International Cotton Advisory Committee

CSITC
Global - Round Trial 2017 - 3
General Evaluation

Section One: Result Distribution
Section Two: Instrument Evaluation
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Section One: Result Distribution

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Optional Parameters
- -Summary Table
- -Distribution Graphs

Executed By:
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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 2017 - 3

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

Micronaire							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			4.232	5.098	5.064	4.231	
Reference Values for Evaluation			4.232	5.098	5.064	4.231	
Number Of Instruments			154	154	154	154	**154**
Inter-Instrument Variation	based on 30 tests	SD	0.058	0.047	0.043	0.069	**0.054**
		CV %	1.4	0.9	0.8	1.6	**1.2**
	based on 6 tests	SD	0.063	0.054	0.049	0.073	**0.060**
		CV %	1.5	1.1	1.0	1.7	**1.3**
	based on single tests	SD	0.069	0.065	0.062	0.084	**0.070**
		CV %	1.6	1.3	1.2	2.0	**1.5**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.020	0.028	0.024	0.023	**0.024**
		CV %	0.5	0.5	0.5	0.6	**0.5**
	between single tests on one day	SD	0.035	0.037	0.033	0.037	**0.035**
		CV %	0.8	0.7	0.7	0.9	**0.8**
	between all tests on different days	SD	0.042	0.045	0.042	0.044	**0.043**
		CV %	1.0	0.9	0.8	1.0	**0.9**

Strength							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			33.594	25.806	29.541	22.679	
Reference Values for Evaluation			33.594	25.806	29.541	22.679	
Number Of Instruments			155	155	155	155	**155**
Inter-Instrument Variation	based on 30 tests	SD	0.707	0.624	0.764	0.709	**0.701**
		CV %	2.1	2.4	2.6	3.1	**2.6**
	based on 6 tests	SD	0.778	0.692	0.844	0.741	**0.764**
		CV %	2.3	2.7	2.9	3.3	**2.8**
	based on single tests	SD	0.976	0.830	0.976	0.887	**0.918**
		CV %	2.9	3.2	3.3	3.9	**3.3**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.305	0.244	0.273	0.270	**0.273**
		CV %	0.9	0.9	0.9	1.2	**1.0**
	between single tests on one day	SD	0.566	0.472	0.514	0.480	**0.508**
		CV %	1.7	1.8	1.7	2.1	**1.8**
	between all tests on different days	SD	0.620	0.526	0.578	0.560	**0.571**
		CV %	1.8	2.0	2.0	2.5	**2.1**

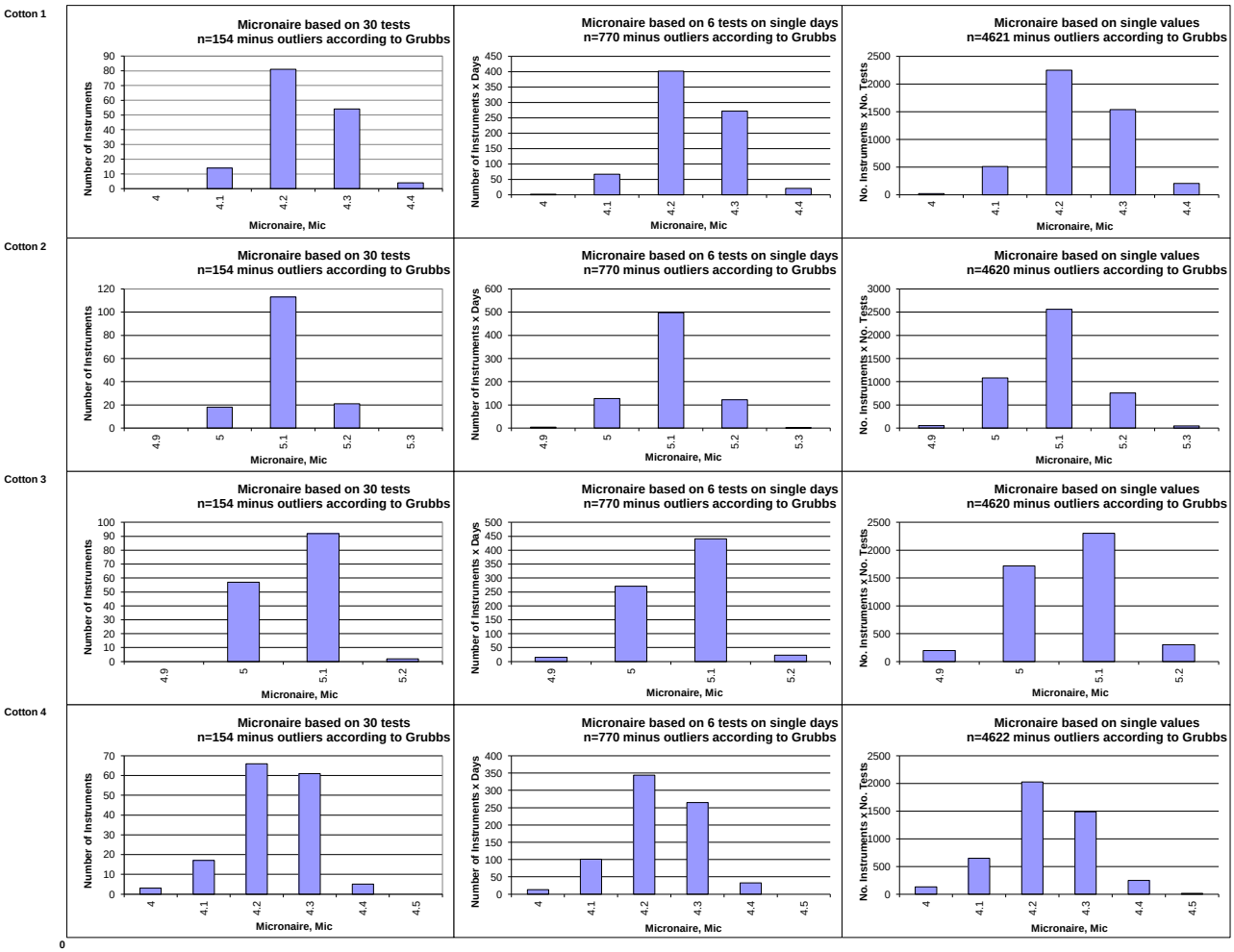
Length							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			1.2174	1.0271	1.0773	0.9523	
Reference Values for Evaluation			1.2174	1.0271	1.0773	0.9523	
Number Of Instruments			155	155	155	155	**155**
Inter-Instrument Variation	based on 30 tests	SD	0.0102	0.0102	0.0100	0.0135	**0.0110**
		CV %	0.8	1.0	0.9	1.4	**1.0**
	based on 6 tests	SD	0.0113	0.0111	0.0110	0.0145	**0.0120**
		CV %	0.9	1.1	1.0	1.5	**1.1**
	based on single tests	SD	0.0154	0.0155	0.0145	0.0178	**0.0158**
		CV %	1.3	1.5	1.3	1.9	**1.5**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.0054	0.0054	0.0044	0.0054	**0.0051**
		CV %	0.4	0.5	0.4	0.6	**0.5**
	between single tests on one day	SD	0.0099	0.0097	0.0094	0.0109	**0.0100**
		CV %	0.8	0.9	0.9	1.1	**0.9**
	between all tests on different days	SD	0.0112	0.0109	0.0104	0.0116	**0.0110**
		CV %	0.9	1.1	1.0	1.2	**1.0**

Uniformity							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			84.885	79.870	83.261	76.944	
Reference Values for Evaluation			84.885	79.870	83.261	76.944	
Number Of Instruments			155	155	155	155	**155**
Inter-Instrument Variation	based on 30 tests	SD	0.342	0.445	0.546	0.554	**0.472**
		CV %	0.4	0.6	0.7	0.7	**0.6**
	based on 6 tests	SD	0.437	0.533	0.605	0.643	**0.554**
		CV %	0.5	0.7	0.7	0.8	**0.7**
	based on single tests	SD	0.640	0.733	0.751	0.813	**0.734**
		CV %	0.8	0.9	0.9	1.1	**0.9**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.213	0.270	0.230	0.276	**0.247**
		CV %	0.3	0.3	0.3	0.4	**0.3**
	between single tests on one day	SD	0.460	0.535	0.467	0.547	**0.502**
		CV %	0.5	0.7	0.6	0.7	**0.6**
	between all tests on different days	SD	0.504	0.605	0.522	0.614	**0.561**
		CV %	0.6	0.8	0.6	0.8	**0.7**

Color Rd							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			77.493	74.114	74.148	78.365	
Reference Values for Evaluation			77.493	74.114	74.148	78.365	
Number Of Instruments			152	152	152	152	**152**
Inter-Instrument Variation	based on 30 tests	SD	0.523	0.584	0.764	0.634	**0.626**
		CV %	0.7	0.8	1.0	0.8	**0.8**
	based on 6 tests	SD	0.570	0.593	0.769	0.671	**0.651**
		CV %	0.7	0.8	1.0	0.9	**0.9**
	based on single tests	SD	0.623	0.639	0.755	0.676	**0.673**
		CV %	0.8	0.9	1.0	0.9	**0.9**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.148	0.149	0.158	0.157	**0.153**
		CV %	0.2	0.2	0.2	0.2	**0.2**
	between single tests on one day	SD	0.202	0.194	0.190	0.158	**0.186**
		CV %	0.3	0.3	0.3	0.2	**0.2**
	between all tests on different days	SD	0.258	0.248	0.267	0.251	**0.256**
		CV %	0.3	0.3	0.4	0.3	**0.3**

Color +b							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			12.861	8.294	10.897	9.001	
Reference Values for Evaluation			12.861	8.294	10.897	9.001	
Number Of Instruments			152	152	152	152	**152**
Inter-Instrument Variation	based on 30 tests	SD	0.332	0.194	0.251	0.232	**0.252**
		CV %	2.6	2.3	2.3	2.6	**2.5**
	based on 6 tests	SD	0.356	0.213	0.264	0.251	**0.271**
		CV %	2.8	2.6	2.4	2.8	**2.6**
	based on single tests	SD	0.404	0.244	0.301	0.273	**0.306**
		CV %	3.1	2.9	2.8	3.0	**3.0**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.107	0.072	0.088	0.082	**0.087**
		CV %	0.8	0.9	0.8	0.9	**0.9**
	between single tests on one day	SD	0.113	0.084	0.087	0.077	**0.090**
		CV %	0.9	1.0	0.8	0.9	**0.9**
	between all tests on different days	SD	0.172	0.119	0.133	0.117	**0.135**
		CV %	1.3	1.4	1.2	1.3	**1.3**

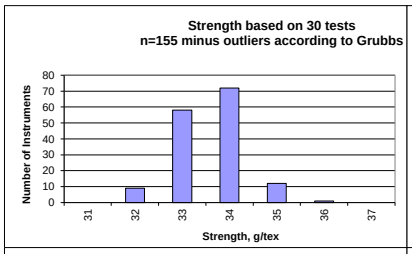
Test Result Distributions
Micronaire

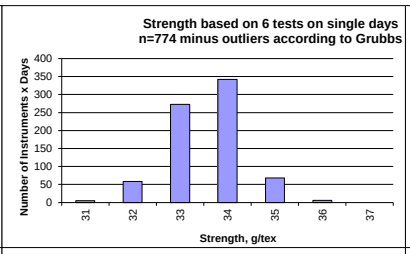


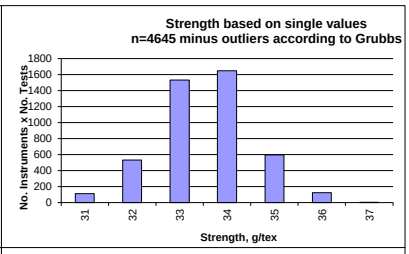
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method.)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Strength

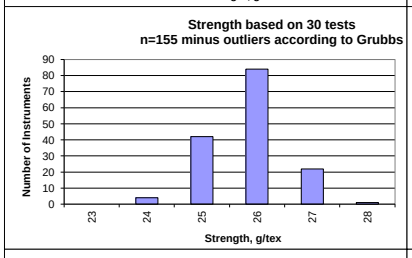
Cotton 1

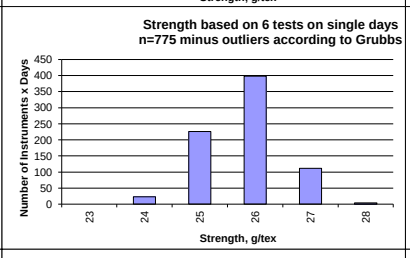


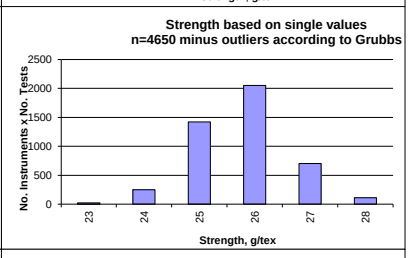




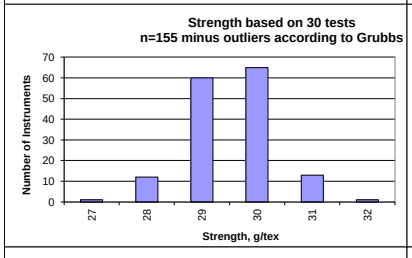
Cotton 2

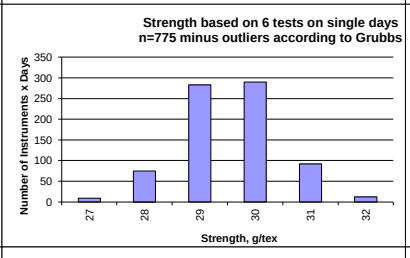


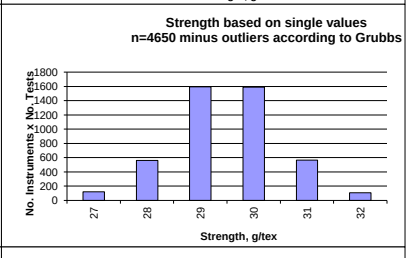




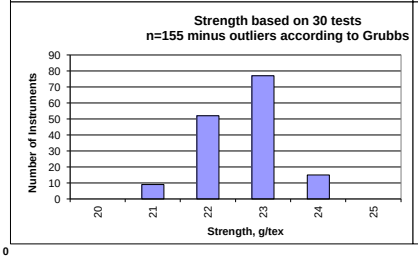
Cotton 3

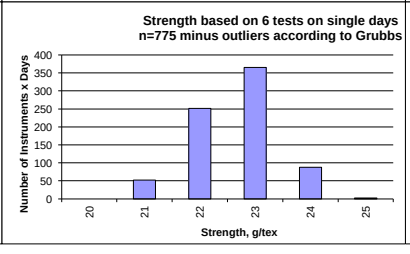


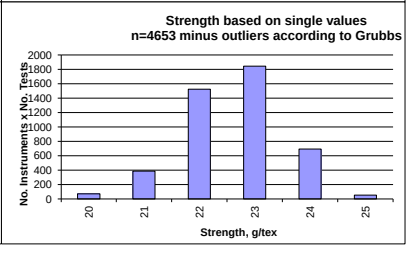




Cotton 4







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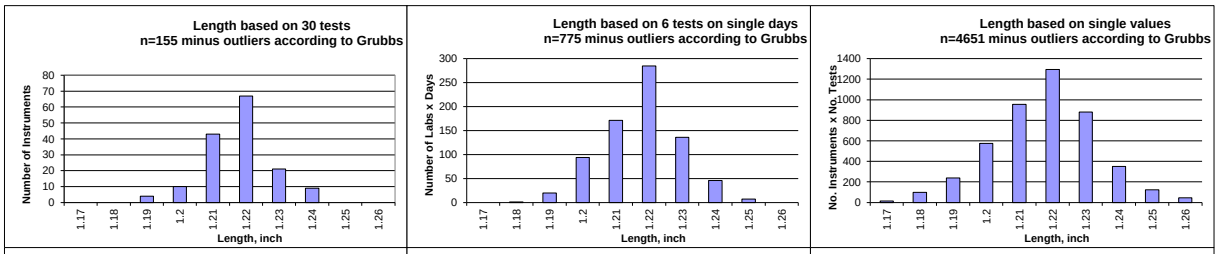
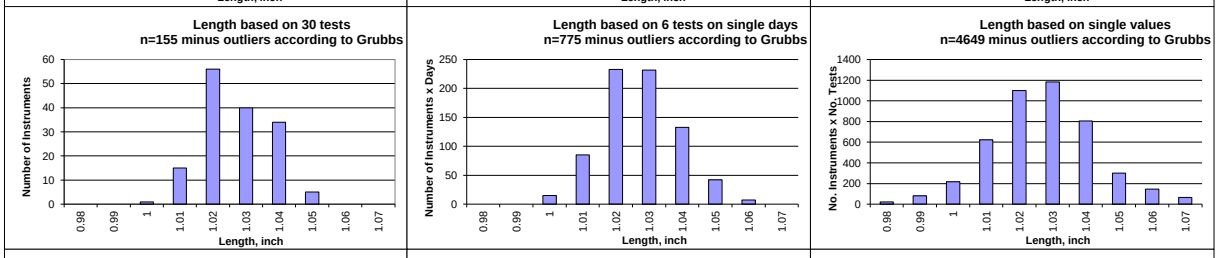
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Length

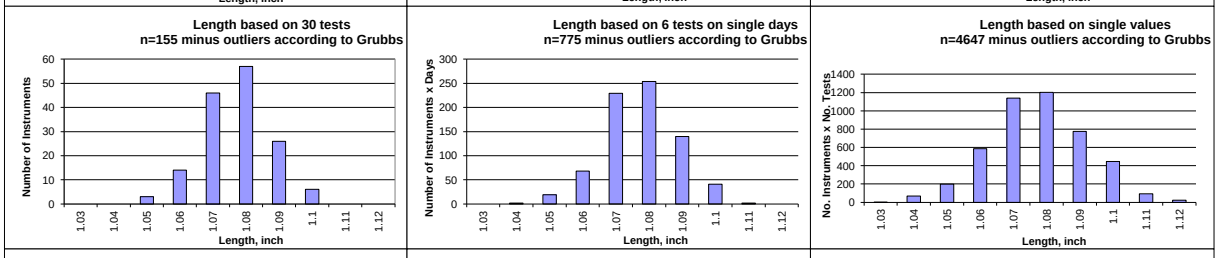
Cotton 1



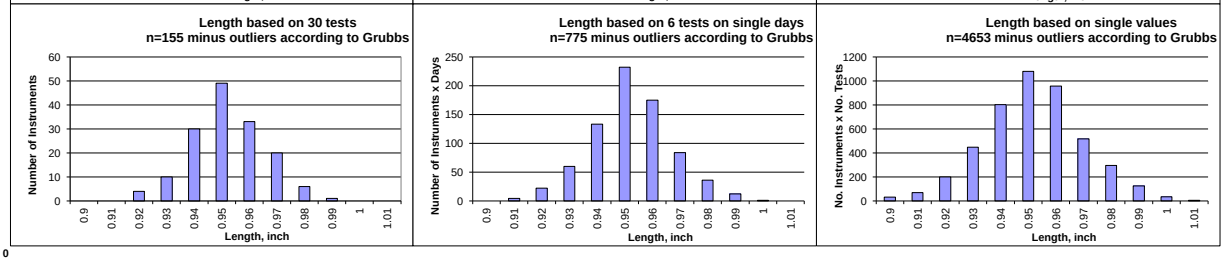
Cotton 2



Cotton 3



Cotton 4



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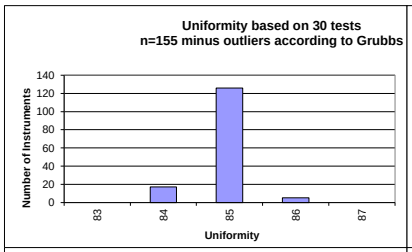
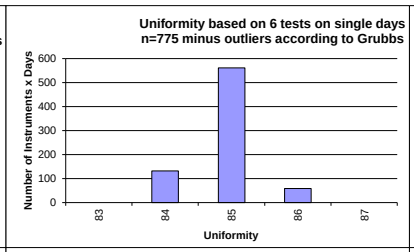
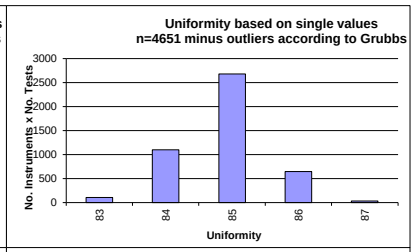
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Uniformity

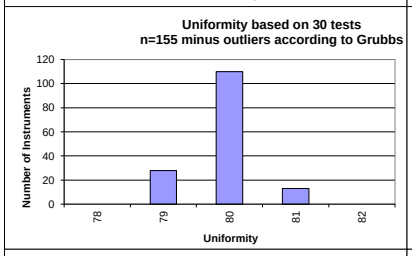
Cotton 1

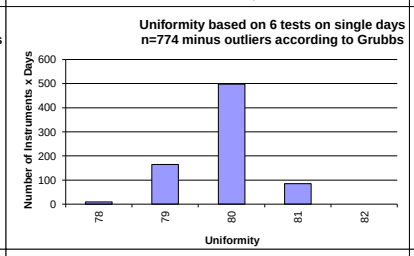


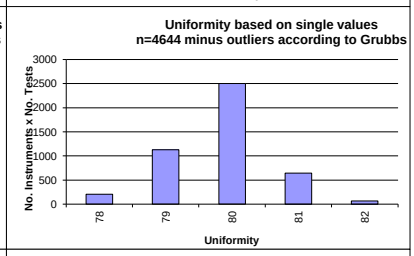




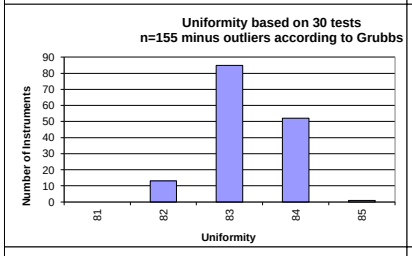
Cotton 2

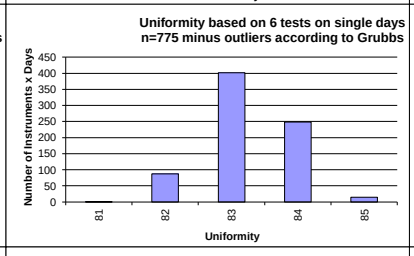


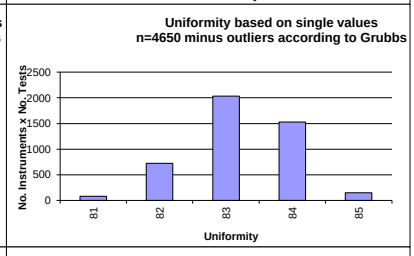




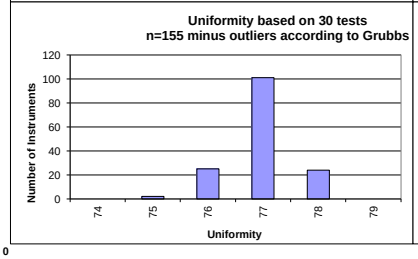
Cotton 3

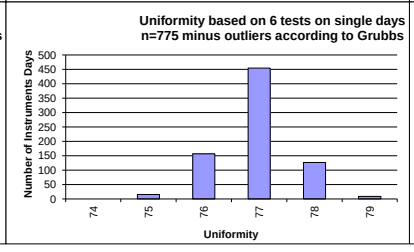


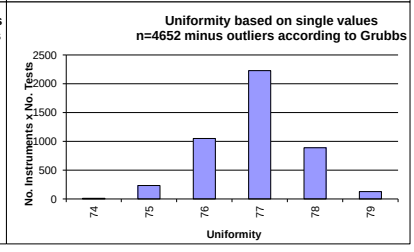




Cotton 4







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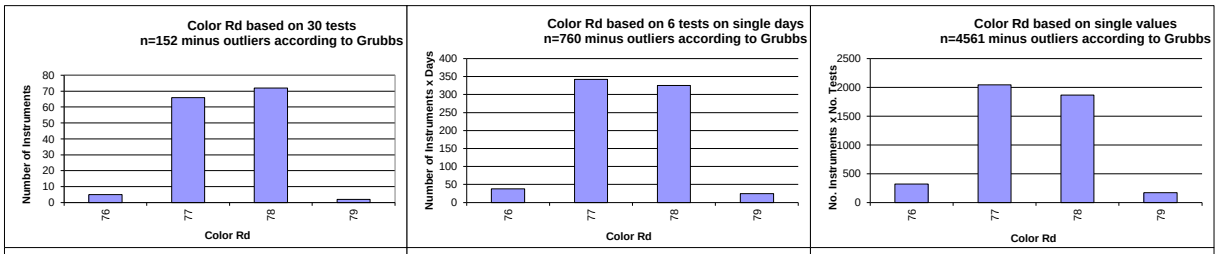
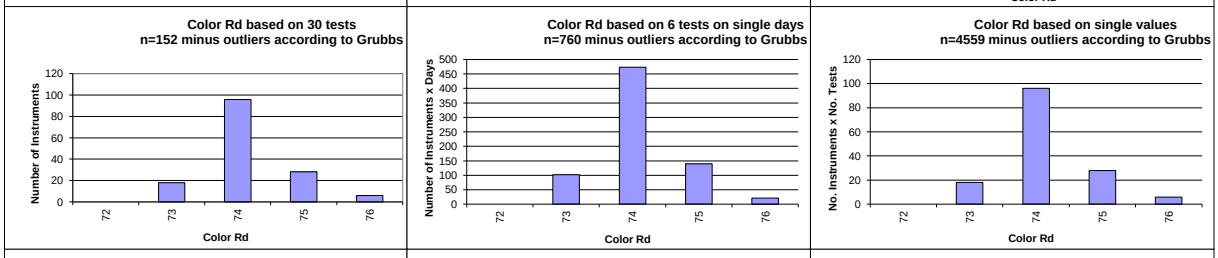
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Color Rd

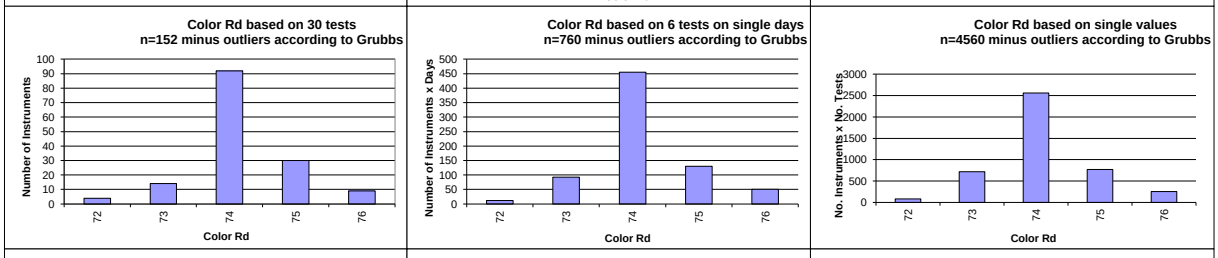
Cotton 1



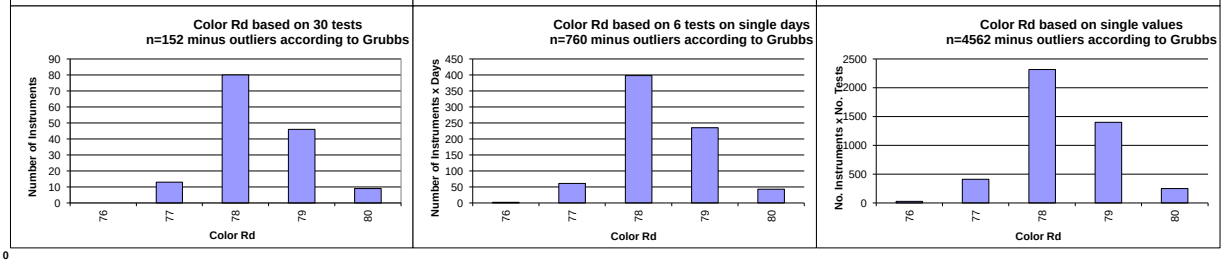
Cotton 2



Cotton 3



Cotton 4



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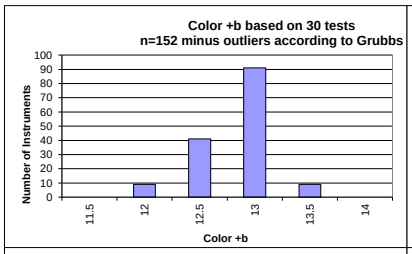
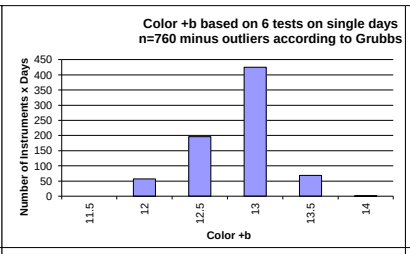
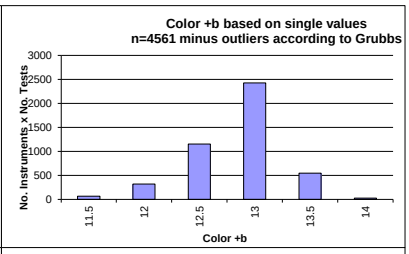
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Color +b

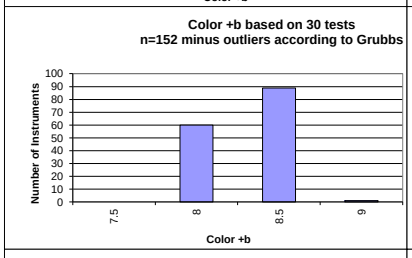
Cotton 1

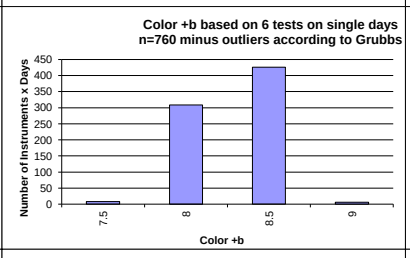


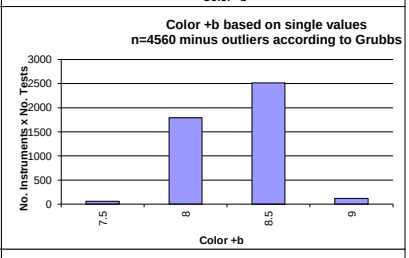




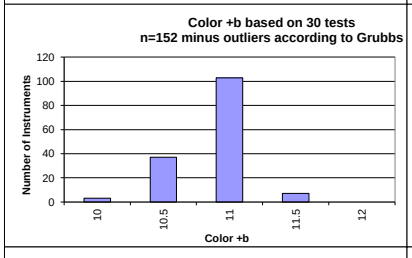
Cotton 2

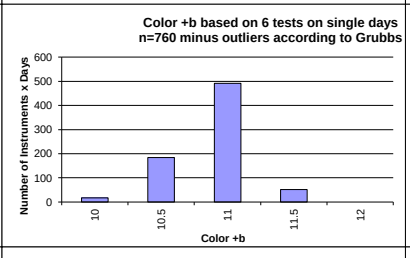


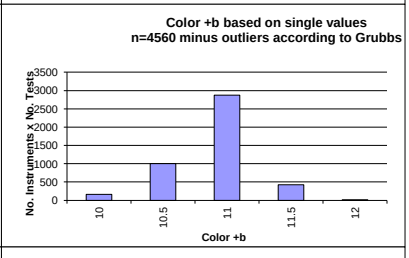




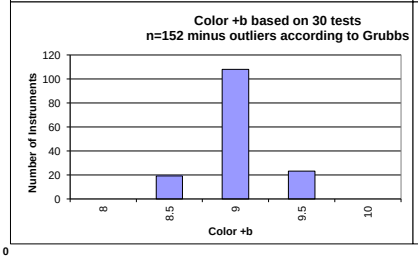
Cotton 3

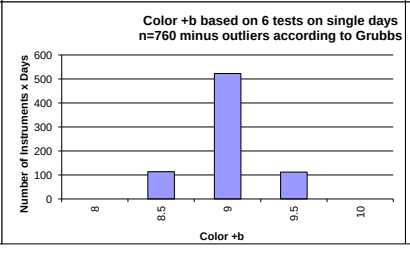


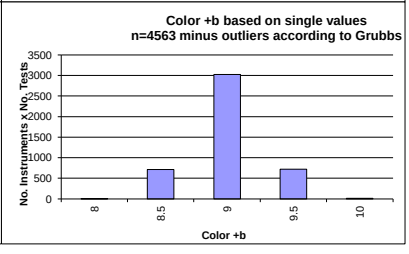




Cotton 4







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(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)			18.52	16.98	15.22	28.82	
Reference Values for Evaluation			18.52	16.98	15.22	28.82	
Number Of Instruments			102	102	102	102	**102**
Inter-Instrument Variation	based on 30 tests	SD	5.89	4.36	4.96	8.93	**6.04**
		CV %	31.8	25.7	32.6	31.0	**30.3**
	based on 6 tests	SD	6.09	5.02	5.38	9.29	**6.44**
		CV %	32.9	29.5	35.3	32.2	**32.5**
	based on single tests	SD	6.67	5.61	5.89	9.79	**6.99**
		CV %	36.0	33.0	38.7	34.0	**35.4**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	1.77	1.61	1.46	2.32	**1.79**
		CV %	9.6	9.5	9.6	8.1	**9.2**
	between single tests on one day	SD	2.58	2.41	1.94	2.82	**2.44**
		CV %	13.9	14.2	12.7	9.8	**12.7**
	between all tests on different days	SD	3.35	3.00	2.53	3.82	**3.18**
		CV %	18.1	17.7	16.6	13.2	**16.4**

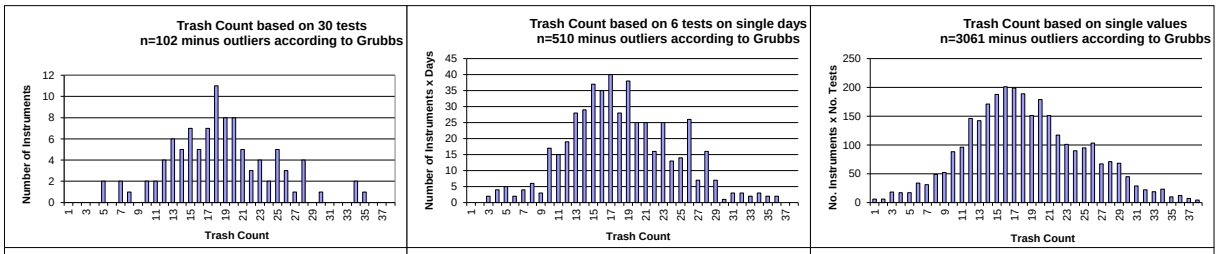
Trash Area							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			0.227	0.190	0.152	0.228	
Reference Values for Evaluation			0.227	0.190	0.152	0.228	
Number Of Instruments			102	102	102	102	**102**
Inter-Instrument Variation	based on 30 tests	SD	0.059	0.052	0.046	0.067	**0.056**
		CV %	26.1	27.3	30.4	29.2	**28.3**
	based on 6 tests	SD	0.068	0.054	0.046	0.065	**0.058**
		CV %	30.0	28.3	30.4	28.3	**29.3**
	based on single tests	SD	0.088	0.062	0.054	0.070	**0.069**
		CV %	38.7	32.9	35.5	30.5	**34.4**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.032	0.025	0.018	0.021	**0.024**
		CV %	13.9	13.2	11.7	9.2	**12.0**
	between single tests on one day	SD	0.043	0.033	0.021	0.027	**0.031**
		CV %	19.0	17.3	14.0	11.9	**15.6**
	between all tests on different days	SD	0.055	0.045	0.033	0.035	**0.042**
		CV %	24.4	23.9	21.9	15.3	**21.4**

Maturity							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			85.26	88.30	87.25	85.53	
Reference Values for Evaluation			85.26	88.30	87.25	85.53	
Number Of Instruments			107	107	107	107	**107**
Inter-Instrument Variation	based on 30 tests	SD	1.64	1.08	1.04	1.05	**1.20**
		CV %	1.9	1.2	1.2	1.2	**1.4**
	based on 6 tests	SD	1.62	1.06	1.05	1.07	**1.20**
		CV %	1.9	1.2	1.2	1.2	**1.4**
	based on single tests	SD	1.58	1.13	1.22	1.72	**1.41**
		CV %	1.9	1.3	1.4	2.0	**1.6**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.14	0.15	0.15	0.14	**0.14**
		CV %	0.2	0.2	0.2	0.2	**0.2**
	between single tests on one day	SD	0.21	0.27	0.27	0.27	**0.25**
		CV %	0.2	0.3	0.3	0.3	**0.3**
	between all tests on different days	SD	0.34	0.38	0.41	0.38	**0.38**
		CV %	0.4	0.4	0.5	0.4	**0.4**

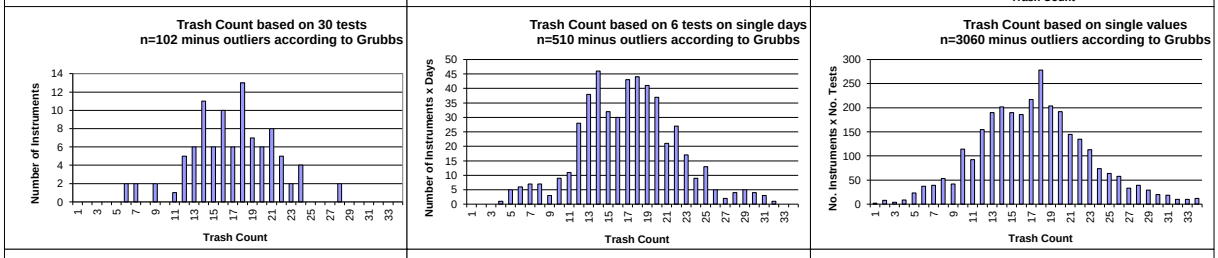
SFI							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			6.58	12.22	8.00	17.38	
Reference Values for Evaluation			6.58	12.22	8.00	17.38	
Number Of Instruments			114	114	114	114	**114**
Inter-Instrument Variation	based on 30 tests	SD	0.80	0.97	1.11	2.01	**1.22**
		CV %	12.2	8.0	13.9	11.6	**11.4**
	based on 6 tests	SD	0.82	1.05	1.13	2.04	**1.26**
		CV %	12.4	8.6	14.1	11.7	**11.7**
	based on single tests	SD	0.84	1.24	1.19	2.19	**1.36**
		CV %	12.8	10.1	14.8	12.6	**12.6**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.13	0.35	0.24	0.46	**0.29**
		CV %	2.0	2.8	3.1	2.6	**2.6**
	between single tests on one day	SD	0.26	0.61	0.43	0.79	**0.52**
		CV %	3.9	5.0	5.3	4.6	**4.7**
	between all tests on different days	SD	0.31	0.70	0.49	0.93	**0.61**
		CV %	4.7	5.7	6.1	5.3	**5.5**

Test Result Distributions
Trash Count

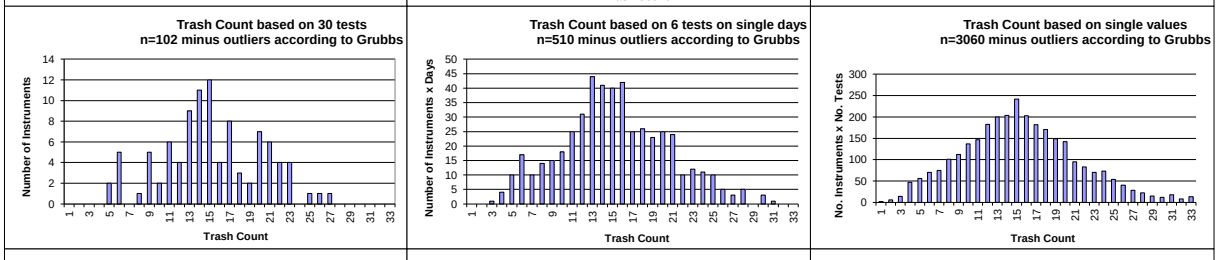
Cotton 1



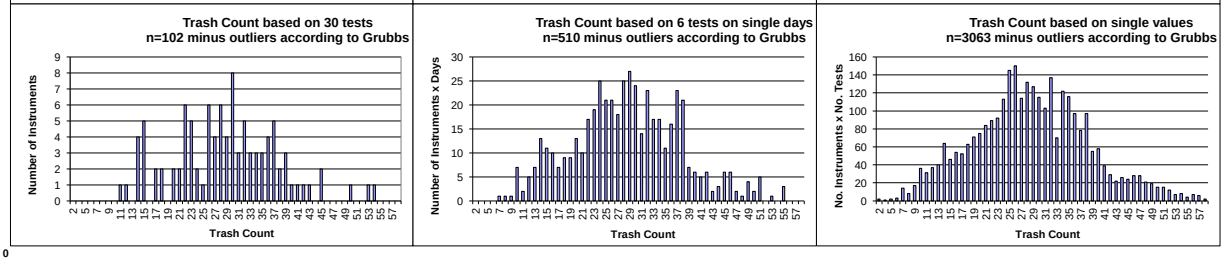
Cotton 2



Cotton 3



Cotton 4



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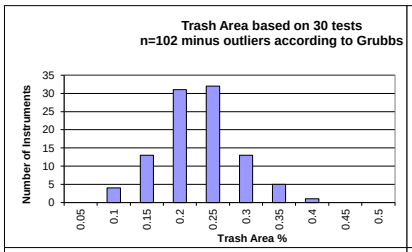
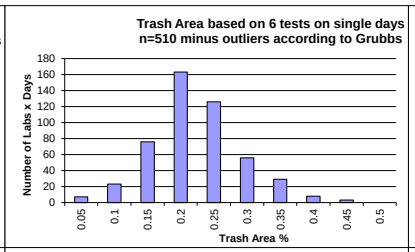
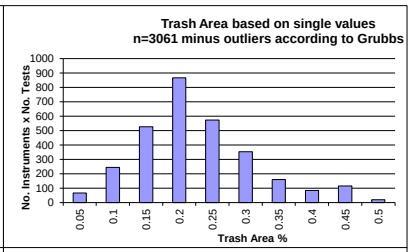
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Trash Area

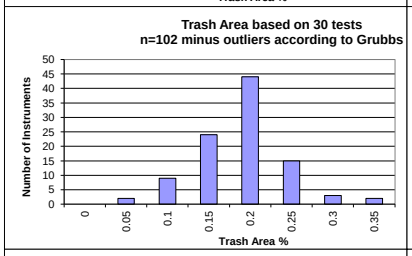
Cotton 1

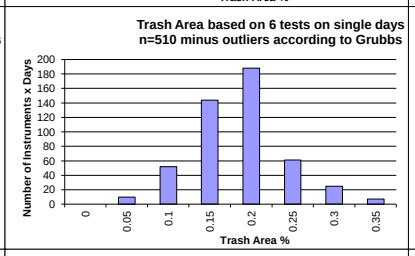


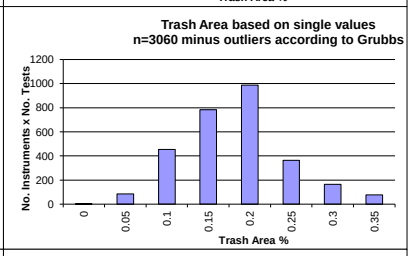




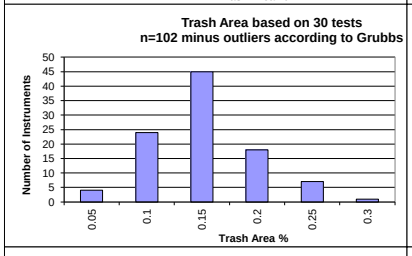
Cotton 2

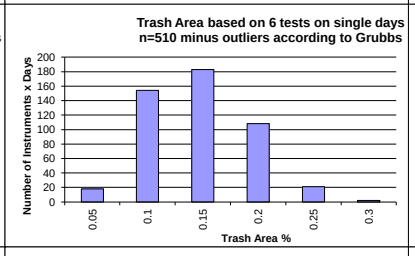


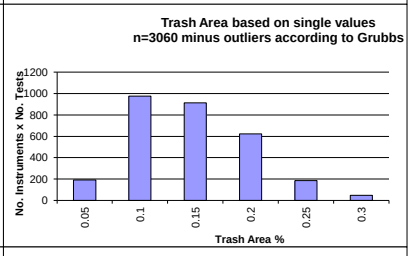




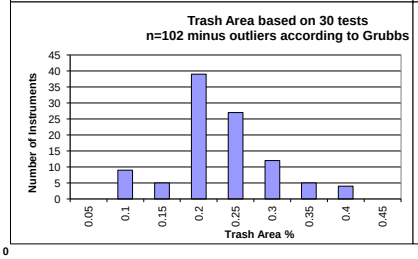
Cotton 3

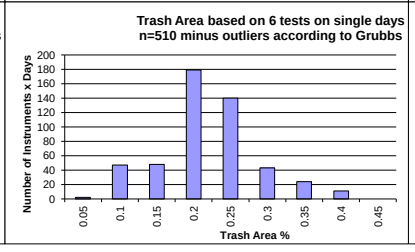


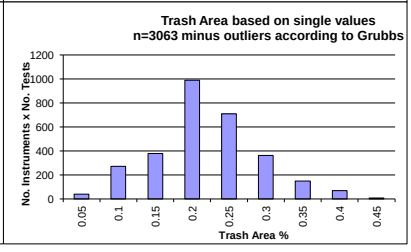




Cotton 4







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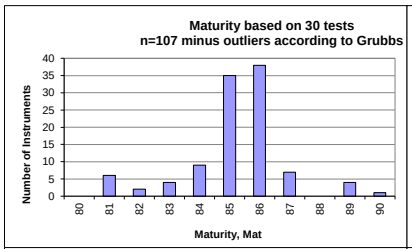
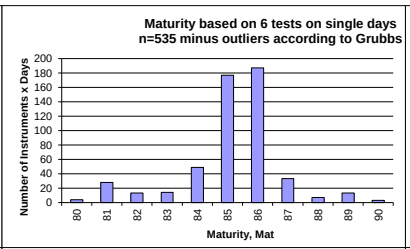
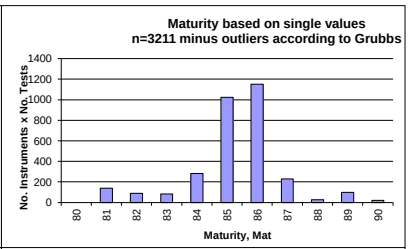
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Maturity

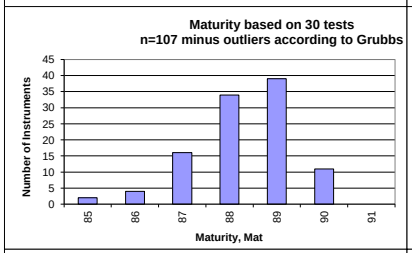
Cotton 1

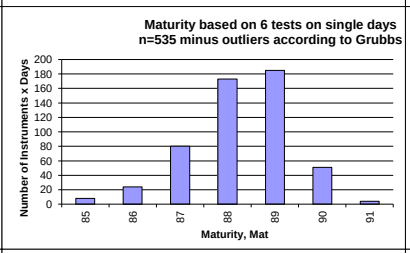


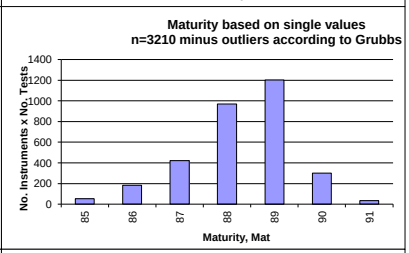




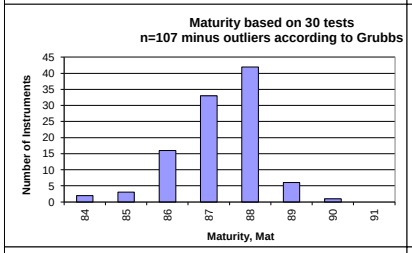
Cotton 2

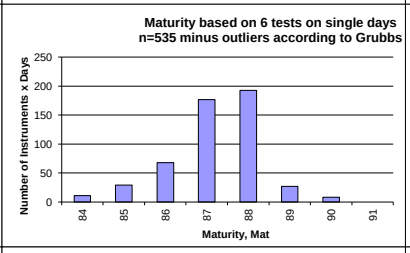


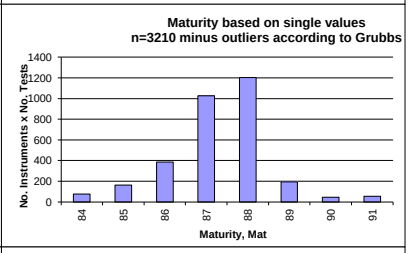




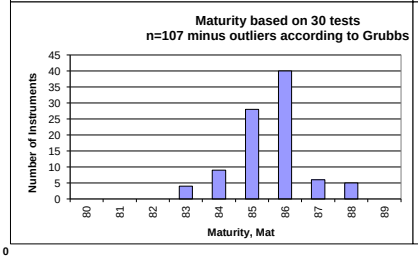
Cotton 3

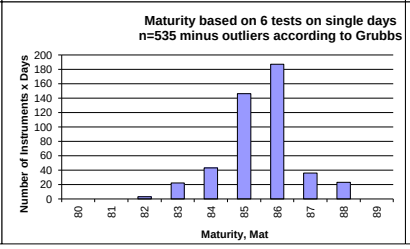


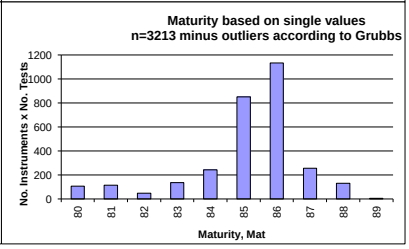




Cotton 4







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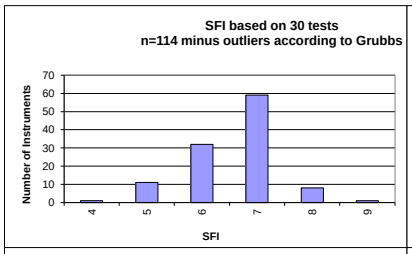
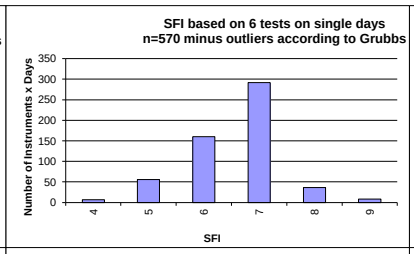
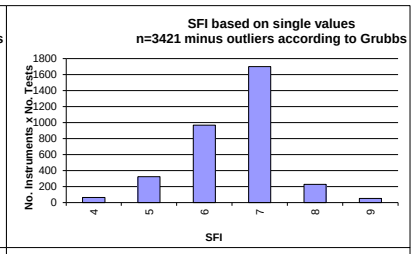
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
SFI

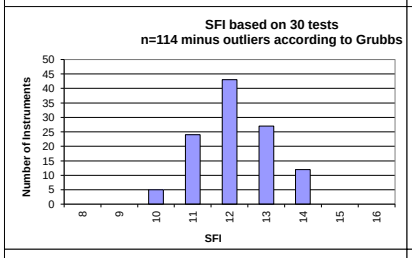
Cotton 1

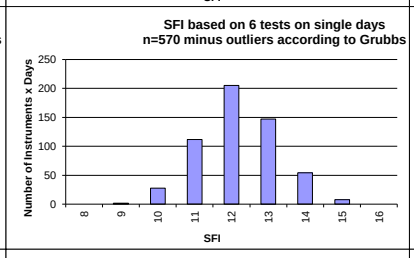


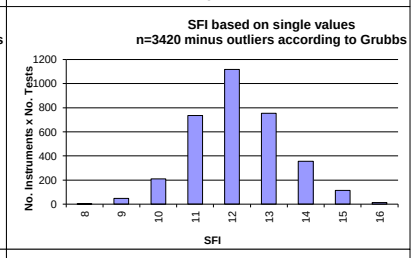




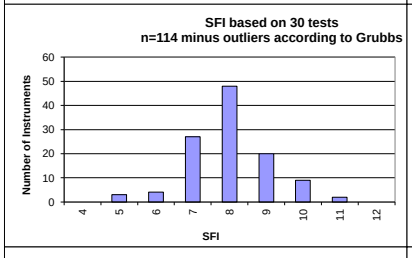
Cotton 2

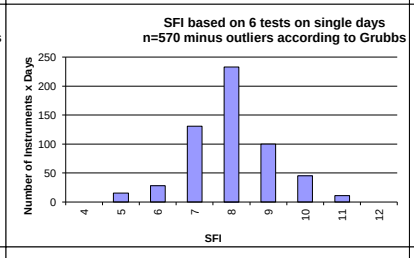


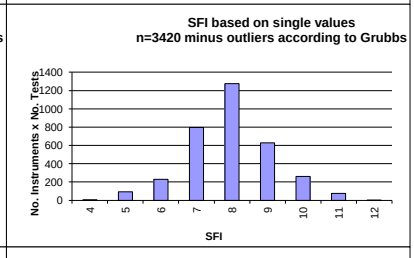




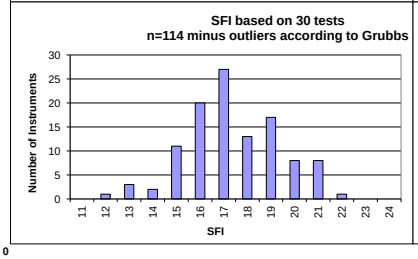
Cotton 3

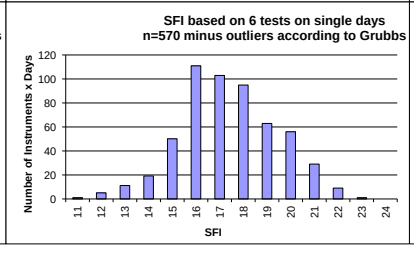


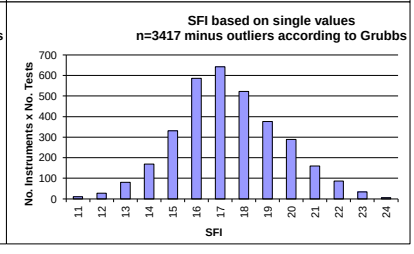




Cotton 4







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 2017 - 3
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*

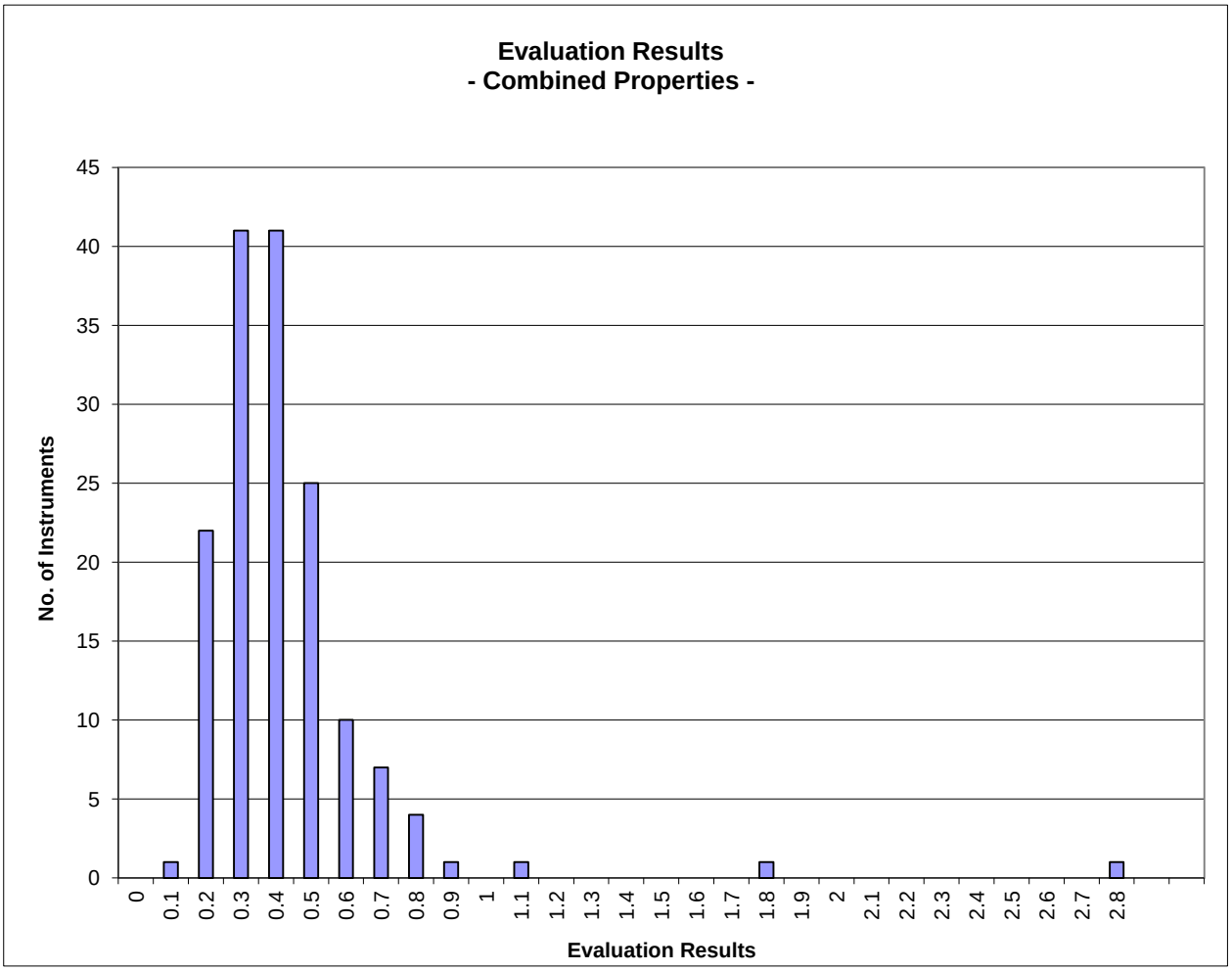
Instrument Evaluation

- Graph of Combined Properties -

According to ICAC CSITC Task Force Recommendations

Global - Round Trial 2017 - 3

		Evaluation Combined Prop.
Statistics	Average	0.43
	Median	0.39
	Best Instrument	0.14
	Worst Instrument	2.79



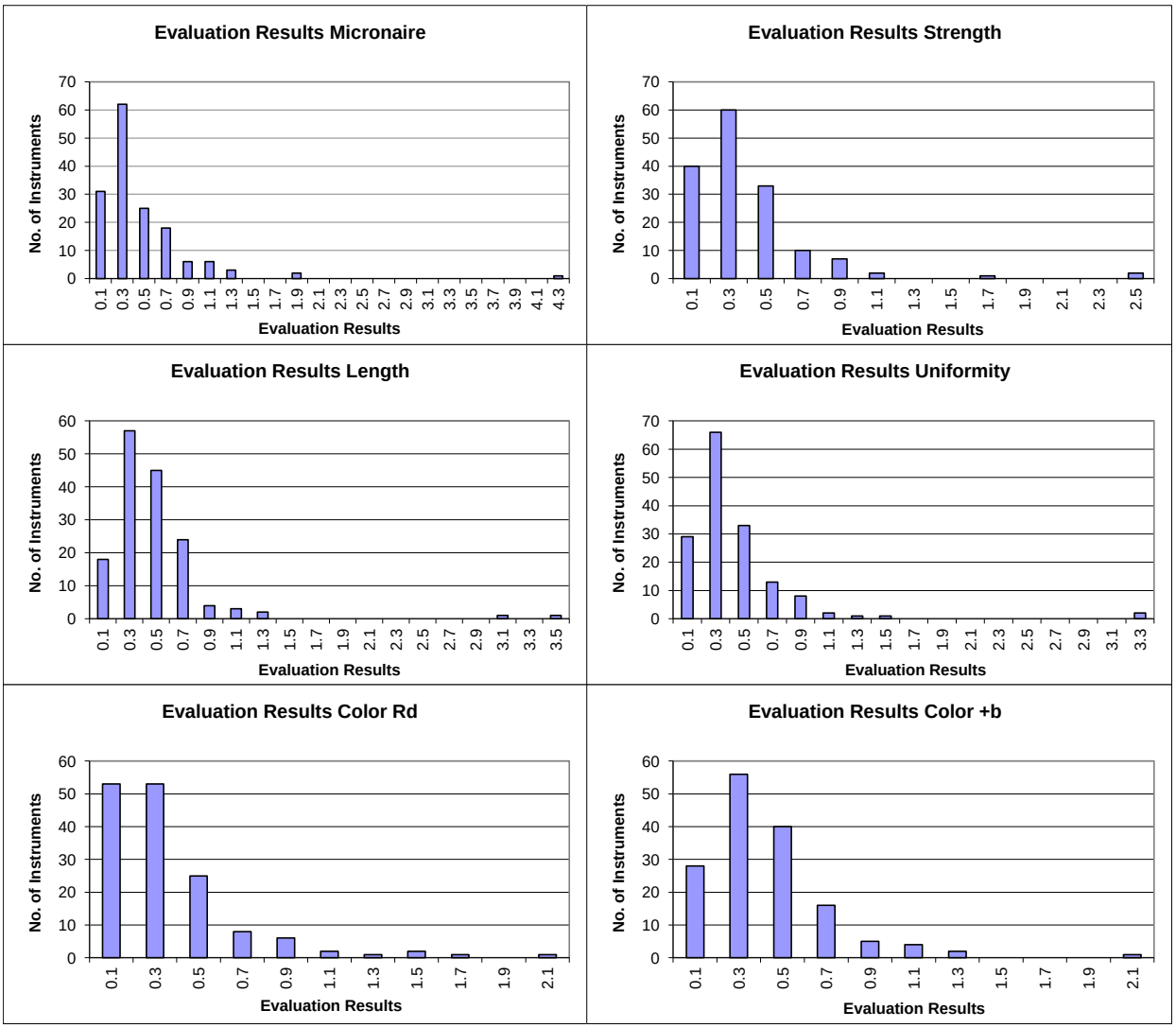
x-Axis shows midpoints of classes

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 2017 - 3

		Evaluation Micronaire	Evaluation Strength	Evaluation Length	Evaluation Uniformity	Evaluation Color Rd	Evaluation Color +b
Statistics	Average	0.47	0.40	0.48	0.43	0.36	0.43
	Median	0.35	0.34	0.41	0.36	0.25	0.37
	Best Instr.	0.07	0.06	0.08	0.06	0.06	0.05
	Worst Instr.	4.33	2.51	3.47	3.32	2.19	2.06



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

International Cotton Advisory Committee

CSITC
Global - Round Trial 2017 - 3
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

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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	99.0	97.7	97.3	98.4	93.3	93.1
Completely within limits	97.4	94.2	92.9	96.8	86.8	82.2
% of Instruments ≥75% within limits	98.7	97.4	97.4	98.1	92.1	92.1
% of Instruments ≥50% within limits	100.0	99.4	99.4	99.4	96.7	98.0

Percentage of Results Within Limits						
Instrument	**Micronaire**	**Strength**	**Length**	**Uniformity**	**Color Rd**	**Color +b**
GL173-001-01	100	100	100	100	100	50
GL173-003-01	100	100	100	100	100	100
GL173-003-02	100	100	100	100	100	100
GL173-004-01	100	100	75	100	75	100
GL173-005-01	100	100	100	100	100	100
GL173-005-02	100	100	100	100	100	100
GL173-005-03	100	100	100	100	100	100
GL173-005-04	100	100	100	100	100	50
GL173-005-05	100	100	100	100	100	100
GL173-005-06	100	100	100	100	100	100
GL173-005-07	100	100	100	100	100	75
GL173-005-08	100	100	100	100	100	50
GL173-008-01	100	100	100	100	100	100
GL173-009-01	100	100	100	100	100	25
GL173-009-02	100	100	100	100	100	25
GL173-011-04	100	100	100	100	100	100
GL173-013-01	100	100	100	100	100	100
GL173-014-01	100	100	100	100	100	100
GL173-015-01	100	100	100	100	100	100
GL173-017-06	100	100	75	100	100	100
GL173-018-01	100	100	100	100	100	100
GL173-019-53	100	100	100	100	100	100
GL173-019-60	100	100	100	100	100	50
GL173-020-01	100	100	100	100	100	100
GL173-021-01	100	100	100	100	100	100
GL173-022-01	100	100	100	100	100	100
GL173-022-06	100	100	100	100	100	100
GL173-023-01	100	75	50	100	100	75
GL173-023-02	100	100	100	100	75	75
GL173-023-03	100	100	100	100	100	75
GL173-023-04	100	100	100	100	100	100
GL173-024-02	100	100	50	100	100	100
GL173-026-32	100	100	75	100	100	50
GL173-029-01	100	100	100	100	100	100

GL173-030-05	100	100	100	100	100	100
GL173-030-12	100	100	100	100	100	100
GL173-032-01	100	100	100	100	75	100
GL173-034-03	100	100	100	100	100	100
GL173-034-07	100	100	100	100	100	100
GL173-034-08	100	100	100	100	100	100
GL173-034-09	100	100	100	100	100	100
GL173-034-10	100	100	100	100	100	100
GL173-034-11	100	100	100	100	100	100
GL173-034-12	100	100	100	100	100	100
GL173-034-13	100	100	100	100	100	100
GL173-034-14	100	100	100	100	100	100
GL173-035-01	100	100	100	100	100	100
GL173-037-03	100	100	100	100	100	100
GL173-038-01	100	100	100	100	100	100
GL173-038-02	100	100	100	100	100	100
GL173-039-02	100	100	100	100	100	100
GL173-040-01	100	100	100	100	100	100
GL173-040-02	100	100	100	100	100	100
GL173-040-03	100	100	100	100	100	100
GL173-040-04	100	50	100	100	100	100
GL173-041-01	100	100	100	100	100	100
GL173-041-02	100	100	100	100	100	100
GL173-042-01	100	25	0	0	100	50
GL173-043-02	100	100	100	100	100	100
GL173-044-04	100	100	100	100	100	100
GL173-044-05	100	100	100	100	100	100
GL173-045-01	100	100	100	75	75	75
GL173-046-01	100	75	100	50	0	100
GL173-047-01	100	100	100	100	100	100
GL173-048-01	100	100	100	100	100	100
GL173-050-01	100	100	100	100	100	100
GL173-051-02	100	100	100	100		
GL173-051-03	100	100	100	100	100	100
GL173-054-02	100	100	100	100	100	100
GL173-054-07	50	100	100	100	50	100
GL173-054-08	100	100	100	100	100	100
GL173-055-01	75	75	75	100		
GL173-056-01	100	100	100	100	100	100
GL173-057-01	100	100	100	100	50	100
GL173-058-01	100	100	100	100	100	100
GL173-061-14	100	100	100	100	100	100
GL173-061-16	100	100	100	100	100	100
GL173-062-01	100	75	100	100	100	100
GL173-063-01	100	100	100	100	100	100
GL173-064-01	100	100	100	75	75	75
GL173-066-01	100	50	100	100	75	75
GL173-068-01	100	100	100	100	50	75
GL173-068-02	100	100	100	100	75	100
GL173-069-01	100	100	100	100	100	100
GL173-070-01	100	100	100	100	100	100
GL173-071-03	100	100	100	100	100	100
GL173-071-06	100	100	100	100	100	100
GL173-072-01	100	100	100	100	100	100
GL173-073-01	100	100	100	100	100	100

GL173-073-06	100	100	100	100	100	100
GL173-073-07	100	100	100	100	100	100
GL173-074-03	100	100	100	100	100	100
GL173-074-04	100	100	100	100	100	100
GL173-074-05	100	100	100	100	100	100
GL173-075-01	100	100	100	100	50	75
GL173-076-01	100	100	100	100	100	100
GL173-076-02	100	100	100	100	100	100
GL173-076-03	100	100	100	100	100	100
GL173-077-01	100	100	100	100	0	25
GL173-078-01	100	100	100	100	100	100
GL173-078-02	100	100	75	100	100	50
GL173-078-03	100	100	75	100	50	100
GL173-078-04	100	100	100	100	0	100
GL173-078-06	100	100	100	100	100	100
GL173-078-08	100	100	100	100	100	100
GL173-080-01	100	75	75	100	100	100
GL173-080-07	100	100	100	100	100	100
GL173-080-08	100	100	100	100	100	100
GL173-081-03	100	100	100	100	100	100
GL173-082-01	100	100	100	100	100	100
GL173-082-02	100	100	100	100	100	100
GL173-083-01	100	100	100	100	50	100
GL173-084-01	75	100	100	100	75	100
GL173-085-01	100	100	100	100	0	50
GL173-085-02	100	100	100	100	100	100
GL173-085-03	100	100	100	100	100	100
GL173-086-02	100	100	100	100	100	100
GL173-087-01	100	100	100	100	100	100
GL173-087-03	100	100	100	100	100	100
GL173-088-01	100	100	100	100	100	100
GL173-088-02	100	100	100	100	100	100
GL173-090-14		100	100	100		
GL173-091-01	100	100	100	100	25	100
GL173-093-01	100	100	100	100	100	75
GL173-093-02	100	100	100	100	100	75
GL173-093-03	100	100	100	100	100	75
GL173-093-04	100	100	100	100	100	75
GL173-094-01	100	100	100	100	100	100
GL173-095-01	100	100	100	100	100	100
GL173-095-02	100	100	100	100	100	75
GL173-096-04	100	100	100	100	100	100
GL173-097-09	100	100	100	100	100	100
GL173-097-11	100	100	100	100	100	100
GL173-098-03	100	100	100	100	100	100
GL173-099-01	100	100	100	100	100	100
GL173-101-03	100	100	100	100	100	100
GL173-102-01	100	100	100	100	100	100
GL173-102-02	100	100	100	100	100	100
GL173-103-21	100	100	100	100	100	100
GL173-103-25	100	100	100	100	100	100
GL173-105-01	100	100	100	100	100	75
GL173-105-02	100	100	100	100	100	100
GL173-105-05	100	100	100	100	100	100
GL173-105-07	100	100	100	100	100	100

GL173-106-01	100	100	100	100	100	100
GL173-107-01	100	100	100	100	100	100
GL173-107-04	100	100	100	100	100	100
GL173-107-05	100	100	100	100	100	100
GL173-108-01	100	100	100	100	100	100
GL173-109-01	100	100	100	100	100	100
GL173-109-02	100	100	100	100	100	100
GL173-110-01	50	50	50	50	50	50
GL173-111-01	100	100	100	100	100	100
GL173-111-02	100	100	100	100	100	100
GL173-112-03	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	97.2	94.3	94.3	96.8	92.2	89.3
% of Instruments 100% within limits	63.0	35.5	32.3	51.0	61.8	34.2
% of Instruments ≥95% within limits	85.7	74.2	69.7	86.5	78.3	57.2
% of Instruments ≥75% within limits	98.1	94.2	95.5	98.1	88.2	84.2
% of Instruments ≥65% within limits	98.7	97.4	97.4	98.1	90.8	92.1
% of Instruments ≥50% within limits	99.4	98.1	98.7	98.7	96.1	96.1

Percentage of Results Within Limits						
Instrument	**Micronaire**	**Strength**	**Length**	**Uniformity**	**Color Rd**	**Color +b**
GL173-001-01	100	96	98	100	83	57
GL173-003-01	83	86	100	99	100	90
GL173-003-02	83	86	100	99	100	90
GL173-004-01	93	100	77	97	80	48
GL173-005-01	100	100	98	100	96	81
GL173-005-02	100	95	99	94	100	96
GL173-005-03	100	97	99	100	98	95
GL173-005-04	100	95	99	100	100	55
GL173-005-05	100	99	96	100	100	93
GL173-005-06	100	97	100	98	100	96
GL173-005-07	100	100	99	100	100	68
GL173-005-08	100	99	100	100	100	68
GL173-008-01	100	99	100	99	100	98
GL173-009-01	100	100	98	100	100	25
GL173-009-02	100	100	100	100	100	26
GL173-011-04	99	100	92	92	95	98
GL173-013-01	100	98	97	96	100	99
GL173-014-01	97	94	100	100	100	100
GL173-015-01	100	88	95	97	97	86
GL173-017-06	100	99	89	99	93	93
GL173-018-01	100	89	98	99	97	98
GL173-019-53	100	95	100	100	100	100
GL173-019-60	100	85	100	100	100	77
GL173-020-01	100	99	99	100	100	100
GL173-021-01	100	100	99	98	100	98
GL173-022-01	100	100	99	100	100	98
GL173-022-06	100	99	99	100	100	98
GL173-023-01	93	61	59	91	79	68
GL173-023-02	99	97	83	93	66	74
GL173-023-03	96	97	90	95	87	74

GL173-023-04	98	98	92	98	100	93
GL173-024-02	98	100	84	98	99	96
GL173-026-32	99	99	79	99	98	52
GL173-029-01	100	100	99	100	100	95
GL173-030-05	100	100	99	98	98	99
GL173-030-12	100	100	100	99	100	100
GL173-032-01	78	98	85	96	73	87
GL173-034-03	100	100	96	97	100	98
GL173-034-07	97	88	99	89	100	100
GL173-034-08	88	66	100	100	100	100
GL173-034-09	100	93	97	91	100	100
GL173-034-10	100	97	99	100	98	99
GL173-034-11	98	82	95	98	100	100
GL173-034-12	100	98	95	94	100	99
GL173-034-13	100	100	99	100	100	100
GL173-034-14	100	100	100	100	100	100
GL173-035-01	100	96	95	100	100	100
GL173-037-03	100	93	100	100	100	99
GL173-038-01	100	84	93	98	91	88
GL173-038-02	100	89	83	98	93	96
GL173-039-02	100	100	100	100	100	100
GL173-040-01	100	99	100	100	100	100
GL173-040-02	100	99	100	100	100	100
GL173-040-03	95	79	99	100	92	92
GL173-040-04	93	71	97	99	98	98
GL173-041-01	100	100	98	94	93	100
GL173-041-02	100	100	96	100	98	100
GL173-042-01	100	26	0	2	100	64
GL173-043-02	100	98	100	100	100	100
GL173-044-04	99	97	98	100	100	91
GL173-044-05	98	93	94	99	100	89
GL173-045-01	88	99	89	78	68	70
GL173-046-01	100	68	94	64	22	100
GL173-047-01	100	100	98	98	100	94
GL173-048-01	100	100	100	100	100	95
GL173-050-01	99	97	98	100	99	99
GL173-051-02	100	97	97	94		
GL173-051-03	100	100	100	98	100	99
GL173-054-02	97	93	99	100	98	82
GL173-054-07	62	88	94	100	59	83
GL173-054-08	97	95	91	90	100	100
GL173-055-01	65	74	74	99		
GL173-056-01	89	93	90	95	96	83
GL173-057-01	100	100	100	100	50	100
GL173-058-01	100	99	99	100	100	100
GL173-061-14	100	100	100	100	100	100
GL173-061-16	100	94	100	100	100	100
GL173-062-01	100	85	100	100	100	100
GL173-063-01	100	89	100	98	100	100
GL173-064-01	92	99	91	79	72	69
GL173-066-01	89	34	90	98	83	77
GL173-068-01	100	96	93	97	45	72
GL173-068-02	99	96	94	94	54	75
GL173-069-01	95	100	98	100	82	70
GL173-070-01	100	100	100	100	100	100

GL173-071-03	100	100	100	100	100	100
GL173-071-06	100	100	100	100	100	100
GL173-072-01	99	100	94	96	99	100
GL173-073-01	100	100	100	100	100	88
GL173-073-06	100	100	100	100	100	100
GL173-073-07	100	100	100	100	100	100
GL173-074-03	99	99	99	100	100	95
GL173-074-04	94	100	95	100	100	92
GL173-074-05	100	99	98	100	100	98
GL173-075-01	100	100	100	100	50	75
GL173-076-01	99	96	100	100	100	100
GL173-076-02	100	99	100	99	100	100
GL173-076-03	100	100	98	100	100	100
GL173-077-01	100	100	100	100	0	38
GL173-078-01	88	100	83	100	100	93
GL173-078-02	91	93	58	89	86	62
GL173-078-03	89	99	70	97	50	71
GL173-078-04	83	87	74	83	23	71
GL173-078-06	100	98	91	95	100	87
GL173-078-08	100	99	98	100	99	88
GL173-080-01	98	83	87	93	98	99
GL173-080-07	100	78	95	100	98	99
GL173-080-08	98	81	96	98	100	99
GL173-081-03	99	99	99	99	98	99
GL173-082-01	100	100	100	100	100	100
GL173-082-02	100	100	100	100	100	100
GL173-083-01	98	100	93	100	64	95
GL173-084-01	77	99	83	95	63	87
GL173-085-01	100	93	93	98	8	44
GL173-085-02	98	97	98	98	100	55
GL173-085-03	100	98	100	98	100	93
GL173-086-02	100	100	98	100	100	100
GL173-087-01	99	100	95	98	100	100
GL173-087-03	100	95	93	96	98	92
GL173-088-01	100	98	97	100	99	84
GL173-088-02	94	89	98	99	87	97
GL173-090-14		82	85	93		
GL173-091-01	100	74	83	76	54	94
GL173-093-01	100	100	100	100	100	80
GL173-093-02	100	100	100	100	100	75
GL173-093-03	100	100	100	98	95	75
GL173-093-04	100	100	100	100	100	74
GL173-094-01	100	100	100	100	100	100
GL173-095-01	100	100	99	100	100	93
GL173-095-02	100	99	100	98	100	80
GL173-096-04	100	96	98	99	100	98
GL173-097-09	100	98	89	100	92	94
GL173-097-11	100	100	98	100	100	100
GL173-098-03	97	96	90	98	100	93
GL173-099-01	86	97	90	99	100	100
GL173-101-03	98	97	90	98	98	93
GL173-102-01	100	96	100	100	100	100
GL173-102-02	100	96	100	100	100	100
GL173-103-21	100	98	100	98	100	100
GL173-103-25	100	96	98	99	98	100