

## ICA Bremen Cotton Round Test

in Cooperation with Bremer Baumwollbörse  
carried out by Bremen Fibre Institute (FIBRE)

Bremen, 15.012.2012

### Evaluation of the Test Results 2012 / 3

Tested Cotton: **Guinea Conakry** Number of Laboratories: **113**  
Cotton Number: **RM 40**

Argentina	1	The Netherlands	1
Australia	1	Pakistan	2
Bangladesh	1	Poland	2
Brazil	5	Portugal	1
China, PR	18	Russia	2
Czech Republic	4	Serbia	1
Egypt	3	Slovenia	2
France	1	South Africa	-
Germany	10	Spain	2
Greece	7	Sudan	1
Hungary	1	Switzerland	4
India	20	Syria	-
Iran	-	Tanzania	2
Israel	1	Thailand	3
Italy	1	Turkey	1
Japan	2	Uganda	1
Kazakhstan	1	United Kingdom	1
Korea, R	1	United States	4
Latvia	-	Uzbekistan	2
Mali	-	Vietnam, SR	1
Mauritius, Rep of	1	Zimbabwe	1
Mozambique	-		

For any questions, please mail to [gerardi@faserinstitut.de](mailto:gerardi@faserinstitut.de)

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## Explanations:

### introduction / important notes

Please take care to fill in all the necessary information on the test forms (e.g. the test methods, the instrument types and the number of repetitions for each test). Please provide one or two reliable e-mail addresses to Mrs Gerardi - contact details are provided in the last section.

### test material

The sample material is generally unprocessed cotton lint without additional homogenisation from varying origins with a wide spectrum of properties. The Bremen Fibre Institute (FIBRE) usually avoids origins with high result variations.

In this Round Test the cotton is: **Guinea Conakry (RM 40)**

The variation of the utilized cotton was measured at the Bremen Fibre Institute (FIBRE) with an Uster HVI 1000 M1000 with 10 tests on samples from 8 different layers with the following results:

HVI HVICCS	SD between bale layers (based on 10 tests per layer)	SD between single tests (based on 8 times 10 tests)
Mic	0,052	0,050
Strength, g/tex	0,242	0,930
Length, UHM, inch	0,010	0,014
Length, UHM, mm	0,252	0,349

The test material is not suitable as a reference for calibration.

### result evaluation

The results of the participating laboratories for one test method and one parameter are grouped in one table implying that the used instruments yield comparable results despite different instrument types or different national standard test methods. The results are partitioned in different tables as soon as significant differences appear.

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Based on the compilation of the results, an identification of outliers is carried out, which is according to Grubbs' Test for Outliers described in ISO 5725 with one slight modification: the algorithm is applied repeatedly to ensure that all outliers are excluded. All outliers are marked by putting the result in brackets. The statistical parameters for all tables and characteristics are calculated after the exclusion of outliers.

For the usage of the statistical data, the different numbers of repetitions in each lab have to be considered.

### assessment of the laboratory performance

From the results, the bias of each laboratory can be calculated. Stability and repeatability cannot be assessed.

The ICA Bremen Cotton Round Test does not include any benchmarking or rating of the laboratories and their results. Rather the results can be used by each laboratory to evaluate its own performance.

- For estimating a bias to results of other laboratories, please calculate the difference between your result and either the average or the median of all laboratories (after exclusion of outliers).
- For evaluating the bias, the z-score calculation may be applied:

$$z = \frac{\text{your value} - \text{average (or median)}}{\text{StdDev.}}$$

- If the z-score is between -1 and 1 your lab belongs to the better 68% of all labs and no measures are necessary. In the z-score range of -2 to 2 are 95 % of all values. The closer your z-score is to 2 (-2) the more urgently it is to take measures to improve performance. If your z-score is above 2 (below -2) a basic revision of all conditions will be necessary.
- For assessing permanent deviations, please monitor all deviations in subsequent ICA Bremen Round Tests or in comparison to other round trial programmes like the CSITC Round Trials or the USDA HVI Checktest.

### laboratory numbers

The laboratory numbers for each laboratory are confident. The numbers are usually kept constant for subsequent Round Tests. In case that any laboratory has doubts in the anonymity of its number, a new laboratory number should be requested.

In case of more than one instruments of the same type, an adjunct number or character is given (e.g. 123-1 and 123-2). In order to distinguish between your instruments, please provide specific adjunct characters for each of your instruments with your data sheet.

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### registration and participation

In the case that a laboratory does not send any results back for a whole year's period, we have to exclude it from the participants.

To register a new laboratory to the ICA Bremen Round Test, please send the laboratory's contact details to Mrs Hannelore Gerardi – contact details provided below.

### choice of test methods included in the round test

The ICA Bremen Round Test strives to include every commonly used test method.

- Test methods will remain included as long as sufficient participant numbers are given, although the Bremen Fibre Institute (FIBRE) maintains the right to exclude methods.
- Proposals for the inclusion of new methods/instruments/parameters are appreciated. For this, an adequate number of long term participants should be given.
- Test methods for stickiness are excluded due to difficulties in sample provision.

### improvement of the ica bremen cotton round test

Any proposals for improving the Round Test are highly appreciated. For this, please contact Mr Axel Drieling – contact details provided below.

### Contact

For any questions regarding the ICA Bremen Cotton Round Test, please contact:

- Mr Axel Drieling for general questions relating to the Round Test and cotton testing,  
Tel. +49 421 218 58650, e-mail: [axel@ica-bremen.org](mailto:axel@ica-bremen.org)
- Mrs Hannelore Gerardi for questions relating to the realization of the current tests,  
Tel. +49 421 218 58671, e-mail: [gerardi@faserinstitut.de](mailto:gerardi@faserinstitut.de)

With kind regards,

Axel Drieling  
Hannelore Gerardi

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MICRONAIRE				
Lab.	Rep.	Mic.	Instrument	Standard Test Method
12	6	3.4	775	GB/T6498-05
17		3.2		
29	5	(3.9)		ISO 2403
35	3	3.5	775	
37		3.6		
56	2	3.3	Fibronaire	JIS
67	4	3.4	Fibronaire	
70	3	3.4	MK.1	ASTMD3818-92
76	3	3.2	RM 1070	
77		3.3		
79	5	3.3		ASTMD1448
93	2	3.4		ASTM 1445
96	3	3.4	GJC-01	GB/T6498-08
102	6	3.3	Fibronaire	ICCS
120		3.2	900-1	
126	2	3.6		ASTM
128	8	3.4	Fibronaire	ASTM
129	4	3.3	Sheffield	BS 3181
131	6	3.3		ASTM
132	3	3.3	775	DIN 53941
133		3.2	275	
142	3	3.5	80400	ISO
162	6	3.4	WIRA	
167	2	3.2	275	
168		3.3		
169	3	3.3	Sheffield	
177	3	3.5	DPM 60	DIN 53941
183	3	3.2	Fibronaire	ASTMD1448
186	6	3.3		
188	7	3.4	Sheffield	ASTM
193	3	3.4	Y145	GB/T6498-08
201	2	3.5	275	
Average		3.35		
Median		3.34		
StdDev		0.11		
CV		3.34		
Min		3.2		
Max		3.6		
n		31		

PRESSLEY, STELOMETER								
Lab.	Pressley Tester				Stelometer			
	Rep.	PI (0)	PI (3.2)	Standard Test Method	Rep.	Bundle Tenacity gf/tex	Elongation %	Standard Test Method
8					10	23.8	6.5	ASTMD1445-95
29	5	8.2		ISO 3060				
35					6	26.5	5.8	
56	5	9.1		JIS				
76	5	9.0						
79	6	8.7		ASTMD1445				
93	6	8.2	3.8	ASTM1445	6	22.2	7.2	
102					5	23.6	5.8	
128	8	8.5	4.1	ASTM	8	25.8	5.8	
131	6	9.1	4.5	ASTM	6	23.5	5.5	
132					6	24.1	5.4	DIN ISO3060
162	6	9.0			6	21.3	5.3	
177	5	7.9		DIN 53942				
188	7	8.5		ASTM				
193					12	23.4	5.4	GB/T13783-92 DIN ISO3060
206					12	19.3	(10.7)	
Average		8.62	4.12			23.35	5.84	
Median		8.64	4.12			23.57	5.76	
StdDev		0.43	0.33			2.08	0.62	
CV		5.01	7.88			8.89	10.55	
Min		7.9	3.8			19.3	5.3	
Max		9.1	4.5			26.5	7.2	
n		10	3			10	9	

Pressley	PI(0)	Av., gf/tex	46.21	StdDev, gf/tex	2.32	CV, %	5.01
	(3.2)	Av., gf/tex	28.04	StdDev, gf/tex	2.21	CV, %	7.88





COMB SORTER <i>(further information see page "Multiple Devices")</i>			Staple Length					
Lab.	Rep.	Instrument	N			W		
			ML	CV	< 12.5 mm	ML	CV	<12.5 mm
			mm	%	%	mm	%	%
85	1	Keisokki				29.8	33.8	11.0
85-2	1	Keisokki				31.4	38.5	13.9
129	2	Bear Sorter	25.1		12.3			

ALMETER <i>(further information see page "Multiple Devices")</i>			Staple Length				
Lab.	Rep.	N			W		
		ML	CV	< 12.5 mm	ML	CV	<12.5 mm
		mm	%	%	mm	%	%
58	3	20.9	39.5	19.9	24.2	33.1	9.4
132	5	19.4	38.3	21.9	22.2	32.1	10.9

Maturity, Fineness <i>(further information see page "Multiple Devices")</i>					
Lab	Fibrograph	Causticaire (18 % NaOH)	Microscopic Test		Gravimetric Fineness
	%	%	ASTM, %	BS, %	dtex
56		74			
70					1.58
79					1.39
85					1.45
129		78			
131		78			
177		5			1.63
193					1.57

IIC/SHIRLEY FM-TESTER (further information see page "Multiple Devices")				Maturity, Fineness
Lab.	Rep.	PM, %	MAT	FIN, mtex
37		79.5	0.89	144
70	3	79.9	0.9	136
93	2	72.0	0.83	136
102	2	63.3	0.72	(215)
126	4	90.0	1.01	131
128	8	74.0	0.83	147
186	6	68.1	0.77	151
Average		75.26	0.85	140.8
Median		74.0	0.83	140.0
StdDev		8.78	0.095	7.7
CV		11.67	11.153	5.5
Min		63.3	0.72	131
Max		90.0	1.01	151
n		7	7	6

HVI <i>(table is divided into 3 pages)</i>					General		
Lab.	Manufacturer	Instrument	Std. Test Method	Rep.	Each rep. consisting of		
					Mic. meas.	Combs for length/strength	Color readings
4	USTER	900			1	2	2
5	USTER	1000 Line4	CCAA BMP	12	1	2	2
5-2	USTER	1000 Line5	CCAA BMP	12	1	2	2
7	USTER			10		2	2
8	USTER	Spectrum I	ASTMD5867-05	10	10	10	10
9	Premier	ART		4	1	2	2
10	USTER	1000	GB/T20392-06	3	1	2	2
10-10	USTER	1000	GB/T20392-06	3	1	2	2
10-11	USTER	1000	GB/T20392-06	3	1	2	2
10-2	USTER	1000	GB/T20392-06	3	1	2	2
10-3	USTER	1000	GB/T20392-06	3	1	2	2
10-4	USTER	1000	GB/T20392-06	3	1	2	2
10-5	USTER	1000	GB/T20392-06	3	1	2	2
10-6	USTER	1000	GB/T20392-06	3	1	2	2
10-7	USTER	1000	GB/T20392-06	3	1	2	2
10-8	USTER	1000	GB/T20392-06	3	1	2	2
10-9	USTER	1000	GB/T20392-06	3	1	2	2
12	USTER	Spectrum I	SN/T1512-11	12	1	1	1
13	USTER	Spectrum	internal	10	1	1	1
15	USTER	900 SA		6	1	2	2
16	USTER	Spectrum	SN/T1512-05	12	1	2	2
18	Premier	ART			1	2	2
19	USTER	1000	SN/T1512-11		1	2	2
24	USTER	Spectrum	USDA	10	1	2	2
27	USTER	900 A	ASTM5867-05	6	1	2	2
30	USTER	Spectrum	internal		2	2	2
31	USTER	900		6	1	2	2
32	USTER	900 A	internal	1	4	10	4
41	USTER	Spectrum		5	5	5	5
43	USTER	1000			1	2	2
47	USTER	900 A	ASTMD5867	10	1	2	2
48	Premier	HFT	ASTMD5867-05	10	1	2	2
50	USTER	1000		6	1	2	2
50-2	USTER	1000		6	1	2	2
50-3	USTER	1000		6	1	2	2
52	USTER	1000	ASTM	6	6	6	6
53	Premier	ART	GB/T20392-06	5	1	2	2
54	USTER				1	2	2
56	USTER	Spectrum I	HVI Test Method	5	1	2	2
58	USTER	Spectrum	internal	10	1	2	2
59	USTER	900 A	USDA	10	1	2	2
59-2	USTER	1000	USDA	10	1	2	2
59-3	USTER	1000	USDA	10	1	2	2
64	USTER	Spectrum			1	2	2
68	Premier	ART	USDA	10	1	2	2
71	USTER	1000	SN/T1512-05	6	1	2	2
71-2	USTER	Spectrum	SN/T1512-05	6	1	1	1
72	USTER	1000		10	2	2	2
75	USTER	Spectrum	SN/T1512-11	6	1	2	2
78	USTER	Spectrum I		6	1	2	2
79	USTER	900					
80	USTER	1000		10	1	1	1
84	USTER	1000	USDA	12	1	1	1
87	USTER	1000	ASTMD5867-05	8	1	2	2
87-2	USTER	Spectrum	ASTMD5867-05	8	1	2	2

HVI <i>(table is divided into 3 pages)</i>					General		
Lab.	Manufacturer	Instrument	Std. Test Method	Rep.	Each rep. consisting of		
					Mic. meas.	Combs for length/strength	Color readings
90	USTER	1000	ASTMD5867	10	1	2	2
91	USTER	1000	ISO	6	1	2	2
93	USTER	900 A	ASTM5867	6	1	2	2
96	USTER	1000	GB/T20392-06	10	1	2	2
98	USTER	1000	USDA. ASTM	12	1	2	4
101	USTER	1000	ASTM5867-05	6	1	2	2
101-2	Premier	ART 2	ASTM5867-05	6	1	2	2
102	USTER	900 B	USDA	6	3	6	4
102-2	USTER	Spectrum	USDA	6	2	6	6
102-3	USTER	SW700V3.1.3.18	USDA	6	6	6	6
104	USTER	900			1	2	2
105	USTER	Spectrum	Manufacturer	6	1	2	2
105-2	USTER	Spectrum	Manufacturer	6	1	2	2
107	Premier	ART 2	ASTM	6	1	2	2
109	USTER	900		10	1	2	2
113	Premier	ART	ASTMD5867-05	10	1	2	2
117	USTER	Spectrum	SN/T1512-11	12	1	1	1
118	USTER	1000M700	ASTMD5867-05	2	1	2	2
120	USTER	900			1	2	2
120-2	USTER	900 SA	ASTM	10	1	2	2
121	USTER	1000	SN/T1512-11		1	2	2
123	USTER	Spectrum	ASTMD5867-05	10	1	4	4
126	Premier	HFT	ASTM	6	1	2	2
128	USTER	Classing	ASTM 5866	8	1	2	2
129	Premier	ART	ASTM5867	6	1	2	2
131	USTER	Spectrum	USDA	6	1	2	2
132	USTER	900	DIN 53944	1		10	5
143	Premier	ART	ABNT/NBR13379a82	6	1	2	2
143-2	USTER	Spectrum	ABNT/NBR13379a82	6	1	2	2
148	USTER	1000		6	1	2	2
153	USTER	Spectrum	Manufacturer	6	1	2	2
153-2	USTER	Spectrum	Manufacturer	6	1	2	2
153-3	USTER	Spectrum	Manufacturer	6	1	2	2
154	USTER	900 A		10	1	2	2
156	USTER	Spectrum	USDA. ASTM	6	1	2	2
158	USTER	900 A		6	1	2	2
162	USTER	900 A		6	1	2	2
163	USTER	900	ASTMD5867-05	6	1	2	2
170	Premier	ART		4	1	2	2
176	USTER	1000		10	1	2	2
179	USTER	Spectrum II	SN/T1512-11	7	1	2	2
183	USTER	1000	ASTMD5867-05	6	1	2	2
186	USTER	900		10	2	10	
193	USTER	1000	GB/T20392-06	6	1	2	2
200	USTER	900 A	ITMF	8	1	2	2
201	USTER	900		6	1	2	2
204	USTER	Spectrum I		30	1	2	
206	USTER	900 B	GOST R53031-08	3	1	2	2
207	USTER	1000	ASTMD5867-05	10	1	2	2
207-2	USTER	1000	ASTMD5867-05	10	1	2	2
207-3	USTER	1000	ASTMD5867-05	10	1	2	2
207-4	USTER	1000	ASTMD5867-05	10	1	2	2
208	USTER	1000	ASTMD5867-05	10	1	2	2
219	Premier	HFT		8	1	2	2
234	Premier	ART 2		12		1	2

HVI <i>(table is divided into 3 pages)</i>					General		
Lab.	Manufacturer	Instrument	Std. Test Method	Rep.	Each rep. consisting of		
					Mic. meas.	Combs for length/strength	Color readings
237	USTER	Spectrum II	ASTM	6	1	2	2
242	USTER	Spectrum	HVI Mode	10	1	2	2
242-2	USTER	1000	HVI Mode	4	1	2	2
271	Premier	ART	internal	10	1	1	1
271-2	USTER	900	internal	10	1	1	1
272	Premier	ART		5	1	1	2
275	USTER	Spectrum II		50	1	2	2
287	Premier	ART 2	USDA	10	1	2	2
289	Premier	ART	ICC	15	1	1	
295	Premier	HFT		4	1	2	2
319	Premier	ART	ASTMD5867-95	12	1	2	1
320	MAG	HVT Expert 1201	ASTM	10	1	2	

HVI		(table is divided into 3 pages) Micronaire, Tenacity, Elongation			
Lab.	Micronaire	Tenacity		Elongation	
		ICCS, gf/tex	HVICCS, gf/tex	ICCS, %	HVICCS, %
4	3.6		33.9		6.4
5	3.4		30.4		5.5
5-2	3.5		31.5		5.8
7			31.1		6.4
8	3.5		32.3		6.6
9	3.4	24.1		(3.7)	
10	3.4		31.8		4.2
10-10	3.4		32.6		4.7
10-11	3.4		33.7		5.7
10-2	3.5		31.4		4.3
10-3	3.5		30.0		5.2
10-4	3.5		30.2		6.4
10-5	3.4		33.4		3.4
10-6	3.4		31.1		5.2
10-7	3.4		31.5		5.3
10-8	3.5		30.6		5.0
10-9	3.4		32.6		4.8
12	3.4		32.5		5.9
13	3.3		33.4		5.3
15	3.6		30.4		5.7
16	3.5		32.9		5.7
18	3.2		30.9		
19	3.4		31.0		3.9
24	3.4		33.4		5.7
27	3.5		32.2		5.7
30	3.5		30.5		4.7
31	3.3	24.9	32.7	5.2	5.2
32	3.2		33.3		5.0
41	3.5		32.4		5.3
43	3.5		33.0		4.4
47	3.4		31.3		5.4
48	3.4	22.8	29.9	5.8	6.6
50	3.5		32.0		6.4
50-2	3.4		32.7		6.3
50-3	3.4		31.1		6.7
52	3.5		32.1		4.9
53	3.4		32.1		6.9
54	3.4		31.8		(2.6)
56	(3.0)		32.7		4.9
58	3.3		30.0		4.6
59	3.5		33.9		
59-2	3.4		34.3		
59-3	3.5		33.7		
64	3.3		30.2		
68	3.5		33.6		
71	3.5		31.8		4.3
71-2	3.4		31.9		5.4
72	3.5		31.4		
75	3.6		32.8		
78	3.5		32.6		
79	3.2		(38.4)		6.5
80	3.4		32.2		5.5
84	3.5		30.4		6.3

HVI		<i>(table is divided into 3 pages)</i> Micronaire, Tenacity, Elongation			
Lab.	Micronaire	Tenacity		Elongation	
		ICCS, gf/tex	HVICCS, gf/tex	ICCS, %	HVICCS, %
87	3.5		29.9		4.8
87-2	3.3		31.5		(8.9)
90	3.3		32.3		5.9
91	3.3		29.5		3.6
93	3.3		34.9		6.8
96	3.5		31.6		4.3
98	3.5		31.1		
101	3.4		32.1		5.2
101-2	3.4		34.9		6.7
102	3.3		33.7		4.6
102-2	3.4		33.9		5.5
102-3	3.4		31.8		5.4
104	3.3		33.4		
105	3.3		32.5		6.8
105-2	3.3		34.5		6.3
107	3.3		28.1		
109	3.4		31.6		
113	3.5		31.6		6.7
117	3.5		31.6		5.9
118	3.5		32.9		7.7
120	(3.1)		(27.0)		
120-2	3.5		31.3		5.5
121	3.5		32.4		6.4
123	3.4	23.4	30.6	6.6	6.6
126	3.6		28.9		6.2
128	3.5		32.2		5.4
129	3.3	22.4	28.6	6.5	6.4
131	3.5		32.5		6.4
132			31.9		4.9
143	3.5		33.5		6.8
143-2	3.5		33.2		6.6
148	3.3		31.4		4.2
153	3.4		30.8		6.4
153-2	3.5		30.2		4.7
153-3	3.2		32.0		6.5
154	3.4		32.0		6.7
156	3.5		31.6		6.7
158	3.5		33.7		5.9
162	3.3		33.5		4.8
163	3.4	23.7		6.1	
170	3.5		30.1		6.5
176	3.5		30.5		5.2
179	3.6		31.6		5.1
183	3.5		31.0		6.2
186	3.3	(29.5)		5.5	
193	3.4		32.3		4.6
200	3.4		32.0		
201	3.5		31.6		7.5
204	3.4		31.6		5.5
206	3.5		31.5		5.7
207	3.4		31.8		6.5
207-2	3.5		32.1		5.7
207-3	3.4		31.6		6.0



HVI		<i>(table is divided into 3 pages)</i>				Micronaire, Tenacity, Elongation	
Lab.	Micronaire	Tenacity		Elongation			
		ICCS, gf/tex	HVICCS, gf/tex	ICCS, %	HVICCS, %		
207-4	3.4		31.8		5.2		
208	3.3		31.0		5.3		
219	(3.8)		31.6				
234			32.8				
237	3.4		32.2		4.3		
242	3.5		32.5		4.6		
242-2	3.4		30.0		6.3		
271	3.6		32.1		6.8		
271-2	3.6		29.7		3.8		
272	3.6		31.4		6.7		
275	3.4		32.7				
287	3.5	23.0	31.5	6.0	6.4		
289	3.4	22.8					
295	3.5	24.1		7.0			
319	3.4	23.2	(47.6)	5.7	6.8		
320	3.4	25.0		5.6			
Average	3.43	23.59	31.88	6.0	5.65		
Median	3.44	23.4	31.8	5.9	5.7		
StdDev	0.09	0.86	1.3	0.56	0.92		
CV	2.52	3.64	4.07	9.26	16.23		
Min	3.2	22.4	28.1	5.2	3.4		
Max	3.6	25.0	34.9	7.0	7.7		
n	116	11	113	10	96		

HVI <i>(table is divided into 3 pages)</i>						Length
Lab.	ICCS			HVICCS		
	2.5 % SL		UR	UHM		UI
	mm	inch	%	mm	inch	%
4				29.4	1.16	83.1
5				29.2	1.15	82.3
5-2				29.2	1.15	82.3
7				29.0	1.14	82.3
8				28.8	1.13	83.1
9	29.5	1.16	47.8			
10				28.8	1.13	82.5
10-10				29.1	1.15	82.7
10-11				29.5	1.16	82.9
10-2				28.9	1.14	83.1
10-3				29.2	1.15	82.5
10-4				29.0	1.14	82.5
10-5				28.9	1.14	83.5
10-6				28.9	1.14	82.8
10-7				28.9	1.14	82.3
10-8				28.9	1.14	82.3
10-9				29.3	1.15	82.5
12				29.0	1.14	81.9
13				29.1	1.15	83.2
15				29.2	1.15	82.4
16				29.1	1.15	82.3
18				28.5	1.12	83.4
19				28.6	1.13	82.0
24				29.2	1.15	82.3
27				28.9	1.14	82.2
30				28.2	1.11	81.7
31	28.5	1.12	47.5	28.8	1.13	(85.7)
32				29.2	1.15	82.4
41				28.1	1.11	82.3
43				29.7	1.17	82.5
47				29.1	1.15	83.3
48	28.7	1.13	48.0	28.5	1.12	84.1
50				29.0	1.14	82.6
50-2				29.5	1.16	82.3
50-3				28.9	1.14	82.8
52				29.4	1.16	82.1
53				29.2	1.15	(24.1)
54				28.9	1.14	82.0
56				29.4	1.16	82.9
58				28.7	1.13	82.5
59				29.4	1.16	82.1
59-2				29.6	1.16	83.2
59-3				30.0	1.18	83.3
64				28.8	1.14	82.3
68				29.1	1.14	82.9
71				29.4	1.16	
71-2				28.5	1.12	
72				28.7	1.13	81.8
75				29.3	1.15	82.5
78				29.0	1.14	82.5
79				29.5	1.16	82.3
80				28.3	1.11	(78.7)

HVI <i>(table is divided into 3 pages)</i>						Length
Lab.	ICCS			HVICCS		
	2.5 % SL		UR	UHM		UI
	mm	inch	%	mm	inch	%
84				29.0	1.14	82.1
87				28.8	1.13	81.5
87-2				28.0	1.10	81.5
90				29.4	1.16	83.5
91				28.5	1.12	(80.6)
93				29.0	1.14	82.3
96				29.0	1.14	82.0
98				29.2	1.15	82.3
101				29.2	1.15	82.7
101-2				29.3	1.15	82.7
102				28.9	1.14	82.5
102-2				28.6	1.13	82.2
102-3				29.2	1.15	82.5
104				29.1	1.15	83.0
105				28.8	1.13	81.7
105-2				29.2	1.15	82.6
107				28.0	1.10	80.9
109				29.3	1.15	82.9
113				28.7	1.13	81.7
117				28.9	1.14	82.4
118				29.0	1.14	82.2
120				28.2	1.11	
120-2				29.1	1.15	82.7
121				29.0	1.14	81.9
123	29.1	1.15	47.2	29.8	1.17	(84.8)
126				(27.8)	(1.09)	81.9
128				29.3	1.15	83.2
129	28.6	1.13	47.0	29.3	1.15	83.0
131				29.1	1.14	82.6
132				28.4	1.12	81.3
143				29.0	1.14	
143-2				29.1	1.15	
148				28.8	1.13	82.3
153				28.8	1.13	82.3
153-2				28.9	1.14	82.5
153-3				28.4	1.12	83.0
154				29.7	1.17	82.8
156				29.4	1.16	82.5
158				29.2	1.15	82.7
162				29.3	1.15	82.6
163	30.1	1.18	48.3			
170				28.3	1.11	82.5
176				28.9	1.14	82.8
179				29.3	1.15	82.2
183				28.7	1.13	83.7
186	28.7	1.13	46.6	28.6	1.12	82.5
193				29.2	1.15	81.9
200				29.3	1.15	83.0
201				29.0	1.14	82.9
204				29.1	1.14	83.7
206				29.2	1.15	82.0
207				29.0	1.14	82.5

HVI <i>(table is divided into 3 pages)</i>						Length
Lab.	ICCS			HVICCS		
	2.5 % SL		UR	UHM		UI
	mm	inch	%	mm	inch	%
207-2				29.4	1.16	82.1
207-3				29.1	1.15	82.5
207-4				29.1	1.14	82.2
208				29.2	1.15	82.5
219				29.8	1.17	84.1
234				28.7	1.13	82.4
237				28.9	1.14	82.2
242				28.9	1.14	
242-2				28.8	1.13	
271				29.5	1.16	83.2
271-2				29.0	1.14	82.4
272				29.4	1.16	(85.1)
275				29.0	1.14	82.4
287	29.2	1.15	44.9	28.6	1.13	83.0
289	28.3	1.11	46.9			
295	29.7	1.17	47.2			
319	29.7	1.17	44.0	(32.6)	(1.28)	(84.3)
320	30.1	1.19	46.0			
Average	29.17	1.149	46.79	29.01	1.142	82.52
Median	29.15	1.148	47.1	29.03	1.143	82.5
StdDev	0.63	0.025	1.27	0.37	0.015	0.54
CV	2.16	2.164	2.71	1.28	1.283	0.66
Min	28.3	1.11	44.0	28.0	1.1	80.9
Max	30.1	1.19	48.3	30.0	1.18	84.1
n	12	12	12	115	115	103

HVI				Color, Trash		
Lab.	Color			Trash		
	Rd	+b	CG	leaf	area	cnt
4	71	12.9	23-3			
5	72	13.0	13-4	2	0.1	14
5-2	71	13.1	23-3	2	0.14	16
7	71	13.3	24-1		0.18	20
8	69	12.4	33-3	2	0.19	13
9	(67)	13.0	34-1			
10	73	12.9	14	3	0.32	52
10-10	72	12.7	14	2	0.27	18
10-11	71	12.0	23	2	0.14	13
10-2	73	13.0	14	2	0.32	29
10-3	73	12.9	14	2	0.21	25
10-4	72	12.7	14	3	0.29	40
10-5	73	12.6	14	2	0.29	20
10-6	73	13.2	14	3	0.24	40
10-7	72	13.4	14	2	0.26	31
10-8	73	13.1	14	2	0.24	30
10-9	72	13.2	14	2	0.18	20
12	71	12.7	23-3	1	0.14	13
13	72	12.7	23-3		0.13	8
15	73	13.0	13-4	1	0.2	10
16	(67)	14.6	24-4	1	0.14	16
18	72	11.0	33-1	7	1.0	109
19	71	12.9	23-3	2	0.21	18
24	72	12.7	23-3			
27	71	12.8	23-3	1	0.23	21
30	71	11.6	33-1		0.06	5
31	71	12.8	23-3		0.23	19
32	70	12.6	23-4			
41	69	12.9	24-2		0.16	12
43	73	12.8	13-4	2	0.22	18
47	70	12.7	23-4	4	0.5	10
48	71	11.8	23-3			
50	72	6.4	23-3	1	0.16	17
50-2	73	12.6	13-4	1	0.12	14
50-3	73	12.9	13-3	3	0.3	20
52	72	12.8	13-4	2	0.24	27
53	(76)	13.8	24.01	2	0.17	9
54	70	12.5	23-4	1	0.09	5
56	71	12.7	33-3	1	0.11	9
58	71	12.4	23-3	2	0.2	22
59	70	13.5	23-4	2	0.2	13
59-2	72	13.1	13-4	2	0.22	36
59-3	72	12.5	23-3	2	0.27	38
64	71	13.0	23-3	1	0.13	13
68	71	13.0	24-2	4	0.4	16
71	73	12.8	13-4		0.16	19
71-2	71	12.5			0.13	10
72	73	13.0	13-3	2	0.18	21
75	70	12.3	23-4	1	0.12	7
78	69	13.0	24-2		0.16	12
79	71	12.5	23-4	1	0.23	15
80	72	13.1	13-4	2	0.2	24
84	73	13.0	13-3	1	0.15	18

HVI				Color, Trash		
Lab.	Color			Trash		
	Rd	+b	CG	leaf	area	cnt
87	72	12.8	13-4	18	0.19	2
90	72	12.7	13-4		0.2	17
91	72	13.0	13-4	1	0.17	17
93	71	11.9	23-4	1	0.4	12
96	74	12.8				
98	72	13.0			0.17	15
101	72	12.7	23-3	1	0.2	19
101-2	73	12.9	13-4	1	0.1	10
102	71	12.8				
102-2	70	11.9			0.08	5
102-3	73	13.0			0.22	26
104	72	10.6	32-1	1	0.1	6
105	72	12.7	23	1	0.14	15
105-2	71	12.6	23	4	1.4	26
107	72	12.8	13-4			
109	71	13.6	24-1			
113	72	12.7	23-3			
117	71	12.7	23-3	1	0.11	10
118	72	12.6	23-3		0.15	20
120	73	11.2	23-2	4	0.38	26
120-2	73	12.7	13-4			
121	73	12.9	13-3		0.22	21
123	70	12.7	23-4	3	0.29	17
126	(78)	8.8	34-1			
128	71	12.5			0.15	17
129	70	11.8	33-4			
131	71	13.0				
132	71	13.0	24-2			
143	72	13.4	24-1	1	0.07	8
143-2	71	12.7	23-3	1	0.06	4
148	73	13.1	13-4	1	0.16	19
153	69	12.6	33-3		0.25	17
153-2	69	12.8	23-4		0.19	10
153-3	73	13.1	13-3		0.19	18
154	72	12.8	13-4	1	0.1	8
156	70	12.6	23-4			
158	72	12.5	23-3	1	0.1	8
162	71	13.7	24-1			
163	72	11.7	23-2			
170	71	12.6	23-3	4	0.45	25
176	72	13.0		3	0.3	35
179	73	12.6	13-4	2	0.18	19
183	72	13.4	24-1	2	0.2	18
193	72	13.0	13-4	2	0.21	20
200	72	13.2	24-1			
201	71	12.6	23-3	1	0.15	12
206	68	13.6	24-2			
207	73	12.5	13-4	2	0.18	15
207-2	73	12.6	13-4	2	0.17	17
207-3	73	12.9	13-3	2	0.2	19
207-4	73	12.6	13-4	2	0.22	20
208	73	12.8	13-4	1	0.16	19
219	70	12.6	23-4			

HVI				Color, Trash		
Lab.	Color			Trash		
	Rd	+b	CG	leaf	area	cnt
234	70	12.1	33-3		0.14	9
237	71	13.9	24	1	0.13	14
242	71	12.3	23-3	1	0.13	13
242-2	73	12.4	13-4	2	0.21	15
271	71	12.1	23-4			
271-2	70	12.9	24-2			
272	72	13.8	24-1			
275	71	12.1	23-4	1	0.11	7
287	70	12.3	23-4			
289	71	13.6	24-1			
319	73	15.4	24.3			
Average	71.5	12.69			0.216	18.4
Median	71.6	12.8			0.185	17.0
StdDev	1.1	0.91			0.173	13.0
CV	1.6	7.18			80.0	70.8
Min	68	6.4			0.06	2
Max	74	15.4			1.4	109
n	113	117			90	90

HVI		<i>(table is divided into 3 pages)</i>			Short Fibre Index, Maturity	
Lab.	ICCS SFI	HVICCS SFI	PM %		Maturity Ratio	
4		5.1				
5		8.6			0.86	
5-2		8.5			0.85	
7		7.7				
8		8.8			0.85	
9	8.6					
10		(15.9)	86			
10-10		(15.7)	86			
10-11		(17.6)	85			
10-2		10.7	86			
10-3		10.9	85			
10-4		(15.5)	84			
10-5		(14.0)	86			
10-6		(15.3)	85			
10-7		11.5	85			
10-8		(16.9)	86			
10-9		(17.6)	85			
12		8.3			0.85	
13		6.8			0.85	
15		5.5	84			
16		8.6			0.85	
18		7.8			0.81	
19		9.8			0.86	
24		8.4			0.85	
27		7.8			0.86	
30		9.0			0.84	
32		9.3				
41		7.6			0.85	
43		7.8				
47		6.5	83			
48	4.8	5.3				
50		7.8			0.84	
50-2		7.9			0.84	
50-3		7.7			0.84	
52		8.5			0.85	
53		8.5			0.81	
54		8.2			0.84	
56		9.8				
58		9.6			0.83	
59		8.2	84			
59-2		7.2			0.84	
59-3		7.3			0.84	
64		8.3			0.83	
68		8.2			0.82	
71					0.86	
71-2					0.84	
72		8.5				
75		8.5			0.85	
78		9.7			0.85	
80		11.1			0.85	
84		8.2	84			
87		10.1			0.85	
87-2		9.1			0.86	



HVI		<i>(table is divided into 3 pages)</i>			Short Fibre Index, Maturity	
Lab.	ICCS SFI	HVICCS SFI	PM %		Maturity Ratio	
90		8.6			0.84	
91		11.2			0.86	
93		7.4				
101		8.8			0.85	
101-2		8.3			0.87	
102-2		6.7			0.85	
102-3		8.0				
104		6.9	84			
105		9.7				
105-2		7.0				
107		10.1			0.83	
109		9.7	82			
113		8.1			0.81	
117		9.1			0.85	
118		8.5			0.83	
120		9.3			0.81	
120-2		4.7	85			
121		8.3			0.84	
123	11.9	10.8			0.81	
126		8.4			0.82	
128		7.6	(76)		0.85	
131		7.4			0.85	
132		9.5			0.82	
143		8.6			0.82	
143-2		7.6			0.85	
148		7.9			0.85	
153		6.8			0.84	
153-2		10.2			0.84	
153-3		8.2	83			
154		5.1				
156		8.8			0.85	
158		7.1			0.84	
162		6.9				
163	8.4					
170		7.5			0.81	
176		7.9			0.85	
179		8.8			0.85	
183		8.6			0.84	
186	6.6	6.6				
193		9.3			0.85	
200		7.4				
201		8.2			0.85	
204		7.7			0.84	
207		8.7			0.84	
207-2		8.5			0.85	
207-3		8.3			0.84	
207-4		8.4			0.85	
208		8.1			0.85	
219		7.7			0.81	
234					0.85	
237		8.3			0.85	
242		8.6			0.85	
242-2		9.3			0.84	

HVI		<i>(table is divided into 3 pages)</i>			Short Fibre Index, Maturity	
Lab.	ICCS SFI	HVICCS SFI	PM %		Maturity Ratio	
271		8.2				
272		(3.8)			0.81	
275		8.6			0.85	
289	6.5					
295	4.1				0.82	
319	10.7	5.4			0.83	
Average	7.7	8.27		84.6		0.841
Median	7.5	8.3		85.0		0.85
StdDev	2.73	1.32		1.2		0.015
CV	35.4	15.95		1.4		1.762
Min	4.1	4.7		82		0.81
Max	11.9	11.5		86		0.87
n	8	96		19		74

AFIS				General
Lab.	Manufacturer	Instrument	Std. Test Method	Repetitions
4	USTER			10
5	USTER	Neptester 720		5
7	USTER			5
21	USTER			5
24	USTER	AFIS Pro	USDA	10
27	USTER	Neptester 720		5
31	USTER			5
32	USTER	AFIS Pro 2		10
39	USTER			
41	USTER			5
43	USTER	AFIS Pro		
51	USTER	AFIS Pro 2	ISO-9001	5
58	USTER		internal	10
59	USTER		USDA	5
75	USTER	AFIS Pro	ASTMD5866-05	5
80	USTER			10
90	USTER	4.22	Manufacturer	10
91	USTER	AFIS Pro 2	ISO	10
101	USTER	296350	PAF02-11-05	5
102	USTER		ICCS	3
105	USTER		Manufacturer	5
105-2	USTER		Manufacturer	5
109	USTER			
110	USTER	206080		5
118	USTER		ASTMD5866-05	5
120	USTER		ASTM	5
123	USTER	AFIS Pro	ASTMD5866-05	10
123-2	USTER	AFIS Pro 2	ASTMD5866-05	10
123-3	USTER		ASTMD5866-05	10
128	USTER	720		5
129	USTER	AFIS Pro		
132	USTER			
143	USTER		ASTMD5866	5
148	USTER	AFIS Pro		10
148-2	USTER	AFIS Pro 2		10
154	USTER			10
158	USTER			5
163	USTER		ASTMD5866-05	5
176	USTER			
183	USTER	AFIS Pro	ASTMD5866-05	5
186	USTER		Manufacturer	10
186-2	USTER	AFIS Pro	Manufacturer	10
193	USTER	AFIS Pro		6
200	USTER			
207	USTER	AFIS Pro	ASTMD5866-05	10
208	USTER	AFIS Pro	ASTMD5866-05	10
271	USTER		internal	10
272	USTER			5

AFIS L								Length
Lab.	N							
	ML		CV	2.5 %		5%		SFC
	mm	inch	%	mm	inch	mm	inch	%
4	19.5	0.77	51.1	38.2	1.50	35.0	1.38	28.8
7	18.4	0.72	54.3	37.8	1.49	34.7	1.37	31.7
21	19.8	0.78	45.2	36.2	1.43	33.6	1.32	23.2
24	20.8	0.82	45.8			35.1	1.38	20.8
31	22.0	0.87	43.9	38.7	1.52	36.0	1.42	18.8
32	19.4	0.76	52.0			34.6	1.36	26.7
39	19.3	0.76	50.1	36.6	1.44	33.9	1.33	25.6
41	21.4	0.84	40.9	37.2	1.46	34.7	1.37	16.9
43	20.1	0.79	52.9	37.1	1.46	35.3	1.39	26.2
51	(24.3)	(0.96)				34.0	1.34	26.5
58	19.1	0.75	50.7	36.9	1.45	34.3	1.35	28.4
59	18.0	0.71	60.2	(41.3)	(1.63)	(38.0)	(1.50)	35.6
75	21.0	0.83	50.6			36.2	1.43	
80	17.5	0.69	57.9			33.5	1.32	33.9
90	19.9	0.78		37.8	1.49	34.9	1.37	25.7
91	19.5	0.77	50.2			34.8	1.37	25.7
101	19.3	0.76	54.4	39.5	1.56	36.0	1.42	31.1
102	20.3	0.80	49.3	38.4	1.51	35.3	1.39	24.9
105	20.3	0.80	51.2	38.9	1.53	35.8	1.41	26.0
105-2	20.1	0.79	49.8	38.9	1.53	35.8	1.41	27.1
109	21.5	0.85	44.7	38.2	1.50	35.4	1.39	20.2
110	18.8	0.74	52.1			34.1	1.34	27.3
118	20.5	0.81	48.6	38.8	1.53	35.8	1.41	24.6
120	(24.9)	(0.98)	(35.4)			34.8	1.37	24.4
123	19.0	0.75	54.2			34.5	1.36	28.0
123-2	19.0	0.75	54.8			35.1	1.38	28.6
123-3	20.8	0.82	46.9			35.5	1.40	22.7
129	20.1	0.79	50.0			35.3	1.39	23.8
143	19.7	0.78	54.5	38.3	1.51	35.5	1.40	28.1
148	19.3	0.76	51.3			34.4	1.35	26.6
148-2	19.6	0.77	49.3			34.1	1.34	24.4
154	20.4	0.80	51.6	38.0	1.50	35.2	1.39	25.3
158	19.1	0.75	54.9	37.2	1.46	34.6	1.36	29.4
163	20.9	0.82	47.3	38.4	1.51	35.8	1.41	23.8
176	20.6	0.81	49.6	37.9	1.49	35.3	1.39	23.8
183	21.3	0.84	45.3			(7.8)	(0.31)	21.0
186	21.0	0.83	48.3	38.8	1.53	36.1	1.42	23.3
186-2	20.2	0.80	50.4			35.2	1.39	24.0
193	20.6	0.81	48.1			35.1	1.38	23.6
207	19.8	0.78	50.6			34.8	1.37	24.3
208	20.5	0.81	49.7			35.3	1.39	22.4
271	19.3	0.76	53.6	37.8	1.49	35.1	1.38	29.6
272	20.3	0.80	45.2	36.6	1.44	34.0	1.34	21.2
Average	19.95	0.785	50.29	37.92	1.493	34.99	1.377	25.57
Median	20.07	0.79	50.3	38.0	1.496	35.05	1.38	25.45
StdDev	0.96	0.038	3.87	0.87	0.034	0.69	0.027	3.77
CV	4.8	4.799	7.7	2.28	2.285	1.97	1.975	14.73
Min	17.5	0.69	40.9	36.2	1.43	33.5	1.32	16.9
Max	22.0	0.87	60.2	39.5	1.56	36.2	1.43	35.6
n	41	41	40	23	23	41	41	42

AFIS L						Length
Lab.	W					SFC %
	ML		CV %	UQL		
	mm	inch		mm	inch	
4	24.5	0.96	37.6			11.1
7	23.8	0.94	38.8	29.8	1.17	11.9
21	23.9	0.94	34.0	29.1	1.15	9.1
24	25.1	0.99	34.5	30.4	1.20	7.2
31	26.2	1.03	32.4	31.3	1.23	6.2
32	24.7	0.97	36.0	30.4	1.20	8.9
39	24.2	0.95	34.3	29.4	1.16	8.5
41	25.0	0.98	31.6	30.0	1.18	6.2
43	25.7	1.01	34.5	31.0	1.22	7.7
51	24.4	0.96		29.9	1.18	8.9
58	24.1	0.95	36.5	29.7	1.17	10.6
59	24.1	0.95	39.4	31.4	1.24	11.2
75	26.3	1.04	33.9	31.7	1.25	6.6
80	23.4	0.92	39.3	29.3	1.15	11.8
90	25.2	0.99		30.6	1.20	8.1
91	24.4	0.96	37.6	30.1	1.19	9.4
101	25.0	0.98	39.5	31.2	1.23	
102	25.2	0.99	35.6	30.6	1.20	8.6
105	25.7	1.01	36.4	31.2	1.23	8.6
105-2	25.1	0.99	37.7	31.0	1.22	10.5
109	25.8	1.02	32.7	30.8	1.21	6.8
110	24.0	0.94	36.9	29.6	1.17	9.5
118	25.4	1.00	35.7	31.2	1.23	8.9
120	(20.0)	(0.79)	(49.6)	30.3	1.19	8.2
123	24.6	0.97	36.3	30.3	1.19	8.8
123-2	24.7	0.97	37.1	30.6	1.20	9.3
123-3	25.4	1.00	34.7	30.7	1.21	8.0
129	25.1	0.99	35.6	31.0	1.22	7.9
143	25.5	1.00	35.5	31.1	1.22	8.5
148	24.4	0.96	36.8	30.1	1.19	9.2
148-2	24.3	0.96	35.8	29.7	1.17	8.4
154	25.8	1.02	33.5	31.0	1.22	7.3
158	24.8	0.98	36.1	30.4	1.20	9.3
163	25.6	1.01	35.0	31.3	1.23	8.8
176	25.7	1.01	34.3	31.2	1.23	7.5
183	25.7	1.01	35.6	31.2	1.23	
186	26.0	1.02	33.9	31.5	1.24	7.6
186-2	25.3	1.00	35.1	30.7	1.21	7.5
193	25.2	0.99	35.0	30.5	1.20	8.1
207	24.8	0.98	35.7	30.2	1.19	7.8
208	25.5	1.00	34.8	30.7	1.21	6.7
271	25.1	0.99	36.8	30.5	1.20	10.1
272	24.4	0.96	33.6	29.5	1.16	7.6
Average	24.97	0.983	35.65	30.53	1.202	8.61
Median	25.1	0.988	35.6	30.6	1.205	8.5
StdDev	0.69	0.027	1.86	0.66	0.026	1.42
CV	2.77	2.771	5.21	2.18	2.176	16.52
Min	23.4	0.92	31.6	29.1	1.15	6.2
Max	26.3	1.04	39.5	31.7	1.25	11.9
n	42	42	40	42	42	41

AFIS D / M		Diameter, Maturity					
Lab.	D (N) µm	CV (D(N)) %	Fineness mtex	IFC %	Mat. Ratio		
4	12.5		155	7.1	0.9		
24			152	9.6	0.86		
31			150	7.4	0.87		
32			144	9.6	0.83		
41							
43					157	9.6	0.88
51					144	6.9	0.84
58					146	9.8	0.83
59					145	6.5	0.88
75					160	5.0	0.94
80					147	7.9	0.86
90					149	5.7	0.89
91					146	7.4	0.88
102					140	11.6	0.82
105					146	7.6	0.85
105-2					149	7.8	0.88
109					153	7.2	0.87
110					147	8.2	0.87
118					153	6.4	0.9
120					150	5.7	0.9
123					141	9.2	0.84
123-2					150	6.7	0.89
123-3					153	6.5	0.88
129					(124)		
143					143	7.1	0.85
148					152	7.3	0.9
148-2					156	5.9	0.91
154					136	12.2	0.82
158					151	7.6	0.88
176					149	7.8	0.86
183					143	8.1	0.86
186					141	9.7	0.81
186-2			143	8.3	0.86		
193			151	7.2	0.89		
207			148	8.0	0.87		
208			137	11.0	0.82		
271			141	12.1	0.78		
272	10.8						
Average			147.7	8.05	0.865		
Median			148.0	7.6	0.87		
StdDev			5.6	1.8	0.033		
CV			3.8	22.37	3.787		
Min			136	5.0	0.78		
Max			160	12.2	0.94		
n	2	0	35	35	35		

AFIS T				Trash
Lab.	Mean Diam. µm	Trash Cnt/g	Dust Cnt/g	V. F. M. %
4	325	57	294	1.75
21		47	(547)	1.17
31	324	60	312	1.77
32	290	50	310	1.17
43	318	61	379	1.67
51	358	53	210	1.06
58	302	61	351	1.34
90	323	51	268	1.27
91	297	53	321	1.11
102	296	41	192	0.58
105-2	301	50	273	1.07
110	306	39	214	0.87
129	259	42	395	1.31
143	278	46	290	0.87
148	351	45	218	1.52
148-2	319	56	305	1.37
154	294	59	349	1.53
158	262	46	381	1.32
183	283	51	376	1.51
186	273	45	307	0.99
186-2	272	49	410	1.18
193	307	59	306	1.12
207	333	54	230	1.1
208	308	48	267	1.09
272	305	34	176	0.59
Average	303.5	50.3	297.3	1.213
Median	303.5	50.0	305.5	1.17
StdDev	25.5	7.2	66.7	0.311
CV	8.4	14.3	22.5	25.655
Min	259	34	176	0.58
Max	358	61	410	1.77
n	24	25	24	25

AFIS N		<i>(table is divided into 2 pages)</i>			Neps	
Lab.	Neps		SCN		Neps	SCN
	Mean Diameter µm	Cnt/g	Mean Diameter µm	Cnt/g		
4	668	298				
5		288				
7	815	284				
21	673	333				
24	717	267	1301		14	
27		314				
31	720	337	1089		21	
32	733	291	1089		26	
39	673	234				
41	716	342				
43	744	317	1227		28	
51	797	375	1320		(54)	
58	724	366	1144		16	
59	720	302	1206		17	
75	730	304	1242		30	
80	722	281	1268		16	
90	725	348	1123		24	
91	759	391	1507		29	
101	806	298				
102	705	282	1090		26	
105	751	232	1494		20	
105-2	710	325	1182		36	
109	718	365	1116		22	
110	745	342	1293		38	
118	732	256	1306		20	
120	691	326	1074		25	
123	706	325	1005		28	
123-2	744	302	1199		24	
123-3	714	312	1190		24	
128		275				
129	775	353	1249		41	
132	696	287				
143	718	353	1209		26	
148	717	287	1061		21	
148-2	702	313	931		29	
154	740	275	1185		36	
158	744	366	1078		40	
163	710	333	1019		27	
176	742	278	1076		23	
183	715	387	1244		32	
186	754	349	1148		33	
186-2	764	357	1110		41	
193	758	389	1246		31	
200	720	380	1157		25	
207	751	364	1248		35	
208	735	371	1372		27	

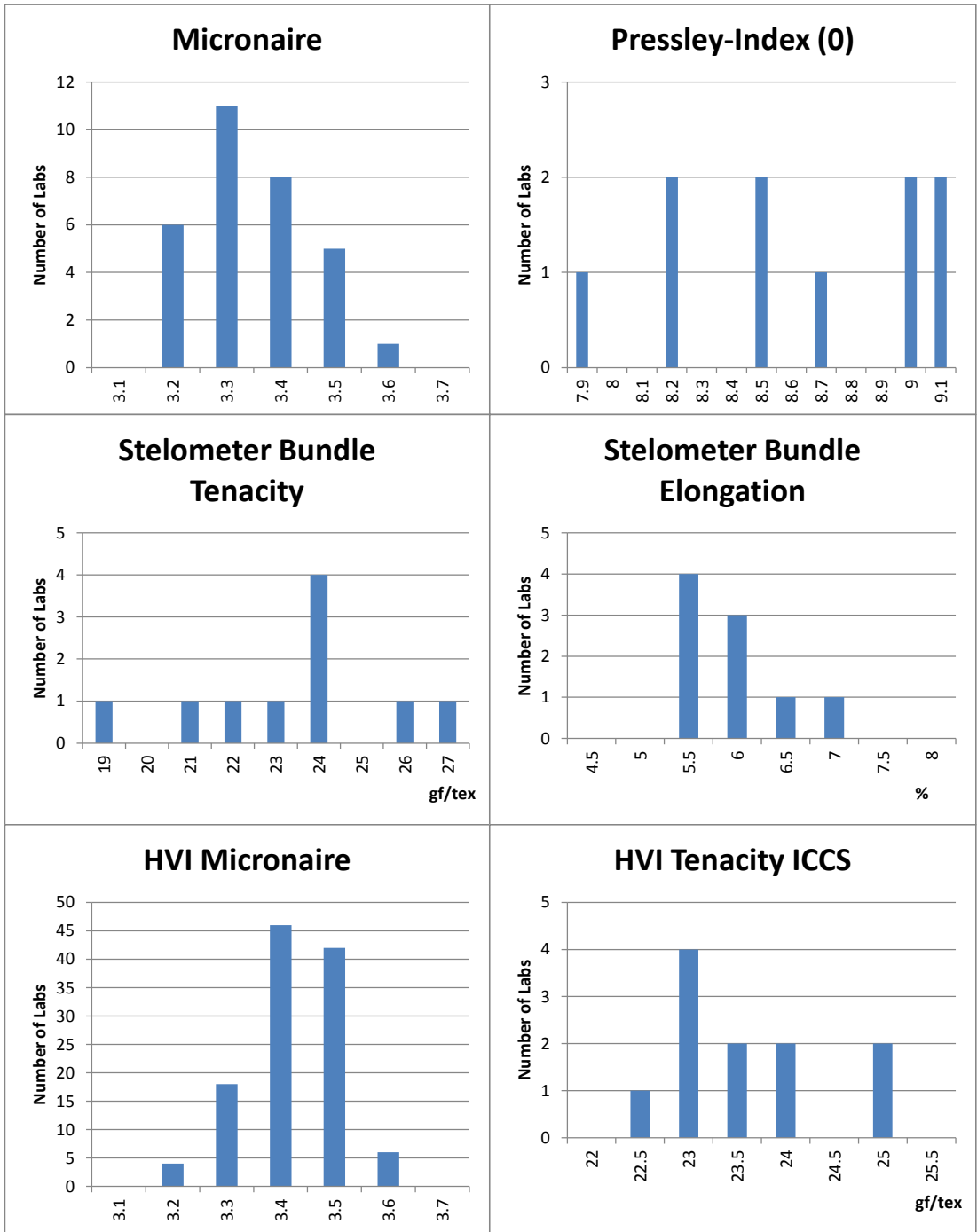


AFIS N		<i>(table is divided into 2 pages)</i>			Neps
Lab.	Neps		SCN		
	Mean Diameter $\mu\text{m}$	Cnt/g	Mean Diameter $\mu\text{m}$	Cnt/g	
271	722	345	1302	26	
272	709	292			
Average	729.6	320.6	1191.9	27.1	
Median	722.0	321.0	1190.0	26.0	
StdDev	31.2	40.8	124.0	7.1	
CV	4.3	12.7	10.4	26.2	
Min	668	232	931	14	
Max	815	391	1507	41	
n	45	48	37	36	

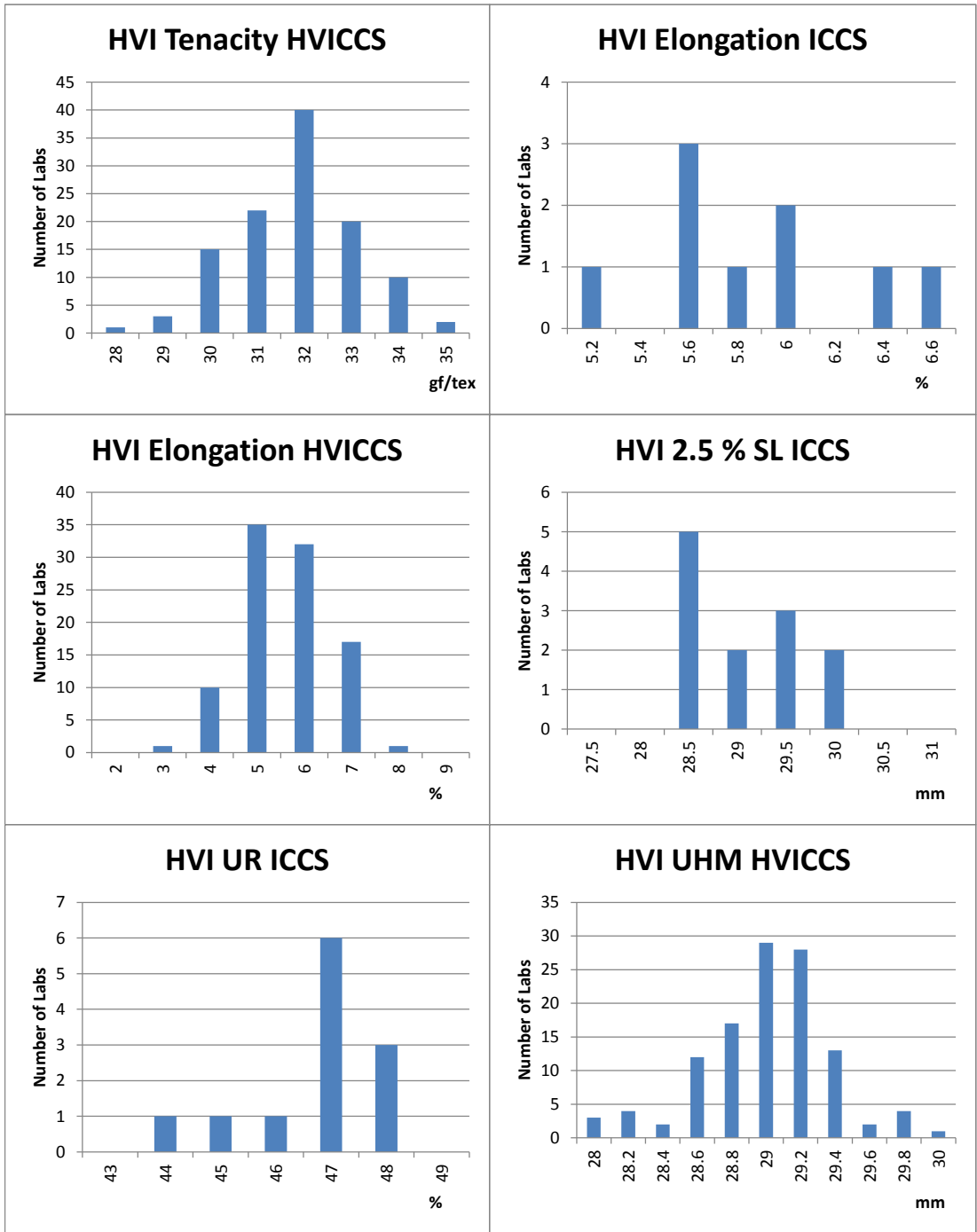
aQura <i>(further information see page "Multiple Devices")</i>						Length, Neps	
Lab.	Repetitions	5.0 % L (n)	50 % L (n)	SFC (n) <12.7 mm	SFC (w) <12.7 mm	Fibre Neps	SCN
		mm	mm	%	%	Cnt/g	Cnt/g
53	4	32.7	17.7	25.3	11.0	196	21
101	4	32.3	33.7	25.5	11.0	323	43
127	4	29.9	18.4	24.6	11.4	265	31
170	4	31.9	19.9	20.7	9.3	312	41
234	4	30.9		23.7	10.4	340	5
Average		31.54		23.96	10.61	287.2	28.2
Median		31.9		24.6	11.0	312.0	31.0
StdDev		1.15		1.98	0.84	58.1	15.7
CV		3.64		8.26	7.93	20.2	55.5
Min		29.9		20.7	9.3	196	5
Max		32.7		25.5	11.4	340	43
n		5	4	5	5	5	5

Multiple Devices <i>(information not provided in the respective table)</i>					General
Lab.	Device	Manufacturer	Instrument	Std. Test Method	Repetitions
8	DigitalFibrograph		730	ASTMD1447	10
37	FMT				
53	aQura	Premier			4
56	Causticaire		Micronaire	JIS	2
58	ALMeter	Peyer		internal	3
70	GravFineness			ISO 1973-95	5
70	FMT			ASTMD3818-92	3
79	GravFineness			RSTUz620-94	
85	CombSorter		Keisokki	UNI10170-94	1
85	GravFineness			UNIENISO1973-98	12
85-2	CombSorter		Keisokki	UNI10170-94	1
93	DigitalFibrograph			ASTM1447	4
93	FMT		WIRA	ISO 10306	2
101	aQura	Premier			4
102	DigitalFibrograph		530	ICCS	5
102	FMT		FMT 3	ICCS	2
123	DigitalFibrograph		530	ASTMD1447-00	5
126	DigitalFibrograph		530	ASTM	2
126	FMT	SDL		ASTM	4
127	aQura	Premier			4
128	DigitalFibrograph			ASTM	8
128	FMT		Micromat	ASTM	8
129	CombSorter		Bear Sorter	BS-4044	2
129	Causticaire		Microscope	IS 236	
131	Causticaire		Fibroscope	British	
131	DigitalFibrograph		530	ASTM	6
132	ALMeter	Peyer	AL100	DIN 53806	5
143	DigitalFibrograph	USTER	330	ABNTNBR13154-94	
170	aQura	Premier			4
177	Causticaire			DIN53943-4	5
177	GravFineness			ASTMD1577-90	5
186	FMT	SDL		USDA	6
193	GravFineness			GB/T6100-07	2
234	aQura	Premier			4

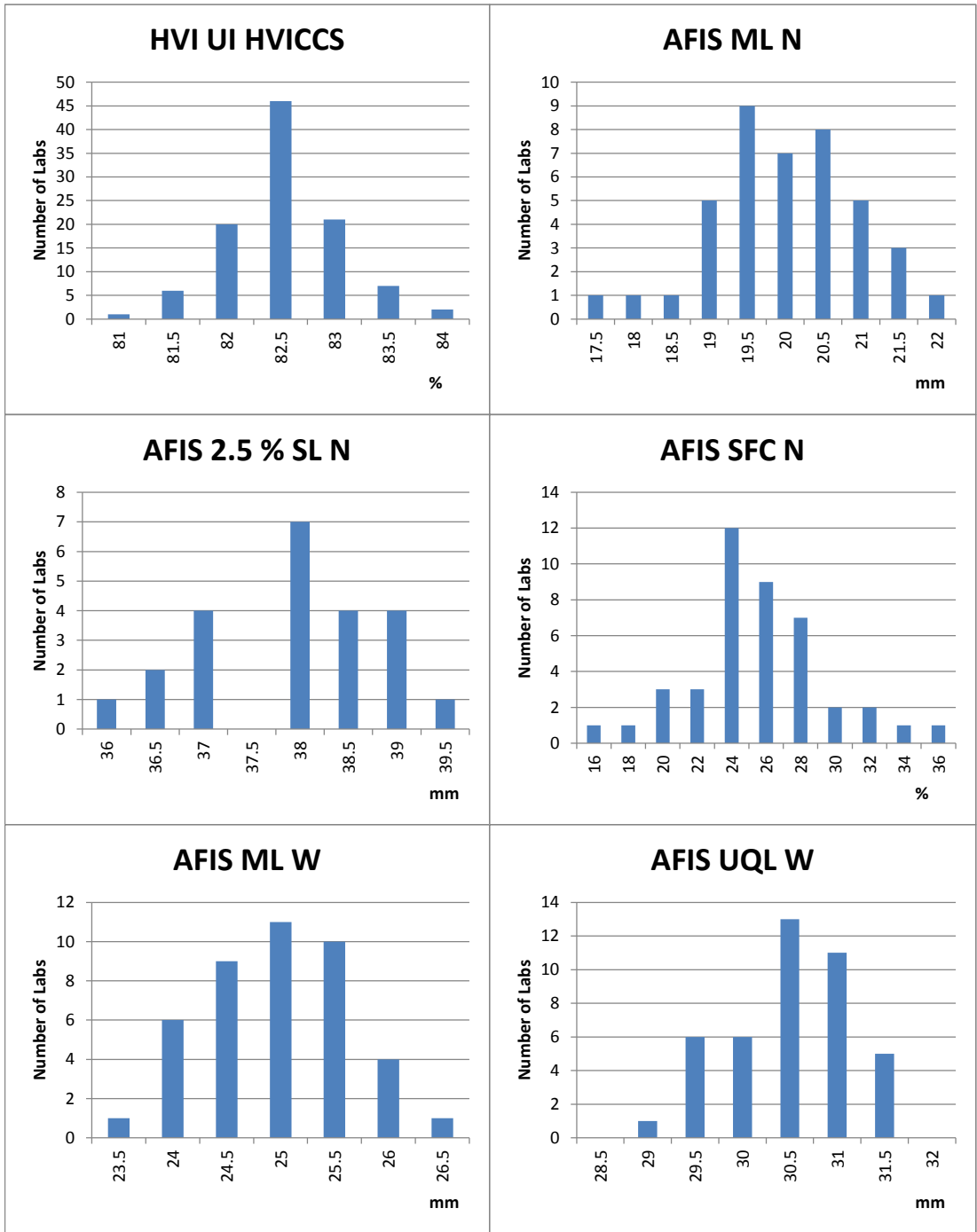
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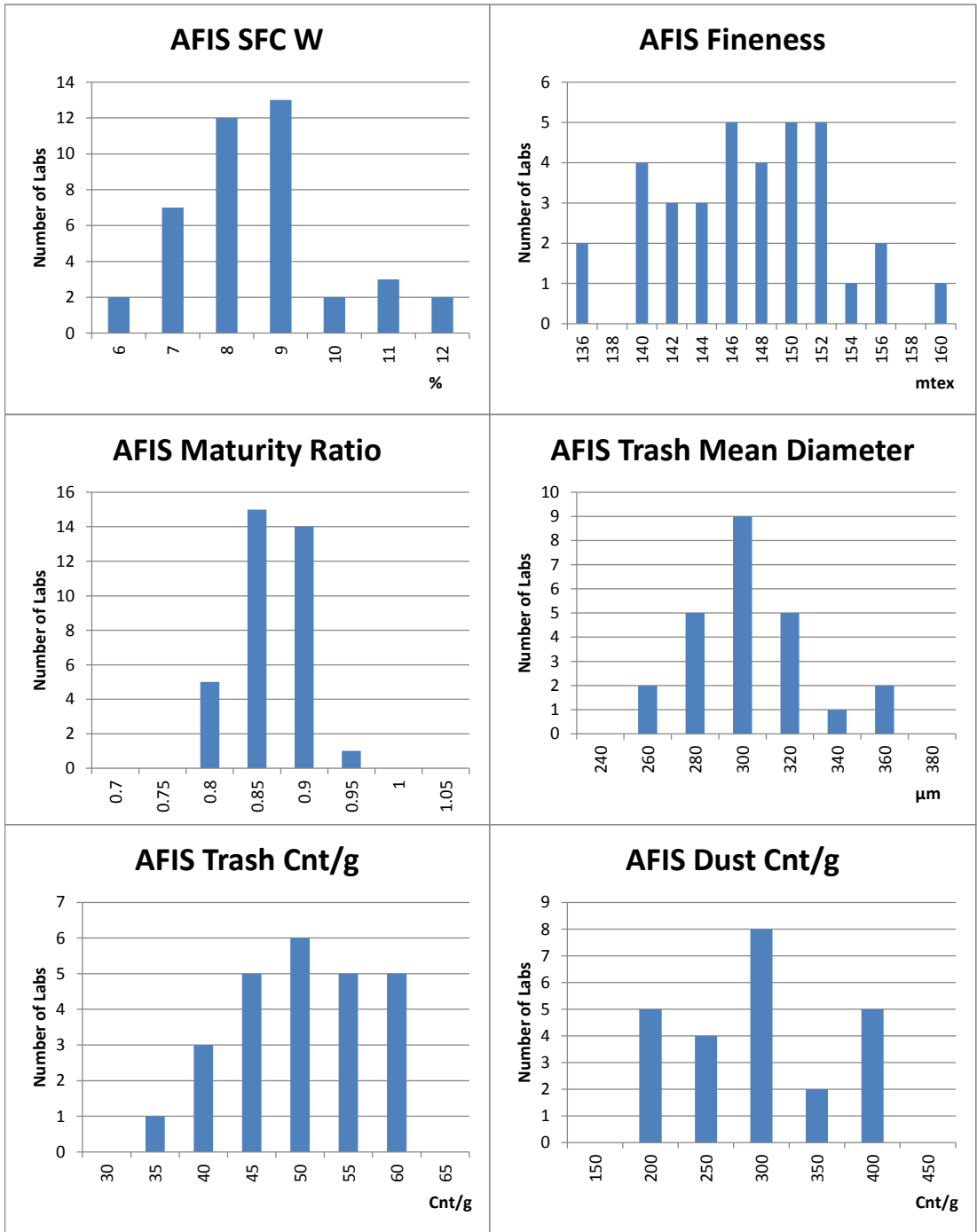
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