-01	98	90	98	100	100	99
GL181-003-02	100	100	99	100	88	93
GL181-003-06	98	95	94	97	13	77
GL181-003-07	92	94	83	95	81	83
GL181-003-08	100	82	98	98	99	79
GL181-004-01	100	98	100	100	100	100
GL181-004-02	100	100	100	100	100	100
GL181-004-03	100	100	100	100	100	88
GL181-004-04	99	99	100	100	100	83
GL181-005-06	86	74	96	99	98	70
GL181-008-01	98	92	95	95	40	84
GL181-009-01	99	100	99	100	100	100
GL181-009-02	100	100	100	100	100	100
GL181-009-03	100	100	100	100	100	100
GL181-009-04	100	100	93	100	100	79
GL181-011-02	99	85	100	100	100	90
GL181-011-03	100	99	99	99	100	94
GL181-012-53	100	97	89	85	100	100
GL181-012-60	100	99	100	100	100	100
GL181-014-01	97	91	99	99	100	98
GL181-016-04	100	100	90	100	100	56
GL181-016-05	100	99	93	100	100	72
GL181-016-06	100	100	93	98	100	83
GL181-018-05	98	98	99	93	68	27
GL181-018-06	94	96	99	98	100	53
GL181-019-01	100	98	98	100	77	57
GL181-019-02	100	100	100	100	100	99
GL181-020-01	100	98	98	98	100	100

GL181-022-01	98	100	100	100	100	100
GL181-022-03	98	100	100	100	100	100
GL181-023-01	98	93	100	100	100	88
GL181-023-02	99	88	95	100	100	93
GL181-024-01	99	82	99	95	100	90
GL181-026-01	0	16	32	62	22	0
GL181-026-02	12	19	42	66	37	9
GL181-026-03	7	22	39	67	28	7
GL181-028-01	100	100	100	100	100	100
GL181-028-02	100	100	100	100	100	100
GL181-029-01	100	100	98	100	99	93
GL181-031-01	98	87	93	98	98	82
GL181-031-02	98	87	93	98	98	82
GL181-033-01	100	98	83	35		
GL181-034-01	100	91	78	100	78	51
GL181-035-01	100	99	100	100	98	45
GL181-036-03	63	87	100	100	59	10
GL181-037-01	100	10	18	82	100	95
GL181-038-04	98	98	91	94	100	95
GL181-039-01	100	99	96	100	100	100
GL181-039-02	100	100	98	100	99	99
GL181-040-01	100	100	96	100	88	30
GL181-041-01	95	80	98	100	99	39
GL181-042-01	100	100	100	100	100	94
GL181-043-31	100	98	97	91	100	93
GL181-043-33	100	100	96	98	100	94
GL181-044-21	100	98	100	99	100	100
GL181-044-25	100	100	99	96	100	100
GL181-045-01	99	98	98	100	99	92
GL181-047-01	100	98	96	99	87	77
GL181-048-19	100	99	98	100	98	100
GL181-049-01	98	88	98	98	100	95
GL181-050-02	98	93	99	99	100	98
GL181-050-03	91	82	83	84	89	85
GL181-050-07	98	93	96	98	63	94
GL181-050-08	99	98	96	97	100	100
GL181-051-01	95	81	92	98	100	70
GL181-052-41	93	93	99	97	100	100
GL181-052-42	98	91	99	100	100	100
GL181-053-01	100	99	100	100	100	98
GL181-056-01	100	88	100	99	100	98
GL181-057-02	100	81	99	99		
GL181-057-03	100	100	99	100	100	98
GL181-058-02	100	100	96	100	99	84
GL181-059-01	87	74	88	96	94	66
GL181-059-02	88	76	92	98	97	66
GL181-061-03	98	100	100	100	100	53
GL181-061-04	97	100	96	98	100	38
GL181-061-05	100	99	99	98	98	53
GL181-062-01	100	96	100	99	100	100
GL181-064-01	100	98	94	100	100	95
GL181-064-02	100	99	98	98	100	90
GL181-066-04	48	56	0	43	26	12
GL181-067-15		64	73	83		
GL181-068-01	100	100	100	100	100	100

GL181-069-02	99	86	83	88	23	13
GL181-070-08	100	80	100	100	100	97
GL181-070-09	100	89	100	99	100	93
GL181-071-01	100	100	100	100	100	100
GL181-071-02	100	100	100	100	100	100
GL181-071-06	100	100	100	100	100	100
GL181-072-01	91	56	71	85	18	93
GL181-073-03	99	95	98	98	100	100
GL181-074-01	100	86	100	100	90	77
GL181-074-02	99	66	93	100	98	100
GL181-074-04	100	99	99	100	100	100
GL181-075-01	96	74	55	97	90	100
GL181-076-01	100	100	100	100	100	99
GL181-078-32	100	100	99	98	100	100
GL181-078-33	100	100	98	97	100	100
GL181-079-01	100	100	100	99	100	100
GL181-079-02	100	100	100	99	100	100
GL181-080-05	100	99	78	100	99	89
GL181-080-12	100	100	98	100	98	93
GL181-081-01	100	100	100	100	100	94
GL181-082-03	98	96	100	98	98	97
GL181-083-01	100	89	98	99	100	97
GL181-084-21	100	100	100	89	100	100
GL181-084-22	100	90	99	98	100	100
GL181-085-01	100	100	98	100	93	82
GL181-085-02	88	86	99	100	77	64
GL181-086-01	100	100	98	100	100	87
GL181-086-02	100	100	100	100	96	91
GL181-087-02	100	100	98	100	98	93
GL181-088-01	100	100	99	100	98	93
GL181-088-02	100	100	100	100	100	94
GL181-089-01	99	98	97	100	99	87
GL181-089-02	99	98	98	98	99	91
GL181-090-01	99	83	100	98	88	51
GL181-091-03	100	100	100	100	100	100
GL181-091-06	100	100	100	100	100	100
GL181-092-01	100	93	99	99	100	92
GL181-092-03	100	98	98	99	100	92
GL181-093-01	100	24	83	91	75	92
GL181-094-03	99	98	99	92	97	89