Collaborative Testing Services, Inc.

Rubber Interlaboratory Testing Program

Summary Report #223- 1st Qtr 2025

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)
630	Tensile Strength: Participant-Cured Rubber
631	Ultimate Elongation: Participant-Cured Samples
632	Tensile Stress at 300% Elongation: Lab-Cured
633	Tensile Stress at 100% Elongation: Lab-Cured
635	Compression Set
640	O-Ring Tensile Strength at Break
641	O-Ring Ultimate Elongation
642	O-Ring Stress at 100% Elongation
647	O-Ring Hardness (Shore A/Type A)
648	O-Ring Hardness (Shore M)
649	O-Ring Density
650	O-Ring Compression Set
660	Mooney Viscosity (4-minute readings)
661	Mooney Viscosity (8-minute butyl readings)
662	Mooney Stress Relaxation: t80
663	Mooney Stress Relaxation: X30
664	Mooney Stress Relaxation: Area under curve
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

Analysis	Analysis Name
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 industries including rubber, plastics, fasteners and metals, containerboard, paper, color, and wine, as well as proficiency tests for forensic laboratories. All of the tests are designed to assist organizations in achieving and maintaining quality control objectives. Labs from the U.S., as well as more than 100 countries, currently participate in CTS programs.

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

Collaborative Testing Services, Inc.
21331 Gentry Drive
Sterling, Virginia 20166 USA

+1-571-434-1925
FAX #: +1-571-434-1937
rubber@cts-interlab.com

Office Hours: 8:00 a.m. - 4:30 p.m. ET

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 A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV
3N4ZT9	X	4,520.1	1,271.3	6.87	4,519.4	1,241.7	6.74
4FN76D		3,337.1	88.3	0.48	3,317.9	40.1	0.22
4KVWA6		2,996.5	-252.3	-1.36	2,952.3	-325.4	-1.77
4QLA7L		3,017.6	-231.2	-1.25	3,071.3	-206.4	-1.12
4X2Q2G		3,213.0	-35.9	-0.19	3,152.0	-125.7	-0.68
6UFKGC		3,539.7	290.8	1.57	3,533.2	255.4	1.39
7WL8UG		3,381.0	132.1	0.71	3,416.0	138.3	0.75
8KMUAA		3,025.0	-223.9	-1.21	2,980.0	-297.7	-1.62
8N7GT3		3,487.5	238.6	1.29	3,543.5	265.8	1.44
8NL8XZ		3,211.2	-37.7	-0.20	3,156.8	-120.9	-0.66
8RJQWD		3,319.9	71.1	0.38	3,367.1	89.4	0.48
9FNWZA		3,002.3	-246.5	-1.33	3,073.4	-204.3	-1.11
9Q8C6X		3,550.0	301.1	1.63	3,608.5	330.8	1.80
9QK3U8		3,348.5	99.6	0.54	3,246.0	-31.7	-0.17
A6NNWX		2,956.0	-292.9	-1.58	2,963.5	-314.2	-1.71
ACKJUV		3,495.4	246.6	1.33	3,480.9	203.2	1.10
BXHE3A		3,481.5	232.6	1.26	3,421.5	143.8	0.78
C9WQTD		3,357.0	108.1	0.58	3,437.5	159.8	0.87
D8GRDU		2,849.1	-399.7	-2.16	2,862.2	-415.5	-2.25
DBGZH6		3,298.5	49.6	0.27	3,299.0	21.3	0.12
DR83ZU		3,346.8	98.0	0.53	3,457.7	180.0	0.98
EMRUB9		3,356.7	107.8	0.58	3,417.9	140.2	0.76
GLN4WP		3,033.9	-215.0	-1.16	3,081.4	-196.4	-1.07
GMXL3T		3,354.0	105.2	0.57	3,422.2	144.5	0.78
H4JY68		3,119.1	-129.8	-0.70	3,126.3	-151.4	-0.82
HEHU43		3,530.5	281.6	1.52	3,531.0	253.3	1.37
HHH6Y3		3,125.6	-123.3	-0.67	3,125.6	-152.1	-0.83
HPNFTP		3,400.3	151.4	0.82	3,330.0	52.3	0.28
HR8UWP		2,885.0	-363.9	-1.97	2,902.5	-375.2	-2.04
HZXEZ3		3,205.6	-43.2	-0.23	3,295.4	17.7	0.10
J3L9CX	X	3,309.1	60.2	0.33	3,076.3	-201.4	-1.09
JXNRZ4		3,450.5	201.6	1.09	3,473.5	195.8	1.06
KLBLN2		3,454.2	205.4	1.11	3,456.5	178.8	0.97
KVHLX3	*	3,749.3	500.4	2.70	3,713.0	435.3	2.36
L9NAYP		3,319.5	70.6	0.38	3,411.0	133.3	0.72
LKDXKW		3,201.5	-47.4	-0.26	3,340.5	62.8	0.34
LQ2HQX		3,256.0	7.1	0.04	3,330.5	52.8	0.29
LRW2RY		3,212.0	-36.9	-0.20	3,270.5	-7.2	-0.04

WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV
MJLY8X		3,055.0	-193.9	-1.05	2,995.0	-282.7	-1.53
MXFJNL		3,326.0	77.1	0.42	3,282.0	4.3	0.02
NJTVQT		3,345.0	96.1	0.52	3,404.5	126.8	0.69
NWF3NU		3,377.5	128.6	0.70	3,403.5	125.8	0.68
PBUQBW		3,140.5	-108.4	-0.59	3,269.0	-8.7	-0.05
PUAZCX		3,187.5	-61.4	-0.33	3,286.0	8.3	0.04
PYP82H		3,158.3	-90.6	-0.49	3,169.1	-108.7	-0.59
Q69VAT		3,004.5	-244.4	-1.32	3,040.7	-237.0	-1.29
Q9976T		3,235.5	-13.4	-0.07	3,260.5	-17.2	-0.09
QE9MFY		3,250.4	1.5	0.01	3,291.9	14.1	0.08
QKYXRH		3,350.4	101.5	0.55	3,311.6	33.9	0.18
QQ32HF		3,408.4	159.6	0.86	3,328.6	50.9	0.28
R3Y8BE		3,185.0	-63.9	-0.35	3,179.5	-98.2	-0.53
RC3MVR		3,004.0	-244.9	-1.32	3,025.0	-252.7	-1.37
RFJP3W		3,106.5	-142.4	-0.77	3,177.5	-100.2	-0.54
RNDVVX		3,483.0	234.1	1.27	3,483.0	205.3	1.11
THABBE		3,314.1	65.3	0.35	3,321.4	43.7	0.24
THM3YP		3,390.0	141.1	0.76	3,420.0	142.3	0.77
TUGQ4H		2,952.0	-296.9	-1.60	3,096.0	-181.7	-0.99
TVTXHQ		3,487.0	238.1	1.29	3,487.5	209.8	1.14
U83KTG		3,426.5	177.6	0.96	3,462.0	184.3	1.00
U9CZDN		3,252.5	3.6	0.02	3,321.0	43.3	0.23
UEGYND		3,322.8	74.0	0.40	3,398.3	120.5	0.65
VA2QXT		3,169.5	-79.4	-0.43	3,181.0	-96.7	-0.52
VLFLFD		3,115.5	-133.4	-0.72	3,230.5	-47.2	-0.26
WDZUCE		3,189.0	-59.9	-0.32	3,315.5	37.8	0.21
X4PJBL		3,178.5	-70.4	-0.38	3,208.0	-69.7	-0.38
X7V8NQ		3,223.3	-25.5	-0.14	3,338.1	60.4	0.33
XAVNAD		3,343.5	94.6	0.51	3,472.5	194.8	1.06
XBBFEB		2,933.4	-315.4	-1.70	2,905.1	-372.6	-2.02
Y6ZNMP		3,167.0	-81.9	-0.44	3,195.0	-82.7	-0.45
YK769G		2,905.0	-343.9	-1.86	2,990.0	-287.7	-1.56
YXK3F7		3,254.0	5.1	0.03	3,349.0	71.3	0.39
Z4Y9PH		3,396.1	147.2	0.80	3,400.4	122.7	0.67
ZKQ329	X	2,586.8	-662.1	-3.58	2,540.4	-737.4	-4.00
ZLJYNG		3,164.0	-84.9	-0.46	3,151.0	-126.7	-0.69

Summary Statistics		
Grand Means	3,248.85 psi	3,277.71 psi
Stnd Dev Btwn Labs	185.02 psi	184.28 psi
		Statistics based on 71 of 74 reporting participants

Summary Statistics in SI Units		
Grand Means	22.400 MPa	22.600 MPa
Stnd Dev Btwn Labs	1.276 MPa	1.270 MPa
		Statistics based on 71 of 74 reporting participants

Samples A51-A52: Polyisoprene Compound & A53-A54: Polyisoprene Compound

Comments on Assigned Data Flags for Test #605

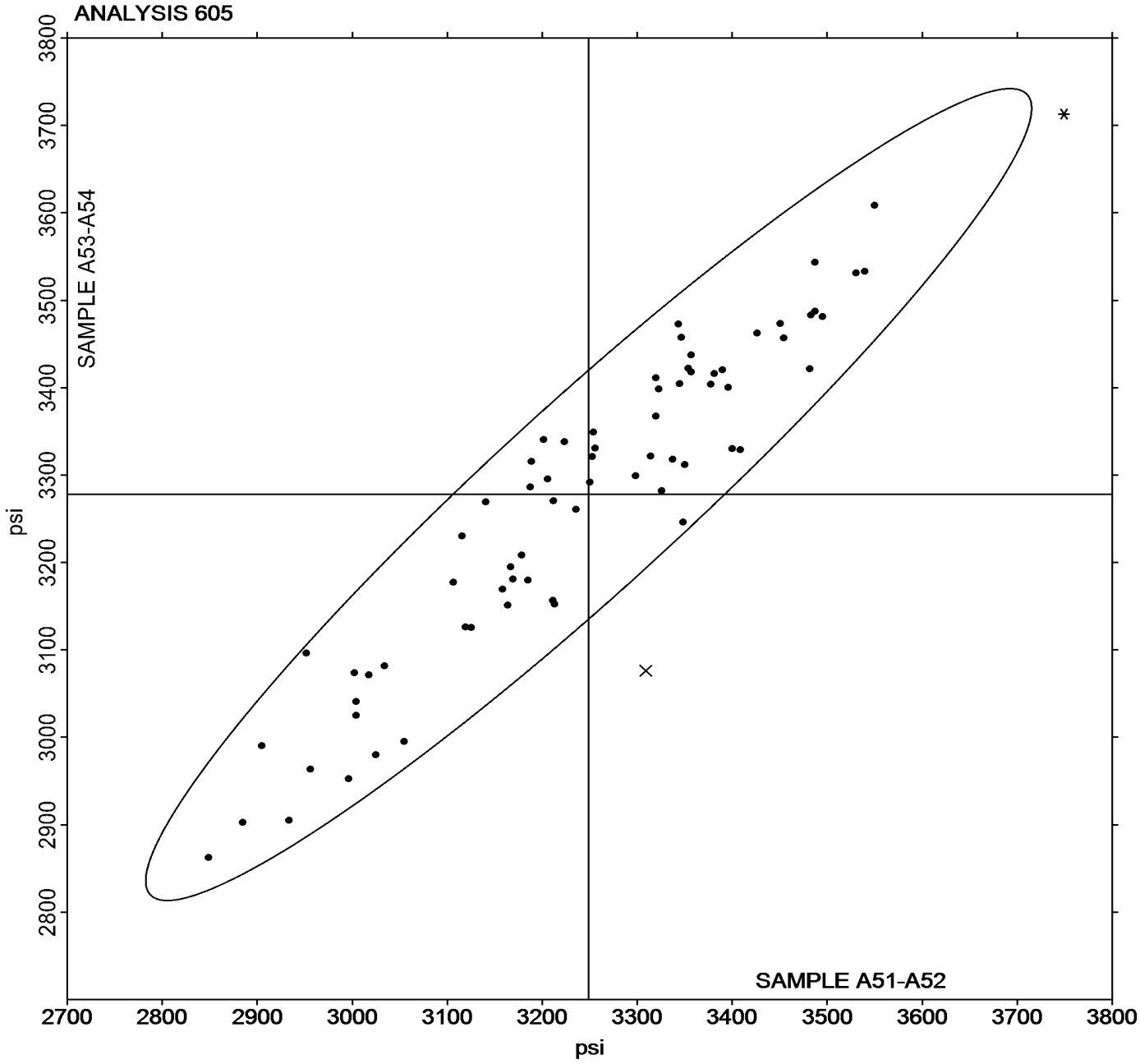
3N4ZT9 (X) - Data for all samples are high. Possible Systematic Error.

J3L9CX (X) - Inconsistent in testing between samples.

ZKQ329 (X) - Data for all samples are low. Possible Systematic Error.

Grand Mean Sample **A51-A52** = 3,248.85 psi

Grand Mean Sample **A53-A54** = 3,277.71 psi



WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV
3N4ZT9		598.5	-9.6	-0.31	604.0	-6.1	-0.21
4FN76D		600.1	-7.9	-0.26	602.0	-8.0	-0.28
4KVWA6		619.0	10.9	0.35	620.5	10.4	0.36
4QLA7L		600.0	-8.1	-0.26	610.9	0.8	0.03
4X2Q2G		626.5	18.4	0.59	616.0	5.9	0.20
6UFKGC		667.4	59.4	1.92	656.4	46.3	1.59
7WL8UG		600.5	-7.6	-0.24	608.5	-1.6	-0.05
8KMUAA		601.5	-6.6	-0.21	596.5	-13.6	-0.47
8N7GT3	*	632.0	23.9	0.77	653.5	43.4	1.49
8RJQWD		597.5	-10.6	-0.34	609.0	-1.1	-0.04
9FNWZA		610.0	1.9	0.06	615.5	5.4	0.19
9Q8C6X		655.5	47.4	1.53	661.0	50.9	1.75
9QK3U8		599.0	-9.1	-0.29	605.5	-4.6	-0.16
A6NNWX		544.5	-63.6	-2.05	557.5	-52.6	-1.80
ACKJUV		648.5	40.4	1.31	641.0	30.9	1.06
BXHE3A		646.5	38.4	1.24	636.5	26.4	0.91
C9WQTD		589.5	-18.6	-0.60	595.5	-14.6	-0.50
D8GRDU		606.3	-1.8	-0.06	607.9	-2.2	-0.08
DBGZH6		625.0	16.9	0.55	622.0	11.9	0.41
DR83ZU		547.2	-60.9	-1.97	556.4	-53.6	-1.84
EMRUB9		619.3	11.2	0.36	625.9	15.9	0.55
GLN4WP		591.1	-17.0	-0.55	594.1	-15.9	-0.55
GMXL3T		615.0	6.9	0.22	636.0	25.9	0.89
H4JY68		629.5	21.4	0.69	629.5	19.4	0.67
HEHU43		609.0	0.9	0.03	619.5	9.4	0.32
HHH6Y3		614.6	6.5	0.21	621.7	11.6	0.40
HPNFTP		609.8	1.7	0.05	607.0	-3.1	-0.10
HR8UWP	X	522.5	-85.6	-2.76	503.3	-106.8	-3.66
HZXEZ3	X	594.9	-13.2	-0.43	733.6	123.5	4.24
J3L9CX	*	588.5	-19.6	-0.63	567.0	-43.1	-1.48
JXNRZ4		633.0	24.9	0.80	647.5	37.4	1.28
KLBLN2		636.3	28.3	0.91	642.7	32.7	1.12
KVHLX3		608.0	-0.1	0.00	590.5	-19.6	-0.67
L9NAYP	X	641.5	33.4	1.08	676.5	66.4	2.28
LKDXKW		596.0	-12.1	-0.39	608.5	-1.6	-0.05
LQ2HQX		580.0	-28.1	-0.91	583.0	-27.1	-0.93
LRW2RY		609.5	1.4	0.05	618.5	8.4	0.29
MJLY8X		594.5	-13.6	-0.44	590.5	-19.6	-0.67

WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV
MXFJNL		619.4	11.3	0.37	601.2	-8.9	-0.31
NJTVQT		631.5	23.4	0.76	644.5	34.4	1.18
NWF3NU		649.5	41.4	1.34	649.5	39.4	1.35
PBUQBW		581.5	-26.6	-0.86	574.5	-35.6	-1.22
PUAZCX		570.0	-38.1	-1.23	587.0	-23.1	-0.79
PYP82H		563.3	-44.8	-1.45	562.9	-47.2	-1.62
Q69VAT		540.8	-67.3	-2.17	555.7	-54.4	-1.87
Q9976T		571.0	-37.1	-1.20	576.5	-33.6	-1.15
QE9MFY		593.1	-15.0	-0.48	595.4	-14.7	-0.50
QKYXRH		616.0	7.9	0.26	605.1	-4.9	-0.17
QQ32HF		615.5	7.4	0.24	614.0	3.9	0.14
R3Y8BE		588.0	-20.1	-0.65	588.5	-21.6	-0.74
RC3MVR	*	682.5	74.4	2.40	669.5	59.4	2.04
RFJP3W		595.0	-13.1	-0.42	600.0	-10.1	-0.34
RNDVVX		647.0	38.9	1.26	648.0	37.9	1.30
THABBE		585.0	-23.1	-0.75	591.5	-18.6	-0.64
THM3YP		675.0	66.9	2.16	663.5	53.4	1.83
TUGQ4H		671.0	62.9	2.03	667.5	57.4	1.97
TVTXHQ		605.5	-2.6	-0.08	605.0	-5.1	-0.17
U83KTG		655.5	47.4	1.53	653.0	42.9	1.47
U9CZDN		618.0	9.9	0.32	606.5	-3.6	-0.12
UEGYND	X	736.5	128.4	4.15	744.5	134.4	4.61
VA2QXT		591.5	-16.6	-0.54	584.5	-25.6	-0.88
VLFLFD		538.0	-70.1	-2.26	541.0	-69.1	-2.37
WDZUCE		613.0	4.9	0.16	617.0	6.9	0.24
X4PJBL		623.0	14.9	0.48	609.5	-0.6	-0.02
X7V8NQ		583.1	-25.0	-0.81	578.9	-31.1	-1.07
XAVNAD		606.5	-1.6	-0.05	622.5	12.4	0.43
XBBFEB		602.0	-6.1	-0.20	614.5	4.4	0.15
Y6ZNMP		614.5	6.4	0.21	610.5	0.4	0.02
YK769G		560.0	-48.1	-1.55	575.0	-35.1	-1.20
YXK3F7		595.5	-12.6	-0.41	591.0	-19.1	-0.65
Z4Y9PH		622.5	14.4	0.47	635.0	24.9	0.86
ZLJYNG		576.8	-31.3	-1.01	587.0	-23.1	-0.79

Summary Statistics		
Grand Means		
	608.08 percent	610.05 percent
Stnd Dev Btwn Labs		
	30.97 percent	29.14 percent

Statistics based on 68 of 72 reporting participants

Samples A51-A52: Polyisoprene Compound & A53-A54: Polyisoprene Compound

Comments on Assigned Data Flags for Test #606

HR8UWP (X) - Data for all samples are low. Possible Systematic Error.

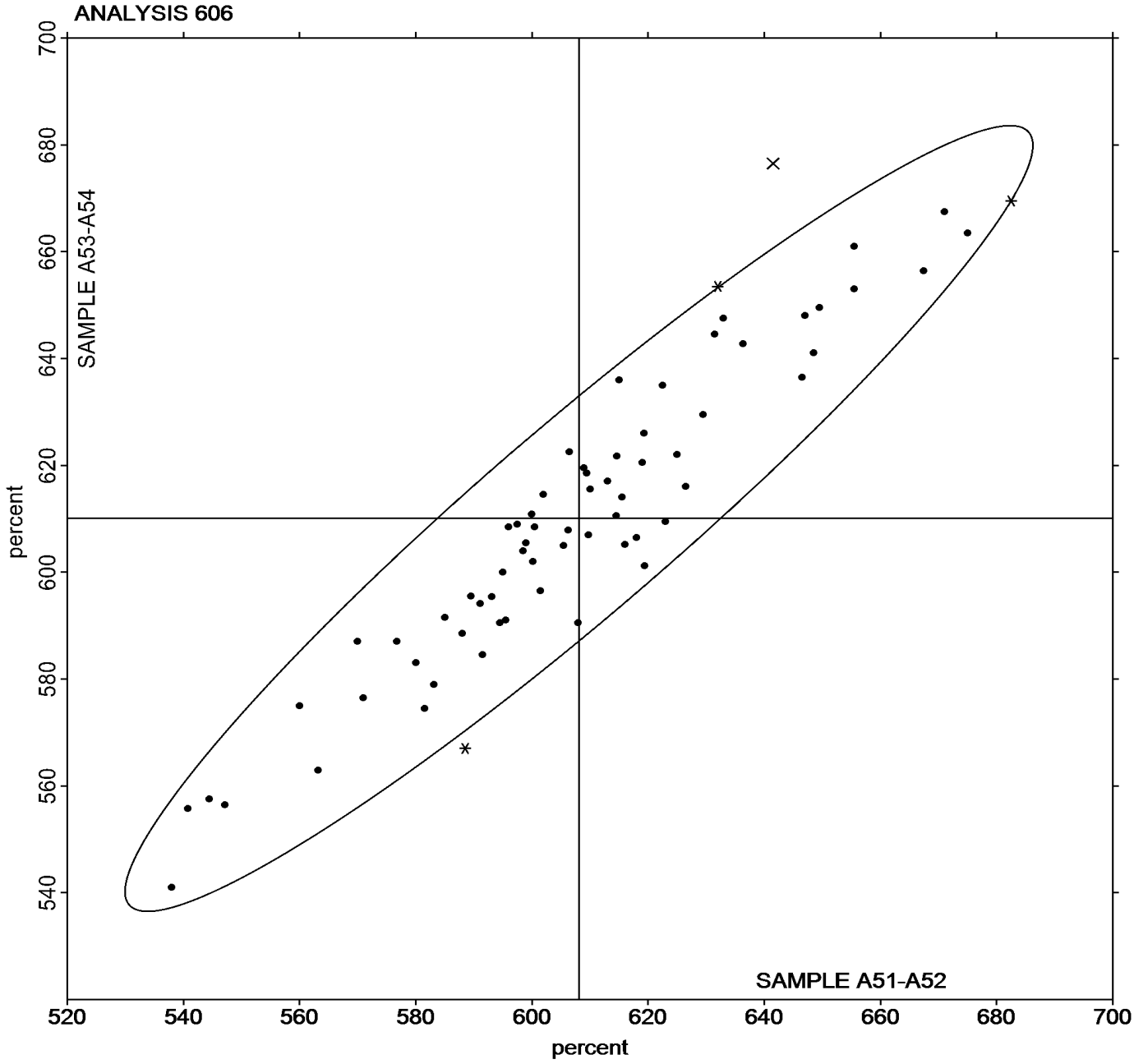
HZXEZ3 (X) - Data for sample group A53-A54 are high. Inconsistent within the determinations of sample group A53-A54.

L9NAYP (X) - Inconsistent in testing between samples.

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

Grand Mean Sample **A51-A52** = 608.08 percent

Grand Mean Sample **A53-A54** = 610.05 percent



WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV
3N4ZT9	X	1,466.3	484.9	6.33	1,443.9	462.9	5.76
4FN76D		954.6	-26.8	-0.35	995.9	15.0	0.19
4KVWA6		878.2	-103.2	-1.35	850.7	-130.3	-1.62
4QLA7L		913.7	-67.7	-0.88	909.7	-71.3	-0.89
6UFKGC		936.2	-45.2	-0.59	981.9	0.9	0.01
7WL8UG		1,064.5	83.1	1.08	1,070.5	89.5	1.11
8KMUAA		902.0	-79.4	-1.04	896.5	-84.5	-1.05
8N7GT3	X	514.5	-466.9	-6.09	507.5	-473.5	-5.89
8RJQWD		955.1	-26.3	-0.34	1,018.2	37.2	0.46
9FNWZA		897.1	-84.3	-1.10	886.9	-94.1	-1.17
9Q8C6X		965.5	-15.9	-0.21	951.5	-29.5	-0.37
9QK3U8		996.0	14.6	0.19	963.0	-18.0	-0.22
A6NNWX		1,069.0	87.6	1.14	1,013.0	32.0	0.40
ACKJUV		1,021.8	40.4	0.53	1,061.0	80.0	0.99
BXHE3A		1,004.5	23.1	0.30	1,001.0	20.0	0.25
C9WQTD		1,030.0	48.6	0.63	1,052.5	71.5	0.89
D8GRDU		882.4	-99.0	-1.29	860.2	-120.8	-1.50
DBGZH6		917.0	-64.4	-0.84	937.5	-43.5	-0.54
DR83ZU		1,125.5	144.1	1.88	1,081.3	100.4	1.25
EMRUB9		980.8	-0.6	-0.01	980.4	-0.6	-0.01
GLN4WP		943.8	-37.6	-0.49	932.6	-48.4	-0.60
GMXL3T		1,021.1	39.7	0.52	931.2	-49.8	-0.62
H4JY68		919.5	-61.9	-0.81	918.1	-62.9	-0.78
HHH6Y3		900.0	-81.4	-1.06	878.2	-102.8	-1.28
HPNFTP		1,015.0	33.6	0.44	1,041.0	60.0	0.75
HR8UWP	*	1,175.0	193.6	2.53	1,180.0	199.0	2.47
HZXEZ3		1,021.7	40.3	0.53	970.6	-10.4	-0.13
J3L9CX		938.4	-43.0	-0.56	1,011.6	30.7	0.38
JXNRZ4		998.0	16.6	0.22	960.5	-20.5	-0.25
KLBLN2		965.9	-15.5	-0.20	940.5	-40.5	-0.50
KVHLX3	*	1,134.2	152.8	1.99	1,198.0	217.0	2.70
L9NAYP		888.5	-92.9	-1.21	831.5	-149.5	-1.86
LKDXKW		965.5	-15.9	-0.21	963.5	-17.5	-0.22
LQ2HQX		1,042.0	60.6	0.79	1,014.5	33.5	0.42
LRW2RY		934.0	-47.4	-0.62	900.0	-81.0	-1.01
MJLY8X		907.0	-74.4	-0.97	866.0	-115.0	-1.43
MXFJNL		923.2	-58.2	-0.76	936.2	-44.7	-0.56
NJTVQT		912.5	-68.9	-0.90	885.0	-96.0	-1.19

WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV
NWF3NU		922.0	-59.4	-0.78	944.5	-36.5	-0.45
PBUQBW	*	1,053.0	71.6	0.93	1,152.0	171.0	2.13
PUAZCX		1,074.5	93.1	1.22	1,055.5	74.5	0.93
PYP82H		962.2	-19.2	-0.25	990.1	9.1	0.11
Q69VAT		1,111.0	129.6	1.69	1,067.5	86.5	1.08
Q9976T		1,077.0	95.6	1.25	1,036.0	55.0	0.68
QE9MFY		1,061.5	80.1	1.05	1,086.7	105.7	1.31
QKYXRH		961.6	-19.8	-0.26	965.6	-15.4	-0.19
QQ32HF		966.7	-14.7	-0.19	963.1	-17.9	-0.22
R3Y8BE		1,091.0	109.6	1.43	1,047.6	66.6	0.83
RFJP3W		925.0	-56.4	-0.74	969.0	-12.0	-0.15
RNDVVX		911.5	-69.9	-0.91	929.5	-51.5	-0.64
THABBE		1,103.7	122.3	1.60	1,119.0	138.0	1.72
THM3YP		862.2	-119.2	-1.56	892.1	-88.9	-1.11
TUGQ4H		861.5	-119.9	-1.57	935.0	-46.0	-0.57
TVTXHQ		1,047.0	65.6	0.86	1,054.0	73.0	0.91
U83KTG		908.0	-73.4	-0.96	937.0	-44.0	-0.55
U9CZDN		917.0	-64.4	-0.84	923.0	-58.0	-0.72
UEGYND		852.8	-128.6	-1.68	828.9	-152.1	-1.89
VA2QXT		958.5	-22.9	-0.30	1,000.5	19.5	0.24
VLFLFD		1,113.0	131.6	1.72	1,095.5	114.5	1.42
WDZUCE		947.5	-33.9	-0.44	953.5	-27.5	-0.34
X4PJBL		930.0	-51.4	-0.67	975.5	-5.5	-0.07
X7V8NQ		1,066.2	84.8	1.11	1,083.7	102.7	1.28
XAVNAD		1,037.5	56.1	0.73	977.5	-3.5	-0.04
Y6ZNMP		967.5	-13.9	-0.18	981.5	0.5	0.01
YK769G		1,005.0	23.6	0.31	989.5	8.5	0.11
YXK3F7		1,015.7	34.3	0.45	1,050.9	69.9	0.87
Z4Y9PH		915.9	-65.5	-0.85	903.6	-77.4	-0.96
ZLJYNG		1,047.5	66.1	0.86	966.0	-15.0	-0.19

Summary Statistics

	Sample A51-A52	Sample A53-A54
Grand Means	981.40 psi	980.97 psi
Stnd Dev Btwn Labs	76.61 psi	80.42 psi

Statistics based on 66 of 68 reporting participants

Summary Statistics in SI Units		
Grand Means	6.7665 MPa	6.7600 MPa
Stnd Dev Btwn Labs	0.5282 MPa	0.5500 MPa
		Statistics based on 66 of 68 reporting participants

Samples A51-A52: Polyisoprene Compound & A53-A54: Polyisoprene Compound

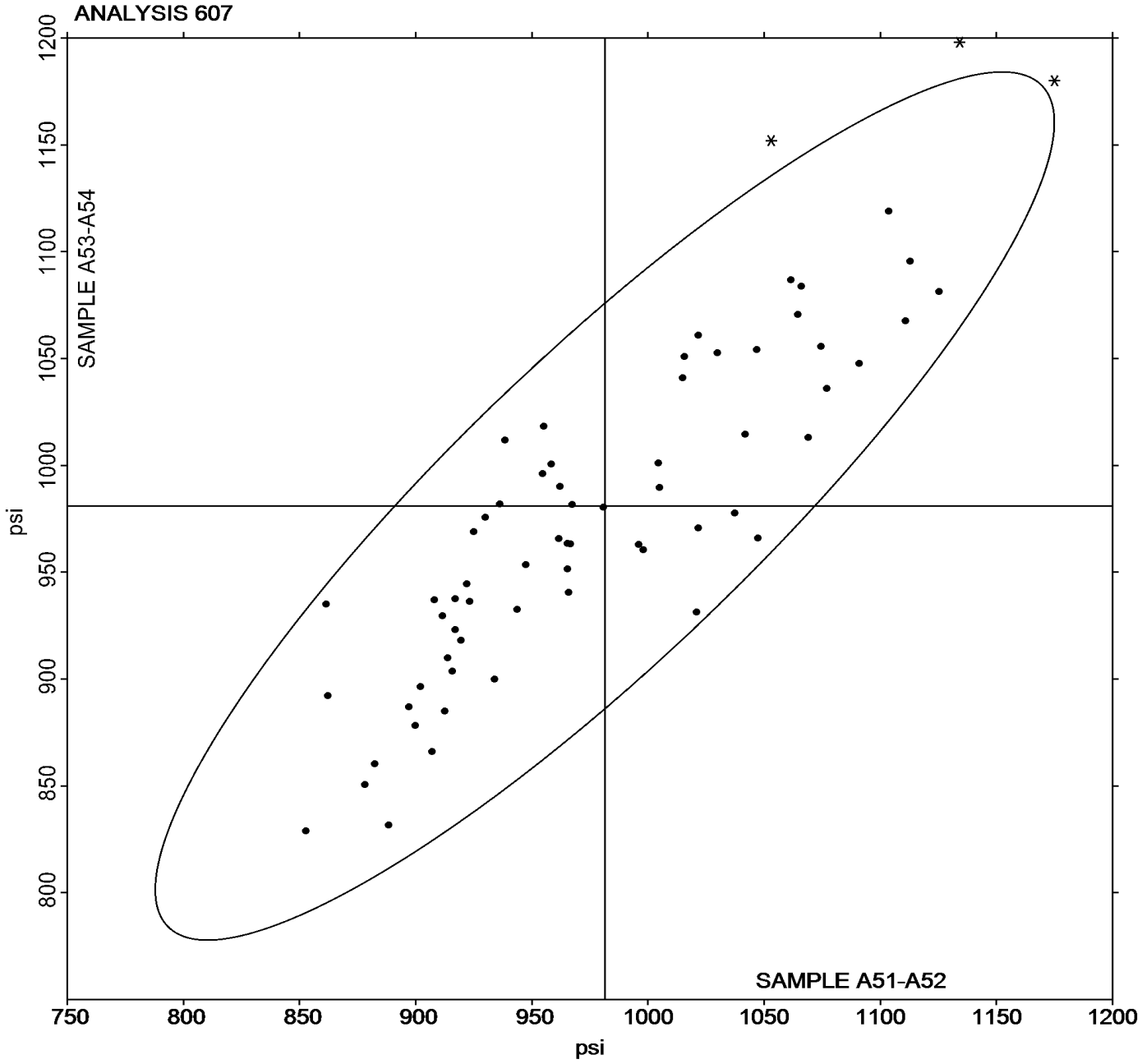
Comments on Assigned Data Flags for Test #607

3N4ZT9 (X) - Data for all samples are high. Possible Systematic Error.

8N7GT3 (X) - Data for all samples are low. Possible Systematic Error.

Grand Mean Sample **A51-A52** = 981.40 psi

Grand Mean Sample **A53-A54** = 980.97 psi



WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV
3N4ZT9	X	318.4	108.2	8.06	310.4	100.9	7.18
4FN76D		204.6	-5.5	-0.41	210.9	1.4	0.10
4KVWA6		200.9	-9.2	-0.69	194.4	-15.1	-1.08
4QLA7L		207.7	-2.5	-0.18	209.8	0.3	0.02
6UFKGC		197.8	-12.3	-0.92	204.7	-4.8	-0.34
7WL8UG		224.0	13.9	1.03	224.0	14.5	1.03
8KMUAA		196.0	-14.1	-1.05	194.0	-15.5	-1.10
8N7GT3		201.0	-9.1	-0.68	200.5	-9.0	-0.64
8RJQWD		201.6	-8.5	-0.63	216.1	6.6	0.47
9FNWZA		198.0	-12.1	-0.90	194.4	-15.1	-1.08
9Q8C6X		214.5	4.4	0.33	210.0	0.5	0.04
9QK3U8		204.5	-5.6	-0.42	203.5	-6.0	-0.43
A6NNWX		224.5	14.4	1.07	215.0	5.5	0.39
ACKJUV		211.0	0.9	0.07	216.8	7.3	0.52
BXHE3A		209.5	-0.6	-0.05	208.0	-1.5	-0.11
C9WQTD		216.0	5.9	0.44	217.5	8.0	0.57
D8GRDU		186.4	-23.7	-1.77	182.1	-27.4	-1.95
DBGZH6		198.0	-12.1	-0.90	202.0	-7.5	-0.53
DR83ZU		215.0	4.9	0.36	226.0	16.5	1.17
EMRUB9		201.9	-8.2	-0.61	201.9	-7.6	-0.54
GLN4WP		196.5	-13.6	-1.01	198.0	-11.5	-0.82
GMXL3T		206.7	-3.4	-0.26	190.0	-19.5	-1.39
H4JY68		192.9	-17.2	-1.28	193.6	-15.9	-1.13
HEHU43		226.0	15.9	1.18	227.0	17.5	1.25
HHH6Y3		187.8	-22.3	-1.66	184.9	-24.6	-1.75
HPNFTP		220.8	10.6	0.79	220.5	11.0	0.78
HR8UWP		215.8	5.6	0.42	210.0	0.5	0.04
HZXEZ3		212.7	2.6	0.19	205.5	-4.0	-0.29
J3L9CX		196.5	-13.6	-1.01	207.4	-2.1	-0.15
JXNRZ4		213.5	3.4	0.25	205.0	-4.5	-0.32
KLBLN2		214.7	4.5	0.34	210.2	0.7	0.05
KVHLX3	*	235.7	25.6	1.90	249.5	40.0	2.85
L9NAYP		182.5	-27.6	-2.06	181.0	-28.5	-2.03
LKDXKW		205.0	-5.1	-0.38	203.0	-6.5	-0.46
LQ2HQX		215.0	4.9	0.36	209.5	0.0	0.00
LRW2RY		211.0	0.9	0.06	200.5	-9.0	-0.64
MJLY8X		197.5	-12.6	-0.94	192.0	-17.5	-1.25
MXFJNL		200.2	-10.0	-0.74	203.1	-6.4	-0.46

WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV
NJTVQT		196.5	-13.6	-1.01	190.5	-19.0	-1.35
NWF3NU		210.0	-0.1	-0.01	212.5	3.0	0.21
PBUQBW	X	246.5	36.4	2.71	275.5	66.0	4.70
PUAZCX		226.5	16.4	1.22	220.0	10.5	0.75
PYP82H		190.5	-19.6	-1.46	196.4	-13.1	-0.93
Q69VAT		229.9	19.8	1.47	229.9	20.4	1.45
Q9976T		219.5	9.4	0.70	210.0	0.5	0.04
QE9MFY		228.6	18.5	1.38	236.1	26.6	1.89
QKYXRH		199.4	-10.7	-0.80	202.0	-7.5	-0.54
QQ32HF		207.4	-2.7	-0.20	211.0	1.5	0.11
R3Y8BE	X	294.0	83.9	6.24	265.5	56.0	3.99
RFJP3W		199.0	-11.1	-0.83	206.0	-3.5	-0.25
RNDVVX		205.0	-5.1	-0.38	207.5	-2.0	-0.14
THABBE	X	261.8	51.7	3.85	269.8	60.3	4.29
THM3YP		201.7	-8.4	-0.63	205.7	-3.8	-0.27
TUGQ4H	*	213.5	3.4	0.25	232.5	23.0	1.64
TVTXHQ		217.0	6.9	0.51	219.5	10.0	0.71
U83KTG		206.0	-4.1	-0.31	207.0	-2.5	-0.18
U9CZDN		205.5	-4.6	-0.34	200.5	-9.0	-0.64
UEGYND		240.0	29.9	2.23	231.3	21.8	1.56
VA2QXT		200.0	-10.1	-0.75	208.0	-1.5	-0.11
VLFLFD		230.0	19.9	1.48	220.0	10.5	0.75
WDZUCE		219.5	9.4	0.70	219.0	9.5	0.68
X4PJBL	X	255.0	44.9	3.34	262.0	52.5	3.74
X7V8NQ		238.3	28.2	2.10	230.5	21.0	1.49
XAVNAD		216.5	6.4	0.47	204.5	-5.0	-0.36
Y6ZNMP		209.0	-1.1	-0.08	209.0	-0.5	-0.03
YK769G		216.0	5.9	0.44	209.5	0.0	0.00
YXK3F7	*	245.0	34.9	2.60	243.5	34.0	2.42
Z4Y9PH		205.2	-4.9	-0.36	200.9	-8.6	-0.61
ZKQ329		231.3	21.2	1.58	231.3	21.8	1.56
ZLJYNG		207.8	-2.4	-0.18	200.0	-9.5	-0.68

Summary Statistics		
Grand Means	210.13 psi	209.49 psi
Stnd Dev Btwn Labs	13.43 psi	14.04 psi
		Statistics based on 65 of 70 reporting participants

Summary Statistics in SI Units		
Grand Means	1.4488 MPa	1.4400 MPa
Stnd Dev Btwn Labs	0.0926 MPa	0.1000 MPa
		Statistics based on 65 of 70 reporting participants

Samples A51-A52: Polyisoprene Compound & A53-A54: Polyisoprene Compound

Comments on Assigned Data Flags for Test #608

3N4ZT9 (X) - Data for all samples are high. Possible Systematic Error.

PBUQBW (X) - Data for sample group A53-A54 are high. Inconsistent within the determinations of sample group A53-A54.

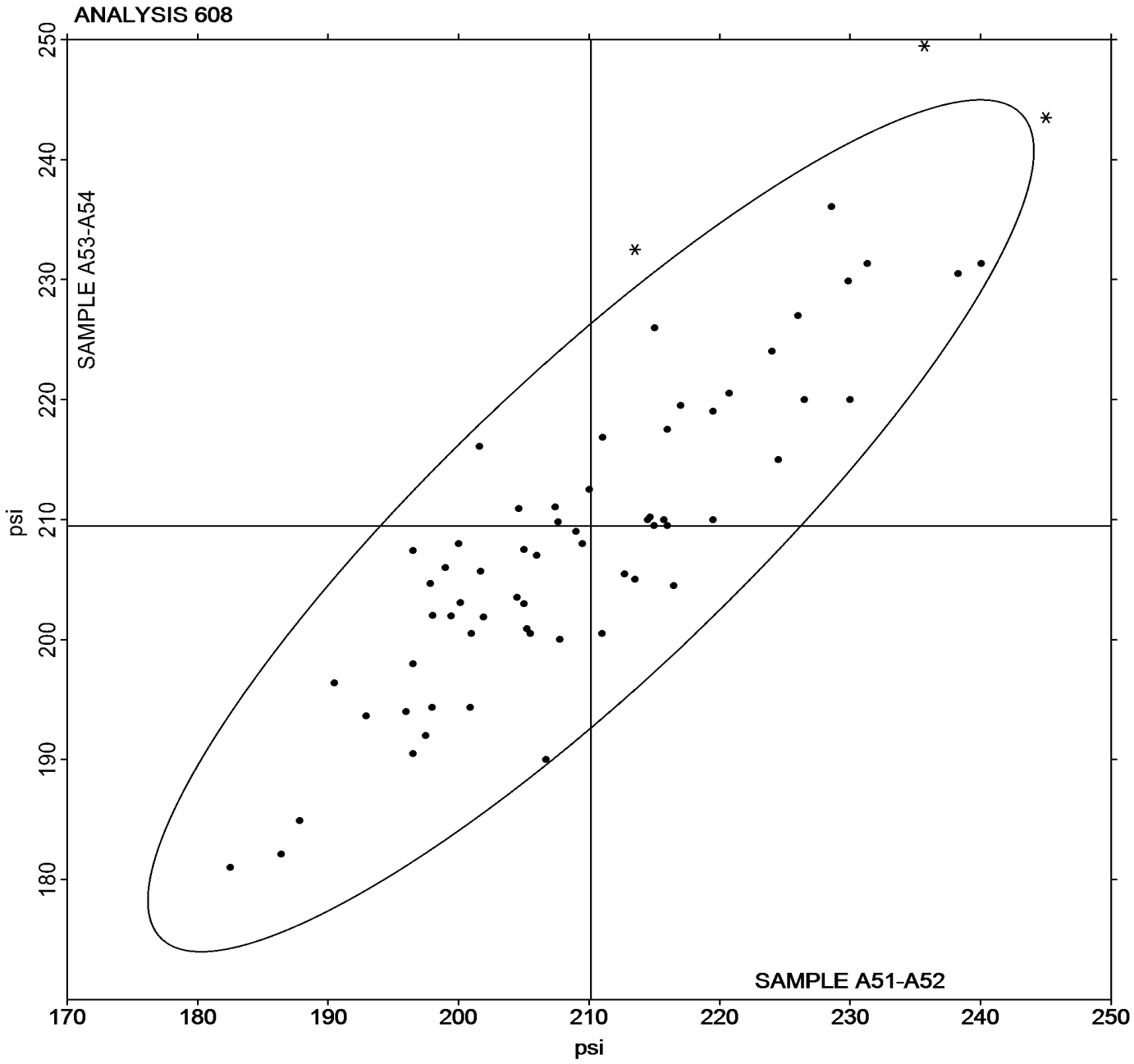
R3Y8BE (X) - Data for all samples are high. Possible Systematic Error. Inconsistent within the determinations of sample group A53-A54.

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

X4PJBL (X) - Data for all samples are high. Possible Systematic Error.

Grand Mean Sample **A51-A52** = 210.13 psi

Grand Mean Sample **A53-A54** = 209.49 psi



WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV	Instr Code
3N4ZT9		50.30	0.82	0.46	50.15	0.67	0.37	BT
4FN76D		47.15	-2.33	-1.29	47.85	-1.63	-0.92	BT
4KVWA6		49.50	0.02	0.01	50.00	0.52	0.29	HH
4QLA7L		49.00	-0.48	-0.27	49.00	-0.48	-0.27	BT
4X2Q2G		49.00	-0.48	-0.27	49.00	-0.48	-0.27	BT
6UFKGC		46.75	-2.73	-1.52	47.55	-1.93	-1.09	BT
7WL8UG		49.00	-0.48	-0.27	48.50	-0.98	-0.55	BT
8KMUAA		48.00	-1.48	-0.82	48.00	-1.48	-0.83	HH
8N7GT3		51.25	1.77	0.99	51.50	2.02	1.13	HH
8NL8XZ		47.00	-2.48	-1.38	47.00	-2.48	-1.40	BT
8RJQWD	*	48.90	-0.58	-0.32	50.85	1.37	0.77	BT
9FNWZA		48.95	-0.53	-0.29	48.85	-0.63	-0.36	BT
9Q8C6X		49.80	0.32	0.18	49.20	-0.28	-0.16	BT
9QK3U8		52.00	2.52	1.40	51.50	2.02	1.13	HH
A6NNWX		51.40	1.92	1.07	50.40	0.92	0.52	BT
ACKJUV		49.05	-0.43	-0.24	48.90	-0.58	-0.33	BT
BXHE3A		47.50	-1.98	-1.10	46.50	-2.98	-1.68	BT
C9WQTD		49.00	-0.48	-0.27	48.50	-0.98	-0.55	BT
D8GRDU	X	18.25	-31.23	-17.36	17.85	-31.63	-17.78	BT
DBGZH6		47.00	-2.48	-1.38	47.50	-1.98	-1.11	BT
DR83ZU		50.05	0.57	0.32	50.45	0.97	0.54	BT
EMRUB9		49.50	0.02	0.01	49.50	0.02	0.01	HH
GLN4WP		53.50	4.02	2.24	53.50	4.02	2.26	BT
GMXL3T		51.30	1.82	1.01	51.30	1.82	1.02	BT
H3NF46		46.65	-2.83	-1.57	46.30	-3.18	-1.79	BT
H4JY68		50.00	0.52	0.29	50.00	0.52	0.29	BT
HEHU43		49.85	0.37	0.21	49.30	-0.18	-0.10	BT
HHH6Y3		49.25	-0.23	-0.13	48.85	-0.63	-0.36	BT
HPNFTP		48.85	-0.63	-0.35	48.90	-0.58	-0.33	BT
HR8UWP		51.00	1.52	0.85	49.50	0.02	0.01	BT
HZXEZ3		47.70	-1.78	-0.99	47.70	-1.78	-1.00	BT
J3L9CX		48.20	-1.28	-0.71	48.60	-0.88	-0.50	BT
JXNRZ4		47.00	-2.48	-1.38	46.50	-2.98	-1.68	BT
KCNMXV		48.50	-0.98	-0.54	49.00	-0.48	-0.27	BT
KLBLN2		47.75	-1.73	-0.96	47.40	-2.08	-1.17	BT
KVHLX3		48.10	-1.38	-0.77	49.00	-0.48	-0.27	BT
L9NAYP	X	56.00	6.52	3.63	56.50	7.02	3.94	HH
LKDXKW		50.55	1.07	0.60	50.75	1.27	0.71	BT

WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV	Instr Code
LQ2HQX		50.00	0.52	0.29	49.50	0.02	0.01	BT
LRW2RY		47.35	-2.13	-1.18	48.50	-0.98	-0.55	BT
MJLY8X	*	54.00	4.52	2.51	54.50	5.02	2.82	BT
NJTVQT		47.95	-1.53	-0.85	47.75	-1.73	-0.97	BT
NWF3NU	*	47.05	-2.43	-1.35	48.98	-0.50	-0.28	BT
PBUQBW		48.15	-1.33	-0.74	48.70	-0.78	-0.44	BT
PUAZCX		49.50	0.02	0.01	49.00	-0.48	-0.27	BT
PYP82H	X	47.50	-1.98	-1.10	51.50	2.02	1.13	BT
Q69VAT	*	55.00	5.52	3.07	54.50	5.02	2.82	HH
QE9MFY		51.40	1.92	1.07	50.85	1.37	0.77	BT
QKYXRH		49.40	-0.08	-0.04	49.75	0.27	0.15	BT
QQ32HF		49.90	0.42	0.23	49.80	0.32	0.18	BT
R3Y8BE		51.00	1.52	0.85	50.50	1.02	0.57	HH
RC3MVR		53.00	3.52	1.96	53.50	4.02	2.26	HH
RFJP3W		50.00	0.52	0.29	49.50	0.02	0.01	BT
RNDVVX		50.50	1.02	0.57	50.00	0.52	0.29	BT
THABBE		48.50	-0.98	-0.54	48.50	-0.98	-0.55	BT
THM3YP		51.50	2.02	1.12	52.00	2.52	1.41	HH
TUGQ4H		52.00	2.52	1.40	52.00	2.52	1.41	HH
TVTXHQ		48.50	-0.98	-0.54	48.90	-0.58	-0.33	BT
U83KTG		50.65	1.17	0.65	49.15	-0.33	-0.19	XX
U9CZDN		50.00	0.52	0.29	51.00	1.52	0.85	HH
UEGYND		48.25	-1.23	-0.68	47.75	-1.73	-0.97	BT
VA2QXT		51.55	2.07	1.15	52.40	2.92	1.64	HH
VLFLFD		50.00	0.52	0.29	49.00	-0.48	-0.27	HH
WDZUCE		49.10	-0.38	-0.21	49.30	-0.18	-0.10	BT
X4PJBL		47.50	-1.98	-1.10	47.50	-1.98	-1.11	BT
X7V8NQ		48.50	-0.98	-0.54	47.75	-1.73	-0.97	BT
XAVNAD		49.25	-0.23	-0.13	49.00	-0.48	-0.27	BT
XBBFEB		50.00	0.52	0.29	50.50	1.02	0.57	BT
Y3D4GK		50.45	0.97	0.54	50.70	1.22	0.68	BT
Y6ZNMP		50.60	1.12	0.62	50.85	1.37	0.77	HH
YE6V2N		50.00	0.52	0.29	50.00	0.52	0.29	BT
YK769G		51.00	1.52	0.85	50.50	1.02	0.57	BT
YXK3F7		51.00	1.52	0.85	51.00	1.52	0.85	HH
Z4Y9PH		47.55	-1.93	-1.07	47.70	-1.78	-1.00	BT
ZKQ329		46.45	-3.03	-1.68	46.15	-3.33	-1.87	BT

Rubber Interlaboratory Testing Program

Analysis 620

Hardness (Shore A/Type A)

WebCode	Data Flag	Sample A51-A52 Lab Mean	Sample A51-A52 Diff from Grand Mean	Sample A51-A52 CPV	Sample A53-A54 Lab Mean	Sample A53-A54 Diff from Grand Mean	Sample A53-A54 CPV	Instr Code
ZV9ML6		47.00	-2.48	-1.38	48.00	-1.48	-0.83	BT

Summary Statistics

	Sample A51-A52	Sample A53-A54
Grand Means	49.477 Type A	49.483 Type A
Stnd Dev Btwn Labs	1.799 Type A	1.779 Type A

Statistics based on 73 of 76 reporting participants

Samples A51-A52: Polyisoprene Compound & A53-A54: Polyisoprene Compound

Comments on Assigned Data Flags for Test #620

D8GRDU (X) - Extreme Data.

L9NAYP (X) - Data for all samples are high. Possible Systematic Error.

PYP82H (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

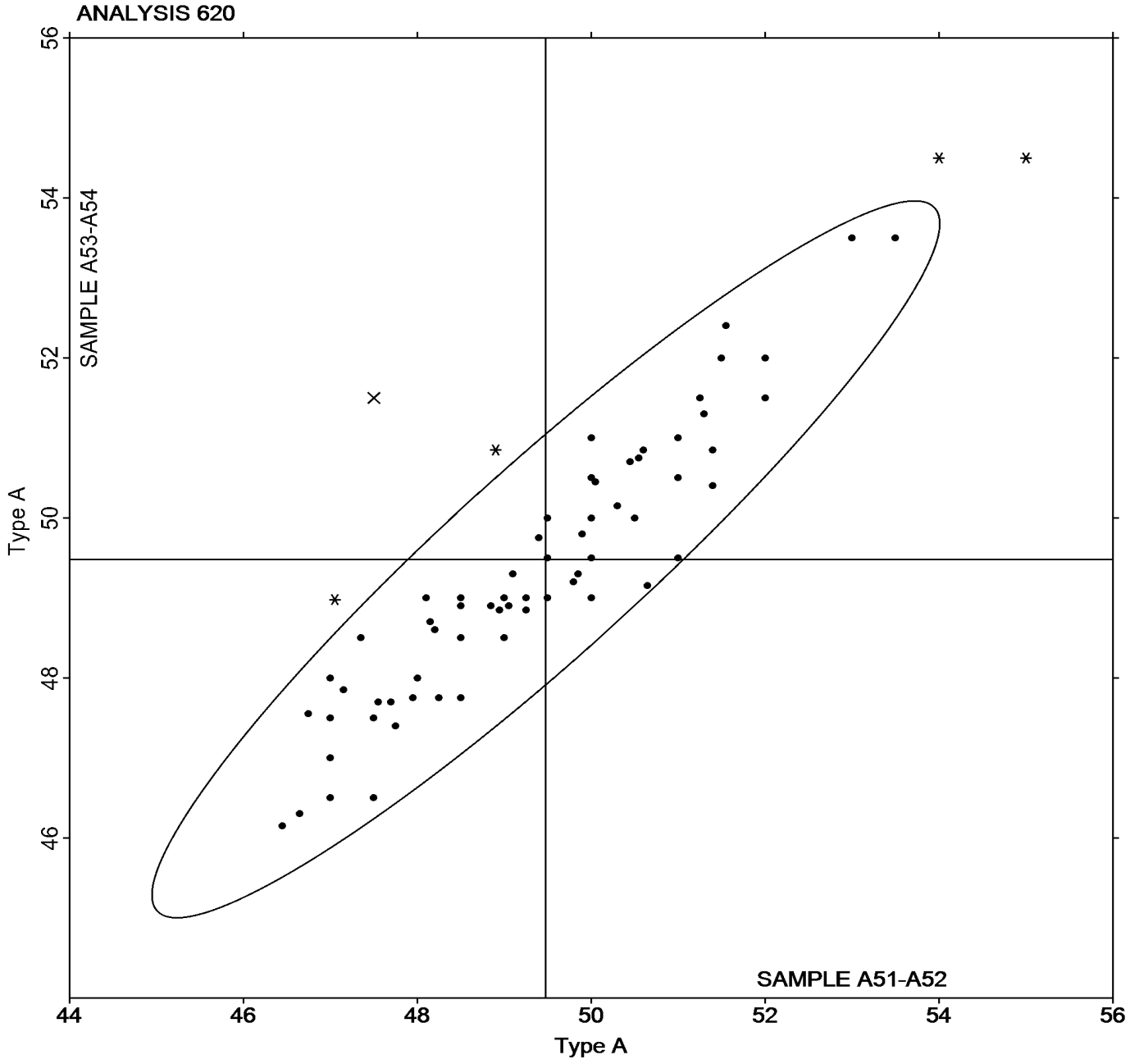
BT	Benchtop	HH	Handheld
XX	Specify Benchtop or Handheld Instrument		

Results by Reading Time (as reported by laboratory)

Reading Time	Sample A51-A52 Polyisoprene Compound Group Mean	Btwn Lab STD	Diff from GM	Sample A53-A54 Polyisoprene Compound Group Mean	Btwn Lab STD	Diff from GM	Labs Incl	Labs Rpt
Readings taken within 0 - 5 seconds	49.67	1.45	0.19	49.60	1.51	0.12	45	48
Readings taken at 5 seconds	49.04	2.05	-0.44	49.38	1.92	-0.10	5	7
Readings taken after 5+ seconds	47.67	0.92	-1.81	47.50	1.06	-1.98	6	7
Maximum hardness indicator used	49.28	1.83	-0.19	49.20	1.56	-0.29	13	14

Grand Mean Sample **A51-A52** = 49.477 Type A

Grand Mean Sample **A53-A54** = 49.483 Type A



WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV
3N4ZT9		1.138	0.003	1.03	1.137	0.002	0.82
4KVWA6		1.136	0.001	0.35	1.136	0.001	0.47
4X2Q2G		1.132	-0.002	-0.72	1.131	-0.003	-1.19
6UFKGC	*	1.143	0.008	2.76	1.143	0.008	2.96
7WL8UG		1.132	-0.002	-0.76	1.133	-0.002	-0.62
8KMUAA		1.136	0.002	0.52	1.136	0.001	0.47
9FNWZA		1.128	-0.007	-2.38	1.128	-0.007	-2.38
9Q8C6X		1.136	0.001	0.50	1.136	0.001	0.52
9QK3U8		1.133	-0.002	-0.67	1.133	-0.002	-0.78
A6NNWX		1.133	-0.002	-0.67	1.132	-0.003	-0.96
ACKJUV		1.131	-0.004	-1.35	1.132	-0.003	-1.14
BXHE3A		1.137	0.003	0.86	1.138	0.003	1.18
D8GRDU		1.130	-0.005	-1.70	1.131	-0.004	-1.31
DBGZH6		1.139	0.005	1.55	1.141	0.006	2.25
DR83ZU		1.134	0.000	-0.16	1.134	-0.001	-0.42
EMRUB9		1.135	0.000	0.12	1.132	-0.002	-0.84
GLN4WP		1.136	0.002	0.52	1.136	0.001	0.47
GMXL3T		1.135	0.000	0.01	1.133	-0.002	-0.60
H4JY68		1.131	-0.003	-1.18	1.132	-0.003	-1.14
HEHU43		1.134	-0.001	-0.33	1.136	0.001	0.29
HHH6Y3		1.137	0.002	0.69	1.136	0.001	0.47
HPNFTP		1.133	-0.001	-0.35	1.133	-0.002	-0.66
HR8UWP		1.132	-0.002	-0.84	1.131	-0.004	-1.31
HZXEZ3		1.137	0.003	0.86	1.137	0.002	0.65
JXNRZ4		1.136	0.002	0.52	1.136	0.001	0.33
KLBLN2	X	1.126	-0.008	-2.89	1.136	0.001	0.29
KVHLX3	*	1.133	-0.001	-0.39	1.137	0.002	0.87
L9NAYP		1.131	-0.003	-1.18	1.132	-0.003	-0.96
LKDXKW	X	1.125	-0.010	-3.40	1.139	0.004	1.36
LQ2HQX		1.130	-0.004	-1.49	1.131	-0.004	-1.42
LRW2RY		1.135	0.001	0.33	1.134	0.000	-0.08
MJLY8X	*	1.141	0.006	2.11	1.138	0.003	1.22
NJTVQT		1.134	0.000	-0.04	1.137	0.002	0.88
PUAZCX		1.136	0.001	0.35	1.135	0.000	0.11
PYP82H	X	1.117	-0.018	-6.13	1.108	-0.027	-9.52
QKYXRH		1.135	0.000	0.06	1.136	0.001	0.41
R3Y8BE		1.133	-0.002	-0.60	1.134	0.000	-0.08
RC3MVR		1.131	-0.004	-1.32	1.131	-0.004	-1.35

WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample A53-A54 Lab Mean	Diff from Grand Mean	CPV
RFJP3W		1.132	-0.002	-0.84	1.133	-0.002	-0.60
RNDVVX		1.135	0.000	0.10	1.136	0.002	0.56
THABBE		1.134	-0.001	-0.23	1.134	-0.001	-0.25
THM3YP	X	1.129	-0.005	-1.87	1.120	-0.015	-5.24
TUGQ4H		1.136	0.001	0.45	1.136	0.001	0.34
TVTXHQ		1.133	-0.002	-0.67	1.135	0.000	-0.07
U83KTG		1.140	0.005	1.73	1.140	0.005	1.89
U9CZDN		1.133	-0.002	-0.67	1.135	0.000	-0.07
UEGYND		1.136	0.001	0.35	1.134	-0.001	-0.42
VA2QXT		1.133	-0.001	-0.36	1.134	-0.001	-0.28
VLFLFD		1.137	0.002	0.81	1.136	0.001	0.33
WDZUCE		1.140	0.006	1.89	1.139	0.004	1.36
X7V8NQ		1.135	0.001	0.22	1.135	0.000	0.02
XAVNAD		1.136	0.002	0.52	1.136	0.001	0.29
XBBFEB		1.134	-0.001	-0.28	1.135	0.000	0.13
Y6ZNMP		1.138	0.003	1.03	1.137	0.003	0.98
YK769G		1.134	-0.001	-0.33	1.133	-0.002	-0.60
YXK3F7		1.132	-0.002	-0.74	1.133	-0.002	-0.73

Summary Statistics

	Sample A51-A52		Sample A53-A54	
Grand Means	1.1345	g/cm^3 (Mg/m^3)	1.1347	g/cm^3 (Mg/m^3)
Stnd Dev Btwn Labs	0.0029	g/cm^3 (Mg/m^3)	0.0028	g/cm^3 (Mg/m^3)

Statistics based on 52 of 56 reporting participants

Samples A51-A52: Polyisoprene Compound & A53-A54: Polyisoprene Compound

Comments on Assigned Data Flags for Test #621

KLBLN2 (X) - Data for sample group A51-A52 are low.

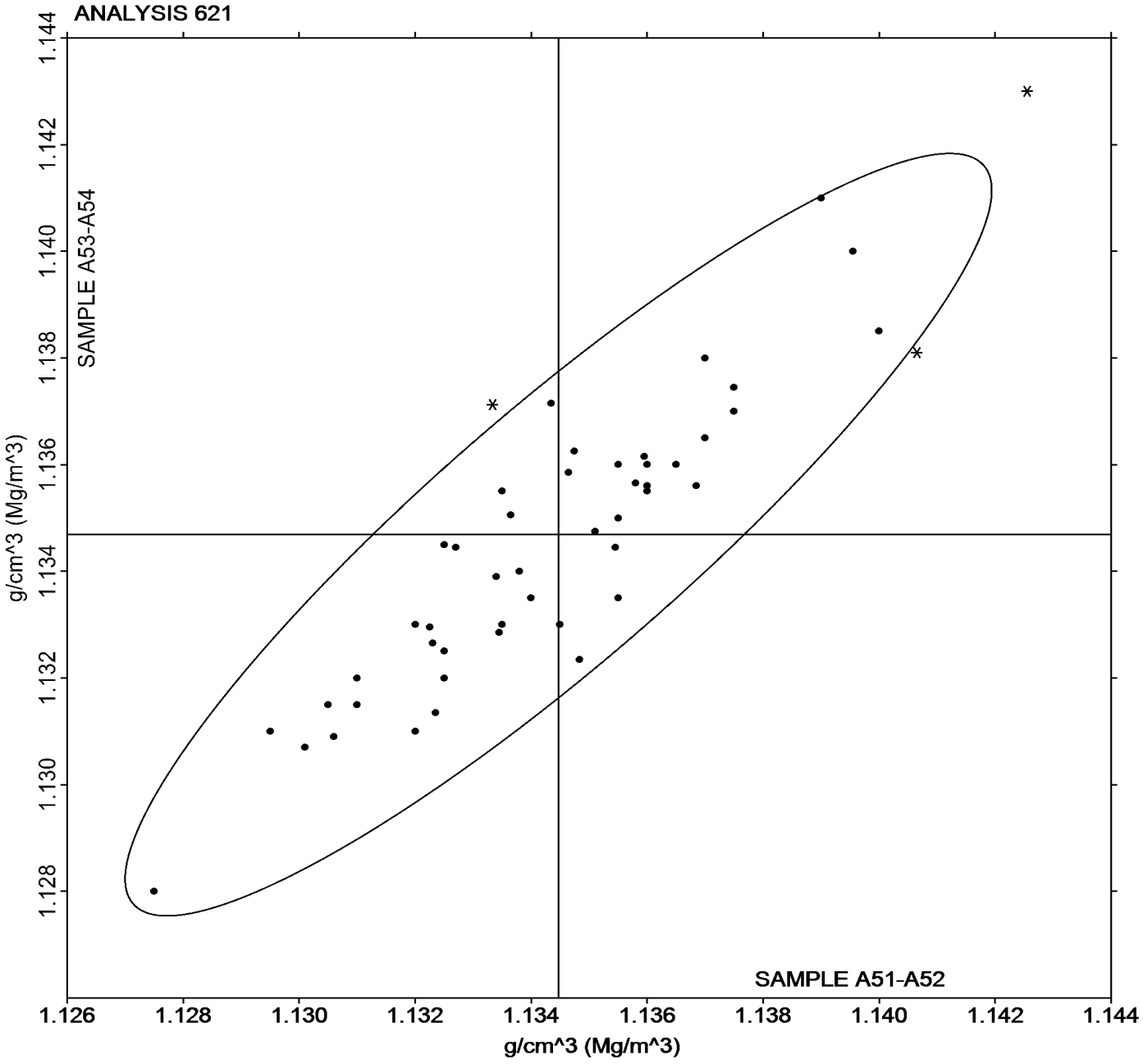
LKDXKW (X) - Data for sample group A51-A52 are low.

PYP82H (X) - Data for all samples are low. Inconsistent within the determinations of both sample groups.

THM3YP (X) - Data for sample group A53-A54 are low.

Grand Mean Sample **A51-A52** = 1.1345 g/cm^3 (Mg/m^3)

Grand Mean Sample **A53-A54** = 1.1347 g/cm^3 (Mg/m^3)



WebCode	Data Flag	Sample HA51-HA52 Lab Mean	Diff from Grand Mean	CPV	Sample HA53-HA54 Lab Mean	Diff from Grand Mean	CPV	Instr Code
4KVWA6		57.30	3.75	1.18	69.30	2.18	0.97	BT
4QLA7L		54.00	0.45	0.14	67.00	-0.12	-0.05	XX
69WHMD		56.50	2.95	0.92	68.50	1.38	0.61	BT
9DJ8VF		50.50	-3.05	-0.95	67.00	-0.12	-0.05	HH
9QK3U8		53.00	-0.55	-0.17	67.00	-0.12	-0.05	HH
BG8TED		58.00	4.45	1.39	69.50	2.38	1.06	HH
D8GRDU		50.70	-2.85	-0.89	65.50	-1.62	-0.72	BT
H3NF46		51.80	-1.75	-0.55	66.00	-1.12	-0.50	BT
HHH6Y3		52.30	-1.25	-0.39	67.30	0.18	0.08	BT
HL4P47		58.50	4.95	1.55	71.00	3.88	1.73	BT
HN9F9Z		56.90	3.35	1.05	68.30	1.18	0.53	BT
HPNFTP		51.20	-2.35	-0.74	65.70	-1.42	-0.63	BT
HZXEZ3		51.60	-1.95	-0.61	65.50	-1.62	-0.72	BT
JUTX4M	*	46.50	-7.05	-2.21	61.00	-6.12	-2.73	BT
JZ3WX2		57.65	4.10	1.29	69.90	2.78	1.24	HH
KCNMXV		56.00	2.45	0.77	69.00	1.88	0.84	BT
LKDXKW	X	94.55	41.00	12.85	95.45	28.33	12.62	BT
PCP9CX		50.60	-2.95	-0.92	64.15	-2.97	-1.32	BT
PYP82H		58.50	4.95	1.55	70.00	2.88	1.28	HH
Q9976T		54.30	0.75	0.24	68.50	1.38	0.61	BT
QKYXRH		55.00	1.45	0.45	69.25	2.13	0.95	BT
QQ32HF		52.65	-0.90	-0.28	66.20	-0.92	-0.41	BT
QQNF7T		52.50	-1.05	-0.33	65.00	-2.12	-0.94	BT
RKWRNT		53.00	-0.55	-0.17	66.35	-0.77	-0.34	BT
Y3D4GK		53.65	0.10	0.03	67.70	0.58	0.26	HH
YK769G		51.50	-2.05	-0.64	66.50	-0.62	-0.28	BT
ZKQ329		48.10	-5.45	-1.71	64.00	-3.12	-1.39	BT

Summary Statistics

	Sample HA51-HA52	Sample HA53-HA54
Grand Means	53.548 Type D	67.121 Type D
Stnd Dev Btwn Labs	3.192 Type D	2.245 Type D

Statistics based on 26 of 27 reporting participants

Samples HA51-HA52: Hardness Disc & HA53-HA54: Hardness Disc

Comments on Assigned Data Flags for Test #625

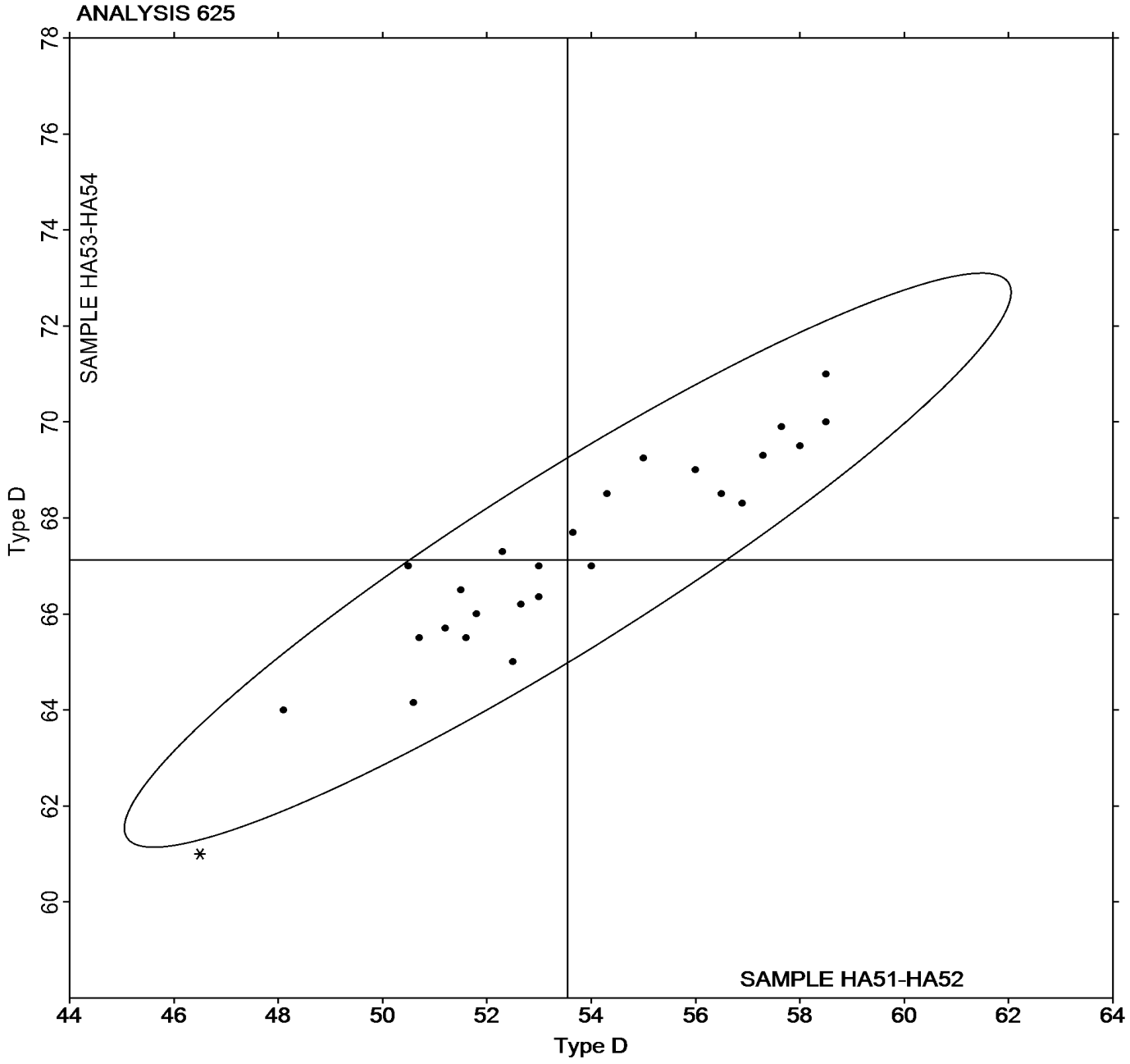
LKDXKW (X) - Extreme Data.

Key to Instrument Codes Reported by Participants

BT	Benchtop	HH	Handheld
XX	Specify Benchtop or Handheld Instrument		

Grand Mean Sample **HA51-HA52** = 53.548 Type D

Grand Mean Sample **HA53-HA54** = 67.121 Type D



Rubber Interlaboratory Testing Program

Analysis 630

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

WebCode	Data Flag	Sample A51-A52 Lab Mean	Sample A51-A52 Diff from Grand Mean	Sample A51-A52 CPV	Sample J51-J52 Lab Mean	Sample J51-J52 Diff from Grand Mean	Sample J51-J52 CPV
6UFKGC		3,539.7	246.8	1.45	3,099.5	108.6	0.51
7WL8UG		3,381.0	88.1	0.52	2,604.5	-386.4	-1.82
8KMUAA		3,025.0	-267.9	-1.58	2,940.0	-50.9	-0.24
C9WQTD		3,357.0	64.1	0.38	3,082.5	91.6	0.43
EMRUB9		3,356.7	63.8	0.38	2,846.6	-144.3	-0.68
HHH6Y3		3,125.6	-167.3	-0.99	3,053.1	62.2	0.29
KVHLX3		3,749.3	456.4	2.69	2,929.8	-61.1	-0.29
LKDXKW		3,201.5	-91.4	-0.54	3,116.0	125.1	0.59
NJTVQT		3,345.0	52.1	0.31	3,483.0	492.1	2.32
PUAZCX		3,187.5	-105.4	-0.62	3,184.0	193.1	0.91
PYP82H		3,158.3	-134.6	-0.79	3,025.7	34.7	0.16
QE9MFY		3,250.4	-42.5	-0.25	2,961.6	-29.3	-0.14
QKYXRH		3,350.4	57.5	0.34	3,168.7	177.8	0.84
U9CZDN		3,252.5	-40.4	-0.24	2,835.0	-155.9	-0.74
VJRC4R	M	No data reported for this sample			2,733.5	-257.4	-1.21
WDZUCE		3,189.0	-103.9	-0.61	3,029.0	38.1	0.18
XAVNAD		3,343.5	50.6	0.30	2,599.0	-391.9	-1.85
Y6ZNMP		3,167.0	-125.9	-0.74	2,887.5	-103.4	-0.49

Summary Statistics

	Sample A51-A52	Sample J51-J52
Grand Means	3,292.90 psi	2,990.91 psi
Stnd Dev Btwn Labs	169.76 psi	212.03 psi

Statistics based on 17 of 18 reporting participants

Summary Statistics in SI Units

	Sample A51-A52	Sample J51-J52
Grand Means	22.704 MPa	20.620 MPa
Stnd Dev Btwn Labs	1.170 MPa	1.460 MPa

Statistics based on 17 of 18 reporting participants

Samples A51-A52: Polyisoprene Compound & J51-J52: Polyisoprene Compound

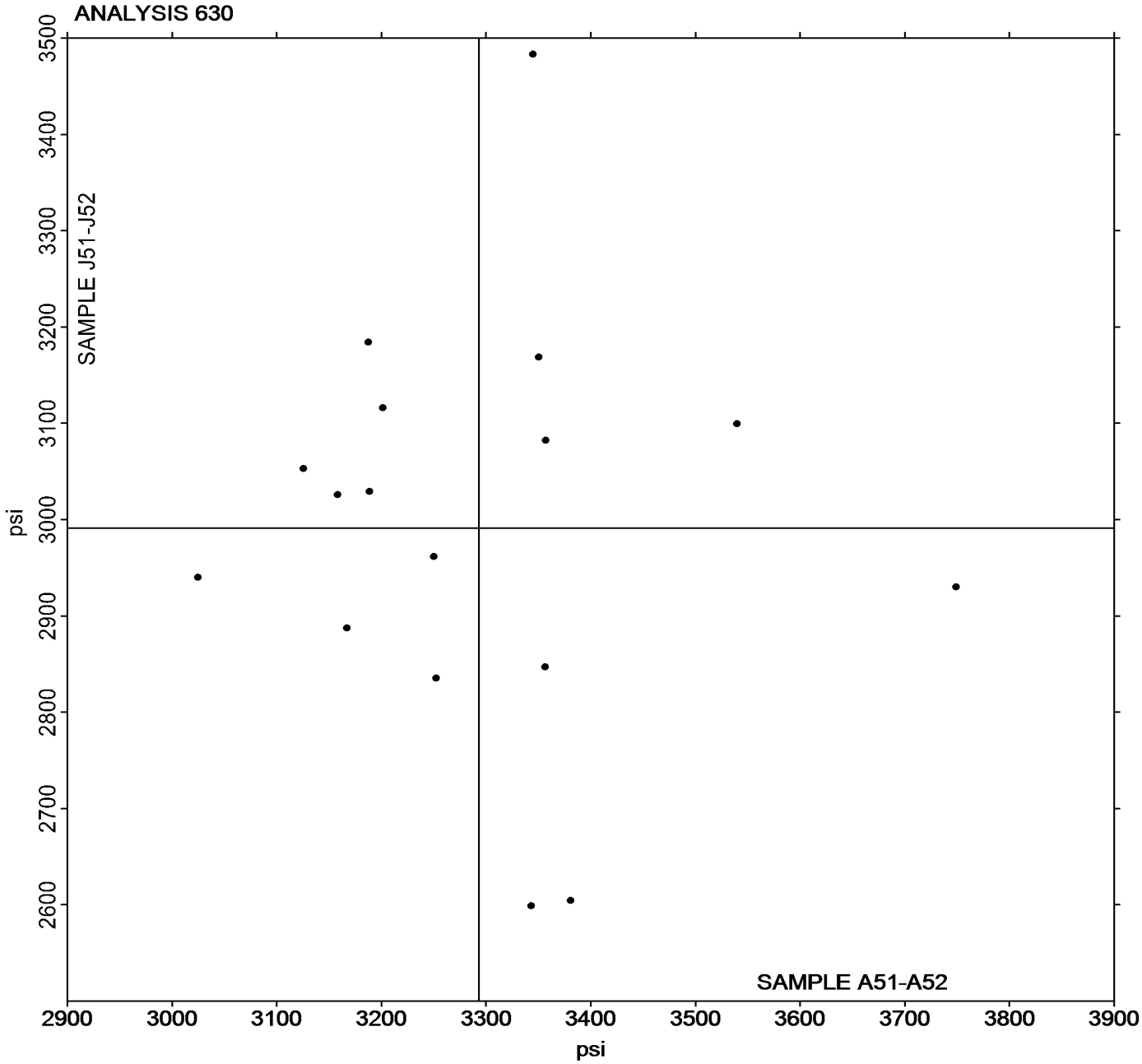
Comments on Assigned Data Flags for Test #630

VJRC4R (M) - Participant did not submit data for sample group A51-A52.

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

Grand Mean Sample **A51-A52** = 3,292.90 psi

Grand Mean Sample **J51-J52** = 2,990.91 psi



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

WebCode	Data Flag	Sample A51-A52 Lab Mean	Diff from Grand Mean	CPV	Sample J51-J52 Lab Mean	Diff from Grand Mean	CPV
6UFKGC		667.4	60.2	2.58	622.1	40.3	1.72
7WL8UG		600.5	-6.7	-0.29	579.0	-2.8	-0.12
8KMUAA		601.5	-5.7	-0.24	598.0	16.2	0.69
C9WQTD		589.5	-17.7	-0.76	580.5	-1.3	-0.06
EMRUB9		619.3	12.1	0.52	545.5	-36.3	-1.55
HHH6Y3		614.6	7.4	0.32	589.7	7.9	0.34
KVHLX3		608.0	0.8	0.03	573.0	-8.8	-0.38
LKDXKW		596.0	-11.2	-0.48	588.5	6.7	0.29
NJTVQT		631.5	24.3	1.04	623.5	41.7	1.78
PUAZCX		570.0	-37.2	-1.59	544.0	-37.8	-1.61
PYP82H		563.3	-44.0	-1.88	559.4	-22.4	-0.96
QE9MFY		593.1	-14.1	-0.60	554.8	-27.0	-1.15
QKYXRH		616.0	8.8	0.38	604.5	22.7	0.97
U9CZDN		618.0	10.8	0.46	578.5	-3.3	-0.14
VJRC4R	M	No data reported for this sample			567.0	-14.8	-0.63
WDZUCE		613.0	5.8	0.25	569.5	-12.3	-0.53
XAVNAD		606.5	-0.7	-0.03	581.0	-0.8	-0.03
Y6ZNMP		614.5	7.3	0.31	599.0	17.2	0.74

Summary Statistics

	Sample A51-A52	Sample J51-J52
Grand Means	607.22 percent	581.79 percent
Stnd Dev Btwn Labs	23.36 percent	23.41 percent

Statistics based on 17 of 18 reporting participants

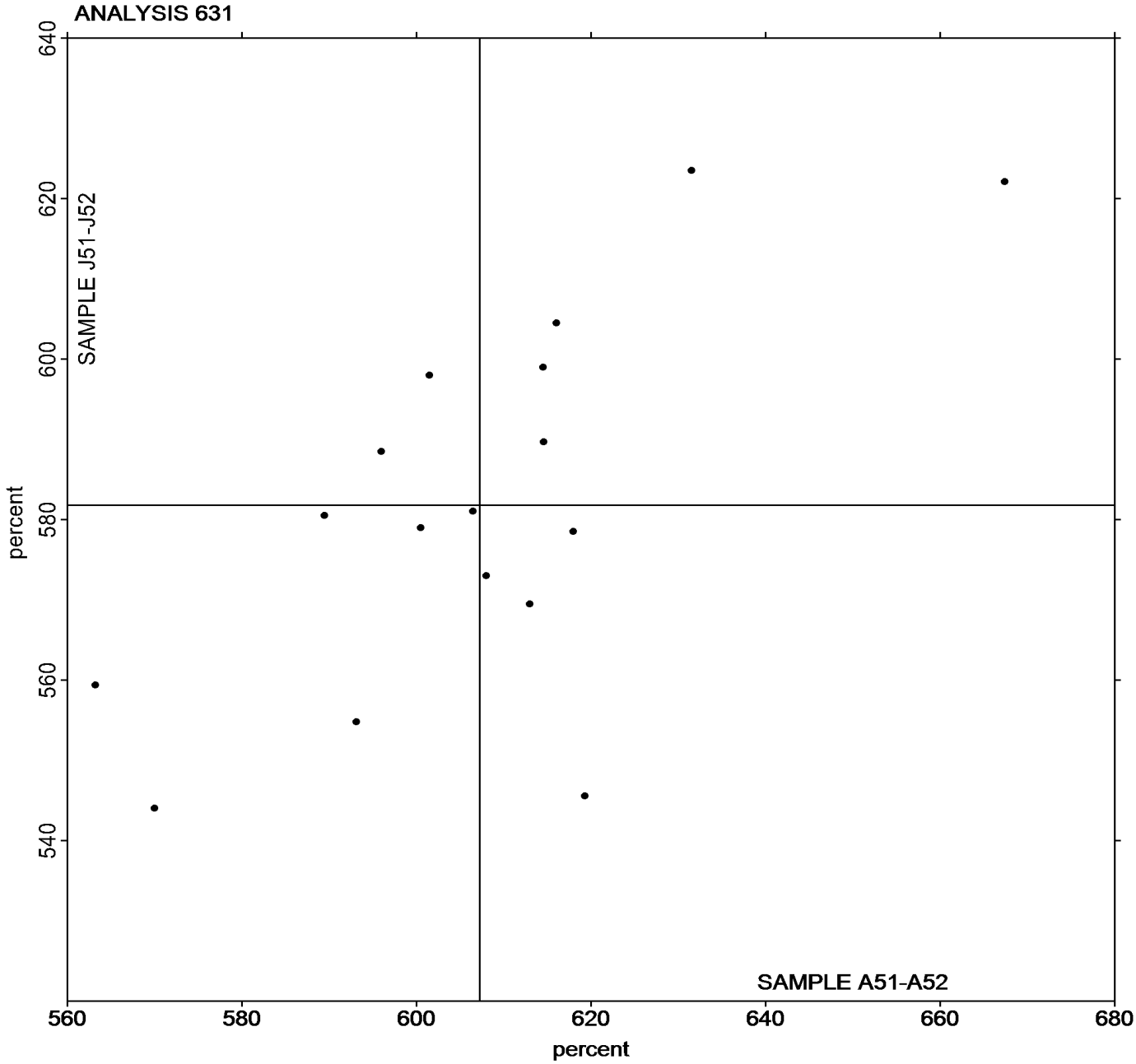
Samples A51-A52: Polyisoprene Compound & J51-J52: Polyisoprene Compound

Comments on Assigned Data Flags for Test #631

VJRC4R (M) - Participant did not submit data for sample group A51-A52.

Grand Mean Sample **A51-A52** = 607.22 percent

Grand Mean Sample **J51-J52** = 581.79 percent



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

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

WebCode	Data Flag	Sample A51-A52 Lab Mean	Sample A51-A52 Diff from Grand Mean	Sample A51-A52 CPV	Sample J51-J52 Lab Mean	Sample J51-J52 Diff from Grand Mean	Sample J51-J52 CPV
6UFKGC		936.2	-49.4	-0.71	934.8	-64.8	-0.68
7WL8UG		1,064.5	78.9	1.14	836.5	-163.0	-1.72
8KMUAA		902.0	-83.6	-1.21	967.0	-32.5	-0.34
C9WQTD		1,030.0	44.4	0.64	958.0	-41.5	-0.44
EMRUB9		980.8	-4.8	-0.07	1,064.3	64.8	0.68
HHH6Y3		900.0	-85.6	-1.24	1,002.9	3.4	0.04
KVHLX3		1,134.2	148.6	2.15	1,012.4	12.8	0.14
LKDXKW		965.5	-20.1	-0.29	963.0	-36.5	-0.39
NJTVQT		912.5	-73.1	-1.06	1,015.0	15.5	0.16
PUAZCX		1,074.5	88.9	1.28	1,219.5	220.0	2.32
PYP82H		962.2	-23.4	-0.34	1,079.6	80.1	0.85
QE9MFY		1,061.5	75.9	1.10	1,131.4	131.9	1.39
QKYXRH		961.6	-24.0	-0.35	990.3	-9.3	-0.10
U9CZDN		917.0	-68.6	-0.99	941.0	-58.5	-0.62
VJRC4R	M	No data reported for this sample			948.0	-51.5	-0.54
WDZUCE		947.5	-38.1	-0.55	1,064.5	65.0	0.69
XAVNAD		1,037.5	51.9	0.75	848.5	-151.0	-1.59
Y6ZNMP		967.5	-18.1	-0.26	963.5	-36.0	-0.38

Summary Statistics

	Sample A51-A52	Sample J51-J52
Grand Means	985.59 psi	999.54 psi
Stnd Dev Btwn Labs	69.27 psi	94.71 psi

Statistics based on 17 of 18 reporting participants

Summary Statistics in SI Units

	Sample A51-A52	Sample J51-J52
Grand Means	6.7953 MPa	6.8900 MPa
Stnd Dev Btwn Labs	0.4776 MPa	0.6500 MPa

Statistics based on 17 of 18 reporting participants

Samples A51-A52: Polyisoprene Compound & J51-J52: Polyisoprene Compound

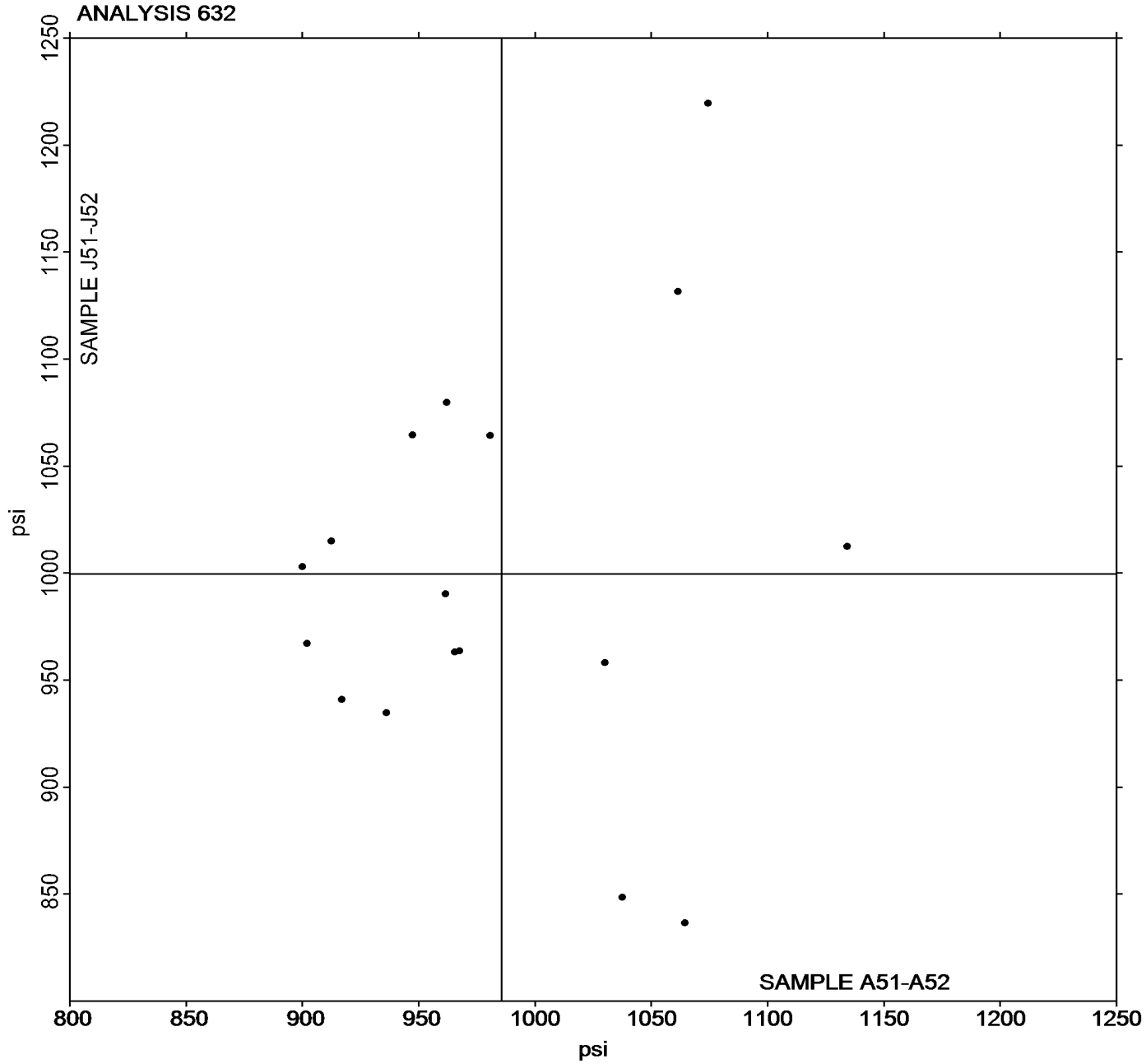
Comments on Assigned Data Flags for Test #632

VJRC4R (M) - Participant did not submit data for sample group A51-A52.

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

Grand Mean Sample **A51-A52** = 985.59 psi

Grand Mean Sample **J51-J52** = 999.54 psi



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

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

WebCode	Data Flag	Sample A51-A52 Lab Mean	Sample A51-A52 Diff from Grand Mean	Sample A51-A52 CPV	Sample J51-J52 Lab Mean	Sample J51-J52 Diff from Grand Mean	Sample J51-J52 CPV
6UFKGC		197.8	-11.4	-0.80	201.2	-14.6	-0.81
7WL8UG		224.0	14.8	1.04	183.0	-32.8	-1.82
8KMUAA		196.0	-13.2	-0.93	202.5	-13.3	-0.74
C9WQTD		216.0	6.8	0.48	212.0	-3.8	-0.21
EMRUB9		201.9	-7.3	-0.51	222.5	6.6	0.37
HHH6Y3		187.8	-21.4	-1.50	215.4	-0.5	-0.03
KVHLX3		235.7	26.5	1.86	222.6	6.8	0.38
LKDXKW		205.0	-4.2	-0.29	214.0	-1.8	-0.10
NJTVQT		196.5	-12.7	-0.89	221.0	5.2	0.28
PUAZCX		226.5	17.3	1.21	252.5	36.7	2.03
PYP82H		190.5	-18.7	-1.31	211.9	-3.9	-0.22
QE9MFY		228.6	19.4	1.36	243.4	27.6	1.52
QKYXRH		199.4	-9.8	-0.68	207.4	-8.4	-0.47
U9CZDN		205.5	-3.7	-0.26	209.5	-6.3	-0.35
VJRC4R	M	No data reported for this sample			204.0	-11.8	-0.66
WDZUCE		219.5	10.3	0.72	237.0	21.2	1.17
XAVNAD		216.5	7.3	0.51	187.0	-28.8	-1.60
Y6ZNMP		209.0	-0.2	-0.01	226.5	10.7	0.59

Summary Statistics

	Sample A51-A52	Sample J51-J52
Grand Means	209.19 psi	215.85 psi
Stnd Dev Btwn Labs	14.26 psi	18.08 psi

Statistics based on 17 of 18 reporting participants

Summary Statistics in SI Units

	Sample A51-A52	Sample J51-J52
Grand Means	1.4423 MPa	1.4900 MPa
Stnd Dev Btwn Labs	0.0983 MPa	0.1200 MPa

Statistics based on 17 of 18 reporting participants

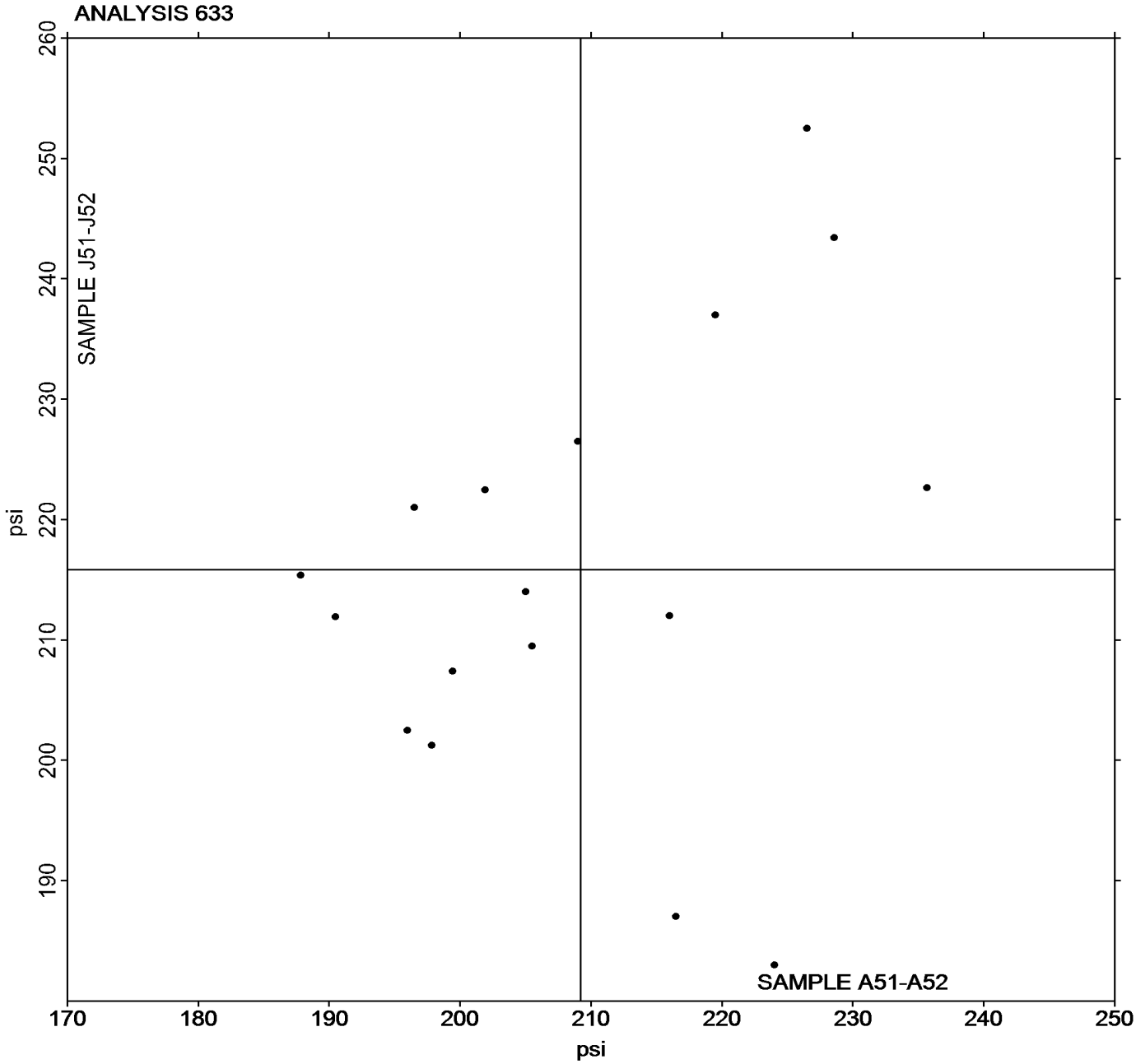
Samples A51-A52: Polyisoprene Compound & J51-J52: Polyisoprene Compound

Comments on Assigned Data Flags for Test #633

VJRC4R (M) - Participant did not submit data for sample group A51-A52.

Grand Mean Sample **A51-A52** = 209.19 psi

Grand Mean Sample **J51-J52** = 215.85 psi



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

WebCode	Data Flag	Sample N51 Lab Mean	Sample N51 Diff from Grand Mean	Sample N51 CPV	Sample N52 Lab Mean	Sample N52 Diff from Grand Mean	Sample N52 CPV
3R3BP9		38.67	0.37	0.10	40.33	2.05	0.54
4KVWA6		28.67	-9.63	-2.52	29.00	-9.28	-2.44
4X2Q2G		37.00	-1.29	-0.34	37.33	-0.95	-0.25
7WL8UG		39.00	0.71	0.18	41.67	3.38	0.89
8KMUAA		36.00	-2.29	-0.60	36.00	-2.28	-0.60
9Q8C6X		37.33	-0.96	-0.25	33.00	-5.28	-1.39
9ZV6E9	*	28.67	-9.63	-2.52	32.67	-5.62	-1.48
A6NNWX		35.37	-2.93	-0.77	35.20	-3.08	-0.81
ACKJUV		38.33	0.04	0.01	35.33	-2.95	-0.77
BXHE3A		37.53	-0.76	-0.20	39.00	0.72	0.19
DR83ZU		37.77	-0.53	-0.14	37.43	-0.85	-0.22
GMXL3T		36.37	-1.92	-0.50	35.45	-2.83	-0.74
HEHU43		39.20	0.91	0.24	38.10	-0.18	-0.05
JXNRZ4		35.00	-3.29	-0.86	34.38	-3.91	-1.03
KVHLX3		41.67	3.37	0.88	41.33	3.05	0.80
LKDXKW		31.33	-6.96	-1.82	31.00	-7.28	-1.91
LQ2HQX		38.67	0.37	0.10	37.67	-0.62	-0.16
PUAZCX		40.00	1.71	0.45	41.00	2.72	0.71
PYP82H		46.90	8.61	2.25	45.53	7.24	1.90
QE9MFY		42.70	4.41	1.15	41.53	3.25	0.85
QKYXRH		40.64	2.35	0.61	40.60	2.32	0.61
QQ32HF		40.67	2.37	0.62	41.67	3.38	0.89
RKWRNT		37.29	-1.00	-0.26	40.36	2.08	0.55
RNDVVX		36.67	-1.63	-0.43	34.67	-3.62	-0.95
THABBE		35.43	-2.87	-0.75	39.31	1.03	0.27
THM3YP		41.33	3.04	0.79	41.00	2.72	0.71
U83KTG		38.71	0.42	0.11	37.10	-1.18	-0.31
U9CZDN		45.57	7.27	1.90	43.13	4.85	1.27
VA2QXT		37.33	-0.96	-0.25	37.33	-0.95	-0.25
WDZUCE		39.91	1.62	0.42	41.36	3.08	0.81
XAVNAD		41.89	3.60	0.94	42.80	4.52	1.19
Y39MJL		39.73	1.44	0.38	34.67	-3.62	-0.95
Y6ZNMP		36.52	-1.78	-0.46	35.25	-3.03	-0.80
YK769G		38.00	-0.29	-0.08	42.00	3.72	0.98
YXK3F7	X	57.04	18.75	4.90	54.62	16.33	4.29
Z4Y9PH		39.07	0.78	0.20	40.93	2.65	0.70
ZLJYNG		43.67	5.37	1.41	43.00	4.72	1.24

Summary Statistics		
Grand Means		
	38.295 % Compression	38.282 % Compression
Stnd Dev Btwn Labs		
	3.823 % Compression	3.806 % Compression
		Statistics based on 36 of 37 reporting participants

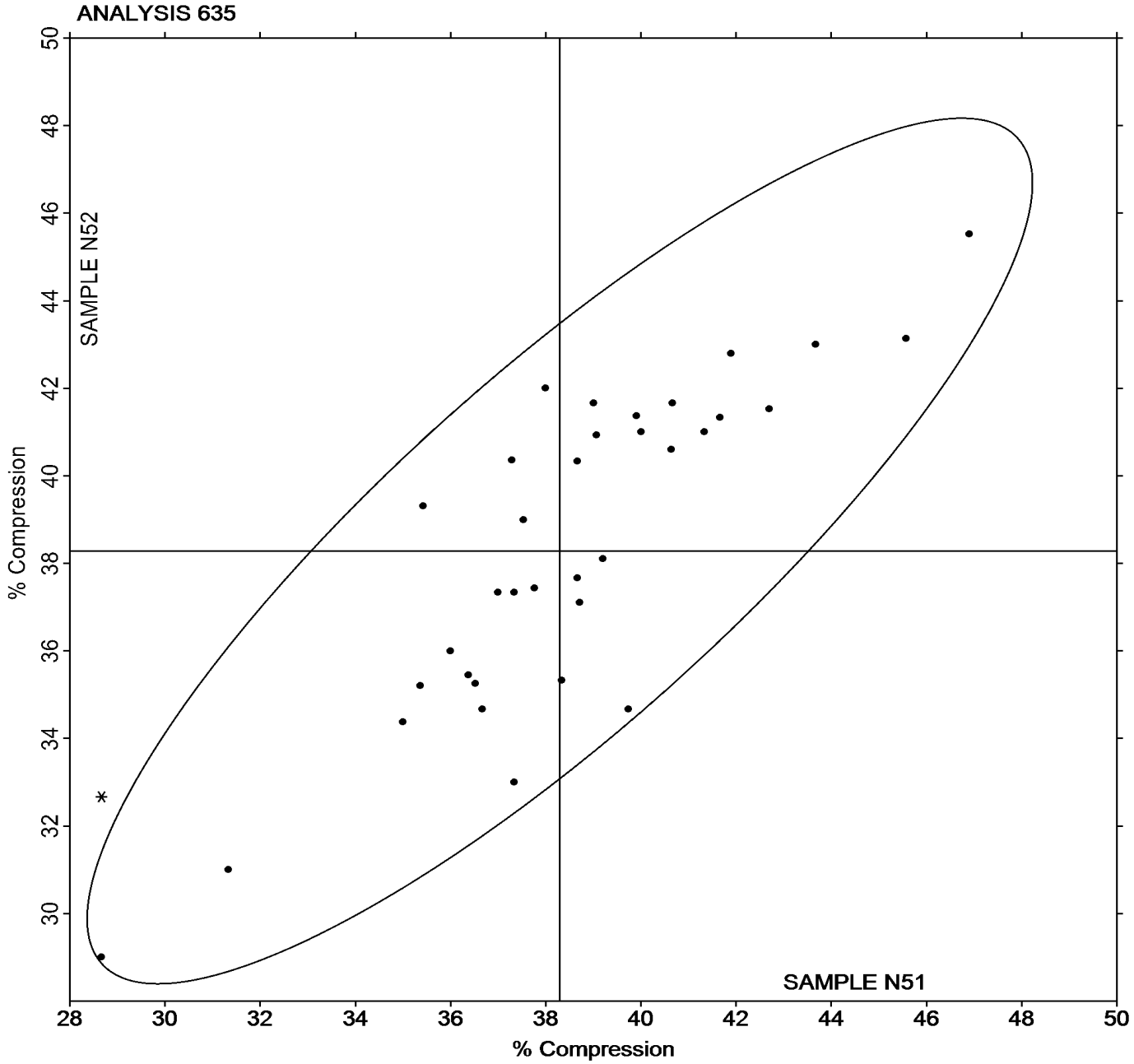
Samples N51: EPDM Compound & N52: EPDM Compound

Comments on Assigned Data Flags for Test #635

YXK3F7 (X) - Data for all samples are high. Possible Systematic Error.

Grand Mean Sample **N51** = 38.295 % Compression

Grand Mean Sample **N52** = 38.282 % Compression



WebCode	Data Flag	Sample RA51 Lab Mean	Sample RA51 Diff from Grand Mean	Sample RA51 CPV	Sample RA52 Lab Mean	Sample RA52 Diff from Grand Mean	Sample RA52 CPV
3N4ZT9		2,408.8	11.5	0.10	2,320.0	-27.6	-0.19
4KVWA6		2,224.9	-172.4	-1.49	2,166.0	-181.7	-1.27
7WL8UG		2,395.6	-1.7	-0.01	2,343.6	-4.1	-0.03
9Q8C6X		2,423.0	25.7	0.22	2,373.0	25.3	0.18
9ZV6E9		2,390.6	-6.7	-0.06	2,336.0	-11.7	-0.08
A6NNWX		2,422.6	25.3	0.22	2,525.6	177.9	1.24
AGYYL9	*	2,049.2	-348.1	-3.00	1,904.2	-443.5	-3.09
APT4FA		2,449.4	52.1	0.45	2,389.8	42.1	0.29
JXNRZ4		2,532.0	134.7	1.16	2,436.0	88.3	0.62
NY823R		2,351.2	-46.1	-0.40	2,407.2	59.5	0.41
PUAZCX		2,436.4	39.1	0.34	2,381.0	33.3	0.23
QKYXRH		2,423.9	26.6	0.23	2,378.1	30.4	0.21
RNDVVX		2,451.4	54.1	0.47	2,330.0	-17.7	-0.12
XAVNAD		2,533.4	136.1	1.17	2,515.6	167.9	1.17
Y6ZNMP		2,437.8	40.5	0.35	2,370.8	23.1	0.16
ZLJYNG		2,426.0	28.7	0.25	2,386.0	38.3	0.27

Summary Statistics

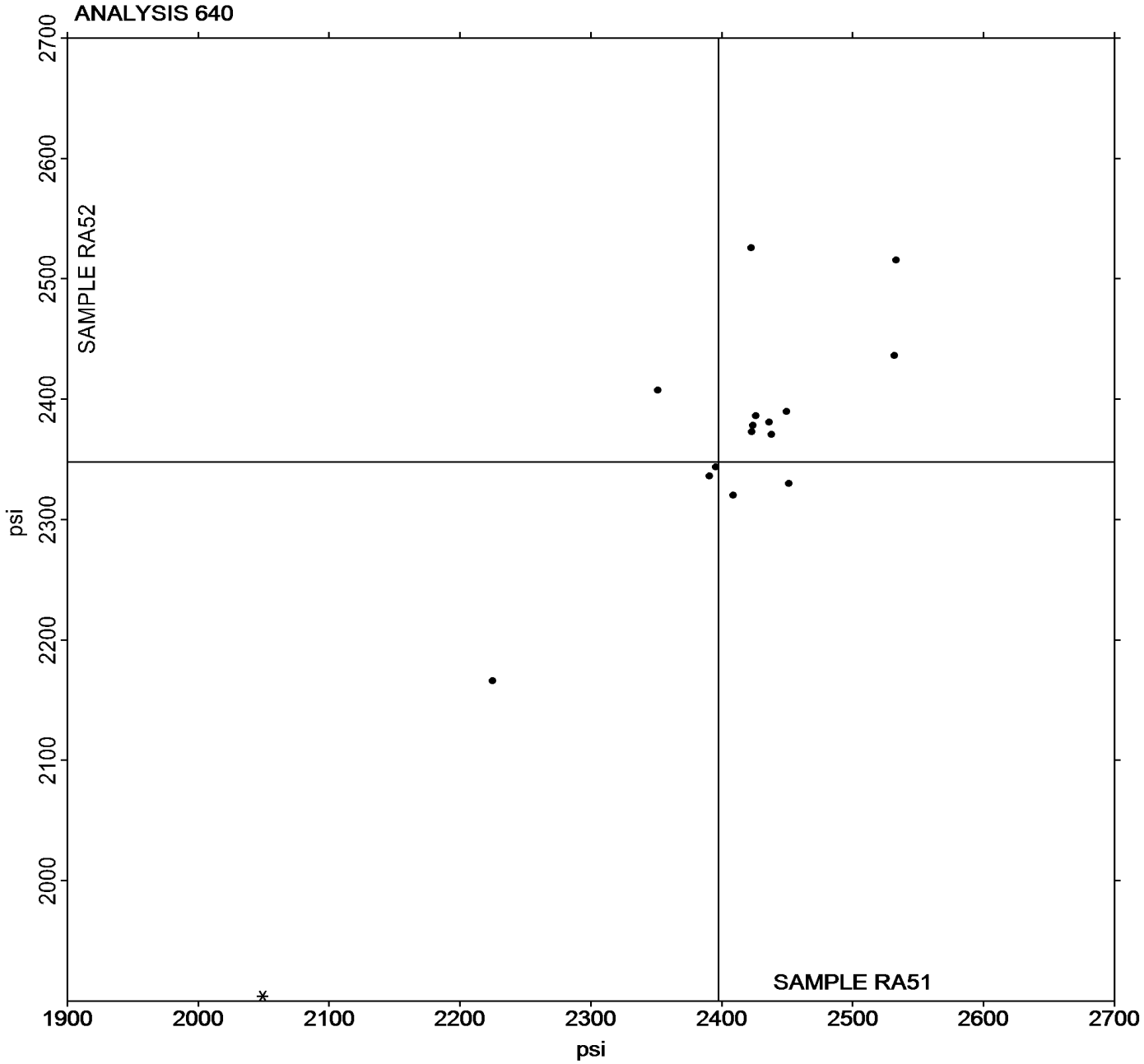
	Sample RA51	Sample RA52
Grand Means	2,397.26 psi	2,347.68 psi
Stnd Dev Btwn Labs	115.91 psi	143.42 psi

Statistics based on 16 of 16 reporting participants

Samples RA51: Nitrile O-Ring & RA52: Nitrile O-Ring

Grand Mean Sample **RA51** = 2,397.26 psi

Grand Mean Sample **RA52** = 2,347.68 psi



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

WebCode	Data Flag	Sample RA51 Lab Mean	Sample RA51 Diff from Grand Mean	Sample RA51 CPV	Sample RA52 Lab Mean	Sample RA52 Diff from Grand Mean	Sample RA52 CPV
3N4ZT9		389.1	20.2	0.48	429.0	17.8	0.33
4KVWA6		363.2	-5.8	-0.14	402.6	-8.7	-0.16
7WL8UG		399.0	30.0	0.71	441.6	30.3	0.57
9Q8C6X		342.6	-26.4	-0.62	383.6	-27.7	-0.52
9ZV6E9		289.4	-79.6	-1.88	319.2	-92.1	-1.73
A6NNWX		393.4	24.4	0.58	471.8	60.5	1.14
AGYYL9		269.0	-100.0	-2.36	282.2	-129.1	-2.43
APT4FA		395.8	26.8	0.63	419.6	8.3	0.16
JXNRZ4		398.8	29.8	0.70	438.4	27.1	0.51
NY823R		380.2	11.2	0.26	453.0	41.7	0.79
PUAZCX		406.0	37.0	0.87	458.8	47.5	0.89
QKYXRH		423.5	54.5	1.28	471.6	60.3	1.14
RNDVVX		346.0	-23.0	-0.54	376.4	-34.9	-0.66
XAVNAD		387.8	18.8	0.44	444.6	33.3	0.63
Y6ZNMP		381.4	12.4	0.29	401.6	-9.7	-0.18
ZLJYNG		338.4	-30.6	-0.72	386.4	-24.9	-0.47

Summary Statistics

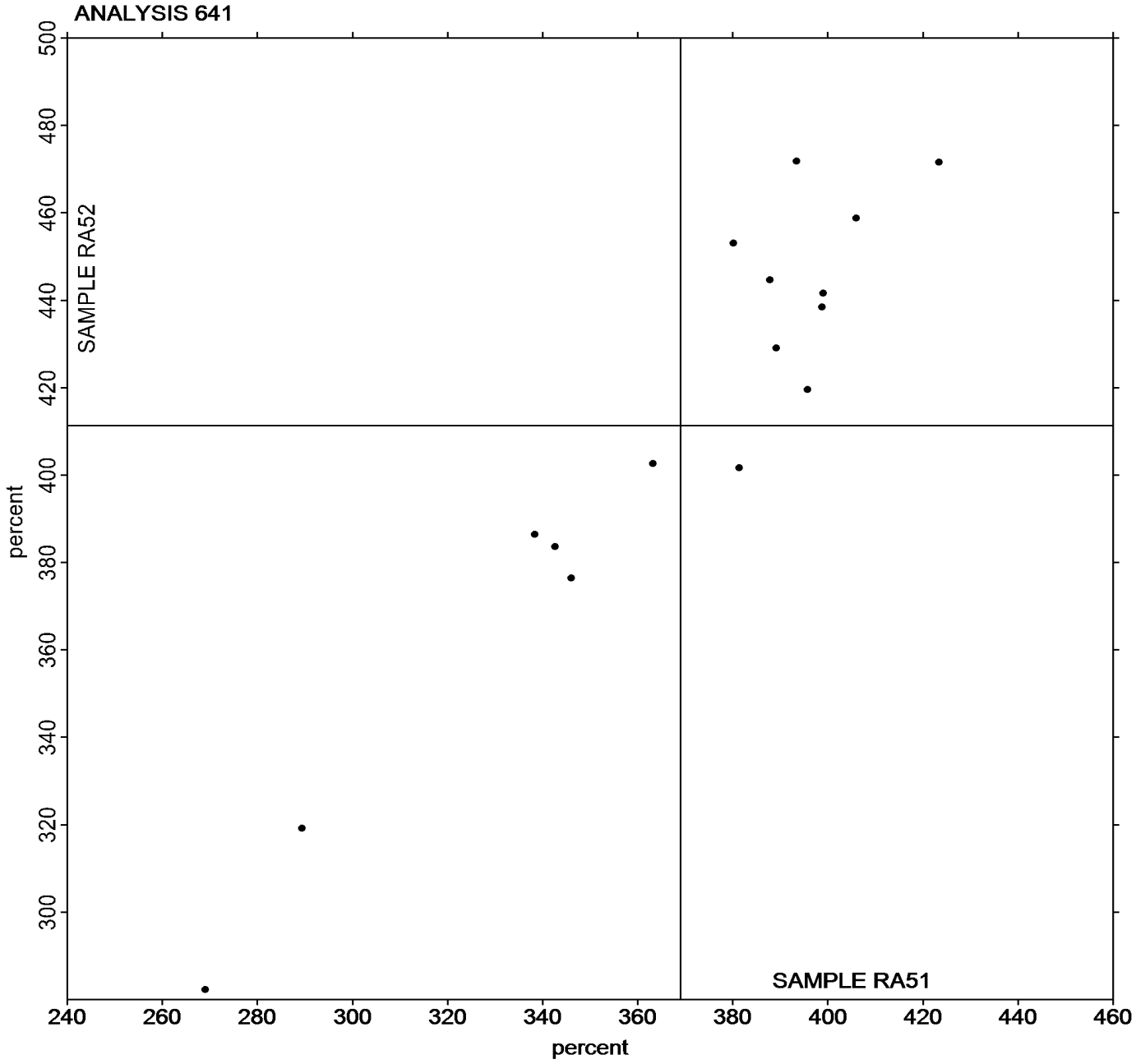
	Sample RA51	Sample RA52
Grand Means	368.97 percent	411.28 percent
Stnd Dev Btwn Labs	42.43 percent	53.14 percent

Statistics based on 16 of 16 reporting participants

Samples RA51: Nitrile O-Ring & RA52: Nitrile O-Ring

Grand Mean Sample **RA51** = 368.97 percent

Grand Mean Sample **RA52** = 411.28 percent



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

WebCode	Data Flag	Sample RA51 Lab Mean	Sample RA51 Diff from Grand Mean	Sample RA51 CPV	Sample RA52 Lab Mean	Sample RA52 Diff from Grand Mean	Sample RA52 CPV
3N4ZT9		471.1	-17.8	-0.22	397.4	-23.6	-0.37
4KVWA6		442.4	-46.5	-0.57	369.6	-51.5	-0.82
7WL8UG		388.6	-100.3	-1.23	331.6	-89.4	-1.42
9Q8C6X		547.4	58.5	0.72	471.2	50.2	0.80
A6NNWX		461.8	-27.1	-0.33	401.2	-19.8	-0.31
AGYYL9		696.6	207.7	2.55	545.4	124.4	1.97
APT4FA		493.8	4.9	0.06	422.0	1.0	0.02
JXNRZ4		473.6	-15.3	-0.19	414.4	-6.6	-0.11
NY823R		463.8	-25.1	-0.31	400.0	-21.0	-0.33
PUAZCX		487.0	-1.9	-0.02	432.2	11.2	0.18
QKYXRH		346.9	-142.0	-1.74	306.3	-114.7	-1.82
RNDVVX		558.4	69.5	0.85	467.8	46.8	0.74
XAVNAD		512.4	23.5	0.29	438.0	17.0	0.27
Y6ZNMP	*	501.0	12.1	0.15	497.2	76.2	1.21

Summary Statistics

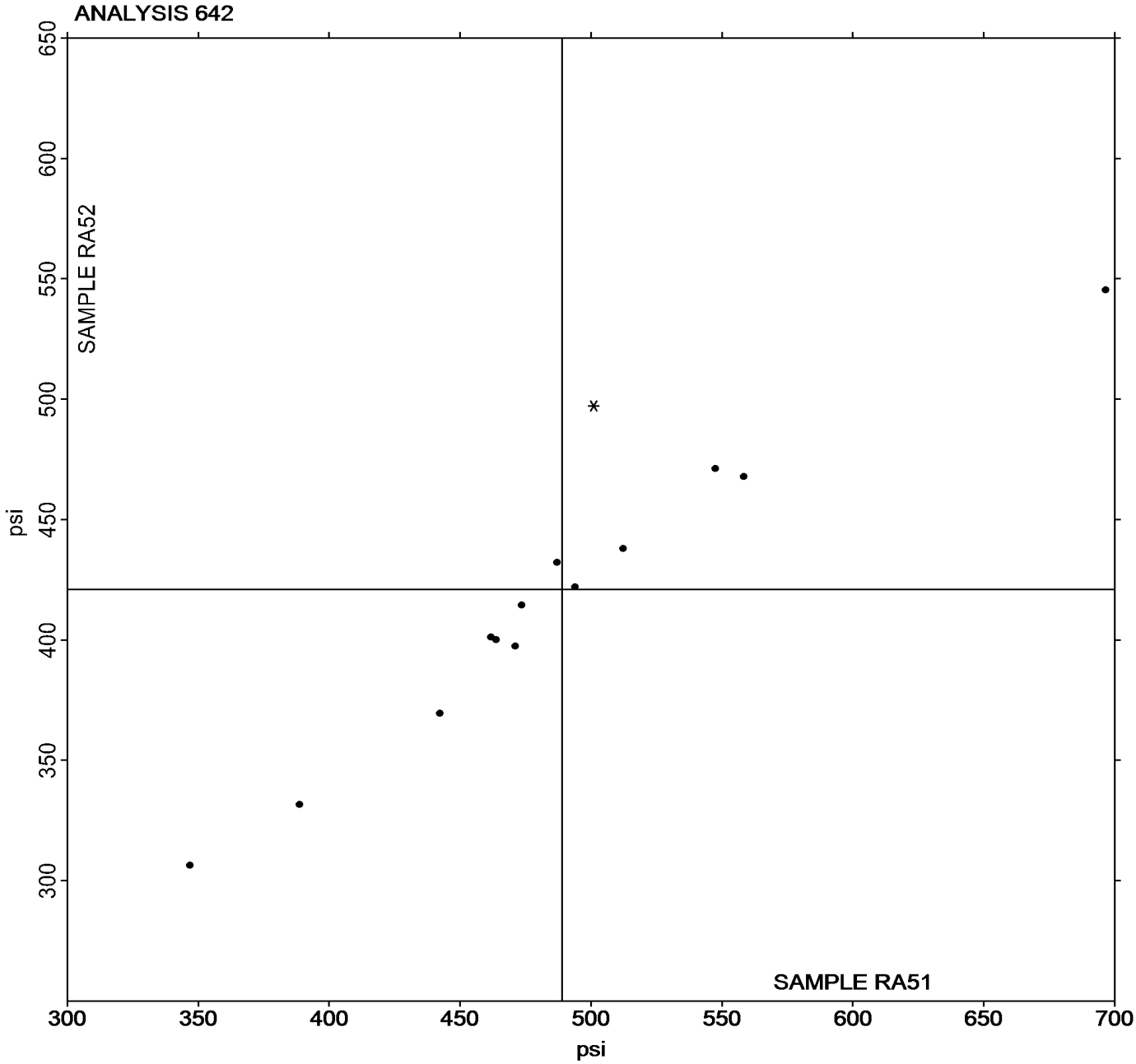
	Sample RA51	Sample RA52
Grand Means	488.91 psi	421.02 psi
Stnd Dev Btwn Labs	81.53 psi	63.02 psi

Statistics based on 14 of 14 reporting participants

Samples RA51: Nitrile O-Ring & RA52: Nitrile O-Ring

Grand Mean Sample **RA51** = 488.91 psi

Grand Mean Sample **RA52** = 421.02 psi



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

WebCode	Data Flag	Sample RA51 Lab Mean	Sample RA51 Diff from Grand Mean	Sample RA51 CPV	Sample RA52 Lab Mean	Sample RA52 Diff from Grand Mean	Sample RA52 CPV
3N4ZT9		66.40	-3.13	-0.81	64.70	-3.65	-0.91
7WL8UG		69.34	-0.19	-0.05	67.90	-0.45	-0.11
9Q8C6X		70.12	0.59	0.15	68.70	0.35	0.09
9ZV6E9		70.60	1.07	0.28	70.60	2.25	0.56
A6NNWX		70.94	1.41	0.36	68.90	0.55	0.14
AGYYL9		65.20	-4.33	-1.12	63.40	-4.95	-1.23
APT4FA		66.40	-3.13	-0.81	65.20	-3.15	-0.79
JXNRZ4		65.78	-3.75	-0.97	63.84	-4.51	-1.13
NY823R	*	81.60	12.07	3.11	80.00	11.65	2.90
PUAZCX		71.20	1.67	0.43	70.60	2.25	0.56
QKYXRH		68.26	-1.27	-0.33	66.80	-1.55	-0.39
RNDVVX		68.20	-1.33	-0.34	68.60	0.25	0.06
WHUHJR		70.52	0.99	0.26	69.60	1.25	0.31
XAVNAD		68.28	-1.25	-0.32	66.40	-1.95	-0.49
Y6ZNMP		70.12	0.59	0.15	70.08	1.73	0.43

Summary Statistics

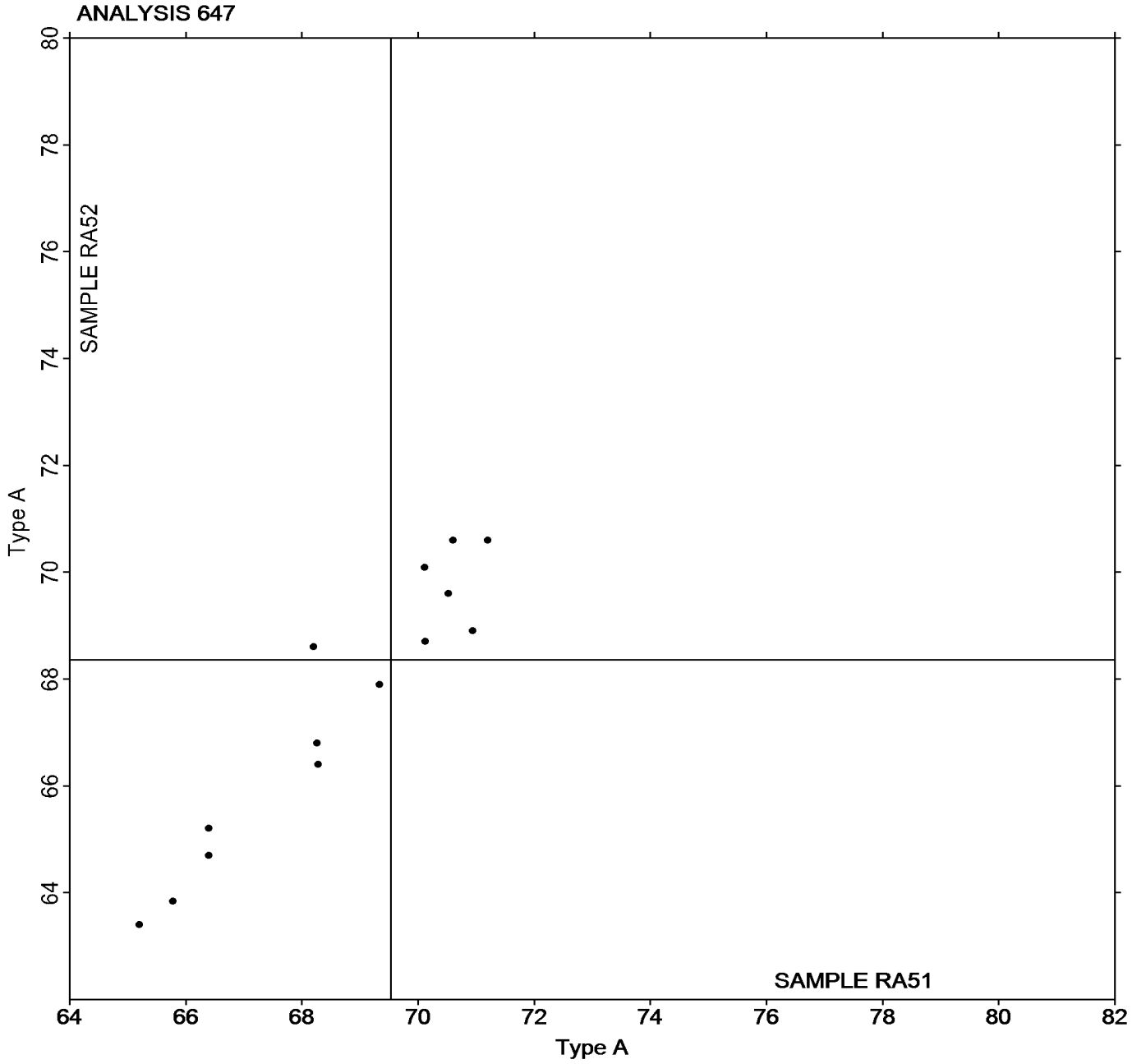
	Sample RA51	Sample RA52
Grand Means	69.530 Type A	68.355 Type A
Stnd Dev Btwn Labs	3.879 Type A	4.012 Type A

Statistics based on 15 of 15 reporting participants

Samples RA51: Nitrile O-Ring & RA52: Nitrile O-Ring

Grand Mean Sample **RA51** = 69.530 Type A

Grand Mean Sample **RA52** = 68.355 Type A



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

WebCode	Data Flag	Sample RA51 Lab Mean	Sample RA51 Diff from Grand Mean	Sample RA51 CPV	Sample RA52 Lab Mean	Sample RA52 Diff from Grand Mean	Sample RA52 CPV
3N4ZT9		73.98	-1.40	-0.86	72.54	-1.73	-0.99
7WL8UG		78.80	3.42	2.10	77.12	2.85	1.63
9Q8C6X		74.16	-1.22	-0.75	72.36	-1.91	-1.09
A6NNWX		73.40	-1.98	-1.22	73.20	-1.07	-0.61
AGYYL9		75.40	0.02	0.01	76.20	1.93	1.10
APT4FA		74.34	-1.04	-0.64	73.64	-0.63	-0.36
JXNRZ4		76.20	0.82	0.50	74.64	0.37	0.21
NY823R		77.00	1.62	1.00	75.00	0.73	0.42
PUAZCX		76.20	0.82	0.50	75.80	1.53	0.87
RNDVVX		73.84	-1.54	-0.95	71.20	-3.07	-1.75
WHUHJR		74.76	-0.62	-0.38	73.28	-0.99	-0.57
XAVNAD		77.40	2.02	1.24	76.08	1.81	1.03
Y6ZNMP		74.46	-0.92	-0.57	74.46	0.19	0.11

Summary Statistics

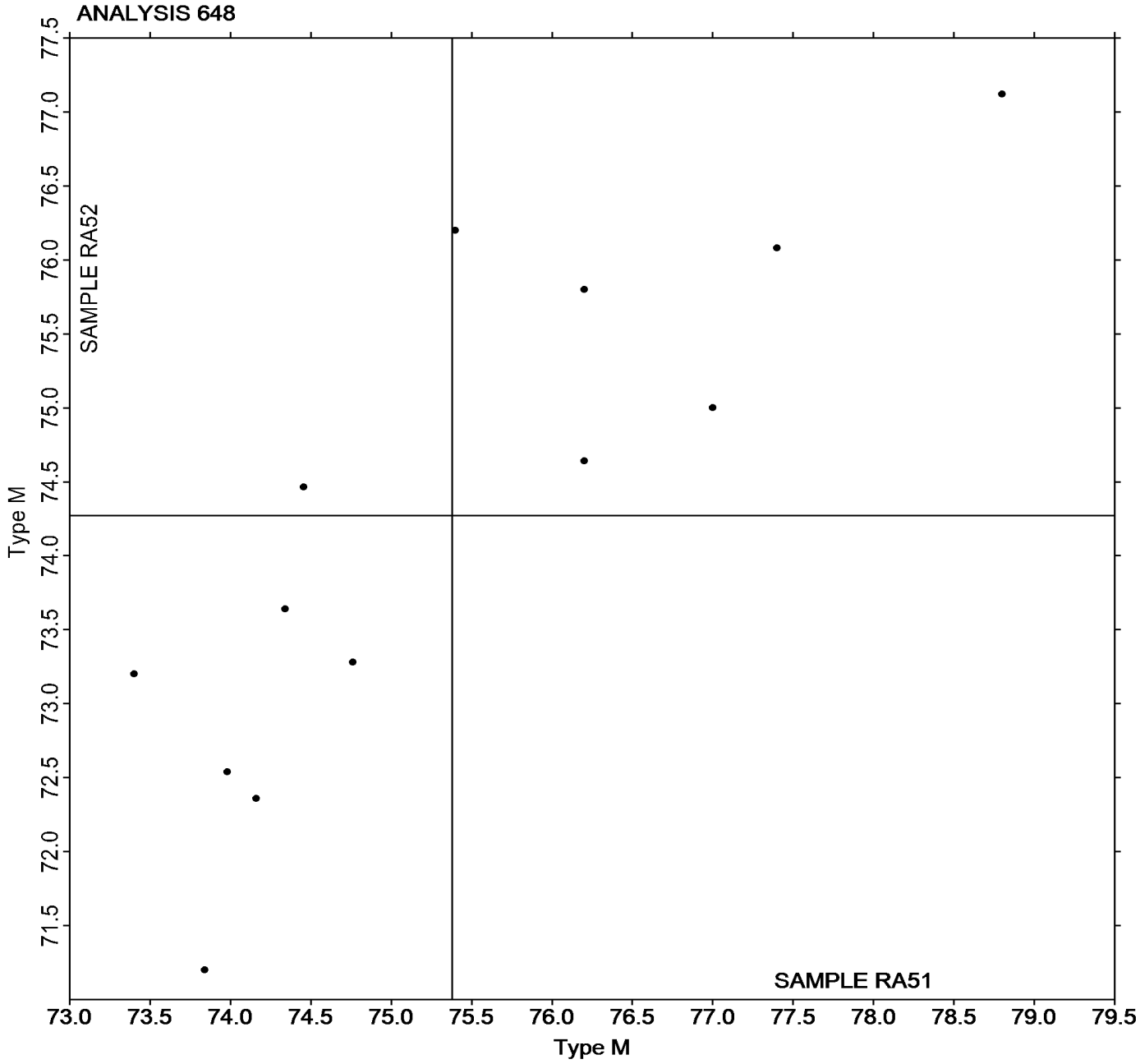
	Sample RA51	Sample RA52
Grand Means	75.380 Type M	74.271 Type M
Stnd Dev Btwn Labs	1.628 Type M	1.750 Type M

Statistics based on 13 of 13 reporting participants

Samples RA51: Nitrile O-Ring & RA52: Nitrile O-Ring

Grand Mean Sample **RA51** = 75.380 Type M

Grand Mean Sample **RA52** = 74.271 Type M



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

WebCode	Data Flag	Sample RA51 Lab Mean	Sample RA51 Diff from Grand Mean	Sample RA51 CPV	Sample RA52 Lab Mean	Sample RA52 Diff from Grand Mean	Sample RA52 CPV
3N4ZT9	*	1.044	-0.150	-3.71	1.054	-0.144	-3.71
4KVWA6		1.204	0.010	0.26	1.207	0.010	0.25
7WL8UG		1.198	0.005	0.11	1.204	0.007	0.18
9Q8C6X		1.202	0.008	0.20	1.205	0.008	0.21
9ZV6E9		1.219	0.025	0.63	1.222	0.025	0.64
A6NNWX		1.201	0.007	0.17	1.204	0.007	0.17
AGYYL9		1.216	0.022	0.55	1.217	0.020	0.52
APT4FA		1.200	0.007	0.17	1.200	0.003	0.08
JXNRZ4		1.200	0.007	0.16	1.203	0.006	0.15
NY823R		1.201	0.007	0.18	1.205	0.008	0.21
PUAZCX		1.198	0.004	0.10	1.205	0.008	0.20
QKYXRH		1.206	0.012	0.31	1.210	0.013	0.33
RNDVVX		1.198	0.005	0.12	1.202	0.005	0.13
WHUHJR		1.200	0.007	0.16	1.206	0.009	0.24
XAVNAD		1.203	0.010	0.24	1.207	0.010	0.25
Y6ZNMP		1.207	0.013	0.33	1.203	0.006	0.15

Summary Statistics

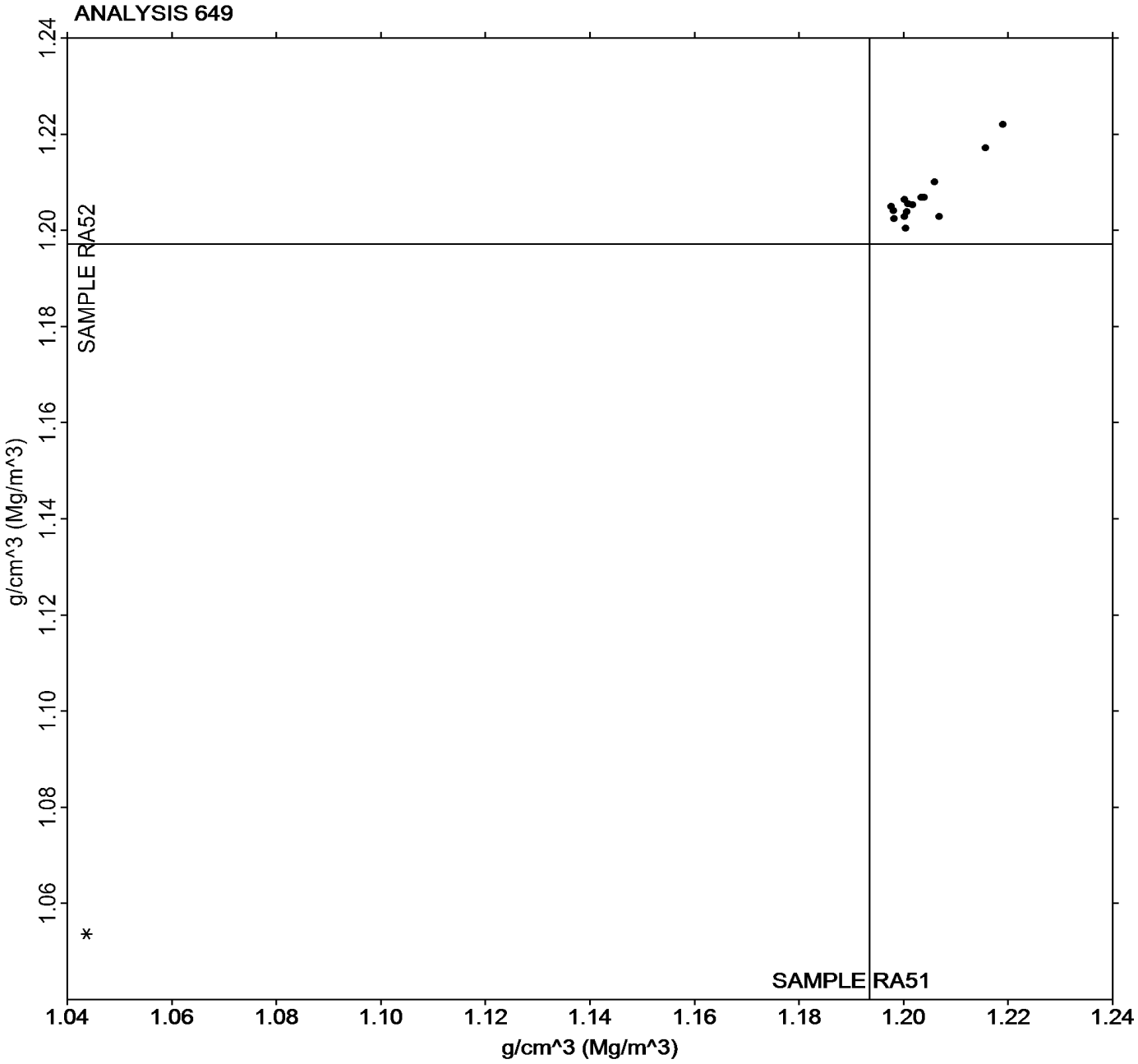
	Sample RA51	Sample RA52
Grand Means	1.1935 g/cm^3 (Mg/m^3)	1.1972 g/cm^3 (Mg/m^3)
Stnd Dev Btwn Labs	0.0404 g/cm^3 (Mg/m^3)	0.0387 g/cm^3 (Mg/m^3)

Statistics based on 16 of 16 reporting participants

Samples RA51: Nitrile O-Ring & RA52: Nitrile O-Ring

Grand Mean Sample **RA51** = 1.1935 g/cm^3 (Mg/m^3)

Grand Mean Sample **RA52** = 1.1972 g/cm^3 (Mg/m^3)



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

WebCode	Data Flag	Sample RA53 Lab Mean	Sample RA53 Diff from Grand Mean	Sample RA53 CPV	Sample RA54 Lab Mean	Sample RA54 Diff from Grand Mean	Sample RA54 CPV
4KVWA6		15.000	5.692	2.59	14.000	4.274	2.35
7WL8UG		9.000	-0.308	-0.14	9.000	-0.726	-0.40
9Q8C6X		8.000	-1.308	-0.59	8.333	-1.393	-0.77
APT4FA		8.300	-1.008	-0.46	9.700	-0.026	-0.01
JXNRZ4		9.717	0.409	0.19	11.010	1.284	0.71
NY823R		10.000	0.692	0.31	10.467	0.740	0.41
PUAZCX		6.000	-3.308	-1.50	9.000	-0.726	-0.40
QKYXRH		10.163	0.856	0.39	9.357	-0.370	-0.20
RNDVVX		9.000	-0.308	-0.14	9.000	-0.726	-0.40
VJRC4R		10.100	0.792	0.36	9.733	0.007	0.00
XAVNAD		7.470	-1.838	-0.84	7.980	-1.746	-0.96
Y6ZNMP		7.350	-1.958	-0.89	6.963	-2.763	-1.52
ZLJYNG		10.900	1.592	0.72	11.900	2.174	1.20

Summary Statistics

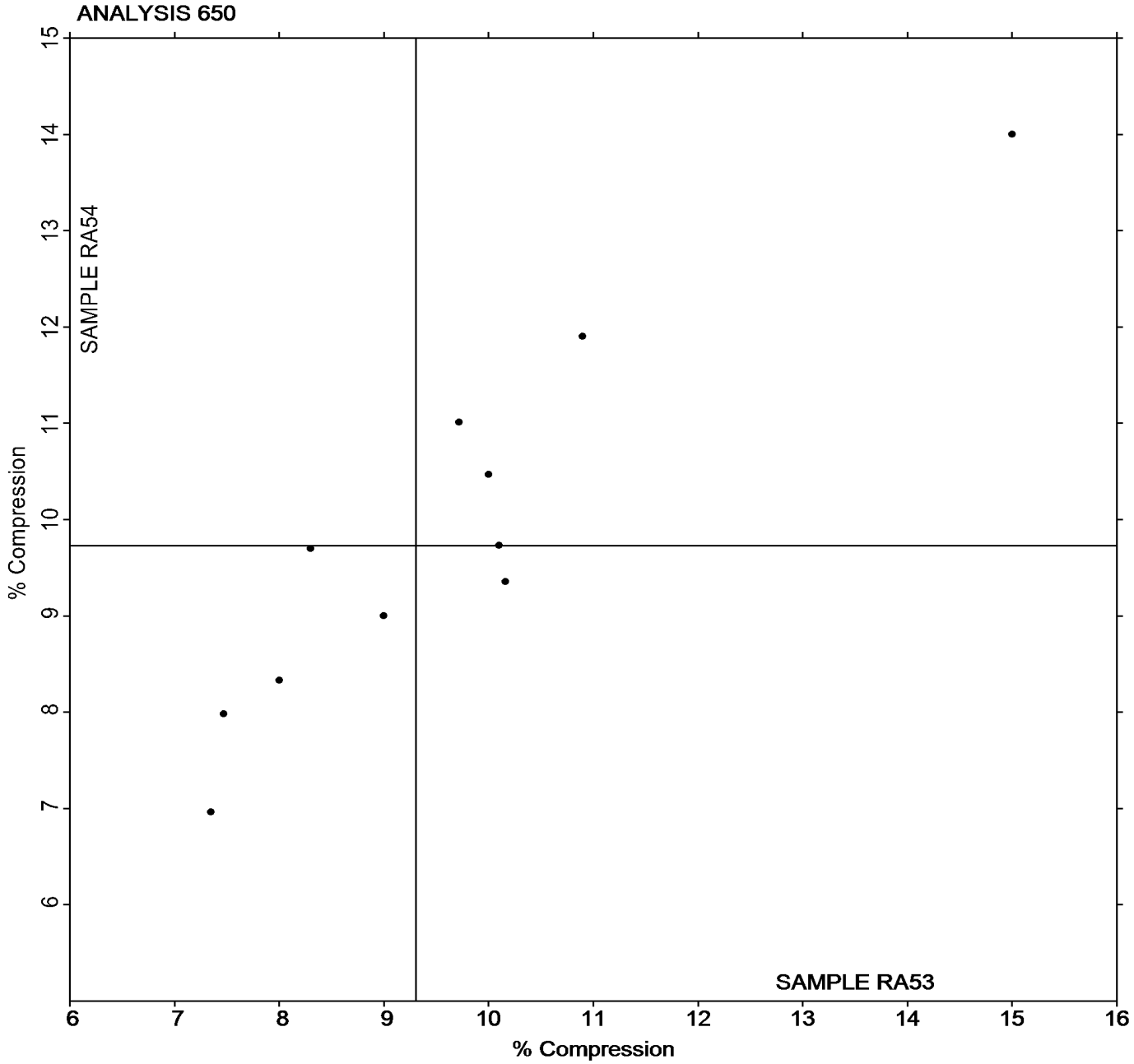
	Sample RA53	Sample RA54
Grand Means	9.3077 % Compression	9.7264 % Compression
Stnd Dev Btwn Labs	2.1987 % Compression	1.8150 % Compression

Statistics based on 13 of 13 reporting participants

Samples RA53: Nitrile O-Ring & RA54: Nitrile O-Ring

Grand Mean Sample **RA53** = 9.3077 % Compression

Grand Mean Sample **RA54** = 9.7264 % Compression



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

WebCode	Data Flag	Sample S51-S52 Lab Mean	Diff from Grand Mean	CPV	Sample S53-S54 Lab Mean	Diff from Grand Mean	CPV	Instr Code
3ZRR6J		42.20	-3.57	-2.68	53.50	-2.46	-1.67	MV
4FN76D		45.02	-0.75	-0.56	54.21	-1.75	-1.19	MR
6RW962		47.75	1.98	1.49	57.65	1.69	1.14	MR
6UFKGC		45.41	-0.35	-0.26	55.56	-0.41	-0.28	MV
8KMUAA		45.37	-0.40	-0.30	54.38	-1.58	-1.07	MR
ACKJUV		44.90	-0.87	-0.65	55.28	-0.68	-0.46	MR
AGYYL9		46.36	0.59	0.45	57.21	1.25	0.85	MV
BKCQYY		46.20	0.43	0.33	55.88	-0.08	-0.05	MR
C9WQTD		45.93	0.17	0.13	56.53	0.57	0.39	MR
EM8B62		45.18	-0.58	-0.44	56.63	0.67	0.46	MR
HHH6Y3		45.15	-0.62	-0.46	55.03	-0.93	-0.63	MR
J8XTL4		44.59	-1.18	-0.89	55.11	-0.85	-0.58	MV
LKDXKW		45.23	-0.53	-0.40	55.20	-0.76	-0.52	ML
MKRKWJ	*	46.74	0.97	0.73	59.29	3.33	2.26	TA
MXFJNL	X	69.32	23.55	17.67	81.03	25.07	17.01	MR
NJTVQT		45.87	0.10	0.08	55.03	-0.93	-0.63	MR
NTZBX2	X	78.11	32.34	24.27	74.85	18.88	12.81	MR
QKYXRH		46.53	0.77	0.58	56.00	0.04	0.03	ML
U9CZDN		47.90	2.13	1.60	58.18	2.22	1.51	MR
WDZUCE		47.46	1.70	1.27	56.63	0.67	0.46	MR

Summary Statistics

	Sample S51-S52	Sample S53-S54
Grand Means	45.766 ML 1 + 4	55.963 ML 1 + 4
Stnd Dev Btwn Labs	1.332 ML 1 + 4	1.474 ML 1 + 4

Statistics based on 18 of 20 reporting participants

Samples S51-S52: NBR & S53-S54: Butyl

Comments on Assigned Data Flags for Test #660

MXFJNL (X) - Extreme Data.

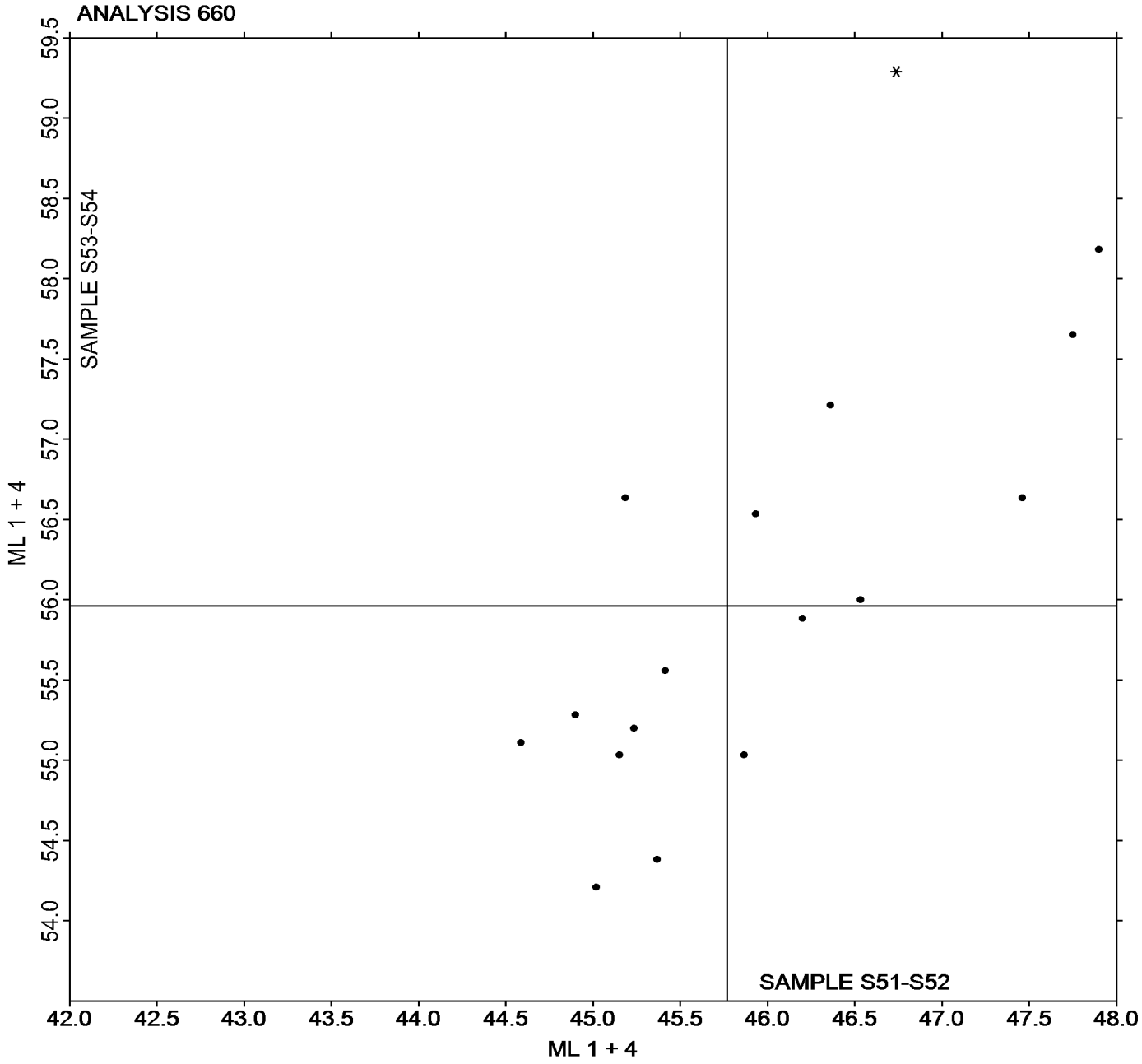
NTZBX2 (X) - Extreme Data.

Key to Instrument Codes Reported by Participants

ML	Alpha Technologies/Monsanto model not specified	MR	Alpha Technologies Model MV2000/MV2000E
MV	MonTech	TA	TA Instruments (any model)

Grand Mean Sample **S51-S52** = 45.766 ML 1 + 4

Grand Mean Sample **S53-S54** = 55.963 ML 1 + 4



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

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

WebCode	Data Flag	Sample S51-S52 Lab Mean	Diff from Grand Mean	CPV	Sample S53-S54 Lab Mean	Diff from Grand Mean	CPV	Instr Code
3ZRR6J		42.20	-3.47	-2.66	51.17	-2.43	-1.60	MV
4FN76D		45.02	-0.65	-0.50	52.04	-1.55	-1.02	MR
6RW962		47.75	2.08	1.60	55.32	1.72	1.13	MR
6UFKGC		45.41	-0.25	-0.19	53.10	-0.50	-0.33	MV
8KMUAA		45.37	-0.30	-0.23	51.45	-2.14	-1.41	MR
ACKJUV		44.90	-0.77	-0.59	52.83	-0.76	-0.50	MR
AGYYL9		46.36	0.69	0.53	54.65	1.05	0.69	MV
BKCQYY		46.20	0.53	0.41	52.92	-0.68	-0.45	MR
C9WQTD		45.93	0.27	0.20	54.30	0.71	0.46	MR
EM8B62		45.18	-0.48	-0.37	54.02	0.42	0.28	MR
HHH6Y3		45.15	-0.52	-0.40	52.57	-1.03	-0.68	MR
J8XTL4		44.59	-1.08	-0.83	52.70	-0.89	-0.59	MV
LKDXKW		45.23	-0.43	-0.33	55.23	1.64	1.08	MR
MKRKWJ		46.74	1.07	0.82	56.42	2.82	1.86	TA
NJTVQT		45.87	0.20	0.15	52.67	-0.93	-0.61	MR
QKYXRH		46.53	0.87	0.67	54.06	0.46	0.30	ML
U9CZDN		47.90	2.23	1.72	55.68	2.09	1.38	MR

Summary Statistics

	Sample S51-S52	Sample S53-S54
Grand Means	45.666 ML 1 + 8	53.595 ML 1 + 8
Stnd Dev Btwn Labs	1.302 ML 1 + 8	1.518 ML 1 + 8

Statistics based on 17 of 17 reporting participants

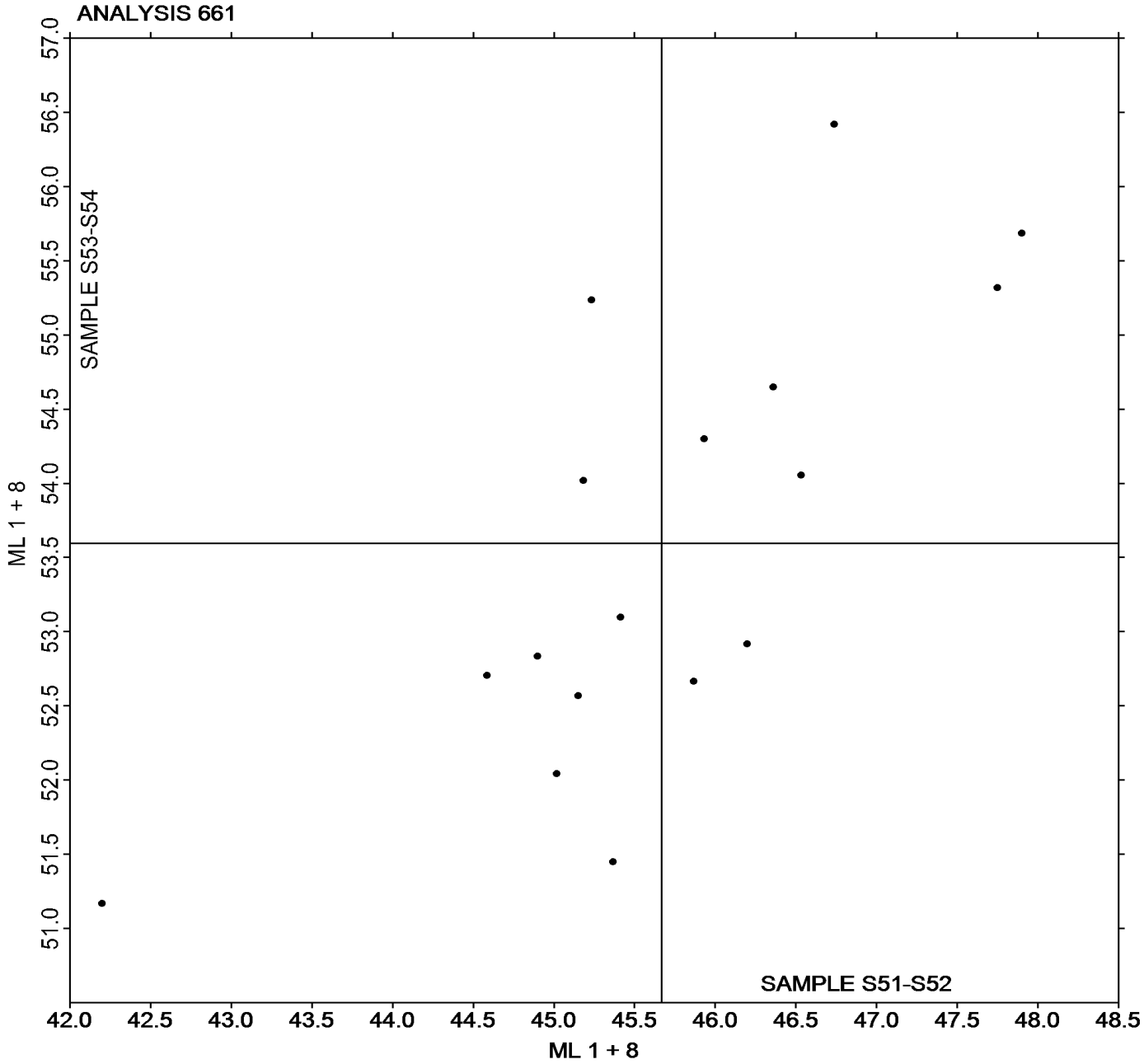
Samples S51-S52: NBR & S53-S54: Butyl

Key to Instrument Codes Reported by Participants

ML	Alpha Technologies/Monsanto model not specified	MR	Alpha Technologies Model MV2000/MV2000E
MV	Montech	TA	TA Instruments (any model)

Grand Mean Sample **S51-S52** = 45.666 ML 1 + 8

Grand Mean Sample **S53-S54** = 53.595 ML 1 + 8



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

WebCode	Data Flag	Sample S51-S52 Lab Mean	Diff from Grand Mean	CPV	Sample S53-S54 Lab Mean	Diff from Grand Mean	CPV	Instr Code
6UFKGC		5.572	0.581	1.13	5.605	-2.099	-1.72	MV
AGYYL9		4.218	-0.772	-1.51	7.673	-0.031	-0.03	MV
C9WQTD		4.855	-0.136	-0.26	8.270	0.566	0.46	MR
HHH6Y3		5.300	0.309	0.60	8.440	0.736	0.60	MR
QKYXRH		5.008	0.018	0.03	8.533	0.829	0.68	ML

Summary Statistics

	Sample S51-S52	Sample S53-S54
Grand Means	4.9907 seconds	7.7043 seconds
Stnd Dev Btwn Labs	0.5120 seconds	1.2203 seconds

Statistics based on 5 of 5 reporting participants

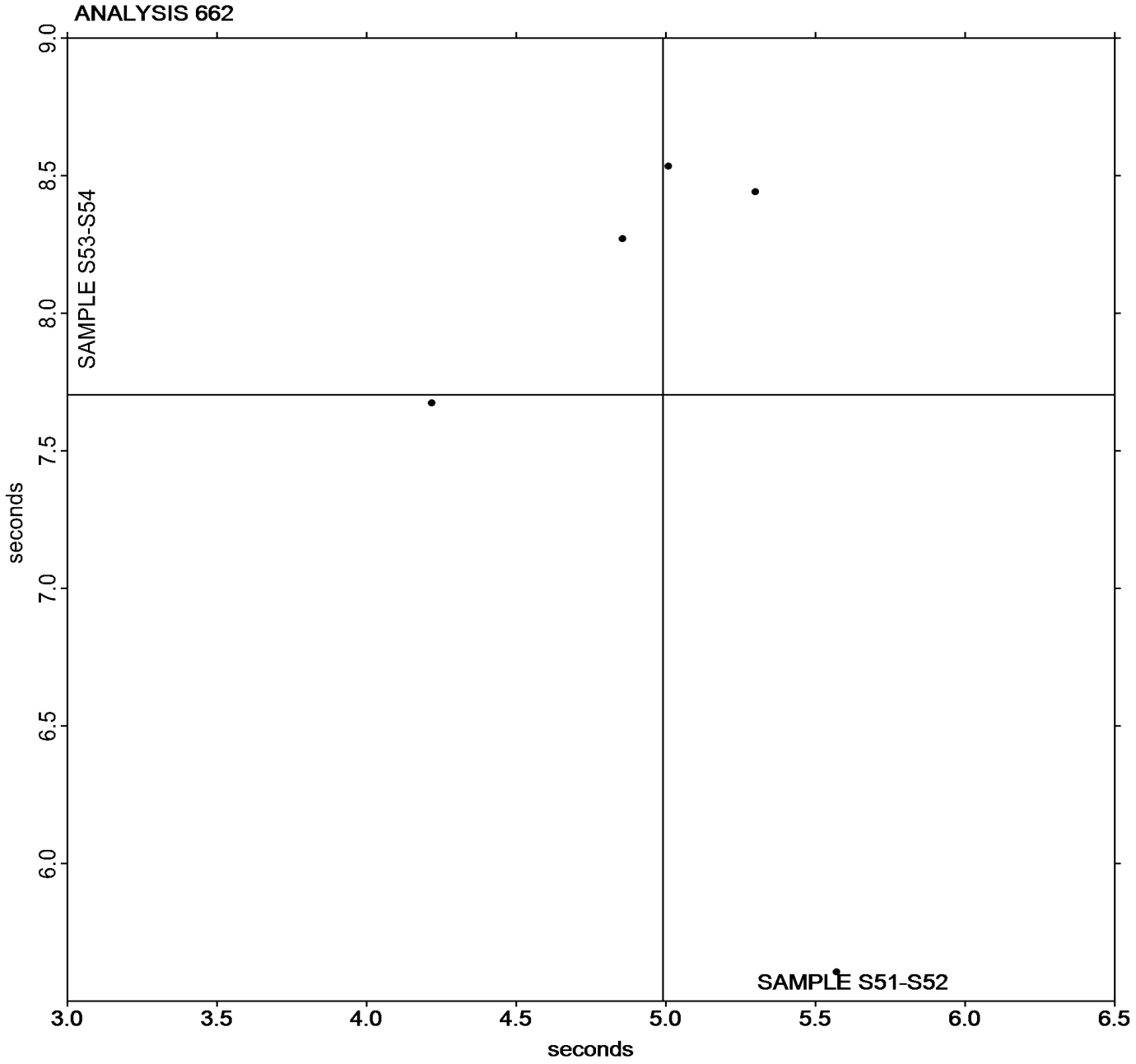
Samples S51-S52: NBR & S53-S54: Butyl

Key to Instrument Codes Reported by Participants

ML Alpha Technologies/Monsanto model not specified
MR Alpha Technologies Model MV2000/MV2000E
MV MonTech

Grand Mean Sample **S51-S52** = 4.9907 seconds

Grand Mean Sample **S53-S54** = 7.7043 seconds



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

WebCode	Data Flag	Sample S51-S52 Lab Mean	Sample S51-S52 Diff from Grand Mean	Sample S51-S52 CPV	Sample S53-S54 Lab Mean	Sample S53-S54 Diff from Grand Mean	Sample S53-S54 CPV	Instr Code
6UFKGC		81.73	-7.77	-1.78	79.05	-9.88	-1.79	MV
AGYYL9		91.90	2.40	0.55	91.74	2.81	0.51	MV
C9WQTD		91.34	1.84	0.42	91.22	2.29	0.41	MR
HHH6Y3		91.44	1.94	0.45	91.60	2.67	0.48	MR
QKYXRH		91.08	1.59	0.36	91.04	2.11	0.38	ML

Summary Statistics

	S51-S52	S53-S54
Grand Means	89.498 percent	88.929 percent
Stnd Dev Btwn Labs	4.353 percent	5.528 percent

Statistics based on 5 of 5 reporting participants

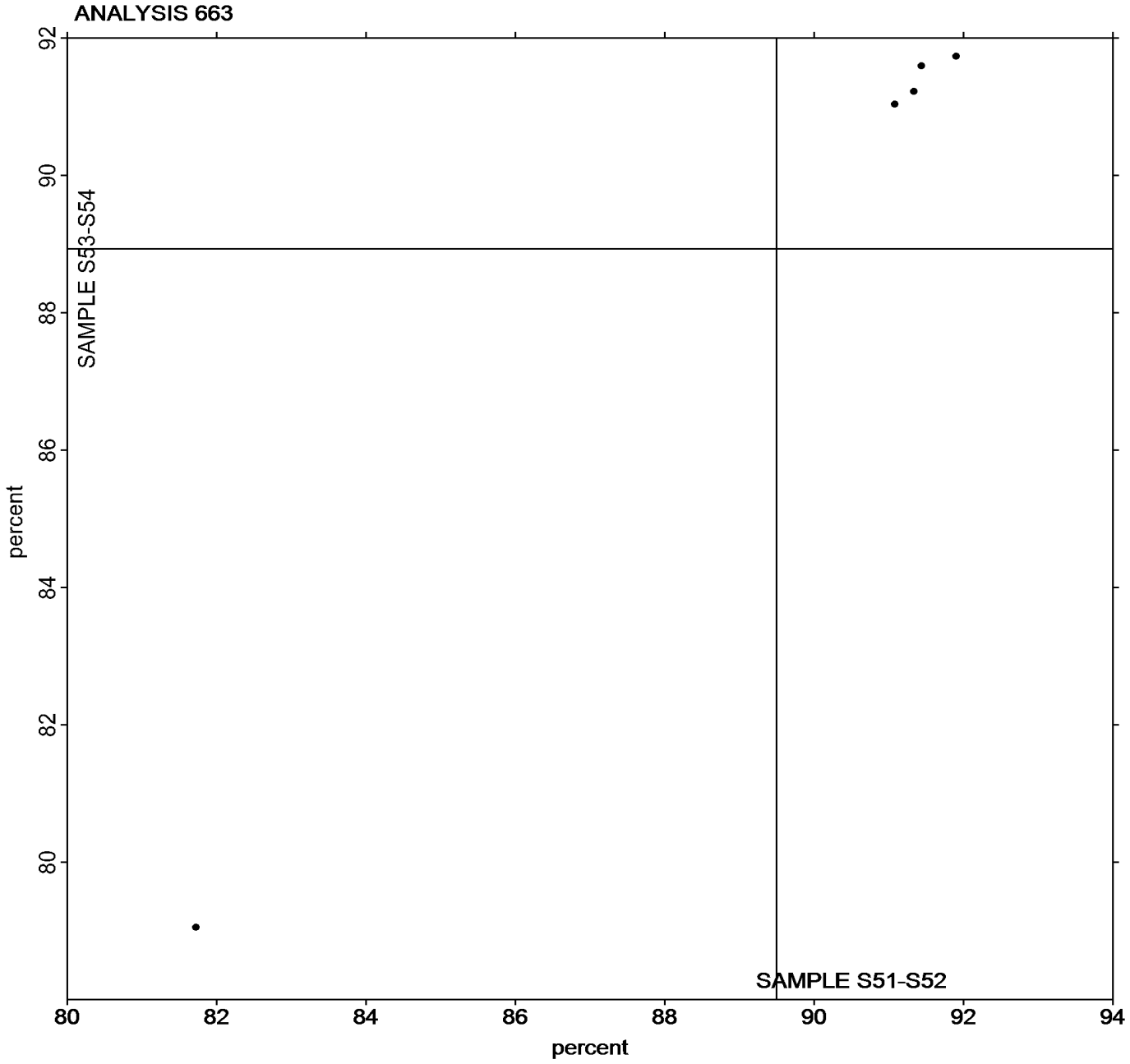
Samples S51-S52: NBR & S53-S54: Butyl

Key to Instrument Codes Reported by Participants

ML Alpha Technologies/Monsanto model not specified
MR Alpha Technologies Model MV2000/MV2000E
MV Montech

Grand Mean Sample **S51-S52** = 89.498 percent

Grand Mean Sample **S53-S54** = 88.929 percent



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

WebCode	Data Flag	Sample S51-S52 Lab Mean	Diff from Grand Mean	CPV	Sample S53-S54 Lab Mean	Diff from Grand Mean	CPV	Instr Code
6UFKGC		425.7	1.0	0.06	524.0	7.7	0.38	MV
AGYYL9		399.4	-25.2	-1.44	489.2	-27.1	-1.35	MV
C9WQTD		429.3	4.7	0.27	527.3	11.1	0.55	MR
HHH6Y3		420.8	-3.8	-0.22	502.3	-13.9	-0.70	XX
QKYXRH		448.1	23.4	1.34	538.5	22.2	1.11	ML

Summary Statistics

	S51-S52	S53-S54
Grand Means	424.67 M-s	516.27 M-s
Stnd Dev Btwn Labs	17.48 M-s	20.02 M-s

Statistics based on 5 of 5 reporting participants

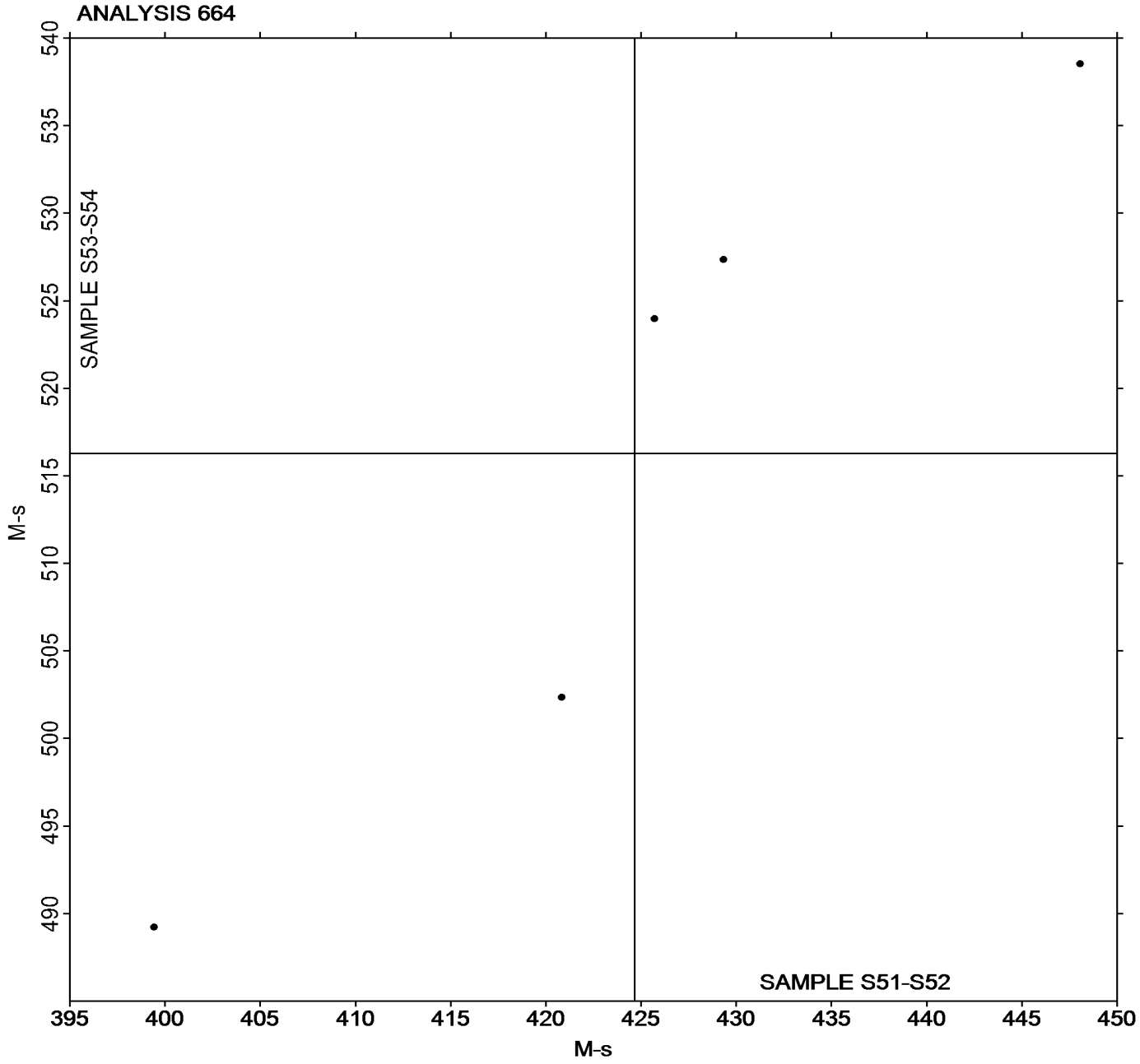
Samples S51-S52: NBR & S53-S54: Butyl

Key to Instrument Codes Reported by Participants

ML	Alpha Technologies/Monsanto model not specified
MR	Alpha Technologies Model MV2000/MV2000E
MV	MonTech
XX	Instrument make/model not specified by lab

Grand Mean Sample **S51-S52** = 424.67 M-s

Grand Mean Sample **S53-S54** = 516.27 M-s



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

WebCode	Data Flag	Sample W55-W56 Lab Mean	Diff from Grand Mean	CPV	Sample W57-W58 Lab Mean	Diff from Grand Mean	CPV	Instr Code
3ZRR6J		1.535	0.122	2.43	1.785	0.111	2.01	ME
4FN76D		1.455	0.042	0.83	1.705	0.031	0.56	MC
66KDBC		1.368	-0.045	-0.90	1.620	-0.054	-0.97	MM
6UFKGC		1.447	0.033	0.67	1.702	0.028	0.50	MR
7WL8UG		1.323	-0.090	-1.80	1.568	-0.106	-1.91	ME
ACKJUV		1.447	0.033	0.67	1.738	0.064	1.17	ME
AGYYL9		1.370	-0.043	-0.86	1.665	-0.009	-0.16	XX
C9WQTD		1.298	-0.115	-2.30	1.578	-0.096	-1.73	MC
E2MAB3		1.383	-0.030	-0.60	1.632	-0.042	-0.76	ME
EMRUB9	X	1.393	-0.020	-0.40	1.450	-0.224	-4.04	ME
J8XTL4		1.398	-0.015	-0.30	1.600	-0.074	-1.33	MC
LKDXKW	X	1.613	0.200	4.00	1.768	0.094	1.71	XX
NJTVQT		1.422	0.008	0.17	1.670	-0.004	-0.07	MC
NTZBX2		1.423	0.010	0.20	1.670	-0.004	-0.07	MC
PUAZCX		1.414	0.001	0.01	1.703	0.029	0.52	MC
PYP82H		1.425	0.012	0.23	1.707	0.033	0.59	MC
QE9MFY		1.392	-0.022	-0.43	1.625	-0.049	-0.88	MC
QKYXRH		1.432	0.018	0.37	1.713	0.039	0.71	ME
THM3YP		1.478	0.065	1.30	1.732	0.058	1.04	XX
U9CZDN		1.428	0.015	0.30	1.675	0.001	0.02	ME
VJRC4R		1.395	-0.018	-0.37	1.690	0.016	0.29	ME
VLFLFD		1.440	0.027	0.53	1.733	0.059	1.07	ME
WDZUCE		1.430	0.017	0.33	1.688	0.014	0.26	ME
YXK3F7		1.388	-0.025	-0.50	1.625	-0.049	-0.88	XX

Summary Statistics

	Sample W55-W56	Sample W57-W58
Grand Means	1.4133 minutes	1.6738 minutes
Stnd Dev Btwn Labs	0.0501 minutes	0.0554 minutes

Statistics based on 22 of 24 reporting participants

Samples W55-W56: EPDM Compound & W57-W58: EPDM Compound

Comments on Assigned Data Flags for Test #684

EMRUB9 (X) - Data for sample group W57-W58 are low. Inconsistent within the determinations of both sample groups.

LKDXKW (X) - Data for sample group W55-W56 are high. Inconsistent within the determinations of both sample groups.

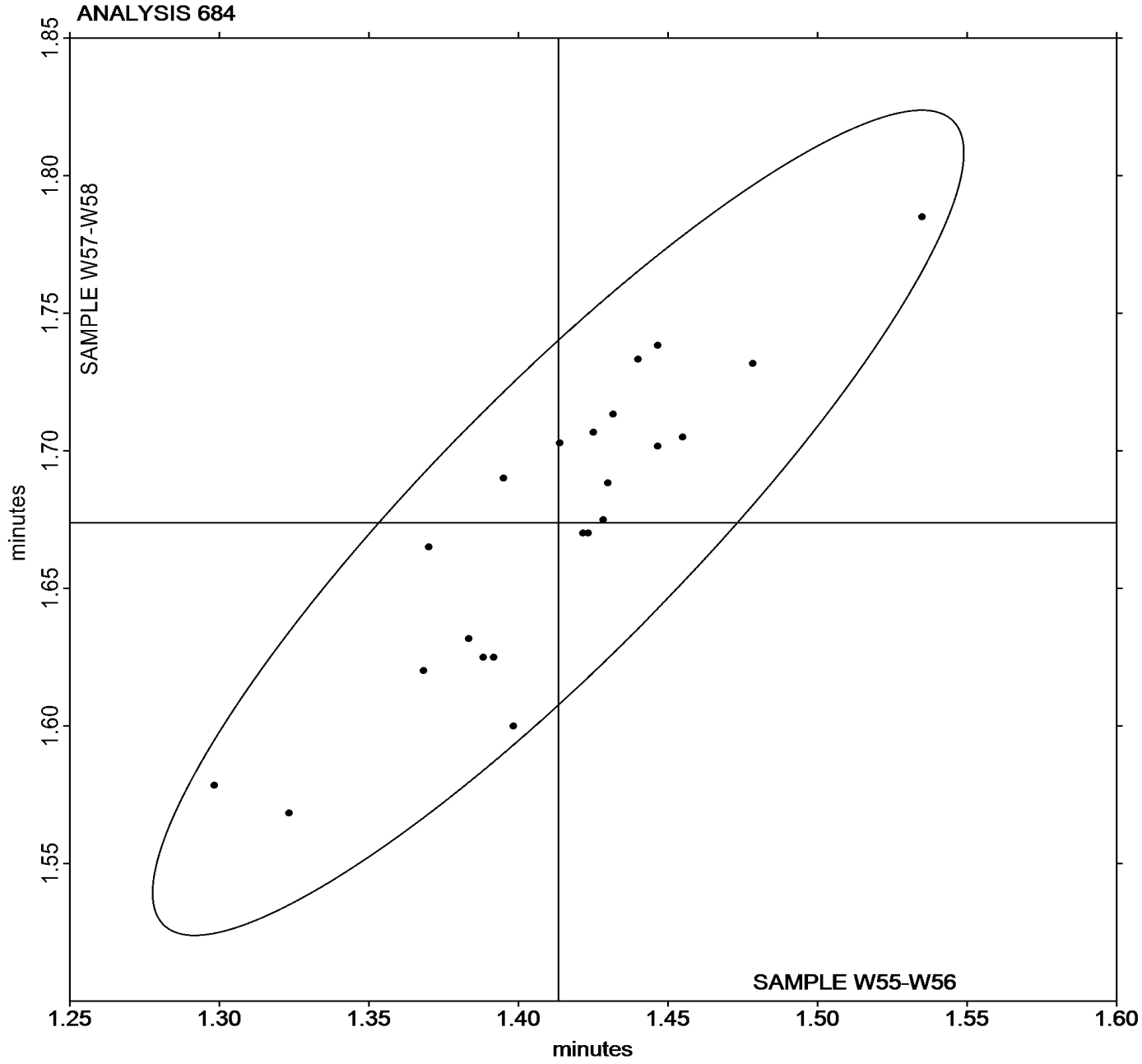
Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	ME	Alpha Tech. MDR Premiere
MM	MonTech MDR 3000	MR	MonTech D-RPA 3000
XX	Instrument model not specified by lab		

MDR Vulcanization-Cure Time 10% (minutes)

Grand Mean Sample **W55-W56** = 1.4133 minutes

Grand Mean Sample **W57-W58** = 1.6738 minutes



WebCode	Data Flag	Sample W55-W56 Lab Mean	Diff from Grand Mean	CPV	Sample W57-W58 Lab Mean	Diff from Grand Mean	CPV	Instr Code
3ZRR6J		1.465	0.157	2.46	1.748	0.145	1.93	ME
4FN76D		1.375	0.067	1.05	1.680	0.077	1.02	MC
66KDBC		1.337	0.029	0.45	1.637	0.034	0.45	MM
6UFKGC	X	1.695	0.387	6.07	2.148	0.545	7.23	MR
7WL8UG		1.148	-0.160	-2.50	1.417	-0.186	-2.47	ME
8KMUAA		1.285	-0.023	-0.36	1.530	-0.073	-0.97	MR
ACKJUV		1.298	-0.010	-0.15	1.597	-0.006	-0.08	ME
AGYYL9		1.290	-0.018	-0.28	1.660	0.057	0.76	XX
C9WQTD		1.213	-0.095	-1.48	1.528	-0.075	-0.99	MC
E2MAB3		1.322	0.014	0.21	1.597	-0.006	-0.08	ME
HHH6Y3		1.324	0.016	0.25	1.628	0.024	0.32	MC
J8XTL4		1.320	0.012	0.19	1.557	-0.046	-0.61	MC
LKDXKW	X	1.463	0.155	2.44	1.642	0.039	0.51	XX
NJTVQT		1.363	0.055	0.87	1.650	0.047	0.62	MC
NTZBX2		1.282	-0.026	-0.41	1.548	-0.055	-0.72	MC
PUAZCX		1.314	0.006	0.09	1.631	0.028	0.37	MC
PYP82H		1.325	0.017	0.27	1.652	0.049	0.64	MC
QE9MFY		1.226	-0.082	-1.28	1.472	-0.131	-1.73	MC
QKYXRH		1.298	-0.010	-0.15	1.612	0.009	0.11	ME
RNDVVX		1.293	-0.015	-0.23	1.580	-0.023	-0.30	MC
THM3YP		1.390	0.082	1.29	1.695	0.092	1.22	MR
U9CZDN		1.327	0.019	0.29	1.602	-0.001	-0.02	ME
VJRC4R		1.267	-0.041	-0.65	1.572	-0.031	-0.42	ME
VLFLFD		1.358	0.050	0.79	1.677	0.074	0.98	ME
WDZUCE		1.368	0.060	0.95	1.690	0.087	1.15	ME
X7V8NQ		1.260	-0.048	-0.75	1.607	0.004	0.05	MC
YXK3F7		1.250	-0.058	-0.91	1.512	-0.091	-1.21	XX

Summary Statistics

	Sample W55-W56	Sample W57-W58
Grand Means	1.3080 minutes	1.6030 minutes
Stnd Dev Btwn Labs	0.0638 minutes	0.0755 minutes

Statistics based on 25 of 27 reporting participants

Samples W55-W56: EPDM Compound & W57-W58: EPDM Compound

Comments on Assigned Data Flags for Test #685

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

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

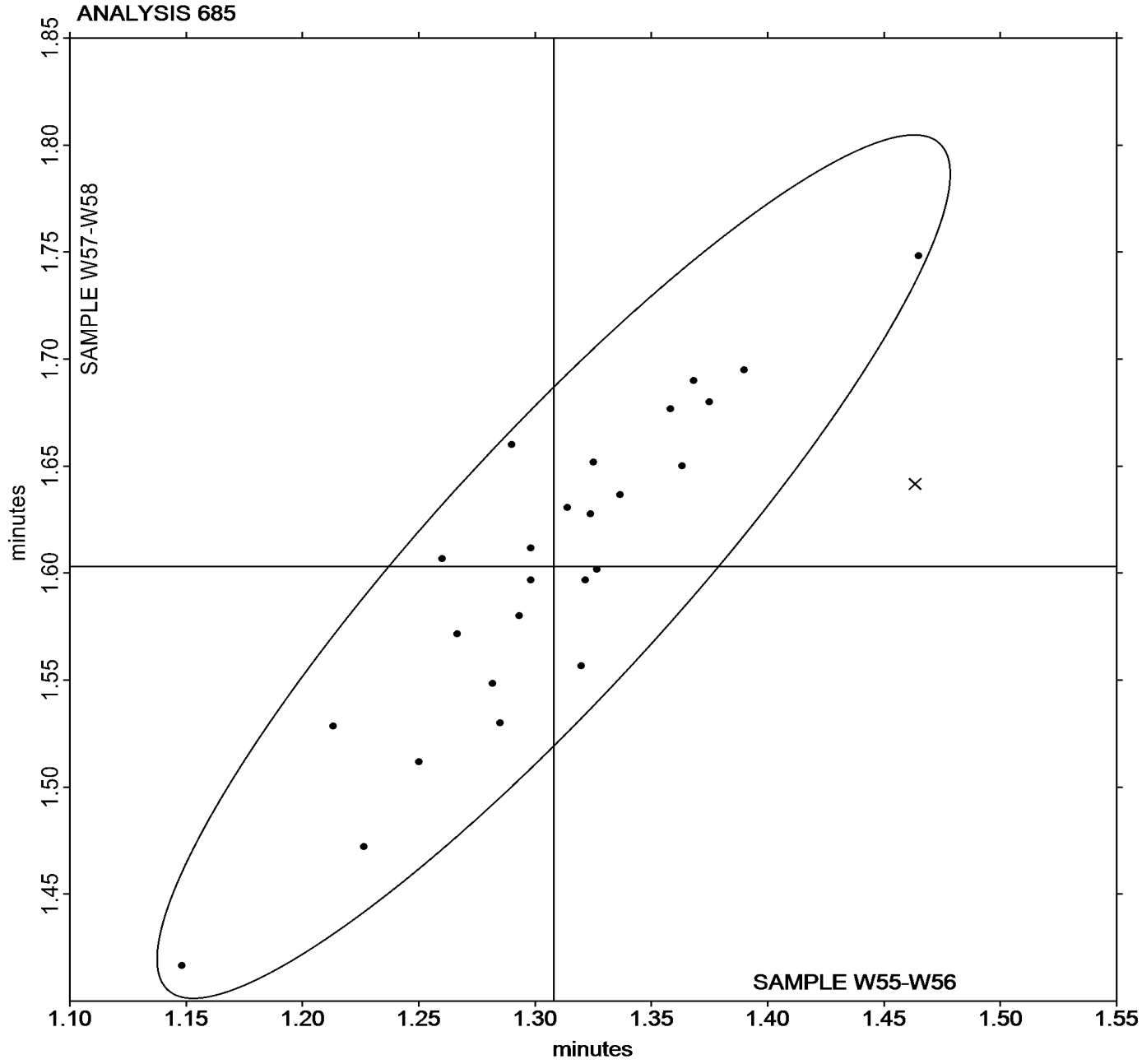
Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	ME	Alpha Tech. MDR Premiere
MM	MonTech MDR 3000	MR	MonTech D-RPA 3000
XX	Instrument model not specified by lab		

MDR Vulcanization-Scorch Time, Ts1 (minutes)

Grand Mean Sample **W55-W56** = 1.3080 minutes

Grand Mean Sample **W57-W58** = 1.6030 minutes



WebCode	Data Flag	Sample W55-W56 Lab Mean	Diff from Grand Mean	CPV	Sample W57-W58 Lab Mean	Diff from Grand Mean	CPV	Instr Code
3ZRR6J	*	3.357	0.258	2.91	3.805	0.210	1.81	ME
4FN76D		3.110	0.012	0.13	3.648	0.053	0.46	MC
66KDBC		3.132	0.033	0.38	3.652	0.056	0.49	MM
6UFKGC		3.115	0.017	0.19	3.562	-0.034	-0.29	MR
7WL8UG		3.103	0.005	0.06	3.582	-0.014	-0.12	ME
8KMUAA		3.023	-0.075	-0.85	3.508	-0.087	-0.75	MR
ACKJUV		3.202	0.103	1.17	3.767	0.171	1.48	ME
AGYYL9		3.122	0.023	0.26	3.662	0.066	0.57	XX
C9WQTD		3.025	-0.073	-0.83	3.473	-0.122	-1.06	MC
E2MAB3		3.007	-0.092	-1.03	3.467	-0.129	-1.11	ME
EMRUB9	*	3.162	0.063	0.71	3.393	-0.202	-1.75	ME
HHH6Y3		3.145	0.046	0.52	3.747	0.151	1.31	MC
J8XTL4		3.080	-0.018	-0.21	3.483	-0.112	-0.97	MC
LKDXKW	X	3.523	0.425	4.79	3.762	0.166	1.44	XX
NJTVQT		3.123	0.025	0.28	3.545	-0.050	-0.44	MC
NTZBX2		3.060	-0.038	-0.43	3.610	0.015	0.13	MC
PUAZCX		2.978	-0.120	-1.36	3.583	-0.012	-0.10	MC
PYP82H		3.028	-0.070	-0.79	3.593	-0.002	-0.02	MC
QE9MFY		3.140	0.042	0.47	3.658	0.063	0.54	MC
QKYXRH		3.008	-0.090	-1.01	3.597	0.001	0.01	ME
RNDVVX		3.060	-0.038	-0.43	3.520	-0.075	-0.65	MC
THM3YP		3.257	0.158	1.79	3.767	0.171	1.48	MR
U9CZDN		3.093	-0.005	-0.06	3.577	-0.019	-0.16	ME
VJRC4R		3.065	-0.033	-0.38	3.660	0.065	0.56	ME
VLFLFD		3.148	0.050	0.56	3.735	0.140	1.21	ME
WDZUCE		3.163	0.065	0.73	3.667	0.071	0.62	ME
X7V8NQ		3.010	-0.088	-1.00	3.458	-0.137	-1.19	MC
YXK3F7		2.938	-0.160	-1.80	3.357	-0.239	-2.07	XX

Summary Statistics

	Sample W55-W56	Sample W57-W58
Grand Means	3.0983 minutes	3.5954 minutes
Stnd Dev Btwn Labs	0.0887 minutes	0.1155 minutes

Statistics based on 27 of 28 reporting participants

Samples W55-W56: EPDM Compound & W57-W58: EPDM Compound

Comments on Assigned Data Flags for Test #686

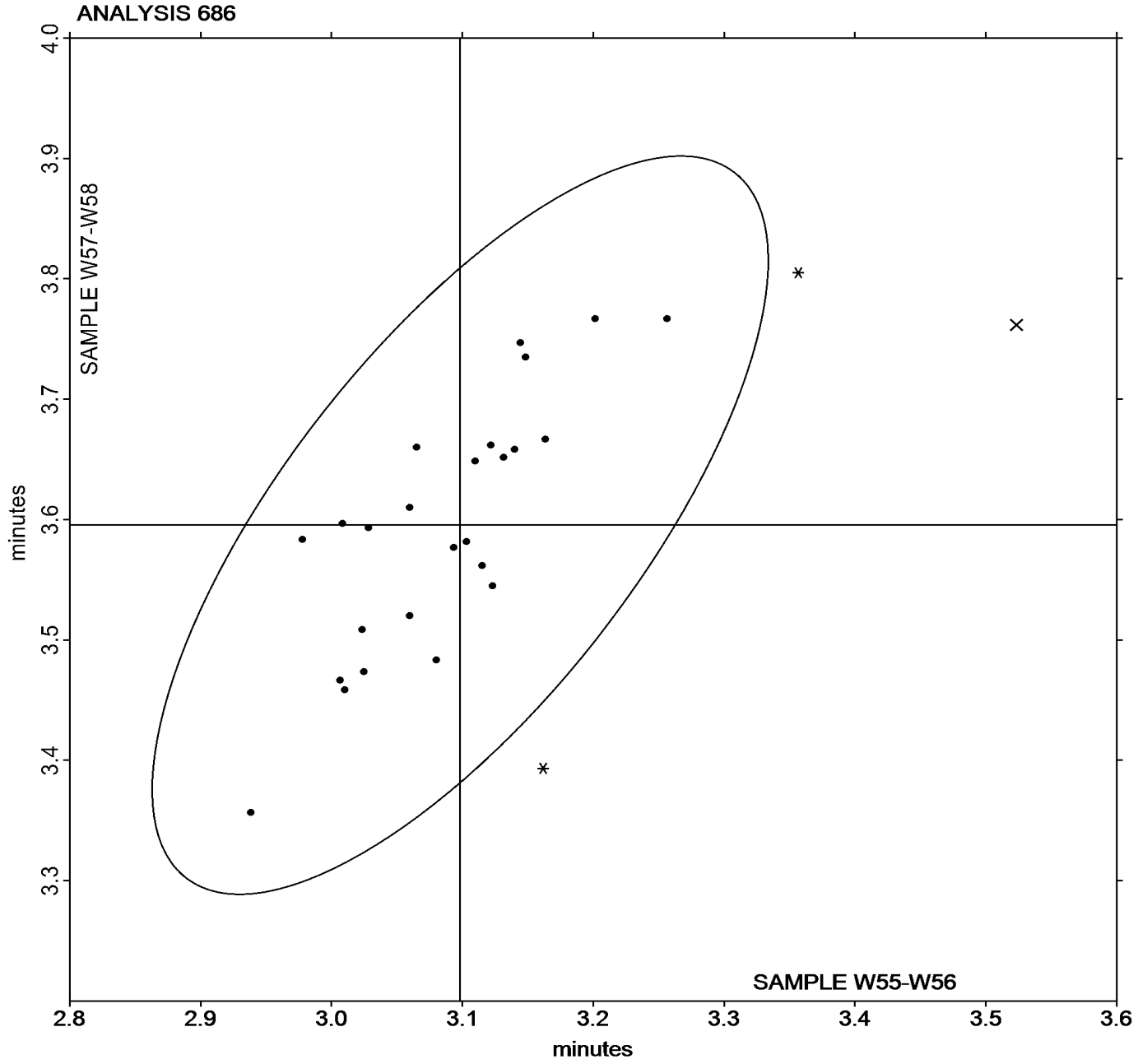
LKDXKW (X) - Data for sample group W55-W56 are high. Inconsistent within the determinations of both sample groups.

Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	ME	Alpha Tech. MDR Premiere
MM	MonTech MDR 3000	MR	MonTech D-RPA 3000
XX	Instrument model not specified by lab		

Grand Mean Sample **W55-W56** = 3.0983 minutes

Grand Mean Sample **W57-W58** = 3.5954 minutes



WebCode	Data Flag	Sample W55-W56 Lab Mean	Diff from Grand Mean	CPV	Sample W57-W58 Lab Mean	Diff from Grand Mean	CPV	Instr Code
3ZRR6J		9.198	0.179	0.92	9.457	0.263	0.86	ME
4FN76D		8.973	-0.046	-0.24	9.147	-0.047	-0.16	MC
66KDBC		8.965	-0.055	-0.28	9.270	0.076	0.25	MM
6UFKGC	*	8.558	-0.461	-2.39	8.358	-0.836	-2.75	MR
7WL8UG		9.182	0.162	0.84	8.922	-0.272	-0.89	ME
8KMUAA		8.988	-0.031	-0.16	9.095	-0.099	-0.33	MR
ACKJUV		9.075	0.055	0.29	9.742	0.548	1.80	ME
AGYYL9		9.117	0.097	0.50	9.330	0.136	0.45	XX
C9WQTD		9.218	0.199	1.03	9.330	0.136	0.45	MC
E2MAB3		8.845	-0.175	-0.90	8.870	-0.324	-1.06	ME
EMRUB9		9.125	0.105	0.55	9.283	0.089	0.29	ME
HHH6Y3		8.850	-0.170	-0.88	9.558	0.364	1.20	MC
J8XTL4		9.083	0.064	0.33	8.950	-0.244	-0.80	MC
LKDXKW		9.285	0.265	1.37	8.942	-0.252	-0.83	XX
NJTVQT		9.367	0.347	1.79	9.077	-0.117	-0.39	MC
NTZBX2		8.915	-0.105	-0.54	9.207	0.013	0.04	MC
PUAZCX		8.567	-0.453	-2.34	9.109	-0.085	-0.28	MC
PYP82H		9.002	-0.018	-0.09	9.330	0.136	0.45	MC
QE9MFY		9.314	0.294	1.52	9.680	0.486	1.60	MC
QKYXRH		9.052	0.032	0.17	9.220	0.026	0.09	ME
RNDVVX		8.997	-0.023	-0.12	9.017	-0.177	-0.58	XX
THM3YP		9.083	0.064	0.33	9.515	0.321	1.05	MR
U9CZDN		8.880	-0.140	-0.72	9.253	0.059	0.20	ME
VJRC4R		8.837	-0.183	-0.95	9.273	0.079	0.26	ME
VLFLFD		9.065	0.045	0.23	9.478	0.284	0.93	ME
WDZUCE		9.075	0.055	0.29	9.215	0.021	0.07	ME
X7V8NQ		8.913	-0.106	-0.55	8.610	-0.584	-1.92	MC
YXK3F7	X	8.007	-1.013	-5.24	7.458	-1.736	-5.70	XX

Summary Statistics

	Sample W55-W56	Sample W57-W58
Grand Means	9.0196 minutes	9.1940 minutes
Stnd Dev Btwn Labs	0.1934 minutes	0.3044 minutes

Statistics based on 27 of 28 reporting participants

Samples W55-W56: EPDM Compound & W57-W58: EPDM Compound

Comments on Assigned Data Flags for Test #687

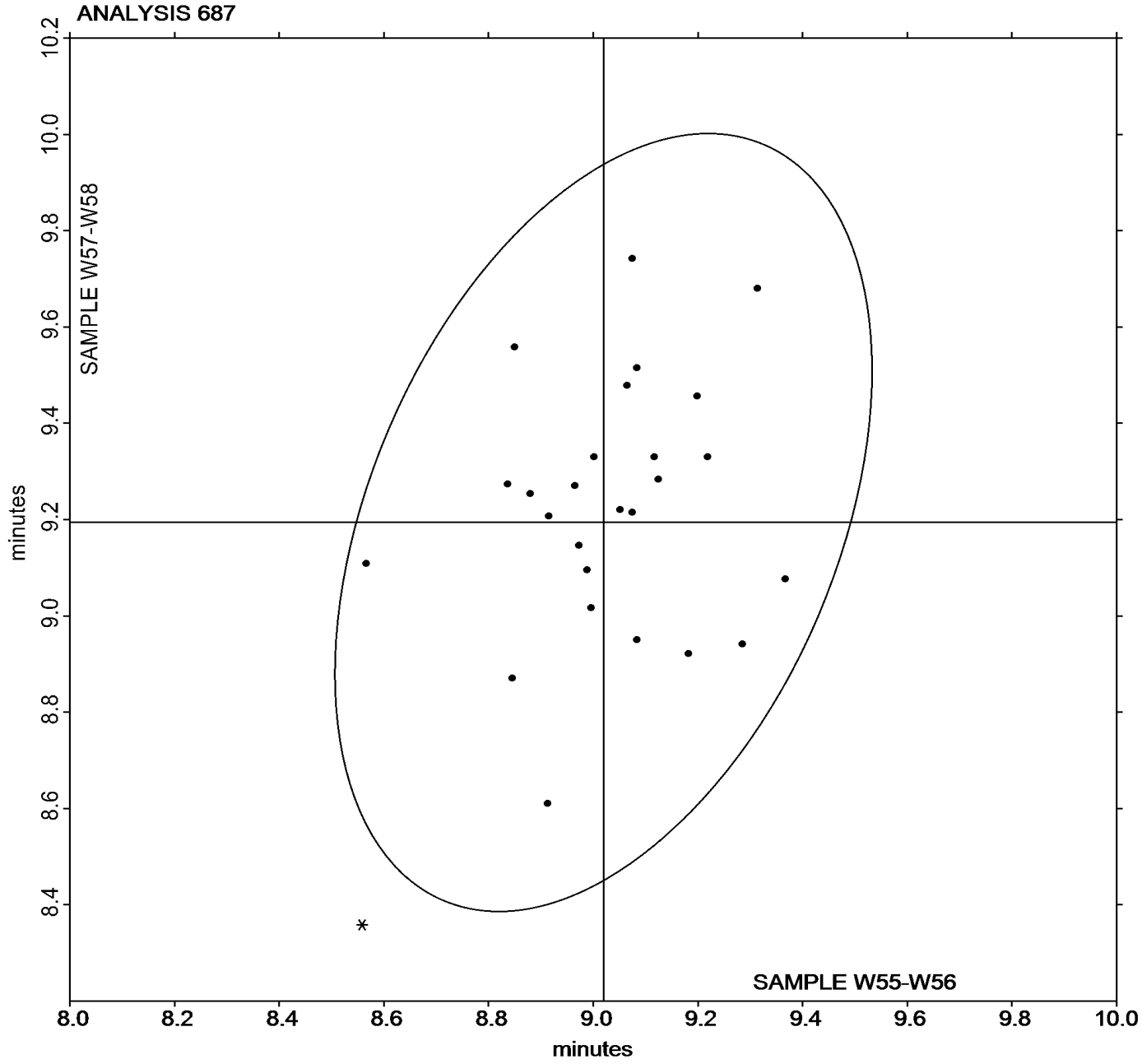
YXK3F7 (X) - Data for all samples are low. Inconsistent within the determinations of sample group W55-W56.

Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	ME	Alpha Tech. MDR Premiere
MM	MonTech MDR 3000	MR	MonTech D-RPA 3000
XX	Instrument model not specified by lab		

Grand Mean Sample **W55-W56** = 9.0196 minutes

Grand Mean Sample **W57-W58** = 9.1940 minutes



WebCode	Data Flag	Sample W55-W56 Lab Mean	Diff from Grand Mean	CPV	Sample W57-W58 Lab Mean	Diff from Grand Mean	CPV	Instr Code
3ZRR6J		1.202	-0.018	-0.36	1.142	-0.025	-0.51	ME
4FN76D		1.228	0.008	0.17	1.165	-0.002	-0.04	MC
66KDBC		1.133	-0.087	-1.73	1.063	-0.104	-2.08	MM
6UFKGC		1.218	-0.002	-0.03	1.148	-0.019	-0.37	MR
7WL8UG		1.201	-0.019	-0.38	1.126	-0.041	-0.83	ME
8KMUAA		1.203	-0.017	-0.33	1.143	-0.024	-0.47	MR
ACKJUV		1.213	-0.007	-0.15	1.190	0.024	0.47	ME
AGYYL9		1.198	-0.022	-0.43	1.130	-0.037	-0.74	MM
C9WQTD		1.292	0.072	1.43	1.245	0.078	1.57	MC
E2MAB3		1.233	0.013	0.27	1.200	0.033	0.66	ME
EMRUB9		1.247	0.027	0.53	1.225	0.058	1.17	ME
HHH6Y3		1.221	0.002	0.03	1.174	0.007	0.15	MC
J8XTL4		1.147	-0.073	-1.46	1.133	-0.034	-0.67	MC
LKDXKW	X	1.583	0.363	7.26	1.490	0.323	6.48	XX
NJTVQT		1.152	-0.068	-1.36	1.120	-0.047	-0.94	MC
NTZBX2		1.273	0.053	1.06	1.224	0.057	1.15	MC
PUAZCX		1.267	0.047	0.93	1.198	0.031	0.63	MC
PYP82H		1.245	0.025	0.50	1.215	0.048	0.97	MC
QE9MFY		1.317	0.097	1.95	1.236	0.069	1.39	MC
QKYXRH		1.254	0.034	0.68	1.186	0.019	0.38	ME
RNDVVX		1.227	0.007	0.14	1.193	0.026	0.53	MC
THM3YP		1.170	-0.050	-1.00	1.090	-0.077	-1.54	MR
U9CZDN		1.308	0.088	1.77	1.255	0.088	1.77	ME
VJRC4R		1.117	-0.103	-2.06	1.100	-0.066	-1.33	ME
VLFLFD		1.210	-0.010	-0.20	1.155	-0.012	-0.24	ME
WDZUCE		1.213	-0.007	-0.13	1.133	-0.034	-0.67	ME
X7V8NQ		1.228	0.008	0.17	1.147	-0.020	-0.41	MC
YXK3F7	X	1.325	0.105	2.10	1.358	0.191	3.84	XX

Summary Statistics

	Sample W55-W56	Sample W57-W58
Grand Means	1.2199 lbf.in	1.1669 lbf.in
Stnd Dev Btwn Labs	0.0501 lbf.in	0.0498 lbf.in

Statistics based on 26 of 28 reporting participants

Summary Statistics in SI Units		
Grand Means		
	1.3783 dN.m	1.3184 dN.m
Stnd Dev Btwn Labs		
	0.0566 dN.m	0.0563 dN.m
		Statistics based on 26 of 28 reporting participants

Samples W55-W56: EPDM Compound & W57-W58: EPDM Compound

Comments on Assigned Data Flags for Test #688

LKDXKW (X) - Data for all samples are high. Possible Systematic Error. Inconsistent within the determinations of both sample groups.

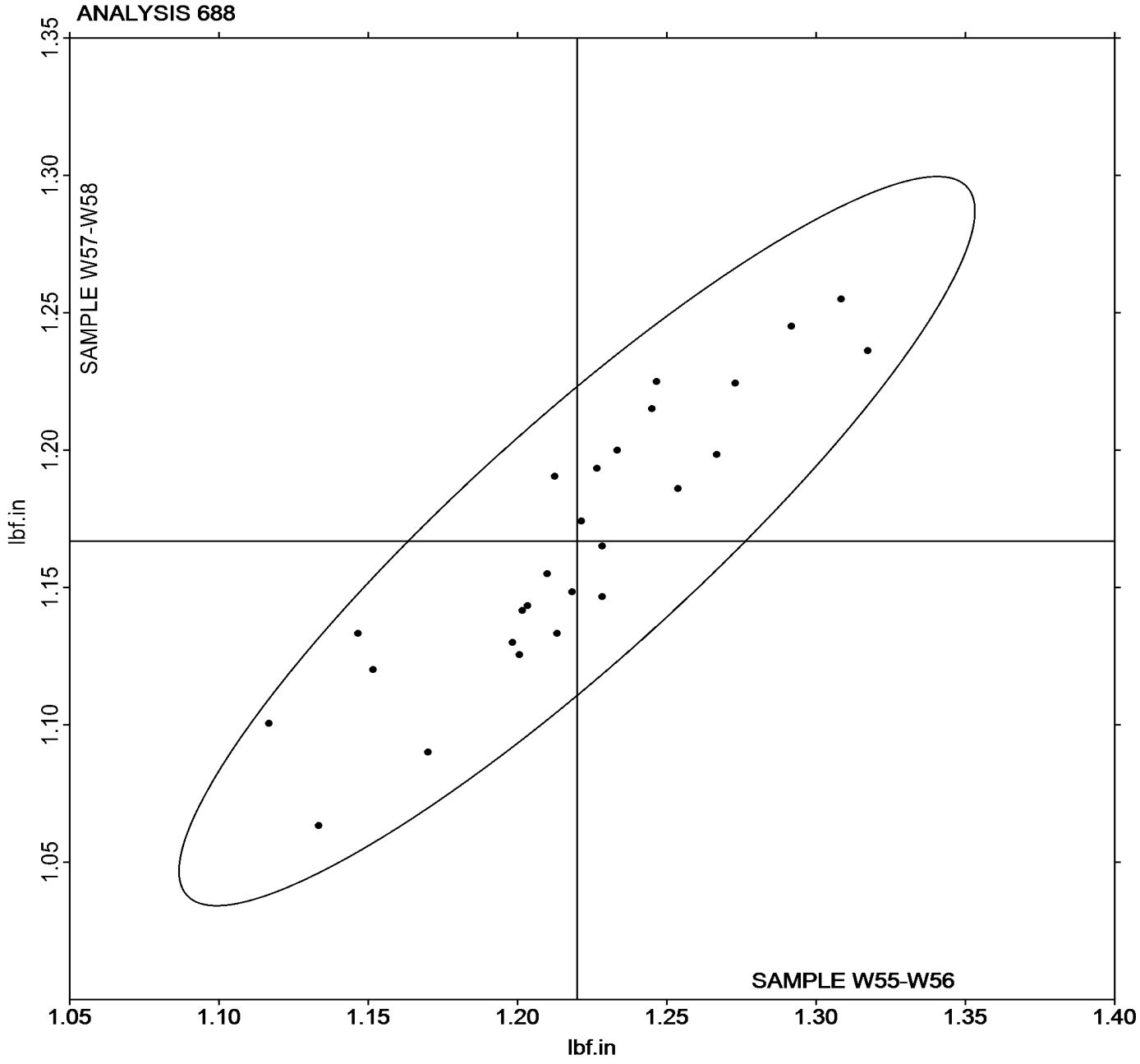
YXK3F7 (X) - Data for sample group W57-W58 are high.

Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	ME	Alpha Tech. MDR Premiere
MM	MonTech MDR 3000	MR	MonTech D-RPA 3000
XX	Instrument model not specified by lab		

Grand Mean Sample **W55-W56** = 1.2199 lbf.in

Grand Mean Sample **W57-W58** = 1.1669 lbf.in



WebCode	Data Flag	Sample W55-W56 Lab Mean	Diff from Grand Mean	CPV	Sample W57-W58 Lab Mean	Diff from Grand Mean	CPV	Instr Code
3ZRR6J		12.76	-0.60	-0.83	11.76	-0.19	-0.29	ME
4FN76D		13.15	-0.21	-0.29	11.59	-0.36	-0.56	MC
66KDBC		12.03	-1.33	-1.84	10.87	-1.08	-1.67	MM
6UFKGC		13.17	-0.19	-0.26	11.45	-0.50	-0.77	MR
7WL8UG		13.84	0.48	0.67	12.10	0.16	0.24	ME
8KMUAA		13.32	-0.04	-0.05	12.13	0.18	0.28	MR
ACKJUV		13.67	0.31	0.43	12.40	0.45	0.70	ME
AGYYL9		13.10	-0.26	-0.36	11.23	-0.72	-1.11	MM
C9WQTD		13.74	0.39	0.53	12.22	0.27	0.42	MC
E2MAB3		12.81	-0.55	-0.76	11.82	-0.12	-0.19	ME
EMRUB9		13.37	0.01	0.02	12.64	0.69	1.07	ME
HHH6Y3		13.29	-0.07	-0.09	12.26	0.31	0.48	MC
J8XTL4		13.00	-0.36	-0.50	11.83	-0.12	-0.18	MC
LKDXKW	*	15.30	1.94	2.69	13.69	1.75	2.70	XX
NJTVQT		12.37	-0.99	-1.37	11.42	-0.53	-0.81	MC
NTZBX2		13.71	0.35	0.49	12.19	0.24	0.37	MC
PUAZCX		13.94	0.58	0.80	12.46	0.51	0.79	MC
PYP82H		13.78	0.43	0.59	12.15	0.20	0.31	MC
QE9MFY		14.25	0.89	1.24	12.76	0.81	1.25	MC
QKYXRH		13.22	-0.14	-0.19	11.63	-0.32	-0.49	ME
RNDVVX		13.34	-0.02	-0.03	11.82	-0.13	-0.20	MC
THM3YP		13.38	0.02	0.02	11.73	-0.22	-0.34	MR
U9CZDN		14.03	0.67	0.93	12.61	0.67	1.03	ME
VJRC4R		11.73	-1.63	-2.26	10.66	-1.29	-2.00	ME
VLFLFD		13.40	0.04	0.05	12.11	0.16	0.24	ME
WDZUCE		12.68	-0.68	-0.94	11.15	-0.80	-1.23	ME
X7V8NQ		13.25	-0.11	-0.15	11.23	-0.72	-1.12	MC
YXK3F7		14.40	1.05	1.45	12.62	0.68	1.05	XX

Summary Statistics

	Sample W55-W56	Sample W57-W58
Grand Means	13.358 lbf.in	11.947 lbf.in
Stnd Dev Btwn Labs	0.722 lbf.in	0.647 lbf.in

Statistics based on 28 of 28 reporting participants

Summary Statistics in SI Units

Grand Means		
	15.092 dN.m	13.498 dN.m
Stnd Dev Btwn Labs		
	0.815 dN.m	0.731 dN.m

Statistics based on 28 of 28 reporting participants

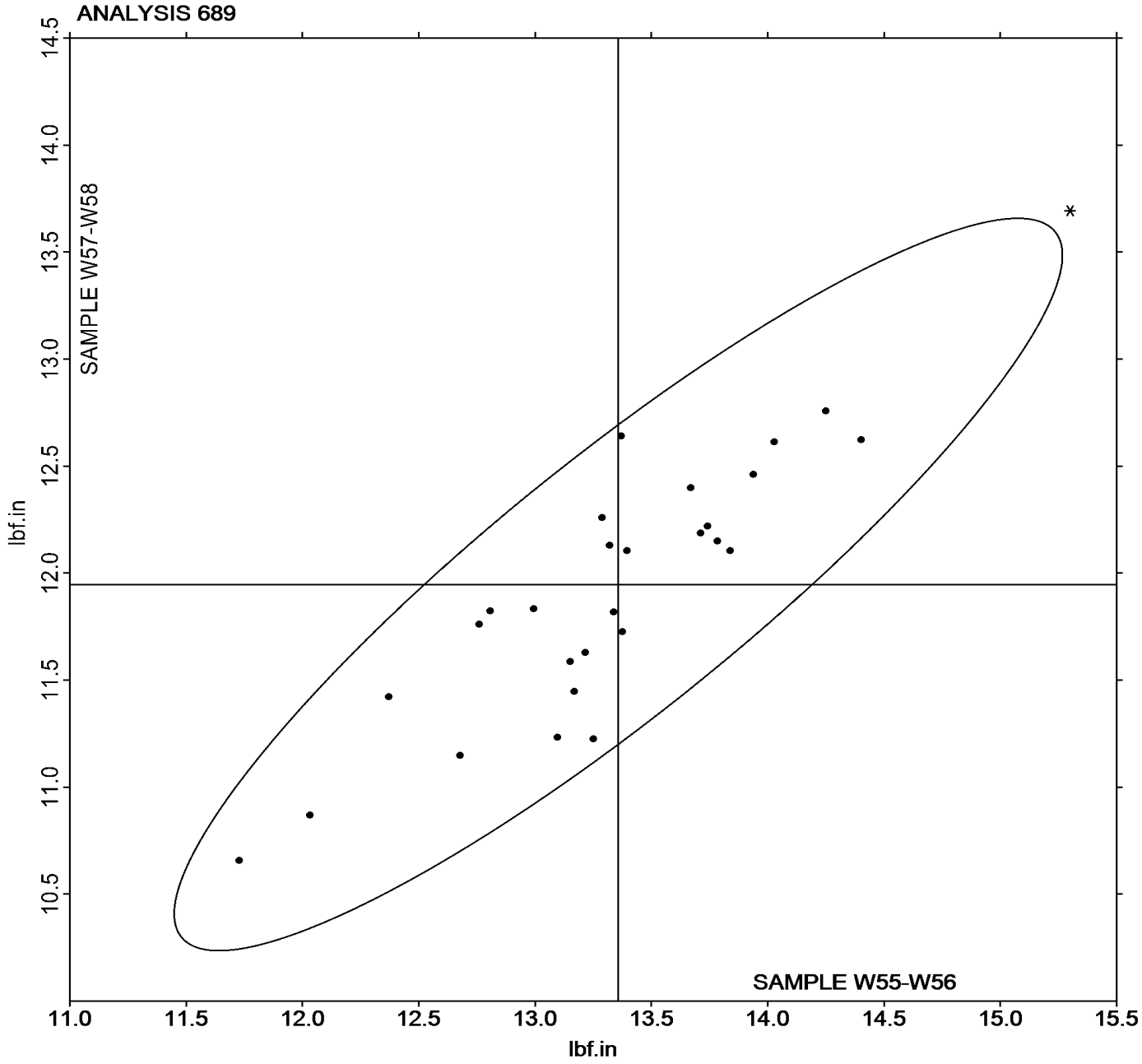
Samples W55-W56: EPDM Compound & W57-W58: EPDM Compound

Key to Instrument Codes Reported by Participants

MC	Alpha Technologies [Monsanto] MDR 2000 or 2000E	ME	Alpha Tech. MDR Premiere
MM	MonTech MDR 3000	MR	MonTech D-RPA 3000
XX	Instrument model not specified by lab		

Grand Mean Sample **W55-W56** = 13.358 lbf.in

Grand Mean Sample **W57-W58** = 11.947 lbf.in



WebCode	Data Flag	Sample E51-E52 Lab Mean	Sample E51-E52 Diff from Grand Mean	Sample E51-E52 CPV	Sample E53-E54 Lab Mean	Sample E53-E54 Diff from Grand Mean	Sample E53-E54 CPV	Instr Code
HHH6Y3		461.1	-46.2	-0.75	418.8	-46.9	-0.79	RP
QE9MFY		455.1	-52.3	-0.85	413.7	-52.0	-0.88	RP
VLFLFD		527.4	20.1	0.33	496.4	30.7	0.52	RP
XAVNAD		585.7	78.4	1.27	533.8	68.1	1.15	XX

Summary Statistics

	Sample E51-E52	Sample E53-E54
Grand Means	507.35 kPa	465.68 kPa
Stnd Dev Btwn Labs	61.69 kPa	59.13 kPa

Statistics based on 4 of 4 reporting participants

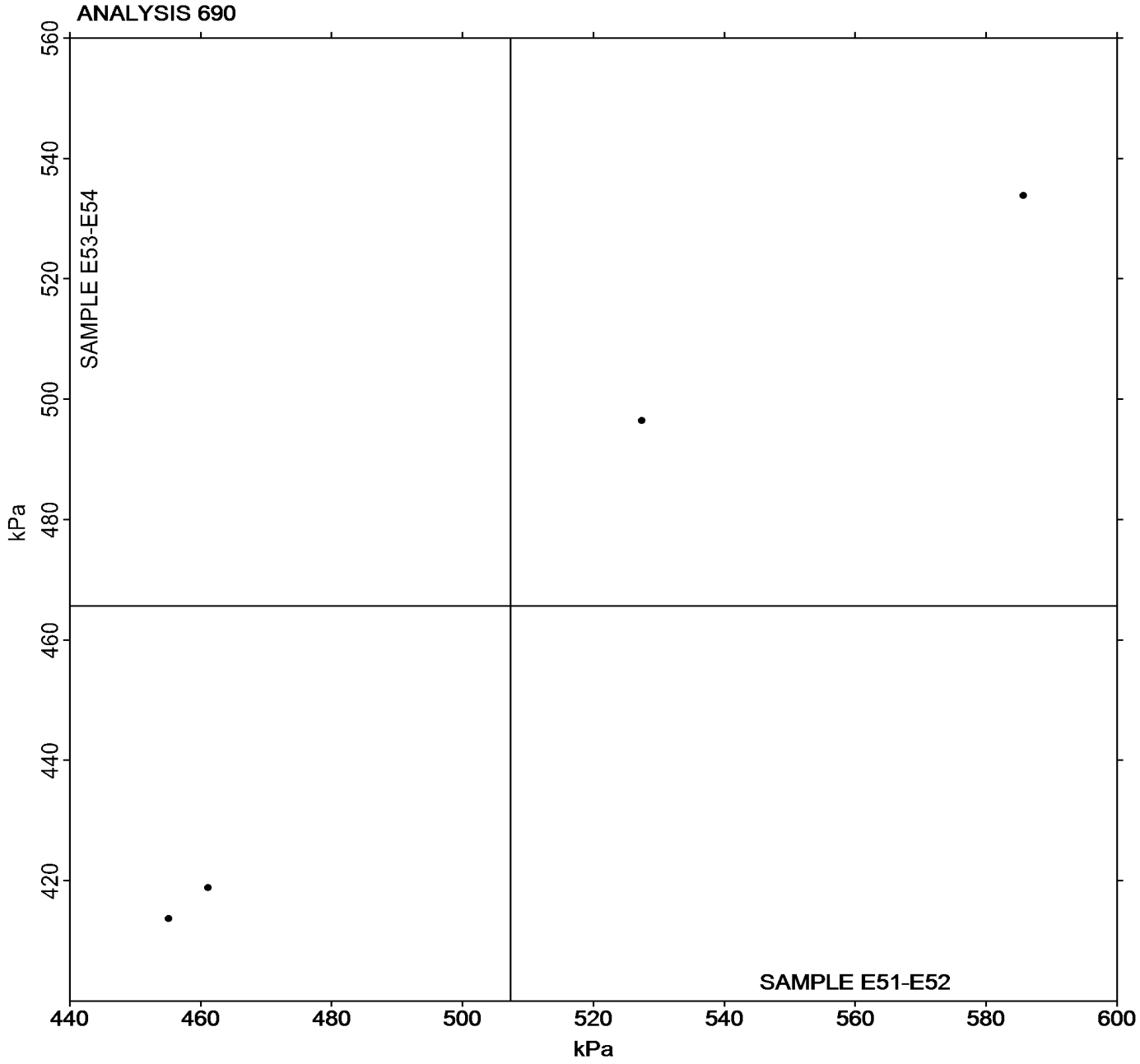
Samples E51-E52: EPDM Compound & E53-E54: EPDM Compound

Key to Instrument Codes Reported by Participants

RP	RPA 2000	XX	Instrument model not specified by lab

Grand Mean Sample **E51-E52** = 507.35 kPa

Grand Mean Sample **E53-E54** = 465.68 kPa



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

WebCode	Data Flag	Sample E51-E52 Lab Mean	Diff from Grand Mean	CPV	Sample E53-E54 Lab Mean	Diff from Grand Mean	CPV	Instr Code
HHH6Y3		252.1	-13.9	-0.45	230.7	-17.0	-0.68	RP
QE9MFY		240.1	-25.9	-0.84	223.6	-24.1	-0.97	RP
VLFLFD		261.5	-4.4	-0.14	259.4	11.7	0.47	RP
XAVNAD		310.2	44.2	1.44	277.1	29.4	1.18	XX

Summary Statistics

	E51-E52	E53-E54
Grand Means	265.98 kPa	247.69 kPa
Stnd Dev Btwn Labs	30.77 kPa	24.95 kPa

Statistics based on 4 of 4 reporting participants

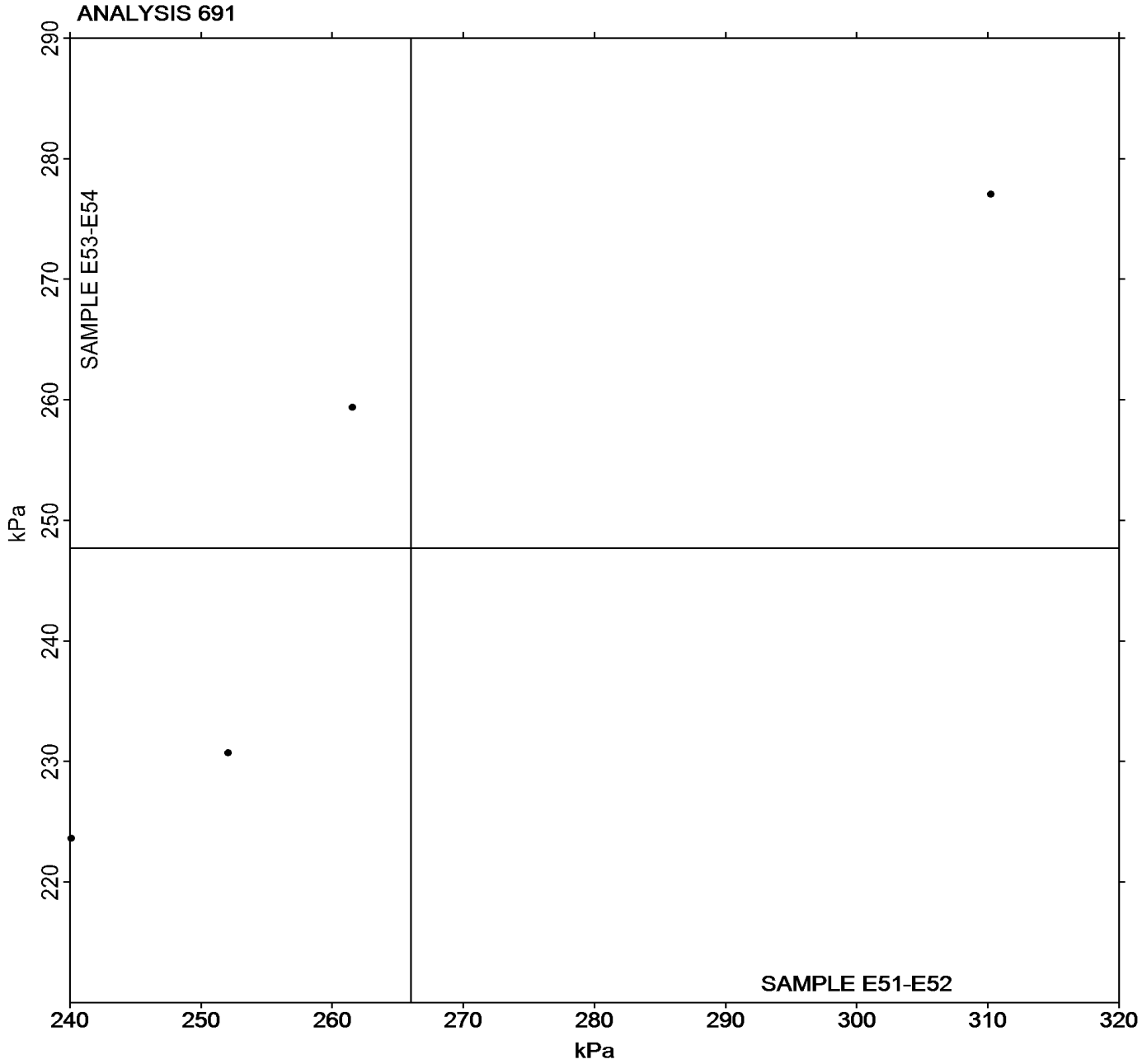
Samples E51-E52: EPDM Compound & E53-E54: EPDM Compound

Key to Instrument Codes Reported by Participants

RP	RPA 2000	XX	Instrument model not specified by lab

Grand Mean Sample **E51-E52** = 265.98 kPa

Grand Mean Sample **E53-E54** = 247.69 kPa



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

WebCode	Data Flag	Sample E51-E52 Lab Mean	Sample E51-E52 Diff from Grand Mean	Sample E51-E52 CPV	Sample E53-E54 Lab Mean	Sample E53-E54 Diff from Grand Mean	Sample E53-E54 CPV	Instr Code
HHH6Y3		46.57	-7.51	-1.41	44.88	-6.46	-1.01	RP
QE9MFY		56.06	1.98	0.37	49.28	-2.05	-0.32	RP
VLFLFD		59.02	4.94	0.93	60.07	8.73	1.37	RP
XAVNAD		54.68	0.59	0.11	51.11	-0.22	-0.03	XX

Summary Statistics

	Sample E51-E52	Sample E53-E54
Grand Means	54.082 kPa	51.336 kPa
Stnd Dev Btwn Labs	5.326 kPa	6.382 kPa

Statistics based on 4 of 4 reporting participants

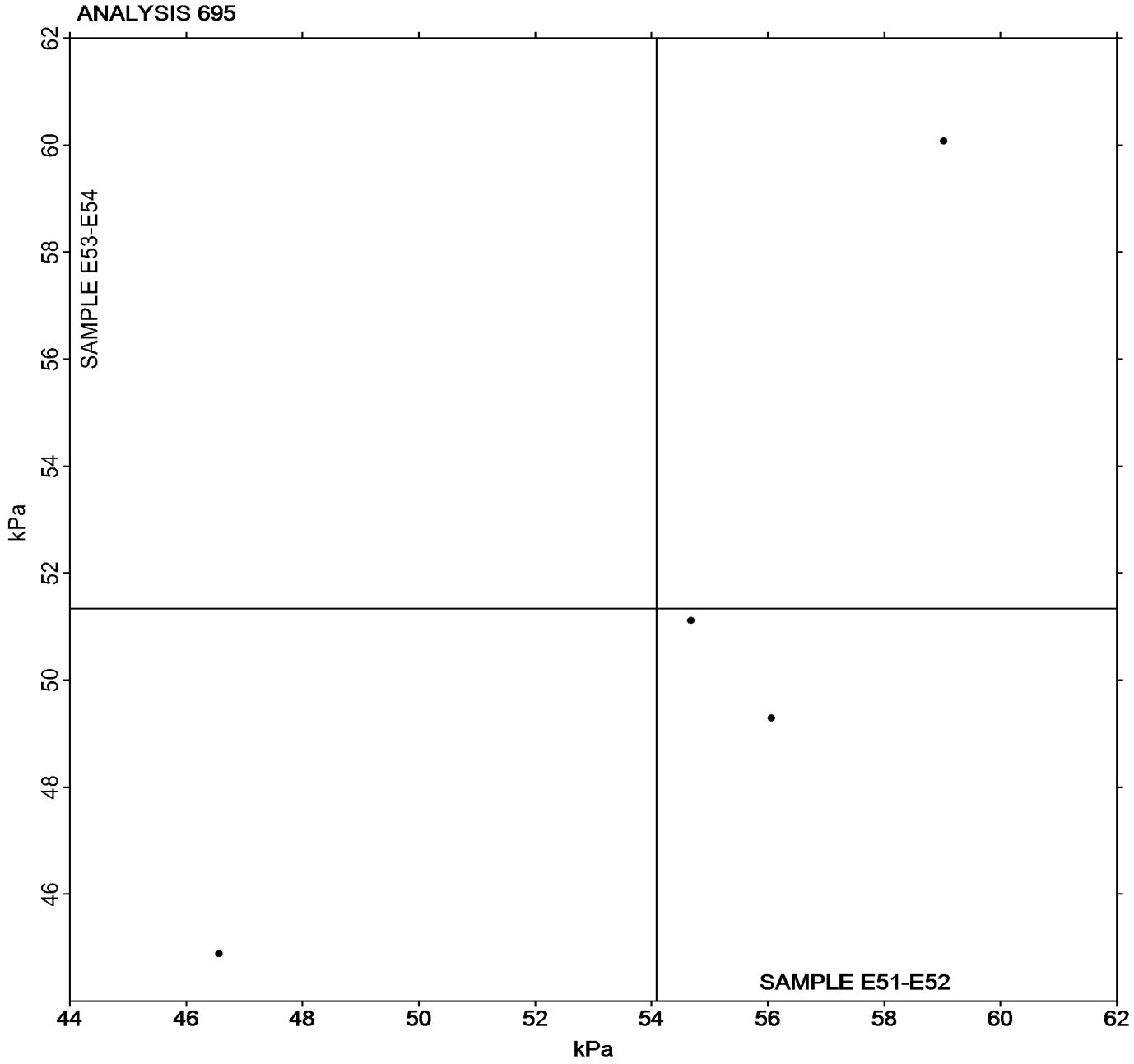
Samples E51-E52: EPDM Compound & E53-E54: EPDM Compound

Key to Instrument Codes Reported by Participants

RP	RPA 2000	XX	Instrument model not specified by lab

Grand Mean Sample **E51-E52** = 54.082 kPa

Grand Mean Sample **E53-E54** = 51.336 kPa



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

WebCode	Data Flag	Sample E51-E52 Lab Mean	Sample E51-E52 Diff from Grand Mean	Sample E51-E52 CPV	Sample E53-E54 Lab Mean	Sample E53-E54 Diff from Grand Mean	Sample E53-E54 CPV	Instr Code
HHH6Y3		68.66	-7.17	-1.03	66.98	-6.90	-0.88	RP
QE9MFY		71.31	-4.51	-0.65	67.87	-6.01	-0.77	RP
VLFLFD		83.45	7.62	1.09	83.17	9.29	1.19	RP
XAVNAD		79.89	4.06	0.58	77.51	3.63	0.46	XX

Summary Statistics

	Sample E51-E52	Sample E53-E54
Grand Means	75.827 kPa	73.879 kPa
Stnd Dev Btwn Labs	6.986 kPa	7.815 kPa

Statistics based on 4 of 4 reporting participants

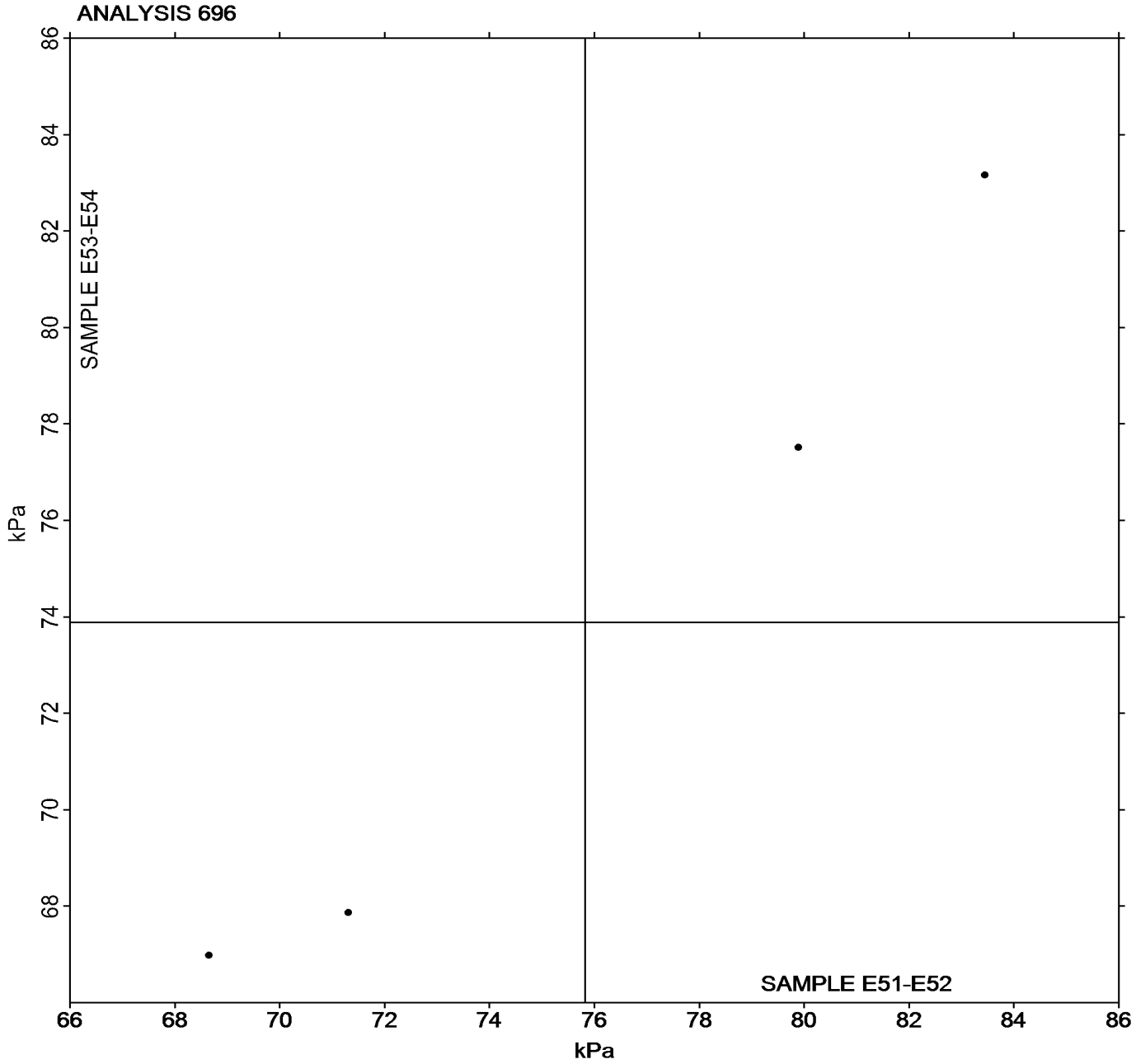
Samples E51-E52: EPDM Compound & E53-E54: EPDM Compound

Key to Instrument Codes Reported by Participants

RP	RPA 2000	XX	Instrument model not specified by lab

Grand Mean Sample **E51-E52** = 75.827 kPa

Grand Mean Sample **E53-E54** = 73.879 kPa



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

-End of Report-