



International Cotton Advisory Committee



CSITC
Global - Round Trial 2026 - 1
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
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Global - Round Trial 2026 - 1

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

Micronaire							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			4.623	4.091	4.543	4.520	
Reference Values for Evaluation			4.623	4.091	4.543	4.520	
Number Of Instruments			95	95	95	95	95
Inter-Instrument Variation	based on 30 tests	SD	0.078	0.068	0.075	0.068	0.072
		CV %	1.7	1.7	1.7	1.5	1.6
	based on 6 tests	SD	0.080	0.073	0.077	0.070	0.075
		CV %	1.7	1.8	1.7	1.6	1.7
	based on single tests	SD	0.087	0.078	0.085	0.078	0.082
		CV %	1.9	1.9	1.9	1.7	1.8
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.028	0.022	0.024	0.022	0.024
		CV %	0.6	0.5	0.5	0.5	0.5
	between single tests on one day	SD	0.036	0.031	0.031	0.036	0.034
		CV %	0.8	0.8	0.7	0.8	0.8
	between all tests on different days	SD	0.045	0.038	0.040	0.041	0.041
		CV %	1.0	0.9	0.9	0.9	0.9

Strength							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			31.673	23.506	24.991	25.117	
Reference Values for Evaluation			31.673	23.506	24.991	25.117	
Number Of Instruments			95	95	95	95	95
Inter-Instrument Variation	based on 30 tests	SD	0.816	0.769	0.725	0.748	0.765
		CV %	2.6	3.3	2.9	3.0	2.9
	based on 6 tests	SD	0.907	0.864	0.819	0.862	0.863
		CV %	2.9	3.7	3.3	3.4	3.3
	based on single tests	SD	1.076	0.985	0.971	1.027	1.015
		CV %	3.4	4.2	3.9	4.1	3.9
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.374	0.353	0.340	0.323	0.347
		CV %	1.2	1.5	1.4	1.3	1.3
	between single tests on one day	SD	0.604	0.490	0.523	0.552	0.542
		CV %	1.9	2.1	2.1	2.2	2.1
	between all tests on different days	SD	0.703	0.592	0.608	0.619	0.631
		CV %	2.2	2.5	2.4	2.5	2.4

Length							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			1.1884	0.9551	1.0065	1.0117	
Reference Values for Evaluation			1.1884	0.9551	1.0065	1.0117	
Number Of Instruments			95	95	95	95	95
Inter-Instrument Variation	based on 30 tests	SD	0.0070	0.0099	0.0084	0.0089	0.0086
		CV %	0.6	1.0	0.8	0.9	0.8
	based on 6 tests	SD	0.0090	0.0113	0.0109	0.0106	0.0105
		CV %	0.8	1.2	1.1	1.1	1.0
	based on single tests	SD	0.0134	0.0144	0.0151	0.0152	0.0145
		CV %	1.1	1.5	1.5	1.5	1.4
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.0052	0.0048	0.0058	0.0059	0.0054
		CV %	0.4	0.5	0.6	0.6	0.5
	between single tests on one day	SD	0.0103	0.0092	0.0112	0.0107	0.0104
		CV %	0.9	1.0	1.1	1.1	1.0
	between all tests on different days	SD	0.0115	0.0101	0.0122	0.0120	0.0115
		CV %	1.0	1.1	1.2	1.2	1.1

Uniformity							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			83.396	77.578	79.024	79.248	
Reference Values for Evaluation			83.396	77.578	79.024	79.248	
Number Of Instruments			95	95	95	95	95
Inter-Instrument Variation	based on 30 tests	SD	0.359	0.517	0.469	0.438	0.446
		CV %	0.4	0.7	0.6	0.6	0.6
	based on 6 tests	SD	0.442	0.565	0.554	0.548	0.527
		CV %	0.5	0.7	0.7	0.7	0.7
based on single tests	SD	0.656	0.761	0.770	0.780	0.742	
	CV %	0.8	1.0	1.0	1.0	0.9	
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.228	0.268	0.298	0.290	0.271
		CV %	0.3	0.3	0.4	0.4	0.3
	between single tests on one day	SD	0.505	0.523	0.558	0.559	0.536
		CV %	0.6	0.7	0.7	0.7	0.7
	between all tests on different days	SD	0.541	0.586	0.644	0.637	0.602
		CV %	0.6	0.8	0.8	0.8	0.8

Color Rd							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			73.075	76.866	75.150	75.110	
Reference Values for Evaluation			73.075	76.866	75.150	75.110	
Number Of Instruments			92	92	92	92	92
Inter-Instrument Variation	based on 30 tests	SD	0.542	0.611	0.628	0.804	0.646
		CV %	0.7	0.8	0.8	1.1	0.9
	based on 6 tests	SD	0.574	0.633	0.647	0.786	0.660
		CV %	0.8	0.8	0.9	1.0	0.9
	based on single tests	SD	0.598	0.647	0.655	0.804	0.676
		CV %	0.8	0.8	0.9	1.1	0.9
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.166	0.118	0.131	0.136	0.138
		CV %	0.2	0.2	0.2	0.2	0.2
	between single tests on one day	SD	0.164	0.120	0.129	0.122	0.134
		CV %	0.2	0.2	0.2	0.2	0.2
	between all tests on different days	SD	0.252	0.181	0.188	0.192	0.203
		CV %	0.3	0.2	0.2	0.3	0.3

Color +b							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			15.279	13.689	15.260	15.210	
Reference Values for Evaluation			15.279	13.689	15.260	15.210	
Number Of Instruments			92	92	92	92	92
Inter-Instrument Variation	based on 30 tests	SD	0.305	0.318	0.301	0.248	0.293
		CV %	2.0	2.3	2.0	1.6	2.0
	based on 6 tests	SD	0.334	0.344	0.322	0.262	0.316
		CV %	2.2	2.5	2.1	1.7	2.1
	based on single tests	SD	0.345	0.345	0.338	0.277	0.326
		CV %	2.3	2.5	2.2	1.8	2.2
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.126	0.114	0.110	0.101	0.113
		CV %	0.8	0.8	0.7	0.7	0.8
	between single tests on one day	SD	0.089	0.069	0.062	0.068	0.072
		CV %	0.6	0.5	0.4	0.4	0.5
	between all tests on different days	SD	0.171	0.145	0.134	0.133	0.146
		CV %	1.1	1.1	0.9	0.9	1.0

Optional Parameters

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

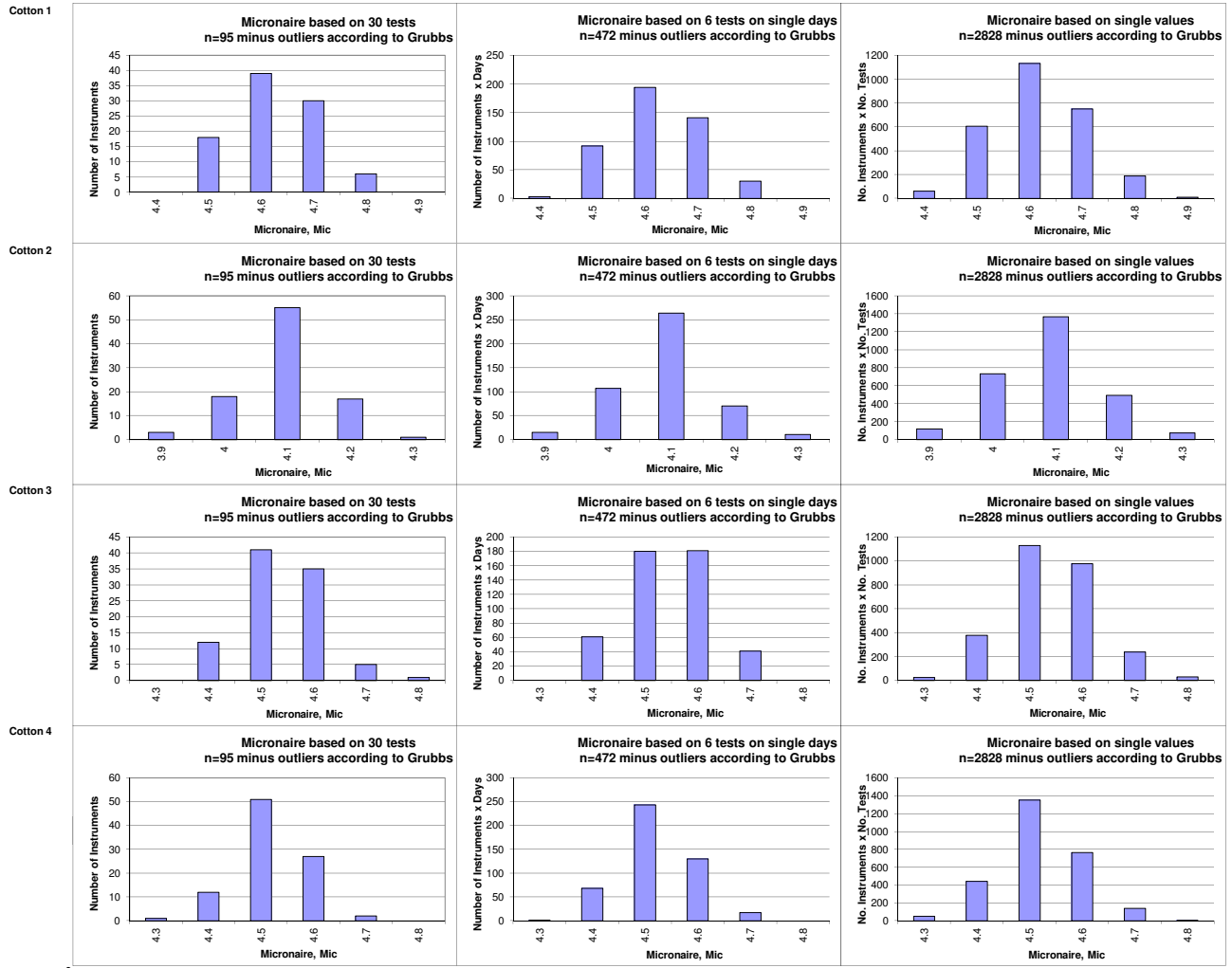
Trash Count							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			15.25	9.34	11.81	12.97	
Reference Values for Evaluation			15.25	9.34	11.81	12.97	
Number Of Instruments			82	82	82	82	82
Inter-Instrument Variation	based on 30 tests	SD	2.96	1.75	2.02	2.76	2.37
		CV %	19.4	18.7	17.1	21.3	19.1
	based on 6 tests	SD	3.53	2.40	2.35	3.03	2.83
		CV %	23.2	25.6	19.9	23.3	23.0
	based on single tests	SD	4.35	3.03	3.26	4.01	3.66
		CV %	28.5	32.4	27.6	30.9	29.8
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	1.74	1.13	1.33	1.62	1.46
		CV %	11.4	12.1	11.3	12.5	11.8
	between single tests on one day	SD	2.03	1.45	1.71	1.84	1.76
		CV %	13.3	15.5	14.4	14.2	14.4
	between all tests on different days	SD	2.98	1.94	2.47	2.45	2.46
		CV %	19.5	20.8	20.9	18.9	20.0

Trash Area							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			0.137	0.094	0.116	0.127	
Reference Values for Evaluation			0.137	0.094	0.116	0.127	
Number Of Instruments			82	82	82	82	82
Inter-Instrument Variation	based on 30 tests	SD	0.026	0.017	0.026	0.029	0.025
		CV %	19.3	18.2	22.5	22.9	20.7
	based on 6 tests	SD	0.031	0.024	0.026	0.036	0.029
		CV %	22.7	25.7	22.8	28.1	24.8
	based on single tests	SD	0.040	0.026	0.031	0.044	0.035
		CV %	29.2	27.8	26.9	34.8	29.7
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.018	0.013	0.014	0.020	0.016
		CV %	13.5	13.7	11.8	15.7	13.7
	between single tests on one day	SD	0.022	0.014	0.016	0.018	0.018
		CV %	16.2	14.6	13.9	14.3	14.7
	between all tests on different days	SD	0.033	0.019	0.026	0.031	0.027
		CV %	23.9	20.6	22.2	24.3	22.7

Maturity							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			86.78	85.41	86.28	86.13	
Reference Values for Evaluation			86.78	85.41	86.28	86.13	
Number Of Instruments			76	76	76	76	76
Inter-Instrument Variation	based on 30 tests	SD	0.61	0.63	0.75	0.70	0.67
		CV %	0.7	0.7	0.9	0.8	0.8
	based on 6 tests	SD	0.62	0.64	0.75	0.70	0.68
		CV %	0.7	0.7	0.9	0.8	0.8
	based on single tests	SD	0.66	0.68	0.80	0.76	0.72
		CV %	0.8	0.8	0.9	0.9	0.8
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.11	0.08	0.09	0.11	0.10
		CV %	0.1	0.1	0.1	0.1	0.1
	between single tests on one day	SD	0.18	0.15	0.16	0.14	0.16
		CV %	0.2	0.2	0.2	0.2	0.2
	between all tests on different days	SD	0.25	0.19	0.22	0.23	0.22
		CV %	0.3	0.2	0.3	0.3	0.3

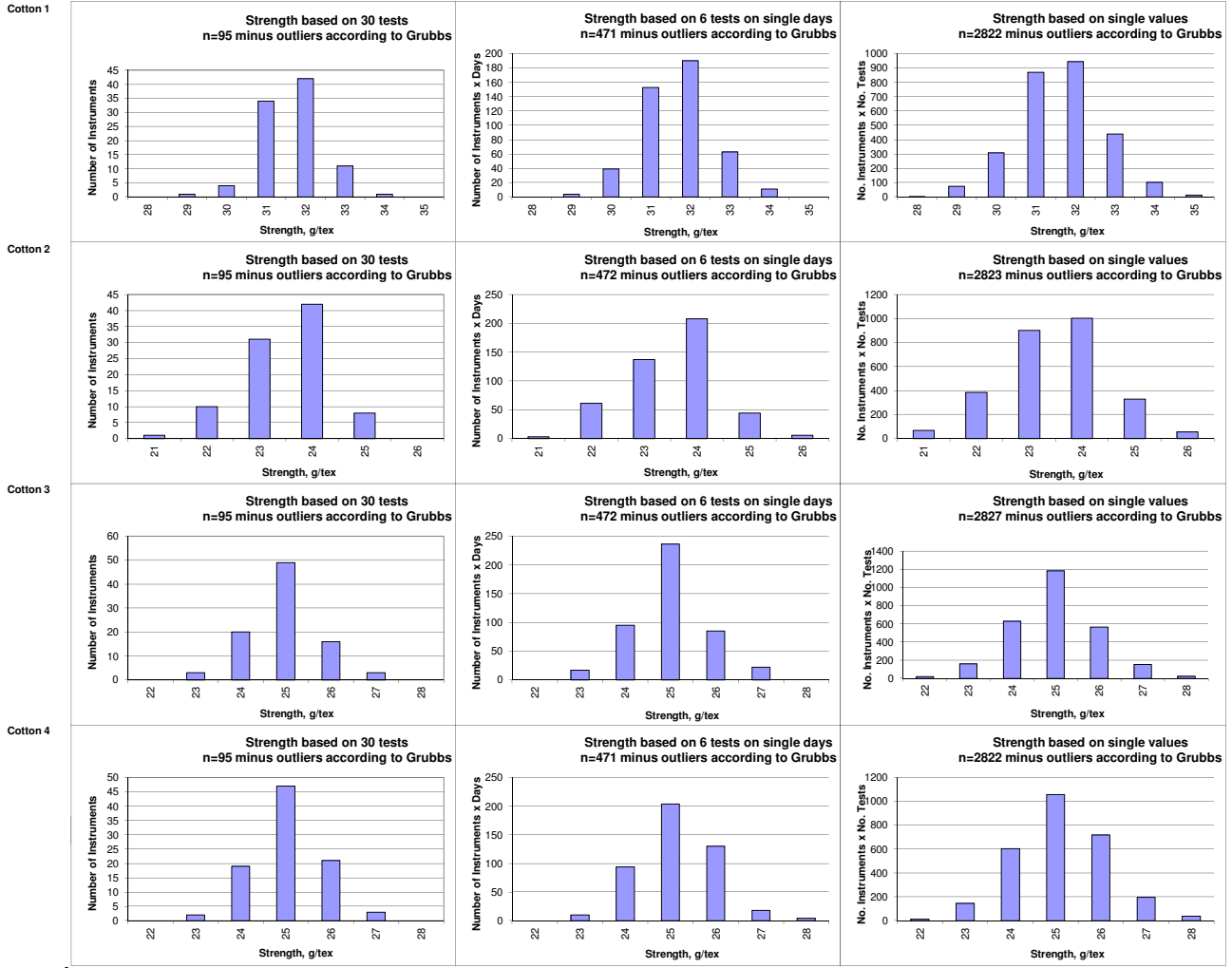
SFI							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			7.37	16.56	13.72	13.26	
Reference Values for Evaluation			7.37	16.56	13.72	13.26	
Number Of Instruments			85	84	84	85	85
Inter-Instrument Variation	based on 30 tests	SD	0.91	1.95	1.43	1.31	1.40
		CV %	12.3	11.8	10.4	9.9	11.1
	based on 6 tests	SD	0.92	2.03	1.53	1.39	1.47
		CV %	12.5	12.2	11.2	10.5	11.6
	based on single tests	SD	0.98	2.19	1.80	1.61	1.64
		CV %	13.3	13.2	13.1	12.2	12.9
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.18	0.47	0.42	0.44	0.38
		CV %	2.5	2.8	3.0	3.3	2.9
	between single tests on one day	SD	0.35	0.83	0.81	0.74	0.68
		CV %	4.7	5.0	5.9	5.5	5.3
	between all tests on different days	SD	0.38	0.97	0.85	0.84	0.76
		CV %	5.2	5.9	6.2	6.4	5.9

Test Result Distributions
Micronaire



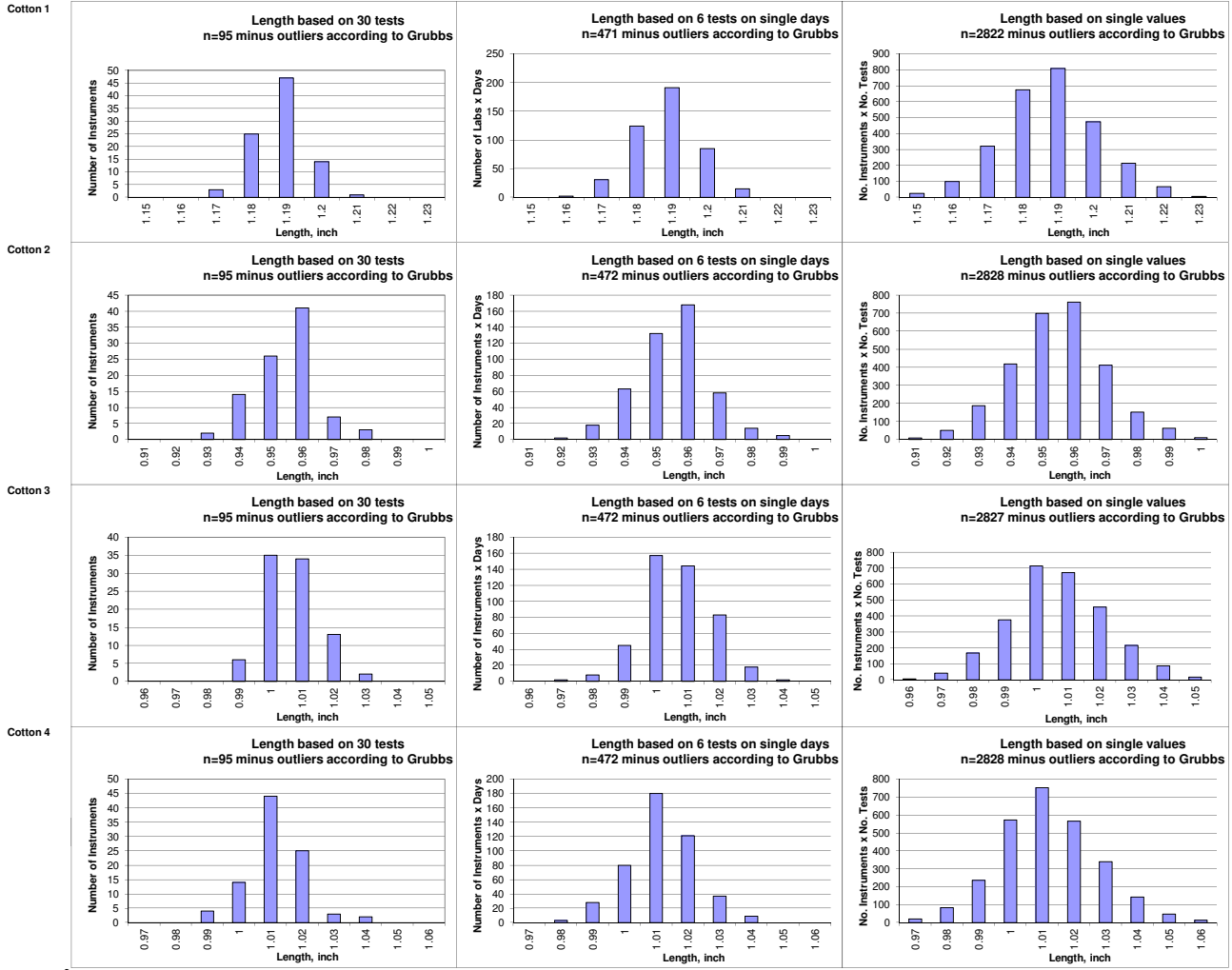
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method.)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Strength



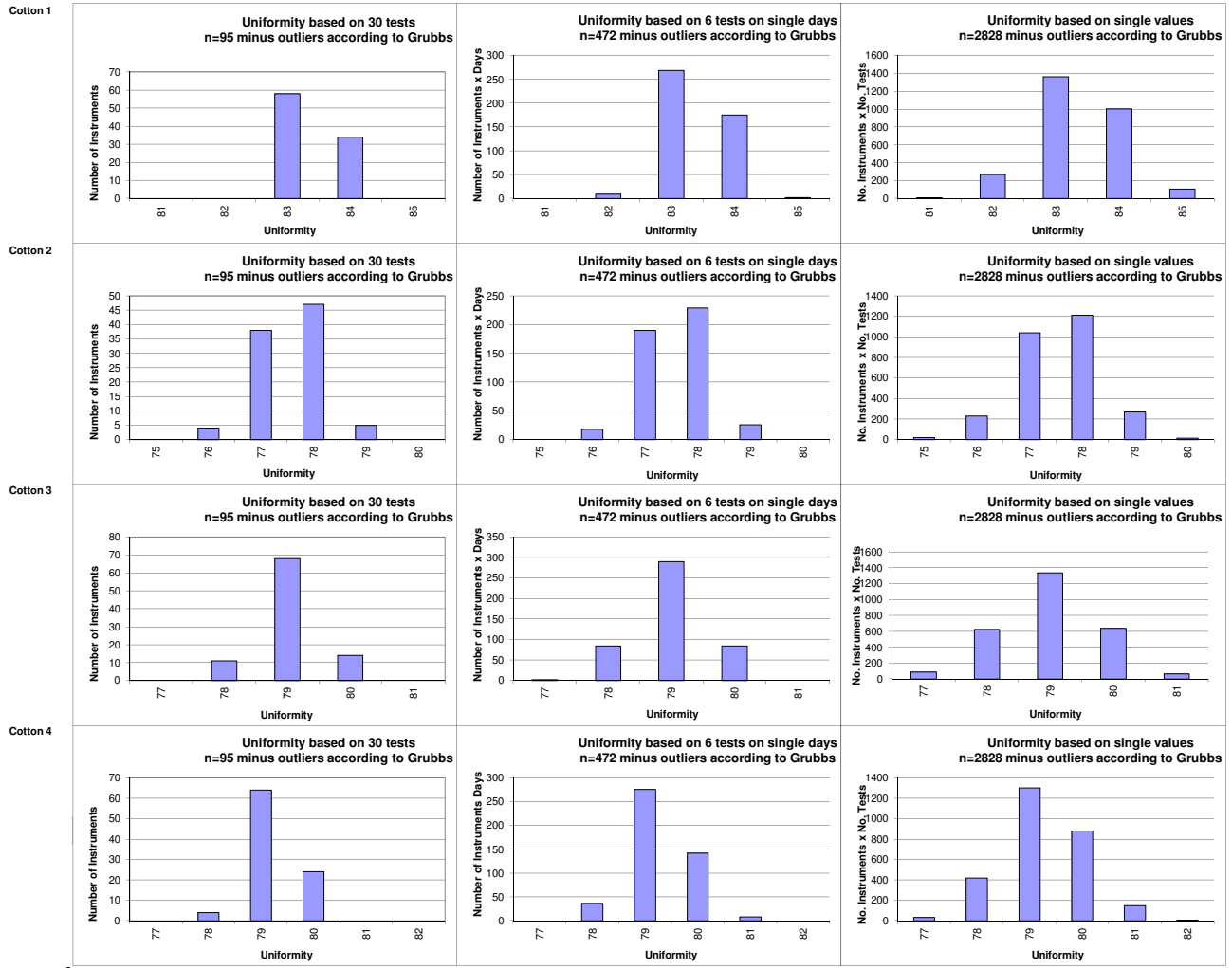
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
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Test Result Distributions
Length



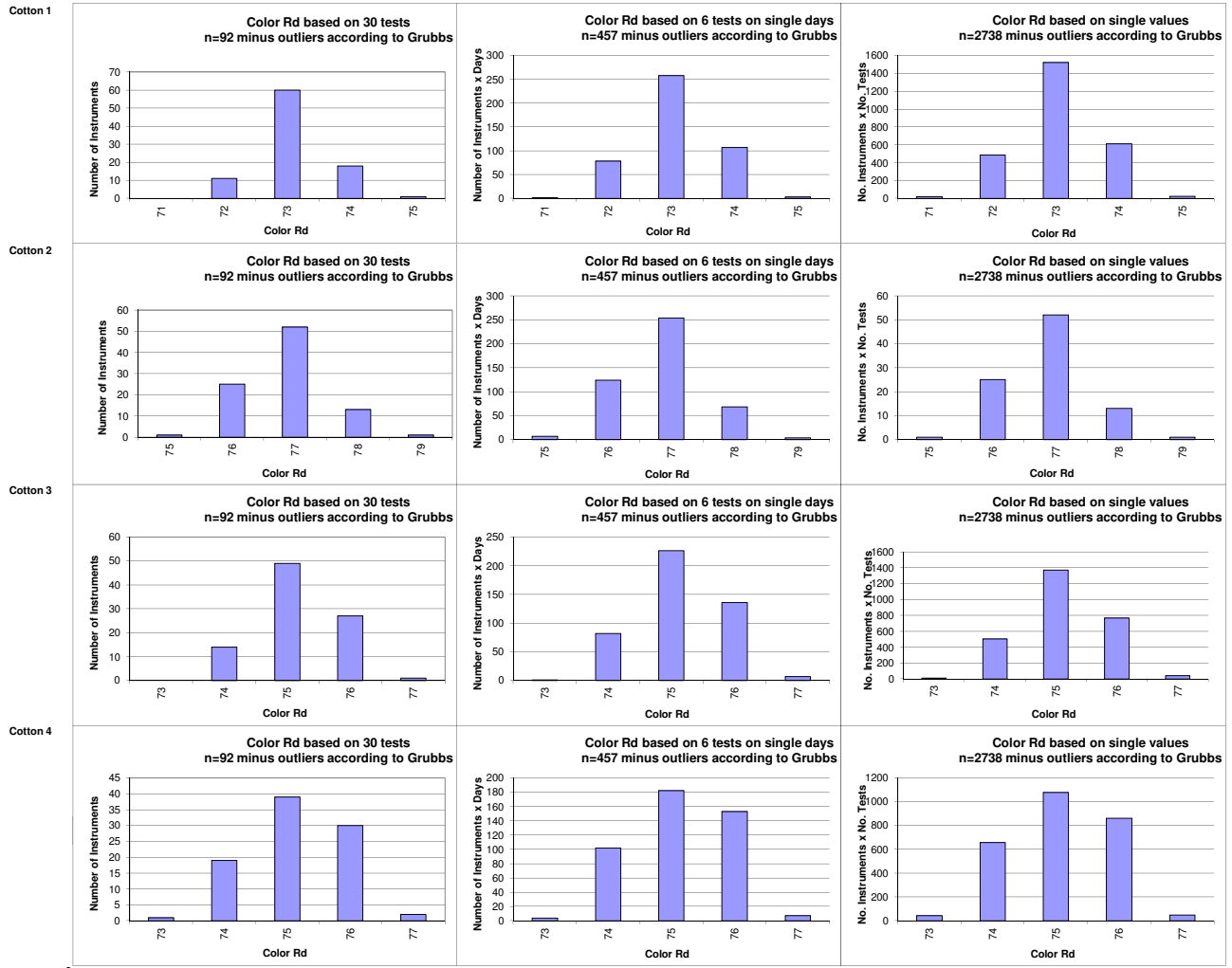
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Uniformity



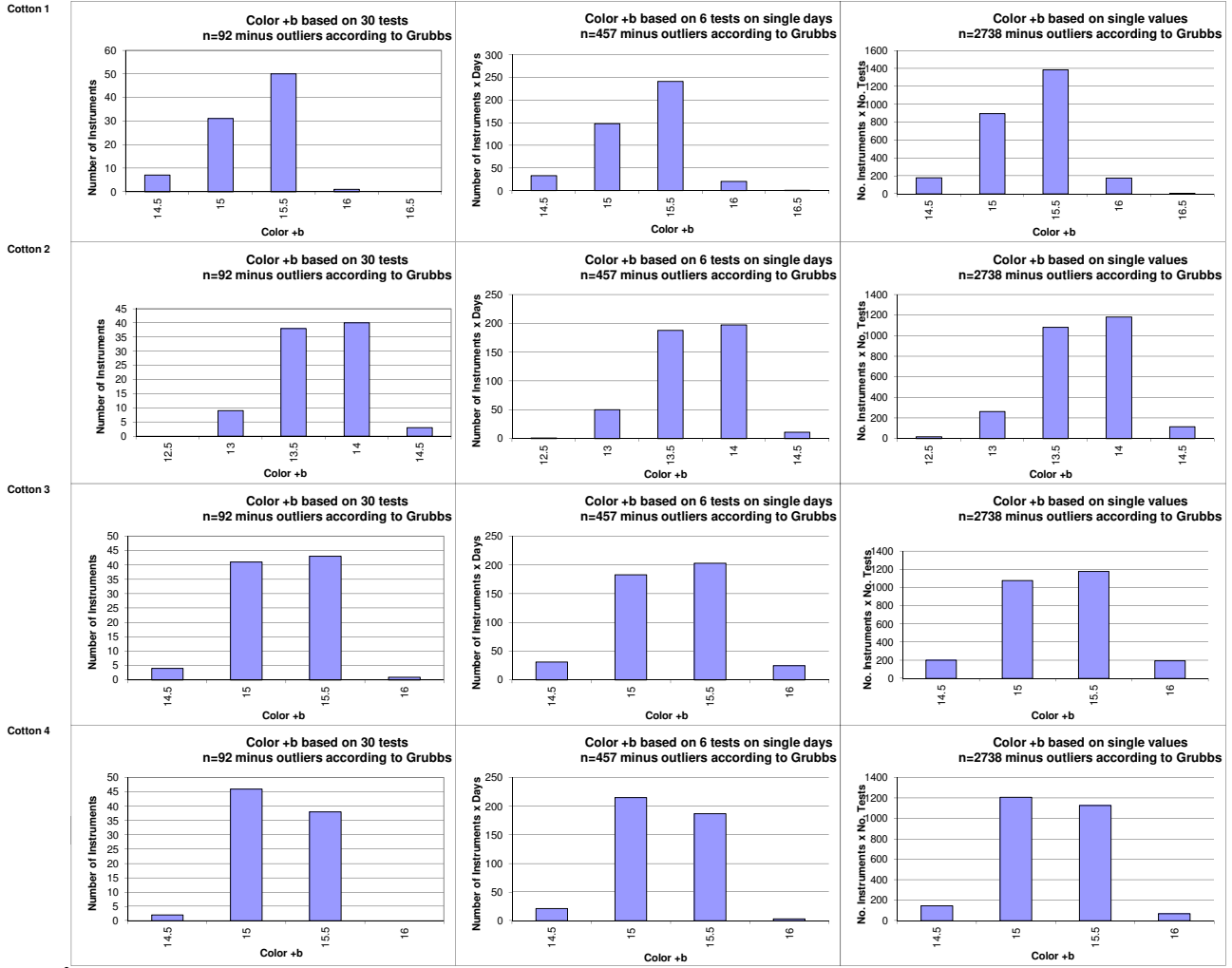
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Color Rd



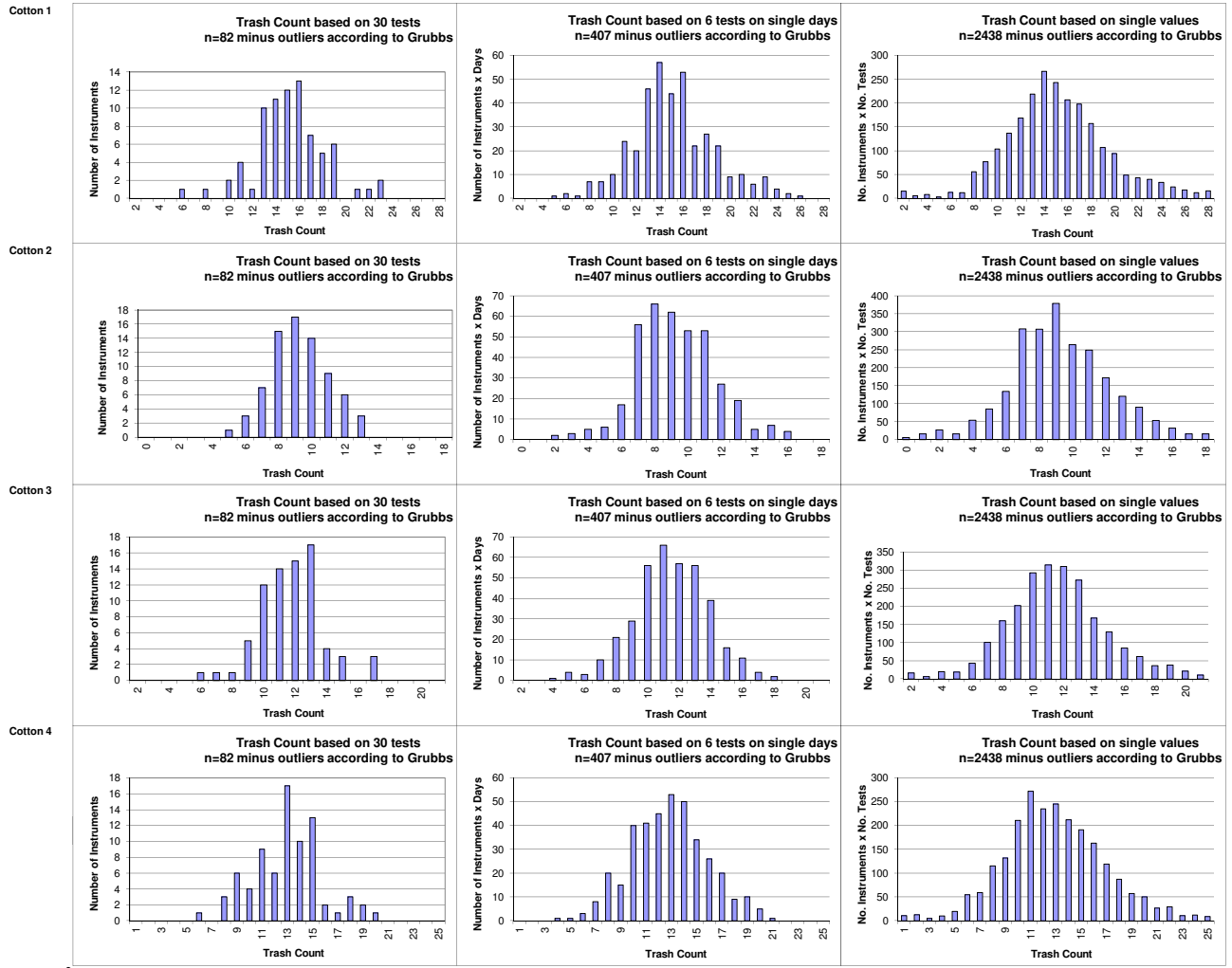
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Test Result Distributions
Color +b



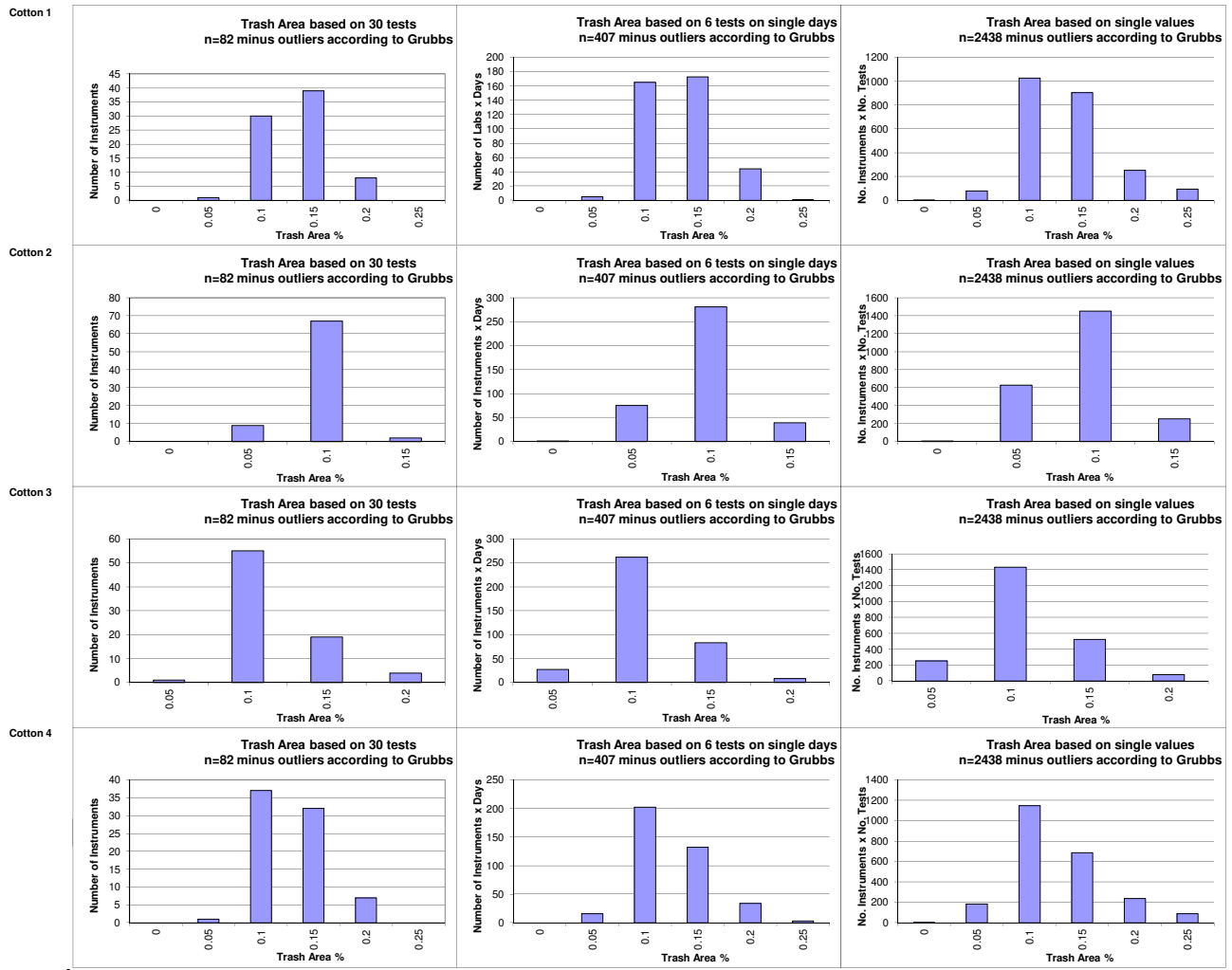
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Trash Count



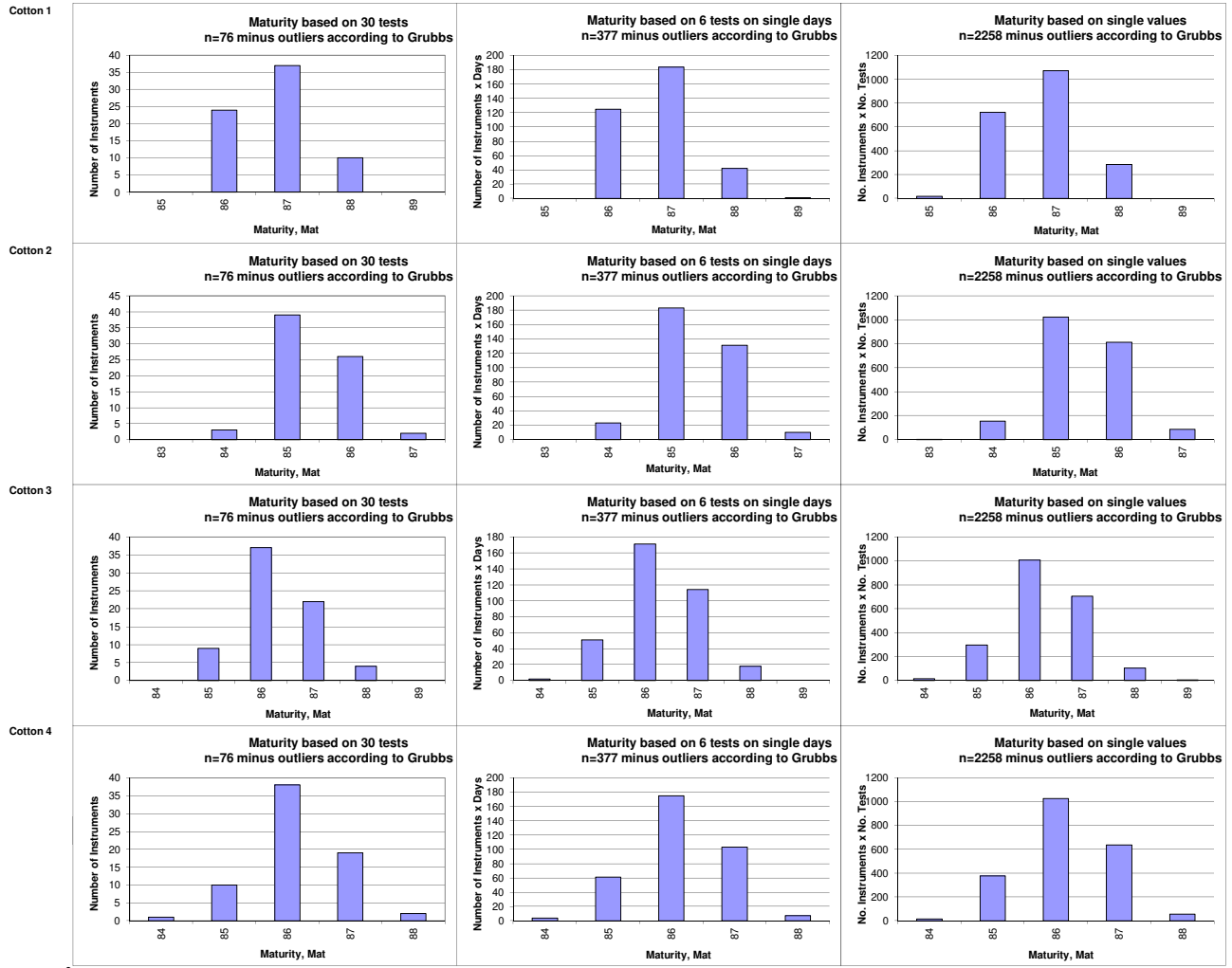
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Trash Area



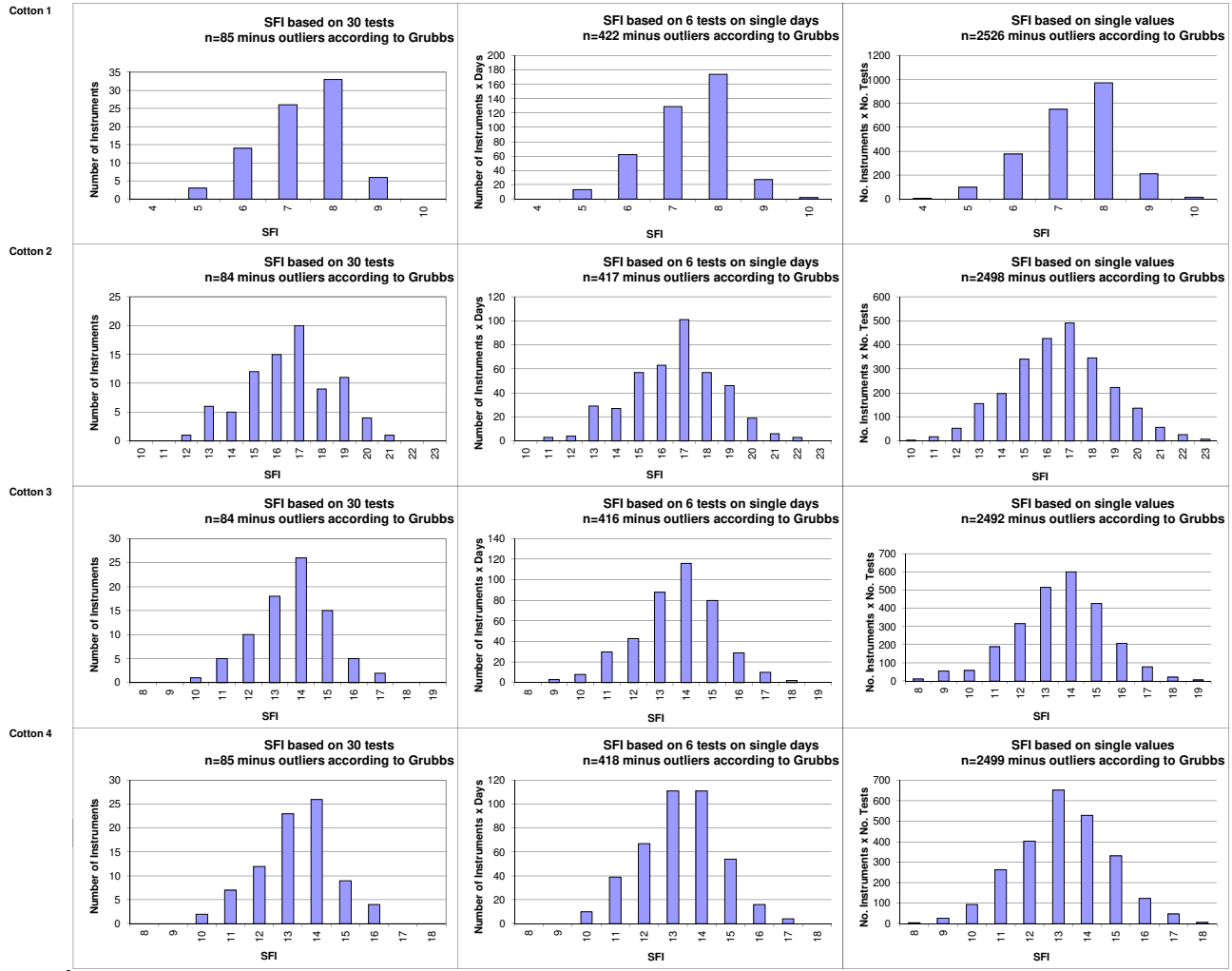
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

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



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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

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Faserinstitut Bremen e.V., Bremen, Germany*
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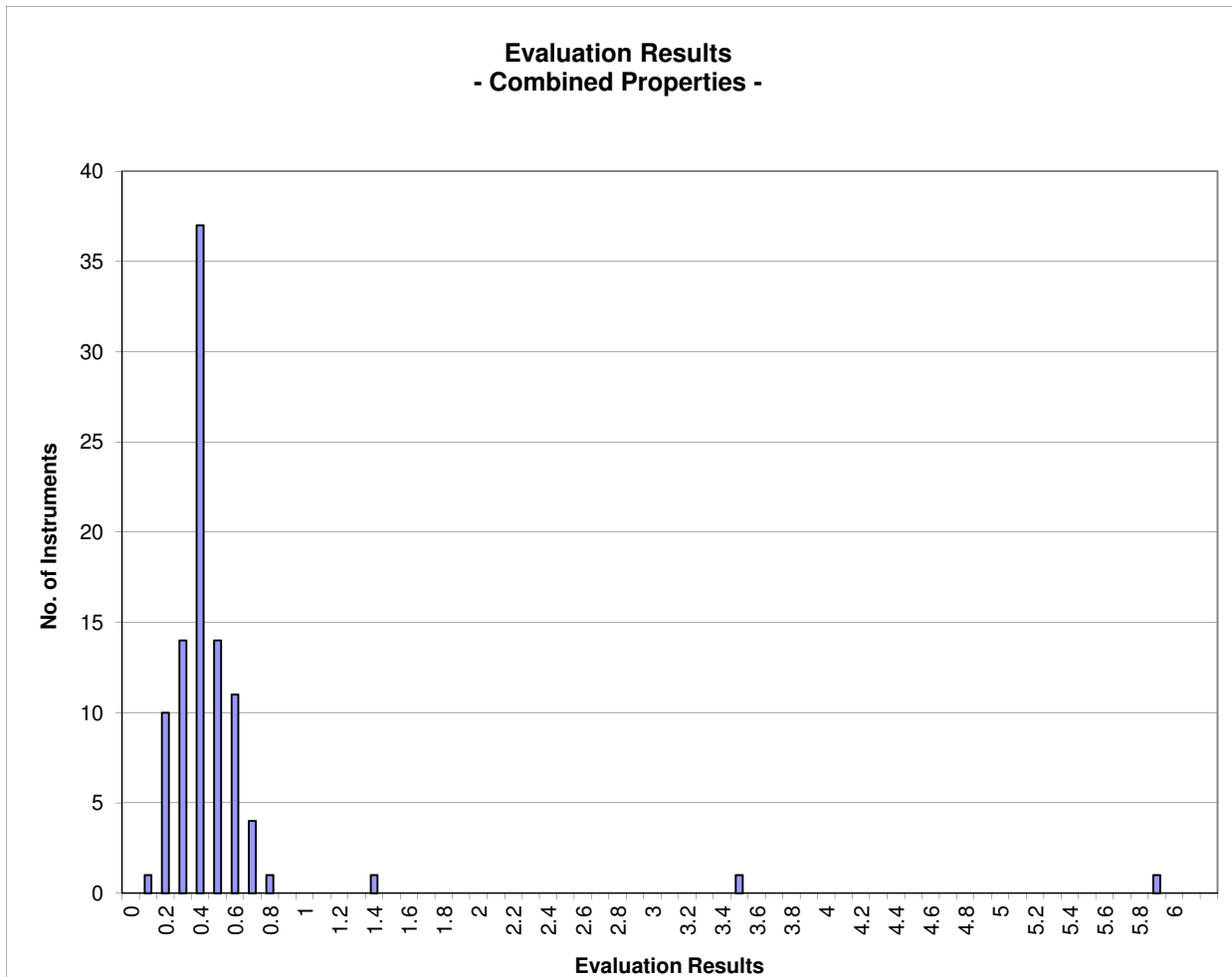
Instrument Evaluation

- Graph of Combined Properties -

According to ICAC CSITC Task Force Recommendations

Global - Round Trial 2026 - 1

Statistics	Evaluation Combined Prop.
Average Overall Evaluation Result (OER)	0.52
OER Rating for the best instrument	0.15
max. OER Limit for belonging to the best 10% of the instruments	0.24
max. OER Limit for belonging to the best 25% of the instruments	0.34
max. OER Limit for belonging to the best 50% of the instruments	0.42
max. OER Limit for belonging to the best 75% of the instruments	0.50
OER Rating for the worst instrument	5.87

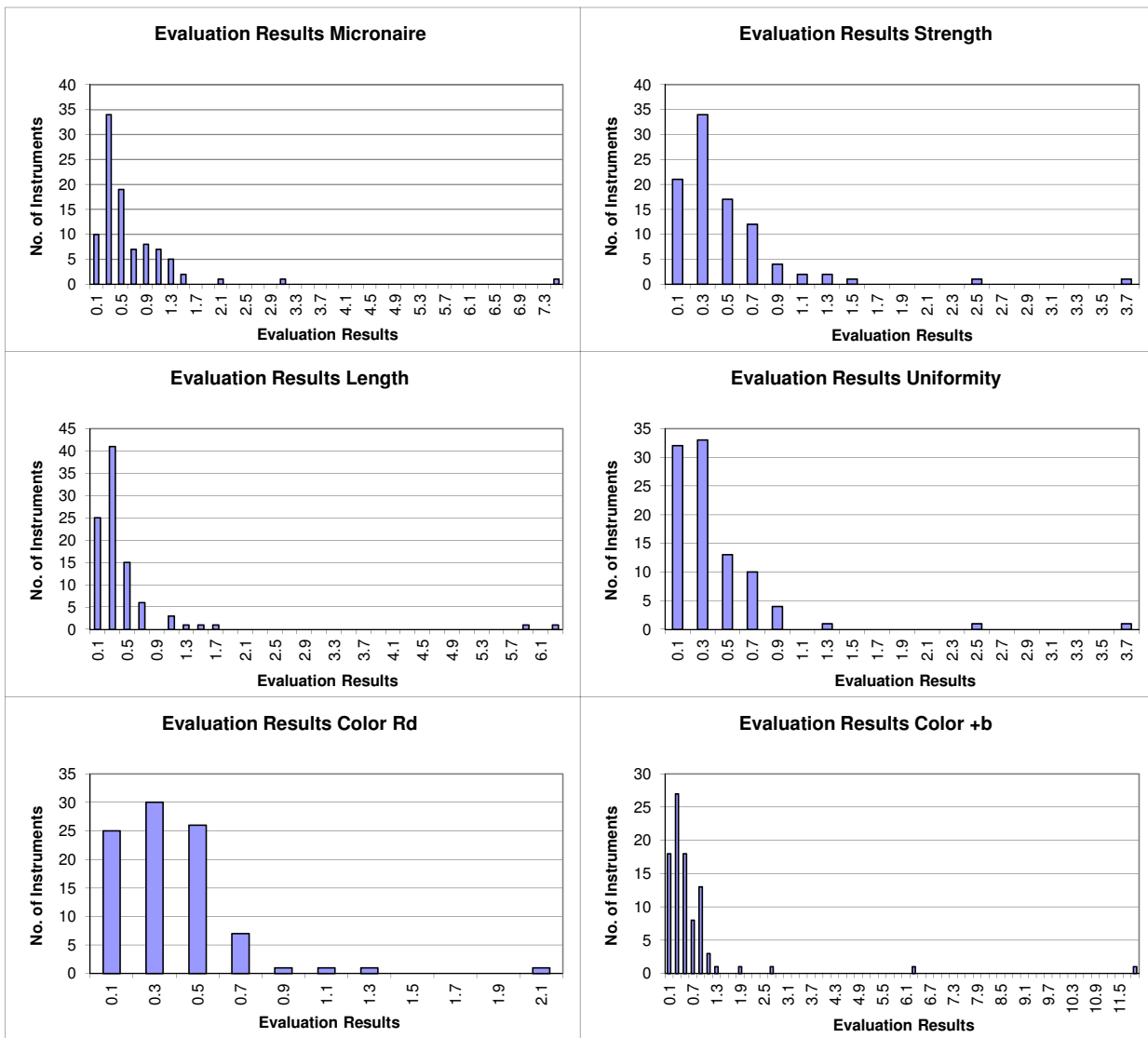


x-Axis shows midpoints of classes

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 2026 - 1

		Evaluation Micronaire	Evaluation Strength	Evaluation Length	Evaluation Uniformity	Evaluation Color Rd	Evaluation Color +b
Statistics	Average	0.66	0.48	0.50	0.41	0.37	0.69
	Median	0.44	0.36	0.29	0.29	0.33	0.41
	Best Instr.	0.07	0.06	0.06	0.06	0.04	0.07
	Worst Instr.	7.56	3.74	6.23	3.63	2.11	11.96



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



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Section Three: Within Limits Evaluation

Section Three: Within Limits Evaluation

Content:

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

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USDA-AMS, Memphis, TN, USA

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Within Limits Evaluation

Based on average of 30 test results for each sample

	Micronaire	Strength	Length	Uniformity	Color Rd	Color +b
Limits	0.20	2.0	0.030	2.0	1.5	0.5
	units	g/tex	inch	%	units	units
Average % Results within Limits	98.2	96.1	96.6	98.4	97.6	88.0
Completely within limits	96.8	93.7	93.7	97.9	95.7	77.2
% of Instruments $\geq 75\%$ within limits	96.8	94.7	95.8	97.9	97.8	88.0
% of Instruments $\geq 50\%$ within limits	98.9	96.8	97.9	97.9	97.8	92.4

Within Limits Evaluation

Based on Single Test Results

	Micronaire	Strength	Length	Uniformity	Color Rd	Color +b
Limits	0.20	2.0	0.030	2.0	1.5	0.5
	units	g/tex	inch	%	units	units
Average % Results within Limits	95.9	92.0	88.6	96.8	96.3	83.1
% of Instruments 100% within limits	55.8	26.3	11.6	47.4	71.7	31.5
% of Instruments $\geq 95\%$ within limits	87.4	68.4	34.7	88.4	89.1	47.8
% of Instruments $\geq 75\%$ within limits	96.8	92.6	90.5	97.9	95.7	76.1
% of Instruments $\geq 65\%$ within limits	96.8	94.7	93.7	97.9	96.7	81.5
% of Instruments $\geq 50\%$ within limits	96.8	94.7	96.8	97.9	96.7	92.4