



## Rubber Interlaboratory Testing Program

### Summary Report #183- 1st Qtr 2015

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## ABOUT THE PROGRAM

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

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

## ABOUT CTS

Founded in 1971, CTS is a privately-owned company that specializes in interlaboratory tests for a wide variety of 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:

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<b>WebCode</b>	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.
<b>Lab Mean</b>	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.
<b>Grand Mean</b>	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.
<b>Difference from Grand Mean</b>	The difference of the LAB MEAN from the GRAND MEAN.
<b>Between-Lab Standard Deviation</b>	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).
<b>Comparative Performance Value</b>	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.
<b>Inst Code</b>	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).
<b>Data Flag</b>	DATA FLAGS are assigned based on the simultaneous analysis of both samples tested. Refer to the following chart for an explanation of each symbol:

<u>DATA FLAG</u>	<u>STATISTICALLY INCLUDED/EXCLUDED</u>	<u>ACTION REQUIRED</u>
*	INCLUDED	<b>CAUTION</b> - 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	<b>STOP</b> - 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	<b>PROCEED</b> - 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.

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### 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.**

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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)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		3,480.0	238.5	1.64	3,320.0	86.6	0.60	ZZ
26EFHT	X	2,884.5	-357.0	-2.45	2,722.5	-510.9	-3.54	ZZ
27XZTQ		3,082.3	-159.2	-1.09	3,074.0	-159.4	-1.10	ZZ
2QWQKB		3,351.0	109.5	0.75	3,357.5	124.1	0.86	ZZ
2Y9MPH		3,369.3	127.8	0.88	3,428.0	194.6	1.35	ZZ
32VLJ7		3,196.0	-45.5	-0.31	3,209.5	-23.9	-0.17	ZZ
376WDL		3,159.0	-82.5	-0.57	3,132.5	-100.9	-0.70	ZZ
3KAZYF	*	3,611.5	370.0	2.54	3,480.9	247.5	1.71	ZZ
3UXNXP		3,229.0	-12.5	-0.09	3,390.0	156.6	1.08	ZZ
3WZRJK		3,047.3	-194.2	-1.33	3,025.5	-207.9	-1.44	ZZ
4CPE63		3,348.4	106.9	0.73	3,301.5	68.0	0.47	ZZ
4HHGBN		3,250.5	9.0	0.06	3,317.0	83.6	0.58	ZZ
4U7KED		3,110.0	-131.5	-0.90	3,280.0	46.6	0.32	ZZ
6KY7AQ		3,276.0	34.5	0.24	3,267.0	33.5	0.23	ZZ
6QR8DQ		3,537.0	295.5	2.03	3,345.0	111.6	0.77	ZZ
762D2V		3,201.5	-40.0	-0.27	3,208.0	-25.4	-0.18	ZZ
86X9ZQ		3,343.1	101.7	0.70	3,359.1	125.7	0.87	ZZ
8BKVWH		3,002.5	-239.0	-1.64	3,120.0	-113.4	-0.78	ZZ
8EMWVU	X	2,677.5	-564.0	-3.87	2,690.0	-543.4	-3.76	ZZ
8H39VG		3,380.0	138.5	0.95	3,447.0	213.6	1.48	ZZ
8MXZ7Y		3,413.6	172.1	1.18	3,453.0	219.5	1.52	ZZ
8QGCKV		3,125.6	-115.9	-0.79	2,951.5	-281.9	-1.95	ZZ
8VAGBD		3,093.5	-148.0	-1.01	3,109.5	-123.9	-0.86	ZZ
9MBCYN		3,430.2	188.7	1.29	3,328.6	95.2	0.66	ZZ
9N7U2P		3,236.9	-4.6	-0.03	3,197.1	-36.3	-0.25	ZZ
A8W7L4		3,156.0	-85.5	-0.59	3,022.0	-211.4	-1.46	ZZ
ATG6RY		3,205.8	-35.7	-0.24	3,117.3	-116.1	-0.80	ZZ
AXA8VX		3,375.9	134.5	0.92	3,324.5	91.1	0.63	ZZ
BBT9QV		3,372.2	130.7	0.90	3,227.1	-6.3	-0.04	ZZ
BFAJ2E		3,284.0	42.5	0.29	3,183.2	-50.2	-0.35	ZZ
BXRDU		3,240.0	-1.5	-0.01	3,186.0	-47.4	-0.33	ZZ
CF6GRZ		3,028.2	-213.3	-1.46	3,207.7	-25.8	-0.18	ZZ
CLT2W2		3,464.5	223.0	1.53	3,409.5	176.1	1.22	ZZ
CPQMN4		2,990.0	-251.5	-1.72	3,004.0	-229.4	-1.59	ZZ
CVFZN7		3,202.5	-39.0	-0.27	3,260.0	26.6	0.18	ZZ
CYTZKX		3,174.3	-67.2	-0.46	3,317.6	84.2	0.58	ZZ
D3AR96		3,275.0	33.5	0.23	3,200.0	-33.4	-0.23	ZZ
DDAHQ8		3,240.6	-0.9	-0.01	3,470.0	236.5	1.64	ZZ
DH4CRE		3,472.0	230.5	1.58	3,357.5	124.1	0.86	ZZ

## Rubber Interlaboratory Testing Program

## Analysis 605

## Tensile Strength (psi)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
DWMWA1		3,227.5	-14.0	-0.10	3,266.0	32.6	0.23	ZZ
E34UDZ		3,089.3	-152.1	-1.04	2,934.9	-298.6	-2.07	ZZ
EDQT47		3,373.0	131.5	0.90	3,251.5	18.1	0.13	ZZ
EFUL3B		3,145.5	-96.0	-0.66	3,228.5	-4.9	-0.03	ZZ
EN8FD7		3,146.7	-94.8	-0.65	3,360.7	127.3	0.88	ZZ
EXYUGC		3,299.0	57.5	0.39	3,304.0	70.6	0.49	ZZ
FG4T3H		3,378.0	136.5	0.94	3,493.3	259.8	1.80	ZZ
FHC7HY		3,015.0	-226.5	-1.55	2,965.0	-268.4	-1.86	ZZ
FHGKTE		3,212.6	-28.8	-0.20	3,169.1	-64.3	-0.45	ZZ
G2P8UC		3,103.5	-138.0	-0.95	2,957.8	-275.7	-1.91	ZZ
G8DUMW		3,130.8	-110.7	-0.76	3,023.5	-209.9	-1.45	ZZ
GDFYEF		3,265.6	24.1	0.17	3,286.6	53.2	0.37	ZZ
GTTA6N		3,228.0	-13.5	-0.09	3,115.0	-118.4	-0.82	ZZ
GUPPHL		3,356.9	115.5	0.79	3,265.6	32.1	0.22	ZZ
GVJDXV		3,170.5	-71.0	-0.49	3,346.0	112.6	0.78	ZZ
GXLEW8		3,251.8	10.3	0.07	3,410.0	176.6	1.22	ZZ
H3YETY		3,289.5	48.0	0.33	3,402.0	168.6	1.17	ZZ
HGVVFC		3,337.0	95.5	0.66	3,346.0	112.6	0.78	ZZ
HTBKJM		3,405.5	164.0	1.12	3,307.5	74.1	0.51	ZZ
JACMWL		3,361.0	119.5	0.82	3,501.5	268.1	1.86	ZZ
JGD2HM		3,557.5	316.0	2.17	3,388.5	155.1	1.07	ZZ
JP86LJ		3,275.4	33.9	0.23	3,164.1	-69.3	-0.48	ZZ
JT8H8N		3,245.2	3.8	0.03	3,328.6	95.2	0.66	ZZ
KBGWY3		3,357.5	116.0	0.80	3,254.5	21.1	0.15	ZZ
L3JPVM		3,329.0	87.5	0.60	3,250.5	17.1	0.12	ZZ
L42DHN		3,053.1	-188.4	-1.29	3,089.3	-144.1	-1.00	ZZ
LCBZ94		3,325.0	83.5	0.57	3,252.5	19.1	0.13	ZZ
LN87P		3,145.0	-96.5	-0.66	3,234.5	1.1	0.01	ZZ
MDJCNK		3,145.5	-96.0	-0.66	3,155.5	-77.9	-0.54	ZZ
MDJEDN		2,983.0	-258.5	-1.77	3,158.5	-74.9	-0.52	ZZ
MNGAD6		3,210.0	-31.5	-0.22	3,174.0	-59.4	-0.41	ZZ
NAGVQG		3,223.5	-18.0	-0.12	3,251.0	17.6	0.12	ZZ
NJ6QPW		3,318.7	77.2	0.53	3,294.7	61.2	0.42	ZZ
NVVFP3		3,330.8	89.3	0.61	3,374.3	140.9	0.97	ZZ
NXKRLM		3,152.5	-89.0	-0.61	3,270.5	37.1	0.26	ZZ
PKTHE8		3,343.1	101.7	0.70	3,408.4	175.0	1.21	ZZ
QHJRP4		3,162.2	-79.3	-0.54	3,303.1	69.6	0.48	ZZ
QHKRMH		3,424.8	183.3	1.26	3,343.2	109.8	0.76	ZZ
R9CCFB		3,038.0	-203.5	-1.40	2,905.0	-328.4	-2.27	ZZ

Analysis 605  
Tensile Strength (psi)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
RAHYRU	*	2,807.5	-434.0	-2.98	2,879.0	-354.4	-2.45	ZZ
RCPCD2		3,309.4	67.9	0.47	3,374.2	140.8	0.97	ZZ
RLDB2L		3,263.4	21.9	0.15	3,227.1	-6.3	-0.04	ZZ
RYNJ4D		3,132.8	-108.6	-0.74	2,995.1	-238.4	-1.65	ZZ
T694MK		3,072.7	-168.8	-1.16	3,142.3	-91.2	-0.63	ZZ
T74LNL		2,970.4	-271.1	-1.86	3,003.0	-230.4	-1.59	ZZ
T74MQ7		3,307.4	65.9	0.45	3,044.9	-188.5	-1.30	ZZ
TA244Z		3,375.0	133.5	0.92	3,360.0	126.6	0.88	ZZ
THTJR6		3,093.5	-148.0	-1.01	3,046.5	-186.9	-1.29	ZZ
TXNZH3	X	2,602.0	-639.5	-4.39	2,641.9	-591.5	-4.09	ZZ
U4NKFR		3,312.5	71.0	0.49	3,290.5	57.1	0.39	ZZ
U88YLD		3,421.0	179.5	1.23	3,333.5	100.1	0.69	ZZ
UGVUKT		3,082.1	-159.4	-1.09	3,118.3	-115.1	-0.80	ZZ
V7TRZW		2,930.8	-310.6	-2.13	3,037.0	-196.4	-1.36	ZZ
VP94P2	X	3,046.0	-195.5	-1.34	2,498.0	-735.4	-5.09	ZZ
WG8BTR		3,152.4	-89.0	-0.61	3,122.0	-111.5	-0.77	ZZ
WXWGZF		3,275.0	33.5	0.23	3,300.0	66.6	0.46	ZZ
XCQZG9	*	3,409.0	167.5	1.15	3,110.8	-122.6	-0.85	ZZ
XGNKLR		3,333.0	91.5	0.63	3,394.5	161.1	1.11	ZZ
Y73ZE2		3,249.6	8.1	0.06	3,175.5	-57.9	-0.40	ZZ
YKFB3N		3,407.7	166.2	1.14	3,440.3	206.9	1.43	ZZ
YR276D		3,215.0	-26.5	-0.18	3,138.5	-94.9	-0.66	ZZ
YTWMHA		3,341.0	99.5	0.68	3,211.0	-22.4	-0.16	ZZ
ZEBRJP		3,292.0	50.5	0.35	3,287.5	54.1	0.37	ZZ
ZPQLUH		3,040.0	-201.5	-1.38	3,150.0	-83.4	-0.58	ZZ
ZULD6Z		3,191.5	-50.0	-0.34	3,237.5	4.1	0.03	ZZ

Summary Statistics	
Grand Means	3,241.46 psi      3,233.43 psi
Std Dev Btwn Labs	145.83 psi      144.51 psi
Statistics based on 100 of 104 reporting participants	

## Analysis 605

## Tensile Strength (psi)

Summary Statistics in SI Units			
Grand Means	22.349 MPa	22.29 MPa	
Std Dev Btwn Labs	1.005 MPa	1.00 MPa	
Statistics based on 100 of 104 reporting participants			

Samples A51-A52: Polyisoprene compound, batch #1 & A53-A54: Polyisoprene compound, batch #2

**Comments on assigned Data Flags for Test #605**

26EFHT (X) - Inconsistency in testing between Sample groups. Data for Sample group A53-A54 are low.

8EMWVU (X) - Data for all Samples are low. Possible systematic error.

TXNZH3 (X) - Data for all Samples are low. Possible systematic error.

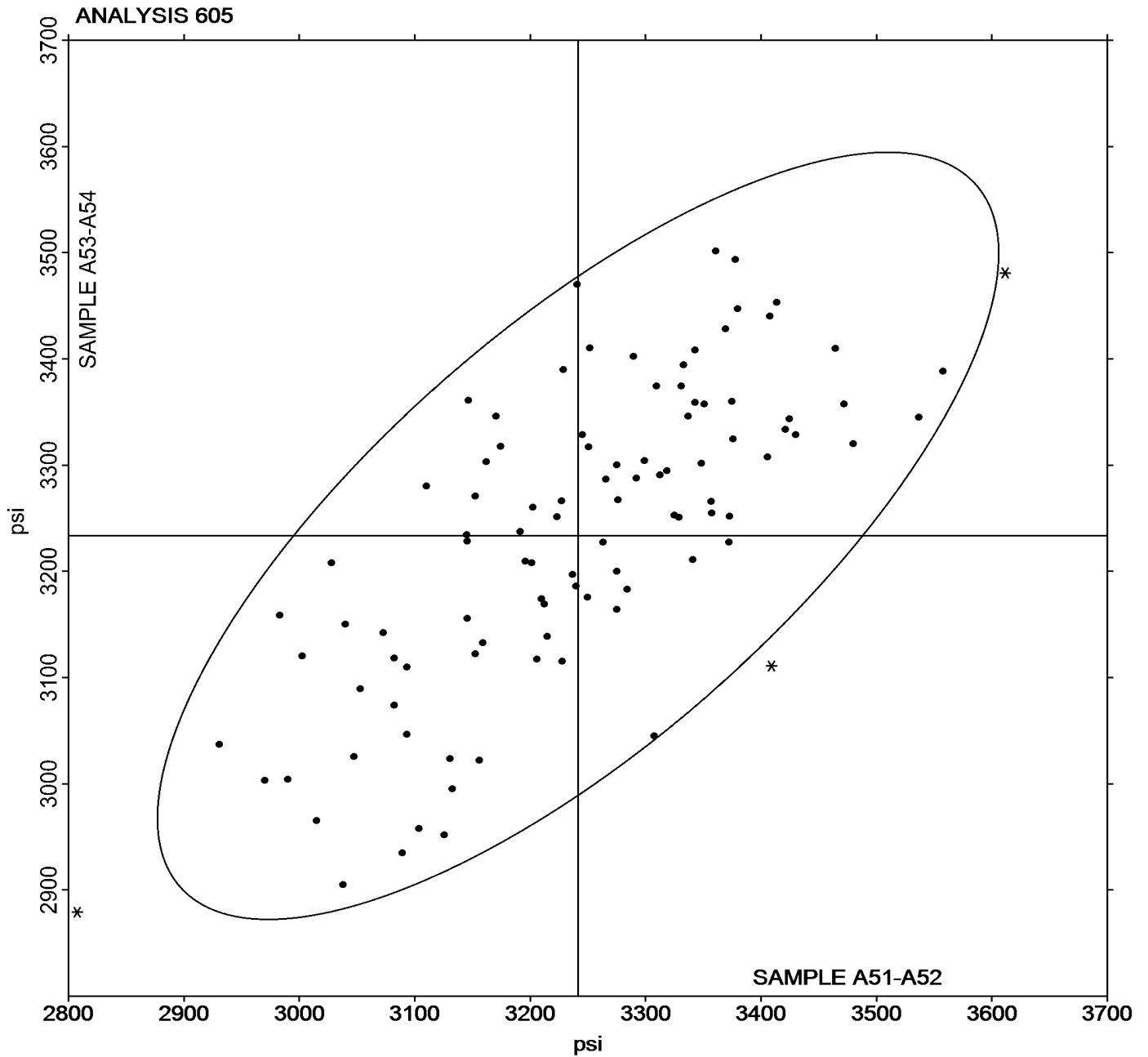
VP94P2 (X) - Inconsistency in testing between Sample groups. Data for Sample group A53-A54 are low.  
Inconsistency in testing within Sample group A53-A54.



Analysis 605  
Tensile Strength (psi)

Grand Mean Sample A51 = 3,241.46 psi

Grand Mean Sample A52 = 3,233.43 psi



## Rubber Interlaboratory Testing Program

## Analysis 606

## Ultimate Elongation (percent)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		655.5	23.8	0.70	660.5	28.1	0.81	ZZ
26EFHT	X	551.5	-80.2	-2.35	511.0	-121.4	-3.51	ZZ
27XZTQ	X	493.5	-138.2	-4.05	496.5	-135.9	-3.93	ZZ
2QWQKB	*	735.5	103.8	3.04	734.0	101.6	2.94	ZZ
2Y9MPH		650.0	18.3	0.53	650.0	17.6	0.51	ZZ
32VLJ7		616.5	-15.2	-0.45	617.5	-14.9	-0.43	ZZ
376WDL		589.5	-42.2	-1.24	598.0	-34.4	-0.99	ZZ
3KAZYF		598.4	-33.4	-0.98	592.9	-39.5	-1.14	ZZ
3UXNXP		651.0	19.3	0.56	638.0	5.6	0.16	ZZ
3WZRJK		631.0	-0.7	-0.02	634.0	1.6	0.05	ZZ
4CPE63		606.5	-25.2	-0.74	618.5	-13.9	-0.40	ZZ
4HHGBN		658.0	26.3	0.77	648.0	15.6	0.45	ZZ
4U7KED		620.5	-11.2	-0.33	627.5	-4.9	-0.14	ZZ
6KY7AQ		643.4	11.6	0.34	659.8	27.4	0.79	ZZ
6QR8DQ	*	665.0	33.3	0.97	701.0	68.6	1.99	ZZ
762D2V		644.5	12.8	0.37	646.0	13.6	0.39	ZZ
86X9ZQ		640.0	8.3	0.24	637.0	4.6	0.13	ZZ
8BKVWH	X	784.0	152.3	4.46	806.0	173.6	5.03	ZZ
8EMWVU		564.0	-67.7	-1.98	563.0	-69.4	-2.01	ZZ
8H39VG		635.5	3.8	0.11	649.0	16.6	0.48	ZZ
8MXZ7Y		641.4	9.6	0.28	636.5	4.1	0.12	ZZ
8VAGBD		619.0	-12.7	-0.37	608.5	-23.9	-0.69	ZZ
9MBCYN		640.0	8.2	0.24	650.9	18.5	0.54	ZZ
9N7U2P	*	543.0	-88.7	-2.60	554.0	-78.4	-2.27	ZZ
A8W7L4	X	723.5	91.8	2.69	791.5	159.1	4.61	ZZ
ATG6RY		614.5	-17.2	-0.50	623.0	-9.4	-0.27	ZZ
AXA8VX		650.1	18.3	0.54	641.9	9.5	0.28	ZZ
BBT9QV		644.0	12.3	0.36	646.5	14.1	0.41	ZZ
BFAJ2E		607.9	-23.9	-0.70	607.0	-25.4	-0.73	ZZ
BXRDUK		582.0	-49.7	-1.46	593.0	-39.4	-1.14	ZZ
CF6GRZ		646.6	14.9	0.44	651.8	19.5	0.56	ZZ
CLT2W2		629.5	-2.2	-0.07	626.5	-5.9	-0.17	ZZ
CPQMN4		594.0	-37.7	-1.10	594.5	-37.9	-1.10	ZZ
CVFZN7	*	723.8	92.0	2.69	699.0	66.6	1.93	ZZ
CYTZXK		624.0	-7.7	-0.23	633.1	0.7	0.02	ZZ
D3AR96		696.0	64.3	1.88	700.5	68.1	1.97	ZZ
DDAHQ8		662.9	31.2	0.91	653.6	21.2	0.61	ZZ
DH4CRE		678.0	46.3	1.35	674.0	41.6	1.21	ZZ
DWMWAI		622.5	-9.2	-0.27	645.5	13.1	0.38	ZZ

## Rubber Interlaboratory Testing Program

## Analysis 606

## Ultimate Elongation (percent)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
E34UDZ		590.5	-41.2	-1.21	585.5	-46.9	-1.36	ZZ
EDQT47		626.0	-5.7	-0.17	643.0	10.6	0.31	ZZ
EFUL3B		640.0	8.3	0.24	625.0	-7.4	-0.21	ZZ
EN8FD7		665.0	33.3	0.98	667.1	34.7	1.00	ZZ
EXYUGC		668.0	36.3	1.06	677.5	45.1	1.31	ZZ
FG4T3H		646.0	14.3	0.42	636.0	3.6	0.11	ZZ
FHC7HY		620.0	-11.7	-0.34	630.0	-2.4	-0.07	ZZ
FHGKTE		614.0	-17.7	-0.52	618.0	-14.4	-0.42	ZZ
G2P8UC	*	663.0	31.3	0.92	699.3	66.9	1.94	ZZ
G8DUMW		607.5	-24.2	-0.71	626.3	-6.1	-0.18	ZZ
GDFYEF		613.0	-18.7	-0.55	622.0	-10.4	-0.30	ZZ
GTTA6N		656.5	24.8	0.73	680.0	47.6	1.38	ZZ
GUPPHL		643.5	11.8	0.34	637.5	5.1	0.15	ZZ
GVJDXV		660.5	28.8	0.84	658.5	26.1	0.76	ZZ
GXLEW8		616.0	-15.7	-0.46	591.5	-40.9	-1.18	ZZ
H3YETY		620.0	-11.7	-0.34	635.5	3.1	0.09	ZZ
HGVVFC		590.5	-41.2	-1.21	595.0	-37.4	-1.08	ZZ
HTBKJM		650.5	18.8	0.55	655.5	23.1	0.67	ZZ
JACMWL		654.5	22.8	0.67	642.5	10.1	0.29	ZZ
JGD2HM		592.5	-39.2	-1.15	568.5	-63.9	-1.85	ZZ
JP86LJ		639.7	8.0	0.23	635.0	2.7	0.08	ZZ
JT8H8N		621.0	-10.7	-0.31	621.5	-10.9	-0.31	ZZ
KBGWY3		631.0	-0.7	-0.02	654.0	21.6	0.63	ZZ
L3JPVM		592.5	-39.2	-1.15	592.5	-39.9	-1.15	ZZ
L42DHN		649.5	17.8	0.52	633.5	1.1	0.03	ZZ
LCBZ94		642.0	10.3	0.30	622.5	-9.9	-0.29	ZZ
LN87P		636.0	4.3	0.13	627.0	-5.4	-0.16	ZZ
MDJCNK		632.0	0.3	0.01	619.5	-12.9	-0.37	ZZ
MDJEDN		648.5	16.8	0.49	649.0	16.6	0.48	ZZ
MNGAD6	*	544.0	-87.7	-2.57	555.0	-77.4	-2.24	ZZ
NAGVQG		621.6	-10.1	-0.30	616.6	-15.8	-0.46	ZZ
NJ6QPW		639.4	7.7	0.23	638.6	6.2	0.18	ZZ
NVVFP3		662.9	31.2	0.91	656.2	23.8	0.69	ZZ
NXKRLM		623.0	-8.7	-0.26	619.0	-13.4	-0.39	ZZ
PKTHE8		655.5	23.8	0.70	635.5	3.1	0.09	ZZ
QHJRP4		655.5	23.7	0.69	639.0	6.6	0.19	ZZ
QHKRMH		630.1	-1.7	-0.05	622.3	-10.0	-0.29	ZZ
R9CCFB		615.0	-16.7	-0.49	591.5	-40.9	-1.18	ZZ
RAHYRU		595.0	-36.7	-1.08	595.0	-37.4	-1.08	ZZ

Rubber Interlaboratory Testing Program

Analysis 606

Ultimate Elongation (percent)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
RCPCD2		609.3	-22.5	-0.66	621.9	-10.5	-0.30	ZZ
RLDB2L		613.5	-18.2	-0.53	583.0	-49.4	-1.43	ZZ
RYNJ4D		645.4	13.6	0.40	639.3	6.9	0.20	ZZ
T694MK		621.0	-10.7	-0.31	638.5	6.1	0.18	ZZ
T74LNL		632.4	0.7	0.02	639.9	7.5	0.22	ZZ
TA244Z		658.0	26.3	0.77	628.0	-4.4	-0.13	ZZ
THTJR6		571.5	-60.2	-1.76	561.0	-71.4	-2.07	ZZ
TXNZH3	*	548.0	-83.7	-2.45	576.0	-56.4	-1.63	ZZ
U4NKFR		649.0	17.3	0.51	636.0	3.6	0.11	ZZ
U88YLD		656.0	24.3	0.71	673.0	40.6	1.18	ZZ
UGVUKT		569.5	-62.2	-1.82	572.5	-59.9	-1.73	ZZ
V7TRZW	*	680.0	48.2	1.41	640.1	7.8	0.22	ZZ
VP94P2	X	604.3	-27.4	-0.80	554.1	-78.2	-2.26	ZZ
WG8BTR		647.0	15.3	0.45	655.5	23.1	0.67	ZZ
WXWGZK		570.0	-61.7	-1.81	583.5	-48.9	-1.41	ZZ
XCQZG9		617.0	-14.7	-0.43	621.5	-10.9	-0.31	ZZ
XGNKLR	*	702.5	70.8	2.07	719.0	86.6	2.51	ZZ
Y73ZE2		631.0	-0.7	-0.02	639.5	7.1	0.21	ZZ
YKFB3N		611.5	-20.2	-0.59	617.0	-15.4	-0.44	ZZ
YR276D		653.0	21.3	0.62	658.0	25.6	0.74	ZZ
YTWMHA		668.5	36.8	1.08	673.0	40.6	1.18	ZZ
ZEBRJP		671.0	39.3	1.15	675.0	42.6	1.23	ZZ
ZPQLUH		617.5	-14.2	-0.42	611.5	-20.9	-0.60	ZZ
ZULD6Z		639.5	7.8	0.23	644.5	12.1	0.35	ZZ

Summary Statistics			
Grand Means	631.73 percent	632.36 percent	
Std Dev Btwn Labs	34.16 percent	34.55 percent	
Statistics based on 97 of 102 reporting participants			

Samples A51-A52: Polyisoprene compound, batch #1 & A53-A54: Polyisoprene compound, batch #2

## Analysis 606

Ultimate Elongation (percent)

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**Comments on assigned Data Flags for Test #606**

26EFHT (X) - Inconsistency in testing between Sample groups. Data for Sample group A53-A54 are low.

27XZTQ (X) - Data for all Samples are low. Possible systematic error.

8BKVWH (X) - Data for all Samples are high. Possible systematic error.

A8W7L4 (X) - Inconsistency in testing between Sample groups. Data for Sample group A53-A54 are high.

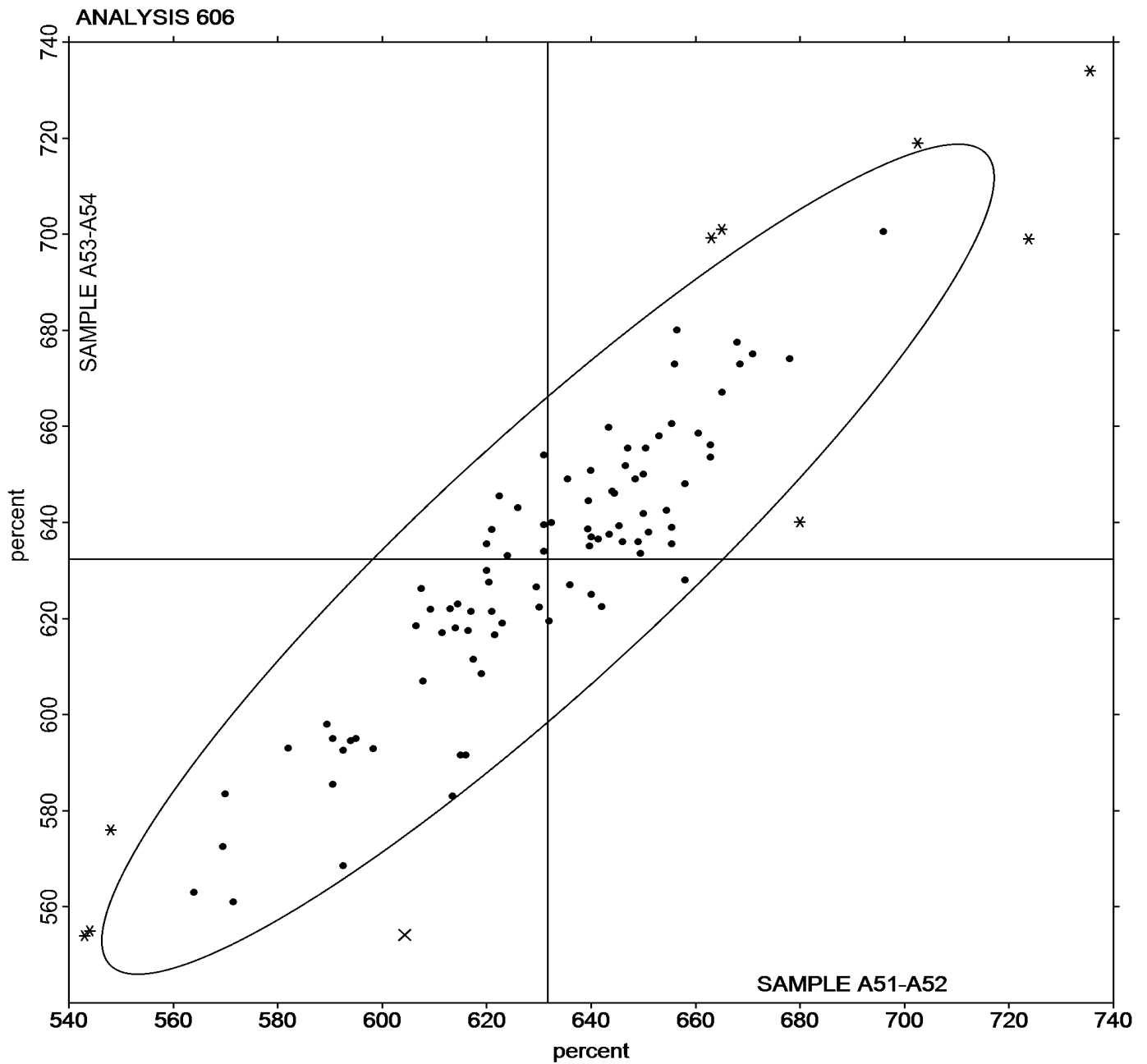
VP94P2 (X) - Inconsistency in testing between Sample groups. Inconsistent in testing within Sample group A53-A54.

Analysis 606

Ultimate Elongation (percent)

Grand Mean Sample A51 = 631.73 percent

Grand Mean Sample A52 = 632.36 percent



## Rubber Interlaboratory Testing Program

## Analysis 607

## Stress at 300% Elongation (psi)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		942.0	10.0	0.12	877.5	-46.2	-0.51	ZZ
26EFHT		1,019.0	87.0	1.02	1,112.5	188.8	2.09	ZZ
27XZTQ		1,083.8	151.8	1.79	1,093.5	169.8	1.88	ZZ
2QWQKB		728.5	-203.5	-2.39	751.5	-172.2	-1.91	ZZ
32VLJ7		918.5	-13.5	-0.16	909.5	-14.2	-0.16	ZZ
376WDL		991.5	59.5	0.70	970.0	46.3	0.51	ZZ
3KAZYF	X	1,450.4	518.4	6.10	1,450.4	526.7	5.83	ZZ
3UXNXP		853.0	-79.0	-0.93	984.0	60.3	0.67	ZZ
3WZRJK		891.3	-40.7	-0.48	877.5	-46.2	-0.51	ZZ
4CPE63		1,016.3	84.3	0.99	936.9	13.2	0.15	ZZ
4HHGBN		900.0	-32.0	-0.38	909.0	-14.7	-0.16	ZZ
4U7KED		912.0	-20.0	-0.23	944.0	20.3	0.22	ZZ
6KY7AQ		950.1	18.2	0.21	834.4	-89.3	-0.99	ZZ
6QR8DQ		934.5	2.5	0.03	776.0	-147.7	-1.64	ZZ
762D2V		902.5	-29.5	-0.35	887.0	-36.7	-0.41	ZZ
86X9ZQ		961.6	29.7	0.35	984.8	61.1	0.68	ZZ
8BKVWH	*	688.5	-243.5	-2.86	672.0	-251.7	-2.79	ZZ
8EMWVU		919.5	-12.5	-0.15	932.5	8.8	0.10	ZZ
8H39VG		947.5	15.5	0.18	948.0	24.3	0.27	ZZ
8MXZ7Y		971.9	39.9	0.47	996.0	72.3	0.80	ZZ
8VAGBD		918.5	-13.5	-0.16	963.0	39.3	0.44	ZZ
9MBCYN		1,012.4	80.4	0.95	887.6	-36.0	-0.40	ZZ
9N7U2P		985.5	53.5	0.63	940.4	16.7	0.19	ZZ
A8W7L4	X	729.0	-203.0	-2.39	606.0	-317.7	-3.52	ZZ
ATG6RY		952.3	20.3	0.24	893.2	-30.5	-0.34	ZZ
AXA8VX		960.9	29.0	0.34	939.3	15.6	0.17	ZZ
BBT9QV		876.5	-55.5	-0.65	794.5	-129.2	-1.43	ZZ
BFAJ2E		981.9	49.9	0.59	998.0	74.4	0.82	ZZ
BXRDUK		1,038.5	106.5	1.25	965.5	41.8	0.46	ZZ
CF6GRZ		841.5	-90.5	-1.06	857.0	-66.7	-0.74	ZZ
CLT2W2		1,014.0	82.0	0.96	992.5	68.8	0.76	ZZ
CPQMN4		976.5	44.5	0.52	946.0	22.3	0.25	ZZ
CVFZN7	*	715.5	-216.5	-2.55	824.0	-99.7	-1.10	ZZ
CYTZKX		983.7	51.7	0.61	984.5	60.8	0.67	ZZ
D3AR96		827.5	-104.5	-1.23	767.0	-156.7	-1.73	ZZ
DDAHQ8		883.3	-48.7	-0.57	1,007.1	83.4	0.92	ZZ
DH4CRE		855.0	-77.0	-0.91	844.0	-79.7	-0.88	ZZ
DWMWA1		930.0	-2.0	-0.02	884.5	-39.2	-0.43	ZZ
E34UDZ		1,013.8	81.9	0.96	973.9	50.3	0.56	ZZ

## Rubber Interlaboratory Testing Program

## Analysis 607

## Stress at 300% Elongation (psi)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
EDQT47		966.5	34.5	0.41	887.0	-36.7	-0.41	ZZ
EFUL3B		853.5	-78.5	-0.92	980.5	56.8	0.63	ZZ
EN8FD7		821.7	-110.3	-1.30	911.5	-12.2	-0.14	ZZ
EXYUGC		843.5	-88.5	-1.04	820.0	-103.7	-1.15	ZZ
FG4T3H		968.1	36.2	0.43	1,021.8	98.1	1.09	ZZ
FHC7HY		871.5	-60.5	-0.71	832.0	-91.7	-1.02	ZZ
FHGKTE		975.4	43.4	0.51	876.0	-47.6	-0.53	ZZ
G2P8UC		827.5	-104.5	-1.23	716.3	-207.4	-2.30	ZZ
G8DUMW		917.0	-15.0	-0.18	834.3	-89.4	-0.99	ZZ
GDFYEF		958.0	26.0	0.31	876.0	-47.6	-0.53	ZZ
GTTA6N		865.0	-67.0	-0.79	782.5	-141.2	-1.56	ZZ
GUPPHL		932.6	0.6	0.01	922.4	-1.2	-0.01	ZZ
GVJDXV		834.5	-97.5	-1.15	921.5	-2.2	-0.02	ZZ
GXLEW8	*	930.8	-1.2	-0.01	1,112.0	188.3	2.09	ZZ
H3YETY		961.0	29.0	0.34	987.5	63.8	0.71	ZZ
HGVVFC		1,054.5	122.5	1.44	1,063.5	139.8	1.55	ZZ
HTBKJM		952.5	20.5	0.24	905.5	-18.2	-0.20	ZZ
JGD2HM		1,034.5	102.5	1.21	985.5	61.8	0.68	ZZ
JP86LJ		929.8	-2.1	-0.02	903.1	-20.6	-0.23	ZZ
JT8H8N		942.8	10.8	0.13	960.9	37.2	0.41	ZZ
KBGWY3		975.0	43.0	0.51	856.0	-67.7	-0.75	ZZ
L3JPVM		1,134.0	202.0	2.38	1,048.8	125.1	1.38	ZZ
LCBZ94		916.0	-16.0	-0.19	957.0	33.3	0.37	ZZ
LN87P		899.0	-33.0	-0.39	993.5	69.8	0.77	ZZ
MDJCNK		966.0	34.0	0.40	970.5	46.8	0.52	ZZ
MDJEDN		832.5	-99.5	-1.17	874.5	-49.2	-0.54	ZZ
MNGAD6		1,128.5	196.5	2.31	1,105.0	181.3	2.01	ZZ
NAGVQG		958.7	26.8	0.31	976.1	52.4	0.58	ZZ
NJ6QPW		931.1	-0.8	-0.01	928.2	4.5	0.05	ZZ
NVVFP3		910.0	-22.0	-0.26	961.5	37.8	0.42	ZZ
NXKRLM		879.5	-52.5	-0.62	944.0	20.3	0.22	ZZ
PKTHE8	*	980.0	48.0	0.57	1,125.5	201.8	2.23	ZZ
QHJRP4		866.7	-65.3	-0.77	953.3	29.6	0.33	ZZ
QHKRMH		983.4	51.5	0.61	963.1	39.4	0.44	ZZ
R9CCFB		932.0	0.0	0.00	901.5	-22.2	-0.25	ZZ
RAHYRU		862.5	-69.5	-0.82	874.0	-49.7	-0.55	ZZ
RCPCD2		1,057.3	125.4	1.47	991.4	67.7	0.75	ZZ
RLDB2L		906.5	-25.5	-0.30	976.8	53.2	0.59	ZZ
RYNJ4D		884.0	-47.9	-0.56	855.0	-68.7	-0.76	ZZ



Rubber Interlaboratory Testing Program

Analysis 607

Stress at 300% Elongation (psi)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
T694MK		929.0	-3.0	-0.04	913.7	-9.9	-0.11	ZZ
T74LNL		842.0	-89.9	-1.06	838.8	-84.8	-0.94	ZZ
TA244Z		1,002.5	70.5	0.83	1,029.0	105.3	1.17	ZZ
THTJR6		1,070.0	138.0	1.62	1,019.5	95.8	1.06	ZZ
TXNZH3		916.6	-15.3	-0.18	849.9	-73.8	-0.82	ZZ
U4NKFR		907.0	-25.0	-0.29	1,004.0	80.3	0.89	ZZ
U88YLD		918.0	-14.0	-0.16	829.0	-94.7	-1.05	ZZ
UGVUKT		1,087.8	155.8	1.83	1,087.8	164.1	1.82	ZZ
V7TRZW	*	738.0	-194.0	-2.28	869.3	-54.4	-0.60	ZZ
VP94P2		997.0	65.0	0.76	923.3	-0.4	0.00	ZZ
WG8BTR		843.4	-88.6	-1.04	840.5	-83.2	-0.92	ZZ
WXWGZK	*	1,190.0	258.0	3.03	1,155.0	231.3	2.56	ZZ
XCQZG9		1,012.7	80.7	0.95	844.9	-78.8	-0.87	ZZ
XGNKLR		855.0	-77.0	-0.91	819.5	-104.2	-1.15	ZZ
Y73ZE2		961.5	29.5	0.35	899.5	-24.2	-0.27	ZZ
YKFB3N		971.0	39.1	0.46	925.3	1.7	0.02	ZZ
YR276D		867.0	-65.0	-0.76	833.0	-90.7	-1.00	ZZ
YTWMHA		888.0	-44.0	-0.52	830.0	-93.7	-1.04	ZZ
ZEBRJP		873.5	-58.5	-0.69	848.0	-75.7	-0.84	ZZ
ZPQLUH		889.5	-42.5	-0.50	918.0	-5.7	-0.06	ZZ
ZULD6Z		897.5	-34.5	-0.41	905.0	-18.7	-0.21	ZZ

Summary Statistics			
Grand Means	931.95	psi	923.68
Std Dev Btwn Labs	85.02	psi	90.31
Statistics based on 97 of 99 reporting participants			

Summary Statistics in SI Units			
Grand Means	6.4255	MPa	6.37
Std Dev Btwn Labs	0.5862	MPa	0.62
Statistics based on 97 of 99 reporting participants			

Samples A51-A52: Polyisoprene compound, batch #1 & A53-A54: Polyisoprene compound, batch #2

Analysis 607

Stress at 300% Elongation (psi)

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**Comments on assigned Data Flags for Test #607**

3KAZYF (X) - Data for all Samples are high.

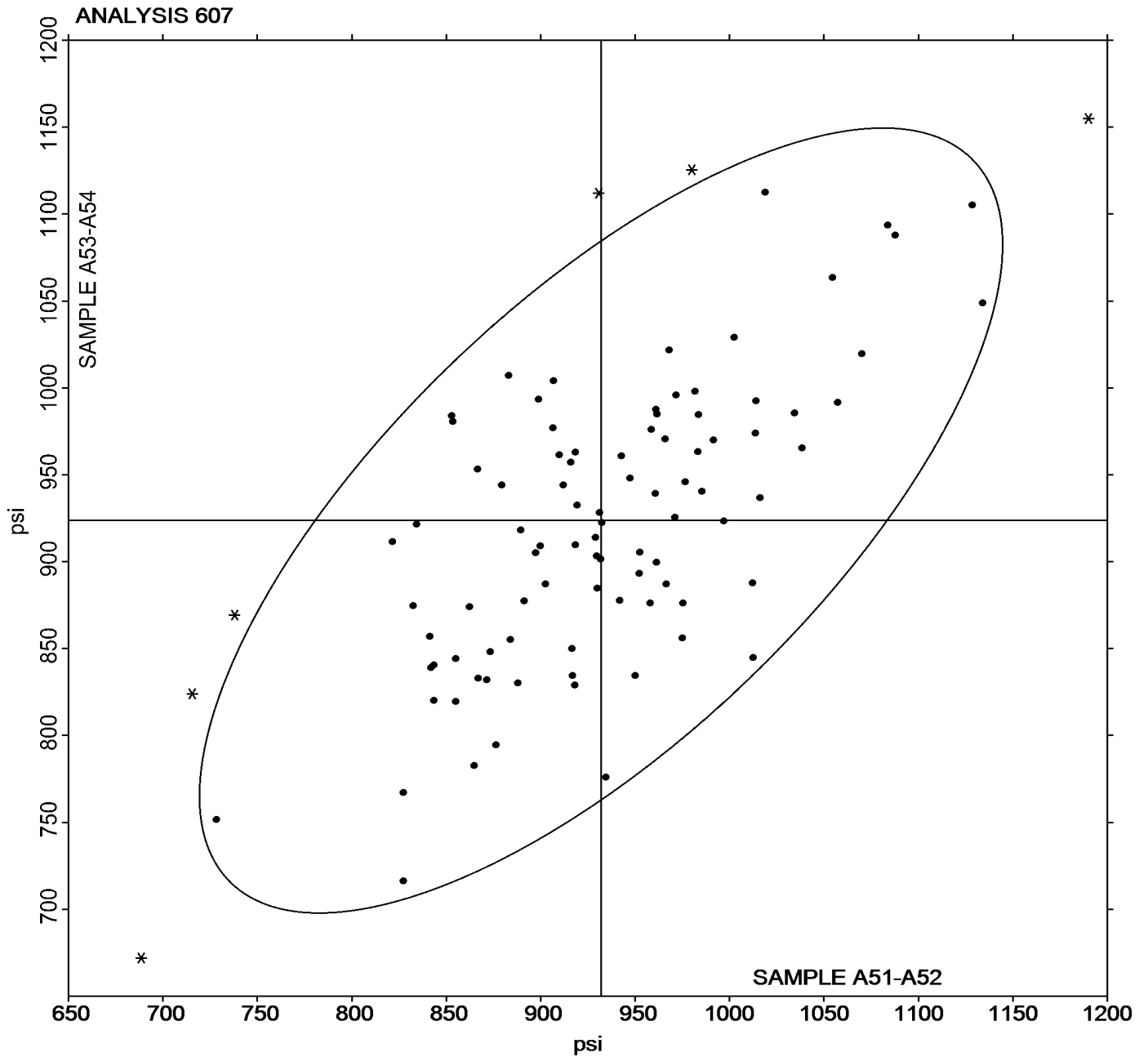
A8W7L4 (X) - Data for Sample group A53-A54 are low.

Analysis 607

Stress at 300% Elongation (psi)

Grand Mean Sample A51 = 931.95 psi

Grand Mean Sample A52 = 923.68 psi



## Rubber Interlaboratory Testing Program

## Analysis 608

## Stress at 100% Elongation (psi)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		208.0	5.4	0.40	194.5	-5.0	-0.37	ZZ
26EFHT		217.0	14.4	1.07	224.0	24.5	1.82	ZZ
27XZTQ		197.0	-5.6	-0.41	195.5	-4.0	-0.30	ZZ
2QWQKB		170.5	-32.1	-2.38	178.0	-21.5	-1.59	ZZ
32VLJ7		199.5	-3.1	-0.23	204.5	5.0	0.37	ZZ
376WDL		211.5	8.9	0.66	205.0	5.5	0.41	ZZ
3KAZYF	X	665.7	463.2	34.40	687.5	488.0	36.20	ZZ
3UXNXP		183.0	-19.6	-1.45	210.0	10.5	0.78	ZZ
3WZRJK		192.9	-9.7	-0.72	186.4	-13.1	-0.97	ZZ
4CPE63		221.8	19.2	1.43	203.7	4.2	0.31	ZZ
4HHGBN		197.5	-5.1	-0.38	198.0	-1.5	-0.11	ZZ
4U7KED		186.0	-16.6	-1.23	196.5	-3.0	-0.22	ZZ
6KY7AQ		210.1	7.5	0.56	185.9	-13.6	-1.01	ZZ
6QR8DQ	*	211.5	8.9	0.66	174.5	-25.0	-1.85	ZZ
762D2V		219.0	16.4	1.22	214.0	14.5	1.08	ZZ
86X9ZQ		198.0	-4.6	-0.34	208.9	9.4	0.70	ZZ
8BKVWH		194.5	-8.1	-0.60	186.0	-13.5	-1.00	ZZ
8EMWVU		195.5	-7.1	-0.52	197.0	-2.5	-0.18	ZZ
8H39VG		205.0	2.4	0.18	202.0	2.5	0.19	ZZ
8MXZ7Y		215.2	12.6	0.94	221.5	22.0	1.63	ZZ
8VAGBD		196.5	-6.1	-0.45	203.5	4.0	0.30	ZZ
9MBCYN		211.0	8.5	0.63	187.1	-12.4	-0.92	ZZ
9N7U2P		199.6	-3.0	-0.22	198.1	-1.4	-0.10	ZZ
A8W7L4	X	171.5	-31.1	-2.31	152.5	-47.0	-3.49	ZZ
ATG6RY		205.1	2.5	0.19	193.5	-6.0	-0.44	ZZ
AXA8VX		215.1	12.6	0.93	204.7	5.2	0.39	ZZ
BBT9QV		197.0	-5.6	-0.41	175.5	-24.0	-1.78	ZZ
BFAJ2E		207.5	4.9	0.37	211.0	11.5	0.85	ZZ
BXRDUK		221.5	18.9	1.41	208.0	8.5	0.63	ZZ
CF6GRZ		192.2	-10.3	-0.77	195.5	-4.0	-0.30	ZZ
CLT2W2		222.0	19.4	1.44	217.5	18.0	1.34	ZZ
CPQMN4		204.5	1.9	0.14	201.5	2.0	0.15	ZZ
CVFZN7		183.0	-19.6	-1.45	209.0	9.5	0.71	ZZ
CYTZKX		219.8	17.2	1.28	218.6	19.1	1.42	ZZ
D3AR96		204.5	1.9	0.14	188.5	-11.0	-0.81	ZZ
DDAHQ8		201.5	-1.1	-0.08	226.2	26.7	1.98	ZZ
DH4CRE		185.5	-17.1	-1.27	183.0	-16.5	-1.22	ZZ
DWMWA1		198.0	-4.6	-0.34	189.0	-10.5	-0.78	ZZ
E34UDZ		219.0	16.5	1.22	205.2	5.7	0.43	ZZ

## Rubber Interlaboratory Testing Program

## Analysis 608

## Stress at 100% Elongation (psi)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
EDQT47		209.0	6.4	0.48	190.0	-9.5	-0.70	ZZ
EFUL3B		197.5	-5.1	-0.38	208.0	8.5	0.63	ZZ
EN8FD7		184.6	-18.0	-1.33	204.6	5.1	0.38	ZZ
EXYUGC		189.5	-13.1	-0.97	185.0	-14.5	-1.07	ZZ
FG4T3H		211.8	9.2	0.68	219.0	19.5	1.45	ZZ
FHC7HY		190.0	-12.6	-0.93	180.0	-19.5	-1.45	ZZ
FHGKTE		216.8	14.3	1.06	197.3	-2.2	-0.17	ZZ
G2P8UC		200.0	-2.6	-0.19	175.0	-24.5	-1.82	ZZ
G8DUMW		202.5	-0.1	0.00	185.8	-13.7	-1.02	ZZ
GDFYEF		202.3	-0.2	-0.02	186.4	-13.1	-0.97	ZZ
GTTA6N		191.0	-11.6	-0.86	180.0	-19.5	-1.45	ZZ
GUPPHL		208.1	5.6	0.41	203.8	4.3	0.32	ZZ
GVJDXV		185.5	-17.1	-1.27	207.5	8.0	0.59	ZZ
GXLEW8	X	199.3	-3.3	-0.25	250.5	51.0	3.78	ZZ
H3YETY		200.0	-2.6	-0.19	209.0	9.5	0.71	ZZ
HGVVFC		211.0	8.4	0.63	211.5	12.0	0.89	ZZ
HTBKJM		210.0	7.4	0.55	199.0	-0.5	-0.04	ZZ
JACMWL		184.5	-18.1	-1.34	203.5	4.0	0.30	ZZ
JGD2HM		209.5	6.9	0.52	194.0	-5.5	-0.41	ZZ
JP86LJ		201.0	-1.6	-0.12	194.5	-5.0	-0.37	ZZ
JT8H8N		207.4	4.8	0.36	208.1	8.6	0.64	ZZ
KBGWY3		211.5	8.9	0.66	185.5	-14.0	-1.04	ZZ
L3JPVM		236.0	33.4	2.48	217.3	17.8	1.32	ZZ
LCBZ94		197.0	-5.6	-0.41	205.5	6.0	0.45	ZZ
LN87P		197.5	-5.1	-0.38	219.5	20.0	1.48	ZZ
MDJCNK		200.0	-2.6	-0.19	197.0	-2.5	-0.18	ZZ
MDJEDN		188.0	-14.6	-1.08	197.0	-2.5	-0.18	ZZ
MNGAD6		224.0	21.4	1.59	225.0	25.5	1.89	ZZ
NAGVQG		209.6	7.0	0.52	211.8	12.3	0.91	ZZ
NJ6QPW		203.0	0.4	0.03	203.9	4.4	0.33	ZZ
NVVFP3		197.1	-5.4	-0.40	206.4	6.9	0.51	ZZ
NXKRLM		186.5	-16.1	-1.19	196.0	-3.5	-0.26	ZZ
PKTHE8	X	213.1	10.6	0.79	309.5	110.0	8.16	ZZ
QHJRP4		206.1	3.5	0.26	227.2	27.7	2.06	ZZ
QHKRMH		212.1	9.5	0.71	203.5	4.1	0.30	ZZ
R9CCFB		199.0	-3.6	-0.26	191.5	-8.0	-0.59	ZZ
RAHYRU		192.0	-10.6	-0.78	187.0	-12.5	-0.93	ZZ
RCPCD2		229.7	27.2	2.02	215.3	15.8	1.17	ZZ
RLDB2L		191.5	-11.1	-0.82	197.3	-2.2	-0.17	ZZ

Rubber Interlaboratory Testing Program

Analysis 608

Stress at 100% Elongation (psi)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
RYNJ4D		186.4	-16.2	-1.20	182.0	-17.5	-1.30	ZZ
T694MK		210.3	7.7	0.58	203.1	3.6	0.26	ZZ
T74LNL		191.2	-11.3	-0.84	189.8	-9.7	-0.72	ZZ
TA244Z		209.5	6.9	0.52	216.5	17.0	1.26	ZZ
THTJR6		223.0	20.4	1.52	209.0	9.5	0.71	ZZ
TXNZH3		197.3	-5.3	-0.39	181.3	-18.2	-1.35	ZZ
U4NKFR		208.5	5.9	0.44	231.0	31.5	2.34	ZZ
U88YLD		202.5	-0.1	0.00	181.0	-18.5	-1.37	ZZ
UGVUKT		232.1	29.5	2.19	224.8	25.3	1.88	ZZ
V7TRZW	*	163.6	-38.9	-2.89	187.8	-11.7	-0.87	ZZ
VP94P2		229.5	26.9	2.00	210.0	10.5	0.78	ZZ
WG8BTR		179.1	-23.4	-1.74	176.9	-22.5	-1.67	ZZ
WXWGZF	X	307.5	104.9	7.79	299.0	99.5	7.38	ZZ
XCQZG9		219.7	17.1	1.27	187.8	-11.7	-0.87	ZZ
XGNKLR		210.0	7.4	0.55	204.0	4.5	0.33	ZZ
Y73ZE2		202.5	-0.1	0.00	190.5	-9.0	-0.67	ZZ
YKFB3N		210.3	7.7	0.58	198.0	-1.5	-0.11	ZZ
YR276D		192.0	-10.6	-0.78	182.5	-17.0	-1.26	ZZ
YTWMHA		207.5	4.9	0.37	191.5	-8.0	-0.59	ZZ
ZEBRJP		188.0	-14.6	-1.08	185.5	-14.0	-1.04	ZZ
ZPQLUH		182.5	-20.1	-1.49	194.5	-5.0	-0.37	ZZ
ZULD6Z		188.5	-14.1	-1.04	194.0	-5.5	-0.41	ZZ

Summary Statistics			
Grand Means	202.56	psi	199.48
			psi
Std Dev Btwn Labs	13.47	psi	13.48
			psi
Statistics based on 95 of 100 reporting participants			

Summary Statistics in SI Units			
Grand Means	1.3966	MPa	1.38
			MPa
Std Dev Btwn Labs	0.0928	MPa	0.09
			MPa
Statistics based on 95 of 100 reporting participants			

Samples A51-A52: Polyisoprene compound, batch #1 & A53-A54: Polyisoprene compound, batch #2

Analysis 608

Stress at 100% Elongation (psi)

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**Comments on assigned Data Flags for Test #608**

3KAZYF (X) - Extreme data.

A8W7L4 (X) - Data for Sample group A53-A54 are low.

GXLEW8 (X) - Data for Sample group A53-A54 are high.

PKTHE8 (X) - Data for Sample group A53-A54 are high. Inconsistency in testing within Sample group A51-A52.

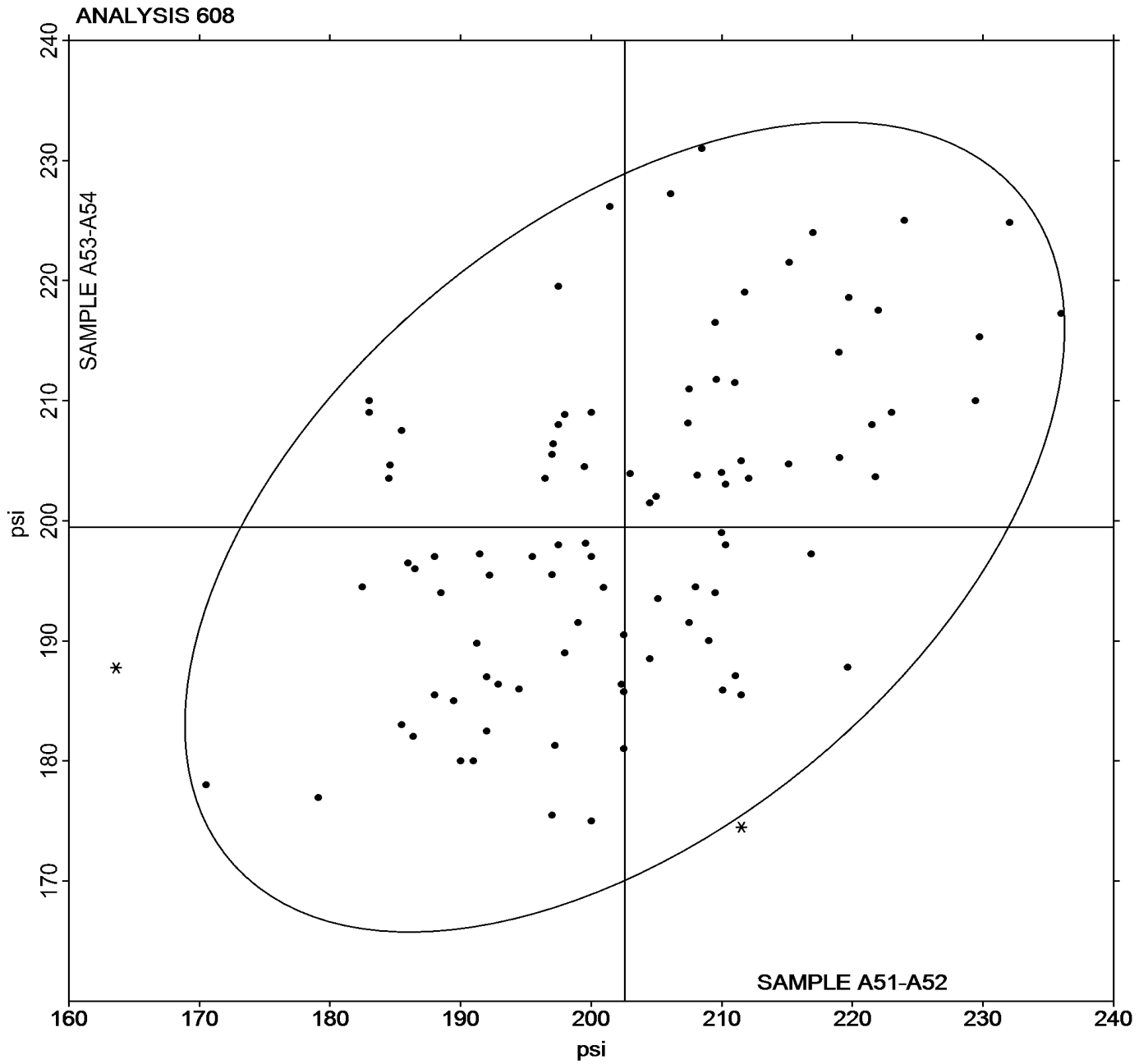
WXWGZK (X) - Data for all Samples are high.

Analysis 608

Stress at 100% Elongation (psi)

Grand Mean Sample A51 = 202.56 psi

Grand Mean Sample A52 = 199.48 psi





## Rubber Interlaboratory Testing Program

## Analysis 620

## Hardness (Shore A/Type A)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		47.50	-2.32	-1.44	46.50	-3.13	-1.98	BT
26EFHT		52.50	2.68	1.67	51.50	1.87	1.18	XX
27XZTQ		52.00	2.18	1.36	52.00	2.37	1.50	BT
2E62NQ		46.75	-3.07	-1.91	46.70	-2.93	-1.85	BT
2QWQKB		51.00	1.18	0.74	51.00	1.37	0.87	BT
2Y9MPH		50.00	0.18	0.11	50.00	0.37	0.23	XX
32VLJ7		50.00	0.18	0.11	51.00	1.37	0.87	BT
376WDL		50.00	0.18	0.11	50.00	0.37	0.23	HH
3KAZYF		53.50	3.68	2.29	52.50	2.87	1.81	XX
3UXNXP		49.00	-0.82	-0.51	50.00	0.37	0.23	XX
3WZRJK		49.10	-0.72	-0.45	47.95	-1.68	-1.06	BT
4CPE63		50.50	0.68	0.42	50.00	0.37	0.23	BT
4HHGBN		52.50	2.68	1.67	52.00	2.37	1.50	HH
4U7KED		48.00	-1.82	-1.13	49.50	-0.13	-0.08	HH
6KY7AQ		51.00	1.18	0.74	50.00	0.37	0.23	XX
6QR8DQ	X	55.50	5.68	3.53	53.25	3.62	2.29	HH
762D2V		52.00	2.18	1.36	51.25	1.62	1.02	HH
86X9ZQ		52.25	2.43	1.51	53.25	3.62	2.29	HH
8BKVWH		49.50	-0.32	-0.20	49.50	-0.13	-0.08	XX
8EMWVU		51.00	1.18	0.74	50.50	0.87	0.55	HH
8H39VG		49.50	-0.32	-0.20	49.00	-0.63	-0.40	BT
8MXZ7Y		50.00	0.18	0.11	49.50	-0.13	-0.08	XX
8VAGBD		52.05	2.23	1.39	51.65	2.02	1.28	XX
9MBCYN		49.75	-0.07	-0.04	50.15	0.52	0.33	XX
9N7U2P		47.30	-2.52	-1.57	47.75	-1.88	-1.19	XX
A8W7L4		53.00	3.18	1.98	51.50	1.87	1.18	XX
ATG6RY		48.00	-1.82	-1.13	47.00	-2.63	-1.66	XX
AXA8VX		51.35	1.53	0.95	50.60	0.97	0.61	XX
BBT9QV		47.55	-2.27	-1.41	47.05	-2.58	-1.63	BT
BFAJ2E		51.50	1.68	1.05	52.50	2.87	1.81	XX
BXRDU		50.05	0.23	0.14	49.15	-0.48	-0.30	XX
CF6GRZ		49.15	-0.67	-0.42	49.40	-0.23	-0.15	BT
CLT2W2		50.90	1.08	0.67	50.15	0.52	0.33	BT
CPQMN4		50.00	0.18	0.11	50.00	0.37	0.23	BT
CVFZN7		49.00	-0.82	-0.51	49.50	-0.13	-0.08	HH
CYTZKX		50.00	0.18	0.11	50.50	0.87	0.55	BT
D3AR96		49.50	-0.32	-0.20	49.50	-0.13	-0.08	HH
DDAHQ8		49.15	-0.67	-0.42	51.35	1.72	1.09	BT
DH4CRE		47.00	-2.82	-1.75	47.00	-2.63	-1.66	XX

## Rubber Interlaboratory Testing Program

## Analysis 620

## Hardness (Shore A/Type A)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
DWMWA1		48.50	-1.32	-0.82	47.50	-2.13	-1.35	BT
E34UDZ		49.50	-0.32	-0.20	47.70	-1.93	-1.22	BT
EDQT47		50.00	0.18	0.11	49.50	-0.13	-0.08	HH
EFUL3B	X	61.00	11.18	6.95	58.00	8.37	5.29	BT
EN8FD7		49.10	-0.72	-0.45	50.00	0.37	0.23	BT
EXYUGC		53.00	3.18	1.98	52.50	2.87	1.81	XX
FG4T3H		50.50	0.68	0.42	49.80	0.17	0.11	BT
FHC7HY		51.00	1.18	0.74	50.00	0.37	0.23	HH
FHGKTE		48.65	-1.17	-0.73	46.65	-2.98	-1.89	BT
G2P8UC		50.15	0.33	0.21	48.05	-1.58	-1.00	BT
G8DUMW	*	52.50	2.68	1.67	49.50	-0.13	-0.08	HH
GDFYEF		50.00	0.18	0.11	48.50	-1.13	-0.72	BT
GLTTTX		50.50	0.68	0.42	50.50	0.87	0.55	BT
GTTA6N		50.00	0.18	0.11	49.50	-0.13	-0.08	BT
GUPPHL		49.10	-0.72	-0.45	48.50	-1.13	-0.72	BT
GVJDXV		50.00	0.18	0.11	50.00	0.37	0.23	BT
GXLEW8		50.50	0.68	0.42	52.50	2.87	1.81	HH
H3YETY		49.50	-0.32	-0.20	49.50	-0.13	-0.08	XX
HGVVFC		49.85	0.03	0.02	50.10	0.47	0.30	BT
HTBKJM		50.85	1.03	0.64	50.15	0.52	0.33	BT
JACMWL		49.00	-0.82	-0.51	49.50	-0.13	-0.08	XX
JGD2HM		49.50	-0.32	-0.20	49.50	-0.13	-0.08	XX
JP86LJ		50.50	0.68	0.42	49.35	-0.28	-0.18	BT
JT8H8N		48.00	-1.82	-1.13	48.00	-1.63	-1.03	HH
KBGWY3	*	52.00	2.18	1.36	49.00	-0.63	-0.40	BT
L3JPVM		50.50	0.68	0.42	50.50	0.87	0.55	XX
L42DHN		50.50	0.68	0.42	50.00	0.37	0.23	HH
LCBZ94		52.00	2.18	1.36	52.00	2.37	1.50	XX
LN87P		48.00	-1.82	-1.13	49.50	-0.13	-0.08	BT
MDJCNK		48.20	-1.62	-1.01	48.45	-1.18	-0.75	BT
MDJEDN		47.10	-2.72	-1.69	47.95	-1.68	-1.06	BT
MNGAD6		49.90	0.08	0.05	50.10	0.47	0.30	BT
NAGVQG		50.50	0.68	0.42	51.00	1.37	0.87	XX
NJ6QPW		48.60	-1.22	-0.76	48.35	-1.28	-0.81	BT
NVVFP3	*	46.00	-3.82	-2.37	47.50	-2.13	-1.35	BT
NXKRLM		50.00	0.18	0.11	50.50	0.87	0.55	HH
PKTHE8	*	53.35	3.53	2.20	54.20	4.57	2.89	BT
QHJRP4		47.00	-2.82	-1.75	49.00	-0.63	-0.40	BT
QHKRMH		50.90	1.08	0.67	50.55	0.92	0.58	BT

## Analysis 620

## Hardness (Shore A/Type A)

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
R9CCFB		48.25	-1.57	-0.98	48.75	-0.88	-0.56	BT
RAHYRU		49.95	0.13	0.08	49.65	0.02	0.01	BT
RCPCD2		48.50	-1.32	-0.82	49.50	-0.13	-0.08	XX
RLDB2L		49.50	-0.32	-0.20	51.15	1.52	0.96	HH
RYKYGB		51.00	1.18	0.74	50.00	0.37	0.23	BT
RYNJ4D		50.65	0.83	0.52	49.65	0.02	0.01	BT
T694MK		50.20	0.38	0.24	48.60	-1.03	-0.65	BT
T74LNL		51.40	1.58	0.98	51.15	1.52	0.96	XX
T74MQ7		47.00	-2.82	-1.75	46.00	-3.63	-2.30	BT
TA244Z		50.50	0.68	0.42	50.00	0.37	0.23	HH
THTJR6		49.75	-0.07	-0.04	48.50	-1.13	-0.72	HH
TXNZH3		48.55	-1.27	-0.79	47.85	-1.78	-1.13	BT
U4NKFR		49.50	-0.32	-0.20	50.50	0.87	0.55	BT
U88YLD		50.80	0.98	0.61	48.50	-1.13	-0.72	XX
UGVUKT		50.50	0.68	0.42	51.00	1.37	0.87	HH
V6WCMY	*	46.50	-3.32	-2.06	45.00	-4.63	-2.93	BT
V7TRZW	*	46.00	-3.82	-2.37	48.50	-1.13	-0.72	BT
VP94P2		50.50	0.68	0.42	49.50	-0.13	-0.08	BT
WG8BTR		47.50	-2.32	-1.44	47.00	-2.63	-1.66	BT
WXWGZK		50.50	0.68	0.42	49.50	-0.13	-0.08	HH
XCQZG9		50.70	0.88	0.55	49.05	-0.58	-0.37	BT
XGNKLR		49.30	-0.52	-0.32	48.55	-1.08	-0.68	XX
Y73ZE2		50.00	0.18	0.11	50.50	0.87	0.55	HH
YKFB3N		49.05	-0.77	-0.48	50.55	0.92	0.58	BT
YR276D		50.45	0.63	0.39	50.00	0.37	0.23	BT
YTWMHA		49.75	-0.07	-0.04	48.50	-1.13	-0.72	BT
ZEBRJP		49.50	-0.32	-0.20	50.00	0.37	0.23	XX
ZPQLUH	*	47.00	-2.82	-1.75	49.50	-0.13	-0.08	HH
ZULD6Z		50.50	0.68	0.42	50.50	0.87	0.55	XX

## Summary Statistics

Grand Means

49.818 Type A

49.631 Type A

Std Dev Btwn Labs

1.608 Type A

1.581 Type A

Statistics based on 105 of 107 reporting participants

## Analysis 620

## Hardness (Shore A/Type A)

**Comments on assigned Data Flags for Test #620**

6QR8DQ (X) - Inconsistency in testing between Sample groups. Data for Sample group A51-A52 are high.

EFUL3B (X) - Data for all Samples are high. Possible systematic error.

**Results by Reading Time (as reported by laboratory)**

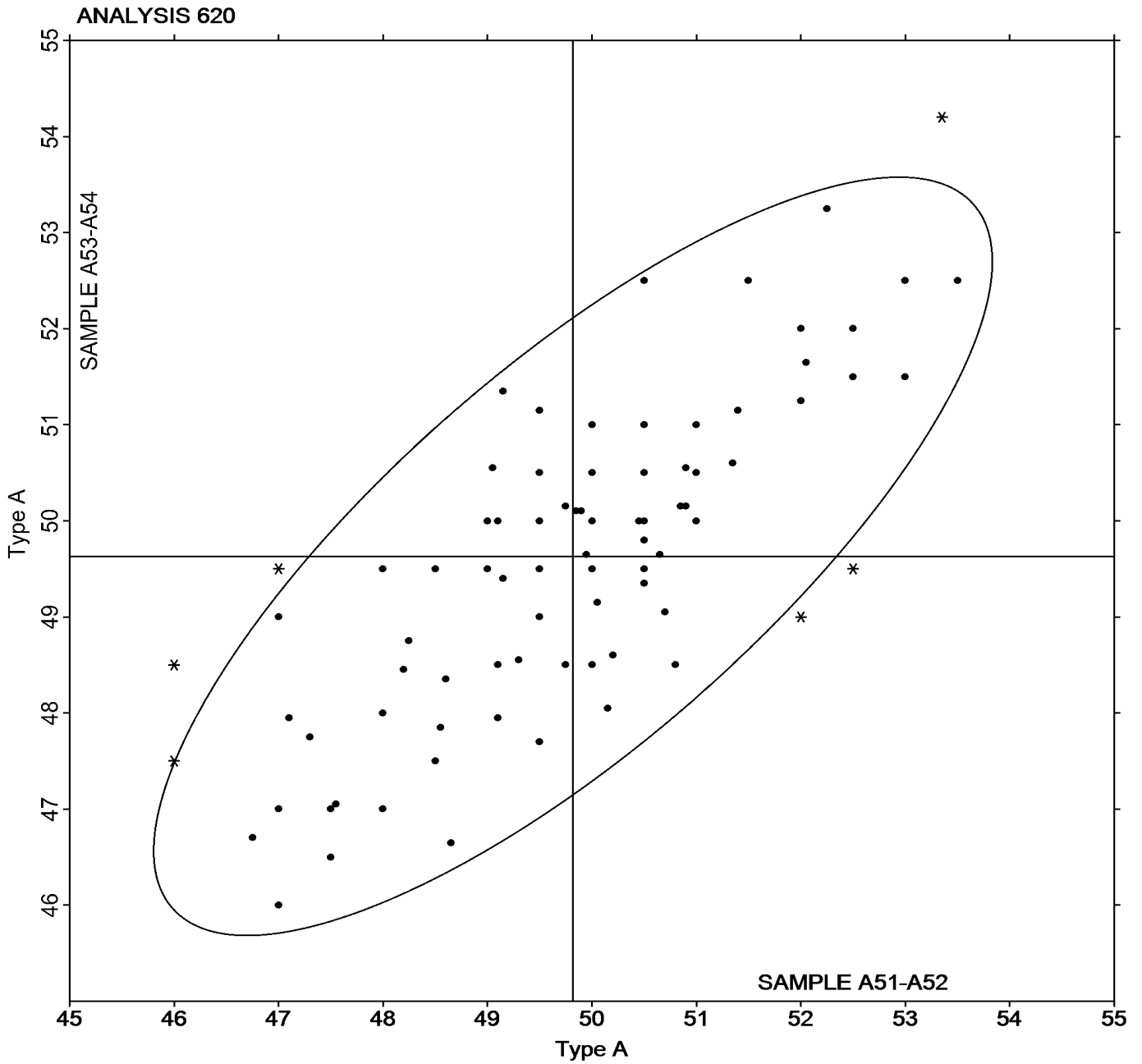
Reading Time	Sample A51 <i>Polyisoprene compound, batch #1</i>			Sample A52 <i>Polyisoprene compound, batch #1</i>			Labs Incl / Rpt	
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM		
Select from list below	51.75	1.77	1.93	51.25	1.77	1.62	2	2
Readings taken within 0 - 5 seconds	49.94	1.21	0.12	49.81	1.20	0.18	67	73
Readings taken at 5 seconds	48.97	1.71	-0.85	48.56	1.73	-1.07	13	14
Readings taken after 5+ seconds	48.87	1.27	-0.95	48.24	1.46	-1.39	5	6
Maximum hardness indicator used	50.66	1.60	0.85	50.54	1.68	0.91	11	12

Analysis 620

Hardness (Shore A/Type A)

Grand Mean Sample A51 = 49.818 Type A

Grand Mean Sample A52 = 49.631 Type A



## Rubber Interlaboratory Testing Program

## Analysis 621

## Density

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		1.139	0.002	0.52	1.138	0.000	-0.04	ZZ
26EFHT		1.139	0.001	0.30	1.139	0.001	0.18	ZZ
27XZTQ	X	1.130	-0.007	-2.07	1.140	0.002	0.61	ZZ
32VLJ7		1.138	0.001	0.19	1.138	0.001	0.16	ZZ
376WDL		1.138	0.001	0.16	1.137	-0.001	-0.24	ZZ
3UXNXP		1.137	0.000	-0.03	1.139	0.001	0.21	ZZ
4CPE63		1.140	0.003	0.72	1.139	0.001	0.33	ZZ
4HHGBN		1.140	0.003	0.72	1.140	0.002	0.61	ZZ
6KY7AQ	X	1.132	-0.006	-1.65	1.124	-0.014	-3.95	ZZ
6QR8DQ		1.135	-0.002	-0.60	1.137	-0.001	-0.34	ZZ
762D2V		1.140	0.003	0.84	1.139	0.001	0.40	ZZ
8BKVWH	X	1.110	-0.027	-7.63	1.115	-0.023	-6.51	ZZ
8EMWVU		1.137	-0.001	-0.26	1.137	-0.001	-0.39	ZZ
8MXZ7Y		1.129	-0.008	-2.23	1.129	-0.009	-2.49	ZZ
9MBCYN		1.137	-0.001	-0.16	1.137	-0.001	-0.30	ZZ
9N7U2P		1.138	0.000	0.02	1.138	0.000	0.04	ZZ
A8W7L4		1.142	0.004	1.14	1.141	0.003	0.98	ZZ
ATG6RY		1.132	-0.005	-1.51	1.132	-0.006	-1.81	ZZ
BBT9QV		1.140	0.003	0.77	1.141	0.003	0.75	ZZ
BXRDUK		1.139	0.001	0.31	1.139	0.001	0.23	ZZ
CF6GRZ		1.140	0.002	0.66	1.140	0.002	0.63	ZZ
CLT2W2		1.131	-0.006	-1.70	1.133	-0.005	-1.29	ZZ
CYTZKX		1.139	0.002	0.45	1.139	0.001	0.33	ZZ
DDAHQ8		1.142	0.005	1.35	1.144	0.006	1.72	ZZ
DH4CRE		1.132	-0.005	-1.51	1.136	-0.002	-0.67	ZZ
DWMWAI		1.139	0.002	0.44	1.139	0.001	0.18	ZZ
E34UDZ	*	1.135	-0.003	-0.81	1.140	0.002	0.47	ZZ
EXYUGC		1.137	-0.001	-0.24	1.138	0.000	0.01	ZZ
FG4T3H		1.136	-0.001	-0.30	1.141	0.003	0.75	ZZ
G2P8UC		1.138	0.000	0.02	1.135	-0.003	-0.95	ZZ
G8DUMW		1.141	0.004	1.02	1.142	0.004	1.10	ZZ
GDFYEF		1.141	0.004	1.02	1.141	0.003	0.75	ZZ
GLTTTX		1.134	-0.004	-0.98	1.133	-0.005	-1.38	ZZ
GTTA6N	*	1.132	-0.005	-1.51	1.137	-0.001	-0.39	ZZ
GUPPHL		1.137	0.000	-0.06	1.137	-0.001	-0.20	ZZ
GVJDXV		1.132	-0.006	-1.61	1.131	-0.006	-1.82	ZZ
GXLEW8		1.139	0.002	0.44	1.139	0.001	0.33	ZZ
HGVVFC		1.145	0.007	1.97	1.145	0.007	1.89	ZZ
JACMWL		1.143	0.005	1.41	1.144	0.006	1.75	ZZ

Analysis 621

Density

WebCode	Data Flag	Sample A51			Sample A52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
JP86LJ		1.130	-0.007	-2.08	1.131	-0.007	-2.09	ZZ
KBGWY3	X	1.125	-0.013	-3.60	1.129	-0.009	-2.66	ZZ
LCBZ94		1.137	-0.001	-0.26	1.138	0.001	0.17	ZZ
MDJEDN		1.142	0.004	1.14	1.142	0.004	1.04	ZZ
NVVP3		1.136	-0.001	-0.39	1.137	-0.001	-0.39	ZZ
NXKRLM		1.142	0.005	1.28	1.142	0.004	1.18	ZZ
QHJRP4		1.136	-0.002	-0.51	1.133	-0.005	-1.34	ZZ
QHCRMH		1.135	-0.002	-0.67	1.137	-0.001	-0.39	ZZ
RAHYRU		1.137	0.000	-0.06	1.137	-0.001	-0.16	ZZ
RCPCD2		1.140	0.002	0.61	1.140	0.002	0.70	ZZ
T694MK		1.141	0.003	0.86	1.140	0.002	0.47	ZZ
TA244Z		1.137	-0.001	-0.26	1.134	-0.004	-1.10	ZZ
TXNZH3		1.130	-0.007	-2.07	1.130	-0.008	-2.24	ZZ
U4NKFR		1.144	0.006	1.69	1.145	0.007	1.89	ZZ
U88YLD		1.133	-0.004	-1.13	1.136	-0.002	-0.66	ZZ
UGVUKT		1.137	-0.001	-0.26	1.138	0.000	-0.10	ZZ
V7TRZW		1.135	-0.002	-0.67	1.137	-0.001	-0.39	ZZ
VP94P2	X	1.133	-0.004	-1.10	1.119	-0.019	-5.41	ZZ
Y73ZE2		1.143	0.005	1.42	1.142	0.004	1.21	ZZ
YKFB3N		1.138	0.000	0.06	1.137	0.000	-0.11	ZZ
YR276D		1.139	0.002	0.44	1.140	0.002	0.47	ZZ
YTWMHA		1.140	0.002	0.62	1.140	0.003	0.73	ZZ
ZEBRJP		1.135	-0.003	-0.76	1.136	-0.001	-0.41	ZZ

Summary Statistics			
Grand Means	1.1374	Mg/M <sup>3</sup>	1.1379
			Mg/M <sup>3</sup>
Std Dev Btwn Labs	0.0036	Mg/M <sup>3</sup>	0.0035
			Mg/M <sup>3</sup>
Statistics based on 57 of 62 reporting participants			

Samples A51-A52: Polyisoprene compound, batch #1 & A53-A54: Polyisoprene compound, batch #2

## Analysis 621

Density

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**Comments on assigned Data Flags for Test #621**

27XZTQ (X) - Inconsistency in testing between Sample groups.

6KY7AQ (X) - Inconsistency in testing between Sample groups. Data for Sample group A53-A54 are low.  
Inconsistency in testing within Sample group A53-A54.

8BKVWH (X) - Data for all Samples are low. Possible systematic error. Inconsistency in testing within Sample group A53-A54.

KBGWY3 (X) - Inconsistency in testing between Sample groups. Data for Sample group A51-A52 are low.

VP94P2 (X) - Inconsistency in testing between Sample groups. Data for Sample group A53-A54 are low.  
Inconsistency in testing within Sample group A53-A54.

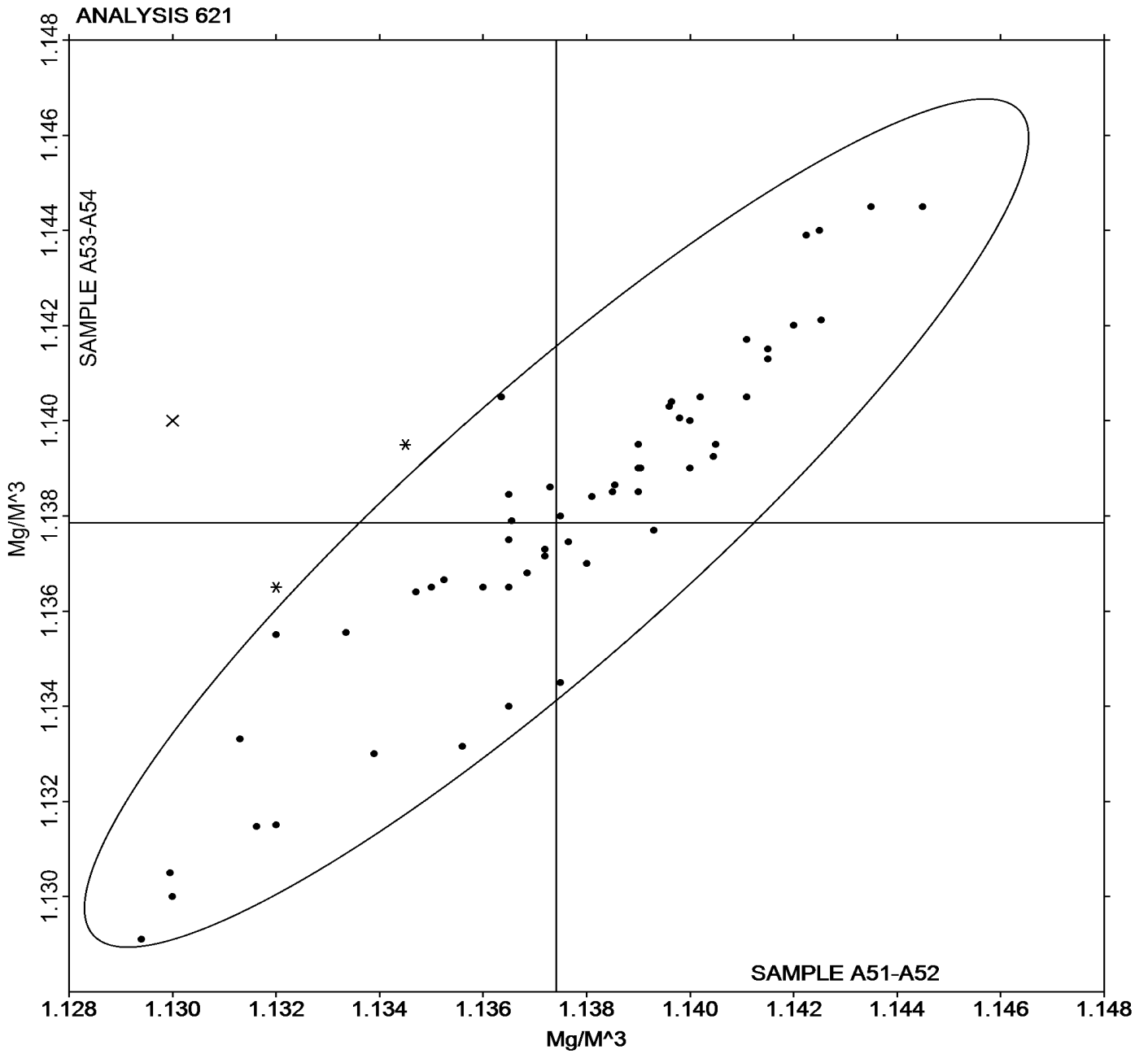


Analysis 621

Density

Grand Mean Sample A51 = 1.1374 Mg/M<sup>3</sup>

Grand Mean Sample A52 = 1.1379 Mg/M<sup>3</sup>



Analysis 630

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

WebCode	Data Flag	Sample J51			Sample J52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2QWQKB		3,351.0	56.3	0.52	2,988.0	-180.7	-0.98	ZZ
4CPE63		3,348.4	53.7	0.50	3,272.0	103.3	0.56	ZZ
762D2V		3,201.5	-93.2	-0.87	2,914.0	-254.7	-1.38	ZZ
86X9ZQ		3,343.1	48.5	0.45	3,177.1	8.4	0.05	ZZ
8EMWVU	X	2,677.5	-617.2	-5.74	2,784.0	-384.7	-2.08	ZZ
8MXZ7Y		3,413.6	118.9	1.11	3,301.2	132.5	0.72	ZZ
9MBCYN		3,430.2	135.5	1.26	3,430.2	261.5	1.41	ZZ
ATG6RY		3,205.8	-88.9	-0.83	3,282.8	114.1	0.62	ZZ
BFAJ2E		3,284.0	-10.7	-0.10	3,090.7	-78.0	-0.42	ZZ
BXRDUK		3,240.0	-54.7	-0.51	3,234.5	65.8	0.36	ZZ
DDAHQ8		3,240.6	-54.1	-0.50	3,362.2	193.5	1.05	ZZ
DH4CRE		3,472.0	177.3	1.65	3,037.0	-131.7	-0.71	ZZ
DWMWAI		3,227.5	-67.2	-0.62	3,052.0	-116.7	-0.63	ZZ
E34UDZ		3,089.3	-205.3	-1.91	2,945.7	-222.9	-1.20	ZZ
EDQT47		3,373.0	78.3	0.73	3,144.5	-24.2	-0.13	ZZ
HTBKJM		3,405.5	110.8	1.03	3,345.5	176.8	0.96	ZZ
NAGVQG		3,223.5	-71.2	-0.66	3,161.1	-7.5	-0.04	ZZ
NJ6QPW		3,318.7	24.0	0.22	3,349.5	180.8	0.98	ZZ
NVVP3		3,330.8	36.1	0.34	3,296.9	128.2	0.69	ZZ
QHJRP4		3,162.2	-132.5	-1.23	2,715.3	-453.4	-2.45	ZZ
QHKRMH		3,424.8	130.1	1.21	3,146.5	-22.2	-0.12	ZZ
RYNJ4D		3,132.8	-161.8	-1.50	3,024.1	-144.6	-0.78	ZZ
U4NKFR		3,312.5	17.8	0.17	3,323.0	154.3	0.83	ZZ
U88YLD		3,421.0	126.3	1.17	2,899.5	-269.2	-1.45	ZZ
UGVUKT		3,082.1	-212.6	-1.98	2,929.8	-238.9	-1.29	ZZ
XCQZG9		3,409.0	114.3	1.06	3,337.0	168.3	0.91	ZZ
XGNKLR		3,333.0	38.3	0.36	3,168.5	-0.2	0.00	ZZ
Y73ZE2		3,249.6	-45.1	-0.42	3,208.6	40.0	0.22	ZZ
YKFB3N		3,407.7	113.0	1.05	3,568.0	399.3	2.16	ZZ
YR276D		3,215.0	-79.7	-0.74	3,233.5	64.8	0.35	ZZ
ZULD6Z		3,191.5	-103.2	-0.96	3,121.0	-47.7	-0.26	ZZ

Summary Statistics

Grand Means

3,294.65 psi

3,168.65 psi

Std Dev Btwn Labs

107.56 psi

185.03 psi

Statistics based on 30 of 31 reporting participants

## Analysis 630

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

		Summary Statistics in SI Units	
Grand Means	22.716 MPa	21.85	MPa
Std Dev Btwn Labs	0.742 MPa	1.28	MPa
Statistics based on 30 of 31 reporting participants			

All samples : Polyisoprene compound, batch #1

**Comments on assigned Data Flags for Test #630**

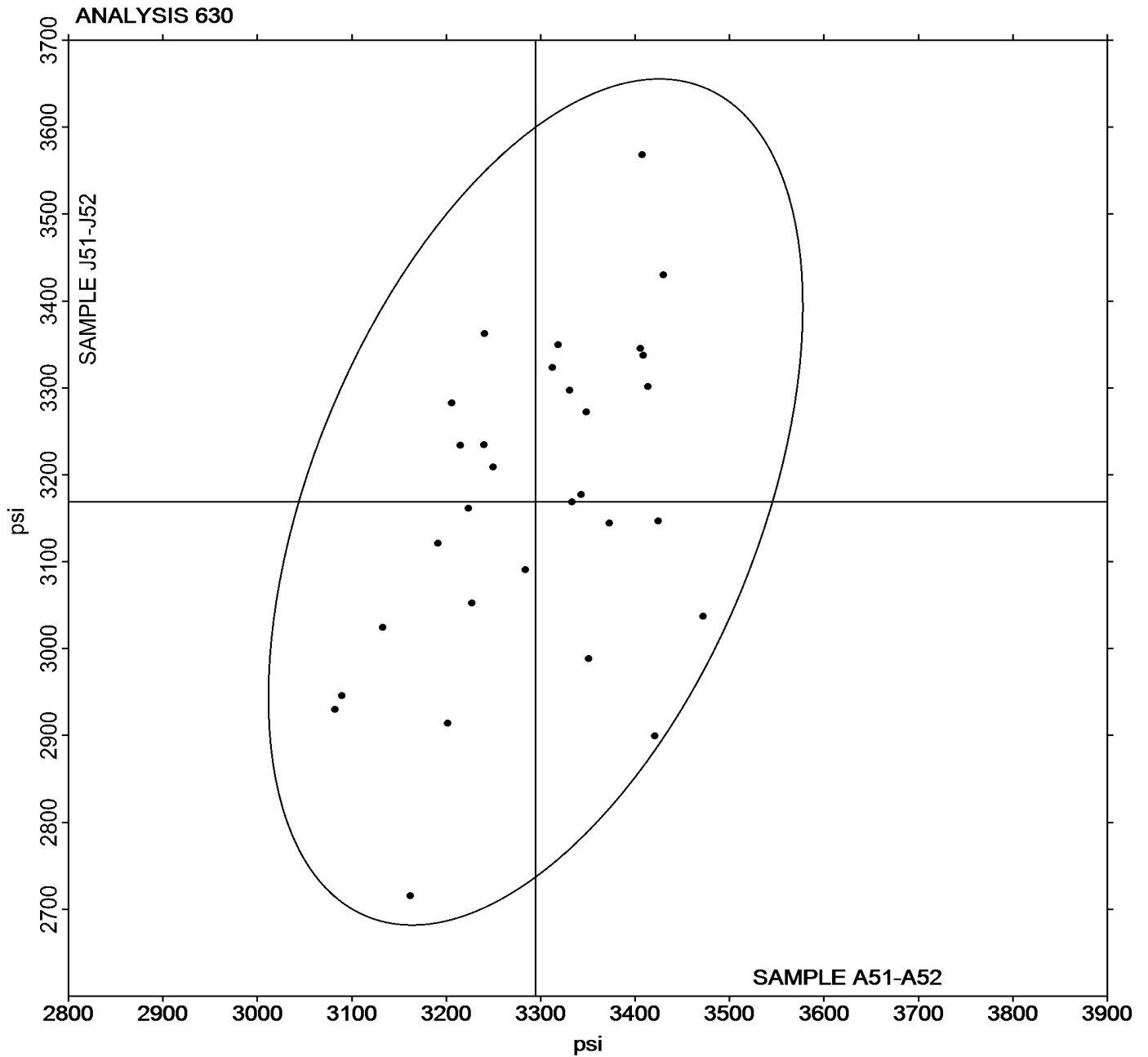
8EMWVU (X) - Data for Sample group A51-A52 are low. Inconsistency in testing within Sample group J51-J52.

Analysis 630

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

Grand Mean Sample J51 = 3,294.65 psi

Grand Mean Sample J52 = 3,168.65 psi



Analysis 631

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

WebCode	Data Flag	Sample J51			Sample J52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2QWQKB	*	735.5	100.0	2.79	643.5	76.8	3.04	ZZ
4CPE63		606.5	-29.0	-0.81	552.5	-14.2	-0.56	ZZ
762D2V		644.5	9.0	0.25	588.5	21.8	0.86	ZZ
86X9ZQ		640.0	4.5	0.13	573.5	6.8	0.27	ZZ
8EMWVU		564.0	-71.5	-1.99	547.0	-19.7	-0.78	ZZ
8MXZ7Y		641.4	5.9	0.16	555.7	-11.1	-0.44	ZZ
9MBCYN		640.0	4.5	0.12	577.2	10.4	0.41	ZZ
ATG6RY		614.5	-21.0	-0.58	563.5	-3.2	-0.13	ZZ
BFAJ2E	*	607.9	-27.6	-0.77	596.1	29.3	1.16	ZZ
BXRDU		582.0	-53.5	-1.49	520.5	-46.2	-1.83	ZZ
DDAHQ8		662.9	27.4	0.76	569.9	3.2	0.13	ZZ
DH4CRE		678.0	42.5	1.18	591.5	24.8	0.98	ZZ
DWMWAI		622.5	-13.0	-0.36	566.0	-0.7	-0.03	ZZ
E34UDZ		590.5	-45.0	-1.25	537.5	-29.2	-1.16	ZZ
HTBKJM		650.5	15.0	0.42	578.0	11.3	0.45	ZZ
NAGVQG		621.6	-13.9	-0.39	550.9	-15.8	-0.63	ZZ
NJ6QPW		639.4	4.0	0.11	567.8	1.0	0.04	ZZ
NVVP3		662.9	27.4	0.76	572.2	5.5	0.22	ZZ
QHJRP4		655.5	20.0	0.56	554.7	-12.0	-0.48	ZZ
QHKRMH		630.1	-5.4	-0.15	555.5	-11.3	-0.45	ZZ
RYNJ4D		645.4	9.9	0.28	562.3	-4.5	-0.18	ZZ
U4NKFR		649.0	13.5	0.38	559.5	-7.2	-0.29	ZZ
U88YLD		656.0	20.5	0.57	597.5	30.8	1.22	ZZ
UGVUKT		569.5	-66.0	-1.84	519.0	-47.7	-1.89	ZZ
XCQZG9		617.0	-18.5	-0.51	550.5	-16.2	-0.64	ZZ
XGNKLR		702.5	67.0	1.87	604.5	37.8	1.49	ZZ
Y73ZE2		631.0	-4.5	-0.12	544.0	-22.7	-0.90	ZZ
YKFB3N		611.5	-24.0	-0.67	553.5	-13.2	-0.52	ZZ
YR276D		653.0	17.5	0.49	587.5	20.8	0.82	ZZ
ZULD6Z		639.5	4.0	0.11	561.5	-5.2	-0.21	ZZ

Summary Statistics			
Grand Means	635.48	percent	566.72
			percent
Std Dev Btwn Labs	35.88	percent	25.29
			percent
Statistics based on 30 of 30 reporting participants			

All samples : Polyisoprene compound, batch #1

Analysis 631

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

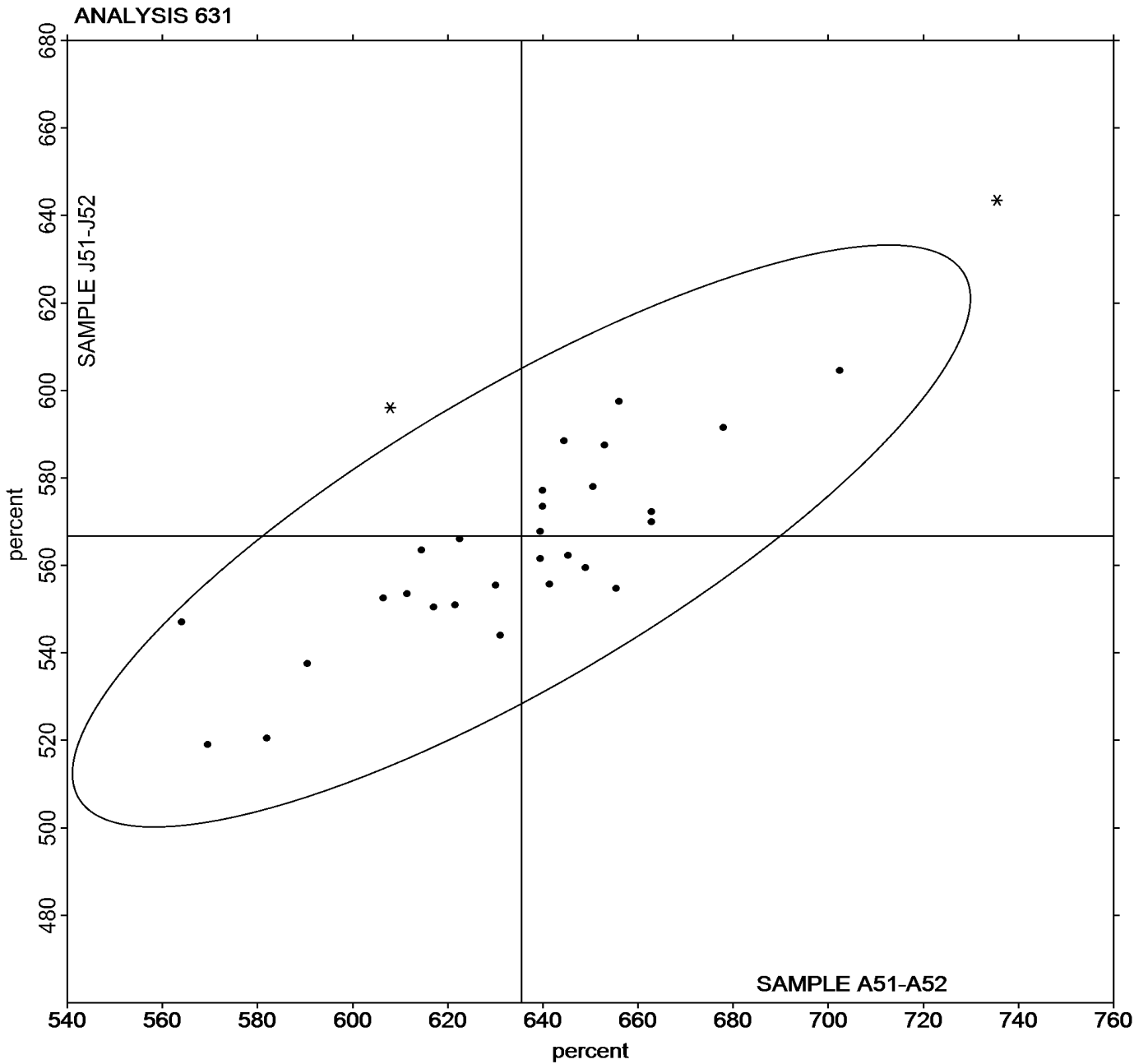
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Analysis 631

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

Grand Mean Sample J51 = 635.48 percent

Grand Mean Sample J52 = 566.72 percent



Analysis 632

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

WebCode	Data Flag	Sample J51			Sample J52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2QWQKB	*	728.5	-210.1	-3.04	790.0	-341.3	-2.85	ZZ
4CPE63		1,016.3	77.6	1.12	1,215.8	84.4	0.71	ZZ
762D2V		902.5	-36.1	-0.52	935.5	-195.8	-1.64	ZZ
86X9ZQ		961.6	23.0	0.33	1,132.0	0.7	0.01	ZZ
8EMWVU		919.5	-19.1	-0.28	1,080.0	-51.3	-0.43	ZZ
8MXZ7Y		971.9	33.2	0.48	1,187.3	55.9	0.47	ZZ
9MBCYN		1,012.4	73.7	1.07	1,241.5	110.2	0.92	ZZ
ATG6RY		952.3	13.6	0.20	1,175.2	43.9	0.37	ZZ
BFAJ2E		981.9	43.2	0.62	1,004.4	-126.9	-1.06	ZZ
BXRDU		1,038.5	99.9	1.44	1,274.0	142.7	1.19	ZZ
DDAHQ8		883.3	-55.4	-0.80	1,263.2	131.9	1.10	ZZ
DH4CRE		855.0	-83.6	-1.21	995.5	-135.8	-1.14	ZZ
DWMWAI		930.0	-8.6	-0.12	1,116.0	-15.3	-0.13	ZZ
E34UDZ		1,013.8	75.2	1.09	1,118.3	-13.1	-0.11	ZZ
EDQT47		966.5	27.9	0.40	1,053.5	-77.8	-0.65	ZZ
HTBKJM		952.5	13.9	0.20	1,241.5	110.2	0.92	ZZ
NAGVQG		958.7	20.1	0.29	1,135.7	4.3	0.04	ZZ
NJ6QPW		931.1	-7.5	-0.11	1,216.2	84.8	0.71	ZZ
NVVP3		910.0	-28.6	-0.41	1,130.0	-1.3	-0.01	ZZ
QHJRP4		866.7	-71.9	-1.04	978.3	-153.1	-1.28	ZZ
QHKRMH		983.4	44.8	0.65	1,163.2	31.8	0.27	ZZ
RYNJ4D		884.0	-54.6	-0.79	1,117.5	-13.8	-0.12	ZZ
U4NKFR		907.0	-31.6	-0.46	1,279.0	147.7	1.23	ZZ
U88YLD		918.0	-20.6	-0.30	931.5	-199.8	-1.67	ZZ
UGVUKT		1,087.8	149.2	2.16	1,240.1	108.7	0.91	ZZ
XCQZG9		1,012.7	74.0	1.07	1,240.1	108.7	0.91	ZZ
XGNKLR		855.0	-83.6	-1.21	1,071.5	-59.8	-0.50	ZZ
Y73ZE2		961.5	22.9	0.33	1,266.5	135.2	1.13	ZZ
YKFB3N		971.0	32.4	0.47	1,259.7	128.3	1.07	ZZ
YR276D		867.0	-71.6	-1.04	1,117.5	-13.8	-0.12	ZZ
ZULD6Z		897.5	-41.1	-0.59	1,101.5	-29.8	-0.25	ZZ

Summary Statistics

Grand Means

938.64 psi

1,131.35 psi

Std Dev Btwn Labs

69.21 psi

119.63 psi

Statistics based on 31 of 31 reporting participants



## Analysis 632

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

Summary Statistics in SI Units			
Grand Means	6.4716 MPa	7.80 MPa	
Std Dev Btwn Labs	0.4772 MPa	0.82 MPa	
Statistics based on 31 of 31 reporting participants			

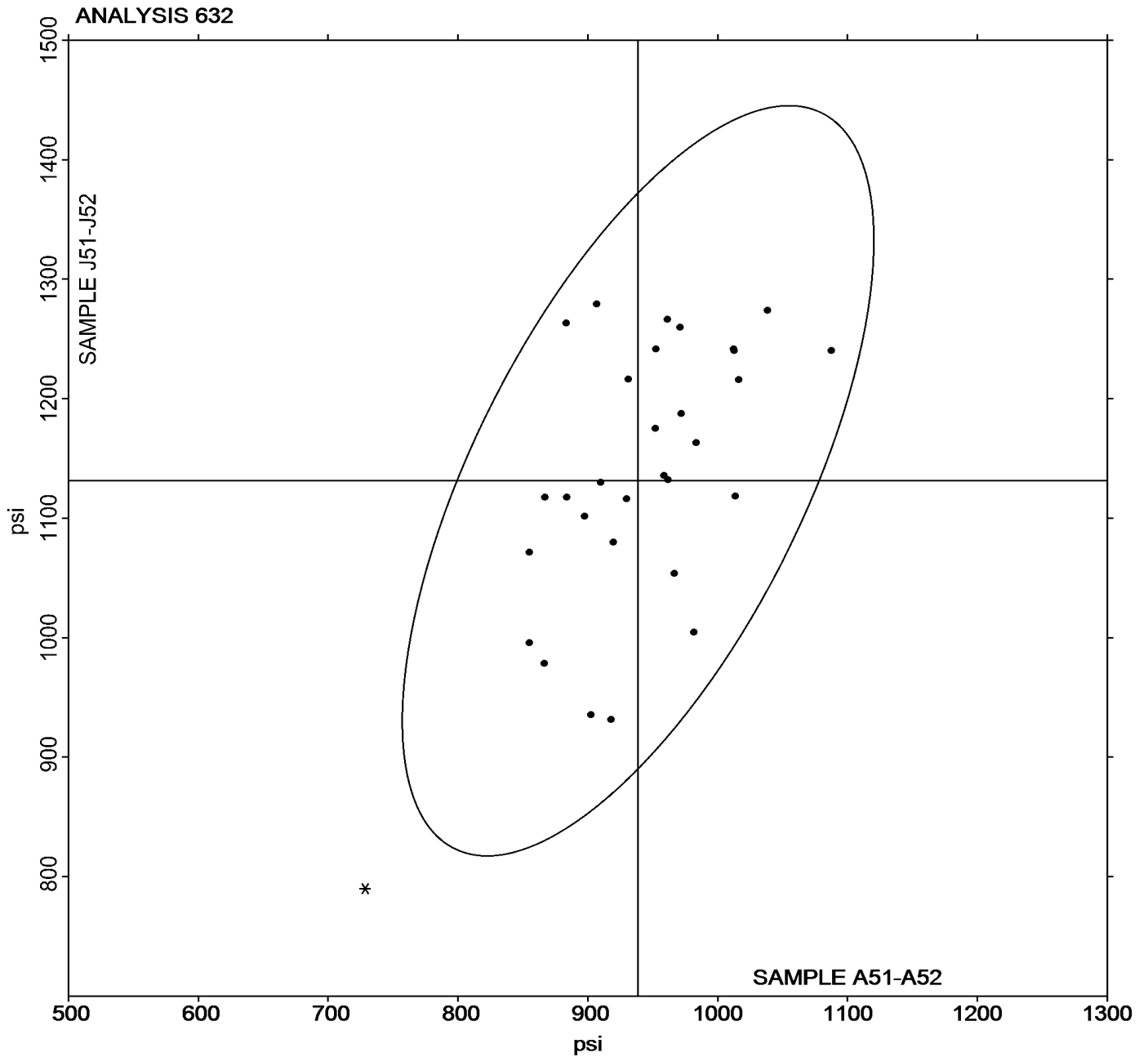
All samples : Polyisoprene compound, batch #1

Analysis 632

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

Grand Mean Sample J51 = 938.64 psi

Grand Mean Sample J52 = 1,131.35 psi



Analysis 633

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

WebCode	Data Flag	Sample J51			Sample J52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2QWQKB	*	170.5	-34.9	-2.75	184.0	-61.0	-2.50	ZZ
4CPE63		221.8	16.3	1.28	266.0	21.0	0.86	ZZ
762D2V		219.0	13.6	1.07	224.0	-21.0	-0.86	ZZ
86X9ZQ		198.0	-7.4	-0.59	237.1	-7.8	-0.32	ZZ
8EMWVU		195.5	-9.9	-0.78	221.5	-23.5	-0.96	ZZ
8MXZ7Y		215.2	9.7	0.76	263.0	18.0	0.74	ZZ
9MBCYN		211.0	5.6	0.44	258.9	13.9	0.57	ZZ
ATG6RY		205.1	-0.3	-0.03	258.3	13.3	0.55	ZZ
BFAJ2E		207.5	2.1	0.16	212.3	-32.7	-1.34	ZZ
BXRDU		221.5	16.1	1.26	264.5	19.5	0.80	ZZ
DDAHQ8		201.5	-4.0	-0.31	266.1	21.1	0.87	ZZ
DH4CRE		185.5	-19.9	-1.57	213.0	-32.0	-1.31	ZZ
DWMWAI		198.0	-7.4	-0.58	241.5	-3.5	-0.14	ZZ
E34UDZ		219.0	13.6	1.07	240.8	-4.2	-0.17	ZZ
EDQT47		209.0	3.6	0.28	223.0	-22.0	-0.90	ZZ
HTBKJM		210.0	4.6	0.36	268.0	23.0	0.94	ZZ
NAGVQG		209.6	4.2	0.33	257.4	12.5	0.51	ZZ
NJ6QPW		203.0	-2.4	-0.19	264.4	19.4	0.79	ZZ
NVVP3		197.1	-8.3	-0.65	245.5	0.5	0.02	ZZ
QHJRP4		206.1	0.7	0.05	217.0	-28.0	-1.15	ZZ
QHKRMH		212.1	6.6	0.52	247.1	2.2	0.09	ZZ
RYNJ4D		186.4	-19.1	-1.50	239.3	-5.7	-0.23	ZZ
U4NKFR		208.5	3.1	0.24	293.0	48.0	1.97	ZZ
U88YLD		202.5	-2.9	-0.23	192.5	-52.5	-2.15	ZZ
UGVUKT		232.1	26.6	2.10	253.8	8.8	0.36	ZZ
XCQZG9		219.7	14.2	1.12	268.3	23.3	0.95	ZZ
XGNKLR		210.0	4.6	0.36	258.5	13.5	0.55	ZZ
Y73ZE2		202.5	-2.9	-0.23	261.0	16.0	0.66	ZZ
YKFB3N		210.3	4.9	0.38	265.4	20.4	0.84	ZZ
YR276D		192.0	-13.4	-1.06	252.5	7.5	0.31	ZZ
ZULD6Z		188.5	-16.9	-1.33	236.5	-8.5	-0.35	ZZ

Summary Statistics

Grand Means

205.43 psi

244.97 psi

Std Dev Btwn Labs

12.71 psi

24.42 psi

Statistics based on 31 of 31 reporting participants

Analysis 633

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

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		Summary Statistics in SI Units	
Grand Means	1.4164 MPa	1.69	MPa
Std Dev Btwn Labs	0.0877 MPa	0.17	MPa
Statistics based on 31 of 31 reporting participants			

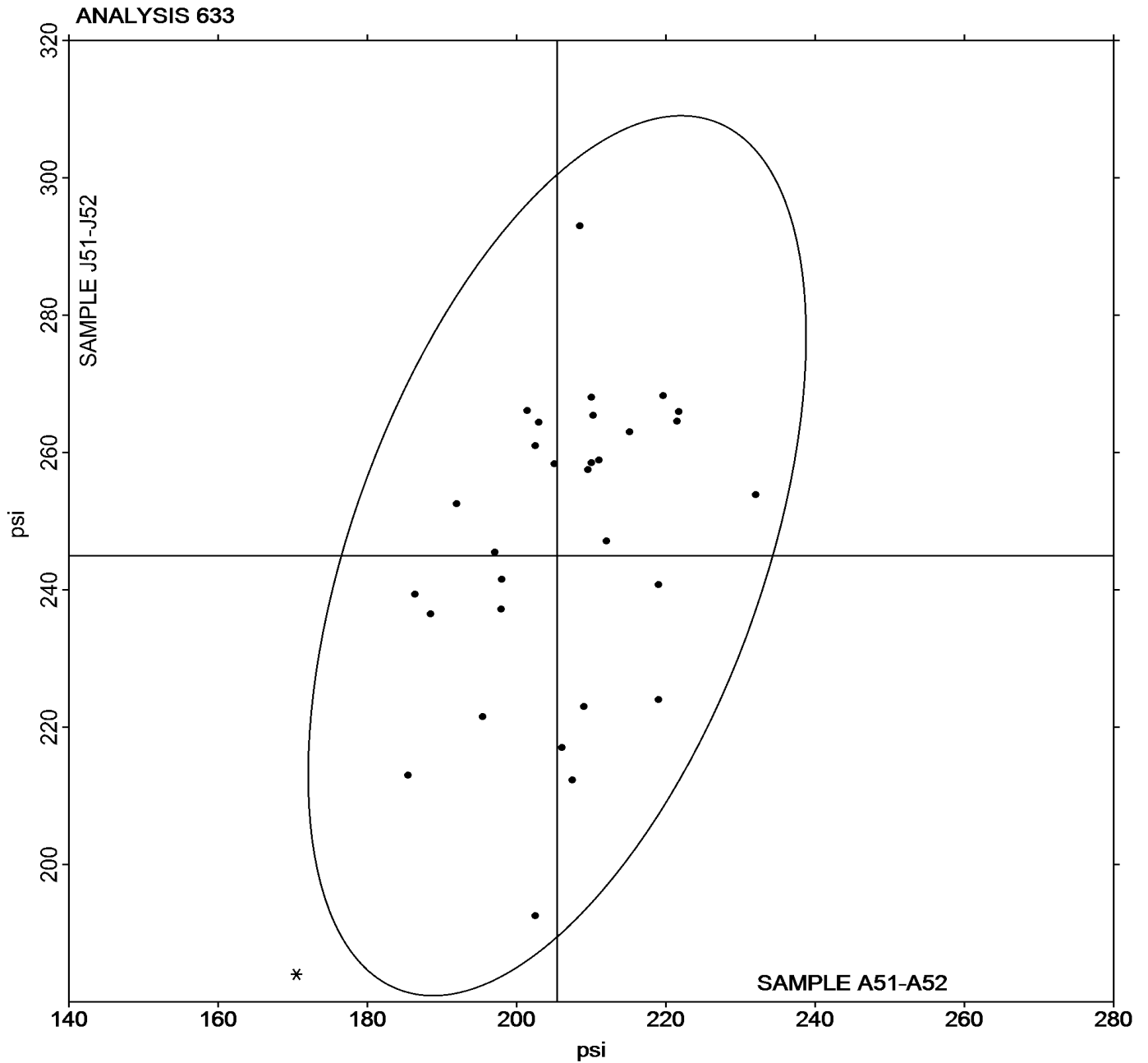
All samples : Polyisoprene compound, batch #1

Analysis 633

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

Grand Mean Sample J51 = 205.43 psi

Grand Mean Sample J52 = 244.97 psi



## Rubber Interlaboratory Testing Program

## Analysis 660

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

WebCode	Data Flag	Sample S51			Sample S52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2Y9MPH		48.63	-0.31	-0.27	54.08	-0.35	-0.27	XX
4CPE63		46.83	-2.11	-1.84	51.88	-2.55	-1.95	TV
6LTQ2W		49.17	0.23	0.20	55.02	0.58	0.45	MR
6Q42TQ		48.03	-0.90	-0.79	53.97	-0.47	-0.36	MR
8MXZ7Y		48.79	-0.15	-0.13	54.12	-0.32	-0.24	TV
9MBCYN		49.10	0.17	0.14	55.03	0.60	0.46	MR
BXRDUK		48.77	-0.17	-0.15	53.15	-1.28	-0.98	MR
C3TD4G		48.15	-0.79	-0.69	54.65	0.22	0.17	MR
CL7TMW		49.32	0.38	0.33	55.78	1.35	1.03	MR
CVFZN7		50.72	1.78	1.56	55.45	1.02	0.78	MR
DH4CRE		48.17	-0.77	-0.67	52.97	-1.47	-1.12	XX
E34UDZ		49.70	0.77	0.67	55.37	0.93	0.71	MR
EDQT47		49.57	0.63	0.55	54.03	-0.40	-0.31	MR
EN8FD7		49.13	0.20	0.17	53.65	-0.78	-0.60	MR
GA3279		46.89	-2.04	-1.79	52.56	-1.87	-1.43	MP
GTTA6N		50.08	1.15	1.01	55.18	0.75	0.57	MR
GVJDXV		48.73	-0.20	-0.18	55.82	1.38	1.06	MR
H93HKH		49.23	0.30	0.26	53.95	-0.48	-0.37	MR
JP86LJ		49.26	0.32	0.28	54.25	-0.18	-0.14	MR
KBGWY3	X	52.78	3.84	3.36	55.68	1.25	0.96	MR
KD67BP		47.25	-1.69	-1.48	52.68	-1.75	-1.34	MR
NAGVQG		49.25	0.32	0.28	54.08	-0.35	-0.27	MR
NJ6QPW		48.50	-0.43	-0.38	52.62	-1.81	-1.39	MR
NVVP3		49.37	0.43	0.38	54.38	-0.05	-0.04	XX
P7UJM6		48.67	-0.27	-0.24	54.33	-0.10	-0.08	MR
QHJRP4	*	52.40	3.47	3.04	58.26	3.83	2.93	TV
QHCRMH		49.13	0.20	0.17	54.95	0.52	0.40	MR
RYNJ4D		47.70	-1.24	-1.08	54.03	-0.40	-0.31	MR
TYKGUZ		50.48	1.55	1.36	57.07	2.63	2.01	MR
U4NKFR		48.97	0.03	0.03	53.98	-0.45	-0.35	MR
UGVUKT		48.62	-0.32	-0.28	55.45	1.02	0.78	MR
XCQZG9		49.80	0.87	0.76	55.77	1.33	1.02	MR
Y73ZE2		50.33	1.40	1.22	55.27	0.83	0.64	MR
YKFB3N		47.31	-1.63	-1.43	53.59	-0.85	-0.65	TV
YR276D		47.75	-1.19	-1.04	53.37	-1.07	-0.82	MR

## Analysis 660

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

## Summary Statistics

Grand Means

48.935 ML 1 + 4

54.433 ML 1 + 4

Stnd Dev Btwn Labs

1.142 ML 1 + 4

1.307 ML 1 + 4

Statistics based on 34 of 35 reporting participants

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

**Comments on assigned Data Flags for Test #660**

KBGWY3 (X) - Inconsistency in testing between Sample groups. Data for Sample group S51-S52 are high.

Instrument Code Listing

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

**Instruments:**

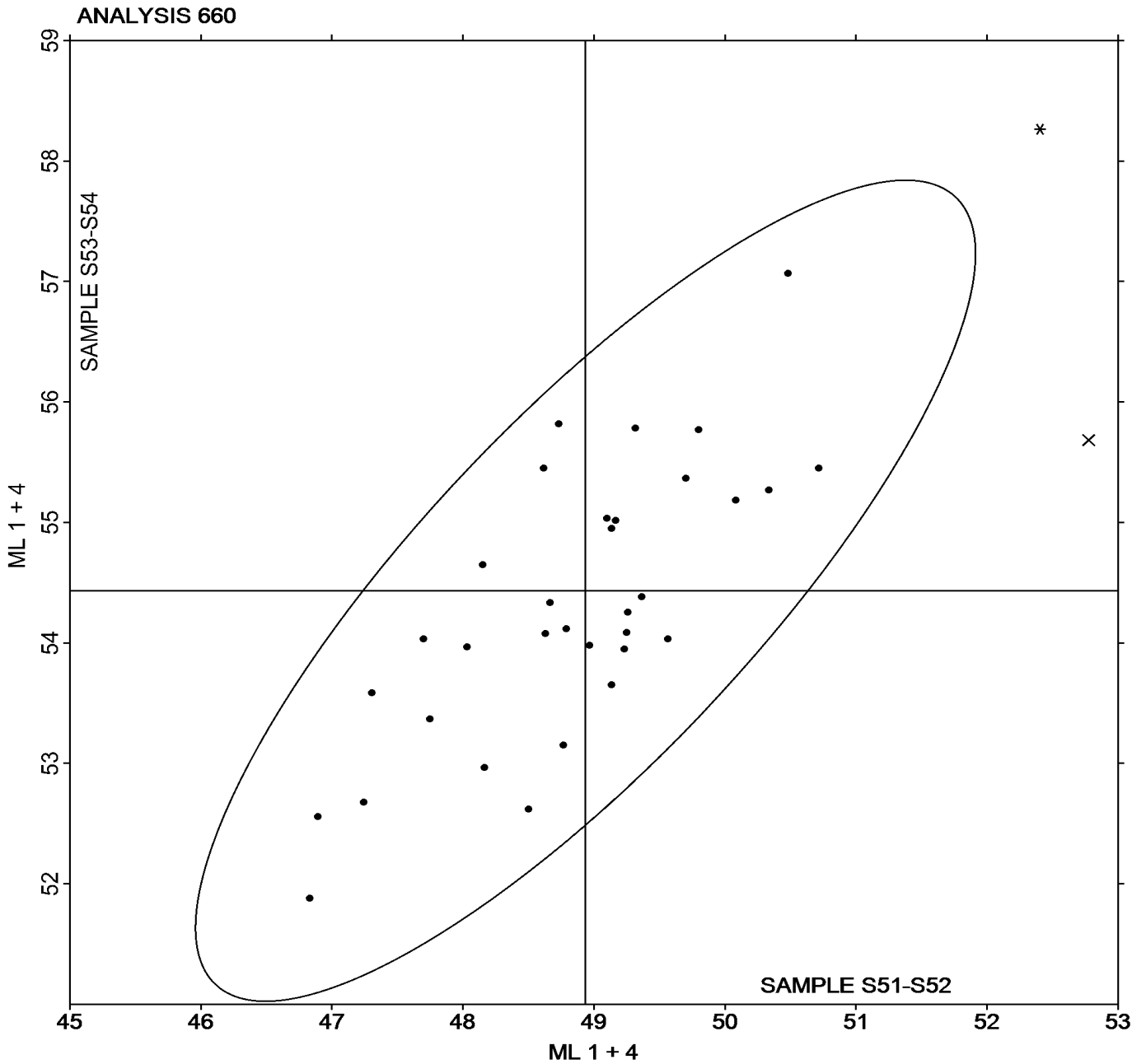
- |  |  |
|--|--|
| (ML) Alpha Technologies/Monsanto model not specified | (MM) Alpha Technologies Model 1xxx or OSM    |
| (MP) Monsanto Compact Mooney Viscometer              | (MR) Alpha Technologies Model MV2000/MV2000E |
| (MZ) Rebuilt Monsanto Mooney Viscometer              | (SF) Scott STI (any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

Analysis 660

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

Grand Mean Sample S51 = 48.935 ML 1 + 4

Grand Mean Sample S52 = 54.433 ML 1 + 4





Analysis 661

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

WebCode	Data Flag	Sample			Sample			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4CPE63		46.83	-2.14	-1.81	48.55	-3.22	-2.36	TV
8MXZ7Y		48.79	-0.18	-0.15	52.27	0.51	0.38	XX
9MBCYN		49.10	0.13	0.11	51.95	0.19	0.14	MR
BXRDU		48.77	-0.20	-0.17	50.48	-1.28	-0.94	XX
C3TD4G		48.15	-0.82	-0.69	52.03	0.27	0.20	MR
CL7TMW		49.32	0.35	0.30	53.12	1.36	0.99	MR
CVFZN7		50.72	1.75	1.48	52.33	0.57	0.42	MR
DH4CRE		48.17	-0.80	-0.68	49.75	-2.01	-1.47	XX
E34UDZ		49.70	0.73	0.62	52.57	0.81	0.59	MR
EDQT47		49.57	0.60	0.51	51.44	-0.32	-0.23	MP
EN8FD7		49.13	0.17	0.14	51.52	-0.24	-0.18	MR
GA3279		46.89	-2.07	-1.75	49.44	-2.32	-1.70	XX
GTTA6N		50.08	1.12	0.94	52.63	0.87	0.64	MR
GVJDXV		48.73	-0.23	-0.20	53.02	1.26	0.92	MR
H93HKH		49.23	0.27	0.23	51.38	-0.38	-0.28	MR
JP86LJ		49.26	0.29	0.25	51.97	0.21	0.15	MR
KBGWY3	X	52.78	3.81	3.22	52.65	0.89	0.65	MR
KD67BP		47.25	-1.72	-1.45	50.71	-1.06	-0.77	MR
NAGVQG		49.25	0.28	0.24	51.03	-0.73	-0.53	MR
NJ6QPW		48.50	-0.46	-0.39	50.06	-1.70	-1.25	MR
NVVFP3		49.37	0.40	0.34	52.58	0.82	0.60	XX
P7UJM6		48.67	-0.30	-0.25	51.37	-0.39	-0.29	MR
QHJRP4	*	52.40	3.44	2.90	55.22	3.46	2.54	TV
QHCRMH		49.13	0.17	0.14	52.22	0.46	0.33	MR
RYNJ4D		47.70	-1.27	-1.07	51.60	-0.16	-0.12	MR
TYKGUZ		50.48	1.52	1.28	54.15	2.39	1.75	MR
U4NKFR		48.97	0.00	0.00	51.47	-0.29	-0.21	MR
UGVUKT		48.62	-0.35	-0.30	52.48	0.72	0.53	MR
XCQZG9		49.80	0.83	0.70	53.35	1.59	1.17	MR
Y73ZE2		50.33	1.37	1.15	52.08	0.32	0.24	MR
YKFB3N		47.31	-1.66	-1.40	50.39	-1.37	-1.01	TV
YR276D		47.75	-1.22	-1.03	51.40	-0.36	-0.26	MR

Summary Statistics

Grand Means

48.967 ML 1 + 8

51.760 ML 1 + 8

Std Dev Btwn Labs

1.183 ML 1 + 8

1.364 ML 1 + 8

Statistics based on 31 of 32 reporting participants

Analysis 661

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

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Please refer to the sample information provided for Analysis 660.

**Comments on assigned Data Flags for Test #661**

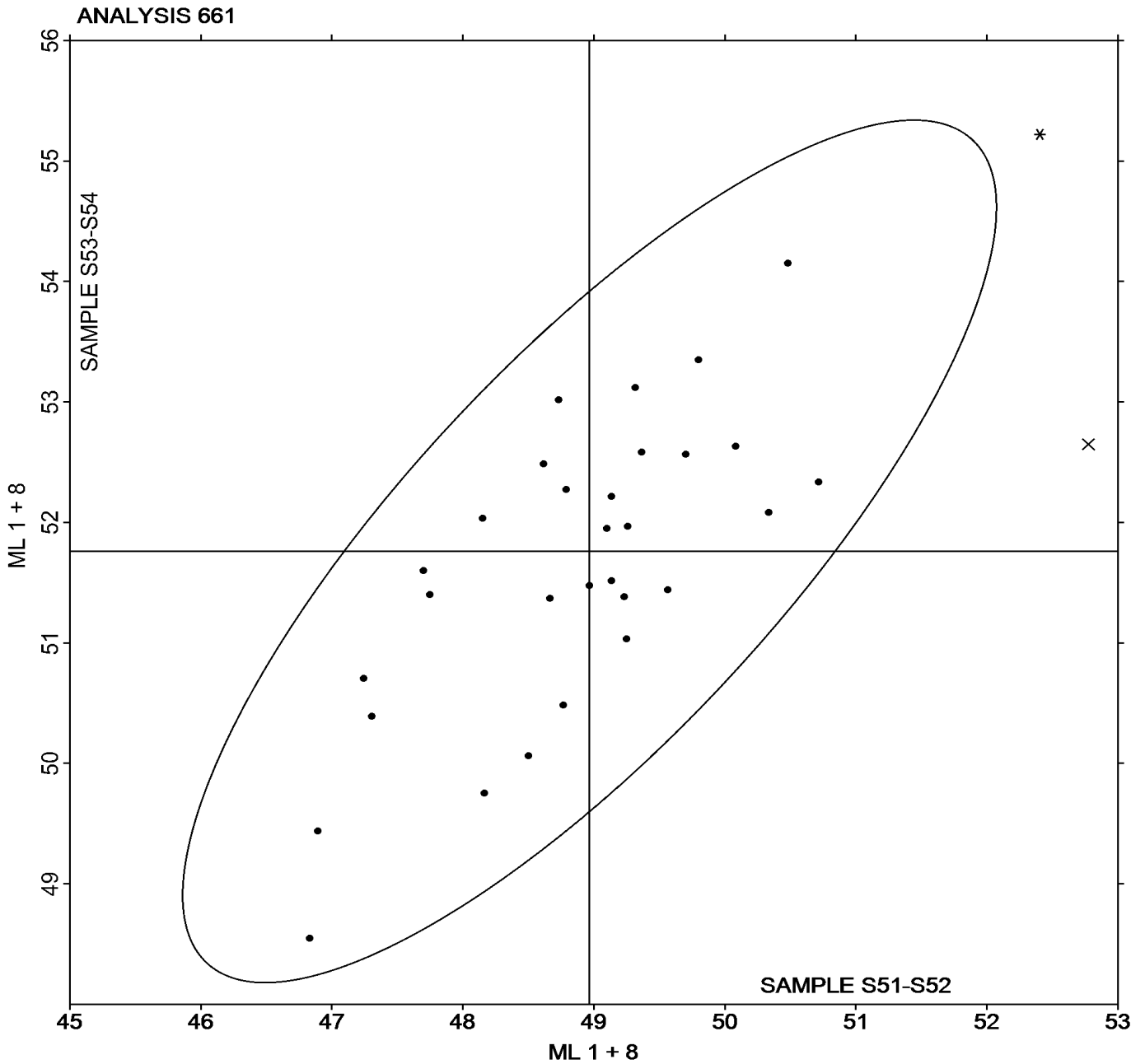
KBGWY3 (X) - Inconsistency in testing between Sample groups. Data for Sample group S51-S52 are high.

Analysis 661

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

Grand Mean Sample = 48.967 ML 1 + 8

Grand Mean Sample = 51.760 ML 1 + 8



## Analysis 662

## Mooney Stress Relaxation: t80 (seconds)

WebCode	Data Flag	Sample S51			Sample S52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
6LTQ2W		4.800	-0.023	-0.06	8.400	1.312	2.08	MR
BXRDUN		4.688	-0.135	-0.36	6.757	-0.332	-0.53	MR
E34UDZ		4.827	0.004	0.01	7.360	0.272	0.43	MR
H93HKH		4.572	-0.251	-0.68	6.558	-0.530	-0.84	MR
NAGVQG		5.500	0.677	1.83	7.463	0.375	0.60	XX
P7UJM6		4.733	-0.090	-0.24	7.000	-0.088	-0.14	MR
QHKRMH		4.113	-0.710	-1.92	6.623	-0.465	-0.74	MR
RYNJ4D		5.230	0.407	1.10	7.450	0.362	0.57	MR
U4NKFR		4.832	0.009	0.02	6.143	-0.945	-1.50	MR
Y73ZE2		4.933	0.111	0.30	7.127	0.039	0.06	MR

## Summary Statistics

Grand Means

4.8228 seconds

7.0882 seconds

Std Dev Btwn Labs

0.3696 seconds

0.6303 seconds

Statistics based on 10 of 10 reporting participants

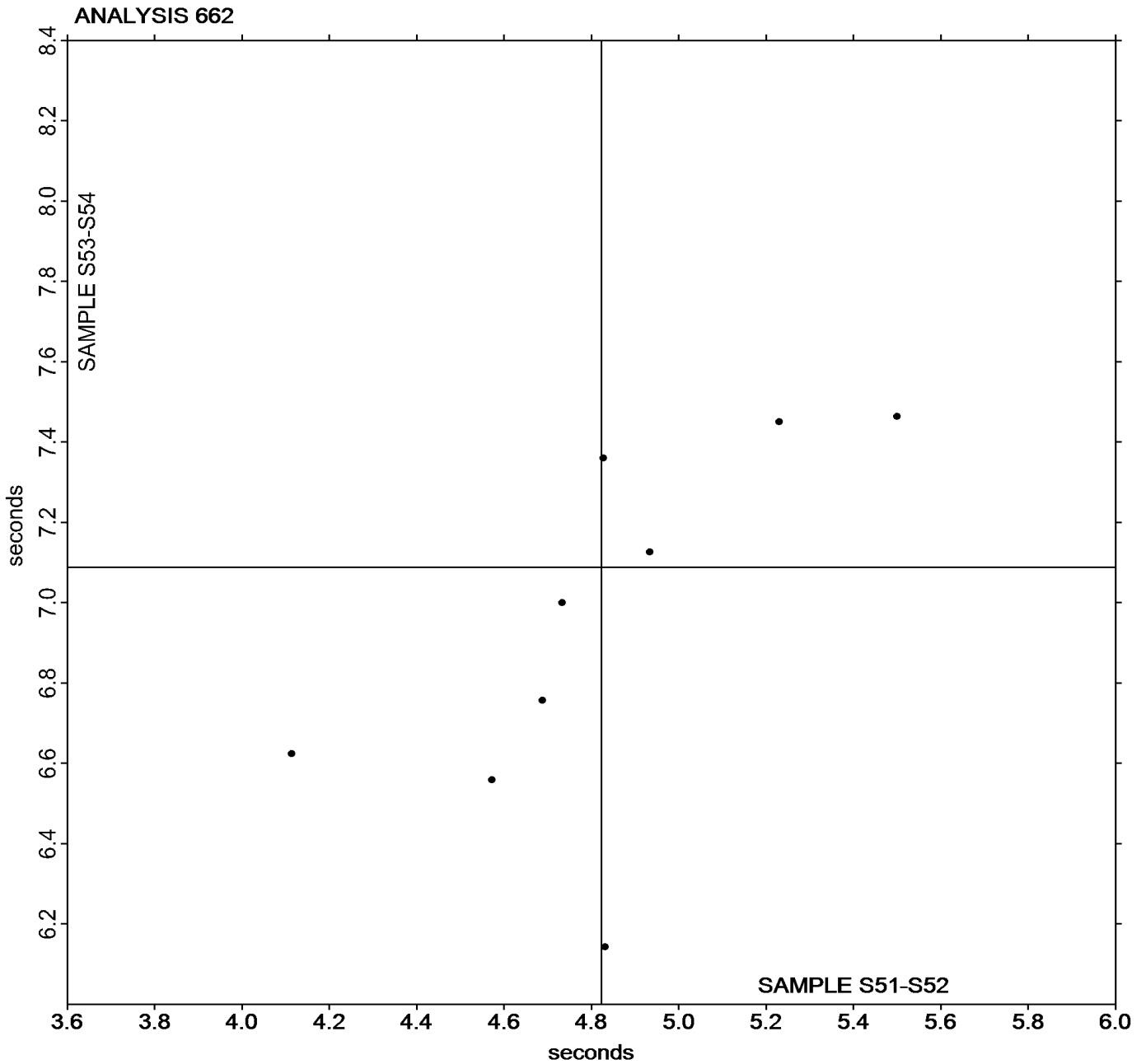
Samples S51-S52: NBR &amp; S53-S54: Butyl

Analysis 662

Mooney Stress Relaxation: t80 (seconds)

Grand Mean Sample S51 = 4.8228 seconds

Grand Mean Sample S52 = 7.0882 seconds



## Analysis 663

## Mooney Stress Relaxation: X30 (percent)

WebCode	Data Flag	Sample S51			Sample S52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
BXRDUN		92.08	0.57	0.68	93.31	0.59	0.80	MR
E34UDZ		91.31	-0.19	-0.23	91.99	-0.73	-0.99	MR
H93HKH		91.64	0.13	0.16	93.00	0.28	0.38	MR
NAGVQG		89.63	-1.87	-2.22	91.45	-1.27	-1.74	XX
P7UJM6		91.78	0.28	0.33	92.83	0.12	0.16	MR
QHKRMH		92.68	1.17	1.39	93.30	0.58	0.79	MR
RYNJ4D		91.37	-0.14	-0.17	92.35	-0.37	-0.51	MR
U4NKFR		91.94	0.44	0.52	93.79	1.08	1.47	MR
Y73ZE2		91.13	-0.38	-0.45	92.45	-0.27	-0.37	MR

## Summary Statistics

Grand Means

91.506 percent

92.718 percent

Std Dev Btwn Labs

0.843 percent

0.731 percent

Statistics based on 9 of 9 reporting participants

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

**Analysis Notes:**

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

H93HKH - Data appear to be reported as percent decay and not X30. Data corrected by CTS.

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

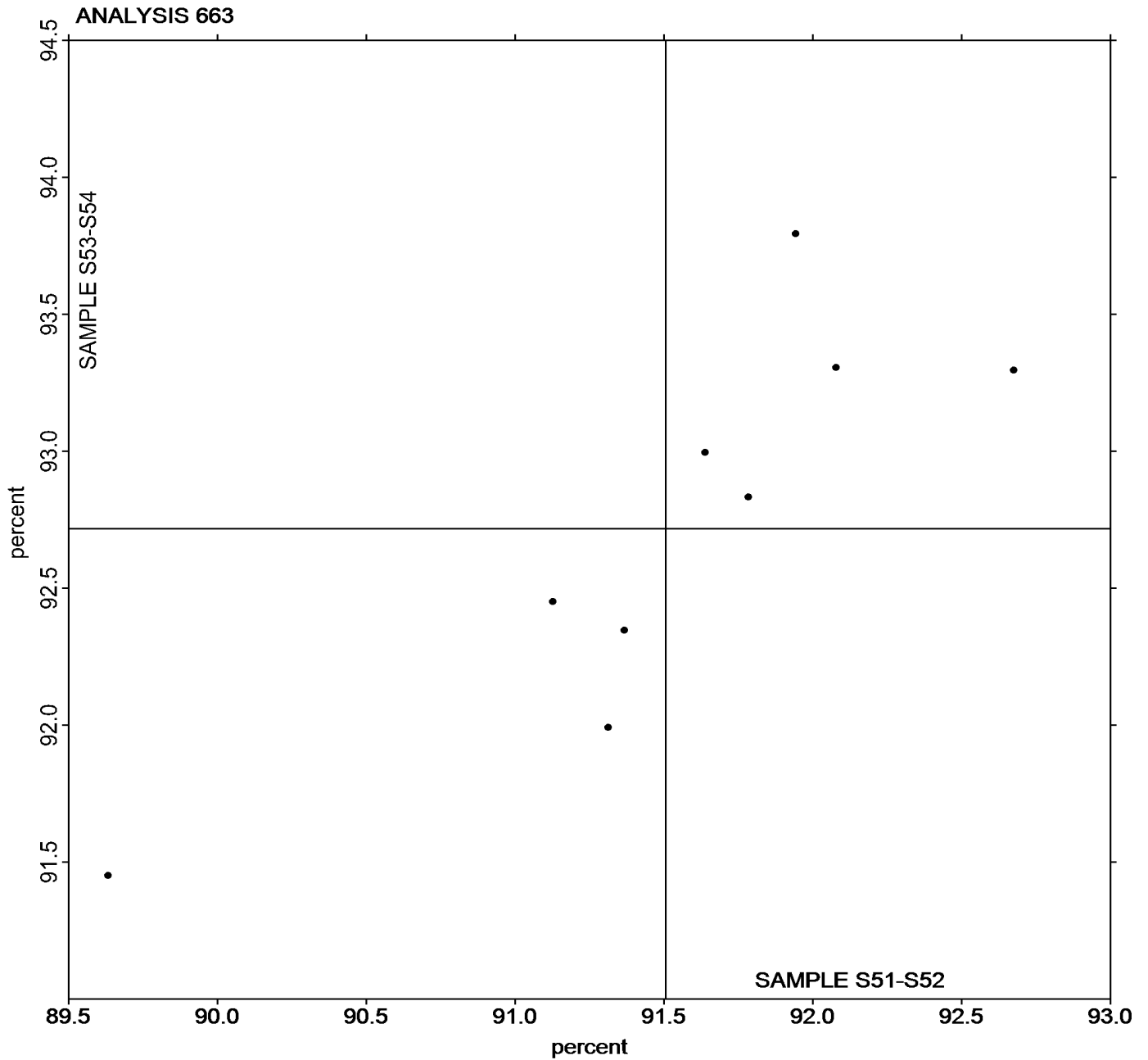
Y73ZE2 - Data appear to be reported as percent decay and not X30. Data corrected by CTS.

Analysis 663

Mooney Stress Relaxation: X30 (percent)

Grand Mean Sample S51 = 91.506 percent

Grand Mean Sample S52 = 92.718 percent



## Analysis 664

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

WebCode	Data Flag	Sample S51			Sample S52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
BXRDUN		418.6	-18.5	-0.60	389.0	-29.1	-0.82	MR
E34UDZ		466.5	29.3	0.95	477.1	59.0	1.66	MR
H93HKH		441.5	4.4	0.14	405.8	-12.3	-0.35	MR
NAGVQG	X	0.4	-436.7	-14.06	0.6	-417.5	-11.73	XX
P7UJM6		432.8	-4.3	-0.14	419.7	1.6	0.04	MR
QHJRP4	M	No data reported for this sample			239.4	-178.7	-5.02	TV
QHKRMH		380.8	-56.3	-1.81	390.1	-28.0	-0.79	MR
RYNJ4D		446.8	9.7	0.31	446.8	28.7	0.81	XX
U4NKFR		426.6	-10.5	-0.34	372.3	-45.8	-1.29	MR
Y73ZE2		483.3	46.2	1.49	444.1	26.0	0.73	MR

## Summary Statistics

Grand Means

437.14 M-s

418.14 M-s

Stnd Dev Btwn Labs

31.06 M-s

35.59 M-s

Statistics based on 8 of 10 reporting participants

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

**Comments on assigned Data Flags for Test #664**

NAGVQG (X) - Extreme data.

QHJRP4 (M) - Data not reported for Sample group S51-S52.

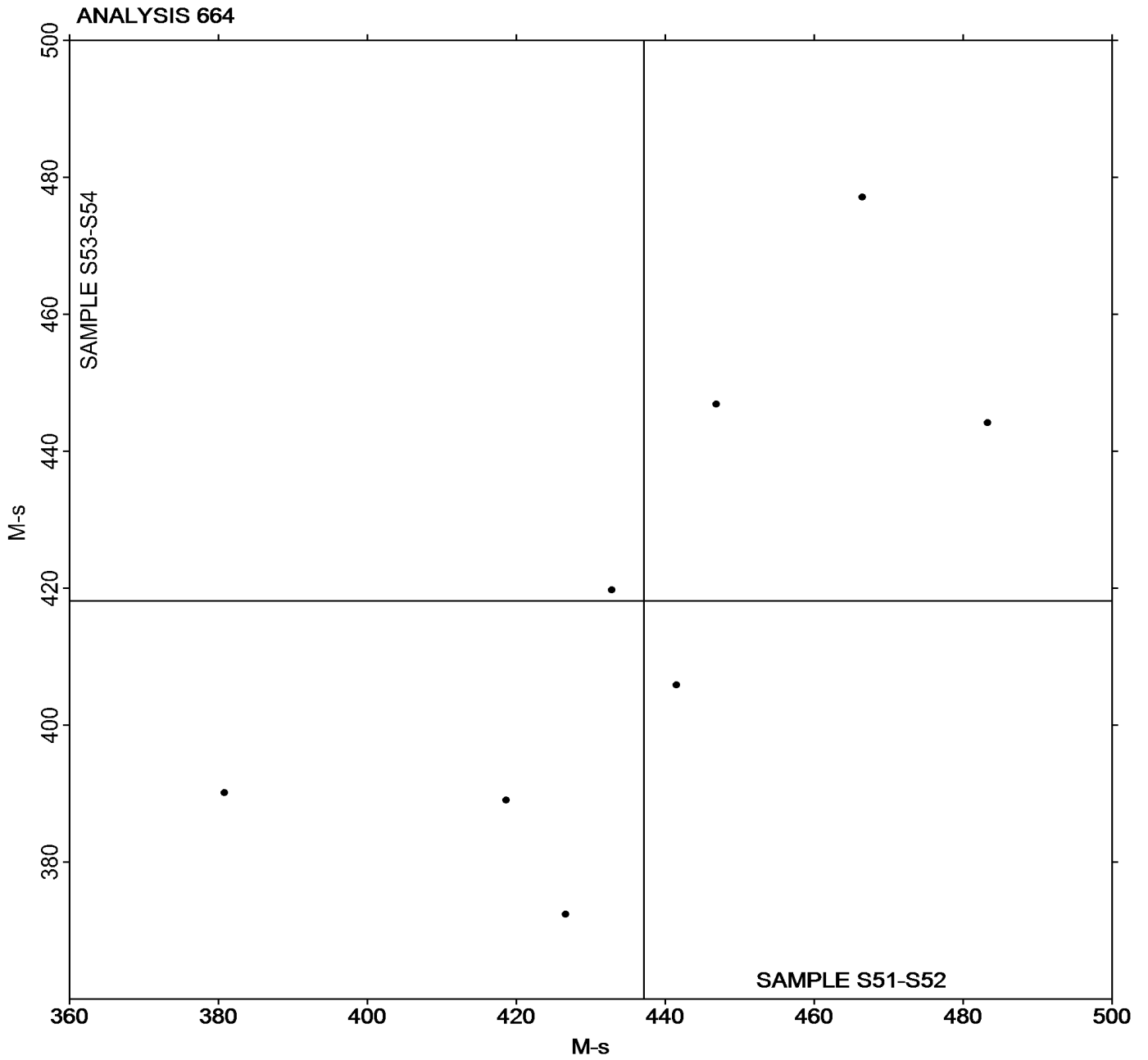


Analysis 664

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

Grand Mean Sample S51 = 437.14 M-s

Grand Mean Sample S52 = 418.14 M-s



Rubber Interlaboratory Testing Program

Analysis 669

ODR Vulcanization-Cure Time 10% (minutes)

WebCode	Data Flag	Sample W51			Sample W52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		2.178	0.111	0.96	1.908	0.121	0.62	ZZ
BFAJ2E		2.120	0.052	0.45	1.723	-0.064	-0.33	ZZ
EDQT47		2.020	-0.048	-0.41	1.650	-0.137	-0.70	ZZ
EN8FD7		2.197	0.129	1.12	2.032	0.244	1.24	ZZ
GA3279		2.167	0.099	0.86	2.050	0.263	1.34	ZZ
GTTA6N		1.965	-0.103	-0.89	1.707	-0.081	-0.41	ZZ
JP86LJ		1.943	-0.124	-1.08	1.472	-0.316	-1.61	ZZ
KD67BP		1.942	-0.126	-1.09	1.482	-0.306	-1.56	ZZ
NAGVQG	X	2.125	0.057	0.50	0.133	-1.654	-8.42	ZZ
QHJRP4		2.262	0.194	1.68	2.023	0.236	1.20	ZZ
U4NKFR		2.050	-0.018	-0.15	1.827	0.039	0.20	ZZ
UGVUKT		2.050	-0.018	-0.15	1.760	-0.027	-0.14	ZZ
YR276D		1.918	-0.149	-1.30	1.813	0.026	0.13	ZZ

Summary Statistics	
Grand Means	2.0676 minutes
Std Dev Btwn Labs	0.1153 minutes
	1.7872 minutes
	0.1965 minutes
Statistics based on 12 of 13 reporting participants	

Samples W51-W52: EPDM compound #1 & W53-W54: EPDM compound #2

**Comments on assigned Data Flags for Test #669**

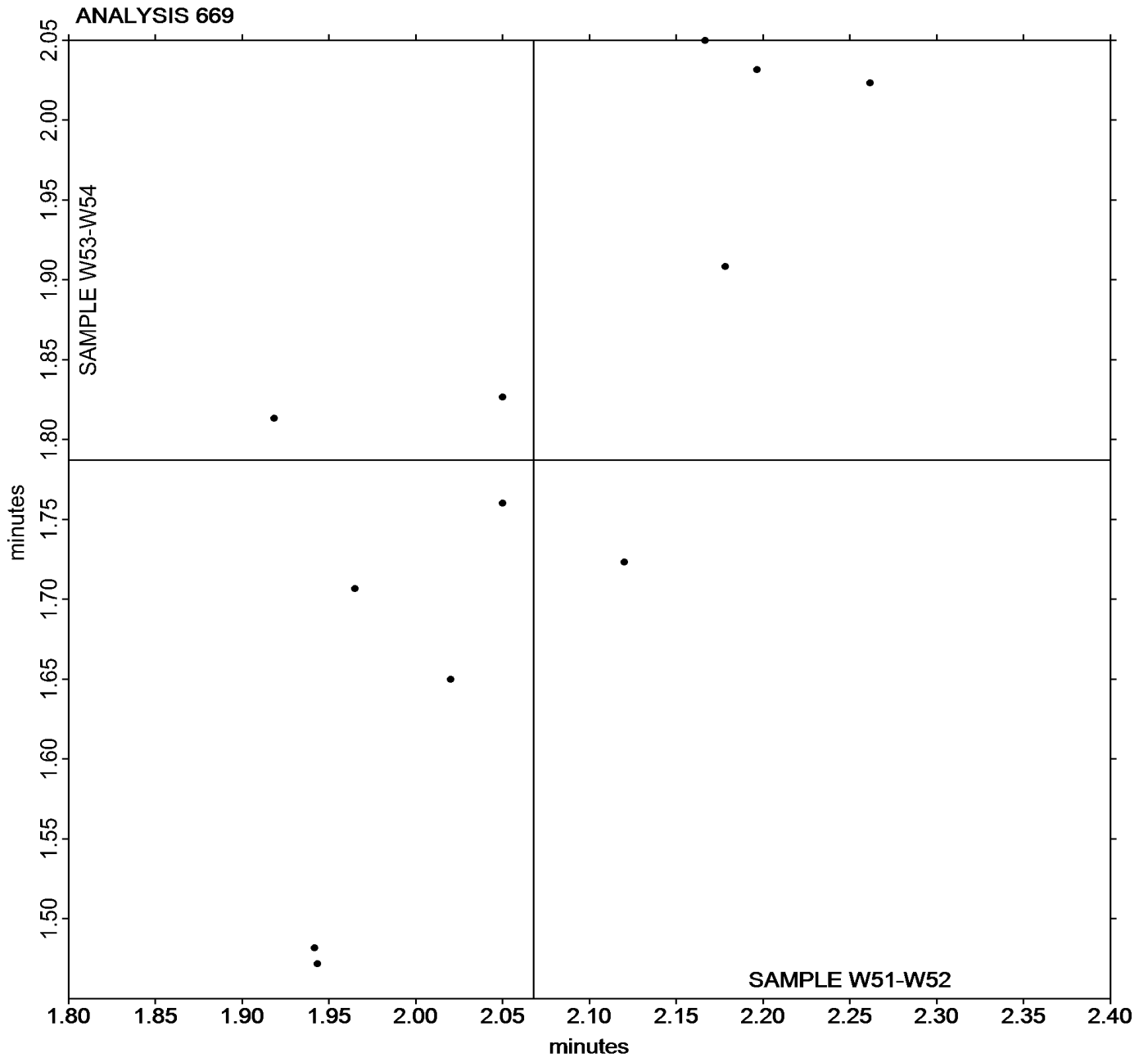
NAGVQG (X) - Data for Sample group W53-W54 are low.

Analysis 669

ODR Vulcanization-Cure Time 10% (minutes)

Grand Mean Sample **W51** = 2.0676 minutes

Grand Mean Sample **W52** = 1.7872 minutes



## Analysis 670

## ODR Vulcanization-Scorch Time, Ts1 (minutes)

WebCode	Data Flag	Sample W51			Sample W52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		1.513	0.029	0.26	1.682	0.096	0.44	ZZ
BFAJ2E		1.515	0.031	0.28	1.522	-0.064	-0.29	ZZ
EDQT47		1.442	-0.043	-0.39	1.402	-0.184	-0.84	ZZ
EN8FD7		1.622	0.137	1.24	1.872	0.286	1.31	ZZ
GA3279		1.665	0.181	1.63	1.943	0.357	1.63	ZZ
GTTA6N		1.392	-0.093	-0.84	1.478	-0.108	-0.49	ZZ
JP86LJ		1.377	-0.108	-0.97	1.298	-0.288	-1.32	ZZ
KD67BP		1.353	-0.131	-1.18	1.245	-0.341	-1.56	ZZ
NAGVQG	X	1.490	0.006	0.05	0.117	-1.469	-6.72	ZZ
QHJRP4		1.648	0.164	1.48	1.818	0.232	1.06	ZZ
U4NKFR		1.487	0.002	0.02	1.635	0.049	0.22	ZZ
UGVUKT		1.422	-0.063	-0.57	1.545	-0.041	-0.19	ZZ
YR276D		1.377	-0.108	-0.97	1.593	0.007	0.03	ZZ

## Summary Statistics

Grand Means

1.4843 minutes

1.5861 minutes

Std Dev Btwn Labs

0.1107 minutes

0.2185 minutes

Statistics based on 12 of 13 reporting participants

Samples W51-W52: EPDM compound #1 &amp; W53-W54: EPDM compound #2

**Comments on assigned Data Flags for Test #670**

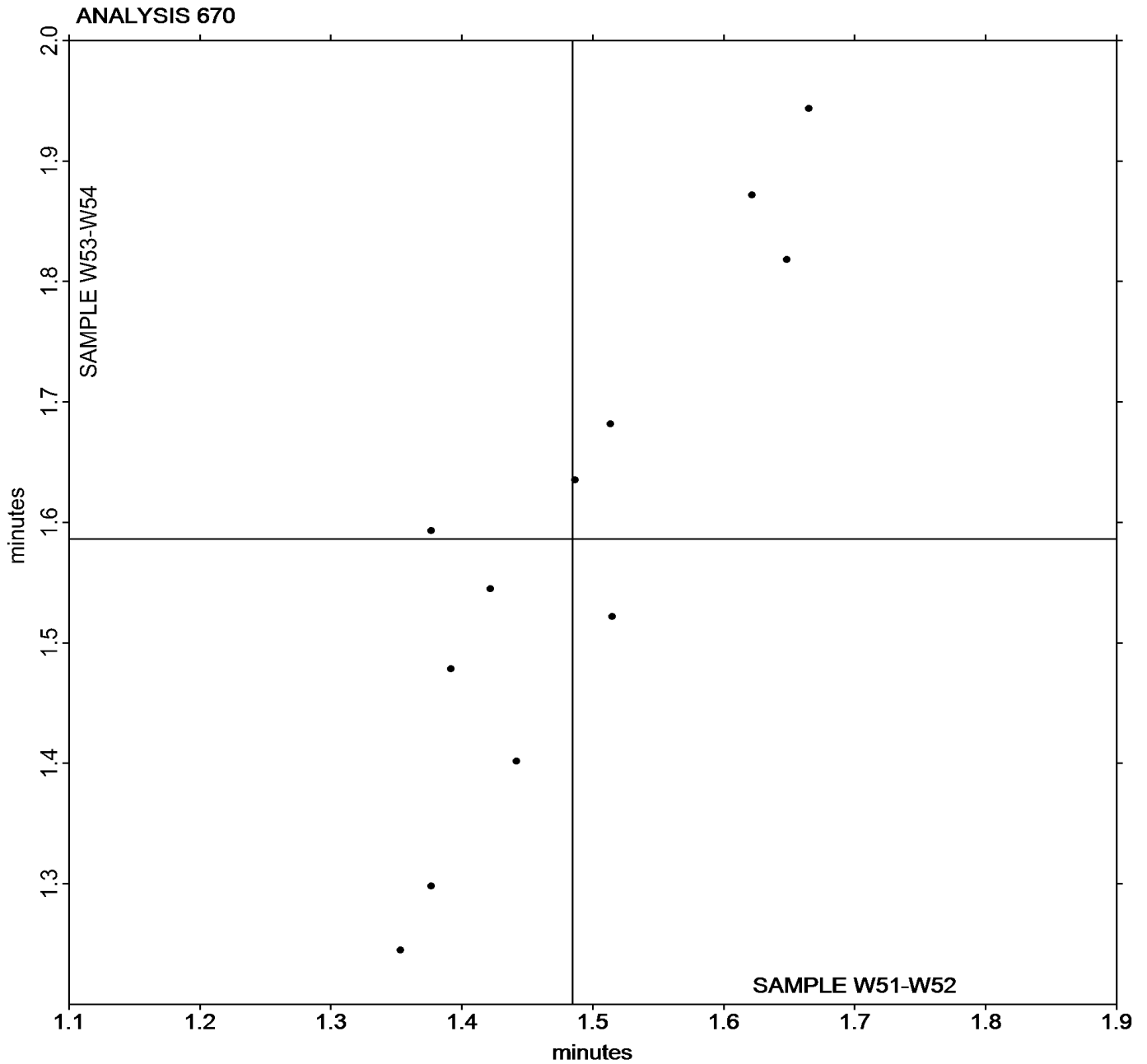
NAGVQG (X) - Data for Sample group A53-A54 are low.

Analysis 670

ODR Vulcanization-Scorch Time, Ts1 (minutes)

Grand Mean Sample W51 = 1.4843 minutes

Grand Mean Sample W52 = 1.5861 minutes



## Analysis 671

## ODR Vulcanization-Cure Time 50% (minutes)

WebCode	Data Flag	Sample W51			Sample W52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		4.335	0.181	1.06	3.327	0.196	0.97	ZZ
BFAJ2E		4.237	0.083	0.49	3.042	-0.089	-0.44	ZZ
EDQT47		4.038	-0.115	-0.68	3.035	-0.096	-0.48	ZZ
EN8FD7		4.247	0.093	0.55	3.350	0.219	1.09	ZZ
GA3279		4.172	0.018	0.11	3.095	-0.036	-0.18	ZZ
GTTA6N		3.995	-0.159	-0.93	3.092	-0.039	-0.19	ZZ
JP86LJ		4.032	-0.122	-0.71	2.917	-0.214	-1.06	ZZ
KD67BP		4.045	-0.109	-0.64	2.732	-0.399	-1.98	ZZ
NAGVQG		4.218	0.065	0.38	3.090	-0.041	-0.20	ZZ
QHJRP4		4.490	0.336	1.97	3.518	0.388	1.93	ZZ
U4NKFR		4.152	-0.002	-0.01	3.258	0.128	0.63	ZZ
UGVUKT		4.220	0.066	0.39	3.070	-0.061	-0.30	ZZ
YR276D		3.817	-0.337	-1.98	3.175	0.044	0.22	ZZ

## Summary Statistics

Grand Means

4.1536 minutes

3.1308 minutes

Std Dev Btwn Labs

0.1706 minutes

0.2011 minutes

Statistics based on 13 of 13 reporting participants

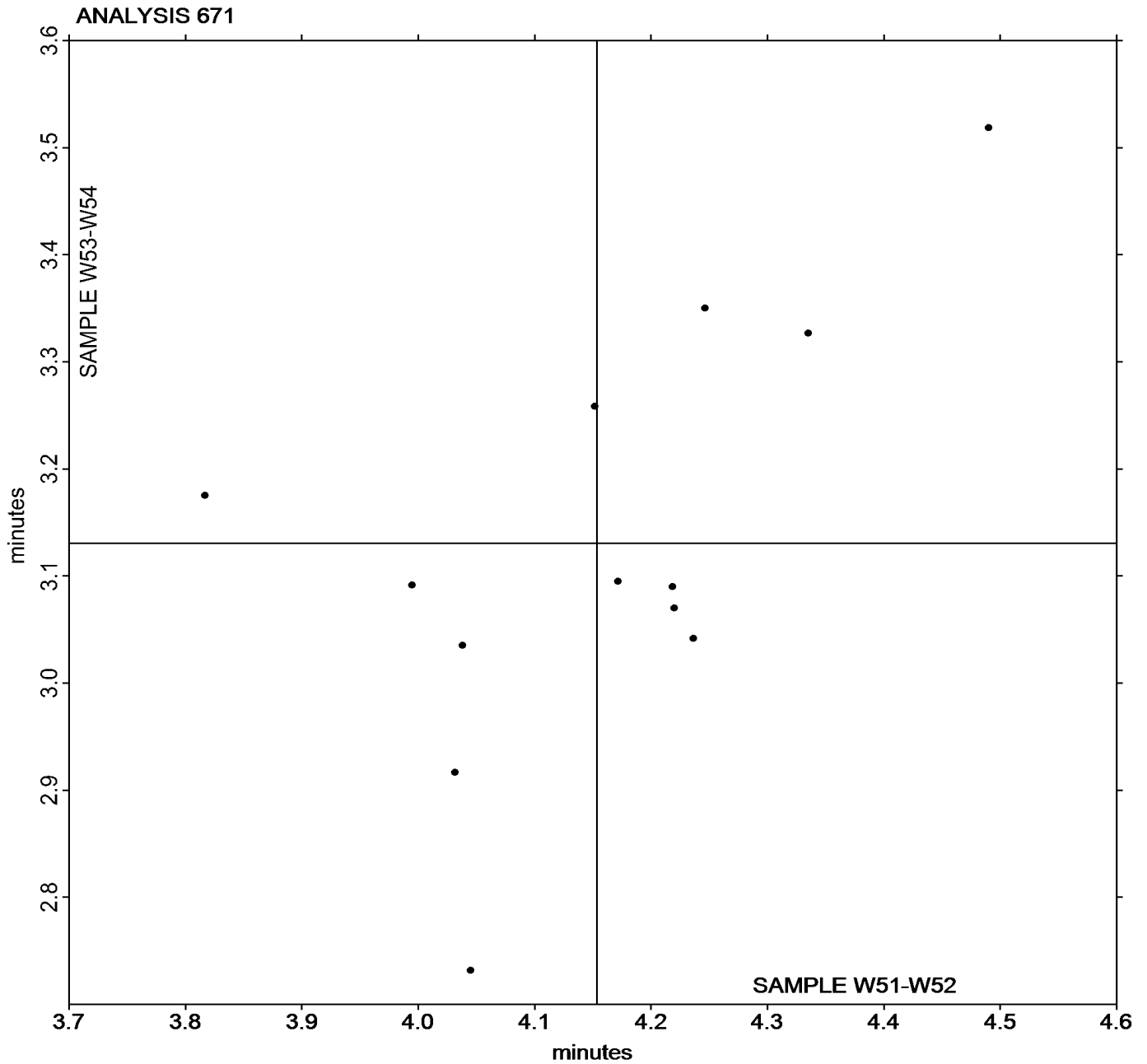
Samples W51-W52: EPDM compound #1 &amp; W53-W54: EPDM compound #2

Analysis 671

ODR Vulcanization-Cure Time 50% (minutes)

Grand Mean Sample W51 = 4.1536 minutes

Grand Mean Sample W52 = 3.1308 minutes



## Analysis 672

## ODR Vulcanization-Cure Time 90% (minutes)

WebCode	Data Flag	Sample W51			Sample W52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		13.91	-0.63	-1.11	11.75	1.73	0.82	ZZ
BFAJ2E		14.21	-0.33	-0.59	9.25	-0.78	-0.37	ZZ
EDQT47		14.22	-0.32	-0.57	8.29	-1.74	-0.82	ZZ
EN8FD7		14.39	-0.15	-0.26	8.41	-1.62	-0.76	ZZ
GA3279		14.29	-0.25	-0.45	7.61	-2.41	-1.14	ZZ
GTTA6N		14.05	-0.49	-0.86	10.89	0.86	0.41	ZZ
JP86LJ		14.51	-0.03	-0.06	12.45	2.43	1.14	ZZ
KD67BP		14.70	0.16	0.27	7.36	-2.67	-1.26	ZZ
NAGVQG		15.00	0.46	0.82	14.29	4.26	2.01	ZZ
QHJRP4		14.86	0.32	0.57	10.55	0.53	0.25	ZZ
U4NKFR		14.42	-0.12	-0.21	10.20	0.17	0.08	ZZ
UGVUKT		16.12	1.58	2.80	7.85	-2.17	-1.02	ZZ
YR276D		14.34	-0.20	-0.35	11.42	1.40	0.66	ZZ

## Summary Statistics

Grand Means

14.540 minutes

10.023 minutes

Std Dev Btwn Labs

0.566 minutes

2.120 minutes

Statistics based on 13 of 13 reporting participants

Samples W51-W52: EPDM compound #1 &amp; W53-W54: EPDM compound #2





## Analysis 673

## ODR Vulcanization: Minimum Torque (lbf.in)

WebCode	Data Flag	Sample W51			Sample W52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		5.358	0.100	0.23	25.99	2.80	1.51	ZZ
BFAJ2E		5.278	0.020	0.05	22.92	-0.27	-0.15	ZZ
EDQT47		5.595	0.337	0.79	23.80	0.60	0.33	ZZ
EN8FD7		5.542	0.284	0.66	23.50	0.30	0.16	ZZ
GA3279		6.177	0.919	2.15	26.38	3.19	1.72	ZZ
GTTA6N		5.022	-0.236	-0.55	21.52	-1.67	-0.91	ZZ
JP86LJ		4.712	-0.546	-1.28	20.69	-2.50	-1.35	ZZ
KD67BP		4.883	-0.375	-0.88	21.08	-2.11	-1.14	ZZ
NAGVQG		5.393	0.135	0.32	25.17	1.98	1.07	ZZ
QHJRP4		5.673	0.415	0.97	24.21	1.01	0.55	ZZ
U4NKFR		5.127	-0.131	-0.31	21.93	-1.26	-0.68	ZZ
UGVUKT		4.905	-0.353	-0.82	22.51	-0.68	-0.37	ZZ
YR276D		4.690	-0.568	-1.33	21.81	-1.39	-0.75	ZZ

## Summary Statistics

Grand Means

5.2581 lbf.in

23.192 lbf.in

Std Dev Btwn Labs

0.4280 lbf.in

1.847 lbf.in

Statistics based on 13 of 13 reporting participants

## Summary Statistics in SI Units

Grand Means

5.9408 dN.m

26.203 dN.m

Std Dev Btwn Labs

0.4836 dN.m

2.087 dN.m

Statistics based on 13 of 13 reporting participants

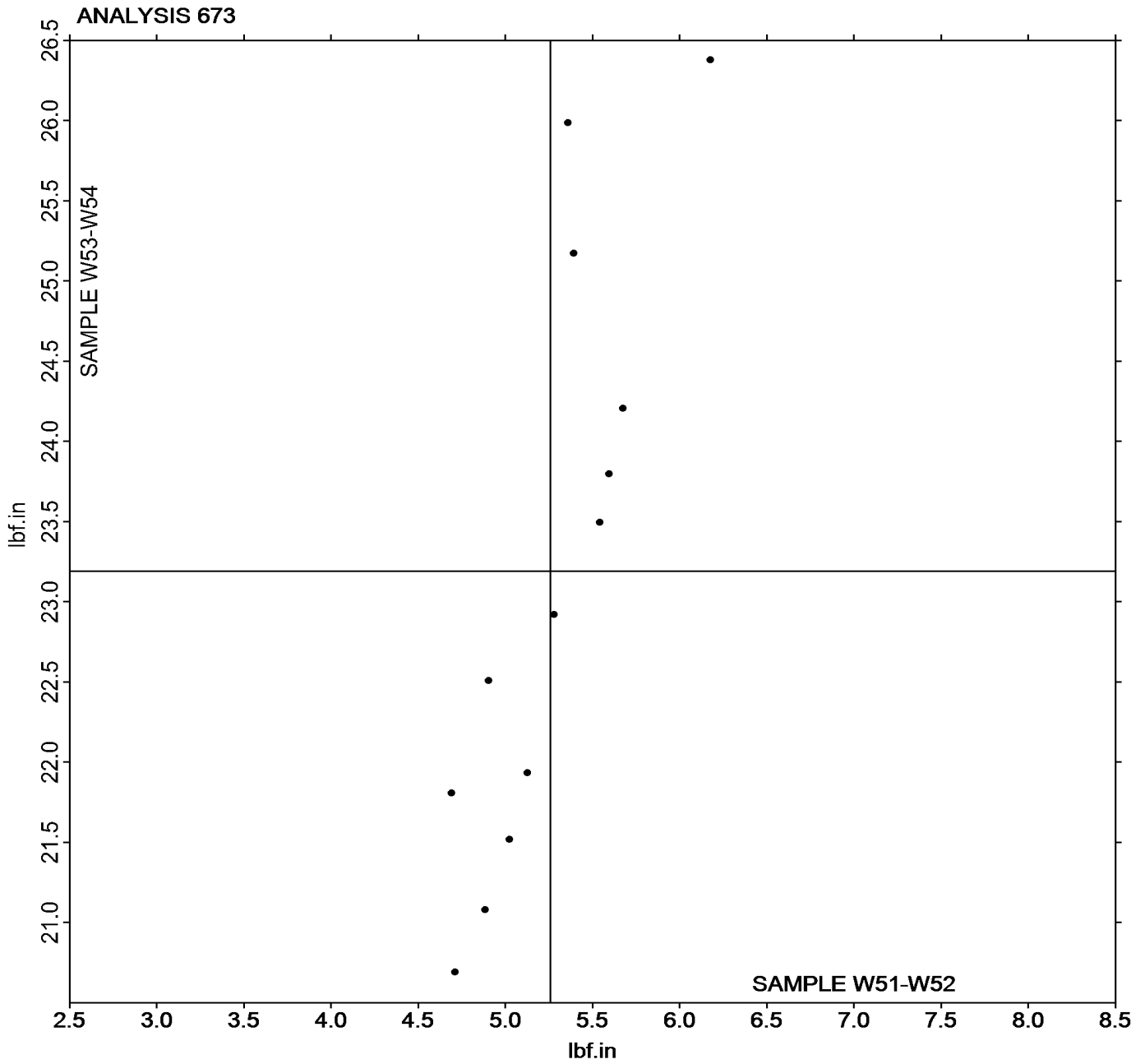
Samples W51-W52: EPDM compound #1 &amp; W53-W54: EPDM compound #2

Analysis 673

ODR Vulcanization: Minimum Torque (lbf.in)

Grand Mean Sample W51 = 5.2581 lbf.in

Grand Mean Sample W52 = 23.192 lbf.in



Analysis 674

ODR Vulcanization: Maximum Torque (lbf.in)

WebCode	Data Flag	Sample W51			Sample W52			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
262JGU		44.25	2.71	1.32	44.93	2.76	1.18	ZZ
BFAJ2E		40.46	-1.08	-0.53	40.23	-1.93	-0.82	ZZ
EDQT47		39.86	-1.68	-0.82	42.02	-0.15	-0.06	ZZ
EN8FD7		39.06	-2.48	-1.21	39.01	-3.16	-1.35	ZZ
GA3279		43.29	1.74	0.85	42.99	0.82	0.35	ZZ
GTTA6N		43.44	1.89	0.93	41.66	-0.51	-0.22	ZZ
JP86LJ		39.76	-1.78	-0.87	42.76	0.59	0.25	ZZ
KD67BP		42.97	1.43	0.70	41.96	-0.21	-0.09	ZZ
NAGVQG		41.22	-0.32	-0.16	47.81	5.64	2.40	ZZ
QHJRP4		41.55	0.01	0.00	41.64	-0.53	-0.22	ZZ
U4NKFR		38.89	-2.65	-1.30	38.91	-3.26	-1.39	ZZ
UGVUKT		45.02	3.47	1.70	42.75	0.59	0.25	ZZ
YR276D		40.28	-1.26	-0.62	41.51	-0.66	-0.28	ZZ

Summary Statistics			
Grand Means	41.542	lbf.in	42.167
			lbf.in
Std Dev Btwn Labs	2.043	lbf.in	2.348
			lbf.in
Statistics based on 13 of 13 reporting participants			

Summary Statistics in SI Units			
Grand Means	46.936	dN.m	47.643
			dN.m
Std Dev Btwn Labs	2.308	dN.m	2.653
			dN.m
Statistics based on 13 of 13 reporting participants			

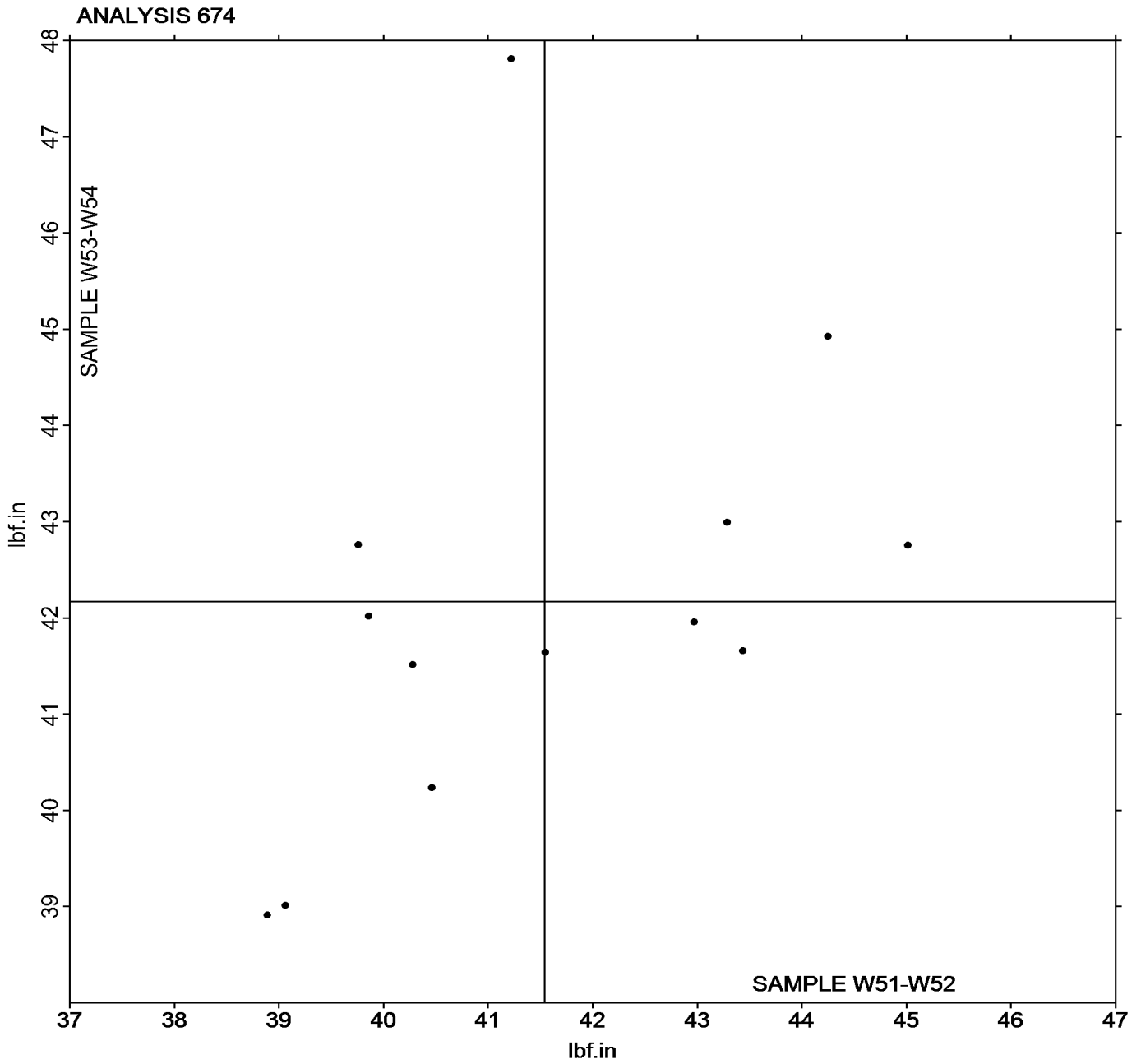
Samples W51-W52: EPDM compound #1 & W53-W54: EPDM compound #2

Analysis 674

ODR Vulcanization: Maximum Torque (lbf.in)

Grand Mean Sample **W51** = 41.542 lbf.in

Grand Mean Sample **W52** = 42.167 lbf.in



## Analysis 684

## MDR Vulcanization-Cure Time 10% (minutes)

WebCode	Data Flag	Sample W55			Sample W56			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4CPE63		0.9667	0.0267	0.28	0.8867	-0.0585	-0.58	MC
6Q42TQ		0.9983	0.0583	0.60	1.0083	0.0632	0.63	XX
7C2UBF		0.9767	0.0367	0.38	1.0167	0.0715	0.71	MC
8EMWVU		1.0367	0.0967	1.00	1.0250	0.0799	0.80	TP
9MBCYN		0.9550	0.0150	0.15	1.0133	0.0682	0.68	MC
BXRDUN		0.9167	-0.0233	-0.24	0.9217	-0.0235	-0.23	MC
CF6GRZ		0.8933	-0.0467	-0.48	0.9000	-0.0451	-0.45	MC
DDAHQ8		0.9717	0.0317	0.33	0.8983	-0.0468	-0.47	MC
DH4CRE	X	0.9050	-0.0350	-0.36	0.5283	-0.4168	-4.15	MC
DWMWAI		1.0139	0.0739	0.76	1.0472	0.1021	1.02	MC
E34UDZ		0.9700	0.0300	0.31	0.9800	0.0349	0.35	MC
EN8FD7		0.9550	0.0150	0.15	1.0450	0.0999	0.99	MC
F9TWU6		1.0933	0.1533	1.58	1.0800	0.1349	1.34	MC
GTTA6N		0.9117	-0.0283	-0.29	0.8233	-0.1218	-1.21	MC
GUPPHL		0.9300	-0.0100	-0.10	0.9800	0.0349	0.35	MC
GVJDXV		1.0560	0.1160	1.20	1.0580	0.1129	1.12	MC
JP86LJ		0.9350	-0.0050	-0.05	0.9833	0.0382	0.38	MC
KBGWY3		0.7767	-0.1633	-1.69	0.7433	-0.2018	-2.01	MC
KD67BP		0.7000	-0.2400	-2.48	0.7817	-0.1635	-1.63	MC
NJ6QPW		1.0233	0.0833	0.86	1.0867	0.1415	1.41	MD
NVVFP3		0.7083	-0.2317	-2.39	0.7700	-0.1751	-1.75	XX
QHCRMH		0.9917	0.0517	0.53	0.9750	0.0299	0.30	MD
U4NKFR	X	14.1083	13.1683	135.96	14.1550	13.2099	131.62	XX
U88YLD		0.9883	0.0483	0.50	0.9933	0.0482	0.48	TP
XGNKLR		0.8967	-0.0433	-0.45	0.9300	-0.0151	-0.15	MC
Y73ZE2	*	0.9850	0.0450	0.46	0.8383	-0.1068	-1.06	MC
YKFB3N		0.8500	-0.0900	-0.93	0.8433	-0.1018	-1.01	MD

## Summary Statistics

Grand Means

0.94000 minutes

0.94514 minutes

Std Dev Btwn Labs

0.09685 minutes

0.10036 minutes

Statistics based on 25 of 27 reporting participants

Samples W55-W56: EPDM compound, batch #1 &amp; W57-W58: EPDM compound, batch #2

Analysis 684

MDR Vulcanization-Cure Time 10% (minutes)

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**Comments on assigned Data Flags for Test #684**

DH4CRE (X) - Inconsistency in testing between Sample groups. Data for Sample group W57-W58 are low.  
Inconsistency in testing within both Sample groups.

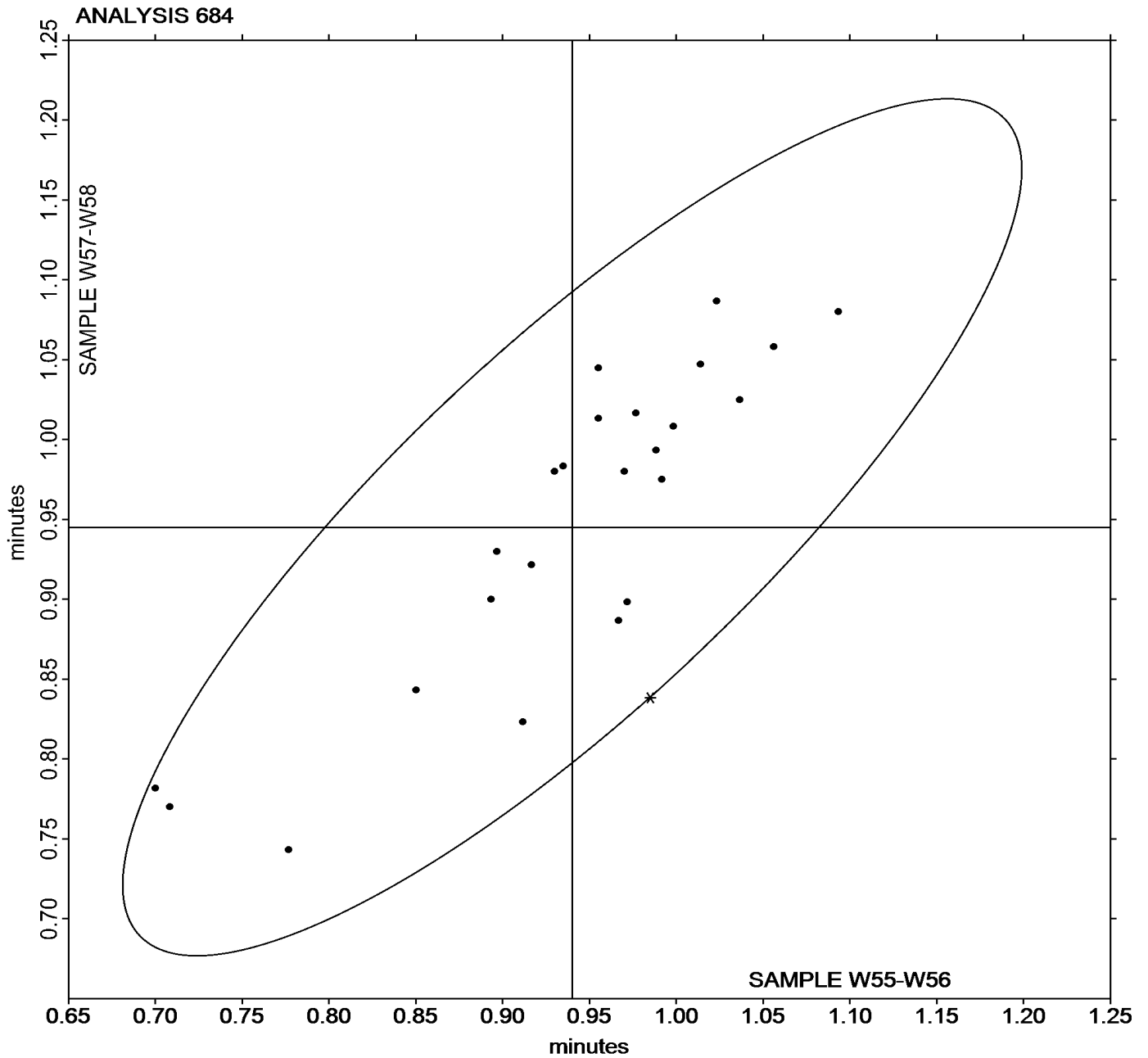
U4NKFR (X) - Extreme data.

Analysis 684

MDR Vulcanization-Cure Time 10% (minutes)

Grand Mean Sample W55 = 0.94000 minutes

Grand Mean Sample W56 = 0.94514 minutes





Analysis 685

MDR Vulcanization-Scorch Time, Ts1 (minutes)

WebCode	Data Flag	Sample W55			Sample W56			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4CPE63		0.9417	0.0124	0.09	0.8983	-0.0475	-0.38	MC
6LTQ2W	X	1.0633	0.1340	1.00	0.0750	-0.8708	-6.97	MC
6Q42TQ		0.9617	0.0324	0.24	1.0133	0.0675	0.54	XX
7C2UBF		0.9967	0.0674	0.50	1.0533	0.1075	0.86	MC
8EMWVU		1.0800	0.1507	1.12	1.0783	0.1325	1.06	TP
9MBCYN		0.8783	-0.0510	-0.38	1.0017	0.0559	0.45	MC
BXRDU		0.9050	-0.0243	-0.18	0.9183	-0.0275	-0.22	MC
CF6GRZ		0.8433	-0.0860	-0.64	0.8533	-0.0925	-0.74	MC
DDAHQ8		0.9950	0.0657	0.49	0.9350	-0.0108	-0.09	MC
DH4CRE	X	0.9333	0.0040	0.03	0.5467	-0.3991	-3.20	MC
DWMWA1		1.0278	0.0985	0.73	1.0806	0.1348	1.08	MC
E34UDZ		0.9083	-0.0210	-0.16	0.9350	-0.0108	-0.09	MC
EN8FD7		0.9517	0.0224	0.17	1.0667	0.1209	0.97	MC
F9TWU6		1.1650	0.2357	1.75	1.1717	0.2259	1.81	MC
GTTA6N		0.9017	-0.0276	-0.21	0.8400	-0.1058	-0.85	MC
GUPPHL		0.9300	0.0007	0.01	0.9900	0.0442	0.35	MC
GVJDXV		1.0840	0.1547	1.15	1.0920	0.1462	1.17	MC
H93HKH		0.8183	-0.1110	-0.82	0.8517	-0.0941	-0.75	MC
JP86LJ		0.9467	0.0174	0.13	0.9983	0.0525	0.42	MC
KBGWY3		0.7217	-0.2076	-1.54	0.6667	-0.2791	-2.24	MC
KD67BP		0.5917	-0.3376	-2.51	0.6967	-0.2491	-2.00	MC
NJ6QPW		1.0550	0.1257	0.93	1.1117	0.1659	1.33	MD
NVVFP3		0.6483	-0.2810	-2.09	0.7433	-0.2025	-1.62	XX
QHCRMH		0.9683	0.0390	0.29	0.9550	0.0092	0.07	MD
RCPCD2	*	1.1617	0.2324	1.73	0.9767	0.0309	0.25	MC
RYNJ4D		0.8688	-0.0605	-0.45	0.9128	-0.0330	-0.26	MC
U4NKFR		0.9700	0.0407	0.30	1.0200	0.0742	0.59	XX
U88YLD		1.0167	0.0874	0.65	1.0333	0.0875	0.70	TP
XGNKLR		0.8488	-0.0805	-0.60	0.8825	-0.0633	-0.51	MC
Y73ZE2		1.0017	0.0724	0.54	0.8533	-0.0925	-0.74	MC
YKFB3N		0.7617	-0.1676	-1.25	0.7983	-0.1475	-1.18	MD

Summary Statistics	
Grand Means	0.92929 minutes
	0.94579 minutes
Std Dev Btwn Labs	0.13456 minutes
	0.12487 minutes
Statistics based on 29 of 31 reporting participants	

Samples W55-W56: EPDM compound, batch #1 & W57-W58: EPDM compound, batch #2

## Analysis 685

MDR Vulcanization-Scorch Time, Ts1 (minutes)

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**Comments on assigned Data Flags for Test #685**

6LTQ2W (X) - Inconsistency in testing between Sample groups. Data for Sample group W57-W58 are low.

DH4CRE (X) - Inconsistency in testing between Sample groups. Data for Sample group W57-W58 are low.  
Inconsistency in testing within both Sample groups.

**Instrument Code Listing**

<b>685</b> MDR Vulcanization-Scorch Time, Ts1 (minutes)
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**Instruments:**

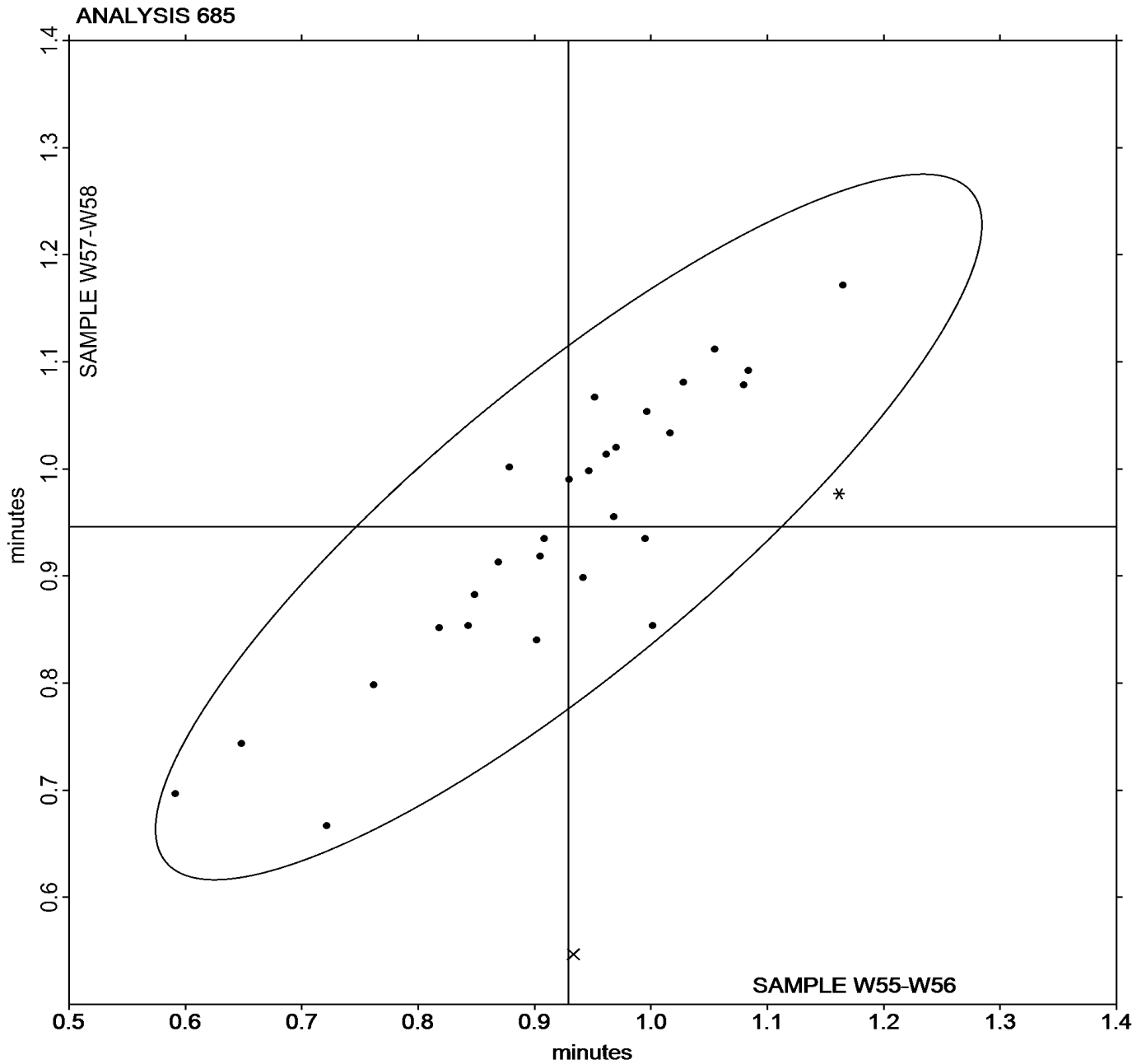
(MC) Alpha Technologies [Monsanto] MDR 2000 or 2000E	(MD) Alpha Tech. Rubber Process Analyzer (RPA 2000)
(MP) Alpha Technologies [Monsanto] MDR 2000P	(TP) Tech Pro MDR model MDPT
(XX) Instrument model not specified by lab	

Analysis 685

MDR Vulcanization-Scorch Time, Ts1 (minutes)

Grand Mean Sample W55 = 0.92929 minutes

Grand Mean Sample W56 = 0.94579 minutes



## Analysis 686

## MDR Vulcanization-Cure Time 50% (minutes)

WebCode	Data Flag	Sample W55			Sample W56			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4CPE63		2.155	-0.011	-0.12	2.035	-0.094	-0.97	MC
6LTQ2W	X	2.300	0.134	1.49	1.822	-0.308	-3.17	MC
6Q42TQ		2.030	-0.136	-1.51	1.935	-0.194	-2.00	MC
7C2UBF		2.153	-0.013	-0.14	2.110	-0.019	-0.20	MC
8EMWVU		2.153	-0.013	-0.14	2.113	-0.016	-0.16	TP
9MBCYN		2.092	-0.074	-0.82	2.050	-0.079	-0.82	MC
BXRDUN		2.282	0.116	1.29	2.228	0.099	1.02	MC
CF6GRZ		2.212	0.046	0.51	2.230	0.101	1.04	MC
DDAHQ8		2.172	0.006	0.06	2.160	0.031	0.32	MC
DH4CRE		2.115	-0.051	-0.57	2.030	-0.099	-1.02	MC
DWMWA1		2.272	0.106	1.18	2.189	0.060	0.61	MC
E34UDZ		2.207	0.041	0.45	2.168	0.039	0.40	MC
EN8FD7		2.298	0.132	1.47	2.255	0.126	1.30	MC
F9TWU6		2.207	0.041	0.45	2.175	0.046	0.47	MC
GTTA6N		2.235	0.069	0.77	2.183	0.054	0.56	MC
GUPPHL		2.195	0.029	0.32	2.195	0.066	0.68	MC
GVJDXV		2.202	0.036	0.40	2.176	0.047	0.48	MC
H93HKH		2.157	-0.009	-0.10	2.153	0.024	0.25	MC
JP86LJ		2.133	-0.033	-0.36	2.155	0.026	0.26	MC
KBGWY3		2.227	0.061	0.68	2.248	0.119	1.23	MC
KD67BP		2.147	-0.019	-0.21	2.105	-0.024	-0.25	MC
NJ6QPW		2.293	0.127	1.42	2.270	0.141	1.45	MD
NVVFP3		2.078	-0.088	-0.97	2.047	-0.083	-0.85	XX
QHKRMH		2.215	0.049	0.55	2.145	0.016	0.16	MD
RCPCD2		2.247	0.081	0.90	2.163	0.034	0.35	MC
RYNJ4D		2.223	0.057	0.63	2.212	0.083	0.85	MC
U4NKFR		2.037	-0.129	-1.44	2.033	-0.096	-0.99	XX
U88YLD		2.097	-0.069	-0.77	2.048	-0.081	-0.83	TP
XGNKLR		2.072	-0.094	-1.05	2.112	-0.018	-0.18	MC
Y73ZE2		2.190	0.024	0.27	2.123	-0.006	-0.06	MC
YKFB3N	*	1.882	-0.284	-3.16	1.830	-0.299	-3.08	MD

## Summary Statistics

Grand Means

2.1658 minutes

2.1293 minutes

Std Dev Btwn Labs

0.0899 minutes

0.0971 minutes

Statistics based on 30 of 31 reporting participants

**Rubber Interlaboratory Testing Program**  
**Analysis 686**

**MDR Vulcanization-Cure Time 50% (minutes)**

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Samples W55-W56: EPDM compound, batch #1 & W57-W58: EPDM compound, batch #2

**Comments on assigned Data Flags for Test #686**

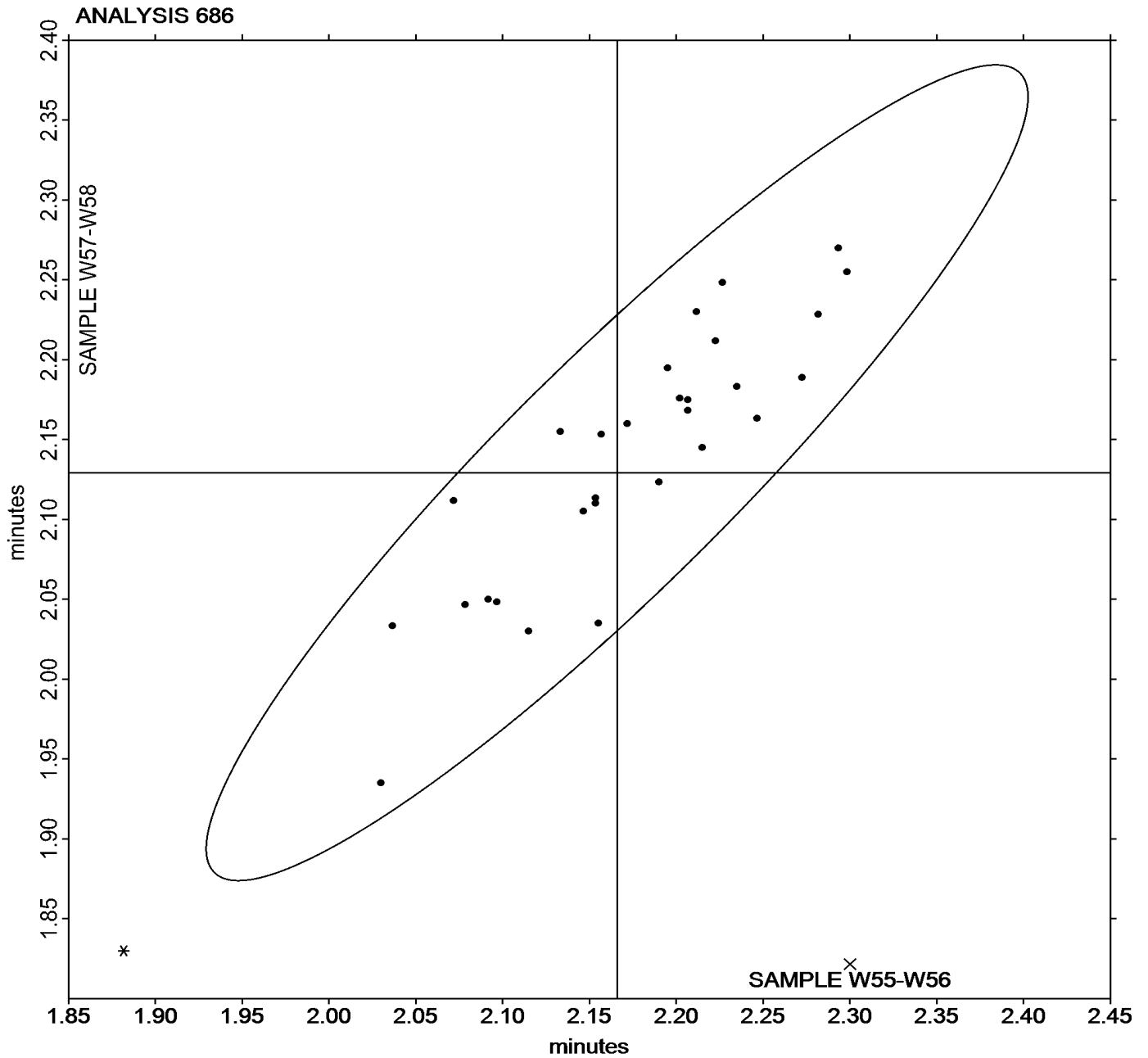
6LTQ2W (X) - Inconsistency in testing between Sample groups. Data for Sample group W57-W58 are low.

Analysis 686

MDR Vulcanization-Cure Time 50% (minutes)

Grand Mean Sample **W55** = 2.1658 minutes

Grand Mean Sample **W56** = 2.1293 minutes



Rubber Interlaboratory Testing Program

Analysis 687

MDR Vulcanization-Cure Time 90% (minutes)

WebCode	Data Flag	Sample W55			Sample W56			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4CPE63		4.937	0.173	0.62	4.952	0.123	0.39	MC
6LTQ2W		4.925	0.162	0.57	4.505	-0.323	-1.01	MC
6Q42TQ	*	4.193	-0.570	-2.02	3.862	-0.967	-3.02	XX
7C2UBF		4.678	-0.085	-0.30	4.755	-0.073	-0.23	MC
8EMWVU		4.823	0.060	0.21	4.822	-0.007	-0.02	TP
9MBCYN		4.973	0.210	0.75	4.520	-0.308	-0.96	MC
BXRDUN		5.193	0.430	1.53	5.112	0.283	0.89	MC
CF6GRZ		4.735	-0.028	-0.10	5.002	0.173	0.54	MC
DDAHQ8		4.440	-0.323	-1.15	4.615	-0.213	-0.67	MC
DH4CRE		4.788	0.025	0.09	4.825	-0.003	-0.01	MC
DWMWAI		4.928	0.165	0.59	4.753	-0.075	-0.24	MC
E34UDZ		4.768	0.005	0.02	4.885	0.057	0.18	MC
EN8FD7		4.925	0.162	0.57	4.885	0.057	0.18	MC
F9TWU6		5.192	0.428	1.52	5.172	0.343	1.07	MC
GTTA6N		4.930	0.167	0.59	5.102	0.273	0.86	MC
GUPPHL		4.855	0.092	0.33	5.080	0.252	0.79	MC
GVJDXV		4.950	0.187	0.66	5.094	0.266	0.83	MC
H93HKH		4.638	-0.125	-0.44	4.892	0.063	0.20	MC
JP86LJ		4.620	-0.143	-0.51	4.942	0.113	0.35	MC
KBGWY3		4.887	0.123	0.44	5.252	0.423	1.32	MC
KD67BP		4.595	-0.168	-0.60	4.658	-0.170	-0.53	MC
NJ6QPW		5.083	0.320	1.14	5.508	0.680	2.13	MD
NVVFP3		4.972	0.208	0.74	4.982	0.153	0.48	XX
QHKRMH		4.667	-0.097	-0.34	4.667	-0.162	-0.51	MD
RCPCD2		5.003	0.240	0.85	5.005	0.177	0.55	MC
RYNJ4D		4.753	-0.010	-0.04	4.944	0.116	0.36	MC
U4NKFR		4.313	-0.450	-1.60	4.622	-0.207	-0.65	XX
U88YLD		4.338	-0.425	-1.51	4.440	-0.388	-1.22	TP
XGNKLR		4.850	0.087	0.31	4.856	0.027	0.09	MC
Y73ZE2		4.753	-0.010	-0.04	4.805	-0.023	-0.07	MC
YKFB3N	*	3.952	-0.812	-2.88	4.167	-0.662	-2.07	MD

Summary Statistics	
Grand Means	4.7632 minutes
	4.8283 minutes
Std Dev Btwn Labs	0.2815 minutes
	0.3196 minutes
Statistics based on 31 of 31 reporting participants	

Samples W55-W56: EPDM compound, batch #1 & W57-W58: EPDM compound, batch #2

Analysis 687

MDR Vulcanization-Cure Time 90% (minutes)

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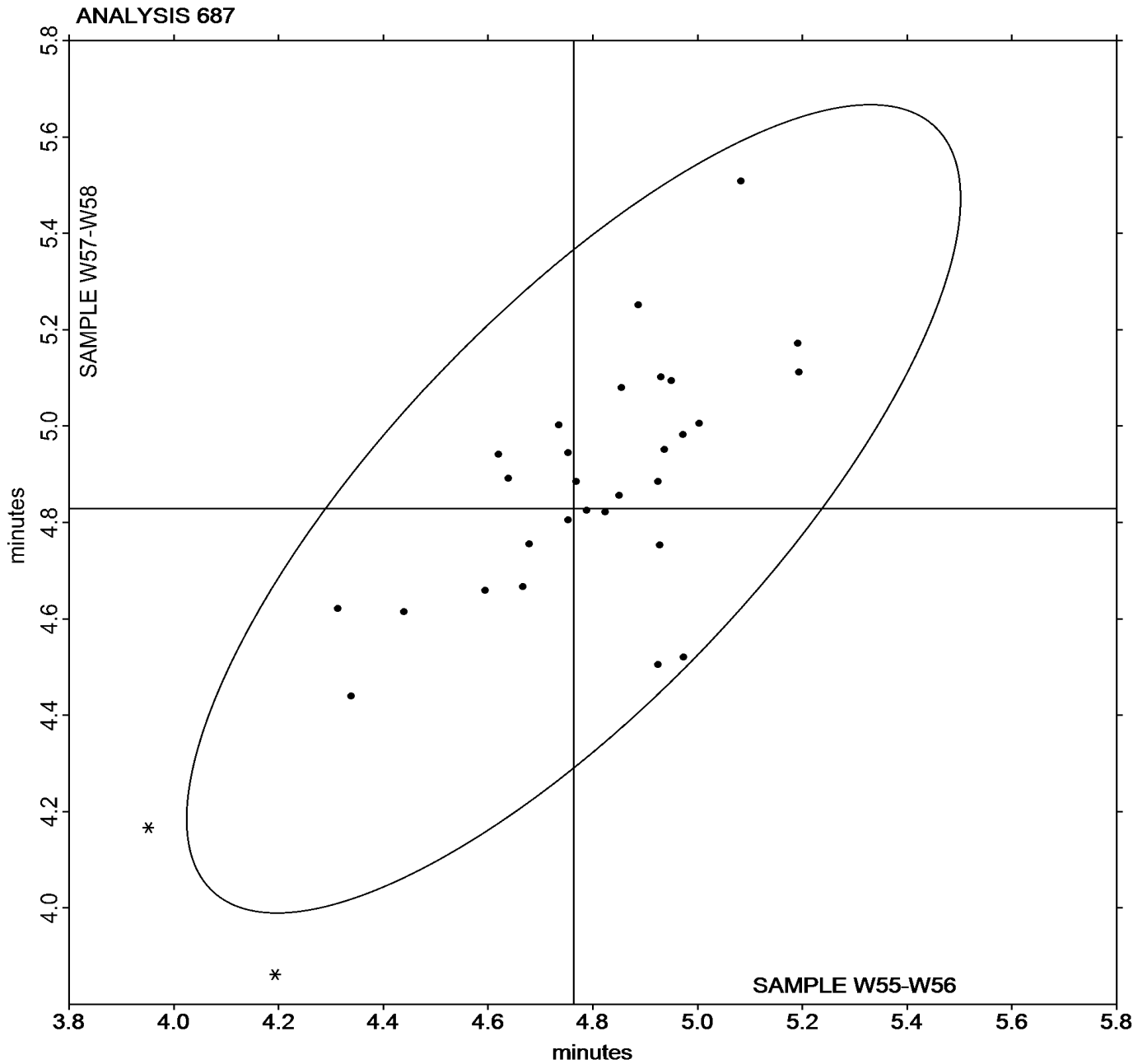


Analysis 687

MDR Vulcanization-Cure Time 90% (minutes)

Grand Mean Sample W55 = 4.7632 minutes

Grand Mean Sample W56 = 4.8283 minutes



## Analysis 688

## MDR Vulcanization: Minimum Torque (lbf.in)

WebCode	Data Flag	Sample W55			Sample W56			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4CPE63		6.740	0.701	1.19	7.260	0.786	1.11	MC
6LTQ2W	X	6.520	0.481	0.82	5.258	-1.216	-1.71	MC
6Q42TQ		5.747	-0.292	-0.50	6.821	0.347	0.49	XX
7C2UBF		6.260	0.221	0.38	7.213	0.739	1.04	MC
8EMWVU	X	9.195	3.156	5.37	10.240	3.766	5.30	TP
9MBCYN		6.463	0.423	0.72	7.513	1.039	1.46	MC
BXRDUN		5.522	-0.518	-0.88	5.722	-0.752	-1.06	MC
CF6GRZ		5.750	-0.289	-0.49	5.975	-0.499	-0.70	MC
DDAHQ8		6.032	-0.008	-0.01	6.760	0.286	0.40	MC
DH4CRE		6.293	0.254	0.43	5.908	-0.566	-0.80	MC
DWMWAI		6.312	0.272	0.46	7.037	0.563	0.79	MC
E34UDZ		5.785	-0.254	-0.43	5.939	-0.535	-0.75	MC
EN8FD7		5.438	-0.601	-1.02	6.253	-0.221	-0.31	MC
F9TWU6		6.213	0.174	0.30	6.178	-0.296	-0.42	MC
GTTA6N		5.118	-0.921	-1.57	5.460	-1.014	-1.43	MC
GUPPHL		5.558	-0.481	-0.82	6.106	-0.368	-0.52	MC
GVJDXV		7.060	1.021	1.74	7.494	1.020	1.43	MC
H93HKH		6.350	0.311	0.53	6.964	0.490	0.69	MP
JP86LJ		5.730	-0.309	-0.53	6.220	-0.254	-0.36	MC
KBGWY3		5.280	-0.759	-1.29	5.475	-0.999	-1.41	MC
KD67BP		6.108	0.069	0.12	6.618	0.144	0.20	MC
NJ6QPW		6.249	0.209	0.36	7.274	0.800	1.13	MD
NVVFP3		5.247	-0.792	-1.35	5.567	-0.907	-1.28	XX
QHKRMH		6.720	0.680	1.16	7.556	1.082	1.52	MD
RCPCD2	*	7.802	1.762	3.00	7.837	1.363	1.92	MC
RYNJ4D		5.623	-0.416	-0.71	5.735	-0.739	-1.04	MC
U4NKFR		5.300	-0.739	-1.26	5.690	-0.784	-1.10	XX
U88YLD		6.123	0.084	0.14	6.418	-0.056	-0.08	TP
XGNKLR		6.139	0.100	0.17	6.039	-0.435	-0.61	MC
Y73ZE2		5.973	-0.066	-0.11	5.893	-0.581	-0.82	MC
YKFB3N		6.205	0.166	0.28	6.821	0.347	0.49	MD

## Summary Statistics

Grand Means

6.0394 lbf.in

6.4740 lbf.in

Std Dev Btwn Labs

0.5872 lbf.in

0.7108 lbf.in

Statistics based on 29 of 31 reporting participants

## Analysis 688

## MDR Vulcanization: Minimum Torque (lbf.in)

		Summary Statistics in SI Units	
Grand Means	6.8236 dN.m	7.3147	dN.m
Std Dev Btwn Labs	0.6634 dN.m	0.8031	dN.m
Statistics based on 29 of 31 reporting participants			

Samples W55-W56: EPDM compound, batch #1 & W57-W58: EPDM compound, batch #2

**Comments on assigned Data Flags for Test #688**

6LTQ2W (X) - Inconsistency in testing between Sample groups.

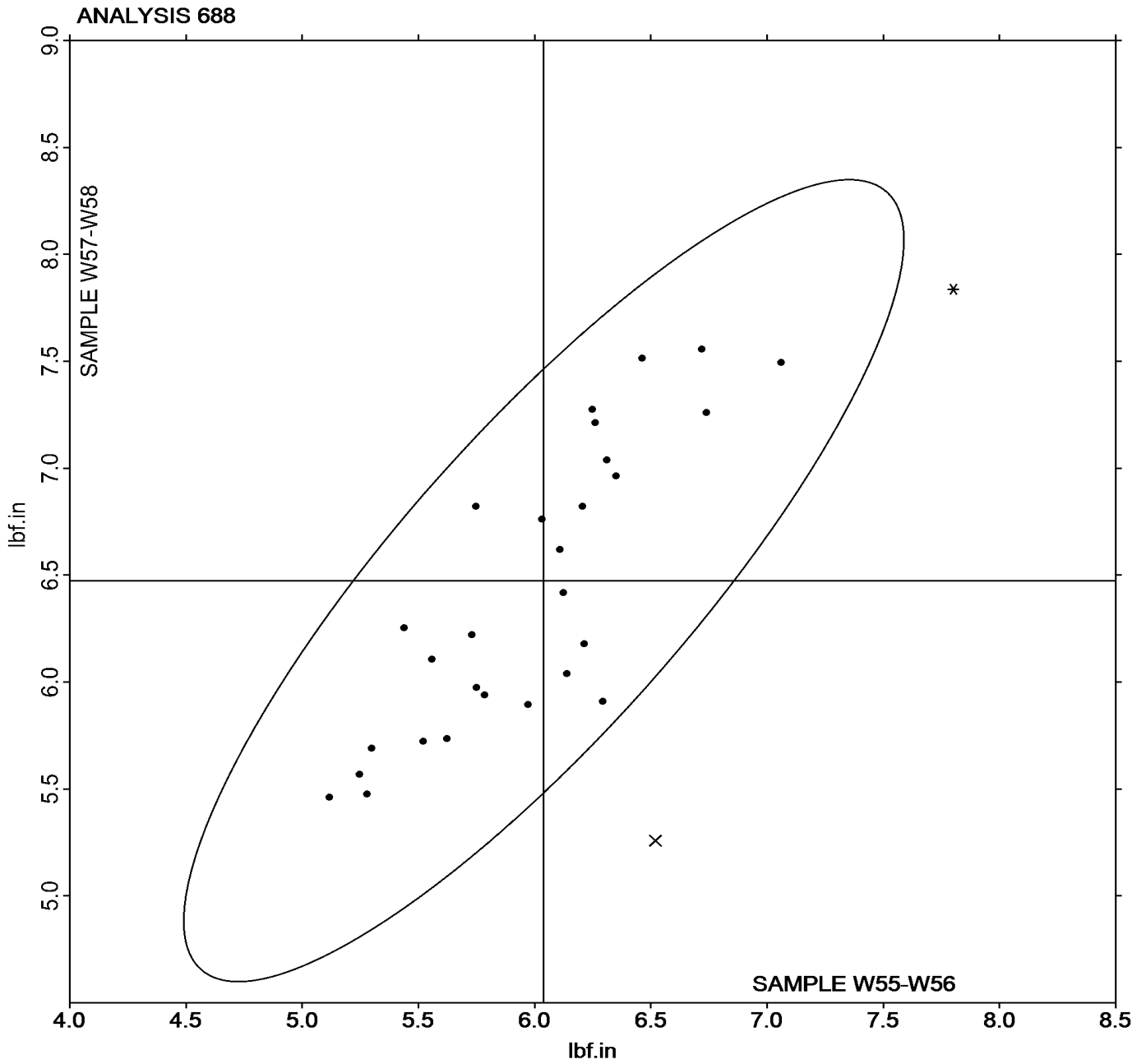
8EMWVU (X) - Data for all Samples are high.

Analysis 688

MDR Vulcanization: Minimum Torque (lbf.in)

Grand Mean Sample W55 = 6.0394 lbf.in

Grand Mean Sample W56 = 6.4740 lbf.in



Rubber Interlaboratory Testing Program

Analysis 689

MDR Vulcanization: Maximum Torque (lbf.in)

WebCode	Data Flag	Sample W55			Sample W56			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4CPE63		17.35	1.21	1.31	17.19	0.89	0.82	MC
6LTQ2W		15.96	-0.19	-0.21	16.39	0.10	0.09	MC
6Q42TQ		15.68	-0.46	-0.50	15.44	-0.86	-0.79	XX
7C2UBF		15.68	-0.47	-0.51	16.22	-0.08	-0.08	MC
8EMWVU		18.09	1.94	2.11	18.74	2.44	2.26	TP
9MBCYN		17.21	1.06	1.15	16.70	0.41	0.37	MC
BXRDUK		15.80	-0.35	-0.38	15.83	-0.46	-0.43	MC
CF6GRZ		16.84	0.69	0.75	16.86	0.56	0.51	MC
DDAHQ8		15.52	-0.62	-0.68	15.72	-0.58	-0.54	MC
DH4CRE		15.65	-0.49	-0.53	15.49	-0.81	-0.75	MC
DWMWAI		15.95	-0.20	-0.21	16.31	0.01	0.01	MC
E34UDZ		16.18	0.03	0.03	15.96	-0.34	-0.31	MC
EN8FD7		15.52	-0.62	-0.68	15.70	-0.59	-0.55	MC
F9TWU6		14.55	-1.60	-1.73	13.95	-2.34	-2.16	MC
GTTA6N		15.32	-0.82	-0.89	15.24	-1.06	-0.98	MC
GUPPHL		15.84	-0.31	-0.34	16.13	-0.17	-0.15	MC
GVJDXV		16.52	0.37	0.41	16.52	0.22	0.20	MC
H93HKH		17.67	1.52	1.65	18.24	1.94	1.79	MP
JP86LJ		15.47	-0.68	-0.74	15.85	-0.45	-0.41	MC
KBGWY3		16.15	0.00	0.00	16.43	0.14	0.13	MC
KD67BP		17.41	1.27	1.37	17.89	1.59	1.47	MC
NJ6QPW		15.54	-0.61	-0.66	16.42	0.12	0.11	MD
NVVFP3		17.05	0.90	0.98	16.76	0.47	0.43	XX
QHCRMH		17.50	1.35	1.47	18.38	2.08	1.92	MD
RCPCD2		16.49	0.34	0.37	16.70	0.40	0.37	MC
RYNJ4D		15.69	-0.45	-0.49	15.76	-0.53	-0.49	MC
U4NKFR		14.11	-2.04	-2.21	14.16	-2.14	-1.98	XX
U88YLD		15.41	-0.74	-0.80	15.31	-0.99	-0.91	TP
XGNKLR		15.97	-0.18	-0.19	16.02	-0.28	-0.26	MC
Y73ZE2		15.50	-0.65	-0.70	15.56	-0.74	-0.68	MC
YKFB3N		16.95	0.80	0.87	17.36	1.07	0.98	MD

Summary Statistics

Grand Means

16.146 lbf.in

16.297 lbf.in

Std Dev Btwn Labs

0.922 lbf.in

1.083 lbf.in

Statistics based on 31 of 31 reporting participants

Analysis 689

MDR Vulcanization: Maximum Torque (Ibf.in)

		Summary Statistics in SI Units	
Grand Means	18.243 dN.m	18.413	dN.m
Stnd Dev Btwn Labs	1.042 dN.m	1.224	dN.m
Statistics based on 31 of 31 reporting participants			

Samples W55-W56: EPDM compound, batch #1 & W57-W58: EPDM compound, batch #2

Analysis 689

MDR Vulcanization: Maximum Torque (lbf.in)

Grand Mean Sample W55 = 16.146 lbf.in

Grand Mean Sample W56 = 16.297 lbf.in

