International Cotton Advisory Committee

CSITC
Global - Round Trial 2016 - 1
General Evaluation

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

Section One: Result Distribution

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- -Summary Table
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Optional Parameters
- -Summary Table
- -Distribution Graphs

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

Global - Round Trial 2016 - 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)			3.683	5.453	4.667	5.079	
Reference Values for Evaluation			3.683	5.453	4.667	5.079	
Number Of Instruments			112	112	112	112	**112**
Inter-Instrument Variation	based on 30 tests	SD	0.064	0.064	0.055	0.045	**0.057**
		CV %	1.7	1.2	1.2	0.9	**1.2**
	based on 6 tests	SD	0.069	0.071	0.062	0.056	**0.065**
		CV %	1.9	1.3	1.3	1.1	**1.4**
	based on single tests	SD	0.081	0.082	0.071	0.070	**0.076**
		CV %	2.2	1.5	1.5	1.4	**1.7**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.025	0.026	0.024	0.026	**0.025**
		CV %	0.7	0.5	0.5	0.5	**0.5**
	between single tests on one day	SD	0.038	0.038	0.035	0.039	**0.038**
		CV %	1.0	0.7	0.7	0.8	**0.8**
	between all tests on different days	SD	0.047	0.050	0.045	0.049	**0.048**
		CV %	1.3	0.9	1.0	1.0	**1.0**

Strength							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			22.577	27.957	31.166	28.521	
Reference Values for Evaluation			22.577	27.957	31.166	28.521	
Number Of Instruments			110	110	110	110	**110**
Inter-Instrument Variation	based on 30 tests	SD	0.669	0.811	0.847	0.788	**0.779**
		CV %	3.0	2.9	2.7	2.8	**2.8**
	based on 6 tests	SD	0.754	0.845	0.950	0.870	**0.855**
		CV %	3.3	3.0	3.0	3.0	**3.1**
	based on single tests	SD	0.908	0.982	1.067	1.026	**0.996**
		CV %	4.0	3.5	3.4	3.6	**3.6**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.253	0.295	0.335	0.312	**0.299**
		CV %	1.1	1.1	1.1	1.1	**1.1**
	between single tests on one day	SD	0.484	0.488	0.457	0.564	**0.498**
		CV %	2.1	1.7	1.5	2.0	**1.8**
	between all tests on different days	SD	0.567	0.570	0.574	0.639	**0.588**
		CV %	2.5	2.0	1.8	2.2	**2.2**

Length							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			0.9827	1.0339	1.1640	1.0505	
Reference Values for Evaluation			0.9827	1.0339	1.1640	1.0505	
Number Of Instruments			112	112	112	112	**112**
Inter-Instrument Variation	based on 30 tests	SD	0.0109	0.0081	0.0086	0.0107	**0.0096**
		CV %	1.1	0.8	0.7	1.0	**0.9**
	based on 6 tests	SD	0.0144	0.0095	0.0098	0.0119	**0.0114**
		CV %	1.5	0.9	0.8	1.1	**1.1**
	based on single tests	SD	0.0179	0.0139	0.0142	0.0160	**0.0155**
		CV %	1.8	1.3	1.2	1.5	**1.5**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.0051	0.0049	0.0052	0.0050	**0.0050**
		CV %	0.5	0.5	0.4	0.5	**0.5**
	between single tests on one day	SD	0.0106	0.0090	0.0090	0.0111	**0.0099**
		CV %	1.1	0.9	0.8	1.1	**0.9**
	between all tests on different days	SD	0.0123	0.0104	0.0105	0.0119	**0.0113**
		CV %	1.2	1.0	0.9	1.1	**1.1**

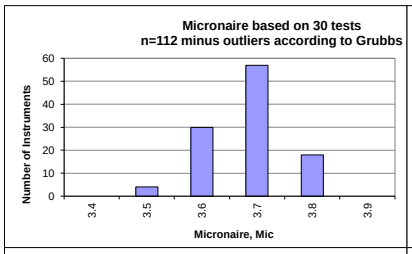
Uniformity							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			77.882	80.673	82.931	81.132	
Reference Values for Evaluation			77.882	80.673	82.931	81.132	
Number Of Instruments			111	111	111	111	**111**
Inter-Instrument Variation	based on 30 tests	SD	0.459	0.494	0.426	0.419	**0.449**
		CV %	0.6	0.6	0.5	0.5	**0.6**
	based on 6 tests	SD	0.622	0.535	0.504	0.492	**0.538**
		CV %	0.8	0.7	0.6	0.6	**0.7**
	based on single tests	SD	0.859	0.765	0.673	0.713	**0.753**
		CV %	1.1	0.9	0.8	0.9	**0.9**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.282	0.240	0.280	0.251	**0.263**
		CV %	0.4	0.3	0.3	0.3	**0.3**
	between single tests on one day	SD	0.531	0.477	0.477	0.489	**0.493**
		CV %	0.7	0.6	0.6	0.6	**0.6**
	between all tests on different days	SD	0.606	0.531	0.534	0.559	**0.557**
		CV %	0.8	0.7	0.6	0.7	**0.7**

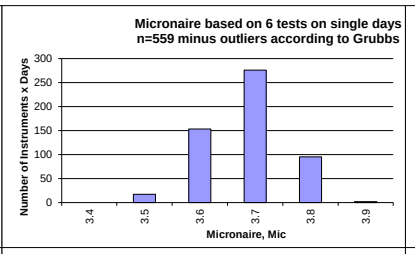
Color Rd							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			76.299	78.253	79.011	78.190	
Reference Values for Evaluation			76.299	78.253	79.011	78.190	
Number Of Instruments			109	109	109	109	**109**
Inter-Instrument Variation	based on 30 tests	SD	0.753	0.832	0.606	0.609	**0.700**
		CV %	1.0	1.1	0.8	0.8	**0.9**
	based on 6 tests	SD	0.790	0.820	0.619	0.616	**0.711**
		CV %	1.0	1.0	0.8	0.8	**0.9**
	based on single tests	SD	0.829	0.869	0.653	0.677	**0.757**
		CV %	1.1	1.1	0.8	0.9	**1.0**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.196	0.162	0.137	0.156	**0.163**
		CV %	0.3	0.2	0.2	0.2	**0.2**
	between single tests on one day	SD	0.241	0.180	0.196	0.196	**0.203**
		CV %	0.3	0.2	0.2	0.3	**0.3**
	between all tests on different days	SD	0.326	0.255	0.259	0.287	**0.282**
		CV %	0.4	0.3	0.3	0.4	**0.4**

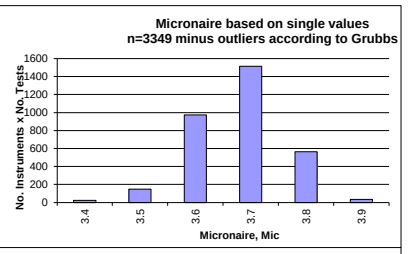
Color +b							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			9.050	9.270	9.619	8.531	
Reference Values for Evaluation			9.050	9.270	9.619	8.531	
Number Of Instruments			109	109	109	109	**109**
Inter-Instrument Variation	based on 30 tests	SD	0.224	0.214	0.225	0.223	**0.221**
		CV %	2.5	2.3	2.3	2.6	**2.4**
	based on 6 tests	SD	0.245	0.230	0.241	0.219	**0.234**
		CV %	2.7	2.5	2.5	2.6	**2.6**
	based on single tests	SD	0.285	0.258	0.269	0.251	**0.266**
		CV %	3.2	2.8	2.8	2.9	**2.9**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.085	0.090	0.084	0.091	**0.087**
		CV %	0.9	1.0	0.9	1.1	**1.0**
	between single tests on one day	SD	0.098	0.083	0.082	0.082	**0.086**
		CV %	1.1	0.9	0.9	1.0	**0.9**
	between all tests on different days	SD	0.135	0.134	0.117	0.123	**0.127**
		CV %	1.5	1.4	1.2	1.4	**1.4**

Test Result Distributions
Micronaire

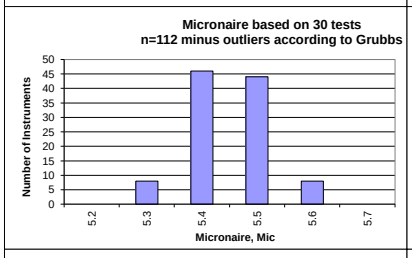
Cotton 1

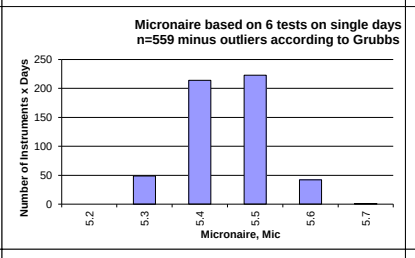


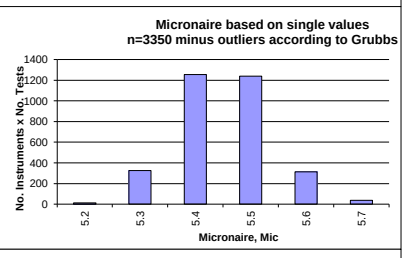




Cotton 2







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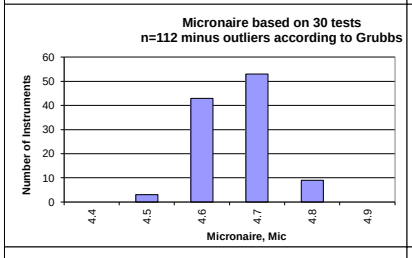
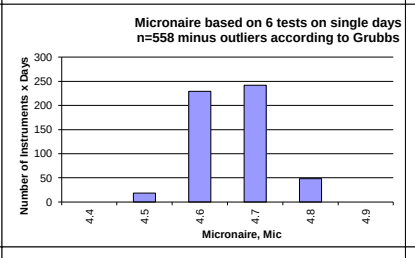
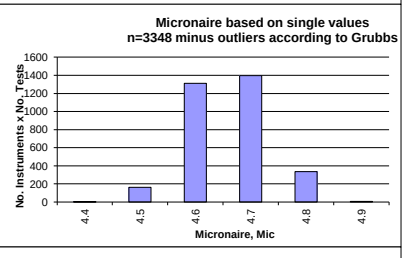
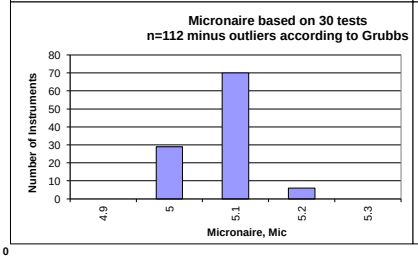
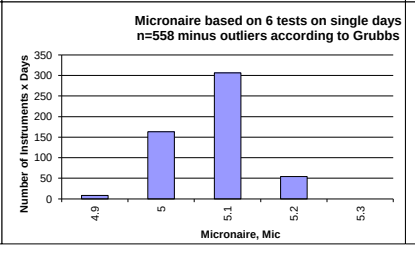


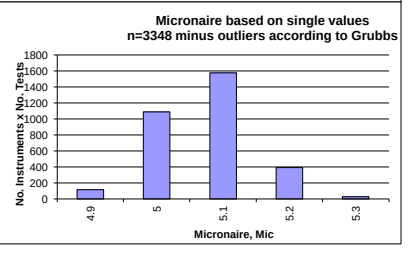




Cotton 4







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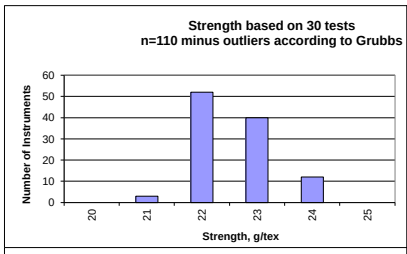
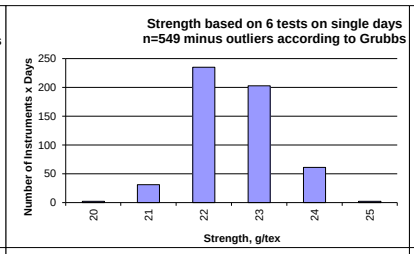
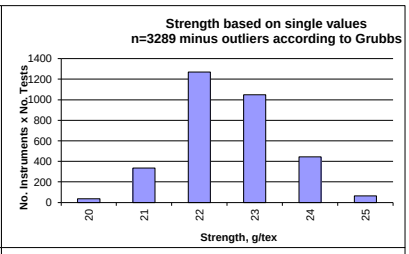
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method.)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Strength

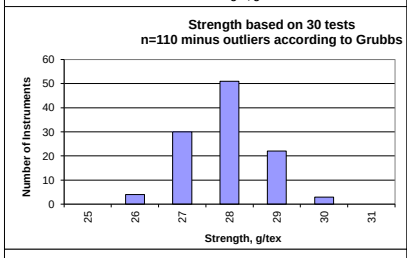
Cotton 1

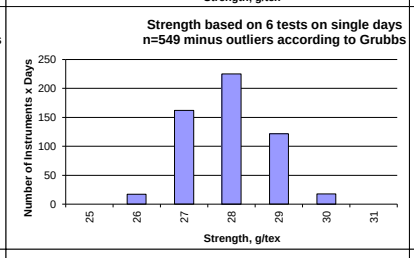


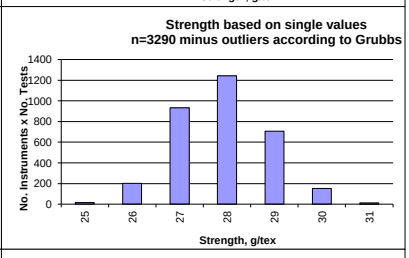




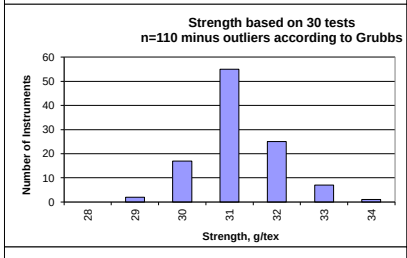
Cotton 2

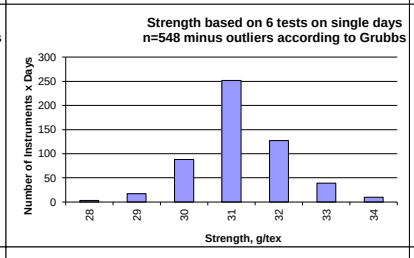


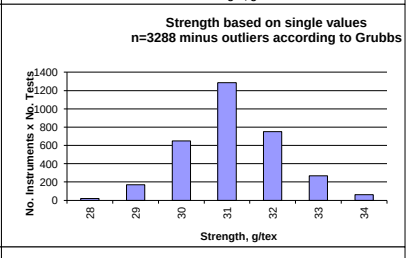




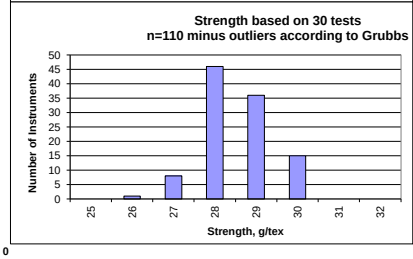
Cotton 3

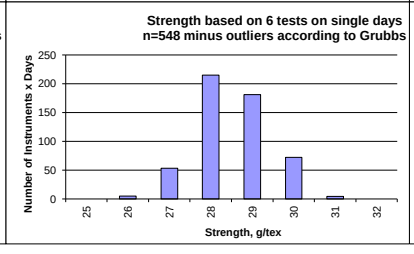


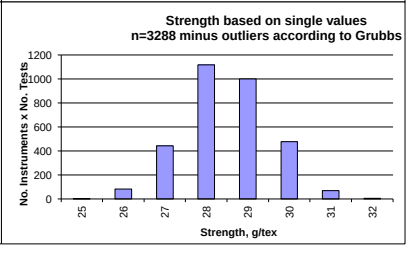




Cotton 4







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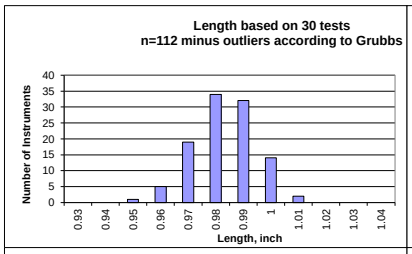
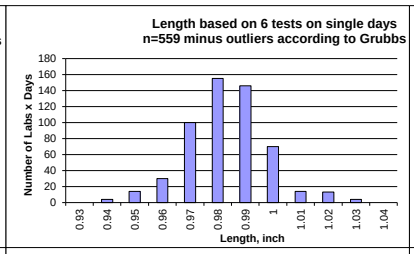
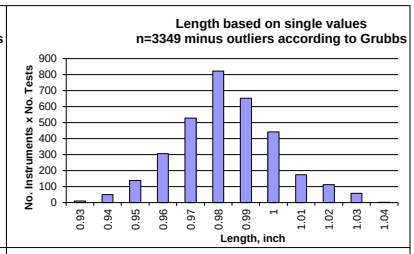
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Length

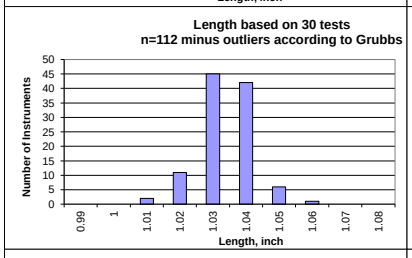
Cotton 1

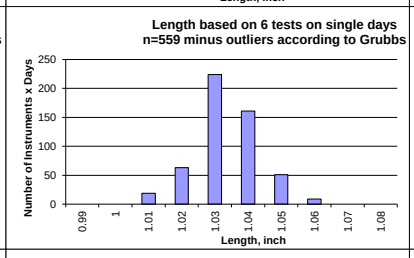


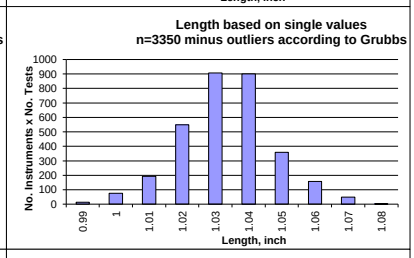




Cotton 2







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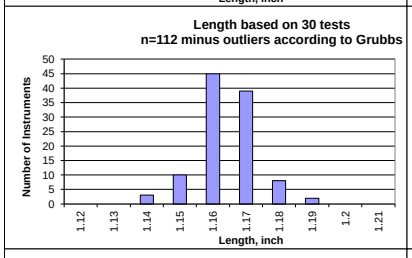
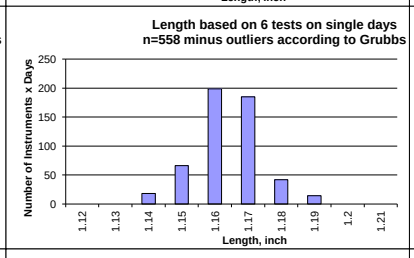
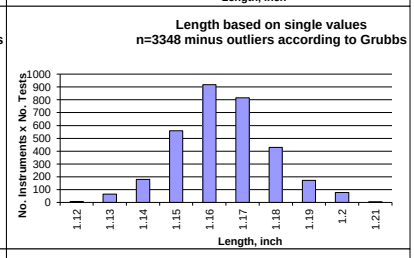
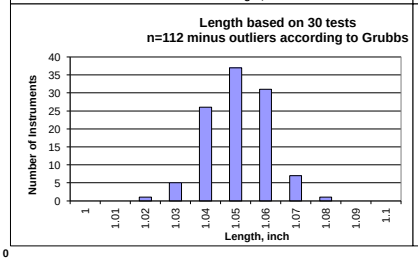
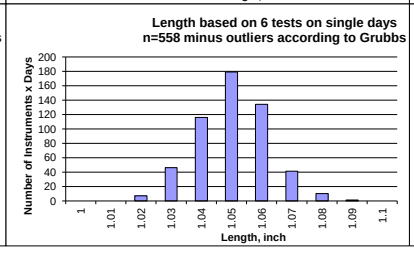


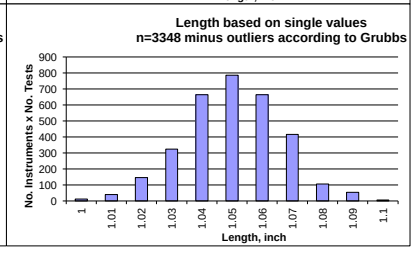




Cotton 4







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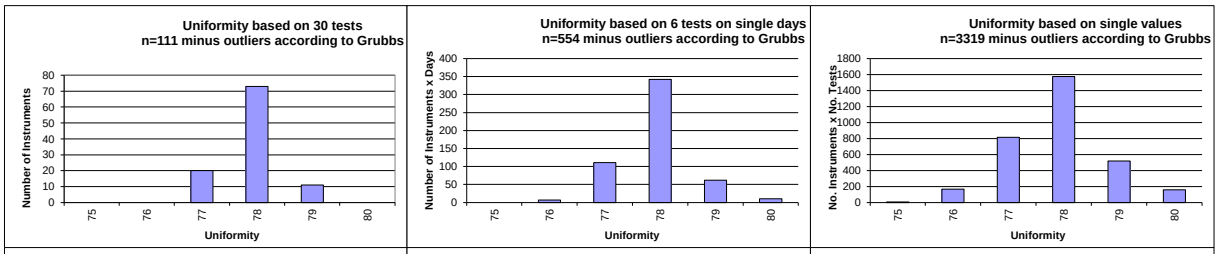
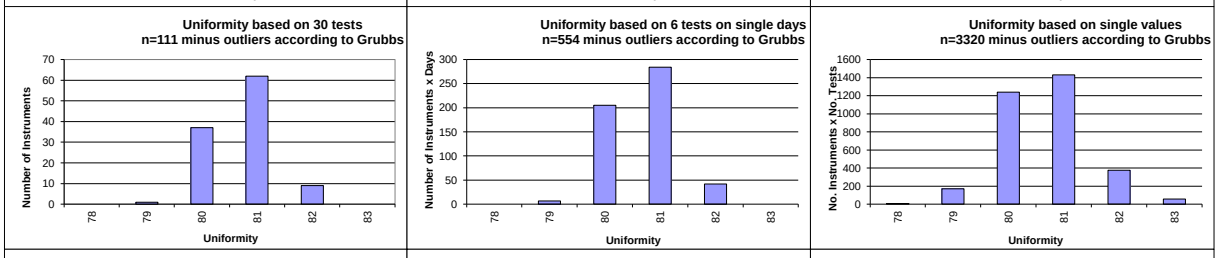
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Uniformity

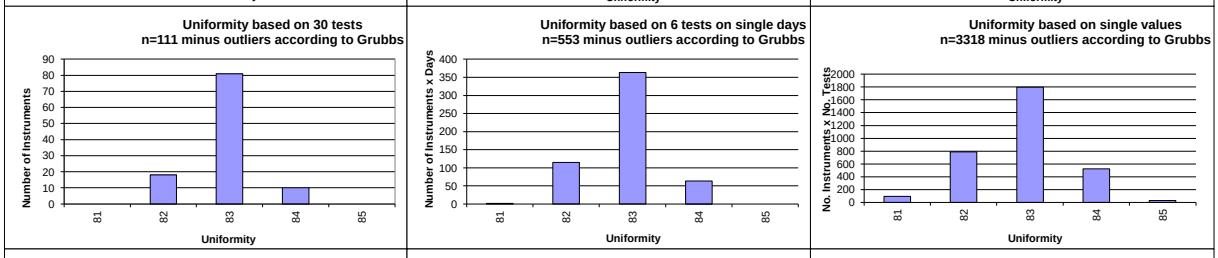
Cotton 1



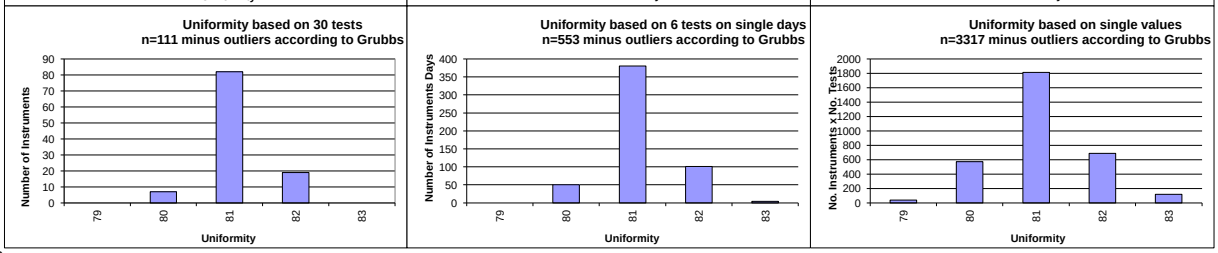
Cotton 2



Cotton 3



Cotton 4



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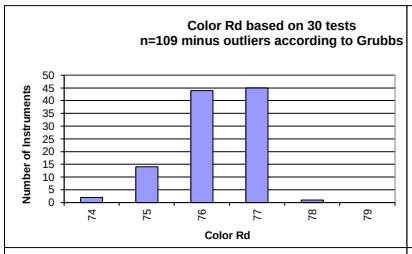
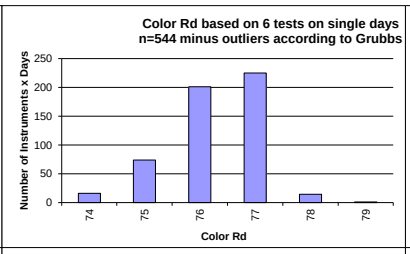
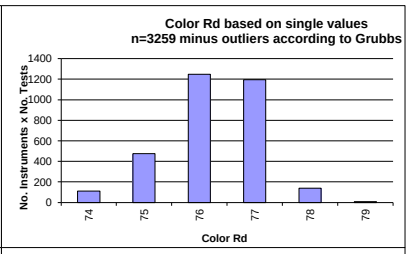
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Color Rd

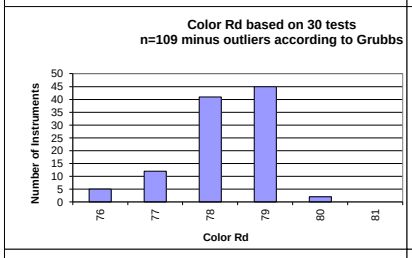
Cotton 1

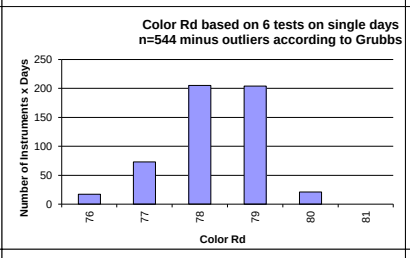


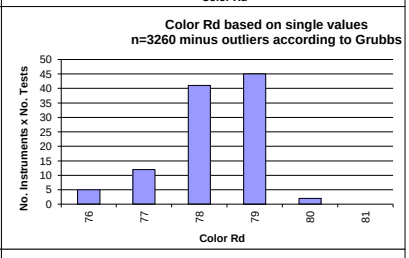




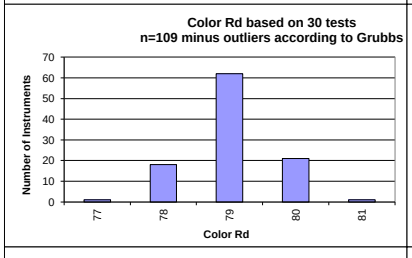
Cotton 2

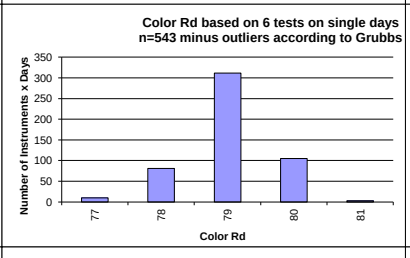


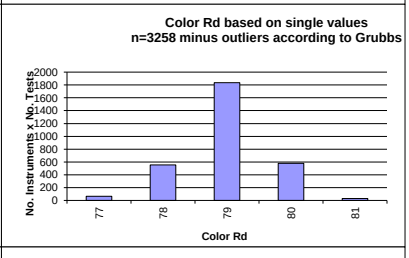




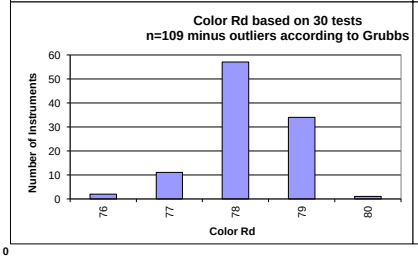
Cotton 3

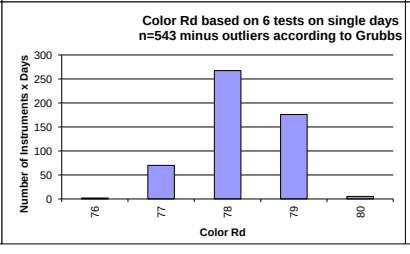


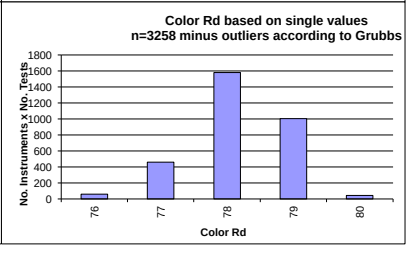




Cotton 4







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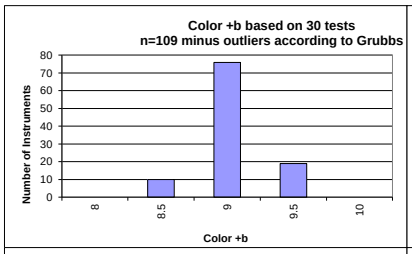
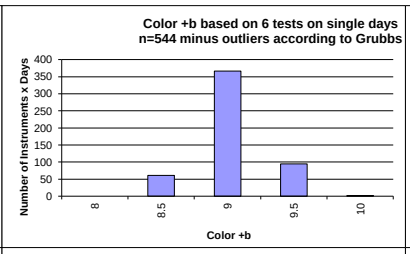
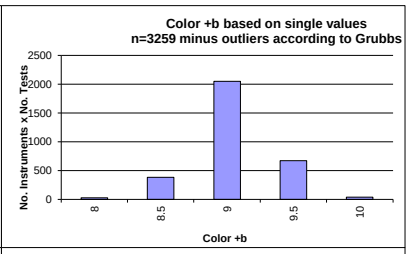
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Color +b

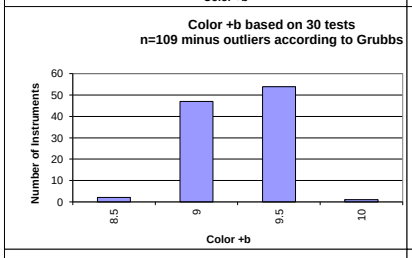
Cotton 1

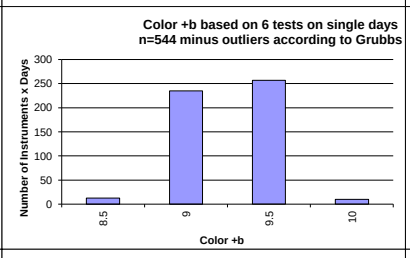


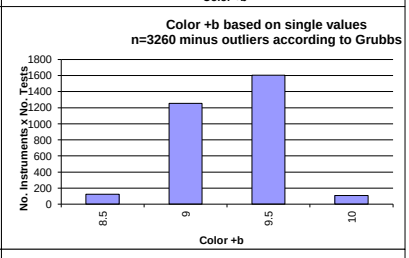




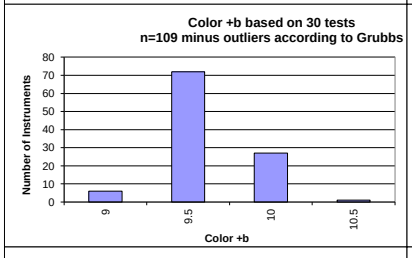
Cotton 2

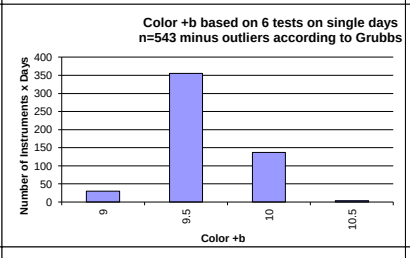


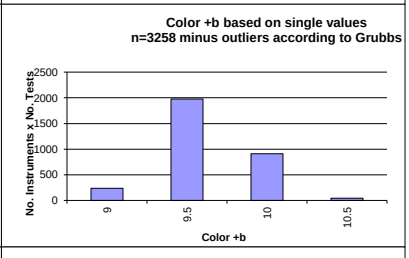




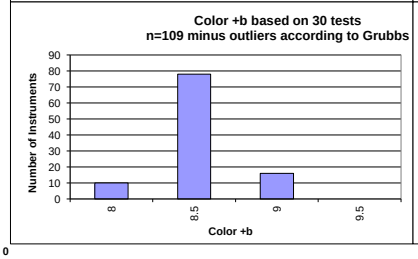
Cotton 3

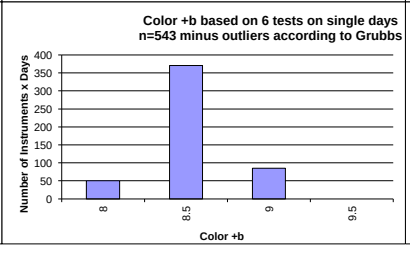


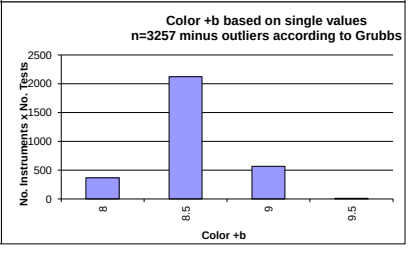




Cotton 4







0

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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)			29.44	13.02	10.00	16.83	
Reference Values for Evaluation			29.44	13.02	10.00	16.83	
Number Of Instruments			74	74	74	74	**74**
Inter-Instrument Variation	based on 30 tests	SD	12.26	6.01	4.97	7.09	**7.58**
		CV %	41.6	46.2	49.7	42.1	**44.9**
	based on 6 tests	SD	12.54	6.23	5.10	7.46	**7.83**
		CV %	42.6	47.9	51.0	44.3	**46.4**
	based on single tests	SD	13.08	6.48	5.39	7.85	**8.20**
		CV %	44.4	49.8	53.9	46.6	**48.7**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	2.66	1.49	1.25	1.79	**1.80**
		CV %	9.0	11.5	12.5	10.7	**10.9**
	between single tests on one day	SD	3.00	1.66	1.54	2.02	**2.05**
		CV %	10.2	12.8	15.4	12.0	**12.6**
	between all tests on different days	SD	4.47	2.35	2.15	3.18	**3.04**
		CV %	15.2	18.0	21.5	18.9	**18.4**

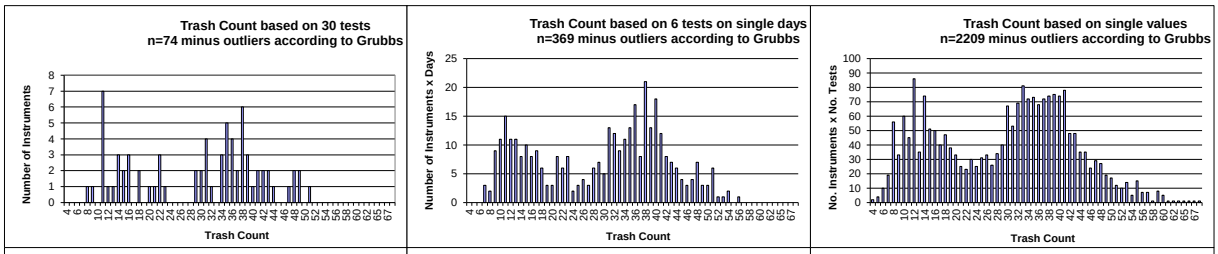
Trash Area							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			0.263	0.123	0.115	0.164	
Reference Values for Evaluation			0.263	0.123	0.115	0.164	
Number Of Instruments			74	74	74	74	**74**
Inter-Instrument Variation	based on 30 tests	SD	0.082	0.037	0.039	0.051	**0.052**
		CV %	31.1	30.1	33.8	31.2	**31.6**
	based on 6 tests	SD	0.092	0.038	0.040	0.055	**0.056**
		CV %	35.0	31.1	35.1	33.6	**33.7**
	based on single tests	SD	0.102	0.042	0.046	0.061	**0.063**
		CV %	38.8	34.3	40.4	37.5	**37.8**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.033	0.013	0.016	0.023	**0.021**
		CV %	12.6	10.4	13.7	13.8	**12.6**
	between single tests on one day	SD	0.041	0.016	0.016	0.022	**0.024**
		CV %	15.7	13.4	13.7	13.8	**14.1**
	between all tests on different days	SD	0.054	0.024	0.026	0.037	**0.035**
		CV %	20.6	19.3	22.2	22.7	**21.2**

Maturity							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			83.31	88.13	86.90	87.61	
Reference Values for Evaluation			83.31	88.13	86.90	87.61	
Number Of Instruments			76	76	76	76	**76**
Inter-Instrument Variation	based on 30 tests	SD	3.24	2.32	1.93	1.82	**2.32**
		CV %	3.9	2.6	2.2	2.1	**2.7**
	based on 6 tests	SD	3.24	2.13	1.86	1.75	**2.25**
		CV %	3.9	2.4	2.1	2.0	**2.6**
	based on single tests	SD	3.26	2.18	1.88	1.78	**2.28**
		CV %	3.9	2.5	2.2	2.0	**2.6**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.20	0.23	0.15	0.18	**0.19**
		CV %	0.2	0.3	0.2	0.2	**0.2**
	between single tests on one day	SD	0.35	0.30	0.24	0.42	**0.33**
		CV %	0.4	0.3	0.3	0.5	**0.4**
	between all tests on different days	SD	0.45	0.44	0.36	0.47	**0.43**
		CV %	0.5	0.5	0.4	0.5	**0.5**

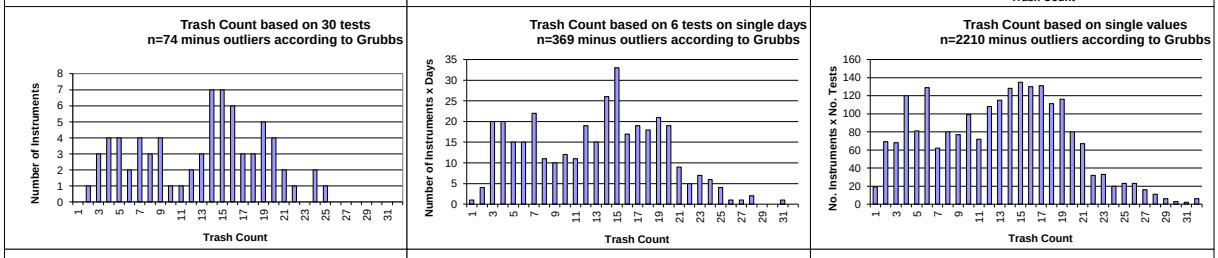
SFI							
			Cotton 1	**Cotton 2**	**Cotton 3**	**Cotton 4**	**Average**
Average of Instruments (Grubbs)			15.33	10.85	8.36	10.24	
Reference Values for Evaluation			15.33	10.85	8.36	10.24	
Number Of Instruments			84	84	84	84	**84**
Inter-Instrument Variation	based on 30 tests	SD	2.09	1.02	0.71	0.93	**1.19**
		CV %	13.6	9.4	8.4	9.0	**10.1**
	based on 6 tests	SD	2.09	1.07	0.62	0.96	**1.19**
		CV %	13.7	9.9	7.5	9.4	**10.1**
	based on single tests	SD	2.24	1.11	0.74	1.21	**1.32**
		CV %	14.6	10.2	8.8	11.8	**11.4**
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.37	0.24	0.19	0.29	**0.27**
		CV %	2.4	2.2	2.2	2.8	**2.4**
	between single tests on one day	SD	0.71	0.45	0.32	0.50	**0.50**
		CV %	4.6	4.2	3.8	4.9	**4.4**
	between all tests on different days	SD	0.84	0.54	0.38	0.55	**0.58**
		CV %	5.5	5.0	4.5	5.4	**5.1**

Test Result Distributions
Trash Count

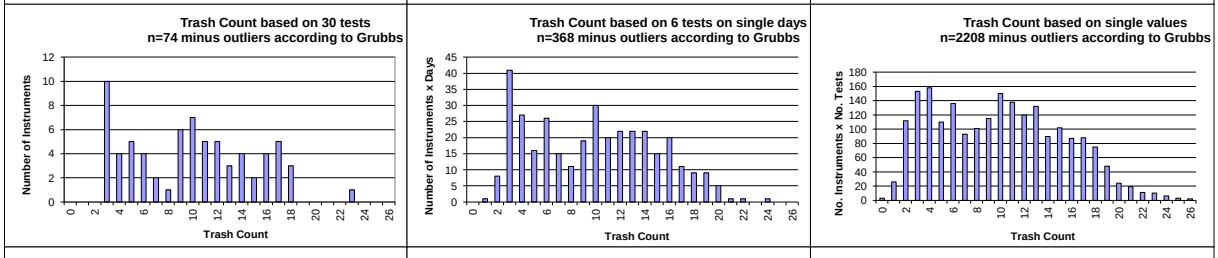
Cotton 1



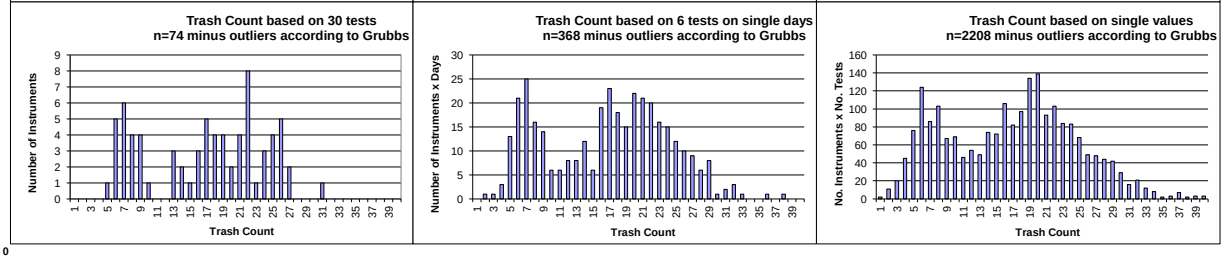
Cotton 2



Cotton 3



Cotton 4



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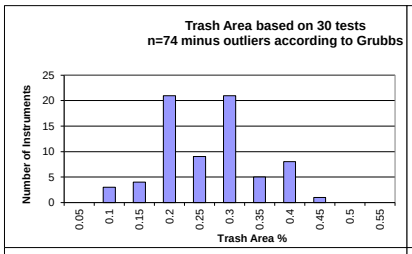
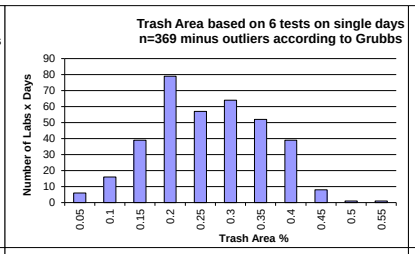
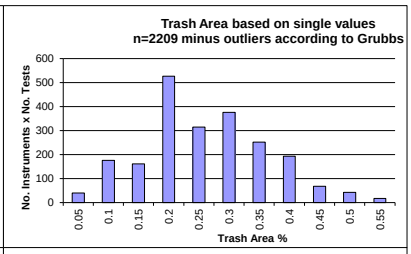
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Trash Area

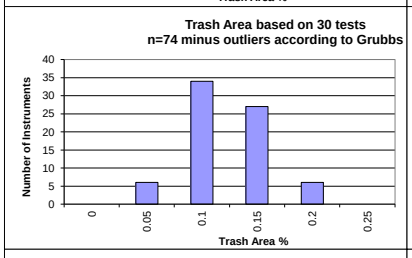
Cotton 1

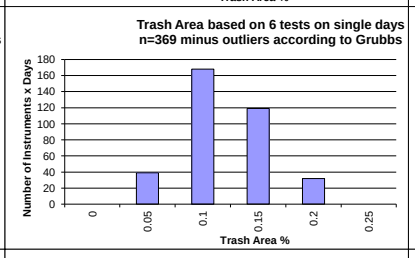


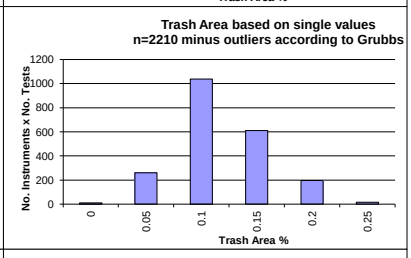




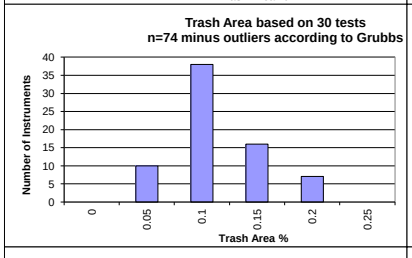
Cotton 2

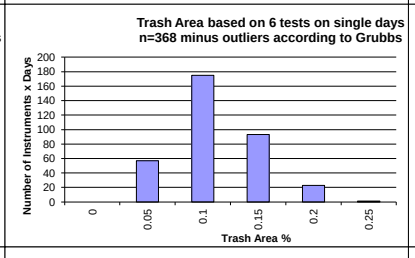


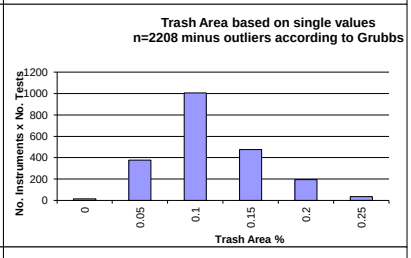




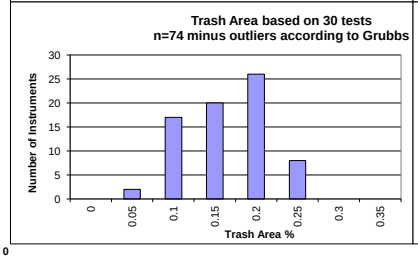
Cotton 3

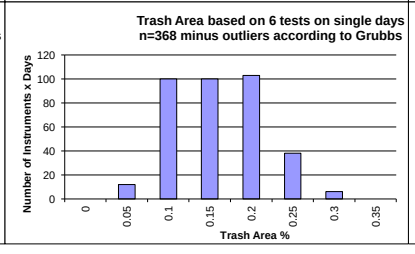


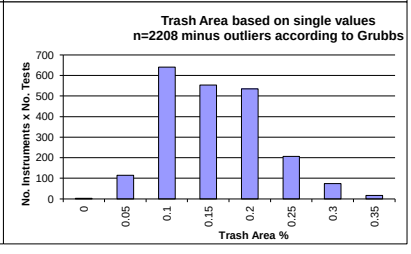




Cotton 4







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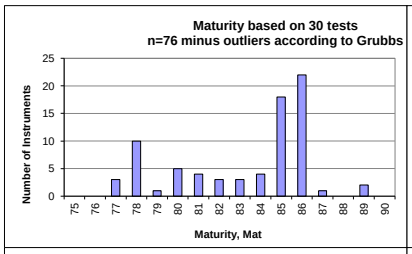
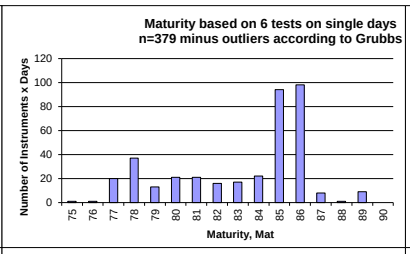
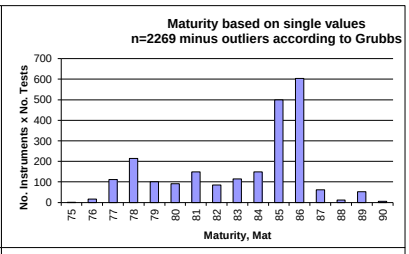
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Maturity

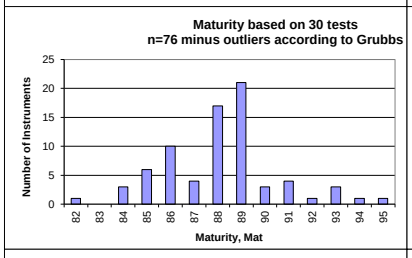
Cotton 1

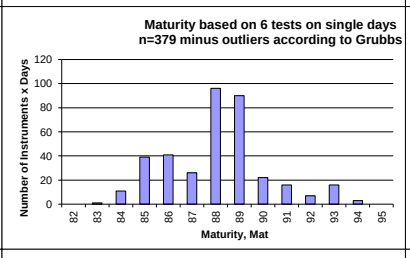


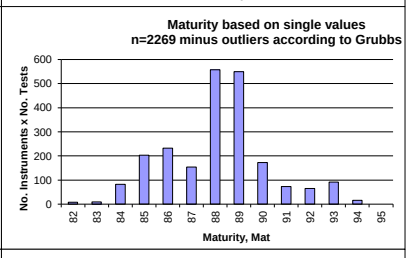




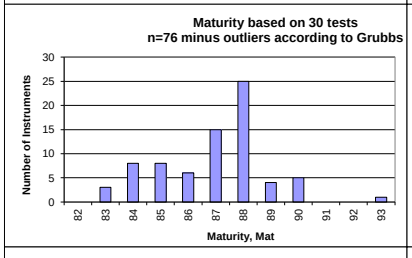
Cotton 2

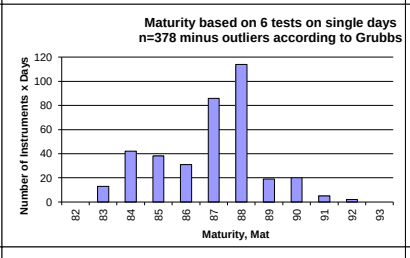


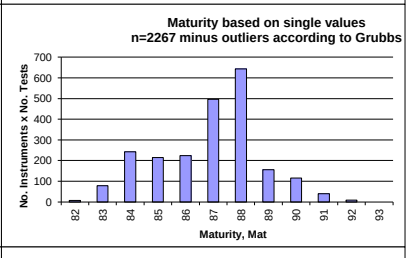




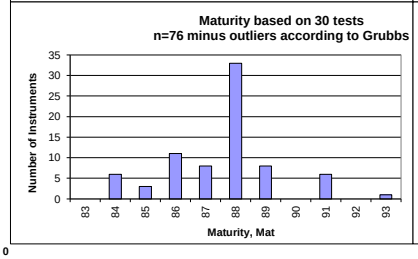
Cotton 3

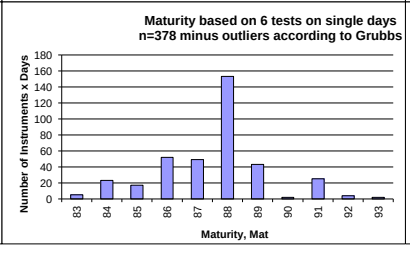


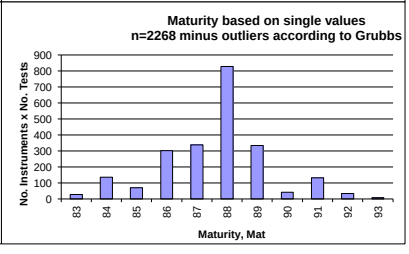




Cotton 4







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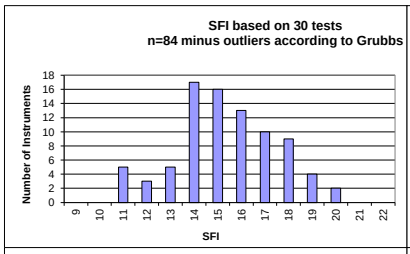
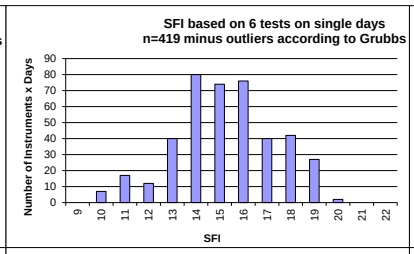
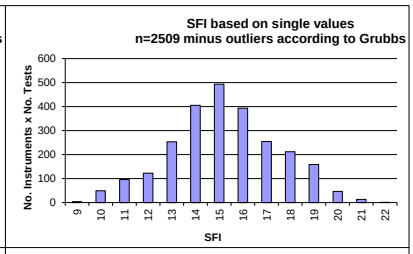
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method.)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
SFI

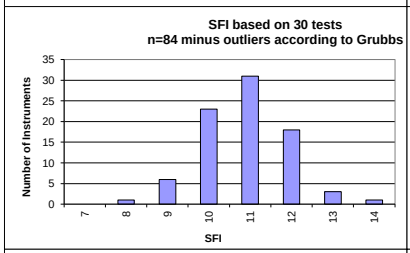
Cotton 1

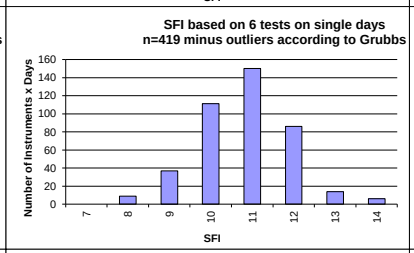


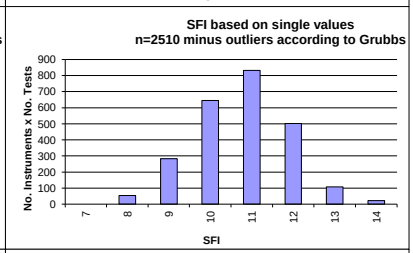




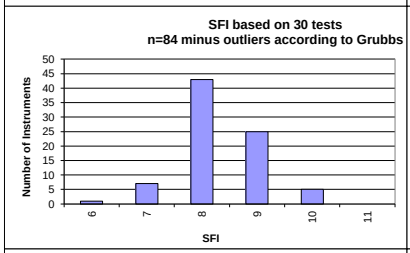
Cotton 2

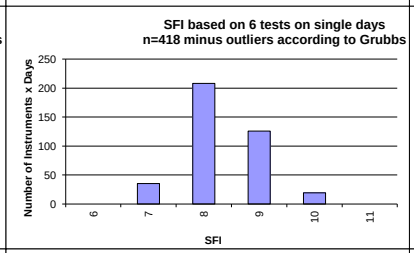


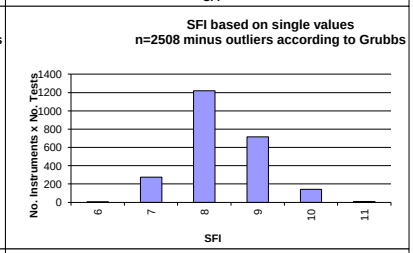




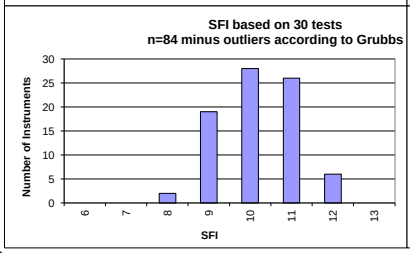
Cotton 3

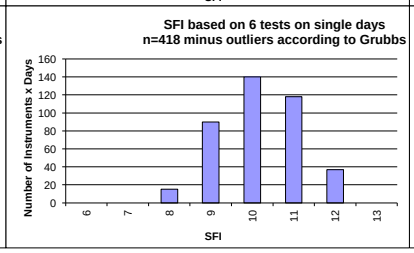


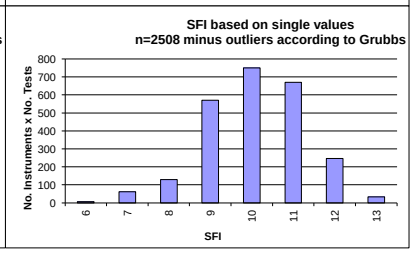




Cotton 4







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 2016 - 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*

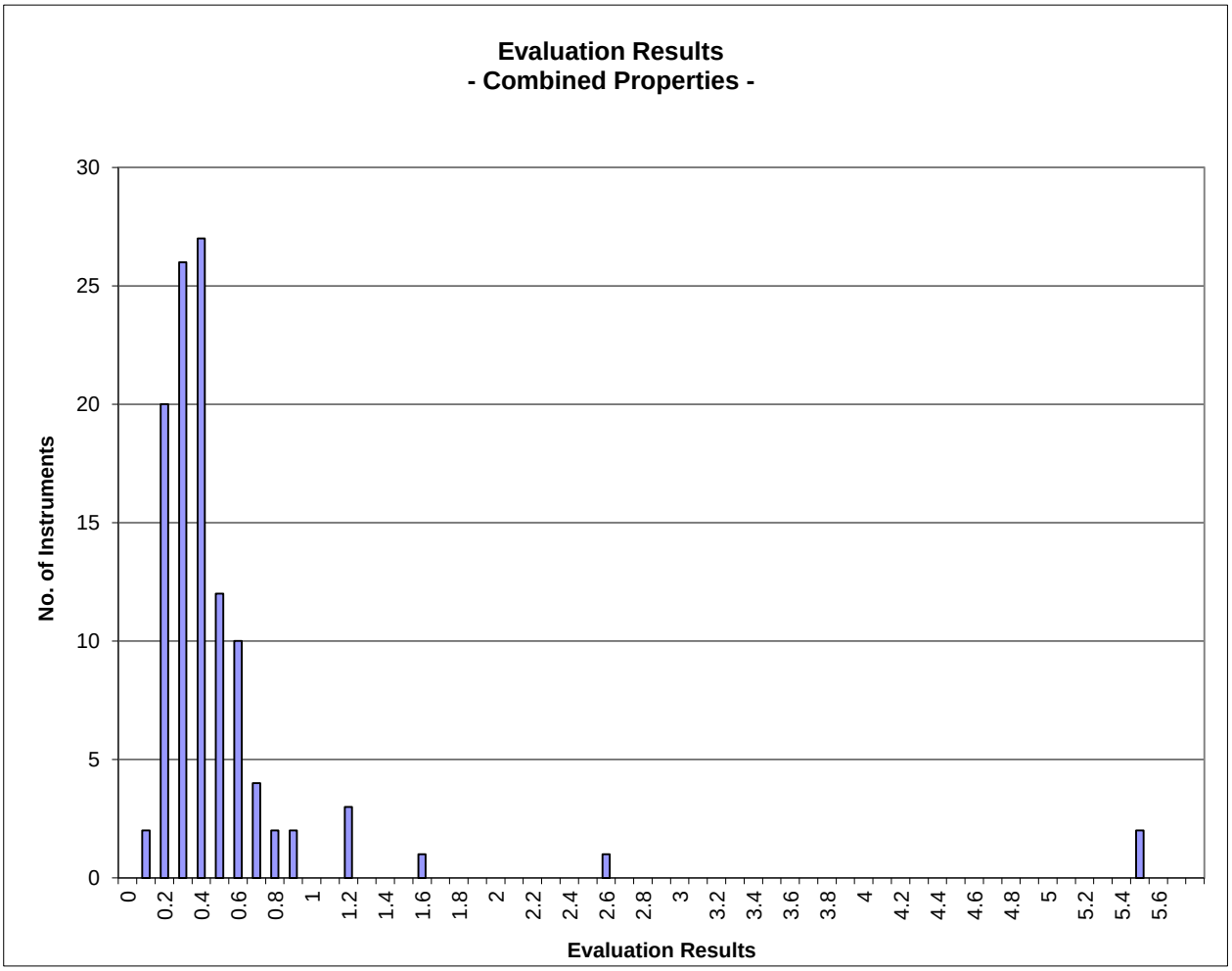
Instrument Evaluation

- Graph of Combined Properties -

According to ICAC CSITC Task Force Recommendations

Global - Round Trial 2016 - 1

		Evaluation Combined Prop.
Statistics	Average	0.53
	Median	0.37
	Best Instrument	0.12
	Worst Instrument	5.52



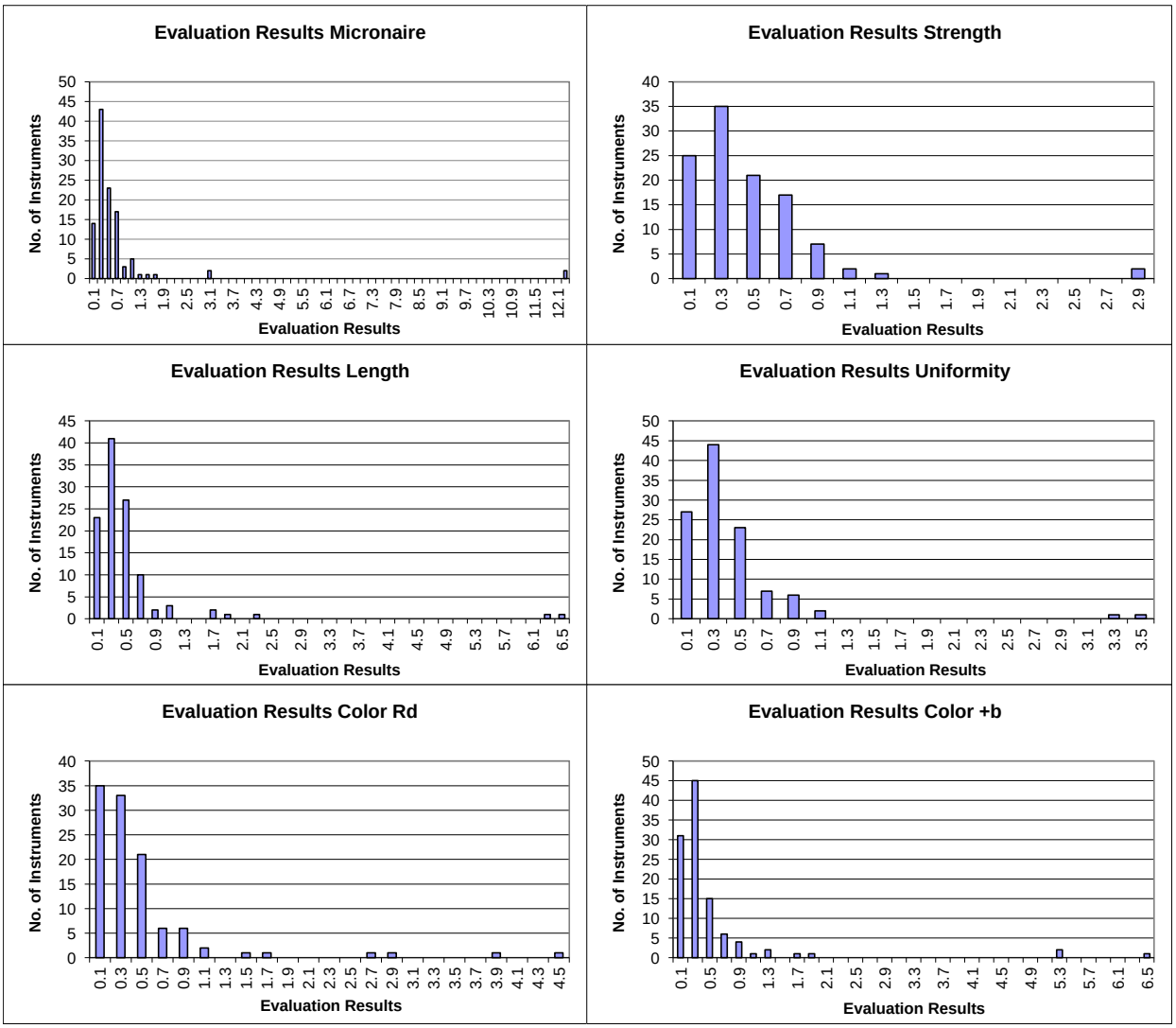
x-Axis shows midpoints of classes

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 2016 - 1

		Evaluation Micronaire	Evaluation Strength	Evaluation Length	Evaluation Uniformity	Evaluation Color Rd	Evaluation Color +b
Statistics	Average	0.72	0.46	0.54	0.42	0.48	0.52
	Median	0.39	0.35	0.33	0.31	0.25	0.29
	Best Instr.	0.06	0.04	0.09	0.05	0.03	0.03
	Worst Instr.	12.32	2.92	6.46	3.47	4.51	6.47



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

International Cotton Advisory Committee

CSITC
Global - Round Trial 2016 - 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:
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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	96.4	96.6	95.5	98.0	91.5	92.7
Completely within limits	93.8	90.9	93.8	97.3	84.4	89.0
% of Instruments ≥75% within limits	96.4	97.3	94.6	98.2	90.8	91.7
% of Instruments ≥50% within limits	97.3	98.2	95.5	98.2	95.4	93.6

Percentage of Results Within Limits						
Instrument	**Micronaire**	**Strength**	**Length**	**Uniformity**	**Color Rd**	**Color +b**
GL161-001-01	100	100	100	100	100	100
GL161-002-01	100	100	100	100	100	100
GL161-003-03	100	100	100	100	100	100
GL161-004-01	25	75	25	100		
GL161-005-01	100	100	100	100	100	100
GL161-006-13	100	100	100	100	100	100
GL161-007-02	100	100	100	100	100	100
GL161-008-01	100	100	75	100	100	0
GL161-009-01	100	100	100	100	100	100
GL161-010-03	100	100	100	100	100	100
GL161-011-01	0	25	0	0	50	50
GL161-011-02	0	25	0	0	50	50
GL161-013-02	100	100	100	100	100	100
GL161-013-29	100	100	100	100	100	100
GL161-014-01	100	100	100	100	100	100
GL161-015-01	100	100	100	100	100	100
GL161-015-04	100	100	100	100	100	100
GL161-015-05	100	100	100	100	100	100
GL161-018-01	75	100	100	100	75	100
GL161-020-01	100	100	100	100	100	100
GL161-022-01	100	100	100	100	100	100
GL161-023-31	100	100	100	100	100	100
GL161-023-32	100	100	100	100	100	100
GL161-024-01	100	100	100	100	100	100
GL161-025-01	100	75	25	100	100	100
GL161-026-01	100	100	100	100	100	100
GL161-027-01	100	100	100	100	100	100
GL161-027-02	100	100	100	100	100	100
GL161-029-02	100	100	100	100	0	0
GL161-029-03	100	100	100	100	100	100
GL161-031-01	100	100	100	100	100	100
GL161-031-02	100	100	100	100	100	100
GL161-031-04	100	100	100	100	100	100
GL161-032-01	100	100	100	100	100	100

GL161-033-01	100	100	100	100	100	100
GL161-034-04	100	100	100	100	100	100
GL161-035-01	100	100	100	100	50	100
GL161-036-01	100	100	100	100	100	100
GL161-036-02	100	100	100	100	100	100
GL161-037-01	50	100	100	100	0	0
GL161-038-01	100	100	100	100	100	100
GL161-038-02	100	100	100	100	100	100
GL161-039-04	100	100	100	100	100	100
GL161-039-30	100	100	100	100	100	100
GL161-040-01	100	100	100	100	100	100
GL161-041-01	100	75	100	75	0	100
GL161-042-01	100	100	100	100	100	100
GL161-043-02	100	100	100	100	100	100
GL161-043-03	100		50	100	100	0
GL161-043-04	100	100	100	100	75	25
GL161-043-06	100	100	100	100	100	100
GL161-043-07	100	75	100	100	100	100
GL161-043-08	100	100	100	100	100	100
GL161-044-01	100	100	100	100	100	100
GL161-044-02	100	100	100	100	100	100
GL161-045-04	100	100	100	100	100	100
GL161-045-05	100	100	100	100	100	100
GL161-046-01	100	100	100	100	100	100
GL161-047-01	100	75	100	100	75	100
GL161-048-01	100	75	100	100	100	100
GL161-049-01	100	100	100	100	0	100
GL161-050-13	75	75	100	100		
GL161-052-01	100	100	100	100	100	100
GL161-052-02	100	100	100	100	100	100
GL161-053-01	100	100	100	100	100	25
GL161-054-01	100	100	100	100	100	100
GL161-055-01	100	100	100	100	100	100
GL161-056-05	100		25			
GL161-057-01	100	100	100	100	100	100
GL161-058-01	100	100	100	100	100	100
GL161-058-02	100	100	100	100	100	100
GL161-060-04	100	100	100	100	100	100
GL161-060-05	100	100	100	100	100	100
GL161-061-01	100	100	100	100	100	100
GL161-062-01	100	100	100	100	100	100
GL161-062-02	100	100	100	100	100	100
GL161-062-03	100	100	100	100	100	100
GL161-062-06	100	100	100	100	100	100
GL161-063-02	100	100	100	100	100	100
GL161-065-01	100	100	100	100	75	100
GL161-065-03	100	100	100	100	75	100
GL161-067-21	100	100	100	100	100	100
GL161-067-30	100	100	100	100	100	100
GL161-068-01	100	100	100	100	50	100
GL161-069-03	100	100	100	100	75	100
GL161-070-01	75	100	100	100	100	100
GL161-071-01	100	100	100	100	100	100
GL161-071-02	100	100	100	100	100	100
GL161-071-03	100	100	100	100	100	100

GL161-071-04	100	100	100	100	100	100
GL161-073-26	100	100	100	100	50	100
GL161-074-01	100	100	100	100	100	100
GL161-074-02	100	100	100	100	100	100
GL161-075-06	100	100	100	100	100	100
GL161-076-01	100	100	100	100	100	100
GL161-077-01	100	50	100	100	100	25
GL161-079-01	100	100	100	100	100	75
GL161-081-01	100	100	100	100	100	100
GL161-082-53	100	100	100	100	100	100
GL161-082-60	100	100	100	100	100	100
GL161-084-01	100	100	100	100	0	100
GL161-086-02	100	100	100	100	100	100
GL161-086-03	100	100	100	100	100	100
GL161-086-04	100	100	100	100	100	100
GL161-088-01	100	100	100	100	100	100
GL161-088-02	100	100	100	100	100	100
GL161-089-03	100	100	100	100	100	100
GL161-089-04	100	100	100	100	100	100
GL161-089-06	100	100	100	100	100	100
GL161-090-01	100	100	100	100	75	100
GL161-091-01	100	100	100	100	100	75
GL161-091-02	100	100	100	100	100	75

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	95.3	93.0	92.9	96.4	90.1	89.2
% of Instruments 100% within limits	58.0	32.7	33.0	52.3	51.4	44.0
% of Instruments ≥95% within limits	88.4	68.2	76.8	86.5	68.8	67.0
% of Instruments ≥75% within limits	95.5	92.7	92.9	98.2	86.2	85.3
% of Instruments ≥65% within limits	96.4	95.5	94.6	98.2	90.8	89.9
% of Instruments ≥50% within limits	96.4	98.2	95.5	98.2	95.4	94.5

Percentage of Results Within Limits						
Instrument	**Micronaire**	**Strength**	**Length**	**Uniformity**	**Color Rd**	**Color +b**
GL161-001-01	78	99	96	98	100	96
GL161-002-01	100	98	100	100	99	100
GL161-003-03	100	99	100	99	100	99
GL161-004-01	25	75	34	100		
GL161-005-01	100	100	97	98	85	97
GL161-006-13	100	99	100	100	100	99
GL161-007-02	99	100	99	100	91	85
GL161-008-01	98	98	88	94	78	5
GL161-009-01	94	99	98	94	84	85
GL161-010-03	100	99	98	100	100	99
GL161-011-01	0	25	0	10	50	50
GL161-011-02	0	25	0	8	50	50
GL161-013-02	98	99	100	100	98	96
GL161-013-29	98	96	97	100	100	100
GL161-014-01	100	99	100	100	100	99
GL161-015-01	100	100	100	100	100	100
GL161-015-04	100	100	100	100	100	100
GL161-015-05	100	100	100	100	100	100
GL161-018-01	79	93	74	93	71	98
GL161-020-01	100	99	99	100	100	98
GL161-022-01	88	71	99	95	99	79
GL161-023-31	100	100	99	100	100	100
GL161-023-32	100	98	99	100	100	100
GL161-024-01	100	100	100	100	100	100
GL161-025-01	99	83	43	95	97	91
GL161-026-01	100	88	98	100	99	100
GL161-027-01	98	95	93	100	91	92
GL161-027-02	98	95	93	100	91	93
GL161-029-02	100	86	98	100	40	43
GL161-029-03	100	100	100	100	100	100

GL161-031-01	100	92	98	99	98	96
GL161-031-02	99	95	98	100	86	98
GL161-031-04	98	96	97	99	100	100
GL161-032-01	100	100	100	100	100	98
GL161-033-01	99	100	95	100	99	98
GL161-034-04	100	100	97	100	98	100
GL161-035-01	98	88	97	98	63	100
GL161-036-01	98	96	97	100	100	100
GL161-036-02	100	99	96	100	100	98
GL161-037-01	43	83	100	80	0	2
GL161-038-01	100	97	100	100	99	96
GL161-038-02	100	85	100	97	100	94
GL161-039-04	100	93	100	100	100	88
GL161-039-30	100	100	99	100	100	98
GL161-040-01	100	99	96	100	94	88
GL161-041-01	100	68	99	85	9	91
GL161-042-01	99	99	98	100	100	100
GL161-043-02	98	97	98	98	92	100
GL161-043-03	100		31	76	84	2
GL161-043-04	99	83	90	99	76	63
GL161-043-06	96	80	89	98	83	95
GL161-043-07	100	76	98	100	99	99
GL161-043-08	94	90	84	93	98	100
GL161-044-01	100	100	100	100	100	100
GL161-044-02	98	100	99	100	100	100
GL161-045-04	100	99	99	98	100	100
GL161-045-05	100	100	95	97	96	99
GL161-046-01	100	100	99	100	100	100
GL161-047-01	98	63	99	98	69	98
GL161-048-01	99	71	98	100	100	100
GL161-049-01	88	93	80	92	9	72
GL161-050-13	66	63	76	96		
GL161-052-01	99	100	100	98	85	77
GL161-052-02	98	100	100	98	86	68
GL161-053-01	94	87	100	99	100	43
GL161-054-01	100	100	99	97	100	99
GL161-055-01	100	100	94	100	96	91
GL161-056-05	98		63			
GL161-057-01	100	89	99	100	98	94
GL161-058-01	100	99	100	100	100	100
GL161-058-02	100	96	99	97	100	100
GL161-060-04	99	100	98	98	100	86
GL161-060-05	100	94	88	98	100	93
GL161-061-01	99	100	100	97	100	100
GL161-062-01	100	100	100	100	100	100
GL161-062-02	98	100	98	100	100	100
GL161-062-03	100	100	100	100	100	100
GL161-062-06	100	100	100	100	100	100
GL161-063-02	100	100	100	100	100	100
GL161-065-01	100	100	98	99	83	100
GL161-065-03	100	96	90	93	72	87
GL161-067-21	100	100	99	100	100	100
GL161-067-30	100	100	100	98	100	100
GL161-068-01	100	95	100	98	53	89
GL161-069-03	98	96	100	96	88	100

GL161-070-01	80	96	90	100	99	80
GL161-071-01	100	93	100	100	100	100
GL161-071-02	100	93	100	100	100	100
GL161-071-03	98	94	100	99	100	99
GL161-071-04	100	85	100	100	100	100
GL161-073-26	100	93	93	99	63	50
GL161-074-01	100	98	99	99	100	74
GL161-074-02	100	100	99	100	97	98
GL161-075-06	98	99	98	93	82	85
GL161-076-01	98	96	71	93	87	66
GL161-077-01	97	54	94	83	97	25
GL161-079-01	100	91	81	99	98	59
GL161-081-01	98	97	78	97	100	100
GL161-082-53	100	100	98	99	100	100
GL161-082-60	100	98	98	93	99	100
GL161-084-01	100	93	98	100	34	97
GL161-086-02	100	99	99	99	100	100
GL161-086-03	95	100	97	100	100	97
GL161-086-04	100	93	98	99	100	100
GL161-088-01	100	93	100	100	100	100
GL161-088-02	100	95	100	100	100	100
GL161-089-03	100	100	100	100	100	100
GL161-089-04	100	100	100	100	100	100
GL161-089-06	100	100	100	100	100	100
GL161-090-01	100	99	93	100	73	100
GL161-091-01	98	99	88	97	83	67
GL161-091-02	99	96	99	99	72	77