



Plastics Interlaboratory Testing Program

Web Summary Report #98, 2nd Qtr 2016

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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.



Plastics Interlaboratory Testing Program

Results Summary for Report #98, 2nd Qtr 2016

Analysis 704 - Tensile Stress at Yield

Material: ABS/PC	Sample F35	9,622.99	psi	1.48% COV
	Sample F36	9,330.73	psi	1.62% COV

Analysis 705 - Tensile Stress at Break

Material: ABS/PC	Sample F35	6,929.95	psi	2.05% COV
	Sample F36	6,889.63	psi	2.30% COV

Analysis 706 - Percent Elongation at Yield

Material: ABS/PC	Sample F35	3.6242	Percent	2.63% COV
	Sample F36	3.5483	Percent	2.93% COV

Analysis 708 - Modulus of Elasticity

Material: ABS/PC	Sample F35	412.19	ksi	5.64% COV
	Sample F36	413.80	ksi	5.33% COV

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

Material: ABS/PC	Sample E35	108.35	Degrees C	2.27% COV
	Sample E36	107.98	Degrees C	2.20% COV

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

Material: PP	Sample G35	78.010	Degrees C	2.00% COV
	Sample G36	77.203	Degrees C	3.02% COV

Analysis 712 - Temperature of Deflection (1.80 MPa)

Material: HIPS	Sample N35	76.661	Degrees C	1.15% COV
	Sample N36	76.720	Degrees C	1.20% COV

Analysis 715 - Vicat Temperature (Rate A)

Material: ABS/PC	Sample H35	139.40	Degrees C	2.54% COV
	Sample H36	139.28	Degrees C	2.48% COV

Analysis 716 - Vicat Temperature (Rate B)

Material: ABS/PC	Sample R35	142.22	Degrees C	0.666% COV
	Sample R36	142.20	Degrees C	0.648% COV

Analysis 718 - Specific Gravity

Material: HIPS	Sample T35	1.0293	sp gr 23/23 C	0.179% COV
	Sample T36	1.0294	sp gr 23/23 C	0.166% COV

Analysis 720 - Flexural Modulus

Material: ABS/PC	Sample J35	342.81	ksi	4.23% COV
	Sample J36	343.18	ksi	4.27% COV

Analysis 721 - Flexural Stress at 5% Strain

Material: ABS/PC	Sample J35	11,874.59	psi	3.71% COV
	Sample J36	11,914.35	psi	3.90% COV

Analysis 722 - Flexural Stress at Yield

Material: ABS/PC	Sample J35	12,078.02	psi	4.31% COV
	Sample J36	12,121.99	psi	4.36% COV

Analysis 730 - Tensile Stress at Yield, ISO Method

Material: ABS/PC	Sample C35	51.434	MPa	1.68% COV
	Sample C36	51.471	MPa	1.68% COV

Analysis 731 - Tensile Stress at Break, ISO Method

Material: ABS/PC	Sample C35	42.789	MPa	2.24% COV
	Sample C36	43.050	MPa	2.41% COV



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Analysis 732 - Strain at Yield, ISO Method

Material: ABS/PC	Sample C35	4.8766	Percent	2.25% COV
	Sample C36	4.8522	Percent	2.27% COV

Analysis 734 - Modulus of Elasticity, ISO Method

Material: ABS/PC	Sample C35	2,256.00	MPa	3.98% COV
	Sample C36	2,244.68	MPa	4.03% COV

Analysis 736 - Flexural Modulus

Material: ABS/PC	Sample K35	2,264.12	MPa	3.87% COV
	Sample K36	2,261.56	MPa	3.73% COV

Analysis 737 - Flexural Stress at 3.5% Strain

Material: ABS/PC	Sample K35	69.979	MPa	2.70% COV
	Sample K36	69.942	MPa	2.61% COV

Analysis 738 - Flexural Stress at Yield

Material: ABS/PC	Sample K35	81.628	MPa	3.19% COV
	Sample K36	81.664	MPa	2.87% COV

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

Material: PP	Sample X35	14.970	grams/10 mins	4.61% COV
	Sample X36	14.944	grams/10 mins	4.35% COV

Analysis 755 - Moisture Content

Material: ABS/PC	Sample Y35	0.09610	Percent	19.8% COV
	Sample Y36	0.09796	Percent	19.5% COV

Analysis 757 - Ash Content

Material: PP	Sample L35	19.750	Percent	0.276% COV
	Sample L36	19.759	Percent	0.264% COV

Analysis 760 - DSC

Material: PP	Sample W35	109.51	Degrees Celsius	2.81% COV
	Sample W36	109.44	Degrees Celsius	2.91% COV

Analysis 761 - DSC

Material: PP	Sample W35	166.58	Degrees Celsius	2.60% COV
	Sample W36	166.58	Degrees Celsius	2.48% COV

Analysis 762 - DSC

Material: PP	Sample W35	69.409	Joules Per Gram	6.77% COV
	Sample W36	71.076	Joules Per Gram	6.76% COV

Analysis 763 - DSC

Material: PP	Sample W35	59.854	Joules Per Gram	28.4% COV
	Sample W36	62.012	Joules Per Gram	29.1% COV

Analysis 764 - DSC

Material: PET	Sample V35	86.980	Degrees Celsius	1.72% COV
	Sample V36	86.996	Degrees Celsius	1.64% COV

Analysis 770 - Tensile Stress at Yield, Films

Material: LDPE	Sample B35	2,547.85	psi	27.1% COV
	Sample B36	2,537.11	psi	27.1% COV

Analysis 771 - Tensile Stress at Break, Films

Material: LDPE	Sample B35	3,307.84	psi	5.48% COV
	Sample B36	3,305.95	psi	5.64% COV



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Analysis 772 - Elongation at Yield, Films

Material: LDPE	Sample B35	137.68	Percent	93.1% COV
	Sample B36	134.53	Percent	92.5% COV

Analysis 773 - Elongation at Break, Films

Material: LDPE	Sample B35	354.88	Percent	22.7% COV
	Sample B36	348.80	Percent	19.8% COV

Analysis 774 - Thickness of Film Specimens

Material: LDPE	Sample B35	2.6350	mils	3.54% COV
	Sample B36	2.6273	mils	3.00% COV

Analysis 775 - Secant Modulus at 1% Strain

Material: LDPE	Sample B35	33,975.89	psi	20.0% COV
	Sample B36	33,573.19	psi	20.1% COV

Analysis 776 - Secant Modulus at 2% Strain

Material: LDPE	Sample B35	29,148.21	psi	13.7% COV
	Sample B36	28,735.78	psi	14.4% COV

Analysis 780 - Static Friction

Material: LDPE	Sample P35	0.14493	COF	34.0% COV
	Sample P36	0.15152	COF	32.1% COV

Analysis 781 - Kinetic Friction

Material: LDPE	Sample P35	0.11531	COF	42.9% COV
	Sample P36	0.12357	COF	40.4% COV

Analysis 782 - Tear Resistance of Film

Material: LDPE	Sample Q35	820.87	grams-force	15.8% COV
	Sample Q36	864.45	grams-force	14.6% COV

Analysis 785 - Percent Haze

Material: LDPE	Sample D35	24.035	Percent	4.91% COV
	Sample D36	15.772	Percent	6.50% COV

Analysis 786 - Total Transmittance

Material: LDPE	Sample D35	92.292	Percent	1.27% COV
	Sample D36	92.600	Percent	1.14% COV

Analysis 790 - Notched Izod Impact

Material: ABS/PC	Sample S35	2.4471	ft.lbf/in	15.0% COV
	Sample S36	2.4376	ft.lbf/in	16.0% COV

Analysis 791 - Notched Izod Impact

Material: HIPS	Sample Z35	12.629	kJ/m ²	7.31% COV
	Sample Z36	12.685	kJ/m ²	4.89% COV

Analysis 792 - Notched Charpy Impact

Material: ABS/PC	Sample M35	46.800	kJ/m ²	6.48% COV
	Sample M36	46.827	kJ/m ²	5.60% COV



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Analysis 704

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Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F35			Sample F36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2D4A6C		9,573.2	-49.8	-0.35	9,278.1	-52.6	-0.35
2JATVP		9,768.0	145.0	1.02	9,476.2	145.5	0.96
3R3M9E		9,732.8	109.8	0.77	9,280.4	-50.3	-0.33
3TX7AF		9,783.7	160.7	1.13	9,447.3	116.6	0.77
4DYDA7	*	9,240.6	-382.4	-2.69	8,933.8	-396.9	-2.62
6M2X3Q		9,562.2	-60.8	-0.43	9,258.2	-72.5	-0.48
7K7TWW		9,570.4	-52.6	-0.37	9,360.0	29.3	0.19
86643P		9,420.2	-202.8	-1.42	9,091.7	-239.1	-1.58
8Q8PT3		9,601.6	-21.4	-0.15	9,500.1	169.3	1.12
8TGFBJ		9,750.1	127.1	0.89	9,411.9	81.1	0.54
8V2JQ4		9,612.6	-10.4	-0.07	9,295.2	-35.5	-0.23
9G36ET		9,652.0	29.0	0.20	9,382.0	51.3	0.34
9XNHG7		9,557.4	-65.6	-0.46	9,205.2	-125.5	-0.83
AVE6NN		9,727.8	104.8	0.74	9,496.0	165.3	1.09
AVJZDA		9,659.4	36.4	0.26	9,399.4	68.7	0.45
AWQFKF		9,766.4	143.4	1.01	9,470.8	140.1	0.93
CMDRGK		9,561.0	-62.0	-0.44	9,169.4	-161.4	-1.07
EKX8KF		9,316.6	-306.4	-2.15	9,059.6	-271.1	-1.79
F8QBTk	X	7,594.4	-2,028.6	-14.25	7,404.2	-1,926.5	-12.74
GAV74Z		9,505.9	-117.1	-0.82	9,233.2	-97.5	-0.64
GHLJA2		9,669.0	46.0	0.32	9,386.8	56.1	0.37
HXT3KY		9,464.0	-159.0	-1.12	9,284.0	-46.7	-0.31
J78CED		9,439.0	-184.0	-1.29	9,199.8	-130.9	-0.87
JRAZ7A	X	9,526.4	-96.6	-0.68	9,848.3	517.6	3.42
KNKBY2		9,652.1	29.1	0.20	9,352.1	21.4	0.14
LA2R4C		9,712.8	89.8	0.63	9,337.2	6.5	0.04
LZnkZA		9,527.8	-95.2	-0.67	9,269.9	-60.8	-0.40
MFZQZU	*	9,630.0	7.0	0.05	9,115.8	-214.9	-1.42
MRUA7D		9,574.9	-48.1	-0.34	9,296.7	-34.0	-0.22
MTMMPB		9,501.4	-121.6	-0.85	9,221.6	-109.1	-0.72
N74ANV		9,840.8	217.8	1.53	9,671.8	341.1	2.25
N7QN77		9,472.4	-150.6	-1.06	9,201.8	-128.9	-0.85
NCXF9C	*	9,686.6	63.6	0.45	9,618.4	287.7	1.90
NLL9MU		9,934.9	311.9	2.19	9,614.3	283.6	1.87
P4VEJH	X	9,825.5	202.5	1.42	9,193.4	-137.3	-0.91



Plastics Interlaboratory Testing Program

Report #98

Analysis 704

2nd Qtr 2016

Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F35			Sample F36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
P6UKZC	X	8,955.5	-667.5	-4.69	8,705.2	-625.5	-4.14
PH3EK3		9,850.2	227.2	1.60	9,535.4	204.7	1.35
PVNQVC		9,725.6	102.6	0.72	9,438.4	107.7	0.71
Q36JM2		9,594.6	-28.4	-0.20	9,257.8	-72.9	-0.48
Q7XYKM		9,645.2	22.2	0.16	9,304.2	-26.5	-0.18
Q7YRFA		9,550.8	-72.2	-0.51	9,297.9	-32.9	-0.22
Q8THLP		9,482.8	-140.2	-0.99	9,134.4	-196.3	-1.30
QTCUN6		9,748.2	125.2	0.88	9,359.4	28.7	0.19
RJZP48	X	9,853.2	230.2	1.62	9,166.0	-164.7	-1.09
TWNXQZ		9,840.8	217.8	1.53	9,472.8	142.1	0.94
U4J2PA		9,681.8	58.8	0.41	9,516.7	185.9	1.23
U4KCP7		9,659.6	36.6	0.26	9,218.7	-112.1	-0.74
UABPQU		9,513.0	-110.0	-0.77	9,284.6	-46.1	-0.30
UFCYWM		9,666.7	43.7	0.31	9,249.8	-80.9	-0.53
ULLYG6		9,426.0	-197.0	-1.38	9,274.0	-56.7	-0.38
UNTHE2		9,687.7	64.7	0.45	9,341.4	10.7	0.07
V4XPQ2		9,445.4	-177.6	-1.25	9,120.8	-209.9	-1.39
VMCKM2		9,838.4	215.4	1.51	9,564.6	233.9	1.55
VRLX6Z		9,685.4	62.4	0.44	9,314.8	-15.9	-0.11
W2Q7LL		9,493.1	-129.9	-0.91	9,392.2	61.5	0.41
WYZ772		9,497.6	-125.4	-0.88	9,188.4	-142.3	-0.94
XHVYQZ		9,717.6	94.6	0.66	9,369.5	38.8	0.26
XP8BJQ		9,569.4	-53.6	-0.38	9,421.4	90.7	0.60
YAEZAU		9,908.5	285.5	2.01	9,612.9	282.2	1.87
YGMNVE		9,630.9	7.9	0.06	9,268.9	-61.9	-0.41
YHKYT3		9,560.8	-62.2	-0.44	9,263.3	-67.4	-0.45
ZAFP2X	X	9,069.6	-553.4	-3.89	8,870.8	-459.9	-3.04

Summary Statistics

Grand Means

Sample F35
9,622.99 psi

Sample F36
9,330.73 psi

Std Dev Btwn Labs

142.32 psi

151.27 psi

Statistics based on 56 of 62 reporting participants

Sample F35: ABS/PC & Sample F36: ABS/PC



Plastics Interlaboratory Testing Program

Analysis 704

Tensile Stress at Yield - psi

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Comments on Assigned Data Flags for Test #704

- JRAZ7A (X) - Data for sample F36 are high.
- P4VEJH (X) - Inconsistent in testing between samples.
- P6UKZC (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample F35.
- ZEFP2X (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample F36.
- RJZP48 (X) - Inconsistent in testing between samples.
- F8QBTK (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

Report #98

Analysis 705

2nd Qtr 2016

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F35			Sample F36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2D4A6C		6,964.5	34.5	0.24	6,702.8	-186.8	-1.18
2JATVP		7,054.2	124.2	0.87	7,055.4	165.8	1.05
3R3M9E		6,866.2	-63.8	-0.45	6,717.8	-171.8	-1.09
3TX7AF		7,001.6	71.7	0.50	7,080.6	191.0	1.21
4DYDA7		6,760.8	-169.2	-1.19	6,711.9	-177.7	-1.12
6M2X3Q		6,770.4	-159.6	-1.12	6,817.6	-72.0	-0.46
7K7TWW		6,862.9	-67.0	-0.47	6,945.3	55.6	0.35
86643P		6,787.4	-142.6	-1.00	6,670.6	-219.0	-1.39
8Q8PT3		6,819.7	-110.2	-0.77	6,866.1	-23.5	-0.15
8TGFBJ		6,843.8	-86.1	-0.61	6,808.1	-81.5	-0.52
8V2JQ4		6,858.2	-71.8	-0.50	6,912.0	22.4	0.14
9G36ET		6,929.2	-0.8	-0.01	6,896.8	7.2	0.05
9XNHG7		6,965.0	35.0	0.25	7,008.4	118.8	0.75
AVE6NN		7,078.8	148.8	1.05	6,954.6	65.0	0.41
AVJZDA		6,986.6	56.6	0.40	6,968.4	78.8	0.50
AWQFKF		6,991.0	61.0	0.43	6,937.8	48.2	0.30
CMDRGK		6,947.4	17.4	0.12	6,668.9	-220.7	-1.40
EKX8KF		6,695.6	-234.4	-1.65	6,795.2	-94.4	-0.60
F8QBTk		7,156.8	226.8	1.59	7,052.2	162.6	1.03
GAV74Z	*	6,485.3	-444.7	-3.12	6,594.9	-294.7	-1.86
GHLJA2		6,969.8	39.8	0.28	6,948.0	58.4	0.37
J78CED		6,788.0	-142.0	-1.00	6,729.6	-160.0	-1.01
KNKBY2		6,872.8	-57.1	-0.40	6,763.5	-126.2	-0.80
LZnkZA		6,808.4	-121.6	-0.85	6,881.8	-7.8	-0.05
MFZQZU		7,032.8	102.8	0.72	6,717.0	-172.6	-1.09
MRUA7D		6,948.8	18.9	0.13	6,711.0	-178.7	-1.13
MTMMPB		6,741.2	-188.8	-1.33	6,725.2	-164.4	-1.04
N74ANV		7,218.0	288.0	2.02	7,228.8	339.2	2.14
N7QN77		6,812.8	-117.2	-0.82	6,903.0	13.4	0.08
NCXF9C		6,925.2	-4.8	-0.03	7,165.0	275.4	1.74
P4VEJH		7,085.7	155.8	1.09	6,773.3	-116.3	-0.74
P6UKZC	X	6,148.2	-781.8	-5.49	6,276.8	-612.9	-3.88
PH3EK3		7,179.0	249.0	1.75	7,175.0	285.4	1.80
PVNQVC		7,207.4	277.4	1.95	7,142.0	252.4	1.60
Q36JM2		6,929.7	-0.3	0.00	6,992.3	102.7	0.65



Plastics Interlaboratory Testing Program

Report #98

Analysis 705

2nd Qtr 2016

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F35			Sample F36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
Q7XYKM		6,960.2	30.2	0.21	6,820.6	-69.0	-0.44
Q7YRFA		6,862.4	-67.6	-0.47	6,990.3	100.7	0.64
Q8THLP		6,892.4	-37.6	-0.26	6,807.2	-82.4	-0.52
QTCUN6		7,016.0	86.0	0.60	6,935.6	46.0	0.29
RJZP48		6,978.2	48.3	0.34	6,650.0	-239.7	-1.52
TW NXQZ		7,146.6	216.6	1.52	7,094.4	204.8	1.29
U4J2PA		6,988.4	58.5	0.41	7,009.4	119.7	0.76
U4KCP7		7,019.9	89.9	0.63	6,883.6	-6.1	-0.04
UFCYWM		6,857.4	-72.5	-0.51	6,688.6	-201.0	-1.27
UNT HE2		7,056.1	126.2	0.89	6,896.3	6.7	0.04
VMCKM2		6,967.0	37.0	0.26	7,192.8	303.2	1.92
W2Q7LL		6,748.2	-181.7	-1.28	6,886.0	-3.7	-0.02
WYZ772		6,844.8	-85.2	-0.60	6,817.0	-72.6	-0.46
XHVYQZ		6,961.9	31.9	0.22	6,874.8	-14.8	-0.09
XP8BJQ		6,890.6	-39.4	-0.28	6,867.4	-22.2	-0.14
YAEZAU		7,131.8	201.8	1.42	7,134.9	245.3	1.55
YGMNVE		6,962.2	32.2	0.23	6,945.0	55.4	0.35
YHKYT3		6,728.6	-201.4	-1.41	6,745.8	-143.8	-0.91
ZEFP2X	X	9,113.5	2,183.5	15.34	8,928.3	2,038.7	12.89

Summary Statistics		
	Sample F35	Sample F36
Grand Means	6,929.95 psi	6,889.63 psi
Stnd Dev Btwn Labs	142.34 psi	158.15 psi
Statistics based on 52 of 54 reporting participants		

Sample F35: ABS/PC & Sample F36: ABS/PC

Comments on Assigned Data Flags for Test #705

- P6UKZC (X) - Data for both samples are low.
- ZEFP2X (X) - Data for both samples are high.



Plastics Interlaboratory Testing Program

Report #98

Analysis 706

2nd Qtr 2016

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F35			Sample F36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2D4A6C		3.698	0.074	0.77	3.496	-0.052	-0.50
2JATVP		3.430	-0.194	-2.03	3.306	-0.242	-2.33
3R3M9E		3.664	0.040	0.42	3.478	-0.070	-0.68
3TX7AF		3.664	0.040	0.42	3.558	0.010	0.09
4DYDA7	X	4.000	0.376	3.94	4.000	0.452	4.34
6M2X3Q		3.592	-0.032	-0.34	3.584	0.036	0.34
7K7TWW	*	3.697	0.073	0.77	3.787	0.239	2.30
86643P	*	3.532	-0.092	-0.97	3.296	-0.252	-2.42
8Q8PT3		3.600	-0.024	-0.25	3.520	-0.028	-0.27
8TGFBJ		3.802	0.178	1.86	3.710	0.162	1.55
8V2JQ4		3.512	-0.112	-1.17	3.494	-0.054	-0.52
9G36ET		3.652	0.028	0.29	3.566	0.018	0.17
9XNHG7		3.652	0.028	0.29	3.570	0.022	0.21
AVE6NN		3.708	0.084	0.88	3.570	0.022	0.21
AVJZDA		3.590	-0.034	-0.36	3.544	-0.005	-0.04
AWQFKF		3.610	-0.014	-0.15	3.518	-0.030	-0.29
CMDRGK		3.550	-0.074	-0.78	3.488	-0.060	-0.58
EKX8KF	X	5.186	1.562	16.36	5.220	1.672	16.06
F8QBTk	X	2.042	-1.582	-16.57	1.978	-1.570	-15.08
GHLJA2		3.774	0.150	1.57	3.632	0.084	0.80
HXT3KY		3.482	-0.142	-1.49	3.534	-0.014	-0.14
J78CED		3.600	-0.024	-0.25	3.556	0.008	0.07
KNKBY2		3.624	0.000	0.00	3.446	-0.102	-0.98
LA2R4C		3.690	0.066	0.69	3.660	0.112	1.07
LZnkZA		3.724	0.100	1.05	3.602	0.054	0.52
MTMMPB		3.520	-0.104	-1.09	3.400	-0.148	-1.42
N74ANV		3.700	0.076	0.79	3.680	0.132	1.26
N7QN77		3.630	0.006	0.06	3.530	-0.018	-0.18
NCXF9C		3.734	0.110	1.15	3.580	0.032	0.30
NLL9MU		3.578	-0.046	-0.48	3.548	0.000	0.00
P4VEJH	X	3.108	-0.516	-5.41	3.200	-0.348	-3.35
P6UKZC	X	3.367	-0.257	-2.69	3.131	-0.417	-4.00
PH3EK3		3.686	0.062	0.65	3.636	0.088	0.84
PVNQVC		3.694	0.070	0.73	3.610	0.062	0.59
Q7XYKM		3.684	0.060	0.63	3.650	0.102	0.98



Plastics Interlaboratory Testing Program

Report #98

Analysis 706

2nd Qtr 2016

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F35			Sample F36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
Q7YRFA	X	3.926	0.302	3.16	3.620	0.072	0.69
Q8THLP		3.574	-0.050	-0.53	3.456	-0.092	-0.89
QTCUN6		3.588	-0.036	-0.38	3.496	-0.052	-0.50
RJZP48	*	3.884	0.260	2.72	3.816	0.268	2.57
TWNXQZ	X	8.906	5.282	55.32	9.752	6.204	59.59
U4J2PA		3.614	-0.010	-0.11	3.588	0.040	0.38
U4KCP7	X	2.886	-0.738	-7.73	2.768	-0.780	-7.50
UABPQU		3.620	-0.004	-0.04	3.550	0.002	0.02
UFCYWM		3.457	-0.167	-1.75	3.449	-0.099	-0.95
UNTHE2		3.608	-0.016	-0.17	3.586	0.038	0.36
VMCKM2		3.590	-0.034	-0.36	3.606	0.058	0.55
VRLX6Z		3.530	-0.094	-0.99	3.400	-0.148	-1.42
W2Q7LL		3.442	-0.182	-1.91	3.477	-0.072	-0.69
WYZ772		3.630	0.006	0.06	3.460	-0.088	-0.85
XHVYQZ		3.520	-0.104	-1.09	3.576	0.028	0.27
XP8BJQ	X	33.060	29.436	308.29	22.500	18.952	182.04
YAEZAU	X	25.262	21.638	226.62	24.364	20.816	199.95
YGMNVE		3.708	0.084	0.88	3.570	0.022	0.21
ZEFP2X	X	0.224	-3.400	-35.61	0.224	-3.324	-31.93

Summary Statistics		
	Sample F35	Sample F36
Grand Means	3.6242 Percent	3.5483 Percent
Std Dev Btwn Labs	0.0955 Percent	0.1041 Percent
Statistics based on 43 of 54 reporting participants		

Sample F35: ABS/PC & Sample F36: ABS/PC



Comments on Assigned Data Flags for Test #706

U4KCP7 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

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

TWNXQZ (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample F36.

XP8BJQ (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.

EKX8KF (X) - Data for both samples are high. Possible Systematic Error.

4DYDA7 (X) - Data for both samples are high. Possible Systematic Error.

P4VEJH (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

Q7YRFA (X) - Data for sample F35 are high. Inconsistent within the determinations of sample F36.

P6UKZC (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

ZEFP2X (X) - Data for both samples are low. Possible Systematic Error.

F8QBTK (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

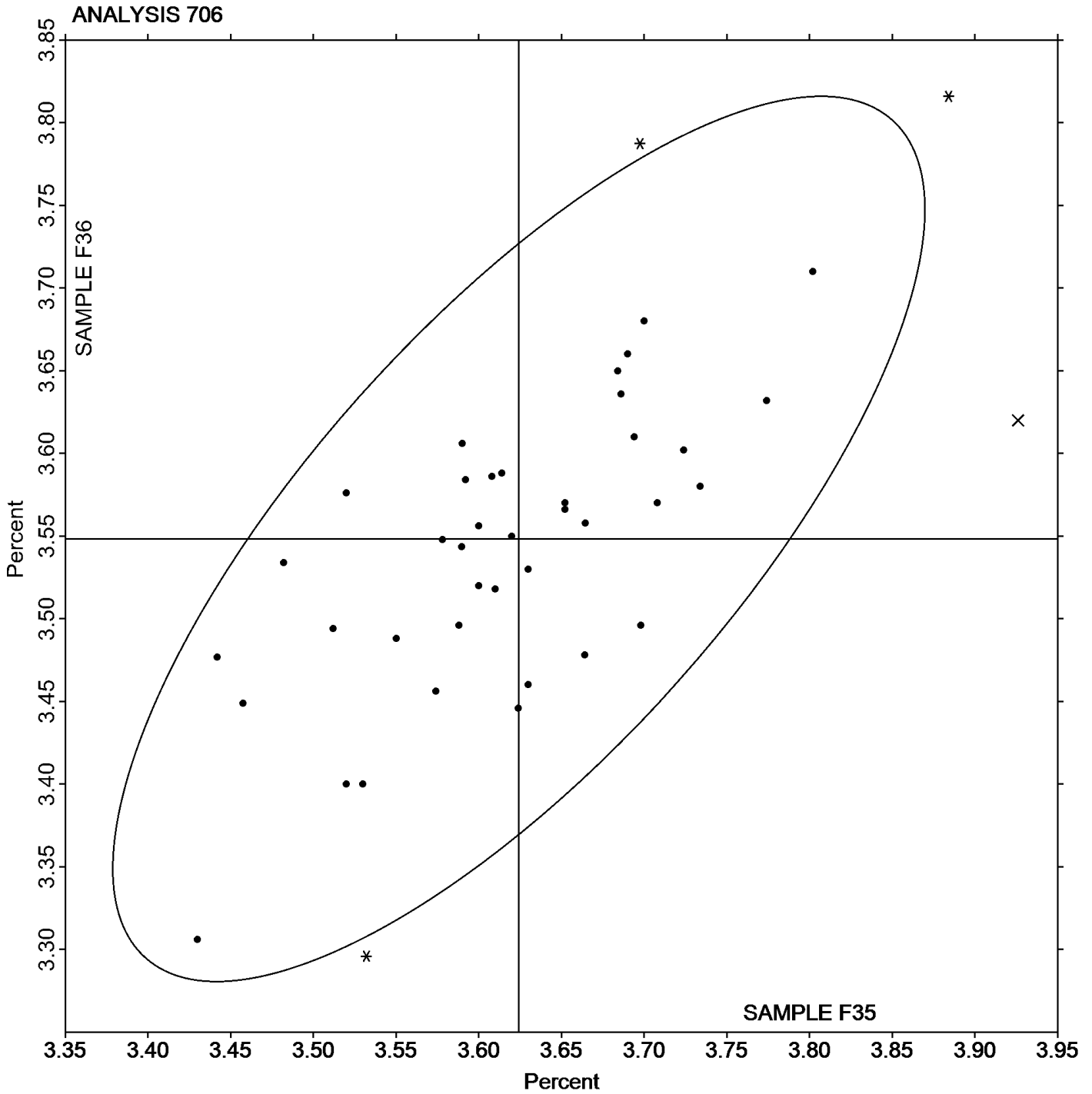
Analysis 706

Percent Elongation at Yield - Percent

Report #98

2nd Qtr 2016

Grand Mean Sample F35: 3.6242 Percent Grand Mean Sample F36: 3.5483 Percent





Plastics Interlaboratory Testing Program

Report #98

Analysis 708

2nd Qtr 2016

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F35			Sample F36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2D4A6C		405.24	-6.95	-0.30	402.11	-11.69	-0.53
2JATVP		443.20	31.01	1.33	456.44	42.64	1.93
3R3M9E		419.67	7.48	0.32	419.55	5.75	0.26
3TX7AF		424.76	12.58	0.54	433.19	19.39	0.88
4DYDA7	X	524.50	112.32	4.83	510.68	96.88	4.39
6M2X3Q		417.42	5.23	0.23	415.06	1.26	0.06
7K7TWW		405.30	-6.89	-0.30	405.46	-8.34	-0.38
86643P		421.92	9.73	0.42	441.04	27.24	1.24
8Q8PT3		390.07	-22.12	-0.95	402.83	-10.97	-0.50
8TGFBJ		398.63	-13.56	-0.58	400.13	-13.67	-0.62
8V2JQ4		394.88	-17.31	-0.74	390.68	-23.12	-1.05
9G36ET		414.24	2.05	0.09	418.92	5.12	0.23
9XNHG7		413.26	1.07	0.05	414.76	0.96	0.04
AVE6NN		398.68	-13.50	-0.58	403.79	-10.01	-0.45
AVJZDA		433.62	21.43	0.92	437.76	23.96	1.09
AWQFKF		408.56	-3.62	-0.16	418.43	4.63	0.21
CMDRGK		405.38	-6.80	-0.29	403.85	-9.95	-0.45
EKX8KF		374.40	-37.79	-1.63	366.00	-47.80	-2.17
F8QGTK		412.16	-0.03	0.00	416.44	2.64	0.12
GHLJA2		393.03	-19.15	-0.82	390.53	-23.27	-1.06
HXT3KY		428.80	16.61	0.71	421.48	7.68	0.35
J78CED		412.85	0.67	0.03	414.96	1.16	0.05
KNKBY2		395.24	-16.95	-0.73	398.97	-14.83	-0.67
LA2R4C		435.86	23.67	1.02	419.48	5.68	0.26
LZNKZA		375.71	-36.48	-1.57	380.70	-33.10	-1.50
MTMMPB		414.42	2.23	0.10	421.16	7.36	0.33
N74ANV		378.20	-33.99	-1.46	389.00	-24.80	-1.13
N7QN77		410.66	-1.53	-0.07	404.68	-9.12	-0.41
P4VEJH	X	343.10	-69.08	-2.97	412.06	-1.74	-0.08
P6UKZC	X	423.70	11.51	0.50	466.33	52.53	2.38
PH3EK3		384.86	-27.33	-1.18	397.70	-16.10	-0.73
Q7XYKM		410.82	-1.37	-0.06	413.58	-0.22	-0.01
Q7YRFA	X	513.30	101.11	4.35	608.55	194.75	8.84
Q8THLP		393.33	-18.85	-0.81	400.56	-13.24	-0.60
QTCUN6		427.66	15.47	0.67	428.00	14.20	0.64



Plastics Interlaboratory Testing Program

Report #98

Analysis 708

2nd Qtr 2016

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F35			Sample F36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RJZP48	X	357.77	-54.42	-2.34	326.99	-86.81	-3.94
TWNXQZ	X	170.38	-241.81	-10.40	163.32	-250.48	-11.36
U4J2PA	*	485.10	72.91	3.14	484.53	70.73	3.21
U4KCP7	X	672.11	259.92	11.18	675.30	261.50	11.86
UABPQU		411.92	-0.27	-0.01	408.44	-5.36	-0.24
UFCYWM		422.28	10.09	0.43	417.09	3.29	0.15
UNTHE2		425.83	13.65	0.59	424.65	10.84	0.49
V4XPQ2		415.06	2.87	0.12	414.67	0.87	0.04
VMCKM2		439.18	26.99	1.16	426.04	12.24	0.56
VRLX6Z		411.12	-1.07	-0.05	429.36	15.56	0.71
W2Q7LL		420.88	8.69	0.37	419.86	6.06	0.27
WYZ772		467.56	55.37	2.38	460.56	46.76	2.12
XHVYQZ	*	440.14	27.95	1.20	414.55	0.75	0.03
XP8BJQ		403.52	-8.67	-0.37	405.90	-7.90	-0.36
YAEZAU		361.79	-50.39	-2.17	363.01	-50.79	-2.30
YGMNVE		389.03	-23.16	-1.00	411.33	-2.47	-0.11
ZEFP2X	X	4,764.52	4,352.33	187.20	4,718.89	4,305.09	195.30

Summary Statistics		
	Sample F35	Sample F36
Grand Means	412.187 ksi	413.800 ksi
Std Dev Btwn Labs	23.250 ksi	22.043 ksi
Statistics based on 44 of 52 reporting participants		

Sample F35: ABS/PC & Sample F36: ABS/PC

Comments on Assigned Data Flags for Test #708

- U4KCP7 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- TWNXQZ (X) - Data for both samples are low. Possible Systematic Error.
- 4DYDA7 (X) - Data for both samples are high. Possible Systematic Error.
- P4VEJH (X) - Data for sample F35 are low. Inconsistent within the determinations of both samples.
- Q7YRFA (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- P6UKZC (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- ZEFP2X (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- RJZP48 (X) - Data for sample F36 are low. Inconsistent within the determinations of sample F35.



Plastics Interlaboratory Testing Program

Analysis 708

Modulus of Elasticity - ksi

Report #98

2nd Qtr 2016



Plastics Interlaboratory Testing Program

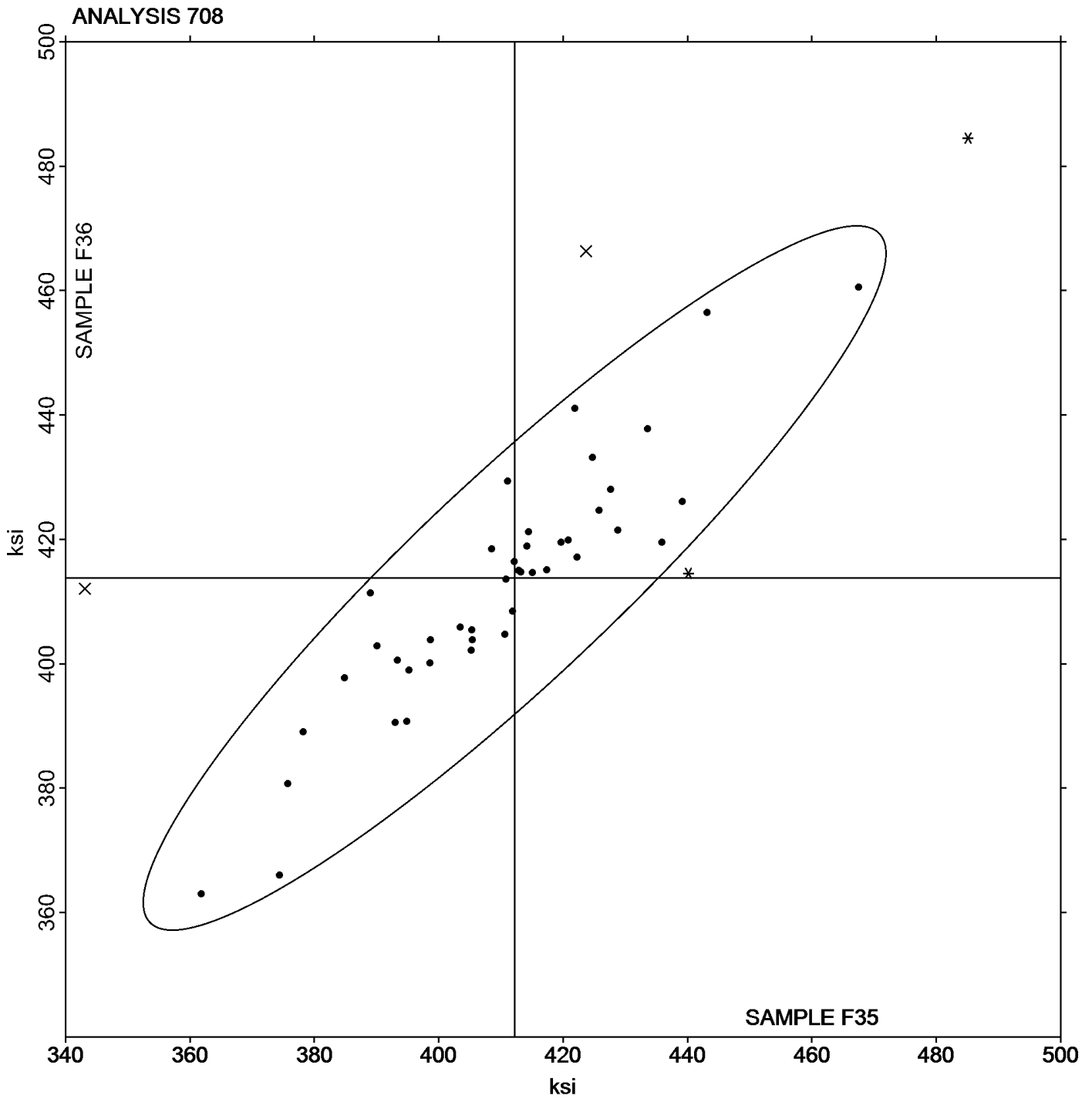
Analysis 708

Modulus of Elasticity - ksi

Report #98

2nd Qtr 2016

Grand Mean Sample F35: 412.19 ksi Grand Mean Sample F36: 413.80 ksi





Plastics Interlaboratory Testing Program

Report #98

Analysis 710

2nd Qtr 2016

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

WebCode	Data Flag	Sample E35			Sample E36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2D4A6C		108.08	-0.27	-0.11	108.73	0.75	0.31	AT
2JATVP		107.63	-0.72	-0.29	106.95	-1.03	-0.43	CE
2ZJJXU		106.80	-1.55	-0.63	106.98	-1.00	-0.42	CE
4PBNRV		110.15	1.80	0.73	109.88	1.90	0.80	AT
6M2X3Q		107.90	-0.45	-0.18	107.73	-0.25	-0.11	TO
8Q8PT3		110.03	1.68	0.68	109.33	1.35	0.57	CF
8TGFBJ		108.05	-0.30	-0.12	108.88	0.90	0.38	AT
9G36ET		108.58	0.23	0.09	108.60	0.62	0.26	DN
9XNHG7		107.00	-1.35	-0.55	106.25	-1.73	-0.73	TO
AWQFKF		107.60	-0.75	-0.30	107.50	-0.48	-0.20	TO
CMDRGK		107.95	-0.40	-0.16	107.55	-0.43	-0.18	TY
DDLT3J		108.73	0.38	0.15	109.05	1.07	0.45	AT
GHLJA2		103.28	-5.07	-2.06	102.70	-5.28	-2.22	TO
J78CED		110.58	2.23	0.91	109.43	1.45	0.61	CE
J9B8XG		109.13	0.78	0.32	109.98	2.00	0.84	CE
JRAZ7A	M	108.16	-0.19	-0.08	No data reported for this sample			TO
K66XEX		106.78	-1.57	-0.64	106.50	-1.48	-0.62	TO
KNKBY2		111.10	2.75	1.12	110.15	2.17	0.91	AT
NCXF9C		110.88	2.53	1.03	109.65	1.67	0.70	DN
NLL9MU		107.60	-0.75	-0.30	107.73	-0.25	-0.11	CE
PVNQVC		107.55	-0.80	-0.32	109.43	1.45	0.61	AT
Q7XYKM		105.98	-2.37	-0.96	105.23	-2.75	-1.16	DN
QGYR38		111.33	2.98	1.21	110.13	2.15	0.90	TO
TWNXQZ		108.68	0.33	0.13	108.83	0.85	0.36	CE
UNTHER		108.58	0.23	0.09	107.93	-0.05	-0.02	AT
VRLX6Z		114.43	6.08	2.47	113.38	5.40	2.27	CE
XHVYQZ		107.23	-1.12	-0.46	106.53	-1.45	-0.61	RO
YAEZAU	*	101.65	-6.70	-2.72	101.00	-6.98	-2.93	CE
ZA7ARA	*	110.48	2.13	0.87	107.40	-0.58	-0.24	DN



Plastics Interlaboratory Testing Program

Report #98

Analysis 710

2nd Qtr 2016

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

Summary Statistics		
	<u>Sample E35</u>	<u>Sample E36</u>
Grand Means	108.345 Degrees C	107.977 Degrees C
Stnd Dev Btwn Labs	2.459 Degrees C	2.379 Degrees C
Statistics based on 28 of 29 reporting participants		

Sample E35: ABS/PC & Sample E36: ABS/PC

Comments on Assigned Data Flags for Test #710

JRAZ7A (M) - Participant did not submit data for sample E36.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

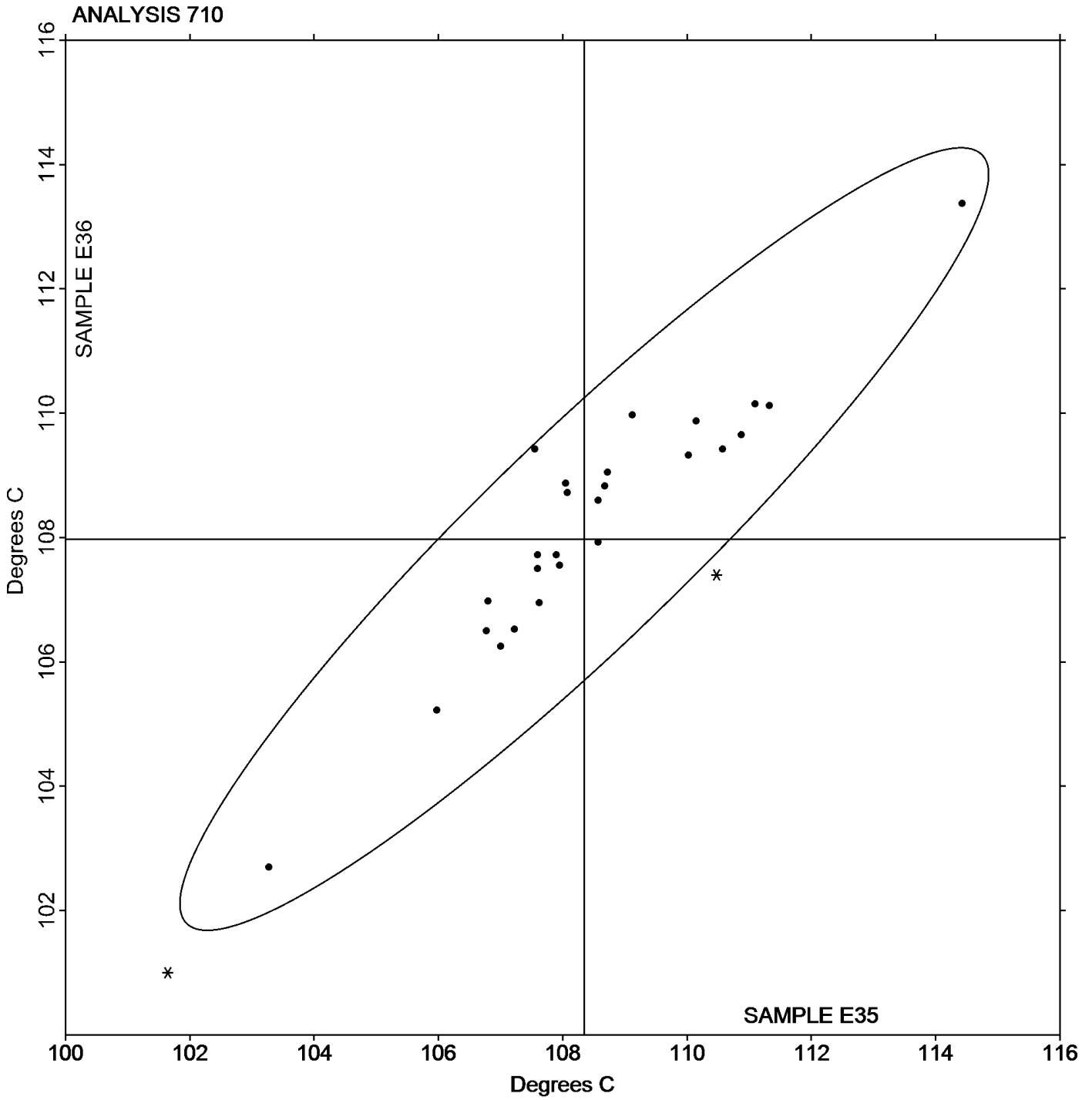
Report #98

Analysis 710

2nd Qtr 2016

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

Grand Mean Sample E35: 108.35 Degrees C Grand Mean Sample E36: 107.98 Degrees C





Plastics Interlaboratory Testing Program

Report #98

Analysis 711

2nd Qtr 2016

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

WebCode	Data Flag	Sample G35			Sample G36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2U7RFG		79.0	1.0	0.61	79.3	2.1	0.89	CE
2ZJJXU		77.2	-0.9	-0.55	77.1	-0.1	-0.03	CE
AWQFKF		76.6	-1.5	-0.94	75.8	-1.4	-0.59	TO
GHLJA2		77.6	-0.5	-0.30	76.6	-0.6	-0.26	TO
GHPCX2		77.7	-0.4	-0.23	78.3	1.1	0.46	CE
JRAZ7A		77.9	-0.1	-0.06	76.6	-0.6	-0.26	TO
K66XEX		76.3	-1.7	-1.10	74.6	-2.6	-1.12	TO
MZ6CRD		77.1	-0.9	-0.58	76.9	-0.3	-0.14	CE
NLL9MU		80.6	2.5	1.63	79.7	2.4	1.05	CE
PVNQVC		81.1	3.1	1.97	81.3	4.1	1.76	AT
YAEZAU		77.3	-0.7	-0.46	73.1	-4.1	-1.75	CE

Summary Statistics		
	Sample G35	Sample G36
Grand Means	78.01 Degrees C	77.20 Degrees C
Std Dev Btwn Labs	1.56 Degrees C	2.33 Degrees C
Statistics based on 11 of 11 reporting participants		

Sample G35: PP & Sample G36: PP

Key to Instrument Codes Reported by Participants

AT Atlas
 TO Tinius Olsen
 CE Ceast



Plastics Interlaboratory Testing Program

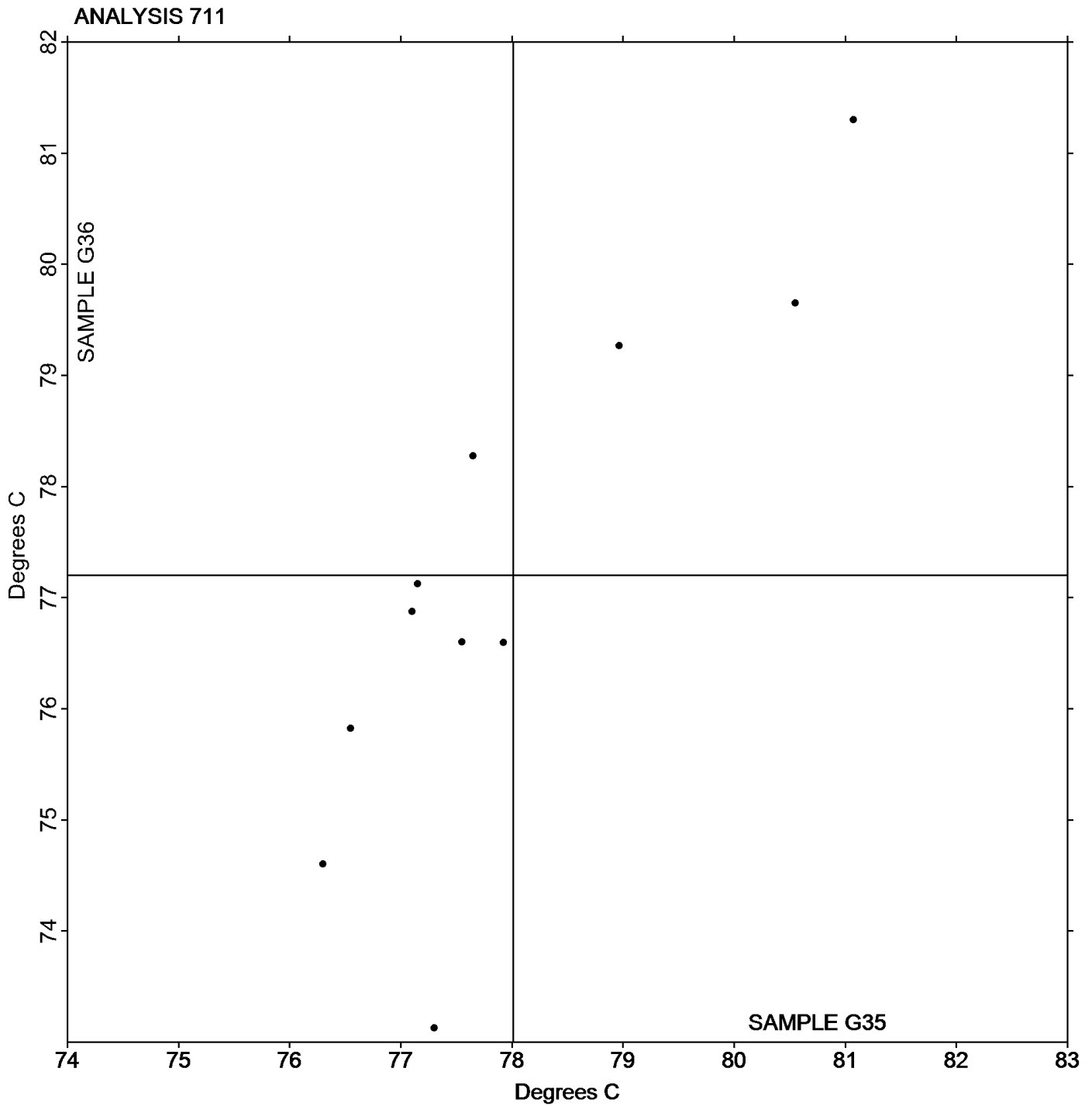
Report #98

Analysis 711

2nd Qtr 2016

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

Grand Mean Sample G35: 78.010 Degrees C Grand Mean Sample G36: 77.203 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 #98

Analysis 712

2nd Qtr 2016

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

WebCode	Data Flag	Sample N35			Sample N36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2JATVP		76.33	-0.34	-0.38	76.48	-0.24	-0.27	IN
2U7RFG		76.60	-0.06	-0.07	76.95	0.23	0.25	CF
2ZJJXU	*	75.53	-1.14	-1.29	76.23	-0.49	-0.54	CE
3EUVB8		75.98	-0.69	-0.78	76.05	-0.67	-0.73	TO
44MDFV		76.50	-0.16	-0.18	76.25	-0.47	-0.51	TO
74XY33		76.50	-0.16	-0.18	76.60	-0.12	-0.13	CE
86ANPR		76.93	0.26	0.30	77.10	0.38	0.41	AT
8TGFBJ		76.93	0.26	0.30	76.85	0.13	0.14	AT
AH9JC7		75.73	-0.94	-1.06	75.90	-0.82	-0.89	CE
AL9VZJ		77.65	0.99	1.12	78.23	1.51	1.64	TO
AVE6NN		76.03	-0.63	-0.72	76.08	-0.64	-0.70	ZW
B4999K		75.23	-1.44	-1.63	74.93	-1.79	-1.95	CE
BLJCHP		75.30	-1.36	-1.55	75.37	-1.35	-1.47	CE
C4LJJP		77.63	0.96	1.09	77.95	1.23	1.34	CE
CCVFE3		75.65	-1.01	-1.15	75.40	-1.32	-1.44	TO
CJDFKK		77.35	0.69	0.78	77.43	0.71	0.77	XX
CMDRGK		77.35	0.69	0.78	77.35	0.63	0.69	TY
GHLJA2		77.58	0.91	1.04	77.48	0.76	0.82	TO
GJFWKD		76.40	-0.26	-0.30	76.45	-0.27	-0.29	TO
GUZMMD		76.80	0.14	0.16	77.45	0.73	0.79	CE
HTXZ6H		77.73	1.06	1.21	77.70	0.98	1.07	AT
JRAZ7A		76.34	-0.32	-0.36	76.50	-0.22	-0.24	TO
JTVZWP		76.73	0.06	0.07	76.68	-0.04	-0.05	CE
K66XEX		75.65	-1.01	-1.15	75.78	-0.94	-1.03	TO
KFQ2LX		77.45	0.79	0.90	77.48	0.76	0.82	CF
KNKBY2		77.88	1.21	1.38	77.85	1.13	1.23	AT
NCXF9C		77.35	0.69	0.78	77.23	0.51	0.55	DN
NLL9MU		76.69	0.03	0.04	76.53	-0.19	-0.21	CE
QUBDTZ		77.20	0.54	0.61	77.33	0.61	0.66	TO
RTA3B3		77.75	1.09	1.24	78.03	1.31	1.42	AT
ULLYG6		77.53	0.86	0.98	77.43	0.71	0.77	XX
UQX36L		76.70	0.04	0.04	76.53	-0.19	-0.21	XX
WU2AE3		74.53	-2.14	-2.43	74.65	-2.07	-2.25	XX
X9HWDL		78.13	1.46	1.66	78.05	1.33	1.45	XX
ZA7ARA		76.70	0.04	0.04	76.33	-0.39	-0.43	DN



Plastics Interlaboratory Testing Program

Report #98

Analysis 712

2nd Qtr 2016

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

WebCode	Data Flag	Sample N35			Sample N36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
ZHJ8PU		75.53	-1.14	-1.29	75.38	-1.34	-1.46	CE

Summary Statistics

	Sample N35	Sample N36
Grand Means	76.661 Degrees C	76.720 Degrees C
Stnd Dev Btwn Labs	0.880 Degrees C	0.920 Degrees C

Statistics based on 36 of 36 reporting participants

Sample N35: HIPS & Sample N36: HIPS

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

Report #98

Analysis 715

2nd Qtr 2016

Vicat Softening Temperature (Rate A)

WebCode	Data Flag	Sample H35			Sample H36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2U7RFG		140.33	0.93	0.26	140.13	0.85	0.25	CF
2ZJJXU		140.33	0.93	0.26	139.85	0.57	0.16	CE
68AZZV		140.92	1.51	0.43	140.87	1.58	0.46	CE
8Q8PT3		141.10	1.70	0.48	141.43	2.15	0.62	CE
8TGFBJ		142.55	3.15	0.89	142.35	3.07	0.89	CF
AVE6NN		137.83	-1.57	-0.44	137.63	-1.65	-0.48	WZ
C4LJJP		141.87	2.46	0.69	141.60	2.32	0.67	CF
CMDRGK		140.95	1.55	0.44	141.02	1.73	0.50	TY
E7ZPMN		138.92	-0.49	-0.14	138.62	-0.67	-0.19	TO
GHLJA2		140.13	0.73	0.21	139.85	0.57	0.16	TO
HJQQPZ		139.47	0.06	0.02	139.27	-0.02	0.00	CE
HWYCEK	*	129.23	-10.17	-2.87	129.10	-10.18	-2.94	XX
J78CED		140.24	0.84	0.24	140.08	0.80	0.23	CE
J9B8XG	*	128.48	-10.92	-3.08	129.00	-10.28	-2.97	CE
K8WZCY		141.40	2.00	0.56	141.18	1.90	0.55	CE
KNKBY2		140.62	1.21	0.34	140.52	1.23	0.36	AT
MZ6CRD		140.78	1.38	0.39	140.75	1.47	0.42	CE
NCXF9C		140.57	1.16	0.33	140.07	0.78	0.23	DN
Q7XYKM		139.78	0.38	0.11	139.68	0.40	0.12	QA
RDH798		140.50	1.10	0.31	140.35	1.07	0.31	AT
XHVYQZ		140.58	1.18	0.33	140.48	1.20	0.35	RO
Y42JYW		140.27	0.86	0.24	140.40	1.12	0.32	CE

Summary Statistics		Sample H35	Sample H36
Grand Means		139.403 Degrees C	139.283 Degrees C
Std Dev Btwn Labs		3.546 Degrees C	3.460 Degrees C
Statistics based on 22 of 22 reporting participants			

Sample H35: ABS/PC & Sample H36: ABS/PC



Plastics Interlaboratory Testing Program

Report #98

Analysis 715

2nd Qtr 2016

Vicat Softening Temperature (Rate A)

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

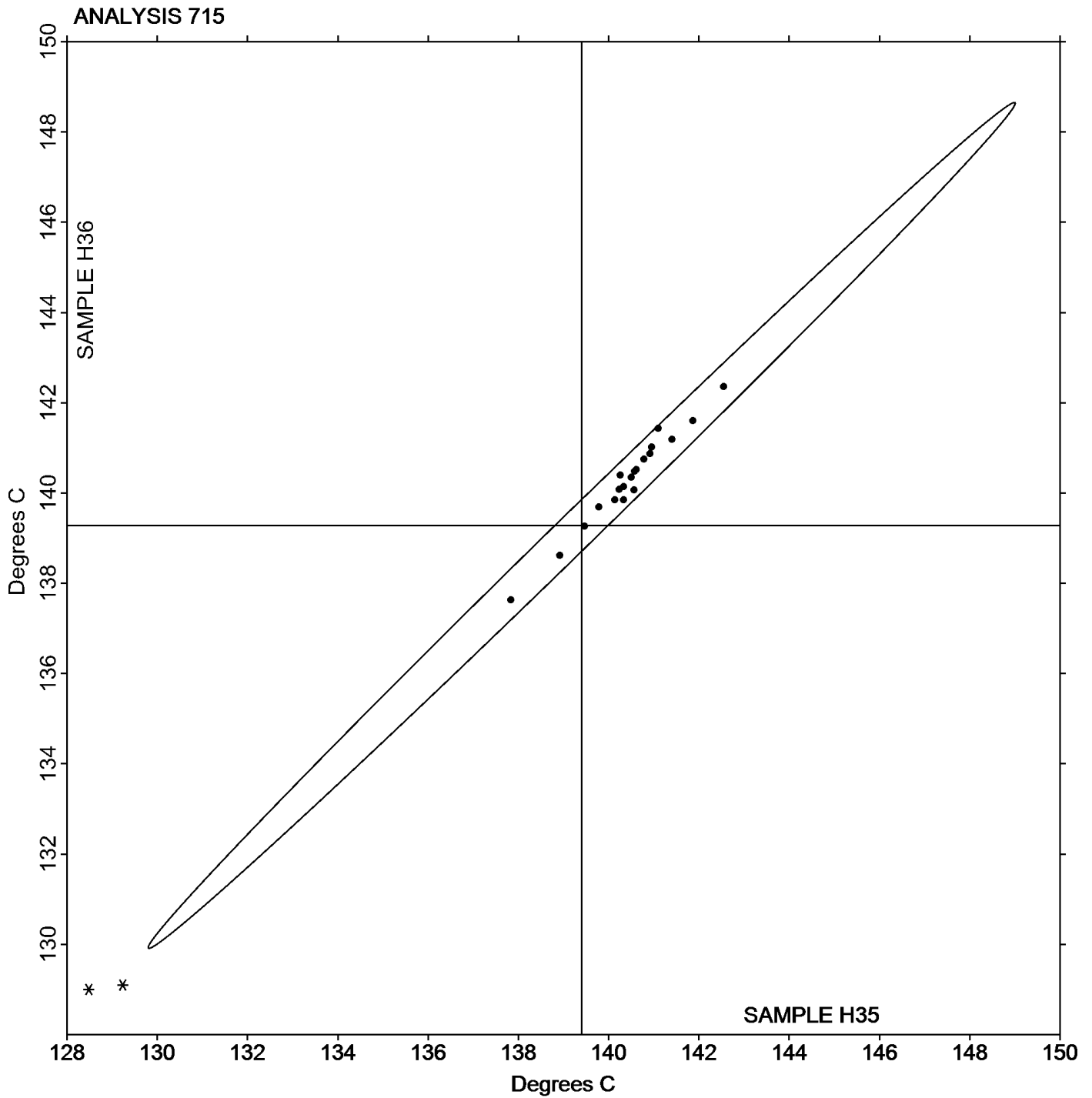
Report #98

Analysis 715

2nd Qtr 2016

Vicat Softening Temperature (Rate A)

Grand Mean Sample H35: 139.40 Degrees C Grand Mean Sample H36: 139.28 Degrees C





Plastics Interlaboratory Testing Program

Report #98

Analysis 716

2nd Qtr 2016

Vicat Softening Temperature (Rate B)

WebCode	Data Flag	Sample R35			Sample R36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2U7RFG		142.03	-0.18	-0.19	142.33	0.14	0.15	CF
3F7GCV		141.33	-0.88	-0.93	141.68	-0.51	-0.56	TO
68AZZV		142.18	-0.03	-0.04	142.42	0.22	0.24	CE
8Q8PT3		143.25	1.03	1.09	143.13	0.94	1.02	CF
8TGFBJ		143.43	1.22	1.28	143.52	1.32	1.43	CF
AVE6NN		140.10	-2.12	-2.24	140.35	-1.85	-2.01	WZ
C4LJJP		143.05	0.83	0.88	143.00	0.80	0.87	CF
CMDRGK		143.25	1.03	1.09	143.28	1.09	1.18	TY
E7ZPMN		140.47	-1.75	-1.85	140.35	-1.85	-2.01	TO
GHLJA2		141.40	-0.82	-0.86	141.48	-0.71	-0.77	TO
HJQQPZ		141.07	-1.15	-1.21	140.65	-1.55	-1.68	CE
HWYCEK	X	130.43	-11.78	-12.44	130.37	-11.83	-12.85	XX
J78CED		141.88	-0.34	-0.36	141.98	-0.21	-0.23	CE
J9B8XG		143.08	0.87	0.91	142.57	0.37	0.40	CE
JRAZ7A		142.58	0.37	0.39	142.62	0.42	0.46	TO
KNKBY2		142.68	0.47	0.49	142.77	0.57	0.62	AT
MZ6CRD		142.08	-0.13	-0.14	142.00	-0.20	-0.21	CE
NCXF9C		142.80	0.58	0.62	142.13	-0.06	-0.07	DN
Q7XYKM		143.10	0.88	0.93	143.12	0.92	1.00	DN
XHVYQZ		142.17	-0.05	-0.05	142.15	-0.05	-0.05	RO
Y42JYW		142.40	0.18	0.19	142.40	0.20	0.22	CE

Summary Statistics		Sample R35	Sample R36
Grand Means		142.217 Degrees C	142.197 Degrees C
Std Dev Btwn Labs		0.947 Degrees C	0.921 Degrees C
Statistics based on 20 of 21 reporting participants			

Sample R35: ABS/PC & Sample R36: ABS/PC

Comments on Assigned Data Flags for Test #716

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



Plastics Interlaboratory Testing Program

Report #98

Analysis 716

2nd Qtr 2016

Vicat Softening Temperature (Rate B)

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

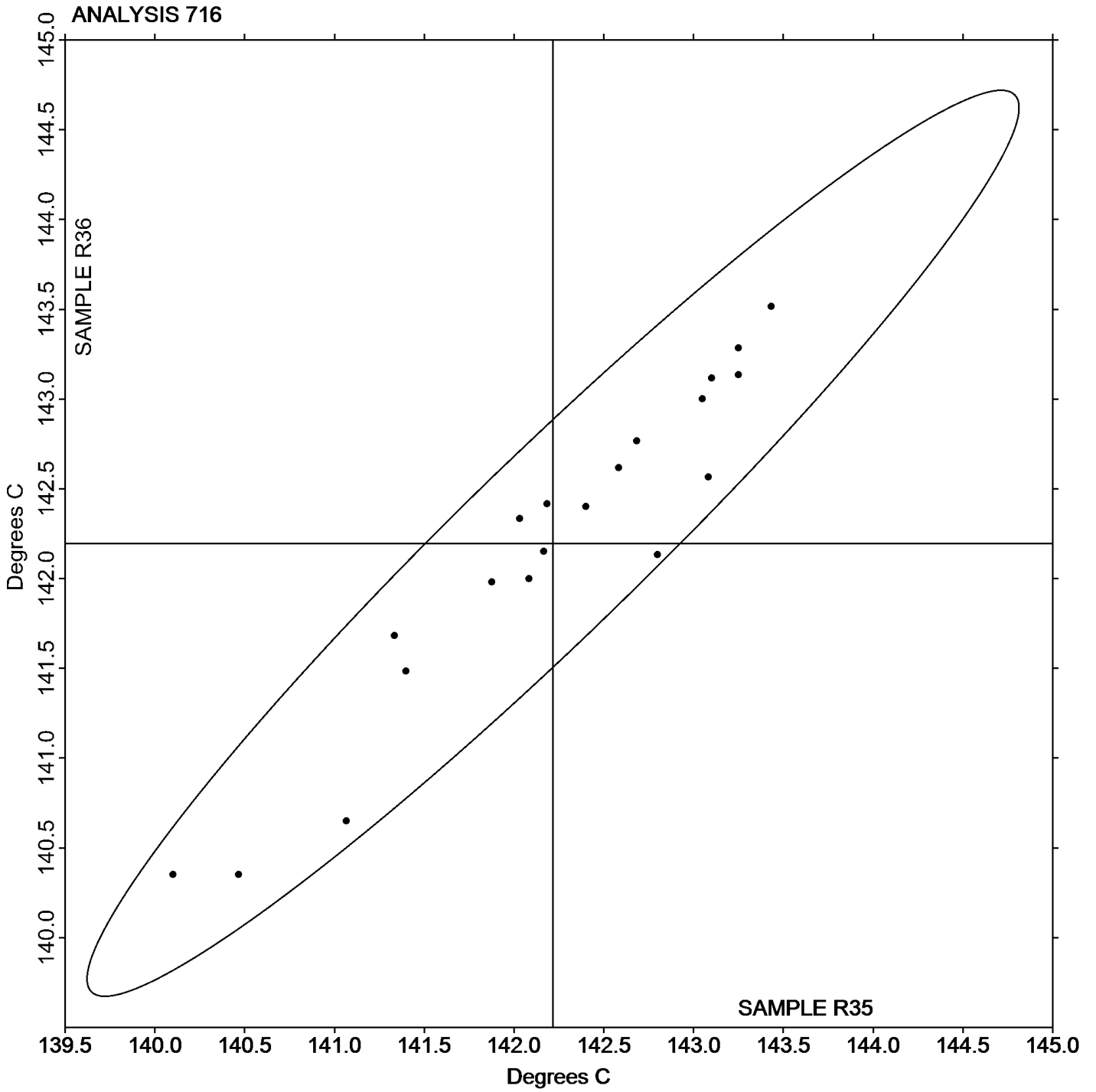
Report #98

Analysis 716

2nd Qtr 2016

Vicat Softening Temperature (Rate B)

Grand Mean Sample R35: 142.22 Degrees C Grand Mean Sample R36: 142.20 Degrees C





Plastics Interlaboratory Testing Program

Report #98

Analysis 718

2nd Qtr 2016

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T35			Sample T36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2D4A6C		1.03030	0.00102	0.55	1.03063	0.00121	0.71
2JATVP		1.02730	-0.00198	-1.07	1.02830	-0.00113	-0.66
2U7RFG	X	1.02200	-0.00728	-3.95	1.02500	-0.00443	-2.59
2ZJJXU		1.03017	0.00089	0.48	1.03027	0.00084	0.49
2ZX7AH		1.03103	0.00175	0.95	1.03097	0.00154	0.90
376WCN		1.02770	-0.00158	-0.86	1.02780	-0.00163	-0.95
3CARVN		1.02907	-0.00021	-0.12	1.02903	-0.00039	-0.23
44MDFV		1.03097	0.00169	0.92	1.03047	0.00104	0.61
4BTV4N	*	1.02867	-0.00061	-0.33	1.02700	-0.00243	-1.42
4WXEEP		1.02690	-0.00238	-1.29	1.02707	-0.00236	-1.38
6M2X3Q		1.03153	0.00225	1.22	1.03180	0.00237	1.39
74XY33	X	1.02567	-0.00361	-1.96	1.02367	-0.00576	-3.38
774GZX		1.03100	0.00172	0.93	1.03100	0.00157	0.92
7R93Z4		1.03066	0.00138	0.75	1.03128	0.00185	1.08
7WVFNQ	X	1.03237	0.00309	1.68	1.02953	0.00011	0.06
7Z3662		1.02667	-0.00261	-1.42	1.02667	-0.00276	-1.62
86ANPR	*	1.02833	-0.00095	-0.51	1.03067	0.00124	0.73
8BC3MA		1.02790	-0.00138	-0.75	1.02867	-0.00076	-0.45
8Q8PT3		1.02843	-0.00085	-0.46	1.02843	-0.00099	-0.58
8TGFBJ		1.03063	0.00135	0.74	1.03160	0.00217	1.27
8Z47WE		1.02613	-0.00315	-1.71	1.02637	-0.00306	-1.79
96M8ZW		1.02757	-0.00171	-0.93	1.02917	-0.00026	-0.15
9G36ET		1.03003	0.00075	0.41	1.02983	0.00041	0.24
9JNJWV		1.02666	-0.00262	-1.42	1.02654	-0.00289	-1.69
9XNHG7		1.02563	-0.00365	-1.98	1.02693	-0.00249	-1.46
A4QNYU		1.03000	0.00072	0.39	1.03000	0.00057	0.34
ABR3KW		1.03133	0.00205	1.12	1.03133	0.00191	1.12
AH9JC7		1.03073	0.00145	0.79	1.03070	0.00127	0.75
AVE6NN		1.03137	0.00209	1.13	1.03157	0.00214	1.25
AVJZDA		1.03247	0.00319	1.73	1.03253	0.00311	1.82
AWQFKF		1.02900	-0.00028	-0.15	1.02833	-0.00109	-0.64
B2G2YV		1.02967	0.00039	0.21	1.03010	0.00067	0.39
B4999K		1.03120	0.00192	1.04	1.03160	0.00217	1.27
CDDFNK		1.03093	0.00165	0.90	1.02960	0.00017	0.10
CMDRGK		1.03043	0.00115	0.63	1.03047	0.00104	0.61



Plastics Interlaboratory Testing Program

Report #98

Analysis 718

2nd Qtr 2016

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T35			Sample T36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
D4Y6JX		1.02957	0.00029	0.16	1.02993	0.00051	0.30
D4ZY34	*	1.03090	0.00162	0.88	1.03260	0.00317	1.86
DK6A29		1.02740	-0.00188	-1.02	1.02727	-0.00216	-1.27
E7ZPMN		1.03127	0.00199	1.08	1.03090	0.00147	0.86
F8QGTK		1.02800	-0.00128	-0.69	1.02767	-0.00176	-1.03
FJNXAG		1.03100	0.00172	0.93	1.03100	0.00157	0.92
FYEUYJ	X	1.02433	-0.00495	-2.69	1.02900	-0.00043	-0.25
GHLJA2		1.02633	-0.00295	-1.60	1.02620	-0.00323	-1.89
GQEUJW		1.03170	0.00242	1.31	1.03195	0.00252	1.48
GUZMMD		1.03050	0.00122	0.66	1.03000	0.00057	0.34
H6EKPE		1.03070	0.00142	0.77	1.03097	0.00154	0.90
HBFYBF		1.03040	0.00112	0.61	1.02933	-0.00009	-0.06
HTXZ6H		1.02957	0.00029	0.16	1.02960	0.00017	0.10
HXT3KY	X	1.02967	0.00039	0.21	1.02733	-0.00209	-1.23
J78CED		1.03000	0.00072	0.39	1.03000	0.00057	0.34
JHKCB8		1.02897	-0.00031	-0.17	1.02893	-0.00049	-0.29
JJAWNP		1.03000	0.00072	0.39	1.03000	0.00057	0.34
JPWL9Z		1.02893	-0.00035	-0.19	1.02850	-0.00093	-0.54
JRAZ7A		1.03063	0.00135	0.74	1.03067	0.00124	0.73
JTVZWP		1.02667	-0.00261	-1.42	1.02667	-0.00276	-1.62
JZWCRL		1.03118	0.00190	1.03	1.03222	0.00279	1.64
K4B89J		1.02600	-0.00328	-1.78	1.02733	-0.00209	-1.23
K66XEX		1.03063	0.00135	0.74	1.03130	0.00187	1.10
KNKBY2		1.03070	0.00142	0.77	1.02970	0.00027	0.16
LA2R4C		1.03197	0.00269	1.46	1.03200	0.00257	1.51
LHP6YH	X	1.02100	-0.00828	-4.50	1.02367	-0.00576	-3.38
MZ6CRD		1.02897	-0.00031	-0.17	1.02873	-0.00069	-0.41
N79RLU	*	1.02600	-0.00328	-1.78	1.02800	-0.00143	-0.84
NCXF9C	*	1.02367	-0.00561	-3.05	1.02467	-0.00476	-2.79
NLL9MU		1.03230	0.00302	1.64	1.03140	0.00197	1.16
PVNQVC		1.03100	0.00172	0.93	1.03157	0.00214	1.25
Q36JM2		1.02593	-0.00335	-1.82	1.02717	-0.00226	-1.32
Q3J9NT		1.02693	-0.00235	-1.27	1.02707	-0.00236	-1.38
Q8THLP		1.02993	0.00065	0.36	1.02997	0.00054	0.32
QKJJDA		1.02747	-0.00181	-0.98	1.02863	-0.00079	-0.47



Plastics Interlaboratory Testing Program

Report #98

Analysis 718

2nd Qtr 2016

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T35			Sample T36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
QRGCL4		1.02967	0.00039	0.21	1.03000	0.00057	0.34
R7YZC2		1.02890	-0.00038	-0.21	1.02927	-0.00016	-0.09
RDH798		1.03123	0.00195	1.06	1.03027	0.00084	0.49
REQ2C4		1.03110	0.00182	0.99	1.03097	0.00154	0.90
RTA3B3		1.02967	0.00039	0.21	1.02967	0.00024	0.14
RVH8WD		1.02887	-0.00041	-0.22	1.02913	-0.00029	-0.17
TCGR26		1.02810	-0.00118	-0.64	1.02813	-0.00129	-0.76
TW82YZ		1.03087	0.00159	0.86	1.03057	0.00114	0.67
TWNXQZ		1.02667	-0.00261	-1.42	1.02767	-0.00176	-1.03
U4J2PA		1.02933	0.00005	0.03	1.02900	-0.00043	-0.25
U4KCP7		1.02670	-0.00258	-1.40	1.02743	-0.00199	-1.17
UABPQU	X	1.02977	0.00049	0.27	1.02293	-0.00649	-3.81
ULLYG6		1.02830	-0.00098	-0.53	1.02797	-0.00146	-0.86
UNTHE2		1.03000	0.00072	0.39	1.03033	0.00091	0.53
V29WV6		1.02790	-0.00138	-0.75	1.02757	-0.00186	-1.09
VRLX6Z	*	1.02973	0.00045	0.25	1.02807	-0.00136	-0.80
WU2AE3		1.02780	-0.00148	-0.80	1.02837	-0.00106	-0.62
WYZ772		1.03103	0.00175	0.95	1.03083	0.00141	0.82
X9HWDL	X	1.02713	-0.00215	-1.17	1.03027	0.00084	0.49
XX43Y8		1.02827	-0.00101	-0.55	1.03010	0.00067	0.39
Y2KW7W		1.03067	0.00139	0.75	1.03067	0.00124	0.73
Y6YJP4		1.02803	-0.00125	-0.68	1.02833	-0.00109	-0.64
Y87QJH		1.02967	0.00039	0.21	1.03000	0.00057	0.34
YHKYT3	*	1.03080	0.00152	0.83	1.02893	-0.00050	-0.29
ZA7ARA		1.02833	-0.00095	-0.51	1.02833	-0.00109	-0.64

Summary Statistics		
	Sample T35	Sample T36
Grand Means	1.029279 sp gr 23/23 C	1.029428 sp gr 23/23 C
Std Dev Btwn Labs	0.001841 sp gr 23/23 C	0.001707 sp gr 23/23 C
Statistics based on 87 of 95 reporting participants		

Sample T35: HIPS & Sample T36: HIPS



Comments on Assigned Data Flags for Test #718

UABPQU (X) - Data for sample T36 are low.

LHP6YH (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

7WVFNQ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

2U7RFG (X) - Data for sample T35 are low.

X9HWDL (X) - Inconsistent in testing between samples.

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

HXT3KY (X) - Inconsistent in testing between samples.

74XY33 (X) - Data for sample T36 are low.



Plastics Interlaboratory Testing Program

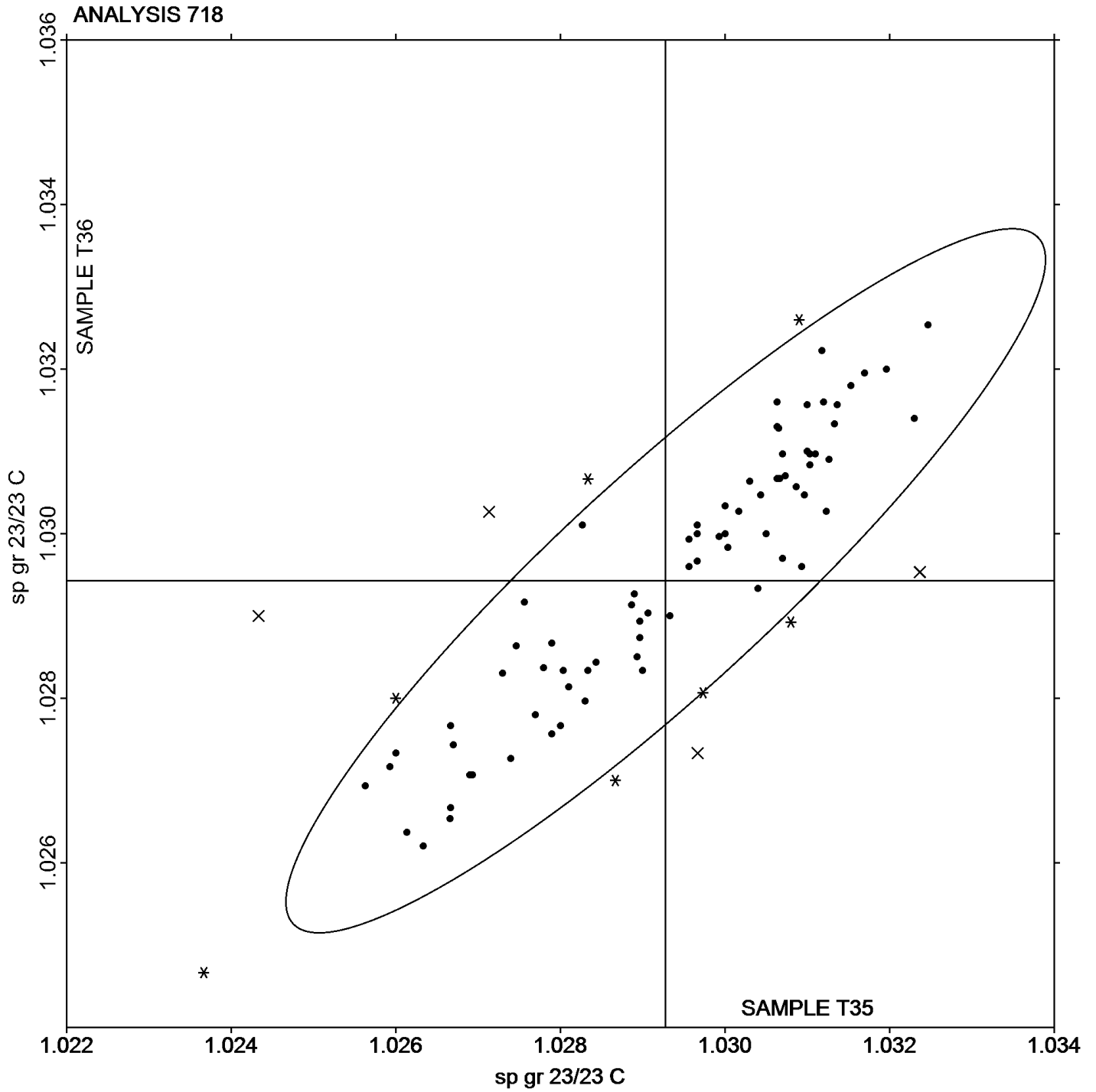
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Analysis 718

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Specific Gravity - sp gr 23/23 C

Grand Mean Sample T35: 1.0293 sp gr 23/23 C Grand Mean Sample T36: 1.0294 sp gr 23/23 C





Plastics Interlaboratory Testing Program

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Analysis 720

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Flexural Modulus- ksi

WebCode	Data Flag	Sample J35			Sample J36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2ANQDU		328.6	-14.2	-0.98	328.8	-14.4	-0.98
2D4A6C		346.3	3.5	0.24	338.4	-4.8	-0.33
2JATVP		342.7	-0.1	0.00	339.0	-4.2	-0.29
38DZVD		355.8	13.0	0.90	355.8	12.6	0.86
3DJTP9		343.3	0.5	0.03	345.6	2.4	0.16
3R3M9E		346.5	3.6	0.25	343.2	0.0	0.00
3TX7AF		347.8	5.0	0.34	344.0	0.8	0.06
4DYDA7		343.7	0.9	0.06	346.6	3.4	0.23
6M2X3Q		348.6	5.8	0.40	346.8	3.6	0.25
7K7TWW		358.4	15.6	1.08	358.1	14.9	1.02
8Q8PT3		321.3	-21.5	-1.49	319.5	-23.7	-1.62
8TGFBJ		335.7	-7.1	-0.49	337.7	-5.4	-0.37
8V2JQ4		360.2	17.4	1.20	364.8	21.7	1.48
9G36ET		351.4	8.6	0.59	351.2	8.0	0.55
9XNHG7		353.7	10.9	0.75	358.5	15.3	1.05
AVE6NN		328.8	-14.0	-0.97	331.0	-12.2	-0.83
AVJZDA		347.6	4.8	0.33	348.0	4.8	0.33
AWQFKF		333.4	-9.4	-0.65	331.0	-12.2	-0.83
BXETGJ		353.3	10.5	0.73	346.7	3.5	0.24
CMDRGK		329.9	-12.9	-0.89	330.1	-13.1	-0.89
CPLHP9		340.7	-2.1	-0.15	341.4	-1.8	-0.12
DDLT3J		342.8	0.0	0.00	345.2	2.0	0.14
F8QGTK		342.2	-0.6	-0.04	345.3	2.1	0.14
GAV74Z	X	698.6	355.8	24.56	698.4	355.2	24.23
GHLJA2		345.2	2.4	0.16	352.8	9.6	0.65
GHPCX2		328.7	-14.1	-0.97	323.0	-20.2	-1.38
HXT3KY		348.0	5.2	0.36	346.4	3.2	0.22
J78CED		329.4	-13.5	-0.93	329.1	-14.1	-0.96
J9B8XG	X	352.8	10.0	0.69	333.4	-9.8	-0.67
JRAZ7A		354.8	12.0	0.83	357.3	14.1	0.96
KJ36AE	*	299.8	-43.0	-2.97	300.9	-42.3	-2.88
KKYKKQ		327.0	-15.8	-1.09	327.0	-16.2	-1.10
KNKBY2		347.4	4.6	0.32	347.6	4.5	0.30
LA2R4C		368.7	25.9	1.79	370.9	27.7	1.89
LZLNKZA	*	346.2	3.4	0.24	356.1	12.9	0.88



Plastics Interlaboratory Testing Program

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Flexural Modulus- ksi

WebCode	Data Flag	Sample J35			Sample J36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MFZQZU	X	341.0	-1.8	-0.12	362.8	19.6	1.34
MTMMPB		314.2	-28.6	-1.97	320.9	-22.3	-1.52
N7QN77		327.1	-15.7	-1.08	327.6	-15.6	-1.06
NCXF9C		337.4	-5.4	-0.37	339.7	-3.5	-0.24
NLL9MU		370.2	27.4	1.89	371.1	27.9	1.90
P6UKZC	X	333.4	-9.4	-0.65	352.6	9.5	0.65
PH3EK3	X	350.6	7.7	0.53	365.4	22.2	1.52
PVNQVC		345.9	3.0	0.21	345.4	2.2	0.15
Q69E76		334.8	-8.0	-0.55	337.9	-5.3	-0.36
Q7XYKM		329.0	-13.8	-0.95	328.5	-14.7	-1.00
Q8THLP		335.6	-7.2	-0.50	334.8	-8.4	-0.57
QKYBFM		359.4	16.6	1.15	358.8	15.6	1.07
QTCUN6		349.0	6.2	0.43	344.2	1.0	0.07
T6LPYU		347.2	4.4	0.31	343.3	0.1	0.01
TWNXQZ	X	183.7	-159.1	-10.98	178.6	-164.6	-11.23
U4J2PA		324.2	-18.7	-1.29	323.5	-19.6	-1.34
U4KCP7		323.8	-19.0	-1.31	326.5	-16.7	-1.14
UABPQU		363.2	20.4	1.41	359.5	16.3	1.11
UFCYWM		365.5	22.6	1.56	364.3	21.1	1.44
ULLYG6		328.1	-14.7	-1.02	331.8	-11.3	-0.77
UNTHE2		358.1	15.3	1.06	361.6	18.4	1.26
V4XPQ2		332.1	-10.7	-0.74	332.5	-10.7	-0.73
VRLX6Z	*	375.0	32.2	2.22	381.2	38.0	2.59
W2Q7LL		355.0	12.2	0.84	355.8	12.6	0.86
WU2AE3		331.6	-11.3	-0.78	334.5	-8.7	-0.59
WYZ772		355.1	12.2	0.85	351.4	8.3	0.56
XHVYQZ		341.9	-0.9	-0.06	339.7	-3.5	-0.24
XP8BJQ		328.5	-14.3	-0.99	332.5	-10.6	-0.73
Y2KW7W		347.5	4.7	0.32	347.2	4.0	0.28
YHKYT3		352.4	9.6	0.66	359.5	16.4	1.12
YN8LN9	*	355.8	13.0	0.90	344.5	1.3	0.09
ZA7ARA		325.9	-16.9	-1.17	327.8	-15.4	-1.05



Plastics Interlaboratory Testing Program

Analysis 720 Flexural Modulus- ksi

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2nd Qtr 2016

Summary Statistics	<u>Sample J35</u>	<u>Sample J36</u>
Grand Means	342.81 ksi	343.18 ksi
Stnd Dev Btwn Labs	14.49 ksi	14.66 ksi

Statistics based on 61 of 67 reporting participants

Sample J35: ABS/PC & Sample J36: ABS/PC

Comments on Assigned Data Flags for Test #720

- J9B8XG (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- PH3EK3 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J35.
- TWNXQZ (X) - Data for both samples are low. Possible Systematic Error.
- GAV74Z (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample J35.
- MFZQZU (X) - Inconsistent in testing between samples.
- P6UKZC (X) - Inconsistent in testing between samples.

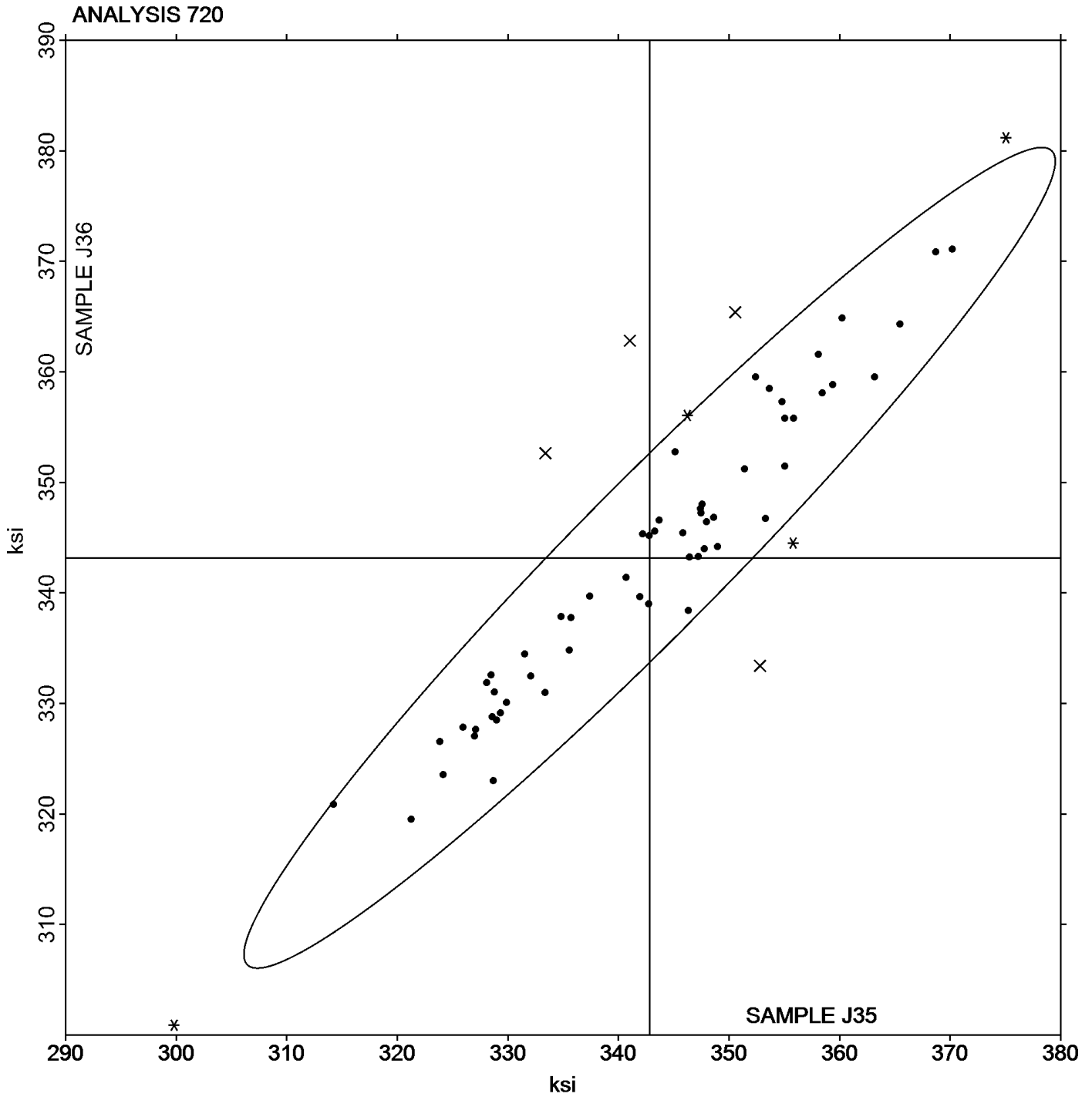


Plastics Interlaboratory Testing Program

Analysis 720
Flexural Modulus- ksi

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Grand Mean Sample J35: 342.81 ksi Grand Mean Sample J36: 343.18 ksi





Plastics Interlaboratory Testing Program

Report #98

Analysis 721

2nd Qtr 2016

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J35			Sample J36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2D4A6C		11,600	-274	-0.62	11,925	11	0.02
2JATVP		12,011	137	0.31	11,957	43	0.09
38DZVD		11,804	-70	-0.16	11,906	-9	-0.02
3DJTP9		12,040	165	0.38	12,143	229	0.49
3R3M9E		12,214	339	0.77	12,082	168	0.36
3TX7AF		11,520	-355	-0.80	11,500	-414	-0.89
4DYDA7		11,164	-711	-1.61	11,245	-669	-1.44
6M2X3Q		12,219	344	0.78	12,228	314	0.68
7K7TWW	*	12,295	420	0.95	12,695	780	1.68
8Q8PT3		11,951	77	0.17	12,009	95	0.20
8TGFBJ		11,879	5	0.01	11,974	60	0.13
8V2JQ4		12,621	746	1.69	12,902	988	2.13
9G36ET		11,853	-22	-0.05	11,954	40	0.09
9XNHG7		11,917	42	0.10	12,074	159	0.34
AVE6NN		11,967	93	0.21	11,859	-56	-0.12
AVJZDA		11,420	-455	-1.03	11,400	-514	-1.11
AWQFKF		11,903	28	0.06	11,921	7	0.01
BXETGJ		12,273	398	0.90	12,032	118	0.25
CMDRGK		11,299	-576	-1.31	11,328	-587	-1.26
DDLT3J		11,870	-5	-0.01	11,842	-72	-0.15
F8QBTK		11,652	-223	-0.51	11,775	-140	-0.30
GAV74Z	X	15,287	3,413	7.75	15,312	3,397	7.31
GHLJA2		11,933	58	0.13	11,890	-24	-0.05
GHPCX2		11,838	-36	-0.08	11,797	-118	-0.25
J78CED		12,305	431	0.98	12,384	469	1.01
J9B8XG		11,340	-535	-1.21	11,540	-374	-0.81
KJ36AE		11,607	-267	-0.61	11,311	-603	-1.30
KKYKKQ		11,670	-204	-0.46	11,736	-178	-0.38
KNKBY2		12,078	203	0.46	11,978	64	0.14
LA2R4C	*	12,840	965	2.19	13,093	1,178	2.54
LZNKZA		12,117	243	0.55	12,203	289	0.62
MTMMPB	*	10,659	-1,216	-2.76	10,865	-1,049	-2.26
N7QN77		11,405	-470	-1.07	11,459	-455	-0.98
NCXF9C		12,138	264	0.60	12,359	444	0.96
P6UKZC	X	11,449	-426	-0.97	12,152	237	0.51



Plastics Interlaboratory Testing Program

Report #98

Analysis 721

2nd Qtr 2016

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J35			Sample J36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PH3EK3		12,131	256	0.58	12,358	443	0.95
PVNQVC		11,933	59	0.13	11,960	45	0.10
Q69E76		11,785	-89	-0.20	11,938	24	0.05
Q7XYKM		11,572	-303	-0.69	11,555	-359	-0.77
Q8THLP		10,770	-1,105	-2.51	10,806	-1,108	-2.39
QKYBFM		12,920	1,045	2.37	12,920	1,006	2.16
QTCUN6		11,686	-188	-0.43	11,613	-302	-0.65
T6LPYU		11,399	-475	-1.08	11,380	-534	-1.15
TWNXQZ	X	5,917	-5,958	-13.52	5,795	-6,119	-13.17
U4KCP7		11,322	-553	-1.25	11,357	-558	-1.20
UABPQU		12,342	467	1.06	12,200	286	0.61
UFCYWM		12,337	462	1.05	12,307	392	0.84
UNTHE2		12,381	507	1.15	12,552	637	1.37
V4XPQ2		11,869	-6	-0.01	11,728	-186	-0.40
W2Q7LL		12,036	162	0.37	12,050	135	0.29
WYZ772		12,125	251	0.57	12,095	180	0.39
XP8BJQ		11,961	87	0.20	12,093	178	0.38
Y2KW7W		12,034	159	0.36	11,998	84	0.18
YN8LN9	*	11,987	113	0.26	11,629	-285	-0.61
ZA7ARA		11,486	-388	-0.88	11,641	-273	-0.59

Summary Statistics

	Sample J35	Sample J36
Grand Means	11,874.6 psi	11,914.3 psi
Stnd Dev Btwn Labs	440.6 psi	464.5 psi

Statistics based on 52 of 55 reporting participants

Sample J35: ABS/PC & Sample J36: ABS/PC

Comments on Assigned Data Flags for Test #721

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

GAV74Z (X) - Data for both samples are high. Possible Systematic Error.

P6UKZC (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J36.



Plastics Interlaboratory Testing Program

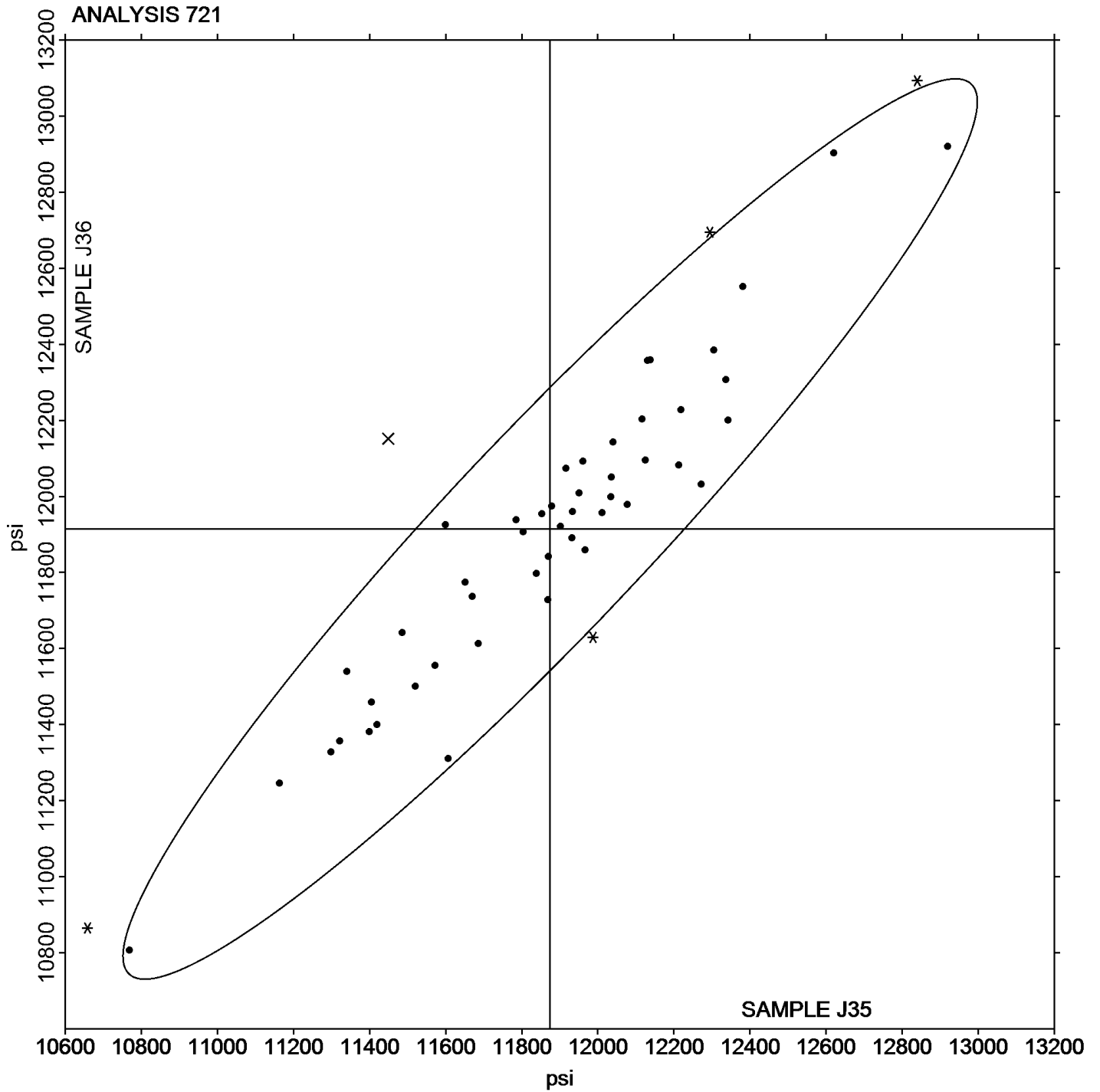
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Analysis 721

2nd Qtr 2016

Flexural Stress at 5% Strain - psi

Grand Mean Sample J35: 11,874.59 psi Grand Mean Sample J36: 11,914.35 psi





Plastics Interlaboratory Testing Program

Report #98

Analysis 722

2nd Qtr 2016

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J35			Sample J36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2ANQDU		11,630	-448	-0.86	11,598	-524	-0.99
2D4A6C	*	11,824	-254	-0.49	12,245	123	0.23
2JATVP		12,223	145	0.28	12,176	54	0.10
38DZVD		11,824	-254	-0.49	11,913	-209	-0.40
3DJTP9		12,330	252	0.48	12,438	316	0.60
3R3M9E		13,070	992	1.90	12,952	830	1.57
4DYDA7		11,162	-916	-1.76	11,246	-876	-1.66
6M2X3Q		12,836	758	1.45	12,775	653	1.24
7K7TWW		12,355	277	0.53	12,713	591	1.12
8TGFBJ		12,054	-24	-0.05	12,158	36	0.07
8V2JQ4		12,880	802	1.54	13,177	1,055	1.99
AVE6NN		12,164	86	0.16	12,048	-74	-0.14
AWQFKF		12,238	160	0.31	12,279	157	0.30
CMDRGK		11,487	-591	-1.13	11,539	-583	-1.10
GAV74Z	X	15,297	3,219	6.18	15,256	3,134	5.93
GHLJA2		12,187	109	0.21	12,125	3	0.01
GHPCX2		12,224	146	0.28	12,294	172	0.32
HXT3KY		12,000	-78	-0.15	12,000	-122	-0.23
J78CED		12,364	286	0.55	12,451	329	0.62
JRAZ7A		12,162	84	0.16	12,253	131	0.25
KJ36AE		12,123	45	0.09	11,910	-212	-0.40
KKYKKQ		11,676	-402	-0.77	11,743	-379	-0.72
KNKBY2		12,442	364	0.70	12,280	158	0.30
LZNKZA		12,161	83	0.16	12,255	133	0.25
MTMMPB		10,959	-1,119	-2.15	11,167	-955	-1.81
N7QN77		11,602	-476	-0.91	11,688	-434	-0.82
NLL9MU		12,407	329	0.63	12,438	316	0.60
P6UKZC	X	4,410	-7,668	-14.72	5,637	-6,485	-12.26
PH3EK3		12,318	240	0.46	12,563	441	0.83
PVNQVC		12,129	51	0.10	12,157	35	0.07
Q69E76		11,996	-82	-0.16	12,167	45	0.08
Q7XYKM		11,792	-286	-0.55	11,782	-340	-0.64
Q8THLP		10,781	-1,297	-2.49	10,807	-1,315	-2.49
QKYBFM		13,180	1,102	2.11	13,200	1,078	2.04
T6LPYU		11,660	-418	-0.80	11,525	-597	-1.13



Plastics Interlaboratory Testing Program

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Analysis 722

2nd Qtr 2016

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J35			Sample J36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
TWNXQZ	X	5,970	-6,108	-11.72	5,859	-6,263	-11.84
U4J2PA		11,372	-706	-1.35	11,370	-752	-1.42
U4KCP7		11,325	-753	-1.45	11,359	-763	-1.44
UFCYWM		12,733	655	1.26	12,696	574	1.08
UNTHE2		12,705	627	1.20	12,763	641	1.21
W2Q7LL		12,427	349	0.67	12,458	336	0.64
WYZ772		12,463	385	0.74	12,489	367	0.69
XHVYQZ		12,125	47	0.09	12,154	32	0.06
XP8BJQ		12,174	96	0.18	12,292	170	0.32
Y2KW7W	M	12,125	47	0.09	No data reported for this sample		
YHKYT3	X	10,061	-2,017	-3.87	10,036	-2,086	-3.95
YN8LN9	*	11,986	-92	-0.18	11,629	-493	-0.93
ZA7ARA		11,805	-273	-0.52	11,976	-146	-0.28

Summary Statistics

	Sample J35	Sample J36
Grand Means	12,078.0 psi	12,122.0 psi
Std Dev Btwn Labs	521.1 psi	528.8 psi

Statistics based on 43 of 48 reporting participants

Sample J35: ABS/PC & Sample J36: ABS/PC

Comments on Assigned Data Flags for Test #722

- Y2KW7W (M) - Participant did not submit data for sample J36.
- TWNXQZ (X) - Data for both samples are low. Possible Systematic Error.
- GAV74Z (X) - Data for both samples are high. Possible Systematic Error.
- P6UKZC (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- YHKYT3 (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

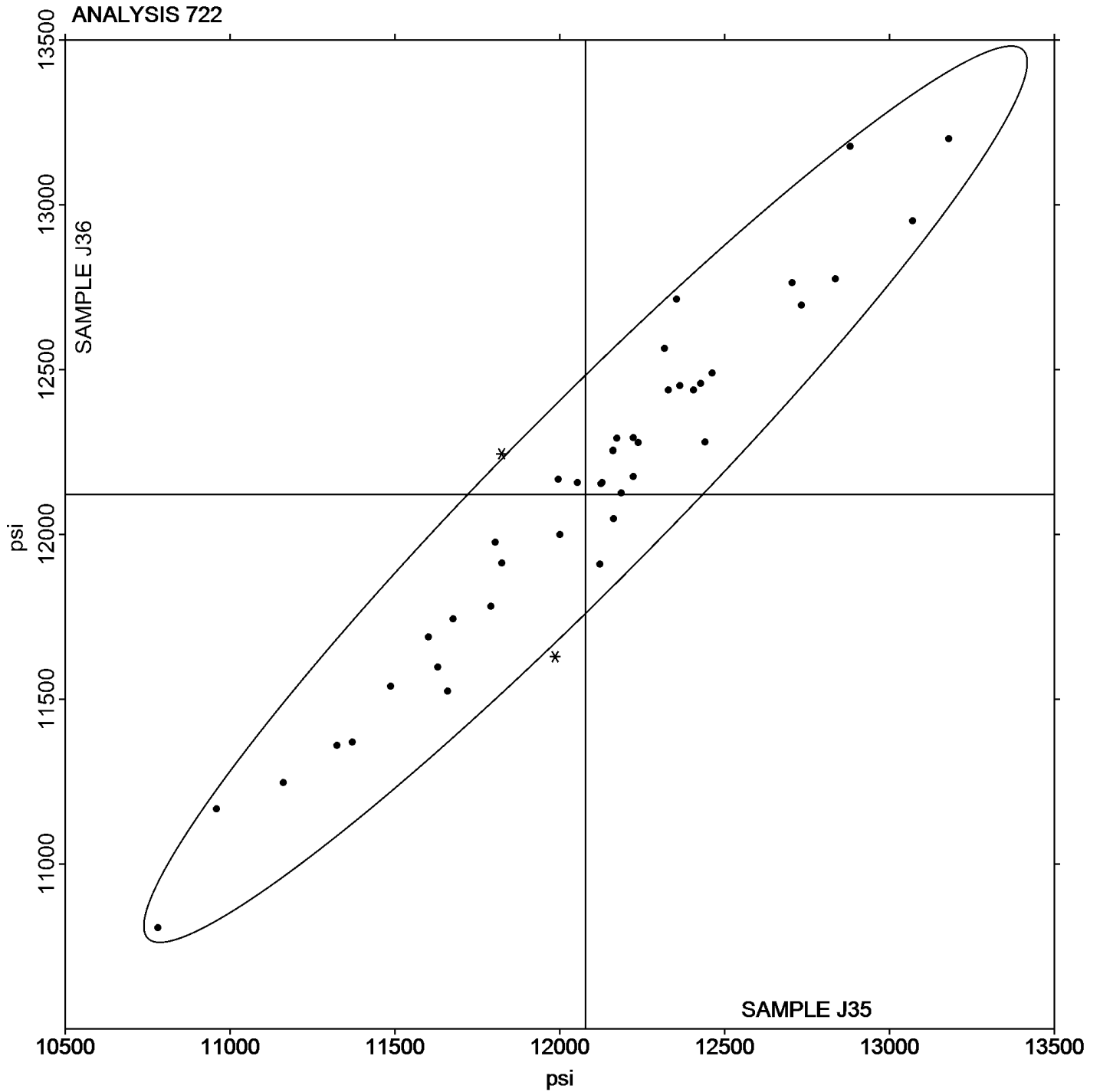
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2nd Qtr 2016

Flexural Stress at Yield - psi

Grand Mean Sample J35: 12,078.02 psi Grand Mean Sample J36: 12,121.99 psi





Plastics Interlaboratory Testing Program

Report #98

Analysis 730

2nd Qtr 2016

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C35			Sample C36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JATVP		50.61	-0.82	-0.95	50.55	-0.92	-1.06
2U7RFG		51.40	-0.03	-0.04	51.36	-0.11	-0.13
3EUVB8	X	50.68	-0.75	-0.87	49.96	-1.51	-1.74
44MDFV	*	49.72	-1.71	-1.98	50.22	-1.25	-1.44
74XY33		51.80	0.37	0.42	51.45	-0.03	-0.03
86ANPR		50.44	-0.99	-1.15	50.43	-1.04	-1.20
86Q8MQ	X	44.36	-7.07	-8.17	44.63	-6.84	-7.90
8R4ZN6		50.90	-0.53	-0.62	50.77	-0.70	-0.81
8TGFBJ		52.38	0.95	1.10	52.33	0.86	1.00
9BDGBU		51.70	0.27	0.31	51.69	0.21	0.25
9XNHG7		50.65	-0.78	-0.90	50.60	-0.88	-1.01
AH9JC7		50.81	-0.62	-0.72	50.82	-0.65	-0.75
AL9VZJ		51.06	-0.37	-0.43	51.10	-0.37	-0.43
AVE6NN		51.34	-0.10	-0.11	51.22	-0.25	-0.29
AWQFKF		52.56	1.13	1.30	52.45	0.98	1.13
B4999K		50.88	-0.55	-0.64	50.95	-0.53	-0.61
BLJCHP		51.38	-0.05	-0.06	51.90	0.43	0.50
BRTDV7		51.11	-0.32	-0.37	51.05	-0.42	-0.49
BVQQNW		52.29	0.86	0.99	52.10	0.63	0.73
BX3EEN		52.23	0.80	0.92	52.23	0.75	0.87
C4LJJP		52.44	1.01	1.16	52.22	0.75	0.86
CCUKVW		52.78	1.34	1.55	52.55	1.08	1.25
CCVFE3		53.24	1.81	2.09	53.08	1.61	1.86
CDDFNK		51.16	-0.27	-0.31	51.03	-0.44	-0.50
CHHZ9M		51.64	0.20	0.24	51.76	0.29	0.33
CMDRGK		50.72	-0.71	-0.83	50.72	-0.75	-0.87
CPLHP9		51.51	0.07	0.09	51.68	0.21	0.24
F8QGTK		50.93	-0.51	-0.59	50.87	-0.60	-0.70
GHPCX2		50.73	-0.71	-0.82	50.48	-0.99	-1.14
GUZMMD		51.55	0.12	0.13	51.43	-0.04	-0.05
HTXZ6H		52.12	0.69	0.79	52.10	0.63	0.73
HWYCEK		52.70	1.27	1.46	52.82	1.35	1.56
JPWL9Z		52.73	1.30	1.50	53.09	1.62	1.87
JRAZ7A		52.19	0.76	0.87	52.63	1.16	1.34
JTVZWP		51.86	0.43	0.49	51.60	0.13	0.15



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Analysis 730

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Tensile Stress at Yield - MPa

WebCode	Data Flag	<u>Sample C35</u>			<u>Sample C36</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
K327EX		51.27	-0.16	-0.19	51.38	-0.09	-0.11
KFQ2LX		51.92	0.49	0.56	52.09	0.62	0.72
KNKBY2		50.97	-0.46	-0.54	50.94	-0.53	-0.62
MZ6CRD	X	49.74	-1.70	-1.96	48.49	-2.98	-3.44
N6K78B		50.14	-1.30	-1.50	50.12	-1.35	-1.56
NCXF9C		52.65	1.22	1.41	52.61	1.14	1.32
NLL9MU		52.50	1.07	1.24	52.73	1.26	1.46
PH3EK3	X	53.88	2.45	2.83	52.14	0.67	0.77
QGYR38		52.73	1.29	1.49	52.86	1.39	1.60
QKJJDA		50.82	-0.62	-0.71	51.21	-0.27	-0.31
R3TTHM		50.92	-0.51	-0.59	50.86	-0.61	-0.71
RDH798		50.29	-1.14	-1.32	50.41	-1.06	-1.23
RTA3B3		50.71	-0.73	-0.84	50.47	-1.00	-1.15
U4J2PA		51.62	0.19	0.22	51.62	0.15	0.17
ULLYG6		49.70	-1.73	-2.00	49.90	-1.57	-1.81
UQX36L		50.64	-0.79	-0.92	50.62	-0.85	-0.99
WU2AE3		51.14	-0.30	-0.34	51.41	-0.06	-0.07
X9HWDL		52.94	1.51	1.74	53.08	1.61	1.86
XP8BJQ		50.70	-0.74	-0.85	51.02	-0.45	-0.52
Y6YJP4		51.48	0.05	0.06	51.45	-0.02	-0.03
ZA7ARA		50.46	-0.97	-1.13	50.30	-1.18	-1.36
ZHJ8PU		51.82	0.38	0.44	52.23	0.76	0.88
ZUAKKW		50.46	-0.97	-1.13	50.84	-0.63	-0.73

Summary Statistics		
	<u>Sample C35</u>	<u>Sample C36</u>
Grand Means	51.434 MPa	51.471 MPa
Stnd Dev Btwn Labs	0.866 MPa	0.866 MPa
Statistics based on 54 of 58 reporting participants		

Sample C35: ABS/PC & Sample C36: ABS/PC



Plastics Interlaboratory Testing Program

Analysis 730

Tensile Stress at Yield - MPa

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Comments on Assigned Data Flags for Test #730

MZ6CRD (X) - Data for sample C36 are low. Inconsistent within the determinations of both samples.

PH3EK3 (X) - Data for sample C35 are high. Inconsistent within the determinations of sample C35.

3EUVB8 (X) - Inconsistent in testing between samples.

86Q8MQ (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample C35.



Plastics Interlaboratory Testing Program

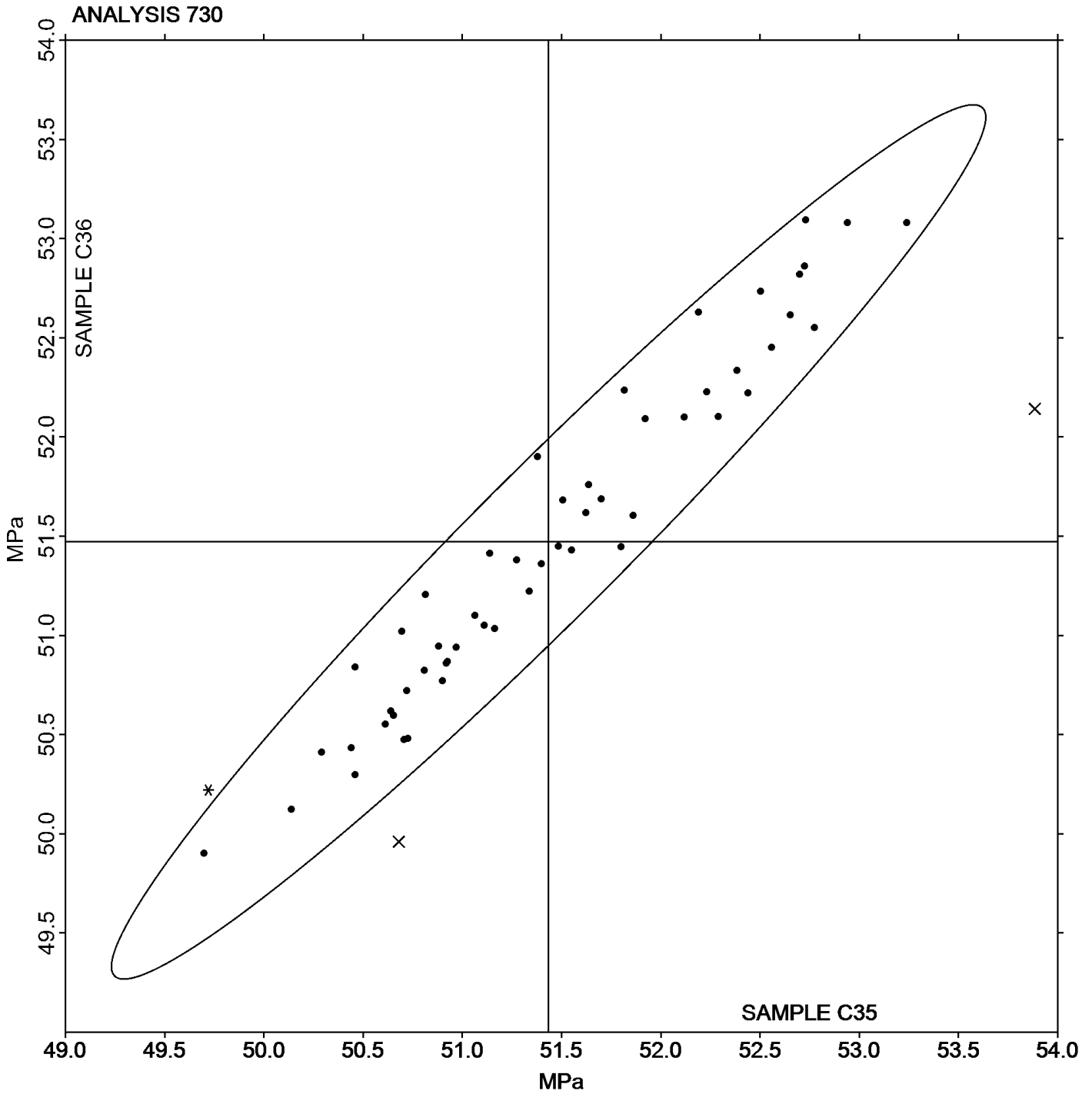
Analysis 730

Tensile Stress at Yield - MPa

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Grand Mean Sample C35: 51.434 MPa Grand Mean Sample C36: 51.471 MPa





Plastics Interlaboratory Testing Program

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Analysis 731

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Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C35			Sample C36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JATVP		42.45	-0.33	-0.35	42.80	-0.25	-0.24
2U7RFG		41.68	-1.11	-1.16	41.82	-1.23	-1.19
3EUVB8		42.36	-0.43	-0.45	41.26	-1.79	-1.73
44MDFV	X	39.08	-3.71	-3.86	43.10	0.05	0.05
74XY33		42.80	0.01	0.01	43.33	0.28	0.27
86ANPR		42.65	-0.14	-0.14	43.36	0.31	0.30
8BC3MA	*	39.82	-2.97	-3.09	40.25	-2.80	-2.71
8R4ZN6		42.26	-0.53	-0.55	42.48	-0.57	-0.55
8TGFBJ		42.15	-0.64	-0.67	43.07	0.02	0.02
9BDGBU		42.56	-0.23	-0.24	43.40	0.35	0.33
9XNHG7		42.16	-0.63	-0.66	42.52	-0.53	-0.51
AH9JC7		41.77	-1.02	-1.06	41.87	-1.18	-1.14
AL9VZJ		42.15	-0.64	-0.66	43.55	0.50	0.48
AVE6NN		43.83	1.04	1.08	42.84	-0.21	-0.21
AWQFKF		43.42	0.63	0.65	44.15	1.10	1.06
B4999K		42.30	-0.49	-0.51	42.72	-0.33	-0.31
BLJCHP		42.50	-0.29	-0.30	43.20	0.15	0.15
BRTDV7		42.99	0.20	0.21	44.27	1.22	1.18
BVQQNW		43.06	0.28	0.29	44.17	1.12	1.08
BX3EEN		43.44	0.65	0.68	43.29	0.24	0.23
C4LJJP		43.26	0.47	0.49	44.66	1.61	1.55
CCUKVW		44.26	1.48	1.54	44.21	1.16	1.12
CHHZ9M		42.19	-0.60	-0.62	43.79	0.74	0.72
CMDRGK		42.12	-0.67	-0.70	42.40	-0.65	-0.63
CPLHP9		43.14	0.36	0.37	43.17	0.12	0.11
F8QBTK		43.38	0.60	0.62	43.42	0.37	0.35
GHPCX2		42.96	0.17	0.18	42.92	-0.13	-0.12
GUZMMD		43.04	0.25	0.26	42.61	-0.44	-0.42
HTXZ6H		43.98	1.19	1.24	44.04	0.99	0.96
HWYCEK		44.90	2.11	2.20	45.22	2.17	2.09
JPWL9Z		43.82	1.03	1.08	43.96	0.91	0.88
JRAZ7A		43.52	0.73	0.76	43.83	0.78	0.75
JTVZWP		43.51	0.72	0.75	42.34	-0.71	-0.68
K327EX		43.01	0.22	0.23	43.19	0.14	0.14
KFQ2LX		43.12	0.33	0.35	43.24	0.19	0.18



Plastics Interlaboratory Testing Program

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Analysis 731

2nd Qtr 2016

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C35			Sample C36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KNKBY2		42.16	-0.63	-0.66	41.86	-1.19	-1.15
MZ6CRD		40.81	-1.98	-2.06	40.64	-2.41	-2.32
N6K78B		41.56	-1.23	-1.28	42.19	-0.86	-0.83
NCXF9C		44.19	1.41	1.46	44.09	1.04	1.00
PH3EK3	X	45.70	2.91	3.03	43.83	0.78	0.75
QGYR38		44.29	1.50	1.56	43.90	0.85	0.82
R3TTHM		41.68	-1.11	-1.16	42.36	-0.69	-0.67
RTA3B3		43.27	0.48	0.50	42.80	-0.25	-0.24
U4J2PA		43.09	0.30	0.32	43.94	0.89	0.86
UQX36L		42.93	0.15	0.15	44.28	1.23	1.19
X9HWDL		44.42	1.63	1.70	44.18	1.13	1.09
XP8BJQ		41.99	-0.80	-0.83	41.89	-1.16	-1.12
Y6YJP4		41.80	-0.98	-1.03	41.85	-1.20	-1.16
ZA7ARA		42.32	-0.47	-0.49	41.85	-1.20	-1.16
ZHJ8PU	X	40.64	-2.15	-2.24	43.79	0.74	0.72
ZUAKKW		42.76	-0.03	-0.03	43.22	0.17	0.16

Summary Statistics

	Sample C35	Sample C36
Grand Means	42.789 MPa	43.050 MPa
Stnd Dev Btwn Labs	0.960 MPa	1.036 MPa

Statistics based on 48 of 51 reporting participants

Sample C35: ABS/PC & Sample C36: ABS/PC

Comments on Assigned Data Flags for Test #731

- ZHJ8PU (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample C35.
- PH3EK3 (X) - Data for sample C35 are high.
- 44MDFV (X) - Data for sample C35 are low. Inconsistent within the determinations of sample C35.



Plastics Interlaboratory Testing Program

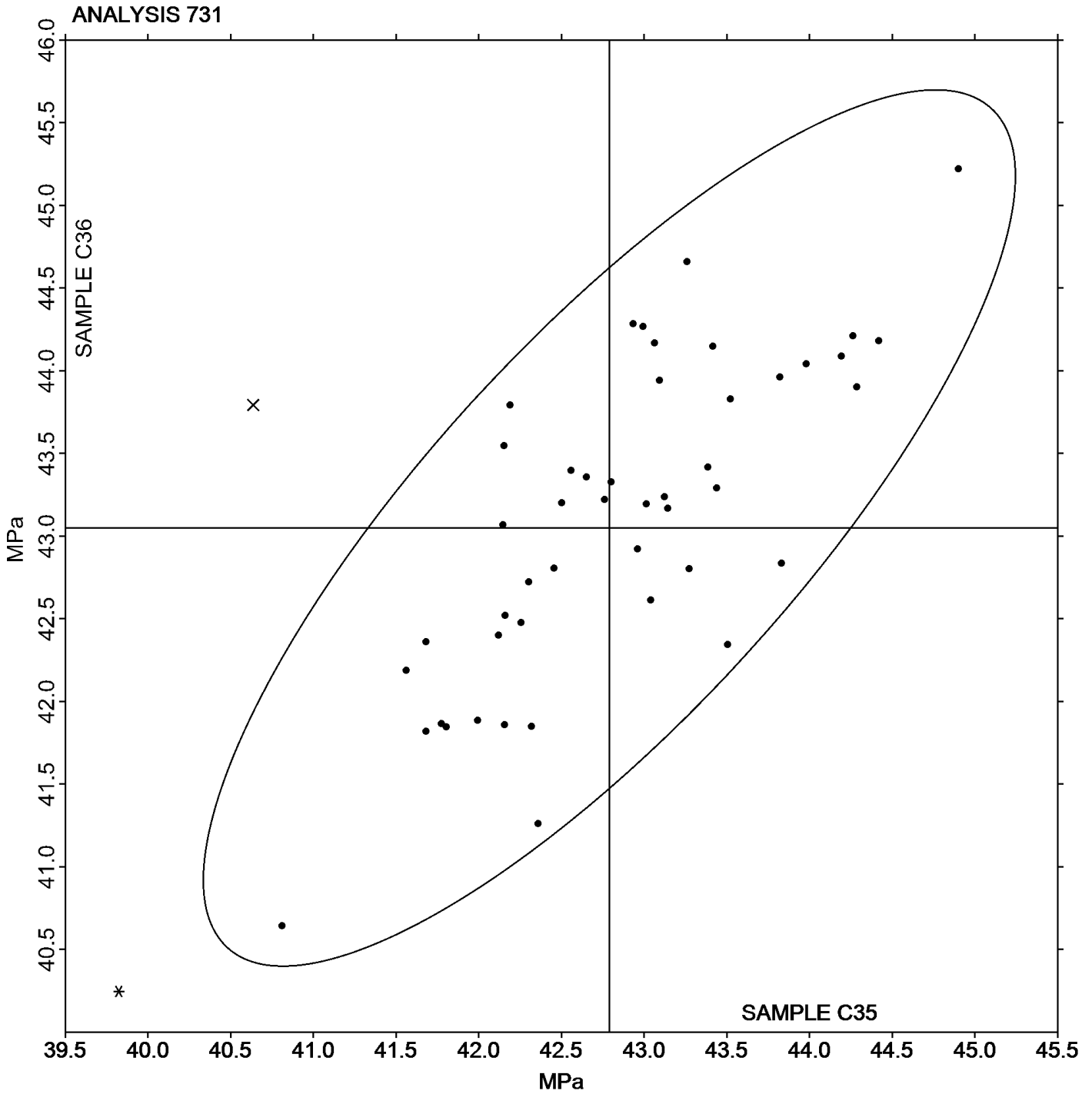
Analysis 731

Tensile Stress at Break - MPa

Report #98

2nd Qtr 2016

Grand Mean Sample C35: 42.789 MPa Grand Mean Sample C36: 43.050 MPa





Plastics Interlaboratory Testing Program

Report #98

Analysis 732

2nd Qtr 2016

Percent Strain at Yield

WebCode	Data Flag	Sample C35			Sample C36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JATVP		4.976	0.099	0.90	4.914	0.062	0.56
3EUVB8	X	4.420	-0.457	-4.16	4.560	-0.292	-2.65
44MDFV		4.846	-0.031	-0.28	4.770	-0.082	-0.75
74XY33	X	4.452	-0.425	-3.87	4.304	-0.548	-4.98
86ANPR		4.820	-0.057	-0.52	4.774	-0.078	-0.71
8R4ZN6	X	5.790	0.913	8.32	5.778	0.926	8.40
8TGFBJ		5.006	0.129	1.18	4.962	0.110	1.00
9BDGBU		4.886	0.009	0.09	4.832	-0.020	-0.18
9XNHG7		4.882	0.005	0.05	4.862	0.010	0.09
AH9JC7		4.851	-0.026	-0.23	4.806	-0.047	-0.42
AL9VZJ		4.828	-0.049	-0.44	4.822	-0.030	-0.27
AVE6NN		4.958	0.081	0.74	4.994	0.142	1.29
AWQFKF		4.934	0.057	0.52	4.864	0.012	0.11
B4999K		4.896	0.019	0.18	4.906	0.054	0.49
BLJCHP		4.840	-0.037	-0.33	4.760	-0.092	-0.84
BRTDV7	*	5.160	0.283	2.58	5.095	0.242	2.20
BVQQNW		4.662	-0.215	-1.95	4.574	-0.278	-2.53
BX3EEN		4.936	0.059	0.54	4.978	0.126	1.14
C4LJJP		4.820	-0.057	-0.52	4.700	-0.152	-1.38
CCUKVW	*	5.180	0.303	2.76	4.992	0.140	1.27
CDDFNK		4.804	-0.073	-0.66	4.854	0.002	0.02
CHHZ9M	X	4.894	0.017	0.16	5.168	0.316	2.87
CMDRGK		4.700	-0.177	-1.61	4.676	-0.176	-1.60
F8QBTk		4.826	-0.051	-0.46	4.792	-0.060	-0.55
GHPCX2		4.806	-0.071	-0.64	4.800	-0.052	-0.47
GUZMMD	X	4.836	-0.041	-0.37	5.600	0.748	6.79
HTXZ6H		4.824	-0.053	-0.48	4.852	0.000	0.00
HWYCEK		4.820	-0.057	-0.52	4.820	-0.032	-0.29
JPWL9Z		4.950	0.073	0.67	4.974	0.122	1.11
JTVZWP		4.766	-0.111	-1.01	4.730	-0.122	-1.11
K327EX		4.896	0.019	0.18	4.768	-0.084	-0.76
KFQ2LX		4.874	-0.003	-0.02	4.842	-0.010	-0.09
KNKBY2	*	4.622	-0.255	-2.32	4.748	-0.104	-0.95
MZ6CRD		4.878	0.001	0.01	4.794	-0.058	-0.53
N6K78B		4.870	-0.007	-0.06	4.712	-0.140	-1.27



Plastics Interlaboratory Testing Program

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Percent Strain at Yield

WebCode	Data Flag	Sample C35			Sample C36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NCXF9C		5.026	0.149	1.36	5.084	0.232	2.10
NLL9MU		4.868	-0.009	-0.08	4.872	0.020	0.18
PH3EK3		4.878	0.001	0.01	4.860	0.008	0.07
QGYR38	X	5.446	0.569	5.18	5.678	0.826	7.50
QKJJDA		4.808	-0.069	-0.62	4.740	-0.112	-1.02
R3TTHM		4.980	0.103	0.94	4.814	-0.038	-0.35
RTA3B3		4.936	0.059	0.54	4.972	0.120	1.09
U4J2PA		5.052	0.175	1.60	5.068	0.216	1.96
UQX36L		4.932	0.055	0.50	4.855	0.003	0.02
X9HWDL		4.806	-0.071	-0.64	4.944	0.092	0.83
XP8BJQ		4.830	-0.047	-0.42	4.894	0.042	0.38
Y6YJP4		4.874	-0.003	-0.02	4.898	0.046	0.42
ZA7ARA	X	4.628	-0.249	-2.26	4.438	-0.414	-3.76
ZHJ8PU		4.733	-0.143	-1.30	4.840	-0.012	-0.11
ZUAKKW		4.854	-0.023	-0.21	4.838	-0.014	-0.13

Summary Statistics

	Sample C35	Sample C36
Grand Means	4.8766 Percent	4.8522 Percent
Stnd Dev Btwn Labs	0.1098 Percent	0.1102 Percent

Statistics based on 43 of 50 reporting participants

Sample C35: ABS/PC & Sample C36: ABS/PC

Comments on Assigned Data Flags for Test #732

- GUZMMD (X) - Data for sample C36 are high. Inconsistent within the determinations of sample C36.
- CHHZ9M (X) - Data for sample C36 are high. Inconsistent within the determinations of both samples.
- QGYR38 (X) - Data for both samples are high. Possible Systematic Error.
- 8R4ZN6 (X) - Data for both samples are high. Possible Systematic Error.
- ZA7ARA (X) - Data for sample C36 are low.
- 3EUVB8 (X) - Data for sample C35 are low.
- 74XY33 (X) - Data for both samples are low. Possible Systematic Error.

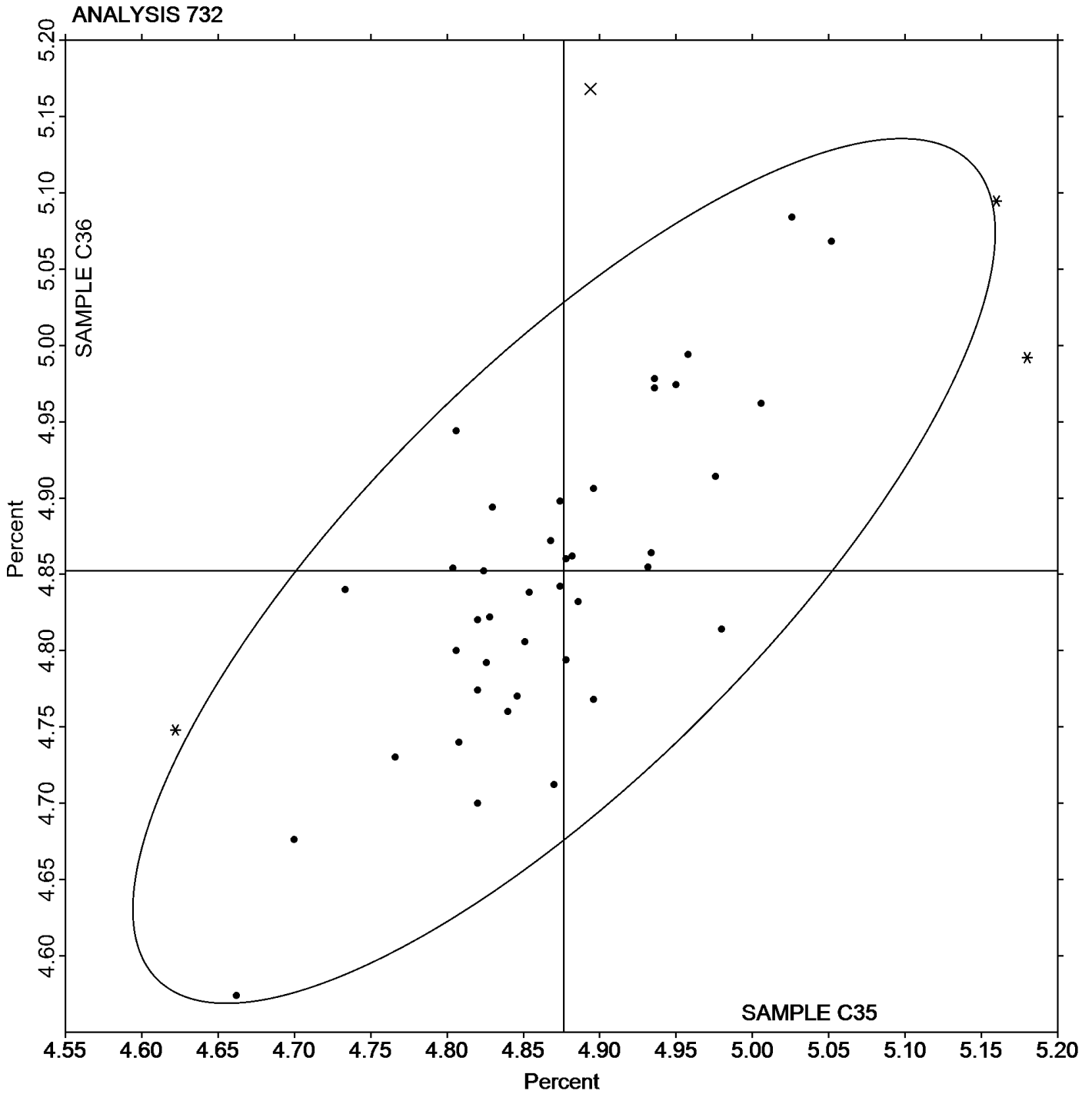


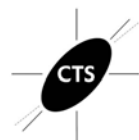
Plastics Interlaboratory Testing Program

Analysis 732
Percent Strain at Yield

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Grand Mean Sample C35: 4.8766 Percent Grand Mean Sample C36: 4.8522 Percent





Plastics Interlaboratory Testing Program

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Analysis 734

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Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C35			Sample C36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JATVP		2,280	24	0.27	2,262	18	0.20
2U7RFG		2,286	30	0.33	2,236	-9	-0.10
3EUVB8	*	2,502	246	2.74	2,495	251	2.77
44MDFV		2,271	15	0.17	2,279	34	0.38
74XY33	X	3,016	760	8.47	2,924	680	7.52
86ANPR	X	2,179	-77	-0.86	2,352	108	1.19
8BC3MA		2,250	-6	-0.06	2,226	-19	-0.21
8R4ZN6	*	2,324	68	0.75	2,188	-56	-0.62
8TGFBJ		2,216	-40	-0.45	2,219	-26	-0.29
9BDGBU		2,175	-81	-0.90	2,218	-26	-0.29
9XNHG7		2,220	-36	-0.40	2,271	26	0.29
AH9JC7		2,180	-76	-0.85	2,186	-59	-0.65
AL9VZJ		2,194	-62	-0.70	2,097	-148	-1.64
AVE6NN		2,152	-104	-1.15	2,114	-131	-1.45
AWQFKF		2,250	-6	-0.06	2,289	45	0.49
B4999K		2,146	-110	-1.23	2,181	-63	-0.70
BLJCHP		2,115	-141	-1.58	2,127	-118	-1.30
BRTDV7		2,237	-19	-0.22	2,236	-8	-0.09
BVQQNW	X	2,915	659	7.35	2,993	748	8.28
BX3EEN		2,225	-31	-0.34	2,239	-6	-0.07
C4LJJP		2,264	8	0.09	2,262	17	0.19
CCUKVW		2,267	11	0.12	2,198	-47	-0.52
CDDFNK		2,382	126	1.40	2,361	116	1.29
CHHZ9M		2,275	19	0.21	2,295	50	0.56
CMDRGK		2,168	-88	-0.98	2,172	-72	-0.80
F8QBTK		2,217	-39	-0.43	2,266	22	0.24
GHPCX2		2,211	-45	-0.50	2,255	11	0.12
GUZMMD		2,035	-221	-2.47	2,053	-192	-2.13
HTXZ6H		2,330	74	0.83	2,342	97	1.08
HWYCEK	*	2,370	114	1.27	2,222	-23	-0.25
JPWL9Z		2,242	-14	-0.15	2,268	24	0.26
JRAZ7A		2,390	134	1.49	2,423	179	1.98
JTVZWP		2,394	138	1.54	2,379	134	1.49
K327EX		2,344	88	0.98	2,337	92	1.02
KFQ2LX		2,276	20	0.23	2,296	51	0.57



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Analysis 734

2nd Qtr 2016

Modulus of Elasticity - MPa

WebCode	Data Flag	<u>Sample C35</u>			<u>Sample C36</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KNKBY2		2,220	-36	-0.41	2,154	-91	-1.01
MZ6CRD		2,305	49	0.55	2,292	48	0.53
N6K78B		2,120	-136	-1.52	2,116	-129	-1.43
PH3EK3		2,278	22	0.25	2,230	-14	-0.16
QGYR38		2,203	-53	-0.59	2,112	-132	-1.47
QKJJDA		2,310	54	0.61	2,321	76	0.84
R3TTHM		2,211	-45	-0.50	2,216	-28	-0.31
RDH798		2,456	200	2.23	2,424	179	1.98
RTA3B3		2,205	-51	-0.57	2,220	-24	-0.27
UQX36L		2,283	27	0.30	2,302	57	0.63
X9HWDL		2,375	119	1.33	2,334	89	0.99
XP8BJQ		2,291	35	0.39	2,251	6	0.07
Y6YJP4		2,273	17	0.19	2,256	12	0.13
ZA7ARA		2,173	-83	-0.92	2,137	-107	-1.19
ZHJ8PU		2,148	-108	-1.20	2,138	-106	-1.18
ZUAKKW		2,249	-7	-0.08	2,248	4	0.04

Summary Statistics		
	<u>Sample C35</u>	<u>Sample C36</u>
Grand Means	2,256.0 MPa	2,244.7 MPa
Stnd Dev Btwn Labs	89.7 MPa	90.3 MPa
Statistics based on 48 of 51 reporting participants		

Sample C35: ABS/PC & Sample C36: ABS/PC

Comments on Assigned Data Flags for Test #734

- 86ANPR (X) - Inconsistent in testing between samples.
- 74XY33 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- BVQQNW (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.



Plastics Interlaboratory Testing Program

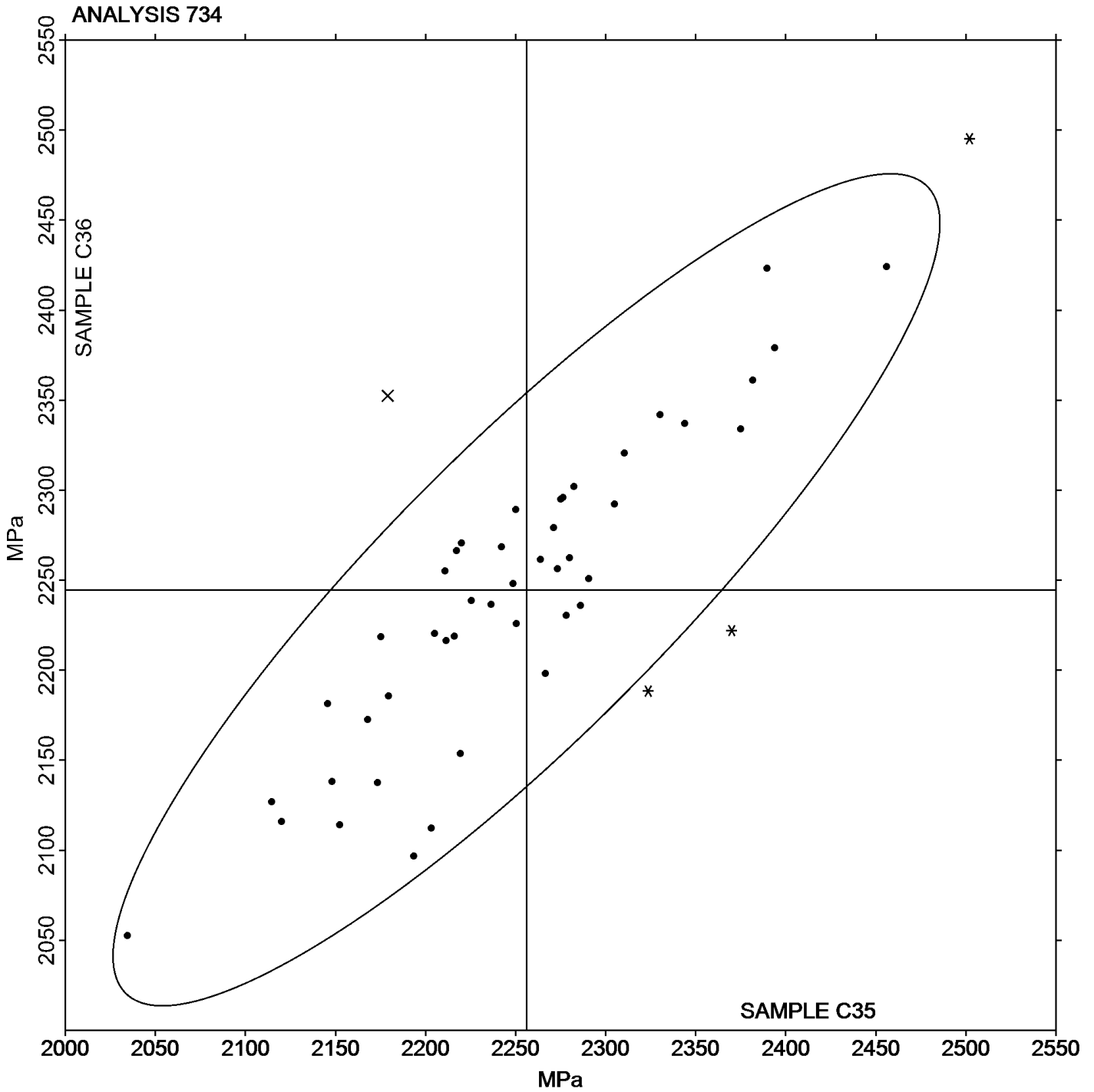
Analysis 734

Modulus of Elasticity - MPa

Report #98

2nd Qtr 2016

Grand Mean Sample C35: 2,256.00 MPa Grand Mean Sample C36: 2,244.68 MPa





Plastics Interlaboratory Testing Program

Report #98

Analysis 736

2nd Qtr 2016

Flexural Modulus - MPa

WebCode	Data Flag	Sample K35			Sample K36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JATVP		2,253	-11	-0.12	2,218	-44	-0.52
2U7RFG		2,298	34	0.39	2,304	42	0.50
3EUVB8	*	2,086	-179	-2.04	2,151	-111	-1.31
44MDFV		2,221	-43	-0.49	2,247	-15	-0.18
74XY33		2,318	53	0.61	2,325	63	0.75
86ANPR		2,236	-28	-0.32	2,246	-16	-0.19
8BC3MA	X	22,920	20,656	235.94	22,374	20,112	238.44
8R4ZN6		2,284	19	0.22	2,235	-26	-0.31
8TGFBJ		2,296	32	0.37	2,286	24	0.29
9XNHG7		2,280	16	0.18	2,265	3	0.04
AH9JC7		2,202	-62	-0.71	2,249	-13	-0.15
AL9VZJ		2,229	-35	-0.40	2,223	-38	-0.45
AVE6NN		2,431	167	1.91	2,414	153	1.81
AWQFKF		2,221	-43	-0.49	2,225	-36	-0.43
B4999K		2,169	-95	-1.09	2,173	-89	-1.05
BLJCHP	*	2,472	207	2.37	2,493	231	2.74
BRTDV7		2,382	117	1.34	2,312	51	0.60
C4LJJP		2,327	63	0.72	2,296	34	0.41
CDDFNK		2,376	112	1.28	2,339	78	0.92
CMDRGK		2,195	-69	-0.79	2,193	-69	-0.82
F8QGTK		2,122	-142	-1.62	2,139	-122	-1.45
GJFWKD		2,353	89	1.01	2,358	97	1.15
GUZMMD		2,382	118	1.35	2,379	117	1.39
HTXZ6H		2,320	56	0.64	2,316	55	0.65
J9B8XG		2,232	-32	-0.37	2,254	-8	-0.09
JHV8MX		2,338	73	0.84	2,274	13	0.15
JPWL9Z		2,393	129	1.47	2,396	135	1.60
JRAZ7A		2,232	-32	-0.37	2,245	-17	-0.20
JTVZWP		2,336	72	0.82	2,352	91	1.07
K327EX		2,222	-42	-0.48	2,238	-24	-0.28
KFQ2LX		2,303	39	0.45	2,327	65	0.78
KNKBY2		2,157	-107	-1.22	2,181	-81	-0.96
MZ6CRD		2,204	-60	-0.69	2,200	-62	-0.73
NCXF9C		2,179	-85	-0.97	2,161	-100	-1.19
NLL9MU		2,281	17	0.19	2,299	38	0.45



Plastics Interlaboratory Testing Program

Report #98

Analysis 736

2nd Qtr 2016

Flexural Modulus - MPa

WebCode	Data Flag	Sample K35			Sample K36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PH3EK3		2,278	14	0.16	2,275	13	0.15
QGYR38		2,353	88	1.01	2,334	72	0.86
QKJJDA		2,258	-6	-0.07	2,231	-30	-0.36
QKYBFM		2,310	46	0.53	2,316	55	0.65
R3TTHM		2,211	-53	-0.61	2,211	-51	-0.60
RTA3B3		2,286	22	0.25	2,291	29	0.35
U4J2PA	*	2,237	-27	-0.31	2,163	-98	-1.17
UQX36L		2,222	-42	-0.48	2,279	17	0.21
X9HWDL		2,331	67	0.77	2,339	78	0.92
XP8BJQ		2,214	-51	-0.58	2,227	-35	-0.41
Y6YJP4		2,106	-158	-1.81	2,103	-158	-1.88
ZA7ARA		2,123	-141	-1.61	2,136	-126	-1.49
ZHJ8PU		2,320	55	0.63	2,286	24	0.28
ZUAKKW	*	2,101	-163	-1.86	2,051	-210	-2.49

Summary Statistics

	Sample K35	Sample K36
Grand Means	2,264.1 MPa	2,261.6 MPa
Stnd Dev Btwn Labs	87.5 MPa	84.3 MPa

Statistics based on 48 of 49 reporting participants

Sample K35: ABS/PC & Sample K36: ABS/PC

8BC3MA (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.

BRTDV7 - Data appeared to be reported in the wrong units. The units were corrected by CTS.



Plastics Interlaboratory Testing Program

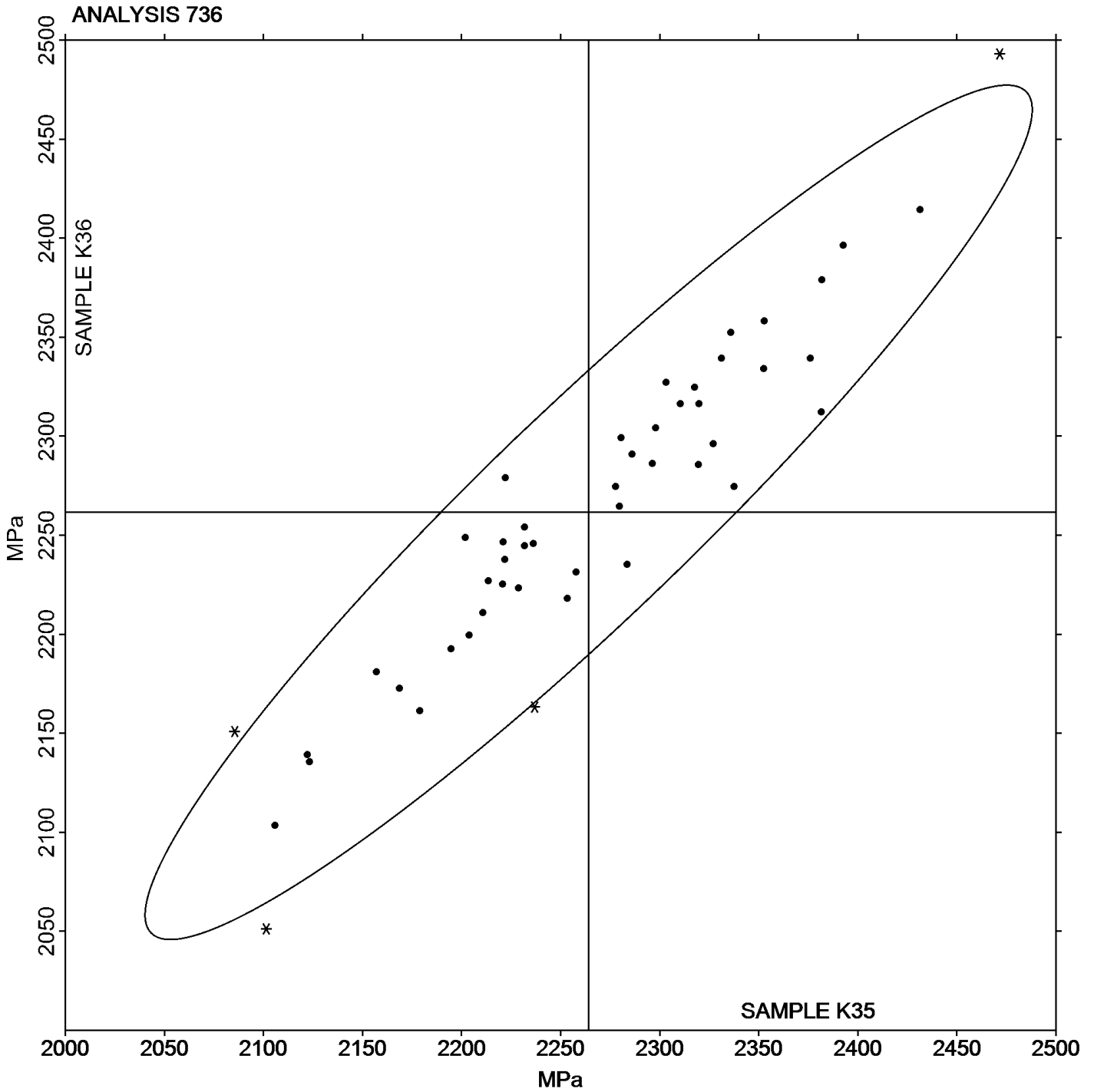
Analysis 736

Flexural Modulus - MPa

Report #98

2nd Qtr 2016

Grand Mean Sample K35: 2,264.12 MPa Grand Mean Sample K36: 2,261.56 MPa





Plastics Interlaboratory Testing Program

Report #98

Analysis 737

2nd Qtr 2016

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K35			Sample K36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JATVP		70.12	0.14	0.07	70.55	0.61	0.33
2U7RFG		72.70	2.72	1.44	72.69	2.75	1.51
3EUVB8		68.18	-1.80	-0.95	68.12	-1.82	-1.00
44MDFV	*	65.69	-4.29	-2.27	66.49	-3.45	-1.89
74XY33		70.74	0.76	0.40	70.33	0.39	0.21
86ANPR		67.87	-2.11	-1.12	68.04	-1.91	-1.04
8BC3MA	X	699.88	629.90	333.74	690.33	620.39	339.93
8R4ZN6		70.34	0.36	0.19	70.06	0.12	0.06
8TGFBJ		72.65	2.67	1.42	72.33	2.38	1.31
9XNHG7		68.75	-1.23	-0.65	68.88	-1.06	-0.58
AH9JC7	X	66.71	-3.27	-1.73	68.32	-1.62	-0.89
AL9VZJ		67.69	-2.29	-1.21	67.94	-2.01	-1.10
AVE6NN		72.54	2.56	1.36	72.42	2.48	1.36
AWQFKF		69.78	-0.20	-0.11	69.72	-0.22	-0.12
B4999K		68.59	-1.39	-0.73	68.95	-0.99	-0.54
BLJCHP		70.34	0.36	0.19	70.72	0.78	0.43
BRTDV7	X	12.52	-57.46	-30.44	12.43	-57.51	-31.51
C4LJJP		69.88	-0.10	-0.05	68.82	-1.12	-0.61
CDDFNK		71.45	1.47	0.78	70.99	1.05	0.58
CMDRGK		69.96	-0.02	-0.01	69.62	-0.32	-0.18
F8QBTK		68.66	-1.32	-0.70	69.04	-0.90	-0.49
GUZMMD		72.73	2.75	1.46	73.13	3.19	1.75
HTXZ6H		70.66	0.68	0.36	70.58	0.64	0.35
J9B8XG	X	59.32	-10.66	-5.65	64.22	-5.72	-3.14
JHV8MX		71.70	1.72	0.91	71.79	1.85	1.01
JPWL9Z		73.43	3.45	1.83	73.39	3.45	1.89
JRAZ7A	X	80.14	10.16	5.38	80.71	10.77	5.90
JTVZWP		70.54	0.56	0.30	70.52	0.58	0.32
K327EX		69.60	-0.38	-0.20	69.02	-0.92	-0.50
KFQ2LX		71.51	1.53	0.81	72.20	2.26	1.24
KNKBY2		69.48	-0.50	-0.26	69.83	-0.12	-0.06
MZ6CRD		69.19	-0.79	-0.42	68.89	-1.06	-0.58
NCXF9C		70.58	0.60	0.32	70.19	0.25	0.14
PH3EK3		68.74	-1.24	-0.66	68.73	-1.21	-0.66
QGYR38		71.53	1.55	0.82	71.06	1.12	0.61



Plastics Interlaboratory Testing Program

Report #98

Analysis 737

2nd Qtr 2016

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K35			Sample K36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
QKJJDA		70.34	0.36	0.19	70.38	0.44	0.24
QKYBFM		73.70	3.72	1.97	73.94	4.00	2.19
R3TTHM		68.98	-1.00	-0.53	69.28	-0.66	-0.36
RTA3B3		66.31	-3.67	-1.95	66.50	-3.44	-1.89
U4J2PA		70.85	0.87	0.46	70.08	0.13	0.07
UQX36L		69.20	-0.78	-0.41	69.16	-0.78	-0.43
X9HWDL		72.59	2.61	1.38	71.93	1.99	1.09
XP8BJQ		68.26	-1.72	-0.91	69.02	-0.92	-0.51
Y6YJP4		67.56	-2.42	-1.28	67.02	-2.92	-1.60
ZA7ARA		67.32	-2.66	-1.41	67.58	-2.36	-1.30
ZHJ8PU		69.82	-0.16	-0.08	69.54	-0.40	-0.22
ZUAKKW		68.58	-1.40	-0.74	68.08	-1.86	-1.02

Summary Statistics		
	Sample K35	Sample K36
Grand Means	69.979 MPa	69.942 MPa
Std Dev Btwn Labs	1.887 MPa	1.825 MPa
Statistics based on 42 of 47 reporting participants		

Sample K35: ABS/PC & Sample K36: ABS/PC

Comments on Assigned Data Flags for Test #737

- J9B8XG (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- JRAZ7A (X) - Data for both samples are high. Possible Systematic Error.
- BRTDV7 (X) - Data for both samples are low. Possible Systematic Error.
- 8BC3MA (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- AH9JC7 (X) - Inconsistent in testing between samples.



Plastics Interlaboratory Testing Program

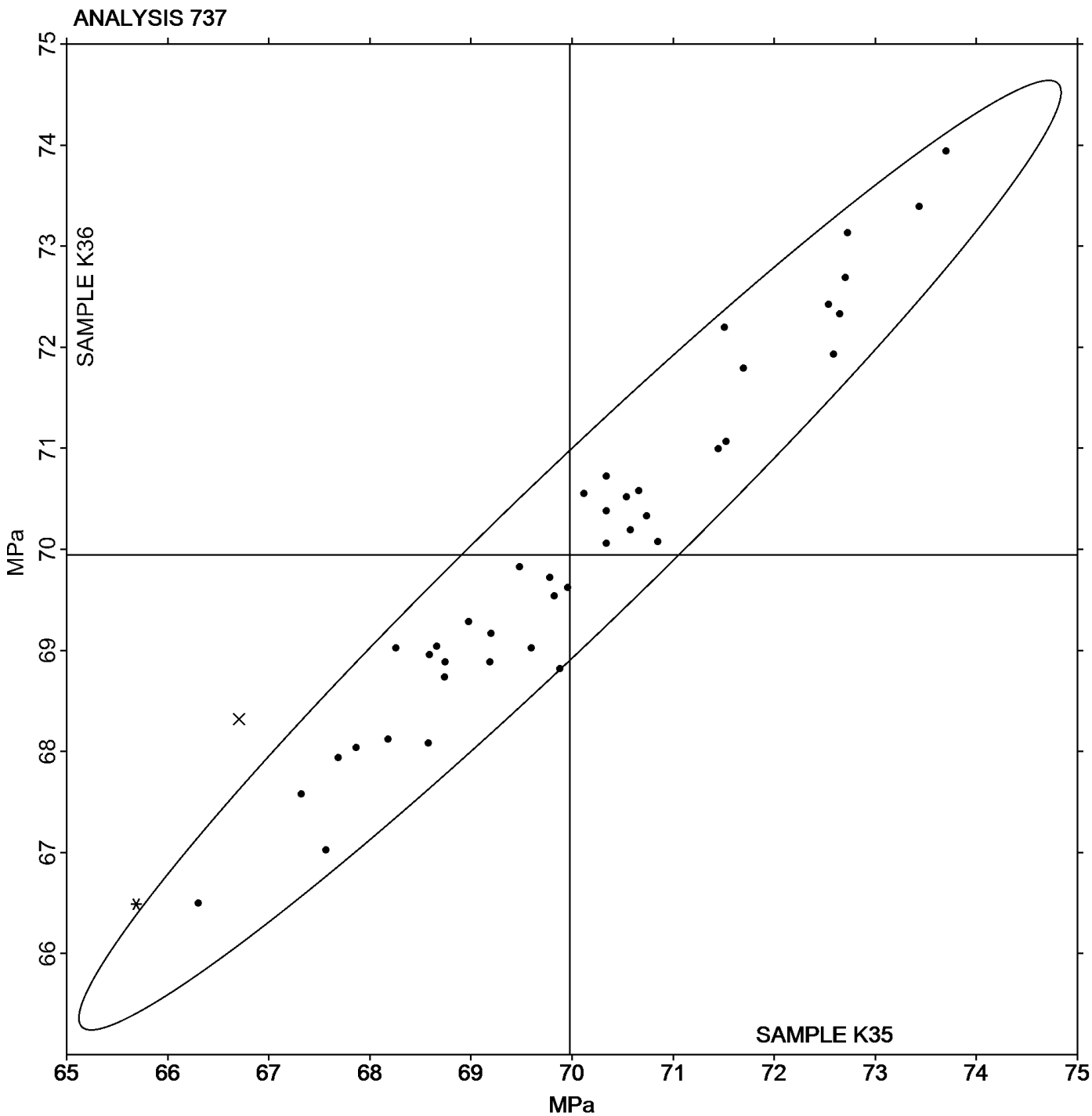
Report #98

Analysis 737

2nd Qtr 2016

Flexural Stress at 3.5% Strain - MPa

Grand Mean Sample K35: 69.979 MPa Grand Mean Sample K36: 69.942 MPa





Plastics Interlaboratory Testing Program

Report #98

Analysis 738

2nd Qtr 2016

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K35			Sample K36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JATVP		81.70	0.07	0.03	81.87	0.21	0.09
2U7RFG		83.66	2.03	0.78	83.35	1.68	0.72
3EUVB8	*	79.20	-2.43	-0.93	81.16	-0.50	-0.21
44MDFV		75.70	-5.93	-2.27	76.54	-5.12	-2.19
74XY33		80.11	-1.52	-0.58	79.75	-1.91	-0.82
86ANPR		79.09	-2.53	-0.97	79.33	-2.34	-1.00
8R4ZN6		81.18	-0.45	-0.17	81.74	0.08	0.03
8TGFBJ		85.94	4.32	1.66	86.22	4.56	1.95
AL9VZJ		79.76	-1.87	-0.72	81.11	-0.55	-0.24
AVE6NN		84.11	2.48	0.95	83.52	1.86	0.79
AWQFKF		80.77	-0.86	-0.33	80.71	-0.96	-0.41
BLJCHP		79.30	-2.33	-0.89	79.40	-2.26	-0.97
C4LJJP		80.72	-0.91	-0.35	79.42	-2.24	-0.96
CDDFNK		82.96	1.33	0.51	82.77	1.10	0.47
CMDRGK		81.40	-0.23	-0.09	80.78	-0.88	-0.38
GJFWKD		84.54	2.92	1.12	84.06	2.40	1.02
JHV8MX		82.89	1.26	0.48	82.30	0.64	0.27
JTVZWP		79.72	-1.91	-0.73	79.78	-1.89	-0.81
K327EX		81.98	0.35	0.13	81.38	-0.29	-0.12
KFQ2LX		81.78	0.16	0.06	82.67	1.01	0.43
KNKBY2		80.36	-1.27	-0.49	80.48	-1.19	-0.51
MZ6CRD		81.39	-0.24	-0.09	82.00	0.34	0.14
NLL9MU		79.95	-1.68	-0.64	80.51	-1.15	-0.49
PH3EK3		81.71	0.08	0.03	81.59	-0.08	-0.03
QGYR38		85.09	3.46	1.33	84.50	2.83	1.21
QKYBFM	*	88.01	6.38	2.45	87.95	6.29	2.68
R3TTHM		80.97	-0.66	-0.25	81.12	-0.55	-0.23
UQX36L		83.54	1.91	0.73	83.47	1.81	0.77
X9HWDL		86.86	5.23	2.01	85.40	3.74	1.60
XP8BJQ		79.08	-2.55	-0.98	79.86	-1.80	-0.77
Y6YJP4		79.30	-2.33	-0.89	78.77	-2.89	-1.23
ZA7ARA		79.34	-2.28	-0.88	79.74	-1.93	-0.82



Plastics Interlaboratory Testing Program

Report #98

Analysis 738

2nd Qtr 2016

Flexural Stress at Yield - MPa

Summary Statistics	<u>Sample K35</u>	<u>Sample K36</u>
Grand Means	81.628 MPa	81.664 MPa
Stnd Dev Btwn Labs	2.607 MPa	2.343 MPa

Statistics based on 32 of 32 reporting participants

Sample K35: ABS/PC & Sample K36: ABS/PC

Analysis Notes:

AWQFKF - Data appeared to be reported in the wrong units. The units were corrected by CTS.



Plastics Interlaboratory Testing Program

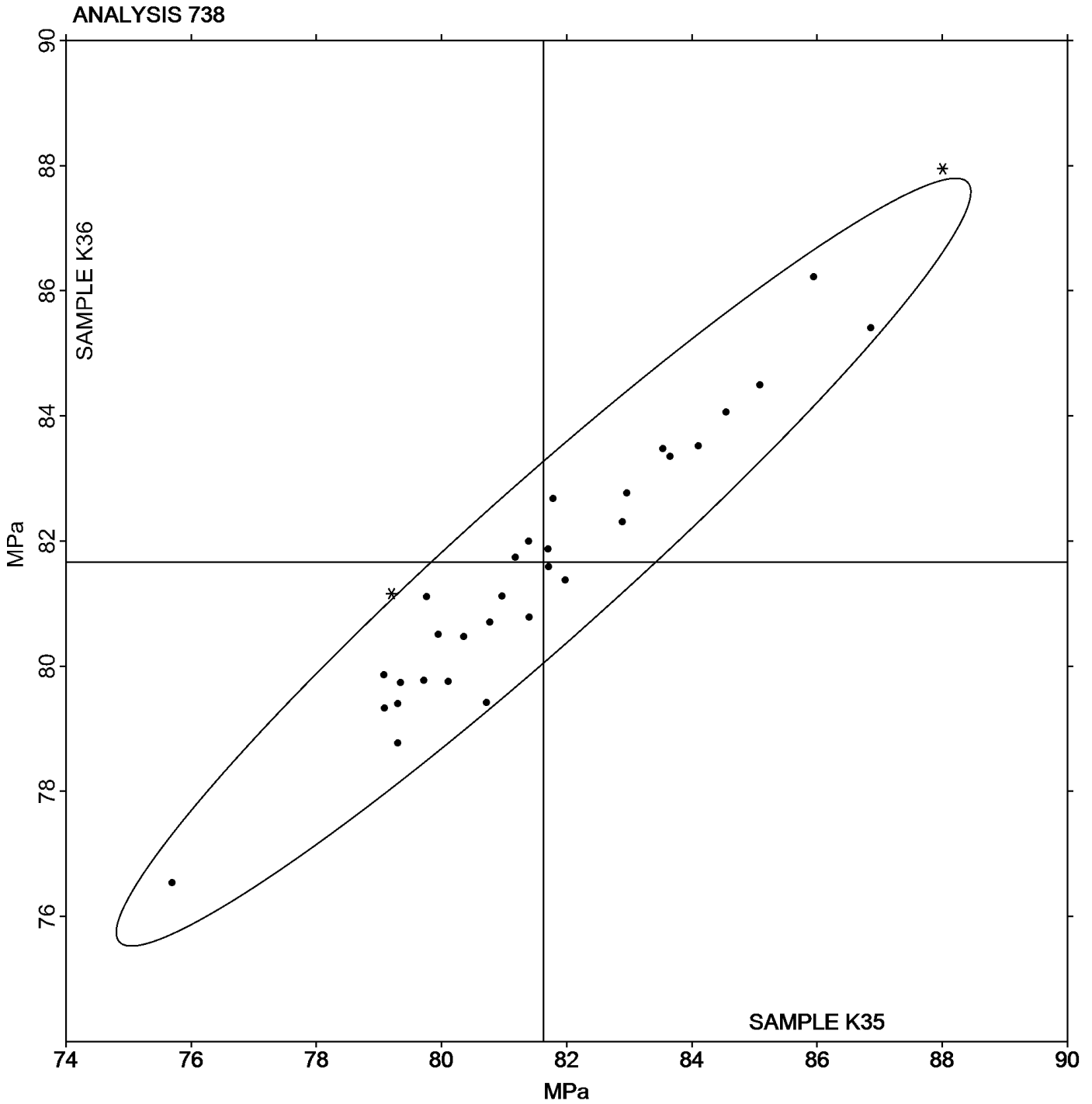
Report #98

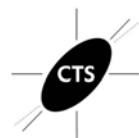
Analysis 738

2nd Qtr 2016

Flexural Stress at Yield - MPa

Grand Mean Sample K35: 81.628 MPa Grand Mean Sample K36: 81.664 MPa





Plastics Interlaboratory Testing Program

Report #98

Analysis 750

2nd Qtr 2016

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

WebCode	Data Flag	Sample X35			Sample X36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2JATVP	X	0.27	-14.70	-21.32	0.24	-14.70	-22.63	TO
2U7RFG		13.61	-1.36	-1.97	14.03	-0.91	-1.41	XX
2ZJJXU		14.06	-0.91	-1.32	13.98	-0.97	-1.49	TO
3EUVB8	X	16.01	1.04	1.50	17.96	3.02	4.64	TO
3F7GCV		15.20	0.23	0.33	15.10	0.16	0.24	TO
44MDFV		15.37	0.40	0.57	15.29	0.34	0.52	TO
74XY33		15.27	0.30	0.44	15.12	0.18	0.27	TO
8Q8PT3		14.07	-0.90	-1.31	14.57	-0.37	-0.58	GO
8TGFBJ		14.18	-0.79	-1.15	14.16	-0.79	-1.21	TO
8Z47WE		14.25	-0.72	-1.04	14.30	-0.64	-0.99	KA
AH9CUQ		14.53	-0.44	-0.64	14.70	-0.24	-0.38	TO
AH9JC7		15.67	0.70	1.02	15.60	0.65	1.01	TO
AL9VZJ		15.37	0.40	0.58	15.64	0.70	1.07	TO
AVE6NN		13.39	-1.58	-2.30	13.46	-1.49	-2.29	GO
AWQFKF		16.31	1.34	1.94	16.00	1.05	1.62	TO
AYT3UQ		14.57	-0.40	-0.58	14.70	-0.25	-0.38	TO
B4999K	*	14.70	-0.27	-0.39	16.00	1.06	1.63	TO
BVQQNW		14.30	-0.67	-0.98	14.36	-0.59	-0.91	XX
C4LJJP		15.07	0.10	0.14	14.96	0.02	0.02	GO
CCVFE3		15.68	0.71	1.03	14.97	0.03	0.04	TO
CMDRGK		14.40	-0.57	-0.83	14.87	-0.08	-0.12	TY
D3LGBJ		15.70	0.73	1.06	15.40	0.46	0.70	DY
D4Y6JX		15.35	0.38	0.55	15.65	0.71	1.09	DY
DMPDGT		15.02	0.05	0.07	15.51	0.56	0.86	TO
EQ49WQ		14.40	-0.57	-0.83	14.48	-0.47	-0.72	TO
G7T744		15.62	0.65	0.94	15.26	0.31	0.48	CE
GAV74Z		14.90	-0.07	-0.10	15.08	0.13	0.20	DY
GJFWKD		15.30	0.33	0.48	15.30	0.36	0.55	TO
GQEUJW		13.99	-0.98	-1.42	13.97	-0.97	-1.50	TO
GUZMMD		14.60	-0.37	-0.54	13.90	-1.04	-1.61	TO
HXT3KY	X	10.33	-4.64	-6.73	13.05	-1.89	-2.91	TO
J8FFYN		15.41	0.44	0.64	14.62	-0.33	-0.50	TO
JN248X	X	15.00	0.03	0.04	17.00	2.06	3.16	TO
JPWL9Z		14.63	-0.34	-0.49	13.82	-1.12	-1.73	DY
JTVZWP		14.99	0.02	0.02	14.82	-0.12	-0.19	TO



Plastics Interlaboratory Testing Program

Report #98

Analysis 750

2nd Qtr 2016

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

WebCode	Data Flag	Sample X35			Sample X36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
JZJNJ8		15.75	0.78	1.12	15.81	0.86	1.33	TO
KFQ2LX		14.55	-0.42	-0.61	15.07	0.13	0.19	GO
KNKBY2		16.29	1.32	1.91	15.49	0.55	0.84	TO
LA2R4C		16.40	1.43	2.07	16.25	1.31	2.01	TO
LVFQWK		14.71	-0.26	-0.38	14.87	-0.08	-0.12	TO
LZNKZA		15.80	0.83	1.20	15.70	0.76	1.16	XX
ME7ZUF		15.31	0.34	0.50	15.13	0.18	0.28	TO
MT2GJD		13.93	-1.04	-1.51	14.24	-0.70	-1.08	TO
MTMMPB		13.50	-1.47	-2.13	13.40	-1.54	-2.38	GO
MZ6CRD		16.28	1.31	1.90	15.28	0.34	0.52	DY
N6K78B		14.45	-0.52	-0.75	14.10	-0.85	-1.30	CE
N74ANV	*	15.95	0.98	1.42	16.65	1.71	2.63	TO
N79RLU		16.20	1.23	1.78	15.20	0.26	0.39	TO
N8ZHHD		15.25	0.28	0.41	15.20	0.26	0.39	TO
NCXF9C		14.00	-0.97	-1.41	14.40	-0.54	-0.84	DY
NLL9MU		15.22	0.25	0.36	15.25	0.31	0.47	TO
P4VEJH	X	15.12	0.15	0.22	13.56	-1.39	-2.13	XX
PVNQVC		15.35	0.38	0.55	15.45	0.51	0.78	TO
Q3J9NT		15.11	0.14	0.21	15.07	0.12	0.19	TO
QGYR38		15.15	0.18	0.26	15.60	0.66	1.01	AT
QUBDTZ		15.19	0.22	0.32	15.18	0.24	0.36	TO
R7YZC2	X	5.88	-9.09	-13.18	6.08	-8.86	-13.63	DY
RDH798		14.08	-0.89	-1.28	14.76	-0.18	-0.28	DY
REQ2C4		15.00	0.03	0.04	15.45	0.51	0.78	DY
RTA3B3		15.30	0.33	0.48	15.50	0.55	0.85	TO
RWDXU7		14.28	-0.69	-1.01	14.71	-0.23	-0.36	DY
TKQ9HD		13.84	-1.13	-1.64	13.73	-1.21	-1.87	TM
TW82YZ		14.71	-0.26	-0.37	14.36	-0.59	-0.90	CE
TWNXQZ		15.45	0.48	0.70	15.51	0.57	0.87	TO
U4KCP7	X	19.16	4.19	6.08	16.98	2.04	3.13	TO
UABPQU	X	18.51	3.54	5.13	15.68	0.74	1.14	CS
ULLYG6		15.25	0.28	0.41	15.13	0.18	0.28	XX
V6R7U6		15.29	0.32	0.46	14.97	0.03	0.04	XX
VHECPK		15.50	0.53	0.77	15.85	0.91	1.39	TO
VRLX6Z	X	16.00	1.03	1.49	14.45	-0.49	-0.76	TO



Plastics Interlaboratory Testing Program

Report #98

Analysis 750

2nd Qtr 2016

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

WebCode	Data Flag	Sample X35			Sample X36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
VZF7PQ		14.21	-0.76	-1.11	14.80	-0.14	-0.22	TO
WRWBW2		15.45	0.48	0.70	15.21	0.27	0.41	XX
WU2AE3		15.12	0.15	0.21	14.05	-0.89	-1.38	XX
WYZ772		15.60	0.63	0.91	14.85	-0.09	-0.14	DY
X9HWDL		14.55	-0.42	-0.62	14.85	-0.09	-0.14	XX
XBCTUT		14.91	-0.06	-0.09	15.57	0.63	0.96	TO
XHVYQZ		15.30	0.33	0.48	15.35	0.41	0.62	TO
Y2KW7W	X	19.00	4.03	5.84	19.45	4.51	6.93	TO
Y47ZWV		14.40	-0.57	-0.83	14.35	-0.59	-0.91	TO
YAEZAU	X	16.00	1.03	1.49	12.81	-2.13	-3.28	KA
YGMNVE		15.50	0.53	0.77	15.00	0.06	0.09	DA
YHKYT3		15.07	0.10	0.14	14.50	-0.45	-0.69	TO
ZA7ARA		14.75	-0.22	-0.32	14.80	-0.14	-0.22	TO
ZGP6HW		14.79	-0.18	-0.27	14.77	-0.17	-0.27	TO
ZUAKKW		15.15	0.18	0.26	14.90	-0.04	-0.07	TO

Summary Statistics		
	Sample X35	Sample X36
Grand Means	14.970 grams/10 mins	14.944 grams/10 mins
Stnd Dev Btwn Labs	0.690 grams/10 mins	0.650 grams/10 mins
Statistics based on 74 of 85 reporting participants		

Sample X35: PP & Sample X36: PP



Plastics Interlaboratory Testing Program

Report #98

Analysis 750

2nd Qtr 2016

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

Comments on Assigned Data Flags for Test #750

- U4KCP7 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- Y2KW7W (X) - Data for both samples are high. Possible Systematic Error.
- VRLX6Z (X) - Inconsistent in testing between samples.
- 2JATVP (X) - Data for both samples are low. Possible Systematic Error.
- YAEZAU (X) - Data for sample X36 are low. Inconsistent within the determinations of sample X35.
- R7YZC2 (X) - Data for both samples are low. Possible Systematic Error.
- UABPQU (X) - Data for sample X35 are high.
- JN248X (X) - Data for sample X36 are high. Inconsistent within the determinations of both samples.
- HXT3KY (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample X35.
- 3EUVB8 (X) - Data for sample X36 are high.
- P4VEJH (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

AT	Atlas	CE	Ceast
CS	CSI	DA	Davenport
DY	Dynisco	GO	Gottfert
KA	Kayeness	TM	TMI
TO	Tinius Olsen	TY	Toyoseiki Seisakusho
XX	Instrument manufacturer not specified by lab		



Plastics Interlaboratory Testing Program

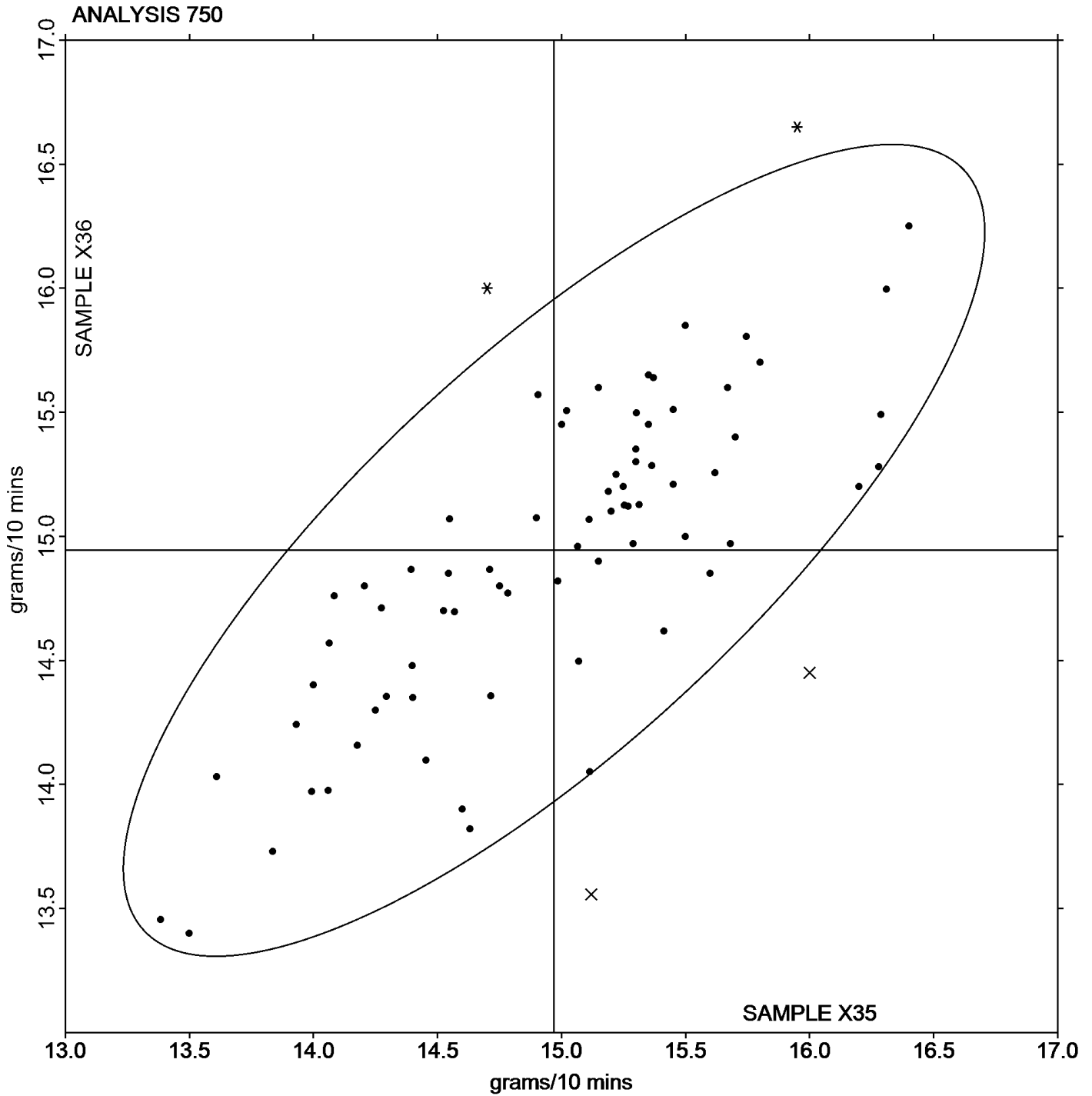
Report #98

Analysis 750

2nd Qtr 2016

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

Grand Mean Sample X35: 14.970 grams/10 mins Grand Mean Sample X36: 14.944 grams/10 mins





Plastics Interlaboratory Testing Program

Report #98

Analysis 755

2nd Qtr 2016

Moisture Content of Plastics

WebCode	Data Flag	Sample Y35			Sample Y36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2JATVP		0.09100	-0.00510	-0.27	0.08500	-0.01296	-0.68	MK
3AD2JU		0.06560	-0.03050	-1.60	0.06297	-0.03498	-1.84	MU
44MDFV		0.05133	-0.04476	-2.35	0.05267	-0.04529	-2.38	CT
4PBNRV		0.09033	-0.00576	-0.30	0.08833	-0.00962	-0.51	PA
4PQYF2		0.09000	-0.00610	-0.32	0.09000	-0.00796	-0.42	ML
69WQXU		0.08803	-0.00806	-0.42	0.08953	-0.00842	-0.44	ML
6T8NE6		0.09600	-0.00010	-0.01	0.09633	-0.00162	-0.09	ML
9G36ET		0.09667	0.00057	0.03	0.09300	-0.00496	-0.26	MJ
AH9JC7		0.13867	0.04257	2.24	0.13533	0.03738	1.96	SB
B4999K		0.09080	-0.00530	-0.28	0.08705	-0.01091	-0.57	ML
BX3EEN		0.09500	-0.00110	-0.06	0.09567	-0.00229	-0.12	MI
CDDFNK		0.09400	-0.00210	-0.11	0.09900	0.00104	0.05	MK
GJFWKD		0.10552	0.00942	0.49	0.10681	0.00885	0.46	CT
GUZMMD	*	0.14633	0.05024	2.64	0.14933	0.05138	2.70	MU
HXT3KY	X	0.17633	0.08024	4.22	0.10733	0.00938	0.49	MU
J78CED		0.08568	-0.01041	-0.55	0.09045	-0.00751	-0.39	CS
K4B89J	*	0.10000	0.00390	0.21	0.11700	0.01904	1.00	SB
LVFQWK		0.10400	0.00790	0.42	0.11300	0.01504	0.79	MB
MT2GJD	X	0.07693	-0.01916	-1.01	0.10377	0.00581	0.30	CT
NCXF9C		0.11237	0.01627	0.85	0.11250	0.01454	0.76	MR
Q3J9NT		0.09647	0.00037	0.02	0.09757	-0.00039	-0.02	AQ
QKYBFM		0.09360	-0.00250	-0.13	0.09443	-0.00352	-0.18	MK
R7YZC2		0.12040	0.02430	1.28	0.12317	0.02521	1.32	AZ
RC4V4M		0.08620	-0.00990	-0.52	0.10050	0.00254	0.13	MU
REQ2C4		0.09833	0.00224	0.12	0.09567	-0.00229	-0.12	AZ
RTA3B3		0.08400	-0.01210	-0.64	0.08490	-0.01306	-0.69	XX
RWDXU7	*	0.06300	-0.03310	-1.74	0.07900	-0.01896	-0.99	MB
TW82YZ		0.09747	0.00137	0.07	0.10227	0.00431	0.23	MK
U4J2PA		0.08747	-0.00863	-0.45	0.09553	-0.00242	-0.13	MK
U4KCP7		0.06973	-0.02636	-1.39	0.06853	-0.02942	-1.54	AZ
UNTHE2		0.09733	0.00124	0.06	0.09900	0.00104	0.05	MJ
X9HWDL		0.09500	-0.00110	-0.06	0.09400	-0.00396	-0.21	CT
Y2KW7W		0.11733	0.02124	1.12	0.11167	0.01371	0.72	MU
YHKYT3		0.12333	0.02724	1.43	0.12667	0.02871	1.51	MU
ZGP6HW		0.09430	-0.00180	-0.09	0.09067	-0.00729	-0.38	MR



Plastics Interlaboratory Testing Program

Report #98

Analysis 755

2nd Qtr 2016

Moisture Content of Plastics

WebCode	Data Flag	Sample Y35			Sample Y36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
ZUAKKW		0.10200	0.00590	0.31	0.10300	0.00504	0.26	AZ

Summary Statistics			
	Sample Y35		Sample Y36
Grand Means	0.096097 Percent		0.097957 Percent
Stnd Dev Btwn Labs	0.019031 Percent		0.019054 Percent
Statistics based on 34 of 36 reporting participants			

Sample Y35: ABS/PC & Sample Y36: ABS/PC

Comments on Assigned Data Flags for Test #755

HXT3KY (X) - Data for sample Y35 are high. Inconsistent within the determinations of sample Y35.

MT2GJD (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

AQ Aquastar	AZ Arizona Instruments Moisture Analyzer
CS Cosa Instruments	CT Computrac Moisture Analyzer
MB Omnimark Mark 3	MI Mitsubishi MCI Series
MJ Mitsubishi KF Analyzer Series	MK Mitsubishi KF Analyzer CA
ML Metrohm Coulometer	MR Metrohm Coulineter 756 KF
MU Mettler Toledo	PA Photovolt Aquatest
SB Sartorius Mark 3	XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

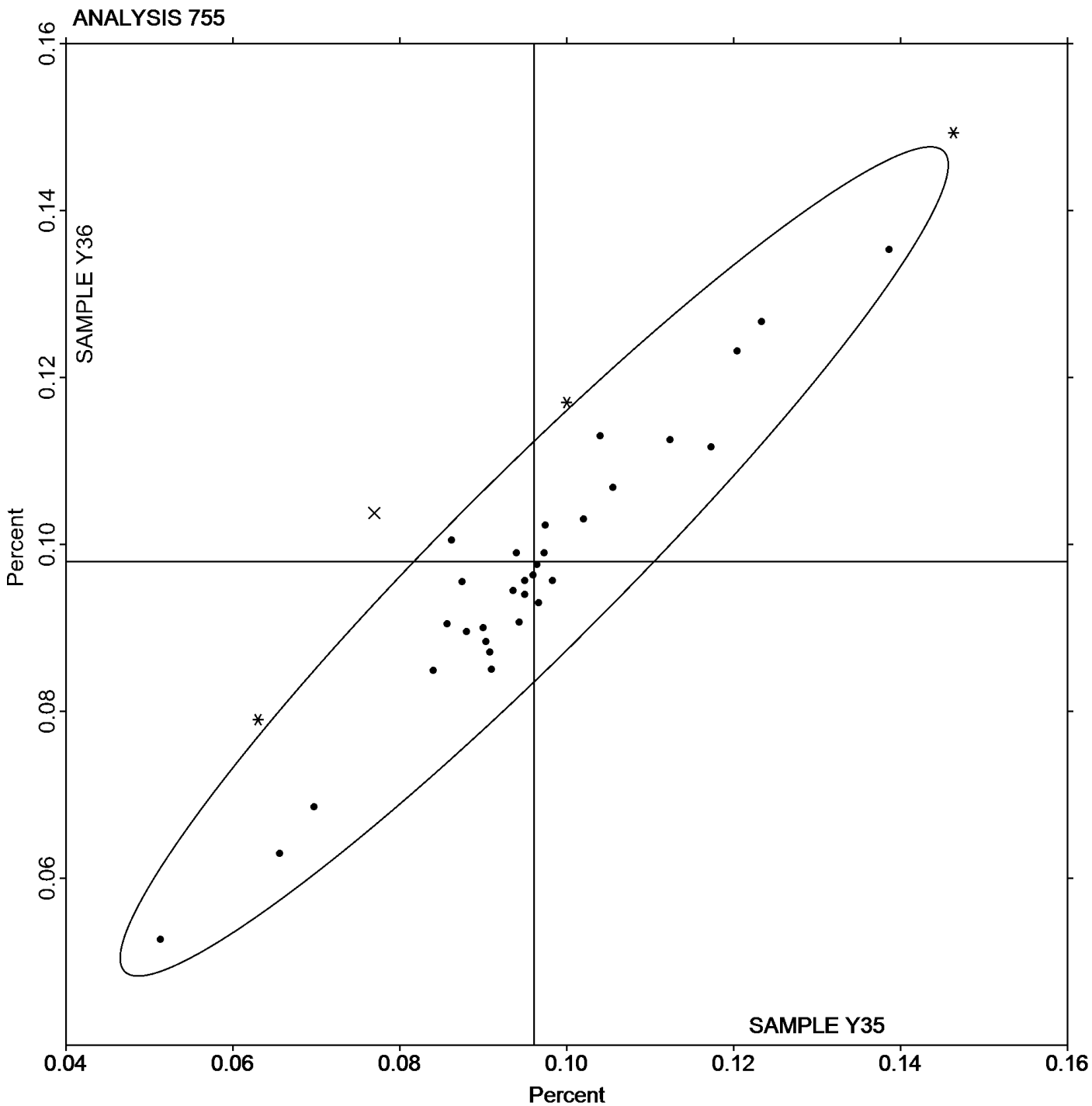
Analysis 755

Moisture Content of Plastics

Report #98

2nd Qtr 2016

Grand Mean Sample Y35: 0.09610 Percent Grand Mean Sample Y36: 0.09796 Percent





Plastics Interlaboratory Testing Program

Report #98

Analysis 757

2nd Qtr 2016

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L35			Sample L36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2D4A6C		19.775	0.025	0.46	19.825	0.066	1.27
2JATVP	X	19.735	-0.015	-0.28	19.340	-0.419	-8.03
2U7RFG		19.775	0.025	0.46	19.805	0.046	0.88
44MDFV		19.685	-0.065	-1.19	19.695	-0.064	-1.22
6VQX4W		19.620	-0.130	-2.38	19.665	-0.094	-1.80
74XY33		19.760	0.010	0.18	19.765	0.006	0.12
8Q8PT3		19.790	0.039	0.72	19.784	0.025	0.48
8TGFBJ		19.718	-0.033	-0.60	19.702	-0.057	-1.10
8Z47WE		19.735	-0.015	-0.28	19.725	-0.034	-0.65
9XNHG7		19.740	-0.010	-0.18	19.765	0.006	0.12
AAWKHU		19.760	0.009	0.17	19.755	-0.004	-0.09
AH9JC7		19.779	0.029	0.53	19.801	0.042	0.80
AWQFKF		19.785	0.035	0.64	19.780	0.021	0.40
B4999K		19.795	0.045	0.82	19.810	0.051	0.98
C4LJJP		19.795	0.045	0.82	19.770	0.011	0.21
CCVFE3	X	19.350	-0.400	-7.34	19.500	-0.259	-4.96
CDDFNK		19.810	0.060	1.10	19.710	-0.049	-0.94
CJDFKK	X	19.560	-0.190	-3.48	19.570	-0.189	-3.62
D4Y6JX	*	19.665	-0.085	-1.56	19.790	0.031	0.60
DDLT3J		19.835	0.085	1.56	19.830	0.071	1.36
ERZQYR		19.738	-0.013	-0.23	19.768	0.009	0.16
FYEUYJ		19.785	0.035	0.64	19.765	0.006	0.12
GUZMMD		19.800	0.050	0.92	19.820	0.061	1.17
JPWL9Z		19.775	0.025	0.46	19.755	-0.004	-0.08
JRAZ7A		19.760	0.010	0.18	19.800	0.041	0.79
JTVZWP		19.680	-0.070	-1.28	19.745	-0.014	-0.27
K66XEX		19.735	-0.015	-0.28	19.685	-0.074	-1.42
K8WZCY		19.755	0.005	0.09	19.775	0.016	0.31
KNKBY2		19.744	-0.007	-0.12	19.726	-0.033	-0.63
LHP6YH		19.700	-0.050	-0.92	19.800	0.041	0.79
LVFQWK		19.800	0.050	0.92	19.780	0.021	0.40
MT2GJD		19.855	0.105	1.93	19.850	0.091	1.74
MZ6CRD		19.735	-0.015	-0.28	19.795	0.036	0.69
N74ANV		19.805	0.055	1.01	19.800	0.041	0.79
N8ZHHD		19.680	-0.070	-1.28	19.705	-0.054	-1.03



Plastics Interlaboratory Testing Program

Report #98

Analysis 757

2nd Qtr 2016

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L35			Sample L36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NCXF9C		19.740	-0.010	-0.18	19.755	-0.004	-0.08
NLL9MU		19.790	0.040	0.73	19.795	0.036	0.69
PVNQVC		19.785	0.035	0.64	19.785	0.026	0.50
QKJJDA		19.800	0.049	0.91	19.754	-0.005	-0.09
RDH798		19.845	0.095	1.74	19.800	0.041	0.79
REQ2C4		19.725	-0.025	-0.46	19.755	-0.004	-0.08
RTA3B3		19.745	-0.005	-0.09	19.850	0.091	1.74
RWDXU7		19.755	0.005	0.09	19.695	-0.064	-1.22
TW82YZ		19.745	-0.005	-0.09	19.780	0.021	0.40
TWNXQZ	*	19.610	-0.141	-2.58	19.648	-0.111	-2.13
U2HEFY		19.774	0.024	0.45	19.770	0.011	0.21
U4KCP7		19.700	-0.050	-0.92	19.645	-0.114	-2.18
ULLYG6		19.698	-0.053	-0.96	19.651	-0.108	-2.08
VHECPK		19.755	0.005	0.09	19.835	0.076	1.46
WU2AE3		19.640	-0.110	-2.02	19.715	-0.044	-0.84
X9HWDL		19.775	0.025	0.46	19.720	-0.039	-0.75
XAFDGV		19.777	0.027	0.49	19.789	0.030	0.57
Y2KW7W		19.775	0.025	0.46	19.790	0.031	0.60
YHKYT3		19.796	0.046	0.85	19.723	-0.036	-0.69
ZA7ARA	X	19.760	0.010	0.18	19.450	-0.309	-5.92
ZGP6HW		19.635	-0.115	-2.11	19.665	-0.094	-1.80
ZUAKKW		19.721	-0.029	-0.54	19.761	0.002	0.03

Summary Statistics		
	Sample L35	Sample L36
Grand Means	19.7500 Percent	19.7589 Percent
Std Dev Btwn Labs	0.0545 Percent	0.0522 Percent
Statistics based on 53 of 57 reporting participants		

Sample L35: PP & Sample L36: PP

Comments on Assigned Data Flags for Test #757

- 2JATVP (X) - Data for sample L36 are low. Inconsistent within the determinations of sample L35.
- CJDFKK (X) - Data for both samples are low.
- CCVFE3 (X) - Data for both samples are low. Inconsistent within the determinations of both samples.
- ZA7ARA (X) - Data for sample L36 are low. Inconsistent within the determinations of sample L36.



Plastics Interlaboratory Testing Program

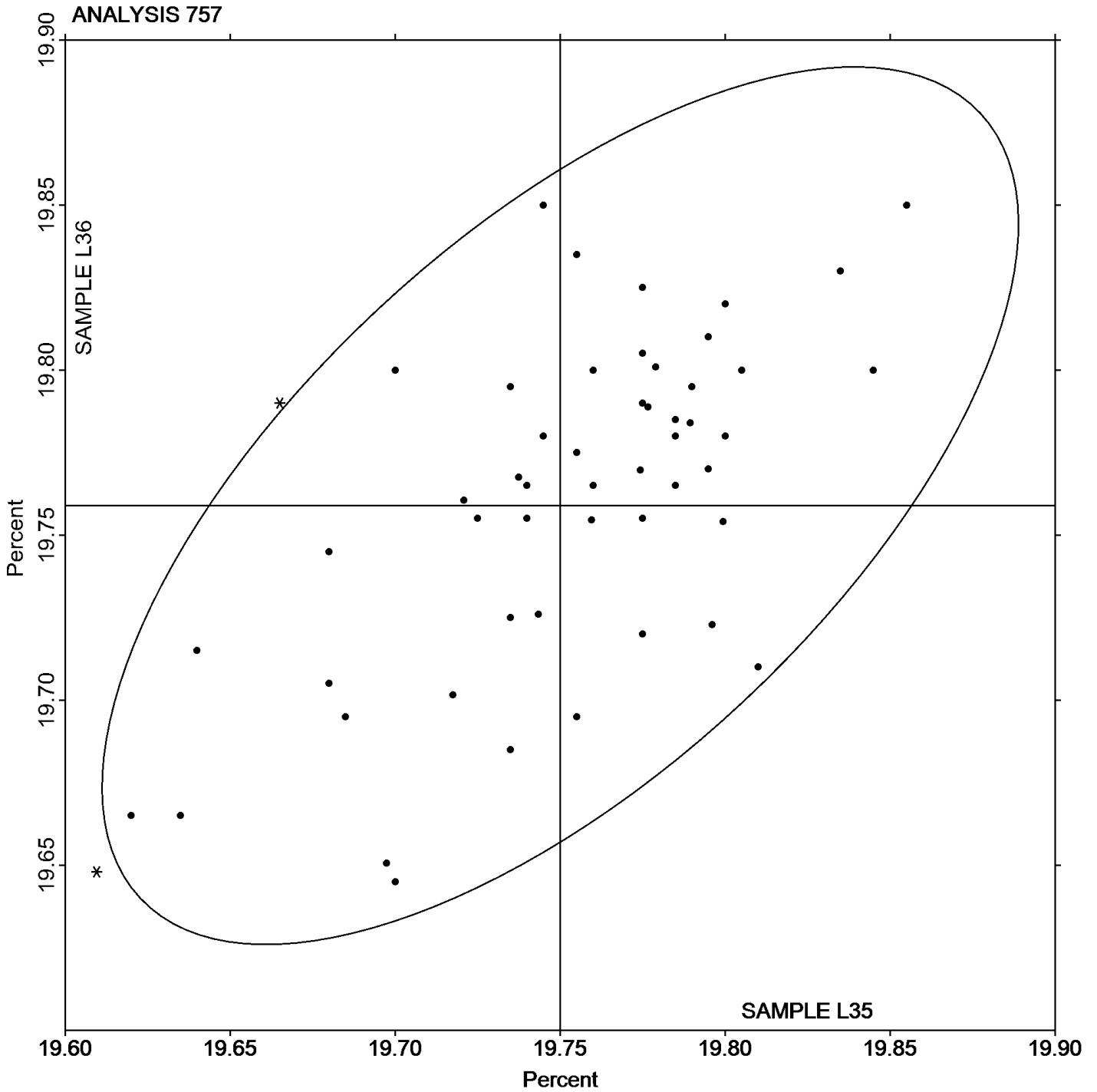
Analysis 757

Ash Content in Thermoplastics - Percent

Report #98

2nd Qtr 2016

Grand Mean Sample L35: 19.750 Percent Grand Mean Sample L36: 19.759 Percent





Plastics Interlaboratory Testing Program

Report #98

Analysis 760

2nd Qtr 2016

DSC Crystallization Temperature

WebCode	Data Flag	<u>Sample W35</u>			<u>Sample W36</u>			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
8TGFBJ		107.30667	-2.19833	-0.72	108.75000	-0.69333	-0.22	TA
98XVQM		110.11333	0.60833	0.20	109.97000	0.52667	0.17	TA
AH9JC7		107.80000	-1.70500	-0.55	107.56667	-1.87667	-0.59	PE
AVE6NN		109.03333	-0.47167	-0.15	109.40000	-0.04333	-0.01	TA
C4LJJP		108.40000	-1.10500	-0.36	109.20000	-0.24333	-0.08	TA
CDDFNK		106.30000	-3.20500	-1.04	105.86667	-3.57667	-1.12	TA
GJFWKD		113.57333	4.06833	1.32	113.68333	4.24000	1.33	TA
HXT3KY		105.19333	-4.31167	-1.40	106.49000	-2.95333	-0.93	MT
N6K78B		107.80000	-1.70500	-0.55	107.90000	-1.54333	-0.48	PE
P4VEJH		112.37000	2.86500	0.93	112.50333	3.06000	0.96	TA
QGYR38		109.40000	-0.10500	-0.03	107.76667	-1.67667	-0.53	MT
RJZP48		111.91333	2.40833	0.78	111.13000	1.68667	0.53	TA
ULLYG6		109.04667	-0.45833	-0.15	107.14000	-2.30333	-0.72	TA
WU2AE3		109.92000	0.41500	0.14	110.10333	0.66000	0.21	TA
XAFDGV		117.31333	7.80833	2.54	117.89667	8.45333	2.65	TA
Y6YJP4		106.59667	-2.90833	-0.95	105.72667	-3.71667	-1.17	TA

Summary Statistics

Sample W35

Sample W36

Grand Means

109.505000 Degrees Celsius

109.443333 Degrees Celsius

Stnd Dev Btwn Labs

3.073589 Degrees Celsius

3.185889 Degrees Celsius

Statistics based on 16 of 16 reporting participants

Sample W35: PP & Sample W36: PP

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

PE Perkins Elmer Instruments

TA TA Instruments



Plastics Interlaboratory Testing Program

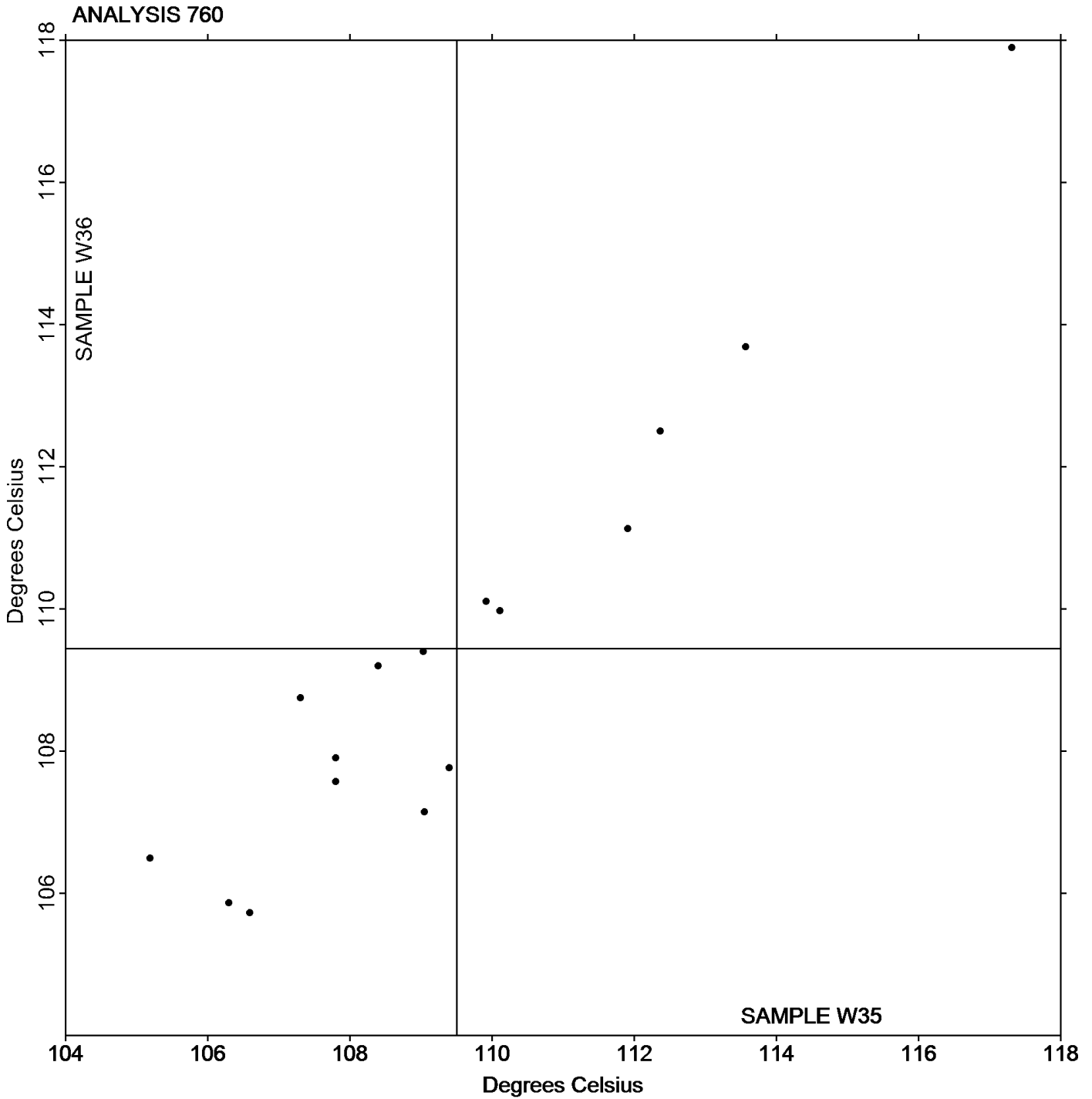
Report #98

Analysis 760

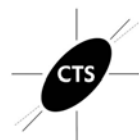
2nd Qtr 2016

DSC Crystallization Temperature

Grand Mean Sample W35: 109.51 Degrees Celsius Grand Mean Sample W36: 109.44 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 #98

Analysis 761

2nd Qtr 2016

DSC Melt Temperature

WebCode	Data Flag	<u>Sample W35</u>			<u>Sample W36</u>			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
8TGFBJ		156.52667	10.05593	-2.32	157.16000	-9.42296	-2.28	TA
98XVQM		175.74333	9.16074	2.11	175.08667	8.50370	2.05	TA
AH9JC7		164.93333	-1.64926	-0.38	165.20000	-1.38296	-0.33	PE
AVE6NN		158.13333	-8.44926	-1.95	158.23333	-8.34963	-2.02	TA
C4LJJP		167.63333	1.05074	0.24	166.50000	-0.08296	-0.02	TA
CDDFNK		169.53333	2.95074	0.68	169.50000	2.91704	0.70	TA
GJFWKD		165.49667	-1.08593	-0.25	165.79667	-0.78630	-0.19	TA
HXT3KY		171.99667	5.41407	1.25	170.22333	3.64037	0.88	MT
N6K78B		165.50000	-1.08259	-0.25	165.73333	-0.84963	-0.21	PE
P4VEJH		166.23667	-0.34593	-0.08	166.11333	-0.46963	-0.11	TA
QGYR38		167.23333	0.65074	0.15	168.60000	2.01704	0.49	MT
RDH798		167.43333	0.85074	0.20	167.50000	0.91704	0.22	TA
RJZP48		169.27000	2.68741	0.62	169.62333	3.04037	0.73	TA
U4J2PA		168.74333	2.16074	0.50	167.78667	1.20370	0.29	MT
ULLYG6		167.03000	0.44741	0.10	169.05667	2.47370	0.60	XX
WU2AE3		165.37333	-1.20926	-0.28	164.56333	-2.01963	-0.49	XX
XAFDGV		164.69000	-1.89259	-0.44	163.85333	-2.72963	-0.66	TA
Y6YJP4		166.98000	0.39741	0.09	167.96333	1.38037	0.33	TA

Summary Statistics

	<u>Sample W35</u>	<u>Sample W36</u>
Grand Means	166.582593 Degrees Celsius	166.582963 Degrees Celsius
Stnd Dev Btwn Labs	4.333083 Degrees Celsius	4.138909 Degrees Celsius
Statistics based on 18 of 18 reporting participants		

Sample W35: PP & Sample W36: PP

Key to Instrument Codes Reported by Participants

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

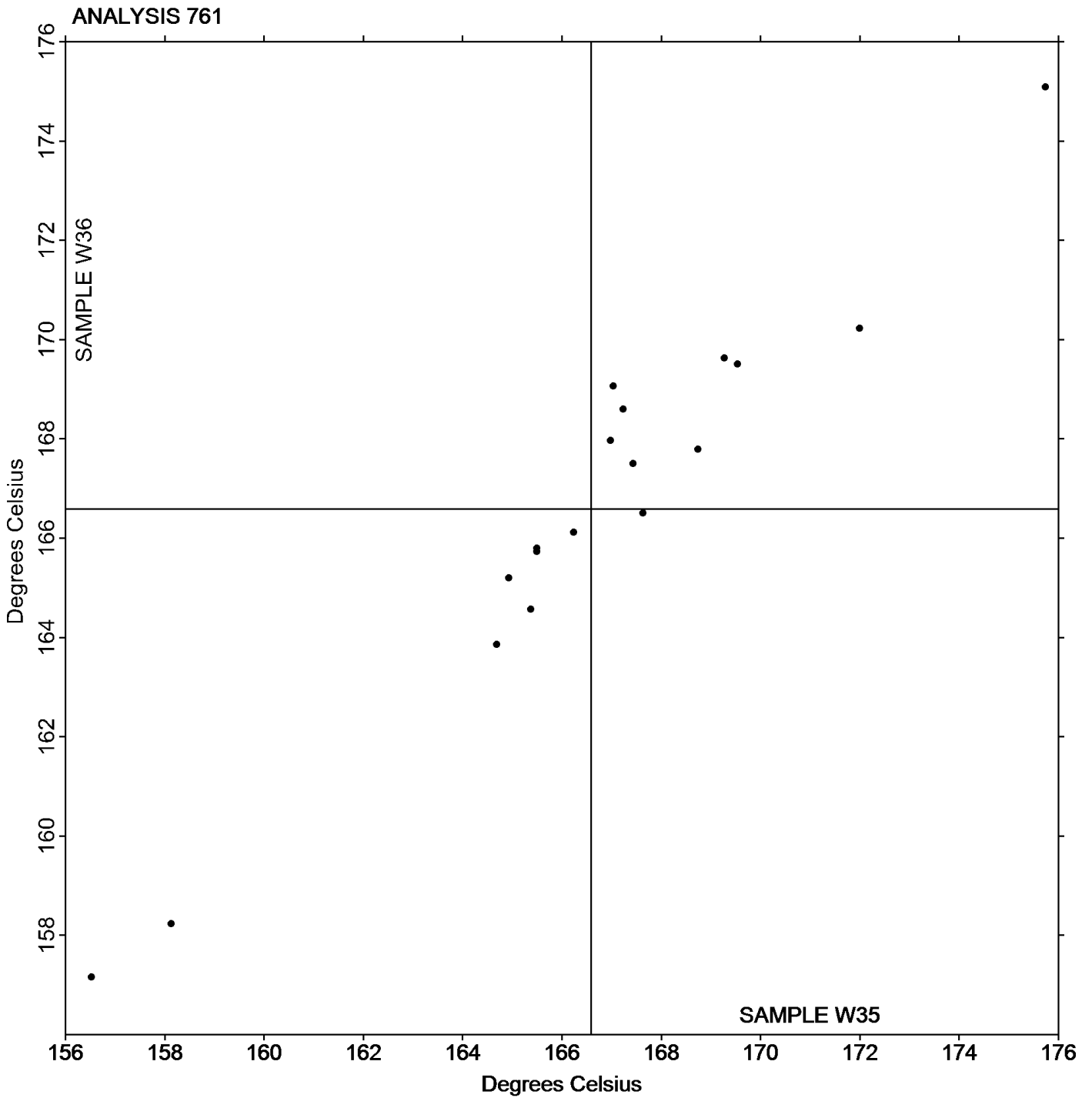


Plastics Interlaboratory Testing Program

Analysis 761
DSC Melt Temperature

Report #98
2nd Qtr 2016

Grand Mean Sample W35: 166.58 Degrees Celsius Grand Mean Sample W36: 166.58 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 #98

Analysis 762

2nd Qtr 2016

DSC Enthalpy of Crystallization

WebCode	Data Flag	Sample W35			Sample W36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
8TGFBJ		68.15000	-1.25861	-0.27	70.22667	-0.84889	-0.18	TA
98XVQM		73.78000	4.37139	0.93	72.66000	1.58444	0.33	TA
AH9JC7		69.07000	-0.33861	-0.07	69.21333	-1.86222	-0.39	PE
AVE6NN		65.10000	-4.30861	-0.92	69.90000	-1.17556	-0.24	TA
C4LJJP		73.06000	3.65139	0.78	75.04333	3.96778	0.83	TA
CDDFNK		69.01667	-0.39194	-0.08	69.29333	-1.78222	-0.37	TA
GJFWKD		71.97000	2.56139	0.55	72.88667	1.81111	0.38	TA
N6K78B		74.60667	5.19806	1.11	75.26000	4.18444	0.87	PE
P4VEJH		73.36000	3.95139	0.84	75.96667	4.89111	1.02	TA
QGYR38		62.41000	-6.99861	-1.49	73.52000	2.44444	0.51	MT
RJZP48		60.23000	-9.17861	-1.95	57.80333	-13.27222	-2.76	TA
XAFDGV	X	9.63667	-9.77194	-12.72	9.58067	-61.49489	-12.80	TA
Y6YJP4		72.15000	2.74139	0.58	71.13333	0.05778	0.01	TA

Summary Statistics

	Sample W35	Sample W36
Grand Means	69.408611 Joules Per Gram	71.075556 Joules Per Gram
Std Dev Btwn Labs	4.698112 Joules Per Gram	4.803821 Joules Per Gram

Statistics based on 12 of 13 reporting participants

Sample W35: PP & Sample W36: PP

Comments on Assigned Data Flags for Test #762

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

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

PE Perkins Elmer Instruments

TA TA Instruments



Plastics Interlaboratory Testing Program

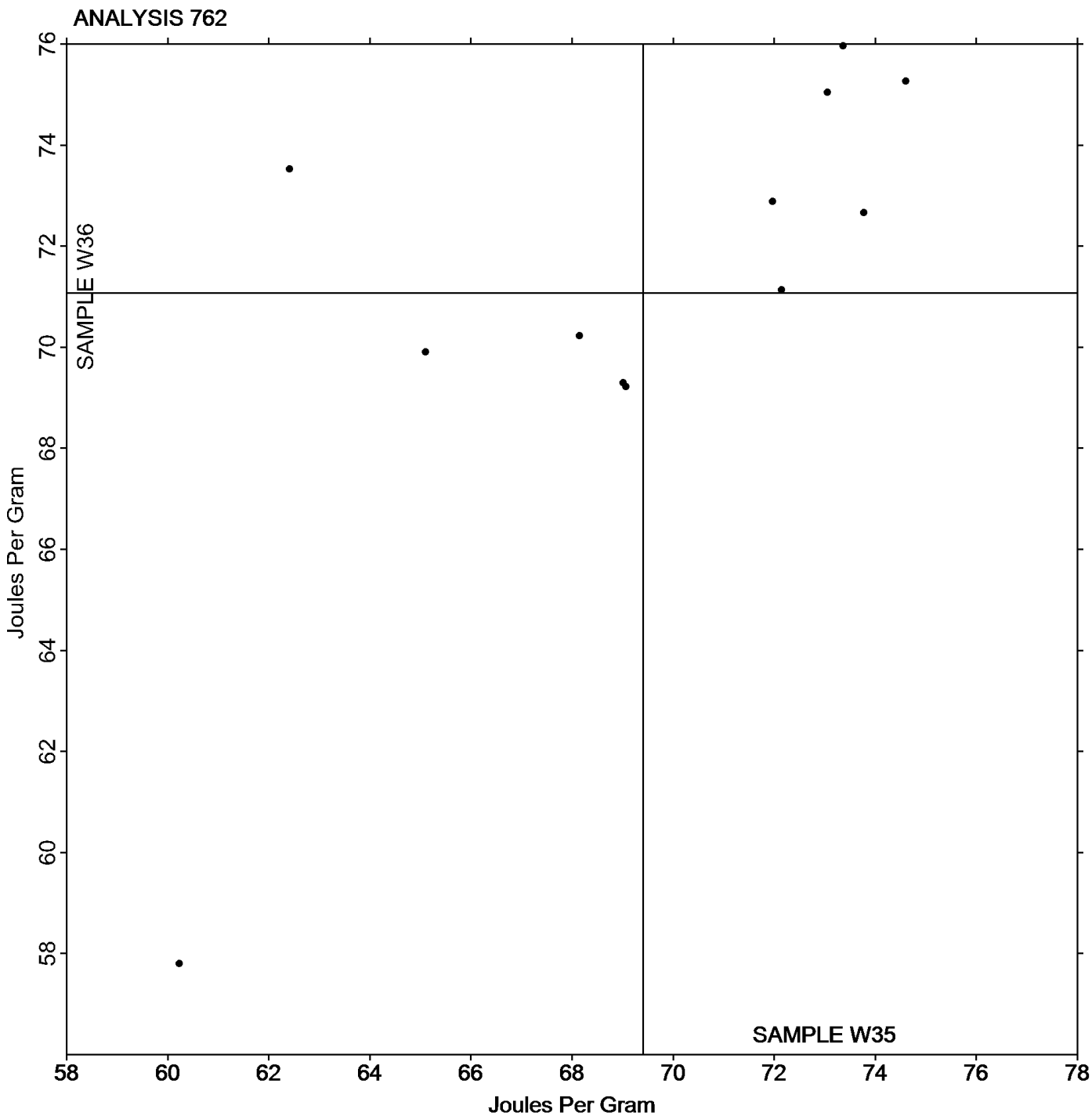
Analysis 762

DSC Enthalpy of Crystallization

Report #98

2nd Qtr 2016

Grand Mean Sample W35: 69.409 Joules Per Gram Grand Mean Sample W36: 71.076 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 #98

Analysis 763

2nd Qtr 2016

DSC Enthalpy of Fusion

WebCode	Data Flag	<u>Sample W35</u>			<u>Sample W36</u>			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
8TGFBJ		58.24333	-1.61077	-0.09	62.74667	0.73513	0.04	TA
98XVQM		51.37000	-8.48410	-0.50	50.40333	-11.60821	-0.64	TA
AH9JC7		59.79667	-0.05744	0.00	56.87333	-5.13821	-0.28	PE
AVE6NN		62.83333	2.97923	0.18	67.00000	4.98846	0.28	TA
C4LJJP		78.01000	18.15590	1.07	80.45667	18.44513	1.02	TA
CDDFNK		56.12333	-3.73077	-0.22	60.07667	-1.93487	-0.11	TA
GJFWKD		68.65667	8.80256	0.52	71.14333	9.13179	0.51	TA
N6K78B		77.01333	17.15923	1.01	78.09000	16.07846	0.89	PE
P4VEJH		73.67667	13.82256	0.81	76.23000	14.21846	0.79	TA
QGYR38		62.30000	2.44590	0.14	74.37667	12.36513	0.69	MT
RJZP48		53.45333	-6.40077	-0.38	54.20667	-7.80487	-0.43	TA
XAFDGV		10.95667	18.89744	-2.88	10.86333	-51.14821	-2.83	TA
Y6YJP4		65.67000	5.81590	0.34	63.68333	1.67179	0.09	TA

Summary Statistics

	<u>Sample W35</u>	<u>Sample W36</u>
Grand Means	59.854103 Joules Per Gram	62.011538 Joules Per Gram
Std Dev Btwn Labs	16.984632 Joules Per Gram	18.044761 Joules Per Gram

Statistics based on 13 of 13 reporting participants

Sample W35: PP & Sample W36: PP

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

PE Perkins Elmer Instruments

TA TA Instruments

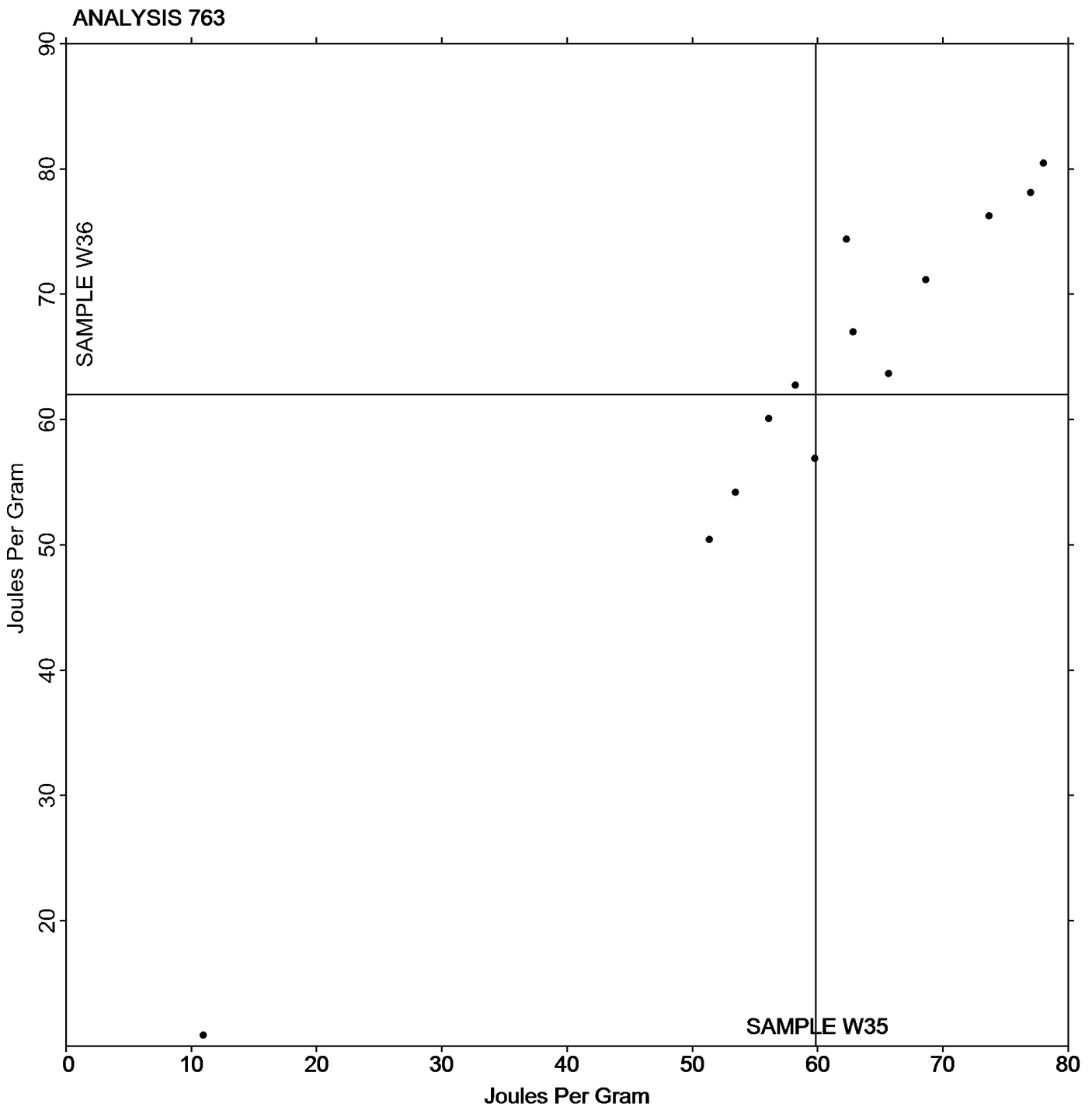


Plastics Interlaboratory Testing Program

Analysis 763 DSC Enthalpy of Fusion

Report #98
2nd Qtr 2016

Grand Mean Sample W35: 59.854 Joules Per Gram Grand Mean Sample W36: 62.012 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 #98

Analysis 764

2nd Qtr 2016

DSC Glass Transition Temperature

WebCode	Data Flag	<u>Sample V35</u>			<u>Sample V36</u>			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
8TGFBJ		87.59333	0.61359	0.41	87.64333	0.64769	0.45	TA
98XVQM		83.98667	-2.99308	-2.00	84.56000	-2.43564	-1.70	TA
AH9JC7		86.96667	-0.01308	-0.01	87.26667	0.27103	0.19	XX
AVE6NN		87.50000	0.52026	0.35	88.10000	1.10436	0.77	TA
C4LJJP		85.46667	-1.51308	-1.01	85.13333	-1.86231	-1.30	TA
CDDFNK		88.30000	1.32026	0.88	87.76667	0.77103	0.54	TA
GJFWKD		86.61000	-0.36974	-0.25	86.65333	-0.34231	-0.24	TA
HXT3KY		86.92000	-0.05974	-0.04	86.81000	-0.18564	-0.13	MT
N6K78B		87.30000	0.32026	0.21	87.63333	0.63769	0.45	PE
P4VEJH		86.43333	-0.54641	-0.37	85.97667	-1.01897	-0.71	TA
QGYR38		85.56667	-1.41308	-0.95	85.53333	-1.46231	-1.02	MT
RJZP48		90.06000	3.08026	2.06	89.81000	2.81436	1.97	TA
Y6YJP4		88.03333	1.05359	0.71	88.05667	1.06103	0.74	TA

Summary Statistics

	<u>Sample V35</u>	<u>Sample V36</u>
Grand Means	86.979744 Degrees Celsius	86.995641 Degrees Celsius
Std Dev Btwn Labs	1.493724 Degrees Celsius	1.428546 Degrees Celsius
Statistics based on 13 of 13 reporting participants		

Sample V35: PET & Sample V36: PET

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

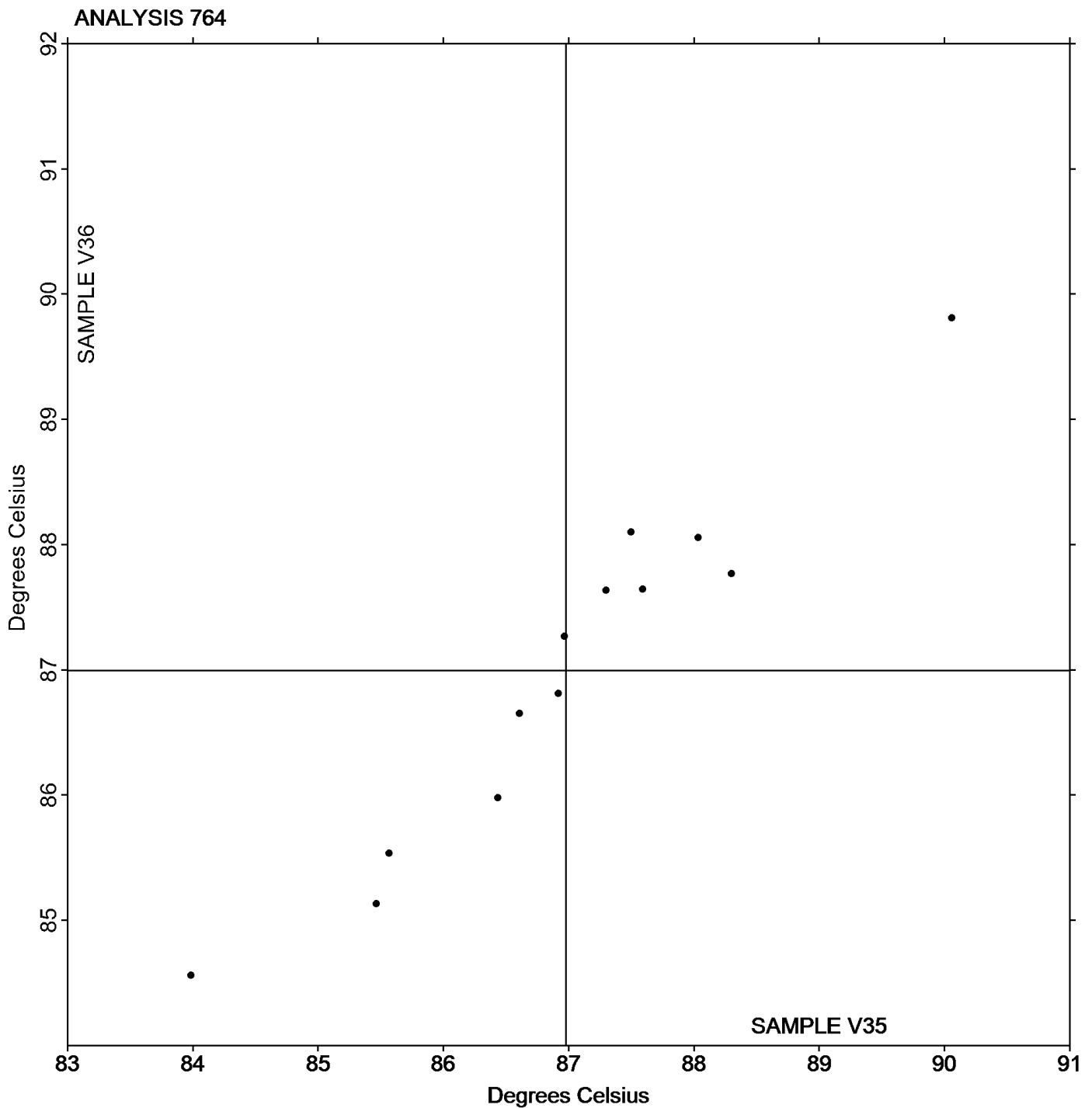
Analysis 764

DSC Glass Transition Temperature

Report #98

2nd Qtr 2016

Grand Mean Sample V35: 86.980 Degrees Celsius Grand Mean Sample V36: 86.996 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 #98

Analysis 770

2nd Qtr 2016

Tensile Stress at Yield, Film Samples - psi

WebCode	Data Flag	Sample B35			Sample B36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZJJXU		2,773	225	0.33	2,807	270	0.39	IN
39NZR8		3,431	883	1.28	3,390	853	1.24	IN
4WXEEP		1,615	-933	-1.35	1,594	-943	-1.37	IN
8Q8PT3		1,809	-739	-1.07	1,737	-800	-1.16	WZ
8U7ZN2		3,137	589	0.85	3,052	515	0.75	XX
B4999K		2,670	122	0.18	2,762	224	0.33	IN
DAHZ9L		2,985	438	0.63	2,925	388	0.56	TH
F46WBH		1,933	-614	-0.89	1,945	-592	-0.86	IN
G7T744		1,661	-887	-1.29	1,601	-936	-1.36	IN
GHLJA2		1,829	-718	-1.04	1,831	-706	-1.03	MT
GXF98J		2,949	401	0.58	3,047	510	0.74	SH
JJAWNP		2,807	259	0.38	2,713	176	0.26	XX
KXKYMP		3,501	953	1.38	3,473	936	1.36	IN
PK24BA		1,643	-905	-1.31	1,689	-849	-1.23	MT
Q26UQJ		3,380	833	1.21	3,352	815	1.18	IN
VHECPK		2,642	94	0.14	2,676	139	0.20	IN

Summary Statistics		Sample B35	Sample B36
Grand Means		2,547.8 psi	2,537.1 psi
Stnd Dev Btwn Labs		689.8 psi	687.6 psi
Statistics based on 16 of 16 reporting participants			

Sample B35: LDPE & Sample B36: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

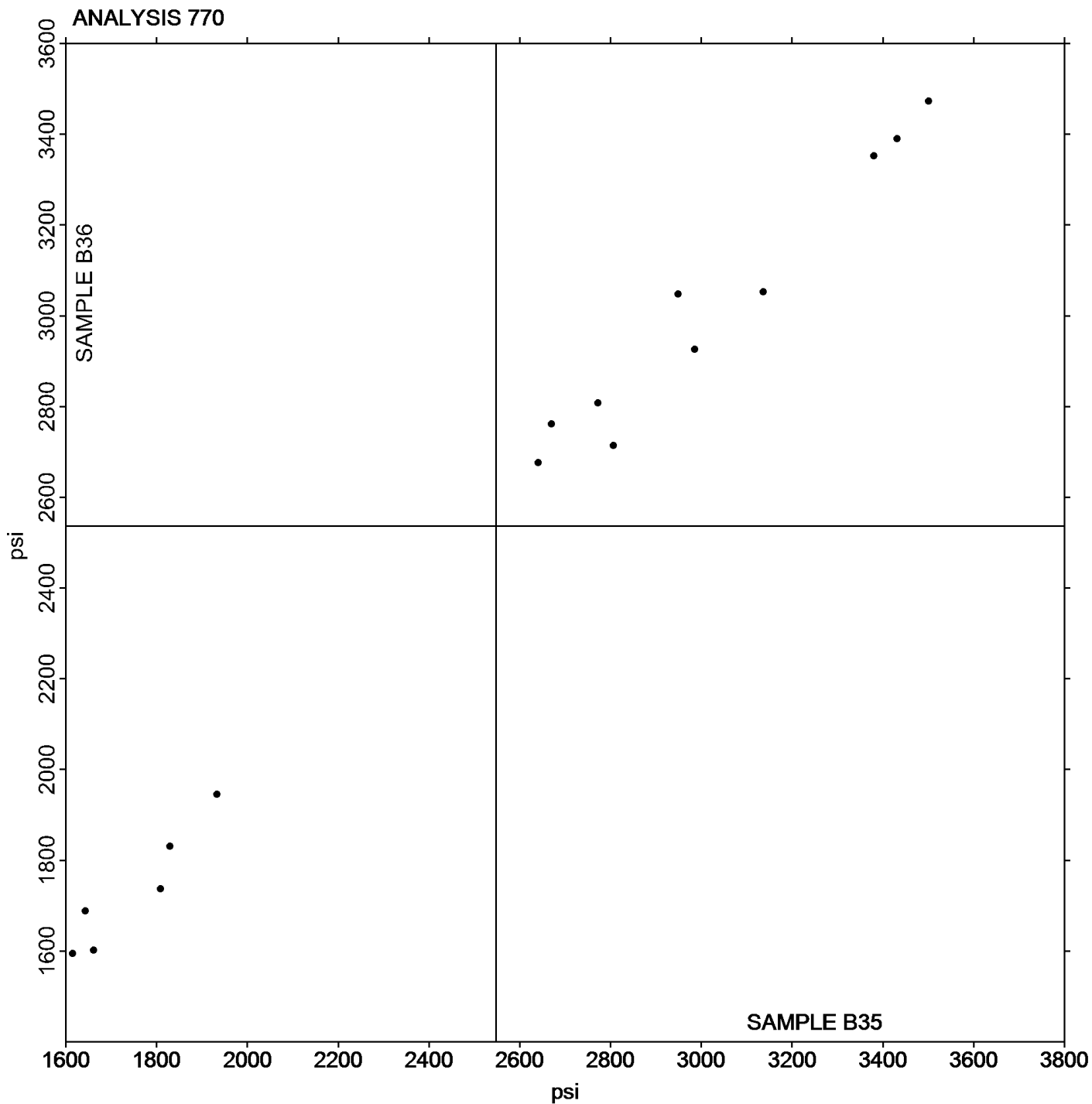
Report #98

Analysis 770

2nd Qtr 2016

Tensile Stress at Yield, Film Samples - psi

Grand Mean Sample B35: 2,547.85 psi Grand Mean Sample B36: 2,537.11 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 #98

Analysis 771

2nd Qtr 2016

Tensile Stress at Break, Film Samples - psi

WebCode	Data Flag	Sample B35			Sample B36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZJJXU		3,215	-92	-0.51	3,330	24	0.13	IN
39NZR8		3,431	123	0.68	3,390	84	0.45	IN
4WXEEP		2,984	-324	-1.79	3,033	-273	-1.47	IN
8Q8PT3		3,084	-224	-1.24	3,221	-85	-0.45	WZ
8U7ZN2		3,128	-180	-0.99	2,977	-329	-1.77	XX
B4999K		3,319	12	0.06	3,446	140	0.75	IN
DAHZ9L		3,565	257	1.42	3,351	45	0.24	TH
F46WBH		3,187	-121	-0.67	3,263	-43	-0.23	IN
G7T744		3,220	-88	-0.49	3,206	-100	-0.54	IN
GHLJA2		3,465	157	0.87	3,519	213	1.14	MT
GXF98J		3,619	311	1.72	3,681	375	2.01	SH
JJAWNP		3,319	11	0.06	3,249	-57	-0.31	XX
KXKYMP		3,501	193	1.06	3,473	167	0.90	IN
Q26UQJ		3,380	73	0.40	3,352	46	0.25	IN
VHECPK		3,361	53	0.29	3,361	55	0.29	IN
WRWBW2		3,148	-159	-0.88	3,045	-261	-1.40	XX

Summary Statistics

	Sample B35	Sample B36
Grand Means	3,307.8 psi	3,306.0 psi
Stnd Dev Btwn Labs	181.2 psi	186.5 psi
Statistics based on 16 of 16 reporting participants		

Sample B35: LDPE & Sample B36: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

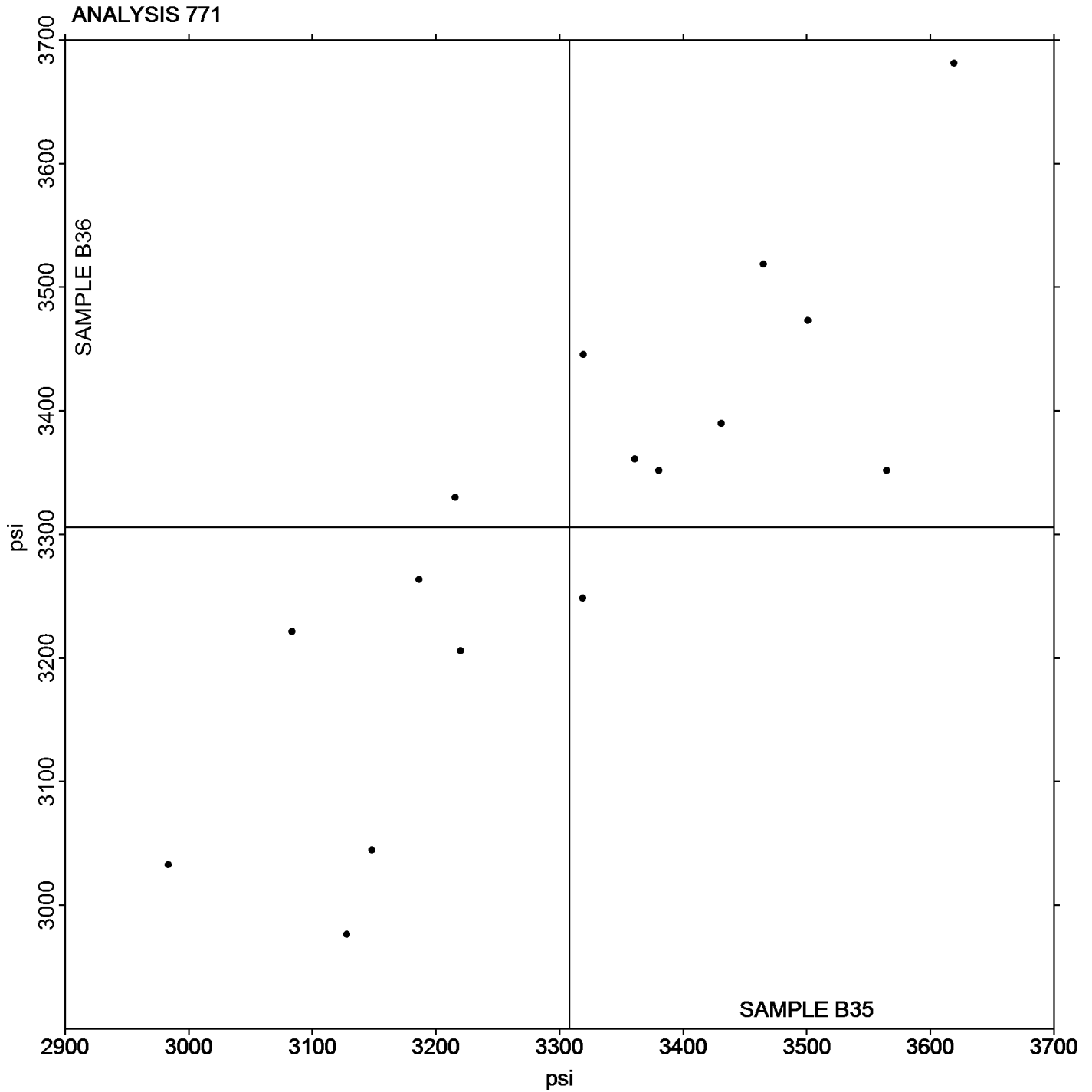
Report #98

Analysis 771

2nd Qtr 2016

Tensile Stress at Break, Film Samples - psi

Grand Mean Sample B35: 3,307.84 psi Grand Mean Sample B36: 3,305.95 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 #98

Analysis 772

2nd Qtr 2016

Percent Elongation at Yield, Films

WebCode	Data Flag	Sample B35			Sample B36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZJJXU		100.16	-37.52	-0.29	101.59	-32.94	-0.26	IN
39NZR8		326.78	189.10	1.48	316.70	182.17	1.46	IN
4WXEEP		12.93	-124.75	-0.97	12.28	-122.25	-0.98	IN
8Q8PT3		11.20	-126.48	-0.99	11.70	-122.83	-0.99	WZ
8U7ZN2	*	293.60	155.92	1.22	243.40	108.87	0.87	XX
B4999K		115.30	-22.38	-0.17	116.91	-17.62	-0.14	IN
F46WBH		42.00	-95.68	-0.75	42.11	-92.42	-0.74	IN
G7T744		7.34	-130.34	-1.02	7.19	-127.34	-1.02	IN
GHLJA2		9.64	-128.04	-1.00	9.82	-124.71	-1.00	MT
GXF98J		109.24	-28.44	-0.22	104.56	-29.97	-0.24	SH
JJAWNP		132.28	-5.40	-0.04	141.87	7.34	0.06	XX
KXKYMP		349.75	212.07	1.65	362.44	227.91	1.83	IN
Q26UQJ		312.66	174.98	1.37	309.65	175.12	1.41	IN
VHECPK		104.64	-33.04	-0.26	103.21	-31.32	-0.25	IN

Summary Statistics		
	Sample B35	Sample B36
Grand Means	137.680 Percent	134.531 Percent
Stnd Dev Btwn Labs	128.181 Percent	124.444 Percent
Statistics based on 14 of 14 reporting participants		

Sample B35: LDPE & Sample B36: LDPE

Note: Results for test 772 exhibit higher variability than historical averages. Participant's should 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

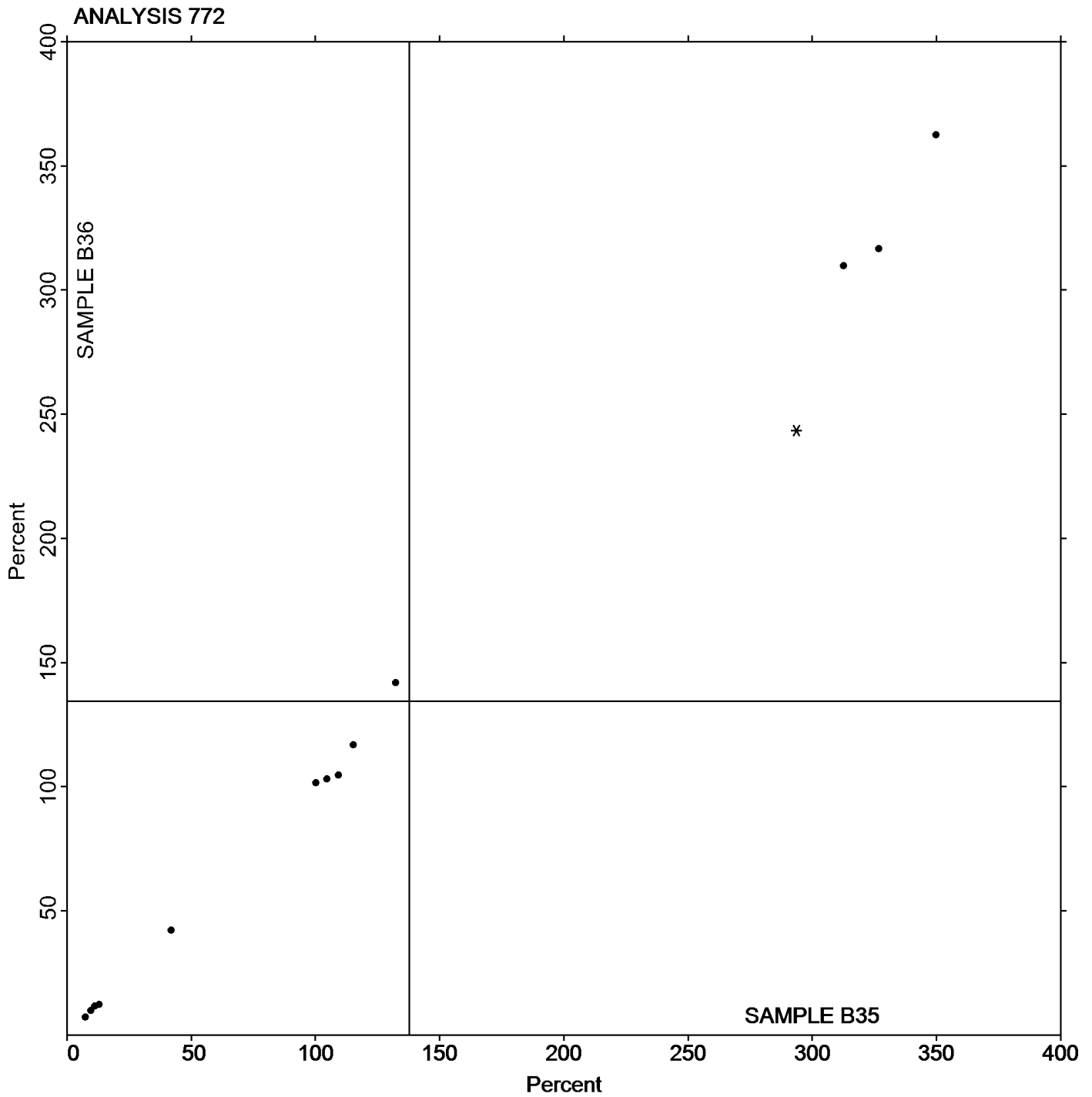
Analysis 772

Percent Elongation at Yield, Films

Report #98

2nd Qtr 2016

Grand Mean Sample B35: 137.68 Percent Grand Mean Sample B36: 134.53 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 #98

Analysis 773

2nd Qtr 2016

Percent Elongation at Break, Film Samples

WebCode	Data Flag	Sample B35			Sample B36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZJJXU		286.1	-68.8	-0.85	292.6	-56.2	-0.82	IN
39NZR8		326.8	-28.1	-0.35	316.7	-32.1	-0.47	IN
4WXEEP		374.4	19.5	0.24	383.2	34.4	0.50	IN
8Q8PT3		248.0	-106.9	-1.33	292.0	-56.8	-0.82	WZ
8U7ZN2		299.9	-55.0	-0.68	253.2	-95.6	-1.39	XX
B4999K		449.3	94.4	1.17	441.8	93.0	1.35	IN
DAHZ9L		298.1	-56.8	-0.71	281.4	-67.4	-0.98	TH
F46WBH		422.4	67.5	0.84	442.9	94.1	1.37	IN
G7T744		278.3	-76.6	-0.95	272.6	-76.2	-1.11	IN
GHLJA2		298.3	-56.6	-0.70	295.4	-53.4	-0.78	MT
GXF98J		387.1	32.2	0.40	365.9	17.1	0.25	SH
JJAWNP		362.2	7.3	0.09	395.8	47.0	0.68	XX
KXKYMP		349.8	-5.1	-0.06	362.4	13.6	0.20	IN
Q26UQJ		312.7	-42.2	-0.52	309.7	-39.2	-0.57	IN
VHECPK	*	564.2	209.3	2.60	475.1	126.3	1.83	IN
WRWBW2		420.6	65.8	0.82	400.2	51.4	0.75	XX

Summary Statistics

	Sample B35	Sample B36
Grand Means	354.88 Percent	348.80 Percent
Stnd Dev Btwn Labs	80.48 Percent	68.93 Percent
Statistics based on 16 of 16 reporting participants		

Sample B35: LDPE & Sample B36: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

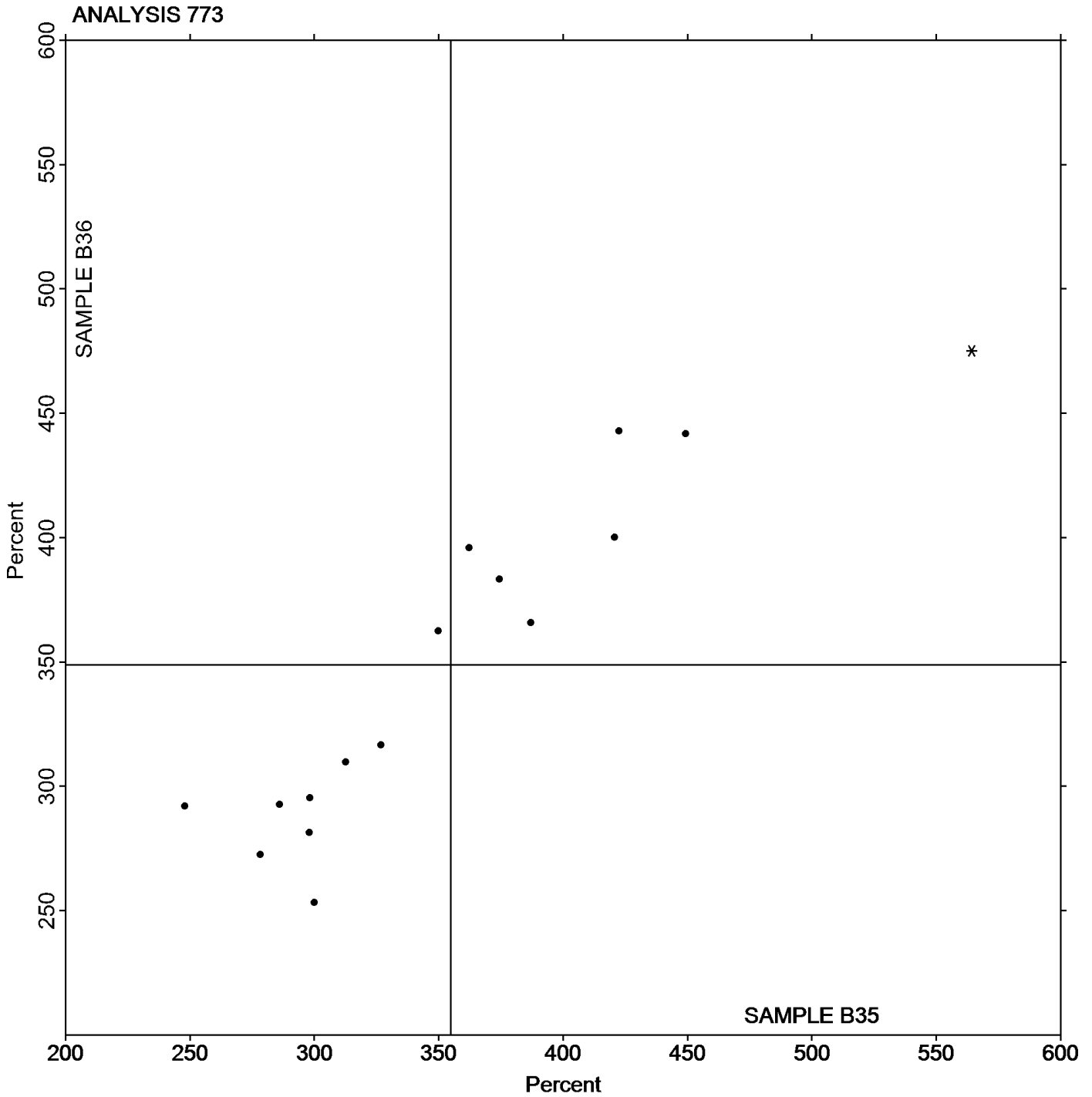
Report #98

Analysis 773

2nd Qtr 2016

Percent Elongation at Break, Film Samples

Grand Mean Sample B35: 354.88 Percent Grand Mean Sample B36: 348.80 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 #98

Analysis 774

2nd Qtr 2016

Thickness of Film Tensile Samples - mils

WebCode	Data Flag	<u>Sample B35</u>			<u>Sample B36</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2ZJJXU		2.6900	0.0550	0.59	2.6160	-0.0113	-0.14
39NZR8		2.6320	-0.0030	-0.03	2.5980	-0.0293	-0.37
4WXEEP		2.7500	0.1150	1.23	2.7000	0.0727	0.92
8Q8PT3		2.6772	0.0422	0.45	2.5748	-0.0525	-0.67
8U7ZN2		2.5552	-0.0798	-0.86	2.5945	-0.0328	-0.42
B4999K		2.7100	0.0750	0.80	2.6700	0.0427	0.54
DAHZ9L		2.5300	-0.1050	-1.13	2.5540	-0.0733	-0.93
F46WBH		2.7560	0.1210	1.30	2.7363	0.1089	1.38
G7T744		2.6300	-0.0050	-0.05	2.6221	-0.0052	-0.07
GHLJA2		2.6700	0.0350	0.38	2.6400	0.0127	0.16
GXF98J	*	2.3504	-0.2845	-3.05	2.3819	-0.2454	-3.12
JJAWNP		2.6660	0.0310	0.33	2.7210	0.0937	1.19
KXKYMP		2.6130	-0.0220	-0.24	2.6440	0.0167	0.21
MZATQC		2.6500	0.0150	0.16	2.6500	0.0227	0.29
PUT8UB		2.5710	-0.0640	-0.69	2.5940	-0.0333	-0.42
Q26UQJ		2.6210	-0.0140	-0.15	2.6550	0.0277	0.35
VHECPK		2.6730	0.0380	0.41	2.6870	0.0597	0.76
WRWBW2		2.6850	0.0501	0.54	2.6535	0.0262	0.33

Summary Statistics		
	<u>Sample B35</u>	<u>Sample B36</u>
Grand Means	2.63499 mils	2.62734 mils
Stnd Dev Btwn Labs	0.09325 mils	0.07869 mils
Statistics based on 18 of 18 reporting participants		

Sample B35: LDPE & Sample B36: LDPE



Plastics Interlaboratory Testing Program

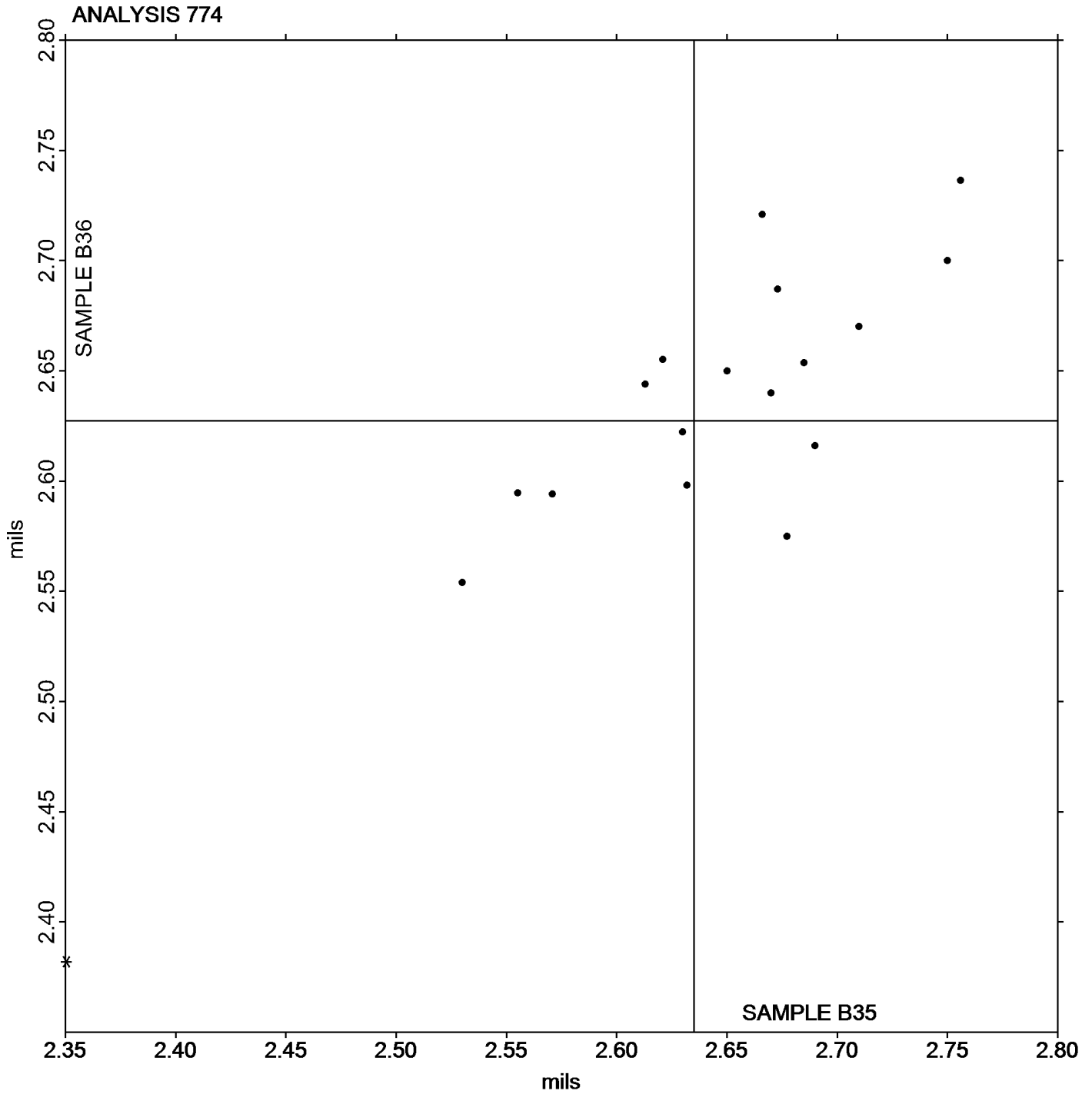
Report #98

Analysis 774

2nd Qtr 2016

Thickness of Film Tensile Samples - mils

Grand Mean Sample B35: 2.6350 mils Grand Mean Sample B36: 2.6273 mils



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



Plastics Interlaboratory Testing Program

Report #98

Analysis 775

2nd Qtr 2016

Secant Modulus at 1% Strain - psi

WebCode	Data Flag	Sample B35			Sample B36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZJJXU		33,972	-3	0.00	33,401	-172	-0.03	IN
39NZR8		36,713	2,737	0.40	36,360	2,787	0.41	IN
4WXEEP		20,865	-13,111	-1.93	20,957	-12,616	-1.87	IN
8Q8PT3		35,375	1,399	0.21	35,186	1,613	0.24	WZ
8U7ZN2		29,856	-4,120	-0.61	30,407	-3,166	-0.47	XX
B4999K		32,455	-1,521	-0.22	33,458	-115	-0.02	IN
DAHZ9L		35,774	1,798	0.26	36,553	2,979	0.44	TH
F46WBH		29,623	-4,353	-0.64	29,515	-4,058	-0.60	IN
GHLJA2		35,637	1,661	0.24	34,684	1,110	0.16	MT
GXF98J		53,230	19,255	2.83	52,745	19,172	2.84	SH
JJAWNP		33,520	-456	-0.07	32,812	-761	-0.11	XX
KXKYMP		31,971	-2,005	-0.29	29,918	-3,655	-0.54	IN
Q26UQJ		33,582	-394	-0.06	32,503	-1,070	-0.16	IN
VHECPK		33,091	-885	-0.13	31,525	-2,048	-0.30	IN

Summary Statistics

	Sample B35	Sample B36
Grand Means	33,975.9 psi	33,573.2 psi
Stnd Dev Btwn Labs	6,802.0 psi	6,754.0 psi

Statistics based on 14 of 14 reporting participants

Sample B35: LDPE & Sample B36: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

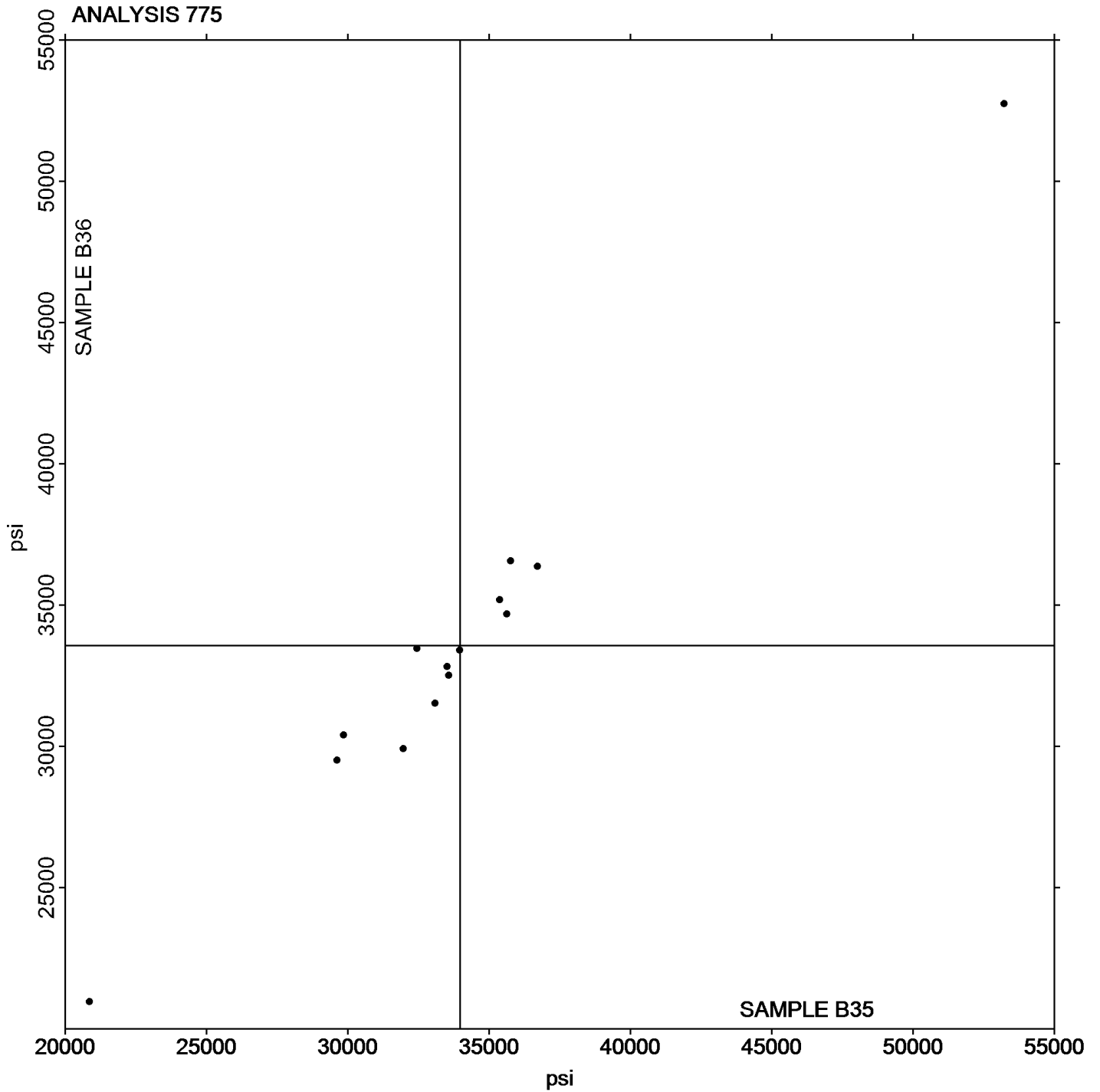
Report #98

Analysis 775

2nd Qtr 2016

Secant Modulus at 1% Strain - psi

Grand Mean Sample B35: 33,975.89 psi Grand Mean Sample B36: 33,573.19 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 #98

Analysis 776

2nd Qtr 2016

Secant Modulus at 2% Strain - psi

WebCode	Data Flag	Sample B35			Sample B36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
39NZR8		31,126	1,978	0.50	30,924	2,188	0.53	IN
4WXEEP		22,837	-6,311	-1.58	22,503	-6,233	-1.51	IN
8Q8PT3		29,544	396	0.10	29,327	591	0.14	IN
8U7ZN2		21,532	-7,616	-1.91	20,646	-8,090	-1.96	XX
B4999K		28,320	-828	-0.21	29,067	332	0.08	IN
DAHZ9L		30,961	1,813	0.46	31,745	3,009	0.73	TH
F46WBH		29,238	90	0.02	28,983	247	0.06	IN
GHLJA2		30,919	1,770	0.44	30,420	1,684	0.41	MT
GXF98J		38,160	9,012	2.26	37,732	8,996	2.18	SH
JJAWNP		28,735	-413	-0.10	28,150	-586	-0.14	XX
KXKYMP		29,159	11	0.00	27,970	-766	-0.19	IN
Q26UQJ		29,373	224	0.06	28,638	-98	-0.02	IN
VHECPK		29,022	-127	-0.03	27,462	-1,274	-0.31	IN

Summary Statistics

	Sample B35	Sample B36
Grand Means	29,148.2 psi	28,735.8 psi
Stnd Dev Btwn Labs	3,984.0 psi	4,133.1 psi

Statistics based on 13 of 13 reporting participants

Sample B35: LDPE & Sample B36: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

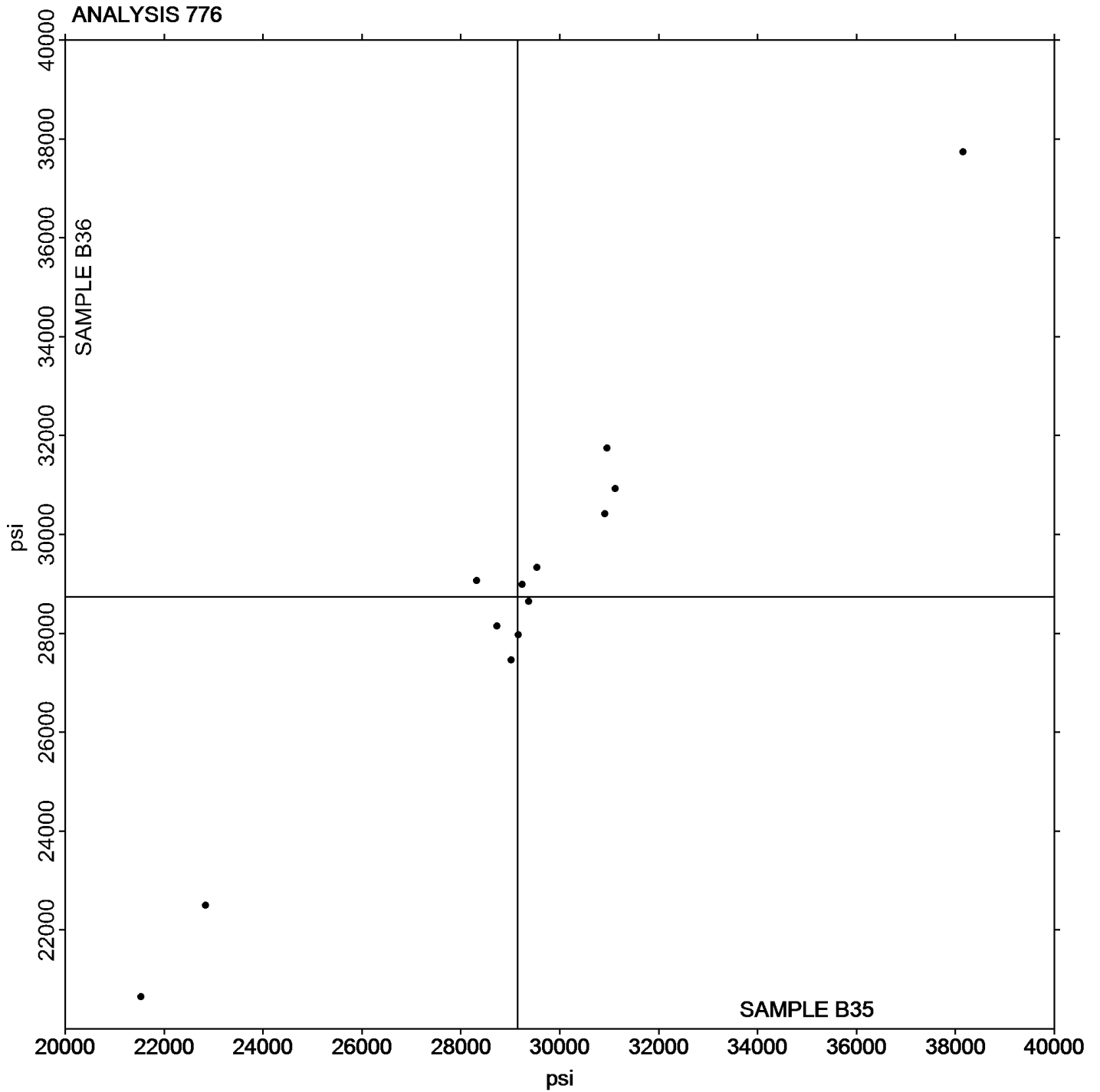
Report #98

Analysis 776

2nd Qtr 2016

Secant Modulus at 2% Strain - psi

Grand Mean Sample B35: 29,148.21 psi Grand Mean Sample B36: 28,735.78 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 #98

Analysis 780

2nd Qtr 2016

Coefficient of Static Friction

WebCode	Data Flag	Sample P35			Sample P36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZJJXU		0.1082	-0.0367	-0.74	0.1098	-0.0417	-0.86	TH
39NZR8		0.1300	-0.0149	-0.30	0.1440	-0.0075	-0.15	TM
4WXEEP		0.1562	0.0113	0.23	0.1678	0.0163	0.33	TN
6VQX4W		0.1218	-0.0231	-0.47	0.1280	-0.0235	-0.48	IS
8Q8PT3		0.0640	-0.0809	-1.64	0.0840	-0.0675	-1.39	XX
8U7ZN2		0.1332	-0.0117	-0.24	0.1370	-0.0145	-0.30	RD
B4999K		0.2102	0.0653	1.32	0.2118	0.0603	1.24	IS
DAHZ9L		0.2526	0.1077	2.18	0.2618	0.1103	2.27	TH
GHLJA2		0.1598	0.0149	0.30	0.1632	0.0117	0.24	MI
GXF98J		0.0809	-0.0640	-1.30	0.0859	-0.0656	-1.35	SA
LHP6YH		0.1180	-0.0269	-0.55	0.1380	-0.0135	-0.28	KA
P6UKZC		0.1824	0.0375	0.76	0.1784	0.0269	0.55	XX
QF84WD		0.1468	0.0019	0.04	0.1230	-0.0285	-0.59	TN
VHECPK		0.1648	0.0199	0.40	0.1886	0.0371	0.76	TH

Summary Statistics

	Sample P35	Sample P36
Grand Means	0.14493 COF	0.15152 COF
Stnd Dev Btwn Labs	0.04932 COF	0.04861 COF

Statistics based on 14 of 14 reporting participants

Sample P35: LDPE & Sample P36: LDPE

Key to Instrument Codes Reported by Participants

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
TM	TMI Slip and Friction Tester	TN	TMI #32-06
XX	Instrument make/model not specified by lab		



Plastics Interlaboratory Testing Program

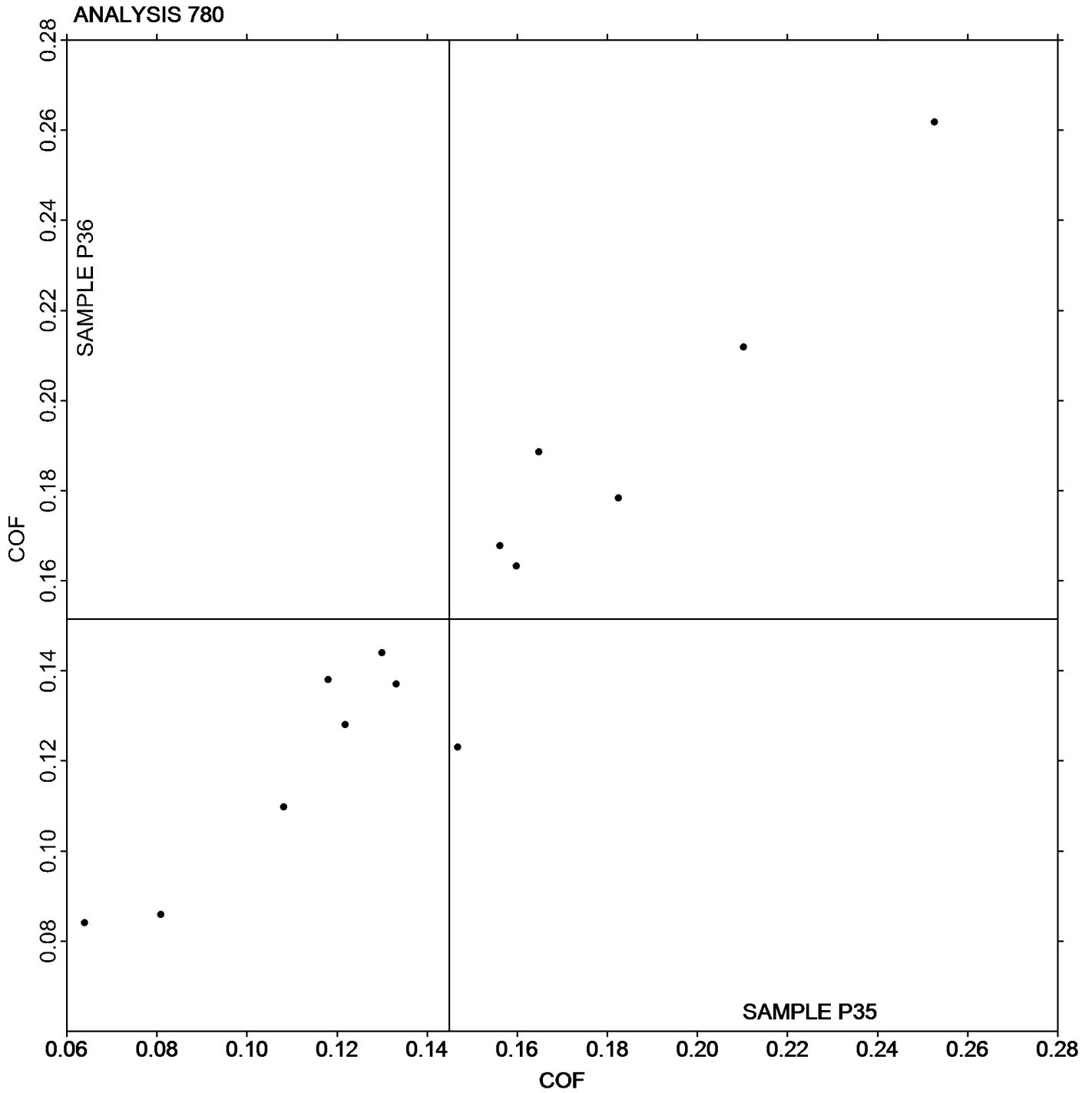
Analysis 780

Coefficient of Static Friction

Report #98

2nd Qtr 2016

Grand Mean Sample P35: 0.14493 COF Grand Mean Sample P36: 0.15152 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 #98

Analysis 781

2nd Qtr 2016

Coefficient of Kinetic Friction

WebCode	Data Flag	Sample P35			Sample P36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZJJXU		0.1042	-0.0111	-0.22	0.1062	-0.0174	-0.35	TH
39NZR8		0.1060	-0.0093	-0.19	0.1220	-0.0016	-0.03	TM
4WXEEP		0.1158	0.0005	0.01	0.1240	0.0004	0.01	TN
6VQX4W		0.1180	0.0027	0.05	0.1202	-0.0034	-0.07	IS
8Q8PT3		0.0280	-0.0873	-1.77	0.0380	-0.0856	-1.71	XX
8U7ZN2		0.1296	0.0143	0.29	0.1314	0.0078	0.16	RD
B4999K		0.2288	0.1135	2.30	0.2084	0.0848	1.70	IS
DAHZ9L	*	0.1236	0.0083	0.17	0.1996	0.0760	1.52	TH
GHLJA2		0.1112	-0.0041	-0.08	0.1098	-0.0138	-0.28	MI
GXF98J		0.0254	-0.0899	-1.82	0.0333	-0.0903	-1.81	SA
LHP6YH		0.1500	0.0347	0.70	0.1720	0.0484	0.97	KA
P6UKZC		0.1513	0.0360	0.73	0.1474	0.0238	0.48	XX
QF84WD		0.1192	0.0039	0.08	0.1036	-0.0200	-0.40	TN
VHECPK		0.1032	-0.0121	-0.25	0.1142	-0.0094	-0.19	TH

Summary Statistics

	Sample P35	Sample P36
Grand Means	0.11531 COF	0.12357 COF
Stnd Dev Btwn Labs	0.04942 COF	0.04994 COF

Statistics based on 14 of 14 reporting participants

Sample P35: LDPE & Sample P36: LDPE

Key to Instrument Codes Reported by Participants

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
TM	TMI Slip and Friction Tester	TN	TMI #32-06
XX	Instrument make/model not specified by lab		



Plastics Interlaboratory Testing Program

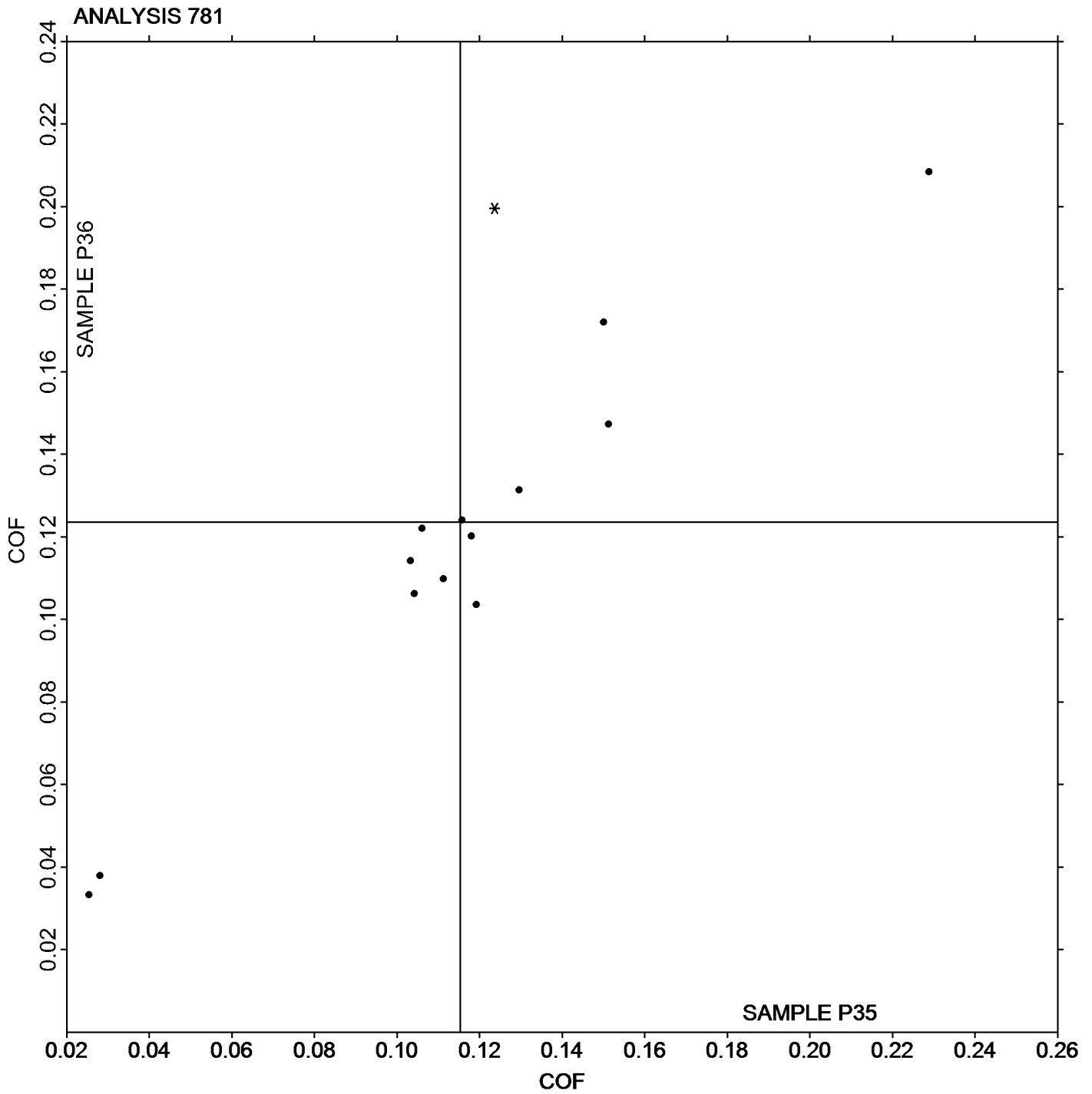
Analysis 781

Coefficient of Kinetic Friction

Report #98

2nd Qtr 2016

Grand Mean Sample P35: 0.11531 COF Grand Mean Sample P36: 0.12357 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 #98

Analysis 782

2nd Qtr 2016

Tear Resistance of Films

WebCode	Data Flag	Sample Q35			Sample Q36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZJJXU		646.6	-174.3	-1.35	773.3	-91.2	-0.72	TE
39NZR8		776.3	-44.6	-0.34	880.3	15.9	0.13	TE
4WXEEP		1,110.2	289.3	2.23	1,100.2	235.7	1.87	TM
8Q8PT3		820.6	-0.3	0.00	967.6	103.1	0.82	TA
B4999K		741.7	-79.2	-0.61	790.7	-73.8	-0.58	TE
G7T744		753.4	-67.5	-0.52	959.1	94.6	0.75	SZ
GHLJA2		838.2	17.4	0.13	685.1	-179.3	-1.42	TE
GXF98J		798.7	-22.1	-0.17	833.2	-31.2	-0.25	TE
Q26UQJ		902.1	81.2	0.63	790.5	-74.0	-0.59	TM

Summary Statistics

	Sample Q35	Sample Q36
Grand Means	820.87 grams-force	864.45 grams-force
Stnd Dev Btwn Labs	129.55 grams-force	126.38 grams-force

Statistics based on 9 of 9 reporting participants

Sample Q35: LDPE & Sample Q36: LDPE

Key to Instrument Codes Reported by Participants

SZ	Textest FX 3700	TA	Thwing-Albert
TE	Thwing-Albert Pro Tear	TM	TMI No. 83-1100



Plastics Interlaboratory Testing Program

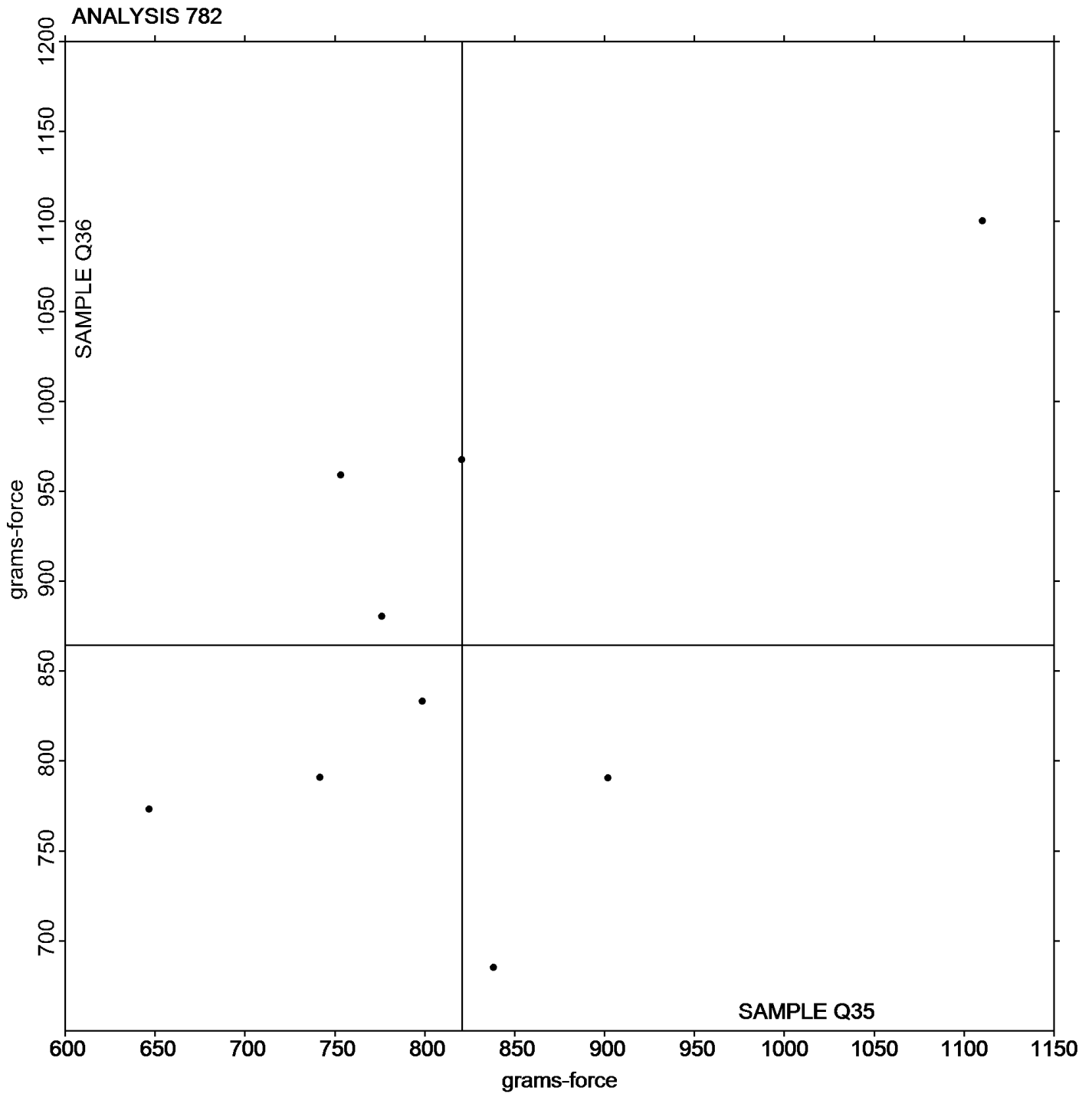
Report #98

Analysis 782

2nd Qtr 2016

Tear Resistance of Films

Grand Mean Sample Q35: 820.87 grams-force Grand Mean Sample Q36: 864.45 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 #98

Analysis 785

2nd Qtr 2016

Percent Haze of Film

WebCode	Data Flag	Sample D35			Sample D36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
29Q8JF		26.438	2.402	2.04	15.538	-0.234	-0.23	DA
2JATVP		25.138	1.102	0.93	16.763	0.991	0.97	BJ
2ZJJXU		23.925	-0.110	-0.09	16.413	0.641	0.62	BJ
39NZR8		24.313	0.277	0.23	14.838	-0.934	-0.91	BJ
3ERCXX		22.429	-1.607	-1.36	14.833	-0.939	-0.92	BH
4F3CCC	*	20.870	-3.165	-2.68	13.734	-2.038	-1.99	HL
4PBNRV		25.675	1.640	1.39	16.988	1.216	1.19	BT
4WXEEP		25.763	1.727	1.46	17.163	1.391	1.36	BJ
6FJPEU		22.598	-1.438	-1.22	14.260	-1.512	-1.47	XR
6Z4JC4		24.165	0.130	0.11	15.493	-0.279	-0.27	BJ
8Q8PT3		23.688	-0.348	-0.29	15.013	-0.759	-0.74	BJ
B4999K		23.988	-0.048	-0.04	16.800	1.028	1.00	BT
BX3EEN		24.188	0.152	0.13	15.438	-0.334	-0.33	BJ
CMDRGK		22.288	-1.748	-1.48	14.450	-1.322	-1.29	BJ
CW4QD6		24.638	0.602	0.51	16.375	0.603	0.59	BJ
FYEUYJ		24.563	0.527	0.45	16.500	0.728	0.71	BJ
G7T744		23.438	-0.598	-0.51	15.700	-0.072	-0.07	BJ
GHLJA2		25.025	0.990	0.84	16.125	0.353	0.34	BJ
GXF98J		23.863	-0.173	-0.15	16.713	0.941	0.92	BJ
J9B8XG	X	45.108	21.073	17.86	29.363	13.592	13.25	MA
K8WZCY		24.100	0.065	0.05	15.888	0.116	0.11	BJ
KA2J8L		24.368	0.332	0.28	16.839	1.067	1.04	XR
MRUA7D		23.204	-0.832	-0.70	17.081	1.310	1.28	XR
PUT8UB		24.188	0.152	0.13	15.213	-0.559	-0.55	BJ
RUMNUC		23.513	-0.523	-0.44	16.863	1.091	1.06	BJ
U37YUH		23.600	-0.435	-0.37	14.138	-1.634	-1.59	BJ
VHECPK		24.963	0.927	0.79	14.913	-0.859	-0.84	BJ

Summary Statistics

Grand Means

Sample D35
24.0354 Percent

Sample D36
15.7717 Percent

Std Dev Btwn Labs

1.1797 Percent

1.0259 Percent

Statistics based on 26 of 27 reporting participants

Sample D35: LDPE & Sample D36: LDPE



Plastics Interlaboratory Testing Program

Analysis 785

Percent Haze of Film

Report #98

2nd Qtr 2016

Comments on Assigned Data Flags for Test #785

J9B8XG (X) - Data for both samples are high.

Key to Instrument Codes Reported by Participants

BH	BYK-Gardner/Pacific Scientific Model XL-211	BJ	BYK-Gardner Haze-Gard Plus
BT	BYK Gardner TCS Series	DA	Datacolor SF 600 Series
HL	Hunterlab Ultrascan	MA	Macbeth 7000A
XR	X-Rite Spectrocolorimeter (any model)		



Plastics Interlaboratory Testing Program

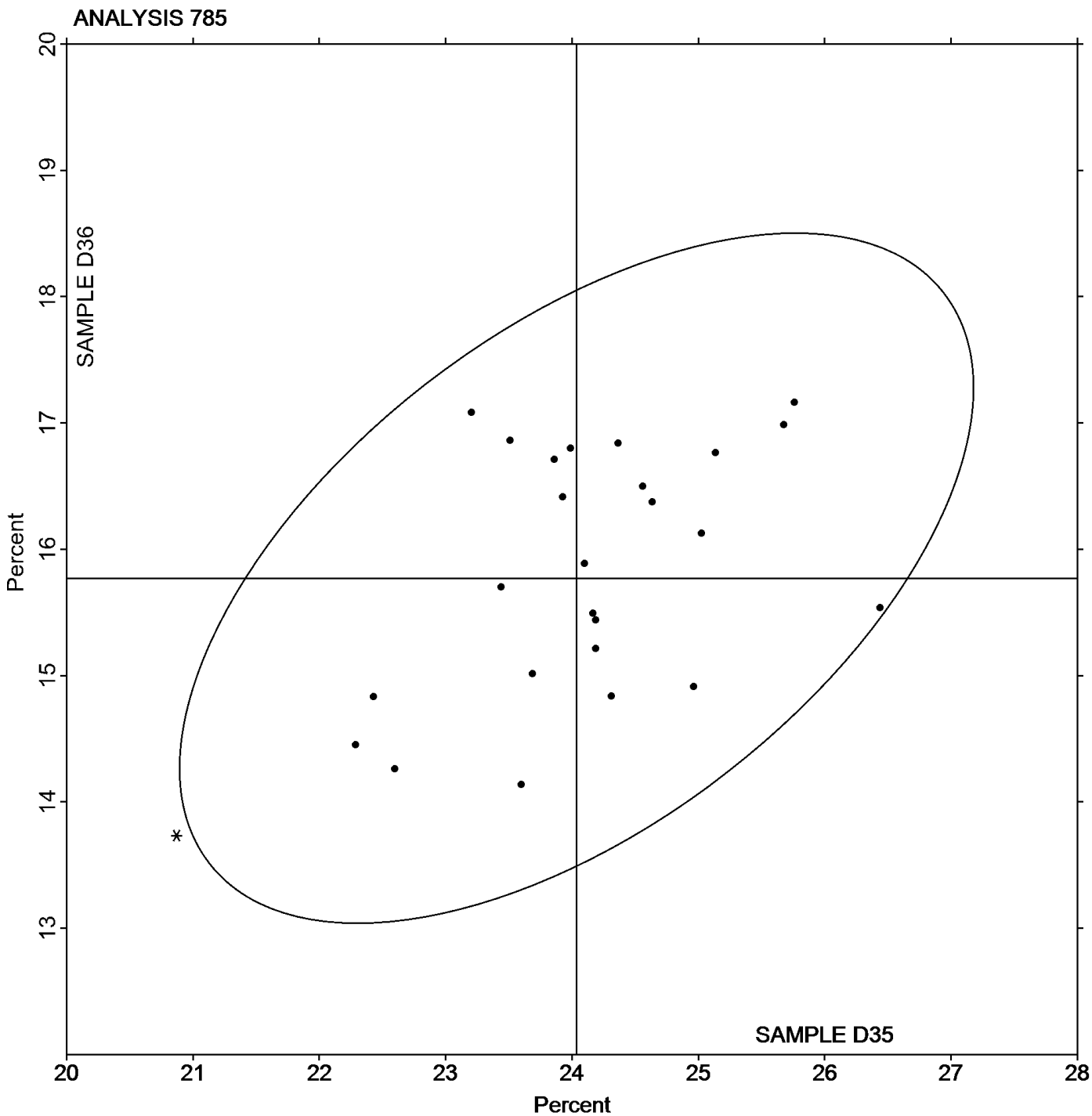
Analysis 785

Percent Haze of Film

Report #98

2nd Qtr 2016

Grand Mean Sample D35: 24.035 Percent Grand Mean Sample D36: 15.772 Percent





Plastics Interlaboratory Testing Program

Report #98

Analysis 786

2nd Qtr 2016

Total Luminous transmittance of film

WebCode	Data Flag	Sample D35			Sample D36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
29Q8JF		90.02	-2.27	-1.94	90.73	-1.87	-1.77	DA
2JATVP		91.61	-0.68	-0.58	91.78	-0.83	-0.78	BJ
2ZJJXU		94.35	2.06	1.75	94.46	1.86	1.76	BJ
39NZR8		90.94	-1.35	-1.15	91.00	-1.60	-1.52	BJ
3ERCXX		91.78	-0.52	-0.44	92.09	-0.51	-0.49	BH
4F3CCC	*	89.64	-2.66	-2.26	90.81	-1.79	-1.70	HL
4PBNRV		92.73	0.43	0.37	92.71	0.11	0.11	BT
4WXEEP		93.09	0.80	0.68	93.20	0.60	0.57	BJ
6FJPEU		92.09	-0.20	-0.17	92.20	-0.40	-0.38	XR
6Z4JC4		92.48	0.18	0.16	92.61	0.01	0.01	BJ
8Q8PT3		92.48	0.18	0.16	92.93	0.32	0.31	BJ
B4999K		93.01	0.72	0.61	93.14	0.54	0.51	BJ
BX3EEN		93.55	1.26	1.07	94.03	1.42	1.35	BJ
CMDRGK		92.18	-0.12	-0.10	92.85	0.25	0.24	BJ
CW4QD6		93.44	1.15	0.98	93.61	1.01	0.96	BJ
FYEUYJ		93.69	1.40	1.19	93.80	1.20	1.14	BJ
G7T744		90.45	-1.84	-1.57	91.05	-1.55	-1.47	BJ
GHLJA2		93.09	0.80	0.68	93.30	0.70	0.66	BJ
GXF98J		92.28	-0.02	-0.01	92.85	0.25	0.24	BJ
J9B8XG	X	86.63	-5.66	-4.83	86.27	-6.33	-5.99	MA
K8WZCY		92.29	0.00	0.00	92.71	0.11	0.11	BJ
KA2J8L		91.36	-0.93	-0.79	91.57	-1.03	-0.98	XR
MRUA7D		91.72	-0.57	-0.48	91.84	-0.76	-0.72	XR
PUT8UB		94.16	1.87	1.59	94.53	1.92	1.82	BJ
RUMNUC		92.84	0.55	0.46	93.05	0.45	0.43	BJ
U37YUH		92.36	0.07	0.06	92.61	0.01	0.01	BJ
VHECPK		92.00	-0.29	-0.25	92.16	-0.44	-0.41	BJ

Summary Statistics

Grand Means

Sample D35
92.292 Percent

Sample D36
92.600 Percent

Std Dev Btwn Labs

1.173 Percent

1.056 Percent

Statistics based on 26 of 27 reporting participants

Sample D35: LDPE & Sample D36: LDPE



Plastics Interlaboratory Testing Program

Analysis 786

Total Luminous transmittance of film

Report #98

2nd Qtr 2016

Comments on Assigned Data Flags for Test #786

J9B8XG (X) - Data for both samples are low. Possible Systematic Error.

Key to Instrument Codes Reported by Participants

BH	BYK-Gardner/Pacific Scientific Model XL-211	BJ	BYK-Gardner Haze-Gard Plus
BT	BYK Gardner TCS Plus Spectrophotometer	DA	Datacolor SF 600 Series
HL	Hunterlab Ultrascan XE	MA	Macbeth 7000A
XR	X-Rite Spectrocolorimeter (any model)		



Plastics Interlaboratory Testing Program

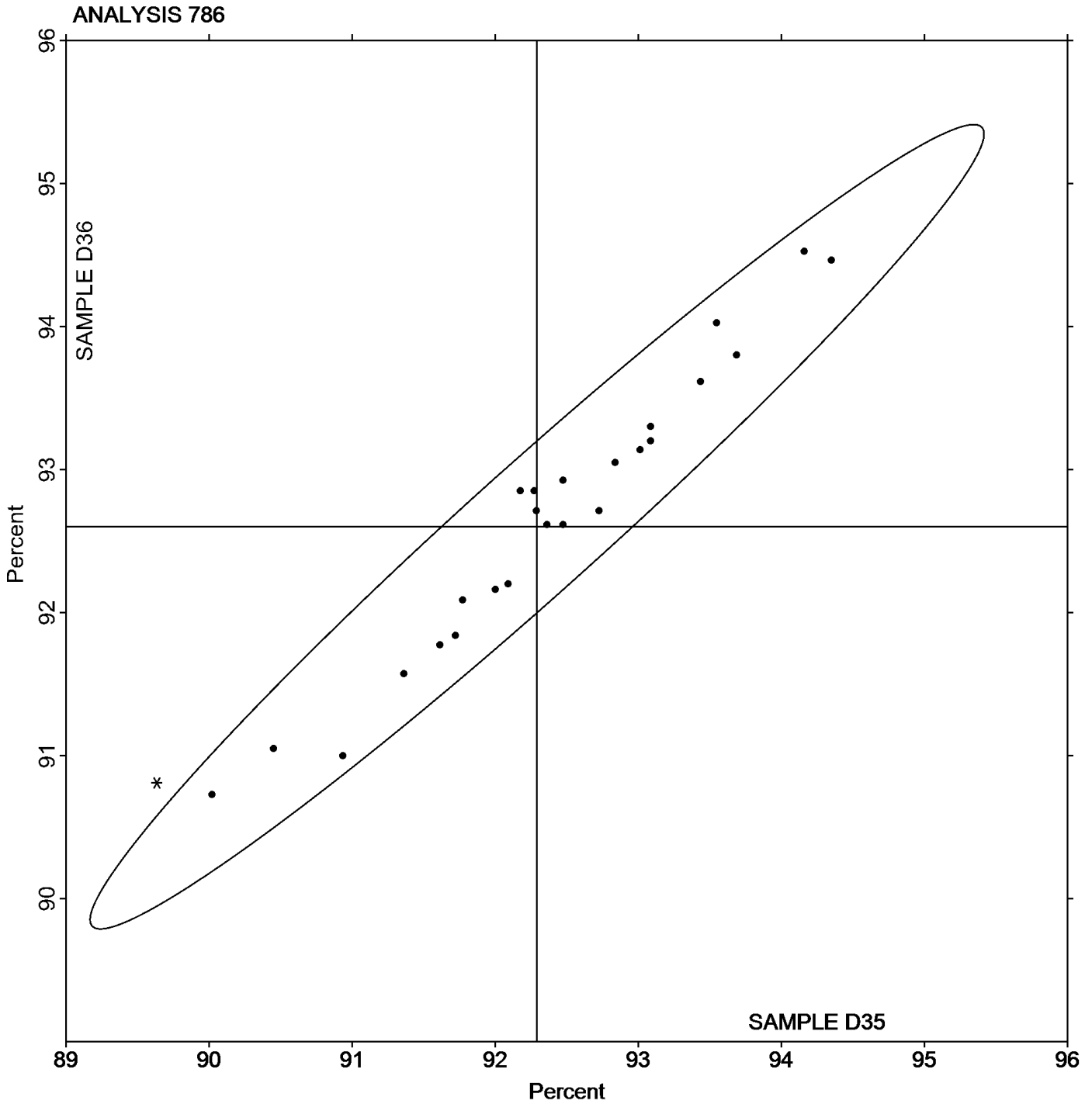
Analysis 786

Total Luminous transmittance of film

Report #98

2nd Qtr 2016

Grand Mean Sample D35: 92.292 Percent Grand Mean Sample D36: 92.600 Percent





Plastics Interlaboratory Testing Program

Report #98

Analysis 790

2nd Qtr 2016

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S35			Sample S36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2D4A6C		2.30	-0.14	-0.39	2.13	-0.30	-0.78	TM
2JATVP		2.12	-0.33	-0.89	2.04	-0.40	-1.03	TM
68AZZV		2.15	-0.30	-0.80	2.41	-0.03	-0.07	TO
6M2X3Q	X	3.50	1.06	2.88	2.35	-0.09	-0.23	TO
86643P		2.52	0.07	0.20	2.58	0.15	0.37	TO
86ANPR		2.19	-0.26	-0.70	2.39	-0.05	-0.12	TO
8Q8PT3		2.56	0.11	0.30	2.64	0.20	0.52	WZ
8TGFBJ		1.98	-0.46	-1.27	2.13	-0.31	-0.80	WZ
97LYLJ		2.36	-0.09	-0.25	1.97	-0.47	-1.20	TM
9G36ET		2.60	0.15	0.41	2.64	0.21	0.53	TO
9XNHG7	*	2.33	-0.12	-0.33	1.47	-0.97	-2.49	TM
AH9CUQ		2.28	-0.17	-0.45	2.34	-0.09	-0.24	TM
AVE6NN		2.23	-0.22	-0.59	2.28	-0.16	-0.40	CE
AWQFKF	X	3.88	1.44	3.92	4.64	2.20	5.64	WZ
AYT3UQ		2.71	0.26	0.71	2.33	-0.11	-0.28	TM
BHH72X	X	4.75	2.30	6.28	4.78	2.34	6.01	TO
CCVFE3		2.25	-0.20	-0.54	2.03	-0.41	-1.05	TO
CJDFKK		3.19	0.74	2.01	3.28	0.84	2.15	DS
CMDRGK		2.42	-0.03	-0.08	2.03	-0.41	-1.05	TY
FFNP68		2.36	-0.08	-0.23	2.59	0.15	0.38	TM
GHLJA2		2.23	-0.22	-0.60	2.41	-0.03	-0.06	TO
GQEUJW		2.74	0.29	0.80	2.71	0.27	0.69	TO
HA6UYD		2.98	0.54	1.46	2.61	0.18	0.45	TM
HXT3KY		2.90	0.45	1.24	2.43	-0.01	-0.03	TM
J78CED		3.01	0.57	1.55	3.31	0.87	2.23	CE
J9B8XG	*	1.54	-0.91	-2.48	2.40	-0.03	-0.09	TO
JN248X	X	0.89	-1.56	-4.24	0.86	-1.58	-4.06	TO
JRAZ7A		2.48	0.03	0.08	2.32	-0.12	-0.30	CE
JXTG9J		2.00	-0.45	-1.23	2.00	-0.43	-1.11	WZ
K66XEX		2.02	-0.42	-1.16	1.97	-0.47	-1.20	TO
LA2R4C		2.40	-0.05	-0.12	2.39	-0.05	-0.12	TO
LZNKZA		2.20	-0.25	-0.68	2.16	-0.28	-0.72	XX
MTMMPB		3.10	0.66	1.79	2.71	0.27	0.70	TM
MZ6CRD		2.92	0.47	1.29	2.83	0.39	1.01	CE
N74ANV		2.26	-0.19	-0.51	2.90	0.46	1.19	TO



Plastics Interlaboratory Testing Program

Report #98

Analysis 790

2nd Qtr 2016

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S35			Sample S36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
N79RLU		2.01	-0.44	-1.20	1.72	-0.71	-1.83	TO
NCXF9C		2.43	-0.02	-0.06	2.01	-0.43	-1.11	CE
NLL9MU		2.10	-0.35	-0.95	1.94	-0.50	-1.28	CE
P6UKZC	X	0.39	-2.06	-5.62	0.25	-2.19	-5.61	XX
PH3EK3		2.75	0.30	0.83	2.81	0.37	0.95	CE
PK24BA		2.32	-0.13	-0.35	2.32	-0.12	-0.31	XX
PVNQVC		2.77	0.32	0.88	2.36	-0.07	-0.19	TO
Q7XYKM		2.87	0.42	1.16	3.20	0.76	1.95	TM
QGYR38		1.88	-0.56	-1.53	2.23	-0.20	-0.53	CS
TWNXQZ		3.06	0.62	1.68	2.66	0.22	0.58	TO
U4J2PA		2.53	0.09	0.23	2.40	-0.04	-0.10	TM
U4KCP7	X	0.76	-1.69	-4.61	0.76	-1.68	-4.30	TM
UABPQU		2.57	0.12	0.32	2.57	0.13	0.34	TO
ULLYG6		2.22	-0.23	-0.62	2.64	0.21	0.53	XX
UNTHE2		3.19	0.74	2.01	3.03	0.60	1.53	TO
V4XPQ2		2.30	-0.14	-0.39	2.36	-0.08	-0.21	TM
WU2AE3		2.23	-0.22	-0.59	2.79	0.35	0.90	XX
XBCTUT		2.37	-0.08	-0.22	2.17	-0.26	-0.68	BA
XHVYQZ		2.44	-0.01	-0.03	2.38	-0.05	-0.14	TO
XP8BJQ		2.59	0.15	0.40	2.33	-0.11	-0.28	TM
Y42JYW		3.01	0.56	1.53	3.42	0.98	2.51	TO
YAEZAU		2.21	-0.24	-0.65	2.75	0.31	0.81	TM
YGNFQ2		1.82	-0.62	-1.70	2.51	0.07	0.19	TO
YHKYT3		2.53	0.08	0.22	2.40	-0.04	-0.10	TO
ZA7ARA		2.62	0.18	0.48	2.20	-0.24	-0.62	TO

Summary Statistics		
	Sample S35	Sample S36
Grand Means	2.447 ft.lbf/in	2.438 ft.lbf/in
Stnd Dev Btwn Labs	0.367 ft.lbf/in	0.390 ft.lbf/in
Statistics based on 54 of 60 reporting participants		

Sample S35: ABS/PC & Sample S36: ABS/PC



Plastics Interlaboratory Testing Program

Report #98

Analysis 790

2nd Qtr 2016

Notched Izod Impact - ft.lbf/in

Comments on Assigned Data Flags for Test #790

U4KCP7 (X) - Data for both samples are low.

6M2X3Q (X) - Data for sample S35 are high. Inconsistent within the determinations of sample S35.

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

JN248X (X) - Data for both samples are low.

BHH72X (X) - Data for both samples are high.

P6UKZC (X) - Data for both samples are low.

CCVFE3 - Determination #2 for sample S35 appeared to be a typo. The determination was removed from the Lab Mean of Sample S35 per the Grubb's Outlier Test.

Key to Instrument Codes Reported by Participants

BA Baldwin

CS CSI

TM TMI

TY Toyoseiki

XX Instrument manufacturer not specified by lab

CE Ceast

DS Dynisco

TO Tinius Olsen

WZ Zwick



Plastics Interlaboratory Testing Program

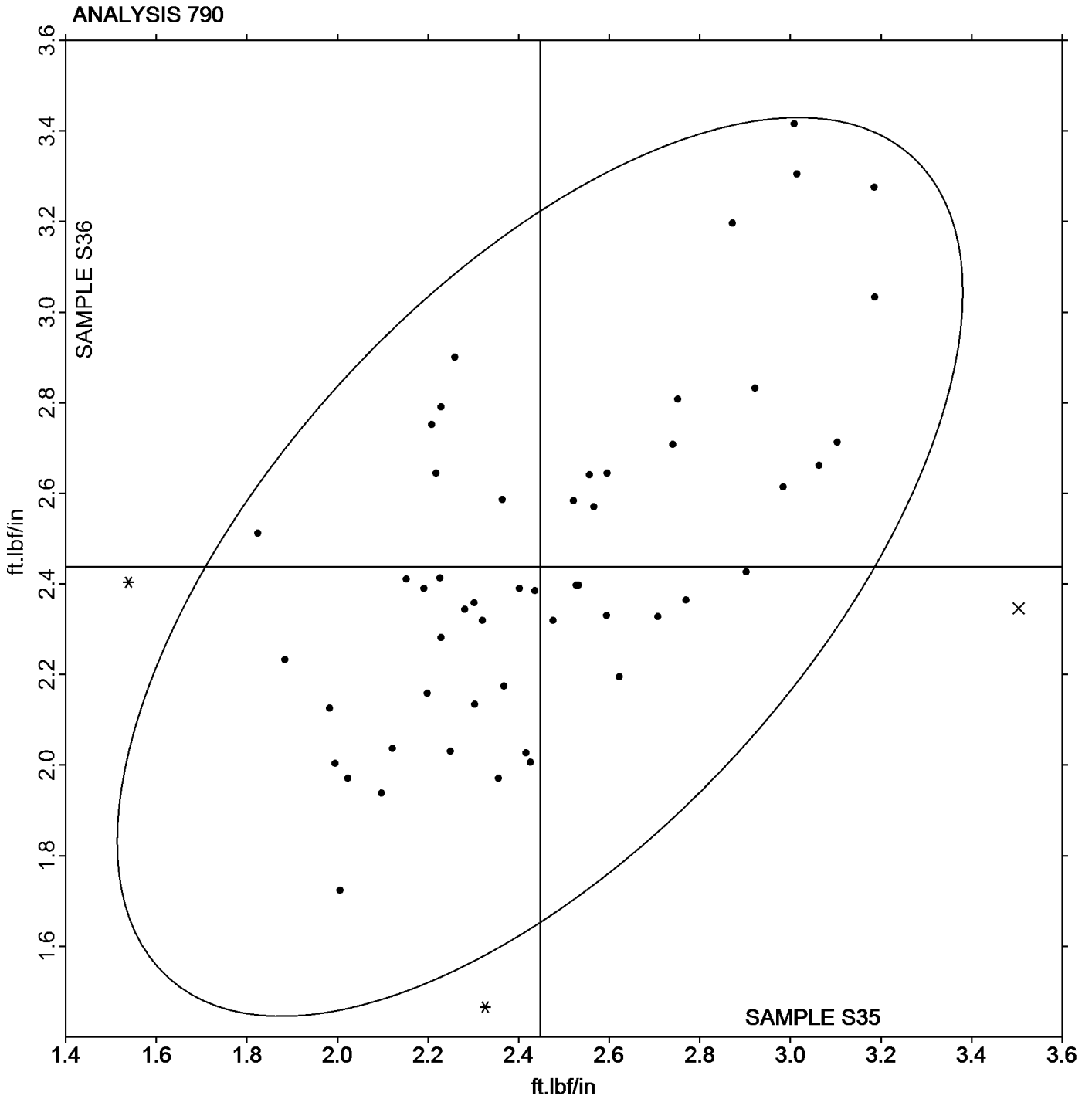
Report #98

Analysis 790

2nd Qtr 2016

Notched Izod Impact - ft.lbf/in

Grand Mean Sample S35: 2.4471 ft.lbf/in Grand Mean Sample S36: 2.4376 ft.lbf/in





Plastics Interlaboratory Testing Program

Report #98

Analysis 791

2nd Qtr 2016

Notched Izod Impact - kJ/m²

WebCode	Data Flag	Sample Z35			Sample Z36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2MPCM8		13.00000	0.37076	0.40	13.36000	0.67499	1.09	TM
2U7RFG		13.79400	1.16476	1.26	12.52200	-0.16301	-0.26	XX
38DZVD		14.54400	1.91476	2.07	13.99800	1.31299	2.12	XX
3EUVB8		14.12600	1.49676	1.62	12.87400	0.18899	0.30	TO
44MDFV		12.51460	-0.11464	-0.12	12.29614	-0.38887	-0.63	TM
74XY33		12.71000	0.08076	0.09	12.39800	-0.28701	-0.46	TO
8TGFBJ		12.00400	-0.62524	-0.68	12.05000	-0.63501	-1.02	WZ
AL9VZJ		12.48200	-0.14724	-0.16	12.12600	-0.55901	-0.90	CE
BX3EEN		12.39600	-0.23324	-0.25	12.42800	-0.25701	-0.41	TO
C4LJJP		11.46000	-1.16924	-1.27	12.50000	-0.18501	-0.30	WZ
CMDRGK		12.15200	-0.47724	-0.52	12.70800	0.02299	0.04	XX
GJFWKD		13.41600	0.78676	0.85	13.97200	1.28699	2.08	CE
JTVZWP		11.19600	-1.43324	-1.55	12.65400	-0.03101	-0.05	TO
KNKBY2		13.42640	0.79716	0.86	12.83440	0.14939	0.24	TM
NCXF9C		11.96000	-0.66924	-0.72	12.67200	-0.01301	-0.02	CE
RTA3B3		12.96380	0.33456	0.36	12.66720	-0.01781	-0.03	XX
U4J2PA		12.14860	-0.48064	-0.52	11.98060	-0.70441	-1.14	TM
WUTF3V		12.73800	0.10876	0.12	12.80400	0.11899	0.19	CE
ZHJ8PU		11.01340	-1.61584	-1.75	11.50980	-1.17521	-1.90	CE
ZUAKKW		12.54000	-0.08924	-0.10	13.34600	0.66099	1.07	IN

Summary Statistics		Sample Z35	Sample Z36
Grand Means		12.629240 kJ/m ²	12.685007 kJ/m ²
Stnd Dev Btwn Labs		0.923736 kJ/m ²	0.619867 kJ/m ²
Statistics based on 20 of 20 reporting participants			

Sample Z35: HIPS & Sample Z36: HIPS

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

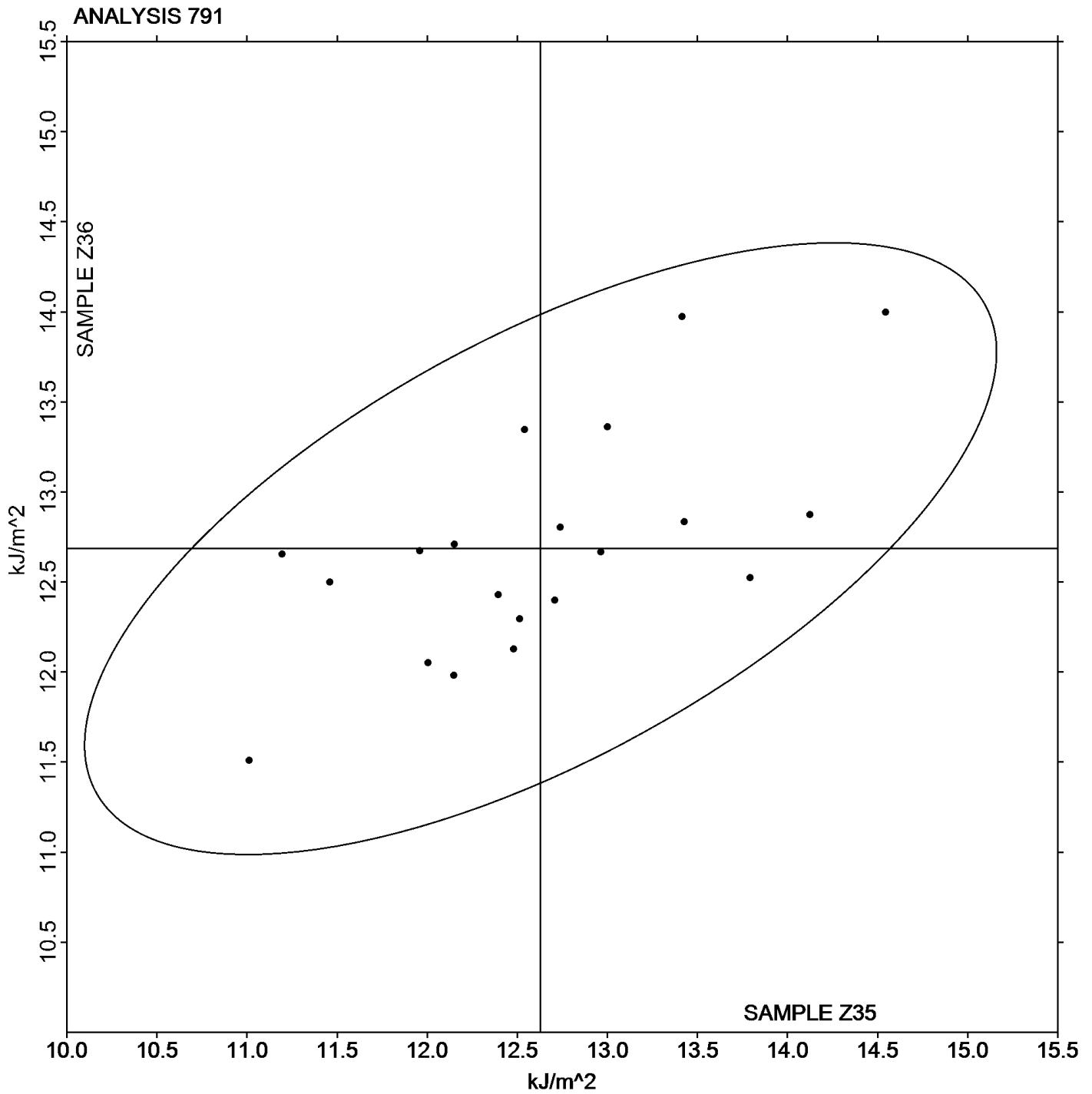
Report #98

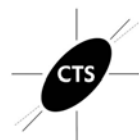
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2nd Qtr 2016

Notched Izod Impact - kJ/m^2

Grand Mean Sample Z35: 12.629 kJ/m^2 Grand Mean Sample Z36: 12.685 kJ/m^2





Plastics Interlaboratory Testing Program

Report #98

Analysis 792

2nd Qtr 2016

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M35			Sample M36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2JATVP	X	41.11	-5.69	-1.88	50.72	3.89	1.48	TM
2U7RFG		44.24	-2.56	-0.84	46.56	-0.27	-0.10	WZ
44MDFV		43.87	-2.93	-0.97	44.21	-2.62	-1.00	TM
74XY33		46.45	-0.35	-0.12	45.78	-1.04	-0.40	TO
8TGFBJ		46.66	-0.14	-0.05	47.65	0.83	0.31	WZ
9BDGBU		48.02	1.22	0.40	48.46	1.63	0.62	TO
AL9VZJ		45.54	-1.26	-0.42	48.14	1.31	0.50	CE
AVE6NN		44.35	-2.45	-0.81	44.62	-2.20	-0.84	CE
AWQFKF		46.87	0.07	0.02	47.29	0.47	0.18	TM
B4999K		50.62	3.82	1.26	49.18	2.36	0.90	TM
BLJCHP		45.64	-1.16	-0.38	44.12	-2.71	-1.03	CE
BVQQNW		46.46	-0.34	-0.11	46.21	-0.62	-0.24	CE
C4LJJP		42.96	-3.84	-1.27	42.88	-3.95	-1.51	WZ
CDDFNK		41.89	-4.91	-1.62	42.43	-4.40	-1.68	TM
CMDRGK		46.93	0.13	0.04	46.78	-0.04	-0.02	TY
GHPCX2		45.05	-1.75	-0.58	44.92	-1.91	-0.73	PO
GJFWKD		43.61	-3.19	-1.05	46.73	-0.10	-0.04	XX
GUZMMD		48.07	1.27	0.42	47.90	1.07	0.41	TO
HA6UYD		41.27	-5.53	-1.82	42.05	-4.78	-1.82	TM
HJQQPZ		45.74	-1.06	-0.35	47.99	1.16	0.44	TM
HTXZ6H		48.66	1.86	0.61	49.24	2.41	0.92	CE
JPWL9Z		50.22	3.42	1.13	49.30	2.47	0.94	WZ
JRAZ7A		43.32	-3.48	-1.15	44.00	-2.83	-1.08	CE
JTVZWP		46.56	-0.24	-0.08	46.59	-0.23	-0.09	TO
K327EX		48.02	1.22	0.40	48.10	1.27	0.49	CE
K66XEX		39.76	-7.04	-2.32	40.45	-6.38	-2.43	TO
KFQ2LX		49.69	2.89	0.95	48.99	2.16	0.82	WZ
KNKBY2		47.27	0.47	0.15	49.06	2.23	0.85	TM
MTMMPB		44.23	-2.57	-0.85	43.32	-3.50	-1.34	TM
MZ6CRD		53.78	6.98	2.30	51.74	4.91	1.87	CE
N6K78B		47.38	0.58	0.19	50.37	3.54	1.35	TM
NCXF9C	*	50.93	4.13	1.36	47.10	0.28	0.11	CE
NLL9MU		49.56	2.76	0.91	49.06	2.23	0.85	CE
QKJJDA		44.34	-2.46	-0.81	45.12	-1.70	-0.65	CE
R3TTHM		50.04	3.24	1.07	50.99	4.17	1.59	XX



Plastics Interlaboratory Testing Program

Report #98

Analysis 792

2nd Qtr 2016

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M35			Sample M36			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
RDH798	*	53.78	6.98	2.30	49.75	2.93	1.12	CE
RTA3B3		47.35	0.55	0.18	45.84	-0.99	-0.38	XX
U4J2PA		49.21	2.40	0.79	49.24	2.41	0.92	TM
UABPQU		46.30	-0.50	-0.17	45.04	-1.79	-0.68	XX
ULLYG6		45.28	-1.52	-0.50	45.66	-1.17	-0.44	XX
UQX36L		48.50	1.70	0.56	48.33	1.50	0.57	XX
VHECPK		50.72	3.92	1.29	50.70	3.87	1.48	TO
VRLX6Z		48.40	1.60	0.53	47.74	0.91	0.35	TO
WU2AE3		44.14	-2.66	-0.88	44.24	-2.59	-0.99	XX
WUTF3V		43.86	-2.94	-0.97	43.77	-3.06	-1.17	CE
X9HWDL		50.76	3.96	1.31	50.47	3.64	1.39	XX
XHVYQZ		48.04	1.24	0.41	48.26	1.43	0.55	TO
YPLLTW	X	36.54	-10.26	-3.38	36.54	-10.29	-3.92	WZ
ZHJ8PU		45.27	-1.53	-0.50	44.49	-2.33	-0.89	CE

Summary Statistics		
	Sample M35	Sample M36
Grand Means	46.800 kJ/m ²	46.827 kJ/m ²
Stnd Dev Btwn Labs	3.033 kJ/m ²	2.622 kJ/m ²
Statistics based on 47 of 49 reporting participants		

Sample M35: ABS/PC & Sample M36: ABS/PC

Comments on Assigned Data Flags for Test #792

2JATVP (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample M36.

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

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

Analysis 792

Notched Charpy Impact - kJ/m^2

Report #98

2nd Qtr 2016

Grand Mean Sample M35: 46.800 kJ/m^2 Grand Mean Sample M36: 46.827 kJ/m^2

