



**International Cotton Advisory Committee**



# CSITC

## Global - Round Trial 2014 - 3

### 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 2014 - 3

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

Micronaire							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			4.243	5.070	4.127	4.570	
Reference Values for Evaluation			4.243	5.070	4.127	4.570	
Number Of Instruments			146	146	146	143	<b>145</b>
Inter-Instrument Variation	based on 30 tests	SD	0.060	0.062	0.084	0.070	<b>0.069</b>
		CV %	1.4	1.2	2.0	1.5	<b>1.6</b>
	based on 6 tests	SD	0.068	0.067	0.089	0.072	<b>0.074</b>
		CV %	1.6	1.3	2.2	1.6	<b>1.7</b>
	based on single tests	SD	0.077	0.079	0.097	0.081	<b>0.083</b>
		CV %	1.8	1.5	2.4	1.8	<b>1.9</b>
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.022	0.024	0.020	0.022	<b>0.022</b>
		CV %	0.5	0.5	0.5	0.5	<b>0.5</b>
	between single tests on one day	SD	0.033	0.038	0.036	0.033	<b>0.035</b>
		CV %	0.8	0.7	0.9	0.7	<b>0.8</b>
	between all tests on different days	SD	0.041	0.048	0.043	0.042	<b>0.043</b>
		CV %	1.0	0.9	1.0	0.9	<b>1.0</b>

Strength							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			33.836	28.646	23.536	31.329	
Reference Values for Evaluation			33.836	28.646	23.536	31.329	
Number Of Instruments			146	147	147	144	<b>146</b>
Inter-Instrument Variation	based on 30 tests	SD	0.759	0.865	0.856	1.051	<b>0.883</b>
		CV %	2.2	3.0	3.6	3.4	<b>3.1</b>
	based on 6 tests	SD	0.901	0.925	0.935	1.093	<b>0.964</b>
		CV %	2.7	3.2	4.0	3.5	<b>3.3</b>
	based on single tests	SD	1.034	1.055	1.063	1.202	<b>1.088</b>
		CV %	3.1	3.7	4.5	3.8	<b>3.8</b>
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.354	0.300	0.300	0.331	<b>0.321</b>
		CV %	1.0	1.0	1.3	1.1	<b>1.1</b>
	between single tests on one day	SD	0.558	0.558	0.518	0.490	<b>0.531</b>
		CV %	1.7	1.9	2.2	1.6	<b>1.8</b>
	between all tests on different days	SD	0.660	0.620	0.619	0.610	<b>0.627</b>
		CV %	2.0	2.2	2.6	1.9	<b>2.2</b>

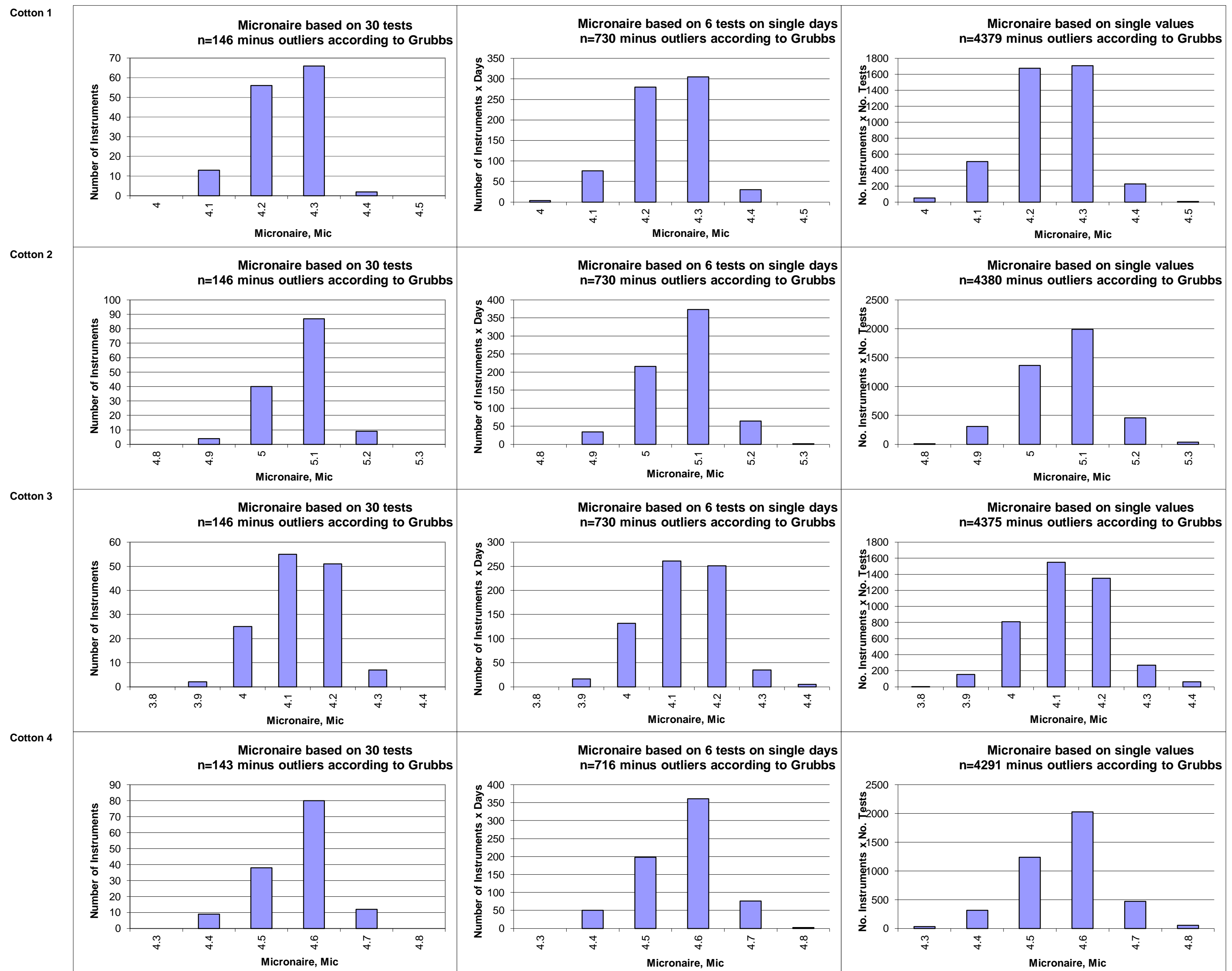
Length							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			1.2167	1.0541	0.9921	1.1682	
Reference Values for Evaluation			1.2167	1.0541	0.9921	1.1682	
Number Of Instruments			147	147	147	144	<b>146</b>
Inter-Instrument Variation	based on 30 tests	SD	0.0098	0.0100	0.0109	0.0133	<b>0.0110</b>
		CV %	0.8	0.9	1.1	1.1	<b>1.0</b>
	based on 6 tests	SD	0.0112	0.0122	0.0121	0.0142	<b>0.0124</b>
		CV %	0.9	1.2	1.2	1.2	<b>1.1</b>
	based on single tests	SD	0.0153	0.0161	0.0162	0.0171	<b>0.0162</b>
		CV %	1.3	1.5	1.6	1.5	<b>1.5</b>
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.0047	0.0048	0.0049	0.0049	<b>0.0048</b>
		CV %	0.4	0.5	0.5	0.4	<b>0.4</b>
	between single tests on one day	SD	0.0100	0.0106	0.0102	0.0091	<b>0.0100</b>
		CV %	0.8	1.0	1.0	0.8	<b>0.9</b>
	between all tests on different days	SD	0.0108	0.0113	0.0112	0.0103	<b>0.0109</b>
		CV %	0.9	1.1	1.1	0.9	<b>1.0</b>

Uniformity							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			84.092	81.289	78.574	82.922	
Reference Values for Evaluation			84.092	81.289	78.574	82.922	
Number Of Instruments			147	147	147	144	<b>146</b>
Inter-Instrument Variation	based on 30 tests	SD	0.475	0.539	0.636	0.482	<b>0.533</b>
		CV %	0.6	0.7	0.8	0.6	<b>0.7</b>
	based on 6 tests	SD	0.580	0.611	0.712	0.577	<b>0.620</b>
		CV %	0.7	0.8	0.9	0.7	<b>0.8</b>
	based on single tests	SD	0.754	0.804	0.897	0.788	<b>0.811</b>
		CV %	0.9	1.0	1.1	1.0	<b>1.0</b>
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.247	0.278	0.269	0.250	<b>0.261</b>
		CV %	0.3	0.3	0.3	0.3	<b>0.3</b>
	between single tests on one day	SD	0.478	0.529	0.512	0.492	<b>0.503</b>
		CV %	0.6	0.7	0.7	0.6	<b>0.6</b>
	between all tests on different days	SD	0.554	0.601	0.578	0.545	<b>0.570</b>
		CV %	0.7	0.7	0.7	0.7	<b>0.7</b>

Color Rd							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			79.076	78.218	75.978	79.594	
Reference Values for Evaluation			79.076	78.218	75.978	79.594	
Number Of Instruments			143	143	143	140	<b>142</b>
Inter-Instrument Variation	based on 30 tests	SD	0.864	0.827	0.830	0.864	<b>0.847</b>
		CV %	1.1	1.1	1.1	1.1	<b>1.1</b>
	based on 6 tests	SD	0.891	0.846	0.844	0.860	<b>0.860</b>
		CV %	1.1	1.1	1.1	1.1	<b>1.1</b>
	based on single tests	SD	0.913	0.880	0.872	0.899	<b>0.891</b>
		CV %	1.2	1.1	1.1	1.1	<b>1.1</b>
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.149	0.150	0.151	0.148	<b>0.149</b>
		CV %	0.2	0.2	0.2	0.2	<b>0.2</b>
	between single tests on one day	SD	0.170	0.196	0.165	0.175	<b>0.177</b>
		CV %	0.2	0.3	0.2	0.2	<b>0.2</b>
	between all tests on different days	SD	0.251	0.262	0.258	0.245	<b>0.254</b>
		CV %	0.3	0.3	0.3	0.3	<b>0.3</b>

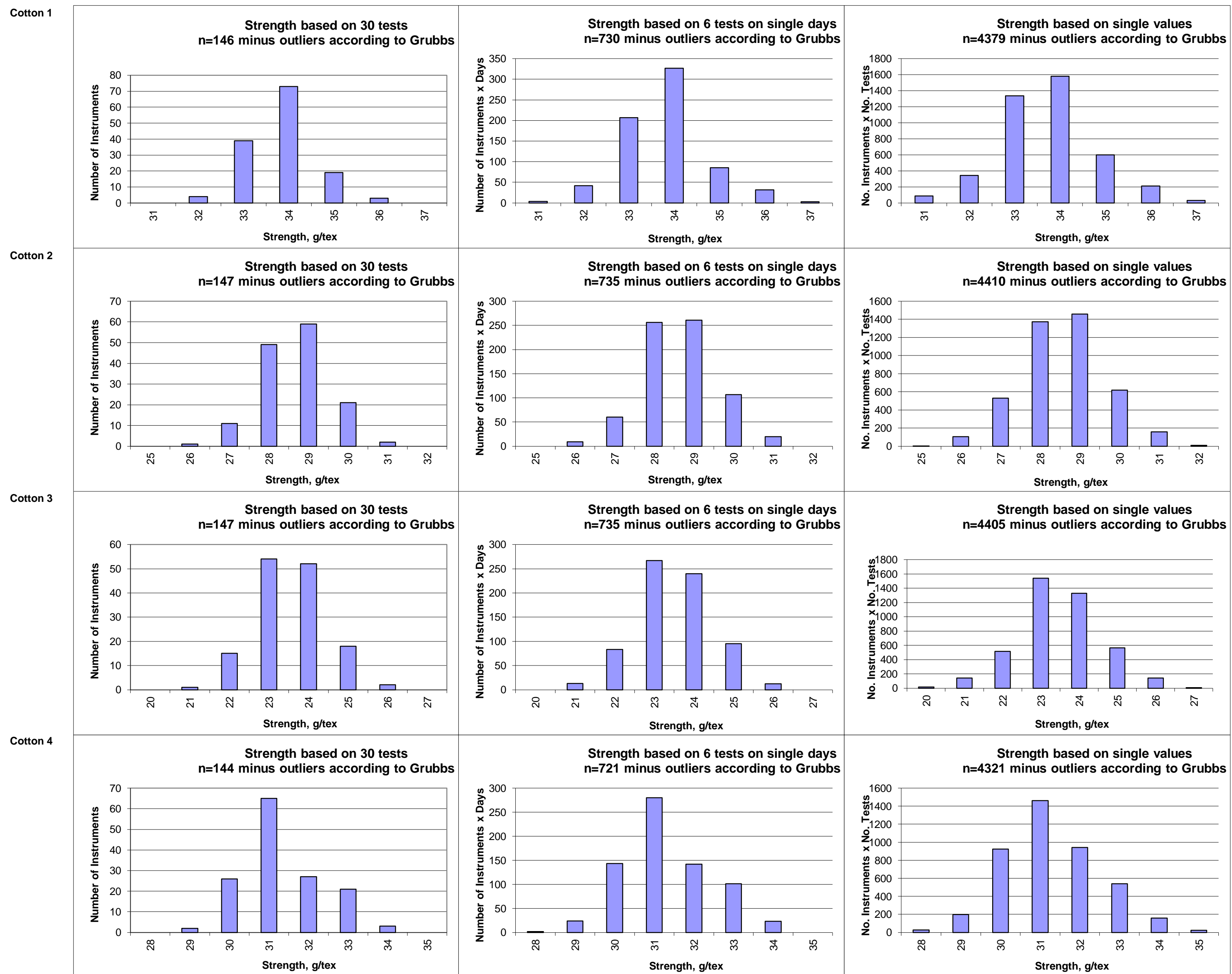
Color +b							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			11.784	8.356	11.383	9.309	
Reference Values for Evaluation			11.784	8.356	11.383	9.309	
Number Of Instruments			143	143	143	140	<b>142</b>
Inter-Instrument Variation	based on 30 tests	SD	0.321	0.221	0.316	0.263	<b>0.280</b>
		CV %	2.7	2.6	2.8	2.8	<b>2.7</b>
	based on 6 tests	SD	0.366	0.241	0.311	0.282	<b>0.300</b>
		CV %	3.1	2.9	2.7	3.0	<b>2.9</b>
	based on single tests	SD	0.391	0.267	0.337	0.304	<b>0.325</b>
		CV %	3.3	3.2	3.0	3.3	<b>3.2</b>
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.102	0.087	0.085	0.083	<b>0.089</b>
		CV %	0.9	1.0	0.7	0.9	<b>0.9</b>
	between single tests on one day	SD	0.113	0.098	0.088	0.100	<b>0.100</b>
		CV %	1.0	1.2	0.8	1.1	<b>1.0</b>
	between all tests on different days	SD	0.160	0.130	0.123	0.138	<b>0.138</b>
		CV %	1.4	1.6	1.1	1.5	<b>1.4</b>

Test Result Distributions  
Micronaire



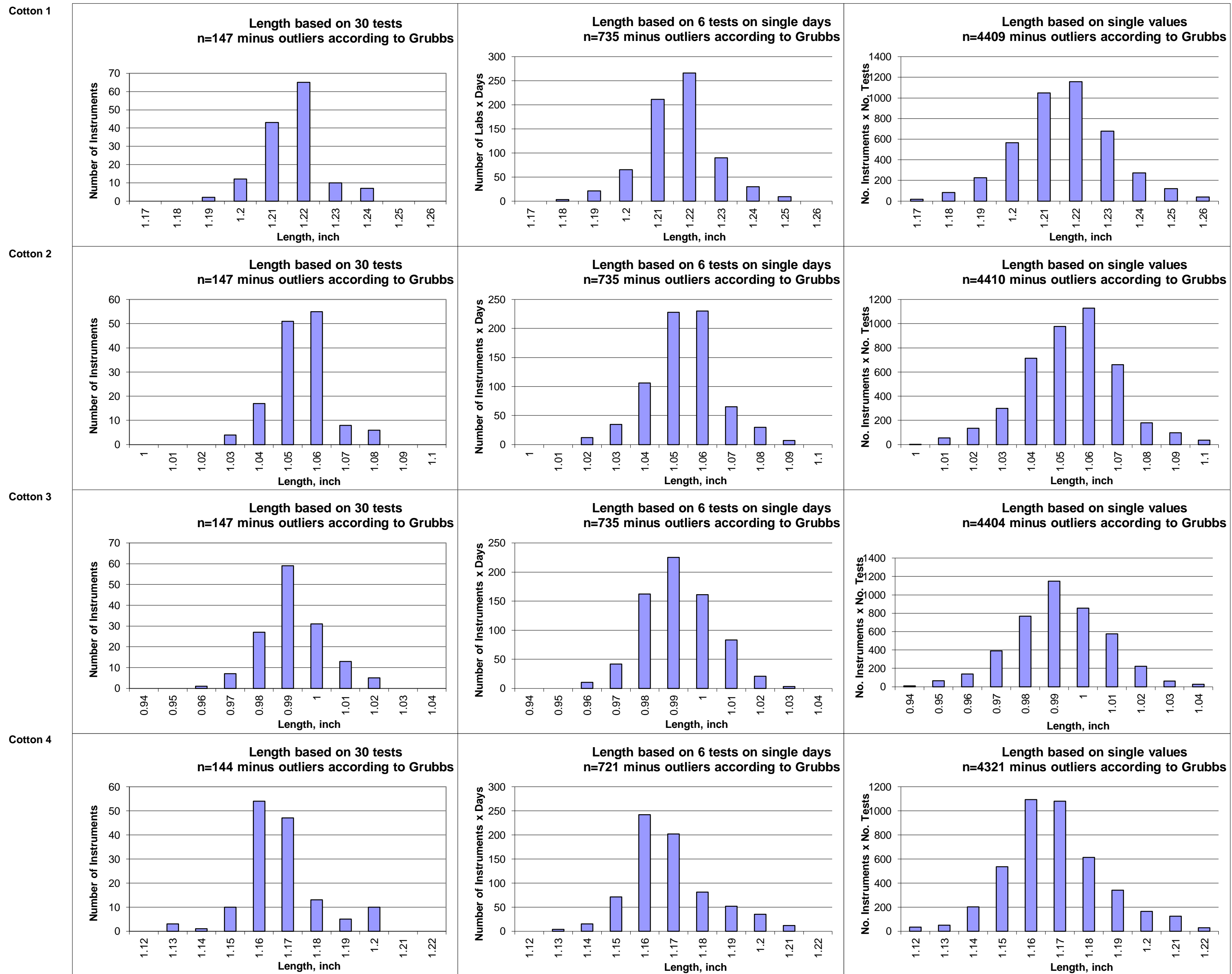
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method.)  
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions  
Strength



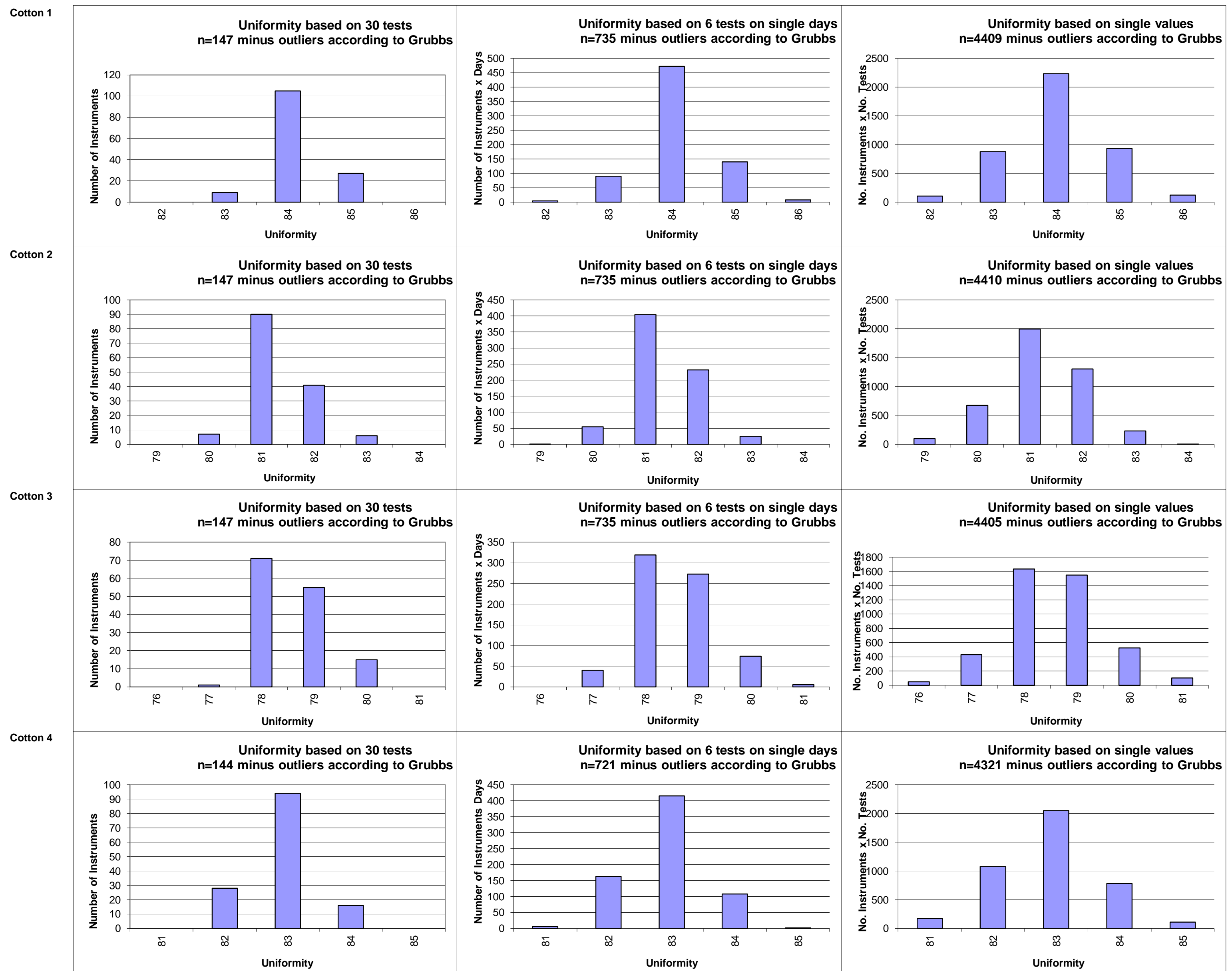
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
(classes are defined as > lower limit and <= upper limit)

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)

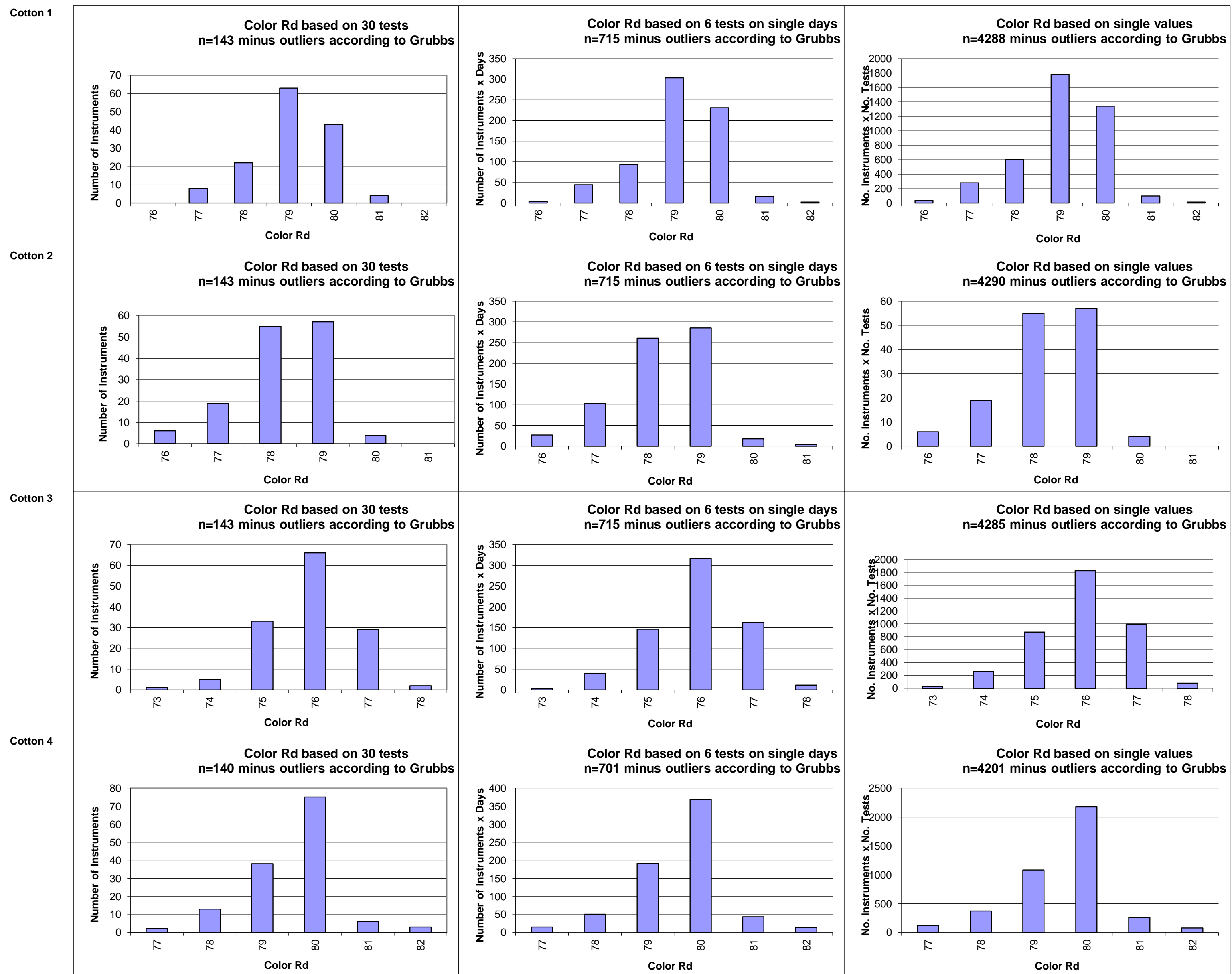
Test Result Distributions  
Uniformity



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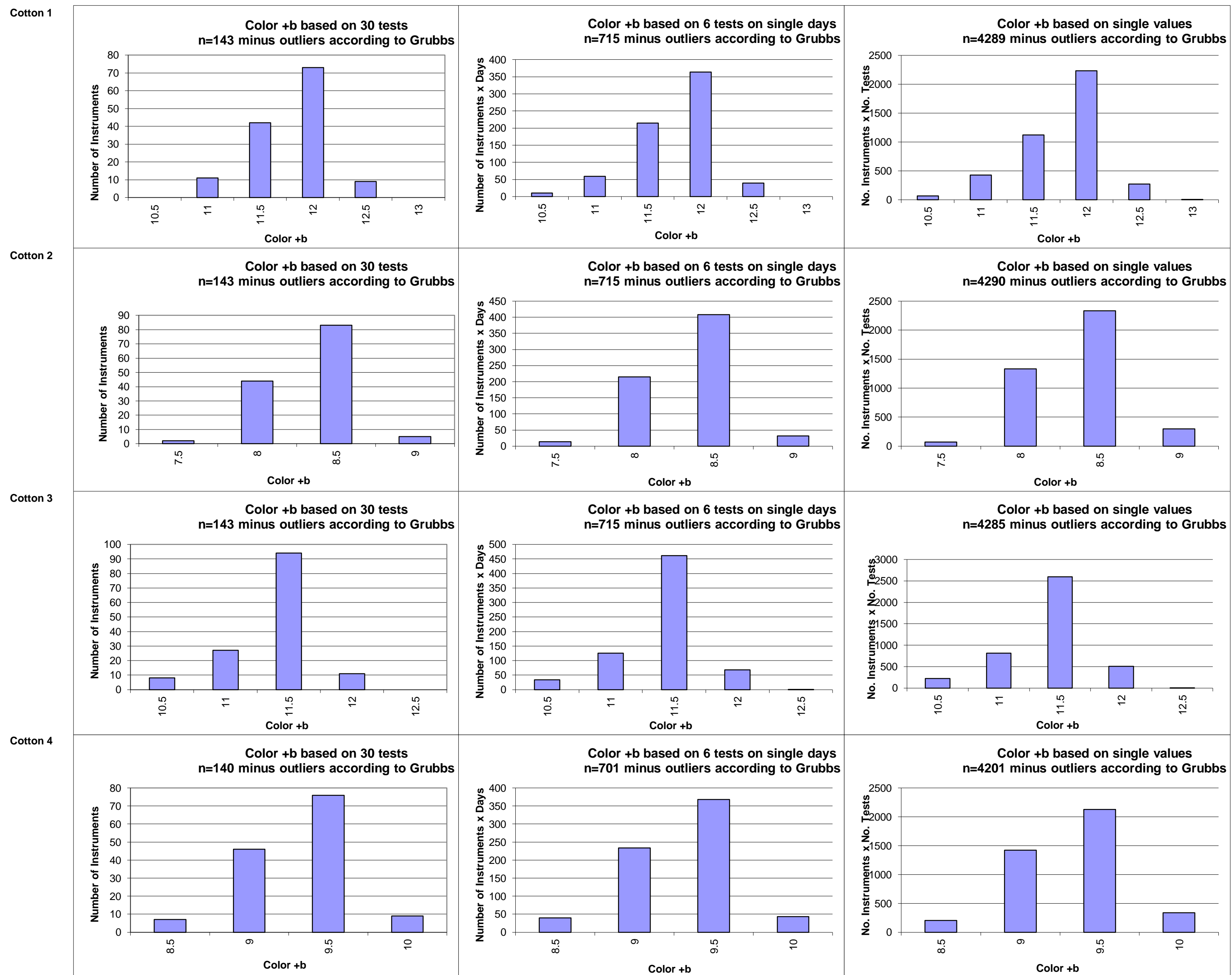
Test Result Distributions  
Color Rd



(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)  
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### Optional Parameters

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

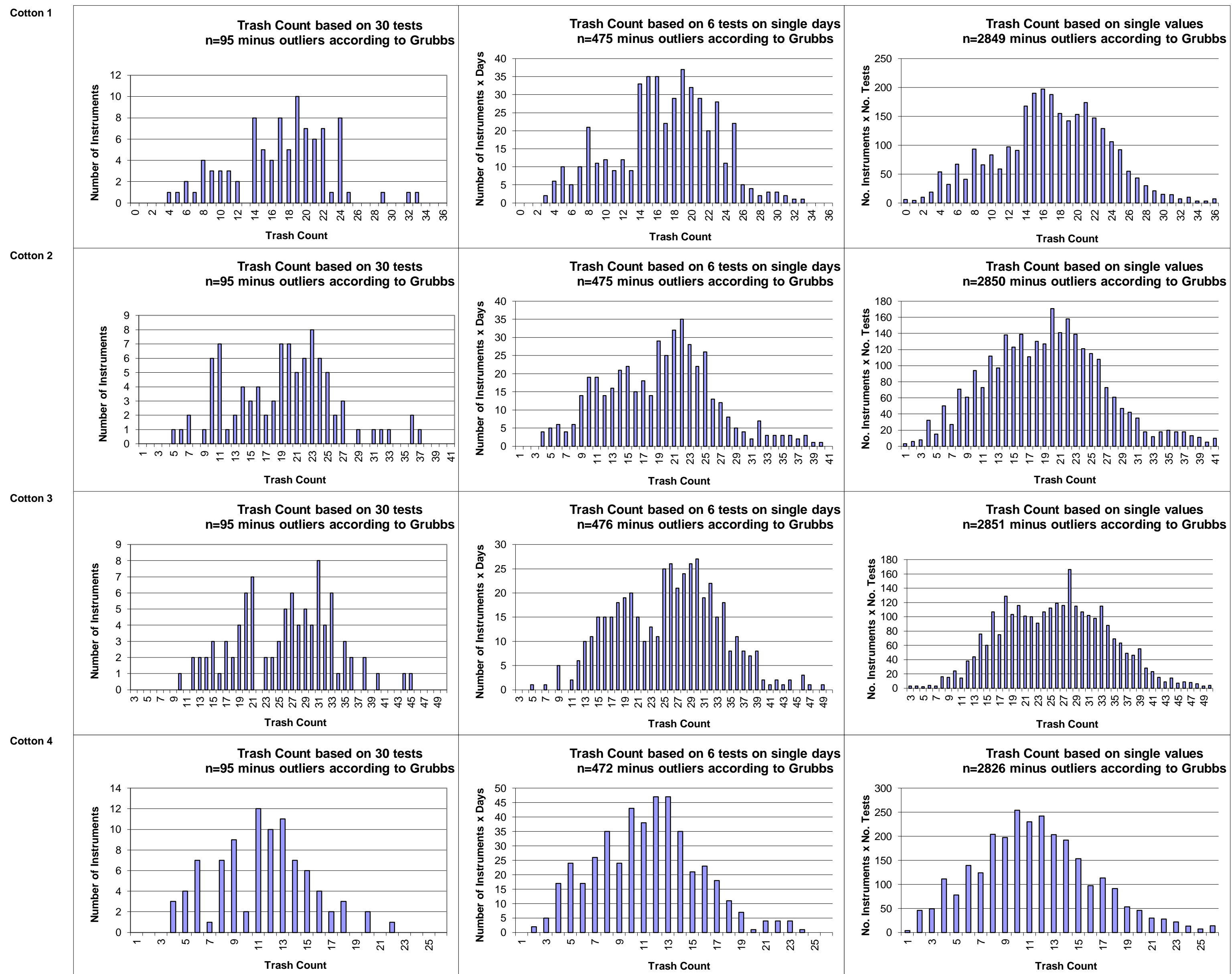
Trash Count							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			17.13	19.32	25.87	11.39	
<b>Reference Values for Evaluation</b>			17.13	19.32	25.87	11.39	
<b>Number Of Instruments</b>			95	95	95	95	<b>95</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	5.79	6.82	7.45	3.94	<b>6.00</b>
		CV %	33.8	35.3	28.8	34.6	<b>33.1</b>
	based on 6 tests	SD	5.91	7.06	7.81	4.24	<b>6.25</b>
		CV %	34.5	36.5	30.2	37.2	<b>34.6</b>
	based on single tests	SD	6.37	7.44	8.29	4.79	<b>6.72</b>
		CV %	37.2	38.5	32.0	42.0	<b>37.4</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	1.65	1.96	2.38	1.39	<b>1.85</b>
		CV %	9.6	10.1	9.2	12.2	<b>10.3</b>
	between single tests on one day	SD	2.35	2.57	2.74	2.01	<b>2.42</b>
		CV %	13.7	13.3	10.6	17.7	<b>13.8</b>
	between all tests on different days	SD	2.89	3.42	4.02	2.59	<b>3.23</b>
		CV %	16.9	17.7	15.5	22.7	<b>18.2</b>

Trash Area							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			0.161	0.195	0.268	0.123	
<b>Reference Values for Evaluation</b>			0.161	0.195	0.268	0.123	
<b>Number Of Instruments</b>			95	95	95	95	<b>95</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.036	0.049	0.063	0.034	<b>0.046</b>
		CV %	22.2	25.1	23.7	27.8	<b>24.7</b>
	based on 6 tests	SD	0.043	0.059	0.070	0.036	<b>0.052</b>
		CV %	26.5	29.9	26.3	29.4	<b>28.0</b>
	based on single tests	SD	0.052	0.071	0.082	0.042	<b>0.062</b>
		CV %	32.6	36.4	30.6	34.0	<b>33.4</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.020	0.027	0.034	0.018	<b>0.025</b>
		CV %	12.5	13.7	12.7	14.5	<b>13.3</b>
	between single tests on one day	SD	0.030	0.034	0.045	0.022	<b>0.033</b>
		CV %	19.0	17.3	16.6	17.8	<b>17.7</b>
	between all tests on different days	SD	0.038	0.049	0.054	0.032	<b>0.043</b>
		CV %	23.8	25.1	20.2	25.8	<b>23.7</b>

Maturity							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			85.84	87.66	84.32	86.73	
<b>Reference Values for Evaluation</b>			85.84	87.66	84.32	86.73	
<b>Number Of Instruments</b>			102	102	102	102	<b>102</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	2.01	1.73	2.02	1.80	<b>1.89</b>
		CV %	2.3	2.0	2.4	2.1	<b>2.2</b>
	based on 6 tests	SD	2.03	1.70	2.05	1.82	<b>1.90</b>
		CV %	2.4	1.9	2.4	2.1	<b>2.2</b>
	based on single tests	SD	2.06	1.73	2.10	1.82	<b>1.93</b>
		CV %	2.4	2.0	2.5	2.1	<b>2.2</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.15	0.15	0.17	0.16	<b>0.16</b>
		CV %	0.2	0.2	0.2	0.2	<b>0.2</b>
	between single tests on one day	SD	0.27	0.27	0.27	0.27	<b>0.27</b>
		CV %	0.3	0.3	0.3	0.3	<b>0.3</b>
	between all tests on different days	SD	0.41	0.41	0.43	0.41	<b>0.41</b>
		CV %	0.5	0.5	0.5	0.5	<b>0.5</b>

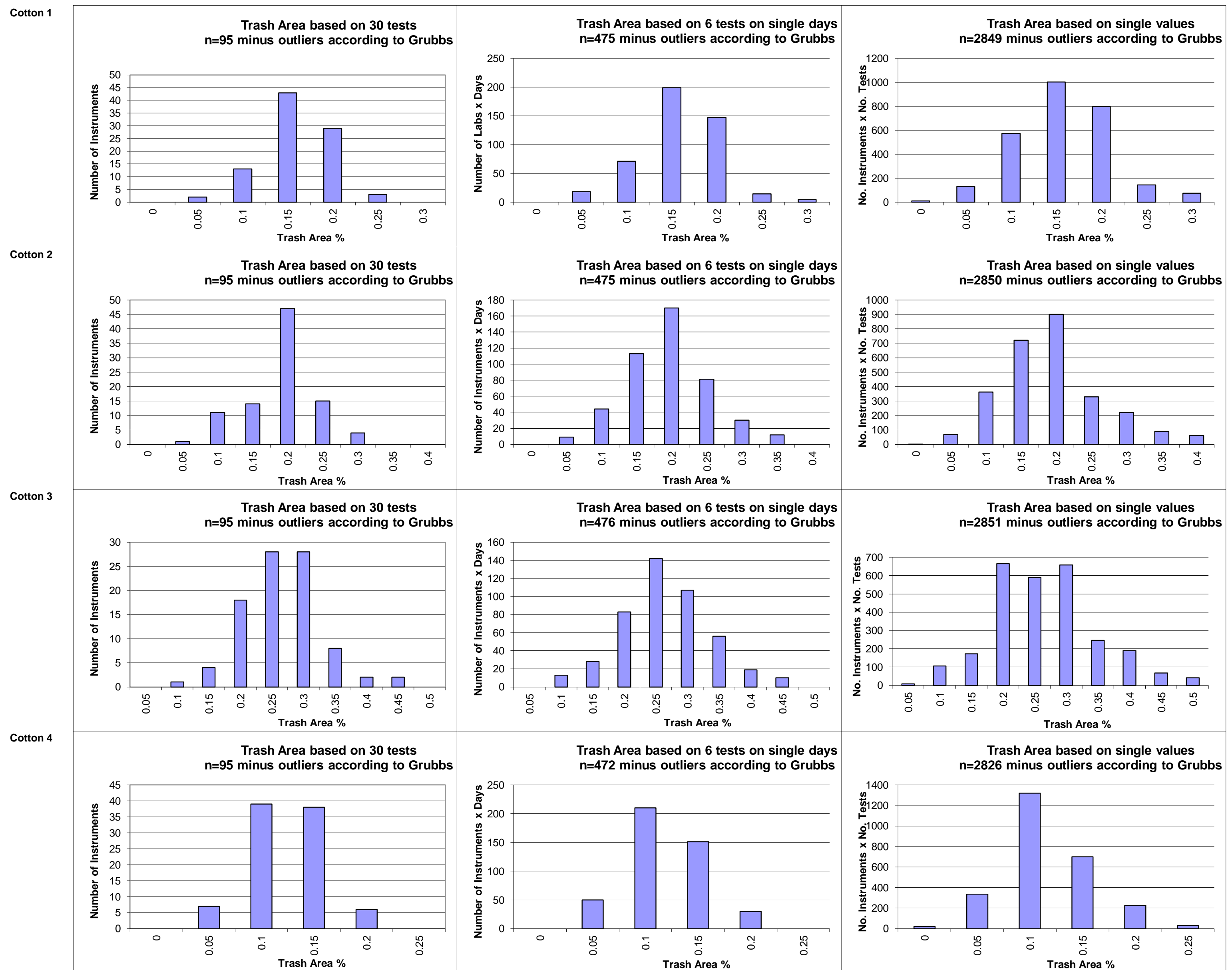
SFI							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
<b>Average of Instruments (Grubbs)</b>			7.22	9.74	14.29	8.50	
<b>Reference Values for Evaluation</b>			7.22	9.74	14.29	8.50	
<b>Number Of Instruments</b>			109	109	109	109	<b>109</b>
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.76	1.02	1.79	0.93	<b>1.12</b>
		CV %	10.5	10.5	12.5	10.9	<b>11.1</b>
	based on 6 tests	SD	0.78	1.01	1.83	0.96	<b>1.14</b>
		CV %	10.8	10.3	12.8	11.3	<b>11.3</b>
	based on single tests	SD	0.85	1.09	1.91	1.02	<b>1.22</b>
		CV %	11.8	11.2	13.4	12.0	<b>12.1</b>
<b>Typical within-instrument Variation (Median)</b>	between different days with each 6 tests	SD	0.15	0.23	0.38	0.20	<b>0.24</b>
		CV %	2.1	2.4	2.7	2.3	<b>2.4</b>
	between single tests on one day	SD	0.29	0.49	0.68	0.36	<b>0.45</b>
		CV %	4.0	5.0	4.8	4.2	<b>4.5</b>
	between all tests on different days	SD	0.34	0.55	0.78	0.41	<b>0.52</b>
		CV %	4.8	5.6	5.4	4.8	<b>5.2</b>

Test Result Distributions  
Trash Count



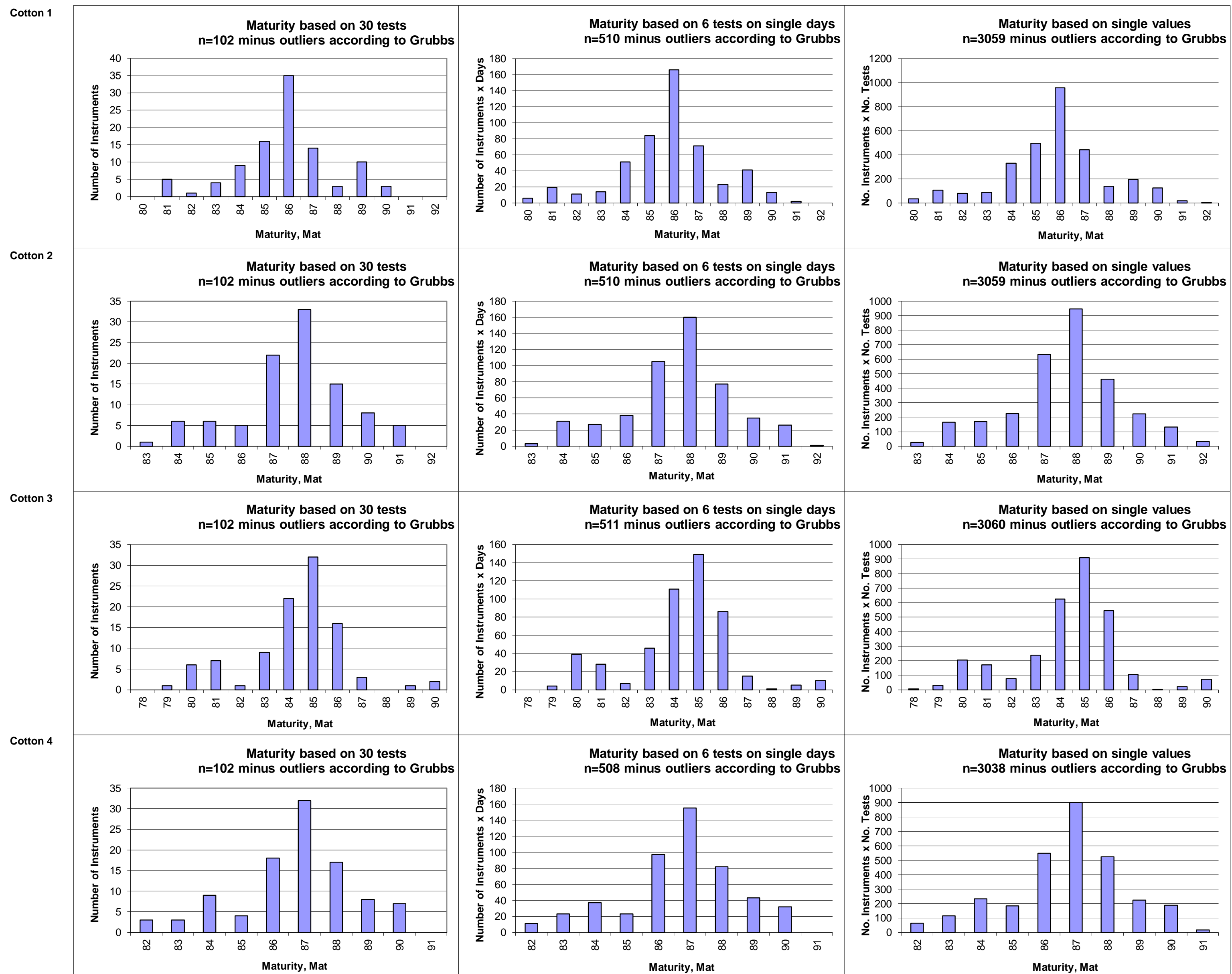
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
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Test Result Distributions  
Trash Area



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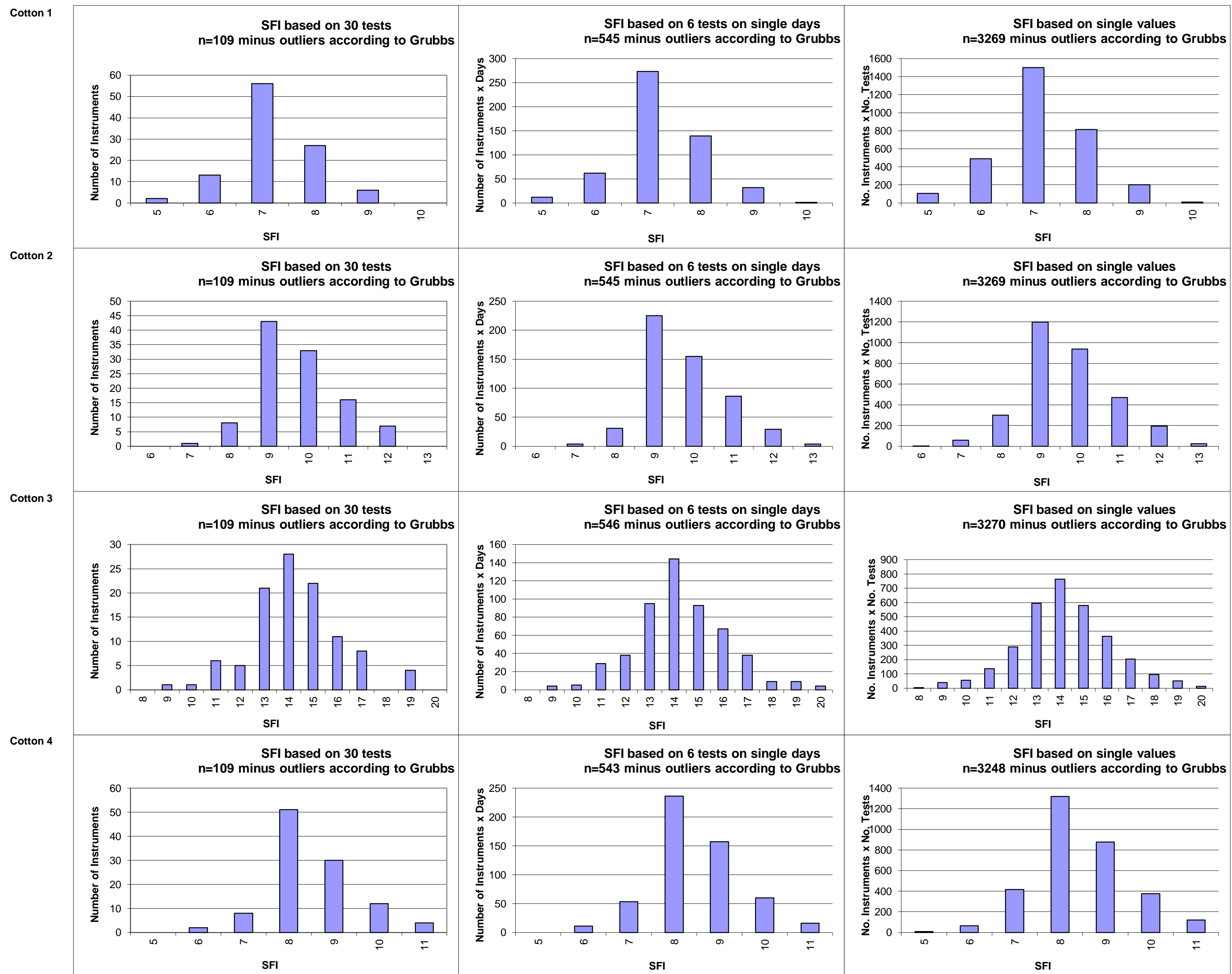
Test Result Distributions  
Maturity



(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 2014 - 3

### General Evaluation

Section One: Result Distribution

**Section Two: Instrument Evaluation**

Section Three: Within Limits Evaluation

#### Section Two: Instrument Evaluation

Content:

- Evaluation of Combined Parameters
- Evaluation of Single Parameters

Executed By:

Faserinstitut Bremen e.V., Bremen, Germany\*

USDA-AMS, Memphis, TN, USA

System Provided by:

Generation 10 Limited



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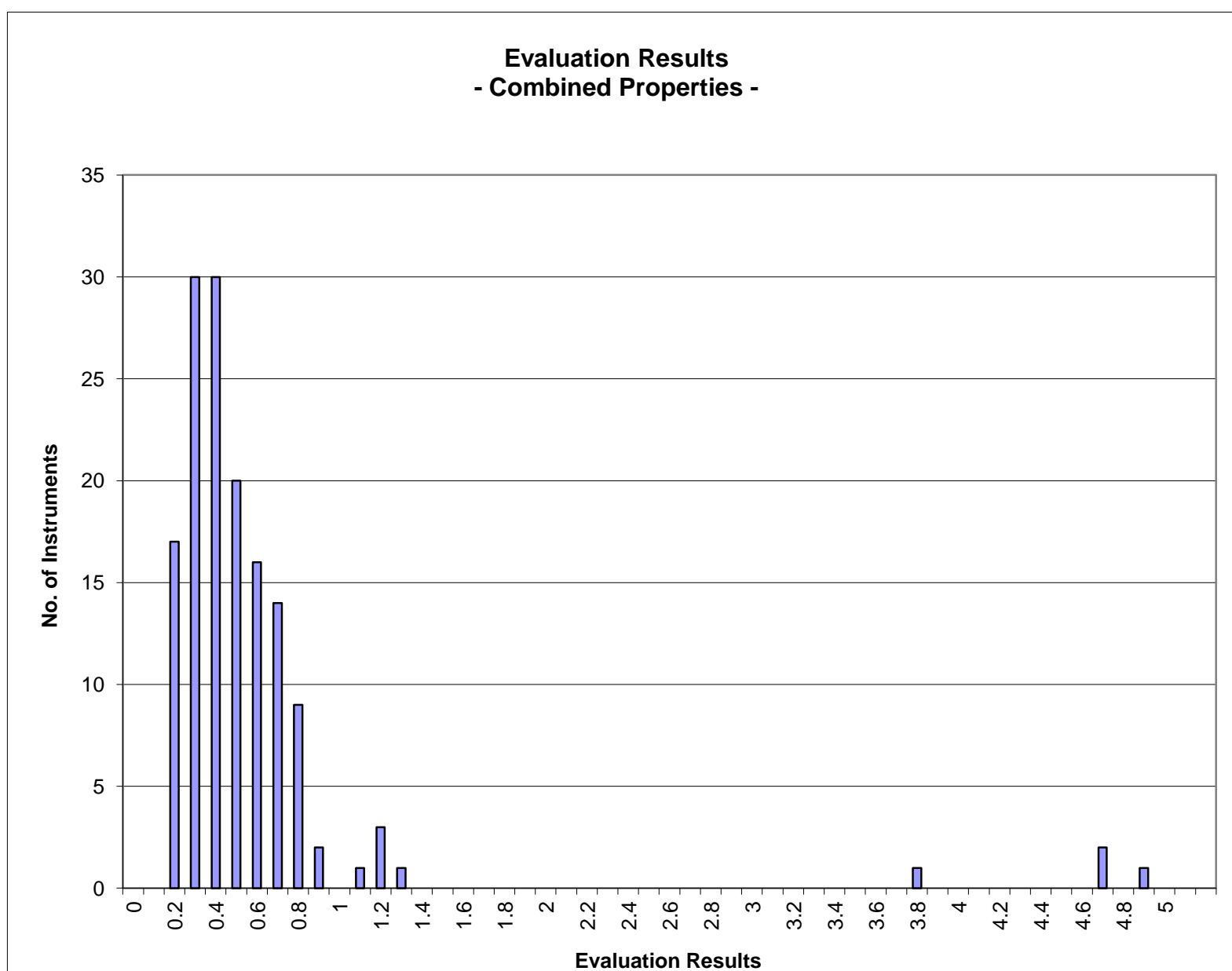
Instrument Evaluation

- Graph of Combined Properties -

According to ICAC CSITC Task Force Recommendations

Global - Round Trial 2014 - 3

		Evaluation Combined Prop.
<b>Statistics</b>	Average	0.59
	Median	0.44
	Best Instrument	0.18
	Worst Instrument	4.91

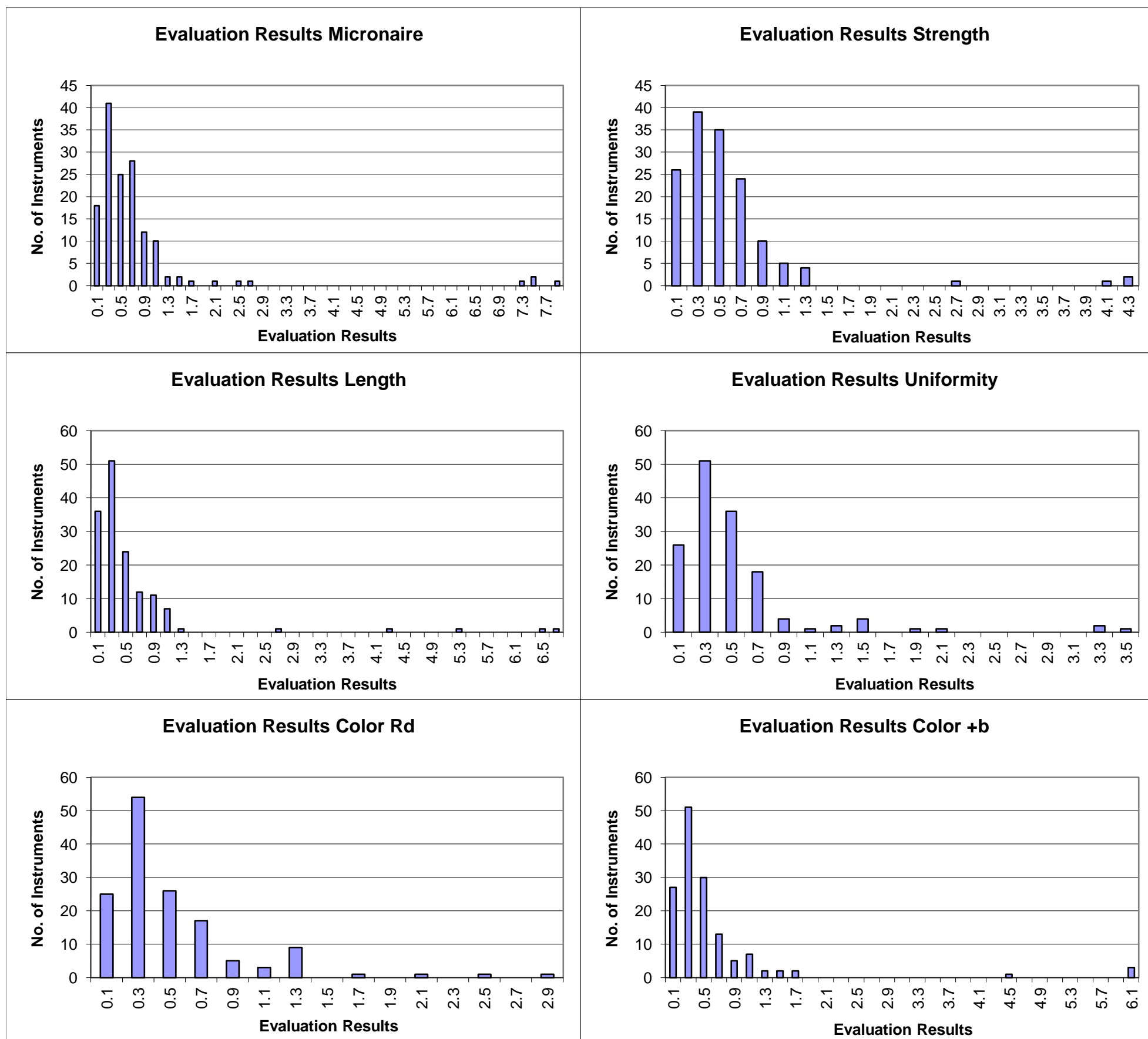


x-Axis shows midpoints of classes

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 2014 - 3

		Evaluation Micronaire	Evaluation Strength	Evaluation Length	Evaluation Uniformity	Evaluation Color Rd	Evaluation Color +b
<b>Statistics</b>	Average	0.77	0.57	0.58	0.52	0.50	0.60
	Median	0.51	0.45	0.33	0.39	0.36	0.36
	Best Instr.	0.09	0.07	0.05	0.04	0.04	0.03
	Worst Instr.	7.91	4.26	6.72	3.41	2.98	6.07



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



International Cotton Advisory Committee



# CSITC

## Global - Round Trial 2014 - 3

### General Evaluation

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

#### Section Three: Within Limits Evaluation

Content:

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

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

System Provided by:  
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## 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	94.7	93.2	94.4	96.6	88.0	96.3
Completely within limits	90.4	83.7	87.1	93.2	79.0	92.3
% of Instruments $\geq 75\%$ within limits	95.2	93.9	95.9	97.3	86.7	97.2
% of Instruments $\geq 50\%$ within limits	95.9	97.3	97.3	98.0	90.2	97.9

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>
GL143-001-01	100	100	100	100	100	100
GL143-001-02	100	100	100	100	100	100
GL143-002-01	100	100	100	100	100	100
GL143-002-03	100	75	100	100	100	100
GL143-003-01	100	50	100	100	25	100
GL143-004-01	100	100	75	75	0	75
GL143-005-01	100	75	75	100	75	100
GL143-005-02	100	75	75	100	75	100
GL143-006-01	100	100	100	100	100	100
GL143-006-05	100	100	100	100	100	100
GL143-006-08	100	100	100	100	100	100
GL143-006-09	100	100	100	100	100	100
GL143-007-03	100	100	75	100		
GL143-008-01	100	75	100	100	100	100
GL143-008-02	100	100	100	100	100	100
GL143-009-01	100	100	100	100	100	100
GL143-010-01	100	100	100	100	100	100
GL143-011-02	100	100	100	100	50	100
GL143-012-04	100	100	100	100	100	100
GL143-013-01	100	100	100	100	100	100
GL143-013-04	100	100	100	100	100	100
GL143-013-05	100	100	100	100	100	100
GL143-014-56	100	100	100	100	100	100
GL143-014-58	100	100	100	100	100	100
GL143-015-01	100	100	100	100	100	100
GL143-016-01	100	100	100	100	100	100
GL143-017-01	100	100	100	100	100	100
GL143-017-02	100	100	100	100	100	100
GL143-018-01	100	100	100	100	100	100
GL143-019-01	50	100	100	100	25	100
GL143-020-01	100	100	100	100	75	100
GL143-020-02	100	100	100	100	100	100
GL143-020-04	100	100	100	100	100	100
GL143-021-01	100	100	100	100	25	100
GL143-022-01	100	100	100	100	100	100
GL143-023-03	100	100	100	100	100	100
GL143-024-02	100	75	100	100	100	100
GL143-024-03	100	100	100	100	100	100
GL143-025-01	100	100	100	100	100	100

GL143-026-01	100	100	100	100	100	100
GL143-028-01	75	75	100	100	100	100
GL143-029-01	100	100	100	100	75	100
GL143-030-01	100	100	100	100	100	100
GL143-032-01	100	100	100	100	100	100
GL143-032-02	100	100	100	100	100	100
GL143-034-01	100	100	100	100	100	100
GL143-034-03	100	50	100	75	50	100
GL143-035-01	100	100	100	100	75	75
GL143-035-02	100	100	100	100	75	75
GL143-035-03	100	100	100	100	100	100
GL143-036-01	100	100	100	100	100	100
GL143-036-02	100	100	100	100	100	100
GL143-037-01	100	100	100	100	100	100
GL143-037-02	100	100	100	100	75	100
GL143-037-03	100	100	100	100	75	75
GL143-037-05	100	100	100	100	75	100
GL143-039-01	100	100	100	100	100	100
GL143-040-01	100	100	100	100	25	75
GL143-041-01	100	100	100	100	100	100
GL143-042-01	100	100	100	100	100	100
GL143-043-01	100	100	100	100	100	100
GL143-043-02	100	100	100	100	100	100
GL143-043-06	100	100	100	100	100	100
GL143-044-01	100	100	100	100	100	100
GL143-044-05	100	100	100	100	100	100
GL143-044-07	100	100	100	100	100	100
GL143-045-01	100	100	100	100	100	100
GL143-046-03	100	100	100	100	100	100
GL143-046-04	100	100	100	100	100	100
GL143-046-06	100	100	100	100	100	100
GL143-047-01	100	100	100	100	100	100
GL143-048-01	100	100	100	100		
GL143-048-02	100	100	100	100		
GL143-049-01	0	0	0	0	33	0
GL143-049-02	0	0	0	0	33	0
GL143-049-03	0	0	0	0	67	0
GL143-051-01	100	75	75	100	75	100
GL143-052-01	100	100	100	100	100	100
GL143-053-04	25	75	75	100	0	100
GL143-054-01	100	100	100	100	100	100
GL143-056-01	100	75	100	100	100	100
GL143-057-01	100	100	100	100	100	100
GL143-057-02	100	100	100	100	100	100
GL143-058-01	0	25	50	50	25	50
GL143-059-01	100	100	100	100	100	100
GL143-059-02	100	100	100	100	100	100
GL143-063-01	100	100	100	100	100	100
GL143-064-03	100	100	100	100	100	100
GL143-064-07	100	100	100	100	100	100
GL143-064-08	100	100	100	100	100	100
GL143-064-09	100	100	100	100	100	100
GL143-064-10	100	100	100	100	100	100
GL143-065-01	100	100	100	100	100	100
GL143-066-01	100	100	100	100	100	100
GL143-066-02	100	100	100	100	100	100
GL143-066-03	100	100	100	100	100	100
GL143-066-04	100	100	100	100	100	100
GL143-067-01	100	100	100	100	100	100
GL143-068-01	100	100	100	100	100	100

GL143-068-02	100	100	100	100	100	100
GL143-071-20	100	50	100	100	75	100
GL143-073-01	100	100	100	100	100	100
GL143-075-01	100	100	100	100	100	100
GL143-076-01	100	100	100	100	100	100
GL143-077-01	100	100	100	100	100	100
GL143-078-02	100	100	100	100	100	100
GL143-079-01	100	75	75	100	100	100
GL143-079-02	100	75	75	100	100	100
GL143-079-03	100	100	100	100	100	100
GL143-079-04	100	100	100	100	100	100
GL143-080-03		75	100	100		
GL143-081-02	75	100	75	75	100	100
GL143-081-03	75	100	75	75	100	100
GL143-081-09	75	100	75	75	100	100
GL143-081-11	75	100	75	75	100	100
GL143-082-01	100	100	100	100	100	100
GL143-084-03	100	100	100	100	100	100
GL143-084-04	100	100	100	100	100	100
GL143-084-05	100	100	100	100	100	100
GL143-087-02	100	100	100	100	100	100
GL143-087-06	100	100	100	100	100	100
GL143-088-01	100	100	100	100	100	100
GL143-089-02	100	100	100	100	0	100
GL143-090-01	100	100	100	100	0	100
GL143-091-12	100	100	100	100	100	100
GL143-091-13	100	100	100	100	100	100
GL143-094-01	100	100	100	100	50	100
GL143-095-03	100	100	100	100	100	100
GL143-096-01	100	100	100	100	100	100
GL143-096-02	100	100	100	100	100	100
GL143-097-01	100	75	100	100	100	100
GL143-099-01	100	100	75	100	100	100
GL143-100-01	100	100	100	100	100	100
GL143-100-03	100	100	100	100	100	100
GL143-101-01	100	75	100	100	100	75
GL143-102-03	100	100	100	100	0	100
GL143-102-05	100	50	100	100	50	100
GL143-102-06	75	75	100	100	0	100
GL143-106-01	100	100	100	100	100	100
GL143-106-02	100	100	100	100	100	100
GL143-107-01	75	50	0	100	100	75
GL143-108-01	100	100	100	100	100	100
GL143-109-01	25	100	50	100	0	100
GL143-110-04	100	100	100	100	100	100
GL143-110-20	100	100	100	100	100	100
GL143-111-04	100	100	100	100	100	100
GL143-111-05	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	93.2	88.9	92.4	94.7	87.0	95.7
% of Instruments 100% within limits	58.9	24.5	38.1	44.2	51.7	72.0
% of Instruments ≥95% within limits	81.5	56.5	68.0	81.6	68.5	87.4
% of Instruments ≥75% within limits	92.5	85.7	94.6	93.2	81.8	95.8
% of Instruments ≥65% within limits	93.8	91.2	95.9	95.2	86.0	96.5
% of Instruments ≥50% within limits	95.9	97.3	96.6	98.0	89.5	97.2

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>
GL143-001-01	100	100	93	96	100	100
GL143-001-02	100	100	95	100	100	100
GL143-002-01	98	94	88	93	99	100
GL143-002-03	100	72	83	99	100	100
GL143-003-01	100	51	96	100	30	99
GL143-004-01	100	83	74	66	0	79
GL143-005-01	87	64	84	99	85	89
GL143-005-02	92	67	84	99	88	94
GL143-006-01	100	98	94	93	100	99
GL143-006-05	100	93	98	98	98	100
GL143-006-08	99	93	93	98	99	100
GL143-006-09	99	89	98	99	99	100
GL143-007-03	100	95	84	100		
GL143-008-01	100	55	88	99	100	100
GL143-008-02	97	96	99	98	100	99
GL143-009-01	100	92	100	94	100	100
GL143-010-01	100	85	100	100	95	99
GL143-011-02	100	99	100	100	54	100
GL143-012-04	100	93	96	99	100	100
GL143-013-01	99	100	100	100	100	100
GL143-013-04	100	100	100	100	100	100
GL143-013-05	100	100	100	100	100	100
GL143-014-56	100	100	100	100	100	100
GL143-014-58	100	100	100	100	100	100
GL143-015-01	100	88	91	94	98	100
GL143-016-01	88	90	94	98	99	100
GL143-017-01	100	91	100	97	100	100
GL143-017-02	100	99	100	98	100	100
GL143-018-01	100	99	96	99	99	100
GL143-019-01	62	69	86	98	38	100
GL143-020-01	100	91	97	99	68	100
GL143-020-02	94	98	99	100	100	100
GL143-020-04	100	100	99	100	100	100
GL143-021-01	82	86	99	100	31	99
GL143-022-01	97	100	100	100	100	100
GL143-023-03	100	98	100	99	99	100

GL143-024-02	100	76	100	100	95	100
GL143-024-03	100	98	100	99	100	100
GL143-025-01	100	98	100	100	100	100
GL143-026-01	100	99	88	83	100	100
GL143-028-01	68	63	98	98	82	99
GL143-029-01	100	89	88	96	69	100
GL143-030-01	98	96	100	98	83	98
GL143-032-01	100	100	100	100	100	100
GL143-032-02	100	100	100	100	100	100
GL143-034-01	100	100	100	100	100	100
GL143-034-03	100	52	99	73	43	96
GL143-035-01	98	93	81	88	71	81
GL143-035-02	99	95	91	94	75	72
GL143-035-03	95	100	94	98	100	100
GL143-036-01	100	99	96	98	97	100
GL143-036-02	97	93	98	100	93	97
GL143-037-01	100	100	100	100	93	97
GL143-037-02	100	100	98	100	91	100
GL143-037-03	89	100	100	100	80	88
GL143-037-05	90	100	100	100	83	90
GL143-039-01	100	100	100	100	100	100
GL143-040-01	63	97	89	94	27	78
GL143-041-01	99	96	99	95	73	100
GL143-042-01	100	98	98	93	96	100
GL143-043-01	97	76	98	100	94	100
GL143-043-02	98	95	98	100	100	100
GL143-043-06	100	91	96	100	100	100
GL143-044-01	100	100	95	100	100	100
GL143-044-05	100	100	98	100	100	100
GL143-044-07	100	100	99	100	100	100
GL143-045-01	96	93	97	100	89	87
GL143-046-03	100	100	100	100	100	100
GL143-046-04	99	100	100	100	100	100
GL143-046-06	100	100	100	100	100	100
GL143-047-01	100	90	95	99	98	100
GL143-048-01	100	87	97	97		
GL143-048-02	98	81	96	99		
GL143-049-01	0	0	0	1	34	0
GL143-049-02	1	0	3	12	33	0
GL143-049-03	0	2	0	13	66	0
GL143-051-01	80	69	73	99	75	100
GL143-052-01	100	84	100	94	95	100
GL143-053-04	36	66	79	98	15	92
GL143-054-01	82	94	95	99	51	98
GL143-056-01	100	65	100	100	98	98
GL143-057-01	99	99	95	94	100	100
GL143-057-02	98	100	89	100	100	100
GL143-058-01	1	27	49	50	20	44
GL143-059-01	100	100	100	100	100	100
GL143-059-02	100	100	99	100	100	100
GL143-063-01	100	96	90	90	100	93
GL143-064-03	100	99	100	100	100	100
GL143-064-07	99	98	100	100	100	100
GL143-064-08	100	98	100	96	99	100
GL143-064-09	100	98	100	100	98	100
GL143-064-10	100	98	100	99	100	100
GL143-065-01	100	100	98	100	100	100
GL143-066-01	100	98	100	99	100	99
GL143-066-02	100	93	93	98	100	100
GL143-066-03	100	96	87	99	100	100

GL143-066-04	100	98	97	100	100	100
GL143-067-01	74	98	100	98	100	97
GL143-068-01	100	98	100	100	100	100
GL143-068-02	100	100	100	99	100	100
GL143-071-20	98	63	93	100	60	91
GL143-073-01	100	90	90	88	100	100
GL143-075-01	99	98	98	99	100	100
GL143-076-01	100	90	100	99	100	100
GL143-077-01	100	99	99	98	100	100
GL143-078-02	100	99	100	100	100	100
GL143-079-01	100	87	87	98	99	98
GL143-079-02	100	87	87	98	99	98
GL143-079-03	98	97	100	100	91	100
GL143-079-04	98	98	100	100	92	100
GL143-080-03		55	91	92		
GL143-081-02	83	90	78	63	100	100
GL143-081-03	83	90	78	63	100	100
GL143-081-09	86	90	76	65	100	100
GL143-081-11	83	91	75	63	100	100
GL143-082-01	100	100	100	98	100	100
GL143-084-03	100	99	100	99	100	100
GL143-084-04	100	98	99	100	100	100
GL143-084-05	100	99	99	100	100	100
GL143-087-02	97	96	98	100	81	98
GL143-087-06	98	91	100	96	88	98
GL143-088-01	100	100	100	98	100	100
GL143-089-02	100	100	88	100	30	98
GL143-090-01	86	96	100	98	13	100
GL143-091-12	100	98	100	100	99	100
GL143-091-13	100	96	100	100	100	100
GL143-094-01	96	87	98	98	50	95
GL143-095-03	100	100	99	100	100	100
GL143-096-01	100	98	100	100	95	99
GL143-096-02	98	94	100	100	100	100
GL143-097-01	99	87	100	100	100	100
GL143-099-01	99	90	78	97	100	100
GL143-100-01	100	98	100	98	100	100
GL143-100-03	100	100	99	98	91	100
GL143-101-01	98	68	82	100	68	63
GL143-102-03	98	92	94	92	9	100
GL143-102-05	92	53	93	99	56	98
GL143-102-06	60	50	84	87	0	100
GL143-106-01	100	99	99	100	99	100
GL143-106-02	100	98	100	98	90	100
GL143-107-01	88	66	27	84	97	88
GL143-108-01	96	82	99	100	98	100
GL143-109-01	25	84	64	98	38	100
GL143-110-04	100	100	100	100	100	100
GL143-110-20	100	100	100	100	100	100
GL143-111-04	100	98	99	100	100	100
GL143-111-05	100	78	92	99	100	100