Collaborative Testing Services, Inc.

Paper & Paperboard Testing Program

Summary Report #3142 G - October 2021

Analysis	Analysis Name
350	Color & Color Difference - Near White Papers - C/2deg obs
351	Color & Color Difference - Near White Papers - D65/10deg obs
360	Thickness (Caliper), Printing papers
361	Thickness (Caliper), Packaging papers
364	Coefficient of Static Friction - Horizontal Plane Method - Printing Papers
365	Coefficient of Kinetic Friction - Horizontal Plane Method - Printing Papers
370	Air Resistance - Gurley Oil Type
372	Porosity - Sheffield Type - Sheffield Units for 3/4 inch Diameter Orifice
376	Roughness - Print Surf Method - 0.5 to 4.0 Microns
377	Roughness - Print Surf Method - 2.5 to 6.0 Microns
378	Roughness - Sheffield Type
382	Moisture in Paper
384	Opacity (89% Reflectance Backing) - Fine Papers
386	Opacity (Paper Backing) - Fine Papers and Newsprint
390	Directional Brightness
391	Directional Brightness of Fluorescent Samples
392	Diffuse Brightness
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395	Specular Gloss at 75 Degrees - High Range
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398	Grammage (Mass per Unit Area)
399	Sizing Test (Hercules Type)

The CTS Paper & Paperboard Interlaboratory Program

In 1969, the National Bureau of Standards (now designated the National Institute for Standards and Technology) and the Technical Association of the Pulp and Paper Industry (TAPPI) developed an interlaboratory program for paper and paperboard testing. Since 1971, Collaborative Testing Services has operated the Collaborative Reference Program for Paper and Paperboard. With hundreds of organizations from around the world participating in these tests, this program has become one of the largest of its kind. The program allows laboratories to compare the performance of their testing with that of other participating laboratories, and provides a realistic picture of the state of paper testing.

About CTS

Founded in 1971, Collaborative Testing Services, Inc. (CTS) is a privately - owned company that specializes in interlaboratory tests for a variety of industrial sectors: rubber, plastics, fasteners and metals, CKPG, paper, color and wine, as well as proficiency tests for forensic laboratories. All of the tests are designed to assist organizations in achieving and maintaining quality assurance objectives. Labs from the U.S., as well as more than 80 countries, currently participate in CTS programs.

If there are any questions on the report or testing program, please contact:

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Key for Web Summary Reports (Page 1 of 2)

WebCode — Assigned laboratory identification number (temporary) used to ensure lab confidentiality while permitting a lab to locate its data in the Paper Report published on the CTS Web site. The WebCode for each analysis can be found on the datasheets and in the Performance Analysis Report mailed to each participant.

Lab Mean — The average of the values obtained for each sample by the participant.

Grand Mean — The average of the LAB MEANS for all included participants. Laboratories flagged with an X or an M (see DATA FLAG column) are excluded from the GRAND MEAN.

ΔE — The calculated total color difference between the two samples. For the Hunter L,a,b analyses it is calculated in Hunter units (ΔE). For the L*,a*,b* analyses it is calculated in CIELAB units (ΔE*).

Difference from Grand Mean — The difference of the LAB MEAN from the GRAND MEAN.

Between-Lab Standard Deviation — An indication of the precision of measurement between the laboratories. The greater the spread of the LAB MEANS about the GRAND MEAN, the larger the BETWEEN-LAB STANDARD DEVIATION (and vice versa).

Comparative Performance Value — An indication of how well a laboratory's results agree with the other participants. The CPV is a ratio indicating the number of standard deviations from the GRAND MEAN. The closer a laboratory's COMPARATIVE PERFORMANCE VALUE is to zero, the more consistent its results are with the other participants' data (and vice versa). The critical value for each CPV will vary depending on the number of labs participating in a test.

Inst Code — A code indicating the manufacturer of the instrument used to perform the test (see separate INSTRUMENT CODE LIST for each test section), if instruments are tracked.

Data Flag — DATA FLAGS are assigned based on the simultaneous analysis of both samples tested. Refer to the following chart for an explanation of each symbol:

DATA FLAG	STATISTICALLY INCLUDED/EXCLUDED	ACTION REQUIRED
*	INCLUDED	**CAUTION** - review testing procedure and monitor future results. Results fall outside 95% ellipse but within a 99% ellipse that is calculated but not drawn.
X	EXCLUDED	**STOP** - immediate review of data and/or testing procedure is required. Results fall outside the 99% ellipse. See specific notes following each table for more information on why the data is excluded.
M	EXCLUDED	**PROCEED** - lab was unable to report data for at least one sample.

Graph - For each laboratory, the LAB MEAN for the first sample (x-axis) is plotted against the LAB MEAN for the second sample (y-axis) with each point representing a laboratory. The horizontal and vertical cross-hairs are the GRAND MEANS for each sample. When 20 or more laboratories are in the statistics, an ellipse is also drawn so that 95% of the time a randomly selected laboratory will be included inside the ellipse. Plotted data flags are explained on the previous page.

Common Problems Highlighted in Footnotes

1. ***Extreme data*** - The laboratory's results for one or both samples are so inconsistent with those of the other participants that the lab mean(s) fall outside the plot. The participant is advised to immediately review his data and/or testing procedure.

2. ***Systematic bias*** - The laboratory's results are either consistently high or low for both samples when compared to the other participants (the plotted point falls near the top or bottom of the ellipse). This indicates that the participant is performing the test with a constant bias. Causes of systematic errors include improper calibration, the particular make/model of equipment or a modification to the testing procedure.

3. ***Inconsistency in testing between samples/sample sets*** - The laboratory's results indicate that there are differences in the way the two samples tested (the plotted point falls to the side of the ellipse). This type of error may be attributed to the analyst deviating from the procedure when testing one of the samples or a material interaction occurrence with the instrument or room conditions. The inconsistency is reflected in the CPVs for the two samples, such as a +1.5 CPV for sample A and a -2.2 CPV for sample B. CTS also will specify if the laboratory's data for one sample are high/low compared to the other participants. If this inconsistency is slight, the lab's plotted point will be an * that falls on the edge of the ellipse.

4. ***Inconsistency in testing within a sample*** - The laboratory's within-lab standard deviation for a specified sample is high when compared to the other participants, often causing the lab's plotted point to fall outside of the ellipse.

Labs flagged with an * are not typically included in the footnotes of a data table. These labs may locate their position in the control ellipse and use the definitions above to help identify the type of testing error. An * should serve as a caution flag, a "yellow light", to a lab. If this error is repeated in future rounds, a lab may need to stop and review its testing procedures. The initial data flag is not cause for alarm. Interlaboratory tests conducted at regular intervals permit a lab to recognize trends in testing.

Paper & Paperboard Interlaboratory Testing Program

Analysis 350

Color & Color Difference - Near White Papers - C/2deg obs

Hunter L,a,b - Illuminant C - 2 Degree Observer

Report #3142 G, October 2021

Web Code	Data Flag	Samples	Hunter L, a, b Color Values L	a	b	Color Difference Values ΔL	Δa	Δb	ΔE	Instr Code
2CP8ND		GA95	86.51	-0.47	0.78	0.08	-0.01	0.02	0.08	EG
		GA96	86.60	-0.48	0.80					
3R22YM		GA95	92.56	-1.03	0.95	0.04	-0.01	-0.01	0.04	HZ
		GA96	92.61	-1.03	0.95					
3WU8C4		GA95	95.35	-0.53	2.41	0.00	0.00	-0.02	0.02	LS
		GA96	95.35	-0.53	2.39					
6RF8CH		GA95	95.32	-0.55	2.44	0.02	0.01	0.00	0.02	TS
		GA96	95.34	-0.54	2.44					
7JCP76		GA95	93.95	-0.51	2.14	0.01	-0.02	0.04	0.05	TC
		GA96	93.96	-0.52	2.18					
7UBK4Z		GA95	93.93	-0.54	2.11	0.00	-0.03	0.02	0.03	TC
		GA96	93.94	-0.56	2.13					
AZCT6D		GA95	92.82	-0.19	1.78	0.06	0.07	-0.03	0.09	TS
		GA96	92.87	-0.13	1.75					
CUUAXF		GA95	94.05	-0.59	2.01	-0.01	0.02	0.03	0.04	HE
		GA96	94.04	-0.57	2.05					
F7J8DB		GA95	92.99	-0.33	1.54	0.03	-0.02	0.01	0.04	TS
		GA96	93.02	-0.35	1.55					
FWEZYB		GA95	94.84	-0.32	2.26	0.05	0.02	0.00	0.05	HE
		GA96	94.89	-0.30	2.26					
KC7NV3		GA95	97.21	-1.81	3.61	-0.02	0.02	-0.14	0.14	VM
		GA96	97.19	-1.79	3.47					
LGF9BM		GA95	95.26	-0.53	2.16	0.00	0.02	-0.04	0.04	EH
		GA96	95.26	-0.51	2.12					
QFLEFD	X	GA95	94.62	0.11	1.47	-0.02	0.02	-0.01	0.03	TS
		GA96	94.60	0.13	1.46					
RF6DEW	X	GA95	93.20	0.11	1.64	-0.13	0.07	-0.13	0.20	TS
		GA96	93.07	0.17	1.51					
TQF82A		GA95	95.24	-0.58	2.25	-0.02	0.00	-0.01	0.02	LS
		GA96	95.22	-0.57	2.24					
W99CV8	X	GA95	82.06	0.46	-0.24	0.06	-0.04	0.00	0.07	TS
		GA96	82.12	0.42	-0.24					

Paper & Paperboard Interlaboratory Testing Program

Report #3142 G, October 2021

Analysis 350

Color & Color Difference - Near White Papers - C/2deg obs

Hunter L,a,b - Illuminant C - 2 Degree Observer

Web Code	Data Flag	Samples	Hunter L, a, b Color Values L	a	b	Color Difference Values ΔL	Δa	Δb	ΔE	Instr Code
X7WW27		**GA95**	94.51	-0.69	1.92	-0.19	0.09	0.01	0.21 X	XS
		GA96	94.32	-0.60	1.93					
XGJQKU		**GA95**	94.41	-0.61	2.04	0.01	0.00	0.03	0.03	HE
		GA96	94.42	-0.61	2.06					
XPACPT		**GA95**	93.76	-0.38	1.85	0.05	-0.11	0.00	0.12	TS
		GA96	93.81	-0.49	1.85					
Y9GXQQ		**GA95**	94.09	-0.56	2.26	-0.01	0.00	-0.02	0.03	TC
		GA96	94.08	-0.57	2.24					

Summary Statistics

Grand Means							
GA95	93.928	-0.600	1.981	0.006	0.002	-0.007	0.062
GA96	93.925	-0.598	1.967				
Stnd Dev Btwn Labs							
GA95	2.104	0.358	0.601	0.059	0.041	0.041	0.053
GA96	2.083	0.356	0.584				

Statistics based on 17 of 20 reporting participants

Comments on Assigned Data Flags for Test #350

RF6DEW (X) - High "a" values for both samples.

QFLEFD (X) - High "a" values for both samples.

W99CV8 (X) - Low values for both "L" & "b" samples. High "a" values for both samples. Inconsistent within replicate readings of both "L" & "a".

Analysis Notes:

QFLEFD - Due to CTS graphs using Absolute Values, data Flag is located within consensus data. However, "a" data is higher than the negative Grand Mean as shown above graphs.

RF6DEW - Due to CTS graphs using Absolute Values, data Flag is located within consensus data. However, "a" data is higher than the negative Grand Mean as shown above graphs.

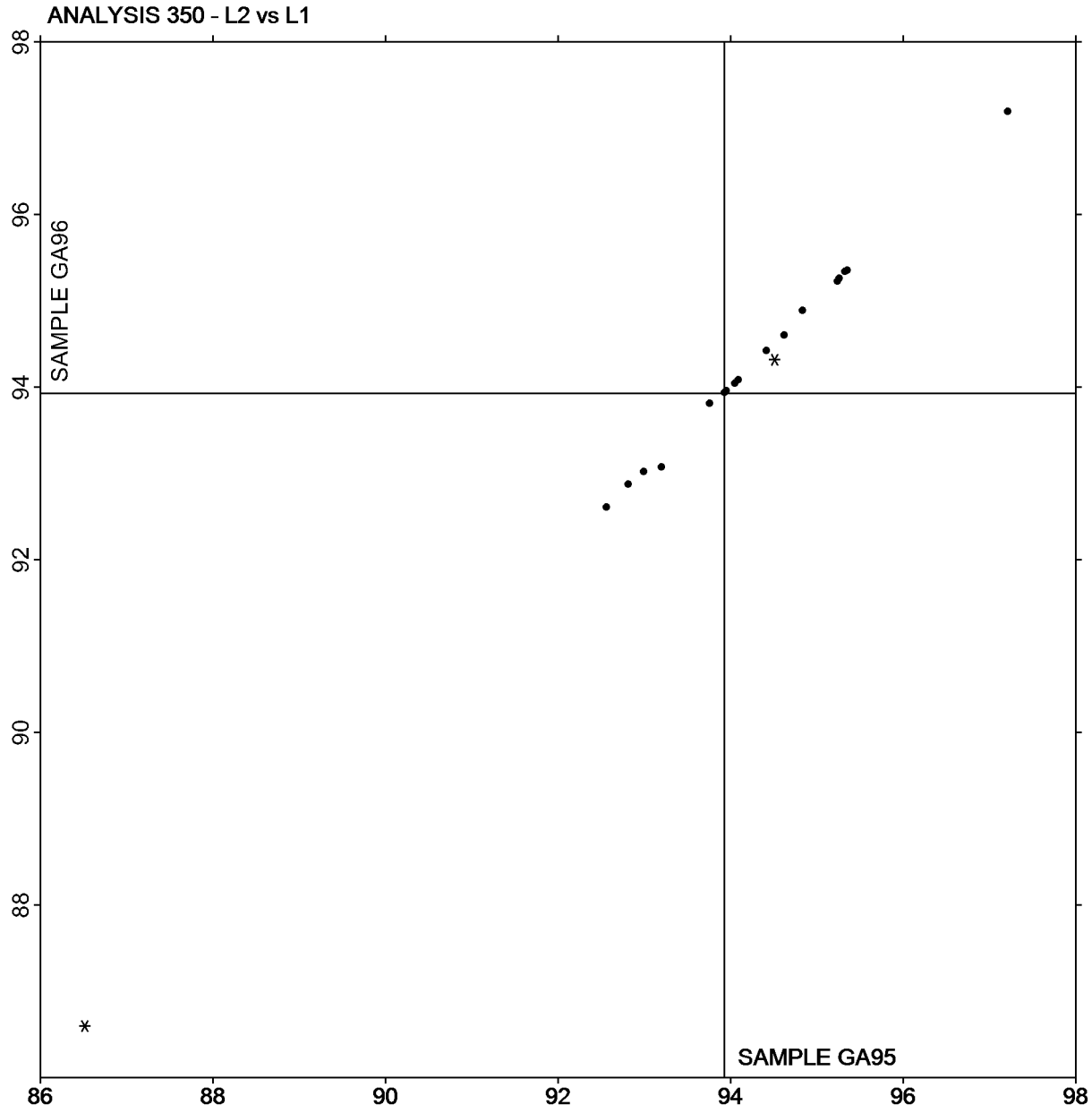
W99CV8 - Due to CTS graphs using Absolute Values, data Flag is located within consensus data. However, "a" data is higher than the negative Grand Mean as shown above graphs.

XGJQKU - One determination removed from the Lab Mean of Sample GA95 L* per Grubb's Test at 1% risk (TAPPI 1205).

Key to Instrument Codes Reported by Participants

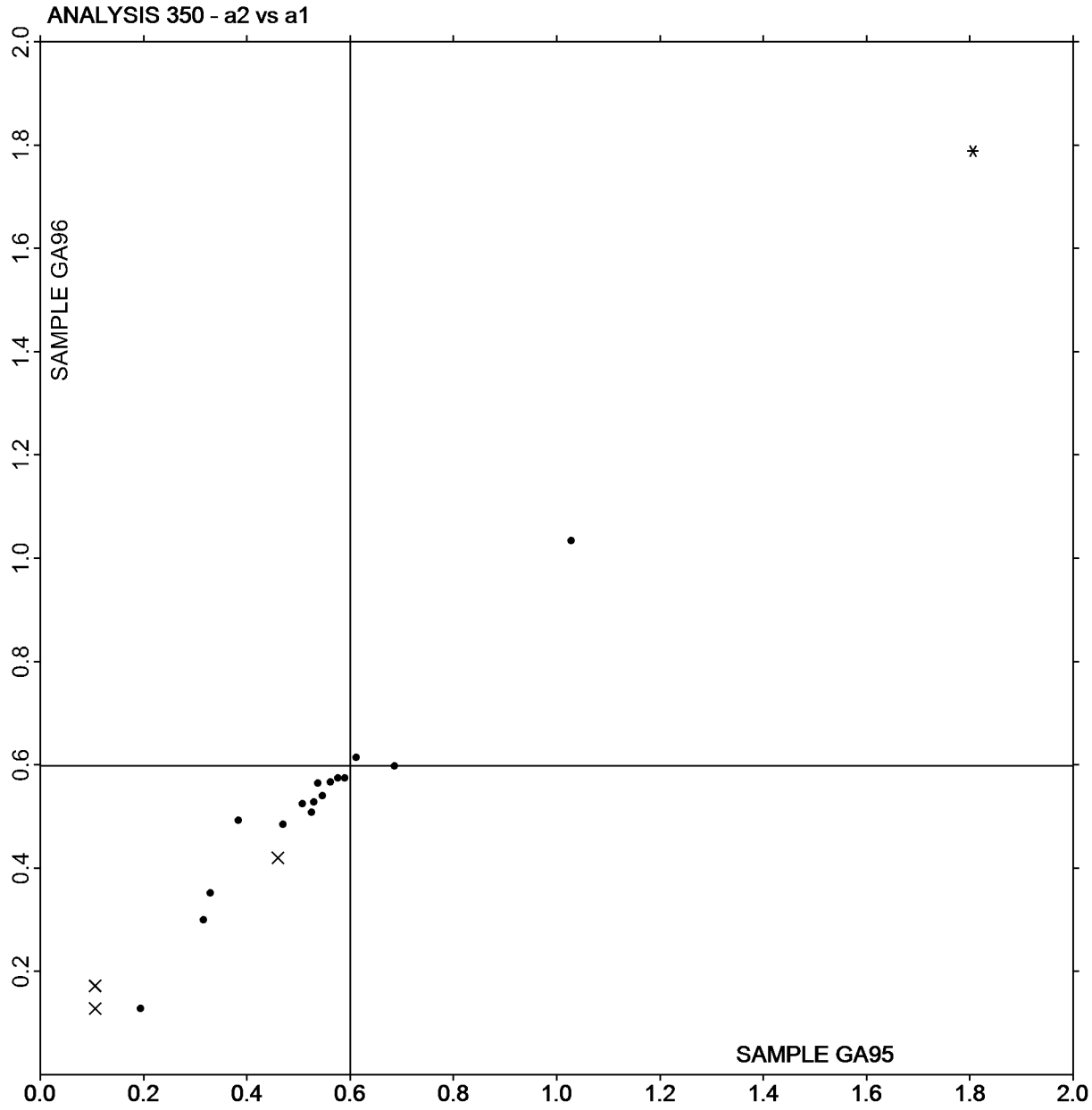
EG	Datacolor Elrepho 3300	EH	Datacolor Elrepho SF450
HE	Hunter LabScan	HZ	Hunter ColorFlex EZ
LS	L & W Elrepho SE 070	TC	Technidyne Color Touch Series
TS	Technidyne Brightimeter Micro S-5	VM	Valmet PaperLab (was Kajaani/Robotest)
XS	X-Rite 938 Spectrodensitometer		

Plot of L values GA96 vs L values GA95



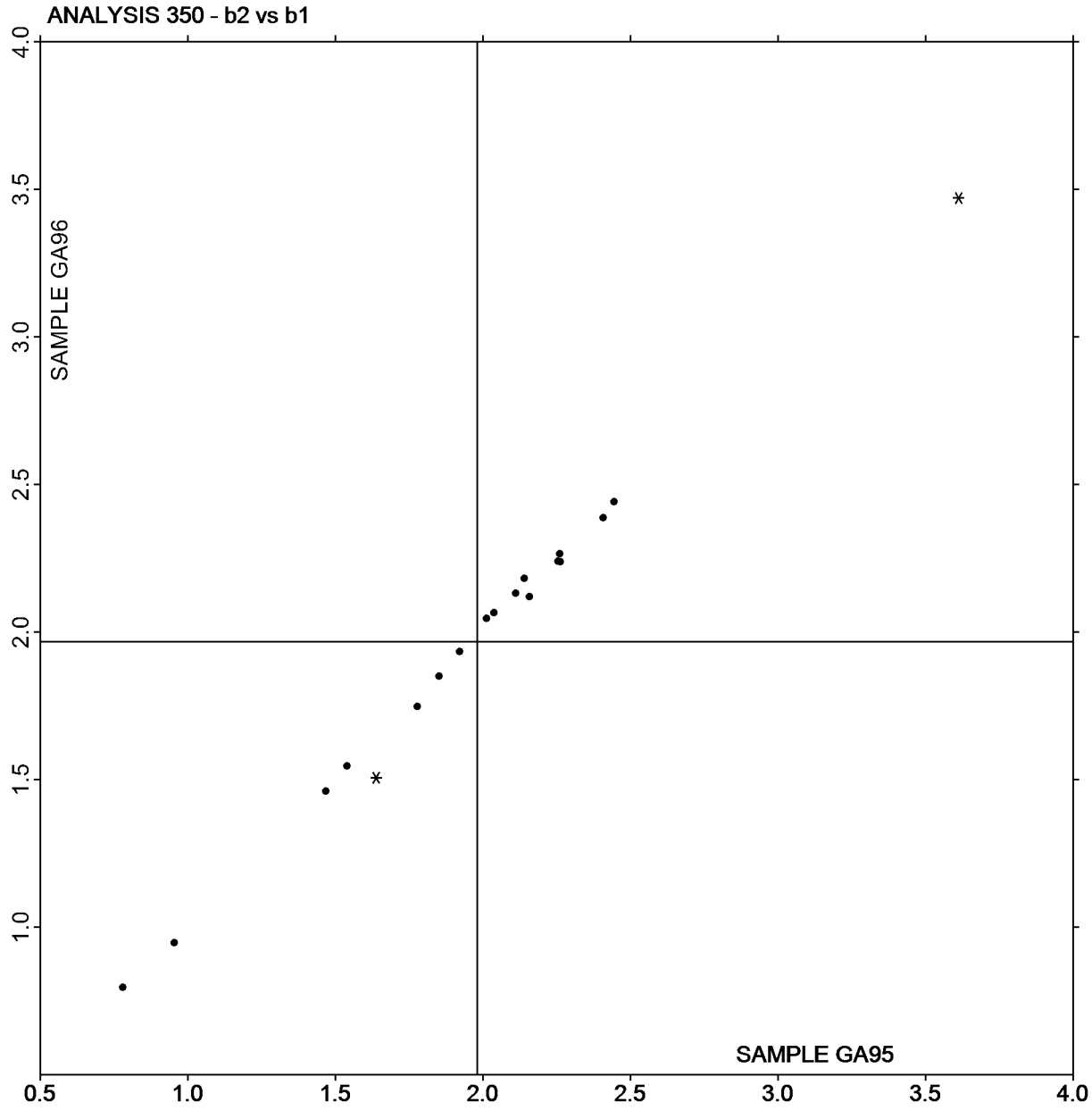
If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Plot of a values GA96 vs a values GA95



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Plot of b values GA96 vs b values GA95



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 351

Color & Color Difference - Near White Papers - D65/10deg obs

Hunter L,a,b - Illuminant D65 - 10 Degree Observer

Web Code	Data Flag	Samples	CIE L* a* b* Color Values L*	a*	b*	Color Difference Values ΔL*	Δa*	Δb*	ΔE*	InstrCode
38R7Y4		GA95	93.34	-0.76	1.02	0.03	0.00	0.02	0.03	HE
		GA96	93.37	-0.75	1.03					
3WU8C4		GA95	95.35	-0.53	2.41	0.01	0.00	0.01	0.01	LS
		GA96	95.36	-0.53	2.42					
4KYDE2		GA95	95.46	-0.50	2.45	0.01	-0.01	-0.02	0.03	HT
		GA96	95.47	-0.51	2.43					
7UBK4Z		GA95	94.66	-0.32	2.33	0.02	-0.01	0.02	0.03	HE
		GA96	94.68	-0.33	2.35					
9C8NKT		GA95	95.57	-0.43	2.30	0.05	-0.02	0.03	0.06	NG
		GA96	95.62	-0.45	2.33					
CURP3Z		GA95	95.57	-0.50	2.33	0.01	-0.02	0.02	0.03	XV
		GA96	95.58	-0.52	2.35					
DKL2PT		GA95	95.45	-0.59	2.38	-0.02	-0.01	-0.01	0.03	HT
		GA96	95.43	-0.60	2.37					
EEYET3		GA95	95.30	-0.50	2.59	-0.10	-0.02	-0.10	0.14	NG
		GA96	95.20	-0.52	2.48					
ETT2YV		GA95	95.34	-0.45	2.34	-0.03	-0.06	0.01	0.06	LS
		GA96	95.31	-0.50	2.35					
GGYJ7Y	X	GA95	86.18	-0.26	-0.25	-0.01	-0.01	0.02	0.02	TC
		GA96	86.17	-0.27	-0.24					
JFTT8U		GA95	95.23	-0.48	2.23	0.06	0.20	-0.21	0.30 X	TC
		GA96	95.29	-0.28	2.02					
JL28W7		GA95	95.37	-0.62	2.09	0.05	-0.01	-0.01	0.05	XC
		GA96	95.41	-0.63	2.08					
LGF9BM		GA95	95.22	-0.57	2.30	-0.01	0.02	-0.08	0.09	EH
		GA96	95.21	-0.54	2.22					
MB9XZ8		GA95	95.54	-0.46	2.14	0.08	-0.01	0.09	0.12	NF
		GA96	95.62	-0.47	2.23					
MGEUK8		GA95	95.54	-0.52	2.43	0.00	-0.02	0.00	0.02	EH
		GA96	95.54	-0.55	2.43					
VFB4MP		GA95	95.32	-0.48	2.59	0.00	-0.02	-0.01	0.02	NH
		GA96	95.32	-0.50	2.59					

WVHK9H	X	GA95	93.81	-0.10	-2.08	0.03	-0.01	0.03	0.04	XP
		GA96	93.84	-0.11	-2.05					
YM49FH		GA95	94.07	-0.30	2.06	0.02	-0.01	-0.01	0.03	XB
		GA96	94.09	-0.31	2.05					

Summary Statistics

Grand Means							
GA95	95.067	-0.464	2.250	0.011	0.001	-0.017	0.066
GA96	95.080	-0.476	2.233				
Stnd Dev Btwn Labs							
GA95	0.680	0.152	0.362	0.041	0.056	0.068	0.073
GA96	0.674	0.149	0.357				

Statistics based on 16 of 18 reporting participants

Comments on Assigned Data Flags for Test #351

GGYJ7Y (X) - Extreme Data for both "L" & "b" samples.

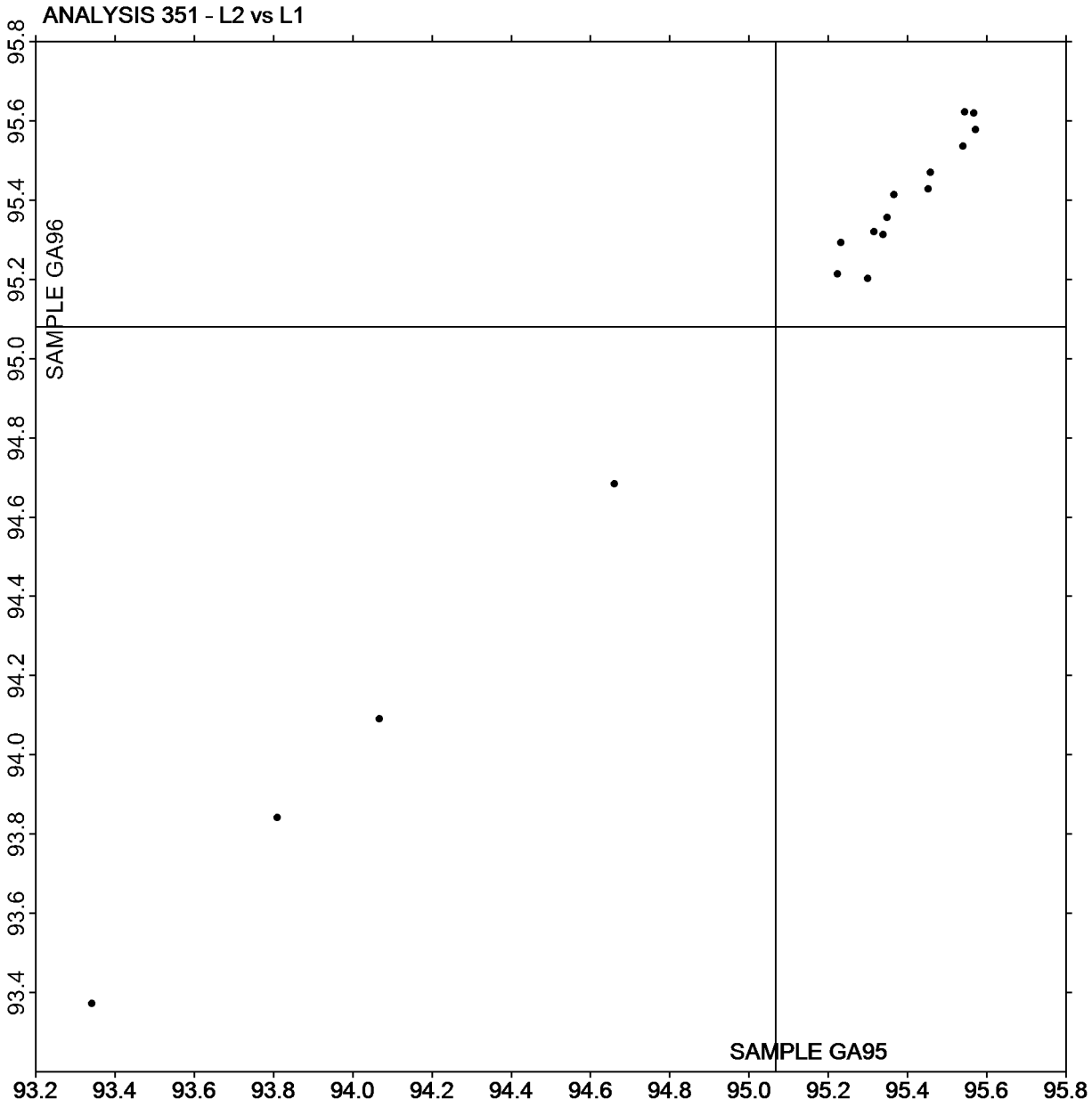
WVHK9H (X) - Extreme Data for both "b" samples.

WVHK9H - Due to CTS graphs using Absolute Values, data Flag is located within consensus data. However, "b" data is lower than the positive Grand Mean as shown above graphs.

Key to Instrument Codes Reported by Participants

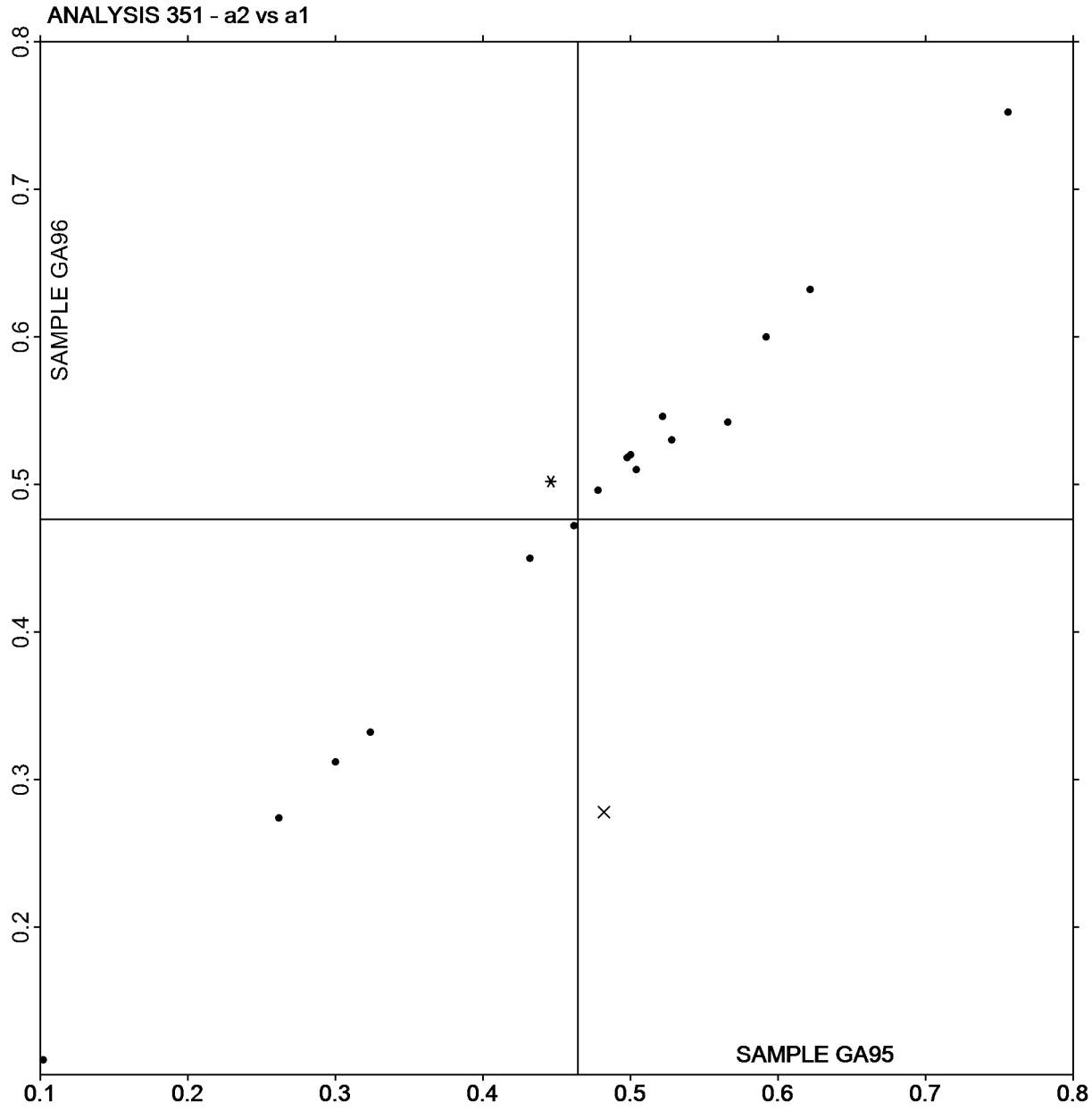
EH	Datacolor Elrepho SF450	HE	Hunter LabScan
HT	Hunter UltraScan Vis	LS	L & W Elrepho SE 070
NF	Minolta CM-3600d Spectrophotometer	NG	Minolta CM-3700d Spectrophotometer
NH	Minolta CM-3700A Spectrophotometer	TC	Technidyne Color Touch Series
XB	X-Rite Ci7	XC	X-Rite eXact Series
XP	X-Rite Spectrophotometer DTP	XV	X-Rite SP60 Series

Plot of L values GA96 vs L values GA95



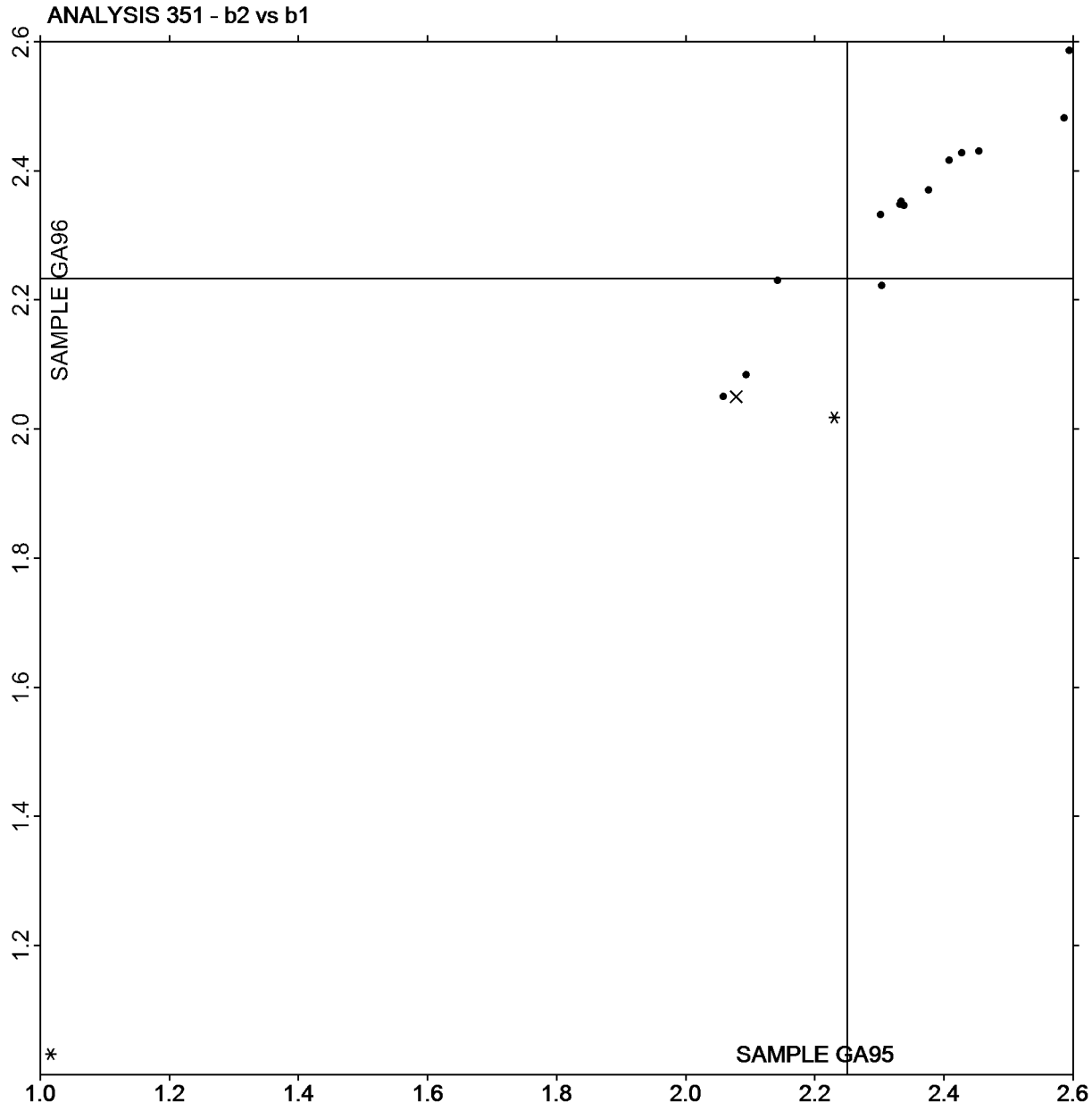
If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Plot of a values GA96 vs a values GA95



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Plot of b values GA96 vs b values GA95



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

WebCode	Data Flag	Sample GV95 Lab Mean	Sample GV95 Diff from Grand Mean	Sample GV95 CPV	Sample GV96 Lab Mean	Sample GV96 Diff from Grand Mean	Sample GV96 CPV	Instr Code
2CP8ND		3.945	0.075	0.96	5.080	0.122	1.31	XX
38R7Y4		3.915	0.045	0.57	5.017	0.059	0.63	EM
3NLQLJ		3.865	-0.005	-0.07	4.997	0.039	0.42	OK
3WWT8K		3.828	-0.042	-0.54	4.889	-0.069	-0.74	TA
4ADA82		3.892	0.022	0.28	4.923	-0.035	-0.38	PP
4KYDE2		3.764	-0.106	-1.36	4.921	-0.037	-0.40	EM
4MPDYQ		3.758	-0.112	-1.44	4.901	-0.057	-0.61	LB
4PTA27		3.961	0.091	1.17	5.014	0.056	0.60	FR
7JCP76		3.830	-0.040	-0.52	4.880	-0.078	-0.84	TM
7LZ4UE	*	3.891	0.021	0.27	5.127	0.169	1.81	EM
7R7UY7		3.831	-0.039	-0.50	4.788	-0.170	-1.82	LA
829CA9		3.910	0.040	0.51	5.027	0.069	0.74	EM
932MK3		4.012	0.142	1.82	5.098	0.140	1.50	LW
989BX4		3.965	0.094	1.21	5.020	0.062	0.66	TM
9HW4AZ		3.780	-0.091	-1.16	4.780	-0.179	-1.91	LW
A24WRT		4.020	0.150	1.92	5.066	0.108	1.16	TM
AAW4AX		3.803	-0.067	-0.86	4.866	-0.092	-0.99	PP
ANHCFC		3.860	-0.010	-0.13	5.000	0.042	0.45	LW
AZCT6D		3.862	-0.008	-0.10	5.032	0.074	0.79	EM
AZUKFH		3.907	0.037	0.47	5.041	0.083	0.88	LW
CKVE37		3.904	0.034	0.43	5.027	0.069	0.74	EM
DKL2PT		3.870	0.000	0.00	4.934	-0.024	-0.26	EM
E6QZU8		3.968	0.098	1.25	5.052	0.094	1.01	TA
EEYET3		3.804	-0.066	-0.85	4.914	-0.044	-0.47	PP
EHFU72		3.776	-0.095	-1.21	4.924	-0.034	-0.36	LW
F7J8DB	X	3.705	-0.165	-2.12	4.603	-0.355	-3.80	TM
GGYJ7Y		3.795	-0.075	-0.96	4.942	-0.016	-0.17	TA
HN9A2P		3.679	-0.191	-2.45	4.805	-0.153	-1.64	TA
JFTT8U		3.890	0.020	0.25	5.016	0.058	0.62	PP
JL28W7		3.886	0.016	0.20	5.008	0.050	0.53	LW
JWJRG3		3.796	-0.074	-0.95	4.930	-0.028	-0.30	PP
JZFHGL		3.907	0.037	0.48	5.002	0.044	0.47	LW
K42GF3		3.911	0.041	0.52	4.966	0.008	0.08	TA
K97FP8		3.844	-0.026	-0.34	4.913	-0.045	-0.48	TM
LGF9BM		3.860	-0.010	-0.13	4.980	0.022	0.23	EM
MB9XZ8		4.039	0.168	2.16	5.140	0.182	1.95	TM
MFYE9R		3.825	-0.045	-0.58	4.845	-0.113	-1.21	MT
MGEUK8		3.860	-0.010	-0.13	5.077	0.119	1.27	EM
PNM3ZZ		3.918	0.047	0.61	4.980	0.022	0.23	LW
QFLEFD		3.933	0.063	0.81	5.000	0.042	0.45	TM
QUTVUV		3.878	0.008	0.10	4.903	-0.055	-0.59	TM

Paper & Paperboard Interlaboratory Testing Program

Analysis 360

Thickness (Caliper), Printing papers

TAPPI Official Test Method T411

WebCode	Data Flag	Sample GV95 Lab Mean	Sample GV95 Diff from Grand Mean	Sample GV95 CPV	Sample GV96 Lab Mean	Sample GV96 Diff from Grand Mean	Sample GV96 CPV	Instr Code
RXLGY3		3.903	0.033	0.42	4.926	-0.032	-0.34	LA
RZEBYT		3.820	-0.050	-0.64	4.876	-0.082	-0.88	PP
TQF82A		3.955	0.085	1.08	4.981	0.023	0.24	LW
VA76F7		3.957	0.087	1.11	5.039	0.081	0.87	LW
VFB4MP		3.931	0.061	0.78	4.965	0.007	0.07	PP
WVHK9H		3.744	-0.126	-1.62	4.777	-0.181	-1.94	TM
X7WW27		3.730	-0.140	-1.80	4.740	-0.218	-2.34	TM
XPACPT		3.779	-0.091	-1.17	4.842	-0.116	-1.24	LA
YM49FH		3.880	0.010	0.13	4.976	0.018	0.19	TM

Summary Statistics	Sample GV95	Sample GV96
Grand Means	3.87 mils	4.96 mils
Stnd Dev Btwn Labs	0.08 mils	0.09 mils

Statistics based on 49 of 50 reporting participants.

Comments on Assigned Data Flags for Test #360

F7J8DB (X) - Data for sample GV96 are low.

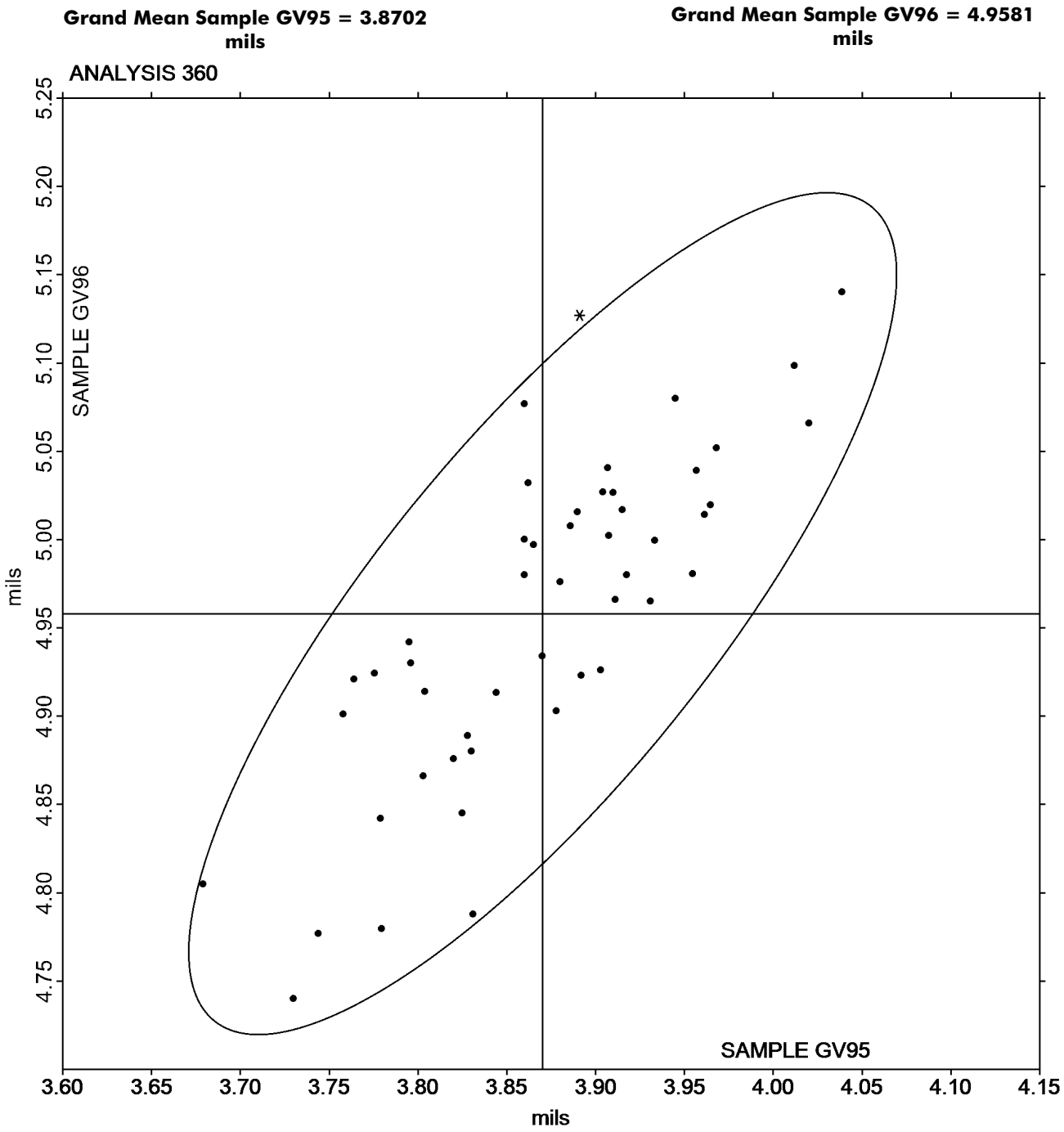
Analysis Notes:

829CA9 - One determination removed from the Lab Mean of Sample GV96 per Grubb's Test at 1% risk (TAPPI 1205).

MB9XZ8 - Data appear to be reported as mm, not micrometers as indicated on data entry form. CTS will not correct the Units going forward.

Key to Instrument Codes Reported by Participants

EM	Emveco	FR	Frank Instruments
LA	L & W Autoline	LB	L & W Autoline 600
LW	L & W	MT	Mitutoyo
OK	Oakland	PP	Technidyne Profile/Plus
TA	Thwing-Albert	TM	TMI
XX	Instrument make/model not specified by lab		



Paper & Paperboard Interlaboratory Testing Program

Analysis 361

Thickness (Caliper), Packaging papers

TAPPI Official Test Method T411

WebCode	Data Flag	Sample GY95 Lab Mean	Sample GY95 Diff from Grand Mean	Sample GY95 CPV	Sample GY96 Lab Mean	Sample GY96 Diff from Grand Mean	Sample GY96 CPV	Instr Code
3U8N7Z		9.539	0.019	0.11	9.551	0.034	0.18	LW
3WU8C4	X	0.009	-9.511	-53.66	0.009	-9.507	-50.35	TM
4MPDYQ		9.500	-0.020	-0.11	9.436	-0.081	-0.43	LB
7UBK4Z		9.483	-0.037	-0.21	9.564	0.047	0.25	EM
8A82QD		9.517	-0.003	-0.02	9.508	-0.009	-0.05	LW
8PW7Y8		9.580	0.060	0.34	9.570	0.053	0.28	TM
973TY9		9.350	-0.170	-0.96	9.306	-0.211	-1.12	LW
AFJUWT		9.460	-0.060	-0.34	9.492	-0.025	-0.13	TM
BFFUAY		9.270	-0.250	-1.41	9.250	-0.267	-1.41	TA
CAR7C8		9.478	-0.042	-0.24	9.467	-0.050	-0.26	PP
CUUAXF		9.564	0.044	0.25	9.537	0.020	0.11	EM
EHFU72		9.492	-0.028	-0.16	9.484	-0.033	-0.17	LW
ETT2YV		9.537	0.017	0.09	9.689	0.172	0.91	LW
FGWE9Q		9.543	0.023	0.13	9.603	0.086	0.46	TM
FWEZYB		9.490	-0.030	-0.17	9.549	0.032	0.17	EM
FXMGNU	*	8.968	-0.552	-3.12	8.930	-0.587	-3.11	TM
HN9A2P		9.324	-0.196	-1.11	9.306	-0.211	-1.12	TA
JBXYAT		9.586	0.066	0.37	9.534	0.017	0.09	LW
JK3C42	*	9.944	0.424	2.39	10.013	0.496	2.63	GE
JZFHGL		9.643	0.123	0.69	9.625	0.108	0.57	LW
K42GF3		9.639	0.119	0.67	9.614	0.097	0.51	TA
K4AY7L		9.814	0.294	1.66	9.869	0.352	1.87	LW
KC7NV3		9.343	-0.177	-1.00	9.368	-0.149	-0.79	VP
KGZLH9		9.653	0.133	0.75	9.548	0.031	0.16	LW
KHWY7Z		9.603	0.083	0.47	9.711	0.194	1.03	LW
KMN7NA		9.673	0.153	0.86	9.622	0.106	0.56	LW
KPF9BP		9.525	0.005	0.03	9.490	-0.027	-0.14	LA
MGEUK8		9.495	-0.025	-0.14	9.543	0.026	0.14	EM
NCWXBN		9.674	0.154	0.87	9.659	0.142	0.75	LA
VA76EL		9.217	-0.304	-1.71	9.260	-0.257	-1.36	LA
VFB4MP		9.755	0.235	1.32	9.665	0.148	0.78	EM
W99CV8		9.443	-0.077	-0.44	9.358	-0.159	-0.84	OK
WM6LMJ		9.315	-0.205	-1.16	9.351	-0.166	-0.88	EM
XBTFAW		9.600	0.080	0.45	9.560	0.043	0.23	TM
XGJQKU		9.626	0.106	0.60	9.638	0.121	0.64	EM
ZRU3PN		9.563	0.043	0.24	9.417	-0.100	-0.53	LA

Summary Statistics	Sample GY95	Sample GY96
Grand Means	9.52 mils	9.52 mils
Stnd Dev Btwn Labs	0.18 mils	0.19 mils

Statistics based on 35 of 36 reporting participants.

Comments on Assigned Data Flags for Test #361

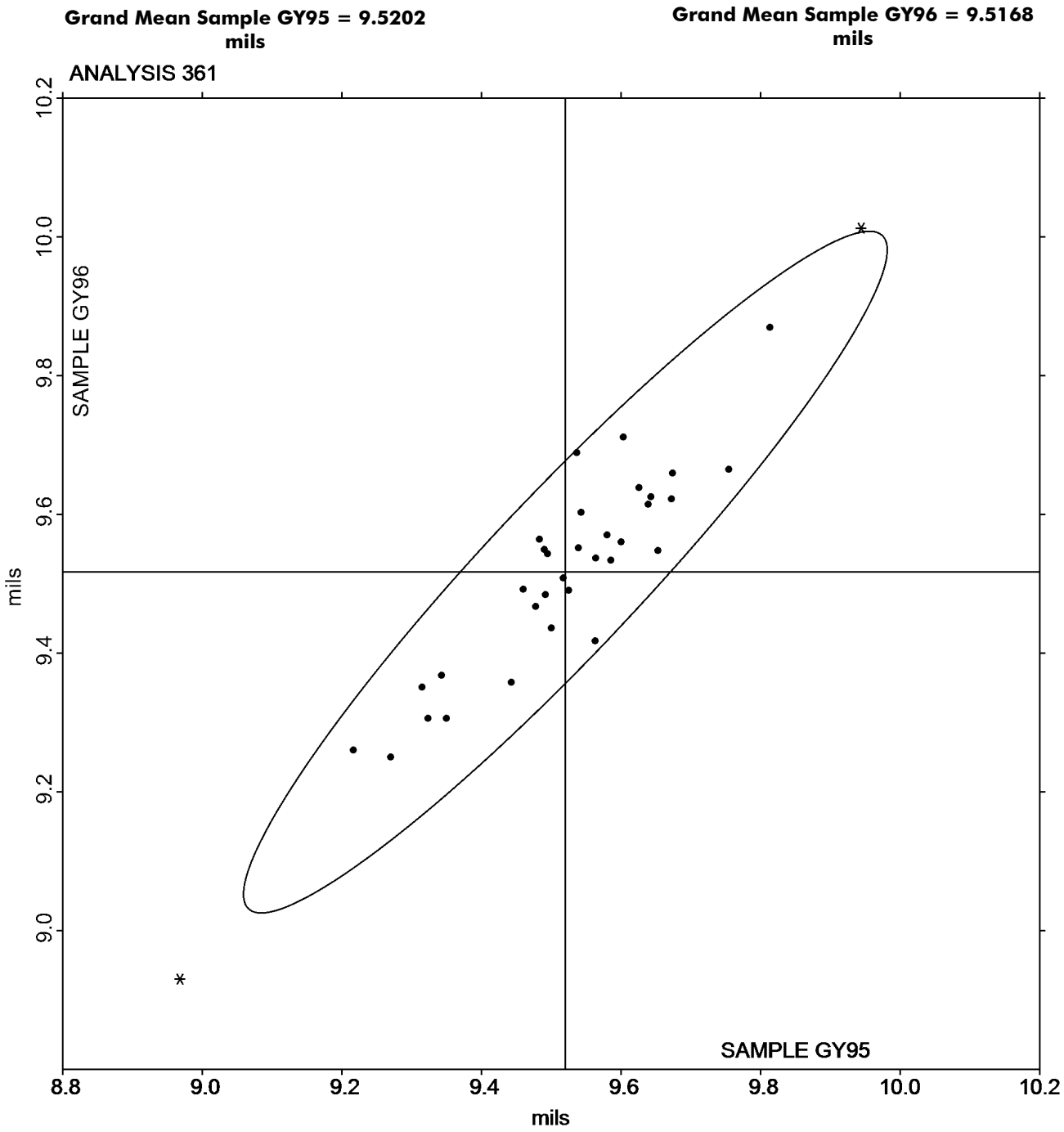
3WU8C4 (X) - Extreme Data.

Analysis Notes:

3WU8C4 - Possibly incorrect units were selected.

Key to Instrument Codes Reported by Participants

EM	Emveco	GE	Gester Electronic Thickness Tester
LA	L & W Autoline	LB	L & W Autoline 600
LW	L & W	OK	Oakland
PP	Technidyne Profile/Plus	TA	Thwing-Albert
TM	TMI	VP	Valmet Paper Lab Automated Tester



Paper & Paperboard Interlaboratory Testing Program

Analysis 364

Coefficient of Static Friction - Horizontal Plane Method - Printing Papers

TAPPI Official Test Method T549

WebCode	Data Flag	Sample GD95 Lab Mean	Sample GD95 Diff from Grand Mean	Sample GD95 CPV	Sample GD96 Lab Mean	Sample GD96 Diff from Grand Mean	Sample GD96 CPV	Instr Code
38R7Y4		0.5360	-0.0655	-0.97	0.4420	-0.1042	-1.50	TA
9WU9KH		0.5370	-0.0645	-0.95	0.4980	-0.0482	-0.70	TA
AZCT6D		0.6722	0.0707	1.04	0.6294	0.0832	1.20	TA
CKVE37		0.6300	0.0285	0.42	0.5180	-0.0282	-0.41	TA
KHWY7Z		0.6230	0.0215	0.32	0.5670	0.0208	0.30	TA
KUCQVV		0.5736	-0.0279	-0.41	0.4628	-0.0834	-1.20	IT
RF6DEW		0.6972	0.0957	1.41	0.6292	0.0830	1.20	TA
RZEBYT	X	0.0025	-0.5990	-8.84	0.0024	-0.5438	-7.85	TA
VA76EL		0.5962	-0.0053	-0.08	0.5892	0.0430	0.62	TA
VFB4MP		0.6620	0.0605	0.89	0.6160	0.0698	1.01	TP
X7WW27		0.4876	-0.1139	-1.68	0.5106	-0.0356	-0.51	XX

Summary Statistics	Sample GD95	Sample GD96
Grand Means	0.60 COF	0.55 COF
Stnd Dev Btwn Labs	0.07 COF	0.07 COF

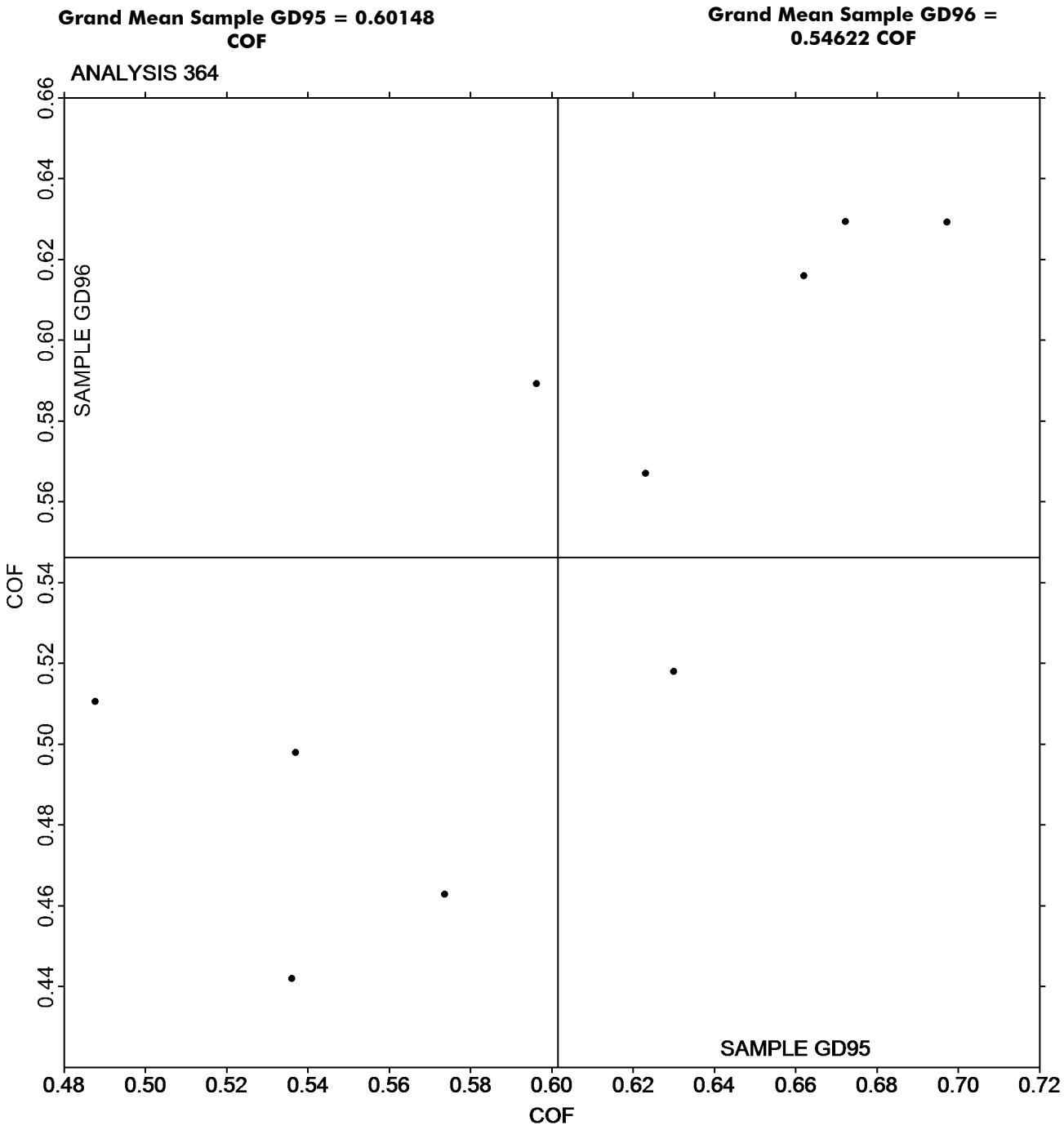
Statistics based on 10 of 11 reporting participants.

Comments on Assigned Data Flags for Test #364

RZEBYT (X) - Extreme Data.

Key to Instrument Codes Reported by Participants

IT	IMASS SP-2100	TA	Thwing-Albert Friction Tester
TP	TMI 32-25 COF Tester (Inclined Plane)	XX	Instrument make/model not specified by lab



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 365

Coefficient of Kinetic Friction - Horizontal Plane Method - Printing Papers

TAPPI Official Test Method T549

WebCode	Data Flag	Sample GD95 Lab Mean	Sample GD95 Diff from Grand Mean	Sample GD95 CPV	Sample GD96 Lab Mean	Sample GD96 Diff from Grand Mean	Sample GD96 CPV	Instr Code
38R7Y4		0.3500	-0.1603	-1.89	0.2460	-0.1525	-1.69	TA
9WU9KH		0.4212	-0.0891	-1.05	0.3620	-0.0365	-0.41	TA
AZCT6D		0.5534	0.0431	0.51	0.4554	0.0569	0.63	TA
CKVE37		0.5360	0.0257	0.30	0.3780	-0.0205	-0.23	XX
KHWY7Z		0.5902	0.0799	0.94	0.4888	0.0903	1.00	TN
KUCQVV		0.5338	0.0235	0.28	0.2888	-0.1097	-1.22	IR
RF6DEW		0.6068	0.0965	1.14	0.5162	0.1177	1.31	TA
RZEBYT	X	0.0024	-0.5079	-5.97	0.0018	-0.3966	-4.41	TA
VA76EL		0.5518	0.0415	0.49	0.4488	0.0503	0.56	TA
X7WW27		0.4496	-0.0607	-0.71	0.4022	0.0037	0.04	XX

Summary Statistics	Sample GD95	Sample GD96
Grand Means	0.51 COF	0.40 COF
Stnd Dev Btwn Labs	0.09 COF	0.09 COF

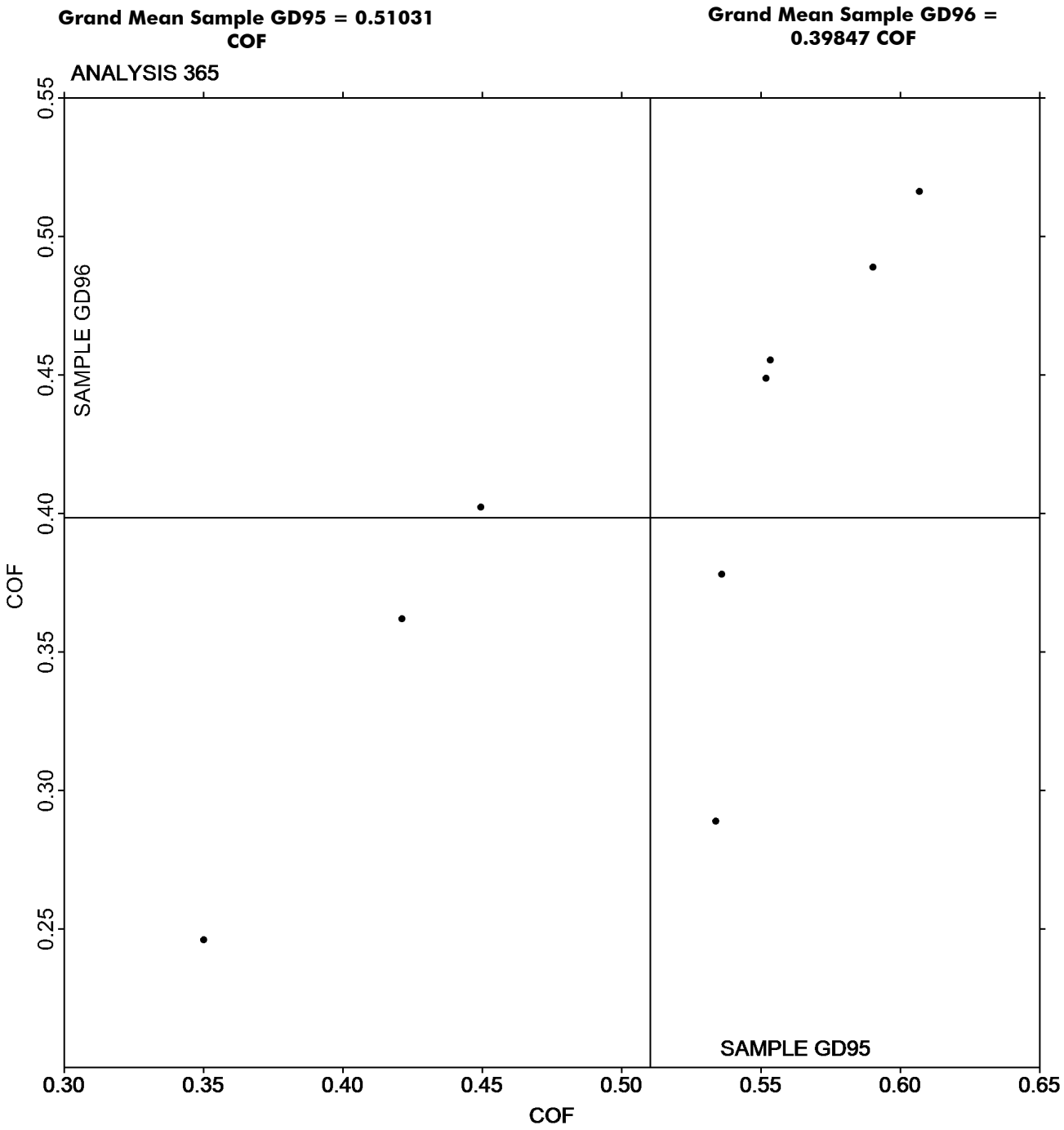
Statistics based on 9 of 10 reporting participants.

Comments on Assigned Data Flags for Test #365

RZEBYT (X) - Data for both samples are low. Possible Systematic Error.

Key to Instrument Codes Reported by Participants

IR	IMASS SP-2000	TA	Thwing-Albert Friction Tester
TN	TMI 32-07 Monitor/Slip and Friction	XX	Instrument make/model not specified by lab



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 370

Air Resistance - Gurley Oil Type

TAPPI Official Test Method T460

WebCode	Data Flag	Sample GE95 Lab Mean	Sample GE95 Diff from Grand Mean	Sample GE95 CPV	Sample GE96 Lab Mean	Sample GE96 Diff from Grand Mean	Sample GE96 CPV	Instr Code
2CP8ND		13.34	-0.36	-0.51	19.78	-1.34	-1.37	LP
38R7Y4		13.73	0.03	0.04	21.80	0.68	0.70	PP
3WWT8K		14.13	0.43	0.61	22.41	1.29	1.33	GA
4ADA82		13.53	-0.17	-0.25	21.15	0.03	0.03	PP
4KYDE2		13.91	0.21	0.30	21.47	0.35	0.36	PP
6Z9EUN		14.37	0.67	0.95	22.94	1.82	1.87	TL
7UBK4Z		13.45	-0.26	-0.36	21.55	0.43	0.44	PP
829CA9		13.56	-0.14	-0.20	21.56	0.44	0.45	PP
932MK3		13.58	-0.12	-0.17	20.87	-0.25	-0.25	LP
973TY9		12.15	-1.55	-2.21	20.55	-0.57	-0.58	TL
9WU9KH		14.01	0.31	0.44	21.96	0.84	0.86	WG
A24WRT		12.85	-0.85	-1.21	21.50	0.38	0.39	HG
AAW4AX	X	0.63	-13.07	-18.59	0.63	-20.49	-21.02	HG
CKVE37		13.90	0.20	0.28	22.09	0.97	1.00	PP
DKL2PT		13.52	-0.18	-0.26	22.16	1.04	1.07	HG
E3KCG3	X	41.50	27.80	39.54	62.77	41.65	42.73	LP
EHFU72		13.67	-0.03	-0.04	20.51	-0.61	-0.62	PP
F7J8DB		14.28	0.58	0.82	21.07	-0.05	-0.05	LP
GGYJ7Y		13.15	-0.55	-0.78	20.97	-0.15	-0.15	PP
GUH8EC		12.61	-1.09	-1.55	19.98	-1.14	-1.17	LP
JBXYAT		14.72	1.02	1.45	22.30	1.18	1.21	LP
JFTT8U		14.64	0.94	1.33	22.02	0.90	0.92	PP
JL28W7	*	14.90	1.20	1.71	20.70	-0.42	-0.43	LW
JWJRG3		15.06	1.36	1.93	22.79	1.68	1.72	PP
K42GF3		12.71	-0.99	-1.41	19.30	-1.82	-1.86	GA
KC7NV3	*	12.72	-0.98	-1.40	18.46	-2.66	-2.73	VM
KGZLH9	X	10.86	-2.84	-4.04	17.06	-4.06	-4.16	HM
LGF9BM		13.68	-0.02	-0.03	20.99	-0.13	-0.13	PP
MB9XZ8		13.36	-0.34	-0.49	19.99	-1.13	-1.16	LP
NCWXBN		12.17	-1.53	-2.18	19.58	-1.54	-1.58	LA
QFLEFD		12.69	-1.01	-1.44	20.28	-0.84	-0.86	LW
QPYY8P		14.04	0.34	0.48	21.86	0.74	0.76	GL
RXLGY3		13.81	0.11	0.16	22.24	1.13	1.16	LA
T2HK4V		13.96	0.26	0.37	22.17	1.05	1.08	TL
TLKHHG		14.66	0.96	1.36	22.07	0.95	0.98	XX
TQF82A		13.51	-0.19	-0.27	20.46	-0.66	-0.67	LP
VA76EL		13.60	-0.10	-0.14	20.69	-0.43	-0.44	LA
VA76F7		14.12	0.42	0.60	20.90	-0.22	-0.22	LP
VFB4MP		13.46	-0.25	-0.35	20.75	-0.37	-0.38	PP
WM6LMJ	X	11.85	-1.85	-2.64	14.31	-6.80	-6.98	WG
X7WW27		14.40	0.70	0.99	20.50	-0.62	-0.63	GS

Paper & Paperboard Interlaboratory Testing Program

Analysis 370

Air Resistance - Gurley Oil Type

TAPPI Official Test Method T460

WebCode	Data Flag	Sample GE95 Lab Mean	Sample GE95 Diff from Grand Mean	Sample GE95 CPV	Sample GE96 Lab Mean	Sample GE96 Diff from Grand Mean	Sample GE96 CPV	Instr Code
XBTFAW		13.12	-0.58	-0.83	20.67	-0.45	-0.46	TL
XPACPT		14.24	0.54	0.77	20.72	-0.40	-0.41	LA
YM49FH		14.15	0.45	0.64	20.97	-0.15	-0.15	PP
ZRU3PN		14.30	0.60	0.85	21.08	-0.04	-0.04	LA

Summary Statistics	Sample GE95	Sample GE96
Grand Means	13.70 sec/100 cc	21.12 sec/100 cc
Stnd Dev Btwn Labs	0.70 sec/100 cc	0.97 sec/100 cc

Statistics based on 41 of 45 reporting participants.

Comments on Assigned Data Flags for Test #370

E3KCG3 (X) - Extreme Data.

WM6LMJ (X) - Extreme Data for Sample GE96.

KGZLH9 (X) - Data for both samples are low.

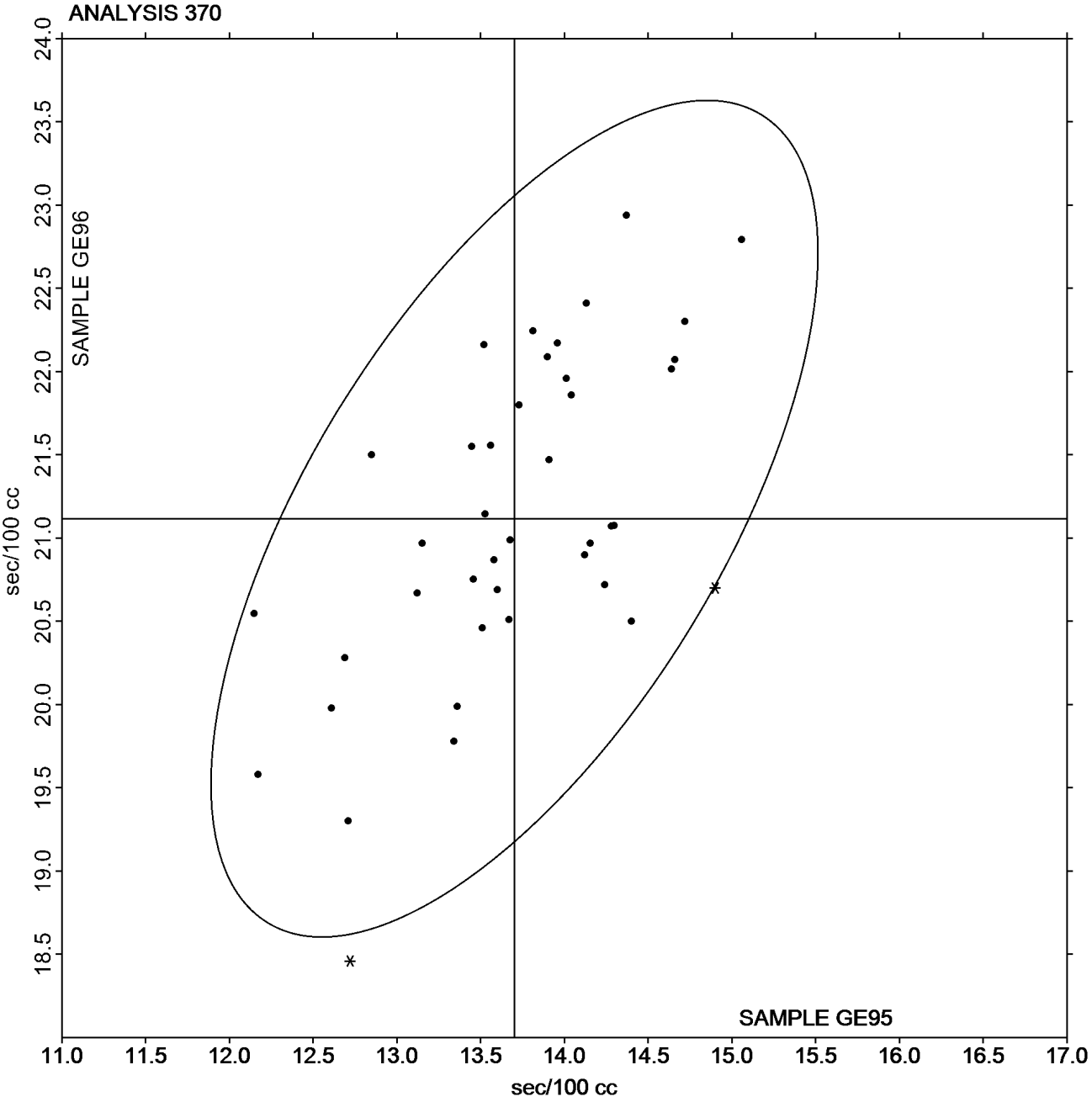
AAW4AX (X) - Extreme Data.

Key to Instrument Codes Reported by Participants

GA	Gurley Precision #4340 Automatic Densometer	GL	Gurley #4110
GS	Gurley-Hill S-P-S Tester #4190	HG	Technidyne - Hagerty Model #1
HM	Technidyne - Hagerty Model #538	LA	L & W Autoline
LP	L & W Densometer, Air Permeance	LW	L & W Type Gurley Densometer, Oil Flotation
PP	Technidyne Profile/Plus	TL	Gurley Densometer #4110, Oil Flotation
VM	Valmet PaperLab (was Kajaani/Robotest)	WG	W & LE Gurley Tester
XX	Instrument make/model not specified by lab		

Grand Mean Sample GE95 = 13.701 sec/100 cc

Grand Mean Sample GE96 = 21.117 sec/100 cc



Paper & Paperboard Interlaboratory Testing Program

Analysis 372

Porosity - Sheffield Type - Sheffield Units for 3/4 inch Diameter Orifice

TAPPI Official Test Method T547

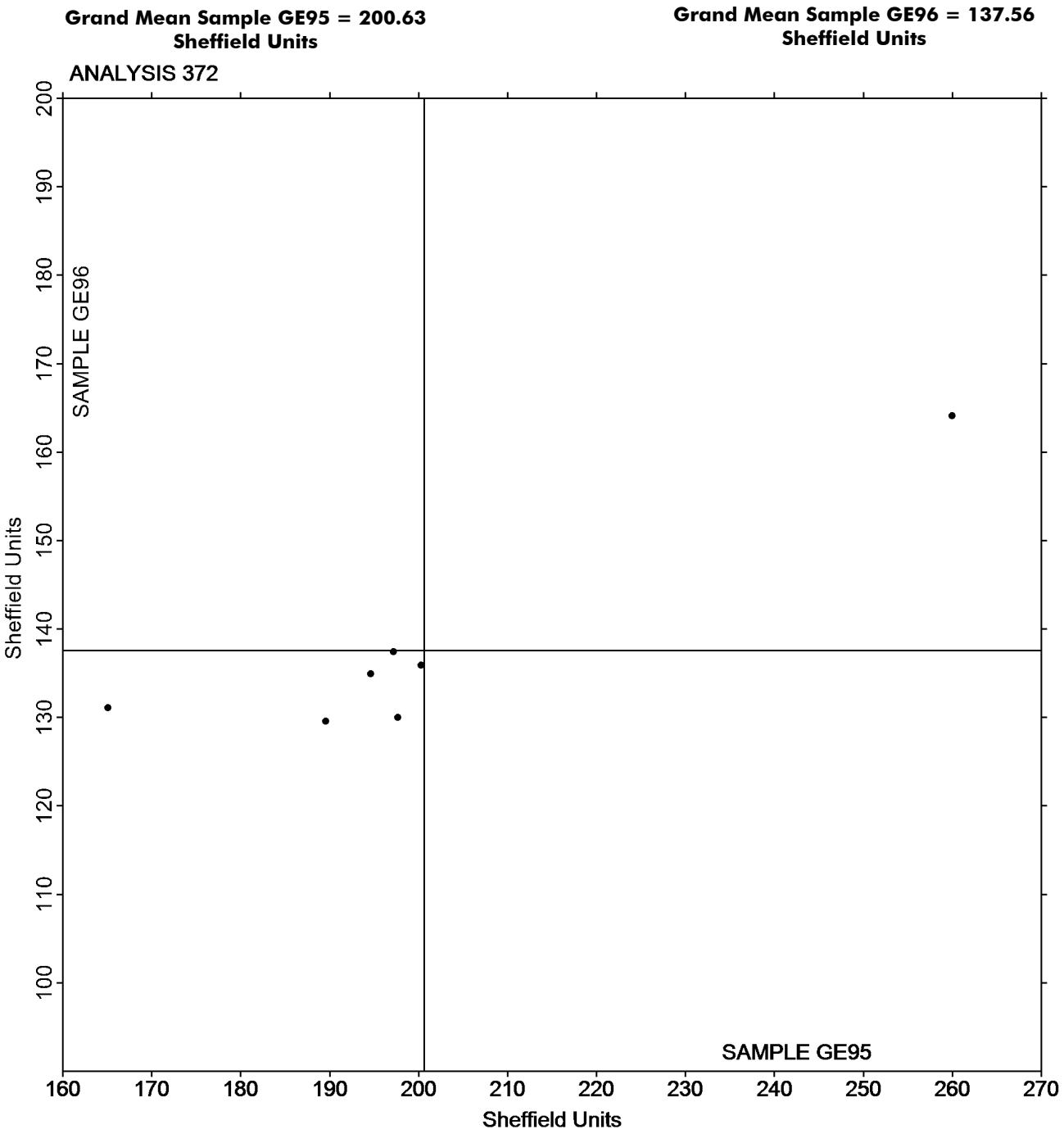
WebCode	Data Flag	Sample GE95 Lab Mean	Sample GE95 Diff from Grand Mean	Sample GE95 CPV	Sample GE96 Lab Mean	Sample GE96 Diff from Grand Mean	Sample GE96 CPV	Instr Code
3NLQLJ		197.2	-3.4	-0.12	137.4	-0.2	-0.01	LA
ANHCFC		260.0	59.4	2.06	164.1	26.5	2.19	LP
E6QZU8		200.3	-0.3	-0.01	135.9	-1.7	-0.14	HM
GGYJ7Y		194.6	-6.0	-0.21	134.9	-2.7	-0.22	TT
K42GF3		197.7	-2.9	-0.10	130.0	-7.6	-0.63	GA
KC7NV3		189.5	-11.1	-0.39	129.5	-8.0	-0.66	PP
X7WW27		165.1	-35.5	-1.24	131.1	-6.5	-0.53	SH

Summary Statistics	Sample GE95	Sample GE96
Grand Means	200.63 Sheffield Units	137.56 Sheffield Units
Stnd Dev Btwn Labs	28.77 Sheffield Units	12.09 Sheffield Units

Statistics based on 7 of 7 reporting participants.

Key to Instrument Codes Reported by Participants

GA	Gurley Precision #4340 Automatic Densometer	HM	Technidyne - Hagerty Model #538
LA	L & W Roughness Sheffield - Autoline	LP	L & W Densometer, Air Permeance
PP	Technidyne Profile/Plus	SH	Sheffield
TT	TMI Monitor/Smoothness II, Model 58-24		



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 376

Roughness - Print Surf Method - 0.5 to 4.0 Microns

TAPPI Official Test Method T555

WebCode	Data Flag	Sample GJ95 Lab Mean	Sample GJ95 Diff from Grand Mean	Sample GJ95 CPV	Sample GJ96 Lab Mean	Sample GJ96 Diff from Grand Mean	Sample GJ96 CPV	Instr Code
29QWRD		2.683	0.615	1.81	2.066	-0.096	-0.23	ZZ
38R7Y4		2.074	0.006	0.02	2.757	0.595	1.43	ZZ
3WU8C4		1.995	-0.073	-0.22	1.952	-0.210	-0.50	ZZ
4MPDYQ		2.038	-0.030	-0.09	1.962	-0.200	-0.48	ZZ
7JCP76		1.988	-0.080	-0.24	2.551	0.389	0.93	ZZ
7R7UY7		2.449	0.381	1.12	1.842	-0.320	-0.77	ZZ
7UBK4Z		1.960	-0.108	-0.32	2.875	0.713	1.71	ZZ
829CA9		2.697	0.629	1.85	2.063	-0.099	-0.24	ZZ
9WU9KH		1.770	-0.298	-0.88	1.737	-0.425	-1.02	ZZ
CUUAXF		2.009	-0.059	-0.17	2.168	0.006	0.02	ZZ
ETT2YV		1.980	-0.088	-0.26	2.049	-0.113	-0.27	ZZ
F7J8DB		1.601	-0.467	-1.38	1.647	-0.515	-1.23	ZZ
FWEZYB		2.799	0.731	2.15	2.024	-0.138	-0.33	ZZ
GGYJ7Y		2.062	-0.006	-0.02	2.639	0.477	1.14	ZZ
JZFHGL		1.579	-0.489	-1.44	1.602	-0.560	-1.34	ZZ
KC7NV3		2.502	0.434	1.28	3.131	0.969	2.32	ZZ
KPF9BP		1.944	-0.124	-0.37	1.951	-0.211	-0.50	ZZ
LGF9BM		1.857	-0.211	-0.62	1.850	-0.312	-0.75	ZZ
MGEUK8		1.818	-0.250	-0.74	1.836	-0.326	-0.78	ZZ
PNM3ZZ		1.965	-0.103	-0.30	1.962	-0.200	-0.48	ZZ
PZYCKJ		1.690	-0.378	-1.11	2.334	0.172	0.41	ZZ
RF6DEW		1.884	-0.184	-0.54	2.698	0.536	1.29	ZZ
W99CV8		2.013	-0.055	-0.16	1.974	-0.188	-0.45	ZZ
XGJQKU		2.653	0.585	1.72	2.045	-0.117	-0.28	ZZ
Y2KBQE		1.716	-0.352	-1.04	1.692	-0.470	-1.13	ZZ
Y3UHRL		2.058	-0.010	-0.03	2.105	-0.057	-0.14	ZZ
Y9GXQQ		2.063	-0.005	-0.02	2.850	0.688	1.65	ZZ

Summary Statistics	Sample GJ95	Sample GJ96
Grand Means	2.07 Microns	2.16 Microns
Stnd Dev Btwn Labs	0.34 Microns	0.42 Microns

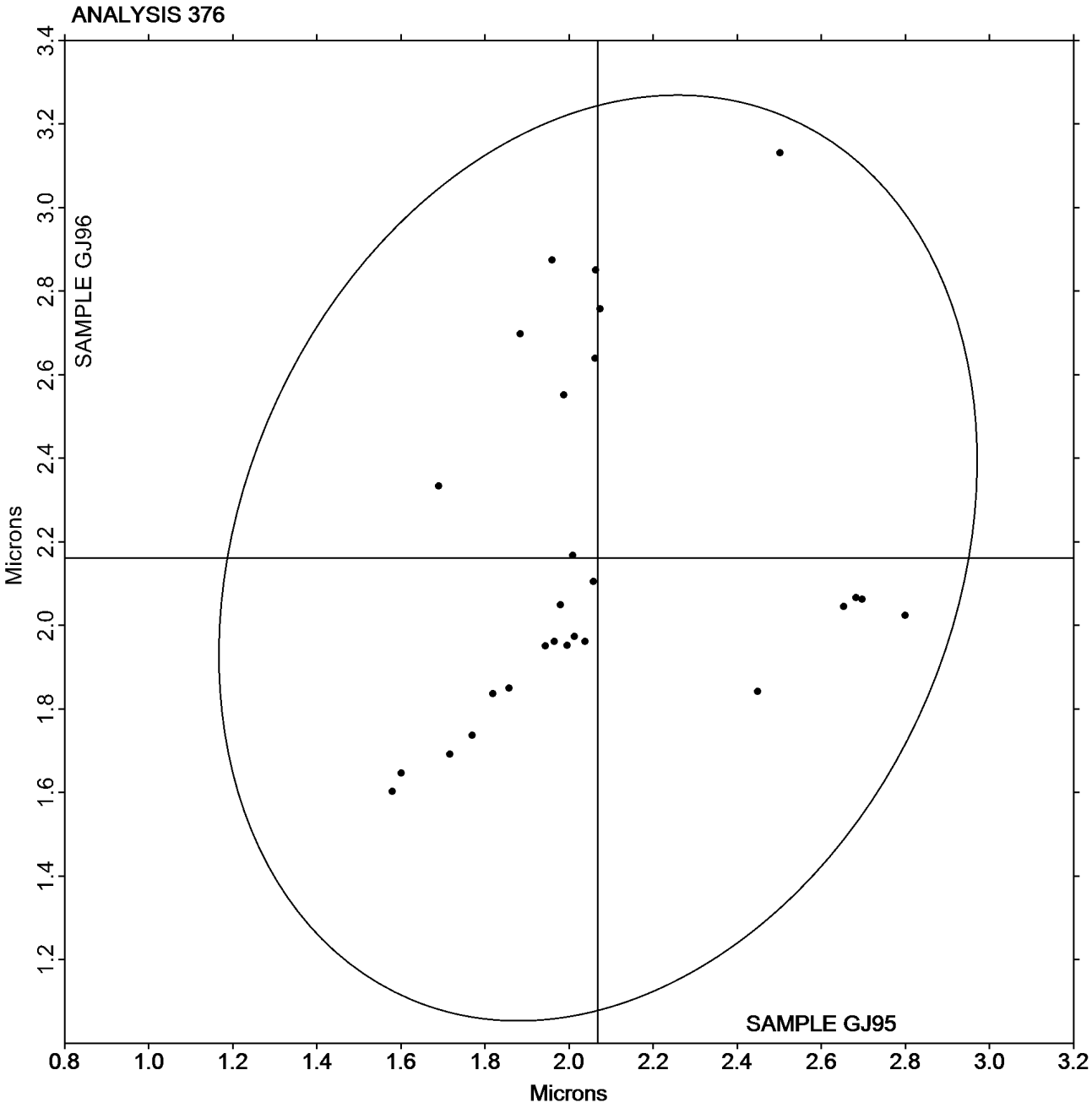
Statistics based on 27 of 27 reporting participants.

Key to Instrument Codes Reported by Participants

ZZ Instruments No Longer Tracked

Grand Mean Sample GJ95 = 2.0684 Microns

Grand Mean Sample GJ96 = 2.1616 Microns



Paper & Paperboard Interlaboratory Testing Program

Analysis 377

Roughness - Print Surf Method - 2.5 to 6.0 Microns

TAPPI Official Test Method T555

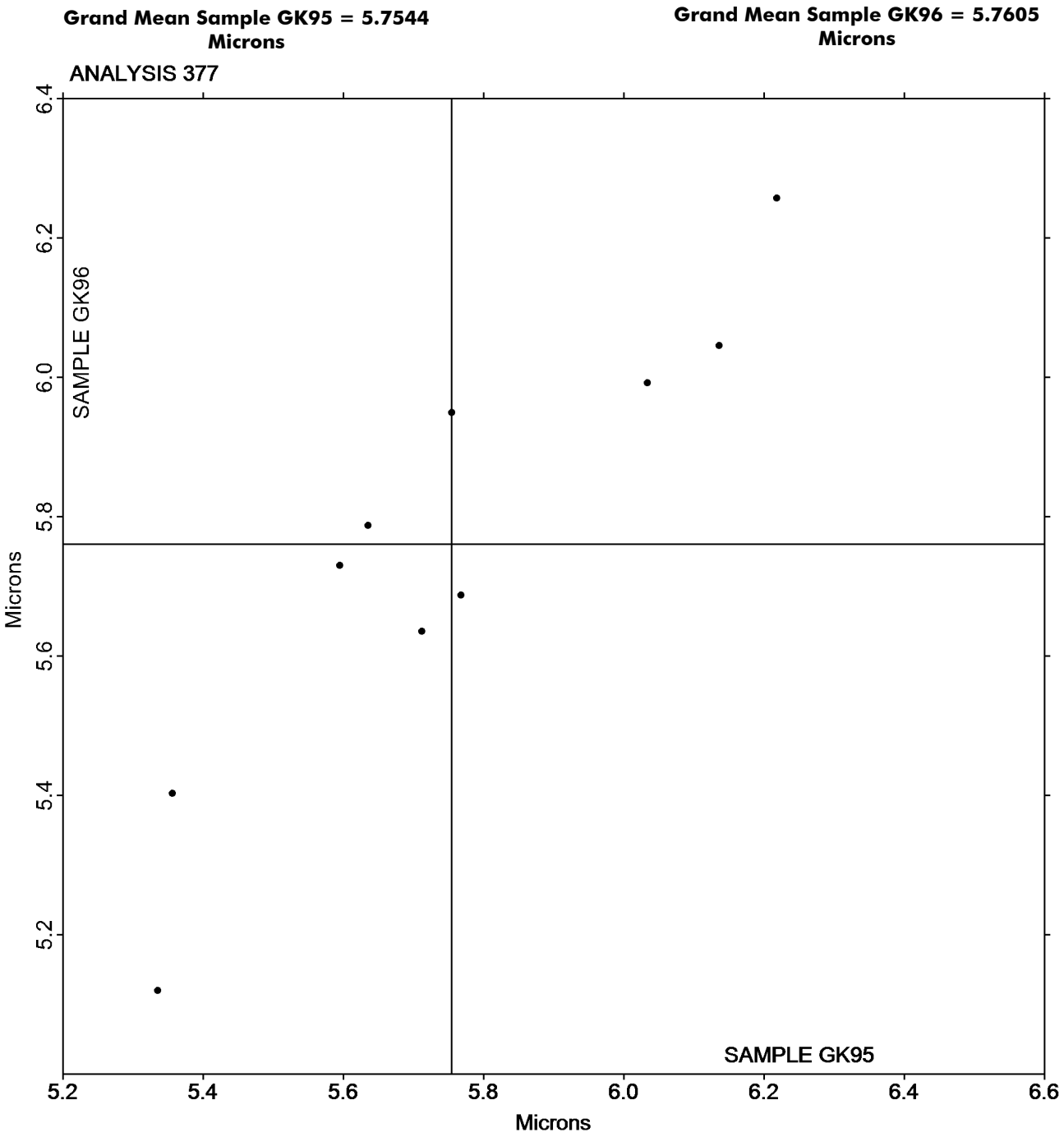
WebCode	Data Flag	Sample GK95 Lab Mean	Sample GK95 Diff from Grand Mean	Sample GK95 CPV	Sample GK96 Lab Mean	Sample GK96 Diff from Grand Mean	Sample GK96 CPV	Instr Code
4MPDYQ		5.335	-0.419	-1.39	5.120	-0.640	-1.94	ZZ
7UBK4Z		6.218	0.464	1.54	6.257	0.497	1.51	ZZ
9WU9KH		5.595	-0.159	-0.53	5.730	-0.030	-0.09	ZZ
AZCT6D		6.136	0.382	1.27	6.045	0.285	0.86	ZZ
CKVE37		6.034	0.280	0.93	5.992	0.232	0.70	ZZ
EHFU72		5.635	-0.119	-0.40	5.787	0.027	0.08	ZZ
KHWY7Z		5.755	0.001	0.00	5.949	0.189	0.57	ZZ
MGEUK8		5.712	-0.042	-0.14	5.635	-0.125	-0.38	ZZ
VFB4MP		5.768	0.014	0.05	5.687	-0.073	-0.22	ZZ
XPACPT		5.356	-0.398	-1.32	5.403	-0.357	-1.08	ZZ

Summary Statistics	Sample GK95	Sample GK96
Grand Means	5.75 Microns	5.76 Microns
Stnd Dev Btwn Labs	0.30 Microns	0.33 Microns

Statistics based on 10 of 10 reporting participants.

Key to Instrument Codes Reported by Participants

ZZ Instruments No Longer Tracked



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 378

Roughness - Sheffield Type

TAPPI Official Test Method T538

WebCode	Data Flag	Sample GL95 Lab Mean	Sample GL95 Diff from Grand Mean	Sample GL95 CPV	Sample GL96 Lab Mean	Sample GL96 Diff from Grand Mean	Sample GL96 CPV	Instr Code
2CP8ND		100.5	-22.5	-2.25	101.7	-20.6	-2.28	XX
38R7Y4		123.0	-0.1	-0.01	124.3	2.1	0.23	PP
3NLQLJ		103.4	-19.6	-1.96	103.2	-19.0	-2.11	LA
3WU8C4		146.9	23.9	2.38	143.9	21.7	2.40	TT
3WWT8K		129.5	6.5	0.65	131.6	9.4	1.04	GA
4ADA82		120.9	-2.2	-0.22	117.4	-4.9	-0.54	PP
4KYDE2		122.8	-0.2	-0.02	127.3	5.1	0.56	SH
4MPDYQ		120.8	-2.2	-0.22	116.5	-5.7	-0.63	LB
7UBK4Z	X	131.8	8.8	0.87	105.3	-16.9	-1.88	LW
829CA9		133.9	10.9	1.08	133.0	10.8	1.19	PP
9WU9KH	X	130.8	7.8	0.77	142.9	20.7	2.29	XX
A24WRT		131.9	8.9	0.88	129.5	7.3	0.81	TS
AAW4AX		117.9	-5.1	-0.51	123.9	1.7	0.19	HM
ANHCFC		121.7	-1.3	-0.13	120.7	-1.5	-0.17	LW
AZCT6D		123.6	0.6	0.06	121.0	-1.2	-0.14	PP
CKVE37		122.0	-1.1	-0.11	121.1	-1.1	-0.12	PP
CRA6KQ		119.3	-3.7	-0.37	119.8	-2.4	-0.27	GA
CUUAXF		135.4	12.4	1.24	133.9	11.7	1.30	PP
DKL2PT		120.0	-3.0	-0.30	121.5	-0.7	-0.08	HM
DNLAWP		120.4	-2.7	-0.27	116.4	-5.8	-0.65	MP
EEYET3		114.4	-8.6	-0.86	113.7	-8.5	-0.94	PP
EHFU72		130.7	7.7	0.77	123.3	1.1	0.12	PP
ETT2YV		129.3	6.2	0.62	122.4	0.2	0.02	PP
F7J8DB		115.7	-7.3	-0.73	113.0	-9.2	-1.02	TS
FWEZYB		119.1	-4.0	-0.40	114.6	-7.6	-0.85	PP
GGYJ7Y		126.8	3.8	0.37	123.4	1.2	0.13	TT
HFFVHD		121.1	-1.9	-0.19	122.9	0.7	0.08	LA
JBXYAT		126.3	3.3	0.32	121.9	-0.3	-0.04	LW
JFTT8U		120.8	-2.2	-0.22	121.1	-1.1	-0.13	PP
JL28W7		133.9	10.9	1.08	129.9	7.7	0.85	TS
JWJRG3		126.1	3.1	0.31	124.4	2.2	0.24	PP
K42GF3		99.6	-23.4	-2.34	103.4	-18.8	-2.09	PP
KC7NV3		119.6	-3.4	-0.34	121.4	-0.8	-0.09	VM
KHWY7Z		130.1	7.1	0.70	130.9	8.7	0.96	LW
KPF9BP		131.8	8.8	0.87	124.9	2.7	0.30	LA
LFKQAL		132.8	9.8	0.98	130.3	8.1	0.89	TT
MGEUK8		119.0	-4.0	-0.40	114.1	-8.1	-0.90	LW
NCWXBN	*	104.2	-18.8	-1.88	115.1	-7.1	-0.79	LA
PZYCKJ		114.6	-8.4	-0.84	116.9	-5.3	-0.59	LW
QFLEFD		132.8	9.8	0.97	130.2	8.0	0.88	SH
RF6DEW		134.9	11.9	1.18	139.0	16.8	1.86	HM

Paper & Paperboard Interlaboratory Testing Program

Analysis 378

Roughness - Sheffield Type

TAPPI Official Test Method T538

WebCode	Data Flag	Sample GL95 Lab Mean	Sample GL95 Diff from Grand Mean	Sample GL95 CPV	Sample GL96 Lab Mean	Sample GL96 Diff from Grand Mean	Sample GL96 CPV	Instr Code
RXLGY3		116.3	-6.8	-0.68	112.6	-9.7	-1.07	LA
TQF82A	X	155.0	32.0	3.19	163.8	41.6	4.61	LW
VFB4MP		146.2	23.1	2.31	138.6	16.4	1.82	PP
W99CV8	X	168.0	45.0	4.49	166.5	44.3	4.91	GL
X7WW27		117.3	-5.7	-0.57	119.7	-2.5	-0.28	XX
XGJQKU		129.8	6.8	0.68	131.9	9.7	1.08	PP
XGYA4R		122.9	-0.1	-0.01	126.9	4.7	0.52	SS
XPACPT		128.0	5.0	0.49	126.3	4.1	0.45	LA
Y2KBQE		123.7	0.7	0.07	125.3	3.1	0.34	LW
Y3UHRL		110.5	-12.5	-1.25	110.7	-11.5	-1.28	LA
YM49FH		114.0	-9.0	-0.90	111.1	-11.1	-1.23	PP

Summary Statistics	Sample GL95	Sample GL96
Grand Means	123.05 Sheffield	122.22 Sheffield
Stnd Dev Btwn Labs	10.01 Sheffield	9.02 Sheffield

Statistics based on 48 of 52 reporting participants.

Comments on Assigned Data Flags for Test #378

9WU9KH (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

W99CV8 (X) - Data for both samples are high. Possible Systematic Error.

TQF82A (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.

7UBK4Z (X) - Inconsistent in testing between samples.

Analysis Notes:

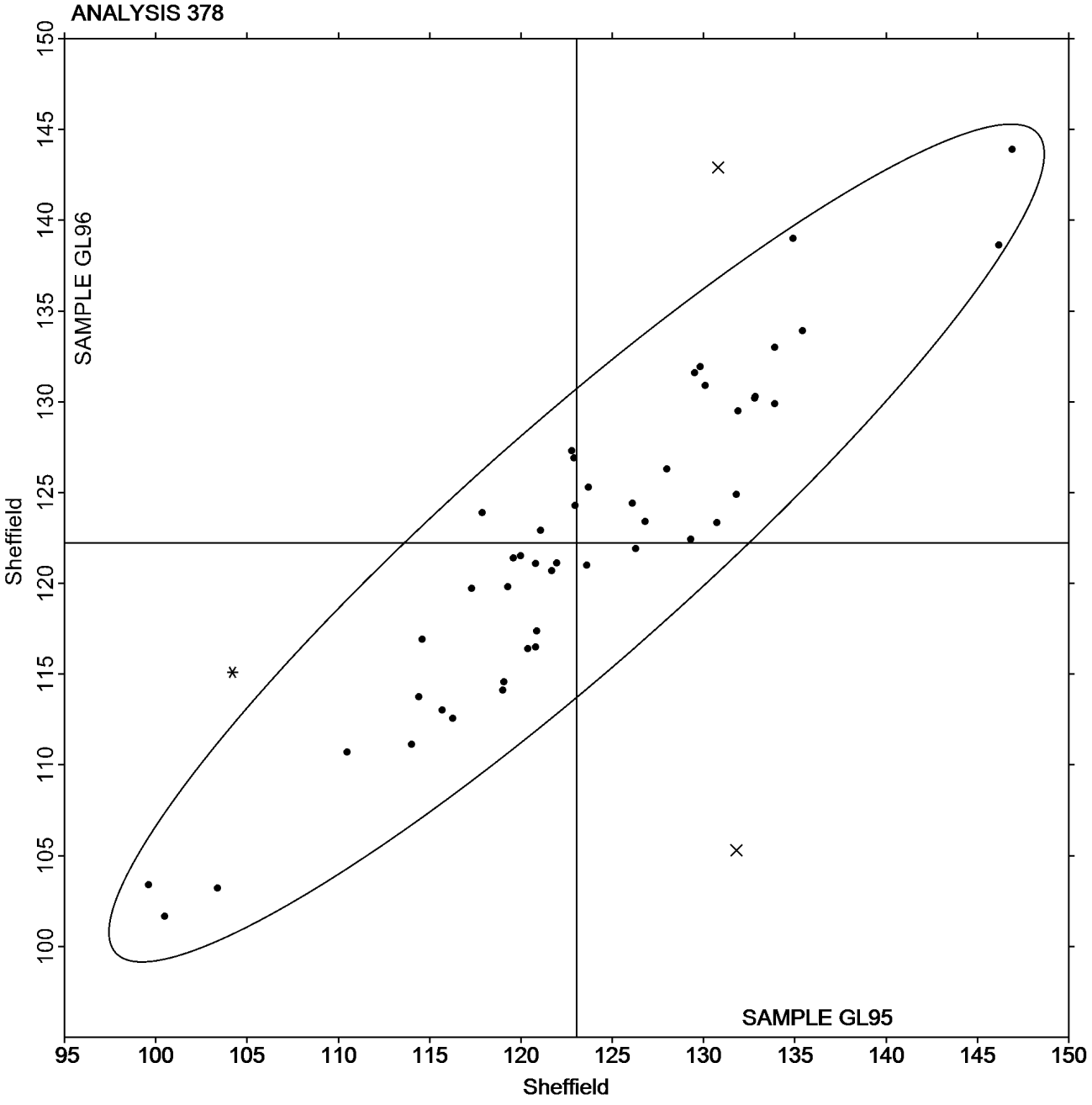
2CP8ND - One determination removed from the Lab Mean of Sample GL96 per Grubb's Test at 1% risk (TAPPI 1205).

Key to Instrument Codes Reported by Participants

GA	Gurley Precision #4340 Automatic Densometer	GL	Giddings and Lewis Sheffield
HM	Technidyne - Hagerty Model #538	LA	L & W Roughness Sheffield - Autoline
LB	L & W - Autoline 600	LW	L & W Roughness Tester
MP	Metso Paperlab	PP	Technidyne Profile/Plus
SH	Sheffield (Bendix Precisionaire)	SS	Sheffield Smoothchek Tester
TS	TMI Monitor/Smoothness, Model 58-02	TT	TMI Monitor/Smoothness II, Model 58-24
VM	Valmet PaperLab (was Kajaani\Robotest)	XX	Instrument make/model not specified by lab

Grand Mean Sample GL95 = 123.05
Sheffield

Grand Mean Sample GL96 = 122.22
Sheffield



Paper & Paperboard Interlaboratory Testing Program

Analysis 382
Moisture in Paper
TAPPI Official Test Method T412

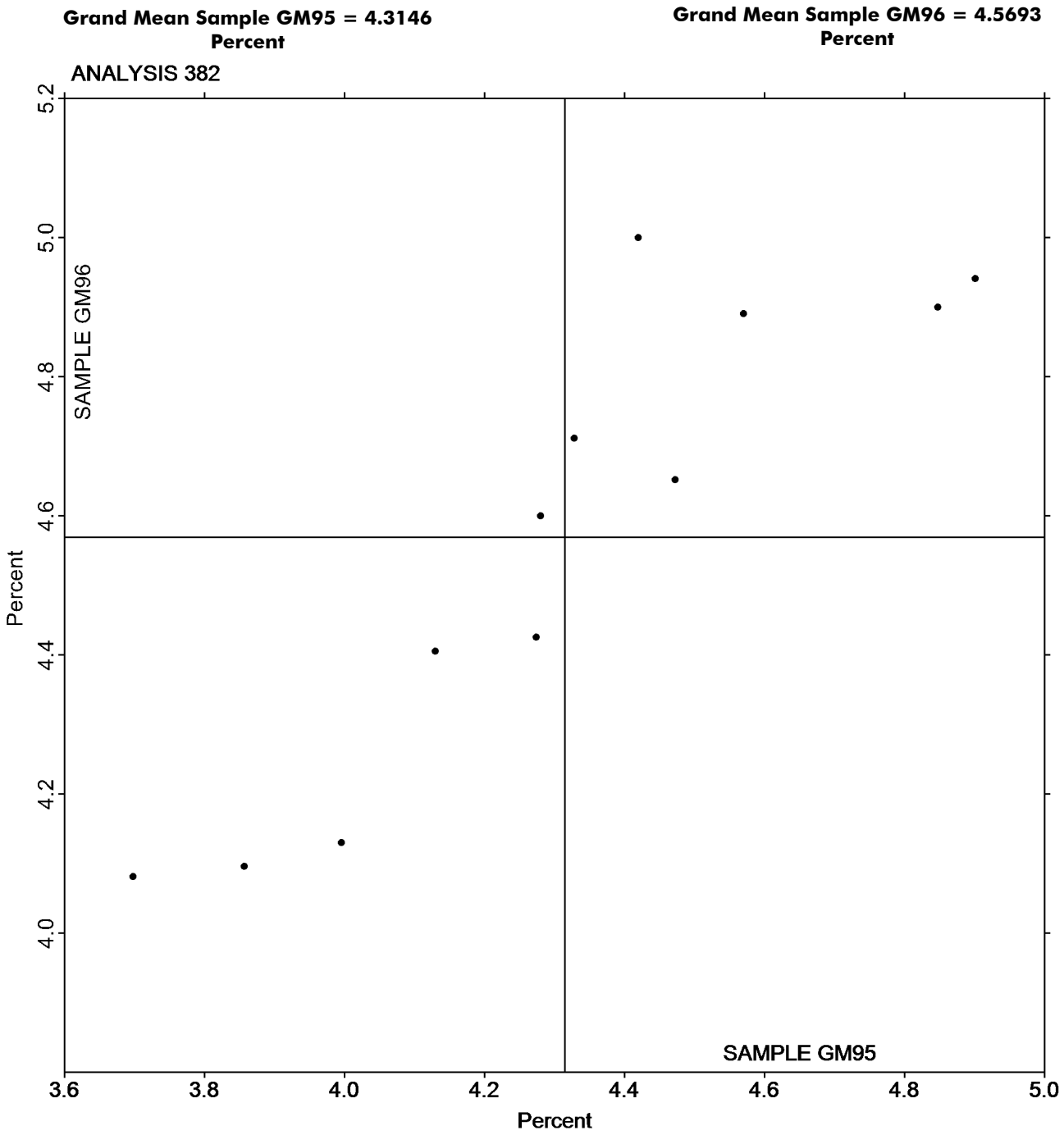
WebCode	Data Flag	Sample GM95 Lab Mean	Sample GM95 Diff from Grand Mean	Sample GM95 CPV	Sample GM96 Lab Mean	Sample GM96 Diff from Grand Mean	Sample GM96 CPV	Instr Code
32TEYM		4.570	0.255	0.70	4.890	0.321	0.95	ZZ
3WU8C4		4.901	0.586	1.61	4.941	0.372	1.10	ZZ
8E2VQZ		4.328	0.013	0.04	4.711	0.142	0.42	ZZ
9C8NKT		4.280	-0.035	-0.09	4.600	0.031	0.09	ZZ
CKVE37		4.473	0.158	0.43	4.652	0.083	0.24	ZZ
DXVKL3		3.996	-0.319	-0.88	4.130	-0.439	-1.29	ZZ
E6QZU8		4.848	0.533	1.47	4.900	0.331	0.97	ZZ
ENZ2KY		4.274	-0.040	-0.11	4.425	-0.144	-0.42	ZZ
JK3C42		3.698	-0.617	-1.69	4.081	-0.488	-1.44	ZZ
KEXRHH		4.130	-0.185	-0.51	4.405	-0.164	-0.48	ZZ
TQF82A		3.857	-0.458	-1.26	4.096	-0.473	-1.39	ZZ
VZGGJH		4.420	0.105	0.29	5.000	0.431	1.27	ZZ

Summary Statistics	Sample GM95	Sample GM96
Grand Means	4.31 Percent	4.57 Percent
Stnd Dev Btwn Labs	0.36 Percent	0.34 Percent

Statistics based on 12 of 12 reporting participants.

Key to Instrument Codes Reported by Participants

ZZ Instruments No Longer Tracked



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 384

Opacity (89% Reflectance Backing) - Fine Papers

TAPPI Official Test Method T425

WebCode	Data Flag	Sample GN95 Lab Mean	Sample GN95 Diff from Grand Mean	Sample GN95 CPV	Sample GN96 Lab Mean	Sample GN96 Diff from Grand Mean	Sample GN96 CPV	Instr Code
38R7Y4		89.36	0.16	0.25	93.74	0.12	0.30	ZZ
3NLQLJ		88.66	-0.54	-0.83	93.30	-0.32	-0.82	ZZ
4KYDE2		89.35	0.15	0.24	93.52	-0.10	-0.26	ZZ
7JCP76		89.37	0.17	0.26	93.83	0.21	0.53	ZZ
7R7UY7		87.80	-1.40	-2.17	92.70	-0.92	-2.35	ZZ
A24WRT		89.19	-0.01	-0.01	93.60	-0.02	-0.05	ZZ
AAW4AX	*	88.18	-1.02	-1.58	93.75	0.13	0.33	ZZ
AZCT6D		89.19	-0.01	-0.01	93.72	0.09	0.24	ZZ
CKVE37		89.89	0.69	1.08	93.76	0.14	0.36	ZZ
DKL2PT		89.84	0.64	1.00	93.73	0.11	0.28	ZZ
EEYET3		88.40	-0.80	-1.24	93.30	-0.32	-0.82	ZZ
EHFU72		88.96	-0.24	-0.37	93.47	-0.15	-0.39	ZZ
GGYJ7Y		88.82	-0.38	-0.58	93.25	-0.37	-0.95	ZZ
GL7RPN		88.58	-0.62	-0.96	93.06	-0.56	-1.44	ZZ
JFTT8U		89.00	-0.20	-0.31	93.51	-0.11	-0.28	ZZ
JL28W7		89.66	0.46	0.71	94.23	0.61	1.55	ZZ
JWJRG3		89.21	0.01	0.02	93.96	0.34	0.86	ZZ
K42GF3		89.16	-0.04	-0.06	93.37	-0.25	-0.64	ZZ
LGF9BM		89.21	0.01	0.02	93.73	0.11	0.28	ZZ
MB9XZ8		89.66	0.46	0.72	94.01	0.39	1.00	ZZ
RF6DEW		89.21	0.01	0.02	93.69	0.07	0.18	ZZ
RXLGY3	X	87.66	-1.54	-2.39	86.31	-7.31	-18.67	ZZ
VFB4MP		89.17	-0.03	-0.04	93.16	-0.46	-1.18	ZZ
WVHK9H	X	86.44	-2.76	-4.28	87.65	-5.97	-15.25	ZZ
X7WW27		88.96	-0.24	-0.37	93.39	-0.23	-0.59	ZZ
XPACPT	*	91.22	2.02	3.14	94.54	0.92	2.36	ZZ
Y9GXQQ		89.35	0.15	0.24	94.20	0.58	1.47	ZZ
YM49FH		89.72	0.53	0.82	93.64	0.02	0.05	ZZ

Summary Statistics	Sample GN95	Sample GN96
Grand Means	89.20 Percent	93.62 Percent
Stnd Dev Btwn Labs	0.64 Percent	0.39 Percent

Statistics based on 26 of 28 reporting participants.

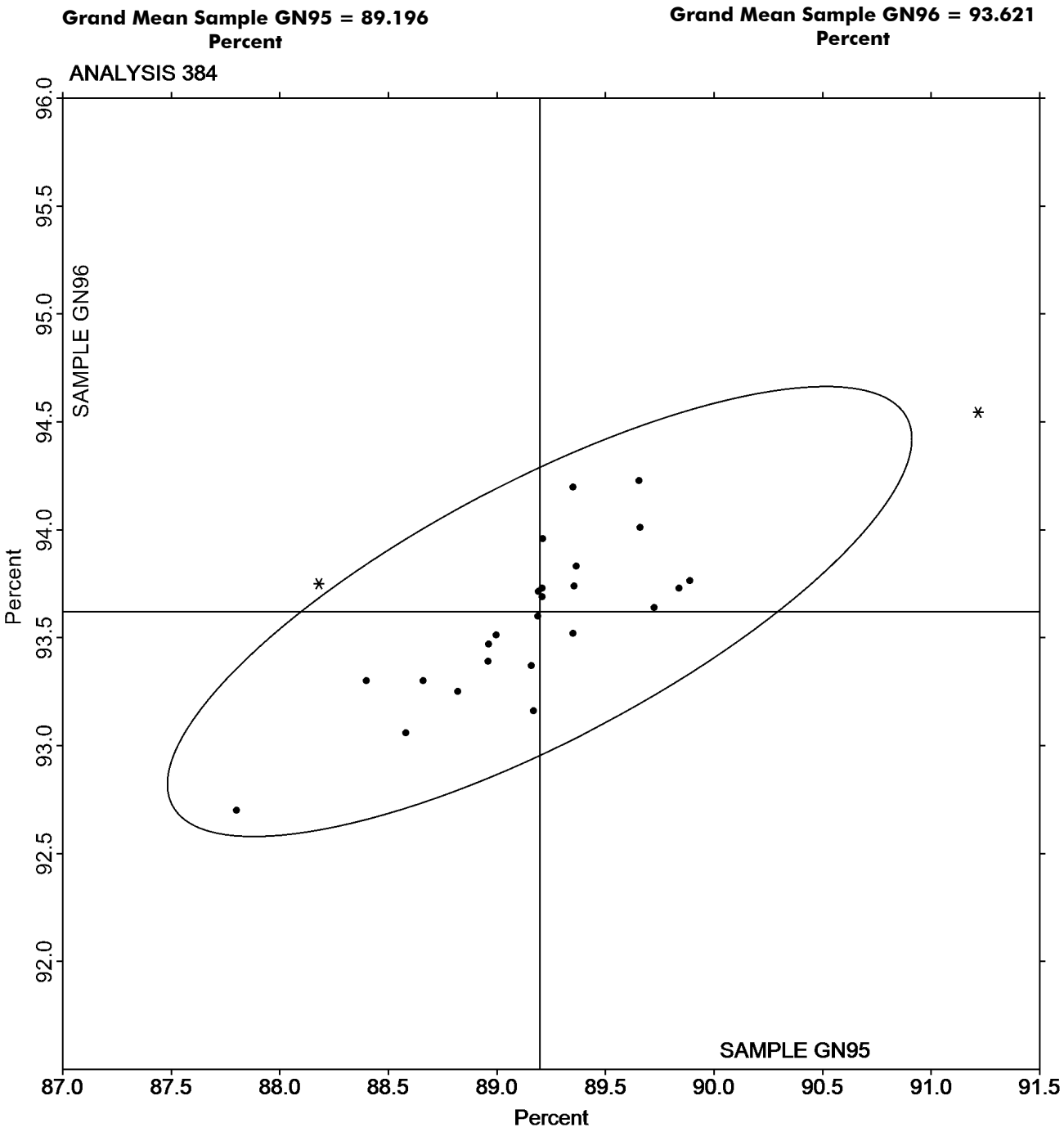
Comments on Assigned Data Flags for Test #384

RXLGY3 (X) - Extreme Data for Sample GN96.

WVHK9H (X) - Extreme Data.

Key to Instrument Codes Reported by Participants

ZZ Instruments No Longer Tracked



Paper & Paperboard Interlaboratory Testing Program

Analysis 386

Opacity (Paper Backing) - Fine Papers and Newsprint

TAPPI Official Test Method T519

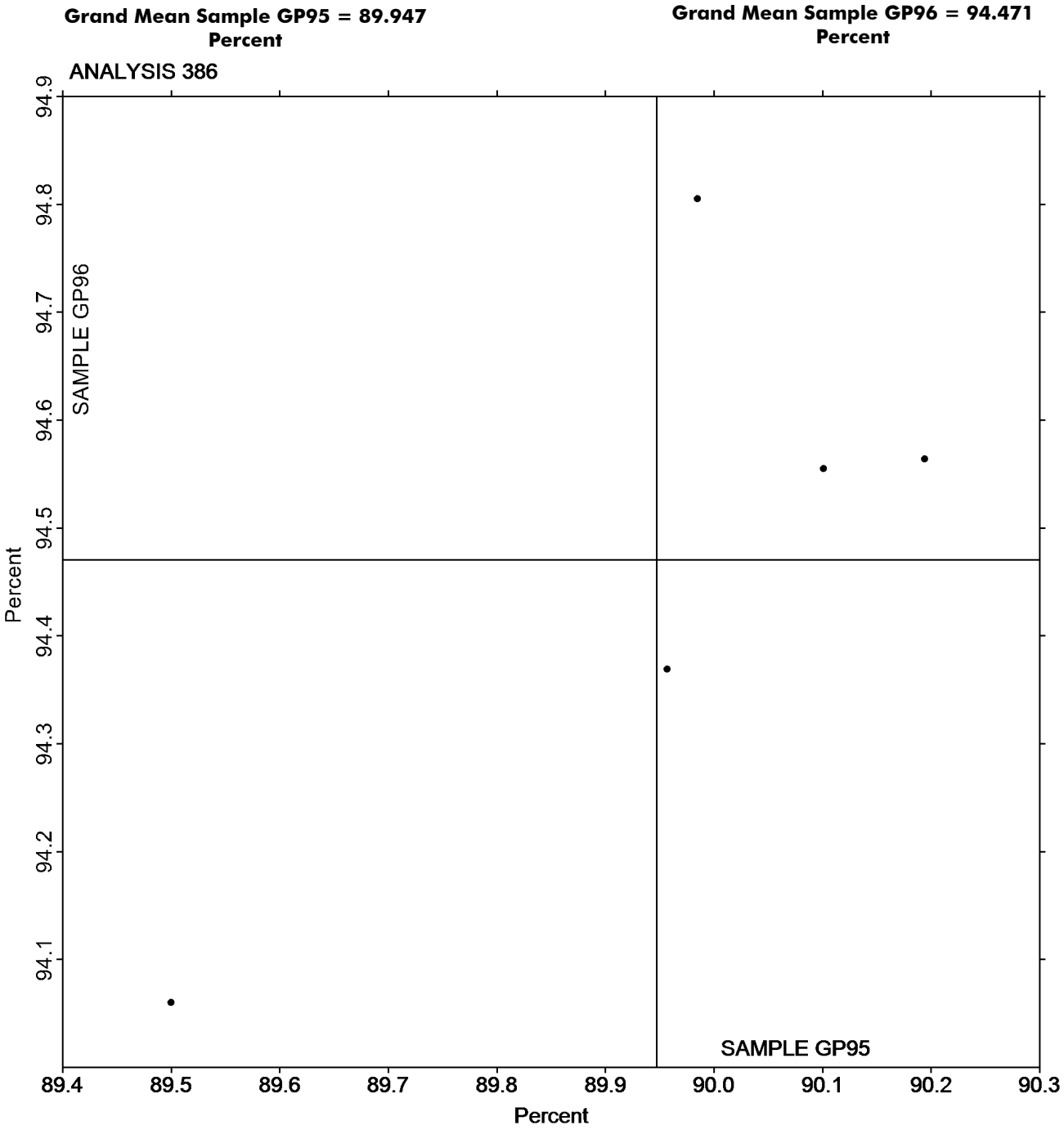
WebCode	Data Flag	Sample GP95 Lab Mean	Sample GP95 Diff from Grand Mean	Sample GP95 CPV	Sample GP96 Lab Mean	Sample GP96 Diff from Grand Mean	Sample GP96 CPV	Instr Code
932MK3		90.19	0.25	0.92	94.56	0.09	0.34	ZZ
ANHCFC		89.99	0.04	0.14	94.81	0.33	1.21	ZZ
JZFHGL		89.96	0.01	0.04	94.37	-0.10	-0.37	ZZ
TQF82A		90.10	0.15	0.57	94.56	0.08	0.30	ZZ
XBTFAW		89.50	-0.45	-1.67	94.06	-0.41	-1.48	ZZ

Summary Statistics	Sample GP95	Sample GP96
Grand Means	89.95 Percent	94.47 Percent
Stnd Dev Btwn Labs	0.27 Percent	0.28 Percent

Statistics based on 5 of 5 reporting participants.

Key to Instrument Codes Reported by Participants

ZZ Instruments No Longer Tracked



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 390
Directional Brightness
TAPPI Official Test Method T452

WebCode	Data Flag	Sample GR95 Lab Mean	Sample GR95 Diff from Grand Mean	Sample GR95 CPV	Sample GR96 Lab Mean	Sample GR96 Diff from Grand Mean	Sample GR96 CPV	Instr Code
2CP8ND	*	81.00	-4.45	-3.03	80.54	-4.88	-3.13	XX
38R7Y4		82.89	-2.56	-1.75	82.84	-2.58	-1.65	PP
7R7UY7		85.41	-0.04	-0.03	85.46	0.04	0.03	TS
7UBK4Z		87.08	1.62	1.10	86.98	1.56	1.00	HG
A24WRT		85.08	-0.38	-0.26	85.16	-0.26	-0.16	TS
CUUAXF		85.31	-0.15	-0.10	85.32	-0.10	-0.06	HG
EEYET3		85.93	0.47	0.32	85.91	0.49	0.32	XX
ETT2YV		85.51	0.06	0.04	85.70	0.28	0.18	TT
FWEZYB		87.39	1.93	1.32	87.46	2.04	1.31	TP
JWJRG3	X	73.75	-11.70	-7.96	85.37	-0.05	-0.03	TP
K42GF3		86.70	1.24	0.85	86.86	1.44	0.92	XC
KUNQQ6		87.26	1.81	1.23	87.23	1.81	1.16	HG
LGF9BM		84.85	-0.60	-0.41	84.73	-0.69	-0.44	TT
MGEUK8		85.30	-0.15	-0.11	85.18	-0.24	-0.16	TT
RF6DEW		85.88	0.43	0.29	85.93	0.51	0.33	TS
TT4LPJ		84.52	-0.94	-0.64	84.51	-0.91	-0.58	TD
W99CV8	X	68.26	-17.19	-11.70	68.33	-17.09	-10.96	TS
X7WW27		86.22	0.77	0.52	86.17	0.75	0.48	PE
XGJQKU		85.75	0.29	0.20	85.69	0.27	0.17	HG
XPACPT		86.39	0.93	0.63	86.36	0.94	0.60	TS
Y2KBQE		85.41	-0.05	-0.03	85.45	0.03	0.02	HZ
YM49FH		85.24	-0.22	-0.15	84.91	-0.51	-0.32	TT

Summary Statistics	Sample GR95	Sample GR96
Grand Means	85.45 Percent	85.42 Percent
Stnd Dev Btwn Labs	1.47 Percent	1.56 Percent

Statistics based on 20 of 22 reporting participants.

Comments on Assigned Data Flags for Test #390

JWJRG3 (X) - Extreme Data for Sample GR95.

W99CV8 (X) - Extreme Data.

Analysis Notes:

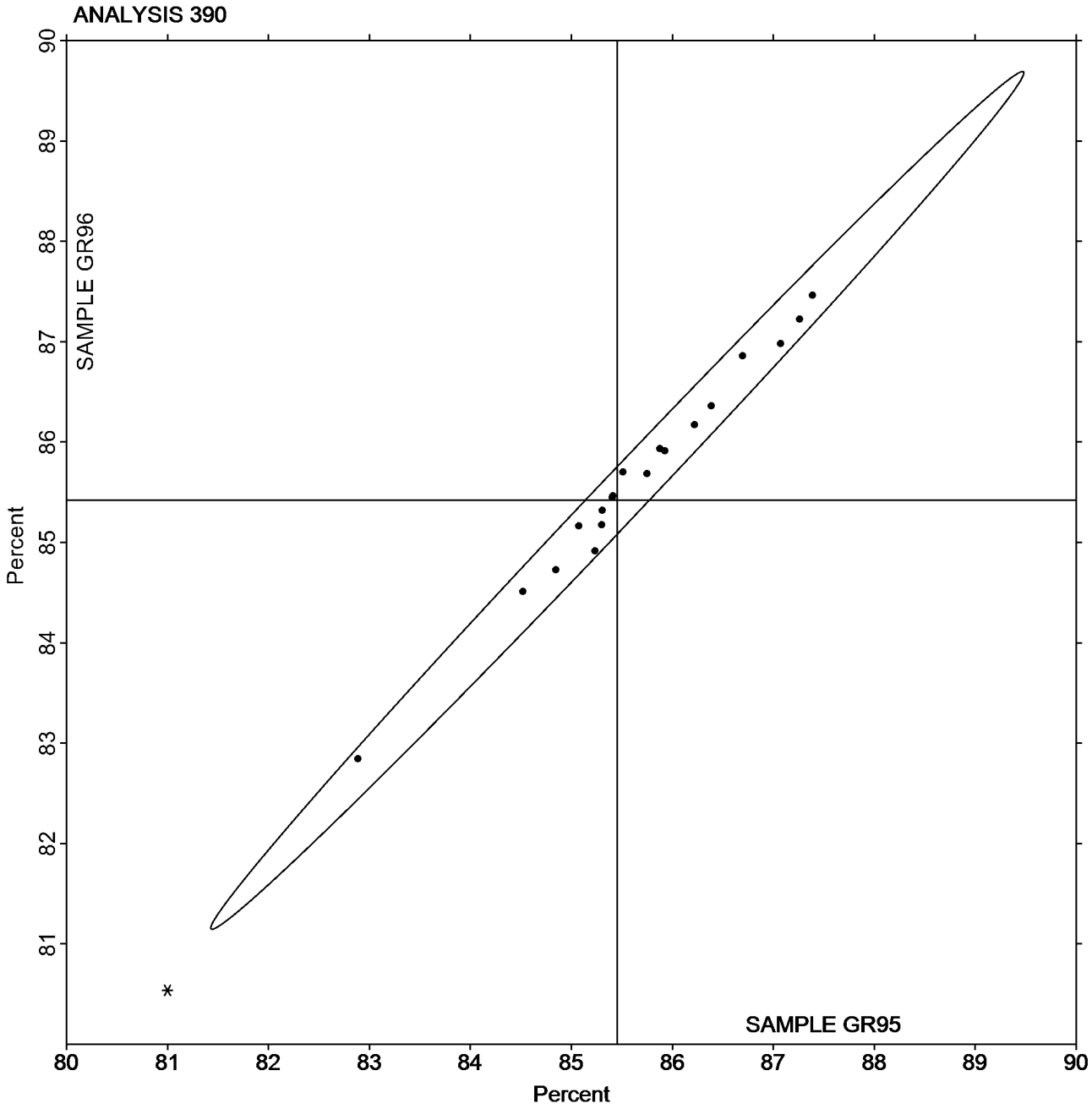
XPACPT - One determination removed from the Lab Mean of Sample GR96 per Grubb's Test at 1% risk (TAPPI 1205).

Key to Instrument Codes Reported by Participants

HG	Hunter Labscan / XE	HZ	Hunter Lab ColorFlex EZ Series
PE	Photovolt 577	PP	Technidyne Profile/Plus
TD	Technidyne Color Touch 45X	TP	Technidyne Test/Plus
TS	Technidyne Brightimeter Micro S-5	TT	Technidyne Brightimeter Micro S4-M
XC	X-Rite Color i5	XX	Instrument make/model not specified by lab

Grand Mean Sample GR95 = 85.455
Percent

Grand Mean Sample GR96 = 85.419
Percent



Paper & Paperboard Interlaboratory Testing Program

Analysis 391

Directional Brightness of Fluorescent Samples

TAPPI Official Test Method T452

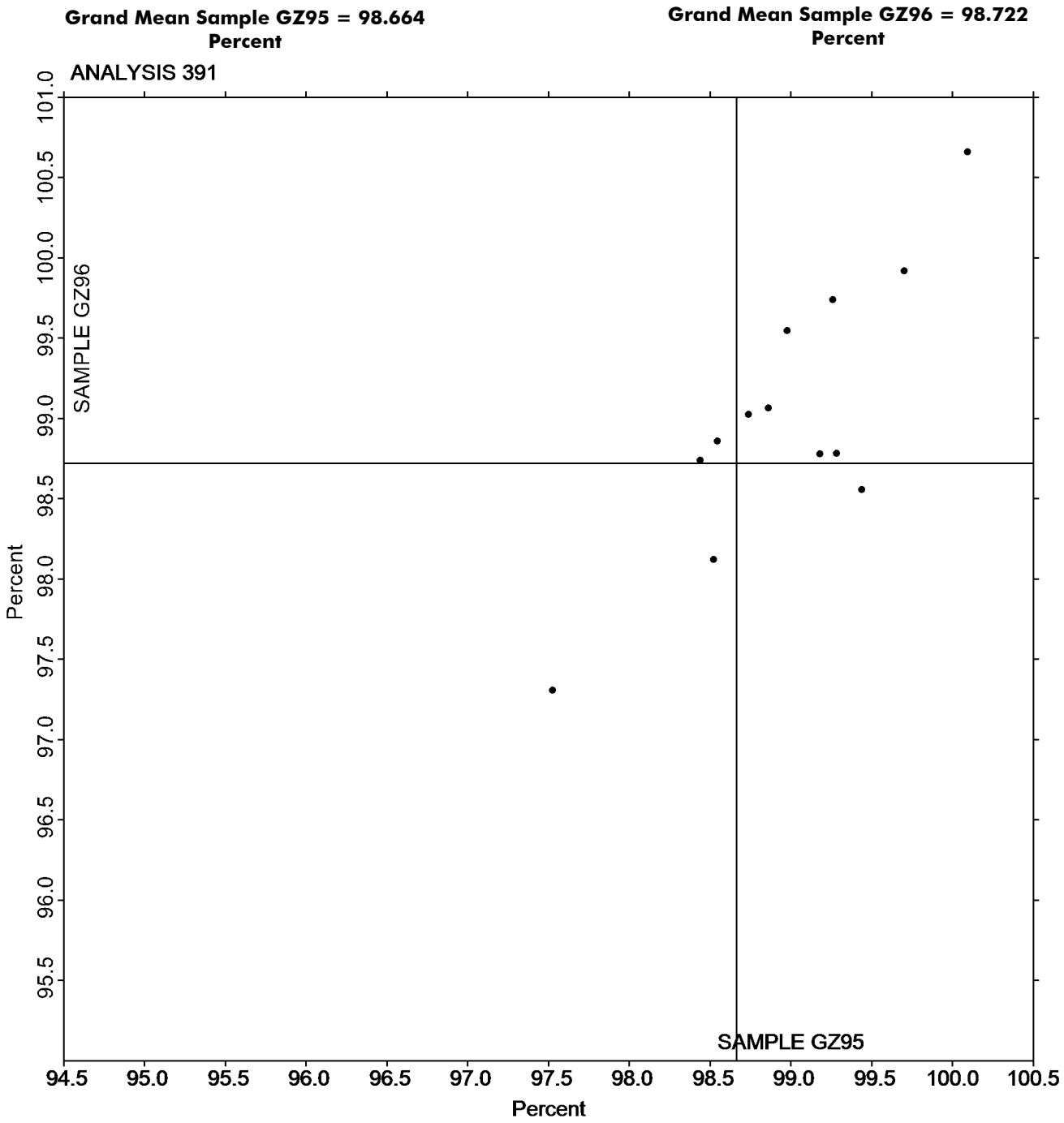
WebCode	Data Flag	Sample GZ95 Lab Mean	Sample GZ95 Diff from Grand Mean	Sample GZ95 CPV	Sample GZ96 Lab Mean	Sample GZ96 Diff from Grand Mean	Sample GZ96 CPV	Instr Code
7JCP76		99.28	0.62	0.48	98.78	0.06	0.04	TS
8A82QD		97.53	-1.14	-0.88	97.31	-1.42	-1.06	LE
A24WRT		98.86	0.20	0.15	99.07	0.34	0.26	TS
AAW4AX	*	94.74	-3.92	-3.04	95.00	-3.72	-2.77	TT
CKVE37		98.98	0.31	0.24	99.55	0.83	0.62	TS
EHFU72		98.55	-0.12	-0.09	98.86	0.14	0.10	TS
JFTT8U		99.18	0.52	0.40	98.78	0.06	0.04	PP
JL28W7		98.52	-0.14	-0.11	98.12	-0.60	-0.45	TS
JWJRG3		99.44	0.78	0.60	98.56	-0.16	-0.12	PP
MB9XZ8		100.09	1.43	1.11	100.66	1.94	1.44	TS
RXLGY3		99.70	1.04	0.80	99.92	1.20	0.89	TT
VFB4MP		99.26	0.60	0.46	99.74	1.02	0.76	TT
WVHK9H		98.44	-0.22	-0.17	98.74	0.02	0.01	TT
Y9GXQQ		98.74	0.07	0.06	99.02	0.30	0.23	PP

Summary Statistics	Sample GZ95	Sample GZ96
Grand Means	98.66 Percent	98.72 Percent
Stnd Dev Btwn Labs	1.29 Percent	1.34 Percent

Statistics based on 14 of 14 reporting participants.

Key to Instrument Codes Reported by Participants

LE	L & W Elrepho	PP	Technidyne Profile/Plus
TS	Technidyne Brightimeter Micro S-5	TT	Technidyne Brightimeter Micro S4-M



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 392
Diffuse Brightness
TAPPI Official Test Method T525

WebCode	Data Flag	Sample GR95 Lab Mean	Sample GR95 Diff from Grand Mean	Sample GR95 CPV	Sample GR96 Lab Mean	Sample GR96 Diff from Grand Mean	Sample GR96 CPV	Instr Code
3WU8C4		85.69	0.14	0.18	85.62	0.09	0.11	LE
4ZVN7D	*	82.81	-2.74	-3.55	82.74	-2.80	-3.57	TL
6RF8CH		85.70	0.15	0.20	85.66	0.13	0.16	LA
7TZHG2		85.49	-0.06	-0.08	85.43	-0.11	-0.14	XX
7UBK4Z		85.76	0.21	0.27	85.78	0.24	0.31	TC
989BX4		84.47	-1.08	-1.40	84.43	-1.10	-1.41	EG
9HW4AZ		85.79	0.24	0.31	85.78	0.24	0.31	LE
ANHCFC		85.64	0.09	0.12	85.70	0.16	0.21	TC
E3KCG3		85.70	0.15	0.19	85.70	0.16	0.21	TC
ETT2YV		85.76	0.21	0.27	85.58	0.05	0.06	LT
FWEZYB		85.85	0.30	0.39	85.81	0.27	0.34	TC
GGYJ7Y	X	68.68	-16.87	-21.90	68.92	-16.62	-21.20	TC
JZFHGL		85.63	0.08	0.10	85.69	0.15	0.20	AC
MGEUK8		86.21	0.65	0.85	86.19	0.65	0.83	EG
PNM3ZZ		85.84	0.29	0.37	85.83	0.29	0.38	TC
QUTVUV		85.62	0.07	0.09	85.64	0.10	0.13	TC
RF6DEW		85.62	0.07	0.09	85.77	0.24	0.31	LT
TQF82A		85.47	-0.08	-0.10	85.46	-0.08	-0.10	LE
XBTFAW		86.60	1.05	1.36	86.56	1.03	1.31	TM
XPACPT		85.82	0.27	0.35	85.81	0.27	0.34	TC

Summary Statistics	Sample GR95	Sample GR96
Grand Means	85.55 Percent	85.53 Percent
Stnd Dev Btwn Labs	0.77 Percent	0.78 Percent

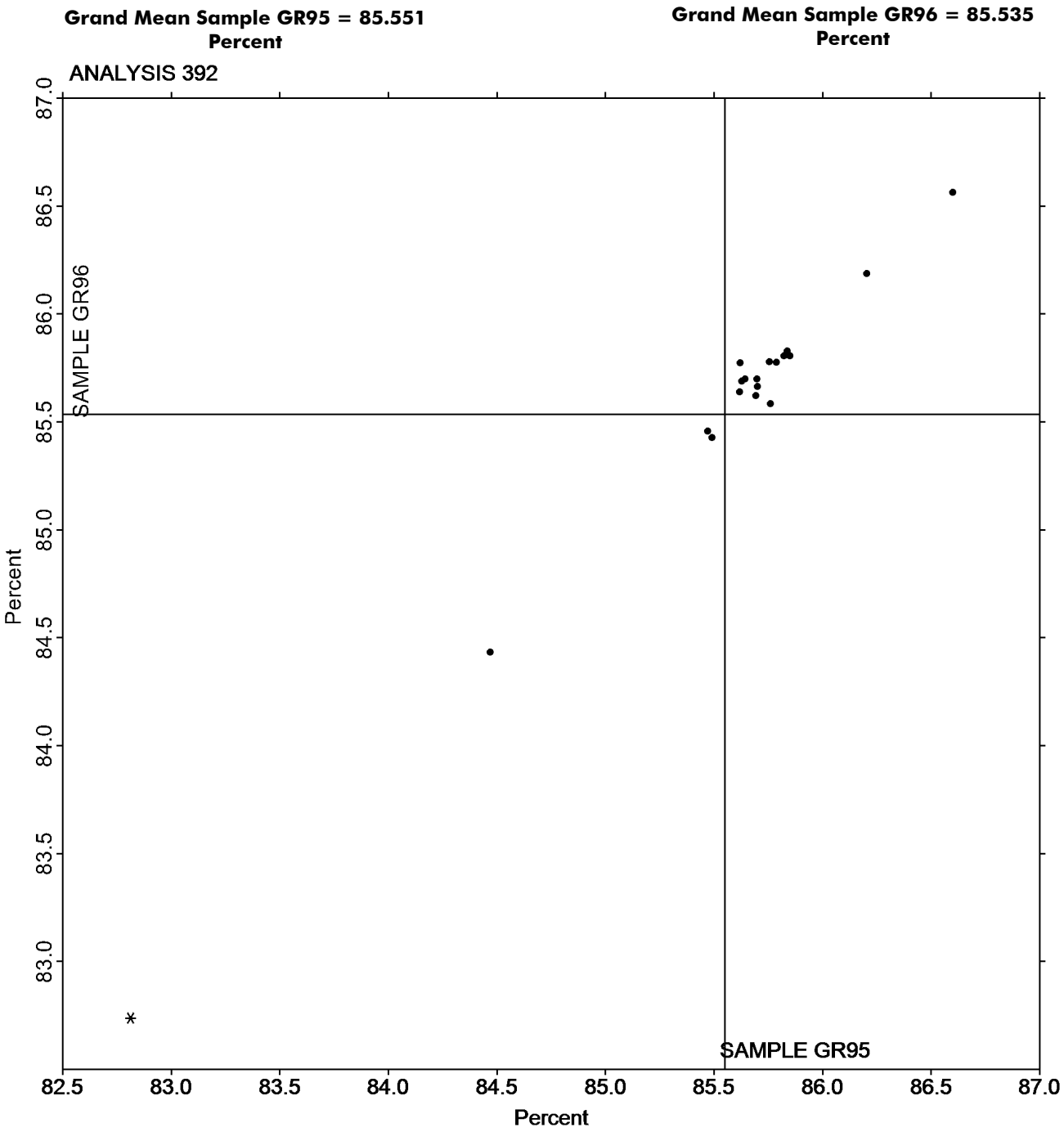
Statistics based on 19 of 20 reporting participants.

Comments on Assigned Data Flags for Test #392

GGYJ7Y (X) - Extreme Data.

Key to Instrument Codes Reported by Participants

AC	ACS Spectro-Sensor II	EG	Datacolor Elrepho 450X
LA	L & W Elrepho - Autoline	LE	L & W Elrepho
LT	L & W Elrepho SE 071	TC	Technidyne Color Touch Series
TL	Technidyne Technibrite TB-1	TM	Technidyne Technibrite Micro TB-1C
XX	Instrument make/model not specified by lab		



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 394

Fluorescent Component of Directional Brightness

TAPPI Official Test Method T452

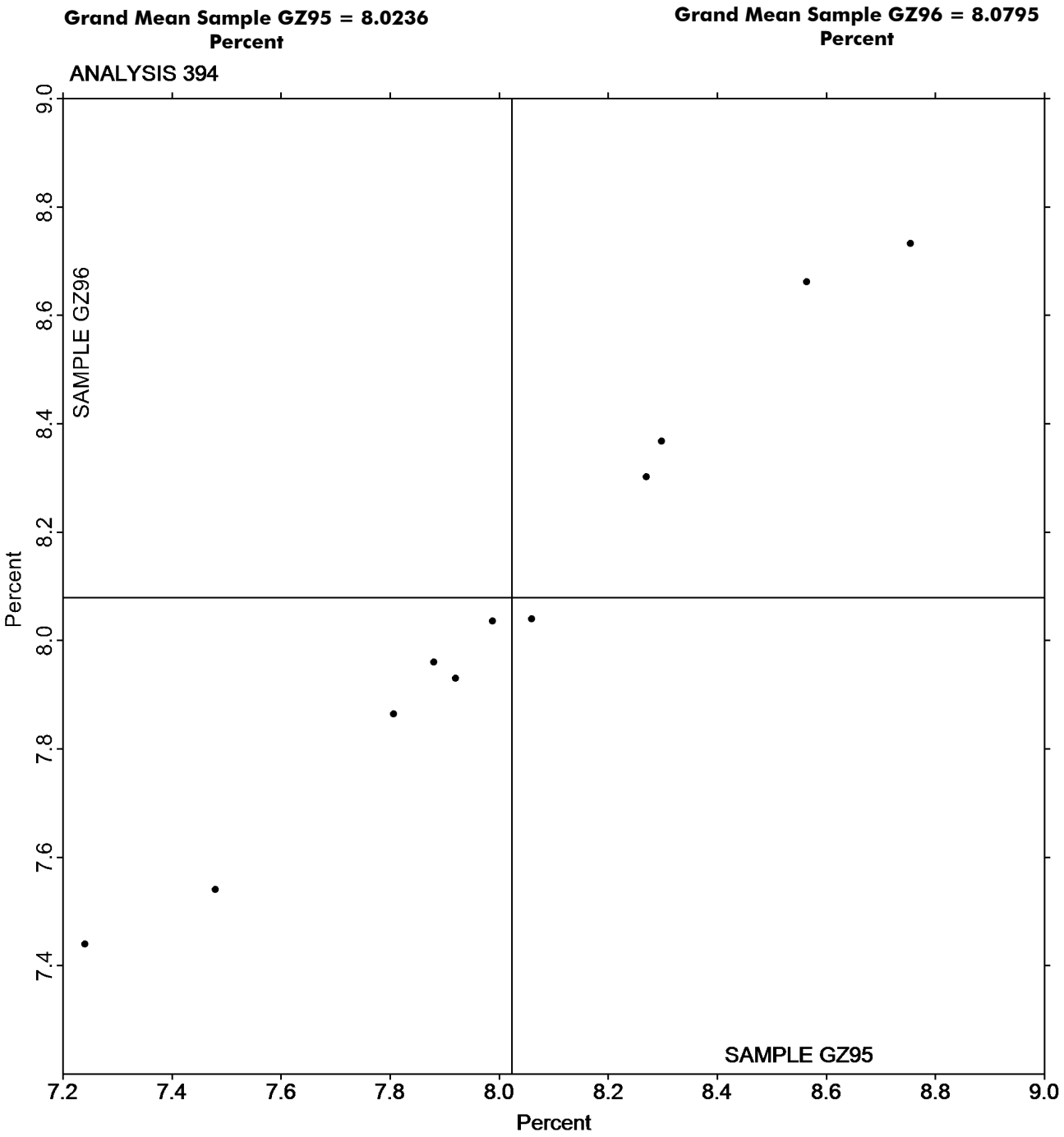
WebCode	Data Flag	Sample GZ95 Lab Mean	Sample GZ95 Diff from Grand Mean	Sample GZ95 CPV	Sample GZ96 Lab Mean	Sample GZ96 Diff from Grand Mean	Sample GZ96 CPV	Instr Code
7JCP76		7.988	-0.036	-0.08	8.036	-0.043	-0.11	TS
8A82QD		8.754	0.730	1.65	8.732	0.653	1.59	LE
A24WRT		8.298	0.274	0.62	8.368	0.289	0.70	TS
AAW4AX		7.240	-0.784	-1.77	7.440	-0.639	-1.56	TT
CKVE37		8.270	0.246	0.56	8.302	0.223	0.54	TS
EHFU72		7.920	-0.104	-0.23	7.930	-0.149	-0.36	TS
JFTT8U		8.060	0.036	0.08	8.040	-0.039	-0.10	PP
MB9XZ8		8.564	0.540	1.22	8.662	0.583	1.42	TS
RXLGY3		7.480	-0.544	-1.23	7.540	-0.539	-1.31	TT
VFB4MP		7.880	-0.144	-0.33	7.960	-0.119	-0.29	TT
Y9GXQQ		7.806	-0.218	-0.49	7.864	-0.215	-0.52	PP

Summary Statistics	Sample GZ95	Sample GZ96
Grand Means	8.02 Percent	8.08 Percent
Stnd Dev Btwn Labs	0.44 Percent	0.41 Percent

Statistics based on 11 of 11 reporting participants.

Key to Instrument Codes Reported by Participants

LE	L & W Elrepho	PP	Technidyne Profile/Plus
TS	Technidyne Brightimeter Micro S-5	TT	Technidyne Brightimeter Micro S4-M



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 395

Specular Gloss at 75 Degrees - High Range

TAPPI Official Test Method T480

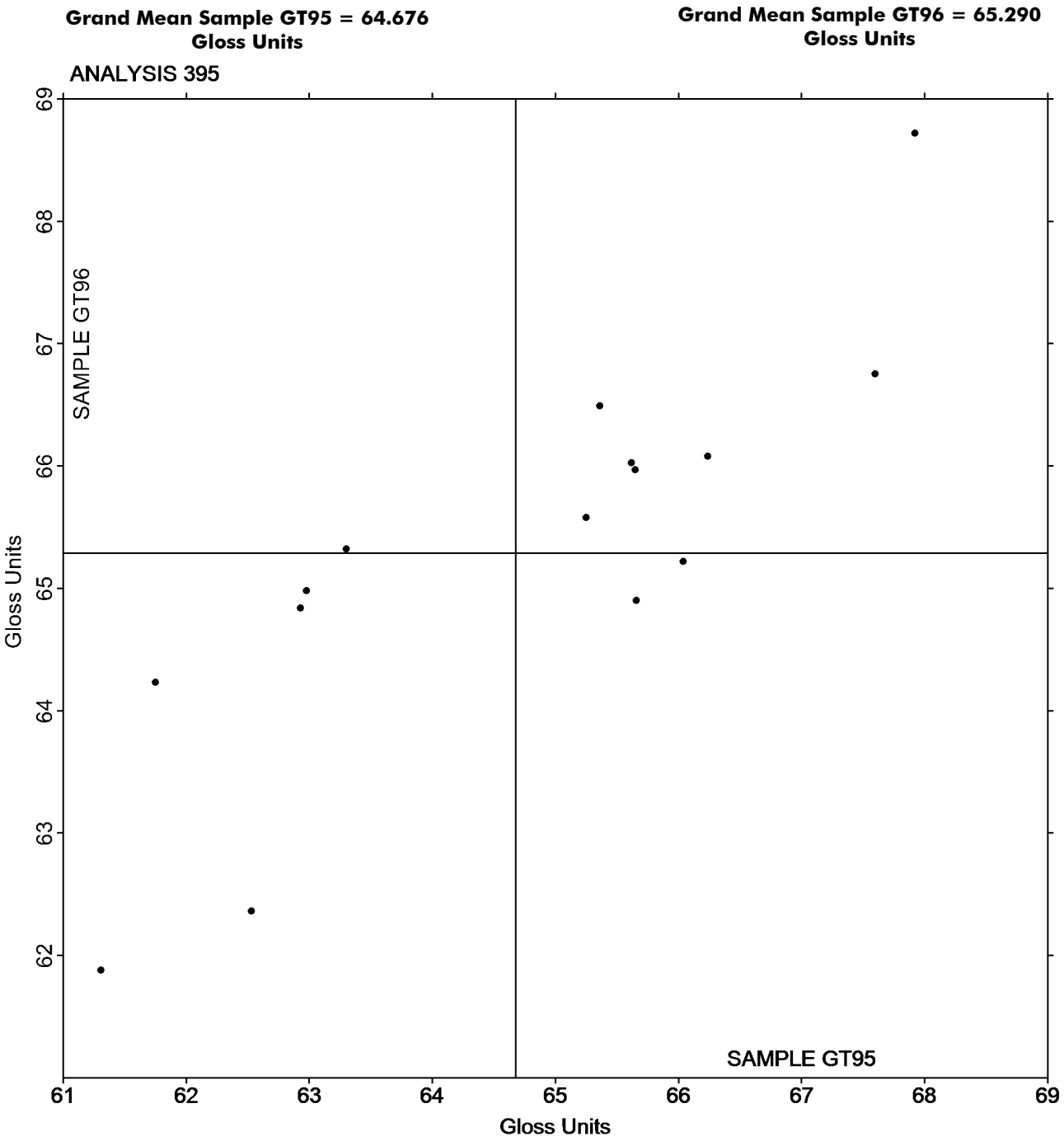
WebCode	Data Flag	Sample GT95 Lab Mean	Sample GT95 Diff from Grand Mean	Sample GT95 CPV	Sample GT96 Lab Mean	Sample GT96 Diff from Grand Mean	Sample GT96 CPV	Instr Code
4MPDYQ		65.25	0.57	0.28	65.58	0.29	0.17	LG
7JCP76		65.65	0.97	0.47	65.97	0.68	0.41	LF
7R7UY7		65.36	0.68	0.33	66.49	1.20	0.72	LA
AAW4AX		62.53	-2.15	-1.04	62.36	-2.93	-1.76	PP
CUUAXF		61.31	-3.37	-1.64	61.88	-3.41	-2.05	PP
ETT2YV		61.75	-2.93	-1.42	64.23	-1.06	-0.64	GA
F7J8DB		63.30	-1.38	-0.67	65.32	0.03	0.02	XX
FWEZYB		62.98	-1.70	-0.82	64.98	-0.31	-0.19	GM
JZFHGL		66.24	1.56	0.76	66.08	0.79	0.47	LB
KC7NV3		66.04	1.36	0.66	65.22	-0.07	-0.04	VM
KPF9BP		67.60	2.92	1.42	66.75	1.46	0.88	LF
LGF9BM		65.62	0.94	0.46	66.03	0.74	0.44	TH
MGEUK8		67.92	3.24	1.58	68.72	3.43	2.06	TH
XGJQKU		62.93	-1.75	-0.85	64.84	-0.45	-0.27	PP
Y9GXQQ		65.66	0.98	0.48	64.90	-0.39	-0.23	PP

Summary Statistics	Sample GT95	Sample GT96
Grand Means	64.68 Gloss Units	65.29 Gloss Units
Stnd Dev Btwn Labs	2.06 Gloss Units	1.67 Gloss Units

Statistics based on 15 of 15 reporting participants.

Key to Instrument Codes Reported by Participants

GA	BYK-Gardner (model not specified)	GM	BYK-Gardner micro-gloss
LA	L & W Gloss - Autoline 300	LB	L & W Gloss Tester Code 224
LF	L & W Autoline 400	LG	L & W Autoline 600
PP	Technidyne Profile/Plus	TH	Technidyne T480A
VM	Valmet PaperLab (was Kajaani/Robotest)	XX	Instrument make/model not specified by lab



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 396

Specular Gloss at 75 Degrees - Low Range

TAPPI Official Test Method T480

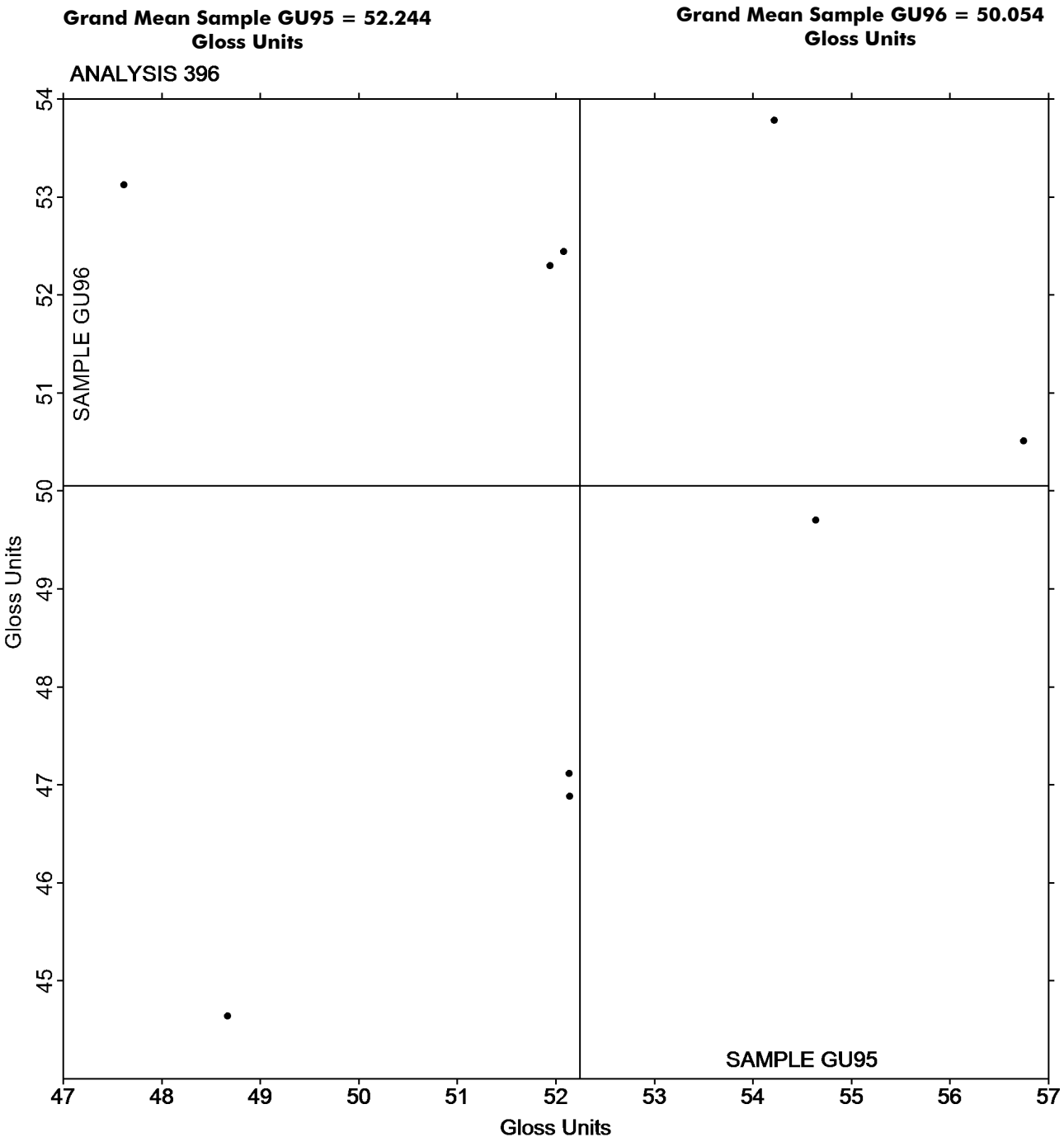
WebCode	Data Flag	Sample GU95 Lab Mean	Sample GU95 Diff from Grand Mean	Sample GU95 CPV	Sample GU96 Lab Mean	Sample GU96 Diff from Grand Mean	Sample GU96 CPV	Instr Code
3WU8C4		47.62	-4.62	-1.63	53.12	3.07	0.96	TH
7UBK4Z		54.64	2.40	0.85	49.70	-0.35	-0.11	PP
AZCT6D		52.08	-0.16	-0.06	52.44	2.39	0.74	PP
GGYJ7Y		56.75	4.51	1.59	50.51	0.46	0.14	TH
JBXYAT		48.67	-3.57	-1.26	44.64	-5.41	-1.69	GM
JZFHGL		54.22	1.98	0.70	53.78	3.73	1.16	LA
K42GF3		51.94	-0.30	-0.11	52.30	2.25	0.70	TH
Y2KBQE		52.14	-0.10	-0.04	46.88	-3.17	-0.99	GS
YM49FH		52.14	-0.11	-0.04	47.12	-2.94	-0.92	TH

Summary Statistics	Sample GU95	Sample GU96
Grand Means	52.24 Gloss Units	50.05 Gloss Units
Stnd Dev Btwn Labs	2.83 Gloss Units	3.21 Gloss Units

Statistics based on 9 of 9 reporting participants.

Key to Instrument Codes Reported by Participants

GM	BYK-Gardner micro-gloss	GS	BYK-Gardner Glossgard II
LA	L & W Gloss - Autoline 300	PP	Technidyne Profile/Plus
TH	Technidyne T480A		



If fewer than 20 laboratories are included in an analysis, a control ellipse will not be drawn on the two-sample plot.

Paper & Paperboard Interlaboratory Testing Program

Analysis 398

Grammage (Mass per Unit Area)

TAPPI Official Test Method T410

WebCode	Data Flag	Sample GW95 Lab Mean	Sample GW95 Diff from Grand Mean	Sample GW95 CPV	Sample GW96 Lab Mean	Sample GW96 Diff from Grand Mean	Sample GW96 CPV	Instr Code
3NLQLJ		90.04	-0.16	-0.28	103.9	0.4	0.63	ZZ
3U8N7Z		89.52	-0.67	-1.20	102.7	-0.8	-1.27	ZZ
3WU8C4	X	8.89	-81.30	-145.18	10.3	-93.3	-148.90	ZZ
3WWT8K		90.11	-0.08	-0.15	102.9	-0.6	-1.01	ZZ
4KYDE2		89.28	-0.92	-1.64	102.9	-0.6	-0.98	ZZ
4PTA27		91.32	1.12	2.00	103.9	0.4	0.61	ZZ
8E2VQZ		89.79	-0.40	-0.72	103.0	-0.6	-0.89	ZZ
989BX4		89.61	-0.59	-1.05	102.8	-0.8	-1.22	ZZ
DKL2PT		90.62	0.42	0.76	103.5	-0.1	-0.09	ZZ
E3KCG3		89.97	-0.23	-0.41	103.5	0.0	-0.05	ZZ
E6QZU8		90.11	-0.09	-0.16	103.4	-0.2	-0.24	ZZ
EEYET3		89.56	-0.64	-1.14	103.3	-0.2	-0.31	ZZ
FXMGNU		90.40	0.21	0.37	103.7	0.2	0.32	ZZ
GGYJ7Y	X	81.99	-8.20	-14.65	94.8	-8.7	-13.95	ZZ
H6EEN2		89.90	-0.30	-0.53	102.8	-0.8	-1.20	ZZ
JK3C42	X	95.89	5.69	10.16	108.9	5.4	8.59	ZZ
JL28W7	*	90.22	0.02	0.04	105.0	1.4	2.31	ZZ
JZFHGL		90.37	0.18	0.32	103.3	-0.2	-0.32	ZZ
K42GF3		90.52	0.32	0.57	103.8	0.3	0.42	ZZ
K4YWKM		89.99	-0.21	-0.37	103.3	-0.2	-0.39	ZZ
KEXRHH		89.79	-0.40	-0.72	103.2	-0.3	-0.56	ZZ
KUNQQ6		90.10	-0.10	-0.17	104.1	0.6	0.90	ZZ
MB9XZ8		91.32	1.13	2.01	104.7	1.1	1.82	ZZ
TQF82A		90.74	0.54	0.97	104.6	1.1	1.76	ZZ
VA76EL		91.24	1.04	1.86	103.2	-0.3	-0.49	ZZ
YM49FH		90.00	-0.20	-0.35	103.7	0.2	0.26	ZZ

Summary Statistics	Sample GW95	Sample GW96
Grand Means	90.20 g/sq m	103.52 g/sq m
Stnd Dev Btwn Labs	0.56 g/sq m	0.63 g/sq m

Statistics based on 23 of 26 reporting participants.

Comments on Assigned Data Flags for Test #398

GGYJ7Y (X) - Extreme Data.

3WU8C4 (X) - Extreme Data.

JK3C42 (X) - Extreme Data.

Analysis Notes:

3NLQLJ - One determination removed from the Lab Mean of Sample GW96 per Grubb's Test at 1% risk (TAPPI 1205).

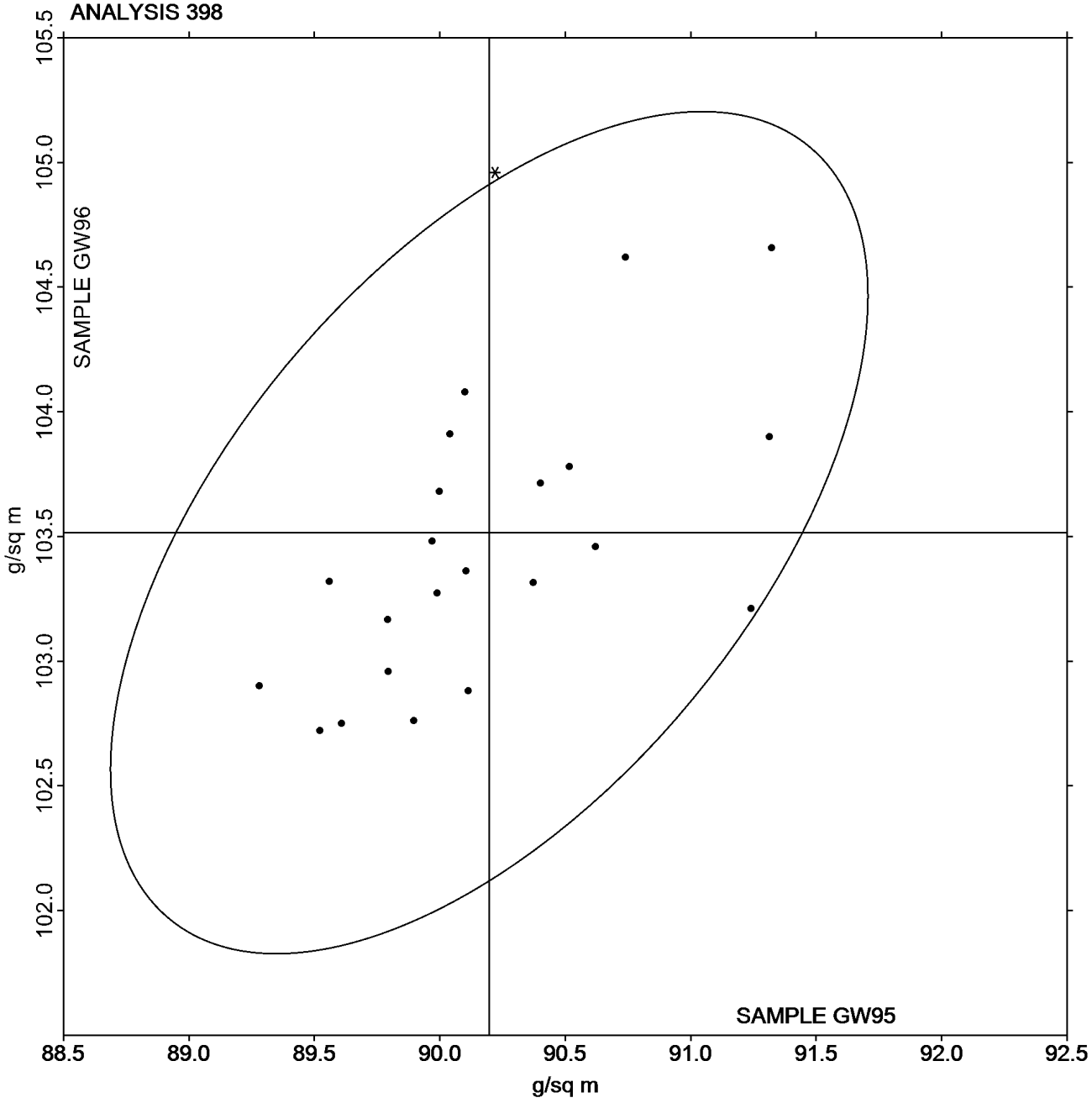
3WU8C4 - Data possibly off by a factor of 10.

Key to Instrument Codes Reported by Participants

ZZ Instruments No Longer Tracked

Grand Mean Sample GW95 = 90.197 g/sq m

Grand Mean Sample GW96 = 103.52 g/sq m



Paper & Paperboard Interlaboratory Testing Program

Analysis 399
Sizing Test (Hercules Type)
TAPPI Official Test Method T530

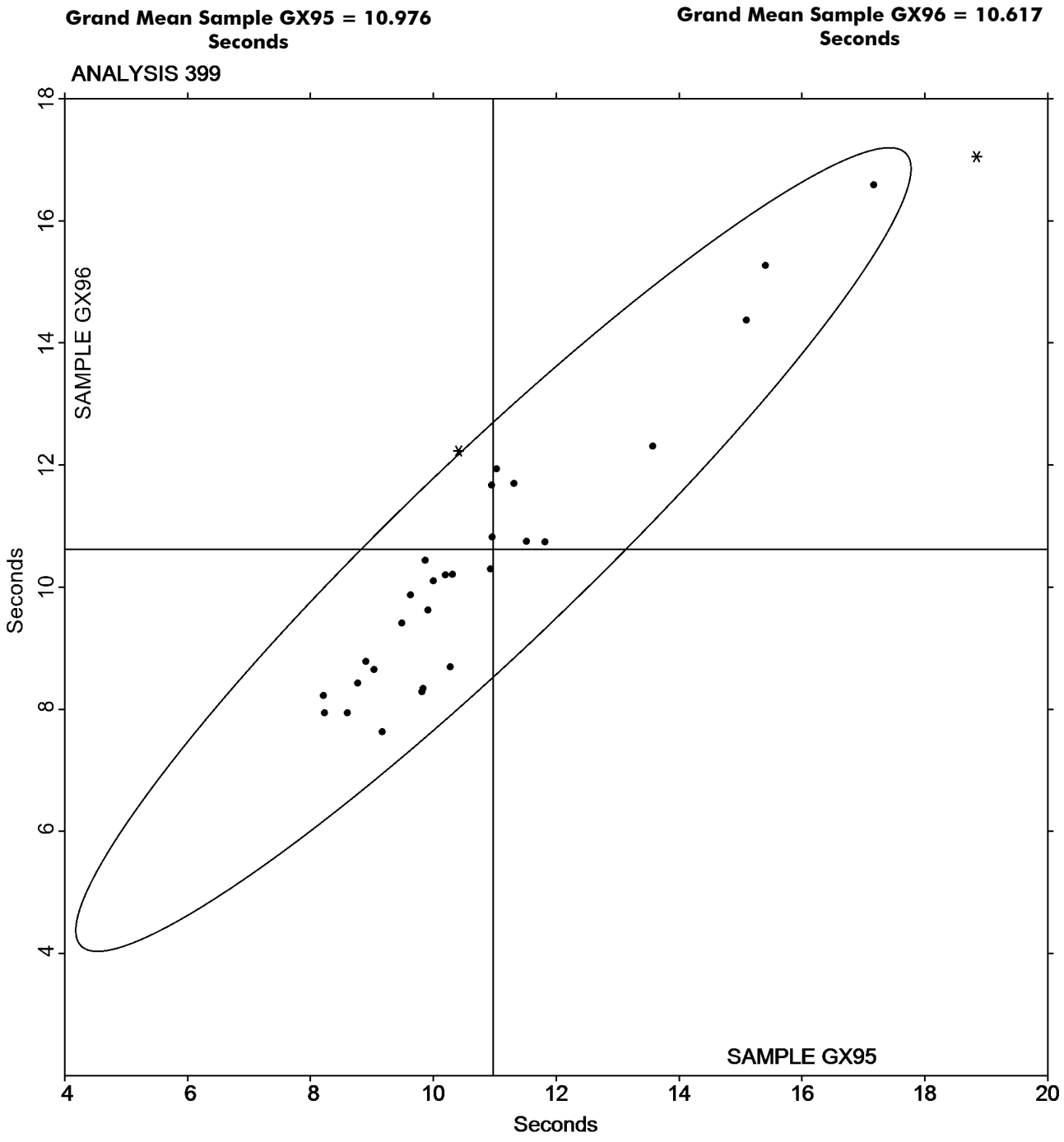
WebCode	Data Flag	Sample GX95 Lab Mean	Sample GX95 Diff from Grand Mean	Sample GX95 CPV	Sample GX96 Lab Mean	Sample GX96 Diff from Grand Mean	Sample GX96 CPV	Instr Code
2CP8ND		8.60	-2.38	-0.92	7.94	-2.68	-1.07	HE
38R7Y4		11.82	0.84	0.33	10.74	0.12	0.05	HE
3NLQLJ		11.31	0.33	0.13	11.70	1.08	0.43	HE
7JCP76		10.31	-0.67	-0.26	10.21	-0.41	-0.16	HE
A24WRT		9.82	-1.16	-0.45	8.29	-2.33	-0.93	HE
ANHCFC		9.83	-1.15	-0.44	8.34	-2.28	-0.91	HE
AZCT6D	*	18.84	7.86	3.04	17.05	6.43	2.57	HE
CKVE37		9.91	-1.07	-0.41	9.62	-1.00	-0.40	HE
EEYET3		15.41	4.43	1.72	15.27	4.65	1.86	XX
EHFU72		10.96	-0.02	-0.01	10.82	0.20	0.08	HE
F7J8DB		11.03	0.05	0.02	11.94	1.32	0.53	HE
GGYJ7Y	*	10.41	-0.57	-0.22	12.23	1.61	0.64	HE
HN9A2P		9.04	-1.94	-0.75	8.65	-1.97	-0.79	HE
JBXYAT		10.93	-0.05	-0.02	10.30	-0.32	-0.13	HE
JFTT8U		9.17	-1.81	-0.70	7.63	-2.99	-1.19	HE
JL28W7		10.20	-0.78	-0.30	10.20	-0.42	-0.17	HE
JWJRG3		17.17	6.19	2.40	16.59	5.97	2.39	HE
KC7NV3		8.21	-2.77	-1.07	8.22	-2.40	-0.96	HE
KHWY7Z		9.87	-1.11	-0.43	10.44	-0.18	-0.07	HE
LFKQAL		11.52	0.54	0.21	10.75	0.13	0.05	HE
NCWXBN		10.28	-0.70	-0.27	8.69	-1.93	-0.77	HE
PNM3ZZ		8.77	-2.21	-0.85	8.43	-2.19	-0.87	HE
QFLEFD		10.95	-0.03	-0.01	11.67	1.05	0.42	HE
RF6DEW		8.23	-2.75	-1.06	7.94	-2.68	-1.07	HE
VFB4MP		10.00	-0.98	-0.38	10.10	-0.52	-0.21	HE
WM6LMJ		9.63	-1.35	-0.52	9.87	-0.75	-0.30	HE
WVHK9H		9.49	-1.49	-0.58	9.41	-1.21	-0.48	HE
X7WW27		13.57	2.59	1.00	12.31	1.69	0.68	HE
XPACPT		15.10	4.12	1.60	14.37	3.75	1.50	HE
ZRU3PN		8.90	-2.08	-0.80	8.78	-1.84	-0.73	HE

Summary Statistics	Sample GX95	Sample GX96
Grand Means	10.98 Seconds	10.62 Seconds
Stnd Dev Btwn Labs	2.58 Seconds	2.50 Seconds

Statistics based on 30 of 30 reporting participants.

Key to Instrument Codes Reported by Participants

HE	Hercules Sizing Tester	XX	Instrument make/model not specified by lab



-End of Report-