



International Cotton Advisory Committee



CSITC Global - Round Trial 2026 - 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
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Global - Round Trial 2026 - 2

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

Micronaire							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			4.279	4.183	3.647	3.905	
Reference Values for Evaluation			4.279	4.183	3.647	3.905	
Number Of Instruments			88	88	88	88	88
Inter-Instrument Variation	based on 30 tests	SD	0.060	0.056	0.052	0.054	0.056
		CV %	1.4	1.3	1.4	1.4	1.4
	based on 6 tests	SD	0.064	0.060	0.059	0.061	0.061
		CV %	1.5	1.4	1.6	1.5	1.5
	based on single tests	SD	0.070	0.069	0.066	0.066	0.068
		CV %	1.6	1.6	1.8	1.7	1.7
Typical within-instrument Variation (Median)	between different days	SD	0.021	0.018	0.021	0.021	0.020
	with each 6 tests	CV %	0.5	0.4	0.6	0.5	0.5
	between single tests	SD	0.035	0.036	0.034	0.034	0.035
	on one day	CV %	0.8	0.8	0.9	0.9	0.9
	between all tests	SD	0.040	0.040	0.042	0.042	0.041
	on different days	CV %	0.9	1.0	1.2	1.1	1.0

Strength							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			29.387	29.919	30.677	30.304	
Reference Values for Evaluation			29.387	29.919	30.677	30.304	
Number Of Instruments			88	88	88	88	88
Inter-Instrument Variation	based on 30 tests	SD	0.695	0.747	0.631	0.688	0.690
		CV %	2.4	2.5	2.1	2.3	2.3
	based on 6 tests	SD	0.769	0.811	0.741	0.783	0.776
		CV %	2.6	2.7	2.4	2.6	2.6
	based on single tests	SD	0.972	1.014	0.936	0.980	0.976
		CV %	3.3	3.4	3.1	3.2	3.2
Typical within-instrument Variation (Median)	between different days	SD	0.328	0.318	0.293	0.324	0.316
	with each 6 tests	CV %	1.1	1.1	1.0	1.1	1.1
	between single tests	SD	0.634	0.608	0.566	0.593	0.600
	on one day	CV %	2.2	2.0	1.8	2.0	2.0
	between all tests	SD	0.687	0.687	0.673	0.663	0.677
	on different days	CV %	2.3	2.3	2.2	2.2	2.3

Length							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			1.1287	1.1743	1.1752	1.1755	
Reference Values for Evaluation			1.1287	1.1743	1.1752	1.1755	
Number Of Instruments			88	88	88	88	88
Inter-Instrument Variation	based on 30 tests	SD	0.0095	0.0109	0.0105	0.0101	0.0103
		CV %	0.8	0.9	0.9	0.9	0.9
	based on 6 tests	SD	0.0110	0.0123	0.0111	0.0115	0.0115
		CV %	1.0	1.0	0.9	1.0	1.0
	based on single tests	SD	0.0152	0.0164	0.0145	0.0152	0.0153
		CV %	1.3	1.4	1.2	1.3	1.3
Typical within-instrument Variation (Median)	between different days	SD	0.0048	0.0058	0.0046	0.0053	0.0052
	with each 6 tests	CV %	0.4	0.5	0.4	0.5	0.4
	between single tests	SD	0.0104	0.0118	0.0103	0.0105	0.0107
	on one day	CV %	0.9	1.0	0.9	0.9	0.9
	between all tests	SD	0.0115	0.0129	0.0108	0.0117	0.0117
	on different days	CV %	1.0	1.1	0.9	1.0	1.0

Uniformity							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			82.168	81.355	82.998	83.023	
Reference Values for Evaluation			82.168	81.355	82.998	83.023	
Number Of Instruments			88	88	88	88	88
Inter-Instrument Variation	based on 30 tests	SD	0.427	0.365	0.385	0.407	0.396
		CV %	0.5	0.4	0.5	0.5	0.5
	based on 6 tests	SD	0.545	0.446	0.479	0.493	0.491
		CV %	0.7	0.5	0.6	0.6	0.6
	based on single tests	SD	0.760	0.796	0.724	0.758	0.760
		CV %	0.9	1.0	0.9	0.9	0.9
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.252	0.273	0.262	0.248	0.259
		CV %	0.3	0.3	0.3	0.3	0.3
	between single tests on one day	SD	0.539	0.622	0.566	0.575	0.575
		CV %	0.7	0.8	0.7	0.7	0.7
	between all tests on different days	SD	0.585	0.665	0.599	0.612	0.615
		CV %	0.7	0.8	0.7	0.7	0.7

Color Rd							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			77.028	78.049	80.928	81.062	
Reference Values for Evaluation			77.028	78.049	80.928	81.062	
Number Of Instruments			88	88	88	88	88
Inter-Instrument Variation	based on 30 tests	SD	0.579	0.609	0.501	0.537	0.557
		CV %	0.8	0.8	0.6	0.7	0.7
	based on 6 tests	SD	0.563	0.602	0.510	0.551	0.557
		CV %	0.7	0.8	0.6	0.7	0.7
	based on single tests	SD	0.608	0.637	0.540	0.591	0.594
		CV %	0.8	0.8	0.7	0.7	0.8
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.153	0.175	0.136	0.124	0.147
		CV %	0.2	0.2	0.2	0.2	0.2
	between single tests on one day	SD	0.196	0.196	0.157	0.158	0.177
		CV %	0.3	0.3	0.2	0.2	0.2
	between all tests on different days	SD	0.266	0.276	0.220	0.203	0.241
		CV %	0.3	0.4	0.3	0.3	0.3

Color +b							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			9.857	9.660	8.975	9.797	
Reference Values for Evaluation			9.857	9.660	8.975	9.797	
Number Of Instruments			88	88	88	88	88
Inter-Instrument Variation	based on 30 tests	SD	0.220	0.239	0.240	0.245	0.236
		CV %	2.2	2.5	2.7	2.5	2.5
	based on 6 tests	SD	0.237	0.238	0.258	0.253	0.247
		CV %	2.4	2.5	2.9	2.6	2.6
	based on single tests	SD	0.258	0.285	0.276	0.278	0.274
		CV %	2.6	2.9	3.1	2.8	2.9
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.072	0.060	0.074	0.070	0.069
		CV %	0.7	0.6	0.8	0.7	0.7
	between single tests on one day	SD	0.082	0.084	0.082	0.084	0.083
		CV %	0.8	0.9	0.9	0.9	0.9
	between all tests on different days	SD	0.107	0.108	0.122	0.113	0.112
		CV %	1.1	1.1	1.4	1.2	1.2

Optional Parameters

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

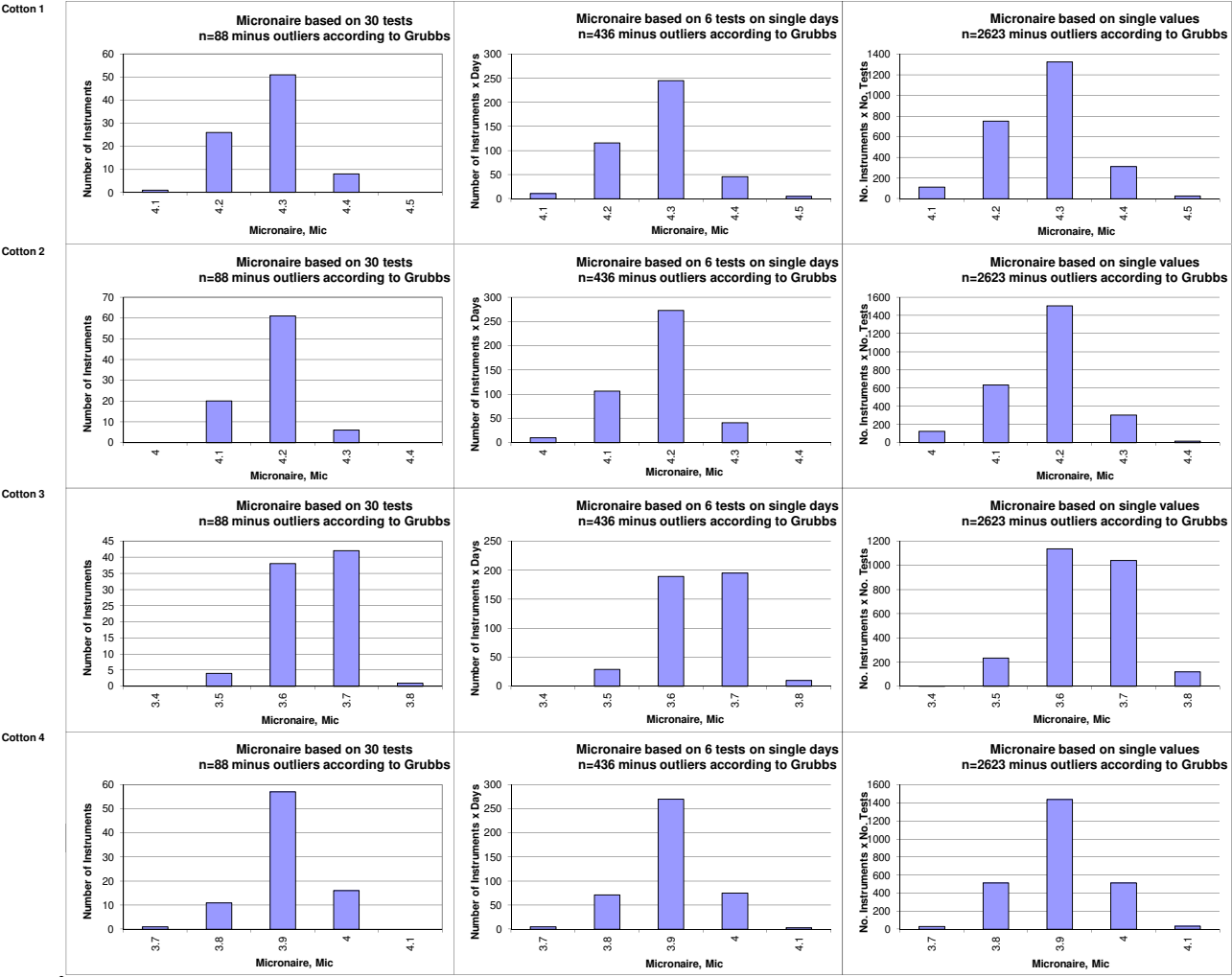
Trash Count							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			28.76	29.25	22.80	20.68	
Reference Values for Evaluation			28.76	29.25	22.80	20.68	
Number Of Instruments			76	76	76	76	76
Inter-Instrument Variation		SD	5.36	5.62	4.39	3.93	4.83
		CV %	18.6	19.2	19.3	19.0	19.0
	based on 30 tests	SD	5.81	6.60	4.89	4.28	5.40
		CV %	20.2	22.6	21.5	20.7	21.2
	based on 6 tests	SD	6.52	7.09	5.49	4.89	6.00
		CV %	22.7	24.2	24.1	23.6	23.7
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	2.17	2.10	1.88	1.58	1.93
		CV %	7.6	7.2	8.2	7.6	7.7
	between single tests on one day	SD	2.94	3.09	2.58	2.68	2.82
		CV %	10.2	10.6	11.3	13.0	11.3
	between all tests on different days	SD	4.06	3.71	3.44	3.13	3.59
		CV %	14.1	12.7	15.1	15.1	14.3

Trash Area							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			0.255	0.273	0.215	0.192	
Reference Values for Evaluation			0.255	0.273	0.215	0.192	
Number Of Instruments			76	76	76	76	76
Inter-Instrument Variation	based on 30 tests	SD	0.054	0.059	0.050	0.040	0.051
		CV %	21.3	21.4	23.2	20.9	21.7
	based on 6 tests	SD	0.059	0.068	0.056	0.047	0.058
		CV %	23.0	24.8	26.1	24.7	24.7
	based on single tests	SD	0.068	0.076	0.066	0.057	0.067
		CV %	26.6	27.7	30.5	29.8	28.7
Typical within-instrument Variation (Median)	between different days	SD	0.026	0.036	0.025	0.023	0.028
	with each 6 tests	CV %	10.2	13.2	11.5	12.2	11.8
	between single tests	SD	0.036	0.038	0.033	0.031	0.035
	on one day	CV %	14.2	13.9	15.4	16.4	15.0
	between all tests	SD	0.049	0.053	0.041	0.041	0.046
	on different days	CV %	19.0	19.4	19.3	21.4	19.8

Maturity							
			Cotton 1	Cotton 2	Cotton 3	Cotton 4	Average
Average of Instruments (Grubbs)			85.80	85.49	84.42	84.89	
Reference Values for Evaluation			85.80	85.49	84.42	84.89	
Number Of Instruments			76	76	76	76	76
Inter-Instrument Variation	based on 30 tests	SD	0.82	0.73	0.67	0.80	0.75
		CV %	1.0	0.9	0.8	0.9	0.9
	based on 6 tests	SD	0.79	0.73	0.69	0.83	0.76
		CV %	0.9	0.9	0.8	1.0	0.9
	based on single tests	SD	0.81	0.73	0.71	0.83	0.77
		CV %	0.9	0.9	0.8	1.0	0.9
Typical within-instrument Variation (Median)	between different days	SD	0.07	0.09	0.09	0.09	0.09
	with each 6 tests	CV %	0.1	0.1	0.1	0.1	0.1
	between single tests	SD	0.14	0.16	0.16	0.15	0.15
	on one day	CV %	0.2	0.2	0.2	0.2	0.2
	between all tests	SD	0.18	0.25	0.24	0.19	0.22
	on different days	CV %	0.2	0.3	0.3	0.2	0.3

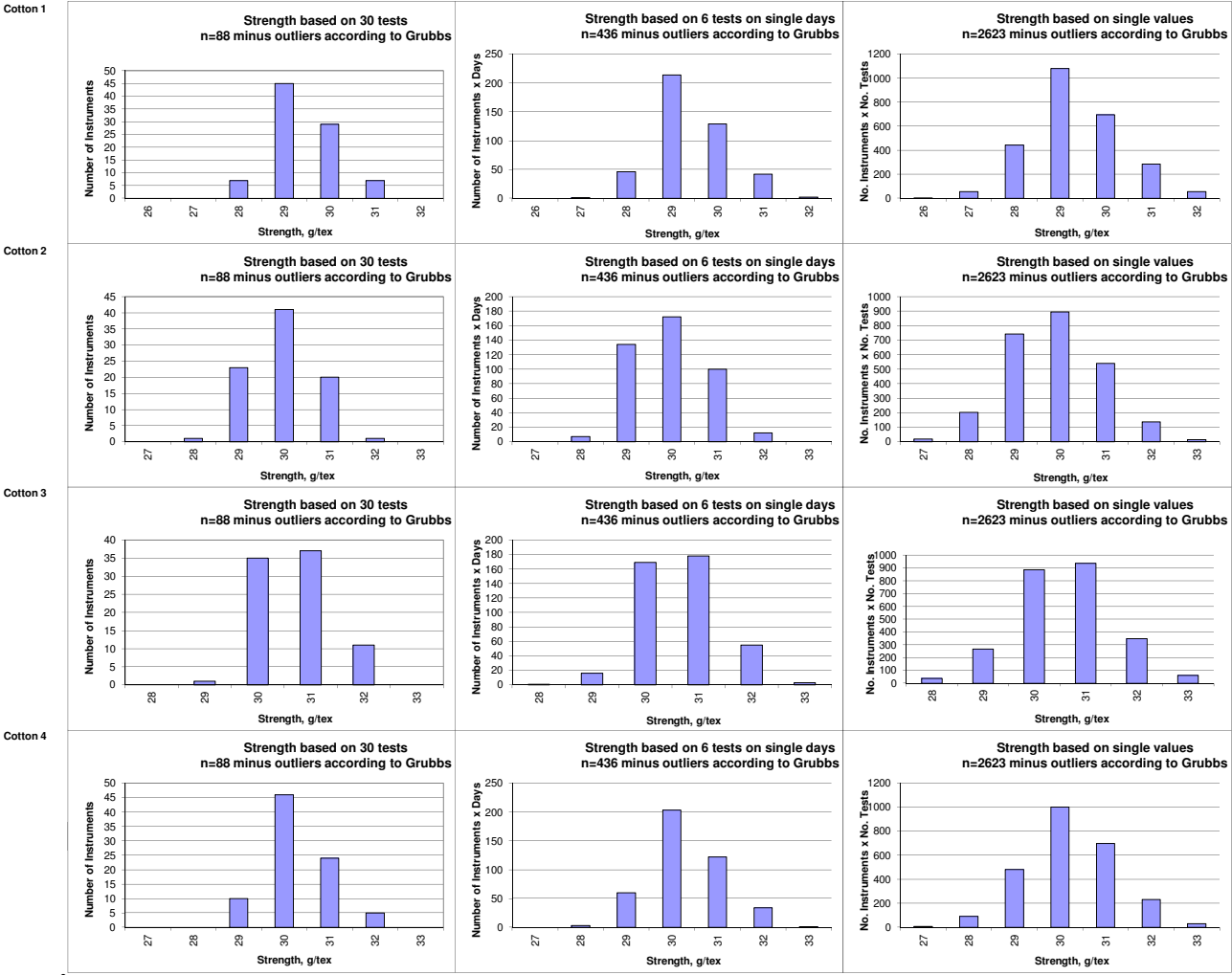
SFI						
			Cotton 1	Cotton 2	Cotton 3	Cotton 4
Average of Instruments (Grubbs)			8.86	9.18	8.25	8.24
Reference Values for Evaluation			8.86	9.18	8.25	8.24
Number Of Instruments			76	76	76	76
Inter-Instrument Variation	based on 30 tests	SD	0.85	0.87	0.82	0.81
		CV %	9.6	9.4	9.9	9.9
	based on 6 tests	SD	0.88	0.91	0.86	0.84
		CV %	9.9	9.9	10.4	10.3
	based on single tests	SD	1.00	1.01	0.95	0.94
		CV %	11.3	11.0	11.5	11.5
Typical within-instrument Variation (Median)	between different days with each 6 tests	SD	0.22	0.25	0.19	0.21
		CV %	2.5	2.8	2.3	2.5
	between single tests on one day	SD	0.46	0.48	0.40	0.42
		CV %	5.2	5.2	4.8	5.1
	between all tests on different days	SD	0.49	0.53	0.45	0.45
		CV %	5.6	5.8	5.5	5.5

Test Result Distributions
Micronaire



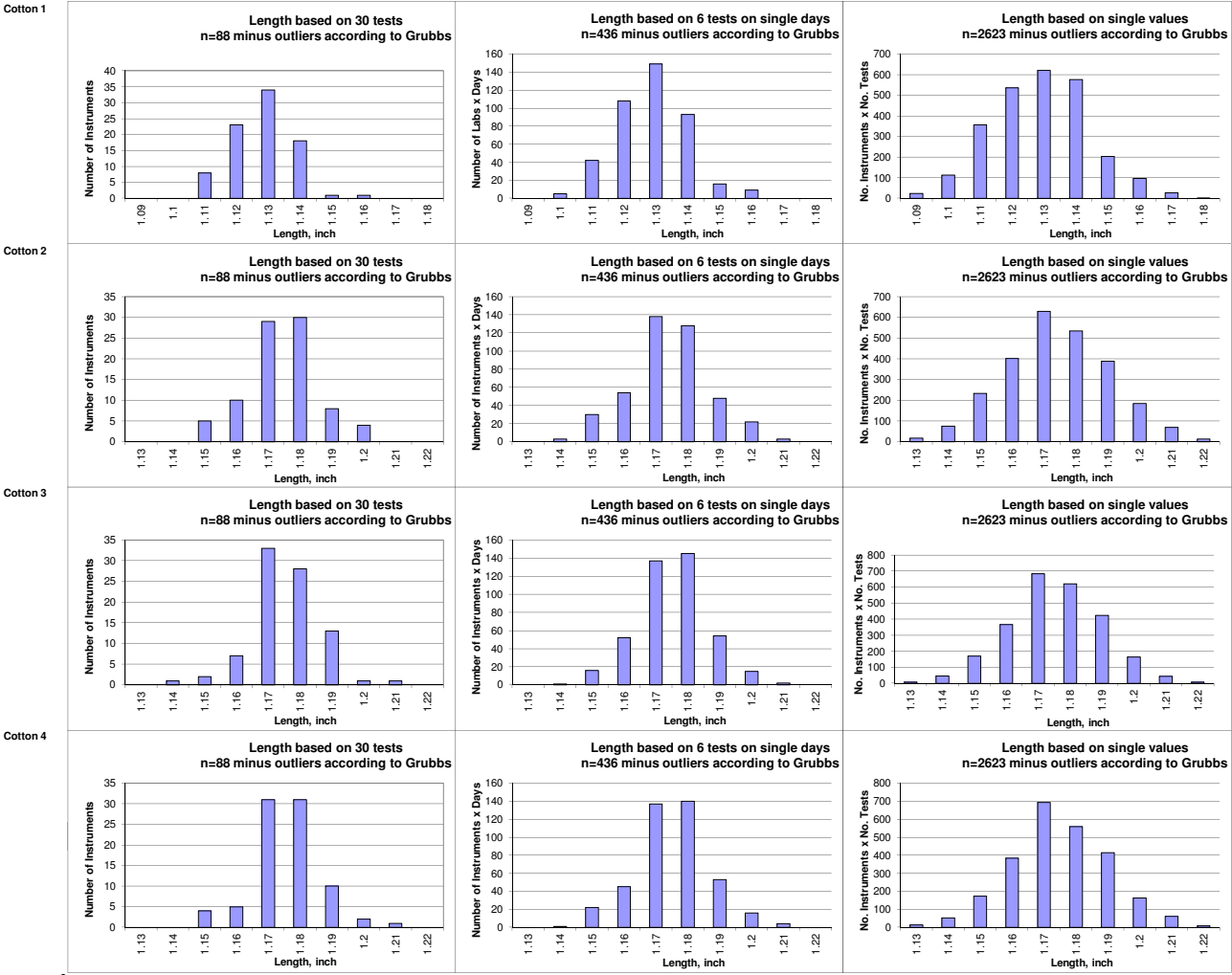
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method.)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Strength



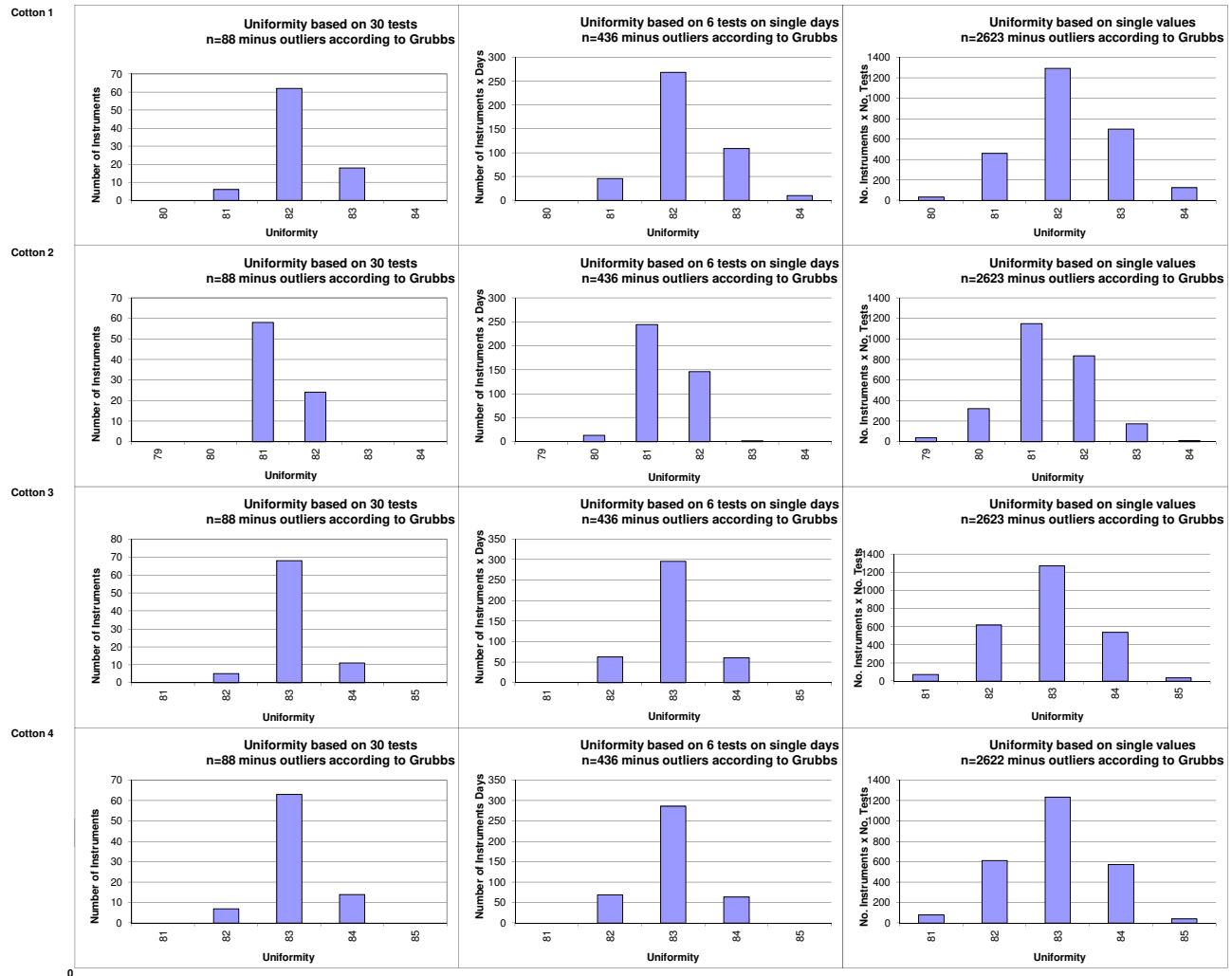
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Length



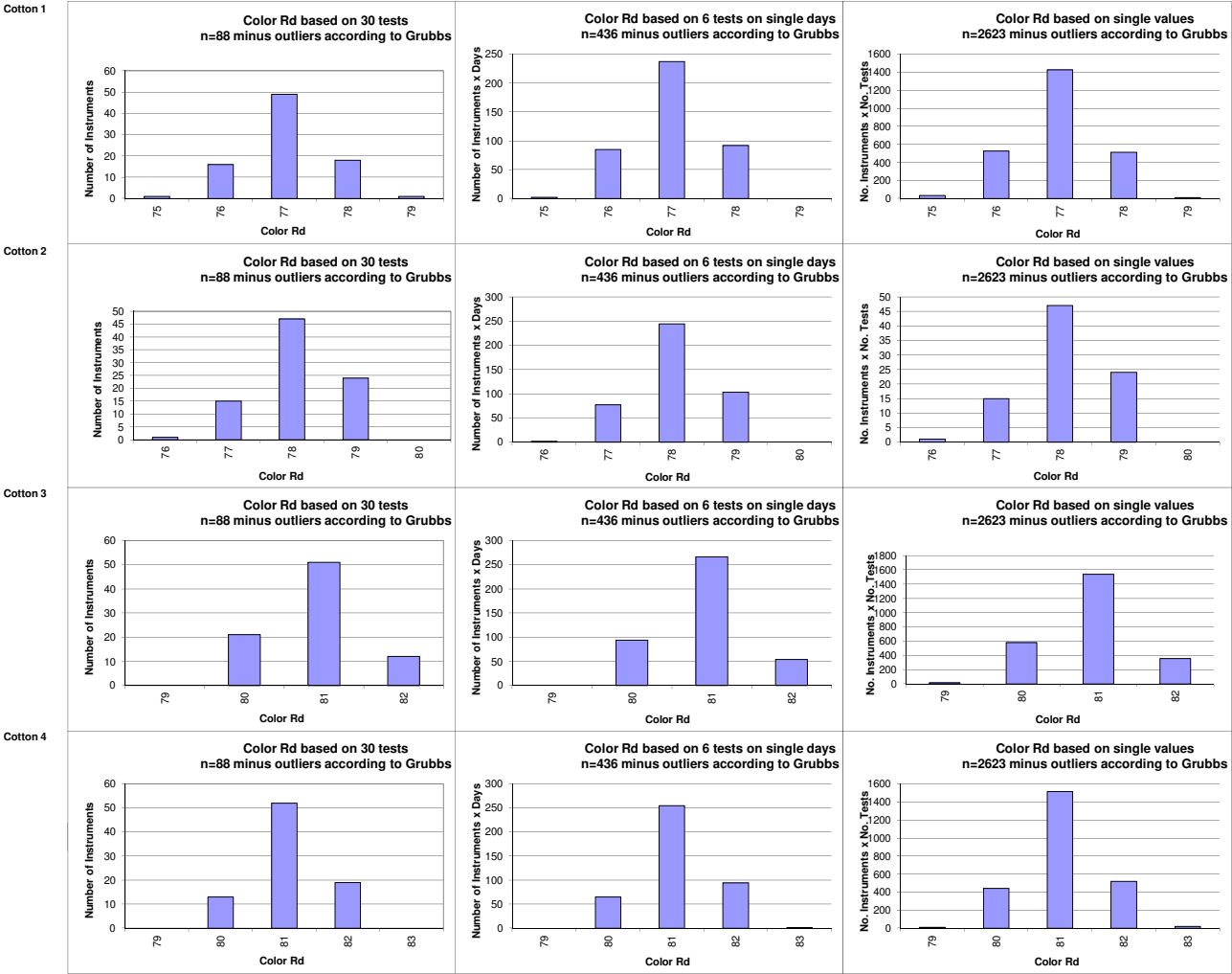
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Uniformity



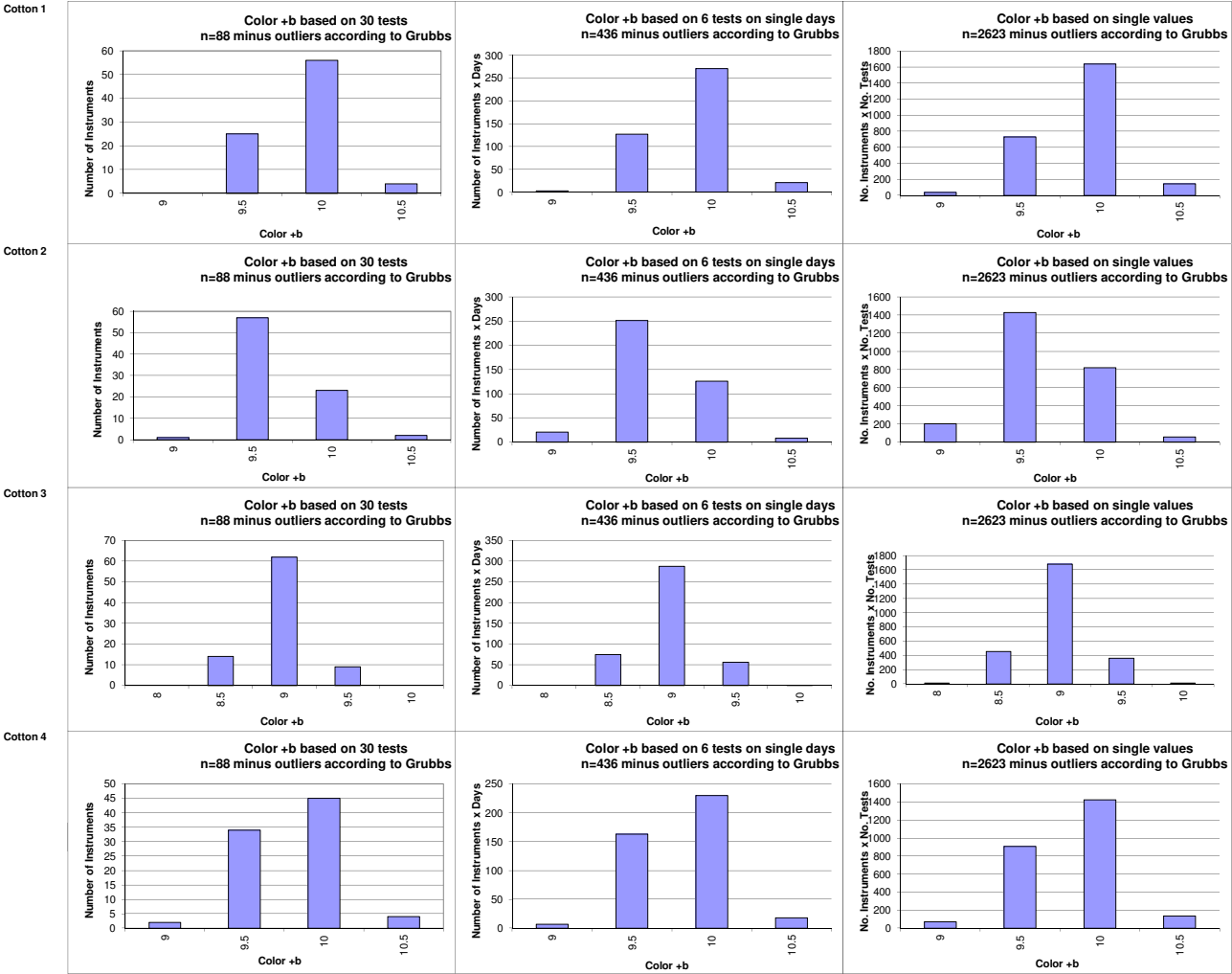
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Color Rd



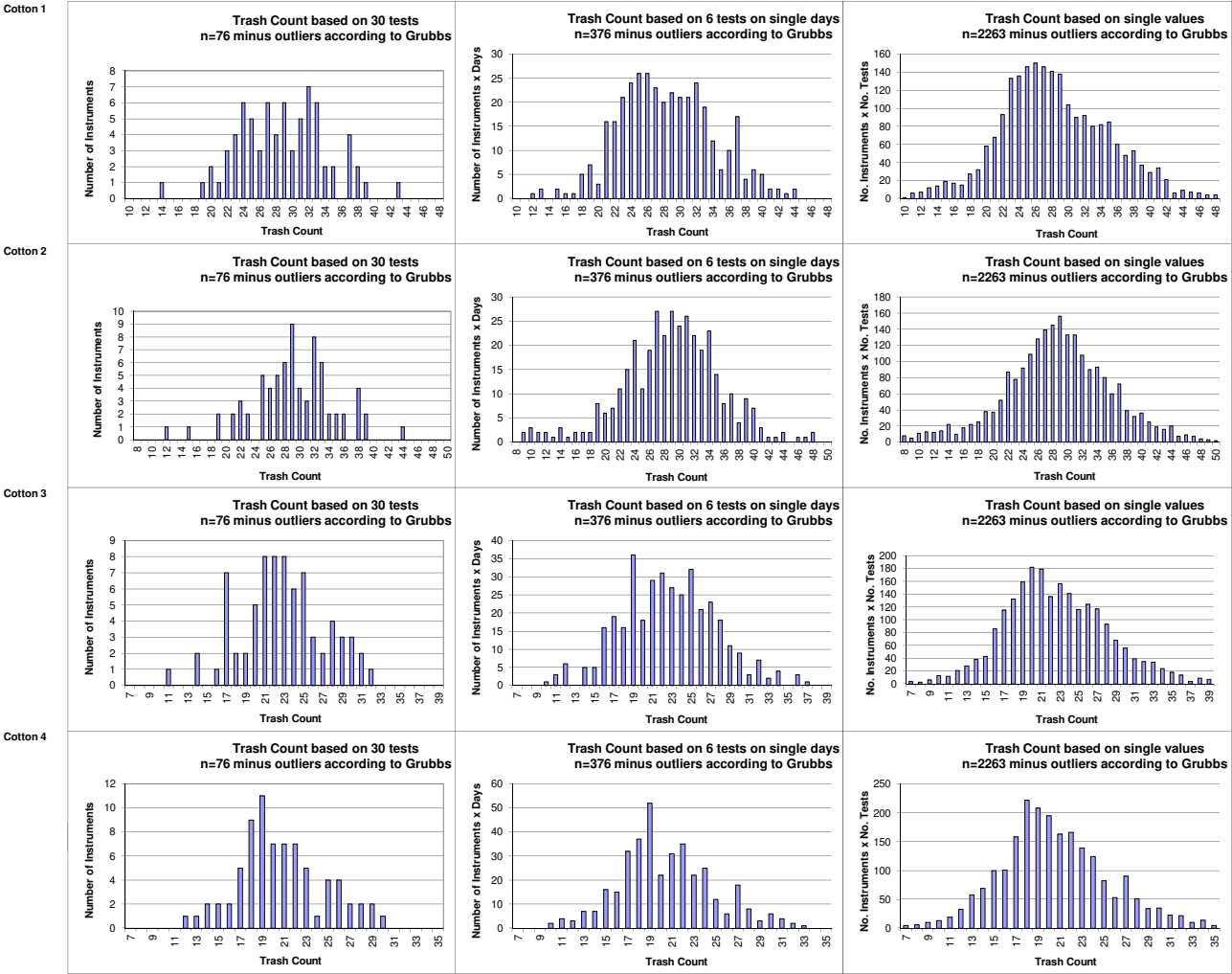
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Color +b



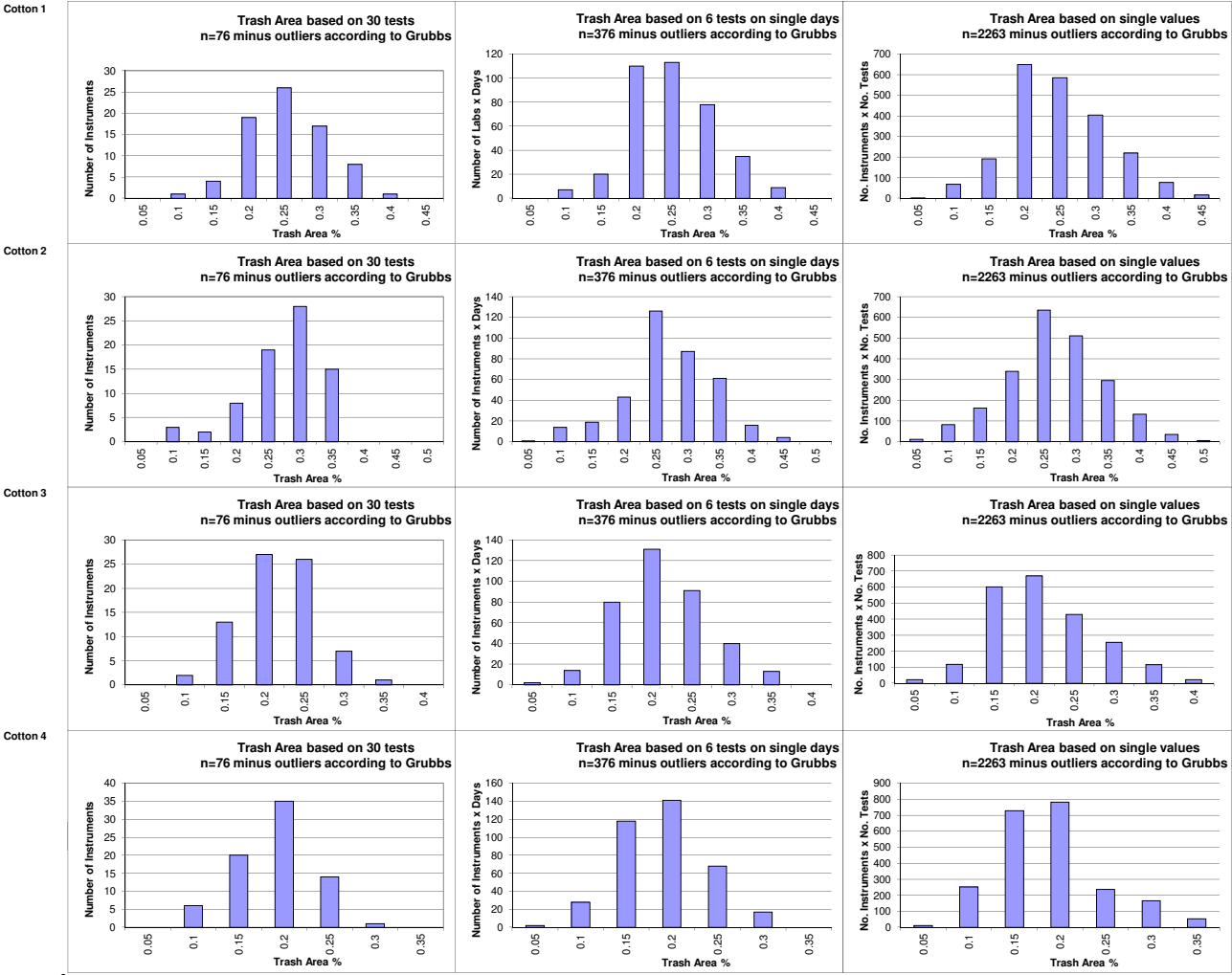
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Trash Count



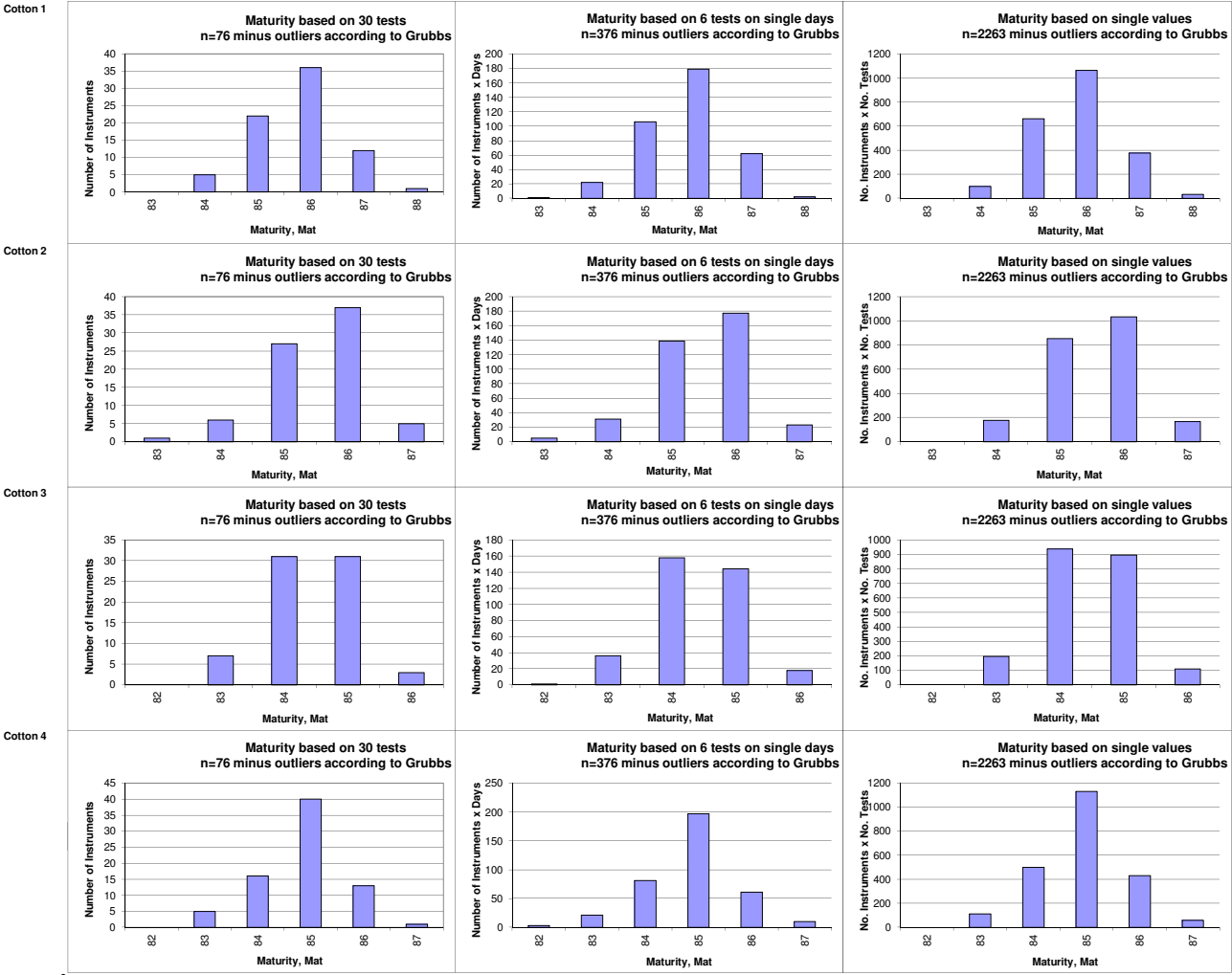
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(classes are defined as > lower limit and <= upper limit)

Test Result Distributions
Trash Area



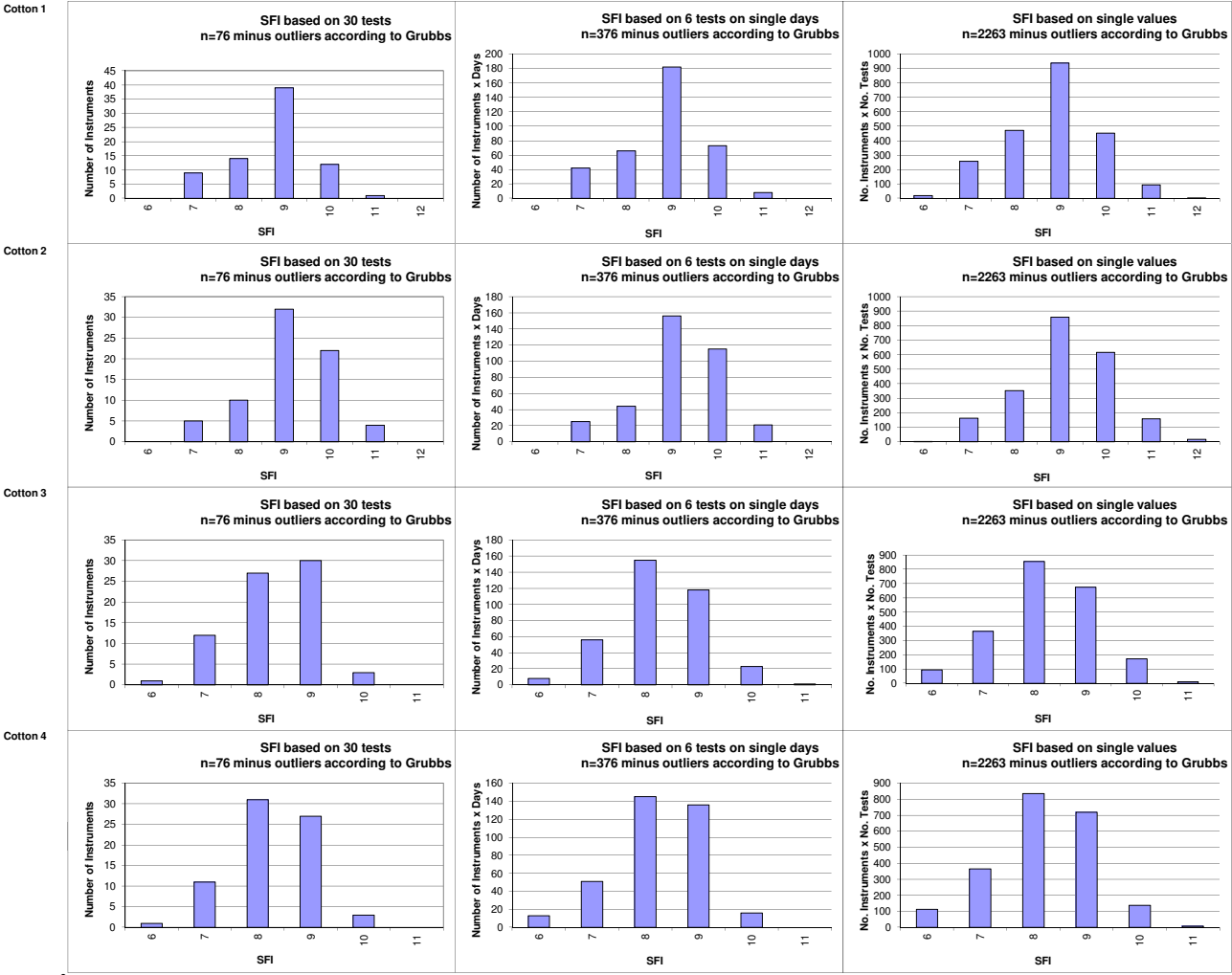
(Only results from instruments/days/single tests that are not regarded as outliers according to Grubbs' method)
(classes are defined as > lower limit and <= upper limit)

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 2026 - 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

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Faserinstitut Bremen e.V., Bremen, Germany*
USDA-AMS, Memphis, TN, USA

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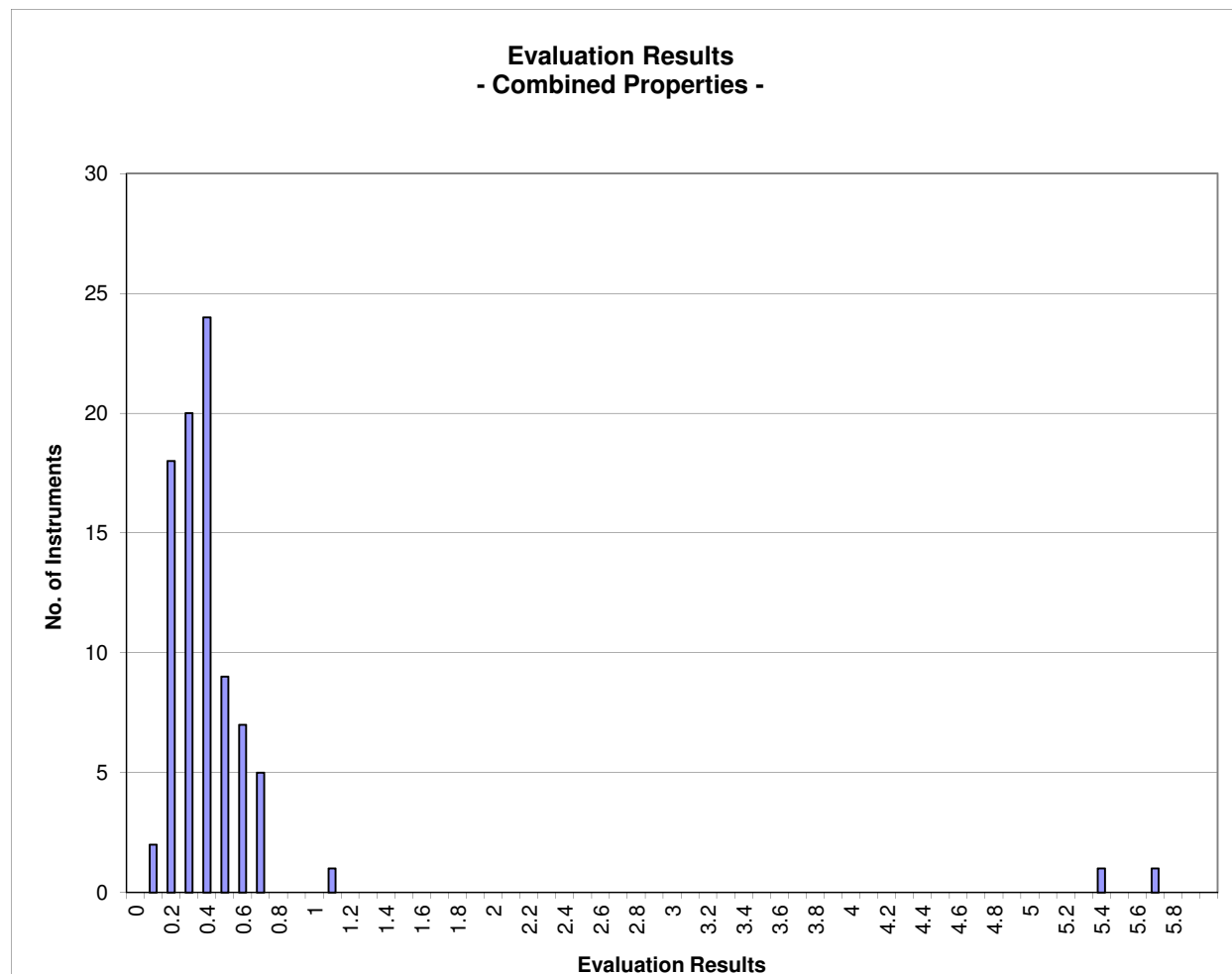
Instrument Evaluation

- Graph of Combined Properties -

According to ICAC CSITC Task Force Recommendations

Global - Round Trial 2026 - 2

Statistics	Evaluation Combined Prop.
Average Overall Evaluation Result (OER)	0.50
OER Rating for the best instrument	0.14
max. OER Limit for belonging to the best 10% of the instruments	0.22
max. OER Limit for belonging to the best 25% of the instruments	0.26
max. OER Limit for belonging to the best 50% of the instruments	0.37
max. OER Limit for belonging to the best 75% of the instruments	0.46
OER Rating for the worst instrument	5.68



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)

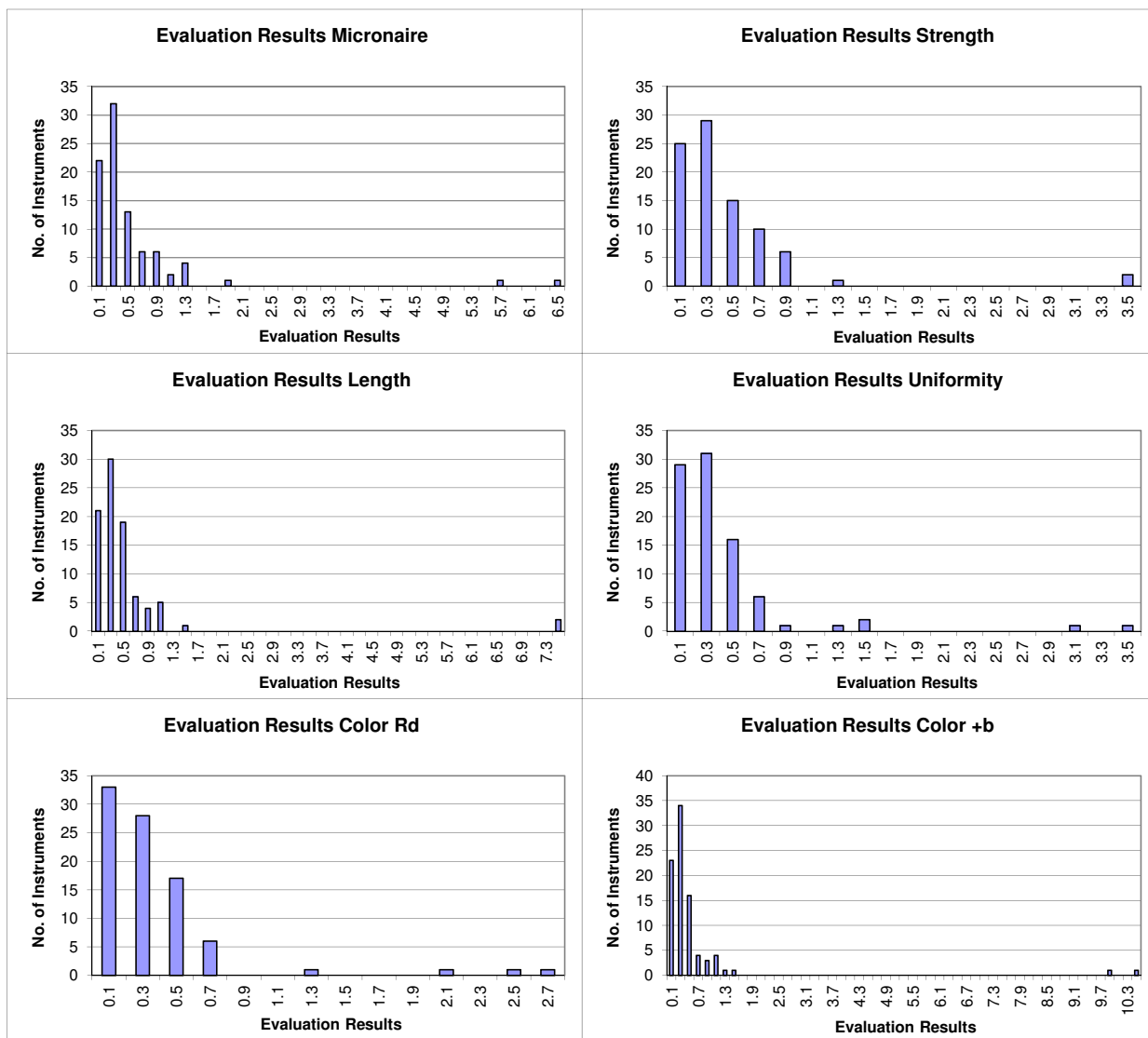
Instrument Evaluation

- Graph of Single Properties -

According to ICAC CSITC Task Force Recommendations

Global - Round Trial 2026 - 2

		Evaluation Micronaire	Evaluation Strength	Evaluation Length	Evaluation Uniformity	Evaluation Color Rd	Evaluation Color +b
Statistics	Average	0.57	0.45	0.58	0.42	0.37	0.62
	Median	0.27	0.31	0.36	0.27	0.27	0.33
	Best Instr.	0.09	0.04	0.07	0.05	0.03	0.06
	Worst Instr.	6.46	3.50	7.57	3.41	2.71	10.59



x-Axis shows midpoints of classes

The evaluation results are entered based on the unrounded values



International Cotton Advisory Committee



CSITC Global - Round Trial 2026 - 2 General Evaluation

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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

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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	98.0	97.4	95.7	97.7	95.7	91.8
Completely within limits	96.6	95.5	93.2	95.5	94.3	85.2
% of Instruments $\geq 75\%$ within limits	97.7	96.6	94.3	97.7	95.5	92.0
% of Instruments $\geq 50\%$ within limits	97.7	97.7	97.7	97.7	95.5	93.2

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	96.7	93.8	86.3	96.4	94.7	89.4
% of Instruments 100% within limits	62.5	33.0	3.4	56.8	65.9	47.7
% of Instruments $\geq 95\%$ within limits	89.8	70.5	31.8	89.8	86.4	70.5
% of Instruments $\geq 75\%$ within limits	96.6	95.5	88.6	95.5	95.5	86.4
% of Instruments $\geq 65\%$ within limits	96.6	96.6	89.8	97.7	95.5	88.6
% of Instruments $\geq 50\%$ within limits	97.7	97.7	96.6	97.7	95.5	93.2