

Plastics Interlaboratory Testing Program

Web Summary Report #107, 3rd Qtr 2018

[About CTS and the Plastics Interlaboratory Program](#)

[Key for Web Summary Report](#)

[Results Summary for this Report](#)

Analysis Analysis Name

[704 Tensile Stress at Yield, Plastic Samples](#)

[705 Tensile Stress at Break, Plastic Samples](#)

[706 Percent Elongation at Yield, Plastic Samples](#)

[708 Modulus of Elasticity, Plastic Samples](#)

[710 Deflection Temp. Under Flexural Load \(1.82 MPa\)](#)

[711 Deflection Temp. Under Flexural Load \(0.455 MPa\)](#)

[712 Temp. of Deflection Under Flexural Load 1.80 MPa](#)

[715 Vicat Softening Temperature \(Rate A\)](#)

[716 Vicat Softening Temperature \(Rate B\)](#)

[718 Specific Gravity](#)

[720 Flexural Modulus](#)

[721 Flexural Stress at 5% Strain](#)

[722 Flexural Stress at Yield](#)

[730 Tensile Stress at Yield, ISO Plastic Samples](#)

[731 Tensile Stress at Break, ISO Plastic Samples](#)

[732 Percent Strain at Yield, ISO Plastic Samples](#)

[734 Modulus of Elasticity, ISO Plastic Samples](#)

[736 Flexural Modulus, ISO Plastic Samples](#)

[737 Flexural Stress at 3.5% Strain](#)

[738 Flexural Stress at Yield](#)

[750 Flow Rates of Thermoplastics \(2.16 kg load\)](#)

[755 Moisture Content of Plastics](#)

[757 Ash Content in Thermoplastics](#)

[760 DSC Crystallization Temperature](#)

[761 DSC Melt Temperature](#)

Analysis Analysis Name

[762 DSC Enthalpy of Crystallization](#)

[763 DSC Enthalpy of Fusion](#)

[764 DSC Glass Transition Temperature](#)

[770 Tensile Stress at Yield, Film Samples](#)

[771 Tensile Stress at Break, Film Samples](#)

[772 Percent Elongation at Yield, Film Samples](#)

[773 Percent Elongation at Break, Film Samples](#)

[774 Thickness of Film Tensile Samples](#)

[775 Secant Modulus at 1% Strain](#)

[776 Secant Modulus at 2% Strain](#)

[780 Coefficient of Friction: Static](#)

[781 Coefficient of Friction: Kinetic](#)

[782 Tear Resistance of Films](#)

[785 Optical Properties of Films - Percent Haze](#)

[786 Optical Properties of Films: % Transmittance](#)

[790 Notched Izod Impact](#)

[791 Notched Izod Impact \(ISO\)](#)

[792 Notched Charpy Impact, ISO Plastic Samples](#)

About CTS and the Plastics Interlaboratory Program

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

Collaborative Testing Services initiated the Collaborative Reference Program for PLASTICS in 1992 at the request of industry, ASTM committee D-20 members, and accrediting bodies. Additional test methods are always under review and are incorporated into the program when possible.

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 plastics testing proficiency.

For each test there is a summary of the statistics for the analysis 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. Refer to the KEY FOR SUMMARY REPORT for an explanation of terms and guidelines for interpreting the results.

For further information contact:

COLLABORATIVE TESTING SERVICES, INC.
21331 Gentry Drive
Sterling, VA 20166
Phone: (571) 434-1925
FAX: (571) 434-1937
e-mail: plastics@cts-interlab.com

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

Key for Web Summary Report (Page 1 of 2)

WebCode	Assigned laboratory identification number (temporary) used to ensure lab confidentiality while permitting a lab to locate its data in the Plastics Web Summary 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	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	A code indicating the manufacturer of the instrument used to perform the test (see separate INSTRUMENT CODE LIST for each test section) if instruments are tracked.
Data Flag	DATA FLAGS are assigned based on the simultaneous analysis of both samples tested. Refer to the following chart for an explanation of each symbol:

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

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 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.

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.

Plastics Interlaboratory Testing Program

Results Summary for Report #107, 3rd Qtr 2018

Analysis 704 - Tensile Stress at Yield

Material: ABS/PC	Sample F53	9,335.82	psi	1.60% COV
	Sample F54	7,429.65	psi	1.77% COV

Analysis 705 - Tensile Stress at Break

Material: ABS/PC	Sample F53	6,845.66	psi	2.64% COV
	Sample F54	6,397.04	psi	2.21% COV

Analysis 706 - Percent Elongation at Yield

Material: ABS/PC	Sample F53	3.4859	Percent	4.10% COV
	Sample F54	4.5505	Percent	4.32% COV

Analysis 708 - Modulus of Elasticity

Material: ABS/PC	Sample F53	409.47	ksi	4.47% COV
	Sample F54	324.38	ksi	5.18% COV

Analysis 710 - Deflection Temp. Under Flexural Load (1.82 MPa)

Material: ABS	Sample E53	82.510	Degrees C	1.09% COV
	Sample E54	83.377	Degrees C	0.949% COV

Analysis 711 - Deflection Temp. Under Flexural Load (0.455 MPa)

Material: PP	Sample G53	85.379	Degrees C	4.35% COV
	Sample G54	85.005	Degrees C	4.61% COV

Analysis 712 - Temperature of Deflection (1.80 MPa)

Material: HIPS	Sample N53	78.165	Degrees C	1.06% COV
	Sample N54	78.232	Degrees C	0.987% COV

Analysis 715 - Vicat Temperature (Rate A)

Material: ABS	Sample H53	106.56	Degrees C	0.653% COV
	Sample H54	104.24	Degrees C	0.700% COV

Analysis 716 - Vicat Temperature (Rate B)

Material: ABS	Sample R53	107.87	Degrees C	0.821% COV
	Sample R54	105.57	Degrees C	0.827% COV

Analysis 718 - Specific Gravity

Material: ABS/PC	Sample T53	1.1391	sp gr 23/23 C	0.206% COV
	Sample T54	1.1371	sp gr 23/23 C	0.207% COV

Analysis 720 - Flexural Modulus

Material: ABS/PC	Sample J53	325.85	ksi	4.35% COV
	Sample J54	325.60	ksi	4.24% COV

Analysis 721 - Flexural Stress at 5% Strain

Material: ABS/PC	Sample J53	11,543.28	psi	4.05% COV
	Sample J54	11,534.50	psi	3.92% COV

Analysis 722 - Flexural Stress at Yield

Material: ABS/PC	Sample J53	11,534.71	psi	4.46% COV
	Sample J54	11,533.51	psi	4.36% COV

Analysis 730 - Tensile Stress at Yield, ISO Method

Material: ABS/PC	Sample C53	50.720	MPa	2.31% COV
	Sample C54	50.885	MPa	2.41% COV

Analysis 731 - Tensile Stress at Break, ISO Method

Material: ABS/PC	Sample C53	43.102	MPa	2.80% COV
	Sample C54	43.064	MPa	2.95% COV

Plastics Interlaboratory Testing Program

Results Summary for Report #107, 3rd Qtr 2018

Analysis 732 - Strain at Yield, ISO Method

Material: ABS/PC	Sample C53	4.6416	Percent	3.09% COV
	Sample C54	4.5973	Percent	3.55% COV

Analysis 734 - Modulus of Elasticity, ISO Method

Material: ABS/PC	Sample C53	2,269.60	MPa	4.29% COV
	Sample C54	2,266.60	MPa	4.20% COV

Analysis 736 - Flexural Modulus

Material: ABS/PC	Sample K53	2,236.68	MPa	6.03% COV
	Sample K54	2,230.27	MPa	6.07% COV

Analysis 737 - Flexural Stress at 3.5% Strain

Material: ABS/PC	Sample K53	69.260	MPa	5.24% COV
	Sample K54	69.326	MPa	5.12% COV

Analysis 738 - Flexural Stress at Yield

Material: ABS/PC	Sample K53	78.775	MPa	4.40% COV
	Sample K54	79.003	MPa	4.33% COV

Analysis 750 - Flow Rate (190C or 230C/2.16 kg)

Material: LDPE	Sample X53	6.4737	grams/10 mins	3.67% COV
	Sample X54	5.3873	grams/10 mins	3.68% COV

Analysis 755 - Moisture Content

Material: ABS/PC	Sample Y53	0.13739	Percent	23.9% COV
	Sample Y54	0.15305	Percent	23.9% COV

Analysis 757 - Ash Content

Material: PP	Sample L53	19.756	Percent	0.241% COV
	Sample L54	19.757	Percent	0.264% COV

Analysis 760 - DSC Crystallization Temperature

Material: PP	Sample W53	108.94	Degrees Celsius	3.61% COV
	Sample W54	108.59	Degrees Celsius	3.75% COV

Analysis 761 - DSC Melt Temperature

Material: PP	Sample W53	165.27	Degrees Celsius	1.18% COV
	Sample W54	165.14	Degrees Celsius	1.21% COV

Analysis 762 - DSC Enthalpy of Crystallization

Material: PP	Sample W53	99.863	Joules Per Gram	5.89% COV
	Sample W54	100.03	Joules Per Gram	6.32% COV

Analysis 763 - DSC Enthalpy of Fusion

Material: PP	Sample W53	94.185	Joules Per Gram	9.34% COV
	Sample W54	94.535	Joules Per Gram	10.3% COV

Analysis 764 - DSC Glass Transition Temperature

Material: PET	Sample V53	86.301	Degrees Celsius	2.27% COV
	Sample V54	86.477	Degrees Celsius	2.57% COV

Analysis 770 - Tensile Stress at Yield, Films

Material: LDPE	Sample B53	1,877.12	psi	9.66% COV
	Sample B54	1,943.25	psi	9.42% COV

Analysis 771 - Tensile Stress at Break, Films

Material: LDPE	Sample B53	3,422.26	psi	13.2% COV
	Sample B54	3,600.15	psi	10.2% COV

Plastics Interlaboratory Testing Program

Results Summary for Report #107, 3rd Qtr 2018

Analysis 772 - Elongation at Yield, Films

Material: LDPE	Sample B53	75.804	Percent	42.7% COV
	Sample B54	65.051	Percent	39.0% COV

Analysis 773 - Elongation at Break, Films

Material: LDPE	Sample B53	749.39	Percent	32.1% COV
	Sample B54	809.30	Percent	32.7% COV

Analysis 774 - Thickness of Film Specimens

Material: LDPE	Sample B53	3.8709	mils	2.58% COV
	Sample B54	3.7538	mils	3.37% COV

Analysis 775 - Secant Modulus at 1% Strain

Material: LDPE	Sample B53	32,925.00	psi	16.3% COV
	Sample B54	32,479.55	psi	17.4% COV

Analysis 776 - Secant Modulus at 2% Strain

Material: LDPE	Sample B53	28,517.70	psi	12.0% COV
	Sample B54	28,645.03	psi	13.4% COV

Analysis 780 - Static Friction

Material: LDPE	Sample P53	0.16118	COF	22.3% COV
	Sample P54	0.15882	COF	25.2% COV

Analysis 781 - Kinetic Friction

Material: LDPE	Sample P53	0.14099	COF	17.7% COV
	Sample P54	0.13865	COF	18.1% COV

Analysis 782 - Tear Resistance of Film

Material: LDPE	Sample Q53	329.70	grams-force	27.2% COV
	Sample Q54	214.61	grams-force	13.3% COV

Analysis 785 - Percent Haze

Material: LDPE	Sample D53	15.723	Percent	6.54% COV
	Sample D54	15.256	Percent	6.21% COV

Analysis 786 - Total Transmittance

Material: LDPE	Sample D53	92.596	Percent	1.37% COV
	Sample D54	92.408	Percent	1.33% COV

Analysis 790 - Notched Izod Impact

Material: ABS/PC	Sample S53	9.8274	ft.lbf/in	7.08% COV
	Sample S54	9.7305	ft.lbf/in	7.38% COV

Analysis 791 - Notched Izod Impact

Material: ABS/PC	Sample Z53	39.438	kJ/m ²	7.88% COV
	Sample Z54	39.410	kJ/m ²	7.73% COV

Analysis 792 - Notched Charpy Impact

Material: ABS/PC	Sample M53	41.138	kJ/m ²	8.46% COV
	Sample M54	41.300	kJ/m ²	8.82% COV



Plastics Interlaboratory Testing Program

Report #107

Analysis 704

3rd Qtr 2018

Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F53			Sample F54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2B9P7Y		9,383.7	47.9	0.32	7,379.9	-49.8	-0.38
2HJ6DY		9,362.8	27.0	0.18	7,469.6	40.0	0.30
34ZP48		9,524.8	189.0	1.26	7,707.6	278.0	2.11
39AZ29		9,517.5	181.6	1.22	7,582.6	153.0	1.16
3YQLZQ		9,533.7	197.9	1.32	7,573.3	143.7	1.09
4BWBH8		9,514.6	178.7	1.20	7,542.0	112.4	0.85
4R4YZE		9,396.6	60.8	0.41	7,330.4	-99.2	-0.75
4V63R2		9,576.8	241.0	1.61	7,664.0	234.4	1.78
63FMA4		9,281.2	-54.6	-0.37	7,223.6	-206.0	-1.57
6DYTVU	X	7,702.6	-1,633.2	-10.93	6,120.0	-1,309.6	-9.96
6M69QL		9,126.0	-209.8	-1.40	7,211.4	-218.2	-1.66
6QAMPC		9,438.0	102.2	0.68	7,458.0	28.4	0.22
6T94VE	X	9,470.0	134.2	0.90	7,056.0	-373.6	-2.84
7VTGQ3	*	8,891.5	-444.3	-2.97	7,090.0	-339.7	-2.58
87QKTB		9,291.2	-44.6	-0.30	7,449.2	19.6	0.15
8H882C		9,406.8	71.0	0.47	7,603.4	173.8	1.32
8TZHY6		9,330.6	-5.2	-0.03	7,453.8	24.2	0.18
9MRL7A		9,282.4	-53.4	-0.36	7,317.0	-112.6	-0.86
9TY9XD		9,512.8	177.0	1.18	7,631.6	202.0	1.54
APETT4	X	7,800.0	-1,535.8	-10.28	6,228.0	-1,201.6	-9.14
AR2JQ2		9,200.8	-135.0	-0.90	7,414.6	-15.0	-0.11
B2NVLE		9,326.0	-9.8	-0.07	7,368.0	-61.7	-0.47
B9KNXE		9,212.0	-123.8	-0.83	7,348.3	-81.3	-0.62
BFJ2TN		9,220.0	-115.8	-0.78	7,348.0	-81.6	-0.62
BVFAXG		9,195.5	-140.3	-0.94	7,359.3	-70.4	-0.53
CGTNQT		9,424.0	88.2	0.59	7,494.8	65.2	0.50
CVWTD9		9,432.4	96.6	0.65	7,436.0	6.4	0.05
CZMYGW		9,250.0	-85.8	-0.57	7,248.0	-181.6	-1.38
DJE6M2		9,420.0	84.2	0.56	7,545.0	115.4	0.88
E9RVPC	X	8,840.4	-495.4	-3.32	6,964.4	-465.2	-3.54
EEYNGM		9,354.0	18.2	0.12	7,516.4	86.8	0.66
EUNUPG		9,316.1	-19.7	-0.13	7,454.6	25.0	0.19
EXB9FC		9,354.4	18.6	0.12	7,363.2	-66.4	-0.51
FAL2HC		9,099.0	-236.8	-1.58	7,187.4	-242.2	-1.84
GF6NVT		9,282.2	-53.6	-0.36	7,436.2	6.6	0.05



Plastics Interlaboratory Testing Program

Report #107

Analysis 704

3rd Qtr 2018

Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F53			Sample F54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
HDWQ4W		9,319.8	-16.0	-0.11	7,551.4	121.8	0.93
HMM8W8		9,163.2	-172.6	-1.16	7,307.2	-122.4	-0.93
J39JER		9,449.7	113.8	0.76	7,510.8	81.2	0.62
JDP7NT		9,381.1	45.3	0.30	7,437.6	8.0	0.06
JK8GZ9		9,378.0	42.2	0.28	7,358.0	-71.6	-0.54
JNA9BU		9,274.7	-61.2	-0.41	7,436.4	6.8	0.05
JNBZ92		9,334.6	-1.2	-0.01	7,527.0	97.4	0.74
JNEPDY		9,308.7	-27.1	-0.18	7,514.1	84.5	0.64
JXG8N2		9,446.6	110.8	0.74	7,423.2	-6.4	-0.05
KLEBUY		9,418.2	82.4	0.55	7,380.2	-49.4	-0.38
LLDP7X		9,293.2	-42.6	-0.29	7,466.9	37.3	0.28
LN4XA8		9,523.1	187.2	1.25	7,581.9	152.2	1.16
LVM44T		9,368.8	33.0	0.22	7,535.6	106.0	0.81
LY3T83		9,069.4	-266.5	-1.78	7,255.6	-174.1	-1.32
M4BH2W		9,234.0	-101.9	-0.68	7,280.6	-149.0	-1.13
MF33NE		9,168.8	-167.0	-1.12	7,319.4	-110.2	-0.84
MXR7DV		9,572.6	236.8	1.58	7,542.0	112.4	0.85
N9GELW		9,401.4	65.6	0.44	7,351.0	-78.6	-0.60
NL82XJ		9,529.0	193.2	1.29	7,487.4	57.8	0.44
PEJDK8	X	8,992.2	-343.6	-2.30	6,882.8	-546.8	-4.16
PXCFYM	X	9,082.7	-253.1	-1.69	7,723.0	293.3	2.23
PZMGHU		9,066.8	-269.0	-1.80	7,254.4	-175.2	-1.33
Q3M7ZT		9,057.8	-278.0	-1.86	7,233.6	-196.0	-1.49
Q4YTPU		9,397.2	61.4	0.41	7,448.1	18.5	0.14
QK3ZTH		9,536.2	200.4	1.34	7,638.6	209.0	1.59
QQDFBY		9,454.8	119.0	0.80	7,444.2	14.6	0.11
REWLM8		9,488.0	152.2	1.02	7,596.8	167.2	1.27
T3ZKDF		9,384.6	48.8	0.33	7,555.7	126.0	0.96
TQKHB4	*	9,342.6	6.8	0.05	7,224.4	-205.2	-1.56
UNY2MG	*	9,658.4	322.6	2.16	7,513.4	83.8	0.64
V4L2QL		9,157.2	-178.6	-1.20	7,318.4	-111.2	-0.85
V8LV9H		9,226.2	-109.6	-0.73	7,508.2	78.6	0.60
V9YLVL		9,301.2	-34.6	-0.23	7,572.5	142.8	1.09
WHHYCC		9,285.2	-50.6	-0.34	7,356.2	-73.4	-0.56
WNQXMM		9,182.0	-153.8	-1.03	7,408.8	-20.8	-0.16



Plastics Interlaboratory Testing Program

Report #107

Analysis 704

3rd Qtr 2018

Tensile Stress at Yield - psi

WebCode	Data Flag	<u>Sample F53</u>			<u>Sample F54</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
XHX8PP		9,500.1	164.2	1.10	7,603.5	173.9	1.32
Y96AK3		9,280.6	-55.2	-0.37	7,402.6	-27.0	-0.21
YC3QWW		9,089.0	-246.8	-1.65	7,233.2	-196.4	-1.49

Summary Statistics		<u>Sample F53</u>	<u>Sample F54</u>
Grand Means		9,335.82 psi	7,429.65 psi
Std Dev Btwn Labs		149.44 psi	131.53 psi
Statistics based on 67 of 73 reporting participants			

Sample F53: ABS/PC & Sample F54: ABS/PC

Comments on Assigned Data Flags for Test #704

- APETT4 (X) - Data for both samples are low. Possible Systematic Error.
- 6T94VE (X) - Data for sample F54 are low. Inconsistent within the determinations of sample F54.
- E9RVPC (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample F53.
- PXCFYM (X) - Inconsistent in testing between samples.
- 6DYTVU (X) - Data for both samples are low. Possible Systematic Error.
- PEJDK8 (X) - Inconsistent in Testing, Data for sample F54 are low.



Plastics Interlaboratory Testing Program

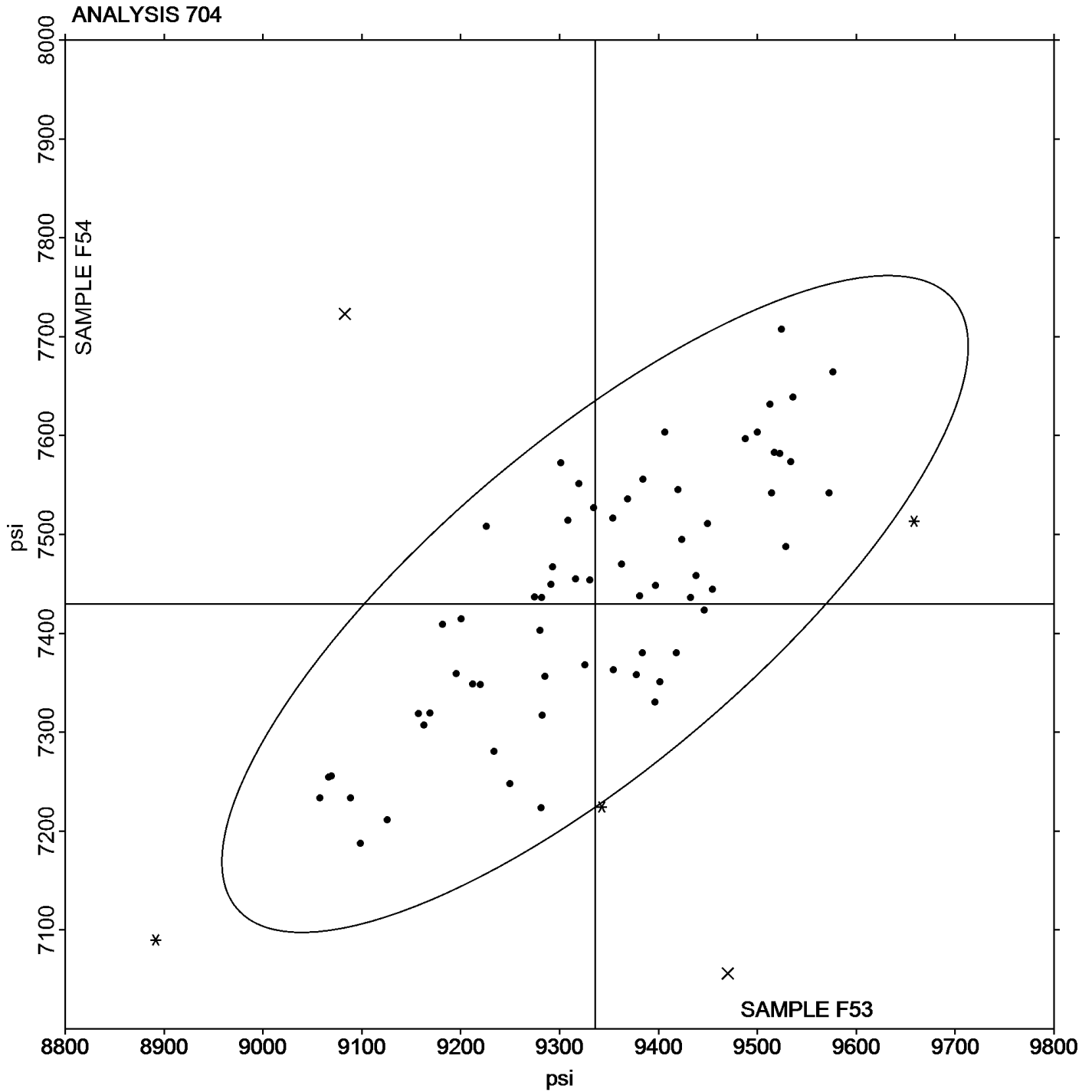
Analysis 704

Tensile Stress at Yield - psi

Report #107

3rd Qtr 2018

Grand Mean Sample F53: 9,335.82 psi Grand Mean Sample F54: 7,429.65 psi





Plastics Interlaboratory Testing Program

Report #107

Analysis 705

3rd Qtr 2018

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F53			Sample F54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2B9P7Y		6,681.4	-164.3	-0.91	6,143.9	-253.2	-1.79
2HJ6DY		6,566.0	-279.7	-1.54	6,337.0	-60.0	-0.42
34ZP48		7,072.6	226.9	1.25	6,603.4	206.4	1.46
39AZ29		6,777.7	-68.0	-0.38	6,471.6	74.6	0.53
3YQLZQ		7,027.8	182.1	1.01	6,474.6	77.6	0.55
4R4YZE		6,845.2	-0.5	0.00	6,366.6	-30.4	-0.22
4V63R2		7,183.4	337.7	1.87	6,708.6	311.6	2.20
63FMA4	X	59.6	-6,786.1	-37.48	53.0	-6,344.0	-44.81
6DYTVU	*	7,403.2	557.5	3.08	6,715.2	318.2	2.25
6M69QL		6,625.6	-220.1	-1.22	6,229.8	-167.2	-1.18
6QAMPC		6,868.0	22.3	0.12	6,410.0	13.0	0.09
7VTGQ3		6,745.0	-100.7	-0.56	6,303.6	-93.5	-0.66
87QKTB		6,811.0	-34.6	-0.19	6,381.7	-15.3	-0.11
8H882C		6,905.6	59.9	0.33	6,425.4	28.4	0.20
8TZHY6		7,060.0	214.3	1.18	6,394.0	-3.0	-0.02
9MRL7A		6,856.8	11.1	0.06	6,261.8	-135.2	-0.96
9TY9XD		7,058.4	212.7	1.18	6,595.8	198.8	1.40
AR2JQ2		6,797.6	-48.1	-0.27	6,268.0	-129.0	-0.91
B2NVLE		6,709.5	-136.2	-0.75	6,175.8	-221.3	-1.56
B9KNXE		6,674.3	-171.3	-0.95	6,439.7	42.6	0.30
BVFAXG		6,567.4	-278.3	-1.54	6,370.1	-26.9	-0.19
CGTNQT		6,949.6	103.9	0.57	6,612.8	215.8	1.52
CZMYGW		6,790.0	-55.7	-0.31	6,286.0	-111.0	-0.78
DJE6M2		6,882.9	37.3	0.21	6,331.7	-65.3	-0.46
E9RVPC		6,698.0	-147.7	-0.82	6,235.2	-161.8	-1.14
EEYNGM		6,996.8	151.1	0.83	6,453.2	56.2	0.40
EUNUPG		6,642.7	-202.9	-1.12	6,399.5	2.5	0.02
EXB9FC		6,680.4	-165.3	-0.91	6,362.2	-34.8	-0.25
FAL2HC		6,572.6	-273.1	-1.51	6,209.6	-187.4	-1.32
GF6NVT		6,843.8	-1.9	-0.01	6,322.2	-74.8	-0.53
HDWQ4W		6,974.8	129.1	0.71	6,560.0	163.0	1.15
J39JER		6,912.5	66.9	0.37	6,484.2	87.1	0.62
JDP7NT		6,909.7	64.0	0.35	6,349.8	-47.2	-0.33
JK8GZ9		6,816.0	-29.7	-0.16	6,264.0	-133.0	-0.94
JNA9BU		6,823.5	-22.2	-0.12	6,558.4	161.3	1.14



Plastics Interlaboratory Testing Program

Report #107

Analysis 705

3rd Qtr 2018

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F53			Sample F54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JNBZ92		6,904.4	58.7	0.32	6,403.4	6.4	0.04
JNEPDY		6,973.6	127.9	0.71	6,460.5	63.4	0.45
JXG8N2		6,858.4	12.7	0.07	6,351.0	-46.0	-0.33
KLEBUY		6,948.8	103.1	0.57	6,346.0	-51.0	-0.36
LLDP7X		6,751.3	-94.4	-0.52	6,366.9	-30.1	-0.21
LN4XA8		7,012.5	166.9	0.92	6,612.5	215.5	1.52
LVM44T		6,894.0	48.3	0.27	6,410.0	13.0	0.09
LY3T83		6,676.8	-168.9	-0.93	6,233.5	-163.6	-1.16
M4BH2W		6,842.0	-3.7	-0.02	6,249.3	-147.7	-1.04
MF33NE		7,055.0	209.3	1.16	6,454.4	57.4	0.41
MXR7DV		6,961.9	116.2	0.64	6,265.7	-131.4	-0.93
N9GELW		7,004.0	158.3	0.87	6,259.0	-138.0	-0.98
NL82XJ	*	6,819.6	-26.1	-0.14	6,706.2	309.2	2.18
PEJDK8	X	6,537.8	-307.9	-1.70	5,881.4	-515.6	-3.64
PXCFYM	*	6,728.2	-117.5	-0.65	6,662.8	265.8	1.88
PZMGHU		6,674.1	-171.5	-0.95	6,204.1	-193.0	-1.36
Q3M7ZT		6,578.4	-267.3	-1.48	6,175.0	-222.0	-1.57
Q4YTPU		6,919.6	73.9	0.41	6,364.6	-32.5	-0.23
QK3ZTH		6,756.9	-88.8	-0.49	6,469.5	72.4	0.51
QQDFBY		7,041.8	196.1	1.08	6,439.6	42.6	0.30
REWLM8		6,876.2	30.5	0.17	6,492.0	95.0	0.67
T3ZKDF		6,773.0	-72.6	-0.40	6,454.5	57.5	0.41
TQKHB4		6,966.8	121.1	0.67	6,235.8	-161.2	-1.14
UNY2MG		7,262.4	416.7	2.30	6,611.8	214.8	1.52
V4L2QL		6,735.0	-110.7	-0.61	6,312.8	-84.2	-0.60
V8LV9H		6,690.0	-155.7	-0.86	6,384.4	-12.6	-0.09
V9YLVL		6,923.8	78.2	0.43	6,464.0	67.0	0.47
WNQXMM		6,598.6	-247.1	-1.36	6,396.8	-0.2	0.00
XHX8PP		6,964.2	118.5	0.65	6,500.6	103.6	0.73
YC3QWW	*	6,355.4	-490.3	-2.71	6,221.4	-175.6	-1.24



Plastics Interlaboratory Testing Program

Report #107

Analysis 705

3rd Qtr 2018

Tensile Stress at Break - psi

Summary Statistics	<u>Sample F53</u>	<u>Sample F54</u>
Grand Means	6,845.66 psi	6,397.04 psi
Stnd Dev Btwn Labs	181.05 psi	141.57 psi

Statistics based on 63 of 65 reporting participants

Sample F53: ABS/PC & Sample F54: ABS/PC

Comments on Assigned Data Flags for Test #705

63FMA4 (X) - Extreme data.

PEJDK8 (X) - Data for sample F54 are low.



Plastics Interlaboratory Testing Program

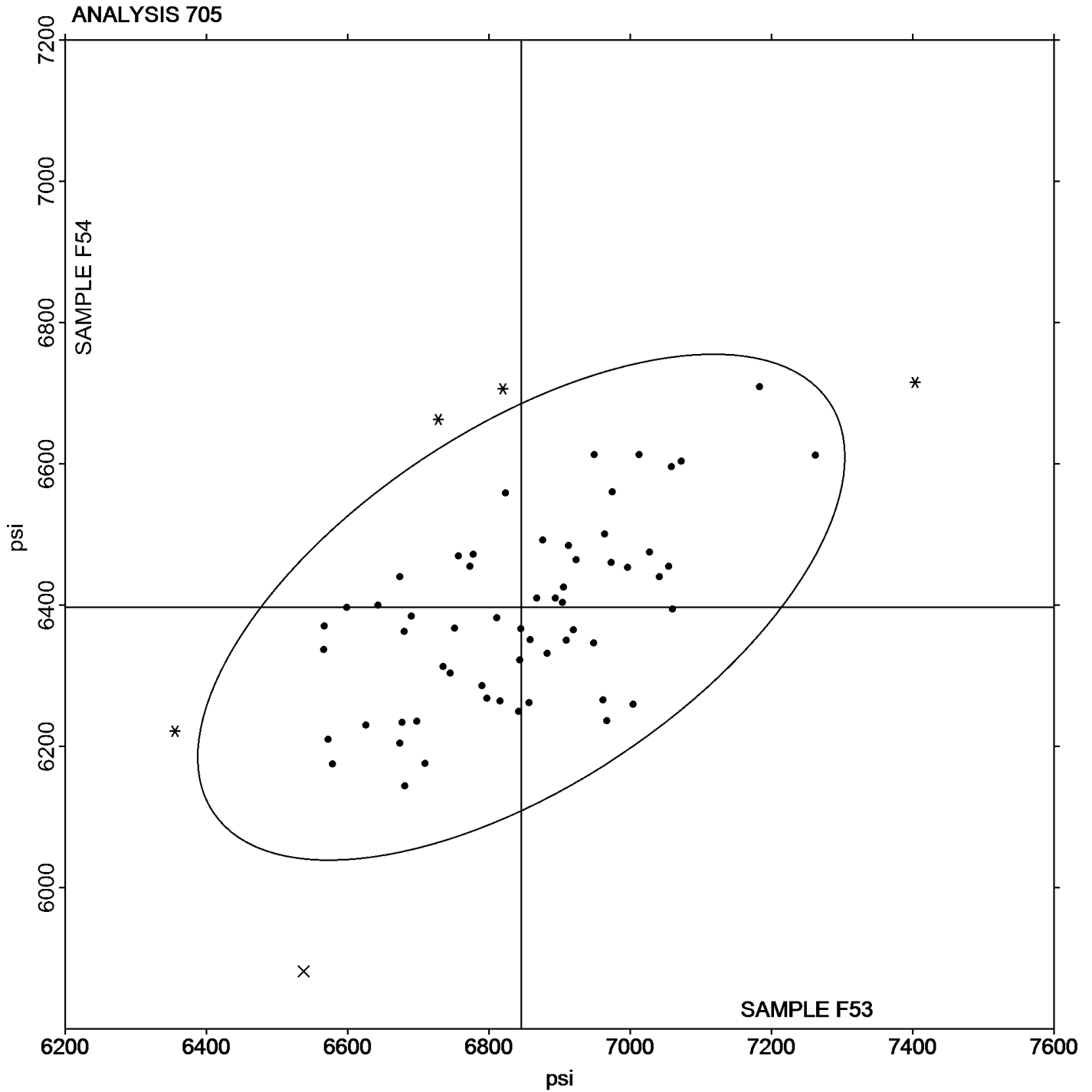
Report #107

Analysis 705

3rd Qtr 2018

Tensile Stress at Break - psi

Grand Mean Sample F53: 6,845.66 psi Grand Mean Sample F54: 6,397.04 psi





Plastics Interlaboratory Testing Program

Report #107

Analysis 706

3rd Qtr 2018

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F53			Sample F54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2B9P7Y		3.484	-0.002	-0.01	4.648	0.097	0.50
2HJ6DY		3.534	0.048	0.34	4.626	0.075	0.38
34ZP48	X	3.642	0.156	1.09	4.064	-0.487	-2.47
39AZ29		3.804	0.318	2.22	5.032	0.481	2.45
3YQLZQ		3.534	0.048	0.34	4.623	0.072	0.37
4R4YZE		3.452	-0.034	-0.24	4.444	-0.107	-0.54
4V63R2		3.550	0.064	0.45	4.666	0.115	0.59
63FMA4	*	3.818	0.332	2.32	5.106	0.555	2.83
6DYTVU	X	2.060	-1.426	-9.97	2.054	-2.497	-12.70
6M69QL		3.470	-0.016	-0.11	4.456	-0.095	-0.48
6QAMPC		3.640	0.154	1.08	4.752	0.201	1.02
7VTGQ3		3.474	-0.012	-0.08	4.438	-0.113	-0.57
87QKTB		3.600	0.114	0.80	4.840	0.289	1.47
8H882C		3.624	0.138	0.97	4.756	0.205	1.05
8TZHY6	X	4.560	1.074	7.51	5.140	0.589	3.00
9TY9XD		3.532	0.046	0.32	4.772	0.221	1.13
B2NVLE		3.460	-0.026	-0.18	4.476	-0.075	-0.38
B9KNXE		3.300	-0.186	-1.30	4.150	-0.401	-2.04
BVFAXG		3.360	-0.126	-0.88	4.440	-0.111	-0.56
CGTNQT	X	3.058	-0.428	-2.99	3.654	-0.897	-4.56
CVWTD9	X	1.640	-1.846	-12.91	4.540	-0.011	-0.05
CZMYGW		3.405	-0.081	-0.57	4.509	-0.042	-0.21
DJE6M2		3.623	0.137	0.95	4.660	0.109	0.56
E9RVPC	*	3.484	-0.002	-0.01	4.228	-0.322	-1.64
EEYNGM		3.220	-0.266	-1.86	4.400	-0.151	-0.77
EUNUPG		3.407	-0.079	-0.55	4.531	-0.019	-0.10
EXB9FC	X	7.946	4.460	31.18	9.614	5.063	25.75
FAL2HC		3.544	0.058	0.41	4.458	-0.093	-0.47
GF6NVT		3.352	-0.134	-0.94	4.468	-0.083	-0.42
HDWQ4W		3.536	0.050	0.35	4.664	0.113	0.58
J39JER	X	4.000	0.514	3.59	4.000	-0.551	-2.80
JDP7NT		3.580	0.094	0.66	4.700	0.149	0.76
JK8GZ9		3.446	-0.040	-0.28	4.594	0.043	0.22
JNA9BU		3.516	0.030	0.21	4.630	0.079	0.40
JNBZ92	*	3.612	0.126	0.88	4.384	-0.167	-0.85



Plastics Interlaboratory Testing Program

Report #107

Analysis 706

3rd Qtr 2018

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F53			Sample F54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JNEPDY		3.610	0.124	0.87	4.670	0.119	0.61
JXG8N2		3.394	-0.092	-0.64	4.384	-0.167	-0.85
KLEBUY		3.360	-0.126	-0.88	4.532	-0.019	-0.09
LN4XA8		3.458	-0.028	-0.19	4.417	-0.134	-0.68
LVM44T		3.494	0.008	0.06	4.486	-0.065	-0.33
LY3T83		3.434	-0.052	-0.36	4.328	-0.223	-1.13
M4BH2W	X	2.725	-0.761	-5.32	2.799	-1.752	-8.91
MF33NE	X	3.180	-0.306	-2.14	46.334	41.783	212.53
MXR7DV		3.534	0.048	0.34	4.570	0.019	0.10
N9GELW		3.552	0.066	0.46	4.532	-0.019	-0.09
PEJDK8	*	3.137	-0.349	-2.44	4.385	-0.165	-0.84
PXCFYM	X	4.680	1.194	8.35	4.640	0.089	0.46
PZMGHU	*	3.069	-0.417	-2.92	4.093	-0.458	-2.33
Q3M7ZT		3.406	-0.080	-0.56	4.456	-0.095	-0.48
Q4YTPU		3.604	0.118	0.83	4.620	0.069	0.35
QK3ZTH	X	3.074	-0.412	-2.88	3.410	-1.141	-5.80
QQDFBY		3.536	0.050	0.35	4.616	0.065	0.33
REWLM8		3.400	-0.086	-0.60	4.298	-0.253	-1.28
T3ZKDF		3.604	0.118	0.83	4.664	0.113	0.58
TQKHB4		3.464	-0.022	-0.15	4.512	-0.039	-0.20
UNY2MG		3.632	0.146	1.02	4.682	0.131	0.67
V4L2QL		3.258	-0.228	-1.59	4.282	-0.269	-1.37
V8LV9H	X	42.876	39.390	275.40	55.582	51.031	259.56
WNQXMM		3.528	0.042	0.29	4.520	-0.031	-0.16
XHX8PP		3.620	0.134	0.94	4.880	0.329	1.68
Y96AK3		3.536	0.050	0.35	4.670	0.119	0.61
YC3QWW		3.306	-0.180	-1.26	4.478	-0.073	-0.37

Summary Statistics

	Sample F53	Sample F54
Grand Means	3.4859 Percent	4.5505 Percent
Std Dev Btwn Labs	0.1430 Percent	0.1966 Percent

Statistics based on 50 of 62 reporting participants

Sample F53: ABS/PC & Sample F54: ABS/PC



Comments on Assigned Data Flags for Test #706

CVWTD9 (X) - Data for sample F53 are low.

CGTNQT (X) - Data for both samples are low. Inconsistent within the determinations of sample F53.

MF33NE (X) - Extreme Data for sample F54. Inconsistent within the determinations of both samples.

M4BH2W (X) - Data for both samples are low.

EXB9FC (X) - Data for both samples are high.

J39JER (X) - Data for sample F53 are high and data for sample F54 are low.

34ZP48 (X) - Inconsistent in testing between samples.

QK3ZTH (X) - Data for both samples are low.

V8LV9H (X) - Extreme data.

PXCFYM (X) - Data for sample F53 are high.

8TZHY6 (X) - Data for both samples are high.

6DYTVU (X) - Data for both samples are low.



Plastics Interlaboratory Testing Program

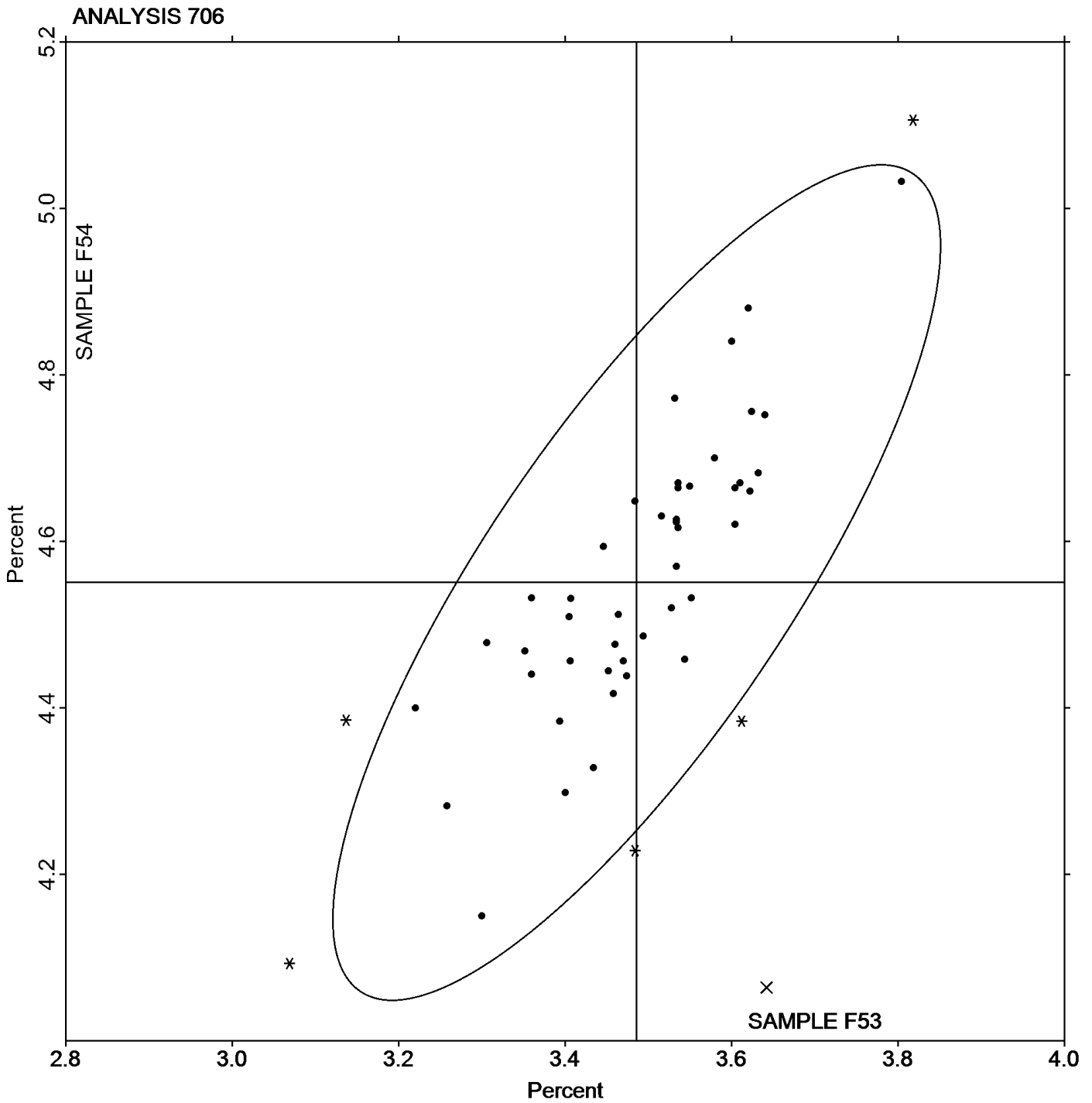
Analysis 706

Percent Elongation at Yield - Percent

Report #107

3rd Qtr 2018

Grand Mean Sample F53: 3.4859 Percent Grand Mean Sample F54: 4.5505 Percent





Plastics Interlaboratory Testing Program

Report #107

Analysis 708

3rd Qtr 2018

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F53			Sample F54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2B9P7Y		427.72	18.25	1.00	351.66	27.27	1.62
2HJ6DY		420.24	10.77	0.59	334.34	9.96	0.59
34ZP48		383.72	-25.75	-1.41	318.48	-5.90	-0.35
39AZ29		396.57	-12.90	-0.70	315.26	-9.13	-0.54
3YQLZQ		449.10	39.63	2.16	349.19	24.81	1.48
4R4YZE		425.20	15.73	0.86	337.40	13.02	0.77
4V63R2		397.26	-12.21	-0.67	313.56	-10.82	-0.64
63FMA4		382.40	-27.07	-1.48	297.40	-26.98	-1.61
6DYTVU		418.84	9.37	0.51	332.52	8.14	0.48
6M69QL	*	388.89	-20.57	-1.12	285.61	-38.77	-2.31
6QAMPC		392.40	-17.07	-0.93	303.20	-21.18	-1.26
7VTGQ3		399.98	-9.48	-0.52	323.44	-0.95	-0.06
87QKTB	X	541.69	132.22	7.22	398.51	74.13	4.41
8H882C		413.42	3.95	0.22	330.72	6.34	0.38
9TY9XD		402.70	-6.77	-0.37	319.90	-4.48	-0.27
B2NVLE		402.48	-6.98	-0.38	318.71	-5.67	-0.34
B9KNXE	X	458.02	48.55	2.65	334.70	10.32	0.61
BVFAXG	*	458.90	49.44	2.70	356.80	32.41	1.93
CGTNQT	X	496.38	86.91	4.75	439.40	115.02	6.85
CVWTD9		397.62	-11.85	-0.65	309.32	-15.06	-0.90
CZMYGW		413.80	4.33	0.24	324.20	-0.18	-0.01
DJE6M2		377.00	-32.47	-1.77	296.25	-28.13	-1.67
E9RVPC	*	402.93	-6.54	-0.36	343.77	19.39	1.15
EEYNGM		439.66	30.19	1.65	342.98	18.60	1.11
EUNUPG	X	358.91	-50.56	-2.76	347.96	23.58	1.40
FAL2HC		390.84	-18.63	-1.02	311.24	-13.14	-0.78
GF6NVT		382.74	-26.73	-1.46	302.50	-21.88	-1.30
HDWQ4W		412.00	2.53	0.14	349.40	25.02	1.49
HMM8W8		409.12	-0.34	-0.02	333.66	9.28	0.55
J39JER	X	534.55	125.08	6.83	409.09	84.70	5.04
JDP7NT		418.93	9.46	0.52	323.49	-0.89	-0.05
JK8GZ9		422.80	13.33	0.73	331.40	7.02	0.42
JNA9BU		421.11	11.64	0.64	340.03	15.65	0.93
JNEPDY		391.61	-17.86	-0.98	318.54	-5.84	-0.35
JXG8N2		402.72	-6.75	-0.37	316.68	-7.70	-0.46



Plastics Interlaboratory Testing Program

Report #107

Analysis 708

3rd Qtr 2018

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F53			Sample F54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KLEBUY		421.80	12.33	0.67	325.14	0.76	0.05
LN4XA8		448.40	38.93	2.13	359.00	34.62	2.06
LVM44T	X	530.60	121.13	6.62	423.66	99.28	5.91
LY3T83		416.86	7.39	0.40	324.26	-0.12	-0.01
M4BH2W		379.21	-30.25	-1.65	286.04	-38.35	-2.28
MF33NE	X	485.58	76.11	4.16	360.82	36.44	2.17
MXR7DV		432.36	22.89	1.25	338.67	14.28	0.85
N9GELW		405.90	-3.57	-0.19	326.68	2.30	0.14
PEJDK8	X	760.24	350.77	19.16	662.50	338.12	20.12
PXCFYM	X	291.47	-118.00	-6.44	272.20	-52.19	-3.11
PZMGHU	X	487.95	78.48	4.29	356.66	32.28	1.92
Q3M7ZT		414.70	5.23	0.29	328.32	3.94	0.23
Q4YTPU		404.92	-4.54	-0.25	326.68	2.30	0.14
QK3ZTH		412.70	3.23	0.18	333.91	9.53	0.57
QQDFBY		428.38	18.91	1.03	325.26	0.88	0.05
REWLM8		392.00	-17.47	-0.95	293.80	-30.58	-1.82
T3ZKDF		396.94	-12.52	-0.68	315.11	-9.27	-0.55
TQKHB4		417.86	8.39	0.46	321.48	-2.90	-0.17
V4L2QL		417.54	8.07	0.44	315.20	-9.18	-0.55
V8LV9H		388.02	-21.44	-1.17	324.80	0.41	0.02
WNQXMM		410.55	1.09	0.06	329.22	4.83	0.29
XHX8PP		408.34	-1.12	-0.06	326.42	2.04	0.12
Y96AK3		411.94	2.47	0.14	337.48	13.10	0.78
YC3QWW		412.76	3.29	0.18	325.66	1.28	0.08

Summary Statistics		
	Sample F53	Sample F54
Grand Means	409.467 ksi	324.383 ksi
Stnd Dev Btwn Labs	18.312 ksi	16.802 ksi
Statistics based on 49 of 59 reporting participants		

Sample F53: ABS/PC & Sample F54: ABS/PC



Comments on Assigned Data Flags for Test #708

- B9KNXE (X) - Inconsistent in testing between samples.
- LVM44T (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample F54.
- CGTNQT (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample F54.
- MF33NE (X) - Data for sample F53 are high. Inconsistent within the determinations of sample F53.
- PZMGHU (X) - Data for sample F53 are high.
- 87QKTB (X) - Data for both samples are high. Possible Systematic Error.
- J39JER (X) - Data for both samples are high. Possible Systematic Error.
- EUNUPG (X) - Inconsistent in Testing, Data for sample F53 are low.
- PXCFYM (X) - Data for both samples are low. Possible Systematic Error.
- PEJDK8 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample F53.



Plastics Interlaboratory Testing Program

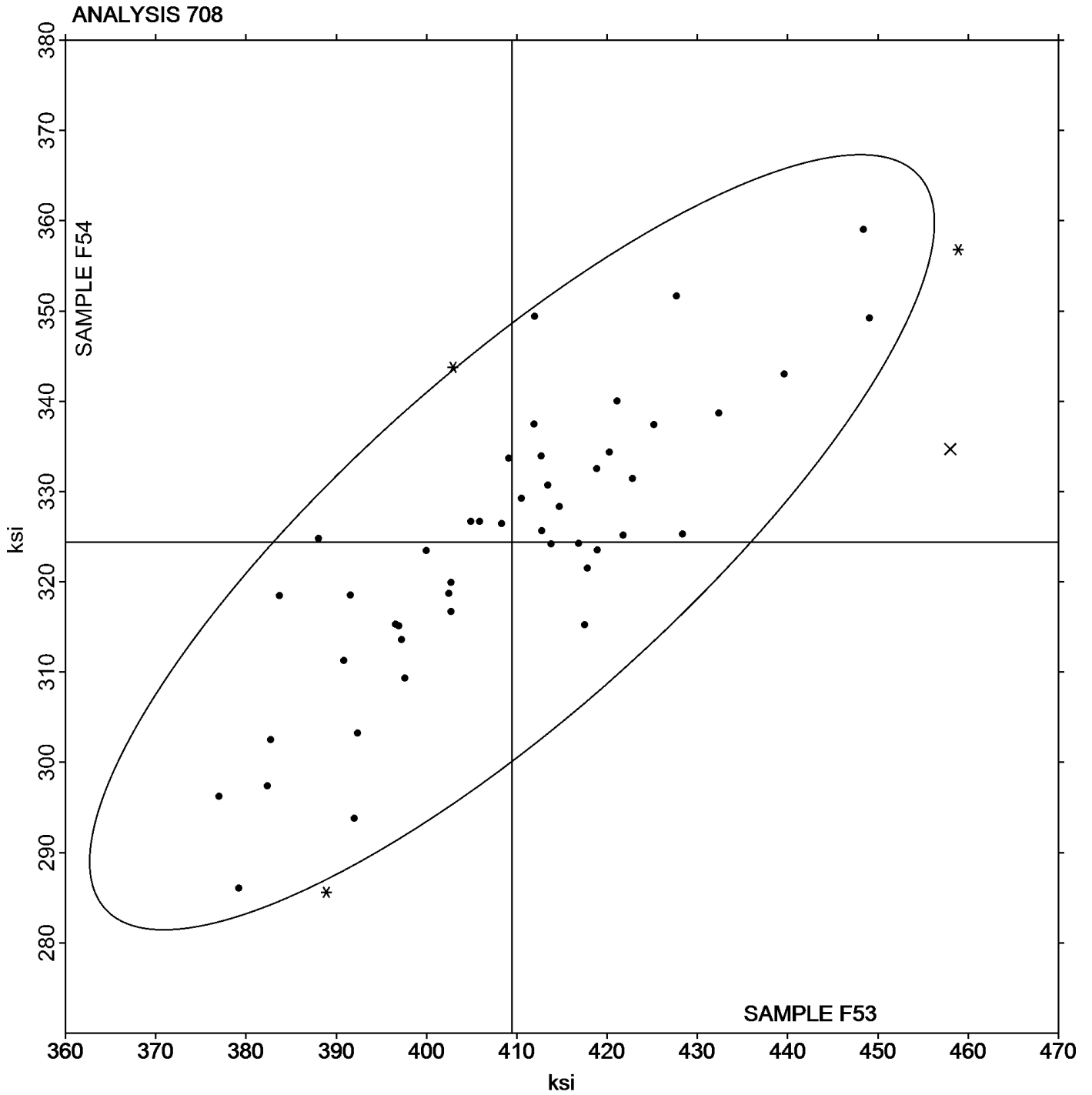
Analysis 708

Modulus of Elasticity - ksi

Report #107

3rd Qtr 2018

Grand Mean Sample F53: 409.47 ksi Grand Mean Sample F54: 324.38 ksi





Plastics Interlaboratory Testing Program

Report #107

Analysis 710

3rd Qtr 2018

Deflection Temp. Under Flexural Load (1.82 MPa) - Degrees C

WebCode	Data Flag	Sample E53			Sample E54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2HJ6DY		82.75	0.24	0.27	83.45	0.07	0.09	DN
34ZP48		83.33	0.81	0.91	83.18	-0.20	-0.25	CE
39AZ29		81.68	-0.84	-0.93	82.40	-0.98	-1.23	ZW
4R4YZE		81.98	-0.54	-0.59	82.45	-0.93	-1.17	TO
63FMA4		82.22	-0.29	-0.32	82.92	-0.46	-0.58	XX
8H882C		83.55	1.04	1.16	84.35	0.97	1.23	DN
8TZHY6		81.15	-1.36	-1.51	82.15	-1.23	-1.55	TO
9TY9XD	X	86.78	4.26	4.74	83.58	0.20	0.25	TO
B2NVLE		82.78	0.26	0.29	83.35	-0.03	-0.03	TY
CGTNQT		82.47	-0.04	-0.05	83.28	-0.10	-0.13	XX
CVWTD9		83.53	1.01	1.13	84.78	1.40	1.77	CE
DDDEDP		82.58	0.06	0.07	83.15	-0.23	-0.29	TO
E9RVPC		82.98	0.46	0.52	83.55	0.17	0.22	TO
JDP7NT		84.60	2.09	2.32	85.18	1.80	2.27	CF
JMHCQ7		83.05	0.54	0.60	84.20	0.82	1.04	XX
KLEBUY		82.18	-0.34	-0.37	83.50	0.12	0.16	CF
LDLDRW		82.60	0.09	0.10	83.30	-0.08	-0.10	TO
MF33NE	X	70.48	-12.04	-13.37	71.65	-11.73	-14.83	CE
MXR7DV		82.20	-0.31	-0.34	83.45	0.07	0.09	RO
N9GELW		80.28	-2.24	-2.48	81.98	-1.40	-1.77	CE
PXCFYM		83.18	0.66	0.74	84.05	0.67	0.85	CE
Q4YTPU		82.43	-0.09	-0.09	82.95	-0.43	-0.54	TO
QG7YJT		81.45	-1.06	-1.18	82.60	-0.78	-0.98	CE
QQDFBY		82.93	0.41	0.46	83.65	0.27	0.35	IN
T3ZKDF		83.40	0.89	0.99	84.65	1.27	1.61	AT
UNY2MG		82.15	-0.36	-0.40	83.08	-0.30	-0.38	AT
WNQXMM		82.65	0.14	0.16	83.10	-0.28	-0.35	CE
Y96AK3		81.23	-1.29	-1.43	83.13	-0.25	-0.32	TO



Plastics Interlaboratory Testing Program

Report #107

Analysis 710

3rd Qtr 2018

Deflection Temp. Under Flexural Load (1.82 MPa) - Degrees C

Summary Statistics	Sample E53	Sample E54
Grand Means	82.510 Degrees C	83.377 Degrees C
Stnd Dev Btwn Labs	0.900 Degrees C	0.791 Degrees C
Statistics based on 26 of 28 reporting participants		

Sample E53: ABS & Sample E54: ABS

Comments on Assigned Data Flags for Test #710

9TY9XD (X) - Data for sample E53 are high. Inconsistent within the determinations of sample E53.

MF33NE (X) - Data for both samples are low.

Key to Instrument Codes Reported by Participants

AT	Atlas	CE	Ceast
CF	Coesfeld	DN	DYNISCO
IN	Instron	RO	Rosand
TO	Tinius Olsen	TY	Toyoseiki
XX	Instrument manufacturer not specified by lab	ZW	Zwick



Plastics Interlaboratory Testing Program

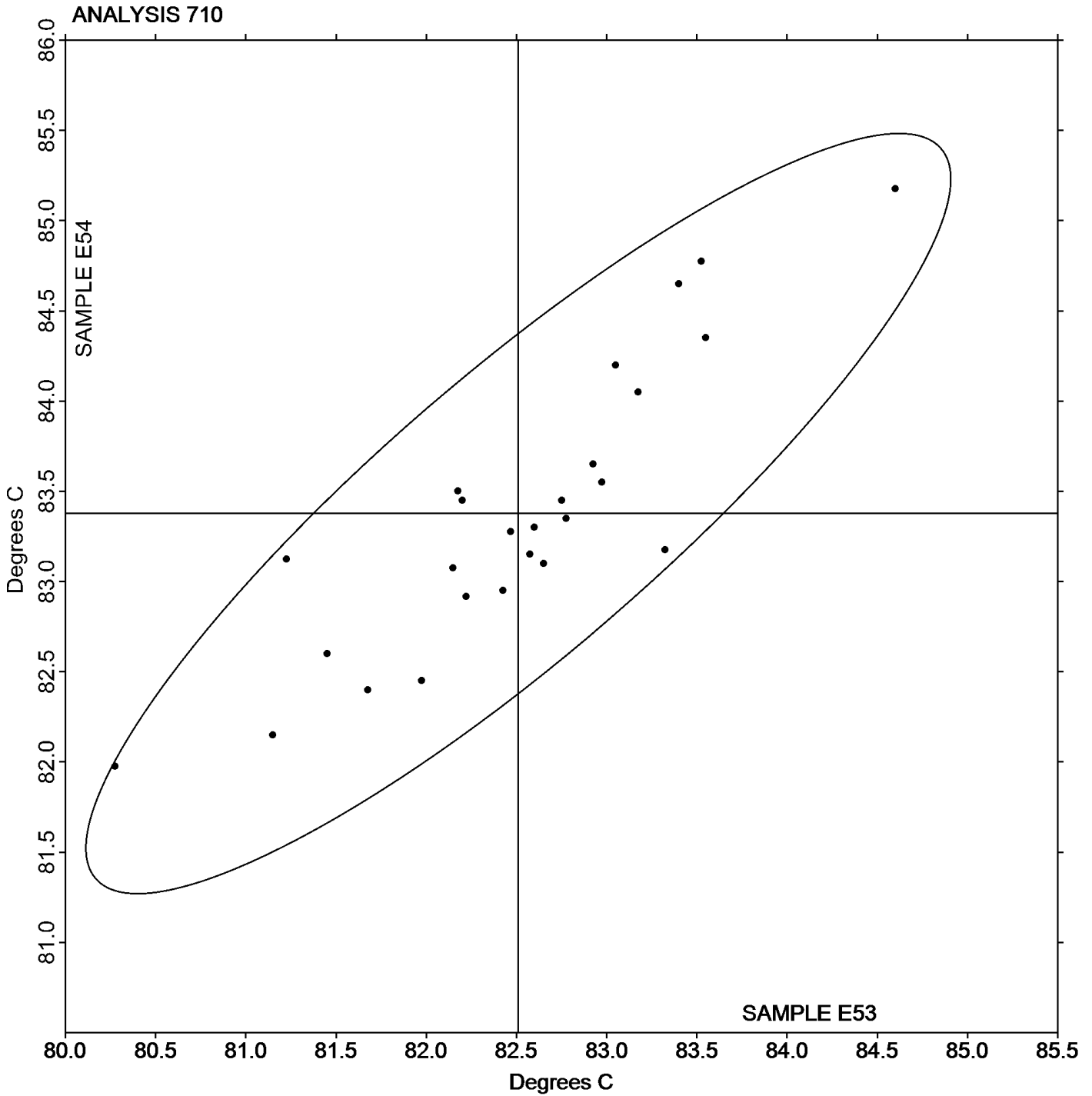
Report #107

Analysis 710

3rd Qtr 2018

Deflection Temp. Under Flexural Load (1.82 MPa) - Degrees C

Grand Mean Sample E53: 82.510 Degrees C Grand Mean Sample E54: 83.377 Degrees C





Plastics Interlaboratory Testing Program

Report #107

Analysis 711

3rd Qtr 2018

Deflection Temp. Under Flexural Load (0.455 MPa) - Degrees C

WebCode	Data Flag	Sample G53			Sample G54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
34ZP48		89.2	3.8	1.02	91.0	6.0	1.54	CE
63FMA4		82.2	-3.2	-0.85	81.7	-3.3	-0.85	XX
8TZHY6		82.5	-2.9	-0.77	83.3	-1.7	-0.43	TO
B3HJ4A		81.9	-3.5	-0.95	84.6	-0.5	-0.12	IN
DDDEDP		85.0	-0.4	-0.11	84.2	-0.8	-0.20	TO
FEHLV9		85.7	0.4	0.10	84.8	-0.2	-0.06	CE
LVM44T		84.4	-1.0	-0.28	81.8	-3.3	-0.83	TO
NL82XJ		84.2	-1.2	-0.31	84.6	-0.4	-0.10	TO
P4427U		83.1	-2.3	-0.61	84.6	-0.4	-0.10	CE
PXCFYM		86.6	1.2	0.33	84.2	-0.9	-0.22	CE
QG7YJT		84.8	-0.6	-0.15	84.9	-0.1	-0.03	CE
QRLTT2	*	97.0	11.6	3.13	96.8	11.7	3.00	CS
UNY2MG		83.5	-1.9	-0.51	83.9	-1.1	-0.29	AT
V9YLV L		85.3	-0.1	-0.02	82.4	-2.6	-0.66	XX
Y96AK3		85.4	0.0	-0.01	82.5	-2.5	-0.65	TO

Summary Statistics		
	Sample G53	Sample G54
Grand Means	85.38 Degrees C	85.01 Degrees C
Std Dev Btwn Labs	3.72 Degrees C	3.92 Degrees C
Statistics based on 15 of 15 reporting participants		

Sample G53: PP & Sample G54: PP

Key to Instrument Codes Reported by Participants

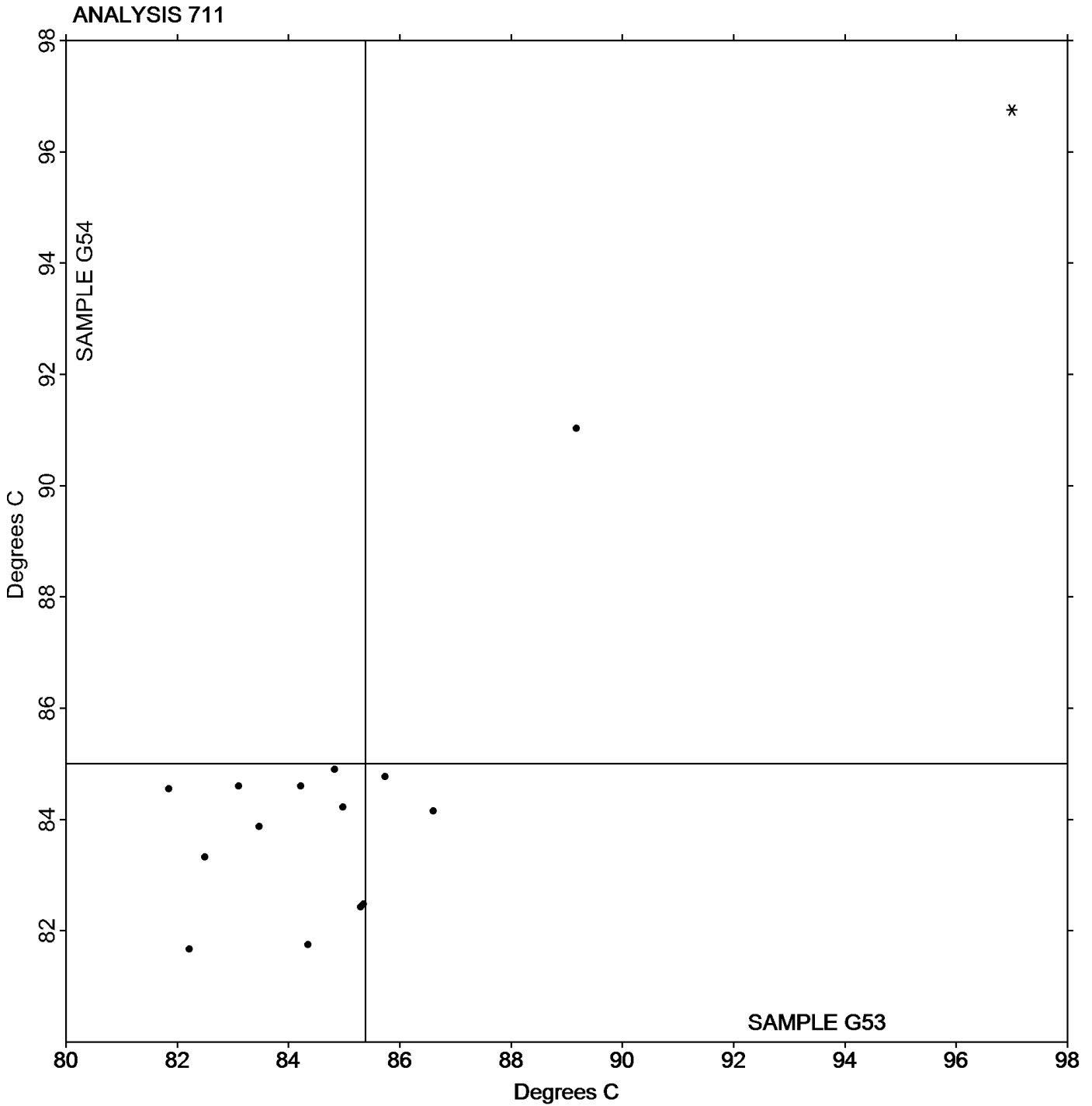
AT	Atlas	CE	Ceast
CS	CSI	IN	Instron
TO	Tinius Olsen	XX	Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program
Analysis 711
Deflection Temp. Under Flexural Load (0.455 MPa) - Degrees C

Report #107
3rd Qtr 2018

Grand Mean Sample G53: 85.379 Degrees C Grand Mean Sample G54: 85.005 Degrees C



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



Plastics Interlaboratory Testing Program

Report #107

Analysis 712

3rd Qtr 2018

Temp. of Deflection Under Flexural Load (1.80 MPa) - Degrees C

WebCode	Data Flag	Sample N53			Sample N54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2B9P7Y		79.15	0.98	1.19	79.05	0.82	1.06	CE
2QGK GK		80.10	1.93	2.34	80.13	1.89	2.45	DN
2V7DBZ		77.23	-0.94	-1.14	76.93	-1.31	-1.69	TO
39AZ29		78.53	0.36	0.43	78.13	-0.11	-0.14	ZW
6DG9G3		79.20	1.03	1.25	79.23	0.99	1.28	CE
6T94VE		76.13	-2.04	-2.46	76.38	-1.86	-2.40	XX
8NPP4Q		77.60	-0.57	-0.68	77.75	-0.48	-0.62	IN
8TZHY6		77.38	-0.79	-0.95	77.65	-0.58	-0.75	TO
982U69		77.65	-0.52	-0.62	77.95	-0.28	-0.37	TO
9BLN4U	X	78.63	0.46	0.56	79.85	1.62	2.09	TO
APETT4	X	80.48	2.31	2.79	81.20	2.97	3.84	XX
B2NVLE		78.43	0.26	0.31	78.40	0.17	0.22	TY
B9KNXE		78.70	0.53	0.65	78.90	0.67	0.86	IN
CB7BUU	X	77.35	-0.82	-0.98	76.63	-1.61	-2.08	TO
CGTNQT		77.85	-0.32	-0.38	77.98	-0.26	-0.33	IN
CYCK62		78.35	0.18	0.22	78.45	0.22	0.28	ZW
DDDEDP		77.85	-0.32	-0.38	78.05	-0.18	-0.24	TO
FEHLV9		78.37	0.20	0.24	78.30	0.07	0.09	CF
FMQRCQ		76.98	-1.19	-1.44	77.00	-1.23	-1.60	TO
G3JAVZ		78.40	0.23	0.28	78.55	0.32	0.41	IN
HDWQ4W		79.18	1.01	1.22	79.13	0.89	1.16	DN
HM4NPE		78.33	0.16	0.19	78.68	0.44	0.57	IN
J2GD38		78.18	0.01	0.01	78.40	0.17	0.22	AT
JA9Y6Y	X	76.63	-1.54	-1.86	78.13	-0.11	-0.14	CE
KHJFF7	X	81.08	2.91	3.51	80.20	1.97	2.55	CE
KHK7QU		77.60	-0.57	-0.68	77.78	-0.46	-0.59	CE
KYPMQ2		78.90	0.73	0.89	78.95	0.72	0.93	IN
LYKKH9		78.23	0.06	0.07	78.28	0.04	0.06	TY
N9GELW		77.35	-0.82	-0.98	77.28	-0.96	-1.24	CE
PXCFYM		78.50	0.33	0.40	78.38	0.14	0.18	CE
Q3LE47		78.28	0.11	0.13	78.30	0.07	0.09	IN
Q4YTPU		78.05	-0.12	-0.14	77.90	-0.33	-0.43	TO
QCVJGW		78.95	0.78	0.95	78.88	0.64	0.83	CF
QG7YJT	*	76.90	-1.27	-1.53	77.58	-0.66	-0.85	CE
T3ZKDF		79.25	1.08	1.31	79.10	0.87	1.12	AT



Plastics Interlaboratory Testing Program

Report #107

Analysis 712

3rd Qtr 2018

Temp. of Deflection Under Flexural Load (1.80 MPa) - Degrees C

WebCode	Data Flag	Sample N53			Sample N54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
T4FJX6		78.30	0.13	0.16	78.38	0.14	0.18	IN
TDG8RM		77.30	-0.87	-1.04	77.95	-0.28	-0.37	CF
WQAE42		78.58	0.41	0.49	78.23	-0.01	-0.01	DN
XG766V	X	74.03	-4.14	-5.00	73.73	-4.51	-5.83	CE
Y4BUZF		77.04	-1.13	-1.36	76.99	-1.25	-1.61	CE
YAHQVU		79.03	0.86	1.04	79.20	0.97	1.25	CE

Summary Statistics		Sample N53	Sample N54
Grand Means		78.165 Degrees C	78.232 Degrees C
Std Dev Btwn Labs		0.828 Degrees C	0.773 Degrees C
Statistics based on 35 of 41 reporting participants			

Sample N53: HIPS & Sample N54: HIPS

Comments on Assigned Data Flags for Test #712

- APETT4 (X) - Data for both samples are high. Possible Systematic Error.
- JA9Y6Y (X) - Inconsistent in testing between samples.
- 9BLN4U (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- XG766V (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample N53.
- KHJFF7 (X) - Data for sample N53 are high. Inconsistent within the determinations of both samples.
- CB7BUU (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

AT Atlas	CE Ceast
CF Coesfeld	DN DYNISCO
IN Instron	TO Tinius Olsen
TY Toyoseiki	XX Instrument manufacturer not specified by lab
ZW Zwick	



Plastics Interlaboratory Testing Program

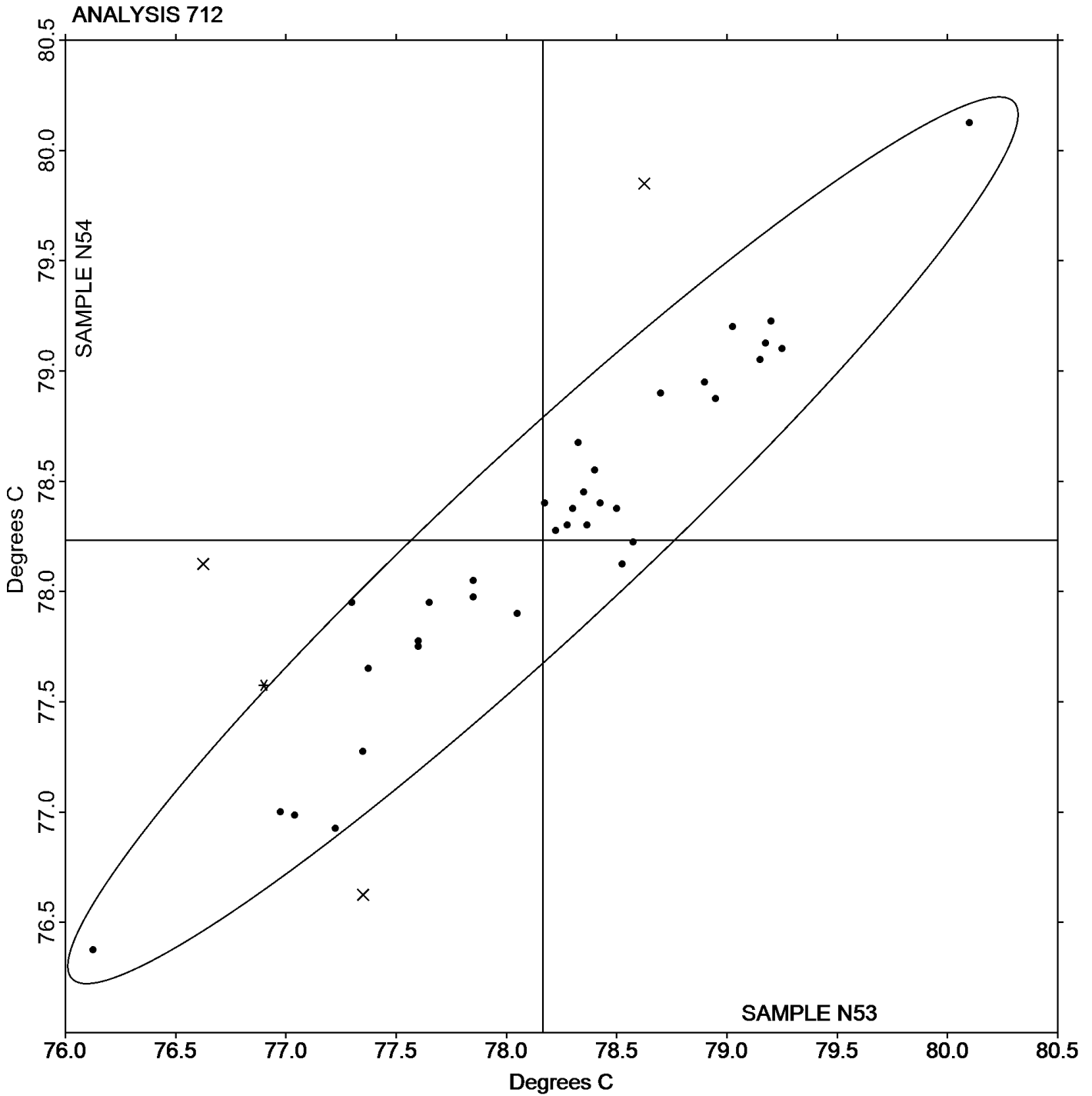
Report #107

Analysis 712

3rd Qtr 2018

Temp. of Deflection Under Flexural Load (1.80 MPa) - Degrees C

Grand Mean Sample N53: 78.165 Degrees C Grand Mean Sample N54: 78.232 Degrees C





Plastics Interlaboratory Testing Program

Report #107

Analysis 715

3rd Qtr 2018

Vicat Softening Temperature (Rate A)

WebCode	Data Flag	Sample H53			Sample H54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2B9P7Y		106.05	-0.51	-0.74	103.73	-0.51	-0.70	CE
36GR29		107.03	0.47	0.68	104.87	0.62	0.86	CE
39AZ29		107.83	1.27	1.83	105.33	1.09	1.50	CF
6LBTP6		105.66	-0.90	-1.30	103.02	-1.23	-1.68	TO
77G7UH		106.68	0.12	0.17	104.25	0.01	0.01	CE
8H882C		105.25	-1.31	-1.89	102.97	-1.28	-1.75	QA
B2NVLE		106.77	0.20	0.29	104.48	0.24	0.33	TY
B3HJ4A		106.77	0.20	0.29	104.32	0.07	0.10	IN
CYCK62		106.77	0.20	0.29	104.47	0.22	0.31	WZ
DG8CJ8		106.67	0.10	0.15	104.53	0.29	0.40	CE
FEHLV9		106.13	-0.43	-0.62	104.00	-0.24	-0.33	CF
GM7X6R		106.37	-0.20	-0.28	104.00	-0.24	-0.33	CE
JDP7NT		107.50	0.94	1.35	105.43	1.19	1.63	CF
KHJFF7		107.33	0.77	1.11	104.92	0.67	0.92	CF
M4BH2W		105.02	-1.55	-2.22	102.62	-1.63	-2.23	DN
MXR7DV		106.87	0.30	0.44	104.52	0.27	0.38	RO
N9GELW		105.75	-0.81	-1.17	103.30	-0.94	-1.29	CE
P4427U		106.03	-0.53	-0.76	103.73	-0.51	-0.70	CE
Q4YTPU		107.20	0.64	0.92	104.83	0.59	0.81	TO
QG7YJT		106.32	-0.25	-0.35	103.73	-0.51	-0.70	CE
T3ZKDF		107.18	0.62	0.89	104.85	0.61	0.83	AT
UQ6LAG		106.98	0.42	0.60	104.63	0.39	0.54	TO
WNQXMM		107.12	0.55	0.80	104.77	0.52	0.72	CE
WQAE42		106.80	0.24	0.34	104.77	0.52	0.72	XX
XPXYAZ		106.00	-0.56	-0.81	104.00	-0.24	-0.33	TO

Summary Statistics

Grand Means

Sample H53
106.563 Degrees C

Sample H54
104.243 Degrees C

Std Dev Btwn Labs

0.696 Degrees C

0.729 Degrees C

Statistics based on 25 of 25 reporting participants

Sample H53: ABS & Sample H54: ABS



Plastics Interlaboratory Testing Program

Analysis 715

Vicat Softening Temperature (Rate A)

Report #107

3rd Qtr 2018

Key to Instrument Codes Reported by Participants

AT	Atlas	CE	Ceast
CF	Coesfeld	DN	DYNISCO
IN	Instron	QA	Qualitest
RO	Rosand	TO	Tinius Olsen
TY	Toyoseiki	WZ	Zwick
XX	Instrument manufacturer not specified by lab		



Plastics Interlaboratory Testing Program

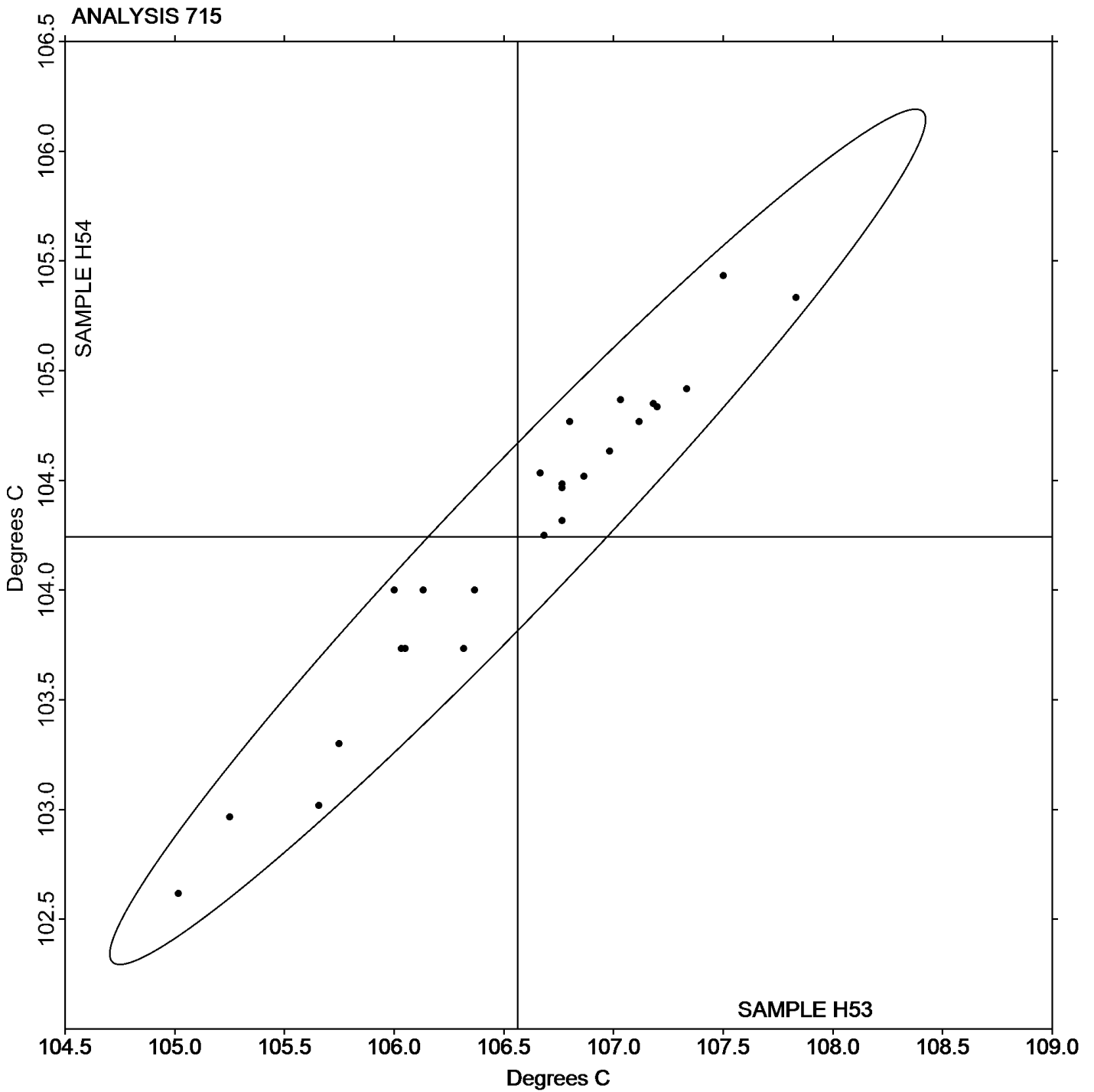
Analysis 715

Vicat Softening Temperature (Rate A)

Report #107

3rd Qtr 2018

Grand Mean Sample H53: 106.56 Degrees C Grand Mean Sample H54: 104.24 Degrees C





Plastics Interlaboratory Testing Program

Report #107

Analysis 716

3rd Qtr 2018

Vicat Softening Temperature (Rate B)

WebCode	Data Flag	Sample R53			Sample R54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2B9P7Y		107.35	-0.52	-0.59	105.23	-0.34	-0.39	CE
36GR29		108.22	0.34	0.39	106.05	0.48	0.55	CE
39AZ29		108.50	0.63	0.71	106.23	0.66	0.76	CF
6AG2V7		107.50	-0.37	-0.42	105.00	-0.57	-0.66	TO
6LBTP6		106.43	-1.44	-1.63	104.23	-1.34	-1.53	TO
77G7UH		108.18	0.31	0.35	106.05	0.48	0.55	CE
8H882C		108.53	0.66	0.74	105.80	0.23	0.26	DN
982U69	*	105.32	-2.56	-2.89	103.03	-2.54	-2.91	XX
B2NVLE		109.05	1.18	1.33	106.68	1.11	1.27	TY
B3HJ4A		108.20	0.33	0.37	105.73	0.16	0.18	IN
CYCK62	X	100.33	-7.54	-8.51	98.52	-7.06	-8.08	WZ
DDDEDP		108.43	0.56	0.63	106.22	0.64	0.74	TO
DG8CJ8		107.63	-0.24	-0.27	105.53	-0.04	-0.05	CE
FEHLV9		107.90	0.03	0.03	105.83	0.26	0.30	CF
FZDP8Z		107.02	-0.86	-0.97	104.78	-0.79	-0.90	TO
JDP7NT		108.58	0.71	0.80	106.23	0.66	0.76	CF
KHJFF7		108.22	0.34	0.39	105.75	0.18	0.20	CF
M4BH2W		106.63	-1.24	-1.40	104.35	-1.22	-1.40	DN
MXR7DV		108.33	0.46	0.52	106.20	0.63	0.72	RO
N9GELW		106.78	-1.09	-1.23	104.50	-1.07	-1.23	CE
P4427U		107.37	-0.51	-0.57	105.05	-0.52	-0.60	CE
Q4YTPU		108.48	0.61	0.69	105.98	0.41	0.47	TO
T3ZKDF		109.12	1.24	1.40	106.70	1.13	1.29	AT
UQ6LAG		107.85	-0.02	-0.03	105.70	0.13	0.15	TO
WNQXMM		108.40	0.52	0.59	106.10	0.53	0.60	CE
WQAE42		108.85	0.98	1.10	106.75	1.18	1.35	DN
XPXYAZ		107.83	-0.04	-0.05	105.17	-0.41	-0.47	TO

Summary Statistics

Grand Means

Sample R53
107.874 Degrees C

Sample R54
105.573 Degrees C

Std Dev Btwn Labs

0.886 Degrees C

0.873 Degrees C

Statistics based on 26 of 27 reporting participants

Sample R53: ABS & Sample R54: ABS



Comments on Assigned Data Flags for Test #716

CYCK62 (X) - Data for both samples are low. Possible Systematic Error.

Key to Instrument Codes Reported by Participants

AT	Atlas	CE	Ceast
CF	Coesfeld	DN	DYNISCO
IN	Instron	RO	Rosand
TO	Tinius Olsen	TY	Toyoseiki
WZ	Zwick	XX	Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

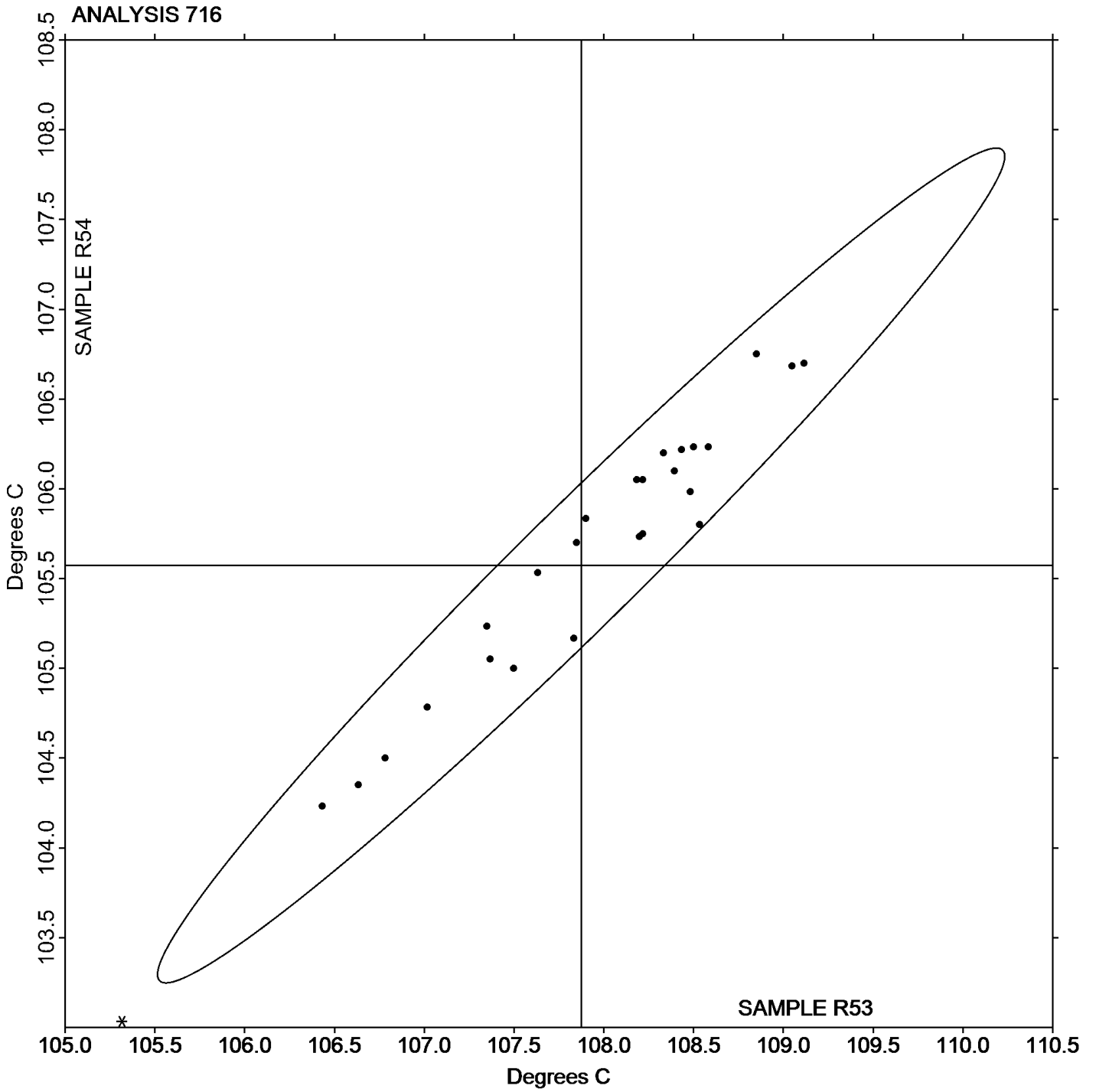
Analysis 716

Vicat Softening Temperature (Rate B)

Report #107

3rd Qtr 2018

Grand Mean Sample R53: 107.87 Degrees C Grand Mean Sample R54: 105.57 Degrees C





Plastics Interlaboratory Testing Program

Report #107

Analysis 718

3rd Qtr 2018

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T53			Sample T54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2B9P7Y		1.13543	-0.00362	-1.54	1.13337	-0.00378	-1.61
2Q2GRZ		1.13967	0.00061	0.26	1.13767	0.00052	0.22
2QGK GK		1.14010	0.00105	0.45	1.13917	0.00202	0.86
39AZ29		1.14097	0.00191	0.81	1.13867	0.00152	0.64
3YQLZQ		1.13973	0.00068	0.29	1.13977	0.00262	1.11
4NGLTW		1.13922	0.00016	0.07	1.13810	0.00095	0.40
4QPREX		1.13867	-0.00039	-0.16	1.13767	0.00052	0.22
63FMA4	*	1.13173	-0.00732	-3.11	1.13013	-0.00702	-2.98
6DG9G3		1.14207	0.00301	1.28	1.14030	0.00315	1.34
6LBTP6		1.13890	-0.00015	-0.06	1.13487	-0.00228	-0.97
6M69QL		1.14120	0.00215	0.91	1.13903	0.00188	0.80
6T94VE	X	1.14233	0.00328	1.40	1.13600	-0.00115	-0.49
8AUB2C	X	0.88087	-0.25819	-109.77	0.87897	-0.25818	-109.58
8TZHY6		1.13800	-0.00105	-0.45	1.13667	-0.00048	-0.20
9H2CUP		1.14200	0.00295	1.25	1.14160	0.00445	1.89
9TY9XD		1.13867	-0.00039	-0.16	1.13867	0.00152	0.64
A3HBCP		1.13837	-0.00069	-0.29	1.13800	0.00085	0.36
APETT4		1.13667	-0.00239	-1.01	1.13467	-0.00248	-1.05
AR2JQ2		1.13807	-0.00099	-0.42	1.13590	-0.00125	-0.53
ATENBZ	*	1.13943	0.00038	0.16	1.13493	-0.00222	-0.94
AXW674		1.14133	0.00228	0.97	1.13903	0.00188	0.80
B2NVLE		1.13667	-0.00239	-1.01	1.13400	-0.00315	-1.34
B9KNXE		1.14047	0.00141	0.60	1.13847	0.00132	0.56
CEB67Y		1.13703	-0.00202	-0.86	1.13447	-0.00268	-1.14
CGTNQT	X	1.14513	0.00608	2.59	1.13663	-0.00052	-0.22
CVWTD9		1.13933	0.00028	0.12	1.13767	0.00052	0.22
D2H33W		1.13647	-0.00259	-1.10	1.13450	-0.00265	-1.12
DDDEDP		1.13887	-0.00019	-0.08	1.13747	0.00032	0.14
DE4JMN		1.14033	0.00128	0.54	1.13800	0.00085	0.36
DWLENB	X	1.13400	-0.00505	-2.15	1.12933	-0.00782	-3.32
EGNQT3	*	1.13603	-0.00302	-1.28	1.13227	-0.00488	-2.07
F68VXH	X	1.12980	-0.00925	-3.93	1.12777	-0.00938	-3.98
FBXN94		1.13833	-0.00072	-0.31	1.13600	-0.00115	-0.49
FEHLV9		1.13750	-0.00155	-0.66	1.13550	-0.00165	-0.70
FGJTPK		1.13700	-0.00205	-0.87	1.13667	-0.00048	-0.20



Plastics Interlaboratory Testing Program

Report #107

Analysis 718

3rd Qtr 2018

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T53			Sample T54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GU8A2N		1.13700	-0.00205	-0.87	1.13533	-0.00182	-0.77
H8A2JM		1.13960	0.00055	0.23	1.13693	-0.00022	-0.09
HB9AR4		1.13843	-0.00062	-0.26	1.13610	-0.00105	-0.45
HDWQ4W		1.14010	0.00105	0.45	1.13680	-0.00035	-0.15
HJZ2QG		1.14120	0.00215	0.91	1.13970	0.00255	1.08
HXFZVH		1.14000	0.00095	0.40	1.13857	0.00142	0.60
J2GD38		1.14000	0.00095	0.40	1.13933	0.00218	0.93
JA9Y6Y		1.14193	0.00288	1.22	1.14050	0.00335	1.42
JDP7NT		1.13723	-0.00182	-0.77	1.13487	-0.00228	-0.97
JNA9BU		1.14130	0.00225	0.96	1.13967	0.00252	1.07
JPGRR3		1.13753	-0.00152	-0.65	1.13717	0.00002	0.01
JUJGLW		1.14153	0.00248	1.05	1.13913	0.00198	0.84
KCT778		1.13900	-0.00005	-0.02	1.13787	0.00072	0.30
KHK7QU		1.13937	0.00031	0.13	1.13647	-0.00068	-0.29
KYPMQ2		1.14240	0.00335	1.42	1.14067	0.00352	1.49
LBFNTU		1.13843	-0.00062	-0.26	1.13610	-0.00105	-0.45
LYLRZ	X	1.14297	0.00391	1.66	1.13780	0.00065	0.28
LVM44T		1.14203	0.00298	1.27	1.14063	0.00348	1.48
MF33NE		1.13767	-0.00139	-0.59	1.13600	-0.00115	-0.49
N9GELW		1.14163	0.00258	1.10	1.13993	0.00278	1.18
NL82XJ		1.13743	-0.00162	-0.69	1.13443	-0.00272	-1.15
P4427U	X	1.13470	-0.00435	-1.85	1.13773	0.00058	0.25
P842HK		1.13900	-0.00005	-0.02	1.13700	-0.00015	-0.06
PB8RRL		1.13583	-0.00322	-1.37	1.13393	-0.00322	-1.36
PL27RH		1.13643	-0.00262	-1.11	1.13510	-0.00205	-0.87
PRRJT7		1.14000	0.00095	0.40	1.13833	0.00118	0.50
PXCFYM		1.14100	0.00195	0.83	1.13933	0.00218	0.93
PZMGHU		1.14087	0.00181	0.77	1.13960	0.00245	1.04
Q4YTPU	X	1.13953	0.00048	0.20	1.13323	-0.00392	-1.66
Q9TK4J		1.13510	-0.00395	-1.68	1.13323	-0.00392	-1.66
QG7YJT		1.14137	0.00231	0.98	1.13960	0.00245	1.04
QLZXUH		1.13963	0.00058	0.25	1.13780	0.00065	0.28
QQDFBY		1.13433	-0.00472	-2.01	1.13283	-0.00432	-1.83
R68WPJ	X	1.15123	0.01218	5.18	1.14907	0.01192	5.06
RBUKLA	X	1.13913	0.00008	0.03	1.13033	-0.00682	-2.89



Plastics Interlaboratory Testing Program

Report #107

Analysis 718

3rd Qtr 2018

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T53			Sample T54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RQCV8W		1.14123	0.00218	0.93	1.13873	0.00158	0.67
RV63NK		1.14023	0.00118	0.50	1.13837	0.00122	0.52
T3ZKDF		1.13967	0.00061	0.26	1.13727	0.00012	0.05
TC9U7F		1.14047	0.00141	0.60	1.13890	0.00175	0.74
U6YWGE		1.14213	0.00308	1.31	1.13897	0.00182	0.77
UNY2MG		1.14047	0.00141	0.60	1.13863	0.00148	0.63
UQ6LAG		1.13833	-0.00072	-0.31	1.13680	-0.00035	-0.15
UXZH67		1.13873	-0.00032	-0.14	1.13817	0.00102	0.43
VDBL47	*	1.13367	-0.00539	-2.29	1.13400	-0.00315	-1.34
VJW28		1.14290	0.00385	1.64	1.13950	0.00235	1.00
WHHYCC	X	1.12753	-0.01152	-4.90	1.12573	-0.01142	-4.85
XC8XHC		1.14223	0.00318	1.35	1.13890	0.00175	0.74
XG766V		1.14167	0.00261	1.11	1.14000	0.00285	1.21
XHX8PP	X	1.14100	0.00195	0.83	1.13110	-0.00605	-2.57
XV2Q8G		1.14250	0.00345	1.47	1.13897	0.00182	0.77
XXQZCC		1.13530	-0.00375	-1.60	1.13520	-0.00195	-0.83
Y96AK3		1.14033	0.00128	0.54	1.13633	-0.00082	-0.35
YAHQVU	X	1.13133	-0.00772	-3.28	1.13300	-0.00415	-1.76
YC3QWW		1.13677	-0.00229	-0.97	1.13380	-0.00335	-1.42
YFPB3Z		1.14167	0.00261	1.11	1.13950	0.00235	1.00
ZNHXFH		1.14160	0.00255	1.08	1.13883	0.00168	0.72
ZW9GVC		1.13700	-0.00205	-0.87	1.13467	-0.00248	-1.05
ZX3CCT		1.13533	-0.00372	-1.58	1.13367	-0.00348	-1.48
ZZK8KX		1.13533	-0.00372	-1.58	1.13367	-0.00348	-1.48

Summary Statistics		Sample T53	Sample T54
Grand Means		1.139052 sp gr 23/23 C	1.137149 sp gr 23/23 C
Std Dev Btwn Labs		0.002352 sp gr 23/23 C	0.002356 sp gr 23/23 C
Statistics based on 81 of 94 reporting participants			

Sample T53: ABS/PC & Sample T54: ABS/PC



Comments on Assigned Data Flags for Test #718

- P4427U (X) - Inconsistent in testing between samples.
- 8AUB2C (X) - Extreme data.
- CGTNQT (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample T53.
- 6T94VE (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample T53.
- DWLENB (X) - Inconsistent in Testing, Data for sample T54 are low.
- LTYLRZ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample T53.
- Q4YTPU (X) - Inconsistent in testing between samples.
- XHX8PP (X) - Inconsistent in testing between samples.
- YAHQVU (X) - Inconsistent in Testing, Data for sample T53 are low.
- R68WPJ (X) - Data for both samples are high. Possible Systematic Error.
- WHHYCC (X) - Data for both samples are low. Possible Systematic Error.
- RBUKLA (X) - Inconsistent in Testing, Data for sample T54 are low.
- F68VXH (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

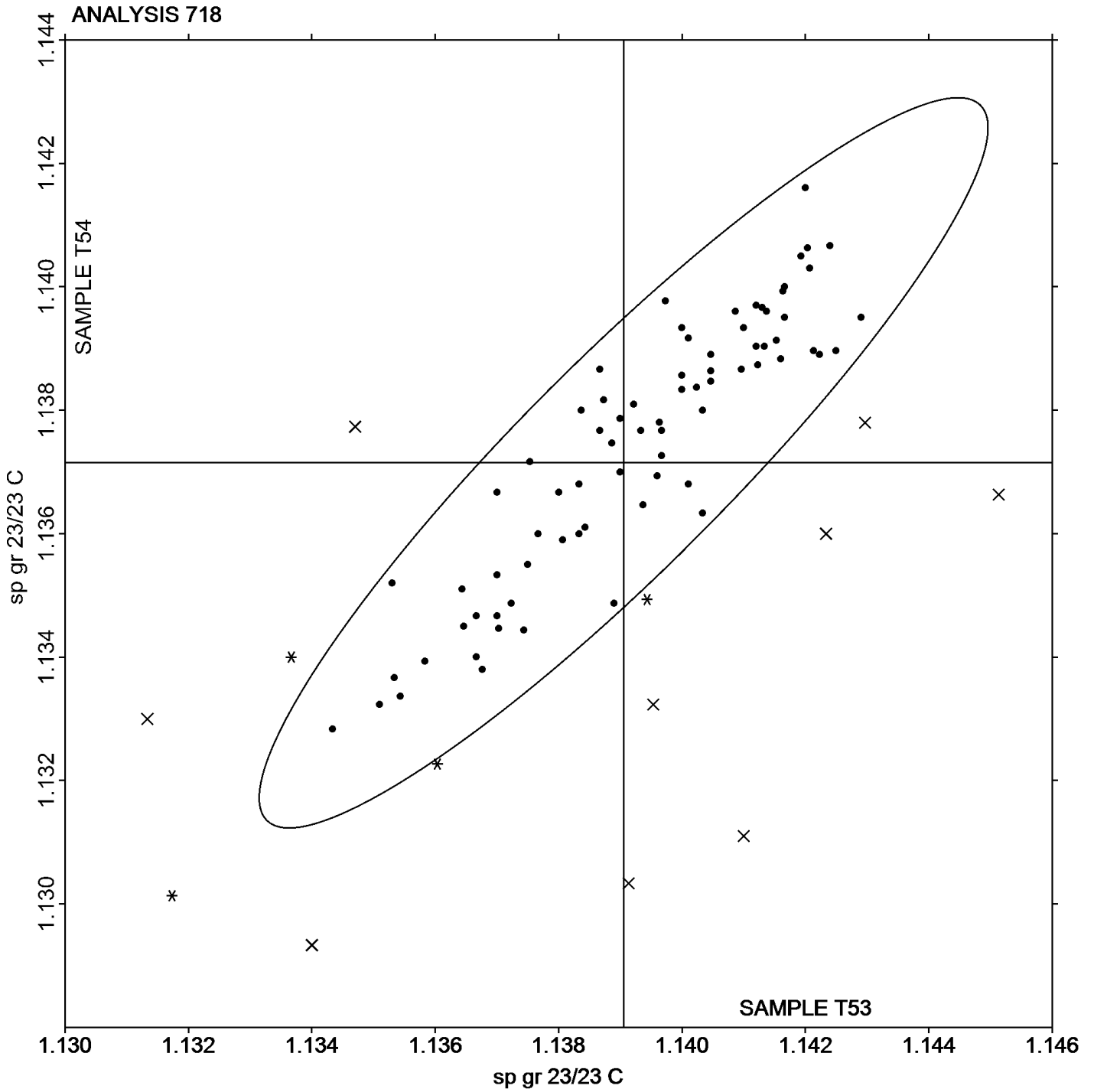
Report #107

Analysis 718

3rd Qtr 2018

Specific Gravity - sp gr 23/23 C

Grand Mean Sample T53: 1.1391 sp gr 23/23 C Grand Mean Sample T54: 1.1371 sp gr 23/23 C





Plastics Interlaboratory Testing Program

Report #107

Analysis 720

3rd Qtr 2018

Flexural Modulus- ksi

WebCode	Data Flag	Sample J53			Sample J54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
27DVBH	X	341.5	15.7	1.10	328.3	2.7	0.20
28M3A6		320.9	-4.9	-0.35	321.9	-3.7	-0.27
2B9P7Y		295.2	-30.7	-2.16	294.9	-30.7	-2.22
2HJ6DY		338.9	13.1	0.92	339.2	13.6	0.98
2NBFLC		319.9	-5.9	-0.42	321.9	-3.7	-0.27
34ZP48	X	395.0	69.1	4.87	410.6	85.0	6.16
39AZ29		318.4	-7.4	-0.52	320.2	-5.4	-0.39
3D9U4Y		323.2	-2.7	-0.19	320.4	-5.2	-0.37
3YQLZQ		332.2	6.4	0.45	331.8	6.2	0.45
4R4YZE		334.0	8.2	0.57	336.6	11.0	0.80
4R6QW2		313.6	-12.3	-0.87	316.3	-9.3	-0.68
4V63R2		350.4	24.5	1.73	350.3	24.7	1.79
4ZEHY6		310.7	-15.1	-1.06	313.1	-12.5	-0.91
63FMA4		307.8	-18.0	-1.27	307.4	-18.2	-1.32
6DG9G3		318.9	-6.9	-0.49	320.0	-5.6	-0.41
6DYTVU	X	389.5	63.7	4.49	390.6	65.0	4.71
6M69QL		310.0	-15.8	-1.12	313.1	-12.5	-0.91
6QAMPC	X	285.6	-40.2	-2.84	280.6	-45.0	-3.26
6T94VE		337.4	11.5	0.81	335.0	9.4	0.68
8H882C		310.3	-15.5	-1.09	318.1	-7.5	-0.54
8RP4MA		331.8	5.9	0.42	330.7	5.1	0.37
96TQ9C		348.1	22.3	1.57	340.6	15.0	1.09
9H2CVB		334.6	8.8	0.62	340.7	15.1	1.09
9MRL7A		305.3	-20.6	-1.45	304.4	-21.2	-1.54
9TY9XD		345.7	19.8	1.40	345.0	19.4	1.41
APETT4	X	269.9	-55.9	-3.94	270.8	-54.8	-3.97
AR2JQ2		319.0	-6.8	-0.48	314.7	-10.9	-0.79
B2NVLE		320.2	-5.6	-0.39	326.0	0.4	0.03
BYEX7C		318.8	-7.0	-0.49	319.6	-6.0	-0.43
BYVJRU		317.2	-8.7	-0.61	316.6	-9.0	-0.65
CFGU3F		325.9	0.0	0.00	324.7	-0.9	-0.06
CGTNQT		355.8	29.9	2.11	351.4	25.8	1.87
CVWTD9		324.3	-1.5	-0.11	324.9	-0.7	-0.05
DDDEDP		332.3	6.4	0.45	335.6	10.0	0.72
DJE6M2		335.2	9.4	0.66	334.8	9.2	0.67



Plastics Interlaboratory Testing Program

Report #107

Analysis 720

3rd Qtr 2018

Flexural Modulus- ksi

WebCode	Data Flag	Sample J53			Sample J54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
DXWM7A		327.6	1.7	0.12	330.1	4.5	0.33
E9RVPC		351.4	25.6	1.80	346.8	21.2	1.54
EAM4LH	X	307.5	-18.4	-1.29	326.4	0.8	0.06
GF6NVT	X	367.5	41.7	2.94	381.9	56.3	4.08
HDWQ4W		333.0	7.2	0.50	332.6	7.0	0.51
HMM8W8		317.9	-7.9	-0.56	315.2	-10.4	-0.75
J39JER		328.2	2.4	0.17	328.7	3.1	0.23
JDP7NT		304.1	-21.8	-1.53	304.8	-20.8	-1.51
JK8GZ9		311.2	-14.6	-1.03	313.0	-12.6	-0.91
JNA9BU	*	332.6	6.8	0.48	321.9	-3.7	-0.27
JNEPDY		329.1	3.2	0.23	321.4	-4.2	-0.30
KLEBUY		318.8	-7.1	-0.50	322.1	-3.5	-0.26
LEFJBQ		326.7	0.8	0.06	327.8	2.2	0.16
LN4XA8		328.6	2.8	0.19	328.8	3.2	0.23
LVM44T		321.1	-4.7	-0.33	320.4	-5.2	-0.38
MF33NE		315.7	-10.2	-0.72	316.6	-9.0	-0.65
MXR7DV		338.0	12.1	0.85	338.2	12.6	0.91
N96MKT		316.2	-9.7	-0.68	313.7	-11.9	-0.86
N9GELW		318.1	-7.7	-0.55	317.1	-8.5	-0.61
NL82XJ		355.9	30.0	2.12	356.7	31.1	2.25
PXCFYM		329.8	4.0	0.28	330.5	4.9	0.36
Q3M7ZT		298.9	-27.0	-1.90	299.7	-25.9	-1.88
Q4YTPU		335.9	10.1	0.71	335.3	9.7	0.70
QK3ZTH		342.9	17.1	1.20	342.8	17.2	1.25
QQDFBY		315.3	-10.5	-0.74	322.8	-2.8	-0.20
RQAAUP		300.5	-25.4	-1.79	299.8	-25.8	-1.87
T3ZKDF		327.2	1.4	0.10	326.2	0.6	0.04
TC9U7F		335.3	9.4	0.66	332.6	7.0	0.51
UNY2MG		324.8	-1.0	-0.07	329.2	3.6	0.26
V4L2QL		329.8	3.9	0.28	328.0	2.4	0.17
V8LV9H		327.0	1.1	0.08	319.3	-6.3	-0.46
WHHYCC	X	293.8	-32.1	-2.26	304.4	-21.2	-1.54
WNQXMM		340.8	15.0	1.05	343.0	17.4	1.26
WQAE42		304.8	-21.0	-1.48	304.4	-21.2	-1.54
XG766V		345.4	19.6	1.38	345.7	20.0	1.45



Plastics Interlaboratory Testing Program

Report #107

Analysis 720

3rd Qtr 2018

Flexural Modulus- ksi

WebCode	Data Flag	Sample J53			Sample J54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
XHX8PP		330.1	4.2	0.30	328.5	2.9	0.21
XV2Q8G		355.4	29.5	2.08	356.9	31.3	2.27
Y96AK3	*	328.9	3.0	0.21	319.5	-6.1	-0.44
YC3QWW		302.7	-23.2	-1.63	302.0	-23.6	-1.71
YJK7GT		318.3	-7.5	-0.53	315.9	-9.7	-0.70
ZNHXFH		333.8	8.0	0.56	332.9	7.3	0.53

Summary Statistics

	Sample J53	Sample J54
Grand Means	325.85 ksi	325.60 ksi
Stnd Dev Btwn Labs	14.19 ksi	13.80 ksi

Statistics based on 68 of 76 reporting participants

Sample J53: ABS/PC & Sample J54: ABS/PC

Comments on Assigned Data Flags for Test #720

- APETT4 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample J54.
- 6QAMPC (X) - Data for both samples are low. Possible Systematic Error.
- 27DVBH (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J54.
- 34ZP48 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- GF6NVT (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample J54.
- WHHYCC (X) - Inconsistent in testing between samples.
- 6DYTVU (X) - Data for both samples are high. Possible Systematic Error.
- EAM4LH (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.



Plastics Interlaboratory Testing Program

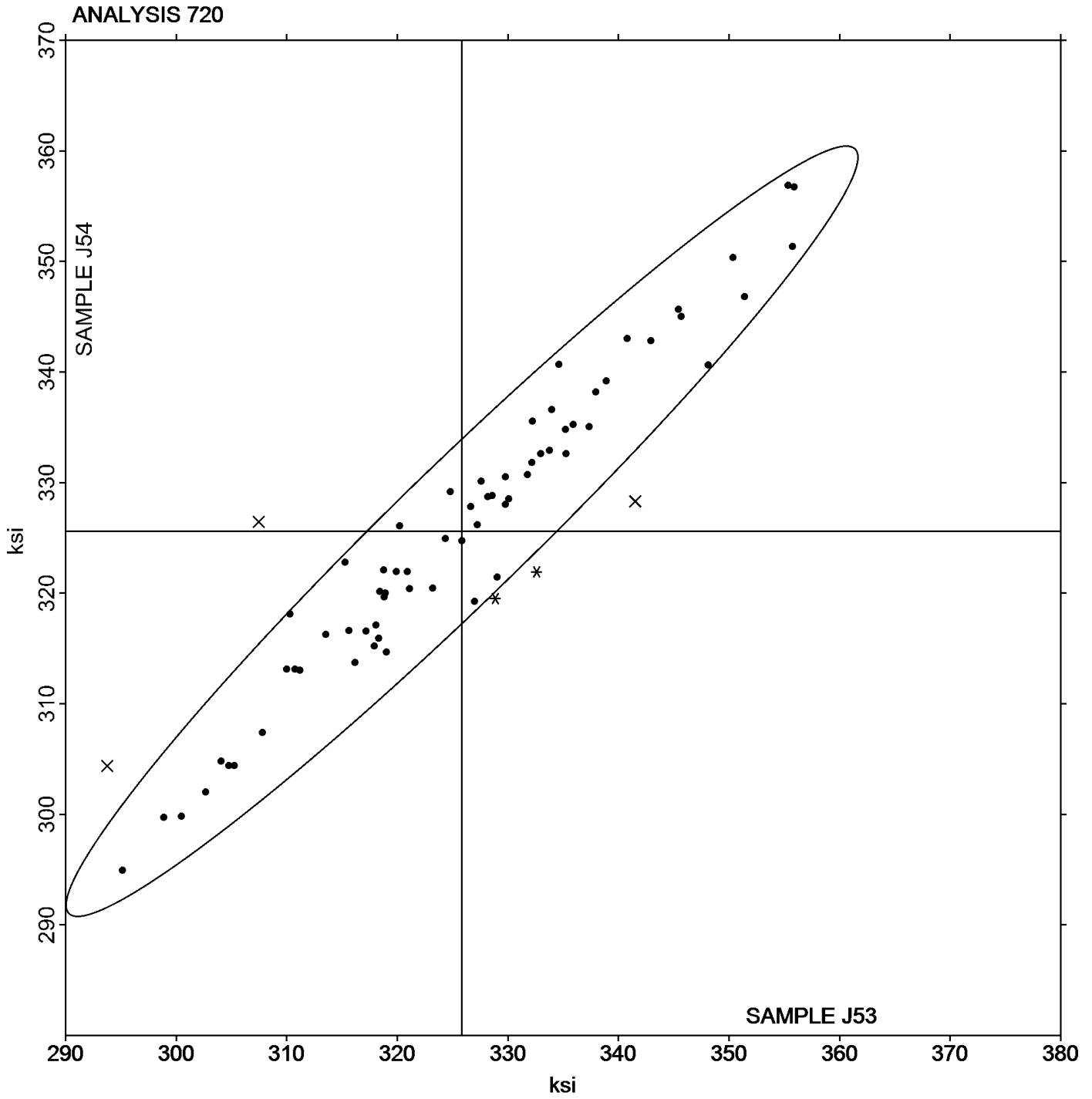
Analysis 720

Flexural Modulus- ksi

Report #107

3rd Qtr 2018

Grand Mean Sample J53: 325.85 ksi Grand Mean Sample J54: 325.60 ksi





Plastics Interlaboratory Testing Program

Report #107

Analysis 721

3rd Qtr 2018

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J53			Sample J54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
27DVBH	X	11,928	385	0.82	11,645	110	0.24
2B9P7Y		11,632	89	0.19	11,584	50	0.11
2HJ6DY		11,473	-70	-0.15	11,507	-28	-0.06
2NBFLC		11,154	-389	-0.83	11,168	-366	-0.81
34ZP48		12,588	1,045	2.24	12,597	1,062	2.35
39AZ29		11,578	34	0.07	11,650	115	0.26
3D9U4Y		11,422	-121	-0.26	11,451	-83	-0.18
3YQLZQ		11,280	-263	-0.56	11,300	-235	-0.52
4R4YZE		11,602	59	0.13	11,653	118	0.26
4R6QW2		11,405	-138	-0.30	11,364	-170	-0.38
4V63R2		12,246	703	1.50	12,268	734	1.62
4ZEHY6		11,063	-480	-1.03	11,070	-465	-1.03
63FMA4		11,206	-338	-0.72	11,286	-248	-0.55
6DG9G3		11,996	453	0.97	12,014	479	1.06
6DYTVU		12,131	588	1.26	12,052	518	1.15
6M69QL		10,647	-897	-1.92	10,659	-875	-1.94
6QAMPC		10,780	-763	-1.63	10,700	-835	-1.85
8H882C		11,179	-364	-0.78	11,302	-232	-0.51
8RP4MA		11,635	91	0.20	11,616	81	0.18
96TQ9C		12,208	665	1.42	12,048	514	1.14
9H2CVB		12,096	553	1.18	12,096	562	1.24
9TY9XD		11,824	281	0.60	11,707	172	0.38
AR2JQ2		11,280	-264	-0.56	11,198	-337	-0.74
B2NVLE		11,581	38	0.08	11,568	33	0.07
BYEX7C		11,314	-229	-0.49	11,376	-158	-0.35
BYVJRU	X	11,714	171	0.37	11,959	424	0.94
CFGU3F		12,083	539	1.15	12,007	472	1.04
CGTNQT		12,165	622	1.33	12,092	557	1.23
DJE6M2		11,741	197	0.42	11,659	125	0.28
DXWM7A		11,381	-162	-0.35	11,349	-186	-0.41
E9RVPC		11,960	417	0.89	11,980	445	0.99
EAM4LH		11,264	-280	-0.60	11,252	-282	-0.62
GF6NVT	X	12,700	1,156	2.48	12,976	1,441	3.19
HDWQ4W		11,888	345	0.74	11,894	359	0.80
HMM8W8		11,726	183	0.39	11,639	105	0.23



Plastics Interlaboratory Testing Program

Report #107

Analysis 721

3rd Qtr 2018

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J53			Sample J54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
J39JER		10,910	-633	-1.36	10,996	-539	-1.19
JDP7NT		10,931	-612	-1.31	10,968	-567	-1.25
JNA9BU		12,055	512	1.10	11,990	455	1.01
JNEPDY		11,583	40	0.09	11,510	-24	-0.05
KLEBUY	*	11,261	-282	-0.60	11,451	-84	-0.18
LN4XA8		11,300	-243	-0.52	11,280	-255	-0.56
LVM44T		11,142	-401	-0.86	11,115	-420	-0.93
MF33NE		10,845	-698	-1.49	10,811	-723	-1.60
N96MKT		11,211	-333	-0.71	11,185	-350	-0.77
N9GELW		12,136	593	1.27	12,111	576	1.28
PXCFYM		11,851	307	0.66	11,907	373	0.82
Q3M7ZT		10,883	-660	-1.41	10,843	-692	-1.53
Q4YTPU		11,523	-21	-0.04	11,518	-16	-0.04
QK3ZTH		12,151	608	1.30	12,001	467	1.03
QQDFBY	*	11,363	-180	-0.39	11,536	2	0.00
RQAAUP		10,932	-611	-1.31	10,869	-666	-1.47
T3ZKDF		12,000	457	0.98	12,017	482	1.07
TC9U7F		12,210	667	1.43	12,082	548	1.21
UNY2MG		11,389	-154	-0.33	11,530	-5	-0.01
V4L2QL		10,909	-634	-1.36	10,830	-704	-1.56
V8LV9H		11,900	357	0.76	11,798	264	0.58
WNQXMM		11,828	284	0.61	11,772	238	0.53
WQAE42		10,680	-863	-1.85	10,720	-815	-1.80
XG766V		11,840	297	0.64	11,856	322	0.71
XV2Q8G		11,810	267	0.57	11,754	220	0.49
Y96AK3		12,086	543	1.16	12,173	638	1.41
YC3QWW		10,913	-631	-1.35	10,949	-585	-1.29
YJK7GT		11,150	-394	-0.84	11,120	-415	-0.92
ZNHXFH		11,821	278	0.60	11,804	269	0.60



Plastics Interlaboratory Testing Program

Report #107

Analysis 721

3rd Qtr 2018

Flexural Stress at 5% Strain - psi

Summary Statistics		
	<u>Sample J53</u>	<u>Sample J54</u>
Grand Means	11,543.3 psi	11,534.5 psi
Stnd Dev Btwn Labs	467.1 psi	452.0 psi
Statistics based on 61 of 64 reporting participants		

Sample J53: ABS/PC & Sample J54: ABS/PC

Comments on Assigned Data Flags for Test #721

- 27DVBH (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J54.
- GF6NVT (X) - Data for sample J54 are high. Inconsistent within the determinations of both samples.
- BYVJRU (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J53.



Plastics Interlaboratory Testing Program

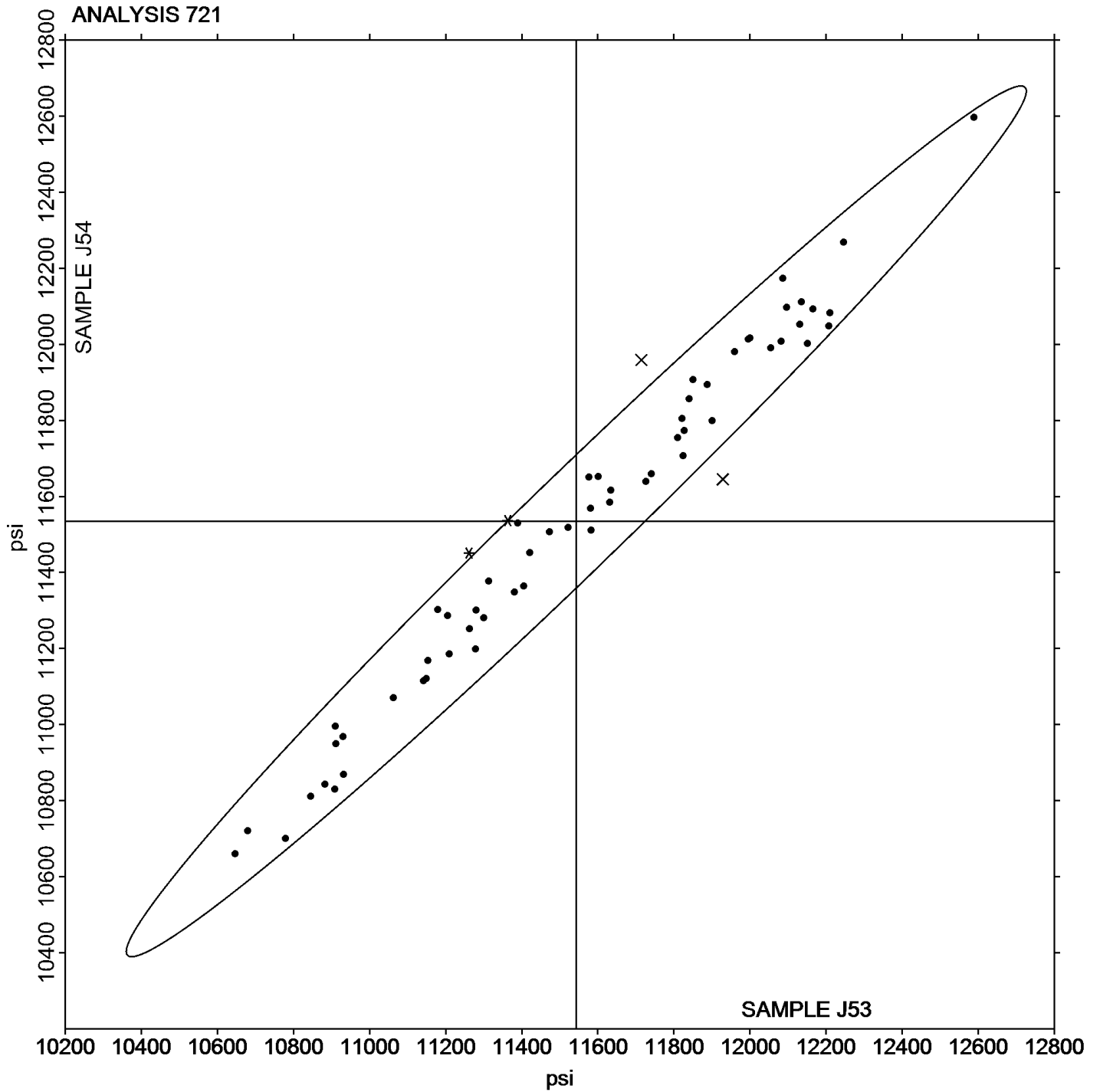
Report #107

Analysis 721

3rd Qtr 2018

Flexural Stress at 5% Strain - psi

Grand Mean Sample J53: 11,543.28 psi Grand Mean Sample J54: 11,534.50 psi





Plastics Interlaboratory Testing Program

Report #107

Analysis 722

3rd Qtr 2018

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J53			Sample J54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
27DVBH	*	12,134	599	1.16	11,889	355	0.71
2B9P7Y		11,794	259	0.50	11,766	233	0.46
2NBFLC		11,284	-251	-0.49	11,344	-190	-0.38
34ZP48		12,705	1,170	2.27	12,702	1,168	2.32
39AZ29		11,718	183	0.36	11,850	317	0.63
3D9U4Y		11,662	128	0.25	11,648	114	0.23
4V63R2		12,454	919	1.79	12,477	944	1.88
4ZEHY6		11,229	-305	-0.59	11,227	-307	-0.61
6DG9G3		12,363	829	1.61	12,385	852	1.69
6DYTVU		10,669	-866	-1.68	10,583	-951	-1.89
6M69QL		10,648	-887	-1.72	10,660	-874	-1.74
6QAMPC		11,120	-415	-0.81	11,100	-434	-0.86
8H882C		11,385	-149	-0.29	11,505	-29	-0.06
8RP4MA		11,738	203	0.39	11,750	217	0.43
9MRL7A	*	10,309	-1,225	-2.38	10,246	-1,288	-2.56
9TY9XD		11,970	435	0.85	11,830	297	0.59
B2NVLE		11,731	196	0.38	11,710	177	0.35
BYEX7C		11,542	7	0.01	11,591	57	0.11
BYVJRU	X	9,400	-2,135	-4.15	9,600	-1,934	-3.85
CFGU3F		11,839	304	0.59	11,723	189	0.38
CGTNQT		12,307	772	1.50	12,264	730	1.45
DDDEDP		11,769	235	0.46	11,762	229	0.46
DJE6M2		11,607	72	0.14	11,543	9	0.02
DXWM7A		11,590	55	0.11	11,678	145	0.29
EAM4LH		11,264	-271	-0.53	11,252	-281	-0.56
GF6NVT	X	12,820	1,285	2.50	13,081	1,547	3.08
J39JER		10,908	-626	-1.22	10,997	-537	-1.07
JK8GZ9		11,220	-315	-0.61	11,280	-254	-0.50
JNEPDY		11,630	95	0.18	11,553	20	0.04
KLEBUY		11,466	-68	-0.13	11,680	146	0.29
LEFJBQ		11,557	22	0.04	11,569	35	0.07
LVM44T		11,245	-290	-0.56	11,231	-303	-0.60
MF33NE		10,993	-542	-1.05	10,934	-599	-1.19
MXR7DV		11,690	155	0.30	11,748	215	0.43
N96MKT		11,462	-73	-0.14	11,492	-41	-0.08



Plastics Interlaboratory Testing Program

Report #107

Analysis 722

3rd Qtr 2018

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J53			Sample J54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NL82XJ	X	7,940	-3,595	-6.99	8,119	-3,414	-6.79
PXCFYM		11,351	-184	-0.36	11,407	-126	-0.25
Q3M7ZT		11,159	-376	-0.73	11,090	-443	-0.88
Q4YTPU		11,652	117	0.23	11,651	118	0.23
QK3ZTH	*	12,429	894	1.74	12,214	680	1.35
RQAAUP		11,152	-383	-0.74	11,118	-415	-0.83
T3ZKDF		12,209	674	1.31	12,256	722	1.44
UNY2MG		11,532	-2	0.00	11,656	122	0.24
V4L2QL		10,941	-593	-1.15	10,857	-676	-1.35
V8LV9H		11,900	366	0.71	11,798	265	0.53
WQAE42	*	10,540	-995	-1.93	10,720	-814	-1.62
XG766V		11,996	462	0.90	12,027	493	0.98
XHX8PP		11,665	130	0.25	11,668	134	0.27
YC3QWW		11,320	-215	-0.42	11,369	-165	-0.33
YJK7GT		11,284	-251	-0.49	11,274	-260	-0.52

Summary Statistics		
	Sample J53	Sample J54
Grand Means	11,534.7 psi	11,533.5 psi
Stnd Dev Btwn Labs	514.5 psi	502.8 psi
Statistics based on 47 of 50 reporting participants		

Sample J53: ABS/PC & Sample J54: ABS/PC

Comments on Assigned Data Flags for Test #722

- NL82XJ (X) - Data for both samples are low. Possible Systematic Error.
- GF6NVT (X) - Data for sample J54 are high. Inconsistent within the determinations of sample J54.
- BYVJRU (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample J53.



Plastics Interlaboratory Testing Program

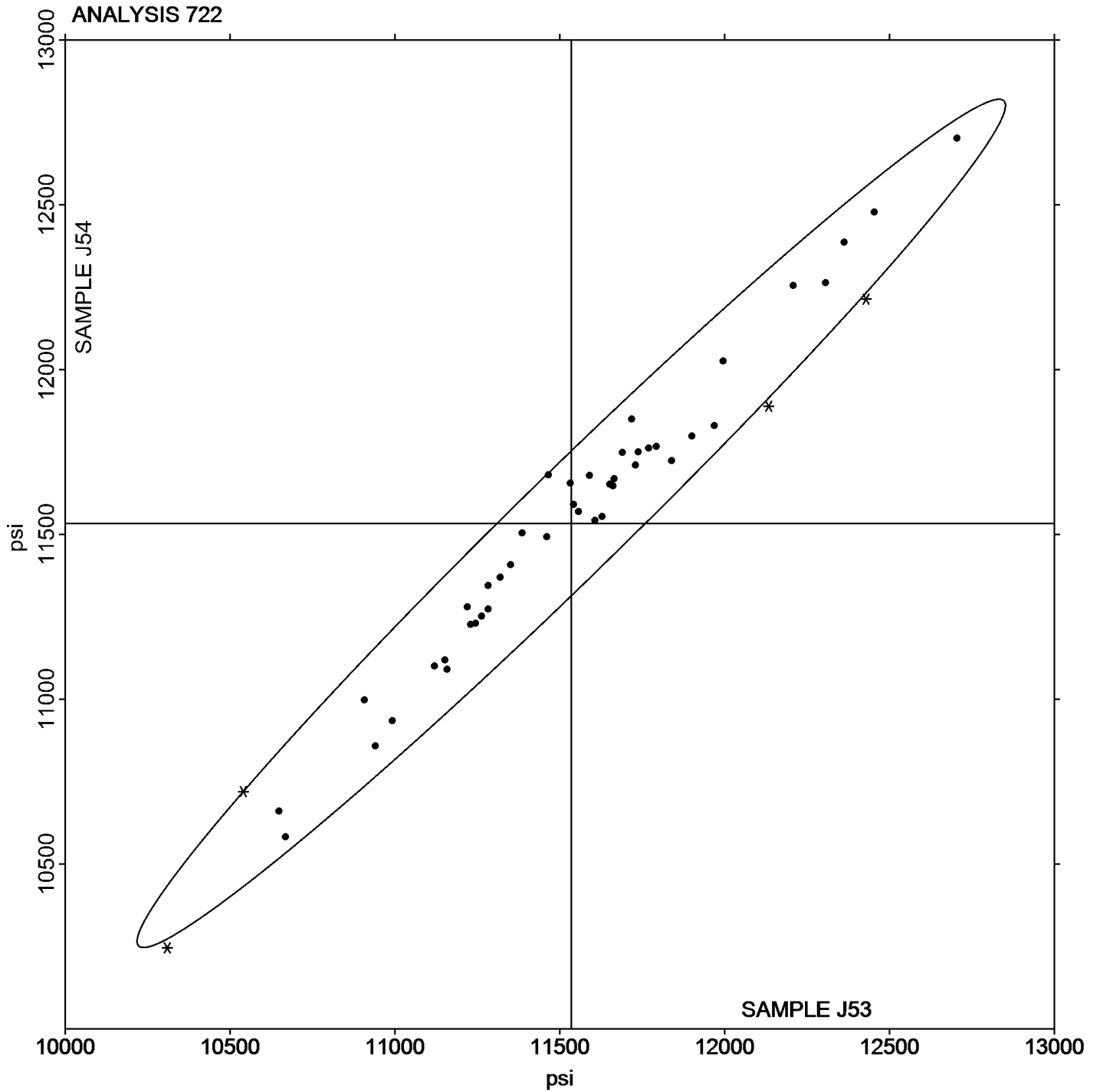
Report #107

Analysis 722

3rd Qtr 2018

Flexural Stress at Yield - psi

Grand Mean Sample J53: 11,534.71 psi Grand Mean Sample J54: 11,533.51 psi





Plastics Interlaboratory Testing Program

Report #107

Analysis 730

3rd Qtr 2018

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C53			Sample C54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
27DVBH		52.06	1.34	1.15	52.33	1.44	1.18
28M3A6		49.48	-1.24	-1.05	49.17	-1.72	-1.40
2B9P7Y		50.18	-0.54	-0.46	50.59	-0.29	-0.24
2Q2GRZ		49.79	-0.93	-0.79	50.99	0.10	0.09
2QGK GK		52.24	1.52	1.30	52.06	1.17	0.95
2V7DBZ		52.32	1.60	1.36	52.50	1.61	1.32
39AZ29		52.04	1.32	1.12	52.24	1.36	1.11
3NNJ34		49.85	-0.87	-0.74	49.95	-0.94	-0.77
4V63R2		52.08	1.36	1.16	52.49	1.61	1.31
6DG9G3		49.65	-1.07	-0.91	49.86	-1.02	-0.83
6PCWGR		48.58	-2.14	-1.82	48.54	-2.35	-1.91
6T94VE		50.82	0.10	0.09	50.79	-0.10	-0.08
8NPP4Q		49.54	-1.18	-1.01	50.10	-0.79	-0.64
8TZHY6		50.56	-0.16	-0.14	50.76	-0.13	-0.10
982U69		51.94	1.22	1.04	52.10	1.21	0.99
9BLN4U		49.06	-1.66	-1.41	49.85	-1.04	-0.85
9TXHPA		50.42	-0.30	-0.26	50.62	-0.27	-0.22
AJN6U7		50.38	-0.34	-0.29	50.27	-0.62	-0.50
APETT4	X	44.06	-6.66	-5.68	44.52	-6.37	-5.19
B2NVLE		49.74	-0.98	-0.84	49.76	-1.13	-0.92
B3HJ4A		49.78	-0.94	-0.80	49.40	-1.49	-1.21
B9KNXE		49.40	-1.32	-1.12	49.33	-1.56	-1.27
BL996N		50.77	0.05	0.04	50.47	-0.42	-0.34
CB7BUU		49.36	-1.36	-1.16	49.10	-1.79	-1.46
CGTNQT		51.31	0.59	0.50	51.54	0.66	0.54
DDDEDP		51.04	0.32	0.27	51.47	0.59	0.48
E9RVPC		50.22	-0.50	-0.43	50.09	-0.80	-0.65
FBXN94		50.18	-0.54	-0.46	50.80	-0.09	-0.07
FEHLV9		49.90	-0.82	-0.70	50.14	-0.75	-0.61
FMQRCQ		49.35	-1.37	-1.17	49.13	-1.76	-1.43
GA2QAV		52.69	1.97	1.68	52.77	1.89	1.54
GMJKJZ		52.93	2.21	1.89	52.83	1.95	1.59
HDWQ4W		50.84	0.12	0.10	51.40	0.51	0.42
HM4NPE		50.24	-0.48	-0.41	50.28	-0.61	-0.49
J2GD38		49.68	-1.04	-0.88	50.30	-0.59	-0.48



Plastics Interlaboratory Testing Program

Report #107

Analysis 730

3rd Qtr 2018

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C53			Sample C54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
J83QAG		49.97	-0.75	-0.64	49.99	-0.90	-0.73
JA9Y6Y		50.34	-0.38	-0.33	50.74	-0.15	-0.12
JNA9BU		50.47	-0.25	-0.21	50.67	-0.21	-0.17
JNBZ92		50.74	0.02	0.02	50.79	-0.10	-0.08
JPGRR3		52.35	1.63	1.39	52.79	1.90	1.55
KCT778		50.47	-0.25	-0.21	50.53	-0.36	-0.29
KHJFF7		52.22	1.50	1.28	51.96	1.07	0.88
KHK7QU	*	53.34	2.62	2.23	52.58	1.70	1.38
KYPMQ2		51.10	0.38	0.33	51.14	0.26	0.21
LDLDRW		53.55	2.83	2.41	53.77	2.89	2.36
LYKKH9		52.56	1.84	1.56	53.46	2.58	2.10
MH8Q44		51.88	1.16	0.99	51.99	1.10	0.90
N9GELW		49.88	-0.84	-0.72	50.57	-0.32	-0.26
P4427U		52.36	1.64	1.40	53.01	2.13	1.74
P8LDUY	*	49.10	-1.62	-1.38	50.58	-0.31	-0.25
PH7UYL	*	50.62	-0.10	-0.09	52.04	1.15	0.94
PL27RH		51.09	0.37	0.32	50.62	-0.27	-0.22
PXCFYM		51.14	0.42	0.36	51.10	0.21	0.18
Q3LE47		49.08	-1.64	-1.40	49.10	-1.79	-1.46
QCVJGW		51.82	1.10	0.94	51.74	0.85	0.70
QQDFBY		50.45	-0.27	-0.23	50.08	-0.80	-0.66
R68WPJ		51.92	1.20	1.02	51.97	1.08	0.88
T3ZKDF		51.52	0.80	0.68	51.68	0.79	0.65
T4FJX6		50.36	-0.36	-0.31	49.82	-1.07	-0.87
UNY2MG		50.16	-0.56	-0.48	51.01	0.12	0.10
WQAE42	*	48.52	-2.20	-1.87	47.90	-2.99	-2.43
WRLJNX		51.31	0.59	0.50	50.77	-0.12	-0.10
X2PFMK		49.58	-1.14	-0.97	49.42	-1.47	-1.19
XG766V		50.63	-0.09	-0.07	50.70	-0.19	-0.15
XPVTZX		49.73	-0.99	-0.85	49.63	-1.25	-1.02
Y4BUZF		50.57	-0.15	-0.13	50.56	-0.32	-0.26
YAHQVU		51.04	0.32	0.27	51.62	0.74	0.60
ZW9GVC		49.94	-0.78	-0.66	50.98	0.09	0.08



Plastics Interlaboratory Testing Program

Report #107

Analysis 730

3rd Qtr 2018

Tensile Stress at Yield - MPa

Summary Statistics	<u>Sample C53</u>	<u>Sample C54</u>
Grand Means	50.720 MPa	50.885 MPa
Stnd Dev Btwn Labs	1.173 MPa	1.226 MPa

Statistics based on 67 of 68 reporting participants

Sample C53: ABS/PC & Sample C54: ABS/PC

Comments on Assigned Data Flags for Test #730

APETT4 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.



Plastics Interlaboratory Testing Program

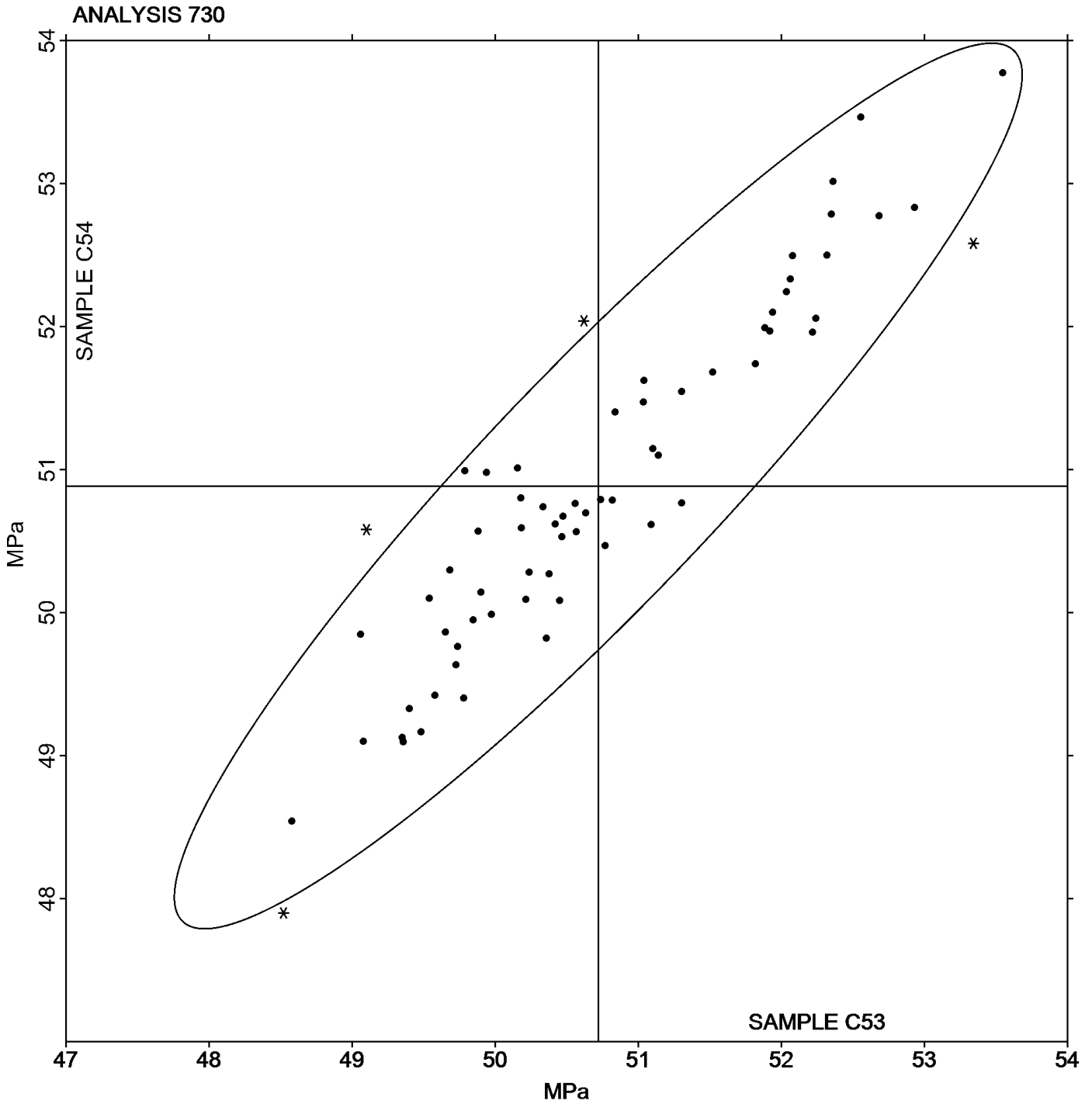
Analysis 730

Tensile Stress at Yield - MPa

Report #107

3rd Qtr 2018

Grand Mean Sample C53: 50.720 MPa Grand Mean Sample C54: 50.885 MPa





Plastics Interlaboratory Testing Program

Report #107

Analysis 731

3rd Qtr 2018

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C53			Sample C54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
27DVBH		44.05	0.95	0.78	44.98	1.91	1.50
28M3A6		42.58	-0.52	-0.43	41.79	-1.27	-1.00
2B9P7Y		41.99	-1.11	-0.92	42.50	-0.57	-0.45
2Q2GRZ		42.11	-0.99	-0.82	42.91	-0.16	-0.12
2QGK GK		44.68	1.58	1.31	44.12	1.06	0.83
39AZ29		44.48	1.38	1.14	43.27	0.21	0.16
3NNJ34		42.41	-0.69	-0.57	42.71	-0.35	-0.28
4V63R2		44.02	0.91	0.76	44.79	1.72	1.35
6DG9G3		42.20	-0.91	-0.75	42.17	-0.89	-0.70
6PCWGR	*	40.84	-2.27	-1.88	39.69	-3.37	-2.65
8NPP4Q		42.10	-1.00	-0.83	42.92	-0.14	-0.11
8TZHY6		44.20	1.10	0.91	43.78	0.72	0.56
982U69		44.65	1.54	1.28	44.72	1.66	1.30
9BLN4U		42.02	-1.08	-0.89	42.15	-0.92	-0.72
AJN6U7		41.68	-1.43	-1.18	42.52	-0.54	-0.42
B2NVLE		42.46	-0.64	-0.53	41.94	-1.12	-0.88
B3HJ4A		42.46	-0.64	-0.53	41.02	-2.04	-1.61
B9KNXE		42.72	-0.39	-0.32	42.20	-0.87	-0.68
BL996N		43.69	0.59	0.49	42.83	-0.24	-0.19
CB7BUU		42.18	-0.92	-0.76	41.92	-1.14	-0.90
CGTNQT		44.37	1.27	1.05	43.44	0.38	0.30
DDDEDP		43.12	0.02	0.02	44.04	0.98	0.77
E9RVPC		42.89	-0.21	-0.18	43.46	0.40	0.31
FBXN94	*	39.76	-3.34	-2.77	39.74	-3.32	-2.61
FEHLV9		41.16	-1.94	-1.61	42.56	-0.50	-0.40
FMQRCQ		41.75	-1.36	-1.13	40.73	-2.33	-1.83
GA2QAV		44.60	1.50	1.24	44.70	1.64	1.29
GMJKJZ		45.15	2.05	1.70	44.58	1.51	1.19
HDWQ4W		43.14	0.04	0.03	43.86	0.80	0.63
HM4NPE		43.98	0.88	0.73	42.82	-0.24	-0.19
J2GD38		42.62	-0.48	-0.40	42.64	-0.42	-0.33
J83QAG		42.08	-1.02	-0.85	42.00	-1.06	-0.83
JA9Y6Y		42.12	-0.98	-0.81	41.80	-1.27	-1.00
JNA9BU		44.63	1.53	1.27	43.42	0.36	0.28
JNBZ92		44.00	0.90	0.75	44.50	1.44	1.13



Plastics Interlaboratory Testing Program

Report #107

Analysis 731

3rd Qtr 2018

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C53			Sample C54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JPGRR3		44.79	1.69	1.40	45.22	2.15	1.69
KHJFF7		43.80	0.70	0.58	43.94	0.88	0.69
KYPMQ2	X	42.23	-0.88	-0.73	38.73	-4.34	-3.41
LDLDRW	*	46.63	3.53	2.93	46.00	2.93	2.30
LYKKH9		43.59	0.48	0.40	44.29	1.22	0.96
MH8Q44		43.98	0.88	0.73	43.99	0.93	0.73
N9GELW		43.23	0.12	0.10	42.61	-0.45	-0.36
P4427U		45.03	1.93	1.60	45.53	2.46	1.93
P8LDUY		41.32	-1.78	-1.48	42.60	-0.46	-0.36
PH7UYL		43.61	0.50	0.42	44.06	0.99	0.78
PL27RH		43.82	0.71	0.59	43.51	0.45	0.35
PXCFYM		43.96	0.86	0.71	43.50	0.44	0.34
Q3LE47		42.02	-1.08	-0.90	42.10	-0.96	-0.76
Q4XTDF		42.08	-1.02	-0.85	43.01	-0.06	-0.04
QCVJGW		43.22	0.12	0.10	42.52	-0.54	-0.43
QQDFBY		43.14	0.04	0.03	42.77	-0.29	-0.23
R68WPJ		44.23	1.13	0.94	43.06	0.00	0.00
T3ZKDF		42.96	-0.14	-0.12	43.16	0.10	0.08
T4FJX6		43.18	0.08	0.06	43.14	0.08	0.06
UNY2MG		43.75	0.64	0.53	44.20	1.14	0.89
WQAE42		42.08	-1.02	-0.85	40.70	-2.36	-1.86
WRLJNX		43.29	0.19	0.15	43.38	0.31	0.25
X2PFMK		41.94	-1.16	-0.96	41.82	-1.24	-0.98
XG766V		42.67	-0.44	-0.36	43.50	0.44	0.35
XPVTZX		42.59	-0.51	-0.43	41.95	-1.11	-0.87
Y4BUZF		43.12	0.02	0.01	43.10	0.04	0.03
YAHQVU		43.09	-0.01	-0.01	43.70	0.64	0.50
ZW9GVC		42.36	-0.74	-0.62	43.38	0.32	0.25



Plastics Interlaboratory Testing Program

Report #107

Analysis 731

3rd Qtr 2018

Tensile Stress at Break - MPa

Summary Statistics	<u>Sample C53</u>	<u>Sample C54</u>
Grand Means	43.102 MPa	43.064 MPa
Stnd Dev Btwn Labs	1.205 MPa	1.272 MPa

Statistics based on 62 of 63 reporting participants

Sample C53: ABS/PC & Sample C54: ABS/PC

Comments on Assigned Data Flags for Test #731

KYPMQ2 (X) - Data for sample C54 are low. Inconsistent within the determinations of sample C54.



Plastics Interlaboratory Testing Program

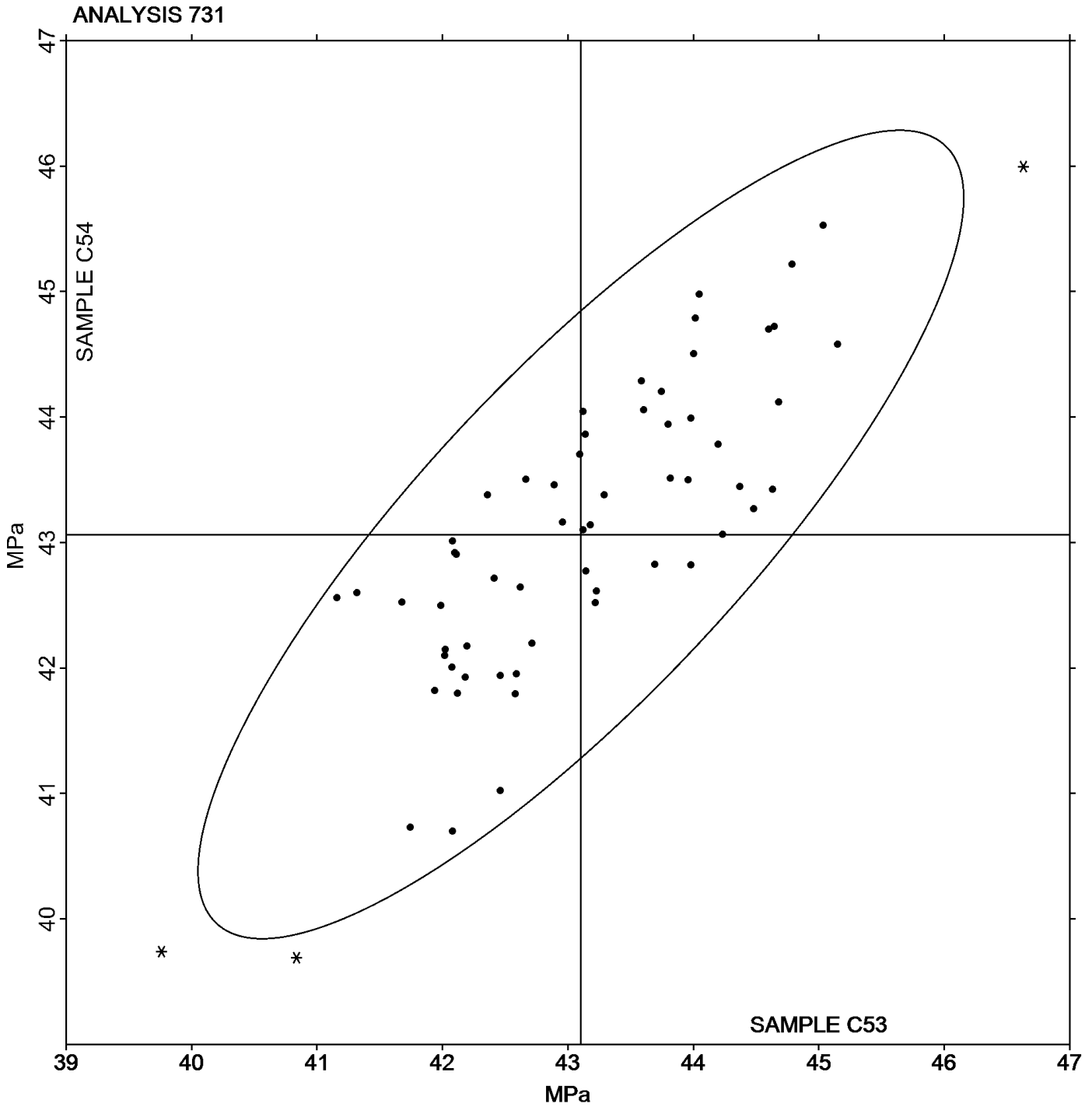
Analysis 731

Tensile Stress at Break - MPa

Report #107

3rd Qtr 2018

Grand Mean Sample C53: 43.102 MPa Grand Mean Sample C54: 43.064 MPa





Plastics Interlaboratory Testing Program

Report #107

Analysis 732

3rd Qtr 2018

Percent Strain at Yield

WebCode	Data Flag	Sample C53			Sample C54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
27DVBH		4.872	0.230	1.61	4.826	0.229	1.40
2B9P7Y		4.782	0.140	0.98	4.772	0.175	1.07
2Q2GRZ		4.540	-0.102	-0.71	4.412	-0.185	-1.14
2QGK GK		4.660	0.018	0.13	4.600	0.003	0.02
2V7DBZ		4.602	-0.040	-0.28	4.570	-0.027	-0.17
39AZ29		4.790	0.148	1.04	4.772	0.175	1.07
3NNJ34		4.740	0.098	0.69	4.688	0.091	0.56
4V63R2		4.652	0.010	0.07	4.628	0.031	0.19
6DG9G3		4.390	-0.252	-1.76	4.334	-0.263	-1.62
6PCWGR		4.504	-0.138	-0.96	4.486	-0.111	-0.68
8NPP4Q		4.604	-0.038	-0.26	4.642	0.045	0.27
8TZHY6	X	5.000	0.358	2.50	5.300	0.703	4.31
9BLN4U		4.494	-0.148	-1.03	4.480	-0.117	-0.72
AJN6U7		4.717	0.075	0.52	4.659	0.061	0.38
B2NVLE		4.680	0.038	0.27	4.702	0.105	0.64
B3HJ4A	*	4.700	0.058	0.41	4.460	-0.137	-0.84
B9KNXE		4.336	-0.306	-2.13	4.328	-0.269	-1.65
BL996N		4.639	-0.002	-0.02	4.719	0.122	0.75
CB7BUU		4.720	0.078	0.55	4.698	0.101	0.62
CGTNQT		4.602	-0.040	-0.28	4.624	0.027	0.16
E9RVPC		4.746	0.104	0.73	4.634	0.037	0.22
FBXN94		4.720	0.078	0.55	4.700	0.103	0.63
FEHLV9		4.700	0.058	0.41	4.520	-0.077	-0.47
FMQRCQ		4.668	0.026	0.18	4.672	0.075	0.46
GA2QAV		4.682	0.040	0.28	4.780	0.183	1.12
GMJKJZ	X	4.100	-0.542	-3.78	4.175	-0.422	-2.59
HDWQ4W		4.730	0.088	0.62	4.610	0.013	0.08
HM4NPE		4.612	-0.030	-0.21	4.602	0.005	0.03
J2GD38		4.686	0.044	0.31	4.646	0.049	0.30
J83QAG		4.683	0.041	0.29	4.717	0.120	0.74
JA9Y6Y		4.508	-0.134	-0.93	4.492	-0.105	-0.65
JNA9BU		4.524	-0.118	-0.82	4.454	-0.143	-0.88
JNBZ92		4.332	-0.310	-2.16	4.340	-0.257	-1.58
JPGRR3		4.764	0.122	0.85	4.654	0.057	0.35
KCT778		4.624	-0.018	-0.12	4.520	-0.077	-0.47



Plastics Interlaboratory Testing Program

Report #107

Analysis 732

3rd Qtr 2018

Percent Strain at Yield

WebCode	Data Flag	Sample C53			Sample C54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KHJFF7		4.580	-0.062	-0.43	4.660	0.063	0.38
KYPMQ2		4.428	-0.213	-1.49	4.289	-0.308	-1.89
LDLDRW	X	5.296	0.654	4.57	5.332	0.735	4.51
LYKKH9		4.506	-0.136	-0.95	4.526	-0.071	-0.44
MH8Q44		4.584	-0.058	-0.40	4.414	-0.183	-1.12
N9GELW		4.610	-0.032	-0.22	4.478	-0.119	-0.73
P4427U		4.730	0.088	0.62	4.730	0.133	0.81
P8LDUY		4.828	0.186	1.30	4.758	0.161	0.99
PH7UYL	X	67.972	63.330	442.25	28.586	23.989	147.16
PL27RH	X	5.222	0.580	4.05	5.288	0.691	4.24
PXCFYM		4.920	0.278	1.94	4.920	0.323	1.98
Q3LE47		5.000	0.358	2.50	4.962	0.365	2.24
QCVJGW		4.740	0.098	0.69	4.658	0.061	0.37
QQDFBY		4.746	0.104	0.73	4.710	0.113	0.69
R68WPJ	*	4.282	-0.360	-2.51	4.184	-0.413	-2.54
T3ZKDF		4.600	-0.042	-0.29	4.580	-0.017	-0.11
T4FJX6		4.726	0.084	0.59	4.732	0.135	0.83
UNY2MG		4.670	0.028	0.20	4.568	-0.029	-0.18
WQAE42	X	5.196	0.554	3.87	5.040	0.443	2.72
WRLJNX		4.620	-0.022	-0.15	4.410	-0.187	-1.15
X2PFMK		4.522	-0.120	-0.84	4.412	-0.185	-1.14
XG766V		4.475	-0.167	-1.16	4.442	-0.156	-0.96
XPVTZX		4.808	0.166	1.16	4.870	0.272	1.67
Y4BUZF		4.524	-0.118	-0.82	4.476	-0.121	-0.74
YAHQVU		4.746	0.104	0.73	4.736	0.139	0.85
ZW9GVC	X	56.264	51.622	360.49	69.608	65.011	398.81

Summary Statistics		
	Sample C53	Sample C54
Grand Means	4.6416 Percent	4.5973 Percent
Stnd Dev Btwn Labs	0.1432 Percent	0.1630 Percent
Statistics based on 54 of 61 reporting participants		

Sample C53: ABS/PC & Sample C54: ABS/PC



Comments on Assigned Data Flags for Test #732

- ZW9GVC (X) - Extreme data.
- PL27RH (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- LDLDRW (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample C53.
- GMJKJZ (X) - Data for sample C53 are low. Inconsistent within the determinations of sample C54.
- PH7UYL (X) - Extreme data.
- 8TZHY6 (X) - Data for sample C54 are high. Inconsistent within the determinations of sample C54.
- WQAE42 (X) - Inconsistent in Testing, Data for sample C53 are high.



Plastics Interlaboratory Testing Program

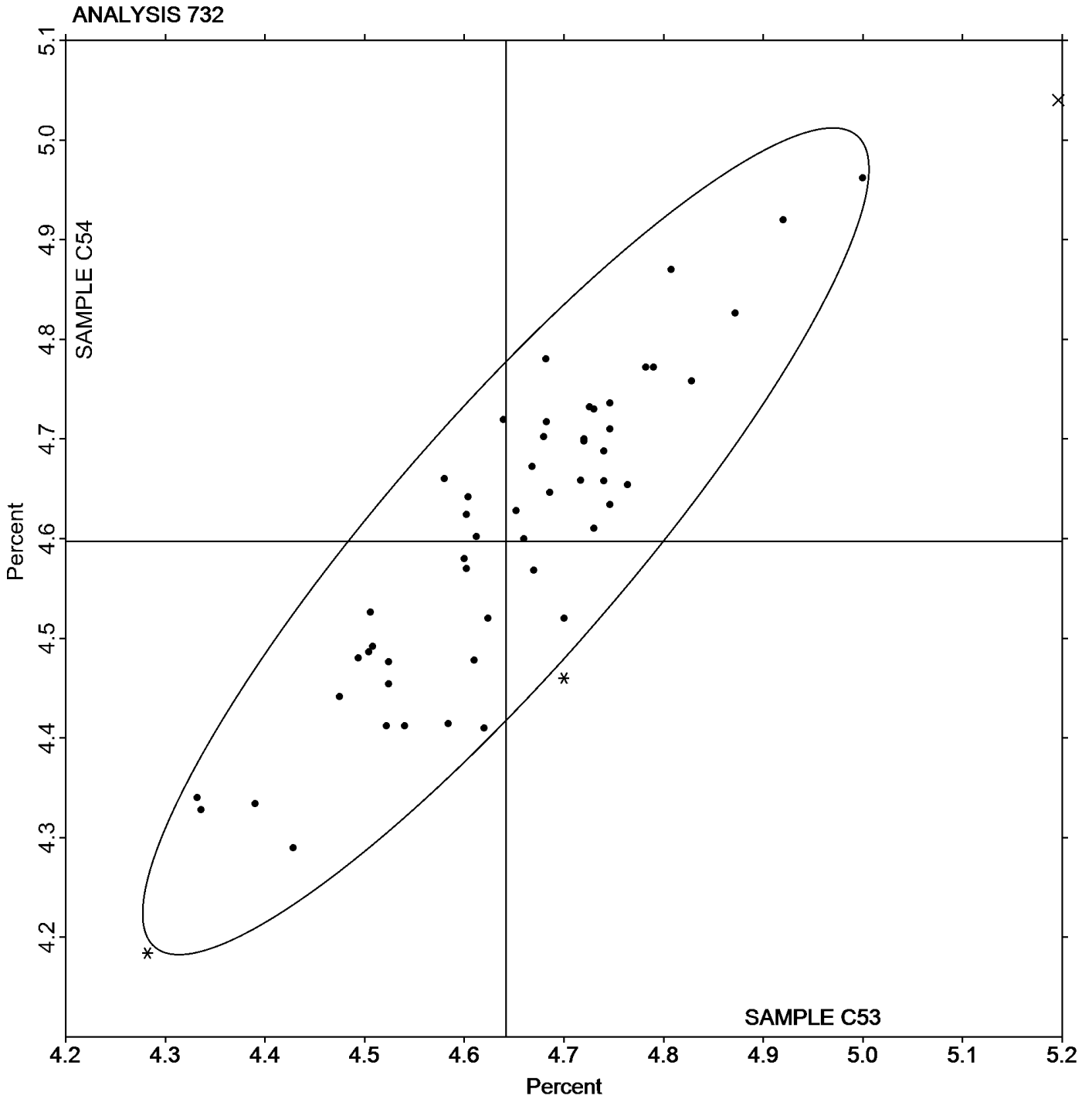
Report #107

Analysis 732

3rd Qtr 2018

Percent Strain at Yield

Grand Mean Sample C53: 4.6416 Percent Grand Mean Sample C54: 4.5973 Percent





Plastics Interlaboratory Testing Program

Report #107

Analysis 734

3rd Qtr 2018

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C53			Sample C54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
27DVBH		2,237	-32	-0.33	2,236	-30	-0.32
2B9P7Y		2,321	51	0.53	2,326	60	0.63
2Q2GRZ		2,264	-5	-0.05	2,320	54	0.56
2QGK GK		2,394	124	1.27	2,379	113	1.18
2V7DBZ		2,341	71	0.73	2,306	39	0.41
39AZ29		2,176	-93	-0.96	2,191	-76	-0.79
3NNJ34		2,289	19	0.20	2,193	-73	-0.77
4V63R2		2,302	32	0.33	2,324	58	0.61
6DG9G3		2,203	-67	-0.68	2,215	-52	-0.54
6PCWGR		2,260	-10	-0.10	2,249	-18	-0.19
8NPP4Q		2,164	-106	-1.08	2,149	-117	-1.23
9BLN4U	X	2,598	328	3.37	2,755	488	5.13
AJN6U7		2,314	45	0.46	2,251	-16	-0.17
B2NVLE		2,209	-61	-0.63	2,212	-54	-0.57
B3HJ4A		2,235	-34	-0.35	2,193	-73	-0.77
B9KNXE		2,419	149	1.53	2,391	124	1.31
BL996N		2,315	46	0.47	2,297	30	0.32
CB7BUU		2,191	-79	-0.81	2,202	-64	-0.68
CGTNQT		2,252	-18	-0.18	2,277	10	0.11
E9RVPC		2,301	31	0.32	2,265	-2	-0.02
FEHLV9		2,290	20	0.21	2,270	3	0.04
FMQRCQ		2,143	-127	-1.30	2,205	-62	-0.65
GMJKJZ	X	2,570	300	3.09	2,788	521	5.48
HDWQ4W		2,232	-38	-0.39	2,303	36	0.38
HM4NPE		2,165	-104	-1.07	2,171	-95	-1.00
J2GD38		2,211	-59	-0.60	2,296	29	0.31
J83QAG		2,171	-98	-1.01	2,166	-101	-1.06
JA9Y6Y	*	2,373	104	1.06	2,247	-20	-0.21
JNA9BU		2,375	106	1.09	2,408	142	1.49
JPGRR3		2,278	8	0.08	2,341	74	0.78
KCT778		2,413	143	1.47	2,428	162	1.70
KHJFF7		2,327	58	0.59	2,299	32	0.34
KHK7QU		2,430	160	1.65	2,444	177	1.86
KYPMQ2		2,241	-29	-0.30	2,243	-24	-0.25
LDLDRW		2,089	-180	-1.85	2,110	-156	-1.64



Plastics Interlaboratory Testing Program

Report #107

Analysis 734

3rd Qtr 2018

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C53			Sample C54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
LTYLRZ		2,185	-85	-0.87	2,181	-85	-0.90
LYKKH9		2,412	142	1.46	2,437	170	1.79
MH8Q44		2,336	67	0.68	2,403	136	1.43
N9GELW		2,229	-41	-0.42	2,241	-25	-0.26
P4427U	*	2,380	110	1.13	2,246	-20	-0.21
P8LDUY		2,284	15	0.15	2,266	-1	-0.01
PH7UYL		2,121	-149	-1.53	2,150	-116	-1.22
PL27RH	X	2,302	32	0.33	2,847	581	6.11
Q3LE47		2,197	-72	-0.74	2,159	-107	-1.13
QCVJGW		2,263	-7	-0.07	2,249	-17	-0.18
QQDFBY		2,231	-38	-0.39	2,226	-41	-0.43
R68WPJ		2,404	134	1.38	2,328	61	0.65
T3ZKDF		2,198	-72	-0.74	2,206	-61	-0.64
T4FJX6		2,180	-90	-0.92	2,137	-129	-1.36
WQAE42	X	1,792	-478	-4.90	2,026	-241	-2.53
WRLJNX		2,389	119	1.23	2,360	94	0.99
X2PFMK		2,223	-47	-0.48	2,226	-41	-0.43
XG766V	*	2,520	250	2.57	2,557	290	3.05
XPVTZX		2,032	-238	-2.44	2,069	-198	-2.08
Y4BUZF		2,313	43	0.45	2,301	34	0.36
YAHQVU		2,199	-71	-0.73	2,213	-54	-0.57
ZW9GVC	X	1,734	-536	-5.50	1,844	-423	-4.44

Summary Statistics		
	Sample C53	Sample C54
Grand Means	2,269.6 MPa	2,266.6 MPa
Std Dev Btwn Labs	97.4 MPa	95.1 MPa
Statistics based on 52 of 57 reporting participants		

Sample C53: ABS/PC & Sample C54: ABS/PC



Comments on Assigned Data Flags for Test #734

- ZW9GVC (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample C53.
- 9BLN4U (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- PL27RH (X) - Data for sample C54 are high. Inconsistent within the determinations of both samples.
- GMJKJZ (X) - Data for both samples are high. Possible Systematic Error.
- WQAE42 (X) - Inconsistent in Testing, Data for sample C53 are low.



Plastics Interlaboratory Testing Program

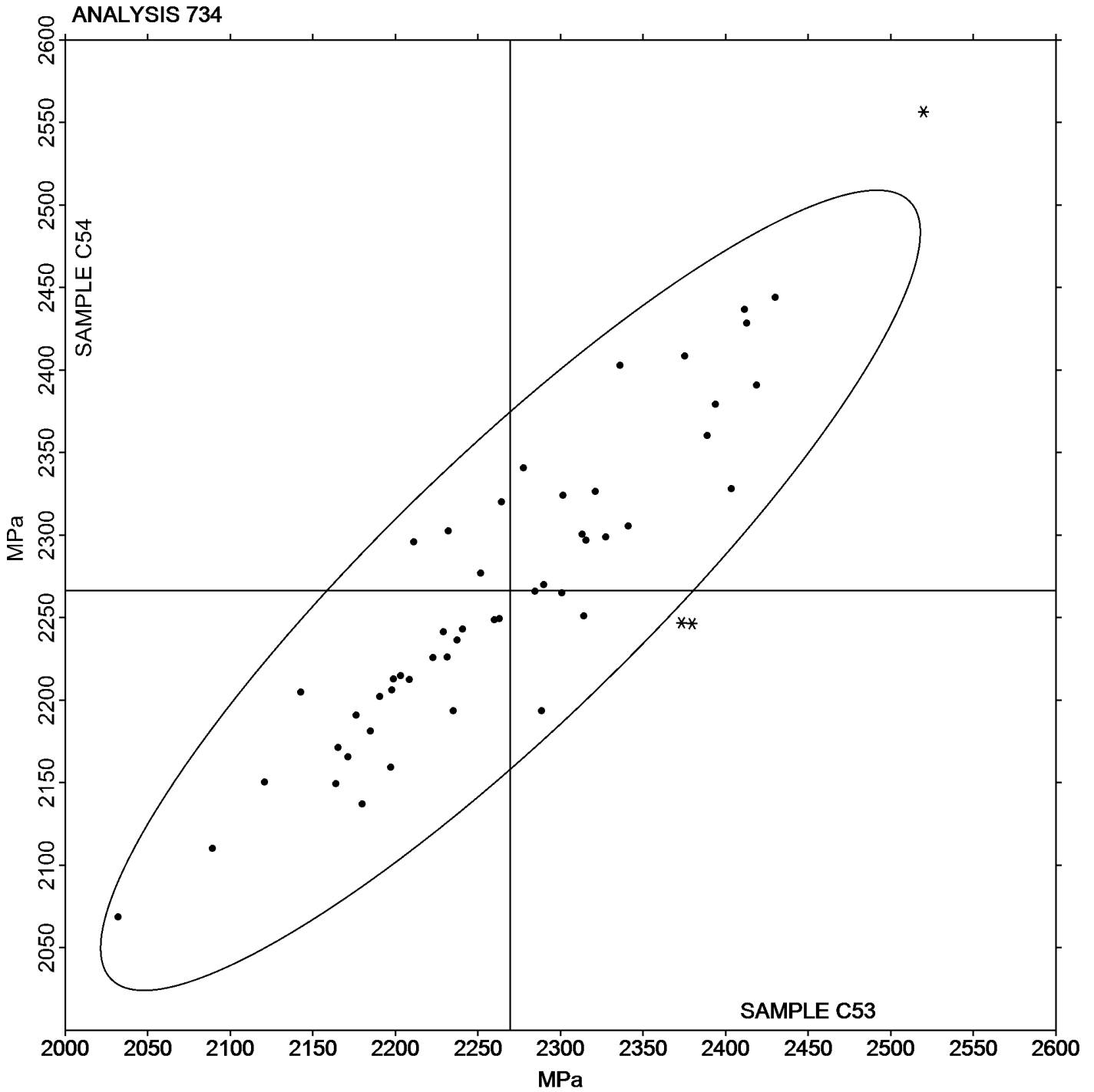
Analysis 734

Modulus of Elasticity - MPa

Report #107

3rd Qtr 2018

Grand Mean Sample C53: 2,269.60 MPa Grand Mean Sample C54: 2,266.60 MPa





Plastics Interlaboratory Testing Program

Report #107

Analysis 736

3rd Qtr 2018

Flexural Modulus - MPa

WebCode	Data Flag	Sample K53			Sample K54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
27DVBH		2,351	114	0.85	2,338	108	0.79
2Q2GRZ		2,155	-82	-0.61	2,164	-66	-0.49
2QGK GK		2,452	215	1.59	2,453	222	1.64
2V7DBZ		2,182	-54	-0.40	2,178	-52	-0.39
39AZ29		2,182	-55	-0.41	2,184	-47	-0.34
3NNJ34		2,165	-72	-0.53	2,139	-92	-0.68
4V63R2		2,575	339	2.51	2,573	343	2.53
6PCWGR		2,096	-141	-1.04	2,070	-160	-1.18
8NPP4Q		2,188	-49	-0.36	2,164	-66	-0.49
96TQ9C		2,262	26	0.19	2,242	12	0.09
98JLFE		2,449	213	1.57	2,429	198	1.46
9BLN4U		2,111	-125	-0.93	2,098	-133	-0.98
9E24R2	X	1,970	-267	-1.97	2,094	-136	-1.00
B2NVLE		2,308	71	0.53	2,335	105	0.77
B3HJ4A		2,097	-139	-1.03	2,100	-130	-0.96
B9KNXE		2,119	-117	-0.87	2,097	-133	-0.98
BL996N		2,123	-114	-0.85	2,146	-85	-0.63
CGTNQT		1,925	-311	-2.31	1,895	-335	-2.47
DDDEDP		2,369	133	0.98	2,362	132	0.98
F68VXH		2,251	15	0.11	2,264	34	0.25
FEHLV9		2,216	-21	-0.15	2,200	-30	-0.22
G3JAVZ		2,250	13	0.10	2,218	-12	-0.09
GMJKJZ		2,409	172	1.28	2,435	204	1.51
HDWQ4W		2,372	135	1.00	2,395	165	1.22
HM4NPE		2,214	-22	-0.17	2,188	-42	-0.31
J2GD38		2,207	-30	-0.22	2,186	-44	-0.33
J83QAG	X	1,971	-265	-1.97	2,078	-152	-1.12
JA9Y6Y		2,197	-39	-0.29	2,187	-43	-0.32
JNA9BU		1,993	-244	-1.81	1,995	-235	-1.73
JPGRR3		2,474	237	1.76	2,456	226	1.67
KCT778		2,341	104	0.77	2,286	56	0.41
KHJFF7	*	2,387	150	1.11	2,303	73	0.54
KYPMQ2		2,382	145	1.08	2,355	125	0.92
LDLDRW		2,239	2	0.02	2,272	42	0.31
LTYLRZ		2,177	-59	-0.44	2,198	-32	-0.24



Plastics Interlaboratory Testing Program

Report #107

Analysis 736

3rd Qtr 2018

Flexural Modulus - MPa

WebCode	Data Flag	Sample K53			Sample K54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
LYKKH9		2,236	-1	-0.01	2,228	-2	-0.01
M4BH2W		2,048	-189	-1.40	2,061	-169	-1.25
N9GELW		2,278	42	0.31	2,285	55	0.41
P4427U		2,360	123	0.91	2,392	162	1.20
P8LDUY		2,180	-56	-0.42	2,192	-38	-0.28
PXCFYM		2,269	32	0.24	2,246	16	0.12
Q3LE47	*	2,242	5	0.04	2,153	-77	-0.57
QCVJGW		2,337	100	0.74	2,318	87	0.64
QQDFBY		2,210	-27	-0.20	2,251	21	0.15
R68WPJ	X	2,012	-225	-1.67	2,451	221	1.63
T3ZKDF		2,229	-8	-0.06	2,226	-4	-0.03
T4FJX6	*	2,187	-50	-0.37	2,261	31	0.23
WQAE42		2,114	-123	-0.91	2,132	-98	-0.73
X2PFMK		2,280	43	0.32	2,267	37	0.27
XG766V		2,178	-59	-0.44	2,174	-56	-0.41
XPVTZX		2,043	-194	-1.44	2,029	-202	-1.49
Y4BUZF		2,181	-56	-0.42	2,169	-61	-0.45
YAHQVU		2,479	242	1.79	2,459	229	1.69
ZW9GVC		2,004	-233	-1.72	1,994	-236	-1.74

Summary Statistics		
	Sample K53	Sample K54
Grand Means	2,236.7 MPa	2,230.3 MPa
Stnd Dev Btwn Labs	135.0 MPa	135.4 MPa
Statistics based on 51 of 54 reporting participants		

Sample K53: ABS/PC & Sample K54: ABS/PC

Comments on Assigned Data Flags for Test #736

- 9E24R2 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- R68WPJ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample K53.
- J83QAG (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample K53.



Plastics Interlaboratory Testing Program

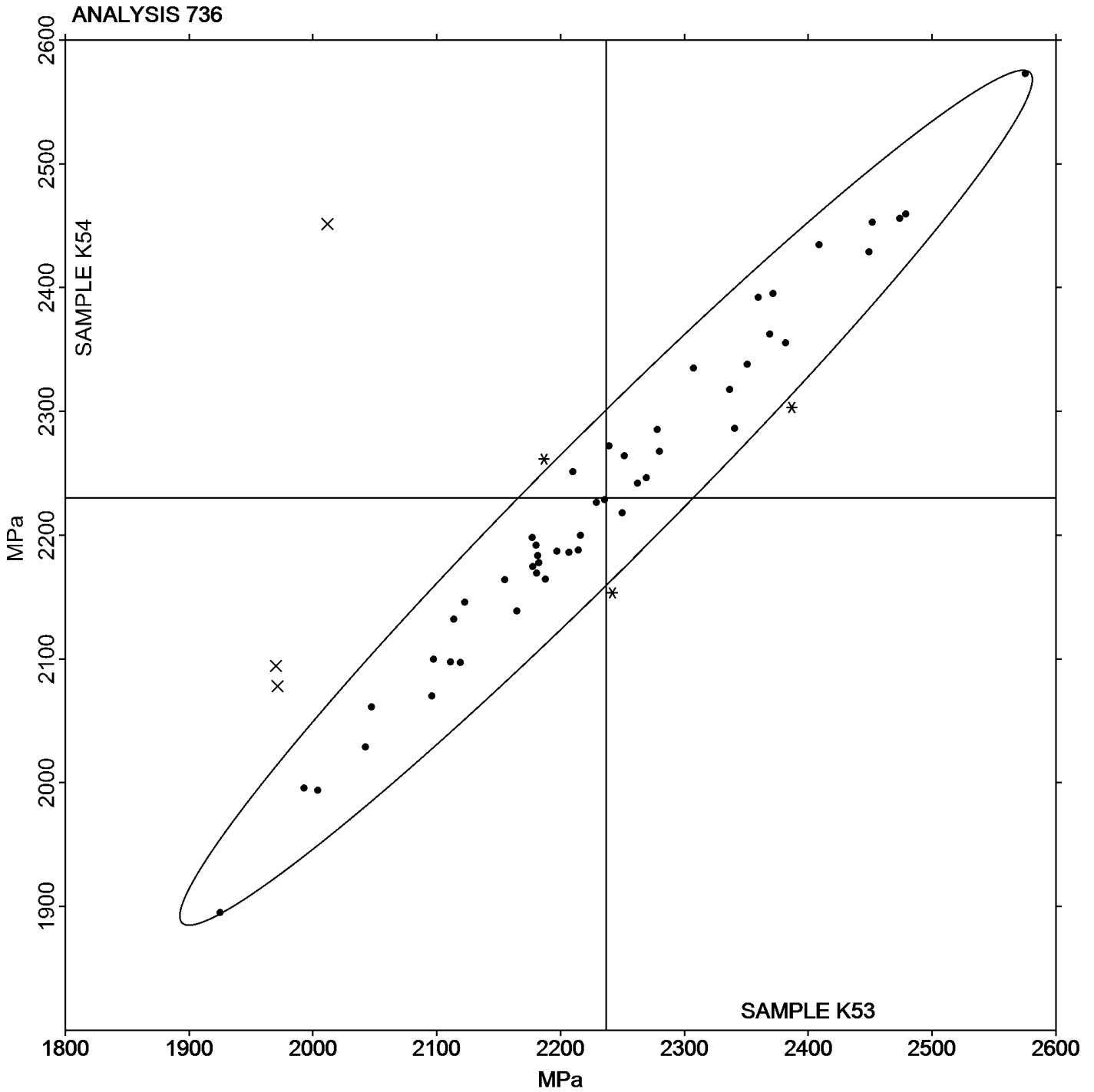
Analysis 736

Flexural Modulus - MPa

Report #107

3rd Qtr 2018

Grand Mean Sample K53: 2,236.68 MPa Grand Mean Sample K54: 2,230.27 MPa





Plastics Interlaboratory Testing Program

Report #107

Analysis 737

3rd Qtr 2018

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K53			Sample K54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
27DVBH		71.49	2.23	0.62	71.12	1.80	0.51
2Q2GRZ		66.09	-3.17	-0.87	66.34	-2.99	-0.84
2QGK GK		74.48	5.22	1.44	74.69	5.36	1.51
39AZ29		71.01	1.75	0.48	71.72	2.40	0.68
3NNJ34		66.76	-2.50	-0.69	66.50	-2.83	-0.80
4V63R2		77.35	8.09	2.23	77.55	8.23	2.32
6PCWGR		68.10	-1.16	-0.32	68.54	-0.78	-0.22
8NPP4Q		66.44	-2.82	-0.78	65.92	-3.41	-0.96
96TQ9C		70.35	1.09	0.30	70.27	0.95	0.27
98JLFE		75.12	5.86	1.61	74.51	5.18	1.46
9BLN4U		67.30	-1.96	-0.54	67.53	-1.79	-0.51
9E24R2		67.19	-2.07	-0.57	67.37	-1.95	-0.55
B2NVLE		69.97	0.71	0.20	70.88	1.56	0.44
B3HJ4A		63.16	-6.10	-1.68	63.37	-5.95	-1.68
B9KNXE		67.80	-1.46	-0.40	67.00	-2.33	-0.66
BL996N		69.67	0.41	0.11	70.38	1.06	0.30
CGTNQT		67.68	-1.58	-0.43	68.26	-1.07	-0.30
F68VXH	X	55.23	-14.03	-3.87	55.58	-13.74	-3.87
FEHLV9		71.28	2.02	0.56	71.08	1.75	0.49
G3JAVZ		67.74	-1.52	-0.42	67.66	-1.67	-0.47
GMJKJZ		68.38	-0.88	-0.24	68.56	-0.77	-0.22
HDWQ4W		72.13	2.87	0.79	72.99	3.67	1.03
HM4NPE		68.14	-1.12	-0.31	67.56	-1.77	-0.50
J2GD38		67.24	-2.02	-0.56	67.10	-2.22	-0.63
J83QAG		65.09	-4.17	-1.15	65.45	-3.88	-1.09
JA9Y6Y		69.47	0.21	0.06	69.58	0.26	0.07
JNA9BU		65.36	-3.90	-1.07	65.64	-3.68	-1.04
JPGRR3		76.14	6.88	1.90	75.78	6.46	1.82
KCT778		70.90	1.64	0.45	69.37	0.05	0.01
KHJFF7		71.04	1.78	0.49	69.88	0.55	0.16
KHK7QU		76.40	7.14	1.97	76.35	7.02	1.98
KYPMQ2		69.16	-0.10	-0.03	68.67	-0.66	-0.19
LDLDRW		67.75	-1.51	-0.41	68.58	-0.75	-0.21
LYLRZ		67.95	-1.31	-0.36	67.35	-1.98	-0.56
LYKKH9		70.98	1.72	0.47	70.36	1.03	0.29



Plastics Interlaboratory Testing Program

Report #107

Analysis 737

3rd Qtr 2018

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	<u>Sample K53</u>			<u>Sample K54</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
M4BH2W		62.91	-6.35	-1.75	63.40	-5.93	-1.67
N9GELW		71.29	2.03	0.56	71.36	2.03	0.57
P4427U		73.39	4.13	1.14	74.09	4.76	1.34
P8LDUY		67.04	-2.22	-0.61	68.01	-1.32	-0.37
PXCFYM		77.64	8.38	2.31	77.66	8.33	2.35
Q3LE47	*	67.04	-2.22	-0.61	65.26	-4.07	-1.15
QCVJGW		72.74	3.48	0.96	72.42	3.09	0.87
QQDFBY		67.66	-1.60	-0.44	68.86	-0.46	-0.13
R68WPJ	X	62.52	-6.74	-1.86	72.95	3.62	1.02
T3ZKDF		69.43	0.17	0.05	69.43	0.10	0.03
T4FJX6	*	65.38	-3.88	-1.07	67.54	-1.79	-0.50
WQAE42		63.52	-5.74	-1.58	64.32	-5.01	-1.41
X2PFMK		69.72	0.46	0.13	69.30	-0.03	-0.01
XG766V		68.24	-1.02	-0.28	68.45	-0.87	-0.25
XPVTZX		64.32	-4.94	-1.36	64.36	-4.97	-1.40
Y4BUZF		65.14	-4.12	-1.14	65.06	-4.27	-1.20
YAHQVU		74.68	5.42	1.49	74.50	5.17	1.46
ZW9GVC		67.00	-2.26	-0.62	67.70	-1.63	-0.46

Summary Statistics		
	<u>Sample K53</u>	<u>Sample K54</u>
Grand Means	69.260 MPa	69.326 MPa
Stnd Dev Btwn Labs	3.629 MPa	3.549 MPa
Statistics based on 51 of 53 reporting participants		

Sample K53: ABS/PC & Sample K54: ABS/PC

Comments on Assigned Data Flags for Test #737

R68WPJ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample K53.

F68VXH (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

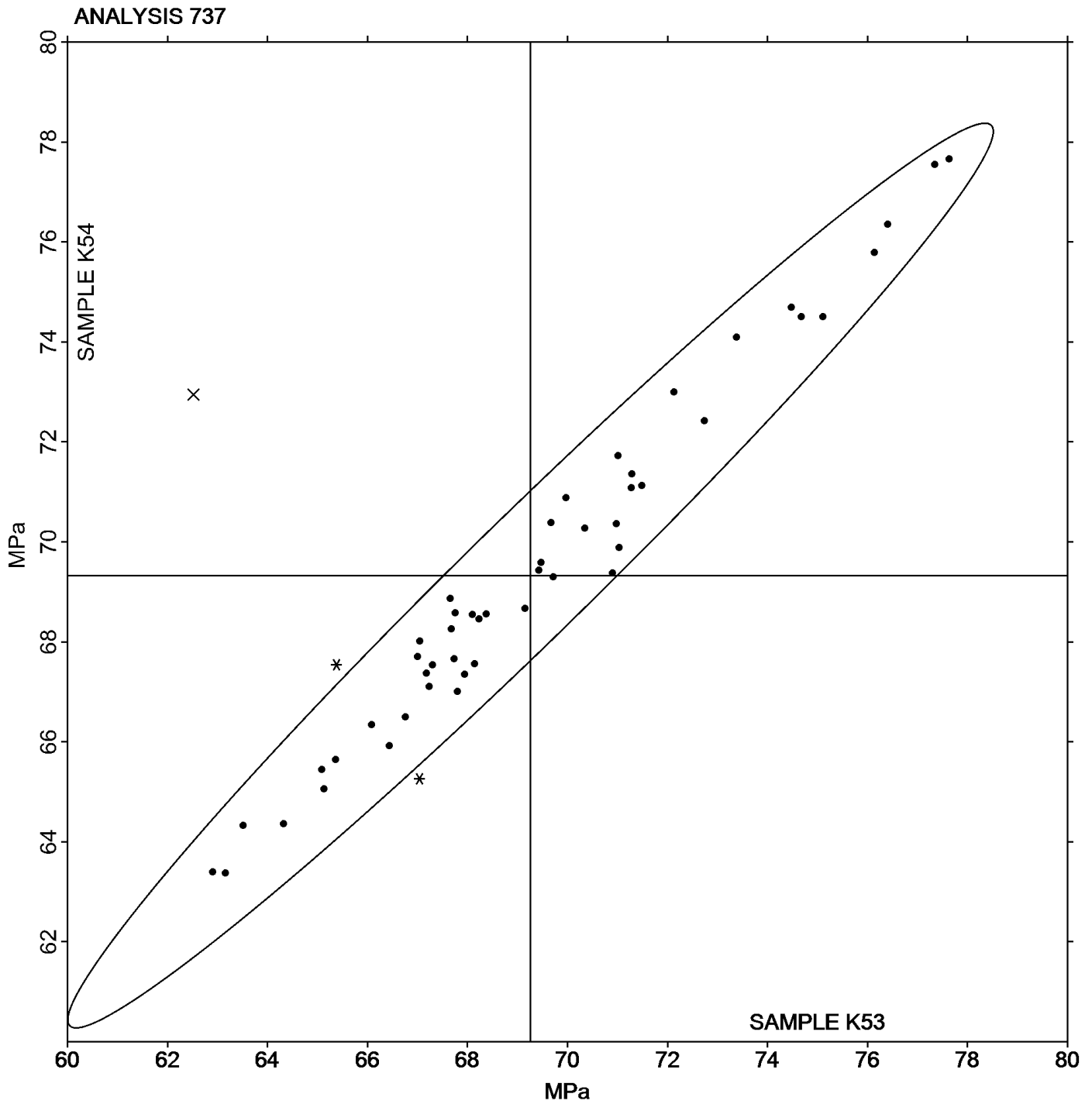
Report #107

Analysis 737

3rd Qtr 2018

Flexural Stress at 3.5% Strain - MPa

Grand Mean Sample K53: 69.260 MPa Grand Mean Sample K54: 69.326 MPa





Plastics Interlaboratory Testing Program

Report #107

Analysis 738

3rd Qtr 2018

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K53			Sample K54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
27DVBH		82.85	4.08	1.18	82.79	3.79	1.11
2Q2GRZ		76.18	-2.60	-0.75	76.48	-2.52	-0.74
2V7DBZ		77.46	-1.31	-0.38	77.88	-1.12	-0.33
39AZ29		83.65	4.88	1.41	85.00	6.00	1.75
3NNJ34		77.40	-1.37	-0.40	77.03	-1.97	-0.58
4V63R2	*	88.44	9.66	2.79	88.82	9.82	2.87
6PCWGR		80.17	1.39	0.40	80.51	1.50	0.44
8NPP4Q		75.48	-3.29	-0.95	75.60	-3.40	-0.99
98JLFE		83.76	4.99	1.44	83.41	4.41	1.29
9BLN4U		80.55	1.78	0.51	81.41	2.41	0.70
9E24R2		76.49	-2.28	-0.66	77.44	-1.56	-0.46
B2NVLE		79.38	0.61	0.17	79.94	0.94	0.27
B3HJ4A		73.94	-4.83	-1.40	74.44	-4.56	-1.33
B9KNXE		73.80	-4.97	-1.44	72.80	-6.20	-1.81
BL996N		80.09	1.31	0.38	80.66	1.66	0.48
CGTNQT		79.02	0.24	0.07	79.26	0.26	0.07
DDDEDP		79.92	1.14	0.33	80.49	1.48	0.43
F68VXH		78.25	-0.52	-0.15	78.15	-0.86	-0.25
FEHLV9		81.24	2.47	0.71	81.32	2.31	0.68
G3JAVZ		76.80	-1.97	-0.57	77.40	-1.60	-0.47
GMJKJZ		81.01	2.23	0.64	81.21	2.21	0.65
HM4NPE		78.50	-0.27	-0.08	78.20	-0.80	-0.23
J2GD38		76.92	-1.85	-0.53	76.96	-2.04	-0.60
J83QAG		76.03	-2.75	-0.79	76.35	-2.66	-0.78
KHJFF7		81.40	2.63	0.76	79.74	0.74	0.22
LDLDRW		79.51	0.73	0.21	80.60	1.60	0.47
LYKKH9		81.16	2.39	0.69	80.30	1.30	0.38
M4BH2W		72.09	-6.68	-1.93	72.66	-6.35	-1.85
P4427U		83.47	4.69	1.35	83.47	4.46	1.30
P8LDUY		76.86	-1.92	-0.55	78.43	-0.58	-0.17
PXCFYM		77.64	-1.13	-0.33	77.66	-1.34	-0.39
Q3LE47	*	76.30	-2.47	-0.71	74.38	-4.62	-1.35
QCVJGW		81.92	3.15	0.91	81.59	2.58	0.76
R68WPJ	X	75.14	-3.63	-1.05	82.22	3.22	0.94
T3ZKDF		80.45	1.68	0.48	80.82	1.82	0.53



Plastics Interlaboratory Testing Program

Report #107

Analysis 738

3rd Qtr 2018

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K53			Sample K54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
T4FJX6	*	74.40	-4.37	-1.26	76.96	-2.04	-0.60
WQAE42		71.20	-7.57	-2.19	72.66	-6.34	-1.85
X2PFMK		79.52	0.75	0.22	79.26	0.26	0.08
XG766V		79.16	0.39	0.11	79.26	0.26	0.08
Y4BUZF		77.16	-1.61	-0.47	77.32	-1.68	-0.49
YAHQVU		83.67	4.90	1.41	84.05	5.04	1.47
ZW9GVC		76.54	-2.23	-0.64	76.42	-2.58	-0.75

Summary Statistics		
	Sample K53	Sample K54
Grand Means	78.775 MPa	79.003 MPa
Std Dev Btwn Labs	3.465 MPa	3.421 MPa
Statistics based on 41 of 42 reporting participants		

Sample K53: ABS/PC & Sample K54: ABS/PC

Comments on Assigned Data Flags for Test #738

R68WPJ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample K53.



Plastics Interlaboratory Testing Program

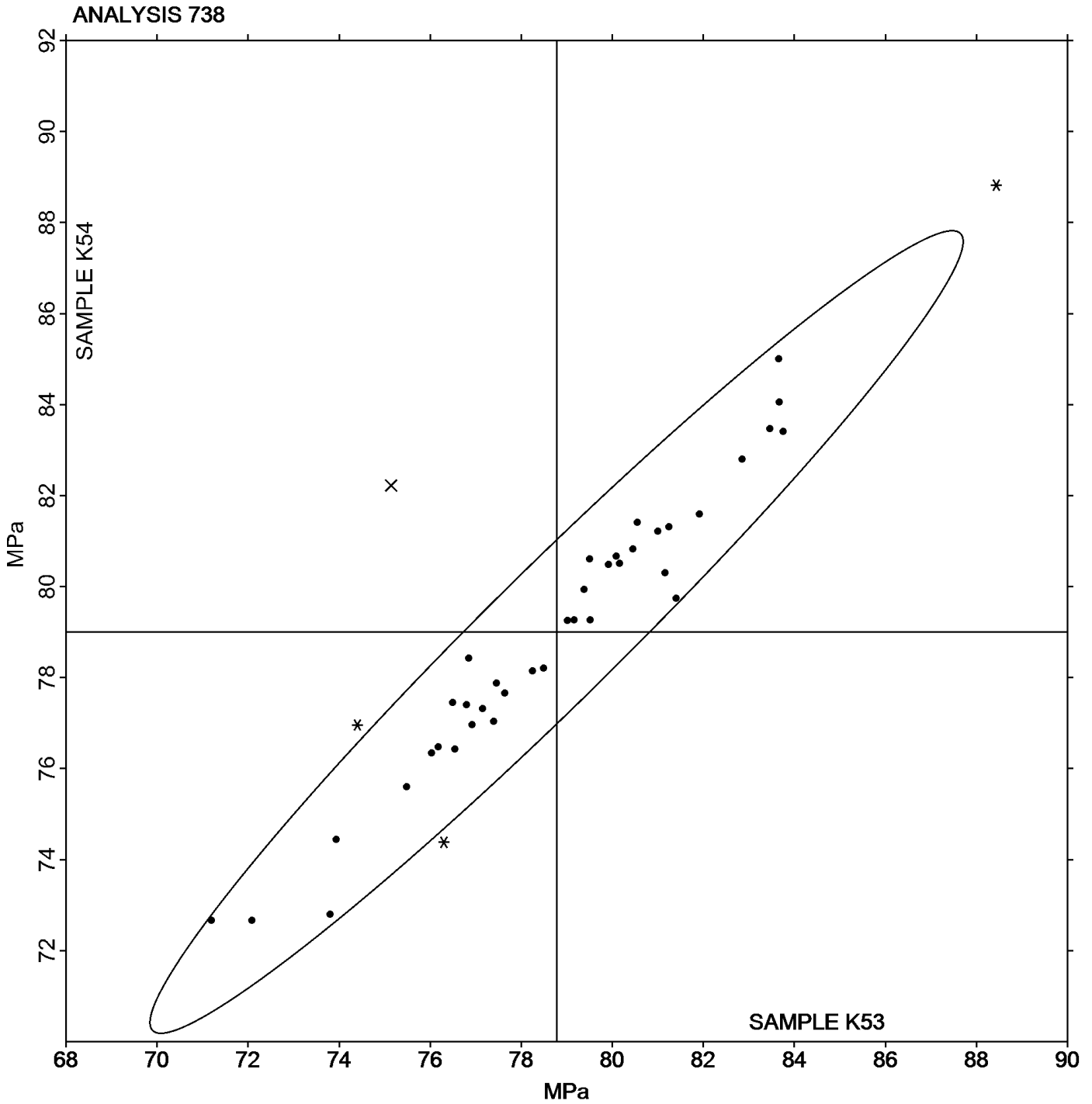
Analysis 738

Flexural Stress at Yield - MPa

Report #107

3rd Qtr 2018

Grand Mean Sample K53: 78.775 MPa Grand Mean Sample K54: 79.003 MPa





Plastics Interlaboratory Testing Program

Report #107

Analysis 750

3rd Qtr 2018

Flow Rates of Thermoplastics (190 or 230C/2.16 kg) - g/10 mins

WebCode	Data Flag	Sample X53			Sample X54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2B9P7Y		6.17	-0.30	-1.28	5.14	-0.25	-1.27	GO
2HJ6DY		6.15	-0.32	-1.36	5.00	-0.39	-1.96	DY
2QGK GK		6.64	0.17	0.72	5.28	-0.11	-0.56	DY
2V7DBZ		6.15	-0.32	-1.36	5.15	-0.24	-1.20	TO
2XG2RQ		6.22	-0.25	-1.06	5.27	-0.12	-0.60	TO
39AZ29		6.42	-0.05	-0.22	5.45	0.07	0.34	TO
3RLUMM		6.09	-0.38	-1.62	5.18	-0.21	-1.05	TM
4QPREX		6.15	-0.32	-1.36	5.25	-0.14	-0.69	DY
4R6QW2		6.30	-0.17	-0.73	5.60	0.21	1.07	TO
63FMA4	*	7.15	0.68	2.85	5.53	0.14	0.70	XX
69QWJL		6.40	-0.07	-0.31	5.45	0.06	0.32	TO
6T94VE		6.66	0.19	0.78	5.33	-0.06	-0.31	XX
7XJKGN		6.47	0.00	-0.02	5.32	-0.07	-0.34	TO
8AUB2C		6.30	-0.17	-0.73	5.00	-0.39	-1.96	TY
8NPP4Q		6.90	0.43	1.79	5.75	0.36	1.83	CE
8TZHY6		6.55	0.08	0.32	5.45	0.06	0.32	TO
96TQ9C		6.30	-0.17	-0.73	5.25	-0.14	-0.69	TO
9BLN4U		6.40	-0.07	-0.31	5.60	0.21	1.07	TO
9TXHPA	X	6.10	-0.37	-1.57	6.05	0.66	3.35	TO
APETT4		6.55	0.07	0.30	5.48	0.09	0.45	XX
ATENBZ		6.26	-0.22	-0.92	5.00	-0.39	-1.97	TO
AWVC6P		6.54	0.06	0.26	5.20	-0.19	-0.97	TO
B2NVLE		6.36	-0.12	-0.50	5.53	0.14	0.72	TY
B3HJ4A	X	3.95	-2.52	-10.62	3.14	-2.25	-11.35	WZ
B4AWWN		6.51	0.03	0.13	5.27	-0.12	-0.59	DA
B9KNXE		6.40	-0.07	-0.31	5.50	0.11	0.57	TO
BPRRFY		6.60	0.12	0.51	5.27	-0.12	-0.59	TO
CB7BUU		6.52	0.04	0.17	5.55	0.16	0.82	XX
CGTNQT	*	6.10	-0.37	-1.57	5.60	0.21	1.07	TO
CVWTD9	X	5.05	-1.42	-5.99	5.90	0.51	2.59	TO
DDDEDP		6.22	-0.26	-1.09	5.33	-0.06	-0.31	TO
DWLENB		6.50	0.03	0.11	5.40	0.01	0.06	TO
E9RVPC		6.89	0.42	1.75	5.49	0.10	0.52	TO
EGNQT3		6.35	-0.12	-0.52	5.20	-0.19	-0.95	TO
F6PBJR		6.47	0.00	0.00	5.47	0.08	0.40	CE



Plastics Interlaboratory Testing Program

Report #107

Analysis 750

3rd Qtr 2018

Flow Rates of Thermoplastics (190 or 230C/2.16 kg) - g/10 mins

WebCode	Data Flag	Sample X53			Sample X54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
FEHLV9		6.62	0.15	0.62	5.55	0.16	0.82	GO
FMQRCQ		6.25	-0.22	-0.94	5.48	0.09	0.47	XX
FZDP8Z		6.28	-0.19	-0.82	5.06	-0.33	-1.65	TO
G8TH83		6.50	0.03	0.11	5.70	0.31	1.58	DY
GMJKJZ		6.67	0.19	0.81	5.34	-0.05	-0.24	TO
H8A2JM		6.40	-0.07	-0.31	5.20	-0.19	-0.95	WZ
HDWQ4W		6.45	-0.02	-0.10	5.16	-0.23	-1.15	DY
HM4NPE		6.79	0.32	1.33	5.82	0.43	2.18	XX
J8JEGF		6.54	0.07	0.27	5.35	-0.04	-0.20	TO
JA9Y6Y		7.05	0.58	2.43	5.65	0.26	1.33	TO
JDP7NT		6.23	-0.24	-1.03	5.17	-0.22	-1.12	WZ
JK8GZ9		6.24	-0.24	-1.00	5.05	-0.34	-1.70	TO
JNA9BU		6.63	0.15	0.64	5.42	0.03	0.17	KA
JNEPDY		6.55	0.08	0.32	5.50	0.11	0.57	XX
JPGRR3		6.54	0.07	0.28	5.70	0.31	1.55	DY
JUJGLW		6.35	-0.12	-0.52	5.50	0.11	0.57	TO
K4JNNA	X	5.37	-1.10	-4.65	5.50	0.11	0.54	DY
KHJFF7		6.56	0.08	0.35	5.43	0.05	0.23	GO
KHK7QU		6.55	0.08	0.32	5.55	0.16	0.82	DY
KLEBUY		6.63	0.15	0.64	5.14	-0.25	-1.27	DY
KYPMQ2	X	14.42	7.95	33.45	13.36	7.98	40.28	DY
L4R8UP		6.54	0.07	0.28	5.39	0.00	-0.01	WZ
LDLDRW		6.80	0.33	1.37	5.45	0.06	0.32	AT
LEFJBQ		6.59	0.12	0.49	5.84	0.45	2.26	RR
LLFBTD		6.33	-0.14	-0.59	5.20	-0.18	-0.93	CE
LNNCZ7		6.95	0.48	2.01	5.65	0.26	1.33	TO
LPVZU3		6.63	0.16	0.66	5.48	0.09	0.45	TO
M4BH2W		6.59	0.11	0.48	5.50	0.12	0.59	DY
M7DC2L		6.25	-0.23	-0.96	5.48	0.09	0.44	TO
MF33NE		6.72	0.24	1.03	5.68	0.29	1.48	TO
MXR7DV		6.25	-0.22	-0.94	5.20	-0.19	-0.95	TO
N27X4N	X	13.69	7.22	30.38	13.21	7.82	39.48	QT
N9GELW		6.09	-0.39	-1.64	5.06	-0.33	-1.68	DY
NL82XJ		6.50	0.03	0.11	5.40	0.01	0.06	TO
P4427U		6.71	0.23	0.97	5.62	0.23	1.15	DY



Plastics Interlaboratory Testing Program

Report #107

Analysis 750

3rd Qtr 2018

Flow Rates of Thermoplastics (190 or 230C/2.16 kg) - g/10 mins

WebCode	Data Flag	Sample X53			Sample X54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
P842HK		6.33	-0.14	-0.60	5.23	-0.16	-0.82	DY
PH7UYL		6.70	0.23	0.95	5.18	-0.21	-1.05	TO
PL27RH		6.20	-0.27	-1.15	5.25	-0.14	-0.69	KA
PXCFYM		6.65	0.18	0.74	5.41	0.02	0.09	TO
Q3LE47	X	6.85	0.38	1.59	6.35	0.97	4.88	CE
QCVJGW	X	8.29	1.81	7.62	6.99	1.60	8.09	GO
QG7YJT		6.69	0.21	0.89	5.45	0.06	0.32	TO
QLZXUH		6.17	-0.31	-1.30	5.32	-0.07	-0.37	CE
RBUKLA		6.63	0.15	0.64	5.42	0.03	0.14	TO
RQCV8W		6.40	-0.07	-0.31	5.15	-0.24	-1.20	DY
RV63NK		6.30	-0.17	-0.73	5.40	0.01	0.06	TO
T3ZKDF		6.50	0.02	0.09	5.29	-0.10	-0.52	TO
TFR63J		6.70	0.23	0.95	5.60	0.21	1.07	TO
TQKHB4		6.48	0.00	0.01	5.51	0.12	0.62	TO
UMYEF3		6.24	-0.24	-1.00	5.07	-0.32	-1.62	CE
UNY2MG		6.45	-0.02	-0.10	5.55	0.16	0.82	TO
VE2ZCG		6.93	0.46	1.92	5.61	0.23	1.14	TO
WGNX4K		6.87	0.39	1.65	5.29	-0.10	-0.49	TO
WQAE42		5.97	-0.50	-2.12	5.38	0.00	-0.02	TO
XV2Q8G		6.21	-0.26	-1.11	5.25	-0.14	-0.69	TO
Y96AK3		6.30	-0.17	-0.71	5.42	0.03	0.14	CE
YAHQVU		6.72	0.25	1.04	5.63	0.24	1.22	TO
ZNHXFH		6.45	-0.02	-0.10	5.60	0.21	1.07	TO
ZW9GVC	X	14.37	7.89	33.22	12.85	7.46	37.66	TO

Summary Statistics		
	Sample X53	Sample X54
Grand Means	6.474 grams/10 mins	5.387 grams/10 mins
Stnd Dev Btwn Labs	0.238 grams/10 mins	0.198 grams/10 mins
Statistics based on 85 of 94 reporting participants		

Sample X53: LDPE & Sample X54: LDPE



Plastics Interlaboratory Testing Program

Report #107

Analysis 750

3rd Qtr 2018

Flow Rates of Thermoplastics (190 or 230C/2.16 kg) - g/10 mins

Comments on Assigned Data Flags for Test #750

- N27X4N (X) - Data for both samples are high.
- ZW9GVC (X) - Data for both samples are high.
- KYPMQ2 (X) - Data for both samples are high. Inconsistent within the determinations of both samples.
- CVWTD9 (X) - Data for sample X53 are low.
- Q3LE47 (X) - Data for sample X54 are high.
- B3HJ4A (X) - Data for both samples are low.
- QCVJGW (X) - Data for both samples are high.
- 9TXHPA (X) - Data for sample X54 are high.
- K4JNNA (X) - Data for sample X53 are low. Inconsistent within the determinations of both samples.

Key to Instrument Codes Reported by Participants

AT	Atlas	CE	Ceast
DA	Davenport	DY	Dynisco
GO	Gottfert	KA	Kayeness
QT	Qualitest	RR	Ray Ran
TM	TMI	TO	Tinius Olsen
TY	Toyoseiki Seisakusho	WZ	Zwick
XX	Instrument manufacturer not specified by lab		



Plastics Interlaboratory Testing Program

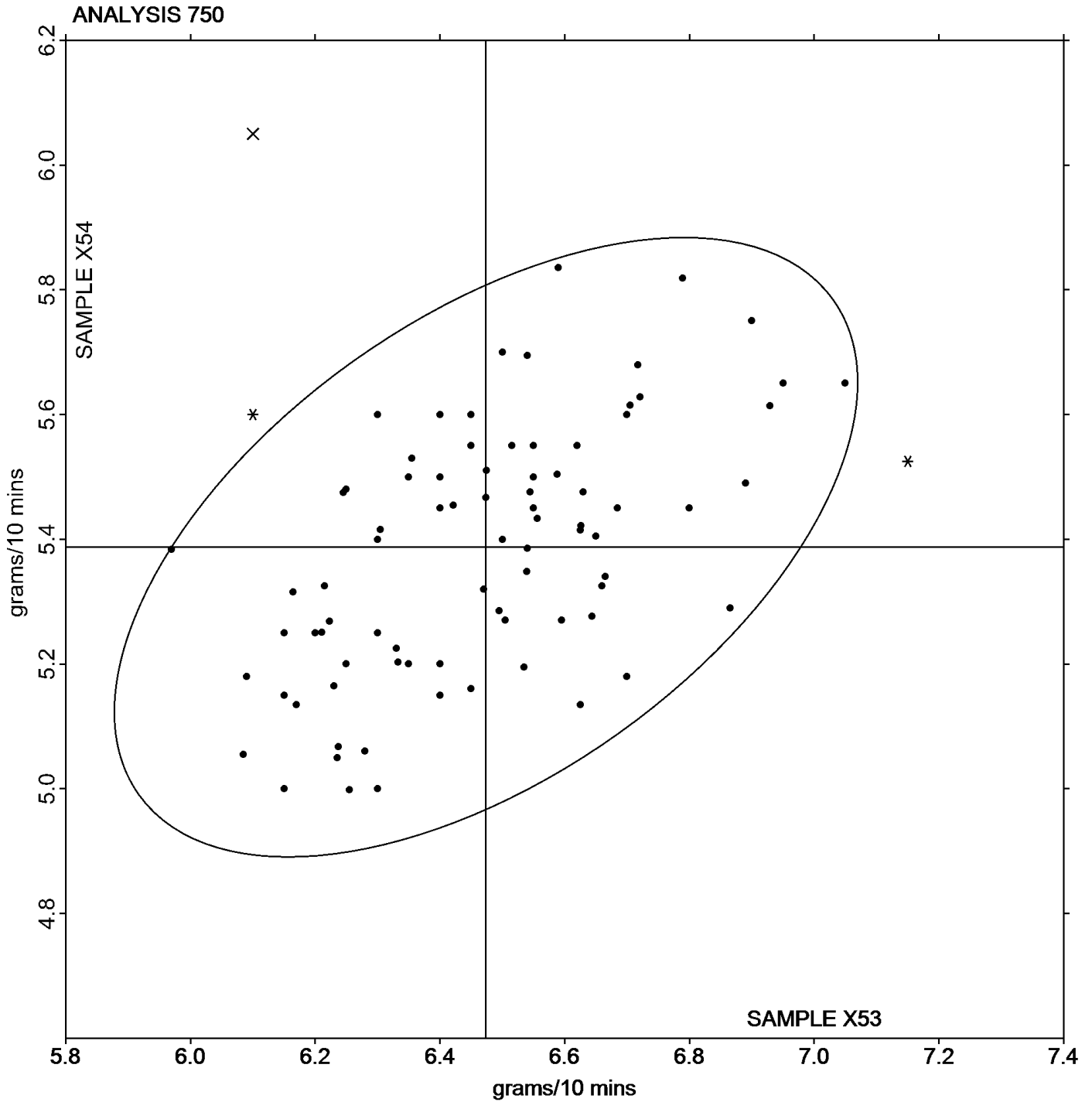
Report #107

Analysis 750

3rd Qtr 2018

Flow Rates of Thermoplastics (190 or 230C/2.16 kg) - g/10 mins

Grand Mean Sample X53: 6.4737 grams/10 mins Grand Mean Sample X54: 5.3873 grams/10 mins





Plastics Interlaboratory Testing Program

Report #107

Analysis 755

3rd Qtr 2018

Moisture Content of Plastics

WebCode	Data Flag	Sample Y53			Sample Y54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2HJ6DY		0.15400	0.01661	0.51	0.16967	0.01662	0.45	MJ
2QGK GK		0.13700	-0.00039	-0.01	0.15950	0.00645	0.18	CT
3TH2CU		0.07584	-0.06155	-1.88	0.08616	-0.06689	-1.83	MU
4QPREX	X	0.17207	0.03468	1.06	0.16023	0.00718	0.20	AZ
4R4YZE		0.15183	0.01445	0.44	0.16803	0.01498	0.41	MJ
63FMA4		0.18367	0.04628	1.41	0.21040	0.05735	1.57	XX
6AG2V7		0.10000	-0.03739	-1.14	0.11333	-0.03972	-1.08	MU
6N2FFR		0.07672	-0.06067	-1.85	0.08505	-0.06800	-1.86	MU
8NPP4Q		0.15400	0.01661	0.51	0.15850	0.00545	0.15	AZ
96TQ9C		0.07233	-0.06505	-1.98	0.07833	-0.07472	-2.04	MU
ATENBZ	X	0.41600	0.27861	8.50	0.40167	0.24862	6.78	XX
AWVC6P		0.13403	-0.00335	-0.10	0.16217	0.00912	0.25	MR
BKGEZL		0.07796	-0.05943	-1.81	0.08630	-0.06675	-1.82	MU
CGTNQT		0.12700	-0.01039	-0.32	0.13867	-0.01438	-0.39	MK
CL7CHC	X	0.07300	-0.06439	-1.96	0.03200	-0.12105	-3.30	SB
CYCK62		0.14670	0.00931	0.28	0.16597	0.01292	0.35	ML
DJE6M2		0.14930	0.01191	0.36	0.17023	0.01718	0.47	AZ
EGNQT3		0.15000	0.01261	0.38	0.16667	0.01362	0.37	ML
FBXN94		0.07033	-0.06705	-2.05	0.08333	-0.06972	-1.90	AZ
GMJKJZ		0.11033	-0.02705	-0.83	0.10623	-0.04682	-1.28	MD
HDWQ4W		0.14700	0.00961	0.29	0.16800	0.01495	0.41	MB
HM4NPE		0.13800	0.00061	0.02	0.15250	-0.00055	-0.02	CT
J2GD38		0.14233	0.00495	0.15	0.15500	0.00195	0.05	CT
JA9Y6Y		0.16850	0.03111	0.95	0.19950	0.04645	1.27	ML
JK8GZ9		0.13133	-0.00605	-0.18	0.14797	-0.00508	-0.14	AZ
K4JNNA		0.17000	0.03261	1.00	0.18300	0.02995	0.82	MB
KHK7QU		0.12957	-0.00782	-0.24	0.15057	-0.00248	-0.07	MR
LDKLVA		0.07563	-0.06176	-1.88	0.08545	-0.06760	-1.84	MU
LWAEME	*	0.14177	0.00438	0.13	0.13487	-0.01818	-0.50	MT
N9GELW		0.09313	-0.04425	-1.35	0.12090	-0.03215	-0.88	MU
NL82XJ		0.16400	0.02661	0.81	0.17450	0.02145	0.59	BA
P842HK		0.11667	-0.02072	-0.63	0.13867	-0.01438	-0.39	MS
PG99XK		0.15567	0.01828	0.56	0.17667	0.02362	0.64	CS
Q3LE47		0.14550	0.00811	0.25	0.15950	0.00645	0.18	AZ
QLZXUH		0.12467	-0.01272	-0.39	0.14467	-0.00838	-0.23	MU



Plastics Interlaboratory Testing Program

Report #107

Analysis 755

3rd Qtr 2018

Moisture Content of Plastics

WebCode	Data Flag	Sample Y53			Sample Y54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
RQCV8W		0.15533	0.01795	0.55	0.18067	0.02762	0.75	AZ
RV63NK	*	0.20733	0.06995	2.13	0.24200	0.08895	2.43	MU
T4FJX6		0.14500	0.00761	0.23	0.15950	0.00645	0.18	CT
T8AMHW		0.19300	0.05561	1.70	0.20700	0.05395	1.47	SA
UNY2MG		0.14533	0.00795	0.24	0.15833	0.00528	0.14	SA
VDBL47		0.17300	0.03561	1.09	0.18950	0.03645	0.99	SB
W4E333		0.16433	0.02695	0.82	0.18167	0.02862	0.78	ML
WNQXMM		0.14968	0.01229	0.38	0.16310	0.01005	0.27	CS
XG766V		0.15000	0.01261	0.38	0.16967	0.01662	0.45	MJ
XTWDTJ		0.14993	0.01255	0.38	0.16513	0.01208	0.33	ML
ZGTPLB		0.15333	0.01595	0.49	0.16867	0.01562	0.43	MK
ZNHXFH	X	0.21733	0.07995	2.44	0.27400	0.12095	3.30	MU
ZW9GVC		0.14397	0.00658	0.20	0.14867	-0.00438	-0.12	AZ

Summary Statistics		
	Sample Y53	Sample Y54
Grand Means	0.137388 Percent	0.153050 Percent
Std Dev Btwn Labs	0.032776 Percent	0.036643 Percent
Statistics based on 44 of 48 reporting participants		

Sample Y53: ABS/PC & Sample Y54: ABS/PC

Comments on Assigned Data Flags for Test #755

- ZNHXFH (X) - Data for sample Y54 are high.
- 4QPREX (X) - Inconsistent in testing between samples.
- CL7CHC (X) - Data for sample Y54 are low.
- ATENBZ (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample Y53.



Plastics Interlaboratory Testing Program

Analysis 755

Moisture Content of Plastics

Report #107

3rd Qtr 2018

Key to Instrument Codes Reported by Participants

AZ	Arizona Instruments Moisture Analyzer	BA	Brabender Aquatrac
CS	Cosa Instruments	CT	Computrac Moisture Analyzer
MB	Omnimark Mark 3	MD	Mettler Toledo DL37
MJ	Mitsubishi KF Analyzer Series	MK	Mitsubishi KF Analyzer CA
ML	Metrohm Coulometer	MR	Metrohm Coulometer 756 KF
MS	Metrohm Coulometer 831 KF	MT	Mettler Toledo DL39
MU	Mettler Toledo	SA	Sartorius MA30
SB	Sartorius Mark 3	XX	Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

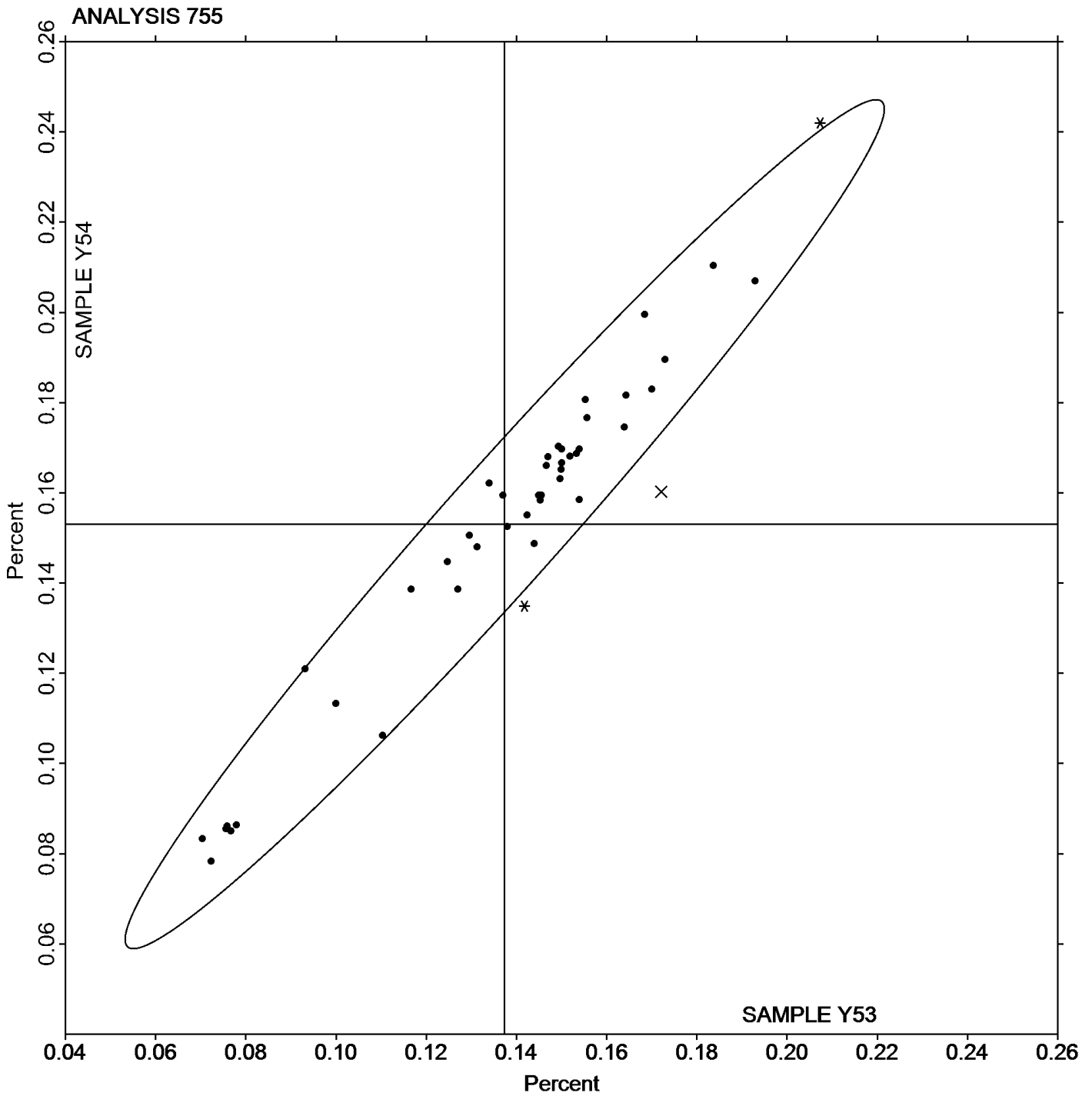
Analysis 755

Moisture Content of Plastics

Report #107

3rd Qtr 2018

Grand Mean Sample Y53: 0.13739 Percent Grand Mean Sample Y54: 0.15305 Percent





Plastics Interlaboratory Testing Program

Report #107

Analysis 757

3rd Qtr 2018

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L53			Sample L54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2HJ6DY		19.715	-0.041	-0.86	19.690	-0.067	-1.28
2QGK GK		19.760	0.004	0.08	19.855	0.098	1.88
39AZ29		19.710	-0.046	-0.97	19.735	-0.022	-0.42
63FMA4	X	20.150	0.394	8.27	19.625	-0.132	-2.53
6T94VE		19.740	-0.016	-0.34	19.715	-0.042	-0.80
8NPP4Q		19.781	0.025	0.53	19.762	0.005	0.10
9H2CVB		19.760	0.004	0.08	19.760	0.003	0.06
9TXHPA	X	19.200	-0.556	-11.68	19.100	-0.657	-12.59
9UUXZK		19.760	0.004	0.08	19.800	0.043	0.83
APETT4		19.810	0.054	1.13	19.810	0.053	1.02
APFKVR	*	19.645	-0.111	-2.33	19.625	-0.132	-2.53
AWVC6P		19.700	-0.056	-1.18	19.735	-0.022	-0.42
AXW674		19.795	0.039	0.82	19.760	0.003	0.06
B3HJ4A	X	36.830	17.074	358.57	36.645	16.888	323.64
B4AWWN		19.835	0.079	1.66	19.760	0.003	0.06
BYEX7C		19.775	0.019	0.40	19.775	0.018	0.35
CGTNQT		19.740	-0.016	-0.34	19.745	-0.012	-0.23
CL7CHC	X	19.150	-0.606	-12.73	19.050	-0.707	-13.55
DDDEDP		19.765	0.009	0.19	19.735	-0.022	-0.42
E9RVPC	X	20.200	0.444	9.32	19.350	-0.407	-7.80
EXB9FC	*	19.657	-0.099	-2.08	19.610	-0.147	-2.82
FBXN94	X	30.247	10.490	220.31	31.170	11.413	218.71
FEHLV9	*	19.645	-0.111	-2.33	19.765	0.008	0.15
G3JAVZ		19.795	0.039	0.82	19.775	0.018	0.35
GM7X6R		19.755	-0.001	-0.02	19.755	-0.002	-0.04
GMJKJZ		19.700	-0.056	-1.18	19.720	-0.037	-0.71
HDWQ4W		19.825	0.069	1.45	19.855	0.098	1.88
HM4NPE		19.823	0.067	1.40	19.795	0.038	0.73
J2GD38		19.740	-0.016	-0.34	19.740	-0.017	-0.32
JA9Y6Y		19.750	-0.006	-0.13	19.845	0.088	1.69
JDP7NT		19.718	-0.038	-0.80	19.729	-0.028	-0.54
JMHCQ7		19.680	-0.076	-1.60	19.760	0.003	0.06
JNA9BU		19.792	0.035	0.74	19.814	0.057	1.08
JPGRR3		19.780	0.024	0.50	19.710	-0.047	-0.90
K4JNNA		19.795	0.039	0.82	19.765	0.008	0.15



Plastics Interlaboratory Testing Program

Report #107

Analysis 757

3rd Qtr 2018

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L53			Sample L54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KHJFF7	*	19.825	0.069	1.45	19.675	-0.082	-1.57
LNNCZ7		19.785	0.029	0.61	19.750	-0.007	-0.13
LWAEME		19.775	0.019	0.40	19.760	0.003	0.06
M7W38Z		19.720	-0.037	-0.77	19.724	-0.033	-0.64
MF33NE		19.677	-0.080	-1.67	19.787	0.030	0.58
N9GELW		19.794	0.038	0.79	19.759	0.002	0.03
P4427U		19.765	0.009	0.19	19.710	-0.047	-0.90
P842HK		19.790	0.034	0.71	19.760	0.003	0.06
PZMGHU		19.745	-0.011	-0.23	19.810	0.053	1.02
Q3LE47		19.738	-0.019	-0.39	19.826	0.069	1.31
QLGUHB		19.772	0.015	0.32	19.784	0.027	0.51
QLZXUH	X	19.730	-0.026	-0.55	19.550	-0.207	-3.97
QQDFBY		19.690	-0.066	-1.39	19.665	-0.092	-1.76
RBUKLA		19.783	0.027	0.56	19.752	-0.005	-0.10
RQCV8W	X	19.505	-0.251	-5.27	19.685	-0.072	-1.38
RV63NK		19.735	-0.021	-0.44	19.715	-0.042	-0.80
RV7VLR		19.800	0.044	0.91	19.834	0.077	1.48
T3ZKDF		19.780	0.024	0.50	19.720	-0.037	-0.71
T4FJX6		19.801	0.045	0.95	19.796	0.039	0.76
T8AMHW		19.795	0.038	0.81	19.847	0.090	1.73
UNY2MG		19.805	0.049	1.03	19.810	0.053	1.02
VE2ZCG		19.776	0.020	0.42	19.746	-0.011	-0.21
YAHQVU		19.734	-0.022	-0.46	19.782	0.025	0.48
YHCU2C		19.795	0.039	0.82	19.780	0.023	0.44
ZGTPLB		19.770	0.014	0.29	19.740	-0.017	-0.32
ZNHXFH		19.790	0.034	0.71	19.795	0.038	0.73
ZTPDWT		19.660	-0.096	-2.02	19.695	-0.062	-1.19
ZW9GVC		19.745	-0.011	-0.23	19.710	-0.047	-0.90



Ash Content in Thermoplastics - Percent

Summary Statistics	Sample L53	Sample L54
Grand Means	19.7562 Percent	19.7569 Percent
Stnd Dev Btwn Labs	0.0476 Percent	0.0522 Percent
Statistics based on 55 of 63 reporting participants		

Sample L53: PP & Sample L54: PP

Comments on Assigned Data Flags for Test #757

- FBXN94 (X) - Data for both samples are high. Also inconsistent in testing within both samples.
- B3HJ4A (X) - Data for both samples are high. Inconsistent within the determinations of sample L53.
- RQCV8W (X) - Data for sample L53 are low.
- 9TXHPA (X) - Data for both samples are low.
- E9RVPC (X) - Data for sample L53 are high and data for sample L54 are low. Inconsistent within the determinations of both samples.
- CL7CHC (X) - Data for both samples are low.
- QLZXUH (X) - Data for sample L54 are low.
- 63FMA4 (X) - Data for sample L53 are high. Inconsistent within the determinations of sample L54.



Plastics Interlaboratory Testing Program

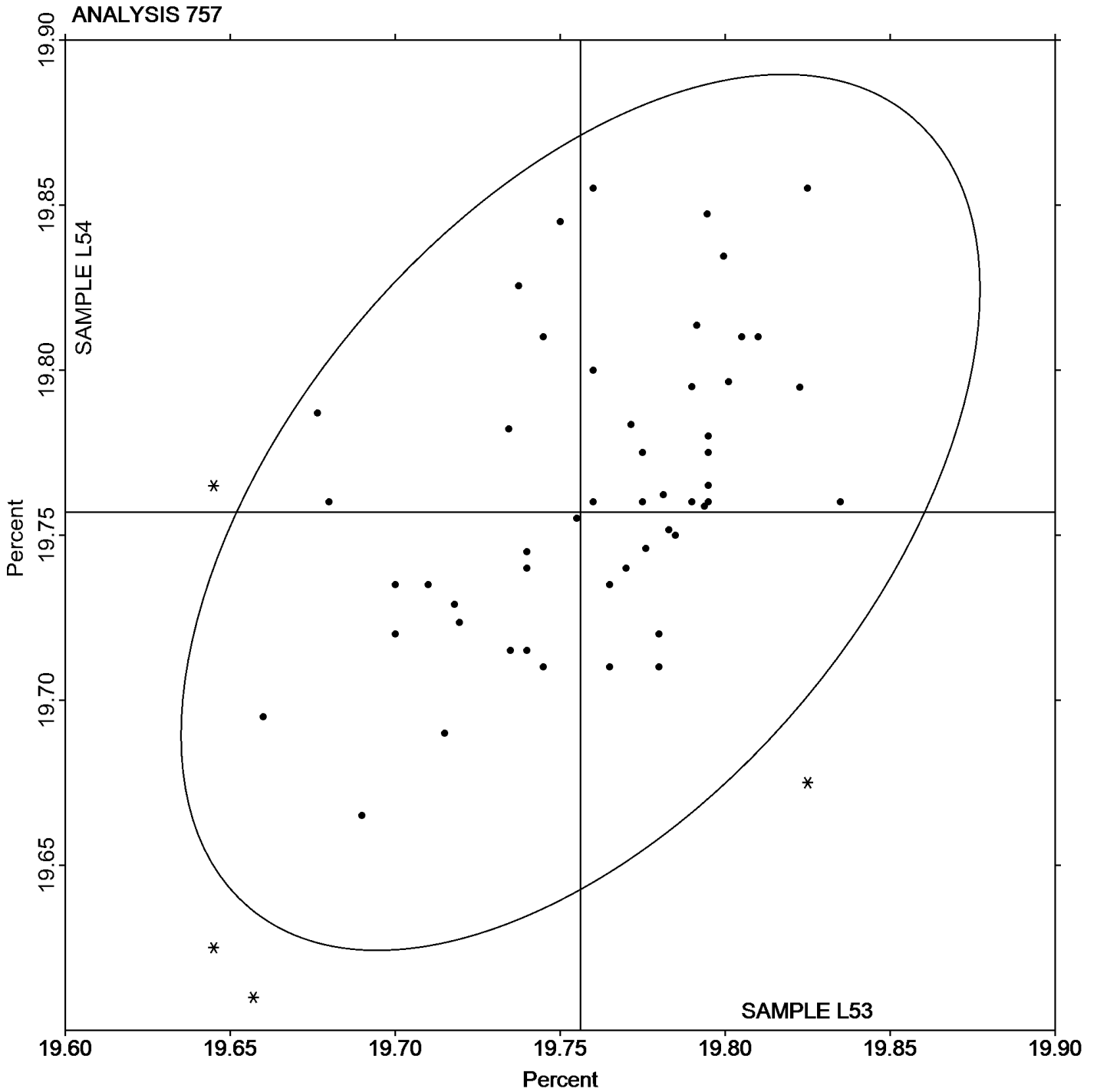
Report #107

Analysis 757

3rd Qtr 2018

Ash Content in Thermoplastics - Percent

Grand Mean Sample L53: 19.756 Percent Grand Mean Sample L54: 19.757 Percent





Plastics Interlaboratory Testing Program

Report #107

Analysis 760

3rd Qtr 2018

DSC Crystallization Temperature

WebCode	Data Flag	Sample W53			Sample W54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2B9P7Y		110.25	1.31	0.33	109.75	1.15	0.28	TA
2HJ6DY		111.67	2.72	0.69	111.27	2.67	0.66	TA
39AZ29		105.34	-3.60	-0.92	105.43	-3.17	-0.78	TA
6QAMPC		112.50	3.56	0.90	113.36	4.76	1.17	TA
6T94VE		106.76	-2.19	-0.56	106.39	-2.20	-0.54	TA
8AUB2C		114.10	5.16	1.31	114.98	6.38	1.57	TA
APETT4		105.89	-3.06	-0.78	104.55	-4.05	-0.99	TA
ATENBZ		108.47	-0.48	-0.12	108.33	-0.26	-0.06	NZ
EABQHZ		109.30	0.36	0.09	106.90	-1.69	-0.41	PE
EUNUPG		113.73	4.79	1.22	112.20	3.60	0.88	TA
FZDP8Z		112.21	3.26	0.83	111.31	2.72	0.67	TA
GMJKJZ		106.40	-2.54	-0.65	106.13	-2.46	-0.60	PE
JK8GZ9	*	97.78	-11.16	-2.84	96.22	-12.37	-3.03	MT
JUJGLW		108.90	-0.04	-0.01	108.87	0.27	0.07	TA
JXG8N2		105.82	-3.13	-0.80	105.92	-2.67	-0.65	XX
K9AVBN		106.90	-2.04	-0.52	106.50	-2.09	-0.51	NZ
KHJFF7		112.93	3.99	1.01	111.57	2.97	0.73	TA
KYPMQ2		105.37	-3.57	-0.91	105.46	-3.14	-0.77	TA
R68WPJ		104.66	-4.28	-1.09	106.03	-2.57	-0.63	TA
REWLM8		107.07	-1.87	-0.48	106.96	-1.64	-0.40	PE
T8AMHW		112.10	3.15	0.80	111.43	2.84	0.70	XX
TDG8RM		110.27	1.32	0.34	109.70	1.11	0.27	XX
WFTRUZ		107.51	-1.43	-0.36	107.37	-1.22	-0.30	MT
WRLJNX		115.37	6.42	1.63	115.25	6.66	1.63	TA
ZXH6VW		112.31	3.37	0.86	112.94	4.34	1.07	TA

Summary Statistics		
	Sample W53	Sample W54
Grand Means	108.944 Degrees Celsius	108.592 Degrees Celsius
Std Dev Btwn Labs	3.933 Degrees Celsius	4.077 Degrees Celsius
Statistics based on 25 of 25 reporting participants		

Sample W53: PP & Sample W54: PP



Plastics Interlaboratory Testing Program

Analysis 760

DSC Crystallization Temperature

Report #107

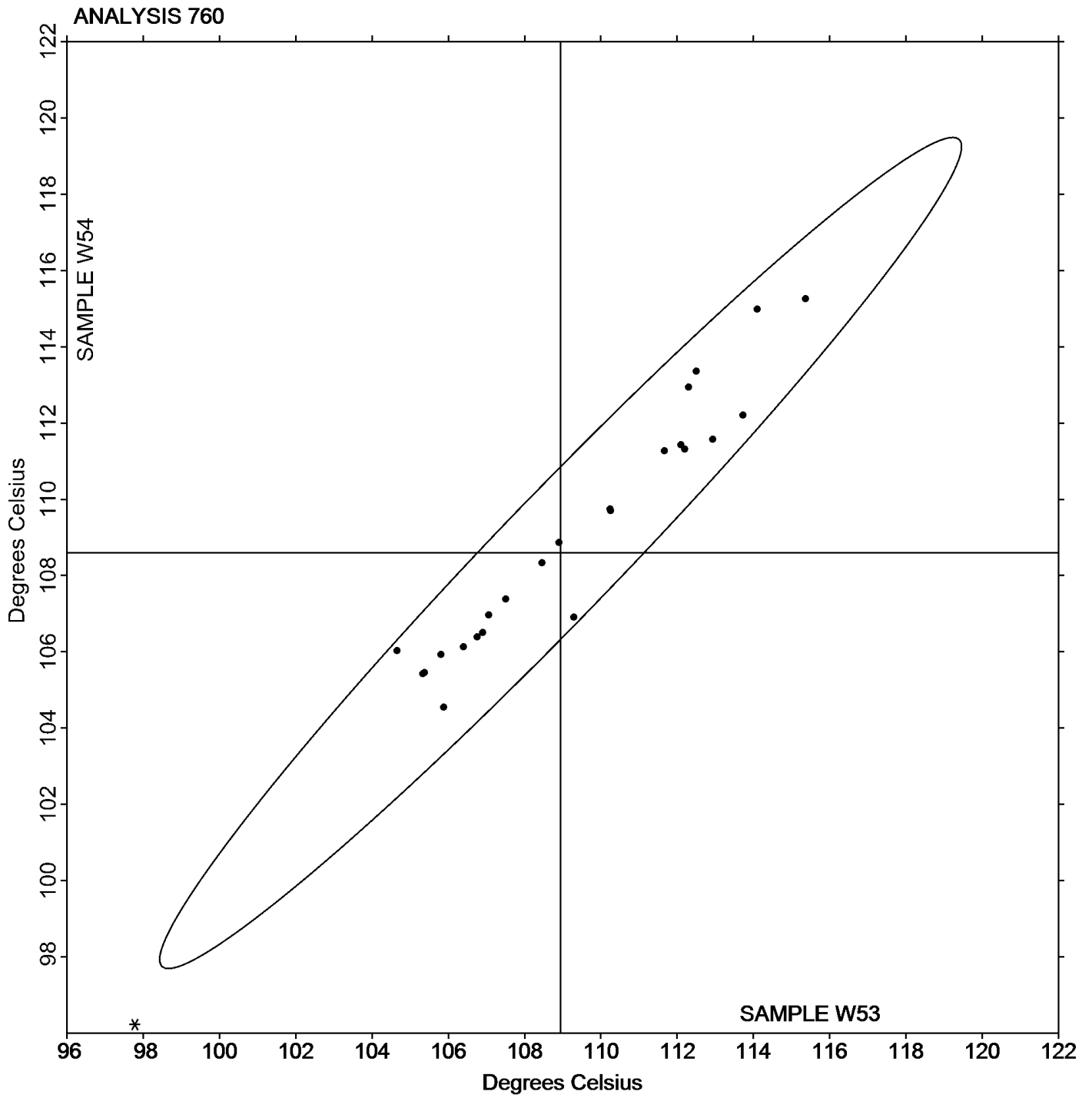
3rd Qtr 2018

Key to Instrument Codes Reported by Participants

MT	Mettler Toledo Instruments	NZ	Netzsch Instruments
PE	Perkins Elmer Instruments	TA	TA Instruments
XX	Instrument manufacturer not specified by lab		



Grand Mean Sample W53: 108.94 Degrees Celsius Grand Mean Sample W54: 108.59 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #107

Analysis 761

3rd Qtr 2018

DSC Melt Temperature

WebCode	Data Flag	Sample W53			Sample W54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2B9P7Y		165.89	0.62	0.32	165.88	0.74	0.37	TA
2HJ6DY		164.27	-1.00	-0.52	164.07	-1.07	-0.54	TA
39AZ29		165.62	0.35	0.18	165.32	0.18	0.09	TA
6QAMPC		161.04	-4.23	-2.17	161.37	-3.77	-1.88	TA
6T94VE		164.31	-0.96	-0.49	164.19	-0.95	-0.48	XX
8AUB2C		161.18	-4.09	-2.10	161.29	-3.85	-1.92	TA
APETT4	*	167.71	2.44	1.26	169.08	3.94	1.97	XX
ATENBZ		166.97	1.70	0.87	167.33	2.19	1.10	NZ
CB7BUU		164.10	-1.17	-0.60	163.70	-1.44	-0.72	TA
EABQHZ		167.30	2.03	1.05	167.27	2.13	1.06	PE
EUNUPG		164.25	-1.02	-0.52	163.24	-1.90	-0.95	TA
FMQRCQ		164.83	-0.44	-0.22	165.20	0.06	0.03	TA
FZDP8Z		164.44	-0.83	-0.42	164.41	-0.73	-0.36	TA
GMJKJZ		166.37	1.10	0.57	166.47	1.33	0.66	XX
JK8GZ9		163.34	-1.93	-0.99	162.78	-2.36	-1.18	MT
JUJGLW		164.20	-1.07	-0.55	163.53	-1.61	-0.80	TA
JXG8N2		166.37	1.10	0.57	166.25	1.11	0.55	XX
K9AVBN		168.10	2.83	1.46	167.50	2.36	1.18	NZ
KHJFF7		164.30	-0.97	-0.50	164.80	-0.34	-0.17	TA
KYPMQ2		168.73	3.46	1.78	168.70	3.56	1.78	TA
R68WPJ		164.89	-0.38	-0.20	164.67	-0.47	-0.23	TA
REWLM8	*	168.88	3.61	1.86	167.50	2.36	1.18	PE
RV63NK		166.35	1.08	0.56	166.46	1.32	0.66	PE
T8AMHW		164.52	-0.75	-0.39	164.08	-1.06	-0.53	XX
VE2ZCG		164.93	-0.34	-0.17	165.44	0.30	0.15	TA
WFTRUZ		165.10	-0.17	-0.09	164.08	-1.06	-0.53	MT
WRLJNX		167.32	2.05	1.05	167.02	1.88	0.94	TA
XG766V		164.16	-1.11	-0.57	164.85	-0.29	-0.15	MT
ZXH6VW		163.31	-1.96	-1.01	162.59	-2.55	-1.27	TA



Plastics Interlaboratory Testing Program

Report #107

Analysis 761

3rd Qtr 2018

DSC Melt Temperature

Summary Statistics

Sample W53

Sample W54

Grand Means

165.268 Degrees Celsius

165.140 Degrees Celsius

Std Dev Btwn Labs

1.944 Degrees Celsius

2.002 Degrees Celsius

Statistics based on 29 of 29 reporting participants

Sample W53: PP & Sample W54: PP

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

NZ Netzsch Instruments

PE Perkins Elmer Instruments

TA TA Instruments

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

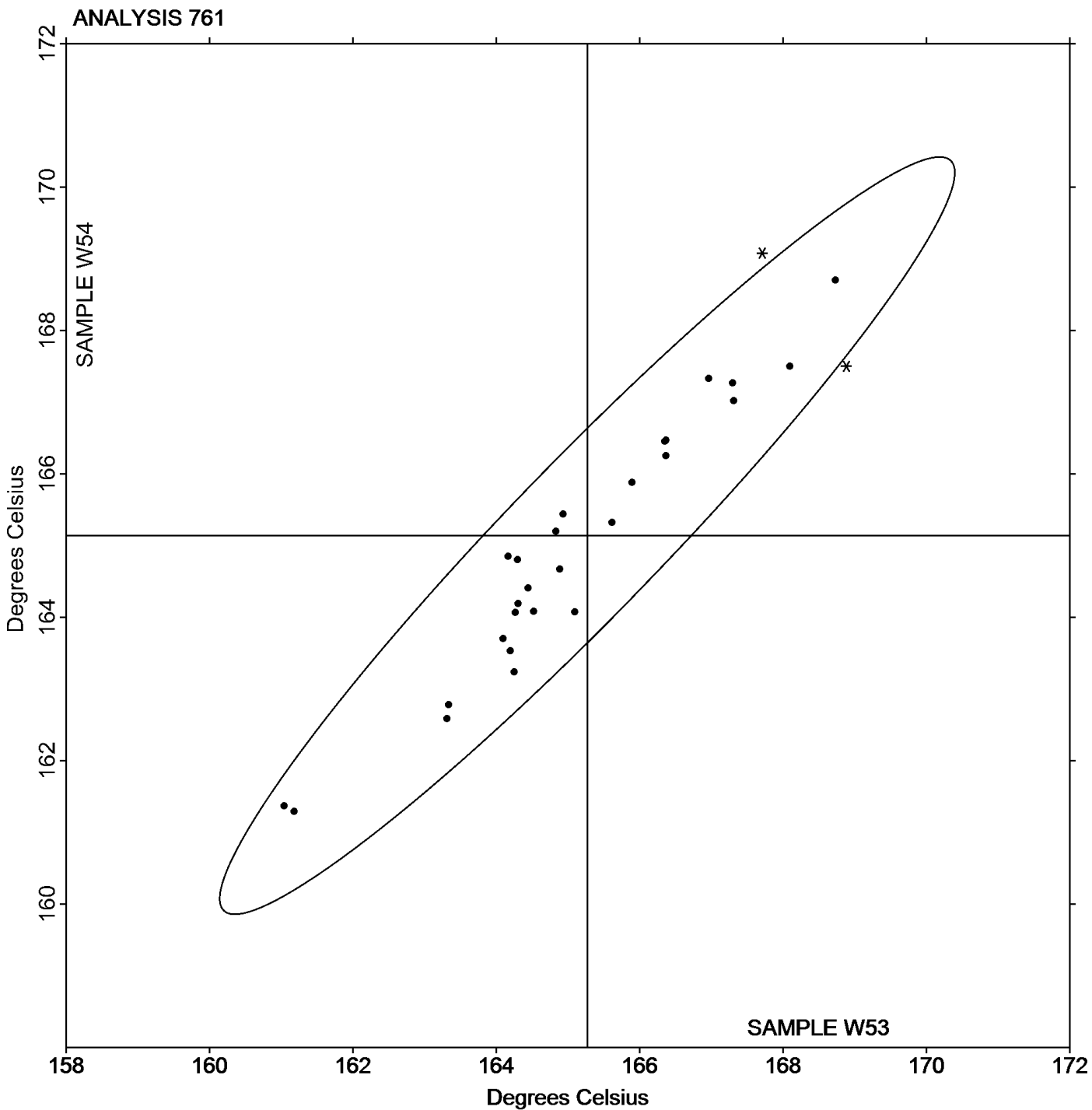
Analysis 761

DSC Melt Temperature

Report #107

3rd Qtr 2018

Grand Mean Sample W53: 165.27 Degrees Celsius Grand Mean Sample W54: 165.14 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #107

Analysis 762

3rd Qtr 2018

DSC Enthalpy of Crystallization

WebCode	Data Flag	Sample W53			Sample W54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2B9P7Y		109.93	10.07	1.71	110.73	10.70	1.69	TA
2HJ6DY		98.63	-1.23	-0.21	97.48	-2.55	-0.40	TA
39AZ29	*	96.50	-3.36	-0.57	100.95	0.92	0.15	TA
6QAMPC		115.47	15.60	2.65	116.97	16.94	2.68	TA
8AUB2C		96.14	-3.72	-0.63	95.40	-4.63	-0.73	TA
ATENBZ		100.16	0.30	0.05	99.00	-1.03	-0.16	NZ
EABQHZ		93.72	-6.15	-1.05	93.09	-6.94	-1.10	PE
EUNUPG		102.63	2.77	0.47	101.93	1.90	0.30	TA
FZDP8Z		94.57	-5.30	-0.90	93.96	-6.07	-0.96	TA
GMJKJZ		104.37	4.50	0.77	105.17	5.14	0.81	XX
JUJGLW		101.40	1.54	0.26	100.37	0.34	0.05	TA
JXG8N2		101.70	1.84	0.31	100.71	0.68	0.11	XX
K9AVBN		92.33	-7.53	-1.28	92.09	-7.94	-1.26	NZ
KHJFF7		100.07	0.20	0.03	99.27	-0.76	-0.12	TA
KYPMQ2		90.71	-9.15	-1.56	91.00	-9.03	-1.43	TA
R68WPJ		99.14	-0.73	-0.12	100.50	0.47	0.07	TA
T8AMHW		98.57	-1.29	-0.22	98.02	-2.01	-0.32	XX
WRLJNX		98.76	-1.10	-0.19	99.25	-0.78	-0.12	TA
ZXH6VW		102.60	2.74	0.47	104.70	4.67	0.74	TA

Summary Statistics		
	Sample W53	Sample W54
Grand Means	99.863 Joules Per Gram	100.030 Joules Per Gram
Std Dev Btwn Labs	5.881 Joules Per Gram	6.319 Joules Per Gram
Statistics based on 19 of 19 reporting participants		

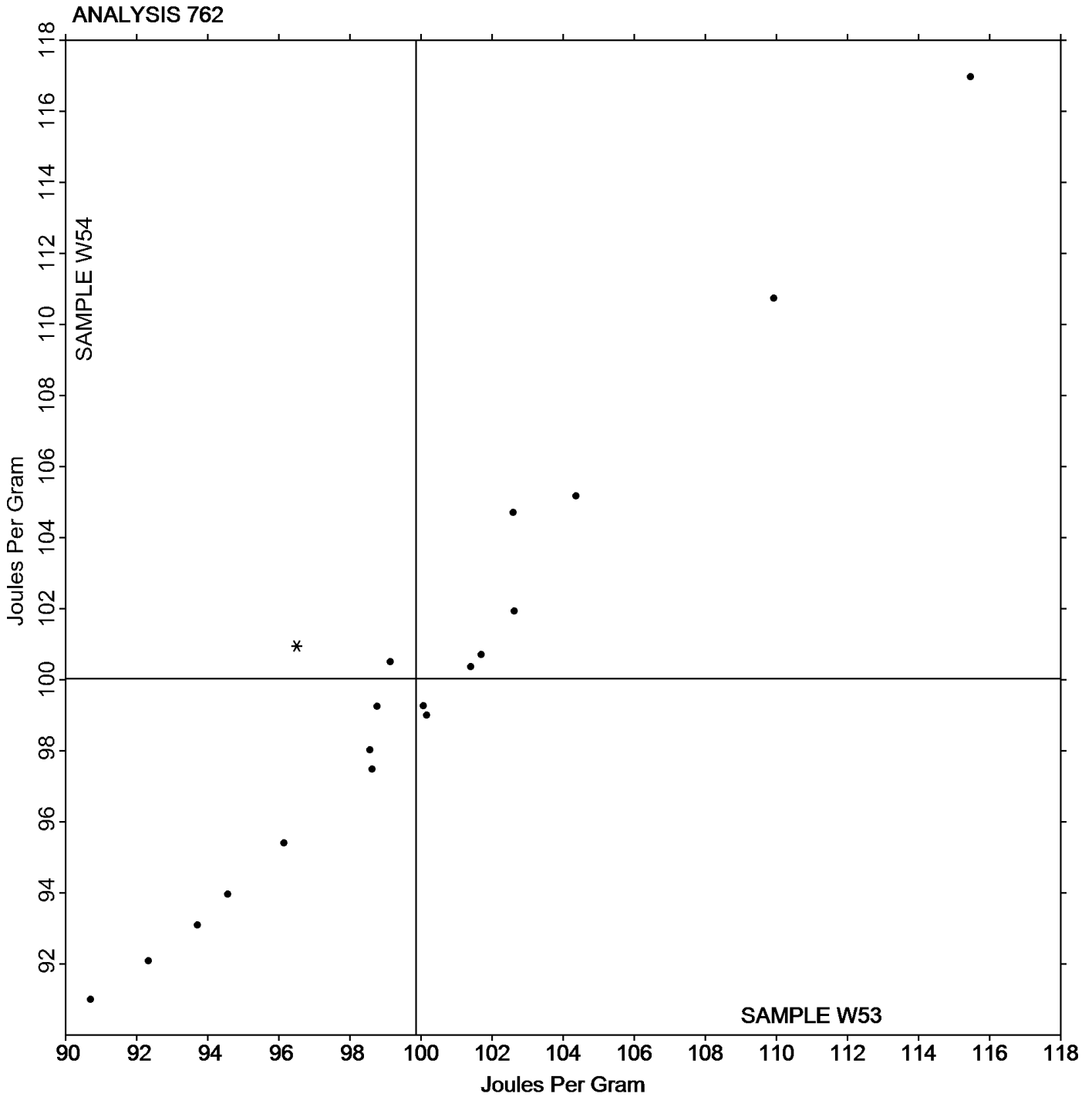
Sample W53: PP & Sample W54: PP

Key to Instrument Codes Reported by Participants

- NZ Netzsch Instruments
- PE Perkins Elmer Instruments
- TA TA Instruments
- XX Instrument manufacturer not specified by lab



Grand Mean Sample W53: 99.863 Joules Per Gram Grand Mean Sample W54: 100.03 Joules Per Gram



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



Plastics Interlaboratory Testing Program

Report #107

Analysis 763

3rd Qtr 2018

DSC Enthalpy of Fusion

WebCode	Data Flag	Sample W53			Sample W54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2B9P7Y		99.30	5.12	0.58	101.53	7.00	0.72	TA
2HJ6DY		95.91	1.73	0.20	98.07	3.54	0.36	TA
39AZ29		88.76	-5.43	-0.62	94.70	0.16	0.02	TA
6QAMPC		106.57	12.38	1.41	109.00	14.47	1.49	TA
8AUB2C		83.20	-10.99	-1.25	82.91	-11.62	-1.20	TA
ATENBZ		95.59	1.41	0.16	93.19	-1.34	-0.14	NZ
EABQHZ		85.19	-8.99	-1.02	85.01	-9.52	-0.98	PE
EUNUPG		103.77	9.58	1.09	105.03	10.50	1.08	TA
FZDP8Z		85.76	-8.42	-0.96	79.40	-15.13	-1.56	TA
GMJKJZ		90.94	-3.25	-0.37	88.47	-6.06	-0.62	XX
JUJGLW		100.70	6.52	0.74	99.36	4.82	0.50	TA
JXG8N2		101.67	7.48	0.85	100.72	6.19	0.64	XX
K9AVBN		111.90	17.72	2.01	110.40	15.87	1.63	NZ
KHJFF7		92.47	-1.72	-0.20	94.40	-0.13	-0.01	TA
KYPMQ2		80.44	-13.75	-1.56	79.44	-15.09	-1.56	TA
R68WPJ		89.09	-5.09	-0.58	95.32	0.79	0.08	TA
T8AMHW		98.57	4.39	0.50	98.03	3.50	0.36	XX
WRLJNX		82.23	-11.96	-1.36	79.73	-14.80	-1.53	TA
ZXH6VW		97.47	3.29	0.37	101.43	6.90	0.71	TA

Summary Statistics

	Sample W53	Sample W54
Grand Means	94.185 Joules Per Gram	94.535 Joules Per Gram
Std Dev Btwn Labs	8.794 Joules Per Gram	9.705 Joules Per Gram

Statistics based on 19 of 19 reporting participants

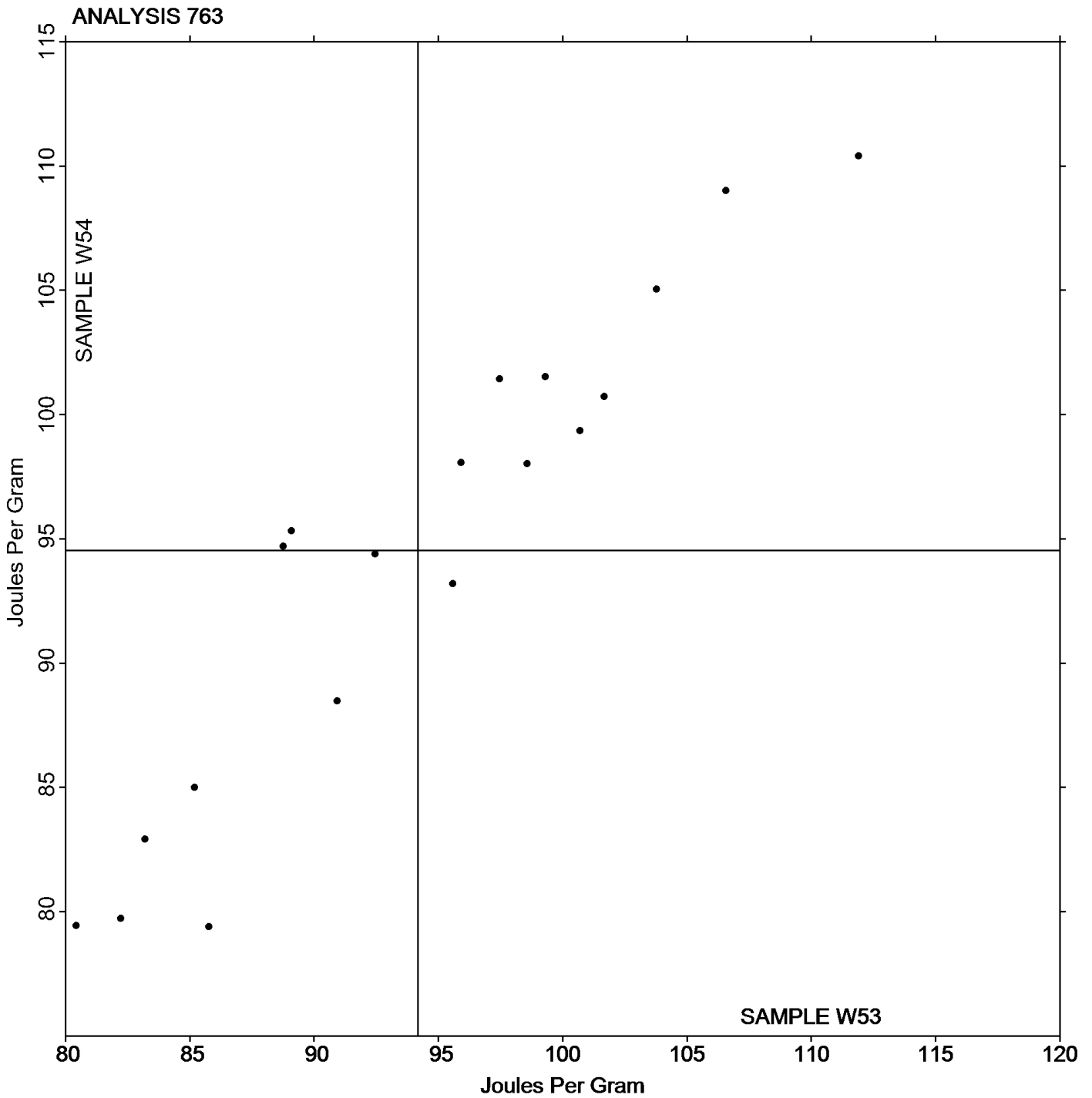
Sample W53: PP & Sample W54: PP

Key to Instrument Codes Reported by Participants

NZ	Netzsch Instruments	PE	Perkins Elmer Instruments
TA	TA Instruments	XX	Instrument manufacturer not specified by lab



Grand Mean Sample W53: 94.185 Joules Per Gram Grand Mean Sample W54: 94.535 Joules Per Gram



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



Plastics Interlaboratory Testing Program

Report #107

Analysis 764

3rd Qtr 2018

DSC Glass Transition Temperature

WebCode	Data Flag	Sample V53			Sample V54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2B9P7Y		85.69	-0.61	-0.31	85.39	-1.09	-0.49	TA
39AZ29		87.07	0.77	0.39	86.29	-0.18	-0.08	TA
6QAMPC		86.11	-0.19	-0.10	85.63	-0.85	-0.38	TA
8AUB2C		86.43	0.13	0.06	86.92	0.44	0.20	TA
ATENBZ		88.87	2.57	1.31	89.03	2.56	1.15	NZ
EABQHZ		87.53	1.23	0.63	87.47	0.99	0.45	PE
EUNUPG		85.38	-0.92	-0.47	85.26	-1.21	-0.55	TA
FZDP8Z		87.13	0.83	0.42	86.67	0.19	0.09	TA
GMJKJZ		86.93	0.63	0.32	85.43	-1.04	-0.47	XX
JK8GZ9		86.61	0.31	0.16	86.46	-0.02	-0.01	MT
JUJGLW		83.30	-3.00	-1.53	83.13	-3.34	-1.51	TA
JXG8N2		87.37	1.07	0.54	87.35	0.87	0.39	XX
K9AVBN		89.50	3.20	1.63	91.70	5.22	2.35	NZ
KHJFF7		85.93	-0.37	-0.19	87.23	0.76	0.34	TA
R68WPJ		86.82	0.52	0.26	88.95	2.47	1.11	TA
REWLM8		86.75	0.45	0.23	87.46	0.98	0.44	XX
T8AMHW		85.91	-0.39	-0.20	85.65	-0.83	-0.37	XX
WFTRUZ		85.11	-1.19	-0.61	84.85	-1.63	-0.73	MT
WRLJNX	*	80.15	-6.15	-3.14	81.02	-5.46	-2.46	TA
ZXH6VW		87.43	1.13	0.58	87.64	1.17	0.53	TA

Summary Statistics

	Sample V53	Sample V54
Grand Means	86.301 Degrees Celsius	86.477 Degrees Celsius
Stnd Dev Btwn Labs	1.958 Degrees Celsius	2.219 Degrees Celsius

Statistics based on 20 of 20 reporting participants

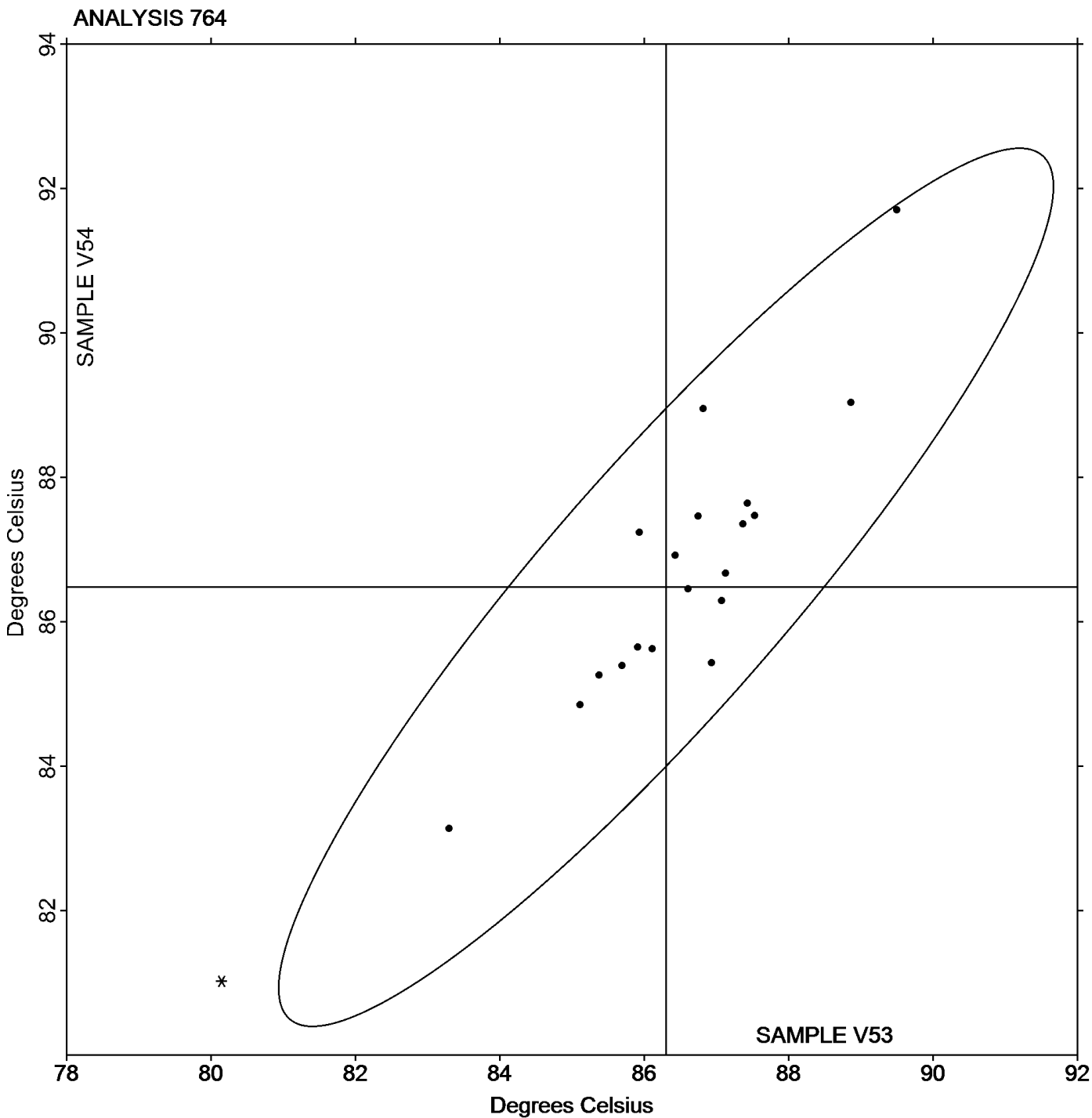
Sample V53: PET & Sample V54: PET

Key to Instrument Codes Reported by Participants

MT	Mettler Toledo Instruments	NZ	Netzsch Instruments
PE	Perkins Elmer Instruments	TA	TA Instruments
XX	Instrument manufacturer not specified by lab		



Grand Mean Sample V53: 86.301 Degrees Celsius Grand Mean Sample V54: 86.477 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #107

Analysis 770

3rd Qtr 2018

Tensile Stress at Yield, Film Samples - psi

WebCode	Data Flag	Sample B53			Sample B54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
34ZP48		1,756	-122	-0.67	1,787	-157	-0.86	MT
3RLUMM		1,939	62	0.34	2,053	110	0.60	OA
789JJB		1,724	-153	-0.84	1,949	5	0.03	SH
CYCK62		1,877	0	0.00	1,958	15	0.08	IM
E76GXG		1,997	120	0.66	2,032	89	0.49	IN
F4T24G		1,923	46	0.26	1,998	55	0.30	IN
F6PBJR		1,549	-328	-1.81	1,552	-391	-2.14	IN
GKF73G		1,953	76	0.42	2,080	137	0.75	IN
HDWQ4W		1,959	81	0.45	2,087	143	0.78	IM
JDP7NT		1,950	73	0.40	1,932	-12	-0.06	WZ
K9AVBN		1,956	79	0.44	2,015	72	0.39	IN
KLEBUY	M	No data reported for this sample			1,674	-269	-1.47	IN
M4BH2W		1,847	-30	-0.17	1,931	-12	-0.06	IN
NP6P8Y		1,685	-192	-1.06	1,678	-266	-1.45	TO
Q4YTPU		1,637	-240	-1.32	1,713	-231	-1.26	MT
QG7YJT		1,955	78	0.43	2,030	87	0.47	IN
VJW28		2,327	449	2.48	2,298	354	1.94	LI

Summary Statistics		
	Sample B53	Sample B54
Grand Means	1,877.1 psi	1,943.3 psi
Std Dev Btwn Labs	181.4 psi	183.0 psi
Statistics based on 16 of 17 reporting participants		

Sample B53: LDPE & Sample B54: LDPE

Comments on Assigned Data Flags for Test #770

KLEBUY (M) - Participant did not submit data for sample B53.

Key to Instrument Codes Reported by Participants

IM Instru-Met Instruments	IN Instron
LI Lloyd Instruments	MT MTS/Sintech
OA Oakland Testing	SH Shimadzu
TO Tinius Olsen	WZ Zwick



Plastics Interlaboratory Testing Program

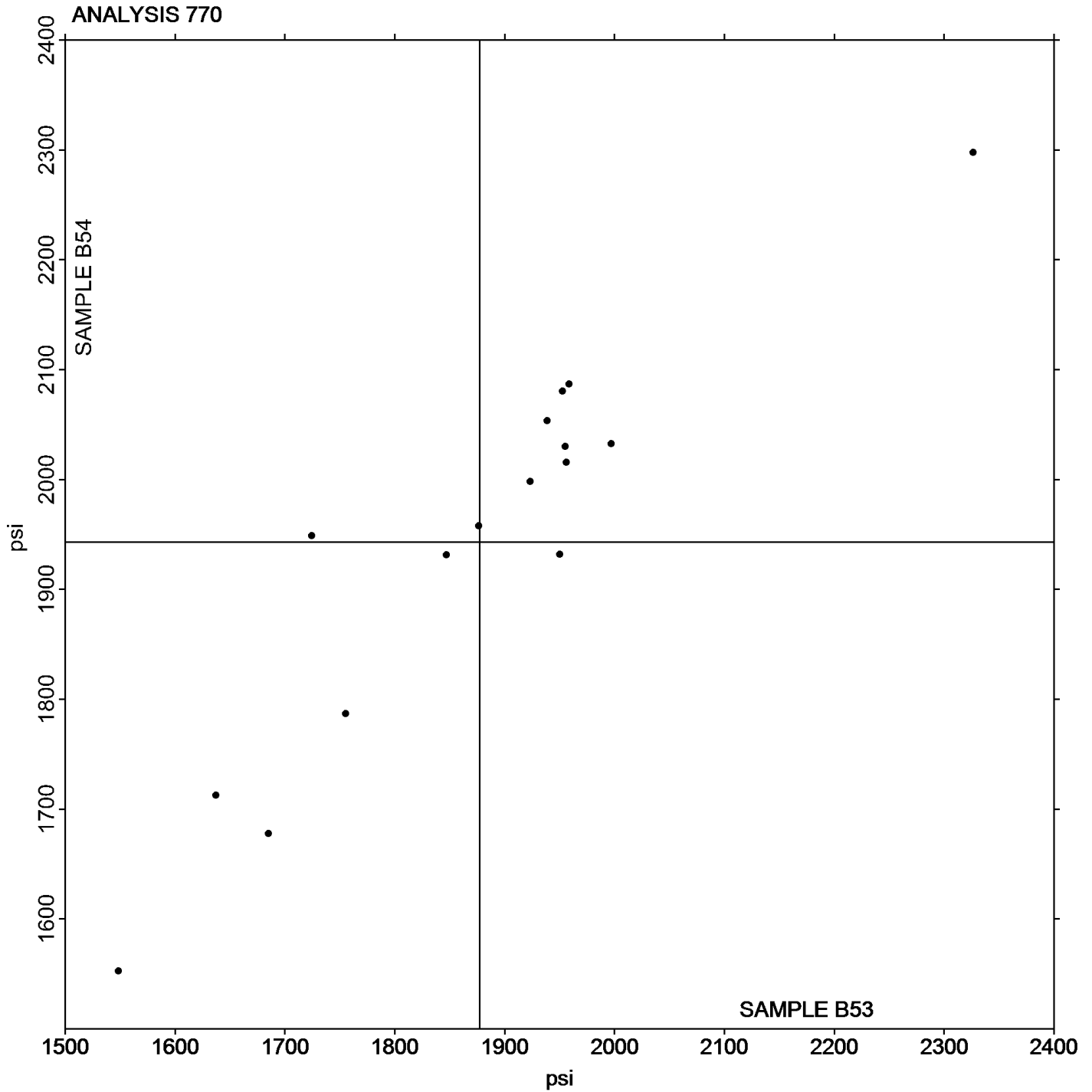
Report #107

Analysis 770

3rd Qtr 2018

Tensile Stress at Yield, Film Samples - psi

Grand Mean Sample B53: 1,877.12 psi Grand Mean Sample B54: 1,943.25 psi



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



Plastics Interlaboratory Testing Program

Report #107

Analysis 771

3rd Qtr 2018

Tensile Stress at Break, Film Samples - psi

WebCode	Data Flag	Sample B53			Sample B54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
34ZP48		3,302	-120	-0.27	3,469	-131	-0.36	MT
3RLUMM		3,594	172	0.38	3,915	315	0.86	OA
789JJB		2,871	-551	-1.22	3,401	-199	-0.54	SH
8AUB2C		3,778	355	0.78	3,475	-125	-0.34	SH
CYCK62		3,343	-79	-0.18	3,327	-273	-0.74	IM
E76GXG		3,818	396	0.87	3,891	291	0.79	IN
F4T24G		3,658	236	0.52	3,890	290	0.79	IN
F6PBJR		3,370	-52	-0.12	3,565	-35	-0.10	IN
GKF73G		3,549	127	0.28	3,719	118	0.32	IN
H8A2JM		3,272	-151	-0.33	3,741	141	0.38	IN
HDWQ4W		3,712	290	0.64	3,866	266	0.72	IM
JDP7NT		3,790	368	0.81	3,929	329	0.90	WZ
K9AVBN		3,753	331	0.73	3,836	236	0.64	IN
KLEBUY		3,286	-137	-0.30	3,468	-133	-0.36	IN
M4BH2W		2,605	-817	-1.80	3,052	-548	-1.49	IN
NP6P8Y	*	2,603	-819	-1.81	2,635	-966	-2.63	TO
NUHKYU		2,537	-886	-1.96	2,978	-622	-1.69	IN
Q4YTPU		3,202	-220	-0.49	3,668	68	0.18	MT
QG7YJT		3,853	431	0.95	3,973	373	1.01	IN
VJW28		4,102	680	1.50	4,061	461	1.25	LI
ZV9UPX		3,871	449	0.99	3,745	145	0.39	IN

Summary Statistics

	Sample B53	Sample B54
Grand Means	3,422.3 psi	3,600.1 psi
Stnd Dev Btwn Labs	452.9 psi	367.4 psi

Statistics based on 21 of 21 reporting participants

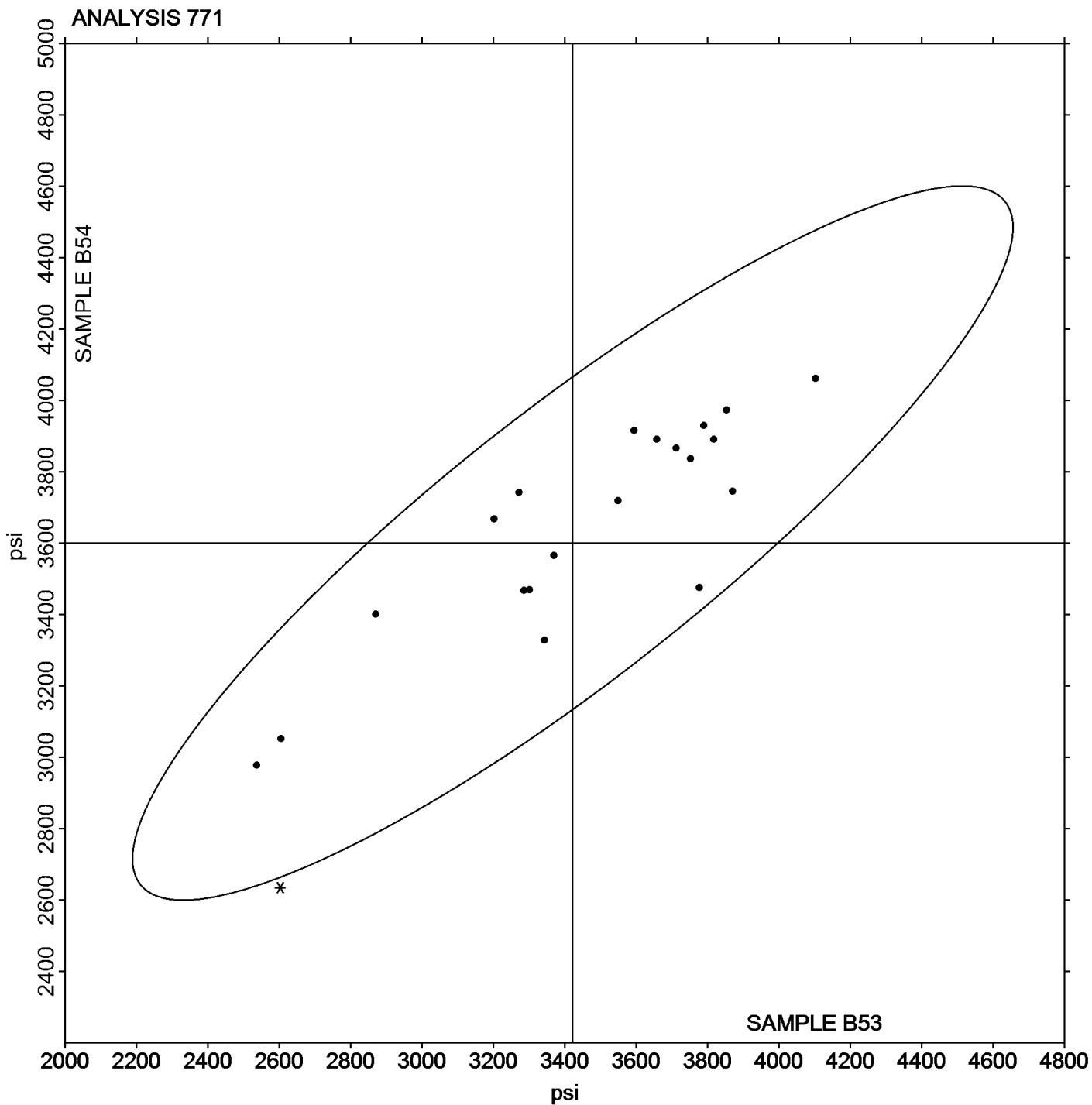
Sample B53: LDPE & Sample B54: LDPE

Key to Instrument Codes Reported by Participants

IM	Instru-Met Instruments	IN	Instron
LI	Lloyd Instruments	MT	MTS/Sintech
OA	Oakland Testing	SH	Shimadzu
TO	Tinius Olsen	WZ	Zwick



Grand Mean Sample B53: 3,422.26 psi Grand Mean Sample B54: 3,600.15 psi





Plastics Interlaboratory Testing Program

Report #107

Analysis 772

3rd Qtr 2018

Percent Elongation at Yield, Films

WebCode	Data Flag	Sample B53			Sample B54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
34ZP48		22.77	-53.03	-1.64	24.57	-40.48	-1.59	MT
789JJB		105.26	29.46	0.91	83.11	18.06	0.71	SH
CYCK62		92.53	16.73	0.52	83.19	18.14	0.71	IM
E76GXG		88.39	12.59	0.39	73.78	8.73	0.34	IN
F4T24G		85.10	9.30	0.29	72.84	7.79	0.31	IN
F6PBJR		24.19	-51.62	-1.60	26.30	-38.75	-1.53	IN
GKF73G		86.53	10.73	0.33	85.17	20.12	0.79	IN
HDWQ4W		97.60	21.79	0.67	79.43	14.38	0.57	IM
JDP7NT		78.53	2.72	0.08	63.90	-1.15	-0.05	WZ
K9AVBN		101.57	25.77	0.80	73.52	8.47	0.33	IN
KLEBUY	M	No data reported for this sample			75.81	10.76	0.42	IN
M4BH2W		113.15	37.35	1.15	98.15	33.10	1.30	IN
NP6P8Y		61.44	-14.36	-0.44	60.74	-4.31	-0.17	TO
Q4YTPU		8.69	-67.12	-2.07	8.63	-56.42	-2.22	MT
QG7YJT		75.06	-0.74	-0.02	67.18	2.13	0.08	IN
VJVW28		96.26	20.46	0.63	75.26	10.21	0.40	LI

Summary Statistics		
	Sample B53	Sample B54
Grand Means	75.804 Percent	65.051 Percent
Stnd Dev Btwn Labs	32.355 Percent	25.388 Percent
Statistics based on 15 of 16 reporting participants		

Sample B53: LDPE & Sample B54: LDPE

Note: Results for test 772 exhibit higher variability than historical averages. Use caution when interpreting results.

Comments on Assigned Data Flags for Test #772

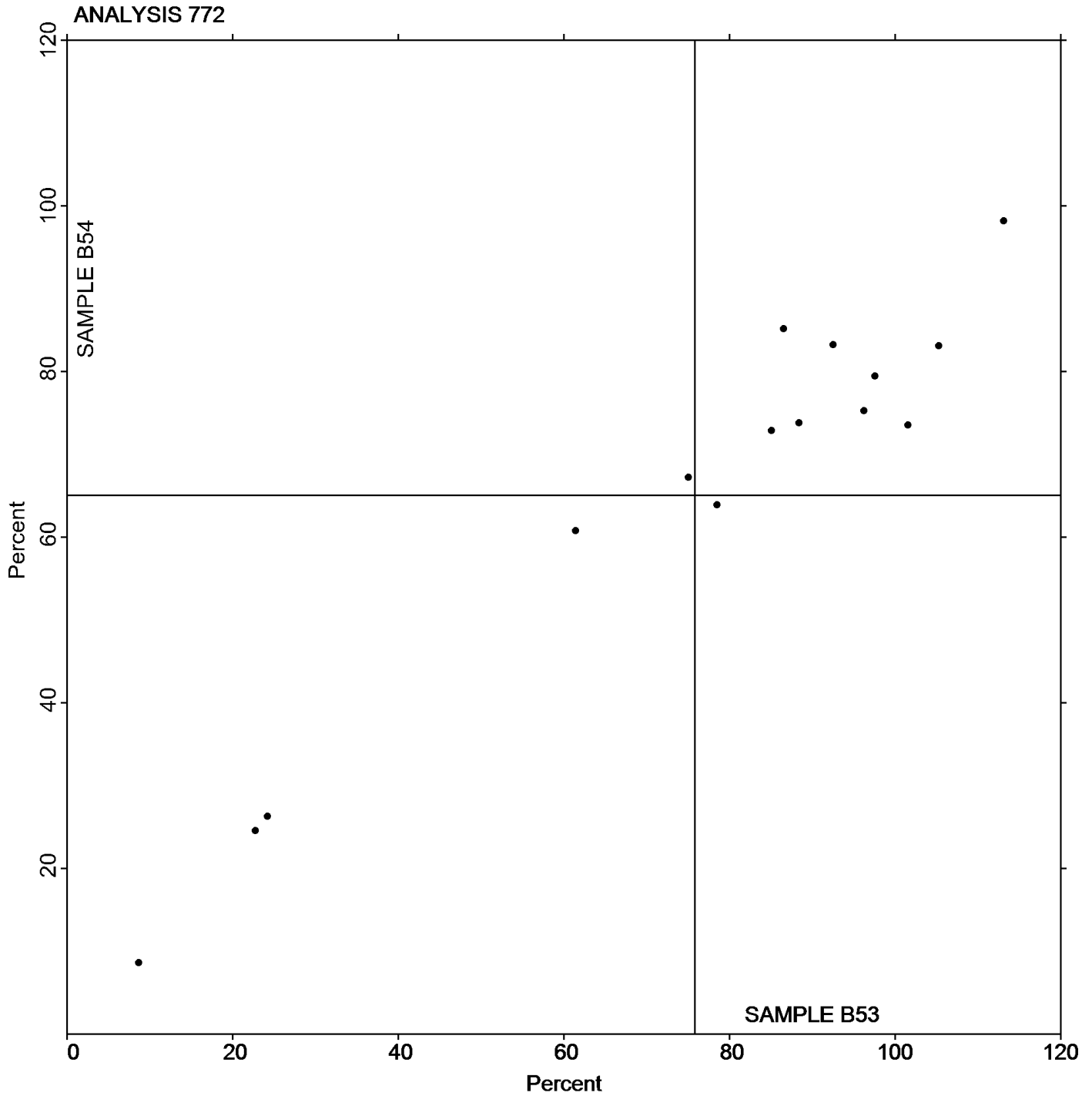
KLEBUY (M) - Participant did not submit data for sample B53.

Key to Instrument Codes Reported by Participants

- | | |
|---------------------------|-----------------|
| IM Instru-Met Instruments | IN Instron |
| LI Lloyd Instruments | MT MTS/Sintech |
| SH Shimadzu | TO Tinius Olsen |
| WZ Zwick | |



Grand Mean Sample B53: 75.804 Percent Grand Mean Sample B54: 65.051 Percent



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



Plastics Interlaboratory Testing Program

Report #107

Analysis 773

3rd Qtr 2018

Percent Elongation at Break, Film Samples

WebCode	Data Flag	Sample B53			Sample B54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
34ZP48		769.5	20.1	0.08	803.7	-5.6	-0.02	MT
3RLUMM		740.8	-8.6	-0.04	825.5	16.2	0.06	OA
789JJB		718.8	-30.6	-0.13	868.2	58.9	0.22	SH
8AUB2C		1,192.1	442.7	1.84	1,150.8	341.5	1.29	SH
CYCK62		648.6	-100.8	-0.42	662.1	-147.2	-0.56	IM
E76GXG		621.7	-127.7	-0.53	682.4	-126.9	-0.48	IN
F4T24G		675.9	-73.5	-0.31	718.0	-91.3	-0.35	IN
F6PBJR	*	1,517.8	768.4	3.20	1,652.0	842.7	3.18	IN
GKF73G		895.2	145.8	0.61	902.4	93.1	0.35	IN
H8A2JM		718.5	-30.9	-0.13	810.1	0.8	0.00	IN
HDWQ4W		791.3	42.0	0.17	779.9	-29.4	-0.11	IM
JDP7NT		583.0	-166.4	-0.69	659.0	-150.3	-0.57	WZ
K9AVBN		675.3	-74.1	-0.31	681.4	-127.9	-0.48	IN
KLEBUY		724.1	-25.3	-0.11	778.0	-31.3	-0.12	IN
M4BH2W		564.9	-184.5	-0.77	694.5	-114.8	-0.43	IN
NP6P8Y		326.0	-423.4	-1.76	327.9	-481.4	-1.82	TO
NUHKYU	*	856.9	107.5	0.45	1,147.5	338.2	1.28	IN
Q4YTPU		595.9	-153.5	-0.64	604.2	-205.1	-0.78	MT
QG7YJT		614.6	-134.8	-0.56	649.0	-160.3	-0.61	IN
VJW28		827.4	78.0	0.32	952.9	143.6	0.54	LI
ZV9UPX		679.2	-70.2	-0.29	645.9	-163.4	-0.62	IN

Summary Statistics		
	Sample B53	Sample B54
Grand Means	749.39 Percent	809.30 Percent
Stnd Dev Btwn Labs	240.32 Percent	264.63 Percent

Statistics based on 21 of 21 reporting participants

Sample B53: LDPE & Sample B54: LDPE

Key to Instrument Codes Reported by Participants

- | | |
|---------------------------|----------------|
| IM Instru-Met Instruments | IN Instron |
| LI Lloyd Instruments | MT MTS/Sintech |
| OA Oakland Testing | SH Shimadzu |
| TO Tinius Olsen | WZ Zwick |



Plastics Interlaboratory Testing Program

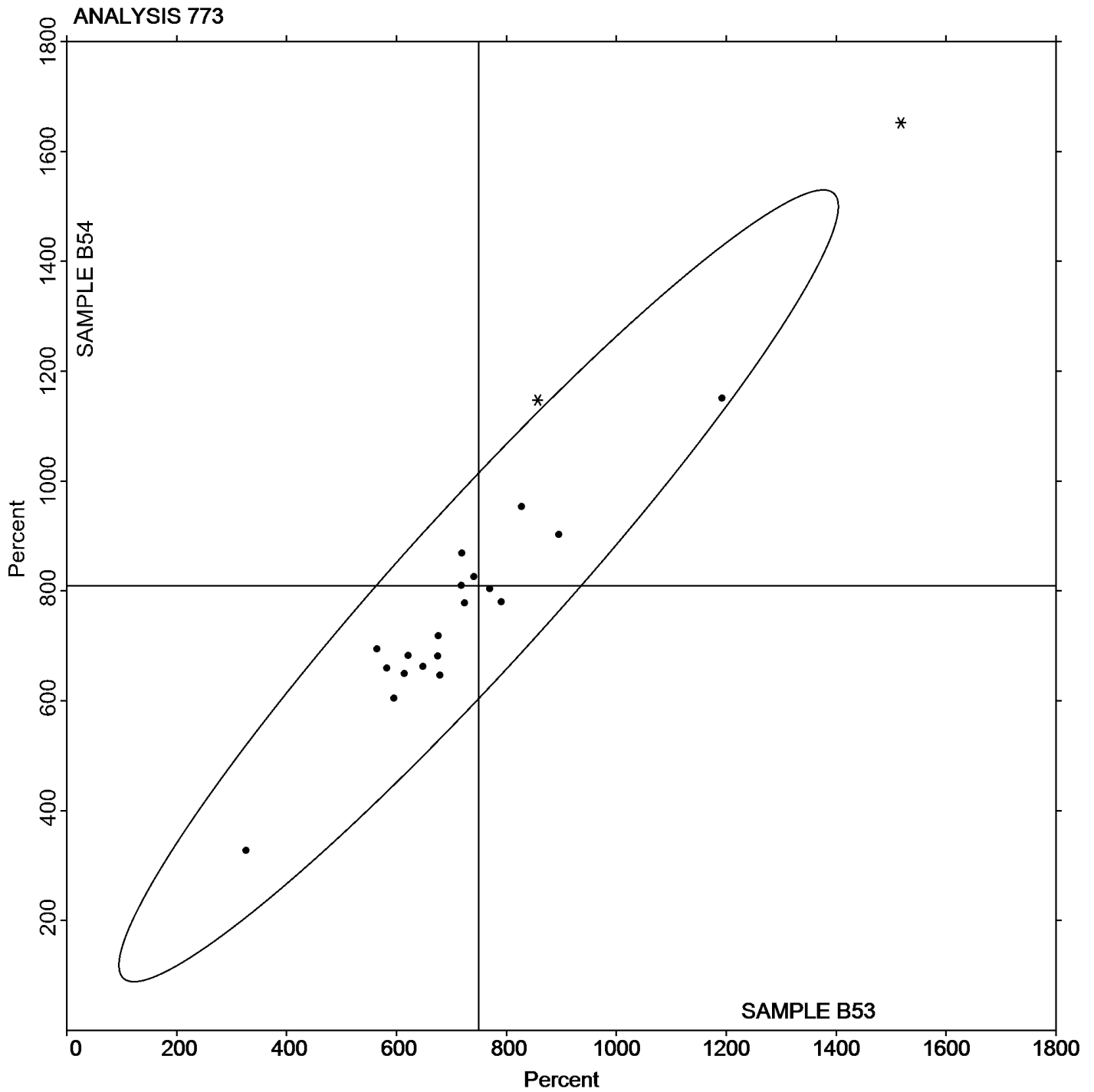
Analysis 773

Percent Elongation at Break, Film Samples

Report #107

3rd Qtr 2018

Grand Mean Sample B53: 749.39 Percent Grand Mean Sample B54: 809.30 Percent





Plastics Interlaboratory Testing Program

Report #107

Analysis 774

3rd Qtr 2018

Thickness of Film Tensile Samples - mils

WebCode	Data Flag	Sample B53			Sample B54		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
34ZP48		3.9000	0.0291	0.29	3.7600	0.0062	0.05
3RLUMM		3.8180	-0.0529	-0.53	3.6290	-0.1248	-0.99
789JJB		3.9111	0.0402	0.40	3.7942	0.0404	0.32
8AUB2C	*	3.6417	-0.2292	-2.30	4.0157	0.2619	2.07
CYCK62		3.9889	0.1180	1.18	3.8100	0.0562	0.44
E76GXG		3.7260	-0.1449	-1.45	3.6070	-0.1468	-1.16
F4T24G		3.9830	0.1121	1.12	3.6350	-0.1188	-0.94
F6PBJR		3.9331	0.0622	0.62	3.7757	0.0218	0.17
GKF73G		3.8550	-0.0159	-0.16	3.6450	-0.1088	-0.86
H8A2JM		3.9800	0.1091	1.09	3.7400	-0.0138	-0.11
HDWQ4W		3.7590	-0.1119	-1.12	3.7500	-0.0038	-0.03
JDP7NT		3.8800	0.0091	0.09	3.5229	-0.2309	-1.83
K9AVBN		3.7960	-0.0749	-0.75	3.7210	-0.0328	-0.26
KLEBUY		3.8720	0.0011	0.01	3.8520	0.0982	0.78
M4BH2W		3.9803	0.1094	1.10	3.9134	0.1596	1.26
NP6P8Y		3.9607	0.0898	0.90	3.9489	0.1951	1.54
NUHKYU		3.9567	0.0858	0.86	3.8661	0.1123	0.89
Q4YTPU		3.9440	0.0731	0.73	3.8160	0.0622	0.49
QG7YJT		3.7400	-0.1309	-1.31	3.6410	-0.1128	-0.89
R4DMVM		3.8300	-0.0409	-0.41	3.8200	0.0662	0.52
VJW28	X	3.2150	-0.6559	-6.58	3.0894	-0.6644	-5.25
VTM9HU		3.9450	0.0741	0.74	3.7610	0.0072	0.06
ZV9UPX		3.7600	-0.1109	-1.11	3.5600	-0.1938	-1.53

Summary Statistics		
	Sample B53	Sample B54
Grand Means	3.87093 mils	3.75381 mils
Stnd Dev Btwn Labs	0.09972 mils	0.12649 mils
Statistics based on 22 of 23 reporting participants		

Sample B53: LDPE & Sample B54: LDPE

Comments on Assigned Data Flags for Test #774

VJW28 (X) - Data for both samples are low.



Plastics Interlaboratory Testing Program

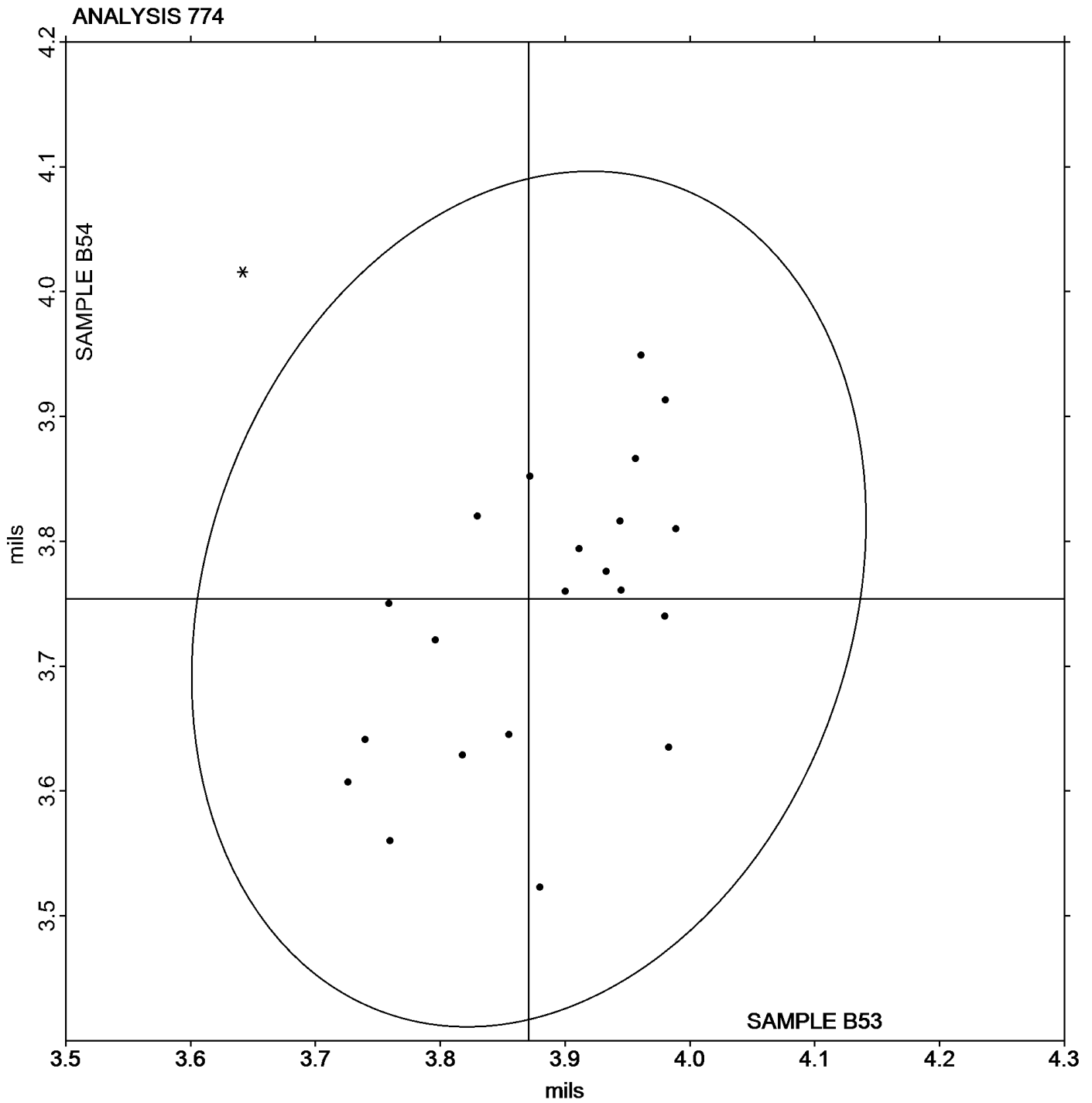
Analysis 774

Thickness of Film Tensile Samples - mils

Report #107

3rd Qtr 2018

Grand Mean Sample B53: 3.8709 mils Grand Mean Sample B54: 3.7538 mils





Plastics Interlaboratory Testing Program

Report #107

Analysis 775

3rd Qtr 2018

Secant Modulus at 1% Strain - psi

WebCode	Data Flag	Sample B53			Sample B54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
34ZP48		33,619	694	0.13	32,806	327	0.06	MT
3RLUMM		37,339	4,414	0.82	36,339	3,859	0.68	OA
789JJB		40,231	7,306	1.36	37,075	4,596	0.81	SH
CYCK62	*	36,568	3,643	0.68	41,243	8,764	1.55	IM
E76GXG		31,203	-1,722	-0.32	29,729	-2,751	-0.49	IN
F4T24G		30,579	-2,346	-0.44	30,521	-1,959	-0.35	IN
H8A2JM		33,853	928	0.17	33,491	1,011	0.18	IN
HDWQ4W		40,472	7,547	1.40	39,775	7,295	1.29	IM
JDP7NT		31,865	-1,060	-0.20	30,574	-1,905	-0.34	WZ
K9AVBN		34,711	1,786	0.33	35,266	2,786	0.49	IN
KLEBUY		28,195	-4,730	-0.88	28,008	-4,471	-0.79	IN
M4BH2W		25,924	-7,001	-1.30	25,453	-7,027	-1.24	IN
NP6P8Y		24,173	-8,752	-1.63	23,599	-8,881	-1.57	TO
NUHKYU		22,639	-10,286	-1.91	21,283	-11,197	-1.98	IN
Q4YTPU		35,429	2,504	0.47	35,969	3,490	0.62	MT
QG7YJT		33,331	406	0.08	32,603	124	0.02	IN
VJW28		39,593	6,668	1.24	38,419	5,939	1.05	LI

Summary Statistics

	Sample B53	Sample B54
Grand Means	32,925.0 psi	32,479.5 psi
Std Dev Btwn Labs	5,373.1 psi	5,651.5 psi
Statistics based on 17 of 17 reporting participants		

Sample B53: LDPE & Sample B54: LDPE

Key to Instrument Codes Reported by Participants

IM Instru-Met Instruments	IN Instron
LI Lloyd Instruments	MT MTS/Sintech
OA Oakland Testing	SH Shimadzu
TO Tinius Olsen	WZ Zwick



Plastics Interlaboratory Testing Program

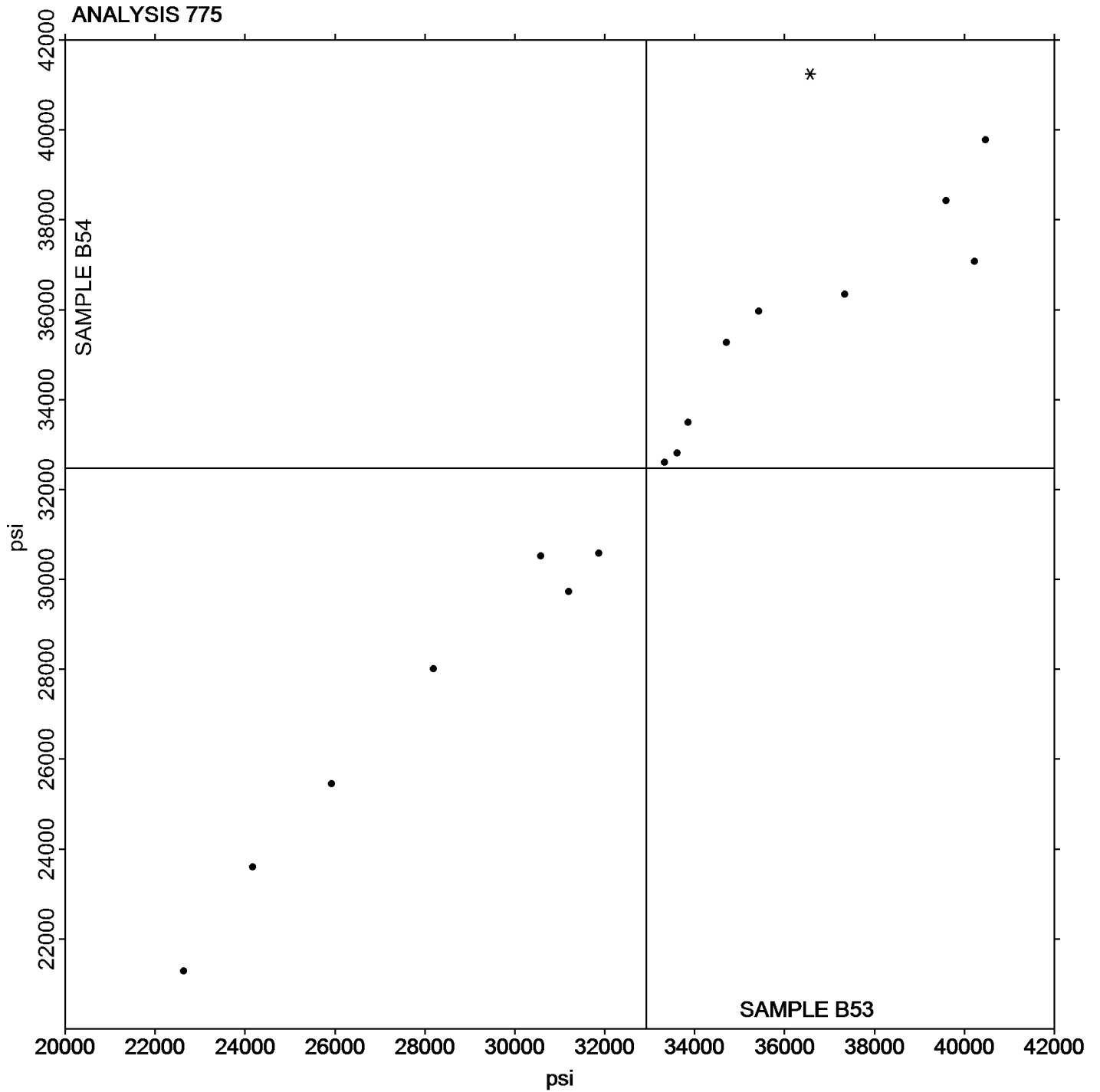
Report #107

Analysis 775

3rd Qtr 2018

Secant Modulus at 1% Strain - psi

Grand Mean Sample B53: 32,925.00 psi Grand Mean Sample B54: 32,479.55 psi



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



Plastics Interlaboratory Testing Program

Report #107

Analysis 776

3rd Qtr 2018

Secant Modulus at 2% Strain - psi

WebCode	Data Flag	Sample B53			Sample B54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
34ZP48		28,099	-419	-0.12	27,554	-1,091	-0.28	XX
789JJB		30,420	1,903	0.56	29,357	712	0.19	SH
CYCK62		34,897	6,379	1.87	36,783	8,138	2.12	IM
E76GXG		27,330	-1,188	-0.35	27,210	-1,435	-0.37	IN
F4T24G		26,659	-1,859	-0.54	27,026	-1,619	-0.42	IN
H8A2JM		29,163	646	0.19	29,067	422	0.11	IN
HDWQ4W		31,541	3,023	0.89	31,968	3,323	0.87	IM
K9AVBN		28,997	479	0.14	29,758	1,113	0.29	IN
KLEBUY		22,547	-5,971	-1.75	22,627	-6,019	-1.57	IN
M4BH2W		26,339	-2,179	-0.64	27,365	-1,280	-0.33	IN
NP6P8Y		26,068	-2,450	-0.72	25,799	-2,846	-0.74	TO
NUHKYU		23,944	-4,573	-1.34	22,627	-6,018	-1.57	IN
Q4YTPU		29,906	1,389	0.41	30,914	2,269	0.59	MT
VJVW28		33,338	4,821	1.41	32,976	4,331	1.13	LI

Summary Statistics		
	Sample B53	Sample B54
Grand Means	28,517.7 psi	28,645.0 psi
Stnd Dev Btwn Labs	3,415.2 psi	3,834.6 psi
Statistics based on 14 of 14 reporting participants		

Sample B53: LDPE & Sample B54: LDPE

Key to Instrument Codes Reported by Participants

- | | |
|---|-----------------|
| IM Instru-Met Instruments | IN Instron |
| LI Lloyd Instruments | MT MTS/Sintech |
| SH Shimadzu | TO Tinius Olsen |
| XX Instrument manufacturer not specified by lab | |



Plastics Interlaboratory Testing Program

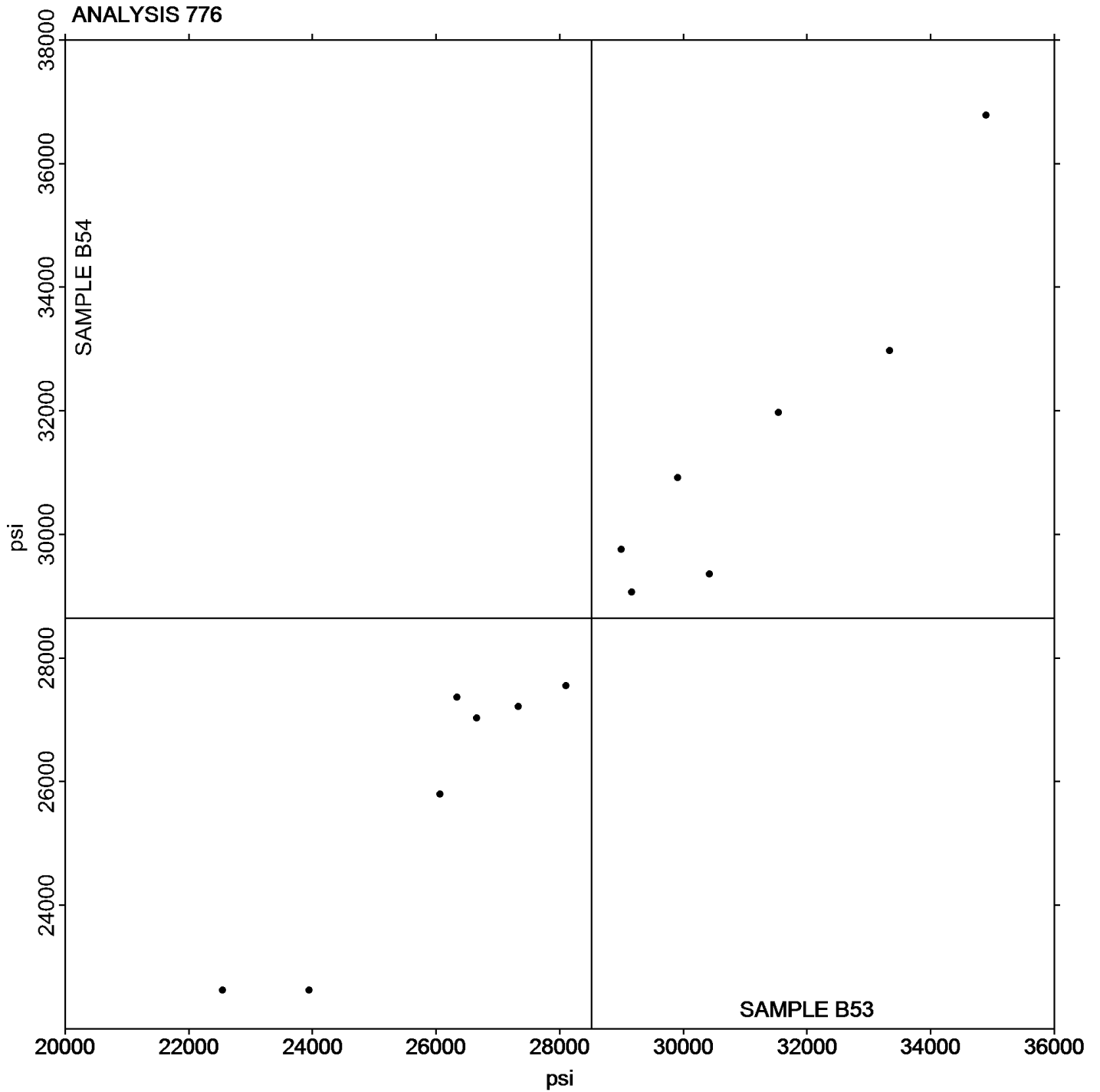
Report #107

Analysis 776

3rd Qtr 2018

Secant Modulus at 2% Strain - psi

Grand Mean Sample B53: 28,517.70 psi Grand Mean Sample B54: 28,645.03 psi



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



Plastics Interlaboratory Testing Program

Report #107

Analysis 780

3rd Qtr 2018

Coefficient of Static Friction

WebCode	Data Flag	Sample P53			Sample P54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3RLUMM		0.1372	-0.0240	-0.67	0.1422	-0.0166	-0.42	TH
3YQLZQ		0.1788	0.0176	0.49	0.1827	0.0239	0.60	IG
789JJB		0.1774	0.0162	0.45	0.2036	0.0448	1.12	SA
AXW674		0.1812	0.0200	0.56	0.1694	0.0106	0.26	IS
E9RVPC		0.1472	-0.0140	-0.39	0.1278	-0.0310	-0.77	TH
GBP98M		0.1360	-0.0252	-0.70	0.1340	-0.0248	-0.62	XX
HB9AR4		0.1869	0.0258	0.72	0.1677	0.0089	0.22	IG
JDP7NT		0.2368	0.0756	2.11	0.2410	0.0822	2.05	TH
K9AVBN		0.1360	-0.0252	-0.70	0.1280	-0.0308	-0.77	TH
NP6P8Y		0.1970	0.0358	1.00	0.2004	0.0416	1.04	RD
Q4YTPU		0.1460	-0.0152	-0.42	0.1380	-0.0208	-0.52	MI
QG7YJT		0.1360	-0.0252	-0.70	0.1360	-0.0228	-0.57	TH
QRLTT2		0.0988	-0.0624	-1.74	0.0938	-0.0650	-1.62	LI

Summary Statistics

	Sample P53	Sample P54
Grand Means	0.16118 COF	0.15882 COF
Stnd Dev Btwn Labs	0.03586 COF	0.04004 COF

Statistics based on 13 of 13 reporting participants

Sample P53: LDPE & Sample P54: LDPE

Key to Instrument Codes Reported by Participants

IG	Instron	IS	Instron 5000 Series
LI	Lloyd Instruments	MI	MTS Insight
RD	RDM CF	SA	Shimadzu Autograph
TH	Thwing Albert Friction/Peel Tester Model 225-1	XX	Instrument make/model not specified by lab



Plastics Interlaboratory Testing Program

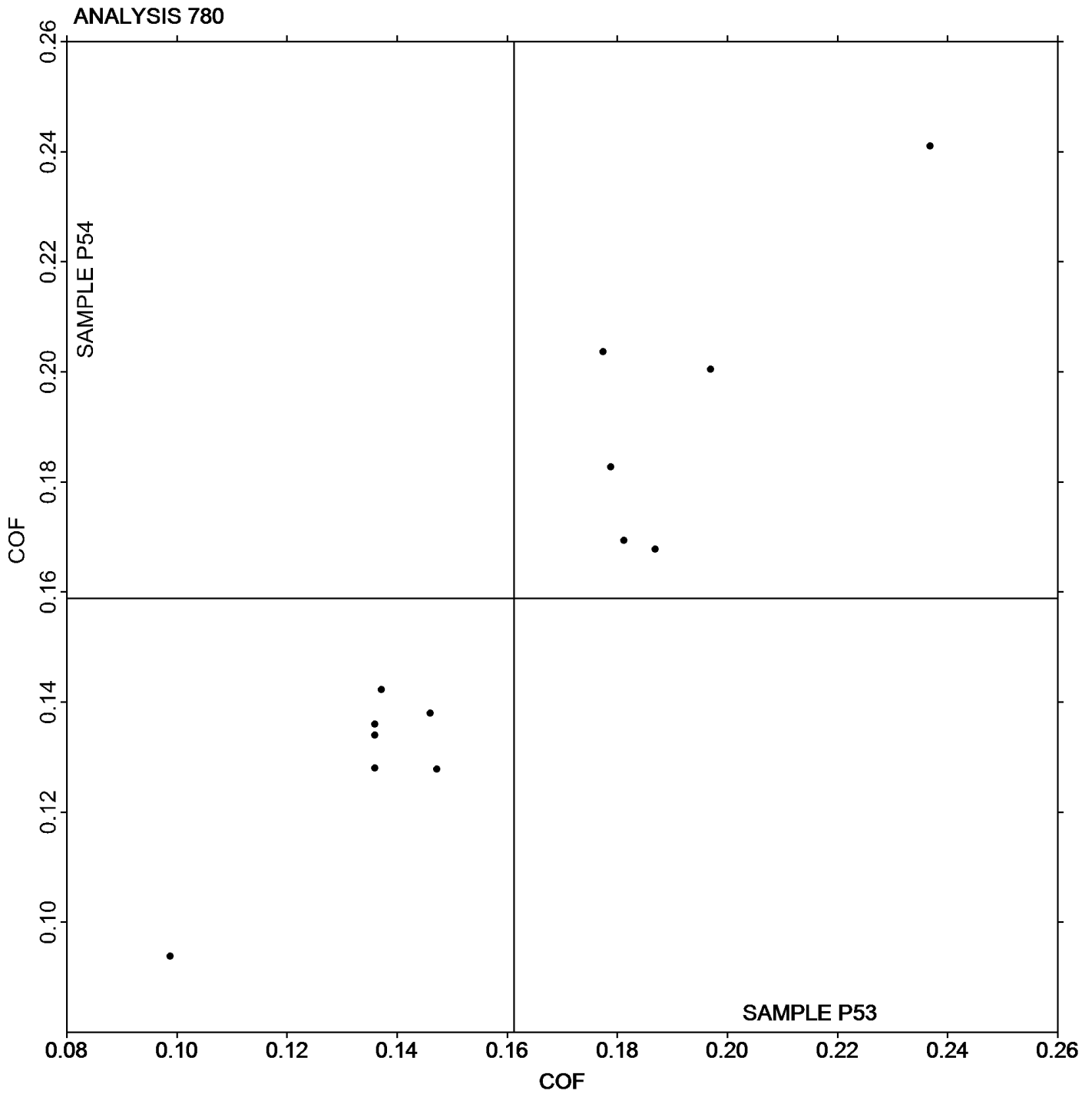
Analysis 780

Coefficient of Static Friction

Report #107

3rd Qtr 2018

Grand Mean Sample P53: 0.16118 COF Grand Mean Sample P54: 0.15882 COF



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



Plastics Interlaboratory Testing Program

Report #107

Analysis 781

3rd Qtr 2018

Coefficient of Kinetic Friction

WebCode	Data Flag	Sample P53			Sample P54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3RLUMM		0.1078	-0.0332	-1.33	0.1114	-0.0272	-1.09	TH
3YQLZQ		0.1361	-0.0049	-0.20	0.1530	0.0143	0.57	IG
3ZKAF2		0.1480	0.0070	0.28	0.1400	0.0014	0.05	XX
762M8Y		0.1720	0.0310	1.24	0.1600	0.0214	0.85	TN
789JJB		0.1343	-0.0067	-0.27	0.1420	0.0033	0.13	SA
AXW674		0.1278	-0.0132	-0.53	0.1210	-0.0176	-0.70	IS
E9RVPC		0.1120	-0.0290	-1.16	0.1060	-0.0326	-1.30	TH
GBP98M		0.1360	-0.0050	-0.20	0.1340	-0.0046	-0.19	XX
HB9AR4		0.1677	0.0267	1.07	0.1441	0.0054	0.22	IG
JDP7NT		0.1394	-0.0016	-0.06	0.1554	0.0168	0.67	TH
JMHCNL		0.1600	0.0190	0.76	0.1480	0.0094	0.37	XX
K9AVBN		0.1120	-0.0290	-1.16	0.1040	-0.0346	-1.38	TH
NP6P8Y		0.1898	0.0488	1.95	0.1948	0.0562	2.24	RD
P4NMVE		0.1520	0.0110	0.44	0.1480	0.0094	0.37	XX
Q4YTPU		0.1076	-0.0334	-1.34	0.1038	-0.0348	-1.39	MI
QG7YJT		0.1348	-0.0062	-0.25	0.1360	-0.0026	-0.11	TH
QRLTT2		0.1004	-0.0406	-1.62	0.0956	-0.0430	-1.72	XX
Y9RHU7		0.1740	0.0330	1.32	0.1560	0.0174	0.69	XX
YTBKP7		0.1540	0.0130	0.52	0.1620	0.0234	0.93	XX
ZRZ6V6		0.1540	0.0130	0.52	0.1580	0.0194	0.77	XX

Summary Statistics

	Sample P53	Sample P54
Grand Means	0.14099 COF	0.13865 COF
Stnd Dev Btwn Labs	0.02499 COF	0.02508 COF

Statistics based on 20 of 20 reporting participants

Sample P53: LDPE & Sample P54: LDPE

Key to Instrument Codes Reported by Participants

IG	Instron	IS	Instron 5000 Series
MI	MTS Insight	RD	RDM CF
SA	Shimadzu Autograph	TH	Thwing Albert Friction/Peel Tester Model 225-1
TN	TMI #32-06	XX	Instrument make/model not specified by lab



Plastics Interlaboratory Testing Program

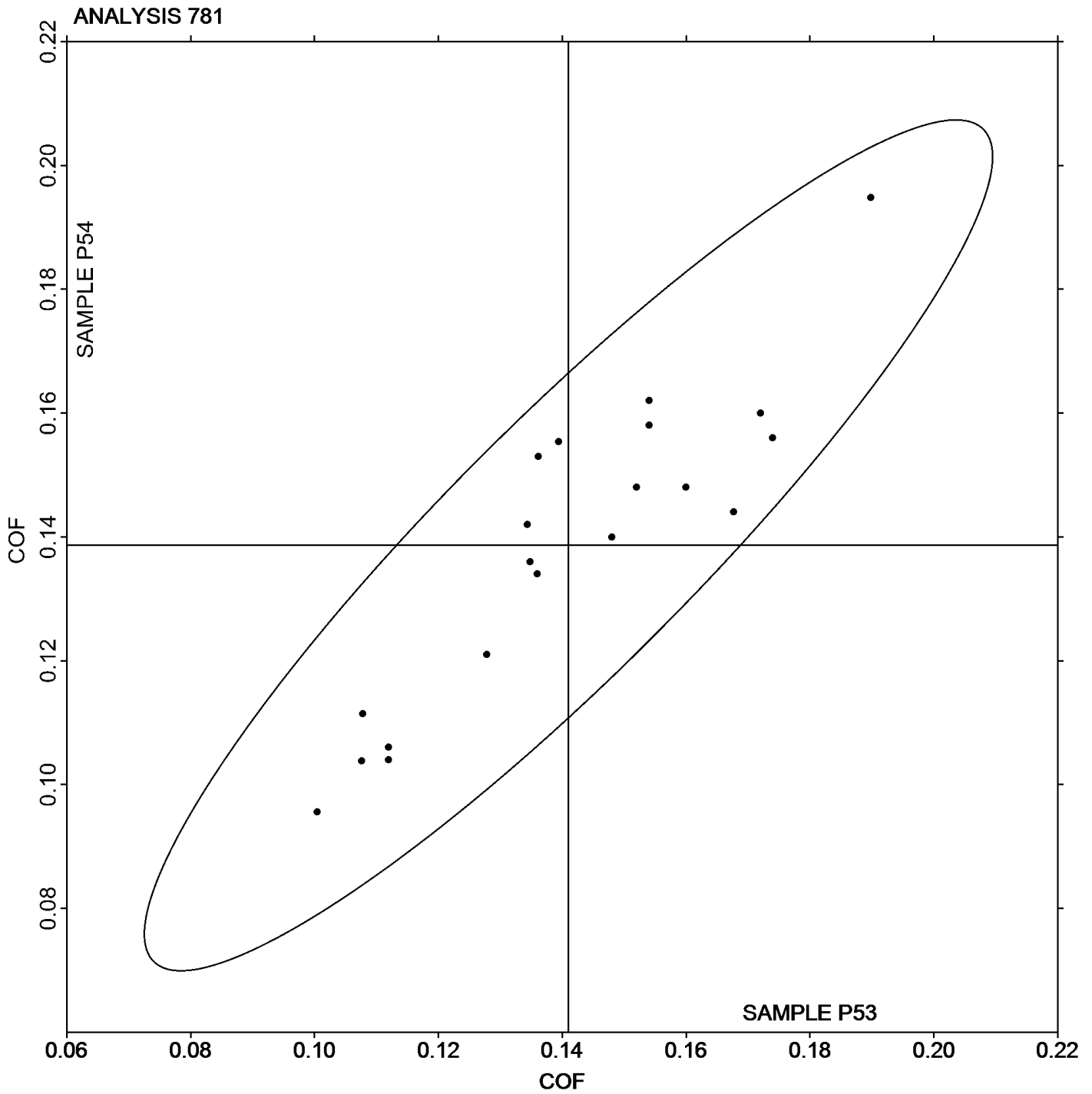
Analysis 781

Coefficient of Kinetic Friction

Report #107

3rd Qtr 2018

Grand Mean Sample P53: 0.14099 COF Grand Mean Sample P54: 0.13865 COF





Plastics Interlaboratory Testing Program

Report #107

Analysis 782

3rd Qtr 2018

Tear Resistance of Films

WebCode	Data Flag	Sample Q53			Sample Q54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3RLUMM		450.2	120.5	1.34	189.4	-25.2	-0.88	TA
789JJB		350.6	20.9	0.23	211.8	-2.8	-0.10	TE
8AUB2C		313.3	-16.4	-0.18	167.2	-47.4	-1.66	LO
F4T24G		312.0	-17.8	-0.20	231.7	17.1	0.60	TM
F6PBJR		444.7	115.0	1.28	269.5	54.9	1.93	SZ
FTWMVQ		143.8	-185.9	-2.07	192.2	-22.4	-0.79	EM
H8A2JM		197.2	-132.5	-1.48	235.9	21.3	0.75	TM
HDWQ4W		356.1	26.4	0.29	225.7	11.1	0.39	EM
JDP7NT		311.0	-18.8	-0.21	221.7	7.1	0.25	TA
K9AVBN		409.0	79.3	0.88	242.1	27.5	0.97	TE
Q4YTPU		345.4	15.7	0.18	194.6	-20.0	-0.70	TE
QG7YJT		323.3	-6.4	-0.07	193.4	-21.2	-0.74	TE

Summary Statistics

Grand Means

Sample Q53

329.70 grams-force

Sample Q54

214.61 grams-force

Std Dev Btwn Labs

89.70 grams-force

28.49 grams-force

Statistics based on 12 of 12 reporting participants

Sample Q53: LDPE & Sample Q54: LDPE

Key to Instrument Codes Reported by Participants

EM Elmendorf Tear Tester
 SZ Textest FX 3700
 TE Thwing-Albert Pro Tear

LO Lorentzen & Wettre Model II
 TA Thwing-Albert
 TM TMI No. 83-1100



Plastics Interlaboratory Testing Program

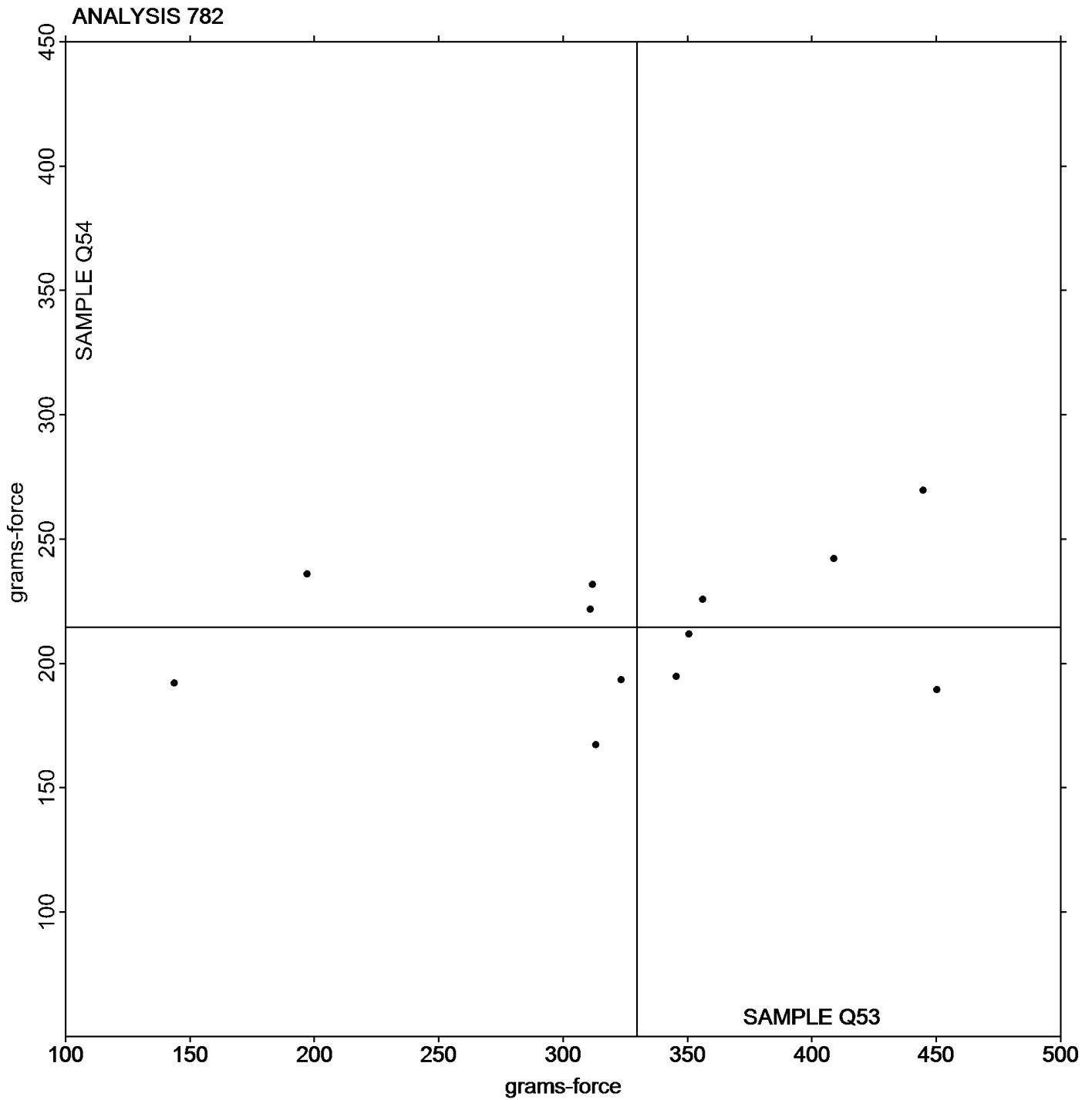
Analysis 782

Tear Resistance of Films

Report #107

3rd Qtr 2018

Grand Mean Sample Q53: 329.70 grams-force Grand Mean Sample Q54: 214.61 grams-force



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



Plastics Interlaboratory Testing Program

Report #107

Analysis 785

3rd Qtr 2018

Percent Haze of Film

WebCode	Data Flag	Sample D53			Sample D54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2V7UF6	*	13.088	-2.636	-2.56	13.530	-1.726	-1.82	XR
3RLUMM		16.891	1.168	1.14	15.896	0.640	0.68	XR
46NK4L		16.350	0.627	0.61	15.300	0.044	0.05	BJ
67498L		16.115	0.392	0.38	15.600	0.344	0.36	XR
6KVNTR		14.900	-0.823	-0.80	14.925	-0.331	-0.35	BJ
789JJB		15.938	0.214	0.21	15.800	0.544	0.57	BJ
AHYZWL		13.413	-2.311	-2.25	13.288	-1.969	-2.08	HL
AXRPRH		16.580	0.857	0.83	16.694	1.437	1.52	BH
AXW674		16.188	0.464	0.45	16.088	0.831	0.88	BJ
B2NVLE		15.350	-0.373	-0.36	15.113	-0.144	-0.15	BJ
BTQ8P9		14.713	-1.011	-0.98	14.513	-0.744	-0.79	BJ
CGTNQT		16.204	0.481	0.47	15.501	0.245	0.26	BJ
E9RVPC		16.700	0.977	0.95	15.850	0.594	0.63	BJ
F6PBJR		16.150	0.427	0.41	14.938	-0.319	-0.34	BJ
GM7X6R		15.950	0.227	0.22	15.063	-0.194	-0.20	BJ
H8A2JM		16.313	0.589	0.57	15.613	0.356	0.38	BJ
JDP7NT		15.563	-0.161	-0.16	14.625	-0.631	-0.67	BJ
JNA9BU		15.438	-0.286	-0.28	15.213	-0.044	-0.05	BJ
JZKZFF		15.975	0.252	0.24	15.525	0.269	0.28	BJ
K9AVBN		16.363	0.639	0.62	15.538	0.281	0.30	BJ
KLEBUY		16.294	0.571	0.55	16.236	0.980	1.03	HC
LLDP7X		17.003	1.279	1.24	16.565	1.309	1.38	XR
Q4YTPU		16.188	0.464	0.45	15.888	0.631	0.67	BJ
QG7YJT		16.113	0.389	0.38	15.675	0.419	0.44	BJ
TDY39P		16.025	0.302	0.29	15.471	0.215	0.23	BJ
TP7BM2	*	13.000	-2.723	-2.65	12.328	-2.929	-3.09	XR
TQKHB4		15.663	-0.061	-0.06	14.888	-0.369	-0.39	BJ
VTM9HU		16.200	0.477	0.46	15.988	0.731	0.77	BJ
YU2TQU		15.313	-0.411	-0.40	14.788	-0.469	-0.50	BJ



Plastics Interlaboratory Testing Program

Report #107

Analysis 785

3rd Qtr 2018

Percent Haze of Film

Summary Statistics		
	<u>Sample D53</u>	<u>Sample D54</u>
Grand Means	15.7232 Percent	15.2563 Percent
Stnd Dev Btwn Labs	1.0284 Percent	0.9471 Percent
Statistics based on 29 of 29 reporting participants		

Sample D53: LDPE & Sample D54: LDPE

Key to Instrument Codes Reported by Participants

- | | | | |
|----|---|----|----------------------------|
| BH | BYK-Gardner/Pacific Scientific Model XL-211 | BJ | BYK-Gardner Haze-Gard Plus |
| HC | Hunterlab ColorQuest | HL | Hunterlab Ultrascan |
| XR | X-Rite Spectrocolorimeter (any model) | | |



Plastics Interlaboratory Testing Program

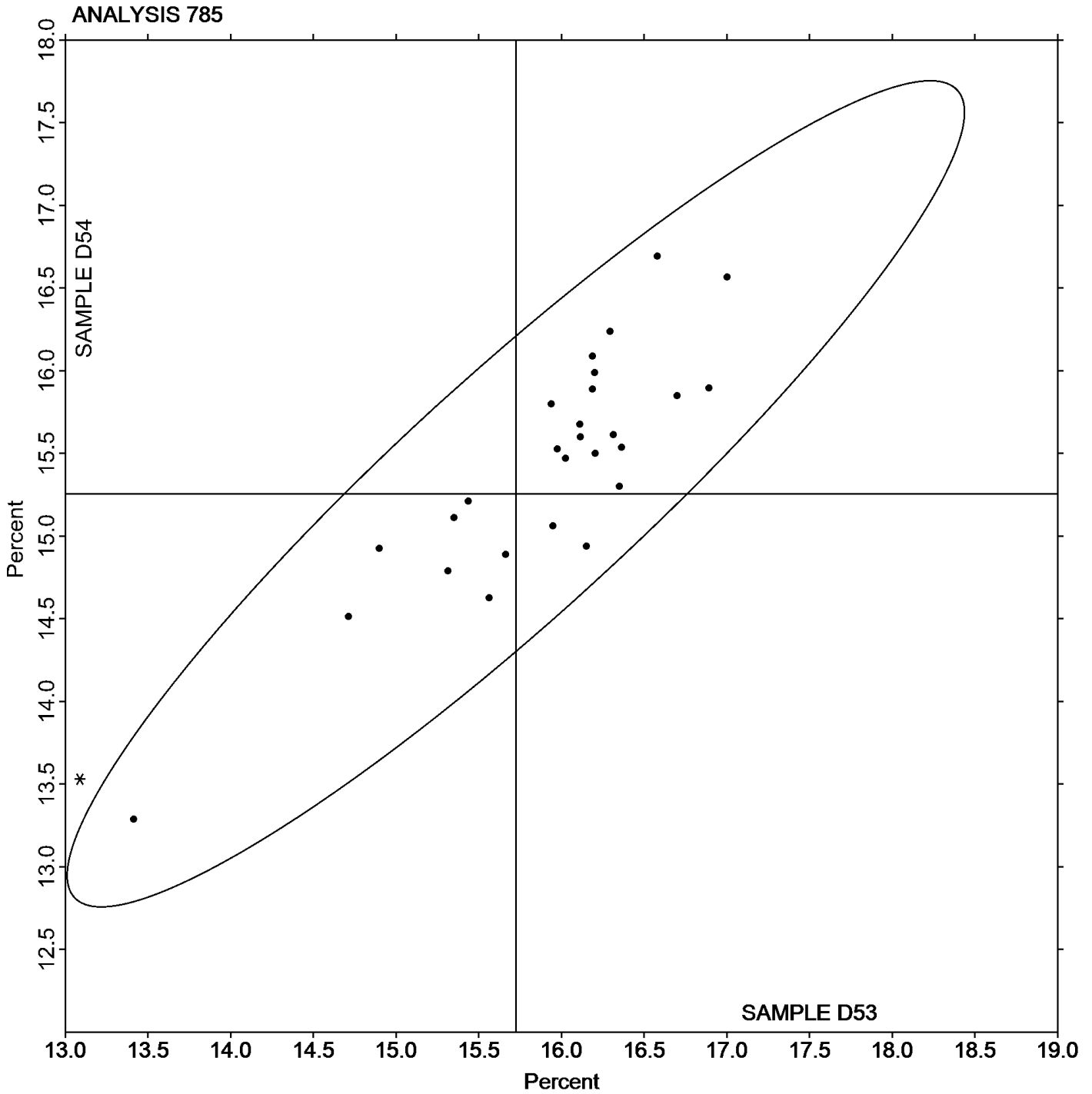
Analysis 785

Percent Haze of Film

Report #107

3rd Qtr 2018

Grand Mean Sample D53: 15.723 Percent Grand Mean Sample D54: 15.256 Percent





Plastics Interlaboratory Testing Program

Report #107

Analysis 786

3rd Qtr 2018

Total Luminous transmittance of film

WebCode	Data Flag	Sample D53			Sample D54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2V7UF6	*	88.86	-3.73	-2.95	88.92	-3.49	-2.84	XR
3RLUMM		90.20	-2.40	-1.90	90.18	-2.23	-1.82	XR
46NK4L		93.19	0.59	0.47	92.98	0.57	0.46	BJ
67498L		91.87	-0.72	-0.57	91.72	-0.69	-0.56	XR
6KVNTR		93.39	0.79	0.63	93.15	0.74	0.61	BJ
789JJB		92.96	0.37	0.29	92.64	0.23	0.19	BJ
AHYZWL		90.93	-1.67	-1.32	90.76	-1.65	-1.34	HL
AXRPRH		91.76	-0.83	-0.66	91.55	-0.86	-0.70	BH
AXW674		93.31	0.72	0.57	93.18	0.77	0.63	BJ
B2NVLE		93.41	0.82	0.65	93.25	0.84	0.69	BJ
BTQ8P9		93.28	0.68	0.54	92.96	0.55	0.45	BJ
CGTNQT		92.44	-0.16	-0.13	92.20	-0.21	-0.17	BJ
E9RVPC		92.79	0.19	0.15	92.56	0.15	0.13	BJ
F6PBJR		91.73	-0.87	-0.69	91.71	-0.70	-0.57	BJ
GM7X6R	X	93.34	0.74	0.59	92.53	0.12	0.10	BJ
H8A2JM		93.33	0.73	0.58	93.24	0.83	0.68	BJ
JDP7NT		93.81	1.22	0.96	93.85	1.44	1.18	BJ
JNA9BU		93.86	1.27	1.00	93.76	1.35	1.11	BJ
JZKZFF		93.30	0.70	0.56	93.04	0.63	0.51	BJ
K9AVBN		93.66	1.07	0.84	93.33	0.92	0.75	BJ
KLEBUY		92.16	-0.44	-0.35	91.64	-0.76	-0.62	HC
LLDP7X		91.87	-0.73	-0.58	91.73	-0.68	-0.55	XR
Q4YTPU		91.06	-1.53	-1.21	90.75	-1.66	-1.35	BJ
QG7YJT		93.59	0.99	0.78	93.35	0.94	0.77	BJ
TDY39P		93.89	1.30	1.02	93.39	0.98	0.80	BJ
TP7BM2		91.47	-1.13	-0.89	91.39	-1.02	-0.83	XR
TQKHB4		92.95	0.35	0.28	92.78	0.37	0.30	BJ
VTM9HU		94.35	1.75	1.39	94.15	1.74	1.42	BJ
YU2TQU		93.29	0.69	0.55	93.26	0.85	0.70	BJ



Plastics Interlaboratory Testing Program

Report #107

Analysis 786

3rd Qtr 2018

Total Luminous transmittance of film

Summary Statistics		
	<u>Sample D53</u>	<u>Sample D54</u>
Grand Means	92.596 Percent	92.408 Percent
Stnd Dev Btwn Labs	1.265 Percent	1.225 Percent
Statistics based on 28 of 29 reporting participants		

Sample D53: LDPE & Sample D54: LDPE

Comments on Assigned Data Flags for Test #786

GM7X6R (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

Key to Instrument Codes Reported by Participants

- | | |
|---|--------------------------------------|
| BH BYK-Gardner/Pacific Scientific Model XL-211 | BJ BYK-Gardner Haze-Gard Plus |
| HC Hunterlab ColorQuest | HL Hunterlab Ultrascan XE |
| XR X-Rite Spectrocolorimeter (any model) | |



Plastics Interlaboratory Testing Program

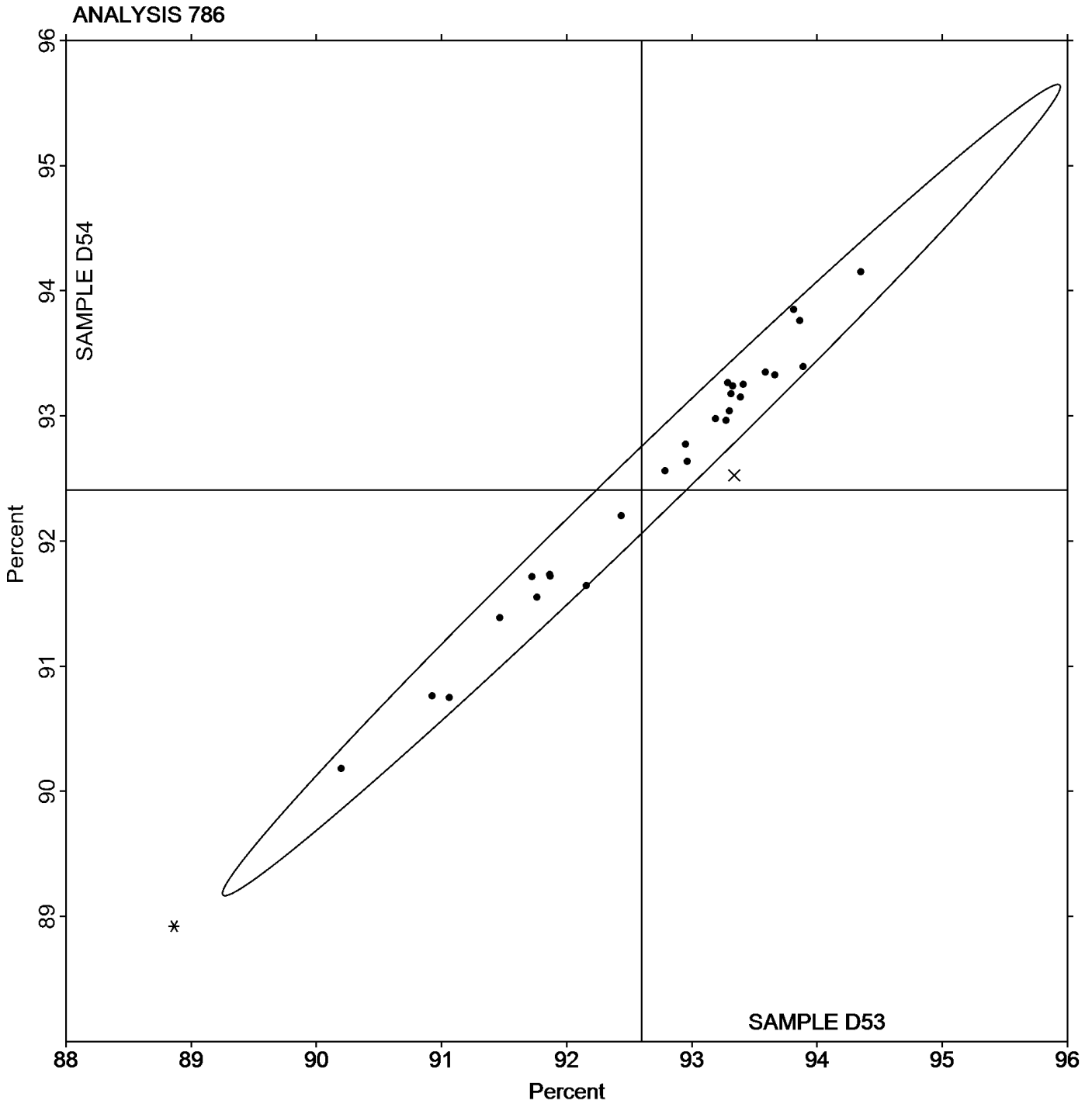
Analysis 786

Total Luminous transmittance of film

Report #107

3rd Qtr 2018

Grand Mean Sample D53: 92.596 Percent Grand Mean Sample D54: 92.408 Percent





Plastics Interlaboratory Testing Program

Report #107

Analysis 790

3rd Qtr 2018

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S53			Sample S54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2B9P7Y		9.89	0.06	0.09	9.68	-0.05	-0.07	CE
2HJ6DY		10.54	0.71	1.02	10.32	0.59	0.81	TO
2NU2H9		10.23	0.40	0.58	9.85	0.12	0.16	WZ
34ZP48		10.10	0.27	0.39	10.16	0.43	0.60	TM
36GR29		9.75	-0.08	-0.12	9.75	0.02	0.03	TO
39AZ29		9.66	-0.17	-0.24	9.60	-0.13	-0.18	WZ
3N9X8D		9.78	-0.05	-0.07	9.79	0.06	0.08	TM
4R4YZE		10.04	0.21	0.30	10.28	0.55	0.77	TO
4V63R2		10.28	0.45	0.65	10.19	0.46	0.64	CE
63FMA4		10.32	0.49	0.71	10.32	0.59	0.83	XX
69QWJL		10.60	0.77	1.11	10.78	1.05	1.46	TM
6QAMPC		10.20	0.38	0.54	9.76	0.03	0.05	WZ
6T94VE		9.70	-0.13	-0.18	9.46	-0.27	-0.38	XX
77G7UH	X	12.76	2.93	4.21	11.93	2.20	3.07	TO
7XJKGN		9.81	-0.01	-0.02	9.52	-0.21	-0.30	TM
8H882C		9.78	-0.05	-0.07	9.80	0.07	0.10	TM
8TZHY6		9.58	-0.25	-0.36	9.44	-0.29	-0.40	TO
9TXHPA		9.04	-0.79	-1.13	8.96	-0.77	-1.07	TO
9TY9XD		9.29	-0.53	-0.77	9.18	-0.55	-0.77	TO
APETT4		9.49	-0.34	-0.48	9.55	-0.18	-0.25	XX
B2NVLE		10.32	0.49	0.71	10.06	0.33	0.46	TY
B3HJ4A	*	11.53	1.70	2.44	10.89	1.16	1.62	TM
B9KNXE		9.53	-0.30	-0.43	9.47	-0.26	-0.36	CE
BFJ2TN	X	108.91	99.09	142.43	105.58	95.85	133.45	TO
BPRRFY		9.18	-0.65	-0.94	9.24	-0.49	-0.68	BA
DJE6M2		9.59	-0.23	-0.34	9.34	-0.39	-0.55	TO
DWLENB		10.17	0.34	0.49	10.19	0.46	0.64	TO
E9RVPC		10.42	0.60	0.86	10.59	0.86	1.20	TO
EXB9FC		10.60	0.77	1.11	10.78	1.05	1.46	XX
HDWQ4W		9.61	-0.22	-0.32	9.19	-0.54	-0.75	CE
J2GD38		10.26	0.44	0.63	10.40	0.66	0.93	TO
JDP7NT		9.66	-0.17	-0.24	9.65	-0.08	-0.12	WZ
JK8GZ9		9.53	-0.29	-0.42	9.43	-0.30	-0.41	TM
JMHCQ7		9.85	0.02	0.03	9.62	-0.11	-0.16	DS
JNA9BU		9.17	-0.65	-0.94	9.13	-0.61	-0.84	BA



Plastics Interlaboratory Testing Program

Report #107

Analysis 790

3rd Qtr 2018

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S53			Sample S54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
JNEPDY		8.67	-1.15	-1.66	8.59	-1.14	-1.59	XX
JUJGLW		9.75	-0.08	-0.11	9.57	-0.16	-0.23	TO
K3M8EX		8.27	-1.55	-2.23	8.14	-1.59	-2.22	IN
KLEBUY		8.44	-1.38	-1.99	8.39	-1.34	-1.87	CE
LDLDRW		11.25	1.43	2.05	11.09	1.36	1.90	CS
LEFJBQ		8.58	-1.24	-1.79	8.45	-1.28	-1.79	TO
M4BH2W	*	9.39	-0.44	-0.63	10.07	0.34	0.48	WZ
MF33NE		10.84	1.01	1.45	10.67	0.94	1.31	TO
MXR7DV		9.92	0.10	0.14	9.93	0.20	0.27	TO
N9GELW	X	10.30	0.47	0.67	9.20	-0.53	-0.74	CE
NL82XJ	X	4.12	-5.71	-8.21	4.10	-5.63	-7.84	TO
P4427U		10.42	0.59	0.85	10.33	0.60	0.83	CE
PXCFYM		9.17	-0.66	-0.94	8.55	-1.18	-1.65	TO
Q4YTPU		10.14	0.31	0.45	9.94	0.21	0.29	TO
QG7YJT		10.38	0.55	0.79	10.49	0.76	1.06	CE
QK3ZTH		9.77	-0.06	-0.08	9.63	-0.10	-0.13	WZ
QQDFBY		8.39	-1.44	-2.07	8.03	-1.70	-2.36	TM
TC9U7F		10.38	0.55	0.79	10.77	1.04	1.45	TO
TQKHB4		9.83	0.00	0.00	9.65	-0.08	-0.12	CE
UNY2MG		9.66	-0.17	-0.24	9.62	-0.11	-0.16	TO
V4L2QL	*	11.48	1.65	2.38	10.75	1.02	1.42	TO
WNQXMM		9.68	-0.15	-0.22	10.06	0.33	0.46	CE
XHX8PP	*	9.48	-0.34	-0.49	8.65	-1.08	-1.51	TM
Y96AK3		9.09	-0.74	-1.06	9.45	-0.28	-0.40	TO

Summary Statistics		
	Sample S53	Sample S54
Grand Means	9.827 ft.lbf/in	9.730 ft.lbf/in
Stnd Dev Btwn Labs	0.696 ft.lbf/in	0.718 ft.lbf/in
Statistics based on 55 of 59 reporting participants		

Sample S53: ABS/PC & Sample S54: ABS/PC



Plastics Interlaboratory Testing Program

Analysis 790

Notched Izod Impact - ft.lbf/in

Report #107

3rd Qtr 2018

Comments on Assigned Data Flags for Test #790

NL82XJ (X) - Data for both samples are low. Possible Systematic Error.

77G7UH (X) - Data for both samples are high. Possible Systematic Error.

N9GELW (X) - Inconsistent in testing between samples.

BFJ2TN (X) - Extreme data.

Key to Instrument Codes Reported by Participants

BA Baldwin

CS CSI

IN Instron

TO Tinius Olsen

WZ Zwick

CE Ceast

DS Dynisco

TM TMI

TY Toyoseiki

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

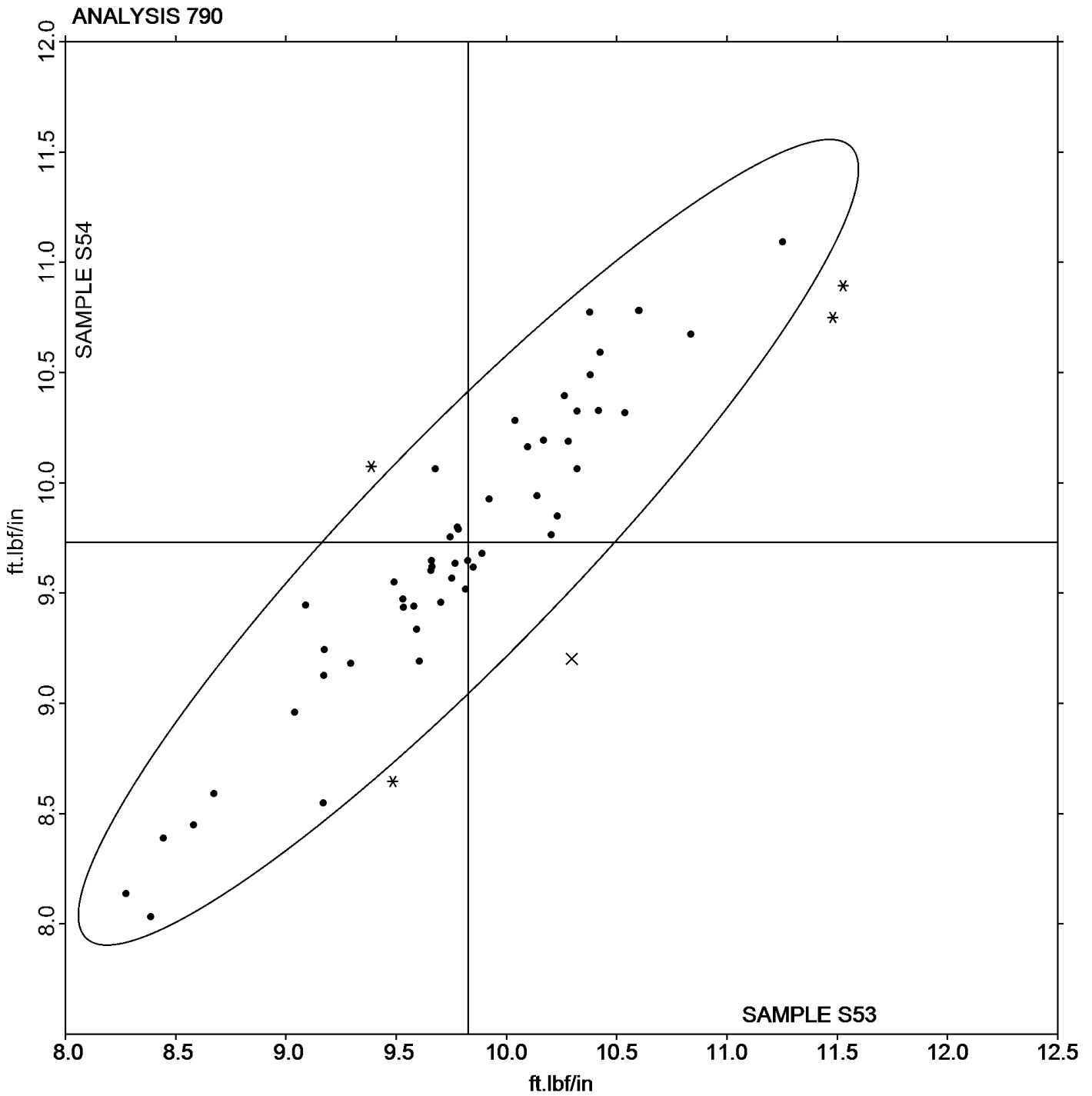
Analysis 790

Notched Izod Impact - ft.lbf/in

Report #107

3rd Qtr 2018

Grand Mean Sample S53: 9.8274 ft.lbf/in Grand Mean Sample S54: 9.7305 ft.lbf/in





Plastics Interlaboratory Testing Program

Report #107

Analysis 791

3rd Qtr 2018

Notched Izod Impact - kJ/m²

WebCode	Data Flag	Sample Z53			Sample Z54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2V7DBZ		37.88000	-1.55809	-0.50	36.50000	-2.90963	-0.95	TM
39AZ29		38.77000	-0.66809	-0.21	39.13600	-0.27363	-0.09	WZ
8NPP4Q		43.35200	3.91391	1.26	45.13400	5.72437	1.88	IN
8TZHY6		40.84000	1.40191	0.45	42.48000	3.07037	1.01	TM
9BLN4U		34.86800	-4.57009	-1.47	37.00200	-2.40763	-0.79	CE
B2NVLE		40.79600	1.35791	0.44	41.17800	1.76837	0.58	XX
B9KNXE		45.58000	6.14191	1.98	43.36000	3.95037	1.30	CE
BL996N		37.31600	-2.12209	-0.68	37.90800	-1.50163	-0.49	TO
E9RVPC		39.31400	-0.12409	-0.04	39.91000	0.50037	0.16	TO
FEHLV9		38.84600	-0.59209	-0.19	38.68400	-0.72563	-0.24	WZ
GMJKJZ		35.14200	-4.29609	-1.38	35.86200	-3.54763	-1.16	XX
H8A2JM		36.02000	-3.41809	-1.10	36.00000	-3.40963	-1.12	CE
JNA9BU		36.98540	-2.45269	-0.79	36.90140	-2.50823	-0.82	BA
KCT778		37.58000	-1.85809	-0.60	36.76400	-2.64563	-0.87	CE
KHJFF7		38.07600	-1.36209	-0.44	38.28200	-1.12763	-0.37	WZ
KHK7QU		41.99000	2.55191	0.82	42.02200	2.61237	0.86	CE
KYPMQ2		37.01240	-2.42569	-0.78	36.32340	-3.08623	-1.01	CE
LY3T83		40.28000	0.84191	0.27	42.36000	2.95037	0.97	XX
PXCFYM		41.22000	1.78191	0.57	40.56000	1.15037	0.38	TO
Q3LE47		43.56800	4.12991	1.33	43.34800	3.93837	1.29	XX
RV63NK		41.27380	1.83571	0.59	41.09940	1.68977	0.55	XX
T3ZKDF		37.52000	-1.91809	-0.62	36.81400	-2.59563	-0.85	WZ
T4FJX6		45.01200	5.57391	1.79	44.67600	5.26637	1.73	IN
WQAE42		34.08000	-5.35809	-1.72	33.70000	-5.70963	-1.87	TO
XG766V		36.54940	-2.88869	-0.93	36.13820	-3.27143	-1.07	TM
YAHQVU		39.12540	-0.31269	-0.10	39.45712	0.04749	0.02	TO
ZTPDWT		41.04000	1.60191	0.52	39.14000	-0.26963	-0.09	TM
ZW9GVC		44.23000	4.79191	1.54	42.73000	3.32037	1.09	TM



Plastics Interlaboratory Testing Program

Report #107

Analysis 791

3rd Qtr 2018

Notched Izod Impact - kJ/m²

Summary Statistics		
	<u>Sample Z53</u>	<u>Sample Z54</u>
Grand Means	39.438086 kJ/m ²	39.409626 kJ/m ²
Stnd Dev Btwn Labs	3.109584 kJ/m ²	3.047088 kJ/m ²
Statistics based on 28 of 28 reporting participants		

Sample Z53: ABS/PC & Sample Z54: ABS/PC

Key to Instrument Codes Reported by Participants

- | | | | |
|----|--|----|-------|
| BA | Baldwin | CE | Ceast |
| IN | Instron | TM | TMI |
| TO | Tinius Olsen | WZ | Zwick |
| XX | Instrument manufacturer not specified by lab | | |



Plastics Interlaboratory Testing Program

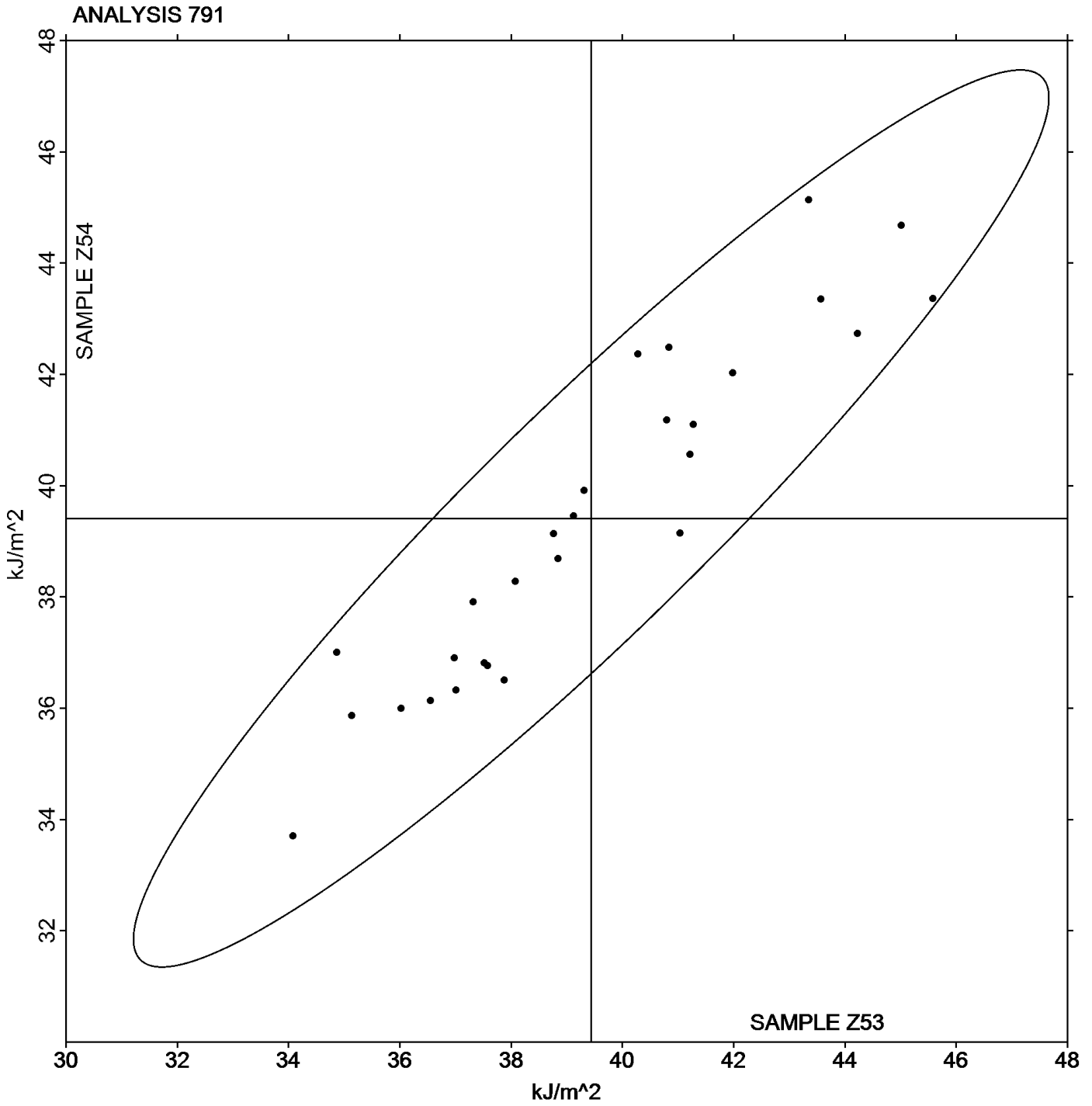
Analysis 791

Notched Izod Impact - kJ/m^2

Report #107

3rd Qtr 2018

Grand Mean Sample Z53: 39.438 kJ/m^2 Grand Mean Sample Z54: 39.410 kJ/m^2





Plastics Interlaboratory Testing Program

Report #107

Analysis 792

3rd Qtr 2018

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M53			Sample M54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2B9P7Y		38.22	-2.92	-0.84	37.20	-4.10	-1.13	CE
2QGK GK		47.29	6.15	1.77	47.75	6.45	1.77	WZ
2V7DBZ		39.39	-1.75	-0.50	38.67	-2.63	-0.72	TM
39AZ29		40.91	-0.23	-0.07	40.18	-1.12	-0.31	WZ
4BWBH8		41.86	0.72	0.21	40.81	-0.49	-0.13	XX
6DG9G3		43.07	1.93	0.55	41.64	0.34	0.09	PO
6T94VE	*	35.24	-5.90	-1.70	37.56	-3.74	-1.03	XX
8NPP4Q		41.11	-0.03	-0.01	41.10	-0.20	-0.05	IN
8TZHY6		44.50	3.36	0.97	44.42	3.12	0.86	TO
9BLN4U		38.97	-2.16	-0.62	39.77	-1.53	-0.42	CE
APETT4		36.72	-4.42	-1.27	38.40	-2.90	-0.80	XX
B2NVLE		41.45	0.31	0.09	42.79	1.49	0.41	TY
B3HJ4A		38.48	-2.66	-0.77	39.28	-2.02	-0.55	TM
B9KNXE		41.82	0.69	0.20	42.58	1.28	0.35	IN
CB7BUU		41.03	-0.11	-0.03	40.37	-0.93	-0.25	CE
CVWTD9	*	50.64	9.50	2.73	52.66	11.36	3.12	TO
DDDEDP		39.52	-1.62	-0.47	40.10	-1.20	-0.33	CE
DG8CJ8		42.53	1.39	0.40	41.41	0.11	0.03	TM
EUNUPG	X	19.08	-22.06	-6.34	21.60	-19.70	-5.41	XX
F68VXH		37.67	-3.47	-1.00	37.94	-3.36	-0.92	TO
FEHLV9		38.34	-2.80	-0.80	38.22	-3.08	-0.85	WZ
FMQRCQ		40.91	-0.22	-0.06	40.82	-0.48	-0.13	CE
GA2QAV		46.45	5.31	1.53	46.54	5.24	1.44	CE
GMJKJZ		35.91	-5.23	-1.50	36.69	-4.61	-1.27	TM
HDWQ4W		43.78	2.64	0.76	44.74	3.44	0.94	IN
HM4NPE		44.38	3.24	0.93	42.19	0.89	0.24	IN
JA9Y6Y		42.89	1.75	0.50	43.05	1.75	0.48	TM
JDP7NT		40.43	-0.71	-0.20	40.06	-1.24	-0.34	WZ
JNA9BU		39.95	-1.19	-0.34	40.30	-1.00	-0.28	CE
JPGRR3		42.76	1.62	0.47	43.46	2.16	0.59	WZ
KCT778		39.59	-1.55	-0.45	39.58	-1.72	-0.47	CE
KHJFF7		40.58	-0.56	-0.16	38.29	-3.01	-0.83	WZ
KYPMQ2		38.59	-2.55	-0.73	38.04	-3.26	-0.90	CE
LY3T83		41.59	0.45	0.13	41.25	-0.05	-0.01	XX
LYKKH9	*	31.17	-9.97	-2.87	31.17	-10.13	-2.78	CE



Plastics Interlaboratory Testing Program

Report #107

Analysis 792

3rd Qtr 2018

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M53			Sample M54			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
MXR7DV		42.39	1.25	0.36	42.91	1.61	0.44	TO
P4427U		47.26	6.12	1.76	48.60	7.30	2.00	CE
PH7UYL		40.64	-0.50	-0.14	42.08	0.78	0.21	TO
PXCFYM		45.20	4.07	1.17	45.00	3.70	1.01	TO
Q3LE47		43.94	2.80	0.80	41.72	0.42	0.12	IN
QCVJGW		44.00	2.86	0.82	44.54	3.24	0.89	WZ
QG7YJT		43.44	2.30	0.66	44.24	2.94	0.81	CE
RV63NK		44.57	3.43	0.99	45.90	4.60	1.26	TO
T3ZKDF		38.07	-3.07	-0.88	36.96	-4.34	-1.19	WZ
T4FJX6		42.06	0.92	0.26	44.42	3.12	0.86	IN
WQAE42		34.98	-6.16	-1.77	35.92	-5.38	-1.48	TO
X2PFMK		42.92	1.78	0.51	43.22	1.92	0.53	XX
XG766V		37.38	-3.75	-1.08	37.06	-4.24	-1.16	TM
Y4BUZF		42.03	0.89	0.26	40.74	-0.56	-0.15	CE
Y96AK3		39.94	-1.20	-0.34	40.40	-0.90	-0.25	TO
YAHQVU		40.35	-0.79	-0.23	42.28	0.98	0.27	TO

Summary Statistics		
	Sample M53	Sample M54
Grand Means	41.138 kJ/m ²	41.300 kJ/m ²
Stnd Dev Btwn Labs	3.479 kJ/m ²	3.644 kJ/m ²
Statistics based on 50 of 51 reporting participants		

Sample M53: ABS/PC & Sample M54: ABS/PC

Comments on Assigned Data Flags for Test #792

EUNUPG (X) - Data for both samples are low. Inconsistent within the determinations of sample M53.

Key to Instrument Codes Reported by Participants

CE Ceast	IN Instron
PO POE	TM TMI
TO Tinius Olsen	TY Toyoseiki
WZ Zwick	XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

Report #107

Analysis 792

3rd Qtr 2018

Notched Charpy Impact - kJ/m²

Grand Mean Sample M53: 41.138 kJ/m² Grand Mean Sample M54: 41.300 kJ/m²

