



**International Cotton Advisory Committee**



# CSITC

## Global - Round Trial 2013 - 2

### 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 - 2

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

Micronaire							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			4.983	3.296	5.225	2.506	
<b>Reference Values for Evaluation</b>			4.983	3.296	5.225	2.506	
<b>Number Of Instruments</b>			129	129	129	126	<b>128</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.056	0.068	0.060	0.056	<b>0.060</b>
		CV %	1.1	2.1	1.1	2.2	<b>1.6</b>
	based on 6 tests	SD	0.062	0.071	0.063	0.059	<b>0.064</b>
		CV %	1.3	2.1	1.2	2.3	<b>1.7</b>
	based on single tests	SD	0.076	0.078	0.077	0.069	<b>0.075</b>
		CV %	1.5	2.4	1.5	2.8	<b>2.0</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.026	0.022	0.028	0.020	<b>0.024</b>
		CV %	0.5	0.7	0.5	0.8	<b>0.6</b>
	between single tests on one day	SD	0.038	0.029	0.038	0.026	<b>0.033</b>
		CV %	0.8	0.9	0.7	1.0	<b>0.9</b>
	between all tests on different days	SD	0.048	0.039	0.048	0.035	<b>0.043</b>
		CV %	1.0	1.2	0.9	1.4	<b>1.1</b>

Strength							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			27.122	29.205	26.965	23.368	
<b>Reference Values for Evaluation</b>			27.122	29.205	26.965	23.368	
<b>Number Of Instruments</b>			129	129	129	126	<b>128</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.905	0.879	0.958	0.943	<b>0.921</b>
		CV %	3.3	3.0	3.6	4.0	<b>3.5</b>
	based on 6 tests	SD	1.086	0.963	1.064	1.003	<b>1.029</b>
		CV %	4.0	3.3	3.9	4.3	<b>3.9</b>
	based on single tests	SD	1.208	1.101	1.170	1.130	<b>1.152</b>
		CV %	4.5	3.8	4.3	4.8	<b>4.4</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.329	0.366	0.332	0.348	<b>0.344</b>
		CV %	1.2	1.3	1.2	1.5	<b>1.3</b>
	between single tests on one day	SD	0.530	0.558	0.568	0.486	<b>0.536</b>
		CV %	2.0	1.9	2.1	2.1	<b>2.0</b>
	between all tests on different days	SD	0.631	0.670	0.653	0.583	<b>0.634</b>
		CV %	2.3	2.3	2.4	2.5	<b>2.4</b>

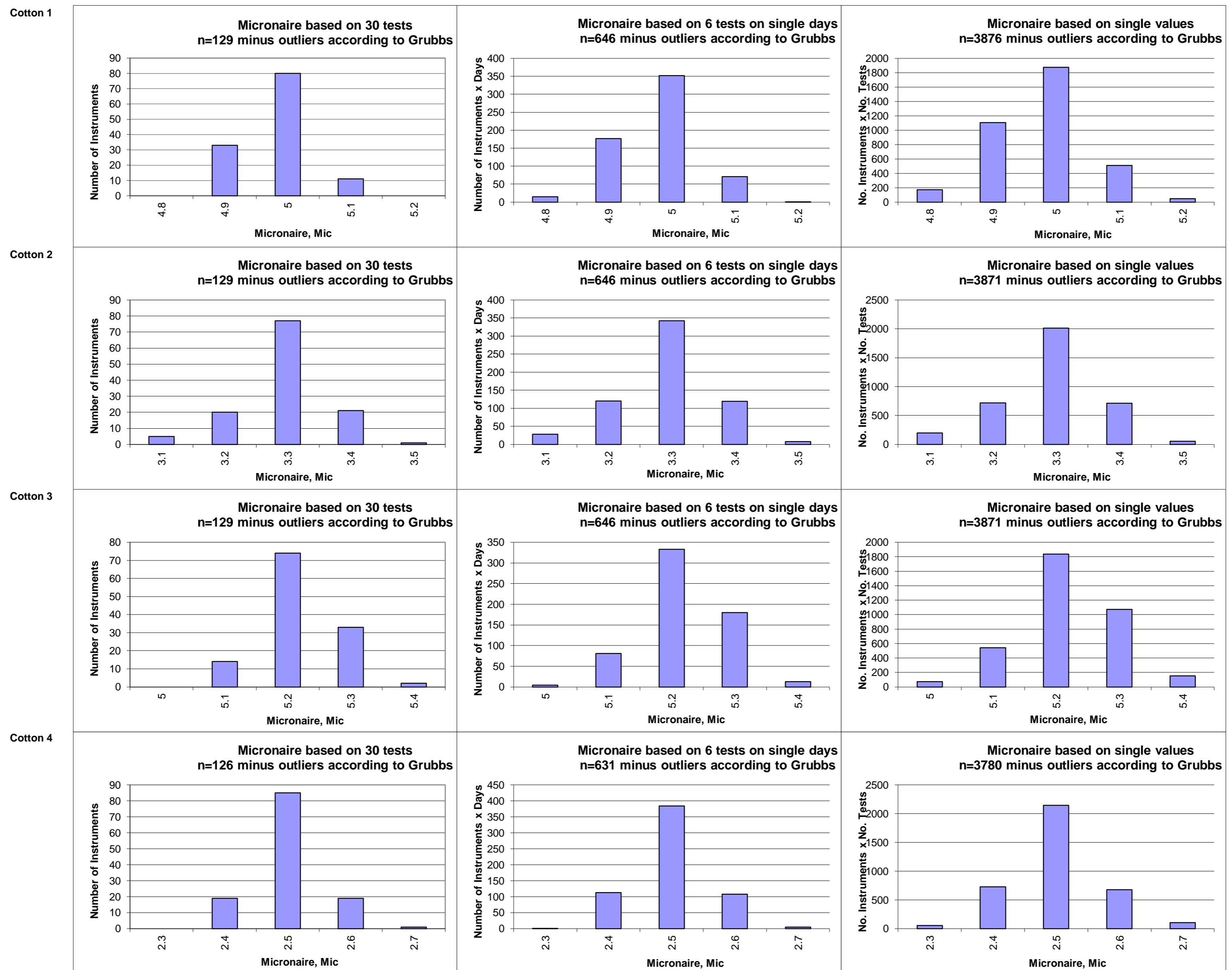
Length							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			1.0317	1.1216	1.0087	1.0341	
<b>Reference Values for Evaluation</b>			1.0317	1.1216	1.0087	1.0341	
<b>Number Of Instruments</b>			129	129	129	126	<b>128</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.0105	0.0101	0.0101	0.0121	<b>0.0107</b>
		CV %	1.0	0.9	1.0	1.2	<b>1.0</b>
	based on 6 tests	SD	0.0125	0.0111	0.0129	0.0137	<b>0.0125</b>
		CV %	1.2	1.0	1.3	1.3	<b>1.2</b>
	based on single tests	SD	0.0163	0.0148	0.0170	0.0166	<b>0.0162</b>
		CV %	1.6	1.3	1.7	1.6	<b>1.5</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.0057	0.0054	0.0054	0.0053	<b>0.0055</b>
		CV %	0.6	0.5	0.5	0.5	<b>0.5</b>
	between single tests on one day	SD	0.0097	0.0090	0.0100	0.0095	<b>0.0096</b>
		CV %	0.9	0.8	1.0	0.9	<b>0.9</b>
	between all tests on different days	SD	0.0111	0.0103	0.0113	0.0108	<b>0.0109</b>
		CV %	1.1	0.9	1.1	1.0	<b>1.0</b>

Uniformity							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			79.167	81.310	79.555	78.994	
<b>Reference Values for Evaluation</b>			79.167	81.310	79.555	78.994	
<b>Number Of Instruments</b>			129	129	129	126	<b>128</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.484	0.517	0.556	0.614	<b>0.543</b>
		CV %	0.6	0.6	0.7	0.8	<b>0.7</b>
	based on 6 tests	SD	0.599	0.554	0.697	0.702	<b>0.638</b>
		CV %	0.8	0.7	0.9	0.9	<b>0.8</b>
	based on single tests	SD	0.842	0.763	0.874	0.865	<b>0.836</b>
		CV %	1.1	0.9	1.1	1.1	<b>1.0</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.276	0.281	0.297	0.317	<b>0.293</b>
		CV %	0.3	0.3	0.4	0.4	<b>0.4</b>
	between single tests on one day	SD	0.548	0.481	0.554	0.533	<b>0.529</b>
		CV %	0.7	0.6	0.7	0.7	<b>0.7</b>
	between all tests on different days	SD	0.590	0.537	0.579	0.613	<b>0.580</b>
		CV %	0.7	0.7	0.7	0.8	<b>0.7</b>

Color Rd							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			78.141	70.754	79.640	73.432	
<b>Reference Values for Evaluation</b>			78.141	70.754	79.640	73.432	
<b>Number Of Instruments</b>			126	126	126	123	<b>125</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.628	1.034	0.951	1.073	<b>0.922</b>
		CV %	0.8	1.5	1.2	1.5	<b>1.2</b>
	based on 6 tests	SD	0.697	1.068	1.020	1.102	<b>0.972</b>
		CV %	0.9	1.5	1.3	1.5	<b>1.3</b>
	based on single tests	SD	0.748	1.097	1.044	1.123	<b>1.003</b>
		CV %	1.0	1.6	1.3	1.5	<b>1.3</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.254	0.222	0.226	0.208	<b>0.227</b>
		CV %	0.3	0.3	0.3	0.3	<b>0.3</b>
	between single tests on one day	SD	0.240	0.208	0.219	0.206	<b>0.218</b>
		CV %	0.3	0.3	0.3	0.3	<b>0.3</b>
	between all tests on different days	SD	0.342	0.313	0.329	0.299	<b>0.321</b>
		CV %	0.4	0.4	0.4	0.4	<b>0.4</b>

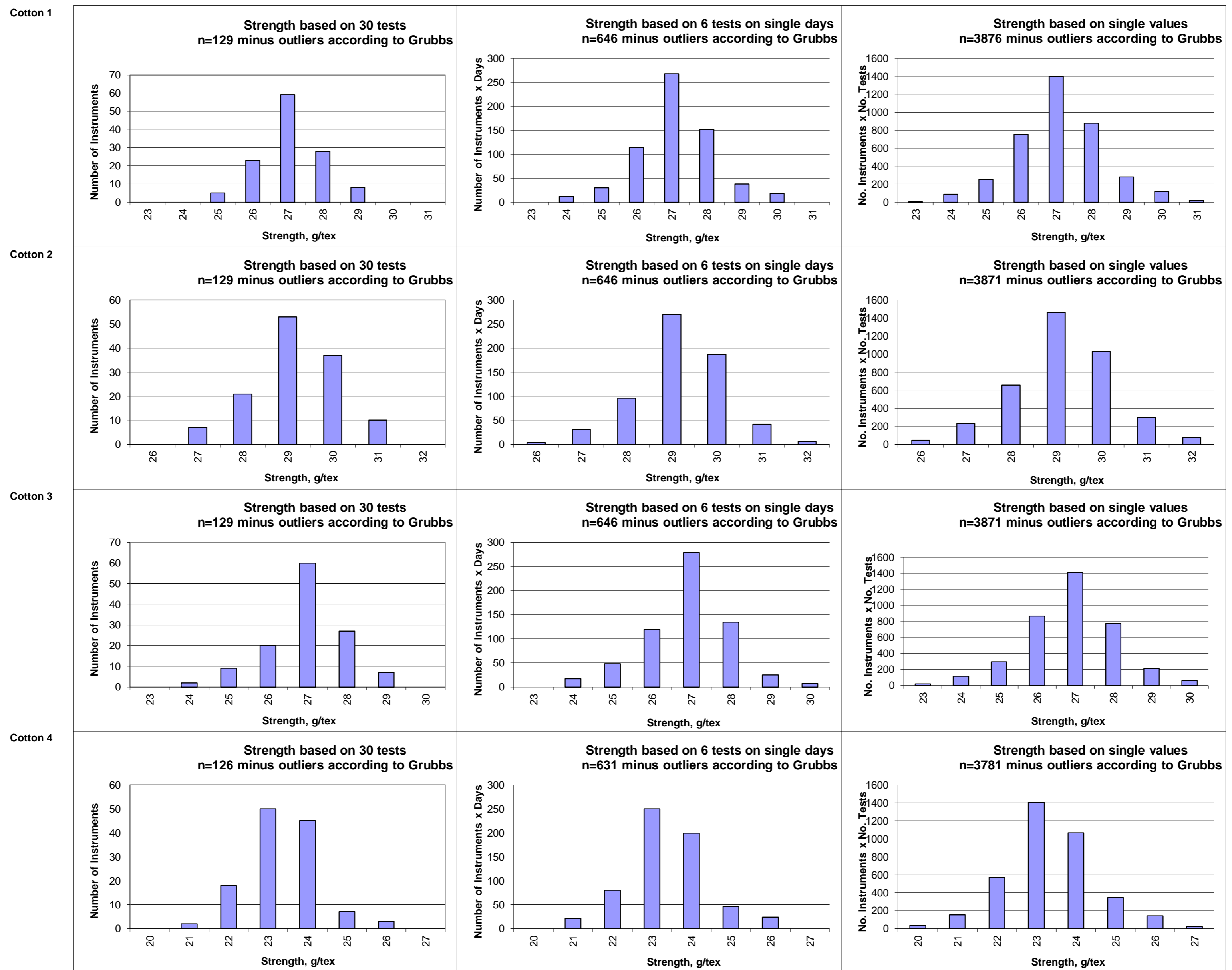
Color +b							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			7.762	14.498	8.832	15.410	
<b>Reference Values for Evaluation</b>			7.762	14.498	8.832	15.410	
<b>Number Of Instruments</b>			126	126	126	123	<b>125</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.242	0.332	0.260	0.372	<b>0.301</b>
		CV %	3.1	2.3	2.9	2.4	<b>2.7</b>
	based on 6 tests	SD	0.263	0.358	0.281	0.409	<b>0.328</b>
		CV %	3.4	2.5	3.2	2.7	<b>2.9</b>
	based on single tests	SD	0.297	0.386	0.315	0.438	<b>0.359</b>
		CV %	3.8	2.7	3.6	2.8	<b>3.2</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.114	0.133	0.123	0.129	<b>0.125</b>
		CV %	1.5	0.9	1.4	0.8	<b>1.2</b>
	between single tests on one day	SD	0.096	0.113	0.102	0.124	<b>0.109</b>
		CV %	1.2	0.8	1.2	0.8	<b>1.0</b>
	between all tests on different days	SD	0.155	0.181	0.155	0.176	<b>0.167</b>
		CV %	2.0	1.2	1.8	1.1	<b>1.5</b>

Test Result Distributions  
Micronaire



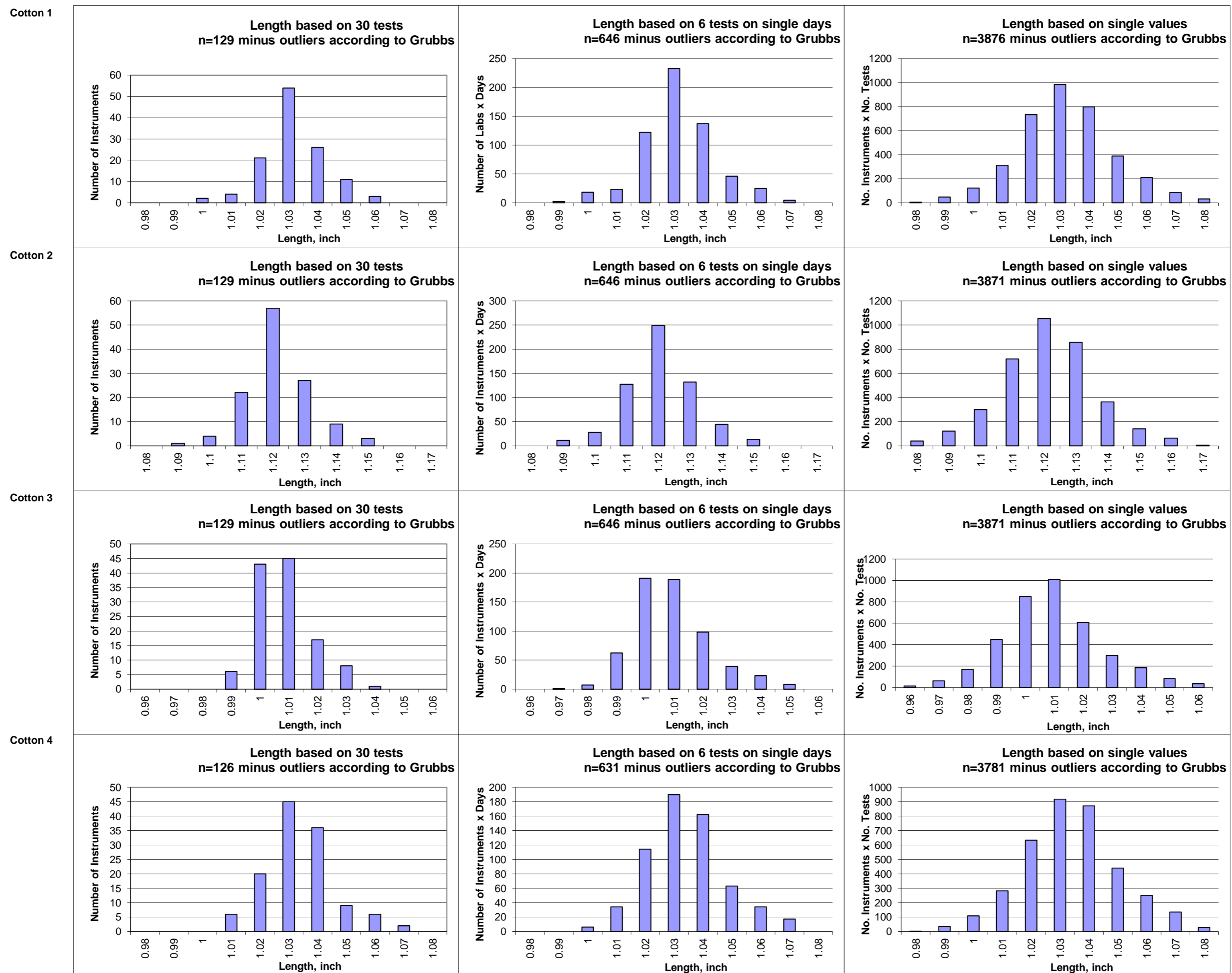
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method.)  
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions  
Strength



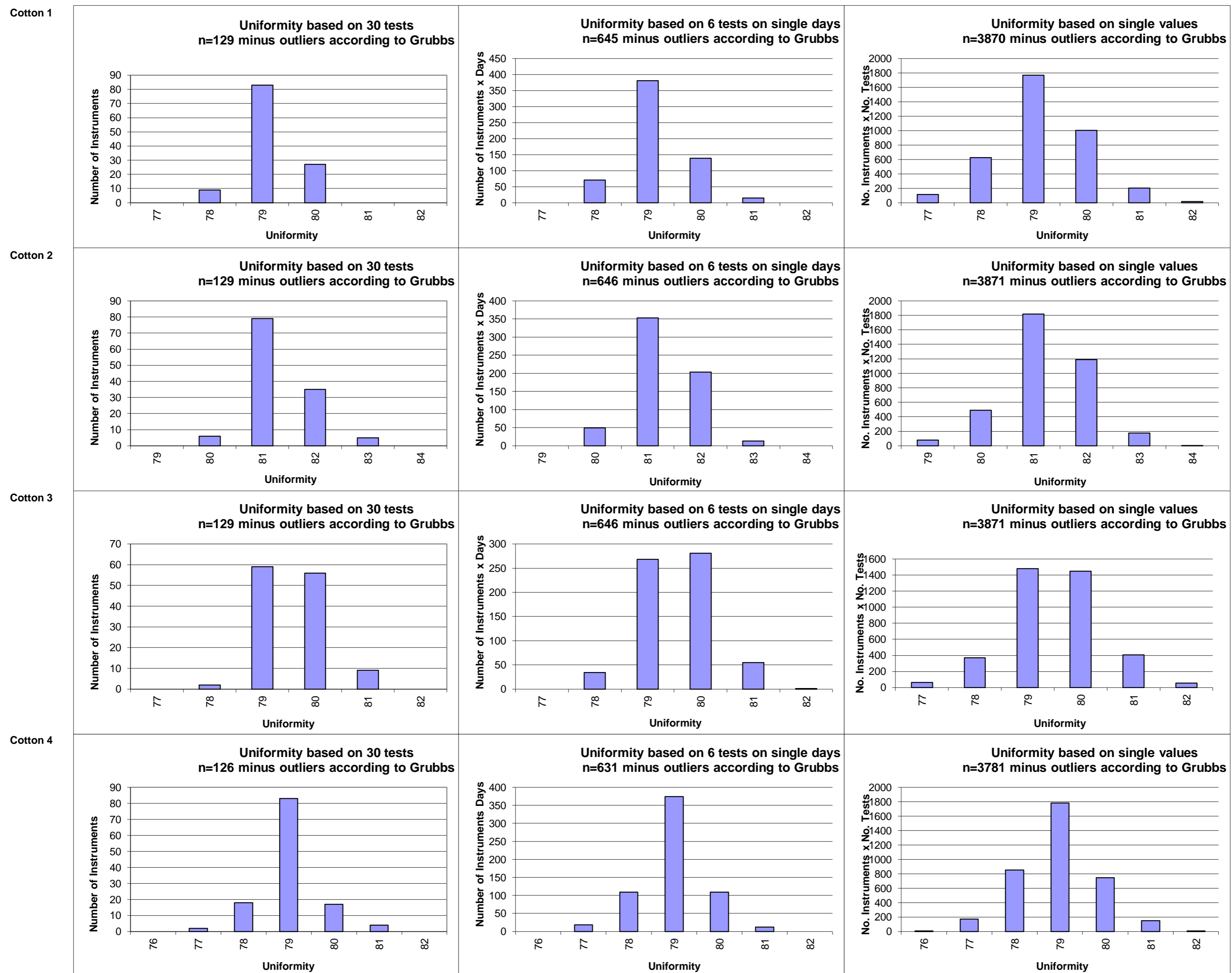
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
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Test Result Distributions  
Length



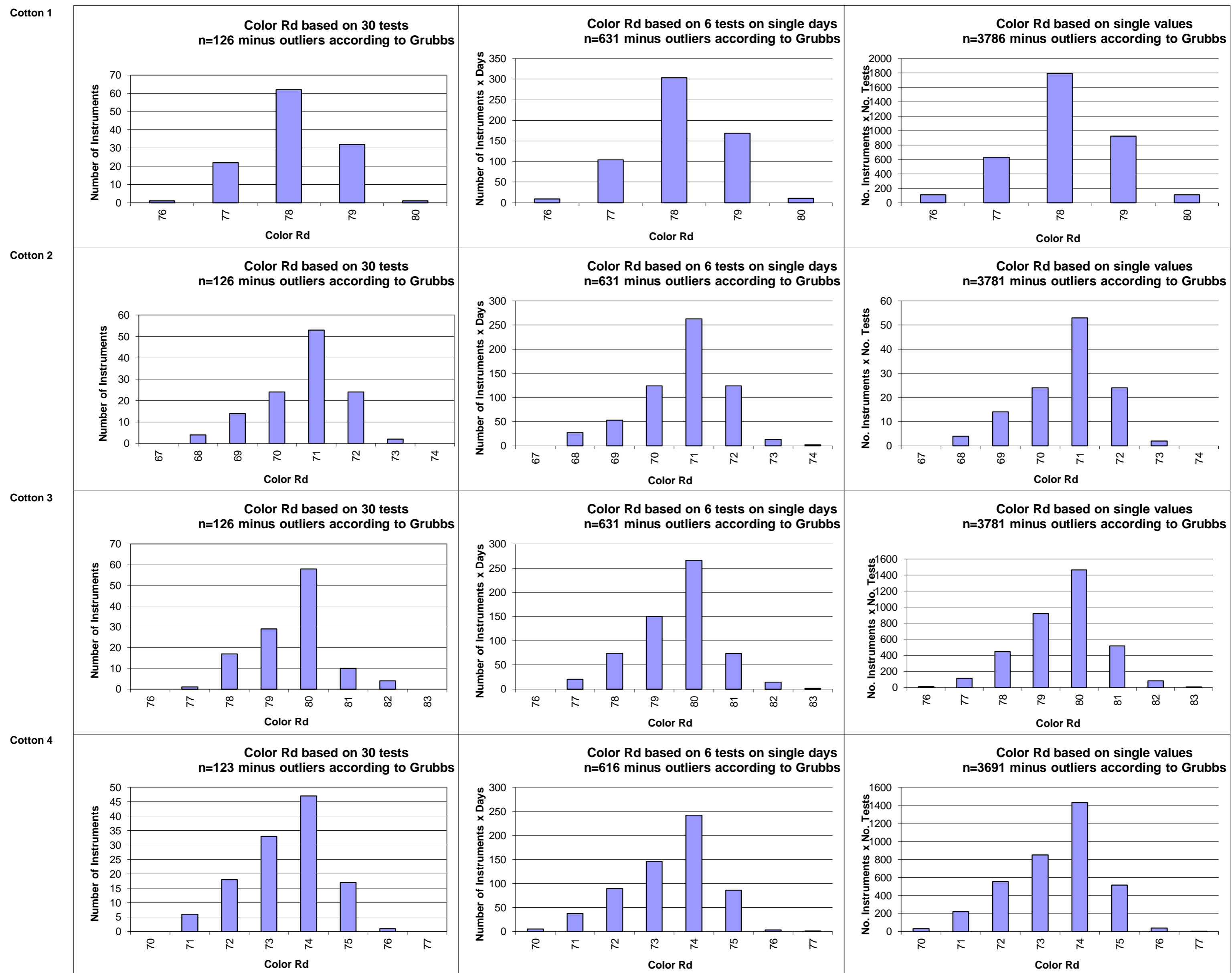
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
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Test Result Distributions  
Uniformity



(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)

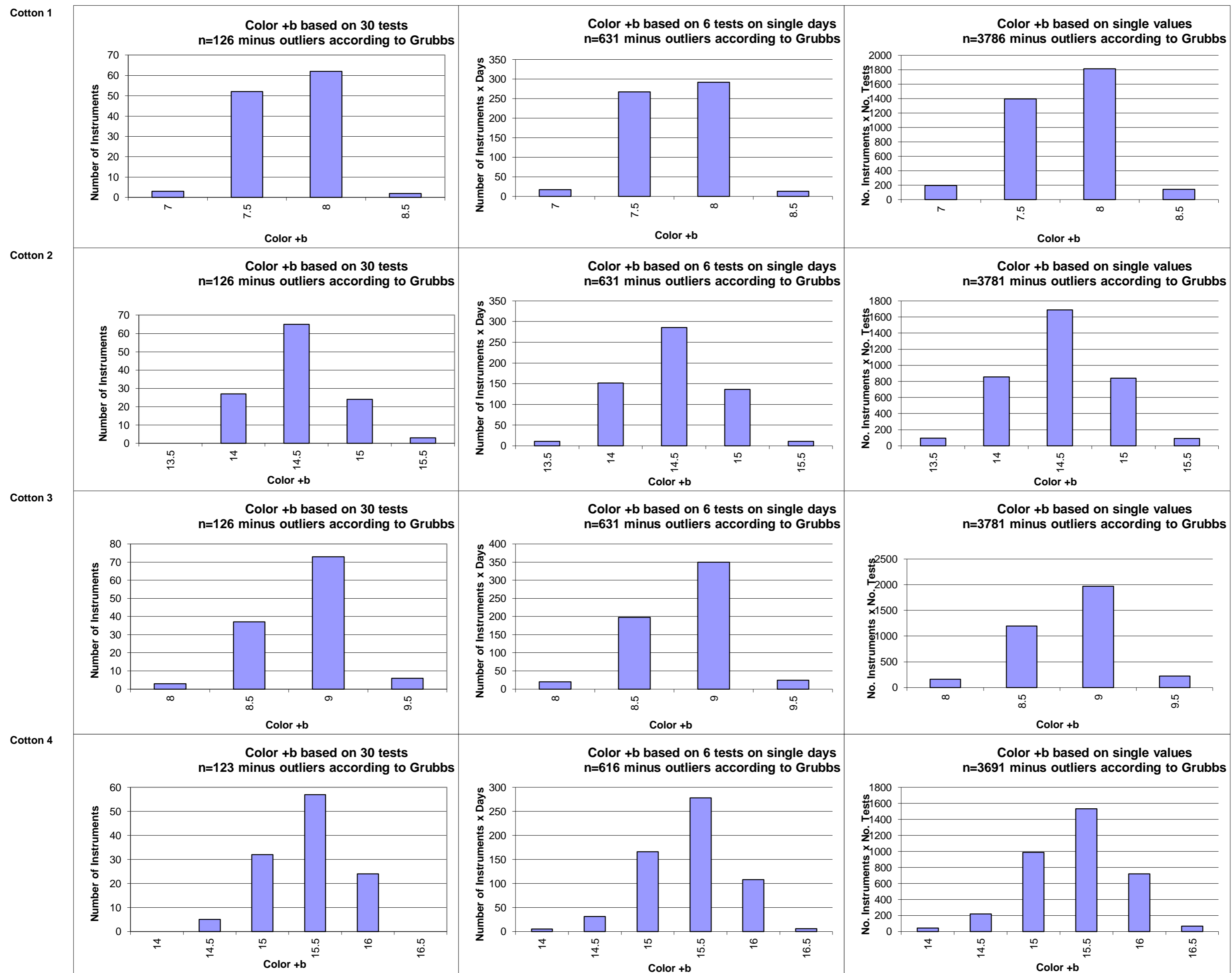
Test Result Distributions  
Color Rd



(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

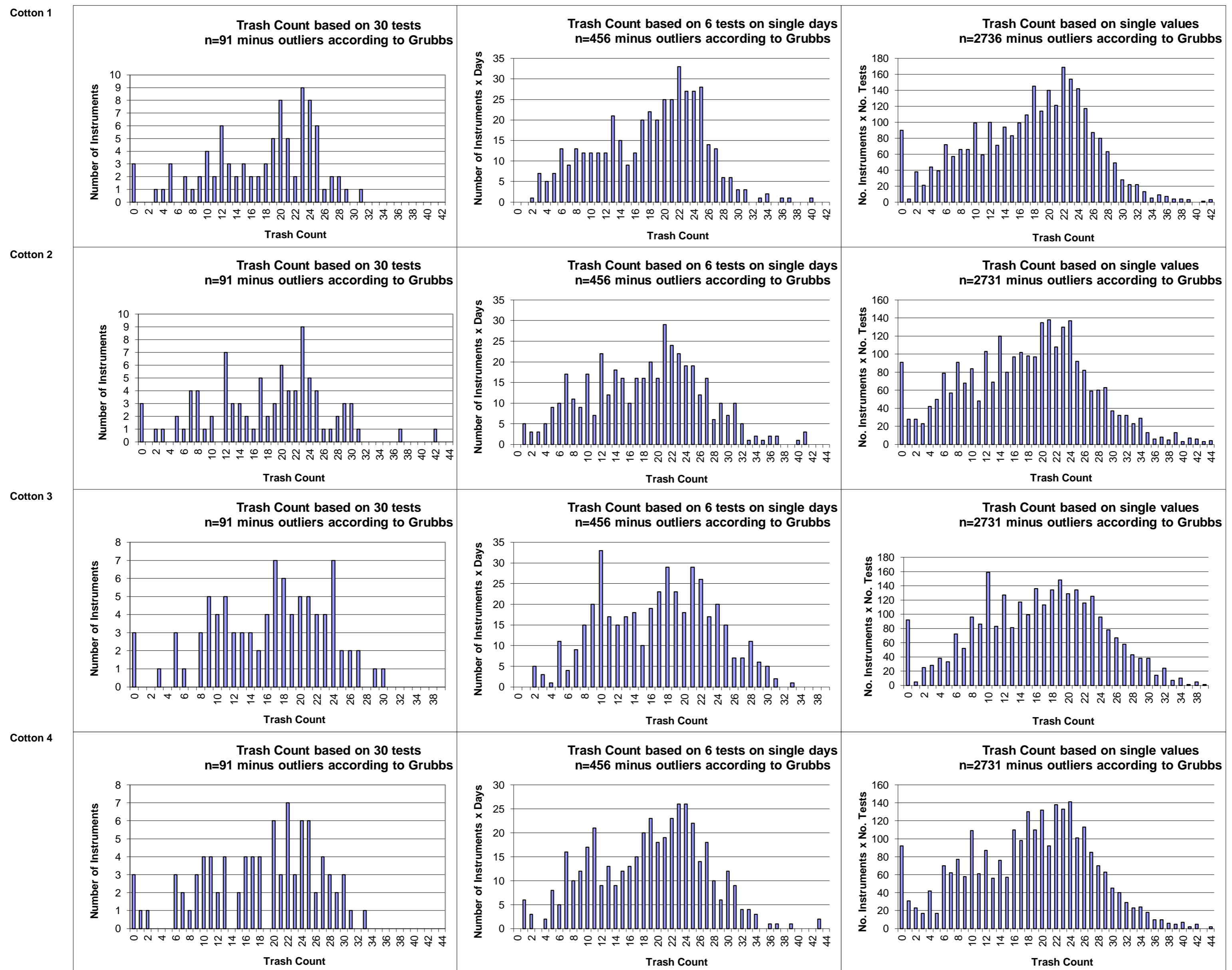
Trash Count							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			17.51	17.95	16.33	18.24	
<b>Reference Values for Evaluation</b>			17.51	17.95	16.33	18.24	
<b>Number Of Instruments</b>			91	91	91	91	<b>91</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	7.26	8.53	6.86	8.06	<b>7.68</b>
		CV %	41.4	47.5	42.0	44.2	<b>43.8</b>
	based on 6 tests	SD	7.68	8.63	7.19	8.51	<b>8.00</b>
		CV %	43.9	48.1	44.0	46.7	<b>45.7</b>
	based on single tests	SD	8.07	8.94	7.64	8.80	<b>8.36</b>
		CV %	46.1	49.8	46.8	48.2	<b>47.7</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	1.94	2.26	1.91	1.96	<b>2.02</b>
		CV %	11.1	12.6	11.7	10.8	<b>11.5</b>
	between single tests on one day	SD	2.24	2.18	1.96	2.23	<b>2.15</b>
		CV %	12.8	12.2	12.0	12.2	<b>12.3</b>
	between all tests on different days	SD	3.22	3.36	3.05	3.48	<b>3.28</b>
		CV %	18.4	18.7	18.7	19.1	<b>18.7</b>

Trash Area							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			0.186	0.157	0.171	0.158	
<b>Reference Values for Evaluation</b>			0.186	0.157	0.171	0.158	
<b>Number Of Instruments</b>			91	91	91	91	<b>91</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.066	0.053	0.044	0.053	<b>0.054</b>
		CV %	35.2	33.6	25.5	33.3	<b>31.9</b>
	based on 6 tests	SD	0.070	0.056	0.053	0.055	<b>0.058</b>
		CV %	37.4	35.9	30.7	34.6	<b>34.6</b>
	based on single tests	SD	0.080	0.060	0.065	0.062	<b>0.067</b>
		CV %	43.2	38.5	37.7	39.1	<b>39.6</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.025	0.021	0.028	0.021	<b>0.024</b>
		CV %	13.5	13.7	16.1	13.3	<b>14.2</b>
	between single tests on one day	SD	0.031	0.027	0.029	0.022	<b>0.027</b>
		CV %	16.5	17.3	16.9	13.9	<b>16.1</b>
	between all tests on different days	SD	0.043	0.038	0.046	0.037	<b>0.041</b>
		CV %	23.1	24.1	26.6	23.3	<b>24.3</b>

Maturity							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			87.92	82.29	88.80	78.42	
<b>Reference Values for Evaluation</b>			87.92	82.29	88.80	78.42	
<b>Number Of Instruments</b>			96	97	96	97	<b>97</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	1.93	2.71	1.95	4.33	<b>2.73</b>
		CV %	2.2	3.3	2.2	5.5	<b>3.3</b>
	based on 6 tests	SD	1.87	2.21	2.01	4.29	<b>2.60</b>
		CV %	2.1	2.7	2.3	5.5	<b>3.1</b>
	based on single tests	SD	1.96	2.47	2.04	4.18	<b>2.66</b>
		CV %	2.2	3.0	2.3	5.3	<b>3.2</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.20	0.22	0.23	0.14	<b>0.20</b>
		CV %	0.2	0.3	0.3	0.2	<b>0.2</b>
	between single tests on one day	SD	0.35	0.38	0.38	0.24	<b>0.34</b>
		CV %	0.4	0.5	0.4	0.3	<b>0.4</b>
	between all tests on different days	SD	0.46	0.48	0.50	0.35	<b>0.45</b>
		CV %	0.5	0.6	0.6	0.4	<b>0.5</b>

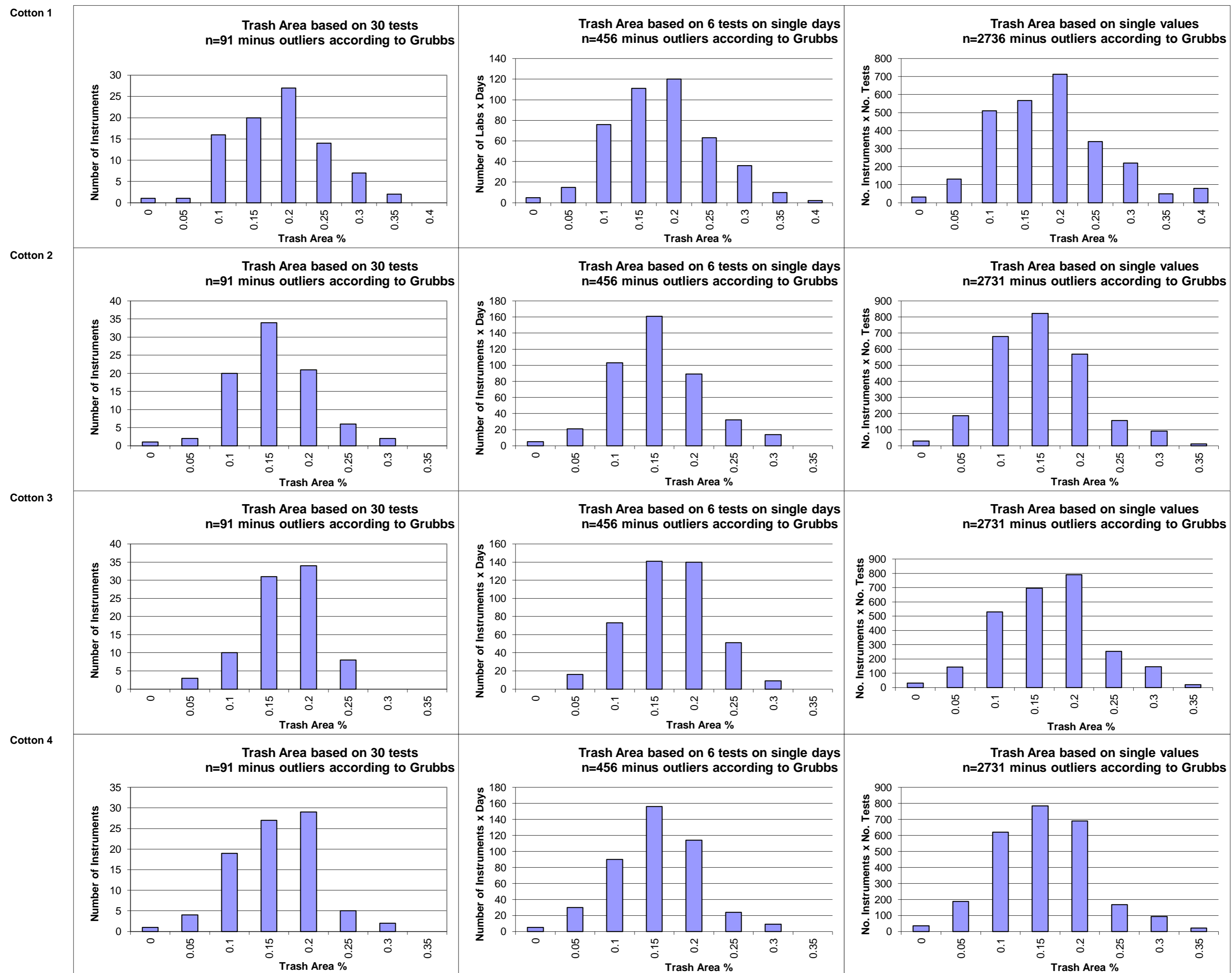
SFI							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			12.23	9.38	12.23	12.79	
<b>Reference Values for Evaluation</b>			12.23	9.38	12.23	12.79	
<b>Number Of Instruments</b>			104	104	104	104	<b>104</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	1.31	1.21	1.30	1.57	<b>1.35</b>
		CV %	10.7	12.9	10.6	12.3	<b>11.6</b>
	based on 6 tests	SD	1.40	1.17	1.29	1.59	<b>1.36</b>
		CV %	11.4	12.5	10.6	12.4	<b>11.7</b>
	based on single tests	SD	1.52	1.23	1.51	1.68	<b>1.48</b>
		CV %	12.4	13.2	12.4	13.1	<b>12.8</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.36	0.29	0.38	0.37	<b>0.35</b>
		CV %	3.0	3.0	3.1	2.9	<b>3.0</b>
	between single tests on one day	SD	0.56	0.45	0.60	0.61	<b>0.56</b>
		CV %	4.6	4.8	4.9	4.7	<b>4.8</b>
	between all tests on different days	SD	0.65	0.53	0.71	0.69	<b>0.64</b>
		CV %	5.3	5.6	5.8	5.4	<b>5.5</b>

Test Result Distributions  
Trash Count



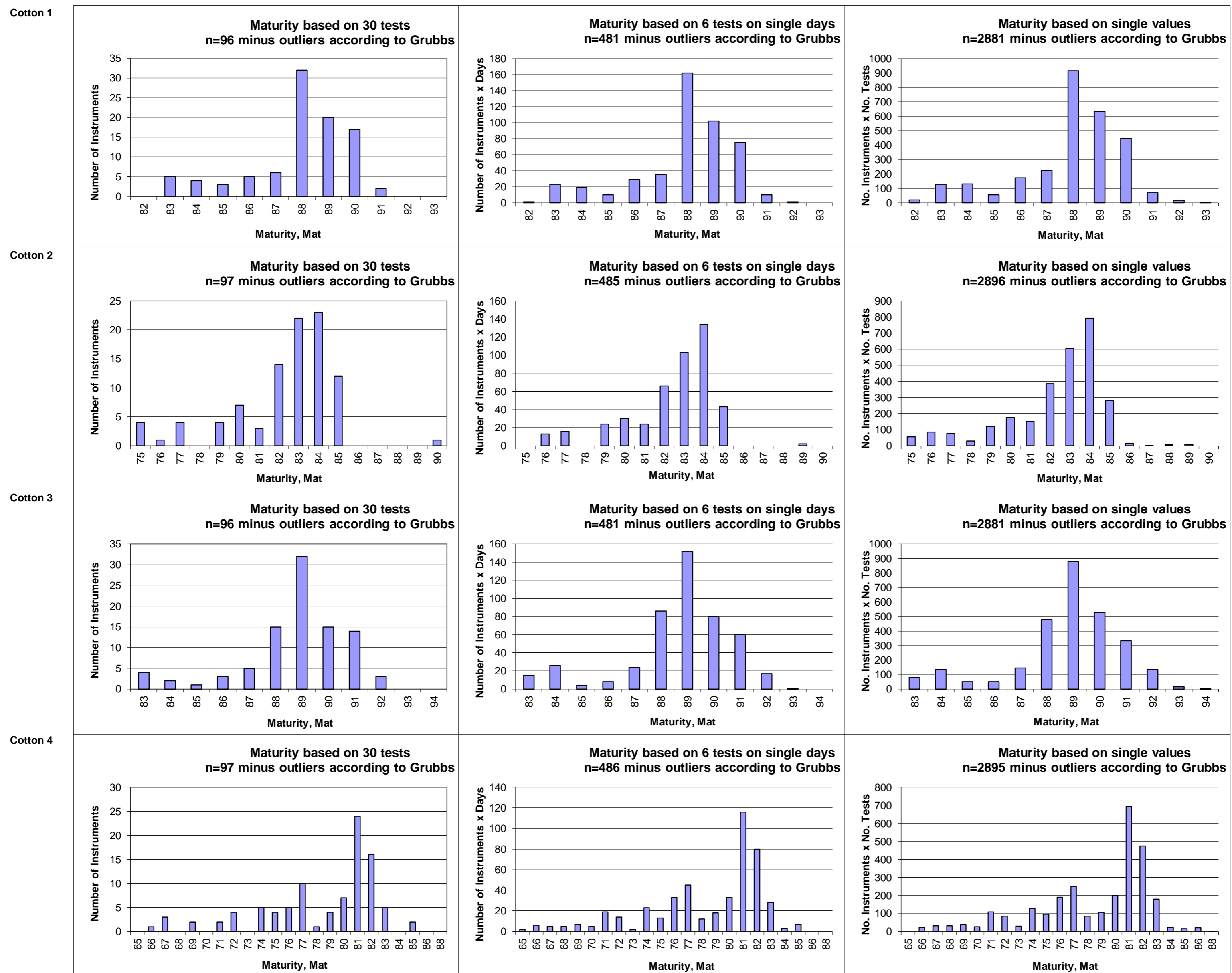
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions  
Trash Area



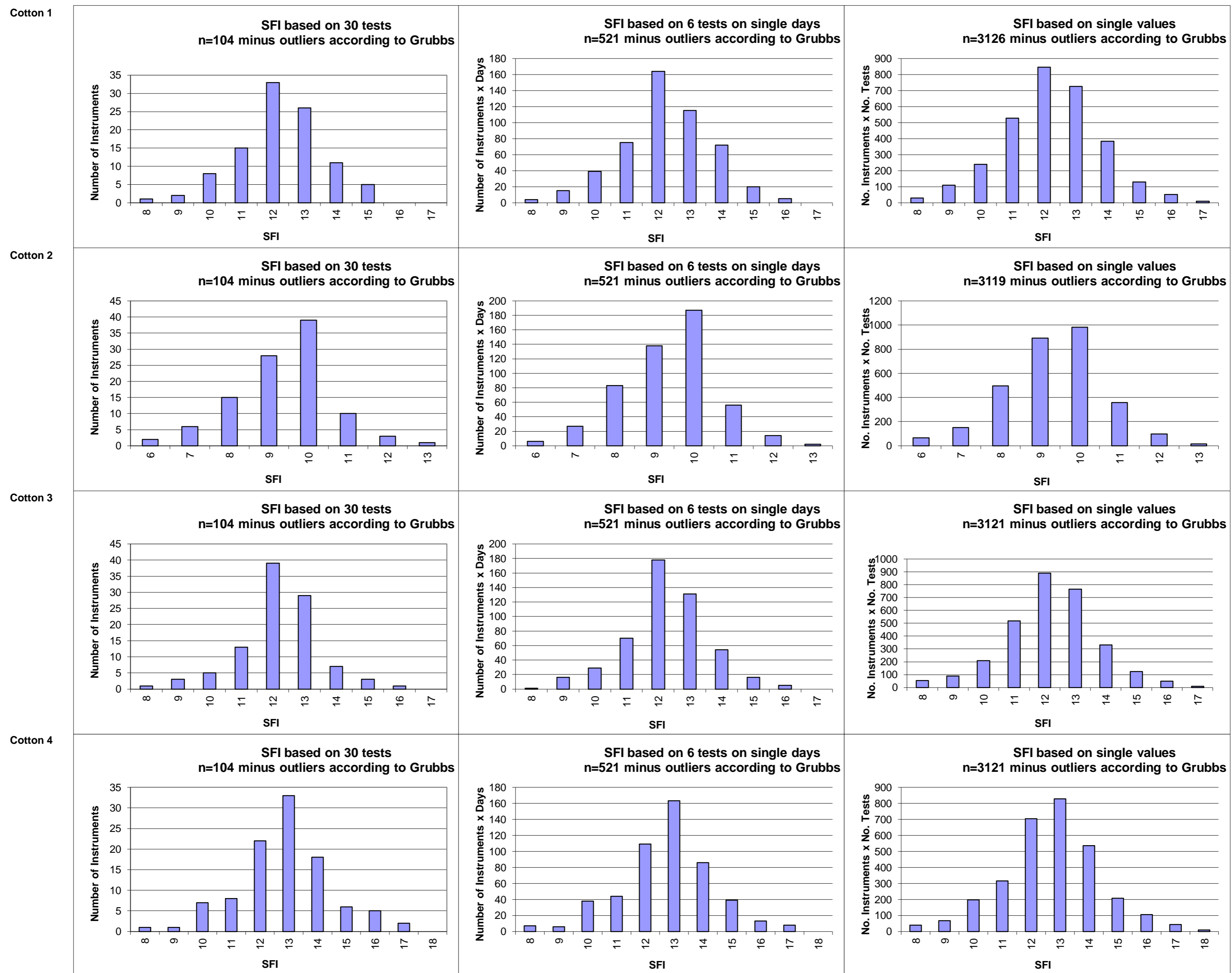
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
(classes are defined as > lower limit and <= upper limit)

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 - 2

### 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



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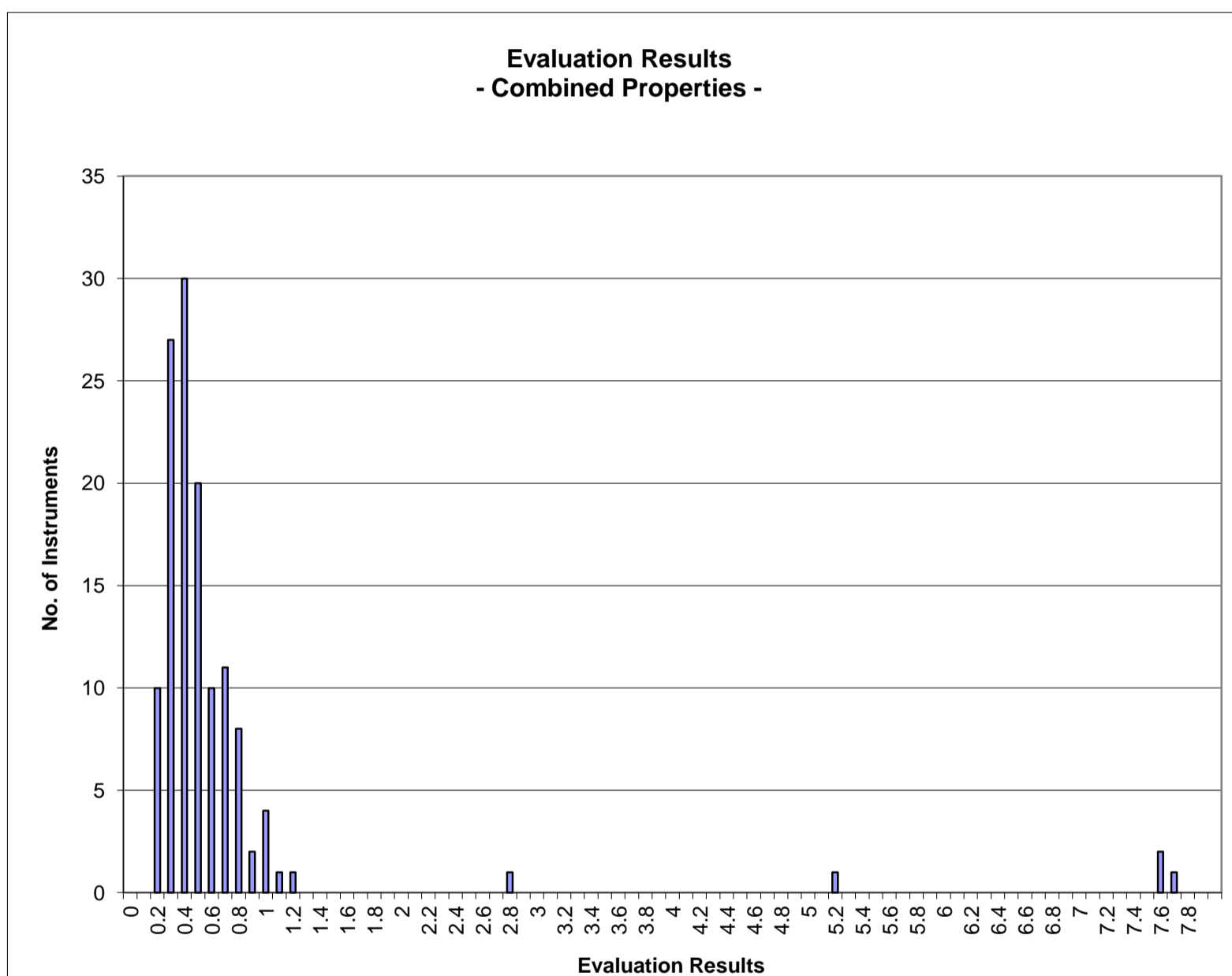
Instrument Evaluation

- Graph of Combined Properties -

According to ICAC CSITC Task Force Recommendations

Global - Round Trial 2013 - 2

		Evaluation Combined Prop.
<b>Statistics</b>	Average	0.70
	Median	0.44
	Best Instrument	0.16
	Worst Instrument	7.66

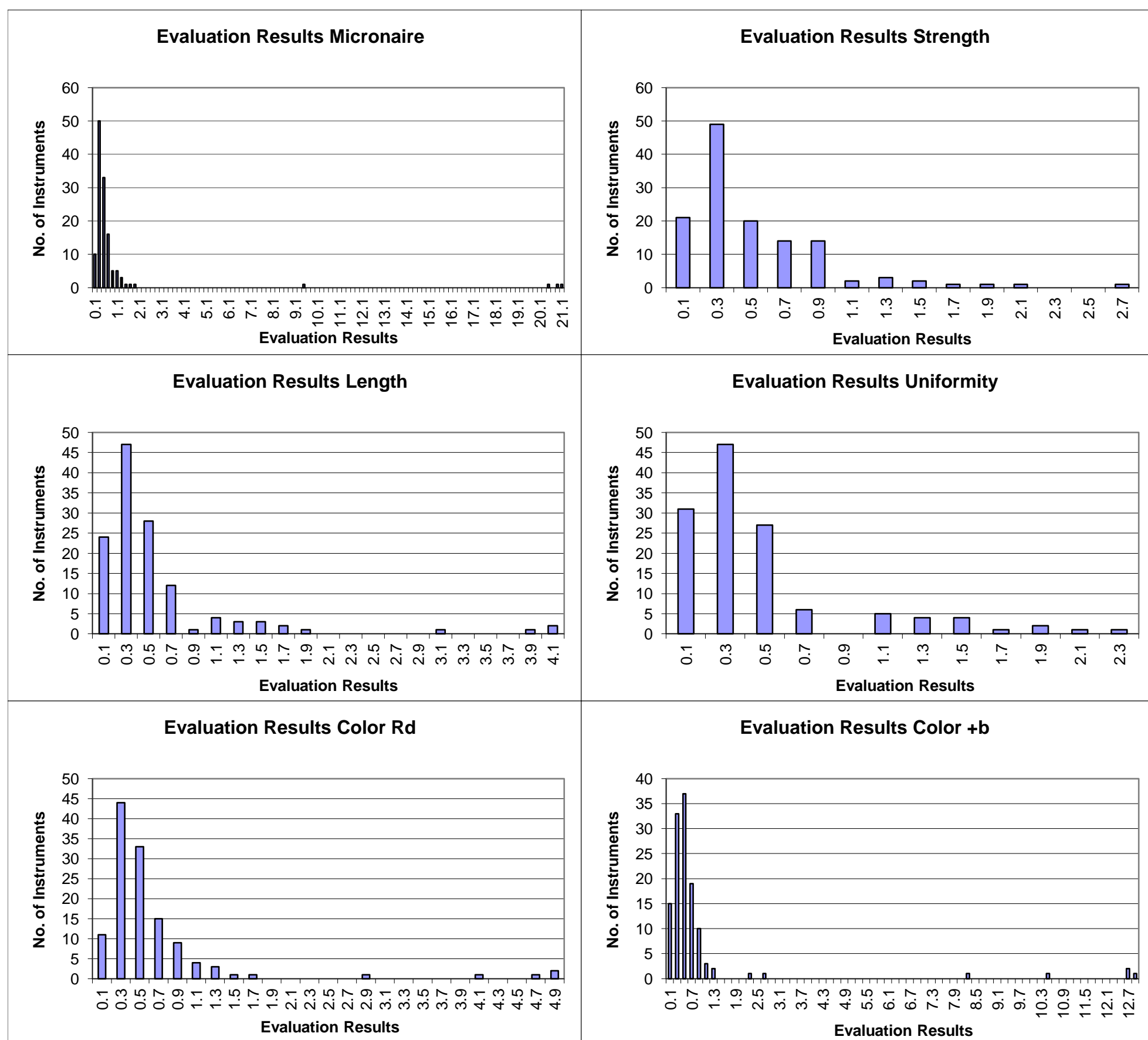


x-Axis shows midpoints of classes

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 - 2

		Evaluation Micronaire	Evaluation Strength	Evaluation Length	Evaluation Uniformity	Evaluation Color Rd	Evaluation Color +b
<b>Statistics</b>	Average	1.04	0.52	0.56	0.48	0.67	0.95
	Median	0.43	0.38	0.38	0.36	0.47	0.47
	Best Instr.	0.07	0.06	0.06	0.06	0.12	0.09
	Worst Instr.	21.16	2.61	4.13	2.23	4.92	12.86



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 - 2

### General Evaluation

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

#### Section Three: Within Limits Evaluation

Content:

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

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

System Provided by:  
Generation 10 Limited



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



\* Faserinstitut Bremen are a Cooperation Partner with ICA Bremen

## Within Limits Evaluation

Based on average of 30 test results for each sample

	Micronaire	Strength	Length	Uniformity	Color Rd	Color +b
Limits	0.20	2.0	0.030	2.0	1.5	1.0
	units	g/tex	inch	%	units	units
Average % Results within Limits	95.9	93.2	93.7	97.5	84.9	94.6
Completely within limits	93.0	83.7	86.0	93.8	69.8	92.1
% of Instruments ≥75% within limits	95.3	92.2	93.0	94.6	82.5	94.4
% of Instruments ≥50% within limits	97.7	96.9	96.1	100.0	91.3	95.2

Percentage of Results Within Limits						
Instrument	Micronaire	Strength	Length	Uniformity	Color Rd	Color +b
GL132-001-01	50	75	75	50	25	0
GL132-002-01	100	100	100	100	100	100
GL132-002-02	100	100	100	100	100	100
GL132-002-04	100	100	100	100	75	100
GL132-003-49	100	100	100	100	100	100
GL132-003-50	100	100	100	100	100	100
GL132-006-01	100	100	100	100	100	100
GL132-006-04	100	100	100	100	100	100
GL132-006-05	100	100	100	100	100	100
GL132-008-01	100	100	100	100	50	100
GL132-009-01	100	100	100	100	75	100
GL132-010-03	100	100	100	100	75	100
GL132-010-04	100	100	100	100	75	100
GL132-010-05	100	100	100	100	100	100
GL132-011-01	100	100	75	100	50	100
GL132-012-01	100	100	100	100	50	100
GL132-013-20	100	100	100	100	100	100
GL132-013-25	100	100	100	100	100	100
GL132-014-01	100	100	100	100	100	100
GL132-015-02	100	100	100	100	25	100
GL132-016-01	100	100	75	50	100	100
GL132-018-01	100	100	100	100	100	100
GL132-018-02	100	100	100	100	100	100
GL132-019-01	100	100	100	100	100	100
GL132-019-03	75	100	100	100	100	100
GL132-021-01	100	75	100	100	100	100
GL132-021-02	100	100	100	100	100	100
GL132-022-01	100	75	100	100	100	100
GL132-024-01	100	100	100	100	50	100
GL132-025-01	100	100	100	100	100	100
GL132-026-01	100	100	100	100	100	100
GL132-027-01	100	100	100	100	100	100
GL132-028-01	100	100	100	100	100	100
GL132-029-01	100	75	100	100	100	100
GL132-030-02	100	75	100	100	0	75
GL132-031-01	100	100	100	100	100	100
GL132-031-02	100	100	100	100	75	100
GL132-031-04	100	100	100	100	100	100
GL132-031-05	100	100	100	100	100	100

GL132-032-01	100	50	100	100	100	100
GL132-033-01	100	100	100	100	100	75
GL132-035-01	100	100	75	100	75	100
GL132-038-01	100	75	100	100	100	100
GL132-039-02	100	100	75	100	50	100
GL132-039-03	100	50	25	100	25	100
GL132-041-01	100	100	100	100	75	100
GL132-042-15	100	75	75	100	75	100
GL132-043-01	100	100	100	100	75	100
GL132-044-01	100	100	100	100	100	100
GL132-044-04	100	100	100	100	100	100
GL132-045-01	100	100	100	100	100	100
GL132-046-01	100	100	100	100	75	100
GL132-047-01	100	100	100	100	50	100
GL132-049-01	100	100	75	100	75	100
GL132-049-02	100	100	100	100	75	100
GL132-049-03	100	100	100	100	100	100
GL132-049-04	100	100	100	100	75	100
GL132-050-01	100	100	75	100		
GL132-051-01	100	25	50	100	100	100
GL132-052-01	100	50	100	100	100	100
GL132-053-01	100	100	100	100	100	100
GL132-054-03	100	100	100	100	100	100
GL132-055-03	100	100	100	100	100	100
GL132-055-04	100	100	100	100	100	100
GL132-055-06	100	100	100	100	100	100
GL132-056-01	100	100	100	100	100	100
GL132-057-01	100	50	100	100	75	100
GL132-058-01	100	100	100	100	100	100
GL132-058-02	100	100	100	100	100	100
GL132-058-03	100	100	100	100	100	100
GL132-058-04	100	100	100	100	100	100
GL132-059-01	100	100	100	100	100	75
GL132-060-02	50	50	50	75	0	25
GL132-062-01	100	100	100	100	100	100
GL132-063-02	100	75	100	100	100	100
GL132-063-03	100	100	100	100	100	100
GL132-064-01	100	100	100	100		
GL132-065-01	100	100	100	100	100	100
GL132-067-02	100	100	100	100	100	100
GL132-067-06	100	100	100	100	100	100
GL132-068-01	100	100	100	100	100	100
GL132-068-02	100	100	100	100	100	100
GL132-069-01	100	100	100	100	100	100
GL132-069-02	100	100	100	100	100	100
GL132-070-03	50	75	100	100	25	25
GL132-072-01	100	100	100	100	100	100
GL132-073-01	100	100	100	100	25	100
GL132-076-01	100	100	100	100	100	100
GL132-077-01	100	100	100	100	100	100
GL132-077-02	100	100	100	100	100	100
GL132-078-03	100	100	100	100	100	100
GL132-078-07	100	100	100	100	100	100
GL132-078-08	100	100	100	100	100	100
GL132-078-09	100	100	100	100	100	100
GL132-079-04	100	100	100	100	100	100
GL132-080-01	75	100	75	50	75	100
GL132-081-01	100	100	25	100	100	100
GL132-081-02	100	100	100	100	100	100
GL132-082-01	100	100	100	100	50	100

GL132-083-01	100	100	100	100	75	100
GL132-083-02	100	100	100	100	100	100
GL132-083-03	100	100	100	100	100	100
GL132-083-04	100	100	100	100	100	100
GL132-084-01	100	100	100	100	100	100
GL132-085-02	100	100	100	100	50	100
GL132-087-01	100	100	100	100	100	100
GL132-087-02	100	100	100	100	100	100
GL132-088-01	100	100	50	50	100	100
GL132-089-01	100	75	100	100	100	100
GL132-090-02	100	100	100	100	50	100
GL132-091-01	100	100	100	100	100	100
GL132-092-01	0	33	0	67	0	0
GL132-092-02	0	33	33	67	0	0
GL132-092-03	0	0	33	67	0	0
GL132-093-01	100	100	100	100	100	100
GL132-093-02	100	100	100	100	100	100
GL132-096-02	75	100	100	100	50	100
GL132-096-04	100	100	100	100	25	100
GL132-096-07	100	100	100	100	100	100
GL132-097-01	100	100	100	100		
GL132-097-02	100	100	100	100	100	100
GL132-098-01	100	100	100	100	100	100
GL132-099-01	100	50	100	100	100	50
GL132-100-02	100	100	100	100	100	100
GL132-100-05	100	75	50	100	50	100
GL132-100-06	100	100	100	100	100	100
GL132-101-03	100	100	100	100	100	100
GL132-102-01	100	100	100	100	100	100
GL132-104-01	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	94.8	88.4	91.7	95.0	82.9	93.4
% of Instruments 100% within limits	65.9	30.2	40.3	49.6	30.2	69.8
% of Instruments ≥95% within limits	86.0	56.6	69.0	80.6	51.6	86.5
% of Instruments ≥75% within limits	95.3	82.9	89.1	90.7	77.0	93.7
% of Instruments ≥65% within limits	95.3	90.7	92.2	96.9	82.5	94.4
% of Instruments ≥50% within limits	96.1	95.3	96.1	99.2	88.1	95.2

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>
GL132-001-01	58	77	73	66	28	0
GL132-002-01	99	96	100	98	73	100
GL132-002-02	99	100	100	100	100	100
GL132-002-04	100	98	99	100	81	100
GL132-003-49	100	98	100	100	100	100
GL132-003-50	100	100	100	100	100	100
GL132-006-01	100	100	100	100	100	100
GL132-006-04	100	100	100	100	100	100
GL132-006-05	100	100	100	100	100	100
GL132-008-01	88	91	88	89	46	83
GL132-009-01	100	93	95	94	77	96
GL132-010-03	98	100	100	98	87	100
GL132-010-04	100	98	100	95	81	100
GL132-010-05	100	100	100	98	98	100
GL132-011-01	88	95	78	97	53	100
GL132-012-01	100	100	100	100	48	100
GL132-013-20	100	100	100	100	100	100
GL132-013-25	100	100	100	100	100	100
GL132-014-01	100	78	86	92	93	100
GL132-015-02	89	91	100	99	33	100
GL132-016-01	88	78	66	54	79	98
GL132-018-01	100	99	99	100	98	100
GL132-018-02	100	95	100	100	93	100
GL132-019-01	99	94	91	100	100	98
GL132-019-03	95	78	93	98	95	95
GL132-021-01	100	69	79	90	100	96
GL132-021-02	100	94	86	94	100	100
GL132-022-01	98	73	93	98	89	80
GL132-024-01	99	79	70	69	58	100
GL132-025-01	100	96	96	98	99	100
GL132-026-01	100	100	100	100	98	96
GL132-027-01	98	99	98	99	99	100
GL132-028-01	96	100	100	99	88	100
GL132-029-01	100	69	100	100	100	100
GL132-030-02	83	73	100	98	8	68
GL132-031-01	100	100	99	100	100	100

GL132-031-02	100	100	99	100	84	100
GL132-031-04	100	100	98	100	93	100
GL132-031-05	99	100	98	100	100	100
GL132-032-01	100	48	91	97	78	98
GL132-033-01	100	97	99	100	97	80
GL132-035-01	100	90	88	100	78	99
GL132-038-01	100	69	98	100	89	100
GL132-039-02	98	80	89	96	52	100
GL132-039-03	95	38	64	88	43	100
GL132-041-01	100	89	100	99	69	100
GL132-042-15	100	84	58	100	77	95
GL132-043-01	100	94	99	97	78	100
GL132-044-01	100	98	96	99	99	100
GL132-044-04	99	74	94	89	66	99
GL132-045-01	100	98	97	100	98	100
GL132-046-01	76	100	98	99	81	98
GL132-047-01	100	83	99	100	50	95
GL132-049-01	100	94	87	71	87	100
GL132-049-02	100	86	93	74	71	100
GL132-049-03	100	71	88	74	84	95
GL132-049-04	100	98	93	83	69	83
GL132-050-01	94	100	75	98		
GL132-051-01	98	51	59	92	99	90
GL132-052-01	100	51	99	98	91	98
GL132-053-01	93	100	100	100	100	100
GL132-054-03	100	100	100	100	100	100
GL132-055-03	100	100	99	100	100	100
GL132-055-04	100	100	100	100	100	100
GL132-055-06	100	100	100	100	100	100
GL132-056-01	100	90	89	96	94	99
GL132-057-01	100	63	98	96	71	100
GL132-058-01	100	100	100	100	99	100
GL132-058-02	100	100	100	100	100	100
GL132-058-03	100	100	100	100	97	100
GL132-058-04	100	100	100	100	95	100
GL132-059-01	100	98	100	100	95	76
GL132-060-02	48	27	44	69	1	13
GL132-062-01	100	100	100	100	88	99
GL132-063-02	100	75	100	99	95	100
GL132-063-03	100	99	100	100	90	100
GL132-064-01	88	72	80	88		
GL132-065-01	100	87	100	100	97	98
GL132-067-02	100	100	100	100	93	92
GL132-067-06	100	100	100	100	94	94
GL132-068-01	100	99	100	100	98	100
GL132-068-02	100	99	99	100	100	100
GL132-069-01	100	100	98	95	100	100
GL132-069-02	100	99	98	95	100	100
GL132-070-03	48	83	97	99	32	28
GL132-072-01	100	94	99	100	100	100
GL132-073-01	99	81	93	97	31	99
GL132-076-01	97	92	95	100	79	100
GL132-077-01	100	100	100	100	100	100
GL132-077-02	100	100	100	100	100	100
GL132-078-03	100	98	99	100	100	100
GL132-078-07	100	97	100	99	100	100
GL132-078-08	100	98	98	99	100	100
GL132-078-09	100	98	100	100	100	100
GL132-079-04	100	94	88	97	100	100
GL132-080-01	88	98	70	43	74	100



GL132-081-01	100	95	42	98	89	100
GL132-081-02	96	88	78	83	93	100
GL132-082-01	100	98	96	86	40	87
GL132-083-01	99	100	100	100	78	100
GL132-083-02	100	98	100	100	98	100
GL132-083-03	100	100	100	100	97	100
GL132-083-04	99	99	99	99	99	100
GL132-084-01	100	94	100	98	96	100
GL132-085-02	100	91	100	100	51	98
GL132-087-01	100	100	100	100	98	100
GL132-087-02	100	100	100	100	100	100
GL132-088-01	100	72	53	63	90	100
GL132-089-01	100	73	100	100	100	100
GL132-090-02	100	99	100	98	59	100
GL132-091-01	95	98	90	94	99	100
GL132-092-01	0	31	16	67	0	0
GL132-092-02	0	40	28	61	0	0
GL132-092-03	0	13	33	69	0	0
GL132-093-01	100	63	93	96	100	100
GL132-093-02	100	63	93	96	100	100
GL132-096-02	76	99	84	99	50	99
GL132-096-04	84	98	99	98	28	98
GL132-096-07	100	100	97	100	93	100
GL132-097-01	100	84	95	100		
GL132-097-02	99	100	98	100	79	100
GL132-098-01	100	77	97	98	95	100
GL132-099-01	96	50	97	100	99	50
GL132-100-02	95	83	96	98	100	100
GL132-100-05	95	76	59	100	58	100
GL132-100-06	98	96	99	100	99	100
GL132-101-03	100	98	100	100	100	100
GL132-102-01	98	97	100	100	100	100
GL132-104-01	100	86	100	100	98	100