

Plastics Interlaboratory Testing Program

Web Summary Report #96, 4th Qtr 2015

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Analysis Analysis Name

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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.

For further information contact:

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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 #96, 4th Qtr 2015

Analysis 704 - Tensile Stress at Yield

Material: ABS/PC	Sample F31	9,374.22	psi	1.46% COV
	Sample F32	9,373.60	psi	1.63% COV

Analysis 705 - Tensile Stress at Break

Material: ABS/PC	Sample F31	6,891.19	psi	2.13% COV
	Sample F32	6,941.43	psi	1.98% COV

Analysis 706 - Percent Elongation at Yield

Material: ABS/PC	Sample F31	3.5794	Percent	2.79% COV
	Sample F32	3.5816	Percent	2.23% COV

Analysis 708 - Modulus of Elasticity

Material: ABS/PC	Sample F31	411.45	ksi	4.95% COV
	Sample F32	410.78	ksi	4.61% COV

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

Material: HIPS	Sample E31	79.121	Degrees C	1.23% COV
	Sample E32	79.321	Degrees C	1.13% COV

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

Material: PP	Sample G31	68.311	Degrees C	2.03% COV
	Sample G32	68.539	Degrees C	2.12% COV

Analysis 712 - Temperature of Deflection (1.80 MPa)

Material: ABS/PC	Sample N31	78.125	Degrees C	1.44% COV
	Sample N32	78.154	Degrees C	1.46% COV

Analysis 715 - Vicat Temperature (Rate A)

Material: ABS	Sample H31	104.23	Degrees C	0.684% COV
	Sample H32	104.17	Degrees C	0.709% COV

Analysis 716 - Vicat Temperature (Rate B)

Material: ABS	Sample R31	105.87	Degrees C	0.793% COV
	Sample R32	105.77	Degrees C	0.799% COV

Analysis 718 - Specific Gravity

Material: HIPS	Sample T31	1.0303	sp gr 23/23 C	0.191% COV
	Sample T32	1.0301	sp gr 23/23 C	0.181% COV

Analysis 720 - Flexural Modulus

Material: HIPS	Sample J31	322.15	ksi	4.55% COV
	Sample J32	322.11	ksi	4.56% COV

Analysis 721 - Flexural Stress at 5% Strain

Material: HIPS	Sample J31	6,270.84	psi	3.11% COV
	Sample J32	6,263.67	psi	3.22% COV

Analysis 722 - Flexural Stress at Yield

Material: HIPS	Sample J31	6,287.79	psi	2.93% COV
	Sample J32	6,276.50	psi	3.03% COV

Analysis 730 - Tensile Stress at Yield, ISO Method

Material: ABS	Sample C31	48.789	MPa	1.36% COV
	Sample C32	48.874	MPa	1.37% COV

Analysis 731 - Tensile Stress at Break, ISO Method

Material: ABS	Sample C31	34.952	MPa	4.61% COV
	Sample C32	34.984	MPa	4.62% COV



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Analysis 732 - Strain at Yield, ISO Method

Material: ABS	Sample C31	2.6742	Percent	2.20% COV
	Sample C32	2.6601	Percent	2.62% COV

Analysis 734 - Modulus of Elasticity, ISO Method

Material: ABS	Sample C31	2,403.47	MPa	4.32% COV
	Sample C32	2,419.83	MPa	4.28% COV

Analysis 736 - Flexural Modulus

Material: HIPS	Sample K31	2,233.38	MPa	3.02% COV
	Sample K32	2,235.17	MPa	3.12% COV

Analysis 737 - Flexural Stress at 3.5% Strain

Material: HIPS	Sample K31	43.563	MPa	2.68% COV
	Sample K32	43.620	MPa	2.67% COV

Analysis 738 - Flexural Stress at Yield

Material: HIPS	Sample K31	43.588	MPa	2.46% COV
	Sample K32	43.663	MPa	2.62% COV

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

Material: PP	Sample X31	11.324	grams/10 mins	3.96% COV
	Sample X32	11.394	grams/10 mins	4.42% COV

Analysis 755 - Moisture Content

Material: ABS	Sample Y31	0.22438	Percent	12.5% COV
	Sample Y32	0.25982	Percent	14.1% COV

Analysis 757 - Ash Content

Material: PP	Sample L31	19.769	Percent	0.252% COV
	Sample L32	19.771	Percent	0.244% COV

Analysis 760 - DSC

Material: PP	Sample W31	106.77	Degrees Celsius	2.12% COV
	Sample W32	106.71	Degrees Celsius	2.09% COV

Analysis 761 - DSC

Material: PP	Sample W31	164.12	Degrees Celsius	1.46% COV
	Sample W32	164.36	Degrees Celsius	1.40% COV

Analysis 762 - DSC

Material: PP	Sample W31	96.862	Joules Per Gram	5.74% COV
	Sample W32	96.852	Joules Per Gram	4.46% COV

Analysis 763 - DSC

Material: PP	Sample W31	94.834	Joules Per Gram	12.6% COV
	Sample W32	94.367	Joules Per Gram	12.4% COV

Analysis 764 - DSC

Material: PET	Sample V31	86.240	Degrees Celsius	2.56% COV
	Sample V32	86.307	Degrees Celsius	2.70% COV

Analysis 770 - Tensile Stress at Yield, Films

Material: LDPE	Sample B31	2,654.01	psi	26.6% COV
	Sample B32	2,610.78	psi	25.8% COV

Analysis 771 - Tensile Stress at Break, Films

Material: LDPE	Sample B31	3,343.54	psi	7.88% COV
	Sample B32	3,261.54	psi	10.2% COV



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Analysis 772 - Elongation at Yield, Films

Material: LDPE	Sample B31	150.76	Percent	101% COV
	Sample B32	155.83	Percent	100% COV

Analysis 773 - Elongation at Break, Films

Material: LDPE	Sample B31	372.87	Percent	25.9% COV
	Sample B32	373.44	Percent	28.1% COV

Analysis 774 - Thickness of Film Specimens

Material: LDPE	Sample B31	2.6207	mils	5.11% COV
	Sample B32	2.6407	mils	5.33% COV

Analysis 775 - Secant Modulus at 1% Strain

Material: LDPE	Sample B31	30,816.28	psi	14.6% COV
	Sample B32	31,193.92	psi	13.2% COV

Analysis 776 - Secant Modulus at 2% Strain

Material: LDPE	Sample B31	27,584.92	psi	11.7% COV
	Sample B32	27,881.06	psi	9.88% COV

Analysis 780 - Static Friction

Material: LDPE	Sample P31	0.11907	COF	30.7% COV
	Sample P32	0.11570	COF	35.2% COV

Analysis 781 - Kinetic Friction

Material: LDPE	Sample P31	0.08663	COF	30.1% COV
	Sample P32	0.08728	COF	27.4% COV

Analysis 782 - Tear Resistance of Film

Material: LDPE	Sample Q31	628.48	grams-force	12.8% COV
	Sample Q32	640.82	grams-force	9.67% COV

Analysis 785 - Percent Haze

Material: LDPE	Sample D31	24.612	Percent	4.75% COV
	Sample D32	24.228	Percent	4.50% COV

Analysis 786 - Total Transmittance

Material: LDPE	Sample D31	92.444	Percent	1.14% COV
	Sample D32	92.425	Percent	1.17% COV

Analysis 790 - Notched Izod Impact

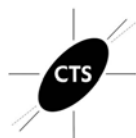
Material: HIPS	Sample S31	2.9561	ft.lbf/in	9.61% COV
	Sample S32	2.9356	ft.lbf/in	10.7% COV

Analysis 791 - Notched Izod Impact

Material: ABS	Sample Z31	28.055	kJ/m ²	3.09% COV
	Sample Z32	27.038	kJ/m ²	3.37% COV

Analysis 792 - Notched Charpy Impact

Material: HIPS	Sample M31	12.664	kJ/m ²	4.05% COV
	Sample M32	12.753	kJ/m ²	4.58% COV



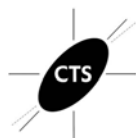
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 704

Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F31			Sample F32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2MTWLC		9,576.1	201.8	1.47	9,588.2	214.6	1.41
2XC4MM		9,375.4	1.2	0.01	9,312.6	-61.0	-0.40
3YFH6C		9,451.8	77.6	0.57	9,364.0	-9.6	-0.06
424GWF		9,221.6	-152.6	-1.11	9,224.5	-149.1	-0.98
462X9A		9,445.4	71.2	0.52	9,579.0	205.4	1.34
4AWNG7		9,527.0	152.8	1.11	9,464.8	91.2	0.60
6NWM7N		9,085.8	-288.4	-2.10	9,053.8	-319.8	-2.09
6RRG36		9,446.8	72.6	0.53	9,473.4	99.8	0.65
6UL3XG		9,459.4	85.2	0.62	9,469.9	96.3	0.63
6XKLTN	*	9,601.4	227.2	1.66	9,774.8	401.2	2.63
74ZJZ8		9,234.8	-139.5	-1.02	9,310.3	-63.3	-0.41
784EKB		9,272.4	-101.8	-0.74	9,352.0	-21.6	-0.14
7FH2TE		9,302.0	-72.2	-0.53	9,343.2	-30.4	-0.20
7MX3RN		9,301.1	-73.2	-0.53	9,359.1	-14.5	-0.10
7NN6GN		9,500.2	126.0	0.92	9,628.4	254.8	1.67
7ZZ968		9,641.2	267.0	1.95	9,574.0	200.4	1.31
8B27FE		9,208.2	-166.0	-1.21	9,053.8	-319.8	-2.09
8KLLW2		9,579.4	205.2	1.50	9,631.4	257.8	1.69
8ZYVW6		9,279.6	-94.6	-0.69	9,247.7	-125.9	-0.82
AF62ZZ		9,401.6	27.4	0.20	9,428.2	54.6	0.36
B8A9FD	X	4,116.2	-5,258.0	-38.36	4,171.3	-5,202.3	-34.06
BNPPBT		9,171.4	-202.8	-1.48	9,144.5	-229.1	-1.50
C2XRAV		9,314.4	-59.8	-0.44	9,256.4	-117.2	-0.77
CXYFDV		9,155.5	-218.7	-1.60	9,066.4	-307.2	-2.01
DJVA2C		9,203.0	-171.2	-1.25	9,216.2	-157.4	-1.03
EXMNDB	X	10,348.7	974.4	7.11	10,354.3	980.7	6.42
FJ63PB		9,463.3	89.0	0.65	9,449.6	76.0	0.50
GA9MDC		9,467.2	93.0	0.68	9,585.9	212.3	1.39
GJ4K87		9,306.0	-68.3	-0.50	9,393.8	20.2	0.13
GJY498		9,369.5	-4.7	-0.03	9,393.6	20.0	0.13
GYX473		9,572.6	198.4	1.45	9,485.6	112.0	0.73
HBLPP3		9,408.0	33.8	0.25	9,358.0	-15.6	-0.10
HCUQNU		9,379.4	5.2	0.04	9,371.2	-2.4	-0.02
HCY9LT		9,336.0	-38.2	-0.28	9,180.6	-193.0	-1.26
HNBB8Q		9,397.2	23.0	0.17	9,352.2	-21.4	-0.14



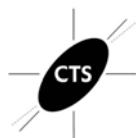
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 704

Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F31			Sample F32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JN6G4B		9,378.2	4.0	0.03	9,284.2	-89.4	-0.59
JUUXF2		9,340.6	-33.6	-0.25	9,308.0	-65.6	-0.43
KDH2DE		9,529.1	154.8	1.13	9,532.0	158.4	1.04
KN43VA		9,568.4	194.2	1.42	9,591.6	218.0	1.43
L3ZGTH	*	9,120.2	-254.0	-1.85	9,259.0	-114.6	-0.75
L68YRD		9,186.6	-187.6	-1.37	9,202.6	-171.0	-1.12
M4NDTV		9,420.1	45.9	0.33	9,336.4	-37.2	-0.24
MPM2XW		9,306.0	-68.2	-0.50	9,240.0	-133.6	-0.87
MT62GJ		9,148.8	-225.4	-1.64	9,251.7	-121.9	-0.80
N9W7BX		9,569.7	195.5	1.43	9,520.4	146.8	0.96
NARYWJ		9,266.8	-107.4	-0.78	9,254.6	-118.9	-0.78
NB8XF9		9,390.4	16.2	0.12	9,419.0	45.4	0.30
NVTWGW		9,401.0	26.8	0.20	9,467.6	94.0	0.62
PAL4R4		9,386.0	11.8	0.09	9,287.0	-86.6	-0.57
PK2X4W		9,459.4	85.2	0.62	9,442.0	68.4	0.45
PK3NCZ		9,297.5	-76.8	-0.56	9,377.7	4.1	0.03
PXRRD6		9,276.4	-97.8	-0.71	9,247.4	-126.2	-0.83
Q26RBV		9,252.0	-122.2	-0.89	9,284.0	-89.6	-0.59
Q6NMDN		9,381.8	7.6	0.06	9,295.8	-77.8	-0.51
RZ82GM		9,213.4	-160.8	-1.17	9,213.6	-160.0	-1.05
TABCQX		9,437.2	63.0	0.46	9,436.0	62.4	0.41
TB7URY		9,395.4	21.2	0.15	9,263.4	-110.2	-0.72
TH8BYX	X	9,480.4	106.2	0.77	9,478.4	104.8	0.69
TQZJJN		9,485.4	111.2	0.81	9,356.0	-17.6	-0.12
TZNA93		9,570.0	195.8	1.43	9,542.0	168.4	1.10
UY7N8Y		9,627.7	253.5	1.85	9,590.0	216.4	1.42
VPFKJW		9,290.9	-83.3	-0.61	9,170.5	-203.1	-1.33
W2MUJQ		9,418.8	44.6	0.33	9,410.4	36.8	0.24
W3LULC		9,357.0	-17.2	-0.13	9,373.0	-0.6	0.00
W7JBZR		9,530.2	156.0	1.14	9,612.4	238.8	1.56
WLB9Z2	X	9,230.3	-143.9	-1.05	9,272.4	-101.2	-0.66
WZVQVQ	*	9,028.4	-345.8	-2.52	9,020.4	-353.2	-2.31
X3XUGL		9,361.8	-12.4	-0.09	9,427.1	53.5	0.35
X7XBGL		9,343.0	-31.2	-0.23	9,419.4	45.8	0.30
XGWXXM	X	6,976.1	-2,398.1	-17.49	9,377.8	4.2	0.03



Plastics Interlaboratory Testing Program

Analysis 704

Tensile Stress at Yield - psi

Report #96
4th Qtr 2015

WebCode	Data Flag	Sample F31			Sample F32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
XJ3FLT		9,425.6	51.4	0.37	9,533.6	160.0	1.05
XRFAWP		9,286.4	-87.8	-0.64	9,369.2	-4.4	-0.03
XVUATF		9,188.2	-186.0	-1.36	9,266.8	-106.8	-0.70
XXNVPT		9,371.2	-3.0	-0.02	9,388.4	14.8	0.10
YCX4ZF		9,378.2	4.0	0.03	9,346.3	-27.3	-0.18
YE8YUK		9,574.0	199.8	1.46	9,574.0	200.4	1.31
ZN9TEC	X	9,584.2	210.0	1.53	9,259.3	-114.3	-0.75
ZUDRRM		9,520.8	146.6	1.07	9,493.2	119.6	0.78
ZWJVZC		9,380.8	6.6	0.05	9,378.8	5.2	0.03

Summary Statistics

Grand Means

9,374.22 psi

9,373.60 psi

Std Dev Btwn Labs

137.08 psi

152.75 psi

Statistics based on 73 of 79 reporting participants

Sample F31: ABS/PC & Sample F32: ABS/PC

Comments on Assigned Data Flags for Test #704

B8A9FD (X) - Data for both samples are low.

EXMNDB (X) - Data for both samples are high. Also inconsistent in testing within Sample F32.

TH8BYX (X) - Laboratory accidentally reported break values in place of yield for this test resulting in a flag. CTS has corrected this error. Due to consensus values a flag must remain on the corrected values.

ZN9TEC (X) - Inconsistent in testing between samples.

WLB9Z2 (X) - Data for this test reflects retest sample results received after Report 96 was published. Due to CTS Policy data must be flagged in order to not change the consensus statistics.

XGWXXM (X) - Inconsistent in testing between samples, data for Sample F31 are low.



Plastics Interlaboratory Testing Program

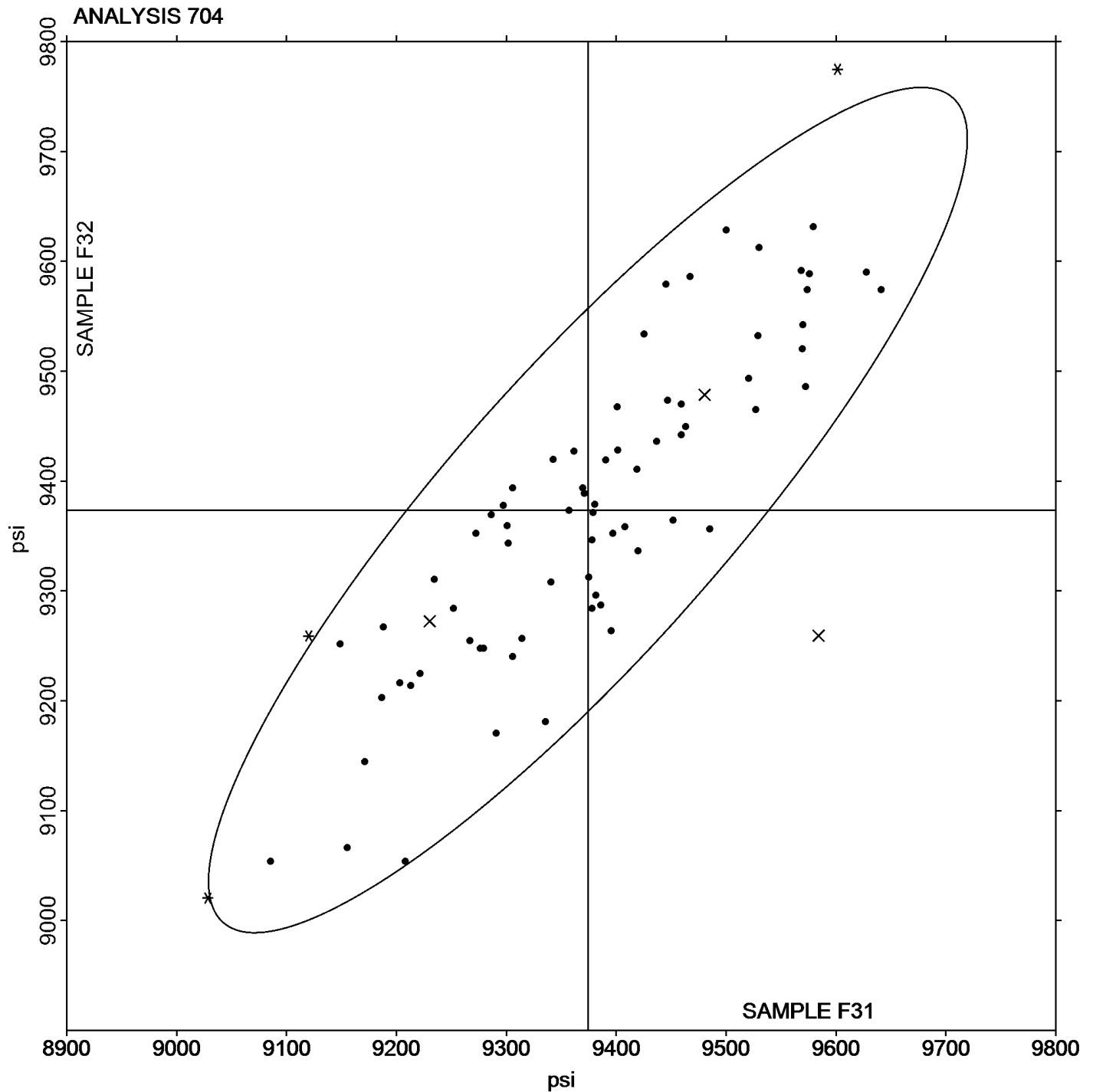
Analysis 704

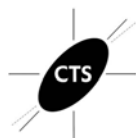
Tensile Stress at Yield - psi

Report #96

4th Qtr 2015

Grand Mean Sample F31: 9,374.22 psi Grand Mean Sample F32: 9,373.60 psi





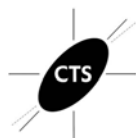
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 705

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F31			Sample F32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2MTWLC		7,116.2	225.0	1.53	7,144.6	203.2	1.48
2XC4MM		7,017.2	126.0	0.86	6,952.4	11.0	0.08
3YFH6C		6,987.2	96.0	0.65	6,828.8	-112.6	-0.82
424GWF		6,613.8	-277.4	-1.89	6,758.8	-182.6	-1.33
462X9A		7,002.4	111.2	0.76	7,116.8	175.4	1.27
4AWNG7		6,986.6	95.4	0.65	7,036.4	95.0	0.69
6NWM7N		6,776.2	-115.0	-0.78	6,749.0	-192.4	-1.40
6RRG36	X	9,446.8	2,555.6	17.41	7,068.8	127.4	0.93
6UL3XG		6,868.5	-22.7	-0.15	7,002.5	61.1	0.44
6XKLTN	*	6,946.4	55.2	0.38	7,270.6	329.2	2.39
74ZJZ8		7,042.3	151.1	1.03	6,789.1	-152.3	-1.11
784EKB		6,646.6	-244.6	-1.67	6,639.8	-301.6	-2.19
7MX3RN		6,852.5	-38.7	-0.26	7,013.2	71.8	0.52
7NN6GN		7,026.4	135.2	0.92	7,050.2	108.8	0.79
7ZZ968		7,026.2	135.0	0.92	6,951.0	9.6	0.07
8B27FE	*	6,780.0	-111.2	-0.76	6,592.6	-348.8	-2.54
8KLLW2		7,022.0	130.8	0.89	7,019.6	78.2	0.57
8ZYVW6		6,848.7	-42.4	-0.29	6,724.0	-217.4	-1.58
AF62ZZ		6,792.0	-99.2	-0.68	6,944.0	2.6	0.02
B8A9FD	X	3,028.4	-3,862.8	-26.31	3,129.9	-3,811.5	-27.70
BDUHEA		6,548.0	-343.2	-2.34	6,834.0	-107.4	-0.78
BNPPBT		6,632.9	-258.3	-1.76	6,669.5	-272.0	-1.98
C2XRAV		6,654.4	-236.8	-1.61	6,828.4	-113.0	-0.82
CXYFDV		6,706.9	-184.3	-1.26	6,980.2	38.7	0.28
EXMNDB	X	7,549.6	658.4	4.48	7,836.9	895.4	6.51
FJ63PB		7,040.2	149.0	1.01	7,054.5	113.1	0.82
GJ4K87		6,966.4	75.2	0.51	6,955.4	13.9	0.10
GJY498		6,835.7	-55.5	-0.38	6,984.2	42.8	0.31
GYX473		6,758.8	-132.4	-0.90	6,961.9	20.4	0.15
HCUQNU		6,840.6	-50.6	-0.34	6,888.6	-52.8	-0.38
HCY9LT		6,847.8	-43.4	-0.30	6,867.4	-74.0	-0.54
HNBB8Q		6,790.2	-101.0	-0.69	6,837.8	-103.6	-0.75
JN6G4B		6,934.0	42.8	0.29	6,894.4	-47.0	-0.34
JUUXF2		7,067.9	176.7	1.20	7,067.4	126.0	0.92
KDH2DE		7,011.2	120.0	0.82	7,019.9	78.5	0.57



Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 705

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F31			Sample F32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KN43VA		7,059.2	168.0	1.14	7,100.8	159.4	1.16
L3ZGTH		6,601.6	-289.6	-1.97	6,712.0	-229.4	-1.67
M4NDTV		6,963.7	72.5	0.49	7,028.0	86.6	0.63
MPM2XW		6,840.0	-51.2	-0.35	6,800.0	-141.4	-1.03
MT62GJ	*	6,632.6	-258.6	-1.76	7,043.1	101.7	0.74
N9W7BX		6,979.3	88.1	0.60	6,999.6	58.2	0.42
NARYWJ		6,913.1	22.0	0.15	6,857.4	-84.0	-0.61
NB8XF9		6,890.6	-0.6	0.00	7,025.2	83.8	0.61
PAL4R4		7,036.0	144.8	0.99	6,884.0	-57.4	-0.42
PK2X4W		6,863.2	-27.9	-0.19	7,048.9	107.5	0.78
PK3NCZ		6,876.1	-15.1	-0.10	6,859.6	-81.8	-0.59
PXRRD6		6,883.8	-7.3	-0.05	6,930.0	-11.5	-0.08
Q6NMDN		6,922.2	31.0	0.21	6,812.0	-129.4	-0.94
RZ82GM		6,735.8	-155.4	-1.06	6,716.8	-224.6	-1.63
TABCQX		6,974.0	82.8	0.56	7,139.4	198.0	1.44
TB7URY		6,813.2	-78.0	-0.53	6,823.2	-118.2	-0.86
TQZJJN		7,173.8	282.6	1.93	7,084.0	142.6	1.04
TZNA93		6,714.0	-177.2	-1.21	6,902.0	-39.4	-0.29
UY7N8Y		7,101.1	209.9	1.43	7,060.5	119.1	0.87
VPFKJW		6,819.2	-72.0	-0.49	6,891.4	-50.0	-0.36
W2MUJQ		6,999.6	108.4	0.74	7,155.0	213.6	1.55
W3LULC		7,074.8	183.6	1.25	6,995.4	54.0	0.39
W7JBZR		7,056.2	165.0	1.12	7,026.4	85.0	0.62
WLB9Z2	X	6,854.4	-36.8	-0.25	6,875.3	-66.1	-0.48
WZVQVQ		6,692.0	-199.2	-1.36	6,834.8	-106.6	-0.78
X3XUGL		6,926.1	34.9	0.24	7,020.6	79.2	0.58
X7XBGL		6,876.2	-15.0	-0.10	7,077.0	135.6	0.99
XGWXMX	X	9,455.5	2,564.3	17.47	6,793.0	-148.4	-1.08
XJ3FLT		7,091.2	200.0	1.36	7,180.2	238.8	1.74
XRFAWP		6,745.6	-145.6	-0.99	6,959.0	17.6	0.13
XXNVPT		6,804.2	-87.0	-0.59	7,001.4	60.0	0.44
YCX4ZF		6,950.3	59.1	0.40	7,043.1	101.7	0.74
YE8YUK		6,847.5	-43.7	-0.30	6,943.3	1.9	0.01
ZN9TEC		7,063.4	172.2	1.17	6,837.1	-104.3	-0.76
ZUDRRM		7,059.2	168.0	1.14	6,980.4	39.0	0.28



Plastics Interlaboratory Testing Program

Report #96

4th Qtr 2015

Analysis 705

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F31			Sample F32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ZWJVZC		6,853.4	-37.8	-0.26	6,935.8	-5.7	-0.04

Summary Statistics

Grand Means

6,891.19 psi

6,941.43 psi

Std Dev Btwn Labs

146.80 psi

137.58 psi

Statistics based on 66 of 71 reporting participants

Sample F31: ABS/PC & Sample F32: ABS/PC

Comments on Assigned Data Flags for Test #705

B8A9FD (X) - Data for both samples are low.

EXMNDB (X) - Data for both samples are high. Also inconsistent in testing within Sample F32.

6RRG36 (X) - Inconsistent in testing between samples, data for Sample F31 are high.

WLB9Z2 (X) - Data for this test reflects retest sample results received after Report 96 was published. Due to CTS Policy data must be flagged in order to not change the consensus statistics.

XGWXXM (X) - Inconsistent in testing between samples, data for Sample F31 are high.



Plastics Interlaboratory Testing Program

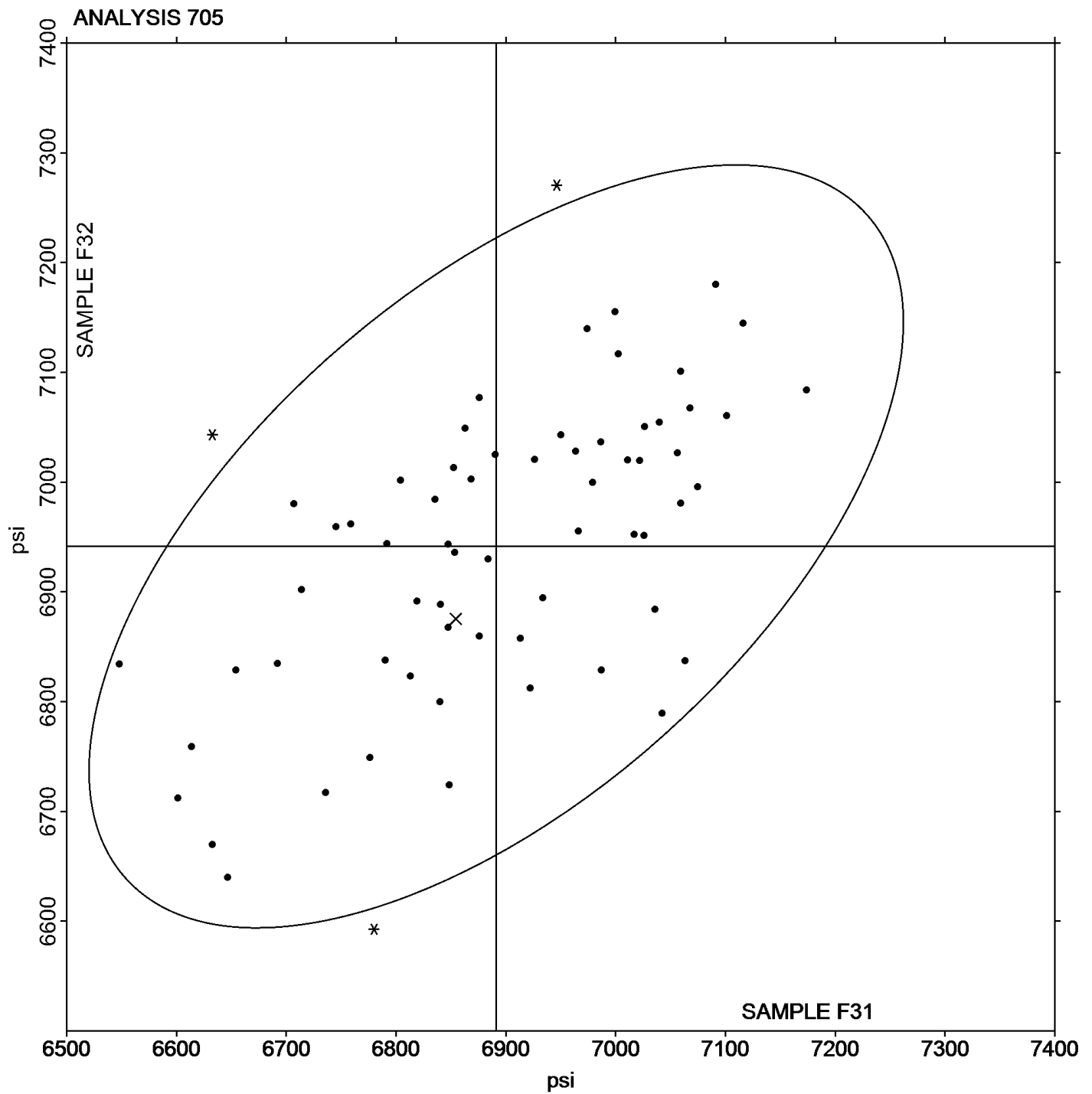
Analysis 705

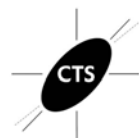
Tensile Stress at Break - psi

Report #96

4th Qtr 2015

Grand Mean Sample F31: 6,891.19 psi Grand Mean Sample F32: 6,941.43 psi





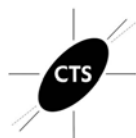
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 706

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F31			Sample F32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2MTWLC		3.642	0.063	0.63	3.684	0.102	1.28
2XC4MM		3.600	0.021	0.21	3.576	-0.006	-0.07
3YFH6C		3.684	0.105	1.05	3.632	0.050	0.63
424GWF		3.454	-0.125	-1.25	3.498	-0.084	-1.05
462X9A		3.488	-0.091	-0.91	3.476	-0.106	-1.32
4AWNG7		3.574	-0.005	-0.05	3.580	-0.002	-0.02
6NWM7N		3.570	-0.009	-0.09	3.580	-0.002	-0.02
6RRG36		3.806	0.227	2.27	3.722	0.140	1.76
6UL3XG		3.548	-0.031	-0.31	3.544	-0.038	-0.47
6XKLTN	X	10.880	7.301	73.04	10.956	7.374	92.31
74ZJZ8		3.328	-0.251	-2.51	3.400	-0.182	-2.27
784EKB	X	2.882	-0.697	-6.98	2.884	-0.698	-8.73
7MX3RN		3.382	-0.197	-1.97	3.440	-0.142	-1.77
7NN6GN		3.660	0.081	0.81	3.666	0.085	1.06
7ZZ968		3.718	0.139	1.39	3.694	0.112	1.41
8B27FE		3.446	-0.133	-1.33	3.492	-0.090	-1.12
8KLLW2		3.620	0.041	0.41	3.612	0.030	0.38
8ZYVW6	X	7.542	3.963	39.65	7.544	3.962	49.60
AF62ZZ		3.508	-0.071	-0.71	3.550	-0.032	-0.40
B8A9FD	X	37.160	33.581	335.97	46.260	42.678	534.26
BNPPBT		3.564	-0.015	-0.15	3.542	-0.040	-0.50
C2XRAV		3.440	-0.139	-1.39	3.460	-0.122	-1.52
CXYFDV	X	3.800	0.221	2.21	4.000	0.418	5.24
DJVA2C	X	3.464	-0.115	-1.15	3.364	-0.218	-2.72
FJ63PB		3.622	0.042	0.42	3.596	0.014	0.18
GJY498		3.632	0.053	0.53	3.664	0.082	1.03
GYX473		3.618	0.039	0.39	3.632	0.050	0.63
HCUQNU		3.658	0.079	0.79	3.634	0.052	0.66
HCY9LT		3.622	0.043	0.43	3.644	0.062	0.78
JN6G4B		3.638	0.059	0.59	3.608	0.026	0.33
KDH2DE	X	7.314	3.735	37.36	7.184	3.602	45.10
KN43VA		3.518	-0.061	-0.61	3.534	-0.048	-0.60
L3ZGTH		3.444	-0.135	-1.35	3.450	-0.132	-1.65
M4NDTV		3.774	0.195	1.95	3.694	0.113	1.41
MPM2XW		3.560	-0.019	-0.19	3.560	-0.022	-0.27



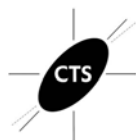
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 706

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F31			Sample F32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MT62GJ	X	3.376	-0.203	-2.03	2.903	-0.679	-8.50
N9W7BX		3.632	0.053	0.53	3.670	0.088	1.11
NARYWJ		3.502	-0.077	-0.77	3.558	-0.024	-0.30
NB8XF9		3.728	0.149	1.49	3.744	0.162	2.03
PAL4R4		3.522	-0.057	-0.57	3.516	-0.066	-0.82
PK2X4W		3.630	0.051	0.51	3.632	0.050	0.63
PK3NCZ		3.562	-0.017	-0.17	3.586	0.004	0.06
Q6NMDN		3.648	0.069	0.69	3.598	0.016	0.21
RZ82GM	X	3.604	0.025	0.25	3.728	0.146	1.83
TABCQX		3.650	0.071	0.71	3.624	0.042	0.53
TB7URY	*	3.816	0.237	2.37	3.712	0.130	1.63
TQZJJN		3.480	-0.099	-0.99	3.440	-0.142	-1.77
TZNA93		3.481	-0.098	-0.98	3.488	-0.094	-1.17
UY7N8Y		3.580	0.001	0.01	3.602	0.020	0.26
W2MUJQ		3.550	-0.029	-0.29	3.556	-0.026	-0.32
W3LULC	X	3.594	0.015	0.15	3.740	0.158	1.98
W7JBZR	*	3.532	-0.047	-0.47	3.624	0.042	0.53
WLB9Z2	X	3.673	0.094	0.94	3.706	0.125	1.56
WZVQVQ		3.560	-0.019	-0.19	3.544	-0.038	-0.47
X3XUGL	X	4.800	1.221	12.21	4.852	1.270	15.90
X7XBGL		3.552	-0.027	-0.27	3.626	0.044	0.56
XJ3FLT		3.672	0.093	0.93	3.654	0.072	0.91
XRFAWP		3.532	-0.047	-0.47	3.526	-0.056	-0.70
XVUATF		3.468	-0.111	-1.11	3.492	-0.090	-1.12
XXNVPT		3.550	-0.029	-0.29	3.564	-0.018	-0.22
YCX4ZF		3.720	0.141	1.41	3.660	0.078	0.98
YE8YUK		3.520	-0.059	-0.59	3.480	-0.102	-1.27
ZN9TEC		3.592	0.013	0.13	3.586	0.004	0.06
ZUDRRM		3.588	0.009	0.09	3.618	0.036	0.46
ZWJVZC		3.520	-0.059	-0.59	3.560	-0.022	-0.27



Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 706

Percent Elongation at Yield - Percent

Summary Statistics			
Grand Means	3.5794 Percent	3.5816 Percent	
Std Dev Btwn Labs	0.1000 Percent	0.0799 Percent	
Statistics based on 53 of 65 reporting participants			

Sample F31: ABS/PC & Sample F32: ABS/PC

Comments on Assigned Data Flags for Test #706

- B8A9FD (X) - Data for both samples are high. Also inconsistent in testing within both samples.
- DJVA2C (X) - Data for Sample F32 are low.
- 6XKLTN (X) - Data for both samples are high.
- X3XUGL (X) - Data for both samples are high.
- 784EKB (X) - Data for both samples are low.
- RZ82GM (X) - Inconsistent in testing between samples.
- 8ZYVW6 (X) - Data for both samples are high.
- W3LULC (X) - Inconsistent in testing between samples.
- CXYFDV (X) - Data for Sample F32 are high. Also inconsistent in testing within Sample F31.
- MT62GJ (X) - Data for Sample F32 are low. Also inconsistent in testing within both samples.
- WLB9Z2 (X) - Data for this test reflects retest sample results received after Report 96 was published. Due to CTS Policy data must be flagged in order to not change the consensus statistics.
- KDH2DE (X) - Data for both samples are high.



Plastics Interlaboratory Testing Program

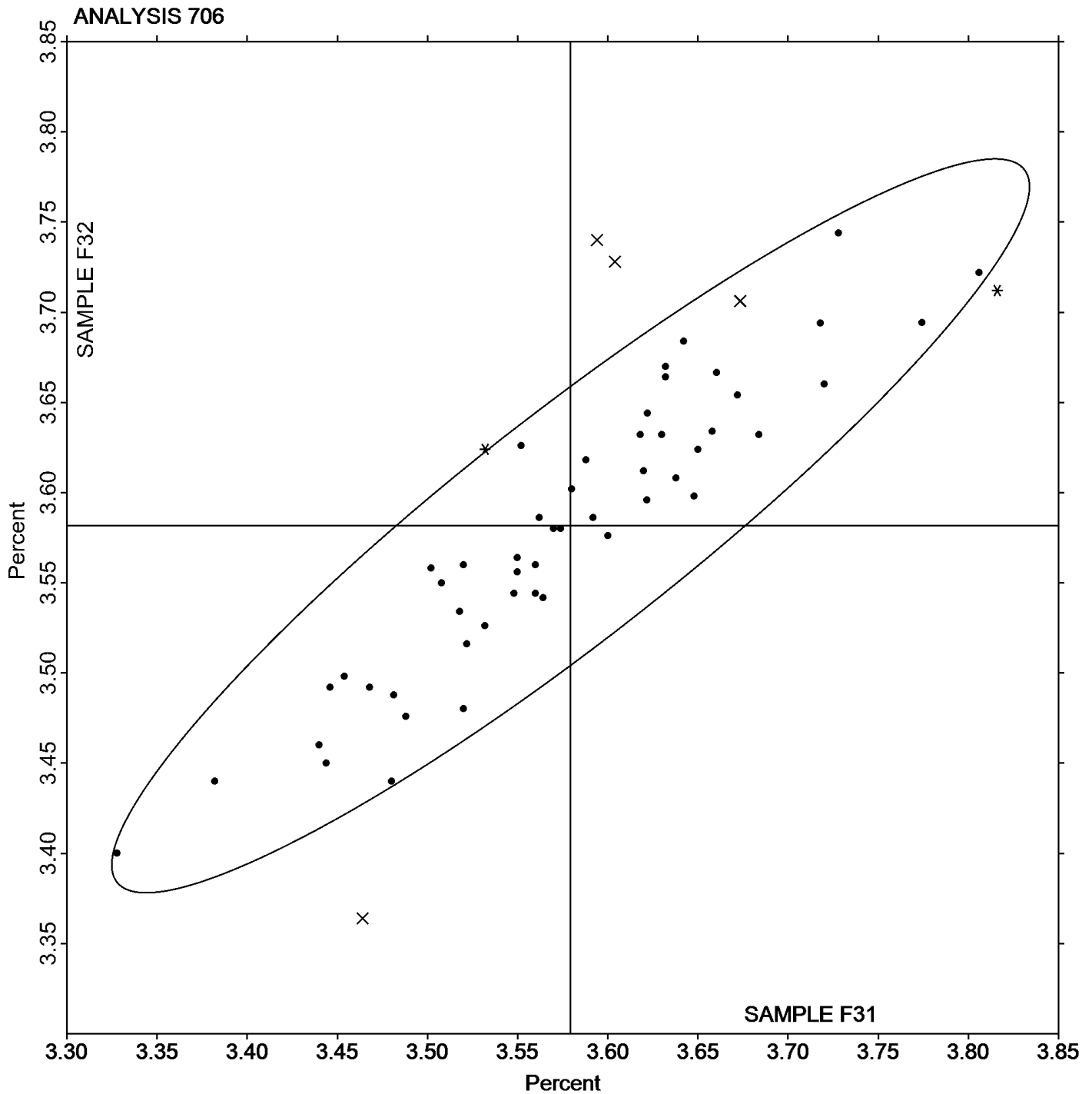
Analysis 706

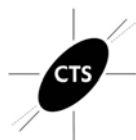
Percent Elongation at Yield - Percent

Report #96

4th Qtr 2015

Grand Mean Sample F31: 3.5794 Percent Grand Mean Sample F32: 3.5816 Percent





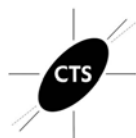
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 708

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F31			Sample F32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2MTWLC		431.81	20.37	1.00	428.44	17.66	0.93
2XC4MM		413.00	1.55	0.08	414.54	3.76	0.20
3YFH6C		408.32	-3.13	-0.15	408.66	-2.12	-0.11
424GWF		395.17	-16.27	-0.80	391.69	-19.09	-1.01
462X9A		422.72	11.27	0.55	429.56	18.78	0.99
4AWNG7		417.72	6.27	0.31	413.74	2.96	0.16
6NWM7N		397.76	-13.69	-0.67	393.46	-17.32	-0.91
6RRG36	*	371.20	-40.25	-1.98	385.20	-25.58	-1.35
6UL3XG		403.35	-8.10	-0.40	401.16	-9.63	-0.51
74ZJZ8		425.19	13.75	0.67	433.42	22.64	1.20
784EKB		421.00	9.55	0.47	421.96	11.18	0.59
7FH2TE		413.99	2.55	0.12	417.35	6.57	0.35
7MX3RN	*	461.83	50.39	2.47	461.28	50.50	2.67
7NN6GN		384.60	-26.85	-1.32	378.60	-32.18	-1.70
7ZZ968		397.92	-13.53	-0.66	394.12	-16.66	-0.88
8B27FE		390.80	-20.65	-1.01	406.54	-4.24	-0.22
8KLLW2		400.84	-10.61	-0.52	400.90	-9.88	-0.52
8ZYVW6	X	173.76	-237.69	-11.67	172.89	-237.89	-12.56
AF62ZZ		397.54	-13.91	-0.68	397.82	-12.96	-0.68
B8A9FD	X	297.91	-113.54	-5.57	321.70	-89.08	-4.70
BNPPBT		398.18	-13.27	-0.65	398.97	-11.81	-0.62
C2XRAV	*	464.07	52.62	2.58	455.83	45.05	2.38
CXYFDV	X	539.95	128.50	6.31	522.05	111.27	5.88
DJVA2C	*	421.44	9.99	0.49	435.58	24.80	1.31
FJ63PB		410.83	-0.61	-0.03	412.44	1.66	0.09
GJY498		400.92	-10.53	-0.52	400.08	-10.71	-0.57
GYX473		424.62	13.17	0.65	417.39	6.61	0.35
HBLPP3		393.48	-17.97	-0.88	391.14	-19.64	-1.04
HCUQNU		425.20	13.75	0.68	418.20	7.42	0.39
HCY9LT	*	358.20	-53.24	-2.61	370.53	-40.25	-2.13
HNBB8Q		421.00	9.55	0.47	413.53	2.75	0.15
JN6G4B		410.66	-0.79	-0.04	405.76	-5.02	-0.27
KDH2DE	X	139.70	-271.74	-13.34	142.92	-267.86	-14.15
KN43VA		416.64	5.19	0.25	421.40	10.62	0.56
L3ZGTH	X	391.84	-19.60	-0.96	415.30	4.52	0.24



Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 708

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F31			Sample F32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
M4NDTV		411.76	0.31	0.02	415.20	4.42	0.23
MPM2XW	*	420.40	8.95	0.44	399.80	-10.98	-0.58
MT62GJ	X	289.44	-122.01	-5.99	385.37	-25.41	-1.34
NARYWJ		399.63	-11.82	-0.58	405.11	-5.68	-0.30
NB8XF9		403.02	-8.43	-0.41	403.90	-6.88	-0.36
PAL4R4		410.20	-1.25	-0.06	416.00	5.22	0.28
PK2X4W		436.10	24.66	1.21	432.68	21.90	1.16
Q6NMDN		389.95	-21.50	-1.06	390.30	-20.48	-1.08
RZ82GM		397.10	-14.35	-0.70	384.40	-26.38	-1.39
TABCQX		371.98	-39.47	-1.94	378.10	-32.68	-1.73
TB7URY		416.54	5.09	0.25	408.48	-2.30	-0.12
TQZJJN		393.00	-18.45	-0.91	393.00	-17.78	-0.94
TZNA93		431.20	19.75	0.97	429.20	18.42	0.97
UY7N8Y		444.54	33.10	1.62	440.63	29.85	1.58
W2MUJQ		425.80	14.36	0.70	423.00	12.22	0.65
W3LULC		415.28	3.83	0.19	402.48	-8.30	-0.44
W7JBZR		403.13	-8.32	-0.41	400.33	-10.45	-0.55
WLB9Z2	X	361.22	-50.23	-2.47	367.68	-43.10	-2.28
WZVQVQ		392.90	-18.55	-0.91	396.78	-14.00	-0.74
X3XUGL	X	225.17	-186.28	-9.14	224.52	-186.26	-9.84
X7XBGL		417.15	5.70	0.28	415.08	4.30	0.23
XGXR4H		420.98	9.53	0.47	422.00	11.22	0.59
XJ3FLT		383.24	-28.21	-1.38	385.12	-25.66	-1.36
XRFAWP		415.04	3.59	0.18	416.56	5.78	0.31
XVUATF		424.54	13.09	0.64	423.70	12.92	0.68
XXNVPT	X	492.70	81.25	3.99	527.34	116.56	6.16
YCX4ZF		429.58	18.13	0.89	424.27	13.49	0.71
YE8YUK		450.80	39.35	1.93	447.80	37.02	1.95
ZN9TEC		426.99	15.55	0.76	420.61	9.83	0.52
ZUDRRM		410.13	-1.32	-0.06	409.92	-0.87	-0.05



Plastics Interlaboratory Testing Program

Report #96

4th Qtr 2015

Analysis 708

Modulus of Elasticity - ksi

		Summary Statistics
Grand Means	411.446 ksi	410.781 ksi
Stnd Dev Btwn Labs	20.371 ksi	18.936 ksi
		Statistics based on 56 of 65 reporting participants

Sample F31: ABS/PC & Sample F32: ABS/PC

Comments on Assigned Data Flags for Test #708

B8A9FD (X) - Data for both samples are low. Also inconsistent in testing within Sample F31.

XXNVPT (X) - Data for both samples are high. Also inconsistent in testing within Sample F31.

X3XUGL (X) - Data for both samples are low.

8ZYVW6 (X) - Data for both samples are low.

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

MT62GJ (X) - Inconsistent in testing between samples, data for Sample F31 are low. Also inconsistent in testing within both samples.

L3ZGTH (X) - Inconsistent in testing between samples.

WLB9Z2 (X) - Data for this test reflects retest sample results received after Report 96 was published. Due to CTS Policy data must be flagged in order to not change the consensus statistics.

KDH2DE (X) - Data for both samples are low.



Plastics Interlaboratory Testing Program

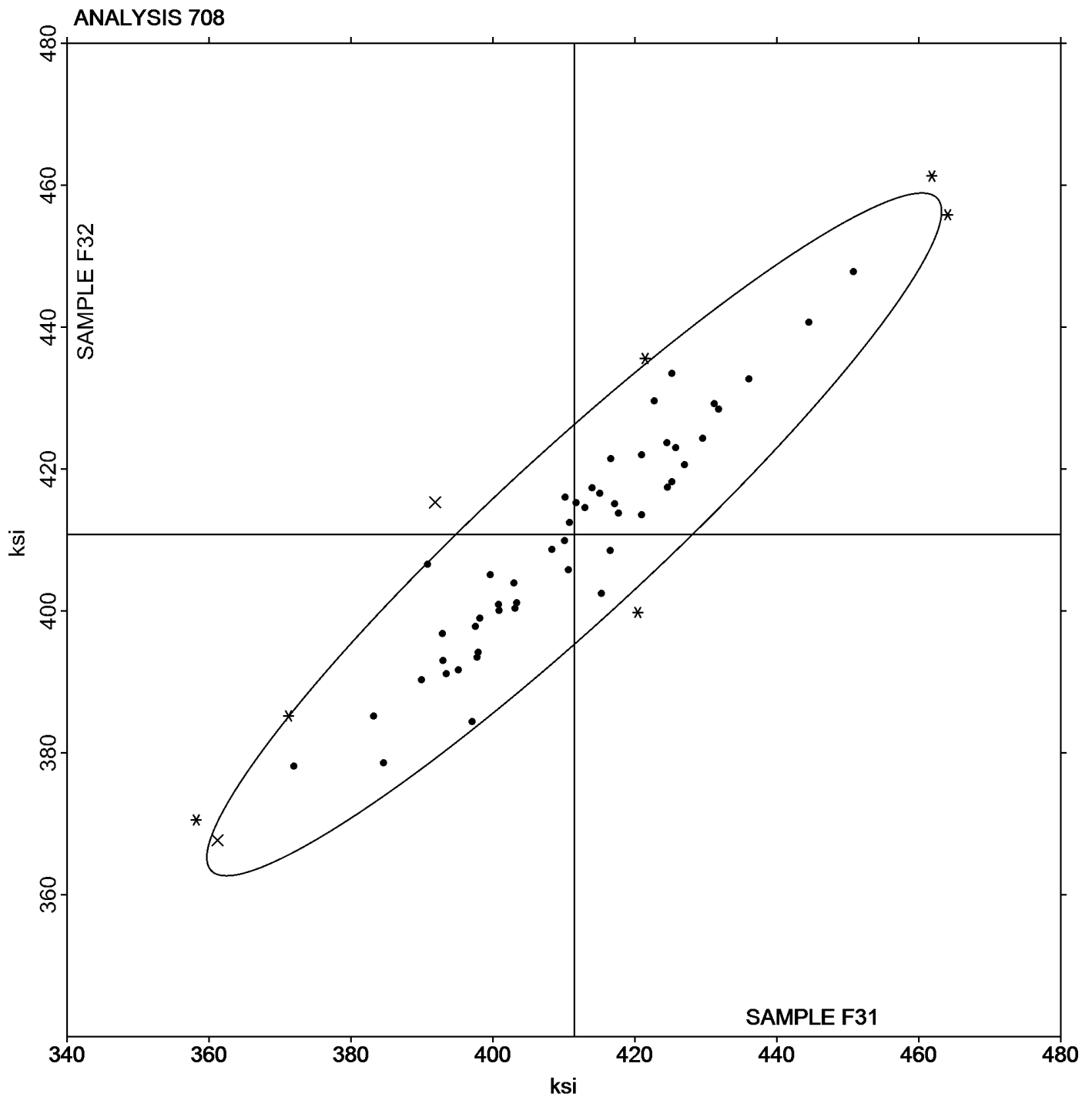
Analysis 708

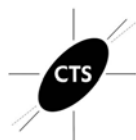
Modulus of Elasticity - ksi

Report #96

4th Qtr 2015

Grand Mean Sample F31: 411.45 ksi Grand Mean Sample F32: 410.78 ksi





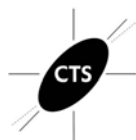
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 730

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C31			Sample C32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29B4X6		48.18	-0.61	-0.92	48.24	-0.63	-0.95
2D3BFE		48.34	-0.45	-0.68	48.50	-0.37	-0.56
2G8YXP		48.17	-0.62	-0.94	48.41	-0.46	-0.70
36AHLT		48.23	-0.56	-0.84	48.31	-0.56	-0.85
3JMWLW	X	44.40	-4.39	-6.61	44.40	-4.47	-6.70
3QQWYE	*	50.42	1.63	2.45	49.82	0.95	1.42
424GWF		48.26	-0.53	-0.80	48.44	-0.43	-0.65
4AWNG7		48.87	0.08	0.12	49.41	0.54	0.81
4NEG6D		49.87	1.08	1.63	49.62	0.74	1.11
4RXC7K		49.14	0.35	0.53	49.20	0.32	0.48
6QZKDB		48.78	-0.01	-0.01	49.32	0.45	0.67
6UL3XG		48.09	-0.70	-1.05	48.16	-0.72	-1.08
74ZJZ8		47.80	-0.99	-1.49	48.01	-0.86	-1.29
77UA7L		48.81	0.02	0.03	48.77	-0.11	-0.16
7KWPHG		48.80	0.01	0.02	48.72	-0.16	-0.23
7MX3RN		48.63	-0.16	-0.24	48.91	0.04	0.06
7P3L2G		48.61	-0.18	-0.27	48.33	-0.54	-0.82
86Q3FD		48.56	-0.23	-0.35	48.48	-0.39	-0.59
8WXUUM	X	52.79	4.00	6.03	53.37	4.50	6.73
9Q8YBU		48.97	0.18	0.27	48.92	0.04	0.07
9V2TBG		49.01	0.22	0.33	49.64	0.77	1.15
BAFQE9		48.20	-0.58	-0.88	48.24	-0.64	-0.96
D2PAN3		49.48	0.69	1.05	49.29	0.41	0.62
EFNB3N	*	47.83	-0.96	-1.44	47.26	-1.61	-2.42
FM2MUU	*	49.72	0.93	1.41	50.49	1.61	2.42
G7A9T8		48.43	-0.36	-0.54	48.82	-0.05	-0.08
GJ4K87		49.01	0.22	0.33	49.33	0.46	0.68
GJY498		49.22	0.43	0.65	48.74	-0.13	-0.20
HWMPR9		48.66	-0.13	-0.20	48.83	-0.05	-0.07
JFD3Z6		49.30	0.51	0.77	49.36	0.49	0.73
KKYH43		48.52	-0.27	-0.41	48.72	-0.15	-0.23
KR2NJ7		48.78	-0.01	-0.01	49.02	0.14	0.21
KTVAEH		48.17	-0.62	-0.93	48.62	-0.26	-0.39
MGE6H7		48.65	-0.14	-0.20	49.16	0.29	0.43
MH6987		49.46	0.67	1.00	49.38	0.50	0.75



Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 730

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C31			Sample C32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
N9W7BX		49.39	0.60	0.90	49.62	0.75	1.12
NUWEFV		47.69	-1.10	-1.65	48.29	-0.59	-0.88
NW8AAZ		47.76	-1.03	-1.55	48.02	-0.85	-1.27
PK2X4W		48.76	-0.03	-0.04	48.68	-0.19	-0.29
PVPPRA	*	49.98	1.19	1.80	50.73	1.85	2.78
QBW4PX		48.23	-0.56	-0.85	48.42	-0.45	-0.68
QUPAV3		48.84	0.05	0.08	48.88	0.00	0.00
QVZNP4		48.85	0.06	0.09	49.16	0.29	0.43
QYZZHH		48.12	-0.67	-1.00	48.33	-0.55	-0.82
TB62UQ		49.27	0.48	0.73	49.11	0.24	0.36
TCZKWR		48.77	-0.02	-0.03	48.33	-0.55	-0.82
TH8BYX		48.63	-0.16	-0.23	48.71	-0.16	-0.24
TZNA93	*	50.55	1.76	2.65	50.27	1.40	2.09
U2EVEX		47.96	-0.83	-1.25	48.58	-0.29	-0.44
UQTUW3		49.24	0.45	0.67	49.53	0.65	0.97
VHJDBN		49.59	0.80	1.20	49.23	0.36	0.54
W2MUJQ		49.44	0.65	0.98	49.46	0.59	0.88
W8EU3T		48.03	-0.76	-1.14	47.58	-1.30	-1.94
WVY8Q8		49.45	0.66	1.00	49.14	0.27	0.40
XJ3FLT	*	49.21	0.42	0.64	48.28	-0.59	-0.88
XJZT4F		48.95	0.16	0.24	49.16	0.28	0.42
YLNN4T		47.71	-1.08	-1.62	48.14	-0.74	-1.10

Summary Statistics

Grand Means

48.789 MPa

48.874 MPa

Std Dev Btwn Labs

0.664 MPa

0.668 MPa

Statistics based on 55 of 57 reporting participants

Sample C31: ABS & Sample C32: ABS

Comments on Assigned Data Flags for Test #730

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

3JMQLW (X) - Data for both samples are low. Also inconsistent in testing within Sample C31.



Plastics Interlaboratory Testing Program

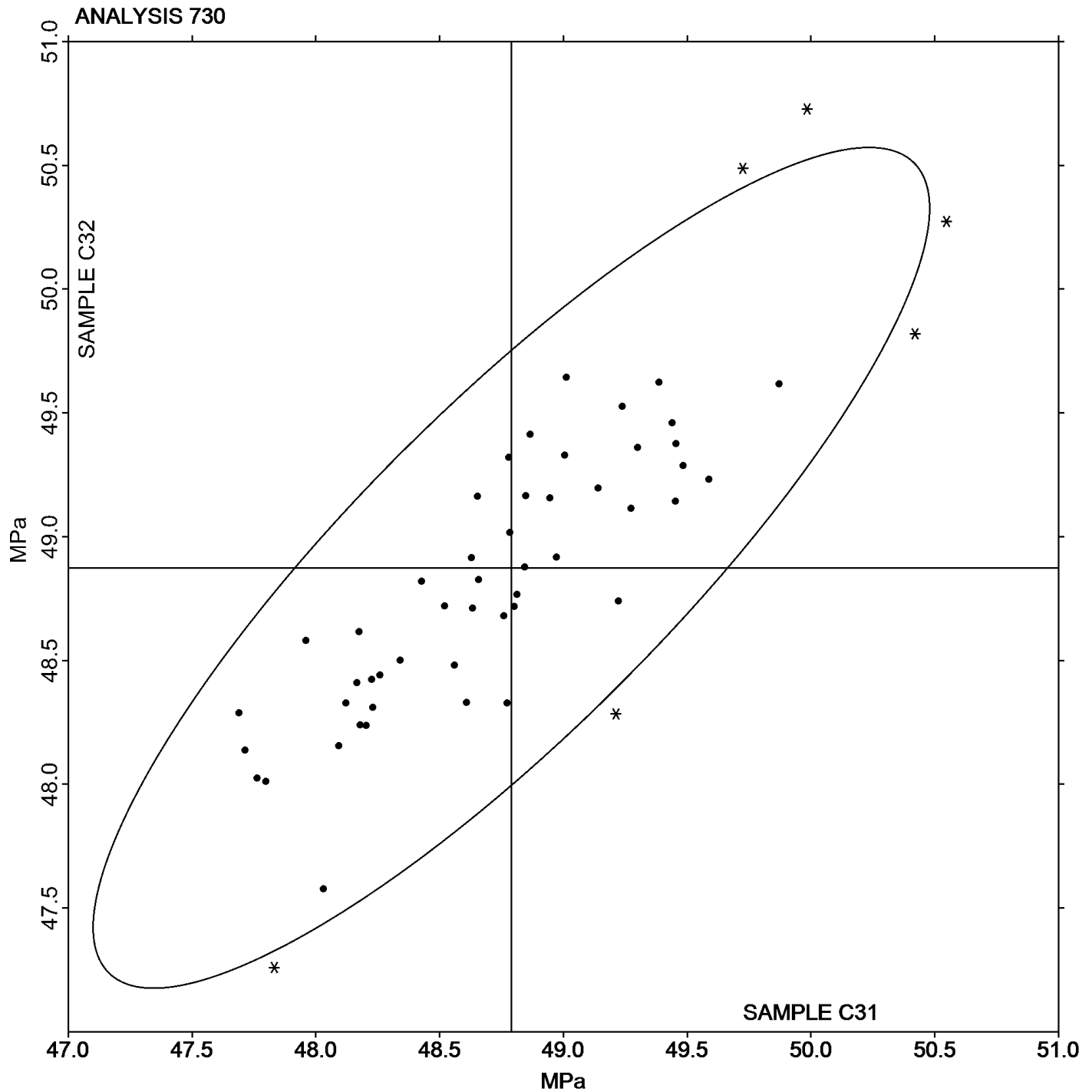
Analysis 730

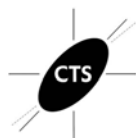
Tensile Stress at Yield - MPa

Report #96

4th Qtr 2015

Grand Mean Sample C31: 48.789 MPa Grand Mean Sample C32: 48.874 MPa





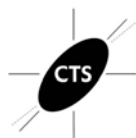
Plastics Interlaboratory Testing Program

Report #96
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Analysis 731

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C31			Sample C32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29B4X6		34.22	-0.73	-0.45	34.42	-0.57	-0.35
2D3BFE		34.74	-0.21	-0.13	32.94	-2.04	-1.26
36AHLT		37.12	2.17	1.35	35.62	0.64	0.40
3QQWYE		35.80	0.85	0.53	35.52	0.54	0.33
424GWF		32.74	-2.21	-1.37	32.32	-2.66	-1.65
4AWNG7		34.15	-0.80	-0.50	34.86	-0.12	-0.08
4NEG6D		34.28	-0.67	-0.41	33.86	-1.13	-0.70
4RXC7K		33.29	-1.66	-1.03	34.21	-0.77	-0.48
6QZKDB		33.36	-1.59	-0.99	34.62	-0.36	-0.23
6UL3XG		32.60	-2.35	-1.46	31.97	-3.02	-1.86
74ZJZ8		32.76	-2.19	-1.36	32.99	-1.99	-1.23
77UA7L		34.37	-0.58	-0.36	35.69	0.71	0.44
7KWPHG		34.18	-0.77	-0.48	33.10	-1.89	-1.17
7MX3RN		34.81	-0.15	-0.09	36.07	1.08	0.67
7P3L2G		36.98	2.03	1.26	36.55	1.56	0.97
86Q3FD		34.44	-0.51	-0.32	34.20	-0.78	-0.48
8WXUUM		38.09	3.13	1.95	37.83	2.85	1.76
9NZGCV	X	47.96	13.01	8.07	48.05	13.06	8.08
9Q8YBU		37.24	2.29	1.42	37.41	2.42	1.50
9V2TBG		35.68	0.73	0.45	35.93	0.94	0.58
BAFQE9		35.91	0.96	0.60	36.38	1.40	0.86
D2PAN3		33.50	-1.46	-0.90	33.63	-1.36	-0.84
EFNB3N		32.39	-2.56	-1.59	32.73	-2.26	-1.39
FM2MUU		34.92	-0.04	-0.02	35.13	0.15	0.09
G7A9T8		35.54	0.59	0.36	35.22	0.24	0.15
GJ4K87		33.63	-1.32	-0.82	34.80	-0.18	-0.11
GJY498		32.75	-2.21	-1.37	32.64	-2.34	-1.45
JFD3Z6		35.08	0.13	0.08	36.08	1.10	0.68
KKYH43		38.80	3.85	2.39	38.66	3.68	2.27
KR2NJ7		34.76	-0.20	-0.12	35.60	0.62	0.38
KTVAEH		32.82	-2.13	-1.32	33.41	-1.57	-0.97
MGE6H7		37.20	2.25	1.40	37.69	2.70	1.67
MH6987		35.91	0.96	0.60	35.92	0.93	0.58
N9W7BX		36.98	2.03	1.26	37.15	2.16	1.34
NUWEFV		37.10	2.15	1.33	35.74	0.76	0.47



Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 731

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C31			Sample C32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NW8AAZ		33.29	-1.66	-1.03	33.72	-1.26	-0.78
PK2X4W		33.98	-0.97	-0.60	33.88	-1.10	-0.68
PVPPRA		36.84	1.89	1.17	36.92	1.94	1.20
QBW4PX		34.50	-0.45	-0.28	34.64	-0.34	-0.21
QUPAV3		32.98	-1.97	-1.22	34.24	-0.75	-0.46
QVZNP4		34.17	-0.78	-0.48	34.19	-0.79	-0.49
QYZZHH		35.08	0.13	0.08	35.38	0.40	0.25
TB62UQ		32.68	-2.27	-1.41	32.97	-2.01	-1.24
TCZKWR		33.97	-0.98	-0.61	32.82	-2.17	-1.34
TZNA93		36.77	1.82	1.13	36.62	1.64	1.01
U2EVEX	*	36.30	1.35	0.84	38.17	3.19	1.97
UQTUW3		36.83	1.88	1.16	35.96	0.97	0.60
VHJDBN		35.02	0.07	0.04	34.56	-0.43	-0.26
W2MUJQ		36.48	1.53	0.95	36.62	1.64	1.01
W8EU3T		34.15	-0.80	-0.50	33.68	-1.31	-0.81
WVY8Q8		34.19	-0.76	-0.47	33.53	-1.45	-0.90
XJ3FLT		36.50	1.55	0.96	35.42	0.44	0.27
XJZT4F		35.60	0.65	0.40	34.98	0.00	0.00
YE8YUK	X	41.42	6.47	4.02	41.67	6.69	4.13

Summary Statistics

Grand Means

34.952 MPa

34.984 MPa

Std Dev Btwn Labs

1.611 MPa

1.618 MPa

Statistics based on 52 of 54 reporting participants

Sample C31: ABS & Sample C32: ABS

Comments on Assigned Data Flags for Test #731

YE8YUK (X) - Data for both samples are high.

9NZGCY (X) - Data for both samples are high.



Plastics Interlaboratory Testing Program

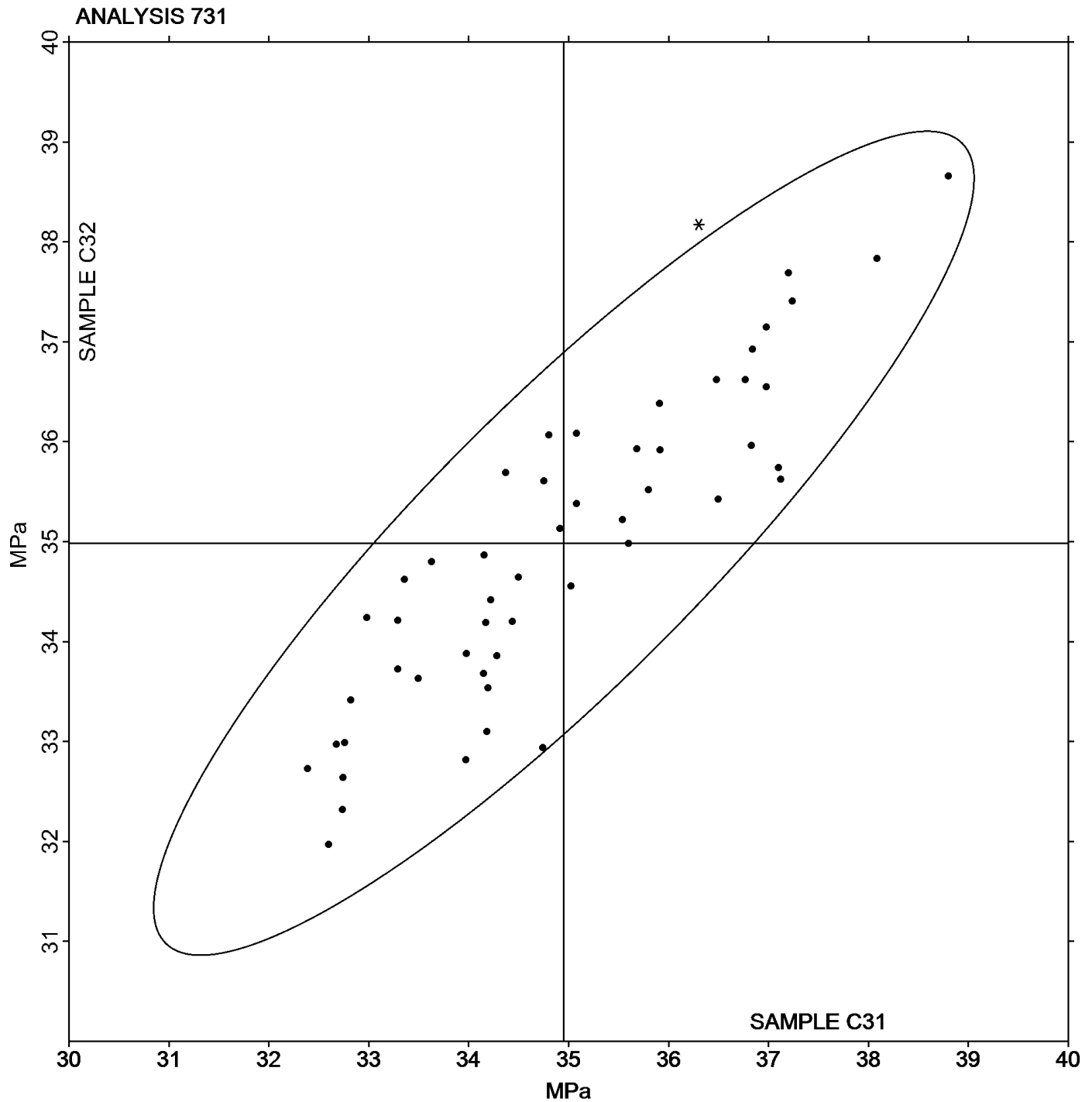
Analysis 731

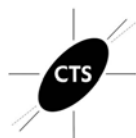
Tensile Stress at Break - MPa

Report #96

4th Qtr 2015

Grand Mean Sample C31: 34.952 MPa Grand Mean Sample C32: 34.984 MPa





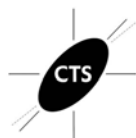
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 732

Percent Strain at Yield

WebCode	Data Flag	Sample C31			Sample C32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29B4X6	*	2.684	0.010	0.17	2.560	-0.100	-1.44
2D3BFE		2.604	-0.070	-1.19	2.584	-0.076	-1.09
2G8YXP		2.640	-0.034	-0.58	2.660	0.000	0.00
3JMWLW	X	3.000	0.326	5.53	3.000	0.340	4.87
3QQWYE		2.734	0.060	1.01	2.690	0.030	0.43
424GWF		2.610	-0.064	-1.09	2.618	-0.042	-0.60
4AWNG7		2.680	0.006	0.10	2.602	-0.058	-0.83
4NEG6D		2.710	0.036	0.61	2.708	0.048	0.69
4RXC7K		2.664	-0.010	-0.17	2.660	0.000	0.00
6QZKDB		2.700	0.026	0.44	2.720	0.060	0.86
6UL3XG		2.740	0.066	1.12	2.712	0.052	0.74
74ZJZ8	X	2.698	0.024	0.40	2.542	-0.118	-1.69
77UA7L		2.670	-0.004	-0.07	2.706	0.046	0.66
7KWPHG		2.640	-0.034	-0.58	2.648	-0.012	-0.17
7MX3RN		2.652	-0.022	-0.38	2.642	-0.018	-0.26
7P3L2G		2.682	0.008	0.13	2.674	0.014	0.20
86Q3FD	*	2.798	0.124	2.10	2.850	0.190	2.72
8WXUUM		2.729	0.055	0.94	2.779	0.118	1.70
9Q8YBU	X	2.796	0.122	2.07	3.290	0.630	9.03
9V2TBG		2.712	0.038	0.64	2.686	0.026	0.37
BAFQE9		2.679	0.005	0.08	2.640	-0.020	-0.29
D2PAN3		2.708	0.034	0.57	2.668	0.008	0.11
EFNB3N		2.754	0.080	1.35	2.694	0.034	0.49
FM2MUU		2.747	0.073	1.24	2.735	0.075	1.07
G7A9T8		2.672	-0.002	-0.04	2.660	0.000	0.00
GJY498		2.746	0.072	1.22	2.712	0.052	0.74
HWMPR9		2.618	-0.056	-0.95	2.592	-0.068	-0.98
JFD3Z6		2.640	-0.034	-0.58	2.600	-0.060	-0.86
KKYH43		2.600	-0.074	-1.26	2.600	-0.060	-0.86
KR2NJ7		2.726	0.052	0.88	2.720	0.060	0.86
KTVAEH		2.658	-0.016	-0.28	2.664	0.004	0.06
MGE6H7		2.756	0.082	1.39	2.726	0.066	0.94
MH6987		2.724	0.050	0.85	2.680	0.020	0.28
N9W7BX		2.696	0.022	0.37	2.708	0.048	0.69
NUWEFV		2.650	-0.024	-0.41	2.704	0.044	0.63



Plastics Interlaboratory Testing Program

Analysis 732

Percent Strain at Yield

Report #96
4th Qtr 2015

WebCode	Data Flag	Sample C31			Sample C32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NW8AAZ		2.660	-0.014	-0.24	2.672	0.012	0.17
PK2X4W		2.644	-0.030	-0.51	2.632	-0.028	-0.40
PVPPRA		2.590	-0.084	-1.43	2.572	-0.088	-1.26
QBW4PX		2.646	-0.028	-0.48	2.630	-0.030	-0.43
QUPAV3	*	2.530	-0.144	-2.45	2.474	-0.186	-2.67
QVZNP4		2.785	0.111	1.88	2.741	0.081	1.16
QYZZHH		2.662	-0.012	-0.21	2.634	-0.026	-0.37
TB62UQ		2.686	0.012	0.20	2.654	-0.006	-0.09
TCZKWR	*	2.706	0.032	0.54	2.798	0.138	1.98
TZNA93		2.611	-0.064	-1.08	2.584	-0.076	-1.09
U2EVEX		2.624	-0.050	-0.85	2.610	-0.050	-0.71
UQTUW3		2.724	0.050	0.85	2.749	0.089	1.27
VHJDBN		2.622	-0.052	-0.89	2.614	-0.046	-0.66
W2MUJQ		2.654	-0.020	-0.34	2.650	-0.010	-0.15
W8EU3T		2.722	0.048	0.81	2.630	-0.030	-0.43
WVY8Q8	X	2.762	0.088	1.49	2.514	-0.146	-2.10
XJ3FLT		2.678	0.004	0.06	2.666	0.006	0.08
XJZT4F	*	2.507	-0.167	-2.84	2.499	-0.161	-2.31
YLNN4T		2.636	-0.038	-0.65	2.596	-0.064	-0.92

Summary Statistics

Grand Means

2.6742 Percent

2.6601 Percent

Std Dev Btwn Labs

0.0589 Percent

0.0697 Percent

Statistics based on 50 of 54 reporting participants

Sample C31: ABS & Sample C32: ABS

Comments on Assigned Data Flags for Test #732

74ZJZ8 (X) - Inconsistent in testing between samples and inconsistent in testing within Sample C31.

WVY8Q8 (X) - Inconsistent in testing between samples and inconsistent in testing within both samples.

9Q8YBU (X) - Data for Sample C32 are high. Also inconsistent in testing within both samples.

3JMQLW (X) - Data for both samples are high.

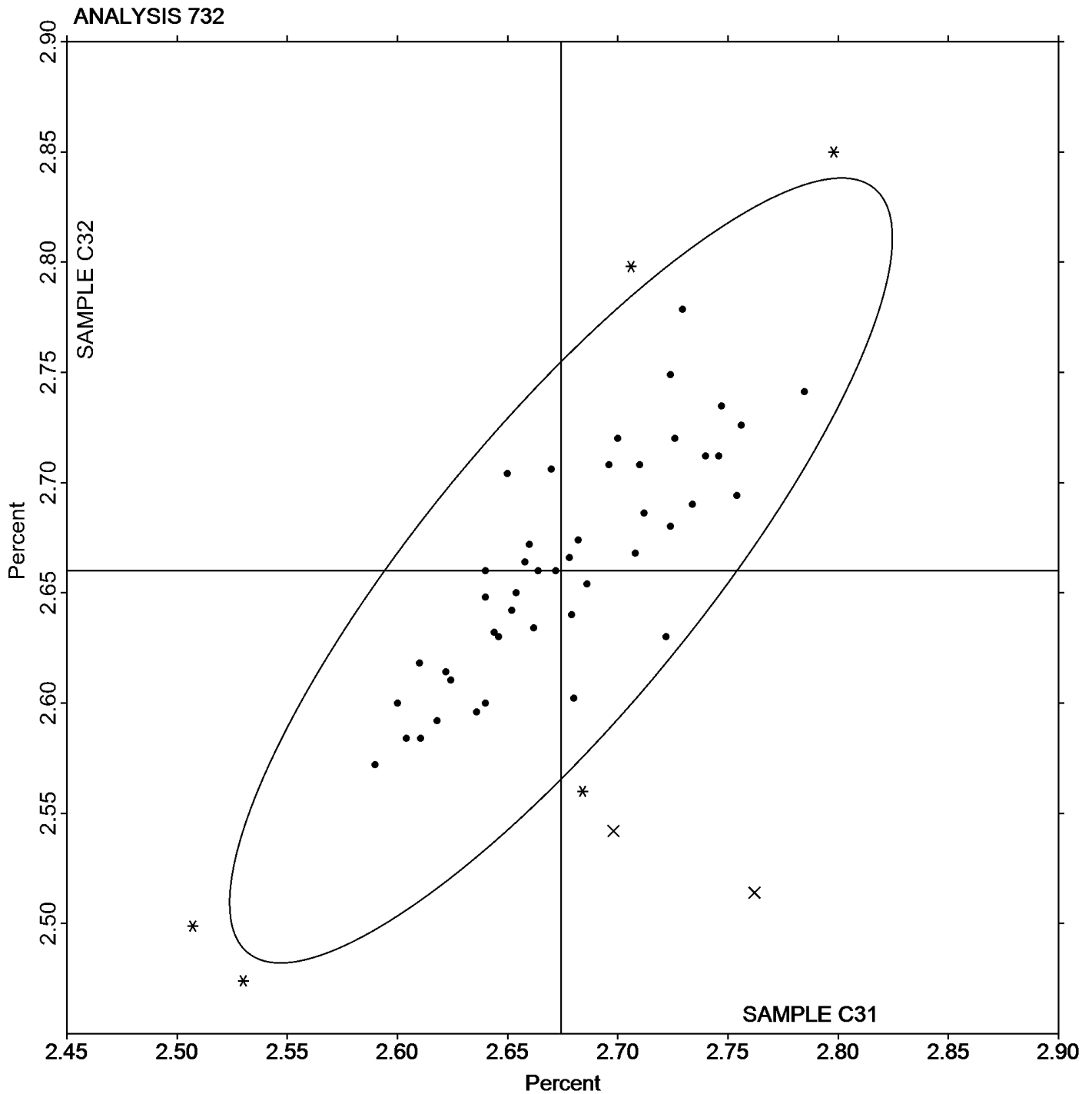


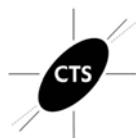
Plastics Interlaboratory Testing Program

Analysis 732 Percent Strain at Yield

Report #96
4th Qtr 2015

Grand Mean Sample C31: 2.6742 Percent Grand Mean Sample C32: 2.6601 Percent





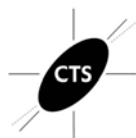
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 734

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C31			Sample C32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29B4X6	X	2,181	-223	-2.15	2,430	10	0.10
2D3BFE		2,283	-121	-1.16	2,350	-69	-0.67
2G8YXP		2,366	-37	-0.36	2,353	-67	-0.64
3JMQLW		2,188	-215	-2.08	2,192	-228	-2.20
3QQWYE		2,486	82	0.79	2,471	51	0.49
424GWF		2,341	-62	-0.60	2,344	-76	-0.74
462X9A		2,455	52	0.50	2,515	95	0.92
4AWNG7		2,425	22	0.21	2,475	55	0.53
4NEG6D		2,474	70	0.68	2,446	26	0.25
4RXC7K		2,412	9	0.08	2,405	-15	-0.15
6QZKDB		2,456	53	0.51	2,490	70	0.68
6UL3XG		2,251	-152	-1.47	2,296	-124	-1.20
74ZJZ8		2,429	26	0.25	2,373	-47	-0.45
77UA7L		2,403	-1	-0.01	2,416	-4	-0.04
7KWPHG		2,425	22	0.21	2,416	-4	-0.04
7MX3RN	*	2,555	152	1.46	2,635	215	2.08
86Q3FD		2,574	171	1.64	2,572	153	1.47
8WXUUM		2,493	90	0.86	2,478	58	0.56
9Q8YBU	X	2,960	557	5.36	3,322	903	8.72
9V2TBG		2,412	9	0.08	2,431	12	0.11
AF6RGF	*	2,416	13	0.12	2,532	112	1.08
BAFQE9		2,342	-61	-0.59	2,365	-55	-0.53
D2PAN3		2,380	-23	-0.23	2,393	-27	-0.26
EFNB3N	*	2,429	25	0.24	2,529	110	1.06
FM2MUU		2,528	125	1.20	2,516	96	0.93
G7A9T8		2,301	-102	-0.99	2,299	-121	-1.17
GJY498		2,338	-66	-0.63	2,357	-63	-0.61
HWMPR9		2,486	83	0.80	2,503	83	0.80
JFD3Z6		2,380	-24	-0.23	2,384	-35	-0.34
KKYH43		2,537	134	1.29	2,553	133	1.28
KR2NJ7		2,430	27	0.26	2,480	60	0.58
KTVAEH		2,382	-21	-0.21	2,390	-30	-0.29
MGE6H7		2,314	-90	-0.87	2,391	-29	-0.28
MH6987	*	2,103	-300	-2.89	2,109	-311	-3.00
NUWEFV		2,339	-64	-0.62	2,369	-51	-0.49



Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 734

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C31			Sample C32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NW8AAZ		2,511	107	1.03	2,508	89	0.86
PK2X4W		2,468	65	0.62	2,471	51	0.49
PVPPRA		2,497	93	0.90	2,515	95	0.92
QBW4PX		2,301	-102	-0.98	2,321	-99	-0.95
QUPAV3	X	2,324	-80	-0.77	2,495	75	0.72
QVZNP4		2,224	-180	-1.73	2,257	-162	-1.57
QYZZHH		2,263	-140	-1.35	2,274	-146	-1.41
TB62UQ		2,342	-61	-0.59	2,331	-89	-0.86
TCZKWR		2,309	-94	-0.91	2,312	-108	-1.04
TZNA93		2,488	85	0.81	2,488	68	0.66
U2EVEX		2,390	-13	-0.13	2,458	38	0.36
UQTUW3		2,446	42	0.41	2,425	5	0.05
VHJDBN	X	2,915	511	4.92	2,902	482	4.66
W2MUJQ		2,453	50	0.48	2,472	52	0.51
W8EU3T		2,384	-20	-0.19	2,379	-40	-0.39
WVY8Q8	*	2,704	301	2.90	2,669	249	2.41
XJ3FLT		2,404	1	0.01	2,417	-3	-0.03
XJZT4F		2,381	-22	-0.21	2,415	-5	-0.04
YE8YUK		2,462	59	0.56	2,468	48	0.47
YLNN4T		2,415	12	0.11	2,406	-14	-0.14

Summary Statistics

Grand Means

2,403.5 MPa

2,419.8 MPa

Std Dev Btwn Labs

103.8 MPa

103.5 MPa

Statistics based on 51 of 55 reporting participants

Sample C31: ABS & Sample C32: ABS

Comments on Assigned Data Flags for Test #734

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

QUPAV3 (X) - Inconsistent in testing between samples.

29B4X6 (X) - Inconsistent in testing between samples and inconsistent in testing within both samples.

9Q8YBU (X) - Data for both samples are high. Also inconsistent in testing within both samples.



Plastics Interlaboratory Testing Program

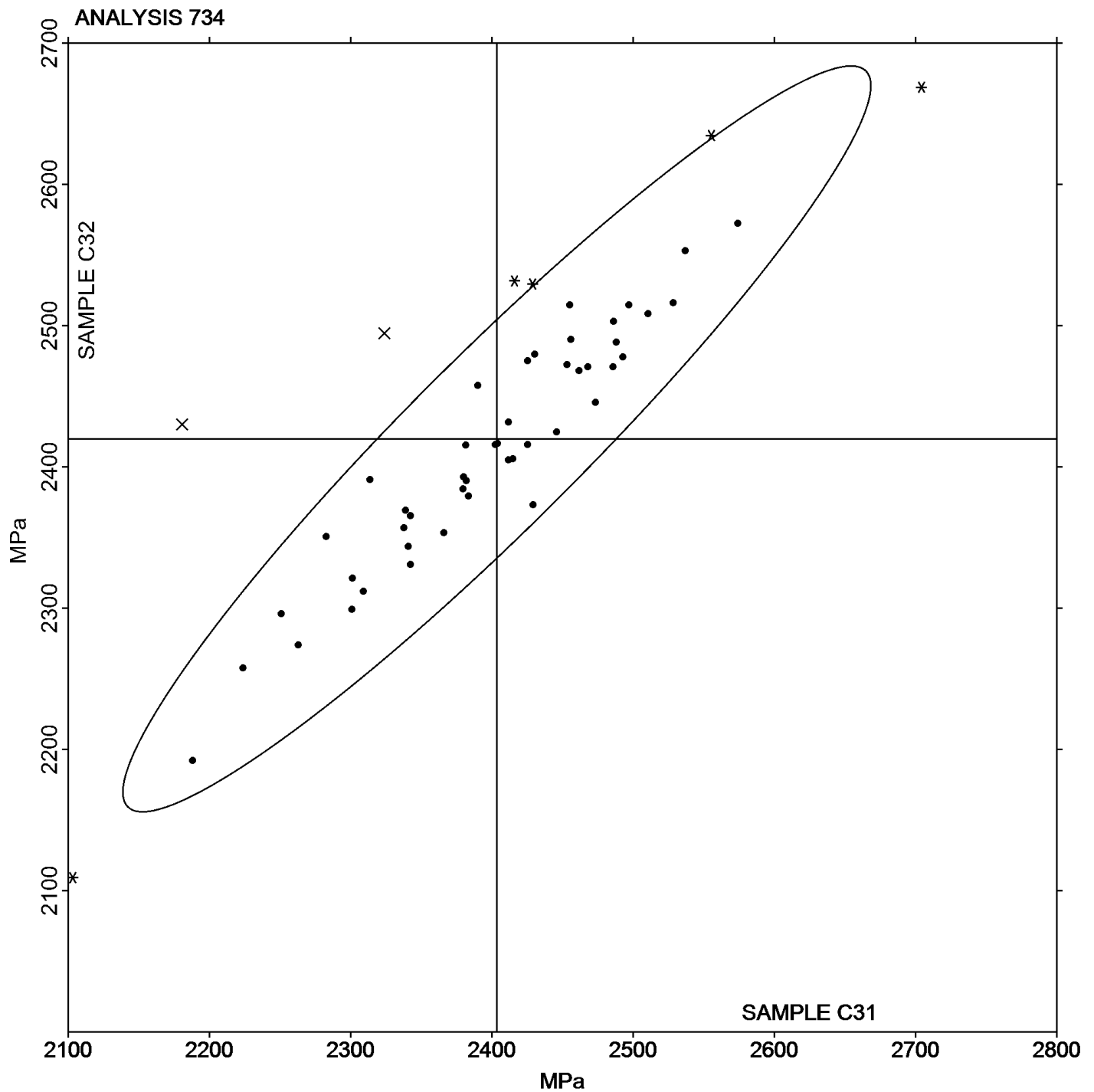
Analysis 734

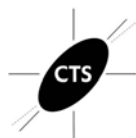
Modulus of Elasticity - MPa

Report #96

4th Qtr 2015

Grand Mean Sample C31: 2,403.47 MPa Grand Mean Sample C32: 2,419.83 MPa





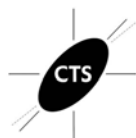
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 720

Flexural Modulus- ksi

WebCode	Data Flag	Sample J31			Sample J32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2EZKAV		326.9	4.7	0.32	330.3	8.1	0.55
2XC4MM		324.7	2.5	0.17	327.3	5.2	0.35
3EGWR2		329.1	7.0	0.48	328.3	6.2	0.42
3YFH6C		313.5	-8.7	-0.59	308.9	-13.3	-0.90
424GWF		311.4	-10.7	-0.73	309.1	-13.0	-0.88
4AWNG7		331.2	9.0	0.62	321.9	-0.2	-0.01
4ERHE8		306.5	-15.6	-1.06	307.4	-14.7	-1.00
6NWM7N		338.0	15.8	1.08	334.3	12.2	0.83
6RRG36		321.2	-1.0	-0.06	326.6	4.5	0.31
6UL3XG		303.3	-18.8	-1.29	298.8	-23.4	-1.59
6XKLTN	X	230.9	-91.3	-6.22	208.5	-113.6	-7.73
74ZJZ8		328.3	6.1	0.42	325.1	3.0	0.20
784EKB		337.9	15.7	1.07	336.2	14.1	0.96
7FH2TE		328.8	6.7	0.45	331.0	8.9	0.60
7MX3RN		326.6	4.4	0.30	327.2	5.1	0.35
7ZZ968		336.6	14.4	0.98	330.9	8.7	0.60
8KLLW2		351.5	29.4	2.00	351.2	29.1	1.98
8TYHYM	X	261.7	-60.5	-4.12	261.8	-60.3	-4.11
AF62ZZ		329.7	7.5	0.51	331.2	9.0	0.62
APRYQ6		325.5	3.3	0.23	321.1	-1.0	-0.07
B8A9FD	X	31.3	-290.9	-19.83	41.0	-281.1	-19.13
C2XRAV	X	149.0	-173.2	-11.81	155.5	-166.6	-11.34
CXYFDV		334.5	12.3	0.84	328.9	6.8	0.46
DJVA2C		348.0	25.9	1.77	351.0	28.9	1.97
FJ63PB		330.4	8.2	0.56	322.4	0.3	0.02
GA9MDC		319.6	-2.5	-0.17	322.1	0.0	0.00
GC399N		309.5	-12.6	-0.86	319.7	-2.4	-0.16
GJ4K87		332.0	9.8	0.67	335.9	13.8	0.94
GJY498		319.7	-2.5	-0.17	318.5	-3.6	-0.24
GYX473		321.8	-0.3	-0.02	330.4	8.3	0.56
HBLPP3	X	301.8	-20.4	-1.39	362.4	40.3	2.74
HCUQNU		296.6	-25.6	-1.74	298.4	-23.7	-1.61
HCY9LT		315.2	-7.0	-0.48	316.0	-6.1	-0.41
HNBB8Q	*	281.4	-40.7	-2.78	276.8	-45.3	-3.08
JEYVFA		340.4	18.3	1.25	346.1	24.0	1.63



Plastics Interlaboratory Testing Program

Analysis 720

Flexural Modulus- ksi

Report #96
4th Qtr 2015

WebCode	Data Flag	Sample J31			Sample J32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JN6G4B		311.7	-10.4	-0.71	313.0	-9.1	-0.62
KDH2DE		347.2	25.0	1.71	347.2	25.1	1.71
KN43VA		332.2	10.0	0.68	326.5	4.4	0.30
MPM2XW		307.0	-15.2	-1.03	305.0	-17.1	-1.16
N9W7BX		305.1	-17.0	-1.16	309.9	-12.2	-0.83
NARYWJ		298.3	-23.8	-1.63	302.4	-19.7	-1.34
NB8XF9		304.7	-17.5	-1.19	307.8	-14.4	-0.98
NUA79C		310.7	-11.5	-0.78	316.0	-6.1	-0.41
NVTWGW		328.7	6.6	0.45	331.8	9.7	0.66
PAL4R4		316.0	-6.2	-0.42	310.6	-11.6	-0.79
PK2X4W		316.0	-6.2	-0.42	318.0	-4.1	-0.28
PK3NCZ		298.3	-23.9	-1.63	298.5	-23.6	-1.61
Q6NMDN		324.0	1.8	0.12	324.2	2.0	0.14
QPXVGU		325.0	2.8	0.19	328.5	6.3	0.43
QYZZHH		320.1	-2.0	-0.14	316.3	-5.8	-0.40
T934JX		327.0	4.8	0.33	318.4	-3.7	-0.25
TB62UQ		338.1	16.0	1.09	335.9	13.8	0.94
TH8BYX		348.8	26.7	1.82	351.1	29.0	1.98
U4ZH8L		303.8	-18.4	-1.25	306.2	-15.9	-1.08
W2MUJQ	*	291.0	-31.2	-2.12	298.8	-23.3	-1.59
W3LULC		321.9	-0.2	-0.01	319.0	-3.2	-0.21
WZVQVQ		347.1	24.9	1.70	353.5	31.3	2.13
X3XUGL		333.4	11.3	0.77	323.4	1.3	0.09
XGWXMX	X	350.4	28.2	1.93	331.8	9.7	0.66
XGXR4H		323.4	1.3	0.09	323.9	1.8	0.12
XJ3FLT		324.6	2.5	0.17	328.4	6.3	0.43
XRFAWP		322.2	0.0	0.00	321.4	-0.7	-0.05
XVUATF		331.1	9.0	0.61	328.6	6.4	0.44
XXNVPT		323.4	1.2	0.08	324.4	2.3	0.16
YE8YUK	X	313.8	-8.4	-0.57	332.8	10.7	0.73
YP8J8L		315.8	-6.4	-0.43	317.4	-4.7	-0.32
ZUDRRM		323.4	1.3	0.09	322.2	0.1	0.01
ZWJVZC		311.4	-10.8	-0.74	307.6	-14.5	-0.99



Plastics Interlaboratory Testing Program

Analysis 720 Flexural Modulus- ksi

Report #96
4th Qtr 2015

Summary Statistics		
Grand Means	322.15 ksi	322.11 ksi
Stnd Dev Btwn Labs	14.66 ksi	14.70 ksi
Statistics based on 61 of 68 reporting participants		

Sample J31: HIPS & Sample J32: HIPS

Comments on Assigned Data Flags for Test #720

- B8A9FD (X) - Data for both samples are low. Also inconsistent in testing within Sample J32.
- YE8YUK (X) - Inconsistent in testing between samples and inconsistent in testing within both samples.
- HBLPP3 (X) - Inconsistent in testing between samples, data for Sample J32 are high.
- 8TYHYM (X) - Data for both samples are low. Also inconsistent in testing within both samples.
- 6XKLTN (X) - Data for both samples are low.
- C2XRAV (X) - Data for both samples are low.
- XGWXXM (X) - Inconsistent in testing between samples and inconsistent in testing within Sample J31.

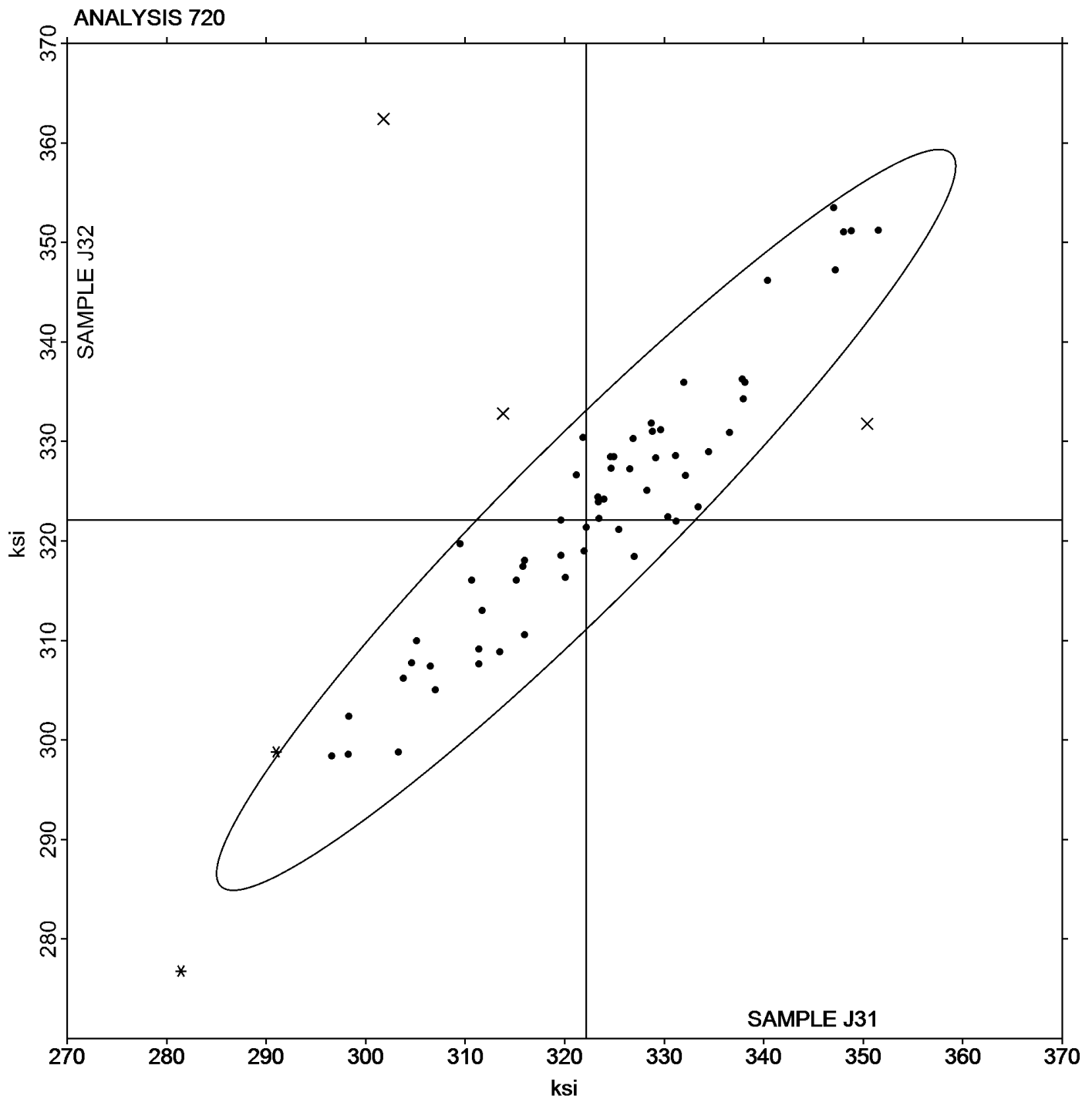


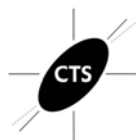
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Analysis 720 Flexural Modulus- ksi

Report #96
4th Qtr 2015

Grand Mean Sample J31: 322.15 ksi Grand Mean Sample J32: 322.11 ksi





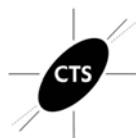
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Report #96
4th Qtr 2015

Analysis 721

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J31			Sample J32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2EZKAV		6,089	-182	-0.93	6,117	-146	-0.72
2XC4MM		5,964	-307	-1.57	6,049	-215	-1.06
3EGWR2		6,169	-101	-0.52	6,153	-111	-0.55
3YFH6C		6,141	-130	-0.67	6,082	-182	-0.90
424GWF		6,089	-182	-0.93	6,089	-175	-0.87
4AWNG7	X	6,438	167	0.86	6,021	-242	-1.20
4ERHE8		6,094	-176	-0.91	6,145	-118	-0.59
6NWM7N		6,304	34	0.17	6,241	-23	-0.11
6RRG36		6,508	237	1.22	6,585	322	1.59
6UL3XG		6,139	-132	-0.68	6,193	-71	-0.35
6XKLTN	X	6,360	89	0.46	6,033	-230	-1.14
74ZJZ8		6,625	354	1.82	6,551	288	1.43
784EKB		6,494	224	1.15	6,376	113	0.56
7FH2TE		6,489	218	1.12	6,575	311	1.54
7MX3RN		6,426	156	0.80	6,552	288	1.43
7ZZ968		6,634	363	1.86	6,505	241	1.19
8KLLW2		6,728	457	2.35	6,755	492	2.44
8TYHYM		6,144	-127	-0.65	5,978	-286	-1.42
APRYQ6		6,179	-92	-0.47	6,122	-142	-0.70
B8A9FD	X	1,204	-5,067	-26.01	1,209	-5,055	-25.05
C2XRAV		5,851	-420	-2.16	5,857	-407	-2.02
CXYFDV		6,184	-87	-0.45	6,042	-222	-1.10
DJVA2C		6,508	237	1.22	6,504	240	1.19
FJ63PB		6,102	-169	-0.87	6,004	-260	-1.29
GC399N		6,219	-52	-0.27	6,324	60	0.30
GJY498		6,360	89	0.46	6,330	67	0.33
HCUQNU		6,485	214	1.10	6,502	239	1.18
HCY9LT		6,247	-24	-0.12	6,239	-24	-0.12
HNBB8Q		6,517	247	1.27	6,422	158	0.78
JN6G4B		6,097	-173	-0.89	6,171	-93	-0.46
KDH2DE		6,322	51	0.26	6,270	6	0.03
KN43VA		6,355	84	0.43	6,313	49	0.24
MPM2XW		6,320	49	0.25	6,310	46	0.23
N9W7BX		6,475	205	1.05	6,520	257	1.27
NARYWJ		5,977	-294	-1.51	6,055	-208	-1.03



Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 721

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J31			Sample J32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NB8XF9		6,255	-16	-0.08	6,304	40	0.20
NUA79C		6,311	41	0.21	6,306	42	0.21
PAL4R4		6,078	-192	-0.99	5,983	-281	-1.39
PK2X4W		6,280	9	0.05	6,204	-60	-0.30
PK3NCZ		6,262	-9	-0.05	6,260	-4	-0.02
Q6NMDN		6,153	-118	-0.61	6,192	-72	-0.36
QPXVGU		6,334	64	0.33	6,381	118	0.58
QYZZHH		6,160	-111	-0.57	6,175	-89	-0.44
T934JX		6,122	-149	-0.76	6,018	-246	-1.22
TB62UQ		6,232	-39	-0.20	6,255	-9	-0.04
W3LULC		6,194	-77	-0.39	6,155	-109	-0.54
WZVQVQ		5,977	-294	-1.51	6,058	-206	-1.02
X3XUGL		6,364	93	0.48	6,356	92	0.46
XGXR4H		6,134	-136	-0.70	6,167	-97	-0.48
XJ3FLT		6,532	261	1.34	6,586	323	1.60
XRFAWP		6,126	-145	-0.74	6,046	-218	-1.08
XXNVPT		6,253	-18	-0.09	6,284	20	0.10
YE8YUK		6,612	341	1.75	6,666	402	1.99
YP8J8L		6,072	-199	-1.02	6,120	-143	-0.71
ZUDRRM		6,395	124	0.64	6,265	2	0.01

Summary Statistics

Grand Means

6,270.8 psi

6,263.7 psi

Std Dev Btwn Labs

194.8 psi

201.8 psi

Statistics based on 52 of 55 reporting participants

Sample J31: HIPS & Sample J32: HIPS

Comments on Assigned Data Flags for Test #721

B8A9FD (X) - Data for both samples are low.

6XKLTN (X) - Inconsistent in testing between samples.

4AWNG7 (X) - Inconsistent in testing between samples.



Plastics Interlaboratory Testing Program

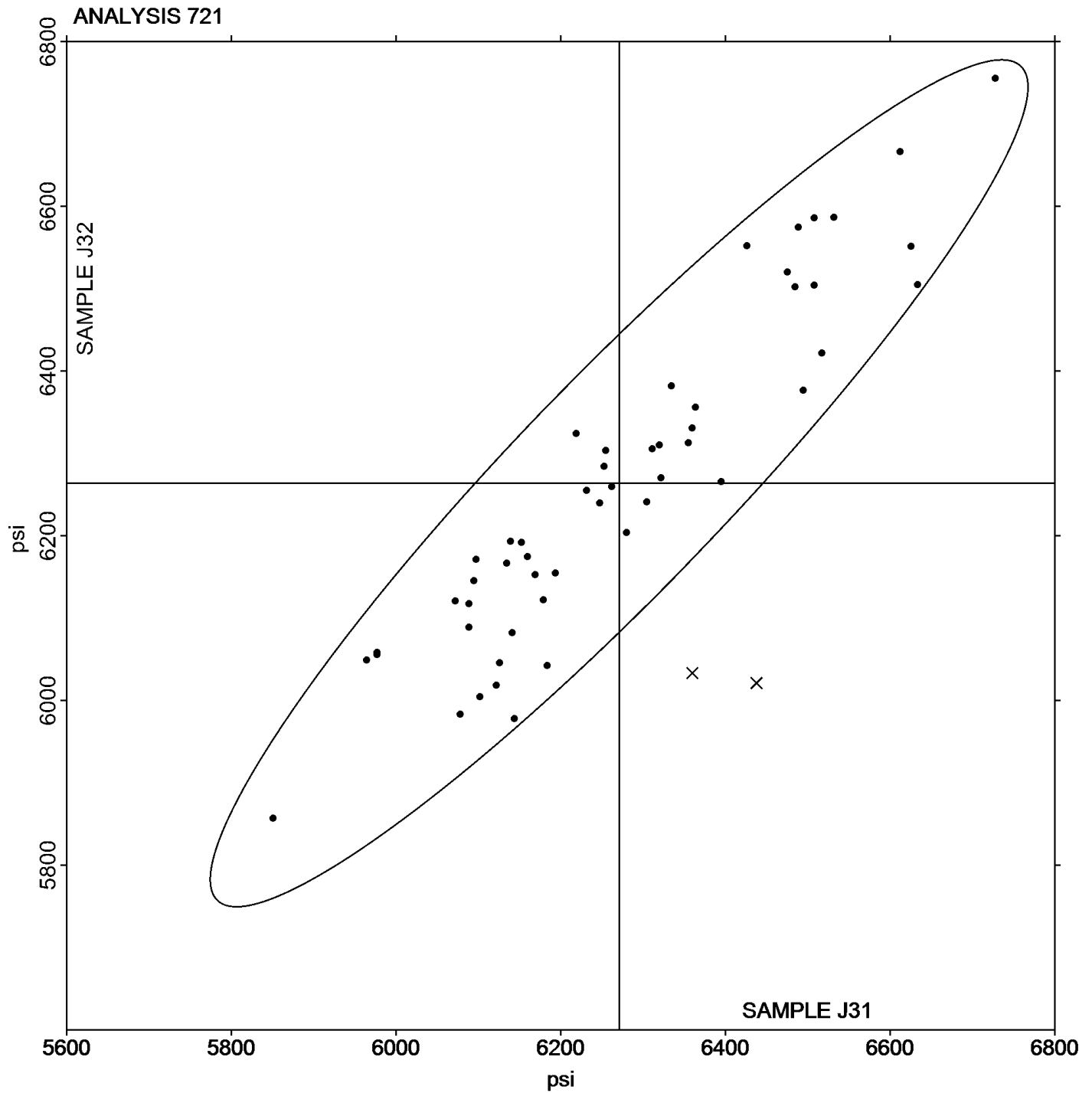
Analysis 721

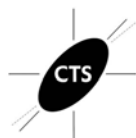
Flexural Stress at 5% Strain - psi

Report #96

4th Qtr 2015

Grand Mean Sample J31: 6,270.84 psi Grand Mean Sample J32: 6,263.67 psi





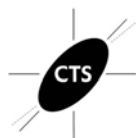
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 722

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J31			Sample J32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2EZKAV		6,162	-126	-0.68	6,194	-83	-0.44
2XC4MM		6,035	-253	-1.37	6,106	-171	-0.90
3EGWR2		6,163	-125	-0.68	6,183	-94	-0.49
3YFH6C		6,173	-115	-0.62	6,092	-185	-0.97
424GWF		6,126	-161	-0.88	6,112	-165	-0.87
4AWNG7	X	6,457	170	0.92	6,037	-240	-1.26
4ERHE8		6,118	-170	-0.92	6,179	-98	-0.51
6NWM7N		6,291	4	0.02	6,252	-25	-0.13
6UL3XG		6,191	-96	-0.52	6,241	-36	-0.19
784EKB		6,530	242	1.31	6,410	133	0.70
7FH2TE		6,641	353	1.92	6,699	422	2.22
7ZZ968		6,652	365	1.98	6,526	249	1.31
8KLLW2	*	6,752	464	2.52	6,773	496	2.61
8TYHYM		6,173	-115	-0.62	6,020	-257	-1.35
AF62ZZ		6,547	259	1.41	6,578	301	1.59
APRYQ6		6,191	-97	-0.53	6,152	-125	-0.66
B8A9FD	X	1,204	-5,084	-27.58	1,209	-5,067	-26.65
C2XRAV		5,851	-437	-2.37	5,857	-420	-2.21
CXYFDV		6,183	-105	-0.57	6,042	-234	-1.23
DJVA2C		6,520	232	1.26	6,325	48	0.25
FJ63PB		6,182	-106	-0.57	6,074	-203	-1.07
GC399N		6,276	-12	-0.07	6,394	117	0.62
GJ4K87		6,164	-124	-0.67	6,260	-17	-0.09
GJY498		6,383	95	0.51	6,321	44	0.23
GYX473	*	6,324	36	0.19	6,556	279	1.47
HBLPP3	X	6,092	-196	-1.06	6,714	437	2.30
HCUQNU		6,489	201	1.09	6,534	258	1.36
HCY9LT		6,328	40	0.22	6,271	-5	-0.03
HNBB8Q		6,602	315	1.71	6,498	222	1.17
JEYVFA		6,394	106	0.58	6,402	125	0.66
JN6G4B		6,169	-118	-0.64	6,194	-83	-0.43
KDH2DE		6,344	56	0.30	6,296	19	0.10
KN43VA		6,389	101	0.55	6,348	71	0.37
MPM2XW		6,336	48	0.26	6,322	45	0.24
NARYWJ		6,023	-265	-1.44	6,078	-199	-1.05



Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 722

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J31			Sample J32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NB8XF9		6,328	40	0.22	6,361	84	0.44
NUA79C		6,350	63	0.34	6,357	80	0.42
PAL4R4		6,136	-152	-0.82	6,038	-239	-1.26
PK2X4W		6,314	26	0.14	6,227	-49	-0.26
PK3NCZ		6,272	-16	-0.08	6,281	5	0.02
Q6NMDN		6,186	-102	-0.55	6,218	-58	-0.31
QYZZHH		6,131	-157	-0.85	6,123	-154	-0.81
T934JX		6,204	-84	-0.45	6,088	-189	-0.99
TB62UQ		6,276	-11	-0.06	6,264	-13	-0.07
TH8BYX		6,441	153	0.83	6,443	166	0.87
W3LULC		6,227	-61	-0.33	6,197	-79	-0.42
WZVQVQ		5,978	-310	-1.68	6,081	-196	-1.03
X3XUGL		6,370	82	0.45	6,363	87	0.46
XGWMX		6,452	165	0.89	6,499	222	1.17
XJ3FLT		6,605	317	1.72	6,692	416	2.19
XRFAWP		6,126	-162	-0.88	6,046	-231	-1.21
XVUATF		6,192	-96	-0.52	6,132	-145	-0.76
XXNVPT		6,263	-25	-0.13	6,298	21	0.11
YP8J8L		6,102	-186	-1.01	6,146	-131	-0.69
ZUDRRM		6,414	126	0.69	6,285	8	0.04
ZWJVZC		6,182	-106	-0.57	6,232	-45	-0.24

Summary Statistics

Grand Means

6,287.8 psi

6,276.5 psi

Stnd Dev Btwn Labs

184.3 psi

190.1 psi

Statistics based on 53 of 56 reporting participants

Sample J31: HIPS & Sample J32: HIPS

Comments on Assigned Data Flags for Test #722

B8A9FD (X) - Data for both samples are low.

HBLPP3 (X) - Inconsistent in testing between samples.

4AWNG7 (X) - Inconsistent in testing between samples.



Plastics Interlaboratory Testing Program

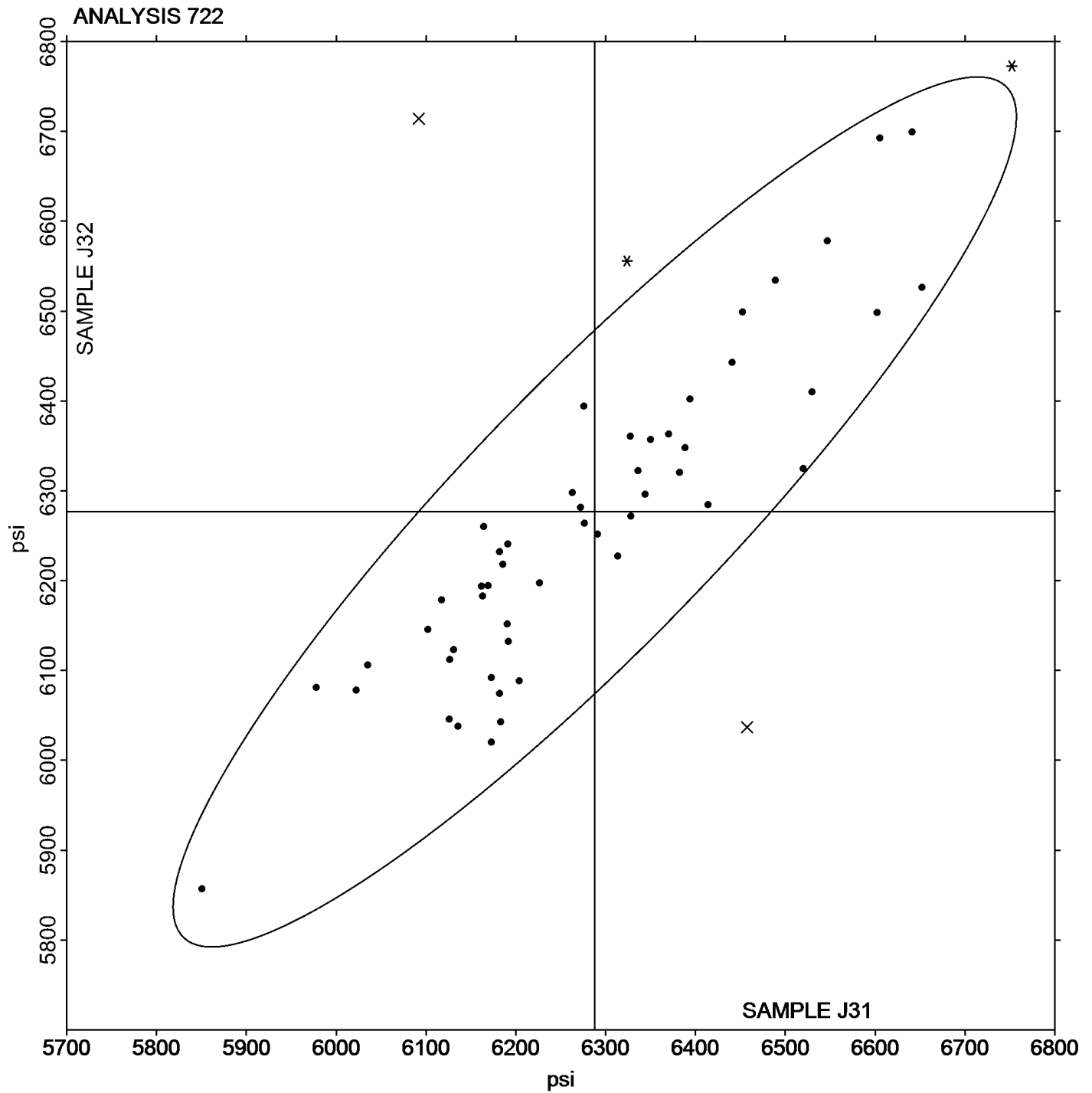
Analysis 722

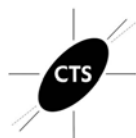
Flexural Stress at Yield - psi

Report #96

4th Qtr 2015

Grand Mean Sample J31: 6,287.79 psi Grand Mean Sample J32: 6,276.50 psi





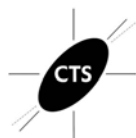
Plastics Interlaboratory Testing Program

Analysis 736

Flexural Modulus - MPa

Report #96
4th Qtr 2015

WebCode	Data Flag	Sample K31			Sample K32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2D3BFE		2,228	-6	-0.08	2,241	5	0.08
2G8YXP		2,249	15	0.23	2,237	2	0.03
36AHLT		2,251	18	0.27	2,241	5	0.08
3JMWLW		2,128	-105	-1.56	2,122	-113	-1.62
3QQWYE		2,243	10	0.14	2,248	12	0.18
424GWF		2,221	-12	-0.18	2,214	-21	-0.30
4AWNG7		2,236	2	0.04	2,266	31	0.44
4NEG6D		2,284	51	0.76	2,281	46	0.66
4RXC7K		2,212	-21	-0.31	2,209	-27	-0.38
6QZKDB		2,282	49	0.72	2,296	61	0.87
6UL3XG		2,153	-80	-1.19	2,179	-56	-0.80
74ZJZ8		2,334	101	1.50	2,327	91	1.31
7KWPHG		2,144	-90	-1.33	2,154	-81	-1.16
7MX3RN		2,234	1	0.01	2,263	28	0.40
7P3L2G		2,235	1	0.02	2,226	-9	-0.13
86Q3FD		2,238	4	0.07	2,216	-19	-0.27
8WXUUM	X	2,608	375	5.56	2,494	259	3.71
9Q8YBU	*	2,377	143	2.13	2,340	105	1.50
9V2TBG		2,362	128	1.90	2,353	118	1.69
BAFQE9	X	2,237	4	0.05	2,306	70	1.01
D2PAN3		2,209	-25	-0.36	2,197	-38	-0.54
FTTUC4		2,309	76	1.12	2,344	109	1.56
FX8HZ7		2,122	-112	-1.66	2,097	-139	-1.98
G7A9T8		2,222	-11	-0.17	2,229	-6	-0.09
GJ4K87		2,249	15	0.23	2,259	23	0.34
GJLPP6		2,172	-61	-0.91	2,210	-25	-0.36
GJY498		2,246	13	0.19	2,250	15	0.22
HWMPR9		2,284	51	0.75	2,288	53	0.76
JFD3Z6		2,172	-61	-0.90	2,173	-62	-0.88
KKYH43		2,206	-27	-0.41	2,214	-21	-0.31
LRVUC6		2,127	-107	-1.58	2,120	-115	-1.65
MGE6H7		2,273	40	0.59	2,285	50	0.71
MH6987		2,239	6	0.08	2,244	9	0.13
N9W7BX		2,225	-8	-0.12	2,220	-15	-0.22
NUWEFV		2,274	41	0.60	2,285	50	0.71



Plastics Interlaboratory Testing Program

Analysis 736

Flexural Modulus - MPa

Report #96
4th Qtr 2015

WebCode	Data Flag	Sample K31			Sample K32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PK2X4W	*	2,266	33	0.49	2,320	85	1.22
Q26RBV	X	2,264	31	0.45	2,382	147	2.10
QBW4PX		2,228	-6	-0.09	2,217	-19	-0.27
QUPAV3		2,225	-9	-0.13	2,235	0	0.00
QVZNP4		2,245	12	0.17	2,223	-12	-0.17
QWX28Q	*	2,052	-181	-2.69	2,024	-211	-3.02
QYZZHH		2,126	-107	-1.59	2,115	-120	-1.72
TB62UQ		2,357	123	1.83	2,362	127	1.82
TH8BYX		2,244	10	0.15	2,226	-9	-0.13
U2EVEX		2,255	21	0.32	2,248	12	0.18
UY7N8Y		2,300	66	0.98	2,296	61	0.87
VHJDBN		2,176	-58	-0.85	2,215	-21	-0.29
W2MUJQ		2,277	44	0.65	2,280	45	0.64
W8EU3T		2,176	-57	-0.85	2,173	-62	-0.88
WVY8Q8		2,362	129	1.91	2,367	132	1.88
X7XBGL		2,136	-97	-1.44	2,152	-83	-1.19
XJ3FLT		2,263	29	0.43	2,261	26	0.37
XJZT4F		2,268	35	0.51	2,248	13	0.18
YLNN4T		2,207	-27	-0.39	2,202	-33	-0.47

Summary Statistics

Grand Means

2,233.4 MPa

2,235.2 MPa

Std Dev Btwn Labs

67.4 MPa

69.8 MPa

Statistics based on 51 of 54 reporting participants

Sample K31: HIPS & Sample K32: HIPS

Comments on Assigned Data Flags for Test #736

BAFQE9 (X) - Inconsistent in testing between samples and inconsistent in testing within Sample K32.

8WXUUM (X) - Data for both samples are high. Also inconsistent in testing within Sample K32.

Q26RBV (X) - Inconsistent in testing between samples and inconsistent in testing within both samples.



Plastics Interlaboratory Testing Program

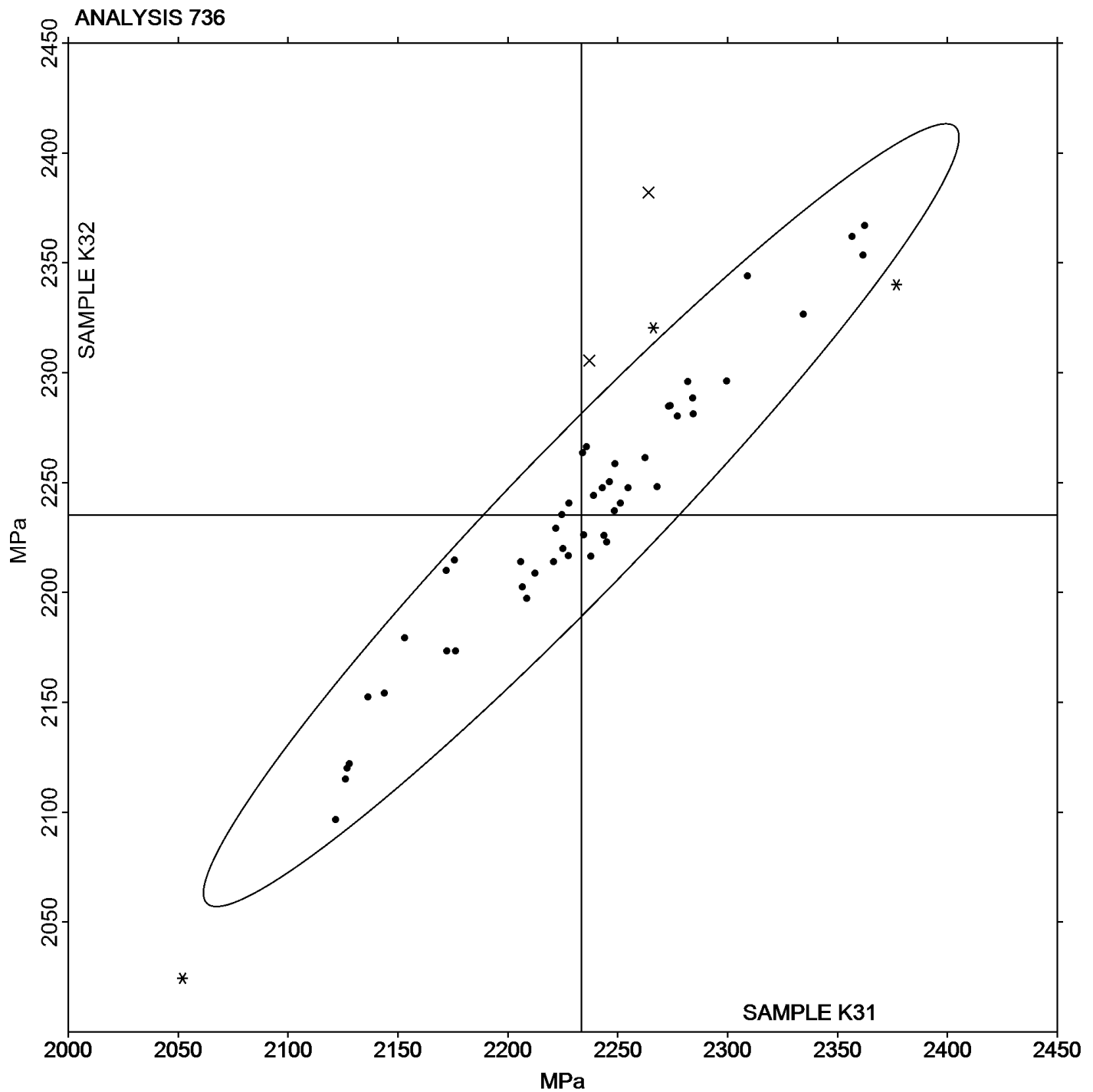
Analysis 736

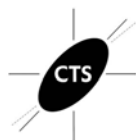
Flexural Modulus - MPa

Report #96

4th Qtr 2015

Grand Mean Sample K31: 2,233.38 MPa Grand Mean Sample K32: 2,235.17 MPa





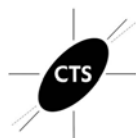
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 737

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K31			Sample K32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2D3BFE		43.04	-0.52	-0.45	44.30	0.68	0.58
36AHLT		42.24	-1.33	-1.14	43.52	-0.10	-0.09
3JMWLW		42.40	-1.16	-1.00	43.40	-0.22	-0.19
3QQWYE		45.36	1.80	1.54	45.83	2.21	1.90
424GWF		43.34	-0.22	-0.19	43.70	0.08	0.07
4AWNG7		42.02	-1.54	-1.32	42.10	-1.52	-1.31
4NEG6D		45.23	1.67	1.43	45.28	1.66	1.43
6QZKDB		44.45	0.88	0.76	44.68	1.06	0.91
6UL3XG		43.36	-0.21	-0.18	43.62	0.00	0.00
74ZJZ8		44.42	0.86	0.73	44.22	0.60	0.52
7KWPHG		43.92	0.35	0.30	44.08	0.46	0.39
7MX3RN		44.00	0.44	0.37	44.06	0.44	0.38
7P3L2G		43.00	-0.56	-0.48	43.36	-0.26	-0.22
7P73YF		45.53	1.97	1.69	45.46	1.84	1.58
86Q3FD		43.74	0.18	0.15	44.24	0.62	0.53
8WXUUM	X	49.71	6.14	5.26	48.39	4.77	4.10
9Q8YBU		42.03	-1.53	-1.31	41.32	-2.30	-1.98
9V2TBG		45.92	2.35	2.01	45.74	2.12	1.82
BAFQE9		44.20	0.64	0.55	44.12	0.50	0.43
D2PAN3		43.53	-0.04	-0.03	42.95	-0.67	-0.58
FX8HZ7		43.58	0.02	0.01	42.83	-0.79	-0.68
G7A9T8		42.69	-0.87	-0.75	43.22	-0.40	-0.35
GJY498		44.80	1.24	1.06	44.16	0.54	0.47
HWMPR9		44.52	0.96	0.82	44.39	0.77	0.66
JFD3Z6		41.92	-1.64	-1.41	41.86	-1.76	-1.51
KKYH43		41.40	-2.17	-1.86	41.70	-1.92	-1.65
LRVUC6		43.80	0.24	0.20	43.45	-0.17	-0.14
MGE6H7		43.05	-0.51	-0.44	43.16	-0.46	-0.39
MH6987		42.97	-0.59	-0.51	42.31	-1.31	-1.12
N9W7BX		45.76	2.20	1.88	45.68	2.06	1.77
NUWEFV		41.76	-1.80	-1.54	42.53	-1.09	-0.94
PK2X4W		43.24	-0.32	-0.28	43.73	0.11	0.09
QBW4PX		44.13	0.57	0.49	43.89	0.27	0.23
QUPAV3		44.15	0.58	0.50	43.78	0.16	0.13
QVZNP4		41.46	-2.10	-1.80	40.91	-2.71	-2.33



Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 737

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K31			Sample K32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
QWX28Q		44.61	1.05	0.90	44.30	0.68	0.58
QYZZHH		41.84	-1.73	-1.48	42.19	-1.43	-1.23
TB62UQ		43.83	0.26	0.23	43.73	0.11	0.09
U2EVEX		43.96	0.39	0.34	43.90	0.28	0.24
UY7N8Y		43.26	-0.30	-0.26	43.57	-0.05	-0.04
VHJDBN		45.14	1.58	1.35	44.60	0.98	0.84
W2MUJQ		43.23	-0.34	-0.29	43.65	0.03	0.02
W8EU3T		42.21	-1.35	-1.16	41.38	-2.24	-1.93
WVY8Q8		42.98	-0.58	-0.50	43.34	-0.28	-0.24
X7XBGL		44.01	0.44	0.38	43.73	0.11	0.09
XJ3FLT		44.43	0.86	0.74	43.98	0.36	0.31
XJZT4F		44.47	0.90	0.77	45.34	1.72	1.48
YLNN4T		42.54	-1.02	-0.88	42.89	-0.73	-0.63

Summary Statistics

Grand Means

43.563 MPa

43.620 MPa

Std Dev Btwn Labs

1.168 MPa

1.164 MPa

Statistics based on 47 of 48 reporting participants

Sample K31: HIPS & Sample K32: HIPS

Comments on Assigned Data Flags for Test #737

8WXUUM (X) - Data for both samples are high. Also inconsistent in testing within Sample K31.



Plastics Interlaboratory Testing Program

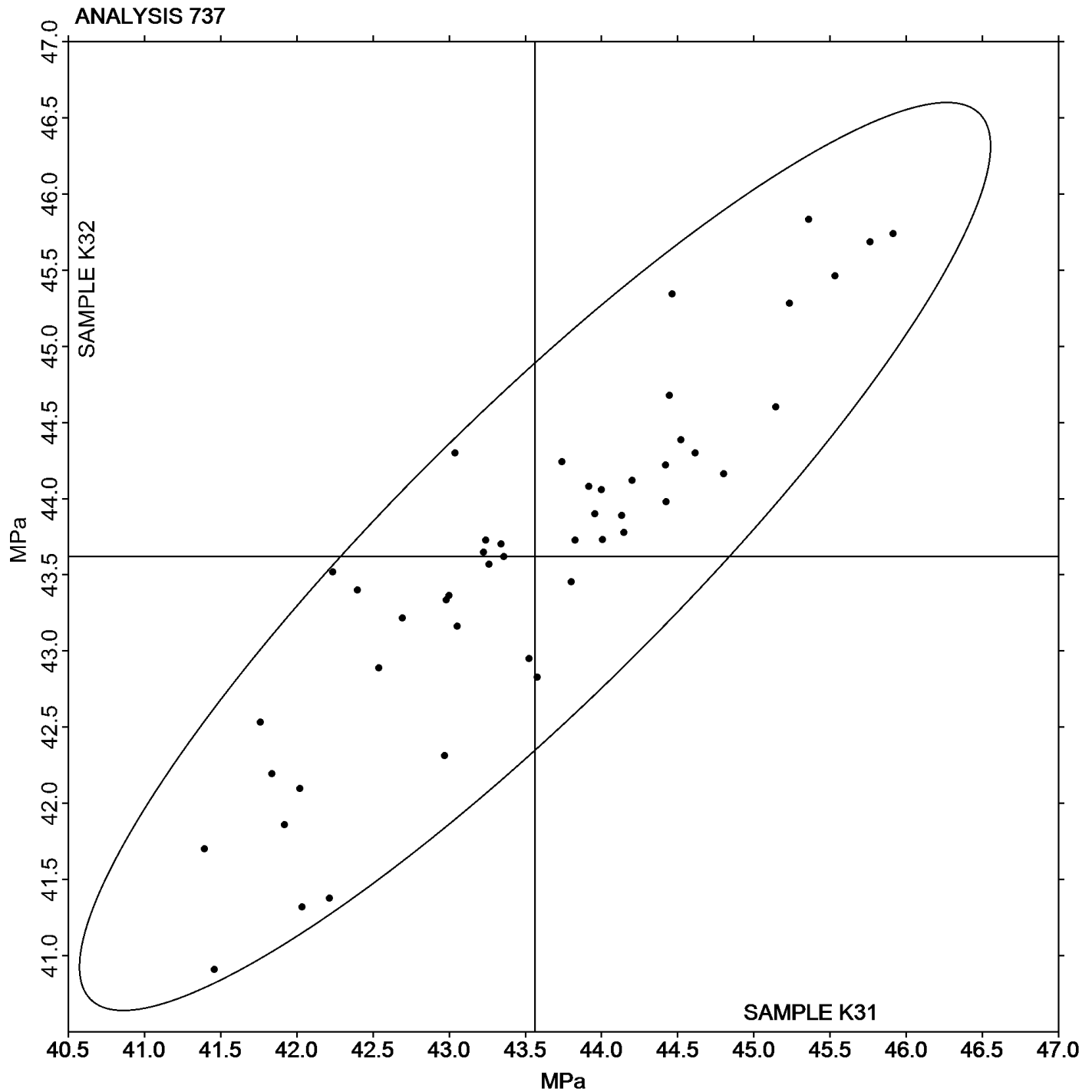
Analysis 737

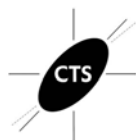
Flexural Stress at 3.5% Strain - MPa

Report #96

4th Qtr 2015

Grand Mean Sample K31: 43.563 MPa Grand Mean Sample K32: 43.620 MPa





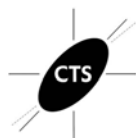
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 738

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K31			Sample K32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2D3BFE		43.34	-0.25	-0.23	44.72	1.06	0.92
36AHLT		42.59	-1.00	-0.93	43.82	0.16	0.14
3QQWYE		45.48	1.90	1.77	46.04	2.37	2.07
424GWF		43.36	-0.23	-0.21	43.90	0.24	0.21
4AWNG7		42.10	-1.49	-1.39	42.25	-1.41	-1.24
4RXC7K		43.55	-0.04	-0.04	43.75	0.08	0.07
6QZKDB		44.52	0.93	0.87	44.74	1.08	0.94
6UL3XG		43.42	-0.17	-0.16	43.67	0.01	0.01
7KWPHG		44.00	0.41	0.38	44.24	0.57	0.50
7P3L2G		43.03	-0.56	-0.52	43.39	-0.27	-0.24
86Q3FD		43.80	0.21	0.20	44.38	0.72	0.63
9Q8YBU		42.08	-1.51	-1.41	41.36	-2.31	-2.02
9V2TBG		46.09	2.50	2.33	46.03	2.37	2.07
BAFQE9		44.83	1.24	1.15	44.75	1.09	0.95
D2PAN3		43.60	0.01	0.01	43.06	-0.61	-0.53
FTTUC4		44.32	0.73	0.68	45.32	1.66	1.45
FX8HZ7		43.60	0.01	0.01	42.97	-0.69	-0.61
G7A9T8		42.70	-0.89	-0.83	43.33	-0.34	-0.29
GJ4K87		42.86	-0.73	-0.68	42.98	-0.68	-0.60
GJY498		44.83	1.24	1.16	44.22	0.55	0.48
HWMPR9		44.59	1.00	0.93	44.50	0.84	0.73
JFD3Z6		41.92	-1.67	-1.56	41.86	-1.80	-1.58
KKYH43		41.56	-2.03	-1.89	41.86	-1.80	-1.58
LRVUC6		44.00	0.41	0.39	43.74	0.08	0.07
MGE6H7		43.20	-0.39	-0.36	43.21	-0.45	-0.40
MH6987		43.01	-0.58	-0.54	42.37	-1.29	-1.13
NUWEFV		41.99	-1.60	-1.49	42.53	-1.14	-0.99
PK2X4W		43.30	-0.29	-0.27	43.76	0.10	0.08
QBW4PX		44.30	0.71	0.66	44.10	0.44	0.38
QUPAV3		44.25	0.66	0.62	43.83	0.17	0.15
QWX28Q		45.04	1.45	1.35	44.71	1.05	0.91
QYZZHH		41.65	-1.94	-1.81	42.06	-1.60	-1.40
TB62UQ		43.85	0.27	0.25	43.75	0.09	0.08
TH8BYX		43.59	0.00	0.00	42.37	-1.30	-1.13
UY7N8Y		43.34	-0.24	-0.23	43.66	0.00	0.00



Plastics Interlaboratory Testing Program

Analysis 738

Flexural Stress at Yield - MPa

Report #96
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WebCode	Data Flag	Sample K31			Sample K32		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
VHJDBN		45.17	1.58	1.48	44.73	1.07	0.93
W8EU3T		42.30	-1.29	-1.20	41.48	-2.18	-1.91
WVY8Q8		43.04	-0.55	-0.51	43.38	-0.29	-0.25
X7XBGL		44.16	0.57	0.53	44.19	0.53	0.46
XJ3FLT		44.42	0.84	0.78	43.94	0.28	0.25
XJZT4F		44.35	0.77	0.71	45.25	1.59	1.39

Summary Statistics

Grand Means

43.588 MPa

43.663 MPa

Std Dev Btwn Labs

1.073 MPa

1.144 MPa

Statistics based on 41 of 41 reporting participants

Sample K31: HIPS & Sample K32: HIPS



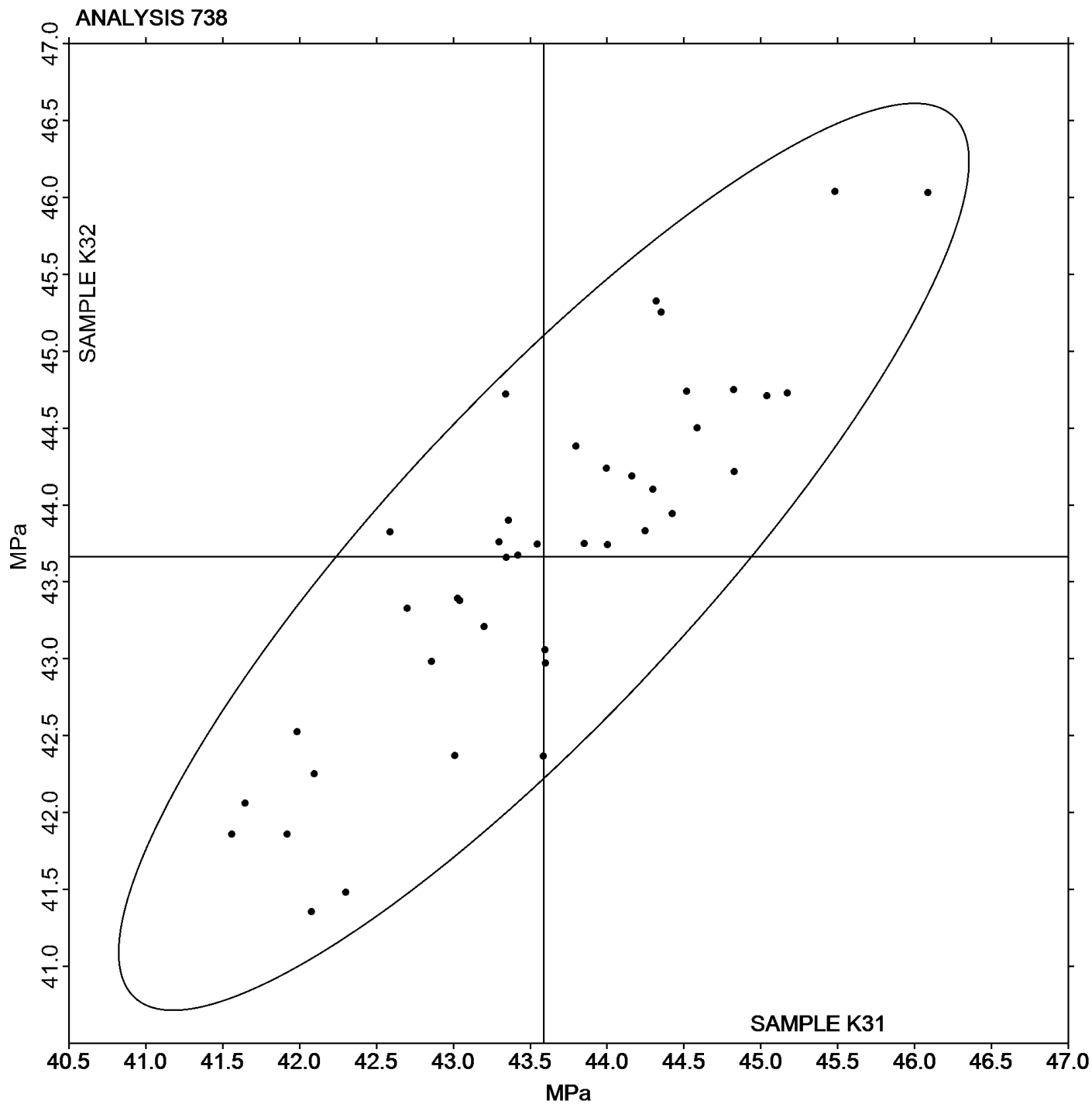
Plastics Interlaboratory Testing Program

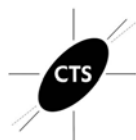
Analysis 738

Flexural Stress at Yield - MPa

Report #96
4th Qtr 2015

Grand Mean Sample K31: 43.588 MPa Grand Mean Sample K32: 43.663 MPa





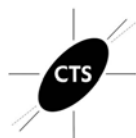
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 790

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S31			Sample S32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2G8YXP		2.90	-0.06	-0.21	2.84	-0.10	-0.31	TO
2XC4MM		3.08	0.13	0.44	3.09	0.16	0.50	TO
3YFH6C		3.13	0.18	0.62	3.20	0.26	0.84	TO
424GWF		2.79	-0.16	-0.57	2.78	-0.15	-0.49	TY
4AWNG7		3.07	0.11	0.40	3.08	0.14	0.45	TM
6QZKDB		2.90	-0.06	-0.20	2.84	-0.10	-0.30	CE
6RRG36		3.15	0.19	0.68	3.31	0.37	1.19	XX
6UL3XG		2.91	-0.04	-0.16	2.91	-0.02	-0.08	WZ
6XKLTN		2.74	-0.22	-0.77	2.83	-0.10	-0.33	TM
74ZJZ8		3.05	0.09	0.31	3.23	0.30	0.95	CE
7868HH	*	3.17	0.21	0.75	2.78	-0.16	-0.51	BA
7FH2TE		2.82	-0.14	-0.48	2.74	-0.20	-0.64	TM
7KWPHG		3.20	0.25	0.87	3.11	0.17	0.54	CE
7MX3RN		2.99	0.03	0.11	2.85	-0.08	-0.26	BA
7ZZ968	*	3.75	0.80	2.80	3.86	0.93	2.95	CE
8ZYVW6	*	3.49	0.53	1.87	3.16	0.22	0.71	TO
AF62ZZ		3.17	0.22	0.76	3.12	0.18	0.58	XX
B8A9FD	X	2.41	-0.55	-1.94	3.80	0.86	2.74	TM
C2XRAV		3.00	0.05	0.16	2.98	0.04	0.14	WZ
DJVA2C		2.96	0.01	0.02	2.96	0.03	0.09	TO
DW3BK9		2.99	0.03	0.12	3.09	0.15	0.49	TM
G7A9T8		3.02	0.07	0.24	3.01	0.08	0.24	TO
GA9MDC	X	2.96	0.00	0.00	3.52	0.58	1.85	TO
GJ4K87		2.78	-0.18	-0.63	2.56	-0.38	-1.20	CE
GJY498		2.80	-0.15	-0.54	2.67	-0.26	-0.83	WZ
GYX473		2.98	0.02	0.07	2.97	0.03	0.11	TO
HNBB8Q		2.83	-0.12	-0.43	2.82	-0.12	-0.37	TO
KN43VA	X	0.34	-2.61	-9.19	0.35	-2.59	-8.23	TO
MGE6H7		2.33	-0.63	-2.22	2.35	-0.58	-1.86	TO
N9W7BX		2.75	-0.20	-0.72	2.92	-0.02	-0.05	CE
NARYWJ	X	3.73	0.77	2.72	2.33	-0.60	-1.93	CE
NUWEFV		2.79	-0.17	-0.60	2.97	0.04	0.12	CS
PK2X4W		3.07	0.11	0.40	2.86	-0.08	-0.25	CE
PK3NCZ		2.66	-0.30	-1.05	2.73	-0.21	-0.66	TM
Q6NMDN		2.70	-0.26	-0.91	2.38	-0.55	-1.75	TO



Plastics Interlaboratory Testing Program

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Analysis 790

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S31			Sample S32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
QYZZHH		2.93	-0.03	-0.11	2.78	-0.15	-0.48	TO
TH8BYX		2.88	-0.07	-0.26	2.97	0.03	0.11	CE
TM3XWR		2.85	-0.11	-0.38	2.77	-0.16	-0.52	TM
TZNA93	*	3.65	0.69	2.43	3.89	0.96	3.05	XX
U4ZH8L		2.33	-0.62	-2.19	2.34	-0.59	-1.89	TO
U78Z6G		3.49	0.53	1.88	3.44	0.50	1.61	XX
UJGFCL		2.85	-0.10	-0.36	2.89	-0.05	-0.16	TO
UY7N8Y	X	1.25	-1.70	-5.99	2.29	-0.65	-2.06	DY
WLB9Z2	X	2.96	0.01	0.02	3.06	0.12	0.40	XX
X3XUGL	*	2.24	-0.72	-2.53	2.38	-0.56	-1.77	XX
XGWMX	X	4.10	1.14	4.03	4.71	1.77	5.64	TO
XJ3FLT		2.88	-0.07	-0.25	2.87	-0.07	-0.21	CE
XKUJAU		3.14	0.18	0.65	2.92	-0.01	-0.04	TM
XRFAWP	*	3.04	0.08	0.29	3.40	0.46	1.47	CE
XVUATF		3.13	0.17	0.60	3.08	0.15	0.47	TM
XXNVPT		2.88	-0.08	-0.27	2.82	-0.11	-0.36	TM
YE8YUK		2.85	-0.11	-0.38	2.73	-0.20	-0.65	TO
ZNAG7N	X	4.00	1.04	3.67	3.75	0.81	2.59	TO
ZPHZJP		2.83	-0.12	-0.44	2.78	-0.15	-0.49	TM
ZQUHXN		3.01	0.05	0.18	3.06	0.12	0.38	TM
ZUDRRM	X	4.30	1.35	4.74	3.89	0.95	3.03	WZ
ZWJVZC		2.96	0.00	0.01	2.76	-0.18	-0.57	TM

Summary Statistics

Grand Means

2.956 ft.lbf/in

2.936 ft.lbf/in

Std Dev Btwn Labs

0.284 ft.lbf/in

0.314 ft.lbf/in

Statistics based on 48 of 57 reporting participants

Sample S31: HIPS & Sample S32: HIPS



Plastics Interlaboratory Testing Program

Analysis 790

Notched Izod Impact - ft.lbf/in

Report #96

4th Qtr 2015

Comments on Assigned Data Flags for Test #790

- B8A9FD (X) - Inconsistent in testing between samples, data for Sample S32 are high.
- ZNAG7N (X) - Inconsistent in testing between samples, data for Sample S31 are high.
- KN43VA (X) - Data for both samples are low.
- ZUDRRM (X) - Data for both samples are high. Also inconsistent in testing within both samples.
- GA9MDC (X) - Inconsistent in testing between samples.
- UY7N8Y (X) - Inconsistent in testing between samples, data for Sample S31 are low. Also inconsistent in testing within Sample S32.
- NARYWJ (X) - Inconsistent in testing between samples, data for Sample S31 are high.
- WLB9Z2 (X) - Data for this test reflects retest sample results received after Report 96 was published. Due to CTS Policy data must be flagged in order to not change the consensus statistics.
- XGWMX (X) - Data for both samples are high. Also inconsistent in testing within Sample S31.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

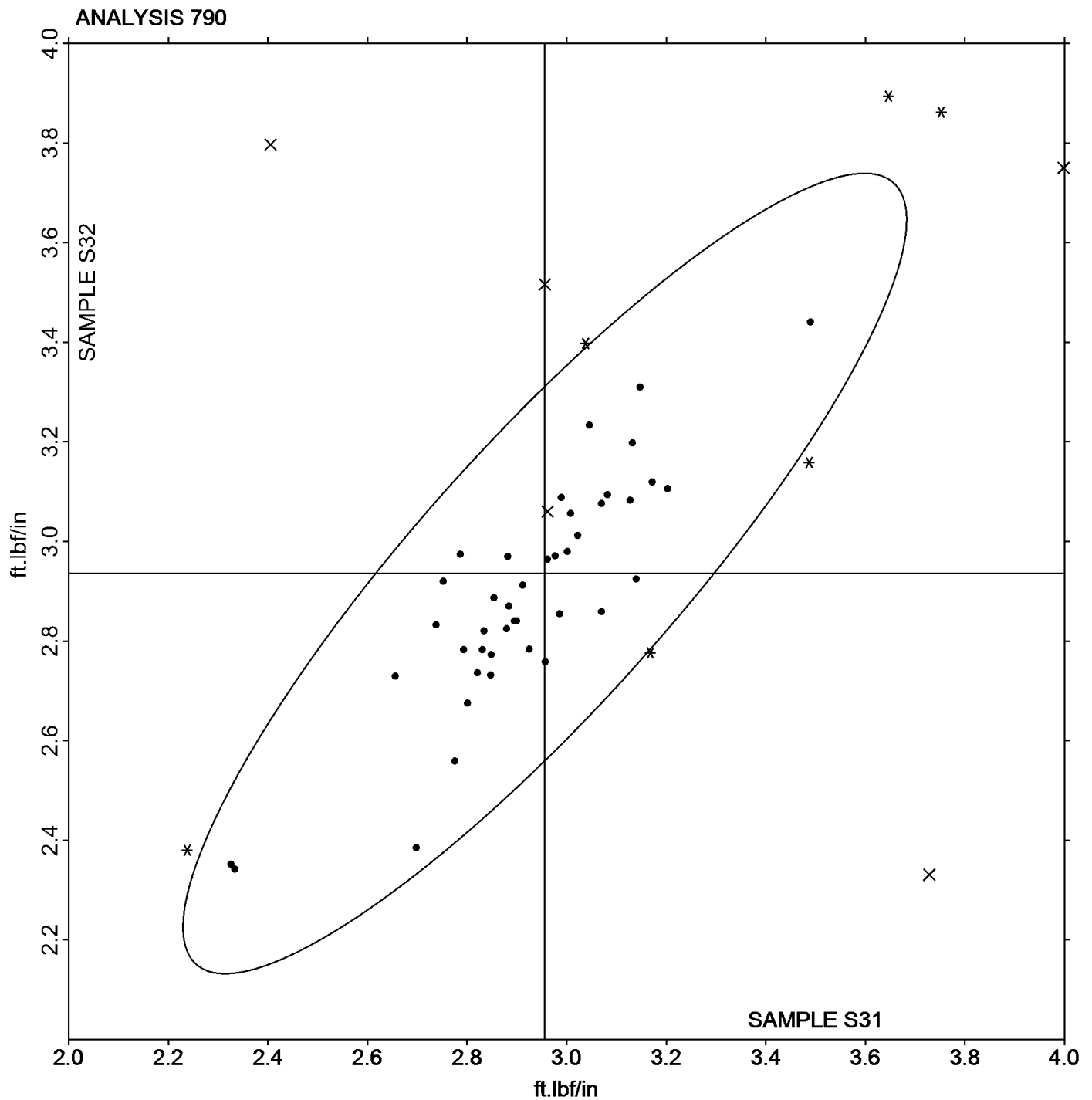
Analysis 790

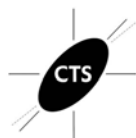
Notched Izod Impact - ft.lbf/in

Report #96

4th Qtr 2015

Grand Mean Sample S31: 2.9561 ft.lbf/in Grand Mean Sample S32: 2.9356 ft.lbf/in





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 791

Notched Izod Impact - kJ/m²

WebCode	Data Flag	Sample Z31			Sample Z32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
36AHLT		27.76000	-0.29523	-0.34	26.78000	-0.25757	-0.28	TO
424GWF		28.08200	0.02677	0.03	27.37600	0.33843	0.37	XX
4RXC7K		27.81600	-0.23923	-0.28	27.69800	0.66043	0.72	TO
6UL3XG		28.77000	0.71477	0.83	27.67200	0.63443	0.70	TM
7MX3RN		29.77700	1.72177	1.99	28.07920	1.04163	1.14	XX
7P3L2G		27.96800	-0.08723	-0.10	26.81000	-0.22757	-0.25	TO
7P73YF		28.62400	0.56877	0.66	28.35400	1.31643	1.44	CE
86Q3FD		28.50400	0.44877	0.52	27.81800	0.78043	0.86	IN
8QCUJG		28.92000	0.86477	1.00	27.94000	0.90243	0.99	CE
9NZGCY		27.15780	-0.89743	-1.04	25.80400	-1.23357	-1.35	XX
9Q8YBU		27.55400	-0.50123	-0.58	26.19400	-0.84357	-0.93	XX
9V2TBG		28.82000	0.76477	0.88	28.20000	1.16243	1.28	TO
BAFQE9		28.06000	0.00477	0.01	26.78000	-0.25757	-0.28	CE
DWX36U		28.84500	0.78977	0.91	27.86840	0.83083	0.91	TM
GB8P8M		29.58000	1.52477	1.76	27.90000	0.86243	0.95	TM
GJLPP6		27.34000	-0.71523	-0.83	25.88000	-1.15757	-1.27	XX
GJY498		27.64000	-0.41523	-0.48	26.26800	-0.76957	-0.84	WZ
JFD3Z6		26.24000	-1.81523	-2.10	25.32000	-1.71757	-1.89	WZ
KKYH43		27.65000	-0.40523	-0.47	27.14400	0.10643	0.12	XX
MH6987		27.80600	-0.24923	-0.29	26.80400	-0.23357	-0.26	WZ
N9W7BX		26.62400	-1.43123	-1.65	26.01600	-1.02157	-1.12	CE
Q26RBV		27.18000	-0.87523	-1.01	25.64000	-1.39757	-1.53	XX
QBW4PX	X	21.64400	-6.41123	-7.40	21.28200	-5.75557	-6.32	XX
QVZNP4	X	26.32860	-1.72663	-1.99	27.79960	0.76203	0.84	CE
U2EVEX		27.71200	-0.34323	-0.40	26.94600	-0.09157	-0.10	XX
WVY8Q8		27.75720	-0.29803	-0.34	26.48540	-0.55217	-0.61	XX
XJZT4F		29.19380	1.13857	1.31	28.16220	1.12463	1.23	CE

Summary Statistics

Grand Means

28.055232 kJ/m²

27.037568 kJ/m²

Std Dev Btwn Labs

0.866357 kJ/m²

0.911060 kJ/m²

Statistics based on 25 of 27 reporting participants

Sample Z31: ABS & Sample Z32: ABS



Plastics Interlaboratory Testing Program

Analysis 791

Notched Izod Impact - kJ/m^2

Report #96

4th Qtr 2015

Comments on Assigned Data Flags for Test #791

QVZNP4 (X) - Inconsistent in testing between samples and inconsistent in testing within Sample Z31.

QBW4PX (X) - Data for both samples are low.

Key to Instrument Codes Reported by Participants

CE Ceast

TM TMI

WZ Zwick

IN Instron

TO Tinius Olsen

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

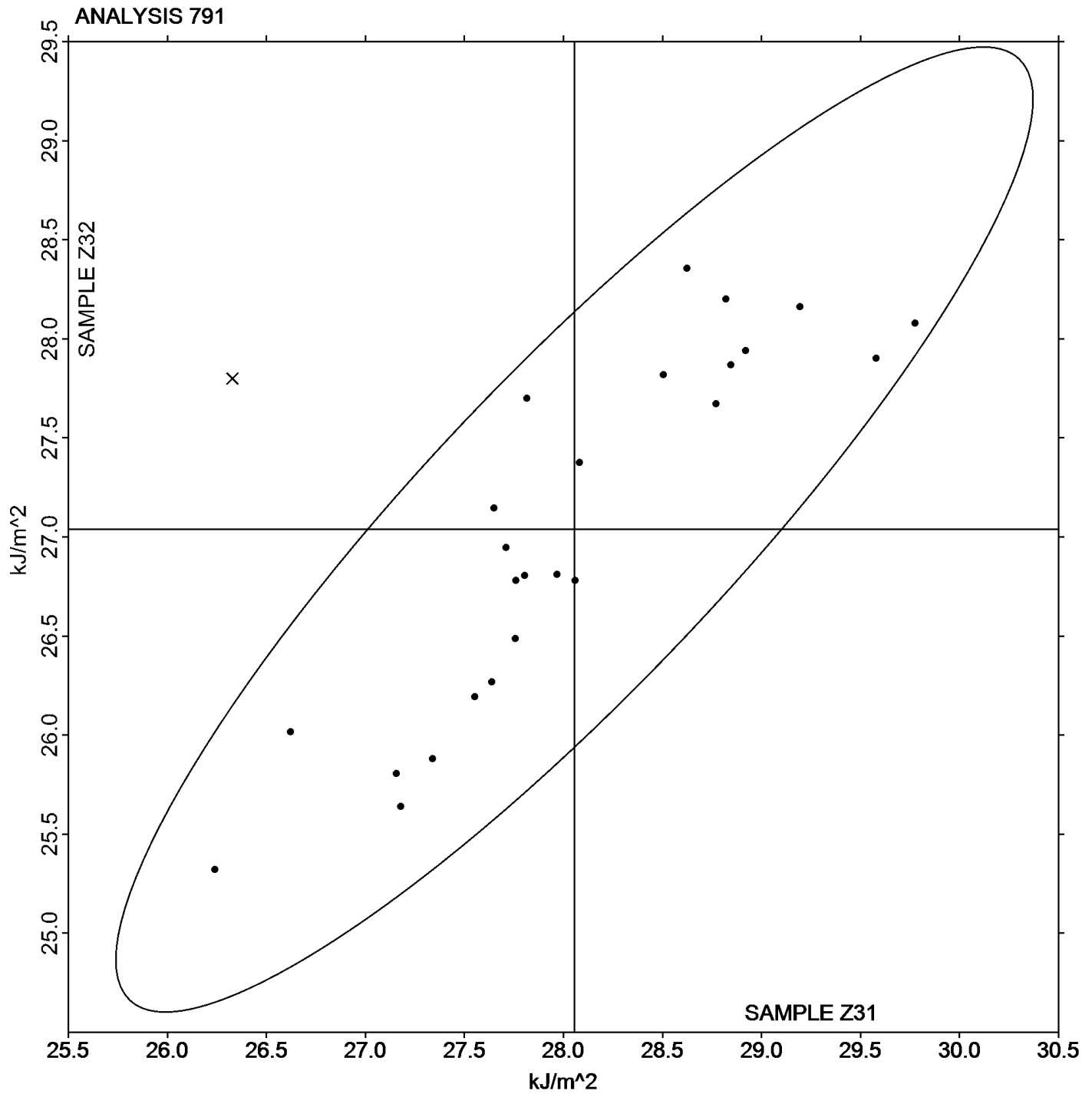
Analysis 791

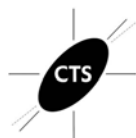
Notched Izod Impact - kJ/m^2

Report #96

4th Qtr 2015

Grand Mean Sample Z31: 28.055 kJ/m^2 Grand Mean Sample Z32: 27.038 kJ/m^2





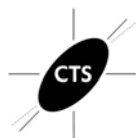
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 792

Notched Charpy Impact - kJ/m ^ 2

WebCode	Data Flag	Sample M31			Sample M32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2D3BFE		13.13	0.46	0.90	12.71	-0.04	-0.07	XX
3JMWLW	X	9.90	-2.76	-5.39	10.02	-2.73	-4.68	TO
3QQWYE		12.61	-0.05	-0.10	13.12	0.37	0.63	XX
424GWF		12.52	-0.14	-0.27	12.43	-0.32	-0.56	TY
4NEG6D		12.96	0.30	0.58	13.04	0.29	0.49	WZ
6QZKDB	*	13.16	0.50	0.97	12.00	-0.75	-1.29	CE
6UL3XG		13.16	0.50	0.97	13.12	0.36	0.62	TM
7KWPHG		12.14	-0.52	-1.02	12.76	0.01	0.01	CE
7MX3RN		12.86	0.20	0.38	12.81	0.06	0.10	CE
7P3L2G		12.61	-0.05	-0.10	12.72	-0.04	-0.06	TO
9Q8YBU	X	14.40	1.74	3.38	12.51	-0.24	-0.42	TO
B8QCZ7		12.46	-0.20	-0.40	12.48	-0.27	-0.46	TM
D2PAN3		12.32	-0.35	-0.68	12.40	-0.35	-0.60	WZ
DJVA2C		13.41	0.74	1.45	12.40	-0.35	-0.60	XX
DW3BK9		12.84	0.17	0.34	13.20	0.45	0.77	TM
EFNB3N	*	13.92	1.25	2.44	14.27	1.52	2.60	CE
FX8HZ7		12.72	0.05	0.10	12.31	-0.44	-0.76	TO
GJ4K87		12.04	-0.62	-1.22	11.80	-0.95	-1.63	CE
GJY498		12.60	-0.06	-0.13	12.76	0.01	0.01	WZ
GYX473		12.24	-0.42	-0.82	12.61	-0.14	-0.24	TO
HWMPR9		12.35	-0.31	-0.61	12.90	0.14	0.25	TM
JFD3Z6		12.92	0.26	0.50	12.56	-0.19	-0.33	WZ
KR2NJ7		12.28	-0.38	-0.75	12.15	-0.60	-1.04	CE
KTVAEH		12.10	-0.56	-1.10	12.10	-0.65	-1.11	CE
LVENFW	*	14.21	1.54	3.00	14.03	1.28	2.19	WZ
MH6987		12.82	0.16	0.31	13.87	1.11	1.91	WZ
N9W7BX		12.09	-0.57	-1.12	12.36	-0.39	-0.67	CE
NARYWJ		12.78	0.12	0.23	13.37	0.62	1.05	CE
PK2X4W		12.30	-0.36	-0.70	13.02	0.27	0.46	CE
PVPPRA		13.42	0.76	1.48	13.16	0.41	0.69	TO
QBW4PX	X	9.30	-3.36	-6.55	9.65	-3.11	-5.32	XX
QUPAV3		12.91	0.25	0.48	13.07	0.32	0.55	TO
QVZNP4		11.69	-0.97	-1.89	11.60	-1.15	-1.97	CE
TH8BYX		12.98	0.32	0.62	13.46	0.71	1.21	CE
TZNA93		12.39	-0.27	-0.53	13.09	0.33	0.57	WZ



Plastics Interlaboratory Testing Program

Analysis 792

Notched Charpy Impact - kJ/m²

Report #96
4th Qtr 2015

WebCode	Data Flag	Sample M31			Sample M32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
U2EVEX		12.63	-0.04	-0.07	12.68	-0.07	-0.12	XX
VHJDBN		12.13	-0.53	-1.04	12.00	-0.75	-1.29	IN
W2MUJQ		12.60	-0.06	-0.13	11.66	-1.09	-1.87	CE
WVY8Q8		13.16	0.50	0.97	13.02	0.26	0.45	TO
XJZT4F		12.27	-0.39	-0.76	13.11	0.35	0.61	CE
XTQEAD		12.48	-0.19	-0.36	12.83	0.07	0.13	TO
YLNN4T		12.59	-0.08	-0.15	12.88	0.13	0.22	CE
ZPHZJP		11.98	-0.68	-1.33	12.41	-0.34	-0.59	TM
ZUDRRM		12.43	-0.23	-0.45	12.60	-0.15	-0.26	TM

Summary Statistics

Grand Means

12.664 kJ/m²

12.753 kJ/m²

Stnd Dev Btwn Labs

0.513 kJ/m²

0.584 kJ/m²

Statistics based on 41 of 44 reporting participants

Sample M31: HIPS & Sample M32: HIPS

Comments on Assigned Data Flags for Test #792

QBW4PX (X) - Data for both samples are low.

9Q8YBU (X) - Data for Sample M31 are high.

3JMQLW (X) - Data for both samples are low.

Key to Instrument Codes Reported by Participants

CE	IN
TM	TO
TY	WZ
XX	



Plastics Interlaboratory Testing Program

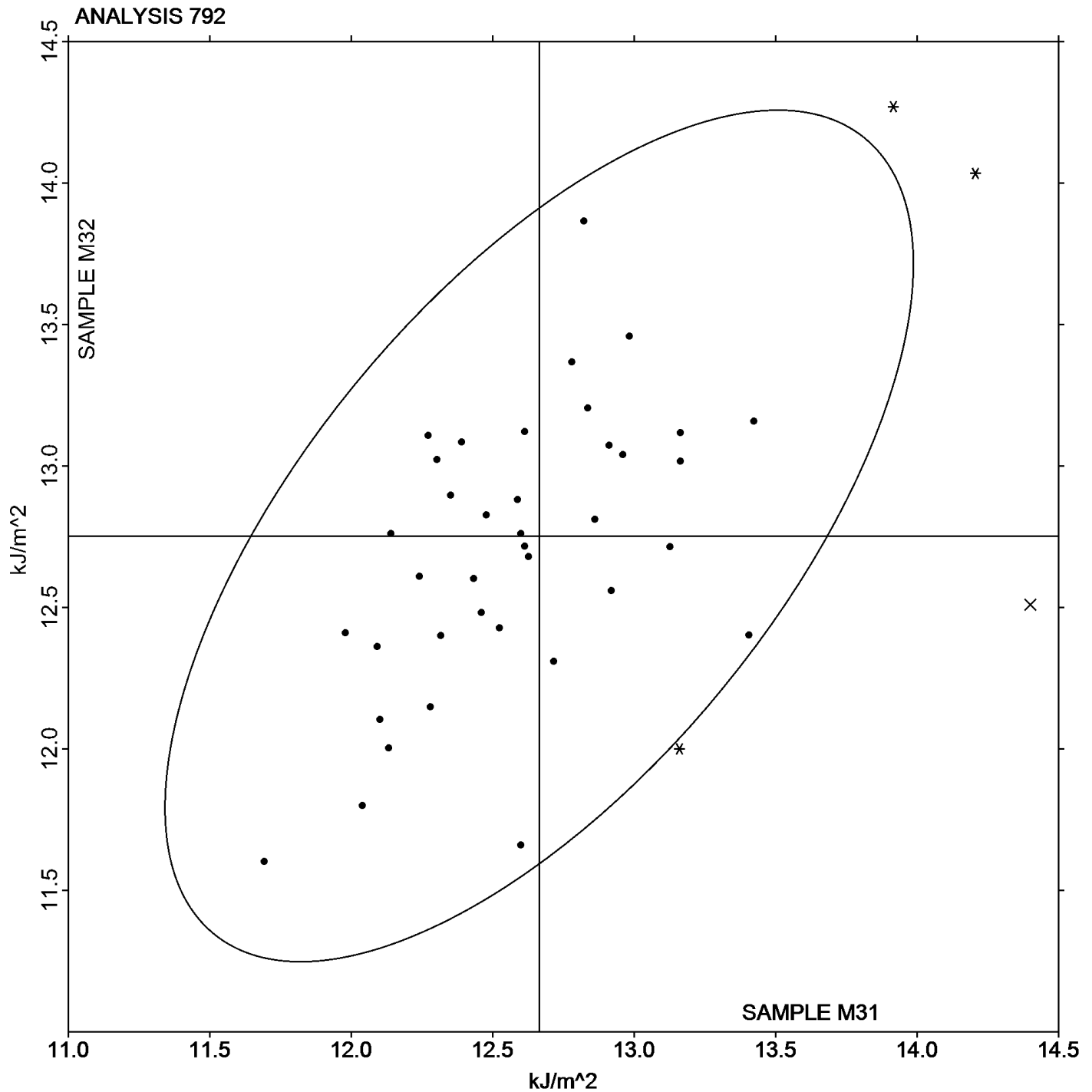
Analysis 792

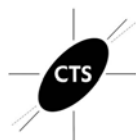
Notched Charpy Impact - kJ/m^2

Report #96

4th Qtr 2015

Grand Mean Sample M31: 12.664 kJ/m^2 Grand Mean Sample M32: 12.753 kJ/m^2





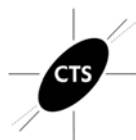
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 710

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

WebCode	Data Flag	Sample E31			Sample E32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2XC4MM		78.88	-0.25	-0.25	79.00	-0.32	-0.36	CE
3YFH6C		78.30	-0.82	-0.84	78.98	-0.35	-0.39	DN
424GWF		79.45	0.33	0.34	79.75	0.43	0.48	TY
4AWNG7		80.50	1.38	1.41	81.00	1.68	1.87	TO
6RRG36	X	66.50	-12.62	-12.94	67.47	-11.85	-13.21	XX
6UL3XG		81.63	2.50	2.57	81.68	2.35	2.62	AT
74ZJZ8		77.68	-1.45	-1.48	78.10	-1.22	-1.36	CE
7KWPHG		78.98	-0.15	-0.15	78.98	-0.34	-0.38	CE
7ZZ968	X	85.18	6.05	6.21	84.80	5.48	6.11	CF
AF62ZZ		80.35	1.23	1.26	80.10	0.78	0.87	CE
C2XRAV		79.38	0.25	0.26	79.73	0.40	0.45	CE
DJVA2C		77.98	-1.15	-1.18	78.35	-0.97	-1.08	TO
GA9MDC		78.33	-0.80	-0.82	78.38	-0.95	-1.05	TO
GJ4K87	M	No data reported for this sample			78.48	-0.85	-0.94	TO
GJY498		80.25	1.13	1.16	80.00	0.68	0.76	AT
GYX473		78.93	-0.20	-0.20	79.08	-0.25	-0.27	RO
KN43VA		78.60	-0.52	-0.53	78.68	-0.65	-0.72	TO
MPM2XW		79.73	0.60	0.62	80.53	1.20	1.34	XX
N9W7BX		79.90	0.78	0.80	80.00	0.68	0.76	DN
NARYWJ		78.40	-0.72	-0.74	78.81	-0.51	-0.57	CE
NUWEFV		78.90	-0.22	-0.23	79.15	-0.17	-0.19	TO
PAL4R4		79.18	0.05	0.05	79.40	0.08	0.09	TO
PFQKLX		77.45	-1.67	-1.71	77.58	-1.75	-1.95	CE
Q6NMDN		78.48	-0.65	-0.66	78.80	-0.52	-0.58	TO
QYZZHH		79.40	0.28	0.29	79.63	0.30	0.34	DN
TH8BYX		78.23	-0.90	-0.92	79.05	-0.27	-0.30	CE
VHJDBN		78.20	-0.92	-0.94	78.08	-1.25	-1.39	XA
YE8YUK		79.23	0.10	0.11	79.60	0.28	0.31	CE
ZPHZJP		78.90	-0.22	-0.23	79.30	-0.02	-0.02	CE
ZUDRRM		79.43	0.30	0.31	79.28	-0.05	-0.05	TO
ZWJVZC	*	80.80	1.68	1.72	80.03	0.70	0.78	AT



Plastics Interlaboratory Testing Program
Analysis 710
Deflection Temp. Under Flexural Load (1.82 MPa) - Degrees C

Report #96
4th Qtr 2015

Summary Statistics			
Grand Means	79.121 Degrees C	79.321 Degrees C	
Std Dev Btwn Labs	0.975 Degrees C	0.897 Degrees C	
Statistics based on 28 of 31 reporting participants			

Sample E31: HIPS & Sample E32: HIPS

Comments on Assigned Data Flags for Test #710

GJ4K87 (M) - Laboratory did not submit data for Sample E31.

7ZZ968 (X) - Data for both samples are high. Also inconsistent in testing within Sample E31.

6RRG36 (X) - Data for both samples are low. Also inconsistent in testing within both samples.

Key to Instrument Codes Reported by Participants

AT	Atlas	CE	Ceast
CF	Coesfeld	DN	DYNISCO
RO	Rosand	TO	Tinius Olsen
TY	Toyoseiki	XA	Special In-House Instrument
XX	Instrument manufacturer not specified by lab		



Plastics Interlaboratory Testing Program

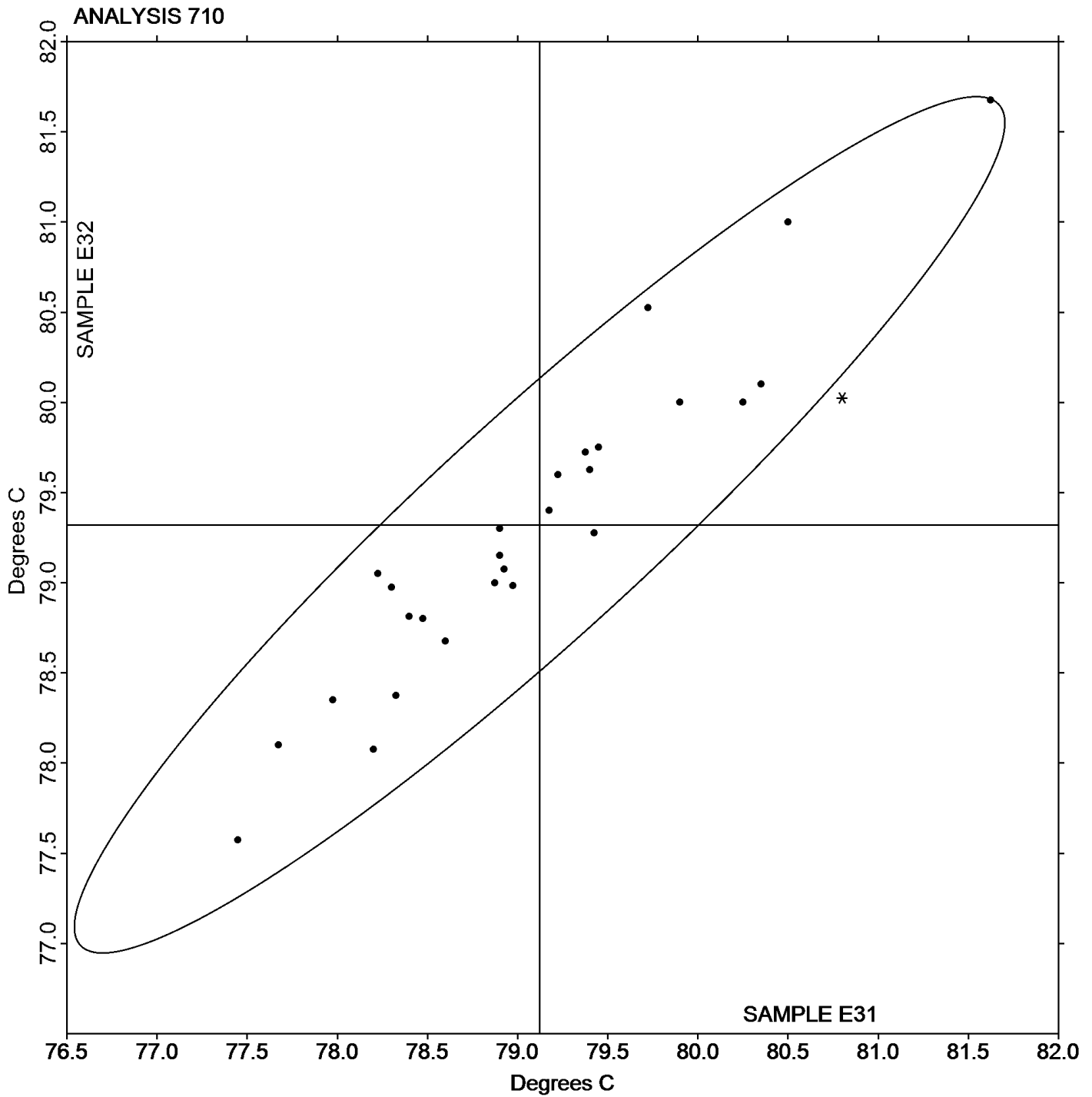
Report #96

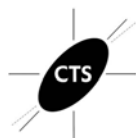
4th Qtr 2015

Analysis 710

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

Grand Mean Sample E31: 79.121 Degrees C Grand Mean Sample E32: 79.321 Degrees C





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 711

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

WebCode	Data Flag	Sample G31			Sample G32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
6QZKDB		68.5	0.2	0.16	68.7	0.2	0.11	CE
6RRG36	X	78.6	10.3	7.44	80.0	11.5	7.88	XX
7KWPHG		67.7	-0.6	-0.46	67.4	-1.1	-0.78	CE
AF62ZZ		70.5	2.2	1.56	70.4	1.8	1.26	CE
DJVA2C		67.8	-0.6	-0.41	67.4	-1.2	-0.82	TO
GJ4K87		66.0	-2.3	-1.65	67.1	-1.5	-1.02	TO
GJLPP6		71.4	3.0	2.19	72.0	3.5	2.40	XX
JUUXF2		67.4	-0.9	-0.64	67.5	-1.1	-0.73	XX
MPM2XW		69.6	1.3	0.95	70.3	1.7	1.18	XX
PFQKLX		67.7	-0.6	-0.46	67.5	-1.0	-0.70	CE
Q26RBV		68.6	0.3	0.21	68.1	-0.4	-0.28	XX
Q6NMDN		68.4	0.1	0.06	68.1	-0.5	-0.34	TO
TH8BYX		67.3	-1.0	-0.73	68.7	0.1	0.09	CE
ZPHZJP		68.2	-0.1	-0.08	69.1	0.6	0.39	CE
ZUDRRM		67.3	-1.0	-0.71	67.5	-1.1	-0.75	TO

Summary Statistics

Grand Means

68.31 Degrees C

68.54 Degrees C

Stnd Dev Btwn Labs

1.38 Degrees C

1.45 Degrees C

Statistics based on 14 of 15 reporting participants

Sample G31: PP & Sample G32: PP

Comments on Assigned Data Flags for Test #711

6RRG36 (X) - Data for both samples are high.

Key to Instrument Codes Reported by Participants

CE Ceast

TO Tinius Olsen

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

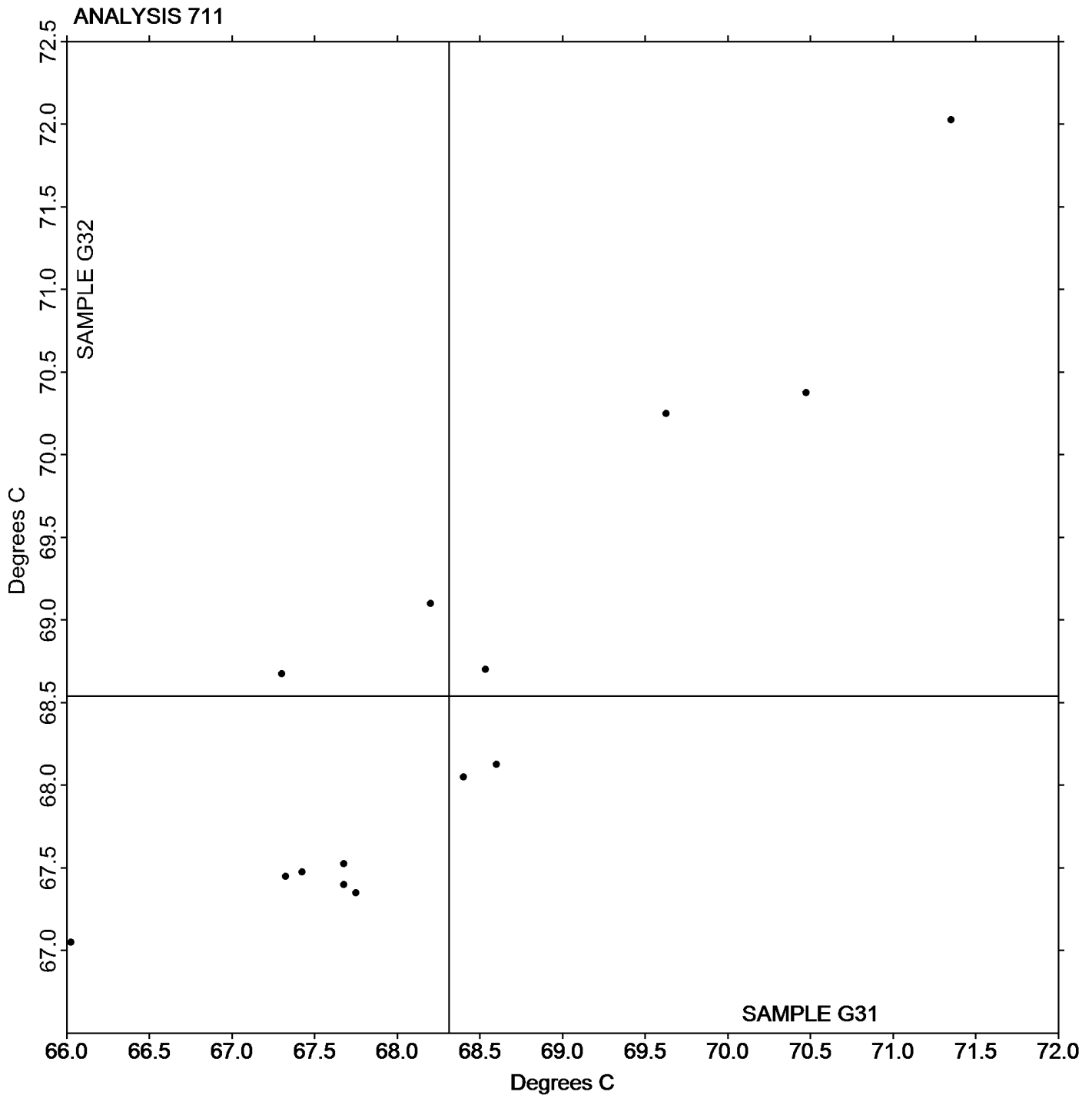
Report #96

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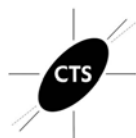
Analysis 711

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

Grand Mean Sample G31: 68.311 Degrees C Grand Mean Sample G32: 68.539 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 #96
4th Qtr 2015

Analysis 712

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

WebCode	Data Flag	Sample N31			Sample N32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2G8YXP		80.15	2.02	1.80	80.50	2.35	2.06	CE
3QQWYE		78.98	0.85	0.75	78.40	0.25	0.22	XX
424GWF		78.20	0.07	0.07	77.98	-0.18	-0.16	TY
4RXC7K		79.03	0.90	0.80	78.90	0.75	0.65	DN
6QZKDB		78.33	0.21	0.18	78.20	0.05	0.04	CF
6UL3XG		78.25	0.12	0.11	77.90	-0.25	-0.22	AT
7P3L2G		78.53	0.40	0.35	78.90	0.75	0.65	AT
7P73YF		76.88	-1.25	-1.11	77.08	-1.08	-0.95	CE
9Q8YBU		77.65	-0.48	-0.42	77.63	-0.53	-0.46	CE
9V2TBG		77.83	-0.30	-0.27	77.50	-0.65	-0.57	AT
BAFQE9		79.88	1.75	1.55	79.50	1.35	1.18	CE
FTTUC4		77.38	-0.75	-0.67	77.40	-0.75	-0.66	TO
FX8HZ7		77.55	-0.58	-0.51	77.83	-0.33	-0.29	RO
G7A9T8		77.78	-0.35	-0.31	77.75	-0.40	-0.36	AT
GJ4K87		76.67	-1.46	-1.29	77.51	-0.65	-0.57	TO
GJY498		79.70	1.57	1.40	79.75	1.60	1.40	AT
JFD3Z6		78.75	0.62	0.55	78.88	0.72	0.63	CE
KKYH43		79.30	1.18	1.04	78.58	0.42	0.37	RO
KR2NJ7		78.63	0.50	0.44	78.25	0.10	0.08	TY
LRVUC6		78.30	0.17	0.16	78.33	0.17	0.15	XX
MGE6H7		76.48	-1.65	-1.46	76.65	-1.50	-1.32	CE
MH6987		77.68	-0.45	-0.40	77.35	-0.80	-0.71	CE
N9W7BX		77.23	-0.90	-0.80	77.65	-0.50	-0.44	XX
PFQKLX		75.58	-2.55	-2.26	75.28	-2.88	-2.53	CE
PK2X4W	*	79.60	1.47	1.31	80.52	2.37	2.08	ZW
Q6NMDN		79.03	0.90	0.80	79.10	0.95	0.83	TO
QBW4PX		79.63	1.50	1.33	79.65	1.50	1.31	TO
QUPAV3		77.95	-0.18	-0.16	78.13	-0.03	-0.03	CE
QYZZHH		78.43	0.30	0.27	78.35	0.20	0.17	DN
TCZKWR		76.23	-1.90	-1.69	76.53	-1.63	-1.43	CE
TH8BYX		76.30	-1.83	-1.62	76.38	-1.78	-1.56	CE
U2EVEX		79.08	0.95	0.84	79.35	1.20	1.05	AT
W2MUJQ		78.63	0.50	0.44	78.90	0.75	0.65	AT
WVY8Q8		77.58	-0.55	-0.49	77.30	-0.85	-0.75	CE
ZPHZJP		77.28	-0.85	-0.75	77.55	-0.60	-0.53	CE



Plastics Interlaboratory Testing Program

Report #96

4th Qtr 2015

Analysis 712

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

Summary Statistics		
Grand Means	78.125 Degrees C	78.154 Degrees C
Std Dev Btwn Labs	1.127 Degrees C	1.139 Degrees C
Statistics based on 35 of 35 reporting participants		

Sample N31: ABS/PC & Sample N32: ABS/PC

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

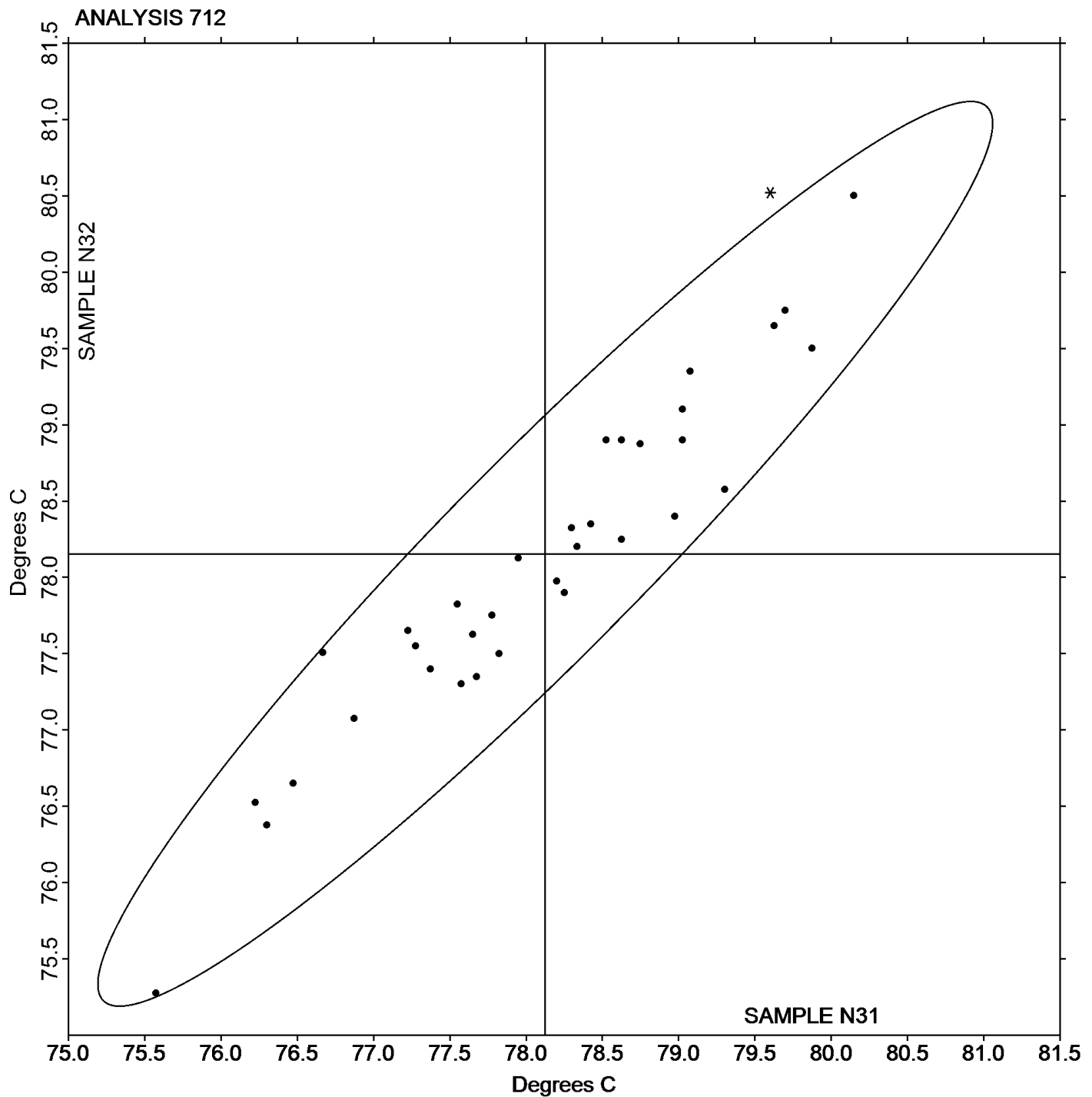
Report #96

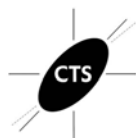
4th Qtr 2015

Analysis 712

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

Grand Mean Sample N31: 78.125 Degrees C Grand Mean Sample N32: 78.154 Degrees C





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 715

Vicat Softening Temperature (Rate A)

WebCode	Data Flag	Sample H31			Sample H32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2D8REC		104.38	0.15	0.21	104.35	0.18	0.25	TO
3YFH6C		103.72	-0.52	-0.72	103.25	-0.92	-1.24	DN
424GWF		104.37	0.13	0.19	104.22	0.05	0.07	TY
6QZKDB		104.00	-0.23	-0.33	104.30	0.13	0.18	CF
6UL3XG		104.55	0.32	0.44	104.53	0.37	0.50	AT
6VQVM9		105.08	0.85	1.19	104.98	0.82	1.10	CE
7KWPHG		104.67	0.43	0.61	104.33	0.17	0.22	CE
7P3L2G		103.57	-0.67	-0.93	103.70	-0.47	-0.63	AT
B8QCZ7		104.27	0.03	0.05	104.20	0.03	0.04	CE
C2XRAV		105.10	0.87	1.22	105.03	0.87	1.17	CE
FX8HZ7		104.60	0.37	0.51	104.72	0.55	0.74	RO
GA9MDC		104.13	-0.10	-0.14	104.02	-0.15	-0.20	TO
GJY498		105.12	0.88	1.24	105.15	0.98	1.33	CF
GYX473		104.15	-0.08	-0.12	104.28	0.12	0.16	RO
JFD3Z6		104.45	0.22	0.30	104.50	0.33	0.45	CF
KKYH43		105.79	1.56	2.19	105.82	1.65	2.23	RO
LU6J39		104.65	0.42	0.58	104.50	0.33	0.45	CE
N9W7BX		104.08	-0.15	-0.21	103.98	-0.18	-0.25	DN
NARYWJ		103.30	-0.93	-1.31	103.43	-0.73	-0.99	CE
PFQKLX		102.92	-1.32	-1.85	102.92	-1.25	-1.69	CE
PK2X4W		102.84	-1.39	-1.95	102.50	-1.67	-2.26	WZ
Q6NMDN		104.23	0.00	0.00	104.18	0.02	0.02	TO
RXQCK6	X	103.38	-0.85	-1.19	102.40	-1.77	-2.39	TO
X7XBGL		103.68	-0.55	-0.77	103.65	-0.52	-0.70	TO
XTQEAD		105.18	0.95	1.33	105.15	0.98	1.33	TO
XXNVPT		103.10	-1.13	-1.59	103.28	-0.88	-1.20	CE
YE8YUK	X	96.82	-7.42	-10.40	96.78	-7.38	-9.99	CE
ZNAG7N		104.10	-0.13	-0.19	103.75	-0.42	-0.56	CE
ZPHZJP		104.27	0.03	0.05	103.78	-0.38	-0.52	CE



Plastics Interlaboratory Testing Program

Analysis 715

Vicat Softening Temperature (Rate A)

Report #96

4th Qtr 2015

Summary Statistics

Grand Means

104.233 Degrees C

104.167 Degrees C

Std Dev Btwn Labs

0.713 Degrees C

0.739 Degrees C

Statistics based on 27 of 29 reporting participants

Sample H31: ABS & Sample H32: ABS

Comments on Assigned Data Flags for Test #715

YE8YUK (X) - Data for both samples are low. Also inconsistent in testing within both samples.

RXQCK6 (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

AT Atlas

CE Ceast

CF Coesfeld

DN DYNISCO

RO Rosand

TO Tinius Olsen

TY Toyoseiki

WZ Zwick



Plastics Interlaboratory Testing Program

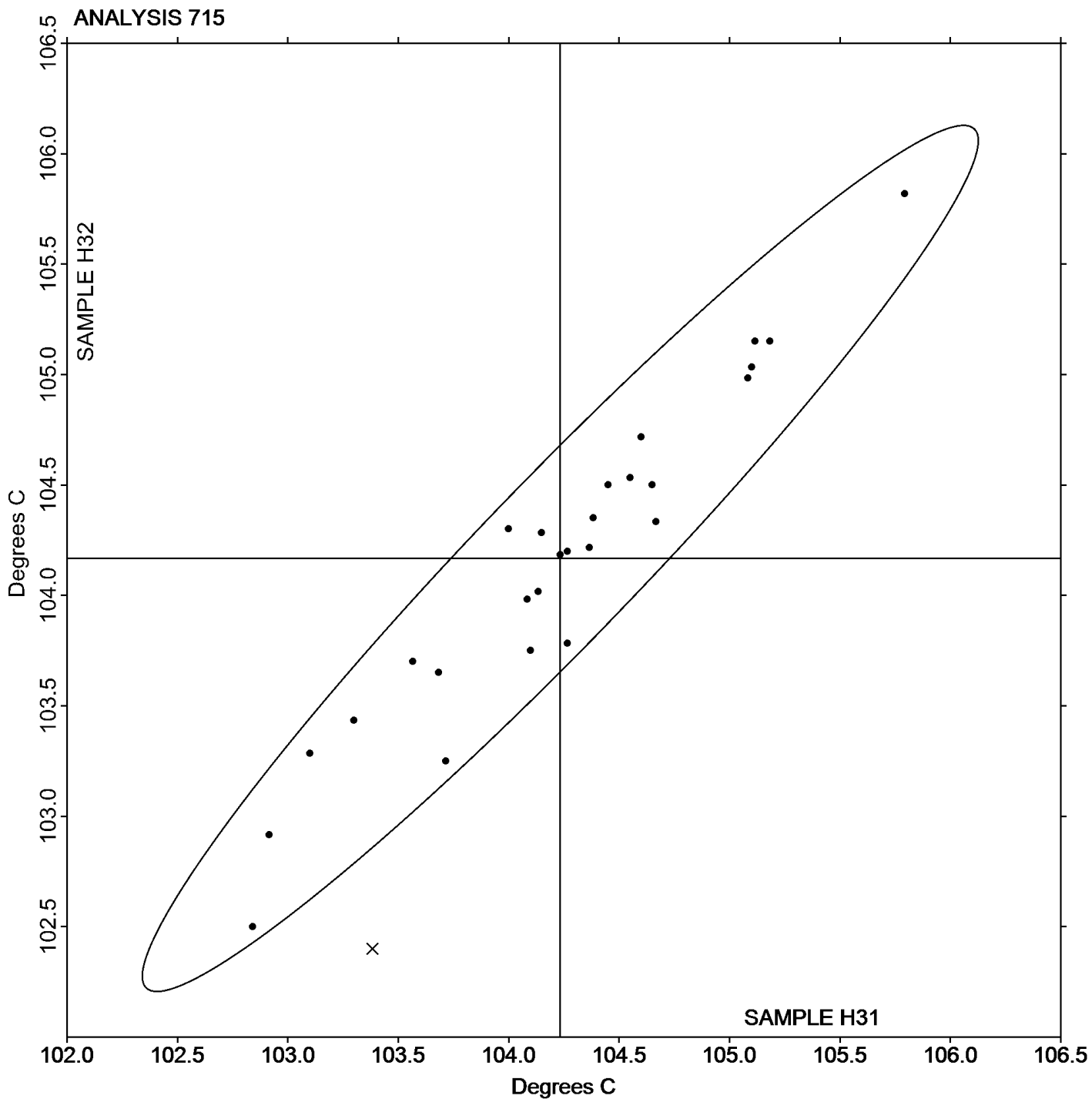
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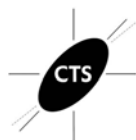
Vicat Softening Temperature (Rate A)

Report #96

4th Qtr 2015

Grand Mean Sample H31: 104.23 Degrees C Grand Mean Sample H32: 104.17 Degrees C





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 716

Vicat Softening Temperature (Rate B)

WebCode	Data Flag	Sample R31			Sample R32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2D8REC		105.40	-0.47	-0.55	105.40	-0.37	-0.44	TO
3YFH6C		107.63	1.77	2.10	107.40	1.63	1.93	DN
424GWF		106.50	0.63	0.76	106.35	0.58	0.69	TY
6QZKDB		106.97	1.10	1.31	107.07	1.30	1.54	CF
6UL3XG		106.90	1.03	1.23	106.57	0.80	0.94	AT
7KWPHG		105.91	0.05	0.06	105.93	0.16	0.19	CE
7P3L2G		105.68	-0.18	-0.22	105.55	-0.22	-0.26	AT
AF62ZZ		105.77	-0.10	-0.12	105.72	-0.05	-0.06	CE
B8QCZ7		105.11	-0.76	-0.90	105.20	-0.57	-0.67	CE
C2XRAV		106.85	0.98	1.17	106.63	0.86	1.02	CE
FX8HZ7		105.80	-0.07	-0.08	105.83	0.06	0.08	XX
GA9MDC		105.53	-0.33	-0.40	105.40	-0.37	-0.44	TO
GJ4K87		106.07	0.20	0.24	106.10	0.33	0.39	TO
GJY498		106.17	0.30	0.36	106.13	0.36	0.43	CF
GYX473		105.98	0.12	0.14	105.65	-0.12	-0.14	RO
JFD3Z6		105.55	-0.32	-0.38	105.60	-0.17	-0.20	CF
JMAX2A		104.83	-1.03	-1.23	104.92	-0.85	-1.01	TO
KKYH43		107.06	1.20	1.43	107.06	1.29	1.52	RO
N9W7BX		106.25	0.38	0.46	105.77	0.00	0.00	DN
NARYWJ		104.68	-1.19	-1.42	104.60	-1.17	-1.39	CE
PFQKLX		104.28	-1.58	-1.88	104.10	-1.67	-1.98	CE
PK2X4W		107.15	1.28	1.53	107.18	1.41	1.66	WZ
Q6NMDN		105.35	-0.52	-0.61	105.18	-0.59	-0.69	TO
RXQCK6		105.10	-0.77	-0.91	104.82	-0.95	-1.13	TO
X7XBGL		104.95	-0.92	-1.09	104.87	-0.90	-1.07	TO
XTQEAD		106.37	0.50	0.60	106.47	0.70	0.82	TO
XXNVPT		105.10	-0.77	-0.91	104.80	-0.97	-1.15	CE
YE8YUK	X	99.10	-6.77	-8.06	98.77	-7.00	-8.29	CE
ZNAG7N		105.30	-0.57	-0.67	105.28	-0.49	-0.58	CE



Plastics Interlaboratory Testing Program

Analysis 716

Vicat Softening Temperature (Rate B)

Report #96

4th Qtr 2015

Summary Statistics

Grand Means

105.866 Degrees C

105.770 Degrees C

Std Dev Btwn Labs

0.840 Degrees C

0.845 Degrees C

Statistics based on 28 of 29 reporting participants

Sample R31: ABS & Sample R32: ABS

Comments on Assigned Data Flags for Test #716

YE8YUK (X) - Data for both samples are low. Also inconsistent in testing within Sample R32.

Key to Instrument Codes Reported by Participants

AT Atlas

CF Coesfeld

RO Rosand

TY Toyoseiki

XX Instrument manufacturer not specified by lab

CE Ceast

DN DYNISCO

TO Tinius Olsen

WZ Zwick



Plastics Interlaboratory Testing Program

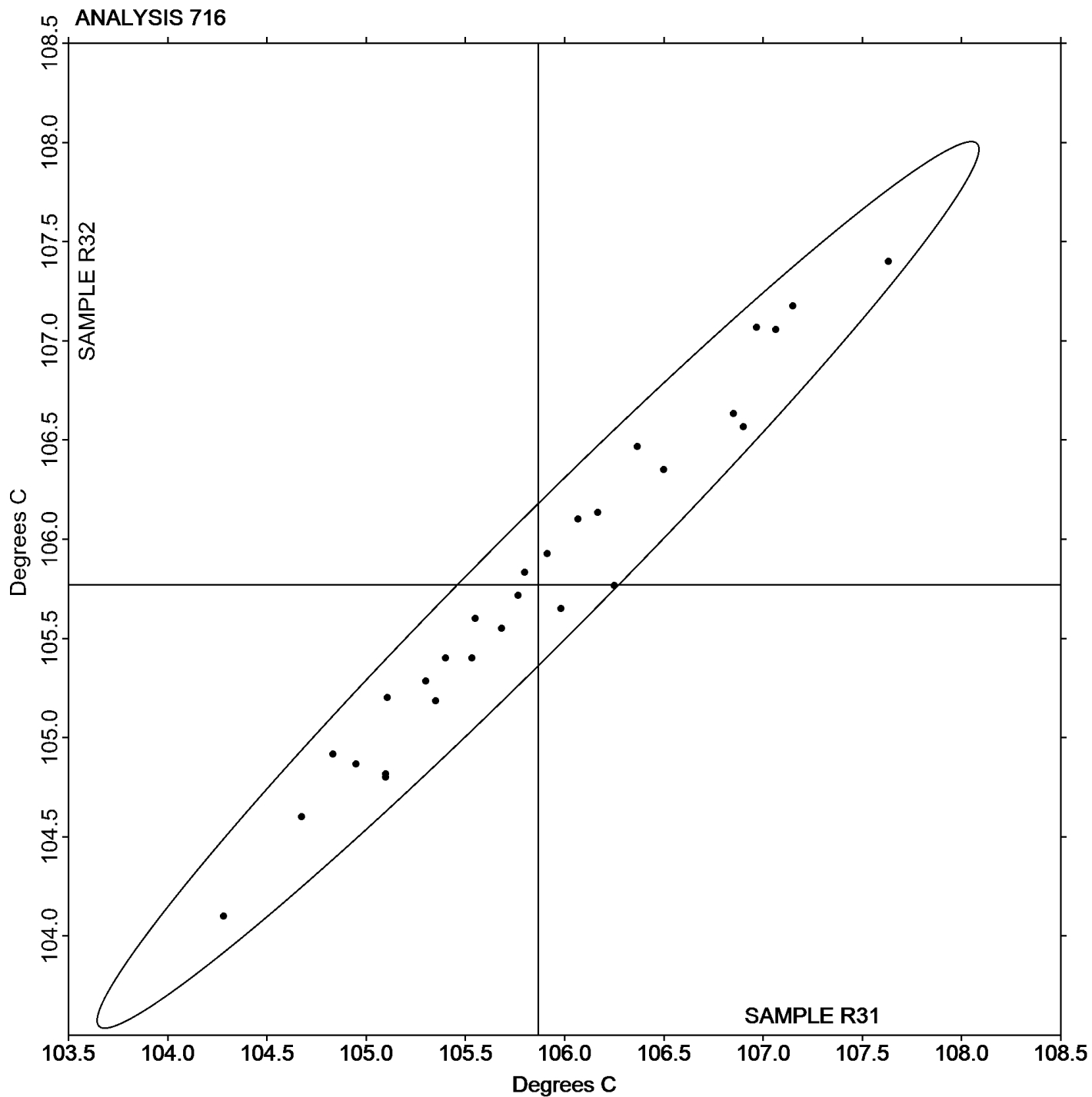
Analysis 716

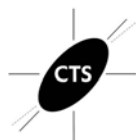
Vicat Softening Temperature (Rate B)

Report #96

4th Qtr 2015

Grand Mean Sample R31: 105.87 Degrees C Grand Mean Sample R32: 105.77 Degrees C





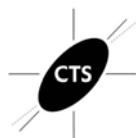
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 750

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

WebCode	Data Flag	Sample X31			Sample X32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2MTWLC	X	13.25	1.92	4.29	12.39	1.00	1.98	DY
2N32YZ		11.39	0.06	0.14	11.52	0.12	0.24	TO
2V62KN		11.66	0.34	0.75	11.51	0.11	0.22	DY
2XC4MM		12.35	1.03	2.30	12.38	0.99	1.96	TO
2Y7TQF		11.65	0.33	0.73	11.70	0.31	0.61	DY
36639R		11.20	-0.12	-0.28	11.05	-0.34	-0.68	KA
3QQWYE		11.40	0.08	0.17	11.31	-0.08	-0.17	XX
424GWF		11.77	0.44	0.98	11.49	0.09	0.18	TY
4NEG6D		11.29	-0.04	-0.09	11.27	-0.13	-0.26	DY
4RXC7K		10.70	-0.62	-1.39	10.85	-0.54	-1.08	DY
6QZKDB		10.97	-0.35	-0.79	11.02	-0.38	-0.75	XX
6RRG36		11.40	0.08	0.17	11.33	-0.07	-0.14	XX
6UL3XG		11.86	0.53	1.19	12.07	0.68	1.34	TO
6VTH4M		10.70	-0.62	-1.39	10.75	-0.64	-1.28	TO
74ZJZ8		11.14	-0.19	-0.42	11.08	-0.32	-0.63	DY
7868HH		11.75	0.43	0.95	12.23	0.84	1.66	TO
7KWPHG		11.38	0.05	0.11	11.34	-0.06	-0.12	DY
7P3L2G		11.60	0.28	0.62	11.75	0.36	0.71	TO
7P73YF		11.42	0.09	0.20	11.25	-0.14	-0.29	DY
7TH39Z		11.13	-0.20	-0.44	11.40	0.01	0.02	TO
7ZZ968	*	11.38	0.05	0.11	10.79	-0.60	-1.20	DY
86Q3FD	X	11.30	-0.02	-0.05	12.30	0.91	1.80	TO
8JQ4UZ	*	12.48	1.15	2.57	12.25	0.86	1.70	CS
8K8ZMZ		10.87	-0.45	-1.01	11.01	-0.39	-0.77	TM
969B7U		11.28	-0.05	-0.11	10.75	-0.65	-1.29	CE
9D677D		11.76	0.44	0.97	11.78	0.39	0.77	TO
9NZGCY		11.84	0.52	1.15	11.88	0.48	0.96	TO
9Q8YBU		10.80	-0.52	-1.17	10.89	-0.50	-1.00	TO
9V2TBG		12.18	0.85	1.90	12.08	0.69	1.36	TO
AF62ZZ	X	5.15	-6.17	-13.78	5.10	-6.29	-12.49	CE
AL7DYH		11.58	0.25	0.56	11.32	-0.08	-0.16	DY
B2WEBF		11.29	-0.04	-0.09	11.19	-0.20	-0.41	DY
B8A9FD		11.16	-0.16	-0.37	11.67	0.28	0.55	TO
BAFQE9		10.91	-0.41	-0.92	10.97	-0.43	-0.85	WZ
BB4AAE		11.41	0.09	0.19	11.43	0.04	0.07	WZ



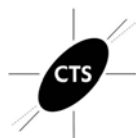
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 750

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

WebCode	Data Flag	Sample X31			Sample X32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
C2XRAV		10.73	-0.59	-1.33	10.85	-0.54	-1.08	GO
CT2WAC		11.95	0.63	1.40	11.95	0.56	1.10	TO
D2PAN3		10.93	-0.39	-0.87	10.82	-0.57	-1.13	GO
DG69VN		10.91	-0.42	-0.93	10.64	-0.75	-1.49	CE
DJVA2C	X	11.17	-0.16	-0.35	12.45	1.06	2.10	CS
EFNB3N		10.59	-0.73	-1.64	10.24	-1.15	-2.29	XX
EXMNDB	*	12.00	0.68	1.51	12.70	1.31	2.59	TY
FM2MUU		10.88	-0.45	-1.00	10.98	-0.41	-0.82	WZ
GA9MDC		11.67	0.34	0.76	11.68	0.28	0.56	TO
GJ4K87		11.65	0.32	0.72	11.77	0.37	0.74	TO
GJY498		10.86	-0.46	-1.04	11.08	-0.32	-0.63	TO
GYX473		11.55	0.23	0.50	11.65	0.26	0.51	TO
JFD3Z6		10.90	-0.42	-0.95	11.00	-0.40	-0.79	WZ
JMAX2A		11.75	0.43	0.95	11.50	0.11	0.21	TO
JXTCZ7		11.12	-0.20	-0.46	11.20	-0.20	-0.40	TO
K4DR9A		10.61	-0.71	-1.59	10.69	-0.71	-1.40	CE
K4WX7E	*	10.18	-1.15	-2.56	10.65	-0.75	-1.49	XX
LJ2NJ4		11.67	0.34	0.76	12.02	0.62	1.23	TO
LRVUC6		11.03	-0.30	-0.67	11.53	0.13	0.26	XX
MGE6H7		10.90	-0.42	-0.95	11.25	-0.14	-0.29	TO
MH6987		11.22	-0.11	-0.24	11.45	0.05	0.10	GO
MPM2XW		11.36	0.03	0.08	11.34	-0.05	-0.10	KA
MT62GJ		10.73	-0.59	-1.32	10.89	-0.51	-1.00	XX
N9W7BX		11.25	-0.07	-0.17	11.45	0.06	0.11	DY
NARYWJ		11.40	0.08	0.17	11.35	-0.04	-0.09	CE
NUWEFV		11.55	0.23	0.50	11.05	-0.34	-0.68	AT
NVTWGW	X	12.50	1.18	2.62	11.90	0.51	1.00	TO
PFQKLX	*	12.51	1.19	2.65	12.53	1.13	2.24	KA
PK2X4W		10.88	-0.44	-0.99	11.08	-0.31	-0.62	GO
PQQB6K		11.53	0.20	0.45	11.58	0.18	0.37	DY
QBW4PX		11.35	0.03	0.06	11.35	-0.04	-0.09	TO
QC88ZZ	*	11.54	0.22	0.48	12.26	0.86	1.71	TO
QUPAV3		11.50	0.18	0.39	11.40	0.01	0.01	TO
QYZZHH		10.95	-0.37	-0.84	10.75	-0.64	-1.28	TO
RXLX84		10.88	-0.45	-1.00	11.02	-0.38	-0.75	CE



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WebCode	Data Flag	Sample X31			Sample X32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
TDCCQU		11.36	0.04	0.08	11.62	0.22	0.45	DY
TH8BYX		11.35	0.03	0.06	11.24	-0.16	-0.32	TO
U2EVEX		11.95	0.63	1.40	12.12	0.72	1.43	TO
U4ZH8L	X	12.45	1.13	2.51	11.45	0.06	0.11	TO
U78Z6G		11.45	0.13	0.28	11.50	0.11	0.21	TO
UJGFCL	X	6.90	-4.42	-9.87	7.80	-3.59	-7.13	TO
W3KZ37		11.03	-0.30	-0.67	11.08	-0.32	-0.63	TO
W4GFF4		10.90	-0.43	-0.96	11.06	-0.34	-0.67	AS
WLB9Z2	X	11.37	0.04	0.10	11.36	-0.03	-0.07	XX
WVY8Q8		11.10	-0.22	-0.50	10.96	-0.44	-0.87	TO
X3XUGL		11.85	0.53	1.17	11.95	0.56	1.10	XX
XGWMX		11.91	0.58	1.30	12.44	1.05	2.08	TO
XJ2MML		11.36	0.03	0.07	11.77	0.38	0.75	GO
XJZT4F		11.21	-0.12	-0.26	11.66	0.26	0.52	TO
XKUJAU		11.11	-0.22	-0.49	11.05	-0.34	-0.68	TO
XTQEAD		11.45	0.13	0.28	11.50	0.11	0.21	TO
XVUATF	*	11.20	-0.12	-0.28	12.00	0.61	1.20	TO
XXNVPT		11.40	0.08	0.17	11.55	0.16	0.31	TO
YE8YUK	X	32.31	20.99	46.84	29.99	18.59	36.90	TO
ZPHZJP		11.39	0.07	0.15	11.18	-0.21	-0.43	TO
ZQUHXN		11.38	0.05	0.11	11.77	0.38	0.75	TO
ZUDRRM		10.40	-0.92	-2.06	10.40	-0.99	-1.97	TO

Summary Statistics

Grand Means

11.324 grams/10 mins

11.394 grams/10 mins

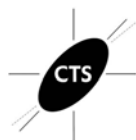
Std Dev Btwn Labs

0.448 grams/10 mins

0.504 grams/10 mins

Statistics based on 83 of 92 reporting participants

Sample X31: PP & Sample X32: PP



Plastics Interlaboratory Testing Program

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Analysis 750

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

Comments on Assigned Data Flags for Test #750

- YE8YUK (X) - Data for both samples are high. Also inconsistent in testing within both samples.
- DJVA2C (X) - Inconsistent in testing between samples.
- 86Q3FD (X) - Inconsistent in testing between samples and inconsistent in testing within Sample X31.
- NVTWGW (X) - Inconsistent in testing between samples.
- UJGFCL (X) - Data for both samples are low.
- 2MTWLC (X) - Inconsistent in testing between samples, data for Sample X31 are high.
- U4ZH8L (X) - Inconsistent in testing between samples and inconsistent in testing within Sample X31.
- AF62ZZ (X) - Data for both samples are low.
- WLB9Z2 (X) - Data for this test reflects retest sample results received after Report 96 was published. Due to CTS Policy data must be flagged in order to not change the consensus statistics.

Key to Instrument Codes Reported by Participants

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



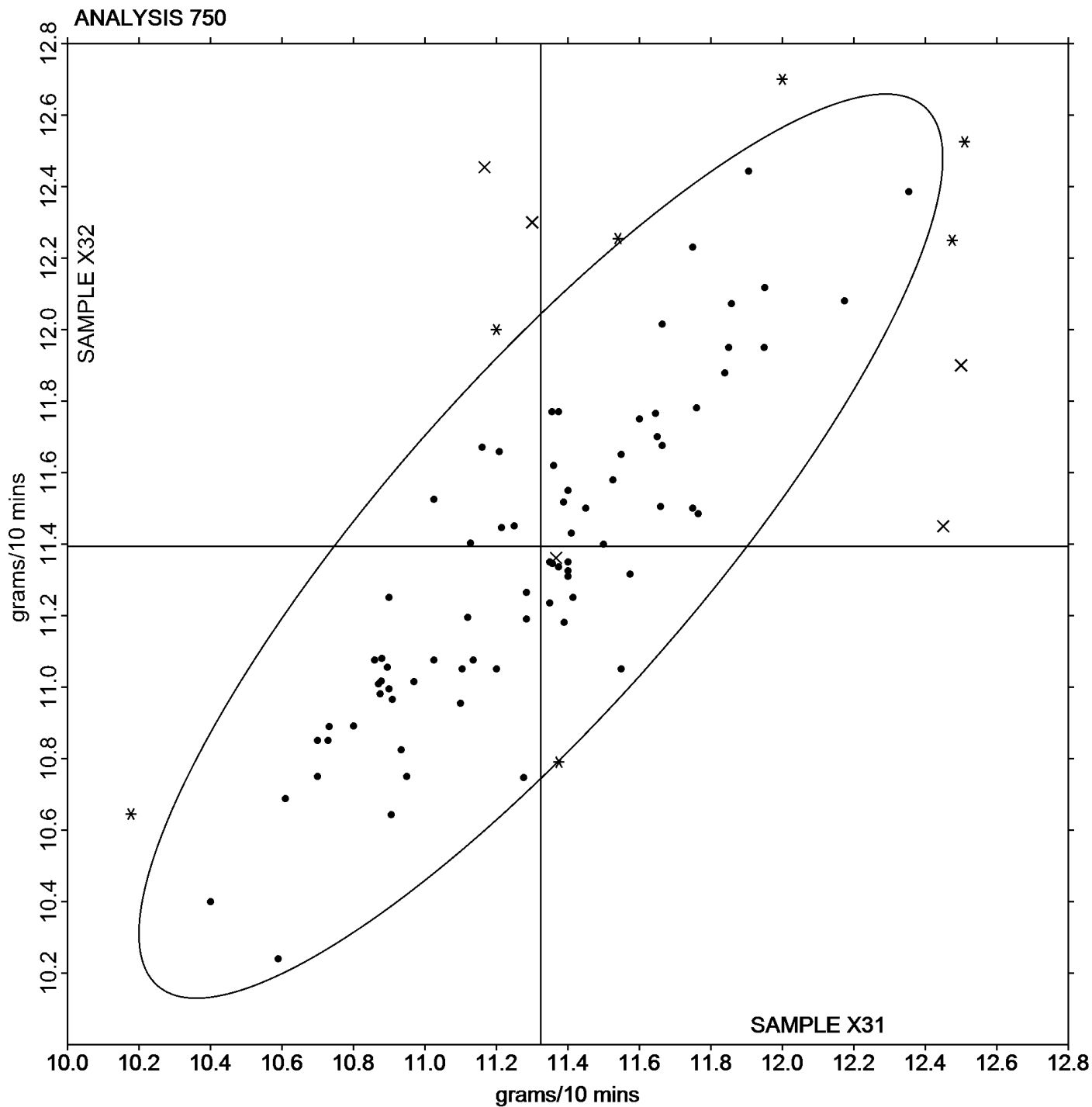
Plastics Interlaboratory Testing Program

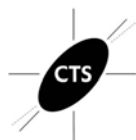
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Analysis 750

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

Grand Mean Sample X31: 11.324 grams/10 mins Grand Mean Sample X32: 11.394 grams/10 mins





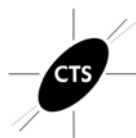
Plastics Interlaboratory Testing Program

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Analysis 718

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T31			Sample T32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
27LUQP		1.02900	-0.00129	-0.65	1.03000	-0.00012	-0.06	XX
2V62KN		1.03237	0.00208	1.06	1.03233	0.00222	1.19	XX
2XC4MM	X	1.01867	-0.01162	-5.91	1.02033	-0.00978	-5.26	XX
2Y7TQF		1.03287	0.00258	1.31	1.03293	0.00282	1.51	XX
36639R	*	1.02530	-0.00499	-2.53	1.02623	-0.00388	-2.09	XX
3QQWYE		1.03157	0.00128	0.65	1.03203	0.00192	1.03	XX
3YERYU		1.02857	-0.00172	-0.87	1.02840	-0.00172	-0.92	XX
424GWF		1.03060	0.00031	0.16	1.03073	0.00062	0.33	XX
4AWNG7		1.02910	-0.00119	-0.60	1.02773	-0.00238	-1.28	XX
4NEG6D		1.03160	0.00131	0.67	1.03213	0.00202	1.08	XX
6NWM7N		1.02800	-0.00229	-1.16	1.03000	-0.00012	-0.06	XX
6PNLH2		1.03129	0.00100	0.51	1.03099	0.00087	0.47	XX
6QZKDB		1.02700	-0.00329	-1.67	1.02900	-0.00112	-0.60	XX
6RRG36		1.02660	-0.00369	-1.87	1.02690	-0.00322	-1.73	XX
6UL3XG		1.03150	0.00121	0.62	1.03093	0.00082	0.44	XX
6VTH4M		1.02910	-0.00119	-0.60	1.02923	-0.00088	-0.47	XX
6XKLTN		1.03067	0.00038	0.19	1.03133	0.00122	0.65	XX
74ZJZ8		1.03020	-0.00009	-0.04	1.02977	-0.00035	-0.19	XX
7KWPHG		1.02633	-0.00396	-2.01	1.02667	-0.00345	-1.85	XX
7P3L2G		1.02893	-0.00136	-0.69	1.02873	-0.00138	-0.74	XX
7R8ZKG		1.02850	-0.00179	-0.91	1.02957	-0.00055	-0.30	XX
8QCUJG		1.02703	-0.00326	-1.65	1.02843	-0.00168	-0.90	XX
8R7MCE	*	1.02567	-0.00462	-2.35	1.02767	-0.00245	-1.32	XX
8TYHYM	X	1.02450	-0.00579	-2.94	1.02800	-0.00212	-1.14	XX
9BE6ZP		1.02810	-0.00219	-1.11	1.02753	-0.00258	-1.39	XX
9NZGCY		1.02657	-0.00372	-1.89	1.02667	-0.00345	-1.85	XX
9Q8YBU		1.03063	0.00034	0.18	1.02957	-0.00055	-0.30	XX
A2JNNQ		1.03077	0.00048	0.24	1.03087	0.00075	0.40	XX
A3GYH8		1.03290	0.00261	1.33	1.03077	0.00065	0.35	XX
AF62ZZ	X	1.03280	0.00251	1.28	1.04337	0.01325	7.12	XX
B2WEBF		1.02940	-0.00089	-0.45	1.03027	0.00015	0.08	XX
B8A9FD		1.02613	-0.00416	-2.11	1.02583	-0.00428	-2.30	XX
BDUHEA		1.03020	-0.00009	-0.04	1.03027	0.00015	0.08	XX
BFY7WK		1.03163	0.00134	0.68	1.03153	0.00142	0.76	XX
BT8U6G		1.02733	-0.00296	-1.50	1.02900	-0.00112	-0.60	XX



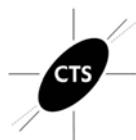
Plastics Interlaboratory Testing Program

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Analysis 718

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T31			Sample T32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
C2XRAV		1.02620	-0.00409	-2.08	1.02623	-0.00388	-2.09	XX
CT2YYG		1.03250	0.00221	1.12	1.03223	0.00212	1.14	XX
CXY468	*	1.03333	0.00304	1.55	1.03000	-0.00012	-0.06	XX
D8CWJ8	X	1.00990	-0.02039	-10.36	1.02457	-0.00555	-2.98	XX
DFU9YU		1.02853	-0.00176	-0.89	1.02893	-0.00118	-0.64	XX
DJVA2C		1.03257	0.00228	1.16	1.03063	0.00052	0.28	XX
E73AKT		1.02983	-0.00046	-0.23	1.03023	0.00012	0.06	XX
E89RJP	X	1.02067	-0.00962	-4.89	1.02000	-0.01012	-5.43	XX
EGJU6P		1.03200	0.00171	0.87	1.03167	0.00155	0.83	XX
EXMNDB		1.02673	-0.00356	-1.81	1.02753	-0.00258	-1.39	XX
FJ63PB		1.03300	0.00271	1.38	1.03233	0.00222	1.19	XX
G7A9T8		1.03200	0.00171	0.87	1.02967	-0.00045	-0.24	XX
GA9MDC		1.03117	0.00088	0.45	1.03077	0.00065	0.35	XX
GDAQ8J		1.02940	-0.00089	-0.45	1.02982	-0.00029	-0.16	XX
GJ4K87		1.03033	0.00004	0.02	1.02983	-0.00028	-0.15	XX
GJY498		1.03383	0.00354	1.80	1.03353	0.00342	1.84	XX
HCY9LT		1.03200	0.00171	0.87	1.03200	0.00188	1.01	XX
HWMPR9		1.03150	0.00121	0.62	1.03173	0.00162	0.87	XX
JEYVFA		1.03260	0.00231	1.17	1.03230	0.00218	1.17	XX
K4DR9A		1.03087	0.00058	0.29	1.03160	0.00148	0.80	XX
KG2TPG		1.03300	0.00271	1.38	1.03267	0.00255	1.37	XX
KN43VA		1.03033	0.00004	0.02	1.02900	-0.00112	-0.60	XX
L3ZGTH		1.03307	0.00278	1.41	1.03220	0.00208	1.12	XX
LGZAMY		1.02797	-0.00232	-1.18	1.02740	-0.00272	-1.46	XX
M4NDTV		1.02964	-0.00065	-0.33	1.02917	-0.00095	-0.51	XX
MGE6H7	*	1.03027	-0.00002	-0.01	1.02727	-0.00285	-1.53	XX
MH6987		1.03000	-0.00029	-0.15	1.02967	-0.00045	-0.24	XX
MPM2XW		1.03230	0.00201	1.02	1.03197	0.00185	0.99	XX
N9W7BX		1.03067	0.00038	0.19	1.03133	0.00122	0.65	XX
NARYWJ		1.02807	-0.00222	-1.13	1.02737	-0.00275	-1.48	XX
PAL4R4		1.03230	0.00201	1.02	1.03210	0.00198	1.07	XX
PFV3JW		1.03183	0.00154	0.78	1.03093	0.00082	0.44	XX
PJ86AY		1.03230	0.00201	1.02	1.03207	0.00195	1.05	XX
PK2X4W		1.03167	0.00138	0.70	1.03023	0.00012	0.06	XX
PQQB6K	*	1.02933	-0.00096	-0.49	1.03233	0.00222	1.19	XX



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Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T31			Sample T32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
PXRRD6		1.03100	0.00071	0.36	1.03067	0.00055	0.30	XX
Q6NMDN		1.02833	-0.00196	-0.99	1.02633	-0.00378	-2.03	XX
QUPAV3		1.03157	0.00128	0.65	1.02907	-0.00105	-0.56	XX
QVZNP4		1.03313	0.00284	1.45	1.03280	0.00268	1.44	XX
QYZZHH		1.03033	0.00004	0.02	1.03000	-0.00012	-0.06	XX
R4RQ2Y		1.03133	0.00104	0.53	1.03133	0.00122	0.65	XX
RXQCK6		1.03157	0.00128	0.65	1.03153	0.00142	0.76	XX
TB7URY		1.03123	0.00094	0.48	1.03023	0.00012	0.06	XX
TCZKWR		1.03010	-0.00019	-0.10	1.03070	0.00058	0.31	XX
TDCCQU	*	1.02910	-0.00119	-0.60	1.02620	-0.00392	-2.10	XX
TGX2B8		1.03171	0.00142	0.72	1.03180	0.00169	0.91	XX
TH8BYX		1.02857	-0.00172	-0.87	1.02840	-0.00172	-0.92	XX
TP39Q8		1.03110	0.00081	0.41	1.03123	0.00112	0.60	XX
U2EVEX		1.03100	0.00071	0.36	1.03033	0.00022	0.12	XX
V7P768		1.03103	0.00074	0.38	1.03093	0.00082	0.44	XX
VBGFE6		1.02983	-0.00046	-0.23	1.03030	0.00018	0.10	XX
VHJPJC		1.03337	0.00308	1.56	1.03220	0.00208	1.12	XX
VPFKJW		1.02907	-0.00122	-0.62	1.03003	-0.00008	-0.04	XX
W2MUJQ		1.03153	0.00124	0.63	1.03153	0.00142	0.76	XX
W7JBZR		1.03153	0.00124	0.63	1.03257	0.00245	1.32	XX
WLB9Z2	X	1.02967	-0.00062	-0.32	1.03033	0.00022	0.12	XX
WVY8Q8		1.02997	-0.00032	-0.16	1.02993	-0.00018	-0.10	XX
XGWXXMX	*	1.02963	-0.00066	-0.33	1.02687	-0.00325	-1.75	XX
XGXR4H		1.03063	0.00034	0.18	1.03157	0.00145	0.78	XX
XHTB7J		1.02993	-0.00036	-0.18	1.02993	-0.00018	-0.10	XX
XJ2MML		1.03090	0.00061	0.31	1.03147	0.00135	0.73	XX
XJZT4F		1.03070	0.00041	0.21	1.03110	0.00098	0.53	XX
XVUATF		1.02900	-0.00129	-0.65	1.02800	-0.00212	-1.14	XX
XXNVPT		1.03267	0.00238	1.21	1.03303	0.00292	1.57	XX
YLNN4T		1.02870	-0.00159	-0.81	1.02900	-0.00112	-0.60	XX
ZPHZJP		1.03040	0.00011	0.06	1.03007	-0.00005	-0.03	XX
ZUDRRM		1.03133	0.00104	0.53	1.03033	0.00022	0.12	XX
ZWJVZC		1.03107	0.00078	0.40	1.03093	0.00082	0.44	XX



Plastics Interlaboratory Testing Program

Report #96

4th Qtr 2015

Analysis 718

Specific Gravity - sp gr 23/23 C

Summary Statistics

Grand Means

1.030288 sp gr 23/23 C

1.030116 sp gr 23/23 C

Std Dev Btwn Labs

0.001968 sp gr 23/23 C

0.001861 sp gr 23/23 C

Statistics based on 97 of 103 reporting participants

Sample T31: HIPS & Sample T32: HIPS

Comments on Assigned Data Flags for Test #718

2XC4MM (X) - Data for both samples are low. Also inconsistent in testing within Sample T31.

8TYHYM (X) - Inconsistent in testing between samples, data for Sample T31 are low.

D8CWJ8 (X) - Data for both samples are low. Also inconsistent in testing within both samples.

AF62ZZ (X) - Inconsistent in testing between samples, data for Sample T32 are high.

E89RJP (X) - Data for both samples are low.

WLB9Z2 (X) - Data for this test reflects retest sample results received after Report 96 was published. Due to CTS Policy data must be flagged in order to not change the consensus statistics.

Key to Instrument Codes Reported by Participants

XX



Plastics Interlaboratory Testing Program

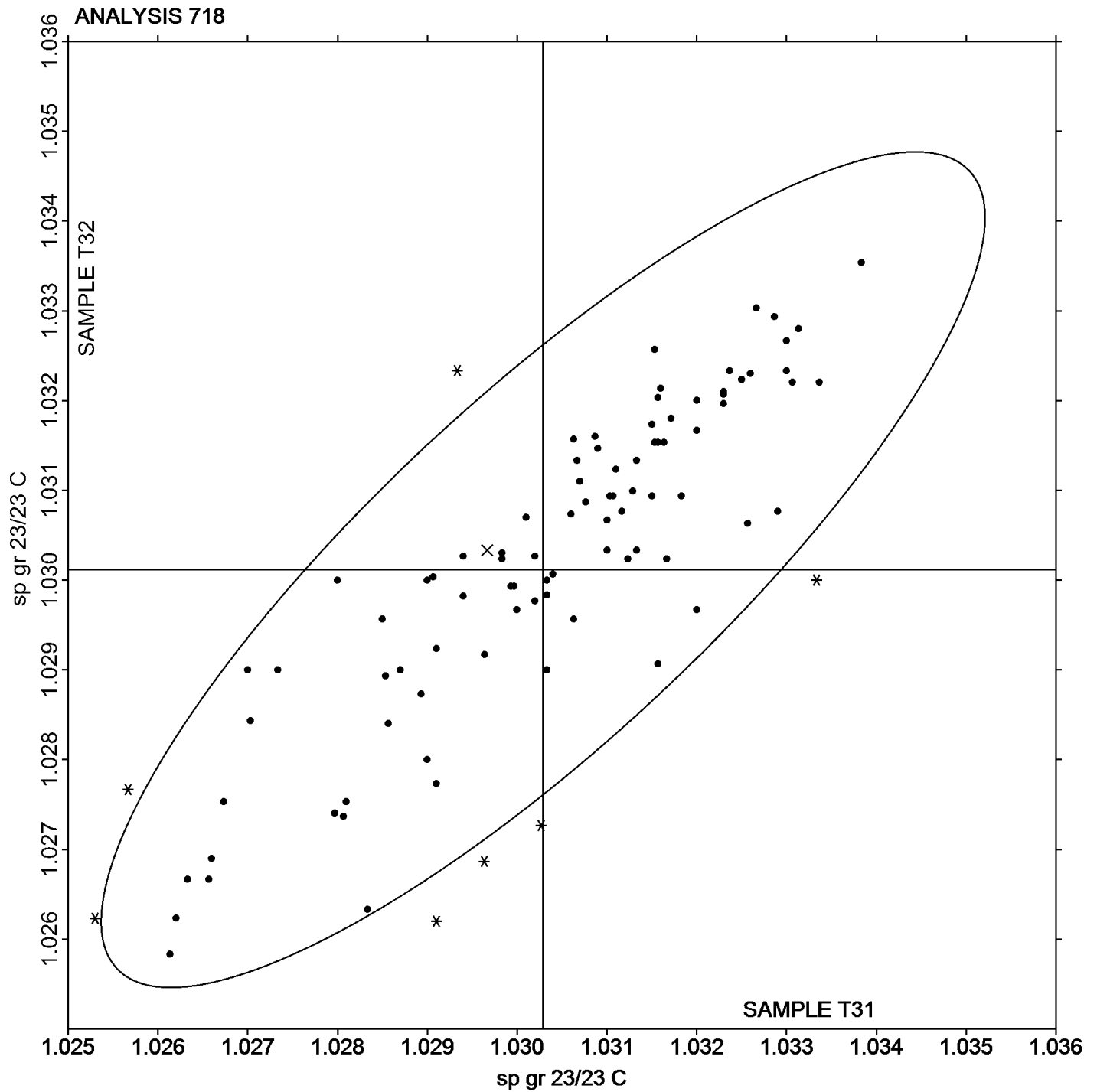
Analysis 718

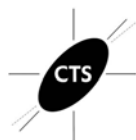
Specific Gravity - sp gr 23/23 C

Report #96

4th Qtr 2015

Grand Mean Sample T31: 1.0303 sp gr 23/23 C Grand Mean Sample T32: 1.0301 sp gr 23/23 C





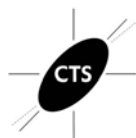
Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 757

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L31			Sample L32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2G8YXP		19.750	-0.019	-0.39	19.800	0.029	0.59	XX
2V62KN		19.785	0.016	0.31	19.800	0.029	0.59	XX
2XC4MM	*	19.660	-0.109	-2.19	19.630	-0.141	-2.92	XX
2Y7TQF		19.830	0.061	1.22	19.795	0.024	0.49	XX
36639R		19.825	0.056	1.12	19.775	0.004	0.08	XX
3QQWYE		19.770	0.001	0.01	19.725	-0.046	-0.96	XX
4AWNG7		19.770	0.001	0.01	19.770	-0.001	-0.03	XX
4NEG6D		19.790	0.021	0.41	19.780	0.009	0.18	XX
4RXC7K		19.785	0.016	0.31	19.815	0.044	0.90	XX
6QZKDB		19.820	0.051	1.02	19.765	-0.006	-0.13	XX
6RRG36	*	19.900	0.131	2.62	19.875	0.104	2.14	XX
6UL3XG		19.700	-0.070	-1.40	19.750	-0.021	-0.44	XX
74ZJZ8		19.785	0.016	0.31	19.820	0.049	1.01	XX
7KWPHG		19.770	0.001	0.01	19.735	-0.036	-0.75	XX
7MX3RN	X	19.460	-0.309	-6.20	19.785	0.014	0.28	XX
7P3L2G		19.785	0.016	0.31	19.775	0.004	0.08	XX
7TH39Z		19.760	-0.009	-0.19	19.785	0.014	0.28	XX
86Q3FD		19.824	0.054	1.09	19.803	0.032	0.65	XX
8R7MCE		19.810	0.041	0.81	19.845	0.074	1.52	XX
8ZYVW6		19.765	-0.004	-0.09	19.795	0.024	0.49	XX
9Q8YBU		19.780	0.011	0.21	19.805	0.034	0.70	XX
9V2TBG		19.750	-0.019	-0.39	19.780	0.009	0.18	XX
AL7DYH		19.730	-0.039	-0.79	19.765	-0.006	-0.13	XX
APRYQ6	*	19.820	0.051	1.02	19.690	-0.081	-1.68	XX
AVEPDZ	X	19.955	0.186	3.72	19.790	0.019	0.39	XX
B8A9FD	*	19.655	-0.114	-2.29	19.785	0.014	0.28	XX
BAFQE9		19.800	0.031	0.61	19.820	0.049	1.01	XX
BT8U6G		19.800	0.031	0.61	19.800	0.029	0.59	XX
C2XRAV		19.805	0.036	0.71	19.792	0.020	0.42	XX
CT2WAC		19.730	-0.039	-0.79	19.785	0.014	0.28	XX
F7E7QX		19.785	0.016	0.31	19.775	0.004	0.08	XX
GA9MDC		19.765	-0.004	-0.09	19.690	-0.081	-1.68	XX
GJ4K87		19.665	-0.104	-2.09	19.685	-0.086	-1.79	XX
GJY498	X	19.590	-0.179	-3.59	19.805	0.034	0.70	XX
HWMPR9		19.770	0.001	0.01	19.780	0.009	0.18	XX



Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 757

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L31			Sample L32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
JFD3Z6		19.775	0.006	0.11	19.680	-0.091	-1.89	XX
JXTCZ7		19.780	0.011	0.21	19.745	-0.026	-0.55	XX
K4DR9A		19.750	-0.019	-0.39	19.795	0.024	0.49	XX
LKYU3J		19.761	-0.008	-0.17	19.768	-0.003	-0.07	XX
LU6J39		19.750	-0.019	-0.39	19.795	0.024	0.49	XX
MGE6H7	X	19.635	-0.134	-2.69	19.920	0.149	3.08	XX
MH6987		19.720	-0.049	-0.99	19.825	0.054	1.11	XX
N9W7BX		19.830	0.061	1.22	19.760	-0.011	-0.24	XX
NARYWJ	*	19.680	-0.089	-1.79	19.825	0.054	1.11	XX
NW8AAZ		19.745	-0.024	-0.49	19.725	-0.046	-0.96	XX
PBGMU6		19.853	0.083	1.67	19.789	0.018	0.36	XX
PQQB6K		19.769	0.000	-0.01	19.675	-0.096	-1.99	XX
Q26RBV	*	19.620	-0.149	-2.99	19.690	-0.081	-1.68	XX
QUPAV3		19.810	0.041	0.81	19.795	0.024	0.49	XX
QYZZHH		19.730	-0.039	-0.79	19.725	-0.046	-0.96	XX
TH8BYX		19.770	0.001	0.01	19.750	-0.021	-0.44	XX
U2EVEX		19.810	0.041	0.81	19.760	-0.011	-0.24	XX
U4ZH8L	X	19.350	-0.419	-8.40	19.150	-0.621	-12.86	XX
WVY8Q8		19.753	-0.016	-0.33	19.738	-0.033	-0.69	XX
XGWXXM		19.756	-0.014	-0.27	19.762	-0.009	-0.18	XX
XJZT4F		19.788	0.019	0.37	19.785	0.013	0.27	XX
XTQEAD		19.780	0.011	0.21	19.760	-0.011	-0.24	XX
XXNVPT		19.805	0.036	0.71	19.835	0.064	1.32	XX
YLNN4T		19.740	-0.029	-0.59	19.755	-0.016	-0.34	XX
ZUDRRM		19.770	0.001	0.01	19.800	0.029	0.59	XX
ZWJVZC		19.800	0.031	0.61	19.870	0.099	2.04	XX

Summary Statistics

Grand Means

19.7693 Percent

19.7714 Percent

Stnd Dev Btwn Labs

0.0499 Percent

0.0483 Percent

Statistics based on 56 of 61 reporting participants

Sample L31: PP & Sample L32: PP



Plastics Interlaboratory Testing Program

Analysis 757

Ash Content in Thermoplastics - Percent

Report #96

4th Qtr 2015

Comments on Assigned Data Flags for Test #757

MGE6H7 (X) - Data for Sample L32 are high. Also inconsistent in testing within Sample L31.

7MX3RN (X) - Data for Sample L31 are low. Also inconsistent in testing within Sample L31.

GJY498 (X) - Data for Sample L31 are low. Also inconsistent in testing within Sample L32.

U4ZH8L (X) - Data for both samples are low. Also inconsistent in testing within Sample L31.

AVEPDZ (X) - Data for Sample L31 are high.

Key to Instrument Codes Reported by Participants

XX Instrument Codes not used by CTS at this time



Plastics Interlaboratory Testing Program

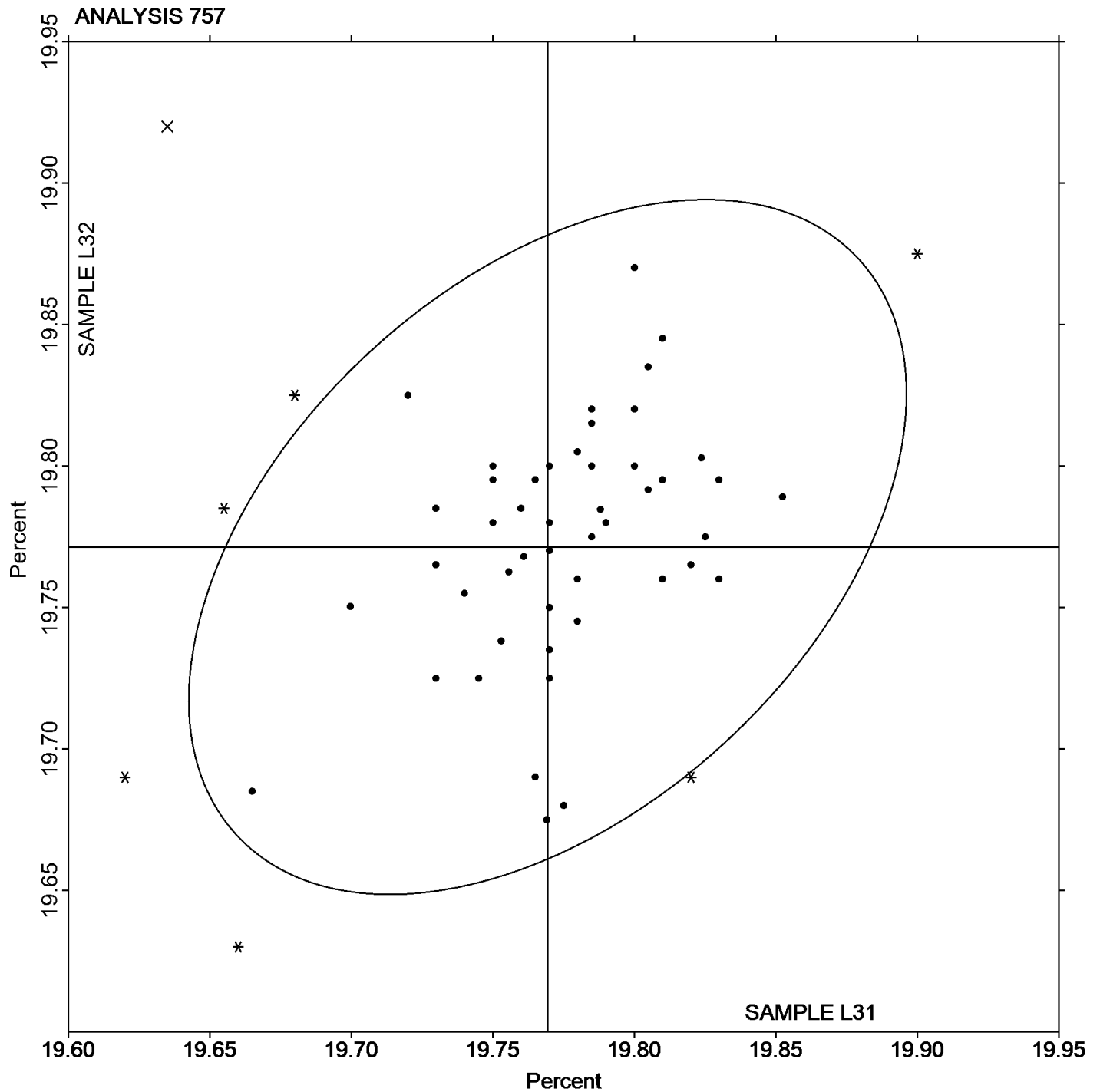
Analysis 757

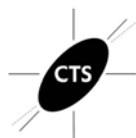
Ash Content in Thermoplastics - Percent

Report #96

4th Qtr 2015

Grand Mean Sample L31: 19.769 Percent Grand Mean Sample L32: 19.771 Percent





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 770

Tensile Stress at Yield, Film Samples - psi

WebCode	Data Flag	Sample B31			Sample B32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2MTWLC		3,540	886	1.25	3,460	849	1.26	XX
3UAR37	*	3,229	575	0.81	2,897	286	0.42	XX
6JZYNW		2,652	-2	0.00	2,633	22	0.03	IN
AF62ZZ		2,778	124	0.18	2,710	99	0.15	MT
C2XRAV		2,693	39	0.05	2,735	124	0.18	WZ
F8Q6K8		2,866	212	0.30	2,920	310	0.46	TH
F8TVQP		3,402	748	1.06	3,244	633	0.94	IN
GXGVWE		1,829	-825	-1.17	1,800	-811	-1.20	IN
KKZ8AK		3,027	373	0.53	3,107	496	0.74	IN
P2W7CV		1,791	-863	-1.22	1,739	-872	-1.29	UC
PJ86AY		4,022	1,368	1.94	3,835	1,224	1.81	LI
Q6NMDN		1,642	-1,012	-1.43	1,640	-970	-1.44	MT
R8BL6R		1,748	-906	-1.28	1,746	-865	-1.28	IN
RXLX84		2,188	-466	-0.66	2,176	-435	-0.64	IN
UQE6VC		3,232	578	0.82	3,324	713	1.06	IN
XTQEAD		1,486	-1,168	-1.65	1,497	-1,114	-1.65	IN
XXNVPT		2,706	52	0.07	2,663	52	0.08	IN
YCX4ZF		2,721	67	0.09	2,606	-4	-0.01	SH
ZPHZJP		2,876	221	0.31	2,875	264	0.39	IN

Summary Statistics

Grand Means

2,654.0 psi

2,610.8 psi

Std Dev Btwn Labs

706.8 psi

674.4 psi

Statistics based on 19 of 19 reporting participants

Sample B31: LDPE & Sample B32: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

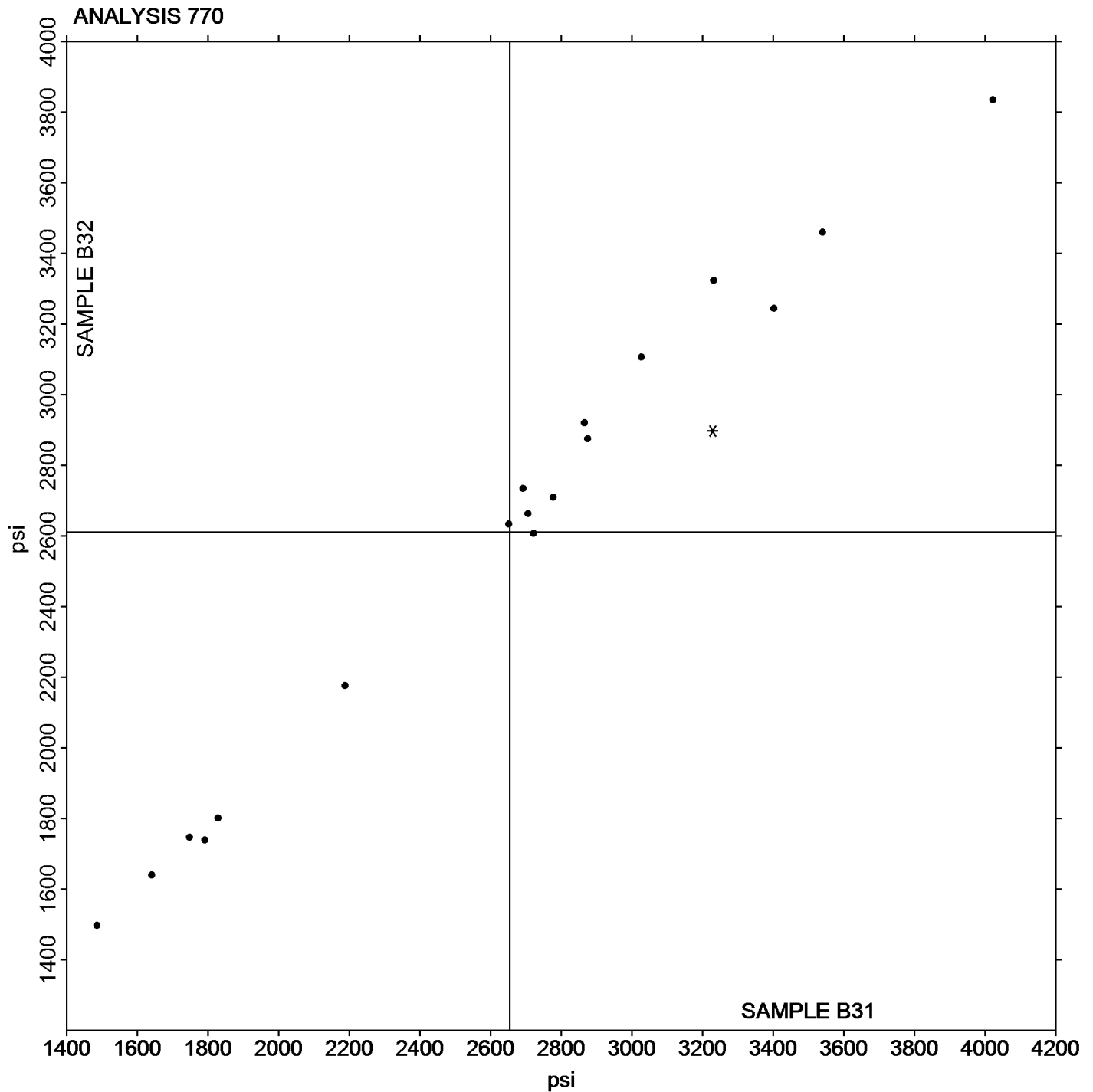
Analysis 770

Tensile Stress at Yield, Film Samples - psi

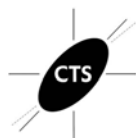
Report #96

4th Qtr 2015

Grand Mean Sample B31: 2,654.01 psi Grand Mean Sample B32: 2,610.78 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 #96
4th Qtr 2015

Analysis 771

Tensile Stress at Break, Film Samples - psi

WebCode	Data Flag	Sample B31			Sample B32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2MTWLC		3,522	179	0.68	3,443	182	0.55	SH
3UAR37		3,239	-104	-0.40	2,915	-347	-1.04	XX
6JZYNW		3,162	-181	-0.69	3,141	-121	-0.36	IN
6VQVM9		3,223	-121	-0.46	3,142	-120	-0.36	IN
7ZZ968		2,878	-466	-1.77	2,772	-489	-1.47	IN
8QCUJG		2,966	-378	-1.44	2,939	-323	-0.97	IN
AF62ZZ		3,461	117	0.45	3,445	184	0.55	MT
BT8U6G		3,629	286	1.09	3,797	535	1.61	XX
C2XRAV		3,233	-111	-0.42	3,397	135	0.41	WZ
EXMNDB		3,454	110	0.42	3,100	-162	-0.49	SH
F8Q6K8		3,425	82	0.31	3,332	70	0.21	TH
F8TVQP		3,402	58	0.22	3,292	31	0.09	IN
GXGVWE		3,463	120	0.46	3,446	184	0.55	XX
K4WX7E		3,815	471	1.79	3,890	628	1.89	WZ
KKZ8AK		3,317	-27	-0.10	3,250	-11	-0.03	IN
P2W7CV	*	3,199	-144	-0.55	2,608	-653	-1.96	UC
PJ86AY	*	4,022	679	2.58	3,834	573	1.72	LI
Q6NMDN		3,431	87	0.33	3,317	55	0.17	MT
R8BL6R		3,271	-73	-0.28	3,143	-119	-0.36	IN
RXLX84	X	5,581	2,237	8.50	5,478	2,217	6.66	IN
UQE6VC		3,276	-68	-0.26	3,324	63	0.19	IN
W2MUJQ		3,307	-37	-0.14	3,340	79	0.24	IM
W4GFF4		3,642	299	1.13	3,631	370	1.11	WZ
XHTB7J		2,801	-543	-2.06	2,601	-661	-1.98	IN
XTQEAD	X	2,397	-947	-3.59	2,796	-465	-1.40	IN
XXNVPT		3,326	-18	-0.07	3,312	50	0.15	IN
YCX4ZF		3,171	-173	-0.66	2,999	-262	-0.79	SH
ZPHZJP		3,299	-45	-0.17	3,391	129	0.39	IN

Summary Statistics

Grand Means

3,343.5 psi

3,261.5 psi

Stnd Dev Btwn Labs

263.3 psi

332.8 psi

Statistics based on 26 of 28 reporting participants

Sample B31: LDPE & Sample B32: LDPE



Plastics Interlaboratory Testing Program

Analysis 771

Tensile Stress at Break, Film Samples - psi

Report #96

4th Qtr 2015

Comments on Assigned Data Flags for Test #771

RXLX84 (X) - Data for both samples are high.

XTQEAD (X) - Data for Sample B31 are low.

Key to Instrument Codes Reported by Participants

IM	IN
LI	MT
SH	TH
UC	WZ
XX	



Plastics Interlaboratory Testing Program

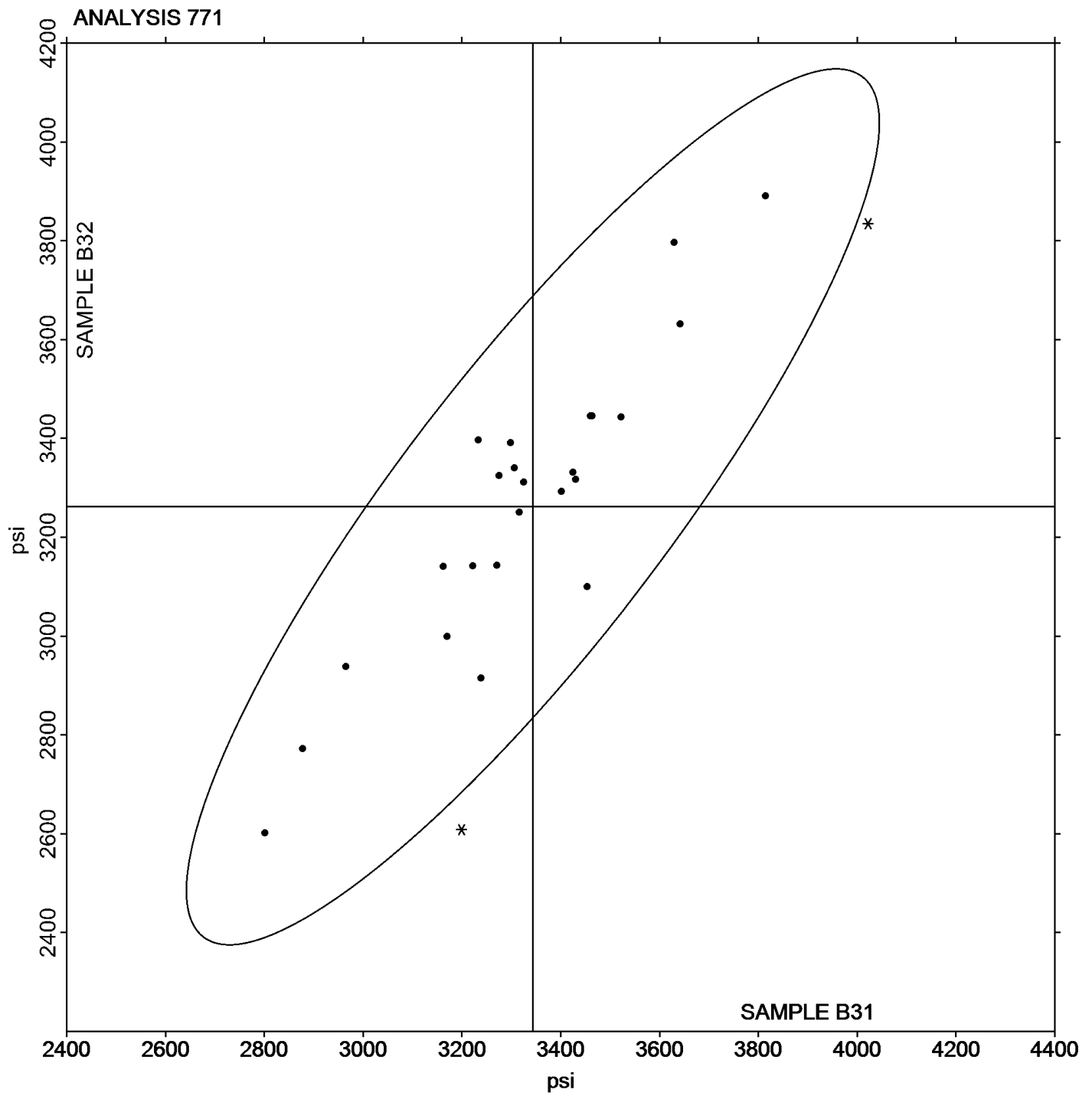
Analysis 771

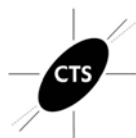
Tensile Stress at Break, Film Samples - psi

Report #96

4th Qtr 2015

Grand Mean Sample B31: 3,343.54 psi Grand Mean Sample B32: 3,261.54 psi





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 772

Percent Elongation at Yield, Films

WebCode	Data Flag	Sample B31			Sample B32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2MTWLC		468.77	318.01	2.08	469.15	313.32	2.01	SH
3UAR37		292.00	141.24	0.92	300.20	144.37	0.93	XX
6JZYNW		109.12	-41.64	-0.27	109.16	-46.67	-0.30	IN
AF62ZZ		87.97	-62.79	-0.41	104.98	-50.85	-0.33	MT
C2XRAV		57.51	-93.25	-0.61	59.69	-96.14	-0.62	WZ
F8TVQP		303.31	152.55	1.00	305.76	149.93	0.96	IN
GXGVWE		15.67	-135.09	-0.88	15.01	-140.82	-0.90	IN
P2W7CV		16.05	-134.71	-0.88	17.29	-138.54	-0.89	UC
PJ86AY		429.52	278.76	1.82	445.18	289.35	1.85	LI
Q6NMDN		7.57	-143.19	-0.94	7.41	-148.42	-0.95	MT
R8BL6R		29.02	-121.74	-0.80	28.32	-127.51	-0.82	IN
RXLX84		10.25	-140.51	-0.92	10.17	-145.66	-0.93	IN
UQE6VC	*	274.05	123.29	0.81	303.30	147.47	0.95	IN
XTQEAD		12.09	-138.67	-0.91	19.02	-136.81	-0.88	IN
XXNVPT		127.75	-23.01	-0.15	128.67	-27.16	-0.17	IN
YCX4ZF		233.93	83.17	0.54	234.57	78.74	0.50	SH
ZPHZJP		88.31	-62.45	-0.41	91.25	-64.58	-0.41	IN

Summary Statistics

Grand Means

150.757 Percent

155.831 Percent

Stnd Dev Btwn Labs

152.821 Percent

155.989 Percent

Statistics based on 17 of 17 reporting participants

Sample B31: LDPE & Sample B32: 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	LI	Lloyd Instruments
MT	MTS/Sintech	SH	Shimadzu
UC	United	WZ	Zwick
XX	Instrument manufacturer not specified by lab		



Plastics Interlaboratory Testing Program

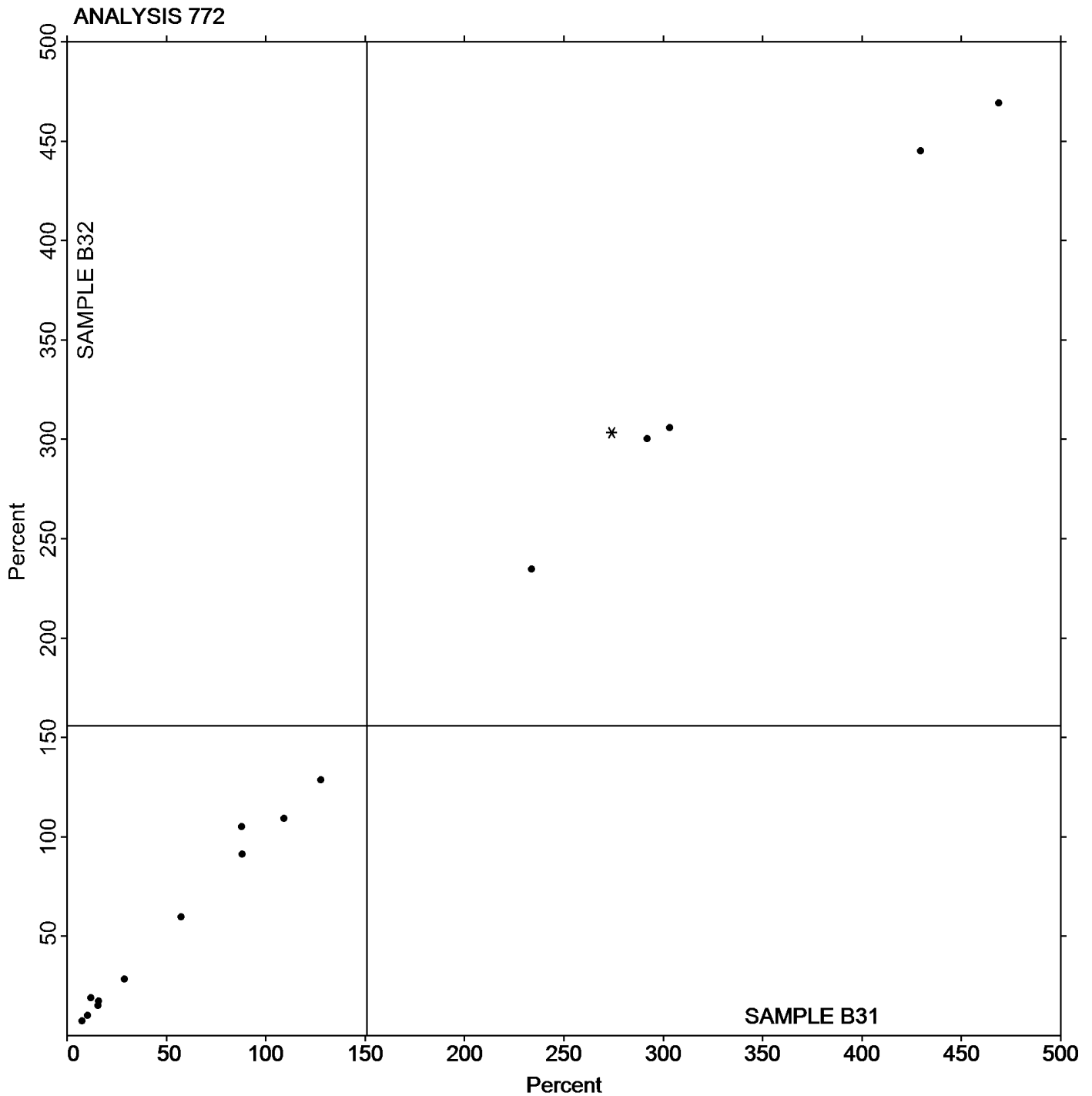
Analysis 772

Percent Elongation at Yield, Films

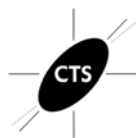
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4th Qtr 2015

Grand Mean Sample B31: 150.76 Percent Grand Mean Sample B32: 155.83 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 #96
4th Qtr 2015

Analysis 773

Percent Elongation at Break, Film Samples

WebCode	Data Flag	Sample B31			Sample B32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2MTWLC		470.4	97.5	1.01	470.5	97.0	0.93	XX
3UAR37		302.0	-70.9	-0.73	308.7	-64.7	-0.62	XX
6JZYNW		348.9	-24.0	-0.25	351.6	-21.8	-0.21	IN
6VQVM9		488.9	116.0	1.20	505.9	132.5	1.26	IN
7ZZ968		301.3	-71.6	-0.74	257.6	-115.8	-1.10	IN
8QCUJG		440.7	67.8	0.70	448.7	75.3	0.72	IN
AF62ZZ		375.0	2.2	0.02	391.1	17.7	0.17	MT
BT8U6G		492.6	119.7	1.24	495.6	122.1	1.16	XX
C2XRAV		262.0	-110.9	-1.15	270.0	-103.4	-0.99	WZ
EXMNDB		397.1	24.2	0.25	406.4	33.0	0.31	SH
F8Q6K8		303.8	-69.1	-0.72	307.0	-66.4	-0.63	TH
F8TVQP		303.8	-69.1	-0.72	306.0	-67.4	-0.64	IN
GXGVWE		382.3	9.4	0.10	376.5	3.1	0.03	IN
K4WX7E		309.0	-63.9	-0.66	318.0	-55.4	-0.53	WZ
KKZ8AK		305.1	-67.7	-0.70	314.2	-59.3	-0.57	IN
P2W7CV		317.5	-55.4	-0.57	287.4	-86.0	-0.82	XX
PJ86AY		430.1	57.2	0.59	445.5	72.1	0.69	LI
Q6NMDN		323.7	-49.2	-0.51	301.2	-72.2	-0.69	MT
R8BL6R		452.8	79.9	0.83	435.4	61.9	0.59	IN
RXLX84	*	646.7	273.8	2.84	666.8	293.3	2.80	IN
UQE6VC		288.7	-84.1	-0.87	303.3	-70.1	-0.67	IN
W2MUJQ		474.9	102.0	1.06	491.8	118.4	1.13	IM
W4GFF4		261.3	-111.5	-1.16	276.5	-96.9	-0.92	WZ
XHTB7J	*	233.0	-139.9	-1.45	175.7	-197.7	-1.89	IN
XTQEAD	X	118.4	-254.5	-2.64	401.7	28.3	0.27	IN
XXNVPT		423.8	50.9	0.53	443.5	70.1	0.67	IN
YCX4ZF		455.2	82.3	0.85	442.7	69.2	0.66	SH
ZPHZJP		276.8	-96.1	-1.00	285.4	-88.0	-0.84	IN

Summary Statistics

Grand Means

372.87 Percent

373.44 Percent

Std Dev Btwn Labs

96.48 Percent

104.85 Percent

Statistics based on 27 of 28 reporting participants

Sample B31: LDPE & Sample B32: LDPE



Plastics Interlaboratory Testing Program

Analysis 773

Percent Elongation at Break, Film Samples

Report #96

4th Qtr 2015

Comments on Assigned Data Flags for Test #773

XTQEAD (X) - Inconsistent in testing between samples, data for Sample B31 are low.

Key to Instrument Codes Reported by Participants

IM	Instru-Met Instruments	IN	Instron
LI	Lloyd Instruments	MT	MTS/Sintech
SH	Shimadzu	TH	Thwing Albert
WZ	Zwick	XX	Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

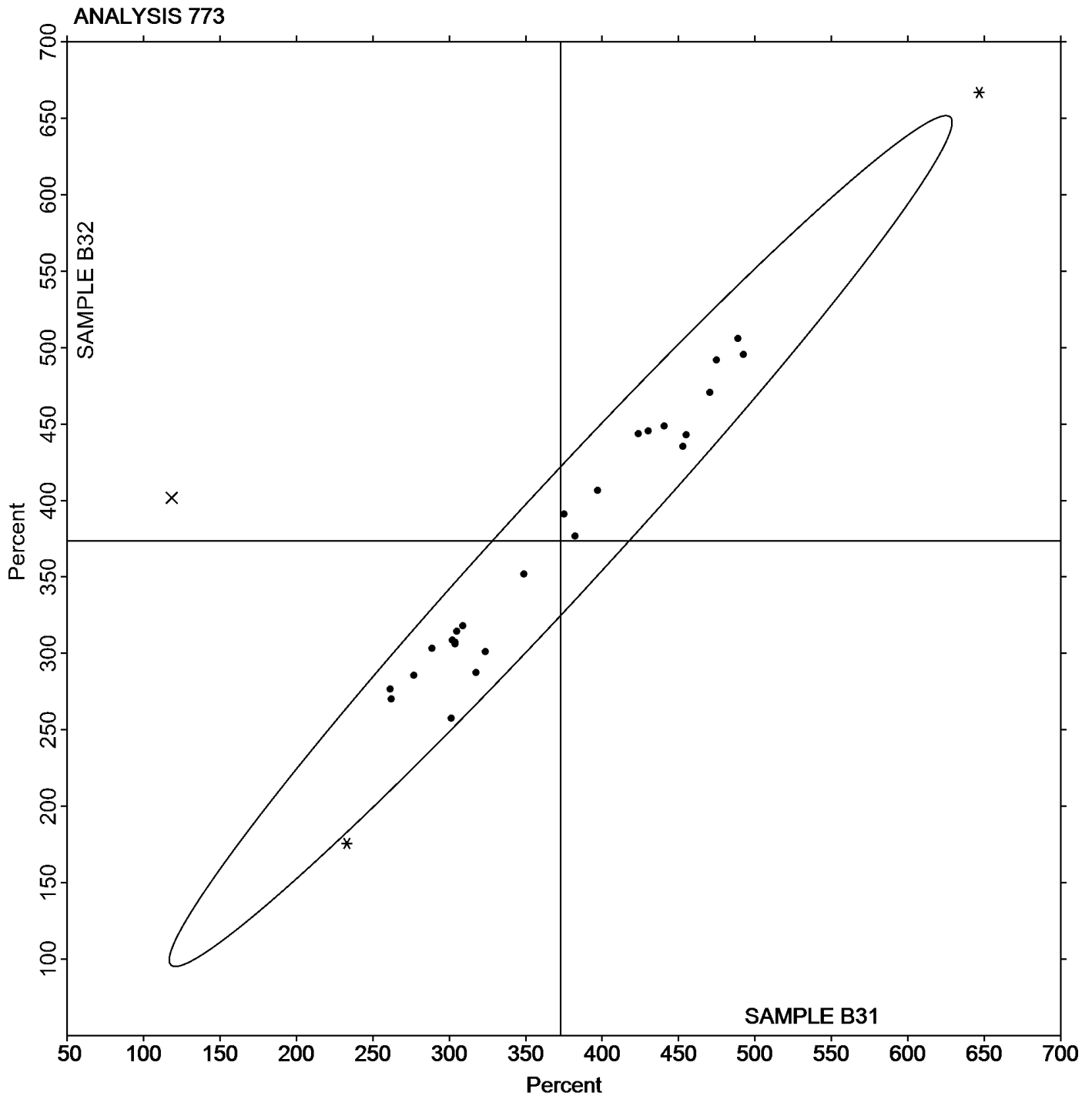
Analysis 773

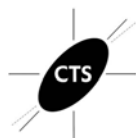
Percent Elongation at Break, Film Samples

Report #96

4th Qtr 2015

Grand Mean Sample B31: 372.87 Percent Grand Mean Sample B32: 373.44 Percent





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 774

Thickness of Film Tensile Samples - mils

WebCode	Data Flag	Sample B31			Sample B32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2MTWLC		2.6732	0.0525	0.39	2.7362	0.0956	0.68	XX
3UAR37	X	2.3937	-0.2270	-1.70	2.8268	0.1862	1.32	XX
6JZYNW		2.6772	0.0565	0.42	2.6969	0.0562	0.40	XX
6VQVM9		2.7441	0.1234	0.92	2.6418	0.0011	0.01	XX
7ZZ968		2.5560	-0.0647	-0.48	2.5760	-0.0647	-0.46	XX
8QCUJG		2.6200	-0.0007	-0.01	2.7100	0.0693	0.49	XX
AF62ZZ		2.5700	-0.0507	-0.38	2.5900	-0.0507	-0.36	XX
B3EEHC		2.5670	-0.0537	-0.40	2.5910	-0.0497	-0.35	XX
BT8U6G		2.5600	-0.0607	-0.45	2.4700	-0.1707	-1.21	XX
C2XRAV		2.4094	-0.2113	-1.58	2.3976	-0.2430	-1.73	XX
EXMNDB	X	2.6693	0.0485	0.36	2.9685	0.3278	2.33	XX
F8Q6K8		2.5550	-0.0657	-0.49	2.5450	-0.0957	-0.68	XX
F8TVQP		2.5900	-0.0307	-0.23	2.6930	0.0523	0.37	XX
GXGVWE		2.6299	0.0092	0.07	2.6378	-0.0029	-0.02	XX
K4WX7E		2.3634	-0.2573	-1.92	2.3673	-0.2734	-1.94	XX
K9TD43		2.6800	0.0593	0.44	2.6990	0.0583	0.41	XX
KKZ8AK		2.6440	0.0233	0.17	2.6860	0.0453	0.32	XX
P2W7CV		2.6300	0.0093	0.07	2.6600	0.0193	0.14	XX
PJ86AY		2.3784	-0.2424	-1.81	2.3780	-0.2627	-1.87	XX
Q6NMDN		2.7700	0.1493	1.11	2.8050	0.1643	1.17	XX
R8BL6R		2.7008	0.0801	0.60	2.7048	0.0641	0.46	XX
RXLX84		2.6300	0.0092	0.07	2.6851	0.0444	0.32	XX
UQE6VC		2.6130	-0.0077	-0.06	2.6410	0.0003	0.00	XX
W2MUJQ		2.7590	0.1383	1.03	2.7680	0.1273	0.91	XX
W4GFF4	*	2.3256	-0.2952	-2.20	2.4558	-0.1848	-1.31	XX
XHTB7J		2.8900	0.2693	2.01	2.8400	0.1993	1.42	XX
XTQEAD	*	2.8440	0.2233	1.67	2.9900	0.3493	2.48	XX
XXNVPT		2.7000	0.0793	0.59	2.7300	0.0893	0.63	XX
YCX4ZF		2.7008	0.0800	0.60	2.6693	0.0286	0.20	XX
ZPHZJP		2.6000	-0.0207	-0.15	2.5740	-0.0667	-0.47	XX



Plastics Interlaboratory Testing Program

Report #96

Analysis 774

4th Qtr 2015

Thickness of Film Tensile Samples - mils

		Summary Statistics
Grand Means	2.62075 mils	2.64066 mils
Stnd Dev Btwn Labs	0.13391 mils	0.14069 mils
		Statistics based on 28 of 30 reporting participants

Sample B31: LDPE & Sample B32: LDPE

Comments on Assigned Data Flags for Test #774

EXMNDB (X) - Inconsistent in testing between samples.

3UAR37 (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

XX Instrument Codes not used by CTS at this time



Plastics Interlaboratory Testing Program

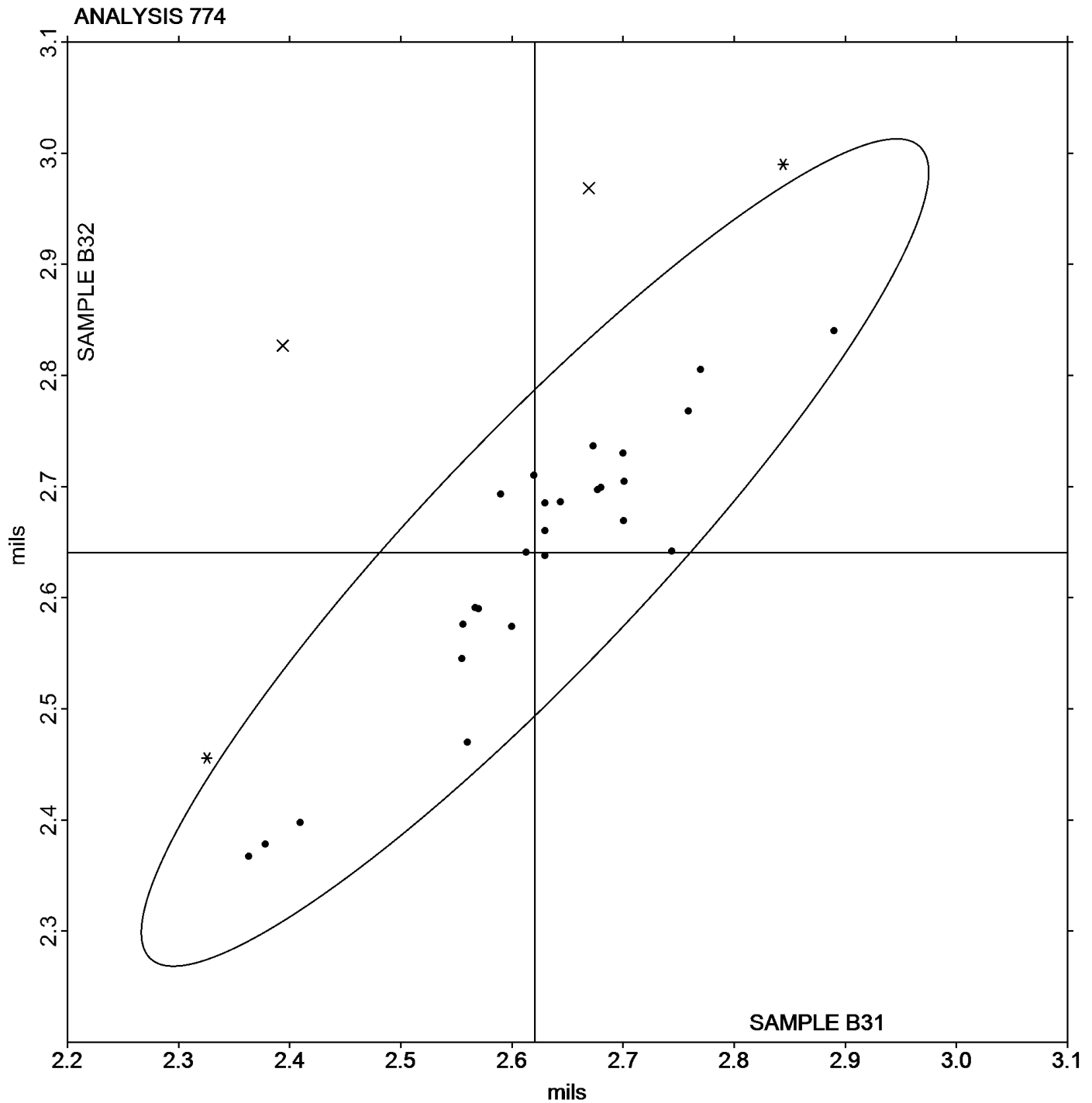
Analysis 774

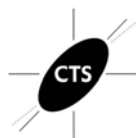
Thickness of Film Tensile Samples - mils

Report #96

4th Qtr 2015

Grand Mean Sample B31: 2.6207 mils Grand Mean Sample B32: 2.6407 mils





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 775

Secant Modulus at 1% Strain - psi

WebCode	Data Flag	Sample B31			Sample B32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2MTWLC		33,851	3,035	0.67	33,157	1,963	0.48	XX
3UAR37		24,233	-6,583	-1.46	23,049	-8,145	-1.98	XX
6JZYNW		34,472	3,656	0.81	33,746	2,552	0.62	IN
6VQVM9		25,917	-4,899	-1.09	25,288	-5,906	-1.44	IN
7ZZ968		29,105	-1,711	-0.38	31,864	670	0.16	IN
8QCUJG		27,170	-3,646	-0.81	27,844	-3,350	-0.82	IN
C2XRAV		33,939	3,123	0.69	34,157	2,963	0.72	WZ
F8Q6K8		32,198	1,382	0.31	33,230	2,036	0.50	TH
F8TVQP		32,592	1,776	0.39	33,204	2,010	0.49	IN
KKZ8AK		34,555	3,738	0.83	35,407	4,213	1.03	IN
PJ86AY		38,253	7,437	1.65	37,653	6,459	1.57	LI
Q6NMDN		32,324	1,508	0.33	32,945	1,751	0.43	MT
R8BL6R		35,632	4,815	1.07	34,276	3,082	0.75	IN
UQE6VC		30,266	-551	-0.12	29,972	-1,222	-0.30	IN
W2MUJQ		29,436	-1,380	-0.31	30,294	-900	-0.22	IM
XHTB7J		23,340	-7,476	-1.66	24,110	-7,084	-1.73	IN
XXNVPT		33,006	2,190	0.49	33,248	2,054	0.50	IN
YCX4ZF	*	21,801	-9,015	-2.00	25,802	-5,391	-1.31	SH
ZPHZJP		33,419	2,602	0.58	33,439	2,245	0.55	IN

Summary Statistics

Grand Means

30,816.3 psi

31,193.9 psi

Std Dev Btwn Labs

4,513.3 psi

4,103.4 psi

Statistics based on 19 of 19 reporting participants

Sample B31: LDPE & Sample B32: LDPE

Key to Instrument Codes Reported by Participants

IM Instru-Met Instruments

IN Instron

LI Lloyd Instruments

MT MTS/Sintech

SH Shimadzu

TH Thwing Albert

WZ Zwick

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

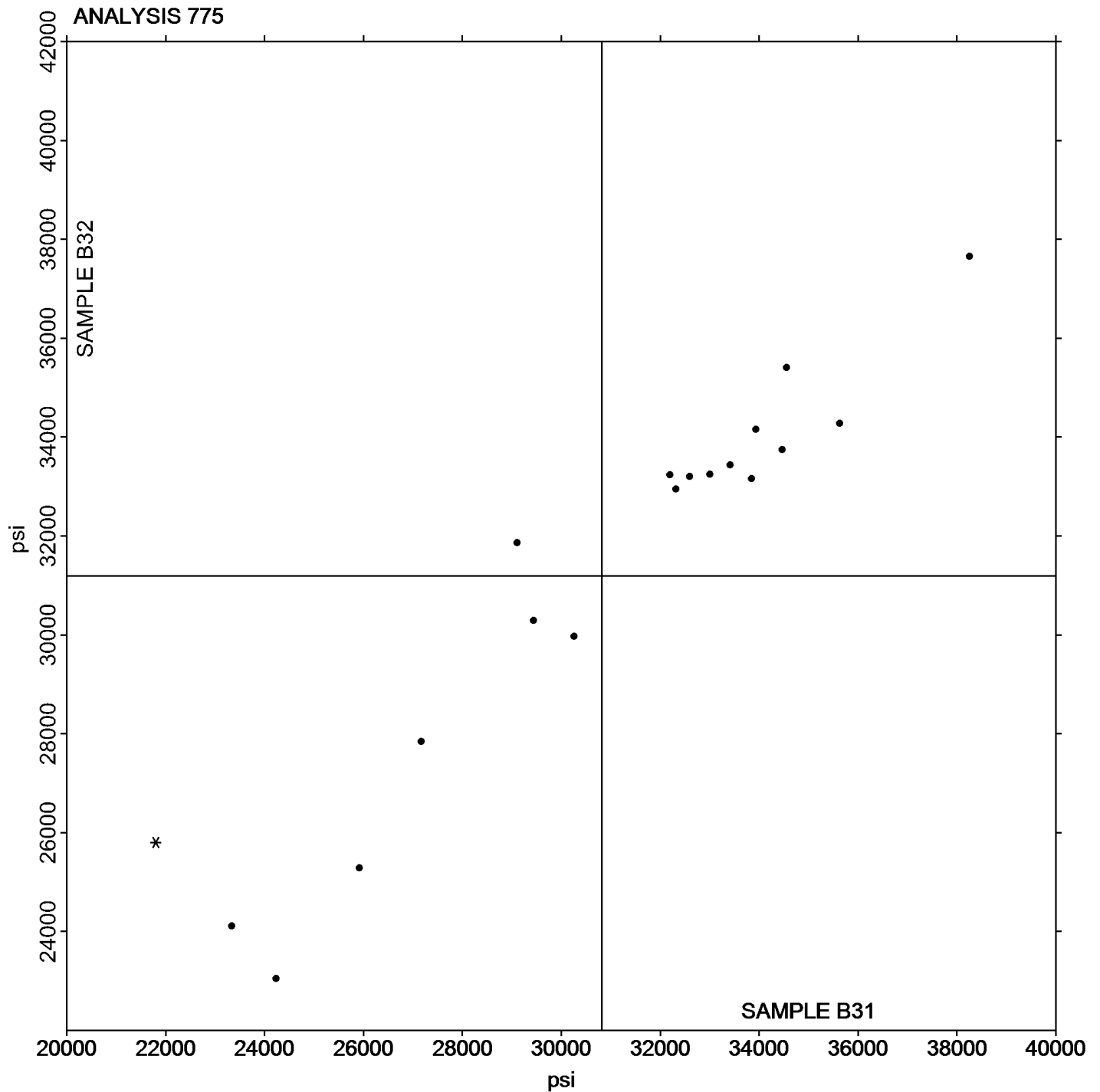
Report #96

4th Qtr 2015

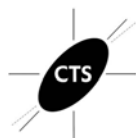
Analysis 775

Secant Modulus at 1% Strain - psi

Grand Mean Sample B31: 30,816.28 psi Grand Mean Sample B32: 31,193.92 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 #96
4th Qtr 2015

Analysis 776

Secant Modulus at 2% Strain - psi

WebCode	Data Flag	Sample B31			Sample B32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2MTWLC		32,097	4,512	1.39	31,680	3,799	1.38	XX
3UAR37	X	16,594	-10,991	-3.40	13,641	-14,240	-5.17	XX
6JZYNW		28,508	923	0.29	28,156	275	0.10	IN
7ZZ968	*	24,150	-3,435	-1.06	26,502	-1,379	-0.50	IN
8QCUJG		24,976	-2,609	-0.81	25,372	-2,510	-0.91	IN
C2XRAV		27,876	292	0.09	28,080	198	0.07	IN
F8Q6K8		28,543	958	0.30	29,243	1,362	0.49	TH
F8TVQP		28,831	1,246	0.39	28,796	915	0.33	IN
KKZ8AK		29,445	1,860	0.57	30,014	2,132	0.77	IN
PJ86AY		32,947	5,362	1.66	32,498	4,617	1.68	LI
Q6NMDN		27,884	299	0.09	28,301	420	0.15	MT
R8BL6R		30,960	3,375	1.04	29,956	2,075	0.75	IN
UQE6VC		27,292	-293	-0.09	27,235	-647	-0.23	IN
W2MUJQ		25,651	-1,934	-0.60	26,284	-1,597	-0.58	IM
XHTB7J		21,340	-6,245	-1.93	22,180	-5,701	-2.07	IN
XXNVPT		28,498	913	0.28	28,607	726	0.26	IN
YCX4ZF		22,361	-5,224	-1.61	23,193	-4,688	-1.70	SH

Summary Statistics

Grand Means

27,584.9 psi

27,881.1 psi

Stnd Dev Btwn Labs

3,235.4 psi

2,753.9 psi

Statistics based on 16 of 17 reporting participants

Sample B31: LDPE & Sample B32: LDPE

Comments on Assigned Data Flags for Test #776

3UAR37 (X) - Data for both samples are low.

Key to Instrument Codes Reported by Participants

IM Instru-Met Instruments

IN Instron

LI Lloyd Instruments

MT MTS/Sintech

SH Shimadzu

TH Thwing Albert

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

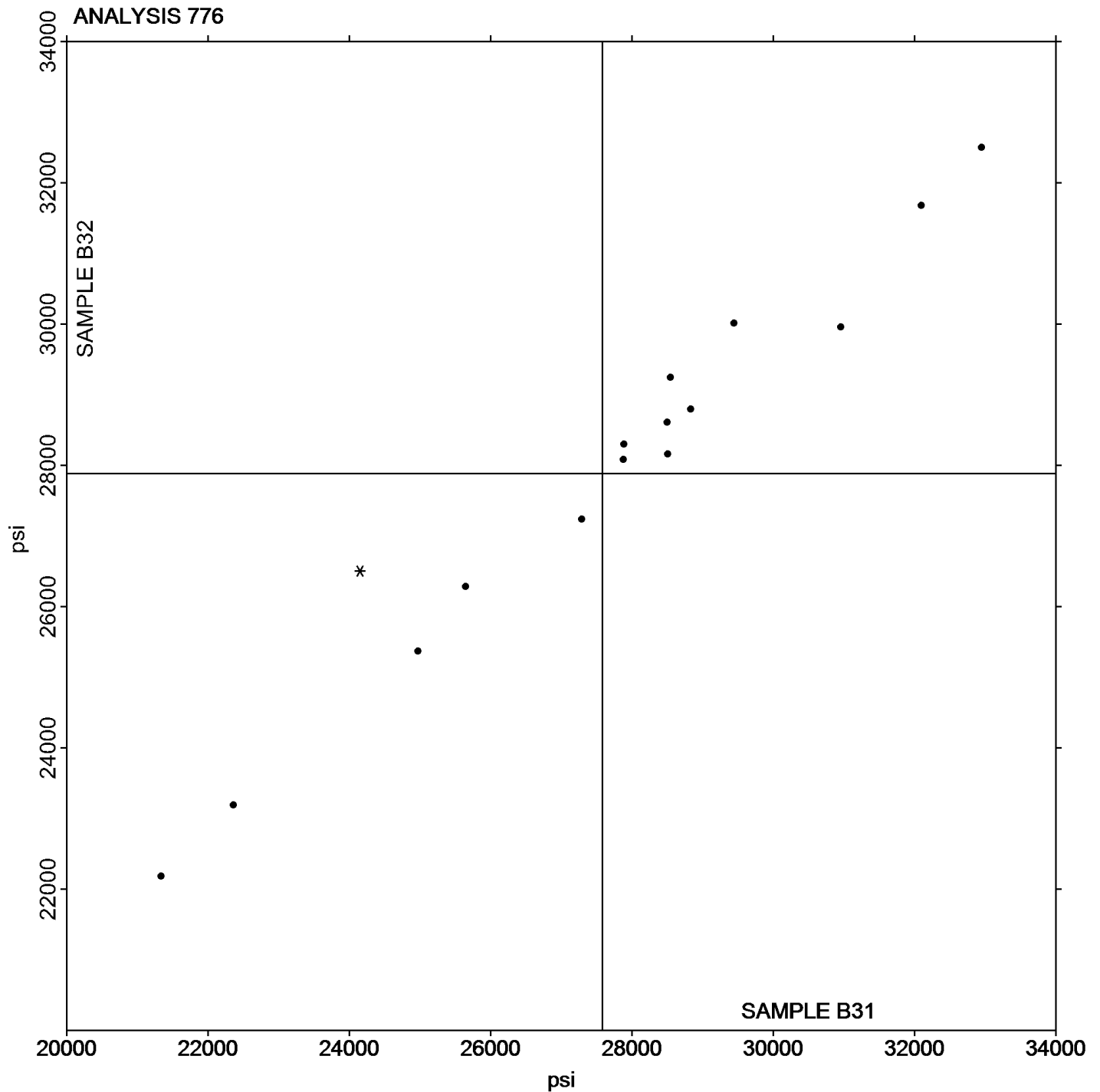
Report #96

4th Qtr 2015

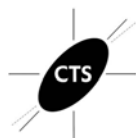
Analysis 776

Secant Modulus at 2% Strain - psi

Grand Mean Sample B31: 27,584.92 psi Grand Mean Sample B32: 27,881.06 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 #96
4th Qtr 2015

Analysis 780

Coefficient of Static Friction

WebCode	Data Flag	Sample P31			Sample P32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3UAR37		0.1112	-0.0079	-0.22	0.1166	0.0009	0.02	RD
6NWM7N		0.1822	0.0631	1.73	0.1842	0.0685	1.68	TH
6VQVM9		0.1280	0.0089	0.24	0.1400	0.0243	0.60	TL
8JQ4UZ		0.2014	0.0823	2.25	0.2078	0.0921	2.26	MI
8QCUJG		0.1236	0.0045	0.12	0.0834	-0.0323	-0.79	TN
AF62ZZ		0.1424	0.0233	0.64	0.1172	0.0015	0.04	MI
BT8U6G		0.0880	-0.0311	-0.85	0.0880	-0.0277	-0.68	KA
C2XRAV		0.0620	-0.0571	-1.56	0.0540	-0.0617	-1.52	XX
D8CWJ8		0.0500	-0.0691	-1.89	0.0180	-0.0977	-2.40	IG
EXMNDB		0.1240	0.0049	0.13	0.1300	0.0143	0.35	SA
F8Q6K8		0.1026	-0.0165	-0.45	0.1062	-0.0095	-0.23	TH
FJ63PB		0.1218	0.0028	0.08	0.1079	-0.0078	-0.19	IG
K4WX7E		0.1072	-0.0119	-0.32	0.1024	-0.0133	-0.33	RD
KKZ8AK		0.0874	-0.0317	-0.87	0.0940	-0.0217	-0.53	TM
NW8AAZ		0.1146	-0.0045	-0.12	0.1246	0.0089	0.22	IP
PQUVU9		0.0820	-0.0371	-1.01	0.0818	-0.0339	-0.83	RD
Q6NMDN		0.1674	0.0483	1.32	0.1658	0.0501	1.23	MI
QPXVGU		0.1472	0.0281	0.77	0.1256	0.0099	0.24	MI
TQZJJN		0.1366	0.0175	0.48	0.1426	0.0269	0.66	TH
U2ZA3B		0.1206	0.0015	0.04	0.1166	0.0009	0.02	TN
W4GFF4		0.0880	-0.0311	-0.85	0.0792	-0.0365	-0.90	TH
XTQEAD		0.1644	0.0453	1.24	0.1574	0.0417	1.02	TH
XXNVPT		0.1176	-0.0015	-0.04	0.1328	0.0171	0.42	IS
ZPHZJP		0.0874	-0.0317	-0.87	0.1006	-0.0151	-0.37	TH

Summary Statistics

Grand Means

0.11907 COF

0.11570 COF

Std Dev Btwn Labs

0.03657 COF

0.04069 COF

Statistics based on 24 of 24 reporting participants

Sample P31: LDPE & Sample P32: LDPE



Plastics Interlaboratory Testing Program

Report #96

4th Qtr 2015

Analysis 780

Coefficient of Static Friction

Key to Instrument Codes Reported by Participants

IG	Instron	IP	Instron 4000 Series
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
TL	TMI #32-90	TM	TMI Slip and Friction Tester
TN	TMI #32-06	XX	Instrument make/model not specified by lab



Plastics Interlaboratory Testing Program

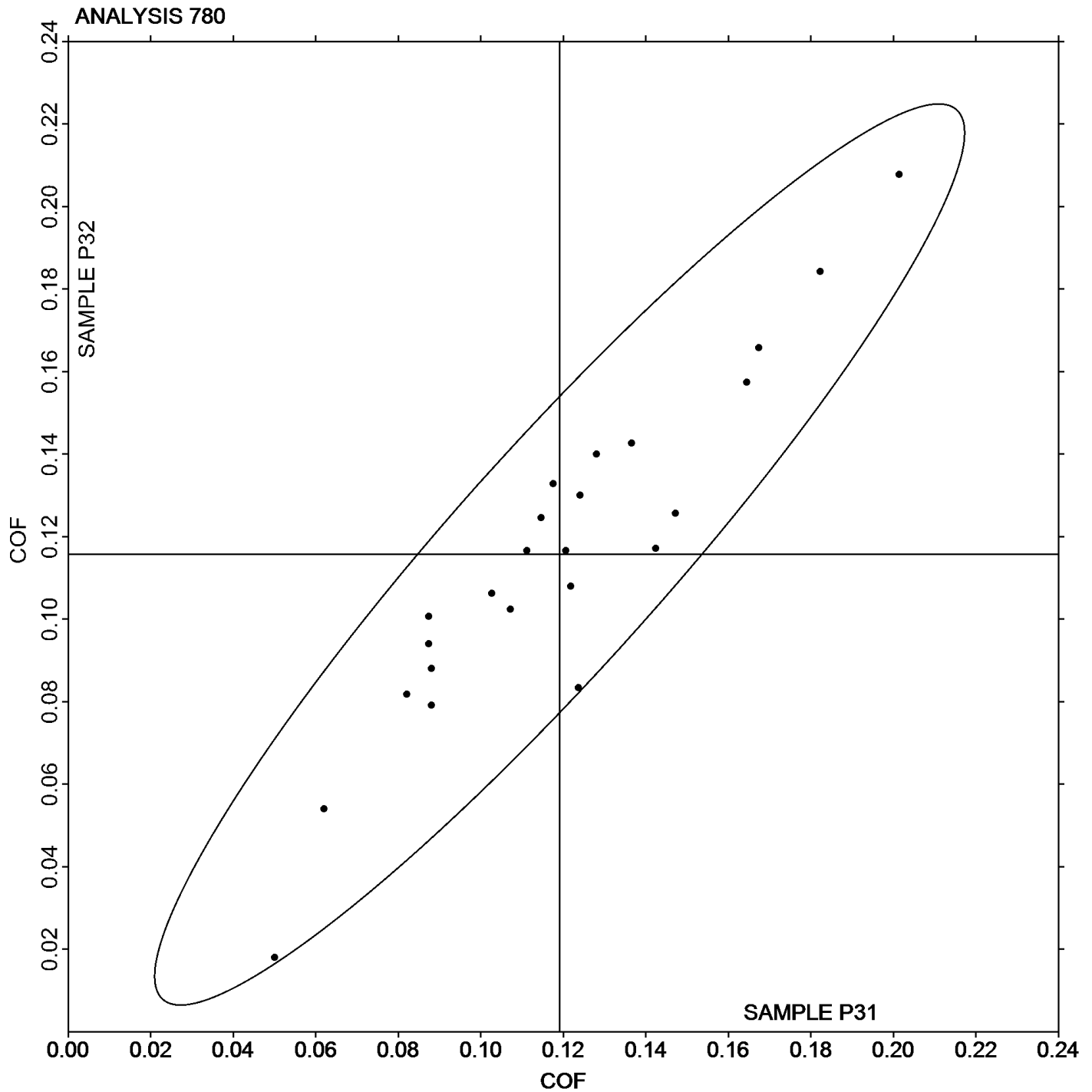
Analysis 780

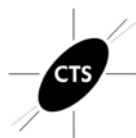
Coefficient of Static Friction

Report #96

4th Qtr 2015

Grand Mean Sample P31: 0.11907 COF Grand Mean Sample P32: 0.11570 COF





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 781

Coefficient of Kinetic Friction

WebCode	Data Flag	Sample P31			Sample P32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3UAR37		0.1082	0.0216	0.83	0.1124	0.0251	1.05	RD
6NWM7N		0.0994	0.0128	0.49	0.1000	0.0127	0.53	TH
6VQVM9		0.0880	0.0014	0.05	0.1000	0.0127	0.53	TL
8JQ4UZ		0.1304	0.0438	1.68	0.1382	0.0509	2.13	MI
8QCUJG	*	0.0900	0.0034	0.13	0.0590	-0.0283	-1.18	TN
AF62ZZ		0.1072	0.0206	0.79	0.0920	0.0047	0.20	MI
BT8U6G		0.0880	0.0014	0.05	0.0880	0.0007	0.03	KA
C2XRAV	*	0.0200	-0.0666	-2.56	0.0200	-0.0673	-2.81	XX
D8CWJ8	*	0.0150	-0.0716	-2.75	0.0480	-0.0393	-1.64	IG
EXMNDB		0.0880	0.0014	0.05	0.0760	-0.0113	-0.47	SA
F8Q6K8		0.0754	-0.0112	-0.43	0.0752	-0.0121	-0.50	TH
FJ63PB		0.1108	0.0241	0.93	0.1106	0.0233	0.97	IG
K4WX7E		0.0772	-0.0094	-0.36	0.0750	-0.0123	-0.51	RD
KKZ8AK		0.0790	-0.0076	-0.29	0.0836	-0.0037	-0.15	TM
NW8AAZ		0.0952	0.0086	0.33	0.0952	0.0079	0.33	IP
PQUVU9		0.0746	-0.0120	-0.46	0.0744	-0.0129	-0.54	RD
Q6NMDN		0.1146	0.0280	1.07	0.1118	0.0245	1.02	MI
QPXVGU		0.1032	0.0166	0.64	0.0970	0.0097	0.41	MI
TQZJJN		0.0630	-0.0236	-0.91	0.0726	-0.0147	-0.61	TH
U2ZA3B		0.0972	0.0106	0.41	0.0968	0.0095	0.40	TN
W4GFF4		0.0760	-0.0106	-0.41	0.0752	-0.0121	-0.50	TH
XTQEAD		0.0932	0.0066	0.25	0.0922	0.0049	0.21	TH
XXNVPT		0.0952	0.0086	0.33	0.1026	0.0153	0.64	IS
ZPHZJP		0.0904	0.0038	0.14	0.0990	0.0117	0.49	TH

Summary Statistics

Grand Means

0.08663 COF

0.08728 COF

Std Dev Btwn Labs

0.02604 COF

0.02395 COF

Statistics based on 24 of 24 reporting participants

Sample P31: LDPE & Sample P32: LDPE



Plastics Interlaboratory Testing Program

Analysis 781

Coefficient of Kinetic Friction

Report #96

4th Qtr 2015

Key to Instrument Codes Reported by Participants

IG	Instron	IP	Instron 4000 Series
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
TL	TMI #32-90	TM	TMI Slip and Friction Tester
TN	TMI #32-06	XX	Instrument make/model not specified by lab



Plastics Interlaboratory Testing Program

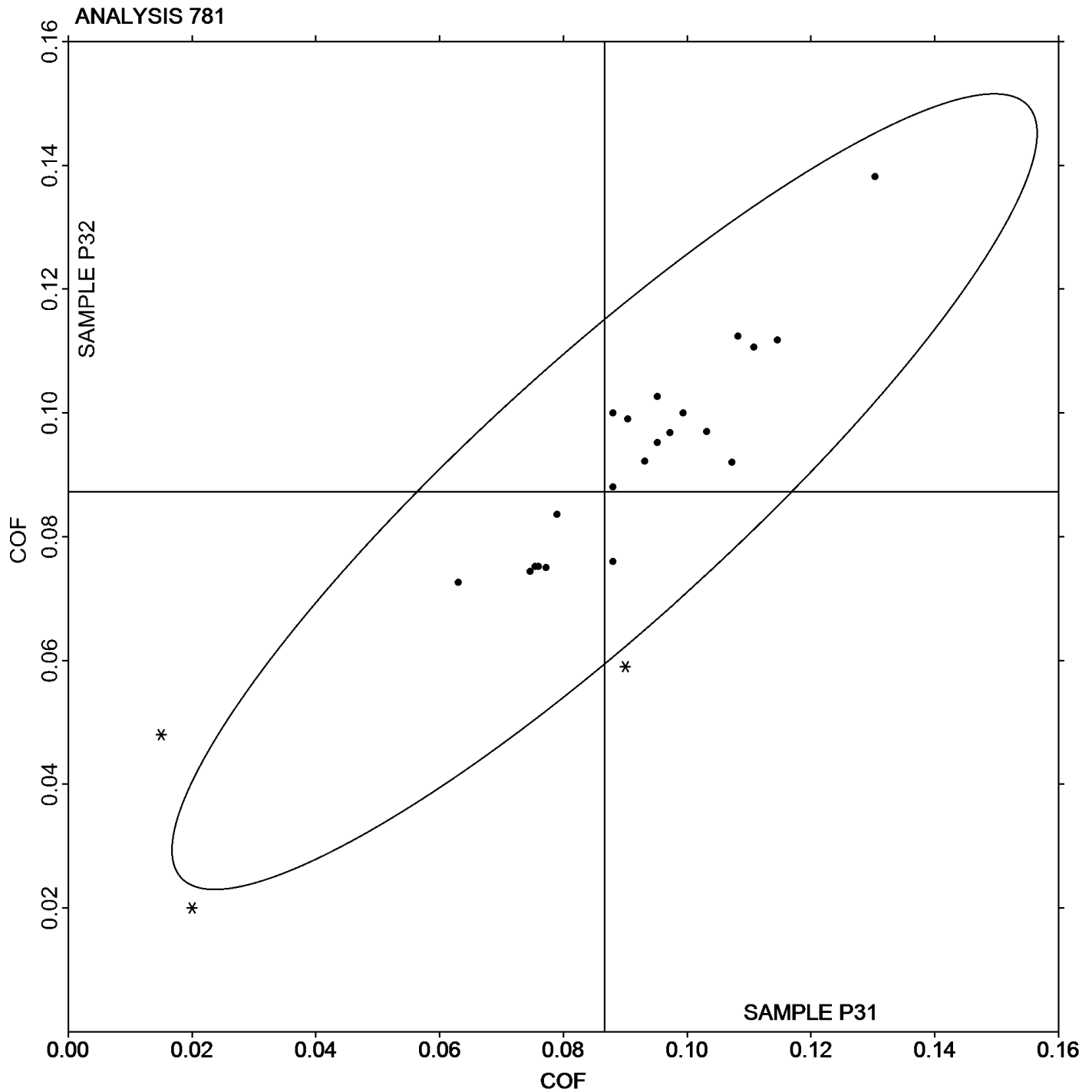
Analysis 781

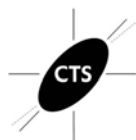
Coefficient of Kinetic Friction

Report #96

4th Qtr 2015

Grand Mean Sample P31: 0.08663 COF Grand Mean Sample P32: 0.08728 COF





Plastics Interlaboratory Testing Program

Analysis 782

Tear Resistance of Films

Report #96
4th Qtr 2015

WebCode	Data Flag	Sample Q31			Sample Q32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
6VQVM9		833.3	204.8	2.55	773.3	132.5	2.14	TM
8QCUJG		659.9	31.4	0.39	640.4	-0.4	-0.01	TM
AF62ZZ		606.1	-22.4	-0.28	560.0	-80.8	-1.30	TA
C2XRAV		633.6	5.2	0.06	630.7	-10.2	-0.16	TA
EXMNDB		528.6	-99.9	-1.25	589.0	-51.8	-0.84	LO
F8TVQP		614.4	-14.1	-0.18	594.7	-46.1	-0.74	TM
FX8HZ7		723.2	94.7	1.18	749.4	108.6	1.75	TA
KKZ8AK		606.7	-21.8	-0.27	616.6	-24.2	-0.39	TE
Q6NMDN		665.0	36.5	0.45	633.8	-7.0	-0.11	TE
QPXVGU		583.9	-44.6	-0.56	563.5	-77.3	-1.25	TE
RXLX84		620.2	-8.3	-0.10	650.2	9.4	0.15	SZ
W2MUJQ		601.1	-27.4	-0.34	604.6	-36.2	-0.58	TE
XHTB7J		689.4	60.9	0.76	696.2	55.4	0.89	TN
XXNVPT		526.0	-102.5	-1.28	682.4	41.6	0.67	TE
ZPHZJP		535.7	-92.8	-1.16	627.4	-13.4	-0.22	TE

Summary Statistics

Grand Means

628.48 grams-force

640.82 grams-force

Stnd Dev Btwn Labs

80.20 grams-force

61.98 grams-force

Statistics based on 15 of 15 reporting participants

Sample Q31: LDPE & Sample Q32: LDPE

Key to Instrument Codes Reported by Participants

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

SZ Textest FX 3700
TE Thwing-Albert Pro Tear
TN TMI Tear Tester 83-10



Plastics Interlaboratory Testing Program

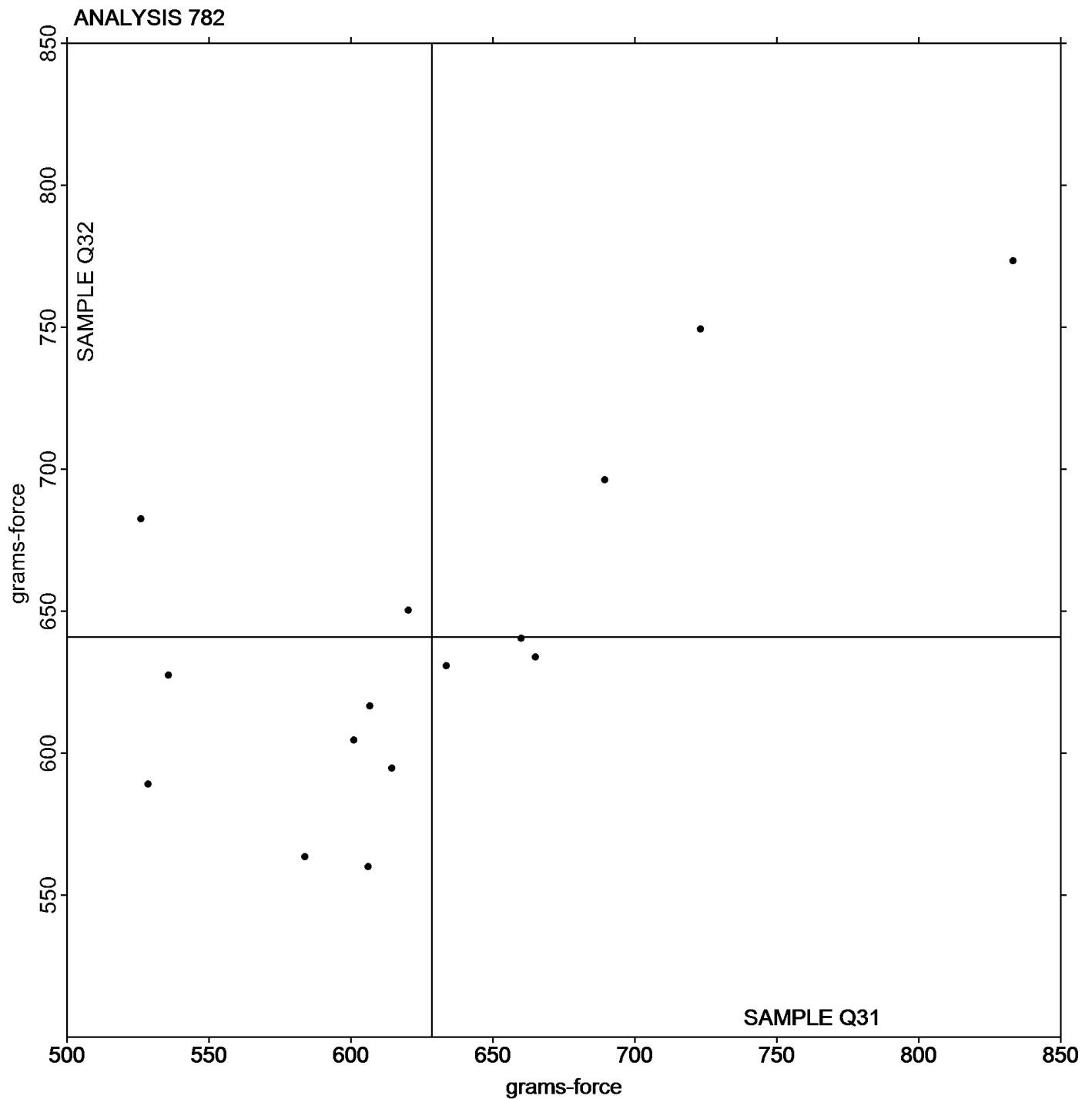
Analysis 782

Tear Resistance of Films

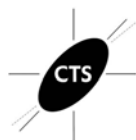
Report #96

4th Qtr 2015

Grand Mean Sample Q31: 628.48 grams-force Grand Mean Sample Q32: 640.82 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

Analysis 785

Percent Haze of Film

Report #96
4th Qtr 2015

WebCode	Data Flag	Sample D31			Sample D32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3FQ7FR		22.049	-2.564	-2.19	21.414	-2.815	-2.58	HL
424GWF		23.688	-0.925	-0.79	23.288	-0.941	-0.86	BJ
6NWM7N		23.275	-1.337	-1.14	22.988	-1.241	-1.14	BH
6VQVM9		24.913	0.300	0.26	24.763	0.534	0.49	BJ
7MX3RN		25.750	1.138	0.97	25.163	0.934	0.86	BJ
7ZZ968		25.006	0.394	0.34	24.489	0.260	0.24	HC
8QCUJG		25.775	1.163	0.99	25.688	1.459	1.34	BJ
AF62ZZ		24.763	0.150	0.13	24.275	0.047	0.04	XX
AFMRC6		24.748	0.135	0.12	24.340	0.112	0.10	BJ
APRYQ6		25.025	0.413	0.35	24.363	0.134	0.12	BJ
B3EEHC		25.025	0.413	0.35	24.625	0.397	0.36	BJ
C2XRAV		24.088	-0.525	-0.45	24.688	0.459	0.42	BJ
FX8HZ7	*	25.050	0.438	0.37	25.913	1.684	1.55	BJ
G88EBM		24.363	-0.250	-0.21	24.425	0.197	0.18	BJ
K7HMN7		25.238	0.625	0.53	24.075	-0.153	-0.14	BJ
KKZ8AK		24.263	-0.350	-0.30	24.688	0.459	0.42	BJ
LDXH7L	*	21.330	-3.282	-2.81	20.960	-3.268	-3.00	XR
LQKRQ7		23.531	-1.081	-0.92	23.595	-0.633	-0.58	BH
LU6J39		24.725	0.113	0.10	24.325	0.097	0.09	BJ
P2WA2Z		23.221	-1.391	-1.19	23.266	-0.962	-0.88	XR
Q6NMDN		25.800	1.188	1.02	25.138	0.909	0.83	BJ
QHWPCQ		27.213	2.600	2.22	26.288	2.059	1.89	DA
RXLX84		25.088	0.475	0.41	23.975	-0.253	-0.23	BJ
TYE6TT		24.050	-0.562	-0.48	24.100	-0.128	-0.12	BJ
UDDKGT		24.179	-0.434	-0.37	23.749	-0.480	-0.44	XR
W4GFF4		24.650	0.038	0.03	24.175	-0.053	-0.05	BJ
XTQEAD		25.013	0.400	0.34	24.600	0.372	0.34	BJ
XXNVPT		25.613	1.000	0.86	24.638	0.409	0.38	BT
YE8YUK		26.279	1.666	1.42	25.381	1.153	1.06	MA
ZG7JA6		24.313	-0.300	-0.26	23.518	-0.711	-0.65	BJ
ZMXQRD		23.788	-0.825	-0.71	24.063	-0.166	-0.15	BJ
ZPHZJP		25.788	1.175	1.00	24.363	0.134	0.12	BJ



Plastics Interlaboratory Testing Program

Analysis 785

Percent Haze of Film

Report #96

4th Qtr 2015

Summary Statistics

Grand Means

24.6123 Percent

24.2285 Percent

Std Dev Btwn Labs

1.1697 Percent

1.0895 Percent

Statistics based on 32 of 32 reporting participants

Sample D31: LDPE & Sample D32: LDPE

Key to Instrument Codes Reported by Participants

BH

BJ

BT

DA

HC

HL

MA

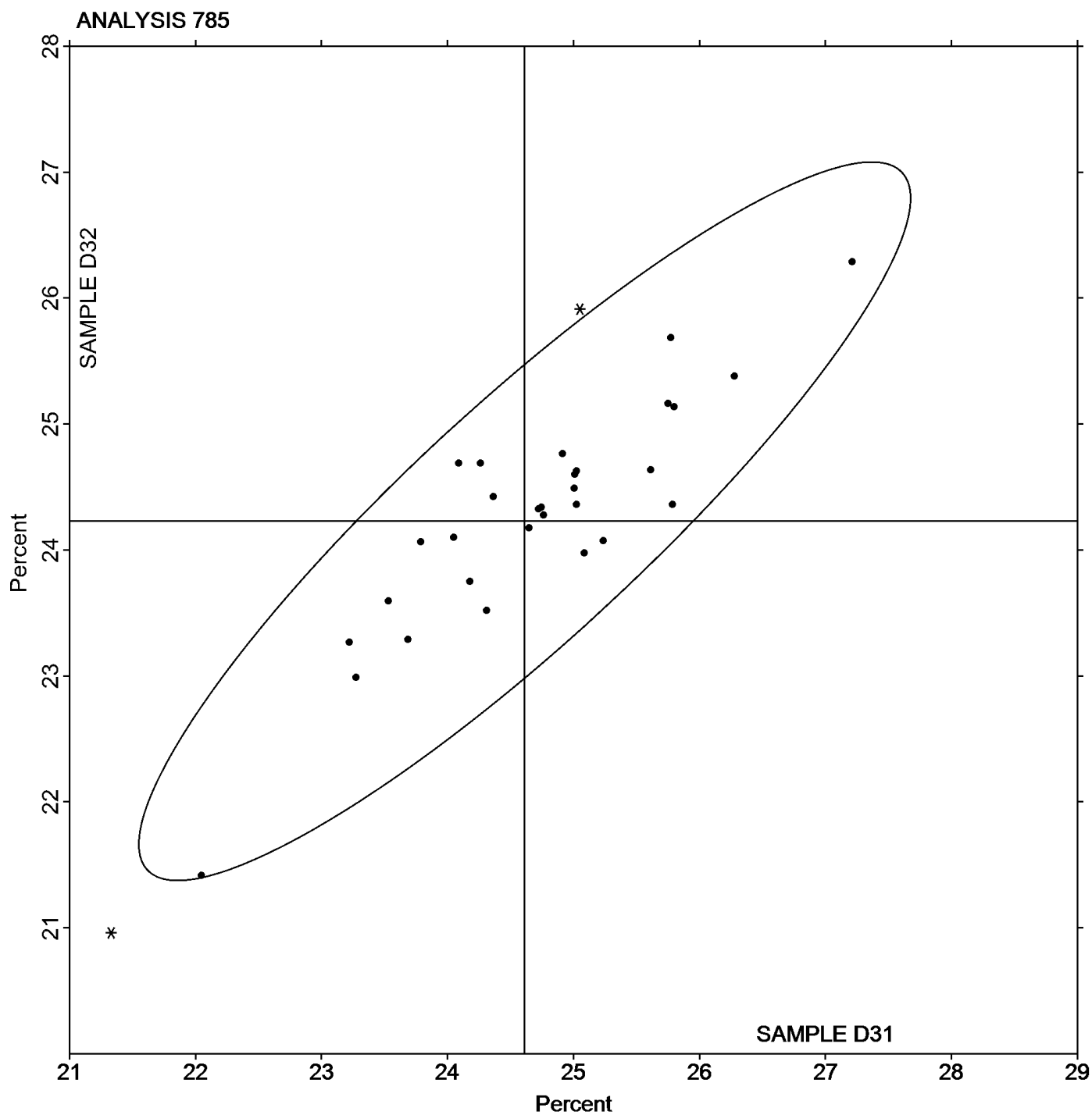
XR

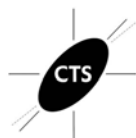
XX

Analysis 785

Percent Haze of Film

Grand Mean Sample D31: 24.612 Percent Grand Mean Sample D32: 24.228 Percent





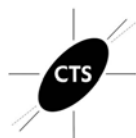
Plastics Interlaboratory Testing Program

Analysis 786

Report #96
4th Qtr 2015

Total Luminous transmittance of film

WebCode	Data Flag	Sample D31			Sample D32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3FQ7FR		89.92	-2.53	-2.40	89.88	-2.55	-2.36	HL
424GWF		92.29	-0.16	-0.15	92.21	-0.21	-0.20	BJ
6NWM7N		91.46	-0.98	-0.93	91.44	-0.99	-0.92	BH
6VQVM9		93.46	1.02	0.97	93.43	1.00	0.93	BJ
7MX3RN		92.76	0.32	0.30	92.85	0.42	0.39	BJ
7ZZ968		93.08	0.63	0.60	93.04	0.62	0.57	HC
8QCUJG		93.33	0.88	0.84	93.20	0.77	0.72	BJ
AFMRC6		93.34	0.90	0.85	93.35	0.93	0.86	BJ
APRYQ6		93.19	0.74	0.71	93.29	0.86	0.80	BJ
B3EEHC		94.23	1.78	1.69	94.26	1.84	1.70	BJ
C2XRAV		92.11	-0.33	-0.31	91.75	-0.68	-0.63	BJ
FX8HZ7		91.39	-1.06	-1.00	91.41	-1.01	-0.94	BJ
G88EBM		92.66	0.22	0.21	92.54	0.11	0.10	BJ
K7HMN7		93.23	0.78	0.74	93.13	0.70	0.65	BJ
KKZ8AK		91.31	-1.13	-1.07	91.24	-1.19	-1.10	BJ
LDXH7L		91.74	-0.71	-0.67	91.70	-0.73	-0.68	XR
LQKRQ7		91.68	-0.77	-0.73	91.74	-0.69	-0.64	BH
LU6J39	*	92.54	0.09	0.09	92.05	-0.38	-0.35	BJ
P2WA2Z		91.90	-0.55	-0.52	91.87	-0.55	-0.51	XR
Q6NMDN		92.98	0.53	0.50	93.20	0.77	0.72	BJ
QHWPCQ		89.89	-2.56	-2.43	89.97	-2.46	-2.28	DA
RXLX84		91.75	-0.69	-0.66	91.65	-0.78	-0.72	BJ
TYE6TT		92.91	0.47	0.44	93.13	0.70	0.65	BJ
UDDKGT		91.74	-0.71	-0.67	91.72	-0.71	-0.66	XR
XTQEAD		92.33	-0.12	-0.11	92.39	-0.04	-0.04	BJ
XXNVPT		93.14	0.69	0.66	93.04	0.61	0.57	BJ
YE8YUK	*	92.36	-0.09	-0.08	92.81	0.38	0.35	MA
ZG7JA6		93.28	0.83	0.79	93.26	0.83	0.77	BJ
ZMXQRD		92.93	0.48	0.46	92.66	0.24	0.22	BJ
ZPHZJP		94.44	1.99	1.89	94.59	2.16	2.01	BJ



Plastics Interlaboratory Testing Program

Analysis 786

Total Luminous transmittance of film

Report #96
4th Qtr 2015

Summary Statistics

Grand Means

92.444 Percent

92.425 Percent

Stnd Dev Btwn Labs

1.054 Percent

1.078 Percent

Statistics based on 30 of 30 reporting participants

Sample D31: LDPE & Sample D32: LDPE

Key to Instrument Codes Reported by Participants

BH BYK-Gardner/Pacific Scientific Model XL-211

BJ BYK-Gardner Haze-Gard Plus

DA Datacolor SF 600 Series

HC Hunterlab ColorQuest

HL Hunterlab Ultrascan XE

MA Macbeth 7000A

XR X-Rite Spectrocolorimeter (any model)



Plastics Interlaboratory Testing Program

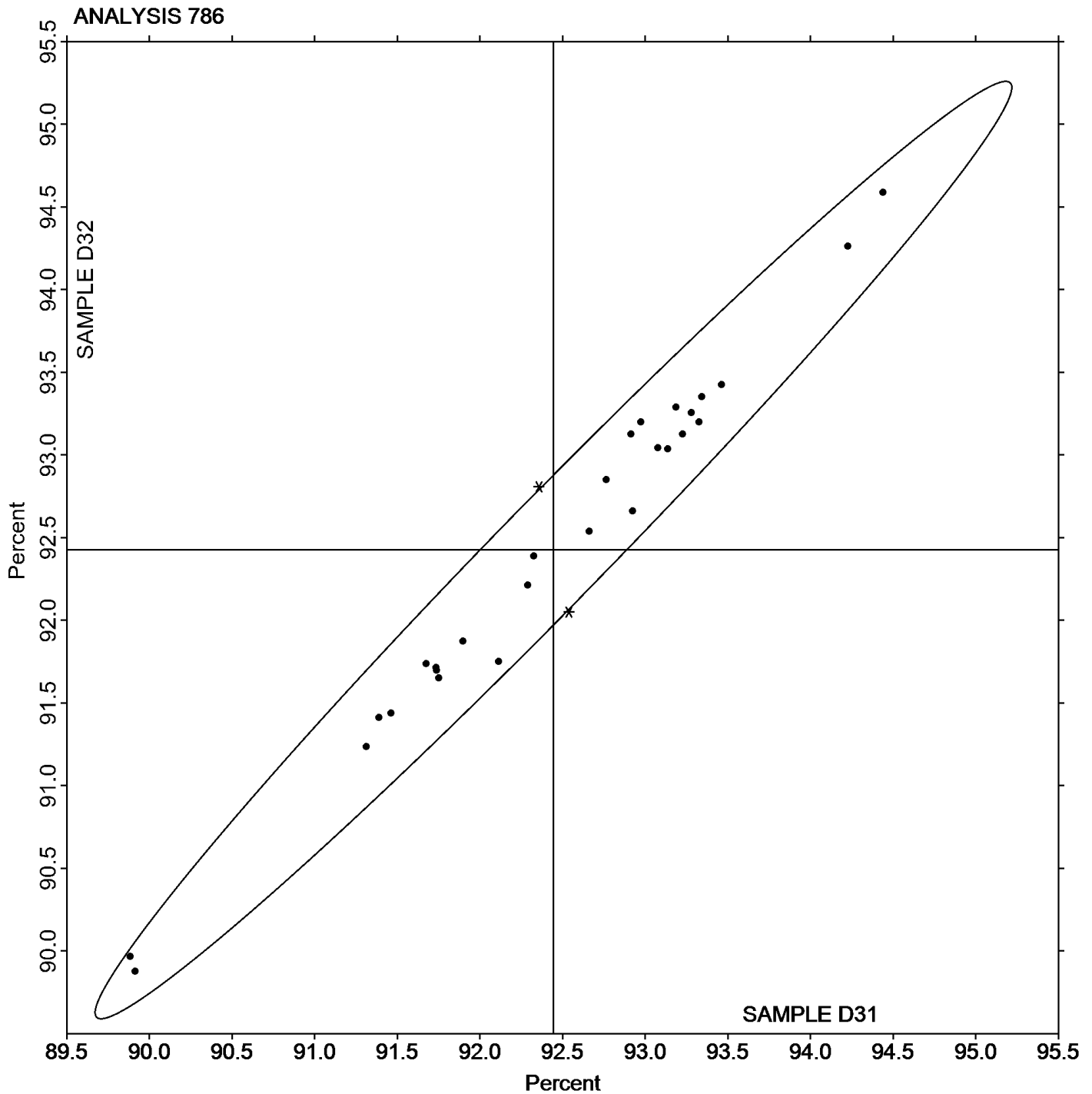
Analysis 786

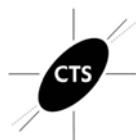
Total Luminous transmittance of film

Report #96

4th Qtr 2015

Grand Mean Sample D31: 92.444 Percent Grand Mean Sample D32: 92.425 Percent





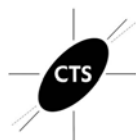
Plastics Interlaboratory Testing Program

Analysis 755

Moisture Content of Plastics

Report #96
4th Qtr 2015

WebCode	Data Flag	Sample Y31			Sample Y32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2G8YXP		0.24067	0.01629	0.58	0.26233	0.00251	0.07	MD
2V62KN		0.23900	0.01462	0.52	0.27133	0.01151	0.31	MJ
2Y7TQF		0.24133	0.01695	0.61	0.27800	0.01818	0.50	AZ
3QQWYE		0.23300	0.00862	0.31	0.26500	0.00518	0.14	CT
4NEG6D		0.16693	-0.05745	-2.05	0.18577	-0.07406	-2.02	XX
6QZKDB		0.19303	-0.03135	-1.12	0.19630	-0.06352	-1.73	MT
6VTH4M		0.18933	-0.03505	-1.25	0.22333	-0.03649	-1.00	AZ
6XKLTN		0.20887	-0.01551	-0.55	0.25377	-0.00606	-0.17	MK
74ZJZ8		0.21100	-0.01338	-0.48	0.25447	-0.00536	-0.15	MU
7P73YF		0.20637	-0.01801	-0.64	0.25083	-0.00899	-0.25	MR
7TH39Z		0.24100	0.01662	0.59	0.28100	0.02118	0.58	MB
86Q3FD		0.22000	-0.00438	-0.16	0.25900	-0.00082	-0.02	AZ
8JQ4UZ		0.23333	0.00895	0.32	0.25667	-0.00316	-0.09	MT
9NZGCY		0.19533	-0.02905	-1.04	0.26633	0.00651	0.18	CT
ABUMH2	X	0.27900	0.05462	1.95	0.23100	-0.02882	-0.79	SA
AL7DYH		0.23200	0.00762	0.27	0.30500	0.04518	1.23	MB
AVEPDZ		0.24800	0.02362	0.84	0.27800	0.01818	0.50	ML
B8A9FD		0.23597	0.01159	0.41	0.27733	0.01751	0.48	AZ
BMHA22	*	0.22500	0.00062	0.02	0.20800	-0.05182	-1.42	SB
C4X33B		0.16613	-0.05826	-2.08	0.21097	-0.04885	-1.33	MU
E89RJP		0.20700	-0.01738	-0.62	0.24250	-0.01732	-0.47	SB
GA9MDC		0.22717	0.00279	0.10	0.26907	0.00924	0.25	XX
HWMPR9		0.24200	0.01762	0.63	0.28200	0.02218	0.61	MK
JXTCZ7		0.23453	0.01015	0.36	0.27093	0.01111	0.30	MR
K4DR9A		0.24403	0.01965	0.70	0.27703	0.01721	0.47	XX
KDH2DE		0.24700	0.02262	0.81	0.26050	0.00068	0.02	XX
KTVAEH		0.23367	0.00929	0.33	0.26733	0.00751	0.21	MJ
N9W7BX		0.23933	0.01495	0.53	0.28467	0.02484	0.68	MR
QUPAV3	*	0.14600	-0.07838	-2.80	0.15233	-0.10749	-2.94	MU
TDCCQU		0.24850	0.02412	0.86	0.26757	0.00774	0.21	AZ
U2EVEX		0.20537	-0.01901	-0.68	0.23567	-0.02416	-0.66	XX
XGWXXMX		0.26667	0.04229	1.51	0.32000	0.06018	1.64	MU
XJZT4F		0.25667	0.03229	1.15	0.31267	0.05284	1.44	SB
XVUATF		0.25100	0.02662	0.95	0.30400	0.04418	1.21	MU
XXNVPT		0.25375	0.02937	1.05	0.30425	0.04443	1.21	ML



Plastics Interlaboratory Testing Program

Analysis 755

Moisture Content of Plastics

Report #96
4th Qtr 2015

Summary Statistics

Grand Means

0.224382 Percent

0.259822 Percent

Std Dev Btwn Labs

0.028004 Percent

0.036619 Percent

Statistics based on 34 of 35 reporting participants

Sample Y31: ABS & Sample Y32: ABS

Comments on Assigned Data Flags for Test #755

ABUMH2 (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

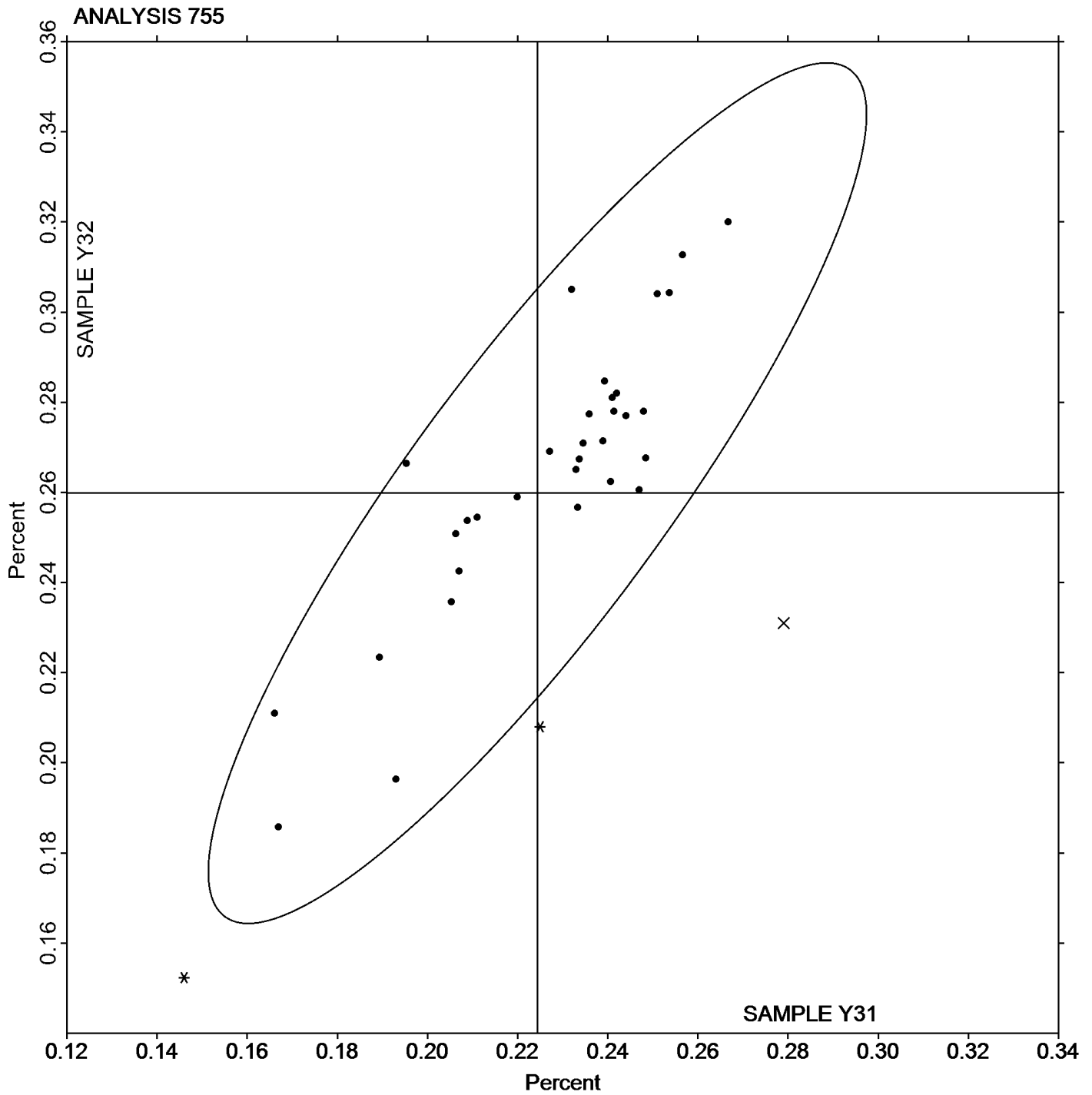
Analysis 755

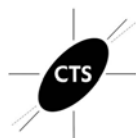
Moisture Content of Plastics

Report #96

4th Qtr 2015

Grand Mean Sample Y31: 0.22438 Percent Grand Mean Sample Y32: 0.25982 Percent





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 760

DSC Crystallization Temperature

WebCode	Data Flag	Sample W31			Sample W32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2G8YXP		105.16667	-1.60667	-0.71	105.13333	-1.58045	-0.71	PE
4ERHE8		109.73333	2.96000	1.31	109.80000	3.08621	1.38	TA
4RXC7K		107.43333	0.66000	0.29	107.63333	0.91955	0.41	TA
9BE6ZP		109.53000	2.75667	1.22	108.61333	1.89955	0.85	TA
9V2TBG		106.98667	0.21333	0.09	107.02000	0.30621	0.14	PE
BAFQE9		106.72333	-0.05000	-0.02	106.19000	-0.52379	-0.23	TA
BDUHEA		110.12000	3.34667	1.48	110.08667	3.37288	1.51	TA
ER3BXW		108.50667	1.73333	0.76	108.32000	1.60621	0.72	MT
FX8HZ7		106.36667	-0.40667	-0.18	106.56667	-0.14712	-0.07	TA
GJLPP6		105.27333	-1.50000	-0.66	105.47333	-1.24045	-0.56	TA
GJY498		105.53333	-1.24000	-0.55	105.41000	-1.30379	-0.58	TA
HWMPR9		104.13333	-2.64000	-1.16	104.43333	-2.28045	-1.02	TA
JFD3Z6		107.80000	1.02667	0.45	107.46667	0.75288	0.34	TA
KTVAEH		106.80333	0.03000	0.01	105.51333	-1.20045	-0.54	MT
MH6987		103.34000	-3.43333	-1.51	104.15000	-2.56379	-1.15	TA
MT62GJ		110.45000	3.67667	1.62	110.47667	3.76288	1.69	TA
PK2X4W		108.26667	1.49333	0.66	108.56667	1.85288	0.83	TA
Q26RBV		106.15333	-0.62000	-0.27	106.44000	-0.27379	-0.12	TA
VHJDBN		108.73333	1.96000	0.86	108.43333	1.71955	0.77	TA
X7XBGL		105.36667	-1.40667	-0.62	105.36667	-1.34712	-0.60	PE
XHTB7J	*	101.80000	-4.97333	-2.19	100.94333	-5.77045	-2.58	PE
XJZT4F		104.79333	-1.98000	-0.87	105.66667	-1.04712	-0.47	PE
XVUATF	X	90.82333	15.95000	-7.03	103.98667	-2.72712	-1.22	MT

Summary Statistics

Grand Means

106.773333 Degrees Celsius

106.713788 Degrees Celsius

Std Dev Btwn Labs

2.267816 Degrees Celsius

2.232615 Degrees Celsius

Statistics based on 22 of 23 reporting participants

Sample W31: PP & Sample W32: PP

Comments on Assigned Data Flags for Test #760

XVUATF (X) - Inconsistent in testing between samples, data for Sample W31 are low.



Plastics Interlaboratory Testing Program

Analysis 760

DSC Crystallization Temperature

Report #96
4th Qtr 2015

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

PE Perkins Elmer Instruments

TA TA Instruments



Plastics Interlaboratory Testing Program

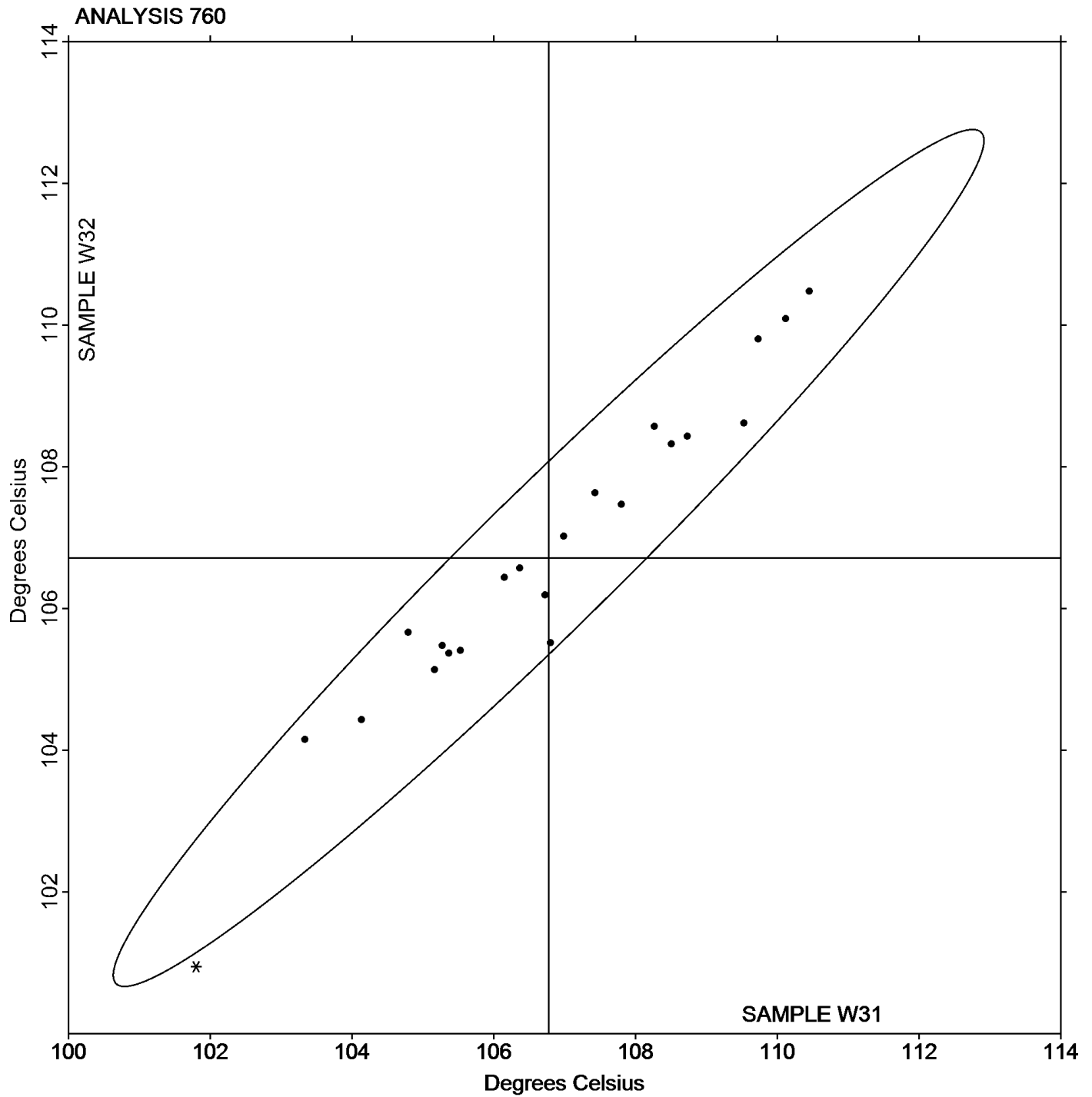
Analysis 760

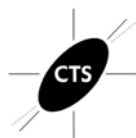
DSC Crystallization Temperature

Report #96

4th Qtr 2015

Grand Mean Sample W31: 106.77 Degrees Celsius Grand Mean Sample W32: 106.71 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 761 DSC Melt Temperature

WebCode	Data Flag	Sample W31			Sample W32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2G8YXP		167.66667	3.54987	1.49	167.66667	3.30813	1.44	PE
4ERHE8		163.90000	-0.21680	-0.09	165.16667	0.80813	0.35	TA
4RXC7K		165.86667	1.74987	0.73	164.60000	0.24147	0.11	TA
6VTH4M		164.53333	0.41653	0.17	165.20000	0.84147	0.37	TA
6XKLTN		160.59000	-3.52680	-1.48	161.42333	-2.93520	-1.28	MT
9BE6ZP	X	151.56000	12.55680	-5.26	152.18333	-12.17520	-5.31	TA
9V2TBG		164.27333	0.15653	0.07	164.46333	0.10480	0.05	PE
BAFQE9		164.25000	0.13320	0.06	164.75667	0.39813	0.17	TA
BDUHEA		163.50333	-0.61347	-0.26	162.95667	-1.40187	-0.61	TA
ER3BXW		166.38333	2.26653	0.95	166.72000	2.36147	1.03	MT
EXMNDB		163.83333	-0.28347	-0.12	163.93333	-0.42520	-0.19	XX
FX8HZ7		163.96667	-0.15013	-0.06	163.06667	-1.29187	-0.56	TA
GJLPP6		166.34333	2.22653	0.93	166.80333	2.44480	1.07	XX
GJY498	*	157.38000	-6.73680	-2.82	157.33667	-7.02187	-3.06	TA
HWMPR9		167.70000	3.58320	1.50	167.70000	3.34147	1.46	TA
JFD3Z6		163.30000	-0.81680	-0.34	163.90000	-0.45853	-0.20	TA
KTVAEH		164.72667	0.60987	0.26	166.02667	1.66813	0.73	XX
MH6987		166.12333	2.00653	0.84	165.96667	1.60813	0.70	TA
MT62GJ		164.33667	0.21987	0.09	165.58333	1.22480	0.53	TA
PK2X4W		161.08000	-3.03680	-1.27	161.68667	-2.67187	-1.17	TA
Q26RBV		164.45667	0.33987	0.14	164.52000	0.16147	0.07	XX
VHJDBN		163.43333	-0.68347	-0.29	163.90000	-0.45853	-0.20	TA
X7XBGL		164.80000	0.68320	0.29	164.36667	0.00813	0.00	PE
XHTB7J		161.82333	-2.29347	-0.96	163.94667	-0.41187	-0.18	PE
XJZT4F		161.23667	-2.88013	-1.21	161.03667	-3.32187	-1.45	PE
XVUATF		167.41333	3.29653	1.38	166.23667	1.87813	0.82	MT

Summary Statistics

Grand Means

164.116800 Degrees Celsius

164.358533 Degrees Celsius

Stnd Dev Btwn Labs

2.388948 Degrees Celsius

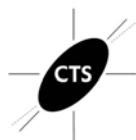
2.292877 Degrees Celsius

Statistics based on 25 of 26 reporting participants

Sample W31: PP & Sample W32: PP

Comments on Assigned Data Flags for Test #761

9BE6ZP (X) - Data for both samples are low.



Plastics Interlaboratory Testing Program

Analysis 761

DSC Melt Temperature

Report #96
4th Qtr 2015

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

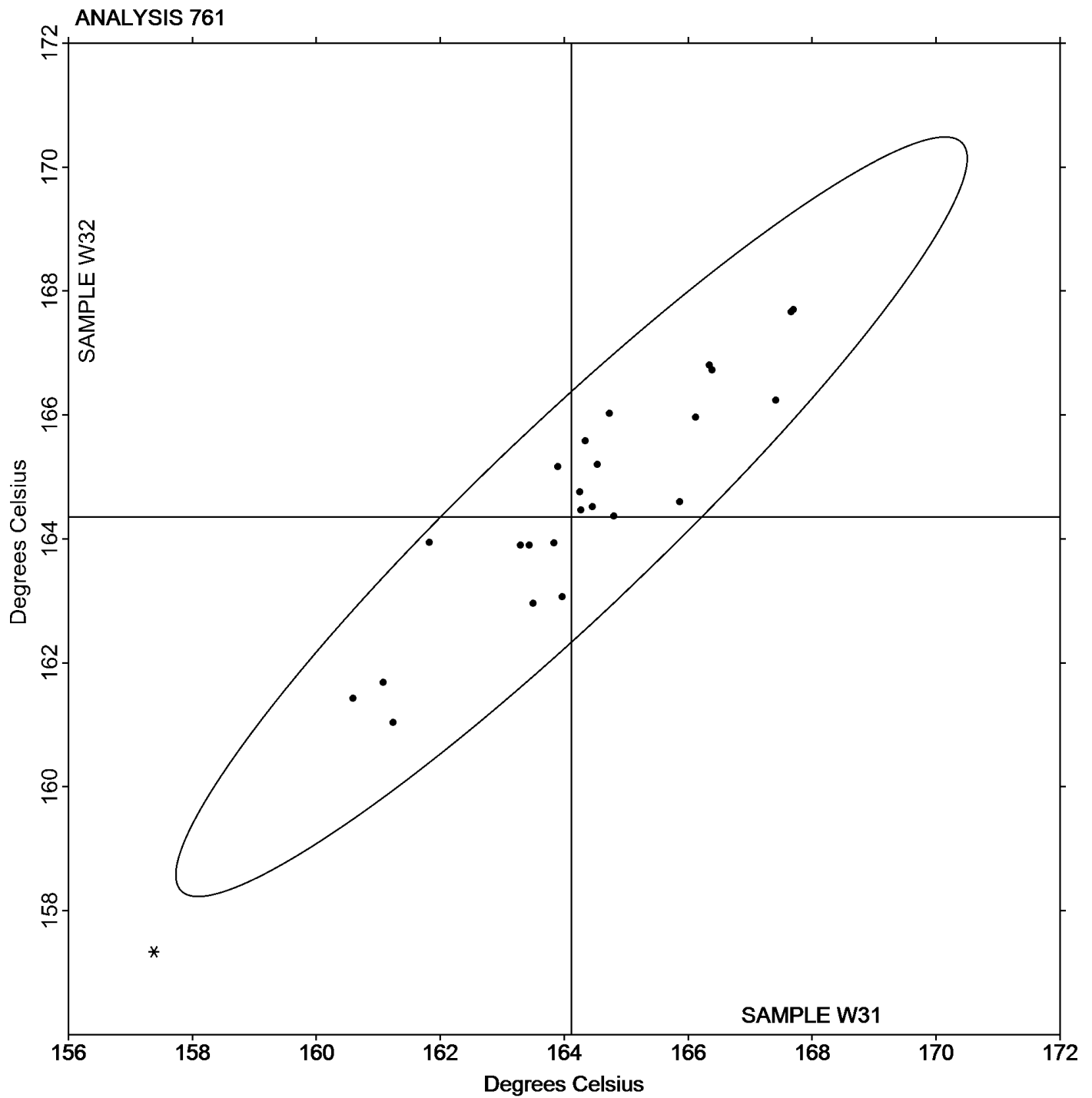


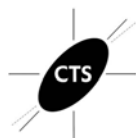
Plastics Interlaboratory Testing Program

Analysis 761 DSC Melt Temperature

Report #96
4th Qtr 2015

Grand Mean Sample W31: 164.12 Degrees Celsius Grand Mean Sample W32: 164.36 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #96
4th Qtr 2015

Analysis 762

DSC Enthalpy of Crystallization

WebCode	Data Flag	Sample W31			Sample W32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2G8YXP		100.13000	3.26820	0.59	96.04000	-0.81159	-0.19	PE
4ERHE8		107.83000	10.96820	1.97	105.59333	8.74174	2.03	TA
4RXC7K		92.91333	-3.94846	-0.71	96.28667	-0.56493	-0.13	TA
9BE6ZP		107.06667	10.20487	1.83	103.86667	7.01507	1.63	TA
BDUHEA		93.97667	-2.88513	-0.52	93.53333	-3.31826	-0.77	TA
ER3BXW		96.47667	-0.38513	-0.07	97.45333	0.60174	0.14	MT
FX8HZ7		96.28333	-0.57846	-0.10	98.14333	1.29174	0.30	TA
HWMPR9		84.67000	12.19180	-2.19	89.20667	-7.64493	-1.77	TA
JFD3Z6		95.86333	-0.99846	-0.18	95.96333	-0.88826	-0.21	TA
MH6987		96.01000	-0.85180	-0.15	96.39000	-0.46159	-0.11	TA
MT62GJ		102.90000	6.03820	1.09	103.40000	6.54841	1.52	TA
PK2X4W		95.55333	-1.30846	-0.24	95.99333	-0.85826	-0.20	TA
VHJDBN		95.58667	-1.27513	-0.23	94.97000	-1.88159	-0.44	TA
X7XBGL		95.53667	-1.32513	-0.24	95.35333	-1.49826	-0.35	PE
XHTB7J		95.40000	-1.46180	-0.26	96.10000	-0.75159	-0.17	PE
XJZT4F		93.59210	-3.26970	-0.59	91.33217	-5.51943	-1.28	PE

Summary Statistics

Grand Means

96.861798 Joules Per Gram

96.851594 Joules Per Gram

Std Dev Btwn Labs

5.563352 Joules Per Gram

4.316851 Joules Per Gram

Statistics based on 16 of 16 reporting participants

Sample W31: PP & Sample W32: PP

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

PE Perkins Elmer Instruments

TA TA Instruments



Plastics Interlaboratory Testing Program

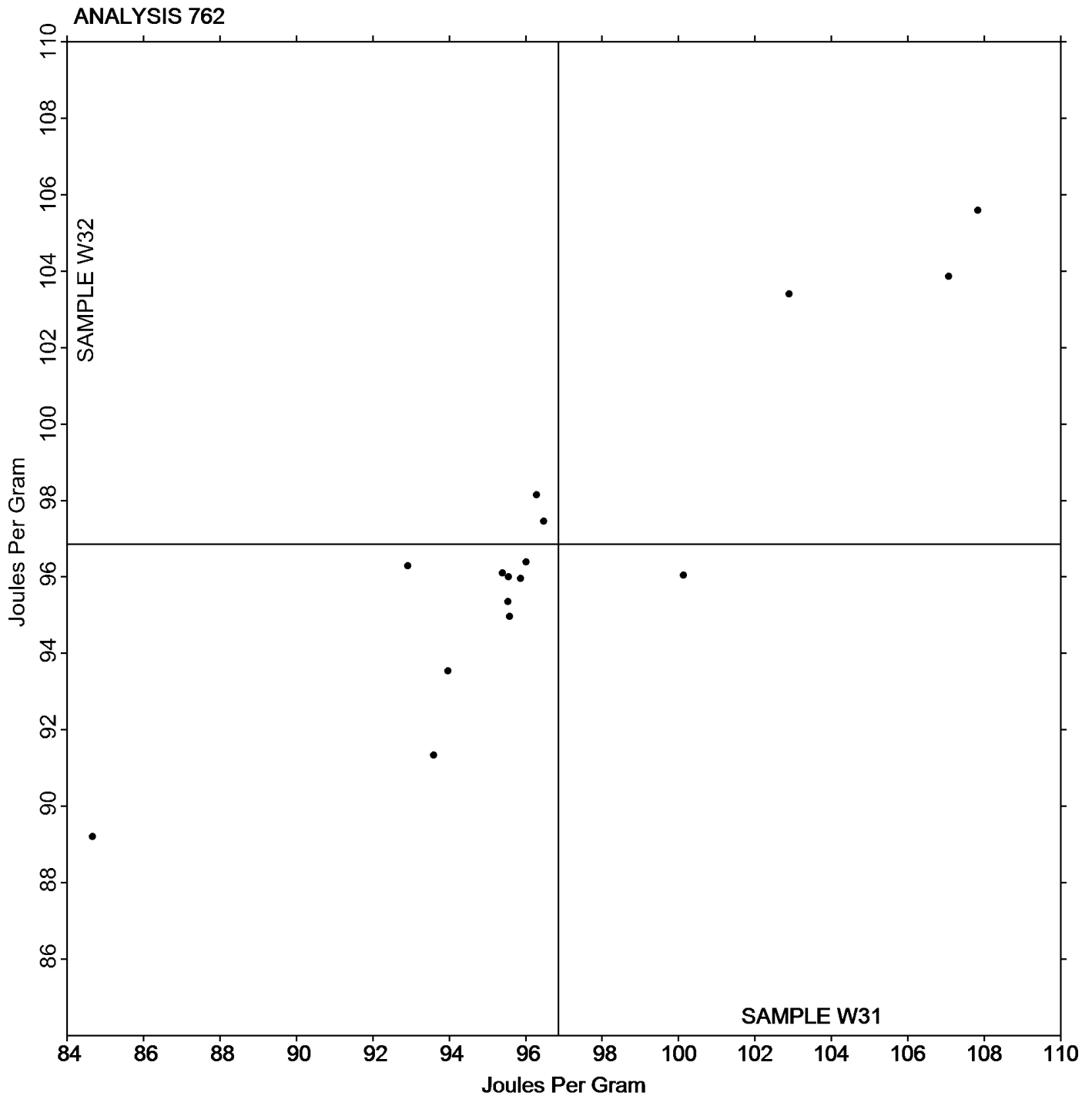
Analysis 762

DSC Enthalpy of Crystallization

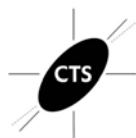
Report #96

4th Qtr 2015

Grand Mean Sample W31: 96.862 Joules Per Gram Grand Mean Sample W32: 96.852 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

Analysis 763

DSC Enthalpy of Fusion

Report #96
4th Qtr 2015

WebCode	Data Flag	Sample W31			Sample W32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2G8YXP		89.41333	-5.42027	-0.45	82.18667	-12.18018	-1.04	PE
4ERHE8		122.08667	27.25306	2.28	122.73000	28.36316	2.41	TA
4RXC7K		91.02667	-3.80694	-0.32	94.10000	-0.26684	-0.02	TA
9BE6ZP		100.07000	5.23640	0.44	96.45667	2.08982	0.18	TA
BDUHEA		86.23000	-8.60360	-0.72	86.66333	-7.70351	-0.66	TA
ER3BXW		96.48333	1.64973	0.14	97.45000	3.08316	0.26	MT
FX8HZ7		92.50333	-2.33027	-0.19	95.88000	1.51316	0.13	TA
HWMPR9		71.98000	22.85360	-1.91	76.76333	-17.60351	-1.50	TA
JFD3Z6		100.09333	5.25973	0.44	97.24333	2.87649	0.24	TA
MH6987		109.66667	14.83306	1.24	109.93333	15.56649	1.33	TA
MT62GJ		109.16667	14.33306	1.20	108.40000	14.03316	1.19	TA
PK2X4W		89.76000	-5.07360	-0.42	93.40000	-0.96684	-0.08	TA
VHJDBN		85.67000	-9.16360	-0.77	85.75667	-8.61017	-0.73	TA
X7XBGL		92.88667	-1.94694	-0.16	92.96667	-1.40018	-0.12	PE
XHTB7J		98.00000	3.16640	0.26	88.83333	-5.53351	-0.47	PE
XJZT4F		82.30100	12.53260	-1.05	81.10613	-13.26071	-1.13	PE

Summary Statistics

Grand Means

94.833604 Joules Per Gram

94.366842 Joules Per Gram

Std Dev Btwn Labs

11.978312 Joules Per Gram

11.745362 Joules Per Gram

Statistics based on 16 of 16 reporting participants

Sample W31: PP & Sample W32: PP

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

PE Perkins Elmer Instruments

TA TA Instruments

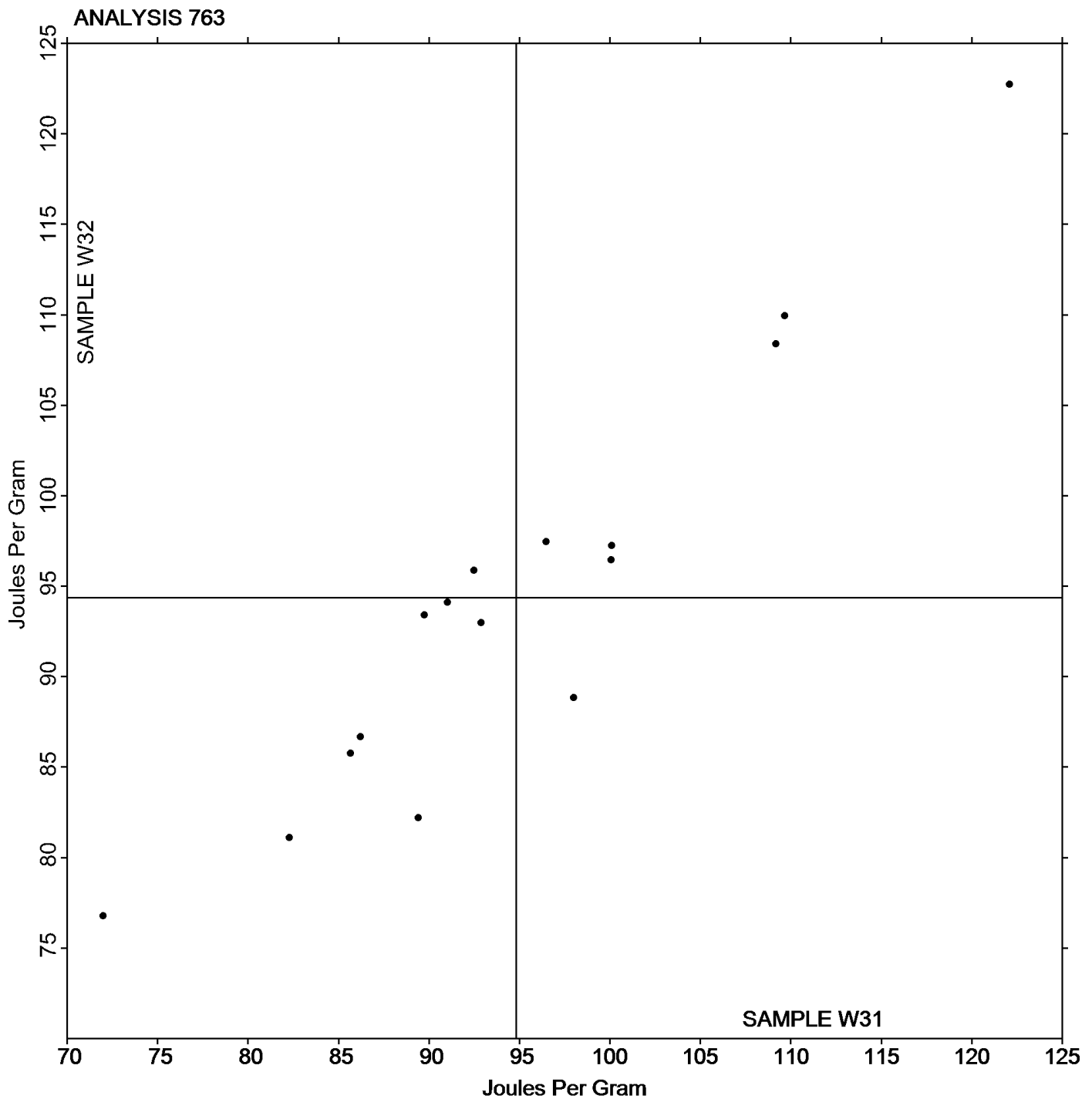


Plastics Interlaboratory Testing Program

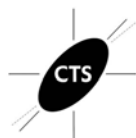
Analysis 763 DSC Enthalpy of Fusion

Report #96
4th Qtr 2015

Grand Mean Sample W31: 94.834 Joules Per Gram Grand Mean Sample W32: 94.367 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

Analysis 764

Report #96
4th Qtr 2015

DSC Glass Transition Temperature

WebCode	Data Flag	Sample V31			Sample V32			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2G8YXP		88.33333	2.09353	0.95	89.53333	3.22647	1.39	PE
4ERHE8		85.56667	-0.67314	-0.31	85.33333	-0.97353	-0.42	TA
4RXC7K		86.50000	0.26020	0.12	86.60000	0.29314	0.13	TA
6VTH4M		85.43333	-0.80647	-0.37	87.66667	1.35980	0.58	TA
9BE6ZP		88.45667	2.21686	1.01	87.71667	1.40980	0.61	TA
ER3BXW		83.61333	-2.62647	-1.19	83.00000	-3.30686	-1.42	MT
FX8HZ7		82.96667	-3.27314	-1.49	83.40000	-2.90686	-1.25	TA
GJY498		86.26333	0.02353	0.01	86.64333	0.33647	0.14	TA
HWMPR9		88.40000	2.16020	0.98	87.66667	1.35980	0.58	TA
JFD3Z6		81.06667	-5.17314	-2.35	80.90000	-5.40686	-2.32	TA
MH6987		88.06000	1.82020	0.83	87.72000	1.41314	0.61	TA
MT62GJ		86.78000	0.54020	0.25	87.12000	0.81314	0.35	TA
PK2X4W		85.50000	-0.73980	-0.34	86.26667	-0.04020	-0.02	TA
VHJDBN		86.73333	0.49353	0.22	85.26667	-1.04020	-0.45	TA
X7XBGL		87.63333	1.39353	0.63	88.60000	2.29314	0.99	PE
XHTB7J		85.23333	-1.00647	-0.46	84.54000	-1.76686	-0.76	PE
XVUATF		89.53667	3.29686	1.50	89.24333	2.93647	1.26	MT

Summary Statistics

Grand Means

86.239804 Degrees Celsius

86.306863 Degrees Celsius

Std Dev Btwn Labs

2.204097 Degrees Celsius

2.326572 Degrees Celsius

Statistics based on 17 of 17 reporting participants

Sample V31: PET & Sample V32: PET

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

PE Perkins Elmer Instruments

TA TA Instruments



Plastics Interlaboratory Testing Program

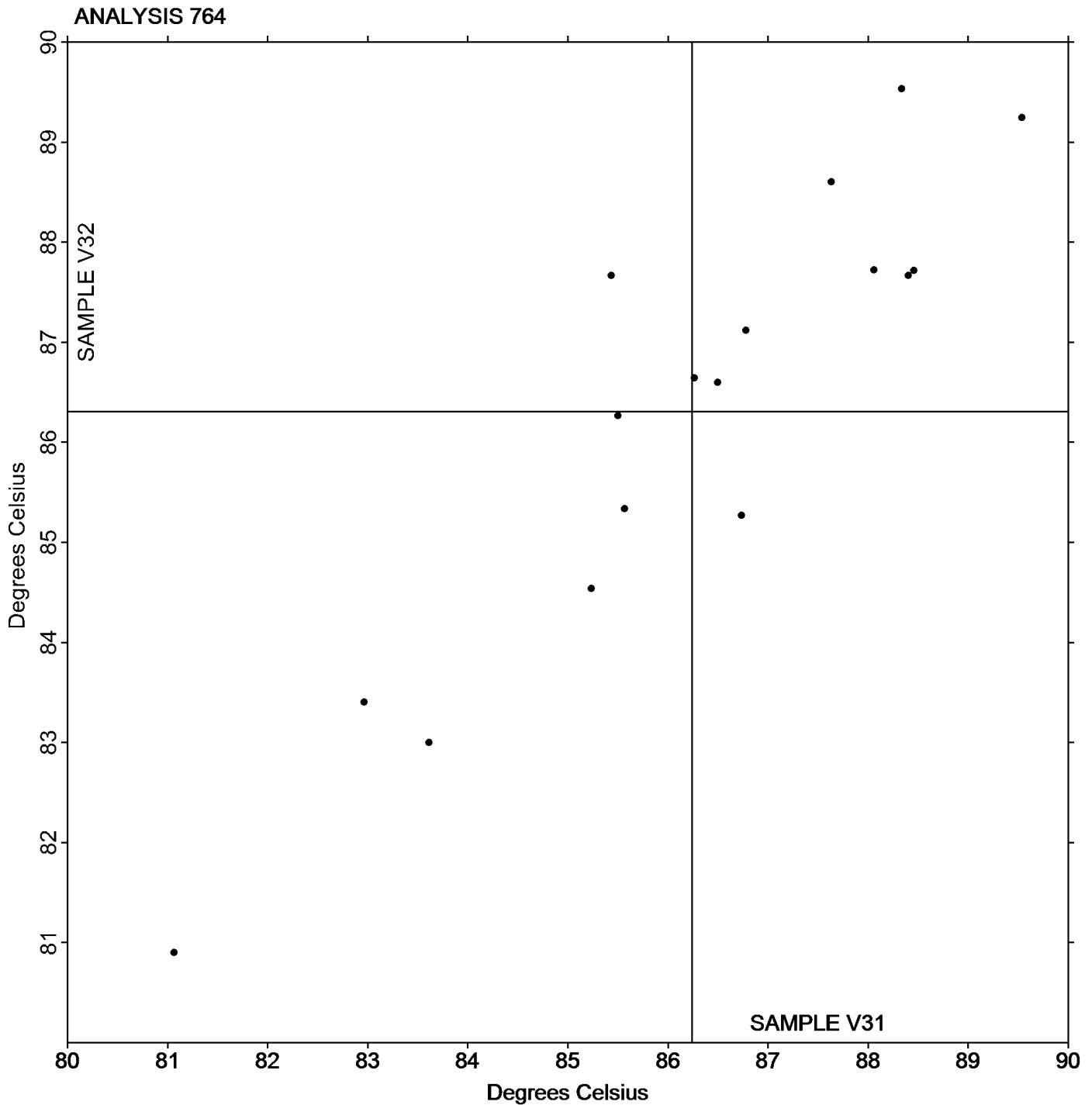
Analysis 764

DSC Glass Transition Temperature

Report #96

4th Qtr 2015

Grand Mean Sample V31: 86.240 Degrees Celsius Grand Mean Sample V32: 86.307 Degrees Celsius



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