

Rubber Interlaboratory Testing Program

Summary Report #226- 4th Qtr 2025

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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.

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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:

<u>DATA FLAG</u>	<u>STATISTICALLY INCLUDED/EXCLUDED</u>	<u>ACTION REQUIRED</u>
*	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.



Rubber Interlaboratory Testing Program

Analysis 605

Tensile Strength (psi)

Report #226

4th Qtr 2025

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BG7UW	X	2,716.5	-545.7	-3.20	3,032.0	-214.9	-1.37
2CAWZB		3,410.6	148.4	0.87	3,399.7	152.8	0.97
2K62UC		3,346.0	83.8	0.49	3,207.0	-39.9	-0.25
2LXRZQ		3,288.5	26.3	0.15	3,266.5	19.6	0.12
3ZZJKV	X	3,634.0	371.8	2.18	3,763.0	516.1	3.28
43YDFH		3,195.5	-66.7	-0.39	3,038.0	-208.9	-1.33
4DGXYE		3,252.5	-9.7	-0.06	3,262.7	15.7	0.10
4NEYCJ		3,306.5	44.3	0.26	3,121.5	-125.4	-0.80
6E8J6B		3,402.5	140.3	0.82	3,179.5	-67.4	-0.43
6F3YH8		3,290.0	27.8	0.16	3,416.5	169.6	1.08
6J6XTZ		3,436.0	173.8	1.02	3,339.5	92.6	0.59
6VFB9F	*	2,957.3	-304.8	-1.79	3,184.3	-62.6	-0.40
77BZ48		3,423.0	160.8	0.94	3,481.0	234.1	1.49
788J79		3,268.0	5.8	0.03	3,345.5	98.6	0.63
7NQCWX		3,321.4	59.2	0.35	3,205.4	-41.6	-0.26
7P8ANX		3,299.6	37.5	0.22	3,308.3	61.4	0.39
7T4X4J		3,236.3	-25.9	-0.15	3,040.4	-206.5	-1.31
7Z8WGU		3,064.7	-197.5	-1.16	2,907.3	-339.6	-2.16
8DLPFK		3,012.5	-249.7	-1.47	2,912.4	-334.5	-2.13
8LL46T		3,286.6	24.4	0.14	3,328.6	81.7	0.52
8QYPCE		3,445.0	182.8	1.07	3,370.0	123.1	0.78
9A7E3G		3,250.0	-12.2	-0.07	3,230.0	-16.9	-0.11
AF7CQB		3,523.6	261.5	1.54	3,524.5	277.5	1.77
AK24ZT		3,140.5	-121.7	-0.71	3,239.1	-7.8	-0.05
ATEVN7		2,880.0	-382.2	-2.24	2,955.0	-291.9	-1.86
AWE8K7		3,419.7	157.5	0.92	3,380.3	133.3	0.85
BBQ3ET		3,220.0	-42.2	-0.25	3,195.0	-51.9	-0.33
BVWDJW		3,044.0	-218.2	-1.28	3,174.5	-72.4	-0.46
C2XB8Q		3,291.0	28.8	0.17	3,261.0	14.1	0.09
C3Q2D6		3,288.0	25.8	0.15	3,267.0	20.1	0.13
C7BWEC		2,910.9	-351.2	-2.06	2,905.9	-341.1	-2.17
CBKAWB	*	2,984.9	-277.3	-1.63	2,827.5	-419.4	-2.67
DG7MB4		3,289.5	27.3	0.16	3,315.6	68.7	0.44
DTGWZE		3,571.1	309.0	1.81	3,628.9	382.0	2.43
EBWLRL		3,280.1	17.9	0.11	3,430.2	183.2	1.17
EFA7X8		3,382.0	119.8	0.70	3,345.0	98.1	0.62
EN4EJX		3,247.1	-15.0	-0.09	3,247.9	1.0	0.01
ETDR2W		3,254.0	-8.2	-0.05	3,250.5	3.6	0.02



Rubber Interlaboratory Testing Program

Analysis 605

Tensile Strength (psi)

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4th Qtr 2025

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EX8NPM		3,280.8	18.6	0.11	3,180.7	-66.2	-0.42
F326FM		3,032.8	-229.4	-1.35	3,194.5	-52.4	-0.33
FK3PFV		3,099.0	-163.2	-0.96	3,183.1	-63.9	-0.41
G8ME3P		3,241.6	-20.5	-0.12	3,234.4	-12.6	-0.08
GGBDQA		3,493.3	231.1	1.36	3,399.0	152.1	0.97
HJGXGV		3,405.8	143.6	0.84	3,386.6	139.6	0.89
J42C9P		3,114.0	-148.2	-0.87	3,139.4	-107.6	-0.68
JBLFFR		3,236.5	-25.7	-0.15	3,239.5	-7.4	-0.05
JBM8BE		3,292.0	29.8	0.18	3,220.5	-26.4	-0.17
KJQK43		3,607.8	345.7	2.03	3,629.6	382.7	2.44
KPXDXX		3,215.0	-47.2	-0.28	3,241.5	-5.4	-0.03
KQTTAV		3,370.5	108.3	0.64	3,320.1	73.2	0.47
LBAMDL		3,364.2	102.0	0.60	3,377.2	130.3	0.83
LKKRQC		3,065.0	-197.2	-1.16	3,220.0	-26.9	-0.17
MCNCED		3,319.5	57.3	0.34	3,265.5	18.6	0.12
MCZ9KH		3,424.5	162.3	0.95	3,396.0	149.1	0.95
MUGETT		3,308.5	46.3	0.27	3,364.0	117.1	0.75
N3E82M		3,101.0	-161.2	-0.95	3,163.3	-83.7	-0.53
NQ26FP	*	3,550.0	287.8	1.69	3,280.0	33.1	0.21
NQWMHQ		3,253.5	-8.7	-0.05	3,209.5	-37.4	-0.24
P46PJE		2,886.3	-375.9	-2.21	3,024.1	-222.9	-1.42
P46T9J		3,497.0	234.8	1.38	3,412.0	165.1	1.05
P8GXHX		3,139.0	-123.2	-0.72	3,026.5	-220.4	-1.40
PZKX8C		3,219.5	-42.7	-0.25	3,268.5	21.6	0.14
QQAVLB		2,995.1	-267.1	-1.57	3,140.1	-106.8	-0.68
R2NFGR		3,485.5	223.3	1.31	3,479.0	232.1	1.48
RU4CBA		3,176.5	-85.7	-0.50	3,353.0	106.1	0.68
RU8WYD		3,084.8	-177.3	-1.04	3,093.0	-154.0	-0.98
RYGXHV	X	2,160.4	-1,101.8	-6.47	1,951.5	-1,295.4	-8.24
TAFATF		3,194.0	-68.2	-0.40	3,200.0	-46.9	-0.30
UX3AWM		3,311.0	48.8	0.29	3,244.0	-2.9	-0.02
VJCWWW	*	3,019.5	-242.7	-1.42	3,268.5	21.6	0.14
VPGWA8		3,453.2	191.0	1.12	3,405.7	158.7	1.01
VUUGFT		3,555.9	293.7	1.72	3,467.8	220.9	1.41
VZJUGG		3,155.8	-106.4	-0.62	3,114.2	-132.7	-0.84
W7KT6C		3,239.3	-22.9	-0.13	3,263.6	16.7	0.11
WF9N6R		3,419.9	157.7	0.93	3,269.0	22.1	0.14



Rubber Interlaboratory Testing Program
Analysis 605
Tensile Strength (psi)

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4th Qtr 2025

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
WHFYA		3,115.0	-147.2	-0.86	3,105.0	-141.9	-0.90
WQ8GF4		2,994.3	-267.8	-1.57	2,902.2	-344.7	-2.19
WR6R9L		3,114.0	-148.2	-0.87	3,188.0	-59.0	-0.38
WZHGA		3,599.5	337.3	1.98	3,512.2	265.3	1.69
X3ZX66		3,140.8	-121.4	-0.71	3,086.4	-160.5	-1.02
XJP9PL		3,241.5	-20.7	-0.12	3,221.5	-25.4	-0.16
Y2NKZ9		3,033.0	-229.2	-1.35	3,049.0	-197.9	-1.26
YHNVGJ		3,379.4	117.2	0.69	3,205.4	-41.6	-0.26
YLN7DJ		3,415.0	152.8	0.90	3,220.0	-26.9	-0.17
YMJPEK		3,422.5	160.3	0.94	3,346.0	99.1	0.63
ZH4E2G		3,209.0	-53.2	-0.31	3,202.0	-44.9	-0.29
ZKAWZD		3,447.0	184.8	1.09	3,371.5	124.6	0.79
ZL7CCA		3,269.5	7.3	0.04	3,276.5	29.6	0.19
ZPP8DG		3,340.0	77.8	0.46	3,385.0	138.1	0.88

Summary Statistics

Grand Means

3,262.17 psi

3,246.93 psi

Std Dev Btwn Labs

170.32 psi

157.12 psi

Statistics based on 86 of 89 reporting participants

Summary Statistics in SI Units

Grand Means

22.492 MPa

22.390 MPa

Std Dev Btwn Labs

1.174 MPa

1.080 MPa

Statistics based on 86 of 89 reporting participants

Samples D51-D52: Polyisoprene Compound & D53-D54: Polyisoprene Compound

Comments on Assigned Data Flags for Test #605

2BG7UW (X) - Data for sample group D51-D52 are low. Inconsistent within the determinations of sample group D51-D52.

3ZZJKV (X) - Data for sample group D53-D54 are high.

RYGXHV (X) - Data for all samples are low. Possible Systematic Error. Inconsistent within the determinations of sample group D53-D54.

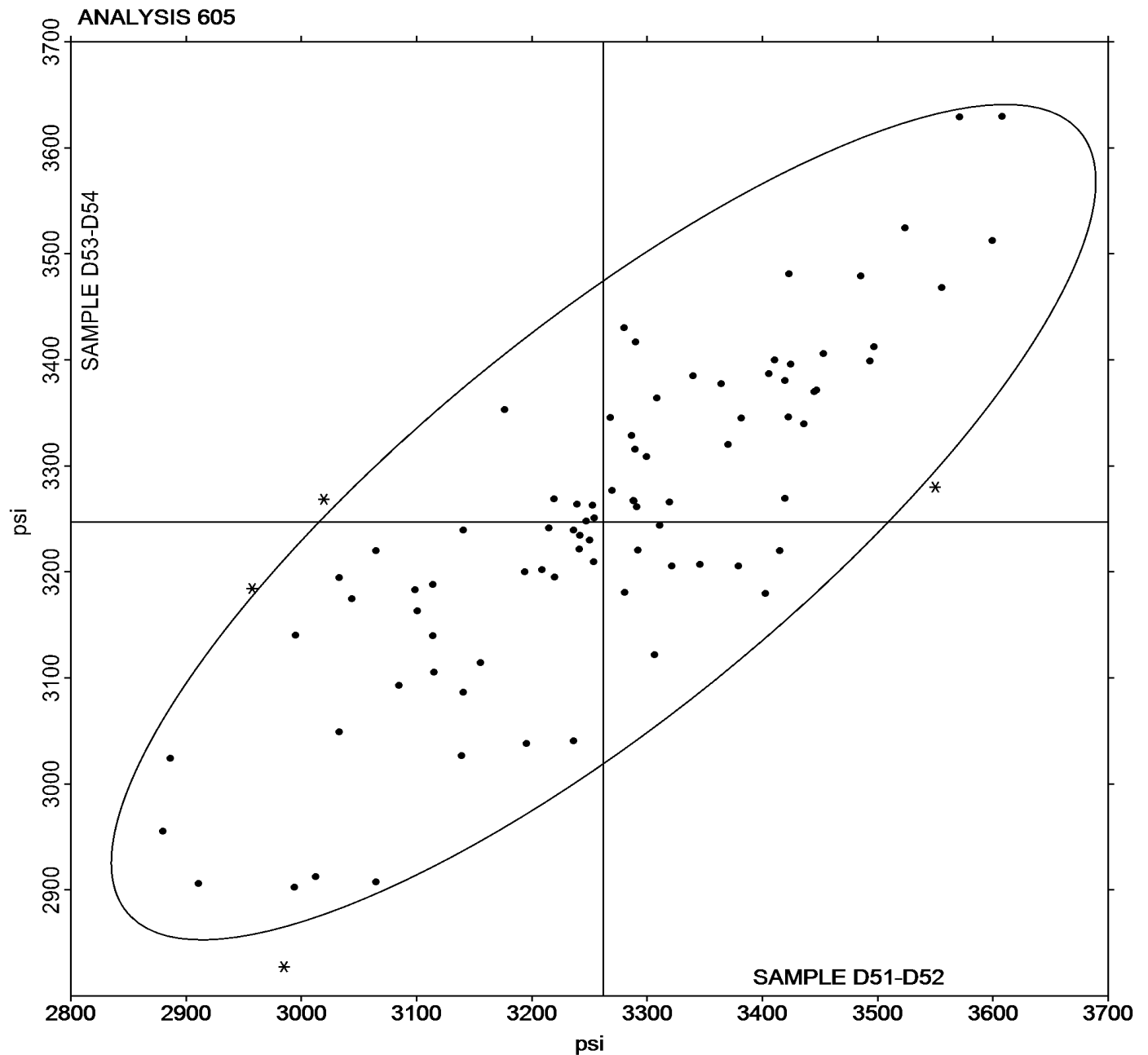


Rubber Interlaboratory Testing Program
Analysis 605
Tensile Strength (psi)

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4th Qtr 2025

Grand Mean Sample **D51-D52** = 3,262.17 psi

Grand Mean Sample **D53-D54** = 3,246.93 psi





Rubber Interlaboratory Testing Program

Analysis 606

Report #226

4th Qtr 2025

Ultimate Elongation (percent)

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BG7UW	*	653.5	29.6	0.84	680.0	59.5	1.86
2CAWZB		603.5	-20.4	-0.58	586.5	-34.0	-1.06
2K62UC		651.0	27.1	0.77	629.0	8.5	0.26
2LXRZQ		653.0	29.1	0.82	618.5	-2.0	-0.06
3ZZJKV		597.3	-26.6	-0.75	618.0	-2.5	-0.08
43YDFH		575.0	-48.9	-1.38	588.0	-32.5	-1.02
4DGXYE		640.5	16.6	0.47	631.5	11.0	0.34
4NEYCJ	X	608.5	-15.4	-0.44	697.0	76.5	2.39
6E8J6B		614.5	-9.4	-0.27	615.0	-5.5	-0.17
6F3YH8		601.5	-22.4	-0.63	614.0	-6.5	-0.20
6J6XTZ		638.5	14.6	0.41	641.0	20.5	0.64
6VFB9F		586.2	-37.7	-1.07	605.8	-14.7	-0.46
77BZ48		609.0	-14.9	-0.42	620.5	0.0	0.00
788J79		629.0	5.1	0.14	619.5	-1.0	-0.03
7NQCWX		611.0	-12.9	-0.37	616.5	-4.0	-0.13
7T4X4J		605.0	-18.9	-0.53	579.5	-41.0	-1.28
7Z8WGU	*	661.0	37.1	1.05	618.5	-2.0	-0.06
8DLPFK		549.0	-74.9	-2.12	553.0	-67.5	-2.11
8LL46T		612.6	-11.3	-0.32	597.9	-22.6	-0.71
8QYPCE		642.5	18.6	0.53	638.5	18.0	0.56
9A7E3G		625.0	1.1	0.03	610.0	-10.5	-0.33
AF7CQB		640.8	16.9	0.48	637.3	16.7	0.52
AK24ZT		612.5	-11.4	-0.32	617.8	-2.8	-0.09
ATEVN7		589.0	-34.9	-0.99	586.5	-34.0	-1.06
AWE8K7		656.7	32.8	0.93	640.2	19.6	0.61
BBQ3ET		624.0	0.1	0.00	626.0	5.5	0.17
BVWDJW	*	533.0	-90.9	-2.57	562.0	-58.5	-1.83
C2XB8Q		635.0	11.1	0.31	623.5	3.0	0.09
C3Q2D6		655.0	31.1	0.88	647.5	27.0	0.84
C7BWEC		609.5	-14.4	-0.41	614.0	-6.5	-0.20
CBKAWB		585.0	-38.9	-1.10	577.0	-43.5	-1.36
DG7MB4		613.5	-10.4	-0.29	621.5	1.0	0.03
DTGWZE		649.5	25.6	0.73	651.0	30.4	0.95
EBWLRL		653.5	29.6	0.84	649.5	29.0	0.91
EFA7X8		655.0	31.1	0.88	638.5	18.0	0.56
EN4EJX		628.5	4.6	0.13	629.5	9.0	0.28
ETDR2W		605.0	-18.9	-0.53	608.5	-12.0	-0.38
EX8NPM	*	711.5	87.6	2.48	684.5	64.0	2.00



Rubber Interlaboratory Testing Program

Analysis 606

Ultimate Elongation (percent)

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WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
F326FM		589.0	-34.9	-0.99	595.0	-25.5	-0.80
FK3PFV		644.4	20.5	0.58	656.8	36.3	1.13
G8ME3P		657.0	33.1	0.94	670.0	49.5	1.55
GGBDQA		641.5	17.6	0.50	624.0	3.5	0.11
HJGXGV		652.0	28.1	0.80	642.0	21.5	0.67
J42C9P		618.0	-5.9	-0.17	613.5	-7.0	-0.22
JBLFFR		658.5	34.6	0.98	645.5	25.0	0.78
JBM8BE	*	521.0	-102.9	-2.91	530.5	-90.0	-2.81
KJQK43		686.6	62.7	1.78	671.8	51.3	1.60
KPXDXX		643.0	19.1	0.54	624.5	4.0	0.12
KQTTAV		657.3	33.4	0.95	666.4	45.9	1.43
LBAMDL		662.0	38.1	1.08	643.0	22.5	0.70
LKKRQC	X	1,365.0	741.1	20.98	1,370.0	749.5	23.42
MCNCED		629.5	5.6	0.16	630.5	10.0	0.31
MCZ9KH		636.0	12.1	0.34	628.0	7.5	0.23
MUGETT		571.0	-52.9	-1.50	584.5	-36.0	-1.13
N3E82M		604.7	-19.2	-0.54	609.5	-11.1	-0.35
NQ26FP		640.2	16.3	0.46	633.9	13.4	0.42
NQWMHQ		627.0	3.1	0.09	628.5	8.0	0.25
P46PJE		622.5	-1.4	-0.04	614.0	-6.5	-0.20
P46T9J		645.5	21.6	0.61	650.5	30.0	0.94
P8GXHX		630.5	6.6	0.19	612.5	-8.0	-0.25
PZKX8C	*	596.0	-27.9	-0.79	563.5	-57.0	-1.78
QQAVLB		574.5	-49.4	-1.40	606.5	-14.0	-0.44
R2NFGR		633.0	9.1	0.26	652.5	32.0	1.00
RU4CBA		663.3	39.4	1.12	663.8	43.2	1.35
RU8WYD		598.8	-25.1	-0.71	601.5	-19.0	-0.59
RYGXHV	X	481.0	-142.9	-4.05	447.5	-173.0	-5.41
TAFATF		666.2	42.3	1.20	650.1	29.6	0.92
UX3AWM		665.5	41.6	1.18	642.5	22.0	0.69
VJCWWW		608.5	-15.4	-0.44	583.5	-37.0	-1.16
VPGWA8		599.4	-24.5	-0.69	581.3	-39.2	-1.23
VUUGFT		637.6	13.7	0.39	624.8	4.2	0.13
VZJUGG		618.5	-5.4	-0.15	642.3	21.8	0.68
W7KT6C		635.2	11.3	0.32	631.0	10.5	0.33
WF9N6R	X	415.6	-208.3	-5.90	400.8	-219.7	-6.86
WHFYA		565.5	-58.4	-1.65	567.5	-53.0	-1.66



Rubber Interlaboratory Testing Program

Analysis 606

Report #226

4th Qtr 2025

Ultimate Elongation (percent)

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
WQ8GF4		604.2	-19.7	-0.56	588.5	-32.1	-1.00
WR6R9L		616.5	-7.4	-0.21	599.0	-21.5	-0.67
WZHGAE		597.9	-26.0	-0.74	623.2	2.7	0.08
X3ZX66		605.1	-18.8	-0.53	595.7	-24.8	-0.78
XJP9PL		669.5	45.6	1.29	677.0	56.5	1.76
Y2NKZ9	*	539.5	-84.4	-2.39	538.5	-82.0	-2.56
YHNVGJ		650.0	26.1	0.74	649.5	29.0	0.91
YLN7DJ	*	716.0	92.1	2.61	694.0	73.5	2.30
YMJPEK		584.0	-39.9	-1.13	593.5	-27.0	-0.84
ZH4E2G		633.5	9.6	0.27	633.5	13.0	0.41
ZKAWZD		630.5	6.6	0.19	633.0	12.5	0.39
ZL7CCA		606.0	-17.9	-0.51	586.0	-34.5	-1.08
ZPP8DG		640.0	16.1	0.46	632.0	11.5	0.36

Grand Means		Summary Statistics	
	623.90 percent		620.53 percent
Std Dev Btwn Labs	35.32 percent		32.01 percent
Statistics based on 84 of 88 reporting participants			

Samples D51-D52: Polyisoprene Compound & D53-D54: Polyisoprene Compound

Comments on Assigned Data Flags for Test #606

4NEYCJ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample group D53-D54.

LKKRQC (X) - Extreme Data.

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

WF9N6R (X) - Data for all samples are low. Possible Systematic Error.



Rubber Interlaboratory Testing Program

Analysis 606

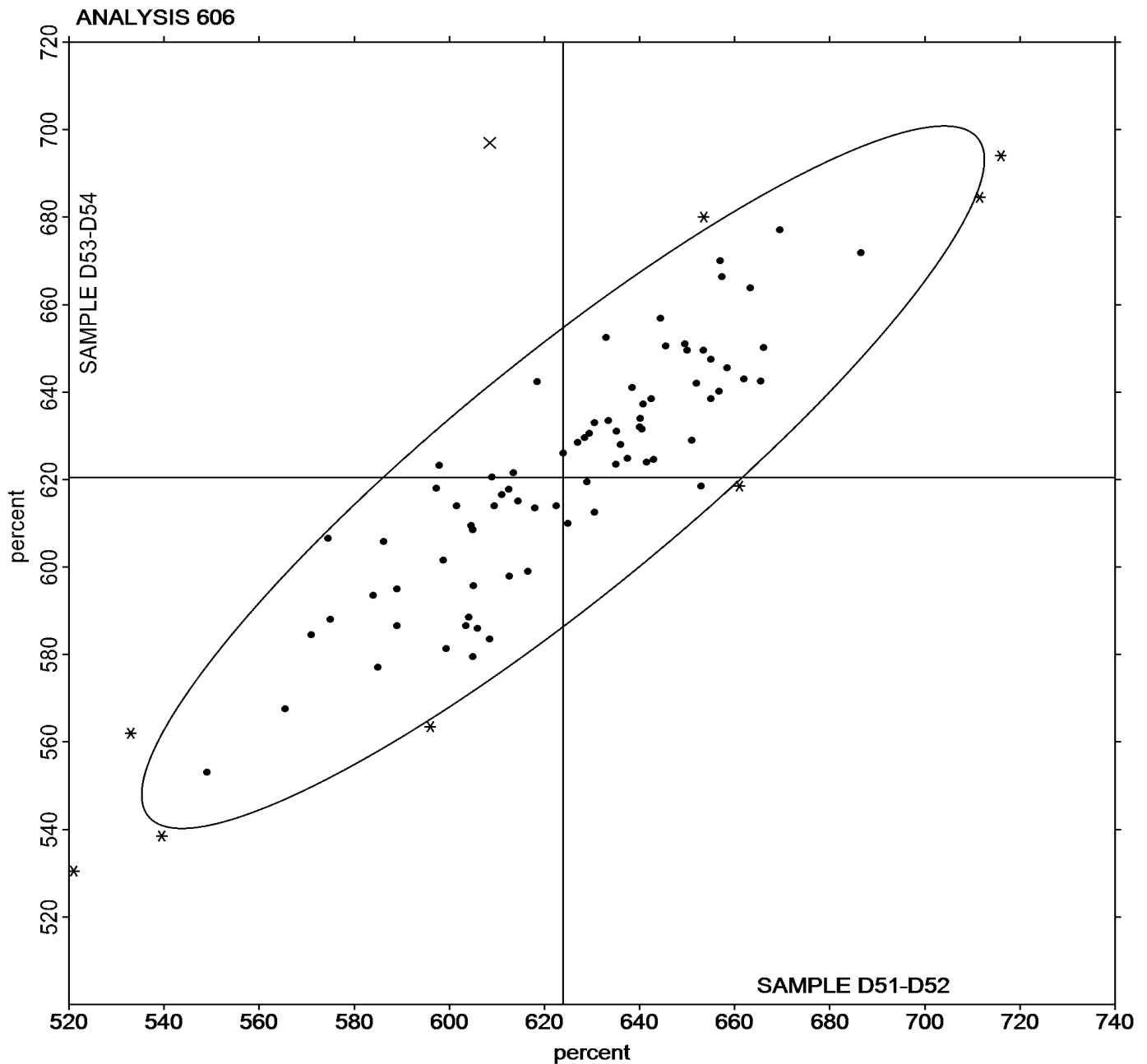
Ultimate Elongation (percent)

Report #226

4th Qtr 2025

Grand Mean Sample **D51-D52** = 623.90 percent

Grand Mean Sample **D53-D54** = 620.53 percent





Rubber Interlaboratory Testing Program

Analysis 607

Report #226

4th Qtr 2025

Stress at 300% Elongation (psi)

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BG7UW		835.0	-63.0	-0.72	819.0	-77.5	-0.99
2CAWZB		1,023.3	125.2	1.43	1,037.0	140.5	1.80
2K62UC		864.2	-33.8	-0.39	820.1	-76.4	-0.98
2LXRZQ		857.0	-41.0	-0.47	915.0	18.5	0.24
43YDFH		1,077.5	179.5	2.05	958.5	62.0	0.79
4DGXYE		898.5	0.5	0.01	889.8	-6.7	-0.09
4NEYCJ	X	991.5	93.5	1.07	782.0	-114.5	-1.47
6E8J6B		970.0	72.0	0.82	884.0	-12.5	-0.16
6F3YH8		860.0	-38.0	-0.43	873.0	-23.5	-0.30
6J6XTZ		918.0	20.0	0.23	886.5	-10.0	-0.13
6VFB9F		866.6	-31.4	-0.36	892.7	-3.8	-0.05
788J79		950.5	52.5	0.60	982.0	85.5	1.10
7NQCWX		924.6	26.6	0.30	871.0	-25.5	-0.33
7T4X4J		982.5	84.4	0.96	931.6	35.1	0.45
7Z8WGU	*	720.1	-177.9	-2.03	690.4	-206.1	-2.64
8DLPFK		921.7	23.7	0.27	872.4	-24.1	-0.31
8LL46T		905.8	7.7	0.09	1,011.6	115.2	1.48
8QYPCE		865.5	-32.5	-0.37	840.5	-56.0	-0.72
9A7E3G		942.5	44.5	0.51	952.0	55.5	0.71
AF7CQB		1,002.1	104.1	1.19	964.5	68.0	0.87
AK24ZT		888.7	-9.3	-0.11	907.9	11.5	0.15
ATEVN7		811.5	-86.5	-0.99	890.0	-6.5	-0.08
AWE8K7		843.1	-55.0	-0.63	841.9	-54.6	-0.70
BVWDJW		1,035.0	137.0	1.57	1,011.0	114.5	1.47
C2XB8Q		781.5	-116.6	-1.33	830.5	-66.0	-0.85
C3Q2D6		836.5	-61.5	-0.70	843.5	-53.0	-0.68
C7BWEC		848.5	-49.6	-0.57	822.4	-74.1	-0.95
CBKAWB		876.0	-22.0	-0.25	833.2	-63.2	-0.81
DG7MB4		863.7	-34.3	-0.39	816.6	-79.9	-1.02
DTGWZE		915.9	17.8	0.20	893.4	-3.1	-0.04
EBWLRL		773.1	-125.0	-1.43	838.3	-58.2	-0.75
EFA7X8		847.0	-51.0	-0.58	888.5	-8.0	-0.10
EN4EJX		854.8	-43.2	-0.49	814.0	-82.5	-1.06
ETDR2W		1,040.5	142.5	1.63	1,031.5	135.0	1.73
EX8NPM		764.4	-133.7	-1.53	811.5	-85.0	-1.09
F326FM		923.2	25.1	0.29	959.4	62.9	0.81
FK3PFV		752.7	-145.3	-1.66	764.8	-131.6	-1.69
G8ME3P		909.4	11.4	0.13	866.6	-29.9	-0.38



Rubber Interlaboratory Testing Program

Analysis 607

Report #226

4th Qtr 2025

Stress at 300% Elongation (psi)

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GGBDQA		844.1	-53.9	-0.62	842.0	-54.5	-0.70
HJGXGV		911.1	13.0	0.15	945.3	48.8	0.62
J42C9P		863.0	-35.1	-0.40	921.0	24.5	0.31
JBLFFR		785.0	-113.0	-1.29	850.0	-46.5	-0.60
JBM8BE	*	1,120.0	222.0	2.54	1,058.5	162.0	2.08
KJQK43		865.2	-32.9	-0.38	922.4	26.0	0.33
KPDXDX		910.5	12.5	0.14	922.0	25.5	0.33
KQTTAV		867.4	-30.6	-0.35	795.9	-100.6	-1.29
LBAMDL		797.0	-101.1	-1.15	857.2	-39.3	-0.50
LKKRQC	X	270.5	-627.5	-7.17	276.5	-620.0	-7.94
MCNCED		883.5	-14.5	-0.17	902.0	5.5	0.07
MCZ9KH		953.5	55.5	0.63	933.5	37.0	0.47
MUGETT		1,107.5	209.5	2.39	1,034.0	137.5	1.76
N3E82M		778.1	-120.0	-1.37	809.2	-87.3	-1.12
NQ26FP		923.5	25.5	0.29	888.0	-8.5	-0.11
NQWMHQ		891.0	-7.0	-0.08	850.5	-46.0	-0.59
P46PJE		760.5	-137.5	-1.57	894.0	-2.5	-0.03
P46T9J		964.0	66.0	0.75	863.5	-33.0	-0.42
P8GXHX		900.0	2.0	0.02	873.0	-23.5	-0.30
PZKX8C		871.5	-26.5	-0.30	980.0	83.5	1.07
QQAVLB		911.6	13.5	0.15	852.8	-43.7	-0.56
R2NFGR		958.5	60.5	0.69	958.0	61.5	0.79
RU4CBA		745.0	-153.0	-1.75	823.0	-73.5	-0.94
RU8WYD		1,008.2	110.1	1.26	1,062.3	165.8	2.12
RYGXHV		942.0	44.0	0.50	869.5	-27.0	-0.35
TAFATF		843.7	-54.3	-0.62	850.2	-46.3	-0.59
UX3AWM		834.5	-63.5	-0.73	903.5	7.0	0.09
VJCWWW	*	873.5	-24.5	-0.28	1,016.0	119.5	1.53
VPWA8		966.9	68.9	0.79	974.7	78.2	1.00
VUUGFT		915.8	17.8	0.20	923.7	27.2	0.35
VZJUGG		880.1	-17.9	-0.20	891.7	-4.8	-0.06
W7KT6C		870.2	-27.8	-0.32	848.5	-48.0	-0.62
WF9N6R		852.3	-45.8	-0.52	840.1	-56.3	-0.72
WHFYA		967.5	69.5	0.79	971.0	74.5	0.95
WQ8GF4		820.2	-77.8	-0.89	832.5	-64.0	-0.82
WR6R9L		813.7	-84.4	-0.96	881.1	-15.4	-0.20
WZHGA		1,057.4	159.3	1.82	943.7	47.2	0.60



Rubber Interlaboratory Testing Program

Analysis 607

Report #226

4th Qtr 2025

Stress at 300% Elongation (psi)

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
X3ZX66		1,005.8	107.8	1.23	1,013.8	117.3	1.50
Y2NKZ9		1,046.0	148.0	1.69	1,057.0	160.5	2.06
YHNVGJ		861.5	-36.5	-0.42	763.6	-132.9	-1.70
YLN7DJ		739.0	-159.0	-1.82	709.0	-187.5	-2.40
YMJPEK		1,051.0	153.0	1.75	938.5	42.0	0.54
ZH4E2G		877.0	-21.0	-0.24	876.0	-20.5	-0.26
ZKAWZD		983.0	85.0	0.97	893.0	-3.5	-0.04
ZL7CCA		970.0	72.0	0.82	1,023.5	127.0	1.63

Grand Means		Summary Statistics	
	898.04 psi		896.48 psi
Stnd Dev Btwn Labs	87.51 psi		78.04 psi
		Statistics based on 81 of 83 reporting participants	

Grand Means		Summary Statistics in SI Units	
	6.1917 MPa		6.1800 MPa
Stnd Dev Btwn Labs	0.6033 MPa		0.5400 MPa
		Statistics based on 81 of 83 reporting participants	

Samples D51-D52: Polyisoprene Compound & D53-D54: Polyisoprene Compound

Comments on Assigned Data Flags for Test #607

4NEYCJ (X) - Inconsistent in testing between samples.

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



Rubber Interlaboratory Testing Program

Analysis 607

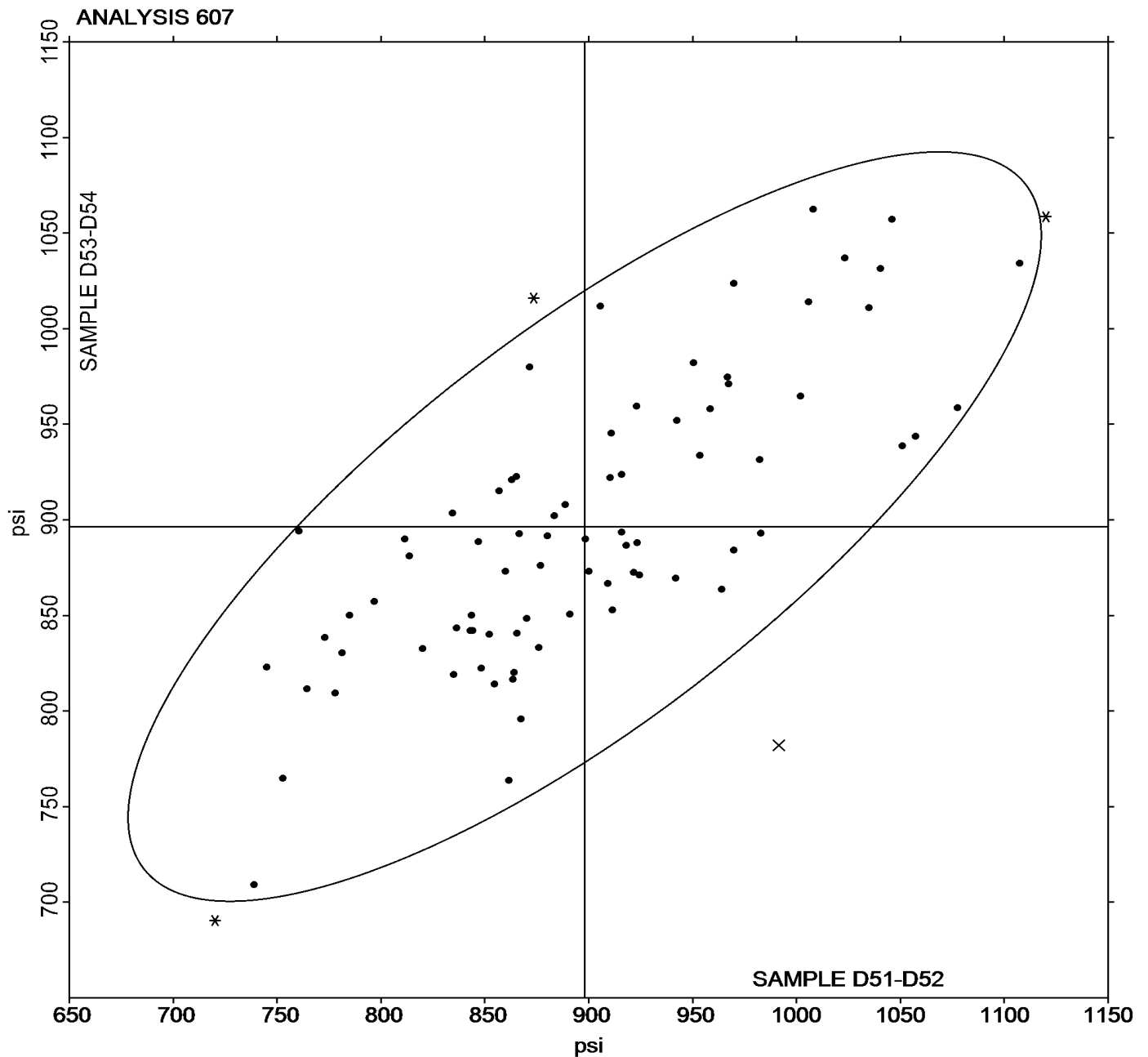
Stress at 300% Elongation (psi)

Report #226

4th Qtr 2025

Grand Mean Sample **D51-D52** = 898.04 psi

Grand Mean Sample **D53-D54** = 896.48 psi





Rubber Interlaboratory Testing Program

Analysis 608

Report #226

4th Qtr 2025

Stress at 100% Elongation (psi)

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BG7UW	*	235.0	41.0	2.52	232.5	40.6	2.79
2CAWZB		213.9	19.9	1.23	211.0	19.1	1.32
2K62UC		181.4	-12.7	-0.78	176.5	-15.5	-1.07
2LXRZQ		199.0	5.0	0.31	205.5	13.6	0.93
3ZZJKV		207.4	13.4	0.82	186.4	-5.6	-0.38
43YDFH	*	227.0	33.0	2.03	201.5	9.6	0.66
4DGXYE		200.2	6.1	0.38	199.4	7.5	0.52
4NEYCJ	X	209.0	15.0	0.92	170.0	-21.9	-1.51
6E8J6B		204.0	10.0	0.61	188.0	-3.9	-0.27
6F3YH8		184.0	-10.0	-0.62	185.0	-6.9	-0.48
6J6XTZ		202.5	8.5	0.52	197.0	5.1	0.35
6VFB9F		178.4	-15.7	-0.96	183.5	-8.5	-0.58
77BZ48		222.5	28.5	1.75	209.0	17.1	1.18
788J79	*	231.5	37.5	2.31	235.5	43.6	3.00
7NQCWX		198.7	4.7	0.29	184.9	-7.0	-0.48
7T4X4J		194.3	0.3	0.02	186.2	-5.8	-0.40
7Z8WGU	X	137.1	-57.0	-3.51	161.7	-30.2	-2.08
8DLPFK		181.3	-12.8	-0.79	172.6	-19.3	-1.33
8LL46T		195.1	1.0	0.06	212.5	20.5	1.41
8QYPCE		181.0	-13.0	-0.80	176.0	-15.9	-1.10
9A7E3G		209.0	15.0	0.92	207.5	15.6	1.07
AF7CQB		215.0	20.9	1.29	214.6	22.7	1.56
AK24ZT		190.7	-3.3	-0.20	186.0	-5.9	-0.41
ATEVN7		178.5	-15.5	-0.96	197.5	5.6	0.38
AWE8K7		190.4	-3.7	-0.23	190.9	-1.0	-0.07
BVWDJW		192.0	-2.0	-0.13	186.0	-5.9	-0.41
C2XB8Q		167.8	-26.3	-1.62	179.6	-12.4	-0.85
C3Q2D6		187.5	-6.5	-0.40	188.5	-3.4	-0.24
C7BWEC		184.2	-9.8	-0.61	183.5	-8.5	-0.58
CBKAWB		191.5	-2.6	-0.16	187.1	-4.8	-0.33
DG7MB4		181.3	-12.8	-0.79	173.3	-18.6	-1.28
DTGWZE		176.9	-17.1	-1.06	175.5	-16.4	-1.13
EBWLRL		157.4	-36.7	-2.26	171.9	-20.1	-1.38
EFA7X8		186.0	-8.0	-0.50	194.0	2.1	0.14
EN4EJX		197.5	3.4	0.21	188.6	-3.3	-0.23
ETDR2W		225.0	31.0	1.91	223.0	31.1	2.14
EX8NPM		209.6	15.5	0.96	221.2	29.2	2.01
F326FM		179.1	-14.9	-0.92	182.7	-9.2	-0.63

**Rubber Interlaboratory Testing Program****Analysis 608****Report #226****4th Qtr 2025****Stress at 100% Elongation (psi)**

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FK3PFV		166.8	-27.2	-1.68	170.3	-21.7	-1.49
G8ME3P		187.3	-6.7	-0.41	178.7	-13.3	-0.91
GGBDQA		175.5	-18.6	-1.14	175.5	-16.4	-1.13
HJGXGV		206.3	12.2	0.75	215.1	23.2	1.60
J42C9P		187.1	-6.9	-0.43	191.5	-0.5	-0.03
JBLFFR		164.5	-29.5	-1.82	177.0	-14.9	-1.03
JBM8BE		227.0	33.0	2.03	217.0	25.1	1.73
KJQK43		181.9	-12.2	-0.75	190.8	-1.1	-0.08
KPXDXX		197.0	3.0	0.18	188.5	-3.4	-0.24
KQTTAV		200.5	6.5	0.40	184.2	-7.8	-0.53
LBAMDL		174.8	-19.3	-1.19	184.9	-7.0	-0.48
LKKRQC		185.5	-8.5	-0.53	186.5	-5.4	-0.37
MCNCED		187.5	-6.5	-0.40	195.5	3.6	0.25
MCZ9KH		204.5	10.5	0.64	199.0	7.1	0.49
MUGETT		217.5	23.5	1.45	206.5	14.6	1.00
N3E82M		170.6	-23.5	-1.45	173.3	-18.7	-1.29
NQ26FP		189.5	-4.5	-0.28	182.0	-9.9	-0.68
NQWMHQ		190.5	-3.5	-0.22	182.5	-9.4	-0.65
P46PJE	X	219.0	25.0	1.54	246.0	54.1	3.72
P46T9J		195.0	1.0	0.06	182.0	-9.9	-0.68
P8GXHX		198.0	4.0	0.24	198.0	6.1	0.42
PZKX8C		174.0	-20.0	-1.24	186.0	-5.9	-0.41
QQAVLB		191.5	-2.6	-0.16	185.6	-6.3	-0.43
R2NFGR		206.0	12.0	0.74	208.5	16.6	1.14
RU4CBA		185.0	-9.0	-0.56	190.0	-1.9	-0.13
RU8WYD		201.2	7.1	0.44	205.5	13.6	0.94
RYGXHV		181.3	-12.8	-0.79	176.9	-15.0	-1.03
TAFATF		207.2	13.1	0.81	206.7	14.7	1.01
UX3AWM	X	234.0	40.0	2.46	246.0	54.1	3.72
VJCWWW	X	187.5	-6.5	-0.40	218.0	26.1	1.80
VPWA8		192.2	-1.9	-0.12	196.3	4.3	0.30
VUUGFT		193.5	-0.6	-0.04	196.0	4.1	0.28
VZJUGG		207.1	13.0	0.80	212.6	20.7	1.42
W7KT6C		187.1	-6.9	-0.43	183.5	-8.5	-0.58
WF9N6R		187.3	-6.8	-0.42	182.7	-9.2	-0.63
WHFYA		193.5	-0.5	-0.03	193.5	1.6	0.11
WQ8GF4		176.9	-17.1	-1.05	178.4	-13.5	-0.93



Rubber Interlaboratory Testing Program

Analysis 608

Report #226

4th Qtr 2025

Stress at 100% Elongation (psi)

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
WR6R9L		179.8	-14.2	-0.88	183.5	-8.5	-0.58
WZHGAE	*	226.1	32.1	1.98	198.7	6.8	0.47
X3ZX66		198.7	4.7	0.29	192.2	0.2	0.02
Y2NKZ9		197.0	3.0	0.18	194.0	2.1	0.14
YHNVGJ		185.6	-8.4	-0.52	167.5	-24.4	-1.68
YLN7DJ		181.5	-12.5	-0.77	173.5	-18.4	-1.27
YMJPEK		204.5	10.5	0.64	185.5	-6.4	-0.44
ZH4E2G		188.5	-5.5	-0.34	184.5	-7.4	-0.51
ZKAWZD		219.5	25.5	1.57	197.0	5.1	0.35
ZL7CCA		195.5	1.5	0.09	203.5	11.6	0.80

Grand Means		Summary Statistics	
	194.05 psi		191.94 psi
Stnd Dev Btwn Labs	16.23 psi		14.52 psi
		Statistics based on 80 of 85 reporting participants	

Grand Means		Summary Statistics in SI Units	
	1.3379 MPa		1.3200 MPa
Stnd Dev Btwn Labs	0.1119 MPa		0.1000 MPa
		Statistics based on 80 of 85 reporting participants	

Samples D51-D52: Polyisoprene Compound & D53-D54: Polyisoprene Compound

Comments on Assigned Data Flags for Test #608

- 4NEYCJ (X) - Inconsistent in testing between samples.
- 7Z8WGU (X) - Data for sample group D51-D52 are low. Inconsistent within the determinations of sample group D51-D52.
- P46PJE (X) - Data for sample group D53-D54 are high. Inconsistent within the determinations of sample group D53-D54.
- UX3AWM (X) - Data for sample group D53-D54 are high.
- VJCWWW (X) - Inconsistent in testing between samples.



Rubber Interlaboratory Testing Program

Analysis 608

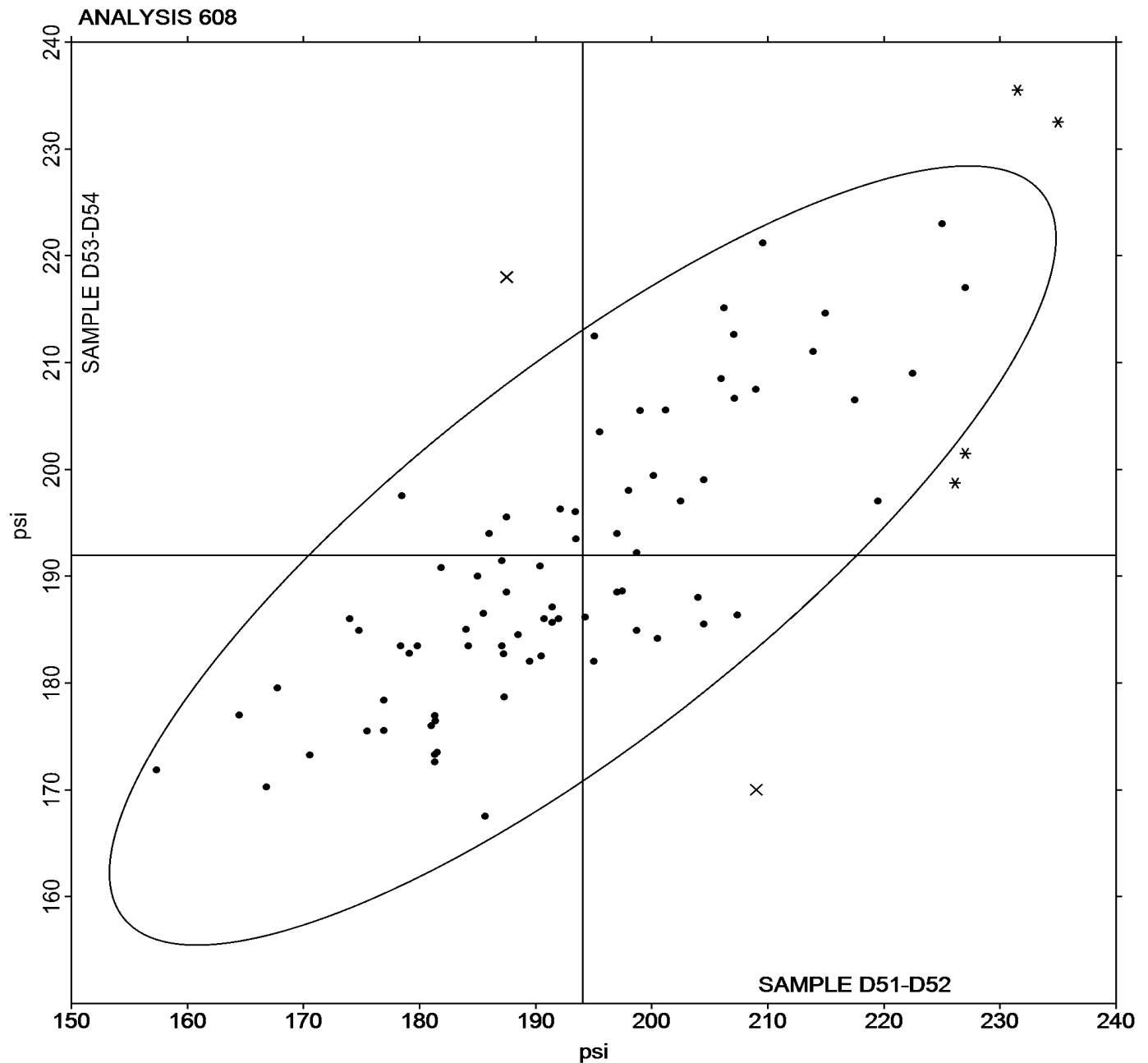
Stress at 100% Elongation (psi)

Report #226

4th Qtr 2025

Grand Mean Sample **D51-D52** = 194.05 psi

Grand Mean Sample **D53-D54** = 191.94 psi





Rubber Interlaboratory Testing Program

Analysis 620

Hardness (Shore A/Type A)

Report #226

4th Qtr 2025

WebCode	Data Flag	Sample D51-D52			Sample D53-D54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2BG7UW		48.00	0.55	0.29	48.50	0.73	0.42	BT
2CAWZB		46.70	-0.75	-0.40	48.05	0.28	0.16	BT
2K62UC		46.70	-0.75	-0.40	47.00	-0.77	-0.45	BT
2LXRZQ		48.65	1.20	0.64	49.65	1.88	1.09	BT
3ZZJKV		45.80	-1.65	-0.88	44.90	-2.87	-1.66	BT
4DGXYE		47.35	-0.10	-0.05	47.40	-0.37	-0.21	BT
4NEYCJ		47.45	0.00	0.00	46.85	-0.92	-0.53	BT
66LEXB		49.55	2.10	1.12	50.15	2.38	1.38	BT
6E8J6B		50.00	2.55	1.36	49.00	1.23	0.71	BT
6F3YH8		48.45	1.00	0.53	48.00	0.23	0.13	BT
6J6XTZ		48.00	0.55	0.29	48.50	0.73	0.42	BT
6VFB9F		44.00	-3.45	-1.83	44.55	-3.22	-1.86	BT
77BZ48		48.05	0.60	0.32	48.80	1.03	0.59	BT
788J79		47.45	0.00	0.00	48.45	0.68	0.39	BT
7NQCWX		48.35	0.90	0.48	48.95	1.18	0.68	BT
7P8ANX		48.00	0.55	0.29	49.75	1.98	1.14	BT
7T4X4J		50.00	2.55	1.36	49.50	1.73	1.00	BT
7Z8WGU		45.75	-1.70	-0.90	46.25	-1.52	-0.88	BT
8DLPFK		47.85	0.40	0.21	48.65	0.88	0.51	BT
8LL46T		48.00	0.55	0.29	48.50	0.73	0.42	BT
8QYPCE		49.00	1.55	0.83	48.50	0.73	0.42	HH
9A7E3G		49.70	2.25	1.20	49.65	1.88	1.09	BT
AAZJWF		47.50	0.05	0.03	47.50	-0.27	-0.16	BT
AF7CQB		48.45	1.00	0.53	48.25	0.48	0.28	BT
AK24ZT		48.00	0.55	0.29	48.00	0.23	0.13	BT
ATBC23	X	45.45	-2.00	-1.06	43.25	-4.52	-2.62	BT
ATEVN7		48.50	1.05	0.56	49.00	1.23	0.71	BT
AWBMW3		49.50	2.05	1.09	49.50	1.73	1.00	BT
AWE8K7		46.45	-1.00	-0.53	47.75	-0.02	-0.01	BT
BBQ3ET	X	56.00	8.55	4.55	55.00	7.23	4.18	HH
BVWDJW		49.90	2.45	1.30	49.80	2.03	1.17	HH
C2XB8Q	*	44.50	-2.95	-1.57	47.00	-0.77	-0.45	BT
C7BWEC	*	47.60	0.15	0.08	49.70	1.93	1.12	BT
CBKAWB		43.40	-4.05	-2.15	44.15	-3.62	-2.09	BT
DG7MB4		49.65	2.20	1.17	50.25	2.48	1.43	BT
DTGWZE		48.50	1.05	0.56	49.50	1.73	1.00	HH
EBWLRL		46.00	-1.45	-0.77	47.50	-0.27	-0.16	BT
EFA7X8		46.20	-1.25	-0.66	46.55	-1.22	-0.71	BT



Rubber Interlaboratory Testing Program

Analysis 620

Hardness (Shore A/Type A)

Report #226

4th Qtr 2025

WebCode	Data Flag	Sample D51-D52			Sample D53-D54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
EN4EJX		46.00	-1.45	-0.77	46.00	-1.77	-1.02	BT
ETDR2W		51.00	3.55	1.89	51.20	3.43	1.98	HH
EU8H7B		47.50	0.05	0.03	48.50	0.73	0.42	HH
EX8NPM		49.00	1.55	0.83	49.50	1.73	1.00	BT
F326FM		49.50	2.05	1.09	50.00	2.23	1.29	BT
FK3PFV		47.25	-0.20	-0.11	46.75	-1.02	-0.59	BT
G8ME3P		45.55	-1.90	-1.01	45.15	-2.62	-1.52	BT
GGBDQA		47.65	0.20	0.11	47.80	0.03	0.02	XX
HJGXGV		48.80	1.35	0.72	47.50	-0.27	-0.16	BT
J42C9P		48.00	0.55	0.29	48.00	0.23	0.13	BT
JBLFFR		45.00	-2.45	-1.30	47.00	-0.77	-0.45	BT
JBM8BE		49.50	2.05	1.09	50.00	2.23	1.29	HH
KJQK43		45.45	-2.00	-1.06	44.70	-3.07	-1.78	BT
KPXDXX		47.73	0.28	0.15	46.85	-0.92	-0.53	BT
KQTTAV		49.00	1.55	0.83	48.00	0.23	0.13	BT
LBAMDL		47.00	-0.45	-0.24	48.00	0.23	0.13	BT
LBXTXL	*	42.50	-4.95	-2.63	44.50	-3.27	-1.89	BT
LKKRQC		47.90	0.45	0.24	48.25	0.48	0.28	BT
MCZ9KH		46.55	-0.90	-0.48	46.65	-1.12	-0.65	BT
MUGETT		48.80	1.35	0.72	49.40	1.63	0.94	BT
N3E82M		47.25	-0.20	-0.11	46.75	-1.02	-0.59	XX
NQ26FP	X	11.20	-36.25	-19.28	11.45	-36.32	-21.01	BT
NQWMHQ		48.75	1.30	0.69	48.40	0.63	0.36	BT
P46PJE		47.00	-0.45	-0.24	47.00	-0.77	-0.45	BT
P46T9J		50.05	2.60	1.38	49.50	1.73	1.00	HH
P8GXHX		45.25	-2.20	-1.17	45.75	-2.02	-1.17	BT
PZKX8C		48.00	0.55	0.29	48.50	0.73	0.42	BT
QQAVLB		49.90	2.45	1.30	49.85	2.08	1.20	BT
R2NFR		43.50	-3.95	-2.10	43.50	-4.27	-2.47	BT
RU4CBA		47.50	0.05	0.03	47.00	-0.77	-0.45	BT
RU8WYD		46.00	-1.45	-0.77	46.50	-1.27	-0.74	BT
RYGXHV		46.60	-0.85	-0.45	46.20	-1.57	-0.91	BT
TAFATF		50.10	2.65	1.41	50.25	2.48	1.43	BT
UX3AWM		45.50	-1.95	-1.04	46.50	-1.27	-0.74	BT
VJCWWW		47.00	-0.45	-0.24	46.50	-1.27	-0.74	HH
VPWA8		48.45	1.00	0.53	48.95	1.18	0.68	BT
VUUGFT		49.80	2.35	1.25	49.30	1.53	0.88	BT



Rubber Interlaboratory Testing Program
Analysis 620
Hardness (Shore A/Type A)

Report #226
4th Qtr 2025

Results by Reading Time (as reported by laboratory)

Reading Time	Sample D51-D52 <i>Polyisoprene Compound</i>			Sample D53-D54 <i>Polyisoprene Compound</i>			Labs Incl / Rpt	
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM		
Reading time not reported	47.25	0.00	-0.20	46.75	0.00	-1.02	1	1
Readings taken within 0 - 5 seconds	47.70	1.74	0.25	47.93	1.62	0.16	62	66
Readings taken at 5 seconds	46.27	1.69	-1.18	46.79	1.64	-0.98	7	7
Readings taken after 5+ seconds	46.63	1.08	-0.81	46.73	1.46	-1.05	6	8
Maximum hardness indicator used	48.38	1.87	0.93	48.63	1.96	0.86	10	11

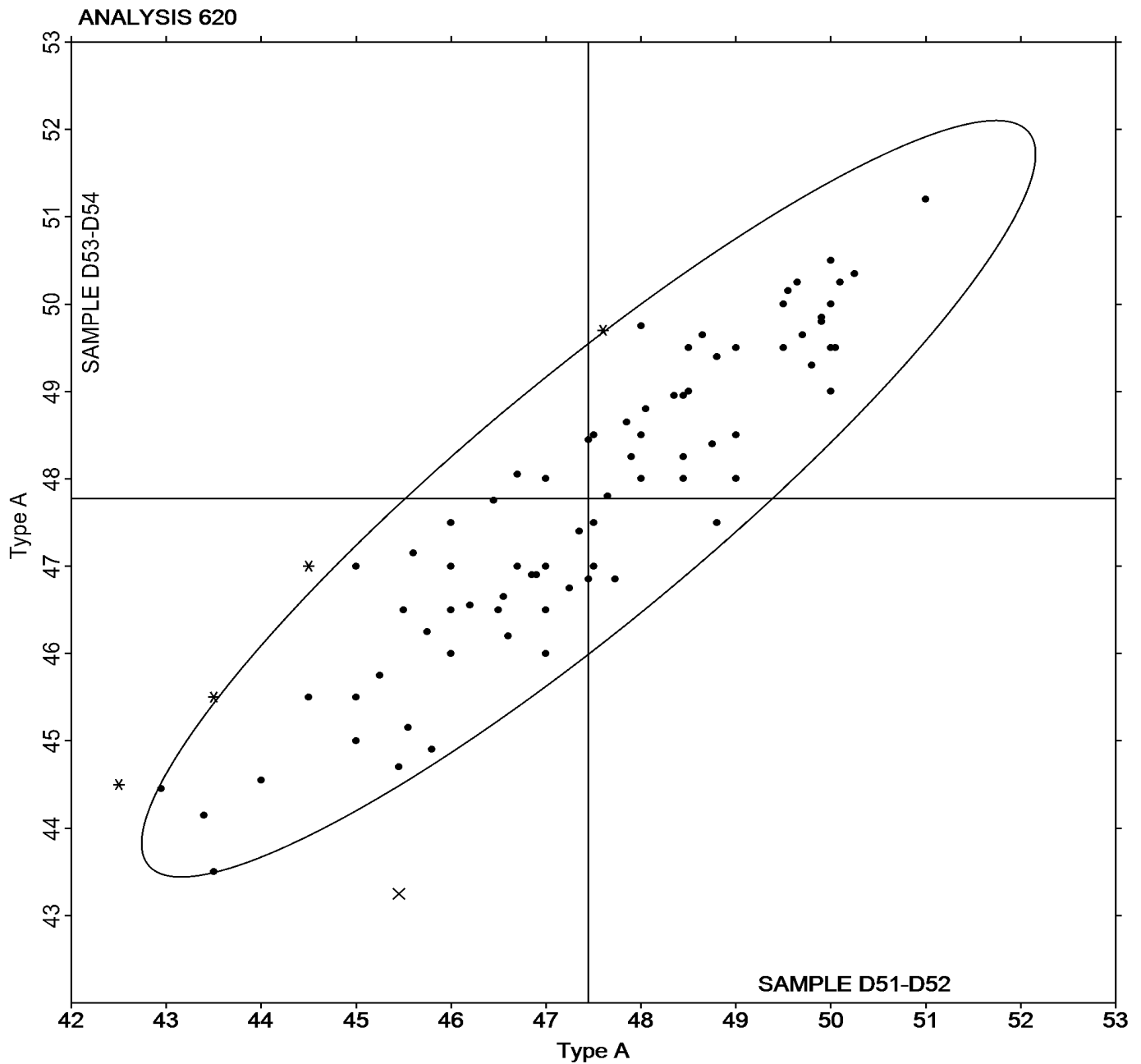


Rubber Interlaboratory Testing Program
Analysis 620
Hardness (Shore A/Type A)

Report #226
4th Qtr 2025

Grand Mean Sample **D51-D52** = 47.448 Type A

Grand Mean Sample **D53-D54** = 47.772 Type A





Rubber Interlaboratory Testing Program
Analysis 621
Density

Report #226
4th Qtr 2025

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BG7UW		1.131	-0.001	-0.49	1.132	-0.001	-0.21
2CAWZB	*	1.139	0.007	2.46	1.136	0.004	1.40
2K62UC		1.138	0.006	2.22	1.139	0.006	2.37
2LXRZQ		1.135	0.003	1.03	1.137	0.004	1.47
43YDFH		1.132	0.000	-0.16	1.133	0.000	-0.03
4DGXYE	X	1.131	-0.002	-0.67	1.126	-0.007	-2.46
4NEYCJ	*	1.136	0.004	1.40	1.139	0.006	2.22
6E8J6B		1.136	0.003	1.21	1.137	0.004	1.66
6F3YH8		1.133	0.001	0.27	1.132	-0.001	-0.21
6J6XTZ		1.132	-0.001	-0.22	1.133	0.000	0.12
77BZ48		1.135	0.002	0.84	1.133	0.000	0.16
7T4X4J		1.132	-0.001	-0.20	1.131	-0.002	-0.59
7Z8WGU		1.133	0.001	0.42	1.133	0.000	0.14
8DLPFK		1.129	-0.004	-1.43	1.130	-0.003	-0.96
8LL46T		1.131	-0.001	-0.35	1.131	-0.002	-0.63
8QYPCE		1.134	0.001	0.46	1.134	0.001	0.54
9A7E3G		1.134	0.001	0.46	1.135	0.002	0.91
AK24ZT		1.133	0.001	0.27	1.134	0.001	0.54
ATEVN7		1.133	0.001	0.31	1.134	0.001	0.37
AWE8K7		1.136	0.003	1.25	1.134	0.002	0.68
BBQ3ET		1.133	0.001	0.27	1.134	0.001	0.35
BVWDJW		1.130	-0.002	-0.75	1.131	-0.001	-0.51
C2XB8Q	X	1.129	-0.004	-1.43	1.117	-0.016	-6.02
C3Q2D6		1.132	0.000	-0.11	1.132	-0.001	-0.40
C7BWEC		1.134	0.001	0.53	1.135	0.002	0.83
CBKAWB		1.133	0.001	0.27	1.133	0.000	0.16
EBWLRL		1.135	0.003	1.03	1.136	0.003	1.28
EFA7X8		1.134	0.002	0.82	1.133	0.000	0.18
EN4EJX	X	1.144	0.012	4.37	1.143	0.011	4.02
ETDR2W		1.134	0.002	0.72	1.135	0.003	1.04
EX8NPM		1.132	0.000	-0.11	1.132	-0.001	-0.21
F326FM		1.131	-0.001	-0.49	1.131	-0.002	-0.59
FK3PFV		1.131	-0.001	-0.45	1.131	-0.002	-0.63
G8ME3P	*	1.131	-0.002	-0.67	1.134	0.001	0.54
GGBDQA	X	1.127	-0.006	-2.19	1.131	-0.002	-0.77
HJGXGV		1.130	-0.002	-0.75	1.132	0.000	-0.12
J42C9P		1.129	-0.004	-1.43	1.130	-0.003	-1.15
JBLFFR		1.133	0.000	0.08	1.134	0.001	0.54



Rubber Interlaboratory Testing Program
Analysis 621
Density

Report #226
4th Qtr 2025

WebCode	Data Flag	Sample D51-D52			Sample D53-D54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JBM8BE		1.135	0.003	1.08	1.136	0.003	1.15
KJQK43		1.133	0.001	0.31	1.135	0.002	0.74
KQTTAV		1.130	-0.002	-0.77	1.130	-0.002	-0.87
LBAMDL	X	1.127	-0.006	-2.11	1.132	0.000	-0.08
LKKRQC		1.130	-0.002	-0.86	1.130	-0.003	-0.96
MCZ9KH		1.133	0.001	0.31	1.133	0.000	0.10
MUGETT		1.133	0.001	0.27	1.133	0.000	0.16
N3E82M		1.131	-0.001	-0.45	1.131	-0.002	-0.63
NQ26FP		1.133	0.001	0.27	1.134	0.001	0.35
NQWMHQ		1.133	0.001	0.29	1.132	0.000	-0.04
P46PJE		1.134	0.002	0.65	1.134	0.002	0.57
P46T9J	X	1.136	0.004	1.55	1.132	0.000	-0.18
P8GXHX		1.130	-0.003	-1.05	1.129	-0.004	-1.34
QQAULB		1.134	0.001	0.46	1.132	-0.001	-0.21
R2NFGR		1.134	0.002	0.65	1.136	0.003	1.10
RU4CBA		1.130	-0.002	-0.81	1.129	-0.004	-1.50
VJCWWW		1.134	0.001	0.55	1.134	0.001	0.39
VPWA8		1.128	-0.004	-1.62	1.127	-0.006	-2.09
VUUGFT		1.133	0.000	0.08	1.133	0.000	-0.03
VZJUGG		1.135	0.003	1.16	1.135	0.002	0.76
WF9N6R	X	1.141	0.009	3.29	1.127	-0.006	-2.27
WHFYA		1.127	-0.006	-2.19	1.127	-0.006	-2.27
WQ8GF4		1.128	-0.005	-1.81	1.129	-0.004	-1.47
WZHGAE		1.132	0.000	-0.09	1.131	-0.002	-0.61
X3ZX66		1.136	0.004	1.40	1.135	0.002	0.91
X69DBB		1.133	0.000	0.08	1.133	0.001	0.22
XJP9PL		1.130	-0.002	-0.79	1.130	-0.003	-0.96
Y2NKZ9		1.130	-0.002	-0.79	1.133	0.001	0.29
YHNVGJ	*	1.126	-0.007	-2.56	1.128	-0.005	-1.90
YLN7DJ		1.129	-0.003	-1.24	1.128	-0.005	-1.71
YMJPEK		1.128	-0.004	-1.62	1.129	-0.004	-1.47
ZH4E2G		1.135	0.003	1.03	1.135	0.002	0.72
ZKAWZD		1.135	0.002	0.84	1.135	0.002	0.72
ZPP8DG		1.128	-0.004	-1.47	1.129	-0.004	-1.39



Rubber Interlaboratory Testing Program
Analysis 621
Density

Report #226
4th Qtr 2025

Grand Means		Summary Statistics	
	1.1323 g/cm ³ (Mg/m ³)		1.1326 g/cm ³ (Mg/m ³)
Stnd Dev Btwn Labs	0.0026 g/cm ³ (Mg/m ³)		0.0027 g/cm ³ (Mg/m ³)
Statistics based on 65 of 72 reporting participants			

Samples D51-D52: Polyisoprene Compound & D53-D54: Polyisoprene Compound

Comments on Assigned Data Flags for Test #621

- 4DGXYE (X) - Inconsistent in testing between samples.
- C2XB8Q (X) - Data for sample group D53-D54 are low. Inconsistent within the determinations of sample group D53-D54.
- EN4EJX (X) - Data for all samples are high. Possible Systematic Error.
- GGBDQA (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample group D51-D52.
- LBAMD L (X) - Inconsistent in testing between samples.
- P46T9J (X) - Inconsistent in testing between samples.
- WF9N6R (X) - Data for sample group D51-D52 are high.



Rubber Interlaboratory Testing Program

Analysis 621

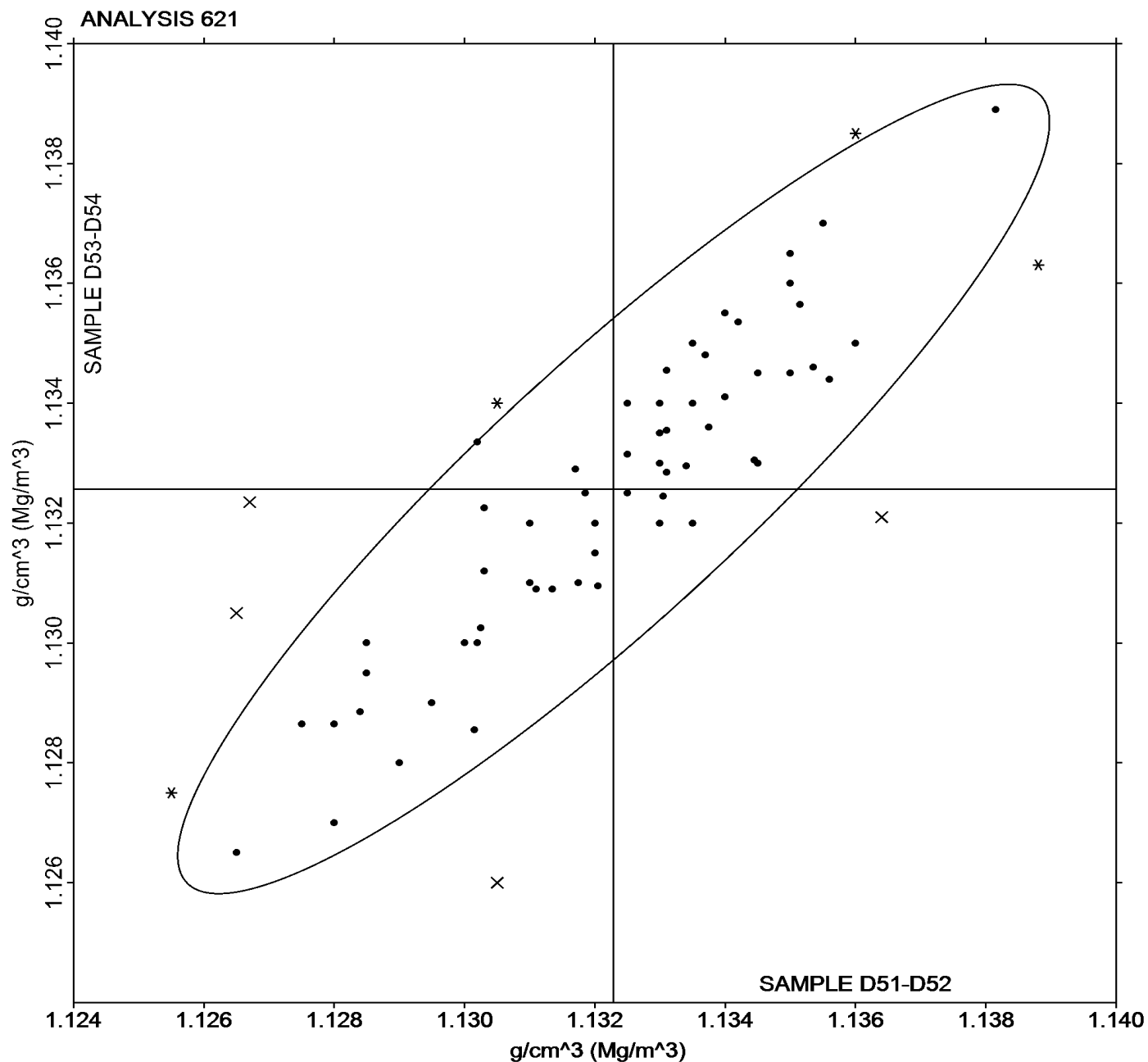
Density

Report #226

4th Qtr 2025

Grand Mean Sample **D51-D52** = 1.1323 g/cm³
(Mg/m³)

Grand Mean Sample **D53-D54** = 1.1326 g/cm³
(Mg/m³)





Rubber Interlaboratory Testing Program

Analysis 625

Hardness (Shore D/Type D)

Report #226

4th Qtr 2025

WebCode	Data Flag	Sample HD51-HD52			Sample HD53-HD54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
26FUY Y		76.50	0.90	0.37	87.50	3.50	1.93	BT
2K62UC		74.25	-1.35	-0.56	82.95	-1.05	-0.58	BT
3FPQF9		72.00	-3.60	-1.49	83.00	-1.00	-0.55	HH
3ZZJKV		71.10	-4.50	-1.87	82.30	-1.70	-0.94	BT
43YDFH		79.50	3.90	1.61	85.50	1.50	0.83	HH
4NEYCJ	X	95.50	19.90	8.24	95.60	11.60	6.40	BT
66LEXB		74.90	-0.70	-0.29	82.45	-1.55	-0.85	HH
6MK974		78.50	2.90	1.20	86.00	2.00	1.10	BT
6YU6ND		76.95	1.35	0.56	82.95	-1.05	-0.58	BT
7NQCWX		74.95	-0.65	-0.27	82.35	-1.65	-0.91	BT
7T4X4J		74.50	-1.10	-0.46	81.50	-2.50	-1.38	BT
8QU6NB		78.75	3.15	1.30	86.70	2.70	1.49	HH
8W2YH7		74.40	-1.20	-0.50	83.15	-0.85	-0.47	BT
9A7E3G		73.50	-2.10	-0.87	83.50	-0.50	-0.27	BT
AAZJWF		75.50	-0.10	-0.04	85.00	1.00	0.55	BT
ATBC23	X	50.15	-25.45	-10.54	63.95	-20.05	-11.05	BT
C2XB8Q		79.50	3.90	1.61	87.00	3.00	1.65	HH
DRM7UZ		71.95	-3.65	-1.51	80.00	-4.00	-2.20	BT
KEDYWG		74.95	-0.65	-0.27	83.75	-0.25	-0.14	XX
LGJNW6		76.00	0.40	0.16	85.50	1.50	0.83	HH
MHAA4Z		78.15	2.55	1.05	85.65	1.65	0.91	BT
N93R63		76.55	0.95	0.39	84.35	0.35	0.19	HH
NQ26FP	X	99.10	23.50	9.73	99.35	15.35	8.46	BT
PUUQMH		78.50	2.90	1.20	85.00	1.00	0.55	HH
QQA VLB		78.70	3.10	1.28	84.15	0.15	0.08	BT
RU8WYD		75.50	-0.10	-0.04	82.00	-2.00	-1.10	XX
VFDJBT		76.50	0.90	0.37	85.00	1.00	0.55	BT
WD4VDE		71.50	-4.10	-1.70	81.50	-2.50	-1.38	BT
WQ8GF4		75.60	0.00	0.00	84.35	0.35	0.19	BT
WRZBBM		75.00	-0.60	-0.25	85.00	1.00	0.55	BT
X69DBB		73.21	-2.39	-0.99	83.86	-0.14	-0.08	BT

Grand Means

75.604 Type D

Std Dev Btwn Labs

2.415 Type D

Summary Statistics

83.999 Type D

1.814 Type D

Statistics based on 28 of 31 reporting participants



Rubber Interlaboratory Testing Program
Analysis 625
Hardness (Shore D/Type D)

Report #226
4th Qtr 2025

Samples HD51-HD52: Hardness Disc & HD53-HD54: Hardness Disc

Comments on Assigned Data Flags for Test #625

4NEYCJ (X) - Data for all samples are high.

ATBC23 (X) - Data for all samples are low. Inconsistent within the determinations of sample group HD53-54.

NQ26FP (X) - Data for all Samples are high.

Key to Instrument Codes Reported by Participants

BT	Benchtop	HH	Handheld
XX	Specify Benchtop or Handheld Instrument		

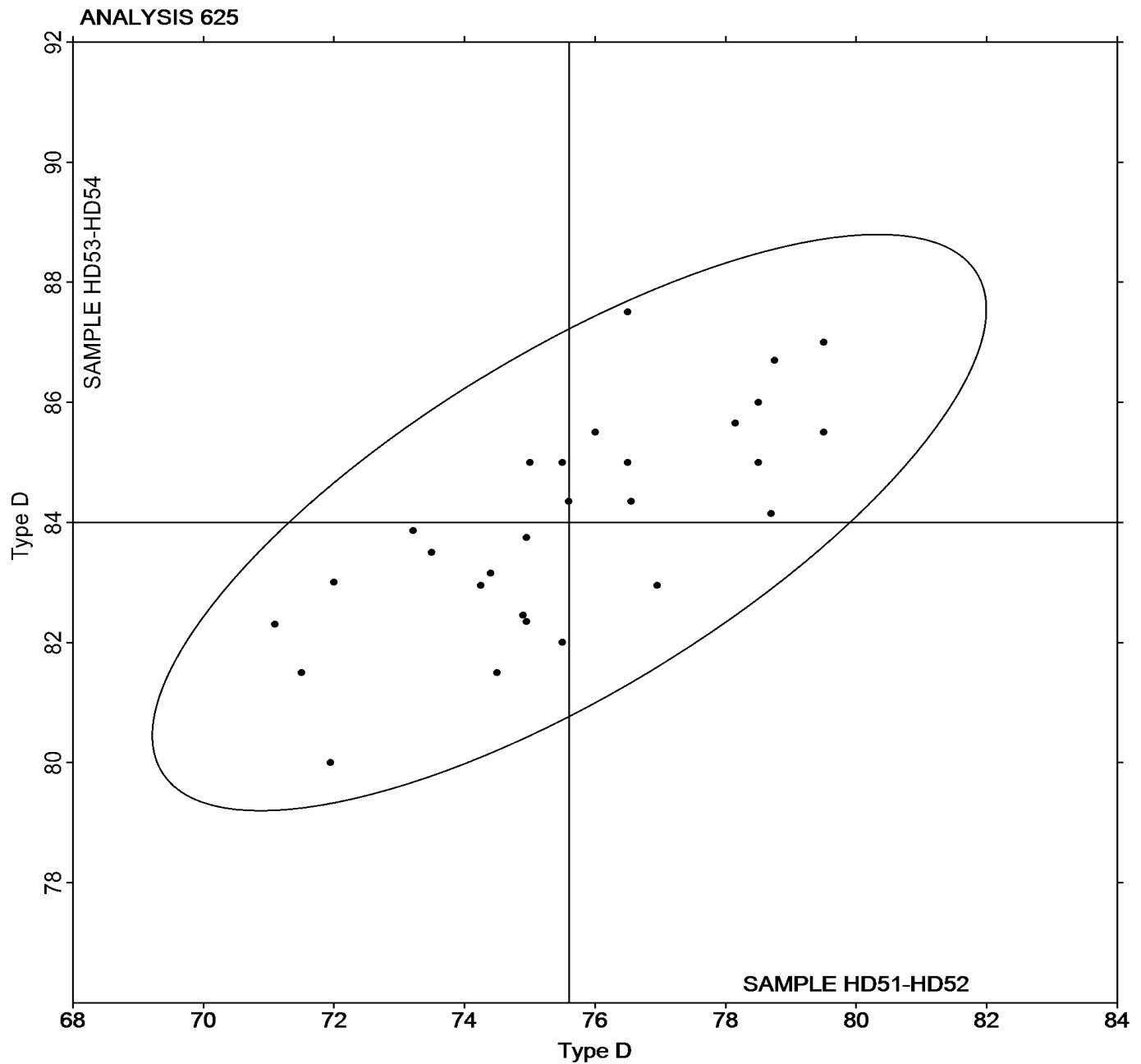


Rubber Interlaboratory Testing Program
Analysis 625
Hardness (Shore D/Type D)

Report #226
4th Qtr 2025

Grand Mean Sample **HD51-HD52** = 75.604 Type D

Grand Mean Sample **HD53-HD54** = 83.999 Type D





Rubber Interlaboratory Testing Program

Analysis 630

Report #226

4th Qtr 2025

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

WebCode	Data Flag	Sample			Sample M51-M52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
279K4D	M	No data reported for this sample			3,078.5	-18.8	-0.06
2CAWZB		3,410.6	79.0	0.53	2,683.2	-414.1	-1.25
2K62UC		3,346.0	14.4	0.10	3,427.1	329.7	0.99
2LXRZQ		3,288.5	-43.1	-0.29	3,261.5	164.2	0.49
4NEYCJ		3,306.5	-25.1	-0.17	3,144.0	46.7	0.14
8QYPCE		3,445.0	113.4	0.76	3,285.0	187.7	0.57
C2XB8Q		3,291.0	-40.6	-0.27	3,314.5	217.2	0.65
EBWLRL		3,280.1	-51.5	-0.34	2,501.9	-595.4	-1.79
EFA7X8		3,382.0	50.4	0.34	3,481.5	384.2	1.16
EN4EJX		3,247.1	-84.4	-0.56	3,005.5	-91.8	-0.28
ETDR2W		3,254.0	-77.6	-0.52	2,750.5	-346.8	-1.04
FK3PFV		3,099.0	-232.6	-1.55	3,316.9	219.6	0.66
HJGXGV		3,405.8	74.2	0.49	2,843.7	-253.6	-0.76
JBLFFR		3,236.5	-95.1	-0.63	3,218.0	120.7	0.36
KJQK43		3,607.8	276.3	1.84	3,594.8	497.5	1.50
KQTTAV		3,370.5	38.9	0.26	3,423.6	326.3	0.98
TAFATF		3,194.0	-137.6	-0.92	2,791.5	-305.8	-0.92
VUUGFT		3,555.9	224.3	1.50	2,877.7	-219.6	-0.66
WQ8GF4		2,994.3	-337.2	-2.25	2,736.2	-361.2	-1.09
WZHGAE		3,599.5	267.9	1.79	3,554.8	457.5	1.38
YHNVGJ		3,379.4	47.8	0.32	2,639.7	-457.6	-1.38
ZL7CCA		3,269.5	-62.1	-0.41	3,192.0	94.7	0.29

Grand Means

3,331.57 psi

3,097.32 psi

Std Dev Btwn Labs

149.86 psi

331.92 psi

Statistics based on 21 of 22 reporting participants

Summary Statistics

Grand Means

22.970 MPa

21.360 MPa

Std Dev Btwn Labs

1.033 MPa

2.290 MPa

Statistics based on 21 of 22 reporting participants

Summary Statistics in SI Units

Samples D51-D52: Polyisoprene Compound & M51-M52: Polyisoprene Compound



Rubber Interlaboratory Testing Program

Analysis 630

Report #226

4th Qtr 2025

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

Comments on Assigned Data Flags for Test #630

279K4D (M) - Participant did not submit data for sample group D51-52.

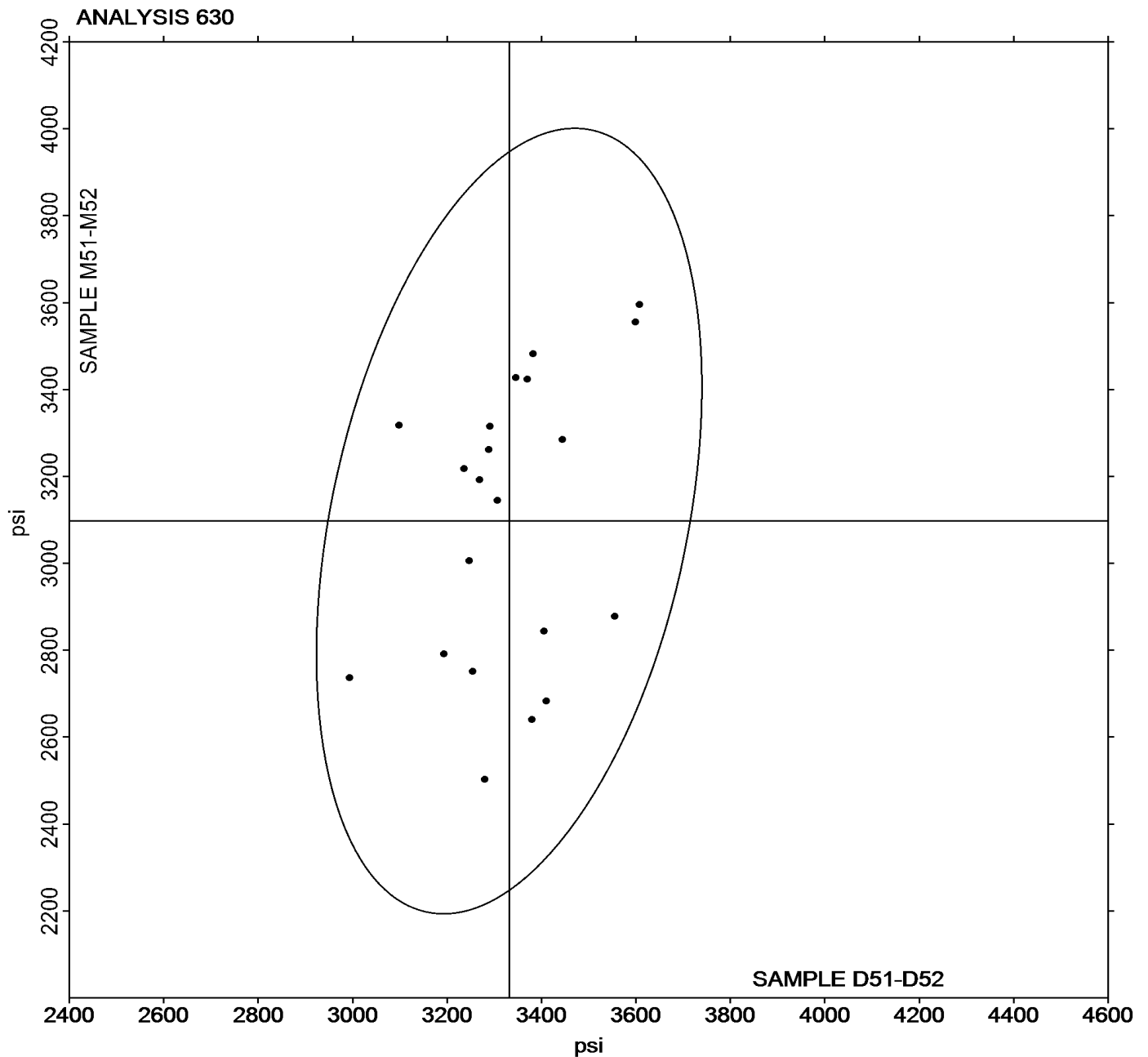


Rubber Interlaboratory Testing Program
Analysis 630
Tensile Strength: Precured vs. Lab-Cured Samples (psi)

Report #226
4th Qtr 2025

Grand Mean Sample **D51-D52** = 3,331.57 psi

Grand Mean Sample **M51-M52** = 3,097.32 psi





Rubber Interlaboratory Testing Program

Analysis 631

Report #226

4th Qtr 2025

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

WebCode	Data Flag	Sample			Sample M51-M52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
279K4D	M	No data reported for this sample			669.5	67.5	2.56
2CAWZB		603.5	-35.9	-1.46	567.0	-35.0	-1.33
2K62UC		651.0	11.6	0.47	623.5	21.5	0.82
2LXRZQ		653.0	13.6	0.56	608.0	6.0	0.23
4NEYCJ	X	608.5	-30.9	-1.26	836.5	234.5	8.90
8QYPCE		642.5	3.1	0.13	591.5	-10.5	-0.40
C2XB8Q		635.0	-4.4	-0.18	565.5	-36.5	-1.38
EBWLRL		653.5	14.1	0.58	578.5	-23.5	-0.89
EFA7X8		655.0	15.6	0.64	628.5	26.5	1.01
EN4EJX		628.5	-10.9	-0.44	621.0	19.0	0.72
ETDR2W		605.0	-34.4	-1.40	591.0	-11.0	-0.42
FK3PFV		644.4	5.0	0.20	620.0	18.1	0.69
HJGXGV		652.0	12.6	0.52	602.5	0.5	0.02
JBLFFR		658.5	19.1	0.78	630.0	28.0	1.06
KJQK43		686.6	47.2	1.93	626.2	24.3	0.92
KQTTAV		657.3	17.9	0.73	632.2	30.3	1.15
TAFATF		666.2	26.8	1.09	617.3	15.3	0.58
VUUGFT		637.6	-1.8	-0.07	580.5	-21.5	-0.81
WQ8GF4		604.2	-35.2	-1.44	538.4	-63.6	-2.41
WZHGAE		597.9	-41.5	-1.70	604.0	2.0	0.08
YHNVGJ		650.0	10.6	0.43	628.0	26.0	0.99
ZL7CCA		606.0	-33.4	-1.36	585.5	-16.5	-0.62

Grand Means		Summary Statistics	
	639.38 percent		601.96 percent
Std Dev Btwn Labs	24.49 percent		26.36 percent
Statistics based on 20 of 22 reporting participants			

Samples D51-D52: Polyisoprene Compound & M51-M52: Polyisoprene Compound

Comments on Assigned Data Flags for Test #631

279K4D (M) - Participant did not submit data for sample group D51-52.

4NEYCJ (X) - Data for sample group M51-M52 are high. Inconsistent within the determinations of sample group M51-M52.



Rubber Interlaboratory Testing Program

Analysis 631

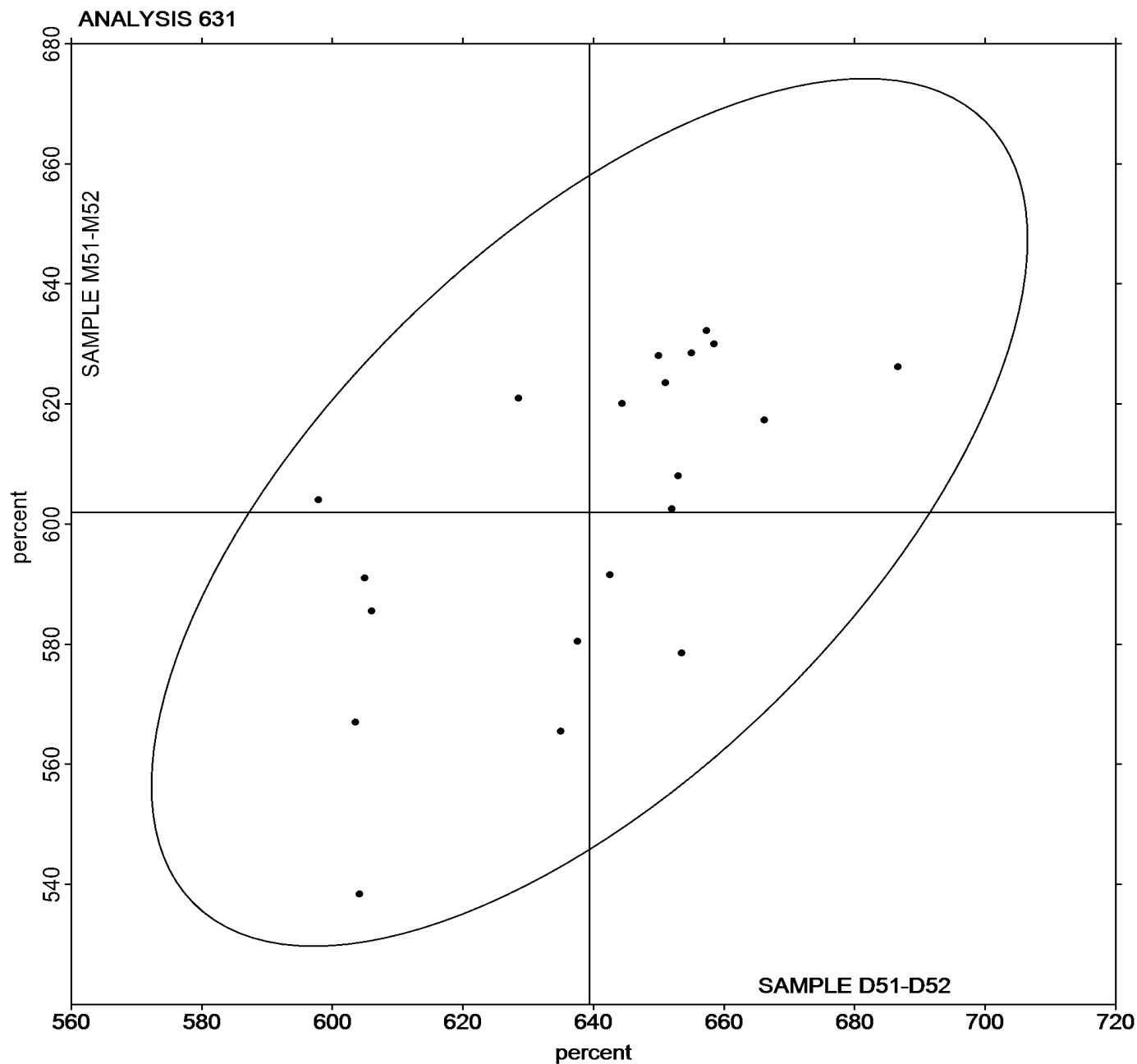
Report #226

4th Qtr 2025

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

Grand Mean Sample **D51-D52** = 639.38 percent

Grand Mean Sample **M51-M52** = 601.96 percent





Rubber Interlaboratory Testing Program

Analysis 632

Report #226

4th Qtr 2025

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

WebCode	Data Flag	Sample			Sample M51-M52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
279K4D	M	No data reported for this sample			764.5	-194.8	-1.77
2CAWZB		1,023.3	140.0	1.59	818.7	-140.5	-1.27
2K62UC		864.2	-19.0	-0.22	1,014.1	54.8	0.50
2LXRZQ		857.0	-26.2	-0.30	1,016.0	56.7	0.51
4NEYCJ		991.5	108.3	1.23	964.5	5.2	0.05
8QYPCE		865.5	-17.7	-0.20	1,059.0	99.7	0.90
C2XB8Q		781.5	-101.8	-1.16	1,112.2	152.9	1.39
EBWLRL		773.1	-110.2	-1.25	723.0	-236.3	-2.14
EFA7X8		847.0	-36.2	-0.41	971.5	12.2	0.11
EN4EJX		854.8	-28.4	-0.32	886.0	-73.3	-0.66
ETDR2W		1,040.5	157.3	1.79	1,037.0	77.7	0.70
FK3PFV		752.7	-130.5	-1.48	1,018.4	59.2	0.54
HJGXGV		911.1	27.8	0.32	961.3	2.0	0.02
JBLFFR		785.0	-98.2	-1.12	947.5	-11.8	-0.11
KJQK43		865.2	-18.1	-0.21	1,103.7	144.5	1.31
KQTTAV		867.4	-15.8	-0.18	1,027.2	67.9	0.62
TAFATF		843.7	-39.5	-0.45	828.1	-131.2	-1.19
VUUGFT		915.8	32.6	0.37	866.6	-92.7	-0.84
WQ8GF4		820.2	-63.1	-0.72	918.1	-41.2	-0.37
WZHGAE		1,057.4	174.1	1.98	1,093.8	134.5	1.22
YHNVGJ		861.5	-21.7	-0.25	762.9	-196.4	-1.78
ZL7CCA		970.0	86.8	0.99	1,015.5	56.2	0.51

Summary Statistics

Grand Means

883.25 psi

959.29 psi

Std Dev Btwn Labs

88.03 psi

110.26 psi

Statistics based on 21 of 22 reporting participants

Summary Statistics in SI Units

Grand Means

6.0897 MPa

6.6100 MPa

Std Dev Btwn Labs

0.6070 MPa

0.7600 MPa

Statistics based on 21 of 22 reporting participants

Samples D51-D52: Polyisoprene Compound & M51-M52: Polyisoprene Compound



Rubber Interlaboratory Testing Program

Report #226

Analysis 632

4th Qtr 2025

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

Comments on Assigned Data Flags for Test #632

279K4D (M) - Participant did not submit data for sample group D51-52.



Rubber Interlaboratory Testing Program

Analysis 632

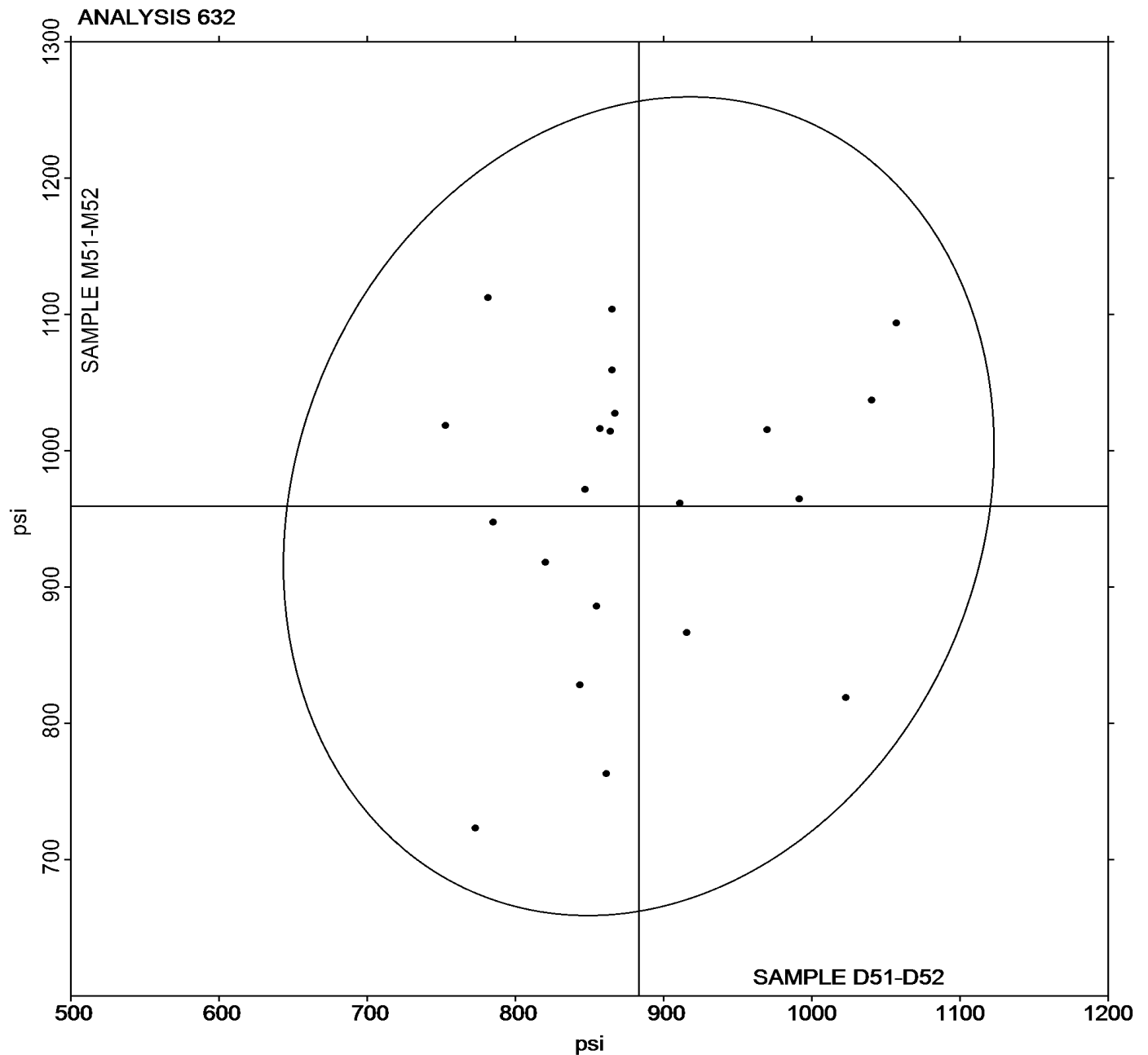
Report #226

4th Qtr 2025

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

Grand Mean Sample **D51-D52** = 883.25 psi

Grand Mean Sample **M51-M52** = 959.29 psi





Rubber Interlaboratory Testing Program

Analysis 633

Report #226

4th Qtr 2025

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

WebCode	Data Flag	Sample			Sample M51-M52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
279K4D	M	No data reported for this sample			165.9	-39.2	-1.73
2CAWZB		213.9	22.4	1.16	174.0	-31.0	-1.37
2K62UC		181.4	-10.2	-0.53	218.8	13.8	0.61
2LXRZQ		199.0	7.4	0.39	218.5	13.5	0.60
4NEYCJ		209.0	17.4	0.90	213.0	8.0	0.35
8QYPCE		181.0	-10.6	-0.55	222.0	17.0	0.75
C2XB8Q		167.8	-23.8	-1.23	219.9	14.8	0.65
EBWLRL	*	157.4	-34.2	-1.77	148.7	-56.4	-2.49
EFA7X8		186.0	-5.6	-0.29	208.5	3.5	0.15
EN4EJX		197.5	5.9	0.31	208.4	3.3	0.15
ETDR2W		225.0	33.4	1.73	214.0	9.0	0.40
FK3PFV		166.8	-24.7	-1.28	224.1	19.0	0.84
HJGXGV		206.3	14.7	0.76	206.1	1.0	0.04
JBLFFR		164.5	-27.1	-1.40	195.5	-9.5	-0.42
KJQK43		181.9	-9.7	-0.50	225.7	20.6	0.91
KQTTAV		200.5	8.9	0.46	234.4	29.3	1.30
TAFATF		207.2	15.6	0.81	184.2	-20.8	-0.92
VUUGFT		193.5	1.9	0.10	186.3	-18.7	-0.83
WQ8GF4		176.9	-14.6	-0.76	189.3	-15.8	-0.70
WZHGAE		226.1	34.6	1.79	230.9	25.8	1.14
YHNVGJ		185.6	-5.9	-0.31	166.8	-38.2	-1.69
ZL7CCA		195.5	3.9	0.20	217.0	12.0	0.53

Summary Statistics

Grand Means

191.56 psi

205.04 psi

Std Dev Btwn Labs

19.28 psi

22.62 psi

Statistics based on 21 of 22 reporting participants

Summary Statistics in SI Units

Grand Means

1.3207 MPa

1.4100 MPa

Std Dev Btwn Labs

0.1329 MPa

0.1600 MPa

Statistics based on 21 of 22 reporting participants

Samples D51-D52: Polyisoprene Compound & M51-M52: Polyisoprene Compound



Rubber Interlaboratory Testing Program

Report #226

Analysis 633

4th Qtr 2025

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

Comments on Assigned Data Flags for Test #633

279K4D (M) - Participant did not submit data for sample group D51-52.



Rubber Interlaboratory Testing Program

Analysis 633

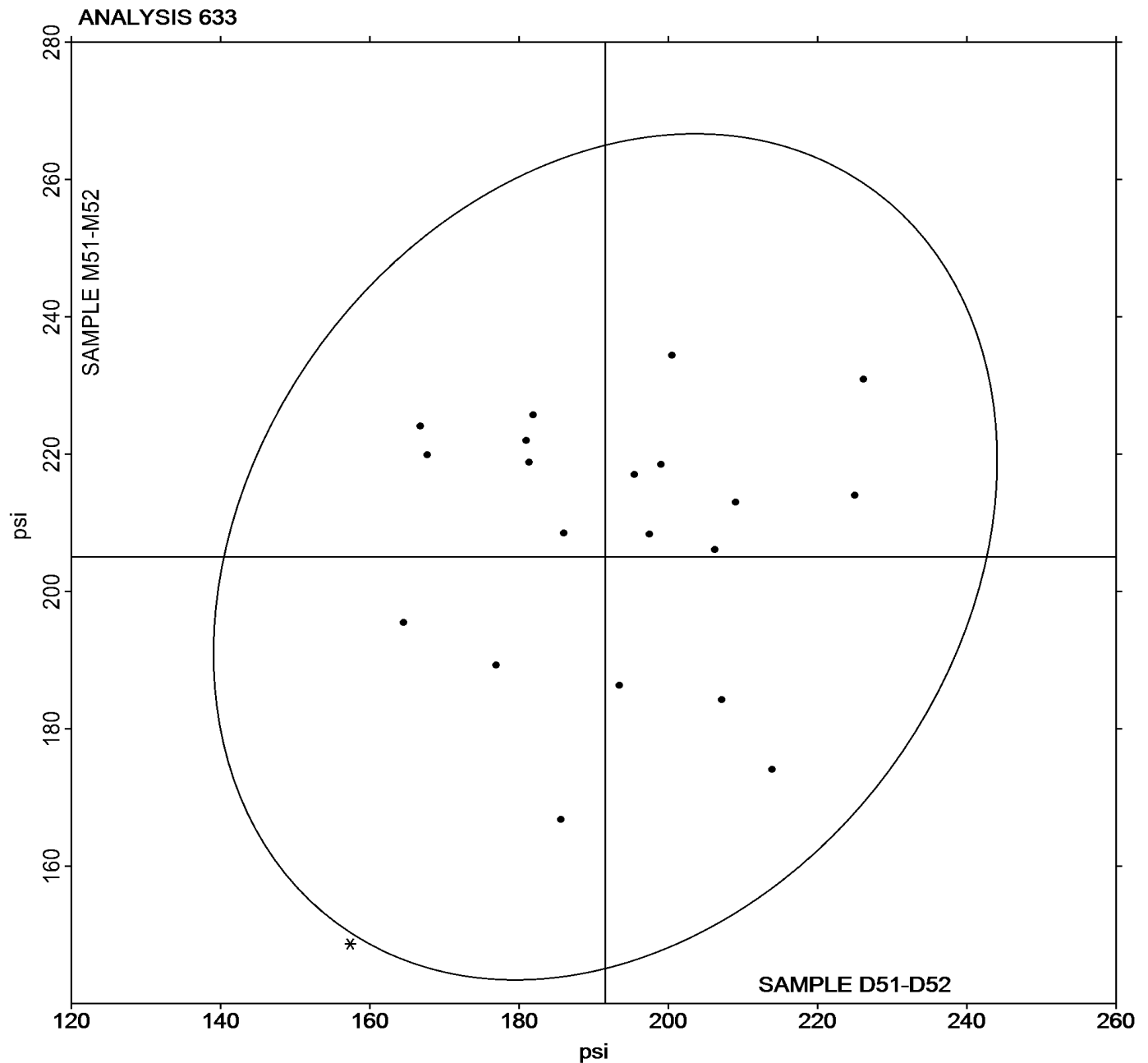
Report #226

4th Qtr 2025

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

Grand Mean Sample **D51-D52** = 191.56 psi

Grand Mean Sample **M51-M52** = 205.04 psi





Rubber Interlaboratory Testing Program

Analysis 635

Compression Set Method B

Report #226

4th Qtr 2025

WebCode	Data Flag	Sample Q51			Sample Q52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2CAWZB		27.33	5.76	1.18	23.67	2.19	0.45
2K62UC		23.28	1.71	0.35	23.20	1.72	0.35
2LXRZQ		24.00	2.42	0.50	23.00	1.52	0.31
4NEYCJ		15.67	-5.91	-1.21	17.33	-4.15	-0.85
6E8J6B		21.00	-0.58	-0.12	19.33	-2.15	-0.44
6J6XTZ		20.33	-1.24	-0.25	20.67	-0.81	-0.17
6QZZUC		21.80	0.22	0.05	20.00	-1.48	-0.30
77BZ48		18.23	-3.34	-0.68	18.13	-3.35	-0.69
7NQCWX	*	31.97	10.39	2.13	34.50	13.02	2.67
8DLPFK		25.01	3.43	0.70	22.00	0.52	0.11
8QYPCE		16.67	-4.91	-1.00	17.33	-4.15	-0.85
9A7E3G		21.00	-0.58	-0.12	23.00	1.52	0.31
BBQ3ET	*	7.47	-14.11	-2.89	8.23	-13.25	-2.71
C2XB8Q		28.31	6.73	1.38	28.79	7.31	1.50
CBKAWB	*	21.35	-0.22	-0.05	26.06	4.58	0.94
DRM7UZ		22.83	1.26	0.26	26.87	5.39	1.10
EBWLRL		11.33	-10.24	-2.10	11.67	-9.81	-2.01
ETDR2W	*	34.68	13.10	2.68	34.76	13.28	2.72
F326FM	X	27.33	5.76	1.18	49.33	27.85	5.71
G8ME3P		19.21	-2.36	-0.48	20.37	-1.11	-0.23
GGBDQA		19.00	-2.58	-0.53	19.67	-1.81	-0.37
HJGXGV		23.33	1.76	0.36	20.33	-1.15	-0.23
JBLFFR		23.00	1.42	0.29	19.67	-1.81	-0.37
KQTTAV		22.20	0.62	0.13	21.87	0.39	0.08
LBAMDL		23.22	1.64	0.34	23.52	2.04	0.42
MCZ9KH		18.67	-2.91	-0.60	20.33	-1.15	-0.23
NQWMHQ		17.67	-3.91	-0.80	19.00	-2.48	-0.51
P46PJE		25.67	4.09	0.84	25.67	4.19	0.86
P46T9J		19.33	-2.24	-0.46	18.00	-3.48	-0.71
P9CFJY		16.70	-4.88	-1.00	15.37	-6.11	-1.25
QQAVLB		20.54	-1.04	-0.21	22.91	1.43	0.29
RU4CBA		18.30	-3.28	-0.67	19.80	-1.68	-0.34
TAFATF		19.27	-2.31	-0.47	19.10	-2.38	-0.49
VPGWA8		20.87	-0.71	-0.15	20.77	-0.71	-0.15
VUUGFT		22.52	0.95	0.19	20.15	-1.33	-0.27
W7KT6C		26.51	4.93	1.01	25.78	4.30	0.88
WQ8GF4		20.20	-1.38	-0.28	19.51	-1.97	-0.40
WR6R9L		19.70	-1.88	-0.38	19.13	-2.35	-0.48



Rubber Interlaboratory Testing Program
Analysis 635
Compression Set Method B

Report #226
4th Qtr 2025

WebCode	Data Flag	Sample Q51			Sample Q52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
X3ZX66		30.68	9.10	1.86	30.44	8.96	1.84
X69DBB		16.19	-5.38	-1.10	17.75	-3.73	-0.76
Y2NKZ9		26.00	4.43	0.91	22.28	0.80	0.16
YHNVGJ		26.00	4.42	0.91	25.67	4.19	0.86
YLN7DJ		21.89	0.31	0.06	22.01	0.53	0.11
YMJPEK		22.00	0.42	0.09	22.00	0.52	0.11
ZH4E2G		20.31	-1.27	-0.26	19.24	-2.24	-0.46
ZPP8DG		19.67	-1.91	-0.39	17.67	-3.81	-0.78

Summary Statistics			
Grand Means	21.576 % Compression	21.479 % Compression	
Stnd Dev Btwn Labs	4.888 % Compression	4.880 % Compression	Statistics based on 45 of 46 reporting participants

Samples Q51: EPDM Compound & Q52: EPDM Compound

Comments on Assigned Data Flags for Test #635

F326FM (X) - Data for sample group Q52 are high.

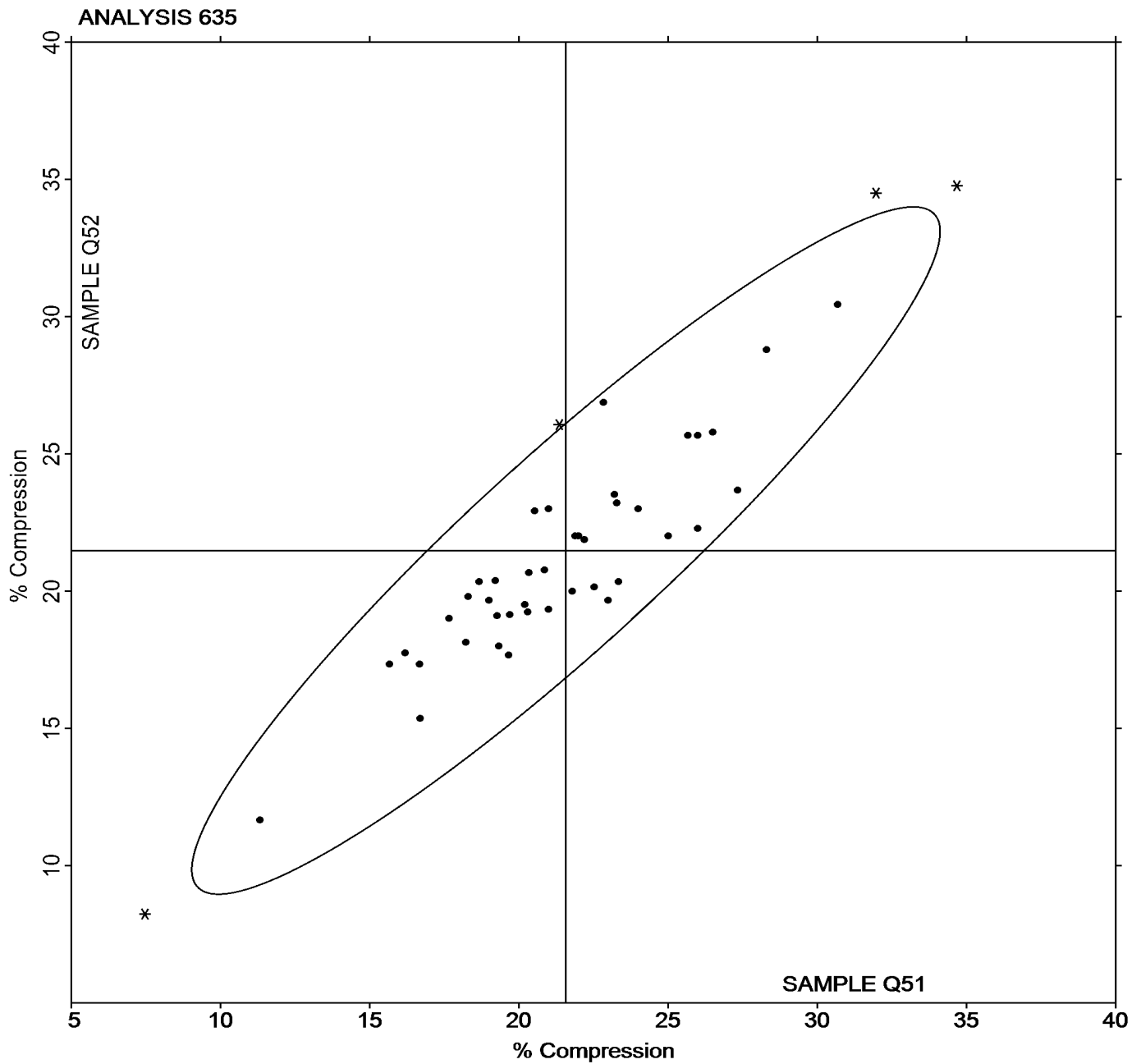


Rubber Interlaboratory Testing Program
Analysis 635
Compression Set Method B

Report #226
4th Qtr 2025

Grand Mean Sample **Q51** = 21.576 % Compression

Grand Mean Sample **Q52** = 21.479 % Compression





Rubber Interlaboratory Testing Program

Analysis 640

Report #226

4th Qtr 2025

O-Ring Tensile Strength at Break (psi)

WebCode	Data Flag	Sample RD51			Sample RD52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
279K4D		2,415.2	16.3	0.16	2,472.7	69.5	0.59
2K62UC		2,497.6	98.7	0.96	2,472.8	69.6	0.59
47J7QK		2,320.9	-77.9	-0.76	2,438.4	35.2	0.30
6E8J6B		2,470.6	71.7	0.70	2,415.0	11.8	0.10
6J6XTZ		2,340.2	-58.7	-0.57	2,373.0	-30.2	-0.26
C3Q2D6		2,441.8	42.9	0.42	2,412.6	9.4	0.08
C7BWEC		2,564.3	165.4	1.61	2,470.3	67.1	0.57
ETDR2W		2,367.0	-31.9	-0.31	2,411.6	8.4	0.07
EY6YJ6		2,476.2	77.3	0.75	2,547.2	144.0	1.22
HJGXGV		2,393.5	-5.3	-0.05	2,398.0	-5.2	-0.04
JBLFFR		2,367.4	-31.5	-0.31	2,346.8	-56.4	-0.48
MCZ9KH		2,332.0	-66.9	-0.65	2,333.2	-70.0	-0.59
NQWMHQ		2,432.2	33.3	0.32	2,463.4	60.2	0.51
P9CFJY		2,336.6	-62.3	-0.60	2,358.0	-45.2	-0.38
PVMGTW	*	2,107.6	-291.3	-2.83	2,018.0	-385.2	-3.27
QQAVLB		2,311.9	-86.9	-0.84	2,325.0	-78.3	-0.66
VUUGFT		2,487.5	88.6	0.86	2,448.6	45.3	0.38
WQ8GF4		2,537.3	138.5	1.34	2,604.0	200.8	1.70
XGKFX9		2,378.3	-20.5	-0.20	2,352.8	-50.4	-0.43

Grand Means		Summary Statistics	
	2,398.85 psi		2,403.23 psi
Std Dev Btwn Labs	103.06 psi		117.99 psi
Statistics based on 19 of 19 reporting participants			

Samples RD51: Nitrile O-Ring & RD52: Nitrile O-Ring



Rubber Interlaboratory Testing Program

Analysis 640

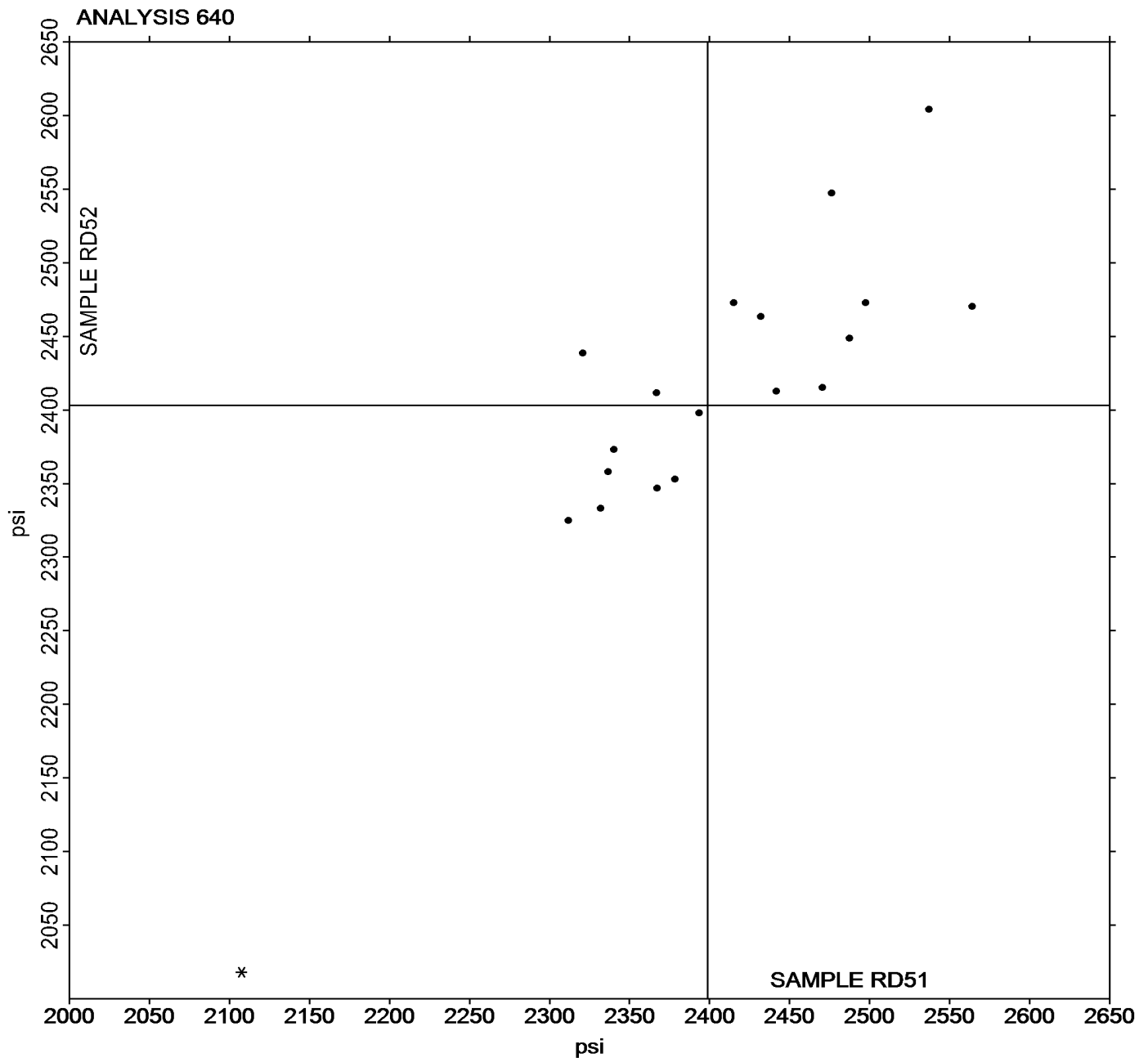
O-Ring Tensile Strength at Break (psi)

Report #226

4th Qtr 2025

Grand Mean Sample **RD51** = 2,398.85 psi

Grand Mean Sample **RD52** = 2,403.23 psi



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



Rubber Interlaboratory Testing Program

Analysis 641

Report #226

4th Qtr 2025

O-Ring Ultimate Elongation (%)

WebCode	Data Flag	Sample RD51			Sample RD52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
279K4D		442.6	24.0	0.56	458.0	39.0	0.87
2K62UC		450.2	31.6	0.74	452.0	33.0	0.74
47J7QK		418.8	0.2	0.01	419.7	0.7	0.02
6E8J6B		450.2	31.6	0.74	436.6	17.6	0.39
6J6XTZ		380.0	-38.6	-0.90	386.4	-32.6	-0.73
C3Q2D6		441.8	23.2	0.54	437.4	18.4	0.41
C7BWEC		451.2	32.6	0.76	427.0	8.0	0.18
ETDR2W		438.2	19.6	0.46	447.4	28.4	0.63
EY6YJ6		418.6	0.0	0.00	436.4	17.4	0.39
HJGXGV		441.0	22.4	0.52	439.6	20.6	0.46
JBLFFR		442.0	23.4	0.54	438.0	19.0	0.42
MCZ9KH		380.4	-38.2	-0.89	386.8	-32.2	-0.72
NQWMHQ		421.8	3.2	0.07	428.0	9.0	0.20
P9CFJY		330.6	-88.0	-2.05	329.2	-89.8	-2.01
PVMGTW	*	308.4	-110.2	-2.56	293.4	-125.6	-2.80
QQAVLB		391.0	-27.6	-0.64	397.3	-21.7	-0.49
VUUGFT		451.3	32.7	0.76	441.3	22.3	0.50
WQ8GF4		472.7	54.1	1.26	481.0	62.0	1.38
XGKFX9		422.4	3.8	0.09	425.5	6.5	0.15

Grand Means		Summary Statistics	
	418.59 percent		419.00 percent
Std Dev Btwn Labs	42.96 percent		44.78 percent
Statistics based on 19 of 19 reporting participants			

Samples RD51: Nitrile O-Ring & RD52: Nitrile O-Ring



Rubber Interlaboratory Testing Program

Analysis 641

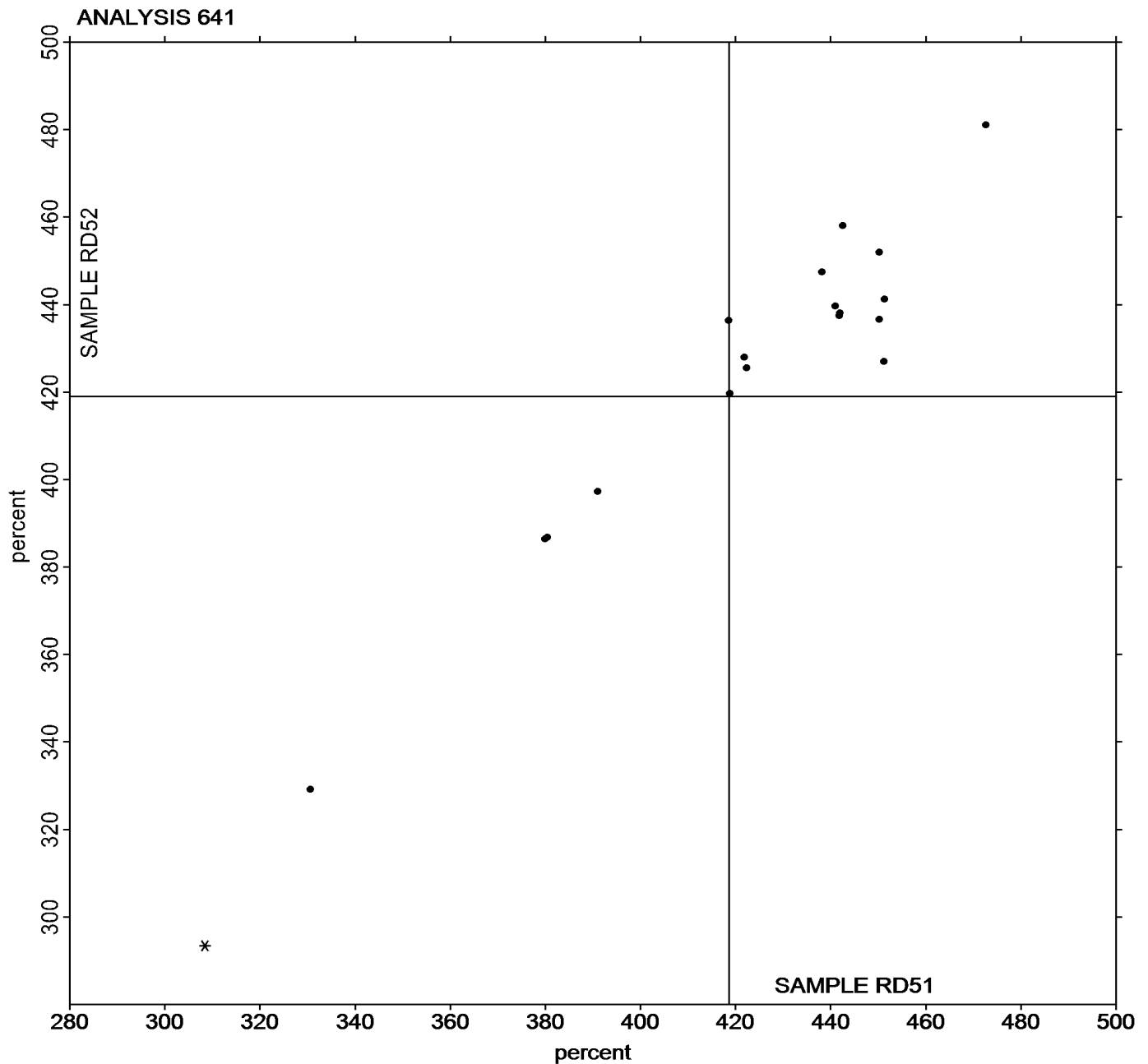
O-Ring Ultimate Elongation (%)

Report #226

4th Qtr 2025

Grand Mean Sample **RD51** = 418.59 percent

Grand Mean Sample **RD52** = 419.00 percent



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



Rubber Interlaboratory Testing Program

Analysis 642

Report #226

4th Qtr 2025

O-Ring Stress at 100% Elongation (psi)

WebCode	Data Flag	Sample RD51			Sample RD52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
279K4D		348.2	-96.9	-1.72	353.2	-94.6	-1.66
2K62UC		436.4	-8.7	-0.15	433.4	-14.4	-0.25
47J7QK		559.0	113.9	2.02	568.3	120.5	2.12
6E8J6B		416.2	-28.9	-0.51	418.6	-29.2	-0.51
6J6XTZ		478.8	33.7	0.60	480.0	32.2	0.57
C3Q2D6		412.6	-32.5	-0.58	407.0	-40.8	-0.72
C7BWEC		470.5	25.4	0.45	474.0	26.2	0.46
ETDR2W		468.4	23.3	0.41	475.8	28.0	0.49
EY6YJ6		548.2	103.1	1.83	549.2	101.4	1.78
HJGXGV		356.8	-88.3	-1.57	358.2	-89.6	-1.58
JBLFFR		447.0	1.9	0.03	454.0	6.2	0.11
MCZ9KH		469.6	24.5	0.44	467.8	20.0	0.35
NQWMHQ		430.6	-14.5	-0.26	430.2	-17.6	-0.31
PVMGTW	X	613.8	168.7	3.00	640.2	192.4	3.38
QQAVLB		473.1	28.1	0.50	476.9	29.1	0.51
VUUGFT		424.8	-20.2	-0.36	429.2	-18.6	-0.33
WQ8GF4		385.2	-59.8	-1.06	395.4	-52.4	-0.92
XGKFX9		440.7	-4.4	-0.08	441.3	-6.5	-0.11

Grand Means		Summary Statistics	
	445.06 psi		447.79 psi
Std Dev Btwn Labs	56.29 psi		56.86 psi
Statistics based on 17 of 18 reporting participants			

Samples RD51: Nitrile O-Ring & RD52: Nitrile O-Ring

Comments on Assigned Data Flags for Test #642

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



Rubber Interlaboratory Testing Program

Analysis 642

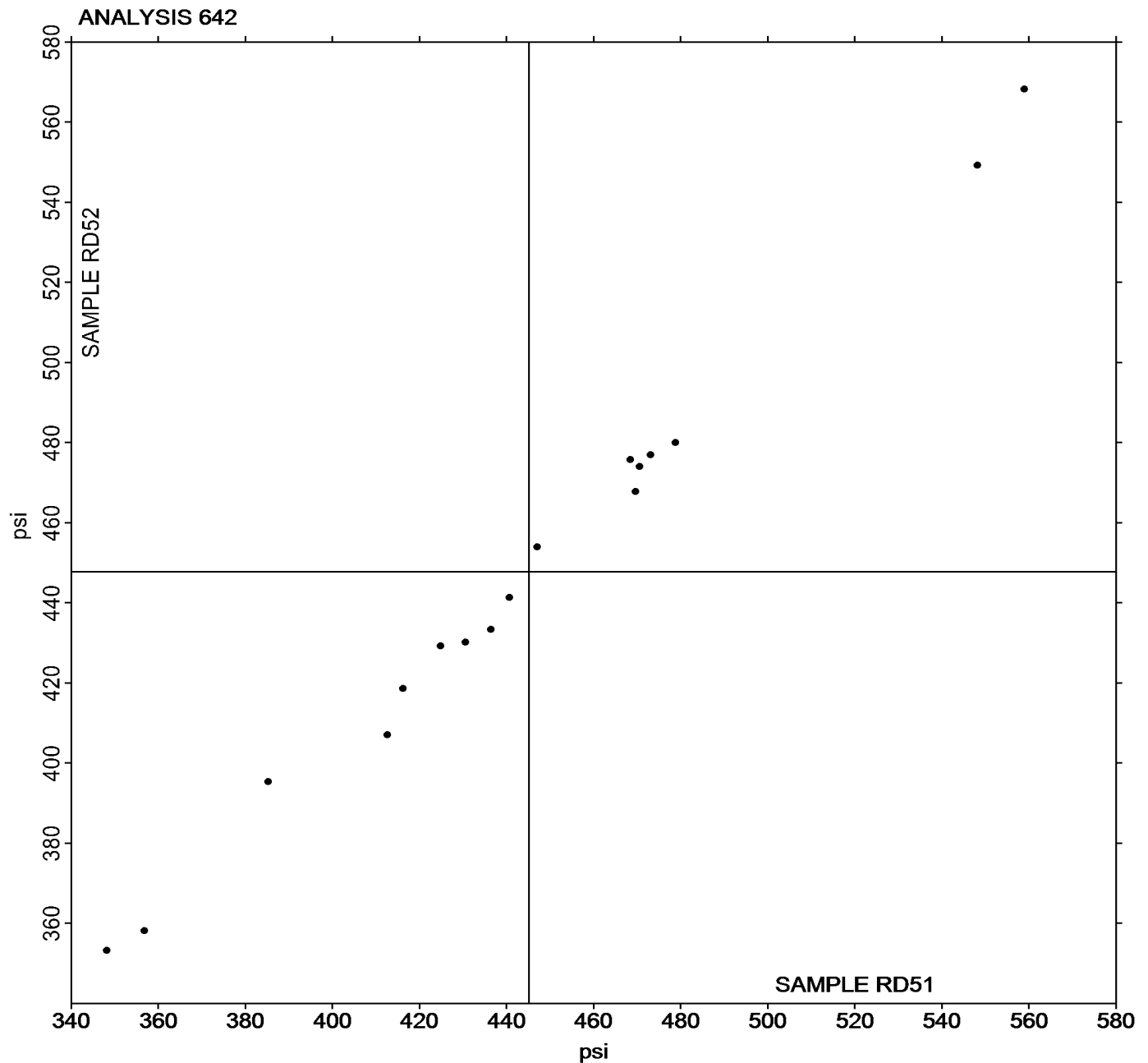
O-Ring Stress at 100% Elongation (psi)

Report #226

4th Qtr 2025

Grand Mean Sample **RD51** = 445.06 psi

Grand Mean Sample **RD52** = 447.79 psi



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



Rubber Interlaboratory Testing Program
Analysis 647
O-Ring Hardness (Shore A)

Report #226
4th Qtr 2025

WebCode	Data Flag	Sample RD51			Sample RD52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
279K4D		66.84	-1.59	-0.88	66.74	-1.83	-1.12
2K62UC		66.00	-2.43	-1.34	66.92	-1.65	-1.01
47J7QK		72.43	4.00	2.21	71.53	2.96	1.81
6E8J6B		70.20	1.77	0.98	70.00	1.43	0.87
6J6XTZ		68.20	-0.23	-0.13	68.80	0.23	0.14
C7BWEC		66.08	-2.35	-1.30	66.42	-2.15	-1.32
ETDR2W	*	69.26	0.83	0.46	70.88	2.31	1.41
EY6YJ6		66.60	-1.83	-1.01	67.00	-1.57	-0.96
FLWFLB		68.80	0.37	0.21	69.00	0.43	0.26
FPUZPU		68.62	0.19	0.11	69.08	0.51	0.31
HJGXGV		67.90	-0.53	-0.29	68.28	-0.29	-0.18
JBLFFR		70.40	1.97	1.09	70.80	2.23	1.36
MCZ9KH		67.70	-0.73	-0.40	67.64	-0.93	-0.57
P9CFJY		69.58	1.15	0.64	69.24	0.67	0.41
PVMGTW		71.20	2.77	1.53	70.40	1.83	1.12
VUUGFT		68.00	-0.43	-0.24	67.40	-1.17	-0.72
WQ8GF4		66.64	-1.79	-0.99	67.04	-1.53	-0.94
XGKFX9		67.26	-1.17	-0.64	67.10	-1.47	-0.90

Grand Means		Summary Statistics	
	68.428 Type A		68.571 Type A
Std Dev Btwn Labs	1.812 Type A		1.634 Type A
Statistics based on 18 of 18 reporting participants			

Samples RD51: Nitrile O-Ring & RD52: Nitrile O-Ring

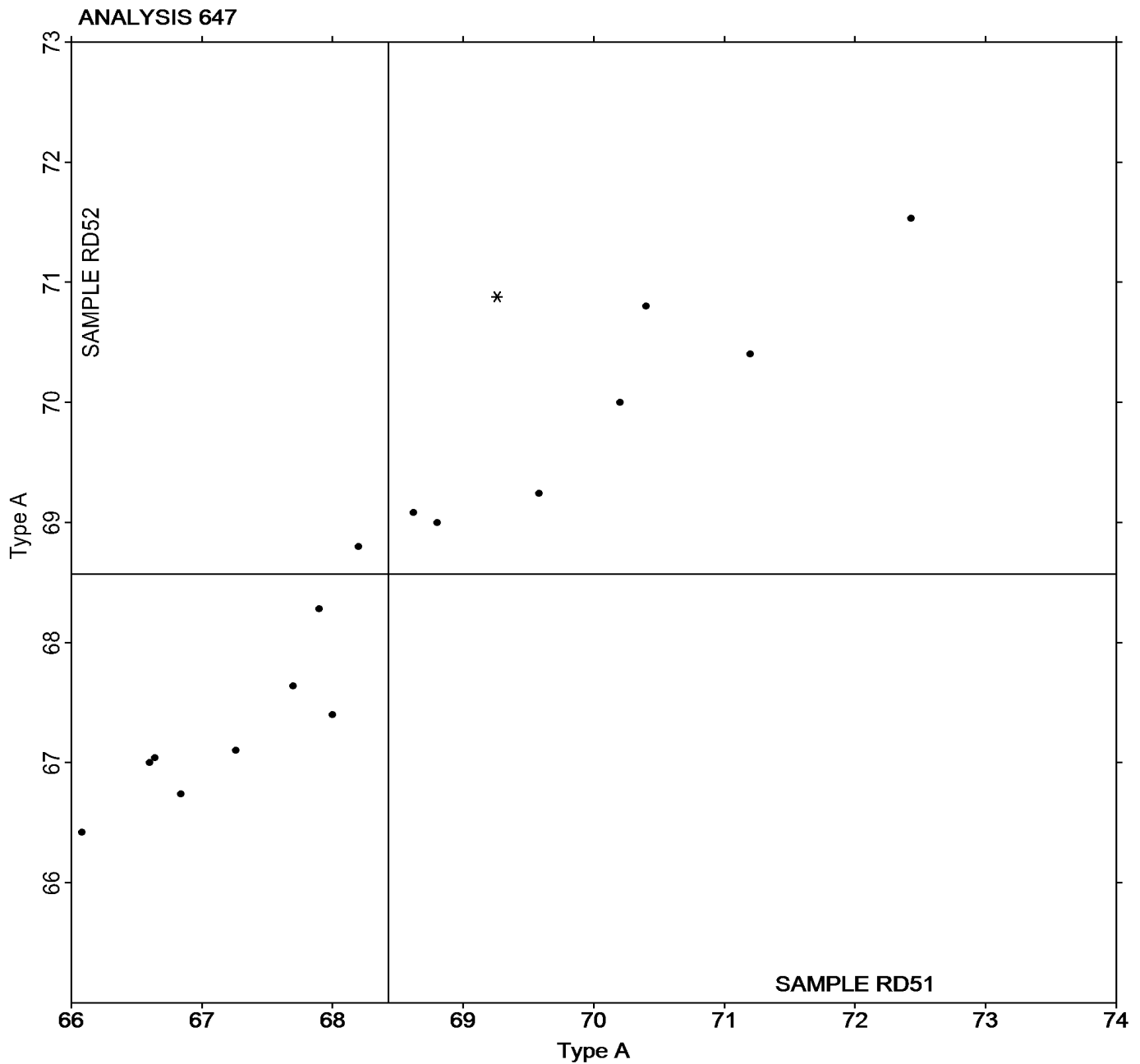


Rubber Interlaboratory Testing Program
Analysis 647
O-Ring Hardness (Shore A)

Report #226
4th Qtr 2025

Grand Mean Sample **RD51** = 68.428 Type A

Grand Mean Sample **RD52** = 68.571 Type A



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



Rubber Interlaboratory Testing Program
Analysis 648
O-Ring Hardness (Shore M)

Report #226
4th Qtr 2025

WebCode	Data Flag	Sample RD51			Sample RD52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2K62UC		72.40	-1.39	-0.39	72.08	-1.86	-0.54
6J6XTZ		75.78	1.99	0.56	76.14	2.20	0.64
C7BWEC		72.62	-1.17	-0.33	73.64	-0.30	-0.09
ETDR2W		74.98	1.19	0.34	75.52	1.58	0.46
EY6YJ6		74.40	0.61	0.17	74.00	0.06	0.02
FLWFLB		76.00	2.21	0.63	76.00	2.06	0.59
FPUZPU		72.34	-1.45	-0.41	72.98	-0.96	-0.28
HJGXGV		77.76	3.97	1.13	76.80	2.86	0.83
JBLFFR		73.00	-0.79	-0.22	72.80	-1.14	-0.33
MCZ9KH		75.10	1.31	0.37	74.80	0.86	0.25
NQWMHQ		75.88	2.09	0.59	76.28	2.34	0.68
P9CFJY		75.08	1.29	0.37	76.44	2.50	0.72
PVMGTW	*	62.80	-10.99	-3.11	63.20	-10.74	-3.11
VUUGFT		76.88	3.09	0.88	76.88	2.94	0.85
XGKFX9		71.82	-1.97	-0.56	71.58	-2.36	-0.68

Grand Means		Summary Statistics	
	73.789 Type M		73.943 Type M
Std Dev Btwn Labs	3.529 Type M		3.460 Type M
Statistics based on 15 of 15 reporting participants			

Samples RD51: Nitrile O-Ring & RD52: Nitrile O-Ring

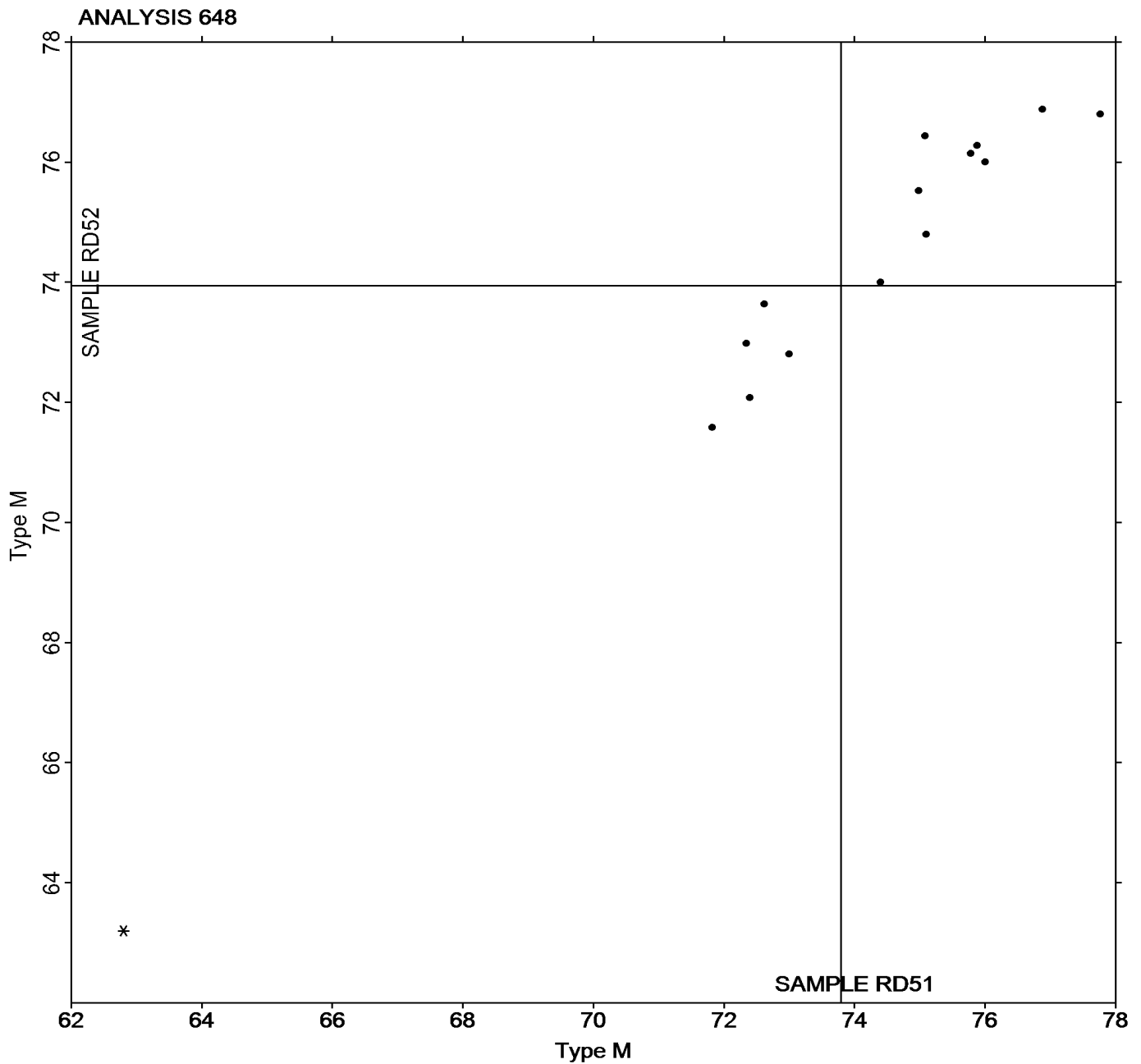


Rubber Interlaboratory Testing Program
Analysis 648
O-Ring Hardness (Shore M)

Report #226
4th Qtr 2025

Grand Mean Sample **RD51** = 73.789 Type M

Grand Mean Sample **RD52** = 73.943 Type M



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



Rubber Interlaboratory Testing Program

Analysis 649

O-Ring Density

Report #226

4th Qtr 2025

WebCode	Data Flag	Sample RD51			Sample RD52		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
279K4D		1.208	-0.003	-0.36	1.207	-0.004	-0.46
2K62UC	*	1.238	0.028	3.58	1.242	0.031	3.58
47J7QK	X	1.075	-0.135	-17.45	1.080	-0.131	-14.99
6E8J6B		1.209	-0.001	-0.12	1.211	0.000	0.03
6J6XTZ		1.213	0.002	0.32	1.213	0.002	0.28
C3Q2D6		1.209	-0.002	-0.20	1.211	0.000	-0.04
C7BWEC		1.210	0.000	-0.02	1.210	-0.001	-0.14
ETDR2W		1.209	-0.002	-0.24	1.208	-0.003	-0.32
EY6YJ6		1.204	-0.006	-0.79	1.205	-0.006	-0.68
FLWFLB		1.207	-0.004	-0.46	1.209	-0.002	-0.28
FPUZPU		1.209	-0.002	-0.23	1.208	-0.002	-0.28
HJGXGV		1.205	-0.005	-0.66	1.206	-0.005	-0.54
JBLFFR		1.208	-0.003	-0.36	1.207	-0.004	-0.45
MCZ9KH		1.205	-0.006	-0.75	1.203	-0.008	-0.92
P9CFJY		1.220	0.009	1.22	1.220	0.009	1.01
PVMGTW		1.215	0.005	0.61	1.219	0.008	0.91
QQAVLB		1.208	-0.002	-0.30	1.209	-0.002	-0.27
VUUGFT		1.208	-0.003	-0.33	1.208	-0.003	-0.29
WQ8GF4		1.210	0.000	-0.03	1.209	-0.002	-0.28
XGKFX9		1.204	-0.007	-0.88	1.204	-0.007	-0.85

Grand Means		Summary Statistics	
	1.2104 g/cm ³ (Mg/m ³)		1.2110 g/cm ³ (Mg/m ³)
Std Dev Btwn Labs	0.0078 g/cm ³ (Mg/m ³)		0.0087 g/cm ³ (Mg/m ³)
Statistics based on 19 of 20 reporting participants			

Samples RD51: Nitrile O-Ring & RD52: Nitrile O-Ring

Comments on Assigned Data Flags for Test #649

47J7QK (X) - Data for both samples are low. Inconsistent within the determinations of both samples.



Rubber Interlaboratory Testing Program

Analysis 649

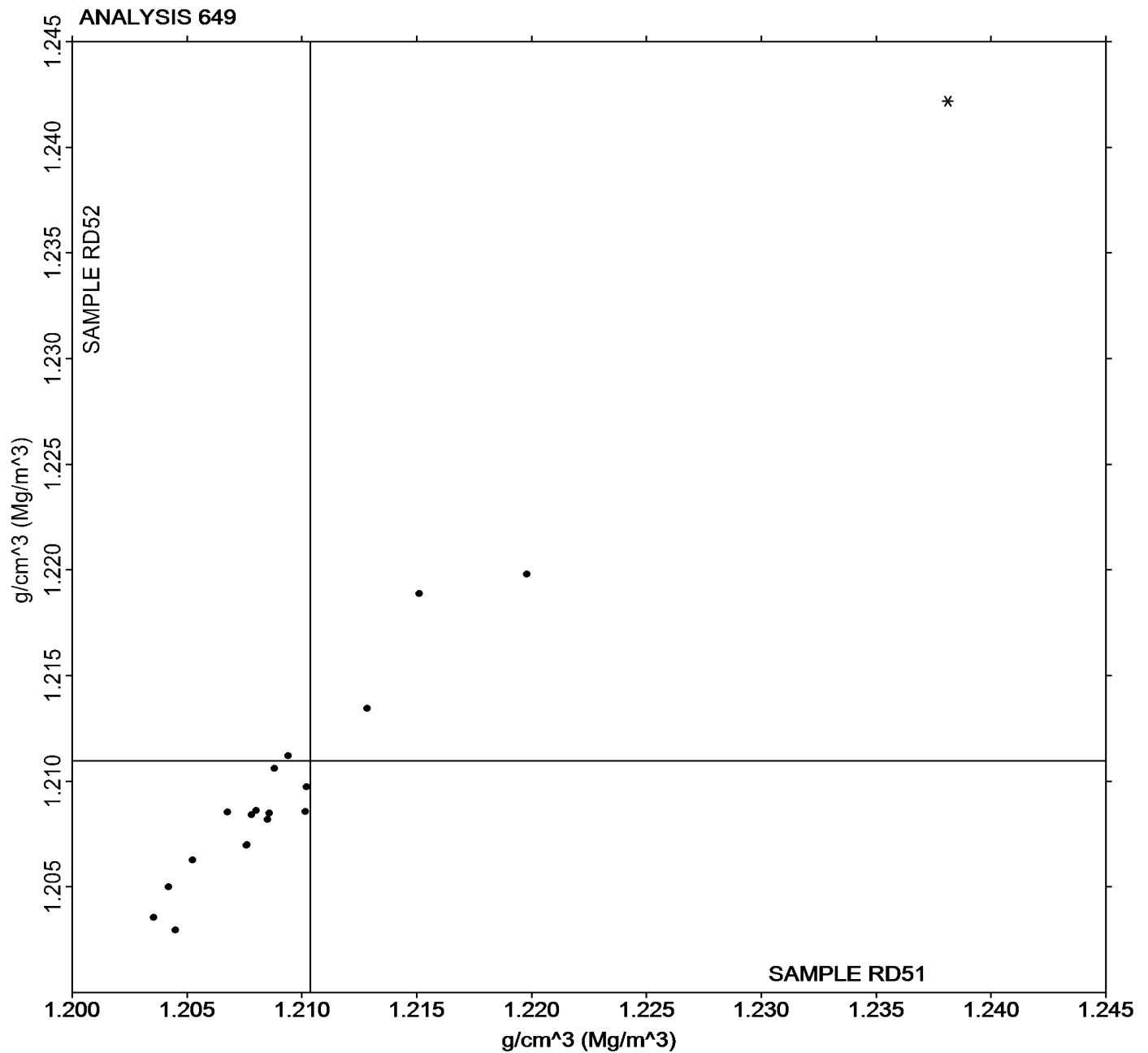
O-Ring Density

Report #226

4th Qtr 2025

Grand Mean Sample **RD51** = 1.2104 g/cm³
(Mg/m³)

Grand Mean Sample **RD52** = 1.2110 g/cm³
(Mg/m³)



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



Rubber Interlaboratory Testing Program
Analysis 650
O-Ring Compression Set Method B

Report #226
4th Qtr 2025

WebCode	Data Flag	Sample RD53			Sample RD54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
279K4D		5.90	-4.26	-2.50	8.80	-1.40	-0.97
2K62UC		11.65	1.49	0.87	13.55	3.36	2.33
6E8J6B		9.63	-0.53	-0.31	9.33	-0.86	-0.60
6J6XTZ		10.33	0.17	0.10	10.00	-0.20	-0.14
82XHMQ		10.08	-0.09	-0.05	10.92	0.73	0.50
ETDR2W		8.82	-1.34	-0.79	8.82	-1.37	-0.95
EY6YJ6		10.47	0.30	0.18	11.27	1.07	0.74
HJGXGV		9.00	-1.16	-0.68	9.00	-1.20	-0.83
JBLFFR		10.33	0.17	0.10	8.00	-2.20	-1.52
MCZ9KH		9.00	-1.16	-0.68	9.33	-0.86	-0.60
NQWMHQ		12.67	2.50	1.47	11.00	0.80	0.56
QQAVLB		12.08	1.92	1.13	11.05	0.85	0.59
VUUGFT		11.67	1.51	0.89	11.21	1.01	0.70
WQ8GF4		10.65	0.49	0.29	10.47	0.28	0.19

Summary Statistics

Grand Means

10.164 % Compression

10.198 % Compression

Std Dev Btwn Labs

1.705 % Compression

1.442 % Compression

Statistics based on 14 of 14 reporting participants

Samples RD53: Nitrile O-Ring & RD54: Nitrile O-Ring

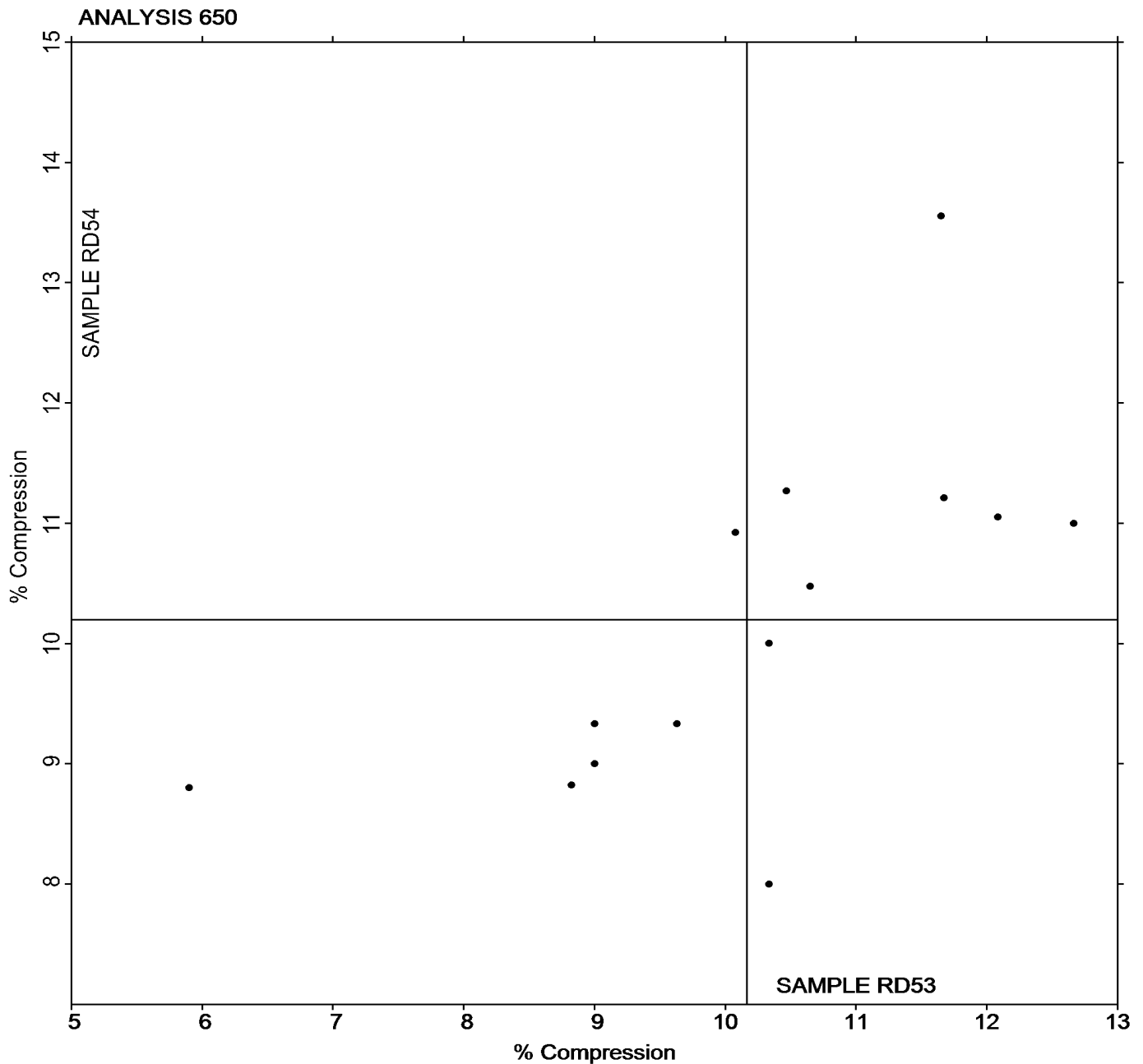


Rubber Interlaboratory Testing Program
Analysis 650
O-Ring Compression Set Method B

Report #226
4th Qtr 2025

Grand Mean Sample **RD53** = 10.164 % Compression

Grand Mean Sample **RD54** = 10.198 % Compression



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



Rubber Interlaboratory Testing Program

Analysis 660

Report #226

4th Qtr 2025

Mooney Viscosity: 4-minute readings (ML 1 + 4)

WebCode	Data Flag	Sample V51-V52			Sample V53-V54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2K62UC		46.77	2.23	1.82	60.30	3.47	1.88	MR
2LXRZQ		44.80	0.27	0.22	57.08	0.25	0.14	MR
4ECECC	M	44.09	-0.45	-0.36	No data reported for this sample			MR
4NEYCJ		43.78	-0.75	-0.61	55.70	-1.13	-0.61	ML
6E8J6B		43.38	-1.15	-0.94	55.62	-1.21	-0.66	MR
8LL46T		47.35	2.82	2.30	60.47	3.64	1.97	MR
8QYPCE		43.97	-0.57	-0.46	55.70	-1.13	-0.61	MR
AF7CQB		42.34	-2.20	-1.79	53.29	-3.54	-1.92	MR
EBWLRL		45.23	0.70	0.57	58.91	2.08	1.13	XX
EFA7X8		44.35	-0.18	-0.15	55.78	-1.05	-0.57	MR
EN4EJX		43.32	-1.22	-0.99	55.71	-1.12	-0.61	MV
FK3PFV		43.54	-0.99	-0.81	55.11	-1.72	-0.93	MR
G8ME3P		43.26	-1.28	-1.04	55.67	-1.16	-0.63	MR
HCXRKN		46.13	1.59	1.30	60.31	3.48	1.89	TA
HFW4FN		45.95	1.42	1.15	58.38	1.55	0.84	MR
HKANMA		43.85	-0.68	-0.56	55.58	-1.25	-0.68	MR
JBM8BE	M	42.81	-1.73	-1.41	No data reported for this sample			MR
KJQK43		43.71	-0.82	-0.67	56.52	-0.31	-0.17	MV
KQTTAV		45.05	0.52	0.42	56.69	-0.14	-0.08	MR
PVMGTW		45.14	0.60	0.49	57.40	0.57	0.31	MV
WQ8GF4		44.44	-0.10	-0.08	56.29	-0.54	-0.29	ML
WVK3LP		44.75	0.22	0.18	56.25	-0.58	-0.31	MR
YHNVGJ		44.80	0.27	0.22	57.57	0.74	0.40	MR
YVEPVY	X	45.67	1.13	0.92	41.39	-15.44	-8.38	MR
ZL7CCA		43.87	-0.67	-0.55	55.92	-0.91	-0.49	ML

Grand Means

44.535 ML 1 + 4

Std Dev Btwn Labs

1.226 ML 1 + 4

Summary Statistics

56.829 ML 1 + 4

1.844 ML 1 + 4

Statistics based on 22 of 25 reporting participants

Samples V51-V52: SBR & V53-V54: Butyl



Rubber Interlaboratory Testing Program
Analysis 660
Mooney Viscosity: 4-minute readings (ML 1 + 4)

Report #226
4th Qtr 2025

Comments on Assigned Data Flags for Test #660

4ECECC (M) - Participant did not submit data for sample group V53-V54 due to a packaging issue with the butyl sample.

JB88BE (M) - Participant did not submit data for sample group V53-V54 due to a packaging issue with the butyl sample.

YVEPVY (X) - Data for sample group V53-V54 are low. Inconsistent within the determinations of both sample groups.

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)
XX	Instrument make/model not specified by lab		

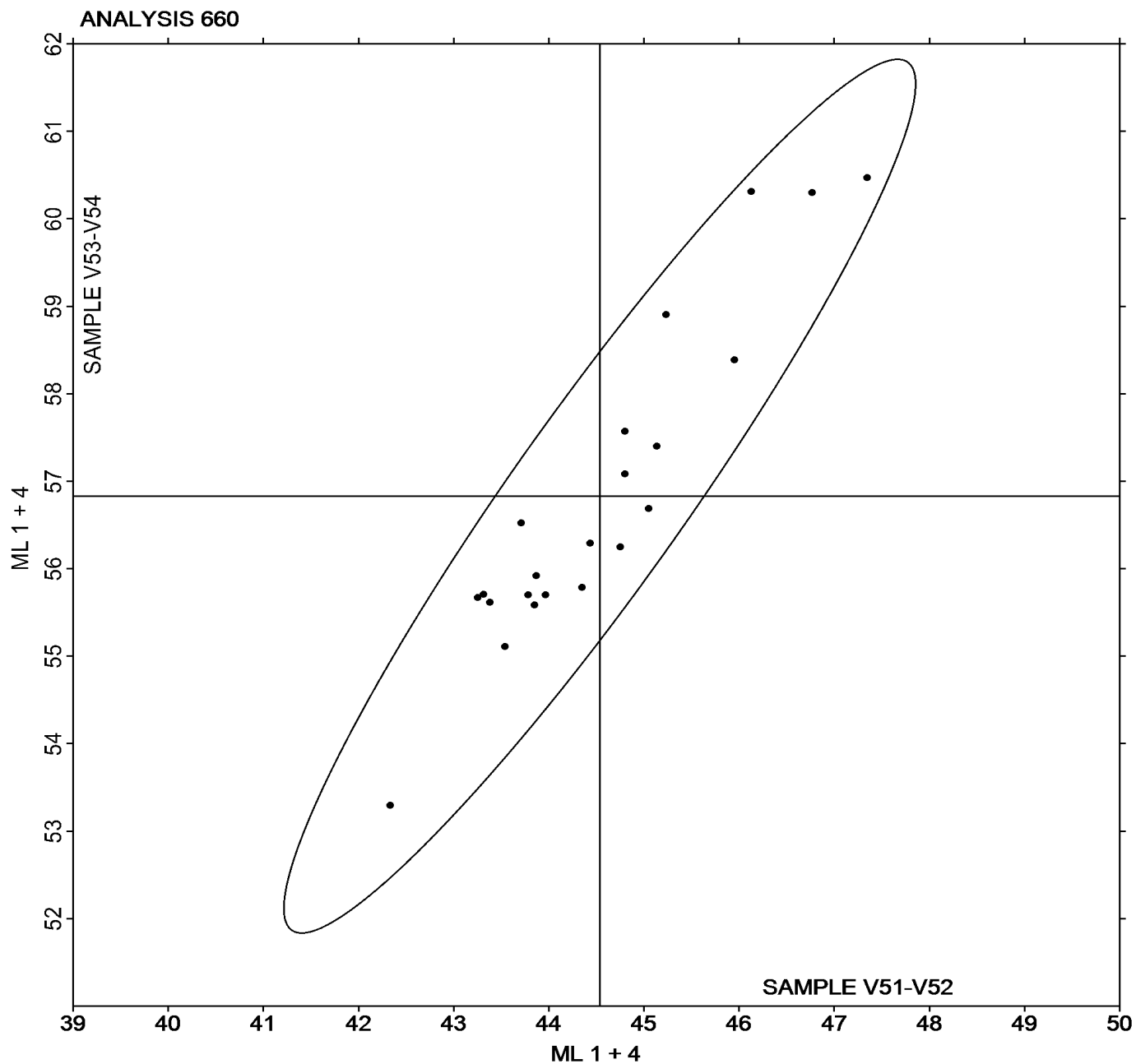


Rubber Interlaboratory Testing Program
Analysis 660
Mooney Viscosity: 4-minute readings (ML 1 + 4)

Report #226
4th Qtr 2025

Grand Mean Sample **V51-V52** = 44.535 ML 1 + 4

Grand Mean Sample **V53-V54** = 56.829 ML 1 + 4





Rubber Interlaboratory Testing Program

Analysis 661

Report #226

4th Qtr 2025

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

WebCode	Data Flag	Sample V51-V52			Sample V53-V54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2K62UC		46.77	2.23	1.82	58.23	3.81	2.01	MR
2LXRZQ		44.80	0.27	0.22	53.75	-0.68	-0.36	MR
4NEYCJ	*	43.78	-0.75	-0.61	55.87	1.44	0.76	MR
6E8J6B		43.38	-1.15	-0.94	52.90	-1.53	-0.81	MR
8LL46T		47.35	2.82	2.30	58.43	4.01	2.12	MR
8QYPCE		43.97	-0.57	-0.46	53.28	-1.15	-0.61	MR
AF7CQB		42.34	-2.20	-1.79	51.16	-3.27	-1.73	MR
EBWLRL		45.23	0.70	0.57	55.47	1.04	0.55	XX
EFA7X8		44.35	-0.18	-0.15	53.23	-1.19	-0.63	MR
EN4EJX		43.32	-1.22	-0.99	52.34	-2.09	-1.10	MV
FK3PFV		43.54	-0.99	-0.81	52.43	-2.00	-1.06	MR
G8ME3P		43.26	-1.28	-1.04	53.17	-1.26	-0.66	MR
HCXRKN		46.13	1.59	1.30	57.28	2.85	1.50	TA
HFW4FN		45.95	1.42	1.15	55.97	1.54	0.81	MR
HKANMA		43.85	-0.68	-0.56	52.90	-1.53	-0.81	MR
KJQK43		43.71	-0.82	-0.67	54.27	-0.16	-0.09	MV
KQTTAV		45.05	0.52	0.42	54.30	-0.13	-0.07	MR
PVMGTW		45.14	0.60	0.49	55.09	0.66	0.35	MV
WQ8GF4		44.44	-0.10	-0.08	54.43	0.00	0.00	ML
WVK3LP		44.75	0.22	0.18	53.62	-0.81	-0.43	MR
YHNVGJ		44.80	0.27	0.22	55.45	1.02	0.54	MR
YVEPVY	X	45.67	1.13	0.92	37.63	-16.79	-8.88	MR
ZL7CCA		43.87	-0.67	-0.55	53.87	-0.56	-0.30	ML

Grand Means		Summary Statistics	
	44.535 ML 1 + 8		54.428 ML 1 + 8
Stnd Dev Btwn Labs			
	1.226 ML 1 + 8		1.892 ML 1 + 8
Statistics based on 22 of 23 reporting participants			

Samples V51-V52: SBR & V53-V54: Butyl

Comments on Assigned Data Flags for Test #661

YVEPVY (X) - Data for sample group V53-V54 are low. Inconsistent within the determinations of sample group V51-V52.



Rubber Interlaboratory Testing Program

Report #226

Analysis 661

4th Qtr 2025

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

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)
XX	Instrument make/model not specified by lab		



Rubber Interlaboratory Testing Program

Analysis 661

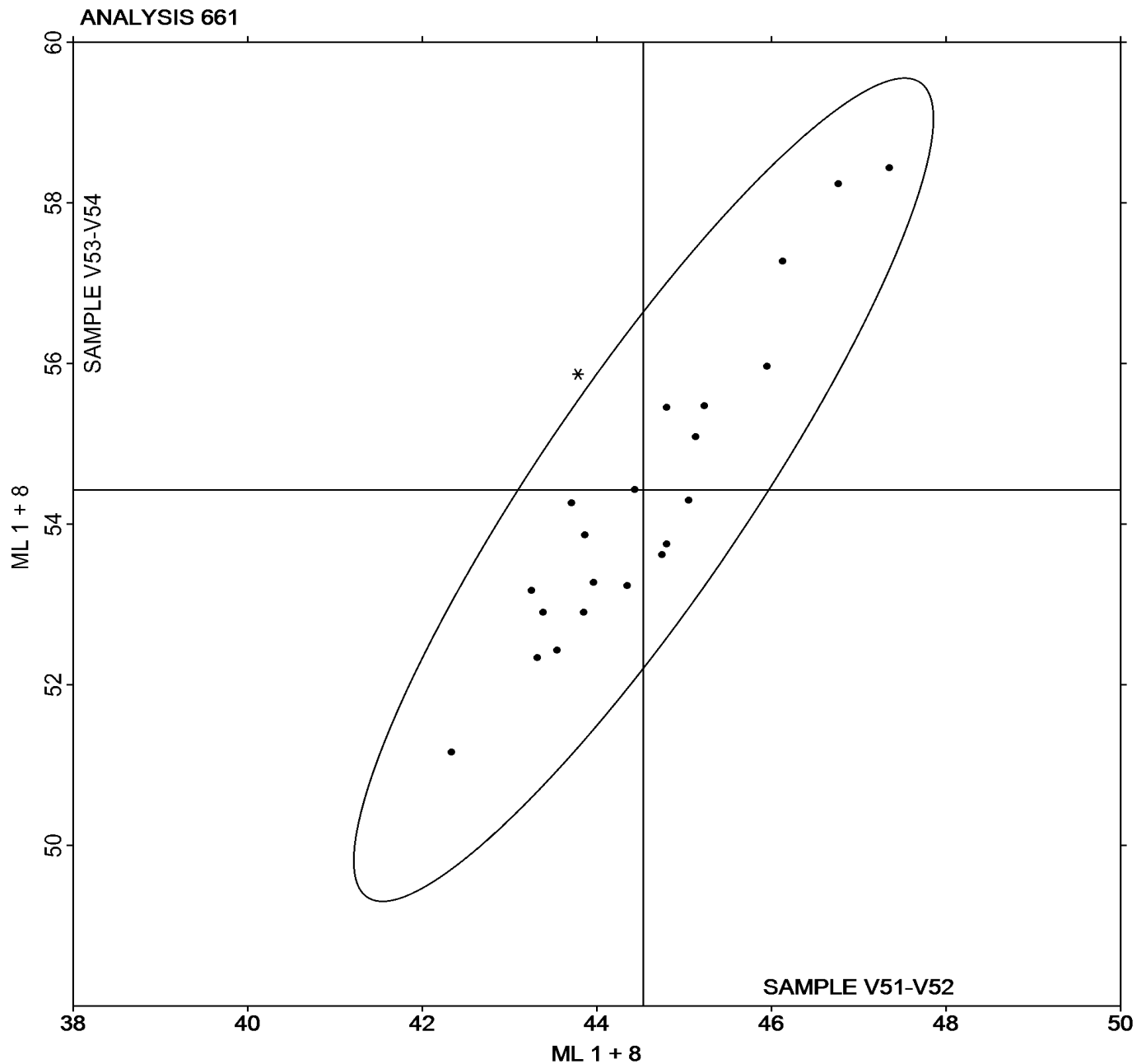
Report #226

4th Qtr 2025

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

Grand Mean Sample **V51-V52** = 44.535 ML 1 + 8

Grand Mean Sample **V53-V54** = 54.428 ML 1 + 8





Rubber Interlaboratory Testing Program

Analysis 662

Report #226

4th Qtr 2025

Mooney Stress Relaxation: 180 (seconds)

WebCode	Data Flag	Sample V51-V52			Sample V53-V54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
EBWLRL	X	26.17	15.79	6.54	14.500	5.887	3.32	XX
EN4EJX		11.12	0.75	0.31	11.125	2.512	1.41	MV
KJQK43		5.51	-4.87	-2.02	5.565	-3.048	-1.72	MV
KQTTAV		11.32	0.94	0.39	8.627	0.014	0.01	MR
PVMGTW		11.48	1.10	0.45	8.908	0.296	0.17	MV
WQ8GF4		10.86	0.49	0.20	8.560	-0.053	-0.03	ML
ZL7CCA		11.98	1.60	0.66	8.892	0.279	0.16	ML

Grand Means		Summary Statistics	
	10.377 seconds		8.6128 seconds
Std Dev Btwn Labs	2.416 seconds		1.7759 seconds
		Statistics based on 6 of 7 reporting participants	

Samples V51-V52: SBR & V53-V54: Butyl

Comments on Assigned Data Flags for Test #662

EBWLRL (X) - Data for all samples are high.

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

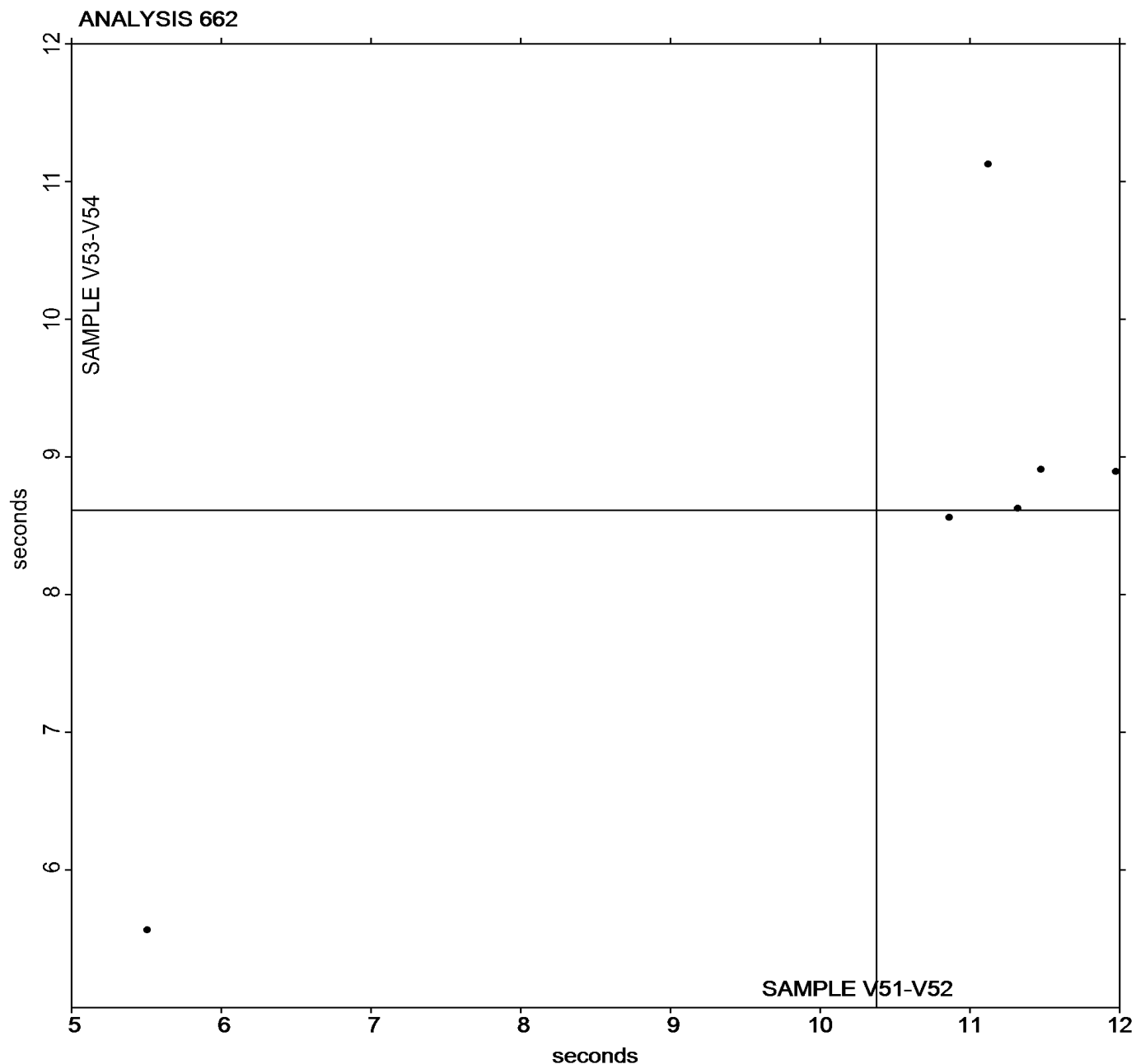


Rubber Interlaboratory Testing Program
Analysis 662
Mooney Stress Relaxation: 180 (seconds)

Report #226
4th Qtr 2025

Grand Mean Sample **V51-V52** = 10.377 seconds

Grand Mean Sample **V53-V54** = 8.6128 seconds



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



Rubber Interlaboratory Testing Program

Analysis 663

Report #226

4th Qtr 2025

Mooney Stress Relaxation: X30 (percent)

WebCode	Data Flag	Sample V51-V52			Sample V53-V54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
EBWLRL		80.83	-4.85	-1.88	86.67	-3.53	-1.96	XX
EN4EJX		88.65	2.97	1.15	91.79	1.60	0.89	MV
KJQK43	X	27.61	-58.07	-22.46	20.28	-69.92	-38.93	MV
KQTTAV		86.16	0.48	0.18	90.86	0.66	0.37	MR
PVMGTW		85.93	0.24	0.09	90.31	0.12	0.07	MV
WQ8GF4		86.55	0.86	0.33	90.82	0.62	0.35	ML
ZL7CCA		85.99	0.30	0.12	90.72	0.53	0.29	ML

Grand Means		Summary Statistics	
	85.683 percent		90.196 percent
Std Dev Btwn Labs	2.586 percent		1.796 percent
		Statistics based on 6 of 7 reporting participants	

Samples V51-V52: SBR & V53-V54: Butyl

Comments on Assigned Data Flags for Test #663

KJQK43 (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	XX	Instrument make/model not specified by lab



Rubber Interlaboratory Testing Program

Analysis 663

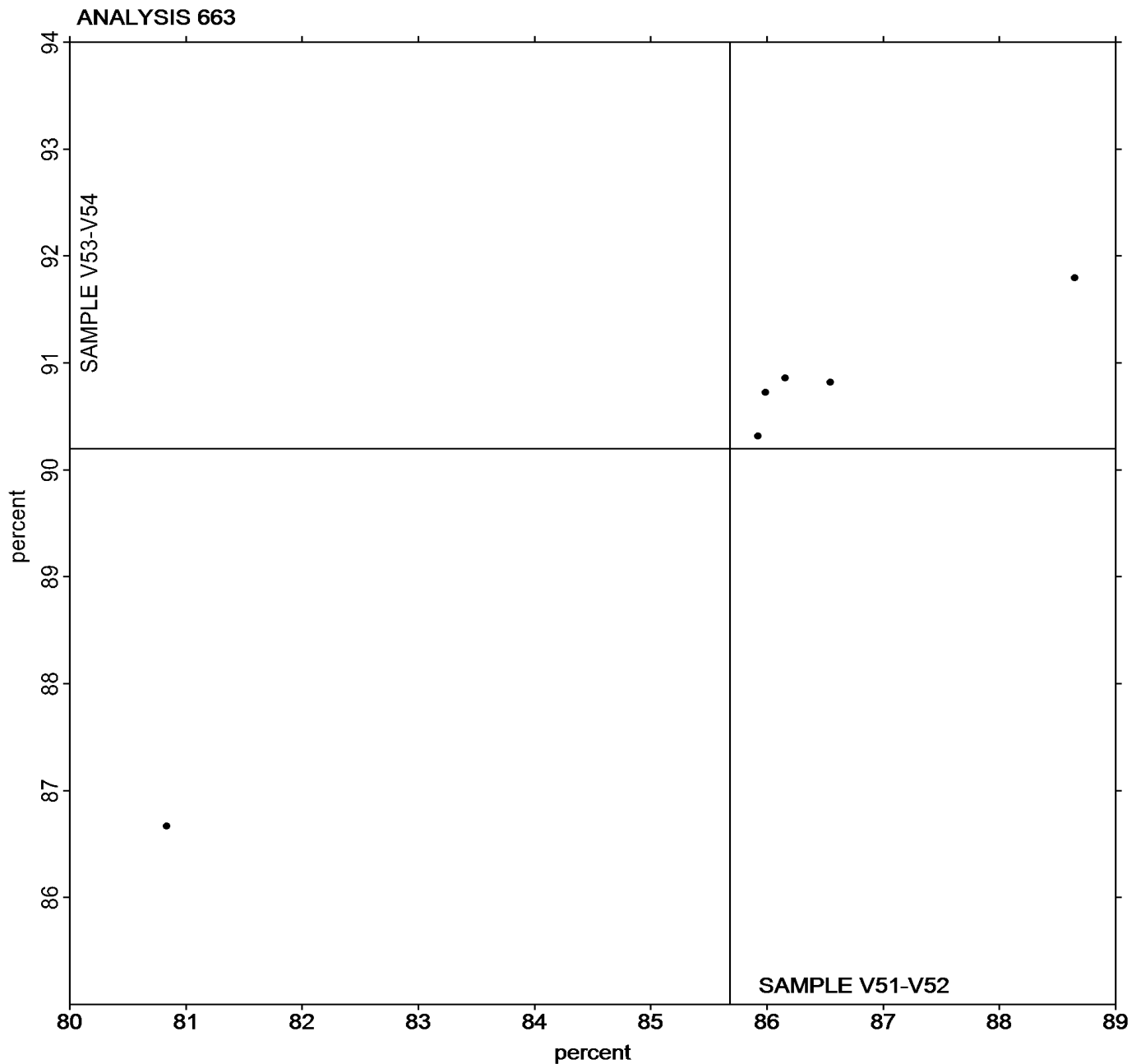
Mooney Stress Relaxation: X30 (percent)

Report #226

4th Qtr 2025

Grand Mean Sample **V51-V52** = 85.683 percent

Grand Mean Sample **V53-V54** = 90.196 percent



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



Rubber Interlaboratory Testing Program

Analysis 664

Report #226

4th Qtr 2025

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

WebCode	Data Flag	Sample V51-V52			Sample V53-V54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
EBWLRL		608.0	-23.1	-0.32	646.1	88.9	1.62	XX
EN4EJX		477.8	-153.3	-2.13	478.2	-79.1	-1.44	MV
KJQK43		666.8	35.8	0.50	511.8	-45.5	-0.83	MV
KQTTAV		670.4	39.3	0.55	553.6	-3.6	-0.07	MR
PVMGTW		684.4	53.4	0.74	599.8	42.6	0.78	MV
WQ8GF4		645.5	14.5	0.20	555.9	-1.4	-0.02	ML
ZL7CCA		664.3	33.3	0.46	555.3	-1.9	-0.03	ML

Grand Means		Summary Statistics	
	631.03 M-s		557.25 M-s
Std Dev Btwn Labs	71.90 M-s		54.85 M-s
Statistics based on 7 of 7 reporting participants			

Samples V51-V52: SBR & V53-V54: 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

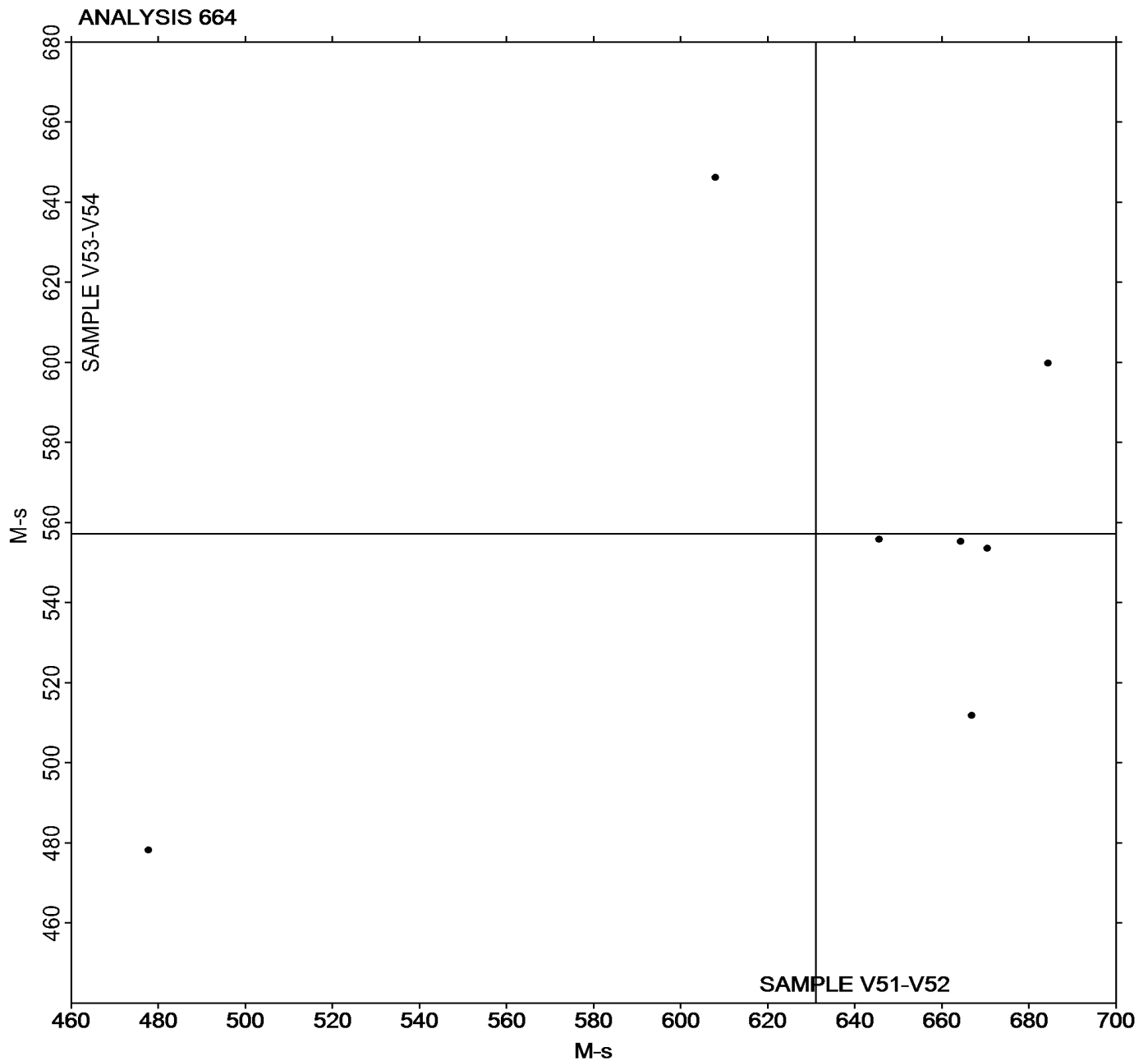


Rubber Interlaboratory Testing Program
Analysis 664
Mooney Stress Relaxation: Area under curve (M-s)

Report #226
4th Qtr 2025

Grand Mean Sample **V51-V52** = 631.03 M-s

Grand Mean Sample **V53-V54** = 557.25 M-s



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



Rubber Interlaboratory Testing Program

Analysis 684

Report #226

4th Qtr 2025

MDR Vulcanization-Cure Time 10% (minutes)

WebCode	Data Flag	Sample Z55-Z56			Sample Z57-Z58			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
279K4D		1.657	0.054	0.44	1.522	0.006	0.06	ME
2K62UC		1.607	0.004	0.04	1.532	0.016	0.16	MC
2LXRZQ		1.622	0.019	0.16	1.547	0.031	0.31	MC
44FB8H		1.545	-0.057	-0.46	1.445	-0.071	-0.71	ME
4ECECC		1.742	0.139	1.12	1.552	0.036	0.36	ME
4NEYCJ		1.920	0.318	2.54	1.723	0.208	2.08	XX
6E8J6B		1.568	-0.034	-0.27	1.483	-0.032	-0.32	MC
AF7CQB		1.545	-0.057	-0.46	1.462	-0.054	-0.54	MC
C2XB8Q		1.570	-0.032	-0.26	1.507	-0.009	-0.09	MC
EFA7X8		1.437	-0.166	-1.33	1.383	-0.132	-1.33	MC
EN4EJX		1.620	0.018	0.14	1.587	0.071	0.71	MM
FK3PFV		1.560	-0.042	-0.34	1.502	-0.014	-0.14	MC
G8ME3P		1.623	0.021	0.17	1.550	0.034	0.34	ME
HJGXGV	*	1.217	-0.386	-3.09	1.195	-0.321	-3.21	ME
JBLFFR		1.461	-0.141	-1.13	1.400	-0.116	-1.16	MC
JBM8BE		1.603	0.001	0.01	1.505	-0.011	-0.11	ME
KJQK43		1.475	-0.127	-1.02	1.408	-0.107	-1.08	MR
KQTTAV		1.690	0.088	0.70	1.565	0.049	0.50	MD
PVMGTW		1.720	0.118	0.94	1.643	0.128	1.28	XX
TAFATF		1.518	-0.084	-0.67	1.433	-0.082	-0.82	MC
VQE73P		1.662	0.059	0.48	1.627	0.111	1.11	MM
WHFYA		1.612	0.009	0.08	1.560	0.044	0.45	MP
WQ8GF4		1.767	0.164	1.32	1.550	0.034	0.34	ME
WZHGA		1.588	-0.014	-0.11	1.493	-0.022	-0.22	ME
Y2NKZ9		1.722	0.119	0.96	1.623	0.108	1.08	XX
YHNVGJ		1.605	0.003	0.02	1.595	0.079	0.80	ME
YLN7DJ		1.593	-0.009	-0.07	1.560	0.044	0.45	XX
ZL7CCA		1.613	0.011	0.09	1.485	-0.031	-0.31	ME

Grand Means

1.6022 minutes

Std Dev Btwn Labs

0.1249 minutes

Summary Statistics

1.5156 minutes

0.0998 minutes

Statistics based on 28 of 28 reporting participants

Samples Z55-Z56: EPDM Compound & Z57-Z58: EPDM Compound



Rubber Interlaboratory Testing Program
Analysis 684
MDR Vulcanization-Cure Time 10% (minutes)

Report #226
4th Qtr 2025

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
XX	Instrument model not specified by lab		

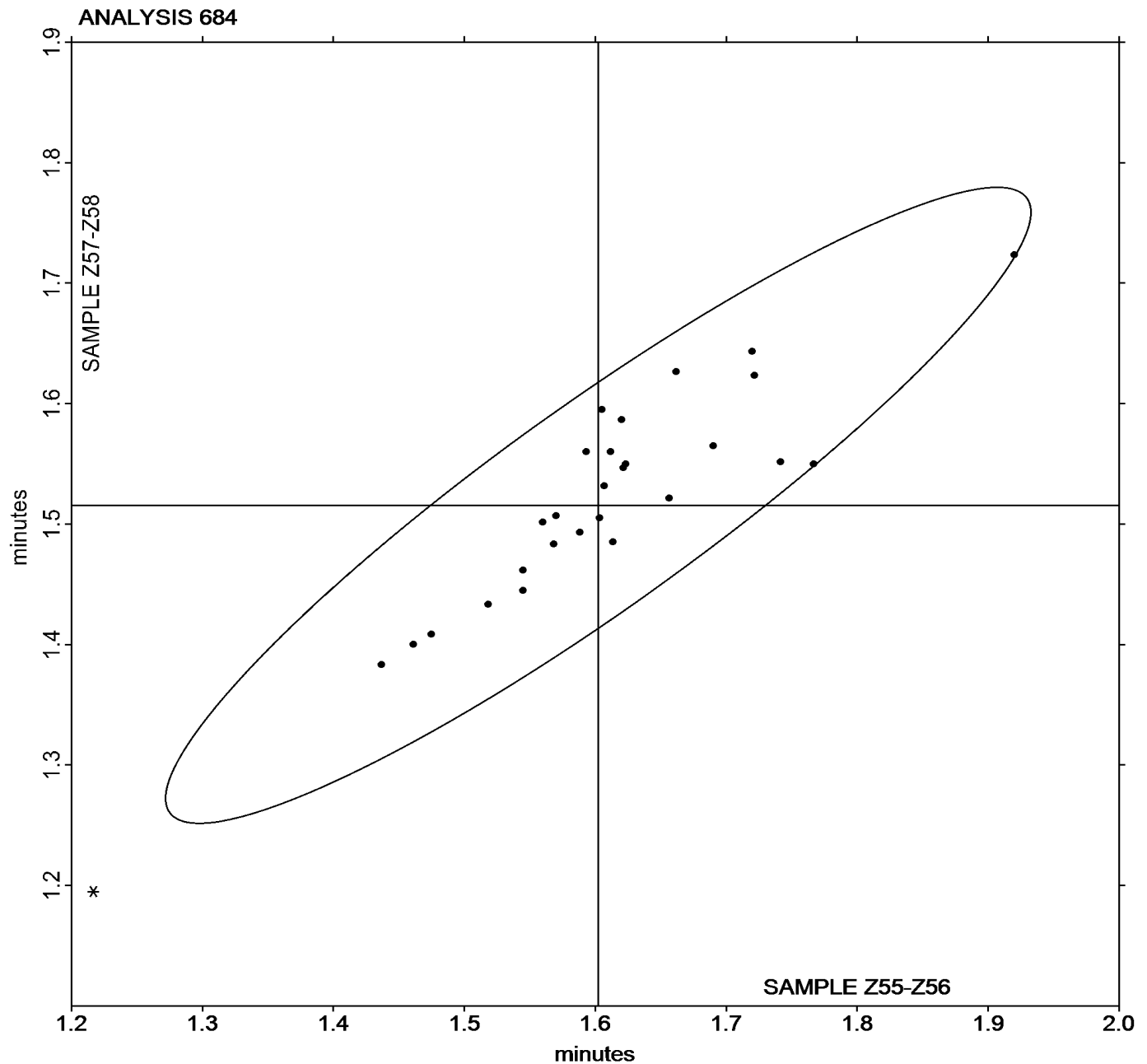


Rubber Interlaboratory Testing Program
Analysis 684
MDR Vulcanization-Cure Time 10% (minutes)

Report #226
4th Qtr 2025

Grand Mean Sample **Z55-Z56** = 1.6022 minutes

Grand Mean Sample **Z57-Z58** = 1.5156 minutes





Rubber Interlaboratory Testing Program
Analysis 685
MDR Vulcanization-Scorch Time, Ts1 (minutes)

Report #226
4th Qtr 2025

WebCode	Data Flag	Sample Z55-Z56			Sample Z57-Z58			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
279K4D		1.672	-0.004	-0.03	1.460	-0.050	-0.53	ME
2K62UC		1.705	0.029	0.25	1.545	0.035	0.37	MC
2LXRZQ		1.688	0.013	0.11	1.562	0.052	0.54	MC
44FB8H		1.658	-0.017	-0.15	1.500	-0.010	-0.11	ME
4ECECC		1.890	0.214	1.81	1.565	0.055	0.57	ME
4NEYCJ	*	2.013	0.338	2.85	1.710	0.200	2.10	XX
6E8J6B		1.632	-0.044	-0.37	1.505	-0.005	-0.05	MC
6J6XTZ		1.573	-0.102	-0.86	1.395	-0.115	-1.21	MC
8QYPCE		1.460	-0.216	-1.82	1.342	-0.168	-1.77	MR
AF7CQB		1.648	-0.027	-0.23	1.460	-0.050	-0.53	MC
C2XB8Q		1.613	-0.062	-0.53	1.462	-0.048	-0.51	XX
CBKAWB	X	1.233	-0.442	-3.74	1.422	-0.088	-0.93	XX
EFA7X8		1.570	-0.106	-0.89	1.427	-0.083	-0.88	MC
EN4EJX		1.728	0.053	0.45	1.600	0.090	0.94	MM
FK3PFV		1.643	-0.032	-0.27	1.525	0.015	0.16	MC
G8ME3P		1.588	-0.087	-0.74	1.473	-0.037	-0.39	ME
HJGXGV	X	1.155	-0.521	-4.40	1.020	-0.490	-5.14	ME
JBLFFR		1.511	-0.164	-1.39	1.381	-0.130	-1.36	MC
JBM8BE		1.635	-0.041	-0.34	1.477	-0.033	-0.35	ME
KJQK43		1.542	-0.134	-1.13	1.430	-0.080	-0.84	MR
KQTTAV		1.768	0.093	0.78	1.587	0.077	0.80	MD
PVMGTW		1.808	0.133	1.12	1.688	0.178	1.87	XX
TAFATF		1.548	-0.128	-1.08	1.340	-0.170	-1.78	MC
VQE73P		1.820	0.144	1.22	1.672	0.162	1.69	MM
VZJUGG	X	0.920	-0.756	-6.38	0.720	-0.790	-8.28	MC
WHFYA		1.705	0.029	0.25	1.563	0.053	0.56	MP
WQ8GF4		1.813	0.138	1.16	1.498	-0.012	-0.12	ME
Y2NKZ9		1.655	-0.021	-0.17	1.510	0.000	0.00	XX
YHNVGJ		1.653	-0.022	-0.19	1.618	0.108	1.13	ME
YLN7DJ		1.682	0.006	0.05	1.518	0.008	0.09	MR
ZL7CCA		1.693	0.018	0.15	1.472	-0.038	-0.40	ME

Grand Means

1.6756 minutes

Std Dev Btwn Labs

0.1184 minutes

Summary Statistics

1.5102 minutes

0.0954 minutes

Statistics based on 28 of 31 reporting participants



Rubber Interlaboratory Testing Program
Analysis 685
MDR Vulcanization-Scorch Time, Ts1 (minutes)

Report #226
4th Qtr 2025

Samples Z55-Z56: EPDM Compound & Z57-Z58: EPDM Compound

Comments on Assigned Data Flags for Test #685

CBKAWB (X) - Data for sample group Z55-Z56 are low.

HJGXGV (X) - Data for all samples are low. Inconsistent within the determinations of sample group Z57-Z58.

VZJUGG (X) - Data for all samples are low. 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
MP	Alpha Technologies [Monsanto] MDR 2000P	MR	MonTech D-RPA 3000
XX	Instrument model not specified by lab		

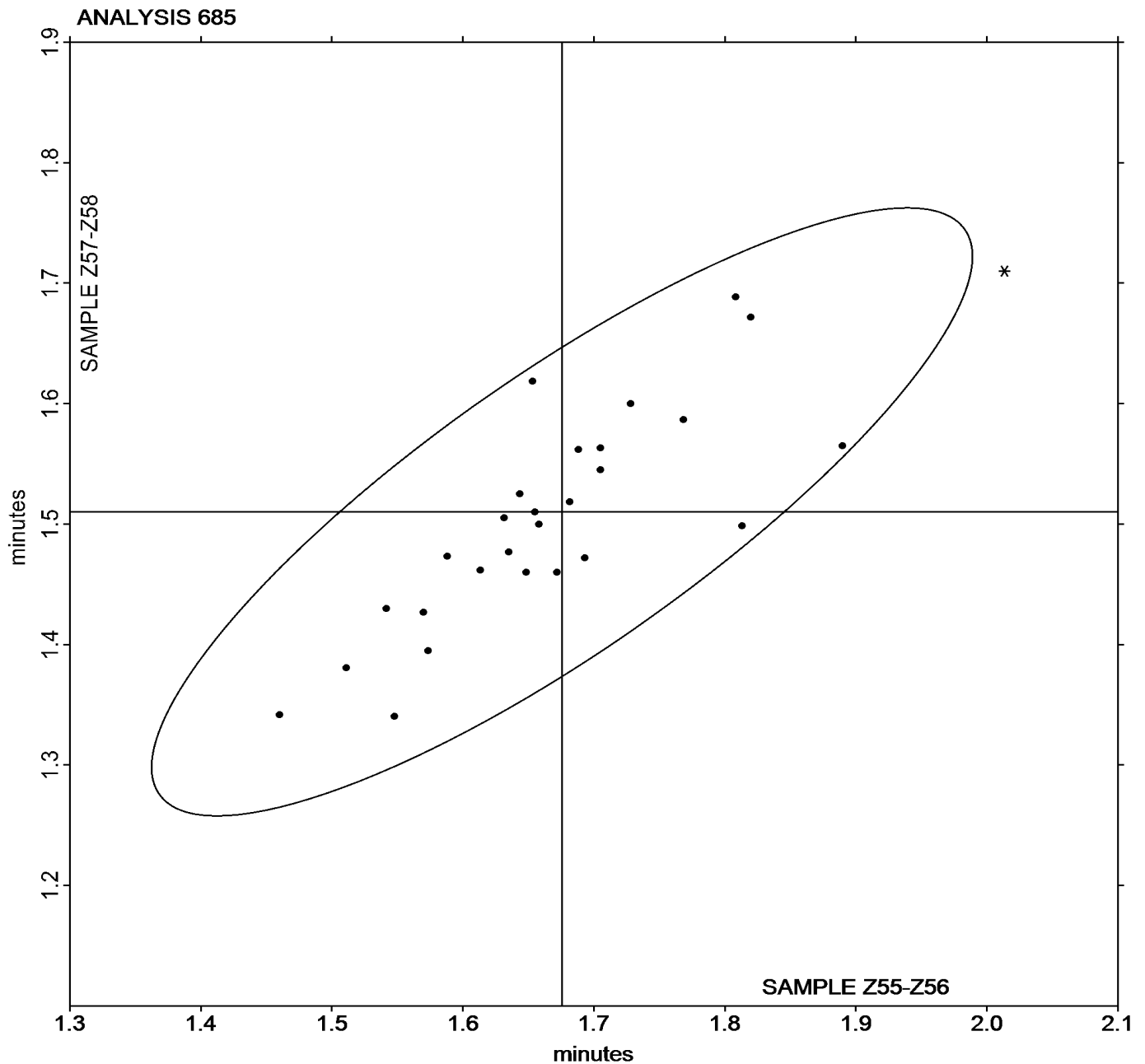


Rubber Interlaboratory Testing Program
Analysis 685
MDR Vulcanization-Scorch Time, Ts1 (minutes)

Report #226
4th Qtr 2025

Grand Mean Sample **Z55-Z56** = 1.6756 minutes

Grand Mean Sample **Z57-Z58** = 1.5102 minutes





Rubber Interlaboratory Testing Program

Analysis 686

Report #226

4th Qtr 2025

MDR Vulcanization-Cure Time 50% (minutes)

WebCode	Data Flag	Sample Z55-Z56			Sample Z57-Z58			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
279K4D		2.993	0.135	1.09	2.882	0.069	0.54	ME
2K62UC		2.827	-0.032	-0.26	2.865	0.052	0.41	MC
2LXRZQ		2.838	-0.020	-0.16	2.755	-0.058	-0.46	MC
44FB8H		2.707	-0.152	-1.23	2.582	-0.231	-1.83	ME
4ECECC		2.962	0.103	0.84	2.745	-0.068	-0.54	ME
4NEYCJ	X	3.308	0.450	3.65	3.040	0.227	1.79	XX
6E8J6B		2.795	-0.063	-0.51	2.790	-0.023	-0.18	MC
6J6XTZ		2.658	-0.200	-1.62	2.593	-0.220	-1.74	MC
8QYPCE		2.915	0.057	0.46	2.928	0.115	0.91	MR
AF7CQB		2.795	-0.063	-0.51	2.735	-0.078	-0.62	MC
C2XB8Q		2.785	-0.073	-0.59	2.747	-0.066	-0.52	XX
CBKAWB	*	2.538	-0.320	-2.59	2.655	-0.158	-1.25	XX
EFA7X8		2.812	-0.047	-0.38	2.682	-0.131	-1.04	MC
EN4EJX	X	3.103	0.245	1.99	3.463	0.650	5.14	MM
FK3PFV		2.827	-0.032	-0.26	2.787	-0.026	-0.21	MC
G8ME3P		2.873	0.015	0.12	2.833	0.020	0.16	ME
HJGXGV		2.742	-0.117	-0.94	2.642	-0.171	-1.35	ME
JBLFFR		2.803	-0.055	-0.45	2.739	-0.074	-0.59	MC
JBM8BE		2.840	-0.018	-0.15	2.752	-0.061	-0.48	ME
KJQK43		2.990	0.132	1.07	2.940	0.127	1.00	MR
KQTTAV		2.850	-0.008	-0.07	2.802	-0.011	-0.09	MD
PVMGTW		2.867	0.008	0.07	2.860	0.047	0.37	XX
TAFATF		2.863	0.005	0.04	2.807	-0.006	-0.05	MC
VQE73P	*	3.127	0.268	2.17	3.155	0.342	2.70	MM
VZJUGG		2.712	-0.147	-1.19	2.800	-0.013	-0.10	MC
WHFYA		2.897	0.038	0.31	2.945	0.132	1.04	MC
WQ8GF4		2.975	0.117	0.95	2.805	-0.008	-0.06	ME
WZHGA		2.880	0.022	0.18	2.815	0.002	0.02	ME
Y2NKZ9		3.115	0.257	2.08	3.035	0.222	1.75	XX
YHNVGJ		2.930	0.072	0.58	2.903	0.090	0.71	ME
YLN7DJ		2.967	0.108	0.88	2.987	0.174	1.37	MR
ZL7CCA		2.865	0.007	0.06	2.827	0.014	0.11	ME



Rubber Interlaboratory Testing Program
Analysis 686
MDR Vulcanization-Cure Time 50% (minutes)

Report #226
4th Qtr 2025

Grand Means		Summary Statistics
	2.8582 minutes	2.8130 minutes
Std Dev Btwn Labs	0.1235 minutes	0.1265 minutes
		Statistics based on 30 of 32 reporting participants

Samples Z55-Z56: EPDM Compound & Z57-Z58: EPDM Compound

Comments on Assigned Data Flags for Test #686

4NEYCJ (X) - Data for sample group Z55-Z56 are high. Inconsistent within the determinations of sample group Z55-Z56.

EN4EJX (X) - Data for sample group Z57-Z58 are high. Inconsistent within the determinations of sample group Z57-Z58.

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	XX	Instrument model not specified by lab



Rubber Interlaboratory Testing Program

Analysis 686

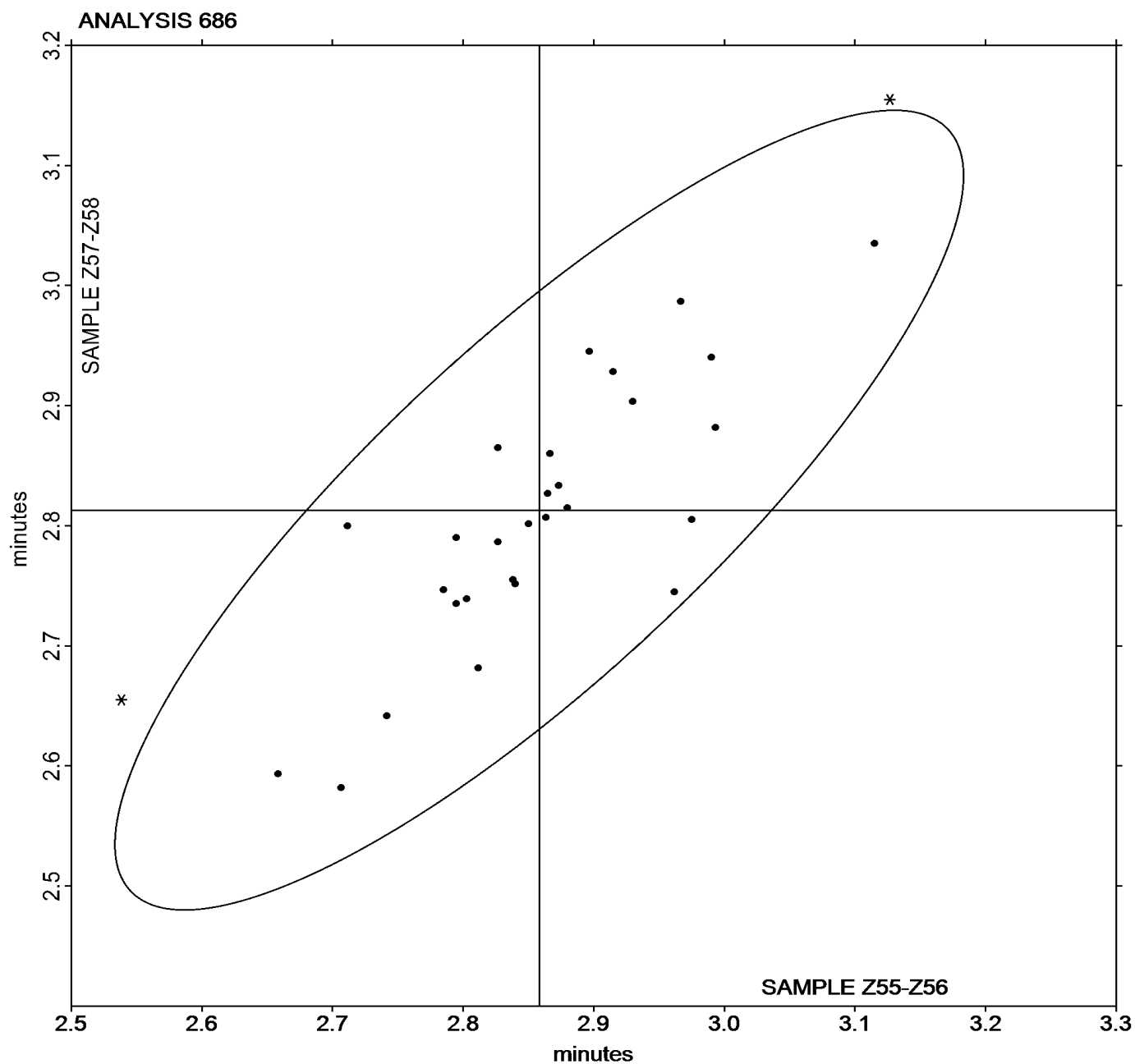
MDR Vulcanization-Cure Time 50% (minutes)

Report #226

4th Qtr 2025

Grand Mean Sample **Z55-Z56** = 2.8582 minutes

Grand Mean Sample **Z57-Z58** = 2.8130 minutes





Rubber Interlaboratory Testing Program

Analysis 687

Report #226

4th Qtr 2025

MDR Vulcanization-Cure Time 90% (minutes)

WebCode	Data Flag	Sample Z55-Z56			Sample Z57-Z58			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
279K4D		10.278	0.466	0.58	10.74	-0.08	-0.11	ME
2K62UC		9.553	-0.259	-0.32	11.43	0.61	0.87	MC
2LXRZQ		8.653	-1.159	-1.45	9.37	-1.45	-2.07	MC
44FB8H		8.812	-1.000	-1.25	9.32	-1.50	-2.15	ME
4ECECC		9.840	0.028	0.03	10.15	-0.68	-0.97	ME
4NEYCJ		10.518	0.706	0.88	10.85	0.03	0.04	XX
6E8J6B		9.483	-0.329	-0.41	11.17	0.35	0.49	MC
6J6XTZ		9.577	-0.235	-0.29	10.89	0.06	0.09	XX
8QYPCE		10.700	0.888	1.11	11.24	0.42	0.59	MR
AF7CQB		9.282	-0.530	-0.66	11.52	0.70	0.99	MC
C2XB8Q		9.053	-0.759	-0.95	10.98	0.16	0.23	XX
CBKAWB		9.290	-0.522	-0.65	10.28	-0.54	-0.77	XX
EFA7X8		8.718	-1.094	-1.37	9.89	-0.93	-1.33	MC
EN4EJX		11.307	1.495	1.87	12.02	1.20	1.71	MM
FK3PFV		9.465	-0.347	-0.43	10.68	-0.14	-0.20	MC
G8ME3P		10.355	0.543	0.68	10.12	-0.71	-1.01	ME
HJGXGV		9.488	-0.324	-0.40	11.10	0.28	0.40	ME
JBLFFR		10.495	0.683	0.85	11.52	0.70	1.00	MC
JBM8BE		9.067	-0.745	-0.93	10.99	0.17	0.24	ME
KJQK43		10.667	0.855	1.07	11.03	0.21	0.30	MR
KQTTAV		9.653	-0.159	-0.20	11.28	0.45	0.65	MD
PVMGTW	*	8.033	-1.779	-2.22	8.95	-1.88	-2.68	XX
TAFATF		10.707	0.895	1.12	11.10	0.27	0.39	MC
VQE73P		10.572	0.760	0.95	10.92	0.09	0.13	MM
VZJUGG		10.217	0.405	0.51	11.55	0.73	1.04	MC
WHFYA		9.872	0.060	0.07	11.22	0.40	0.57	MC
WQ8GF4		8.447	-1.365	-1.71	10.88	0.05	0.07	ME
WZHGA		10.553	0.741	0.93	11.47	0.65	0.92	ME
Y2NKZ9		10.515	0.703	0.88	10.56	-0.27	-0.38	XX
YHNVGJ		10.673	0.861	1.08	10.60	-0.22	-0.32	ME
YLN7DJ		10.527	0.715	0.89	11.23	0.40	0.58	MR
ZL7CCA		9.615	-0.197	-0.25	11.32	0.49	0.70	MC



Rubber Interlaboratory Testing Program
Analysis 687
MDR Vulcanization-Cure Time 90% (minutes)

Report #226
4th Qtr 2025

Grand Means		Summary Statistics
	9.8120 minutes	10.823 minutes
Stnd Dev Btwn Labs	0.8001 minutes	0.701 minutes
		Statistics based on 32 of 32 reporting participants

Samples Z55-Z56: EPDM Compound & Z57-Z58: EPDM Compound

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	XX	Instrument model not specified by lab

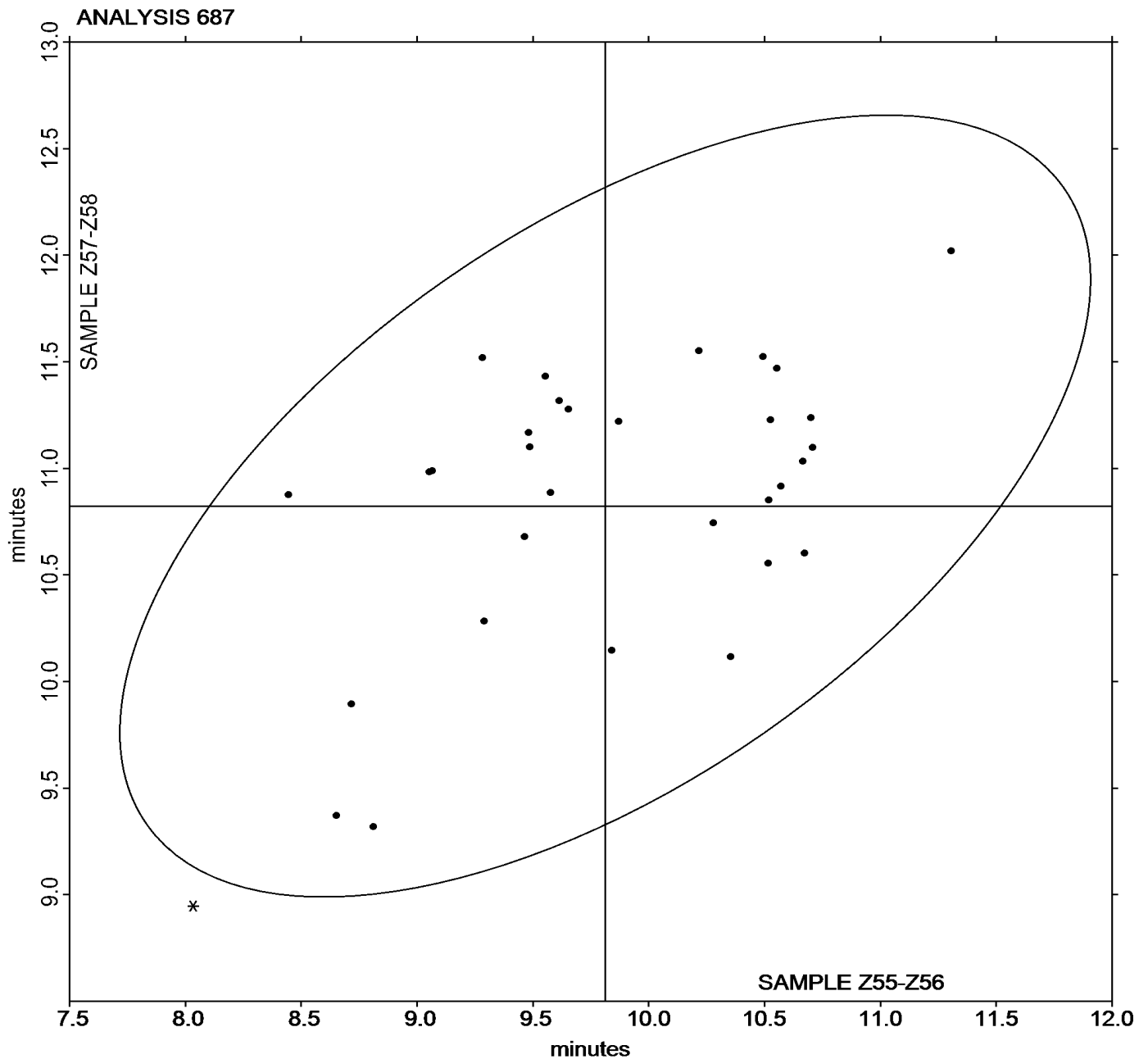


Rubber Interlaboratory Testing Program
Analysis 687
MDR Vulcanization-Cure Time 90% (minutes)

Report #226
4th Qtr 2025

Grand Mean Sample **Z55-Z56** = 9.8120 minutes

Grand Mean Sample **Z57-Z58** = 10.823 minutes





Rubber Interlaboratory Testing Program

Analysis 688

Report #226

4th Qtr 2025

MDR Vulcanization: Minimum Torque (lbf.in)

WebCode	Data Flag	Sample Z55-Z56			Sample Z57-Z58			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
279K4D		3.419	0.209	1.10	3.160	0.125	0.72	ME
2K62UC		3.362	0.151	0.80	3.187	0.152	0.88	MC
2LXRZQ		3.322	0.111	0.59	3.180	0.145	0.84	MC
44FB8H		3.147	-0.064	-0.33	2.953	-0.081	-0.47	ME
4ECECC		3.235	0.025	0.13	2.945	-0.090	-0.52	ME
4NEYCJ	X	4.198	0.988	5.19	3.910	0.875	5.07	XX
6E8J6B		3.225	0.015	0.08	3.082	0.047	0.27	MC
6J6XTZ		3.518	0.308	1.62	3.237	0.202	1.17	MC
8QYPCE		2.892	-0.319	-1.67	2.785	-0.250	-1.45	MR
AF7CQB		3.237	0.026	0.14	3.010	-0.025	-0.14	MC
C2XB8Q		3.218	0.008	0.04	3.163	0.129	0.75	XX
CBKAWB		2.948	-0.262	-1.38	2.785	-0.250	-1.45	XX
EFA7X8		2.947	-0.264	-1.38	2.763	-0.271	-1.57	MC
EN4EJX		3.045	-0.165	-0.87	2.915	-0.120	-0.69	MM
FK3PFV		3.283	0.073	0.38	3.155	0.120	0.70	MC
G8ME3P		3.229	0.019	0.10	3.152	0.118	0.68	ME
HJGXGV		2.952	-0.259	-1.36	2.685	-0.350	-2.03	ME
JBLFFR		3.233	0.023	0.12	3.018	-0.016	-0.10	MC
JBM8BE		3.248	0.038	0.20	3.077	0.042	0.24	ME
KJQK43		3.318	0.108	0.57	3.258	0.224	1.30	MR
KQTTAV		2.951	-0.260	-1.36	2.766	-0.269	-1.56	MD
PVMGTW		2.942	-0.269	-1.41	2.888	-0.146	-0.85	MM
TAFATF		3.267	0.057	0.30	2.981	-0.053	-0.31	MC
VQE73P		2.902	-0.309	-1.62	2.790	-0.245	-1.42	MM
VZJUGG		3.252	0.041	0.22	3.120	0.085	0.49	MC
WHFYA		3.095	-0.115	-0.61	3.020	-0.015	-0.09	MC
WQ8GF4		3.419	0.209	1.10	3.239	0.205	1.19	ME
WZHGA		3.377	0.166	0.87	3.207	0.172	1.00	ME
Y2NKZ9		3.568	0.358	1.88	3.328	0.294	1.70	XX
YHNVGJ		3.468	0.258	1.36	3.160	0.125	0.73	ME
YLN7DJ		3.122	-0.089	-0.47	2.982	-0.053	-0.31	MR
ZL7CCA		3.377	0.166	0.87	3.085	0.050	0.29	ME



Rubber Interlaboratory Testing Program
Analysis 688
MDR Vulcanization: Minimum Torque (lbf.in)

Report #226
4th Qtr 2025

Grand Means		Summary Statistics
	3.2102 lbf.in	3.0347 lbf.in
Std Dev Btwn Labs	0.1904 lbf.in	0.1725 lbf.in
		Statistics based on 31 of 32 reporting participants

Grand Means		Summary Statistics in SI Units
	3.6271 dN.m	3.4288 dN.m
Std Dev Btwn Labs	0.2151 dN.m	0.1949 dN.m
		Statistics based on 31 of 32 reporting participants

Samples Z55-Z56: EPDM Compound & Z57-Z58: EPDM Compound

Comments on Assigned Data Flags for Test #688

4NEYCJ (X) - Data for all samples are high. Possible Systematic Error.

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	XX	Instrument model not specified by lab

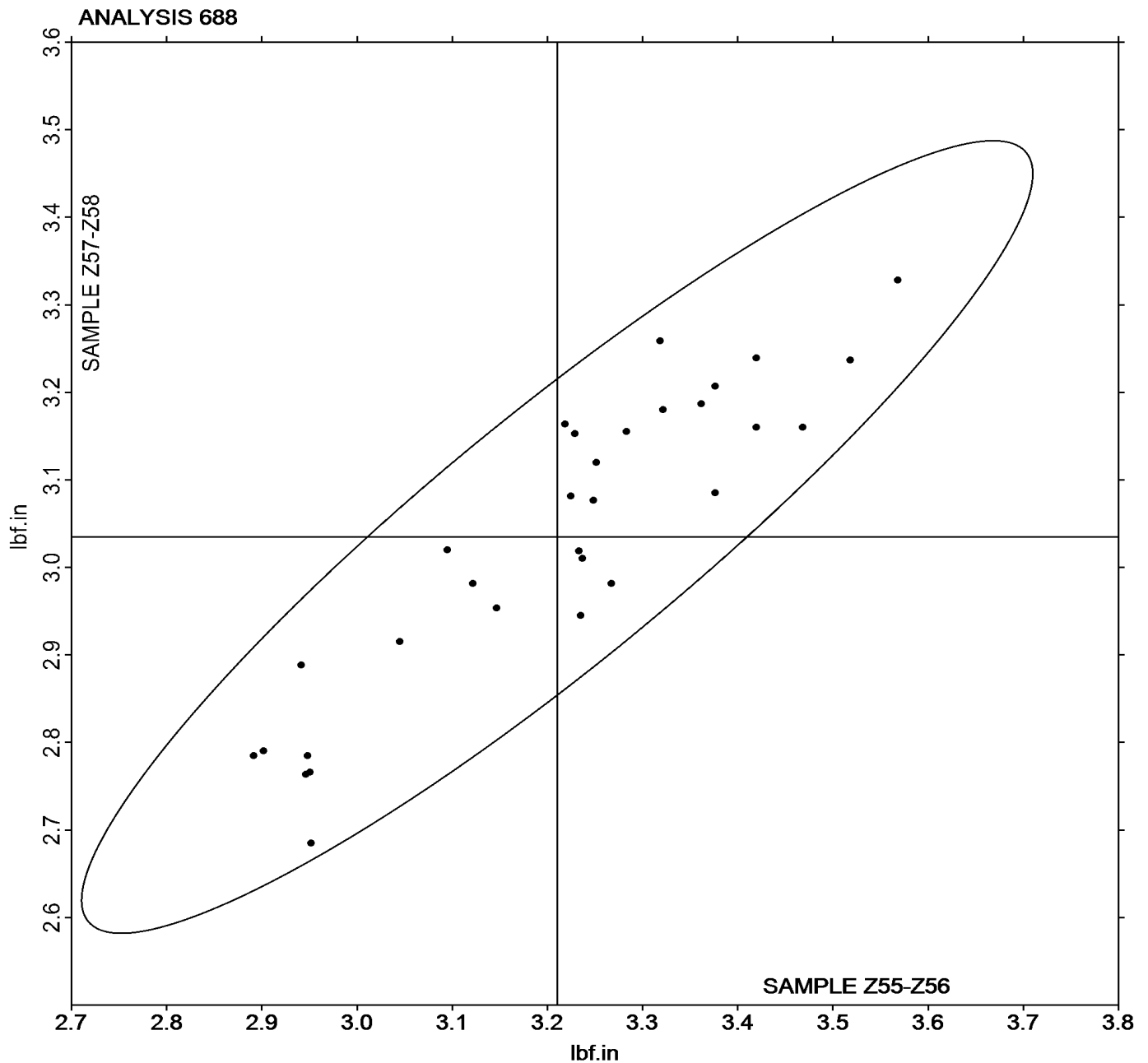


Rubber Interlaboratory Testing Program
Analysis 688
MDR Vulcanization: Minimum Torque (lbf.in)

Report #226
4th Qtr 2025

Grand Mean Sample **Z55-Z56** = 3.2102 lbf.in

Grand Mean Sample **Z57-Z58** = 3.0347 lbf.in





Rubber Interlaboratory Testing Program

Analysis 689

Report #226

4th Qtr 2025

MDR Vulcanization: Maximum Torque (lbf.in)

WebCode	Data Flag	Sample Z55-Z56			Sample Z57-Z58			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
279K4D		12.11	0.07	0.10	13.21	0.11	0.15	ME
2K62UC		11.71	-0.33	-0.49	12.90	-0.20	-0.27	MC
2LXRZQ		12.18	0.13	0.20	12.87	-0.23	-0.31	MC
44FB8H		11.32	-0.73	-1.08	11.91	-1.19	-1.61	ME
4ECECC		10.94	-1.10	-1.64	12.68	-0.43	-0.57	ME
4NEYCJ		12.80	0.75	1.12	14.22	1.12	1.51	XX
6E8J6B		12.12	0.08	0.12	12.63	-0.48	-0.64	MC
6J6XTZ		13.21	1.16	1.73	13.78	0.68	0.91	MC
8QYPCE		12.36	0.31	0.47	13.59	0.49	0.66	MR
AF7CQB		11.61	-0.43	-0.64	13.00	-0.10	-0.14	MC
C2XB8Q		12.51	0.46	0.69	14.07	0.97	1.31	XX
CBKAWB		11.59	-0.46	-0.68	12.00	-1.10	-1.49	XX
EFA7X8		11.38	-0.67	-1.00	12.10	-1.00	-1.36	MC
EN4EJX		11.45	-0.60	-0.89	12.79	-0.31	-0.42	MM
FK3PFV		11.89	-0.15	-0.23	12.72	-0.38	-0.51	MC
G8ME3P		12.73	0.69	1.02	13.62	0.52	0.70	ME
HJGXGV		12.39	0.34	0.51	13.40	0.30	0.41	ME
JBLFFR		12.45	0.41	0.60	13.25	0.14	0.19	MC
JBM8BE		12.67	0.63	0.93	13.67	0.57	0.77	ME
KJQK43		12.34	0.30	0.44	12.91	-0.19	-0.25	MR
KQTTAV		11.39	-0.66	-0.98	12.32	-0.78	-1.06	MD
PVMGTW		11.39	-0.66	-0.98	12.06	-1.04	-1.41	MM
TAFATF		11.73	-0.31	-0.46	13.29	0.19	0.26	MC
VQE73P		10.83	-1.22	-1.81	12.16	-0.94	-1.27	MM
VZJUGG		12.11	0.07	0.10	13.54	0.43	0.59	MC
WHFYA		11.72	-0.33	-0.49	12.98	-0.12	-0.17	MC
WQ8GF4		11.52	-0.53	-0.79	13.11	0.01	0.01	ME
WZHGA		12.47	0.42	0.63	13.19	0.09	0.12	ME
Y2NKZ9	*	14.02	1.98	2.94	15.40	2.30	3.11	XX
YHNVGJ		12.70	0.65	0.97	12.64	-0.46	-0.62	ME
YLN7DJ		11.77	-0.28	-0.41	13.84	0.73	0.99	MR
ZL7CCA		12.06	0.01	0.02	13.43	0.32	0.44	ME



Rubber Interlaboratory Testing Program
Analysis 689
MDR Vulcanization: Maximum Torque (lbf.in)

Report #226
4th Qtr 2025

Summary Statistics			
Grand Means	12.044 lbf.in	13.101 lbf.in	
Std Dev Btwn Labs	0.672 lbf.in	0.741 lbf.in	
Statistics based on 32 of 32 reporting participants			

Summary Statistics in SI Units			
Grand Means	13.608 dN.m	14.802 dN.m	
Std Dev Btwn Labs	0.760 dN.m	0.837 dN.m	
Statistics based on 32 of 32 reporting participants			

Samples Z55-Z56: EPDM Compound & Z57-Z58: EPDM Compound

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	XX	Instrument model not specified by lab

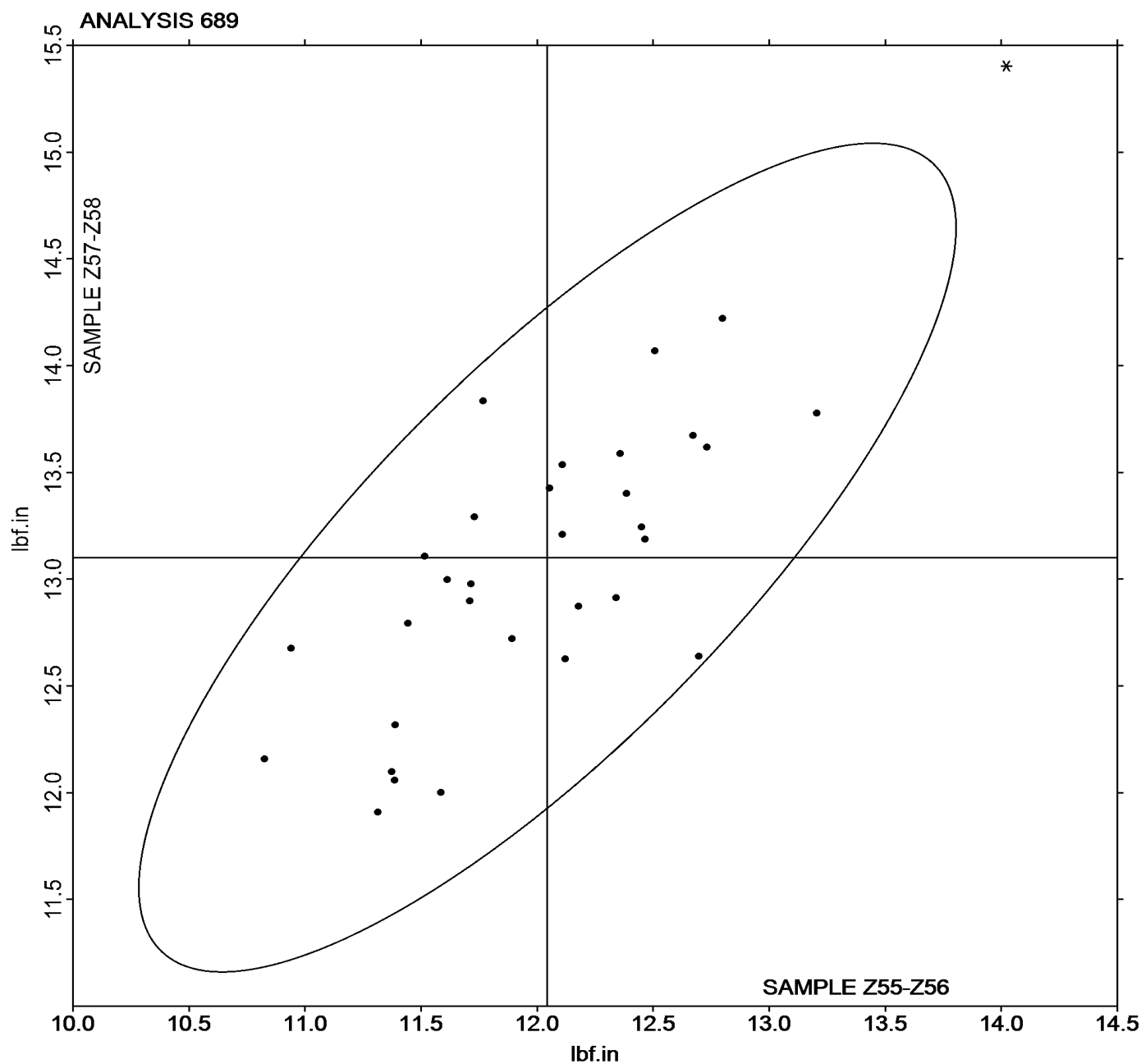


Rubber Interlaboratory Testing Program
Analysis 689
MDR Vulcanization: Maximum Torque (lbf.in)

Report #226
4th Qtr 2025

Grand Mean Sample **Z55-Z56** = 12.044 lbf.in

Grand Mean Sample **Z57-Z58** = 13.101 lbf.in





Rubber Interlaboratory Testing Program
Analysis 690
RPA Rheological Properties: Part A - G' at 20Hz (kPa)

Report #226
4th Qtr 2025

WebCode	Data Flag	Sample H51-H52			Sample H53-H54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2K62UC		595.0	-35.3	-1.15	584.0	-7.0	-0.26	RP
JBM8BE		668.7	38.5	1.26	628.3	37.3	1.39	RP
KQTTAV		634.6	4.3	0.14	587.3	-3.6	-0.14	RP
TAFATF		622.7	-7.5	-0.25	564.4	-26.6	-0.99	RP

Grand Means		Summary Statistics	
	630.25 kPa		590.99 kPa
Stnd Dev Btwn Labs	30.54 kPa		26.83 kPa
Statistics based on 4 of 4 reporting participants			

Samples H51-H52: EPDM Compound & H53-H54: EPDM Compound

Key to Instrument Codes Reported by Participants

RP RPA 2000



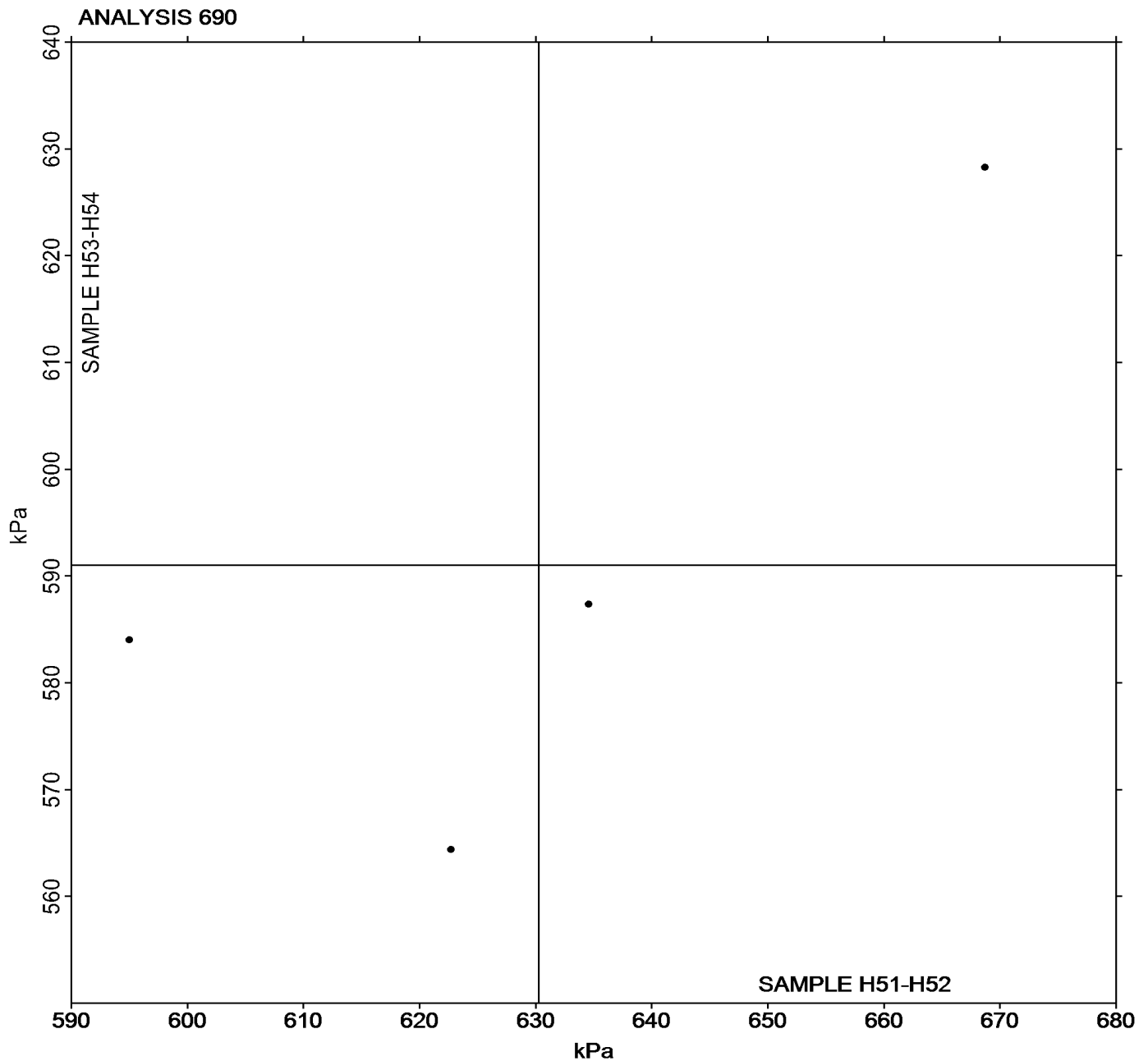
Rubber Interlaboratory Testing Program
Analysis 690
RPA Rheological Properties: Part A - G' at 20Hz (kPa)

Report #226

4th Qtr 2025

Grand Mean Sample **H51-H52** = 630.25 kPa

Grand Mean Sample **H53-H54** = 590.99 kPa



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



Rubber Interlaboratory Testing Program
Analysis 691
RPA Rheological Properties: Part A - G'' at 20Hz (kPa)

Report #226
4th Qtr 2025

WebCode	Data Flag	Sample H51-H52			Sample H53-H54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2K62UC		221.8	9.5	0.78	218.1	9.0	0.52	PR
JBM8BE		206.6	-5.7	-0.47	203.8	-5.3	-0.31	RP
KQTTAV		197.8	-14.5	-1.19	187.7	-21.4	-1.25	RP
TAFATF		222.9	10.6	0.87	226.8	17.7	1.04	RP

Grand Means		Summary Statistics	
	212.29 kPa		209.11 kPa
Stnd Dev Btwn Labs	12.19 kPa		17.13 kPa
Statistics based on 4 of 4 reporting participants			

Samples H51-H52: EPDM Compound & H53-H54: EPDM Compound

Key to Instrument Codes Reported by Participants

PR PRPA 2000

RP RPA 2000



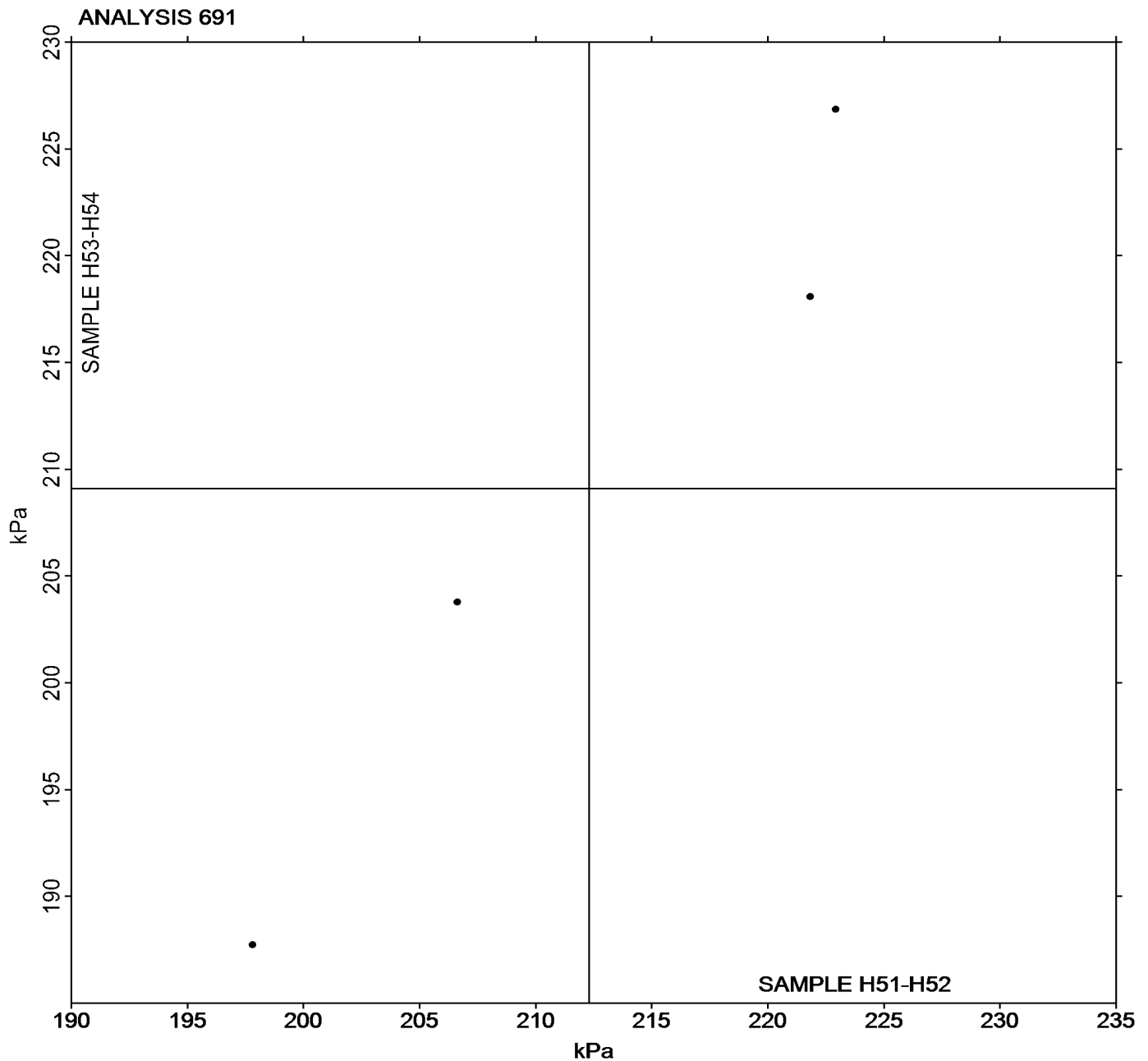
Rubber Interlaboratory Testing Program
Analysis 691
RPA Rheological Properties: Part A - G'' at 20Hz (kPa)

Report #226

4th Qtr 2025

Grand Mean Sample **H51-H52** = 212.29 kPa

Grand Mean Sample **H53-H54** = 209.11 kPa



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



Rubber Interlaboratory Testing Program
Analysis 695
RPA Rheological Properties: Part B - G' at 1.0Hz (kPa)

Report #226
4th Qtr 2025

WebCode	Data Flag	Sample H51-H52			Sample H53-H54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2K62UC		79.91	-12.71	-0.97	81.32	-7.82	-0.61	PR
JBM8BE		104.78	12.16	0.93	101.50	12.36	0.97	RP
KQTTAV		103.01	10.39	0.79	98.42	9.28	0.73	RP
TAFATF		82.77	-9.84	-0.75	75.33	-13.81	-1.08	RP

Grand Means		Summary Statistics	
	92.617 kPa		89.140 kPa
Stnd Dev Btwn Labs	13.093 kPa		12.789 kPa
Statistics based on 4 of 4 reporting participants			

Samples H51-H52: EPDM Compound & H53-H54: EPDM Compound

Key to Instrument Codes Reported by Participants

PR PRPA 2000

RP RPA 2000



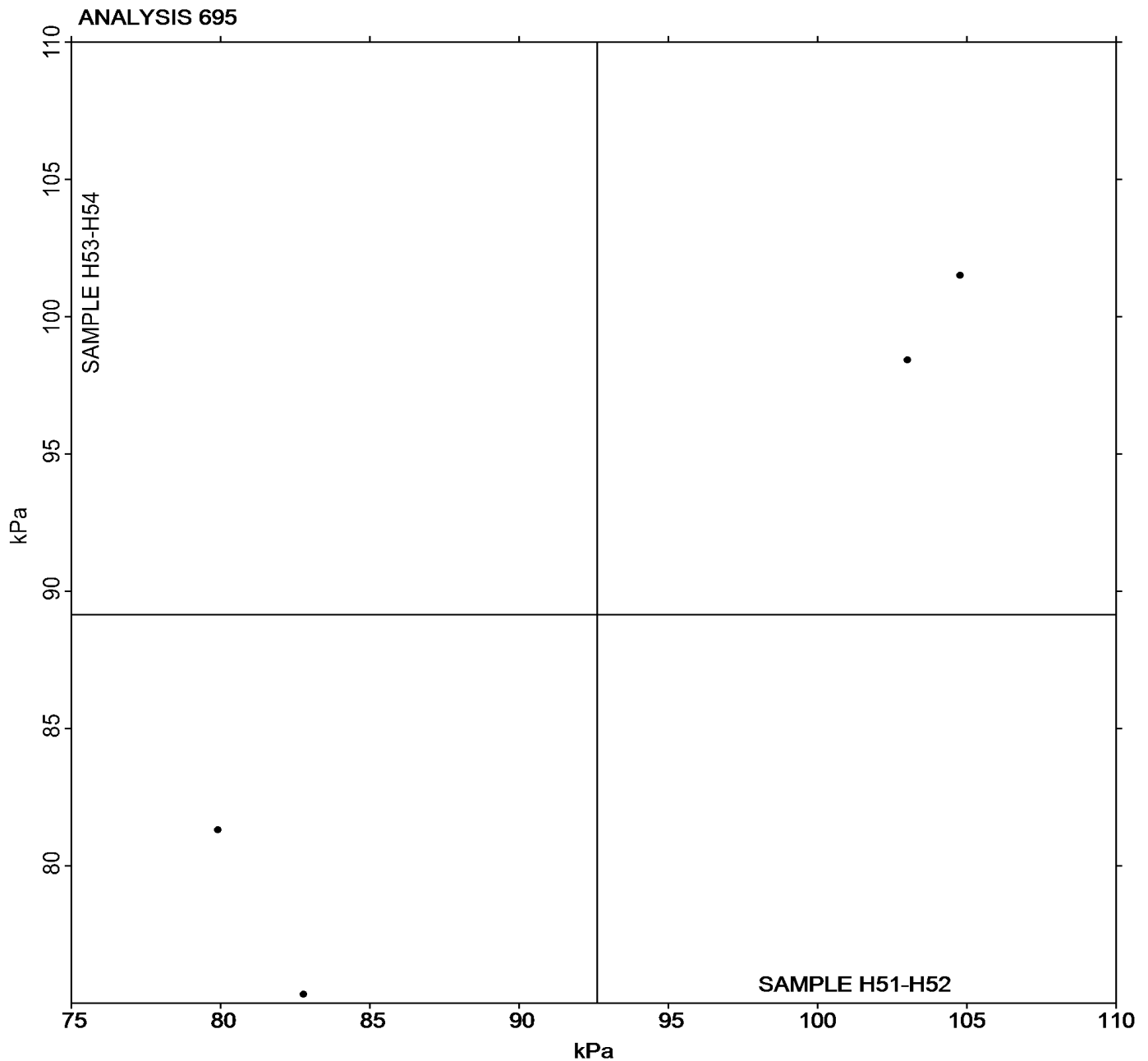
Rubber Interlaboratory Testing Program
Analysis 695
RPA Rheological Properties: Part B - G' at 1.0Hz (kPa)

Report #226

4th Qtr 2025

Grand Mean Sample **H51-H52** = 92.617 kPa

Grand Mean Sample **H53-H54** = 89.140 kPa



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



Rubber Interlaboratory Testing Program

Report #226

Analysis 696

4th Qtr 2025

RPA Rheological Properties: Part B - G'' at 1.0Hz (kPa)

WebCode	Data Flag	Sample H51-H52			Sample H53-H54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2K62UC		90.83	-6.48	-1.39	88.75	-3.80	-0.98	PR
JBM8BE		101.90	4.60	0.99	97.69	5.13	1.32	RP
KQTTAV		98.54	1.24	0.27	93.22	0.66	0.17	RP
TAFATF		97.95	0.65	0.14	90.56	-1.99	-0.51	RP

Grand Means		Summary Statistics	
	97.306 kPa		92.555 kPa
Stnd Dev Btwn Labs	4.655 kPa		3.884 kPa
		Statistics based on 4 of 4 reporting participants	

Samples H51-H52: EPDM Compound & H53-H54: EPDM Compound

Key to Instrument Codes Reported by Participants

PR PRPA 2000

RP RPA 2000



Rubber Interlaboratory Testing Program

Report #226

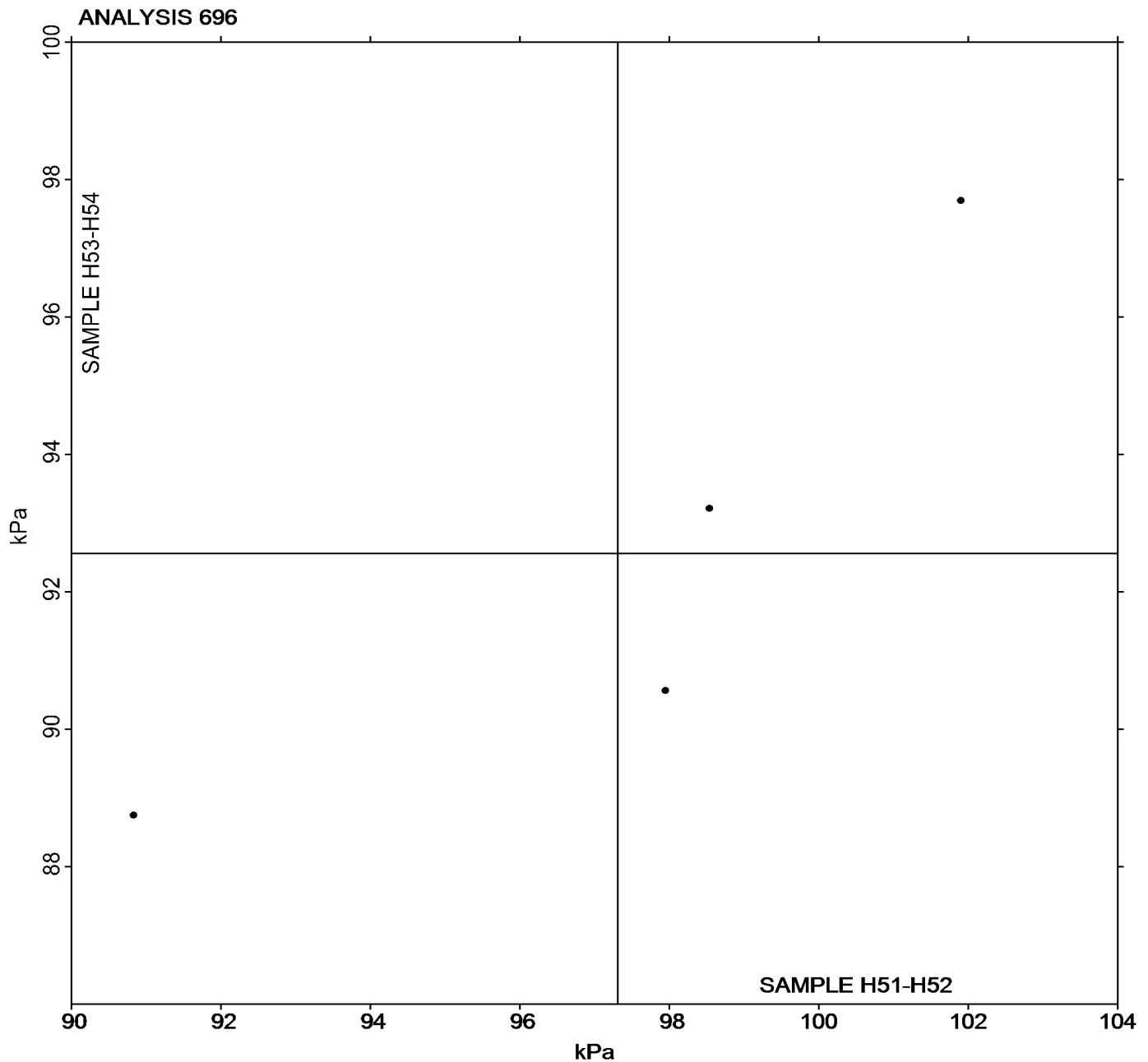
Analysis 696

4th Qtr 2025

RPA Rheological Properties: Part B - G'' at 1.0Hz (kPa)

Grand Mean Sample **H51-H52** = 97.306 kPa

Grand Mean Sample **H53-H54** = 92.555 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-