



**International Cotton Advisory Committee**



# CSITC

## Global - Round Trial 2013 - 4

### General Evaluation

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

#### Section One: Result Distribution

Content:

Mandatory Parameters

- Summary Table
- Distribution Graphs

Optional Parameters

- Summary Table
- Distribution Graphs

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

System Provided by:  
Generation 10 Limited



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



\* Faserinstitut Bremen are a Cooperation Partner with ICA Bremen

Global - Round Trial 2013 - 4

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

Micronaire							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			3.982	4.062	4.839	3.966	
Reference Values for Evaluation			3.982	4.062	4.839	3.966	
Number Of Instruments			151	151	151	151	<b>151</b>
Inter-Instrument Variation	based on 30 tests	SD	0.069	0.084	0.053	0.073	<b>0.070</b>
		CV %	1.7	2.1	1.1	1.8	<b>1.7</b>
	based on 6 tests	SD	0.075	0.086	0.063	0.081	<b>0.076</b>
		CV %	1.9	2.1	1.3	2.0	<b>1.8</b>
	based on single tests	SD	0.089	0.096	0.074	0.089	<b>0.087</b>
		CV %	2.2	2.4	1.5	2.2	<b>2.1</b>
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.028	0.027	0.026	0.022	<b>0.026</b>
		CV %	0.7	0.7	0.5	0.6	<b>0.6</b>
	between single tests on one day	SD	0.044	0.038	0.038	0.035	<b>0.039</b>
		CV %	1.1	0.9	0.8	0.9	<b>0.9</b>
	between all tests on different days	SD	0.053	0.049	0.048	0.042	<b>0.048</b>
		CV %	1.3	1.2	1.0	1.1	<b>1.1</b>

Strength							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			24.546	29.048	26.966	33.475	
Reference Values for Evaluation			24.546	29.048	26.966	33.475	
Number Of Instruments			151	151	151	151	<b>151</b>
Inter-Instrument Variation	based on 30 tests	SD	0.971	0.845	0.942	0.878	<b>0.909</b>
		CV %	4.0	2.9	3.5	2.6	<b>3.2</b>
	based on 6 tests	SD	1.054	0.918	0.997	0.954	<b>0.981</b>
		CV %	4.3	3.2	3.7	2.8	<b>3.5</b>
	based on single tests	SD	1.185	1.092	1.153	1.122	<b>1.138</b>
		CV %	4.8	3.8	4.3	3.4	<b>4.1</b>
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.316	0.390	0.339	0.339	<b>0.346</b>
		CV %	1.3	1.3	1.3	1.0	<b>1.2</b>
	between single tests on one day	SD	0.542	0.604	0.531	0.547	<b>0.556</b>
		CV %	2.2	2.1	2.0	1.6	<b>2.0</b>
	between all tests on different days	SD	0.615	0.712	0.620	0.643	<b>0.647</b>
		CV %	2.5	2.4	2.3	1.9	<b>2.3</b>

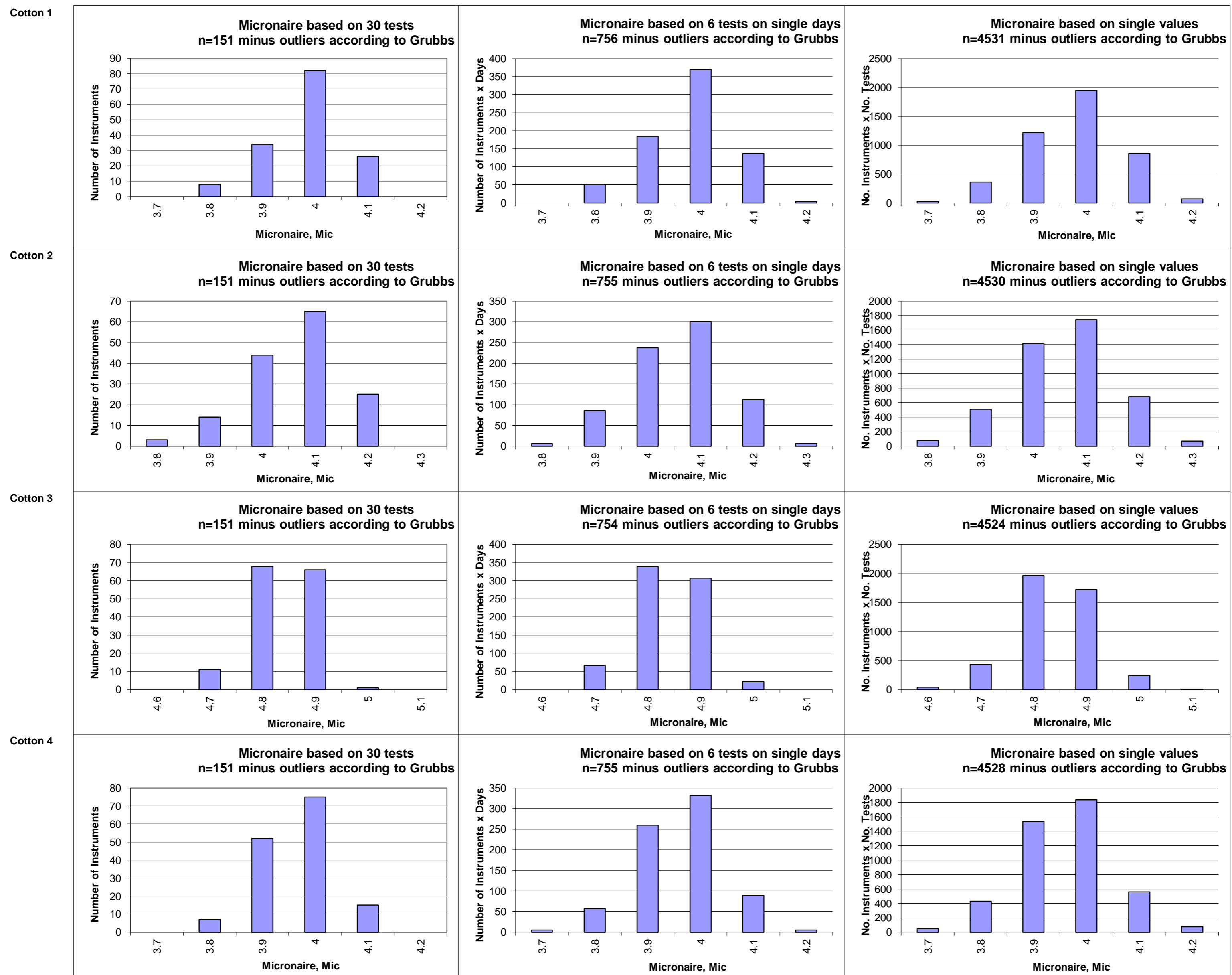
Length							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			0.9831	1.0980	1.0166	1.1940	
Reference Values for Evaluation			0.9831	1.0980	1.0166	1.1940	
Number Of Instruments			152	152	152	152	<b>152</b>
Inter-Instrument Variation	based on 30 tests	SD	0.0118	0.0112	0.0115	0.0105	<b>0.0112</b>
		CV %	1.2	1.0	1.1	0.9	<b>1.1</b>
	based on 6 tests	SD	0.0136	0.0125	0.0124	0.0117	<b>0.0126</b>
		CV %	1.4	1.1	1.2	1.0	<b>1.2</b>
	based on single tests	SD	0.0171	0.0165	0.0161	0.0147	<b>0.0161</b>
		CV %	1.7	1.5	1.6	1.2	<b>1.5</b>
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.0055	0.0053	0.0055	0.0053	<b>0.0054</b>
		CV %	0.6	0.5	0.5	0.4	<b>0.5</b>
	between single tests on one day	SD	0.0110	0.0108	0.0102	0.0090	<b>0.0103</b>
		CV %	1.1	1.0	1.0	0.8	<b>1.0</b>
	between all tests on different days	SD	0.0122	0.0122	0.0114	0.0107	<b>0.0116</b>
		CV %	1.2	1.1	1.1	0.9	<b>1.1</b>

Uniformity							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			79.708	79.913	80.905	83.570	
<b>Reference Values for Evaluation</b>			79.708	79.913	80.905	83.570	
<b>Number Of Instruments</b>			152	152	152	152	<b>152</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.658	0.534	0.512	0.437	<b>0.535</b>
		CV %	0.8	0.7	0.6	0.5	<b>0.7</b>
	based on 6 tests	SD	0.691	0.629	0.660	0.531	<b>0.628</b>
		CV %	0.9	0.8	0.8	0.6	<b>0.8</b>
	based on single tests	SD	0.848	0.814	0.823	0.704	<b>0.797</b>
		CV %	1.1	1.0	1.0	0.8	<b>1.0</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.290	0.288	0.263	0.265	<b>0.277</b>
		CV %	0.4	0.4	0.3	0.3	<b>0.3</b>
	between single tests on one day	SD	0.532	0.543	0.507	0.480	<b>0.515</b>
		CV %	0.7	0.7	0.6	0.6	<b>0.6</b>
	between all tests on different days	SD	0.593	0.607	0.574	0.553	<b>0.582</b>
		CV %	0.7	0.8	0.7	0.7	<b>0.7</b>

Color Rd							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			75.127	79.567	76.233	75.690	
<b>Reference Values for Evaluation</b>			75.127	79.567	76.233	75.690	
<b>Number Of Instruments</b>			150	150	150	150	<b>150</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.680	0.893	0.800	0.851	<b>0.806</b>
		CV %	0.9	1.1	1.0	1.1	<b>1.1</b>
	based on 6 tests	SD	0.709	0.864	0.835	0.884	<b>0.823</b>
		CV %	0.9	1.1	1.1	1.2	<b>1.1</b>
	based on single tests	SD	0.748	0.899	0.877	0.913	<b>0.859</b>
		CV %	1.0	1.1	1.2	1.2	<b>1.1</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.199	0.166	0.185	0.177	<b>0.182</b>
		CV %	0.3	0.2	0.2	0.2	<b>0.2</b>
	between single tests on one day	SD	0.207	0.193	0.184	0.180	<b>0.191</b>
		CV %	0.3	0.2	0.2	0.2	<b>0.2</b>
	between all tests on different days	SD	0.285	0.268	0.299	0.261	<b>0.278</b>
		CV %	0.4	0.3	0.4	0.3	<b>0.4</b>

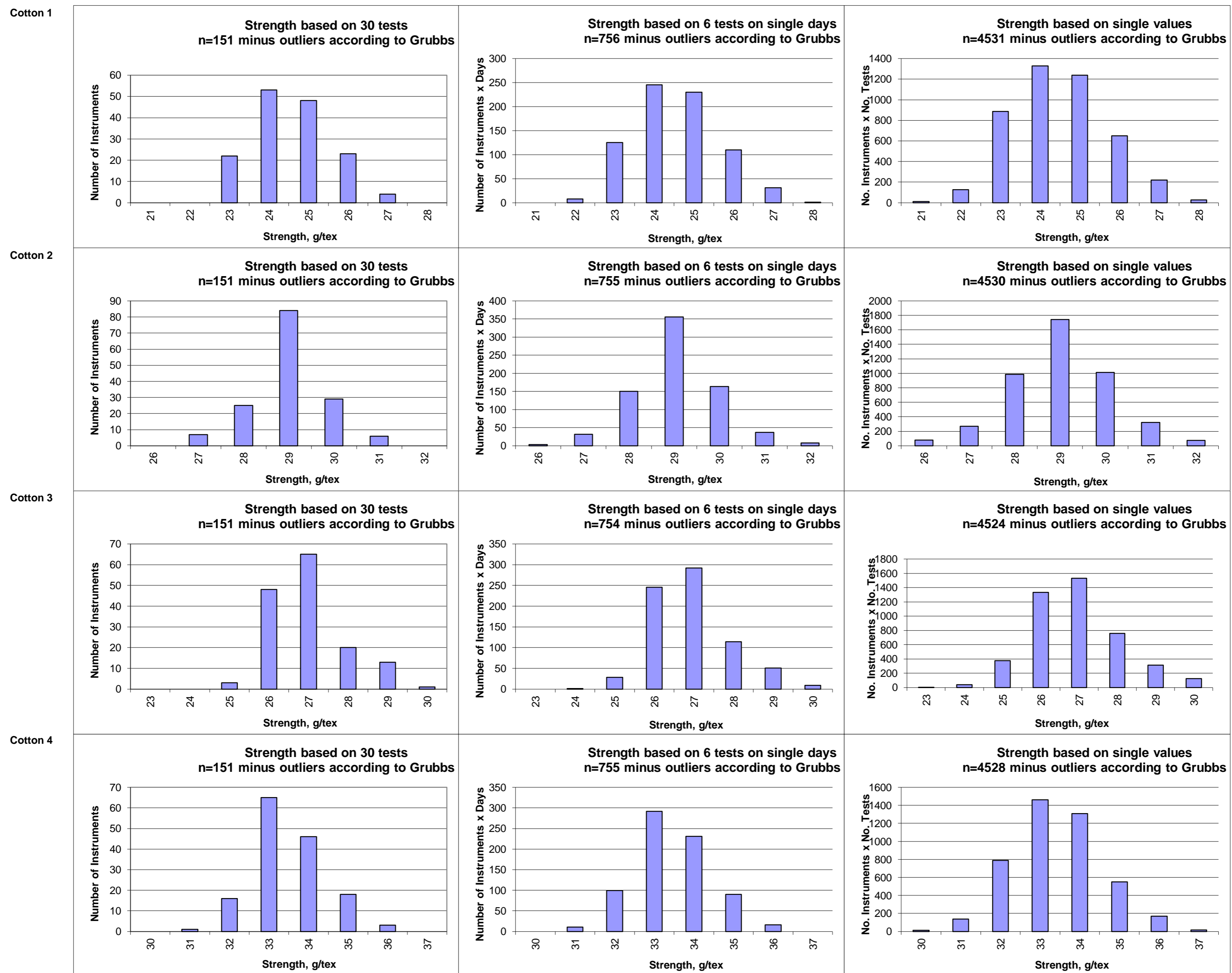
Color +b							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			10.669	12.504	10.976	12.159	
<b>Reference Values for Evaluation</b>			10.669	12.504	10.976	12.159	
<b>Number Of Instruments</b>			150	150	150	150	<b>150</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.272	0.372	0.298	0.371	<b>0.328</b>
		CV %	2.5	3.0	2.7	3.0	<b>2.8</b>
	based on 6 tests	SD	0.284	0.417	0.330	0.391	<b>0.356</b>
		CV %	2.7	3.3	3.0	3.2	<b>3.1</b>
	based on single tests	SD	0.312	0.438	0.350	0.417	<b>0.379</b>
		CV %	2.9	3.5	3.2	3.4	<b>3.3</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.096	0.106	0.117	0.106	<b>0.106</b>
		CV %	0.9	0.8	1.1	0.9	<b>0.9</b>
	between single tests on one day	SD	0.104	0.105	0.114	0.101	<b>0.106</b>
		CV %	1.0	0.8	1.0	0.8	<b>0.9</b>
	between all tests on different days	SD	0.149	0.158	0.164	0.147	<b>0.154</b>
		CV %	1.4	1.3	1.5	1.2	<b>1.3</b>

Test Result Distributions  
Micronaire



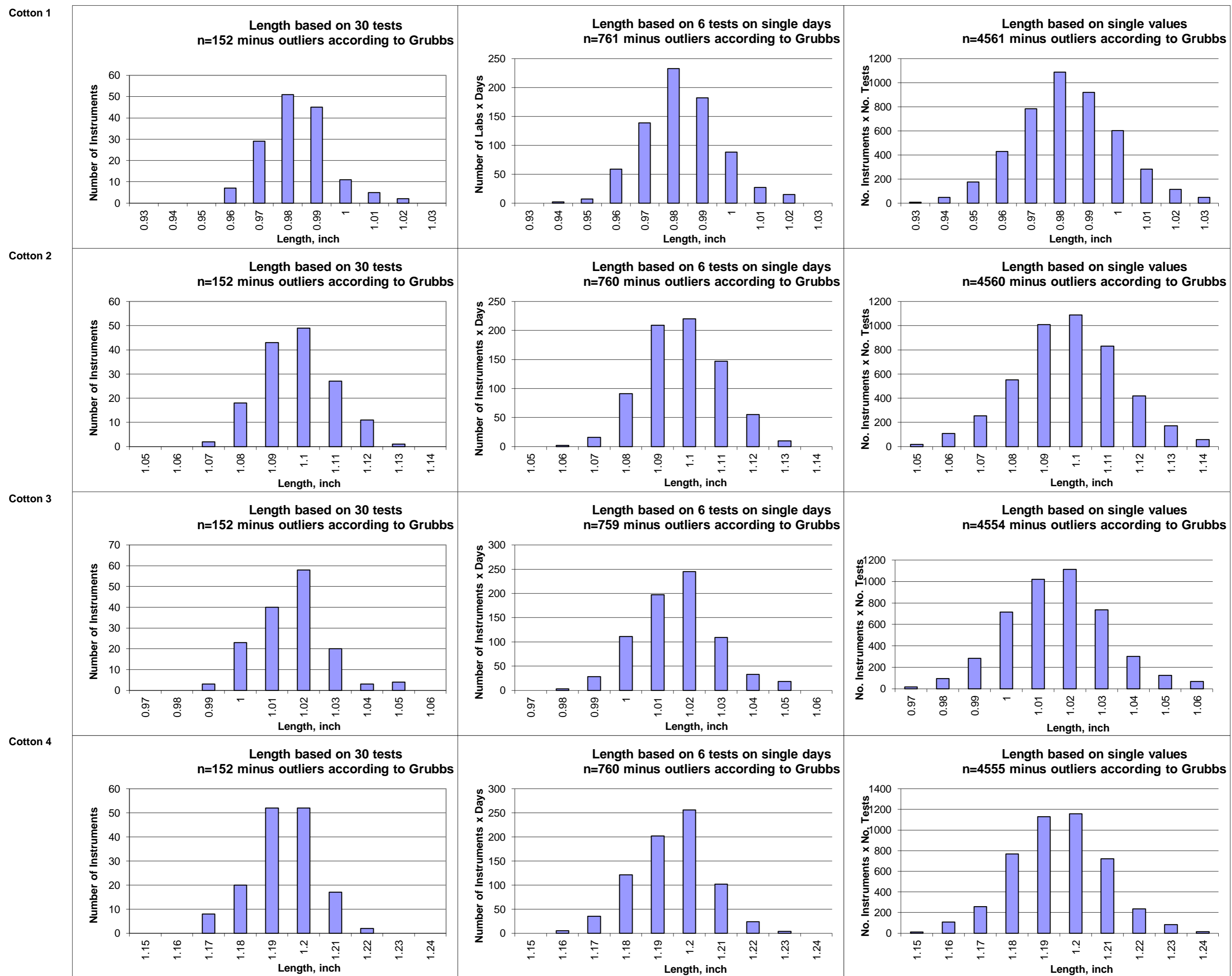
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method.)  
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions  
Strength



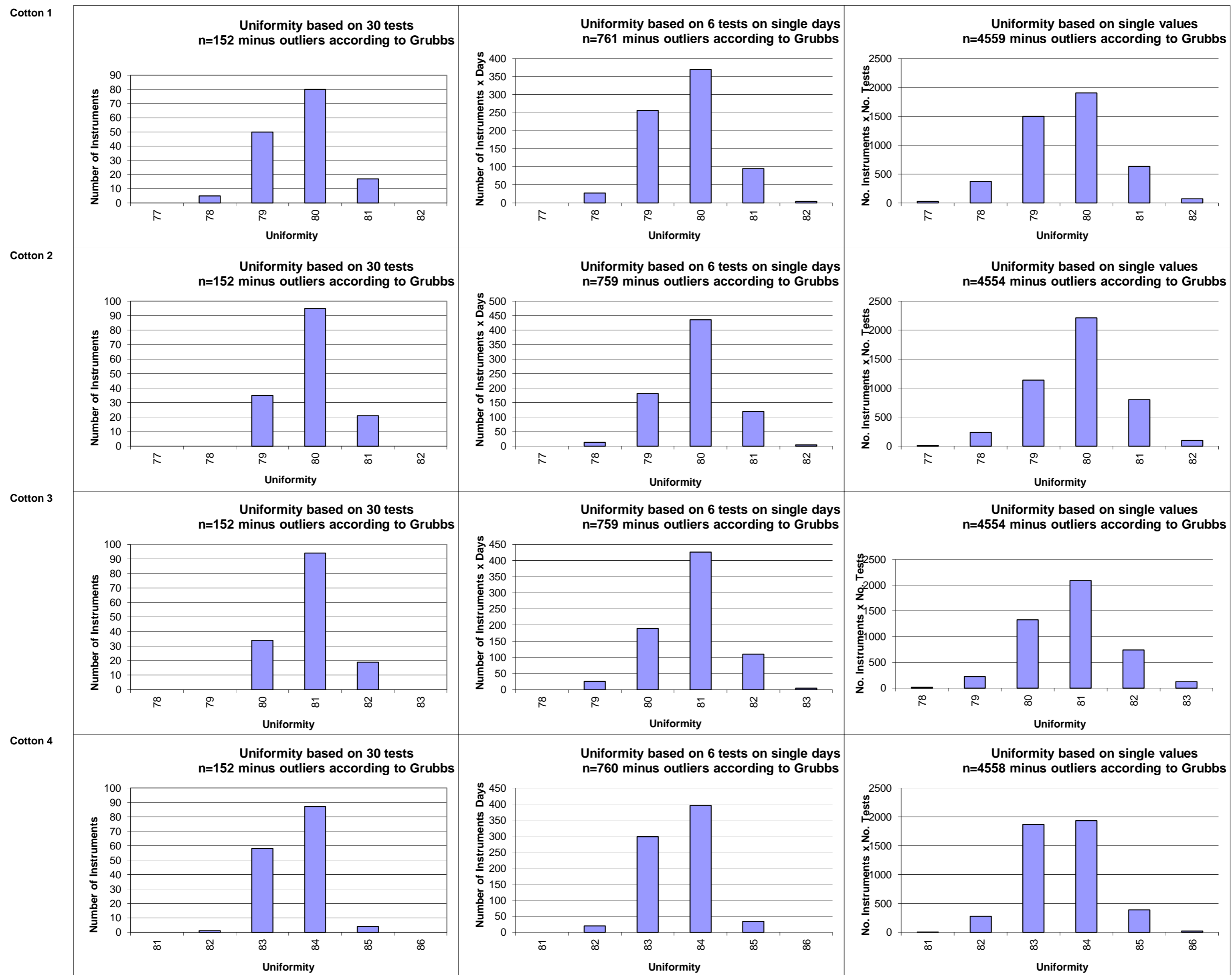
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions  
Length



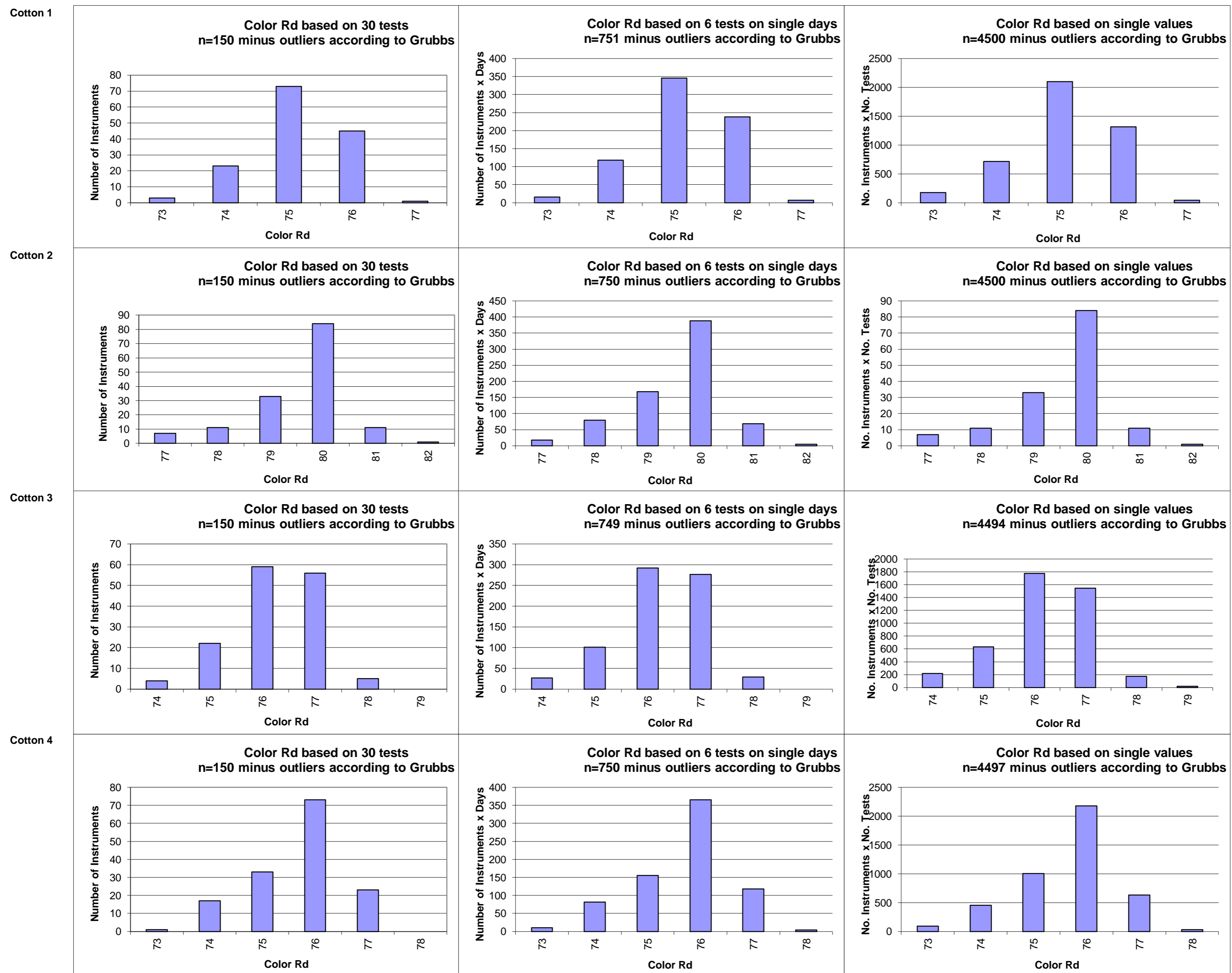
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions  
Uniformity



(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)

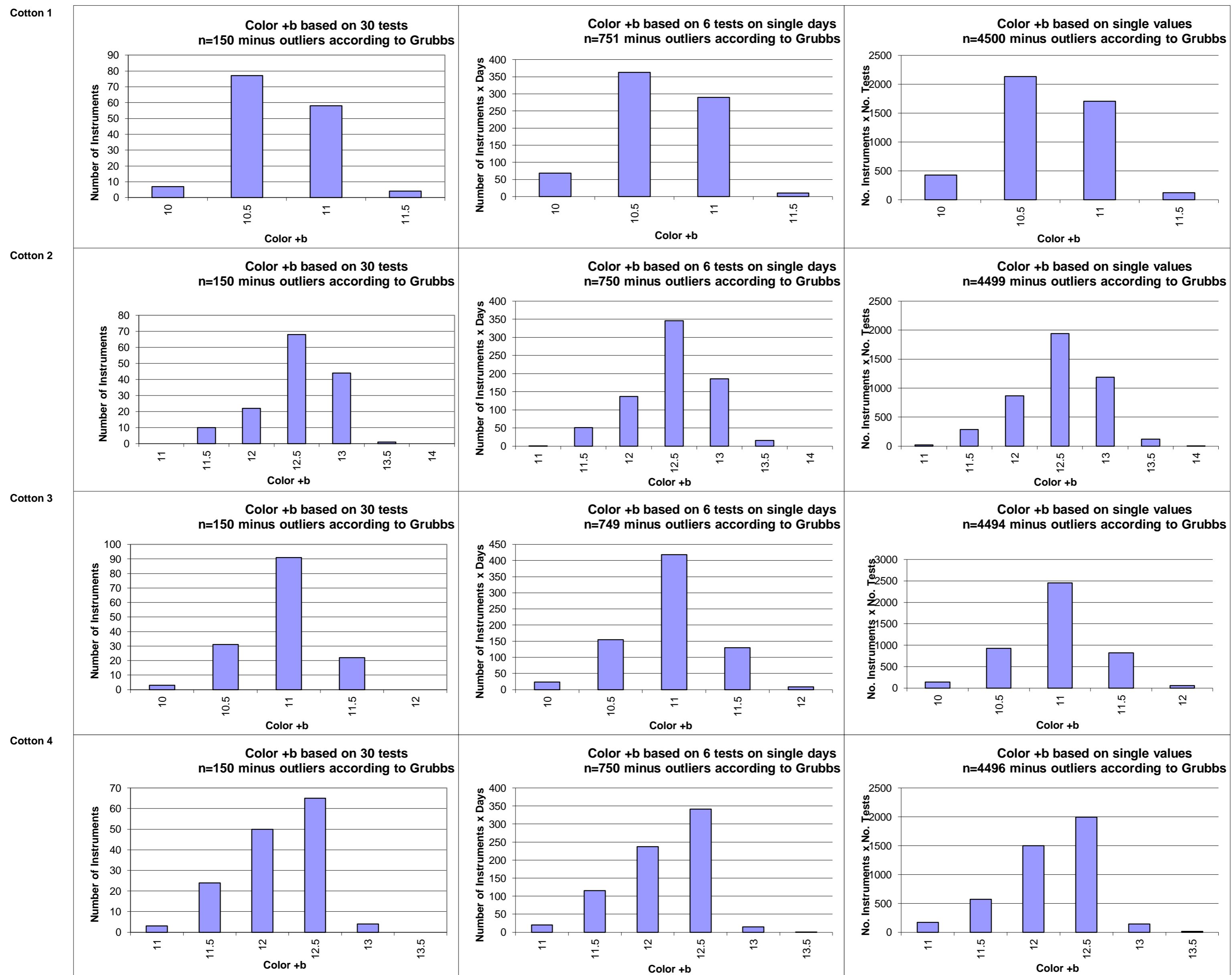
Test Result Distributions  
Color Rd



(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



(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

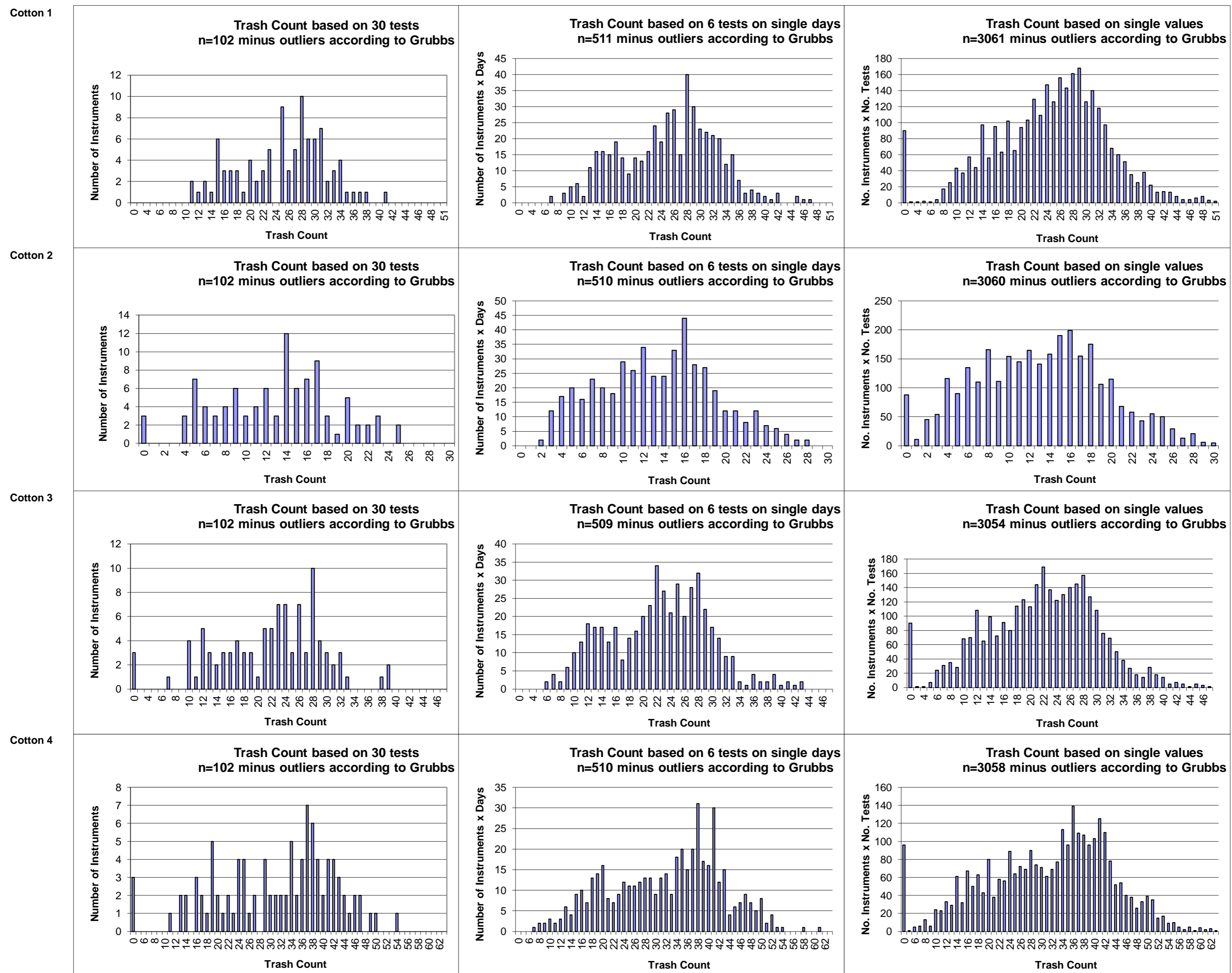
Trash Count							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			25.18	12.93	21.72	31.09	
<b>Reference Values for Evaluation</b>			25.18	12.93	21.72	31.09	
<b>Number Of Instruments</b>			102	102	102	102	<b>102</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	6.79	5.76	7.84	11.38	<b>7.94</b>
		CV %	27.0	44.5	36.1	36.6	<b>36.1</b>
	based on 6 tests	SD	8.42	6.07	8.14	11.80	<b>8.60</b>
		CV %	33.4	46.9	37.5	37.9	<b>38.9</b>
	based on single tests	SD	8.90	6.41	8.49	12.20	<b>9.00</b>
		CV %	35.4	49.6	39.1	39.2	<b>40.8</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	2.17	1.54	2.00	2.49	<b>2.05</b>
		CV %	8.6	11.9	9.2	8.0	<b>9.4</b>
	between single tests on one day	SD	2.73	1.83	2.47	2.83	<b>2.47</b>
		CV %	10.8	14.2	11.4	9.1	<b>11.4</b>
	between all tests on different days	SD	3.92	2.78	3.33	4.20	<b>3.56</b>
		CV %	15.6	21.5	15.3	13.5	<b>16.5</b>

Trash Area							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			0.303	0.111	0.232	0.287	
<b>Reference Values for Evaluation</b>			0.303	0.111	0.232	0.287	
<b>Number Of Instruments</b>			102	102	102	102	<b>102</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.081	0.031	0.077	0.078	<b>0.067</b>
		CV %	26.6	28.2	32.9	27.1	<b>28.7</b>
	based on 6 tests	SD	0.089	0.038	0.078	0.082	<b>0.072</b>
		CV %	29.3	34.5	33.7	28.7	<b>31.5</b>
	based on single tests	SD	0.107	0.043	0.081	0.093	<b>0.081</b>
		CV %	35.4	39.2	35.0	32.3	<b>35.5</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.039	0.018	0.032	0.026	<b>0.029</b>
		CV %	12.9	16.0	13.8	9.2	<b>13.0</b>
	between single tests on one day	SD	0.047	0.024	0.035	0.035	<b>0.035</b>
		CV %	15.6	21.6	14.9	12.1	<b>16.1</b>
	between all tests on different days	SD	0.066	0.032	0.050	0.048	<b>0.049</b>
		CV %	21.9	28.7	21.7	16.8	<b>22.3</b>

Maturity							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			84.16	85.01	86.61	85.09	
<b>Reference Values for Evaluation</b>			84.16	85.01	86.61	85.09	
<b>Number Of Instruments</b>			100	100	100	100	<b>100</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	1.86	1.43	2.13	1.91	<b>1.83</b>
		CV %	2.2	1.7	2.5	2.3	<b>2.2</b>
	based on 6 tests	SD	1.89	1.46	2.04	1.81	<b>1.80</b>
		CV %	2.2	1.7	2.4	2.1	<b>2.1</b>
	based on single tests	SD	1.94	1.66	1.98	1.83	<b>1.85</b>
		CV %	2.3	2.0	2.3	2.2	<b>2.2</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.20	0.19	0.22	0.24	<b>0.22</b>
		CV %	0.2	0.2	0.3	0.3	<b>0.3</b>
	between single tests on one day	SD	0.37	0.36	0.37	0.37	<b>0.37</b>
		CV %	0.4	0.4	0.4	0.4	<b>0.4</b>
	between all tests on different days	SD	0.49	0.48	0.49	0.48	<b>0.49</b>
		CV %	0.6	0.6	0.6	0.6	<b>0.6</b>

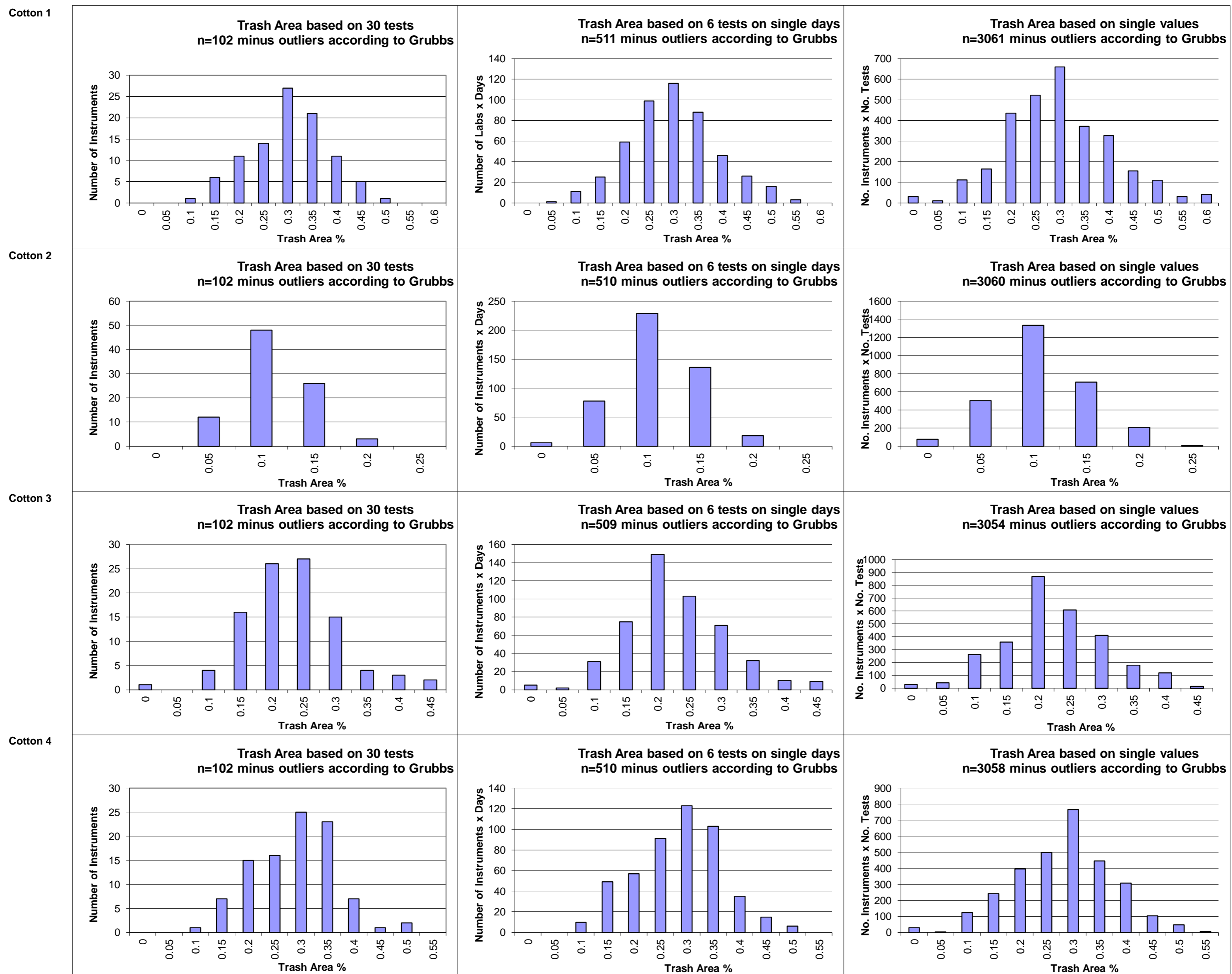
SFI							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			12.11	11.56	10.08	7.59	
<b>Reference Values for Evaluation</b>			12.11	11.56	10.08	7.59	
<b>Number Of Instruments</b>			114	114	114	114	<b>114</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	1.26	1.13	1.39	0.84	<b>1.15</b>
		CV %	10.4	9.8	13.8	11.0	<b>11.3</b>
	based on 6 tests	SD	1.32	1.15	1.39	0.81	<b>1.17</b>
		CV %	10.9	10.0	13.8	10.6	<b>11.3</b>
	based on single tests	SD	1.51	1.29	1.46	0.81	<b>1.27</b>
		CV %	12.5	11.2	14.5	10.7	<b>12.2</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.33	0.32	0.29	0.16	<b>0.28</b>
		CV %	2.7	2.8	2.9	2.1	<b>2.6</b>
	between single tests on one day	SD	0.65	0.53	0.53	0.29	<b>0.50</b>
		CV %	5.3	4.6	5.3	3.9	<b>4.8</b>
	between all tests on different days	SD	0.71	0.61	0.58	0.35	<b>0.56</b>
		CV %	5.9	5.3	5.7	4.6	<b>5.4</b>

Test Result Distributions  
Trash Count



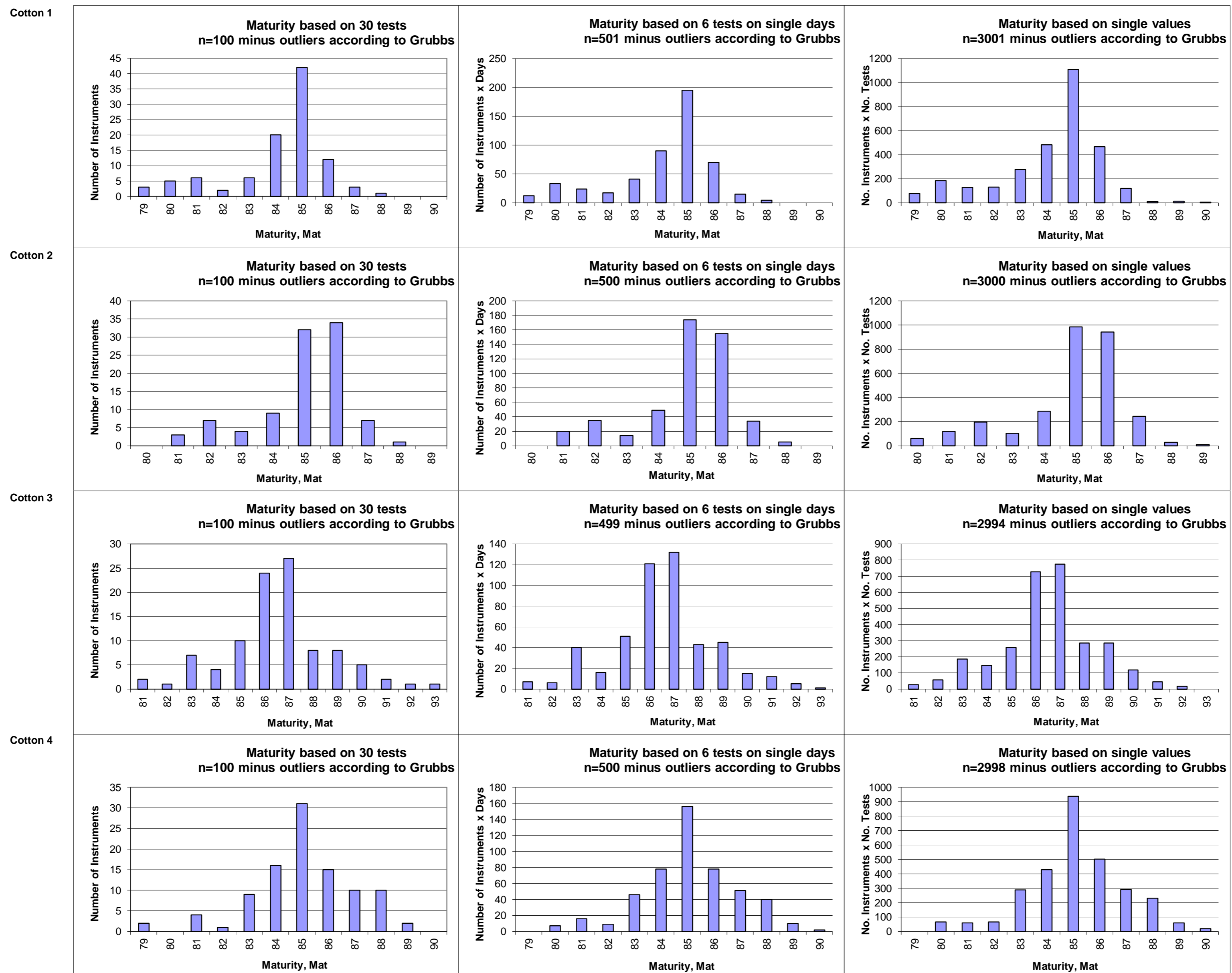
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions  
Trash Area



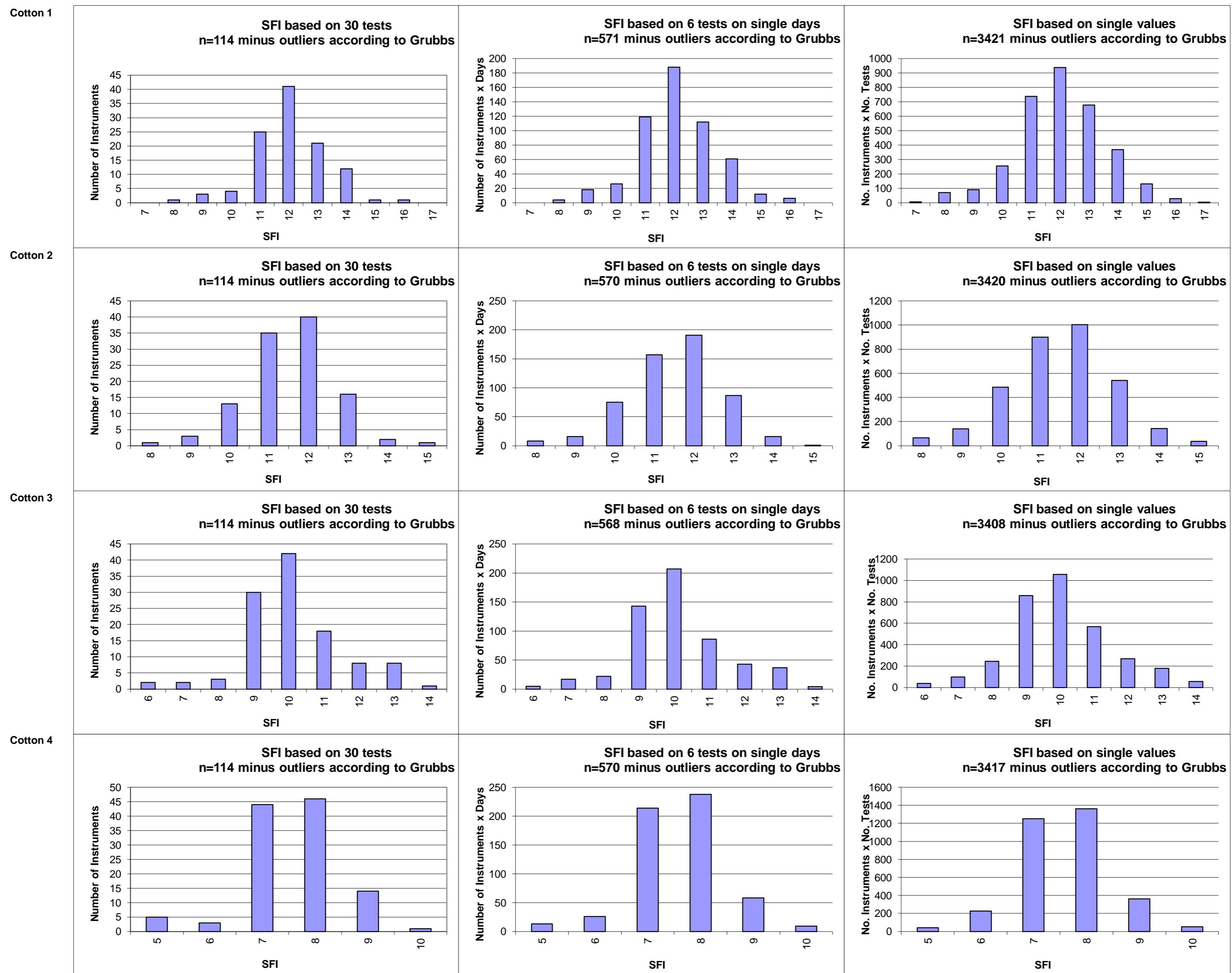
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions  
Maturity



(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



(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 2013 - 4

### 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



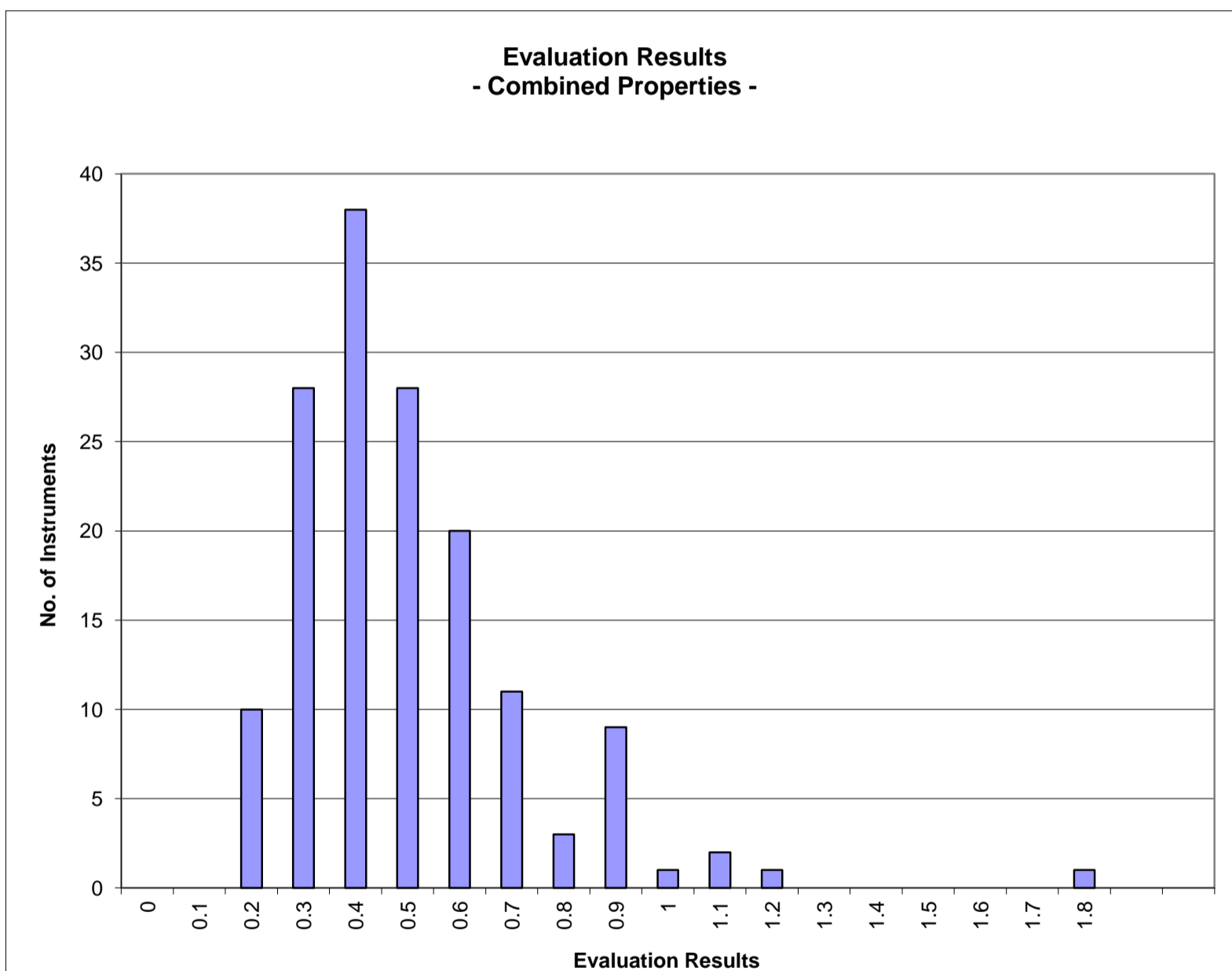
Instrument Evaluation

- Graph of Combined Properties -

According to ICAC CSITC Task Force Recommendations

Global - Round Trial 2013 - 4

		Evaluation Combined Prop.
<b>Statistics</b>	Average	0.50
	Median	0.45
	Best Instrument	0.16
	Worst Instrument	1.83

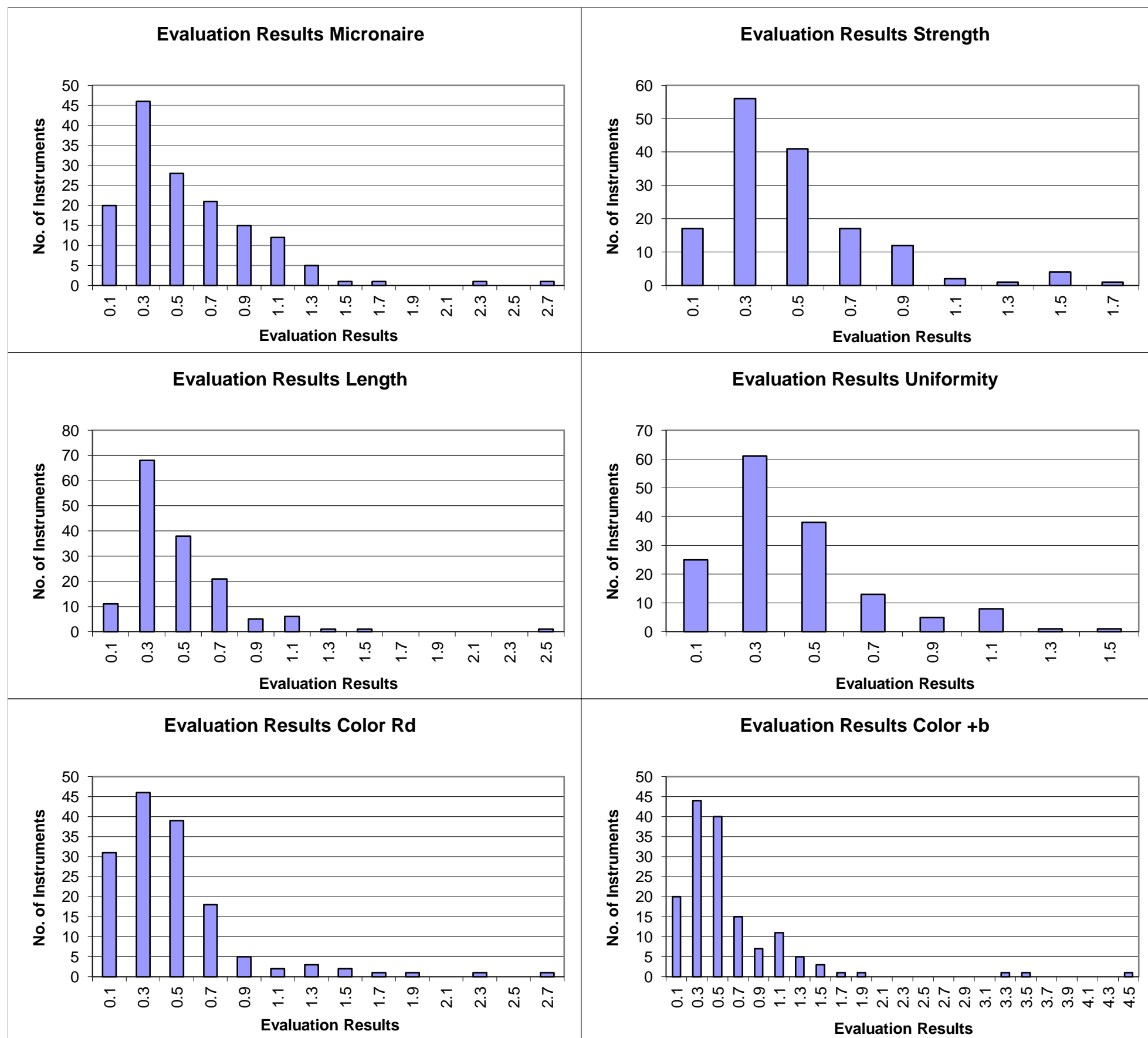


x-Axis shows midpoints of classes

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 2013 - 4

		Evaluation Micronaire	Evaluation Strength	Evaluation Length	Evaluation Uniformity	Evaluation Color Rd	Evaluation Color +b
<b>Statistics</b>	Average	0.57	0.48	0.46	0.43	0.47	0.60
	Median	0.44	0.41	0.39	0.37	0.39	0.44
	Best Instr.	0.03	0.10	0.10	0.04	0.04	0.07
	Worst Instr.	2.69	1.65	2.54	1.58	2.61	4.41



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



International Cotton Advisory Committee



# CSITC

## Global - Round Trial 2013 - 4

### General Evaluation

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

#### Section Three: Within Limits Evaluation

Content:

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

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

System Provided by:  
Generation 10 Limited



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



\* Faserinstitut Bremen are a Cooperation Partner with ICA Bremen

## Within Limits Evaluation

Based on average of 30 test results for each sample

	<b>Micronaire</b>	<b>Strength</b>	<b>Length</b>	<b>Uniformity</b>	<b>Color Rd</b>	<b>Color +b</b>
Limits	0.20	2.0	0.030	2.0	1.5	1.0
	units	g/tex	inch	%	units	units
Average % Results within Limits	98.7	95.4	98.0	100.0	91.2	97.7
Completely within limits	98.0	86.8	94.7	100.0	84.0	96.7
% of Instruments $\geq 75\%$ within limits	98.0	95.4	98.0	100.0	92.0	97.3
% of Instruments $\geq 50\%$ within limits	98.7	99.3	99.3	100.0	93.3	98.0

Percentage of Results Within Limits						
<b>Instrument</b>	<b>Micronaire</b>	<b>Strength</b>	<b>Length</b>	<b>Uniformity</b>	<b>Color Rd</b>	<b>Color +b</b>
GL134-001-01	100	100	100	100	100	100
GL134-002-01	100	100	100	100	100	100
GL134-002-04	100	100	100	100	100	100
GL134-002-05	100	100	100	100	100	100
GL134-003-01	100	100	100	100	100	100
GL134-004-01	100	100	100	100	100	100
GL134-005-01	100	50	100	100	75	100
GL134-006-01	100	100	100	100	75	100
GL134-007-01	100	100	100	100	100	100
GL134-007-02	100	100	100	100	100	100
GL134-008-01	100	100	100	100	100	100
GL134-008-02	100	75	100	100	100	100
GL134-008-03	100	100	100	100	100	100
GL134-008-04	100	100	100	100	100	100
GL134-009-01	100	100	100	100	50	100
GL134-010-01	100	100	100	100	100	100
GL134-011-01	100	75	100	100	50	25
GL134-012-01	100	100	100	100	100	100
GL134-013-10		75	100	100		
GL134-014-01	25	100	100	100	100	50
GL134-015-04	100		50	100	0	0
GL134-017-01	100	75	100	100	25	100
GL134-018-01	100	100	100	100	100	100
GL134-019-01	100	100	25	100	100	100
GL134-019-02	100	50	75	100	100	100
GL134-021-01	100	100	100	100	100	100
GL134-022-01	100	100	100	100	100	100
GL134-026-03	25	75	100	100	0	100
GL134-027-01	100	100	100	100	100	0
GL134-027-03	100	100	100	100	100	100
GL134-028-01	100	100	100	100	100	100
GL134-028-19	100	100	100	100	100	100
GL134-028-25	100	100	100	100	100	100
GL134-031-03	100	100	100	100	100	100
GL134-031-07	100	100	100	100	100	100
GL134-031-08	100	100	100	100	100	100
GL134-031-09	100	100	100	100	100	100
GL134-032-01	100	100	100	100	100	100
GL134-033-23	100	100	100	100	75	100

GL134-033-24	100	100	100	100	100	100
GL134-035-01	100	100	100	100	100	100
GL134-036-01	100	100	100	100	75	100
GL134-037-12	100	100	100	100	100	100
GL134-037-13	100	100	100	100	100	100
GL134-038-02	100	100	100	100	100	100
GL134-039-02	100	100	75	100	100	100
GL134-040-01	100	100	100	100		
GL134-040-02	100	100	100	100	100	100
GL134-041-01	100	100	100	100	100	100
GL134-042-02	100	100	100	100	75	100
GL134-042-03	100	100	100	100	100	100
GL134-042-04	100	100	100	100	0	100
GL134-042-06	100	100	100	100	75	100
GL134-042-07	100	100	100	100	100	100
GL134-043-02	100	100	100	100	100	100
GL134-043-06	100	100	100	100	100	100
GL134-045-01	100	100	100	100	100	100
GL134-045-02	100	100	100	100	100	100
GL134-046-03	100	100	100	100	100	100
GL134-046-04	100	100	100	100	100	100
GL134-046-06	100	100	100	100	100	100
GL134-047-01	100	50	100	100	100	100
GL134-048-01	100	100	100	100	75	100
GL134-049-01	100	75	100	100	100	100
GL134-050-01	100	100	100	100	100	100
GL134-051-01	100	100	100	100	100	100
GL134-052-01	100	100	100	100	100	100
GL134-052-02	100	100	100	100	100	100
GL134-052-03	100	100	100	100	100	100
GL134-052-04	100	100	100	100	100	100
GL134-053-19	100	100	100	100	100	100
GL134-053-26	100	100	100	100	100	100
GL134-054-12	100	100	100	100	100	100
GL134-054-13	100	100	100	100	100	100
GL134-055-01	100	100	50	100	75	100
GL134-057-03	100	100	100	100	100	100
GL134-058-01	50	75	100	100	100	100
GL134-059-04	100	100	100	100	100	100
GL134-059-05	100	100	100	100	100	100
GL134-060-01	100	100	100	100	100	100
GL134-061-01	100	100	100	100	100	100
GL134-061-02	100	100	100	100	100	100
GL134-062-01	100	100	100	100	100	100
GL134-063-01	100	100	100	100	100	100
GL134-064-01	100	100	100	100	25	100
GL134-064-02	100	100	100	100	100	100
GL134-064-04	100	100	100	100	100	100
GL134-065-01	100	100	75	100	100	100
GL134-065-02	100	75	75	100	100	100
GL134-066-01	100	75	75	100	100	100
GL134-068-01	100	100	100	100	100	100
GL134-068-08	100	100	100	100	100	100
GL134-069-01	100	100	100	100	100	100
GL134-070-01	100	100	100	100	100	100
GL134-071-01	100	100	100	100	100	100
GL134-072-01	100	100	100	100	0	100
GL134-074-01	100	100	100	100	100	100
GL134-074-02	100	100	100	100	100	100
GL134-075-01	100	75	100	100	25	75

GL134-076-01	100	100	100	100	100	100
GL134-077-01	100	100	100	100	100	100
GL134-077-02	100	100	100	100	100	100
GL134-078-03	100	100	100	100	100	100
GL134-079-01	100	75	100	100	100	100
GL134-079-02	100	75	100	100	100	100
GL134-079-03	100	100	100	100	100	100
GL134-080-01	100	100	100	100	100	100
GL134-080-04	100	100	100	100	100	100
GL134-080-05	100	100	100	100	100	100
GL134-081-01	100	100	100	100	100	100
GL134-083-01	100	100	100	100	0	100
GL134-084-01	100	100	100	100	100	100
GL134-085-52	100	100	100	100	100	100
GL134-085-53	100	100	100	100	100	100
GL134-087-01	100	100	100	100	100	100
GL134-088-01	100	100	100	100	75	100
GL134-088-02	100	100	100	100	75	100
GL134-088-03	100	100	100	100	100	100
GL134-088-04	100	100	100	100	100	100
GL134-089-01	100	100	100	100	0	100
GL134-089-02	100	100	100	100	100	100
GL134-090-01	100	100	100	100	0	100
GL134-091-01	100	50	100	100	100	100
GL134-091-02	100	25	100	100	100	100
GL134-091-03	100	50	100	100	100	100
GL134-091-06	100	50	100	100	100	100
GL134-092-01	100	100	100	100	100	100
GL134-092-02	100	100	100	100	100	100
GL134-092-03	100	100	100	100	100	100
GL134-092-04	100	100	100	100	100	100
GL134-094-02	100	100	100	100	100	100
GL134-095-13	100	100	100	100	100	100
GL134-098-01	100	100	100	100	100	100
GL134-099-01	100	100	100	100	100	100
GL134-099-02	100	100	100	100	100	100
GL134-099-03	100	100	100	100	100	100
GL134-100-01	100	100	100	100	100	100
GL134-100-02	100	100	100	100	100	100
GL134-101-01	100	100	100	100	100	100
GL134-102-01	100	100	100	100	100	100
GL134-103-01	100	100	100	100	75	100
GL134-104-17	100	100	100	100	100	100
GL134-105-04	100	100	100	100	100	100
GL134-106-01	100	100	100	100	100	100
GL134-106-02	100	100	100	100	100	100
GL134-107-01	100	75	100	100	75	100
GL134-108-01	100	100	100	100	100	100
GL134-109-02	100	100	100	100	100	100
GL134-111-03	100	100	100	100	100	100
GL134-111-04	100	100	100	100	100	100
GL134-111-05	100	100	100	100	100	100
GL134-111-06	100	100	100	100	100	100

# Within Limits Evaluation

Based on Single Test Results

	<b>Micronaire</b>	<b>Strength</b>	<b>Length</b>	<b>Uniformity</b>	<b>Color Rd</b>	<b>Color +b</b>
Limits	0.20	2.0	0.030	2.0	1.5	1.0
	units	g/tex	inch	%	units	units
Average % Results within Limits	96.7	90.4	94.7	97.1	88.9	96.5
% of Instruments 100% within limits	54.3	27.2	30.3	50.7	46.7	76.7
% of Instruments ≥95% within limits	85.4	50.3	70.4	84.9	62.7	90.0
% of Instruments ≥75% within limits	96.7	89.4	97.4	98.7	87.3	96.7
% of Instruments ≥65% within limits	98.0	95.4	99.3	99.3	90.0	96.7
% of Instruments ≥50% within limits	98.7	96.7	99.3	100.0	93.3	98.0

Percentage of Results Within Limits						
<b>Instrument</b>	<b>Micronaire</b>	<b>Strength</b>	<b>Length</b>	<b>Uniformity</b>	<b>Color Rd</b>	<b>Color +b</b>
GL134-001-01	100	98	94	100	100	100
GL134-002-01	100	100	98	100	100	100
GL134-002-04	100	100	100	100	99	100
GL134-002-05	100	100	100	100	100	100
GL134-003-01	100	100	100	100	100	100
GL134-004-01	89	100	94	100	90	100
GL134-005-01	100	57	99	97	65	99
GL134-006-01	99	87	81	93	78	100
GL134-007-01	100	99	99	100	99	100
GL134-007-02	100	100	100	100	100	100
GL134-008-01	100	94	100	100	98	100
GL134-008-02	98	86	100	100	98	97
GL134-008-03	98	96	100	100	98	98
GL134-008-04	91	100	100	100	98	98
GL134-009-01	100	87	83	90	62	100
GL134-010-01	100	93	99	100	100	100
GL134-011-01	100	75	100	94	57	24
GL134-012-01	93	100	99	100	98	99
GL134-013-10		53	94	88		
GL134-014-01	31	100	84	85	100	53
GL134-015-04	99		73	98	5	20
GL134-017-01	99	71	93	99	41	99
GL134-018-01	98	91	97	97	97	100
GL134-019-01	100	95	25	97	95	100
GL134-019-02	100	48	68	96	100	100
GL134-021-01	89	100	98	100	100	98
GL134-022-01	98	88	88	73	74	96
GL134-026-03	48	77	100	98	3	96
GL134-027-01	98	91	92	100	99	0
GL134-027-03	98	100	91	96	93	86
GL134-028-01	96	85	93	98	95	100
GL134-028-19	96	85	93	98	95	100
GL134-028-25	99	94	95	99	93	100
GL134-031-03	100	100	100	97	100	100
GL134-031-07	100	98	98	100	100	100
GL134-031-08	100	99	100	99	100	100

GL134-031-09	100	85	100	100	100	100
GL134-032-01	100	98	95	98	100	98
GL134-033-23	99	92	100	99	82	100
GL134-033-24	95	93	93	100	100	100
GL134-035-01	98	71	84	87	93	100
GL134-036-01	100	76	96	96	63	99
GL134-037-12	100	100	98	99	100	100
GL134-037-13	100	99	96	100	100	100
GL134-038-02	100	100	100	100	100	100
GL134-039-02	98	93	82	98	92	100
GL134-040-01	100	99	100	100		
GL134-040-02	100	97	94	62	99	100
GL134-041-01	99	99	94	84	100	100
GL134-042-02	97	92	94	93	62	100
GL134-042-03	100	91	73	96	85	98
GL134-042-04	100	100	96	93	2	100
GL134-042-06	72	92	79	84	77	100
GL134-042-07	100	100	83	92	79	100
GL134-043-02	88	100	94	100	88	100
GL134-043-06	84	100	98	100	91	100
GL134-045-01	99	99	97	91	88	85
GL134-045-02	100	100	98	96	90	95
GL134-046-03	98	99	100	100	100	100
GL134-046-04	99	100	100	100	100	100
GL134-046-06	100	100	100	100	100	100
GL134-047-01	99	67	100	100	100	100
GL134-048-01	94	98	88	100	79	100
GL134-049-01	98	74	99	98	88	100
GL134-050-01	100	98	100	100	100	100
GL134-051-01	99	87	99	98	87	100
GL134-052-01	98	91	99	100	100	100
GL134-052-02	99	99	98	88	99	99
GL134-052-03	100	100	97	99	100	100
GL134-052-04	100	99	100	100	100	100
GL134-053-19	100	100	96	100	100	100
GL134-053-26	100	98	99	100	99	100
GL134-054-12	99	93	99	100	100	100
GL134-054-13	100	92	99	100	97	100
GL134-055-01	99	98	76	99	71	100
GL134-057-03	99	90	97	98	100	100
GL134-058-01	50	72	89	94	87	100
GL134-059-04	95	92	95	99	100	100
GL134-059-05	96	97	98	100	100	100
GL134-060-01	100	97	92	98	98	100
GL134-061-01	100	93	87	98	91	100
GL134-061-02	99	92	97	98	82	84
GL134-062-01	98	99	98	100	100	100
GL134-063-01	73	96	87	98	87	100
GL134-064-01	100	99	96	98	37	93
GL134-064-02	98	97	98	100	100	100
GL134-064-04	99	97	100	100	99	100
GL134-065-01	85	90	80	82	96	100
GL134-065-02	84	86	83	81	100	100
GL134-066-01	100	74	78	98	78	82
GL134-068-01	100	96	98	98	100	100
GL134-068-08	99	91	100	100	100	100
GL134-069-01	98	90	97	92	100	99
GL134-070-01	99	93	95	97	78	100
GL134-071-01	98	97	96	96	100	100
GL134-072-01	100	94	95	98	30	100



GL134-074-01	98	96	96	98	93	100
GL134-074-02	100	97	100	100	94	100
GL134-075-01	100	83	80	95	38	53
GL134-076-01	100	100	100	100	100	100
GL134-077-01	100	99	100	100	100	100
GL134-077-02	100	100	100	100	100	100
GL134-078-03	100	98	96	97	100	100
GL134-079-01	91	67	96	100	100	100
GL134-079-02	88	75	96	98	100	99
GL134-079-03	100	88	94	99	100	100
GL134-080-01	100	100	100	100	100	100
GL134-080-04	100	100	100	100	100	100
GL134-080-05	100	100	100	100	100	100
GL134-081-01	100	92	96	98	73	100
GL134-083-01	99	93	82	78	38	100
GL134-084-01	100	100	93	99	84	91
GL134-085-52	100	94	100	100	100	100
GL134-085-53	100	100	100	99	100	100
GL134-087-01	100	93	98	99	100	100
GL134-088-01	100	88	99	100	86	100
GL134-088-02	100	92	99	100	83	100
GL134-088-03	91	85	95	85	92	100
GL134-088-04	90	81	93	92	58	99
GL134-089-01	100	88	88	96	13	100
GL134-089-02	93	88	99	100	99	100
GL134-090-01	82	68	89	88	1	82
GL134-091-01	100	34	98	100	91	96
GL134-091-02	100	30	95	100	92	86
GL134-091-03	100	33	96	100	95	97
GL134-091-06	100	33	92	100	94	93
GL134-092-01	100	100	100	100	100	100
GL134-092-02	100	100	100	100	100	100
GL134-092-03	100	100	100	100	100	100
GL134-092-04	100	100	100	100	100	100
GL134-094-02	93	88	95	95	97	93
GL134-095-13	98	93	94	98	100	100
GL134-098-01	100	94	97	99	100	100
GL134-099-01	100	66	98	100	99	100
GL134-099-02	100	82	98	99	89	100
GL134-099-03	100	93	98	100	100	100
GL134-100-01	99	97	100	100	100	100
GL134-100-02	99	87	100	100	100	100
GL134-101-01	98	97	88	100	89	100
GL134-102-01	100	82	99	100	100	100
GL134-103-01	83	100	88	100	78	100
GL134-104-17	98	88	98	98	80	98
GL134-105-04	100	83	98	97	100	100
GL134-106-01	100	100	100	100	100	100
GL134-106-02	100	94	100	100	100	100
GL134-107-01	100	76	100	100	82	100
GL134-108-01	98	100	100	100	100	100
GL134-109-02	100	98	99	100	98	100
GL134-111-03	100	100	100	100	100	100
GL134-111-04	100	100	99	100	100	100
GL134-111-05	100	100	100	100	100	100
GL134-111-06	100	100	100	100	100	100