Collaborative Testing Services, Inc.

Rubber Interlaboratory Testing Program

Summary Report #195- 1st Qtr 2018

About the Rubber Program, About CTS

Key for Web Summary Report

Analysis	Analysis Name
605	Tensile Strength: Precured Rubber Samples
606	Ultimate Elongation: Precured Rubber Samples
607	Stress at 300% Elongation: Precured Samples
608	Stress at 100% Elongation: Precured Samples
620	Hardness (Type A): Precured Rubber Samples
621	Density: Precured Rubber Samples @ 25C
625	Hardness (Shore D/Type D)
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631	Ultimate Elongation: Participant-Cured Samples
632	Tensile Stress at 300% Elongation: Lab-Cured
633	Tensile Stress at 100% Elongation: Lab-Cured
660	Mooney Viscosity (4-minute readings)
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684	MDR Vulcanization Charac.: Cure Time 10%
685	MDR Vulcanization Charac.: Scorch Time, Ts1
686	MDR Vulcanization Charac.: Cure Time 50%
687	MDR Vulcanization Charac.: Cure Time 90%
688	MDR Vulcanization Charac.: Minimum Torque
689	MDR Vulcanization Charac.: Maximum Torque
690	RPA Rheological Properties: Part A - G′ at 20Hz
691	RPA Rheological Properties: Part A - G″ at 20Hz
695	RPA Rheological Properties: Part B - G′ at 1.0Hz
696	RPA Rheological Properties: Part B - G″ at 1.0Hz

ABOUT THE PROGRAM

The Collaborative Reference Program for RUBBER, which was initiated in 1969, is operated and maintained by Collaborative Testing Services, Inc. (CTS), with technical guidance provided by the Rubber Division of the American Chemical Society. The program allows laboratories to compare periodically the level and uniformity of their testing with that of other participating laboratories. It also provides a realistic assessment of the state of rubber testing proficiency.

For each test there are summary statistics and a graphical representation of the data. Also shown are notes concerning specific laboratory results, as well as significant findings related to instrument types or other testing variations. Please refer to the section KEY TO TABLES AND GRAPHS for an explanation of terms and guidelines to interpreting the results.

ABOUT CTS

Founded in 1971, CTS is a privately-owned company that specializes in interlaboratory tests for a wide variety of industrial sectors, including rubber, plastics, fasteners and metals, containerboard, paper and color, as well as proficiency tests for forensic laboratories. All of the tests are designed to assist organizations in achieving and maintaining quality control objectives. Labs from the U.S., as well as more than 80 countries, currently participate in CTS programs.

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Key for Web Summary Report (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 Rubber Report published on the CTS Web site. The WebCode for each analysis can be found in the Performance Analysis Report mailed to each participant.

Lab Mean — Tensile & Hardness: the average of the median values obtained for each sample. All other tests: the average of the test results obtained 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.

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 — If instruments are tracked in a test, a code indicating the manufacturer of the instrument used to perform the test (see separate INSTRUMENT CODE LIST for each test section).

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. However, a lab receiving two of more M flags for a test may need to stop and review its testing procedures.

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 above.

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 data usually vary by more than three standard deviations from the grand mean.) 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.

5. ***Data appeared to be off by a factor of # and was corrected by CTS*** - In tests that involve computations, the results reported to CTS may be off by a factor. If this factor can easily be determined, CTS may correct the data and flag the participant. Occasionally CTS will correct a laboratory's results even though the data are still high or low when compared to the other participants. This is done so that the laboratory may be alerted to other possible errors in its testing procedure.

6. ***Data for two samples (or two tests) appeared to be switched by the lab, and the error was corrected by CTS.***

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.

WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
29JVB6		3,404.5	231.7	1.29	3,409.5	178.9	0.98
2DW7CR		3,159.0	-13.8	-0.08	3,200.5	-30.1	-0.17
2QJDAT		3,398.0	225.2	1.26	3,393.0	162.4	0.89
3QV2XK		3,271.0	98.2	0.55	3,404.5	173.9	0.96
3YCHRF		3,263.5	90.7	0.51	3,386.0	155.4	0.85
438UZK		3,038.6	-134.3	-0.75	3,132.8	-97.8	-0.54
46WZKH		3,305.4	132.6	0.74	3,285.9	55.2	0.30
477BQE		3,168.7	-4.2	-0.02	3,297.9	67.2	0.37
4DNGAL		3,165.5	-7.3	-0.04	3,242.0	11.4	0.06
4FDMUH		2,907.7	-265.2	-1.48	2,931.4	-299.2	-1.64
4LJDWN		3,267.1	94.3	0.53	3,210.9	-19.8	-0.11
4TH3ET		3,033.0	-139.8	-0.78	3,140.0	-90.6	-0.50
68T2Z6		3,404.3	231.5	1.29	3,480.4	249.8	1.37
69CTAP		3,385.7	212.8	1.19	3,406.7	176.1	0.97
6AMPJZ		3,136.5	-36.4	-0.20	3,237.3	6.6	0.04
6GKKGY	*	2,752.8	-420.0	-2.35	2,763.7	-467.0	-2.56
6WV7ZN		3,239.0	66.2	0.37	3,322.0	91.4	0.50
797X4N		3,270.0	97.1	0.54	3,314.4	83.7	0.46
7PTD8K		2,950.0	-222.8	-1.24	2,965.0	-265.6	-1.46
7TTP3K		2,940.0	-232.8	-1.30	2,950.0	-280.6	-1.54
7ZAZFL	*	3,633.2	460.4	2.57	3,713.0	482.4	2.65
8BR2BL		3,138.0	-34.8	-0.19	3,243.5	12.9	0.07
8ENKF7		3,206.9	34.0	0.19	3,259.6	28.9	0.16
8ZQ2R8		3,202.5	29.7	0.17	3,268.0	37.4	0.21
9ATBKX		3,001.5	-171.3	-0.96	3,226.0	-4.6	-0.03
9RR96E		3,062.0	-110.8	-0.62	3,126.5	-104.1	-0.57
AKQEKK		2,973.5	-199.3	-1.11	3,025.0	-205.6	-1.13
B8WE99		3,190.5	17.7	0.10	3,261.0	30.4	0.17
BAKJU7		3,277.5	104.7	0.58	3,340.0	109.4	0.60
BG3GAZ	*	2,706.5	-466.3	-2.60	2,759.0	-471.6	-2.59
BWFRY9		3,174.0	1.2	0.01	3,278.5	47.9	0.26
C8RK39		3,108.2	-64.7	-0.36	3,256.9	26.2	0.14
DWPGD6		3,207.5	34.7	0.19	3,360.0	129.4	0.71
EDRF2Y		3,375.1	202.2	1.13	3,423.6	193.0	1.06
EH4LCY		3,169.5	-3.3	-0.02	3,205.5	-25.1	-0.14
ERNWNB		2,965.0	-207.8	-1.16	3,124.0	-106.6	-0.59
EV8EW2		3,232.5	59.7	0.33	3,382.6	152.0	0.83
F3LK9X		3,204.6	31.8	0.18	3,177.1	-53.6	-0.29

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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
F7MY4X		3,361.9	189.0	1.06	3,475.1	244.4	1.34
FN7X9V		3,000.1	-172.7	-0.96	3,038.6	-192.1	-1.06
FUA2W9		3,136.5	-36.3	-0.20	3,190.0	-40.6	-0.22
GA4MZF		3,285.1	112.3	0.63	3,343.1	112.5	0.62
GKJUEV		3,193.2	20.3	0.11	3,311.0	80.3	0.44
GUAHAX		3,206.8	33.9	0.19	3,336.5	105.9	0.58
HAXTUE		3,238.0	65.2	0.36	3,294.0	63.4	0.35
HHVK39	*	2,825.0	-347.8	-1.94	3,080.0	-150.6	-0.83
HLUYND	*	2,846.3	-326.5	-1.82	3,103.8	-126.8	-0.70
J2JWHX		3,012.6	-160.2	-0.89	3,130.5	-100.1	-0.55
J7UK3A		3,017.5	-155.3	-0.87	2,992.5	-238.1	-1.31
JBN4XX		3,547.5	374.7	2.09	3,509.9	279.3	1.53
JCYFMA		3,130.9	-42.0	-0.23	3,185.1	-45.6	-0.25
JTT9MV		3,190.0	17.2	0.10	3,240.5	9.9	0.05
K43ZCV		3,396.8	224.0	1.25	3,417.0	186.4	1.02
KEJPB2		3,219.9	47.0	0.26	3,422.9	192.3	1.06
KFDDRB		3,246.5	73.7	0.41	3,222.5	-8.1	-0.04
KXX4TV	*	2,702.5	-470.3	-2.63	2,672.0	-558.6	-3.07
KYRRA7		2,923.3	-249.6	-1.39	2,958.8	-271.8	-1.49
LA9WXG		2,923.3	-249.6	-1.39	3,036.4	-194.2	-1.07
LFFTTV		2,970.7	-202.2	-1.13	3,089.1	-141.6	-0.78
LFVCDT		3,256.9	84.0	0.47	3,269.2	38.5	0.21
MGJD7G		3,343.7	170.8	0.95	3,429.7	199.0	1.09
MLCAG7	*	3,087.5	-85.3	-0.48	2,967.5	-263.1	-1.45
MTDTVH	*	3,438.1	265.3	1.48	3,322.8	92.2	0.51
N67WCG		3,119.5	-53.3	-0.30	3,136.5	-94.1	-0.52
NHV2VR		3,182.0	9.2	0.05	3,298.5	67.9	0.37
PC6J2V		3,117.0	-55.8	-0.31	3,223.5	-7.1	-0.04
PHP8PR		3,336.6	163.8	0.91	3,312.7	82.1	0.45
PJFZBG		3,300.2	127.4	0.71	3,345.4	114.8	0.63
QKN6B4	*	3,395.0	222.2	1.24	3,270.5	39.9	0.22
R7LTGQ		3,228.5	55.7	0.31	3,266.5	35.9	0.20
RB3Z6P		3,261.9	89.1	0.50	3,345.0	114.4	0.63
RCVLJV		3,330.0	157.2	0.88	3,462.0	231.4	1.27
RJQLXN		3,122.0	-50.8	-0.28	3,113.5	-117.1	-0.64
RT2Q9T		3,297.5	124.7	0.70	3,306.5	75.9	0.42
TCTLAZ		3,321.5	148.7	0.83	3,244.0	13.4	0.07

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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
TQQ8M3		3,084.6	-88.2	-0.49	3,172.2	-58.4	-0.32
TTWQMJ		2,905.7	-267.2	-1.49	2,948.5	-282.2	-1.55
TUAM7N		3,336.6	163.8	0.91	3,457.0	226.4	1.24
TV2DZN		3,181.5	8.7	0.05	3,186.0	-44.6	-0.25
U729WX		3,258.5	85.7	0.48	3,394.0	163.4	0.90
UJ4YDW		2,894.0	-278.8	-1.56	2,947.5	-283.1	-1.56
UVVJW9		3,075.6	-97.2	-0.54	3,199.4	-31.2	-0.17
V49WCJ	*	3,615.8	443.0	2.47	3,768.1	537.5	2.95
V63KTT		3,229.5	56.7	0.32	3,393.0	162.4	0.89
VLC8JB		3,227.1	54.3	0.30	3,393.9	163.3	0.90
VLN7BX		3,318.4	145.6	0.81	3,397.7	167.1	0.92
VNVREJ		3,157.5	-15.4	-0.09	3,237.3	6.6	0.04
VVB3EK		3,058.5	-114.3	-0.64	2,977.5	-253.1	-1.39
VW7PVU		3,246.0	73.2	0.41	3,270.5	39.9	0.22
W84DFG		3,264.0	91.2	0.51	3,255.5	24.9	0.14
WB8GCT		3,043.0	-129.8	-0.73	3,189.5	-41.1	-0.23
WDRP2K		3,453.0	280.2	1.56	3,413.5	182.9	1.00
WNA8UR		3,178.8	6.0	0.03	3,220.5	-10.1	-0.06
WV9YZZ		2,993.5	-179.3	-1.00	3,012.0	-218.6	-1.20
WXFK4K		2,998.0	-174.9	-0.98	2,970.4	-260.2	-1.43
X2CQVV	X	2,596.2	-576.7	-3.22	2,618.0	-612.7	-3.37
XEFL2X		3,111.1	-61.8	-0.35	3,166.4	-64.3	-0.35
Y74MA9		3,283.5	110.7	0.62	3,279.5	48.9	0.27
YLCFYW		3,139.1	-33.8	-0.19	3,135.6	-95.0	-0.52
Z7YPBH		3,258.0	85.2	0.48	3,180.5	-50.1	-0.28

Summary Statistics

	Sample A81-A82	Sample A83-A84
Grand Means	3,172.85 psi	3,230.63 psi
Stnd Dev Btwn Labs	179.06 psi	182.05 psi

Statistics based on 99 of 100 reporting participants

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Summary Statistics in SI Units		
Grand Means	21.876 MPa	22.27 MPa
Stnd Dev Btwn Labs	1.235 MPa	1.26 MPa

Statistics based on 99 of 100 reporting participants

Samples A81-A82: Polyisoprene compound, batch #1 & A83-A84: Polyisoprene compound, batch #2

Comments on Assigned Data Flags for Test #605

X2CQVV (X) - Data for all samples are low. Possible Systematic Error.

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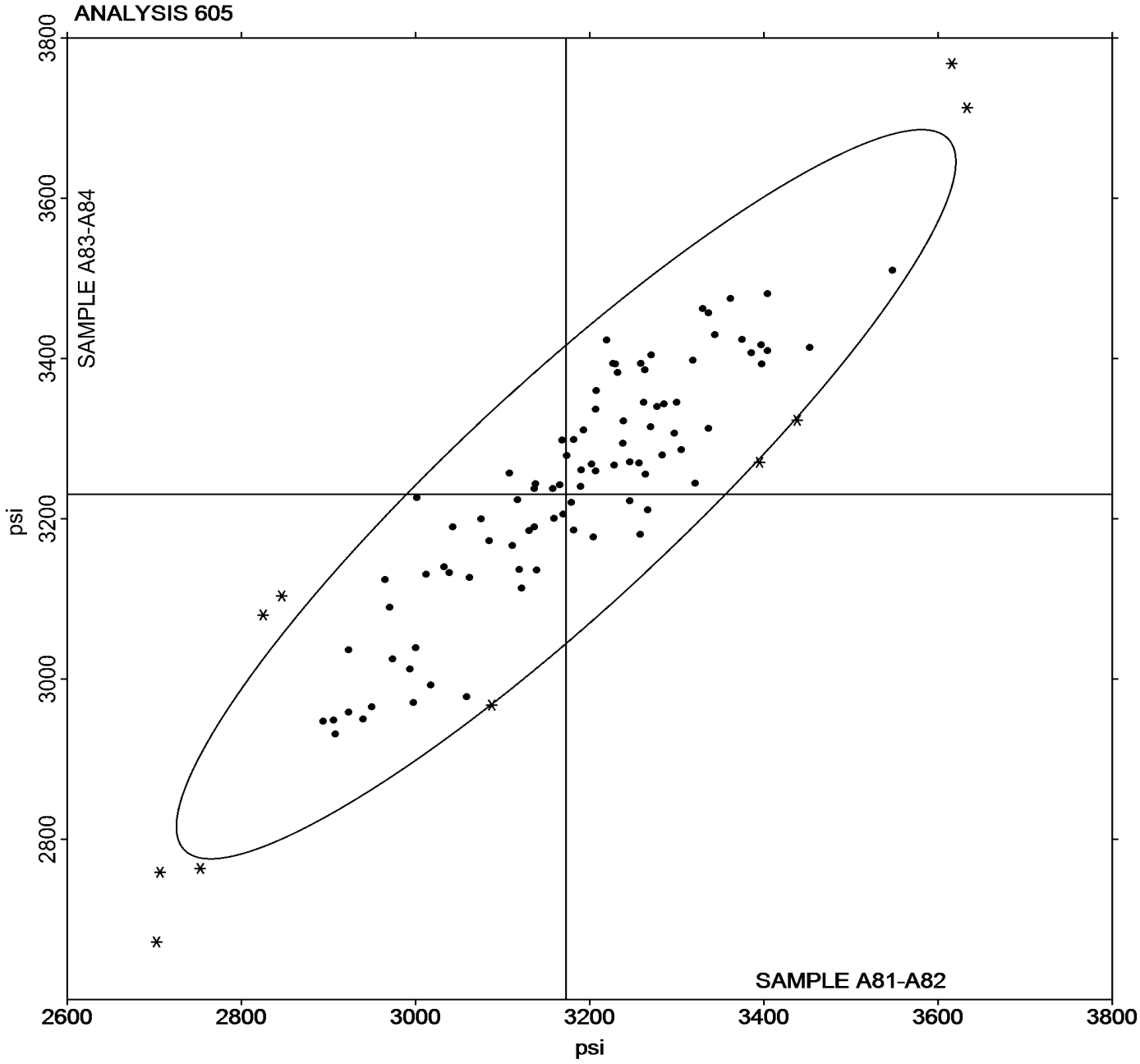
Grand Mean Sample **A81-A82** = 3,172.85 psi

Grand Mean Sample **A83-A84** = 3,230.63 psi



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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
29JVB6		586.0	-0.5	-0.02	586.0	-2.9	-0.12
2DW7CR		592.5	6.0	0.25	578.5	-10.4	-0.42
2QJDAT		570.5	-16.0	-0.65	572.5	-16.4	-0.65
3QV2XK		618.5	32.0	1.30	627.5	38.6	1.54
3YCHRF		612.5	26.0	1.06	616.0	27.1	1.08
438UZK	X	510.0	-76.5	-3.11	530.0	-58.9	-2.35
46WZKH		599.5	13.0	0.53	600.0	11.1	0.44
477BQE		612.8	26.3	1.07	614.8	25.9	1.03
4DNGAL		568.0	-18.5	-0.75	552.0	-36.9	-1.47
4FDMUH		587.3	0.8	0.03	597.3	8.4	0.34
4LJDWN		579.3	-7.1	-0.29	577.6	-11.3	-0.45
4TH3ET		600.0	13.5	0.55	600.0	11.1	0.44
68T2Z6		645.9	59.4	2.42	646.6	57.6	2.30
69CTAP		604.1	17.6	0.72	612.1	23.2	0.92
6GKKGY		531.2	-55.3	-2.25	535.2	-53.7	-2.14
6WV7ZN		605.0	18.5	0.75	611.5	22.6	0.90
797X4N		594.3	7.8	0.32	604.1	15.2	0.61
7PTD8K		551.5	-35.0	-1.42	539.0	-49.9	-1.99
7TTP3K		560.0	-26.5	-1.08	565.5	-23.4	-0.93
7ZAZFL		556.3	-30.2	-1.23	568.2	-20.7	-0.83
8BR2BL	*	601.5	15.0	0.61	630.5	41.6	1.66
8ENKF7		603.3	16.9	0.69	606.8	17.9	0.71
8ZQ2R8	X	586.0	-0.5	-0.02	550.5	-38.4	-1.53
9ATBKX		569.5	-17.0	-0.69	573.5	-15.4	-0.61
9RR96E		547.5	-39.0	-1.58	542.5	-46.4	-1.85
AKQEKK		594.5	8.0	0.33	593.5	4.6	0.18
B8WE99		580.0	-6.5	-0.26	594.5	5.6	0.22
BAKJU7	*	649.8	63.3	2.57	633.5	44.6	1.78
BG3GAZ	X	489.5	-97.0	-3.94	487.0	-101.9	-4.07
BWFRY9		573.0	-13.5	-0.55	588.5	-0.4	-0.02
C8RK39		583.0	-3.5	-0.14	580.0	-8.9	-0.36
DWPGD6		601.5	15.0	0.61	609.5	20.6	0.82
EDRF2Y		584.0	-2.5	-0.10	590.0	1.1	0.04
EH4LCY		612.0	25.5	1.04	609.0	20.1	0.80
ERNWNB		591.2	4.7	0.19	598.5	9.5	0.38
EV8EW2		596.1	9.6	0.39	613.0	24.1	0.96
F3LK9X		611.0	24.5	1.00	616.0	27.1	1.08
F7MY4X		554.5	-31.9	-1.30	567.6	-21.3	-0.85

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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
FN7X9V		559.0	-27.5	-1.12	558.5	-30.4	-1.21
FUA2W9		577.0	-9.5	-0.38	576.5	-12.4	-0.50
GA4MZF		602.1	15.6	0.63	606.4	17.5	0.70
GKJUEV		563.9	-22.5	-0.92	575.4	-13.6	-0.54
GUAHAX		617.8	31.3	1.27	624.9	36.0	1.43
HAXTUE		548.0	-38.5	-1.56	552.5	-36.4	-1.45
HHVK39	X	498.0	-88.5	-3.60	504.5	-84.4	-3.37
HLUYND	*	533.5	-53.0	-2.15	552.5	-36.4	-1.45
J2JWHX		571.0	-15.5	-0.63	561.0	-27.9	-1.11
J7UK3A		552.0	-34.5	-1.40	541.0	-47.9	-1.91
JBN4XX		594.4	7.9	0.32	587.1	-1.8	-0.07
JCYFMA		590.7	4.2	0.17	594.7	5.8	0.23
JTT9MV		559.0	-27.5	-1.12	565.5	-23.4	-0.93
K43ZCV		607.5	21.0	0.86	612.0	23.1	0.92
KEJPB2		563.5	-23.0	-0.93	580.5	-8.4	-0.34
KFDDRB		586.0	-0.5	-0.02	591.5	2.6	0.10
KYRRA7		577.5	-9.0	-0.36	570.0	-18.9	-0.75
LA9WXG		615.0	28.5	1.16	619.5	30.6	1.22
LFFTTV		565.0	-21.5	-0.87	570.0	-18.9	-0.75
LFVCDT		624.5	38.0	1.55	628.0	39.1	1.56
MGJD7G		616.6	30.2	1.23	604.2	15.3	0.61
MLCAG7		565.0	-21.5	-0.87	555.0	-33.9	-1.35
MTDTVH	X	597.0	10.5	0.43	769.5	180.6	7.20
N67WCG		592.0	5.5	0.23	586.5	-2.4	-0.10
NHV2VR	*	567.5	-19.0	-0.77	547.0	-41.9	-1.67
PC6J2V		564.0	-22.5	-0.91	569.0	-19.9	-0.79
PHP8PR	X	619.0	32.5	1.32	585.5	-3.4	-0.14
PJFZBG		589.5	3.0	0.12	597.1	8.2	0.33
QKN6B4		618.5	32.0	1.30	613.0	24.1	0.96
R7LTGQ		567.5	-19.0	-0.77	569.0	-19.9	-0.79
RB3Z6P		594.6	8.1	0.33	596.6	7.7	0.31
RCVLJV		602.0	15.5	0.63	606.5	17.6	0.70
RJQLXN		588.5	2.0	0.08	585.5	-3.4	-0.14
RT2Q9T		592.0	5.5	0.23	592.0	3.1	0.12
TCTLAZ		624.5	38.0	1.55	622.5	33.6	1.34
TQQ8M3		559.5	-27.0	-1.10	571.0	-17.9	-0.71
TTWQMJ		599.0	12.5	0.51	597.5	8.6	0.34

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Rubber Interlaboratory Testing Program

Analysis 606

Ultimate Elongation (percent)

WebCode	Data Flag	Sample A81-A82 Lab Mean	Sample A81-A82 Diff from Grand Mean	Sample A81-A82 CPV	Sample A83-A84 Lab Mean	Sample A83-A84 Diff from Grand Mean	Sample A83-A84 CPV
TUAM7N		555.5	-31.0	-1.26	570.5	-18.4	-0.73
TV2DZN	*	539.5	-47.0	-1.91	564.5	-24.4	-0.97
U729WX		599.0	12.5	0.51	608.0	19.1	0.76
UJ4YDW	*	550.0	-36.5	-1.48	530.0	-58.9	-2.35
UVVJW9		580.0	-6.5	-0.26	586.5	-2.4	-0.10
V49WCJ		599.0	12.5	0.51	608.5	19.6	0.78
V63KTT		581.0	-5.5	-0.22	599.0	10.1	0.40
VLC8JB		550.0	-36.5	-1.48	553.0	-35.9	-1.43
VLN7BX		586.6	0.1	0.01	581.6	-7.3	-0.29
VNVREJ		590.0	3.5	0.14	593.5	4.6	0.18
VVB3EK		575.5	-11.0	-0.45	577.5	-11.4	-0.46
VW7PVU		579.0	-7.5	-0.30	598.0	9.1	0.36
W84DFG		606.5	20.0	0.82	606.5	17.6	0.70
WB8GCT		589.5	3.0	0.12	601.0	12.1	0.48
WDRP2K		626.5	40.0	1.63	619.5	30.6	1.22
WNA8UR		598.8	12.3	0.50	601.4	12.5	0.50
WV9YZZ		557.5	-29.0	-1.18	554.0	-34.9	-1.39
WXFK4K		612.5	26.0	1.06	607.0	18.1	0.72
X2CQVV	X	405.0	-181.5	-7.38	325.0	-263.9	-10.53
XEFL2X		609.4	22.9	0.93	623.5	34.6	1.38
Y74MA9		613.0	26.5	1.08	596.5	7.6	0.30
YLCFYW	X	574.5	-12.0	-0.49	542.0	-46.9	-1.87
Z7YPBH		607.5	21.0	0.86	591.0	2.1	0.08

Summary Statistics

	Sample A81-A82	Sample A83-A84
Grand Means	586.46 percent	588.91 percent
Stnd Dev Btwn Labs	24.58 percent	25.07 percent

Statistics based on 90 of 98 reporting participants

Samples A81-A82: Polyisoprene compound, batch #1 & A83-A84: Polyisoprene compound, batch #2

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Comments on Assigned Data Flags for Test #606

438UZK (X) - Inconsistent in testing between samples. Data for sample group A81-A82 are low.

8ZQ2R8 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample group A83-A84.

BG3GAZ (X) - Data for all samples are low. Possible Systematic Error.

HHVK39 (X) - Data for all samples are low. Possible Systematic Error.

MTDTVH (X) - Inconsistent in testing between samples. Data for sample group A83-A84 are high.

PHP8PR (X) - Inconsistent in testing between samples.

X2CQVV (X) - Data for all samples are very low.

YLCFYW (X) - Inconsistent in testing between samples.

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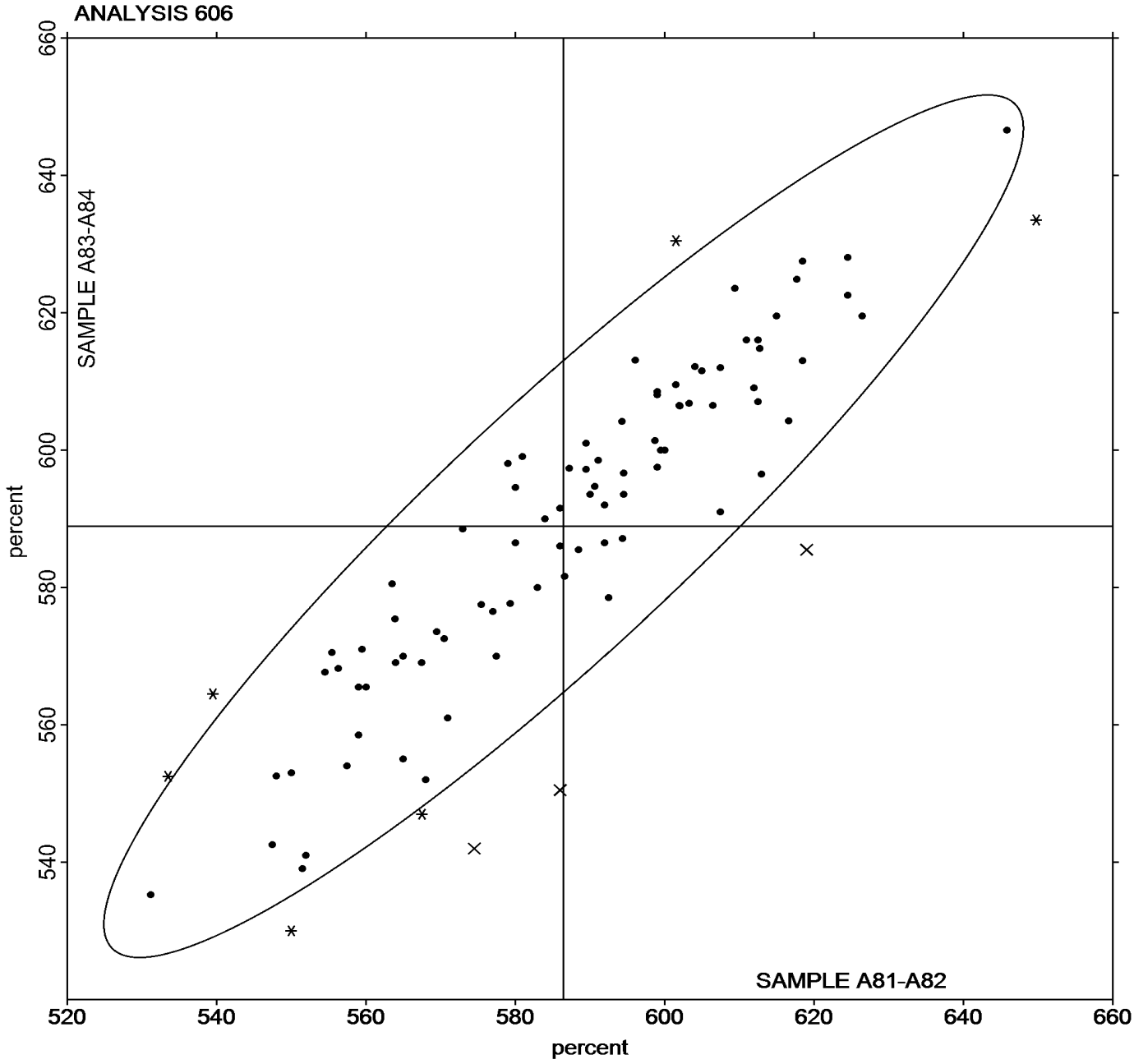
Grand Mean Sample **A81-A82** = 586.46 percent

Grand Mean Sample **A83-A84** = 588.91 percent



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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
29JVB6		1,071.5	-11.8	-0.17	1,128.0	15.4	0.21
2DW7CR		1,036.0	-47.3	-0.66	1,098.0	-14.6	-0.20
2QJDAT		1,132.0	48.7	0.69	1,185.5	72.9	0.98
3YCHRF		1,006.0	-77.3	-1.09	1,037.0	-75.6	-1.02
46WZKH		1,076.2	-7.1	-0.10	1,092.9	-19.7	-0.27
477BQE		1,010.2	-73.1	-1.03	1,033.2	-79.4	-1.07
4DNGAL		1,146.0	62.7	0.88	1,241.5	128.9	1.74
4FDMUH		1,069.2	-14.1	-0.20	1,078.2	-34.4	-0.46
4LJDWN		1,116.9	33.6	0.47	1,108.4	-4.2	-0.06
4TH3ET		979.0	-104.3	-1.47	1,060.5	-52.1	-0.70
68T2Z6		1,012.7	-70.6	-0.99	1,046.1	-66.5	-0.90
69CTAP		1,123.3	40.1	0.56	1,102.0	-10.6	-0.14
6GKKGY		1,070.5	-12.7	-0.18	1,087.6	-25.0	-0.34
6WV7ZN		1,083.0	-0.3	0.00	1,097.5	-15.1	-0.20
797X4N		1,089.7	6.4	0.09	1,110.9	-1.7	-0.02
7PTD8K		1,098.4	15.1	0.21	1,161.3	48.7	0.66
7TTP3K		1,070.0	-13.3	-0.19	1,090.0	-22.6	-0.30
7ZAZFL	X	1,673.0	589.8	8.30	1,681.7	569.1	7.67
8BR2BL		1,099.5	16.2	0.23	1,132.5	19.9	0.27
8ENKF7		1,055.2	-28.0	-0.39	1,031.5	-81.1	-1.09
8ZQ2R8		1,067.0	-16.3	-0.23	1,108.5	-4.1	-0.06
9ATBKX		1,052.5	-30.8	-0.43	1,079.5	-33.1	-0.45
9RR96E		1,134.5	51.2	0.72	1,225.0	112.4	1.51
AKQEKK		1,011.5	-71.8	-1.01	1,032.0	-80.6	-1.09
B8WE99		1,140.5	57.2	0.81	1,163.5	50.9	0.69
BAKJU7	X	902.5	-180.8	-2.54	1,016.0	-96.6	-1.30
BG3GAZ		1,244.5	161.2	2.27	1,268.0	155.4	2.09
BWFRY9		1,122.0	38.7	0.55	1,130.0	17.4	0.23
C8RK39		1,202.4	119.1	1.68	1,180.6	68.0	0.92
DWPGD6		1,004.5	-78.8	-1.11	1,071.0	-41.6	-0.56
EDRF2Y	*	1,278.5	195.3	2.75	1,326.4	213.8	2.88
EH4LCY		997.0	-86.3	-1.21	1,045.5	-67.1	-0.90
ERNWNB		1,052.7	-30.6	-0.43	1,066.5	-46.1	-0.62
EV8EW2		1,074.5	-8.8	-0.12	1,087.1	-25.5	-0.34
F3LK9X		984.8	-98.4	-1.38	1,018.9	-93.7	-1.26
F7MY4X	*	1,262.8	179.5	2.53	1,280.2	167.6	2.26
FN7X9V		1,114.6	31.4	0.44	1,147.3	34.7	0.47

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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
FUA2W9		1,077.5	-5.8	-0.08	1,092.0	-20.6	-0.28
GA4MZF		1,079.8	-3.4	-0.05	1,077.6	-35.0	-0.47
GKJUEV		1,162.0	78.8	1.11	1,204.9	92.3	1.24
GUAHAX		1,019.1	-64.1	-0.90	1,069.2	-43.4	-0.58
HAXTUE		1,249.0	165.7	2.33	1,256.5	143.9	1.94
HHVK39	X	1,300.0	216.7	3.05	1,395.0	282.4	3.80
HLUYND		1,121.5	38.3	0.54	1,192.6	80.0	1.08
J2JWHX		1,040.9	-42.4	-0.60	1,111.0	-1.6	-0.02
J7UK3A		1,202.0	118.7	1.67	1,243.5	130.9	1.76
JBN4XX		1,142.4	59.2	0.83	1,160.8	48.2	0.65
JCYFMA		1,054.0	-29.3	-0.41	1,075.8	-36.8	-0.50
JTT9MV		1,144.5	61.2	0.86	1,156.0	43.4	0.58
K43ZCV		1,100.0	16.7	0.24	1,080.5	-32.1	-0.43
KEJPB2		1,145.8	62.6	0.88	1,145.1	32.5	0.44
LA9WXG	*	905.8	-177.5	-2.50	953.6	-159.0	-2.14
LFFTTV		1,039.5	-43.8	-0.62	1,094.5	-18.1	-0.24
LFVCDT		992.8	-90.5	-1.27	1,000.8	-111.8	-1.51
MGJD7G		1,016.5	-66.7	-0.94	1,100.9	-11.7	-0.16
N67WCG		1,044.5	-38.8	-0.55	1,080.5	-32.1	-0.43
NHV2VR		1,112.0	28.7	0.40	1,206.5	93.9	1.27
PC6J2V		1,141.0	57.7	0.81	1,152.5	39.9	0.54
PHP8PR		1,069.7	-13.6	-0.19	1,113.9	1.3	0.02
PJFZBG		1,153.5	70.2	0.99	1,112.6	0.0	0.00
QKN6B4		1,080.0	-3.3	-0.05	1,127.0	14.4	0.19
R7LTGQ		1,147.0	63.7	0.90	1,156.0	43.4	0.58
RB3Z6P		1,039.7	-43.5	-0.61	1,093.2	-19.4	-0.26
RCVLJV		1,044.5	-38.8	-0.55	1,075.0	-37.6	-0.51
RJQLXN		1,038.5	-44.8	-0.63	1,047.5	-65.1	-0.88
RT2Q9T		1,049.0	-34.3	-0.48	1,093.0	-19.6	-0.26
TCTLAZ		1,006.5	-76.8	-1.08	986.5	-126.1	-1.70
TQQ8M3		1,089.4	6.1	0.09	1,097.4	-15.2	-0.20
TTWQMJ		972.0	-111.3	-1.57	1,018.5	-94.1	-1.27
TUAM7N		1,147.3	64.0	0.90	1,121.9	9.3	0.13
TV2DZN	X	1,191.5	108.2	1.52	1,068.0	-44.6	-0.60
U729WX		1,053.5	-29.8	-0.42	1,096.0	-16.6	-0.22
UJ4YDW		1,063.5	-19.8	-0.28	1,126.0	13.4	0.18
UVVJW9		1,108.6	25.3	0.36	1,139.1	26.5	0.36
V49WCJ		1,198.7	115.5	1.62	1,248.8	136.2	1.83

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Rubber Interlaboratory Testing Program

Analysis 607

Stress at 300% Elongation (psi)

WebCode	Data Flag	Sample A81-A82 Lab Mean	Sample A81-A82 Diff from Grand Mean	Sample A81-A82 CPV	Sample A83-A84 Lab Mean	Sample A83-A84 Diff from Grand Mean	Sample A83-A84 CPV
V63KTT		1,104.5	21.2	0.30	1,158.5	45.9	0.62
VLC8JB		1,208.2	124.9	1.76	1,256.8	144.2	1.94
VLN7BX		1,096.0	12.7	0.18	1,166.5	53.9	0.73
VNVREJ		1,086.3	3.1	0.04	1,114.6	2.0	0.03
VVB3EK		1,046.5	-36.8	-0.52	1,007.0	-105.6	-1.42
VW7PVU		1,118.5	35.2	0.50	1,078.0	-34.6	-0.47
W84DFG		1,100.5	17.2	0.24	1,066.0	-46.6	-0.63
WB8GCT		1,002.0	-81.3	-1.14	1,076.0	-36.6	-0.49
WDRP2K		1,089.0	5.7	0.08	1,117.5	4.9	0.07
WNA8UR		1,036.0	-47.2	-0.66	1,064.8	-47.8	-0.64
WV9YZZ		1,081.5	-1.8	-0.02	1,061.5	-51.1	-0.69
WXFK4K		949.3	-134.0	-1.88	947.8	-164.8	-2.22
X2CQVV	X	1,554.1	470.8	6.62	2,338.0	1,225.4	16.51
XEFL2X		974.6	-108.7	-1.53	982.9	-129.7	-1.75
Y74MA9	*	993.0	-90.3	-1.27	1,108.5	-4.1	-0.06
YLCFYW		1,155.8	72.5	1.02	1,243.2	130.6	1.76
Z7YPBH		1,060.0	-23.3	-0.33	1,086.5	-26.1	-0.35

Summary Statistics

	Sample A81-A82	Sample A83-A84
Grand Means	1,083.25 psi	1,112.60 psi
Stnd Dev Btwn Labs	71.08 psi	74.23 psi

Statistics based on 87 of 92 reporting participants

Summary Statistics in SI Units

	Sample A81-A82	Sample A83-A84
Grand Means	7.4687 MPa	7.67 MPa
Stnd Dev Btwn Labs	0.4900 MPa	0.51 MPa

Statistics based on 87 of 92 reporting participants

Samples A81-A82: Polyisoprene compound, batch #1 & A83-A84: Polyisoprene compound, batch #2

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Comments on Assigned Data Flags for Test #607

7ZAZFL (X) - Data for all samples are high. Possible Systematic Error.

BAKJU7 (X) - Inconsistent in testing between samples.

HHVK39 (X) - Data for all samples are high. Possible Systematic Error.

TV2DZN (X) - Inconsistent in testing between samples.

X2CQVV (X) - Extreme Data.

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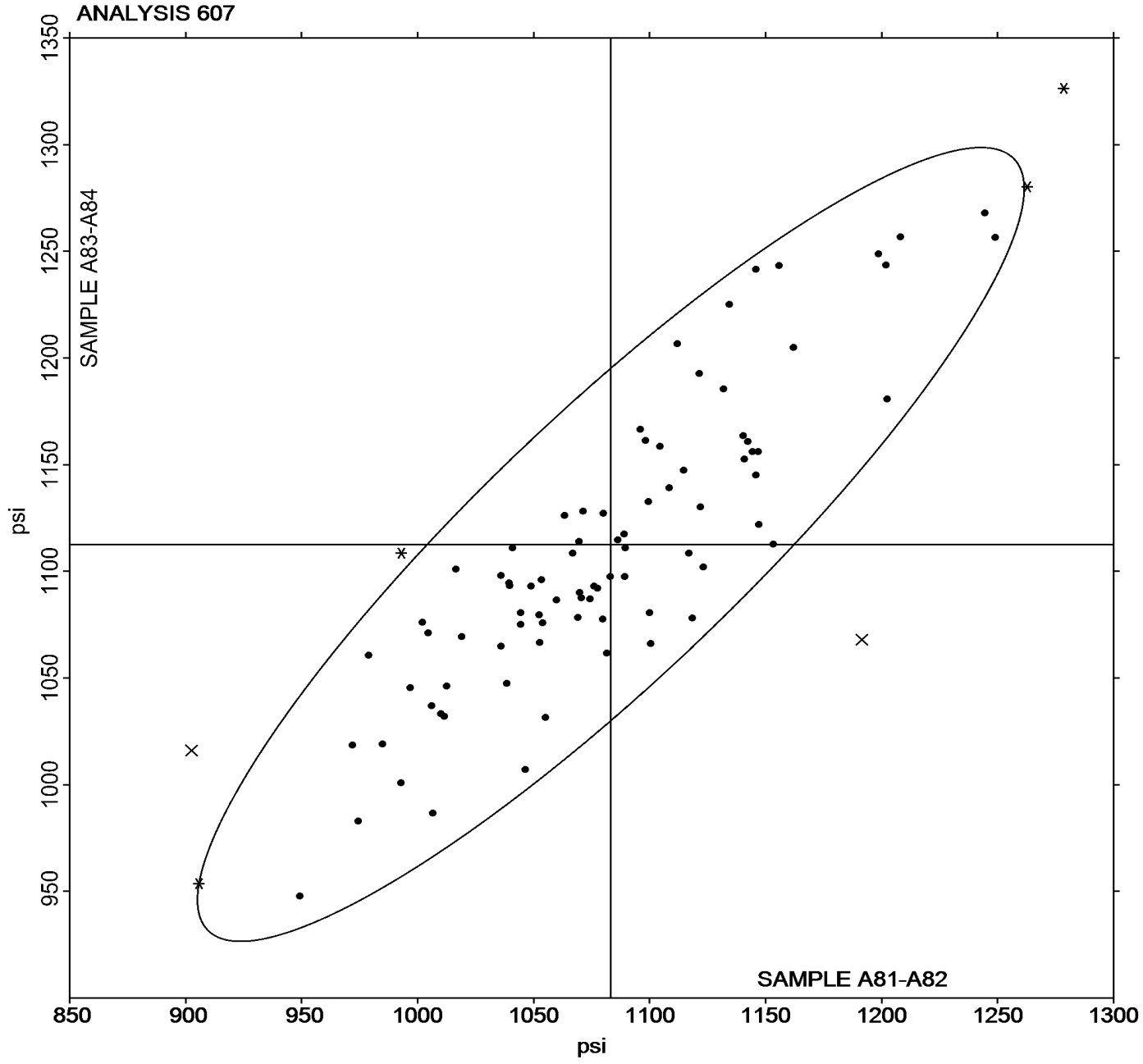
Grand Mean Sample **A81-A82** = 1,083.25 psi

Grand Mean Sample **A83-A84** = 1,112.60 psi



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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
29JVB6		219.5	-16.8	-1.19	224.5	-16.5	-1.18
2DW7CR		225.0	-11.3	-0.80	235.5	-5.5	-0.39
2QJDAT		238.5	2.2	0.16	246.5	5.5	0.39
3YCHRF		226.0	-10.3	-0.73	232.0	-9.0	-0.65
46WZKH		236.4	0.2	0.01	246.6	5.6	0.40
477BQE		219.1	-17.2	-1.22	227.8	-13.3	-0.95
4DNGAL		236.0	-0.3	-0.02	255.5	14.5	1.04
4FDMUH	*	273.0	36.8	2.61	263.9	22.9	1.64
4LJDWN		250.5	14.2	1.01	245.8	4.8	0.34
4TH3ET		227.0	-9.3	-0.66	236.0	-5.0	-0.36
68T2Z6		243.2	7.0	0.49	250.3	9.3	0.67
69CTAP		247.5	11.2	0.80	246.0	5.0	0.36
6GKKGY		233.3	-2.9	-0.21	237.0	-4.0	-0.29
6WV7ZN		245.5	9.2	0.66	249.5	8.5	0.61
797X4N		257.3	21.0	1.49	258.1	17.0	1.22
7PTD8K		236.4	0.1	0.01	243.6	2.5	0.18
7TTP3K		239.5	3.2	0.23	242.5	1.5	0.11
7ZAZFL	X	774.5	538.3	38.20	776.7	535.7	38.39
8BR2BL		225.0	-11.3	-0.80	229.0	-12.0	-0.86
8ENKF7		235.0	-1.2	-0.09	229.5	-11.5	-0.82
8ZQ2R8		235.5	-0.8	-0.05	242.5	1.5	0.11
9ATBKX	*	224.5	-11.8	-0.83	211.0	-30.0	-2.15
9RR96E		247.0	10.7	0.76	267.5	26.5	1.90
AKQEKK		219.5	-16.8	-1.19	228.0	-13.0	-0.93
B8WE99		256.5	20.2	1.44	267.5	26.5	1.90
BAKJU7	*	209.0	-27.3	-1.93	232.5	-8.5	-0.61
BG3GAZ		253.0	16.7	1.19	260.0	19.0	1.36
BWFRY9		234.5	-1.8	-0.12	236.0	-5.0	-0.36
C8RK39		235.7	-0.6	-0.04	232.8	-8.2	-0.59
DWPGD6		224.0	-12.3	-0.87	235.5	-5.5	-0.39
EDRF2Y	X	309.7	73.4	5.21	327.1	86.1	6.17
EH4LCY		225.5	-10.8	-0.76	232.5	-8.5	-0.61
ERNWNB		239.8	3.5	0.25	240.4	-0.7	-0.05
EV8EW2		239.7	3.4	0.24	240.2	-0.9	-0.06
F3LK9X		203.8	-32.5	-2.30	211.0	-30.0	-2.15
F7MY4X		260.4	24.2	1.71	256.4	15.4	1.11
FN7X9V		234.2	-2.0	-0.14	242.2	1.2	0.09
FUA2W9		234.0	-2.3	-0.16	238.0	-3.0	-0.22

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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
GA4MZF		232.8	-3.5	-0.25	227.7	-13.3	-0.95
GKJUEV		244.0	7.7	0.55	257.0	16.0	1.15
GUAHAX		249.7	13.4	0.95	261.8	20.8	1.49
HAXTUE		248.0	11.7	0.83	250.5	9.5	0.68
HHVK39	X	319.5	83.2	5.91	344.5	103.5	7.42
HLUYND		237.1	0.9	0.06	248.7	7.7	0.55
J2JWHX		221.9	-14.3	-1.02	238.0	-3.0	-0.21
J7UK3A		249.5	13.2	0.94	256.5	15.5	1.11
JBN4XX		244.3	8.0	0.57	245.4	4.4	0.31
JCYFMA		233.5	-2.8	-0.20	236.5	-4.5	-0.32
JTT9MV		235.5	-0.8	-0.05	244.0	3.0	0.21
K43ZCV		246.5	10.2	0.73	239.5	-1.5	-0.11
KEJPB2		230.6	-5.6	-0.40	242.9	1.9	0.14
KFDDRB		238.0	1.7	0.12	234.5	-6.5	-0.47
LA9WXG		219.0	-17.2	-1.22	224.8	-16.2	-1.16
LFFTTV		227.5	-8.8	-0.62	239.0	-2.0	-0.14
LFVCDT		223.4	-12.9	-0.92	224.8	-16.2	-1.16
MGJD7G		218.1	-18.2	-1.29	232.1	-9.0	-0.64
N67WCG		226.0	-10.3	-0.73	230.5	-10.5	-0.75
NHV2VR		237.5	1.2	0.09	254.0	13.0	0.93
PC6J2V		244.0	7.7	0.55	247.0	6.0	0.43
PHP8PR		242.9	6.7	0.47	242.9	1.9	0.14
PJFZBG		248.2	11.9	0.85	240.4	-0.6	-0.04
QKN6B4		218.0	-18.3	-1.30	226.5	-14.5	-1.04
R7LTGQ		249.0	12.7	0.90	242.5	1.5	0.11
RB3Z6P		226.9	-9.3	-0.66	241.0	0.0	0.00
RCVLJV		240.5	4.2	0.30	242.0	1.0	0.07
RJQLXN		206.0	-30.3	-2.15	216.5	-24.5	-1.76
RT2Q9T		227.5	-8.8	-0.62	238.5	-2.5	-0.18
TCTLAZ		235.0	-1.3	-0.09	228.5	-12.5	-0.90
TQQ8M3		235.9	-0.4	-0.03	236.5	-4.5	-0.32
TTWQMJ		212.8	-23.5	-1.67	225.0	-16.0	-1.15
TUAM7N		250.2	13.9	0.99	243.7	2.7	0.19
TV2DZN	*	220.0	-16.3	-1.15	206.0	-35.0	-2.51
U729WX		230.5	-5.8	-0.41	235.5	-5.5	-0.39
UJ4YDW		237.0	0.7	0.05	237.0	-4.0	-0.29
UVVJW9	*	270.1	33.8	2.40	278.8	37.8	2.71

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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
V49WCJ	*	274.1	37.9	2.69	284.3	43.3	3.10
V63KTT		241.5	5.2	0.37	254.5	13.5	0.97
VLC8JB		254.5	18.3	1.30	260.3	19.3	1.39
VLN7BX		235.6	-0.7	-0.05	246.1	5.0	0.36
VNVREJ		242.9	6.7	0.47	248.0	7.0	0.50
VVB3EK		250.5	14.2	1.01	240.0	-1.0	-0.07
VW7PVU		244.0	7.7	0.55	239.0	-2.0	-0.14
W84DFG		250.5	14.2	1.01	246.5	5.5	0.39
WB8GCT		225.0	-11.3	-0.80	239.5	-1.5	-0.11
WDRP2K		243.5	7.2	0.51	255.0	14.0	1.00
WNA8UR		234.2	-2.1	-0.15	238.3	-2.7	-0.19
WV9YZZ		243.5	7.2	0.51	235.0	-6.0	-0.43
WXFK4K		211.8	-24.5	-1.74	212.5	-28.5	-2.04
X2CQVV	X	301.7	65.4	4.64	398.9	157.8	11.31
XEFL2X		226.0	-10.2	-0.73	220.9	-20.2	-1.44
Y74MA9	*	209.5	-26.8	-1.90	233.5	-7.5	-0.54
YLCFYW		253.6	17.3	1.23	260.0	18.9	1.36
Z7YPBH		238.5	2.2	0.16	246.5	5.5	0.39

Summary Statistics

	Sample A81-A82	Sample A83-A84
Grand Means	236.25 psi	241.01 psi
Stnd Dev Btwn Labs	14.09 psi	13.95 psi

Statistics based on 89 of 93 reporting participants

Summary Statistics in SI Units

	Sample A81-A82	Sample A83-A84
Grand Means	1.6289 MPa	1.66 MPa
Stnd Dev Btwn Labs	0.0971 MPa	0.10 MPa

Statistics based on 89 of 93 reporting participants

Samples A81-A82: Polyisoprene compound, batch #1 & A83-A84: Polyisoprene compound, batch #2

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Comments on Assigned Data Flags for Test #608

7ZAZFL (X) - Extreme Data.

EDRF2Y (X) - Data for all samples are high. Possible Systematic Error.

HHVK39 (X) - Data for all samples are high. Possible Systematic Error.

X2CQVV (X) - Data for all samples are very high.

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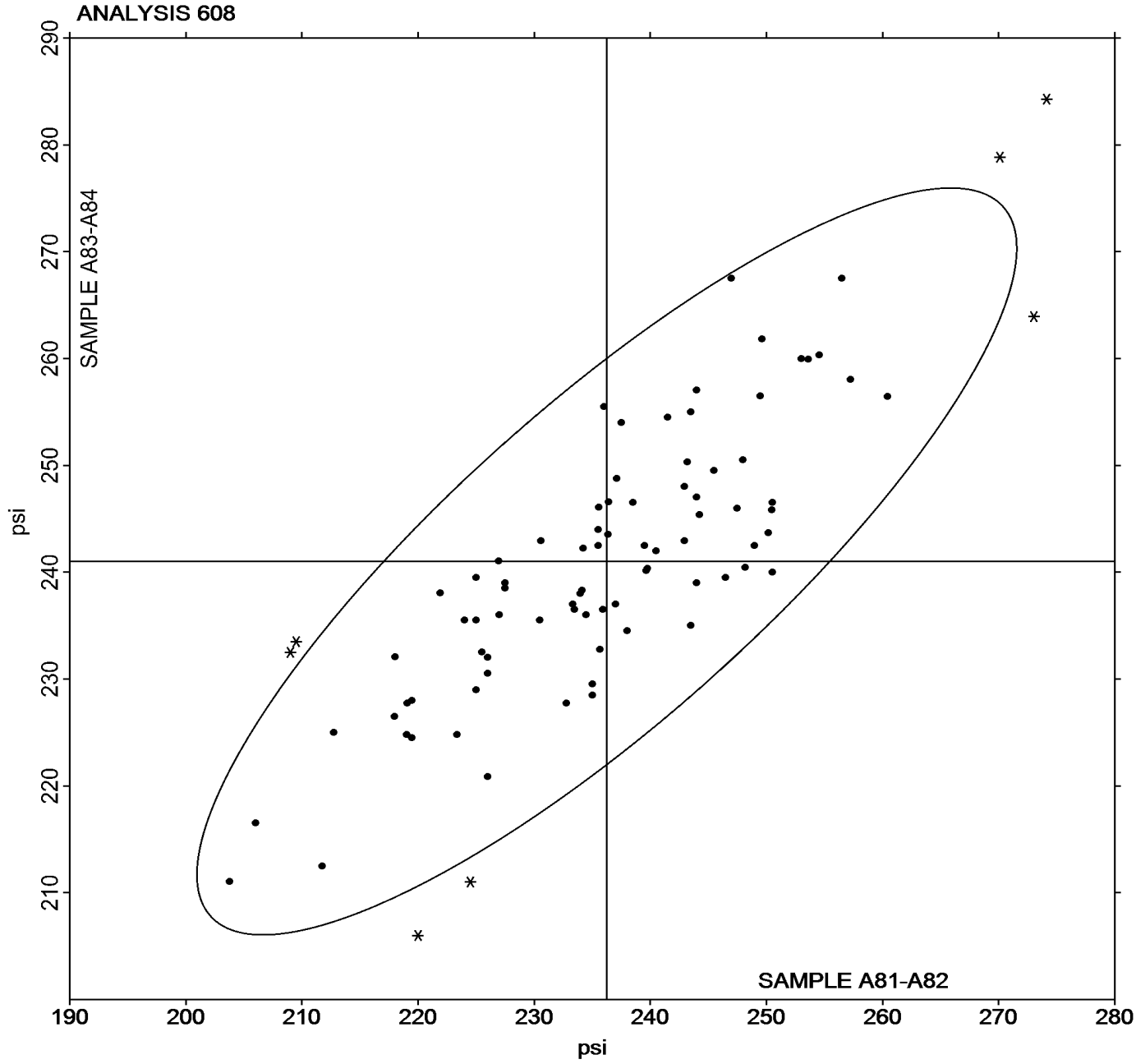
Grand Mean Sample **A81-A82** = 236.25 psi

Grand Mean Sample **A83-A84** = 241.01 psi



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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
29JVB6		50.50	-0.30	-0.24	50.00	-0.52	-0.42	BT
2DW7CR		50.00	-0.80	-0.65	50.00	-0.52	-0.42	BT
2QJDAT		50.50	-0.30	-0.24	50.50	-0.02	-0.02	BT
3QV2XK		49.50	-1.30	-1.05	50.00	-0.52	-0.42	BT
3YCHRF		50.00	-0.80	-0.65	50.00	-0.52	-0.42	BT
438UZK		50.00	-0.80	-0.65	50.00	-0.52	-0.42	HH
46WZKH		50.00	-0.80	-0.65	50.00	-0.52	-0.42	BT
477BQE		50.55	-0.25	-0.20	50.40	-0.12	-0.10	BT
4DNGAL		52.00	1.20	0.98	51.50	0.98	0.78	BT
4FDMUH		51.25	0.45	0.37	50.00	-0.52	-0.42	HH
4LJDWN	*	54.20	3.40	2.76	53.70	3.18	2.53	BT
4TH3ET		51.00	0.20	0.17	50.00	-0.52	-0.42	HH
68T2Z6		51.00	0.20	0.17	51.25	0.73	0.58	XX
69CTAP		49.30	-1.50	-1.21	50.00	-0.52	-0.42	BT
6AMPJZ		49.50	-1.30	-1.05	50.00	-0.52	-0.42	BT
6GKKGY		51.00	0.20	0.17	51.00	0.48	0.38	HH
6WV7ZN		51.65	0.85	0.69	50.80	0.28	0.22	BT
72LUX8		52.00	1.20	0.98	51.00	0.48	0.38	XX
797X4N		52.00	1.20	0.98	52.00	1.48	1.18	HH
7DEEEX		51.00	0.20	0.17	51.50	0.98	0.78	HH
7TTP3K		52.00	1.20	0.98	51.00	0.48	0.38	HH
7ZAZFL		52.50	1.70	1.38	52.00	1.48	1.18	HH
8BR2BL		50.95	0.15	0.13	49.80	-0.72	-0.57	BT
8ENKF7		50.50	-0.30	-0.24	51.00	0.48	0.38	BT
8ZQ2R8	X	52.00	1.20	0.98	49.50	-1.02	-0.81	HH
9ATBKX	X	47.50	-3.30	-2.68	45.50	-5.02	-4.00	BT
9RR96E		51.50	0.70	0.57	52.25	1.73	1.38	HH
AB2MZE		51.45	0.65	0.53	51.05	0.53	0.42	BT
AKQEKK	X	47.00	-3.80	-3.08	48.25	-2.27	-1.81	BT
B8WE99		50.50	-0.30	-0.24	49.60	-0.92	-0.73	XX
BAKJU7		51.00	0.20	0.17	51.00	0.48	0.38	BT
BG3GAZ		52.00	1.20	0.98	51.50	0.98	0.78	HH
BWFRY9		50.00	-0.80	-0.65	50.00	-0.52	-0.42	HH
C8RK39		51.75	0.95	0.78	51.25	0.73	0.58	BT
DWPGD6		50.50	-0.30	-0.24	50.00	-0.52	-0.42	BT
EDRF2Y		50.30	-0.50	-0.40	50.10	-0.42	-0.34	BT
EH4LCY	*	51.00	0.20	0.17	49.00	-1.52	-1.21	BT

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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
ERNWNB		49.90	-0.90	-0.73	50.15	-0.37	-0.30	BT
EV8EW2		51.50	0.70	0.57	52.00	1.48	1.18	HH
F3LK9X	X	52.00	1.20	0.98	54.00	3.48	2.77	BT
F7MY4X		51.75	0.95	0.78	51.25	0.73	0.58	BT
FN7X9V		49.20	-1.60	-1.30	48.30	-2.22	-1.77	BT
FUA2W9		48.00	-2.80	-2.27	47.50	-3.02	-2.41	BT
G6Q6JY		49.40	-1.40	-1.13	49.25	-1.27	-1.01	BT
GA4MZF		52.35	1.55	1.26	52.05	1.53	1.22	BT
GHYQ7X		50.00	-0.80	-0.65	50.00	-0.52	-0.42	BT
GKJUEV		51.10	0.30	0.25	50.10	-0.42	-0.34	BT
GUAHAX		52.85	2.05	1.67	52.45	1.93	1.54	HH
HAXTUE		52.00	1.20	0.98	51.45	0.93	0.74	BT
HLUYND		50.25	-0.55	-0.44	49.80	-0.72	-0.57	BT
J2JWHX		53.00	2.20	1.79	53.00	2.48	1.97	BT
J7UK3A		50.35	-0.45	-0.36	50.10	-0.42	-0.34	BT
JBN4XX		51.30	0.50	0.41	50.25	-0.27	-0.22	BT
JCYFMA		50.00	-0.80	-0.65	49.50	-1.02	-0.81	BT
JTT9MV		48.95	-1.85	-1.50	49.35	-1.17	-0.93	BT
K43ZCV		50.50	-0.30	-0.24	51.50	0.98	0.78	HH
KEJPB2	X	49.50	-1.30	-1.05	47.30	-3.22	-2.57	BT
KFDDRB		51.00	0.20	0.17	50.50	-0.02	-0.02	BT
KXX4TV		49.00	-1.80	-1.46	49.00	-1.52	-1.21	BT
KYRRA7	X	55.00	4.20	3.41	55.25	4.73	3.77	HH
LA9WXG		50.50	-0.30	-0.24	50.00	-0.52	-0.42	HH
LFFTTV	*	53.35	2.55	2.07	53.75	3.23	2.57	BT
LFVCDT		51.50	0.70	0.57	52.00	1.48	1.18	BT
MGJD7G		50.50	-0.30	-0.24	51.00	0.48	0.38	HH
MLCAG7		51.00	0.20	0.17	50.00	-0.52	-0.42	BT
MTDTVH		50.00	-0.80	-0.65	50.00	-0.52	-0.42	BT
N67WCG		50.00	-0.80	-0.65	49.50	-1.02	-0.81	BT
NHV2VR		52.50	1.70	1.38	52.50	1.98	1.58	HH
PC6J2V		50.90	0.10	0.09	50.70	0.18	0.14	BT
PHP8PR	X	54.00	3.20	2.60	52.00	1.48	1.18	HH
PJFZBG		49.50	-1.30	-1.05	48.50	-2.02	-1.61	BT
QKN6B4		53.50	2.70	2.20	52.75	2.23	1.77	HH
R7LTGQ		50.50	-0.30	-0.24	50.00	-0.52	-0.42	HH
RB3Z6P		48.50	-2.30	-1.86	48.00	-2.52	-2.01	HH
RCVLJV		51.50	0.70	0.57	50.50	-0.02	-0.02	BT

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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
RJQLXN		51.00	0.20	0.17	51.00	0.48	0.38	HH
RT2Q9T		50.50	-0.30	-0.24	50.50	-0.02	-0.02	BT
TCTLAZ		51.00	0.20	0.17	50.70	0.18	0.14	BT
TQQ8M3		51.10	0.30	0.25	51.15	0.63	0.50	BT
TTWQMJ		49.00	-1.80	-1.46	49.00	-1.52	-1.21	XX
TUAM7N		50.00	-0.80	-0.65	48.80	-1.72	-1.37	BT
TV2DZN		50.50	-0.30	-0.24	50.00	-0.52	-0.42	BT
TZEYAV	*	53.00	2.20	1.79	51.50	0.98	0.78	BT
U729WX	*	49.00	-1.80	-1.46	50.00	-0.52	-0.42	BT
UVVJW9		48.50	-2.30	-1.86	48.00	-2.52	-2.01	BT
V49WCJ		50.85	0.05	0.04	50.10	-0.42	-0.34	BT
V63KTT		50.50	-0.30	-0.24	49.55	-0.97	-0.77	BT
VLC8JB		50.00	-0.80	-0.65	50.00	-0.52	-0.42	HH
VLN7BX		48.50	-2.30	-1.86	48.50	-2.02	-1.61	BT
VNVREJ		50.90	0.10	0.09	50.35	-0.17	-0.14	BT
VVB3EK		51.00	0.20	0.17	50.00	-0.52	-0.42	HH
VW7PVU		50.00	-0.80	-0.65	50.00	-0.52	-0.42	HH
W84DFG		50.75	-0.05	-0.04	51.00	0.48	0.38	HH
WB8GCT		50.00	-0.80	-0.65	50.00	-0.52	-0.42	BT
WDRP2K	*	53.55	2.75	2.24	54.15	3.63	2.89	BT
WNA8UR	*	54.00	3.20	2.60	53.50	2.98	2.37	BT
WV9YZZ		51.00	0.20	0.17	51.00	0.48	0.38	HH
WXFK4K		50.35	-0.45	-0.36	50.00	-0.52	-0.42	BT
X2CQVV	X	42.50	-8.30	-6.74	42.00	-8.52	-6.79	BT
XEFL2X		50.50	-0.30	-0.24	50.50	-0.02	-0.02	BT
Y74MA9		49.85	-0.95	-0.77	49.65	-0.87	-0.69	BT
Z7YPBH		50.35	-0.45	-0.36	50.20	-0.32	-0.26	BT

Summary Statistics

	Sample A81-A82	Sample A83-A84
Grand Means	50.795 Type A	50.522 Type A
Stnd Dev Btwn Labs	1.232 Type A	1.256 Type A

Statistics based on 94 of 102 reporting participants

Samples A81-A82: Polyisoprene compound, batch #1 & A83-A84: Polyisoprene compound, batch #2

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Comments on Assigned Data Flags for Test #620

8ZQ2R8 (X) - Inconsistent in testing between samples.

9ATBKX (X) - Inconsistent in testing between samples. Data for sample group A83-A84 are low.

AKQEKK (X) - Inconsistent in testing between samples. Data for sample group A81-A82 are low.

F3LK9X (X) - Inconsistent in testing between samples. Data for sample group A83-A84 are high.

KEJPB2 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample group A83-A84.

KYRRA7 (X) - Data for all samples are high. Possible Systematic Error.

PHP8PR (X) - Inconsistent in testing between samples.

X2CQVV (X) - Data for all samples are low. Possible Systematic Error. Inconsistent within the determinations of sample group A83-A84.

Key to Instrument Codes Reported by Participants

BT	Benchtop	HH	Handheld
XX	Specify Benchtop or Handheld Instrument		

Results by Reading Time (as reported by laboratory)

	Sample A81-A82 *Polyisoprene compound, batch #1*			Sample A83-A84 *Polyisoprene compound, batch #2*				
Reading Time	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	Labs Incl	/ Rpt
Select from list below	49.00	0.00	-1.80	49.00	0.00	-1.52	1	1
Readings taken within 0 - 5 seconds	50.78	0.98	-0.02	50.51	1.01	-0.02	65	74
Readings taken at 5 seconds	49.82	1.06	-0.98	49.60	1.08	-0.93	10	12
Readings taken after 5+ seconds	50.41	1.33	-0.39	49.96	1.32	-0.56	5	7
Maximum hardness indicator used	51.13	0.96	0.34	50.97	0.94	0.44	6	8

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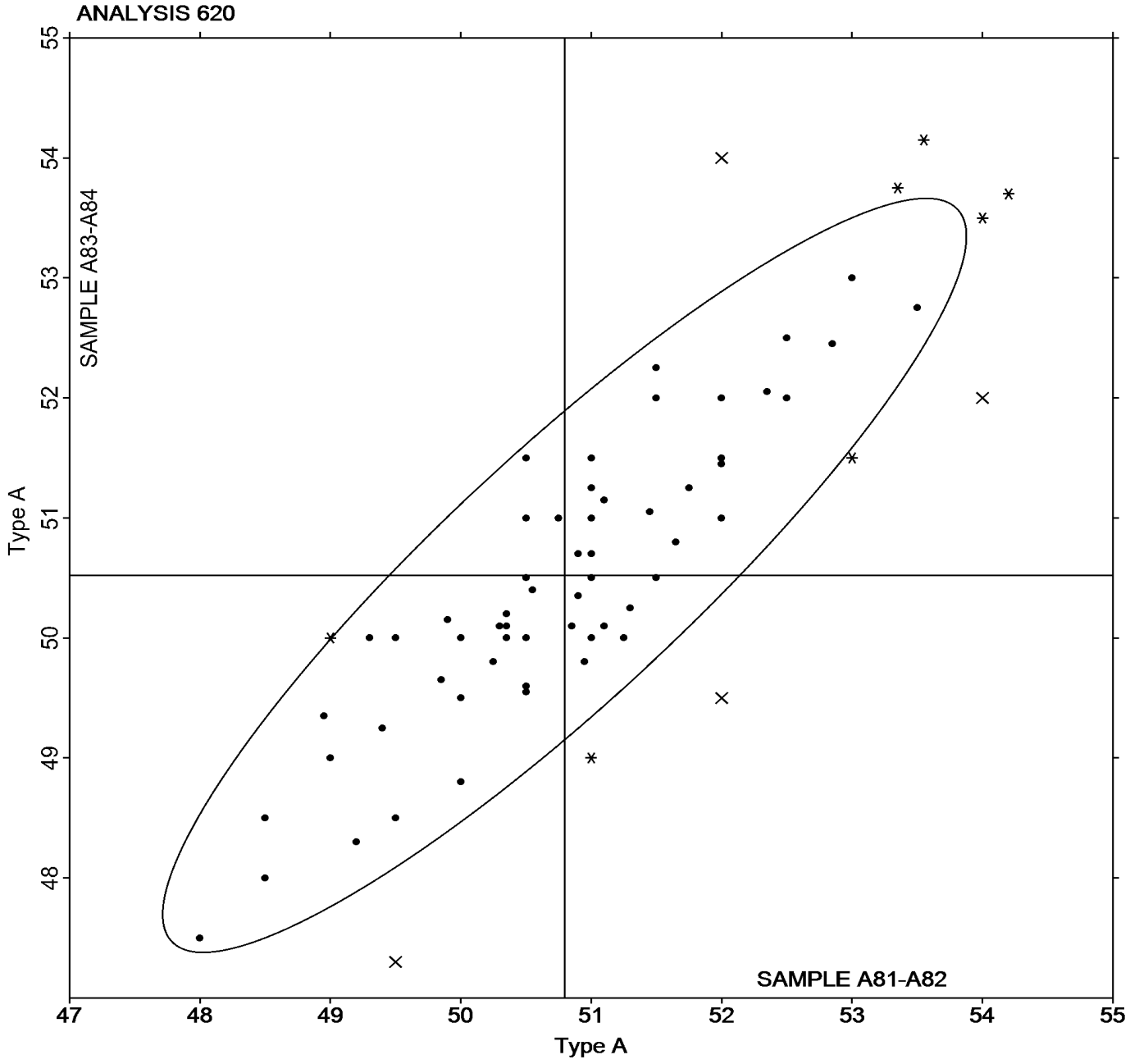
Grand Mean Sample **A81-A82** = 50.795 Type A

Grand Mean Sample **A83-A84** = 50.522 Type A



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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
29JVB6	X	1.128	-0.007	-3.11	1.133	-0.003	-1.05
2QJDAT		1.138	0.002	0.86	1.137	0.001	0.54
3QV2XK		1.133	-0.002	-1.02	1.134	-0.002	-0.85
3YCHRF		1.134	-0.001	-0.54	1.134	-0.001	-0.57
46WZKH		1.136	0.001	0.42	1.136	0.001	0.30
477BQE		1.139	0.004	1.63	1.140	0.004	1.54
4DNGAL	X	1.131	-0.005	-1.94	1.120	-0.015	-6.17
4LJDWN		1.136	0.000	0.19	1.136	0.000	0.06
4TH3ET		1.137	0.001	0.44	1.137	0.001	0.34
68T2Z6		1.137	0.001	0.46	1.137	0.001	0.58
6GKKGY		1.137	0.001	0.44	1.137	0.001	0.34
6WV7ZN		1.136	0.000	0.19	1.136	0.000	0.14
797X4N	X	1.143	0.008	3.29	1.137	0.002	0.64
7DEEEX	X	1.125	-0.010	-4.36	1.125	-0.011	-4.25
8BR2BL		1.132	-0.003	-1.27	1.133	-0.003	-1.17
8ENKF7	*	1.129	-0.007	-2.82	1.129	-0.006	-2.57
8ZQ2R8		1.134	-0.001	-0.60	1.134	-0.002	-0.85
9ATBKX		1.138	0.002	0.86	1.138	0.002	0.74
AB2MZE		1.139	0.003	1.32	1.139	0.004	1.50
AKQEKK		1.135	-0.001	-0.39	1.135	-0.001	-0.45
BAKJU7		1.137	0.001	0.44	1.137	0.001	0.54
BG3GAZ	X	1.126	-0.010	-4.15	1.126	-0.010	-4.05
BWFRY9		1.133	-0.003	-1.21	1.133	-0.003	-1.09
C8RK39		1.136	0.001	0.23	1.136	0.000	0.14
DWPGD6		1.137	0.002	0.84	1.138	0.002	0.78
EDRF2Y		1.134	-0.002	-0.66	1.135	0.000	-0.12
EH4LCY		1.134	-0.002	-0.81	1.133	-0.003	-1.05
ERNWNB		1.134	-0.001	-0.62	1.135	-0.001	-0.45
F3LK9X		1.135	0.000	-0.18	1.137	0.001	0.34
F7MY4X		1.134	-0.001	-0.58	1.135	0.000	-0.18
FN7X9V		1.137	0.001	0.44	1.136	0.000	0.14
GKJUEV		1.132	-0.004	-1.56	1.132	-0.004	-1.49
GUAHAX		1.136	0.001	0.34	1.138	0.002	0.94
J2JWHX	X	1.145	0.010	4.00	1.100	-0.036	-14.24
JBN4XX	X	1.137	0.002	0.71	1.141	0.006	2.20
JCYFMA		1.133	-0.003	-1.12	1.132	-0.004	-1.45
K43ZCV		1.132	-0.003	-1.38	1.133	-0.003	-1.23
KEJPB2		1.135	-0.001	-0.39	1.135	-0.001	-0.28

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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample A83-A84 Lab Mean	Diff from Grand Mean	CPV
KFDDRB		1.139	0.004	1.49	1.138	0.002	0.94
KYRRA7	X	1.124	-0.011	-4.74	1.124	-0.011	-4.53
LFFTTV		1.136	0.000	0.13	1.134	-0.001	-0.59
MGJD7G	X	1.124	-0.012	-4.99	1.123	-0.013	-5.25
MLCAG7		1.137	0.001	0.44	1.136	0.000	0.14
MTDTVH		1.139	0.004	1.49	1.139	0.003	1.34
N67WCG	*	1.135	-0.001	-0.39	1.138	0.002	0.74
NHV2VR		1.137	0.002	0.63	1.137	0.001	0.48
PC6J2V		1.136	0.001	0.34	1.136	0.000	0.04
PHP8PR	X	1.133	-0.003	-1.23	1.138	0.002	0.74
PJFZBG		1.136	0.001	0.23	1.136	0.000	0.14
R7LTGQ		1.138	0.003	1.07	1.138	0.002	0.74
RB3Z6P	X	1.140	0.004	1.70	1.135	-0.001	-0.26
RCVLJV		1.140	0.005	2.09	1.141	0.005	1.98
TQQ8M3		1.133	-0.003	-1.15	1.132	-0.003	-1.33
TTWQMJ	X	1.115	-0.020	-8.54	1.110	-0.026	-10.24
TUAM7N	X	1.147	0.012	4.89	1.133	-0.002	-0.93
TV2DZN		1.135	0.000	-0.18	1.135	-0.001	-0.45
TZEYAV		1.140	0.004	1.76	1.141	0.005	2.06
UVVJW9		1.138	0.003	1.26	1.138	0.002	0.96
V49WCJ		1.133	-0.002	-0.98	1.132	-0.004	-1.65
V63KTT	*	1.135	0.000	-0.18	1.133	-0.003	-1.25
VLN7BX		1.133	-0.002	-1.02	1.135	-0.001	-0.26
VNVREJ	*	1.130	-0.005	-2.27	1.132	-0.004	-1.45
VVB3EK		1.137	0.001	0.44	1.138	0.002	0.94
VW7PVU		1.139	0.003	1.28	1.140	0.004	1.54
WB8GCT	X	1.142	0.006	2.53	1.139	0.003	1.14
WDRP2K		1.135	-0.001	-0.33	1.137	0.002	0.70
WNA8UR		1.133	-0.003	-1.08	1.134	-0.002	-0.79
WV9YZZ		1.137	0.001	0.44	1.136	0.001	0.26
X2CQVV		1.137	0.002	0.65	1.138	0.002	0.94
XEFL2X	*	1.135	-0.001	-0.39	1.132	-0.004	-1.45
Y74MA9		1.135	-0.001	-0.35	1.134	-0.002	-0.63
YLCFYW	X	1.135	0.000	-0.18	1.130	-0.006	-2.25
Z7YPBH		1.137	0.001	0.61	1.137	0.002	0.70

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Summary Statistics		
Grand Means		
	1.1354 g/cm^3 (Mg/m^3)	1.1356 g/cm^3 (Mg/m^3)
Stnd Dev Btwn Labs		
	0.0024 g/cm^3 (Mg/m^3)	0.0025 g/cm^3 (Mg/m^3)
		Statistics based on 58 of 73 reporting participants

Samples A81-A82: Polyisoprene compound, batch #1 & A83-A84: Polyisoprene compound, batch #2

Comments on Assigned Data Flags for Test #621

29JVB6 (X) - Data for sample group A81-A82 are low. Inconsistent within the determinations of sample group A81-A82.

4DNGAL (X) - Data for sample group A83-A84 are low. Inconsistent within the determinations of sample group A83-A84.

797X4N (X) - Inconcistent in testing between samples. Data for sample group A81-A82 are high.

7DEEEX (X) - Data for all samples are low. Possible Systematic Error.

BG3GAZ (X) - Data for all samples are low. Possible Systematic Error.

J2JWHX (X) - Extreme Data.

JBN4XX (X) - Inconsistent in testing between samples.

KYRRA7 (X) - Data for all samples are low. Possible Systematic Error.

MGJD7G (X) - Data for all samples are low. Possible Systematic Error.

PHP8PR (X) - Inconsistent in testing between samples.

RB3Z6P (X) - Inconsistent in testing between samples.

TTWQMJ (X) - Data for all samples are very low.

TUAM7N (X) - Inconsistent in testing between samples. Data for sample group A81-A82 are high. Inconsistent within the determinations of both sample groups.

WB8GCT (X) - Inconsistent in testing between samples.

YLCFYW (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample group A81-A82.

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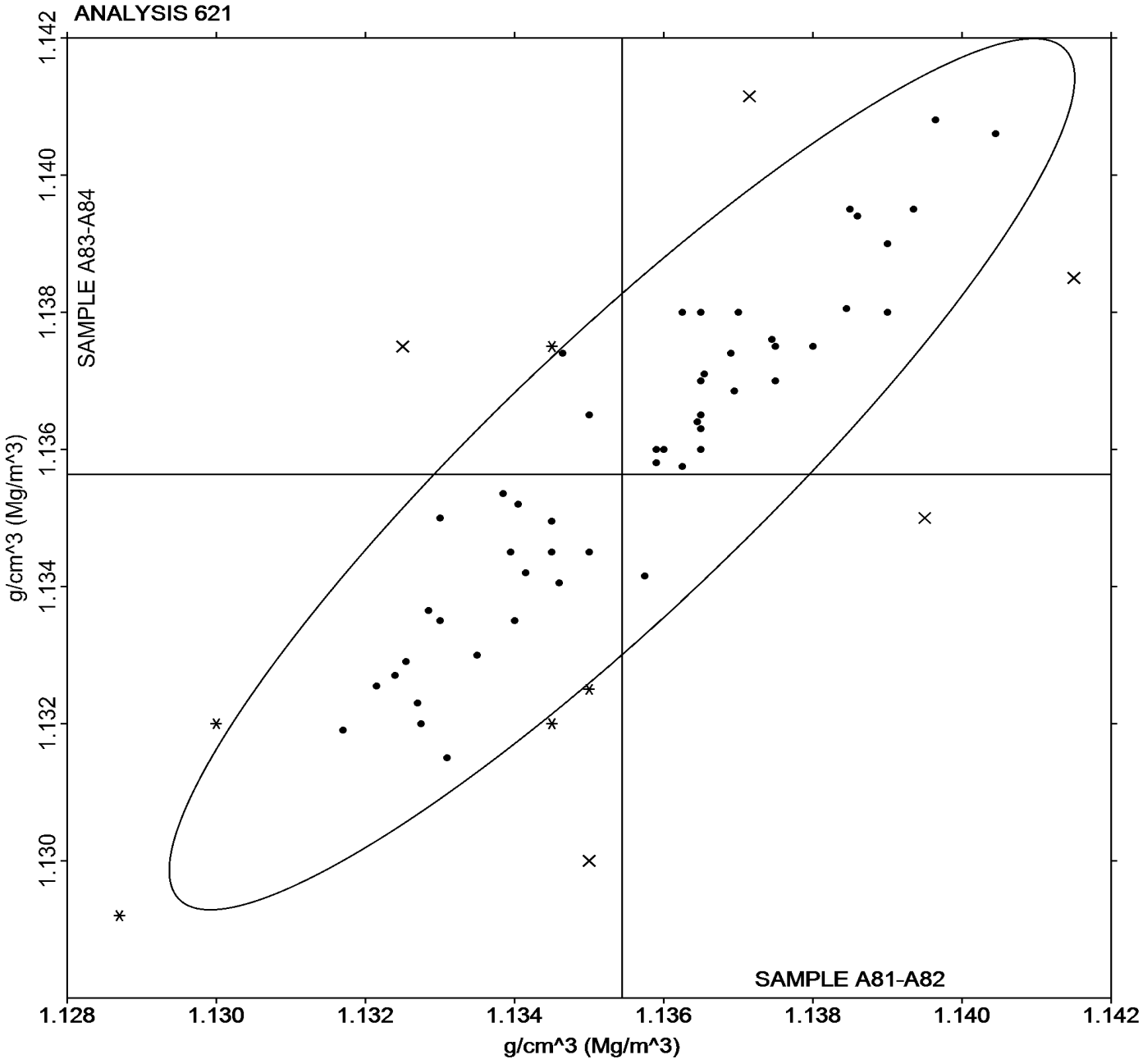
Grand Mean Sample **A81-A82** = 1.1354 g/cm^3 (Mg/m^3)

Grand Mean Sample **A83-A84** = 1.1356 g/cm^3 (Mg/m^3)



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WebCode	Data Flag	Sample HA81-HA82 Lab Mean	Diff from Grand Mean	CPV	Sample HA83-HA84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
4BY6D2		64.50	-1.81	-0.66	49.75	-2.16	-0.63	BT
4TH3ET		67.00	0.69	0.25	52.50	0.59	0.17	XX
6F8TNH		70.50	4.19	1.53	59.00	7.09	2.08	XX
8JW72H		70.00	3.69	1.34	56.75	4.84	1.42	BT
9Y8A33		65.05	-1.26	-0.46	48.75	-3.16	-0.93	BT
CJMQW7		70.50	4.19	1.53	56.00	4.09	1.20	XX
FN7X9V		62.70	-3.61	-1.32	47.45	-4.46	-1.31	BT
G6Q6JY		65.45	-0.86	-0.31	50.25	-1.66	-0.49	BT
GA4MZF		66.15	-0.16	-0.06	49.65	-2.26	-0.66	BT
GYM2RE		68.25	1.94	0.71	53.60	1.69	0.50	HH
QFH9Q4		66.50	0.19	0.07	53.50	1.59	0.47	BT
TC9DAR		68.00	1.69	0.62	52.80	0.89	0.26	BT
TLCP6L		65.00	-1.31	-0.48	51.50	-0.41	-0.12	BT
X2CQVV		62.00	-4.31	-1.57	48.00	-3.91	-1.15	BT
X2DVJZ		63.05	-3.26	-1.19	49.10	-2.81	-0.82	BT

Summary Statistics

	Sample HA81-HA82	Sample HA83-HA84
Grand Means	66.310 Type D	51.907 Type D
Stnd Dev Btwn Labs	2.744 Type D	3.409 Type D

Statistics based on 15 of 15 reporting participants

Samples HA81-HA82: Hardness Disc, batch #1 & HA83-HA84: Hardness Disc, batch #2

Key to Instrument Codes Reported by Participants

BT	Benchtop	HH	Handheld
XX	Specify Benchtop or Handheld Instrument		

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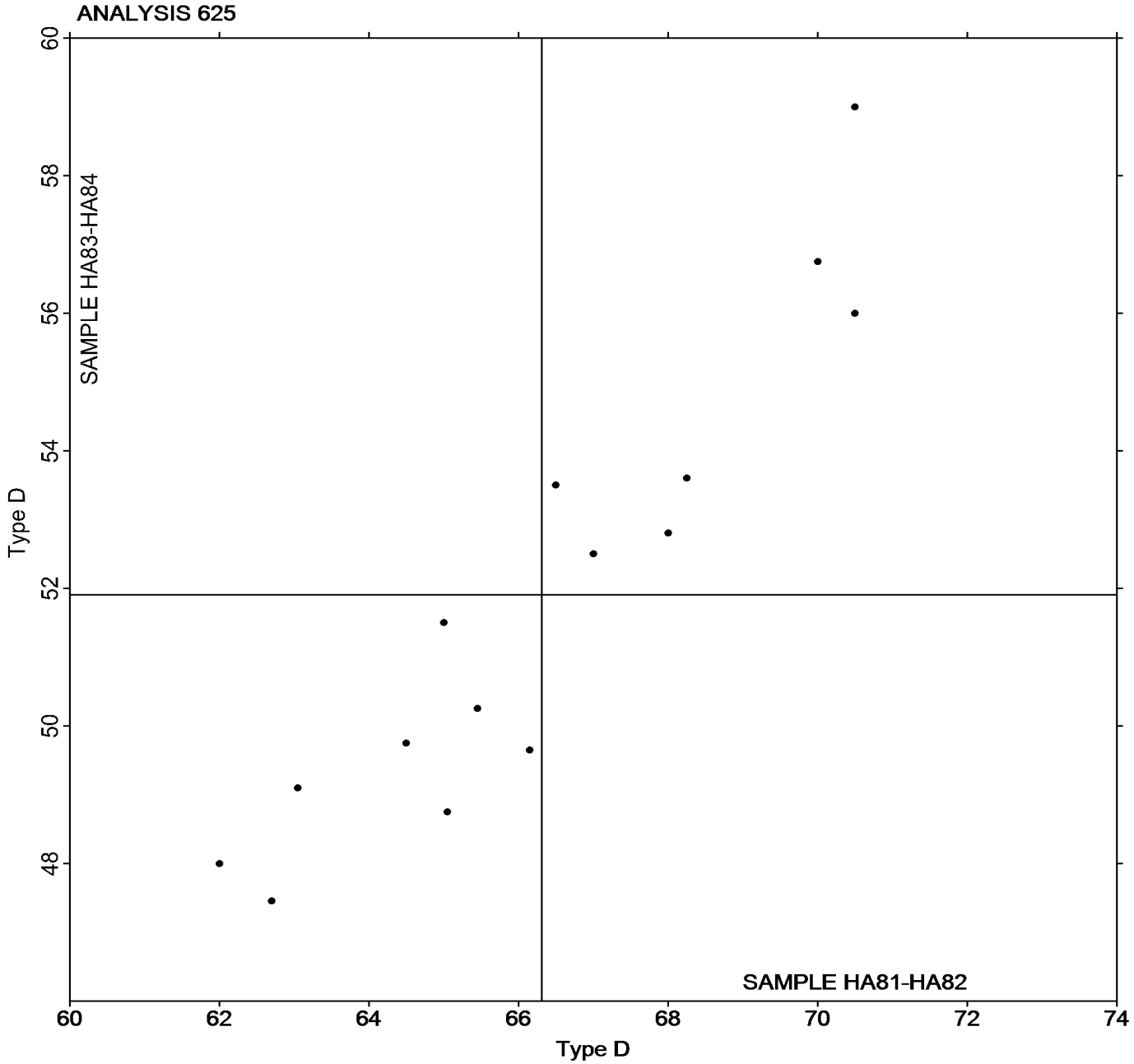
Grand Mean Sample **HA81-HA82** = 66.310 Type D

Grand Mean Sample **HA83-HA84** = 51.907 Type D



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

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WebCode	Data Flag	Sample A81-A82 Lab Mean	Diff from Grand Mean	CPV	Sample J81-J82 Lab Mean	Diff from Grand Mean	CPV
477BQE		3,168.7	-36.1	-0.25	3,359.5	268.9	1.13
4LJDWN		3,267.1	62.3	0.43	3,075.6	-15.0	-0.06
68T2Z6		3,404.3	199.6	1.36	3,235.1	144.6	0.61
6GKKGY	*	2,752.8	-451.9	-3.09	2,698.1	-392.4	-1.64
6WV7ZN		3,239.0	34.2	0.23	2,857.5	-233.0	-0.98
797X4N		3,270.0	65.2	0.45	3,225.7	135.2	0.57
8ENKF7		3,206.9	2.1	0.01	2,648.6	-441.9	-1.85
8ZQ2R8		3,202.5	-2.3	-0.02	2,887.5	-203.0	-0.85
9ATBKX		3,001.5	-203.3	-1.39	2,740.0	-350.5	-1.47
B8WE99		3,190.5	-14.3	-0.10	3,216.0	125.5	0.53
BAKJU7		3,277.5	72.7	0.50	3,377.0	286.5	1.20
EDRF2Y		3,375.1	170.3	1.16	3,334.4	243.9	1.02
EV8EW2		3,232.5	27.7	0.19	3,046.3	-44.2	-0.18
GA4MZF		3,285.1	80.4	0.55	3,161.9	71.3	0.30
GUAHAX		3,206.8	2.0	0.01	2,933.7	-156.9	-0.66
HAXTUE		3,238.0	33.2	0.23	2,887.0	-203.5	-0.85
JBN4XX		3,547.5	342.7	2.34	3,512.6	422.1	1.77
JCYFMA		3,130.9	-73.9	-0.51	2,804.0	-286.5	-1.20
K43ZCV		3,396.8	192.1	1.31	3,265.4	174.9	0.73
LA9WXG		2,923.3	-281.5	-1.92	2,600.5	-490.0	-2.05
MGJD7G		3,343.7	138.9	0.95	3,230.1	139.5	0.58
N67WCG		3,119.5	-85.3	-0.58	3,084.0	-6.5	-0.03
PC6J2V		3,117.0	-87.8	-0.60	3,087.0	-3.5	-0.01
PHP8PR		3,336.6	131.9	0.90	2,977.7	-112.9	-0.47
PJFZBG		3,300.2	95.5	0.65	3,397.8	307.3	1.29
R7LTGQ		3,228.5	23.7	0.16	3,196.0	105.5	0.44
RJQLXN		3,122.0	-82.8	-0.57	3,118.0	27.5	0.12
RT2Q9T		3,297.5	92.7	0.63	3,119.5	29.0	0.12
TQQ8M3		3,084.6	-120.2	-0.82	3,111.2	20.6	0.09
TUAM7N		3,336.6	131.9	0.90	3,452.7	362.1	1.52
TV2DZN		3,181.5	-23.3	-0.16	3,186.0	95.5	0.40
UVVJW9		3,075.6	-129.1	-0.88	3,011.9	-78.6	-0.33
VLN7BX		3,318.4	113.6	0.78	3,439.0	348.5	1.46
VNVREJ		3,157.5	-47.3	-0.32	3,145.9	55.4	0.23
VVB3EK		3,058.5	-146.3	-1.00	2,650.5	-440.0	-1.84
WB8GCT		3,043.0	-161.8	-1.11	3,082.5	-8.0	-0.03
YLCFYW		3,139.1	-65.7	-0.45	3,192.8	102.3	0.43

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Summary Statistics

Grand Means	3,204.77 psi	3,090.51 psi
Stnd Dev Btwn Labs	146.32 psi	238.96 psi

Statistics based on 37 of 37 reporting participants

Summary Statistics in SI Units

Grand Means	22.096 MPa	21.31 MPa
Stnd Dev Btwn Labs	1.009 MPa	1.65 MPa

Statistics based on 37 of 37 reporting participants

Samples A81-A82: Polyisoprene compound, batch #1 & J81-J82: Polyisoprene compound, batch #1

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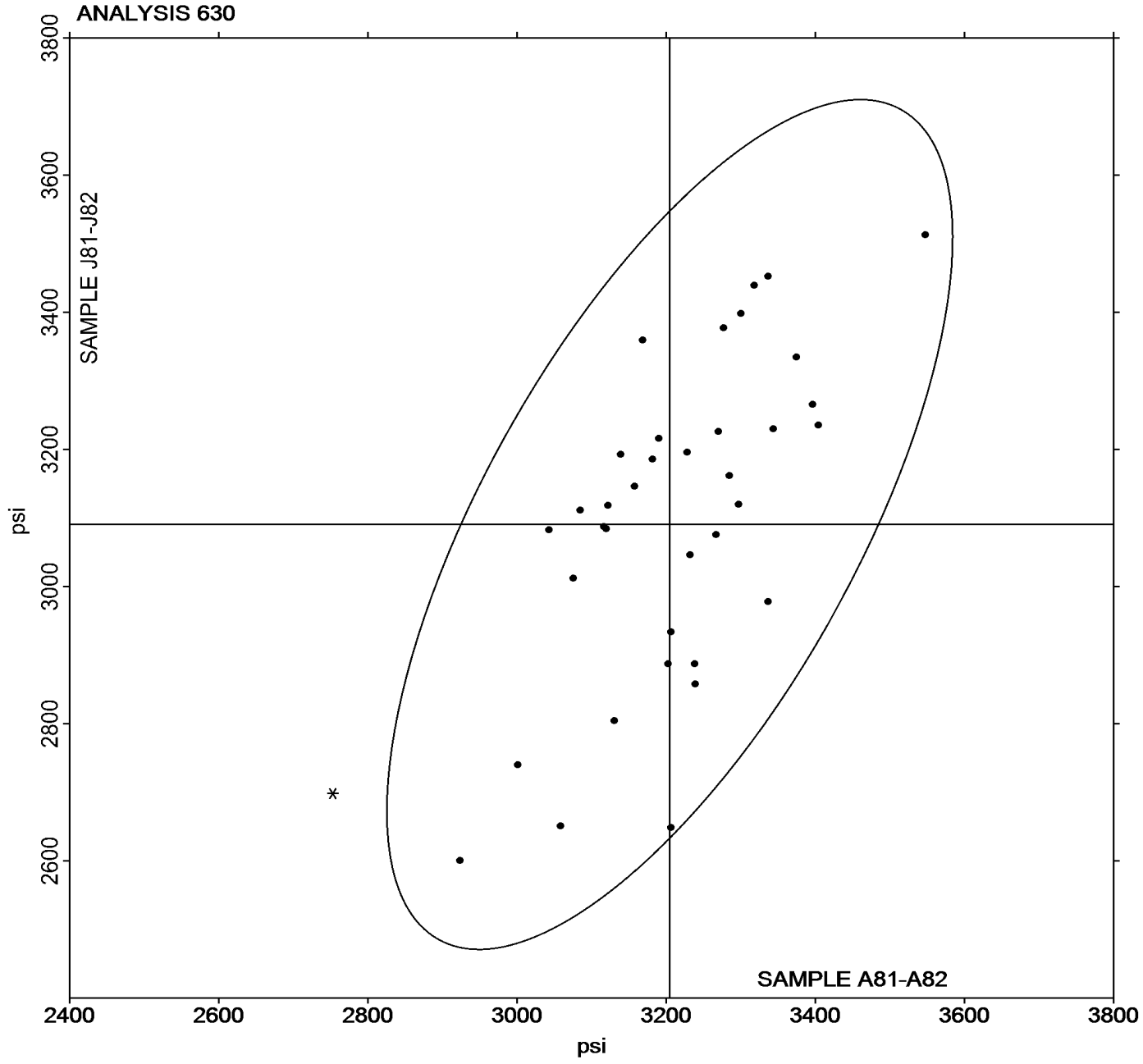
Tensile Strength: Precured vs. Lab-Cured Samples (psi)

Grand Mean Sample **A81-A82** = 3,204.77 psi

Grand Mean Sample **J81-J82** = 3,090.51 psi



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Ultimate Elongation: Precured vs. Lab-Cured Samples (percent)

WebCode	Data Flag	Sample A81-A82 Lab Mean	Sample A81-A82 Diff from Grand Mean	Sample A81-A82 CPV	Sample J81-J82 Lab Mean	Sample J81-J82 Diff from Grand Mean	Sample J81-J82 CPV
477BQE		612.8	23.8	0.93	583.8	4.0	0.15
4LJDWN		579.3	-9.6	-0.38	582.9	3.1	0.11
68T2Z6		645.9	56.9	2.23	632.7	52.9	1.94
6GKKGY	*	531.2	-57.8	-2.27	562.6	-17.2	-0.63
6WV7ZN		605.0	16.0	0.63	610.0	30.2	1.11
797X4N		594.3	5.3	0.21	565.3	-14.5	-0.53
8ENKF7		603.3	14.3	0.56	586.0	6.2	0.23
8ZQ2R8		586.0	-3.0	-0.12	599.0	19.2	0.70
9ATBKX		569.5	-19.5	-0.76	569.5	-10.3	-0.38
B8WE99		580.0	-9.0	-0.35	582.5	2.7	0.10
BAKJU7		649.8	60.8	2.39	634.0	54.2	1.98
EDRF2Y		584.0	-5.0	-0.20	614.5	34.7	1.27
EV8EW2		596.1	7.1	0.28	578.8	-1.0	-0.04
GA4MZF		602.1	13.1	0.51	577.9	-1.9	-0.07
GUAHAX		617.8	28.8	1.13	590.0	10.2	0.37
HAXTUE	*	548.0	-41.0	-1.61	498.0	-81.8	-2.99
JBN4XX		594.4	5.4	0.21	579.3	-0.5	-0.02
JCYFMA		590.7	1.7	0.07	563.2	-16.5	-0.61
K43ZCV		607.5	18.5	0.73	581.5	1.7	0.06
LA9WXG		615.0	26.0	1.02	634.5	54.7	2.00
MGJD7G		616.6	27.6	1.08	616.6	36.8	1.35
N67WCG		592.0	3.0	0.12	578.5	-1.3	-0.05
PC6J2V		564.0	-25.0	-0.98	566.0	-13.8	-0.50
PHP8PR		619.0	30.0	1.18	574.0	-5.8	-0.21
PJFZBG		589.5	0.5	0.02	591.4	11.7	0.43
R7LTGQ		567.5	-21.5	-0.84	550.5	-29.3	-1.07
RJQLXN		588.5	-0.5	-0.02	563.5	-16.3	-0.60
RT2Q9T		592.0	3.0	0.12	572.5	-7.3	-0.27
TQQ8M3		559.5	-29.5	-1.16	546.0	-33.8	-1.24
TUAM7N		555.5	-33.5	-1.31	562.5	-17.3	-0.63
TV2DZN		539.5	-49.5	-1.94	535.5	-44.3	-1.62
UVVJW9		580.0	-9.0	-0.35	565.5	-14.3	-0.52
VLN7BX		586.6	-2.4	-0.09	573.6	-6.2	-0.23
VNVREJ		590.0	1.0	0.04	573.0	-6.8	-0.25
VVB3EK		575.5	-13.5	-0.53	607.0	27.2	1.00
WB8GCT		589.5	0.5	0.02	591.0	11.2	0.41
YLCFYW		574.5	-14.5	-0.57	559.0	-20.8	-0.76

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Summary Statistics		
Grand Means		
	588.97 percent	579.78 percent
Stnd Dev Btwn Labs		
	25.48 percent	27.31 percent

Statistics based on 37 of 37 reporting participants

Samples A81-A82: Polyisoprene compound, batch #1 & J81-J82: Polyisoprene compound, batch #1

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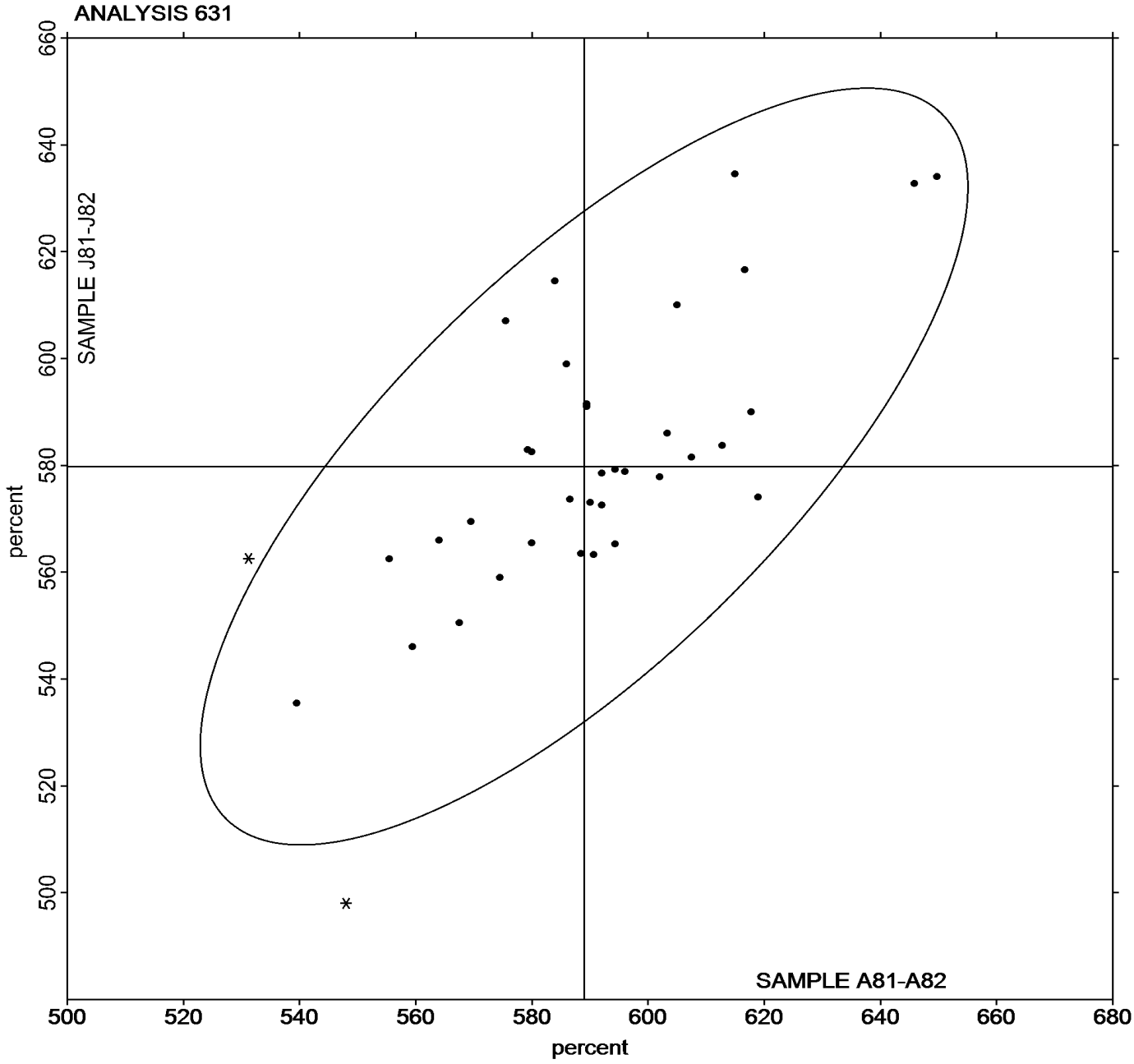
Ultimate Elongation: Precured vs. Lab-Cured Samples (percent)

Grand Mean Sample **A81-A82** = 588.97 percent

Grand Mean Sample **J81-J82** = 579.78 percent



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Stress at 300% Elongation: Precured vs. Lab-Cured Samples (psi)

WebCode	Data Flag	Sample A81-A82 Lab Mean	Sample A81-A82 Diff from Grand Mean	Sample A81-A82 CPV	Sample J81-J82 Lab Mean	Sample J81-J82 Diff from Grand Mean	Sample J81-J82 CPV
477BQE		1,010.2	-73.3	-0.97	1,257.2	178.5	1.31
4LJDWN		1,116.9	33.5	0.44	1,069.4	-9.2	-0.07
68T2Z6		1,012.7	-70.7	-0.93	1,027.6	-51.0	-0.37
6GKKGY		1,070.5	-12.9	-0.17	945.7	-133.0	-0.97
6WV7ZN		1,083.0	-0.4	-0.01	908.5	-170.2	-1.25
797X4N		1,089.7	6.2	0.08	1,164.9	86.3	0.63
8ENKF7		1,055.2	-28.2	-0.37	890.9	-187.7	-1.37
8ZQ2R8		1,067.0	-16.4	-0.22	915.0	-163.7	-1.20
9ATBKX		1,052.5	-30.9	-0.41	970.0	-108.7	-0.80
B8WE99		1,140.5	57.1	0.75	1,165.5	86.8	0.64
BAKJU7	*	902.5	-180.9	-2.39	1,066.5	-12.2	-0.09
EDRF2Y	*	1,278.5	195.1	2.57	1,168.3	89.6	0.66
EV8EW2		1,074.5	-8.9	-0.12	1,078.9	0.3	0.00
GA4MZF		1,079.8	-3.6	-0.05	1,110.3	31.6	0.23
GUAHAX		1,019.1	-64.3	-0.85	1,059.1	-19.6	-0.14
HAXTUE		1,249.0	165.6	2.18	1,317.5	238.8	1.75
JBN4XX		1,142.4	59.0	0.78	1,204.8	126.1	0.92
JCYFMA		1,054.0	-29.5	-0.39	981.7	-96.9	-0.71
K43ZCV		1,100.0	16.6	0.22	1,161.5	82.8	0.61
LA9WXG	*	905.8	-177.7	-2.34	707.8	-370.9	-2.71
MGJD7G		1,016.5	-66.9	-0.88	917.3	-161.3	-1.18
N67WCG		1,044.5	-38.9	-0.51	1,011.0	-67.7	-0.50
PC6J2V		1,141.0	57.6	0.76	1,077.0	-1.7	-0.01
PHP8PR		1,069.7	-13.8	-0.18	968.9	-109.8	-0.80
PJFZBG		1,153.5	70.1	0.92	1,189.1	110.4	0.81
R7LTGQ		1,147.0	63.6	0.84	1,211.5	132.8	0.97
RJQLXN		1,038.5	-44.9	-0.59	1,144.5	65.8	0.48
RT2Q9T		1,049.0	-34.4	-0.45	1,028.5	-50.2	-0.37
TQQ8M3		1,089.4	6.0	0.08	1,192.2	113.5	0.83
TUAM7N		1,147.3	63.8	0.84	1,158.9	80.2	0.59
TV2DZN		1,191.5	108.1	1.42	1,289.5	210.8	1.54
UVVJW9		1,108.6	25.1	0.33	1,077.0	-1.7	-0.01
VLN7BX		1,096.0	12.6	0.17	1,197.9	119.2	0.87
VNVREJ		1,086.3	2.9	0.04	1,125.5	46.8	0.34
VVB3EK		1,046.5	-36.9	-0.49	804.5	-274.2	-2.01
WB8GCT		1,002.0	-81.4	-1.07	1,092.0	13.3	0.10
YLCFYW		1,155.8	72.4	0.95	1,254.1	175.4	1.28

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Stress at 300% Elongation: Precured vs. Lab-Cured Samples (psi)

Summary Statistics

Grand Means	1,083.43 psi	1,078.66 psi
Stnd Dev Btwn Labs	75.84 psi	136.62 psi

Statistics based on 37 of 37 reporting participants

Summary Statistics in SI Units

Grand Means	7.4699 MPa	7.44 MPa
Stnd Dev Btwn Labs	0.5229 MPa	0.94 MPa

Statistics based on 37 of 37 reporting participants

Samples A81-A82: Polyisoprene compound, batch #1 & J81-J82: Polyisoprene compound, batch #1

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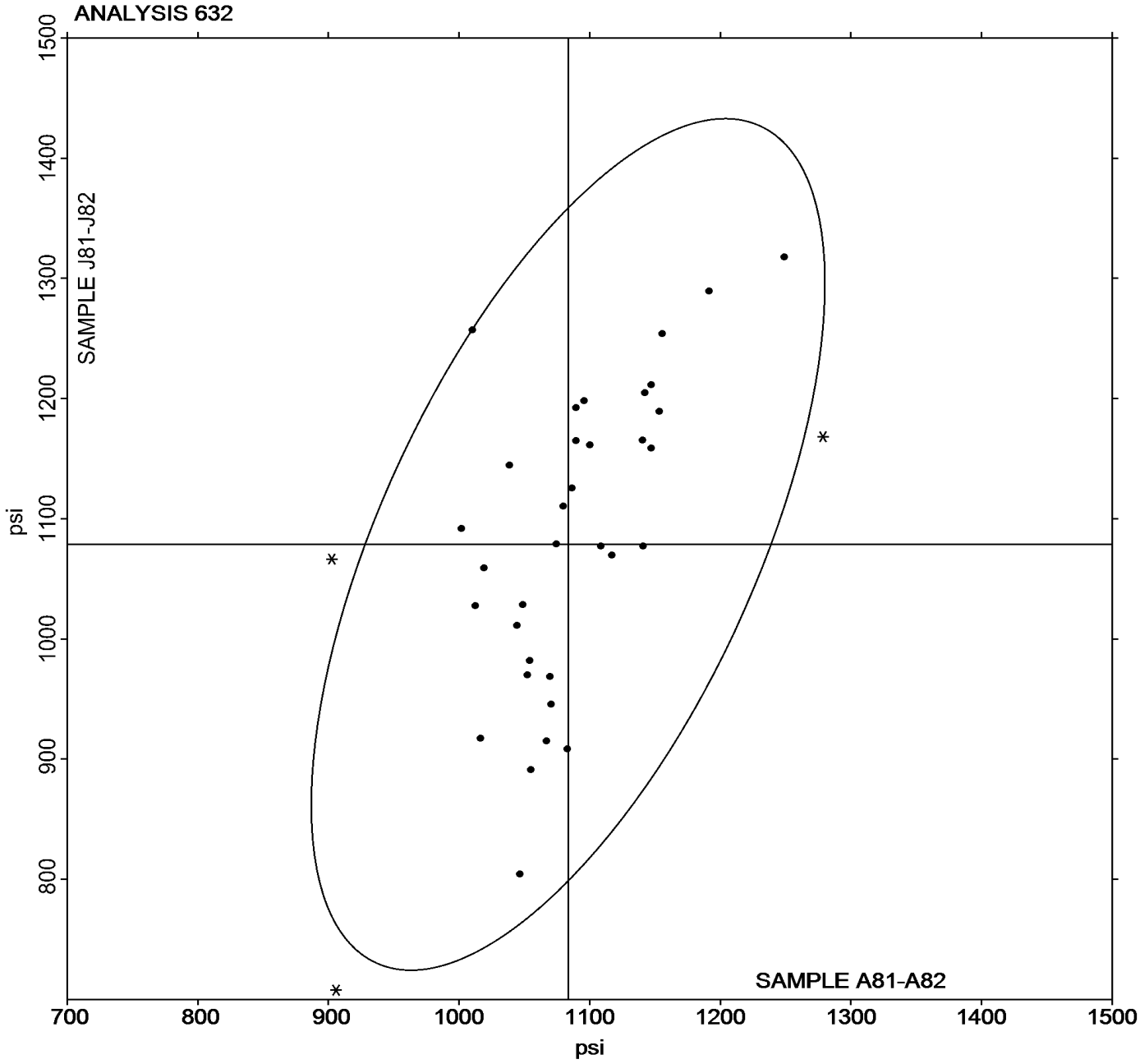
Stress at 300% Elongation: Precured vs. Lab-Cured Samples (psi)

Grand Mean Sample **A81-A82** = 1,083.43 psi

Grand Mean Sample **J81-J82** = 1,078.66 psi



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Stress at 100% Elongation: Precured vs. Lab-Cured Samples (psi)

WebCode	Data Flag	Sample A81-A82 Lab Mean	Sample A81-A82 Diff from Grand Mean	Sample A81-A82 CPV	Sample J81-J82 Lab Mean	Sample J81-J82 Diff from Grand Mean	Sample J81-J82 CPV
477BQE		219.1	-18.9	-1.32	273.7	32.1	1.22
4LJDWN		250.5	12.5	0.87	247.1	5.5	0.21
68T2Z6		243.2	5.2	0.36	246.8	5.1	0.20
6GKKGY		233.3	-4.7	-0.33	220.7	-21.0	-0.80
6WV7ZN		245.5	7.5	0.52	211.5	-30.1	-1.15
797X4N		257.3	19.2	1.34	271.8	30.1	1.15
8ENKF7		235.0	-3.0	-0.21	207.0	-34.7	-1.32
8ZQ2R8		235.5	-2.5	-0.17	215.0	-26.6	-1.02
9ATBKX		224.5	-13.5	-0.94	220.0	-21.6	-0.83
B8WE99		256.5	18.5	1.29	275.0	33.4	1.27
BAKJU7		209.0	-29.0	-2.02	248.0	6.4	0.24
EDRF2Y	X	309.7	71.7	5.00	303.1	61.5	2.34
EV8EW2		239.7	1.6	0.11	229.0	-12.6	-0.48
GA4MZF		232.8	-5.2	-0.36	240.8	-0.9	-0.03
GUAHAX		249.7	11.6	0.81	248.5	6.9	0.26
HAXTUE		248.0	10.0	0.70	263.0	21.4	0.81
JBN4XX		244.3	6.2	0.44	274.3	32.7	1.25
JCYFMA		233.5	-4.5	-0.32	217.3	-24.3	-0.93
K43ZCV		246.5	8.5	0.59	253.0	11.4	0.43
LA9WXG	*	219.0	-19.0	-1.32	171.9	-69.8	-2.66
MGJD7G		218.1	-20.0	-1.39	206.8	-34.8	-1.33
N67WCG		226.0	-12.0	-0.84	227.0	-14.6	-0.56
PC6J2V		244.0	6.0	0.42	241.5	-0.1	-0.01
PHP8PR		242.9	4.9	0.34	222.6	-19.0	-0.72
PJFZBG		248.2	10.2	0.71	265.1	23.5	0.90
R7LTGQ		249.0	11.0	0.77	261.0	19.4	0.74
RJQLXN		206.0	-32.0	-2.23	238.5	-3.1	-0.12
RT2Q9T		227.5	-10.5	-0.73	232.0	-9.6	-0.37
TQQ8M3		235.9	-2.1	-0.15	264.3	22.6	0.86
TUAM7N		250.2	12.2	0.85	252.4	10.7	0.41
TV2DZN		220.0	-18.0	-1.26	281.0	39.4	1.50
UVVJW9		270.1	32.1	2.24	255.3	13.7	0.52
VLN7BX		235.6	-2.5	-0.17	262.1	20.4	0.78
VNVREJ		242.9	4.9	0.34	255.3	13.6	0.52
VVB3EK	*	250.5	12.5	0.87	182.5	-59.1	-2.25
WB8GCT		225.0	-13.0	-0.91	255.0	13.4	0.51
YLCFYW		253.6	15.6	1.09	262.5	20.8	0.79

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Summary Statistics		
Grand Means	238.01 psi	241.64 psi
Stnd Dev Btwn Labs	14.34 psi	26.23 psi
		Statistics based on 36 of 37 reporting participants

Summary Statistics in SI Units		
Grand Means	1.6410 MPa	1.67 MPa
Stnd Dev Btwn Labs	0.0989 MPa	0.18 MPa
		Statistics based on 36 of 37 reporting participants

Samples A81-A82: Polyisoprene compound, batch #1 & J81-J82: Polyisoprene compound, batch #1

Comments on Assigned Data Flags for Test #633

EDRF2Y (X) - Data for sample group A81-A82 are high. Inconsistent within the determinations of sample group J81-J82.

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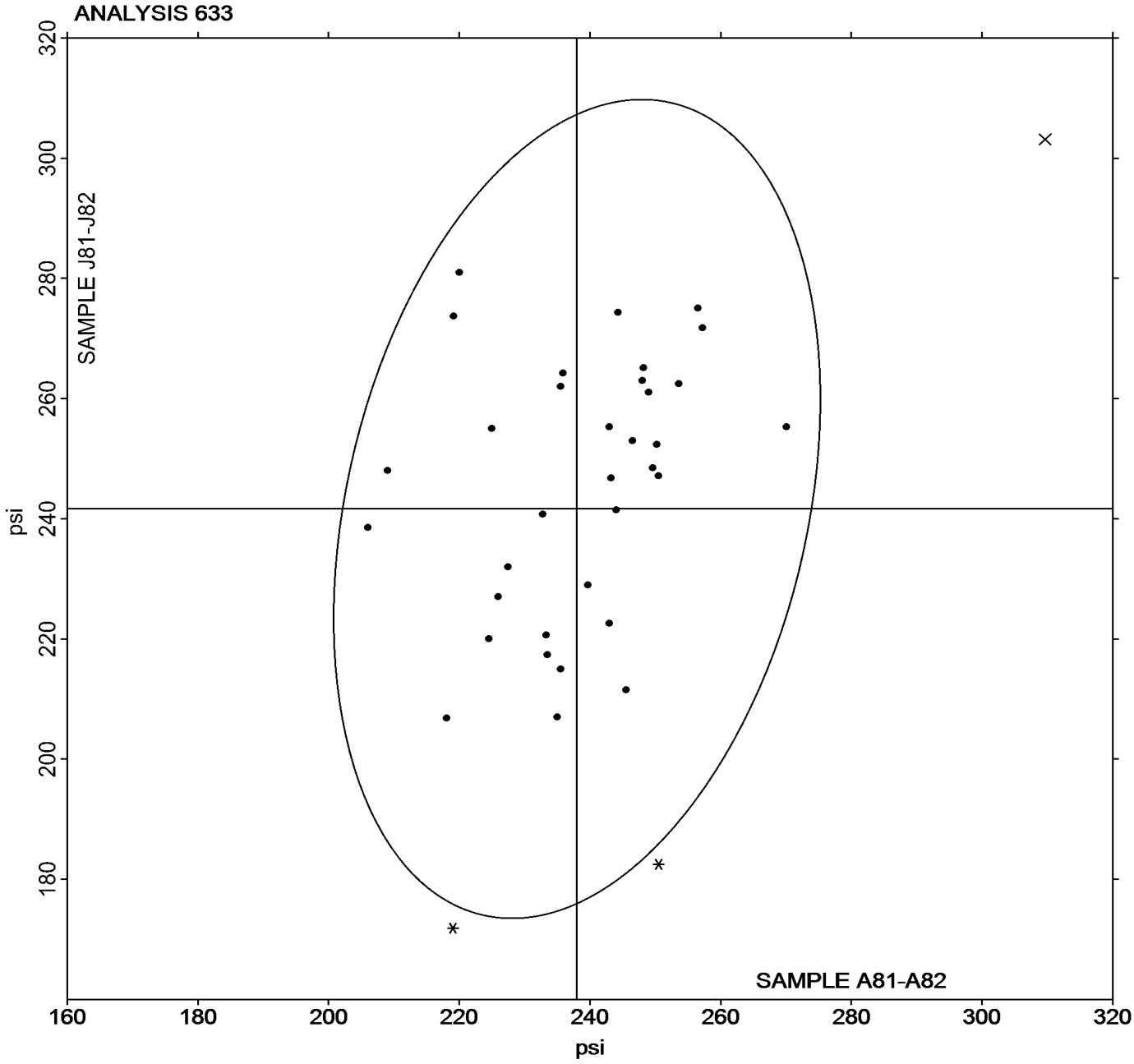
Stress at 100% Elongation: Precured vs. Lab-Cured Samples (psi)

Grand Mean Sample **A81-A82** = 238.01 psi

Grand Mean Sample **J81-J82** = 241.64 psi



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WebCode	Data Flag	Sample S81-S82 Lab Mean	Diff from Grand Mean	CPV	Sample S83-S84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
4LJDWN		48.70	0.81	0.55	54.10	0.96	0.73	MR
4PF3H3		48.20	0.31	0.21	54.12	0.98	0.74	MR
6GKKGY		47.83	-0.06	-0.04	53.00	-0.14	-0.11	MZ
797X4N		48.43	0.53	0.36	54.40	1.26	0.96	TA
79JL6F		47.38	-0.51	-0.35	53.40	0.26	0.20	MR
7DEEEX		49.13	1.24	0.84	53.17	0.03	0.02	MR
7TTP3K	X	53.28	5.39	3.65	59.90	6.76	5.13	MR
8ENKF7	*	51.65	3.75	2.54	57.11	3.97	3.01	TV
9ATBKX		47.97	0.07	0.05	53.31	0.17	0.13	ML
BAKJU7		48.08	0.18	0.12	52.59	-0.55	-0.42	MR
EDRF2Y	M	49.99	2.09	1.42	No data reported for this sample			MR
EZNMJF		48.28	0.39	0.26	53.55	0.41	0.31	MR
GA4MZF		46.55	-1.34	-0.91	53.03	-0.11	-0.08	MR
HX9U6X		48.64	0.74	0.50	54.03	0.89	0.67	MR
JBN4XX		49.18	1.29	0.87	52.36	-0.78	-0.60	MR
K43ZCV		49.53	1.64	1.11	53.57	0.43	0.32	MR
KP2749		48.27	0.37	0.25	51.90	-1.24	-0.94	MV
KYRRA7		46.05	-1.84	-1.25	50.68	-2.46	-1.87	XX
LA9WXG		50.12	2.23	1.51	54.19	1.05	0.80	MV
M3H4ZM		48.12	0.22	0.15	53.27	0.13	0.10	MR
MBUM87		45.48	-2.41	-1.63	52.80	-0.34	-0.26	MR
MGJD7G		44.61	-3.28	-2.22	52.51	-0.63	-0.48	MV
PC6J2V		46.53	-1.36	-0.92	52.70	-0.44	-0.34	MR
PHP8PR		47.83	-0.06	-0.04	54.93	1.78	1.35	MR
PJFZBG		48.57	0.67	0.46	52.37	-0.77	-0.59	XX
R7LTGQ		47.12	-0.78	-0.53	51.83	-1.31	-0.99	MR
RB3Z6P		49.06	1.16	0.79	54.36	1.22	0.93	MR
RCVLJV		47.07	-0.83	-0.56	53.20	0.06	0.04	MR
RT2Q9T		47.42	-0.48	-0.32	52.78	-0.36	-0.27	MR
T7HZAP	*	47.02	-0.88	-0.59	49.72	-3.42	-2.60	MR
TCTLAZ		46.20	-1.69	-1.15	51.42	-1.72	-1.31	MR
TUAM7N		47.09	-0.81	-0.55	52.42	-0.72	-0.55	MV
UVVJW9	X	48.13	0.23	0.16	57.42	4.28	3.25	MV
VNVREJ		46.88	-1.01	-0.68	53.47	0.33	0.25	MR
WB8GCT		45.87	-2.03	-1.37	51.98	-1.16	-0.88	MR
XEFL2X		50.59	2.70	1.83	54.44	1.30	0.99	MR
YLCFYW		48.95	1.06	0.72	54.12	0.98	0.74	MR

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Summary Statistics		
Grand Means	47.894 ML 1 + 4	53.141 ML 1 + 4
Stnd Dev Btwn Labs	1.476 ML 1 + 4	1.317 ML 1 + 4

Statistics based on 34 of 37 reporting participants

Samples S81-S82: NBR & S83-S84: Butyl

Comments on Assigned Data Flags for Test #660

7TTP3K (X) - Data for all samples are high.

EDRF2Y (M) - Participant did not submit data for sample group S83-S84.

UVVJW9 (X) - Data for sample group S83-S84 are high. Inconsistent within the determinations of sample group S83-S84. Inconsistent within the determinations of sample group S83-S84.

Key to Instrument Codes Reported by Participants

ML	Alpha Technologies/Monsanto model not specified	MR	Alpha Technologies Model MV2000/MV2000E
MV	MonTech	MZ	Rebuilt Monsanto Mooney Viscometer
TA	TA Instruments (any model)	TV	Tech Pro Visc Tech (any model)
XX	Instrument make/model not specified by lab		

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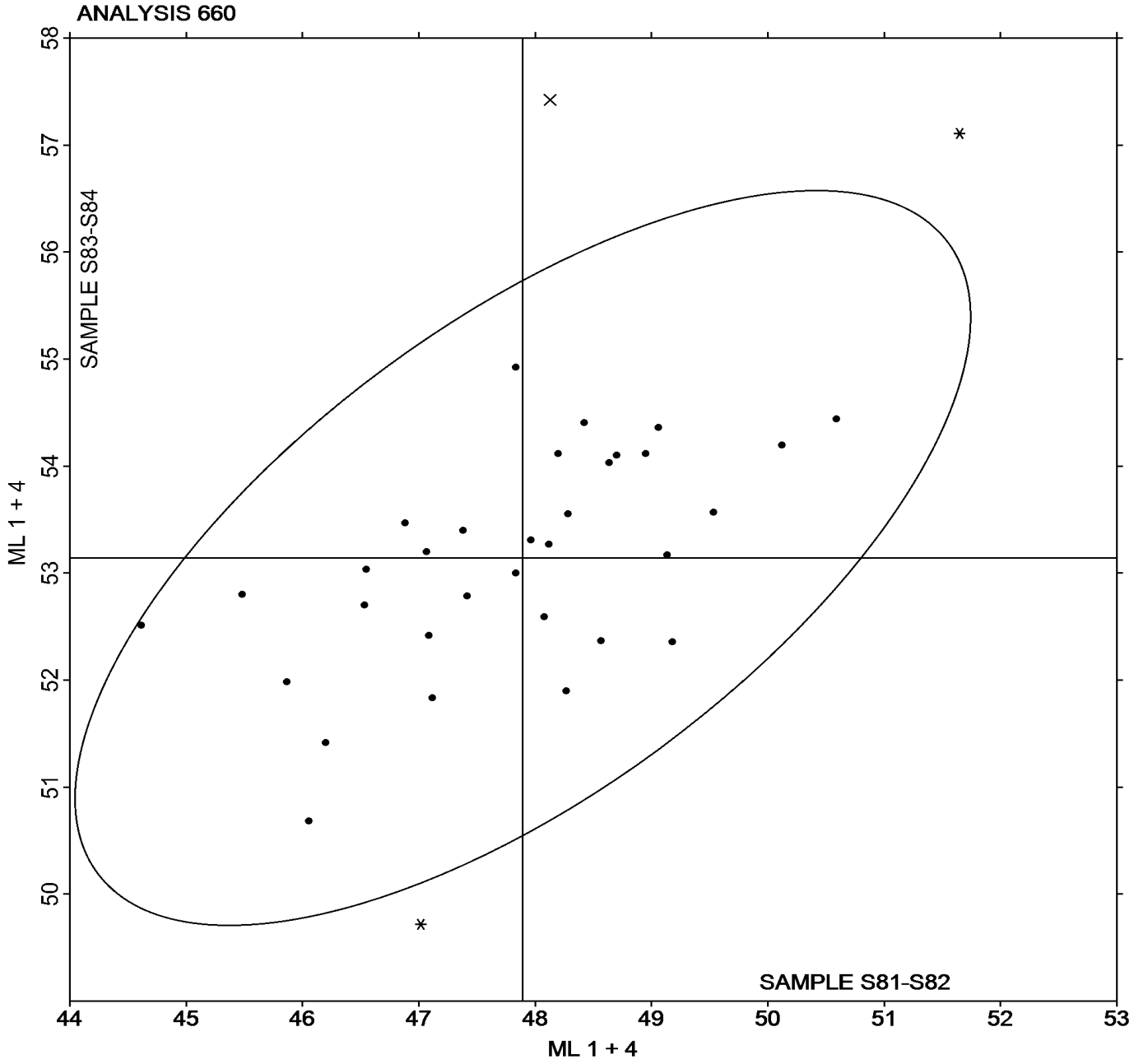
Grand Mean Sample **S81-S82** = 47.894 ML 1 + 4

Grand Mean Sample **S83-S84** = 53.141 ML 1 + 4



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Mooney Viscosity: 4-min NBR/SBR & 8-min butyl readings (ML)

WebCode	Data Flag	Sample S81-S82 Lab Mean	Diff from Grand Mean	CPV	Sample S83-S84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
4LJDWN		48.70	0.69	0.46	51.70	0.88	0.86	MR
4PF3H3		48.20	0.19	0.12	51.68	0.86	0.85	MR
6GKKGY		47.83	-0.18	-0.12	50.25	-0.57	-0.56	MZ
797X4N		48.43	0.41	0.28	51.68	0.86	0.85	TA
7DEEEX		49.13	1.12	0.75	50.87	0.04	0.04	MR
7TTP3K	X	53.28	5.27	3.52	56.67	5.85	5.76	MR
8ENKF7	*	51.65	3.64	2.43	53.54	2.71	2.67	TV
9ATBKX		47.97	-0.05	-0.03	49.98	-0.84	-0.83	ML
BAKJU7		48.08	0.06	0.04	50.11	-0.71	-0.70	MR
EDRF2Y		49.99	1.97	1.32	51.50	0.68	0.67	MR
EZNMJF		48.28	0.27	0.18	50.60	-0.22	-0.22	MR
GA4MZF		46.55	-1.46	-0.98	50.43	-0.39	-0.38	MR
JBN4XX		49.18	1.17	0.78	49.88	-0.94	-0.93	MR
K43ZCV		49.53	1.52	1.02	50.87	0.04	0.04	MR
KP2749		48.27	0.25	0.17	50.26	-0.57	-0.56	MV
LA9WXG		50.12	2.11	1.41	52.07	1.25	1.23	MV
M3H4ZM		48.12	0.10	0.07	50.43	-0.39	-0.38	MR
MBUM87		45.48	-2.53	-1.69	50.33	-0.49	-0.48	MR
MGJD7G	*	44.61	-3.40	-2.27	50.50	-0.32	-0.32	MV
PC6J2V		46.53	-1.48	-0.99	49.98	-0.84	-0.83	MR
PHP8PR		47.83	-0.18	-0.12	51.52	0.69	0.68	MR
PJFZBG		48.57	0.55	0.37	50.87	0.04	0.04	XX
R7LTGQ		47.12	-0.90	-0.60	49.18	-1.64	-1.61	MP
RB3Z6P		49.06	1.05	0.70	52.21	1.39	1.37	MR
RCVLJV		47.07	-0.95	-0.63	50.45	-0.37	-0.37	MR
RT2Q9T		47.42	-0.60	-0.40	50.18	-0.64	-0.63	MR
T7HZAP	*	47.02	-1.00	-0.67	52.42	1.59	1.57	MR
TCTLAZ		46.20	-1.81	-1.21	49.23	-1.59	-1.56	MR
TUAM7N		47.09	-0.93	-0.62	49.84	-0.99	-0.97	MV
UVVJW9		48.13	0.12	0.08	49.67	-1.15	-1.13	MV
VNVREJ		46.88	-1.13	-0.75	50.45	-0.37	-0.37	MR
WB8GCT		45.87	-2.15	-1.43	50.15	-0.67	-0.66	MR
XEFL2X		50.59	2.58	1.72	52.36	1.54	1.52	MR
YLCFYW		48.95	0.94	0.63	51.93	1.11	1.09	MR

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Summary Statistics		
Grand Means	48.013 ML 1 + 8	50.822 ML 1 + 8
Stnd Dev Btwn Labs	1.497 ML 1 + 8	1.015 ML 1 + 8

Statistics based on 33 of 34 reporting participants

Samples S81-S82: NBR & S83-S84: Butyl

Comments on Assigned Data Flags for Test #661

7TTP3K (X) - Data for all samples are high. Inconsistent within the determinations of sample group S83-S84.

Key to Instrument Codes Reported by Participants

ML	Alpha Technologies/Monsanto model not specified	MP	Monsanto Compact Mooney Viscometer
MR	Alpha Technologies Model MV2000/MV2000E	MV	Montech
MZ	Rebuilt Monsanto Mooney Viscometer	TA	TA Instruments (any model)
TV	Tech Pro Visc Tech (any model)	XX	Instrument make/model not specified by lab

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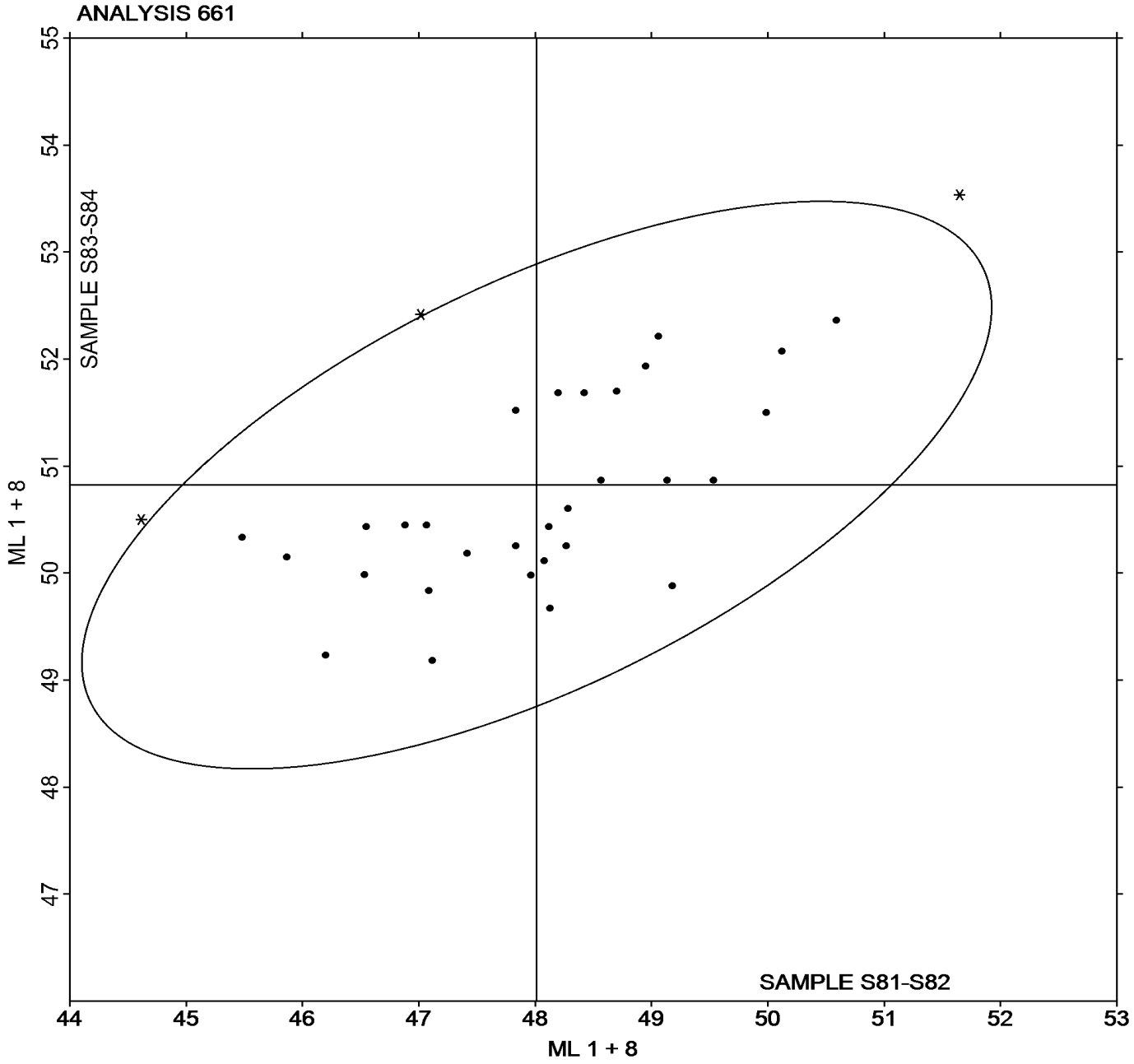
Grand Mean Sample **S81-S82** = 48.013 ML 1 + 8

Grand Mean Sample **S83-S84** = 50.822 ML 1 + 8



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WebCode	Data Flag	Sample S81-S82 Lab Mean	Diff from Grand Mean	CPV	Sample S83-S84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
4LJDWN		4.863	-0.928	-0.40	7.757	0.115	0.07	MR
6GKKGY		9.053	3.262	1.39	9.102	1.460	0.86	MZ
797X4N		5.060	-0.732	-0.31	5.120	-2.522	-1.49	TA
7DEEEX		4.957	-0.835	-0.36	7.317	-0.325	-0.19	MR
8ENKF7		11.060	5.268	2.25	11.127	3.485	2.06	TV
BAKJU7		11.400	5.608	2.40	11.365	3.723	2.21	MR
EZNMJF		5.183	-0.608	-0.26	7.717	0.075	0.04	MR
GA4MZF		5.330	-0.462	-0.20	7.800	0.158	0.09	MR
HX9U6X		4.600	-1.192	-0.51	8.300	0.658	0.39	MR
K43ZCV		5.220	-0.572	-0.24	7.550	-0.092	-0.05	MR
LA9WXG		3.600	-2.192	-0.94	6.000	-1.642	-0.97	MV
M3H4ZM		3.717	-2.075	-0.89	7.350	-0.292	-0.17	MR
MGJD7G	X	548.567	542.775	231.97	551.933	544.291	322.38	MV
PC6J2V		5.003	-0.788	-0.34	6.963	-0.679	-0.40	MR
RT2Q9T		4.847	-0.945	-0.40	7.227	-0.415	-0.25	MR
TUAM7N		5.058	-0.733	-0.31	5.110	-2.532	-1.50	MV
UVVJW9		4.667	-1.125	-0.48	7.000	-0.642	-0.38	MV
VNVREJ		4.842	-0.950	-0.41	7.108	-0.534	-0.32	MR

Summary Statistics

	Sample S81-S82	Sample S83-S84
Grand Means	5.7918 seconds	7.6419 seconds
Stnd Dev Btwn Labs	2.3399 seconds	1.6883 seconds

Statistics based on 17 of 18 reporting participants

Samples S81-S82: NBR & S83-S84: Butyl

Comments on Assigned Data Flags for Test #662

MGJD7G (X) - Extreme Data.

Key to Instrument Codes Reported by Participants

MR	Alpha Technologies Model MV2000/MV2000E	MV	MonTech
MZ	Rebuilt Monsanto Mooney Viscometer	TA	TA Instruments (any model)
TV	Tech Pro Visc Tech (any model)		

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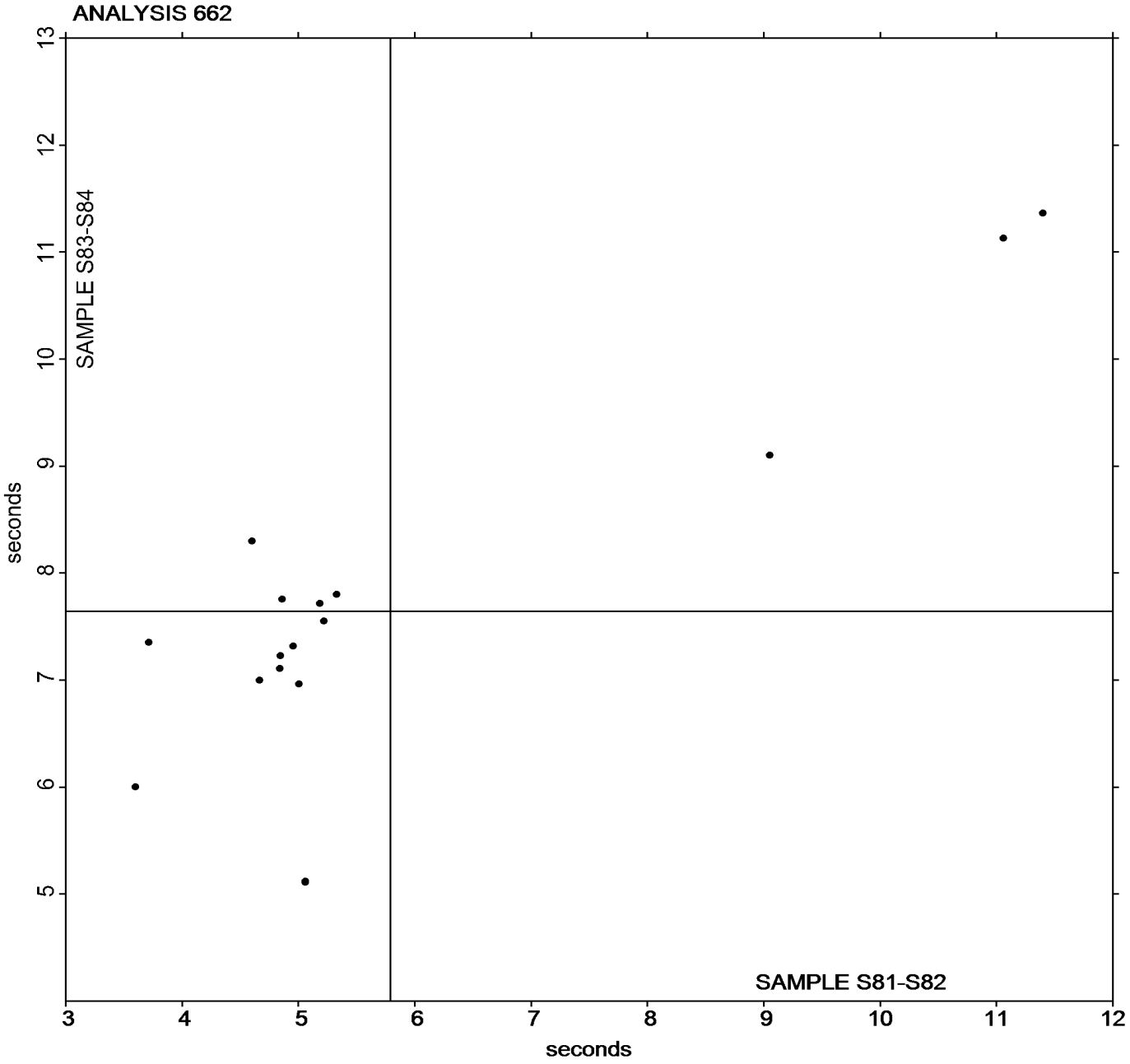
Grand Mean Sample **S81-S82** = 5.7918 seconds

Grand Mean Sample **S83-S84** = 7.6419 seconds



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

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WebCode	Data Flag	Sample S81-S82 Lab Mean	Diff from Grand Mean	CPV	Sample S83-S84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
4LJDWN		91.04	-0.62	-0.29	91.43	-0.43	-0.21	MR
6GKKGY		94.37	2.72	1.28	94.12	2.26	1.12	MZ
797X4N		94.86	3.21	1.51	93.86	2.00	0.99	TA
7DEEEX		90.81	-0.84	-0.40	91.90	0.04	0.02	MR
8ENKF7		92.36	0.71	0.33	91.67	-0.19	-0.09	TV
BAKJU7		91.03	-0.62	-0.29	88.65	-3.21	-1.58	MR
EZNMJF		90.55	-1.10	-0.52	91.48	-0.37	-0.18	MR
GA4MZF		91.12	-0.54	-0.25	92.04	0.18	0.09	MR
K43ZCV		90.31	-1.34	-0.63	91.42	-0.44	-0.22	MR
LA9WXG		94.66	3.00	1.42	94.95	3.10	1.53	MV
M3H4ZM		91.18	-0.47	-0.22	89.98	-1.87	-0.93	MR
MGJD7G		86.01	-5.64	-2.66	86.66	-5.19	-2.56	MV
PC6J2V		91.16	-0.49	-0.23	92.50	0.64	0.32	MR
RT2Q9T		91.11	-0.54	-0.26	92.20	0.34	0.17	MR
TUAM7N		94.30	2.64	1.25	93.89	2.03	1.00	MV
UVVJW9		92.07	0.42	0.20	92.79	0.93	0.46	MV
VNVREJ		91.16	-0.49	-0.23	92.04	0.18	0.09	MR

Summary Statistics

	Sample S81-S82	Sample S83-S84
Grand Means	91.652 percent	91.858 percent
Stnd Dev Btwn Labs	2.121 percent	2.025 percent

Statistics based on 17 of 17 reporting participants

Samples S81-S82: NBR & S83-S84: Butyl

Key to Instrument Codes Reported by Participants

MR	Alpha Technologies Model MV2000/MV2000E	MV	Montech
MZ	Rebuilt Monsanto Mooney Viscometer	TA	TA Instruments (any model)
TV	Tech Pro Visc Tech (any model)		

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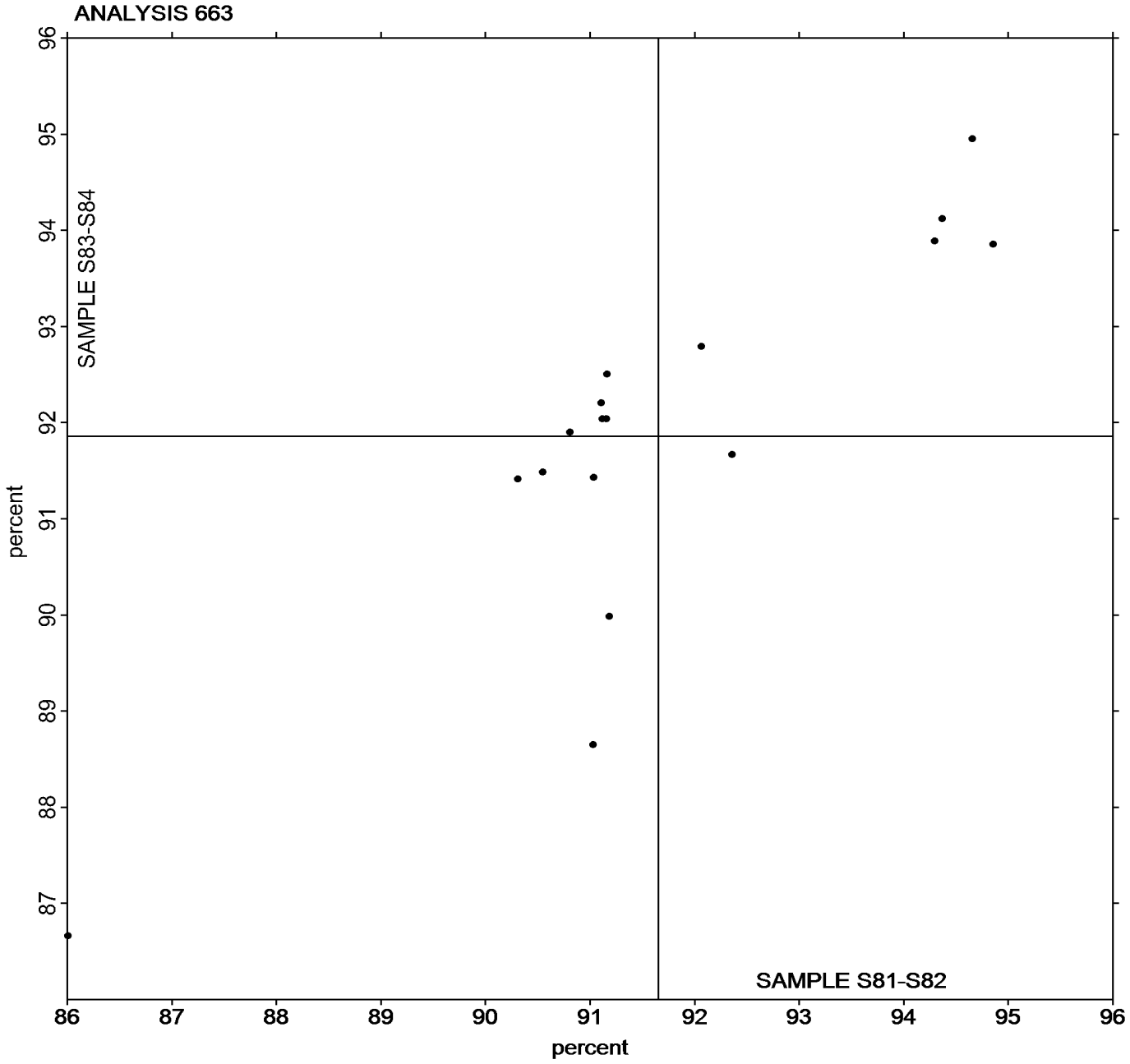
Grand Mean Sample **S81-S82** = 91.652 percent

Grand Mean Sample **S83-S84** = 91.858 percent



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

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Rubber Interlaboratory Testing Program

Analysis 664

Mooney Stress Relaxation: Area under curve (M-s)

WebCode	Data Flag	Sample S81-S82 Lab Mean	Diff from Grand Mean	CPV	Sample S83-S84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
4LJDWN		471.0	50.7	0.43	499.4	56.9	0.50	MR
6GKKGY		261.2	-159.1	-1.35	322.3	-120.1	-1.05	MZ
797X4N		249.5	-170.8	-1.45	344.8	-97.7	-0.85	TA
8ENKF7		399.8	-20.5	-0.17	501.2	58.7	0.51	TV
BAKJU7		468.4	48.1	0.41	420.4	-22.1	-0.19	MR
EZNMJF		495.0	74.7	0.64	489.5	47.0	0.41	MR
GA4MZF		451.5	31.2	0.27	456.3	13.8	0.12	XX
K43ZCV		518.6	98.3	0.84	490.9	48.5	0.42	MR
LA9WXG		267.7	-152.6	-1.30	275.9	-166.6	-1.45	MV
M3H4ZM	X	6.9	-413.4	-3.51	7.7	-434.8	-3.79	MR
MGJD7G	*	687.1	266.8	2.27	772.2	329.7	2.88	MV
PC6J2V		442.8	22.6	0.19	425.8	-16.7	-0.15	MR
RT2Q9T		455.5	35.2	0.30	441.2	-1.3	-0.01	MR
TUAM7N		275.8	-144.4	-1.23	341.5	-100.9	-0.88	MV
UVVJW9		413.5	-6.8	-0.06	407.0	-35.4	-0.31	MV
VNVREJ		446.6	26.3	0.22	448.7	6.2	0.05	MR

Summary Statistics

	Sample S81-S82	Sample S83-S84
Grand Means	420.27 M-s	442.48 M-s
Stnd Dev Btwn Labs	117.67 M-s	114.69 M-s

Statistics based on 15 of 16 reporting participants

Samples S81-S82: NBR & S83-S84: Butyl

Comments on Assigned Data Flags for Test #664

M3H4ZM (X) - Data for all samples are low.

Key to Instrument Codes Reported by Participants

MR	Alpha Technologies Model MV2000/MV2000E	MV	MonTech
MZ	Rebuilt Mooney Viscometer	TA	TA Instruments (any model)
TV	Tech Pro Visc Tech (any model)	XX	Instrument make/model not specified by lab

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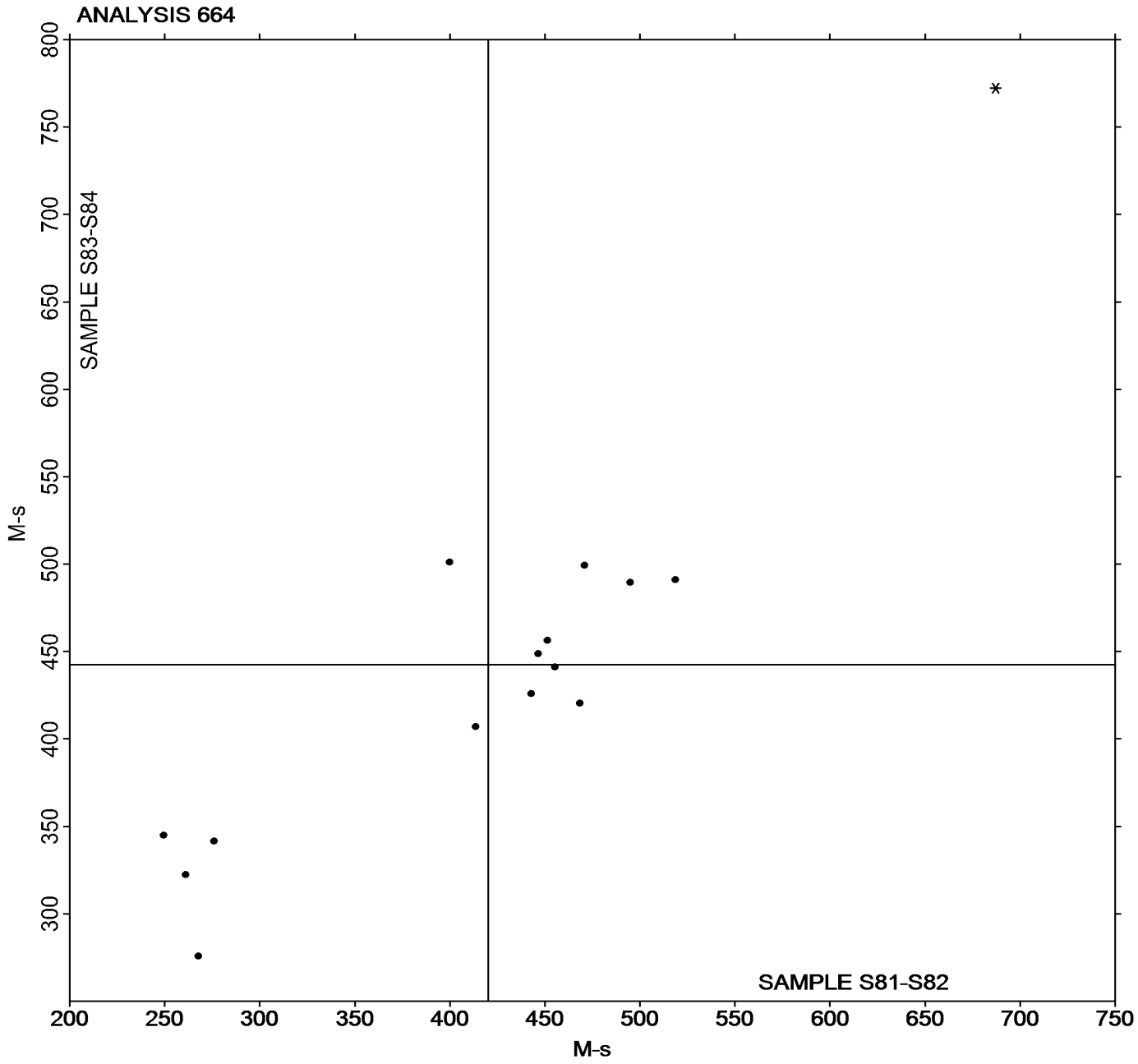
Grand Mean Sample **S81-S82** = 420.27 M-s

Grand Mean Sample **S83-S84** = 442.48 M-s



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

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Rubber Interlaboratory Testing Program

Analysis 669

ODR Vulcanization-Cure Time 10% (minutes)

WebCode	Data Flag	Sample W81-W82 Lab Mean	Sample W81-W82 Diff from Grand Mean	Sample W81-W82 CPV	Sample W83-W84 Lab Mean	Sample W83-W84 Diff from Grand Mean	Sample W83-W84 CPV
8ENKF7		1.610	-0.001	-0.01	2.965	-0.084	-0.97
BAKJU7		1.532	-0.079	-0.72	3.048	-0.001	-0.01
EV8EW2		1.577	-0.034	-0.31	3.067	0.018	0.21
PHP8PR		1.670	0.059	0.54	3.047	-0.002	-0.03
R7LTGQ		1.692	0.081	0.73	3.245	0.196	2.27
TCTLAZ		1.813	0.203	1.84	3.022	-0.027	-0.32
WB8GCT		1.505	-0.106	-0.96	3.015	-0.034	-0.39
XEFL2X		1.488	-0.123	-1.11	2.983	-0.066	-0.76

Summary Statistics

	Sample W81-W82	Sample W83-W84
Grand Means	1.6108 minutes	3.0490 minutes
Stnd Dev Btwn Labs	0.1100 minutes	0.0862 minutes

Statistics based on 8 of 8 reporting participants

Samples W81-W82: EPDM compound #1 & W83-W84: EPDM compound #2

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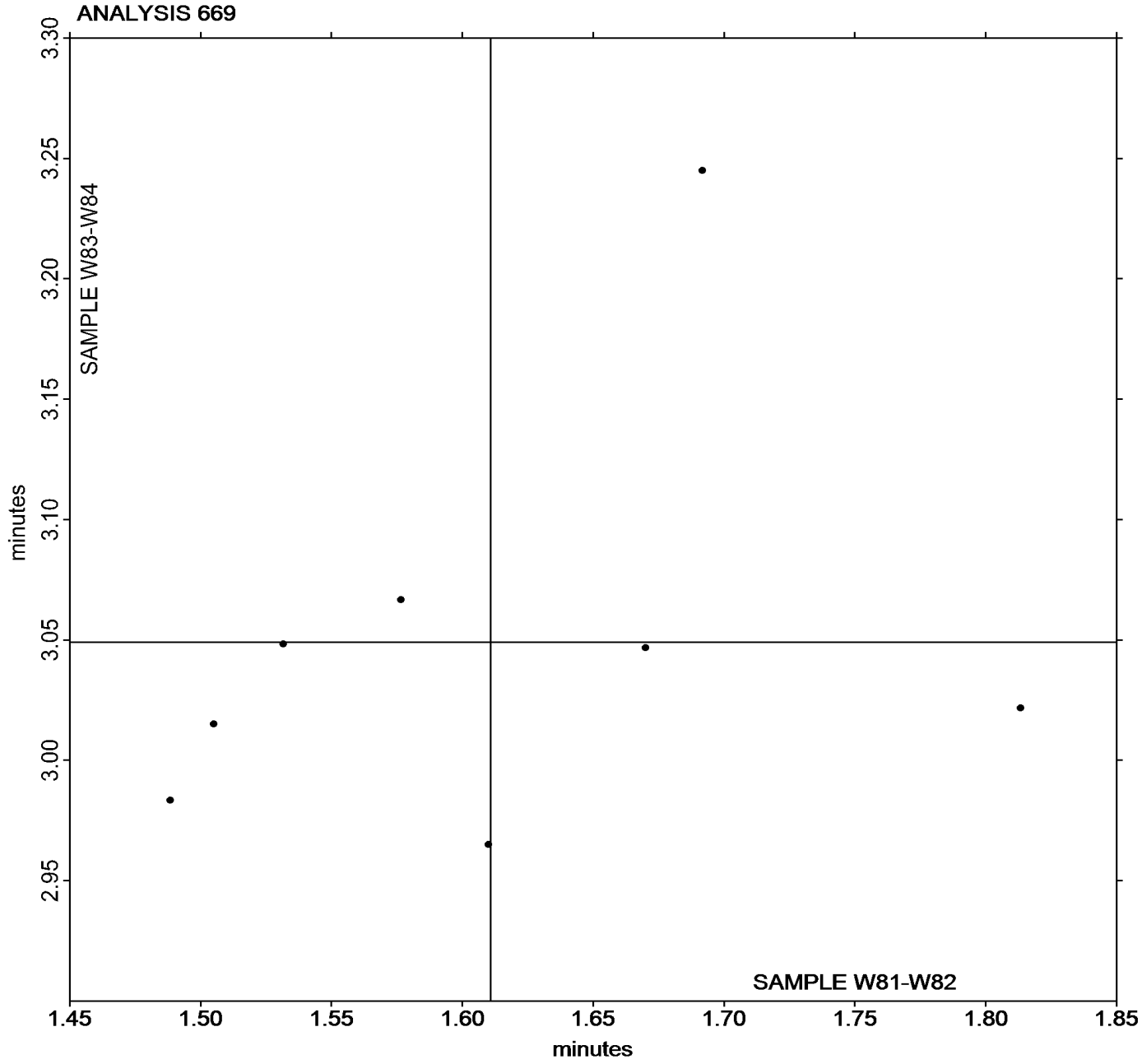
Grand Mean Sample **W81-W82** = 1.6108 minutes

Grand Mean Sample **W83-W84** = 3.0490 minutes



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

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WebCode	Data Flag	Sample W81-W82 Lab Mean	Diff from Grand Mean	CPV	Sample W83-W84 Lab Mean	Diff from Grand Mean	CPV
8ENKF7		1.200	0.032	0.33	2.392	0.094	0.73
BAKJU7		1.110	-0.058	-0.61	2.398	0.100	0.78
EV8EW2		1.143	-0.025	-0.26	2.262	-0.036	-0.28
PHP8PR		1.188	0.020	0.21	2.355	0.057	0.45
R7LTGQ		1.190	0.021	0.22	2.437	0.139	1.08
TCTLAZ		1.365	0.197	2.07	2.317	0.019	0.15
WB8GCT		1.100	-0.068	-0.72	2.147	-0.151	-1.18
XEFL2X		1.050	-0.118	-1.24	2.077	-0.221	-1.73

Summary Statistics

	Sample W81-W82	Sample W83-W84
Grand Means	1.1683 minutes	2.2979 minutes
Stnd Dev Btwn Labs	0.0950 minutes	0.1281 minutes

Statistics based on 8 of 8 reporting participants

Samples W81-W82: EPDM compound #1 & W83-W84: EPDM compound #2

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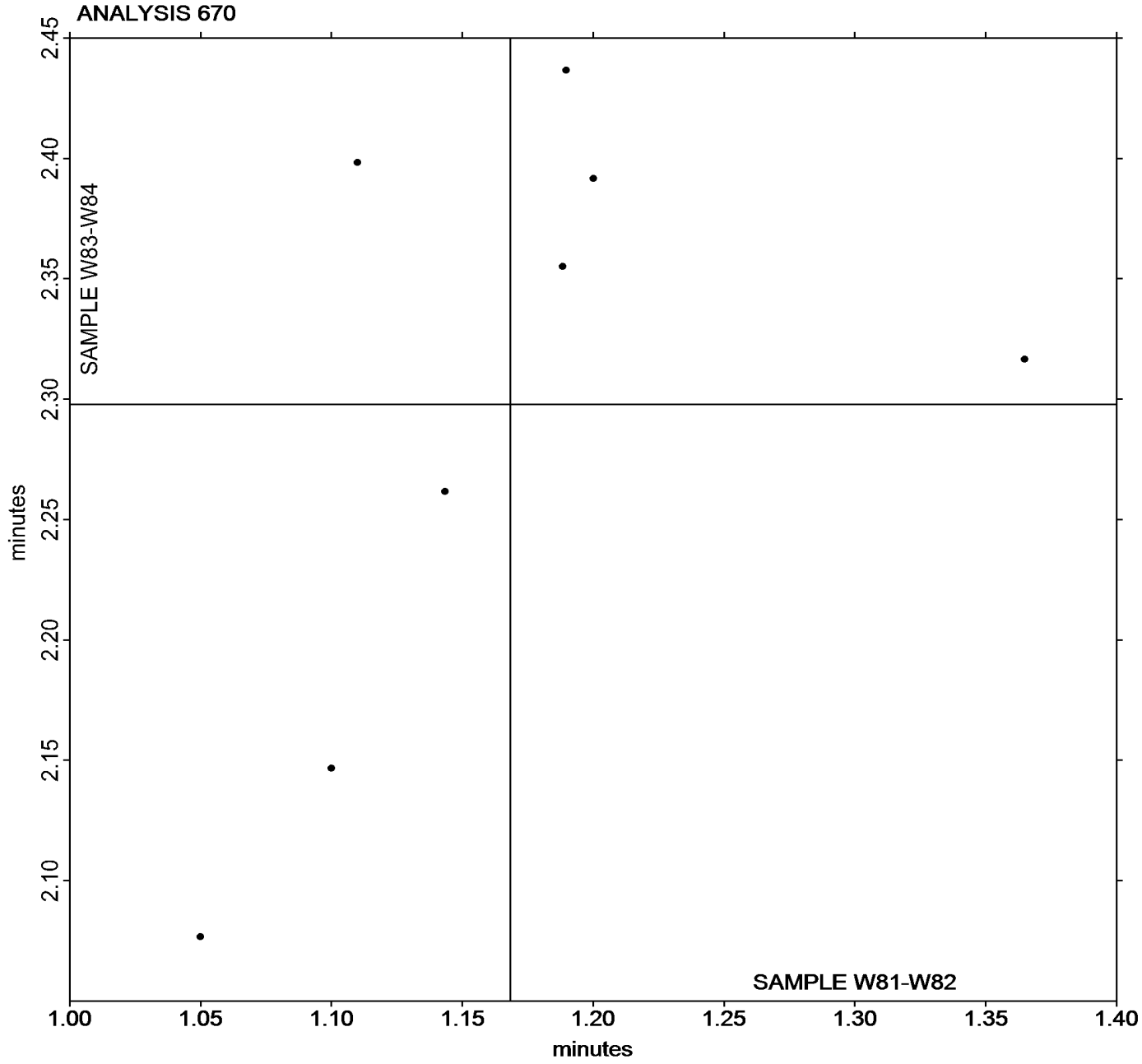
Grand Mean Sample **W81-W82** = 1.1683 minutes

Grand Mean Sample **W83-W84** = 2.2979 minutes



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

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WebCode	Data Flag	Sample W81-W82 Lab Mean	Sample W81-W82 Diff from Grand Mean	Sample W81-W82 CPV	Sample W83-W84 Lab Mean	Sample W83-W84 Diff from Grand Mean	Sample W83-W84 CPV
8ENKF7		3.122	0.041	0.26	4.767	-0.334	-1.68
BAKJU7		2.932	-0.149	-0.95	5.050	-0.050	-0.25
EV8EW2		2.940	-0.141	-0.90	5.322	0.221	1.11
PHP8PR		3.245	0.164	1.05	5.022	-0.079	-0.40
R7LTGQ		3.175	0.094	0.60	5.388	0.288	1.45
TCTLAZ		3.325	0.244	1.56	4.957	-0.144	-0.72
WB8GCT		2.968	-0.113	-0.72	5.160	0.060	0.30
XEFL2X		2.940	-0.141	-0.90	5.138	0.038	0.19

Summary Statistics

	Sample W81-W82	Sample W83-W84
Grand Means	3.0808 minutes	5.1004 minutes
Stnd Dev Btwn Labs	0.1566 minutes	0.1992 minutes

Statistics based on 8 of 8 reporting participants

Samples W81-W82: EPDM compound #1 & W83-W84: EPDM compound #2

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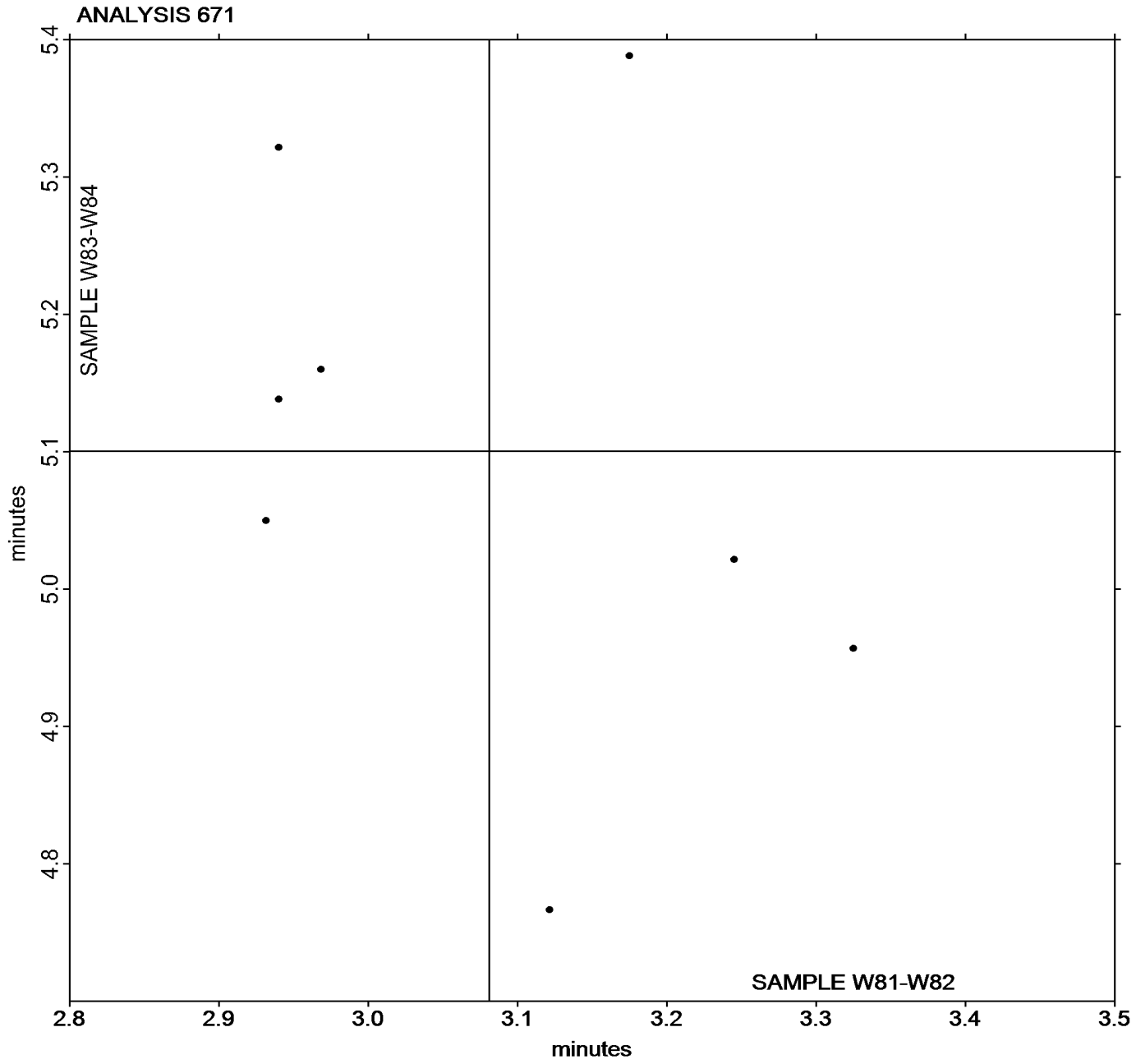
Grand Mean Sample **W81-W82** = 3.0808 minutes

Grand Mean Sample **W83-W84** = 5.1004 minutes



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

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WebCode	Data Flag	Sample W81-W82 Lab Mean	Sample W81-W82 Diff from Grand Mean	Sample W81-W82 CPV	Sample W83-W84 Lab Mean	Sample W83-W84 Diff from Grand Mean	Sample W83-W84 CPV
8ENKF7		15.25	1.40	1.24	10.02	-1.16	-0.63
BAKJU7		13.17	-0.68	-0.60	9.88	-1.30	-0.71
EV8EW2		12.00	-1.85	-1.63	9.78	-1.40	-0.76
PHP8PR		15.39	1.54	1.36	10.38	-0.80	-0.43
R7LTGQ		13.17	-0.68	-0.60	10.86	-0.32	-0.17
TCTLAZ		13.74	-0.11	-0.10	10.30	-0.88	-0.47
WB8GCT		14.36	0.51	0.45	13.84	2.66	1.44
XEFL2X		13.71	-0.14	-0.12	14.37	3.20	1.73

Summary Statistics

	Sample W81-W82	Sample W83-W84
Grand Means	13.850 minutes	11.177 minutes
Stnd Dev Btwn Labs	1.131 minutes	1.843 minutes

Statistics based on 8 of 8 reporting participants

Samples W81-W82: EPDM compound #1 & W83-W84: EPDM compound #2

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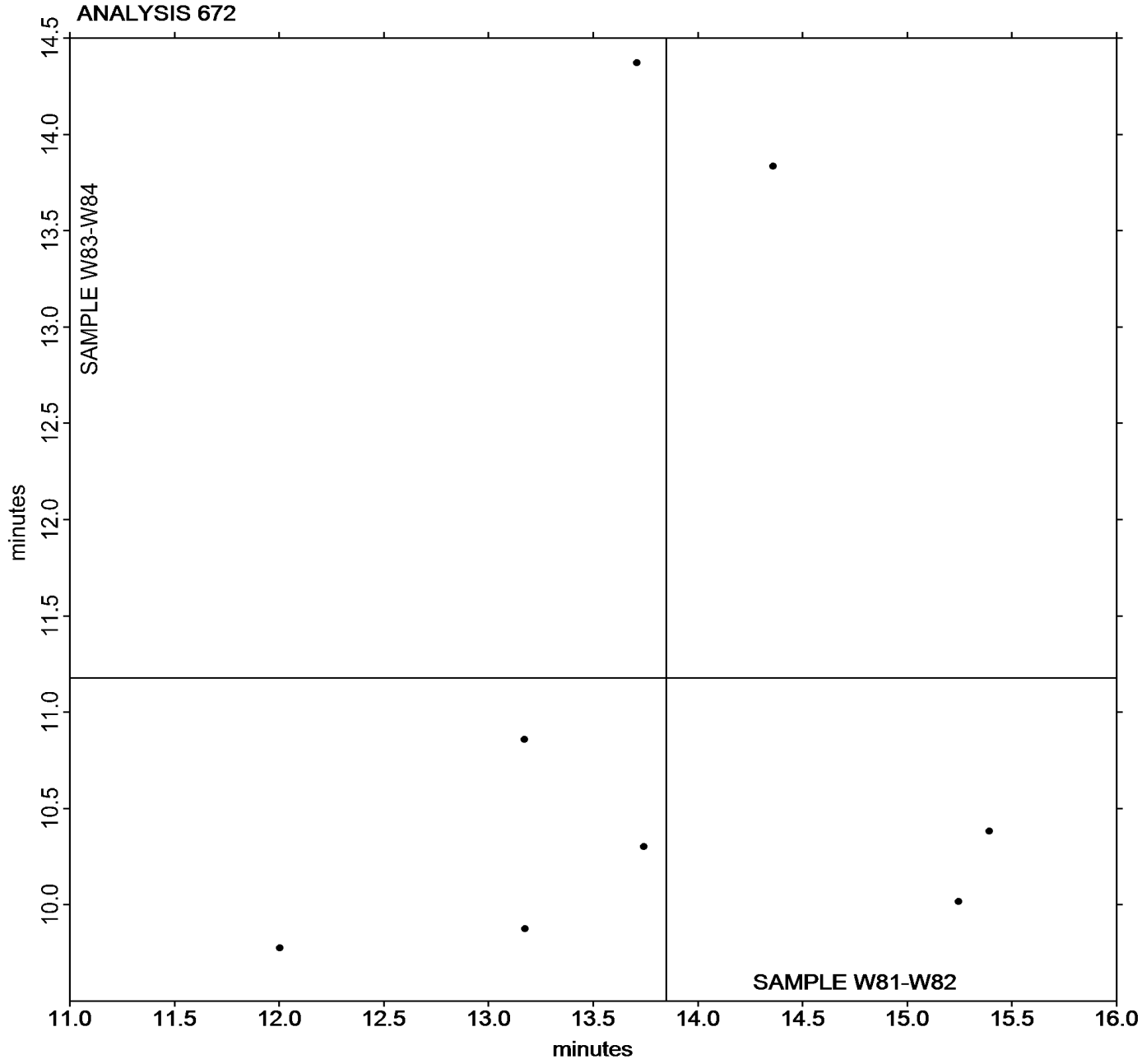
Grand Mean Sample **W81-W82** = 13.850 minutes

Grand Mean Sample **W83-W84** = 11.177 minutes



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

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WebCode	Data Flag	Sample W81-W82 Lab Mean	Sample W81-W82 Diff from Grand Mean	Sample W81-W82 CPV	Sample W83-W84 Lab Mean	Sample W83-W84 Diff from Grand Mean	Sample W83-W84 CPV
8ENKF7		8.472	-0.124	-0.13	9.295	1.389	1.01
BAKJU7		9.533	0.937	1.02	9.320	1.414	1.03
EV8EW2		8.123	-0.473	-0.51	6.687	-1.219	-0.88
PHP8PR		8.233	-0.363	-0.39	9.587	1.681	1.22
R7LTGQ		9.878	1.282	1.39	8.357	0.451	0.33
TCTLAZ		9.445	0.849	0.92	7.050	-0.856	-0.62
WB8GCT		7.312	-1.284	-1.39	6.573	-1.333	-0.97
XEFL2X		7.772	-0.824	-0.89	6.378	-1.528	-1.11

Summary Statistics

	Sample W81-W82	Sample W83-W84
Grand Means	8.5960 lbf.in	7.9058 lbf.in
Stnd Dev Btwn Labs	0.9214 lbf.in	1.3777 lbf.in

Statistics based on 8 of 8 reporting participants

Summary Statistics in SI Units

	Sample W81-W82	Sample W83-W84
Grand Means	9.7122 dN.m	8.9324 dN.m
Stnd Dev Btwn Labs	1.0411 dN.m	1.5566 dN.m

Statistics based on 8 of 8 reporting participants

Samples W81-W82: EPDM compound #1 & W83-W84: EPDM compound #2

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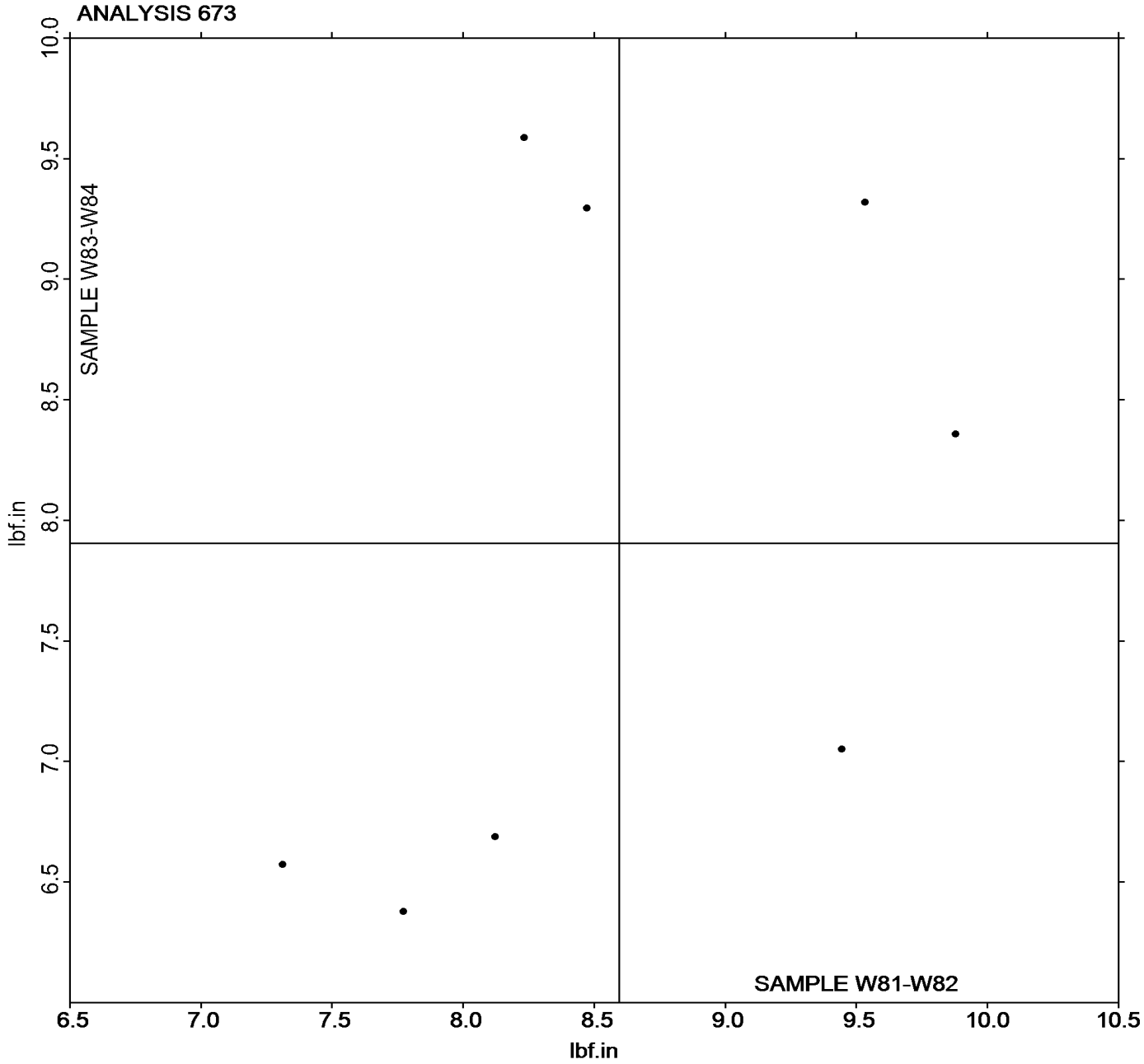
Grand Mean Sample **W81-W82** = 8.5960 lbf.in

Grand Mean Sample **W83-W84** = 7.9058 lbf.in



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

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WebCode	Data Flag	Sample W81-W82 Lab Mean	Diff from Grand Mean	CPV	Sample W83-W84 Lab Mean	Diff from Grand Mean	CPV
8ENKF7		42.78	-2.41	-0.92	36.03	-0.52	-0.29
BAKJU7		44.64	-0.56	-0.21	35.40	-1.15	-0.65
EV8EW2		42.74	-2.45	-0.94	34.45	-2.10	-1.18
PHP8PR		49.25	4.06	1.55	39.15	2.60	1.47
R7LTGQ		46.70	1.50	0.57	37.38	0.83	0.47
TCTLAZ		41.99	-3.20	-1.22	34.27	-2.28	-1.28
WB8GCT		45.65	0.46	0.17	37.78	1.23	0.69
XEFL2X		47.81	2.62	1.00	37.93	1.38	0.78

Summary Statistics

	Sample W81-W82	Sample W83-W84
Grand Means	45.196 lbf.in	36.548 lbf.in
Stnd Dev Btwn Labs	2.623 lbf.in	1.776 lbf.in

Statistics based on 8 of 8 reporting participants

Summary Statistics in SI Units

	Sample W81-W82	Sample W83-W84
Grand Means	51.065 dN.m	41.294 dN.m
Stnd Dev Btwn Labs	2.964 dN.m	2.006 dN.m

Statistics based on 8 of 8 reporting participants

Samples W81-W82: EPDM compound #1 & W83-W84: EPDM compound #2

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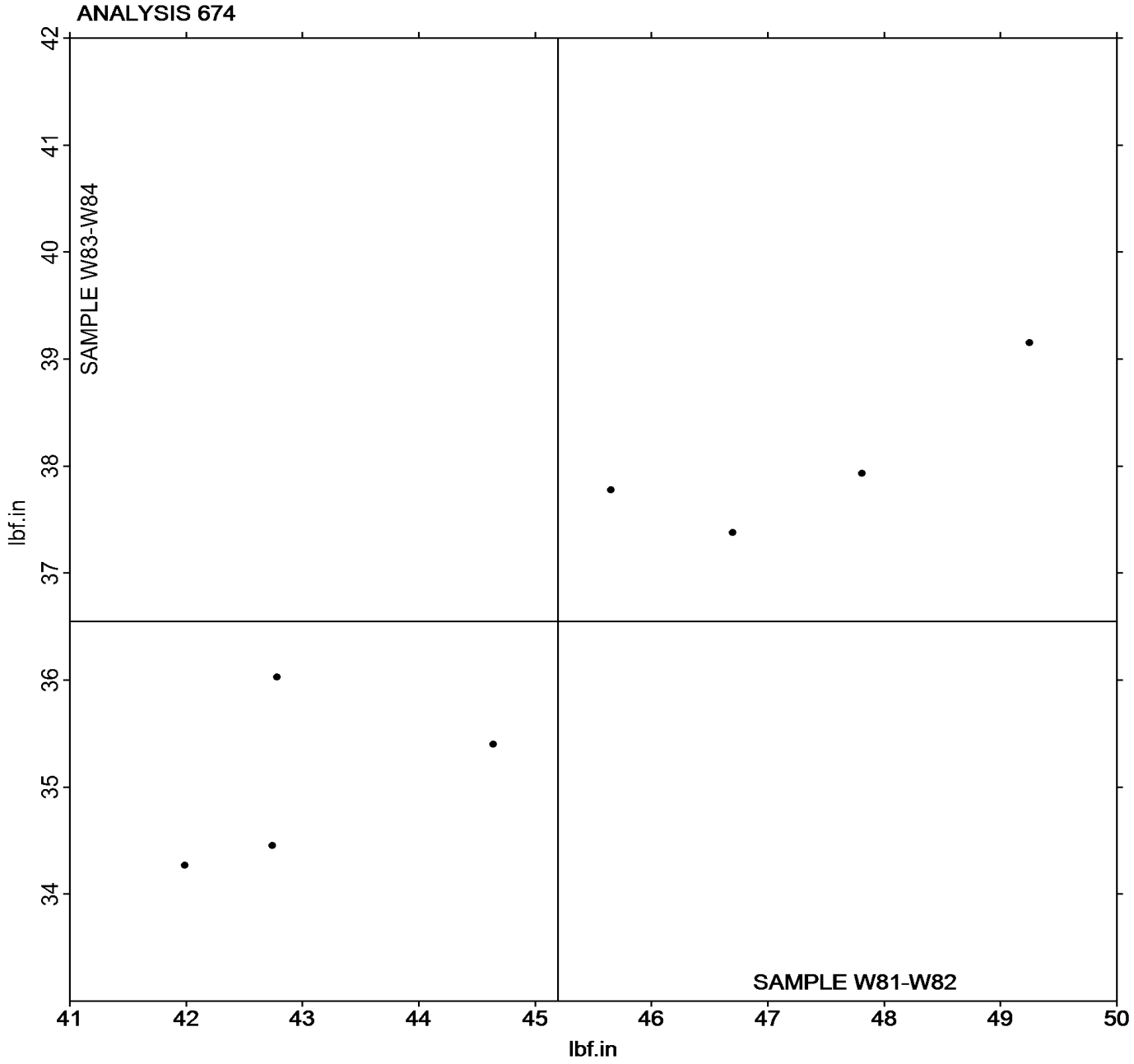
Grand Mean Sample **W81-W82** = 45.196 lbf.in

Grand Mean Sample **W83-W84** = 36.548 lbf.in



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

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MDR Vulcanization-Cure Time 10% (minutes)

WebCode	Data Flag	Sample W85-W86 Lab Mean	Sample W85-W86 Diff from Grand Mean	Sample W85-W86 CPV	Sample W87-W88 Lab Mean	Sample W87-W88 Diff from Grand Mean	Sample W87-W88 CPV	Instr Code
477BQE		2.313	0.083	0.52	2.193	0.029	0.30	MC
4LJDWN		2.330	0.100	0.62	2.130	-0.034	-0.35	MD
6GKKGY		2.463	0.233	1.45	2.308	0.144	1.49	MX
6WV7ZN		1.903	-0.327	-2.03	2.127	-0.037	-0.38	ME
79JL6F		2.253	0.023	0.14	2.152	-0.012	-0.13	MP
7DEEEX		2.298	0.068	0.42	2.237	0.073	0.75	MC
8BR2BL		2.175	-0.055	-0.34	2.207	0.043	0.44	MC
9ATBKX		2.388	0.158	0.98	2.287	0.123	1.26	MC
B8WE99		2.102	-0.129	-0.80	2.020	-0.144	-1.48	MC
BAKJU7		2.230	0.000	0.00	2.123	-0.041	-0.42	TP
JBN4XX		2.112	-0.119	-0.74	2.062	-0.102	-1.05	MC
JCYFMA	*	2.008	-0.222	-1.38	2.345	0.181	1.86	ME
K43ZCV	*	1.922	-0.309	-1.92	2.233	0.069	0.71	MM
KP2749		2.065	-0.165	-1.03	2.063	-0.101	-1.04	MC
LA9WXG		2.393	0.163	1.01	2.187	0.023	0.23	MC
MGJD7G		2.495	0.265	1.64	2.310	0.146	1.50	MM
N67WCG		2.375	0.145	0.90	2.182	0.018	0.18	MC
PC6J2V		2.325	0.095	0.59	2.157	-0.007	-0.07	MC
PJFZBG		2.262	0.031	0.19	2.110	-0.054	-0.56	XX
RB3Z6P		2.407	0.176	1.10	2.210	0.046	0.47	MC
RCVLJV		2.227	-0.004	-0.02	2.062	-0.102	-1.05	MC
RR7UCP		2.253	0.023	0.14	2.187	0.023	0.23	ME
RT2Q9T		2.040	-0.190	-1.18	2.023	-0.141	-1.45	MC
TCTLAZ		2.355	0.125	0.77	2.245	0.081	0.83	MC
TQQ8M3		2.342	0.111	0.69	2.167	0.003	0.03	MC
TUAM7N		2.117	-0.114	-0.71	1.963	-0.201	-2.07	MR
TV2DZN		1.914	-0.316	-1.97	2.181	0.017	0.17	MC
UVVJW9		2.065	-0.165	-1.03	1.990	-0.174	-1.79	MC
V49WCJ		2.270	0.040	0.25	2.130	-0.034	-0.35	MC
VNVREJ		2.348	0.118	0.73	2.245	0.081	0.83	MC
VVB3EK		2.348	0.118	0.73	2.243	0.079	0.82	TP
XEFL2X		2.353	0.123	0.76	2.278	0.114	1.18	MC
Y4XU4T		2.150	-0.080	-0.50	2.053	-0.111	-1.14	MC

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Summary Statistics		
Grand Means	2.2304 minutes	2.1639 minutes
Stnd Dev Btwn Labs	0.1609 minutes	0.0971 minutes
		Statistics based on 33 of 33 reporting participants

Samples W85-W86: EPDM compound, batch #1 & W87-W88: EPDM compound, batch #2

Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	MD	Alpha Tech. Rubber Process Analyzer (RPA 2000)
ME	Alpha Tech. MDR Premiere	MM	MonTech MDR 3000
MP	Alpha Technologies [Monsanto] MDR 2000P	MR	MonTech D-RPA 3000
MX	Rebuilt MonTech Alpha	TP	Tech Pro MDR model MDPT
XX	Instrument model not specified by lab		

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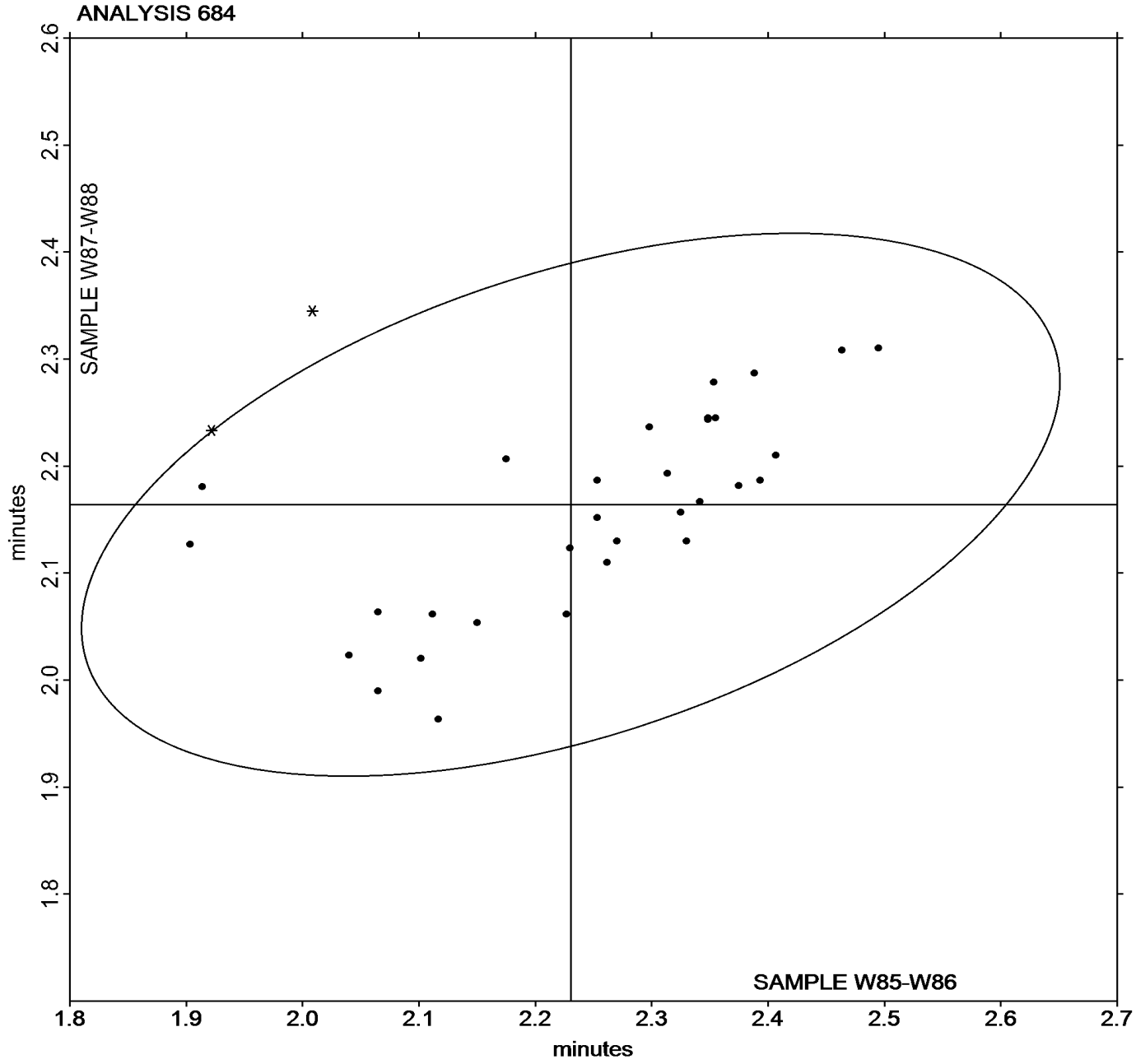
Grand Mean Sample **W85-W86** = 2.2304 minutes

Grand Mean Sample **W87-W88** = 2.1639 minutes



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WebCode	Data Flag	Sample W85-W86 Lab Mean	Diff from Grand Mean	CPV	Sample W87-W88 Lab Mean	Diff from Grand Mean	CPV	Instr Code
477BQE		2.135	0.032	0.20	2.043	0.005	0.05	MC
4LJDWN		2.197	0.094	0.58	2.033	-0.005	-0.05	MD
6GKKGY		2.258	0.156	0.97	2.107	0.069	0.64	MX
6WV7ZN		1.830	-0.273	-1.69	2.028	-0.010	-0.09	ME
79JL6F		1.972	-0.131	-0.81	1.898	-0.140	-1.31	MP
7DEEEX		2.137	0.034	0.21	2.083	0.045	0.42	MC
8BR2BL		2.043	-0.059	-0.37	2.072	0.034	0.31	MC
9ATBKX		2.322	0.219	1.36	2.242	0.204	1.90	MC
B8WE99		1.875	-0.228	-1.41	1.817	-0.221	-2.07	MC
BAKJU7		2.263	0.161	1.00	2.158	0.120	1.12	TP
EDRF2Y		2.182	0.079	0.49	2.063	0.025	0.24	MC
F7MY4X		2.187	0.084	0.52	1.938	-0.100	-0.93	MC
GA4MZF		2.003	-0.100	-0.62	1.933	-0.105	-0.98	MC
HX9U6X		2.102	-0.001	-0.01	2.020	-0.018	-0.17	MC
JBN4XX		1.995	-0.108	-0.67	1.943	-0.095	-0.89	MC
JCYFMA	*	1.823	-0.279	-1.73	2.122	0.084	0.78	ME
K43ZCV		1.907	-0.196	-1.22	2.135	0.097	0.90	MM
KP2749		1.867	-0.236	-1.46	1.897	-0.141	-1.32	MC
LA9WXG		2.227	0.124	0.77	2.053	0.015	0.14	MC
MGJD7G	*	2.477	0.374	2.32	2.307	0.269	2.51	MM
N67WCG		2.192	0.089	0.55	2.037	-0.001	-0.01	MC
PC6J2V		2.250	0.147	0.92	2.107	0.069	0.64	MC
PJFZBG		2.183	0.081	0.50	2.025	-0.013	-0.12	XX
RB3Z6P		2.222	0.119	0.74	2.058	0.020	0.19	MC
RCVLJV		2.212	0.109	0.68	2.050	0.012	0.11	MC
RR7UCP		2.088	-0.014	-0.09	2.047	0.009	0.08	ME
RT2Q9T		2.012	-0.091	-0.56	1.988	-0.050	-0.47	MC
TCTLAZ		2.182	0.079	0.49	2.100	0.062	0.58	MC
TQQ8M3		2.188	0.086	0.53	2.027	-0.011	-0.11	MC
TUAM7N	*	1.855	-0.248	-1.54	1.747	-0.291	-2.72	MR
TV2DZN		1.792	-0.311	-1.93	2.025	-0.013	-0.12	MC
UVVJW9	X	1.367	-0.736	-4.57	1.345	-0.693	-6.48	MC
V49WCJ		2.140	0.037	0.23	2.025	-0.013	-0.12	MC
VNVREJ		2.053	-0.049	-0.31	2.002	-0.036	-0.34	MC
VVB3EK		2.270	0.167	1.04	2.160	0.122	1.14	TP
XEFL2X		2.213	0.111	0.69	2.130	0.092	0.86	MC
Y4XU4T		2.042	-0.061	-0.38	1.953	-0.085	-0.79	MC

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Summary Statistics		
Grand Means		
	2.1026 minutes	2.0382 minutes
Stnd Dev Btwn Labs		
	0.1611 minutes	0.1070 minutes

Statistics based on 36 of 37 reporting participants

Samples W85-W86: EPDM compound, batch #1 & W87-W88: EPDM compound, batch #2

Comments on Assigned Data Flags for Test #685

UVVJW9 (X) - Data for all samples are low.

Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	MD	Alpha Tech. Rubber Process Analyzer (RPA 2000)
ME	Alpha Tech. MDR Premiere	MM	MonTech MDR 3000
MP	Alpha Technologies [Monsanto] MDR 2000P	MR	MonTech D-RPA 3000
MX	Rebuilt MonTech Alpha	TP	Tech Pro MDR model MDPT
XX	Instrument model not specified by lab		

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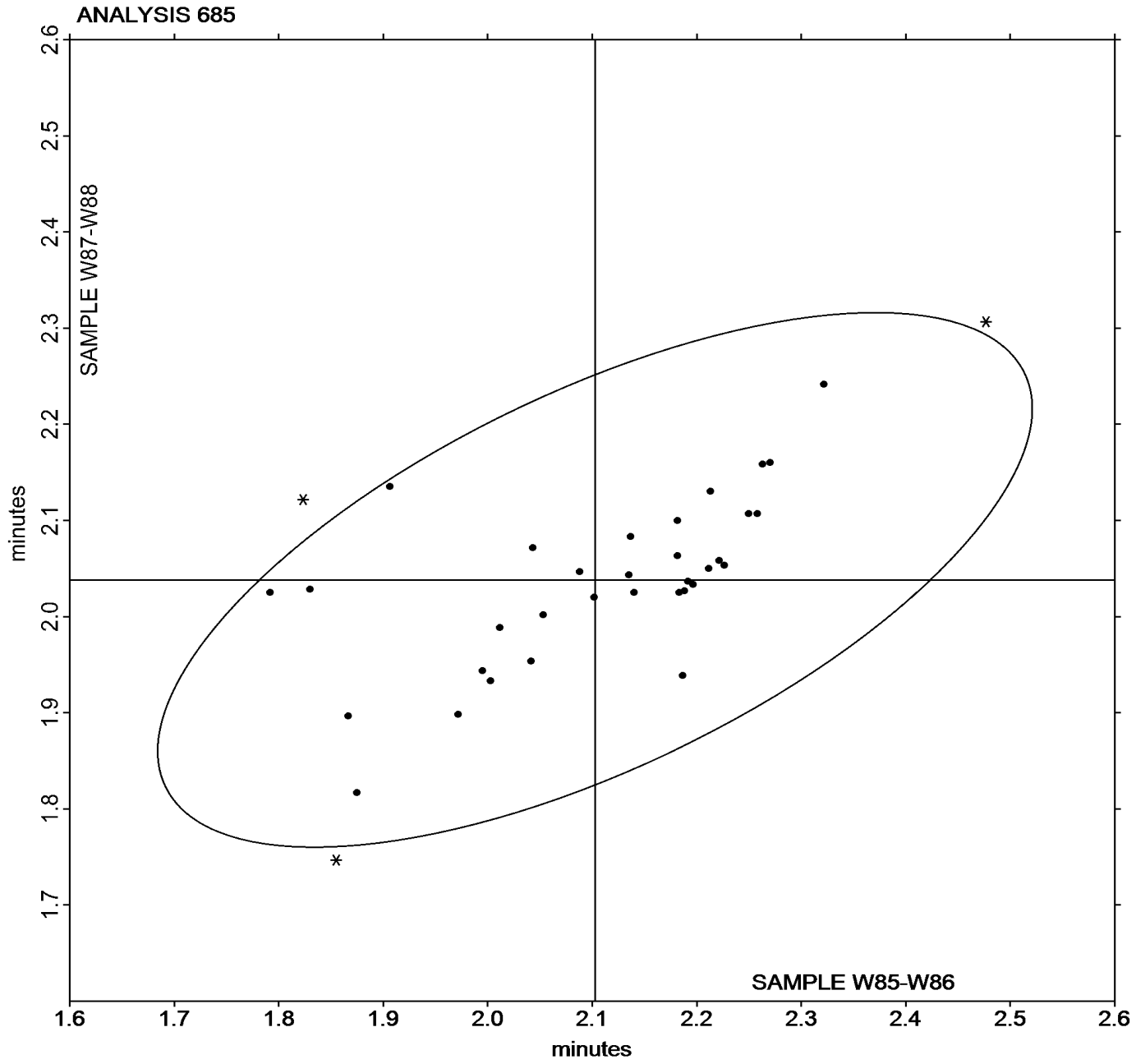
Grand Mean Sample **W85-W86** = 2.1026 minutes

Grand Mean Sample **W87-W88** = 2.0382 minutes



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WebCode	Data Flag	Sample W85-W86 Lab Mean	Diff from Grand Mean	CPV	Sample W87-W88 Lab Mean	Diff from Grand Mean	CPV	Instr Code
477BQE		4.737	0.323	1.11	4.467	0.225	1.08	MC
4LJDWN		4.550	0.136	0.47	4.195	-0.047	-0.22	MD
6GKKGY		4.695	0.281	0.97	4.452	0.210	1.01	MX
6WV7ZN		3.980	-0.434	-1.50	4.157	-0.085	-0.41	ME
79JL6F		4.513	0.100	0.34	4.210	-0.032	-0.15	MC
7DEEEX		4.443	0.030	0.10	4.358	0.117	0.56	MC
8BR2BL		4.283	-0.130	-0.45	4.280	0.038	0.18	MC
9ATBKX		4.640	0.226	0.78	4.440	0.198	0.95	MC
B8WE99		3.960	-0.454	-1.57	3.890	-0.352	-1.68	MC
BAKJU7		4.378	-0.035	-0.12	4.185	-0.057	-0.27	TP
EDRF2Y		4.245	-0.169	-0.58	4.052	-0.190	-0.91	MC
F7MY4X		3.755	-0.659	-2.27	3.913	-0.328	-1.57	MC
GA4MZF		4.595	0.181	0.62	4.392	0.151	0.72	MC
HX9U6X		4.453	0.040	0.14	4.213	-0.028	-0.14	MC
JBN4XX		4.163	-0.250	-0.86	4.030	-0.212	-1.01	MC
JCYFMA	X	4.200	-0.214	-0.74	4.738	0.497	2.38	ME
K43ZCV	*	4.008	-0.405	-1.40	4.358	0.117	0.56	MM
KP2749		4.295	-0.119	-0.41	4.207	-0.035	-0.17	MC
LA9WXG		4.722	0.308	1.06	4.322	0.080	0.38	MC
MGJD7G		4.757	0.343	1.18	4.442	0.200	0.96	MM
N67WCG		4.742	0.328	1.13	4.387	0.145	0.69	MC
PC6J2V		4.418	0.005	0.02	4.243	0.002	0.01	MC
PJFZBG		4.197	-0.217	-0.75	3.915	-0.327	-1.56	XX
RB3Z6P		4.908	0.495	1.71	4.560	0.318	1.52	MC
RCVLJV		4.235	-0.179	-0.62	4.013	-0.228	-1.09	MC
RR7UCP		4.442	0.028	0.10	4.295	0.053	0.26	ME
RT2Q9T		3.987	-0.427	-1.47	3.892	-0.350	-1.68	MC
TCTLAZ		4.755	0.341	1.18	4.515	0.273	1.31	MC
TQQ8M3		4.587	0.173	0.60	4.233	-0.008	-0.04	MC
TUAM7N		4.703	0.290	1.00	4.360	0.118	0.57	MR
TV2DZN	*	4.136	-0.278	-0.96	4.417	0.175	0.84	MC
UVVJW9		4.125	-0.289	-1.00	3.853	-0.388	-1.86	MC
V49WCJ		4.305	-0.109	-0.38	4.090	-0.152	-0.73	MC
VNVREJ		4.687	0.273	0.94	4.525	0.283	1.36	MC
VVB3EK		4.620	0.206	0.71	4.370	0.128	0.61	TP
XEFL2X		4.735	0.321	1.11	4.527	0.285	1.36	MC
Y4XU4T		4.142	-0.272	-0.94	3.942	-0.300	-1.44	MC

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Summary Statistics		
Grand Means	4.4138 minutes	4.2416 minutes
Stnd Dev Btwn Labs	0.2897 minutes	0.2089 minutes

Statistics based on 36 of 37 reporting participants

Samples W85-W86: EPDM compound, batch #1 & W87-W88: EPDM compound, batch #2

Comments on Assigned Data Flags for Test #686

JCYFMA (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both sample groups.

Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	MD	Alpha Tech. Rubber Process Analyzer (RPA 2000)
ME	Alpha Tech. MDR Premiere	MM	MonTech MDR 3000
MR	MonTech D-RPA 3000	MX	Rebuilt MonTech Alpha
TP	Tech Pro MDR model MDPT	XX	Instrument model not specified by lab

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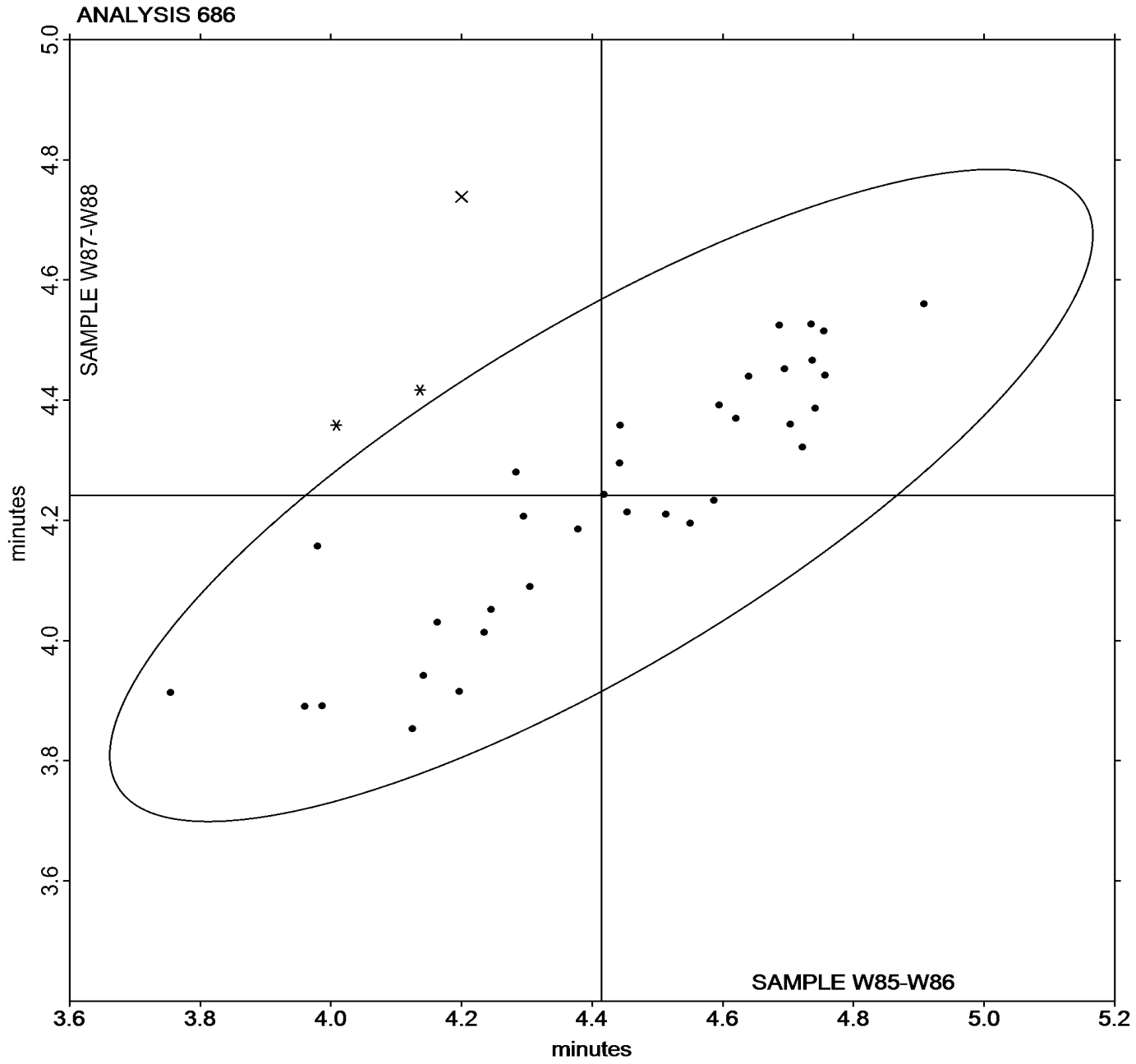
Grand Mean Sample **W85-W86** = 4.4138 minutes

Grand Mean Sample **W87-W88** = 4.2416 minutes



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WebCode	Data Flag	Sample W85-W86 Lab Mean	Diff from Grand Mean	CPV	Sample W87-W88 Lab Mean	Diff from Grand Mean	CPV	Instr Code
477BQE		7.757	0.249	0.52	7.225	0.037	0.10	MC
4LJDWN		7.715	0.207	0.43	7.073	-0.115	-0.32	MD
6GKKGY	X	9.127	1.619	3.39	8.733	1.545	4.31	MX
6WV7ZN		7.122	-0.386	-0.81	7.202	0.013	0.04	ME
79JL6F		7.480	-0.028	-0.06	7.107	-0.082	-0.23	MP
7DEEEX	*	8.033	0.526	1.10	8.020	0.832	2.32	MC
8BR2BL		7.120	-0.388	-0.81	7.200	0.012	0.03	MC
9ATBKX		7.690	0.182	0.38	7.213	0.025	0.07	MC
B8WE99		7.527	0.019	0.04	7.218	0.030	0.08	MC
BAKJU7		6.770	-0.738	-1.54	6.567	-0.622	-1.73	TP
EDRF2Y		7.333	-0.174	-0.36	6.923	-0.265	-0.74	MC
F7MY4X		6.593	-0.914	-1.91	6.492	-0.697	-1.94	MC
GA4MZF		7.854	0.347	0.73	7.639	0.451	1.26	MC
HX9U6X		7.405	-0.103	-0.21	7.032	-0.157	-0.44	MC
JBN4XX		6.893	-0.614	-1.29	6.645	-0.543	-1.52	MC
JCYFMA	X	7.667	0.159	0.33	8.795	1.607	4.48	ME
K43ZCV	X	7.103	-0.404	-0.85	7.930	0.742	2.07	MM
KP2749		7.185	-0.323	-0.68	6.965	-0.223	-0.62	MC
LA9WXG		8.195	0.687	1.44	7.483	0.295	0.82	MC
MGJD7G		8.250	0.742	1.55	7.733	0.545	1.52	MM
N67WCG		7.922	0.414	0.87	7.238	0.050	0.14	MC
PC6J2V		7.655	0.147	0.31	7.283	0.095	0.27	MC
PJFZBG		7.382	-0.126	-0.26	7.115	-0.073	-0.20	XX
RB3Z6P		8.013	0.506	1.06	7.413	0.225	0.63	MC
RCVLJV		6.893	-0.614	-1.29	6.535	-0.653	-1.82	MC
RR7UCP		7.865	0.357	0.75	7.525	0.337	0.94	ME
RT2Q9T		6.932	-0.576	-1.21	6.873	-0.315	-0.88	MC
TCTLAZ		7.912	0.404	0.85	7.502	0.313	0.87	MC
TQQ8M3		7.615	0.107	0.22	7.208	0.020	0.06	MC
TUAM7N		8.347	0.839	1.76	7.532	0.343	0.96	MR
TV2DZN		7.222	-0.285	-0.60	7.364	0.176	0.49	MC
UVVJW9		6.558	-0.949	-1.99	6.800	-0.388	-1.08	MC
V49WCJ		7.565	0.057	0.12	7.130	-0.058	-0.16	MC
VNVREJ		7.787	0.279	0.58	7.463	0.275	0.77	MC
VVB3EK		7.625	0.117	0.25	7.382	0.193	0.54	TP
XEFL2X		8.028	0.521	1.09	7.598	0.410	1.14	MC
Y4XU4T		7.017	-0.491	-1.03	6.700	-0.488	-1.36	MC

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Summary Statistics		
Grand Means	7.5077 minutes	7.1882 minutes
Stnd Dev Btwn Labs	0.4777 minutes	0.3585 minutes
		Statistics based on 34 of 37 reporting participants

Samples W85-W86: EPDM compound, batch #1 & W87-W88: EPDM compound, batch #2

Comments on Assigned Data Flags for Test #687

6GKKGY (X) - Data for all samples are high.

JCYFMA (X) - Data for sample group W87-W88 are high. Inconsistent within the determinations of both sample groups.

K43ZCV (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample group W85-W86.

Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	MD	Alpha Tech. Rubber Process Analyzer (RPA 2000)
ME	Alpha Tech. MDR Premiere	MM	MonTech MDR 3000
MP	Alpha Technologies [Monsanto] MDR 2000P	MR	MonTech D-RPA 3000
MX	Rebuilt MonTech Alpha	TP	Tech Pro MDR model MDPT
XX	Instrument model not specified by lab		

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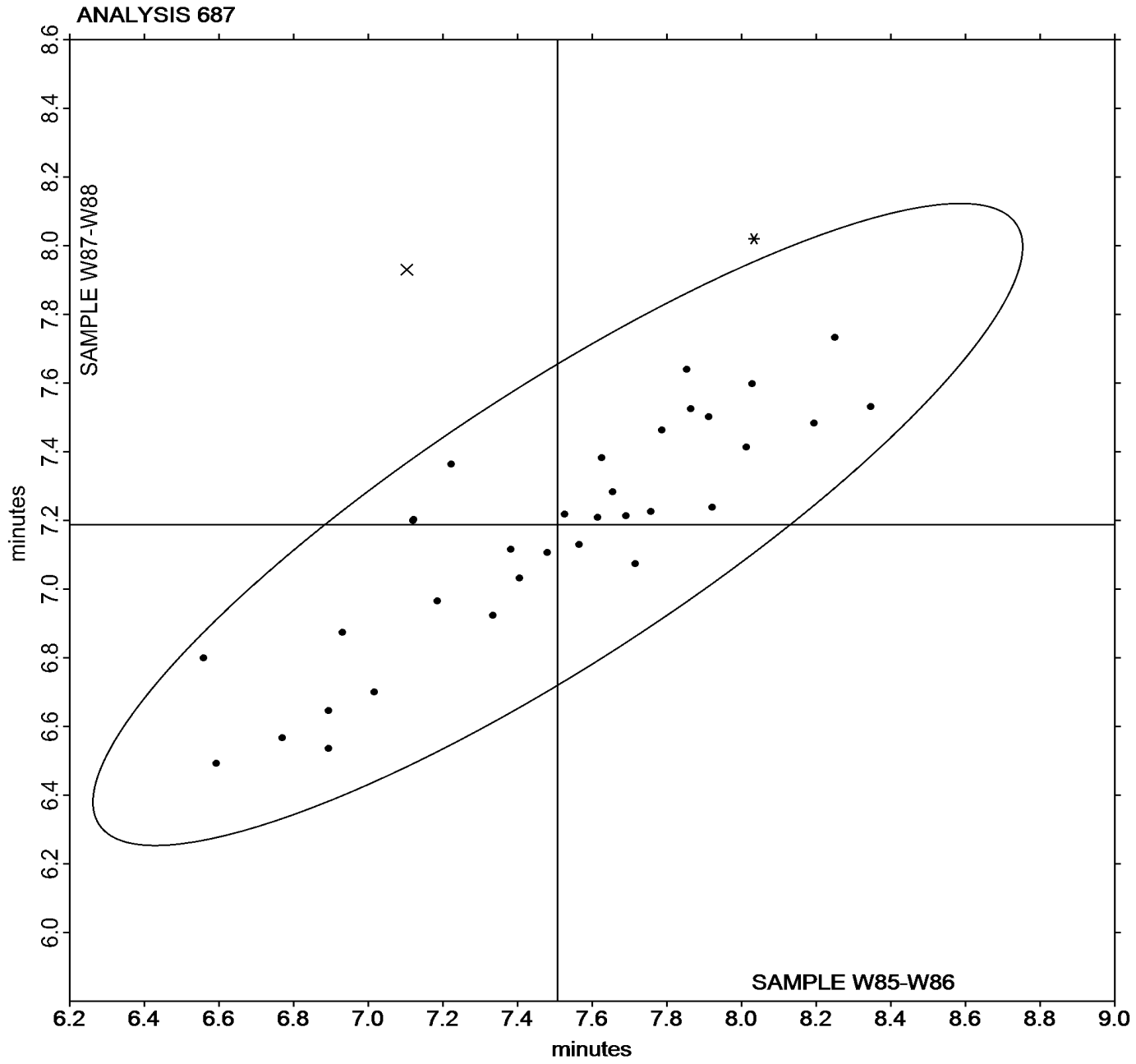
Grand Mean Sample **W85-W86** = 7.5077 minutes

Grand Mean Sample **W87-W88** = 7.1882 minutes



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WebCode	Data Flag	Sample W85-W86 Lab Mean	Diff from Grand Mean	CPV	Sample W87-W88 Lab Mean	Diff from Grand Mean	CPV	Instr Code
477BQE		1.835	-0.375	-0.79	1.933	-0.370	-0.83	MC
4LJDWN		1.751	-0.458	-0.97	1.829	-0.474	-1.06	MD
6GKKGY		2.563	0.354	0.75	2.547	0.243	0.54	MX
6WV7ZN		2.043	-0.166	-0.35	2.278	-0.025	-0.06	ME
79JL6F		1.809	-0.401	-0.85	1.946	-0.358	-0.80	MP
7DEEEX		1.958	-0.251	-0.53	2.100	-0.204	-0.46	MC
8BR2BL		1.997	-0.212	-0.45	2.086	-0.218	-0.49	MC
9ATBKX		2.190	-0.020	-0.04	2.303	0.000	0.00	MC
B8WE99		3.014	0.804	1.70	3.023	0.719	1.61	MC
BAKJU7		2.102	-0.108	-0.23	2.143	-0.160	-0.36	TP
EDRF2Y		3.247	1.037	2.19	3.260	0.956	2.14	MC
F7MY4X	*	2.563	0.354	0.75	2.810	0.506	1.13	MC
GA4MZF		2.070	-0.140	-0.29	2.148	-0.156	-0.35	MC
HX9U6X		1.863	-0.346	-0.73	2.047	-0.257	-0.57	MC
JBN4XX		2.110	-0.100	-0.21	2.228	-0.075	-0.17	MC
JCYFMA		1.814	-0.395	-0.83	1.844	-0.460	-1.03	ME
K43ZCV		2.457	0.247	0.52	2.662	0.358	0.80	MM
KP2749		2.098	-0.111	-0.23	2.310	0.006	0.01	MC
LA9WXG		2.182	-0.028	-0.06	2.202	-0.102	-0.23	MC
MGJD7G		1.703	-0.506	-1.07	1.763	-0.540	-1.21	MM
N67WCG		1.990	-0.220	-0.46	2.062	-0.242	-0.54	MC
PC6J2V		2.615	0.405	0.85	2.603	0.300	0.67	MC
PJFZBG		3.043	0.834	1.76	3.003	0.700	1.57	XX
RB3Z6P		1.780	-0.430	-0.91	1.873	-0.430	-0.96	MC
RCVLJV		2.657	0.447	0.94	2.655	0.351	0.79	MC
RR7UCP		1.970	-0.240	-0.50	2.073	-0.230	-0.52	ME
RT2Q9T		3.172	0.962	2.03	3.213	0.910	2.04	MC
TCTLAZ		1.750	-0.460	-0.97	1.850	-0.454	-1.01	MC
TQQ8M3		2.333	0.124	0.26	2.467	0.163	0.36	MC
TUAM7N		1.838	-0.371	-0.78	1.958	-0.345	-0.77	MR
TV2DZN		1.780	-0.430	-0.91	2.018	-0.285	-0.64	MC
UVVJW9		2.182	-0.028	-0.06	2.368	0.065	0.14	MC
V49WCJ		2.527	0.317	0.67	2.520	0.216	0.48	MC
VNVREJ		1.736	-0.473	-1.00	1.834	-0.470	-1.05	MC
VVB3EK		1.880	-0.330	-0.69	1.998	-0.305	-0.68	TP
XEFL2X		1.752	-0.458	-0.97	1.845	-0.459	-1.03	MC
Y4XU4T		3.378	1.169	2.46	3.430	1.126	2.52	MC

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Summary Statistics

Grand Means	2.2095 lbf.in	2.3036 lbf.in
Stnd Dev Btwn Labs	0.4744 lbf.in	0.4470 lbf.in

Statistics based on 37 of 37 reporting participants

Summary Statistics in SI Units

Grand Means	2.4964 dN.m	2.6027 dN.m
Stnd Dev Btwn Labs	0.5360 dN.m	0.5051 dN.m

Statistics based on 37 of 37 reporting participants

Samples W85-W86: EPDM compound, batch #1 & W87-W88: EPDM compound, batch #2

Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	MD	Alpha Tech. Rubber Process Analyzer (RPA 2000)
ME	Alpha Tech. MDR Premiere	MM	MonTech MDR 3000
MP	Alpha Technologies [Monsanto] MDR 2000P	MR	MonTech D-RPA 3000
MX	Rebuilt MonTech Alpha	TP	Tech Pro MDR model MDPT
XX	Instrument model not specified by lab		

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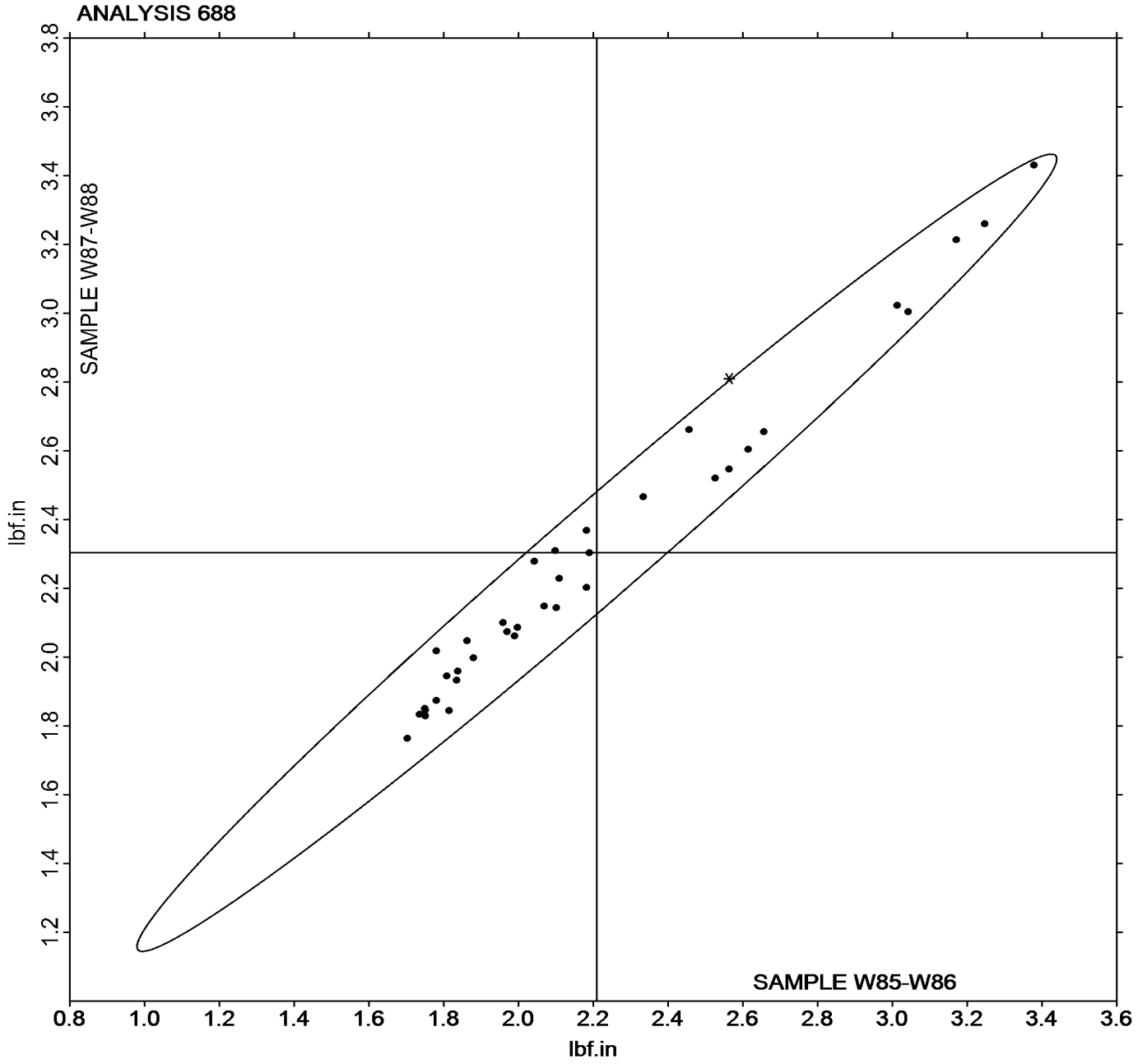
Grand Mean Sample **W85-W86** = 2.2095 lbf.in

Grand Mean Sample **W87-W88** = 2.3036 lbf.in



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WebCode	Data Flag	Sample W85-W86 Lab Mean	Diff from Grand Mean	CPV	Sample W87-W88 Lab Mean	Diff from Grand Mean	CPV	Instr Code
477BQE		13.79	0.18	0.23	13.68	-0.01	-0.01	MC
4LJDWN		13.20	-0.41	-0.54	12.95	-0.73	-1.00	MD
6GKKGY		13.99	0.38	0.50	13.97	0.28	0.38	MX
6WV7ZN		12.96	-0.65	-0.87	13.66	-0.02	-0.03	ME
79JL6F		13.66	0.04	0.06	13.83	0.15	0.20	MC
7DEEEX		13.84	0.22	0.29	14.34	0.66	0.90	MC
8BR2BL		12.33	-1.29	-1.71	12.49	-1.20	-1.64	MC
9ATBKX		12.99	-0.62	-0.82	12.94	-0.74	-1.01	MC
B8WE99		15.11	1.49	1.98	14.77	1.09	1.49	MC
BAKJU7	*	11.75	-1.86	-2.47	11.76	-1.93	-2.64	TP
EDRF2Y		14.47	0.86	1.14	14.35	0.67	0.91	MC
F7MY4X		12.99	-0.62	-0.82	13.67	-0.02	-0.02	MC
GA4MZF		14.41	0.80	1.06	14.57	0.88	1.21	MC
HX9U6X		13.50	-0.11	-0.15	13.71	0.03	0.04	MC
JBN4XX		13.62	0.01	0.01	13.74	0.05	0.07	MC
JCYFMA		12.93	-0.68	-0.91	13.36	-0.33	-0.45	ME
K43ZCV	X	12.81	-0.81	-1.07	14.10	0.42	0.57	MM
KP2749		14.46	0.85	1.13	14.48	0.80	1.09	MC
LA9WXG		14.05	0.44	0.58	13.92	0.24	0.33	MC
MGJD7G		11.97	-1.65	-2.19	11.95	-1.74	-2.37	MM
N67WCG		13.91	0.30	0.40	13.85	0.17	0.23	MC
PC6J2V		13.54	-0.08	-0.10	13.24	-0.45	-0.61	MC
PJFZBG		14.22	0.61	0.81	14.37	0.69	0.94	XX
RB3Z6P		13.68	0.06	0.08	13.63	-0.05	-0.07	MC
RCVLJV		12.94	-0.68	-0.90	12.83	-0.85	-1.16	MC
RR7UCP		13.93	0.32	0.42	13.78	0.09	0.13	ME
RT2Q9T		13.63	0.02	0.03	13.71	0.02	0.03	MC
TCTLAZ		13.48	-0.14	-0.18	13.45	-0.23	-0.32	MC
TQQ8M3		14.30	0.69	0.92	14.36	0.68	0.92	MC
TUAM7N		14.43	0.82	1.09	14.41	0.72	0.98	MR
TV2DZN		13.24	-0.38	-0.50	13.93	0.24	0.33	MC
UVVJW9		14.13	0.51	0.68	14.54	0.86	1.17	MC
V49WCJ		13.73	0.12	0.16	13.56	-0.13	-0.18	MC
VNVREJ		13.42	-0.20	-0.26	13.36	-0.32	-0.44	MC
VVB3EK		12.78	-0.83	-1.11	12.90	-0.78	-1.07	TP
XEFL2X		13.66	0.04	0.06	13.60	-0.09	-0.12	MC
Y4XU4T		15.05	1.44	1.91	15.01	1.33	1.81	MC

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Summary Statistics

Grand Means	13.613 lbf.in	13.685 lbf.in
Stnd Dev Btwn Labs	0.753 lbf.in	0.732 lbf.in

Statistics based on 36 of 37 reporting participants

Summary Statistics in SI Units

Grand Means	15.381 dN.m	15.462 dN.m
Stnd Dev Btwn Labs	0.850 dN.m	0.827 dN.m

Statistics based on 36 of 37 reporting participants

Samples W85-W86: EPDM compound, batch #1 & W87-W88: EPDM compound, batch #2

Comments on Assigned Data Flags for Test #689

K43ZCV (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample group W85-W86.

Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	MD	Alpha Tech. Rubber Process Analyzer (RPA 2000)
ME	Alpha Tech. MDR Premiere	MM	MonTech MDR 3000
MR	MonTech D-RPA 3000	MX	Rebuilt MonTech Alpha
TP	Tech Pro MDR model MDPT	XX	Instrument model not specified by lab

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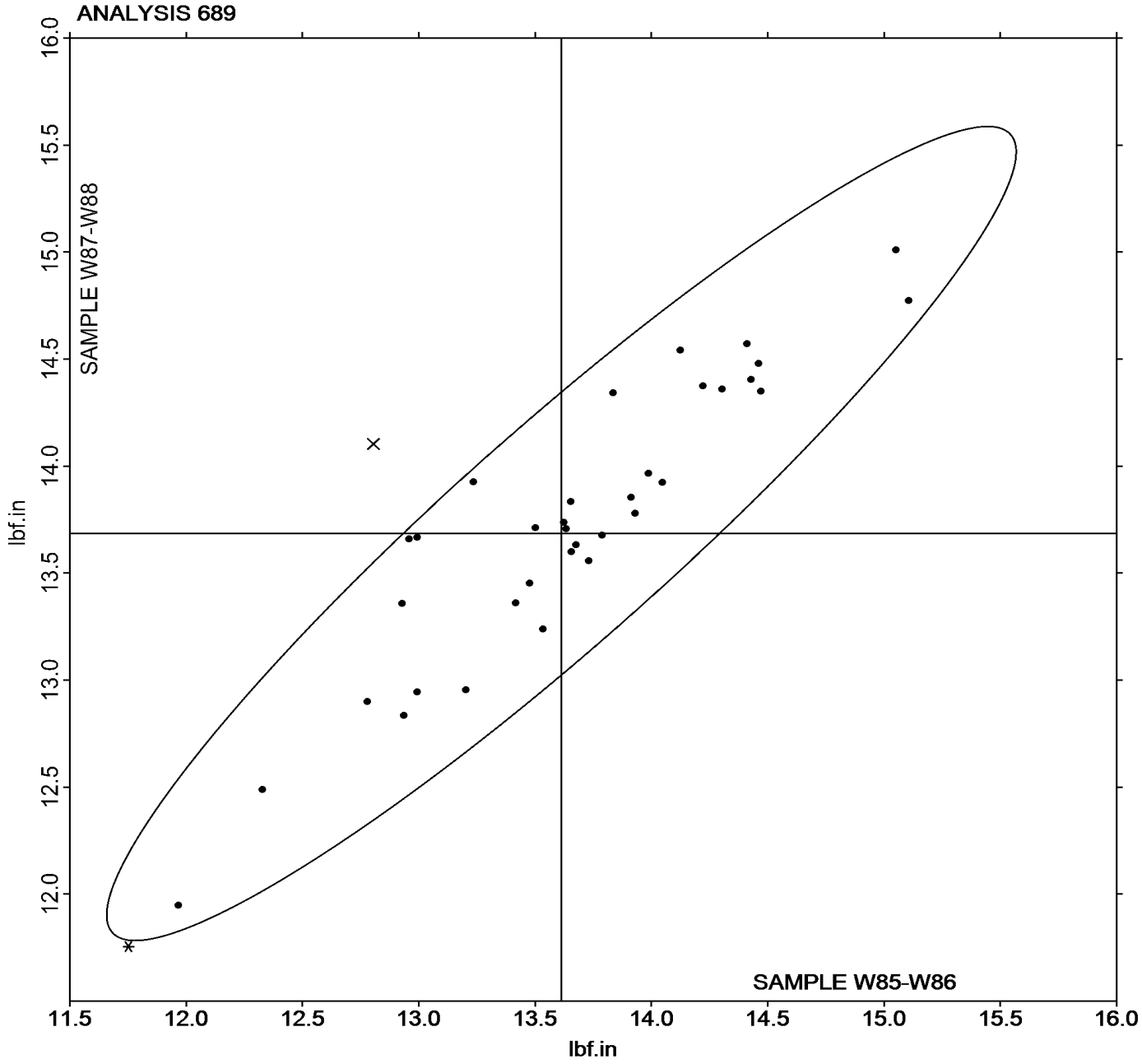
Grand Mean Sample **W85-W86** = 13.613 lbf.in

Grand Mean Sample **W87-W88** = 13.685 lbf.in



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WebCode	Data Flag	Sample E81-E82 Lab Mean	Diff from Grand Mean	CPV	Sample E83-E84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
6GKKGY		566.2	32.2	0.50	581.3	40.2	0.67	XX
B8WE99		594.8	60.8	0.95	590.0	48.9	0.81	XX
GA4MZF		492.1	-41.9	-0.65	501.2	-39.9	-0.66	RP
K43ZCV		589.6	55.6	0.87	596.0	55.0	0.91	XX
MGJD7G		545.0	11.0	0.17	552.2	11.1	0.18	XX
PC6J2V		538.8	4.9	0.08	540.2	-0.9	-0.01	PP
VVB3EK		411.4	-122.6	-1.91	426.6	-114.4	-1.90	XX

Summary Statistics

	Sample E81-E82	Sample E83-E84
Grand Means	533.98 kPa	541.06 kPa
Stnd Dev Btwn Labs	64.23 kPa	60.34 kPa

Statistics based on 7 of 7 reporting participants

Samples E81-E82: EPDM compound, batch #1 & E83-E84: EPDM compound, batch #2

Key to Instrument Codes Reported by Participants

PP	PPA 2000	RP	RPA 2000
XX	Instrument model not specified by lab		

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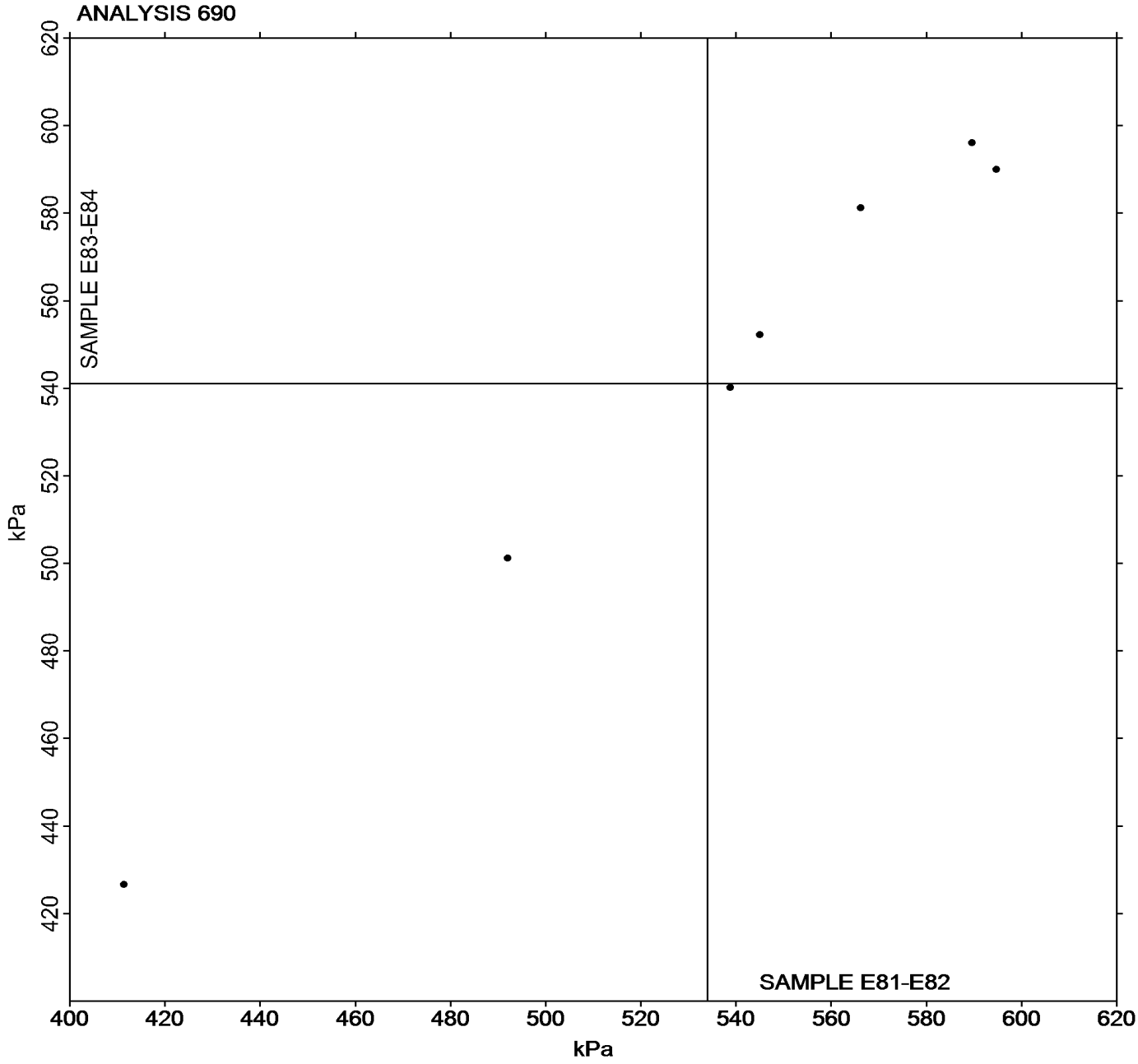
Grand Mean Sample **E81-E82** = 533.98 kPa

Grand Mean Sample **E83-E84** = 541.06 kPa



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

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RPA Rheological Properties: Part A - G" at 20Hz (kPa)

WebCode	Data Flag	Sample E81-E82 Lab Mean	Sample E81-E82 Diff from Grand Mean	Sample E81-E82 CPV	Sample E83-E84 Lab Mean	Sample E83-E84 Diff from Grand Mean	Sample E83-E84 CPV	Instr Code
6GKKGY		191.6	-3.5	-0.16	198.4	2.5	0.12	XX
B8WE99		220.3	25.2	1.16	217.5	21.5	1.03	XX
GA4MZF		212.7	17.6	0.81	214.3	18.4	0.88	RP
K43ZCV		167.6	-27.5	-1.27	167.4	-28.6	-1.36	XX
MGJD7G		182.5	-12.5	-0.58	182.8	-13.2	-0.63	XX
PC6J2V		217.2	22.1	1.02	216.2	20.2	0.96	PP
VVB3EK		173.6	-21.4	-0.99	175.0	-20.9	-1.00	XX

Summary Statistics

	Sample E81-E82	Sample E83-E84
Grand Means	195.08 kPa	195.93 kPa
Stnd Dev Btwn Labs	21.67 kPa	21.00 kPa

Statistics based on 7 of 7 reporting participants

Samples E81-E82: EPDM compound, batch #1 & E83-E84: EPDM compound, batch #2

Key to Instrument Codes Reported by Participants

PP PPA 2000
RP RPA 2000
XX Instrument model not specified by lab

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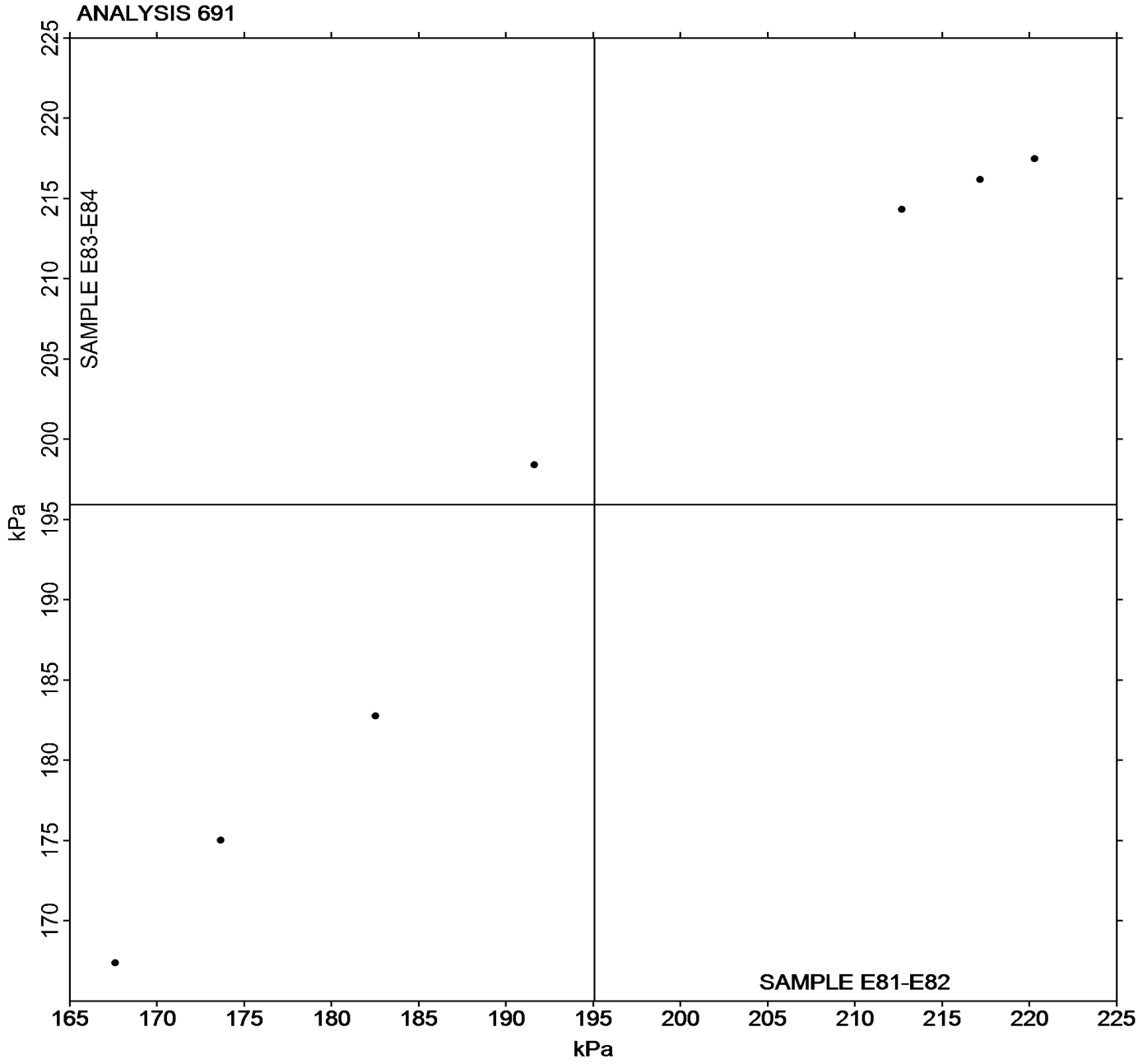
Grand Mean Sample **E81-E82** = 195.08 kPa

Grand Mean Sample **E83-E84** = 195.93 kPa



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

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WebCode	Data Flag	Sample E81-E82 Lab Mean	Diff from Grand Mean	CPV	Sample E83-E84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
6GKKGY		110.15	14.17	0.86	112.80	14.23	0.85	XX
B8WE99		103.97	7.99	0.48	104.92	6.35	0.38	XX
GA4MZF		69.68	-26.30	-1.59	71.72	-26.85	-1.60	RP
K43ZCV		113.80	17.82	1.08	117.59	19.02	1.13	XX
MGJD7G		87.65	-8.33	-0.50	91.96	-6.61	-0.39	XX
PC6J2V		90.64	-5.34	-0.32	92.44	-6.13	-0.37	PR

Summary Statistics

	Sample E81-E82	Sample E83-E84
Grand Means	95.979 kPa	98.574 kPa
Stnd Dev Btwn Labs	16.565 kPa	16.774 kPa

Statistics based on 6 of 6 reporting participants

Samples E81-E82: EPDM compound, batch #1 & E83-E84: EPDM compound, batch #2

Key to Instrument Codes Reported by Participants

PR	PRPA 2000	RP	RPA 2000
XX	Instrument model not specified by lab		

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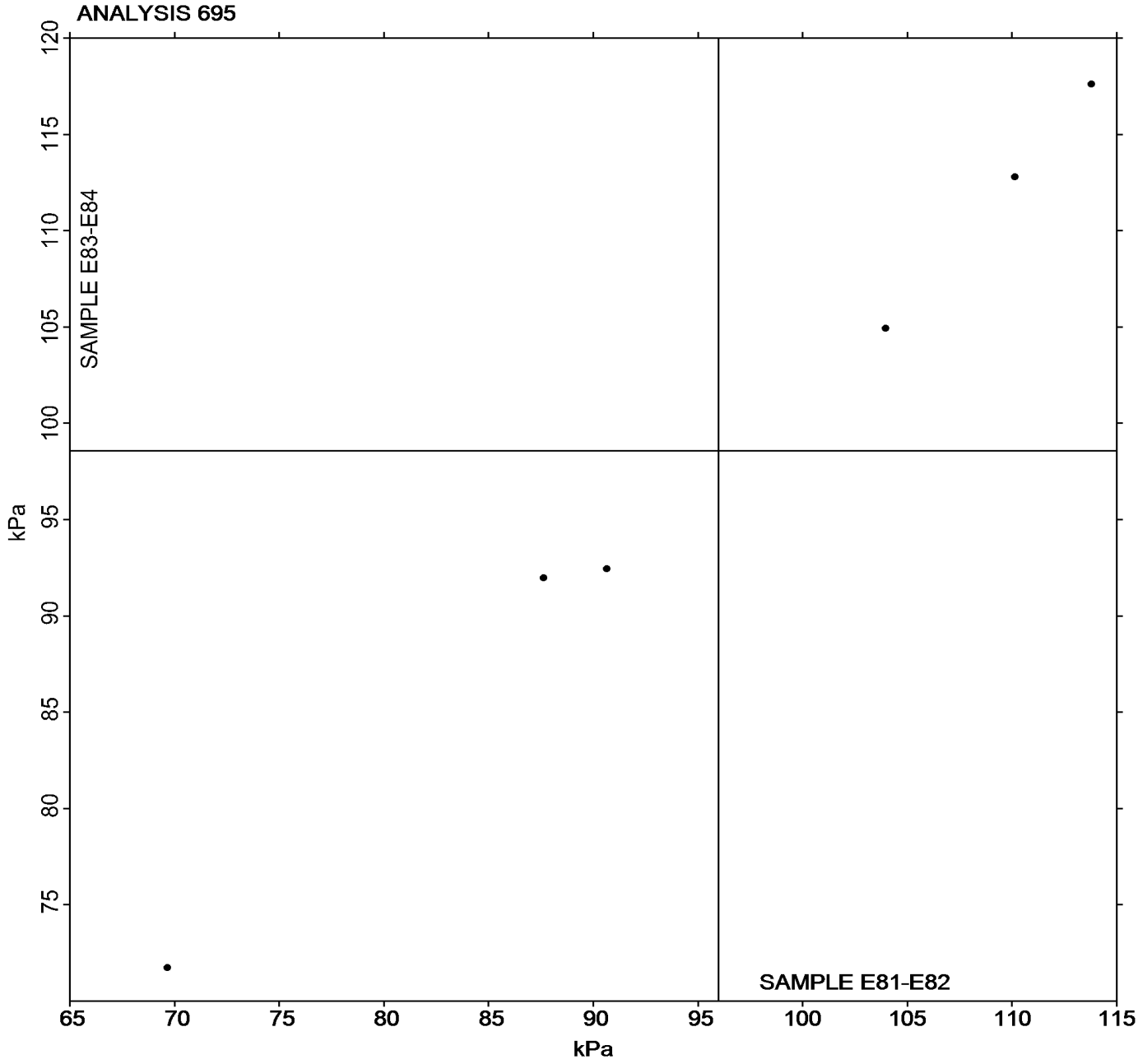
Grand Mean Sample **E81-E82** = 95.979 kPa

Grand Mean Sample **E83-E84** = 98.574 kPa



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

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WebCode	Data Flag	Sample E81-E82 Lab Mean	Diff from Grand Mean	CPV	Sample E83-E84 Lab Mean	Diff from Grand Mean	CPV	Instr Code
6GKKGY		69.04	-2.36	-0.88	71.99	0.15	0.09	XX
B8WE99		75.79	4.38	1.63	74.48	2.64	1.47	XX
GA4MZF		68.20	-3.21	-1.19	68.98	-2.86	-1.60	RP
K43ZCV		71.43	0.03	0.01	71.93	0.09	0.05	XX
MGJD7G		72.37	0.97	0.36	72.50	0.66	0.37	XX
PC6J2V		71.60	0.19	0.07	71.16	-0.68	-0.38	PP

Summary Statistics

	Sample E81-E82	Sample E83-E84
Grand Means	71.405 kPa	71.840 kPa
Stnd Dev Btwn Labs	2.686 kPa	1.794 kPa

Statistics based on 6 of 6 reporting participants

Samples E81-E82: EPDM compound, batch #1 & E83-E84: EPDM compound, batch #2

Key to Instrument Codes Reported by Participants

PP	PPA 2000	RP	RPA 2000
XX	Instrument model not specified by lab		

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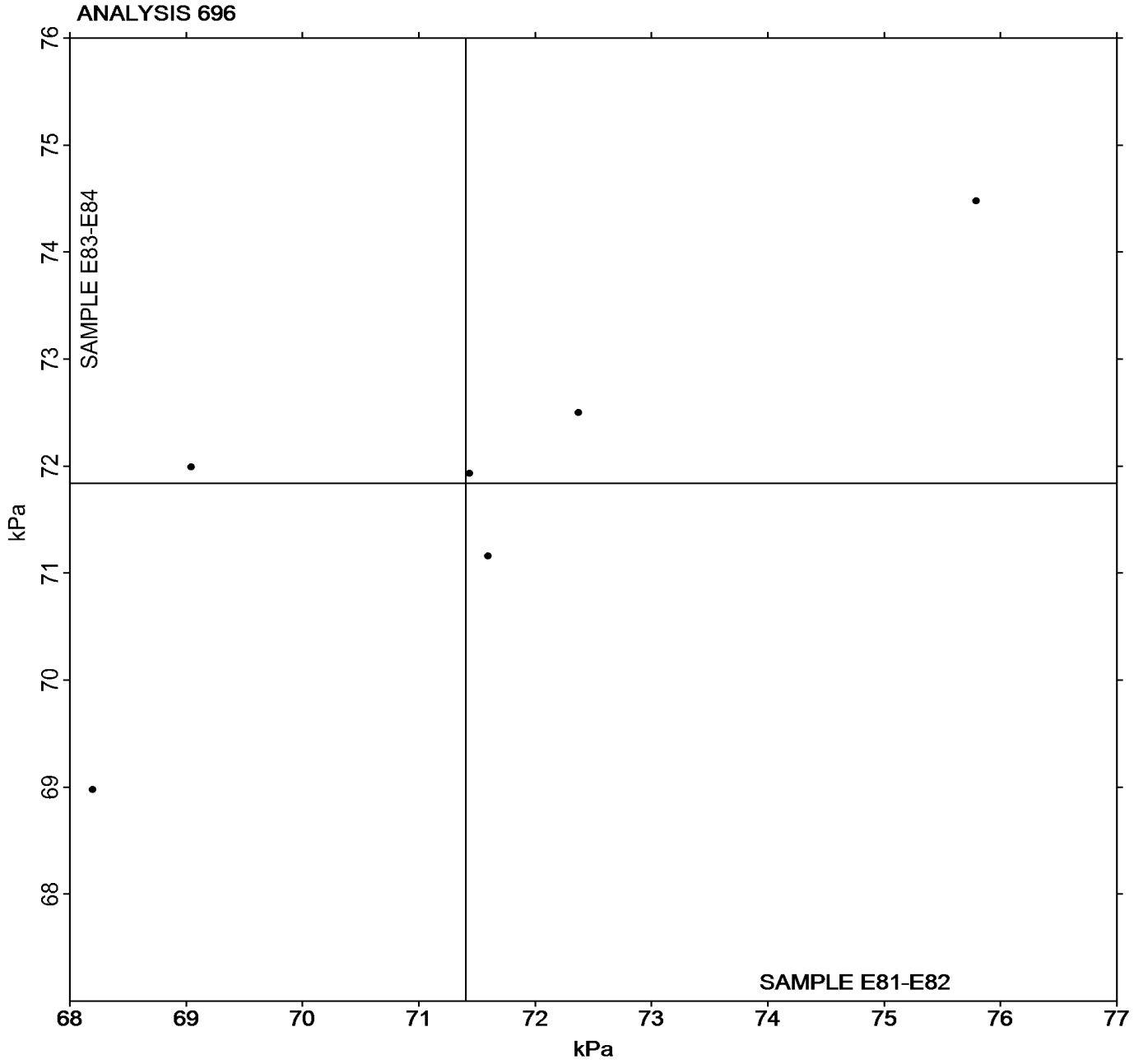
Grand Mean Sample **E81-E82** = 71.405 kPa

Grand Mean Sample **E83-E84** = 71.840 kPa



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

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