



Plastics Interlaboratory Testing Program

Web Summary Report #103, 3rd 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 #103, 3rd Qtr 2017

Analysis 704 - Tensile Stress at Yield

Material: HIPS	Sample F45	3,748.90	psi	3.09% COV
	Sample F46	3,747.95	psi	2.84% COV

Analysis 705 - Tensile Stress at Break

Material: HIPS	Sample F45	3,370.02	psi	3.41% COV
	Sample F46	3,380.15	psi	3.22% COV

Analysis 706 - Percent Elongation at Yield

Material: HIPS	Sample F45	1.3416	Percent	4.47% COV
	Sample F46	1.3409	Percent	4.74% COV

Analysis 708 - Modulus of Elasticity

Material: HIPS	Sample F45	334.37	ksi	4.92% COV
	Sample F46	334.99	ksi	4.64% COV

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

Material: HIPS	Sample E45	76.633	Degrees C	1.19% COV
	Sample E46	76.645	Degrees C	0.916% COV

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

Material: PP	Sample G45	68.914	Degrees C	3.04% COV
	Sample G46	81.574	Degrees C	7.27% COV

Analysis 712 - Temperature of Deflection (1.80 MPa)

Material: HIPS	Sample N45	83.595	Degrees C	1.37% COV
	Sample N46	83.564	Degrees C	1.33% COV

Analysis 715 - Vicat Temperature (Rate A)

Material: HIPS	Sample H45	96.188	Degrees C	0.446% COV
	Sample H46	96.210	Degrees C	0.467% COV

Analysis 716 - Vicat Temperature (Rate B)

Material: HIPS	Sample R45	98.459	Degrees C	0.632% COV
	Sample R46	98.420	Degrees C	0.694% COV

Analysis 718 - Specific Gravity

Material: ABS	Sample T45	1.0465	sp gr 23/23 C	0.180% COV
	Sample T46	1.0463	sp gr 23/23 C	0.178% COV

Analysis 720 - Flexural Modulus

Material: ABS	Sample J45	364.29	ksi	4.84% COV
	Sample J46	375.00	ksi	4.39% COV

Analysis 721 - Flexural Stress at 5% Strain

Material: ABS	Sample J45	10,989.72	psi	3.95% COV
	Sample J46	11,415.42	psi	3.90% COV

Analysis 722 - Flexural Stress at Yield

Material: ABS	Sample J45	10,986.56	psi	3.28% COV
	Sample J46	11,420.26	psi	3.64% COV

Analysis 730 - Tensile Stress at Yield, ISO Method

Material: ABS	Sample C45	46.001	MPa	2.15% COV
	Sample C46	45.978	MPa	2.23% COV

Analysis 731 - Tensile Stress at Break, ISO Method

Material: ABS	Sample C45	33.699	MPa	3.95% COV
	Sample C46	33.560	MPa	4.55% COV



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Analysis 732 - Strain at Yield, ISO Method

Material: ABS	Sample C45	2.4488	Percent	2.77% COV
	Sample C46	2.4445	Percent	2.70% COV

Analysis 734 - Modulus of Elasticity, ISO Method

Material: ABS	Sample C45	2,382.88	MPa	3.61% COV
	Sample C46	2,387.57	MPa	3.51% COV

Analysis 736 - Flexural Modulus

Material: ABS	Sample K45	2,357.41	MPa	6.08% COV
	Sample K46	2,355.34	MPa	5.81% COV

Analysis 737 - Flexural Stress at 3.5% Strain

Material: ABS	Sample K45	67.460	MPa	3.88% COV
	Sample K46	67.310	MPa	3.93% COV

Analysis 738 - Flexural Stress at Yield

Material: ABS	Sample K45	68.022	MPa	3.95% COV
	Sample K46	67.891	MPa	3.88% COV

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

Material: LDPE	Sample X45	5.4151	grams/10 mins	3.49% COV
	Sample X46	6.4049	grams/10 mins	3.86% COV

Analysis 755 - Moisture Content

Material: ABS	Sample Y45	0.19813	Percent	16.1% COV
	Sample Y46	0.18018	Percent	15.6% COV

Analysis 757 - Ash Content

Material: PP	Sample L45	19.741	Percent	0.337% COV
	Sample L46	19.748	Percent	0.284% COV

Analysis 760 - DSC

Material: PP	Sample W45	117.61	Degrees Celsius	3.07% COV
	Sample W46	106.65	Degrees Celsius	3.14% COV

Analysis 761 - DSC

Material: PP	Sample W45	164.68	Degrees Celsius	1.15% COV
	Sample W46	166.02	Degrees Celsius	1.42% COV

Analysis 762 - DSC

Material: PP	Sample W45	79.482	Joules Per Gram	5.00% COV
	Sample W46	98.650	Joules Per Gram	6.13% COV

Analysis 763 - DSC

Material: PP	Sample W45	73.658	Joules Per Gram	8.83% COV
	Sample W46	90.497	Joules Per Gram	8.81% COV

Analysis 764 - DSC

Material: PET	Sample V45	86.141	Degrees Celsius	2.42% COV
	Sample V46	86.358	Degrees Celsius	2.69% COV

Analysis 770 - Tensile Stress at Yield, Films

Material: LDPE	Sample B45	1,681.32	psi	3.96% COV
	Sample B46	2,133.16	psi	19.7% COV

Analysis 771 - Tensile Stress at Break, Films

Material: LDPE	Sample B45	3,326.71	psi	12.4% COV
	Sample B46	3,218.36	psi	13.0% COV



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Analysis 772 - Elongation at Yield, Films

Material: LDPE	Sample B45	56.104	Percent	44.0% COV
	Sample B46	175.30	Percent	135% COV

Analysis 773 - Elongation at Break, Films

Material: LDPE	Sample B45	734.15	Percent	15.2% COV
	Sample B46	711.94	Percent	19.7% COV

Analysis 774 - Thickness of Film Specimens

Material: LDPE	Sample B45	3.8995	mils	3.03% COV
	Sample B46	4.1007	mils	7.44% COV

Analysis 775 - Secant Modulus at 1% Strain

Material: LDPE	Sample B45	29,271.99	psi	16.5% COV
	Sample B46	31,338.89	psi	18.4% COV

Analysis 776 - Secant Modulus at 2% Strain

Material: LDPE	Sample B45	25,769.75	psi	9.21% COV
	Sample B46	27,226.19	psi	9.63% COV

Analysis 780 - Static Friction

Material: LDPE	Sample P45	0.14483	COF	28.1% COV
	Sample P46	0.12841	COF	42.1% COV

Analysis 781 - Kinetic Friction

Material: LDPE	Sample P45	0.11549	COF	32.2% COV
	Sample P46	0.10469	COF	44.6% COV

Analysis 782 - Tear Resistance of Film

Material: LDPE	Sample Q45	480.90	grams-force	12.7% COV
	Sample Q46	250.19	grams-force	16.4% COV

Analysis 785 - Percent Haze

Material: LDPE	Sample D45	12.768	Percent	5.52% COV
	Sample D46	22.886	Percent	5.57% COV

Analysis 786 - Total Transmittance

Material: LDPE	Sample D45	91.891	Percent	1.23% COV
	Sample D46	92.425	Percent	1.39% COV

Analysis 790 - Notched Izod Impact

Material: ABS	Sample S45	6.6701	ft.lbf/in	6.29% COV
	Sample S46	5.0714	ft.lbf/in	7.59% COV

Analysis 791 - Notched Izod Impact

Material: HIPS	Sample Z45	1.9514	kJ/m ²	17.7% COV
	Sample Z46	1.9722	kJ/m ²	23.2% COV

Analysis 792 - Notched Charpy Impact

Material: HIPS	Sample M45	1.7916	kJ/m ²	24.2% COV
	Sample M46	1.7270	kJ/m ²	22.7% COV



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Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23QPJU		3,582.4	-166.5	-1.44	3,604.4	-143.5	-1.35
24F7MA		3,644.6	-104.3	-0.90	3,681.6	-66.3	-0.62
2L4C62		3,771.0	22.1	0.19	3,771.0	23.1	0.22
376UHB		3,860.9	112.0	0.97	3,840.6	92.7	0.87
3JVG Y4		3,722.0	-26.9	-0.23	3,704.0	-43.9	-0.41
3MWKQQ		3,666.0	-82.9	-0.72	3,655.6	-92.3	-0.87
4TEDGG		3,559.3	-189.6	-1.64	3,559.3	-188.7	-1.77
63Y4C8	X	3,680.0	-68.9	-0.60	3,554.2	-193.7	-1.82
68PFCA	*	3,724.0	-24.9	-0.22	3,632.4	-115.6	-1.08
6AEPJP		3,775.2	26.3	0.23	3,769.6	21.7	0.20
6L92W4		3,686.0	-62.9	-0.54	3,718.8	-29.1	-0.27
6NENA8		3,915.2	166.3	1.44	3,925.0	177.1	1.66
6NEQWQ		3,841.7	92.8	0.80	3,811.9	63.9	0.60
79F8CL		3,762.6	13.7	0.12	3,740.6	-7.3	-0.07
7B6EWH	X	5.2	-3,743.7	-32.36	5.2	-3,742.7	-35.11
82D7YX		3,646.0	-102.9	-0.89	3,648.0	-99.9	-0.94
82UEZL		3,613.2	-135.7	-1.17	3,611.4	-136.5	-1.28
84KRMX		3,887.4	138.5	1.20	3,882.2	134.3	1.26
8D9KYU		3,838.2	89.3	0.77	3,831.6	83.7	0.78
8KN4EN		3,853.8	104.9	0.91	3,804.6	56.7	0.53
8RQ99T		3,887.4	138.5	1.20	3,876.6	128.7	1.21
8UC4MK		3,682.3	-66.6	-0.58	3,740.4	-7.5	-0.07
8VRRHY		3,908.8	159.9	1.38	3,881.8	133.9	1.26
9D3M7B	X	2,921.7	-827.2	-7.15	2,973.3	-774.6	-7.27
9LJ27V	X	3,826.1	77.2	0.67	3,643.4	-104.6	-0.98
9XCKP7		3,681.8	-67.1	-0.58	3,666.2	-81.7	-0.77
ABBZXF		3,704.1	-44.8	-0.39	3,714.1	-33.9	-0.32
AJ9JK4		3,658.5	-90.4	-0.78	3,643.8	-104.1	-0.98
AQ3XZA		3,756.0	7.1	0.06	3,762.0	14.1	0.13
B4EB83	X	3,940.6	191.7	1.66	4,022.0	274.1	2.57
B9HETV		3,663.6	-85.3	-0.74	3,664.4	-83.5	-0.78
BEAMFA		3,757.0	8.1	0.07	3,756.3	8.3	0.08
DPJYK4		3,542.6	-206.3	-1.78	3,597.8	-150.1	-1.41
E4EWVD		3,880.0	131.1	1.13	3,810.2	62.3	0.58
EHZZQN		3,672.6	-76.3	-0.66	3,685.8	-62.1	-0.58



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Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ER73QF		3,646.3	-102.6	-0.89	3,637.6	-110.4	-1.04
EXUMWG		3,654.8	-94.1	-0.81	3,690.6	-57.3	-0.54
FLTJ6R		3,828.6	79.7	0.69	3,833.5	85.5	0.80
FLW28W	*	3,637.6	-111.3	-0.96	3,736.6	-11.3	-0.11
FPTRCM		3,727.8	-21.1	-0.18	3,745.2	-2.7	-0.03
FRHW92		3,723.0	-25.9	-0.22	3,722.6	-25.3	-0.24
GEEXWN	*	3,731.0	-17.9	-0.15	3,633.6	-114.3	-1.07
GY2JGC		3,684.0	-64.9	-0.56	3,713.0	-34.9	-0.33
JBH6QV		3,597.1	-151.8	-1.31	3,603.3	-144.6	-1.36
JTGME6		3,662.0	-86.9	-0.75	3,614.0	-133.9	-1.26
JUH7TU		3,808.2	59.3	0.51	3,757.6	9.7	0.09
KNK9EM	*	4,088.7	339.8	2.94	4,061.4	313.5	2.94
L267VB		3,739.8	-9.1	-0.08	3,819.0	71.1	0.67
LEU6MD		3,805.4	56.5	0.49	3,803.2	55.3	0.52
LHC66E		3,693.0	-55.9	-0.48	3,714.4	-33.5	-0.31
LQ9Z3D		3,692.4	-56.5	-0.49	3,717.1	-30.9	-0.29
MJ3NL7		3,764.1	15.2	0.13	3,800.9	52.9	0.50
MT7XRV		3,766.4	17.5	0.15	3,714.5	-33.4	-0.31
N7TGVY		3,495.4	-253.5	-2.19	3,568.0	-180.0	-1.69
NTMG9M		3,784.1	35.2	0.30	3,731.5	-16.5	-0.15
NZMT9Q		3,658.0	-90.9	-0.79	3,653.8	-94.1	-0.88
PCXN2U		3,601.4	-147.5	-1.28	3,584.3	-163.6	-1.53
PK8ZDR		3,817.1	68.2	0.59	3,808.1	60.2	0.56
PUFL7R		3,800.3	51.4	0.44	3,764.9	17.0	0.16
QEUKYZ	*	3,932.0	183.1	1.58	3,820.6	72.7	0.68
QMT2Y7		3,914.6	165.7	1.43	3,894.0	146.1	1.37
QPXLNR		3,618.0	-130.9	-1.13	3,662.0	-85.9	-0.81
T3VKKM		3,915.3	166.4	1.44	3,934.9	186.9	1.75
TRC864		3,681.1	-67.8	-0.59	3,663.7	-84.3	-0.79
U4MVX2		3,739.8	-9.1	-0.08	3,803.8	55.9	0.52
U7V9GN	X	1,579.0	-2,169.9	-18.76	1,708.1	-2,039.8	-19.14
UB2V6X		3,682.0	-66.9	-0.58	3,754.0	6.1	0.06
UCFBKJ		3,870.9	122.0	1.05	3,852.6	104.7	0.98
UMFVPX		3,722.0	-26.9	-0.23	3,728.8	-19.1	-0.18
UQF8KX		3,956.7	207.8	1.80	3,956.0	208.1	1.95



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Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UV84JW		3,873.6	124.7	1.08	3,869.3	121.3	1.14
VDVRGX		3,766.2	17.3	0.15	3,775.4	27.5	0.26
W38B4H		3,848.8	99.9	0.86	3,839.4	91.5	0.86
W4DPKV		3,693.2	-55.7	-0.48	3,662.4	-85.5	-0.80
WDLAW6		3,669.5	-79.4	-0.69	3,672.1	-75.8	-0.71
WLFHEA		3,742.0	-6.9	-0.06	3,778.0	30.1	0.28
X2N33R		4,006.7	257.8	2.23	3,941.5	193.5	1.82
XPW3Y6	M	No data reported for this sample			3,848.0	100.1	0.94
XX8Q9W		3,926.0	177.1	1.53	3,953.0	205.0	1.92
Y3YML8		3,566.0	-182.9	-1.58	3,568.0	-179.9	-1.69
YRYJB6		3,724.0	-24.9	-0.22	3,736.0	-11.9	-0.11
YULY4L		3,720.8	-28.1	-0.24	3,704.5	-43.5	-0.41
YZT3X8		3,889.4	140.5	1.21	3,929.2	181.3	1.70
ZJJ4HV		3,656.0	-92.9	-0.80	3,672.0	-75.9	-0.71

Summary Statistics

	Sample F45	Sample F46
Grand Means	3,748.90 psi	3,747.95 psi
Stnd Dev Btwn Labs	115.69 psi	106.59 psi

Statistics based on 77 of 84 reporting participants

Sample F45: HIPS & Sample F46: HIPS

Comments on Assigned Data Flags for Test #704

- 9LJ27V (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample F45.
- XPW3Y6 (M) - Participant did not submit data for sample F45.
- 63Y4C8 (X) - Inconsistent in testing between samples.
- U7V9GN (X) - Data for both samples are low. Inconsistent within the determinations of sample F45.
- 9D3M7B (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- B4EB83 (X) - Inconsistent in testing between samples.
- 7B6EWH (X) - Extreme data.



Plastics Interlaboratory Testing Program

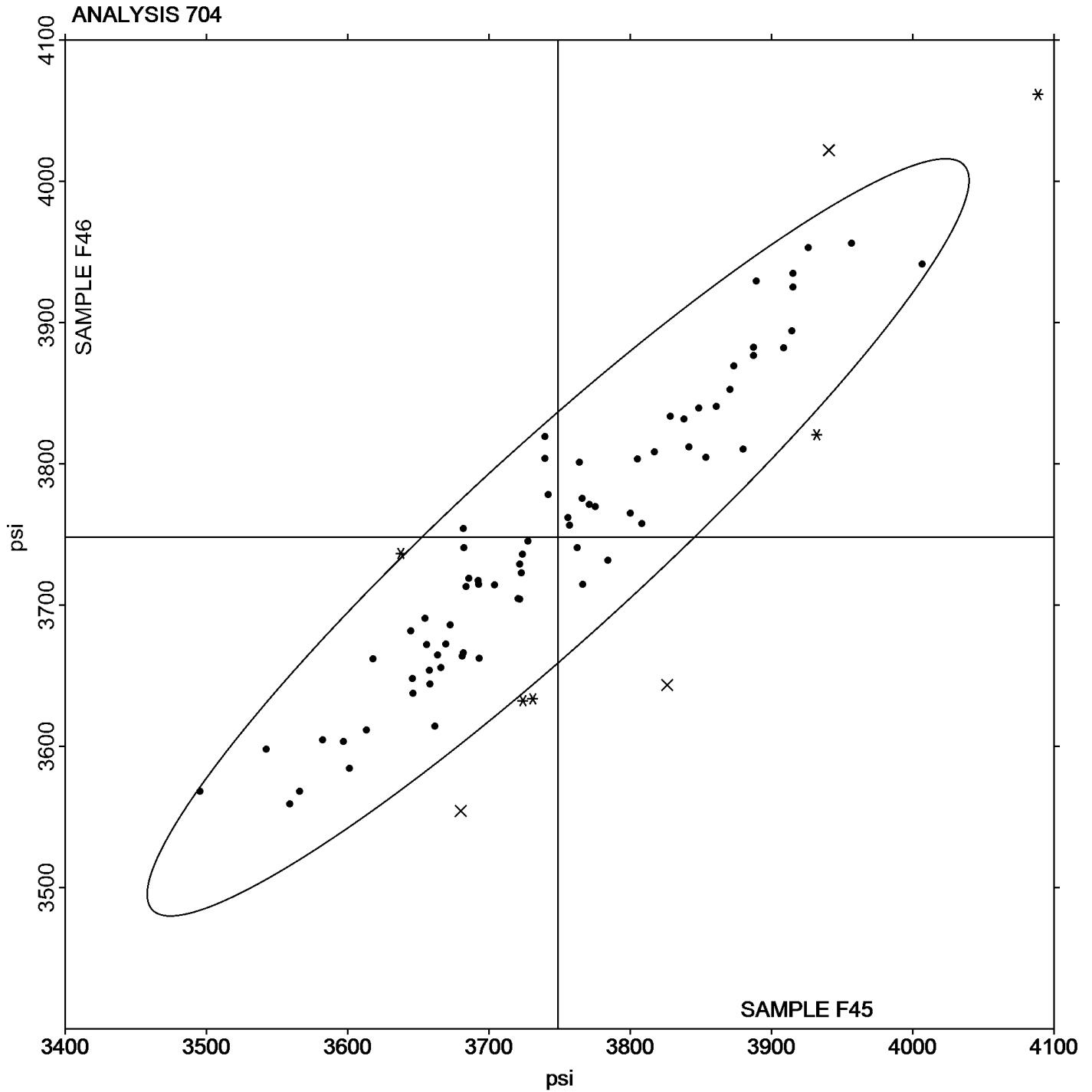
Report #103

Analysis 704

3rd Qtr 2017

Tensile Stress at Yield - psi

Grand Mean Sample F45: 3,748.90 psi Grand Mean Sample F46: 3,747.95 psi





Plastics Interlaboratory Testing Program

Report #103

Analysis 705

3rd Qtr 2017

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23QPJU		3,152.0	-218.0	-1.90	3,191.8	-188.4	-1.73
24F7MA		3,302.4	-67.6	-0.59	3,339.2	-41.0	-0.38
2L4C62		3,335.9	-34.1	-0.30	3,364.9	-15.2	-0.14
376UHB		3,489.6	119.6	1.04	3,411.3	31.2	0.29
3MWKQQ		3,254.4	-115.6	-1.01	3,308.2	-72.0	-0.66
4TEDGG		3,301.1	-68.9	-0.60	3,318.5	-61.7	-0.57
68PFCA		3,087.9	-282.1	-2.45	3,112.2	-267.9	-2.46
6AEPJP		3,372.6	2.6	0.02	3,351.0	-29.2	-0.27
6L92W4		3,450.5	80.5	0.70	3,460.3	80.2	0.74
6NENA8		3,432.5	62.5	0.54	3,524.7	144.6	1.33
6NEQWQ		3,505.7	135.7	1.18	3,418.3	38.2	0.35
7B6EWH	X	5.3	-3,364.7	-29.27	5.3	-3,374.9	-31.02
82D7YX		3,262.0	-108.0	-0.94	3,318.0	-62.2	-0.57
82UEZL		3,225.8	-144.2	-1.25	3,206.2	-174.0	-1.60
84KRMX		3,229.4	-140.6	-1.22	3,272.8	-107.4	-0.99
8D9KYU		3,389.4	19.4	0.17	3,397.8	17.6	0.16
8KN4EN		3,390.2	20.2	0.18	3,388.6	8.4	0.08
8RQ99T		3,490.8	120.8	1.05	3,476.6	96.4	0.89
8UC4MK		3,375.7	5.7	0.05	3,384.5	4.3	0.04
8VRRHY		3,423.8	53.8	0.47	3,396.2	16.0	0.15
9D3M7B	X	2,979.1	-390.9	-3.40	2,893.8	-486.3	-4.47
9LJ27V	X	3,486.7	116.7	1.02	3,301.1	-79.1	-0.73
9XCKP7		3,420.2	50.2	0.44	3,484.6	104.4	0.96
ABBZXF		3,324.8	-45.2	-0.39	3,337.1	-43.0	-0.40
AJ9JK4		3,330.6	-39.4	-0.34	3,334.8	-45.4	-0.42
AQ3XZA		3,250.4	-119.6	-1.04	3,264.0	-116.2	-1.07
B4EB83	X	3,465.4	95.4	0.83	3,640.2	260.0	2.39
B9HETV		3,253.0	-117.0	-1.02	3,288.8	-91.4	-0.84
BEAMFA		3,441.9	71.9	0.63	3,504.8	124.7	1.15
DPJYK4		3,131.6	-238.4	-2.07	3,240.2	-140.0	-1.29
E4EWVD		3,431.8	61.7	0.54	3,367.4	-12.8	-0.12
EHZZQN		3,382.6	12.6	0.11	3,390.6	10.4	0.10
ER73QF		3,306.9	-63.1	-0.55	3,315.6	-64.6	-0.59
EXUMWG		3,348.8	-21.2	-0.18	3,342.8	-37.4	-0.34
FLTJ6R		3,408.8	38.8	0.34	3,425.7	45.6	0.42



Plastics Interlaboratory Testing Program

Report #103

Analysis 705

3rd Qtr 2017

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FLW28W		3,360.0	-10.0	-0.09	3,460.0	79.8	0.73
FPTRCM		3,426.1	56.1	0.49	3,382.3	2.2	0.02
FRHW92		3,239.0	-131.0	-1.14	3,335.6	-44.6	-0.41
GY2JGC		3,335.9	-34.1	-0.30	3,335.9	-44.3	-0.41
JBH6QV		3,268.0	-102.0	-0.89	3,345.9	-34.3	-0.32
JTGME6		3,318.0	-52.0	-0.45	3,294.0	-86.2	-0.79
KNK9EM	*	3,674.6	304.6	2.65	3,680.2	300.0	2.76
L24DZN		3,422.6	52.6	0.46	3,439.4	59.2	0.54
L267VB		3,431.6	61.6	0.54	3,432.2	52.0	0.48
LEU6MD		3,457.2	87.2	0.76	3,405.4	25.2	0.23
LHC66E		3,225.4	-144.6	-1.26	3,281.0	-99.2	-0.91
LQ9Z3D		3,429.9	59.9	0.52	3,388.4	8.2	0.08
MJ3NL7		3,404.4	34.3	0.30	3,424.4	44.2	0.41
MT7XRV		3,396.6	26.5	0.23	3,374.7	-5.4	-0.05
N7TGVY		3,315.6	-54.4	-0.47	3,315.6	-64.6	-0.59
NZMT9Q		3,278.6	-91.4	-0.80	3,263.6	-116.6	-1.07
PCXN2U	*	3,125.9	-244.2	-2.12	3,084.0	-296.1	-2.72
PK8ZDR		3,314.7	-55.3	-0.48	3,351.6	-28.6	-0.26
PUFL7R	X	2,910.9	-459.1	-3.99	2,906.6	-473.6	-4.35
QEUKYZ		3,505.9	135.9	1.18	3,396.8	16.7	0.15
QMT2Y7		3,574.8	204.8	1.78	3,539.2	159.0	1.46
T3CV27	X	3,982.4	612.4	5.33	4,025.1	645.0	5.93
T3VKKM	*	3,639.0	269.0	2.34	3,676.4	296.2	2.72
TRC864		3,295.3	-74.7	-0.65	3,289.5	-90.7	-0.83
U4MVX2	X	3,251.0	-119.0	-1.04	3,455.4	75.2	0.69
UB2V6X		3,414.0	44.0	0.38	3,496.0	115.8	1.06
UCFBKJ		3,472.8	102.8	0.89	3,456.4	76.3	0.70
UMFVPX		3,276.2	-93.8	-0.82	3,282.8	-97.4	-0.89
UQF8KX	*	3,530.6	160.6	1.40	3,621.7	241.6	2.22
UV84JW		3,391.8	21.8	0.19	3,433.8	53.7	0.49
VDVRGX		3,406.4	36.4	0.32	3,395.0	14.8	0.14
W38B4H		3,441.6	71.6	0.62	3,432.0	51.8	0.48
W4DPKV		3,418.6	48.6	0.42	3,433.2	53.0	0.49
WDLAW6		3,361.1	-8.9	-0.08	3,390.7	10.6	0.10
WLFHEA		3,368.0	-2.0	-0.02	3,428.0	47.8	0.44



Plastics Interlaboratory Testing Program

Report #103

Analysis 705

3rd Qtr 2017

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
X2N33R	*	3,632.5	262.4	2.28	3,504.9	124.7	1.15
XPW3Y6	M	No data reported for this sample			3,444.0	63.8	0.59
XX8Q9W		3,375.4	5.4	0.05	3,491.1	111.0	1.02
YRYJB6		3,316.8	-53.2	-0.46	3,291.8	-88.4	-0.81
YULY4L		3,308.4	-61.7	-0.54	3,317.3	-62.8	-0.58
YZT3X8		3,493.4	123.4	1.07	3,524.0	143.8	1.32
ZJJ4HV		3,382.0	12.0	0.10	3,298.0	-82.2	-0.76

Summary Statistics		Sample F45	Sample F46
Grand Means		3,370.02 psi	3,380.15 psi
Std Dev Btwn Labs		114.94 psi	108.78 psi
Statistics based on 69 of 77 reporting participants			

Sample F45: HIPS & Sample F46: HIPS

Comments on Assigned Data Flags for Test #705

- 9LJ27V (X) - Inconsistent in testing between samples.
- XPW3Y6 (M) - Participant did not submit data for sample F45.
- T3CV27 (X) - Data for both samples are high. Possible Systematic Error.
- PUFL7R (X) - Data for both samples are low. Possible Systematic Error.
- 9D3M7B (X) - Data for both samples are low. Possible Systematic Error.
- B4EB83 (X) - Inconsistent in testing between samples.
- U4MVX2 (X) - Inconsistent in testing between samples.
- 7B6EWH (X) - Extreme data.



Plastics Interlaboratory Testing Program

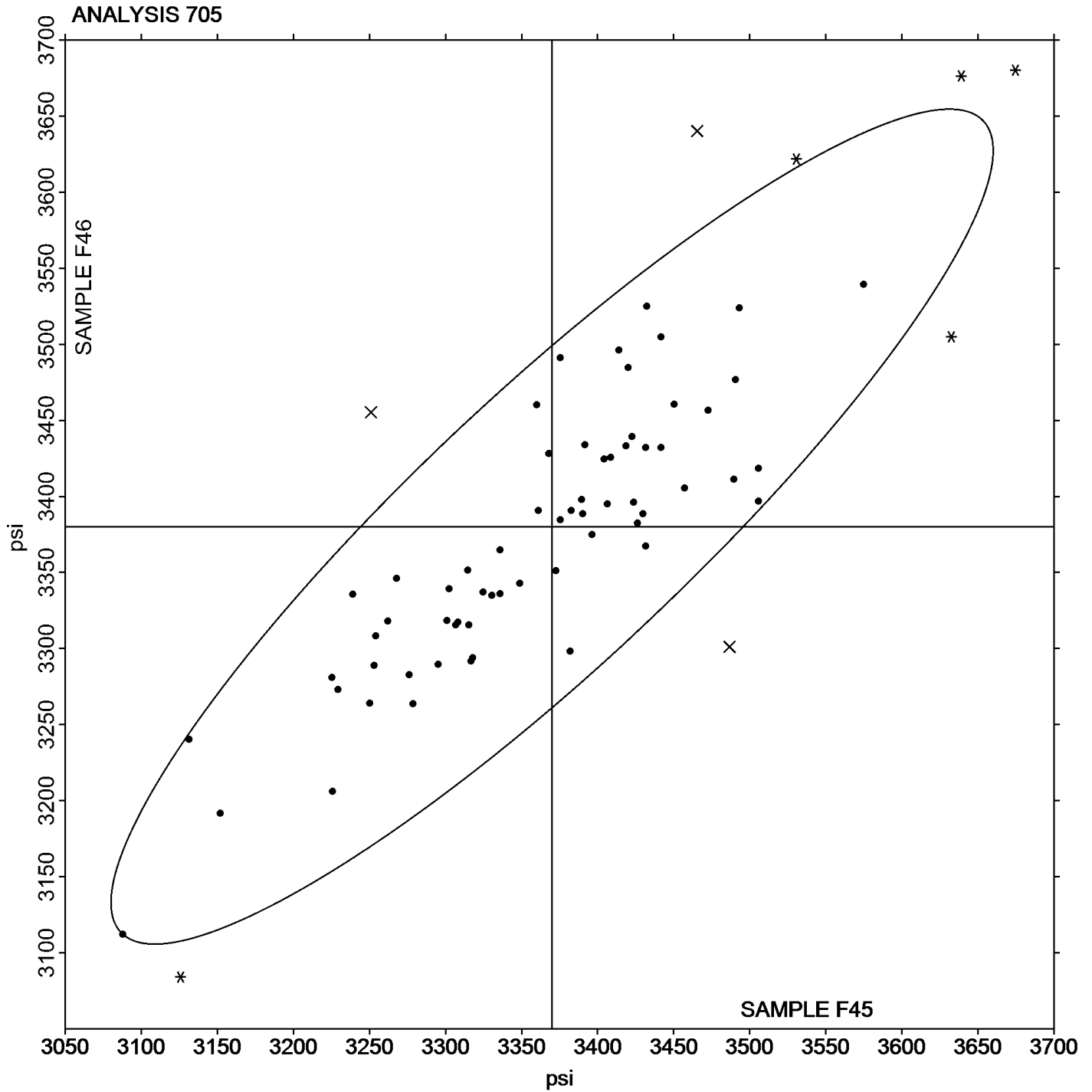
Analysis 705

Tensile Stress at Break - psi

Report #103

3rd Qtr 2017

Grand Mean Sample F45: 3,370.02 psi Grand Mean Sample F46: 3,380.15 psi





Plastics Interlaboratory Testing Program

Report #103

Analysis 706

3rd Qtr 2017

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23QPJU		1.218	-0.124	-2.06	1.256	-0.085	-1.34
24F7MA		1.238	-0.104	-1.73	1.234	-0.107	-1.68
2L4C62		1.304	-0.038	-0.63	1.308	-0.033	-0.52
376UHB		1.362	0.020	0.34	1.342	0.001	0.02
3JVGY4		1.352	0.010	0.17	1.338	-0.003	-0.05
3MWKQQ		1.314	-0.028	-0.46	1.372	0.031	0.49
4TEDGG		1.214	-0.128	-2.13	1.216	-0.125	-1.96
63Y4C8		1.346	0.004	0.07	1.354	0.013	0.21
68PFCA		1.310	-0.032	-0.53	1.282	-0.059	-0.93
6AEPJP		1.380	0.038	0.64	1.400	0.059	0.93
6NENA8		1.386	0.044	0.74	1.390	0.049	0.77
6NEQWQ	X	33.600	32.258	538.14	30.000	28.659	450.82
7B6EWH	X	0.012	-1.330	-22.18	0.008	-1.333	-20.97
82D7YX		1.388	0.046	0.77	1.364	0.023	0.36
82UEZL		1.336	-0.006	-0.09	1.340	-0.001	-0.01
84KRMX		1.310	-0.032	-0.53	1.306	-0.035	-0.55
8D9KYU		1.364	0.022	0.37	1.370	0.029	0.46
8KN4EN		1.322	-0.020	-0.33	1.268	-0.073	-1.15
8RQ99T		1.372	0.030	0.51	1.334	-0.007	-0.11
8UC4MK	X	2.760	1.418	23.66	2.860	1.519	23.90
8VRRHY		1.398	0.056	0.94	1.394	0.053	0.84
9LJ27V	X	0.141	-1.201	-20.03	0.482	-0.859	-13.51
9XCKP7		1.380	0.038	0.64	1.400	0.059	0.93
AJ9JK4		1.334	-0.008	-0.13	1.278	-0.063	-0.99
B4EB83		1.350	0.008	0.14	1.392	0.051	0.80
B9HETV		1.228	-0.114	-1.90	1.194	-0.147	-2.31
BEAMFA		1.396	0.054	0.91	1.394	0.053	0.84
DPJYK4	X	1.246	-0.096	-1.60	1.372	0.031	0.49
E4EWVD	X	1.183	-0.159	-2.65	1.112	-0.229	-3.60
EHZZQN		1.336	-0.006	-0.09	1.268	-0.073	-1.15
ER73QF		1.292	-0.050	-0.83	1.300	-0.041	-0.64
EXUMWG		1.280	-0.062	-1.03	1.300	-0.041	-0.64
FLTJ6R		1.365	0.024	0.40	1.425	0.085	1.33
FLW28W		1.226	-0.116	-1.93	1.232	-0.109	-1.71
FRHW92		1.300	-0.042	-0.69	1.300	-0.041	-0.64



Plastics Interlaboratory Testing Program

Report #103

Analysis 706

3rd Qtr 2017

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GEEXWN		1.324	-0.018	-0.29	1.288	-0.053	-0.83
GY2JGC		1.410	0.068	1.14	1.346	0.005	0.08
JBH6QV	X	1.450	0.108	1.80	1.315	-0.026	-0.40
JTGME6	X	0.423	-0.919	-15.33	0.013	-1.328	-20.88
KNK9EM		1.476	0.134	2.24	1.443	0.102	1.60
L24DZN	X	43.526	42.184	703.73	47.094	45.753	719.71
L267VB		1.332	-0.010	-0.16	1.376	0.035	0.55
LEU6MD		1.356	0.014	0.24	1.384	0.043	0.68
LHC66E		1.326	-0.016	-0.26	1.316	-0.025	-0.39
LQ9Z3D		1.392	0.050	0.84	1.368	0.027	0.43
MJ3NL7		1.352	0.010	0.17	1.392	0.051	0.80
N7TGVY	X	38.440	37.098	618.88	36.940	35.599	559.99
NTMG9M		1.321	-0.020	-0.34	1.338	-0.003	-0.05
NZMT9Q		1.330	-0.012	-0.19	1.332	-0.009	-0.14
PCXN2U		1.296	-0.046	-0.76	1.267	-0.074	-1.16
PK8ZDR		1.384	0.042	0.71	1.394	0.053	0.84
PUFL7R		1.470	0.128	2.14	1.454	0.113	1.78
QEUKYZ		1.412	0.070	1.17	1.328	-0.013	-0.20
QMT2Y7		1.326	-0.016	-0.26	1.336	-0.005	-0.08
T3VKKM	X	3.050	1.708	28.50	3.184	1.843	28.99
TRC864		1.320	-0.022	-0.36	1.300	-0.041	-0.64
U4MVX2	X	3.396	2.054	34.27	3.540	2.199	34.59
U7V9GN	*	1.352	0.010	0.17	1.446	0.105	1.65
UB2V6X	X	7.578	6.236	104.04	7.703	6.362	100.07
UMFVPX		1.370	0.028	0.47	1.372	0.031	0.49
UQF8KX		1.457	0.115	1.92	1.480	0.139	2.18
UV84JW		1.265	-0.077	-1.28	1.261	-0.080	-1.26
VDVRGX		1.396	0.054	0.91	1.368	0.027	0.43
W38B4H		1.420	0.078	1.31	1.418	0.077	1.21
W4DPKV		1.328	-0.014	-0.23	1.318	-0.023	-0.36
WLFHEA		1.254	-0.088	-1.46	1.288	-0.053	-0.83
X2N33R	X	3.270	1.928	32.17	3.270	1.929	30.35
XPW3Y6	M	No data reported for this sample			1.320	-0.021	-0.33
XX8Q9W		1.444	0.102	1.71	1.437	0.096	1.52
YRYJB6		1.288	-0.054	-0.89	1.368	0.027	0.43



Plastics Interlaboratory Testing Program

Report #103

Analysis 706

3rd Qtr 2017

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
YZT3X8		1.356	0.014	0.24	1.380	0.039	0.62
ZJJ4HV		1.314	-0.028	-0.46	1.282	-0.059	-0.93

Summary Statistics		Sample F45	Sample F46
Grand Means		1.3416 Percent	1.3409 Percent
Std Dev Btwn Labs		0.0599 Percent	0.0636 Percent
Statistics based on 57 of 72 reporting participants			

Sample F45: HIPS & Sample F46: HIPS

Comments on Assigned Data Flags for Test #706

- 9LJ27V (X) - Data for both samples are low. Inconsistent within the determinations of both samples.
- XPW3Y6 (M) - Participant did not submit data for sample F45.
- T3VKKM (X) - Data for both samples are high. Inconsistent within the determinations of both samples.
- L24DZN (X) - Extreme data.
- DPJYK4 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample F45.
- U4MVX2 (X) - Data for both samples are high.
- 6NEQWQ (X) - Extreme data.
- JBH6QV (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- JTGME6 (X) - Data for both samples are low.
- X2N33R (X) - Data for both samples are high. Inconsistent within the determinations of both samples.
- 7B6EWH (X) - Data for both samples are low.
- N7TGVY (X) - Extreme data.
- E4EWVD (X) - Inconsistent in testing between samples, data for Sample F46 are low.
- 8UC4MK (X) - Data for both samples are high.
- UB2V6X (X) - Extreme data.



Plastics Interlaboratory Testing Program

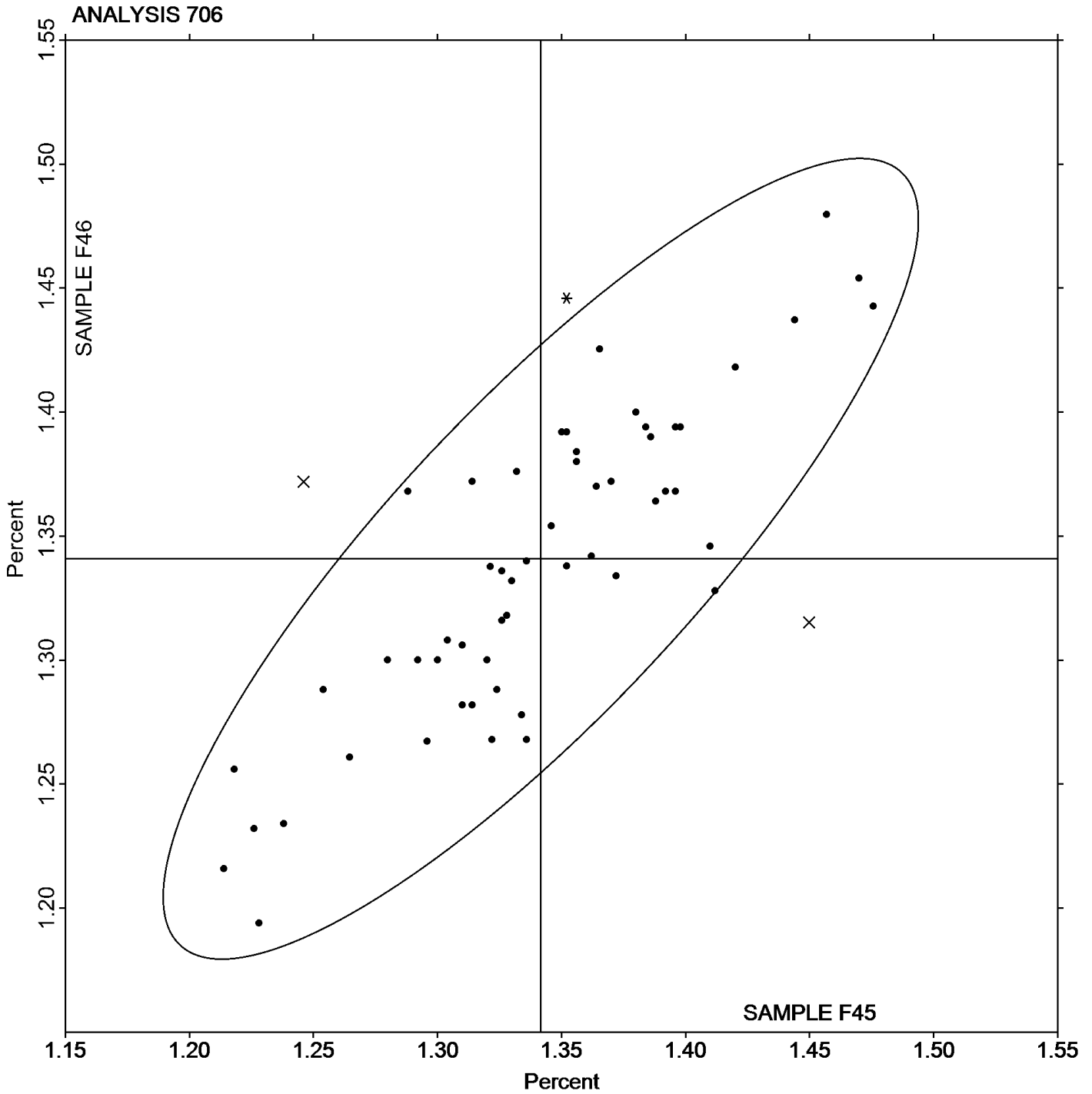
Analysis 706

Percent Elongation at Yield - Percent

Report #103

3rd Qtr 2017

Grand Mean Sample F45: 1.3416 Percent Grand Mean Sample F46: 1.3409 Percent





Plastics Interlaboratory Testing Program

Report #103

Analysis 708

3rd Qtr 2017

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23QPJU		313.79	-20.58	-1.25	321.25	-13.74	-0.88
24F7MA		355.14	20.77	1.26	359.66	24.67	1.59
2L4C62		356.36	21.99	1.34	349.05	14.06	0.90
376UHB		353.67	19.30	1.17	341.32	6.33	0.41
3JVGY4		331.13	-3.24	-0.20	329.68	-5.32	-0.34
3MWKQQ		328.16	-6.21	-0.38	314.38	-20.61	-1.33
4TEDGG		329.12	-5.25	-0.32	331.50	-3.49	-0.22
63Y4C8		337.20	2.83	0.17	332.36	-2.63	-0.17
68PFCA		330.28	-4.09	-0.25	334.98	-0.01	0.00
6AEPJP		329.42	-4.95	-0.30	325.76	-9.23	-0.59
6NENA8		337.04	2.67	0.16	337.56	2.57	0.17
6NEQWQ	X	457.51	123.14	7.48	456.61	121.62	7.82
79F8CL		337.93	3.56	0.22	332.27	-2.72	-0.17
7B6EWH	X	146.65	-187.72	-11.40	186.03	-148.96	-9.58
7NTJ4E	X	438.95	104.58	6.35	425.95	90.96	5.85
82D7YX		301.56	-32.81	-1.99	306.78	-28.21	-1.81
82UEZL	*	303.20	-31.17	-1.89	325.80	-9.19	-0.59
84KRMX		358.60	24.23	1.47	357.64	22.65	1.46
8D9KYU		337.42	3.05	0.19	338.46	3.47	0.22
8KN4EN		354.58	20.21	1.23	353.82	18.83	1.21
8RQ99T		333.40	-0.97	-0.06	338.34	3.35	0.22
8UC4MK	X	158.42	-175.95	-10.69	156.90	-178.09	-11.45
8VRRHY		331.76	-2.61	-0.16	332.98	-2.01	-0.13
9LJ27V		322.86	-11.51	-0.70	317.06	-17.94	-1.15
9XCKP7		301.88	-32.49	-1.97	310.98	-24.01	-1.54
AJ9JK4		314.14	-20.23	-1.23	322.48	-12.51	-0.80
B4EB83		342.40	8.03	0.49	337.98	2.99	0.19
B9HETV		337.43	3.06	0.19	339.16	4.17	0.27
BEAMFA		307.00	-27.37	-1.66	306.22	-28.78	-1.85
DPJYK4		311.94	-22.43	-1.36	305.98	-29.01	-1.87
E4EWVD		344.50	10.13	0.62	356.60	21.61	1.39
EHZZQN	X	265.52	-68.85	-4.18	264.14	-70.85	-4.56
ER73QF		344.90	10.53	0.64	343.45	8.46	0.54
EXUMWG		352.58	18.21	1.11	350.06	15.07	0.97
F9AUBW		332.63	-1.74	-0.11	335.51	0.52	0.03



Plastics Interlaboratory Testing Program

Report #103

Analysis 708

3rd Qtr 2017

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FLTJ6R		348.91	14.54	0.88	344.54	9.55	0.61
FLW28W	*	352.00	17.63	1.07	368.20	33.21	2.14
FRHW92		345.94	11.57	0.70	344.30	9.31	0.60
GEEXWN		345.62	11.25	0.68	348.10	13.11	0.84
GY2JGC		340.51	6.14	0.37	349.27	14.28	0.92
JBH6QV	*	376.12	41.75	2.54	377.70	42.71	2.75
JTGME6		338.00	3.63	0.22	326.80	-8.19	-0.53
JUH7TU		347.46	13.09	0.80	345.15	10.15	0.65
KNK9EM	*	348.65	14.28	0.87	364.43	29.44	1.89
L267VB		348.22	13.85	0.84	349.90	14.91	0.96
LEU6MD		341.82	7.45	0.45	342.08	7.09	0.46
LHC66E		340.20	5.83	0.35	340.44	5.45	0.35
LQ9Z3D		311.20	-23.17	-1.41	323.44	-11.56	-0.74
MJ3NL7		317.27	-17.10	-1.04	322.81	-12.18	-0.78
NTMG9M		328.04	-6.32	-0.38	330.14	-4.86	-0.31
NZMT9Q		339.12	4.75	0.29	339.50	4.51	0.29
PCXN2U		337.40	3.03	0.18	341.04	6.05	0.39
PK8ZDR		309.89	-24.48	-1.49	308.33	-26.66	-1.71
PUFL7R		311.20	-23.17	-1.41	313.16	-21.83	-1.40
QEUKYZ		330.60	-3.77	-0.23	338.47	3.48	0.22
QMT2Y7		326.78	-7.59	-0.46	330.64	-4.35	-0.28
T3VKKM	X	114.58	-219.79	-13.35	134.86	-200.14	-12.87
TRC864		333.07	-1.30	-0.08	333.71	-1.29	-0.08
U7V9GN	X	130.71	-203.66	-12.37	140.19	-194.81	-12.53
UB2V6X	X	223.40	-110.97	-6.74	227.80	-107.19	-6.89
UMFVPX		318.00	-16.37	-0.99	311.52	-23.47	-1.51
UQF8KX		352.29	17.92	1.09	336.21	1.21	0.08
UV84JW		325.81	-8.56	-0.52	325.54	-9.46	-0.61
VDVRGX		327.18	-7.19	-0.44	329.80	-5.19	-0.33
W38B4H		316.70	-17.67	-1.07	315.87	-19.12	-1.23
W4DPKV		341.20	6.83	0.41	337.20	2.21	0.14
WLFHEA		349.20	14.83	0.90	346.00	11.01	0.71
X2N33R	X	133.01	-201.36	-12.23	131.50	-203.49	-13.09
XPW3Y6	M	No data reported for this sample			336.80	1.81	0.12
XX8Q9W		313.57	-20.79	-1.26	319.09	-15.91	-1.02



Plastics Interlaboratory Testing Program

Report #103

Analysis 708

3rd Qtr 2017

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F45			Sample F46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
YRYJB6		334.36	-0.01	0.00	330.84	-4.15	-0.27
YULY4L		326.70	-7.67	-0.47	330.67	-4.32	-0.28
ZJJ4HV	*	370.20	35.83	2.18	350.60	15.61	1.00

Summary Statistics		
	Sample F45	Sample F46
Grand Means	334.369 ksi	334.993 ksi
Std Dev Btwn Labs	16.461 ksi	15.551 ksi
Statistics based on 63 of 73 reporting participants		

Sample F45: HIPS & Sample F46: HIPS

Comments on Assigned Data Flags for Test #708

- EHZZQN (X) - Data for both samples are low. Possible Systematic Error.
- XPW3Y6 (M) - Participant did not submit data for sample F45.
- T3VKKM (X) - Data for both samples are low. Inconsistent within the determinations of sample F46.
- U7V9GN (X) - Data for both samples are low.
- 6NEQWQ (X) - Data for both samples are high. Possible Systematic Error.
- X2N33R (X) - Data for both samples are low.
- 7B6EWH (X) - Data for both samples are low. Inconsistent within the determinations of both samples.
- 8UC4MK (X) - Data for both samples are low.
- UB2V6X (X) - Data for both samples are low. Possible Systematic Error.
- 7NTJ4E (X) - Data for both samples are high. Possible Systematic Error.



Plastics Interlaboratory Testing Program

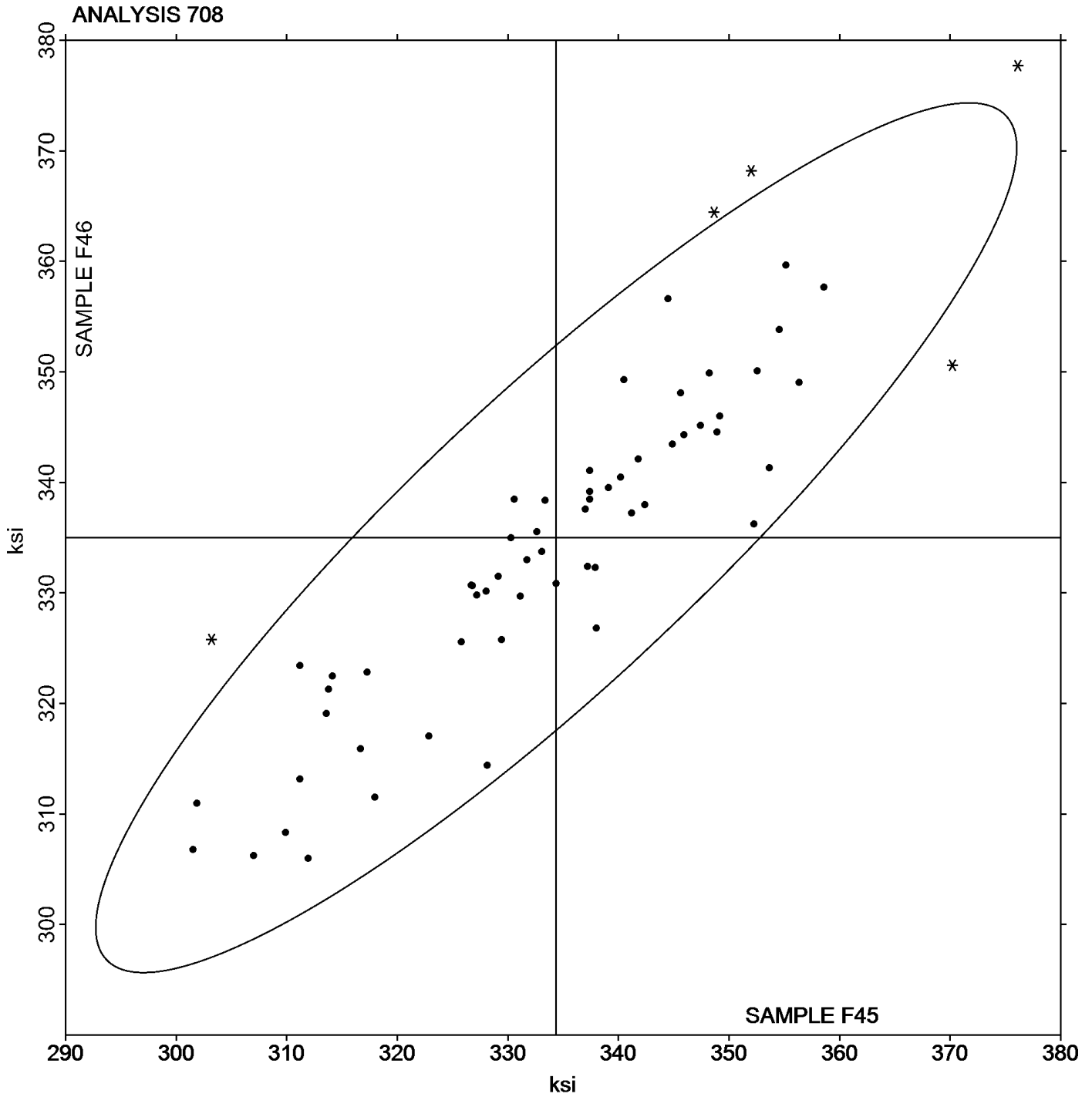
Analysis 708

Modulus of Elasticity - ksi

Report #103

3rd Qtr 2017

Grand Mean Sample F45: 334.37 ksi Grand Mean Sample F46: 334.99 ksi





Plastics Interlaboratory Testing Program

Report #103

Analysis 710

3rd Qtr 2017

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

WebCode	Data Flag	Sample E45			Sample E46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2L4C62		76.23	-0.41	-0.45	76.18	-0.47	-0.67	RO
376UHB		74.63	-2.01	-2.21	75.48	-1.17	-1.67	CE
3MWKQQ		76.45	-0.18	-0.20	76.68	0.03	0.04	CF
4TEDGG		76.53	-0.11	-0.12	76.53	-0.12	-0.17	TY
63Y4C8		75.03	-1.61	-1.77	75.45	-1.20	-1.70	TO
68PFCA	*	77.28	0.64	0.70	77.78	1.13	1.61	CE
6AEPJP		78.08	1.44	1.58	77.55	0.91	1.29	CE
6NENA8		76.78	0.14	0.16	76.58	-0.07	-0.10	ZW
8HYU88		75.65	-0.98	-1.08	76.15	-0.50	-0.70	XX
8UC4MK		78.30	1.67	1.83	78.03	1.38	1.97	CE
8VRRHY		75.98	-0.66	-0.72	76.03	-0.62	-0.88	RO
9EFXGW		78.10	1.47	1.61	77.58	0.93	1.32	XX
AJ9JK4		76.53	-0.11	-0.12	76.45	-0.20	-0.28	CE
CGTYRK		76.23	-0.41	-0.45	76.65	0.01	0.01	CE
EXUMWG		75.50	-1.13	-1.24	75.58	-1.07	-1.52	TO
FRHW92	X	74.18	-2.46	-2.70	74.00	-2.65	-3.77	IN
L267VB		76.65	0.02	0.02	76.65	0.01	0.01	TO
LEU6MD		76.48	-0.16	-0.17	76.43	-0.22	-0.31	IN
LQ9Z3D		76.63	-0.01	-0.01	76.60	-0.05	-0.06	TO
LWWKAY	X	75.68	-0.96	-1.05	77.43	0.78	1.11	TO
MT7XRV		76.88	0.24	0.27	76.83	0.18	0.26	XX
NZMT9Q		75.70	-0.93	-1.02	75.78	-0.87	-1.24	CE
PK8ZDR		77.75	1.12	1.23	77.68	1.03	1.47	AT
QMT2Y7		77.03	0.39	0.43	77.00	0.36	0.51	IN
TQLY2U		76.38	-0.26	-0.28	76.10	-0.55	-0.78	DN
TRC864		77.83	1.19	1.31	77.58	0.93	1.32	CE
UB2V6X	X	86.88	10.24	11.25	86.40	9.76	13.89	XX
UCFBKJ		76.40	-0.23	-0.26	76.48	-0.17	-0.24	TO
VDVRGX		77.75	1.12	1.23	77.03	0.38	0.54	DN
W38B4H		75.48	-1.16	-1.27	75.75	-0.90	-1.27	TO
XPW3Y6		77.25	0.62	0.68	77.15	0.51	0.72	CE
XX8Q9W		76.75	0.12	0.13	76.63	-0.02	-0.03	CE
YZT3X8		76.83	0.19	0.21	77.05	0.41	0.58	DN



Plastics Interlaboratory Testing Program

Report #103

Analysis 710

3rd Qtr 2017

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

Summary Statistics		
	<u>Sample E45</u>	<u>Sample E46</u>
Grand Means	76.633 Degrees C	76.645 Degrees C
Stnd Dev Btwn Labs	0.911 Degrees C	0.702 Degrees C
Statistics based on 30 of 33 reporting participants		

Sample E45: HIPS & Sample E46: HIPS

Comments on Assigned Data Flags for Test #710

FRHW92 (X) - Data for both samples are low.

LWWKAY (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample E46.

UB2V6X (X) - Data for both samples are high.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

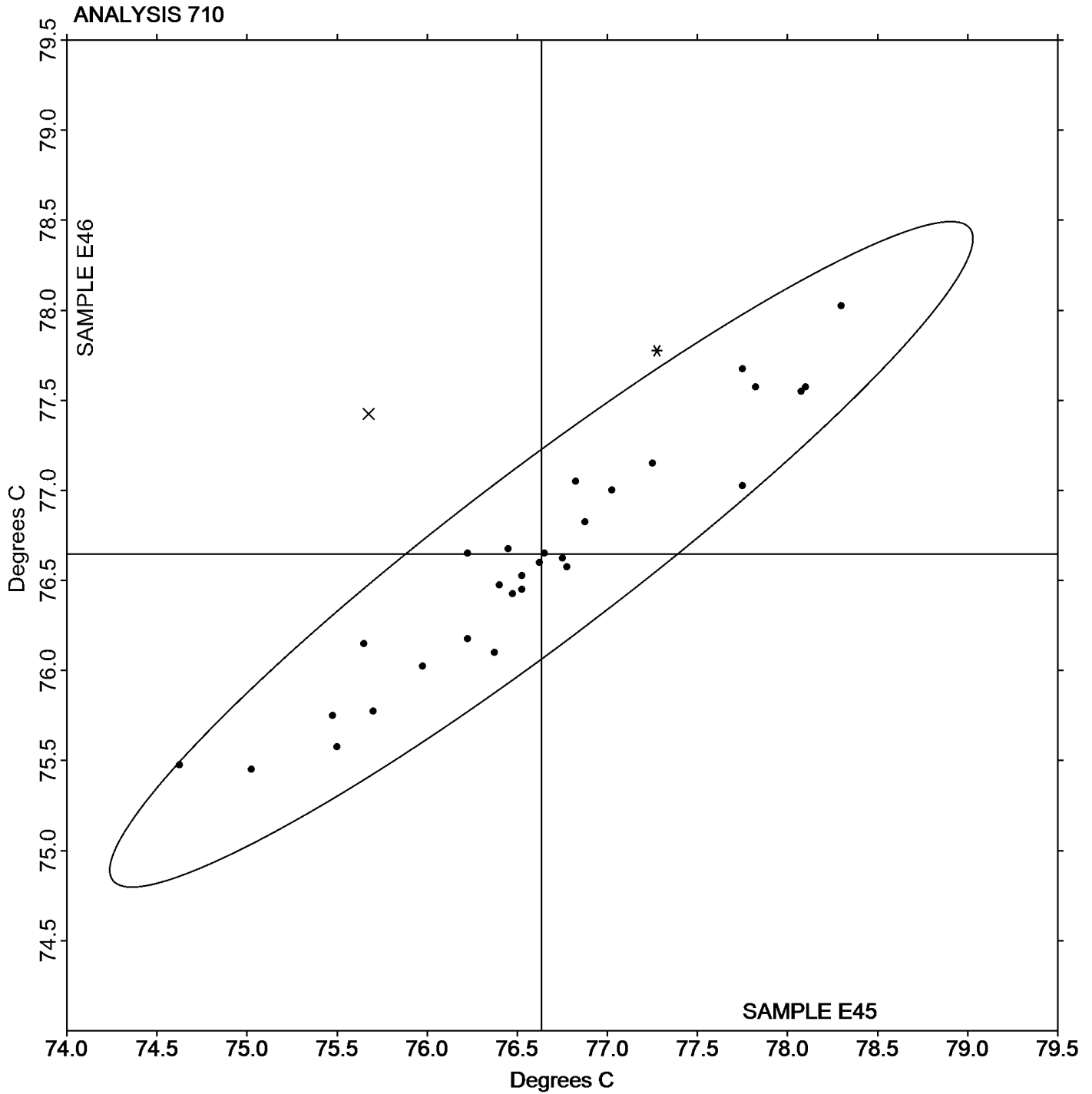
Report #103

Analysis 710

3rd Qtr 2017

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

Grand Mean Sample E45: 76.633 Degrees C Grand Mean Sample E46: 76.645 Degrees C





Plastics Interlaboratory Testing Program

Report #103

Analysis 711

3rd Qtr 2017

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

WebCode	Data Flag	Sample G45			Sample G46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2CH9X3		68.4	-0.6	-0.27	82.8	1.2	0.20	CE
63Y4C8		67.9	-1.0	-0.50	83.0	1.4	0.23	TO
6AEPJP		71.3	2.4	1.14	84.0	2.4	0.40	CE
8UC4MK		72.4	3.5	1.65	90.5	8.9	1.50	CE
CGTYRK		69.6	0.6	0.30	83.4	1.9	0.31	CE
DN88TM		68.3	-0.6	-0.29	81.4	-0.2	-0.04	AT
FRHW92		67.7	-1.2	-0.59	79.4	-2.2	-0.37	IN
LQ9Z3D		68.3	-0.6	-0.29	81.5	-0.1	-0.02	TO
UB2V6X		65.0	-3.9	-1.87	64.7	-16.8	-2.84	XX
UCFBKJ		67.8	-1.2	-0.55	81.6	0.0	0.00	TO
V84FKG		72.0	3.1	1.48	83.6	2.0	0.34	CE
W38B4H		68.5	-0.4	-0.21	83.2	1.7	0.28	TO

Summary Statistics		
	Sample G45	Sample G46
Grand Means	68.91 Degrees C	81.57 Degrees C
Std Dev Btwn Labs	2.09 Degrees C	5.93 Degrees C
Statistics based on 12 of 12 reporting participants		

Sample G45: PP & Sample G46: PP

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

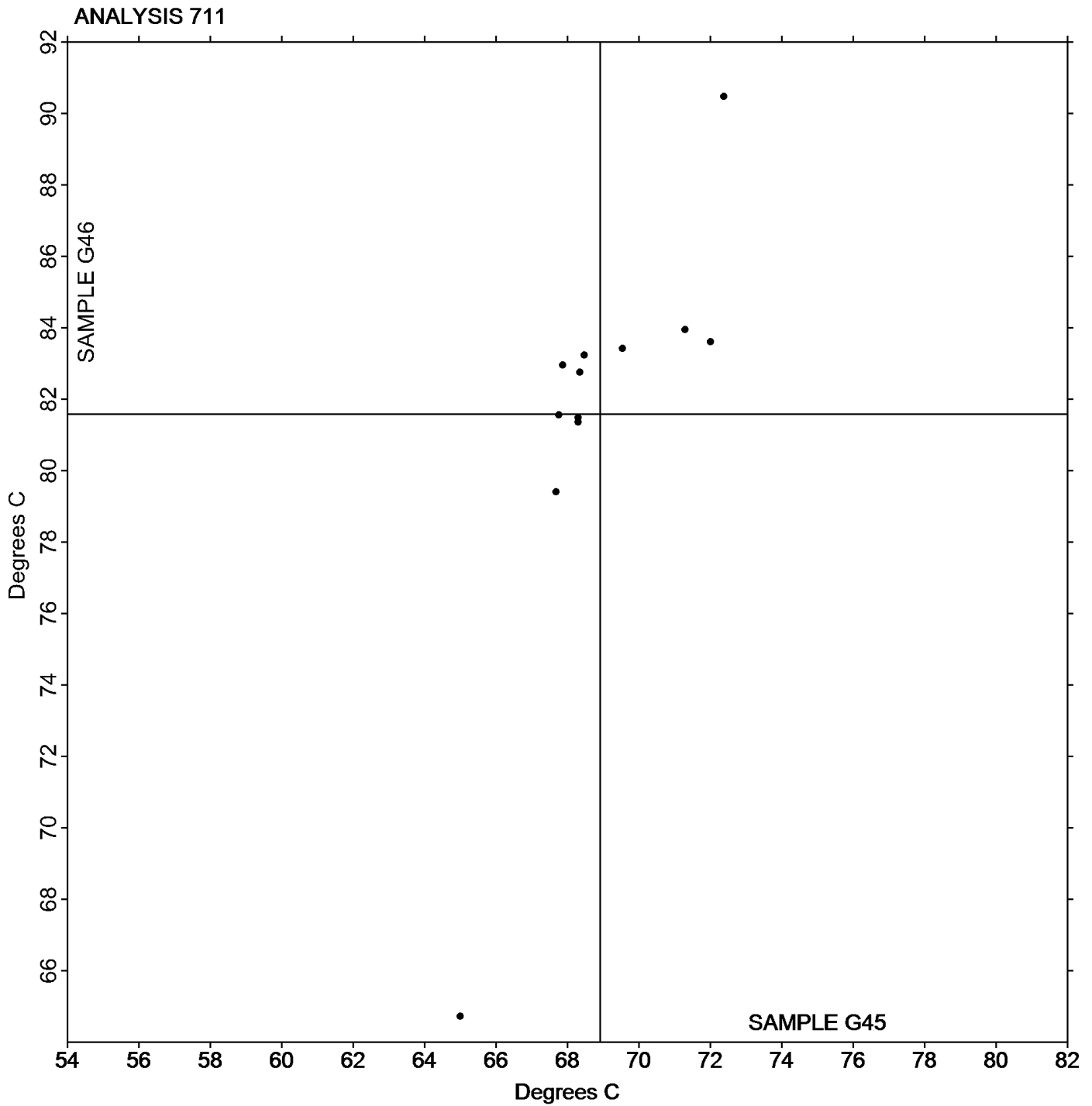
Report #103

Analysis 711

3rd Qtr 2017

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

Grand Mean Sample G45: 68.914 Degrees C Grand Mean Sample G46: 81.574 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 #103

Analysis 712

3rd Qtr 2017

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

WebCode	Data Flag	Sample N45			Sample N46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4TEDGG		84.08	0.48	0.42	83.95	0.39	0.35	TY
6HQZE3		83.73	0.13	0.11	83.48	-0.09	-0.08	TY
6NENA8		83.65	0.05	0.05	83.65	0.09	0.08	ZW
7NTJ4E		84.38	0.78	0.68	84.08	0.51	0.46	XX
8JCNPT		83.38	-0.22	-0.19	83.40	-0.16	-0.15	AT
8P3YW7		82.63	-0.97	-0.85	82.88	-0.69	-0.62	TO
8UC4MK		84.28	0.68	0.60	83.73	0.16	0.14	CE
9DQTNP		84.83	1.23	1.08	84.50	0.94	0.84	AT
C2YHE8	*	86.73	3.13	2.74	86.53	2.96	2.66	CF
C3B9QX		83.63	0.03	0.03	83.65	0.09	0.08	AT
CGTYRK		82.70	-0.90	-0.78	83.10	-0.46	-0.42	CE
EXUMWG		83.85	0.25	0.22	83.93	0.36	0.32	TO
FLW28W		83.98	0.38	0.33	84.13	0.56	0.50	MR
GNGATH		84.53	0.93	0.81	84.10	0.54	0.48	AT
HMXZ6A		82.48	-1.12	-0.98	82.28	-1.29	-1.16	CE
HW9AL2		83.28	-0.32	-0.28	83.18	-0.39	-0.35	TO
LEU6MD		83.10	-0.50	-0.43	83.00	-0.56	-0.51	IN
LQ9Z3D		83.45	-0.15	-0.13	83.35	-0.21	-0.19	TO
MXNZWF		83.28	-0.32	-0.28	83.23	-0.34	-0.30	AT
NTMG9M		82.05	-1.55	-1.35	81.90	-1.66	-1.50	CE
NZMT9Q		82.25	-1.35	-1.18	82.30	-1.26	-1.14	CE
PK8ZDR		84.40	0.80	0.70	84.18	0.61	0.55	AT
PUFL7R		84.50	0.90	0.79	84.70	1.14	1.02	CE
QPXLNR		81.55	-2.05	-1.79	81.43	-2.14	-1.92	XX
QV4H77	*	84.23	0.63	0.55	84.78	1.21	1.09	CE
R32C2J		84.00	0.40	0.35	83.90	0.34	0.30	DN
TGXJHC		82.85	-0.75	-0.65	82.80	-0.76	-0.69	CE
TQLY2U		83.38	-0.22	-0.19	82.88	-0.69	-0.62	DN
TWU7YL		85.40	1.80	1.58	85.48	1.91	1.72	TO
UB2V6X		83.25	-0.35	-0.30	83.70	0.14	0.12	XX
UCFBKJ		83.23	-0.37	-0.32	83.47	-0.09	-0.08	TO
UXLJ24		83.98	0.38	0.33	83.98	0.41	0.37	DN
V84FKG		83.88	0.28	0.25	83.80	0.24	0.21	CF
W38B4H		82.88	-0.72	-0.63	82.88	-0.69	-0.62	TO
X8AVGD		83.25	-0.35	-0.30	83.23	-0.34	-0.30	CE



Plastics Interlaboratory Testing Program

Report #103

Analysis 712

3rd Qtr 2017

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

WebCode	Data Flag	Sample N45			Sample N46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
XF8CGJ		84.85	1.25	1.10	84.60	1.04	0.93	DN
Y3G26X		81.13	-2.47	-2.16	81.08	-2.49	-2.24	CE
Y3YML8		85.45	1.85	1.62	85.33	1.76	1.58	XX
YDXNEX	*	80.65	-2.95	-2.58	80.80	-2.76	-2.48	CE
Z6ZHX3		83.57	-0.03	-0.02	84.03	0.46	0.41	CE
ZQHP8A		84.60	1.00	0.88	84.50	0.94	0.84	CE
ZYRCZB		83.80	0.20	0.18	83.90	0.34	0.30	CF

Summary Statistics		
	Sample N45	Sample N46
Grand Means	83.595 Degrees C	83.564 Degrees C
Std Dev Btwn Labs	1.142 Degrees C	1.113 Degrees C
Statistics based on 42 of 42 reporting participants		

Sample N45: HIPS & Sample N46: HIPS

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

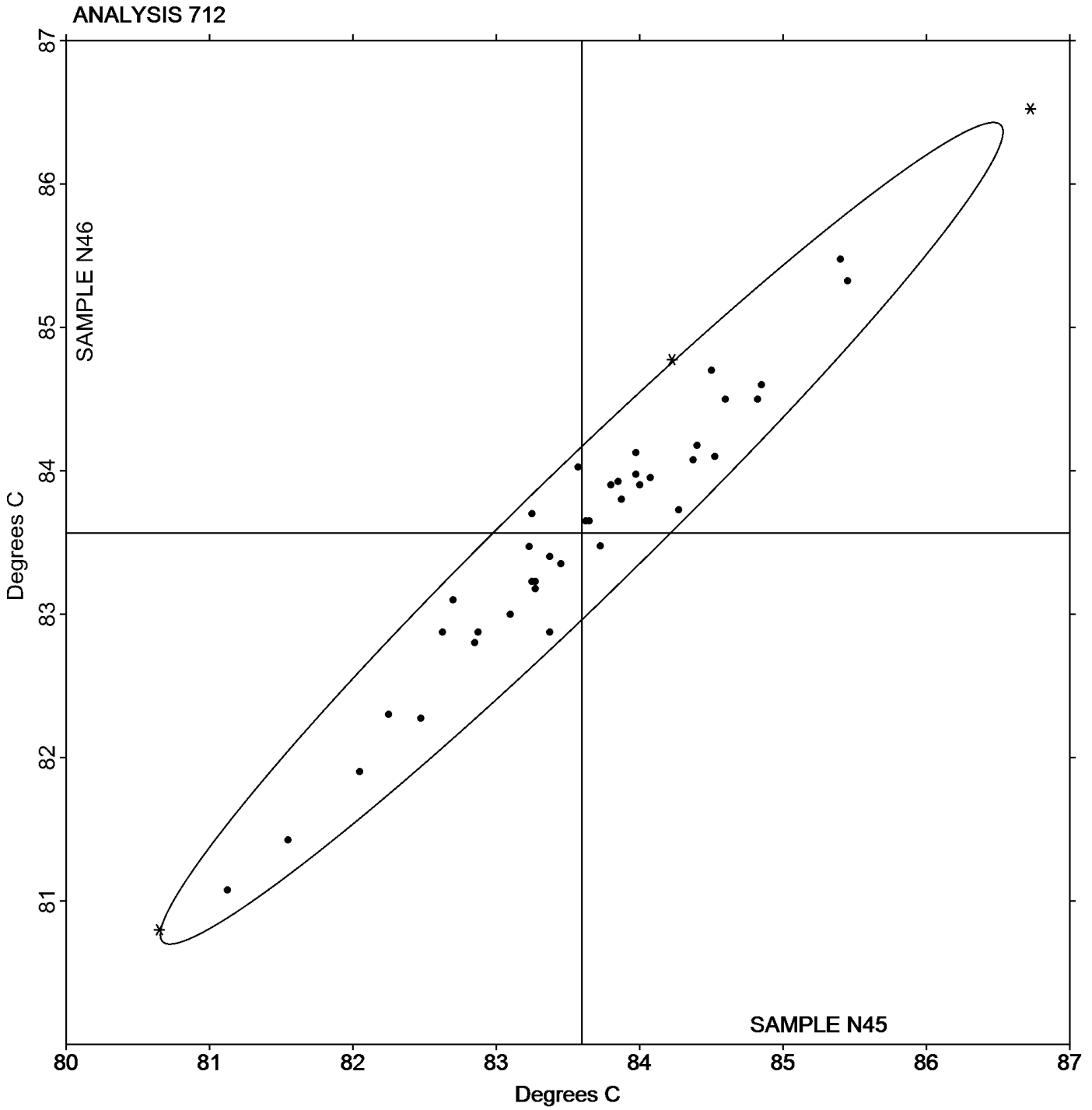
Report #103

Analysis 712

3rd Qtr 2017

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

Grand Mean Sample N45: 83.595 Degrees C Grand Mean Sample N46: 83.564 Degrees C





Plastics Interlaboratory Testing Program

Report #103

Analysis 715

3rd Qtr 2017

Vicat Softening Temperature (Rate A)

WebCode	Data Flag	Sample H45			Sample H46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2CH9X3		95.83	-0.35	-0.83	95.87	-0.34	-0.76	CE
2L4C62		95.65	-0.54	-1.25	95.98	-0.23	-0.50	RO
376UHB		96.64	0.45	1.06	96.73	0.52	1.17	CE
4TEDGG		96.10	-0.09	-0.20	96.12	-0.09	-0.21	TY
6NENA8	*	97.33	1.15	2.67	97.45	1.24	2.76	CF
CGTYRK		95.58	-0.60	-1.41	95.97	-0.24	-0.54	CE
CMJDFR		96.17	-0.02	-0.05	96.18	-0.03	-0.06	CE
DGB8HZ		96.18	0.00	-0.01	96.03	-0.18	-0.39	CE
LHC66E		95.42	-0.77	-1.80	95.08	-1.13	-2.51	CE
NZMT9Q		96.42	0.23	0.53	96.32	0.11	0.24	CE
PK8ZDR		96.55	0.36	0.85	96.65	0.44	0.98	AT
PUFL7R		96.25	0.06	0.15	96.13	-0.08	-0.17	CE
QY6FTR		96.05	-0.14	-0.32	96.10	-0.11	-0.24	CE
TRC864		96.65	0.46	1.08	96.25	0.04	0.09	CE
V84FKG		96.10	-0.09	-0.20	96.23	0.02	0.05	CF
VDVRGX		96.53	0.35	0.81	96.57	0.36	0.80	QA
W38B4H		95.80	-0.39	-0.90	95.82	-0.39	-0.88	TO
X8AVGD		96.03	-0.15	-0.36	96.30	0.09	0.20	CE
XPW3Y6		96.23	0.05	0.11	96.00	-0.21	-0.47	CE
YRYJB6		96.05	-0.14	-0.32	96.08	-0.13	-0.28	AT
ZQHP8A		96.37	0.18	0.42	96.53	0.32	0.72	CF

Summary Statistics		Sample H45	Sample H46
Grand Means		96.188 Degrees C	96.210 Degrees C
Stnd Dev Btwn Labs		0.429 Degrees C	0.449 Degrees C
Statistics based on 21 of 21 reporting participants			

Sample H45: HIPS & Sample H46: HIPS

Key to Instrument Codes Reported by Participants

- | | |
|--------------|-----------------|
| AT Atlas | CE Ceast |
| CF Coesfeld | QA Qualitest |
| RO Rosand | TO Tinius Olsen |
| TY Toyoseiki | |



Plastics Interlaboratory Testing Program

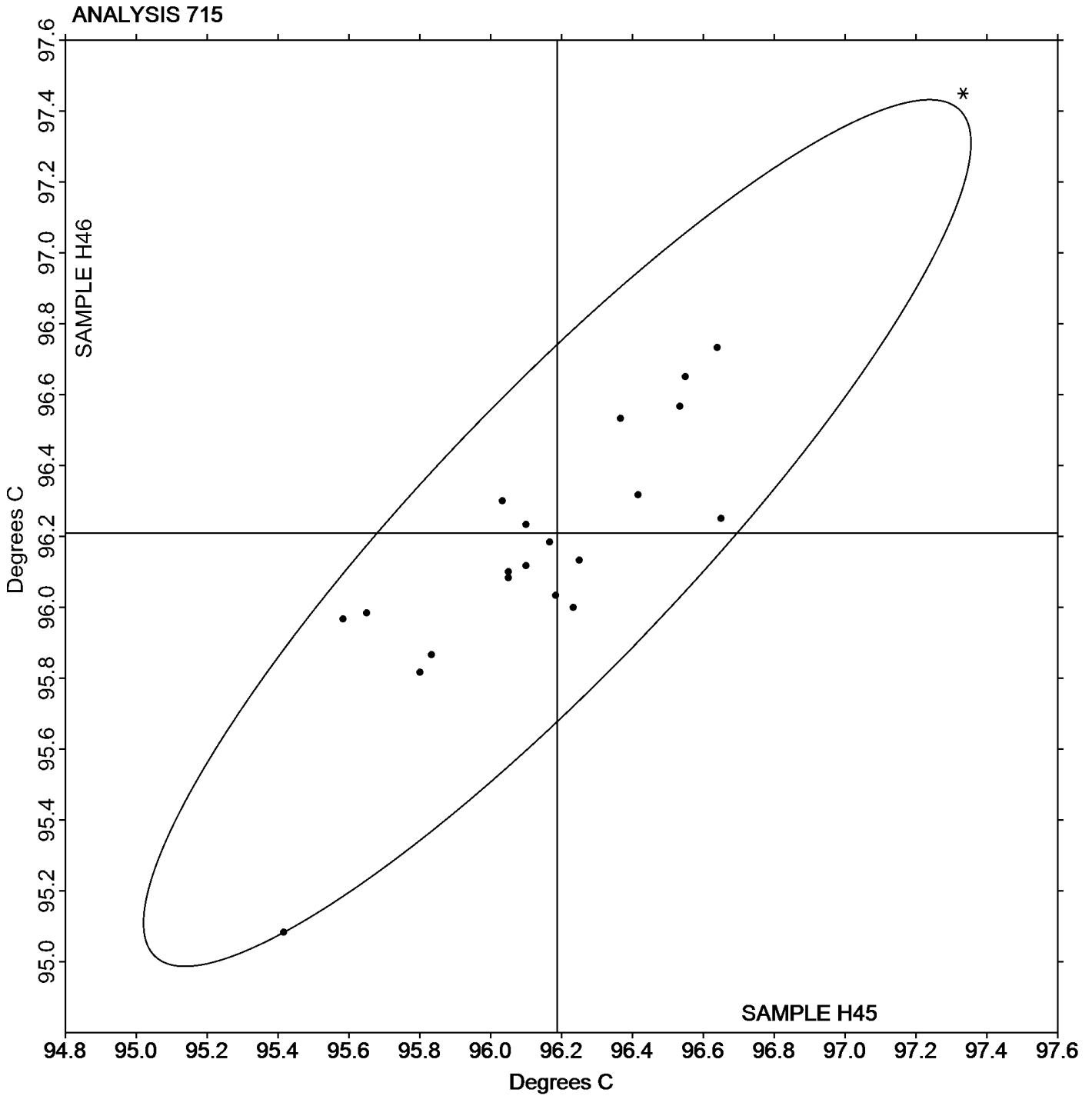
Report #103

Analysis 715

3rd Qtr 2017

Vicat Softening Temperature (Rate A)

Grand Mean Sample H45: 96.188 Degrees C Grand Mean Sample H46: 96.210 Degrees C





Plastics Interlaboratory Testing Program

Report #103

Analysis 716

3rd Qtr 2017

Vicat Softening Temperature (Rate B)

WebCode	Data Flag	Sample R45			Sample R46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2CH9X3		97.74	-0.72	-1.16	97.74	-0.68	-1.00	CE
2L4C62		97.83	-0.63	-1.01	97.75	-0.67	-0.98	RO
376UHB		99.15	0.69	1.11	99.28	0.86	1.26	CE
3X9YKC		97.87	-0.59	-0.95	97.80	-0.62	-0.91	CE
4TEDGG		98.82	0.36	0.58	98.82	0.40	0.58	TY
6NENA8		98.75	0.29	0.47	98.93	0.51	0.75	CF
CMJDFR		98.25	-0.21	-0.34	98.20	-0.22	-0.32	CE
DGB8HZ		98.38	-0.08	-0.12	98.18	-0.24	-0.35	CE
KQTJ8J		97.28	-1.18	-1.89	97.32	-1.10	-1.62	TO
LHC66E	*	97.83	-0.63	-1.01	96.95	-1.47	-2.15	CE
NZMT9Q		99.40	0.94	1.51	99.20	0.78	1.14	CE
PK8ZDR		99.13	0.67	1.08	98.93	0.51	0.75	AT
PUFL7R		98.53	0.07	0.12	98.42	0.00	-0.01	CE
QY6FTR		98.30	-0.16	-0.26	98.32	-0.10	-0.15	CE
TRC864	*	97.82	-0.64	-1.03	98.63	0.21	0.31	CE
UCFBKJ		98.85	0.39	0.63	98.93	0.50	0.74	TO
UQF8KX		97.93	-0.53	-0.84	97.73	-0.69	-1.01	DN
V84FKG		99.23	0.77	1.24	99.07	0.65	0.95	CF
VDVRGX		99.77	1.31	2.10	99.85	1.43	2.09	DN
W38B4H	X	89.98	-8.48	-13.62	89.85	-8.57	-12.55	TO
X8AVGD		98.18	-0.28	-0.44	98.15	-0.27	-0.40	CE
XPW3Y6		98.25	-0.21	-0.34	98.58	0.16	0.24	CE
YRYJB6		98.77	0.31	0.49	98.65	0.23	0.34	AT
ZQHP8A		98.48	0.02	0.04	98.23	-0.19	-0.27	CF

Summary Statistics		
	Sample R45	Sample R46
Grand Means	98.459 Degrees C	98.420 Degrees C
Std Dev Btwn Labs	0.622 Degrees C	0.683 Degrees C
Statistics based on 23 of 24 reporting participants		

Sample R45: HIPS & Sample R46: HIPS

Comments on Assigned Data Flags for Test #716

W38B4H (X) - Data for both samples are low.



Plastics Interlaboratory Testing Program

Analysis 716

Vicat Softening Temperature (Rate B)

Report #103

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Key to Instrument Codes Reported by Participants

AT Atlas

CF Coesfeld

RO Rosand

TY Toyoseiki

CE Ceast

DN DYNISCO

TO Tinius Olsen



Plastics Interlaboratory Testing Program

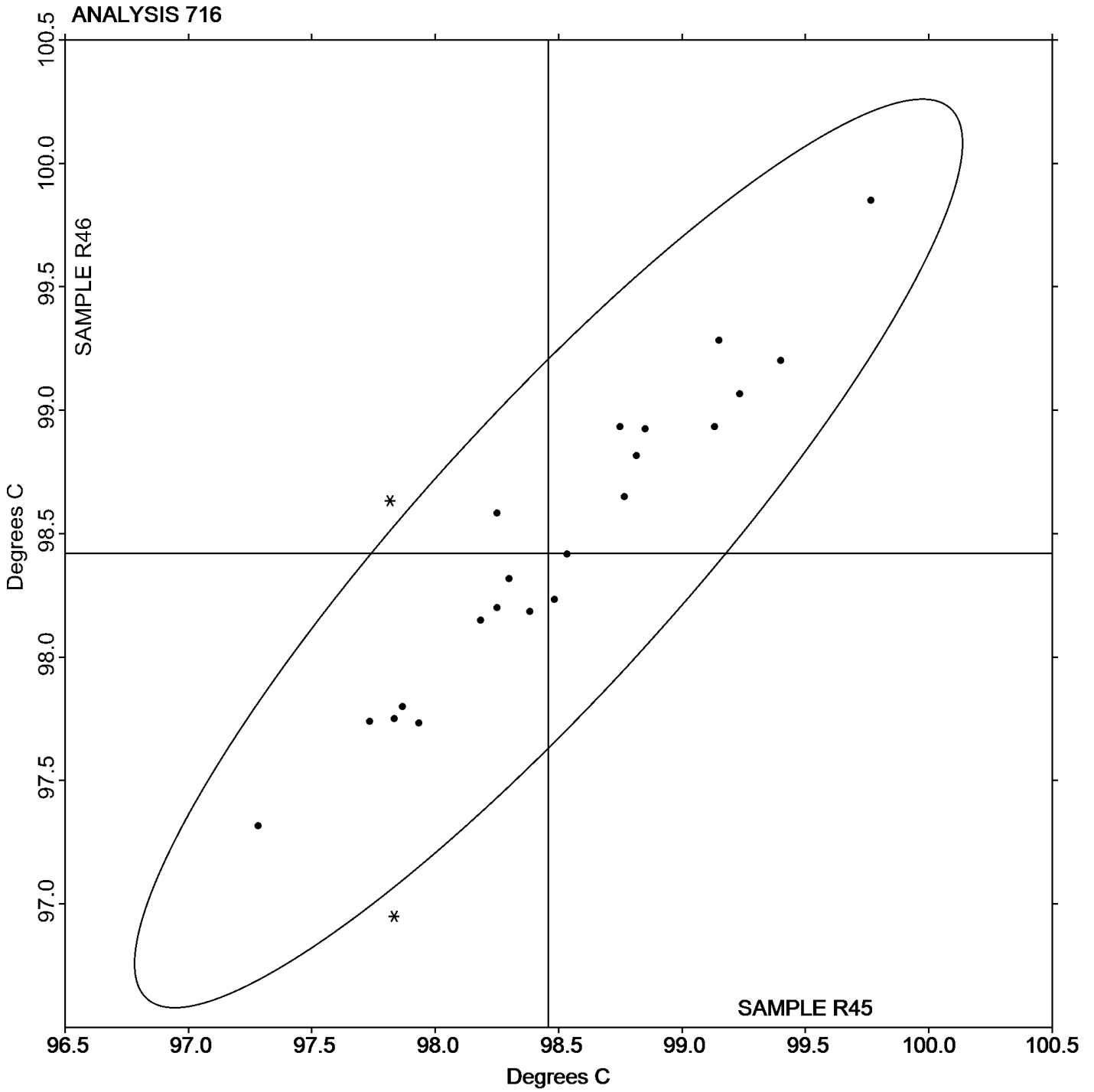
Analysis 716

Vicat Softening Temperature (Rate B)

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Grand Mean Sample R45: 98.459 Degrees C Grand Mean Sample R46: 98.420 Degrees C





Plastics Interlaboratory Testing Program

Report #103

Analysis 718

3rd Qtr 2017

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T45			Sample T46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23QPJU		1.04800	0.00150	0.80	1.04800	0.00165	0.89
23THEG		1.04693	0.00044	0.23	1.04677	0.00042	0.23
2CH9X3		1.04503	-0.00146	-0.78	1.04510	-0.00125	-0.67
2KBJ7C		1.04357	-0.00293	-1.56	1.04377	-0.00258	-1.39
2WZHWE		1.04413	-0.00236	-1.26	1.04410	-0.00225	-1.21
376UHB		1.04807	0.00157	0.83	1.04580	-0.00055	-0.29
3YH7M6		1.04587	-0.00063	-0.33	1.04563	-0.00071	-0.38
4HRKH6		1.04623	-0.00026	-0.14	1.04607	-0.00028	-0.15
4TEDGG		1.04603	-0.00046	-0.25	1.04563	-0.00071	-0.38
63Y4C8	*	1.04800	0.00150	0.80	1.04533	-0.00101	-0.54
68PFCA	X	1.01580	-0.03070	-16.31	0.99507	-0.05128	-27.57
6BBA64		1.04617	-0.00033	-0.18	1.04567	-0.00068	-0.37
6GGTBA		1.04500	-0.00150	-0.80	1.04500	-0.00135	-0.72
6L92W4		1.04717	0.00067	0.36	1.04683	0.00049	0.26
6NENA8		1.04807	0.00157	0.83	1.04840	0.00205	1.10
6VTGEC		1.04833	0.00184	0.98	1.04700	0.00065	0.35
8UC4MK		1.04603	-0.00046	-0.25	1.04723	0.00089	0.48
9DQTNP		1.04600	-0.00050	-0.26	1.04533	-0.00101	-0.54
9LJ27V		1.04367	-0.00283	-1.50	1.04400	-0.00235	-1.26
9TJL9Q		1.04433	-0.00216	-1.15	1.04400	-0.00235	-1.26
9ZH93B		1.04900	0.00250	1.33	1.04900	0.00265	1.43
A4WDJX		1.04817	0.00167	0.89	1.04810	0.00175	0.94
ABBZXF		1.04867	0.00217	1.15	1.04733	0.00099	0.53
AJ9JK4	*	1.04133	-0.00516	-2.74	1.04300	-0.00335	-1.80
AXR4A4	X	1.04033	-0.00616	-3.27	1.03900	-0.00735	-3.95
C3B9QX		1.04667	0.00017	0.09	1.04800	0.00165	0.89
CGTYRK	X	1.03760	-0.00890	-4.73	1.03287	-0.01348	-7.25
CVF7Q8		1.04540	-0.00110	-0.58	1.04613	-0.00021	-0.11
D4KPEV		1.04613	-0.00036	-0.19	1.04610	-0.00025	-0.13
DDNRPK		1.04640	-0.00010	-0.05	1.04620	-0.00015	-0.08
DN88TM		1.04673	0.00024	0.13	1.04607	-0.00028	-0.15
E6FFB2		1.04900	0.00250	1.33	1.04843	0.00209	1.12
EEHZ9M	X	1.03400	-0.01250	-6.64	1.04933	0.00299	1.61
ER73QF		1.04367	-0.00283	-1.50	1.04300	-0.00335	-1.80
F9AUBW		1.04837	0.00187	0.99	1.04737	0.00102	0.55



Plastics Interlaboratory Testing Program

Report #103

Analysis 718

3rd Qtr 2017

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T45			Sample T46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FJPQBT		1.04630	-0.00020	-0.10	1.04593	-0.00041	-0.22
FLTJ6R		1.04900	0.00250	1.33	1.04920	0.00285	1.53
FLW28W		1.04900	0.00250	1.33	1.04893	0.00259	1.39
GEEXWN		1.04860	0.00210	1.12	1.04867	0.00232	1.25
GGVGEX		1.04487	-0.00163	-0.87	1.04330	-0.00305	-1.64
GL8CBU	*	1.04340	-0.00310	-1.65	1.04527	-0.00108	-0.58
GRZ8JU		1.04700	0.00050	0.27	1.04800	0.00165	0.89
HW9AL2		1.04887	0.00237	1.26	1.04950	0.00315	1.70
JH3BDU		1.04807	0.00157	0.83	1.04820	0.00185	1.00
JH4DYT		1.04713	0.00064	0.34	1.04717	0.00082	0.44
JQVRZD	*	1.04830	0.00180	0.96	1.04990	0.00355	1.91
JTGME6		1.04933	0.00284	1.51	1.04867	0.00232	1.25
JVRB6W		1.04410	-0.00240	-1.27	1.04440	-0.00195	-1.05
JZXXR7		1.05017	0.00367	1.95	1.05017	0.00382	2.05
L24DZN		1.04500	-0.00150	-0.80	1.04500	-0.00135	-0.72
L267VB	X	1.04500	-0.00150	-0.80	1.04133	-0.00501	-2.70
LAWLHU	*	1.04200	-0.00450	-2.39	1.04090	-0.00545	-2.93
LDHEBN		1.04767	0.00117	0.62	1.04700	0.00065	0.35
LEU6MD		1.04597	-0.00053	-0.28	1.04617	-0.00018	-0.10
LHC66E	X	1.05287	0.00637	3.38	1.05893	0.01259	6.77
LQ9Z3D		1.04720	0.00070	0.37	1.04643	0.00009	0.05
M7WLYN	X	1.04533	-0.00116	-0.62	1.04033	-0.00601	-3.23
MEAN6P		1.04373	-0.00276	-1.47	1.04273	-0.00361	-1.94
MXNZWF		1.04857	0.00207	1.10	1.04817	0.00182	0.98
NFYERF		1.04600	-0.00050	-0.26	1.04513	-0.00121	-0.65
NZMT9Q		1.04730	0.00080	0.43	1.04577	-0.00058	-0.31
PK8ZDR		1.04453	-0.00196	-1.04	1.04520	-0.00115	-0.62
PMA6KK	X	0.14167	-0.90483	-480.65	0.14233	-0.90401	-486.08
PUFL7R		1.04803	0.00154	0.82	1.04777	0.00142	0.76
QMT2Y7		1.04590	-0.00060	-0.32	1.04467	-0.00168	-0.90
QPXLNR		1.04677	0.00027	0.14	1.04817	0.00182	0.98
QZYC2L		1.04767	0.00117	0.62	1.04667	0.00032	0.17
T3CV27		1.04517	-0.00133	-0.71	1.04463	-0.00171	-0.92
T9KZBE		1.04587	-0.00063	-0.33	1.04643	0.00009	0.05
TGXJHC		1.04777	0.00127	0.67	1.04770	0.00135	0.73



Plastics Interlaboratory Testing Program

Report #103

Analysis 718

3rd Qtr 2017

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T45			Sample T46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
TQLY2U		1.04767	0.00117	0.62	1.04900	0.00265	1.43
TRC864		1.04433	-0.00216	-1.15	1.04427	-0.00208	-1.12
U4MVX2		1.04707	0.00057	0.30	1.04700	0.00065	0.35
UB2V6X	X	1.04000	-0.00650	-3.45	1.04000	-0.00635	-3.41
UCFBKJ		1.04627	-0.00023	-0.12	1.04517	-0.00118	-0.63
UJ24X6		1.04573	-0.00076	-0.41	1.04603	-0.00031	-0.17
UXLJ24		1.04700	0.00050	0.27	1.04663	0.00029	0.15
V84FKG		1.04400	-0.00250	-1.33	1.04300	-0.00335	-1.80
W38B4H		1.04563	-0.00086	-0.46	1.04577	-0.00058	-0.31
WDLAW6		1.04387	-0.00263	-1.40	1.04427	-0.00208	-1.12
WEVGWC		1.04733	0.00084	0.44	1.04800	0.00165	0.89
WJBUXY		1.04833	0.00184	0.98	1.04767	0.00132	0.71
X27RPT		1.04450	-0.00200	-1.06	1.04480	-0.00155	-0.83
XF8CGJ		1.04780	0.00130	0.69	1.04787	0.00152	0.82
XX8Q9W		1.04683	0.00034	0.18	1.04607	-0.00028	-0.15
Y3G26X		1.04957	0.00307	1.63	1.04953	0.00319	1.71
Y3YML8		1.04333	-0.00316	-1.68	1.04433	-0.00201	-1.08
YDXNEX		1.04730	0.00080	0.43	1.04677	0.00042	0.23
YULY4L		1.04887	0.00237	1.26	1.04697	0.00062	0.33
ZJJ4HV	*	1.04367	-0.00283	-1.50	1.04567	-0.00068	-0.37
ZPMD2A		1.04661	0.00012	0.06	1.04636	0.00002	0.01
ZQDHUF		1.04810	0.00160	0.85	1.04737	0.00102	0.55

Summary Statistics

	Sample T45	Sample T46
Grand Means	1.046497 sp gr 23/23 C	1.046347 sp gr 23/23 C
Std Dev Btwn Labs	0.001883 sp gr 23/23 C	0.001860 sp gr 23/23 C

Statistics based on 83 of 92 reporting participants

Sample T45: ABS & Sample T46: ABS



Comments on Assigned Data Flags for Test #718

- EEHZ9M (X) - Inconsistent in testing between samples, data for sample T45 are low. Inconsistent within the determinations of sample T45.
- L267VB (X) - Inconsistent in testing between samples.
- CGTYRK (X) - Data for both samples are low. Inconsistent within the determinations of sample T45.
- LHC66E (X) - Data for both samples are high. Inconsistent within the determinations of sample T45.
- 68PFCA (X) - Data for both samples are low. Inconsistent within the determinations of both samples.
- AXR4A4 (X) - Data for both samples are low. Possible Systematic Error.
- PMA6KK (X) - Extreme data.
- M7WLYN (X) - Inconsistent in testing between samples, data for sample T46 are low.
- UB2V6X (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample T46.



Plastics Interlaboratory Testing Program

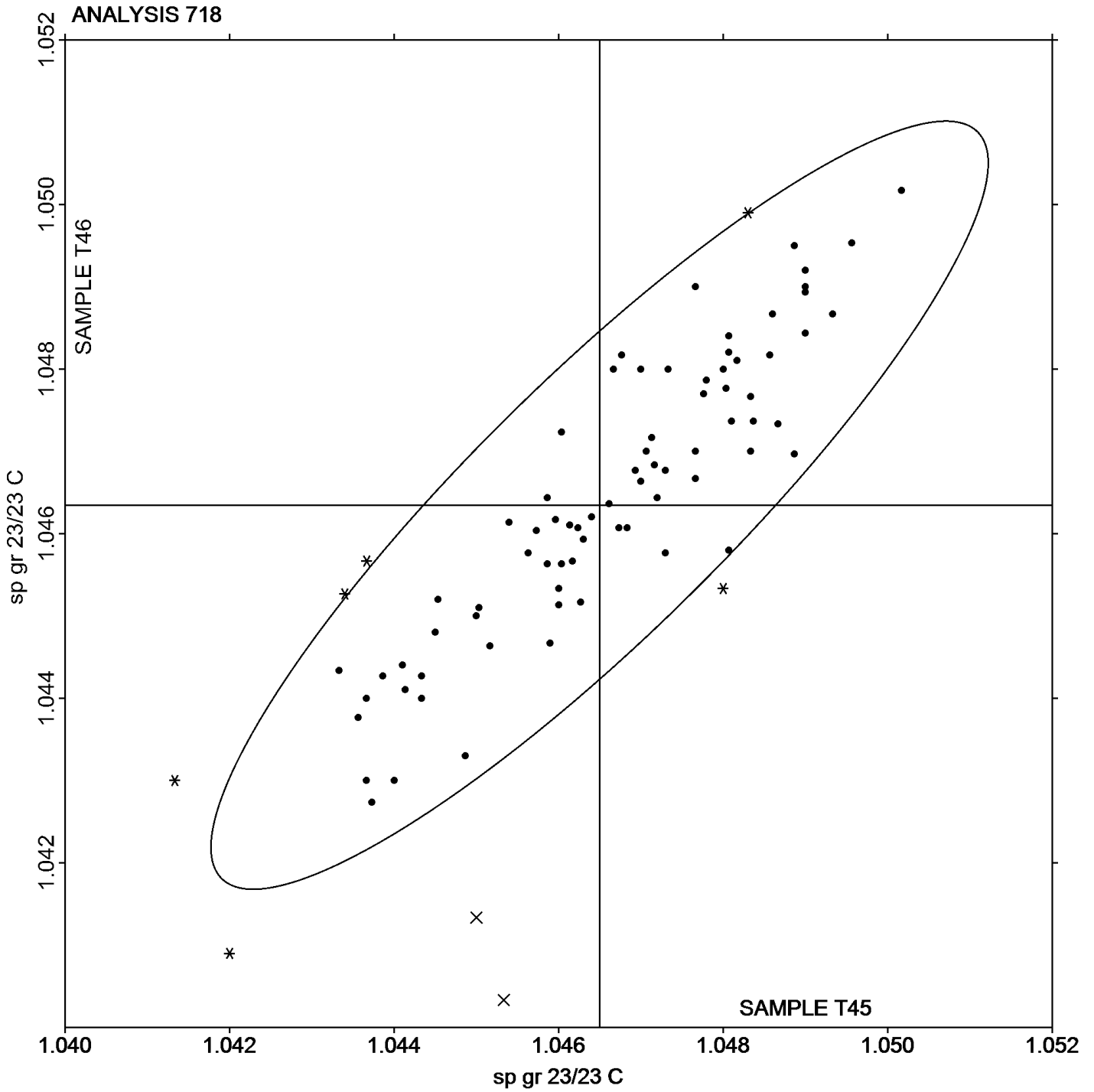
Analysis 718

Specific Gravity - sp gr 23/23 C

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Grand Mean Sample T45: 1.0465 sp gr 23/23 C Grand Mean Sample T46: 1.0463 sp gr 23/23 C





Plastics Interlaboratory Testing Program

Report #103

Analysis 720

3rd Qtr 2017

Flexural Modulus- ksi

WebCode	Data Flag	Sample J45			Sample J46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23QPJU		369.0	4.7	0.27	377.8	2.8	0.17
23THEG		382.0	17.7	1.00	395.5	20.5	1.24
24F7MA		358.4	-5.9	-0.34	363.8	-11.2	-0.68
2L4C62		369.6	5.4	0.30	381.0	6.0	0.37
376UHB	X	339.3	-25.0	-1.42	325.7	-49.3	-2.99
3JVGY4		349.8	-14.5	-0.82	359.6	-15.4	-0.93
3MWKQQ		374.2	9.9	0.56	390.1	15.1	0.92
4TEDGG		350.7	-13.6	-0.77	358.8	-16.2	-0.98
63Y4C8		400.0	35.7	2.03	411.4	36.4	2.21
6AEPJP		380.3	16.0	0.91	385.3	10.3	0.63
6LPGPB		353.0	-11.3	-0.64	359.1	-15.9	-0.97
6NENA8		357.2	-7.1	-0.40	366.6	-8.4	-0.51
6NEQWQ		379.4	15.1	0.86	392.2	17.2	1.04
79F8CL	X	345.5	-18.7	-1.06	331.0	-44.0	-2.67
82D7YX	X	306.4	-57.9	-3.28	307.0	-68.0	-4.13
8KN4EN		385.3	21.0	1.19	393.6	18.6	1.13
8QA4N9		348.0	-16.3	-0.93	368.8	-6.2	-0.38
8RQ99T		391.1	26.8	1.52	391.3	16.3	0.99
8UC4MK		391.6	27.3	1.55	404.6	29.6	1.79
8VRRHY		371.4	7.1	0.41	381.9	6.9	0.42
9D3M7B		346.0	-18.3	-1.04	362.9	-12.1	-0.74
9LJ27V	X	129.5	-234.8	-13.33	136.3	-238.7	-14.48
9XCKP7		357.5	-6.8	-0.39	380.1	5.1	0.31
ABBZXF	*	410.7	46.4	2.63	412.2	37.2	2.26
AJ9JK4		368.7	4.4	0.25	381.0	6.0	0.37
B4EB83	*	352.3	-12.0	-0.68	348.7	-26.3	-1.60
B9HETV		350.3	-14.0	-0.79	362.3	-12.7	-0.77
BEAMFA	X	394.0	29.7	1.68	376.5	1.5	0.09
DPJYK4		401.9	37.6	2.14	413.9	38.9	2.36
E4EWVD		356.3	-8.0	-0.46	369.6	-5.4	-0.33
EAKEJ7		379.1	14.8	0.84	380.0	5.0	0.30
EHZZQN		365.5	1.2	0.07	384.5	9.5	0.57
F2PTTX		358.2	-6.1	-0.34	358.8	-16.2	-0.99
F9AUBW		372.3	8.0	0.45	379.3	4.3	0.26
FLTJ6R		359.2	-5.1	-0.29	371.8	-3.2	-0.19



Plastics Interlaboratory Testing Program

Report #103

Analysis 720

3rd Qtr 2017

Flexural Modulus- ksi

WebCode	Data Flag	Sample J45			Sample J46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FLW28W		352.2	-12.1	-0.69	358.8	-16.2	-0.98
GEEXWN		373.8	9.5	0.54	381.4	6.4	0.39
JUH7TU		374.0	9.7	0.55	386.5	11.5	0.70
KKPFJ7		364.7	0.4	0.02	371.7	-3.3	-0.20
KNK9EM		351.8	-12.5	-0.71	367.6	-7.4	-0.45
L267VB		333.8	-30.5	-1.73	347.1	-27.9	-1.70
LEU6MD		373.4	9.1	0.52	389.9	14.9	0.91
LHC66E		370.6	6.3	0.36	377.8	2.8	0.17
LQ9Z3D		356.0	-8.3	-0.47	374.4	-0.6	-0.04
LYHDXM	*	362.9	-1.4	-0.08	356.1	-18.9	-1.15
NTMG9M		371.2	6.9	0.39	378.7	3.7	0.22
NZMT9Q		369.6	5.3	0.30	382.0	7.0	0.43
PK8ZDR		377.1	12.8	0.73	383.8	8.8	0.53
PUFL7R		334.1	-30.2	-1.71	360.5	-14.5	-0.88
QMT2Y7		386.5	22.2	1.26	394.7	19.7	1.19
QPXLNR		338.8	-25.5	-1.45	362.0	-13.0	-0.79
QQALJZ	X	295.0	-69.3	-3.93	311.4	-63.6	-3.86
TQLY2U		327.5	-36.8	-2.09	337.0	-38.0	-2.31
TRC864		344.1	-20.2	-1.15	369.4	-5.6	-0.34
U7V9GN	X	28,464.1	28,099.8	1,594.61	30,910.0	30,535.0	1,853.00
UB2V6X	X	372.4	8.1	0.46	420.8	45.8	2.78
UCFBKJ		370.3	6.0	0.34	378.2	3.2	0.20
UJ24X6		357.3	-7.0	-0.40	363.3	-11.7	-0.71
UV84JW		378.6	14.4	0.81	382.9	7.9	0.48
V7RULE		375.3	11.0	0.62	380.9	5.9	0.36
VDVRGX		355.1	-9.2	-0.52	356.5	-18.5	-1.12
VUWUWG		366.6	2.3	0.13	373.2	-1.8	-0.11
W38B4H		373.5	9.2	0.52	380.6	5.6	0.34
X27RPT		358.2	-6.1	-0.35	376.5	1.5	0.09
X2N33R		333.2	-31.1	-1.76	351.3	-23.7	-1.44
XPW3Y6	X	314.6	-49.7	-2.82	314.8	-60.2	-3.65
XX8Q9W		362.9	-1.3	-0.08	376.4	1.4	0.09
Y3YML8		340.8	-23.5	-1.33	365.5	-9.5	-0.58
YZT3X8		337.6	-26.7	-1.52	349.4	-25.6	-1.55
ZJJ4HV		380.6	16.3	0.93	397.6	22.6	1.37



Plastics Interlaboratory Testing Program

Report #103

Analysis 720

3rd Qtr 2017

Flexural Modulus- ksi

WebCode	Data Flag	<u>Sample J45</u>			<u>Sample J46</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ZQDHUF		344.9	-19.4	-1.10	352.1	-22.9	-1.39

Summary Statistics		<u>Sample J45</u>	<u>Sample J46</u>
Grand Means		364.29 ksi	375.00 ksi
Stnd Dev Btwn Labs		17.62 ksi	16.48 ksi
Statistics based on 62 of 71 reporting participants			

Sample J45: ABS & Sample J46: ABS

Comments on Assigned Data Flags for Test #720

- 9LJ27V (X) - Data for both samples are low.
- XPW3Y6 (X) - Data for both samples are low. Possible Systematic Error.
- 82D7YX (X) - Data for both samples are low. Possible Systematic Error.
- U7V9GN (X) - Extreme data.
- BEAMFA (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J46.
- QQALJZ (X) - Data for both samples are low. Possible Systematic Error.
- 376UHB (X) - Inconsistent in testing between samples, data for sample J46 are low. Inconsistent within the determinations of sample J45.
- 79F8CL (X) - Inconsistent in testing between samples.
- UB2V6X (X) - Inconsistent in testing between samples, data for sample J46 are high. Inconsistent within the determinations of sample J45.



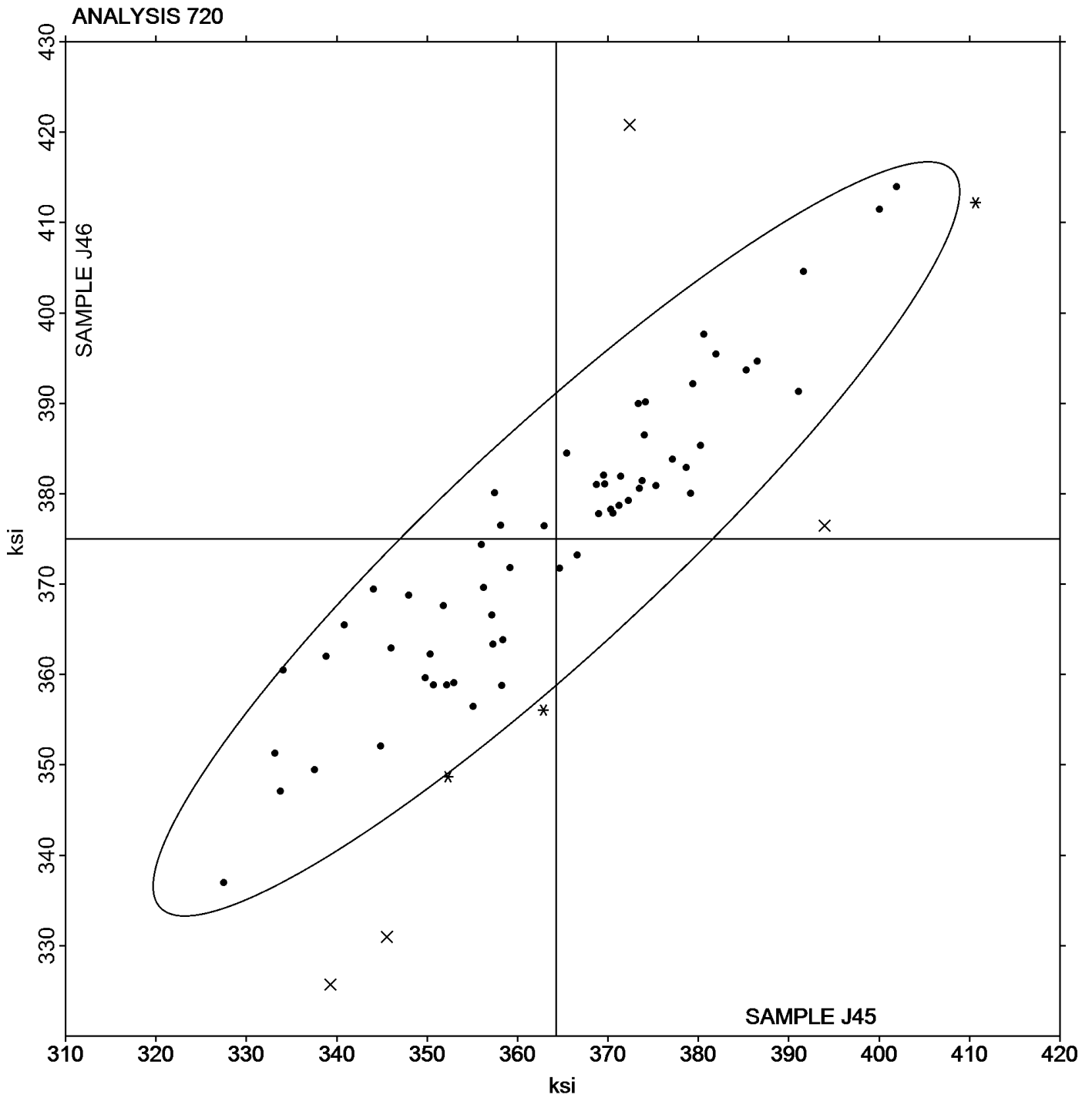
Plastics Interlaboratory Testing Program

Analysis 720 Flexural Modulus- ksi

Report #103

3rd Qtr 2017

Grand Mean Sample J45: 364.29 ksi Grand Mean Sample J46: 375.00 ksi





Plastics Interlaboratory Testing Program

Report #103

Analysis 721

3rd Qtr 2017

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J45			Sample J46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23QPJU		10,477	-513	-1.18	10,726	-690	-1.55
23THEG		11,374	384	0.88	11,685	269	0.61
24F7MA		11,052	62	0.14	11,249	-166	-0.37
376UHB		10,489	-500	-1.15	10,605	-810	-1.82
3JVGY4		10,425	-565	-1.30	10,752	-664	-1.49
3MWKQQ		11,019	30	0.07	11,389	-26	-0.06
4TEDGG		10,750	-239	-0.55	11,047	-368	-0.83
63Y4C8		11,254	264	0.61	11,546	131	0.29
6AEPJP		11,319	330	0.76	11,667	251	0.57
6LPGPB		10,192	-798	-1.84	10,655	-761	-1.71
6NENA8		11,229	239	0.55	11,426	11	0.02
6NEQWQ		10,821	-169	-0.39	11,381	-34	-0.08
79F8CL		11,203	214	0.49	11,745	330	0.74
82D7YX		10,802	-188	-0.43	11,514	99	0.22
8KN4EN		11,561	572	1.32	11,878	463	1.04
8QA4N9		10,538	-452	-1.04	11,004	-411	-0.92
8RQ99T		11,326	336	0.77	11,677	261	0.59
8UC4MK		11,644	654	1.50	12,163	748	1.68
8VRRHY		11,029	40	0.09	11,463	48	0.11
9D3M7B		10,502	-488	-1.12	10,933	-482	-1.08
9LJ27V	X	5,920	-5,069	-11.66	6,205	-5,211	-11.72
9XCKP7		10,923	-67	-0.15	11,415	0	0.00
AJ9JK4		10,633	-357	-0.82	11,135	-280	-0.63
B4EB83		10,934	-56	-0.13	11,417	2	0.00
B9HETV		10,286	-704	-1.62	10,528	-888	-2.00
BEAMFA		11,143	153	0.35	11,561	145	0.33
DPJYK4		11,315	325	0.75	11,676	260	0.58
E4EWVD		10,936	-53	-0.12	11,542	127	0.29
EAKEJ7		11,487	497	1.14	11,748	333	0.75
EHZZQN		11,074	84	0.19	11,860	445	1.00
F2PTTX		10,922	-68	-0.16	11,061	-354	-0.80
F9AUBW		10,461	-528	-1.22	11,173	-243	-0.55
FLTJ6R		10,500	-490	-1.13	10,960	-455	-1.02
FLW28W		10,912	-78	-0.18	11,490	75	0.17
JUH7TU		11,464	475	1.09	11,743	327	0.74



Plastics Interlaboratory Testing Program

Report #103

Analysis 721

3rd Qtr 2017

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	<u>Sample J45</u>			<u>Sample J46</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KKPFJ7		11,413	423	0.97	11,674	258	0.58
KNK9EM		10,760	-230	-0.53	11,040	-375	-0.84
L267VB		10,546	-443	-1.02	11,277	-138	-0.31
LEU6MD		11,032	42	0.10	11,484	68	0.15
LQ9Z3D		11,169	179	0.41	11,447	31	0.07
LYHDXM		10,616	-374	-0.86	11,015	-400	-0.90
NZMT9Q		11,481	491	1.13	11,937	522	1.17
PK8ZDR		11,186	197	0.45	11,511	95	0.21
PUFL7R		10,726	-264	-0.61	11,281	-134	-0.30
QMT2Y7		11,851	862	1.98	12,034	619	1.39
TQLY2U		10,272	-718	-1.65	10,776	-640	-1.44
TRC864		10,341	-648	-1.49	10,785	-630	-1.42
UB2V6X	*	12,146	1,156	2.66	12,794	1,379	3.10
UJ24X6		10,871	-119	-0.27	11,362	-53	-0.12
UV84JW		11,509	520	1.20	11,926	510	1.15
V7RULE		11,704	714	1.64	12,289	874	1.96
VUWUWG		10,797	-193	-0.44	11,261	-154	-0.35
W38B4H		11,196	206	0.47	11,536	121	0.27
X2N33R		10,661	-329	-0.76	11,333	-82	-0.19
XPW3Y6		11,500	510	1.17	12,000	585	1.31
XX8Q9W		10,851	-139	-0.32	11,345	-71	-0.16
YZT3X8		11,229	239	0.55	11,738	323	0.73
ZQDHUF		10,560	-430	-0.99	11,020	-395	-0.89

Summary Statistics		
	<u>Sample J45</u>	<u>Sample J46</u>
Grand Means	10,989.7 psi	11,415.4 psi
Stnd Dev Btwn Labs	434.6 psi	444.8 psi
Statistics based on 57 of 58 reporting participants		

Sample J45: ABS & Sample J46: ABS

Comments on Assigned Data Flags for Test #721

9LJ27V (X) - Data for both samples are low.



Plastics Interlaboratory Testing Program

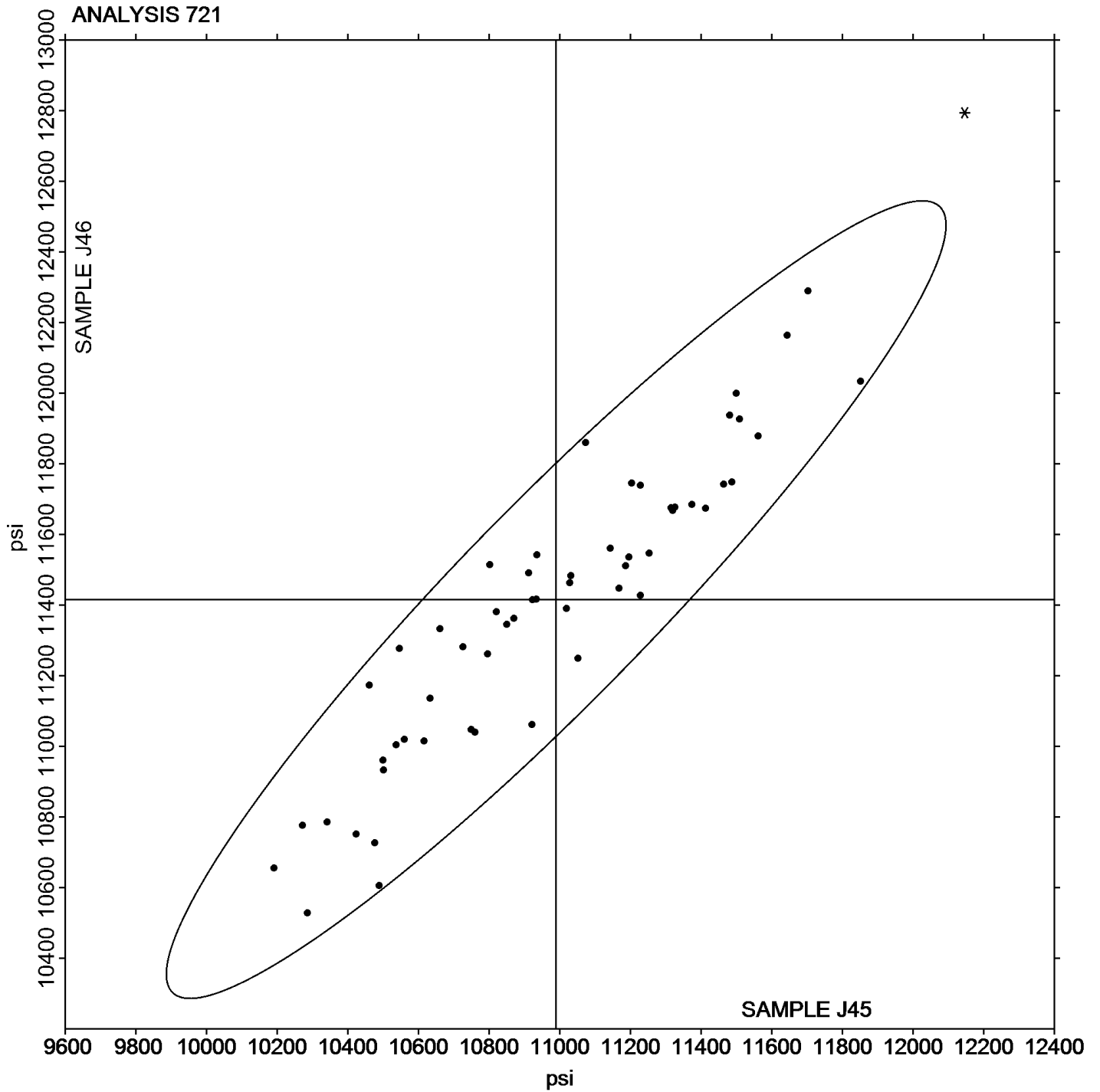
Analysis 721

Flexural Stress at 5% Strain - psi

Report #103

3rd Qtr 2017

Grand Mean Sample J45: 10,989.72 psi Grand Mean Sample J46: 11,415.42 psi





Plastics Interlaboratory Testing Program

Report #103

Analysis 722

3rd Qtr 2017

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J45			Sample J46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23QPJU		10,537	-450	-1.25	10,899	-521	-1.25
23THEG		11,432	445	1.24	11,823	403	0.97
24F7MA		11,079	93	0.26	11,315	-105	-0.25
2L4C62		11,284	297	0.83	11,719	299	0.72
376UHB		10,497	-490	-1.36	10,671	-749	-1.80
3JVGY4		10,478	-509	-1.41	10,848	-572	-1.38
3MWKQQ		11,046	60	0.17	11,490	70	0.17
4TEDGG		10,803	-184	-0.51	11,165	-255	-0.61
63Y4C8		11,272	285	0.79	11,638	218	0.52
6AEPJP		11,346	359	1.00	11,694	273	0.66
6LPGPB		10,287	-700	-1.94	10,735	-685	-1.65
6NENA8		11,222	235	0.65	11,465	45	0.11
6NEQWQ		10,821	-166	-0.46	11,369	-51	-0.12
79F8CL		11,263	276	0.77	11,809	389	0.94
7NTJ4E		11,360	373	1.04	11,823	402	0.97
82D7YX		10,814	-173	-0.48	11,540	120	0.29
8KN4EN		11,580	594	1.65	11,945	525	1.26
8QA4N9		10,577	-410	-1.14	11,135	-285	-0.69
8RQ99T		11,337	350	0.97	11,752	332	0.80
8UC4MK		11,644	657	1.83	12,163	743	1.79
8VRRHY		11,057	70	0.19	11,521	100	0.24
9D3M7B		10,502	-485	-1.35	10,912	-508	-1.22
9LJ27V	X	5,920	-5,066	-14.07	6,205	-5,215	-12.56
9XCKP7		10,940	-47	-0.13	11,540	120	0.29
ABBZXF		10,715	-271	-0.75	10,906	-514	-1.24
AJ9JK4		10,702	-285	-0.79	11,224	-196	-0.47
B4EB83		11,062	76	0.21	11,463	42	0.10
B9HETV		10,358	-628	-1.74	10,646	-775	-1.87
BEAMFA		11,172	185	0.51	11,620	199	0.48
DPJYK4		11,370	384	1.07	11,815	395	0.95
E4EWVD		10,957	-29	-0.08	11,079	-341	-0.82
EAKEJ7		11,487	501	1.39	11,777	357	0.86
EHZZQN		11,122	136	0.38	11,941	521	1.25
F2PTTX		10,933	-54	-0.15	11,115	-305	-0.74
FLTJ6R		10,580	-407	-1.13	11,080	-340	-0.82



Plastics Interlaboratory Testing Program

Report #103

Analysis 722

3rd Qtr 2017

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J45			Sample J46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FLW28W		10,854	-133	-0.37	11,054	-366	-0.88
GEEXWN		11,200	213	0.59	11,580	160	0.38
KKPFJ7	*	10,414	-572	-1.59	10,439	-981	-2.36
KNK9EM		10,820	-167	-0.46	11,100	-320	-0.77
L267VB		10,566	-421	-1.17	11,315	-106	-0.25
LEU6MD		11,054	68	0.19	11,542	122	0.29
LHC66E		10,967	-19	-0.05	11,372	-48	-0.12
LYHDXM		10,966	-21	-0.06	11,329	-91	-0.22
NTMG9M		11,128	141	0.39	11,430	10	0.02
PK8ZDR		11,219	232	0.64	11,602	182	0.44
PUFL7R		10,769	-218	-0.60	11,371	-49	-0.12
TQLY2U		10,263	-724	-2.01	10,776	-644	-1.55
UCFBKJ		10,969	-18	-0.05	11,452	31	0.08
UJ24X6		10,898	-88	-0.25	11,425	5	0.01
UV84JW		11,569	583	1.62	11,987	566	1.36
V7RULE		11,717	730	2.03	12,339	919	2.21
VDVRGX		10,921	-66	-0.18	11,230	-191	-0.46
VUWUWG		10,912	-75	-0.21	11,376	-44	-0.11
W38B4H		11,210	223	0.62	11,605	185	0.45
X27RPT	*	11,509	522	1.45	12,419	999	2.41
X2N33R		10,764	-223	-0.62	11,429	9	0.02
XPW3Y6		11,500	513	1.43	12,000	580	1.40
XX8Q9W		10,904	-82	-0.23	11,448	28	0.07
ZJJ4HV		10,920	-67	-0.18	11,520	100	0.24
ZQDHUF		10,560	-427	-1.18	11,020	-400	-0.96

Summary Statistics		
	Sample J45	Sample J46
Grand Means	10,986.6 psi	11,420.3 psi
Stnd Dev Btwn Labs	360.0 psi	415.2 psi
Statistics based on 59 of 60 reporting participants		

Sample J45: ABS & Sample J46: ABS

Comments on Assigned Data Flags for Test #722

9LJ27V (X) - Data for both samples are low.



Plastics Interlaboratory Testing Program

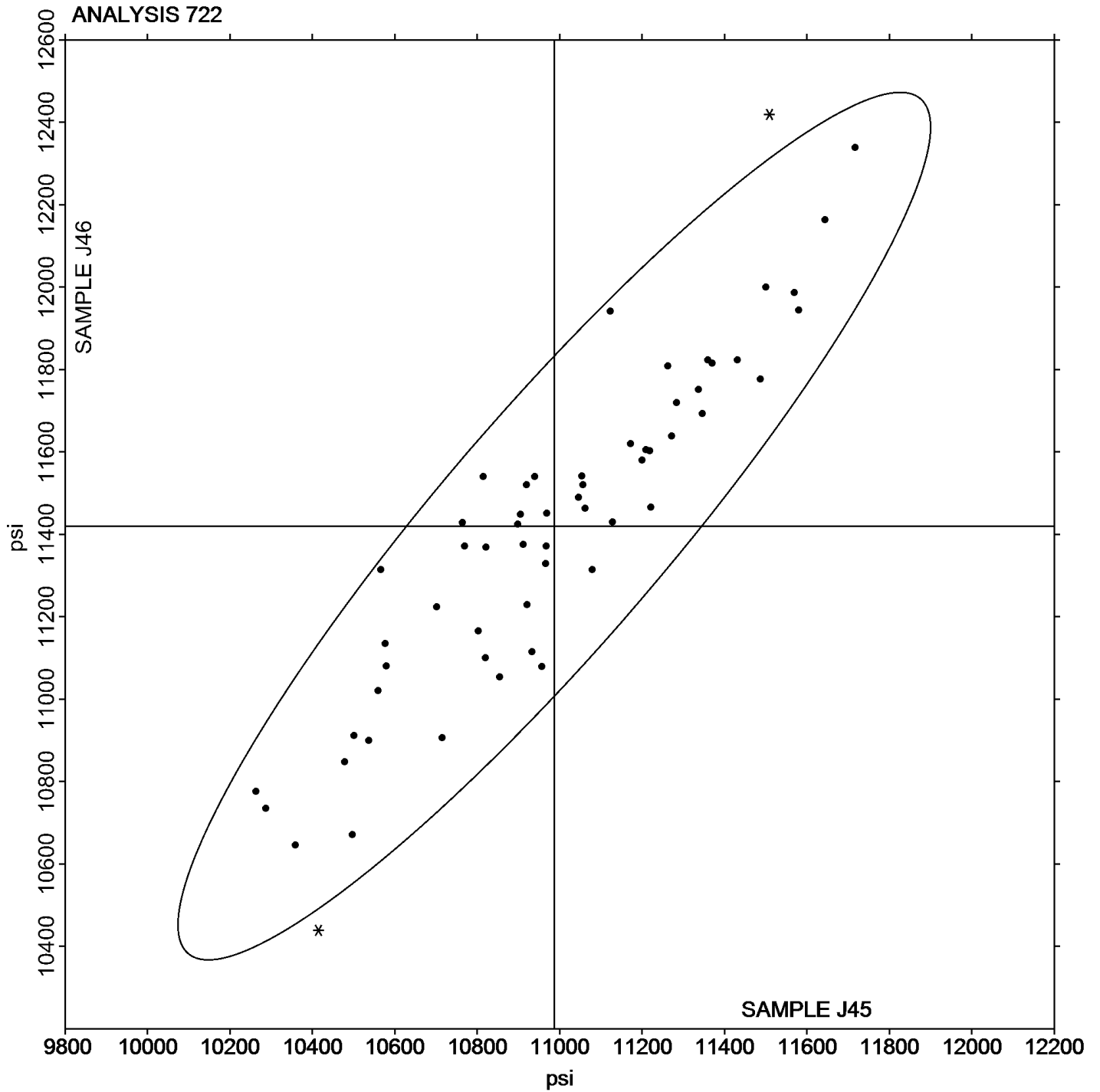
Analysis 722

Flexural Stress at Yield - psi

Report #103

3rd Qtr 2017

Grand Mean Sample J45: 10,986.56 psi Grand Mean Sample J46: 11,420.26 psi





Plastics Interlaboratory Testing Program

Report #103

Analysis 730

3rd Qtr 2017

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C45			Sample C46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
24F7MA		45.62	-0.38	-0.38	45.64	-0.34	-0.33
2CH9X3		47.59	1.59	1.60	47.70	1.72	1.68
2E2CJE		45.64	-0.37	-0.37	45.08	-0.90	-0.87
2XD8X7		45.90	-0.11	-0.11	45.53	-0.45	-0.44
4TEDGG		44.96	-1.04	-1.05	44.73	-1.25	-1.22
4ZBGVD		44.14	-1.86	-1.87	44.04	-1.93	-1.89
6HQZE3		47.59	1.59	1.60	47.60	1.62	1.58
6NENA8		47.25	1.25	1.26	47.22	1.25	1.22
8JCNPT		45.16	-0.84	-0.85	45.51	-0.47	-0.46
8P3YW7		47.31	1.31	1.32	47.25	1.27	1.24
8RQ99T		47.22	1.22	1.23	47.04	1.06	1.04
8UC4MK		45.82	-0.18	-0.18	46.00	0.02	0.02
9DQTNP		44.87	-1.13	-1.14	45.05	-0.92	-0.90
AWQKUF		43.98	-2.02	-2.04	43.69	-2.28	-2.23
BP9HD6		45.80	-0.20	-0.20	45.74	-0.24	-0.23
C2YHE8		44.61	-1.39	-1.40	44.56	-1.42	-1.39
C3B9QX		45.61	-0.39	-0.40	45.29	-0.69	-0.67
DDNRPK	X	38.34	-7.66	-7.74	37.41	-8.56	-8.35
EAKEJ7		47.35	1.35	1.36	47.52	1.54	1.51
EEHZ9M		44.74	-1.26	-1.28	44.99	-0.99	-0.96
ER73QF		44.92	-1.08	-1.09	45.28	-0.70	-0.68
EXUMWG		45.32	-0.68	-0.69	45.28	-0.70	-0.68
FRHW92		45.40	-0.60	-0.61	45.70	-0.28	-0.27
GNGATH		46.20	0.20	0.20	46.17	0.19	0.19
HMXZ6A		45.52	-0.48	-0.49	46.10	0.12	0.12
JGTAPB		44.96	-1.04	-1.05	44.78	-1.20	-1.17
JH4DYT		45.07	-0.93	-0.94	45.00	-0.97	-0.95
JQVRZD		47.15	1.15	1.16	47.11	1.13	1.10
JVRB6W	*	48.87	2.87	2.90	48.63	2.65	2.58
LKKCAT		45.75	-0.25	-0.26	45.80	-0.17	-0.17
LQ9Z3D		45.39	-0.61	-0.62	45.94	-0.04	-0.04
LWWKAY		46.93	0.93	0.93	46.76	0.78	0.76
MXNZWF		46.24	0.24	0.24	45.87	-0.10	-0.10
NRTH93		46.23	0.23	0.23	46.01	0.03	0.03
NTMG9M		45.25	-0.75	-0.76	45.20	-0.78	-0.76



Plastics Interlaboratory Testing Program

Report #103

Analysis 730

3rd Qtr 2017

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C45			Sample C46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NZMT9Q		44.64	-1.36	-1.37	44.67	-1.31	-1.27
PK8ZDR		46.35	0.35	0.35	45.80	-0.18	-0.18
PUFL7R		46.02	0.02	0.02	46.25	0.27	0.26
PYAN7L		46.72	0.72	0.73	46.91	0.93	0.91
QMT2Y7		45.76	-0.24	-0.24	45.78	-0.20	-0.20
QNL2PP		47.55	1.55	1.56	47.63	1.66	1.62
QPXLNR	X	40.94	-5.06	-5.11	39.00	-6.98	-6.81
QV4H77		45.55	-0.45	-0.46	45.52	-0.46	-0.45
R32C2J		45.93	-0.07	-0.08	45.62	-0.36	-0.35
RQ78MR		45.60	-0.40	-0.40	45.36	-0.62	-0.60
TGXJHC		47.00	1.00	1.00	46.65	0.67	0.66
TQLY2U		45.45	-0.55	-0.56	45.45	-0.52	-0.51
TWU7YL		45.67	-0.33	-0.33	45.67	-0.31	-0.30
UB2V6X		45.93	-0.07	-0.07	46.50	0.53	0.51
UCFBKJ		46.71	0.71	0.72	46.57	0.59	0.57
UXLJ24		46.00	0.00	0.00	46.56	0.58	0.57
V84FKG	X	50.06	4.06	4.10	50.38	4.40	4.30
WZVP3U		46.64	0.64	0.65	46.26	0.28	0.28
XF8CGJ		47.51	1.51	1.53	47.45	1.48	1.44
XPW3Y6		45.80	-0.20	-0.20	46.16	0.18	0.18
XX8Q9W		45.32	-0.68	-0.69	45.38	-0.60	-0.58
Y3G26X		46.72	0.72	0.73	47.11	1.13	1.10
Y3YML8	*	44.40	-1.60	-1.62	43.56	-2.42	-2.36
YDXNEX		46.18	0.18	0.18	46.58	0.60	0.59
Z6ZHX3		45.39	-0.61	-0.61	45.46	-0.52	-0.51
ZK9JLC		46.69	0.69	0.70	46.28	0.30	0.30
ZQHP8A		47.46	1.46	1.47	47.30	1.32	1.29
ZRVEBM		46.12	0.12	0.12	45.38	-0.60	-0.58
ZYRCZB		46.60	0.60	0.60	46.94	0.96	0.94



Plastics Interlaboratory Testing Program

Report #103

Analysis 730

3rd Qtr 2017

Tensile Stress at Yield - MPa

Summary Statistics	<u>Sample C45</u>	<u>Sample C46</u>
Grand Means	46.001 MPa	45.978 MPa
Stnd Dev Btwn Labs	0.991 MPa	1.025 MPa

Statistics based on 61 of 64 reporting participants

Sample C45: ABS & Sample C46: ABS

Comments on Assigned Data Flags for Test #730

- DDNRPK (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- QPXLNR (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample C46.
- V84FKG (X) - Data for both samples are high. Possible Systematic Error.



Plastics Interlaboratory Testing Program

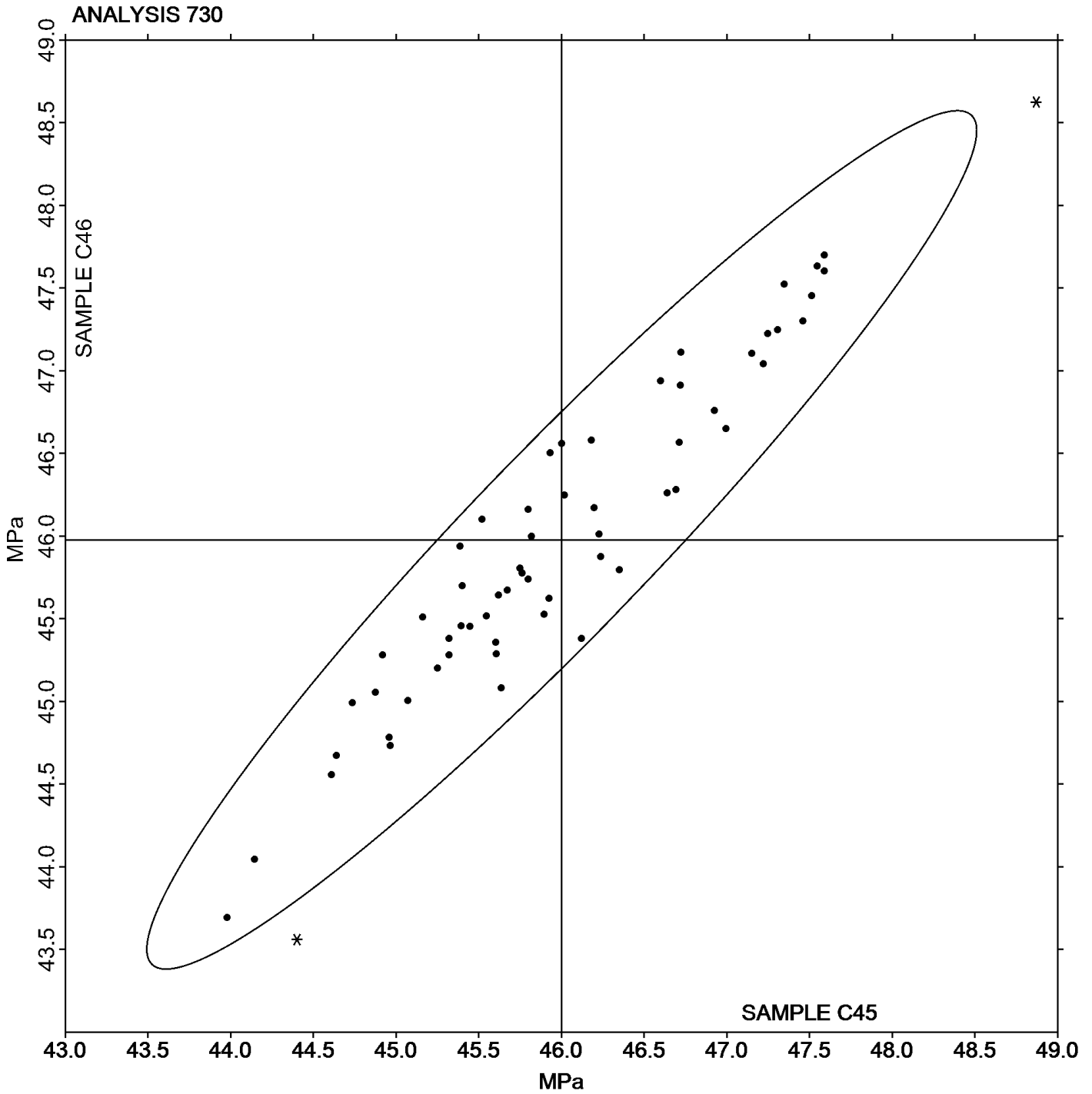
Analysis 730

Tensile Stress at Yield - MPa

Report #103

3rd Qtr 2017

Grand Mean Sample C45: 46.001 MPa Grand Mean Sample C46: 45.978 MPa





Plastics Interlaboratory Testing Program

Report #103

Analysis 731

3rd Qtr 2017

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C45			Sample C46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
24F7MA		35.37	1.67	1.25	34.18	0.62	0.41
2CH9X3		33.16	-0.54	-0.41	34.21	0.65	0.42
2E2CJE		34.28	0.58	0.44	33.23	-0.33	-0.22
2XD8X7		33.18	-0.52	-0.39	34.10	0.54	0.35
4TEDGG		30.83	-2.87	-2.15	30.72	-2.84	-1.86
4ZBGVD		32.81	-0.89	-0.67	31.07	-2.49	-1.63
6HQZE3		34.77	1.07	0.80	34.88	1.32	0.86
6NENA8		33.08	-0.62	-0.47	33.87	0.31	0.20
8JCNPT		32.94	-0.75	-0.57	32.80	-0.76	-0.50
8P3YW7		33.90	0.20	0.15	33.80	0.24	0.16
8RQ99T		35.71	2.01	1.51	35.80	2.24	1.47
8UC4MK		33.92	0.22	0.17	33.36	-0.20	-0.13
9DQTNP	*	35.36	1.67	1.25	37.45	3.89	2.55
AWQKUF		32.29	-1.41	-1.06	32.06	-1.50	-0.98
BP9HD6		33.86	0.16	0.12	33.92	0.36	0.24
C2YHE8		32.10	-1.60	-1.20	31.59	-1.97	-1.29
C3B9QX		33.40	-0.30	-0.22	33.75	0.19	0.13
EAKEJ7	*	31.47	-2.23	-1.67	29.28	-4.28	-2.81
EEHZ9M		33.62	-0.08	-0.06	32.18	-1.38	-0.90
ER73QF	X	44.92	11.22	8.42	45.28	11.72	7.67
EXUMWG		34.46	0.76	0.57	32.90	-0.66	-0.43
FRHW92		32.60	-1.10	-0.82	33.76	0.20	0.13
GNGATH		33.25	-0.45	-0.34	33.00	-0.56	-0.36
HMXZ6A		33.24	-0.46	-0.34	33.60	0.04	0.03
JGTAPB		31.74	-1.96	-1.47	31.95	-1.61	-1.05
JH4DYT		32.62	-1.08	-0.81	32.59	-0.97	-0.63
JQVRZD		34.19	0.49	0.37	33.24	-0.32	-0.21
JVRB6W		34.65	0.95	0.71	34.83	1.27	0.83
LKKCAT		32.08	-1.61	-1.21	31.89	-1.67	-1.09
LQ9Z3D		33.78	0.08	0.06	33.66	0.10	0.06
LWWKAY		36.46	2.76	2.07	36.24	2.68	1.75
MXNZWF		33.97	0.27	0.20	33.99	0.43	0.28
NRTH93		34.49	0.79	0.59	34.05	0.49	0.32
NZMT9Q		31.67	-2.03	-1.53	30.74	-2.82	-1.85
PK8ZDR		32.47	-1.23	-0.92	32.78	-0.78	-0.51



Plastics Interlaboratory Testing Program

Report #103

Analysis 731

3rd Qtr 2017

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C45			Sample C46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PUFL7R		32.52	-1.17	-0.88	32.91	-0.65	-0.43
PYAN7L		34.67	0.98	0.73	34.45	0.89	0.58
QMT2Y7	*	31.25	-2.45	-1.84	33.10	-0.46	-0.30
QNL2PP		36.30	2.61	1.96	36.02	2.46	1.61
R32C2J		33.29	-0.41	-0.31	32.56	-1.00	-0.66
RQ78MR		32.99	-0.71	-0.53	31.69	-1.87	-1.23
TQLY2U		33.22	-0.48	-0.36	33.05	-0.51	-0.34
TWU7YL		33.71	0.01	0.01	33.50	-0.06	-0.04
UB2V6X	X	34.23	0.53	0.40	46.50	12.94	8.47
UXLJ24		34.52	0.82	0.62	34.60	1.04	0.68
V84FKG		36.52	2.82	2.12	36.42	2.86	1.87
WZVP3U		33.60	-0.10	-0.07	33.72	0.16	0.10
XF8CGJ		35.18	1.48	1.11	34.64	1.08	0.71
XPW3Y6		33.12	-0.58	-0.43	33.80	0.24	0.16
XX8Q9W		36.46	2.76	2.07	35.94	2.38	1.56
Y3G26X	X	34.90	1.20	0.90	31.52	-2.04	-1.34
YDXNEX		34.30	0.60	0.45	34.72	1.16	0.76
Z6ZHX3		33.33	-0.37	-0.28	33.27	-0.29	-0.19
ZK9JLC		34.37	0.67	0.50	35.56	2.00	1.31
ZQHP8A		34.72	1.02	0.77	33.76	0.20	0.13
ZRVEBM		34.64	0.94	0.71	33.38	-0.18	-0.12
ZYRCZB		33.32	-0.38	-0.28	33.68	0.12	0.08

Summary Statistics		
	Sample C45	Sample C46
Grand Means	33.699 MPa	33.560 MPa
Std Dev Btwn Labs	1.333 MPa	1.527 MPa

Statistics based on 54 of 57 reporting participants

Sample C45: ABS & Sample C46: ABS

Comments on Assigned Data Flags for Test #731

- Y3G26X (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- ER73QF (X) - Data for both samples are high. Possible Systematic Error.
- UB2V6X (X) - Inconsistent in testing between samples, data for sample C46 are high.



Plastics Interlaboratory Testing Program

Report #103

Analysis 732

3rd Qtr 2017

Percent Strain at Yield

WebCode	Data Flag	Sample C45			Sample C46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
24F7MA	*	2.262	-0.187	-2.76	2.282	-0.162	-2.46
2CH9X3		2.448	-0.001	-0.01	2.428	-0.016	-0.25
2E2CJE		2.335	-0.114	-1.67	2.345	-0.100	-1.51
2XD8X7		2.582	0.133	1.96	2.532	0.088	1.32
4TEDGG		2.352	-0.097	-1.43	2.314	-0.130	-1.97
4ZBGVD		2.434	-0.015	-0.22	2.404	-0.040	-0.61
6HQZE3		2.356	-0.093	-1.37	2.390	-0.054	-0.82
6NENA8		2.478	0.029	0.43	2.474	0.030	0.45
8JCNPT		2.418	-0.031	-0.45	2.466	0.022	0.33
8P3YW7		2.462	0.013	0.19	2.456	0.012	0.17
8RQ99T		2.434	-0.015	-0.22	2.462	0.018	0.26
8UC4MK	X	3.120	0.671	9.90	3.180	0.736	11.13
9DQTNP		2.512	0.063	0.93	2.486	0.042	0.63
AWQKUF	*	2.396	-0.053	-0.78	2.322	-0.122	-1.85
C2YHE8		2.418	-0.031	-0.45	2.416	-0.028	-0.43
C3B9QX		2.314	-0.135	-1.99	2.312	-0.132	-2.00
DDNRPK	X	2.616	0.167	2.47	2.784	0.340	5.14
EAKEJ7		2.472	0.023	0.34	2.470	0.026	0.39
EEHZ9M		2.462	0.013	0.19	2.460	0.016	0.23
ER73QF		2.436	-0.013	-0.19	2.434	-0.010	-0.16
EXUMWG		2.466	0.017	0.25	2.408	-0.036	-0.55
FRHW92		2.520	0.071	1.05	2.520	0.076	1.14
GNGATH		2.432	-0.017	-0.25	2.448	0.004	0.05
HMXZ6A	X	1.640	-0.809	-11.93	1.600	-0.844	-12.78
JGTAPB		2.488	0.039	0.58	2.490	0.046	0.69
JH4DYT		2.466	0.017	0.25	2.442	-0.002	-0.04
JQVRZD		2.362	-0.087	-1.28	2.394	-0.050	-0.76
JVRB6W		2.540	0.091	1.34	2.528	0.084	1.26
LKKCAT		2.350	-0.099	-1.46	2.336	-0.108	-1.64
LQ9Z3D		2.450	0.001	0.02	2.466	0.022	0.33
LWWKAY		2.530	0.081	1.20	2.526	0.082	1.23
MXNZWF		2.450	0.001	0.02	2.392	-0.052	-0.79
NRTH93	X	3.484	1.035	15.27	3.474	1.030	15.57
NTMG9M		2.442	-0.007	-0.10	2.478	0.034	0.51
NZMT9Q		2.404	-0.045	-0.66	2.436	-0.008	-0.13



Plastics Interlaboratory Testing Program

Report #103

Analysis 732

3rd Qtr 2017

Percent Strain at Yield

WebCode	Data Flag	Sample C45			Sample C46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PK8ZDR		2.474	0.025	0.37	2.448	0.004	0.05
PUFL7R		2.512	0.063	0.93	2.498	0.054	0.81
PYAN7L		2.400	-0.049	-0.72	2.408	-0.036	-0.55
QMT2Y7		2.492	0.043	0.64	2.476	0.032	0.48
QNL2PP		2.548	0.099	1.46	2.548	0.104	1.57
QV4H77		2.450	0.001	0.02	2.420	-0.024	-0.37
R32C2J		2.472	0.023	0.34	2.466	0.022	0.33
RQ78MR		2.430	-0.019	-0.28	2.436	-0.008	-0.13
TQLY2U		2.478	0.029	0.43	2.450	0.006	0.08
TWU7YL		2.494	0.045	0.67	2.468	0.024	0.36
UB2V6X	X	10.764	8.315	122.64	10.618	8.173	123.64
UXLJ24		2.452	0.003	0.05	2.474	0.030	0.45
V84FKG	X	2.740	0.291	4.29	2.780	0.336	5.08
WZVP3U	X	2.790	0.341	5.03	2.810	0.366	5.53
XF8CGJ		2.478	0.029	0.43	2.486	0.042	0.63
XPW3Y6	X	2.300	-0.149	-2.19	2.400	-0.044	-0.67
XX8Q9W	*	2.622	0.173	2.55	2.616	0.172	2.59
Y3G26X		2.522	0.074	1.09	2.530	0.085	1.29
YDXNEX	X	12.876	10.427	153.79	11.342	8.898	134.60
Z6ZHX3		2.469	0.020	0.29	2.488	0.044	0.66
ZK9JLC		2.432	-0.017	-0.25	2.416	-0.028	-0.43
ZQHP8A		2.360	-0.089	-1.31	2.380	-0.064	-0.98
ZRVEBM		2.400	-0.049	-0.72	2.400	-0.044	-0.67
ZYRCZB		2.484	0.035	0.52	2.500	0.056	0.84

Summary Statistics		
	Sample C45	Sample C46
Grand Means	2.4488 Percent	2.4445 Percent
Stnd Dev Btwn Labs	0.0678 Percent	0.0661 Percent
Statistics based on 50 of 59 reporting participants		

Sample C45: ABS & Sample C46: ABS



Comments on Assigned Data Flags for Test #732

XPW3Y6 (X) - Inconsistent in testing between samples.

YDXNEX (X) - Extreme data.

DDNRPK (X) - Inconsistent in testing between samples, data for sample C46 are high. Inconsistent within the determinations of both samples.

V84FKG (X) - Data for both samples are high. Possible Systematic Error.

HMXZ6A (X) - Data for both samples are low. Inconsistent within the determinations of both samples.

8UC4MK (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

NRTH93 (X) - Data for both samples are high.

WZVP3U (X) - Data for both samples are high. Possible Systematic Error.

UB2V6X (X) - Extreme data.



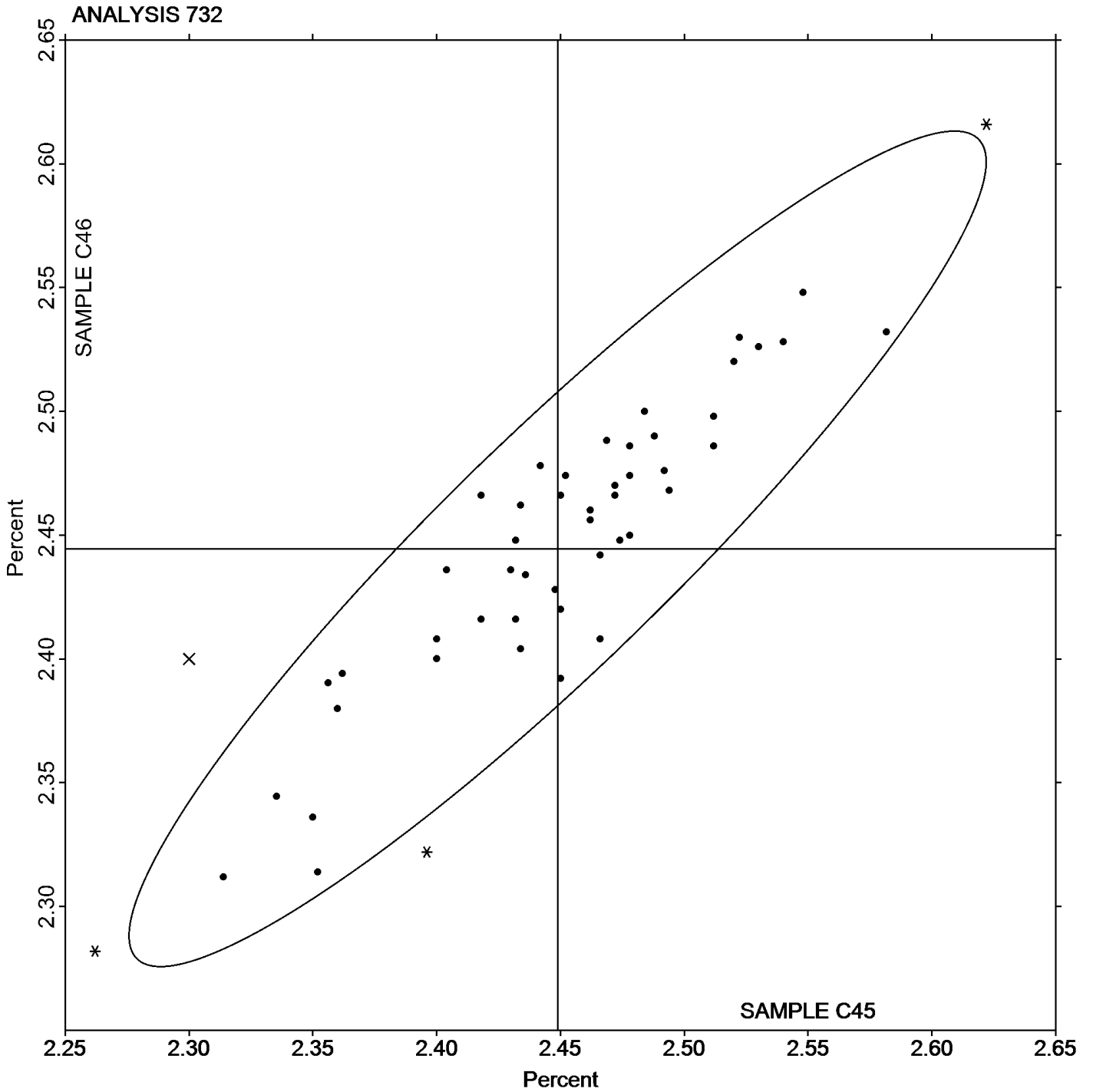
Plastics Interlaboratory Testing Program

Analysis 732 Percent Strain at Yield

Report #103

3rd Qtr 2017

Grand Mean Sample C45: 2.4488 Percent Grand Mean Sample C46: 2.4445 Percent





Plastics Interlaboratory Testing Program

Report #103

Analysis 734

3rd Qtr 2017

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C45			Sample C46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
24F7MA	*	2,585	202	2.34	2,634	246	2.94
2CH9X3		2,482	99	1.15	2,488	100	1.20
2E2CJE		2,506	123	1.43	2,521	134	1.60
2XD8X7		2,258	-125	-1.46	2,309	-79	-0.94
4TEDGG		2,243	-140	-1.62	2,298	-89	-1.06
4ZBGVD	X	2,073	-310	-3.60	2,220	-167	-2.00
6HQZE3		2,452	70	0.81	2,470	83	0.99
6NENA8		2,416	33	0.39	2,423	36	0.43
8JCNPT		2,346	-36	-0.42	2,357	-31	-0.37
8P3YW7		2,365	-17	-0.20	2,333	-55	-0.65
8RQ99T		2,423	40	0.47	2,395	7	0.08
8UC4MK	X	1,527	-856	-9.95	1,506	-882	-10.53
BP9HD6		2,242	-141	-1.64	2,306	-81	-0.97
C2YHE8		2,385	2	0.02	2,389	2	0.02
C3B9QX		2,304	-79	-0.91	2,304	-84	-1.00
DDNRPK		2,388	5	0.06	2,417	29	0.35
EAKEJ7		2,396	13	0.15	2,400	13	0.15
EEHZ9M		2,345	-38	-0.44	2,371	-16	-0.19
ER73QF		2,322	-61	-0.71	2,372	-16	-0.19
EXUMWG	*	2,471	88	1.03	2,538	150	1.80
FRHW92		2,406	23	0.26	2,434	46	0.55
GNGATH		2,487	104	1.21	2,416	28	0.33
HMXZ6A		2,302	-81	-0.94	2,327	-60	-0.72
JGTAPB		2,278	-105	-1.22	2,278	-109	-1.30
JH4DYT		2,423	41	0.47	2,378	-9	-0.11
JQVRZD		2,423	40	0.46	2,382	-6	-0.07
JVRB6W		2,360	-23	-0.26	2,371	-16	-0.20
LEU6MD		2,428	45	0.52	2,424	36	0.43
LKKCAT	X	2,925	542	6.30	3,066	679	8.11
LQ9Z3D		2,346	-37	-0.43	2,351	-37	-0.44
LWWKAY		2,445	63	0.73	2,413	25	0.30
NRTH93		2,584	202	2.34	2,586	198	2.37
NTMG9M	X	2,133	-250	-2.90	2,269	-119	-1.42
NZMT9Q		2,365	-17	-0.20	2,365	-23	-0.27
PK8ZDR		2,310	-73	-0.84	2,295	-93	-1.11



Plastics Interlaboratory Testing Program

Report #103

Analysis 734

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Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C45			Sample C46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PUFL7R		2,325	-58	-0.67	2,305	-83	-0.99
PYAN7L		2,399	16	0.19	2,401	14	0.16
QMT2Y7		2,265	-117	-1.37	2,284	-104	-1.24
QNL2PP		2,558	175	2.03	2,579	192	2.29
QV4H77	X	2,185	-198	-2.30	2,063	-324	-3.87
R32C2J		2,363	-20	-0.24	2,338	-50	-0.59
RQ78MR		2,430	47	0.54	2,407	19	0.23
TGXJHC	*	2,576	193	2.24	2,524	136	1.63
TQLY2U		2,223	-160	-1.86	2,257	-130	-1.56
TWU7YL		2,368	-15	-0.18	2,323	-65	-0.78
UCFBKJ		2,302	-81	-0.94	2,323	-64	-0.77
UXLJ24		2,311	-72	-0.84	2,330	-58	-0.69
V84FKG		2,364	-19	-0.22	2,364	-24	-0.28
WZVP3U		2,372	-11	-0.13	2,386	-2	-0.02
XF8CGJ		2,469	87	1.01	2,470	82	0.98
XPW3Y6		2,370	-13	-0.15	2,388	0	0.01
XX8Q9W	*	2,346	-37	-0.43	2,268	-120	-1.43
Y3G26X		2,345	-38	-0.44	2,349	-39	-0.47
YDXNEX		2,345	-38	-0.44	2,352	-36	-0.43
Z6ZHX3		2,283	-100	-1.17	2,298	-89	-1.06
ZK9JLC		2,366	-16	-0.19	2,395	7	0.09
ZQHP8A		2,450	67	0.78	2,453	65	0.78
ZRVEBM		2,428	45	0.52	2,454	66	0.79
ZYRCZB		2,330	-53	-0.61	2,336	-52	-0.62

Summary Statistics		
	Sample C45	Sample C46
Grand Means	2,382.9 MPa	2,387.6 MPa
Stnd Dev Btwn Labs	86.1 MPa	83.7 MPa
Statistics based on 54 of 59 reporting participants		

Sample C45: ABS & Sample C46: ABS



Comments on Assigned Data Flags for Test #734

QV4H77 (X) - Inconsistent in testing between samples, data for Sample C46 are low.

NTMG9M (X) - Inconsistent in testing between samples, data for sample C45 are low. Inconsistent within the determinations of sample C46.

LKKCAT (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample C46.

4ZBGVD (X) - Inconsistent in testing between samples, data for sample C45 are low. Inconsistent within the determinations of sample C45.

8UC4MK (X) - Data for both samples are low. Inconsistent within the determinations of both samples.



Plastics Interlaboratory Testing Program

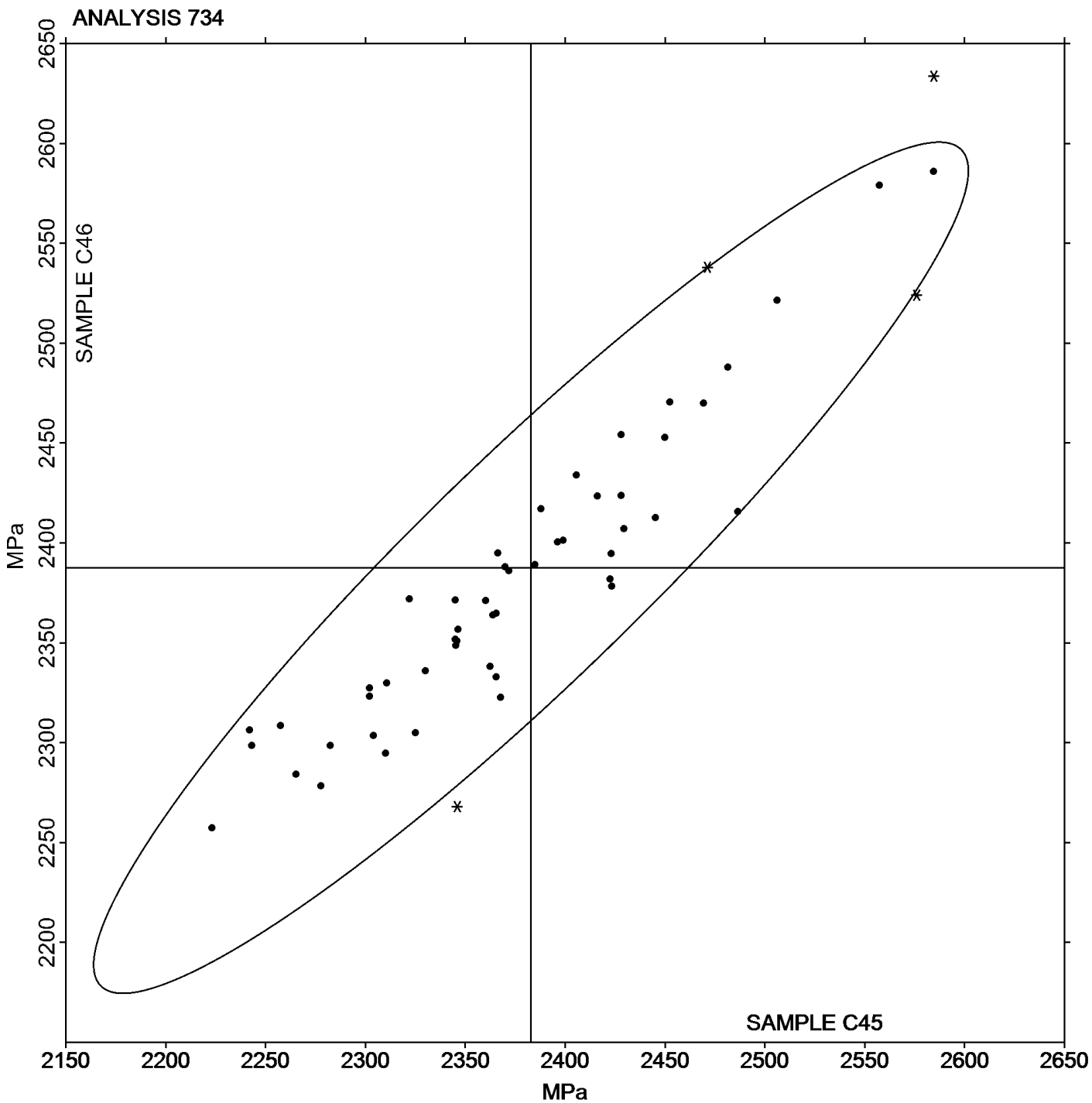
Analysis 734

Modulus of Elasticity - MPa

Report #103

3rd Qtr 2017

Grand Mean Sample C45: 2,382.88 MPa Grand Mean Sample C46: 2,387.57 MPa





Plastics Interlaboratory Testing Program

Report #103

Analysis 736

3rd Qtr 2017

Flexural Modulus - MPa

WebCode	Data Flag	Sample K45			Sample K46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23THEG		2,618	260	1.82	2,585	230	1.68
24F7MA	X	1,468	-890	-6.20	2,343	-12	-0.09
2CH9X3		2,582	224	1.56	2,576	220	1.61
2XD8X7		2,270	-87	-0.61	2,294	-62	-0.45
4TEDGG		2,402	45	0.31	2,426	71	0.52
68PFCA	X	2,252	-105	-0.73	2,373	18	0.13
6HQZE3		2,329	-29	-0.20	2,321	-34	-0.25
6NENA8		2,340	-17	-0.12	2,315	-41	-0.30
8JCNPT		2,334	-23	-0.16	2,335	-20	-0.15
8P3YW7		2,298	-59	-0.41	2,265	-90	-0.66
8RQ99T	*	2,784	427	2.97	2,782	427	3.12
8UC4MK		2,084	-273	-1.90	2,128	-228	-1.66
9DQTNP	X	2,371	13	0.09	1,906	-449	-3.28
BP9HD6		2,392	34	0.24	2,354	-2	-0.01
C3B9QX		2,286	-71	-0.50	2,277	-78	-0.57
DDNRPK		2,183	-175	-1.22	2,192	-163	-1.19
DJXXFY	*	2,224	-133	-0.93	2,166	-190	-1.39
EAKEJ7		2,573	216	1.50	2,570	215	1.57
EXUMWG		2,453	96	0.67	2,491	135	0.99
F2PTTX		2,326	-32	-0.22	2,332	-23	-0.17
GNGATH		2,308	-50	-0.35	2,324	-32	-0.23
HMXZ6A		2,243	-115	-0.80	2,266	-90	-0.66
J3P6ZA		2,279	-79	-0.55	2,272	-84	-0.61
JGTAPB		2,411	53	0.37	2,412	57	0.42
JH4DYT		2,321	-37	-0.26	2,307	-48	-0.35
JQVRZD		2,462	104	0.73	2,488	133	0.97
JVRB6W		2,511	154	1.07	2,488	133	0.97
LEU6MD		2,367	10	0.07	2,358	2	0.02
LQ9Z3D		2,307	-51	-0.35	2,284	-71	-0.52
LWWKAY		2,445	88	0.61	2,456	101	0.74
MXNZWF		2,241	-116	-0.81	2,266	-89	-0.65
NRTH93		2,332	-25	-0.17	2,329	-26	-0.19
NTMG9M		2,215	-143	-1.00	2,272	-83	-0.61
NZMT9Q		2,233	-125	-0.87	2,221	-135	-0.98
PK8ZDR		2,328	-30	-0.21	2,327	-29	-0.21



Plastics Interlaboratory Testing Program

Report #103

Analysis 736

3rd Qtr 2017

Flexural Modulus - MPa

WebCode	Data Flag	Sample K45			Sample K46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PUFL7R		2,213	-145	-1.01	2,248	-108	-0.79
QMT2Y7		2,310	-47	-0.33	2,321	-34	-0.25
QV4H77		2,340	-17	-0.12	2,372	17	0.12
R32C2J		2,327	-31	-0.21	2,334	-21	-0.15
RQ78MR		2,442	84	0.59	2,394	39	0.29
TQLY2U		2,310	-48	-0.33	2,306	-49	-0.36
TWU7YL		2,339	-18	-0.13	2,321	-35	-0.25
UB2V6X		2,208	-150	-1.04	2,220	-135	-0.99
UCFBKJ		2,566	209	1.46	2,543	188	1.38
UQF8KX		2,285	-73	-0.51	2,293	-62	-0.45
UXLJ24		2,493	135	0.94	2,495	139	1.02
V84FKG	*	2,128	-229	-1.60	2,092	-263	-1.93
WHWH2F		2,423	66	0.46	2,395	39	0.29
XF8CGJ		2,541	184	1.28	2,505	150	1.10
XPW3Y6		2,016	-341	-2.38	2,052	-303	-2.22
XX8Q9W		2,335	-23	-0.16	2,315	-40	-0.29
Y3G26X	X	2,440	83	0.58	2,309	-47	-0.34
YDXNEX		2,591	233	1.63	2,584	229	1.68
Z6ZHX3		2,272	-86	-0.60	2,305	-50	-0.37
ZQHP8A		2,463	105	0.73	2,418	63	0.46
ZYRCZB		2,506	148	1.03	2,484	129	0.94

Summary Statistics		
	Sample K45	Sample K46
Grand Means	2,357.4 MPa	2,355.3 MPa
Stnd Dev Btwn Labs	143.4 MPa	136.7 MPa

Statistics based on 52 of 56 reporting participants

Sample K45: ABS & Sample K46: ABS

Comments on Assigned Data Flags for Test #736

- 9DQTNP (X) - Inconsistent in testing between samples, data for sample K46 are low. Inconsistent within the determinations of sample K46.
- Y3G26X (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- 68PFCA (X) - Inconsistent in testing between samples.
- 24F7MA (X) - Inconsistent in testing between samples, data for sample K45 are low.



Plastics Interlaboratory Testing Program

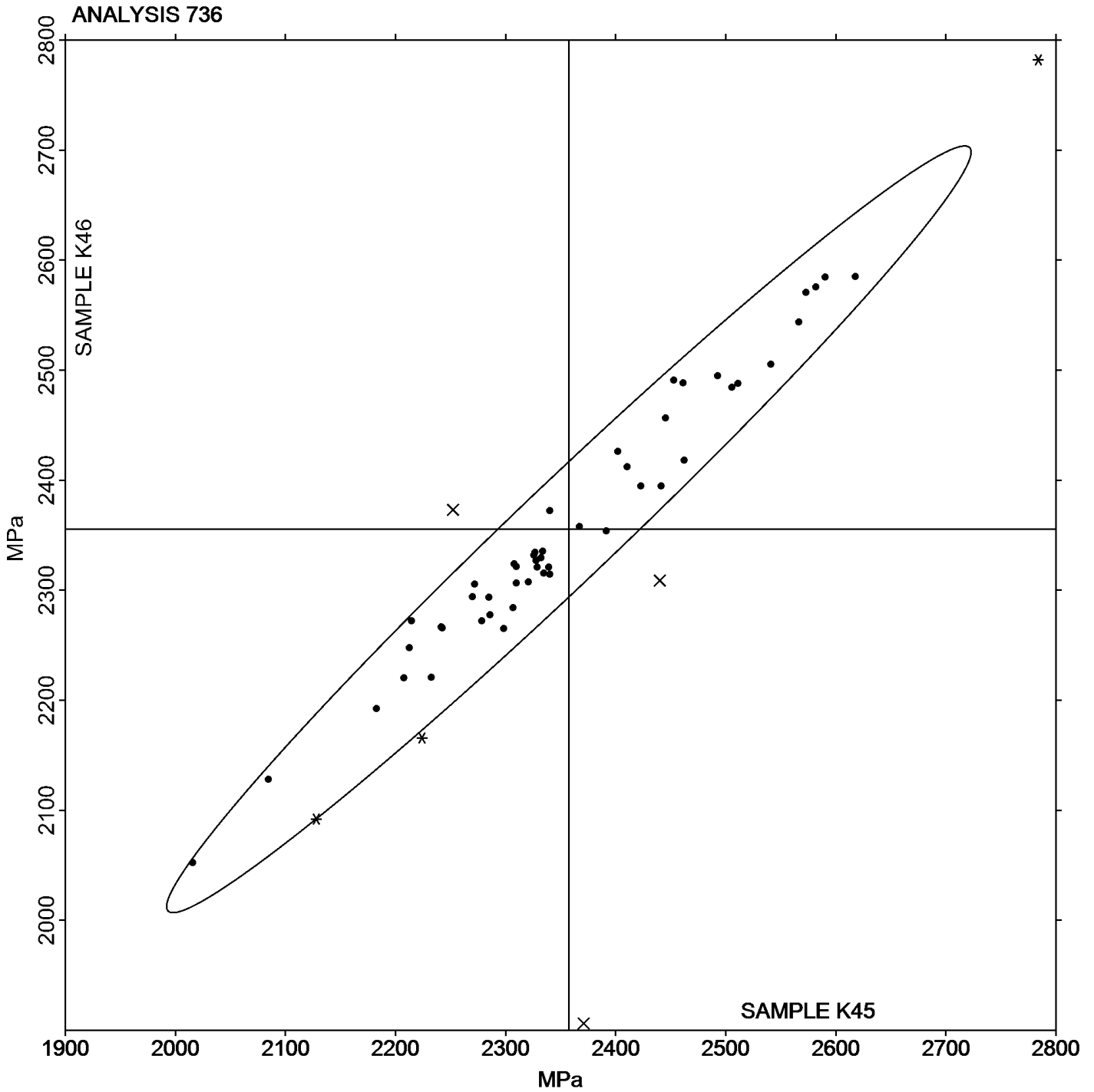
Analysis 736

Flexural Modulus - MPa

Report #103

3rd Qtr 2017

Grand Mean Sample K45: 2,357.41 MPa Grand Mean Sample K46: 2,355.34 MPa





Plastics Interlaboratory Testing Program

Report #103

Analysis 737

3rd Qtr 2017

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K45			Sample K46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23THEG		69.21	1.75	0.67	69.72	2.41	0.91
24F7MA	X	1,647.80	1,580.34	603.54	2,559.55	2,492.24	943.25
2CH9X3		72.40	4.94	1.89	72.87	5.56	2.10
2XD8X7		65.43	-2.03	-0.78	65.80	-1.51	-0.57
4TEDGG		67.15	-0.31	-0.12	66.91	-0.40	-0.15
68PFCA		64.90	-2.56	-0.98	65.52	-1.79	-0.68
6HQZE3		68.36	0.90	0.34	68.12	0.81	0.31
6NENA8		69.36	1.90	0.73	68.67	1.36	0.51
8JCNPT		66.60	-0.86	-0.33	66.71	-0.60	-0.23
8RQ99T		73.69	6.23	2.38	73.23	5.92	2.24
8UC4MK		66.94	-0.52	-0.20	66.18	-1.13	-0.43
BP9HD6		66.02	-1.44	-0.55	64.64	-2.67	-1.01
C3B9QX		65.43	-2.03	-0.78	65.31	-2.00	-0.76
DDNRPK		64.79	-2.67	-1.02	64.68	-2.63	-0.99
DJXXFY		64.99	-2.47	-0.94	64.85	-2.46	-0.93
EAKEJ7		72.15	4.69	1.79	71.84	4.53	1.72
EXUMWG		68.01	0.55	0.21	67.55	0.24	0.09
F2PTTX		67.87	0.41	0.16	68.01	0.70	0.26
GNGATH		65.38	-2.08	-0.80	66.36	-0.95	-0.36
HMXZ6A		63.41	-4.05	-1.55	63.45	-3.86	-1.46
J3P6ZA		65.52	-1.94	-0.74	65.69	-1.62	-0.61
JGTAPB		67.58	0.12	0.05	68.04	0.73	0.28
JH4DYT		66.61	-0.85	-0.32	66.13	-1.18	-0.45
JQVRZD		70.23	2.77	1.06	71.32	4.01	1.52
JVRB6W		73.22	5.76	2.20	72.70	5.39	2.04
LEU6MD		67.94	0.48	0.18	67.32	0.01	0.01
LQ9Z3D		66.36	-1.10	-0.42	66.27	-1.04	-0.39
LWWKAY		70.38	2.92	1.12	69.90	2.59	0.98
MXNZWF		66.41	-1.05	-0.40	66.58	-0.73	-0.27
NRTH93		68.08	0.62	0.24	68.34	1.03	0.39
NTMG9M	X	65.08	-2.38	-0.91	67.33	0.02	0.01
NZMT9Q		67.08	-0.38	-0.15	66.56	-0.75	-0.28
PK8ZDR		66.52	-0.94	-0.36	66.44	-0.87	-0.33
PUFL7R		65.60	-1.86	-0.71	66.03	-1.28	-0.49
QMT2Y7		65.93	-1.53	-0.58	65.66	-1.65	-0.62



Plastics Interlaboratory Testing Program

Report #103

Analysis 737

3rd Qtr 2017

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	<u>Sample K45</u>			<u>Sample K46</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
R32C2J		65.84	-1.62	-0.62	66.00	-1.31	-0.50
RQ78MR		67.87	0.41	0.16	66.83	-0.48	-0.18
TGXJHC		72.54	5.08	1.94	71.74	4.43	1.68
TQLY2U		65.11	-2.35	-0.90	64.80	-2.51	-0.95
TWU7YL		66.72	-0.74	-0.28	66.06	-1.25	-0.47
UQF8KX		64.36	-3.10	-1.18	64.10	-3.21	-1.21
UXLJ24		68.88	1.42	0.54	69.33	2.02	0.76
V84FKG		62.68	-4.78	-1.82	62.28	-5.03	-1.90
WHWH2F		70.45	2.99	1.14	69.91	2.60	0.98
XF8CGJ		71.10	3.64	1.39	70.25	2.94	1.11
XPW3Y6		65.28	-2.18	-0.83	66.00	-1.31	-0.50
XX8Q9W		64.40	-3.06	-1.17	63.44	-3.87	-1.46
Y3G26X		64.18	-3.28	-1.25	63.52	-3.79	-1.44
YDXNEX		69.10	1.64	0.63	69.90	2.59	0.98
Z6ZHX3		67.15	-0.31	-0.12	66.64	-0.67	-0.25
ZQHP8A		67.48	0.02	0.01	66.58	-0.73	-0.28
ZYRCZB		70.35	2.89	1.10	70.70	3.39	1.28

Summary Statistics		<u>Sample K45</u>	<u>Sample K46</u>
Grand Means		67.460 MPa	67.310 MPa
Stnd Dev Btwn Labs		2.618 MPa	2.642 MPa
Statistics based on 50 of 52 reporting participants			

Sample K45: ABS & Sample K46: ABS

Comments on Assigned Data Flags for Test #737

NTMG9M (X) - Inconsistent in testing between samples.

24F7MA (X) - Extreme data.



Plastics Interlaboratory Testing Program

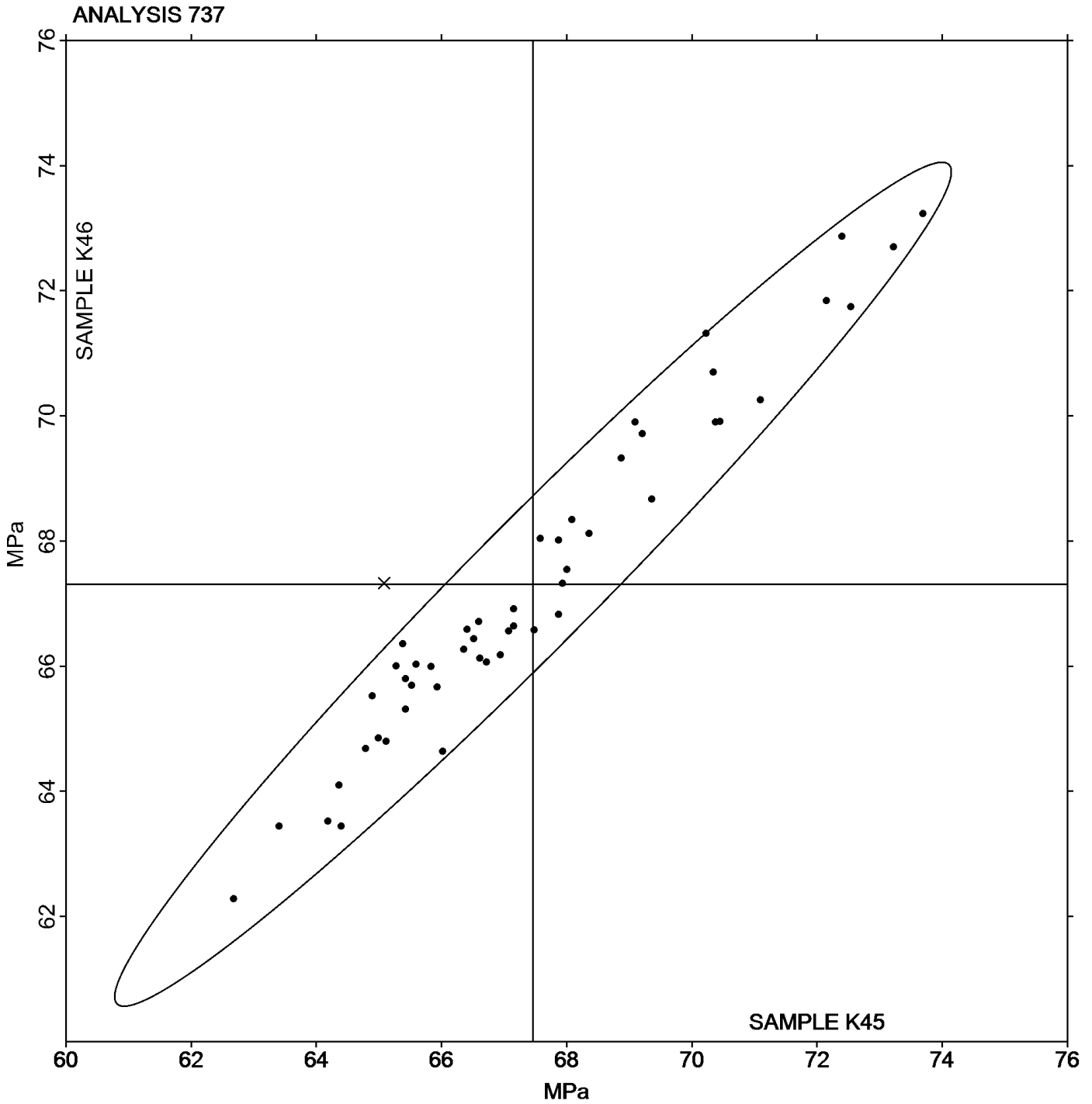
Report #103

Analysis 737

3rd Qtr 2017

Flexural Stress at 3.5% Strain - MPa

Grand Mean Sample K45: 67.460 MPa Grand Mean Sample K46: 67.310 MPa





Plastics Interlaboratory Testing Program

Report #103

Analysis 738

3rd Qtr 2017

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K45			Sample K46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23THEG		70.19	2.17	0.81	70.88	2.98	1.13
24F7MA	X	48.02	-20.00	-7.45	65.99	-1.90	-0.72
2CH9X3		73.12	5.09	1.90	73.63	5.74	2.18
4TEDGG		67.78	-0.24	-0.09	67.42	-0.47	-0.18
68PFCA		66.09	-1.93	-0.72	66.51	-1.38	-0.52
6HQZE3		69.17	1.15	0.43	68.89	0.99	0.38
6NENA8		71.31	3.29	1.23	70.24	2.34	0.89
8P3YW7		69.10	1.08	0.40	67.00	-0.89	-0.34
8RQ99T		74.08	6.05	2.26	73.67	5.78	2.19
8UC4MK		66.94	-1.08	-0.40	66.18	-1.71	-0.65
9DQTNP		66.43	-1.59	-0.59	66.84	-1.05	-0.40
BP9HD6		66.70	-1.32	-0.49	65.50	-2.39	-0.91
C3B9QX		66.46	-1.57	-0.58	66.35	-1.54	-0.59
DDNRPK		64.24	-3.78	-1.41	65.30	-2.59	-0.98
DJXXFY		66.24	-1.78	-0.66	66.06	-1.83	-0.70
EAKEJ7		73.14	5.12	1.91	72.62	4.73	1.80
EXUMWG		62.47	-5.56	-2.07	62.99	-4.90	-1.86
GNGATH		66.29	-1.73	-0.65	67.21	-0.68	-0.26
HMXZ6A		64.76	-3.26	-1.22	64.92	-2.97	-1.13
J3P6ZA		66.53	-1.50	-0.56	66.82	-1.07	-0.41
JGTAPB		68.44	0.42	0.16	68.94	1.05	0.40
JH4DYT		67.96	-0.06	-0.02	67.32	-0.57	-0.22
JQVRZD		71.15	3.13	1.17	72.15	4.26	1.62
LEU6MD		68.94	0.92	0.34	68.47	0.57	0.22
LWWKAY		71.96	3.93	1.47	71.01	3.12	1.18
MXNZWF		67.52	-0.50	-0.19	67.64	-0.25	-0.09
NRTH93	X	115.48	47.46	17.68	115.74	47.85	18.16
NTMG9M	*	66.44	-1.58	-0.59	68.62	0.73	0.28
PK8ZDR		67.50	-0.52	-0.19	67.44	-0.45	-0.17
PUFL7R		66.86	-1.16	-0.43	67.02	-0.87	-0.33
R32C2J		66.53	-1.49	-0.55	66.74	-1.15	-0.44
RQ78MR		68.87	0.85	0.32	67.84	-0.05	-0.02
TQLY2U		66.22	-1.80	-0.67	65.67	-2.22	-0.84
TWU7YL		68.03	0.01	0.00	67.71	-0.18	-0.07
UCFBKJ		70.70	2.68	1.00	69.30	1.41	0.54



Plastics Interlaboratory Testing Program

Report #103

Analysis 738

3rd Qtr 2017

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K45			Sample K46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UQF8KX		65.61	-2.41	-0.90	65.18	-2.71	-1.03
V84FKG		63.80	-4.22	-1.57	63.26	-4.63	-1.76
WHWH2F		71.36	3.34	1.25	70.53	2.63	1.00
XPW3Y6		65.28	-2.74	-1.02	66.00	-1.89	-0.72
XX8Q9W		65.28	-2.74	-1.02	64.31	-3.58	-1.36
YDXNEX		69.86	1.84	0.68	71.08	3.19	1.21
ZQHP8A		68.72	0.70	0.26	67.00	-0.89	-0.34
ZYRCZB		70.81	2.79	1.04	71.29	3.39	1.29

Summary Statistics

	Sample K45	Sample K46
Grand Means	68.022 MPa	67.891 MPa
Std Dev Btwn Labs	2.684 MPa	2.635 MPa

Statistics based on 41 of 43 reporting participants

Sample K45: ABS & Sample K46: ABS

Comments on Assigned Data Flags for Test #738

24F7MA (X) - Inconsistent in testing between samples, data for sample K45 are low.

NRTH93 (X) - Data for both samples are high. Inconsistent within the determinations of sample K45.



Plastics Interlaboratory Testing Program

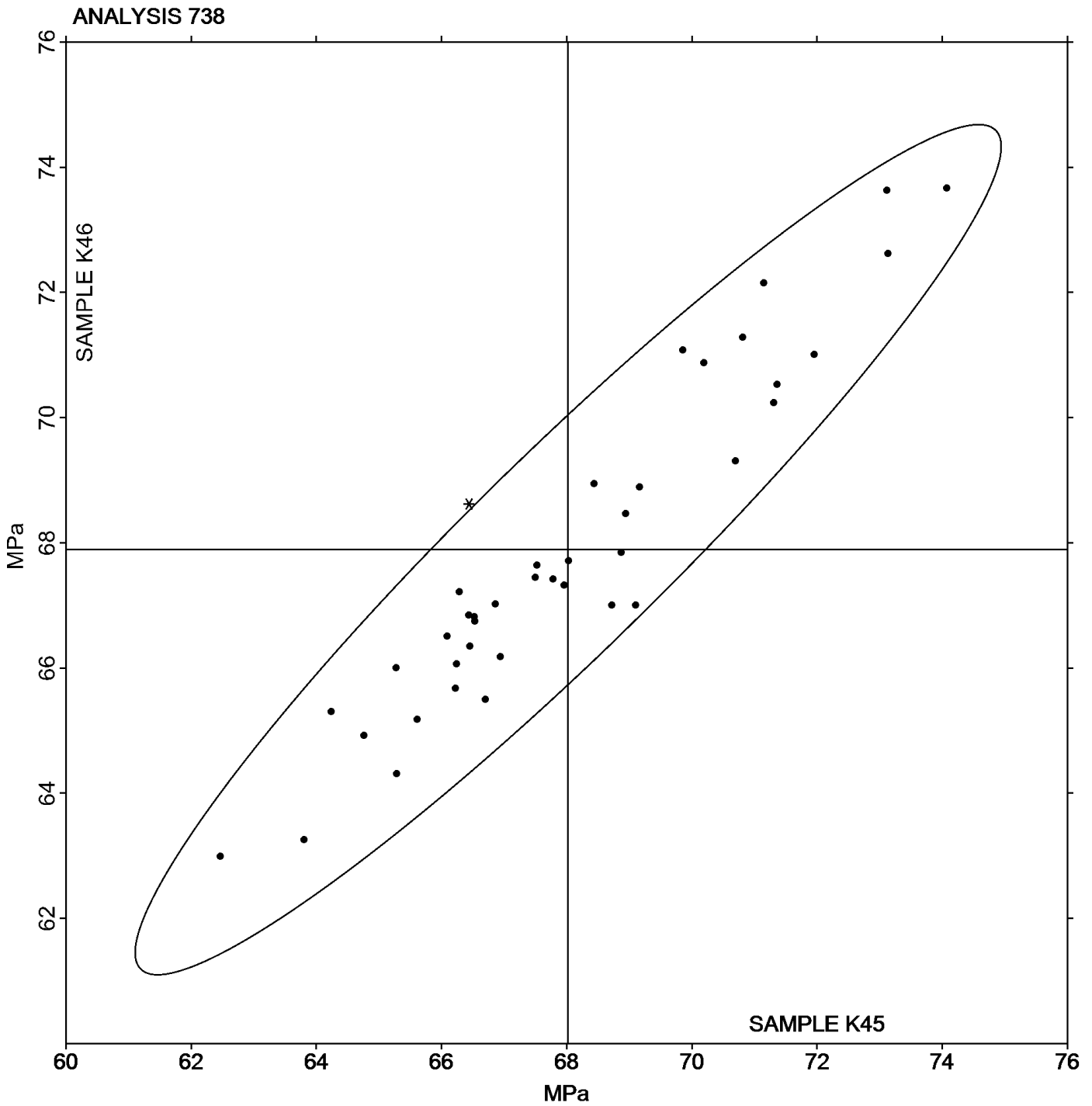
Analysis 738

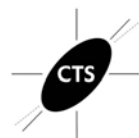
Flexural Stress at Yield - MPa

Report #103

3rd Qtr 2017

Grand Mean Sample K45: 68.022 MPa Grand Mean Sample K46: 67.891 MPa





Plastics Interlaboratory Testing Program

Report #103

Analysis 750

3rd Qtr 2017

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

WebCode	Data Flag	Sample X45			Sample X46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
23THEG		5.43	0.01	0.05	6.43	0.03	0.10	KA
24F7MA	X	13.28	7.86	41.63	15.76	9.35	37.78	TO
2CH9X3		5.47	0.05	0.29	6.49	0.09	0.34	DY
2E2CJE		5.49	0.07	0.38	6.79	0.38	1.54	TO
2L4C62		5.45	0.03	0.18	6.60	0.20	0.79	TO
376UHB		5.44	0.02	0.13	6.55	0.14	0.57	CE
3MWKQQ		5.04	-0.38	-1.99	5.97	-0.43	-1.76	DY
3RJLJN		5.34	-0.08	-0.40	6.44	0.04	0.14	XX
4TEDGG		5.30	-0.12	-0.64	6.43	0.03	0.10	TY
63Y4C8		5.29	-0.12	-0.64	6.28	-0.13	-0.52	CE
6AEPJP		5.61	0.20	1.05	6.75	0.35	1.41	CE
6GGTBA		5.47	0.05	0.26	6.16	-0.24	-0.99	DY
6NENA8		5.55	0.14	0.73	6.43	0.03	0.11	TO
7VBP37		5.54	0.13	0.66	6.44	0.04	0.14	TO
8DPNKA		5.30	-0.11	-0.60	6.28	-0.13	-0.51	TO
8JCNPT		5.30	-0.12	-0.61	6.35	-0.06	-0.24	TO
8UC4MK		5.35	-0.07	-0.34	6.35	-0.05	-0.22	TO
8VRRHY		5.30	-0.12	-0.61	6.30	-0.10	-0.42	TO
9D3M7B	X	5.50	0.08	0.42	7.24	0.84	3.37	TO
9D6C9M		5.42	0.00	0.00	6.17	-0.23	-0.95	TO
9DQTNP	X	6.97	1.55	8.21	8.39	1.99	8.02	TO
9LJ27V	X	12.96	7.54	39.94	15.47	9.06	36.60	TO
A4WDJX		5.52	0.10	0.53	6.53	0.12	0.49	DY
ABBZXF		5.30	-0.12	-0.61	6.20	-0.20	-0.83	TO
AJ9JK4	*	5.94	0.52	2.76	6.98	0.58	2.34	TO
AMME68		5.35	-0.07	-0.37	6.48	0.08	0.30	TO
AWQKUF		5.28	-0.14	-0.72	6.40	-0.01	-0.04	TO
AXR4A4		5.15	-0.27	-1.40	6.00	-0.40	-1.64	TO
BEAMFA		5.50	0.08	0.45	6.65	0.25	0.99	XX
BP9HD6	X	5.60	0.19	0.98	5.48	-0.92	-3.73	TO
BZKW67		5.62	0.20	1.07	6.62	0.21	0.85	TO
CGCU82		5.46	0.04	0.23	6.49	0.08	0.33	CE
CGTYRK		5.47	0.05	0.28	6.41	0.00	0.02	TO
CNFTQ4		5.45	0.04	0.20	6.49	0.09	0.34	CE
CUZXDC		5.11	-0.31	-1.64	6.11	-0.29	-1.17	TO



Plastics Interlaboratory Testing Program

Report #103

Analysis 750

3rd Qtr 2017

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

WebCode	Data Flag	Sample X45			Sample X46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
EHZZQN	*	5.53	0.11	0.61	5.97	-0.43	-1.76	KA
EXUMWG		5.52	0.10	0.56	6.61	0.21	0.83	TO
FLW28W		5.56	0.15	0.77	6.44	0.03	0.14	KA
GEEXWN	X	5.94	0.52	2.78	7.36	0.96	3.86	TO
GL8CBU		5.54	0.12	0.66	6.15	-0.26	-1.05	TO
HGBXCB	*	5.30	-0.12	-0.61	5.85	-0.55	-2.24	TO
JH3BDU		5.50	0.08	0.45	6.15	-0.25	-1.03	DY
JV6WQR		5.03	-0.39	-2.04	5.99	-0.42	-1.70	TO
JVRB6W		5.40	-0.01	-0.07	6.62	0.22	0.87	DY
KQTJ8J		5.40	-0.02	-0.08	6.30	-0.10	-0.42	TO
LEU6MD		5.55	0.13	0.71	6.65	0.25	0.99	TO
LHC66E		5.65	0.23	1.24	6.80	0.40	1.60	TO
LKKCAT		5.54	0.12	0.66	6.41	0.00	0.00	TO
LN3EEC		5.51	0.10	0.51	6.88	0.47	1.91	TO
LQ9Z3D		5.46	0.05	0.26	6.27	-0.13	-0.54	KA
LWWKAY		5.65	0.23	1.24	6.70	0.30	1.19	AT
MXNZWF		5.55	0.13	0.71	6.55	0.15	0.59	TO
NZMT9Q		5.50	0.08	0.45	6.45	0.05	0.18	DY
P36H4M	*	4.88	-0.54	-2.86	6.03	-0.38	-1.53	TO
PK8ZDR		5.37	-0.05	-0.24	6.47	0.07	0.26	TO
PUFL7R		5.45	0.03	0.16	6.52	0.11	0.44	GO
QJCVZB	*	5.90	0.48	2.57	6.70	0.30	1.19	DY
QNL2PP		5.38	-0.04	-0.19	6.58	0.17	0.69	XX
QNQA3J		5.35	-0.07	-0.34	6.75	0.35	1.39	TO
QPXLNR		5.54	0.12	0.66	6.58	0.18	0.71	XX
QQALJZ	X	5.10	-0.32	-1.67	5.55	-0.85	-3.45	TO
QZYC2L	X	6.00	0.58	3.10	6.60	0.20	0.79	DY
R32C2J	X	4.25	-1.17	-6.17	6.50	0.10	0.38	WZ
R8DK3N		5.36	-0.06	-0.29	6.08	-0.32	-1.31	TO
T3CV27		5.40	-0.02	-0.08	6.50	0.10	0.38	TY
T9KZBE		5.45	0.04	0.21	6.22	-0.19	-0.76	DY
TGXJHC		5.41	-0.01	-0.05	6.48	0.08	0.30	DY
TQLY2U		5.20	-0.22	-1.14	6.40	0.00	-0.02	TO
TRC864		5.08	-0.34	-1.77	6.15	-0.25	-1.03	WZ
TWU7YL		5.65	0.23	1.24	6.45	0.05	0.18	TO



Plastics Interlaboratory Testing Program

Report #103

Analysis 750

3rd Qtr 2017

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

WebCode	Data Flag	Sample X45			Sample X46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
UB2V6X		5.30	-0.12	-0.64	6.31	-0.09	-0.38	XX
UCFBKJ		5.72	0.30	1.61	6.64	0.24	0.95	TO
UQF8KX		5.46	0.04	0.24	6.57	0.16	0.65	DY
UXHYCF		5.41	-0.01	-0.05	6.51	0.11	0.42	TO
UXLJ24		5.37	-0.05	-0.27	6.56	0.15	0.61	DY
V84FKG		5.56	0.14	0.74	6.49	0.09	0.34	GO
WJBUXY		5.48	0.06	0.32	6.22	-0.19	-0.77	DY
WZVP3U	*	4.92	-0.50	-2.62	5.98	-0.42	-1.72	XX
XF8CGJ		5.38	-0.03	-0.18	6.63	0.23	0.92	DY
XPW3Y6		5.20	-0.22	-1.14	6.00	-0.40	-1.64	TO
XX8Q9W		5.21	-0.21	-1.09	5.99	-0.41	-1.68	CE
Y3G26X	X	7.21	1.79	9.49	8.78	2.37	9.57	DY
Y3YML8		5.28	-0.13	-0.71	6.05	-0.35	-1.42	XX
YDXNEX		5.41	-0.01	-0.04	6.19	-0.21	-0.87	CE
YULY4L		5.87	0.45	2.41	6.94	0.53	2.14	TO
Z6ZHX3		5.14	-0.28	-1.46	6.37	-0.04	-0.16	WZ
ZH2AFZ		5.56	0.14	0.74	6.64	0.23	0.93	TO
ZJJ4HV		5.56	0.14	0.74	6.45	0.05	0.18	TO
ZK9JLC		5.35	-0.07	-0.34	6.51	0.11	0.42	TO
ZQHP8A		5.37	-0.05	-0.26	6.14	-0.26	-1.07	WZ
ZYRCZB		5.30	-0.12	-0.63	6.42	0.01	0.05	GO

Summary Statistics		
	Sample X45	Sample X46
Grand Means	5.415 grams/10 mins	6.405 grams/10 mins
Std Dev Btwn Labs	0.189 grams/10 mins	0.248 grams/10 mins
Statistics based on 81 of 91 reporting participants		

Sample X45: LDPE & Sample X46: LDPE



Plastics Interlaboratory Testing Program

Analysis 750

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

Report #103

3rd Qtr 2017

Comments on Assigned Data Flags for Test #750

- 9LJ27V (X) - Data for both samples are high.
- GEEXWN (X) - Data for both samples are high.
- 9DQTNP (X) - Data for both samples are high.
- Y3G26X (X) - Data for both samples are high.
- QZYC2L (X) - Data for sample X45 are high.
- R32C2J (X) - Data for sample X45 are low.
- BP9HD6 (X) - Data for sample X46 are low.
- 9D3M7B (X) - Data for sample X46 are high.
- QQALJZ (X) - Data for sample X46 are low.
- 24F7MA (X) - Data for both samples are high.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

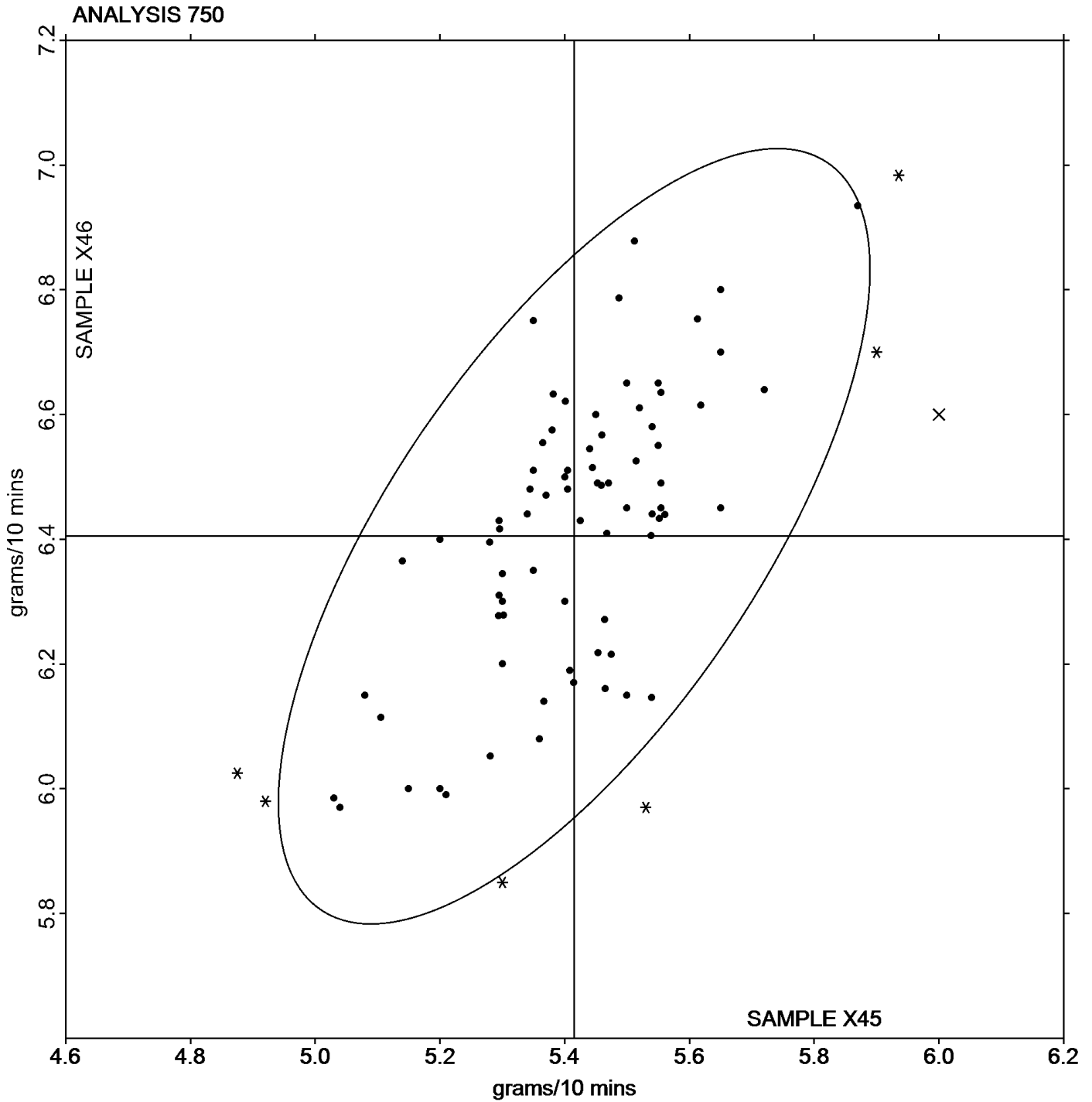
Analysis 750

Report #103

3rd Qtr 2017

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

Grand Mean Sample X45: 5.4151 grams/10 mins Grand Mean Sample X46: 6.4049 grams/10 mins





Plastics Interlaboratory Testing Program

Report #103

Analysis 755

3rd Qtr 2017

Moisture Content of Plastics

WebCode	Data Flag	Sample Y45			Sample Y46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
22TKXT		0.22533	0.02721	0.86	0.19733	0.01716	0.61	CS
369FVH		0.18447	-0.01366	-0.43	0.18583	0.00566	0.20	MT
6GGTBA		0.23667	0.03854	1.21	0.20630	0.02612	0.93	AZ
9DQTNP		0.24457	0.04644	1.46	0.22243	0.04226	1.50	MS
9LJ27V	X	0.30580	0.10767	3.38	0.29627	0.11609	4.12	AZ
A4WDJX		0.20467	0.00654	0.21	0.18567	0.00549	0.19	MJ
A7KEGE		0.12000	-0.07813	-2.46	0.12000	-0.06018	-2.14	XX
ABBZXF		0.22000	0.02187	0.69	0.20000	0.01982	0.70	MU
AMME68		0.19753	-0.00059	-0.02	0.18933	0.00916	0.33	MR
BP9HD6		0.19233	-0.00579	-0.18	0.15867	-0.02151	-0.76	AZ
BZKW67		0.21600	0.01787	0.56	0.20900	0.02882	1.02	MB
CUZXDC	X	0.49447	0.29634	9.31	0.48423	0.30406	10.79	CT
DDNRPK		0.21800	0.01987	0.62	0.19800	0.01782	0.63	MK
E4EWVD		0.20113	0.00301	0.09	0.17920	-0.00098	-0.03	AZ
EEHZ9M		0.18267	-0.01546	-0.49	0.16267	-0.01751	-0.62	AZ
GZBNUZ		0.12739	-0.07074	-2.22	0.11548	-0.06470	-2.30	MT
JH3BDU		0.21400	0.01587	0.50	0.18267	0.00249	0.09	AZ
KYLRUV		0.17422	-0.02390	-0.75	0.15291	-0.02727	-0.97	MU
LEU6MD	X	0.43600	0.23787	7.48	0.43733	0.25716	9.13	MK
LHC66E		0.23250	0.03437	1.08	0.21050	0.03032	1.08	ML
MXNZWF		0.22933	0.03121	0.98	0.19967	0.01949	0.69	SA
NZMT9Q		0.12637	-0.07176	-2.26	0.12123	-0.05894	-2.09	MU
PMA6KK		0.18850	-0.00963	-0.30	0.16050	-0.01968	-0.70	SB
QV4H77		0.20487	0.00674	0.21	0.19027	0.01009	0.36	MD
TGXJHC		0.20933	0.01121	0.35	0.18100	0.00082	0.03	MR
UXLJ24		0.17800	-0.02013	-0.63	0.18400	0.00382	0.14	MB
VR6MND		0.20533	0.00721	0.23	0.18200	0.00182	0.06	ML
WJBUXY		0.21633	0.01821	0.57	0.19867	0.01849	0.66	MS
XF8CGJ		0.23000	0.03187	1.00	0.21900	0.03882	1.38	CT
XHVYLR		0.19700	-0.00113	-0.04	0.17633	-0.00384	-0.14	ML
XX8Q9W		0.18900	-0.00913	-0.29	0.18333	0.00316	0.11	MU
YDXNEX		0.21843	0.02031	0.64	0.19593	0.01576	0.56	MK
ZJJ4HV		0.15980	-0.03833	-1.20	0.13733	-0.04284	-1.52	AZ



Plastics Interlaboratory Testing Program

Report #103

Analysis 755

3rd Qtr 2017

Moisture Content of Plastics

Summary Statistics		
	<u>Sample Y45</u>	<u>Sample Y46</u>
Grand Means	0.198126 Percent	0.180175 Percent
Stnd Dev Btwn Labs	0.031816 Percent	0.028172 Percent
Statistics based on 30 of 33 reporting participants		

Sample Y45: ABS & Sample Y46: ABS

Comments on Assigned Data Flags for Test #755

9LJ27V (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.

LEU6MD (X) - Data for both samples are high.

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

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 Coulineter 756 KF | MS Metrohm Coulometer 831 KF |
| MT Mettler Toledo DL39 | MU Mettler Toledo |
| SA Sartorius MA30 | SB Sartorius Mark 3 |
| XX Instrument manufacturer not specified by lab | |



Plastics Interlaboratory Testing Program

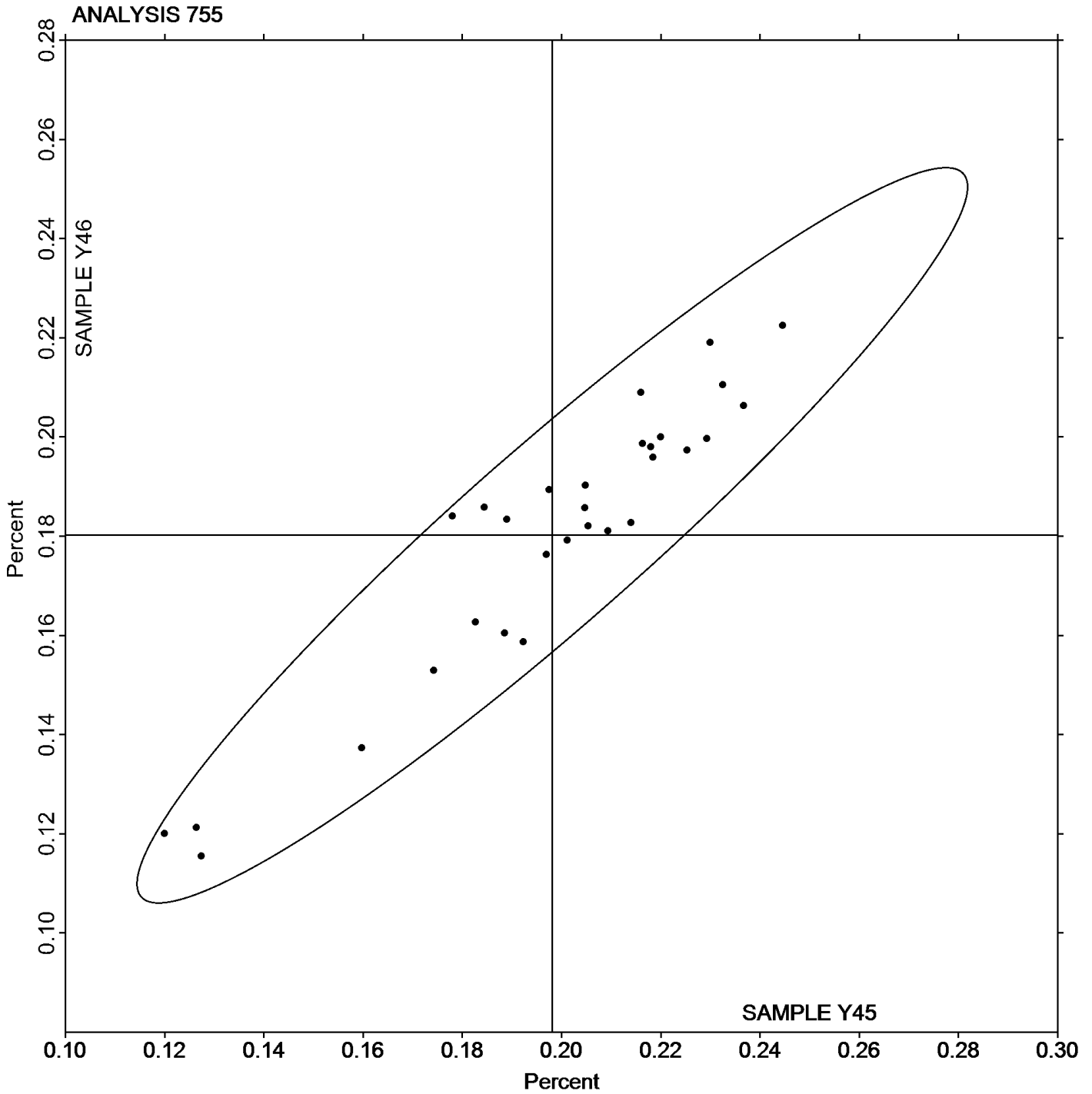
Analysis 755

Moisture Content of Plastics

Report #103

3rd Qtr 2017

Grand Mean Sample Y45: 0.19813 Percent Grand Mean Sample Y46: 0.18018 Percent





Plastics Interlaboratory Testing Program

Report #103

Analysis 757

3rd Qtr 2017

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L45			Sample L46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
22TKXT		19.800	0.059	0.89	19.790	0.042	0.75
23THEG		19.761	0.020	0.30	19.756	0.008	0.15
2CH9X3		19.755	0.014	0.21	19.785	0.037	0.66
2Z4BQD		19.805	0.064	0.97	19.760	0.012	0.21
369FVH		19.795	0.054	0.81	19.785	0.037	0.66
376UHB		19.810	0.069	1.04	19.800	0.052	0.93
3RJLJN		19.630	-0.111	-1.67	19.680	-0.068	-1.21
6NENA8		19.737	-0.004	-0.06	19.678	-0.070	-1.26
8JCNPT	*	19.770	0.029	0.44	19.665	-0.083	-1.48
9DQTNP		19.810	0.069	1.04	19.750	0.002	0.04
9EFXGW		19.695	-0.046	-0.69	19.675	-0.073	-1.30
9LJ27V	*	19.565	-0.176	-2.65	19.675	-0.073	-1.30
A4WDJX	X	19.370	-0.371	-5.58	19.765	0.017	0.30
ABBZXF		19.800	0.059	0.89	19.800	0.052	0.93
AJ9JK4		19.720	-0.021	-0.31	19.677	-0.071	-1.27
AMME68		19.700	-0.041	-0.62	19.765	0.017	0.30
BP9HD6		19.775	0.034	0.51	19.772	0.024	0.43
BZKW67	X	19.695	-0.046	-0.69	20.090	0.342	6.10
CUZXDC		19.743	0.002	0.03	19.808	0.060	1.07
DDNRPK	X	19.635	-0.106	-1.59	18.765	-0.983	-17.55
EEHZ9M	X	64.985	45.244	681.07	62.965	43.217	771.39
ER73QF		19.780	0.039	0.59	19.780	0.032	0.57
EXUMWG		19.720	-0.021	-0.31	19.810	0.062	1.11
GNGATH	X	19.505	-0.236	-3.55	19.770	0.022	0.39
GY2JGC		19.750	0.009	0.14	19.735	-0.013	-0.23
HW9AL2		19.705	-0.036	-0.54	19.775	0.027	0.48
JH3BDU		19.650	-0.091	-1.37	19.655	-0.093	-1.66
JQVRZD		19.830	0.089	1.34	19.810	0.062	1.11
JVRB6W		19.815	0.074	1.12	19.850	0.102	1.82
L24DZN		19.770	0.029	0.44	19.735	-0.013	-0.23
LEU6MD		19.770	0.029	0.44	19.775	0.027	0.48
LHC66E		19.790	0.049	0.74	19.785	0.037	0.66
LN3EEC		19.727	-0.014	-0.20	19.771	0.023	0.41
LQ9Z3D		19.785	0.044	0.66	19.730	-0.018	-0.32
MXNZWF		19.775	0.034	0.51	19.740	-0.008	-0.14



Plastics Interlaboratory Testing Program

Report #103

Analysis 757

3rd Qtr 2017

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L45			Sample L46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NZMT9Q		19.680	-0.060	-0.91	19.686	-0.062	-1.10
PK8ZDR		19.759	0.018	0.27	19.768	0.020	0.36
QMT2Y7		19.730	-0.011	-0.16	19.705	-0.043	-0.77
QNQA3J		19.760	0.019	0.29	19.805	0.057	1.02
QPXLNR		19.600	-0.141	-2.12	19.700	-0.048	-0.86
QV4H77		19.765	0.024	0.36	19.740	-0.008	-0.14
R27ZVH		19.758	0.017	0.26	19.754	0.006	0.11
R32C2J		19.805	0.064	0.97	19.780	0.032	0.57
TQLY2U		19.665	-0.076	-1.14	19.615	-0.133	-2.37
TRC864		19.757	0.016	0.24	19.814	0.065	1.17
UCFBKJ		19.760	0.019	0.29	19.745	-0.003	-0.05
UJ24X6		19.770	0.029	0.44	19.755	0.007	0.12
UXLJ24		19.790	0.049	0.74	19.775	0.027	0.48
V84FKG		19.765	0.024	0.36	19.835	0.087	1.55
WJBUXY	*	19.575	-0.166	-2.50	19.720	-0.028	-0.50
X8AVGD		19.790	0.049	0.74	19.810	0.062	1.11
XF8CGJ		19.645	-0.096	-1.44	19.680	-0.068	-1.21
XUMNJC		19.749	0.008	0.11	19.764	0.015	0.28
XX8Q9W		19.798	0.057	0.86	19.759	0.011	0.20
Y3YML8	*	19.552	-0.189	-2.85	19.586	-0.163	-2.90
YDXNEX	X	19.470	-0.271	-4.08	19.690	-0.058	-1.04
YRYJB6		19.740	-0.001	-0.01	19.735	-0.013	-0.23
Z6ZHX3		19.775	0.034	0.51	19.795	0.047	0.84
ZQHP8A	X	19.605	-0.136	-2.05	19.470	-0.278	-4.96

Summary Statistics		
	Sample L45	Sample L46
Grand Means	19.7409 Percent	19.7480 Percent
Stnd Dev Btwn Labs	0.0664 Percent	0.0560 Percent
Statistics based on 52 of 59 reporting participants		

Sample L45: PP & Sample L46: PP



Comments on Assigned Data Flags for Test #757

A4WDJX (X) - Data for sample L45 are low.

EEHZ9M (X) - Extreme data.

YDXNEX (X) - Data for sample L45 are low.

DDNRPK (X) - Data for sample L46 are low. Inconsistent within the determinations of both samples.

GNGATH (X) - Data for sample L45 are low. Inconsistent within the determinations of sample L45.

ZQHP8A (X) - Data for sample L46 are low. Inconsistent within the determinations of sample L46.

BZKW67 (X) - Data for sample L46 are high. Inconsistent within the determinations of sample L46.



Plastics Interlaboratory Testing Program

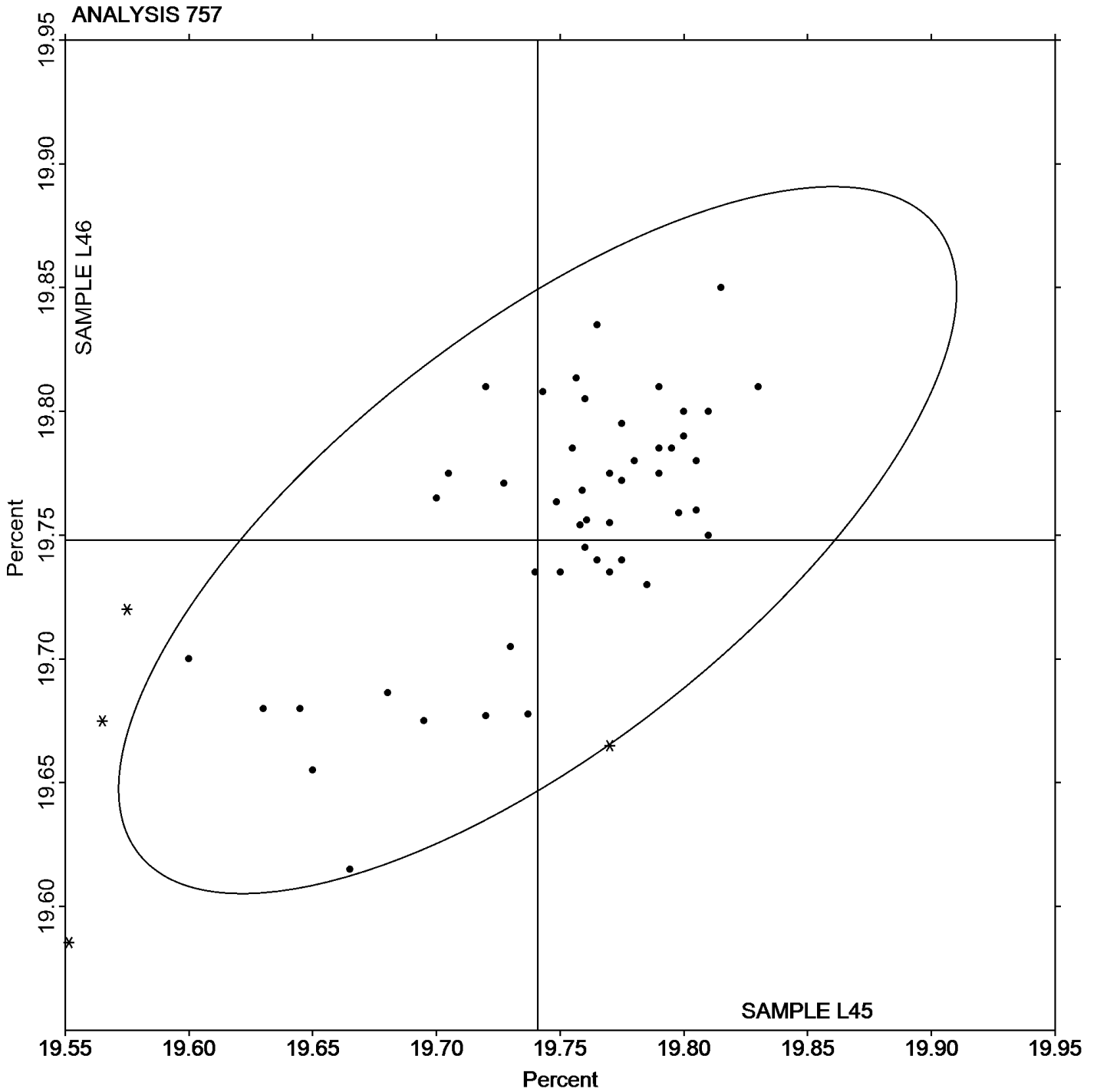
Analysis 757

Ash Content in Thermoplastics - Percent

Report #103

3rd Qtr 2017

Grand Mean Sample L45: 19.741 Percent Grand Mean Sample L46: 19.748 Percent





Plastics Interlaboratory Testing Program

Report #103

Analysis 760

3rd Qtr 2017

DSC Crystallization Temperature

WebCode	Data Flag	Sample W45			Sample W46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3RM79D		109.60	-8.01	-2.22	100.80	-5.85	-1.75	NZ
4ZBGVD		124.85	7.24	2.01	113.67	7.02	2.09	TA
6NENA8		117.57	-0.04	-0.01	106.90	0.25	0.07	TA
82D7YX		120.55	2.94	0.82	108.73	2.08	0.62	TA
8JCNPT		114.99	-2.62	-0.72	105.02	-1.63	-0.49	PE
CQG2M2		120.64	3.03	0.84	109.75	3.10	0.93	TA
DDNRPK		114.90	-2.71	-0.75	102.40	-4.25	-1.27	TA
E8HF9D		124.87	7.26	2.01	113.20	6.55	1.95	TA
F2PTTX		116.33	-1.27	-0.35	105.33	-1.32	-0.39	TA
GL8CBU		113.60	-4.01	-1.11	102.97	-3.69	-1.10	NZ
PUFL7R		119.73	2.13	0.59	108.03	1.38	0.41	TA
QPXLNR		117.48	-0.13	-0.03	106.49	-0.17	-0.05	TA
QV4H77		114.50	-3.11	-0.86	101.63	-5.02	-1.50	PE
R32C2J		118.63	1.03	0.28	108.43	1.78	0.53	TA
RM729L		120.31	2.71	0.75	109.10	2.45	0.73	TA
Y3G26X		117.74	0.13	0.04	106.16	-0.50	-0.15	TA
Y3YML8		116.48	-1.13	-0.31	105.21	-1.44	-0.43	TA
YDXNEX		118.67	1.06	0.29	108.67	2.01	0.60	TA
Z6ZHX3		116.65	-0.96	-0.26	105.43	-1.22	-0.37	TA
ZJJ4HV		113.67	-3.94	-1.09	104.78	-1.87	-0.56	MT
ZQHP8A		117.97	0.36	0.10	107.03	0.38	0.11	TA

Summary Statistics

	Sample W45	Sample W46
Grand Means	117.606 Degrees Celsius	106.654 Degrees Celsius
Std Dev Btwn Labs	3.609 Degrees Celsius	3.349 Degrees Celsius

Statistics based on 21 of 21 reporting participants

Sample W45: PP & Sample W46: PP

Key to Instrument Codes Reported by Participants

MT	Mettler Toledo Instruments	NZ	Netzsch Instruments
PE	Perkins Elmer Instruments	TA	TA Instruments



Plastics Interlaboratory Testing Program

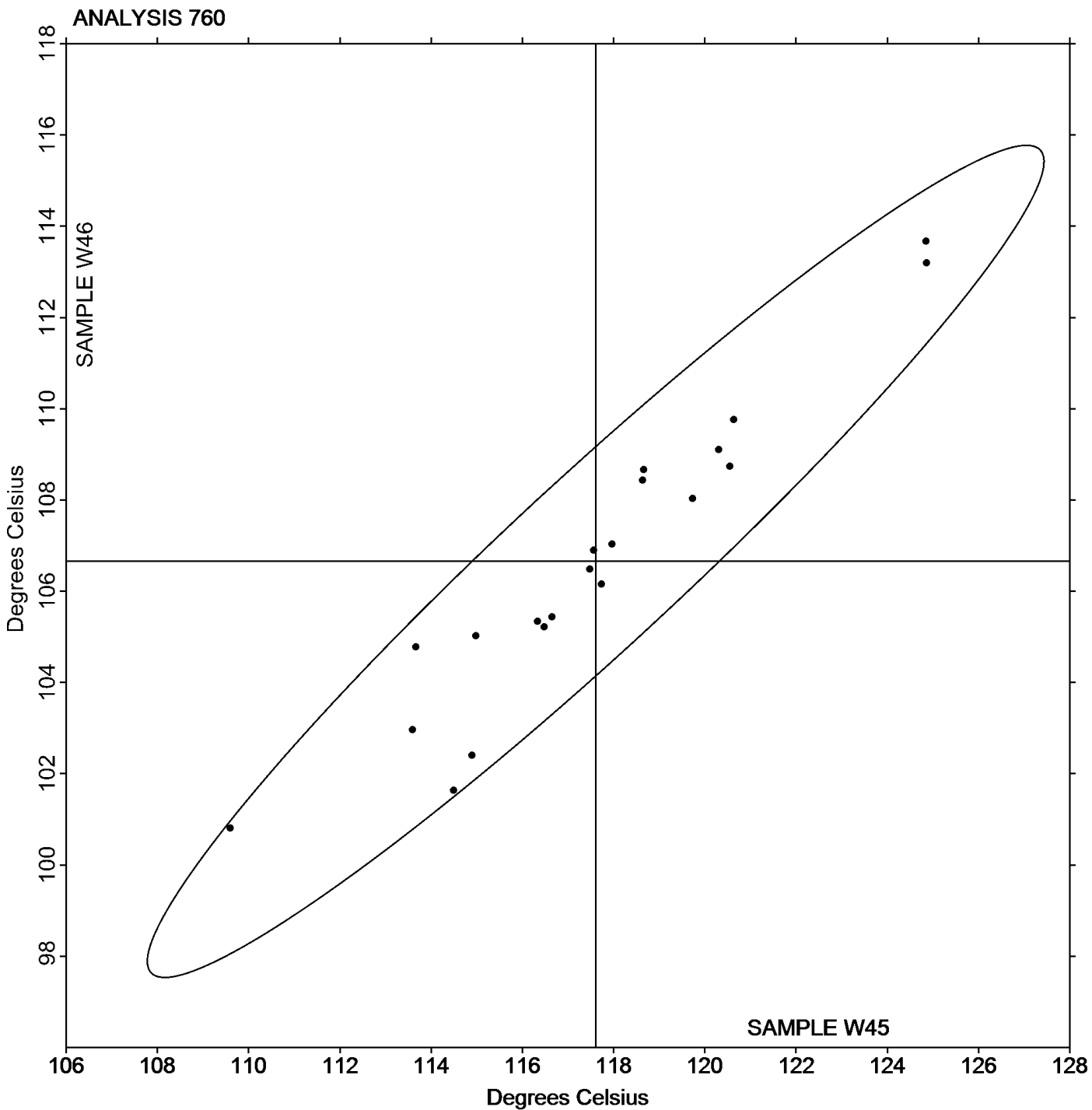
Analysis 760

DSC Crystallization Temperature

Report #103

3rd Qtr 2017

Grand Mean Sample W45: 117.61 Degrees Celsius Grand Mean Sample W46: 106.65 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #103

Analysis 761

3rd Qtr 2017

DSC Melt Temperature

WebCode	Data Flag	Sample W45			Sample W46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3RM79D		167.70	3.02	1.60	169.20	3.18	1.35	NZ
4ZBGVD		165.64	0.96	0.51	166.59	0.58	0.24	TA
6NENA8	X	153.68	-10.99	-5.81	151.96	-14.06	-5.94	TA
82D7YX		163.99	-0.69	-0.36	167.32	1.30	0.55	TA
8JCNPT		162.76	-1.91	-1.01	163.73	-2.29	-0.97	PE
9DQTNP		169.58	4.90	2.59	170.56	4.55	1.92	TA
CQG2M2		163.92	-0.76	-0.40	164.71	-1.30	-0.55	TA
DDNRPK		165.23	0.56	0.29	166.67	0.65	0.27	TA
E8HF9D		165.17	0.49	0.26	167.27	1.25	0.53	TA
F2PTTX		164.13	-0.54	-0.29	165.63	-0.38	-0.16	TA
GL8CBU		166.60	1.92	1.02	169.10	3.08	1.30	NZ
LN3EEC		163.87	-0.80	-0.42	162.43	-3.59	-1.52	TA
PUFL7R		161.70	-2.98	-1.57	161.43	-4.58	-1.94	TA
QPXLNR		163.34	-1.33	-0.71	163.91	-2.11	-0.89	XX
QV4H77		164.73	0.06	0.03	169.07	3.05	1.29	PE
R32C2J		163.17	-1.51	-0.80	164.17	-1.85	-0.78	TA
RM729L		163.76	-0.91	-0.48	163.71	-2.31	-0.98	TA
T3CV27		163.98	-0.70	-0.37	164.85	-1.17	-0.49	TA
Y3G26X		166.49	1.81	0.96	167.34	1.33	0.56	TA
Y3YML8		164.21	-0.47	-0.25	167.87	1.86	0.79	XX
YDXNEX	X	111.00	-53.68	-28.39	111.00	-55.02	-23.26	TA
Z6ZHX3		163.16	-1.52	-0.80	165.53	-0.49	-0.21	TA
ZJJ4HV		167.22	2.54	1.35	166.78	0.76	0.32	MT
ZQHP8A		162.53	-2.14	-1.13	164.50	-1.52	-0.64	TA

Summary Statistics		
	Sample W45	Sample W46
Grand Means	164.676 Degrees Celsius	166.017 Degrees Celsius
Std Dev Btwn Labs	1.891 Degrees Celsius	2.365 Degrees Celsius
Statistics based on 22 of 24 reporting participants		

Sample W45: PP & Sample W46: PP

Comments on Assigned Data Flags for Test #761

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

6NENA8 (X) - Data for both samples are low.



Plastics Interlaboratory Testing Program

Analysis 761

DSC Melt Temperature

Report #103

3rd Qtr 2017

Key to Instrument Codes Reported by Participants

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



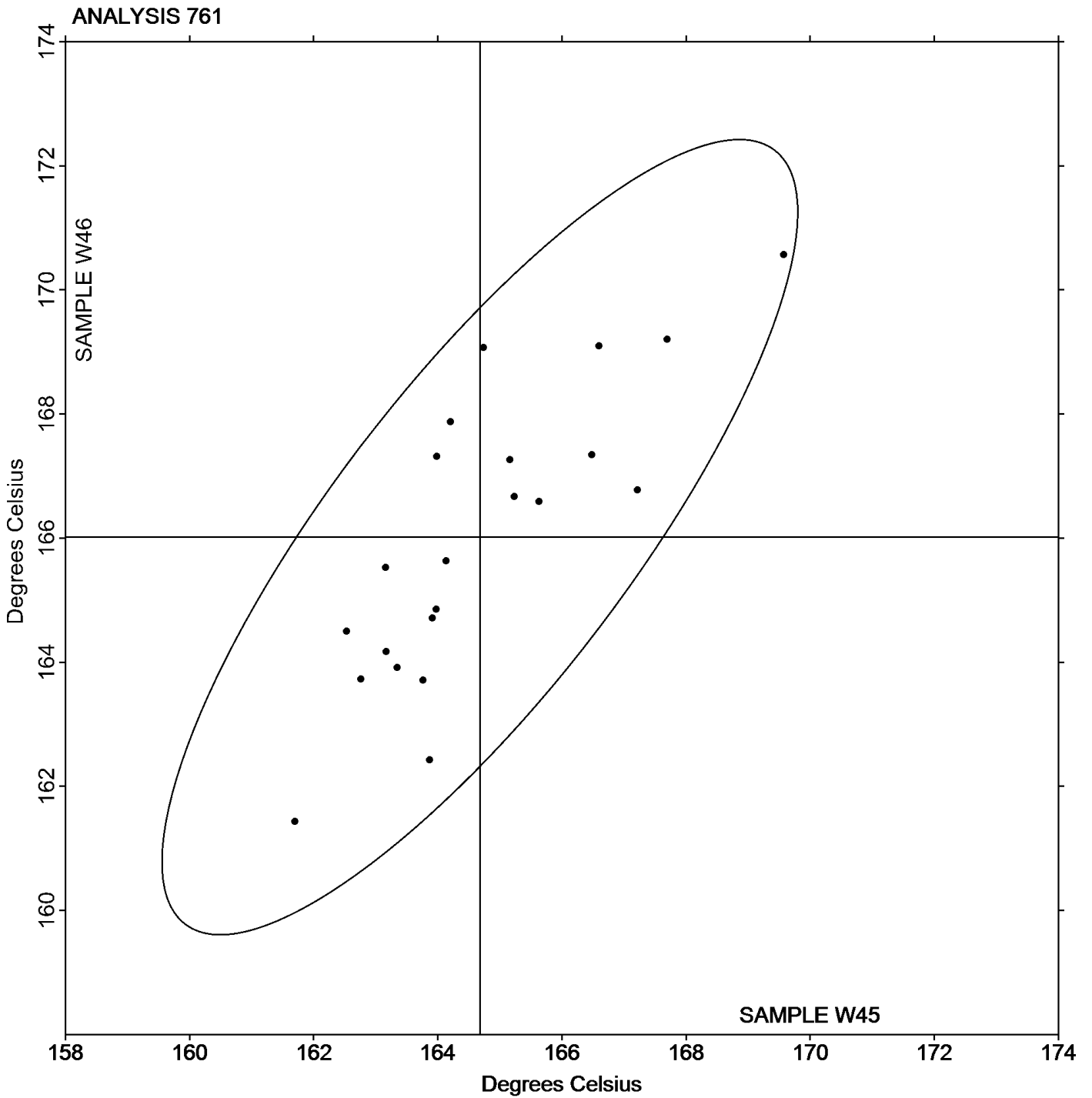
Plastics Interlaboratory Testing Program

Analysis 761
DSC Melt Temperature

Report #103

3rd Qtr 2017

Grand Mean Sample W45: 164.68 Degrees Celsius Grand Mean Sample W46: 166.02 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #103

Analysis 762

3rd Qtr 2017

DSC Enthalpy of Crystallization

WebCode	Data Flag	Sample W45			Sample W46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3RM79D		85.90	6.42	1.62	102.90	4.25	0.70	NZ
4ZBGVD		79.14	-0.34	-0.09	96.37	-2.28	-0.38	TA
6NENA8		88.45	8.96	2.26	108.93	10.28	1.70	TA
82D7YX	X	10.80	-68.69	-17.30	13.46	-85.19	-14.08	TA
CQG2M2		79.58	0.10	0.03	100.44	1.79	0.30	TA
DDNRPK		75.24	-4.24	-1.07	87.56	-11.09	-1.83	TA
E8HF9D		79.80	0.32	0.08	96.60	-2.05	-0.34	TA
GL8CBU		82.66	3.18	0.80	101.23	2.58	0.43	NZ
PUFL7R		80.13	0.65	0.16	100.80	2.15	0.36	TA
QV4H77		74.84	-4.64	-1.17	90.96	-7.69	-1.27	PE
R32C2J		77.67	-1.81	-0.46	98.43	-0.22	-0.04	TA
RM729L		79.93	0.45	0.11	99.94	1.29	0.21	TA
Y3G26X		77.27	-2.22	-0.56	95.92	-2.73	-0.45	TA
YDXNEX	*	75.23	-4.25	-1.07	108.57	9.92	1.64	TA
ZQHP8A		76.90	-2.58	-0.65	92.43	-6.22	-1.03	TA

Summary Statistics		
	Sample W45	Sample W46
Grand Means	79.482 Joules Per Gram	98.650 Joules Per Gram
Stnd Dev Btwn Labs	3.971 Joules Per Gram	6.051 Joules Per Gram
Statistics based on 14 of 15 reporting participants		

Sample W45: PP & Sample W46: PP

Comments on Assigned Data Flags for Test #762

82D7YX (X) - Data for both samples are low

Key to Instrument Codes Reported by Participants

NZ Netzsch Instruments

PE Perkins Elmer Instruments

TA TA Instruments



Plastics Interlaboratory Testing Program

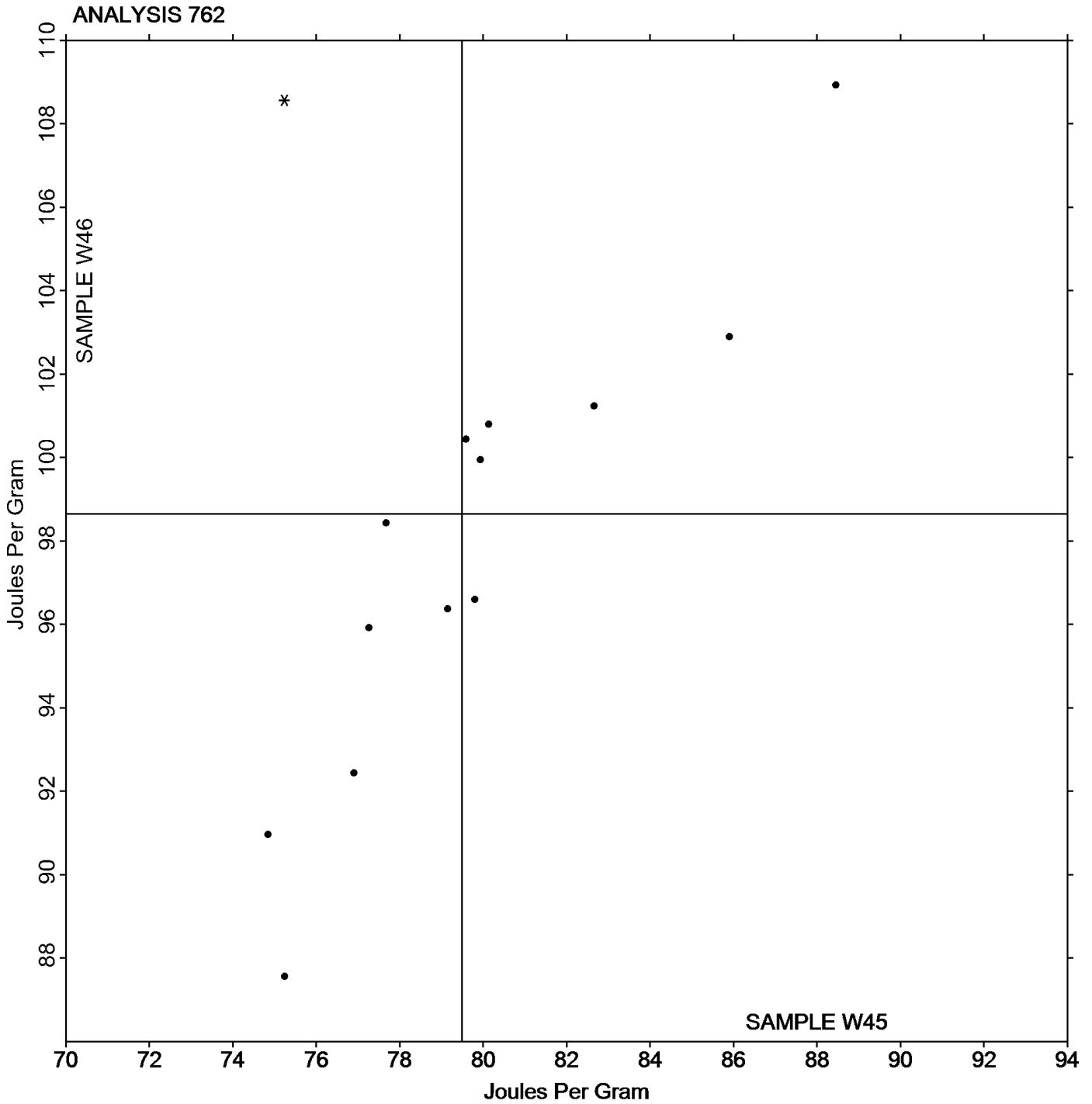
Analysis 762

DSC Enthalpy of Crystallization

Report #103

3rd Qtr 2017

Grand Mean Sample W45: 79.482 Joules Per Gram Grand Mean Sample W46: 98.650 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 #103

Analysis 763

3rd Qtr 2017

DSC Enthalpy of Fusion

WebCode	Data Flag	Sample W45			Sample W46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3RM79D		75.50	1.84	0.28	94.40	3.90	0.49	NZ
4ZBGVD		66.97	-6.69	-1.03	86.13	-4.36	-0.55	TA
6NENA8		79.99	6.33	0.97	105.80	15.30	1.92	TA
82D7YX	X	9.19	-64.47	-9.91	10.28	-80.22	-10.06	TA
9DQTNP	X	4.33	-69.33	-10.66	8.22	-82.28	-10.32	TA
CQG2M2		69.35	-4.31	-0.66	89.06	-1.44	-0.18	TA
DDNRPK		66.27	-7.39	-1.14	78.27	-12.22	-1.53	TA
E8HF9D		67.80	-5.86	-0.90	82.73	-7.76	-0.97	TA
GL8CBU		83.90	10.25	1.57	98.26	7.77	0.97	NZ
PUFL7R		80.77	7.11	1.09	99.20	8.70	1.09	TA
QV4H77		76.43	2.77	0.43	89.25	-1.25	-0.16	PE
R32C2J	X	163.17	89.51	13.76	164.17	73.67	9.24	TA
RM729L		76.48	2.82	0.43	94.45	3.95	0.50	TA
Y3G26X		64.14	-9.52	-1.46	83.23	-7.27	-0.91	TA
YDXNEX		70.13	-3.52	-0.54	82.23	-8.26	-1.04	TA
ZQHP8A		79.83	6.18	0.95	93.43	2.94	0.37	TA

Summary Statistics

	Sample W45	Sample W46
Grand Means	73.658 Joules Per Gram	90.497 Joules Per Gram
Stnd Dev Btwn Labs	6.507 Joules Per Gram	7.975 Joules Per Gram

Statistics based on 13 of 16 reporting participants

Sample W45: PP & Sample W46: PP

Comments on Assigned Data Flags for Test #763

82D7YX (X) - Data for both samples are low

9DQTNP (X) - Data for both samples are low.

R32C2J (X) - Data for both samples are high.

Key to Instrument Codes Reported by Participants

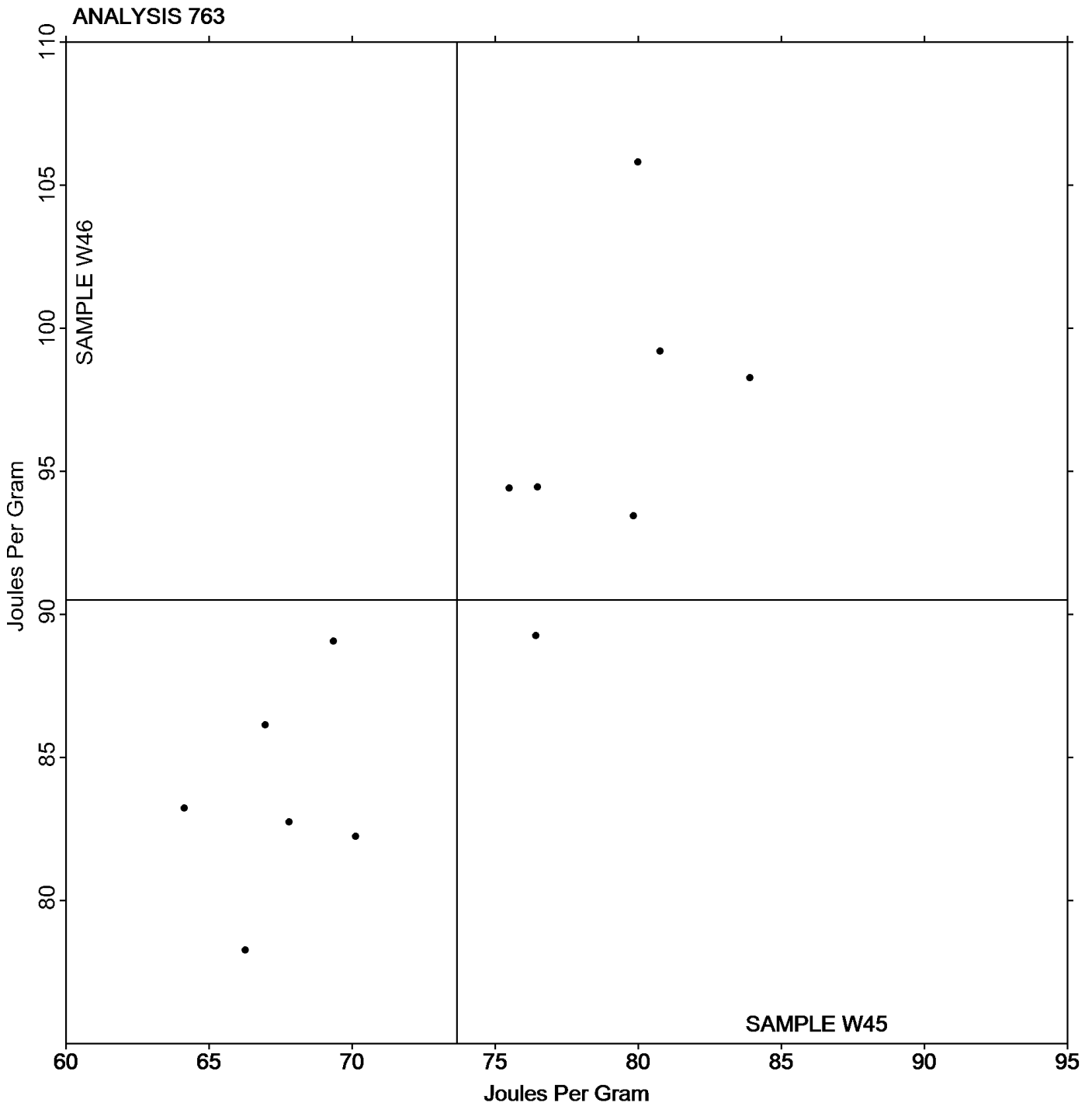
NZ Netzsch Instruments

PE Perkins Elmer Instruments

TA TA Instruments



Grand Mean Sample W45: 73.658 Joules Per Gram Grand Mean Sample W46: 90.497 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 #103

Analysis 764

3rd Qtr 2017

DSC Glass Transition Temperature

WebCode	Data Flag	Sample V45			Sample V46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3RM79D		87.10	0.96	0.46	87.70	1.34	0.58	NZ
4ZBGVD		83.84	-2.30	-1.11	83.39	-2.97	-1.28	TA
6NENA8		86.99	0.85	0.41	87.23	0.87	0.37	TA
82D7YX		83.57	-2.57	-1.24	83.24	-3.12	-1.34	TA
9DQTNP	*	87.95	1.81	0.87	90.68	4.32	1.87	TA
CQG2M2		86.04	-0.10	-0.05	86.23	-0.13	-0.06	TA
DDNRPK		85.80	-0.34	-0.16	86.87	0.51	0.22	TA
E8HF9D		84.40	-1.74	-0.84	84.87	-1.49	-0.64	TA
GL8CBU		87.10	0.96	0.46	86.77	0.41	0.18	NZ
PUFL7R		87.67	1.53	0.73	88.00	1.64	0.71	TA
QV4H77		88.97	2.83	1.36	88.63	2.27	0.98	PE
R32C2J		87.50	1.36	0.65	86.93	0.57	0.25	TA
RM729L		86.67	0.53	0.25	85.91	-0.45	-0.19	XX
T3CV27		85.56	-0.58	-0.28	85.08	-1.28	-0.55	TA
YDXNEX		81.00	-5.14	-2.47	81.67	-4.69	-2.02	TA
ZJJ4HV		89.03	2.89	1.39	89.59	3.23	1.39	MT
ZQHP8A		85.20	-0.94	-0.45	85.30	-1.06	-0.46	TA

Summary Statistics

Grand Means

Sample V45
86.141 Degrees Celsius

Sample V46
86.358 Degrees Celsius

Std Dev Btwn Labs

2.083 Degrees Celsius

2.319 Degrees Celsius

Statistics based on 17 of 17 reporting participants

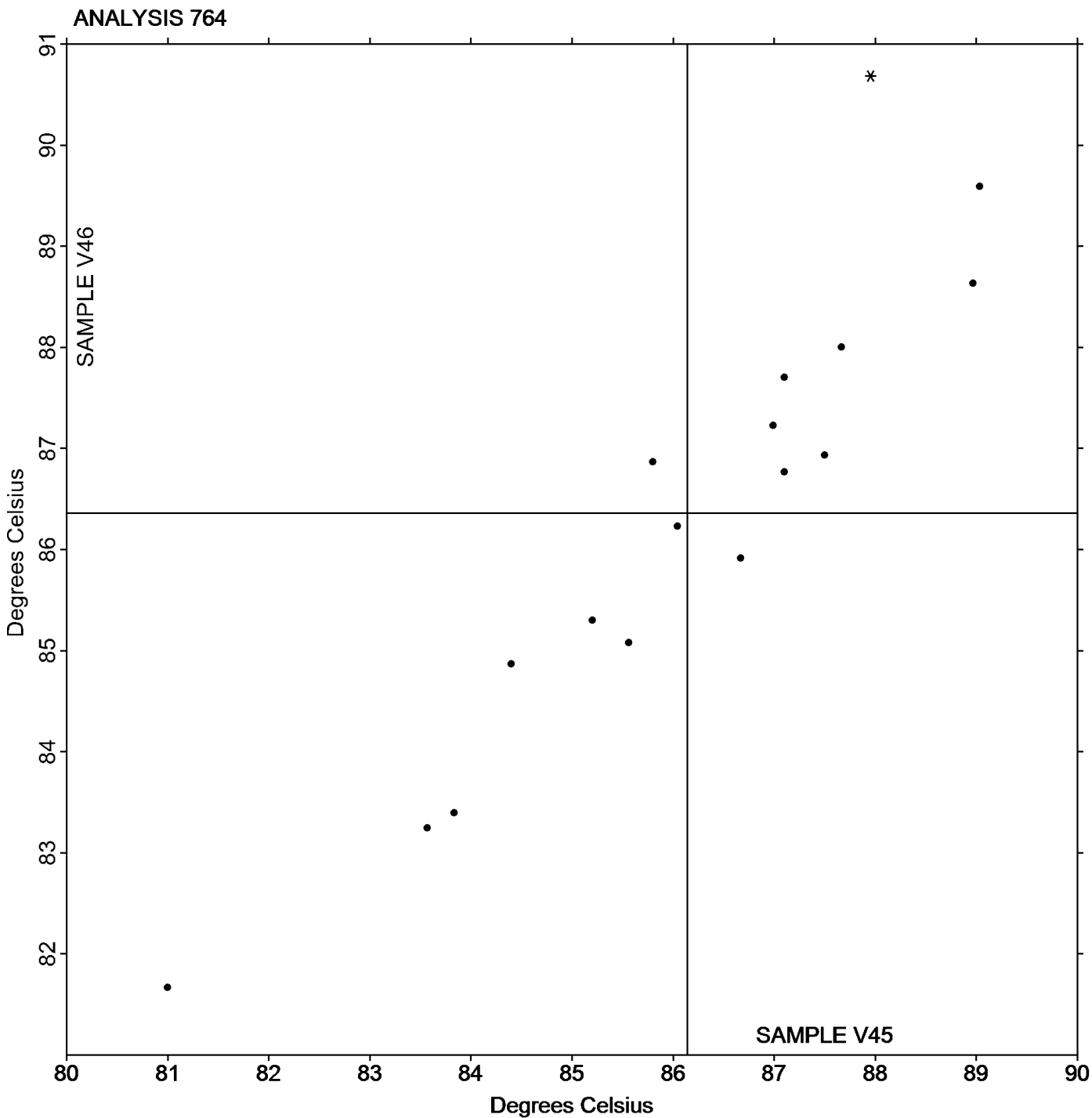
Sample V45: PET & Sample V46: PET

Key to Instrument Codes Reported by Participants

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



Grand Mean Sample V45: 86.141 Degrees Celsius Grand Mean Sample V46: 86.358 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 #103

Analysis 770

3rd Qtr 2017

Tensile Stress at Yield, Film Samples - psi

WebCode	Data Flag	Sample B45			Sample B46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2KBJ7C		1,638	-43	-0.65	2,253	120	0.29	IN
2RMPVN		1,594	-87	-1.31	1,912	-221	-0.53	SH
2WGLKE		1,715	34	0.51	2,071	-63	-0.15	IN
3MWKQQ		1,578	-103	-1.55	2,027	-106	-0.25	IN
3RM79D		1,793	112	1.68	2,135	2	0.00	IN
6AEPJP		1,603	-79	-1.18	1,709	-425	-1.01	MT
9XCKP7	*	1,731	50	0.75	3,363	1,230	2.93	IN
CGTYRK		1,765	84	1.26	2,082	-51	-0.12	IN
CNFTQ4		1,649	-32	-0.48	1,699	-434	-1.03	IN
JMTWUV		1,729	48	0.72	2,102	-31	-0.07	IN
QAKHW6		1,663	-19	-0.28	2,326	193	0.46	XX
TRC864		1,758	77	1.16	2,494	361	0.86	WZ
UQF8KX		1,684	3	0.04	2,325	192	0.46	IN
W38B4H		1,690	9	0.14	1,704	-429	-1.02	MT
XNHVDM		1,629	-53	-0.79	1,796	-338	-0.80	IN

Summary Statistics		
	Sample B45	Sample B46
Grand Means	1,681.3 psi	2,133.2 psi
Stnd Dev Btwn Labs	66.6 psi	419.7 psi
Statistics based on 15 of 15 reporting participants		

Sample B45: LDPE & Sample B46: 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

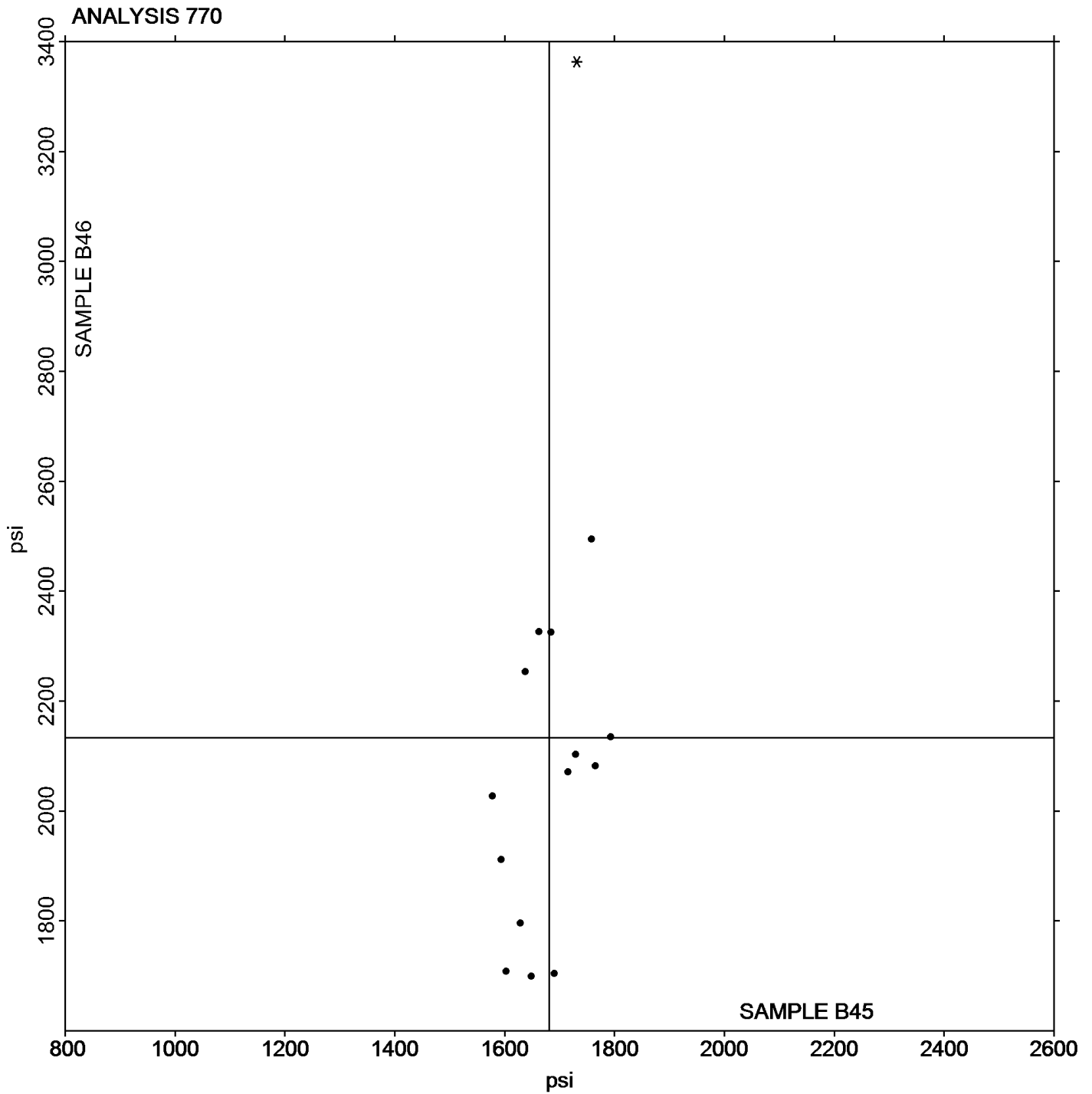
Analysis 770

Tensile Stress at Yield, Film Samples - psi

Report #103

3rd Qtr 2017

Grand Mean Sample B45: 1,681.32 psi Grand Mean Sample B46: 2,133.16 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 #103

Analysis 771

3rd Qtr 2017

Tensile Stress at Break, Film Samples - psi

WebCode	Data Flag	Sample B45			Sample B46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2KBJ7C		3,243	-84	-0.20	3,608	390	0.94	IN
2RMPVN		2,860	-467	-1.13	3,074	-144	-0.35	SH
2WGLKE		3,640	314	0.76	3,730	512	1.23	IN
3MWKQQ		3,332	5	0.01	3,259	41	0.10	IN
3RM79D		3,538	212	0.51	3,819	601	1.44	IN
6AEPJP		3,182	-145	-0.35	2,950	-268	-0.64	MT
9XCKP7		3,348	22	0.05	3,363	145	0.35	IN
ARGZ94		3,721	394	0.96	3,124	-94	-0.23	IN
CGTYRK		3,853	527	1.28	3,413	195	0.47	IN
CNFTQ4		3,690	363	0.88	3,133	-86	-0.21	IN
GEEXWN		2,341	-986	-2.39	2,837	-382	-0.92	UC
JMTWUV		3,356	29	0.07	3,406	188	0.45	IN
LHC66E		3,500	173	0.42	3,362	143	0.34	IN
QAKHW6		2,745	-582	-1.41	2,532	-686	-1.65	XX
T3CV27	*	3,058	-269	-0.65	2,160	-1,059	-2.54	SH
TRC864		3,830	504	1.22	3,720	502	1.20	WZ
UQF8KX		3,229	-98	-0.24	3,302	84	0.20	IN
W38B4H		3,828	501	1.22	3,435	217	0.52	MT
XNHVDM		2,912	-414	-1.01	2,921	-297	-0.71	IN

Summary Statistics		
	Sample B45	Sample B46
Grand Means	3,326.7 psi	3,218.4 psi
Stnd Dev Btwn Labs	411.9 psi	417.1 psi
Statistics based on 19 of 19 reporting participants		

Sample B45: LDPE & Sample B46: 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

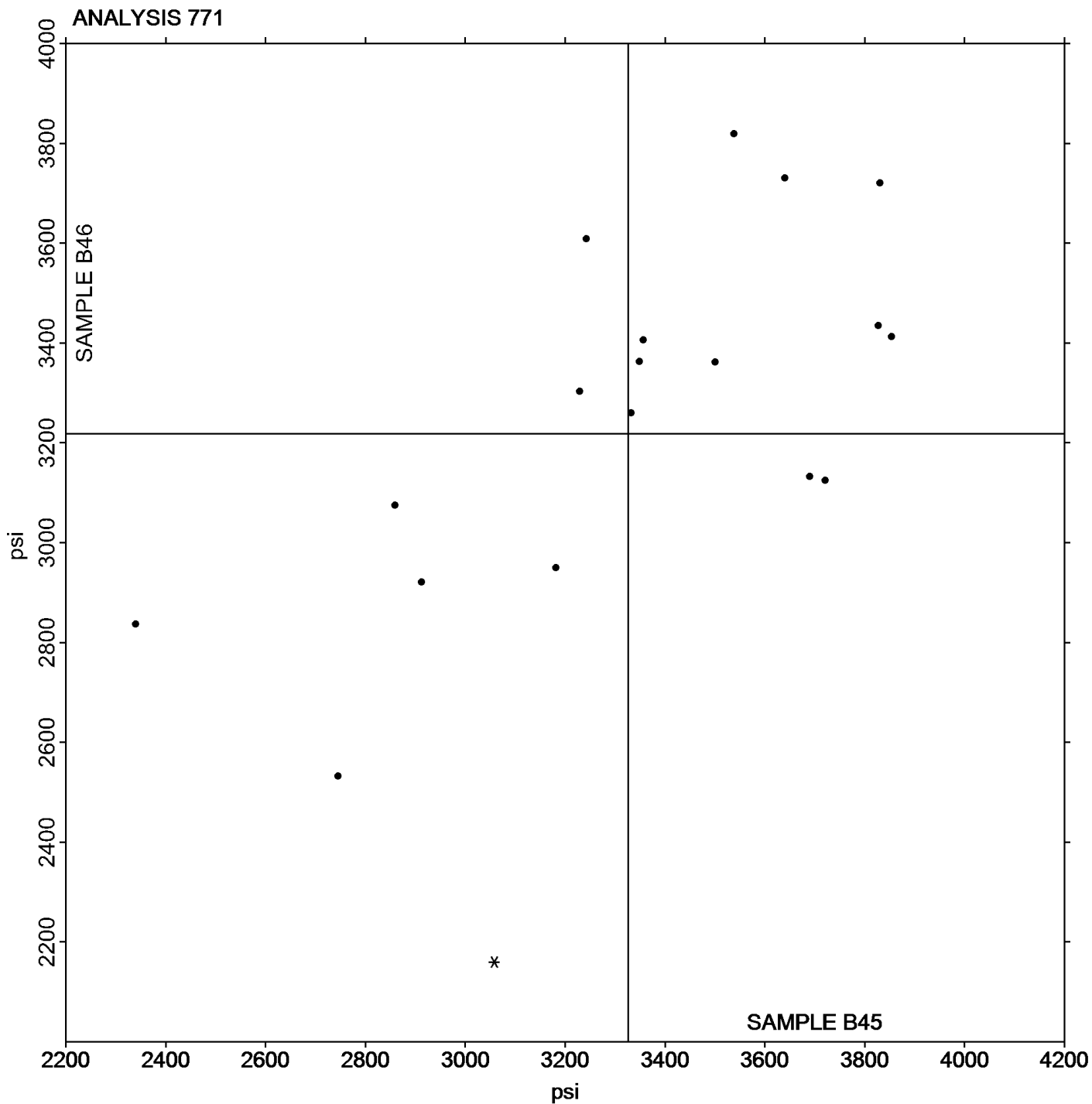
Report #103

Analysis 771

3rd Qtr 2017

Tensile Stress at Break, Film Samples - psi

Grand Mean Sample B45: 3,326.71 psi Grand Mean Sample B46: 3,218.36 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 #103

Analysis 772

3rd Qtr 2017

Percent Elongation at Yield, Films

WebCode	Data Flag	Sample B45			Sample B46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2KBJ7C		71.46	15.36	0.62	127.33	-47.97	-0.20	IN
2RMPVN		55.64	-0.46	-0.02	106.75	-68.55	-0.29	SH
2WGLKE		62.30	6.20	0.25	93.76	-81.54	-0.35	IN
3MWKQQ		63.92	7.82	0.32	107.18	-68.12	-0.29	IN
3RM79D		58.86	2.76	0.11	93.28	-82.02	-0.35	IN
6AEPJP		19.54	-36.56	-1.48	20.03	-155.27	-0.66	MT
9XCKP7	*	97.40	41.30	1.67	883.20	707.90	3.00	IN
CGTYRK		60.05	3.95	0.16	93.91	-81.39	-0.34	IN
CNFTQ4		9.42	-46.69	-1.89	8.45	-166.85	-0.71	IN
JMTWUV		70.42	14.32	0.58	104.87	-70.43	-0.30	IN
QAKHW6		64.87	8.77	0.35	524.67	349.37	1.48	XX
TRC864		52.83	-3.27	-0.13	84.24	-91.06	-0.39	WZ
UQF8KX		84.13	28.03	1.13	312.59	137.29	0.58	IN
W38B4H		12.72	-43.38	-1.76	13.79	-161.51	-0.68	MT
XNHVDM		57.99	1.89	0.08	55.46	-119.84	-0.51	IN

Summary Statistics		
	Sample B45	Sample B46
Grand Means	56.104 Percent	175.301 Percent
Stnd Dev Btwn Labs	24.705 Percent	235.935 Percent
Statistics based on 15 of 15 reporting participants		

Sample B45: LDPE & Sample B46: 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

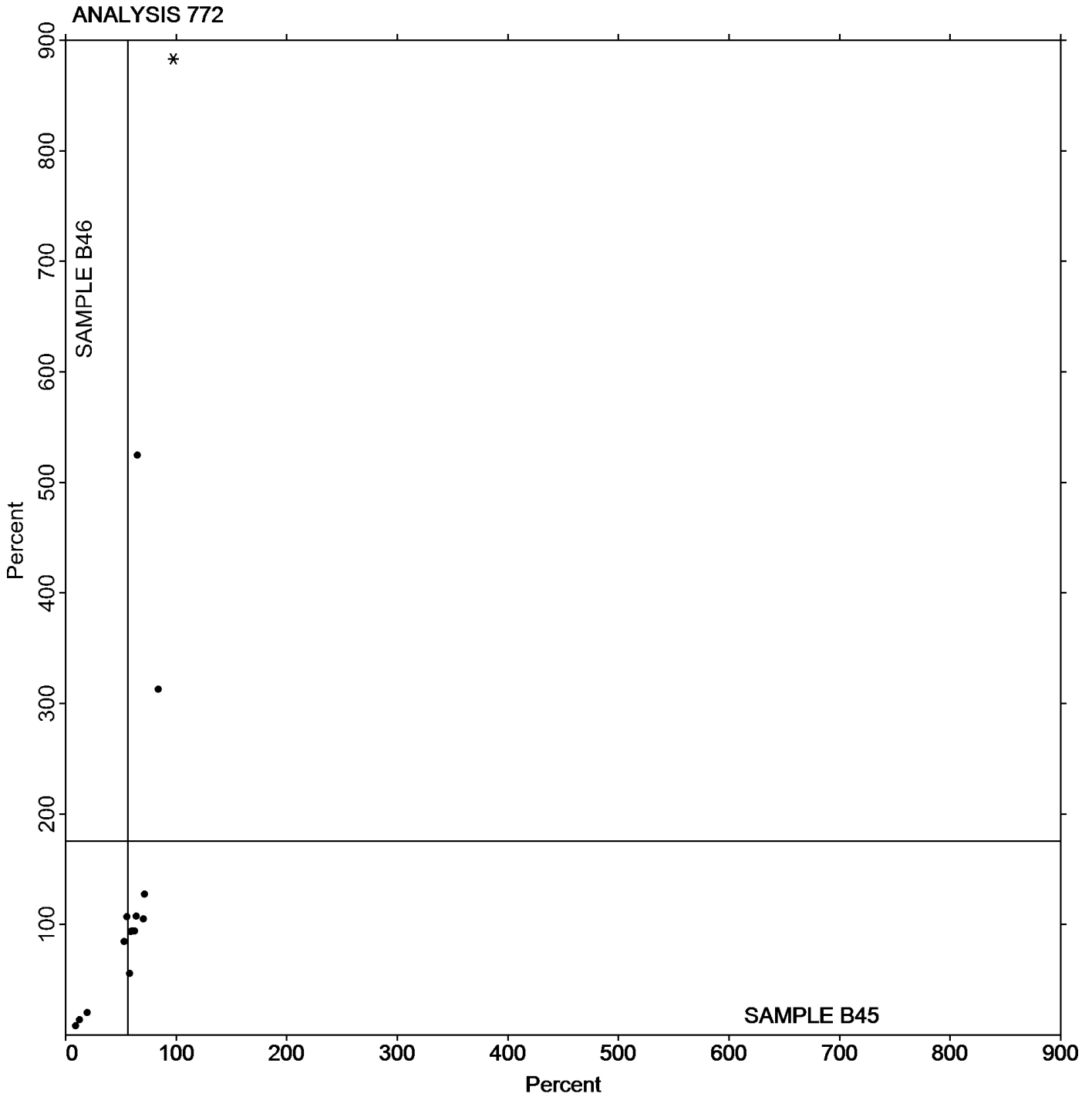
Report #103

Analysis 772

3rd Qtr 2017

Percent Elongation at Yield, Films

Grand Mean Sample B45: 56.104 Percent Grand Mean Sample B46: 175.30 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 #103

Analysis 773

3rd Qtr 2017

Percent Elongation at Break, Film Samples

WebCode	Data Flag	Sample B45			Sample B46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2KBJ7C		747.7	13.5	0.12	749.6	37.7	0.27	IN
2RMPVN		728.8	-5.4	-0.05	758.5	46.6	0.33	SH
2WGLKE		648.5	-85.7	-0.77	643.7	-68.2	-0.49	IN
3MWKQQ		759.7	25.6	0.23	715.9	4.0	0.03	IN
3RM79D		653.2	-81.0	-0.73	628.7	-83.2	-0.59	IN
6AEPJP		754.5	20.3	0.18	664.2	-47.7	-0.34	MT
9XCKP7		911.4	177.2	1.59	883.2	171.3	1.22	IN
ARGZ94		696.2	-37.9	-0.34	648.8	-63.1	-0.45	IN
CGTYRK		648.7	-85.5	-0.77	623.4	-88.5	-0.63	IN
CNFTQ4		594.1	-140.1	-1.26	535.7	-176.3	-1.26	IN
GEEXWN		931.2	197.0	1.77	1,024.9	313.0	2.23	UC
JMTWUV		624.3	-109.9	-0.99	661.7	-50.2	-0.36	IN
LHC66E		944.2	210.0	1.89	935.0	223.1	1.59	IN
QAKHW6		650.4	-83.8	-0.75	512.9	-199.1	-1.42	XX
T3CV27	X	984.5	250.3	2.25	570.6	-141.3	-1.01	SH
TRC864		627.0	-107.2	-0.96	589.0	-122.9	-0.88	WZ
UQF8KX		786.5	52.3	0.47	868.4	156.5	1.11	IN
W38B4H		657.1	-77.0	-0.69	600.0	-111.9	-0.80	MT
XNHVDM		851.2	117.0	1.05	771.3	59.4	0.42	IN

Summary Statistics

	Sample B45	Sample B46
Grand Means	734.15 Percent	711.94 Percent
Stnd Dev Btwn Labs	111.36 Percent	140.42 Percent

Statistics based on 18 of 19 reporting participants

Sample B45: LDPE & Sample B46: LDPE

Comments on Assigned Data Flags for Test #773

T3CV27 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

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

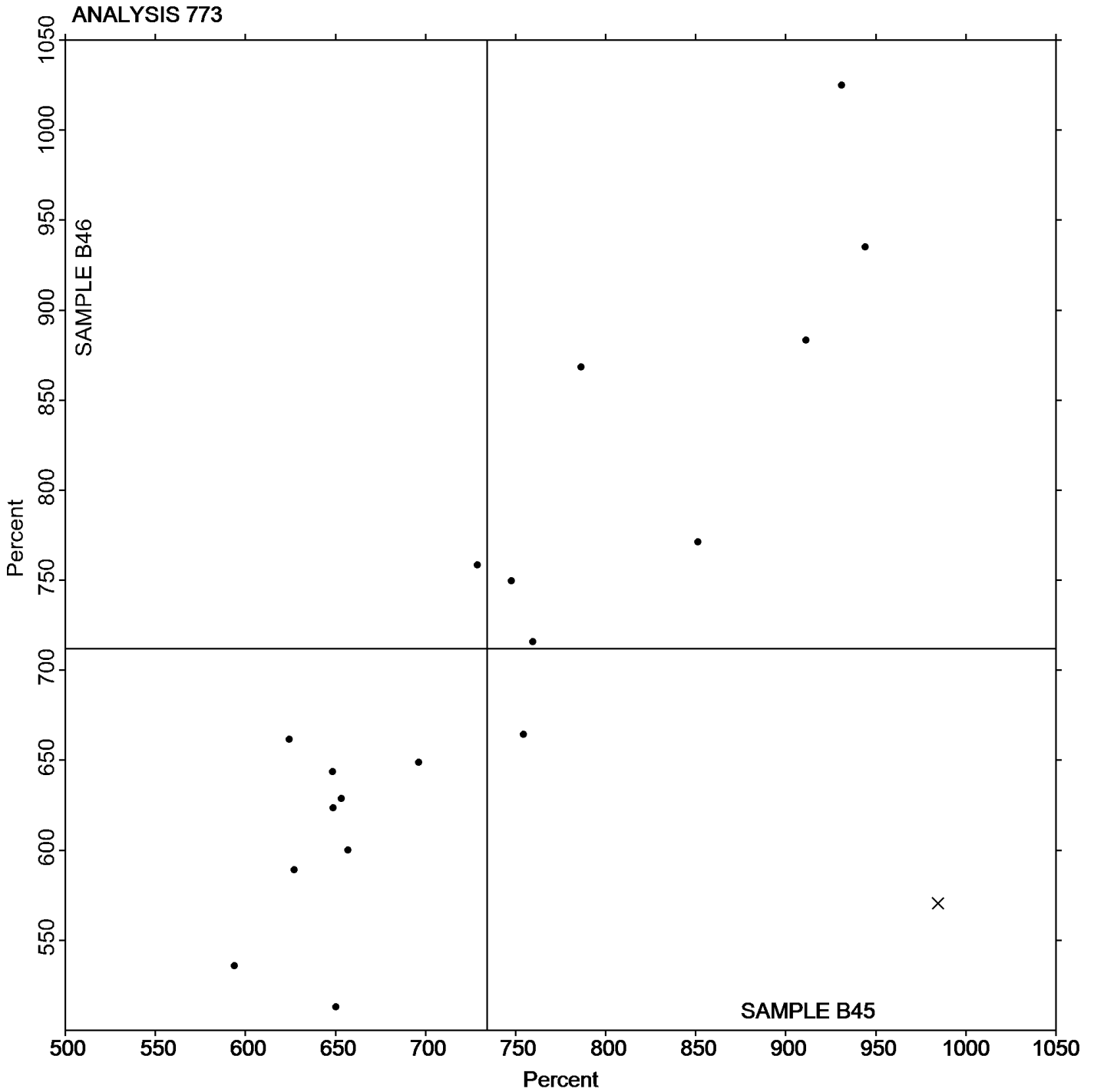
Report #103

Analysis 773

3rd Qtr 2017

Percent Elongation at Break, Film Samples

Grand Mean Sample B45: 734.15 Percent Grand Mean Sample B46: 711.94 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 #103

Analysis 774

3rd Qtr 2017

Thickness of Film Tensile Samples - mils

WebCode	Data Flag	Sample B45			Sample B46		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2KBJ7C		3.8100	-0.0895	-0.76	3.6000	-0.5007	-1.64
2RMPVN		3.8717	-0.0278	-0.24	3.8457	-0.2549	-0.84
2WGLKE		3.9990	0.0995	0.84	3.6430	-0.4577	-1.50
3MWKQQ		3.9610	0.0615	0.52	4.2090	0.1083	0.35
3RM79D		3.7930	-0.1065	-0.90	3.6830	-0.4177	-1.37
6AEPJP		3.7300	-0.1695	-1.44	4.0000	-0.1007	-0.33
8AC7LY		3.7650	-0.1345	-1.14	4.3240	0.2233	0.73
9XCKP7		3.8700	-0.0295	-0.25	3.9600	-0.1407	-0.46
ARGZ94		3.8800	-0.0195	-0.17	4.6100	0.5093	1.67
CGTYRK		3.8060	-0.0935	-0.79	4.3020	0.2013	0.66
CNFTQ4		3.8111	-0.0884	-0.75	4.1851	0.0845	0.28
GEEXWN		3.9400	0.0405	0.34	4.0800	-0.0207	-0.07
JMTWUV		3.8870	-0.0125	-0.11	4.1860	0.0853	0.28
LHC66E		4.0200	0.1205	1.02	4.2300	0.1293	0.42
QAKHW6		3.8977	-0.0018	-0.02	4.3111	0.2104	0.69
T3CV27	*	4.2717	0.3722	3.15	4.7638	0.6631	2.17
TRC864		3.9654	0.0659	0.56	4.3580	0.2573	0.84
UQF8KX		3.9252	0.0257	0.22	4.2323	0.1316	0.43
W38B4H		3.9600	0.0605	0.51	3.9100	-0.1907	-0.62
XNHVDM		3.7796	-0.1199	-1.02	3.8190	-0.2817	-0.92
Y93QC6		3.9460	0.0465	0.39	3.8620	-0.2387	-0.78

Summary Statistics		Sample B45	Sample B46
Grand Means		3.89950 mils	4.10066 mils
Stnd Dev Btwn Labs		0.11800 mils	0.30519 mils
Statistics based on 21 of 21 reporting participants			

Sample B45: LDPE & Sample B46: LDPE



Plastics Interlaboratory Testing Program

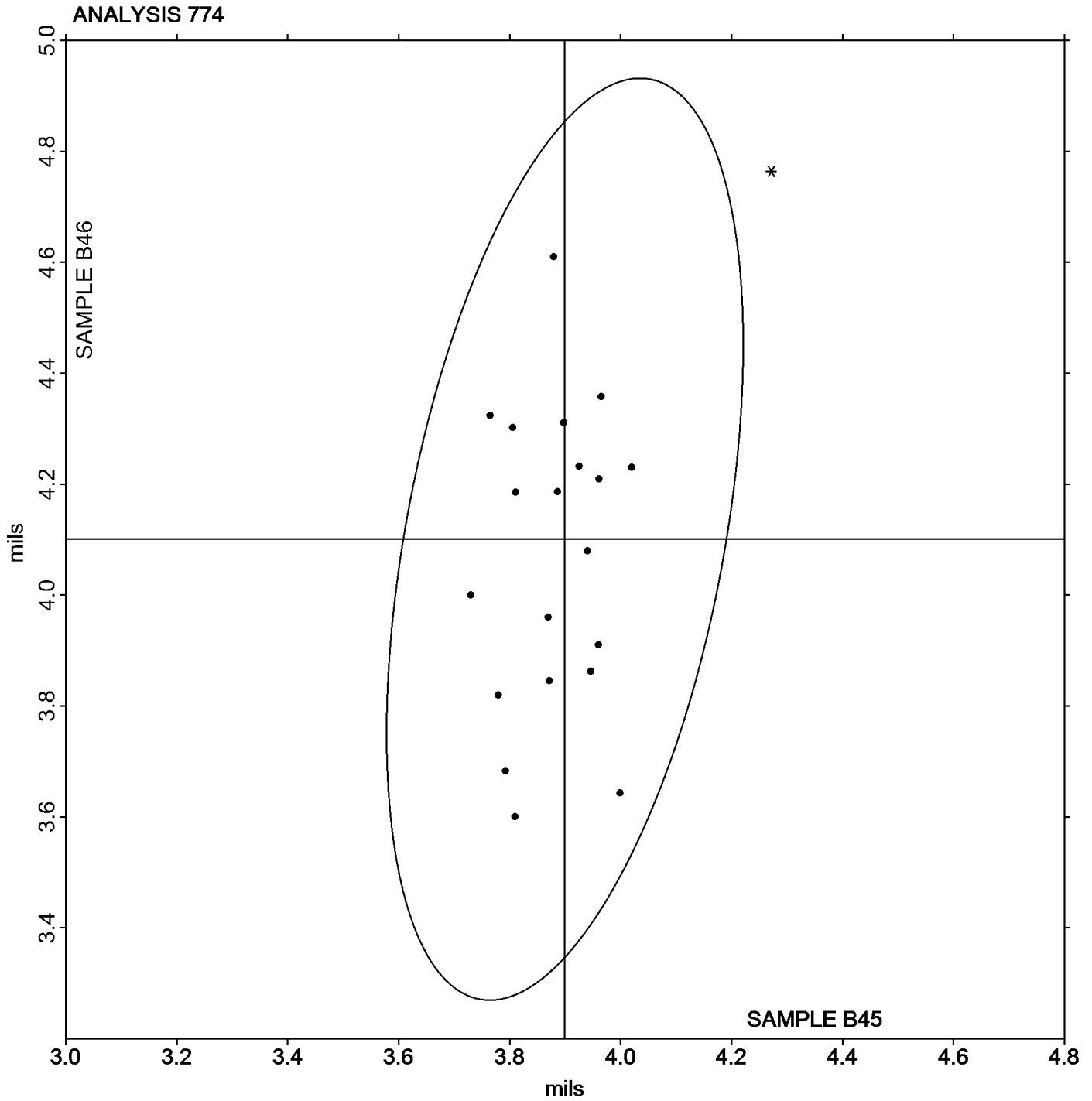
Analysis 774

Thickness of Film Tensile Samples - mils

Report #103

3rd Qtr 2017

Grand Mean Sample B45: 3.8995 mils Grand Mean Sample B46: 4.1007 mils





Plastics Interlaboratory Testing Program

Report #103

Analysis 775

3rd Qtr 2017

Secant Modulus at 1% Strain - psi

WebCode	Data Flag	Sample B45			Sample B46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2KBJ7C		19,828	-9,444	-1.96	20,232	-11,107	-1.93	IN
2RMPVN		34,983	5,711	1.18	37,037	5,698	0.99	SH
2WGLKE		27,952	-1,320	-0.27	27,444	-3,895	-0.68	IN
3MWKQQ		27,005	-2,267	-0.47	30,484	-855	-0.15	IN
3RM79D		31,802	2,530	0.52	33,803	2,464	0.43	IN
9XCKP7		31,831	2,559	0.53	33,300	1,961	0.34	IN
CGTYRK		30,040	768	0.16	32,658	1,319	0.23	IN
JMTWUV		27,822	-1,450	-0.30	27,819	-3,520	-0.61	IN
LHC66E		30,668	1,396	0.29	33,746	2,407	0.42	IN
QAKHW6		21,187	-8,085	-1.68	22,659	-8,680	-1.51	XX
TRC864	*	30,676	1,404	0.29	38,841	7,503	1.30	WZ
UQF8KX		38,316	9,044	1.88	40,821	9,482	1.65	IN
W38B4H		30,662	1,390	0.29	31,488	149	0.03	MT
XNHVDM		27,035	-2,237	-0.46	28,413	-2,926	-0.51	IN

Summary Statistics

	Sample B45	Sample B46
Grand Means	29,272.0 psi	31,338.9 psi
Stnd Dev Btwn Labs	4,822.7 psi	5,762.7 psi

Statistics based on 14 of 14 reporting participants

Sample B45: LDPE & Sample B46: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

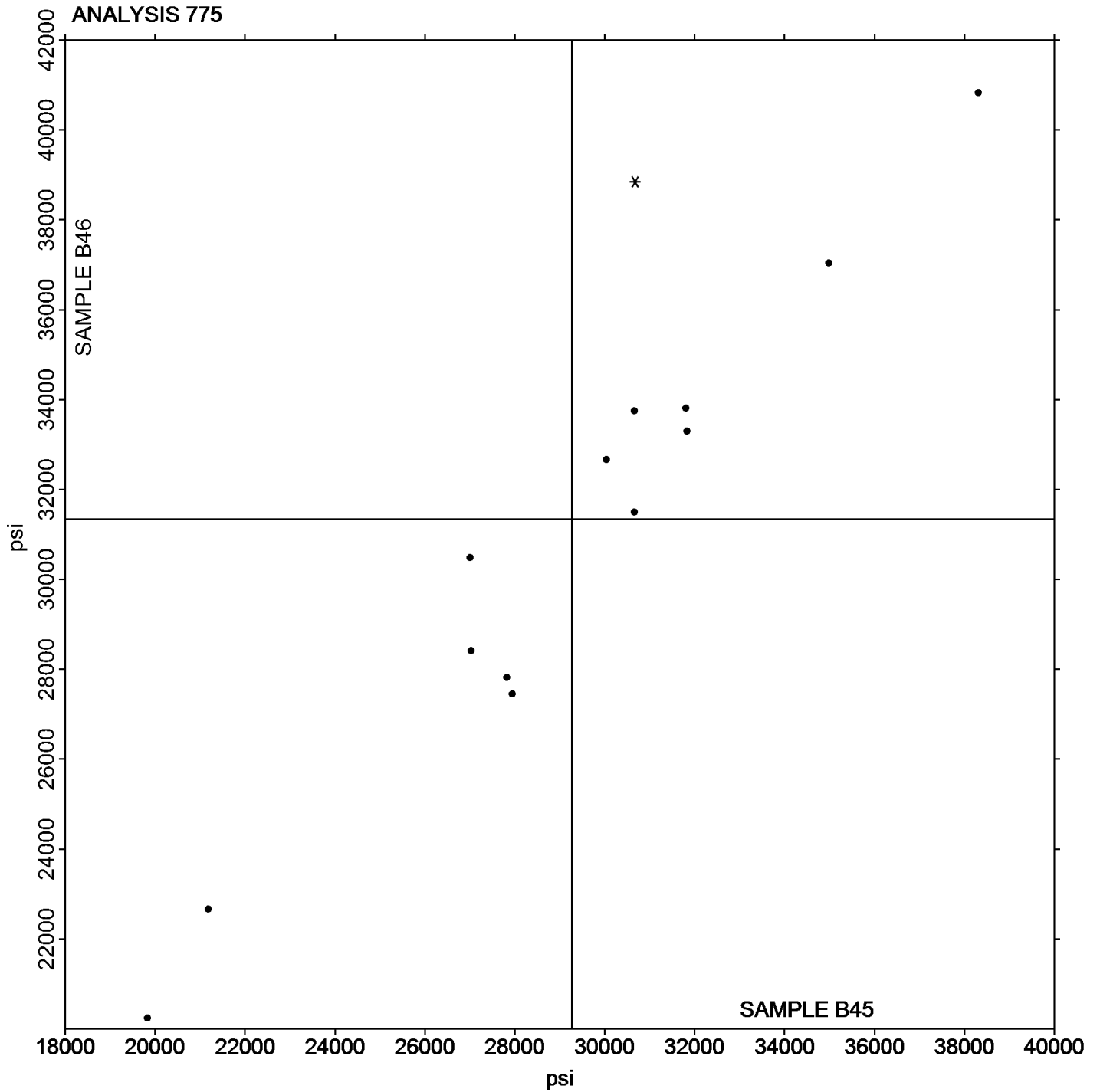
Report #103

Analysis 775

3rd Qtr 2017

Secant Modulus at 1% Strain - psi

Grand Mean Sample B45: 29,271.99 psi Grand Mean Sample B46: 31,338.89 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 #103

Analysis 776

3rd Qtr 2017

Secant Modulus at 2% Strain - psi

WebCode	Data Flag	Sample B45			Sample B46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2KBJ7C		20,835	-4,935	-2.08	21,766	-5,460	-2.08	IN
2RMPVN		27,244	1,474	0.62	27,834	608	0.23	SH
2WGLKE		25,090	-680	-0.29	25,456	-1,771	-0.67	IN
3MWKQQ		22,894	-2,875	-1.21	25,506	-1,720	-0.66	IN
3RM79D		26,851	1,081	0.46	28,455	1,229	0.47	IN
9XCCKP7		26,344	574	0.24	27,804	578	0.22	IN
JMTWUV		24,961	-809	-0.34	25,410	-1,816	-0.69	IN
LHC66E		26,129	359	0.15	28,490	1,263	0.48	IN
QAKHW6		26,099	329	0.14	28,646	1,420	0.54	XX
UQF8KX		30,467	4,697	1.98	32,720	5,493	2.09	IN
W38B4H		27,145	1,375	0.58	27,797	571	0.22	MT
XNHVDM		25,179	-591	-0.25	26,832	-394	-0.15	IN

Summary Statistics		
	Sample B45	Sample B46
Grand Means	25,769.8 psi	27,226.2 psi
Std Dev Btwn Labs	2,373.1 psi	2,623.1 psi
Statistics based on 12 of 12 reporting participants		

Sample B45: LDPE & Sample B46: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

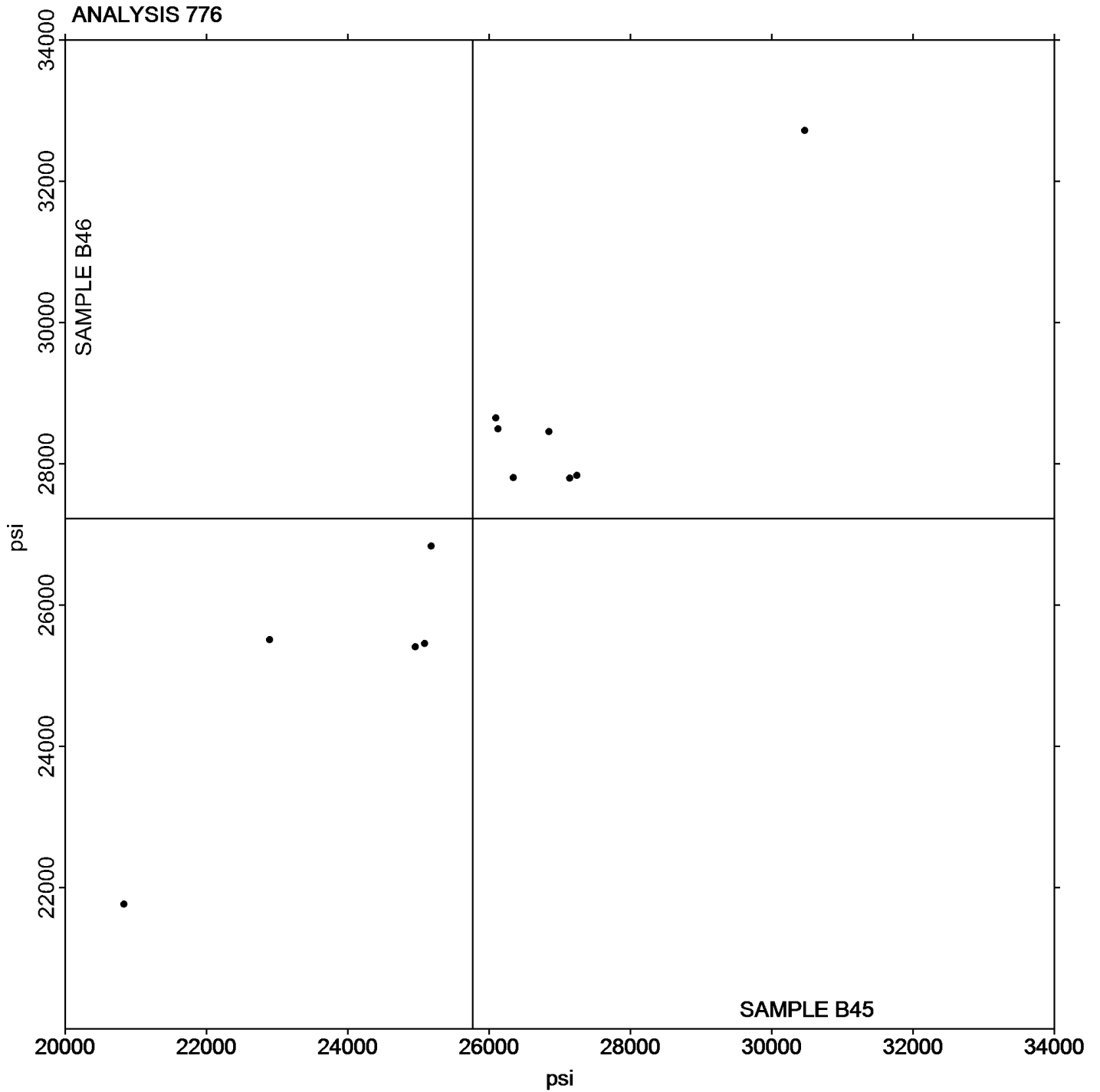
Report #103

Analysis 776

3rd Qtr 2017

Secant Modulus at 2% Strain - psi

Grand Mean Sample B45: 25,769.75 psi Grand Mean Sample B46: 27,226.19 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 #103

Analysis 780

3rd Qtr 2017

Coefficient of Static Friction

WebCode	Data Flag	Sample P45			Sample P46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2RMPVN		0.1899	0.0451	1.11	0.2637	0.1353	2.50	SA
3RM79D		0.1220	-0.0228	-0.56	0.0880	-0.0404	-0.75	TH
4LAKZ7		0.1224	-0.0224	-0.55	0.1014	-0.0270	-0.50	TN
CGTYRK		0.1204	-0.0244	-0.60	0.1084	-0.0200	-0.37	TH
FLTJ6R		0.1184	-0.0264	-0.65	0.0850	-0.0434	-0.80	IG
L24DZN		0.1400	-0.0048	-0.12	0.1320	0.0036	0.07	KA
LHC66E		0.2156	0.0708	1.74	0.1424	0.0140	0.26	IS
QAKHW6		0.1510	0.0062	0.15	0.1306	0.0022	0.04	RD
T3CV27		0.1886	0.0438	1.08	0.1798	0.0514	0.95	SA
TRC864		0.0730	-0.0718	-1.77	0.0746	-0.0538	-1.00	TH
W38B4H		0.1518	0.0070	0.17	0.1066	-0.0218	-0.40	MI

Summary Statistics

	Sample P45	Sample P46
Grand Means	0.14483 COF	0.12841 COF
Std Dev Btwn Labs	0.04067 COF	0.05402 COF

Statistics based on 11 of 11 reporting participants

Sample P45: LDPE & Sample P46: LDPE

Key to Instrument Codes Reported by Participants

IG Instron	IS Instron 5000 Series
KA Kayeness Inc.	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

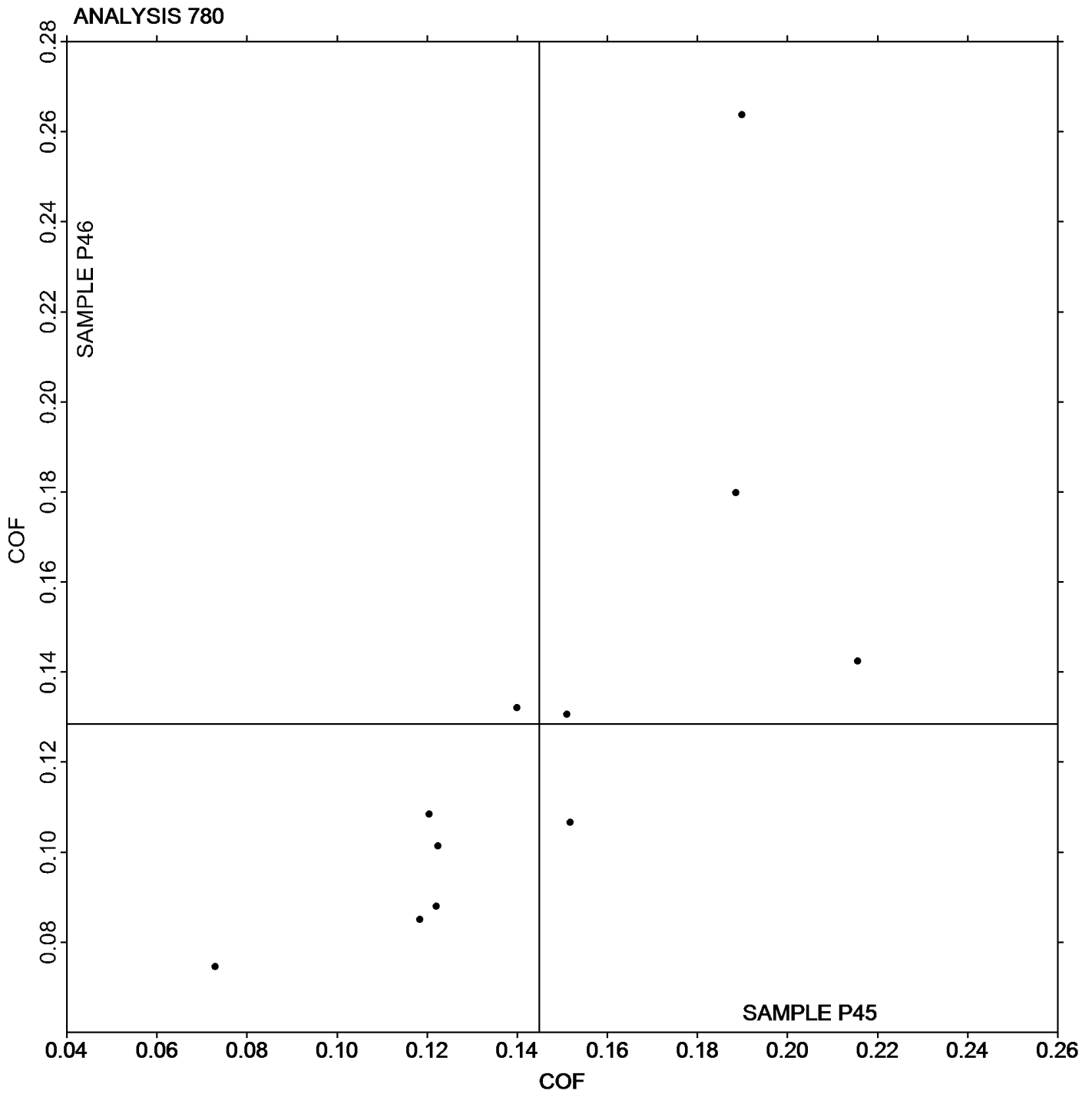
Analysis 780

Coefficient of Static Friction

Report #103

3rd Qtr 2017

Grand Mean Sample P45: 0.14483 COF Grand Mean Sample P46: 0.12841 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 #103

Analysis 781

3rd Qtr 2017

Coefficient of Kinetic Friction

WebCode	Data Flag	Sample P45			Sample P46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2RMPVN		0.1281	0.0126	0.34	0.2007	0.0960	2.05	SA
3RM79D		0.0980	-0.0175	-0.47	0.0700	-0.0347	-0.74	TH
4LAKZ7		0.1060	-0.0095	-0.26	0.0846	-0.0201	-0.43	TN
CGTYRK		0.1138	-0.0017	-0.05	0.1068	0.0021	0.05	TH
FLTJ6R		0.1189	0.0034	0.09	0.0829	-0.0218	-0.47	IG
L24DZN		0.1420	0.0265	0.71	0.1120	0.0073	0.16	KA
LHC66E		0.1406	0.0251	0.68	0.1046	-0.0001	0.00	IS
QAKHW6		0.1606	0.0451	1.21	0.1366	0.0319	0.68	RD
T3CV27		0.1286	0.0131	0.35	0.1460	0.0413	0.88	SA
TRC864		0.0170	-0.0985	-2.65	0.0180	-0.0867	-1.86	TH
W38B4H		0.1168	0.0013	0.04	0.0894	-0.0153	-0.33	MI

Summary Statistics

	Sample P45	Sample P46
Grand Means	0.11549 COF	0.10469 COF
Std Dev Btwn Labs	0.03716 COF	0.04672 COF

Statistics based on 11 of 11 reporting participants

Sample P45: LDPE & Sample P46: LDPE

Key to Instrument Codes Reported by Participants

IG Instron	IS Instron 5000 Series
KA Kayeness Inc.	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

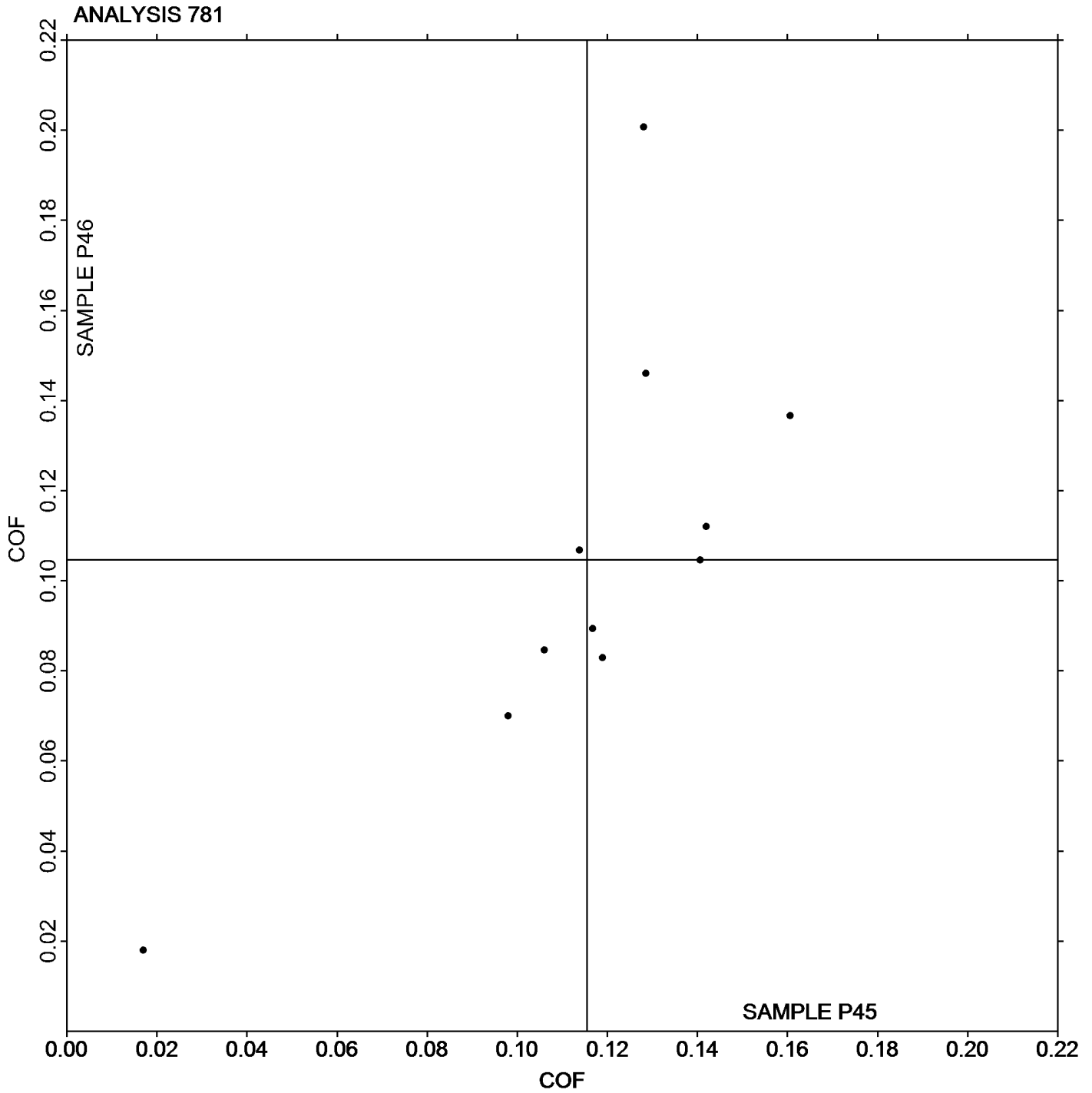
Analysis 781

Coefficient of Kinetic Friction

Report #103

3rd Qtr 2017

Grand Mean Sample P45: 0.11549 COF Grand Mean Sample P46: 0.10469 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 #103

Analysis 782

3rd Qtr 2017

Tear Resistance of Films

WebCode	Data Flag	Sample Q45			Sample Q46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2KBJ7C		414.5	-66.4	-1.08	274.0	23.8	0.58	TM
2RMPVN		463.5	-17.4	-0.28	234.1	-16.1	-0.39	TE
2WGLKE		559.1	78.2	1.28	254.4	4.2	0.10	TM
3RM79D		496.3	15.4	0.25	332.2	82.0	2.00	TE
6AEPJP		500.8	19.9	0.33	200.8	-49.3	-1.20	TA
CGTYRK		544.3	63.4	1.04	187.0	-63.2	-1.54	TE
CNFTQ4		390.6	-90.3	-1.48	211.7	-38.5	-0.94	SZ
LHC66E		542.7	61.8	1.01	261.8	11.6	0.28	TE
T3CV27		391.6	-89.3	-1.46	276.5	26.4	0.64	LO
TRC864		522.6	41.7	0.68	273.6	23.4	0.57	TA
W38B4H		463.8	-17.1	-0.28	246.0	-4.2	-0.10	TE

Summary Statistics

	Sample Q45	Sample Q46
Grand Means	480.90 grams-force	250.19 grams-force
Stnd Dev Btwn Labs	61.21 grams-force	41.08 grams-force

Statistics based on 11 of 11 reporting participants

Sample Q45: LDPE & Sample Q46: LDPE

Key to Instrument Codes Reported by Participants

LO	Lorentzen & Wettre Model II	SZ	Textest FX 3700
TA	Thwing-Albert	TE	Thwing-Albert Pro Tear
TM	TMI No. 83-1100		



Plastics Interlaboratory Testing Program

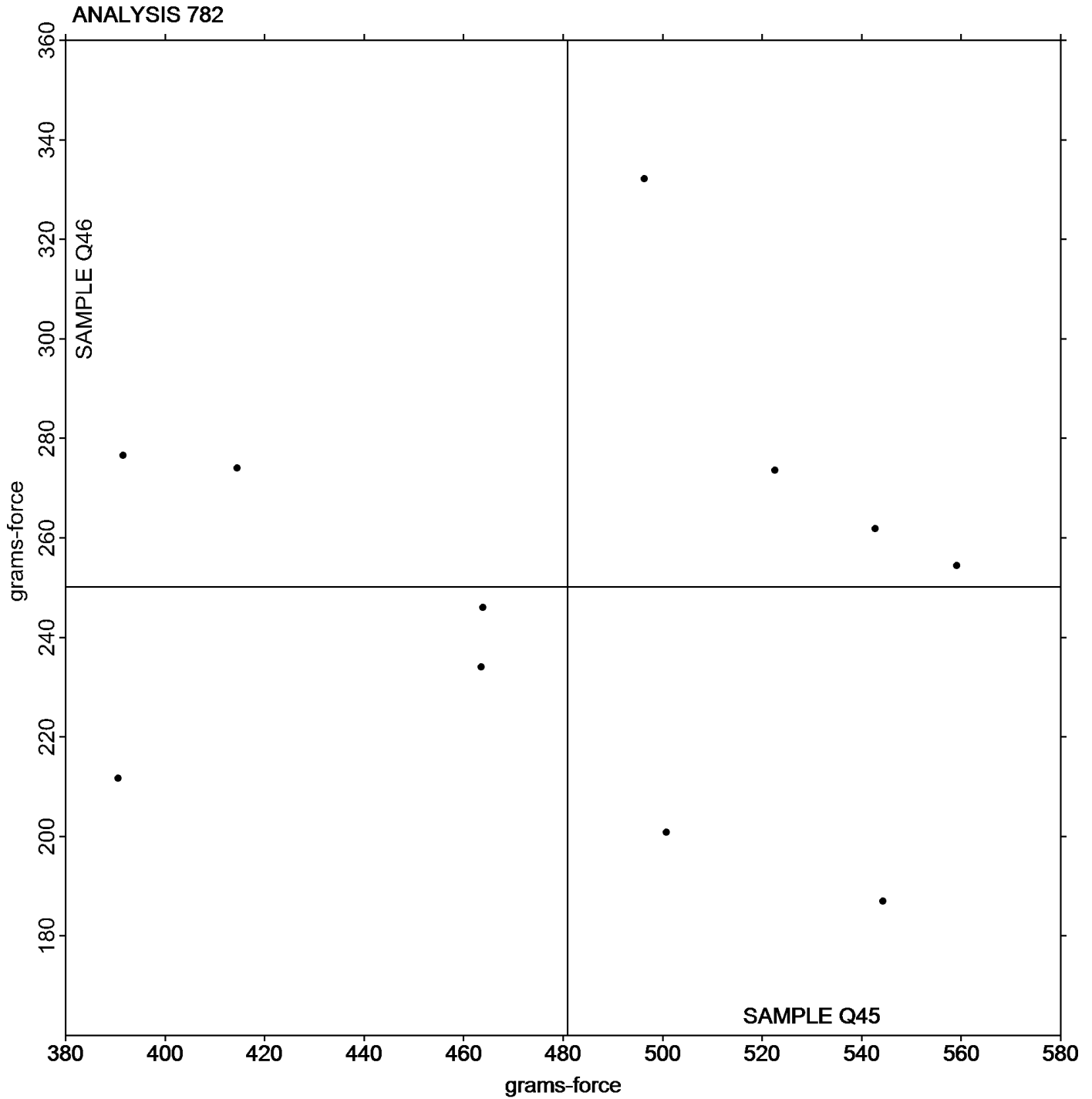
Report #103

Analysis 782

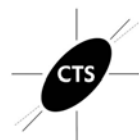
3rd Qtr 2017

Tear Resistance of Films

Grand Mean Sample Q45: 480.90 grams-force Grand Mean Sample Q46: 250.19 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 #103

Analysis 785

3rd Qtr 2017

Percent Haze of Film

WebCode	Data Flag	Sample D45			Sample D46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2FV78B		11.800	-0.968	-1.37	21.813	-1.073	-0.84	DA
2KBJ7C		12.863	0.094	0.13	23.325	0.439	0.34	BJ
2RMPVN		12.525	-0.243	-0.35	21.925	-0.961	-0.75	BJ
2Z4BQD		12.463	-0.306	-0.43	22.100	-0.786	-0.62	BJ
3MWKQQ		12.821	0.053	0.08	23.424	0.538	0.42	HC
3RM79D		13.138	0.369	0.52	22.463	-0.423	-0.33	BJ
4TEDGG		12.538	-0.231	-0.33	22.575	-0.311	-0.24	BJ
4UAX72	*	13.950	1.182	1.68	21.050	-1.836	-1.44	BG
7LAFKN		11.788	-0.981	-1.39	21.925	-0.961	-0.75	BJ
8AC7LY		13.075	0.307	0.44	23.850	0.964	0.76	BJ
8VRRHY		12.125	-0.643	-0.91	21.463	-1.423	-1.12	BJ
8YAE8K		12.254	-0.514	-0.73	22.516	-0.369	-0.29	BJ
9D3M7B		13.088	0.319	0.45	23.150	0.264	0.21	DS
CGTYRK		12.288	-0.481	-0.68	22.238	-0.648	-0.51	BJ
CNFTQ4		12.138	-0.631	-0.90	23.363	0.477	0.37	BJ
CPM9ZV		12.625	-0.143	-0.20	23.213	0.327	0.26	BJ
F3Z86Q		13.804	1.036	1.47	21.916	-0.969	-0.76	XR
FPTRCM		14.211	1.443	2.05	23.200	0.314	0.25	XR
LDLT8W		12.138	-0.631	-0.90	22.525	-0.361	-0.28	BJ
LEU6MD		12.913	0.144	0.21	24.400	1.514	1.19	BJ
LHC66E		12.400	-0.368	-0.52	24.675	1.789	1.40	BT
PV3C3Q		12.615	-0.153	-0.22	22.913	0.027	0.02	BJ
QUQQFA		12.275	-0.493	-0.70	22.450	-0.436	-0.34	BJ
W38B4H		13.075	0.307	0.44	23.888	1.002	0.79	BJ
XPW3Y6		12.630	-0.138	-0.20	21.339	-1.547	-1.21	XR
XU9CPD		12.973	0.204	0.29	25.496	2.611	2.05	BH
YCMVBJ	*	14.729	1.961	2.78	26.403	3.517	2.76	XR
ZWLUX9		12.270	-0.498	-0.71	21.206	-1.679	-1.32	HL



Plastics Interlaboratory Testing Program

Report #103

Analysis 785

3rd Qtr 2017

Percent Haze of Film

Summary Statistics

	<u>Sample D45</u>	<u>Sample D46</u>
Grand Means	12.7681 Percent	22.8857 Percent
Stnd Dev Btwn Labs	0.7044 Percent	1.2753 Percent

Statistics based on 28 of 28 reporting participants

Sample D45: LDPE & Sample D46: LDPE

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

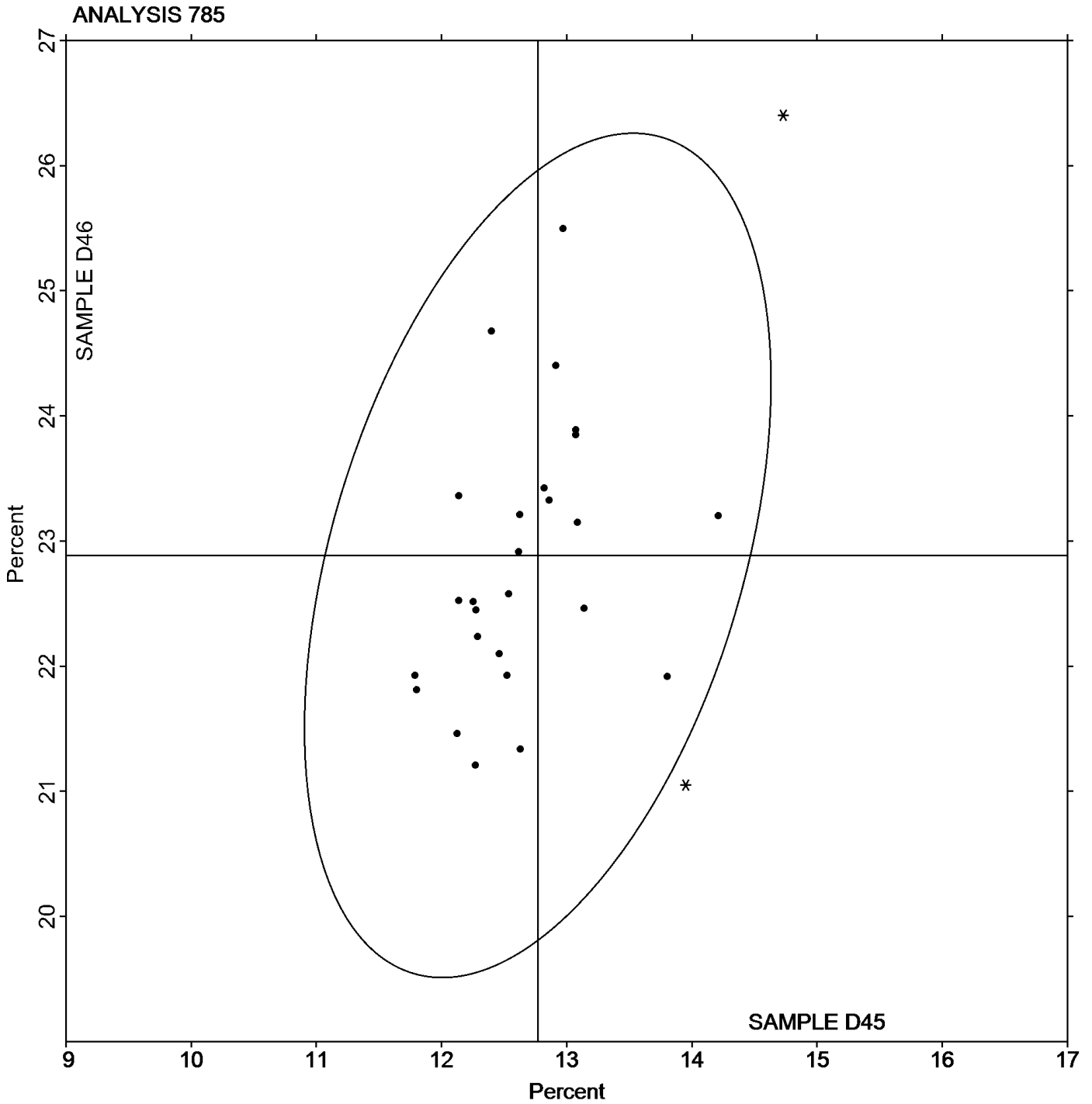
Analysis 785

Percent Haze of Film

Report #103

3rd Qtr 2017

Grand Mean Sample D45: 12.768 Percent Grand Mean Sample D46: 22.886 Percent





Plastics Interlaboratory Testing Program

Report #103

Analysis 786

3rd Qtr 2017

Total Luminous transmittance of film

WebCode	Data Flag	Sample D45			Sample D46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2FV78B		89.82	-2.08	-1.83	90.23	-2.19	-1.70	DA
2KBJ7C		92.70	0.81	0.71	93.38	0.95	0.74	BJ
2RMPVN		92.19	0.30	0.26	92.46	0.04	0.03	BJ
2Z4BQD		92.28	0.38	0.34	92.41	-0.01	-0.01	BJ
3MWKQQ		91.62	-0.27	-0.24	92.24	-0.18	-0.14	HC
3RM79D		93.33	1.43	1.26	94.06	1.64	1.27	BJ
4TEDGG		92.44	0.55	0.48	93.24	0.81	0.63	BJ
4UAX72		92.69	0.80	0.70	93.03	0.60	0.47	BG
7LAFKN		92.88	0.98	0.87	93.53	1.10	0.85	BJ
8AC7LY		93.65	1.76	1.55	94.56	2.14	1.66	BJ
8VRRHY		93.15	1.26	1.11	93.98	1.55	1.20	BJ
8YAE8K		92.76	0.87	0.77	93.34	0.92	0.71	BJ
9D3M7B		90.96	-0.93	-0.82	91.46	-0.96	-0.75	XX
CGTYRK		93.54	1.65	1.45	93.48	1.05	0.82	BJ
CNFTQ4		90.09	-1.80	-1.59	90.40	-2.03	-1.57	BJ
CPM9ZV		92.64	0.75	0.66	93.20	0.77	0.60	BJ
F3Z86Q		91.32	-0.57	-0.51	92.22	-0.21	-0.16	XR
FPTRCM		91.06	-0.83	-0.73	92.08	-0.35	-0.27	XR
LDLT8W		91.26	-0.63	-0.55	92.83	0.40	0.31	BJ
LEU6MD	X	86.79	-5.10	-4.50	87.64	-4.79	-3.72	BJ
LHC66E		92.58	0.68	0.60	93.19	0.76	0.59	BJ
PV3C3Q		92.29	0.39	0.35	92.61	0.18	0.14	BJ
QUQQFA		92.71	0.82	0.72	93.31	0.89	0.69	BJ
W38B4H		91.20	-0.69	-0.61	91.86	-0.56	-0.44	BJ
XPW3Y6	*	90.41	-1.48	-1.30	89.60	-2.83	-2.20	XR
XU9CPD		90.81	-1.08	-0.95	91.08	-1.35	-1.05	BH
YCMVBJ		90.64	-1.25	-1.10	91.60	-0.82	-0.64	XR
ZWLUX9		90.08	-1.81	-1.60	90.12	-2.31	-1.79	HL



Plastics Interlaboratory Testing Program

Report #103

Analysis 786

3rd Qtr 2017

Total Luminous transmittance of film

Summary Statistics	<u>Sample D45</u>	<u>Sample D46</u>
Grand Means	91.891 Percent	92.425 Percent
Stnd Dev Btwn Labs	1.134 Percent	1.286 Percent
Statistics based on 27 of 28 reporting participants		

Sample D45: LDPE & Sample D46: LDPE

Comments on Assigned Data Flags for Test #786

LEU6MD (X) - Data for both samples are low. Possible Systematic Error.

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) | XX Instrument make/model not specified by lab |



Plastics Interlaboratory Testing Program

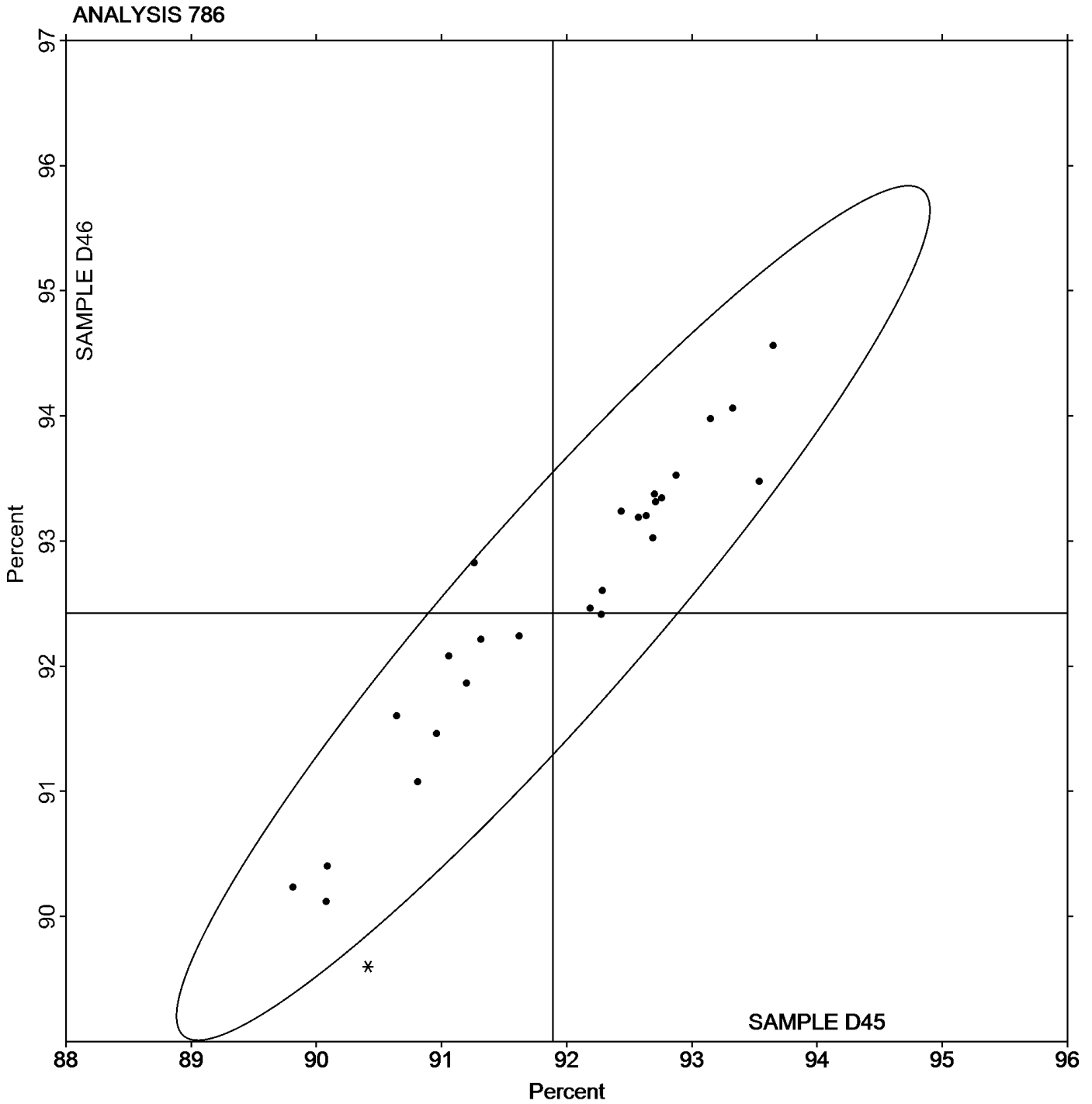
Analysis 786

Total Luminous transmittance of film

Report #103

3rd Qtr 2017

Grand Mean Sample D45: 91.891 Percent Grand Mean Sample D46: 92.425 Percent





Plastics Interlaboratory Testing Program

Report #103

Analysis 790

3rd Qtr 2017

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S45			Sample S46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
23THEG		6.39	-0.28	-0.67	5.03	-0.04	-0.11	TO
24F7MA		6.01	-0.66	-1.56	4.68	-0.39	-1.01	TO
2CH9X3		6.63	-0.04	-0.10	4.98	-0.09	-0.24	CE
2L4C62		7.09	0.42	1.00	5.38	0.30	0.79	TO
376UHB		7.26	0.59	1.41	5.58	0.51	1.33	CE
3MWKQQ		6.71	0.04	0.09	5.44	0.37	0.95	CE
4TEDGG		6.93	0.26	0.61	5.16	0.09	0.23	TY
63Y4C8		7.03	0.36	0.85	4.81	-0.26	-0.68	TO
68PFCA		6.34	-0.33	-0.79	4.84	-0.24	-0.61	DY
6AEPJP		6.74	0.07	0.16	5.17	0.10	0.25	TM
6NENA8		6.34	-0.33	-0.79	4.77	-0.30	-0.78	WZ
7NTJ4E		5.97	-0.70	-1.67	4.31	-0.76	-1.98	WZ
82D7YX		7.06	0.39	0.94	5.37	0.30	0.77	WZ
8D9KYU		6.95	0.28	0.67	5.26	0.18	0.48	CE
8HYU88		7.00	0.33	0.79	5.37	0.30	0.79	XX
8RQ99T		6.27	-0.40	-0.96	4.96	-0.11	-0.29	CE
8UC4MK	*	7.68	1.01	2.41	6.20	1.13	2.94	TO
8VRRHY		6.24	-0.43	-1.03	4.91	-0.16	-0.42	TO
9LJ27V		7.13	0.46	1.11	4.98	-0.09	-0.24	TM
ABBZXF		6.92	0.25	0.59	5.13	0.06	0.16	TO
AJ9JK4		6.84	0.16	0.39	4.72	-0.36	-0.92	TO
AXR4A4		7.10	0.43	1.04	5.10	0.03	0.08	TO
B9HETV		6.29	-0.38	-0.92	5.42	0.35	0.91	TO
BEAMFA		6.75	0.08	0.19	4.69	-0.38	-0.99	XX
C3B9QX		6.84	0.17	0.41	5.29	0.22	0.58	TO
CGTYRK		6.61	-0.06	-0.15	5.00	-0.07	-0.19	CE
CMJDFR	X	27.22	20.55	48.97	20.15	15.08	39.17	TO
DGB8HZ	X	8.33	1.66	3.95	6.35	1.28	3.33	TO
E4EWVD		6.93	0.26	0.62	4.88	-0.19	-0.49	TO
ER73QF		6.38	-0.29	-0.68	5.06	-0.01	-0.02	TO
EXUMWG		6.08	-0.59	-1.40	4.45	-0.62	-1.62	TO
FRHW92	*	7.24	0.57	1.37	6.18	1.10	2.87	TM
FXQM8Z		6.42	-0.25	-0.59	4.78	-0.29	-0.76	TM
GEEXWN		6.49	-0.18	-0.43	4.76	-0.31	-0.80	TO
GRZ8JU		7.47	0.80	1.92	5.24	0.17	0.44	TO



Plastics Interlaboratory Testing Program

Report #103

Analysis 790

3rd Qtr 2017

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S45			Sample S46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
L267VB		6.60	-0.07	-0.16	5.51	0.44	1.14	TO
LEU6MD		7.58	0.91	2.16	5.48	0.41	1.06	TM
LHC66E		6.83	0.16	0.38	5.16	0.09	0.23	TM
LKKCAT		6.32	-0.35	-0.84	4.79	-0.28	-0.73	TO
LQ9Z3D		7.05	0.38	0.90	5.50	0.43	1.12	BA
LWWKAY		6.31	-0.36	-0.86	5.10	0.03	0.07	CS
NTMG9M		6.20	-0.48	-1.13	4.59	-0.48	-1.26	TM
NZMT9Q		7.04	0.37	0.87	5.20	0.13	0.34	CE
P36H4M		6.36	-0.31	-0.75	5.22	0.14	0.38	BA
PK8ZDR		6.44	-0.23	-0.54	5.09	0.02	0.04	WZ
PUFL7R		6.88	0.21	0.49	4.74	-0.33	-0.85	CE
QMT2Y7		6.17	-0.50	-1.20	4.65	-0.42	-1.09	TM
QPXLNR		6.82	0.15	0.36	5.41	0.34	0.88	XX
QQALJZ		7.26	0.59	1.40	5.06	-0.01	-0.03	TO
QV4H77		6.80	0.13	0.31	5.06	-0.01	-0.02	TO
T9KZBE	X	2.04	-4.63	-11.03	2.02	-3.05	-7.92	IN
TQLY2U		6.65	-0.02	-0.06	5.05	-0.02	-0.05	TO
TRC864		5.94	-0.73	-1.75	4.48	-0.59	-1.54	WZ
UB2V6X		6.40	-0.27	-0.64	5.05	-0.02	-0.05	XX
UCFBKJ		6.32	-0.35	-0.83	5.12	0.05	0.12	CE
UQF8KX	X	5.96	-0.71	-1.69	5.99	0.91	2.37	WZ
UV84JW		6.51	-0.16	-0.38	4.53	-0.54	-1.39	WZ
UXHYCF		7.06	0.39	0.92	5.52	0.45	1.17	TM
VDVRGX		6.90	0.23	0.54	5.55	0.48	1.24	TM
W38B4H		6.20	-0.47	-1.12	5.27	0.20	0.52	TO
X27RPT		6.00	-0.67	-1.60	4.48	-0.59	-1.54	TO
XPW3Y6		5.88	-0.79	-1.88	4.14	-0.94	-2.43	TO
XX8Q9W		6.95	0.28	0.67	5.15	0.08	0.22	CE
Y3YML8		6.76	0.09	0.21	5.21	0.14	0.35	XX
YZT3X8		6.44	-0.23	-0.55	5.10	0.02	0.06	CE
ZJJ4HV		6.79	0.12	0.28	5.32	0.25	0.64	TM



Plastics Interlaboratory Testing Program

Report #103

Analysis 790

3rd Qtr 2017

Notched Izod Impact - ft.lbf/in

Summary Statistics		
	<u>Sample S45</u>	<u>Sample S46</u>
Grand Means	6.670 ft.lbf/in	5.071 ft.lbf/in
Stnd Dev Btwn Labs	0.420 ft.lbf/in	0.385 ft.lbf/in
Statistics based on 62 of 66 reporting participants		

Sample S45: ABS & Sample S46: ABS

Comments on Assigned Data Flags for Test #790

- CMJDFR (X) - Extreme data.
- T9KZBE (X) - Data for both samples are low.
- DGB8HZ (X) - Data for both samples are high.
- UQF8KX (X) - Inconsistent in testing between samples.

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

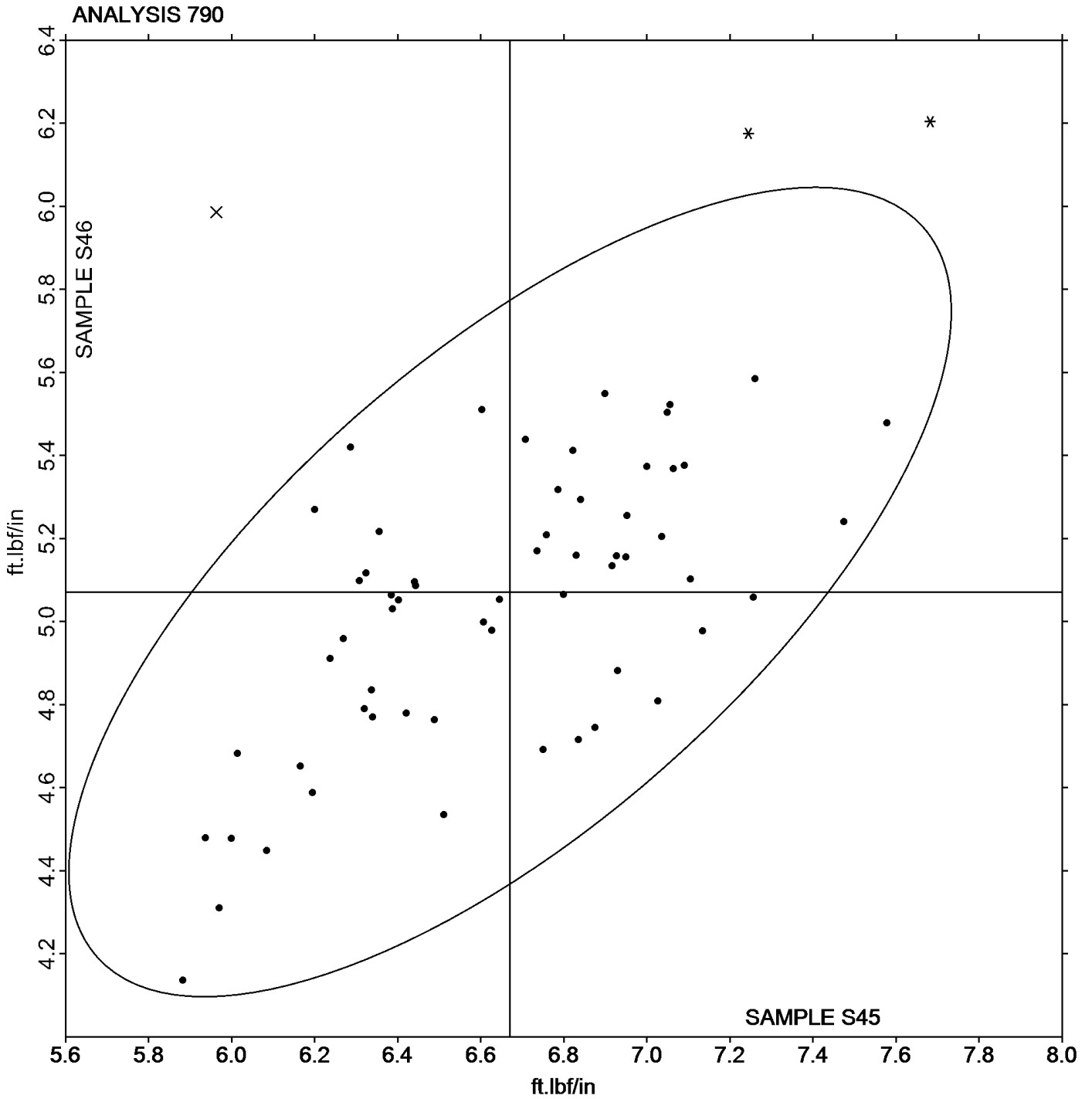
Analysis 790

Notched Izod Impact - ft.lbf/in

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Grand Mean Sample S45: 6.6701 ft.lbf/in Grand Mean Sample S46: 5.0714 ft.lbf/in





Plastics Interlaboratory Testing Program

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Analysis 791

3rd Qtr 2017

Notched Izod Impact - kJ/m²

WebCode	Data Flag	Sample Z45			Sample Z46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
23THEG		1.65200	-0.29942	-0.87	1.62200	-0.35021	-0.77	TO
24F7MA		2.25000	0.29858	0.86	2.29400	0.32179	0.70	TO
426VT4		1.68380	-0.26762	-0.77	1.65560	-0.31661	-0.69	XX
4TEDGG		2.22400	0.27258	0.79	2.15400	0.18179	0.40	XX
4UAX72	*	2.62000	0.66858	1.93	1.97400	0.00179	0.00	WZ
6NENA8		1.82200	-0.12942	-0.37	2.27000	0.29779	0.65	WZ
73VZZ9	X	4.90850	2.95708	8.54	4.88690	2.91469	6.37	TO
8JCNPT		1.69000	-0.26142	-0.76	1.78400	-0.18821	-0.41	TO
8UC4MK	*	2.62600	0.67458	1.95	3.42000	1.44779	3.16	TO
9DQTNP		2.23800	0.28658	0.83	2.15600	0.18379	0.40	TO
AWQKUF		1.92260	-0.02882	-0.08	2.13020	0.15799	0.35	TM
BP9HD6		1.73400	-0.21742	-0.63	1.76000	-0.21221	-0.46	IN
E9TVMR		1.75580	-0.19562	-0.57	1.56740	-0.40481	-0.88	XX
ER73QF		1.61440	-0.33702	-0.97	1.63980	-0.33241	-0.73	TO
FMNBTX	*	2.31860	0.36718	1.06	1.36640	-0.60581	-1.32	TM
LQ9Z3D		2.66020	0.70878	2.05	3.08240	1.11019	2.43	CE
MXNZWF		1.93800	-0.01342	-0.04	1.93000	-0.04221	-0.09	TO
NTMG9M		1.58800	-0.36342	-1.05	1.63060	-0.34161	-0.75	TM
PK8ZDR		1.70040	-0.25102	-0.73	1.74960	-0.22261	-0.49	TM
Q8JCJK		1.68000	-0.27142	-0.78	1.30600	-0.66621	-1.46	CE
QY6FTR		1.63400	-0.31742	-0.92	1.56400	-0.40821	-0.89	TM
R32C2J		2.23400	0.28258	0.82	2.46800	0.49579	1.08	TO
RQ78MR		1.78200	-0.16942	-0.49	1.84000	-0.13221	-0.29	TO
TGXJHC		1.73400	-0.21742	-0.63	1.98600	0.01379	0.03	CE
TWU7YL		1.64800	-0.30342	-0.88	1.81600	-0.15621	-0.34	CE
UB2V6X	X	4.15380	2.20238	6.36	3.88600	1.91379	4.18	XX
V84FKG		2.07400	0.12258	0.35	1.95400	-0.01821	-0.04	WZ
X8AVGD		2.58200	0.63058	1.82	2.57000	0.59779	1.31	CE
Y3G26X		1.96300	0.01158	0.03	1.89920	-0.07301	-0.16	CE
YDXNEX		1.90120	-0.05022	-0.15	1.99640	0.02419	0.05	TM
Z6ZHX3		1.71260	-0.23882	-0.69	1.70060	-0.27161	-0.59	CE
ZQHP8A		1.56000	-0.39142	-1.13	1.88000	-0.09221	-0.20	WZ



Plastics Interlaboratory Testing Program

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Analysis 791

3rd Qtr 2017

Notched Izod Impact - kJ/m²

Summary Statistics		
	<u>Sample Z45</u>	<u>Sample Z46</u>
Grand Means	1.951420 kJ/m ²	1.972207 kJ/m ²
Stnd Dev Btwn Labs	0.346125 kJ/m ²	0.457490 kJ/m ²
Statistics based on 30 of 32 reporting participants		

Sample Z45: HIPS & Sample Z46: HIPS

Comments on Assigned Data Flags for Test #791

73VZZ9 (X) - Data for both samples are high.

UB2V6X (X) - Data for both samples are high.

Key to Instrument Codes Reported by Participants

CE Ceast

IN Instron

TM TMI

TO Tinius Olsen

WZ Zwick

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

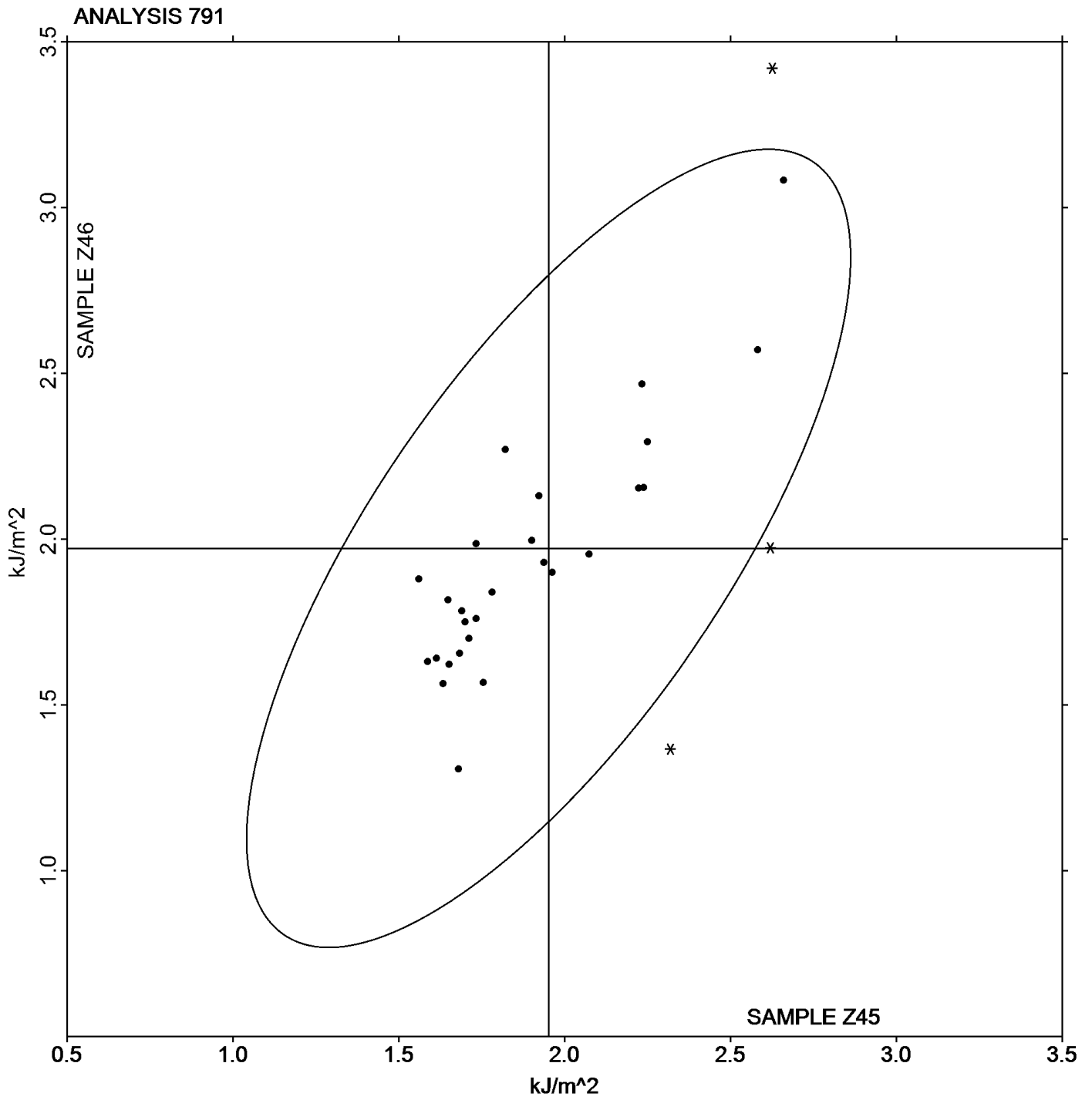
Analysis 791

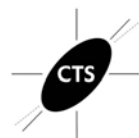
Notched Izod Impact - kJ/m^2

Report #103

3rd Qtr 2017

Grand Mean Sample Z45: 1.9514 kJ/m^2 Grand Mean Sample Z46: 1.9722 kJ/m^2





Plastics Interlaboratory Testing Program

Report #103

Analysis 792

3rd Qtr 2017

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M45			Sample M46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
23THEG		1.71	-0.08	-0.19	1.74	0.01	0.03	TO
24F7MA		1.76	-0.04	-0.08	1.72	-0.01	-0.02	TO
2CH9X3	*	1.78	-0.02	-0.04	2.17	0.44	1.13	CE
2L4C62		1.74	-0.05	-0.12	1.69	-0.04	-0.09	TO
376UHB		2.35	0.55	1.28	2.14	0.41	1.06	CE
4TEDGG		1.33	-0.46	-1.06	1.37	-0.36	-0.92	TY
63Y4C8		1.47	-0.32	-0.74	1.63	-0.09	-0.24	TO
6HQZE3		1.28	-0.51	-1.18	1.28	-0.44	-1.13	CE
6NENA8		1.82	0.03	0.07	1.41	-0.31	-0.80	WZ
8L2TL7		1.70	-0.10	-0.22	1.70	-0.03	-0.07	TM
8P3YW7		1.04	-0.75	-1.73	1.39	-0.33	-0.85	TM
8UC4MK		1.84	0.05	0.11	1.76	0.03	0.09	TO
9DQTNP		1.66	-0.13	-0.30	1.79	0.06	0.16	TO
C2YHE8		2.39	0.60	1.37	2.40	0.68	1.73	WZ
CGTYRK		2.29	0.50	1.15	2.03	0.30	0.77	CE
DDNRPK		2.38	0.59	1.36	2.25	0.52	1.34	TM
EXUMWG		1.69	-0.10	-0.23	1.75	0.02	0.05	TO
HMXZ6A		1.93	0.14	0.32	1.89	0.16	0.42	CE
JGTAPB		1.67	-0.12	-0.28	1.65	-0.08	-0.20	XX
JVRB6W		2.70	0.91	2.09	2.64	0.91	2.33	WZ
LEU6MD		1.46	-0.33	-0.76	1.37	-0.36	-0.91	TM
LQ9Z3D		2.59	0.80	1.83	2.19	0.46	1.17	CE
MXNZWF		1.90	0.11	0.25	1.79	0.07	0.17	TO
NRTH93		1.73	-0.06	-0.14	1.74	0.01	0.04	TM
NTMG9M		1.45	-0.34	-0.79	1.38	-0.35	-0.89	TM
PK8ZDR	*	1.86	0.06	0.15	1.35	-0.38	-0.97	TM
PUFL7R		1.32	-0.47	-1.09	1.24	-0.49	-1.24	CE
QNL2PP		1.82	0.03	0.07	1.58	-0.15	-0.38	CE
QPXLNR		1.54	-0.25	-0.58	1.59	-0.13	-0.34	XX
TRC864		1.50	-0.29	-0.68	1.57	-0.15	-0.39	WZ
TWU7YL		2.45	0.66	1.52	2.16	0.43	1.10	CE
UCFBKJ		1.38	-0.41	-0.95	1.31	-0.42	-1.06	CE
UXLJ24		1.87	0.07	0.17	1.52	-0.21	-0.54	IN
V84FKG		1.54	-0.25	-0.58	1.44	-0.29	-0.73	WZ
WZVP3U		0.80	-0.99	-2.28	0.80	-0.93	-2.37	XX



Plastics Interlaboratory Testing Program

Report #103

Analysis 792

3rd Qtr 2017

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M45			Sample M46			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
X8AVGD		2.51	0.72	1.65	2.45	0.72	1.84	CE
XF8CGJ		2.24	0.45	1.04	2.28	0.55	1.41	WZ
Y3G26X		1.34	-0.45	-1.03	1.21	-0.51	-1.31	CE
Y3YML8		1.72	-0.07	-0.16	1.69	-0.04	-0.10	XX
YDXNEX		1.30	-0.49	-1.13	1.30	-0.43	-1.09	TM
ZK9JLC		1.66	-0.14	-0.31	1.69	-0.04	-0.09	TO
ZQHP8A		2.18	0.39	0.89	2.02	0.29	0.75	WZ
ZYRCZB		2.39	0.59	1.37	2.19	0.46	1.18	WZ

Summary Statistics

	Sample M45	Sample M46
Grand Means	1.792 kJ/m ²	1.727 kJ/m ²
Std Dev Btwn Labs	0.434 kJ/m ²	0.391 kJ/m ²

Statistics based on 43 of 43 reporting participants

Sample M45: HIPS & Sample M46: HIPS

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/m^2

Report #103

3rd Qtr 2017

Grand Mean Sample M45: 1.7916 kJ/m^2 Grand Mean Sample M46: 1.7270 kJ/m^2

