Collaborative Testing Services, Inc.

Rubber Interlaboratory Testing Program

Summary Report #180- 2nd Qtr 2014

About the Rubber Program, About CTS

Key for Web Summary Report

Analysis	Analysis Name
605	Tensile Strength: Precured Rubber Samples
606	Ultimate Elongation: Precured Rubber Samples
607	Stress at 300% Elongation: Precured Samples
608	Stress at 100% Elongation: Precured Samples
620	Hardness (Type A): Precured Rubber Samples
621	Density: Precured Rubber Samples @ 25C
630	Tensile Strength: Participant-Cured Rubber
631	Ultimate Elongation: Participant-Cured Samples
632	Tensile Stress at 300% Elongation: Lab-Cured
633	Tensile Stress at 100% Elongation: Lab-Cured
660	Mooney Viscosity (4-minute readings)
661	Mooney Viscosity (8-minute butyl readings)
662	Mooney Stress Relaxation: t80
663	Mooney Stress Relaxation: X30
664	Mooney Stress Relaxation: Area under curve
669	ODR Vulcanization Charac.: Cure Time 10%
670	ODR Vulcanization Charac.: Scorch Time, Ts1
671	ODR Vulcanization Charac.: Cure Time 50%
672	ODR Vulcanization Charac.: Cure Time 90%
673	ODR Vulcanization Charac.: Minimum Torque
674	ODR Vulcanization Charac.: Maximum Torque
684	MDR Vulcanization Charac.: Cure Time 10%
685	MDR Vulcanization Charac.: Scorch Time, Ts1
686	MDR Vulcanization Charac.: Cure Time 50%
687	MDR Vulcanization Charac.: Cure Time 90%
688	MDR Vulcanization Charac.: Minimum Torque
689	MDR Vulcanization Charac.: Maximum Torque

ABOUT THE PROGRAM

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

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

ABOUT CTS

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

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

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

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

(Toll-free fax within the U.S.: 1-866-fax-2cts)

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

Key for Web Summary Report (Page 1 of 2)

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

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

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

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

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

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

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

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

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

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

Common Problems Highlighted in Footnotes

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

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

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

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

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

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

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

Rubber Interlaboratory Testing Program

Analysis 605

Tensile Strength (psi)

		Sample B41-B42			Sample B43-B44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
2GBFFL		3,388.8	76.9	0.52	3,414.1	121.4	0.88	ZZ
2HNZ8W		3,189.4	-122.4	-0.83	3,166.9	-125.7	-0.91	ZZ
2U2Z4P		3,372.2	60.3	0.41	3,262.7	-30.0	-0.22	ZZ
3397BC		3,488.5	176.6	1.19	3,287.0	-5.6	-0.04	ZZ
3QFK6G	*	3,480.2	168.4	1.14	3,269.9	-22.7	-0.16	ZZ
3YD96U		2,980.5	-331.4	-2.24	2,967.5	-325.1	-2.34	ZZ
6BYJ8H		3,188.5	-123.4	-0.83	3,177.6	-115.1	-0.83	ZZ
6CABED		3,364.7	52.8	0.36	3,395.9	103.3	0.74	ZZ
6YZTFH		3,097.5	-214.4	-1.45	3,109.5	-183.1	-1.32	ZZ
73KXWT		3,496.6	184.7	1.25	3,363.2	70.6	0.51	ZZ
73KXYE		3,220.0	-91.9	-0.62	3,175.0	-117.6	-0.85	ZZ
76QHLE		3,260.0	-51.9	-0.35	3,195.0	-97.6	-0.70	ZZ
77W3AE		3,205.4	-106.5	-0.72	3,169.1	-123.5	-0.89	ZZ
7FPZDG		3,345.0	33.1	0.22	3,284.0	-8.6	-0.06	ZZ
7LQCAD		3,224.5	-87.4	-0.59	3,240.0	-52.6	-0.38	ZZ
7U4JTM		3,251.0	-60.8	-0.41	3,275.7	-16.9	-0.12	ZZ
8ML9FM		3,650.0	338.1	2.28	3,591.5	298.9	2.15	ZZ
94ZB77	*	3,556.0	244.1	1.65	3,647.0	354.4	2.55	ZZ
9TZKMK		3,263.4	-48.5	-0.33	3,169.1	-123.5	-0.89	ZZ
9UW2ZG		3,306.5	-5.4	-0.04	3,241.5	-51.1	-0.37	ZZ
9YPZEC		3,488.2	176.3	1.19	3,473.7	181.1	1.31	ZZ
A8JPA8		3,270.6	-41.2	-0.28	3,263.4	-29.2	-0.21	ZZ
ABJRHG		3,502.0	190.1	1.28	3,452.7	160.0	1.15	ZZ
AH32N6		3,424.5	112.6	0.76	3,360.0	67.4	0.49	ZZ
AK8MKH		3,268.5	-43.4	-0.29	3,343.5	50.9	0.37	ZZ
AR2YAJ		3,567.5	255.6	1.72	3,560.0	267.4	1.93	ZZ
AYQBUF		3,481.5	169.6	1.14	3,389.0	96.4	0.69	ZZ
B3LGNC		3,327.5	15.6	0.11	3,260.5	-32.1	-0.23	ZZ
B72XWF		3,087.0	-224.9	-1.52	3,075.3	-217.4	-1.57	ZZ
BBDWCF		3,248.5	-63.4	-0.43	3,367.5	74.9	0.54	ZZ
BM9UFF		3,322.0	10.1	0.07	3,265.0	-27.6	-0.20	ZZ
CBUD89		3,270.0	-41.9	-0.28	3,205.0	-87.6	-0.63	ZZ
CV66AB		3,211.0	-100.9	-0.68	3,192.5	-100.1	-0.72	ZZ
D2JHH9		3,043.5	-268.4	-1.81	3,072.0	-220.6	-1.59	ZZ
DAEBYF		3,117.6	-194.2	-1.31	3,219.9	-72.8	-0.52	ZZ
DF33ZG		3,353.3	41.4	0.28	3,288.0	-4.6	-0.03	ZZ
DPTN8Z	X	2,331.5	-980.4	-6.61	2,523.0	-769.6	-5.55	ZZ
DRWJPH		3,370.0	58.1	0.39	3,262.0	-30.6	-0.22	ZZ
E2GZ4A		3,410.0	98.1	0.66	3,445.5	152.9	1.10	ZZ

Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 605

Tensile Strength (psi)

		Sample B41-B42			Sample B43-B44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
E898LJ		3,408.0	96.1	0.65	3,535.5	242.9	1.75	ZZ
EH4PUW	X	2,842.0	-469.8	-3.17	2,988.5	-304.1	-2.19	ZZ
EJ3ND6		3,165.0	-146.9	-0.99	3,245.0	-47.6	-0.34	ZZ
ETL8M4		3,316.4	4.5	0.03	3,257.2	-35.5	-0.26	ZZ
EXJLFK		3,288.5	-23.4	-0.16	3,243.5	-49.1	-0.35	ZZ
EZJW48		3,306.5	-5.4	-0.04	3,230.0	-62.6	-0.45	ZZ
F7RHUQ		3,166.9	-144.9	-0.98	3,145.9	-146.7	-1.06	ZZ
FBGZ82		3,471.0	159.1	1.07	3,451.5	158.9	1.15	ZZ
FE23Y8		3,178.3	-133.6	-0.90	3,296.9	4.2	0.03	ZZ
FY8J2W		3,440.3	128.4	0.87	3,368.2	75.5	0.54	ZZ
FZHGEE		3,335.5	23.6	0.16	3,298.0	5.4	0.04	ZZ
G7MKVZ		3,361.4	49.5	0.33	3,404.0	111.3	0.80	ZZ
G8CQEB	X	3,887.2	575.3	3.88	3,830.3	537.6	3.88	ZZ
GHZMFC		3,272.0	-39.9	-0.27	3,226.0	-66.6	-0.48	ZZ
GJD8A8		3,499.5	187.6	1.27	3,424.5	131.9	0.95	ZZ
GTBCVT		3,149.1	-162.8	-1.10	3,166.9	-125.7	-0.91	ZZ
GYJDGW		3,348.0	36.1	0.24	3,266.5	-26.1	-0.19	ZZ
GZVFZA		3,598.1	286.2	1.93	3,562.9	270.3	1.95	ZZ
HCP4FA		3,245.0	-66.9	-0.45	3,220.0	-72.6	-0.52	ZZ
HHX9T4		3,417.0	105.1	0.71	3,282.5	-10.1	-0.07	ZZ
HMLYU6	X	2,768.4	-543.5	-3.67	2,907.3	-385.3	-2.78	ZZ
JB8EUA		3,360.0	48.1	0.32	3,244.5	-48.1	-0.35	ZZ
LFVN9Z		3,416.0	104.1	0.70	3,378.0	85.4	0.62	ZZ
LKRCP8		3,477.7	165.8	1.12	3,303.2	10.5	0.08	ZZ
M8XDDU		3,033.5	-278.4	-1.88	3,063.0	-229.6	-1.66	ZZ
MHCKX2		3,041.0	-270.9	-1.83	3,071.0	-221.6	-1.60	ZZ
MMMHJ3		3,183.6	-128.3	-0.87	3,227.1	-65.5	-0.47	ZZ
MWHER		3,385.4	73.5	0.50	3,263.1	-29.6	-0.21	ZZ
NJPCNX		3,188.0	-123.9	-0.84	3,129.5	-163.1	-1.18	ZZ
NRGY93		3,132.1	-179.7	-1.21	3,206.1	-86.5	-0.62	ZZ
NWYVK		3,315.0	3.1	0.02	3,322.5	29.9	0.22	ZZ
P7TWTT		3,229.3	-82.5	-0.56	3,163.0	-129.7	-0.93	ZZ
P88Y3M		3,272.5	-39.4	-0.27	3,269.5	-23.1	-0.17	ZZ
PZ9R6Y		3,347.0	35.1	0.24	3,373.5	80.9	0.58	ZZ
QCYJP3		3,157.5	-154.4	-1.04	3,260.0	-32.6	-0.24	ZZ
QMVWG		3,400.3	88.4	0.60	3,317.8	25.2	0.18	ZZ
QRAAJV		3,391.5	79.6	0.54	3,322.5	29.9	0.22	ZZ
QWLEV		3,114.0	-197.9	-1.33	2,985.5	-307.1	-2.21	ZZ
R29NHY		3,551.5	239.6	1.62	3,396.5	103.9	0.75	ZZ

Rubber Interlaboratory Testing Program

Analysis 605

Tensile Strength (psi)

WebCode	Data Flag	Sample B41-B42 Lab Mean	Sample B41-B42 Diff from Grand Mean	Sample B41-B42 CPV	Sample B43-B44 Lab Mean	Sample B43-B44 Diff from Grand Mean	Sample B43-B44 CPV	Instr Code
R8GQ43		3,174.9	-137.0	-0.92	3,069.8	-222.9	-1.61	ZZ
RCCK24		3,480.9	169.1	1.14	3,437.4	144.8	1.04	ZZ
RP2G6M		3,111.5	-200.4	-1.35	3,167.0	-125.6	-0.91	ZZ
RR82TM		3,182.0	-129.9	-0.88	3,308.5	15.9	0.11	ZZ
TCU7U7		3,367.6	55.7	0.38	3,350.8	58.2	0.42	ZZ
TM96HM		3,485.5	173.6	1.17	3,488.0	195.4	1.41	ZZ
TZVE6R		3,409.6	97.8	0.66	3,417.3	124.6	0.90	ZZ
U4FGVX		3,219.9	-92.0	-0.62	3,219.9	-72.8	-0.52	ZZ
UFP29Y		3,252.5	-59.4	-0.40	3,194.0	-98.6	-0.71	ZZ
UKHGJR		3,164.5	-147.4	-0.99	3,207.5	-85.1	-0.61	ZZ
ULQD6V	*	3,743.5	431.6	2.91	3,634.7	342.1	2.47	ZZ
UNFME		3,206.5	-105.4	-0.71	3,233.5	-59.1	-0.43	ZZ
UTBDM		3,223.5	-88.4	-0.60	3,335.5	42.9	0.31	ZZ
V3ATLX		3,331.4	19.5	0.13	3,295.9	3.3	0.02	ZZ
VJLZ8U		3,100.7	-211.2	-1.42	3,025.6	-267.0	-1.92	ZZ
VNGU6V	X	2,778.0	-533.9	-3.60	2,829.0	-463.6	-3.34	ZZ
VNWHX		3,454.1	142.2	0.96	3,500.5	207.8	1.50	ZZ
VZT4MU		3,360.6	48.7	0.33	3,407.0	114.3	0.82	ZZ
WARJKX		3,180.9	-131.0	-0.88	3,042.0	-250.7	-1.81	ZZ
WFE7KA		3,417.0	105.1	0.71	3,367.0	74.4	0.54	ZZ
WQ4TW		3,072.5	-239.4	-1.61	3,148.0	-144.6	-1.04	ZZ
WRADJY		3,430.2	118.3	0.80	3,372.2	79.5	0.57	ZZ
X2TBGH		3,174.8	-137.0	-0.92	3,262.8	-29.8	-0.21	ZZ
X83C3L		3,438.1	126.3	0.85	3,376.5	83.9	0.60	ZZ
XHWQZ		3,169.0	-142.9	-0.96	3,206.5	-86.1	-0.62	ZZ
Y4DMVE	X	2,589.7	-722.2	-4.87	2,428.7	-863.9	-6.23	ZZ
Y4X2LC		3,172.7	-139.1	-0.94	3,269.9	-22.7	-0.16	ZZ
YDZJWF		3,425.0	113.1	0.76	3,381.5	88.9	0.64	ZZ
YEV4NK		3,294.0	-17.9	-0.12	3,392.5	99.9	0.72	ZZ
YWYRY		3,507.0	195.2	1.32	3,523.0	230.4	1.66	ZZ
ZGG2XW	*	3,345.5	33.6	0.23	3,497.5	204.9	1.48	ZZ
ZKWTNP		3,483.2	171.3	1.16	3,482.4	189.8	1.37	ZZ

Summary Statistics

	Sample B41-B42	Sample B43-B44
Grand Means	3,311.86 psi	3,292.62 psi
Stnd Dev Btwn Labs	148.25 psi	138.74 psi

Statistics based on 104 of 110 reporting participants

Rubber Interlaboratory Testing Program

Analysis 605

Tensile Strength (psi)

Summary Statistics in SI Units

Grand Means				
	22.834	MPa	22.70	MPa
Stnd Dev Btwn Labs				
	1.022	MPa	0.96	MPa

Statistics based on 104 of 110 reporting participants

Samples B41-B42: Polyisoprene compound, batch #1 & B43-B44: Polyisoprene compound, batch #2

Comments on assigned Data Flags for Test #605

DPTN8Z (X) - Data for all Samples are low. Possible systematic error.

EH4PUW (X) - Inconsistency in testing between Sample groups. Data for Sample group B41-B42 are low.

G8CQEB (X) - Data for all Samples are high. Possible systematic error. Inconsistency in testing within Sample group B41-B42.

HMLYU6 (X) - Data for all Samples are low. Possible systematic error.

VNGU6V (X) - Data for all Samples are low. Possible systematic error.

Y4DMVE (X) - Data for all Samples are low. Possible systematic error. Inconsistency in testing within Sample group B43-B44.

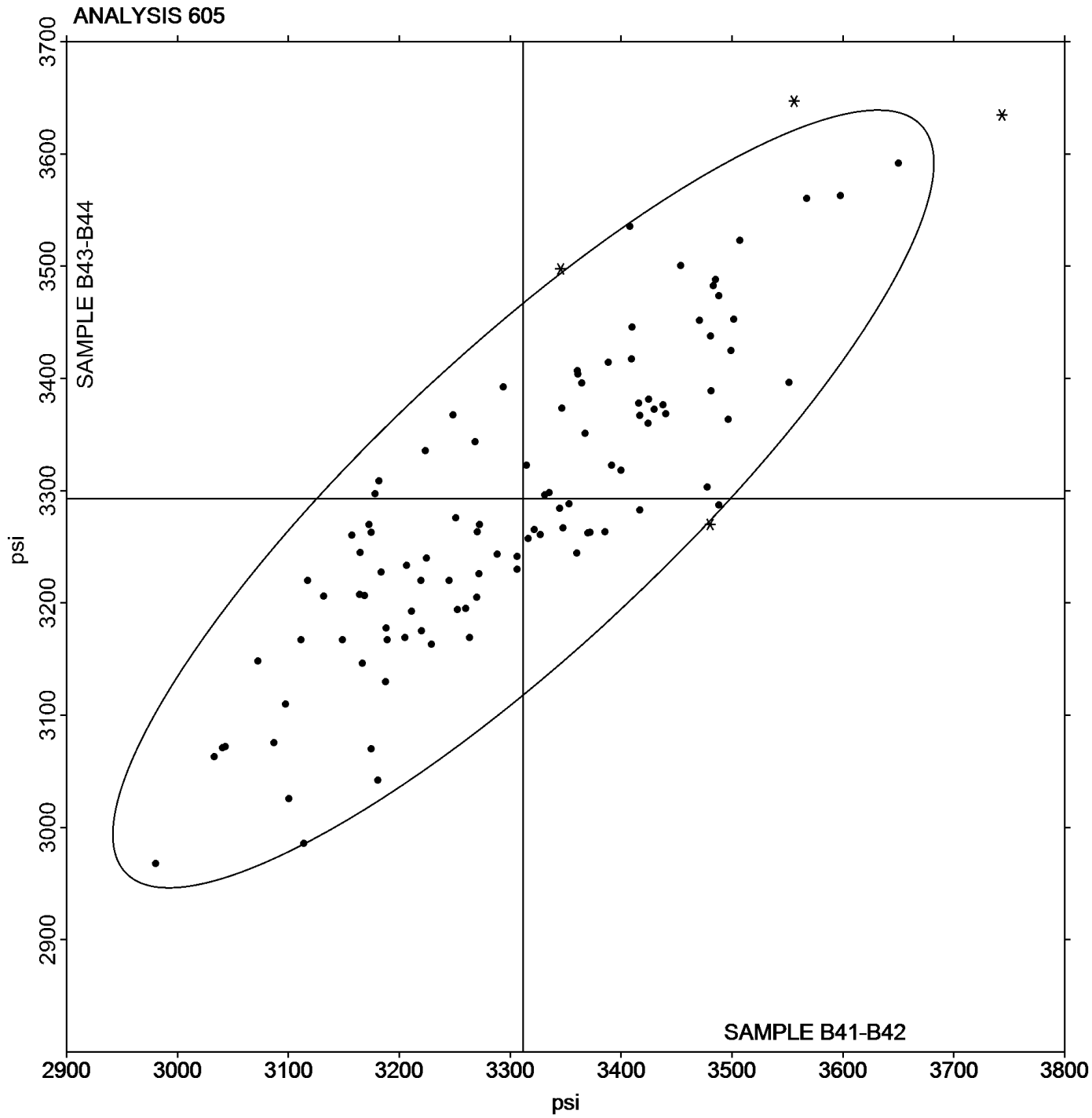
Rubber Interlaboratory Testing Program

Analysis 605

Tensile Strength (psi)

Grand Mean Sample **B41-B42** = 3,311.86 psi

Grand Mean Sample **B43-B44** = 3,292.62 psi



Rubber Interlaboratory Testing Program

Analysis 606

Ultimate Elongation (percent)

		Sample B41-B42			Sample B43-B44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
2GBFFL		601.4	-12.4	-0.49	610.9	-5.4	-0.20	ZZ
2HNZ8W		643.5	29.7	1.18	632.0	15.8	0.58	ZZ
2U2Z4P		628.5	14.7	0.58	616.0	-0.2	-0.01	ZZ
3397BC		638.5	24.7	0.98	636.5	20.3	0.75	ZZ
3QFK6G		586.0	-27.8	-1.10	602.0	-14.2	-0.53	ZZ
3YD96U		576.0	-37.8	-1.50	578.5	-37.7	-1.39	ZZ
6BYJ8H		628.5	14.7	0.58	638.3	22.1	0.82	ZZ
6CABED		635.0	21.2	0.84	630.5	14.3	0.53	ZZ
6YZTFH		591.0	-22.8	-0.90	602.5	-13.7	-0.51	ZZ
73KXWT		631.0	17.2	0.68	613.1	-3.1	-0.12	ZZ
73KXYE		611.0	-2.8	-0.11	606.5	-9.7	-0.36	ZZ
76QHLE		609.5	-4.3	-0.17	595.5	-20.7	-0.77	ZZ
77W3AE		598.5	-15.3	-0.61	605.0	-11.2	-0.42	ZZ
7FPZDG		665.5	51.7	2.05	670.0	53.8	1.99	ZZ
7LQCAD		665.0	51.2	2.03	674.0	57.8	2.13	ZZ
7U4JTM		607.5	-6.3	-0.25	627.5	11.3	0.42	ZZ
8ML9FM		657.0	43.2	1.71	658.0	41.8	1.54	ZZ
94ZB77	X	639.0	25.2	1.00	687.0	70.8	2.61	ZZ
9TZKMK		601.5	-12.3	-0.49	609.0	-7.2	-0.27	ZZ
9UW2ZG		607.5	-6.3	-0.25	601.5	-14.7	-0.54	ZZ
9YPZEC		645.5	31.7	1.26	649.0	32.8	1.21	ZZ
A8JPA8	X	721.1	107.3	4.26	711.0	94.7	3.50	ZZ
ABJRHG		597.5	-16.3	-0.65	616.0	-0.2	-0.01	ZZ
AH32N6		633.5	19.7	0.78	643.0	26.8	0.99	ZZ
AK8MKH		596.5	-17.3	-0.69	596.5	-19.7	-0.73	ZZ
AR2YAJ		624.0	10.2	0.41	638.0	21.8	0.80	ZZ
AYQBUF	*	678.5	64.7	2.57	678.5	62.3	2.30	ZZ
B3LGNC		629.5	15.7	0.62	613.5	-2.7	-0.10	ZZ
B72XWF	*	578.3	-35.5	-1.41	554.8	-61.5	-2.27	ZZ
BBDWCF		607.5	-6.3	-0.25	606.5	-9.7	-0.36	ZZ
BM9UFF		625.0	11.2	0.44	627.0	10.8	0.40	ZZ
CBUD89	*	571.0	-42.8	-1.70	547.5	-68.7	-2.54	ZZ
CV66AB		642.0	28.2	1.12	654.5	38.3	1.41	ZZ
D2JHH9		607.5	-6.3	-0.25	598.5	-17.7	-0.66	ZZ
DAEBYF		600.0	-13.8	-0.55	620.0	3.8	0.14	ZZ
DF33ZG		599.5	-14.3	-0.57	615.5	-0.7	-0.03	ZZ
DPTN8Z	X	789.0	175.2	6.95	862.0	245.8	9.08	ZZ
DRWJPH		595.0	-18.8	-0.75	619.0	2.8	0.10	ZZ
E2GZ4A		625.0	11.2	0.44	640.5	24.3	0.90	ZZ

Rubber Interlaboratory Testing Program

Analysis 606

Ultimate Elongation (percent)

		Sample B41-B42			Sample B43-B44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
E898LJ		595.0	-18.8	-0.75	599.5	-16.7	-0.62	ZZ
EH4PUW	X	1,397.5	783.7	31.10	1,238.5	622.3	22.99	ZZ
EJ3ND6		571.5	-42.3	-1.68	569.5	-46.7	-1.73	ZZ
ETL8M4		604.4	-9.4	-0.37	615.8	-0.5	-0.02	ZZ
EXJLFK		635.0	21.2	0.84	623.5	7.3	0.27	ZZ
EZJW48		608.5	-5.3	-0.21	621.5	5.3	0.19	ZZ
F7RHUQ		633.5	19.7	0.78	632.0	15.8	0.58	ZZ
FBGZ82		585.5	-28.3	-1.12	578.5	-37.7	-1.39	ZZ
FE23Y8		615.5	1.7	0.07	639.0	22.8	0.84	ZZ
FY8J2W	X	671.0	57.2	2.27	709.0	92.8	3.43	ZZ
FZHGEE		582.5	-31.3	-1.24	581.5	-34.7	-1.28	ZZ
G7MKVZ		631.5	17.7	0.70	634.8	18.5	0.68	ZZ
G8CQEB		621.0	7.2	0.29	639.0	22.8	0.84	ZZ
GHZMFC		621.0	7.2	0.29	627.0	10.8	0.40	ZZ
GJD8A8		606.0	-7.8	-0.31	609.0	-7.2	-0.27	ZZ
GTBCVT		606.0	-7.8	-0.31	609.5	-6.7	-0.25	ZZ
GYJDGW		608.0	-5.8	-0.23	607.5	-8.7	-0.32	ZZ
GZVFZA		634.6	20.8	0.83	633.3	17.1	0.63	ZZ
HCP4FA		583.0	-30.8	-1.22	582.5	-33.7	-1.25	ZZ
HHX9T4		603.0	-10.8	-0.43	597.5	-18.7	-0.69	ZZ
JB8EUA		625.5	11.7	0.46	618.0	1.8	0.06	ZZ
LFVN9Z		594.0	-19.8	-0.79	593.5	-22.7	-0.84	ZZ
LKRCP8		632.5	18.7	0.74	638.5	22.3	0.82	ZZ
M8XDDU		590.5	-23.3	-0.92	583.5	-32.7	-1.21	ZZ
MHCKX2		602.5	-11.3	-0.45	600.0	-16.2	-0.60	ZZ
MMMHJ3		621.0	7.2	0.29	628.0	11.8	0.43	ZZ
MWHER	*	648.3	34.5	1.37	625.5	9.2	0.34	ZZ
NJPCNX		565.5	-48.3	-1.92	570.0	-46.2	-1.71	ZZ
NRGY93		597.7	-16.1	-0.64	610.2	-6.1	-0.23	ZZ
P7TWTT	*	550.5	-63.3	-2.51	566.5	-49.7	-1.84	ZZ
P88Y3M		599.0	-14.8	-0.59	607.5	-8.7	-0.32	ZZ
PZ9R6Y		604.0	-9.8	-0.39	617.5	1.3	0.05	ZZ
QCYJP3		594.0	-19.8	-0.79	596.0	-20.2	-0.75	ZZ
QMVWG	*	655.0	41.2	1.64	680.0	63.8	2.36	ZZ
QRAAJV		617.5	3.7	0.15	625.0	8.8	0.32	ZZ
QWLEV		593.5	-20.3	-0.81	579.5	-36.7	-1.36	ZZ
R29NHY		642.0	28.2	1.12	652.5	36.3	1.34	ZZ
R8GQ43	X	547.5	-66.3	-2.63	526.0	-90.2	-3.33	ZZ
RCCK24		581.5	-32.3	-1.28	582.0	-34.2	-1.27	ZZ

Rubber Interlaboratory Testing Program

Analysis 606

Ultimate Elongation (percent)

WebCode	Data Flag	Sample B41-B42 Lab Mean	Sample B41-B42 Diff from Grand Mean	Sample B41-B42 CPV	Sample B43-B44 Lab Mean	Sample B43-B44 Diff from Grand Mean	Sample B43-B44 CPV	Instr Code
RP2G6M		630.0	16.2	0.64	630.0	13.8	0.51	ZZ
RR82TM		629.0	15.2	0.60	632.0	15.8	0.58	ZZ
TCU7U7		643.9	30.1	1.19	648.5	32.2	1.19	ZZ
TM96HM		594.0	-19.8	-0.79	606.0	-10.2	-0.38	ZZ
TZVE6R		618.0	4.2	0.17	631.0	14.8	0.55	ZZ
U4FGVX		583.0	-30.8	-1.22	603.5	-12.7	-0.47	ZZ
UFP29Y		615.0	1.2	0.05	611.5	-4.7	-0.18	ZZ
UKHGJR		640.5	26.7	1.06	640.5	24.3	0.90	ZZ
ULQD6V		576.0	-37.8	-1.50	581.0	-35.2	-1.30	ZZ
UNFME		607.0	-6.8	-0.27	624.0	7.8	0.29	ZZ
UTBDM		608.5	-5.3	-0.21	613.5	-2.7	-0.10	ZZ
V3ATLX		636.2	22.5	0.89	652.9	36.6	1.35	ZZ
VJLZ8U		609.6	-4.1	-0.16	612.2	-4.1	-0.15	ZZ
VNGU6V		571.0	-42.8	-1.70	564.0	-52.2	-1.93	ZZ
VNWHX		607.2	-6.6	-0.26	615.7	-0.5	-0.02	ZZ
VZT4MU		627.5	13.7	0.54	613.0	-3.2	-0.12	ZZ
WARJKX		578.2	-35.6	-1.41	569.7	-46.6	-1.72	ZZ
WFE7KA		641.0	27.2	1.08	632.0	15.8	0.58	ZZ
WQ4TW		612.5	-1.3	-0.05	590.0	-26.2	-0.97	ZZ
WRADJY	*	673.0	59.2	2.35	684.0	67.8	2.50	ZZ
X2TBGH		608.9	-4.9	-0.19	609.1	-7.1	-0.26	ZZ
X83C3L		646.0	32.2	1.28	633.5	17.3	0.64	ZZ
XHWQZ		642.5	28.7	1.14	632.0	15.8	0.58	ZZ
Y4DMVE	X	447.0	-166.8	-6.62	428.0	-188.2	-6.95	ZZ
Y4X2LC		596.5	-17.3	-0.69	599.5	-16.7	-0.62	ZZ
YDZJWF		623.5	9.7	0.39	616.0	-0.2	-0.01	ZZ
YEV4NK		591.5	-22.3	-0.88	600.5	-15.7	-0.58	ZZ
YWYRY		650.0	36.2	1.44	650.0	33.8	1.25	ZZ
ZGG2XW	X	508.0	-105.8	-4.20	514.0	-102.2	-3.78	ZZ
ZKWTNP		620.8	7.0	0.28	628.6	12.4	0.46	ZZ

Summary Statistics

	Sample B41-B42	Sample B43-B44
Grand Means	613.79 percent	616.24 percent
Stnd Dev Btwn Labs	25.20 percent	27.07 percent

Statistics based on 100 of 108 reporting participants

Samples B41-B42: Polyisoprene compound, batch #1 & B43-B44: Polyisoprene compound, batch #2

Rubber Interlaboratory Testing Program

Analysis 606

Ultimate Elongation (percent)

Comments on assigned Data Flags for Test #606

94ZB77 (X) - Inconsistency in testing between Sample groups.

A8JPA8 (X) - Data for all Samples are high. Possible systematic error. Inconsistency in testing within Sample group B43-B44.

DPTN8Z (X) - Extreme data for both Sample groups.

EH4PUW (X) - Extreme data for both Sample groups.

FY8J2W (X) - Inconsistency in testing between Sample groups. Inconsistent in testing within Sample group B41-B42.

R8GQ43 (X) - Inconsistency in testing between Sample groups. Data for Sample group B43-B44 are low.

Y4DMVE (X) - Data for all Samples are low. Possible systematic error. Inconsistency in testing within Sample group B43-B44.

ZGG2XW (X) - Data for all Samples are low. Possible systematic error.

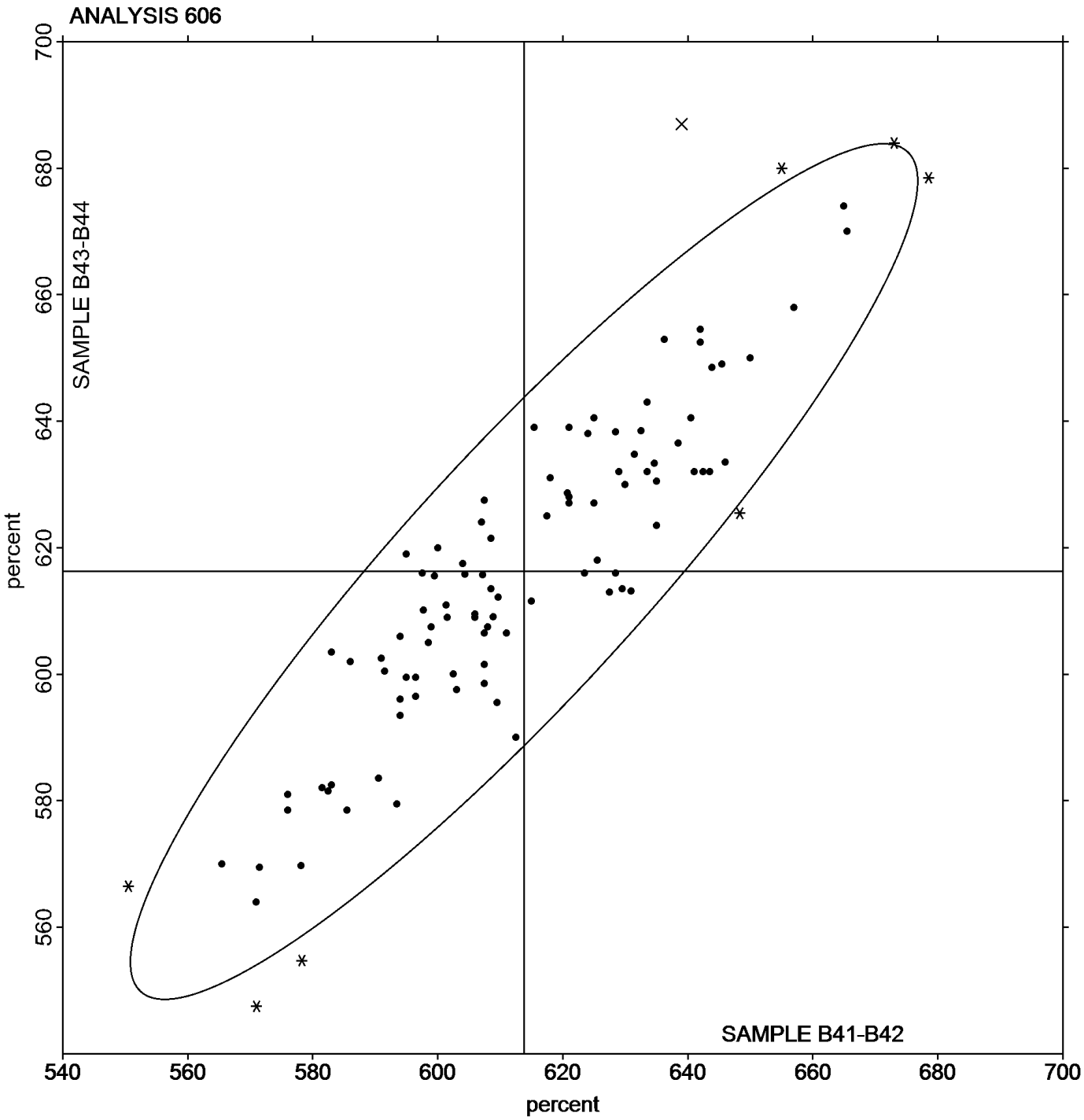
Rubber Interlaboratory Testing Program

Analysis 606

Ultimate Elongation (percent)

Grand Mean Sample **B41-B42** = 613.79 percent

Grand Mean Sample **B43-B44** = 616.24 percent



Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 607

Stress at 300% Elongation (psi)

		Sample B41-B42			Sample B43-B44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
2GBFFL		993.5	29.3	0.40	951.9	5.1	0.07	ZZ
2HNZ8W		851.4	-112.8	-1.53	885.5	-61.3	-0.83	ZZ
2U2Z4P		915.2	-49.0	-0.67	960.9	14.1	0.19	ZZ
3397BC		973.0	8.8	0.12	939.0	-7.8	-0.11	ZZ
3YD96U		946.5	-17.7	-0.24	1,005.5	58.7	0.80	ZZ
6BYJ8H		922.7	-41.6	-0.56	872.3	-74.5	-1.01	ZZ
6CABED		877.6	-86.7	-1.18	893.1	-53.7	-0.73	ZZ
6YZTFH		995.5	31.3	0.42	981.0	34.2	0.47	ZZ
73KXWT		995.9	31.7	0.43	1,006.6	59.9	0.81	ZZ
73KXYE		977.5	13.3	0.18	933.5	-13.3	-0.18	ZZ
76QHLE		948.5	-15.7	-0.21	963.0	16.2	0.22	ZZ
7FPZDG		873.5	-90.7	-1.23	831.0	-115.8	-1.57	ZZ
7LQCAD		939.5	-24.7	-0.34	902.0	-44.8	-0.61	ZZ
7U4JTM		976.1	11.9	0.16	939.9	-6.9	-0.09	ZZ
8ML9FM		1,007.0	42.8	0.58	973.0	26.2	0.36	ZZ
94ZB77		994.0	29.8	0.40	879.5	-67.3	-0.91	ZZ
9TZKMK		935.5	-28.7	-0.39	913.7	-33.0	-0.45	ZZ
9UW2ZG		984.0	19.8	0.27	959.5	12.7	0.17	ZZ
9YPZEC		890.5	-73.7	-1.00	899.2	-47.5	-0.65	ZZ
A8JPA8		812.9	-151.3	-2.05	826.0	-120.8	-1.64	ZZ
ABJRHG		1,060.2	96.0	1.30	975.4	28.6	0.39	ZZ
AH32N6		932.0	-32.2	-0.44	900.5	-46.3	-0.63	ZZ
AK8MKH		1,031.5	67.3	0.91	1,037.5	90.7	1.23	ZZ
AR2YAJ		1,037.0	72.8	0.99	948.5	1.7	0.02	ZZ
AYQBUF		849.0	-115.2	-1.56	842.5	-104.3	-1.42	ZZ
B3LGNC		920.0	-44.2	-0.60	936.5	-10.3	-0.14	ZZ
B72XWF		974.3	10.0	0.14	1,049.8	103.0	1.40	ZZ
BBDWCF		997.5	33.3	0.45	1,015.5	68.7	0.93	ZZ
BM9UFF		946.5	-17.7	-0.24	906.0	-40.8	-0.55	ZZ
CBUD89	X	1,150.0	185.8	2.52	1,220.0	273.2	3.71	ZZ
CV66AB		863.5	-100.7	-1.37	827.5	-119.3	-1.62	ZZ
D2JHH9		939.0	-25.2	-0.34	919.5	-27.3	-0.37	ZZ
DAEBYF		889.1	-75.1	-1.02	863.0	-83.8	-1.14	ZZ
DF33ZG		1,033.4	69.2	0.94	924.6	-22.2	-0.30	ZZ
DPTN8Z	X	506.5	-457.7	-6.22	475.0	-471.8	-6.41	ZZ
DRWJPH		974.5	10.3	0.14	1,001.0	54.2	0.74	ZZ
E2GZ4A		904.5	-59.7	-0.81	880.5	-66.3	-0.90	ZZ
E898LJ		1,065.5	101.3	1.38	1,079.5	132.7	1.80	ZZ
EJ3ND6	*	1,095.0	130.8	1.78	1,145.0	198.2	2.70	ZZ

Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 607

Stress at 300% Elongation (psi)

		Sample B41-B42			Sample B43-B44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
ETL8M4		1,023.1	58.9	0.80	916.8	-30.0	-0.41	ZZ
EXJLFK		906.0	-58.2	-0.79	927.0	-19.8	-0.27	ZZ
EZJW48		957.0	-7.2	-0.10	892.5	-54.3	-0.74	ZZ
F7RHUQ		947.1	-17.1	-0.23	925.3	-21.4	-0.29	ZZ
FBGZ82	*	1,100.0	135.8	1.84	1,141.0	194.2	2.64	ZZ
FE23Y8		943.4	-20.8	-0.28	914.0	-32.8	-0.45	ZZ
FY8J2W	*	860.4	-103.8	-1.41	746.2	-200.6	-2.73	ZZ
FZHGEE		1,052.0	87.8	1.19	1,068.0	121.2	1.65	ZZ
G7MKVZ		931.2	-33.1	-0.45	932.1	-14.7	-0.20	ZZ
G8CQEB		1,006.6	42.4	0.58	925.3	-21.5	-0.29	ZZ
GHZMFC		944.5	-19.7	-0.27	896.5	-50.3	-0.68	ZZ
GJD8A8		983.5	19.3	0.26	1,017.0	70.2	0.95	ZZ
GTBCVT		886.7	-77.6	-1.05	907.2	-39.6	-0.54	ZZ
GYJDGW		1,004.5	40.3	0.55	973.5	26.7	0.36	ZZ
GZVFZA		1,002.1	37.9	0.51	999.3	52.5	0.71	ZZ
HCP4FA		1,070.0	105.8	1.44	1,070.0	123.2	1.68	ZZ
HHX9T4		1,057.5	93.3	1.27	1,024.0	77.2	1.05	ZZ
JB8EUA		938.0	-26.2	-0.36	922.5	-24.3	-0.33	ZZ
LFVN9Z		1,057.0	92.8	1.26	1,056.5	109.7	1.49	ZZ
LKRCP8		1,037.0	72.7	0.99	919.6	-27.2	-0.37	ZZ
M8XDDU		938.5	-25.7	-0.35	940.0	-6.8	-0.09	ZZ
MHCKX2		895.5	-68.7	-0.93	901.5	-45.3	-0.62	ZZ
MMMHJ3		911.6	-52.6	-0.72	931.9	-14.9	-0.20	ZZ
MWHER		916.4	-47.8	-0.65	954.8	8.0	0.11	ZZ
NJPCNX		1,086.5	122.3	1.66	1,026.5	79.7	1.08	ZZ
NRGY93		964.5	0.3	0.00	935.5	-11.3	-0.15	ZZ
P7TWTT	*	1,159.9	195.7	2.66	1,060.5	113.7	1.55	ZZ
P88Y3M		1,052.0	87.8	1.19	1,007.5	60.7	0.83	ZZ
PZ9R6Y		1,018.5	54.3	0.74	1,017.5	70.7	0.96	ZZ
QCYJP3		967.0	2.8	0.04	984.0	37.2	0.51	ZZ
QMVWG	*	816.8	-147.5	-2.00	762.7	-184.1	-2.50	ZZ
QRAAJV		1,008.5	44.3	0.60	964.5	17.7	0.24	ZZ
QWLEV		980.0	15.8	0.21	957.0	10.2	0.14	ZZ
R29NHY		946.0	-18.2	-0.25	877.5	-69.3	-0.94	ZZ
R8GQ43	X	1,124.8	160.5	2.18	1,188.0	241.2	3.28	ZZ
RCCK24		1,145.8	181.6	2.47	1,109.5	162.8	2.21	ZZ
RP2G6M		814.0	-150.2	-2.04	865.0	-81.8	-1.11	ZZ
RR82TM		887.5	-76.7	-1.04	919.0	-27.8	-0.38	ZZ
TCU7U7		972.3	8.0	0.11	916.4	-30.4	-0.41	ZZ

Rubber Interlaboratory Testing Program

Analysis 607

Stress at 300% Elongation (psi)

WebCode	Data Flag	Sample B41-B42 Lab Mean	Sample B41-B42 Diff from Grand Mean	Sample B41-B42 CPV	Sample B43-B44 Lab Mean	Sample B43-B44 Diff from Grand Mean	Sample B43-B44 CPV	Instr Code
TM96HM		1,101.0	136.8	1.86	1,026.5	79.7	1.08	ZZ
TZVE6R		971.0	6.8	0.09	941.0	-5.8	-0.08	ZZ
U4FGVX		1,000.8	36.6	0.50	981.9	35.1	0.48	ZZ
UKHGJR		830.0	-134.2	-1.82	845.0	-101.8	-1.38	ZZ
ULQD6V	X	1,274.2	310.0	4.21	1,212.5	265.7	3.61	ZZ
UNFME		940.5	-23.7	-0.32	896.0	-50.8	-0.69	ZZ
UTBDM		1,024.0	59.8	0.81	1,043.5	96.7	1.32	ZZ
V3ATLX		938.4	-25.8	-0.35	881.4	-65.4	-0.89	ZZ
VJLZ8U		890.6	-73.6	-1.00	857.2	-89.5	-1.22	ZZ
VNGU6V	*	873.5	-90.7	-1.23	965.0	18.2	0.25	ZZ
VNWHX		1,043.7	79.4	1.08	1,012.7	65.9	0.90	ZZ
VZT4MU		915.9	-48.3	-0.66	979.0	32.2	0.44	ZZ
WARJKX		1,042.3	78.1	1.06	997.2	50.4	0.69	ZZ
WFE7KA		902.5	-61.7	-0.84	922.5	-24.3	-0.33	ZZ
WRADJY		877.5	-86.7	-1.18	841.2	-105.6	-1.44	ZZ
X2TBGH		968.8	4.6	0.06	953.0	6.2	0.08	ZZ
X83C3L		929.7	-34.5	-0.47	905.8	-41.0	-0.56	ZZ
XHWQZ		848.0	-116.2	-1.58	881.0	-65.8	-0.89	ZZ
Y4DMVE	X	1,260.4	296.2	4.02	1,291.6	344.8	4.69	ZZ
Y4X2LC		933.3	-30.9	-0.42	912.3	-34.5	-0.47	ZZ
YDZJWF		993.5	29.3	0.40	985.0	38.2	0.52	ZZ
YEV4NK		1,031.5	67.3	0.91	1,013.5	66.7	0.91	ZZ
ZGG2XW	X	1,336.0	371.8	5.05	1,377.5	430.7	5.86	ZZ
ZKWTNP		996.5	32.3	0.44	975.8	29.0	0.39	ZZ

Summary Statistics

	Sample B41-B42	Sample B43-B44
Grand Means	964.21 psi	946.78 psi
Stnd Dev Btwn Labs	73.62 psi	73.55 psi

Statistics based on 96 of 102 reporting participants

Summary Statistics in SI Units

	Sample B41-B42	Sample B43-B44
Grand Means	6.6479 MPa	6.53 MPa
Stnd Dev Btwn Labs	0.5076 MPa	0.51 MPa

Statistics based on 96 of 102 reporting participants

Rubber Interlaboratory Testing Program

Analysis 607

Stress at 300% Elongation (psi)

Samples B41-B42: Polyisoprene compound, batch #1 & B43-B44: Polyisoprene compound, batch #2

CBUD89 (X) - Inconsistency in testing between Sample groups. Data for Sample group B43-B44 are high.

DPTN8Z (X) - Data for all Samples are low. Possible systematic error.

R8GQ43 (X) - Data for all Samples are high. Possible systematic error.

ULQD6V (X) - Data for all Samples are high. Possible systematic error.

Y4DMVE (X) - Data for all Samples are high. Possible systematic error. Inconsistency in testing within Sample group B43-B44.

ZGG2XW (X) - Data for all Samples are high. Possible systematic error. Inconsistency in testing within Sample group B43-B44.

Analysis Notes:

6CABED - Data appear to be reported as MPa and not psi as indicated on datasheet.

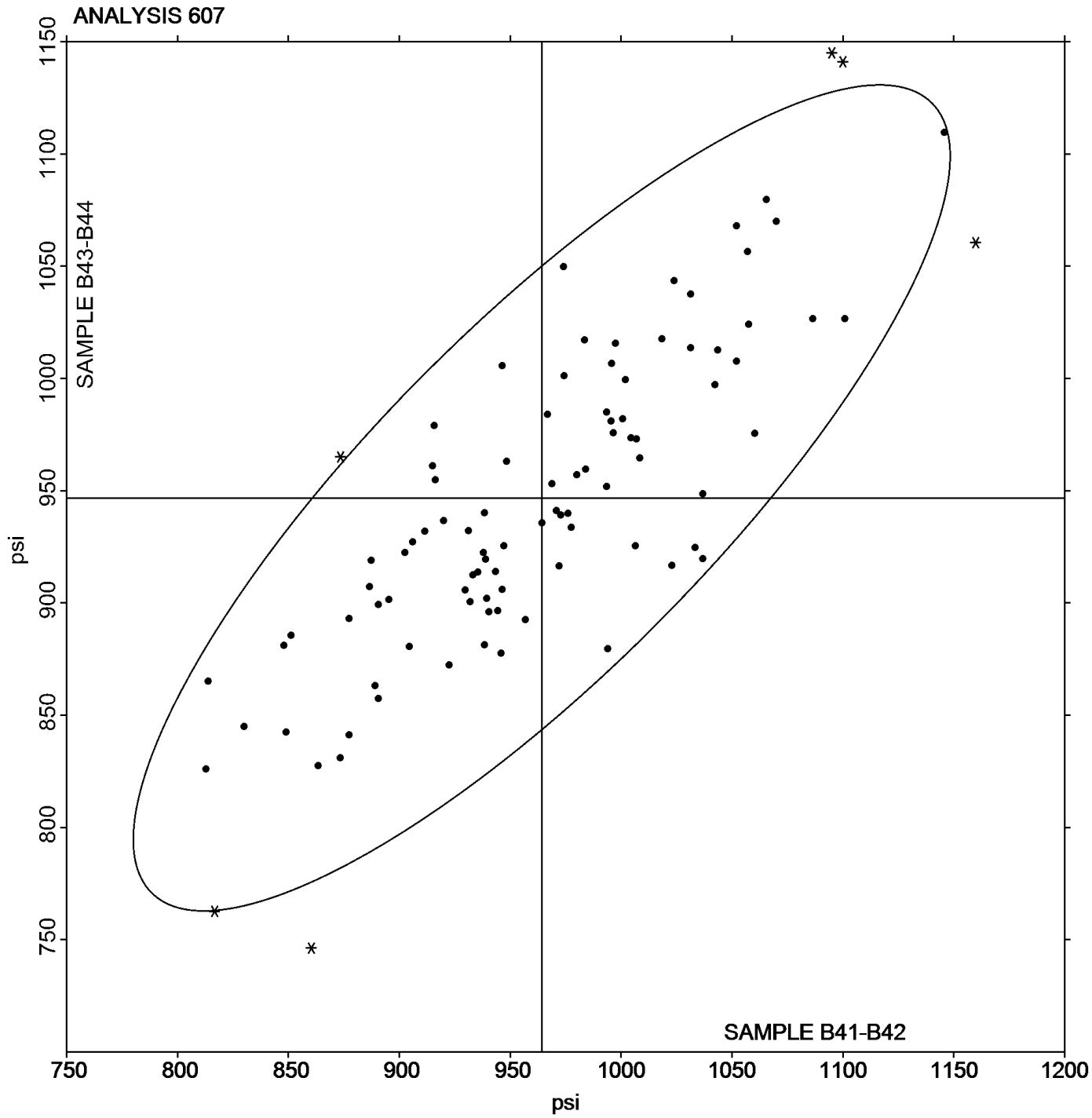
Rubber Interlaboratory Testing Program

Analysis 607

Stress at 300% Elongation (psi)

Grand Mean Sample **B41-B42** = 964.21 psi

Grand Mean Sample **B43-B44** = 946.78 psi



Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 608

Stress at 100% Elongation (psi)

WebCode	Data Flag	Sample B41-B42 Lab Mean	Sample B41-B42 Diff from Grand Mean	Sample B41-B42 CPV	Sample B43-B44 Lab Mean	Sample B43-B44 Diff from Grand Mean	Sample B43-B44 CPV	Instr Code
2GBFFL		199.6	-0.7	-0.05	192.4	-4.3	-0.30	ZZ
2HNZ8W		171.1	-29.1	-2.02	177.7	-19.0	-1.34	ZZ
2U2Z4P		192.2	-8.1	-0.56	202.3	5.7	0.40	ZZ
3397BC		202.0	1.7	0.12	196.5	-0.1	-0.01	ZZ
3YD96U		196.5	-3.8	-0.26	204.5	7.9	0.56	ZZ
6BYJ8H		196.1	-4.2	-0.29	185.7	-10.9	-0.77	ZZ
6CABED		181.2	-19.1	-1.32	185.3	-11.3	-0.80	ZZ
6YZTFH		227.5	27.2	1.88	222.5	25.9	1.84	ZZ
73KXWT		205.4	5.1	0.35	198.6	1.9	0.14	ZZ
73KXYE		190.0	-10.3	-0.71	191.5	-5.1	-0.36	ZZ
76QHLE		198.0	-2.3	-0.16	200.5	3.9	0.27	ZZ
7FPZDG		190.5	-9.8	-0.68	184.5	-12.1	-0.86	ZZ
7LQCAD		234.0	33.7	2.33	228.0	31.4	2.23	ZZ
7U4JTM		197.3	-3.0	-0.21	189.3	-7.3	-0.52	ZZ
8ML9FM		213.5	13.2	0.92	208.0	11.4	0.81	ZZ
94ZB77		217.5	17.2	1.19	196.5	-0.1	-0.01	ZZ
9TZKMK		188.6	-11.7	-0.81	195.8	-0.8	-0.06	ZZ
9UW2ZG		211.0	10.7	0.74	203.0	6.4	0.45	ZZ
9YPZEC		187.8	-12.5	-0.86	190.0	-6.6	-0.47	ZZ
A8JPA8		221.9	21.6	1.50	224.8	28.2	2.00	ZZ
ABJRHG		212.5	12.2	0.84	198.0	1.4	0.10	ZZ
AH32N6		200.0	-0.3	-0.02	189.5	-7.1	-0.51	ZZ
AK8MKH		194.5	-5.8	-0.40	196.5	-0.1	-0.01	ZZ
AR2YAJ		224.5	24.2	1.68	205.0	8.4	0.59	ZZ
AYQBUF		186.5	-13.8	-0.95	184.0	-12.6	-0.90	ZZ
B3LGNC		193.5	-6.8	-0.47	197.0	0.4	0.03	ZZ
B72XWF		201.5	1.2	0.08	206.3	9.6	0.68	ZZ
BBDWCF		193.5	-6.8	-0.47	196.5	-0.1	-0.01	ZZ
BM9UFF		212.0	11.7	0.81	205.5	8.9	0.63	ZZ
CBUD89	X	277.5	77.2	5.34	297.0	100.4	7.12	ZZ
CV66AB		184.5	-15.8	-1.09	179.5	-17.1	-1.21	ZZ
D2JHH9		206.5	6.2	0.43	195.5	-1.1	-0.08	ZZ
DAEBYF	*	169.7	-30.6	-2.12	158.8	-37.8	-2.68	ZZ
DF33ZG		215.4	15.1	1.05	195.1	-1.5	-0.11	ZZ
DPTN8Z	*	165.5	-34.8	-2.41	159.5	-37.1	-2.63	ZZ
DRWJPH		200.0	-0.3	-0.02	194.5	-2.1	-0.15	ZZ
E2GZ4A		191.0	-9.3	-0.64	188.0	-8.6	-0.61	ZZ
E898LJ		227.0	26.7	1.85	229.0	32.4	2.30	ZZ
EJ3ND6	X	249.0	48.7	3.37	267.0	70.4	4.99	ZZ

Rubber Interlaboratory Testing Program

Analysis 608

Stress at 100% Elongation (psi)

		Sample B41-B42			Sample B43-B44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
ETL8M4		204.0	3.7	0.26	182.4	-14.2	-1.01	ZZ
EXJLFK		188.0	-12.3	-0.85	193.0	-3.6	-0.26	ZZ
EZJW48		197.0	-3.3	-0.23	184.5	-12.1	-0.86	ZZ
F7RHUQ		207.4	7.1	0.49	202.3	5.7	0.40	ZZ
FBGZ82		220.0	19.7	1.36	225.5	28.9	2.05	ZZ
FE23Y8		190.4	-9.9	-0.68	185.7	-11.0	-0.78	ZZ
FY8J2W		180.1	-20.1	-1.39	167.7	-28.9	-2.05	ZZ
FZHGEE		214.0	13.7	0.95	214.5	17.9	1.27	ZZ
G7MKVZ		218.5	18.2	1.26	219.3	22.7	1.61	ZZ
G8CQEB		213.0	12.7	0.88	201.9	5.2	0.37	ZZ
GHZMFC		191.5	-8.8	-0.61	182.5	-14.1	-1.00	ZZ
GJD8A8		204.5	4.2	0.29	208.5	11.9	0.84	ZZ
GTBCVT		188.7	-11.6	-0.80	194.1	-2.5	-0.18	ZZ
GYJDGW		205.0	4.7	0.33	199.0	2.4	0.17	ZZ
GZVFZA		211.0	10.7	0.74	208.6	12.0	0.85	ZZ
HCP4FA	X	266.5	66.2	4.58	266.0	69.4	4.92	ZZ
HHX9T4		210.0	9.7	0.67	196.0	-0.6	-0.04	ZZ
JB8EUA		195.5	-4.8	-0.33	191.0	-5.6	-0.40	ZZ
LFVN9Z		210.0	9.7	0.67	214.0	17.4	1.23	ZZ
LKRCP8	*	225.1	24.8	1.72	201.1	4.4	0.31	ZZ
M8XDDU		192.0	-8.3	-0.57	191.0	-5.6	-0.40	ZZ
MHCKX2		183.0	-17.3	-1.20	181.5	-15.1	-1.07	ZZ
MMMHJ3		184.9	-15.4	-1.06	189.3	-7.3	-0.52	ZZ
MWHER		208.9	8.6	0.60	208.9	12.2	0.87	ZZ
NJPCNX		204.0	3.7	0.26	195.0	-1.6	-0.12	ZZ
NRGY93		196.5	-3.7	-0.26	192.2	-4.4	-0.32	ZZ
P7TWTT		223.9	23.6	1.63	212.2	15.5	1.10	ZZ
P88Y3M		211.0	10.7	0.74	203.0	6.4	0.45	ZZ
PZ9R6Y		222.5	22.2	1.54	224.5	27.9	1.98	ZZ
QCYJP3		192.5	-7.8	-0.54	195.5	-1.1	-0.08	ZZ
QMVWG		164.9	-35.4	-2.45	167.4	-29.2	-2.07	ZZ
QRAAJV		208.5	8.2	0.57	188.5	-8.1	-0.58	ZZ
QWLEV		203.0	2.7	0.19	197.5	0.9	0.06	ZZ
R29NHY		197.0	-3.3	-0.23	184.5	-12.1	-0.86	ZZ
R8GQ43		191.9	-8.4	-0.58	204.8	8.2	0.58	ZZ
RCCK24		224.8	24.5	1.70	217.6	20.9	1.48	ZZ
RP2G6M		196.0	-4.3	-0.30	191.5	-5.1	-0.36	ZZ
RR82TM		179.5	-20.8	-1.44	187.0	-9.6	-0.68	ZZ
TCU7U7		196.7	-3.6	-0.25	184.8	-11.8	-0.84	ZZ

Rubber Interlaboratory Testing Program

Analysis 608

Stress at 100% Elongation (psi)

WebCode	Data Flag	Sample B41-B42 Lab Mean	Sample B41-B42 Diff from Grand Mean	Sample B41-B42 CPV	Sample B43-B44 Lab Mean	Sample B43-B44 Diff from Grand Mean	Sample B43-B44 CPV	Instr Code
TM96HM		226.0	25.7	1.78	212.0	15.4	1.09	ZZ
TZVE6R		197.5	-2.8	-0.19	193.0	-3.6	-0.26	ZZ
U4FGVX		204.5	4.2	0.29	202.3	5.7	0.40	ZZ
UFP29Y		190.5	-9.8	-0.68	187.0	-9.6	-0.68	ZZ
UKHGJR		178.0	-22.3	-1.54	179.0	-17.6	-1.25	ZZ
ULQD6V	X	258.9	58.6	4.06	249.5	52.8	3.75	ZZ
UNFME		192.0	-8.3	-0.57	182.5	-14.1	-1.00	ZZ
UTBDM		180.5	-19.8	-1.37	187.5	-9.1	-0.65	ZZ
V3ATLX		195.3	-5.0	-0.35	190.0	-6.6	-0.47	ZZ
VJLZ8U		190.7	-9.6	-0.67	182.6	-14.0	-1.00	ZZ
VNGU6V	X	169.0	-31.3	-2.16	189.5	-7.1	-0.51	ZZ
VNWHX		217.4	17.1	1.18	208.3	11.6	0.83	ZZ
VZT4MU		195.1	-5.2	-0.36	195.8	-0.8	-0.06	ZZ
WARJKX		207.8	7.5	0.52	203.1	6.5	0.46	ZZ
WFE7KA		197.5	-2.8	-0.19	201.5	4.9	0.35	ZZ
WRADJY		195.8	-4.5	-0.31	188.6	-8.1	-0.57	ZZ
X2TBGH		207.8	7.5	0.52	205.5	8.9	0.63	ZZ
X83C3L		190.7	-9.6	-0.66	185.6	-11.0	-0.78	ZZ
XHWQZ		181.0	-19.3	-1.33	185.5	-11.1	-0.79	ZZ
Y4DMVE		213.9	13.7	0.95	224.1	27.5	1.95	ZZ
Y4X2LC		190.0	-10.3	-0.71	186.4	-10.2	-0.73	ZZ
YDZJWF		196.5	-3.8	-0.26	198.5	1.9	0.13	ZZ
YEV4NK		201.5	1.2	0.08	200.5	3.9	0.27	ZZ
ZGG2XW	*	218.0	17.7	1.23	228.5	31.9	2.26	ZZ
ZKWTNP		204.7	4.4	0.31	197.9	1.3	0.09	ZZ

Summary Statistics

	Sample B41-B42	Sample B43-B44
Grand Means	200.28 psi	196.62 psi
Stnd Dev Btwn Labs	14.45 psi	14.10 psi

Statistics based on 98 of 103 reporting participants

Summary Statistics in SI Units

	Sample B41-B42	Sample B43-B44
Grand Means	1.3809 MPa	1.36 MPa
Stnd Dev Btwn Labs	0.0996 MPa	0.10 MPa

Statistics based on 98 of 103 reporting participants

Rubber Interlaboratory Testing Program

Analysis 608

Stress at 100% Elongation (psi)

Samples B41-B42: Polyisoprene compound, batch #1 & B43-B44: Polyisoprene compound, batch #2

CBUD89 (X) - Data for all Samples are high. Possible systematic error.

EJ3ND6 (X) - Data for all Samples are high. Possible systematic error. Inconsistency in testing within Sample group B41-B42.

HCP4FA (X) - Data for all Samples are high. Possible systematic error.

ULQD6V (X) - Data for all Samples are high. Possible systematic error.

VNGU6V (X) - Inconsistency in testing between Sample groups.

Analysis Notes:

6CABED - Data appear to be reported as MPa and not psi as indicated on datasheet.

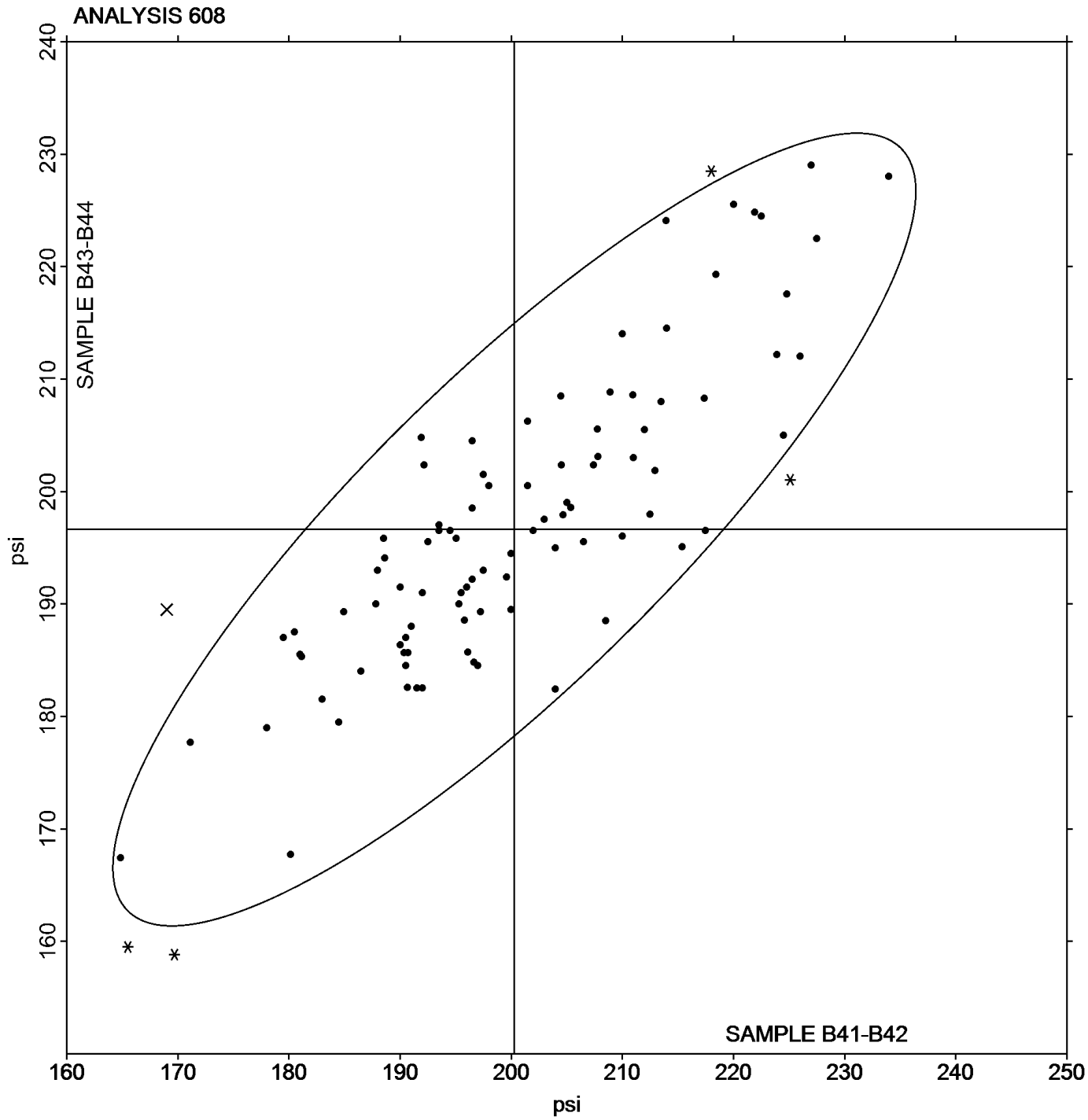
Rubber Interlaboratory Testing Program

Analysis 608

Stress at 100% Elongation (psi)

Grand Mean Sample **B41-B42** = 200.28 psi

Grand Mean Sample **B43-B44** = 196.62 psi



Rubber Interlaboratory Testing Program

Analysis 620

Hardness (Shore A/Type A)

		Sample B41-B42			Sample B43-B44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
2GBFFL		47.75	-1.36	-0.81	47.80	-1.16	-0.73	XX
2HNZ8W		47.85	-1.26	-0.75	47.85	-1.11	-0.70	BT
2U2Z4P	*	54.00	4.89	2.90	52.50	3.54	2.24	XX
2X424M		47.50	-1.61	-0.96	48.00	-0.96	-0.61	BT
3397BC		48.50	-0.61	-0.37	47.50	-1.46	-0.92	XX
3QFK6G		51.00	1.89	1.12	50.50	1.54	0.97	XX
3YD96U		50.00	0.89	0.53	50.00	1.04	0.66	XX
6BYJ8H		48.60	-0.51	-0.31	48.35	-0.61	-0.39	BT
6CABED		50.00	0.89	0.53	50.50	1.54	0.97	XX
6YZTFH		50.50	1.39	0.82	50.00	1.04	0.66	XX
73KXWT		47.80	-1.31	-0.78	47.65	-1.31	-0.83	BT
73KXYE		49.00	-0.11	-0.07	48.50	-0.46	-0.29	HH
76QHLE		48.50	-0.61	-0.37	48.50	-0.46	-0.29	HH
77W3AE		52.00	2.89	1.72	51.00	2.04	1.29	HH
7FPZDG		49.25	0.14	0.08	48.75	-0.21	-0.13	BT
7LQCAD		50.65	1.54	0.91	50.80	1.84	1.16	BT
7U4JTM	*	52.90	3.79	2.25	53.05	4.09	2.58	BT
8ML9FM		49.25	0.14	0.08	49.25	0.29	0.18	XX
94ZB77		51.00	1.89	1.12	50.50	1.54	0.97	HH
9TZKMK		52.00	2.89	1.72	52.00	3.04	1.92	XX
9UW2ZG		47.00	-2.11	-1.26	47.00	-1.96	-1.24	BT
9YPZEC		48.75	-0.36	-0.22	48.50	-0.46	-0.29	XX
A8JPA8		48.95	-0.16	-0.10	48.75	-0.21	-0.13	XX
ABJRHG		49.40	0.29	0.17	48.50	-0.46	-0.29	BT
AH32N6		50.00	0.89	0.53	49.00	0.04	0.02	XX
AK8MKH		48.00	-1.11	-0.66	47.50	-1.46	-0.92	XX
AR2YAJ		50.00	0.89	0.53	50.00	1.04	0.66	XX
AYQBUF		47.00	-2.11	-1.26	47.00	-1.96	-1.24	BT
B3LGNC		48.00	-1.11	-0.66	48.00	-0.96	-0.61	BT
B72XWF		50.00	0.89	0.53	49.50	0.54	0.34	XX
BBDWCF		47.50	-1.61	-0.96	47.50	-1.46	-0.92	BT
BM9UFF		48.00	-1.11	-0.66	48.00	-0.96	-0.61	BT
CBUD89		48.75	-0.36	-0.22	50.00	1.04	0.66	HH
CV66AB		47.60	-1.51	-0.90	48.35	-0.61	-0.39	BT
D2JHH9		52.50	3.39	2.01	52.00	3.04	1.92	BT
DAEBYF		47.50	-1.61	-0.96	48.00	-0.96	-0.61	XX
DF33ZG	*	49.05	-0.06	-0.04	46.90	-2.06	-1.30	BT
DPTN8Z		49.00	-0.11	-0.07	48.00	-0.96	-0.61	HH
DRWJPH		48.55	-0.56	-0.34	48.15	-0.81	-0.51	BT

Rubber Interlaboratory Testing Program

Analysis 620

Hardness (Shore A/Type A)

		Sample B41-B42			Sample B43-B44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
E2GZ4A		48.00	-1.11	-0.66	48.00	-0.96	-0.61	BT
E898LJ		50.20	1.09	0.65	49.75	0.79	0.50	XX
EH4PUW	X	56.84	7.72	4.59	58.72	9.76	6.16	BT
EJ3ND6	*	47.50	-1.61	-0.96	49.25	0.29	0.18	HH
ETL8M4		50.25	1.14	0.68	49.25	0.29	0.18	XX
EXJLFK		47.00	-2.11	-1.26	48.50	-0.46	-0.29	HH
EZJW48		49.50	0.39	0.23	49.00	0.04	0.02	XX
F7RHUQ		46.85	-2.26	-1.35	46.80	-2.16	-1.37	BT
FBGZ82		52.00	2.89	1.72	52.00	3.04	1.92	HH
FE23Y8		49.20	0.09	0.05	48.80	-0.16	-0.10	BT
FY8J2W		47.50	-1.61	-0.96	46.50	-2.46	-1.55	BT
FZHGEE		47.00	-2.11	-1.26	47.00	-1.96	-1.24	XX
G7MKVZ		48.50	-0.61	-0.37	49.00	0.04	0.02	BT
G8CQEB	*	53.20	4.09	2.43	52.85	3.89	2.46	XX
GHZMFC		46.00	-3.11	-1.85	46.00	-2.96	-1.87	BT
GJD8A8		48.90	-0.21	-0.13	48.35	-0.61	-0.39	BT
GTBCVT		49.80	0.69	0.41	49.35	0.39	0.25	XX
GYJDGW		50.00	0.89	0.53	49.00	0.04	0.02	HH
GZVFZA		48.50	-0.61	-0.37	48.50	-0.46	-0.29	XX
HCP4FA		48.75	-0.36	-0.22	49.25	0.29	0.18	HH
HHX9T4	*	53.50	4.39	2.61	53.00	4.04	2.55	XX
HMLYU6		50.00	0.89	0.53	50.00	1.04	0.66	XX
JB8EUA		49.35	0.24	0.14	49.30	0.34	0.21	XX
LFVN9Z		48.50	-0.61	-0.37	48.50	-0.46	-0.29	BT
LKRCP8		53.15	4.04	2.40	51.95	2.99	1.89	XX
LXVQUB		46.70	-2.41	-1.44	48.05	-0.91	-0.58	BT
LYAZY6		49.50	0.39	0.23	49.50	0.54	0.34	BT
M8XDDU		49.00	-0.11	-0.07	48.50	-0.46	-0.29	HH
MHCKX2		51.00	1.89	1.12	52.00	3.04	1.92	BT
MLDBH		50.50	1.39	0.82	50.50	1.54	0.97	HH
MMMHJ3		48.55	-0.56	-0.34	48.60	-0.36	-0.23	BT
MWHER		50.00	0.89	0.53	50.00	1.04	0.66	BT
NJPCNX		50.00	0.89	0.53	49.00	0.04	0.02	XX
NRGY93		48.45	-0.66	-0.39	48.65	-0.31	-0.20	XX
NWYVK		50.00	0.89	0.53	50.50	1.54	0.97	XX
P7TWTT		51.80	2.69	1.60	50.40	1.44	0.91	XX
P88Y3M		49.35	0.24	0.14	47.95	-1.01	-0.64	XX
PZ9R6Y		50.00	0.89	0.53	51.00	2.04	1.29	HH
QCYJP3		49.00	-0.11	-0.07	48.00	-0.96	-0.61	XX

Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 620

Hardness (Shore A/Type A)

		Sample B41-B42			Sample B43-B44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
QMVWG		51.00	1.89	1.12	52.00	3.04	1.92	XX
QRAAJV		47.50	-1.61	-0.96	46.50	-2.46	-1.55	HH
QWLEV		49.50	0.39	0.23	49.50	0.54	0.34	HH
R29NHY		49.00	-0.11	-0.07	48.20	-0.76	-0.48	BT
R8GQ43		45.50	-3.61	-2.15	46.00	-2.96	-1.87	XX
RCCK24		48.00	-1.11	-0.66	48.00	-0.96	-0.61	XX
RP2G6M	X	41.50	-7.61	-4.53	41.50	-7.46	-4.71	XX
RR82TM		48.00	-1.11	-0.66	49.50	0.54	0.34	XX
TCU7U7		49.70	0.59	0.35	49.20	0.24	0.15	XX
TM96HM		50.50	1.39	0.82	49.50	0.54	0.34	HH
TZVE6R		48.50	-0.61	-0.37	49.50	0.54	0.34	HH
U4FGVX		50.00	0.89	0.53	49.00	0.04	0.02	BT
UFP29Y		48.50	-0.61	-0.37	48.00	-0.96	-0.61	XX
UKHGJR		47.95	-1.16	-0.69	46.55	-2.41	-1.52	XX
ULQD6V		49.20	0.09	0.05	48.45	-0.51	-0.32	BT
UNFME		48.50	-0.61	-0.37	48.50	-0.46	-0.29	BT
UTBDM		46.50	-2.61	-1.55	46.50	-2.46	-1.55	HH
V3ATLX		49.65	0.54	0.32	48.30	-0.66	-0.42	XX
VJLZ8U		49.80	0.69	0.41	50.20	1.24	0.78	XX
VNGU6V	*	46.50	-2.61	-1.55	48.50	-0.46	-0.29	XX
VNWHX		48.00	-1.11	-0.66	47.50	-1.46	-0.92	BT
VZT4MU		49.00	-0.11	-0.07	49.50	0.54	0.34	XX
WARJKX		49.05	-0.06	-0.04	49.10	0.14	0.09	XX
WFE7KA		46.50	-2.61	-1.55	46.50	-2.46	-1.55	XX
WQ4TW		46.00	-3.11	-1.85	46.00	-2.96	-1.87	HH
WRADJY		50.50	1.39	0.82	49.00	0.04	0.02	XX
X2TBGH		49.50	0.39	0.23	49.50	0.54	0.34	BT
X83C3L	*	49.00	-0.11	-0.07	46.80	-2.16	-1.37	BT
XHWQZ		47.85	-1.26	-0.75	48.65	-0.31	-0.20	XX
Y4DMVE		49.00	-0.11	-0.07	49.50	0.54	0.34	XX
Y4X2LC		48.50	-0.61	-0.37	48.50	-0.46	-0.29	BT
YDZJWF		49.00	-0.11	-0.07	50.00	1.04	0.66	XX
YEV4NK		48.00	-1.11	-0.66	48.00	-0.96	-0.61	BT
YWYRY		48.50	-0.61	-0.37	49.00	0.04	0.02	XX
ZGG2XW		46.00	-3.11	-1.85	46.50	-2.46	-1.55	XX
ZKWTNP		52.00	2.89	1.72	51.50	2.54	1.60	XX

Rubber Interlaboratory Testing Program

Analysis 620

Hardness (Shore A/Type A)

Summary Statistics

Grand Means		
	49.114 Type A	48.961 Type A
Stnd Dev Btwn Labs		
	1.682 Type A	1.583 Type A

Statistics based on 112 of 114 reporting participants

Samples B41-B42: Polyisoprene compound, batch #1 & B43-B44: Polyisoprene compound, batch #2

Comments on assigned Data Flags for Test #620

EH4PUW (X) - Data for all Samples are high. Possible systematic error.

RP2G6M (X) - Data for all Samples are low. Possible systematic error.

Results by Reading Time (as reported by laboratory)

	Sample B41 *Polyisoprene compound, batch #1*			Sample B42 *Polyisoprene compound, batch #1*				
Reading Time	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	Labs Incl	/ Rpt
Select from list below	49.25	0.96	0.14	49.75	0.65	0.79	4	4
Select from list below	49.05	1.41	-0.06	48.82	1.33	-0.14	65	69
Readings taken at 5 seconds	48.39	1.85	-0.72	48.38	1.85	-0.58	16	18
Readings taken after 5+ seconds	48.56	1.29	-0.55	48.69	1.16	-0.28	10	11
Maximum hardness indicator used	50.00	1.39	0.89	49.70	1.44	0.74	9	12

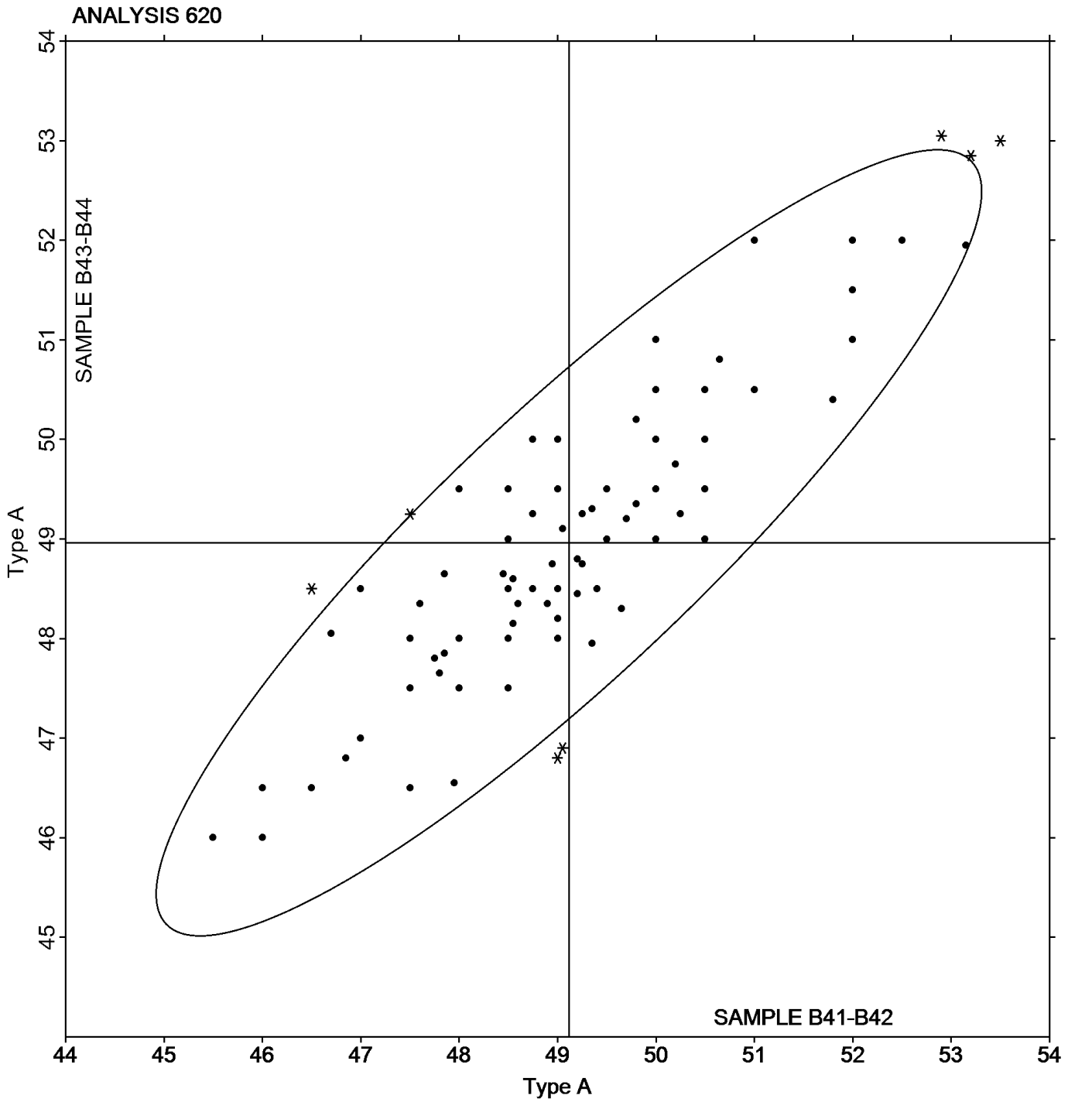
Rubber Interlaboratory Testing Program

Analysis 620

Hardness (Shore A/Type A)

Grand Mean Sample **B41-B42** = 49.114 Type A

Grand Mean Sample **B43-B44** = 48.961 Type A



Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 621

Density

WebCode	Data Flag	Sample B41-B42 Lab Mean	Sample B41-B42 Diff from Grand Mean	Sample B41-B42 CPV	Sample B43-B44 Lab Mean	Sample B43-B44 Diff from Grand Mean	Sample B43-B44 CPV	Instr Code
2GBFFL		1.132	-0.003	-0.95	1.130	-0.005	-1.65	ZZ
2U2Z4P		1.135	0.000	0.02	1.135	0.000	0.01	ZZ
2X424M		1.135	0.000	0.11	1.136	0.001	0.23	ZZ
3397BC	X	1.134	-0.001	-0.38	1.125	-0.010	-3.42	ZZ
6BYJ8H		1.136	0.001	0.32	1.137	0.002	0.64	ZZ
6CABED	*	1.143	0.008	2.40	1.143	0.008	2.52	ZZ
6YZTFH		1.138	0.003	0.77	1.138	0.003	0.87	ZZ
7FPZDG		1.135	0.000	0.02	1.131	-0.004	-1.30	ZZ
7U4JTM		1.139	0.004	1.22	1.141	0.005	1.79	ZZ
94ZB77		1.133	-0.002	-0.68	1.133	-0.002	-0.67	ZZ
9YPZEC		1.137	0.002	0.62	1.134	-0.002	-0.52	ZZ
ABJRHG		1.137	0.002	0.71	1.138	0.003	1.02	ZZ
AH32N6		1.135	0.000	-0.10	1.136	0.001	0.44	ZZ
AYQBUF		1.136	0.001	0.17	1.136	0.001	0.30	ZZ
B72XWF		1.137	0.002	0.61	1.138	0.003	0.85	ZZ
BM9UFF		1.135	0.000	-0.13	1.136	0.000	0.14	ZZ
CV66AB		1.136	0.001	0.17	1.137	0.001	0.47	ZZ
D2JHH9		1.136	0.001	0.34	1.136	0.001	0.40	ZZ
E2GZ4A		1.135	0.000	-0.01	1.136	0.001	0.40	ZZ
ETL8M4		1.131	-0.004	-1.32	1.131	-0.004	-1.35	ZZ
EZJW48		1.134	-0.001	-0.43	1.135	-0.001	-0.19	ZZ
F7RHUQ		1.136	0.001	0.17	1.136	0.000	0.14	ZZ
FBGZ82		1.131	-0.004	-1.05	1.129	-0.006	-1.86	ZZ
FE23Y8	X	1.158	0.023	6.87	1.132	-0.003	-0.92	ZZ
FY8J2W		1.136	0.001	0.41	1.136	0.001	0.32	ZZ
FZHGEE		1.135	0.000	0.13	1.136	0.001	0.24	ZZ
G7MKVZ		1.130	-0.005	-1.62	1.131	-0.004	-1.35	ZZ
G8CQEB	*	1.139	0.004	1.22	1.135	-0.001	-0.19	ZZ
GHZMFC		1.129	-0.006	-1.92	1.130	-0.005	-1.68	ZZ
GJD8A8		1.136	0.001	0.40	1.137	0.002	0.65	ZZ
GTBCVT	X	1.313	0.178	53.27	1.312	0.177	58.51	ZZ
GYJDGW	X	1.140	0.005	1.52	1.130	-0.005	-1.68	ZZ
GZVFZA		1.129	-0.006	-1.76	1.133	-0.002	-0.82	ZZ
JB8EUA		1.132	-0.003	-0.87	1.132	-0.004	-1.18	ZZ
LFVN9Z		1.136	0.001	0.17	1.134	-0.001	-0.36	ZZ
LKRCP8		1.133	-0.002	-0.73	1.133	-0.003	-0.85	ZZ
M8XDDU	X	1.143	0.008	2.26	1.123	-0.013	-4.16	ZZ
MHCKX2		1.136	0.001	0.35	1.136	0.001	0.37	ZZ
MLDBH	X	1.149	0.014	4.21	1.149	0.013	4.44	ZZ

Rubber Interlaboratory Testing Program

Analysis 621

Density

WebCode	Data Flag	Sample B41-B42 Lab Mean	Sample B41-B42 Diff from Grand Mean	Sample B41-B42 CPV	Sample B43-B44 Lab Mean	Sample B43-B44 Diff from Grand Mean	Sample B43-B44 CPV	Instr Code
MWHER		1.134	-0.001	-0.19	1.134	-0.001	-0.26	ZZ
NJPCNX		1.135	0.000	-0.13	1.134	-0.001	-0.36	ZZ
P7TWTT		1.140	0.005	1.53	1.140	0.005	1.50	ZZ
PZ9R6Y	*	1.135	0.000	0.02	1.130	-0.005	-1.68	ZZ
QWLEV		1.133	-0.002	-0.58	1.135	0.000	-0.03	ZZ
RR82TM		1.136	0.001	0.32	1.136	0.001	0.45	ZZ
TCU7U7		1.140	0.005	1.40	1.139	0.004	1.25	ZZ
TM96HM		1.133	-0.002	-0.73	1.130	-0.005	-1.70	ZZ
TZVE6R		1.136	0.001	0.37	1.137	0.002	0.77	ZZ
U4FGVX		1.129	-0.006	-1.77	1.132	-0.003	-1.02	ZZ
UFP29Y		1.142	0.007	1.97	1.140	0.004	1.46	ZZ
ULQD6V		1.137	0.002	0.47	1.137	0.002	0.50	ZZ
UNFME		1.130	-0.005	-1.47	1.134	-0.001	-0.36	ZZ
VNGU6V		1.136	0.001	0.43	1.137	0.002	0.55	ZZ
VNWHX	*	1.126	-0.009	-2.82	1.129	-0.006	-2.01	ZZ
VZT4MU		1.139	0.004	1.08	1.137	0.002	0.73	ZZ
WFE7KA	X	1.105	-0.030	-8.95	1.110	-0.025	-8.30	ZZ
WQ4TW		1.138	0.003	0.77	1.138	0.003	0.97	ZZ
X2TBGH		1.137	0.002	0.49	1.135	0.000	0.04	ZZ
X83C3L		1.136	0.002	0.46	1.136	0.001	0.45	ZZ
XHWQZ		1.131	-0.004	-1.23	1.132	-0.003	-0.89	ZZ
Y4X2LC		1.139	0.004	1.23	1.139	0.004	1.28	ZZ
YDZJWF		1.135	0.000	0.11	1.137	0.002	0.57	ZZ
ZGG2XW		1.133	-0.002	-0.49	1.135	0.000	-0.06	ZZ

Summary Statistics

	Sample B41-B42	Sample B43-B44
Grand Means	1.1349 Mg/M^3	1.1351 Mg/M^3
Stnd Dev Btwn Labs	0.0033 Mg/M^3	0.0030 Mg/M^3

Statistics based on 56 of 63 reporting participants

Samples B41-B42: Polyisoprene compound, batch #1 & B43-B44: Polyisoprene compound, batch #2

Rubber Interlaboratory Testing Program

Analysis 621

Density

Comments on assigned Data Flags for Test #621

3397BC (X) - Inconsistency in testing between Sample groups. Data for Sample group B43-B44 are low.

FE23Y8 (X) - Data for all Samples are high. Possible systematic error.

GTBCVT (X) - Extreme data for both Sample groups.

GYJDGW (X) - Inconsistency in testing between Sample groups.

M8XDDU (X) - Inconsistency in testing between Sample groups. Data for Sample group B43-B44 are low. Inconsistency in testing within both Sample groups.

MLDBHV (X) - Data for all Samples are high. Possible systematic error. Inconsistency in testing within Sample group B43-B44.

WFE7KA (X) - Data for all Samples are low. Possible systematic error. Inconsistency in testing within Sample group B41-B42.

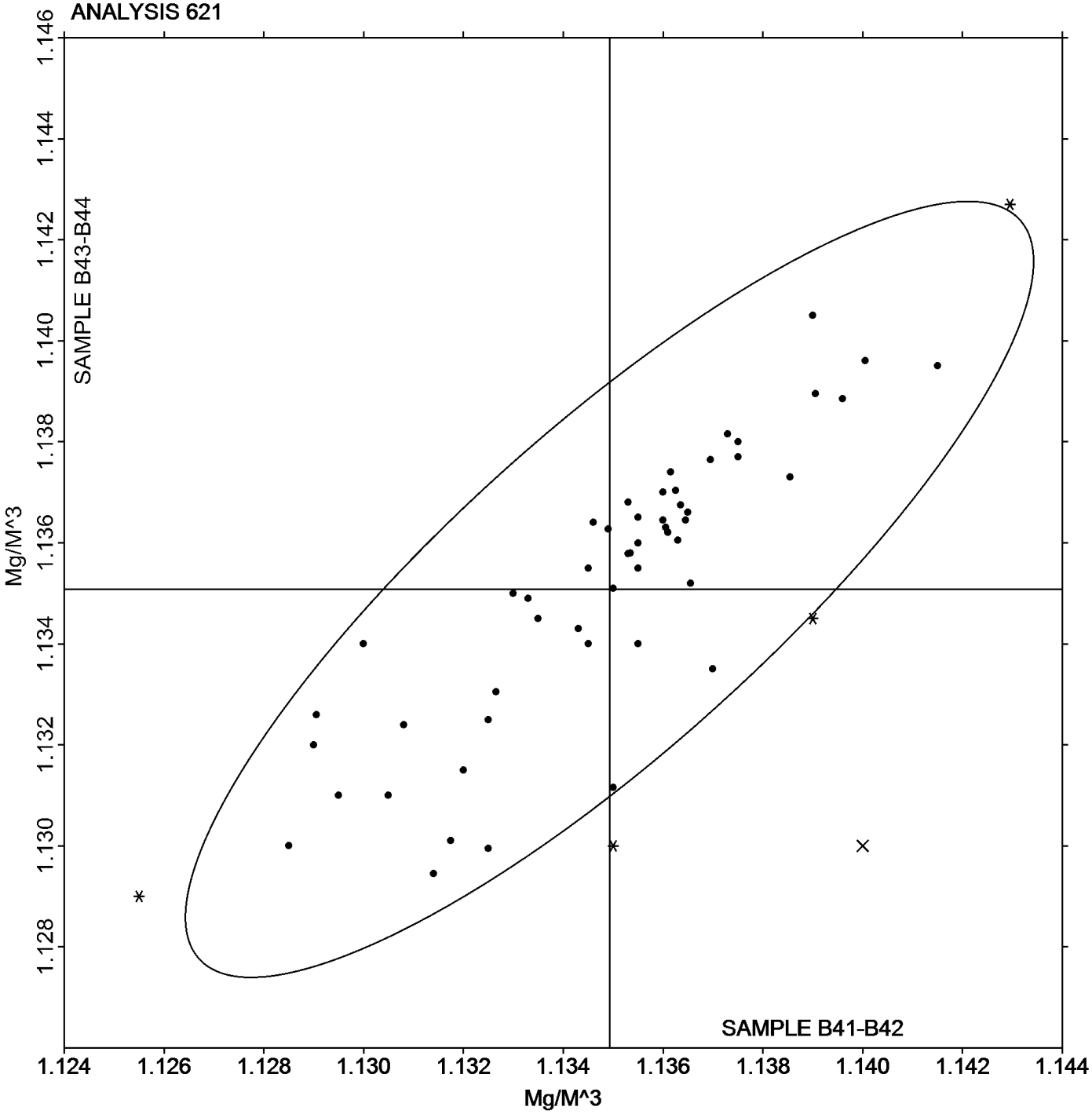
Rubber Interlaboratory Testing Program

Analysis 621

Density

Grand Mean Sample **B41-B42** = 1.1349 Mg/M^3

Grand Mean Sample **B43-B44** = 1.1351 Mg/M^3



Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 630

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

		Sample B41-B42			Sample K41-K42			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
2U2Z4P		3,372.2	33.5	0.26	3,256.9	30.6	0.14	ZZ
3QFK6G	X	3,480.2	141.6	1.10	2,540.4	-685.9	-3.14	ZZ
6BYJ8H		3,188.5	-150.1	-1.16	3,086.7	-139.6	-0.64	ZZ
6YZTFH		3,097.5	-241.1	-1.87	2,934.0	-292.2	-1.34	ZZ
73KXWT		3,496.6	158.0	1.22	3,378.2	151.9	0.70	ZZ
9TZKMK		3,263.4	-75.3	-0.58	3,169.1	-57.1	-0.26	ZZ
9YPZEC		3,488.2	149.6	1.16	3,553.5	327.2	1.50	ZZ
A8JPA8		3,270.6	-68.0	-0.53	3,111.1	-115.2	-0.53	ZZ
ABJRHG		3,502.0	163.3	1.26	3,507.0	280.8	1.28	ZZ
AYQBUF		3,481.5	142.9	1.11	3,438.0	211.8	0.97	ZZ
ETL8M4		3,316.4	-22.2	-0.17	3,181.2	-45.1	-0.21	ZZ
EXJLFK		3,288.5	-50.1	-0.39	3,015.0	-211.2	-0.97	ZZ
EZJW48		3,306.5	-32.1	-0.25	2,818.0	-408.2	-1.87	ZZ
F7RHUQ		3,166.9	-171.7	-1.33	3,111.8	-114.4	-0.52	ZZ
G7MKVZ	*	3,361.4	22.8	0.18	2,708.7	-517.5	-2.37	ZZ
G8CQEB	X	3,887.2	548.5	4.24	3,464.3	238.0	1.09	ZZ
GHZMFC		3,272.0	-66.6	-0.52	3,353.5	127.3	0.58	ZZ
GZVFZA		3,598.1	259.4	2.01	3,468.1	241.8	1.11	ZZ
JB8EUA		3,360.0	21.4	0.17	3,081.5	-144.7	-0.66	ZZ
LFVN9Z		3,416.0	77.4	0.60	3,346.5	120.3	0.55	ZZ
LKRCP8		3,477.7	139.0	1.08	3,370.2	143.9	0.66	ZZ
MMMHJ3		3,183.6	-155.0	-1.20	3,082.1	-144.2	-0.66	ZZ
P7TWTT		3,229.3	-109.3	-0.85	3,156.8	-69.4	-0.32	ZZ
P88Y3M		3,272.5	-66.1	-0.51	3,143.5	-82.7	-0.38	ZZ
R29NHY		3,551.5	212.9	1.65	3,376.5	150.3	0.69	ZZ
TCU7U7		3,367.6	29.0	0.22	3,664.4	438.1	2.00	ZZ
TZVE6R		3,409.6	71.0	0.55	3,227.8	1.5	0.01	ZZ
U4FGVX		3,219.9	-118.8	-0.92	3,024.1	-202.2	-0.93	ZZ
UKHGJR		3,164.5	-174.1	-1.35	2,969.5	-256.7	-1.17	ZZ
UTBDM		3,223.5	-115.1	-0.89	3,386.5	160.3	0.73	ZZ
VNWHX		3,454.1	115.4	0.89	3,572.6	346.4	1.58	ZZ
WARJKX		3,180.9	-157.7	-1.22	3,275.5	49.2	0.23	ZZ
WFE7KA		3,417.0	78.4	0.61	3,107.0	-119.2	-0.55	ZZ
YEV4NK		3,294.0	-44.6	-0.35	3,267.0	40.8	0.19	ZZ
ZKWTNP		3,483.2	144.6	1.12	3,324.2	97.9	0.45	ZZ

Rubber Interlaboratory Testing Program

Analysis 630

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

Summary Statistics

Grand Means	3,338.64 psi	3,226.24 psi
Stnd Dev Btwn Labs	129.24 psi	218.56 psi

Statistics based on 33 of 35 reporting participants

Summary Statistics in SI Units

Grand Means	23.019 MPa	22.24 MPa
Stnd Dev Btwn Labs	0.891 MPa	1.51 MPa

Statistics based on 33 of 35 reporting participants

All samples : Polyisoprene compound, batch #1

Comments on assigned Data Flags for Test #630

3QFK6G (X) - Data for Sample group K41-K42 are low. Inconsistency in testing within Sample group K41-K42.

G8CQEB (X) - Data for Sample group B41-B42 are high. Inconsistency in testing within Sample group B41-B42.

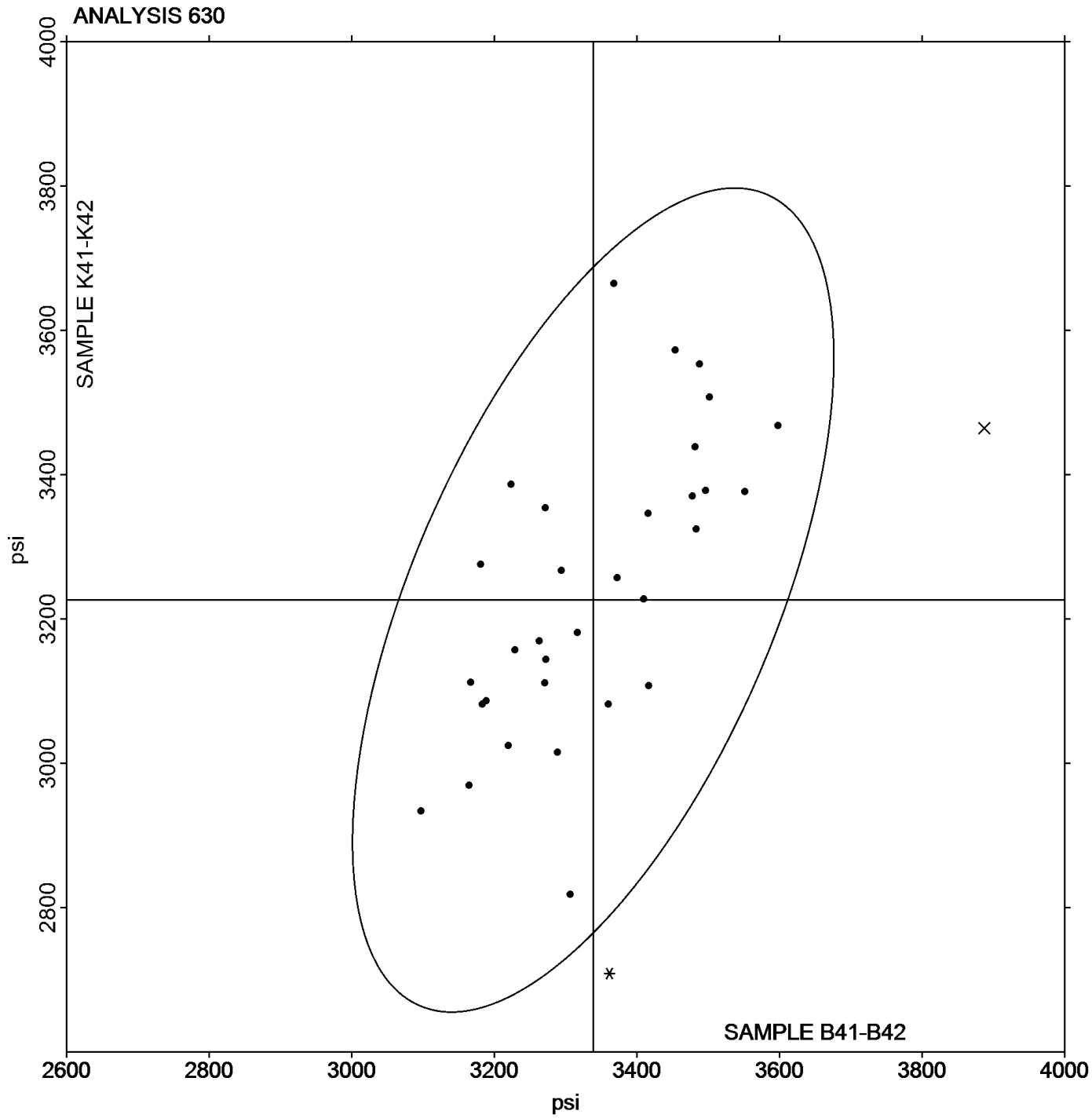
Rubber Interlaboratory Testing Program

Analysis 630

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

Grand Mean Sample **B41-B42** = 3,338.64 psi

Grand Mean Sample **K41-K42** = 3,226.24 psi



Rubber Interlaboratory Testing Program

Analysis 631

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

		Sample B41-B42			Sample K41-K42			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
2U2Z4P		628.5	11.6	0.47	592.5	-0.3	-0.01	ZZ
3QFK6G	*	586.0	-30.9	-1.25	608.0	15.2	0.62	ZZ
6BYJ8H		628.5	11.6	0.47	620.5	27.7	1.13	ZZ
6YZTFH		591.0	-25.9	-1.04	574.0	-18.8	-0.77	ZZ
73KXWT		631.0	14.1	0.57	602.2	9.3	0.38	ZZ
9TZKMK		601.5	-15.4	-0.62	574.0	-18.8	-0.77	ZZ
9YPZEC		645.5	28.6	1.15	633.0	40.2	1.63	ZZ
A8JPA8	X	721.1	104.2	4.20	667.3	74.5	3.03	ZZ
ABJRHG		597.5	-19.4	-0.78	585.0	-7.8	-0.32	ZZ
AYQBUF		678.5	61.6	2.49	645.0	52.2	2.12	ZZ
ETL8M4		604.4	-12.5	-0.50	581.2	-11.6	-0.47	ZZ
EXJLFK		635.0	18.1	0.73	570.0	-22.8	-0.93	ZZ
EZJW48		608.5	-8.4	-0.34	592.0	-0.8	-0.03	ZZ
F7RHUQ		633.5	16.6	0.67	593.5	0.7	0.03	ZZ
G7MKVZ		631.5	14.6	0.59	565.9	-26.9	-1.10	ZZ
G8CQEB		621.0	4.1	0.17	581.0	-11.8	-0.48	ZZ
GHZMFC		621.0	4.1	0.17	595.0	2.2	0.09	ZZ
GZVFZA		634.6	17.7	0.72	604.4	11.6	0.47	ZZ
JB8EUA		625.5	8.6	0.35	610.5	17.7	0.72	ZZ
LFVN9Z		594.0	-22.9	-0.92	590.5	-2.3	-0.09	ZZ
LKRCP8		632.5	15.6	0.63	606.5	13.7	0.56	ZZ
MMMHJ3		621.0	4.1	0.17	584.2	-8.6	-0.35	ZZ
P7TWTT	*	550.5	-66.4	-2.68	525.5	-67.3	-2.74	ZZ
P88Y3M		599.0	-17.9	-0.72	575.5	-17.3	-0.71	ZZ
R29NHY		642.0	25.1	1.01	622.5	29.7	1.21	ZZ
TCU7U7		643.9	27.0	1.09	631.8	39.0	1.59	ZZ
TZVE6R		618.0	1.1	0.04	595.5	2.7	0.11	ZZ
U4FGVX		583.0	-33.9	-1.37	554.0	-38.8	-1.58	ZZ
UKHGJR		640.5	23.6	0.95	622.5	29.7	1.21	ZZ
UTBDM		608.5	-8.4	-0.34	595.5	2.7	0.11	ZZ
VNWHX		607.2	-9.7	-0.39	595.4	2.5	0.10	ZZ
WARJKX		578.2	-38.7	-1.56	569.0	-23.8	-0.97	ZZ
WFE7KA		641.0	24.1	0.97	608.5	15.7	0.64	ZZ
YEV4NK		591.5	-25.4	-1.02	560.5	-32.3	-1.32	ZZ
ZKWTNP		620.8	3.9	0.16	591.1	-1.8	-0.07	ZZ

Rubber Interlaboratory Testing Program

Analysis 631

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

Summary Statistics				
Grand Means				
	616.90	percent	592.83	percent
Stnd Dev Btwn Labs				
	24.78	percent	24.58	percent

Statistics based on 34 of 35 reporting participants

All samples : Polyisoprene compound, batch #1

Comments on assigned Data Flags for Test #631

A8JPA8 (X) - Data for all Samples are high. Possible systematic error.

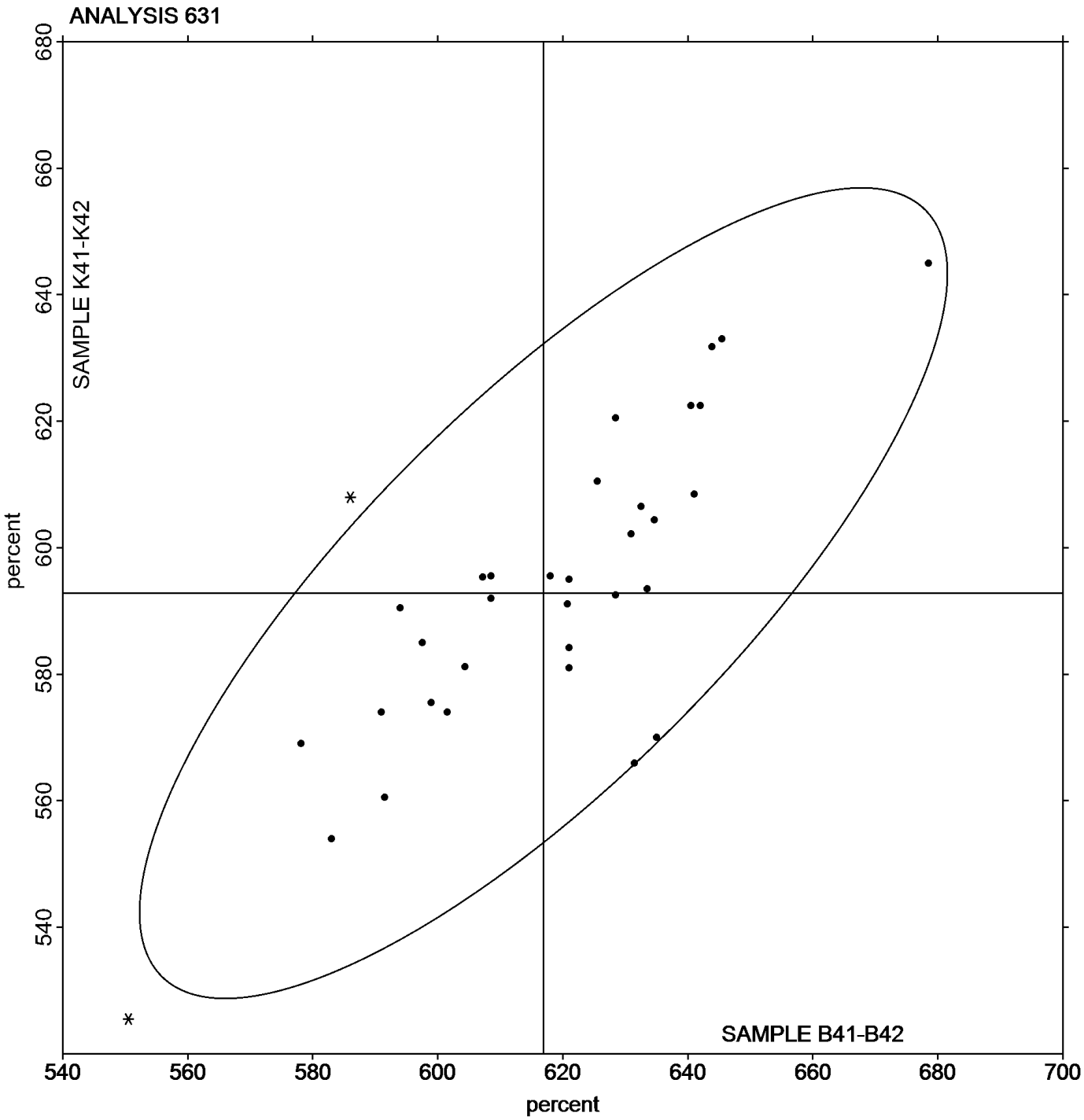
Rubber Interlaboratory Testing Program

Analysis 631

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

Grand Mean Sample **B41-B42** = 616.90 percent

Grand Mean Sample **K41-K42** = 592.83 percent



Rubber Interlaboratory Testing Program

Analysis 632

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

		Sample B41-B42			Sample K41-K42			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
2U2Z4P		915.2	-55.7	-0.76	1,018.2	-19.5	-0.20	ZZ
6BYJ8H		922.7	-48.3	-0.66	910.6	-127.1	-1.29	ZZ
6YZTFH		995.5	24.6	0.34	1,003.5	-34.2	-0.35	ZZ
73KXWT		995.9	25.0	0.34	1,067.9	30.2	0.31	ZZ
9TZKMK		935.5	-35.4	-0.48	1,015.3	-22.4	-0.23	ZZ
9YPZEC		890.5	-80.4	-1.10	1,047.9	10.2	0.10	ZZ
A8JPA8		812.9	-158.0	-2.16	860.1	-177.6	-1.80	ZZ
ABJRHG		1,060.2	89.3	1.22	1,105.2	67.5	0.69	ZZ
AYQBUF		849.0	-121.9	-1.67	974.5	-63.2	-0.64	ZZ
ETL8M4		1,023.1	52.2	0.71	1,049.5	11.9	0.12	ZZ
EXJLFK		906.0	-64.9	-0.89	1,001.5	-36.2	-0.37	ZZ
EZJW48		957.0	-13.9	-0.19	887.5	-150.2	-1.53	ZZ
F7RHUQ		947.1	-23.8	-0.33	1,039.2	1.5	0.02	ZZ
G7MKVZ		931.2	-39.8	-0.54	902.3	-135.4	-1.38	ZZ
G8CQEB		1,006.6	35.7	0.49	1,093.4	55.7	0.57	ZZ
GHZMFC		944.5	-26.4	-0.36	1,058.0	20.3	0.21	ZZ
GZVFZA		1,002.1	31.2	0.43	1,030.2	-7.4	-0.08	ZZ
JB8EUA		938.0	-32.9	-0.45	923.5	-114.2	-1.16	ZZ
LFVN9Z		1,057.0	86.1	1.18	1,125.5	87.8	0.89	ZZ
LKRCP8		1,037.0	66.0	0.90	1,106.1	68.4	0.70	ZZ
MMMHJ3		911.6	-59.3	-0.81	1,047.2	9.5	0.10	ZZ
P7TWTT	*	1,159.9	189.0	2.58	1,264.8	227.2	2.31	ZZ
P88Y3M		1,052.0	81.1	1.11	1,116.5	78.8	0.80	ZZ
R29NHY		946.0	-24.9	-0.34	1,010.5	-27.2	-0.28	ZZ
TCU7U7		972.3	1.3	0.02	1,154.4	116.7	1.19	ZZ
TZVE6R		971.0	0.1	0.00	966.5	-71.2	-0.72	ZZ
U4FGVX		1,000.8	29.9	0.41	1,043.6	5.9	0.06	ZZ
UKHGJR		830.0	-140.9	-1.93	822.0	-215.7	-2.19	ZZ
UTBDM		1,024.0	53.1	0.73	1,172.0	134.3	1.37	ZZ
VNWHX		1,043.7	72.7	0.99	1,128.6	90.9	0.92	ZZ
WARJKX		1,042.3	71.4	0.98	1,141.3	103.6	1.05	ZZ
WFE7KA		902.5	-68.4	-0.94	942.0	-95.7	-0.97	ZZ
YEV4NK		1,031.5	60.6	0.83	1,086.0	48.3	0.49	ZZ
ZKWTNP		996.5	25.6	0.35	1,165.8	128.2	1.30	ZZ

Rubber Interlaboratory Testing Program

Analysis 632

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

Summary Statistics

	Precured	Lab-Cured
Grand Means	970.91 psi	1,037.67 psi
Stnd Dev Btwn Labs	73.16 psi	98.39 psi

Statistics based on 34 of 34 reporting participants

Summary Statistics in SI Units

	Precured	Lab-Cured
Grand Means	6.6941 MPa	7.15 MPa
Stnd Dev Btwn Labs	0.5044 MPa	0.68 MPa

Statistics based on 34 of 34 reporting participants

All samples : Polyisoprene compound, batch #1

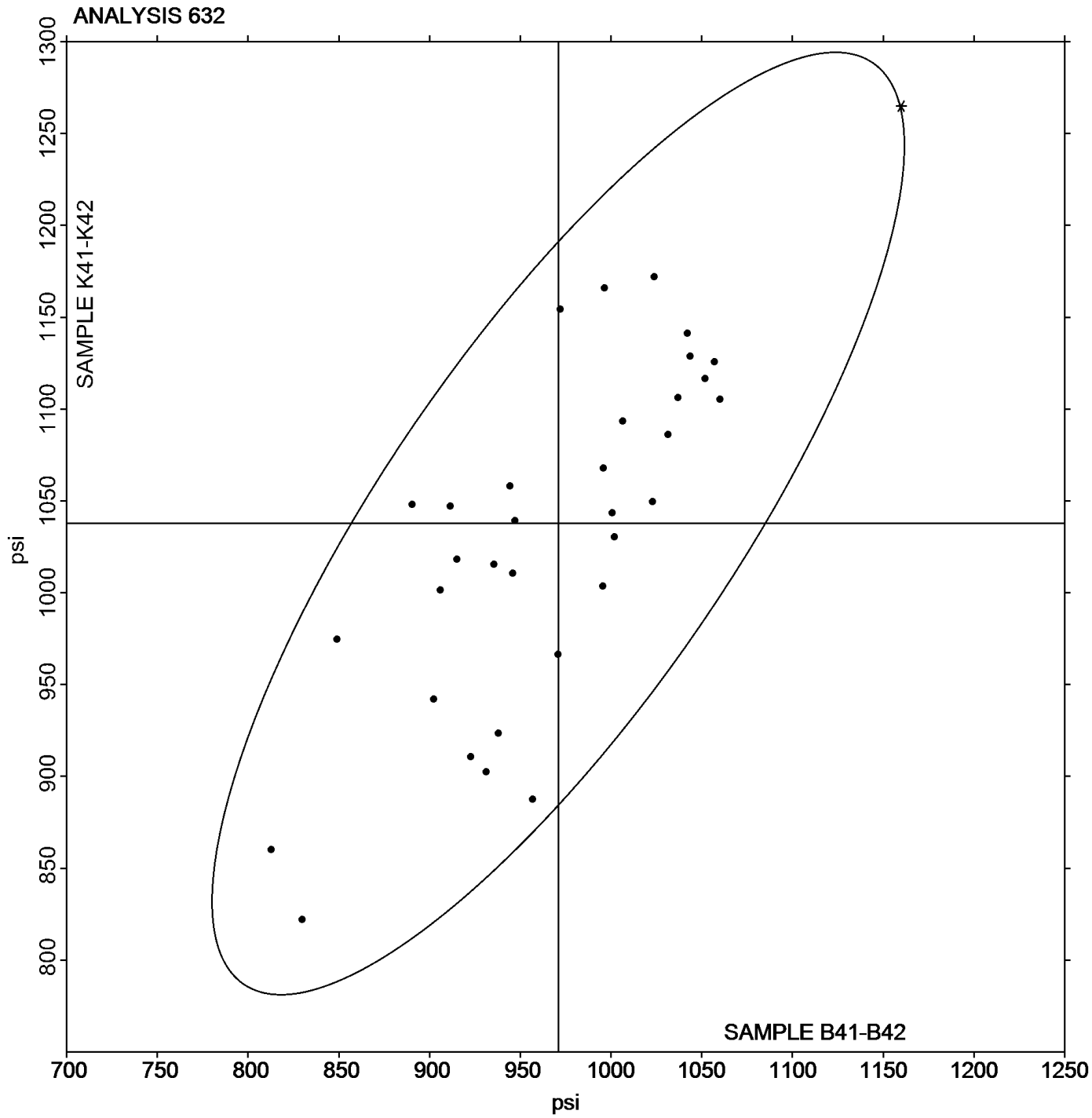
Rubber Interlaboratory Testing Program

Analysis 632

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

Grand Mean Sample **B41-B42** = 970.91 psi

Grand Mean Sample **K41-K42** = 1,037.67 psi



Rubber Interlaboratory Testing Program

Analysis 633

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

		Sample B41-B42			Sample K41-K42			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
2U2Z4P		192.2	-10.2	-0.78	227.0	-2.4	-0.14	ZZ
6BYJ8H		196.1	-6.3	-0.48	213.0	-16.4	-0.95	ZZ
6YZTFH		227.5	25.1	1.92	218.0	-11.4	-0.66	ZZ
73KXWT		205.4	2.9	0.22	236.5	7.1	0.41	ZZ
9TZKMK		188.6	-13.9	-1.06	224.8	-4.6	-0.27	ZZ
9YPZEC		187.8	-14.6	-1.11	242.2	12.8	0.75	ZZ
A8JPA8		221.9	19.5	1.49	245.8	16.5	0.96	ZZ
ABJRHG		212.5	10.1	0.77	235.7	6.3	0.37	ZZ
AYQBUF		186.5	-15.9	-1.22	225.0	-4.4	-0.26	ZZ
ETL8M4		204.0	1.5	0.12	226.3	-3.1	-0.18	ZZ
EXJLFK		188.0	-14.4	-1.10	219.0	-10.4	-0.60	ZZ
EZJW48		197.0	-5.4	-0.41	193.0	-36.4	-2.12	ZZ
F7RHUQ		207.4	5.0	0.38	223.4	-6.0	-0.35	ZZ
G7MKVZ		218.5	16.0	1.22	210.5	-18.9	-1.10	ZZ
G8CQEB		213.0	10.5	0.80	243.5	14.1	0.82	ZZ
GHZMFC		191.5	-10.9	-0.83	231.0	1.6	0.09	ZZ
GZVFZA		211.0	8.5	0.65	229.0	-0.4	-0.02	ZZ
JB8EUA		195.5	-6.9	-0.53	204.0	-25.4	-1.48	ZZ
LFVN9Z		210.0	7.6	0.58	238.5	9.1	0.53	ZZ
LKRCP8		225.1	22.7	1.73	251.6	22.2	1.29	ZZ
MMMHJ3		184.9	-17.5	-1.34	227.0	-2.4	-0.14	ZZ
P7TWTT		223.9	21.5	1.64	268.2	38.8	2.26	ZZ
P88Y3M		211.0	8.6	0.66	231.0	1.6	0.09	ZZ
R29NHY		197.0	-5.4	-0.41	232.0	2.6	0.15	ZZ
TCU7U7		196.7	-5.8	-0.44	234.4	5.0	0.29	ZZ
TZVE6R		197.5	-4.9	-0.38	207.5	-21.9	-1.27	ZZ
U4FGVX		204.5	2.1	0.16	225.5	-3.9	-0.22	ZZ
UKHGJR		178.0	-24.4	-1.86	188.5	-40.9	-2.38	ZZ
UTBDM		180.5	-21.9	-1.67	244.0	14.6	0.85	ZZ
VNWHX		217.4	15.0	1.14	256.7	27.3	1.59	ZZ
WARJKX		207.8	5.4	0.41	247.8	18.4	1.07	ZZ
WFE7KA		197.5	-4.9	-0.38	218.5	-10.9	-0.63	ZZ
YEV4NK		201.5	-0.9	-0.07	231.5	2.1	0.12	ZZ
ZKWTNP		204.7	2.3	0.17	248.9	19.5	1.14	ZZ

Rubber Interlaboratory Testing Program

Analysis 633

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

Summary Statistics

	Precured	Lab-Cured
Grand Means	202.41 psi	229.39 psi
Stnd Dev Btwn Labs	13.09 psi	17.18 psi

Statistics based on 34 of 34 reporting participants

Summary Statistics in SI Units

	Precured	Lab-Cured
Grand Means	1.3956 MPa	1.58 MPa
Stnd Dev Btwn Labs	0.0903 MPa	0.12 MPa

Statistics based on 34 of 34 reporting participants

All samples : Polyisoprene compound, batch #1

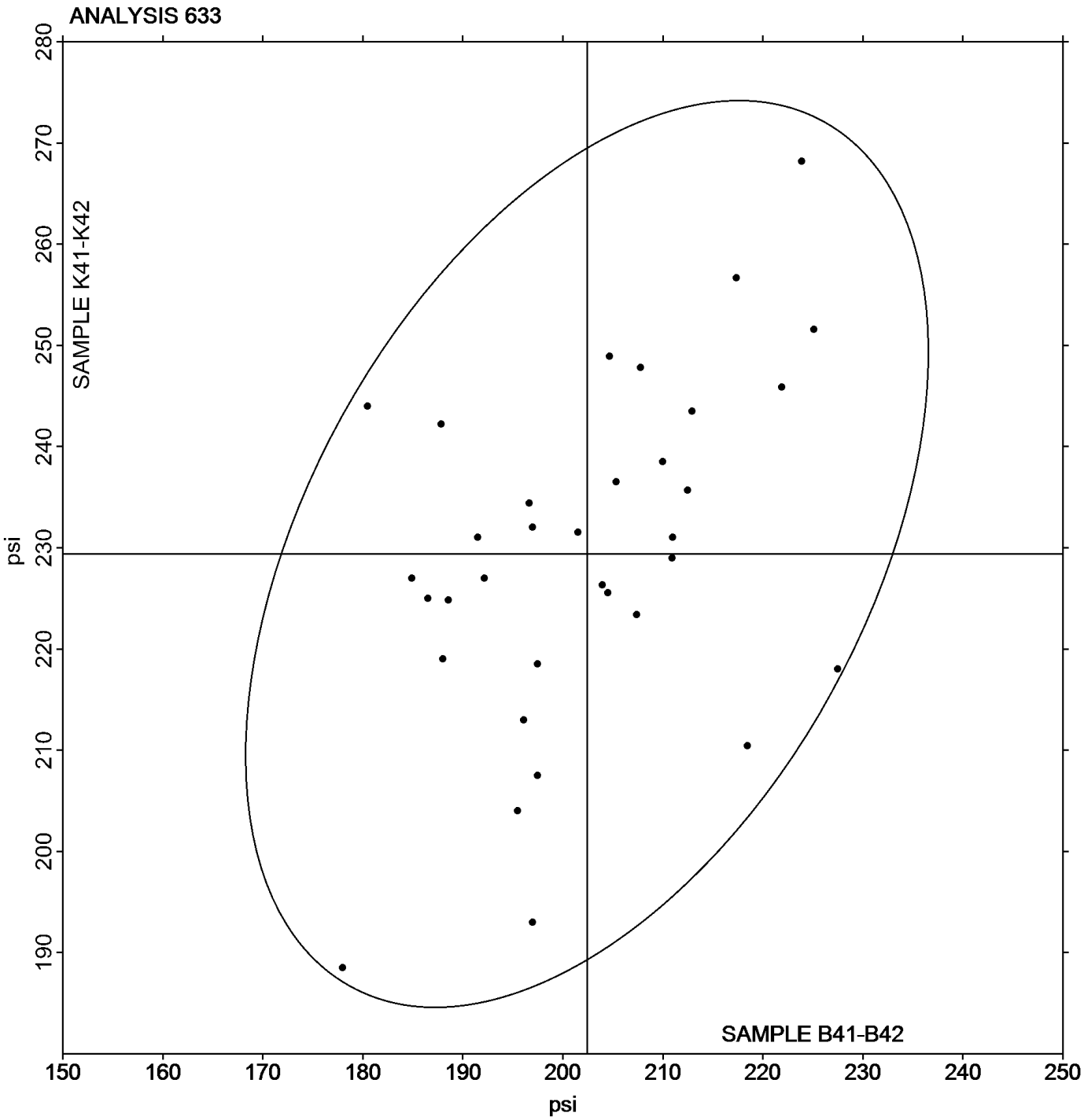
Rubber Interlaboratory Testing Program

Analysis 633

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

Grand Mean Sample **B41-B42** = 202.41 psi

Grand Mean Sample **K41-K42** = 229.39 psi



Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 660

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

		Sample T41-T42			Sample T43-T44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
2GBFFL		49.34	0.32	0.33	54.79	0.20	0.19	MR
2U2Z4P		47.93	-1.08	-1.10	53.98	-0.61	-0.58	MR
6BYJ8H		49.53	0.52	0.52	54.20	-0.39	-0.37	MR
73KXWT		47.60	-1.42	-1.44	54.48	-0.11	-0.10	MR
9TZKMK		49.18	0.17	0.17	54.45	-0.14	-0.13	MR
A8JPA8		49.28	0.27	0.27	54.38	-0.21	-0.20	MR
AAAJFN		49.55	0.53	0.54	54.60	0.01	0.01	MR
ABJRHG		51.18	2.16	2.19	56.69	2.10	2.01	TV
AJWP6E		49.07	0.05	0.05	54.67	0.08	0.07	MR
AYQBUF		49.75	0.73	0.74	55.18	0.59	0.56	MR
DB6GBY		48.54	-0.48	-0.49	55.01	0.42	0.40	TV
DGXL44		49.90	0.88	0.90	56.03	1.44	1.38	MR
DJ2APK		49.00	-0.02	-0.02	54.35	-0.24	-0.23	MR
E2GZ4A		49.52	0.50	0.51	54.67	0.08	0.07	MR
E898LJ		47.82	-1.20	-1.22	53.00	-1.59	-1.52	MR
EXJLFK		47.77	-1.25	-1.27	53.02	-1.57	-1.50	MR
EZJW48		50.43	1.42	1.44	56.65	2.06	1.97	MR
F7RHUQ		48.80	-0.22	-0.22	53.92	-0.67	-0.64	MR
G7MKVZ	X	57.87	8.85	8.98	79.82	25.23	24.06	TV
GZVFZA		49.07	0.05	0.05	54.18	-0.41	-0.39	TV
HCP4FA		50.75	1.73	1.76	56.30	1.71	1.63	MR
HYEFJ7		49.32	0.30	0.30	54.80	0.21	0.20	MR
LKRCP8		46.81	-2.21	-2.24	52.64	-1.95	-1.86	TV
MMMHJ3		47.48	-1.53	-1.56	53.70	-0.89	-0.85	MR
P7TWTT		48.58	-0.43	-0.44	54.23	-0.36	-0.34	MR
P9H4B6		51.17	2.15	2.18	55.75	1.16	1.11	MR
PZ9R6Y		49.48	0.47	0.47	55.80	1.21	1.16	MR
RCCK24	*	48.10	-0.92	-0.93	52.22	-2.37	-2.26	MR
TZVE6R		48.36	-0.66	-0.67	53.65	-0.94	-0.90	MR
U4FGVX		49.25	0.23	0.24	55.42	0.83	0.79	MR
UNFME		48.67	-0.35	-0.36	55.02	0.43	0.41	MR
VNWHX		49.30	0.28	0.29	55.13	0.54	0.52	XX
WARJKX		49.12	0.10	0.10	55.32	0.73	0.69	MR
WFE7KA		48.33	-0.69	-0.70	53.89	-0.70	-0.67	XX
YEV4NK		49.00	-0.02	-0.02	54.67	0.08	0.07	MR
YWYGH		48.64	-0.38	-0.39	53.84	-0.75	-0.71	MR

Rubber Interlaboratory Testing Program

Analysis 660

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

Summary Statistics

Grand Means			
	49.017 ML 1 + 4		54.589 ML 1 + 4
Stnd Dev Btwn Labs			
	0.985 ML 1 + 4		1.048 ML 1 + 4

Statistics based on 35 of 36 reporting participants

Samples T41-T42: SBR & T43-T44: Butyl

Comments on assigned Data Flags for Test #660

G7MKVZ (X) - Extreme data for both Sample groups.

Instrument Code Listing

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

Instruments:

(ML) Alpha Technologies/Monsanto model not specified
(MM) Alpha Technologies Model 1xxx or OSM
(MP) Monsanto Compact Mooney Viscometer
(MR) Alpha Technologies Model MV2000/MV2000E
(MZ) Rebuilt Monsanto Mooney Viscometer
(SF) Scott STI (any model)
(TV) Tech Pro Visc Tech (any model)
(XA) Special In-House Instrument
(XX) Instrument make/model not specified by lab

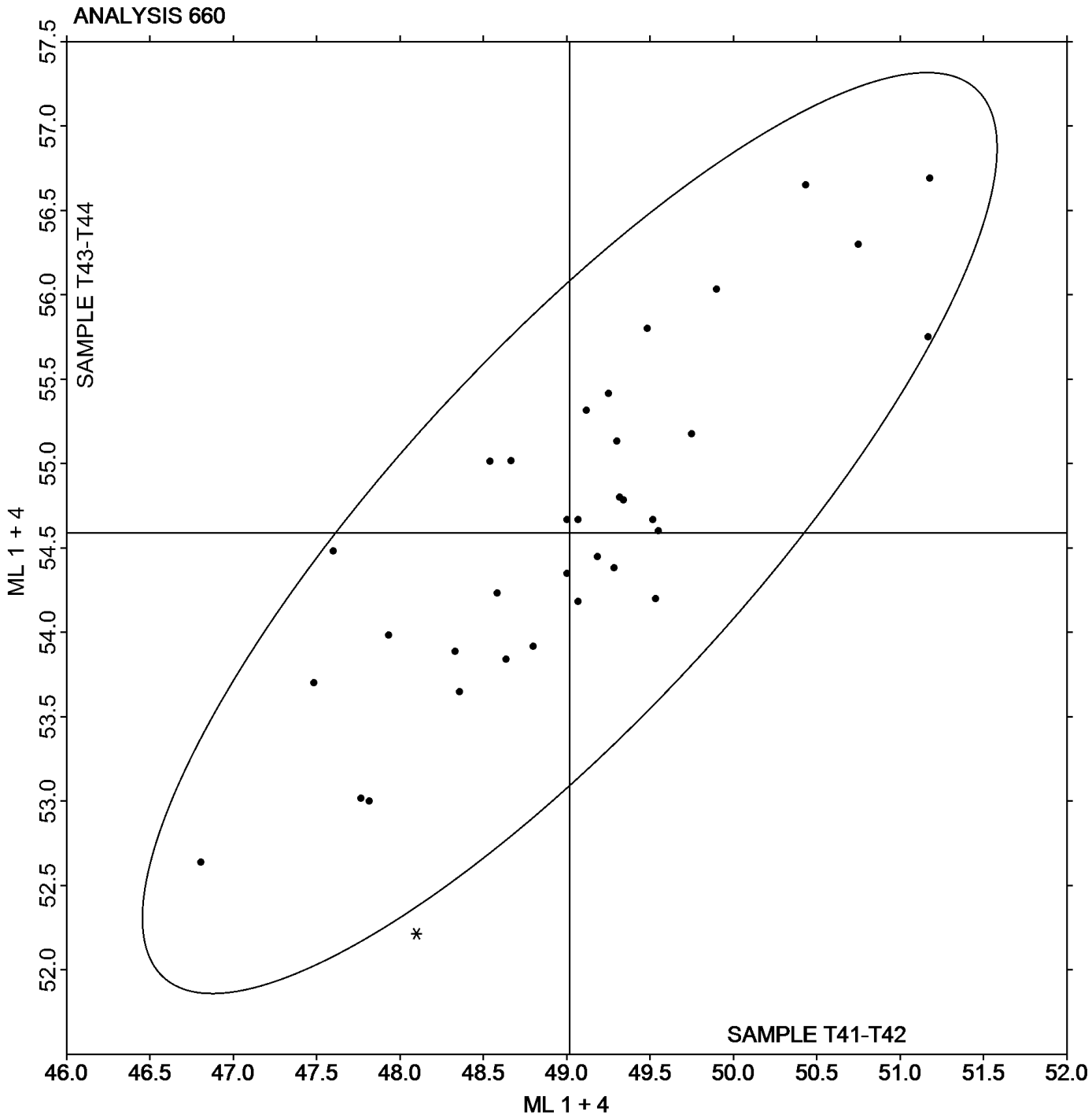
Rubber Interlaboratory Testing Program

Analysis 660

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

Grand Mean Sample **T41-T42** = 49.017 ML 1 + 4

Grand Mean Sample **T43-T44** = 54.589 ML 1 + 4



Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 661

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

		Sample T41-T42			Sample T43-T44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
2GBFFL		49.34	0.35	0.34	52.38	0.56	0.54	MR
2U2Z4P		47.93	-1.06	-1.03	51.23	-0.58	-0.57	MR
6BYJ8H		49.53	0.54	0.52	51.98	0.17	0.16	MR
73KXWT		47.60	-1.40	-1.35	51.84	0.02	0.02	MR
9TZKMK		49.18	0.19	0.18	52.35	0.53	0.52	MR
A8JPA8		49.28	0.29	0.28	51.53	-0.28	-0.28	MR
AAAJFN		49.55	0.56	0.54	51.58	-0.23	-0.23	MR
ABJRHG		51.18	2.18	2.12	53.74	1.93	1.87	TV
AYQBUF		49.75	0.75	0.73	52.26	0.44	0.43	MR
DB6GBY	X	48.54	-0.46	-0.44	54.82	3.00	2.91	TV
DJ2APK		49.00	0.01	0.01	51.32	-0.50	-0.49	MR
E2GZ4A		49.52	0.52	0.51	52.37	0.55	0.53	MR
E898LJ		47.82	-1.18	-1.14	50.98	-0.83	-0.81	MR
EXJLFK		47.77	-1.23	-1.19	50.13	-1.68	-1.64	MP
EZJW48	*	50.43	1.44	1.40	54.45	2.63	2.56	MR
F7RHUQ		48.80	-0.19	-0.19	51.97	0.15	0.14	MR
G7MKVZ	X	57.87	8.87	8.61	77.52	25.70	24.97	TV
GZVFZA		49.07	0.07	0.07	51.78	-0.03	-0.03	XX
HCP4FA		50.75	1.76	1.70	51.87	0.05	0.05	MR
HYEFJ7		49.32	0.32	0.31	52.42	0.60	0.58	MR
LKRCP8		46.81	-2.19	-2.12	49.35	-2.46	-2.39	TV
MMMHJ3		47.48	-1.51	-1.46	51.27	-0.55	-0.54	MR
P7TWTT		48.58	-0.41	-0.40	51.10	-0.72	-0.70	XX
P9H4B6	*	51.17	2.17	2.11	52.32	0.50	0.48	MR
PZ9R6Y		49.48	0.49	0.48	53.15	1.33	1.29	MR
RCCK24		48.10	-0.90	-0.87	50.29	-1.53	-1.48	XX
TZVE6R		48.36	-0.64	-0.62	51.12	-0.69	-0.68	MR
U4FGVX		49.25	0.26	0.25	52.32	0.50	0.48	MR
UNFME		48.67	-0.33	-0.32	52.65	0.83	0.81	MR
WARJKX		49.12	0.12	0.12	52.67	0.85	0.82	MR
WFE7KA		48.33	-0.66	-0.64	50.52	-1.29	-1.26	XX
YEV4NK		49.00	0.01	0.01	52.08	0.27	0.26	MR
YWYGH		48.64	-0.36	-0.35	51.34	-0.48	-0.47	MR

Rubber Interlaboratory Testing Program

Analysis 661

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

Summary Statistics

Grand Means				
	48.993	ML 1 + 8	51.818	ML 1 + 8
Stnd Dev Btwn Labs				
	1.031	ML 1 + 8	1.029	ML 1 + 8

Statistics based on 31 of 33 reporting participants

Please refer to the sample information provided for Analysis 660.

Comments on assigned Data Flags for Test #661

DB6GBY (X) - Inconsistency in testing between Sample groups. Data for Sample group T43-T44 are high.

G7MKVZ (X) - Extreme data for both Sample groups.

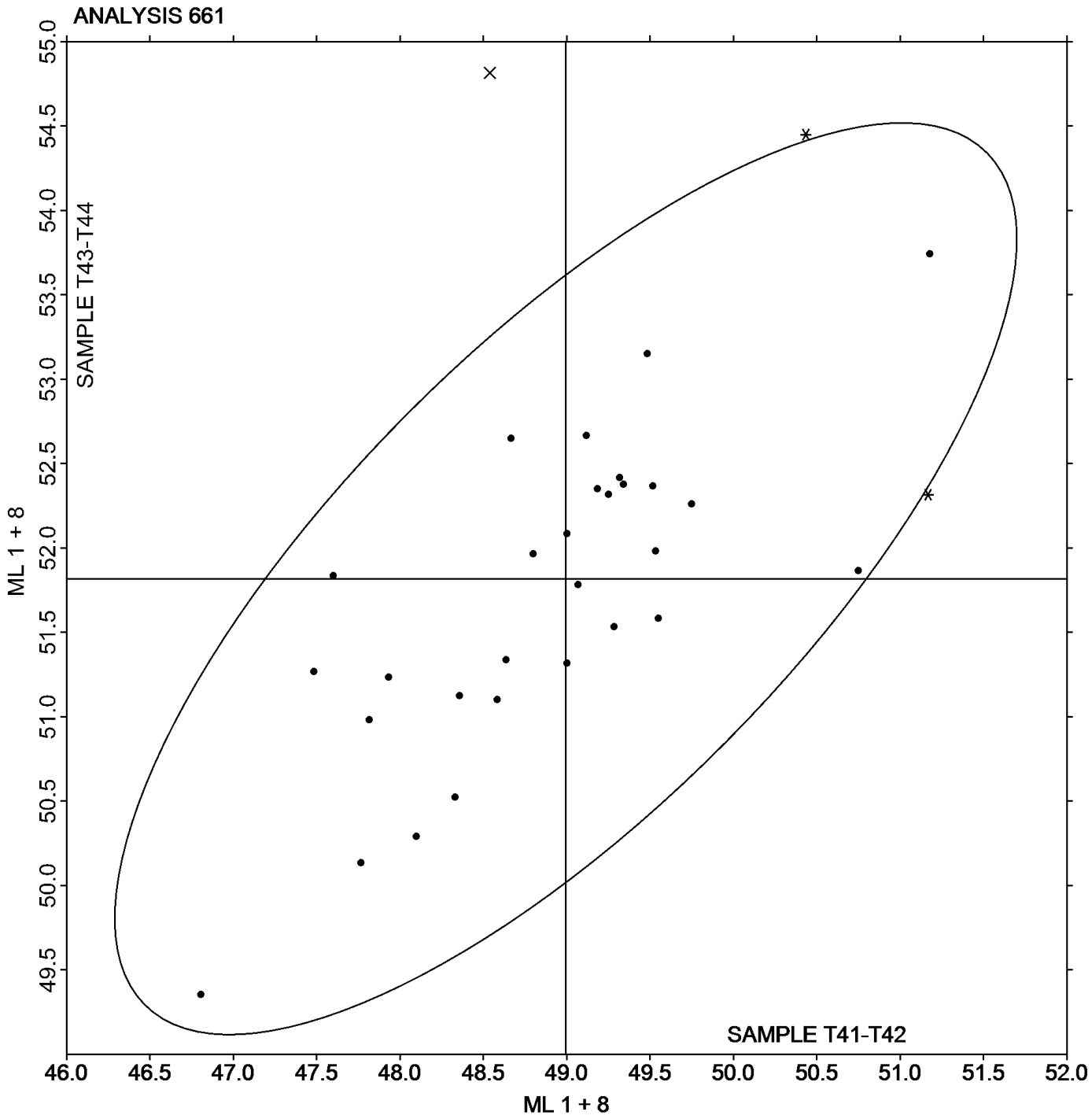
Rubber Interlaboratory Testing Program

Analysis 661

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

Grand Mean Sample **T41-T42** = 48.993 ML 1 + 8

Grand Mean Sample **T43-T44** = 51.818 ML 1 + 8



Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 662

Mooney Stress Relaxation: t80 (seconds)

WebCode	Data Flag	Sample T41-T42 Lab Mean	Sample T41-T42 Diff from Grand Mean	Sample T41-T42 CPV	Sample T43-T44 Lab Mean	Sample T43-T44 Diff from Grand Mean	Sample T43-T44 CPV	Instr Code
9TZKMK		14.30	2.11	0.97	8.950	1.530	1.96	XX
AAAJFN		11.43	-0.75	-0.35	7.233	-0.186	-0.24	MR
AJWP6E		12.10	-0.09	-0.04	8.300	0.880	1.13	MR
AYQBUF		13.63	1.44	0.66	7.012	-0.408	-0.52	MR
DB6GBY		18.20	6.01	2.77	8.908	1.489	1.91	TV
F7RHUQ		10.20	-1.99	-0.92	6.600	-0.820	-1.05	MR
G7MKVZ	X	1,595.40	1,583.21	729.84	924.200	916.780	1,176.62	TV
HYEFJ7		10.11	-2.08	-0.96	6.767	-0.653	-0.84	MR
MMMHJ3		11.33	-0.85	-0.39	7.133	-0.286	-0.37	MR
P7TWTT		10.88	-1.31	-0.60	6.910	-0.510	-0.65	MR
TZVE6R		11.13	-1.06	-0.49	7.052	-0.368	-0.47	MR
U4FGVX		12.35	0.16	0.07	7.283	-0.136	-0.17	MR
WARJKX		11.22	-0.97	-0.45	7.240	-0.180	-0.23	XX
YEV4NK		11.57	-0.62	-0.29	7.067	-0.353	-0.45	MR

Summary Statistics

	Sample T41-T42	Sample T43-T44
Grand Means	12.188 seconds	7.4196 seconds
Stnd Dev Btwn Labs	2.169 seconds	0.7792 seconds

Statistics based on 13 of 14 reporting participants

Samples T41-T42: SBR & T43-T44: Butyl

Comments on assigned Data Flags for Test #662

G7MKVZ (X) - Extreme data for both Sample groups.

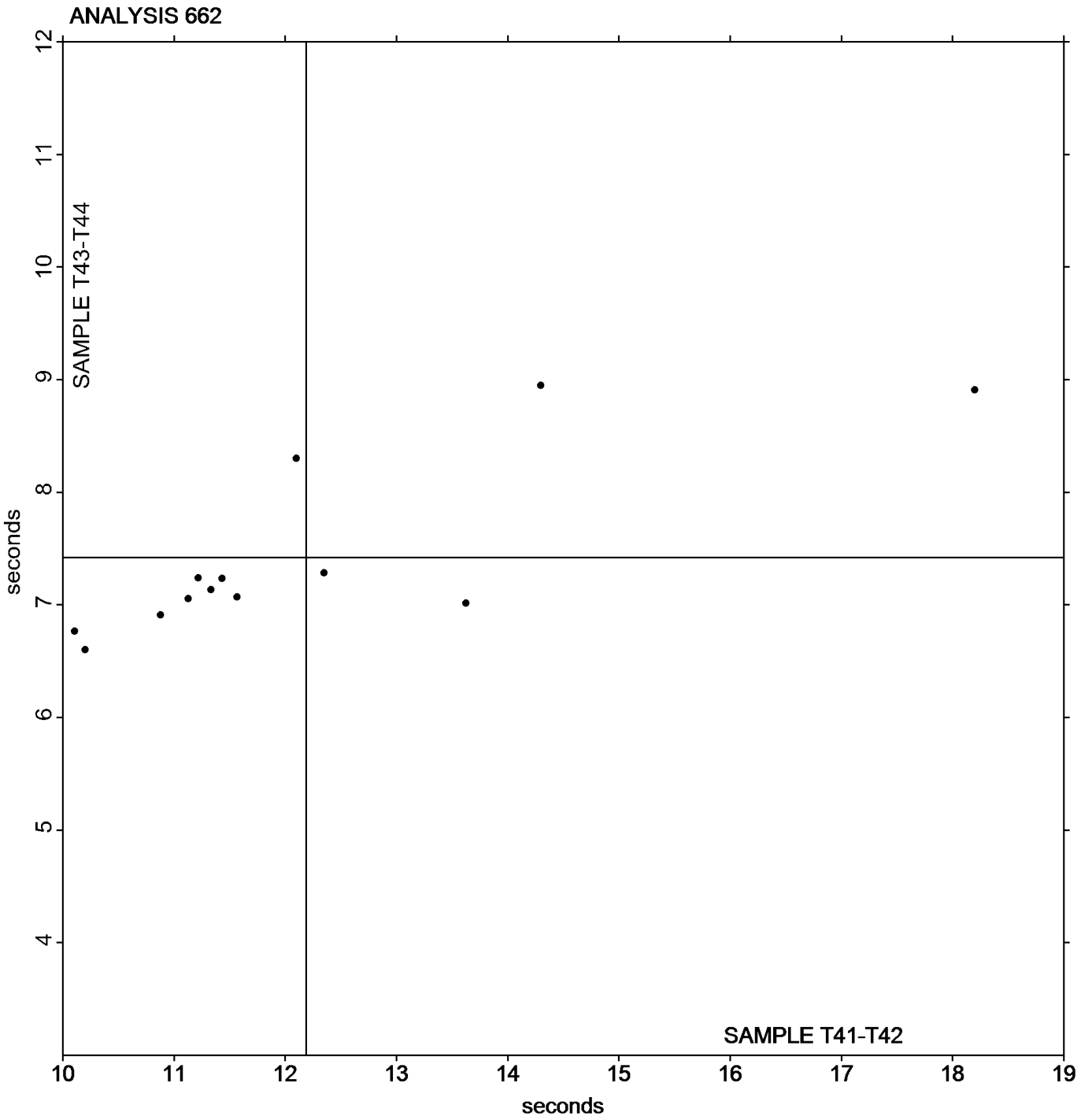
Rubber Interlaboratory Testing Program

Analysis 662

Mooney Stress Relaxation: t80 (seconds)

Grand Mean Sample **T41-T42** = 12.188 seconds

Grand Mean Sample **T43-T44** = 7.4196 seconds



Rubber Interlaboratory Testing Program

Analysis 663

Mooney Stress Relaxation: X30 (percent)

WebCode	Data Flag	Sample T41-T42 Lab Mean	Sample T41-T42 Diff from Grand Mean	Sample T41-T42 CPV	Sample T43-T44 Lab Mean	Sample T43-T44 Diff from Grand Mean	Sample T43-T44 CPV	Instr Code
9TZKMK		84.78	-0.62	-0.22	90.33	-1.45	-0.80	XX
AAAJFN		88.60	3.19	1.15	92.27	0.49	0.27	MR
AYQBUF		84.86	-0.54	-0.20	91.65	-0.13	-0.07	MR
DB6GBY	*	78.24	-7.16	-2.57	90.93	-0.85	-0.47	TV
F7RHUQ		87.18	1.78	0.64	93.18	1.40	0.78	MR
G7MKVZ	*	81.16	-4.25	-1.53	86.53	-5.25	-2.92	TV
HYEFJ7		87.36	1.96	0.70	93.35	1.57	0.87	MR
MMMHJ3		86.38	0.98	0.35	93.03	1.25	0.70	MR
P7TWTT		86.75	1.34	0.48	92.89	1.11	0.62	MR
TZVE6R		86.62	1.22	0.44	92.43	0.65	0.36	MR
U4FGVX		85.83	0.43	0.15	92.00	0.22	0.12	MR
WARJKX		86.29	0.88	0.32	92.22	0.44	0.24	XX
YEV4NK		86.22	0.81	0.29	92.32	0.54	0.30	MR

Summary Statistics

	Sample T41-T42	Sample T43-T44
Grand Means	85.406 percent	91.781 percent
Stnd Dev Btwn Labs	2.786 percent	1.799 percent

Statistics based on 13 of 13 reporting participants

Samples T41-T42: SBR & T43-T44: Butyl

Analysis Notes:

9TZKMK - Data appear to be reported as percent decay and not X30. Data corrected by CTS.

HYEFJ7 - Data appear to be reported as percent decay and not X30. Data corrected by CTS.

P7TWTT - Data appear to be reported as percent decay and not X30. Data corrected by CTS.

TZVE6R - Data appear to be reported as percent decay and not X30. Data corrected by CTS.

YEV4NK - Data appear to be reported as percent decay and not X30. Data corrected by CTS.

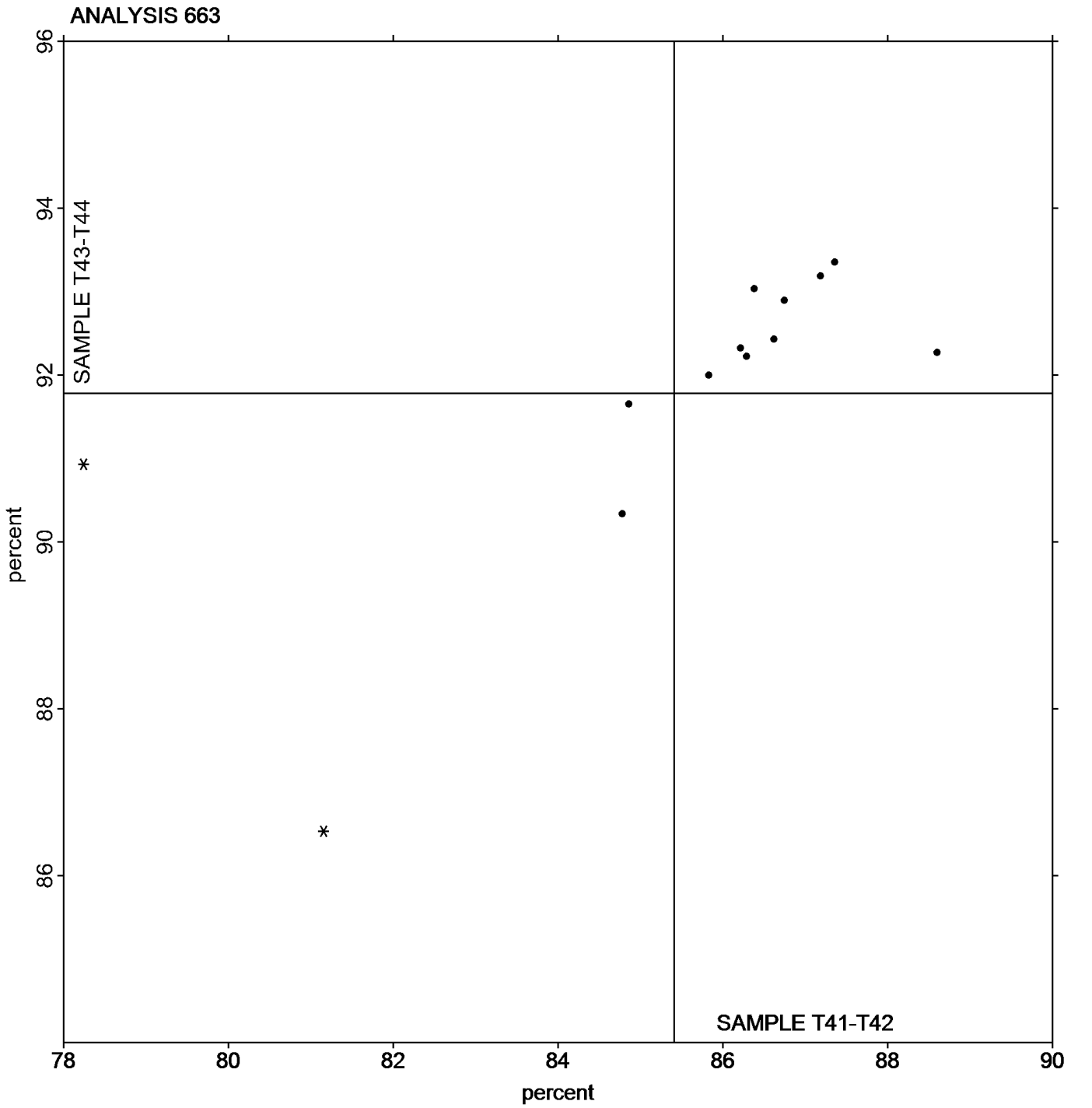
Rubber Interlaboratory Testing Program

Analysis 663

Mooney Stress Relaxation: X30 (percent)

Grand Mean Sample **T41-T42** = 85.406 percent

Grand Mean Sample **T43-T44** = 91.781 percent



Rubber Interlaboratory Testing Program

Analysis 664

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

		Sample T41-T42			Sample T43-T44			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
9TZKMK	X	0.4	-771.3	-5.13	0.6	-483.8	-3.67	XX
AAAJFN		730.5	-41.2	-0.27	454.2	-30.2	-0.23	MR
AYQBUF		817.0	45.4	0.30	486.2	1.8	0.01	MR
DB6GBY		908.0	136.4	0.91	549.0	64.6	0.49	TV
F7RHUQ		669.5	-102.2	-0.68	393.3	-91.1	-0.69	MR
G7MKVZ	*	731.4	-40.3	-0.27	878.7	394.3	3.00	TV
HYEFJ7		667.9	-103.8	-0.69	391.5	-92.9	-0.71	MR
MMMHJ3		698.0	-73.7	-0.49	415.8	-68.6	-0.52	XX
P7TWTT		691.3	-80.4	-0.54	414.1	-70.3	-0.53	MR
TZVE6R		695.5	-76.2	-0.51	439.3	-45.1	-0.34	MR
U4FGVX		1,197.7	426.0	2.83	470.3	-14.1	-0.11	MR
WARJKX		721.4	-50.3	-0.33	466.6	-17.8	-0.13	XX
YEV4NK		732.2	-39.5	-0.26	453.5	-30.9	-0.23	MR

Summary Statistics

	Sample T41-T42	Sample T43-T44
Grand Means	771.69 M-s	484.39 M-s
Stnd Dev Btwn Labs	150.29 M-s	131.65 M-s

Statistics based on 12 of 13 reporting participants

Samples T41-T42: SBR & T43-T44: Butyl

Comments on assigned Data Flags for Test #664

9TZKMK (X) - Data for all Samples are low.

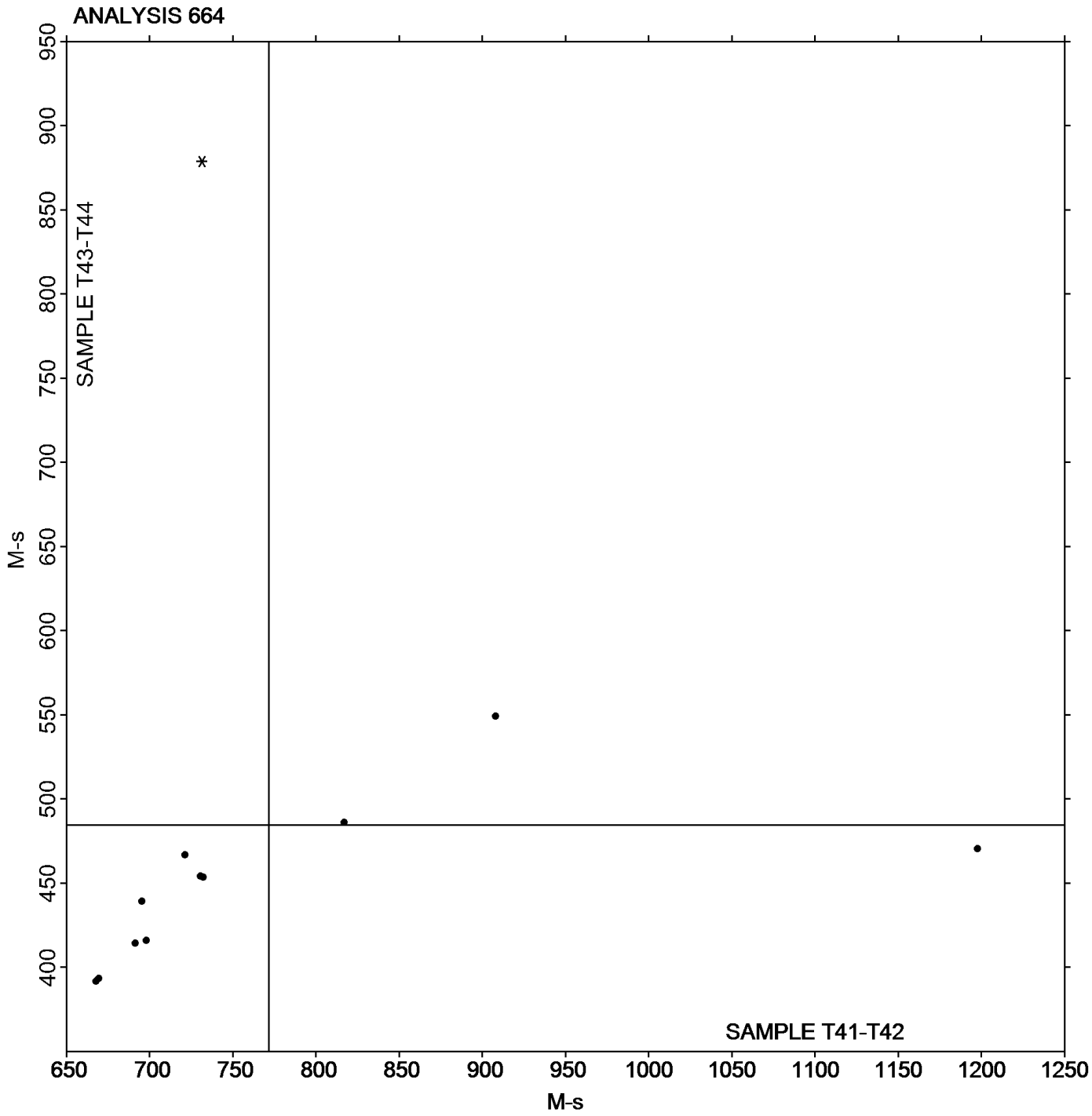
Rubber Interlaboratory Testing Program

Analysis 664

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

Grand Mean Sample **T41-T42** = 771.69 M-s

Grand Mean Sample **T43-T44** = 484.39 M-s



Rubber Interlaboratory Testing Program

Analysis 669

ODR Vulcanization-Cure Time 10% (minutes)

WebCode	Data Flag	Sample X41-X42 Lab Mean	Sample X41-X42 Diff from Grand Mean	Sample X41-X42 CPV	Sample X43-X44 Lab Mean	Sample X43-X44 Diff from Grand Mean	Sample X43-X44 CPV	Instr Code
2GBFFL		1.955	-0.190	-0.65	2.102	-0.169	-0.59	ZZ
2U2Z4P		2.167	0.022	0.07	2.262	-0.009	-0.03	ZZ
6BYJ8H		1.847	-0.298	-1.01	1.992	-0.279	-0.97	ZZ
9TZKMK		2.167	0.022	0.07	2.300	0.029	0.10	ZZ
AYQBUF		2.885	0.740	2.52	2.972	0.701	2.44	ZZ
E898LJ		2.182	0.037	0.13	2.285	0.014	0.05	ZZ
EXJLFK		2.538	0.393	1.34	2.700	0.429	1.50	ZZ
G7MKVZ		2.110	-0.035	-0.12	2.218	-0.052	-0.18	ZZ
P9H4B6		1.975	-0.170	-0.58	2.107	-0.164	-0.57	ZZ
UNFME		2.002	-0.143	-0.49	2.160	-0.111	-0.39	ZZ
YWYGH		1.950	-0.195	-0.66	2.035	-0.236	-0.82	ZZ
ZKWTNP		1.962	-0.183	-0.62	2.117	-0.154	-0.54	ZZ

Summary Statistics

	Sample X41-X42	Sample X43-X44
Grand Means	2.1449 minutes	2.2707 minutes
Stnd Dev Btwn Labs	0.2942 minutes	0.2867 minutes

Statistics based on 12 of 12 reporting participants

Samples X41-X42: EPDM compound #1 & X43-X44: EPDM compound #2

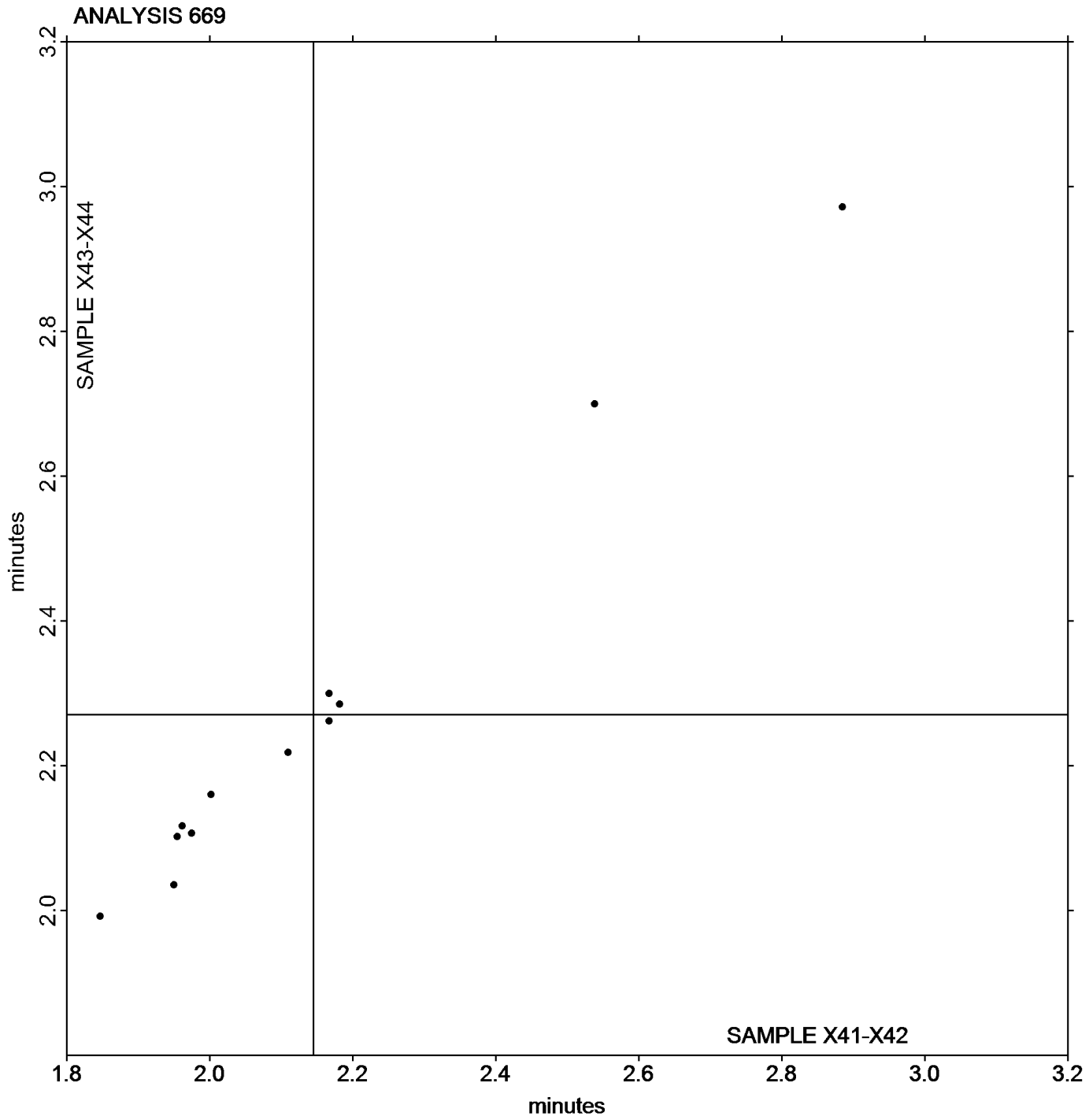
Rubber Interlaboratory Testing Program

Analysis 669

ODR Vulcanization-Cure Time 10% (minutes)

Grand Mean Sample **X41-X42** = 2.1449 minutes

Grand Mean Sample **X43-X44** = 2.2707 minutes



Rubber Interlaboratory Testing Program

Analysis 670

ODR Vulcanization-Scorch Time, Ts1 (minutes)

WebCode	Data Flag	Sample X41-X42 Lab Mean	Sample X41-X42 Diff from Grand Mean	Sample X41-X42 CPV	Sample X43-X44 Lab Mean	Sample X43-X44 Diff from Grand Mean	Sample X43-X44 CPV	Instr Code
2GBFFL		1.410	-0.074	-0.65	1.483	-0.074	-0.71	ZZ
2U2Z4P		1.487	0.003	0.03	1.550	-0.007	-0.07	ZZ
6BYJ8H		1.343	-0.140	-1.24	1.420	-0.137	-1.32	ZZ
9TZKMK		1.500	0.016	0.14	1.583	0.026	0.25	ZZ
AYQBUF		1.435	-0.049	-0.43	1.500	-0.057	-0.55	ZZ
E898LJ		1.597	0.113	0.99	1.647	0.089	0.86	ZZ
EXJLFK		1.775	0.291	2.56	1.817	0.259	2.50	ZZ
G7MKVZ		1.545	0.061	0.54	1.637	0.079	0.76	ZZ
P9H4B6		1.408	-0.075	-0.66	1.497	-0.061	-0.59	ZZ
UNFME		1.432	-0.052	-0.46	1.518	-0.039	-0.38	ZZ
YWYGH		1.437	-0.047	-0.41	1.508	-0.049	-0.47	ZZ
ZKWTNP		1.437	-0.047	-0.41	1.528	-0.029	-0.28	ZZ

Summary Statistics

	Sample X41-X42	Sample X43-X44
Grand Means	1.4838 minutes	1.5574 minutes
Stnd Dev Btwn Labs	0.1136 minutes	0.1037 minutes

Statistics based on 12 of 12 reporting participants

Samples X41-X42: EPDM compound #1 & X43-X44: EPDM compound #2

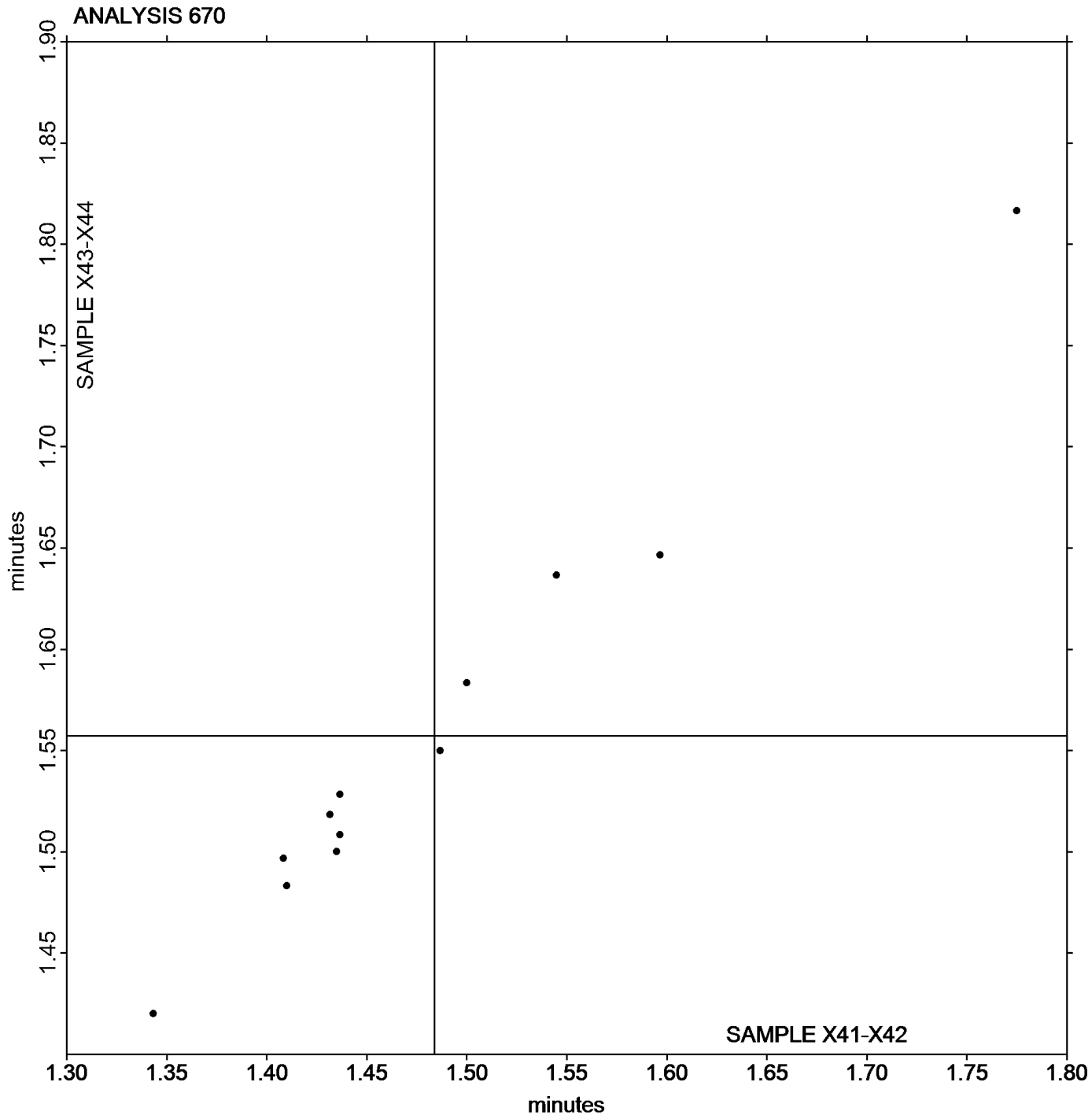
Rubber Interlaboratory Testing Program

Analysis 670

ODR Vulcanization-Scorch Time, Ts1 (minutes)

Grand Mean Sample **X41-X42** = 1.4838 minutes

Grand Mean Sample **X43-X44** = 1.5574 minutes



Rubber Interlaboratory Testing Program

Analysis 671

ODR Vulcanization-Cure Time 50% (minutes)

WebCode	Data Flag	Sample X41-X42 Lab Mean	Sample X41-X42 Diff from Grand Mean	Sample X41-X42 CPV	Sample X43-X44 Lab Mean	Sample X43-X44 Diff from Grand Mean	Sample X43-X44 CPV	Instr Code
2GBFFL		3.808	-0.361	-0.92	3.605	-0.226	-0.66	ZZ
2U2Z4P		4.522	0.352	0.90	3.992	0.161	0.47	ZZ
6BYJ8H		3.817	-0.353	-0.90	3.518	-0.313	-0.91	ZZ
9TZKMK		4.217	0.047	0.12	4.000	0.169	0.49	ZZ
AYQBUF		4.002	-0.168	-0.43	3.610	-0.221	-0.65	ZZ
E898LJ		4.290	0.121	0.31	3.915	0.084	0.25	ZZ
EXJLFK		5.220	1.051	2.67	4.790	0.959	2.80	ZZ
G7MKVZ		4.215	0.046	0.12	3.815	-0.016	-0.05	ZZ
P9H4B6		4.052	-0.118	-0.30	3.652	-0.179	-0.52	ZZ
UNFME		4.037	-0.133	-0.34	3.748	-0.083	-0.24	ZZ
YWYGH		4.038	-0.131	-0.33	3.743	-0.088	-0.26	ZZ
ZKWTNP		3.815	-0.354	-0.90	3.582	-0.249	-0.73	ZZ

Summary Statistics

	Sample X41-X42	Sample X43-X44
Grand Means	4.1693 minutes	3.8308 minutes
Stnd Dev Btwn Labs	0.3936 minutes	0.3422 minutes

Statistics based on 12 of 12 reporting participants

Samples X41-X42: EPDM compound #1 & X43-X44: EPDM compound #2

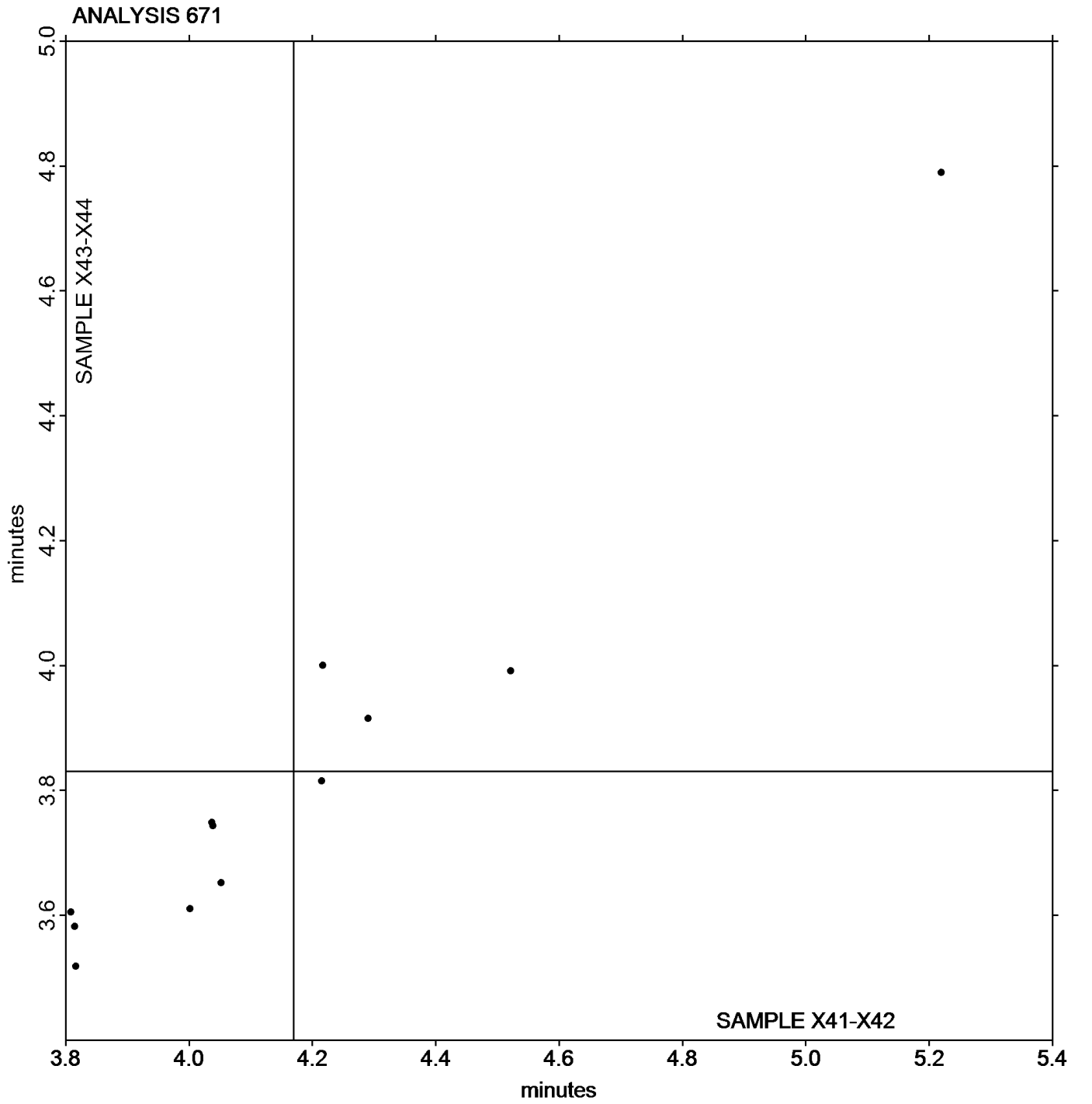
Rubber Interlaboratory Testing Program

Analysis 671

ODR Vulcanization-Cure Time 50% (minutes)

Grand Mean Sample **X41-X42** = 4.1693 minutes

Grand Mean Sample **X43-X44** = 3.8308 minutes



Rubber Interlaboratory Testing Program

Analysis 672

ODR Vulcanization-Cure Time 90% (minutes)

WebCode	Data Flag	Sample X41-X42 Lab Mean	Sample X41-X42 Diff from Grand Mean	Sample X41-X42 CPV	Sample X43-X44 Lab Mean	Sample X43-X44 Diff from Grand Mean	Sample X43-X44 CPV	Instr Code
2GBFFL		15.05	0.43	0.39	7.803	-1.115	-1.15	ZZ
2U2Z4P		15.48	0.86	0.79	9.558	0.640	0.66	ZZ
6BYJ8H		14.43	-0.19	-0.18	9.117	0.198	0.20	ZZ
9TZKMK		14.20	-0.42	-0.38	8.183	-0.735	-0.76	ZZ
AYQBUF		13.74	-0.88	-0.81	8.462	-0.457	-0.47	ZZ
E898LJ		14.06	-0.55	-0.51	8.830	-0.088	-0.09	ZZ
EXJLFK		16.91	2.29	2.11	11.055	2.137	2.21	ZZ
G7MKVZ		15.57	0.95	0.87	9.827	0.908	0.94	ZZ
P9H4B6		14.88	0.26	0.24	9.178	0.260	0.27	ZZ
UNFME		14.13	-0.49	-0.45	8.352	-0.567	-0.59	ZZ
YWYGH		14.43	-0.19	-0.18	9.157	0.238	0.25	ZZ
ZKWTNP		12.55	-2.06	-1.90	7.500	-1.418	-1.47	ZZ

Summary Statistics

	Sample X41-X42	Sample X43-X44
Grand Means	14.618 minutes	8.9185 minutes
Stnd Dev Btwn Labs	1.087 minutes	0.9675 minutes

Statistics based on 12 of 12 reporting participants

Samples X41-X42: EPDM compound #1 & X43-X44: EPDM compound #2

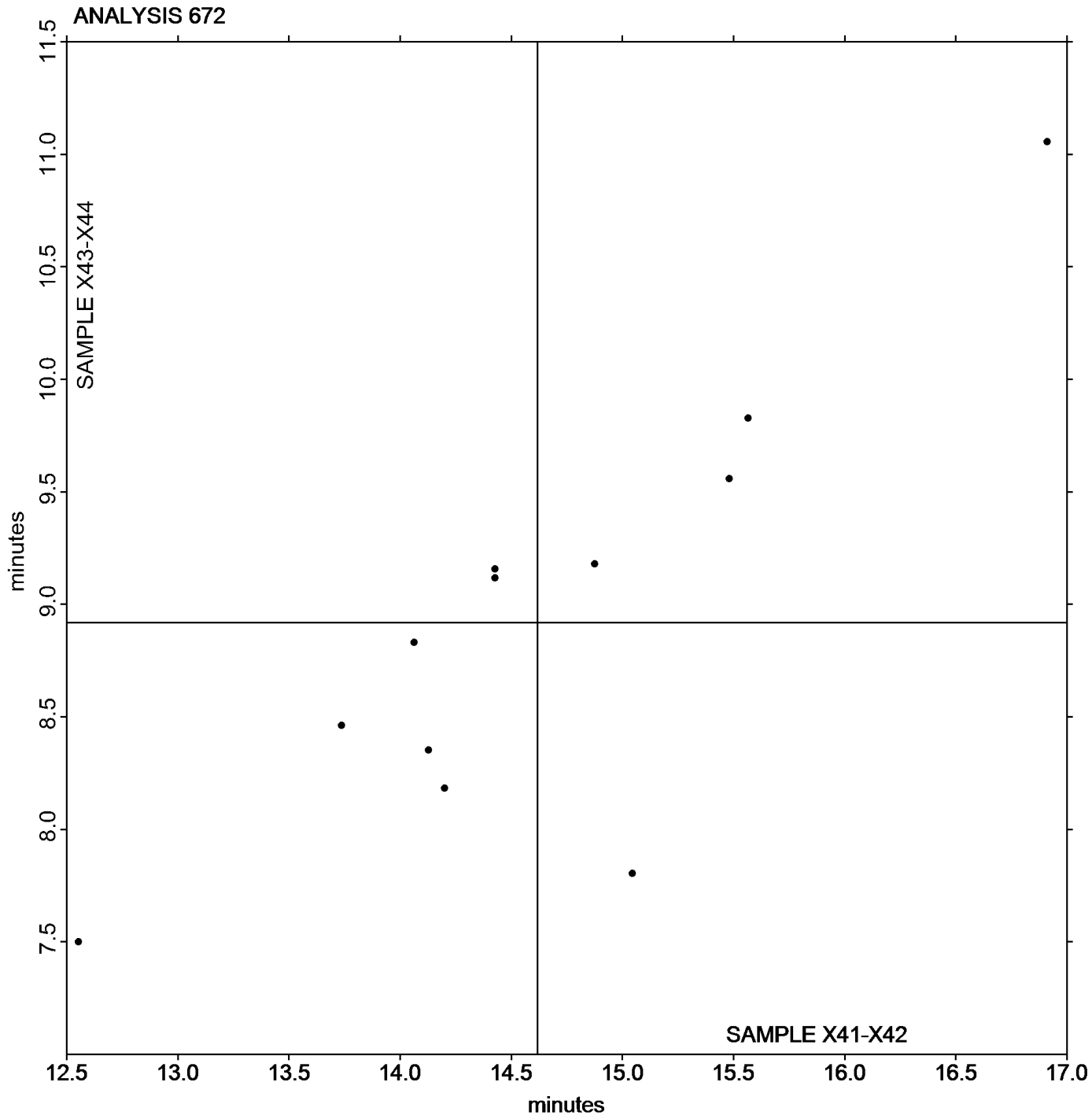
Rubber Interlaboratory Testing Program

Analysis 672

ODR Vulcanization-Cure Time 90% (minutes)

Grand Mean Sample **X41-X42** = 14.618 minutes

Grand Mean Sample **X43-X44** = 8.9185 minutes



Rubber Interlaboratory Testing Program

Analysis 673

ODR Vulcanization: Minimum Torque (lbf.in)

WebCode	Data Flag	Sample X41-X42 Lab Mean	Sample X41-X42 Diff from Grand Mean	Sample X41-X42 CPV	Sample X43-X44 Lab Mean	Sample X43-X44 Diff from Grand Mean	Sample X43-X44 CPV	Instr Code
2GBFFL		4.718	-0.752	-1.32	5.540	-0.905	-1.22	ZZ
2U2Z4P		5.682	0.211	0.37	6.438	-0.007	-0.01	ZZ
6BYJ8H		5.247	-0.224	-0.39	6.837	0.391	0.53	ZZ
9TZKMK		5.350	-0.121	-0.21	6.683	0.238	0.32	ZZ
AYQBUF		5.212	-0.259	-0.46	5.978	-0.467	-0.63	ZZ
E898LJ		5.388	-0.082	-0.14	6.103	-0.342	-0.46	ZZ
EXJLFK		6.060	0.589	1.04	7.633	1.188	1.60	ZZ
G7MKVZ		5.838	0.368	0.65	7.457	1.011	1.36	ZZ
P9H4B6		5.037	-0.434	-0.76	5.602	-0.844	-1.14	ZZ
UNFME		5.167	-0.304	-0.53	5.773	-0.672	-0.91	ZZ
YWYGH		6.853	1.383	2.43	7.362	0.916	1.23	ZZ
ZKWTNP		5.097	-0.374	-0.66	5.937	-0.509	-0.69	ZZ

Summary Statistics

	Sample X41-X42	Sample X43-X44
Grand Means	5.4707 lbf.in	6.4453 lbf.in
Stnd Dev Btwn Labs	0.5692 lbf.in	0.7423 lbf.in

Statistics based on 12 of 12 reporting participants

Summary Statistics in SI Units

	Sample X41-X42	Sample X43-X44
Grand Means	6.1811 dN.m	7.2822 dN.m
Stnd Dev Btwn Labs	0.6431 dN.m	0.8386 dN.m

Statistics based on 12 of 12 reporting participants

Samples X41-X42: EPDM compound #1 & X43-X44: EPDM compound #2

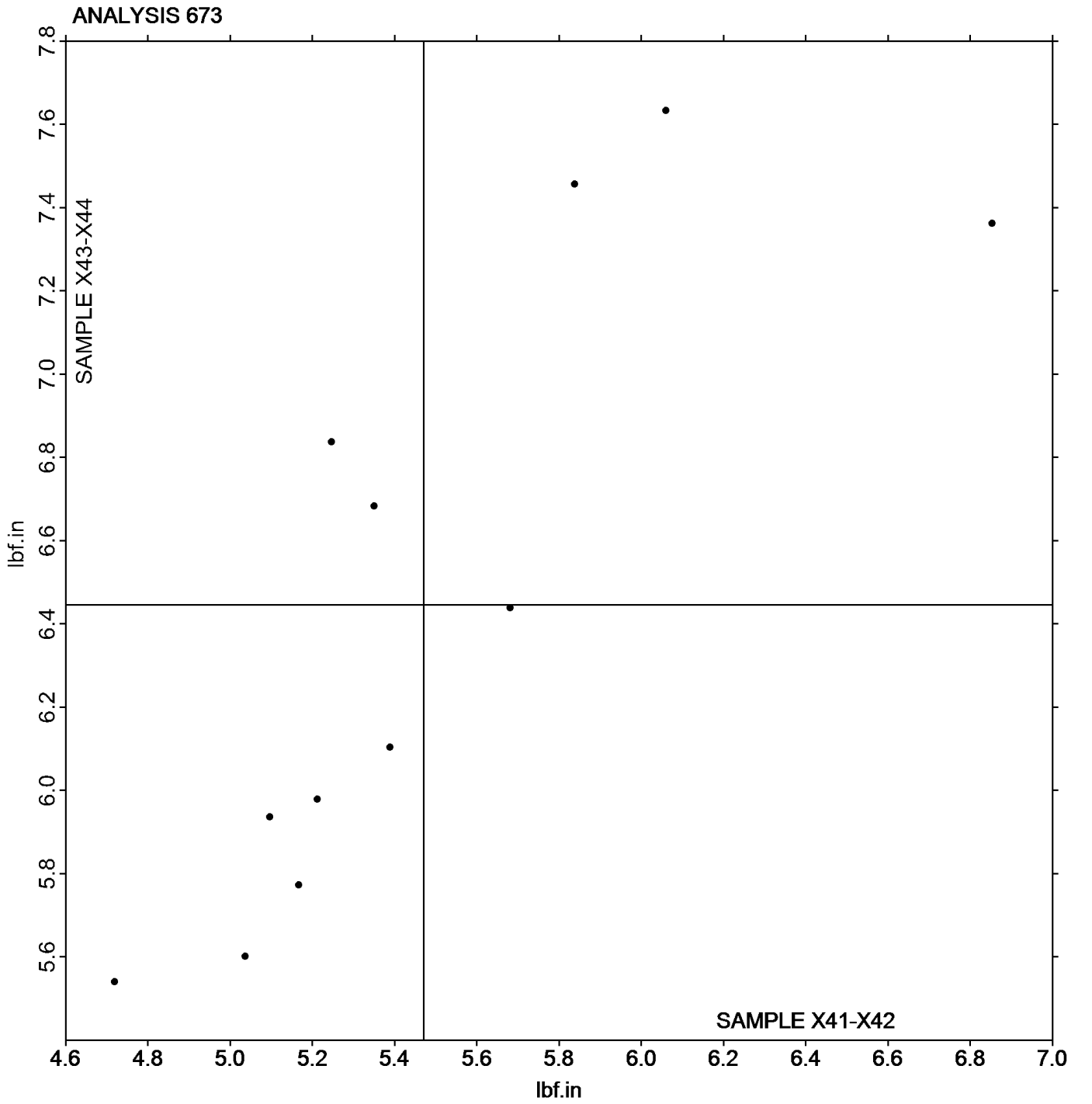
Rubber Interlaboratory Testing Program

Analysis 673

ODR Vulcanization: Minimum Torque (lbf.in)

Grand Mean Sample **X41-X42** = 5.4707 lbf.in

Grand Mean Sample **X43-X44** = 6.4453 lbf.in



Rubber Interlaboratory Testing Program

Analysis 674

ODR Vulcanization: Maximum Torque (lbf.in)

WebCode	Data Flag	Sample X41-X42 Lab Mean	Sample X41-X42 Diff from Grand Mean	Sample X41-X42 CPV	Sample X43-X44 Lab Mean	Sample X43-X44 Diff from Grand Mean	Sample X43-X44 CPV	Instr Code
2GBFFL		38.07	-3.28	-0.99	37.35	-1.42	-0.56	ZZ
2U2Z4P		50.03	8.68	2.62	44.78	6.00	2.35	ZZ
6BYJ8H		39.64	-1.71	-0.52	38.67	-0.11	-0.04	ZZ
9TZKMK		41.70	0.35	0.11	39.33	0.56	0.22	ZZ
AYQBUF		40.40	-0.95	-0.29	37.07	-1.70	-0.67	ZZ
E898LJ		38.56	-2.79	-0.84	36.05	-2.72	-1.07	ZZ
EXJLFK		43.48	2.14	0.64	41.97	3.20	1.25	ZZ
G7MKVZ		39.91	-1.44	-0.43	37.32	-1.46	-0.57	ZZ
P9H4B6		41.60	0.25	0.08	38.02	-0.75	-0.29	ZZ
UNFME		42.34	0.99	0.30	39.34	0.57	0.22	ZZ
YWYGH		42.78	1.43	0.43	39.59	0.81	0.32	ZZ
ZKWTNP		37.68	-3.67	-1.11	35.77	-3.00	-1.17	ZZ

Summary Statistics

	Sample X41-X42	Sample X43-X44
Grand Means	41.348 lbf.in	38.771 lbf.in
Stnd Dev Btwn Labs	3.316 lbf.in	2.551 lbf.in

Statistics based on 12 of 12 reporting participants

Summary Statistics in SI Units

	Sample X41-X42	Sample X43-X44
Grand Means	46.717 dN.m	43.805 dN.m
Stnd Dev Btwn Labs	3.747 dN.m	2.882 dN.m

Statistics based on 12 of 12 reporting participants

Samples X41-X42: EPDM compound #1 & X43-X44: EPDM compound #2

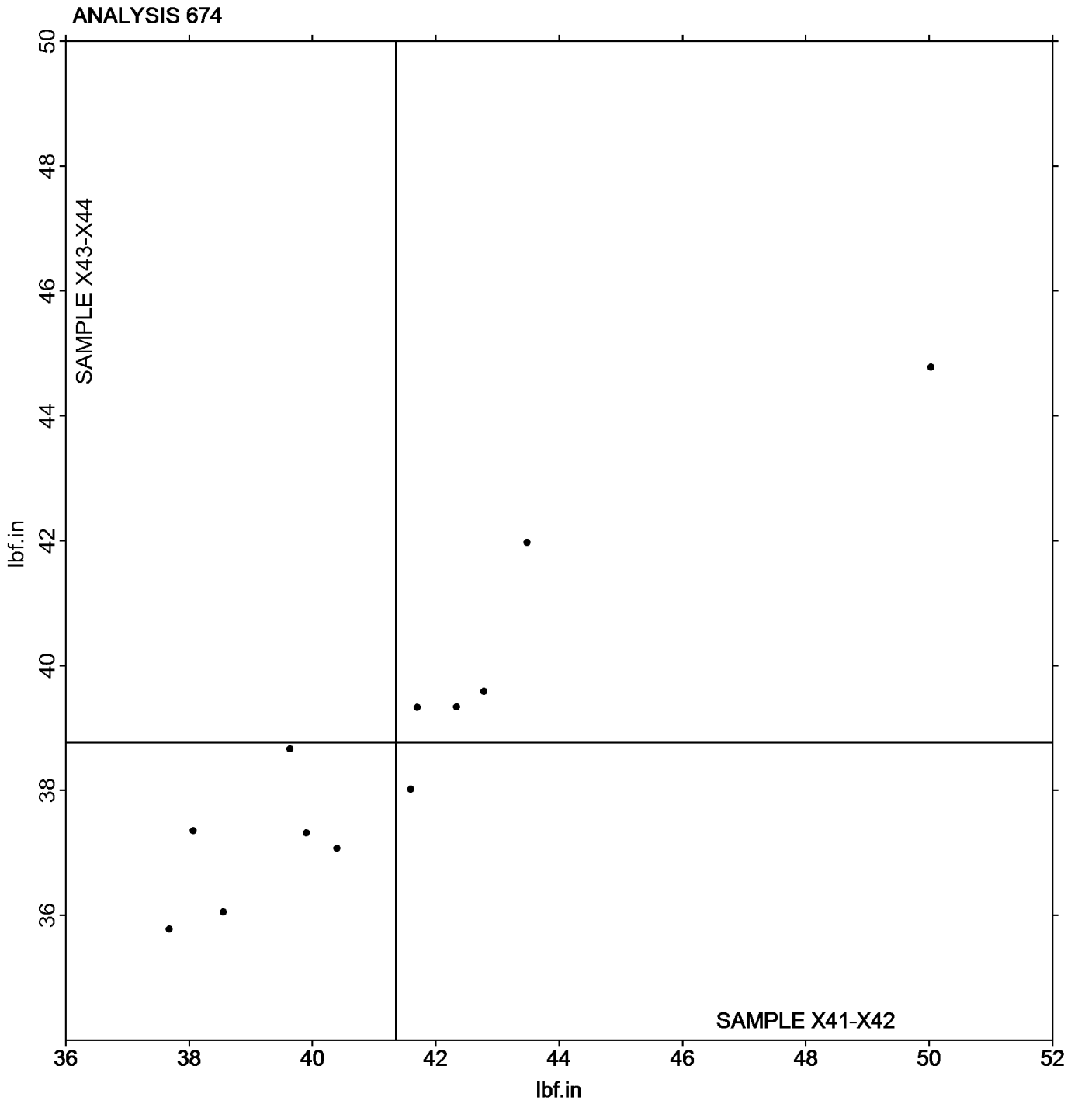
Rubber Interlaboratory Testing Program

Analysis 674

ODR Vulcanization: Maximum Torque (lbf.in)

Grand Mean Sample **X41-X42** = 41.348 lbf.in

Grand Mean Sample **X43-X44** = 38.771 lbf.in



Rubber Interlaboratory Testing Program

Analysis 684

MDR Vulcanization-Cure Time 10% (minutes)

WebCode	Data Flag	Sample X45-X46 Lab Mean	Sample X45-X46 Diff from Grand Mean	Sample X45-X46 CPV	Sample X47-X48 Lab Mean	Sample X47-X48 Diff from Grand Mean	Sample X47-X48 CPV	Instr Code
2GBFFL		1.577	0.022	0.39	1.572	0.008	0.18	MC
2Q7CLW		1.568	0.013	0.24	1.597	0.033	0.79	MC
73KXWT		1.648	0.093	1.68	1.620	0.056	1.36	MD
86G4QP		1.597	0.042	0.75	1.582	0.018	0.43	MC
9YPZEC		1.561	0.006	0.11	1.575	0.011	0.27	MC
A8JPA8		1.505	-0.050	-0.90	1.532	-0.032	-0.79	XX
ABJRHG		1.603	0.048	0.87	1.608	0.044	1.07	MD
DGXL44		1.548	-0.007	-0.12	1.548	-0.016	-0.38	XX
E2GZ4A		1.472	-0.083	-1.50	1.508	-0.056	-1.35	MC
E898LJ		1.570	0.015	0.27	1.582	0.018	0.43	MC
EZJW48		1.547	-0.008	-0.15	1.578	0.014	0.35	TP
F7RHUQ		1.487	-0.068	-1.23	1.553	-0.011	-0.26	MC
FE23Y8		1.633	0.078	1.41	1.610	0.046	1.12	MC
LFVN9Z		1.619	0.065	1.16	1.622	0.058	1.41	MC
LKRCP8		1.513	-0.042	-0.75	1.535	-0.029	-0.71	MC
P7TWTT		1.512	-0.043	-0.78	1.532	-0.032	-0.79	MC
P88Y3M		1.512	-0.043	-0.78	1.505	-0.059	-1.44	MC
PZ9R6Y		1.595	0.040	0.72	1.552	-0.012	-0.30	MC
TCU7U7		1.540	-0.015	-0.27	1.555	-0.009	-0.22	MC
TZVE6R		1.460	-0.095	-1.71	1.502	-0.062	-1.52	MC
ULQD6V		1.555	0.000	0.00	1.580	0.016	0.39	MC
UNFME		1.645	0.090	1.62	1.662	0.098	2.37	MC
VNWHX		1.545	-0.010	-0.18	1.552	-0.012	-0.30	XX
WARJKX		1.635	0.080	1.44	1.585	0.021	0.51	MD
WFE7KA		1.533	-0.022	-0.39	1.537	-0.027	-0.67	XX
XHWQZ		1.452	-0.103	-1.86	1.485	-0.079	-1.92	TP
YEV4NK	X	1.312	-0.243	-4.38	1.330	-0.234	-5.69	MC
YWYGH		1.550	-0.005	-0.09	1.563	-0.001	-0.02	MC

Summary Statistics

	Sample X45-X46	Sample X47-X48
Grand Means	1.5549 minutes	1.5641 minutes
Stnd Dev Btwn Labs	0.0556 minutes	0.0412 minutes

Statistics based on 27 of 28 reporting participants

Samples X45-X46: EPDM compound, batch #1 & X47-X48: EPDM compound, batch #2

Rubber Interlaboratory Testing Program

Analysis 684

MDR Vulcanization-Cure Time 10% (minutes)

Comments on assigned Data Flags for Test #684

YEV4NK (X) - Data for all Samples are low.

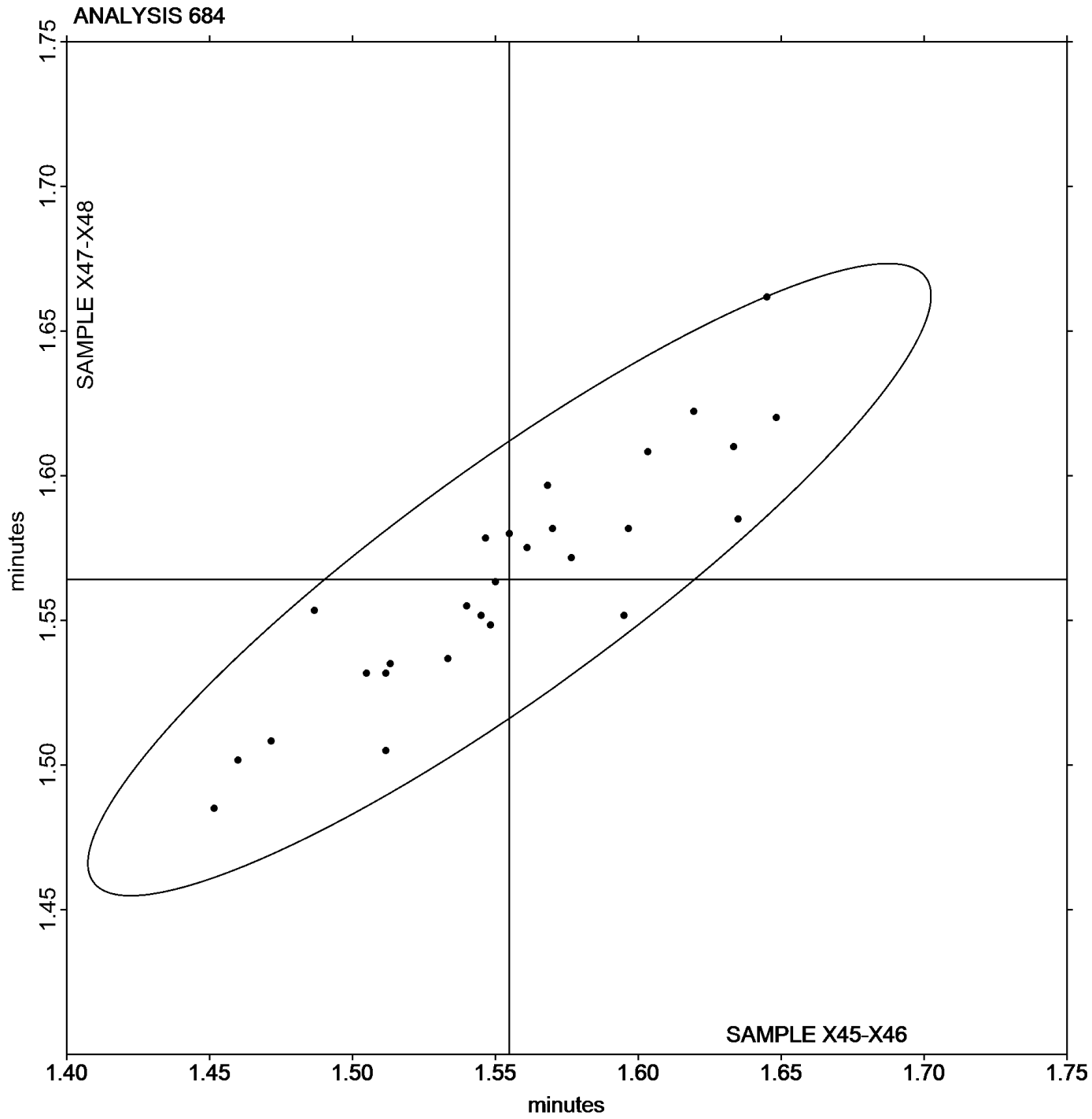
Rubber Interlaboratory Testing Program

Analysis 684

MDR Vulcanization-Cure Time 10% (minutes)

Grand Mean Sample **X45-X46** = 1.5549 minutes

Grand Mean Sample **X47-X48** = 1.5641 minutes



Rubber Interlaboratory Testing Program

Analysis 685

MDR Vulcanization-Scorch Time, Ts1 (minutes)

WebCode	Data Flag	Sample X45-X46 Lab Mean	Diff from Grand Mean	CPV	Sample X47-X48 Lab Mean	Diff from Grand Mean	CPV	Instr Code
2GBFFL		1.348	0.035	0.52	1.347	0.023	0.38	MC
2Q7CLW		1.400	0.087	1.30	1.420	0.096	1.57	MC
73KXWT		1.428	0.115	1.73	1.398	0.075	1.22	MD
86G4QP		1.350	0.037	0.55	1.338	0.015	0.24	MC
9YPZEC		1.344	0.031	0.47	1.367	0.043	0.70	MC
A8JPA8		1.200	-0.113	-1.71	1.223	-0.100	-1.63	XX
ABJRHG		1.325	0.012	0.17	1.323	0.000	0.00	MD
AJWP6E		1.372	0.058	0.87	1.345	0.021	0.35	MC
DGXL44		1.265	-0.048	-0.73	1.272	-0.052	-0.85	XX
E2GZ4A		1.272	-0.042	-0.63	1.313	-0.010	-0.17	MC
E898LJ		1.340	0.027	0.40	1.352	0.028	0.46	MC
EZJW48		1.352	0.038	0.57	1.370	0.046	0.76	TP
F7RHUQ		1.257	-0.057	-0.85	1.303	-0.020	-0.33	XX
FE23Y8		1.348	0.035	0.52	1.320	-0.004	-0.06	MC
HYEFJ7	*	1.128	-0.185	-2.78	1.138	-0.185	-3.02	MC
LFVN9Z		1.375	0.062	0.92	1.375	0.051	0.84	MC
LKRCP8		1.297	-0.017	-0.25	1.315	-0.009	-0.14	MC
MMMHJ3		1.267	-0.047	-0.70	1.292	-0.032	-0.52	MC
P7TWTT		1.267	-0.047	-0.70	1.278	-0.045	-0.74	MC
P88Y3M		1.191	-0.123	-1.85	1.188	-0.135	-2.20	MC
PZ9R6Y		1.325	0.012	0.17	1.317	-0.007	-0.11	MC
TCU7U7		1.303	-0.010	-0.15	1.322	-0.002	-0.03	MC
TZVE6R		1.245	-0.068	-1.03	1.285	-0.039	-0.63	MC
ULQD6V		1.310	-0.003	-0.05	1.335	0.011	0.19	MC
UNFME		1.395	0.082	1.23	1.410	0.086	1.41	MC
VNWHX		1.343	0.030	0.45	1.360	0.036	0.59	XX
VZT4MU		1.375	0.062	0.92	1.407	0.083	1.36	MC
WARJKX		1.402	0.088	1.33	1.367	0.043	0.70	MD
WFE7KA		1.343	0.030	0.45	1.355	0.031	0.51	XX
XHWQZ		1.260	-0.053	-0.80	1.278	-0.045	-0.74	TP
YEV4NK		1.308	-0.005	-0.08	1.350	0.026	0.43	MC
YWYGH		1.297	-0.017	-0.25	1.290	-0.034	-0.55	MC

Summary Statistics

	Sample X45-X46	Sample X47-X48
Grand Means	1.3135 minutes	1.3235 minutes
Stnd Dev Btwn Labs	0.0665 minutes	0.0613 minutes

Statistics based on 32 of 32 reporting participants

Rubber Interlaboratory Testing Program

Analysis 685

MDR Vulcanization-Scorch Time, Ts1 (minutes)

Samples X45-X46: EPDM compound, batch #1 & X47-X48: EPDM compound, batch #2

Instrument Code Listing

685	MDR Vulcanization-Scorch Time, Ts1 (minutes)

Instruments:

(MC) Alpha Technologies [Monsanto] MDR 2000 or 2000E

(MD) Alpha Tech. Rubber Process Analyzer (RPA 2000)

(MP) Alpha Technologies [Monsanto] MDR 2000P

(TP) Tech Pro MDR model MDPT

(XX) Instrument model not specified by lab

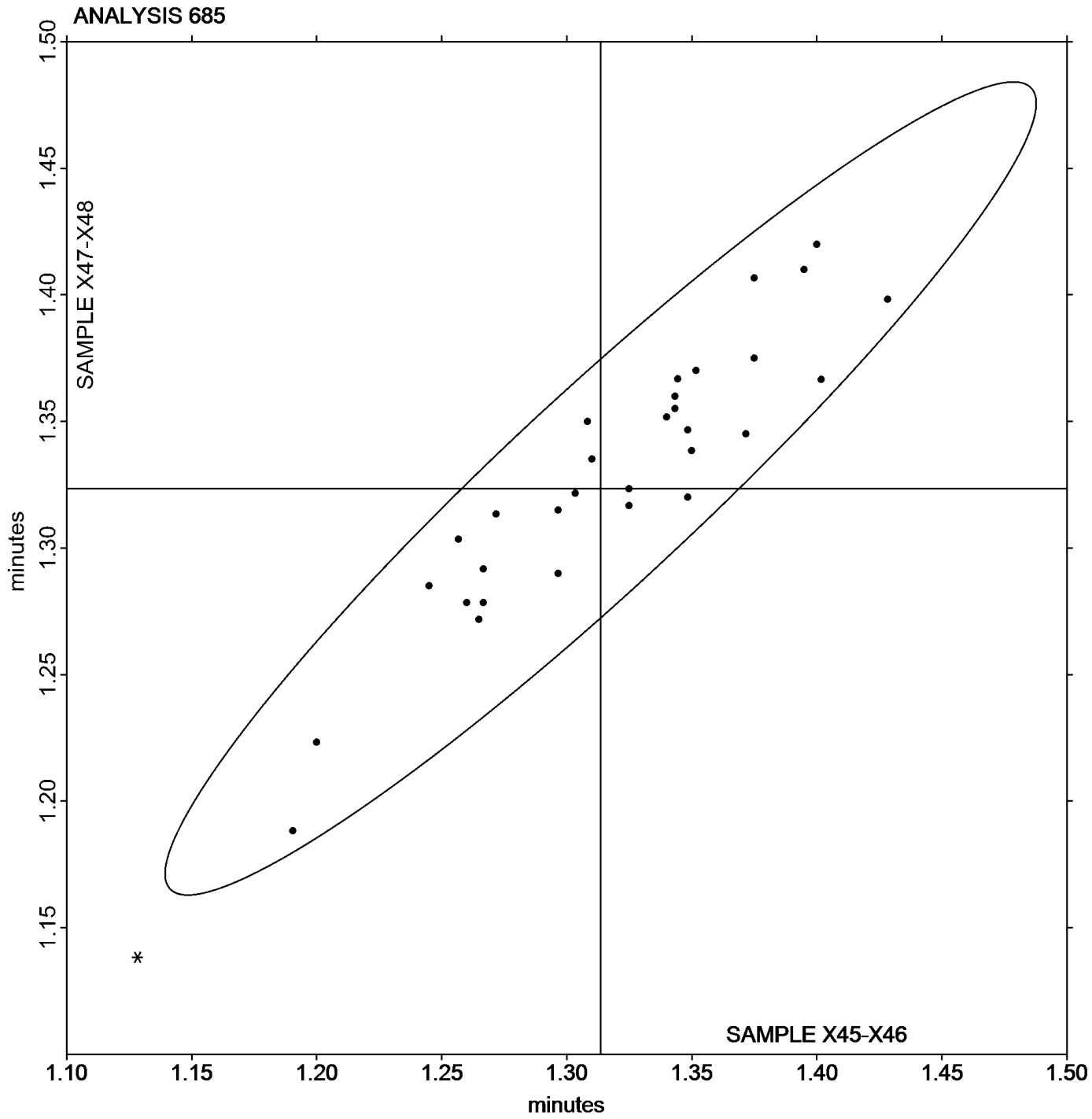
Rubber Interlaboratory Testing Program

Analysis 685

MDR Vulcanization-Scorch Time, Ts1 (minutes)

Grand Mean Sample **X45-X46** = 1.3135 minutes

Grand Mean Sample **X47-X48** = 1.3235 minutes



Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 686

MDR Vulcanization-Cure Time 50% (minutes)

WebCode	Data Flag	Sample X45-X46 Lab Mean	Sample X45-X46 Diff from Grand Mean	Sample X45-X46 CPV	Sample X47-X48 Lab Mean	Sample X47-X48 Diff from Grand Mean	Sample X47-X48 CPV	Instr Code
2GBFFL		3.312	0.037	0.36	3.295	0.005	0.06	XX
2Q7CLW		3.225	-0.050	-0.48	3.285	-0.005	-0.07	MC
73KXWT		3.483	0.209	2.02	3.433	0.143	1.88	MD
86G4QP		3.305	0.030	0.29	3.285	-0.005	-0.07	MC
9YPZEC		3.203	-0.072	-0.70	3.231	-0.060	-0.78	MC
A8JPA8		3.168	-0.106	-1.03	3.208	-0.082	-1.08	XX
ABJRHG		3.355	0.080	0.78	3.363	0.073	0.96	MD
AJWP6E		3.375	0.100	0.97	3.313	0.023	0.30	MC
DGXL44		3.275	0.000	0.00	3.258	-0.032	-0.42	MC
E2GZ4A		3.212	-0.063	-0.61	3.260	-0.030	-0.40	MC
E898LJ		3.305	0.030	0.29	3.313	0.023	0.30	MC
EZJW48		3.247	-0.028	-0.27	3.280	-0.010	-0.13	TP
F7RHUQ		3.108	-0.166	-1.61	3.217	-0.074	-0.97	XX
FE23Y8		3.443	0.169	1.63	3.402	0.111	1.46	MC
HYEFJ7	X	2.852	-0.423	-4.09	2.880	-0.410	-5.39	MC
LFVN9Z		3.406	0.131	1.27	3.408	0.118	1.55	MC
LKRCP8		3.248	-0.026	-0.26	3.280	-0.010	-0.13	MC
MMMHJ3		3.299	0.024	0.23	3.354	0.064	0.84	MC
P7TWTT		3.227	-0.048	-0.47	3.260	-0.030	-0.40	MC
P88Y3M		3.237	-0.038	-0.37	3.218	-0.072	-0.95	MC
PZ9R6Y		3.363	0.089	0.86	3.272	-0.019	-0.24	MC
TCU7U7		3.227	-0.048	-0.47	3.243	-0.047	-0.62	MC
TZVE6R		3.105	-0.170	-1.64	3.170	-0.120	-1.58	MC
ULQD6V		3.275	0.000	0.00	3.320	0.030	0.39	MC
UNFME	*	3.423	0.149	1.44	3.463	0.173	2.27	MC
VNWHX		3.258	-0.016	-0.16	3.277	-0.014	-0.18	XX
VZT4MU		3.325	0.050	0.49	3.362	0.071	0.94	MC
WARJKX		3.437	0.162	1.57	3.358	0.068	0.89	MD
WFE7KA		3.205	-0.070	-0.67	3.202	-0.089	-1.16	XX
XHWQZ		3.048	-0.226	-2.19	3.135	-0.155	-2.04	TP
YEV4NK		3.222	-0.053	-0.51	3.293	0.003	0.04	MC
YWYGH		3.197	-0.078	-0.76	3.238	-0.052	-0.68	MC

Summary Statistics

	Sample X45-X46	Sample X47-X48
Grand Means	3.2747 minutes	3.2903 minutes
Stnd Dev Btwn Labs	0.1033 minutes	0.0761 minutes

Statistics based on 31 of 32 reporting participants

Rubber Interlaboratory Testing Program

Analysis 686

MDR Vulcanization-Cure Time 50% (minutes)

Samples X45-X46: EPDM compound, batch #1 & X47-X48: EPDM compound, batch #2

Comments on assigned Data Flags for Test #686

HYEFJ7 (X) - Data for all Samples are low.

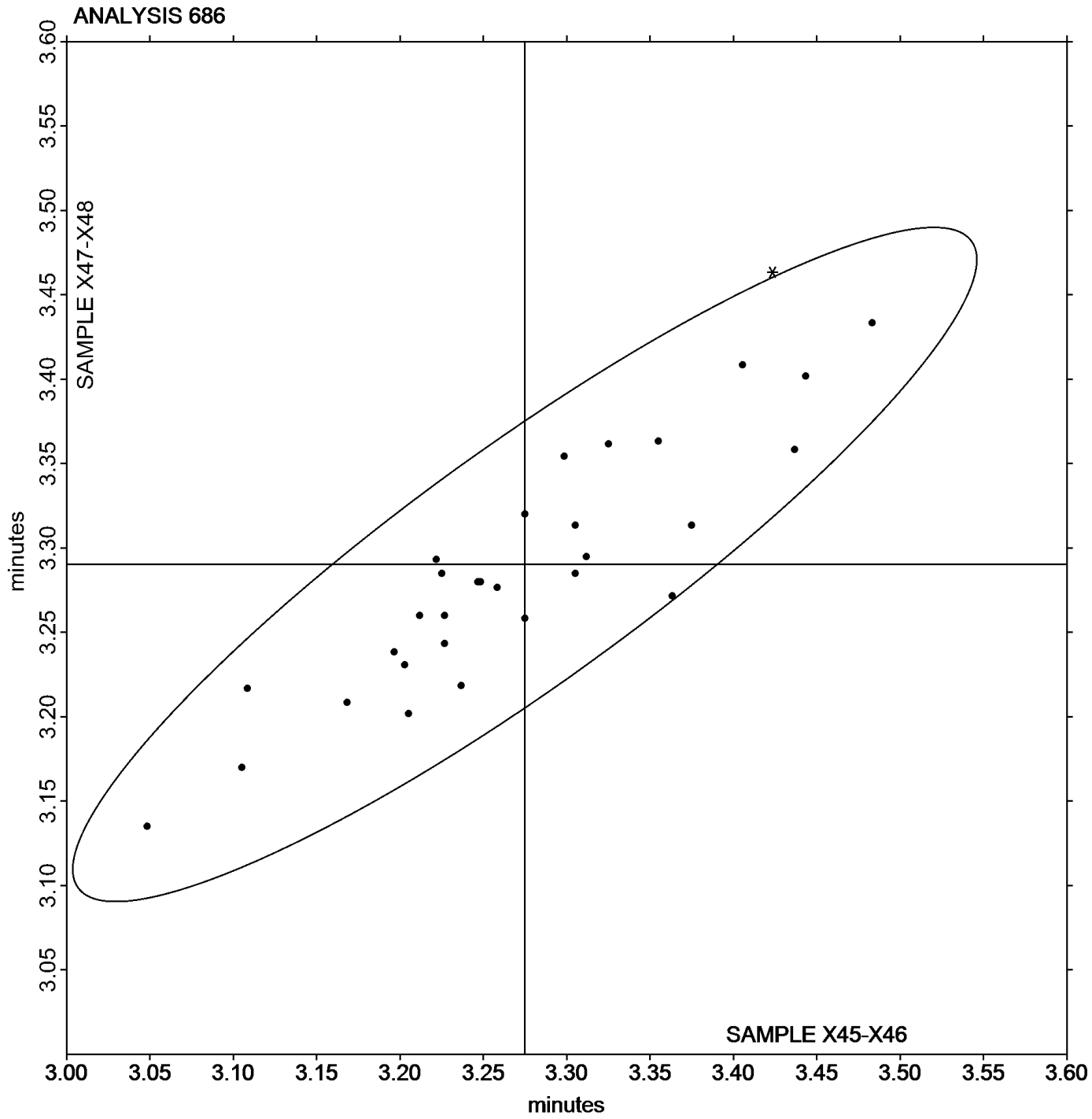
Rubber Interlaboratory Testing Program

Analysis 686

MDR Vulcanization-Cure Time 50% (minutes)

Grand Mean Sample **X45-X46** = 3.2747 minutes

Grand Mean Sample **X47-X48** = 3.2903 minutes



Report #180

Rubber Interlaboratory Testing Program

2nd Qtr 2014

Analysis 687

MDR Vulcanization-Cure Time 90% (minutes)

WebCode	Data Flag	Sample X45-X46 Lab Mean	Diff from Grand Mean	CPV	Sample X47-X48 Lab Mean	Diff from Grand Mean	CPV	Instr Code
2GBFFL		7.082	-0.003	-0.01	6.952	-0.188	-0.65	XX
2Q7CLW		6.962	-0.123	-0.37	6.985	-0.154	-0.53	MC
73KXWT		7.622	0.537	1.63	7.592	0.452	1.56	MD
86G4QP		7.355	0.270	0.82	7.473	0.334	1.15	MC
9YPZEC		6.953	-0.132	-0.40	6.956	-0.184	-0.63	MC
A8JPA8		7.323	0.239	0.72	7.340	0.201	0.69	XX
ABJRHG		7.170	0.085	0.26	7.233	0.094	0.32	MD
AJWP6E		7.277	0.192	0.58	7.195	0.056	0.19	MC
DGXL44		7.663	0.579	1.76	7.628	0.489	1.69	XX
E2GZ4A		6.877	-0.208	-0.63	6.903	-0.236	-0.81	MC
E898LJ		7.130	0.045	0.14	7.223	0.084	0.29	MC
EZJW48	*	6.788	-0.296	-0.90	7.287	0.147	0.51	TP
F7RHUQ		6.930	-0.155	-0.47	7.075	-0.064	-0.22	XX
FE23Y8		7.405	0.320	0.97	7.510	0.371	1.28	MC
HYEFJ7	*	6.048	-1.036	-3.14	6.262	-0.878	-3.03	MP
LFVN9Z		7.239	0.154	0.47	7.314	0.175	0.60	MC
LKRCP8		7.033	-0.051	-0.16	7.043	-0.096	-0.33	XX
MMMHJ3		7.039	-0.045	-0.14	7.121	-0.019	-0.06	MC
P7TWTT		7.533	0.449	1.36	7.620	0.481	1.66	MC
P88Y3M		7.291	0.206	0.63	7.221	0.081	0.28	MC
PZ9R6Y		7.040	-0.045	-0.14	6.965	-0.174	-0.60	MC
TCU7U7		6.895	-0.190	-0.58	7.032	-0.108	-0.37	MC
TZVE6R		6.840	-0.245	-0.74	6.810	-0.329	-1.14	MC
ULQD6V		7.215	0.130	0.40	7.270	0.131	0.45	MC
UNFME		7.580	0.495	1.50	7.598	0.459	1.58	MC
VNWHX		7.247	0.162	0.49	7.152	0.012	0.04	XX
VZT4MU		6.968	-0.116	-0.35	6.992	-0.148	-0.51	MC
WARJKX		7.098	0.014	0.04	6.895	-0.244	-0.84	MD
WFE7KA		6.833	-0.251	-0.76	6.825	-0.314	-1.08	XX
XHWQZ	*	6.458	-0.626	-1.90	7.007	-0.133	-0.46	TP
YEV4NK		6.988	-0.096	-0.29	7.058	-0.081	-0.28	MC
YWYGH		6.823	-0.261	-0.79	6.923	-0.216	-0.75	MC

Summary Statistics

	Sample X45-X46	Sample X47-X48
Grand Means	7.0846 minutes	7.1394 minutes
Stnd Dev Btwn Labs	0.3297 minutes	0.2898 minutes

Statistics based on 32 of 32 reporting participants

Rubber Interlaboratory Testing Program

Analysis 687

MDR Vulcanization-Cure Time 90% (minutes)

Samples X45-X46: EPDM compound, batch #1 & X47-X48: EPDM compound, batch #2

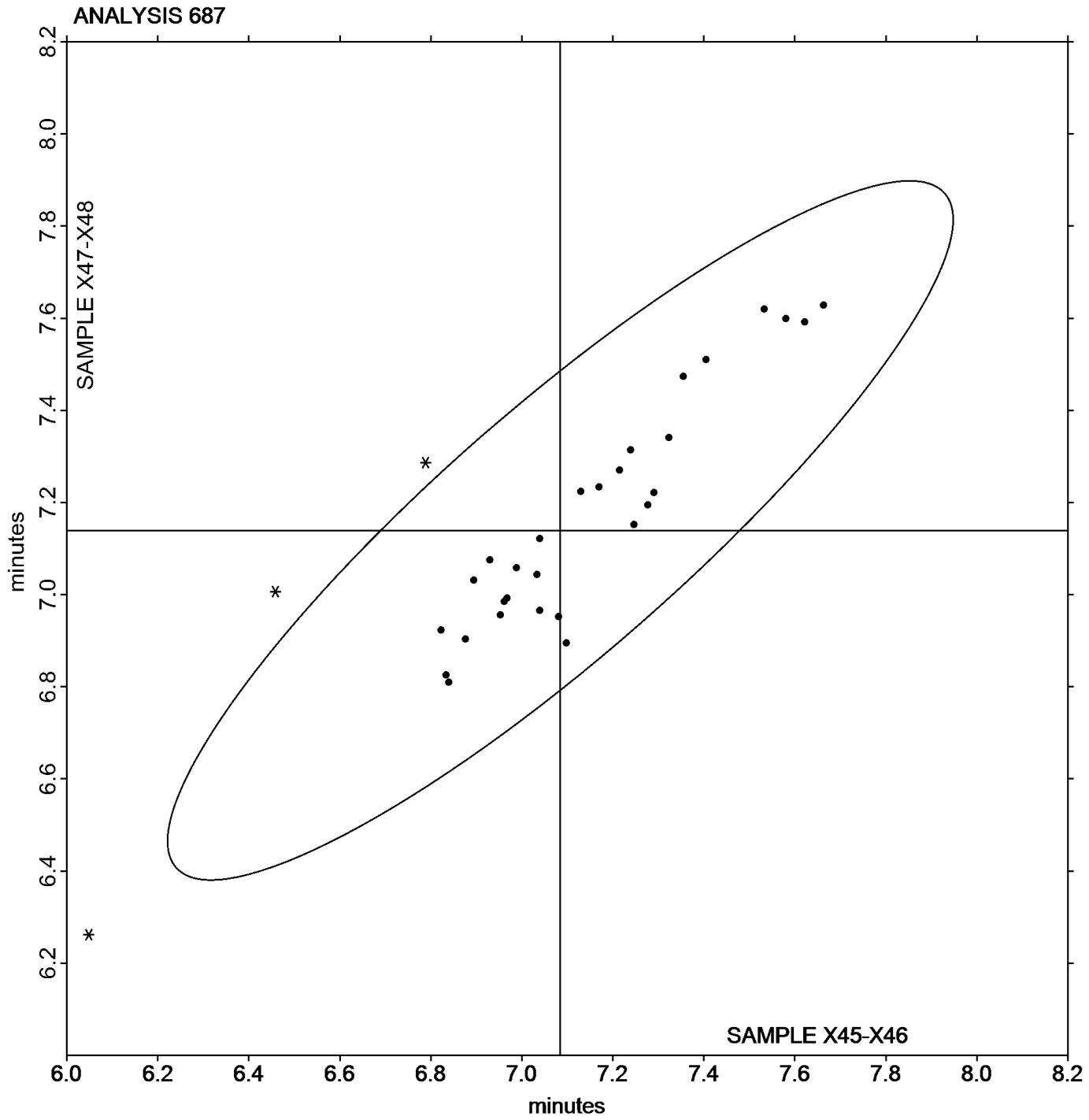
Rubber Interlaboratory Testing Program

Analysis 687

MDR Vulcanization-Cure Time 90% (minutes)

Grand Mean Sample **X45-X46** = 7.0846 minutes

Grand Mean Sample **X47-X48** = 7.1394 minutes



Rubber Interlaboratory Testing Program

Analysis 688

MDR Vulcanization: Minimum Torque (lbf.in)

WebCode	Data Flag	Sample X45-X46 Lab Mean	Sample X45-X46 Diff from Grand Mean	Sample X45-X46 CPV	Sample X47-X48 Lab Mean	Sample X47-X48 Diff from Grand Mean	Sample X47-X48 CPV	Instr Code
2GBFFL		1.542	-0.115	-0.92	1.563	-0.087	-0.73	XX
2Q7CLW		1.453	-0.203	-1.63	1.443	-0.207	-1.73	MC
73KXWT		1.484	-0.173	-1.38	1.500	-0.150	-1.26	MD
86G4QP		1.637	-0.020	-0.16	1.640	-0.011	-0.09	MC
9YPZEC		1.710	0.053	0.43	1.737	0.086	0.72	MC
A8JPA8		1.940	0.283	2.27	1.922	0.272	2.27	XX
ABJRHG		1.586	-0.070	-0.56	1.593	-0.058	-0.49	MD
AJWP6E		1.605	-0.052	-0.41	1.645	-0.006	-0.05	MC
DGXL44		1.806	0.149	1.19	1.792	0.142	1.18	XX
E2GZ4A		1.840	0.183	1.47	1.810	0.159	1.33	MC
E898LJ		1.550	-0.107	-0.85	1.548	-0.102	-0.85	MC
EZJW48		1.495	-0.162	-1.29	1.463	-0.187	-1.57	TP
F7RHUQ		1.651	-0.006	-0.05	1.611	-0.040	-0.33	XX
FE23Y8		1.632	-0.025	-0.20	1.628	-0.022	-0.19	MC
HYEFJ7		1.629	-0.028	-0.23	1.590	-0.060	-0.50	MP
LFVN9Z		1.568	-0.088	-0.71	1.588	-0.062	-0.52	MC
LKRCP8		1.860	0.203	1.63	1.867	0.216	1.81	XX
MMMHJ3		1.599	-0.058	-0.46	1.577	-0.074	-0.62	MC
P7TWTT		1.782	0.125	1.00	1.748	0.098	0.82	MC
P88Y3M		1.719	0.062	0.49	1.704	0.053	0.44	MC
PZ9R6Y		1.570	-0.087	-0.69	1.553	-0.097	-0.81	MC
TCU7U7		1.637	-0.020	-0.16	1.622	-0.029	-0.24	MC
TZVE6R		1.758	0.102	0.81	1.717	0.066	0.55	MC
ULQD6V		1.649	-0.008	-0.06	1.618	-0.032	-0.27	MC
UNFME		1.470	-0.187	-1.50	1.482	-0.169	-1.41	MC
VNWHX		1.825	0.168	1.35	1.837	0.186	1.56	XX
VZT4MU		1.783	0.127	1.01	1.773	0.123	1.03	MC
WARJKX	*	1.495	-0.161	-1.29	1.571	-0.080	-0.67	MD
WFE7KA		1.628	-0.028	-0.23	1.612	-0.039	-0.33	XX
XHWQZ		1.788	0.132	1.05	1.787	0.136	1.14	TP
YEV4NK		1.667	0.010	0.08	1.645	-0.006	-0.05	MC
YWYGH		1.660	0.003	0.03	1.632	-0.019	-0.16	MC

Summary Statistics

	Sample X45-X46	Sample X47-X48
Grand Means	1.6568 lbf.in	1.6506 lbf.in
Stnd Dev Btwn Labs	0.1249 lbf.in	0.1196 lbf.in

Statistics based on 32 of 32 reporting participants

Rubber Interlaboratory Testing Program

Analysis 688

MDR Vulcanization: Minimum Torque (lbf.in)

Summary Statistics in SI Units

Grand Means				
	1.8719	dN.m	1.8649	dN.m
Stnd Dev Btwn Labs				
	0.1412	dN.m	0.1352	dN.m

Statistics based on 32 of 32 reporting participants

Samples X45-X46: EPDM compound, batch #1 & X47-X48: EPDM compound, batch #2

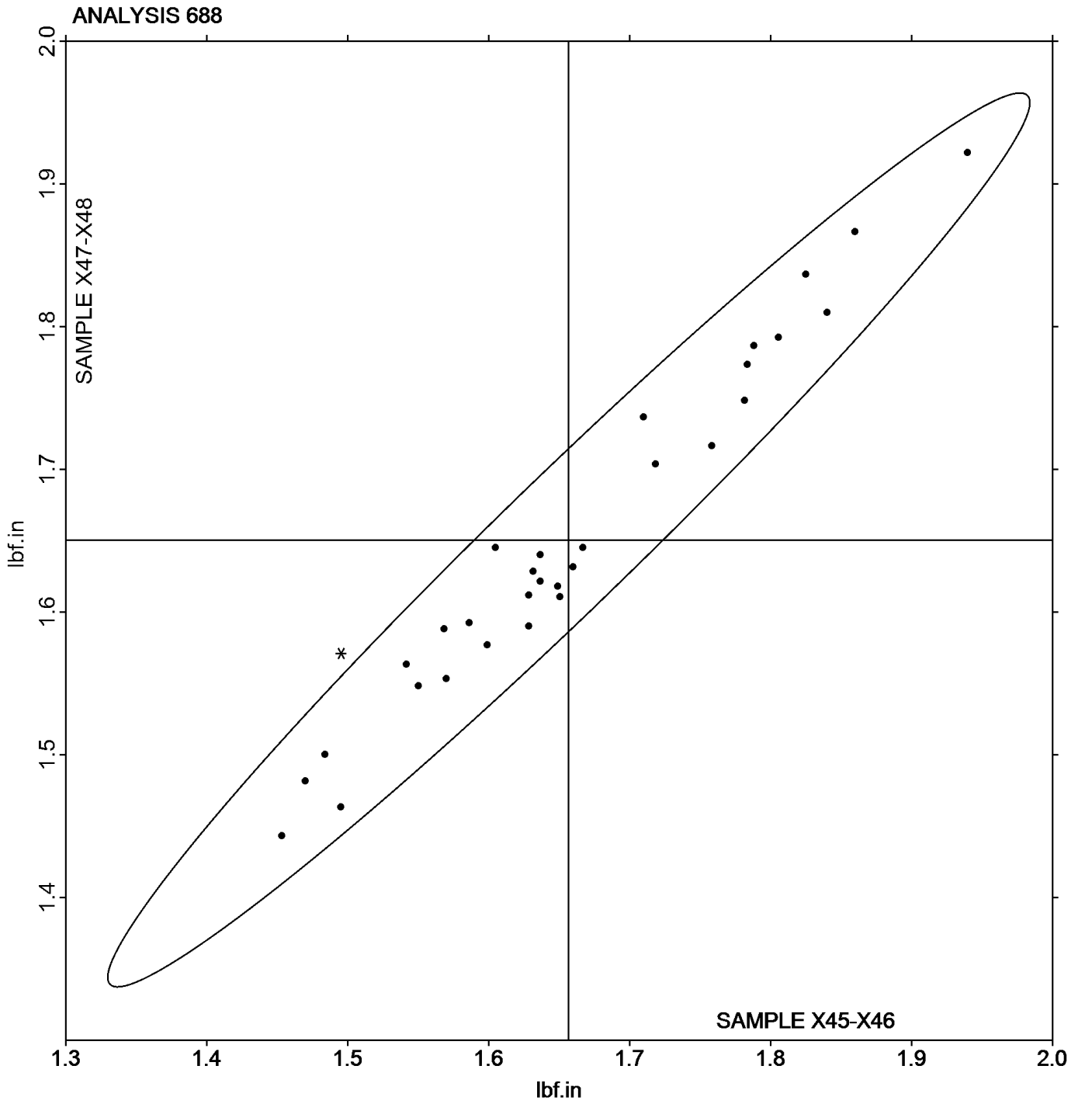
Rubber Interlaboratory Testing Program

Analysis 688

MDR Vulcanization: Minimum Torque (lbf.in)

Grand Mean Sample **X45-X46** = 1.6568 lbf.in

Grand Mean Sample **X47-X48** = 1.6506 lbf.in



Rubber Interlaboratory Testing Program

Analysis 689

MDR Vulcanization: Maximum Torque (lbf.in)

		Sample X45-X46			Sample X47-X48			
WebCode	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	Instr Code
2GBFFL		15.97	-0.08	-0.13	15.91	-0.13	-0.19	XX
2Q7CLW		14.53	-1.53	-2.38	14.61	-1.42	-2.14	MC
73KXWT		15.55	-0.50	-0.78	15.53	-0.50	-0.76	MD
86G4QP		16.59	0.53	0.83	16.68	0.65	0.97	MC
9YPZEC		16.18	0.12	0.19	16.03	-0.01	-0.01	MC
A8JPA8		17.32	1.27	1.97	17.28	1.25	1.88	XX
ABJRHG		17.03	0.98	1.52	17.02	0.99	1.49	MD
AJWP6E		16.22	0.17	0.26	16.26	0.23	0.34	MC
DGXL44		16.14	0.08	0.13	16.05	0.02	0.03	XX
E2GZ4A		15.40	-0.66	-1.02	15.30	-0.73	-1.10	MC
E898LJ		15.79	-0.27	-0.42	15.78	-0.26	-0.39	MC
EZJW48	*	14.95	-1.11	-1.72	15.28	-0.76	-1.14	TP
F7RHUQ		14.76	-1.29	-2.01	14.87	-1.17	-1.76	XX
FE23Y8		17.19	1.13	1.76	17.40	1.37	2.06	MC
HYEFJ7		15.96	-0.09	-0.14	16.03	0.00	0.00	MP
LFVN9Z		16.24	0.19	0.29	16.23	0.20	0.30	MC
LKRCP8		16.08	0.02	0.03	16.12	0.09	0.13	XX
MMMHJ3		15.99	-0.07	-0.11	15.85	-0.18	-0.28	MC
P7TWTT		16.79	0.73	1.13	16.78	0.75	1.13	MC
P88Y3M		16.72	0.66	1.03	16.60	0.57	0.86	MC
PZ9R6Y		16.46	0.41	0.63	16.13	0.09	0.14	MC
TCU7U7		16.30	0.25	0.38	16.27	0.24	0.36	MC
TZVE6R		15.96	-0.09	-0.14	15.86	-0.17	-0.26	MC
ULQD6V		16.11	0.05	0.08	16.03	0.00	0.00	MC
UNFME		16.19	0.14	0.21	16.15	0.12	0.18	MC
VNWHX		15.77	-0.29	-0.44	15.56	-0.47	-0.71	XX
VZT4MU		15.45	-0.61	-0.94	15.35	-0.69	-1.03	MC
WARJKX		16.09	0.03	0.05	15.91	-0.13	-0.19	MD
WFE7KA		15.39	-0.66	-1.03	15.08	-0.95	-1.44	XX
XHWQZ		16.27	0.21	0.33	16.53	0.50	0.75	TP
YEV4NK		15.75	-0.31	-0.48	15.62	-0.42	-0.63	MC
YWYGH		16.64	0.58	0.91	16.95	0.92	1.39	MC

Summary Statistics

	Sample X45-X46	Sample X47-X48
Grand Means	16.056 lbf.in	16.032 lbf.in
Stnd Dev Btwn Labs	0.643 lbf.in	0.664 lbf.in

Statistics based on 32 of 32 reporting participants

Rubber Interlaboratory Testing Program

Analysis 689

MDR Vulcanization: Maximum Torque (lbf.in)

Summary Statistics in SI Units

Grand Means				
	18.140	dN.m	18.113	dN.m
Stnd Dev Btwn Labs				
	0.726	dN.m	0.750	dN.m

Statistics based on 32 of 32 reporting participants

Samples X45-X46: EPDM compound, batch #1 & X47-X48: EPDM compound, batch #2

Rubber Interlaboratory Testing Program

Analysis 689

MDR Vulcanization: Maximum Torque (lbf.in)

Grand Mean Sample **X45-X46** = 16.056 lbf.in

Grand Mean Sample **X47-X48** = 16.032 lbf.in