

Plastics Interlaboratory Testing Program

Web Summary Report #102, 2nd Qtr 2017

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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.

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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.



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Results Summary for Report #102, 2nd Qtr 2017

Analysis 704 - Tensile Stress at Yield

Material: ABS	Sample F43	6,725.40	psi	1.88% COV
	Sample F44	6,706.74	psi	1.90% COV

Analysis 705 - Tensile Stress at Break

Material: ABS	Sample F43	4,822.04	psi	4.18% COV
	Sample F44	4,824.25	psi	4.34% COV

Analysis 706 - Percent Elongation at Yield

Material: ABS	Sample F43	2.5551	Percent	3.64% COV
	Sample F44	2.5502	Percent	4.05% COV

Analysis 708 - Modulus of Elasticity

Material: ABS	Sample F43	345.31	ksi	4.48% COV
	Sample F44	344.74	ksi	4.39% COV

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

Material: PC/ABS	Sample E43	108.11	Degrees C	1.43% COV
	Sample E44	107.81	Degrees C	1.33% COV

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

Material: PP	Sample G43	84.033	Degrees C	3.79% COV
	Sample G44	69.854	Degrees C	2.55% COV

Analysis 712 - Temperature of Deflection (1.80 MPa)

Material: ABS	Sample N43	75.563	Degrees C	1.71% COV
	Sample N44	75.462	Degrees C	1.67% COV

Analysis 715 - Vicat Temperature (Rate A)

Material: PC/ABS	Sample H43	140.44	Degrees C	0.546% COV
	Sample H44	140.42	Degrees C	0.536% COV

Analysis 716 - Vicat Temperature (Rate B)

Material: PC/ABS	Sample R43	142.15	Degrees C	0.647% COV
	Sample R44	142.05	Degrees C	0.629% COV

Analysis 718 - Specific Gravity

Material: HIPS	Sample T43	1.0342	sp gr 23/23 C	0.187% COV
	Sample T44	1.0344	sp gr 23/23 C	0.186% COV

Analysis 720 - Flexural Modulus

Material: HIPS	Sample J43	334.93	ksi	5.20% COV
	Sample J44	334.85	ksi	5.33% COV

Analysis 721 - Flexural Stress at 5% Strain

Material: HIPS	Sample J43	6,260.39	psi	3.88% COV
	Sample J44	6,267.40	psi	4.07% COV

Analysis 722 - Flexural Stress at Yield

Material: HIPS	Sample J43	6,275.61	psi	3.81% COV
	Sample J44	6,289.22	psi	4.08% COV

Analysis 730 - Tensile Stress at Yield, ISO Method

Material: HIPS	Sample C43	24.333	MPa	3.05% COV
	Sample C44	24.310	MPa	3.06% COV

Analysis 731 - Tensile Stress at Break, ISO Method

Material: HIPS	Sample C43	21.189	MPa	3.68% COV
	Sample C44	21.129	MPa	3.46% COV



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Analysis 732 - Strain at Yield, ISO Method

Material: HIPS	Sample C43	1.2529	Percent	4.26% COV
	Sample C44	1.2520	Percent	4.38% COV

Analysis 734 - Modulus of Elasticity, ISO Method

Material: HIPS	Sample C43	2,227.22	MPa	3.84% COV
	Sample C44	2,236.00	MPa	4.18% COV

Analysis 736 - Flexural Modulus

Material: HIPS	Sample K43	2,243.08	MPa	4.92% COV
	Sample K44	1,850.95	MPa	4.68% COV

Analysis 737 - Flexural Stress at 3.5% Strain

Material: HIPS	Sample K43	40.935	MPa	4.35% COV
	Sample K44	33.968	MPa	4.17% COV

Analysis 738 - Flexural Stress at Yield

Material: HIPS	Sample K43	41.309	MPa	3.66% COV
	Sample K44	33.811	MPa	3.35% COV

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

Material: PP	Sample X43	14.931	grams/10 mins	6.60% COV
	Sample X44	15.069	grams/10 mins	6.17% COV

Analysis 755 - Moisture Content

Material: HIPS	Sample Y43	0.02395	Percent	44.2% COV
	Sample Y44	0.02687	Percent	39.2% COV

Analysis 757 - Ash Content

Material: PBT	Sample L43	14.897	Percent	1.05% COV
	Sample L44	14.925	Percent	0.984% COV

Analysis 760 - DSC

Material: PBT	Sample W43	197.28	Degrees Celsius	2.22% COV
	Sample W44	177.28	Degrees Celsius	4.84% COV

Analysis 761 - DSC

Material: PBT	Sample W43	221.35	Degrees Celsius	0.797% COV
	Sample W44	224.47	Degrees Celsius	0.625% COV

Analysis 762 - DSC

Material: PBT	Sample W43	22.698	Joules Per Gram	8.43% COV
	Sample W44	46.802	Joules Per Gram	9.93% COV

Analysis 763 - DSC

Material: PBT	Sample W43	24.494	Joules Per Gram	11.2% COV
	Sample W44	42.062	Joules Per Gram	15.2% COV

Analysis 764 - DSC

Material: ABS	Sample V43	107.07	Degrees Celsius	1.47% COV
	Sample V44	107.28	Degrees Celsius	1.61% COV

Analysis 770 - Tensile Stress at Yield, Films

Material: LDPE	Sample B43	2,239.07	psi	28.2% COV
	Sample B44	2,248.47	psi	29.9% COV

Analysis 771 - Tensile Stress at Break, Films

Material: LDPE	Sample B43	3,428.38	psi	12.8% COV
	Sample B44	3,516.75	psi	13.2% COV



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Analysis 772 - Elongation at Yield, Films

Material: LDPE	Sample B43	178.26	Percent	133% COV
	Sample B44	190.17	Percent	133% COV

Analysis 773 - Elongation at Break, Films

Material: LDPE	Sample B43	622.75	Percent	20.6% COV
	Sample B44	675.26	Percent	21.4% COV

Analysis 774 - Thickness of Film Specimens

Material: LDPE	Sample B43	2.9778	mils	3.81% COV
	Sample B44	3.0812	mils	2.86% COV

Analysis 775 - Secant Modulus at 1% Strain

Material: LDPE	Sample B43	29,753.10	psi	21.9% COV
	Sample B44	30,074.16	psi	24.0% COV

Analysis 776 - Secant Modulus at 2% Strain

Material: LDPE	Sample B43	26,307.73	psi	9.35% COV
	Sample B44	26,452.22	psi	9.94% COV

Analysis 780 - Static Friction

Material: LDPE	Sample P43	0.18893	COF	44.6% COV
	Sample P44	0.17918	COF	41.0% COV

Analysis 781 - Kinetic Friction

Material: LDPE	Sample P43	0.11839	COF	53.3% COV
	Sample P44	0.11051	COF	48.5% COV

Analysis 782 - Tear Resistance of Film

Material: LDPE	Sample Q43	138.50	grams-force	11.7% COV
	Sample Q44	133.42	grams-force	20.3% COV

Analysis 785 - Percent Haze

Material: LDPE	Sample D43	27.034	Percent	9.26% COV
	Sample D44	32.819	Percent	9.42% COV

Analysis 786 - Total Transmittance

Material: LDPE	Sample D43	91.854	Percent	1.83% COV
	Sample D44	91.764	Percent	1.85% COV

Analysis 790 - Notched Izod Impact

Material: HIPS	Sample S43	1.7044	ft.lbf/in	6.58% COV
	Sample S44	2.8729	ft.lbf/in	9.38% COV

Analysis 791 - Notched Izod Impact

Material: ABS	Sample Z43	18.915	kJ/m ²	3.63% COV
	Sample Z44	18.862	kJ/m ²	3.65% COV

Analysis 792 - Notched Charpy Impact

Material: ABS	Sample M43	19.816	kJ/m ²	3.99% COV
	Sample M44	19.831	kJ/m ²	3.98% COV



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Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F43			Sample F44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2K3RPL		6,832.2	106.8	0.84	6,758.6	51.8	0.41
388XU4		6,790.7	65.3	0.52	6,817.7	111.0	0.87
38LGEZ		6,653.9	-71.5	-0.56	6,653.5	-53.2	-0.42
39JUZ8		6,578.3	-147.1	-1.16	6,574.5	-132.2	-1.04
3BRRMX		6,534.8	-190.6	-1.50	6,488.2	-218.5	-1.71
4KUM6T		6,596.0	-129.4	-1.02	6,662.4	-44.3	-0.35
4MJVC9		6,790.2	64.8	0.51	6,798.8	92.1	0.72
6MB7PM	X	5,628.0	-1,097.4	-8.66	5,610.0	-1,096.7	-8.59
736X7H		6,547.8	-177.6	-1.40	6,573.4	-133.3	-1.04
7A78EV		6,801.2	75.8	0.60	6,669.5	-37.3	-0.29
7M84DN		6,570.0	-155.4	-1.23	6,588.0	-118.7	-0.93
7Q7KMW	*	6,848.7	123.3	0.97	6,673.5	-33.2	-0.26
7R3X94		6,737.2	11.8	0.09	6,698.0	-8.7	-0.07
7XPMTE		6,724.6	-0.8	-0.01	6,714.8	8.1	0.06
8MMK8G	X	7,361.2	635.8	5.02	7,294.0	587.2	4.60
93FN3R	*	6,685.4	-40.0	-0.32	6,534.0	-172.8	-1.35
9H8GUK		6,587.7	-137.7	-1.09	6,645.7	-61.0	-0.48
9PQLKY		7,006.3	280.9	2.22	6,962.3	255.6	2.00
9VWCBK		6,609.8	-115.6	-0.91	6,664.4	-42.3	-0.33
9W8FHG		6,588.8	-136.6	-1.08	6,597.0	-109.7	-0.86
9Z7M6Y		6,659.4	-66.0	-0.52	6,579.2	-127.5	-1.00
AZ68CY		6,789.0	63.6	0.50	6,753.6	46.9	0.37
BE69PZ	X	6,451.3	-274.1	-2.16	6,697.9	-8.8	-0.07
BGA44W		6,901.0	175.6	1.39	6,889.0	182.3	1.43
BKR4LX		6,775.6	50.2	0.40	6,743.2	36.4	0.29
BVAKCJ		6,779.4	54.0	0.43	6,814.8	108.1	0.85
D2MCET		6,643.7	-81.7	-0.65	6,642.5	-64.2	-0.50
DQ7RRC		6,814.8	89.4	0.71	6,779.2	72.5	0.57
E4QRZP		6,827.3	101.9	0.80	6,843.2	136.5	1.07
E8P4XB		6,640.0	-85.4	-0.67	6,575.2	-131.5	-1.03
EB9ZNL		6,758.3	32.9	0.26	6,781.9	75.2	0.59
EGDYWQ		6,803.4	78.0	0.62	6,775.1	68.3	0.54
FB4XD9		6,718.2	-7.2	-0.06	6,727.2	20.5	0.16
FLP6BC		6,898.9	173.6	1.37	6,913.9	207.1	1.62
J8ENYR		6,912.6	187.2	1.48	6,945.4	238.7	1.87



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Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F43			Sample F44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JA2CCC		6,767.0	41.6	0.33	6,789.0	82.3	0.64
JCPLKT		6,837.8	112.4	0.89	6,836.8	130.1	1.02
JHUKZN		6,797.0	71.6	0.57	6,759.0	52.3	0.41
KHBZL6		6,604.0	-121.4	-0.96	6,550.8	-155.9	-1.22
KYDXMF		6,559.6	-165.8	-1.31	6,570.0	-136.7	-1.07
KZT2G8		6,863.2	137.9	1.09	6,895.2	188.4	1.48
LRT2JQ		6,719.9	-5.4	-0.04	6,630.9	-75.8	-0.59
LVAHXN		6,480.0	-245.4	-1.94	6,498.0	-208.7	-1.64
MGRV3W		6,800.6	75.2	0.59	6,790.6	83.9	0.66
NEFDLD		6,802.0	76.6	0.60	6,798.0	91.3	0.72
NMMH82		6,784.9	59.5	0.47	6,762.3	55.6	0.44
PG3EZY		6,590.6	-134.8	-1.06	6,538.4	-168.4	-1.32
PTAKWJ	*	6,422.4	-303.0	-2.39	6,385.2	-321.5	-2.52
PX4GG4		6,671.8	-53.6	-0.42	6,671.8	-34.9	-0.27
QQZYFW		6,642.0	-83.4	-0.66	6,661.4	-45.3	-0.36
R3DCHJ		6,831.6	106.2	0.84	6,867.8	161.1	1.26
RUFVE8		6,707.7	-17.7	-0.14	6,650.3	-56.4	-0.44
RZ4FK9	X	10.2	-6,715.2	-53.01	10.0	-6,696.8	-52.48
T3PKR6	X	6,258.0	-467.4	-3.69	6,228.0	-478.7	-3.75
TBYWXF		6,958.1	232.7	1.84	6,914.8	208.1	1.63
TN8MTW	*	6,779.0	53.6	0.42	6,597.4	-109.3	-0.86
TQD8GW		6,626.0	-99.4	-0.78	6,622.0	-84.7	-0.66
UDMMUE		6,770.0	44.6	0.35	6,794.0	87.3	0.68
UFQFNC		6,758.0	32.6	0.26	6,674.0	-32.7	-0.26
UXU42X	*	6,444.4	-281.0	-2.22	6,517.1	-189.7	-1.49
UZJALU		6,764.4	39.0	0.31	6,754.6	47.9	0.38
W2PEA3		6,527.6	-197.8	-1.56	6,447.0	-259.7	-2.04
WFJYTB		6,673.2	-52.2	-0.41	6,623.1	-83.7	-0.66
WMFXYQ		6,841.2	115.8	0.91	6,746.4	39.7	0.31
X6YA6P		6,607.4	-118.0	-0.93	6,612.4	-94.3	-0.74
XFFX2A		6,649.8	-75.6	-0.60	6,678.6	-28.1	-0.22
XQYBHT		6,850.2	124.8	0.99	6,865.6	158.8	1.24
XUVYUU		6,873.7	148.3	1.17	6,892.5	185.8	1.46
Y9BG7U		6,856.8	131.4	1.04	6,827.6	120.9	0.95
YA3LE8		6,871.3	145.9	1.15	6,858.9	152.1	1.19



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Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F43			Sample F44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
YP3E8P		6,653.5	-71.9	-0.57	6,703.7	-3.0	-0.02
YZ7AQU		6,820.0	94.6	0.75	6,729.4	22.7	0.18
Z69Z76		6,843.9	118.5	0.94	6,795.7	89.0	0.70
Z9PC22		6,596.4	-129.0	-1.02	6,617.0	-89.8	-0.70
ZGGPZZ	X	6,326.4	-399.0	-3.15	6,238.4	-468.3	-3.67

Summary Statistics		
	Sample F43	Sample F44
Grand Means	6,725.40 psi	6,706.74 psi
Std Dev Btwn Labs	126.67 psi	127.61 psi
Statistics based on 69 of 75 reporting participants		

Sample F43: ABS & Sample F44: ABS

Comments on Assigned Data Flags for Test #704

- BE69PZ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample F44.
- 6MB7PM (X) - Data for both samples are low. Possible Systematic Error.
- 8MMK8G (X) - Data for both samples are high. Possible Systematic Error.
- RZ4FK9 (X) - Extreme data.
- ZGGPZZ (X) - Data for both samples are low. Possible Systematic Error.
- T3PKR6 (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

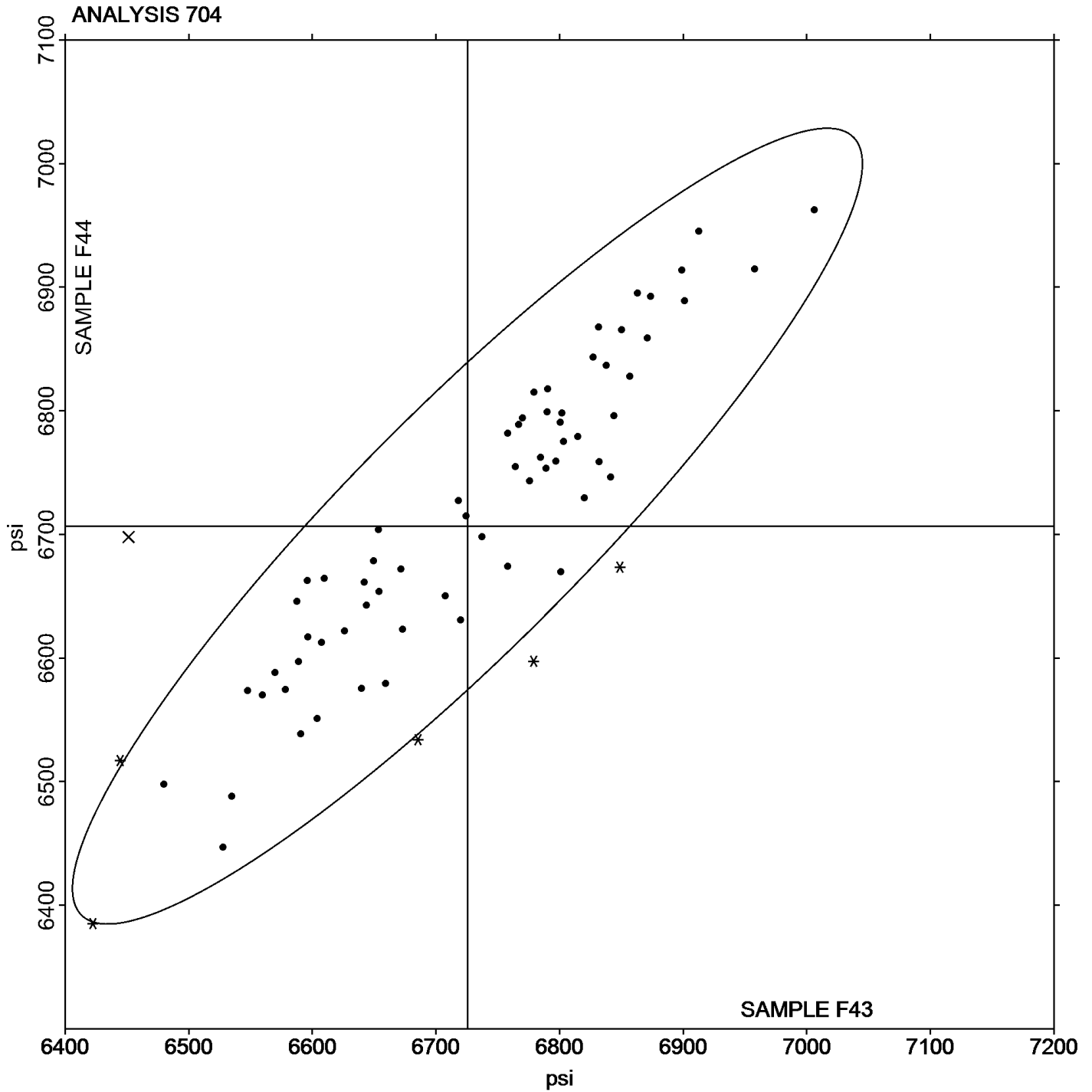
Analysis 704

Tensile Stress at Yield - psi

Report #102

2nd Qtr 2017

Grand Mean Sample F43: 6,725.40 psi Grand Mean Sample F44: 6,706.74 psi





Plastics Interlaboratory Testing Program

Report #102

Analysis 705

2nd Qtr 2017

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F43			Sample F44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
38LGEZ		4,986.1	164.1	0.81	4,945.9	121.6	0.58
39JUZ8		4,842.6	20.6	0.10	4,875.7	51.5	0.25
3BRRMX		4,688.8	-133.2	-0.66	4,646.2	-178.0	-0.85
4KUM6T		4,711.0	-111.0	-0.55	4,914.8	90.6	0.43
4MJVC9		4,959.4	137.4	0.68	4,686.0	-138.2	-0.66
6MB7PM		5,012.0	190.0	0.94	4,894.0	69.8	0.33
736X7H	*	4,646.3	-175.7	-0.87	5,036.8	212.6	1.01
7A78EV	X	5,085.1	263.0	1.30	4,566.1	-258.1	-1.23
7M84DN		5,010.0	188.0	0.93	5,164.0	339.8	1.62
7Q7KMW	X	6,187.9	1,365.9	6.77	5,835.2	1,011.0	4.82
7R3X94		4,681.4	-140.6	-0.70	4,689.6	-134.6	-0.64
7XPMTE		4,552.8	-269.2	-1.34	4,592.0	-232.2	-1.11
8MMK8G		5,139.6	317.5	1.57	5,153.5	329.3	1.57
93FN3R		4,712.6	-109.4	-0.54	4,799.7	-24.5	-0.12
9H8GUK		4,528.1	-293.9	-1.46	4,667.4	-156.9	-0.75
9PQLKY		4,733.7	-88.3	-0.44	4,802.4	-21.9	-0.10
9W8FHG		4,937.0	115.0	0.57	4,981.6	157.4	0.75
AZ68CY		4,884.0	62.0	0.31	4,831.8	7.6	0.04
BE69PZ		4,850.1	28.1	0.14	4,899.4	75.2	0.36
BGA44W		4,462.4	-359.6	-1.78	4,565.4	-258.8	-1.24
BVAKCJ		4,798.0	-24.0	-0.12	4,844.0	19.8	0.09
D2MCET		4,707.1	-114.9	-0.57	4,620.4	-203.9	-0.97
DQ7RRC		4,947.2	125.2	0.62	4,999.0	174.8	0.83
E4QRZP		4,639.2	-182.8	-0.91	4,596.0	-228.3	-1.09
EB9ZNL	X	5,514.2	692.2	3.43	5,685.1	860.9	4.11
EGDYWQ		4,887.6	65.6	0.33	4,907.1	82.8	0.40
FB4XD9		4,713.6	-108.4	-0.54	4,755.0	-69.2	-0.33
HQ9778	X	6,101.6	1,279.6	6.35	6,117.4	1,293.2	6.17
J8ENYR		5,118.4	296.4	1.47	5,117.8	293.6	1.40
JA2CCC		4,687.8	-134.2	-0.67	4,959.0	134.8	0.64
JCPLKT		5,280.4	458.4	2.27	5,333.6	509.4	2.43
JHUKZN		4,760.0	-62.0	-0.31	4,680.0	-144.2	-0.69
KHBZL6		4,766.2	-55.8	-0.28	4,669.8	-154.4	-0.74
KYDXMF		5,123.0	301.0	1.49	5,122.4	298.2	1.42
KZT2G8		4,879.1	57.1	0.28	5,041.6	217.3	1.04



Plastics Interlaboratory Testing Program

Report #102

Analysis 705

2nd Qtr 2017

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F43			Sample F44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
LRT2JQ		5,019.8	197.8	0.98	5,069.1	244.9	1.17
MGRV3W		4,684.6	-137.4	-0.68	4,730.8	-93.4	-0.45
NMMH82		4,716.2	-105.9	-0.53	4,706.5	-117.8	-0.56
PG3EZY		4,783.4	-38.7	-0.19	4,812.4	-11.9	-0.06
PTAKWJ	X	6,469.2	1,647.2	8.17	6,439.2	1,615.0	7.71
PX4GG4		4,960.3	138.3	0.69	5,163.4	339.1	1.62
QQZYFW		4,575.8	-246.2	-1.22	4,416.6	-407.6	-1.95
R3DCHJ		4,575.2	-246.8	-1.22	4,561.0	-263.2	-1.26
RUFVE8		4,592.2	-229.8	-1.14	4,406.5	-417.7	-1.99
RZ4FK9	X	10.2	-4,811.9	-23.86	10.0	-4,814.3	-22.97
T3PKR6	X	6,240.0	1,418.0	7.03	6,200.0	1,375.8	6.56
TBYWXF		5,298.9	476.9	2.36	5,113.7	289.5	1.38
TN8MTW	*	4,732.0	-90.0	-0.45	4,425.8	-398.4	-1.90
TQD8GW		4,804.0	-18.0	-0.09	4,822.0	-2.2	-0.01
UDMMUE		5,194.0	372.0	1.84	5,010.0	185.8	0.89
UFQFNC		5,001.4	179.4	0.89	4,914.8	90.6	0.43
UXU42X		4,541.2	-280.8	-1.39	4,607.6	-216.6	-1.03
UZJALU		4,682.8	-139.2	-0.69	4,793.4	-30.8	-0.15
WFJYTB		4,635.4	-186.6	-0.93	4,635.4	-188.8	-0.90
WMFXYQ		4,970.6	148.6	0.74	4,919.4	95.2	0.45
X6YA6P		5,129.8	307.8	1.53	4,954.0	129.8	0.62
XFFX2A		4,691.2	-130.8	-0.65	4,839.2	15.0	0.07
XQYBHT		4,613.7	-208.3	-1.03	4,670.0	-154.3	-0.74
XUVYUU		4,819.1	-3.0	-0.01	4,657.5	-166.8	-0.80
XZ48F6	X	6,859.9	2,037.9	10.11	6,807.4	1,983.1	9.46
Y9BG7U		4,813.2	-8.8	-0.04	4,716.4	-107.8	-0.51
YA3LE8		4,675.0	-147.0	-0.73	4,731.0	-93.3	-0.45
YP3E8P		4,793.8	-28.2	-0.14	4,955.7	131.4	0.63
Z69Z76		5,110.1	288.1	1.43	5,033.5	209.3	1.00
Z9PC22		4,574.8	-247.2	-1.23	4,455.0	-369.2	-1.76
ZGGPZZ		5,044.0	222.0	1.10	4,893.8	69.6	0.33



Plastics Interlaboratory Testing Program

Report #102

Analysis 705

2nd Qtr 2017

Tensile Stress at Break - psi

Summary Statistics	Sample F43	Sample F44
Grand Means	4,822.04 psi	4,824.25 psi
Std Dev Btwn Labs	201.64 psi	209.56 psi

Statistics based on 58 of 66 reporting participants

Sample F43: ABS & Sample F44: ABS

Comments on Assigned Data Flags for Test #705

- HQ9778 (X) - Data for both samples are high. Possible Systematic Error.
- 7Q7KMW (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- 7A78EV (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample F43.
- EB9ZNL (X) - Data for both samples are high. Possible Systematic Error.
- PTAKWJ (X) - Data for both samples are high. Possible Systematic Error.
- RZ4FK9 (X) - Extreme data.
- T3PKR6 (X) - Data for both samples are high. Possible Systematic Error.
- XZ48F6 (X) - Extreme data.



Plastics Interlaboratory Testing Program

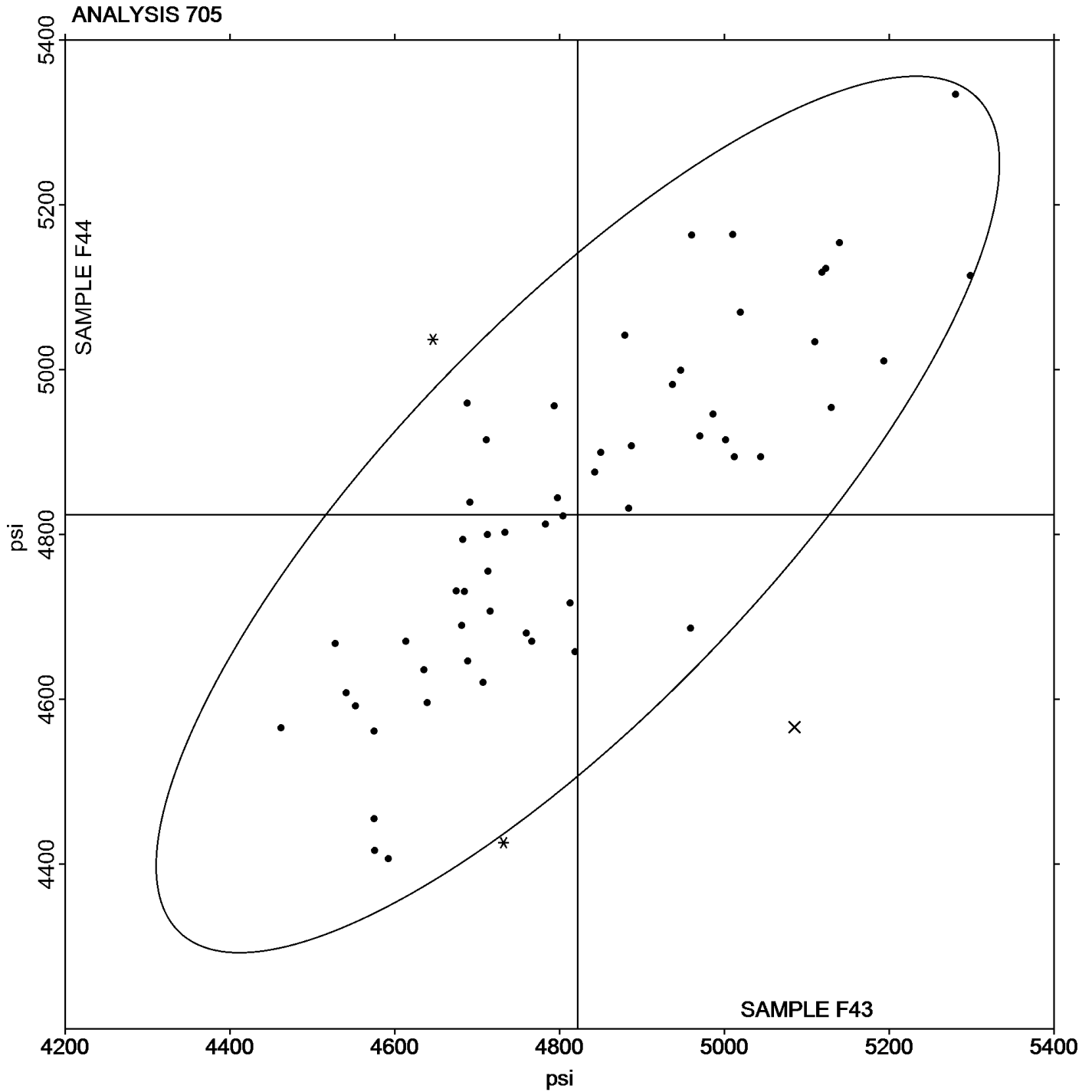
Report #102

Analysis 705

2nd Qtr 2017

Tensile Stress at Break - psi

Grand Mean Sample F43: 4,822.04 psi Grand Mean Sample F44: 4,824.25 psi





Plastics Interlaboratory Testing Program

Report #102

Analysis 706

2nd Qtr 2017

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F43			Sample F44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
388XU4		2.628	0.073	0.78	2.628	0.078	0.75
38LGEZ	*	2.412	-0.144	-1.54	2.320	-0.230	-2.23
39JUZ8		2.400	-0.155	-1.66	2.374	-0.176	-1.70
3BRRMX	*	2.271	-0.285	-3.06	2.228	-0.323	-3.12
4KUM6T		2.638	0.083	0.89	2.652	0.102	0.99
4MJVC9		2.644	0.089	0.96	2.650	0.100	0.97
6MB7PM	X	1.754	-0.801	-8.62	1.750	-0.800	-7.74
736X7H		2.440	-0.115	-1.24	2.424	-0.126	-1.22
7A78EV	*	2.750	0.195	2.10	2.670	0.120	1.16
7M84DN		2.590	0.035	0.38	2.590	0.040	0.39
7Q7KMW		2.544	-0.011	-0.12	2.486	-0.064	-0.62
7R3X94		2.566	0.011	0.12	2.602	0.052	0.50
7XPMTE		2.528	-0.027	-0.29	2.538	-0.012	-0.12
93FN3R		2.644	0.089	0.96	2.708	0.158	1.53
9H8GUK	*	2.420	-0.135	-1.45	2.500	-0.050	-0.49
9PQLKY		2.348	-0.208	-2.23	2.365	-0.186	-1.80
9VWCBK		2.496	-0.059	-0.64	2.484	-0.066	-0.64
9W8FHG		2.644	0.089	0.96	2.700	0.150	1.45
BE69PZ	X	1.734	-0.821	-8.83	2.320	-0.230	-2.23
BGA44W		2.572	0.017	0.18	2.564	0.014	0.13
BVAKCJ		2.508	-0.047	-0.51	2.566	0.016	0.15
E4QRZP		2.640	0.085	0.91	2.630	0.080	0.77
E8P4XB		2.566	0.011	0.12	2.562	0.012	0.11
EB9ZNL		2.696	0.141	1.52	2.700	0.150	1.45
EGDYWQ		2.499	-0.057	-0.61	2.433	-0.118	-1.14
FB4XD9		2.602	0.047	0.50	2.620	0.070	0.68
HQ9778		2.354	-0.201	-2.16	2.372	-0.178	-1.72
J8ENYR		2.606	0.051	0.55	2.646	0.096	0.93
JA2CCC		2.528	-0.027	-0.29	2.480	-0.070	-0.68
JCPLKT		2.630	0.075	0.81	2.632	0.082	0.79
JHUKZN		2.560	0.005	0.05	2.520	-0.030	-0.29
KHBZL6		2.574	0.019	0.20	2.558	0.008	0.08
KYDXMF		2.500	-0.055	-0.59	2.520	-0.030	-0.29
KZT2G8		2.530	-0.025	-0.27	2.512	-0.038	-0.37
LRT2JQ		2.636	0.081	0.87	2.646	0.096	0.93



Plastics Interlaboratory Testing Program

Report #102

Analysis 706

2nd Qtr 2017

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F43			Sample F44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MGRV3W		2.622	0.067	0.72	2.614	0.064	0.62
NMMH82	X	3.000	0.445	4.79	3.000	0.450	4.35
PG3EZY		2.502	-0.053	-0.57	2.486	-0.064	-0.62
PTAKWJ		2.588	0.033	0.35	2.518	-0.032	-0.31
PX4GG4		2.526	-0.029	-0.31	2.504	-0.046	-0.45
QQZYFW	X	6.016	3.461	37.23	6.048	3.498	33.84
R3DCHJ		2.620	0.065	0.70	2.638	0.088	0.85
RUFVE8	X	7.380	4.825	51.90	7.300	4.750	45.95
RZ4FK9	X	0.032	-2.523	-27.14	0.008	-2.542	-24.59
T3PKR6	X	2.148	-0.407	-4.38	1.932	-0.618	-5.98
TN8MTW		2.480	-0.075	-0.81	2.460	-0.090	-0.87
TQD8GW		2.488	-0.067	-0.72	2.482	-0.068	-0.66
UDMMUE	X	0.089	-2.466	-26.53	0.075	-2.476	-23.95
UFQFNC		2.558	0.003	0.03	2.496	-0.054	-0.52
UXU42X		2.588	0.033	0.35	2.668	0.118	1.14
UZJALU		2.666	0.111	1.19	2.660	0.110	1.06
W2PEA3		2.648	0.093	1.00	2.666	0.116	1.12
WFJYTB		2.496	-0.059	-0.64	2.512	-0.038	-0.37
WMFXYQ		2.596	0.041	0.44	2.596	0.046	0.44
X6YA6P		2.554	-0.001	-0.01	2.584	0.034	0.33
XFFX2A		2.500	-0.055	-0.59	2.540	-0.010	-0.10
XQYBHT		2.650	0.095	1.02	2.656	0.106	1.02
XUVYUU		2.618	0.063	0.68	2.628	0.078	0.75
Y9BG7U		2.620	0.065	0.70	2.590	0.040	0.39
YZ7AQU		2.596	0.041	0.44	2.522	-0.028	-0.27
Z69Z76		2.622	0.067	0.72	2.570	0.020	0.19
Z9PC22		2.476	-0.079	-0.85	2.440	-0.110	-1.07
ZGGPZZ	X	1.560	-0.995	-10.70	1.380	-1.170	-11.32



Plastics Interlaboratory Testing Program

Report #102

Analysis 706

2nd Qtr 2017

Percent Elongation at Yield - Percent

Summary Statistics	<u>Sample F43</u>	<u>Sample F44</u>
Grand Means	2.5551 Percent	2.5502 Percent
Std Dev Btwn Labs	0.0930 Percent	0.1034 Percent
<small>Statistics based on 54 of 63 reporting participants</small>		

Sample F43: ABS & Sample F44: ABS

Comments on Assigned Data Flags for Test #706

- BE69PZ (X) - Data for sample F43 are low. Inconsistent within the determinations of sample F44.
- 6MB7PM (X) - Data for both samples are low. Possible Systematic Error.
- QQZYFW (X) - Extreme data.
- NMMH82 (X) - Data for both samples are high. Possible Systematic Error.
- UDMMUE (X) - Extreme data.
- RZ4FK9 (X) - Extreme data.
- ZGGPZZ (X) - High data for all samples. Also inconsistent in testing within both samples.
- T3PKR6 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample F44.
- RUFVE8 (X) - Extreme data.



Plastics Interlaboratory Testing Program

Report #102

Analysis 708

2nd Qtr 2017

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F43			Sample F44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
38LGEZ	*	374.86	29.55	1.91	357.69	12.95	0.85
39JUZ8		320.86	-24.45	-1.58	323.30	-21.44	-1.42
3BRRMX		370.20	24.89	1.61	364.40	19.66	1.30
4KUM6T		338.20	-7.11	-0.46	344.14	-0.60	-0.04
4MJVC9		325.80	-19.52	-1.26	329.57	-15.17	-1.00
6MB7PM		353.20	7.89	0.51	354.60	9.86	0.65
736X7H		337.19	-8.12	-0.53	353.70	8.96	0.59
7A78EV		338.81	-6.50	-0.42	326.48	-18.26	-1.21
7M84DN		329.60	-15.71	-1.02	325.60	-19.14	-1.26
7Q7KMW		346.38	1.07	0.07	345.83	1.09	0.07
7R3X94		335.76	-9.55	-0.62	330.20	-14.54	-0.96
7XPMTE		330.88	-14.43	-0.93	331.94	-12.80	-0.84
93FN3R	X	324.52	-20.80	-1.35	267.07	-77.67	-5.13
9H8GUK		320.01	-25.30	-1.64	320.33	-24.41	-1.61
9PQLKY		357.29	11.98	0.77	352.16	7.42	0.49
9VWCBK	*	340.20	-5.11	-0.33	358.24	13.50	0.89
9W8FHG	X	280.30	-65.01	-4.20	281.61	-63.13	-4.17
9Z7M6Y		351.06	5.74	0.37	348.60	3.86	0.25
BE69PZ	X	515.47	170.15	11.00	526.78	182.04	12.02
BGA44W		359.32	14.01	0.91	362.38	17.64	1.16
BVAKCJ		349.11	3.79	0.25	348.62	3.88	0.26
E4QRZP		329.53	-15.79	-1.02	332.08	-12.66	-0.84
E8P4XB		350.18	4.87	0.31	348.96	4.22	0.28
EB9ZNL		312.64	-32.67	-2.11	313.20	-31.54	-2.08
EGDYWQ	X	266.00	-79.31	-5.13	287.48	-57.26	-3.78
FB4XD9		350.68	5.37	0.35	345.50	0.76	0.05
JA2CCC	*	350.96	5.65	0.37	367.78	23.04	1.52
JCPLKT		355.18	9.87	0.64	350.68	5.94	0.39
JHUKZN		339.00	-6.31	-0.41	346.20	1.46	0.10
KHBZL6		329.46	-15.85	-1.03	328.58	-16.16	-1.07
KYDXMF		348.52	3.21	0.21	349.60	4.86	0.32
KZT2G8	*	381.16	35.85	2.32	386.09	41.35	2.73
LNDPKN		345.15	-0.17	-0.01	348.21	3.47	0.23
LRT2JQ		340.86	-4.46	-0.29	332.50	-12.24	-0.81
MGRV3W		341.42	-3.89	-0.25	341.26	-3.48	-0.23



Plastics Interlaboratory Testing Program

Report #102

Analysis 708

2nd Qtr 2017

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F43			Sample F44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NMMH82	X	0.46	-344.85	-22.30	0.45	-344.28	-22.73
PG3EZY		353.32	8.00	0.52	343.45	-1.29	-0.08
PTAKWJ		361.48	16.16	1.05	357.42	12.68	0.84
PX4GG4		357.14	11.83	0.77	364.48	19.74	1.30
R3DCHJ		347.82	2.51	0.16	347.62	2.88	0.19
RUFVE8	X	120.75	-224.57	-14.52	120.30	-224.44	-14.81
RZ4FK9	X	28.44	-316.87	-20.49	15.94	-328.79	-21.70
T3PKR6		360.20	14.89	0.96	354.80	10.06	0.66
TN8MTW		365.98	20.67	1.34	361.32	16.58	1.09
TQD8GW		354.60	9.29	0.60	357.20	12.46	0.82
UDMMUE		335.40	-9.91	-0.64	346.20	1.46	0.10
UFQFNC		363.82	18.51	1.20	359.80	15.06	0.99
UXU42X		336.22	-9.09	-0.59	329.80	-14.94	-0.99
UZJALU		352.32	7.01	0.45	352.18	7.44	0.49
W2PEA3		311.41	-33.91	-2.19	312.27	-32.47	-2.14
WFJYTB		352.62	7.30	0.47	346.88	2.14	0.14
WMFXYQ		347.82	2.51	0.16	341.60	-3.14	-0.21
X6YA6P		317.94	-27.37	-1.77	319.20	-25.54	-1.69
XFFX2A		321.80	-23.51	-1.52	320.60	-24.14	-1.59
XQYBHT		342.06	-3.25	-0.21	344.32	-0.42	-0.03
XUVYUU		355.29	9.97	0.65	340.93	-3.81	-0.25
Y9BG7U		347.72	2.41	0.16	349.34	4.60	0.30
YZ7AQU		358.12	12.81	0.83	354.38	9.64	0.64
Z69Z76		359.78	14.47	0.94	354.22	9.48	0.63
Z9PC22	X	592.51	247.19	15.99	603.38	258.64	17.07

Summary Statistics		
	Sample F43	Sample F44
Grand Means	345.314 ksi	344.739 ksi
Stnd Dev Btwn Labs	15.462 ksi	15.149 ksi
Statistics based on 52 of 60 reporting participants		

Sample F43: ABS & Sample F44: ABS



Comments on Assigned Data Flags for Test #708

BE69PZ (X) - Extreme data.

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

9W8FHG (X) - Data for both samples are low. Possible Systematic Error.

NMMH82 (X) - Extreme data.

RZ4FK9 (X) - Extreme data.

RUFVE8 (X) - Extreme data.

93FN3R (X) - Inconsistent in testing between samples, data for Sample F44 are low.

Z9PC22 (X) - Extreme data.



Plastics Interlaboratory Testing Program

Report #102

Analysis 710

2nd Qtr 2017

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

WebCode	Data Flag	Sample E43			Sample E44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
388XU4		106.75	-1.36	-0.88	106.85	-0.96	-0.67	CE
4MJVC9		105.08	-3.03	-1.97	104.93	-2.89	-2.01	TO
7Q7KMW		109.03	0.92	0.59	108.15	0.34	0.24	CE
7R3X94		108.13	0.02	0.01	107.35	-0.46	-0.32	CF
9H8GUK	*	109.88	1.77	1.14	107.38	-0.44	-0.30	CE
BUFYJT		106.25	-1.86	-1.20	107.50	-0.31	-0.22	XX
E4QRZP		109.60	1.49	0.97	109.05	1.24	0.86	AT
E8P4XB		105.30	-2.81	-1.82	105.25	-2.56	-1.78	TO
FJGW4D		108.25	0.14	0.09	108.83	1.01	0.71	DN
FLP6BC		109.36	1.25	0.81	107.95	0.14	0.10	TO
HQ9778		106.83	-1.28	-0.83	106.58	-1.24	-0.86	TO
J8ENYR		106.53	-1.58	-1.03	107.35	-0.46	-0.32	DN
JA2CCC		107.58	-0.53	-0.35	106.95	-0.86	-0.60	TO
JCPLKT		108.48	0.37	0.24	108.83	1.01	0.71	DN
KWBYD8		110.25	2.14	1.39	110.90	3.09	2.15	XX
KYDXMF		108.60	0.49	0.32	107.05	-0.76	-0.53	CE
MGRV3W	X	117.25	9.14	5.92	117.15	9.34	6.51	CE
MHLGX9		107.60	-0.51	-0.33	107.48	-0.34	-0.23	CE
NVK8TC	X	106.28	-1.83	-1.19	101.90	-5.91	-4.12	TO
PX4GG4		108.05	-0.06	-0.04	107.43	-0.39	-0.27	RO
R3DCHJ		105.65	-2.46	-1.59	105.80	-2.01	-1.40	RO
RUFVE8		109.95	1.84	1.19	109.18	1.36	0.95	CE
TBYWXF		107.58	-0.53	-0.35	107.50	-0.31	-0.22	XX
TN8MTW		109.30	1.19	0.77	108.33	0.51	0.36	TO
UFQFNC	*	111.38	3.27	2.12	111.83	4.01	2.80	XX
UXU42X		108.68	0.57	0.37	108.53	0.71	0.50	CE
UZJALU		108.43	0.32	0.20	108.18	0.36	0.25	XX
WFJYTB		107.00	-1.11	-0.72	107.08	-0.74	-0.51	TY
WMFXYQ		109.90	1.79	1.16	108.68	0.86	0.60	CE
XQYBHT		107.65	-0.46	-0.30	107.35	-0.46	-0.32	ZW
XUVYUU		108.18	0.07	0.04	108.33	0.51	0.36	AT



Plastics Interlaboratory Testing Program

Report #102

Analysis 710

2nd Qtr 2017

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

Summary Statistics		
	<u>Sample E43</u>	<u>Sample E44</u>
Grand Means	108.110 Degrees C	107.811 Degrees C
Stnd Dev Btwn Labs	1.543 Degrees C	1.435 Degrees C
Statistics based on 29 of 31 reporting participants		

Sample E43: PC/ABS & Sample E44: PC/ABS

Comments on Assigned Data Flags for Test #710

NVK8TC (X) - Inconsistent in testing between samples, data for Sample E44 are low.

MGRV3W (X) - Data for both samples are high. Possible Systematic Error.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

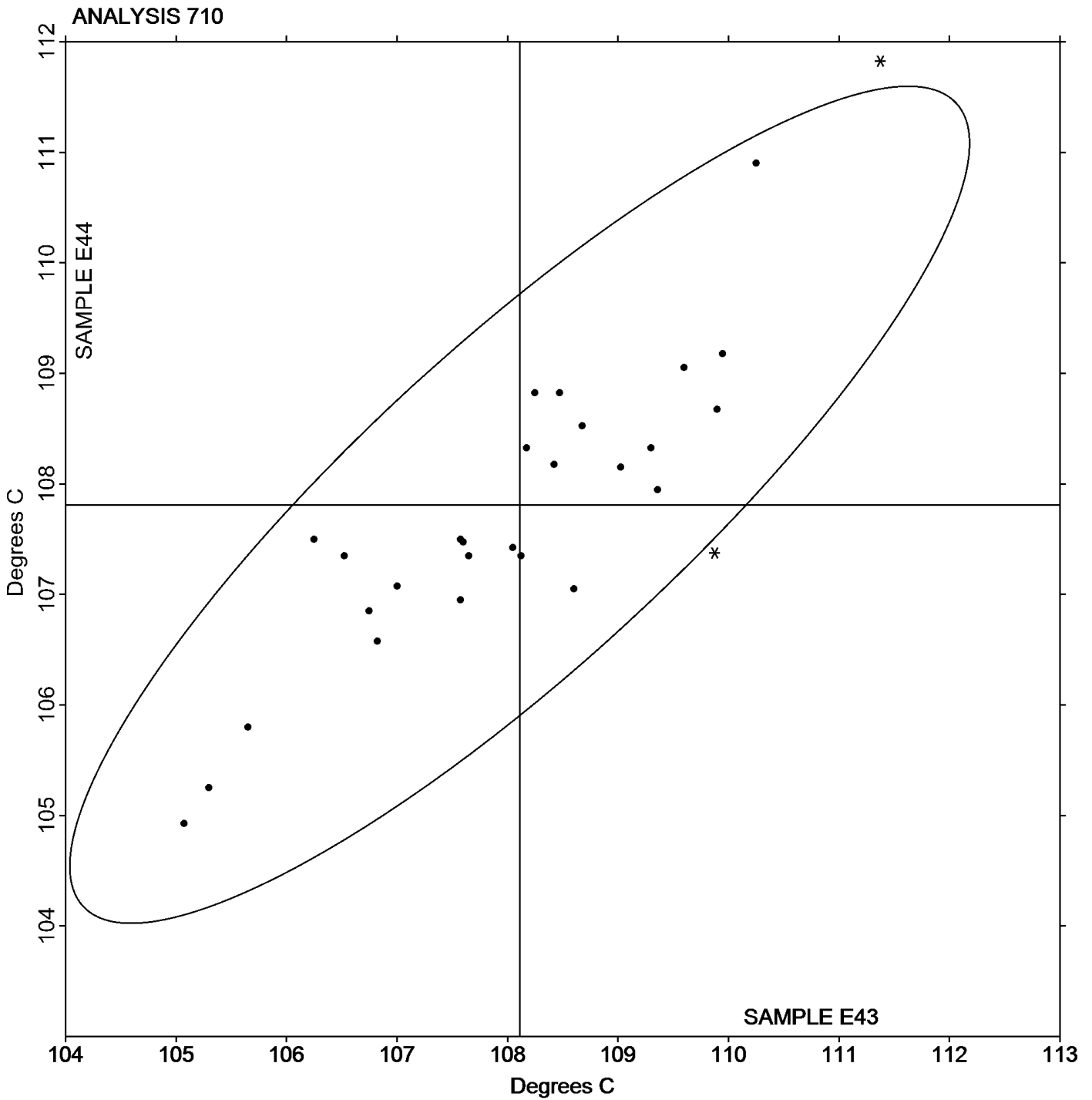
Report #102

Analysis 710

2nd Qtr 2017

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

Grand Mean Sample E43: 108.11 Degrees C Grand Mean Sample E44: 107.81 Degrees C





Plastics Interlaboratory Testing Program

Report #102

Analysis 711

2nd Qtr 2017

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

WebCode	Data Flag	Sample G43			Sample G44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
388XU4		82.8	-1.2	-0.39	70.5	0.6	0.34	CE
4MJVC9		82.3	-1.8	-0.56	68.4	-1.5	-0.85	TO
AZ2RWD		79.2	-4.9	-1.53	67.9	-2.0	-1.13	AT
DJNAKV		83.3	-0.8	-0.24	69.3	-0.6	-0.31	CE
E8P4XB		83.8	-0.3	-0.09	69.0	-0.9	-0.48	TO
FLP6BC		82.4	-1.7	-0.52	67.6	-2.3	-1.27	TO
JLWFJR		86.4	2.3	0.73	72.2	2.3	1.29	CE
KYDXMF		79.9	-4.1	-1.30	68.5	-1.4	-0.76	CE
MGRV3W		87.2	3.1	0.99	70.4	0.5	0.28	CE
MHLGX9		84.0	-0.1	-0.02	69.7	-0.2	-0.11	CE
RUFVE8		90.1	6.1	1.90	72.1	2.2	1.26	CE
UFQFNC		87.3	3.3	1.02	73.0	3.1	1.74	XX

Summary Statistics

Grand Means

Sample G43

84.03 Degrees C

Sample G44

69.85 Degrees C

Std Dev Btwn Labs

3.19 Degrees C

1.78 Degrees C

Statistics based on 12 of 12 reporting participants

Sample G43: PP & Sample G44: PP

Key to Instrument Codes Reported by Participants

AT Atlas

CE Ceast

TO Tinius Olsen

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

Report #102

Analysis 712

2nd Qtr 2017

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

WebCode	Data Flag	Sample N43			Sample N44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
23HWDY		75.78	0.21	0.16	75.18	-0.29	-0.23	AT
388XU4		73.28	-2.29	-1.78	74.05	-1.41	-1.12	CE
4MJVC9		74.18	-1.39	-1.08	73.98	-1.49	-1.18	TO
6AQNWJ		76.40	0.84	0.65	76.35	0.89	0.70	CE
6KLZ6Q		76.50	0.94	0.73	76.23	0.76	0.61	DN
7A78EV		75.40	-0.16	-0.13	76.38	0.91	0.72	CE
7LTL8X		78.45	2.89	2.24	77.53	2.06	1.64	CF
92NF4N		76.20	0.64	0.49	75.30	-0.16	-0.13	AT
AZMZ93		75.93	0.36	0.28	76.53	1.06	0.84	CF
B9BHVA		77.00	1.44	1.11	76.40	0.94	0.74	CE
E4QRZP		75.78	0.21	0.16	74.88	-0.59	-0.47	AT
EGDYWQ		74.63	-0.94	-0.73	74.68	-0.79	-0.62	CE
EHNQ4L		74.43	-1.14	-0.88	74.55	-0.91	-0.72	TO
FJGW4D		75.35	-0.21	-0.17	75.05	-0.41	-0.33	DN
FLP6BC		75.05	-0.52	-0.40	74.75	-0.71	-0.56	TO
GZYAYG		77.93	2.36	1.83	77.85	2.39	1.90	CE
JHUKZN		75.88	0.31	0.24	75.83	0.36	0.29	XX
JLWFJR		76.75	1.19	0.92	76.48	1.02	0.81	CF
LVAHXN		75.85	0.29	0.22	75.93	0.46	0.37	XX
MHLGX9		73.93	-1.64	-1.27	74.53	-0.94	-0.74	CE
MRRGFM	*	76.58	1.01	0.79	77.85	2.39	1.90	CE
N43AHM		75.15	-0.41	-0.32	75.00	-0.46	-0.37	AT
NEFDLD		74.33	-1.24	-0.96	73.83	-1.64	-1.30	XX
NEYJK3		78.43	2.86	2.22	77.73	2.26	1.80	TO
NKKFL8		75.05	-0.51	-0.40	74.80	-0.66	-0.53	IN
PTYEZH		74.23	-1.34	-1.04	74.50	-0.96	-0.76	CE
R39W4X		76.08	0.51	0.40	75.73	0.26	0.21	AT
RUFVE8		77.00	1.44	1.11	77.35	1.89	1.50	CE
TJFFEU		76.33	0.76	0.59	76.15	0.69	0.55	AT
TN8MTW		74.88	-0.69	-0.53	74.65	-0.81	-0.64	TO
TQU3LD		75.18	-0.39	-0.30	75.55	0.09	0.07	TY
UZJALU		74.08	-1.49	-1.16	73.88	-1.59	-1.26	IN
VCRBXD		74.98	-0.59	-0.46	74.73	-0.74	-0.58	TO
WFJYTB		75.05	-0.51	-0.40	75.15	-0.31	-0.25	TY
WPQMH3		74.73	-0.84	-0.65	74.33	-1.14	-0.90	CE



Plastics Interlaboratory Testing Program

Report #102

Analysis 712

2nd Qtr 2017

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

WebCode	Data Flag	Sample N43			Sample N44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
X2VJYB		76.98	1.41	1.10	77.00	1.54	1.22	DN
XQYBHT		74.63	-0.94	-0.73	74.50	-0.96	-0.76	ZW
Z9PC22		72.75	-2.81	-2.18	72.38	-3.09	-2.45	XX
ZNHVZX		75.95	0.39	0.30	75.53	0.06	0.05	DN

Summary Statistics

	Sample N43	Sample N44
Grand Means	75.563 Degrees C	75.462 Degrees C
Std Dev Btwn Labs	1.289 Degrees C	1.260 Degrees C

Statistics based on 39 of 39 reporting participants

Sample N43: ABS & Sample N44: ABS

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

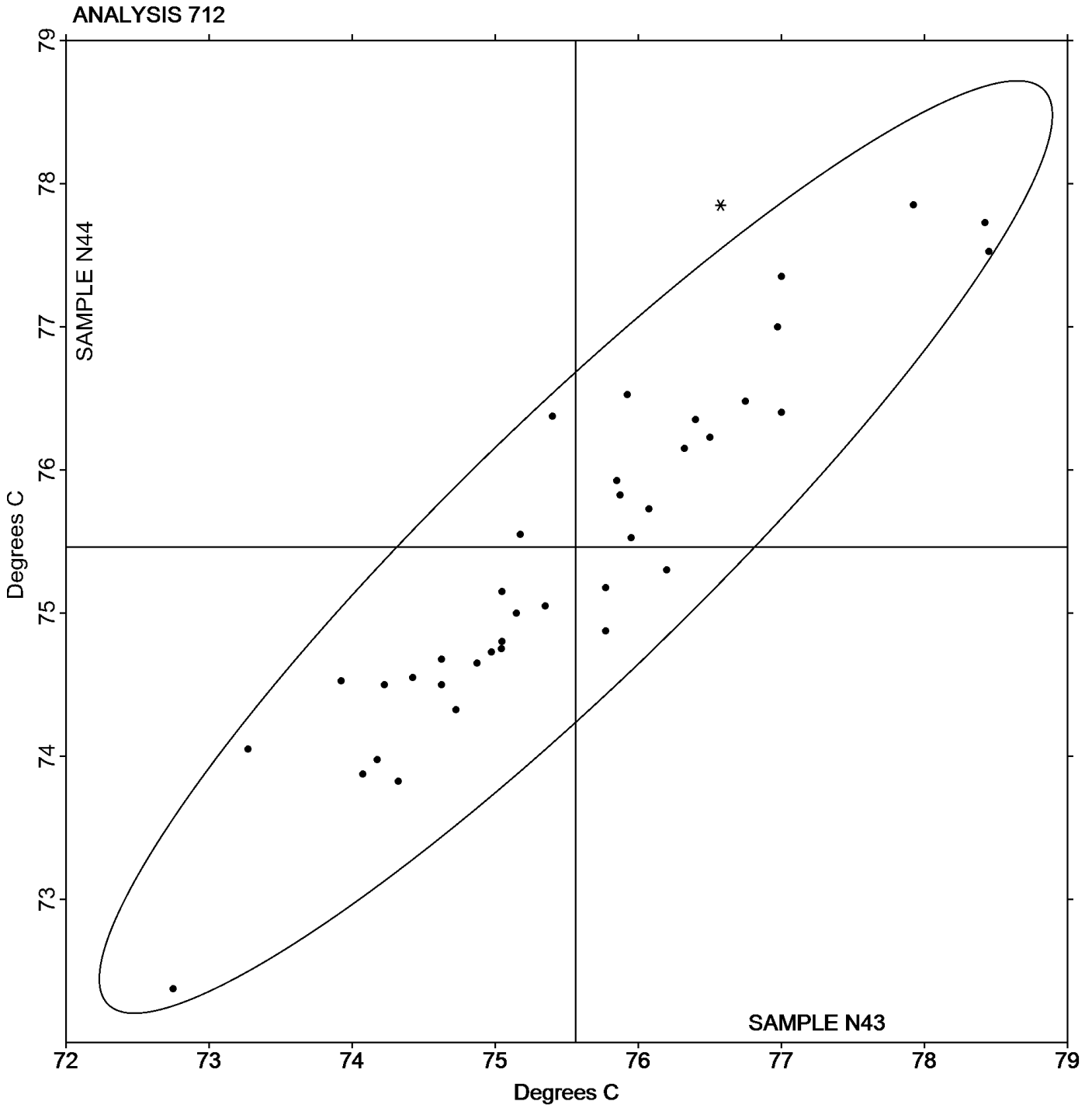
Report #102

Analysis 712

2nd Qtr 2017

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

Grand Mean Sample N43: 75.563 Degrees C Grand Mean Sample N44: 75.462 Degrees C





Plastics Interlaboratory Testing Program

Report #102

Analysis 715

2nd Qtr 2017

Vicat Softening Temperature (Rate A)

WebCode	Data Flag	Sample H43			Sample H44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
39JUZ8		139.50	-0.94	-1.22	139.58	-0.84	-1.11	DN
4MJVC9		140.18	-0.25	-0.33	140.07	-0.35	-0.47	TO
7A78EV		142.12	1.68	2.19	142.08	1.66	2.21	CE
9H8GUK		141.35	0.91	1.19	141.07	0.65	0.86	CE
9VWCBK		140.27	-0.17	-0.22	140.22	-0.20	-0.27	AT
DJNAKV		140.42	-0.02	-0.03	140.32	-0.10	-0.14	CE
DM8E88		140.10	-0.34	-0.44	139.95	-0.47	-0.62	CE
E4QRZP		140.50	0.06	0.08	140.55	0.13	0.17	AT
FB4XD9		139.42	-1.02	-1.33	139.78	-0.64	-0.85	CE
FE498M		140.63	0.20	0.26	140.62	0.20	0.26	CE
GZYAYG		141.37	0.93	1.21	141.23	0.81	1.08	CF
JCPLKT		139.15	-1.29	-1.68	139.07	-1.35	-1.80	QA
JLWFJR		140.87	0.43	0.56	141.17	0.75	0.99	CF
KKGEFP		140.50	0.06	0.08	140.45	0.03	0.04	CE
KVB22Q		141.07	0.63	0.82	140.90	0.48	0.64	TO
MHLGX9		139.53	-0.90	-1.18	139.32	-1.10	-1.47	CE
PX4GG4		140.18	-0.25	-0.33	140.27	-0.15	-0.20	RO
WFJYTB		139.97	-0.47	-0.61	140.03	-0.39	-0.51	TY
XQYBHT		141.18	0.75	0.97	141.30	0.88	1.17	CF

Summary Statistics		
	Sample H43	Sample H44
Grand Means	140.437 Degrees C	140.419 Degrees C
Std Dev Btwn Labs	0.767 Degrees C	0.752 Degrees C
Statistics based on 19 of 19 reporting participants		

Sample H43: PC/ABS & Sample H44: PC/ABS

Key to Instrument Codes Reported by Participants

AT Atlas	CE Ceast
CF Coesfeld	DN DYNISCO
QA Qualitest	RO Rosand
TO Tinius Olsen	TY Toyoseiki



Plastics Interlaboratory Testing Program

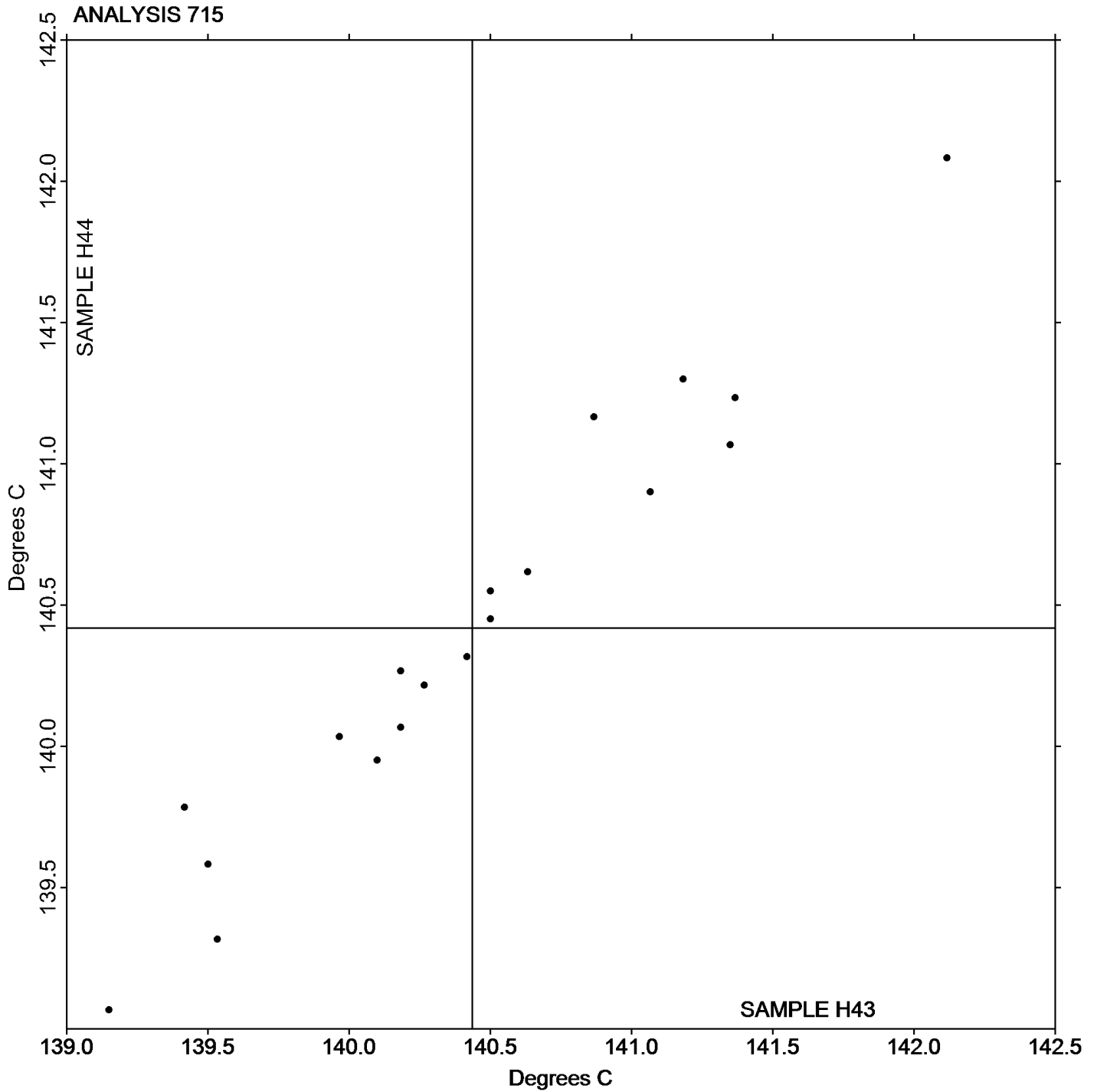
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Analysis 715

2nd Qtr 2017

Vicat Softening Temperature (Rate A)

Grand Mean Sample H43: 140.44 Degrees C Grand Mean Sample H44: 140.42 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 #102

Analysis 716

2nd Qtr 2017

Vicat Softening Temperature (Rate B)

WebCode	Data Flag	Sample R43			Sample R44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
39JUZ8		141.10	-1.05	-1.15	141.32	-0.73	-0.82	DN
3JPDZQ		141.50	-0.65	-0.71	140.83	-1.21	-1.36	TO
4MJVC9		141.53	-0.62	-0.68	141.47	-0.58	-0.65	TO
7A78EV	*	144.27	2.11	2.30	143.63	1.59	1.78	CE
9H8GUK		142.87	0.71	0.77	142.80	0.75	0.84	CE
9VWCBK		142.18	0.03	0.03	142.20	0.15	0.17	AT
DJNAKV		141.85	-0.30	-0.33	141.89	-0.16	-0.18	CE
DM8E88	*	139.65	-2.50	-2.72	139.55	-2.50	-2.79	CE
E4QRZP		142.33	0.18	0.19	142.37	0.32	0.36	AT
FB4XD9		141.60	-0.55	-0.60	141.40	-0.65	-0.72	CE
FLP6BC		143.10	0.94	1.02	142.86	0.81	0.91	TO
GZYAYG		142.37	0.21	0.23	142.17	0.12	0.13	CF
JCPLKT		142.63	0.48	0.52	142.77	0.72	0.81	DN
JLWFJR		142.73	0.58	0.63	142.90	0.85	0.96	CF
KKGEFP		142.23	0.08	0.09	142.10	0.05	0.06	CE
KVB22Q		142.43	0.28	0.30	142.40	0.35	0.40	TO
PX4GG4		142.18	0.03	0.03	142.23	0.19	0.21	RO
WFJYTB		142.05	-0.10	-0.11	141.82	-0.23	-0.26	TY
XQYBHT		142.32	0.16	0.18	142.18	0.14	0.15	CF

Summary Statistics		Sample R43	Sample R44
Grand Means		142.154 Degrees C	142.046 Degrees C
Stnd Dev Btwn Labs		0.919 Degrees C	0.894 Degrees C
Statistics based on 19 of 19 reporting participants			

Sample R43: PC/ABS & Sample R44: PC/ABS

Key to Instrument Codes Reported by Participants

AT Atlas	CE Ceast
CF Coesfeld	DN DYNISCO
RO Rosand	TO Tinius Olsen
TY Toyoseiki	



Plastics Interlaboratory Testing Program

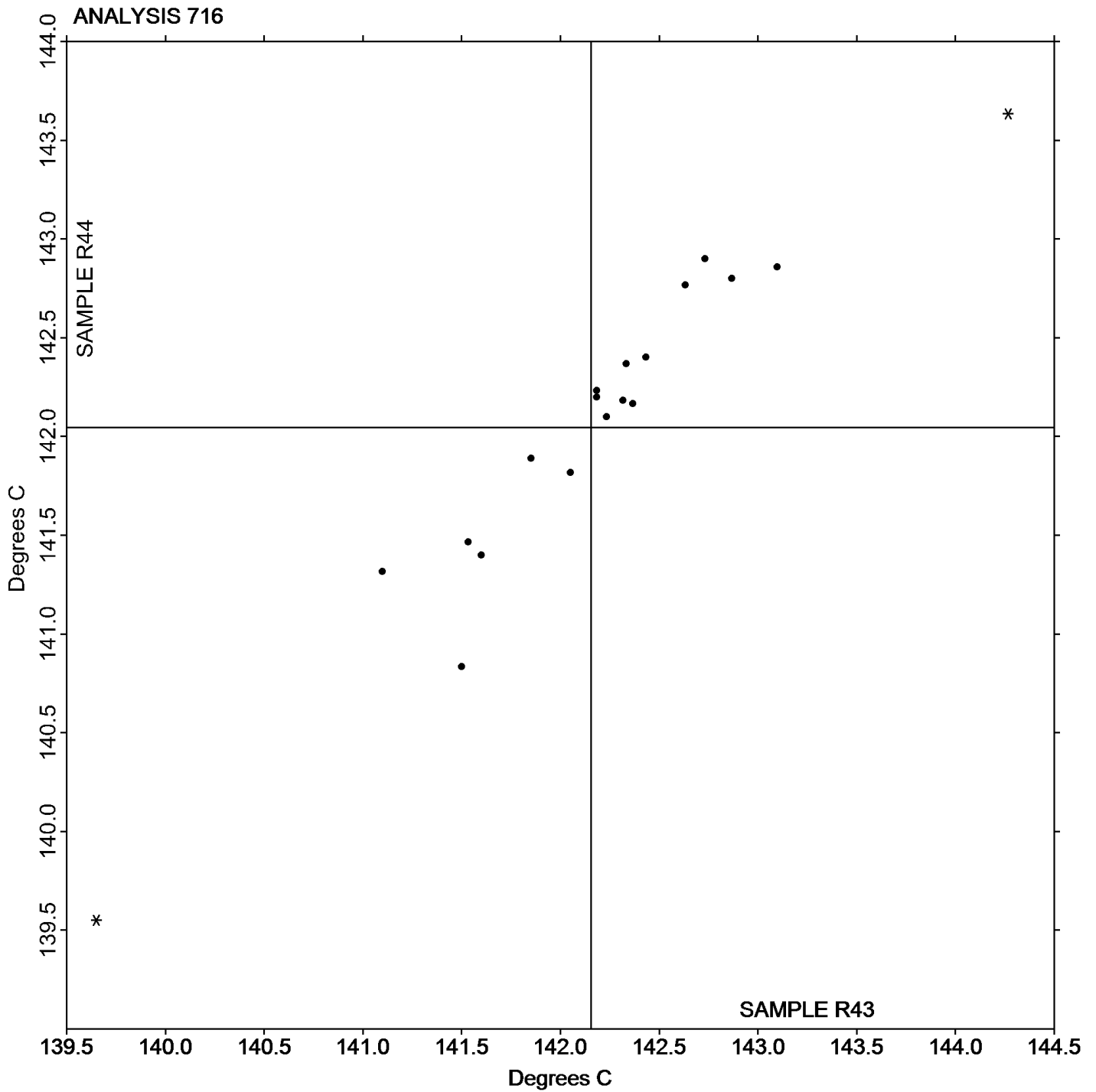
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Analysis 716

2nd Qtr 2017

Vicat Softening Temperature (Rate B)

Grand Mean Sample R43: 142.15 Degrees C Grand Mean Sample R44: 142.05 Degrees C





Plastics Interlaboratory Testing Program

Report #102

Analysis 718

2nd Qtr 2017

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T43			Sample T44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23HWDY		1.03667	0.00242	1.25	1.03667	0.00227	1.18
26PECU		1.03447	0.00022	0.11	1.03467	0.00027	0.14
2K3RPL		1.03350	-0.00075	-0.39	1.03353	-0.00087	-0.45
388XU4		1.03560	0.00135	0.70	1.03560	0.00120	0.62
3ULG77		1.03273	-0.00151	-0.78	1.03383	-0.00057	-0.29
4ELW49		1.03167	-0.00258	-1.34	1.03133	-0.00307	-1.59
4FZPF3		1.03487	0.00062	0.32	1.03427	-0.00013	-0.07
4G8RHZ		1.03447	0.00022	0.11	1.03470	0.00030	0.16
4MJVC9		1.03463	0.00039	0.20	1.03517	0.00077	0.40
6KLZ6Q		1.03400	-0.00025	-0.13	1.03303	-0.00137	-0.71
7A78EV		1.03333	-0.00091	-0.47	1.03343	-0.00097	-0.50
7AMLKK		1.03633	0.00209	1.08	1.03467	0.00027	0.14
7Q7KMW		1.03318	-0.00106	-0.55	1.03169	-0.00271	-1.40
7VNK6X		1.03207	-0.00218	-1.13	1.03187	-0.00253	-1.31
8MMK8G		1.03363	-0.00061	-0.32	1.03293	-0.00147	-0.76
8XLKHZ		1.03743	0.00319	1.65	1.03783	0.00343	1.78
92NF4N		1.03200	-0.00225	-1.16	1.03167	-0.00273	-1.42
9C4ENY		1.03422	-0.00003	-0.02	1.03410	-0.00030	-0.15
9H8GUK		1.03333	-0.00091	-0.47	1.03350	-0.00090	-0.47
9HPMVV	*	1.03287	-0.00138	-0.72	1.03103	-0.00337	-1.75
9W8FHG		1.03300	-0.00125	-0.65	1.03300	-0.00140	-0.73
AEL8ZD		1.03233	-0.00191	-0.99	1.03133	-0.00307	-1.59
AZ2RWD		1.03603	0.00179	0.93	1.03610	0.00170	0.88
B76VKQ		1.03627	0.00202	1.05	1.03670	0.00230	1.19
B8ZM8W	X	1.02333	-0.01091	-5.66	1.02733	-0.00707	-3.67
B9BHVA		1.03267	-0.00158	-0.82	1.03333	-0.00107	-0.55
BE69PZ	X	1.03033	-0.00391	-2.03	1.02800	-0.00640	-3.32
C4CJYQ		1.03097	-0.00328	-1.70	1.03170	-0.00270	-1.40
D2MCET		1.03533	0.00109	0.56	1.03500	0.00060	0.31
DJNAKV		1.03400	-0.00025	-0.13	1.03390	-0.00050	-0.26
E4QRZP		1.03480	0.00055	0.29	1.03517	0.00077	0.40
E8P4XB		1.03367	-0.00058	-0.30	1.03400	-0.00040	-0.21
EDBXWU		1.03143	-0.00281	-1.46	1.03363	-0.00077	-0.40
EHNQ4L		1.03390	-0.00035	-0.18	1.03600	0.00160	0.83
EPN2G7		1.03600	0.00175	0.91	1.03533	0.00093	0.48



Plastics Interlaboratory Testing Program

Report #102

Analysis 718

2nd Qtr 2017

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T43			Sample T44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
F6WJJQ		1.03600	0.00175	0.91	1.03600	0.00160	0.83
FB4XD9		1.03737	0.00312	1.62	1.03733	0.00293	1.52
FJGW4D		1.03633	0.00209	1.08	1.03633	0.00193	1.00
FLGAHP		1.03467	0.00042	0.22	1.03500	0.00060	0.31
FLP6BC	X	1.03233	-0.00191	-0.99	1.02410	-0.01030	-5.35
GUV7AH		1.03400	-0.00025	-0.13	1.03617	0.00177	0.92
HEZ7VM		1.03660	0.00235	1.22	1.03663	0.00223	1.16
HQ9778		1.03450	0.00025	0.13	1.03490	0.00050	0.26
JA2CCC		1.03567	0.00142	0.74	1.03533	0.00093	0.48
JHUKZN		1.03587	0.00162	0.84	1.03557	0.00117	0.61
JLWFJR		1.03250	-0.00175	-0.91	1.03200	-0.00240	-1.25
JVGUK9		1.03367	-0.00058	-0.30	1.03333	-0.00107	-0.55
LKBQ7P		1.03223	-0.00201	-1.04	1.03200	-0.00240	-1.25
LLN8GH		1.03553	0.00129	0.67	1.03517	0.00077	0.40
LNDPKN		1.03473	0.00049	0.25	1.03573	0.00133	0.69
LVAHXN		1.03333	-0.00091	-0.47	1.03200	-0.00240	-1.25
LY9PAL	X	1.02753	-0.00671	-3.48	1.02813	-0.00627	-3.25
MA7XEA	X	1.02970	-0.00455	-2.36	1.03287	-0.00153	-0.80
MCW3BM		1.03077	-0.00348	-1.80	1.03103	-0.00337	-1.75
MHLGX9		1.03390	-0.00035	-0.18	1.03397	-0.00043	-0.23
N2CCN2		1.03213	-0.00211	-1.10	1.03200	-0.00240	-1.25
N43AHM		1.03630	0.00205	1.06	1.03570	0.00130	0.67
NCVKTH		1.03620	0.00195	1.01	1.03643	0.00203	1.06
NEFDLD		1.03452	0.00028	0.14	1.03247	-0.00193	-1.00
NKKFL8		1.03573	0.00149	0.77	1.03630	0.00190	0.99
P63TRF		1.03553	0.00129	0.67	1.03533	0.00093	0.48
PG3EZY		1.03200	-0.00225	-1.16	1.03333	-0.00107	-0.55
PTYEZH		1.03610	0.00185	0.96	1.03593	0.00153	0.80
Q3TDJZ	X	1.03353	-0.00071	-0.37	1.03063	-0.00377	-1.95
QQZYFW		1.03607	0.00182	0.94	1.03683	0.00243	1.26
RUFVE8		1.03050	-0.00375	-1.94	1.03163	-0.00277	-1.44
TFUJZC		1.03220	-0.00205	-1.06	1.03233	-0.00207	-1.07
TJEEVG	*	1.03933	0.00509	2.64	1.03967	0.00527	2.73
TMXHHT		1.03467	0.00042	0.22	1.03540	0.00100	0.52
TQD8GW		1.03333	-0.00091	-0.47	1.03367	-0.00073	-0.38



Plastics Interlaboratory Testing Program

Report #102

Analysis 718

2nd Qtr 2017

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T43			Sample T44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
TUV934		1.03512	0.00087	0.45	1.03572	0.00132	0.69
UDMMUE		1.03600	0.00175	0.91	1.03567	0.00127	0.66
UQ6QXN		1.03537	0.00112	0.58	1.03557	0.00117	0.61
UUQECA		1.03270	-0.00155	-0.80	1.03417	-0.00023	-0.12
UVJ2DD		1.03367	-0.00058	-0.30	1.03367	-0.00073	-0.38
UXU42X		1.03200	-0.00225	-1.16	1.03367	-0.00073	-0.38
UZJALU	*	1.03037	-0.00388	-2.01	1.03293	-0.00147	-0.76
VCRBXD		1.03803	0.00379	1.96	1.03807	0.00367	1.90
W2PEA3		1.03000	-0.00425	-2.20	1.03000	-0.00440	-2.28
W8PWMT		1.03713	0.00289	1.50	1.03573	0.00133	0.69
WDBXHC		1.03317	-0.00108	-0.56	1.03353	-0.00087	-0.45
WECJHY	*	1.03387	-0.00038	-0.20	1.03637	0.00197	1.02
WFJYTB		1.03333	-0.00091	-0.47	1.03313	-0.00127	-0.66
WMFXYQ		1.03403	-0.00021	-0.11	1.03347	-0.00093	-0.48
X2VJYB		1.03633	0.00209	1.08	1.03603	0.00163	0.85
X9XK3B		1.03593	0.00169	0.87	1.03610	0.00170	0.88
XQYBHT		1.03567	0.00142	0.74	1.03590	0.00150	0.78
XUVYUU	*	1.03303	-0.00121	-0.63	1.03597	0.00157	0.81
YA3LE8		1.03523	0.00098	0.51	1.03514	0.00074	0.38
YP3E8P		1.03023	-0.00401	-2.08	1.03033	-0.00407	-2.11
YZ7AQU		1.03693	0.00269	1.39	1.03713	0.00273	1.42
Z6TGNT		1.03230	-0.00195	-1.01	1.03260	-0.00180	-0.93
ZWY943		1.03533	0.00109	0.56	1.03567	0.00127	0.66

Summary Statistics		
	Sample T43	Sample T44
Grand Means	1.034247 sp gr 23/23 C	1.034400 sp gr 23/23 C
Std Dev Btwn Labs	0.001929 sp gr 23/23 C	0.001927 sp gr 23/23 C
Statistics based on 87 of 93 reporting participants		

Sample T43: HIPS & Sample T44: HIPS



Comments on Assigned Data Flags for Test #718

- BE69PZ (X) - Inconsistent in testing between samples, data for Sample T44 are low.
- MA7XEA (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample T44.
- Q3TDJZ (X) - Inconsistent in testing between samples.
- FLP6BC (X) - Inconsistent in testing between samples, data for Sample T44 are low.
- B8ZM8W (X) - Data for both samples are low. Possible Systematic Error.
- LY9PAL (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample T44.



Plastics Interlaboratory Testing Program

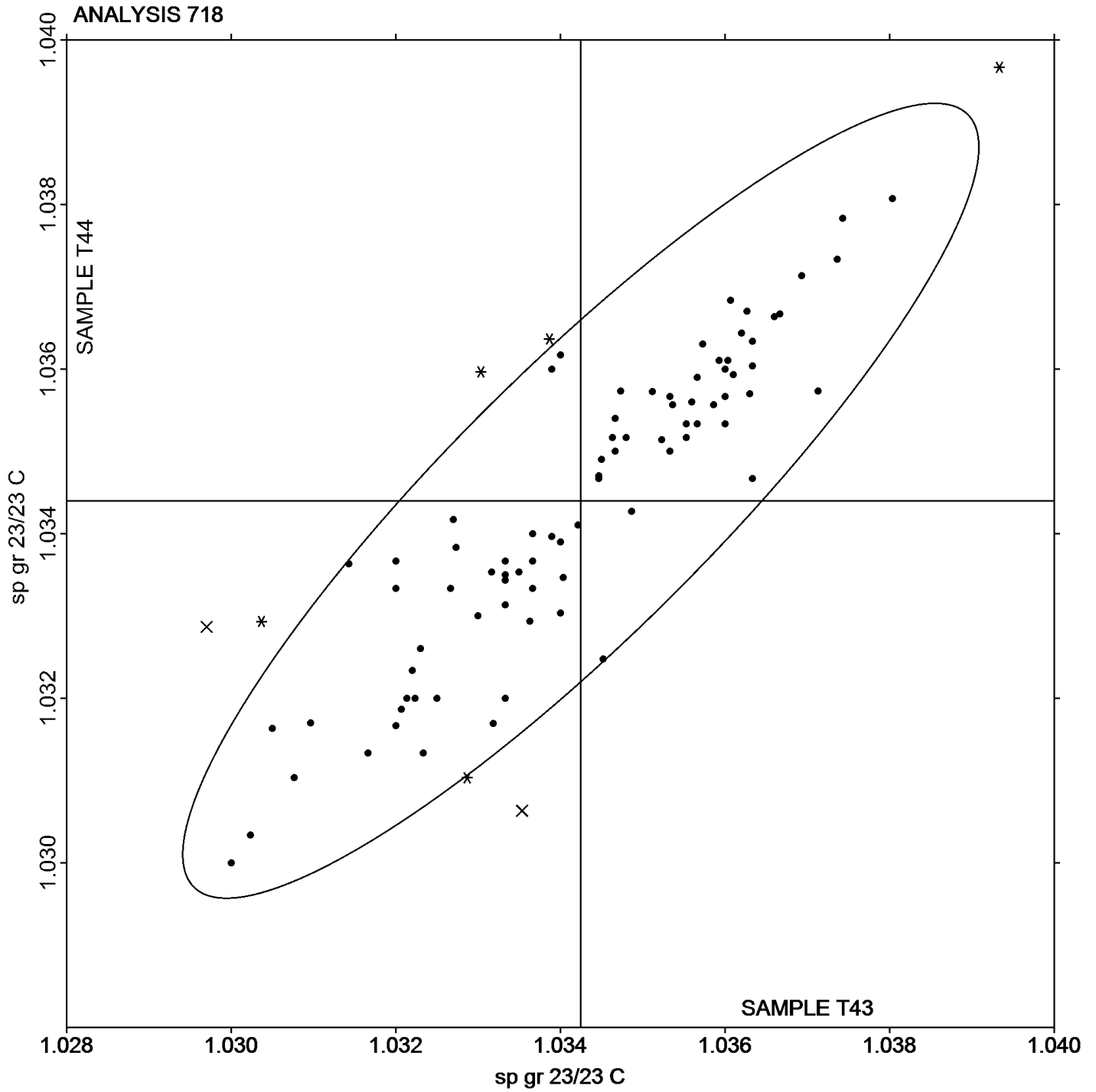
Analysis 718

Specific Gravity - sp gr 23/23 C

Report #102

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Grand Mean Sample T43: 1.0342 sp gr 23/23 C Grand Mean Sample T44: 1.0344 sp gr 23/23 C





Plastics Interlaboratory Testing Program

Report #102

Analysis 720

2nd Qtr 2017

Flexural Modulus- ksi

WebCode	Data Flag	Sample J43			Sample J44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2K3RPL		354.8	19.8	1.14	356.8	22.0	1.23
388XU4		363.8	28.9	1.66	361.7	26.9	1.51
4KUM6T		318.0	-16.9	-0.97	315.4	-19.4	-1.09
4MJVC9		326.1	-8.8	-0.51	329.1	-5.8	-0.32
7A78EV		308.1	-26.8	-1.54	306.0	-28.9	-1.62
7M84DN		336.8	1.9	0.11	331.4	-3.4	-0.19
7R3X94		335.2	0.3	0.02	336.6	1.8	0.10
7XPMTE		360.0	25.1	1.44	362.0	27.2	1.52
8CQEEJ		348.7	13.7	0.79	343.5	8.7	0.49
9H8GUK		307.8	-27.1	-1.56	307.7	-27.2	-1.52
9PQLKY	*	382.3	47.3	2.71	381.3	46.5	2.61
9W8FHG		332.6	-2.3	-0.13	332.0	-2.8	-0.16
9Z7M6Y		339.5	4.5	0.26	334.6	-0.3	-0.01
BE69PZ	X	117.5	-217.4	-12.47	117.3	-217.5	-12.20
BGA44W		334.0	-1.0	-0.05	332.0	-2.9	-0.16
BKR4LX		314.1	-20.8	-1.19	309.7	-25.1	-1.41
BUFYJT		335.5	0.5	0.03	333.4	-1.5	-0.08
BVAKCJ		311.3	-23.6	-1.36	312.7	-22.2	-1.24
DQ7RRC		336.2	1.3	0.07	333.3	-1.6	-0.09
E4QRZP		348.4	13.5	0.77	348.0	13.2	0.74
E8P4XB	X	336.6	1.6	0.09	317.5	-17.3	-0.97
EB9ZNL		344.5	9.5	0.55	353.0	18.1	1.02
EGDYWQ		292.5	-42.4	-2.43	293.5	-41.3	-2.32
FB4XD9		342.8	7.8	0.45	342.5	7.7	0.43
FJGW4D		326.9	-8.0	-0.46	329.4	-5.5	-0.31
FLP6BC		349.0	14.1	0.81	354.7	19.8	1.11
HEZ7VM		343.8	8.9	0.51	345.6	10.8	0.60
HQ9778		347.9	12.9	0.74	346.9	12.0	0.67
J8ENYR		333.4	-1.6	-0.09	329.2	-5.7	-0.32
JA2CCC		355.3	20.4	1.17	352.3	17.4	0.98
JCPLKT		323.3	-11.6	-0.67	328.8	-6.1	-0.34
JHUKZN		323.4	-11.5	-0.66	325.2	-9.6	-0.54
KVDNFJ		328.6	-6.3	-0.36	327.8	-7.0	-0.40
KZT2G8		362.3	27.4	1.57	361.7	26.9	1.51
LKBQ7P		322.4	-12.5	-0.72	319.6	-15.2	-0.86



Plastics Interlaboratory Testing Program

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Analysis 720

2nd Qtr 2017

Flexural Modulus- ksi

WebCode	Data Flag	Sample J43			Sample J44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
LLN8GH		340.4	5.4	0.31	339.2	4.3	0.24
LNDPKN		338.1	3.1	0.18	339.7	4.9	0.27
LVAHXN		295.6	-39.3	-2.26	297.6	-37.2	-2.09
MA7XEA	*	317.7	-17.2	-0.99	308.7	-26.2	-1.47
MGRV3W		361.2	26.2	1.51	359.6	24.7	1.39
N8Y39C		361.5	26.6	1.53	360.5	25.6	1.44
NEFDLD		321.1	-13.8	-0.79	324.6	-10.3	-0.57
NMMH82		322.7	-12.2	-0.70	321.5	-13.4	-0.75
P7V2JV		345.7	10.8	0.62	342.7	7.8	0.44
PX4GG4		326.0	-8.9	-0.51	328.3	-6.5	-0.37
R3DCHJ		320.3	-14.7	-0.84	323.0	-11.9	-0.67
RNBTVZ	X	185.2	-149.7	-8.59	184.9	-149.9	-8.41
RUFVE8		335.4	0.5	0.03	333.7	-1.1	-0.06
T3PKR6		319.4	-15.5	-0.89	323.8	-11.0	-0.62
TMXHHT		319.1	-15.9	-0.91	316.3	-18.5	-1.04
TN8MTW		344.6	9.7	0.55	346.4	11.6	0.65
TQD8GW		340.8	5.9	0.34	337.4	2.6	0.14
UFQFNC		325.5	-9.4	-0.54	325.5	-9.4	-0.53
UXU42X	*	332.6	-2.3	-0.13	322.0	-12.8	-0.72
UZJALU	*	334.2	-0.8	-0.04	345.3	10.4	0.58
W2PEA3	X	314.3	-20.6	-1.18	292.1	-42.8	-2.40
WFJYTB		337.7	2.7	0.16	338.0	3.2	0.18
WMFXYQ		350.9	15.9	0.91	351.8	17.0	0.95
X6YA6P		334.1	-0.8	-0.05	335.6	0.7	0.04
XFFX2A		313.8	-21.2	-1.21	320.2	-14.7	-0.82
XQYBHT		324.0	-10.9	-0.63	323.8	-11.0	-0.62
XUVYUU		345.0	10.0	0.58	344.2	9.3	0.52
YA3LE8	*	366.5	31.6	1.81	374.2	39.4	2.21
YZ7AQU	X	364.9	29.9	1.72	349.7	14.9	0.83
Z69Z76		342.6	7.7	0.44	341.6	6.8	0.38
Z9PC22		325.1	-9.8	-0.56	323.3	-11.6	-0.65



Plastics Interlaboratory Testing Program

Report #102

Analysis 720

2nd Qtr 2017

Flexural Modulus- ksi

Summary Statistics		
	<u>Sample J43</u>	<u>Sample J44</u>
Grand Means	334.93 ksi	334.85 ksi
Stnd Dev Btwn Labs	17.43 ksi	17.83 ksi
Statistics based on 61 of 66 reporting participants		

Sample J43: HIPS & Sample J44: HIPS

Comments on Assigned Data Flags for Test #720

- BE69PZ (X) - Extreme data.
- YZ7AQU (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- E8P4XB (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J43.
- W2PEA3 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- RNBTVZ (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample J43.

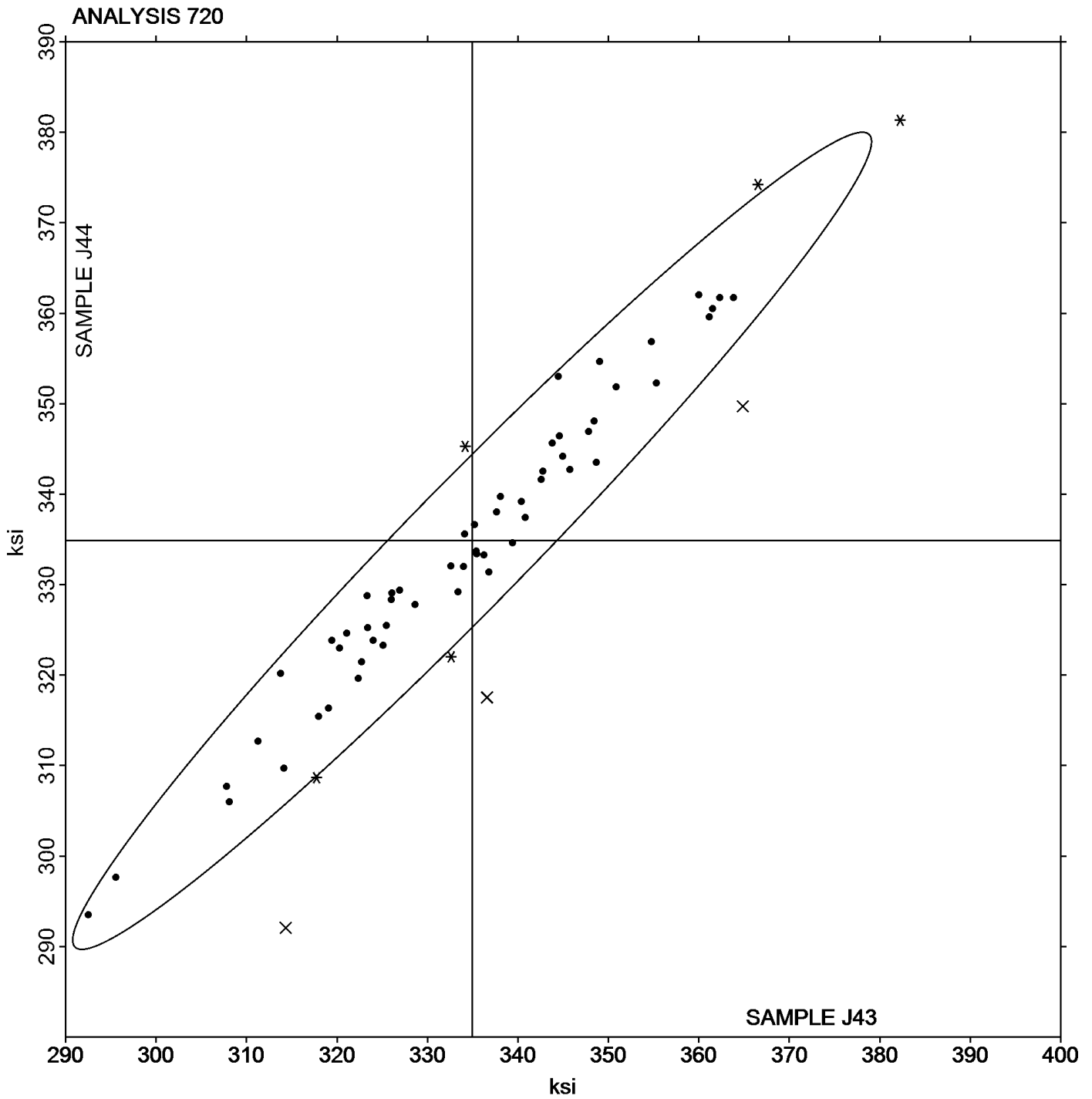


Plastics Interlaboratory Testing Program

Analysis 720 Flexural Modulus- ksi

Report #102
2nd Qtr 2017

Grand Mean Sample J43: 334.93 ksi Grand Mean Sample J44: 334.85 ksi





Plastics Interlaboratory Testing Program

Report #102

Analysis 721

2nd Qtr 2017

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J43			Sample J44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
4KUM6T		6,078	-183	-0.75	6,083	-184	-0.72
4MJVC9		6,313	53	0.22	6,238	-29	-0.11
7A78EV	*	5,589	-671	-2.77	5,596	-671	-2.63
7M84DN		6,200	-60	-0.25	6,154	-113	-0.44
7R3X94		6,165	-95	-0.39	6,151	-116	-0.45
7XPMTE		6,506	246	1.01	6,561	294	1.15
8CQEEJ		6,448	187	0.77	6,391	124	0.49
9H8GUK		5,891	-369	-1.52	5,929	-338	-1.33
9PQLKY	*	6,931	670	2.76	6,966	698	2.74
9W8FHG		6,016	-244	-1.01	6,060	-208	-0.82
9Z7M6Y		6,382	122	0.50	6,413	146	0.57
BE69PZ	X	3,788	-2,472	-10.18	3,803	-2,464	-9.67
BGA44W		6,200	-60	-0.25	6,225	-42	-0.16
BUFYJT		6,293	33	0.14	6,259	-8	-0.03
BVAKCJ	X	5,238	-1,023	-4.21	5,297	-970	-3.81
E4QRZP		6,415	155	0.64	6,413	146	0.57
E8P4XB	*	6,390	130	0.53	6,160	-107	-0.42
EB9ZNL		6,524	264	1.09	6,604	337	1.32
FB4XD9		6,370	110	0.45	6,371	104	0.41
FJGW4D		5,970	-291	-1.20	6,041	-227	-0.89
HEZ7VM	*	6,300	40	0.16	6,086	-181	-0.71
J8ENYR		6,577	317	1.31	6,589	322	1.26
JA2CCC		6,425	165	0.68	6,396	128	0.50
JCPLKT		6,318	57	0.24	6,400	133	0.52
JHUKZN		6,342	82	0.34	6,402	135	0.53
KVDNFJ		5,835	-425	-1.75	5,806	-462	-1.81
KZT2G8		6,657	397	1.64	6,733	465	1.83
LNDPKN		5,868	-392	-1.62	5,908	-360	-1.41
MA7XEA		6,221	-40	-0.16	6,106	-162	-0.63
MGRV3W		6,556	295	1.22	6,527	259	1.02
N8Y39C		6,546	285	1.18	6,553	286	1.12
NMMH82		5,982	-278	-1.15	5,942	-325	-1.28
P7V2JV		6,206	-54	-0.22	6,144	-123	-0.48
R3DCHJ		6,257	-4	-0.02	6,296	29	0.11
RNBTVZ		6,356	96	0.39	6,292	24	0.09



Plastics Interlaboratory Testing Program

Report #102

Analysis 721

2nd Qtr 2017

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	<u>Sample J43</u>			<u>Sample J44</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RUFVE8		6,368	108	0.44	6,375	107	0.42
T3PKR6		6,119	-141	-0.58	6,320	52	0.21
TMXHHT		5,836	-424	-1.75	5,906	-361	-1.42
TN8MTW		6,540	280	1.15	6,640	373	1.46
UFQFNC		6,192	-68	-0.28	6,206	-62	-0.24
UXU42X		6,025	-236	-0.97	5,888	-380	-1.49
UZJALU		6,230	-30	-0.12	6,389	122	0.48
WFJYTB		6,184	-76	-0.31	6,184	-83	-0.33
WMFXYQ		6,368	107	0.44	6,416	148	0.58
X6YA6P		6,127	-133	-0.55	6,106	-161	-0.63
XFFX2A		6,099	-161	-0.66	6,206	-61	-0.24
XQYBHT		6,425	165	0.68	6,436	169	0.66
XUVYUU		6,415	154	0.64	6,407	139	0.55
YZ7AQU		6,298	38	0.16	6,421	154	0.60
Z69Z76		6,188	-72	-0.30	6,206	-61	-0.24
Z9PC22		6,216	-45	-0.18	6,201	-67	-0.26

Summary Statistics		<u>Sample J43</u>	<u>Sample J44</u>
Grand Means		6,260.4 psi	6,267.4 psi
Stnd Dev Btwn Labs		242.7 psi	255.0 psi
Statistics based on 49 of 51 reporting participants			

Sample J43: HIPS & Sample J44: HIPS

Comments on Assigned Data Flags for Test #721

BE69PZ (X) - Extreme data.

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



Plastics Interlaboratory Testing Program

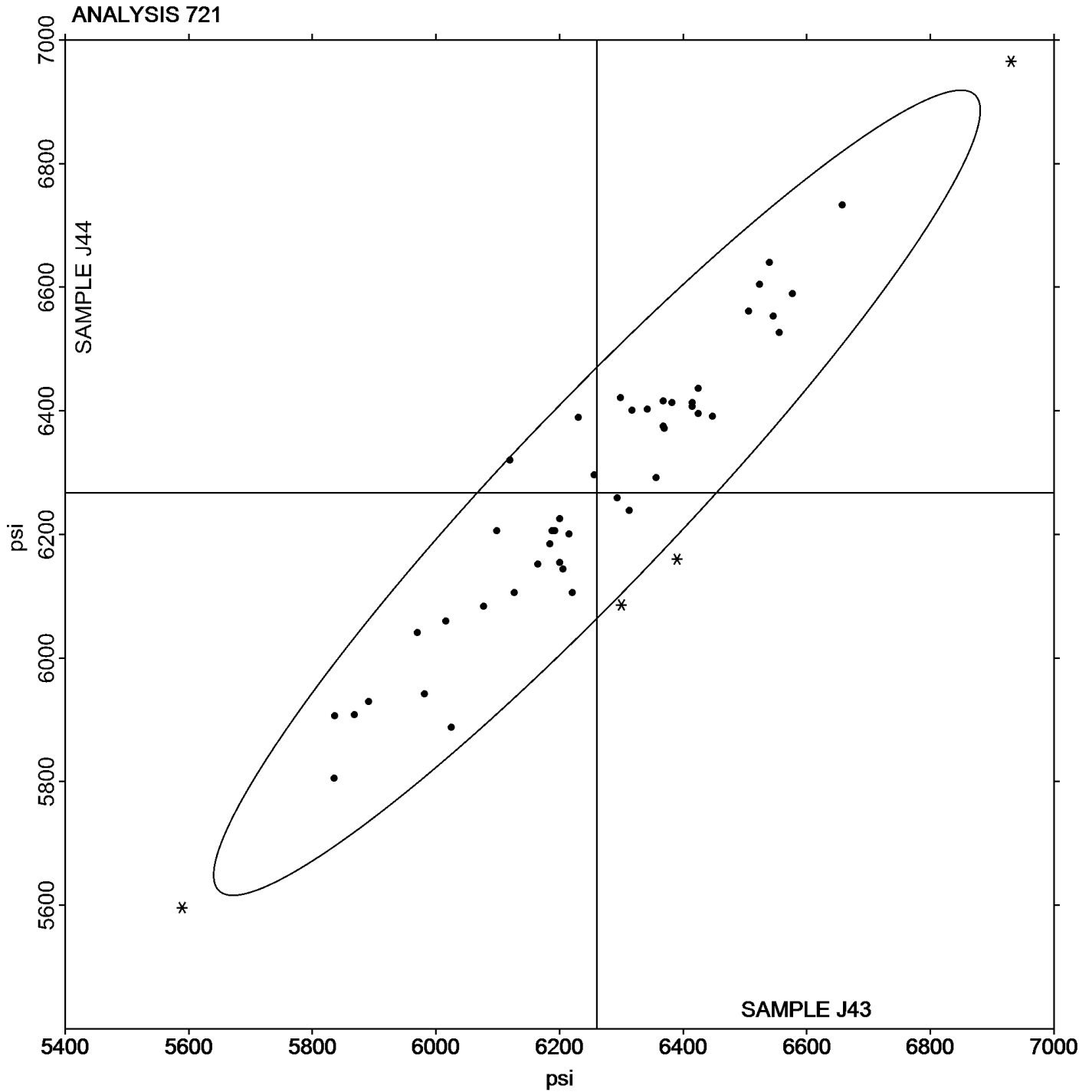
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Analysis 721

2nd Qtr 2017

Flexural Stress at 5% Strain - psi

Grand Mean Sample J43: 6,260.39 psi Grand Mean Sample J44: 6,267.40 psi





Plastics Interlaboratory Testing Program

Report #102

Analysis 722

2nd Qtr 2017

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J43			Sample J44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
388XU4		6,517	241	1.01	6,531	242	0.94
4KUM6T		6,108	-168	-0.70	6,138	-151	-0.59
4MJVC9		6,402	126	0.53	6,330	41	0.16
7A78EV	*	5,598	-678	-2.83	5,601	-688	-2.68
7M84DN		6,318	42	0.18	6,262	-27	-0.11
7R3X94		6,226	-50	-0.21	6,227	-62	-0.24
7XPMTE		6,522	246	1.03	6,534	245	0.95
8CQEEJ		6,483	208	0.87	6,425	136	0.53
9PQLKY	X	7,045	770	3.22	7,227	938	3.65
9W8FHG		6,024	-251	-1.05	6,066	-223	-0.87
BE69PZ	X	3,788	-2,487	-10.39	3,803	-2,486	-9.68
BGA44W		6,260	-16	-0.07	6,284	-6	-0.02
BUFYJT		6,293	18	0.07	6,259	-30	-0.12
BVAKCJ	X	4,872	-1,404	-5.86	4,719	-1,571	-6.12
DQ7RRC		6,206	-70	-0.29	6,281	-8	-0.03
E4QRZP		6,477	202	0.84	6,470	180	0.70
EB9ZNL		6,533	258	1.08	6,612	323	1.26
EGDYWQ		6,146	-130	-0.54	6,172	-117	-0.46
FJGW4D		5,939	-336	-1.40	6,009	-280	-1.09
FLP6BC		6,398	122	0.51	6,501	212	0.83
HEZ7VM	*	6,308	32	0.14	6,096	-193	-0.75
HQ9778		6,460	184	0.77	6,494	205	0.80
JA2CCC		6,448	172	0.72	6,412	122	0.48
JCPLKT		6,322	46	0.19	6,405	116	0.45
JHUKZN		6,390	114	0.48	6,424	135	0.52
KVDNFJ		5,866	-410	-1.71	5,869	-420	-1.64
KZT2G8	*	6,802	527	2.20	7,014	725	2.82
LLN8GH		6,582	307	1.28	6,533	244	0.95
MA7XEA		6,232	-44	-0.18	6,113	-177	-0.69
MGRV3W		6,648	372	1.55	6,629	340	1.32
N8Y39C		6,564	289	1.21	6,602	313	1.22
NMMH82		5,977	-298	-1.25	5,930	-359	-1.40
P7V2JV		6,234	-41	-0.17	6,167	-123	-0.48
PX4GG4		6,121	-155	-0.65	6,121	-169	-0.66
RNBTVZ		6,503	228	0.95	6,432	143	0.56



Plastics Interlaboratory Testing Program

Report #102

Analysis 722

2nd Qtr 2017

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J43			Sample J44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RUFVE8	X	73	-6,203	-25.91	73	-6,216	-24.21
T3PKR6		5,987	-289	-1.21	6,122	-167	-0.65
TMXHHT		5,826	-450	-1.88	5,846	-443	-1.73
TN8MTW		6,550	274	1.15	6,652	363	1.41
TQD8GW		6,188	-88	-0.37	6,236	-53	-0.21
UFQFNC		6,213	-63	-0.26	6,246	-44	-0.17
UXU42X		6,032	-244	-1.02	5,914	-375	-1.46
UZJALU		6,224	-51	-0.21	6,439	150	0.58
WFJYTB		6,187	-88	-0.37	6,190	-99	-0.39
X6YA6P		6,110	-165	-0.69	6,091	-198	-0.77
XQYBHT		6,402	127	0.53	6,394	105	0.41
XUVYUU		6,411	135	0.56	6,432	143	0.56
YA3LE8		6,164	-111	-0.47	6,298	9	0.04
Z69Z76		6,200	-76	-0.32	6,210	-79	-0.31
Z9PC22	X	5,106	-1,170	-4.89	5,150	-1,139	-4.44

Summary Statistics		
	Sample J43	Sample J44
Grand Means	6,275.6 psi	6,289.2 psi
Stnd Dev Btwn Labs	239.4 psi	256.8 psi
Statistics based on 45 of 50 reporting participants		

Sample J43: HIPS & Sample J44: HIPS

Comments on Assigned Data Flags for Test #722

- BE69PZ (X) - Extreme data.
- BVAKCJ (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample J43.
- 9PQLKY (X) - Data for both samples are high. Possible Systematic Error.
- RUFVE8 (X) - Extreme data.
- Z9PC22 (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

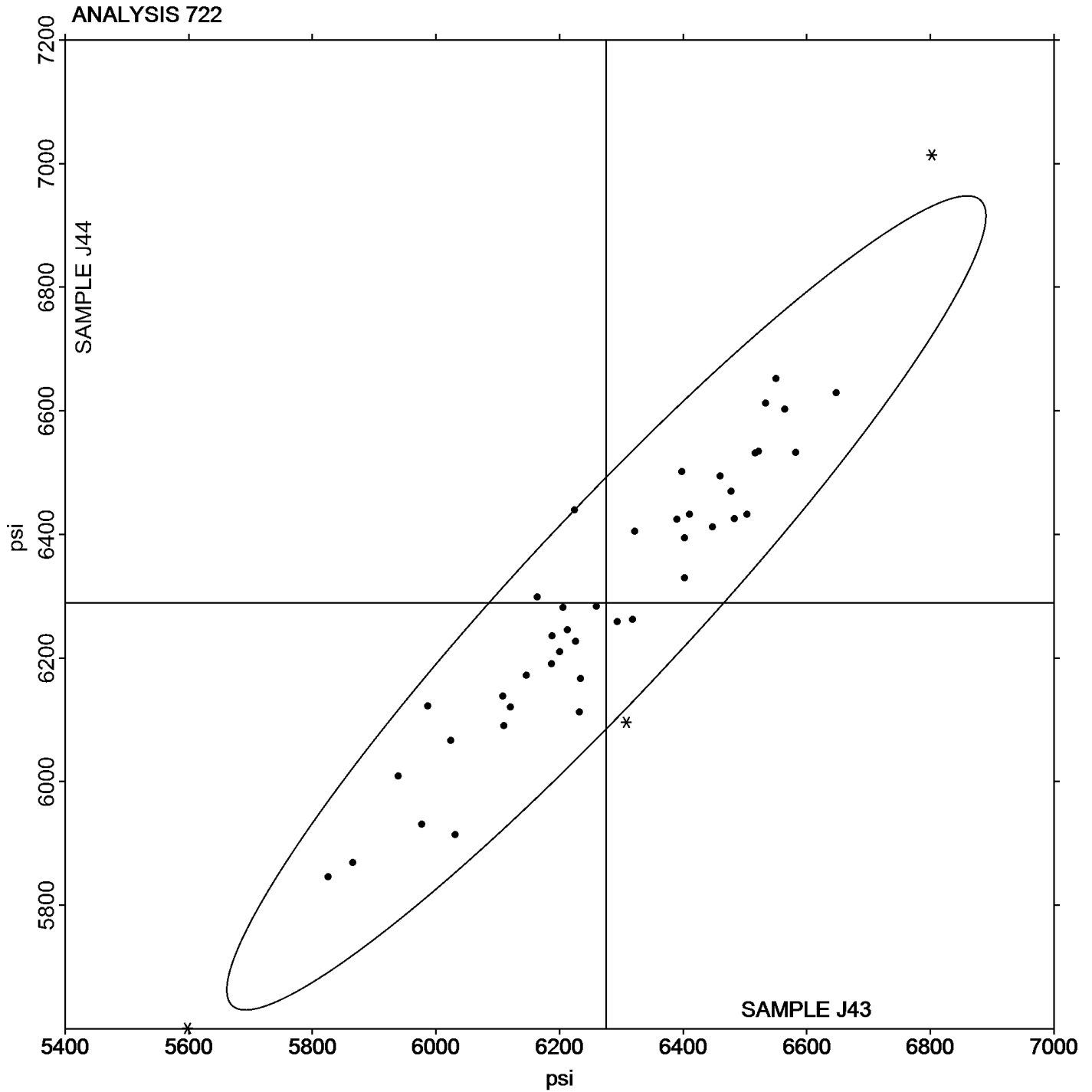
Analysis 722

Flexural Stress at Yield - psi

Report #102

2nd Qtr 2017

Grand Mean Sample J43: 6,275.61 psi Grand Mean Sample J44: 6,289.22 psi





Plastics Interlaboratory Testing Program

Report #102

Analysis 730

2nd Qtr 2017

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C43			Sample C44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23H2QL	*	22.46	-1.87	-2.52	22.40	-1.91	-2.57
23HWDY		23.85	-0.48	-0.65	24.06	-0.25	-0.34
26PECU		24.41	0.08	0.11	24.17	-0.14	-0.19
388XU4		24.59	0.26	0.35	24.43	0.12	0.16
4JHPX4		23.76	-0.58	-0.78	23.67	-0.64	-0.86
6AQNWJ		24.22	-0.11	-0.15	24.11	-0.20	-0.27
6KLZ6Q		24.52	0.19	0.25	24.50	0.19	0.25
7A78EV		24.16	-0.17	-0.23	24.20	-0.11	-0.15
7LTL8X		24.26	-0.08	-0.10	24.14	-0.17	-0.23
92NF4N		23.52	-0.81	-1.09	23.34	-0.97	-1.31
A3RVLE		23.62	-0.71	-0.96	23.36	-0.95	-1.28
AZMZ93		24.84	0.51	0.68	24.96	0.65	0.87
B9BHVA		25.11	0.78	1.05	24.87	0.56	0.75
BUCC4Z		24.39	0.06	0.08	24.45	0.14	0.18
DF4AG9	*	25.51	1.18	1.59	25.09	0.78	1.05
DJNAKV		24.63	0.30	0.40	24.60	0.29	0.39
E4QRZP		23.96	-0.38	-0.51	23.84	-0.47	-0.63
EDBXWU		26.03	1.70	2.29	26.02	1.71	2.30
EGDYWQ		24.24	-0.09	-0.12	24.04	-0.27	-0.37
EHNQ4L	X	23.22	-1.11	-1.50	23.94	-0.37	-0.50
FJGW4D	X	38.96	14.62	19.73	32.19	7.88	10.60
FLP6BC		25.28	0.94	1.27	25.42	1.11	1.50
GZYAYG		25.54	1.21	1.63	25.38	1.07	1.44
JLWFJR	X	29.88	5.55	7.48	29.88	5.57	7.49
KYDXMF		23.36	-0.97	-1.31	23.56	-0.75	-1.01
LVAHXN		23.28	-1.05	-1.42	23.02	-1.29	-1.74
M9V6DF		24.24	-0.09	-0.13	24.16	-0.15	-0.20
MRRGFM		24.58	0.25	0.34	24.63	0.32	0.43
N43AHM		23.75	-0.58	-0.79	23.63	-0.68	-0.92
N8Y39C		25.51	1.17	1.58	25.39	1.08	1.45
NEFDLD		23.61	-0.72	-0.97	23.73	-0.58	-0.78
NEYJK3		23.03	-1.30	-1.76	23.35	-0.96	-1.29
NKKFL8		24.77	0.44	0.59	24.88	0.57	0.76
NVK8TC		24.31	-0.03	-0.03	24.34	0.03	0.04
PG3EZY		22.98	-1.35	-1.83	23.24	-1.07	-1.44



Plastics Interlaboratory Testing Program

Report #102

Analysis 730

2nd Qtr 2017

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C43			Sample C44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PTYEZH		25.04	0.71	0.95	24.96	0.65	0.87
Q883WH		24.58	0.25	0.33	24.53	0.22	0.29
QVUW79		25.17	0.83	1.12	25.22	0.91	1.23
R39W4X		24.58	0.25	0.33	24.82	0.51	0.68
RUFVE8		24.04	-0.29	-0.40	23.76	-0.55	-0.74
THGDJX	X	18.04	-6.29	-8.49	18.00	-6.31	-8.49
TJFFEU		24.61	0.28	0.37	24.41	0.10	0.13
TQU3LD	*	25.14	0.81	1.09	25.58	1.27	1.71
TUAWZP		23.90	-0.44	-0.59	23.85	-0.46	-0.62
UFQFNC		24.41	0.07	0.10	24.34	0.03	0.04
UZJALU		24.01	-0.33	-0.44	23.80	-0.51	-0.69
W8PWMT	X	28.22	3.89	5.25	27.45	3.14	4.23
WDBXHC	X	23.95	-0.39	-0.52	24.66	0.35	0.48
WDF7V7	*	24.08	-0.25	-0.34	24.56	0.25	0.34
WECJHY		25.16	0.83	1.12	25.14	0.83	1.12
WFJYTB		23.27	-1.06	-1.43	23.31	-1.00	-1.34
WMFXYQ		24.24	-0.09	-0.13	24.31	0.00	0.00
WPQMH3		24.41	0.07	0.10	24.22	-0.09	-0.12
WVVNGC		23.57	-0.76	-1.03	23.63	-0.68	-0.91
X2VJYB		25.47	1.14	1.54	25.55	1.24	1.67
X6YA6P	X	24.21	-0.12	-0.16	23.24	-1.07	-1.44
XQYBHT		24.39	0.06	0.08	24.37	0.06	0.08
ZNHVZX		24.61	0.27	0.37	24.52	0.21	0.28

Summary Statistics		
	Sample C43	Sample C44
Grand Means	24.333 MPa	24.310 MPa
Stnd Dev Btwn Labs	0.741 MPa	0.744 MPa
Statistics based on 51 of 58 reporting participants		

Sample C43: HIPS & Sample C44: HIPS



Comments on Assigned Data Flags for Test #730

X6YA6P (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample C43.

W8PWMT (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample C43.

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

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

FJGW4D (X) - Extreme data.

WDBXHC (X) - Inconsistent in testing between samples.

EHNQ4L (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.



Plastics Interlaboratory Testing Program

Report #102

Analysis 731

2nd Qtr 2017

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C43			Sample C44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23H2QL		19.49	-1.70	-2.18	19.73	-1.40	-1.92
23HWDY		20.43	-0.76	-0.97	20.67	-0.46	-0.63
4JHPX4		20.24	-0.95	-1.22	20.06	-1.07	-1.46
6KLZ6Q		21.36	0.17	0.22	21.24	0.11	0.15
7A78EV		20.88	-0.31	-0.40	21.33	0.20	0.27
7LTL8X		21.11	-0.08	-0.11	20.91	-0.22	-0.30
92NF4N	*	21.35	0.16	0.21	20.39	-0.74	-1.01
A3RVLE		20.70	-0.49	-0.63	20.38	-0.75	-1.03
AZMZ93		21.04	-0.15	-0.19	21.50	0.37	0.51
B9BHVA		22.52	1.33	1.70	22.14	1.02	1.39
BUCC4Z		21.00	-0.19	-0.24	20.70	-0.43	-0.58
DF4AG9		21.48	0.30	0.38	21.05	-0.08	-0.11
DJNAKV		20.97	-0.22	-0.28	21.04	-0.09	-0.13
E4QRZP		20.88	-0.30	-0.39	20.66	-0.47	-0.64
EDBXWU		22.79	1.60	2.06	22.82	1.69	2.31
EGDYWQ		21.13	-0.06	-0.08	21.06	-0.07	-0.10
EHNQ4L		20.18	-1.01	-1.29	20.92	-0.21	-0.29
FLP6BC		21.88	0.69	0.89	22.09	0.96	1.31
GZYAYG		21.88	0.69	0.89	21.66	0.53	0.73
JLWFJR	X	26.40	5.21	6.69	26.52	5.39	7.38
KYDXMF		19.96	-1.23	-1.58	20.04	-1.09	-1.49
M9V6DF	X	33.36	12.17	15.62	32.80	11.67	15.98
MRRGFM		21.15	-0.04	-0.05	21.02	-0.11	-0.15
N43AHM		21.27	0.09	0.11	20.93	-0.20	-0.27
N8Y39C		21.70	0.51	0.66	21.67	0.54	0.74
NEYJK3		19.93	-1.26	-1.61	20.21	-0.92	-1.26
NKKFL8		21.57	0.39	0.49	21.25	0.13	0.17
NVK8TC		21.17	-0.02	-0.03	21.53	0.40	0.55
PG3EZY	*	22.98	1.79	2.30	23.24	2.11	2.89
Q883WH		21.33	0.14	0.18	21.35	0.22	0.31
QVUW79		21.58	0.39	0.50	21.77	0.64	0.88
R39W4X		21.48	0.30	0.38	21.35	0.22	0.31
RUFVE8		21.08	-0.11	-0.14	21.02	-0.11	-0.15
THGDJX	X	15.96	-5.23	-6.71	15.78	-5.35	-7.32
TJFFEU		21.27	0.09	0.11	21.14	0.01	0.02



Plastics Interlaboratory Testing Program

Report #102

Analysis 731

2nd Qtr 2017

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C43			Sample C44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
TQU3LD		21.90	0.71	0.91	21.98	0.85	1.17
TUAWZP		20.59	-0.60	-0.77	20.46	-0.67	-0.92
UFQFNC		21.45	0.27	0.34	21.29	0.16	0.22
UZJALU		21.03	-0.16	-0.21	20.87	-0.26	-0.35
W8PWMT		22.24	1.05	1.35	21.45	0.32	0.43
WDBXHC		20.71	-0.48	-0.62	21.02	-0.11	-0.15
WDF7V7		19.56	-1.63	-2.09	19.90	-1.23	-1.68
WECJHY		21.91	0.72	0.92	21.98	0.85	1.17
WFJYTB		20.85	-0.33	-0.43	21.04	-0.09	-0.13
WMFXYQ		20.84	-0.35	-0.45	20.34	-0.79	-1.08
WPQMH3		21.50	0.31	0.40	21.13	0.01	0.01
WVVNGC		19.65	-1.54	-1.97	20.12	-1.01	-1.38
X2VJYB		22.14	0.95	1.22	22.48	1.35	1.85
X6YA6P	*	21.81	0.62	0.79	20.79	-0.34	-0.46
XQYBHT		22.04	0.85	1.09	21.50	0.37	0.50
ZNHVZX		21.05	-0.13	-0.17	20.98	-0.15	-0.21

Summary Statistics

	Sample C43	Sample C44
Grand Means	21.189 MPa	21.129 MPa
Stnd Dev Btwn Labs	0.779 MPa	0.730 MPa

Statistics based on 48 of 51 reporting participants

Sample C43: HIPS & Sample C44: HIPS

Comments on Assigned Data Flags for Test #731

- JLWFJR (X) - Data for both samples are high. Possible Systematic Error.
- THGDJX (X) - Data for both samples are low. Possible Systematic Error.
- M9V6DF (X) - Extreme data.



Plastics Interlaboratory Testing Program

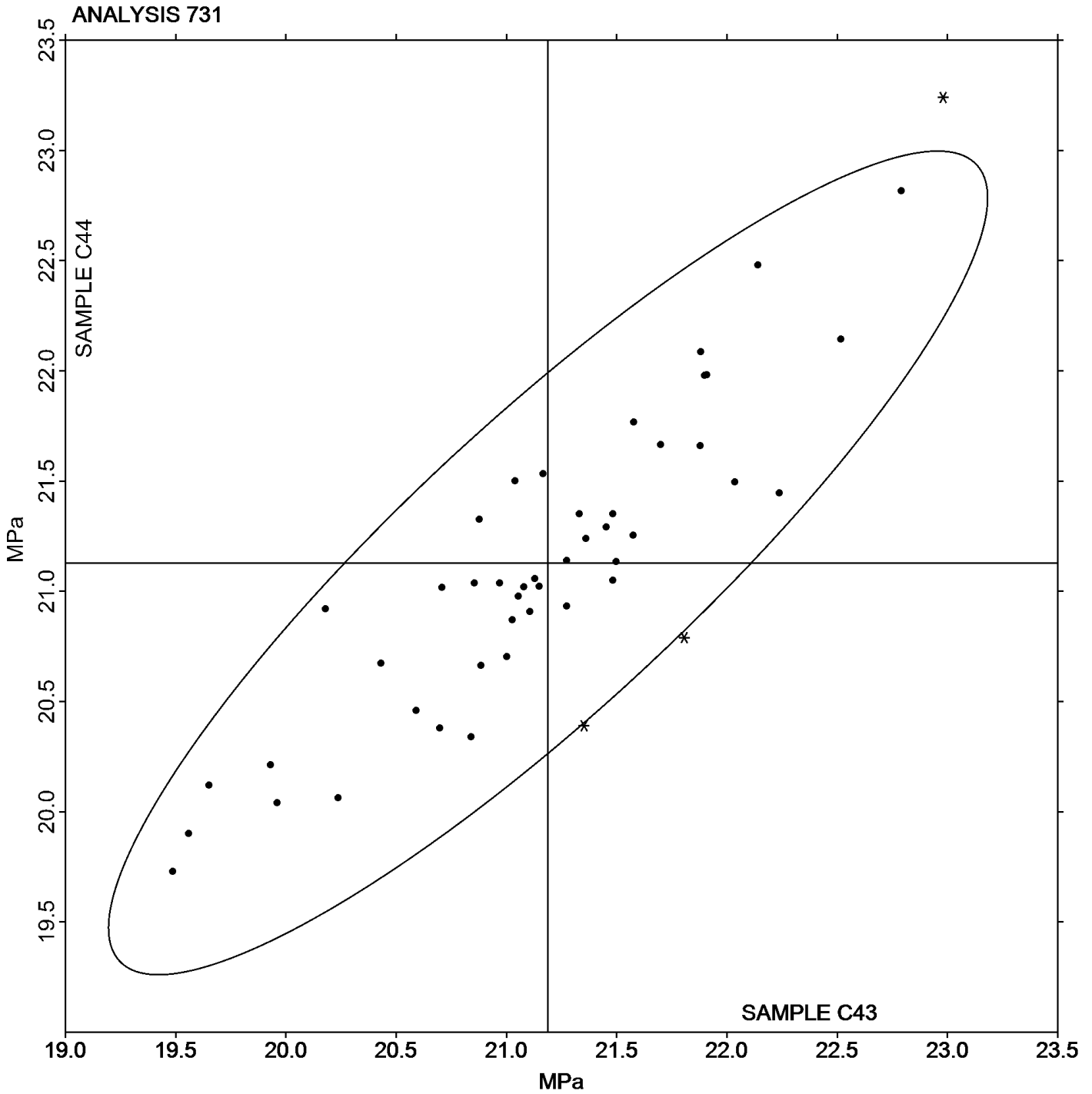
Analysis 731

Tensile Stress at Break - MPa

Report #102

2nd Qtr 2017

Grand Mean Sample C43: 21.189 MPa Grand Mean Sample C44: 21.129 MPa





Plastics Interlaboratory Testing Program

Report #102

Analysis 732

2nd Qtr 2017

Percent Strain at Yield

WebCode	Data Flag	Sample C43			Sample C44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23H2QL		1.300	0.047	0.88	1.262	0.010	0.18
23HWDY		1.194	-0.059	-1.11	1.218	-0.034	-0.62
26PECU		1.250	-0.003	-0.06	1.238	-0.014	-0.26
388XU4		1.258	0.005	0.09	1.222	-0.030	-0.55
4JHPX4		1.328	0.075	1.41	1.341	0.089	1.62
6AQNWJ		1.330	0.077	1.44	1.338	0.085	1.56
6KLZ6Q		1.254	0.001	0.02	1.262	0.010	0.18
7A78EV		1.312	0.059	1.11	1.332	0.080	1.46
7LTL8X		1.254	0.001	0.02	1.258	0.006	0.11
92NF4N		1.282	0.029	0.54	1.268	0.016	0.29
A3RVLE	X	1.280	0.027	0.51	1.138	-0.114	-2.08
AZMZ93		1.268	0.015	0.28	1.270	0.018	0.33
B9BHVA	X	0.542	-0.711	-13.33	0.500	-0.752	-13.71
BUCC4Z		1.254	0.001	0.02	1.262	0.010	0.18
DF4AG9		1.292	0.039	0.73	1.272	0.020	0.36
DJNAKV		1.184	-0.069	-1.29	1.186	-0.066	-1.20
E4QRZP		1.206	-0.047	-0.88	1.200	-0.052	-0.95
EDBXWU		1.312	0.059	1.11	1.320	0.068	1.24
EGDYWQ	X	1.604	0.351	6.58	1.541	0.289	5.27
EHNQ4L		1.324	0.071	1.33	1.362	0.110	2.01
FJGW4D	X	3.320	2.067	38.75	2.986	1.734	31.62
GZYAYG		1.280	0.027	0.51	1.260	0.008	0.15
JLWFJR	X	1.580	0.327	6.13	1.580	0.328	5.98
KYDXMF		1.200	-0.053	-0.99	1.220	-0.032	-0.58
M9V6DF	*	1.394	0.141	2.64	1.384	0.132	2.41
MRRGFM		1.245	-0.008	-0.14	1.249	-0.003	-0.05
N43AHM		1.206	-0.047	-0.88	1.206	-0.046	-0.84
N8Y39C		1.284	0.031	0.58	1.268	0.016	0.29
NEYJK3		1.208	-0.045	-0.84	1.232	-0.020	-0.37
NKKFL8		1.330	0.077	1.44	1.346	0.094	1.71
NVK8TC		1.206	-0.047	-0.88	1.206	-0.046	-0.84
PG3EZY		1.230	-0.023	-0.43	1.234	-0.018	-0.33
Q883WH		1.264	0.011	0.21	1.276	0.024	0.44
QVUW79		1.260	0.007	0.13	1.234	-0.018	-0.33
R39W4X		1.226	-0.027	-0.51	1.250	-0.002	-0.04



Plastics Interlaboratory Testing Program

Report #102

Analysis 732

2nd Qtr 2017

Percent Strain at Yield

WebCode	Data Flag	Sample C43			Sample C44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RUFVE8	X	1.560	0.307	5.76	1.600	0.348	6.35
THGDJX		1.260	0.007	0.13	1.280	0.028	0.51
TJFFEU		1.276	0.023	0.43	1.250	-0.002	-0.04
TQU3LD		1.268	0.015	0.28	1.296	0.044	0.80
TUAWZP		1.210	-0.043	-0.81	1.178	-0.074	-1.35
UFQFNC		1.277	0.024	0.44	1.252	0.000	0.01
UZJALU		1.206	-0.047	-0.88	1.186	-0.066	-1.20
W8PWMT	X	1.608	0.355	6.66	1.564	0.312	5.69
WDBXHC		1.162	-0.091	-1.70	1.182	-0.070	-1.28
WECJHY		1.208	-0.045	-0.84	1.198	-0.054	-0.99
WFJYTB	*	1.098	-0.155	-2.90	1.100	-0.152	-2.77
WMFXYQ		1.242	-0.011	-0.21	1.248	-0.004	-0.07
WPQMH3	X	0.894	-0.359	-6.73	0.962	-0.290	-5.29
WVVNGC		1.194	-0.059	-1.11	1.220	-0.032	-0.58
X2VJYB		1.294	0.041	0.77	1.298	0.046	0.84
X6YA6P		1.272	0.019	0.36	1.224	-0.028	-0.51
XQYBHT		1.206	-0.047	-0.88	1.202	-0.050	-0.91
ZNHVZX		1.274	0.021	0.39	1.252	0.000	0.00

Summary Statistics

	Sample C43	Sample C44
Grand Means	1.2529 Percent	1.2520 Percent
Std Dev Btwn Labs	0.0533 Percent	0.0548 Percent

Statistics based on 45 of 53 reporting participants

Sample C43: HIPS & Sample C44: HIPS



Comments on Assigned Data Flags for Test #732

- W8PWMT (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- EGDYWQ (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample C43.
- JLWFJR (X) - Data for both samples are high. Possible Systematic Error.
- A3RVLE (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- FJGW4D (X) - Extreme data.
- B9BHVA (X) - Extreme data.
- WPQM3H3 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample C44.
- RUFVE8 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample C44.

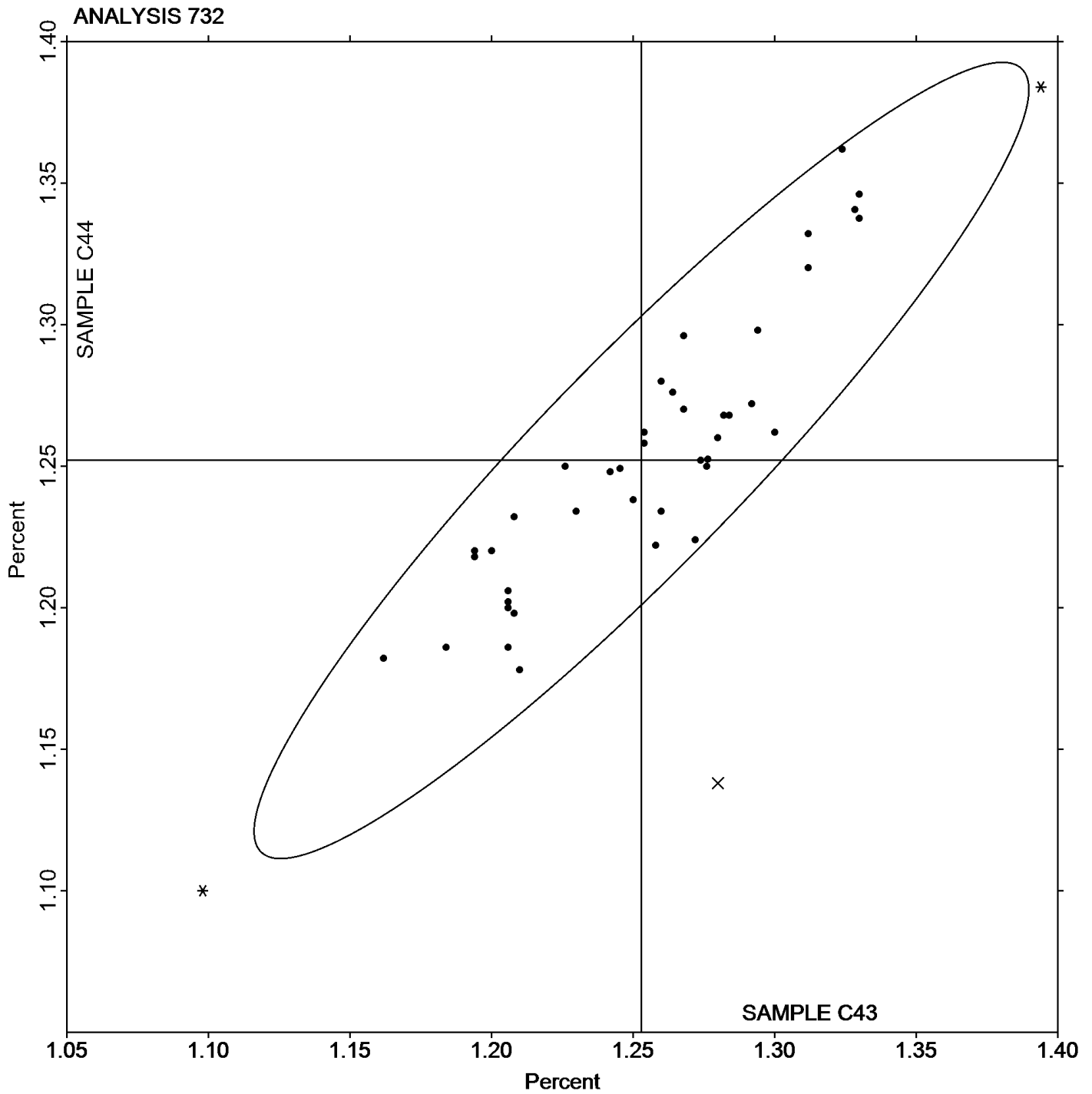


Plastics Interlaboratory Testing Program

Analysis 732 Percent Strain at Yield

Report #102
2nd Qtr 2017

Grand Mean Sample C43: 1.2529 Percent Grand Mean Sample C44: 1.2520 Percent





Plastics Interlaboratory Testing Program

Report #102

Analysis 734

2nd Qtr 2017

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C43			Sample C44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23H2QL	*	1,997	-230	-2.69	2,048	-188	-2.01
23HWDY		2,277	50	0.58	2,346	110	1.18
26PECU		2,298	71	0.83	2,334	98	1.05
4JHPX4	X	2,031	-196	-2.29	2,126	-110	-1.17
6AQNWJ		2,087	-140	-1.63	2,073	-163	-1.74
6KLZ6Q		2,137	-90	-1.05	2,131	-105	-1.12
7A78EV		2,096	-131	-1.53	2,115	-121	-1.29
7LTL8X		2,193	-34	-0.40	2,198	-38	-0.41
92NF4N		2,155	-72	-0.84	2,191	-45	-0.48
A3RVLE		2,118	-109	-1.27	2,128	-108	-1.16
AZMZ93		2,214	-13	-0.15	2,212	-24	-0.26
B9BHVA	X	2,389	161	1.89	2,212	-24	-0.26
BUCC4Z		2,173	-54	-0.64	2,165	-71	-0.76
DF4AG9		2,380	153	1.79	2,376	140	1.49
DJNAKV		2,326	99	1.15	2,327	91	0.97
E4QRZP		2,207	-20	-0.23	2,187	-49	-0.53
EDBXWU		2,378	150	1.76	2,415	179	1.91
EGDYWQ		2,248	20	0.24	2,266	30	0.32
EHNQ4L		2,205	-22	-0.26	2,198	-38	-0.41
FJGW4D	X	2,255	28	0.33	1,866	-370	-3.95
FLP6BC		2,207	-20	-0.24	2,215	-21	-0.23
GZYAYG		2,242	15	0.17	2,218	-18	-0.19
JLWFJR	X	2,330	103	1.20	2,184	-52	-0.56
KYDXMF		2,323	96	1.12	2,359	123	1.31
M9V6DF		2,300	73	0.85	2,304	68	0.73
MRRGFM		2,206	-21	-0.25	2,198	-38	-0.40
N8Y39C		2,299	72	0.84	2,272	36	0.39
NEYJK3		2,141	-86	-1.01	2,105	-131	-1.40
NKKFL8		2,145	-82	-0.96	2,131	-105	-1.12
NVK8TC		2,111	-116	-1.35	2,109	-127	-1.36
PTYEZH		2,372	145	1.69	2,364	128	1.37
Q883WH		2,253	26	0.30	2,234	-2	-0.02
QVUW79		2,221	-6	-0.07	2,232	-4	-0.04
R39W4X		2,249	22	0.26	2,258	22	0.23
RUFVE8		2,299	72	0.84	2,360	124	1.33



Plastics Interlaboratory Testing Program

Report #102

Analysis 734

2nd Qtr 2017

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C43			Sample C44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
THGDJX	X	1,778	-449	-5.25	1,786	-450	-4.81
TJFFEU		2,232	5	0.06	2,273	37	0.39
TN8MTW	*	2,307	79	0.93	2,399	163	1.74
TQU3LD		2,310	83	0.97	2,290	54	0.58
TUAWZP	X	1,814	-414	-4.84	1,823	-413	-4.42
UFQFNC		2,353	126	1.47	2,360	124	1.33
UZJALU		2,283	56	0.65	2,258	22	0.24
W8PWMT		2,253	26	0.31	2,291	55	0.59
WDBXHC		2,223	-5	-0.05	2,198	-38	-0.41
WDF7V7		2,178	-49	-0.57	2,200	-36	-0.38
WECJHY		2,102	-125	-1.46	2,142	-94	-1.01
WFJYTB		2,190	-37	-0.43	2,194	-42	-0.45
WMFXYQ		2,187	-40	-0.47	2,223	-13	-0.13
WPQMH3		2,223	-4	-0.05	2,229	-7	-0.07
WVNGC	X	2,562	335	3.91	2,381	145	1.55
X2VJYB		2,368	140	1.64	2,403	167	1.78
X6YA6P	*	2,202	-25	-0.29	2,119	-117	-1.25
XQYBHT		2,236	9	0.10	2,260	24	0.25
ZNHVZX		2,173	-54	-0.63	2,185	-51	-0.55

Summary Statistics		
	Sample C43	Sample C44
Grand Means	2,227.2 MPa	2,236.0 MPa
Stnd Dev Btwn Labs	85.5 MPa	93.5 MPa
Statistics based on 47 of 54 reporting participants		

Sample C43: HIPS & Sample C44: HIPS

Comments on Assigned Data Flags for Test #734

- 4JHPX4 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample C43.
- JLWFJR (X) - Inconsistent in testing between samples.
- THGDJX (X) - Data for both samples are low. Possible Systematic Error.
- FJGW4D (X) - Inconsistent in testing between samples, data for Sample C44 are low.
- TUAWZP (X) - Data for both samples are low. Possible Systematic Error.
- B9BHVA (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample C43.
- WVNGC (X) - Data for sample C43 are high. Inconsistent within the determinations of both samples.



Plastics Interlaboratory Testing Program

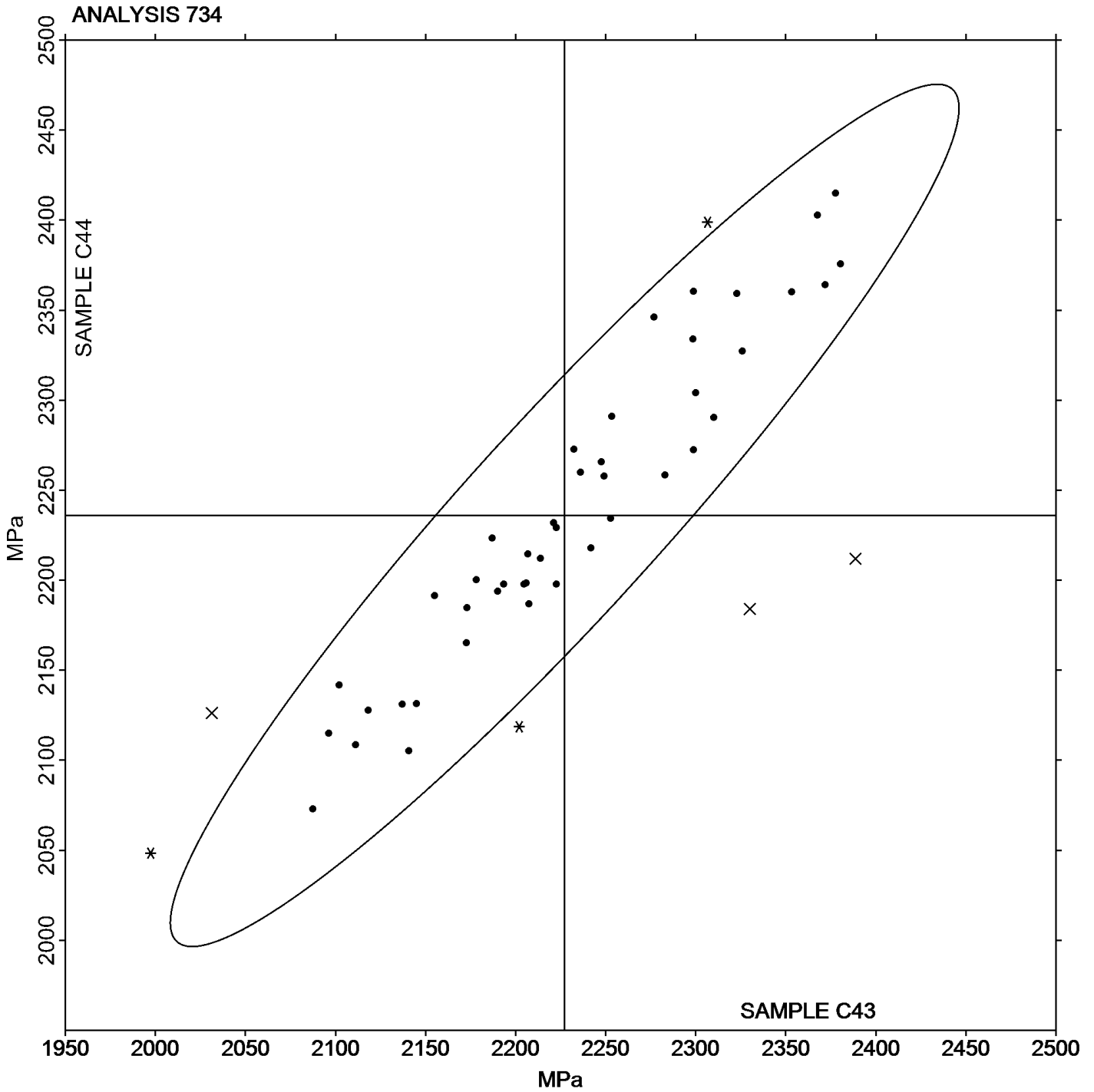
Analysis 734

Modulus of Elasticity - MPa

Report #102

2nd Qtr 2017

Grand Mean Sample C43: 2,227.22 MPa Grand Mean Sample C44: 2,236.00 MPa





Plastics Interlaboratory Testing Program

Report #102

Analysis 736

2nd Qtr 2017

Flexural Modulus - MPa

WebCode	Data Flag	Sample K43			Sample K44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23HWDY		2,197	-46	-0.41	1,828	-23	-0.27
26PECU		2,304	61	0.55	1,911	60	0.69
388XU4		2,256	13	0.12	1,833	-18	-0.21
39JUZ8		2,015	-228	-2.07	1,690	-161	-1.85
4JHPX4		2,137	-106	-0.96	1,799	-52	-0.60
6AQNWJ		2,143	-100	-0.90	1,761	-90	-1.04
6KLZ6Q		2,332	89	0.81	1,907	56	0.65
7A78EV		2,226	-17	-0.15	1,874	23	0.26
7Q7KMW		2,144	-99	-0.90	1,799	-52	-0.60
92NF4N		2,265	22	0.20	1,897	46	0.53
A3RVLE		2,188	-55	-0.50	1,738	-113	-1.31
AZMZ93		2,308	65	0.59	1,865	14	0.16
B9BHVA		2,361	118	1.07	1,962	111	1.28
BUCC4Z		2,280	37	0.33	1,857	6	0.07
DJNAKV		2,491	248	2.25	2,036	185	2.14
E4QRZP		2,255	12	0.11	1,860	9	0.10
EDBXWU		2,446	203	1.84	1,960	109	1.26
EGDYWQ		2,158	-85	-0.77	1,764	-87	-1.00
EHNQ4L		2,140	-103	-0.94	1,718	-133	-1.54
FJGW4D		2,255	12	0.11	1,866	15	0.18
FLP6BC		2,288	45	0.41	1,898	47	0.55
GZYAYG		2,300	57	0.51	1,862	11	0.13
JLWFJR		2,332	89	0.81	1,948	97	1.12
MRRGFM		2,124	-120	-1.08	1,797	-54	-0.63
N43AHM		2,095	-148	-1.34	1,746	-105	-1.21
N8Y39C		2,466	223	2.02	1,998	147	1.70
NEYJK3	X	1,926	-317	-2.87	1,850	-1	-0.01
NKKFL8		2,303	60	0.54	1,898	47	0.54
NVK8TC		2,307	64	0.58	1,910	59	0.68
R39W4X		2,254	11	0.10	1,828	-23	-0.27
RUFVE8		2,207	-36	-0.33	1,892	41	0.47
TJFFEU		2,178	-65	-0.59	1,803	-48	-0.55
TN8MTW	*	2,493	250	2.26	2,098	247	2.84
TQU3LD		2,079	-164	-1.49	1,722	-129	-1.49
UFQFNC		2,245	2	0.02	1,845	-6	-0.07



Plastics Interlaboratory Testing Program

Report #102

Analysis 736

2nd Qtr 2017

Flexural Modulus - MPa

WebCode	Data Flag	Sample K43			Sample K44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UZJALU		2,099	-144	-1.31	1,723	-128	-1.48
W8PWMT		2,188	-56	-0.50	1,758	-93	-1.07
WDBXHC		2,046	-197	-1.79	1,722	-129	-1.49
WDF7V7		2,251	8	0.07	1,837	-14	-0.16
WECJHY		2,368	125	1.13	1,937	86	0.99
WFJYTB		2,204	-39	-0.35	1,823	-28	-0.32
WMFXYQ		2,214	-29	-0.26	1,872	21	0.24
WPQMH3		2,204	-39	-0.35	1,844	-7	-0.08
X2VJYB		2,382	139	1.26	1,923	72	0.83
X6YA6P		2,186	-57	-0.52	1,834	-17	-0.20
XQYBHT		2,245	2	0.01	1,860	9	0.10
ZNHVZX		2,222	-21	-0.19	1,845	-6	-0.07

Summary Statistics		
	Sample K43	Sample K44
Grand Means	2,243.1 MPa	1,850.9 MPa
Std Dev Btwn Labs	110.4 MPa	86.7 MPa
Statistics based on 46 of 47 reporting participants		

Sample K43: HIPS & Sample K44: HIPS

Comments on Assigned Data Flags for Test #736

NEYJK3 (X) - Data for sample K43 are low. Inconsistent within the determinations of sample K43.



Plastics Interlaboratory Testing Program

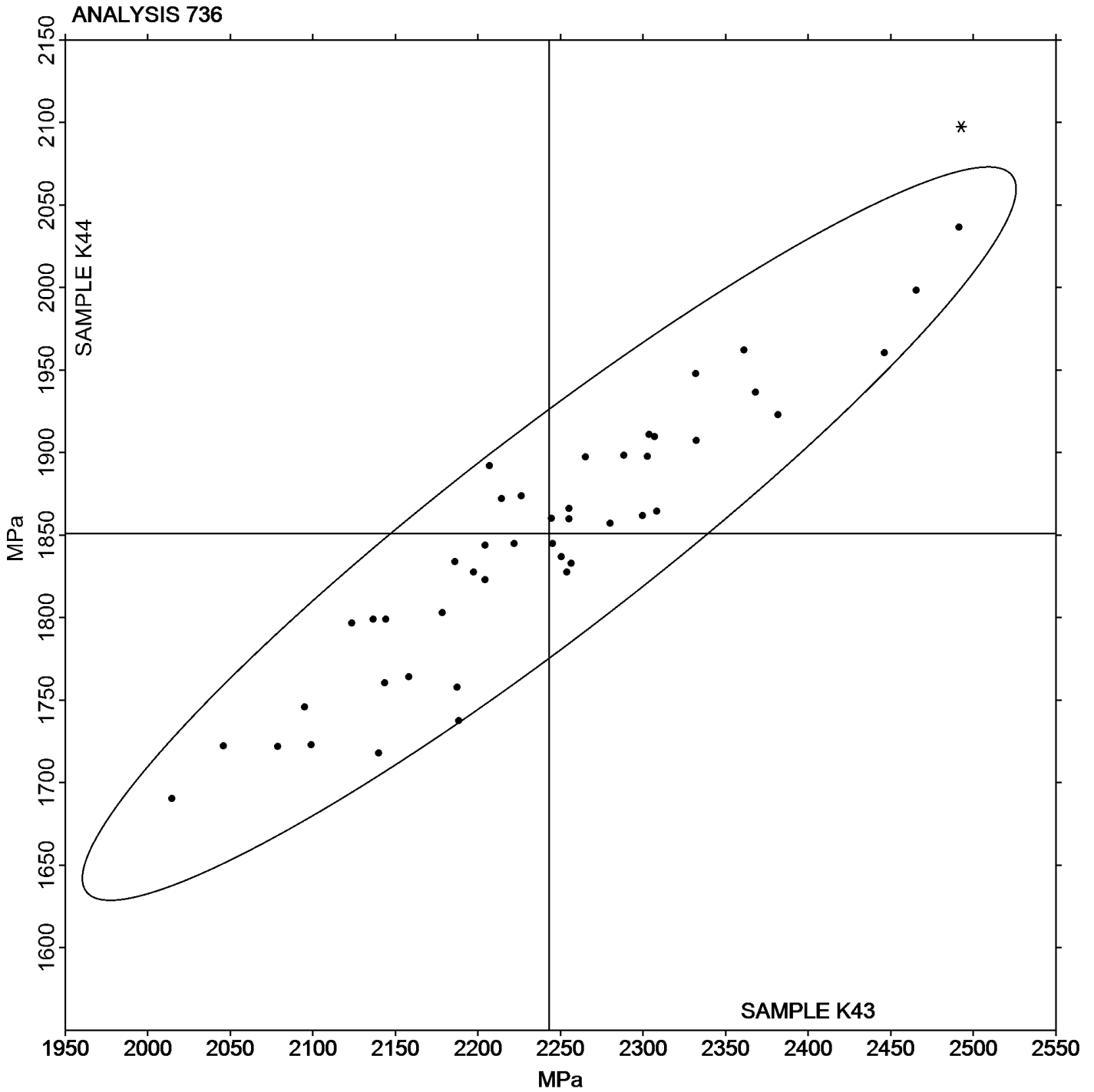
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Analysis 736

2nd Qtr 2017

Flexural Modulus - MPa

Grand Mean Sample K43: 2,243.08 MPa Grand Mean Sample K44: 1,850.95 MPa





Plastics Interlaboratory Testing Program

Report #102

Analysis 737

2nd Qtr 2017

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K43			Sample K44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23HWDY		39.75	-1.19	-0.67	32.88	-1.09	-0.77
26PECU	X	32.84	-8.10	-4.55	25.77	-8.20	-5.79
39JUZ8		37.18	-3.76	-2.11	31.02	-2.95	-2.08
4JHPX4		39.46	-1.47	-0.83	33.01	-0.96	-0.68
6KLZ6Q		42.07	1.14	0.64	34.89	0.92	0.65
7A78EV		40.87	-0.06	-0.04	34.08	0.12	0.08
7Q7KMW		39.17	-1.77	-0.99	32.95	-1.02	-0.72
92NF4N		40.10	-0.84	-0.47	33.60	-0.37	-0.26
A3RVLE		41.08	0.14	0.08	34.07	0.10	0.07
AZMZ93		42.21	1.28	0.72	34.82	0.85	0.60
B9BHVA		39.86	-1.07	-0.60	33.42	-0.55	-0.39
BUCC4Z		41.13	0.19	0.11	34.13	0.17	0.12
DJNAKV		44.41	3.47	1.95	36.65	2.68	1.90
E4QRZP		40.99	0.05	0.03	33.89	-0.08	-0.06
EDBXWU		44.91	3.97	2.23	36.99	3.02	2.13
EGDYWQ		41.38	0.44	0.25	34.04	0.07	0.05
EHNQ4L		39.62	-1.32	-0.74	32.42	-1.55	-1.09
FJGW4D		39.12	-1.82	-1.02	32.60	-1.37	-0.97
GZYAYG		39.88	-1.06	-0.59	32.56	-1.41	-0.99
JLWFJR		41.68	0.74	0.42	34.79	0.82	0.58
MRRGFM		40.89	-0.05	-0.03	34.45	0.48	0.34
N43AHM		39.76	-1.17	-0.66	33.15	-0.81	-0.58
N8Y39C		43.14	2.20	1.24	35.32	1.35	0.95
NEYJK3		40.65	-0.28	-0.16	34.00	0.04	0.03
NKKFL8		39.25	-1.69	-0.95	31.81	-2.16	-1.52
NVK8TC		40.85	-0.08	-0.05	33.89	-0.08	-0.06
PTYEZH		45.02	4.08	2.30	37.12	3.15	2.23
R39W4X		40.87	-0.07	-0.04	33.29	-0.68	-0.48
RUFVE8		39.14	-1.80	-1.01	32.74	-1.23	-0.87
TJFFEU		39.64	-1.30	-0.73	33.14	-0.83	-0.59
TN8MTW	*	44.06	3.12	1.76	37.30	3.34	2.36
TQU3LD		39.94	-1.00	-0.56	33.70	-0.27	-0.19
UFQFNC		40.41	-0.53	-0.30	33.34	-0.63	-0.45
UZJALU		40.04	-0.89	-0.50	33.45	-0.52	-0.37
W8PWMT		39.62	-1.32	-0.74	32.19	-1.78	-1.26



Plastics Interlaboratory Testing Program

Report #102

Analysis 737

2nd Qtr 2017

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K43			Sample K44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
WDBXHC	X	5.51	-35.42	-19.91	4.57	-29.40	-20.78
WDF7V7	X	36.66	-4.28	-2.40	29.28	-4.69	-3.31
WECJHY		43.16	2.23	1.25	35.56	1.60	1.13
WFJYTB		41.22	0.28	0.16	34.32	0.35	0.25
WMFXYQ		40.18	-0.75	-0.42	34.04	0.07	0.05
WPQMH3		39.68	-1.25	-0.70	33.52	-0.44	-0.31
X2VJYB	*	44.52	3.58	2.02	35.99	2.02	1.43
X6YA6P		39.38	-1.56	-0.88	32.83	-1.14	-0.81
XQYBHT		42.47	1.54	0.86	35.18	1.21	0.86
ZNHVZX		40.53	-0.40	-0.23	33.51	-0.46	-0.32

Summary Statistics

	Sample K43	Sample K44
Grand Means	40.935 MPa	33.968 MPa
Std Dev Btwn Labs	1.779 MPa	1.415 MPa

Statistics based on 42 of 45 reporting participants

Sample K43: HIPS & Sample K44: HIPS

Comments on Assigned Data Flags for Test #737

- 26PECU (X) - Data for both samples are low.
- WDF7V7 (X) - Data for sample K44 are low.
- WDBXHC (X) - Extreme data.



Plastics Interlaboratory Testing Program

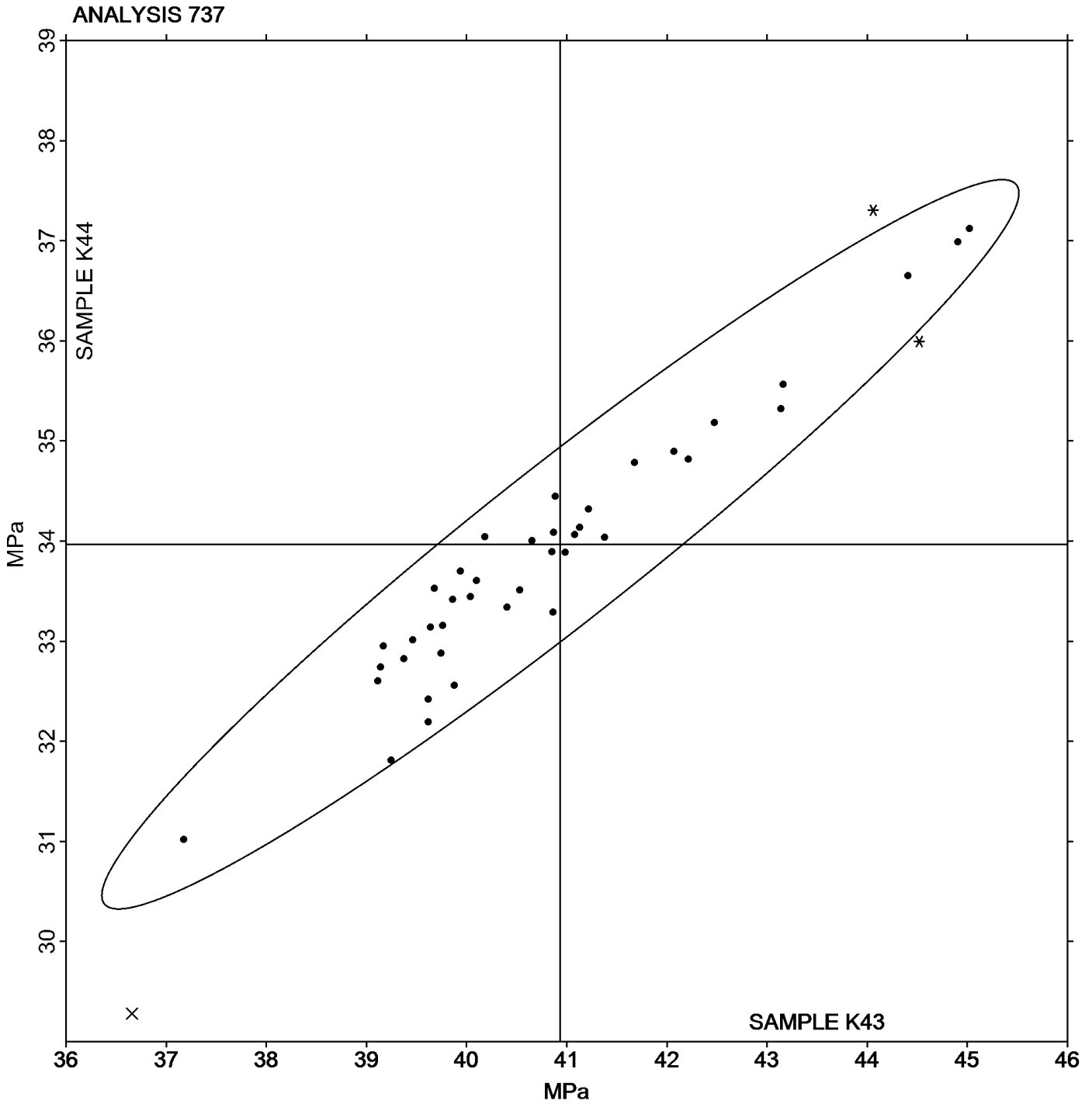
Analysis 737

Flexural Stress at 3.5% Strain - MPa

Report #102

2nd Qtr 2017

Grand Mean Sample K43: 40.935 MPa Grand Mean Sample K44: 33.968 MPa





Plastics Interlaboratory Testing Program

Report #102

Analysis 738

2nd Qtr 2017

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K43			Sample K44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23HWDY		40.40	-0.91	-0.60	32.88	-0.94	-0.83
26PECU	X	33.18	-8.12	-5.37	25.80	-8.01	-7.08
388XU4	X	43.38	2.07	1.37	33.82	0.00	0.00
39JUZ8		37.63	-3.68	-2.43	31.10	-2.71	-2.40
7A78EV		41.75	0.44	0.29	34.26	0.45	0.40
7Q7KMW		40.12	-1.19	-0.79	33.22	-0.59	-0.52
92NF4N		40.10	-1.21	-0.80	33.60	-0.21	-0.19
A3RVLE		42.13	0.82	0.54	34.39	0.58	0.51
AZMZ93		42.75	1.44	0.95	34.90	1.09	0.96
B9BHVA		40.49	-0.82	-0.54	33.51	-0.31	-0.27
BUCC4Z		41.97	0.66	0.43	34.32	0.51	0.45
DJNAKV		45.10	3.79	2.50	36.73	2.92	2.58
E4QRZP		41.87	0.56	0.37	34.01	0.20	0.18
EGDYWQ		42.29	0.98	0.65	34.20	0.39	0.35
EHNQ4L		40.08	-1.23	-0.81	32.56	-1.25	-1.11
FJGW4D		38.96	-2.35	-1.55	32.19	-1.62	-1.43
FLP6BC		41.93	0.63	0.41	34.71	0.90	0.79
GZYAYG		40.24	-1.07	-0.71	32.60	-1.21	-1.07
JLWFJR		42.50	1.20	0.79	34.81	0.99	0.88
N43AHM		40.60	-0.71	-0.47	33.33	-0.49	-0.43
N8Y39C		44.14	2.83	1.87	35.42	1.61	1.42
NEYJK3		41.28	-0.03	-0.02	33.24	-0.57	-0.51
NVK8TC		41.58	0.27	0.18	33.90	0.09	0.08
RUFVE8	X	2,251.04	2,209.73	1,459.90	1,891.90	1,858.09	1,642.78
TJFFEU		40.44	-0.87	-0.57	33.26	-0.55	-0.49
TQU3LD		40.80	-0.51	-0.34	33.76	-0.05	-0.05
UFQFNC		40.60	-0.71	-0.47	33.37	-0.44	-0.39
UZJALU		41.00	-0.31	-0.21	33.78	-0.03	-0.03
W8PWMT		40.20	-1.11	-0.73	32.31	-1.50	-1.33
WDBXHC		41.48	0.17	0.11	33.56	-0.25	-0.22
WECJHY		43.72	2.41	1.59	35.87	2.06	1.82
WFJYTB		42.02	0.71	0.47	34.48	0.67	0.59
WPQMH3		40.14	-1.17	-0.77	33.64	-0.17	-0.15
X6YA6P		40.09	-1.22	-0.81	32.87	-0.94	-0.83
XQYBHT		43.70	2.39	1.58	35.37	1.56	1.38



Plastics Interlaboratory Testing Program

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Analysis 738

2nd Qtr 2017

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K43			Sample K44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ZNHVZX		41.10	-0.21	-0.14	33.62	-0.19	-0.17

Summary Statistics

	Sample K43	Sample K44
Grand Means	41.309 MPa	33.811 MPa
Stnd Dev Btwn Labs	1.514 MPa	1.131 MPa

Statistics based on 33 of 36 reporting participants

Sample K43: HIPS & Sample K44: HIPS

Comments on Assigned Data Flags for Test #738

26PECU (X) - Data for both samples are low.

388XU4 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample K43.

RUFVE8 (X) - Extreme data.



Plastics Interlaboratory Testing Program

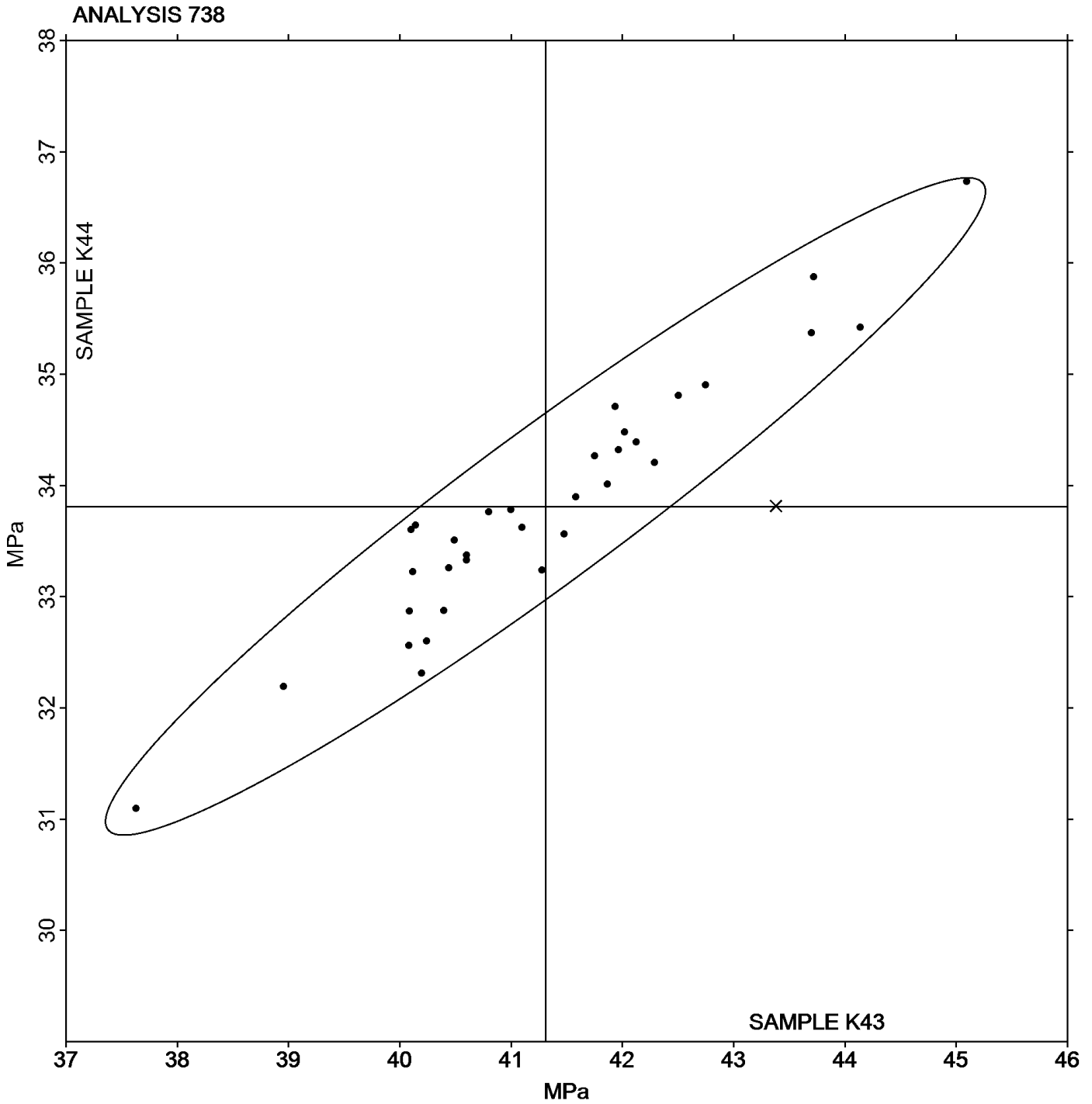
Analysis 738

Flexural Stress at Yield - MPa

Report #102

2nd Qtr 2017

Grand Mean Sample K43: 41.309 MPa Grand Mean Sample K44: 33.811 MPa





Plastics Interlaboratory Testing Program

Report #102

Analysis 750

2nd Qtr 2017

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

WebCode	Data Flag	Sample X43			Sample X44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2K3RPL		15.48	0.55	0.55	15.51	0.44	0.48	TO
388XU4		14.74	-0.20	-0.20	14.51	-0.56	-0.60	TO
39JUZ8		14.98	0.05	0.05	14.53	-0.54	-0.58	DY
3JPDZQ		16.20	1.27	1.29	16.05	0.98	1.06	TO
3ULG77		15.00	0.07	0.07	15.65	0.58	0.63	DY
4ELW49		14.75	-0.18	-0.18	14.85	-0.22	-0.24	TO
4FZPF3	*	16.71	1.77	1.80	15.33	0.26	0.28	DY
4KUM6T		14.85	-0.08	-0.08	14.45	-0.62	-0.67	TO
6KLZ6Q		15.00	0.06	0.07	14.28	-0.79	-0.85	DY
74BM3Y		15.14	0.20	0.21	13.85	-1.22	-1.32	TO
7A78EV	X	13.91	-1.02	-1.04	16.78	1.71	1.84	GO
7AMLKK		16.20	1.27	1.29	16.20	1.13	1.22	DY
7R3X94		13.48	-1.45	-1.47	13.94	-1.13	-1.22	DY
8CQEEJ		14.91	-0.02	-0.02	14.85	-0.22	-0.24	WZ
8MMK8G		15.20	0.27	0.27	16.00	0.93	1.00	TY
8XNBPH		16.65	1.71	1.74	16.72	1.65	1.78	TO
92NF4N		14.82	-0.12	-0.12	14.96	-0.11	-0.12	TO
9H8GUK		13.60	-1.33	-1.35	14.60	-0.47	-0.50	WZ
AT38TW		16.41	1.48	1.51	15.85	0.78	0.84	CE
AZMZ93		15.00	0.07	0.07	14.67	-0.40	-0.43	GO
B9BHVA		13.19	-1.74	-1.77	14.73	-0.34	-0.37	TO
B9U36M		13.90	-1.03	-1.05	14.50	-0.57	-0.61	TO
BE69PZ		15.96	1.03	1.05	16.88	1.81	1.94	TO
BKR4LX		15.90	0.97	0.98	15.48	0.41	0.44	TO
DF4AG9		15.04	0.10	0.11	13.97	-1.10	-1.19	XX
DJNAKV		15.63	0.70	0.71	15.69	0.62	0.66	DY
E4QRZP		13.85	-1.09	-1.10	14.79	-0.28	-0.31	TO
E8P4XB		15.10	0.17	0.17	14.10	-0.97	-1.04	CE
EB9ZNL		14.95	0.02	0.02	15.15	0.08	0.09	XX
EDBXWU		14.55	-0.38	-0.39	14.42	-0.65	-0.70	DY
EHNQ4L	X	5.12	-9.82	-9.97	5.28	-9.79	-10.53	TO
EPN2G7		15.05	0.12	0.12	15.60	0.53	0.57	DY
F62ULN		13.79	-1.15	-1.16	13.80	-1.27	-1.37	TO
FB4XD9		17.05	2.12	2.15	16.30	1.23	1.32	TO
FJGW4D		14.45	-0.48	-0.49	14.85	-0.22	-0.24	TO



Plastics Interlaboratory Testing Program

Report #102

Analysis 750

2nd Qtr 2017

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

WebCode	Data Flag	Sample X43			Sample X44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
FLP6BC		15.22	0.28	0.29	16.06	0.99	1.07	TO
FPKX48		13.31	-1.62	-1.65	13.28	-1.79	-1.93	TM
FRPLLH		15.15	0.22	0.22	15.72	0.65	0.70	TO
GUF66U	X	14.00	-0.93	-0.94	16.50	1.43	1.54	TO
GZYAYG		13.95	-0.98	-1.00	14.75	-0.32	-0.35	WZ
J8B9J6		16.44	1.50	1.53	16.65	1.58	1.70	TO
JHUKZN		15.46	0.53	0.54	16.52	1.45	1.56	KA
JLWFJR		14.45	-0.48	-0.49	14.80	-0.27	-0.29	GO
JVGUK9		14.81	-0.13	-0.13	14.84	-0.23	-0.25	DY
LKBQ7P		15.25	0.32	0.32	14.75	-0.32	-0.34	TO
LVAHXN		14.81	-0.13	-0.13	16.13	1.06	1.14	XX
LY9PAL	*	17.56	2.63	2.67	16.93	1.86	2.00	TO
M9V6DF		14.05	-0.88	-0.89	14.30	-0.77	-0.83	XX
MGRV3W	*	17.20	2.27	2.30	17.40	2.33	2.51	CE
MHLGX9		15.35	0.41	0.42	14.88	-0.19	-0.20	TO
MRRGFM		14.15	-0.79	-0.80	14.35	-0.72	-0.77	WZ
N43AHM		15.00	0.07	0.07	15.30	0.23	0.25	TO
NCVKTH		15.58	0.64	0.65	14.97	-0.10	-0.11	DY
NEFDLD		14.98	0.04	0.05	15.95	0.88	0.95	XX
NEYJK3		14.35	-0.58	-0.59	14.30	-0.77	-0.83	TO
NKKFL8	X	8.52	-6.41	-6.51	11.61	-3.46	-3.73	DY
PTYEZH	X	1.45	-13.48	-13.69	1.45	-13.62	-14.66	DY
PX4GG4		15.50	0.57	0.58	15.20	0.13	0.14	TO
PYEBBH	X	21.29	6.35	6.45	20.60	5.53	5.95	TO
Q883WH	X	17.74	2.81	2.85	15.36	0.29	0.31	TO
R39W4X		14.03	-0.90	-0.92	14.05	-1.02	-1.10	TO
R3DCHJ		15.50	0.57	0.58	15.25	0.18	0.19	TO
RKDAX9		15.05	0.12	0.12	15.00	-0.07	-0.07	TO
RUFVE8		15.35	0.42	0.43	16.20	1.13	1.22	TO
TN8MTW		14.00	-0.93	-0.94	14.50	-0.57	-0.61	TO
TQD8GW		12.70	-2.23	-2.26	13.05	-2.02	-2.17	TO
TUAWZP		13.67	-1.26	-1.28	13.68	-1.39	-1.49	TO
UFQFNC	X	11.49	-3.44	-3.49	13.38	-1.69	-1.82	TO
UMMBLB		14.73	-0.20	-0.20	14.71	-0.36	-0.39	TO
UQ6QXN		13.84	-1.09	-1.11	14.32	-0.75	-0.81	CE



Plastics Interlaboratory Testing Program

Report #102

Analysis 750

2nd Qtr 2017

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

WebCode	Data Flag	<u>Sample X43</u>			<u>Sample X44</u>			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
UXU42X		15.49	0.56	0.57	15.75	0.68	0.73	TO
UZJALU		14.70	-0.23	-0.23	15.25	0.18	0.19	TO
W2PEA3		15.50	0.57	0.58	15.10	0.03	0.03	DY
WDF7V7		15.40	0.47	0.48	16.45	1.38	1.49	TO
WFJYTB		13.27	-1.66	-1.69	14.13	-0.94	-1.02	TY
X2VJYB		14.77	-0.16	-0.16	14.81	-0.26	-0.28	DY
XQYBHT		14.58	-0.35	-0.35	15.08	0.02	0.02	TO
XUWQR2		14.02	-0.92	-0.93	14.31	-0.76	-0.82	TO
XUWW6P		13.80	-1.13	-1.15	15.20	0.13	0.14	TO
YA3LE8		14.65	-0.28	-0.28	13.90	-1.17	-1.26	TO
YHHAGA		13.90	-1.03	-1.05	14.10	-0.97	-1.04	DY
YZ7AQU		16.65	1.72	1.75	16.90	1.83	1.97	TO
ZNHVZX		14.19	-0.75	-0.76	14.39	-0.68	-0.73	WZ

Summary Statistics		
	<u>Sample X43</u>	<u>Sample X44</u>
Grand Means	14.931 grams/10 mins	15.069 grams/10 mins
Std Dev Btwn Labs	0.985 grams/10 mins	0.929 grams/10 mins
Statistics based on 75 of 83 reporting participants		

Sample X43: PP & Sample X44: PP

Comments on Assigned Data Flags for Test #750

- PTYEZH (X) - Extreme data. Data may be off by a factor of 10.
- NKKFL8 (X) - Data for both samples are low. Possible Systematic Error.
- 7A78EV (X) - Inconsistent in testing between samples.
- GUF66U (X) - Inconsistent in testing between samples.
- PYEBBH (X) - Data for both samples are high. Possible Systematic Error.
- Q883WH (X) - Inconsistent in testing between samples, data for Sample X43 are high.
- UFQFNC (X) - Inconsistent in testing between samples, data for Sample X43 are low.
- EHNQ4L (X) - Extreme data.



Plastics Interlaboratory Testing Program

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Analysis 750

2nd Qtr 2017

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

Key to Instrument Codes Reported by Participants

CE	Ceast	DY	Dynisco
GO	Gottfert	KA	Kayeness
TM	TMI	TO	Tinius Olsen
TY	Toyoseiki Seisakusho	WZ	Zwick
XX	Instrument manufacturer not specified by lab		



Plastics Interlaboratory Testing Program

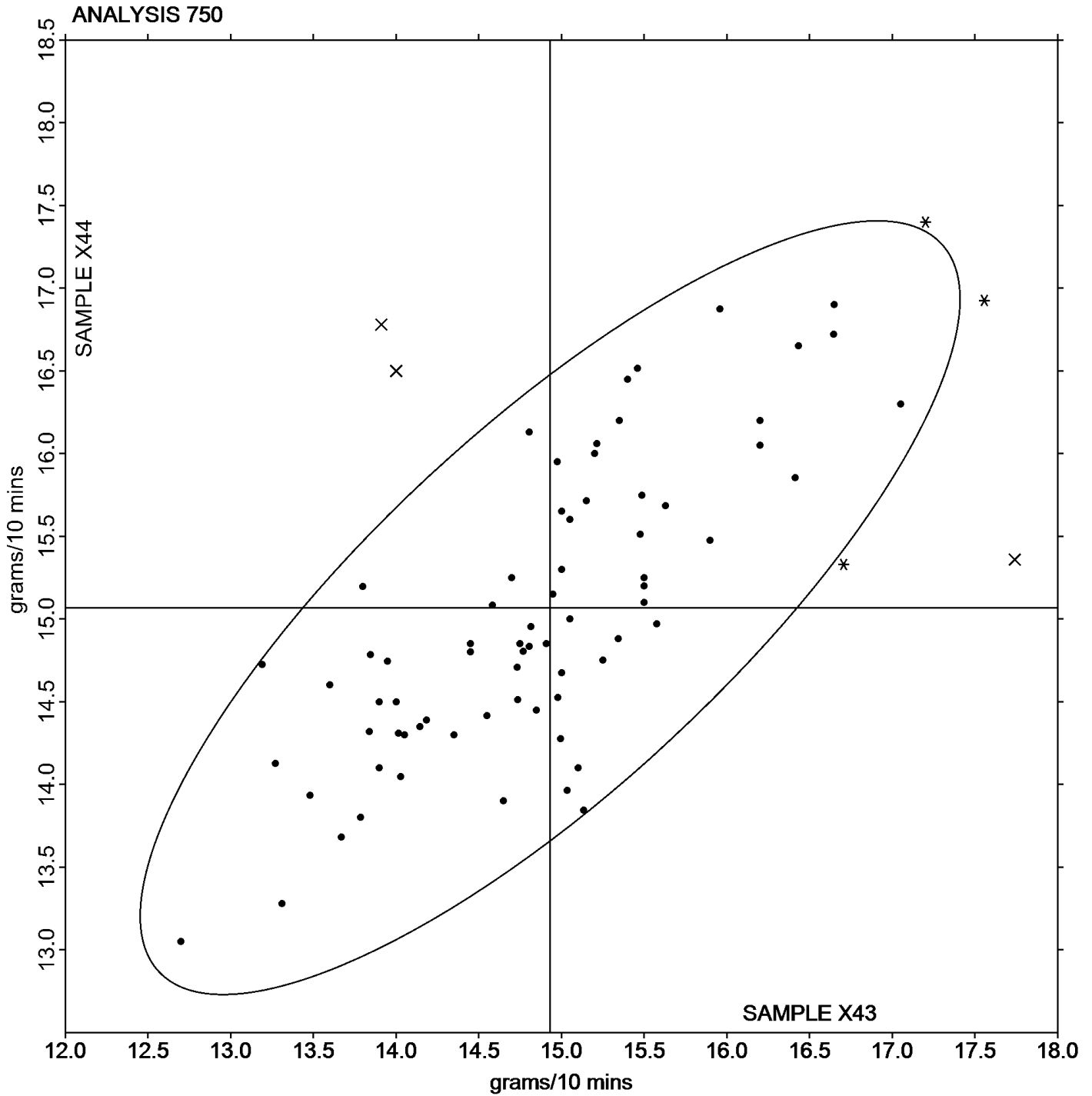
Analysis 750

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

Report #102

2nd Qtr 2017

Grand Mean Sample X43: 14.931 grams/10 mins Grand Mean Sample X44: 15.069 grams/10 mins





Plastics Interlaboratory Testing Program

Report #102

Analysis 755

2nd Qtr 2017

Moisture Content of Plastics

WebCode	Data Flag	Sample Y43			Sample Y44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
26PECU		0.02100	-0.00295	-0.28	0.02600	-0.00087	-0.08	MK
2K3RPL		0.01800	-0.00595	-0.56	0.01850	-0.00837	-0.79	CT
3ULG77		0.02267	-0.00128	-0.12	0.02633	-0.00053	-0.05	AZ
3XJ7YX		0.01957	-0.00438	-0.41	0.02110	-0.00577	-0.55	ML
4YAMYX		0.02130	-0.00264	-0.25	0.02173	-0.00513	-0.49	MU
6AQNWJ	*	0.02107	-0.00288	-0.27	0.03220	0.00533	0.51	MD
6KLZ6Q	X	0.04700	0.02305	2.18	0.03100	0.00413	0.39	MB
6MB9C7		0.01300	-0.01095	-1.03	0.01367	-0.01320	-1.25	MU
8DHH3J		0.02300	-0.00095	-0.09	0.02500	-0.00187	-0.18	CS
92NF4N		0.02700	0.00305	0.29	0.03110	0.00423	0.40	MS
9JGJH4		0.01380	-0.01015	-0.96	0.01563	-0.01123	-1.07	MU
BE69PZ		0.01863	-0.00531	-0.50	0.01977	-0.00710	-0.67	AZ
EHNQ4L		0.01267	-0.01128	-1.07	0.01467	-0.01220	-1.16	CT
EPN2G7		0.02567	0.00172	0.16	0.02600	-0.00087	-0.08	MS
FACQ8P		0.01433	-0.00961	-0.91	0.01633	-0.01053	-1.00	ML
FB4XD9		0.04450	0.02055	1.94	0.04950	0.02263	2.15	ML
FRPLLH		0.01470	-0.00925	-0.87	0.01743	-0.00943	-0.89	MR
GUUDBA	X	0.07667	0.05272	4.98	0.06000	0.03313	3.14	MU
JVGUK9		0.01710	-0.00685	-0.65	0.02710	0.00023	0.02	AZ
N43AHM	X	0.15100	0.12705	12.01	0.15000	0.12313	11.68	SA
NCVKTH		0.02233	-0.00161	-0.15	0.02367	-0.00320	-0.30	MJ
PTYEZH	X	0.02667	0.00272	0.26	0.06000	0.03313	3.14	MR
RNBTVZ		0.05000	0.02605	2.46	0.05000	0.02313	2.19	XX
TQD8GW		0.02200	-0.00195	-0.18	0.02333	-0.00353	-0.34	AZ
UQ6QXN		0.02197	-0.00198	-0.19	0.02913	0.00227	0.21	MU
UZJALU		0.04933	0.02539	2.40	0.04800	0.02113	2.00	MK
WDF7V7		0.02450	0.00055	0.05	0.03100	0.00413	0.39	AZ
X2VJYB		0.02150	-0.00245	-0.23	0.02250	-0.00437	-0.41	CT
XUWW6P		0.03900	0.01505	1.42	0.04200	0.01513	1.44	MB
YA3LE8	X	0.07667	0.05272	4.98	0.06667	0.03980	3.77	MU



Plastics Interlaboratory Testing Program

Report #102

Analysis 755

2nd Qtr 2017

Moisture Content of Plastics

Summary Statistics		
	<u>Sample Y43</u>	<u>Sample Y44</u>
Grand Means	0.023945 Percent	0.026868 Percent
Stnd Dev Btwn Labs	0.010578 Percent	0.010544 Percent
Statistics based on 25 of 30 reporting participants		

Sample Y43: HIPS & Sample Y44: HIPS

Comments on Assigned Data Flags for Test #755

- PTYEZH (X) - Data for sample Y44 are high. Inconsistent within the determinations of both samples.
- N43AHM (X) - Extreme data.
- 6KLZ6Q (X) - Inconsistent in testing between samples.
- GUUDBA (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample Y43.
- YA3LE8 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations for both samples.

Key to Instrument Codes Reported by Participants

- | | |
|--|---|
| AZ Arizona Instruments Moisture Analyzer | 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 |
| MU Mettler Toledo | SA Sartorius MA30 |
| XX Instrument manufacturer not specified by lab | |



Plastics Interlaboratory Testing Program

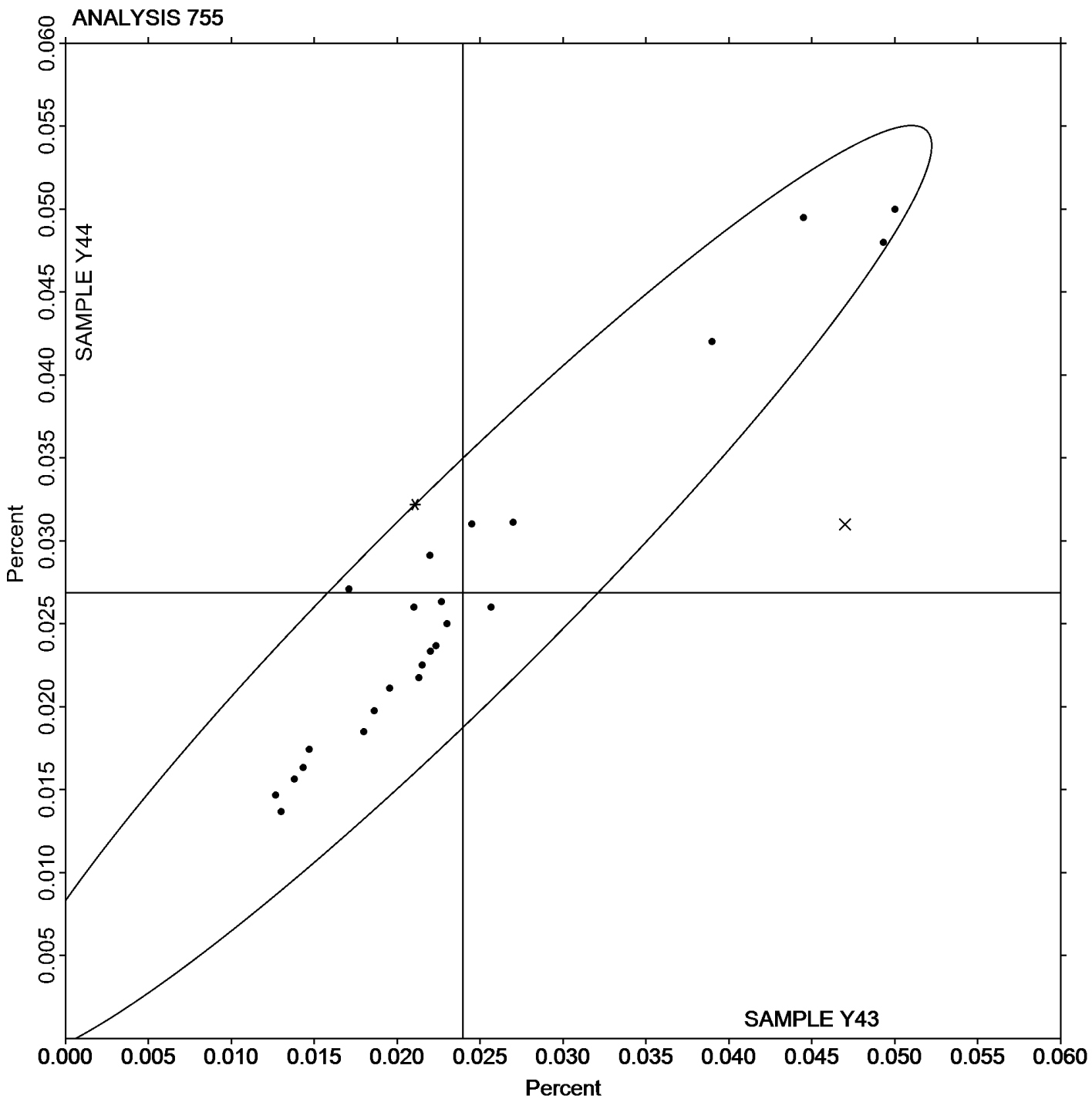
Analysis 755

Moisture Content of Plastics

Report #102

2nd Qtr 2017

Grand Mean Sample Y43: 0.02395 Percent Grand Mean Sample Y44: 0.02687 Percent





Plastics Interlaboratory Testing Program

Report #102

Analysis 757

2nd Qtr 2017

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L43			Sample L44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
26PECU		14.870	-0.027	-0.17	14.860	-0.065	-0.45
2K3RPL		14.620	-0.277	-1.76	14.890	-0.035	-0.24
388XU4		15.070	0.173	1.10	14.895	-0.030	-0.21
3NXVWX		14.940	0.043	0.27	14.980	0.055	0.37
3ULG77	*	14.560	-0.337	-2.15	14.575	-0.350	-2.39
6AQNWJ		14.880	-0.017	-0.11	14.720	-0.205	-1.40
6KLZ6Q		14.985	0.088	0.56	14.900	-0.025	-0.17
8AXUZX	*	15.340	0.443	2.82	15.217	0.292	1.99
8DHH3J	X	14.855	-0.042	-0.27	14.315	-0.610	-4.15
92NF4N		14.695	-0.202	-1.29	15.125	0.200	1.36
9E7FNV		14.960	0.063	0.40	14.965	0.040	0.27
9H8GUK		14.995	0.098	0.62	14.891	-0.034	-0.23
9HRABN		14.700	-0.198	-1.26	15.034	0.109	0.74
9VWCBK		14.755	-0.142	-0.90	14.815	-0.110	-0.75
B9BHVA		14.805	-0.092	-0.59	14.900	-0.025	-0.17
BE69PZ		15.030	0.133	0.85	15.005	0.080	0.54
DJNAKV		15.005	0.108	0.69	14.915	-0.010	-0.07
E4QRZP		14.893	-0.004	-0.02	15.126	0.201	1.37
EDBXWU		15.125	0.228	1.45	14.950	0.025	0.17
EHNQ4L		15.090	0.193	1.23	14.875	-0.050	-0.34
EPN2G7	*	14.540	-0.357	-2.27	14.625	-0.300	-2.04
FB4XD9		14.960	0.063	0.40	15.135	0.210	1.43
FJGW4D		14.730	-0.167	-1.06	15.120	0.195	1.32
FLP6BC		14.865	-0.032	-0.20	14.625	-0.300	-2.04
FRPLLH	X	12.755	-2.142	-13.63	12.965	-1.960	-13.34
GZYAYG		14.745	-0.152	-0.97	14.805	-0.120	-0.82
HQ9778		14.900	0.003	0.02	15.005	0.080	0.54
JLWFJR		14.790	-0.107	-0.68	15.015	0.090	0.61
KWBYD8		15.005	0.108	0.69	14.870	-0.055	-0.38
LVAHXN		14.895	-0.003	-0.02	14.615	-0.310	-2.11
MA7XEA		14.956	0.059	0.38	15.110	0.184	1.25
MRRGFM		14.990	0.093	0.59	14.905	-0.020	-0.14
N43AHM		14.970	0.073	0.46	14.950	0.025	0.17
NCVKTH		14.895	-0.002	-0.01	14.865	-0.060	-0.41
NEFDLD		14.935	0.038	0.24	14.880	-0.045	-0.31



Plastics Interlaboratory Testing Program

Report #102

Analysis 757

2nd Qtr 2017

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L43			Sample L44		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PG3EZY		14.745	-0.152	-0.97	14.850	-0.075	-0.51
R39W4X	X	14.165	-0.732	-4.66	15.000	0.075	0.51
RKDAX9		14.805	-0.092	-0.59	14.835	-0.090	-0.62
TJFFEU		15.025	0.128	0.81	14.940	0.015	0.10
TN8MTW		14.770	-0.127	-0.81	15.020	0.095	0.64
UQ6QXN		14.950	0.053	0.34	15.022	0.096	0.66
UXL9AB		14.797	-0.100	-0.64	14.820	-0.105	-0.72
UXU42X	*	15.306	0.408	2.60	15.273	0.348	2.37
UZJALU		14.770	-0.127	-0.81	14.865	-0.060	-0.41
VCRBXD		14.825	-0.072	-0.46	14.815	-0.110	-0.75
WDF7V7	X	15.001	0.104	0.66	15.566	0.640	4.36
WECJHY		14.845	-0.052	-0.33	15.055	0.130	0.88
WMFXYQ		14.820	-0.077	-0.49	14.935	0.010	0.07
X2VJYB		14.930	0.033	0.21	14.910	-0.015	-0.10
XQYBHT		14.858	-0.039	-0.25	14.934	0.008	0.06
XUVYUU		14.900	0.003	0.02	15.090	0.165	1.12
XUWW6P		15.035	0.138	0.88	14.795	-0.130	-0.89
YA3LE8		15.034	0.137	0.87	14.937	0.012	0.08
ZNHVZX		14.950	0.053	0.34	15.010	0.085	0.58

Summary Statistics		
	Sample L43	Sample L44
Grand Means	14.8972 Percent	14.9254 Percent
Std Dev Btwn Labs	0.1572 Percent	0.1469 Percent
Statistics based on 50 of 54 reporting participants		

Sample L43: PBT & Sample L44: PBT

Comments on Assigned Data Flags for Test #757

- R39W4X (X) - Data for sample L43 are low.
- FRPLLH (X) - Data for both samples are low.
- WDF7V7 (X) - Data for sample L44 are high.
- 8DHH3J (X) - Data for sample L44 are low.



Plastics Interlaboratory Testing Program

Report #102

Analysis 760

2nd Qtr 2017

DSC Crystallization Temperature

WebCode	Data Flag	Sample W43			Sample W44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
23H2QL		206.48	9.20	2.10	192.18	14.90	1.74	TA
26PECU		196.60	-0.68	-0.16	173.67	-3.61	-0.42	TA
388XU4		196.80	-0.48	-0.11	172.97	-4.31	-0.50	TA
6AQNWJ		193.73	-3.55	-0.81	170.40	-6.88	-0.80	PE
7A78EV		199.23	1.95	0.45	175.17	-2.11	-0.25	TA
DLTW7M		197.27	-0.02	0.00	171.53	-5.74	-0.67	TA
GZYAYG		198.80	1.52	0.35	173.83	-3.44	-0.40	TA
LVAHXN		194.98	-2.30	-0.53	172.81	-4.47	-0.52	TA
LY9PAL		200.77	3.48	0.80	178.63	1.36	0.16	XX
MRRGFM		192.28	-5.01	-1.14	175.01	-2.27	-0.26	TA
NEFDLD		197.58	0.30	0.07	172.68	-4.60	-0.54	TA
NKKFL8		194.63	-2.65	-0.61	173.09	-4.19	-0.49	TA
PWRMXX		196.61	-0.67	-0.15	182.14	4.86	0.57	TA
R39W4X		194.08	-3.20	-0.73	173.11	-4.16	-0.49	PE
R6ZZRX		199.47	2.18	0.50	185.17	7.89	0.92	TA
TQD8GW		193.67	-3.62	-0.83	174.78	-2.50	-0.29	MT
WDBXHC		190.41	-6.87	-1.57	174.83	-2.45	-0.29	TA
XQYBHT		195.41	-1.88	-0.43	173.57	-3.70	-0.43	TA
ZF7NE2	*	208.70	11.42	2.61	206.27	28.99	3.38	XX
ZNHVZX		198.17	0.88	0.20	173.70	-3.58	-0.42	TA

Summary Statistics

	Sample W43	Sample W44
Grand Means	197.284 Degrees Celsius	177.276 Degrees Celsius
Std Dev Btwn Labs	4.377 Degrees Celsius	8.579 Degrees Celsius

Statistics based on 20 of 20 reporting participants

Sample W43: PBT & Sample W44: PBT

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

Report #102

Analysis 761

2nd Qtr 2017

DSC Melt Temperature

WebCode	Data Flag	Sample W43			Sample W44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
23H2QL		224.56	3.21	1.82	226.18	1.71	1.22	TA
26PECU		222.60	1.25	0.71	226.43	1.96	1.40	TA
388XU4		220.27	-1.09	-0.62	222.63	-1.84	-1.31	TA
6AQNWJ		223.40	2.05	1.16	224.70	0.23	0.16	PE
7A78EV		221.17	-0.19	-0.11	223.50	-0.97	-0.69	TA
92NF4N	X	211.66	-9.70	-5.49	225.66	1.19	0.85	TA
9HRABN		221.70	0.35	0.20	223.73	-0.74	-0.53	TA
DLTW7M		223.63	2.28	1.29	227.30	2.83	2.02	TA
GUV7AH		220.60	-0.75	-0.43	224.43	-0.04	-0.03	TA
GZYAYG		221.33	-0.02	-0.01	223.20	-1.27	-0.91	TA
LVAHXN		220.09	-1.27	-0.72	224.77	0.30	0.21	XX
LY9PAL		222.47	1.11	0.63	224.33	-0.14	-0.10	XX
MRRGFM		219.32	-2.03	-1.15	224.97	0.50	0.35	TA
NEFDLD		221.20	-0.16	-0.09	223.70	-0.77	-0.55	XX
NKKFL8		221.43	0.08	0.05	224.46	-0.01	-0.01	TA
PWRMXX		220.36	-0.99	-0.56	225.15	0.68	0.48	TA
R39W4X		219.99	-1.36	-0.77	223.95	-0.52	-0.37	PE
R6ZZRX		222.83	1.48	0.84	226.80	2.33	1.66	TA
TQD8GW		223.67	2.31	1.31	222.89	-1.58	-1.13	MT
WDBXHC		216.86	-4.49	-2.55	222.92	-1.55	-1.11	TA
XQYBHT		220.32	-1.03	-0.58	225.56	1.09	0.77	TA
ZF7NE2	X	229.17	7.81	4.43	234.47	10.00	7.12	XX
ZNHVZX		220.60	-0.75	-0.43	222.27	-2.20	-1.57	TA

Summary Statistics		
	Sample W43	Sample W44
Grand Means	221.353 Degrees Celsius	224.470 Degrees Celsius
Stnd Dev Btwn Labs	1.765 Degrees Celsius	1.403 Degrees Celsius
Statistics based on 21 of 23 reporting participants		

Sample W43: PBT & Sample W44: PBT

Comments on Assigned Data Flags for Test #761

92NF4N (X) - Data for sample W43 are low.

ZF7NE2 (X) - Data for both samples are high.



Plastics Interlaboratory Testing Program

Analysis 761

DSC Melt Temperature

Report #102

2nd Qtr 2017

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

PE Perkins Elmer Instruments

TA TA Instruments

XX Instrument manufacturer not specified by lab

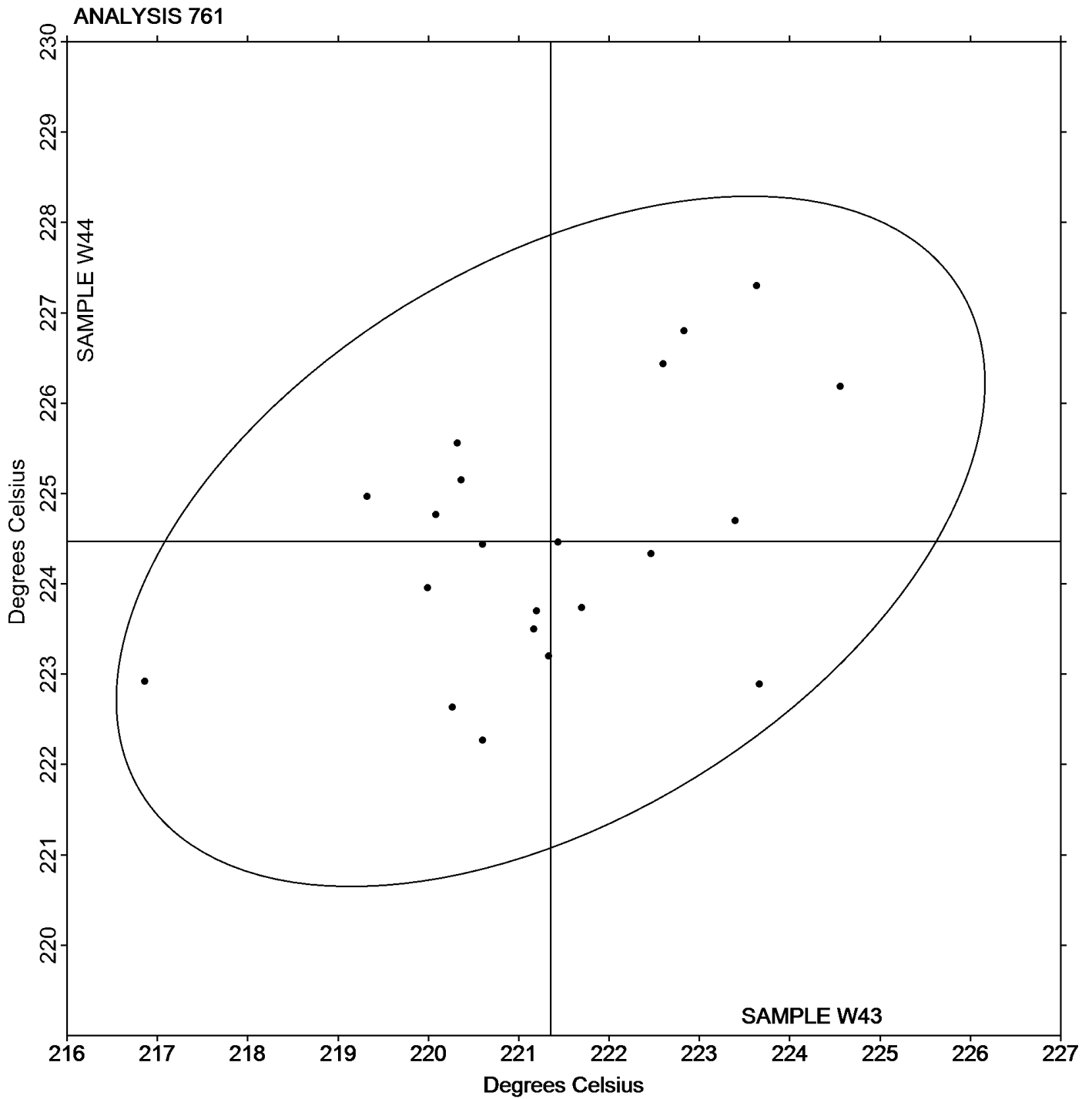


Plastics Interlaboratory Testing Program

Analysis 761
DSC Melt Temperature

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Grand Mean Sample W43: 221.35 Degrees Celsius Grand Mean Sample W44: 224.47 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #102

Analysis 762

2nd Qtr 2017

DSC Enthalpy of Crystallization

WebCode	Data Flag	Sample W43			Sample W44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
23H2QL		19.55	-3.14	-1.64	36.70	-10.11	-2.17	TA
26PECU		22.66	-0.03	-0.02	43.94	-2.87	-0.62	TA
388XU4		25.07	2.37	1.24	48.97	2.17	0.47	TA
6AQNWJ		20.00	-2.70	-1.41	40.65	-6.15	-1.32	PE
7A78EV		23.07	0.37	0.19	45.93	-0.87	-0.19	TA
DLTW7M		22.31	-0.38	-0.20	50.77	3.97	0.85	TA
GZYAYG		23.80	1.10	0.58	48.20	1.40	0.30	TA
LY9PAL		21.29	-1.40	-0.73	46.38	-0.43	-0.09	XX
NKKFL8		19.79	-2.91	-1.52	43.40	-3.41	-0.73	TA
PWRMXX		24.30	1.60	0.84	51.49	4.68	1.01	TA
R6ZZRX		24.93	2.24	1.17	53.50	6.70	1.44	TA
WDBXHC		24.40	1.70	0.89	52.13	5.33	1.15	TA
XQYBHT		24.22	1.53	0.80	47.66	0.86	0.18	TA
ZF7NE2	X	0.83	-21.87	-11.42	2.32	-44.49	-9.57	XX
ZNHVZX		22.37	-0.33	-0.17	45.52	-1.28	-0.28	TA

Summary Statistics		
	Sample W43	Sample W44
Grand Means	22.698 Joules Per Gram	46.802 Joules Per Gram
Stnd Dev Btwn Labs	1.914 Joules Per Gram	4.647 Joules Per Gram
Statistics based on 14 of 15 reporting participants		

Sample W43: PBT & Sample W44: PBT

Comments on Assigned Data Flags for Test #762

ZF7NE2 (X) - Extreme data.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

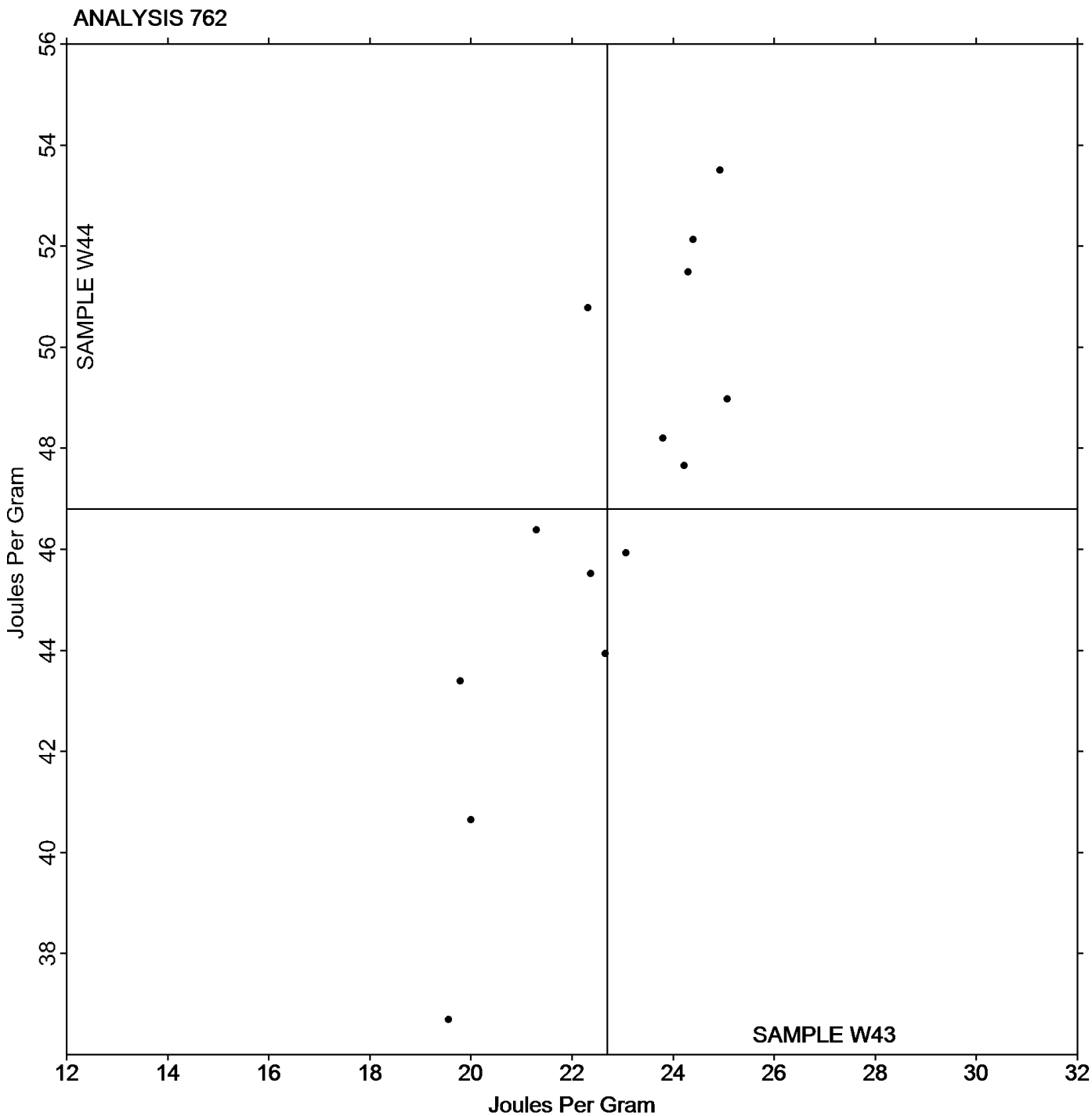
Analysis 762

DSC Enthalpy of Crystallization

Report #102

2nd Qtr 2017

Grand Mean Sample W43: 22.698 Joules Per Gram Grand Mean Sample W44: 46.802 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 #102

Analysis 763

2nd Qtr 2017

DSC Enthalpy of Fusion

WebCode	Data Flag	Sample W43			Sample W44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
23H2QL		22.24	-2.26	-0.83	36.70	-5.36	-0.84	TA
26PECU		26.19	1.70	0.62	41.79	-0.27	-0.04	TA
388XU4		23.92	-0.57	-0.21	37.57	-4.49	-0.70	TA
6AQNWJ		21.59	-2.91	-1.06	35.67	-6.39	-1.00	PE
7A78EV		23.93	-0.56	-0.21	36.80	-5.26	-0.83	TA
92NF4N		22.90	-1.59	-0.58	35.90	-6.17	-0.97	TA
DLTW7M		26.12	1.62	0.59	39.52	-2.54	-0.40	TA
GZYAYG		25.73	1.24	0.45	46.17	4.10	0.64	TA
LY9PAL		29.48	4.99	1.82	56.67	14.60	2.29	XX
NKKFL8		21.78	-2.72	-0.99	43.95	1.89	0.30	TA
PWRMXX		24.41	-0.08	-0.03	53.80	11.73	1.84	TA
R6ZZRX		26.90	2.41	0.88	48.83	6.77	1.06	TA
WDBXHC		28.69	4.20	1.54	41.93	-0.13	-0.02	TA
XQYBHT		25.06	0.56	0.21	40.98	-1.09	-0.17	TA
ZF7NE2		18.82	-5.67	-2.08	37.40	-4.66	-0.73	XX
ZNHVZX		24.15	-0.34	-0.13	39.31	-2.75	-0.43	TA

Summary Statistics

	Sample W43	Sample W44
Grand Means	24.494 Joules Per Gram	42.062 Joules Per Gram
Stnd Dev Btwn Labs	2.734 Joules Per Gram	6.376 Joules Per Gram

Statistics based on 16 of 16 reporting participants

Sample W43: PBT & Sample W44: PBT

Key to Instrument Codes Reported by Participants

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



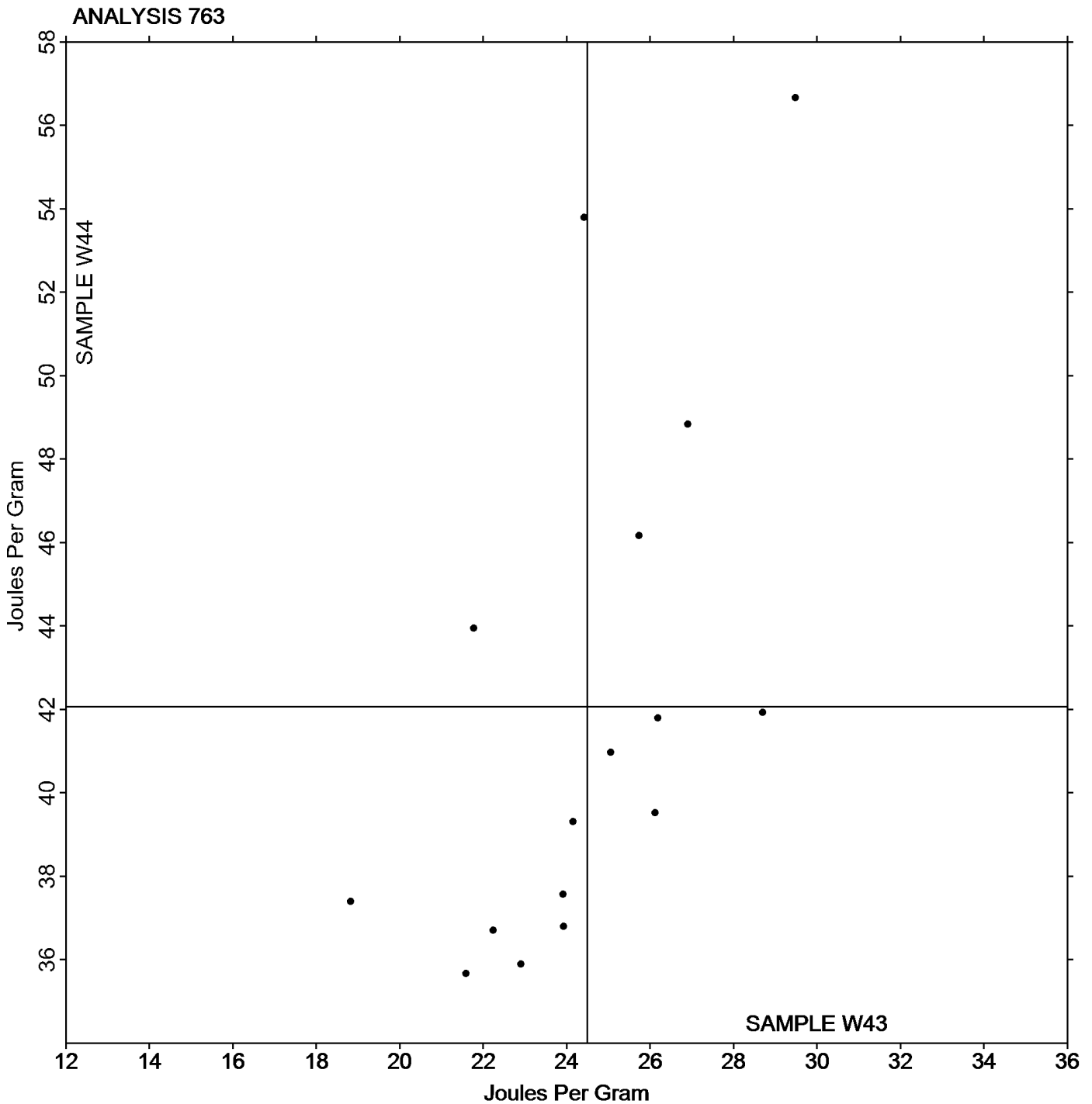
Plastics Interlaboratory Testing Program

Analysis 763 DSC Enthalpy of Fusion

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2nd Qtr 2017

Grand Mean Sample W43: 24.494 Joules Per Gram Grand Mean Sample W44: 42.062 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 #102

Analysis 764

2nd Qtr 2017

DSC Glass Transition Temperature

WebCode	Data Flag	Sample V43			Sample V44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
23H2QL		110.70	3.63	2.31	110.06	2.78	1.60	TA
26PECU		105.80	-1.27	-0.81	106.10	-1.18	-0.68	TA
388XU4		107.50	0.43	0.27	107.20	-0.08	-0.05	TA
6AQNWJ		107.73	0.66	0.42	108.33	1.06	0.61	PE
7A78EV		106.90	-0.17	-0.11	106.40	-0.88	-0.51	TA
92NF4N		108.48	1.41	0.90	108.54	1.26	0.73	TA
DLTW7M	*	106.13	-0.94	-0.59	109.14	1.87	1.08	TA
GZYAYG		103.97	-3.10	-1.97	103.53	-3.74	-2.16	TA
LY9PAL		106.93	-0.14	-0.09	108.67	1.39	0.80	XX
PWRMXX		105.10	-1.97	-1.25	104.76	-2.52	-1.46	TA
R6ZZRX		106.27	-0.80	-0.51	105.73	-1.54	-0.89	TA
TQD8GW		107.60	0.53	0.34	107.48	0.20	0.11	MT
WDBXHC		107.65	0.58	0.37	107.50	0.22	0.13	TA
XQYBHT		108.30	1.23	0.78	108.34	1.06	0.61	TA
ZF7NE2	X	70.30	-36.77	-23.37	70.43	-36.84	-21.28	XX
ZNHVZX		106.97	-0.10	-0.06	107.40	0.12	0.07	TA

Summary Statistics		Sample V43	Sample V44
Grand Means		107.069 Degrees Celsius	107.278 Degrees Celsius
Stnd Dev Btwn Labs		1.574 Degrees Celsius	1.732 Degrees Celsius
Statistics based on 15 of 16 reporting participants			

Sample V43: ABS & Sample V44: ABS

Comments on Assigned Data Flags for Test #764

ZF7NE2 (X) - Extreme data.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

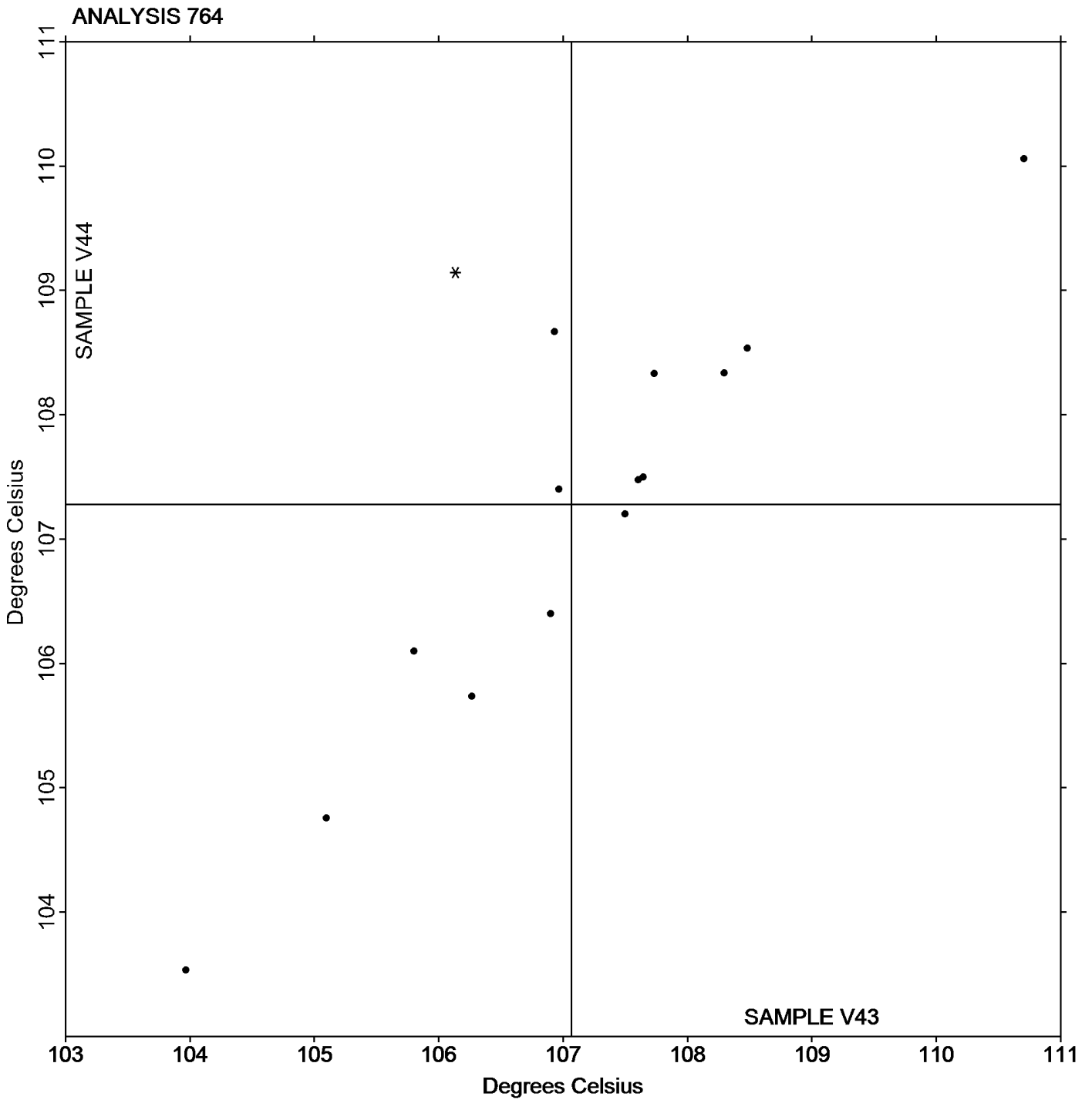
Analysis 764

DSC Glass Transition Temperature

Report #102

2nd Qtr 2017

Grand Mean Sample V43: 107.07 Degrees Celsius Grand Mean Sample V44: 107.28 Degrees Celsius



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 #102

Analysis 770

2nd Qtr 2017

Tensile Stress at Yield, Film Samples - psi

WebCode	Data Flag	Sample B43			Sample B44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
39JUZ8		3,405	1,166	1.85	3,455	1,206	1.79	IN
4MJVC9		1,328	-912	-1.45	1,324	-924	-1.37	MT
62VR8V		2,019	-220	-0.35	2,026	-222	-0.33	IN
7R3X94		1,969	-270	-0.43	1,911	-338	-0.50	IN
9H8GUK		2,406	167	0.26	2,320	72	0.11	WZ
AT38TW		1,495	-744	-1.18	1,448	-801	-1.19	IN
D4977M		2,247	8	0.01	2,247	-1	0.00	SH
FB4XD9		2,143	-96	-0.15	2,272	23	0.03	IN
MGRV3W		2,229	-11	-0.02	2,225	-23	-0.03	MT
MHLGX9		2,306	67	0.11	2,239	-9	-0.01	IN
Q3TDJZ		1,608	-631	-1.00	1,508	-741	-1.10	IN
UYK8QX		2,543	304	0.48	2,806	557	0.83	XX
XFFX2A		3,410	1,171	1.86	3,450	1,202	1.79	IN

Summary Statistics

	Sample B43	Sample B44
Grand Means	2,239.1 psi	2,248.5 psi
Std Dev Btwn Labs	630.5 psi	672.3 psi

Statistics based on 13 of 13 reporting participants

Sample B43: LDPE & Sample B44: LDPE

Key to Instrument Codes Reported by Participants

- IN Instron
- SH Shimadzu
- XX Instrument manufacturer not specified by lab
- MT MTS/Sintech
- WZ Zwick



Plastics Interlaboratory Testing Program

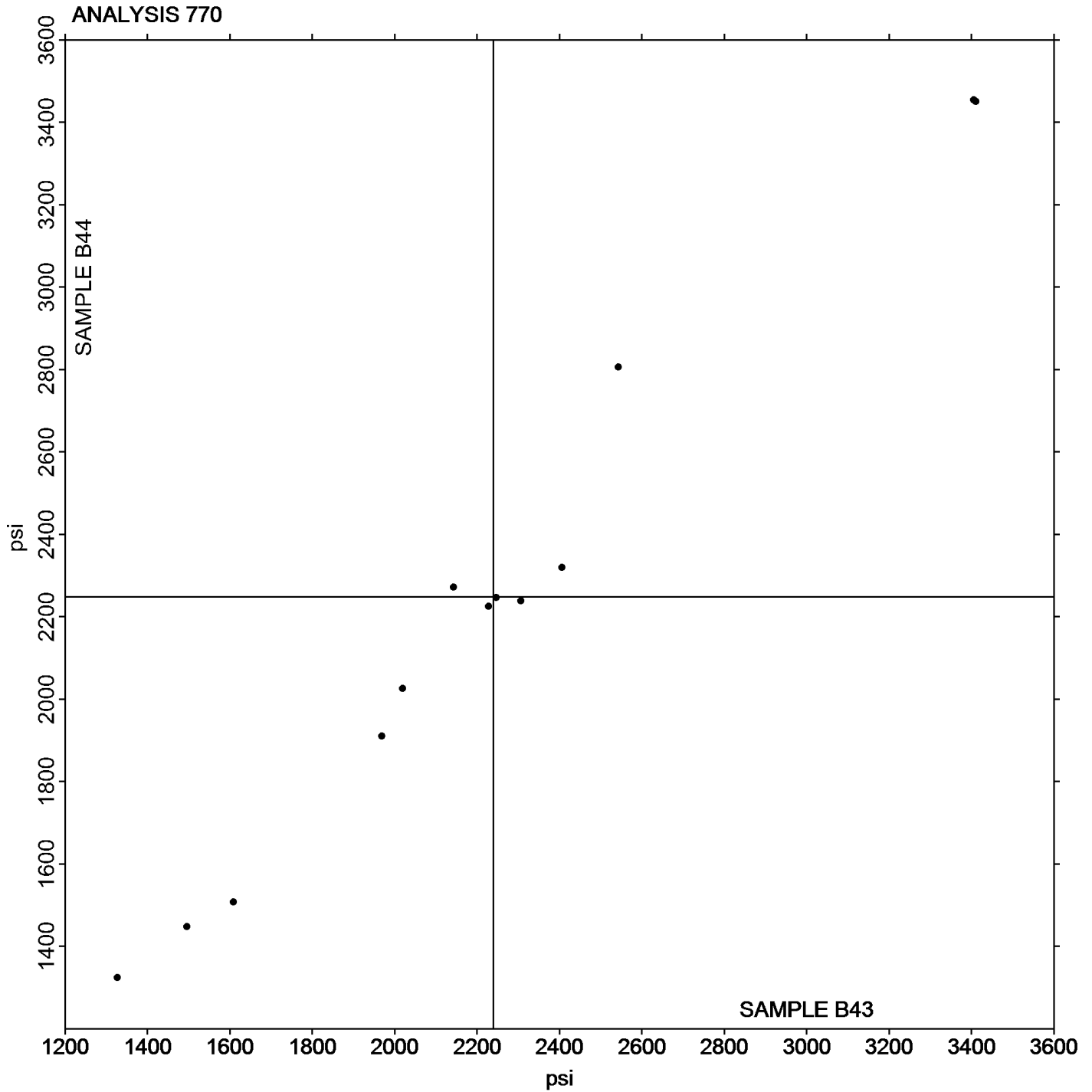
Report #102

Analysis 770

2nd Qtr 2017

Tensile Stress at Yield, Film Samples - psi

Grand Mean Sample B43: 2,239.07 psi Grand Mean Sample B44: 2,248.47 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 #102

Analysis 771

2nd Qtr 2017

Tensile Stress at Break, Film Samples - psi

WebCode	Data Flag	Sample B43			Sample B44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
39JUZ8		3,675	246	0.56	3,959	442	0.95	IN
4MJVC9		3,918	489	1.12	4,125	608	1.31	MT
62VR8V		2,966	-462	-1.06	2,940	-577	-1.24	IN
7R3X94		3,409	-20	-0.05	3,596	79	0.17	IN
8MMK8G		3,241	-187	-0.43	3,283	-233	-0.50	SH
9H8GUK		3,891	463	1.06	3,607	90	0.19	WZ
AT38TW		3,378	-50	-0.11	3,517	0	0.00	IN
D4977M		3,579	151	0.34	3,714	197	0.42	SH
FB4XD9		3,666	237	0.54	3,964	447	0.96	IN
MGRV3W		3,415	-13	-0.03	3,126	-391	-0.84	MT
MHLGX9		3,743	314	0.72	4,031	515	1.11	IN
Q3TDJZ		3,596	168	0.38	3,802	285	0.61	IN
TN8MTW		3,929	501	1.14	3,804	287	0.62	IN
UYK8QX		2,542	-886	-2.02	2,805	-712	-1.53	XX
XFFX2A		3,410	-18	-0.04	3,450	-67	-0.14	IN
YZ7AQU		2,497	-931	-2.13	2,545	-971	-2.09	UC

Summary Statistics		Sample B43	Sample B44
Grand Means		3,428.4 psi	3,516.8 psi
Stnd Dev Btwn Labs		437.9 psi	464.8 psi
Statistics based on 16 of 16 reporting participants			

Sample B43: LDPE & Sample B44: LDPE

Key to Instrument Codes Reported by Participants

- IN Instron
- SH Shimadzu
- WZ Zwick
- MT MTS/Sintech
- UC United
- XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

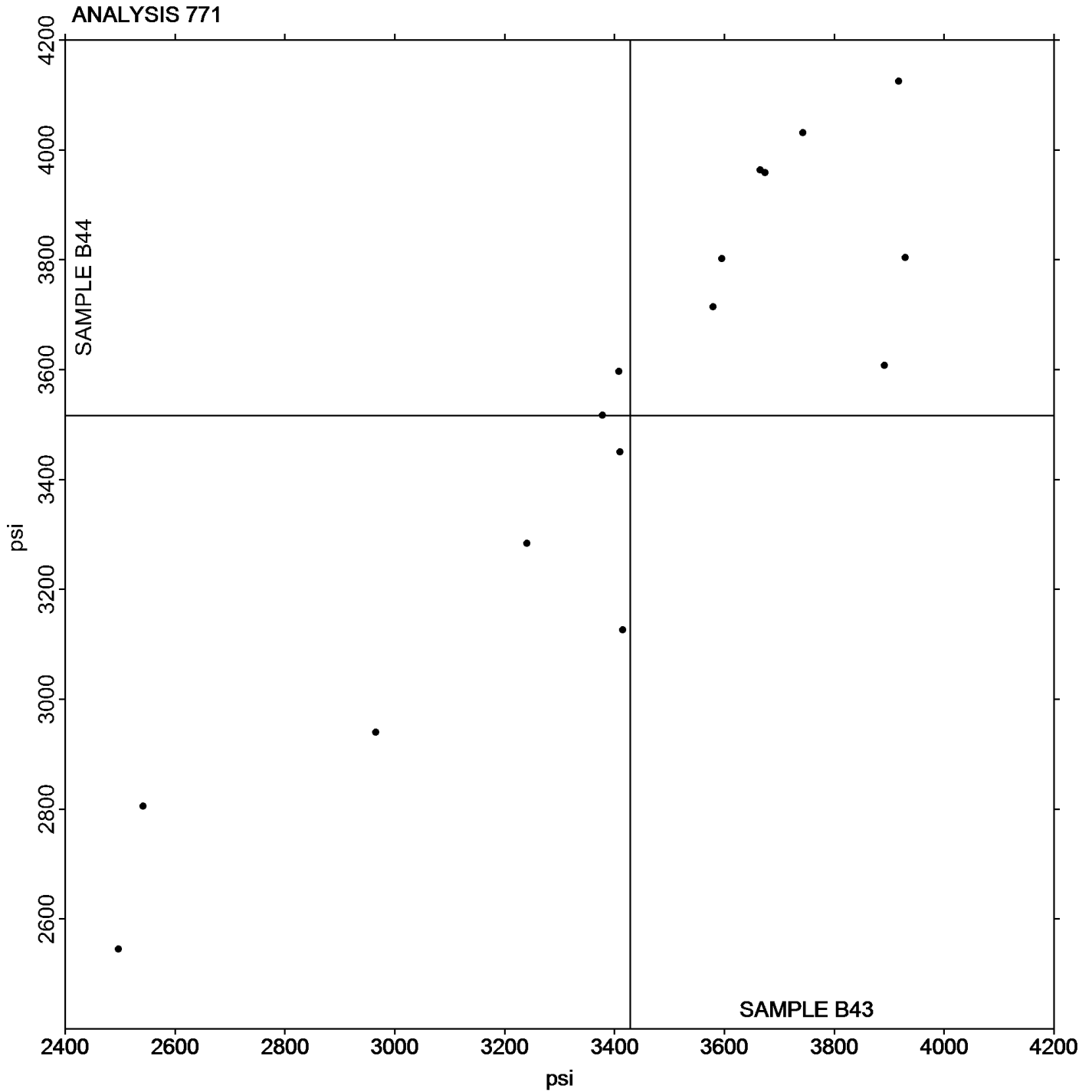
Analysis 771

Tensile Stress at Break, Film Samples - psi

Report #102

2nd Qtr 2017

Grand Mean Sample B43: 3,428.38 psi Grand Mean Sample B44: 3,516.75 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 #102

Analysis 772

2nd Qtr 2017

Percent Elongation at Yield, Films

WebCode	Data Flag	Sample B43			Sample B44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
39JUZ8	*	598.77	420.52	1.78	557.47	367.30	1.45	IN
4MJVC9		5.26	-173.00	-0.73	5.20	-184.97	-0.73	MT
62VR8V		61.67	-116.59	-0.49	62.76	-127.41	-0.50	IN
7R3X94		94.60	-83.66	-0.35	94.99	-95.18	-0.38	IN
9H8GUK		57.59	-120.66	-0.51	80.68	-109.49	-0.43	WZ
AT38TW		8.21	-170.05	-0.72	9.06	-181.11	-0.72	IN
D4977M		94.16	-84.10	-0.36	103.09	-87.08	-0.34	SH
FB4XD9		114.17	-64.09	-0.27	109.71	-80.46	-0.32	IN
MGRV3W		68.80	-109.46	-0.46	73.77	-116.40	-0.46	MT
MHLGX9		79.05	-99.21	-0.42	82.16	-108.01	-0.43	IN
Q3TDJZ		12.76	-165.50	-0.70	12.90	-177.27	-0.70	IN
UYK8QX		406.00	227.74	0.96	482.30	292.13	1.16	XX
XFFX2A		716.30	538.04	2.27	798.10	607.93	2.41	IN

Summary Statistics

	Sample B43	Sample B44
Grand Means	178.257 Percent	190.169 Percent
Stnd Dev Btwn Labs	236.745 Percent	252.458 Percent

Statistics based on 13 of 13 reporting participants

Sample B43: LDPE & Sample B44: LDPE

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

Key to Instrument Codes Reported by Participants

- IN Instron
- SH Shimadzu
- XX Instrument manufacturer not specified by lab
- MT MTS/Sintech
- WZ Zwick



Plastics Interlaboratory Testing Program

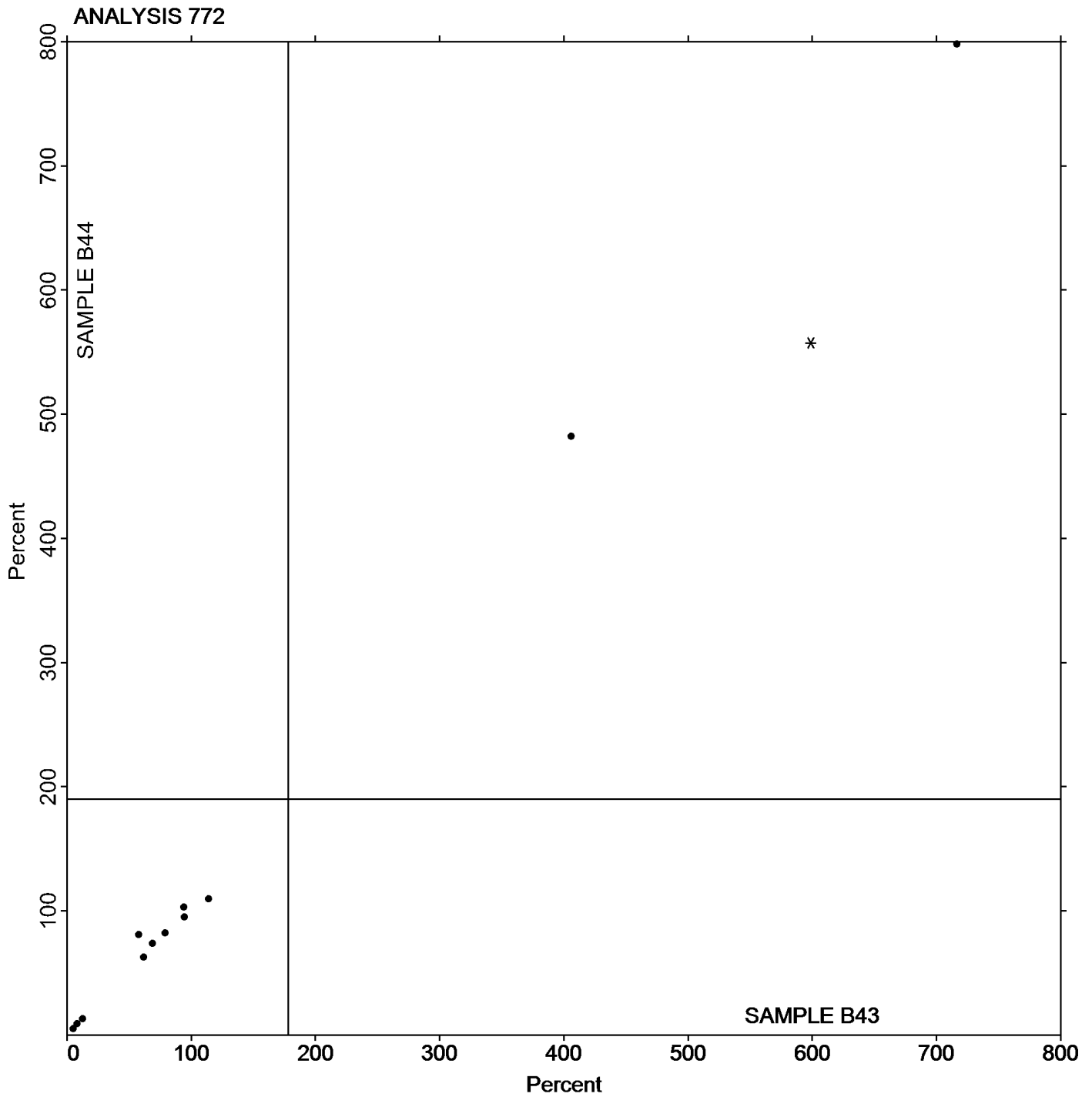
Report #102

Analysis 772

2nd Qtr 2017

Percent Elongation at Yield, Films

Grand Mean Sample B43: 178.26 Percent Grand Mean Sample B44: 190.17 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 #102

Analysis 773

2nd Qtr 2017

Percent Elongation at Break, Film Samples

WebCode	Data Flag	Sample B43			Sample B44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
39JUZ8		712.9	90.1	0.70	751.9	76.7	0.53	IN
4MJVC9		560.5	-62.2	-0.48	635.7	-39.6	-0.27	MT
62VR8V		641.8	19.0	0.15	635.0	-40.3	-0.28	IN
7R3X94		617.0	-5.8	-0.04	723.7	48.4	0.34	IN
8MMK8G		802.4	179.6	1.40	802.7	127.4	0.88	SH
9H8GUK		518.0	-104.8	-0.81	528.0	-147.3	-1.02	WZ
AT38TW		515.2	-107.6	-0.84	566.6	-108.7	-0.75	IN
D4977M		656.8	34.1	0.26	731.0	55.8	0.39	SH
FB4XD9		774.9	152.1	1.18	834.2	158.9	1.10	IN
MGRV3W		575.0	-47.8	-0.37	511.6	-163.7	-1.13	MT
MHLGX9		538.8	-84.0	-0.65	603.8	-71.5	-0.49	IN
Q3TDJZ		659.3	36.5	0.28	711.6	36.3	0.25	IN
TN8MTW		843.8	221.0	1.72	997.9	322.6	2.23	IN
UYK8QX		380.3	-242.5	-1.89	483.9	-191.4	-1.32	XX
XFFX2A		716.3	93.5	0.73	798.1	122.8	0.85	IN
YZ7AQU		451.1	-171.7	-1.33	488.4	-186.9	-1.29	UC

Summary Statistics		
	Sample B43	Sample B44
Grand Means	622.75 Percent	675.26 Percent
Stnd Dev Btwn Labs	128.59 Percent	144.56 Percent
Statistics based on 16 of 16 reporting participants		

Sample B43: LDPE & Sample B44: LDPE

Key to Instrument Codes Reported by Participants

- | | |
|-------------|---|
| IN Instron | MT MTS/Sintech |
| SH Shimadzu | UC United |
| WZ Zwick | XX Instrument manufacturer not specified by lab |



Plastics Interlaboratory Testing Program

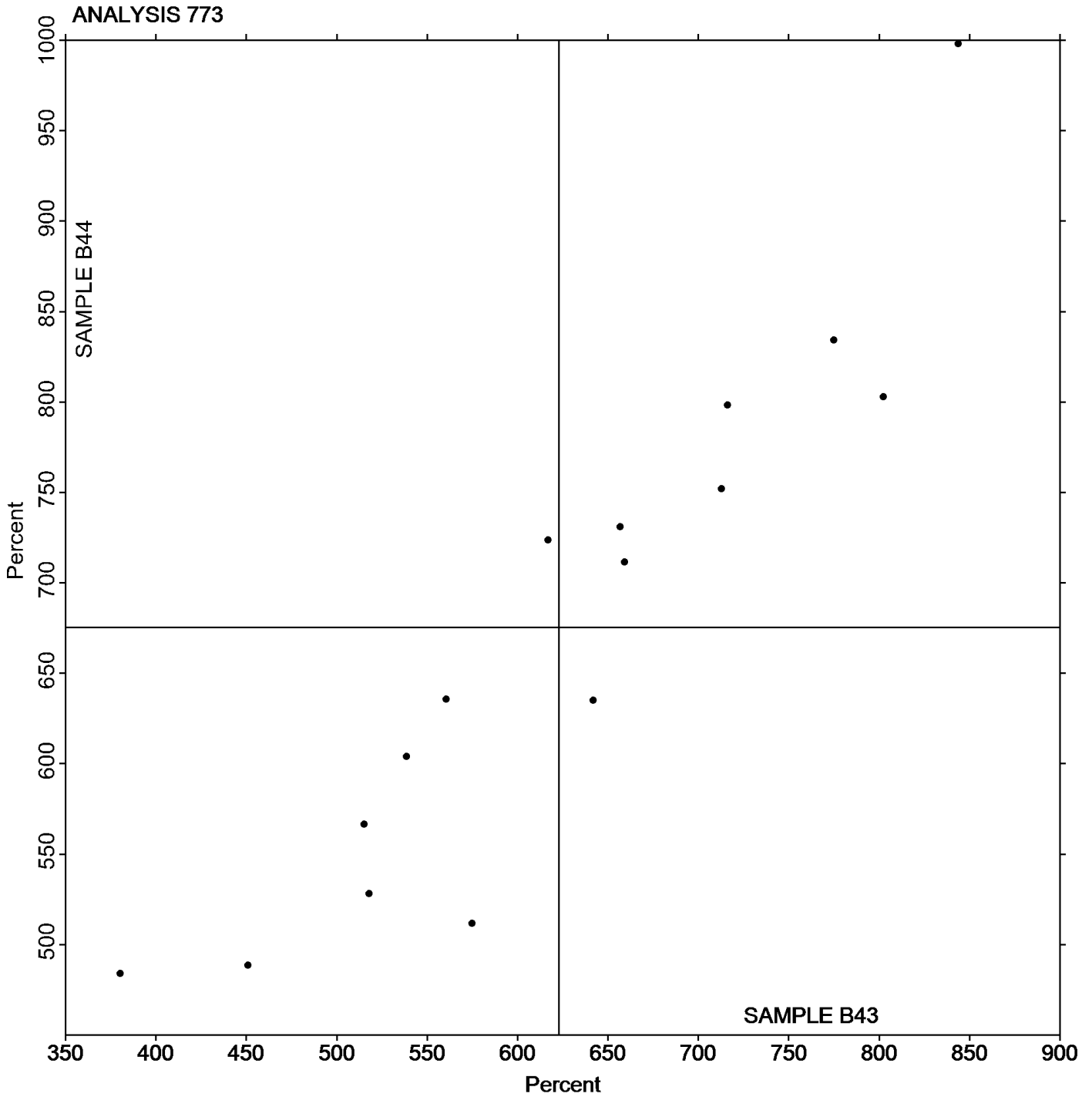
Analysis 773

Percent Elongation at Break, Film Samples

Report #102

2nd Qtr 2017

Grand Mean Sample B43: 622.75 Percent Grand Mean Sample B44: 675.26 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 #102

Analysis 774

2nd Qtr 2017

Thickness of Film Tensile Samples - mils

WebCode	Data Flag	<u>Sample B43</u>			<u>Sample B44</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
39JUZ8		2.9882	0.0104	0.09	3.0157	-0.0654	-0.74
4MJVC9		3.1250	0.1472	1.30	3.2550	0.1738	1.97
62VR8V		3.0276	0.0498	0.44	3.0316	-0.0496	-0.56
7R3X94		2.9470	-0.0308	-0.27	2.9950	-0.0862	-0.98
8MMK8G	X	44.0945	41.1167	362.00	40.7874	37.7062	427.72
9H8GUK		2.7091	-0.2687	-2.37	3.0186	-0.0626	-0.71
AT38TW		3.0001	0.0222	0.20	3.1418	0.0606	0.69
D4977M		2.9138	-0.0640	-0.56	3.0485	-0.0327	-0.37
FB4XD9		2.9600	-0.0178	-0.16	2.9900	-0.0912	-1.03
HTY42T		2.9000	-0.0778	-0.69	3.0110	-0.0702	-0.80
MGRV3W		2.9921	0.0143	0.13	3.0709	-0.0103	-0.12
MHLGX9		3.0830	0.1052	0.93	3.2190	0.1378	1.56
Q3TDJZ		2.9200	-0.0578	-0.51	3.0500	-0.0312	-0.35
TN8MTW		2.9940	0.0162	0.14	3.0760	-0.0052	-0.06
UYK8QX		3.1103	0.1325	1.17	3.1182	0.0370	0.42
XFFX2A		2.9500	-0.0278	-0.25	3.1500	0.0688	0.78
YZ7AQU		3.1800	0.2022	1.78	3.2200	0.1388	1.57
ZYNTT8		2.8230	-0.1548	-1.36	2.9690	-0.1122	-1.27

Summary Statistics		
	<u>Sample B43</u>	<u>Sample B44</u>
Grand Means	2.97784 mils	3.08119 mils
Stnd Dev Btwn Labs	0.11358 mils	0.08816 mils
Statistics based on 17 of 18 reporting participants		

Sample B43: LDPE & Sample B44: LDPE

Comments on Assigned Data Flags for Test #774

8MMK8G (X) - Extreme data.



Plastics Interlaboratory Testing Program

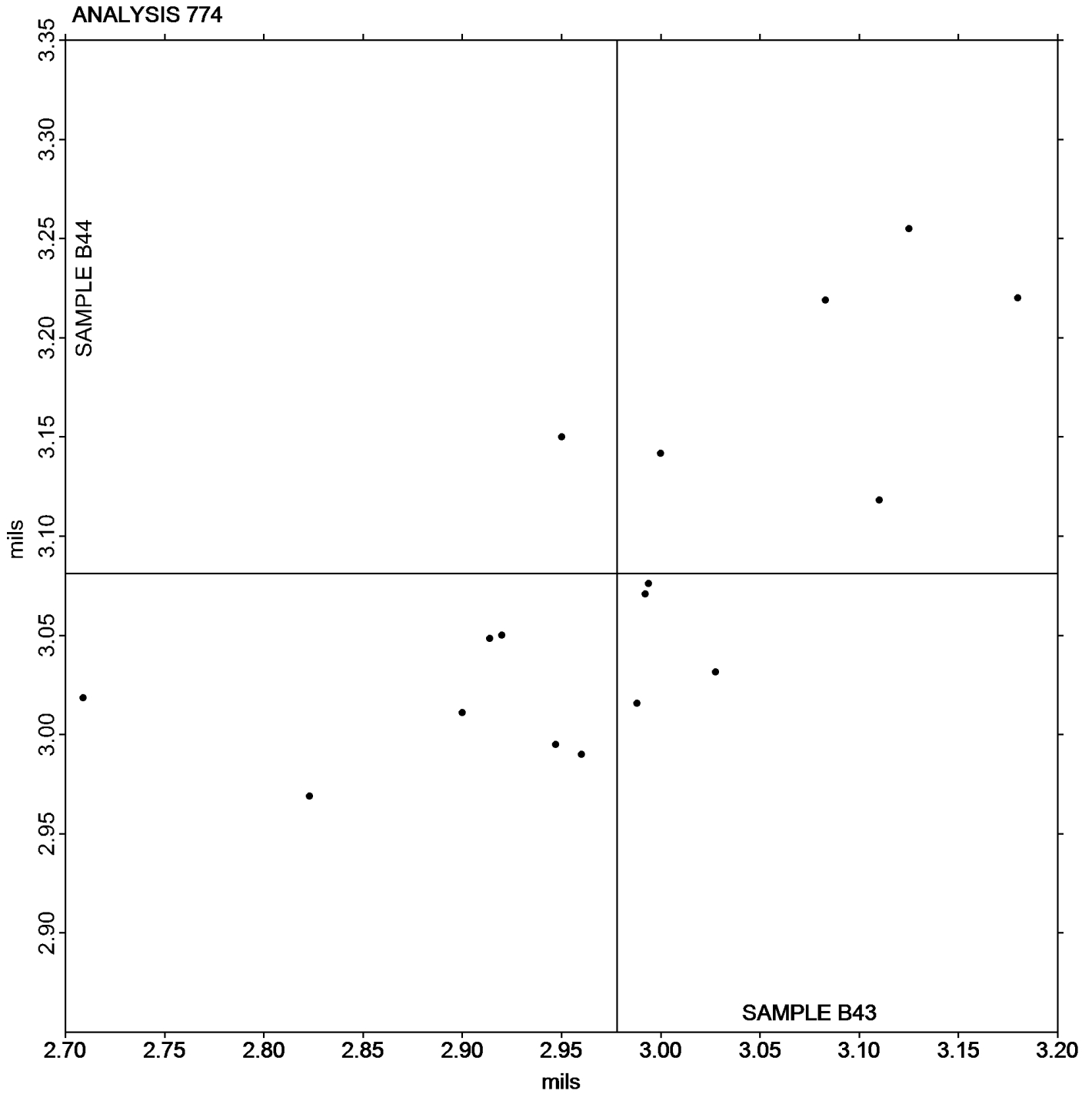
Analysis 774

Thickness of Film Tensile Samples - mils

Report #102

2nd Qtr 2017

Grand Mean Sample B43: 2.9778 mils Grand Mean Sample B44: 3.0812 mils



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 #102

Analysis 775

2nd Qtr 2017

Secant Modulus at 1% Strain - psi

WebCode	Data Flag	Sample B43			Sample B44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
39JUZ8		22,332	-7,421	-1.14	21,844	-8,230	-1.14	IN
4MJVC9		30,588	835	0.13	31,407	1,333	0.18	MT
62VR8V		28,515	-1,238	-0.19	28,123	-1,951	-0.27	IN
7R3X94		26,971	-2,782	-0.43	27,126	-2,949	-0.41	IN
9H8GUK		32,851	3,098	0.47	30,980	906	0.13	WZ
D4977M		45,114	15,361	2.35	47,235	17,161	2.38	SH
FB4XD9		31,441	1,687	0.26	31,517	1,443	0.20	IN
MGRV3W		31,733	1,980	0.30	32,707	2,633	0.36	XX
MHLGX9		31,767	2,014	0.31	32,642	2,568	0.36	IN
Q3TDJZ		21,186	-8,567	-1.31	21,361	-8,714	-1.21	IN
TN8MTW		34,533	4,780	0.73	36,389	6,315	0.87	IN
UYK8QX		20,061	-9,692	-1.48	19,279	-10,795	-1.50	XX
XFFX2A		29,699	-54	-0.01	30,354	280	0.04	IN

Summary Statistics		
	Sample B43	Sample B44
Grand Means	29,753.1 psi	30,074.2 psi
Stnd Dev Btwn Labs	6,529.5 psi	7,218.9 psi
Statistics based on 13 of 13 reporting participants		

Sample B43: LDPE & Sample B44: LDPE

Key to Instrument Codes Reported by Participants

- IN Instron
- SH Shimadzu
- XX Instrument manufacturer not specified by lab
- MT MTS/Sintech
- WZ Zwick



Plastics Interlaboratory Testing Program

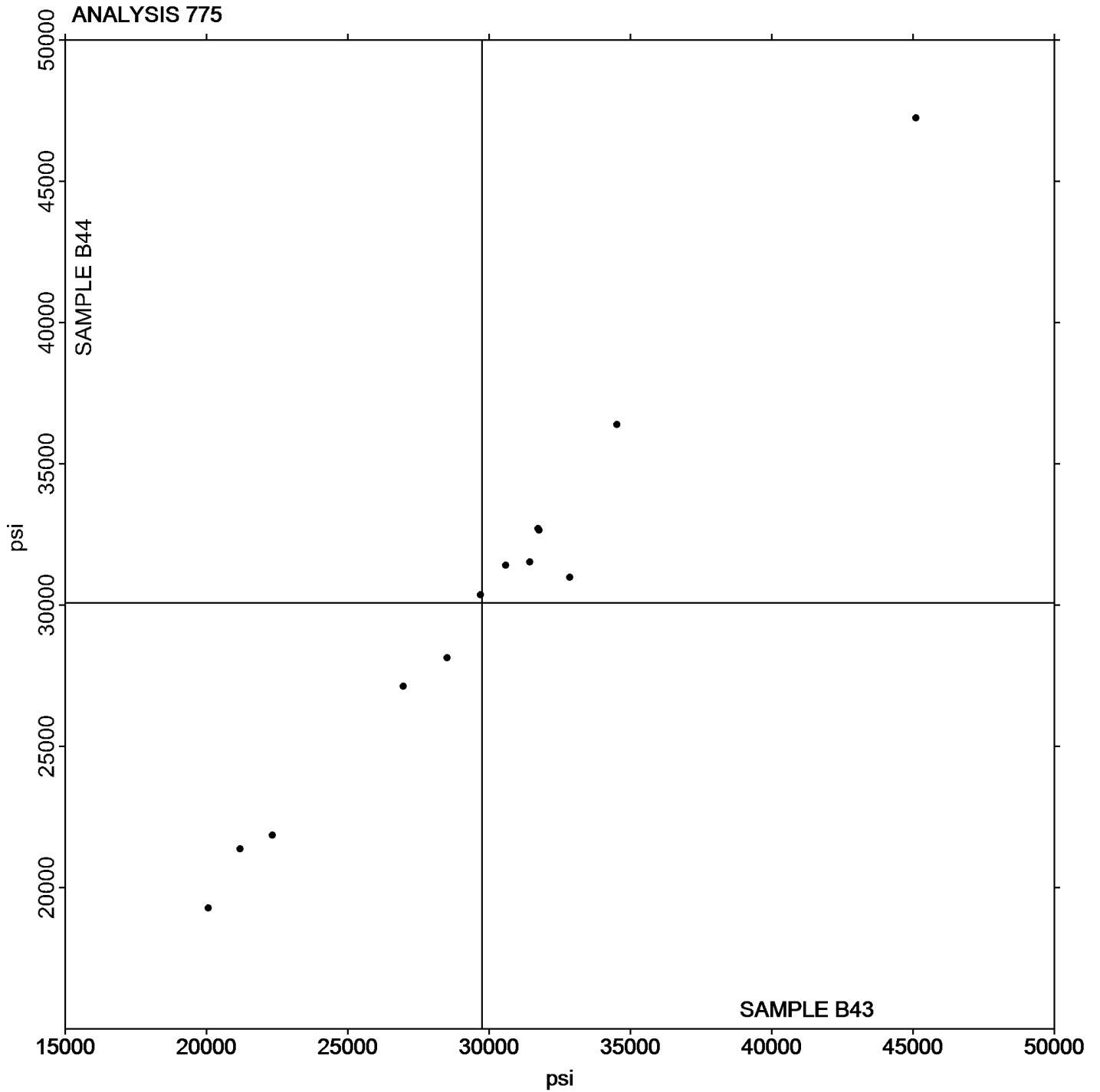
Report #102

Analysis 775

2nd Qtr 2017

Secant Modulus at 1% Strain - psi

Grand Mean Sample B43: 29,753.10 psi Grand Mean Sample B44: 30,074.16 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 #102

Analysis 776

2nd Qtr 2017

Secant Modulus at 2% Strain - psi

WebCode	Data Flag	Sample B43			Sample B44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
39JUZ8		24,462	-1,846	-0.75	24,840	-1,613	-0.61	IN
4MJVC9		26,969	661	0.27	27,642	1,190	0.45	MT
62VR8V		26,020	-288	-0.12	26,267	-186	-0.07	IN
7R3X94		22,224	-4,084	-1.66	22,291	-4,161	-1.58	IN
9H8GUK		26,296	-12	0.00	24,657	-1,796	-0.68	WZ
D4977M		31,778	5,471	2.22	31,973	5,521	2.10	SH
FB4XD9		26,900	593	0.24	26,779	327	0.12	IN
MGRV3W		27,324	1,016	0.41	27,924	1,472	0.56	XX
Q3TDJZ		23,220	-3,088	-1.26	23,462	-2,991	-1.14	IN
TN8MTW		28,106	1,798	0.73	29,447	2,995	1.14	IN
UYK8QX		27,157	849	0.35	26,569	117	0.04	XX
XFFX2A		25,238	-1,070	-0.43	25,577	-875	-0.33	IN

Summary Statistics

	Sample B43	Sample B44
Grand Means	26,307.7 psi	26,452.2 psi
Std Dev Btwn Labs	2,459.7 psi	2,629.2 psi
Statistics based on 12 of 12 reporting participants		

Sample B43: LDPE & Sample B44: LDPE

Key to Instrument Codes Reported by Participants

- IN Instron
- SH Shimadzu
- XX Instrument manufacturer not specified by lab
- MT MTS/Sintech
- WZ Zwick



Plastics Interlaboratory Testing Program

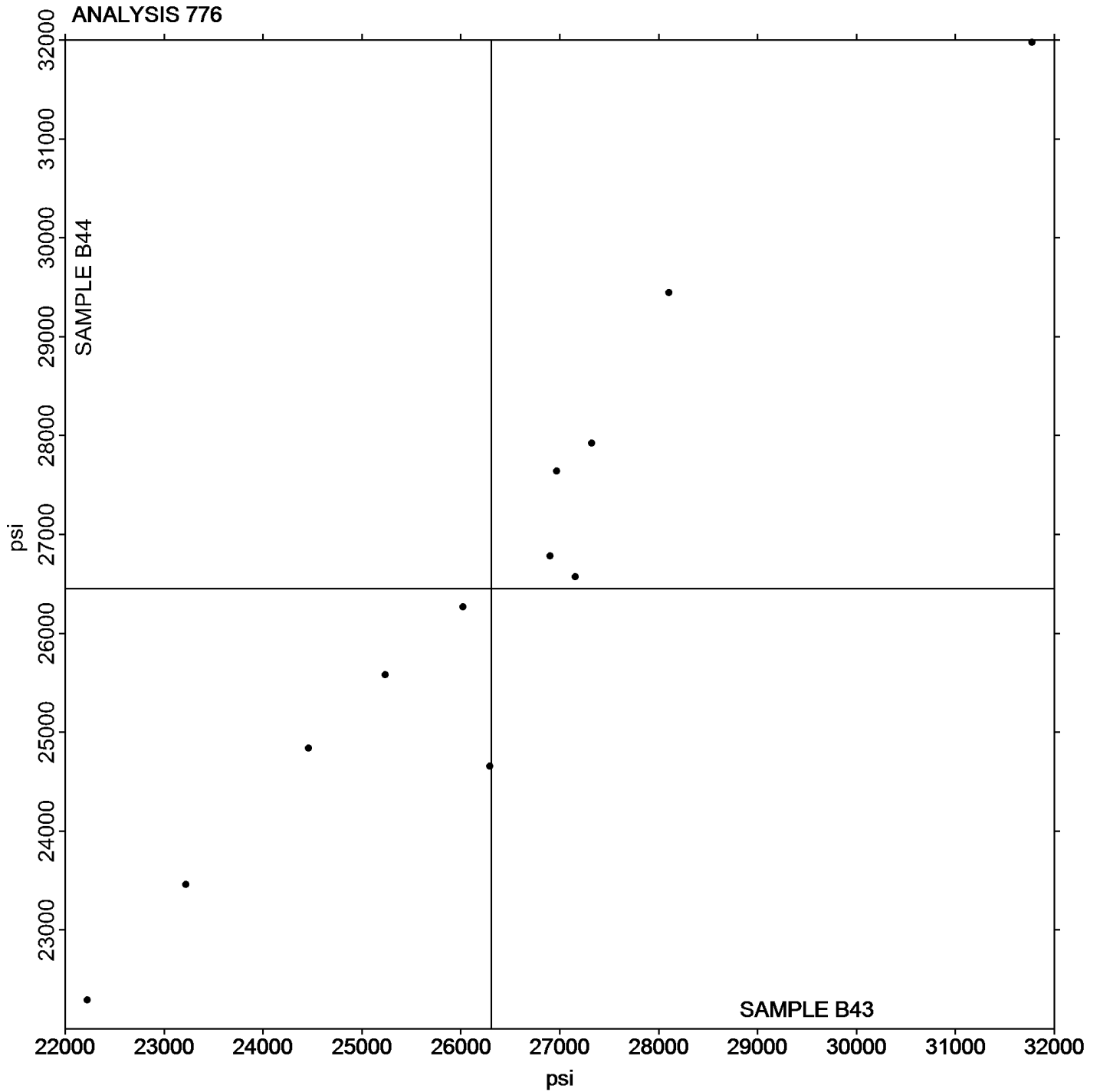
Report #102

Analysis 776

2nd Qtr 2017

Secant Modulus at 2% Strain - psi

Grand Mean Sample B43: 26,307.73 psi Grand Mean Sample B44: 26,452.22 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 #102

Analysis 780

2nd Qtr 2017

Coefficient of Static Friction

WebCode	Data Flag	Sample P43			Sample P44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4MJVC9		0.2294	0.0405	0.48	0.2562	0.0770	1.05	MI
8MMK8G		0.1828	-0.0061	-0.07	0.1344	-0.0448	-0.61	SA
9H8GUK		0.1972	0.0083	0.10	0.1860	0.0068	0.09	TH
D4977M		0.3523	0.1634	1.94	0.3118	0.1327	1.80	SA
FB4XD9		0.2598	0.0709	0.84	0.2522	0.0730	0.99	IS
HEZ7VM		0.1179	-0.0711	-0.84	0.1223	-0.0569	-0.77	IG
MHLGX9		0.1186	-0.0703	-0.83	0.1114	-0.0678	-0.92	TH
Q3TDJZ		0.1130	-0.0759	-0.90	0.0960	-0.0832	-1.13	TN
TUV934		0.2770	0.0881	1.04	0.2166	0.0374	0.51	TH
UYK8QX		0.1550	-0.0339	-0.40	0.1882	0.0090	0.12	RD
ZWY943		0.0752	-0.1137	-1.35	0.0958	-0.0834	-1.13	IG

Summary Statistics

	Sample P43	Sample P44
Grand Means	0.18893 COF	0.17918 COF
Stnd Dev Btwn Labs	0.08430 COF	0.07355 COF

Statistics based on 11 of 11 reporting participants

Sample P43: LDPE & Sample P44: 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	



Plastics Interlaboratory Testing Program

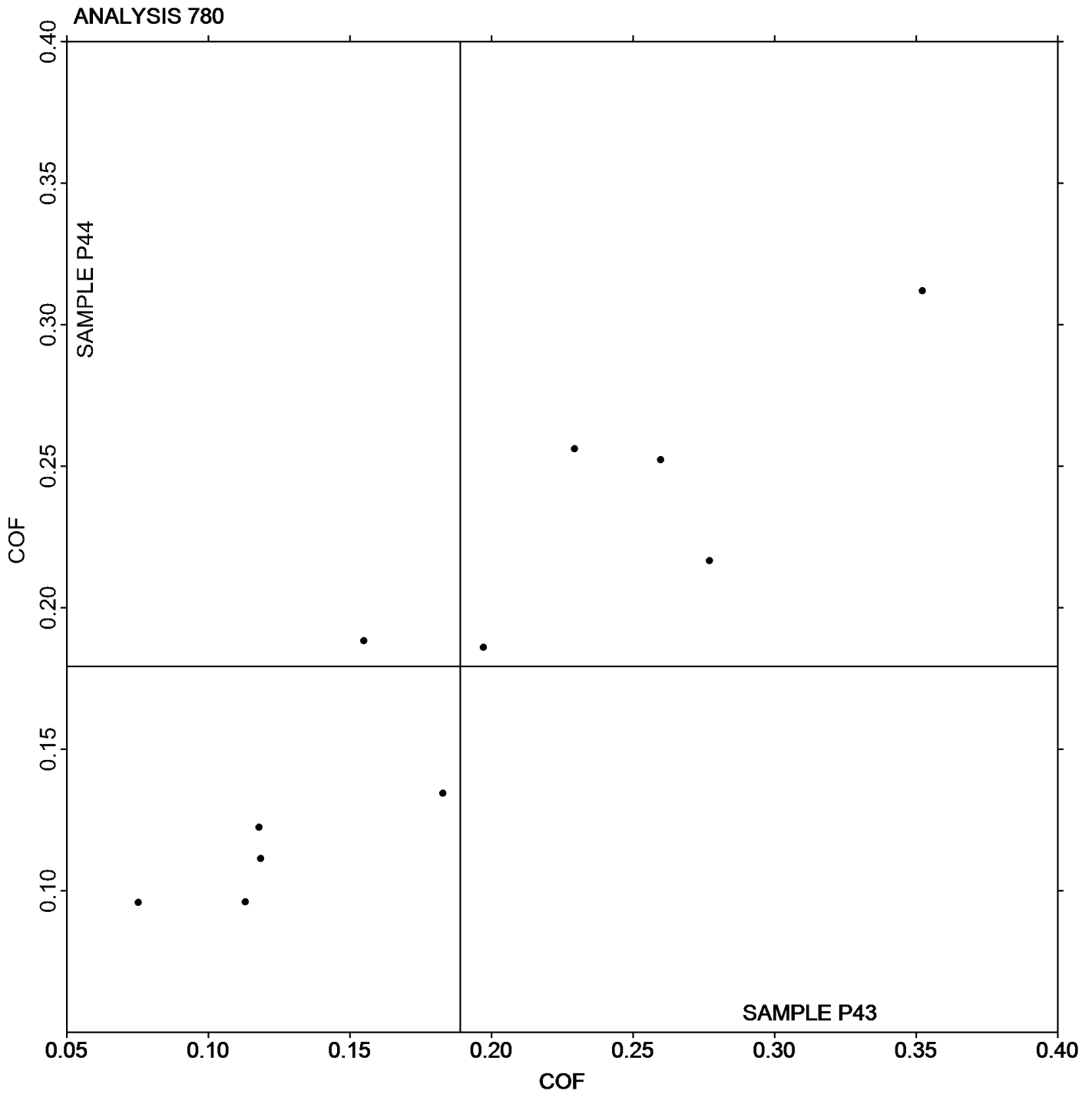
Report #102

Analysis 780

2nd Qtr 2017

Coefficient of Static Friction

Grand Mean Sample P43: 0.18893 COF Grand Mean Sample P44: 0.17918 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 #102

Analysis 781

2nd Qtr 2017

Coefficient of Kinetic Friction

WebCode	Data Flag	Sample P43			Sample P44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4MJVC9		0.1148	-0.0036	-0.06	0.1240	0.0135	0.25	MI
8MMK8G		0.0800	-0.0384	-0.61	0.0710	-0.0395	-0.74	SA
9H8GUK		0.0860	-0.0324	-0.51	0.0964	-0.0141	-0.26	TH
D4977M		0.2201	0.1017	1.61	0.1894	0.0789	1.47	SA
FB4XD9		0.1412	0.0228	0.36	0.1176	0.0071	0.13	IS
HEZ7VM		0.1030	-0.0154	-0.24	0.0878	-0.0227	-0.42	IG
MHLGX9		0.1122	-0.0062	-0.10	0.1074	-0.0031	-0.06	TH
Q3TDJZ		0.0614	-0.0570	-0.90	0.0524	-0.0581	-1.08	TN
TUV934		0.2218	0.1034	1.64	0.1770	0.0665	1.24	TH
UYK8QX		0.1496	0.0312	0.49	0.1730	0.0625	1.17	RD
ZWY943		0.0122	-0.1062	-1.68	0.0196	-0.0909	-1.70	IG

Summary Statistics

	Sample P43	Sample P44
Grand Means	0.11839 COF	0.11051 COF
Stnd Dev Btwn Labs	0.06314 COF	0.05359 COF

Statistics based on 11 of 11 reporting participants

Sample P43: LDPE & Sample P44: 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	



Plastics Interlaboratory Testing Program

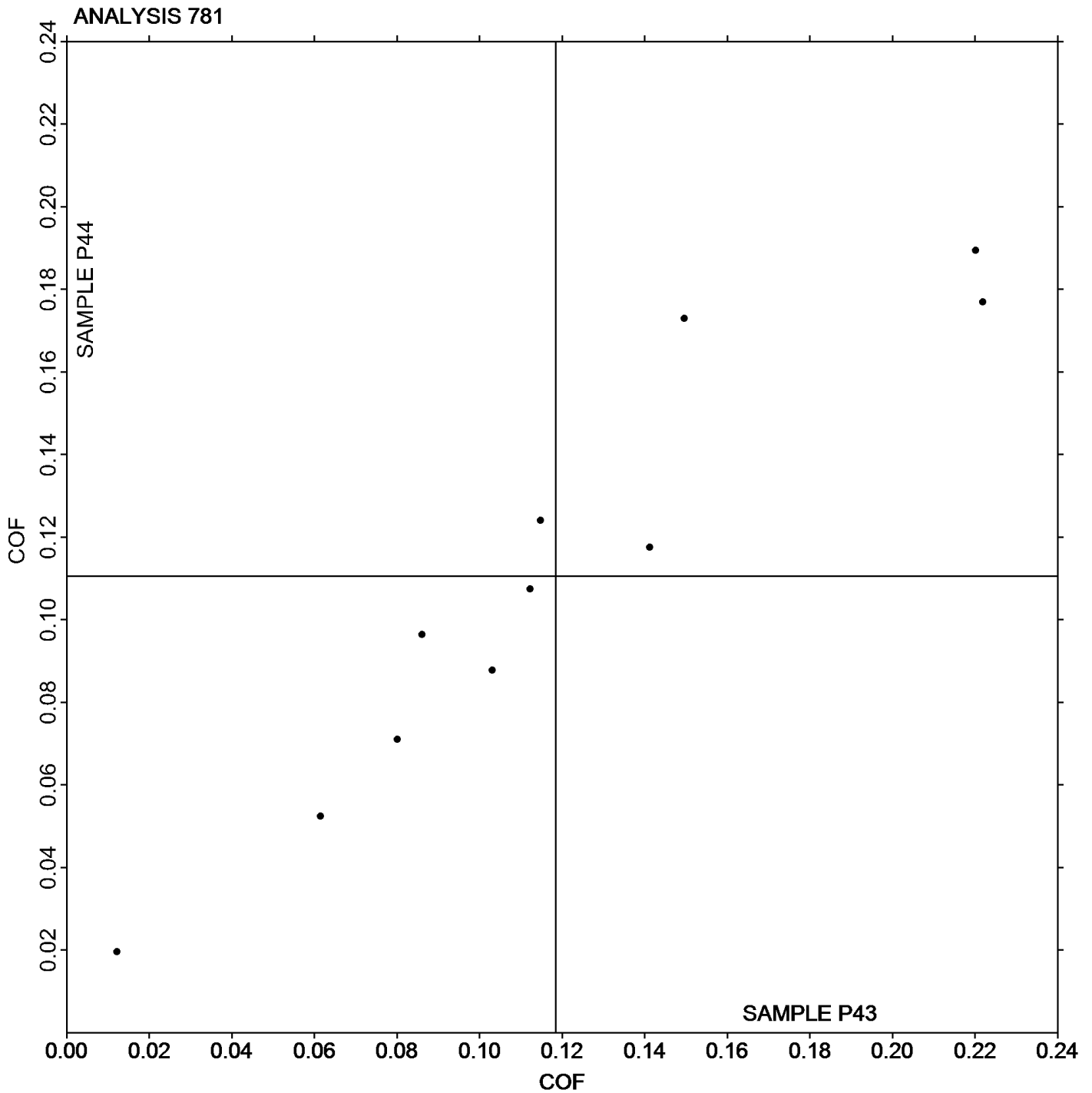
Analysis 781

Coefficient of Kinetic Friction

Report #102

2nd Qtr 2017

Grand Mean Sample P43: 0.11839 COF Grand Mean Sample P44: 0.11051 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 #102

Analysis 782

2nd Qtr 2017

Tear Resistance of Films

WebCode	Data Flag	Sample Q43			Sample Q44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4MJVC9		130.0	-8.5	-0.52	138.6	5.2	0.19	TE
8MMK8G		114.2	-24.3	-1.50	105.6	-27.8	-1.02	EM
9H8GUK		156.5	18.0	1.11	157.1	23.7	0.87	TA
AT38TW		159.4	20.9	1.29	186.9	53.5	1.97	SZ
D4977M		133.0	-5.5	-0.34	118.1	-15.3	-0.57	TE
FB4XD9		154.1	15.6	0.97	109.7	-23.7	-0.88	TE
MGRV3W		131.1	-7.4	-0.46	124.2	-9.2	-0.34	TA
MHLGX9		129.6	-8.9	-0.55	127.1	-6.3	-0.23	TE

Summary Statistics

	Sample Q43	Sample Q44
Grand Means	138.50 grams-force	133.42 grams-force
Stnd Dev Btwn Labs	16.16 grams-force	27.11 grams-force
Statistics based on 8 of 8 reporting participants		

Sample Q43: LDPE & Sample Q44: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

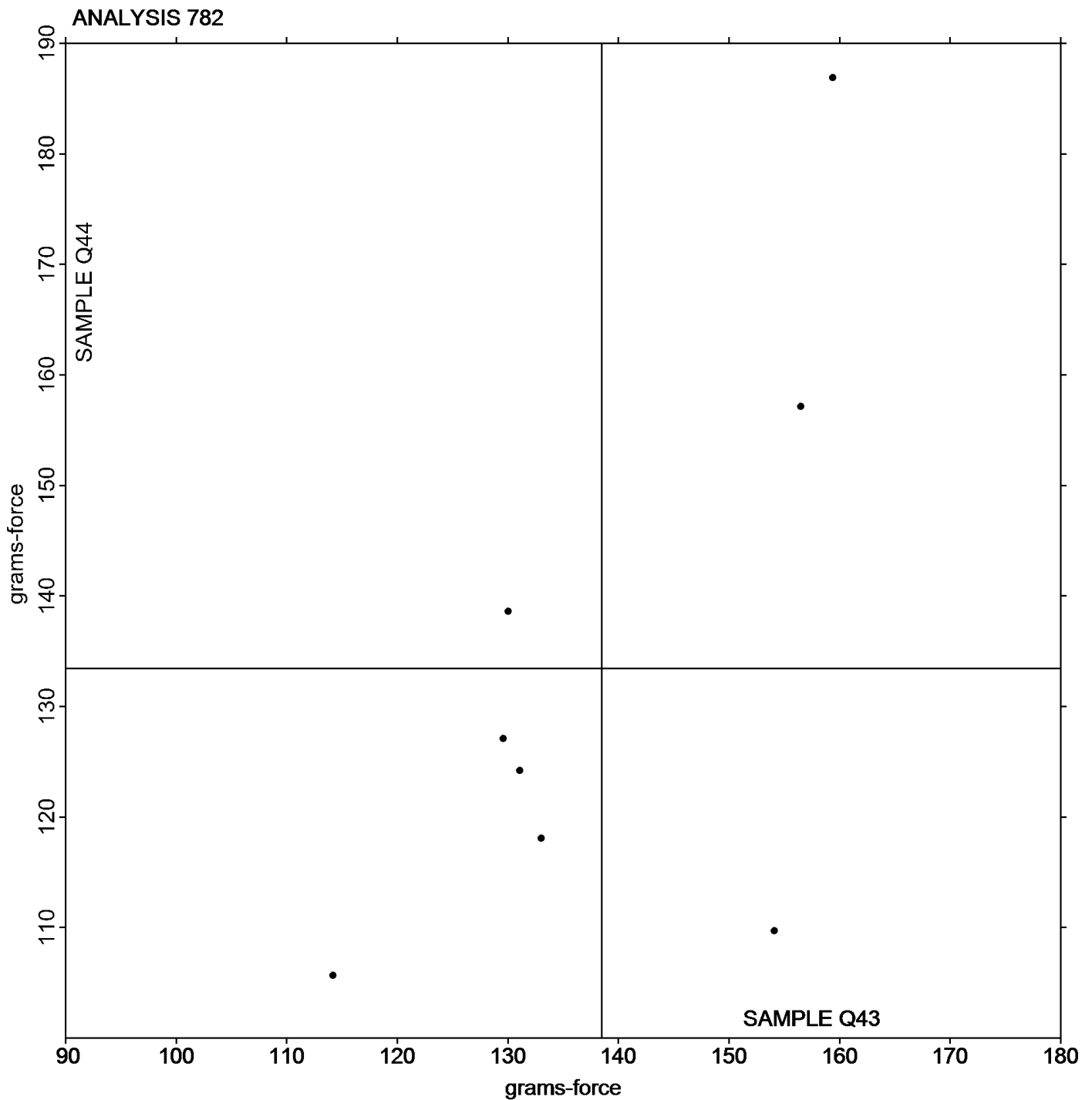
Analysis 782

Tear Resistance of Films

Report #102

2nd Qtr 2017

Grand Mean Sample Q43: 138.50 grams-force Grand Mean Sample Q44: 133.42 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 #102

Analysis 785

2nd Qtr 2017

Percent Haze of Film

WebCode	Data Flag	Sample D43			Sample D44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
46WBU4		28.250	1.216	0.49	33.450	0.631	0.20	BJ
4MJVC9		27.975	0.941	0.38	34.838	2.018	0.65	BJ
7R3X94	*	22.454	-4.581	-1.83	31.505	-1.314	-0.42	HC
82AR84		31.500	4.466	1.78	37.513	4.693	1.52	DA
9KGGVK		28.225	1.191	0.48	34.350	1.531	0.49	BG
A4NBXB		27.325	0.291	0.12	33.188	0.368	0.12	BJ
AJXXNT		27.425	0.391	0.16	34.538	1.718	0.56	BJ
AT38TW		27.750	0.716	0.29	34.050	1.231	0.40	BJ
AZ68CY		22.876	-4.158	-1.66	28.025	-4.794	-1.55	XR
BKR4LX		29.313	2.278	0.91	31.625	-1.194	-0.39	DS
D4977M		28.400	1.366	0.55	33.750	0.931	0.30	BJ
FB4XD9		27.938	0.903	0.36	34.025	1.206	0.39	BT
FE498M		28.163	1.128	0.45	34.413	1.593	0.52	BJ
JA4UJN		22.574	-4.461	-1.78	28.406	-4.413	-1.43	XR
KDTZ44		28.425	1.391	0.56	31.500	-1.319	-0.43	BJ
M6ETJK		23.803	-3.232	-1.29	27.961	-4.858	-1.57	HL
MHLGX9		27.163	0.128	0.05	34.188	1.368	0.44	BJ
PDJHCA		24.901	-2.133	-0.85	30.966	-1.853	-0.60	BH
Q3TDJZ		27.625	0.591	0.24	35.888	3.068	0.99	BJ
R3DCHJ		28.163	1.128	0.45	34.050	1.231	0.40	BJ
RHKFVX		28.776	1.742	0.70	33.664	0.845	0.27	BJ
TN8MTW		28.375	1.341	0.54	35.150	2.331	0.75	BJ
UZJALU		28.300	1.266	0.51	36.363	3.543	1.15	BJ
WFJYTB		28.175	1.141	0.46	32.563	-0.257	-0.08	BJ
ZJRP4M	*	20.923	-6.112	-2.44	23.173	-9.647	-3.12	XR
ZYNTT8		28.100	1.066	0.43	34.163	1.343	0.43	BJ

Summary Statistics		
	Sample D43	Sample D44
Grand Means	27.0344 Percent	32.8192 Percent
Std Dev Btwn Labs	2.5026 Percent	3.0927 Percent
Statistics based on 26 of 26 reporting participants		

Sample D43: LDPE & Sample D44: LDPE



Plastics Interlaboratory Testing Program

Analysis 785 Percent Haze of Film

Report #102
2nd Qtr 2017

Key to Instrument Codes Reported by Participants

BG	BYK-Gardner/Pacific Scientific	BH	BYK-Gardner/Pacific Scientific Model XL-211
BJ	BYK-Gardner Haze-Gard Plus	BT	BYK Gardner TCS Series
DA	Datacolor SF 600 Series	DS	Diffusion Systems EEL 57D Hazemeter
HC	Hunterlab ColorQuest	HL	Hunterlab Ultrascan
XR	X-Rite Spectrocolorimeter (any model)		



Plastics Interlaboratory Testing Program

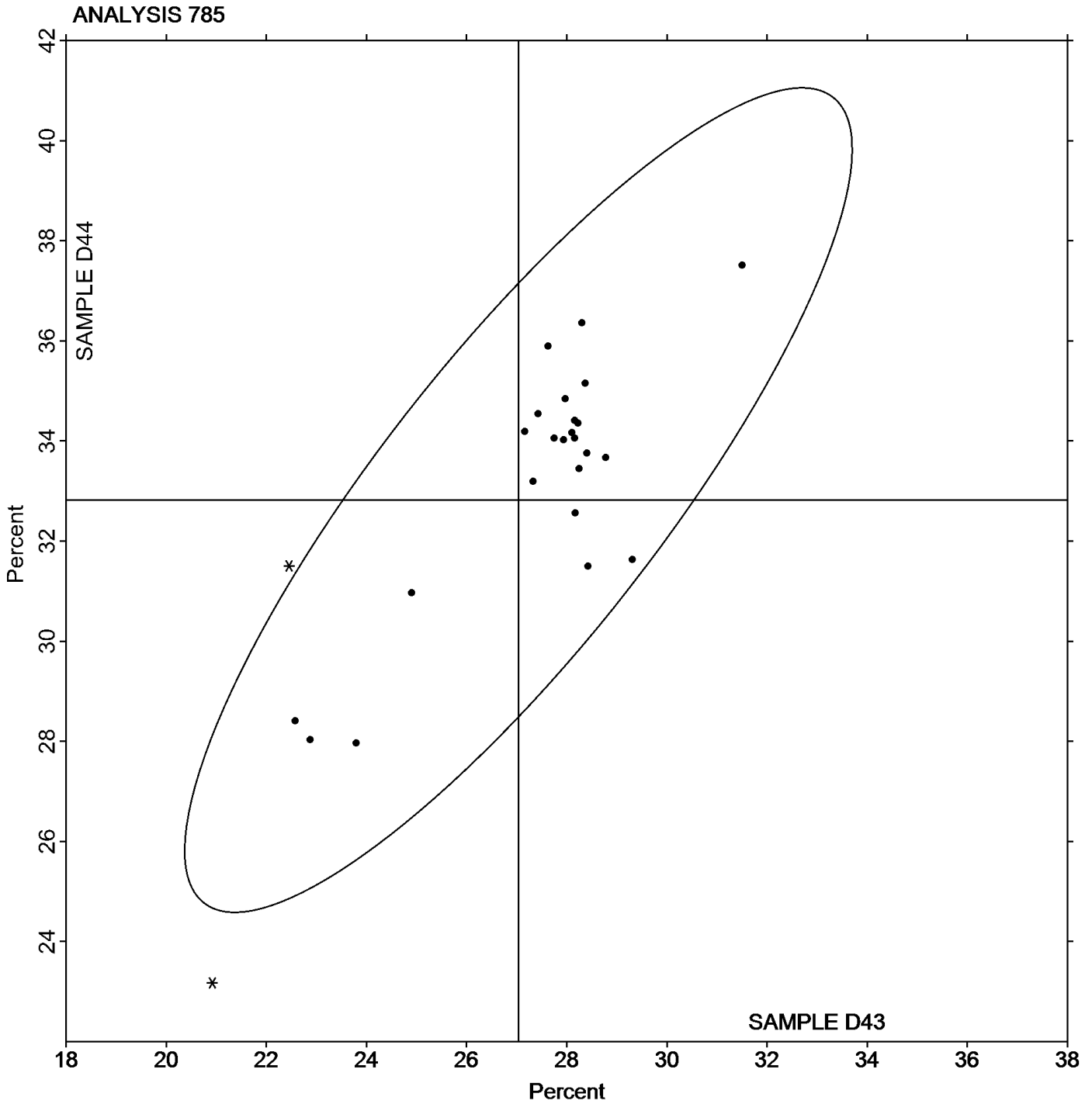
Analysis 785

Percent Haze of Film

Report #102

2nd Qtr 2017

Grand Mean Sample D43: 27.034 Percent Grand Mean Sample D44: 32.819 Percent





Plastics Interlaboratory Testing Program

Report #102

Analysis 786

2nd Qtr 2017

Total Luminous transmittance of film

WebCode	Data Flag	Sample D43			Sample D44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
46WBU4		93.13	1.27	0.76	93.05	1.29	0.76	BJ
4MJVC9		91.63	-0.23	-0.14	91.68	-0.09	-0.05	BJ
7R3X94		89.49	-2.37	-1.41	89.54	-2.22	-1.31	HC
82AR84		89.27	-2.58	-1.54	89.10	-2.66	-1.57	DA
9KGGVK		92.69	0.83	0.50	92.56	0.80	0.47	BG
A4NBXB		92.06	0.21	0.12	91.69	-0.08	-0.05	BJ
AJXXNT		92.88	1.02	0.61	92.81	1.05	0.62	BJ
AT38TW		90.30	-1.55	-0.92	90.20	-1.56	-0.92	BJ
AZ68CY		91.30	-0.56	-0.33	91.32	-0.45	-0.26	XR
D4977M		92.31	0.46	0.27	92.18	0.41	0.24	BJ
FB4XD9		92.89	1.03	0.61	92.83	1.06	0.63	BJ
FE498M		92.36	0.51	0.30	92.08	0.31	0.18	BJ
JA4UJN		91.02	-0.83	-0.50	90.83	-0.94	-0.55	XR
KDTZ44		92.44	0.58	0.35	92.59	0.82	0.49	BJ
M6ETJK		88.94	-2.92	-1.74	88.79	-2.97	-1.75	HL
MHLGX9		93.89	2.03	1.21	93.88	2.11	1.25	BJ
PDJHCA		91.46	-0.39	-0.23	91.31	-0.45	-0.27	BH
Q3TDJZ		93.26	1.41	0.84	93.24	1.47	0.87	BJ
R3DCHJ		93.55	1.70	1.01	93.51	1.75	1.03	BJ
RHKFVX		93.20	1.35	0.80	93.03	1.26	0.75	BJ
TN8MTW		92.69	0.83	0.50	92.65	0.89	0.52	BJ
UZJALU	*	87.30	-4.55	-2.71	87.19	-4.58	-2.70	BJ
WFJYTB		92.89	1.03	0.61	92.65	0.89	0.52	BJ
ZJRP4M		91.43	-0.43	-0.26	91.44	-0.33	-0.19	XR
ZYNTT8		94.00	2.15	1.28	93.98	2.21	1.31	BJ

Summary Statistics		Sample D43	Sample D44
Grand Means		91.854 Percent	91.764 Percent
Std Dev Btwn Labs		1.681 Percent	1.693 Percent
Statistics based on 25 of 25 reporting participants			

Sample D43: LDPE & Sample D44: LDPE



Plastics Interlaboratory Testing Program

Analysis 786

Total Luminous transmittance of film

Report #102

2nd Qtr 2017

Key to Instrument Codes Reported by Participants

BG	BYK-Gardner/Pacific Scientific	BH	BYK-Gardner/Pacific Scientific Model XL-211
BJ	BYK-Gardner Haze-Gard Plus	DA	Datacolor SF 600 Series
HC	Hunterlab ColorQuest	HL	Hunterlab Ultrascan XE
XR	X-Rite Spectrocolorimeter (any model)		



Plastics Interlaboratory Testing Program

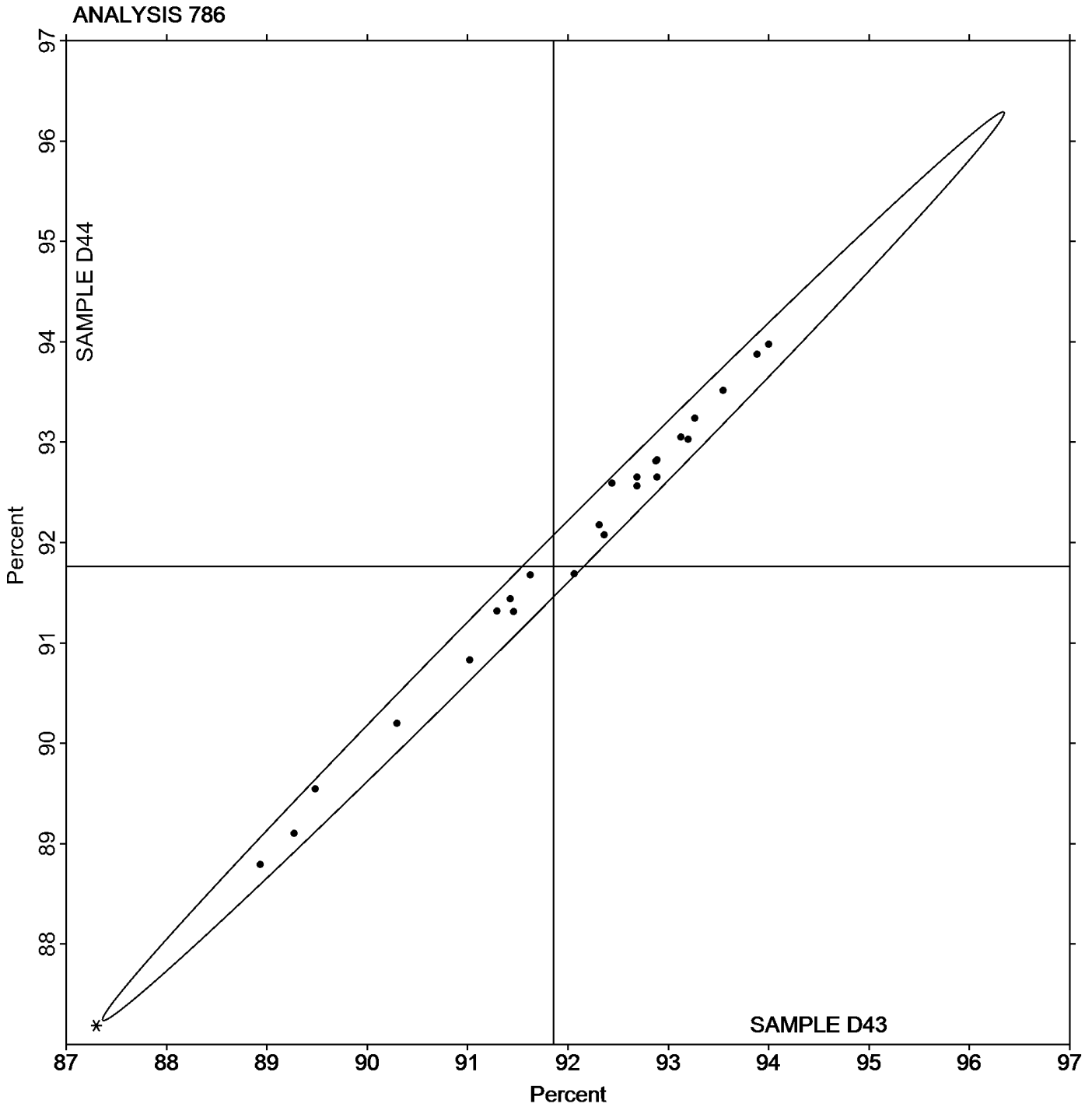
Analysis 786

Total Luminous transmittance of film

Report #102

2nd Qtr 2017

Grand Mean Sample D43: 91.854 Percent Grand Mean Sample D44: 91.764 Percent





Plastics Interlaboratory Testing Program

Report #102

Analysis 790

2nd Qtr 2017

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S43			Sample S44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
23HWDY		1.75	0.04	0.40	2.97	0.09	0.35	TO
2K3RPL		1.65	-0.05	-0.47	2.65	-0.22	-0.83	TO
388XU4		1.67	-0.03	-0.30	3.00	0.12	0.46	CE
39JUZ8	X	2.46	0.76	6.75	2.60	-0.27	-1.01	WZ
4ELW49		1.78	0.07	0.64	2.99	0.12	0.45	TO
4FZPF3	X	2.35	0.65	5.78	3.10	0.23	0.86	IN
4MJVC9		1.78	0.07	0.66	3.08	0.20	0.76	TO
6AQNWJ		1.70	0.00	0.00	2.90	0.02	0.08	TO
6MB9C7		1.64	-0.06	-0.57	2.98	0.11	0.39	TO
7A78EV	*	1.58	-0.13	-1.15	2.25	-0.63	-2.32	CE
7M84DN		1.79	0.09	0.76	3.12	0.25	0.92	WZ
7Q7KMW		1.58	-0.13	-1.14	2.68	-0.19	-0.71	DY
7R3X94	*	2.01	0.30	2.69	3.62	0.75	2.78	CE
8XNBPH		1.81	0.10	0.92	3.03	0.16	0.59	BA
9H8GUK		1.73	0.03	0.24	2.89	0.01	0.06	WZ
9PQLKY		1.60	-0.10	-0.92	2.43	-0.44	-1.63	WZ
B9U36M		1.90	0.20	1.74	3.34	0.47	1.73	TM
BE69PZ	X	0.70	-1.00	-8.95	0.10	-2.77	-10.27	TM
BUFYJT		1.73	0.02	0.20	3.01	0.13	0.50	XX
BVAKCJ	*	1.99	0.29	2.57	3.42	0.55	2.04	TO
CEVX2T		1.74	0.03	0.29	3.04	0.17	0.63	TM
DJNAKV		1.81	0.10	0.94	2.87	0.00	-0.01	CE
E8P4XB		1.47	-0.23	-2.05	2.45	-0.42	-1.56	TO
EB9ZNL		1.51	-0.20	-1.75	2.32	-0.55	-2.05	XX
EGDYWQ		1.72	0.01	0.10	2.80	-0.08	-0.28	TM
FB4XD9		1.70	-0.01	-0.08	2.73	-0.15	-0.55	TM
FJGW4D		1.69	-0.02	-0.17	2.87	0.00	0.00	TO
FLP6BC		1.63	-0.07	-0.62	2.78	-0.09	-0.33	CE
GUF66U	X	0.40	-1.31	-11.64	0.30	-2.57	-9.53	TO
GUV7AH		1.76	0.06	0.50	3.03	0.15	0.57	TO
HQ9778	*	1.37	-0.34	-3.02	2.30	-0.57	-2.13	TM
J8ENYR		1.76	0.06	0.53	3.05	0.17	0.65	CE
JA2CCC		1.77	0.07	0.62	2.98	0.11	0.41	TO
JCPLKT		1.69	-0.01	-0.10	2.77	-0.11	-0.40	TM
KKGEFP		1.70	-0.01	-0.08	2.91	0.04	0.14	TO



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2nd Qtr 2017

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S43			Sample S44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
KYDXMF	X	1.79	0.09	0.78	2.35	-0.52	-1.94	TM
LKBQ7P	*	1.49	-0.22	-1.96	2.15	-0.72	-2.67	TO
LLN8GH		1.51	-0.20	-1.75	2.63	-0.24	-0.89	TO
LVAHXN		1.68	-0.02	-0.18	2.84	-0.04	-0.14	XX
MGRV3W		1.76	0.06	0.50	3.06	0.18	0.68	XX
MHLGX9		1.78	0.08	0.69	3.02	0.15	0.56	CE
NEFDLD		1.77	0.07	0.62	2.96	0.09	0.32	XX
NVK8TC	X	2.00	0.30	2.67	2.94	0.07	0.25	CS
PG3EZY		1.67	-0.03	-0.27	2.98	0.10	0.38	TO
PX4GG4		1.81	0.10	0.90	3.04	0.17	0.63	TO
R3DCHJ		1.63	-0.07	-0.67	2.87	-0.01	-0.03	TO
RUFVE8	X	2.14	0.43	3.87	2.36	-0.51	-1.90	TO
T3PKR6		1.77	0.06	0.55	2.91	0.04	0.15	TO
TN8MTW		1.73	0.03	0.27	2.96	0.09	0.32	TO
TQD8GW		1.76	0.05	0.48	3.07	0.20	0.74	TM
UFQFNC		1.65	-0.05	-0.45	2.89	0.02	0.06	TO
UXU42X		1.72	0.02	0.18	3.06	0.18	0.68	TO
UZJALU		1.74	0.04	0.35	2.87	-0.01	-0.03	TM
W2PEA3	X	0.51	-1.20	-10.69	0.78	-2.09	-7.75	TO
WFJYTB		1.65	-0.06	-0.50	2.91	0.03	0.12	TY
WMFXYQ		1.62	-0.08	-0.74	2.70	-0.18	-0.66	TM
X6YA6P		1.75	0.05	0.43	2.71	-0.16	-0.59	CE
XQYBHT		1.72	0.02	0.13	2.78	-0.10	-0.36	WZ
XUVYUU		1.72	0.02	0.14	2.94	0.07	0.26	TM
XUWQR2		1.74	0.04	0.32	2.70	-0.17	-0.64	TM
Y9BG7U		1.70	0.00	-0.03	3.08	0.20	0.75	CE
YA3LE8		1.72	0.02	0.17	3.06	0.19	0.69	TO
YZ7AQU		1.64	-0.06	-0.56	2.59	-0.28	-1.06	TO
Z9PC22	X	0.58	-1.13	-10.07	0.89	-1.98	-7.36	WZ



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2nd Qtr 2017

Notched Izod Impact - ft.lbf/in

Summary Statistics		
	<u>Sample S43</u>	<u>Sample S44</u>
Grand Means	1.704 ft.lbf/in	2.873 ft.lbf/in
Stnd Dev Btwn Labs	0.112 ft.lbf/in	0.270 ft.lbf/in
Statistics based on 55 of 64 reporting participants		

Sample S43: HIPS & Sample S44: HIPS

Comments on Assigned Data Flags for Test #790

- BE69PZ (X) - Extreme data.
- 4FZPF3 (X) - Data for sample S43 are high. Inconsistent within the determinations of both samples.
- W2PEA3 (X) - Extreme data.
- KYDXMF (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample S43.
- NVK8TC (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample S43.
- GUF66U (X) - Extreme data.
- 39JUZ8 (X) - Data for sample S43 are high. Inconsistent within the determinations of sample S43.
- RUFVE8 (X) - Data for sample S43 are high.
- Z9PC22 (X) - Extreme data.

Key to Instrument Codes Reported by Participants

BA Baldwin	CE Ceast
CS CSI	DY Dynatup
IN Instron	TM TMI
TO Tinius Olsen	TY Toyoseiki
WZ Zwick	XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

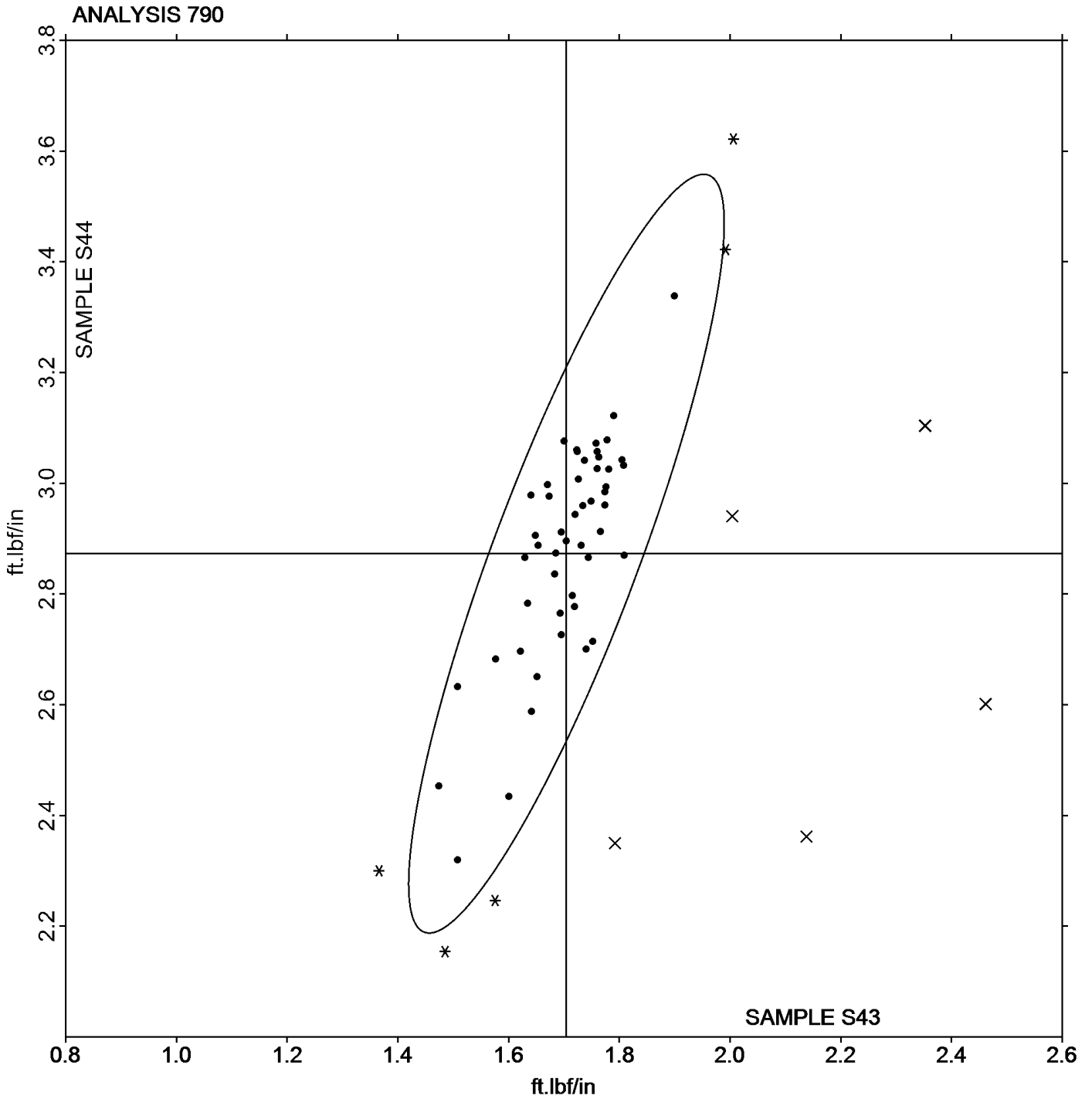
Analysis 790

Notched Izod Impact - ft.lbf/in

Report #102

2nd Qtr 2017

Grand Mean Sample S43: 1.7044 ft.lbf/in Grand Mean Sample S44: 2.8729 ft.lbf/in





Plastics Interlaboratory Testing Program

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Analysis 791

2nd Qtr 2017

Notched Izod Impact - kJ/m²

WebCode	Data Flag	Sample Z43			Sample Z44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
92NF4N		19.47400	0.55861	0.81	19.78580	0.92348	1.34	TO
9CKPMQ		18.30600	-0.60939	-0.89	18.40200	-0.46032	-0.67	CE
9KGGVK		18.46800	-0.44739	-0.65	18.55600	-0.30632	-0.45	WZ
B9BHVA		18.79480	-0.12059	-0.18	18.64680	-0.21552	-0.31	TO
DM8E88		18.56000	-0.35539	-0.52	18.58000	-0.28232	-0.41	TM
E4QRZP	*	21.07040	2.15501	3.14	20.92740	2.06508	3.00	TM
EGDYWQ		18.40960	-0.50579	-0.74	18.47420	-0.38812	-0.56	TM
EHNQ4L	X	8.12640	10.78899	-15.72	8.21240	-10.64992	-15.47	TM
GZYAYG		18.30000	-0.61539	-0.90	18.08000	-0.78232	-1.14	WZ
JLWFJR		18.31400	-0.60139	-0.88	18.32800	-0.53432	-0.78	WZ
MEJWRN		17.85020	-1.06519	-1.55	17.58720	-1.27512	-1.85	XX
MRRGFM		18.47400	-0.44139	-0.64	18.69920	-0.16312	-0.24	CE
N43AHM		18.22600	-0.68939	-1.00	18.56400	-0.29832	-0.43	TO
NEYJK3		18.98800	0.07261	0.11	18.37200	-0.49032	-0.71	CE
NKKFL8		19.16980	0.25441	0.37	18.97760	0.11528	0.17	CE
PG3EZY		19.06000	0.14461	0.21	18.49160	-0.37072	-0.54	TO
PTYEZH		19.89400	0.97861	1.43	19.50600	0.64368	0.94	CE
Q3TDJZ		19.22000	0.30461	0.44	19.16000	0.29768	0.43	CE
R39W4X		19.04000	0.12461	0.18	18.90000	0.03768	0.05	TO
RBNH9V		18.53540	-0.37999	-0.55	18.65860	-0.20372	-0.30	TM
RUFVE8		19.78600	0.87061	1.27	19.82600	0.96368	1.40	TO
TN8MTW		19.50800	0.59261	0.86	18.67800	-0.18432	-0.27	TO
UFQFNC		18.46000	-0.45539	-0.66	18.46000	-0.40232	-0.58	TO
WDF7V7		19.65600	0.74061	1.08	19.51000	0.64768	0.94	IN
WFJYTB		18.56400	-0.35139	-0.51	18.53200	-0.33032	-0.48	XX
XQYBHT	*	18.89200	-0.02339	-0.03	19.81800	0.95568	1.39	WZ
ZNHVZX		18.78000	-0.13539	-0.20	18.90000	0.03768	0.05	TO

Summary Statistics

Grand Means

Sample Z43
18.915392 kJ/m²

Sample Z44
18.862323 kJ/m²

Std Dev Btwn Labs

0.686384 kJ/m²

0.688296 kJ/m²

Statistics based on 26 of 27 reporting participants

Sample Z43: ABS & Sample Z44: ABS



Plastics Interlaboratory Testing Program

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Notched Izod Impact - kJ/m^2

Report #102

2nd Qtr 2017

Comments on Assigned Data Flags for Test #791

EHNQ4L (X) - Extreme data.

Key to Instrument Codes Reported by Participants

CE Ceast

TM TMI

WZ Zwick

IN Instron

TO Tinius Olsen

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

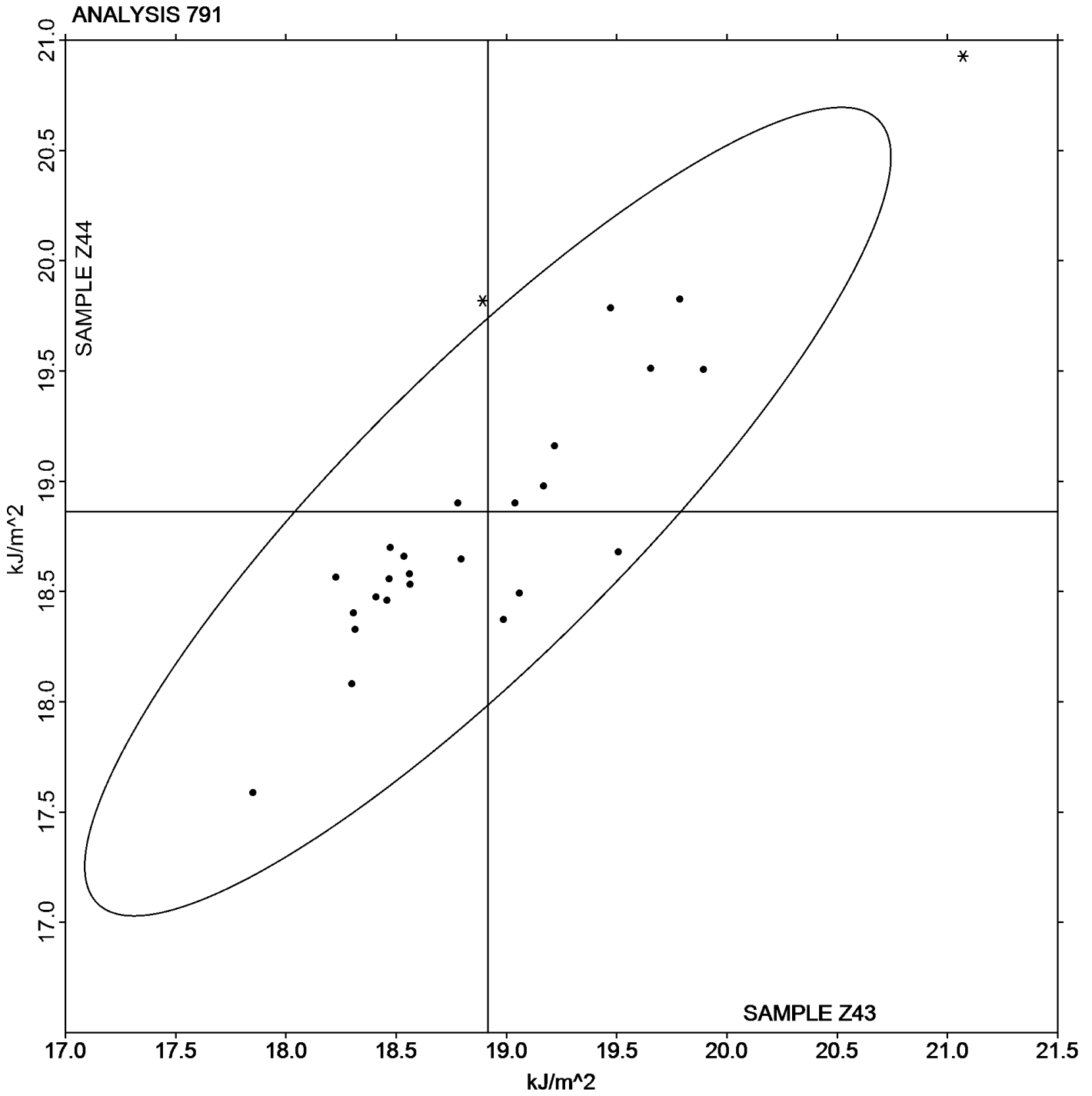
Analysis 791

Notched Izod Impact - kJ/m^2

Report #102

2nd Qtr 2017

Grand Mean Sample Z43: 18.915 kJ/m^2 Grand Mean Sample Z44: 18.862 kJ/m^2





Plastics Interlaboratory Testing Program

Report #102

Analysis 792

2nd Qtr 2017

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M43			Sample M44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
26PECU		19.33	-0.49	-0.62	19.34	-0.49	-0.62	TM
388XU4		19.60	-0.22	-0.27	20.03	0.20	0.25	CE
6KLZ6Q		20.06	0.24	0.31	20.18	0.35	0.44	IN
6MB9C7		19.10	-0.71	-0.90	18.84	-0.99	-1.25	TO
6PGUZ8		20.21	0.39	0.49	20.57	0.74	0.93	TM
7A78EV		20.50	0.69	0.87	20.09	0.26	0.33	CE
7LTL8X		19.38	-0.44	-0.56	18.53	-1.30	-1.65	WZ
92NF4N		19.07	-0.74	-0.94	19.01	-0.82	-1.04	TO
9H8GUK		18.83	-0.98	-1.24	18.98	-0.85	-1.07	WZ
AZMZ93		19.82	0.00	0.00	20.22	0.39	0.49	WZ
B9BHVA		20.24	0.42	0.53	20.28	0.45	0.56	TO
BUCC4Z		19.54	-0.28	-0.35	19.49	-0.34	-0.43	XX
DF4AG9		19.50	-0.32	-0.40	19.73	-0.10	-0.12	CE
DJNAKV		20.30	0.49	0.62	20.31	0.48	0.60	CE
E4QRZP		21.48	1.66	2.10	21.06	1.23	1.55	TM
E8P4XB	X	3.06	-16.75	-21.19	3.19	-16.64	-21.06	TO
EDBXWU	*	19.52	-0.30	-0.37	20.76	0.93	1.18	WZ
EGDYWQ		20.31	0.50	0.63	19.36	-0.47	-0.59	TM
EHNQ4L		18.18	-1.64	-2.07	18.29	-1.54	-1.94	TM
FLP6BC		18.86	-0.96	-1.21	19.28	-0.55	-0.70	CE
GZYAYG		19.74	-0.08	-0.10	19.32	-0.51	-0.65	WZ
JLWFJR		19.42	-0.39	-0.50	20.16	0.33	0.41	WZ
LVAHXN		18.95	-0.87	-1.10	19.05	-0.78	-0.99	XX
M9V6DF		19.58	-0.24	-0.30	19.46	-0.37	-0.47	XX
MHLGX9		20.29	0.47	0.59	20.52	0.69	0.88	CE
N43AHM		19.70	-0.11	-0.14	19.67	-0.16	-0.21	TO
NEFDLD		19.23	-0.58	-0.74	19.06	-0.77	-0.98	XX
NEYJK3		19.92	0.10	0.13	20.33	0.50	0.63	CE
NKKFL8		21.37	1.56	1.97	20.73	0.90	1.14	CE
PX4GG4		19.96	0.14	0.18	19.66	-0.17	-0.22	TO
Q883WH		19.25	-0.56	-0.71	19.77	-0.06	-0.08	TO
RUFVE8		19.98	0.16	0.20	20.01	0.18	0.22	TO
TQU3LD		20.28	0.46	0.59	20.20	0.37	0.47	CE
UFQFNC		19.18	-0.64	-0.80	19.12	-0.71	-0.90	TO
UZJALU		19.78	-0.04	-0.05	19.45	-0.38	-0.49	TM



Plastics Interlaboratory Testing Program

Report #102

Analysis 792

2nd Qtr 2017

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M43			Sample M44			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
VEXVKD	*	22.07	2.26	2.85	22.24	2.41	3.04	WZ
WFJYTB		20.02	0.20	0.26	20.50	0.67	0.85	TY
WPQMH3		18.71	-1.11	-1.40	18.73	-1.10	-1.39	CE
X2VJYB		20.99	1.17	1.48	20.77	0.94	1.19	WZ
XQYBHT		20.59	0.77	0.97	20.32	0.49	0.62	WZ

Summary Statistics		
	Sample M43	Sample M44
Grand Means	19.816 kJ/m ²	19.831 kJ/m ²
Stnd Dev Btwn Labs	0.791 kJ/m ²	0.790 kJ/m ²
Statistics based on 39 of 40 reporting participants		

Sample M43: ABS & Sample M44: ABS

Comments on Assigned Data Flags for Test #792

E8P4XB (X) - Extreme data.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

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Notched Charpy Impact - kJ/m²

Report #102

2nd Qtr 2017

Grand Mean Sample M43: 19.816 kJ/m² Grand Mean Sample M44: 19.831 kJ/m²

