



## International Cotton Advisory Committee



# CSITC Global - Round Trial 2012 - 2 General Evaluation

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Section Two: Instrument Evaluation

Section Three: Within Limits Evaluation

### Section One: Result Distribution

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-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 2012 - 2

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

Micronaire								
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average	Cotton 5
<b>Average of Instruments (Grubbs)</b>			4.998	4.214	4.214	5.071		4.942
<b>Reference Values for Evaluation</b>			4.998	4.214	4.214	5.071		4.942
<b>Number Of Instruments</b>			111	111	111	111	<b>111</b>	111
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.055	0.076	0.065	0.067	<b>0.066</b>	0.065
		CV %	1.1	1.8	1.5	1.3	<b>1.4</b>	1.3
	based on 6 tests	SD	0.062	0.078	0.070	0.074	<b>0.071</b>	0.070
		CV %	1.2	1.9	1.7	1.5	<b>1.6</b>	1.4
<b>Typical within-instrument Variation (Median)</b>	based on single tests	SD	0.078	0.088	0.079	0.085	<b>0.083</b>	0.081
		CV %	1.6	2.1	1.9	1.7	<b>1.8</b>	1.6
	between different days with each 6 tests	SD	0.029	0.027	0.023	0.030	<b>0.027</b>	0.026
		CV %	0.6	0.6	0.6	0.6	<b>0.6</b>	0.5
	between single tests on one day	SD	0.047	0.039	0.035	0.040	<b>0.040</b>	0.040
		CV %	0.9	0.9	0.8	0.8	<b>0.9</b>	0.8
	between all tests on different days	SD	0.054	0.048	0.044	0.053	<b>0.050</b>	0.048
		CV %	1.1	1.1	1.1	1.0	<b>1.1</b>	1.0

Strength								
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average	Cotton 5
<b>Average of Instruments (Grubbs)</b>			27.207	28.003	33.274	29.027		30.148
<b>Reference Values for Evaluation</b>			27.207	28.003	33.274	29.027		30.148
<b>Number Of Instruments</b>			112	112	112	112	<b>112</b>	112
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.879	0.842	0.803	0.921	<b>0.861</b>	1.094
		CV %	3.2	3.0	2.4	3.2	<b>3.0</b>	3.6
	based on 6 tests	SD	0.957	0.884	0.841	1.027	<b>0.927</b>	1.154
		CV %	3.5	3.2	2.5	3.5	<b>3.2</b>	3.8
<b>Typical within-instrument Variation (Median)</b>	based on single tests	SD	1.100	1.101	1.018	1.127	<b>1.087</b>	1.248
		CV %	4.0	3.9	3.1	3.9	<b>3.7</b>	4.1
	between different days with each 6 tests	SD	0.300	0.282	0.332	0.351	<b>0.316</b>	0.351
		CV %	1.1	1.0	1.0	1.2	<b>1.1</b>	1.2
	between single tests on one day	SD	0.500	0.516	0.544	0.503	<b>0.516</b>	0.5
		CV %	1.8	1.8	1.6	1.7	<b>1.8</b>	1.7
	between all tests on different days	SD	0.595	0.588	0.649	0.595	<b>0.607</b>	0.623
		CV %	2.2	2.1	2.0	2.0	<b>2.1</b>	2.1

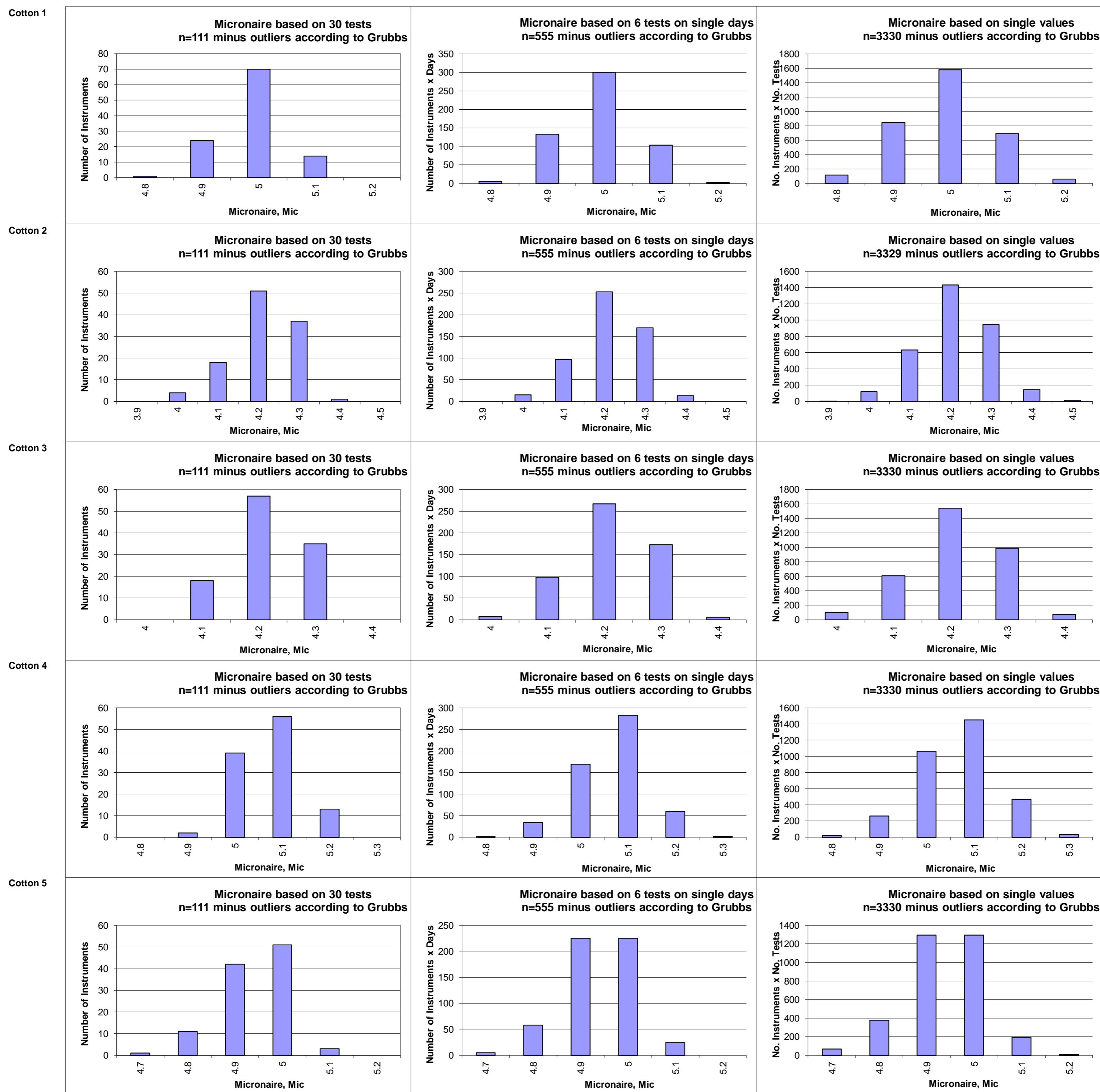
Length								
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average	Cotton 5
<b>Average of Instruments (Grubbs)</b>			1.0352	1.0116	1.2188	1.1162		1.0924
<b>Reference Values for Evaluation</b>			1.0352	1.0116	1.2188	1.1162		1.0924
<b>Number Of Instruments</b>			112	112	112	112	<b>112</b>	112
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.0125	0.0106	0.0083	0.0083	<b>0.0099</b>	0.0106
		CV %	1.2	1.0	0.7	0.7	<b>0.9</b>	1.0
	based on 6 tests	SD	0.0137	0.0122	0.0105	0.0097	<b>0.0115</b>	0.0115
		CV %	1.3	1.2	0.9	0.9	<b>1.1</b>	1.1
<b>Typical within-instrument Variation (Median)</b>	based on single tests	SD	0.0162	0.0149	0.0144	0.0128	<b>0.0145</b>	0.0144
		CV %	1.6	1.5	1.2	1.1	<b>1.3</b>	1.3
	between different days with each 6 tests	SD	0.0046	0.0047	0.0055	0.0045	<b>0.0048</b>	0.0045
		CV %	0.4	0.5	0.4	0.4	<b>0.4</b>	0.4
	between single tests on one day	SD	0.0095	0.0092	0.0093	0.0082	<b>0.0090</b>	0.0081
		CV %	0.9	0.9	0.8	0.7	<b>0.8</b>	0.7
	between all tests on different days	SD	0.0107	0.0100	0.0106	0.0092	<b>0.0101</b>	0.0089
		CV %	1.0	1.0	0.9	0.8	<b>0.9</b>	0.8

Uniformity								
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average	Cotton 5
<b>Average of Instruments (Grubbs)</b>			79.457	79.313	83.516	83.308		82.281
<b>Reference Values for Evaluation</b>			79.457	79.313	83.516	83.308		82.281
<b>Number Of Instruments</b>			112	112	112	112	<b>112</b>	112
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.725	0.666	0.490	0.487	<b>0.592</b>	0.504
		CV %	0.9	0.8	0.6	0.6	<b>0.7</b>	0.6
	based on 6 tests	SD	0.775	0.702	0.521	0.547	<b>0.636</b>	0.586
		CV %	1.0	0.9	0.6	0.7	<b>0.8</b>	0.7
<b>Typical within-instrument Variation (Median)</b>	based on single tests	SD	0.921	0.839	0.688	0.731	<b>0.795</b>	0.751
		CV %	1.2	1.1	0.8	0.9	<b>1.0</b>	0.9
	between different days with each 6 tests	SD	0.325	0.283	0.270	0.260	<b>0.284</b>	0.244
		CV %	0.4	0.4	0.3	0.3	<b>0.4</b>	0.3
	between single tests on one day	SD	0.527	0.502	0.462	0.470	<b>0.490</b>	0.458
		CV %	0.7	0.6	0.6	0.6	<b>0.6</b>	0.6
	between all tests on different days	SD	0.604	0.575	0.529	0.508	<b>0.554</b>	0.497
		CV %	0.8	0.7	0.6	0.6	<b>0.7</b>	0.6

Color Rd								
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average	Cotton 5
<b>Average of Instruments (Grubbs)</b>			78.434	74.460	75.871	74.483		79.666
<b>Reference Values for Evaluation</b>			78.434	74.460	75.871	74.483		79.666
<b>Number Of Instruments</b>			111	111	111	111	<b>111</b>	111
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.772	1.061	1.032	1.087	<b>0.988</b>	0.729
		CV %	1.0	1.4	1.4	1.5	<b>1.3</b>	0.9
	based on 6 tests	SD	0.820	1.097	0.987	1.159	<b>1.016</b>	0.807
		CV %	1.0	1.5	1.3	1.6	<b>1.3</b>	1.0
<b>Typical within-instrument Variation (Median)</b>	based on single tests	SD	0.837	1.111	1.008	1.185	<b>1.035</b>	0.846
		CV %	1.1	1.5	1.3	1.6	<b>1.4</b>	1.1
	between different days with each 6 tests	SD	0.227	0.199	0.188	0.201	<b>0.204</b>	0.223
		CV %	0.3	0.3	0.2	0.3	<b>0.3</b>	0.3
	between single tests on one day	SD	0.224	0.213	0.206	0.209	<b>0.213</b>	0.194
		CV %	0.3	0.3	0.3	0.3	<b>0.3</b>	0.2
	between all tests on different days	SD	0.340	0.279	0.294	0.292	<b>0.301</b>	0.337
		CV %	0.4	0.4	0.4	0.4	<b>0.4</b>	0.4

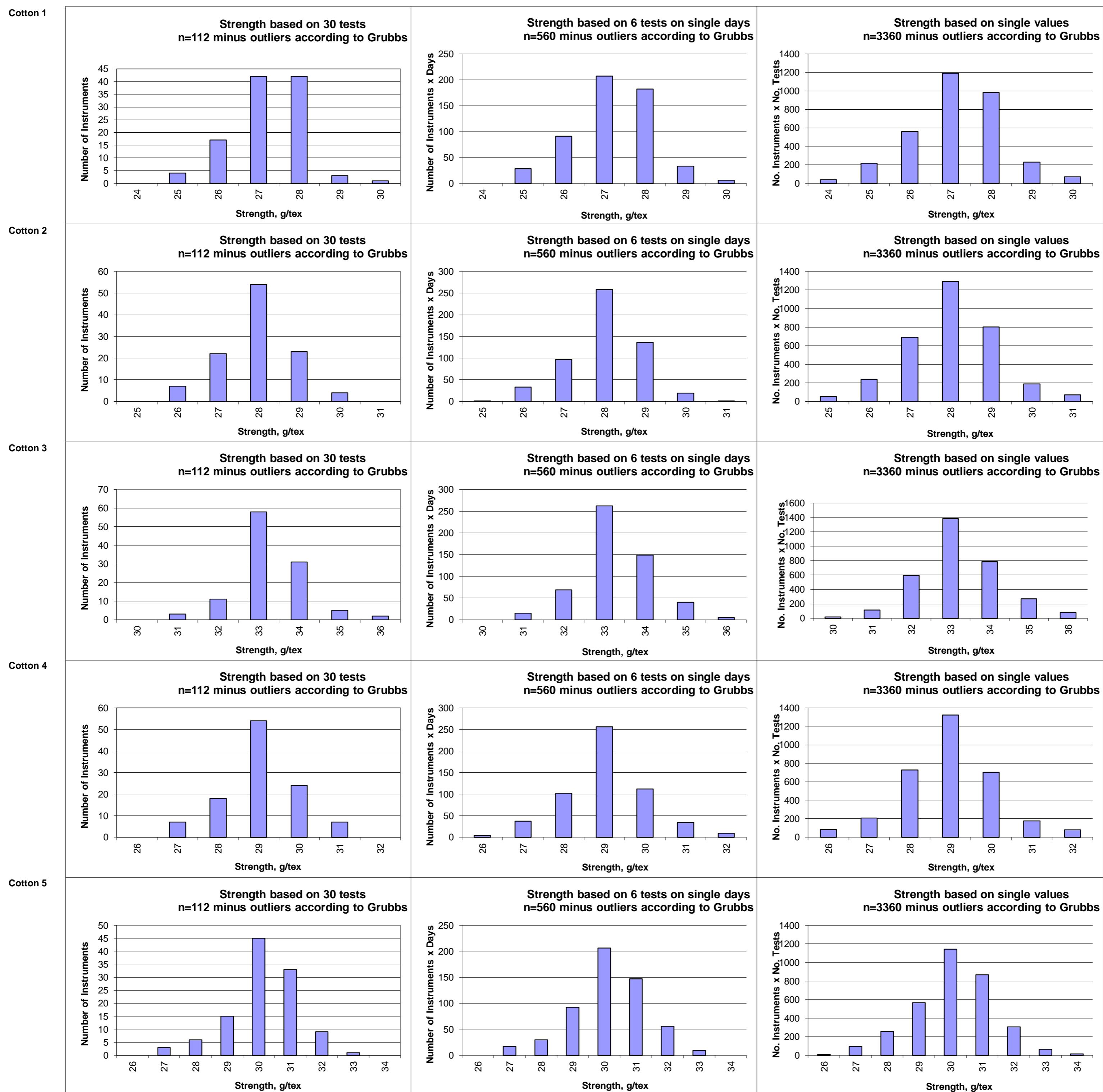
Color +b								
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average	Cotton 5
<b>Average of Instruments (Grubbs)</b>			7.567	12.997	12.734	14.974		8.726
<b>Reference Values for Evaluation</b>			7.567	12.997	12.734	14.974		8.726
<b>Number Of Instruments</b>			111	111	111	111	<b>111</b>	111
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.214	0.407	0.379	0.403	<b>0.351</b>	0.328
		CV %	2.8	3.1	3.0	2.7	<b>2.9</b>	3.8
	based on 6 tests	SD	0.248	0.424	0.397	0.463	<b>0.383</b>	0.346
		CV %	3.3	3.3	3.1	3.1	<b>3.2</b>	4.0
<b>Typical within-instrument Variation (Median)</b>	based on single tests	SD	0.279	0.444	0.424	0.487	<b>0.409</b>	0.393
		CV %	3.7	3.4	3.3	3.3	<b>3.4</b>	4.5
	between different days with each 6 tests	SD	0.092	0.106	0.128	0.134	<b>0.115</b>	0.102
		CV %	1.2	0.8	1.0	0.9	<b>1.0</b>	1.2
	between single tests on one day	SD	0.111	0.097	0.133	0.114	<b>0.114</b>	0.093
		CV %	1.5	0.7	1.0	0.8	<b>1.0</b>	1.1
	between all tests on different days	SD	0.161	0.154	0.220	0.189	<b>0.181</b>	0.153
		CV %	2.1	1.2	1.7	1.3	<b>1.6</b>	1.8

Test Result Distributions  
Micronaire



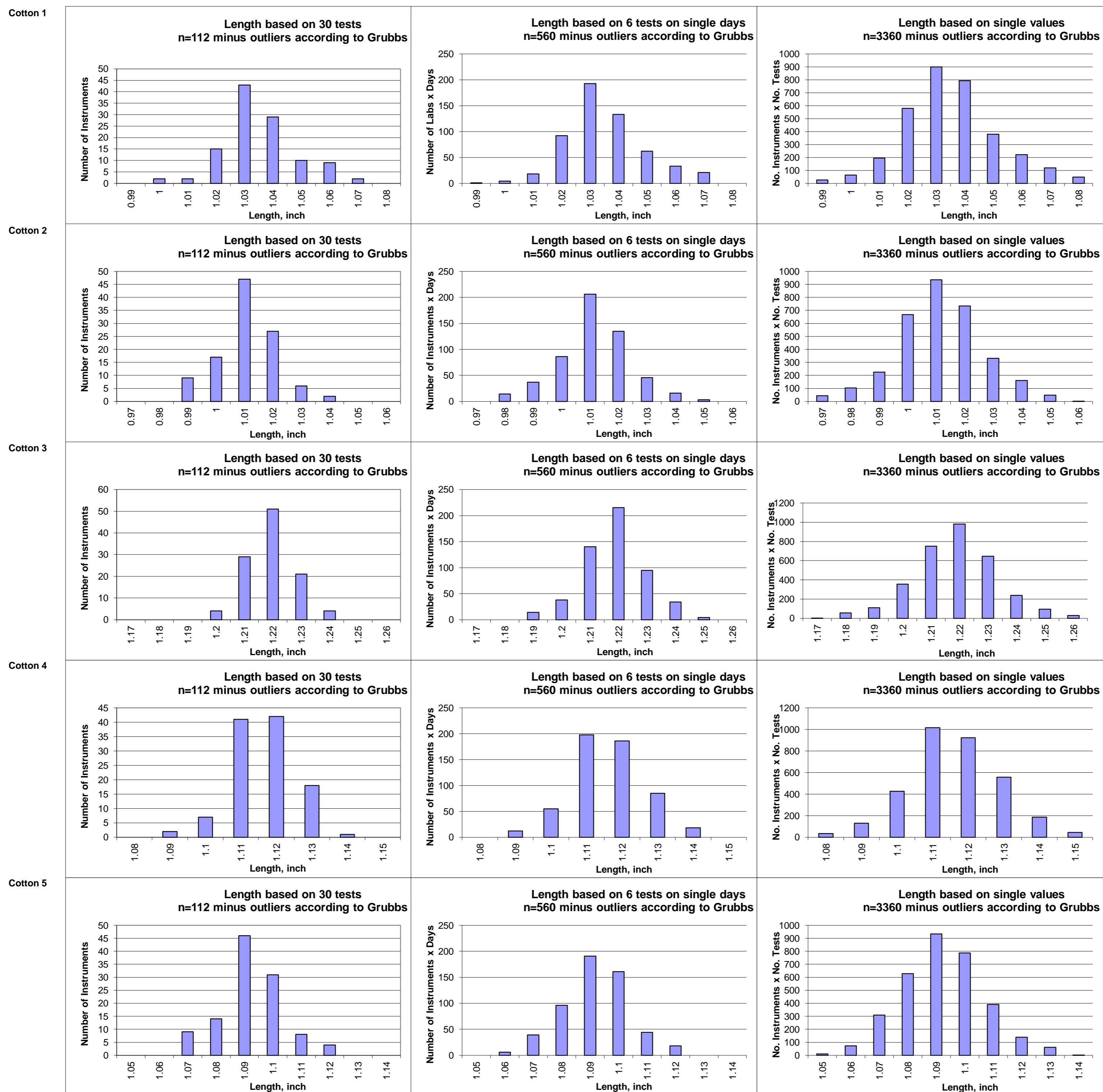
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method.)  
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions  
Strength



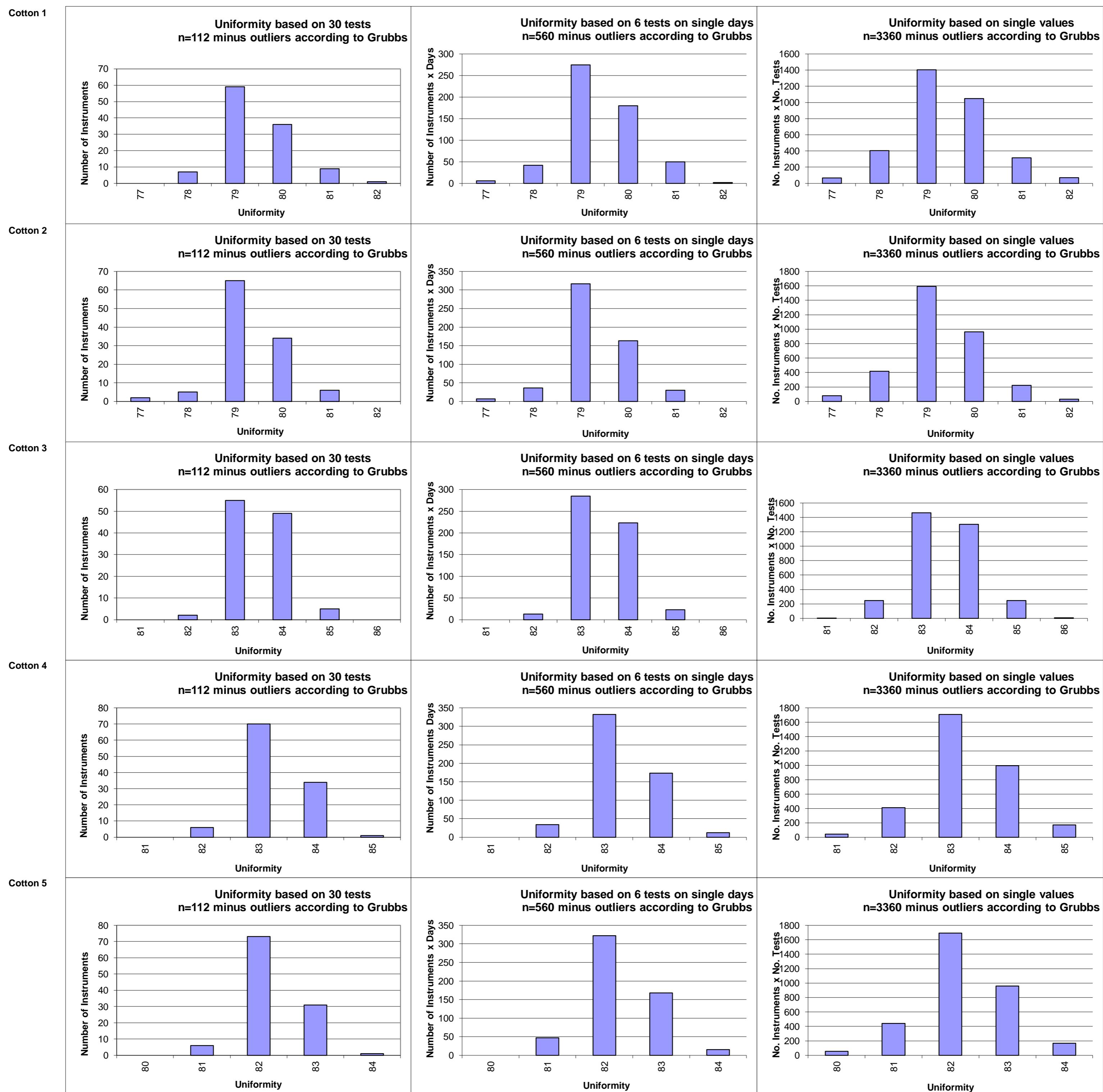
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Test Result Distributions  
Length



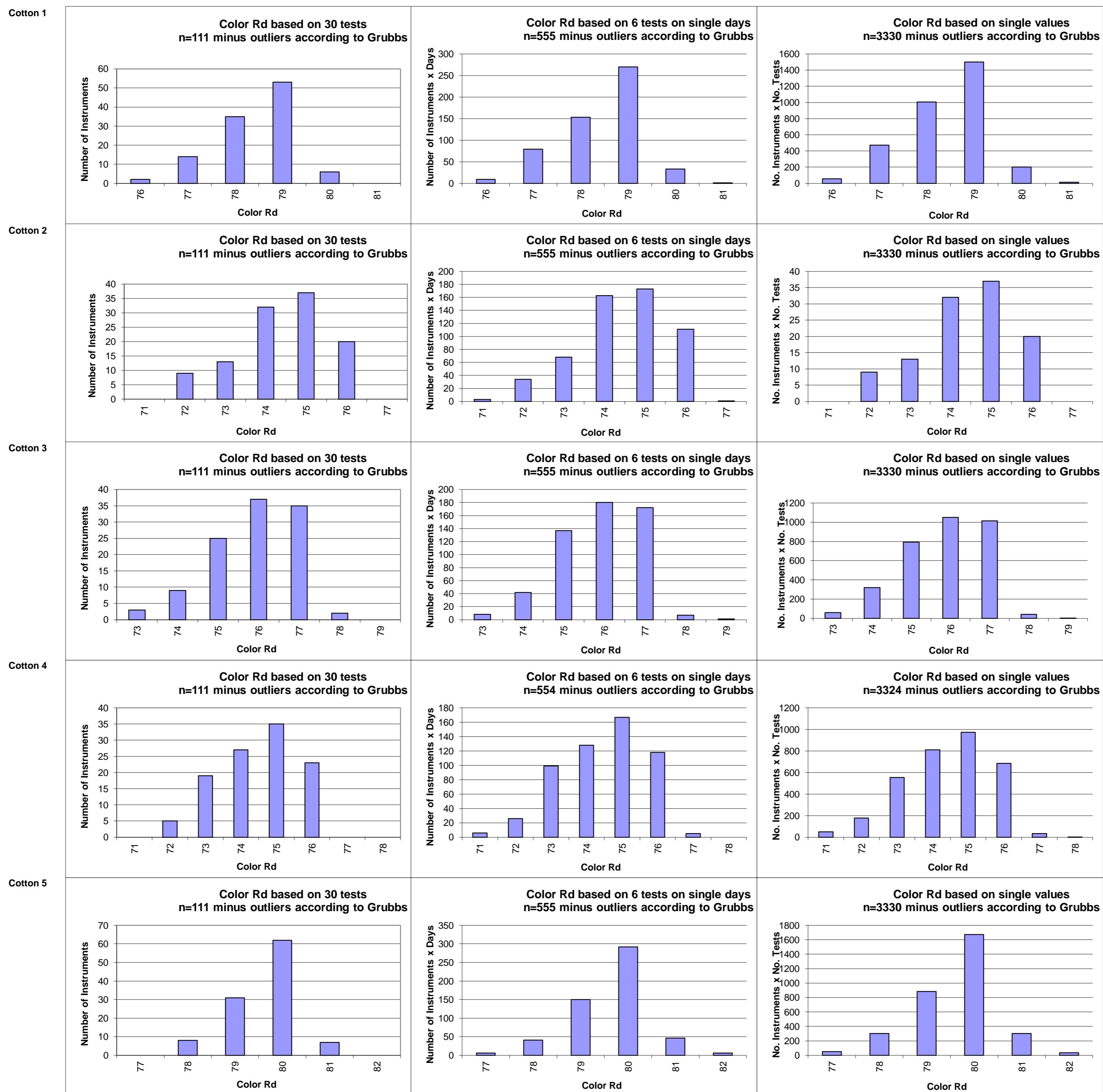
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
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Test Result Distributions  
Uniformity



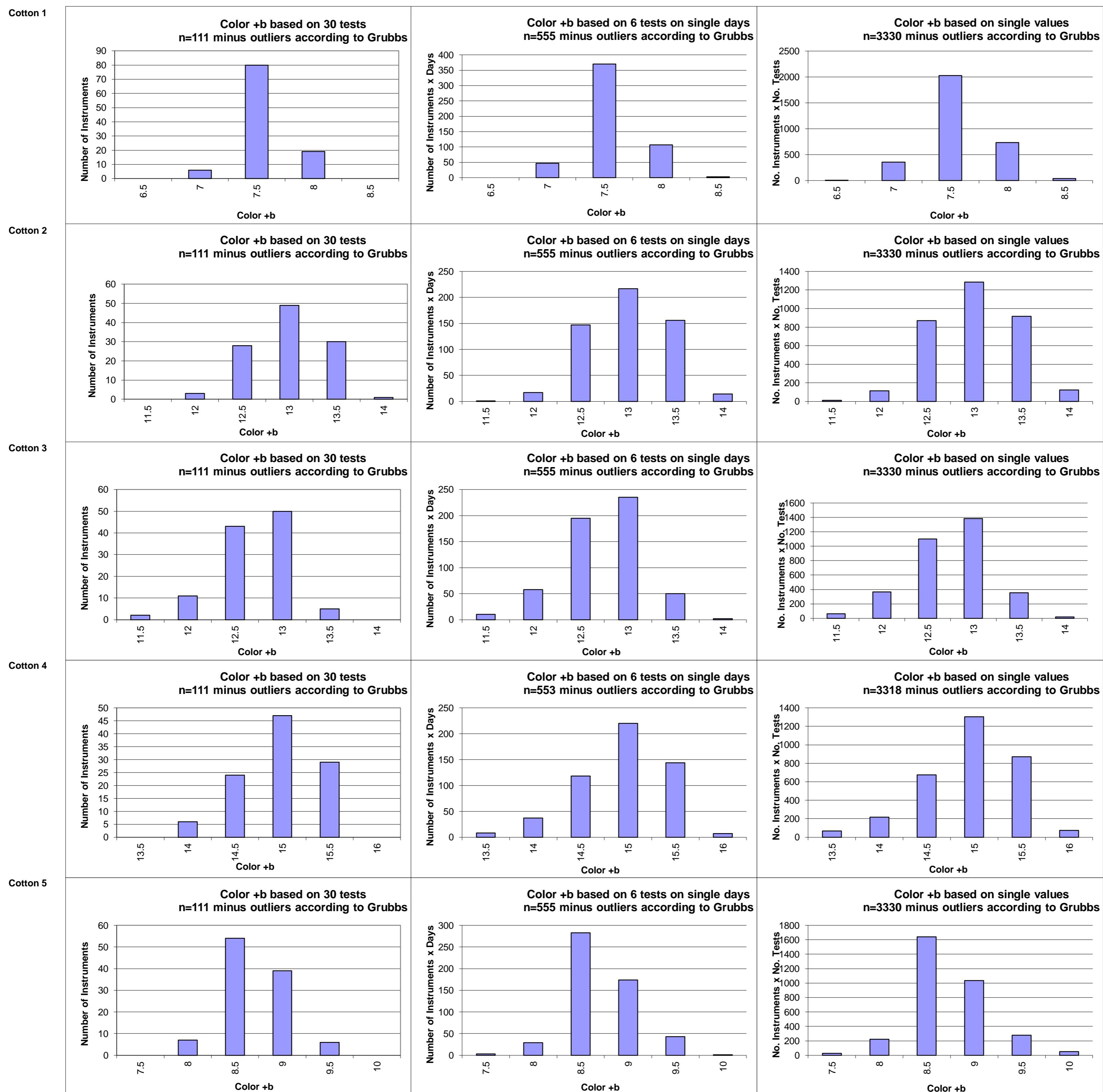
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Test Result Distributions  
Color Rd



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

### Optional Parameters

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

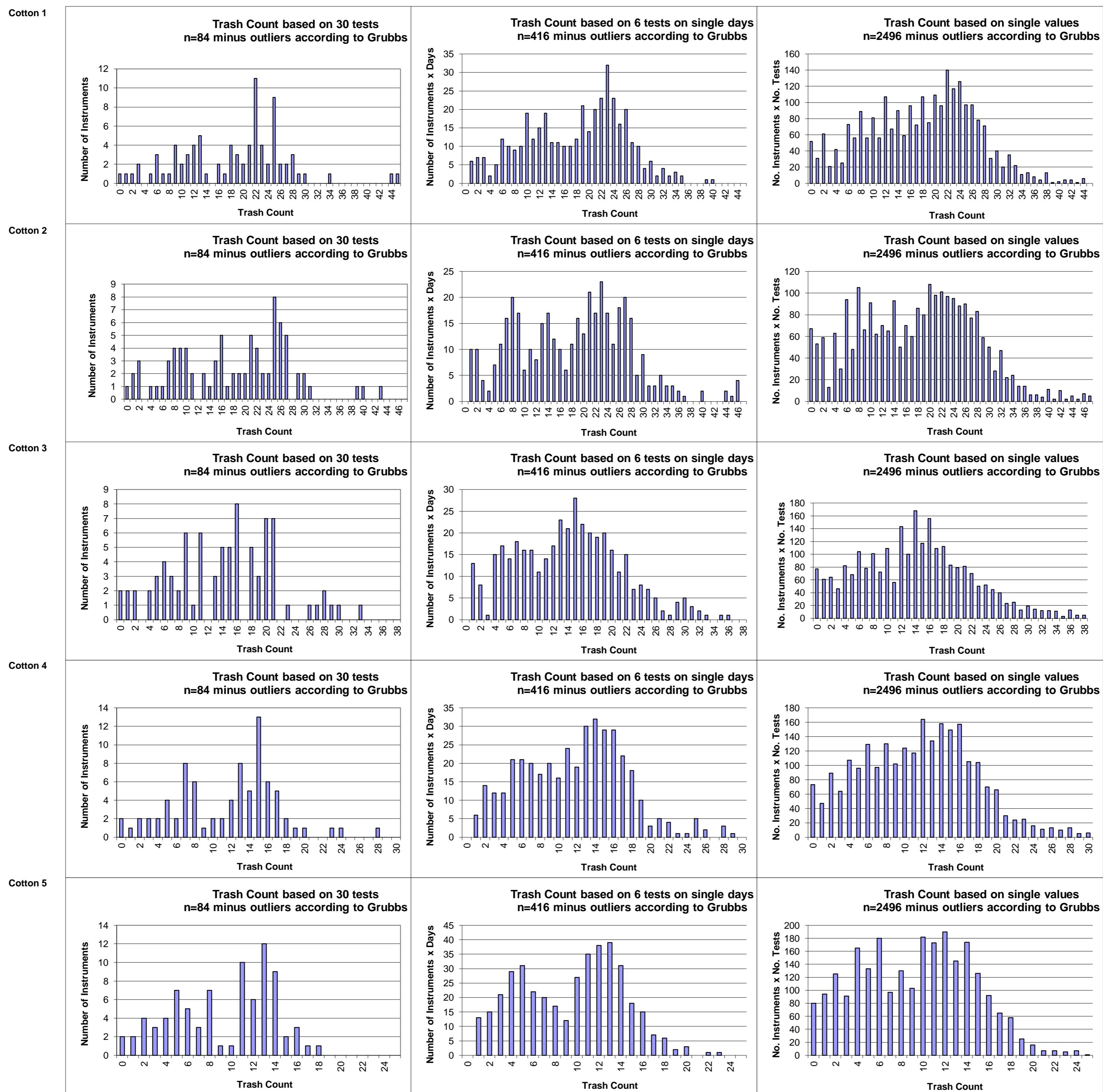
Trash Count								
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average	Cotton 5
<b>Average of Instruments (Grubbs)</b>			18.36	18.05	14.23	11.64		9.32
<b>Reference Values for Evaluation</b>			18.36	18.05	14.23	11.64		9.32
<b>Number Of Instruments</b>			84	84	84	84	<b>84</b>	84
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	8.76	9.41	7.44	5.66	<b>7.82</b>	4.57
		CV %	47.7	52.1	52.3	48.6	<b>50.2</b>	49.0
	based on 6 tests	SD	8.24	9.71	7.48	5.92	<b>7.84</b>	4.87
		CV %	44.9	53.8	52.6	50.8	<b>50.5</b>	52.2
<b>Typical within-instrument Variation (Median)</b>	based on single tests	SD	8.82	9.80	7.94	6.21	<b>8.19</b>	5.20
		CV %	48.0	54.3	55.8	53.4	<b>52.9</b>	55.7
	between different days with each 6 tests	SD	2.23	2.09	1.89	1.78	<b>2.00</b>	1.38
		CV %	12.1	11.6	13.3	15.3	<b>13.1</b>	14.8
	between single tests on one day	SD	2.47	2.46	2.13	1.94	<b>2.25</b>	1.73
		CV %	13.4	13.6	14.9	16.7	<b>14.7</b>	18.5
	between all tests on different days	SD	3.44	3.59	3.22	2.89	<b>3.29</b>	2.43
		CV %	18.8	19.9	22.6	24.9	<b>21.5</b>	26.1

Trash Area								
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average	Cotton 5
<b>Average of Instruments (Grubbs)</b>			0.190	0.135	0.124	0.109		0.092
<b>Reference Values for Evaluation</b>			0.190	0.135	0.124	0.109		0.092
<b>Number Of Instruments</b>			83	83	83	83	<b>83</b>	83
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	0.058	0.044	0.045	0.030	<b>0.044</b>	0.026
		CV %	30.5	32.4	36.4	27.7	<b>31.8</b>	27.7
	based on 6 tests	SD	0.064	0.046	0.048	0.040	<b>0.050</b>	0.033
		CV %	33.9	34.2	38.9	36.2	<b>35.8</b>	35.5
<b>Typical within-instrument Variation (Median)</b>	based on single tests	SD	0.080	0.056	0.055	0.049	<b>0.060</b>	0.044
		CV %	42.3	41.7	44.0	44.7	<b>43.1</b>	47.6
	between different days with each 6 tests	SD	0.029	0.020	0.021	0.021	<b>0.023</b>	0.019
		CV %	15.3	15.1	17.3	19.1	<b>16.7</b>	20.6
	between single tests on one day	SD	0.041	0.027	0.025	0.022	<b>0.029</b>	0.0
		CV %	21.4	20.0	20.3	19.9	<b>20.4</b>	24.3
	between all tests on different days	SD	0.053	0.035	0.037	0.035	<b>0.040</b>	0.031
		CV %	28.1	26.1	29.6	31.6	<b>28.8</b>	33.0

Maturity								
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average	Cotton 5
<b>Average of Instruments (Grubbs)</b>			87.55	85.03	85.17	86.63		87.38
<b>Reference Values for Evaluation</b>			87.55	85.03	85.17	86.63		87.38
<b>Number Of Instruments</b>			86	86	86	86	<b>86</b>	86
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	2.22	1.89	3.04	3.71	<b>2.72</b>	2.50
		CV %	2.5	2.2	3.6	4.3	<b>3.2</b>	2.9
	based on 6 tests	SD	2.24	1.89	3.07	3.61	<b>2.70</b>	2.42
		CV %	2.6	2.2	3.6	4.2	<b>3.1</b>	2.8
<b>Typical within-instrument Variation (Median)</b>	based on single tests	SD	2.27	1.99	3.12	3.66	<b>2.76</b>	2.44
		CV %	2.6	2.3	3.7	4.2	<b>3.2</b>	2.8
	between different days with each 6 tests	SD	0.25	0.26	0.24	0.22	<b>0.24</b>	0.25
		CV %	0.3	0.3	0.3	0.3	<b>0.3</b>	0.3
	between single tests on one day	SD	0.35	0.37	0.33	0.35	<b>0.35</b>	0.40
		CV %	0.4	0.4	0.4	0.4	<b>0.4</b>	0.5
	between all tests on different days	SD	0.48	0.49	0.46	0.49	<b>0.48</b>	0.49
		CV %	0.5	0.6	0.5	0.6	<b>0.6</b>	0.6

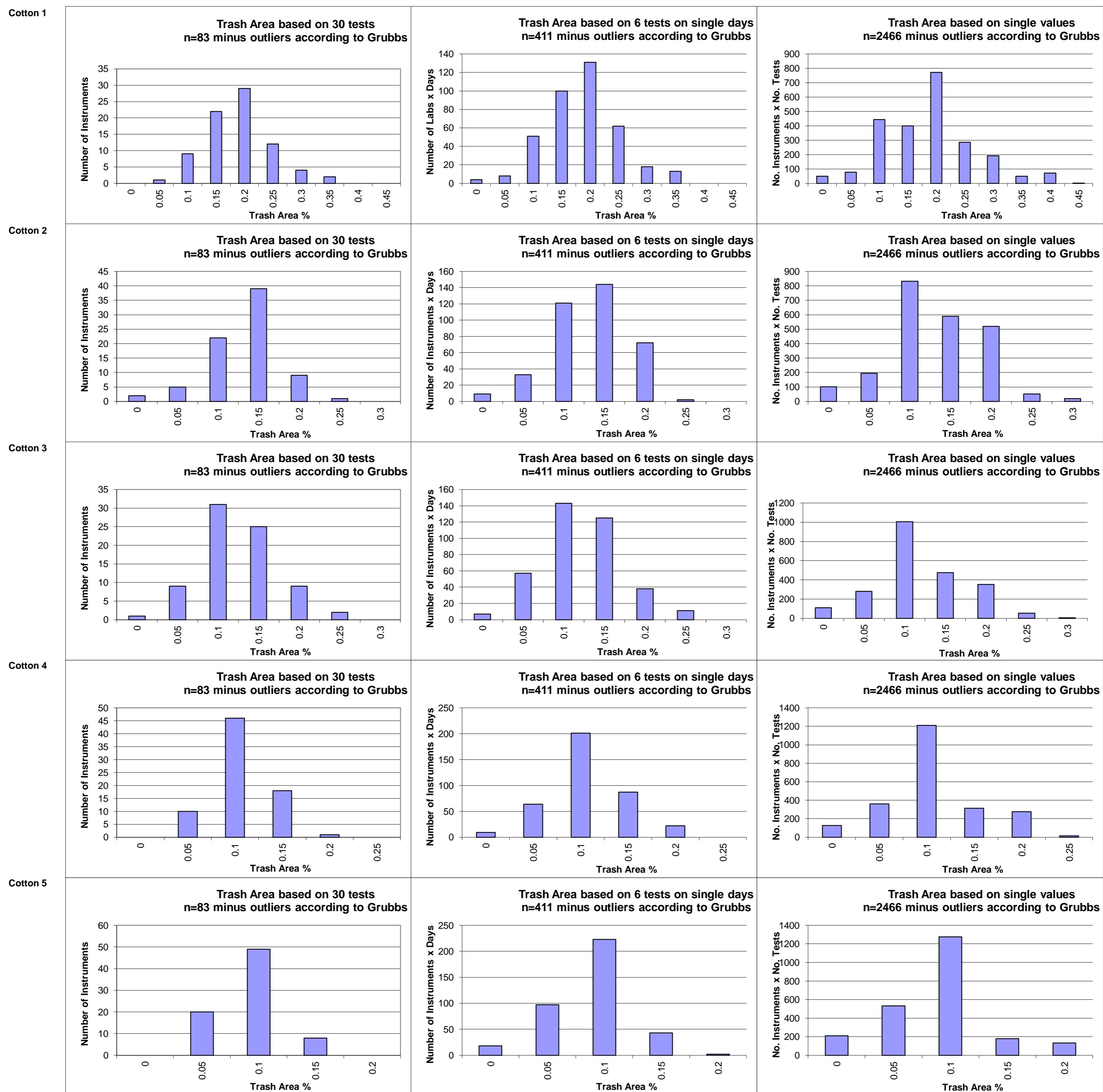
SFI								
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average	Cotton 5
<b>Average of Instruments (Grubbs)</b>			11.87	12.28	6.98	7.73		8.82
<b>Reference Values for Evaluation</b>			11.87	12.28	6.98	7.73		8.82
<b>Number Of Instruments</b>			91	91	91	91	<b>91</b>	91
<b>Inter-Instrument Variation</b>	based on 30 tests	SD	1.74	1.81	1.17	0.98	<b>1.42</b>	0.83
		CV %	14.7	14.8	16.7	12.6	<b>14.7</b>	9.4
	based on 6 tests	SD	1.83	1.77	1.13	1.00	<b>1.43</b>	0.88
		CV %	15.4	14.4	16.2	13.0	<b>14.8</b>	9.9
<b>Typical within-instrument Variation (Median)</b>	based on single tests	SD	1.91	1.96	1.19	1.10	<b>1.54</b>	1.02
		CV %	16.1	16.0	17.1	14.2	<b>15.8</b>	11.5
	between different days with each 6 tests	SD	0.36	0.39	0.17	0.22	<b>0.28</b>	0.25
		CV %	3.0	3.2	2.5	2.9	<b>2.9</b>	2.8
	between single tests on one day	SD	0.66	0.62	0.31	0.40	<b>0.50</b>	0.43
		CV %	5.6	5.1	4.5	5.1	<b>5.1</b>	4.9
	between all tests on different days	SD	0.71	0.72	0.37	0.45	<b>0.56</b>	0.49
		CV %	6.0	5.8	5.3	5.8	<b>5.7</b>	5.6

Test Result Distributions  
Trash Count



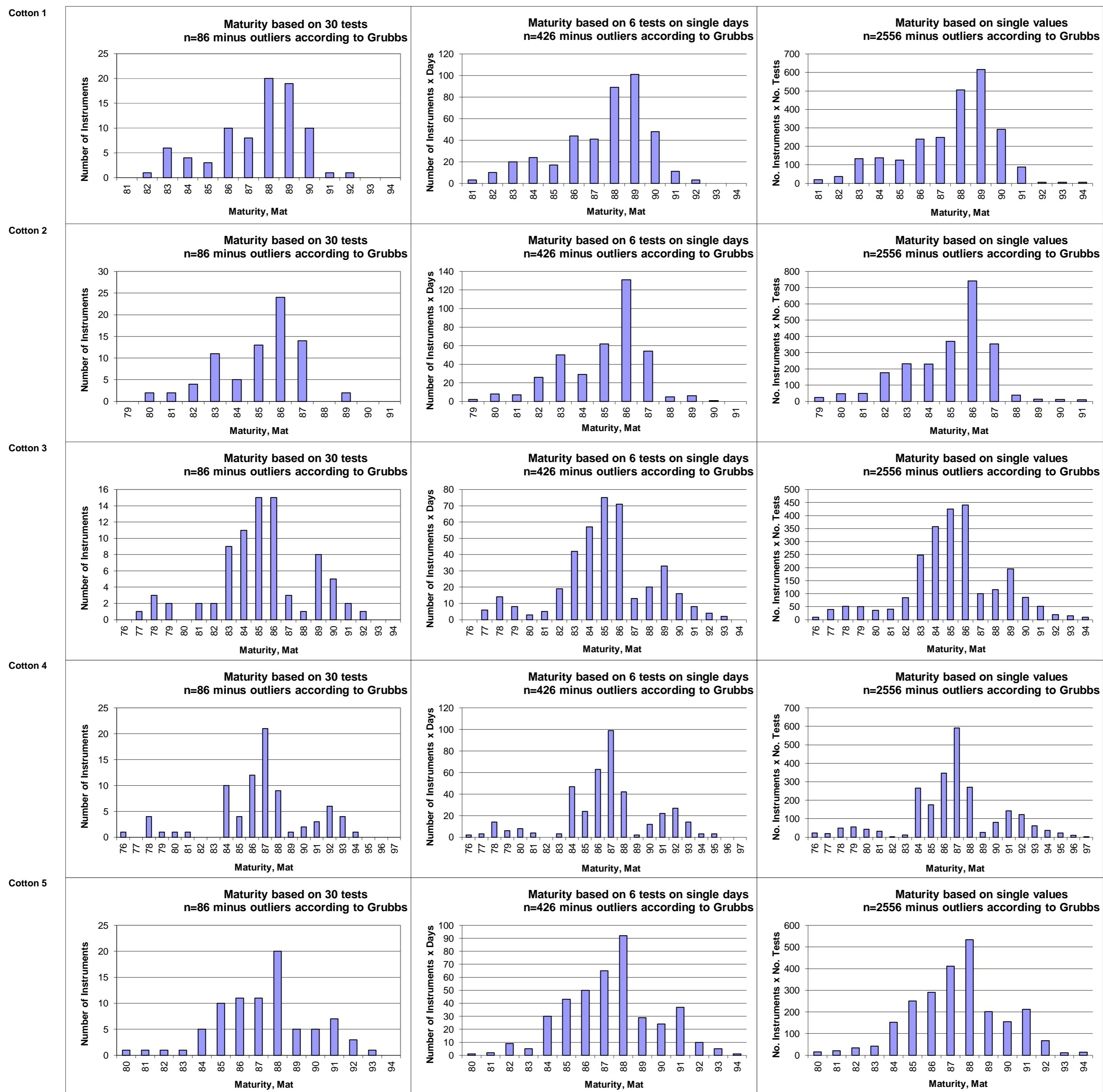
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions  
Trash Area



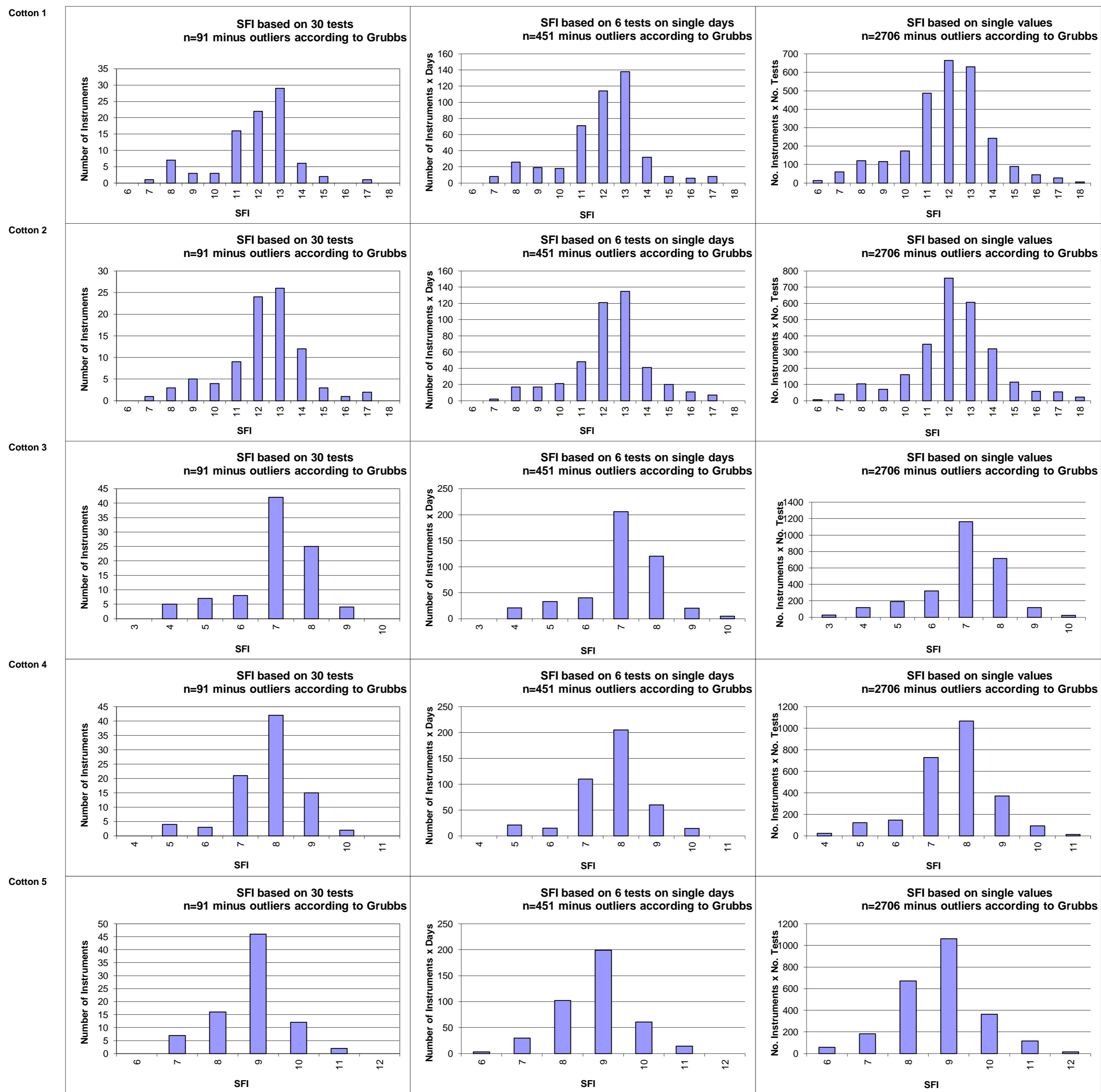
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)  
(classes are defined as > lower limit and <= upper limit)

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 2012 - 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



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.



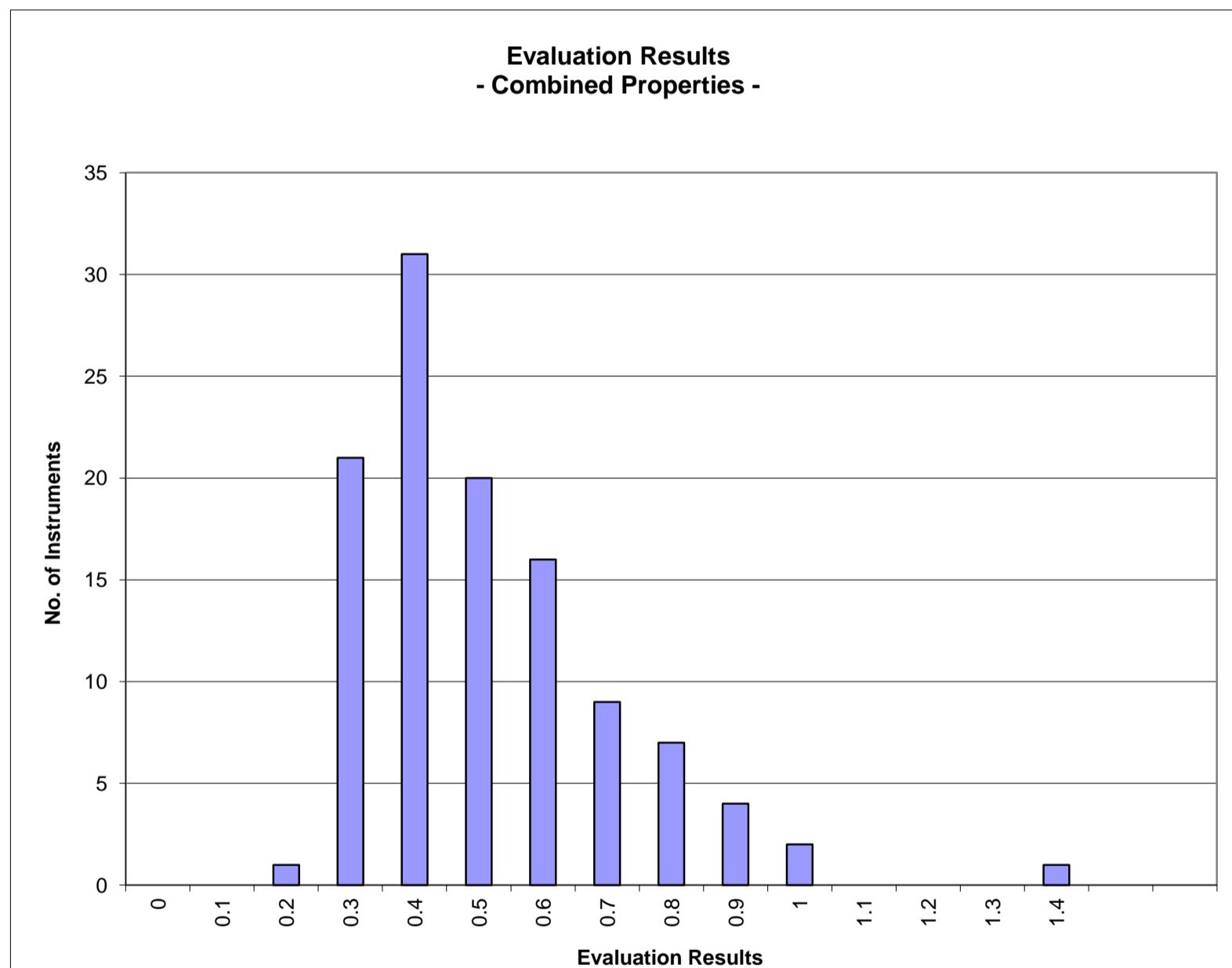
\* Faserinstitut Bremen are a Cooperation Partner with ICA Bremen

**Instrument Evaluation****- Graph of Combined Properties -**

According to ICAC CSITC Task Force Recommendations

Global - Round Trial 2012 - 2

		Evaluation Combined Prop.
Statistics	Average	0.51
	Median	0.46
	Best Instrument	0.21
	Worst Instrument	1.37



x-Axis shows midpoints of classes

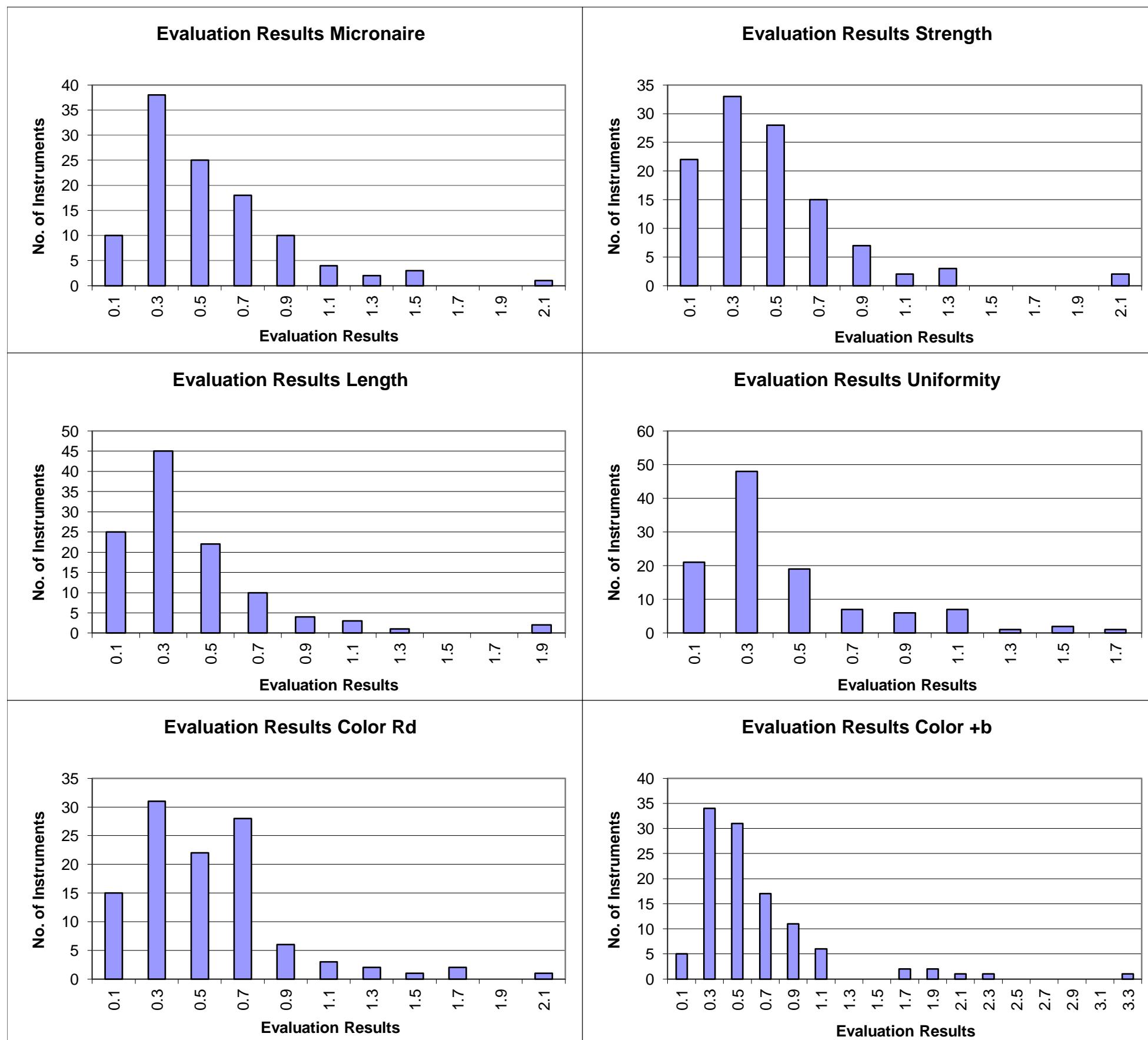
The evaluation results are entered based on the unrounded values  
(classes are defined as > lower limit and <= upper limit)

**Instrument Evaluation****- Graph of Single Properties -**

According to ICAC CSITC Task Force Recommendations

Global - Round Trial 2012 - 2

		Evaluation Micronaire	Evaluation Strength	Evaluation Length	Evaluation Uniformity	Evaluation Color Rd	Evaluation Color +b
Statistics	Average	0.54	0.47	0.42	0.45	0.55	0.63
	Median	0.47	0.40	0.32	0.33	0.50	0.53
	Best Instr.	0.05	0.07	0.08	0.05	0.08	0.16
	Worst Instr.	2.04	2.19	1.93	1.65	2.02	3.29



x-Axis shows midpoints of classes

The evaluation results are entered based on the unrounded values



## International Cotton Advisory Committee



# CSITC Global - Round Trial 2012 - 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

	<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	98.9	95.1	97.1	99.1	89.4	97.1
Completely within limits	97.3	88.4	92.9	97.3	80.2	93.7
% of Instruments ≥75% within limits	99.1	95.5	98.2	99.1	89.2	97.3
% of Instruments ≥50% within limits	99.1	98.2	98.2	100.0	91.9	98.2

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>
GL122-001-01	100	100	100	100	100	100
GL122-001-02	100	100	100	100	100	100
GL122-002-02	100	100	100	100	100	100
GL122-002-06	100	100	100	100	100	100
GL122-004-01	100	100	100	100	100	100
GL122-004-02	100	100	100	100	100	100
GL122-004-04	100	100	100	100	100	100
GL122-004-05	100	100	100	100	100	100
GL122-005-01	100	100	100	100	100	100
GL122-005-02	100	100	100	100	100	100
GL122-005-03	100	100	100	100	100	100
GL122-005-04	100	100	100	100	100	100
GL122-006-01	100	75	100	100	25	100
GL122-007-01	100	100	100	100	100	100
GL122-008-01	100	100	100	100	100	100
GL122-008-03	100	100	100	100	100	100
GL122-008-04	100	100	100	100	100	100
GL122-008-05	100	100	100	100	100	100
GL122-009-01	100	100	100	100	75	100
GL122-010-01	100	75	100	100	100	100
GL122-013-01	100	100	100	100	100	100
GL122-014-01	100	100	100	100	100	100
GL122-015-01	100	100	100	100	100	100
GL122-018-40	100	100	100	100	100	100
GL122-018-42	100	100	100	100	100	100
GL122-019-01	100	100	100	100	50	100
GL122-019-02	100	100	100	100	100	100
GL122-019-03	100	100	100	100	0	100
GL122-020-01	100	100	100	100	100	100
GL122-021-01	100	50	100	100	25	100
GL122-022-01	100	50	100	100	75	100
GL122-023-01	100	75	100	100	100	75
GL122-025-01	75	100	100	100	75	100
GL122-025-03	100	100	100	100	50	100
GL122-026-01	100	100	100	100	100	100
GL122-026-02	100	100	100	100	100	100
GL122-026-04	100	100	100	100	100	100
GL122-028-01	100	100	100	100	100	100
GL122-028-03	100	100	100	100	75	100

GL122-029-01	100	100	100	100	75	100
GL122-030-02	100	100	100	100	0	100
GL122-030-07	100	100	100	100	100	100
GL122-030-08	100	100	100	100	100	100
GL122-030-09	100	100	100	100	100	100
GL122-031-03	100	100	100	100	100	100
GL122-032-01	100	100	100	100	100	100
GL122-032-02	100	100	100	100	100	100
GL122-033-01	100	100	100	100	100	100
GL122-033-02	100	100	100	100	100	100
GL122-034-01	100	100	100	100	100	100
GL122-034-02	100	100	100	100	100	100
GL122-034-03	100	100	100	100	100	100
GL122-034-05	100	100	100	100	100	100
GL122-036-01	100	100	100	100	100	100
GL122-040-01	100	100	100	100	100	100
GL122-040-02	100	100	100	100	100	100
GL122-041-02	100	100	100	100	100	100
GL122-043-01	100	100	100	100	75	100
GL122-047-01	100	100	100	100	100	100
GL122-048-01	100	100	100	100	100	75
GL122-049-19	100	100	100	100	100	100
GL122-049-24	100	100	100	100	100	100
GL122-051-01	100	100	100	100	75	100
GL122-054-01	100	75	100	100	100	100
GL122-055-01	100	100	100	100	100	100
GL122-058-03	100	100	100	100	100	100
GL122-059-01	100	100	100	100	100	100
GL122-060-01	100	100	100	100	100	100
GL122-061-01	100	100	100	100	100	100
GL122-061-02	100	75	75	100	100	100
GL122-062-01	100	100	100	100	100	100
GL122-062-02	100	100	100	100	100	100
GL122-062-03	100	100	100	100	100	100
GL122-062-04	100	100	100	100	100	100
GL122-063-01	100	100	100	100	100	100
GL122-064-01	100	100	100	100	100	100
GL122-064-04	100	100	100	100	100	100
GL122-065-01	100	100	100	100	100	100
GL122-066-01	100	100	100	100	100	100
GL122-067-01	25	100	100	100	0	100
GL122-069-01	100	100	100	100	100	100
GL122-070-14	100	100	100	100	100	100
GL122-070-21	100	100	100	100	100	100
GL122-071-01	100	100	25	100	75	100
GL122-071-02	100	100	0	100	100	75
GL122-073-01	100	100	75	75	50	100
GL122-075-01	100	100	100	100	25	100
GL122-075-04	100	100	100	100	100	100
GL122-075-06	100	100	100	100	100	100
GL122-077-01	100	100	100	100	100	100
GL122-078-01	100	100	100	100	100	100
GL122-079-01	100	100	75	100	25	100
GL122-080-01	100	100	100	100	100	100
GL122-081-01	100	100	75	100	100	100
GL122-083-12	100	75	75	100	100	75
GL122-084-01	100	100	100	100	100	100
GL122-084-02	100	100	100	100	100	100
GL122-085-02	100	50	100	100	75	100
GL122-085-04	100	100	100	100	0	100

GL122-085-07	100	100	100	100	25	100
GL122-086-01		100	100	100		
GL122-087-01	100	75	100	100	100	25
GL122-088-01	100	100	100	100	100	100
GL122-088-02	100	75	100	100	75	100
GL122-088-03	100	100	100	100	100	100
GL122-089-01	100	100	100	100	100	100
GL122-090-01	75	100	75	50	100	0
GL122-091-01	100	100	100	75	100	100
GL122-091-02	100	100	100	100	100	100
GL122-091-03	100	0	100	100	100	100
GL122-091-04	100	0	100	100	100	100
GL122-092-01	100	100	100	100	100	50

## 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	1.0
	units	g/tex	inch	%	units	units
Average % Results within Limits	97.5	90.3	95.3	96.3	86.4	95.6
% of Instruments 100% within limits	55.9	33.0	42.0	47.3	33.3	63.1
% of Instruments ≥95% within limits	90.1	62.5	75.9	78.6	58.6	84.7
% of Instruments ≥75% within limits	99.1	86.6	96.4	98.2	82.0	93.7
% of Instruments ≥65% within limits	99.1	93.8	98.2	99.1	85.6	95.5
% of Instruments ≥50% within limits	99.1	95.5	98.2	100.0	91.9	98.2

Percentage of Results Within Limits						
Instrument	Micronaire	Strength	Length	Uniformity	Color Rd	Color +b
GL122-001-01	100	100	100	88	98	98
GL122-001-02	100	100	100	99	100	100
GL122-002-02	100	100	100	100	100	95
GL122-002-06	100	100	99	100	100	96
GL122-004-01	100	100	99	100	100	100
GL122-004-02	90	99	98	100	95	100
GL122-004-04	91	99	100	100	93	100
GL122-004-05	100	99	98	100	100	100
GL122-005-01	99	100	100	100	98	100
GL122-005-02	99	100	100	100	95	100
GL122-005-03	100	100	100	100	92	100
GL122-005-04	98	100	99	100	95	100
GL122-006-01	100	70	91	94	36	100
GL122-007-01	96	77	93	85	93	97
GL122-008-01	100	100	100	100	100	100
GL122-008-03	98	100	100	100	100	100
GL122-008-04	99	100	100	100	98	100
GL122-008-05	100	100	100	100	100	100
GL122-009-01	100	85	100	100	63	98
GL122-010-01	88	74	100	100	83	99
GL122-013-01	100	96	100	98	100	100
GL122-014-01	100	100	100	100	100	100
GL122-015-01	100	100	98	98	97	100
GL122-018-40	100	100	100	99	86	100
GL122-018-42	100	100	100	99	98	100
GL122-019-01	100	93	100	100	54	99
GL122-019-02	79	88	100	78	80	98
GL122-019-03	99	90	100	100	10	100
GL122-020-01	100	82	97	96	100	100
GL122-021-01	100	48	79	86	46	100
GL122-022-01	100	49	99	100	75	100
GL122-023-01	99	64	99	98	99	60
GL122-025-01	80	87	93	99	53	92
GL122-025-03	78	87	91	98	55	89
GL122-026-01	100	98	100	99	98	100
GL122-026-02	98	99	100	100	100	100

GL122-026-04	100	96	100	99	87	100
GL122-028-01	99	98	98	100	88	90
GL122-028-03	98	92	93	88	73	93
GL122-029-01	100	89	92	99	73	100
GL122-030-02	100	99	100	100	18	98
GL122-030-07	99	99	99	99	99	100
GL122-030-08	97	96	100	100	100	100
GL122-030-09	100	99	100	100	99	100
GL122-031-03	99	100	99	100	100	100
GL122-032-01	100	100	100	100	100	100
GL122-032-02	97	95	100	99	100	100
GL122-033-01	100	100	100	100	100	100
GL122-033-02	100	100	100	99	100	100
GL122-034-01	99	100	100	100	96	100
GL122-034-02	96	100	100	100	100	100
GL122-034-03	100	100	100	100	96	100
GL122-034-05	100	100	100	100	88	100
GL122-036-01	100	97	98	98	95	100
GL122-040-01	100	82	97	98	95	100
GL122-040-02	100	81	100	92	95	100
GL122-041-02	95	100	93	100	100	97
GL122-043-01	100	100	100	98	84	97
GL122-047-01	100	100	99	99	93	100
GL122-048-01	98	94	78	85	97	68
GL122-049-19	100	100	100	100	100	100
GL122-049-24	100	100	100	100	100	100
GL122-051-01	99	98	98	100	73	100
GL122-054-01	93	54	100	100	94	100
GL122-055-01	100	98	100	100	100	100
GL122-058-03	100	100	98	100	100	100
GL122-059-01	100	100	99	99	100	96
GL122-060-01	100	90	100	100	83	98
GL122-061-01	100	92	80	98	94	90
GL122-061-02	98	74	78	94	96	99
GL122-062-01	100	100	100	99	98	100
GL122-062-02	98	99	99	87	100	100
GL122-062-03	100	100	99	100	100	100
GL122-062-04	100	100	99	100	100	100
GL122-063-01	96	100	96	98	100	100
GL122-064-01	100	91	99	100	100	100
GL122-064-04	99	78	93	97	84	100
GL122-065-01	99	98	82	78	83	100
GL122-066-01	100	86	99	99	92	100
GL122-067-01	47	82	84	91	11	100
GL122-069-01	98	97	99	99	99	86
GL122-070-14	100	96	98	99	95	100
GL122-070-21	100	98	99	100	95	100
GL122-071-01	100	99	43	99	82	99
GL122-071-02	97	96	42	100	94	66
GL122-073-01	90	98	68	87	56	99
GL122-075-01	98	99	100	97	24	100
GL122-075-04	98	99	99	100	98	94
GL122-075-06	82	99	99	100	100	98
GL122-077-01	100	98	98	100	100	100
GL122-078-01	100	90	74	88	96	100
GL122-079-01	100	90	92	100	21	93
GL122-080-01	98	88	100	98	95	100
GL122-081-01	98	83	81	100	91	98
GL122-083-12	99	80	81	92	89	59
GL122-084-01	99	100	97	100	94	100

GL122-084-02	98	98	100	99	98	99
GL122-085-02	96	67	98	94	69	100
GL122-085-04	97	68	94	79	13	93
GL122-085-07	100	99	99	98	31	100
GL122-086-01		49	93	90		
GL122-087-01	100	74	100	100	100	26
GL122-088-01	100	90	97	99	100	100
GL122-088-02	100	78	99	99	62	90
GL122-088-03	100	97	99	100	100	100
GL122-089-01	100	98	100	99	93	99
GL122-090-01	78	98	83	55	80	26
GL122-091-01	100	73	98	69	93	98
GL122-091-02	100	85	99	77	57	98
GL122-091-03	98	3	91	78	100	95
GL122-091-04	98	19	84	86	98	98
GL122-092-01	100	74	91	93	100	50