



Plastics Interlaboratory Testing Program

Web Summary Report #128, 4th Qtr 2023

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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, agriculture, hemp, 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 100 countries currently participate in CTS programs.

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

The program allows laboratories to compare periodically the level and uniformity of their testing with that of other participating laboratories. It also provides a realistic assessment of the state of plastics testing proficiency.

For each test there is a summary of the statistics for the analysis and a graphical representation of the data. Also shown are notes concerning specific laboratory results, as well as significant findings related to instrument types or other testing variations. Refer to the KEY FOR SUMMARY REPORT for an explanation of terms and guidelines for interpreting the results.

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Key for Web Summary Report (Page 1 of 2)

WebCode	Assigned laboratory identification number (temporary) used to ensure lab confidentiality while permitting a lab to locate its data in the Plastics Web Summary Report published on the CTS web site. The WebCode for each analysis can be found in the Performance Analysis Report mailed to each participant.
Lab Mean	The average of the test results obtained by the participant.
Grand Mean	The average of the LAB MEANS for all included participants. Laboratories flagged with an X or an M (see DATA FLAG column) are excluded from the GRAND MEAN.
Difference from Grand Mean	The difference of the LAB MEAN from the GRAND MEAN.
Between-Lab Standard Deviation	An indication of the precision of measurement between the laboratories. The greater the spread of the LAB MEANS about the GRAND MEAN, the larger the BETWEEN-LAB STANDARD DEVIATION (and vice versa).
Comparative Performance Value	An indication of how well a laboratory's results agree with the other participants. The CPV is a ratio indicating the number of standard deviations from the GRAND MEAN. The closer a laboratory's COMPARATIVE PERFORMANCE VALUE is to zero, the more consistent its results are with the other participants' data (and vice versa). The critical value for each CPV will vary depending on the number of labs participating in a test.
Inst Code	A code indicating the manufacturer of the instrument used to perform the test (see separate INSTRUMENT CODE LIST for each test section) if instruments are tracked.
Data Flag	DATA FLAGS are assigned based on the simultaneous analysis of both samples tested. Refer to the following chart for an explanation of each symbol:

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

Graph - For each laboratory, the LAB MEAN for the first sample (x-axis) is plotted against the LAB MEAN for the second sample (y-axis) with each point representing a laboratory. The horizontal and vertical cross-hairs are the GRAND MEANS for each sample. When 20 or more laboratories are in the statistics, an ellipse is also drawn so that 95% of the time a randomly selected laboratory will be included inside the ellipse. Plotted data flags are explained above.

Common Problems Highlighted in Footnotes

1. **Extreme data** - The laboratory's results for one or both samples are so inconsistent with those of the other participants that the lab mean(s) fall outside the plot. The participant is advised to immediately review his data and/or testing procedure.
2. **Systematic bias** - The laboratory's results are either consistently high or low for both samples when compared to the other participants (the plotted point falls near the top or bottom of the ellipse). This indicates that the participant is performing the test with a constant bias. Causes of systematic errors include improper calibration, the particular make/model of equipment or a modification to the testing procedure.
3. **Inconsistency in testing between samples/sample sets** - The laboratory's results indicate that there are differences in the way the two samples tested (the plotted point falls to the side of the ellipse). This type of error may be attributed to the analyst deviating from the procedure when testing one of the samples or a material interaction occurrence with the instrument or room conditions. The inconsistency is reflected in the CPVs for the two samples, such as a +1.5 CPV for sample A and a -2.2 CPV for sample B. CTS also will specify if the laboratory's data for one sample are high/low compared to the other participants. If this inconsistency is slight, the lab's plotted point will be an * that falls on the edge of the ellipse.
4. **Inconsistency in testing within a sample** - The laboratory's within-lab standard deviation for a specified sample is high when compared to the other participants, often causing the lab's plotted point to fall outside of the ellipse.

Labs flagged with an * are not typically included in the footnotes of a data table. These labs may locate their position in the control ellipse and use the definitions above to help identify the type of testing error. An * should serve as a caution flag, a "yellow light", to a lab. If this error is repeated in future rounds, a lab may need to stop and review its testing procedures. The initial data flag is not cause for alarm. Interlaboratory tests conducted at regular intervals permit a lab to recognize trends in testing.



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Results Summary for Report #128, 4th Qtr 2023

Analysis 704 - Tensile Stress at Yield

Material: ABS/PC	Sample F95	7,156.18	psi	1.71% COV
	Sample F96	7,150.09	psi	1.62% COV

Analysis 705 - Tensile Stress at Break

Material: ABS/PC	Sample F95	6,561.57	psi	4.72% COV
	Sample F96	6,555.61	psi	4.60% COV

Analysis 706 - Percent Elongation at Yield

Material: ABS/PC	Sample F95	4.6226	Percent	3.27% COV
	Sample F96	4.6324	Percent	2.63% COV

Analysis 708 - Modulus of Elasticity

Material: ABS/PC	Sample F95	322.01	ksi	3.79% COV
	Sample F96	321.39	ksi	3.95% COV

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

Material: ABS	Sample E95	81.948	Degrees C	1.34% COV
	Sample E96	82.103	Degrees C	1.21% COV

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

Material: PP	Sample G95	109.76	Degrees C	2.33% COV
	Sample G96	110.25	Degrees C	2.17% COV

Analysis 712 - Temperature of Deflection (1.80 MPa)

Material: HIPS	Sample N95	76.929	Degrees C	0.915% COV
	Sample N96	76.887	Degrees C	0.863% COV

Analysis 715 - Vicat Temperature (Rate A)

Material: ABS	Sample H95	103.26	Degrees C	0.691% COV
	Sample H96	103.28	Degrees C	0.662% COV

Analysis 716 - Vicat Temperature (Rate B)

Material: ABS	Sample R95	105.03	Degrees C	0.702% COV
	Sample R96	105.02	Degrees C	0.736% COV

Analysis 718 - Specific Gravity

Material: ABS	Sample T95	1.0419	sp gr 23/23 C	0.223% COV
	Sample T96	1.0420	sp gr 23/23 C	0.206% COV

Analysis 720 - Flexural Modulus

Material: ABS	Sample J95	347.53	ksi	5.90% COV
	Sample J96	348.41	ksi	6.06% COV

Analysis 721 - Flexural Stress at 5% Strain

Material: ABS	Sample J95	9,900.43	psi	5.50% COV
	Sample J96	9,937.73	psi	5.54% COV

Analysis 722 - Flexural Stress at Yield

Material: ABS	Sample J95	9,914.02	psi	5.35% COV
	Sample J96	9,941.35	psi	5.32% COV

Analysis 730 - Tensile Stress at Yield, ISO Method

Material: ABS/PC	Sample C95	49.790	MPa	1.23% COV
	Sample C96	49.786	MPa	1.26% COV

Analysis 731 - Tensile Stress at Break, ISO Method

Material: ABS/PC	Sample C95	47.007	MPa	5.78% COV
	Sample C96	46.932	MPa	5.80% COV



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Analysis 732 - Strain at Yield, ISO Method

Material: ABS/PC	Sample C95	4.1924	Percent	2.98% COV
	Sample C96	4.1764	Percent	2.82% COV

Analysis 734 - Modulus of Elasticity, ISO Method

Material: ABS/PC	Sample C95	2,300.25	MPa	4.23% COV
	Sample C96	2,297.86	MPa	4.51% COV

Analysis 736 - Flexural Modulus

Material: ABS/PC	Sample K95	2,319.11	MPa	4.39% COV
	Sample K96	2,314.73	MPa	3.99% COV

Analysis 737 - Flexural Stress at 3.5% Strain

Material: ABS/PC	Sample K95	71.079	MPa	2.72% COV
	Sample K96	70.879	MPa	2.42% COV

Analysis 738 - Flexural Stress at Yield

Material: ABS/PC	Sample K95	79.840	MPa	2.70% COV
	Sample K96	79.695	MPa	2.44% COV

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

Material: PP	Sample X95	12.146	grams/10 mins	6.08% COV
	Sample X96	12.711	grams/10 mins	5.70% COV

Analysis 755 - Moisture Content

Material: ABS/PC	Sample Y95	0.10119	Percent	19.1% COV
	Sample Y96	0.10482	Percent	16.4% COV

Analysis 757 - Ash Content

Material: PBT	Sample L95	29.697	Percent	0.166% COV
	Sample L96	29.702	Percent	0.204% COV

Analysis 758 - TGA

Material: PP	Sample A95	79.257	Percent	0.943% COV
	Sample A96	79.092	Percent	1.37% COV

Analysis 760 - DSC Crystallization Temperature

Material: PBT	Sample W95	173.88	Degrees Celsius	3.17% COV
	Sample W96	173.92	Degrees Celsius	3.12% COV

Analysis 761 - DSC Melt Temperature

Material: PBT	Sample W95	223.24	Degrees Celsius	0.529% COV
	Sample W96	223.21	Degrees Celsius	0.536% COV

Analysis 762 - DSC Enthalpy of Crystallization

Material: PBT	Sample W95	47.923	Joules Per Gram	9.11% COV
	Sample W96	47.740	Joules Per Gram	8.02% COV

Analysis 763 - DSC Enthalpy of Fusion

Material: PBT	Sample W95	41.290	Joules Per Gram	10.6% COV
	Sample W96	41.030	Joules Per Gram	10.6% COV

Analysis 764 - DSC Glass Transition Temperature

Material: PET	Sample V95	81.804	Degrees Celsius	1.73% COV
	Sample V96	81.814	Degrees Celsius	1.67% COV

Analysis 765 - Research Crystallization Peak Temperature

Material: PBT	Sample W95	175.56	Degrees Celsius	3.59% COV
	Sample W96	175.40	Degrees Celsius	3.52% COV



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Analysis 766 - Research Melting Peak Temperature

Material: PBT	Sample W95	223.26	Degrees Celsius	0.797% COV
	Sample W96	223.35	Degrees Celsius	0.870% COV

Analysis 767 - Research Heat of Crystallization

Material: PBT	Sample W95	48.067	Joules Per Gram	8.11% COV
	Sample W96	47.847	Joules Per Gram	7.85% COV

Analysis 768 - Research Heat of Fusion

Material: PBT	Sample W95	43.850	Joules Per Gram	14.3% COV
	Sample W96	43.525	Joules Per Gram	14.3% COV

Analysis 769 - Research Glass Transition Temperature

Material: PET	Sample V95	79.506	Degrees Celsius	5.02% COV
	Sample V96	79.484	Degrees Celsius	5.18% COV

Analysis 770 - Tensile Stress at Yield, Films

Material: LDPE	Sample B95	1,685.86	psi	9.37% COV
	Sample B96	1,680.27	psi	8.07% COV

Analysis 771 - Tensile Stress at Break, Films

Material: LDPE	Sample B95	3,413.37	psi	12.7% COV
	Sample B96	3,178.64	psi	14.4% COV

Analysis 772 - Elongation at Yield, Films

Material: LDPE	Sample B95	37.913	Percent	40.2% COV
	Sample B96	62.058	Percent	43.6% COV

Analysis 773 - Elongation at Break, Films

Material: LDPE	Sample B95	885.00	Percent	15.5% COV
	Sample B96	753.35	Percent	16.4% COV

Analysis 774 - Thickness of Film Specimens

Material: LDPE	Sample B95	2.8798	mils	6.61% COV
	Sample B96	2.7707	mils	4.97% COV

Analysis 775 - Secant Modulus at 1% Strain

Material: LDPE	Sample B95	31,586.49	psi	13.3% COV
	Sample B96	30,356.27	psi	12.3% COV

Analysis 776 - Secant Modulus at 2% Strain

Material: LDPE	Sample B95	28,080.51	psi	10.4% COV
	Sample B96	26,920.75	psi	7.78% COV

Analysis 780 - Static Friction

Material: LDPE	Sample P95	0.15667	COF	21.6% COV
	Sample P96	0.14187	COF	24.8% COV

Analysis 781 - Kinetic Friction

Material: LDPE	Sample P95	0.09890	COF	18.6% COV
	Sample P96	0.09081	COF	24.7% COV

Analysis 782 - Tear Resistance of Film

Material: LDPE	Sample Q95	299.76	grams-force	18.2% COV
	Sample Q96	246.35	grams-force	17.2% COV

Analysis 785 - Percent Haze

Material: LDPE	Sample D95	26.524	Percent	4.69% COV
	Sample D96	19.198	Percent	3.73% COV



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Analysis 786 - Total Transmittance

Material: LDPE	Sample D95	92.768	Percent	1.28% COV
	Sample D96	92.849	Percent	1.26% COV

Analysis 790 - Notched Izod Impact

Material: HIPS	Sample S95	1.8989	ft.lbf/in	7.69% COV
	Sample S96	1.8908	ft.lbf/in	7.78% COV

Analysis 791 - Notched Izod Impact

Material: ABS	Sample Z95	22.485	kJ/m ²	5.16% COV
	Sample Z96	22.518	kJ/m ²	5.60% COV

Analysis 792 - Notched Charpy Impact

Material: ABS	Sample M95	22.649	kJ/m ²	3.97% COV
	Sample M96	22.620	kJ/m ²	3.90% COV



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Analysis 704

4th Qtr 2023

Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F95			Sample F96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UU43U	X	7,391.2	235.0	1.92	7,162.0	11.9	0.10
2ZED2Q	X	5,240.0	-1,916.2	-15.62	5,360.0	-1,790.1	-15.48
4MGUX6		7,206.4	50.2	0.41	7,234.4	84.3	0.73
7Z2BGM		7,220.6	64.4	0.53	7,269.4	119.3	1.03
837C6Q		7,252.0	95.8	0.78	7,245.4	95.3	0.82
83QPVN		7,205.2	49.1	0.40	7,223.2	73.1	0.63
87LJTP		7,166.1	9.9	0.08	7,166.4	16.3	0.14
8MCNWD		7,219.8	63.6	0.52	7,203.2	53.1	0.46
8YLDPM		7,192.4	36.2	0.30	7,099.2	-50.9	-0.44
9PEVQP	X	6,723.4	-432.8	-3.53	6,646.4	-503.7	-4.36
ADGMBJ	*	7,306.8	150.6	1.23	7,189.6	39.5	0.34
AXL96Y		7,050.3	-105.8	-0.86	7,074.8	-75.3	-0.65
B9J48Z		7,251.4	95.2	0.78	7,211.8	61.7	0.53
BCW9EU		7,209.3	53.1	0.43	7,250.5	100.4	0.87
C4JCC9		7,322.4	166.2	1.36	7,295.8	145.7	1.26
C74D7U	*	6,848.0	-308.2	-2.51	6,858.0	-292.1	-2.53
CCDTFJ		6,985.1	-171.1	-1.39	6,988.0	-162.1	-1.40
DJ9WHU		7,243.8	87.7	0.71	7,220.4	70.3	0.61
EJR6WG		7,252.0	95.8	0.78	7,208.4	58.4	0.50
F8Q4UW		7,220.8	64.6	0.53	7,249.8	99.7	0.86
FGFRRK		7,402.6	246.4	2.01	7,380.4	230.3	1.99
GJ2UAD		7,109.8	-46.4	-0.38	7,124.9	-25.2	-0.22
GK99GJ		7,025.2	-131.0	-1.07	7,008.2	-141.9	-1.23
HMVAZC		7,144.0	-12.2	-0.10	7,206.0	55.9	0.48
HT2XML		7,396.0	239.8	1.96	7,400.0	249.9	2.16
HW6EBH		7,081.2	-75.0	-0.61	7,115.6	-34.5	-0.30
JW2ENM		6,987.8	-168.4	-1.37	6,984.1	-166.0	-1.44
JY68FZ		7,297.2	141.0	1.15	7,191.4	41.3	0.36
K7HH9R		7,021.3	-134.8	-1.10	7,015.0	-135.1	-1.17
KNHEHA		6,955.2	-201.0	-1.64	6,983.4	-166.7	-1.44
KYKTP2		7,168.2	12.0	0.10	7,199.4	49.3	0.43
L7FBGJ		7,154.0	-2.2	-0.02	7,179.2	29.1	0.25
LVH8DP	*	7,092.4	-63.8	-0.52	6,973.5	-176.6	-1.53
LVXKTL		7,117.6	-38.5	-0.31	7,107.8	-42.2	-0.37
MVDAGK		7,157.7	1.5	0.01	7,157.1	7.0	0.06



Plastics Interlaboratory Testing Program

Report #128

Analysis 704

4th Qtr 2023

Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F95			Sample F96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MXZTHH		7,143.6	-12.6	-0.10	7,142.4	-7.7	-0.07
N42K6K		7,290.0	133.8	1.09	7,284.0	133.9	1.16
NATUEH		7,228.6	72.4	0.59	7,207.9	57.8	0.50
NBKQ4C		7,132.0	-24.2	-0.20	7,154.0	3.9	0.03
NGNWGU		7,016.0	-140.2	-1.14	6,986.0	-164.1	-1.42
NZ2CZA	X	7,198.8	42.6	0.35	7,518.2	368.1	3.18
P6CLQJ		7,350.6	194.4	1.58	7,359.3	209.2	1.81
PMPF77	*	6,826.0	-330.2	-2.69	6,908.0	-242.1	-2.09
PN4VNE		7,280.7	124.5	1.01	7,263.3	113.2	0.98
PZDDFG		7,114.0	-42.2	-0.34	7,160.8	10.7	0.09
Q2RYPJ		7,175.2	19.0	0.16	7,147.8	-2.3	-0.02
QA2M4H		7,051.4	-104.8	-0.85	7,038.4	-111.7	-0.97
RKF3PG		7,035.4	-120.8	-0.98	7,073.0	-77.1	-0.67
RYGN4Y		7,024.8	-131.4	-1.07	7,023.2	-126.9	-1.10
T6J8QV	*	7,119.7	-36.5	-0.30	7,009.8	-140.3	-1.21
TC3BVC		7,243.4	87.2	0.71	7,173.2	23.1	0.20
TDALU2		7,282.1	125.9	1.03	7,263.6	113.5	0.98
TTM2UC		7,284.8	128.6	1.05	7,244.6	94.5	0.82
TTMBFG		6,972.0	-184.2	-1.50	7,012.0	-138.1	-1.19
UEJ42C		7,142.9	-13.3	-0.11	7,151.4	1.3	0.01
UFBZP6		7,033.2	-123.0	-1.00	7,060.8	-89.3	-0.77
UN8T7C		7,118.5	-37.7	-0.31	7,127.2	-22.9	-0.20
UVAX33		7,190.9	34.8	0.28	7,186.5	36.4	0.31
UZ6P9D		7,123.7	-32.4	-0.26	7,151.6	1.5	0.01
W3FTKZ		7,195.3	39.2	0.32	7,207.3	57.2	0.49
WGH2PA		7,040.4	-115.8	-0.94	6,993.0	-157.1	-1.36
X8BWX6		7,152.7	-3.5	-0.03	7,167.6	17.6	0.15
XHU7NJ		7,193.9	37.8	0.31	7,193.9	43.8	0.38
XMLBGM		7,106.9	-49.3	-0.40	7,077.9	-72.2	-0.62
XVWVHY		7,216.0	59.8	0.49	7,230.0	79.9	0.69
Y7A7JA		7,408.6	252.4	2.06	7,359.6	209.5	1.81
YHNGV7		7,207.4	51.2	0.42	7,178.4	28.3	0.24
YJCX3T	X	6,865.6	-290.6	-2.37	7,137.9	-12.1	-0.10
YL94V7		6,986.0	-170.2	-1.39	6,980.0	-170.1	-1.47
YNR6QT		7,202.1	45.9	0.37	7,225.0	74.9	0.65



Plastics Interlaboratory Testing Program

Report #128

Analysis 704

4th Qtr 2023

Tensile Stress at Yield - psi

Summary Statistics	Sample F95	Sample F96
Grand Means	7,156.18 psi	7,150.09 psi
Stnd Dev Btwn Labs	122.67 psi	115.65 psi
Statistics based on 65 of 70 reporting participants		

Sample F95: ABS/PC & Sample F96: ABS/PC

Comments on Assigned Data Flags for Test #704

- 2UU43U (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- NZ2CZA (X) - Data for sample F96 are high.
- YJCX3T (X) - Inconsistent in testing between samples.
- 2ZED2Q (X) - Data for both samples are low. Inconsistent within the determinations of sample F96.
- 9PEVQP (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

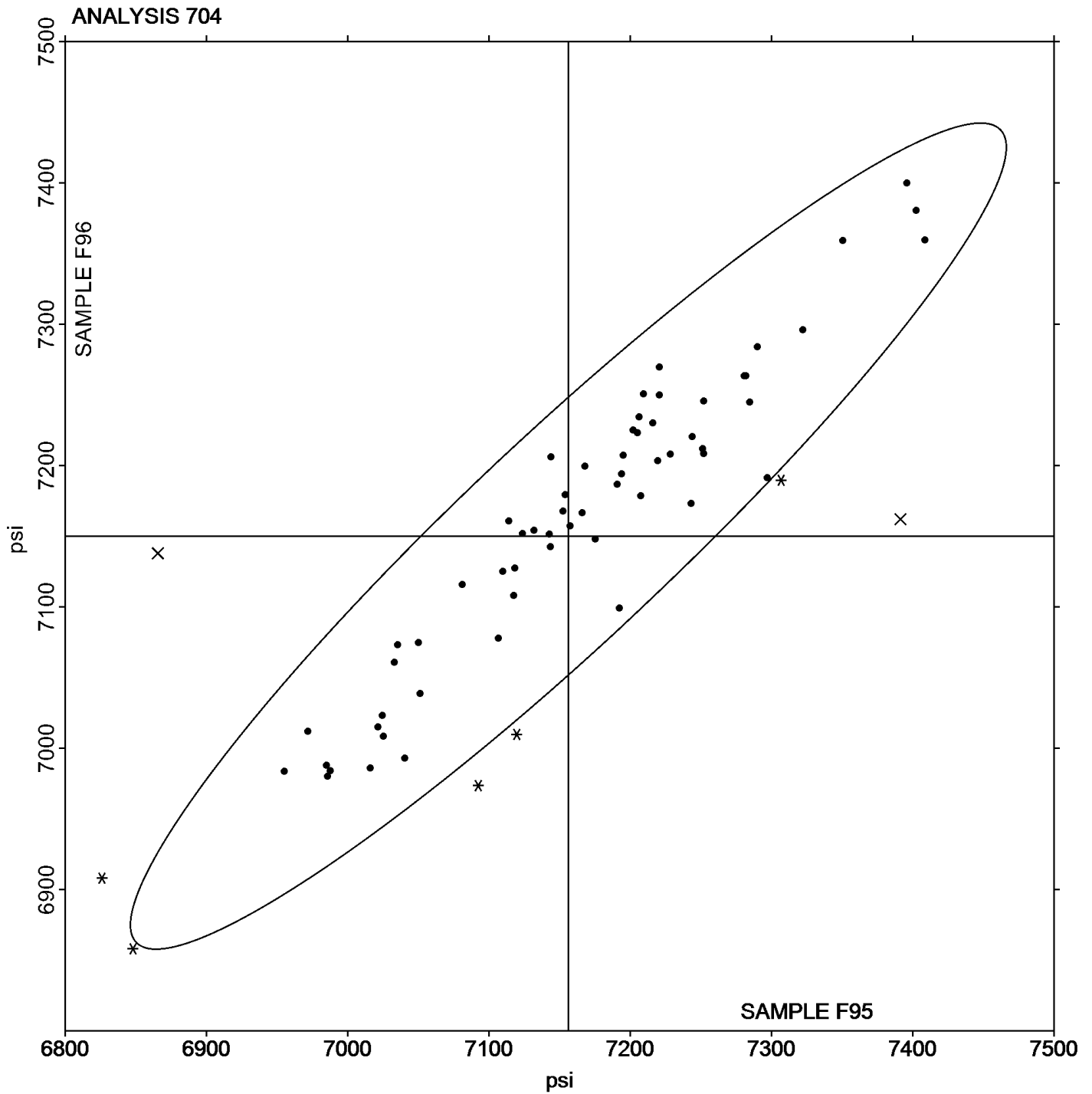
Report #128

Analysis 704

4th Qtr 2023

Tensile Stress at Yield - psi

Grand Mean Sample F95: 7,156.18 psi Grand Mean Sample F96: 7,150.09 psi





Plastics Interlaboratory Testing Program

Report #128

Analysis 705

4th Qtr 2023

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F95			Sample F96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UU43U		7,037.3	475.7	1.54	7,298.4	742.8	2.46
2ZED2Q		6,400.0	-161.6	-0.52	6,720.0	164.4	0.54
4MGUX6		6,437.6	-124.0	-0.40	6,580.8	25.2	0.08
7Z2BGM		6,524.2	-37.4	-0.12	6,533.6	-22.0	-0.07
837C6Q		6,431.4	-130.2	-0.42	6,417.8	-137.8	-0.46
83QPVN		6,601.9	40.3	0.13	7,068.3	512.7	1.70
87LJTP		6,723.6	162.0	0.52	6,972.4	416.8	1.38
8MCNWD		6,786.4	224.8	0.73	6,625.4	69.8	0.23
8YLDPM		6,720.4	158.8	0.51	6,360.6	-195.0	-0.65
9PEVQP		6,289.8	-271.8	-0.88	5,896.6	-659.0	-2.18
ADGMBJ		6,480.0	-81.6	-0.26	6,350.0	-205.6	-0.68
AXL96Y		7,023.7	462.2	1.49	7,037.0	481.4	1.60
B9J48Z		6,371.0	-190.6	-0.62	6,341.6	-214.0	-0.71
BCW9EU		6,373.6	-188.0	-0.61	6,346.0	-209.6	-0.69
C74D7U		5,909.2	-652.4	-2.11	5,893.4	-662.2	-2.19
CCDTFJ		6,445.5	-116.0	-0.37	6,387.5	-168.1	-0.56
DJ9WHU		6,886.9	325.3	1.05	6,386.8	-168.8	-0.56
EJR6WG		6,866.1	304.6	0.98	6,515.2	-40.5	-0.13
GJ2UAD		6,761.4	199.9	0.65	6,294.1	-261.5	-0.87
GK99GJ		6,676.8	115.2	0.37	6,387.6	-168.0	-0.56
HT2XML		6,666.4	104.8	0.34	6,476.6	-79.0	-0.26
HW6EBH		7,151.0	589.4	1.90	6,699.6	144.0	0.48
JW2ENM		6,103.6	-458.0	-1.48	6,146.1	-409.5	-1.36
JY68FZ		6,348.8	-212.8	-0.69	6,589.8	34.2	0.11
K7HH9R		6,135.1	-426.4	-1.38	6,581.9	26.3	0.09
KNHEHA		6,920.9	359.3	1.16	7,134.7	579.1	1.92
KYKTP2		6,312.4	-249.2	-0.81	6,355.8	-199.8	-0.66
L7FBGJ		6,464.8	-96.8	-0.31	6,755.8	200.2	0.66
MVDAGK		6,394.5	-167.1	-0.54	6,317.9	-237.7	-0.79
MXZTHH		6,398.5	-163.1	-0.53	6,791.6	236.0	0.78
N42K6K		6,595.6	34.0	0.11	6,702.8	147.2	0.49
NATUEH		6,191.6	-369.9	-1.20	6,329.0	-226.6	-0.75
NBKQ4C		6,384.0	-177.6	-0.57	6,548.0	-7.6	-0.03
NZ2CZA	*	5,950.8	-610.8	-1.97	6,679.4	123.8	0.41
P6CLQJ		6,898.1	336.5	1.09	6,477.4	-78.2	-0.26



Plastics Interlaboratory Testing Program

Report #128

Analysis 705

4th Qtr 2023

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F95			Sample F96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PMPF77		7,198.0	636.4	2.06	7,240.0	684.4	2.27
PN4VNE		6,851.9	290.4	0.94	6,887.6	332.0	1.10
PZDDFG		6,832.8	271.2	0.88	6,410.0	-145.6	-0.48
Q2RYPJ		6,423.0	-138.6	-0.45	6,474.8	-80.8	-0.27
QA2M4H		6,175.0	-386.6	-1.25	6,305.2	-250.4	-0.83
RKF3PG		6,439.6	-122.0	-0.39	6,943.8	388.2	1.29
RYGN4Y		6,263.6	-298.0	-0.96	6,110.0	-445.6	-1.48
T6J8QV		6,887.4	325.8	1.05	6,939.1	383.5	1.27
TC3BVC		6,524.2	-37.4	-0.12	6,403.6	-152.0	-0.50
TDALU2		7,209.3	647.7	2.09	7,026.8	471.2	1.56
TTM2UC		6,527.0	-34.6	-0.11	6,402.6	-153.0	-0.51
TTMBFG		6,802.0	240.4	0.78	6,704.0	148.4	0.49
UEJ42C		6,575.9	14.4	0.05	6,802.4	246.8	0.82
UFBZP6		6,224.5	-337.0	-1.09	6,244.4	-311.2	-1.03
UN8T7C		6,338.2	-223.4	-0.72	6,323.7	-231.9	-0.77
UVAX33		6,737.8	176.2	0.57	7,000.9	445.3	1.48
UZ6P9D		6,645.1	83.5	0.27	6,479.2	-76.4	-0.25
W3FTKZ	*	7,315.3	753.7	2.44	6,614.4	58.8	0.19
X8BWX6		6,469.8	-91.8	-0.30	6,597.3	41.6	0.14
XHU7NJ		6,526.8	-34.8	-0.11	6,468.7	-86.9	-0.29
XMLBGM		6,816.8	255.3	0.82	6,584.8	29.2	0.10
XVWVHY		6,472.0	-89.6	-0.29	6,430.0	-125.6	-0.42
Y7A7JA		6,624.4	62.8	0.20	6,585.6	30.0	0.10
YHNGV7		6,276.2	-285.4	-0.92	6,103.2	-452.4	-1.50
YJCX3T		6,216.7	-344.9	-1.11	6,512.3	-43.4	-0.14
YNR6QT		6,219.6	-342.0	-1.11	6,298.2	-257.4	-0.85

Summary Statistics		Sample F95	Sample F96
Grand Means		6,561.57 psi	6,555.61 psi
Std Dev Btwn Labs		309.51 psi	301.75 psi
Statistics based on 61 of 61 reporting participants			

Sample F95: ABS/PC & Sample F96: ABS/PC



Plastics Interlaboratory Testing Program

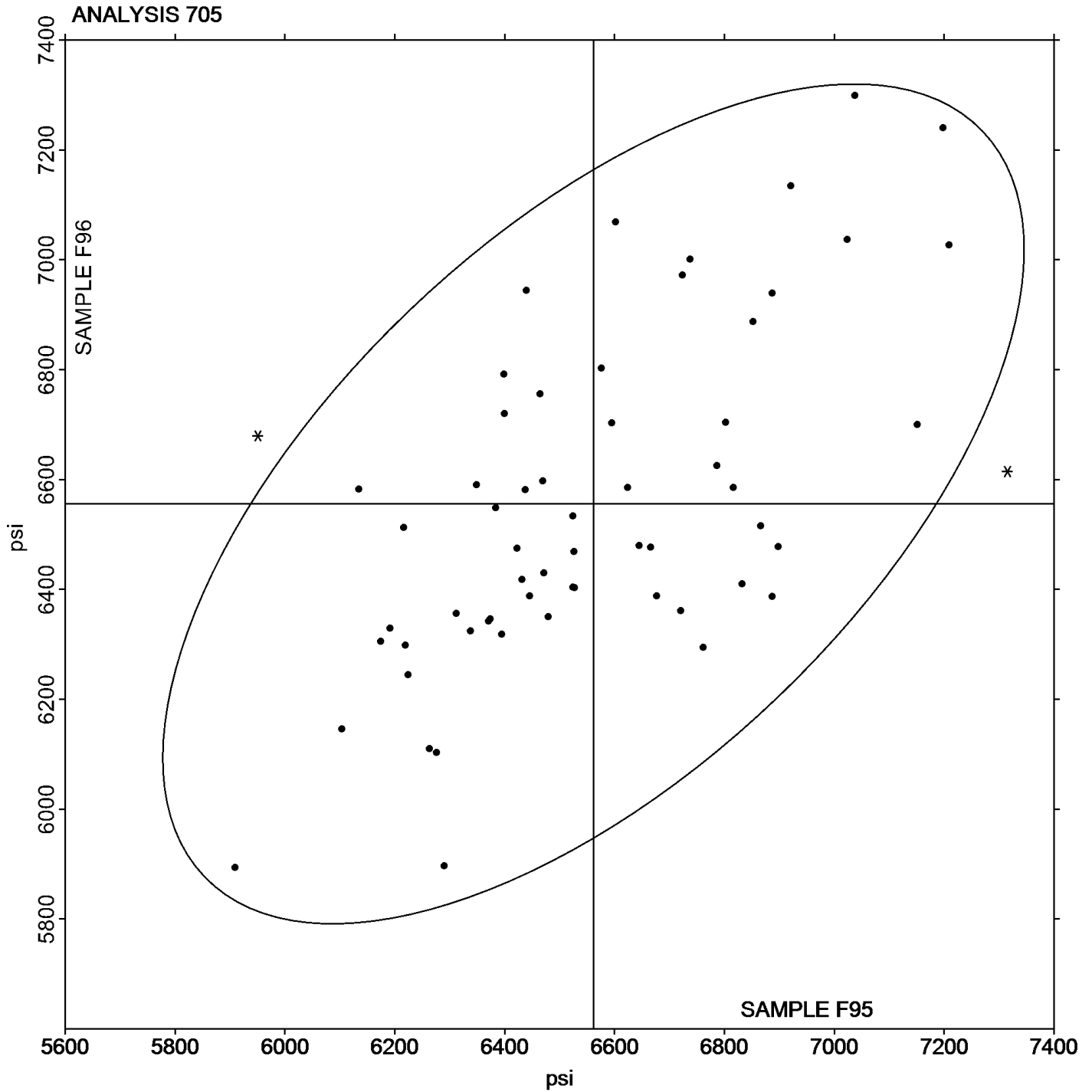
Report #128

Analysis 705

4th Qtr 2023

Tensile Stress at Break - psi

Grand Mean Sample F95: 6,561.57 psi Grand Mean Sample F96: 6,555.61 psi





Plastics Interlaboratory Testing Program

Report #128

Analysis 706

4th Qtr 2023

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F95			Sample F96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UU43U	*	5.010	0.387	2.57	4.730	0.098	0.80
2ZED2Q	X	1.760	-2.863	-18.96	1.800	-2.832	-23.26
4MGUX6		4.634	0.011	0.08	4.560	-0.072	-0.59
7Z2BGM		4.568	-0.055	-0.36	4.546	-0.086	-0.71
837C6Q		4.602	-0.021	-0.14	4.628	-0.004	-0.04
83QPVN		4.712	0.089	0.59	4.662	0.030	0.24
87LJTP	X	2.883	-1.740	-11.52	4.622	-0.010	-0.09
8MCNWD		4.576	-0.047	-0.31	4.660	0.028	0.23
8YLDPM		4.785	0.162	1.07	4.642	0.010	0.08
9PEVQP	*	4.246	-0.377	-2.49	4.304	-0.328	-2.70
ADGMBJ		4.446	-0.177	-1.17	4.520	-0.112	-0.92
AXL96Y		4.701	0.078	0.52	4.630	-0.003	-0.02
B9J48Z	X	4.044	-0.579	-3.83	4.350	-0.282	-2.32
BCW9EU		4.632	0.009	0.06	4.670	0.038	0.31
C4JCC9		4.782	0.159	1.06	4.728	0.096	0.78
C74D7U	X	2.458	-2.165	-14.34	2.476	-2.156	-17.71
CCDTFJ		4.576	-0.047	-0.31	4.614	-0.018	-0.15
DJ9WHU		4.724	0.101	0.67	4.808	0.176	1.44
FGFRRK		4.842	0.219	1.45	4.751	0.118	0.97
GJ2UAD		4.508	-0.115	-0.76	4.606	-0.026	-0.22
GK99GJ		4.554	-0.069	-0.45	4.684	0.052	0.42
HT2XML	*	4.906	0.283	1.88	5.000	0.368	3.02
HW6EBH		4.576	-0.047	-0.31	4.570	-0.062	-0.51
JW2ENM		4.660	0.037	0.25	4.642	0.010	0.08
JY68FZ	*	4.780	0.157	1.04	4.430	-0.202	-1.66
K7HH9R		4.538	-0.085	-0.56	4.572	-0.060	-0.50
KNHEHA		4.582	-0.041	-0.27	4.802	0.170	1.39
KYKTP2		4.506	-0.117	-0.77	4.454	-0.178	-1.47
L7FBGJ		4.470	-0.153	-1.01	4.696	0.064	0.52
LVXKTL		4.456	-0.167	-1.10	4.612	-0.021	-0.17
MVDAGK		4.488	-0.135	-0.89	4.476	-0.156	-1.28
MXZTHH		4.562	-0.061	-0.40	4.580	-0.052	-0.43
N42K6K		4.678	0.055	0.37	4.628	-0.004	-0.04
NBKQ4C		4.420	-0.203	-1.34	4.580	-0.052	-0.43
P6CLQJ		4.680	0.057	0.38	4.660	0.028	0.23



Plastics Interlaboratory Testing Program

Report #128

Analysis 706

4th Qtr 2023

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F95			Sample F96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PMPF77	X	31.840	27.217	180.27	30.040	25.408	208.67
PZDDFG		4.710	0.087	0.58	4.582	-0.050	-0.41
Q2RYPJ		4.632	0.009	0.06	4.614	-0.018	-0.15
QA2M4H		4.378	-0.245	-1.62	4.560	-0.072	-0.59
RKF3PG	X	6.574	1.951	12.92	2.284	-2.348	-19.29
RYGN4Y	X	4.524	-0.099	-0.65	5.170	0.538	4.41
T6J8QV		4.922	0.299	1.98	4.788	0.156	1.28
TC3BVC	X	5.224	0.601	3.98	5.138	0.506	4.15
TDALU2		4.576	-0.047	-0.31	4.608	-0.024	-0.20
TTM2UC		4.558	-0.065	-0.43	4.522	-0.110	-0.91
UEJ42C		4.640	0.017	0.12	4.680	0.048	0.39
UFBZP6		4.640	0.017	0.12	4.560	-0.072	-0.59
UN8T7C		4.780	0.157	1.04	4.800	0.168	1.38
UVAX33	X	5.362	0.739	4.90	4.734	0.102	0.83
UZ6P9D	X	4.118	-0.505	-3.34	4.048	-0.584	-4.80
W3FTKZ	X	3.399	-1.223	-8.10	2.984	-1.648	-13.54
X8BWX6		4.640	0.017	0.11	4.686	0.054	0.44
XHU7NJ		4.702	0.079	0.53	4.726	0.094	0.77
XMLBGM	X	85.510	80.887	535.74	79.294	74.662	613.19
XVWVHY		4.772	0.149	0.99	4.714	0.082	0.67
YHNGV7		4.706	0.083	0.55	4.614	-0.018	-0.15
YJCX3T	*	4.576	-0.047	-0.31	4.864	0.232	1.90
YL94V7		4.340	-0.283	-1.87	4.478	-0.154	-1.27
YNR6QT		4.490	-0.133	-0.88	4.484	-0.148	-1.22

Summary Statistics		
	Sample F95	Sample F96
Grand Means	4.6226 Percent	4.6324 Percent
Stnd Dev Btwn Labs	0.1510 Percent	0.1218 Percent
Statistics based on 47 of 59 reporting participants		

Sample F95: ABS/PC & Sample F96: ABS/PC



Comments on Assigned Data Flags for Test #706

- XMLBGM (X) - Extreme data.
- UZ6P9D (X) - Data for both samples are low.
- RKF3PG (X) - Data for sample F95 are high and data for sample F96 are low. Inconsistent within the determinations of sample F95.
- B9J48Z (X) - Data for sample F95 are low. Inconsistent within the determinations of sample F95.
- UVAX33 (X) - Data for sample F95 are high. Inconsistent within the determinations of sample F95.
- 87LJTP (X) - Data for sample F95 are low.
- TC3BVC (X) - Data for both samples are high.
- C74D7U (X) - Data for both samples are low.
- 2ZED2Q (X) - Extreme data.
- RYGN4Y (X) - Data for sample F96 are high.
- W3FTKZ (X) - Data for both samples are low. Inconsistent within the determinations of both samples.
- PMPF77 (X) - Extreme data.



Plastics Interlaboratory Testing Program

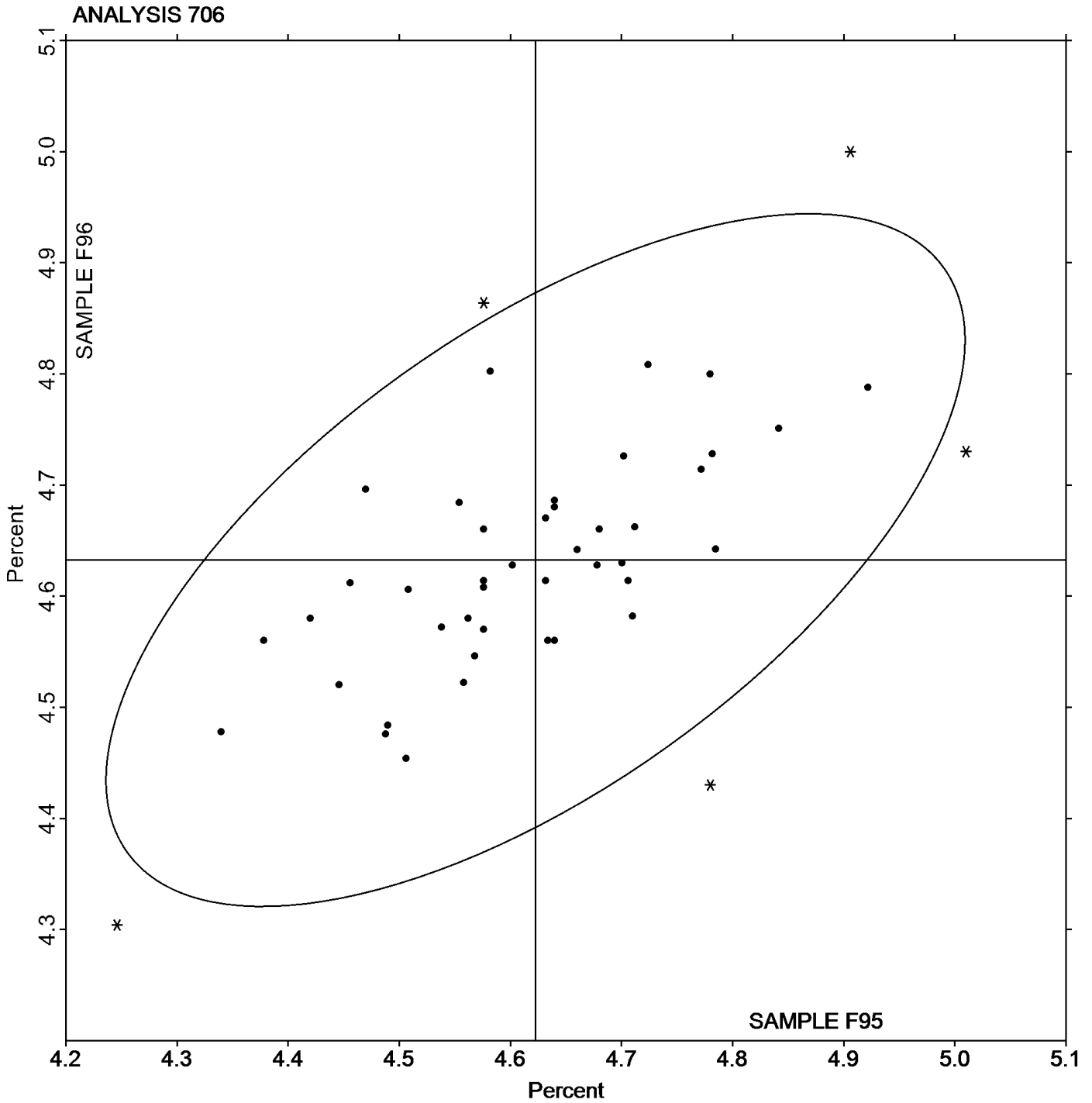
Analysis 706

Percent Elongation at Yield - Percent

Report #128

4th Qtr 2023

Grand Mean Sample F95: 4.6226 Percent Grand Mean Sample F96: 4.6324 Percent





Plastics Interlaboratory Testing Program

Report #128

Analysis 708

4th Qtr 2023

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F95			Sample F96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UU43U		304.87	-17.14	-1.40	299.94	-21.45	-1.69
2ZED2Q		318.00	-4.01	-0.33	316.20	-5.19	-0.41
4MGUX6		294.37	-27.64	-2.26	294.02	-27.37	-2.16
7Z2BGM		320.81	-1.20	-0.10	329.80	8.41	0.66
837C6Q		326.02	4.01	0.33	317.42	-3.97	-0.31
83QPVN		327.48	5.47	0.45	333.68	12.29	0.97
87LJTP	X	566.93	244.92	20.05	338.68	17.29	1.36
8MCNWD		324.13	2.12	0.17	320.19	-1.20	-0.09
8YLDPM		325.70	3.69	0.30	321.26	-0.13	-0.01
9PEVQP		334.30	12.29	1.01	324.52	3.13	0.25
ADGMBJ		313.60	-8.41	-0.69	313.80	-7.59	-0.60
AXL96Y		313.01	-9.00	-0.74	317.59	-3.80	-0.30
B9J48Z	X	368.78	46.77	3.83	348.66	27.27	2.15
BCW9EU		301.80	-20.21	-1.65	308.50	-12.88	-1.02
C4JCC9		326.68	4.67	0.38	329.74	8.35	0.66
C74D7U		341.80	19.79	1.62	340.80	19.41	1.53
CCDTFJ		311.51	-10.49	-0.86	309.98	-11.41	-0.90
DJ9WHU		318.19	-3.82	-0.31	322.85	1.46	0.12
FGFRRK		317.17	-4.84	-0.40	316.06	-5.33	-0.42
GJ2UAD		324.89	2.88	0.24	323.19	1.80	0.14
GK99GJ		297.48	-24.53	-2.01	302.42	-18.97	-1.50
HT2XML		308.66	-13.35	-1.09	310.40	-10.99	-0.87
HW6EBH		331.46	9.45	0.77	331.08	9.69	0.76
JW2ENM		314.22	-7.79	-0.64	306.28	-15.11	-1.19
JY68FZ		334.24	12.23	1.00	331.10	9.71	0.77
K7HH9R		335.91	13.90	1.14	334.75	13.36	1.05
KNHEHA		302.63	-19.38	-1.59	303.88	-17.51	-1.38
KYKTP2		332.34	10.33	0.85	333.80	12.41	0.98
L7FBGJ		339.76	17.75	1.45	331.12	9.73	0.77
LVXKTL		337.88	15.87	1.30	342.60	21.21	1.67
MVDAGK		325.87	3.87	0.32	324.39	3.01	0.24
MXZTHH	X	279.40	-42.61	-3.49	272.80	-48.59	-3.83
N42K6K		336.20	14.19	1.16	337.16	15.77	1.24
NBKQ4C		326.00	3.99	0.33	317.40	-3.99	-0.31
P6CLQJ		315.60	-6.40	-0.52	314.15	-7.23	-0.57



Plastics Interlaboratory Testing Program

Report #128

Analysis 708

4th Qtr 2023

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F95			Sample F96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PMPF77	X	347.60	25.59	2.09	300.00	-21.39	-1.69
PZDDFG		320.31	-1.70	-0.14	321.46	0.07	0.01
Q2RYPJ		304.14	-17.87	-1.46	305.98	-15.41	-1.22
QA2M4H		320.94	-1.07	-0.09	321.04	-0.35	-0.03
RKF3PG	X	130.20	-191.81	-15.70	368.40	47.01	3.71
RYGN4Y		327.86	5.85	0.48	322.34	0.95	0.07
T6J8QV		327.61	5.60	0.46	324.83	3.44	0.27
TDALU2		333.42	11.41	0.93	333.00	11.61	0.92
TTM2UC		309.60	-12.41	-1.02	302.54	-18.85	-1.49
TTMBFG	X	255.00	-67.01	-5.48	269.00	-52.39	-4.13
UEJ42C		315.04	-6.97	-0.57	313.26	-8.13	-0.64
UFBZP6		330.69	8.68	0.71	337.09	15.70	1.24
UN8T7C		315.89	-6.11	-0.50	307.77	-13.62	-1.07
UVAX33		322.57	0.56	0.05	328.52	7.13	0.56
UZ6P9D		325.64	3.63	0.30	333.07	11.68	0.92
XHU7NJ		328.46	6.46	0.53	330.62	9.23	0.73
XMLBGM	*	350.12	28.12	2.30	340.96	19.57	1.54
XVWVHY		313.80	-8.21	-0.67	314.20	-7.19	-0.57
YHNGV7		302.34	-19.67	-1.61	301.34	-20.05	-1.58
YJCX3T		322.55	0.54	0.04	311.65	-9.74	-0.77
YL94V7		332.92	10.91	0.89	332.72	11.33	0.89
YNR6QT	*	335.91	13.90	1.14	348.38	26.99	2.13

Summary Statistics		
	Sample F95	Sample F96
Grand Means	322.008 ksi	321.389 ksi
Std Dev Btwn Labs	12.217 ksi	12.680 ksi
Statistics based on 51 of 57 reporting participants		

Sample F95: ABS/PC & Sample F96: ABS/PC



Plastics Interlaboratory Testing Program

Analysis 708

Modulus of Elasticity - ksi

Report #128

4th Qtr 2023

Comments on Assigned Data Flags for Test #708

- RKF3PG (X) - Data for sample F95 are low and data for sample F96 are high. Inconsistent in testing between samples. Inconsistent within the determinations of sample F96.
- B9J48Z (X) - Data for sample F95 are high. Inconsistent within the determinations of sample F95.
- 87LJTP (X) - Data for sample F95 are high. Inconsistent within the determinations of sample F95.
- MXZTHH (X) - Data for both samples are low. Possible Systematic Error.
- TTMBFG (X) - Data for both samples are low. Possible Systematic Error.
- PMPF77 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.



Plastics Interlaboratory Testing Program

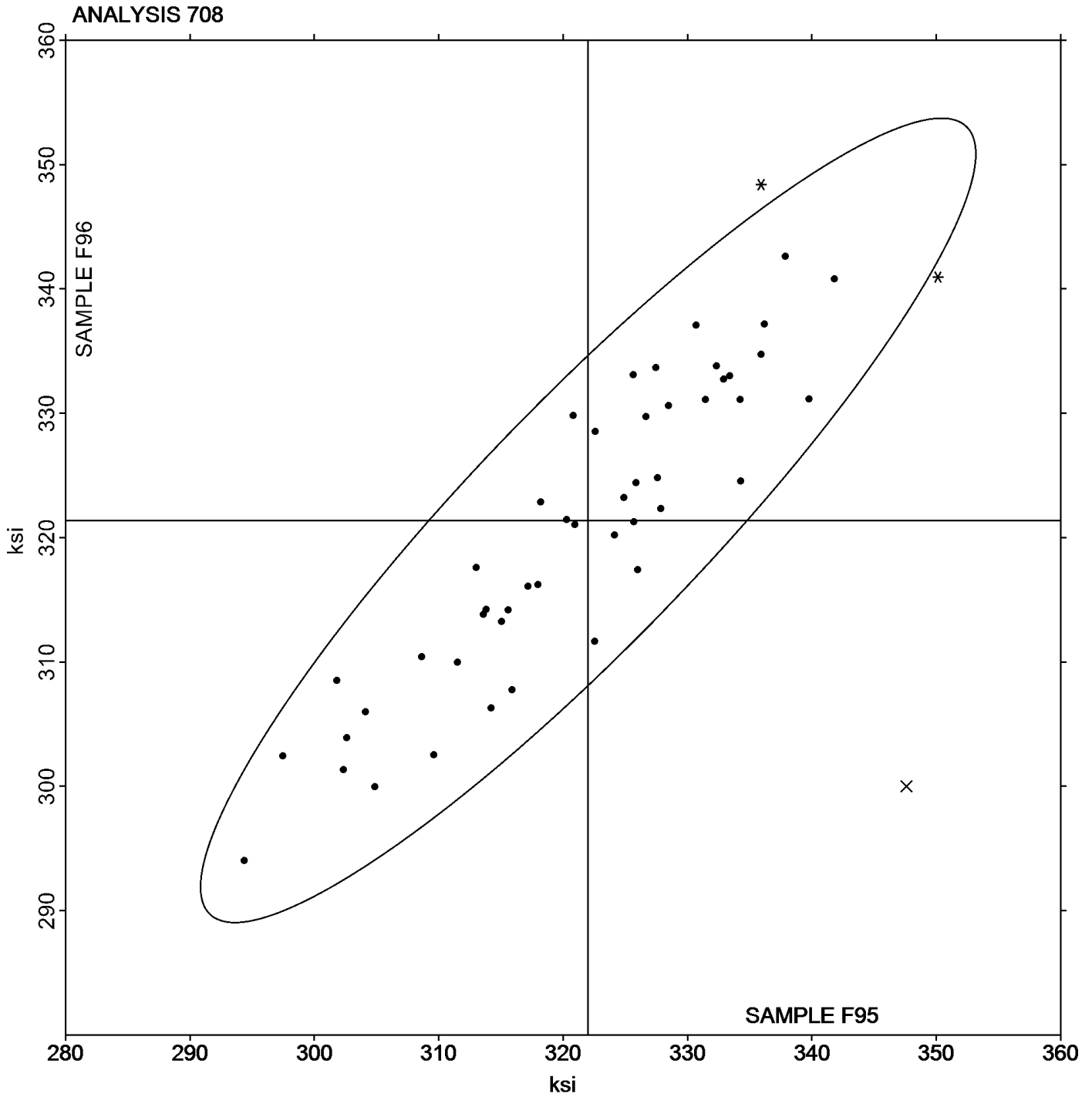
Analysis 708

Modulus of Elasticity - ksi

Report #128

4th Qtr 2023

Grand Mean Sample F95: 322.01 ksi Grand Mean Sample F96: 321.39 ksi





Plastics Interlaboratory Testing Program

Report #128

Analysis 710

4th Qtr 2023

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

WebCode	Data Flag	Sample E95			Sample E96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
87LJTP		83.03	1.08	0.98	83.03	0.92	0.93	CE
8MCNWD		80.87	-1.08	-0.98	80.84	-1.26	-1.27	TO
9PEVQP		82.88	0.93	0.84	83.08	0.97	0.98	IN
ADGMBJ		81.83	-0.12	-0.11	82.45	0.35	0.35	XA
BCW9EU		83.13	1.18	1.07	83.05	0.95	0.96	CE
CV6TR9		80.75	-1.20	-1.09	81.33	-0.78	-0.79	IN
EJR6WG		82.50	0.55	0.50	82.88	0.77	0.78	IN
F8Q4UW	X	88.05	6.10	5.56	88.18	6.07	6.13	CE
GJ2UAD		82.15	0.20	0.18	81.85	-0.25	-0.26	TY
HW6EBH		82.65	0.70	0.64	82.73	0.62	0.63	IN
J2AVWB		81.88	-0.07	-0.07	81.78	-0.33	-0.33	TO
L7FBGJ		82.25	0.30	0.27	82.25	0.15	0.15	IN
LVH8DP		81.43	-0.52	-0.48	81.55	-0.55	-0.56	CE
NATUEH		82.35	0.40	0.37	82.58	0.47	0.48	TO
NBKQ4C		81.15	-0.80	-0.73	80.95	-1.15	-1.17	TO
P6CLQJ		82.80	0.85	0.78	82.85	0.75	0.75	IN
PN4VNE		81.00	-0.95	-0.86	81.75	-0.35	-0.36	TO
QA2M4H		79.95	-2.00	-1.82	80.38	-1.73	-1.75	TO
T6J8QV		80.40	-1.55	-1.41	81.40	-0.70	-0.71	CE
TC3BVC		84.40	2.45	2.23	84.50	2.40	2.42	XX
TDALU2		81.88	-0.07	-0.07	81.75	-0.35	-0.36	TY
ULGTK2		82.93	0.98	0.89	82.93	0.82	0.83	IN
UQTPE3		82.93	0.99	0.90	82.77	0.66	0.67	CF
UZ6P9D		82.65	0.70	0.64	82.60	0.50	0.50	IN
XMLBGM		80.25	-1.70	-1.55	80.65	-1.45	-1.47	TO
YL94V7		80.70	-1.25	-1.14	80.70	-1.40	-1.42	TO

Summary Statistics		
	Sample E95	Sample E96
Grand Means	81.948 Degrees C	82.103 Degrees C
Std Dev Btwn Labs	1.097 Degrees C	0.990 Degrees C
Statistics based on 25 of 26 reporting participants		

Sample E95: ABS & Sample E96: ABS

Comments on Assigned Data Flags for Test #710

F8Q4UW (X) - Data for both samples are high. Possible Systematic Error.



Plastics Interlaboratory Testing Program

Report #128

Analysis 710

4th Qtr 2023

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

Key to Instrument Codes Reported by Participants

CE	Ceast	CF	Coesfeld
IN	Instron	TO	Tinius Olsen
TY	Toyoseiki	XA	Special In-House Instrument
XX	Instrument manufacturer not specified by lab		



Plastics Interlaboratory Testing Program

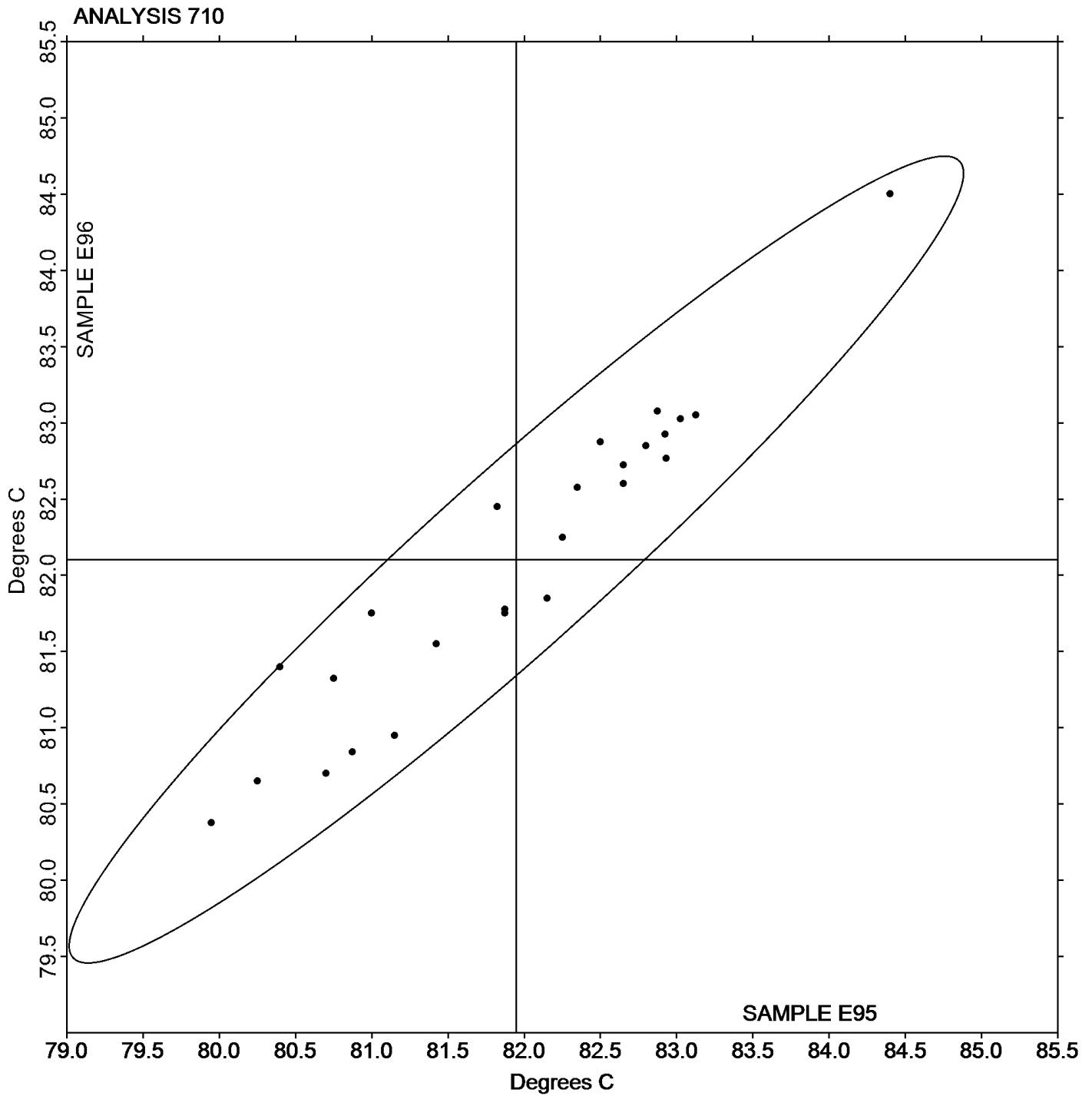
Report #128

Analysis 710

4th Qtr 2023

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

Grand Mean Sample E95: 81.948 Degrees C Grand Mean Sample E96: 82.103 Degrees C





Plastics Interlaboratory Testing Program

Report #128

Analysis 711

4th Qtr 2023

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

WebCode	Data Flag	Sample G95			Sample G96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
4MGUX6		111.8	2.0	0.80	115.6	5.3	2.22	RR
9ZAANZ		110.6	0.8	0.33	109.2	-1.0	-0.43	IN
F8Q4UW		111.8	2.0	0.80	111.7	1.5	0.61	CE
HMVAZC		108.3	-1.5	-0.59	108.5	-1.8	-0.73	XX
LVH8DP		109.4	-0.4	-0.16	110.4	0.1	0.06	CE
NATUEH		114.9	5.1	2.01	113.0	2.7	1.13	TO
NBKQ4C		112.8	3.1	1.20	113.1	2.9	1.20	TO
NGNWXU		108.5	-1.3	-0.49	107.3	-3.0	-1.25	XX
P6CLQJ		108.1	-1.7	-0.65	109.7	-0.6	-0.24	IN
PN4VNE		110.3	0.5	0.21	108.2	-2.1	-0.88	TO
T6J8QV		110.7	0.9	0.37	110.6	0.4	0.16	CE
ULGTK2		105.4	-4.4	-1.72	107.4	-2.9	-1.19	IN
UVAX33		108.7	-1.1	-0.42	110.1	-0.1	-0.05	IN
UZ6P9D		109.7	-0.1	-0.03	111.4	1.1	0.48	IN
YL94V7		105.5	-4.2	-1.66	107.7	-2.6	-1.08	TO

Summary Statistics

	Sample G95	Sample G96
Grand Means	109.76 Degrees C	110.25 Degrees C
Std Dev Btwn Labs	2.55 Degrees C	2.39 Degrees C

Statistics based on 15 of 15 reporting participants

Sample G95: PP & Sample G96: PP

Key to Instrument Codes Reported by Participants

CE	Ceast	IN	Instron
RR	Ray-Ran	TO	Tinius Olsen
XX	Instrument manufacturer not specified by lab		



Plastics Interlaboratory Testing Program

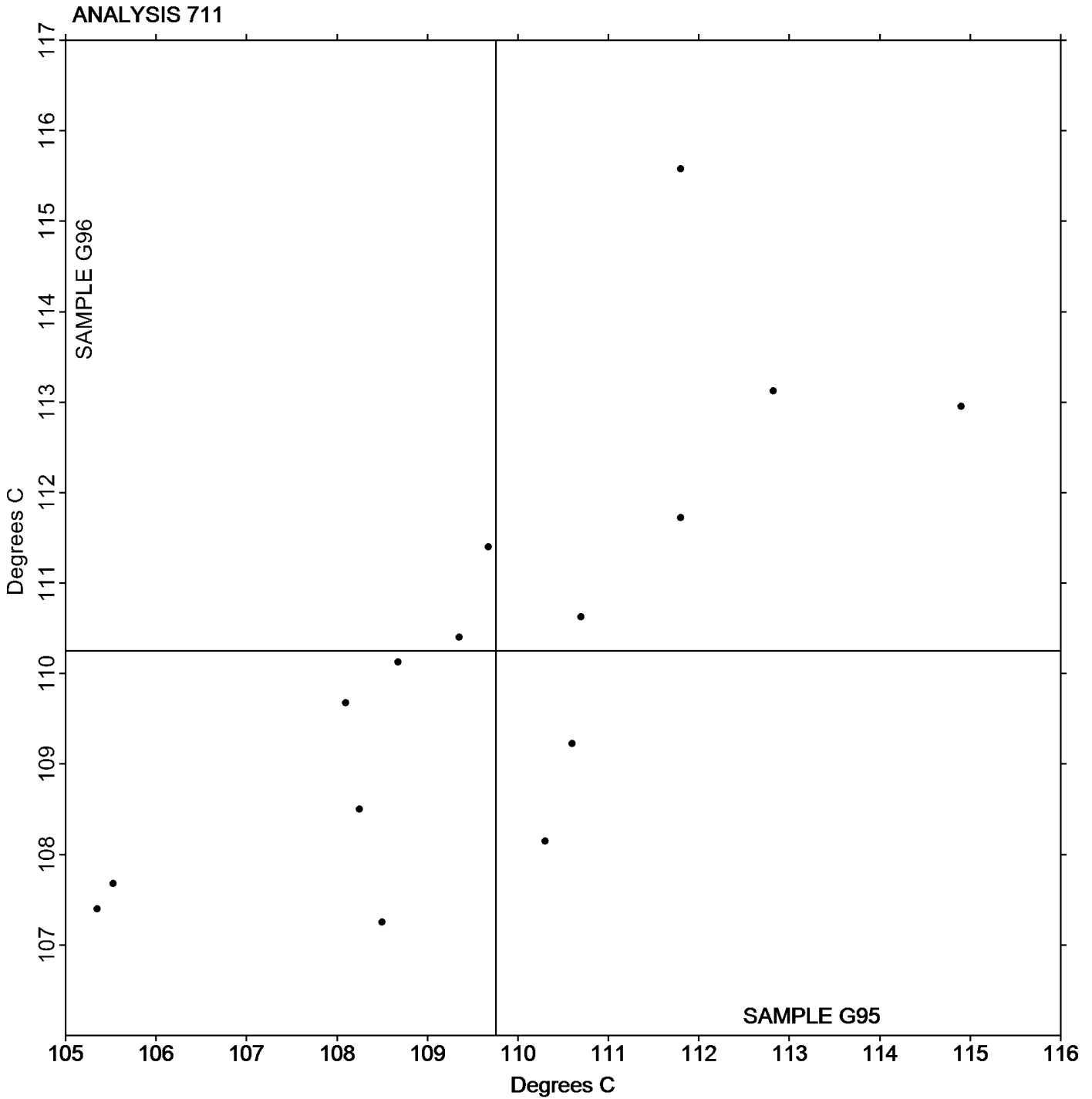
Report #128

Analysis 711

4th Qtr 2023

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

Grand Mean Sample G95: 109.76 Degrees C **Grand Mean Sample G96: 110.25 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 #128

Analysis 712

4th Qtr 2023

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

WebCode	Data Flag	Sample N95			Sample N96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7JWUJ2		75.68	-1.25	-1.78	75.55	-1.34	-2.02	TO
87LJTP		77.25	0.32	0.46	77.23	0.34	0.51	CE
8G2MPN		76.50	-0.43	-0.61	76.65	-0.24	-0.36	XX
9BFZJP		77.25	0.32	0.46	77.03	0.14	0.21	IN
9PEVQP		77.35	0.42	0.60	77.38	0.49	0.74	IN
B8R8H7		75.85	-1.08	-1.53	75.90	-0.99	-1.49	TO
CNN46U		77.34	0.41	0.58	77.09	0.20	0.30	ZW
D99B49		75.95	-0.98	-1.39	76.25	-0.64	-0.96	TO
EG24N8		76.53	-0.40	-0.57	76.43	-0.46	-0.70	TO
F8Q4UW	*	75.08	-1.85	-2.63	75.18	-1.71	-2.58	CE
FDFGVK		76.93	0.00	-0.01	76.73	-0.16	-0.24	TY
GE8WJ2		77.40	0.47	0.67	77.23	0.34	0.51	IN
GJ2UAD		77.18	0.25	0.35	77.15	0.26	0.40	TY
HMVAZC		77.85	0.92	1.31	77.68	0.79	1.19	XX
JTWNEL		77.40	0.47	0.67	77.23	0.34	0.51	IN
K7HH9R		77.05	0.12	0.17	77.00	0.11	0.17	CE
L6LBEE		76.55	-0.38	-0.54	76.58	-0.31	-0.47	IN
L7FBGJ	X	76.23	-0.70	-1.00	75.33	-1.56	-2.36	IN
L VH8DP		76.38	-0.55	-0.79	76.55	-0.34	-0.51	CE
MNR4W7		77.50	0.57	0.81	77.37	0.48	0.72	CE
N9D96G		76.13	-0.80	-1.14	76.13	-0.76	-1.15	TO
NA82ZZ		77.07	0.14	0.20	77.10	0.21	0.32	IN
NBKQ4C	X	76.23	-0.70	-1.00	77.28	0.39	0.58	TO
NGNWGU		77.45	0.52	0.74	77.30	0.41	0.62	XX
P6CLQJ		77.63	0.70	0.99	77.40	0.51	0.77	IN
PN4VNE		76.25	-0.68	-0.96	76.33	-0.56	-0.85	TO
PTGD7V		77.49	0.56	0.79	77.49	0.60	0.91	ZW
PUM8EZ		76.98	0.05	0.07	77.08	0.19	0.28	XX
R6M8DQ		76.65	-0.28	-0.40	76.43	-0.46	-0.70	CE
T6J8QV	X	74.88	-2.05	-2.92	75.60	-1.29	-1.94	CE
T9HJLV		76.60	-0.33	-0.47	76.58	-0.31	-0.47	TO
TC3BVC	*	78.30	1.37	1.95	78.43	1.54	2.32	XX
TDALU2		77.23	0.30	0.42	76.83	-0.06	-0.09	TY
UQTPE3		77.13	0.20	0.29	77.13	0.25	0.37	CF
UVAX33		77.13	0.20	0.28	77.05	0.16	0.25	IN



Plastics Interlaboratory Testing Program

Report #128

Analysis 712

4th Qtr 2023

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

WebCode	Data Flag	Sample N95			Sample N96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
UZ6P9D		77.40	0.47	0.67	77.33	0.44	0.66	IN
V9U2GC		76.40	-0.53	-0.75	76.60	-0.29	-0.43	CE
WC7DND		75.40	-1.53	-2.17	75.40	-1.49	-2.24	TO
WPCFE2		77.40	0.47	0.67	77.50	0.61	0.92	IN
XAFKFF		77.70	0.77	1.10	77.78	0.89	1.34	CE
XDGLGX		77.48	0.55	0.78	77.35	0.46	0.70	IN
ZTWKBZ		77.45	0.52	0.74	77.25	0.36	0.55	XX

Summary Statistics		
	Sample N95	Sample N96
Grand Means	76.929 Degrees C	76.887 Degrees C
Std Dev Btwn Labs	0.704 Degrees C	0.663 Degrees C
Statistics based on 39 of 42 reporting participants		

Sample N95: HIPS & Sample N96: HIPS

Comments on Assigned Data Flags for Test #712

- T6J8QV (X) - Data for sample N95 are low.
- L7FBGJ (X) - Inconsistent in testing between samples.
- NBKQ4C (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

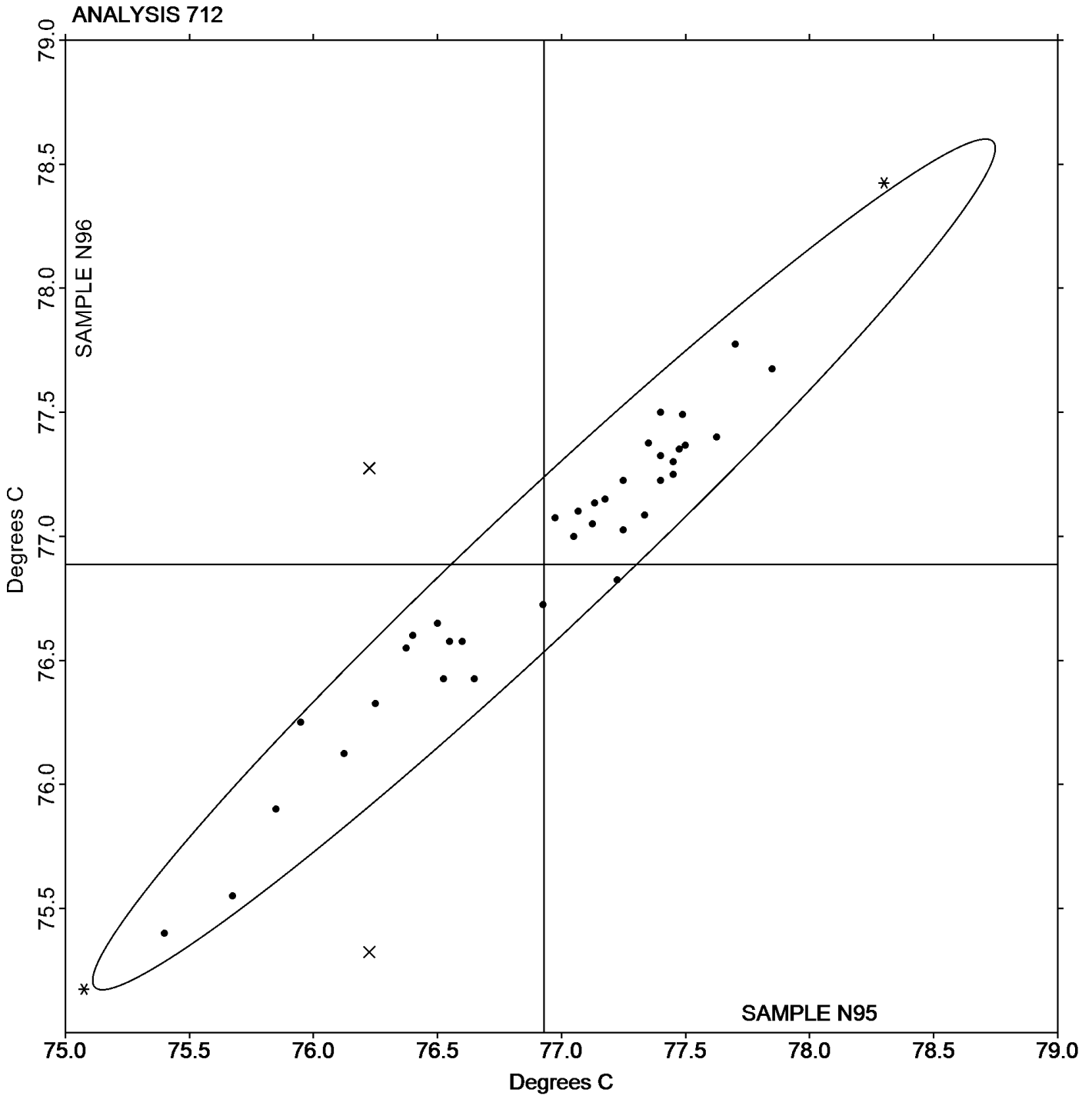
Report #128

Analysis 712

4th Qtr 2023

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

Grand Mean Sample N95: 76.929 Degrees C Grand Mean Sample N96: 76.887 Degrees C





Plastics Interlaboratory Testing Program

Report #128

Analysis 715

4th Qtr 2023

Vicat Softening Temperature (Rate A)

WebCode	Data Flag	Sample H95			Sample H96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7JWUJ2		103.00	-0.26	-0.37	103.00	-0.28	-0.41	XX
7WHAMZ		103.38	0.12	0.17	103.40	0.12	0.18	CE
87LJTP		103.52	0.25	0.36	103.52	0.24	0.35	CE
9PEVQP		103.60	0.34	0.47	103.62	0.34	0.50	IN
B8R8H7		101.98	-1.28	-1.79	102.00	-1.28	-1.87	TO
EJR6WG		103.02	-0.25	-0.34	102.95	-0.33	-0.48	IN
EQMANW		103.20	-0.06	-0.09	103.17	-0.11	-0.16	IN
F8Q4UW		102.27	-1.00	-1.40	102.42	-0.86	-1.26	CE
GJ2UAD		102.73	-0.53	-0.74	102.70	-0.58	-0.85	TY
K7HH9R		103.65	0.39	0.54	103.50	0.22	0.32	CE
NBKQ4C		102.47	-0.80	-1.12	102.53	-0.74	-1.09	TO
P6CLQJ		103.42	0.15	0.22	103.48	0.21	0.30	AT
Q2RYPJ		102.80	-0.46	-0.65	102.85	-0.43	-0.63	CE
QA2M4H	X	99.75	-3.51	-4.92	99.75	-3.53	-5.16	TO
QDXAYQ		104.83	1.57	2.20	104.87	1.59	2.32	CE
R6M8DQ		102.88	-0.38	-0.53	102.88	-0.39	-0.58	CE
T6J8QV		102.38	-0.88	-1.23	102.50	-0.78	-1.14	CE
TC3BVC	X	100.55	-2.71	-3.80	101.77	-1.51	-2.21	XX
ULGTK2		103.35	0.09	0.12	103.48	0.21	0.30	IN
UQTPE3		103.77	0.50	0.71	103.83	0.56	0.81	CF
UVAX33		104.38	1.12	1.57	104.22	0.94	1.37	TO
UZ6P9D		104.30	1.04	1.45	104.32	1.04	1.52	CF
WPCFE2		102.70	-0.56	-0.79	102.82	-0.46	-0.68	IN
XAFKFF		104.07	0.80	1.13	104.02	0.74	1.08	CF
XMLBGM		103.33	0.07	0.10	103.33	0.06	0.08	TO

Summary Statistics		
	Sample H95	Sample H96
Grand Means	103.262 Degrees C	103.278 Degrees C
Std Dev Btwn Labs	0.714 Degrees C	0.684 Degrees C
Statistics based on 23 of 25 reporting participants		

Sample H95: ABS & Sample H96: ABS



Comments on Assigned Data Flags for Test #715

TC3BVC (X) - Data for sample H95 are low. Inconsistent within the determinations of both samples.

QA2M4H (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

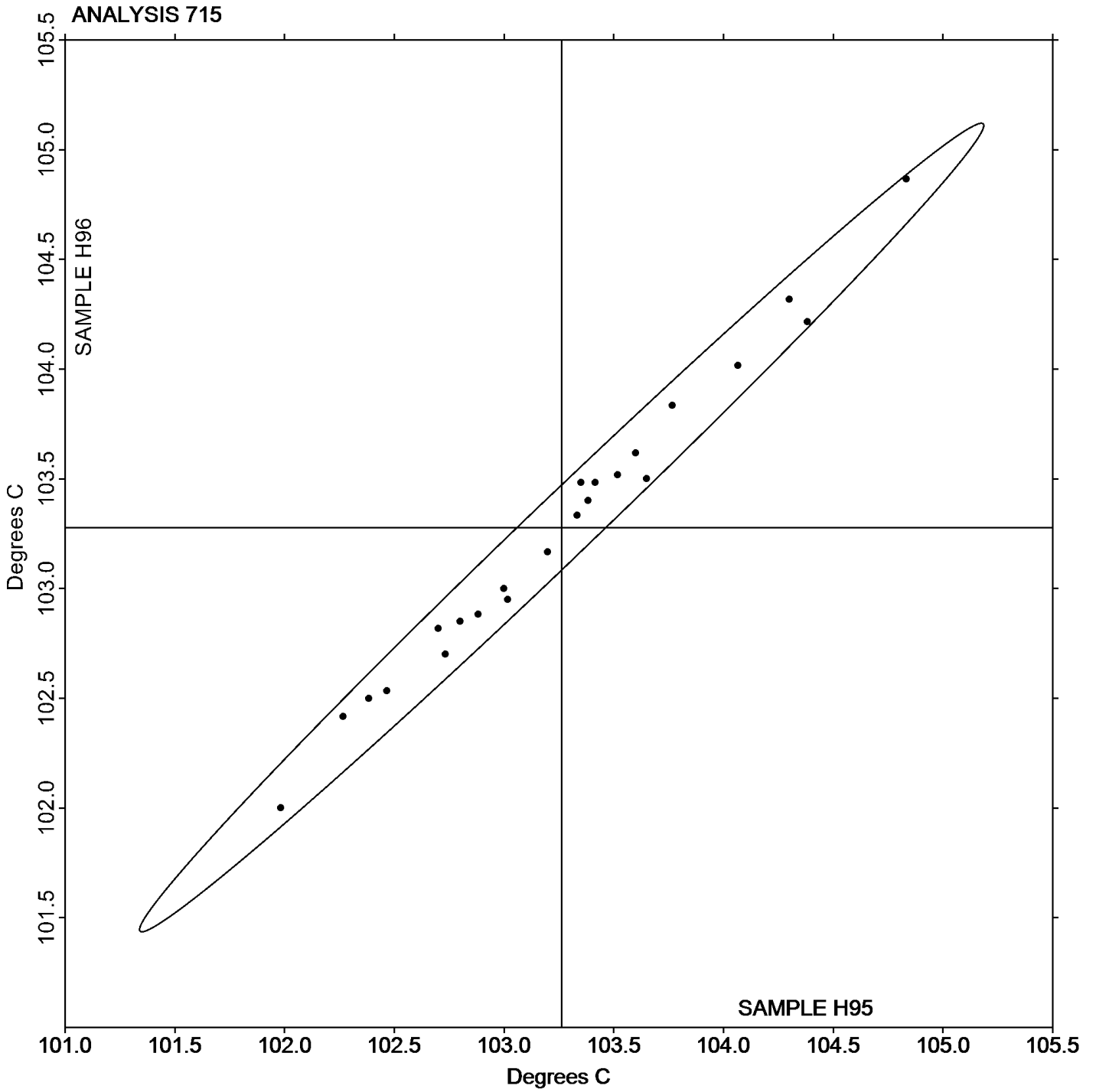
Report #128

Analysis 715

4th Qtr 2023

Vicat Softening Temperature (Rate A)

Grand Mean Sample H95: 103.26 Degrees C Grand Mean Sample H96: 103.28 Degrees C





Plastics Interlaboratory Testing Program

Report #128

Analysis 716

4th Qtr 2023

Vicat Softening Temperature (Rate B)

WebCode	Data Flag	Sample R95			Sample R96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
87LJTP		105.58	0.55	0.75	105.58	0.56	0.73	CE
9PEVQP		105.50	0.47	0.64	105.60	0.58	0.75	IN
B8R8H7		103.57	-1.46	-1.99	103.65	-1.37	-1.77	TO
D6Q4TN		105.23	0.20	0.27	105.55	0.53	0.69	CS
EJR6WG		105.08	0.05	0.07	105.03	0.01	0.02	IN
EQMANW		104.73	-0.30	-0.40	104.57	-0.45	-0.59	IN
F8Q4UW		103.60	-1.43	-1.94	103.63	-1.39	-1.79	CE
GJ2UAD		105.13	0.10	0.14	105.12	0.10	0.13	TY
K7HH9R		105.15	0.12	0.16	105.12	0.10	0.13	CE
MVDAGK		106.35	1.32	1.79	106.57	1.55	2.00	CE
NBKQ4C		103.98	-1.05	-1.42	103.98	-1.04	-1.34	TO
P6CLQJ		105.63	0.60	0.82	105.55	0.53	0.69	AT
PN4VNE		104.82	-0.21	-0.28	104.85	-0.17	-0.22	TO
Q2RYPJ	*	105.03	0.00	0.00	104.43	-0.59	-0.76	CE
QA2M4H	X	100.62	-4.41	-5.99	100.58	-4.44	-5.74	TO
QDXAYQ		104.85	-0.18	-0.25	104.80	-0.22	-0.28	CE
R6M8DQ		104.53	-0.50	-0.67	104.47	-0.55	-0.72	CE
TC3BVC		104.07	-0.96	-1.31	104.08	-0.94	-1.21	XX
ULGTK2		105.40	0.37	0.50	105.43	0.41	0.54	IN
UQTPE3		106.17	1.14	1.54	106.27	1.25	1.61	CF
UVAX33		106.22	1.19	1.61	106.22	1.20	1.55	TO
UZ6P9D		105.05	0.02	0.03	105.43	0.41	0.54	CF
WPCFE2		104.62	-0.41	-0.56	104.80	-0.22	-0.28	IN
XAFKFF		105.43	0.40	0.55	104.90	-0.12	-0.15	CF
XMLBGM		105.00	-0.03	-0.04	104.83	-0.19	-0.24	TO

Summary Statistics		
	Sample R95	Sample R96
Grand Means	105.031 Degrees C	105.019 Degrees C
Stnd Dev Btwn Labs	0.737 Degrees C	0.773 Degrees C
Statistics based on 24 of 25 reporting participants		

Sample R95: ABS & Sample R96: ABS

Comments on Assigned Data Flags for Test #716

QA2M4H (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

Report #128

Analysis 716

4th Qtr 2023

Vicat Softening Temperature (Rate B)

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

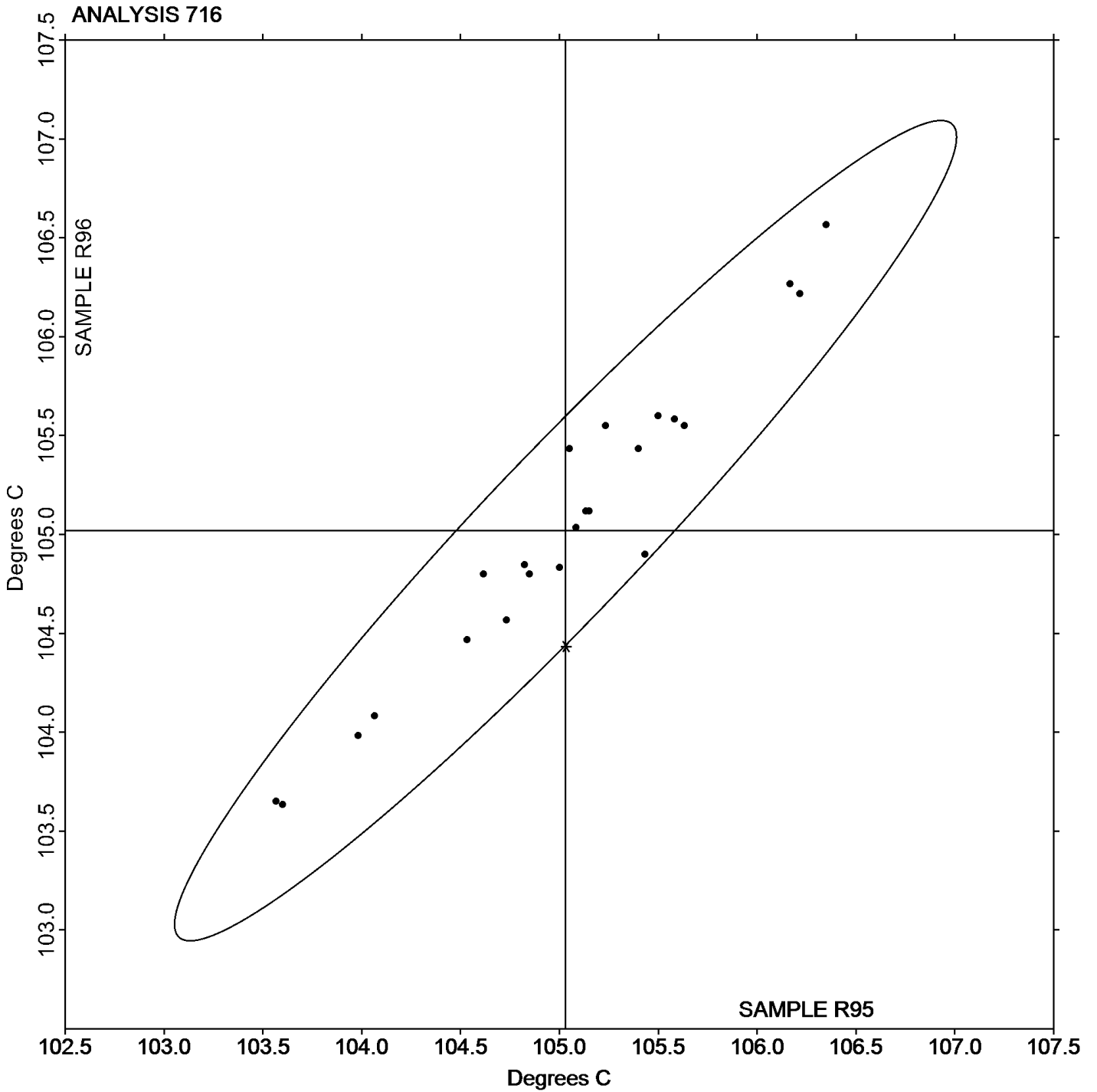
Report #128

Analysis 716

4th Qtr 2023

Vicat Softening Temperature (Rate B)

Grand Mean Sample R95: 105.03 Degrees C Grand Mean Sample R96: 105.02 Degrees C





Plastics Interlaboratory Testing Program

Report #128

Analysis 718

4th Qtr 2023

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T95			Sample T96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2CPQG7	X	1.05233	0.01047	4.51	1.05233	0.01034	4.81
2UU43U		1.04533	0.00347	1.49	1.04433	0.00234	1.09
3B9UN7		1.04480	0.00294	1.26	1.04443	0.00244	1.14
3PQRGD		1.04277	0.00090	0.39	1.04310	0.00111	0.52
3RJN78		1.04500	0.00314	1.35	1.04367	0.00167	0.78
47JMU6		1.04270	0.00084	0.36	1.04330	0.00131	0.61
4E6ZKN		1.04350	0.00164	0.70	1.04367	0.00167	0.78
6LJ7UZ		1.04183	-0.00003	-0.01	1.04233	0.00034	0.16
7LGVDM		1.04007	-0.00180	-0.77	1.04000	-0.00199	-0.93
7Z2BGM		1.04133	-0.00053	-0.23	1.04133	-0.00066	-0.31
83LMTX		1.04313	0.00127	0.55	1.04207	0.00007	0.03
873ZLX		1.04190	0.00004	0.02	1.04180	-0.00019	-0.09
87LJTP		1.04000	-0.00186	-0.80	1.04000	-0.00199	-0.93
8EGLV2		1.04340	0.00154	0.66	1.04367	0.00167	0.78
8MCNWD	*	1.04267	0.00080	0.35	1.04067	-0.00133	-0.62
8WTHZT		1.04000	-0.00186	-0.80	1.04000	-0.00199	-0.93
99N4UV		1.04033	-0.00153	-0.66	1.04073	-0.00126	-0.59
9BFZJP		1.04017	-0.00170	-0.73	1.04183	-0.00016	-0.07
9PEVQP	*	1.03527	-0.00660	-2.84	1.03663	-0.00536	-2.49
ADGMBJ		1.04213	0.00027	0.12	1.04220	0.00021	0.10
B8R8H7		1.04360	0.00174	0.75	1.04370	0.00171	0.79
B9J48Z		1.04060	-0.00126	-0.54	1.04080	-0.00119	-0.55
BCW9EU		1.04270	0.00084	0.36	1.04277	0.00077	0.36
C8HYHG		1.04400	0.00214	0.92	1.04397	0.00197	0.92
CNN46U	*	1.03533	-0.00653	-2.81	1.03667	-0.00533	-2.48
CV6TR9		1.04140	-0.00046	-0.20	1.04120	-0.00079	-0.37
D99B49		1.04393	0.00207	0.89	1.04393	0.00194	0.90
F8Q4UW	X	1.03833	-0.00353	-1.52	1.03613	-0.00586	-2.73
FFMW3Q		1.04123	-0.00063	-0.27	1.04080	-0.00119	-0.55
FNEEGY		1.04397	0.00210	0.90	1.04460	0.00261	1.21
G2BZ9M		1.04370	0.00184	0.79	1.04407	0.00207	0.97
GBZN7B	X	1.04000	-0.00186	-0.80	1.03667	-0.00533	-2.48
GE8WJ2		1.04293	0.00107	0.46	1.04393	0.00194	0.90
GEZYZP		1.04100	-0.00086	-0.37	1.04167	-0.00033	-0.15
GJ2UAD		1.04200	0.00014	0.06	1.04167	-0.00033	-0.15



Plastics Interlaboratory Testing Program

Report #128

Analysis 718

4th Qtr 2023

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T95			Sample T96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
HMVAZC		1.04233	0.00047	0.20	1.04367	0.00167	0.78
HW6EBH		1.03607	-0.00580	-2.50	1.03683	-0.00516	-2.40
JEYNJC		1.03847	-0.00340	-1.46	1.03787	-0.00413	-1.92
JMPAMP	X	1.03827	-0.00360	-1.55	1.04303	0.00104	0.48
K7HH9R		1.04527	0.00340	1.46	1.04597	0.00397	1.85
L6LBEE	X	1.03673	-0.00513	-2.21	1.03347	-0.00853	-3.97
L7FBGJ		1.04327	0.00140	0.60	1.04250	0.00051	0.24
LBVH6H		1.04033	-0.00153	-0.66	1.04167	-0.00033	-0.15
L VH8DP		1.04047	-0.00140	-0.60	1.04040	-0.00159	-0.74
MLNLKW		1.04397	0.00210	0.90	1.04377	0.00177	0.83
MNR4W7		1.03833	-0.00353	-1.52	1.03833	-0.00366	-1.70
MTKBFE		1.04381	0.00195	0.84	1.04385	0.00186	0.87
MVDAGK		1.04373	0.00187	0.80	1.04353	0.00154	0.72
MXZTHH		1.04033	-0.00153	-0.66	1.04040	-0.00159	-0.74
N42K6K		1.04563	0.00377	1.62	1.04537	0.00337	1.57
N78W XF		1.04360	0.00174	0.75	1.04320	0.00121	0.56
NA82ZZ		1.04360	0.00174	0.75	1.04323	0.00124	0.58
NATUEH	X	1.04367	0.00180	0.78	1.04133	-0.00066	-0.31
NBKQ4C	X	1.03760	-0.00426	-1.84	1.03583	-0.00616	-2.87
NGNWGU		1.04033	-0.00153	-0.66	1.04167	-0.00033	-0.15
P6CLQJ		1.04310	0.00124	0.53	1.04180	-0.00019	-0.09
PJ8XBG		1.04060	-0.00126	-0.54	1.04070	-0.00129	-0.60
PK7ECK	X	1.04400	0.00214	0.92	1.03433	-0.00766	-3.56
PN4VNE		1.04120	-0.00066	-0.29	1.04140	-0.00059	-0.28
PTGD7V		1.04180	-0.00006	-0.03	1.04210	0.00011	0.05
PUM8EZ		1.04267	0.00080	0.35	1.04400	0.00201	0.93
QHA8H8	X	1.04300	0.00114	0.49	1.03967	-0.00233	-1.08
R6M8DQ		1.03793	-0.00393	-1.69	1.03833	-0.00366	-1.70
R7E43J		1.04367	0.00180	0.78	1.04367	0.00167	0.78
RAY6W7		1.04500	0.00314	1.35	1.04473	0.00274	1.28
RW8NVC	X	1.04000	-0.00186	-0.80	1.03333	-0.00866	-4.03
T6J8QV		1.04483	0.00297	1.28	1.04440	0.00241	1.12
TC3BVC		1.04200	0.00014	0.06	1.04367	0.00167	0.78
TTMBFG	X	1.03667	-0.00520	-2.24	1.04133	-0.00066	-0.31
UN8T7C		1.04133	-0.00053	-0.23	1.04100	-0.00099	-0.46



Plastics Interlaboratory Testing Program

Report #128

Analysis 718

4th Qtr 2023

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T95			Sample T96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UQTPE3	*	1.03600	-0.00586	-2.52	1.03700	-0.00499	-2.32
UVAX33		1.04137	-0.00050	-0.21	1.04123	-0.00076	-0.35
UXDQUF		1.04463	0.00277	1.19	1.04387	0.00187	0.87
UZ6P9D		1.04323	0.00137	0.59	1.04327	0.00127	0.59
V8JVHP		1.04083	-0.00103	-0.44	1.04250	0.00051	0.24
V8XGUD		1.04330	0.00144	0.62	1.04303	0.00104	0.48
V9U2GC	*	1.03857	-0.00330	-1.42	1.03770	-0.00429	-2.00
WN2B2C		1.04230	0.00044	0.19	1.04270	0.00071	0.33
WPCFE2		1.04333	0.00147	0.63	1.04337	0.00137	0.64
XDGLGX		1.04313	0.00127	0.55	1.04330	0.00131	0.61
XZNWW7		1.04233	0.00047	0.20	1.04300	0.00101	0.47
Y9GNG6		1.04070	-0.00116	-0.50	1.03990	-0.00209	-0.97
YJ2VGU		1.04137	-0.00050	-0.21	1.04157	-0.00043	-0.20
YL94V7		1.03867	-0.00320	-1.38	1.03923	-0.00276	-1.28
YMH9AU		1.04183	-0.00003	-0.01	1.04220	0.00021	0.10
ZCUUJX	X	1.04987	0.00800	3.44	1.04997	0.00797	3.71

Summary Statistics		Sample T95	Sample T96
Grand Means		1.041865 sp gr 23/23 C	1.041993 sp gr 23/23 C
Stnd Dev Btwn Labs		0.002323 sp gr 23/23 C	0.002149 sp gr 23/23 C
Statistics based on 74 of 86 reporting participants			

Sample T95: ABS & Sample T96: ABS



Plastics Interlaboratory Testing Program

Report #128

Analysis 718

4th Qtr 2023

Specific Gravity - sp gr 23/23 C

Comments on Assigned Data Flags for Test #718

- RW8NVC (X) - Data for sample T96 are low. Inconsistent within the determinations of sample T96.
- NATUEH (X) - Inconsistent in testing between samples.
- PK7ECK (X) - Data for sample T96 are low. Inconsistent within the determinations of both samples.
- F8Q4UW (X) - Inconsistent in testing between samples.
- ZCUUJX (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample T95.
- NBKQ4C (X) - Data for sample T96 are low.
- 2CPQG7 (X) - Data for both samples are high. Possible Systematic Error.
- TTMBFG (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample T96.
- JMPAMP (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample T95.
- GBZN7B (X) - Inconsistent in testing between samples.
- QHA8H8 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample T95.
- L6LBEE (X) - Data for sample T96 are low. Inconsistent within the determinations of sample T96.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample T95			Sample T96			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
ASTM D792 Method A (water)	1.042049	0.002218	0.000	1.042187	0.001998	0.000	54/63
ASTM D792 Method B (not water)	1.041144	0.003455	-0.001	1.040889	0.003168	-0.001	3/3
ISO 1183	1.041408	0.002530	0.000	1.041571	0.002460	0.000	17/20



Plastics Interlaboratory Testing Program

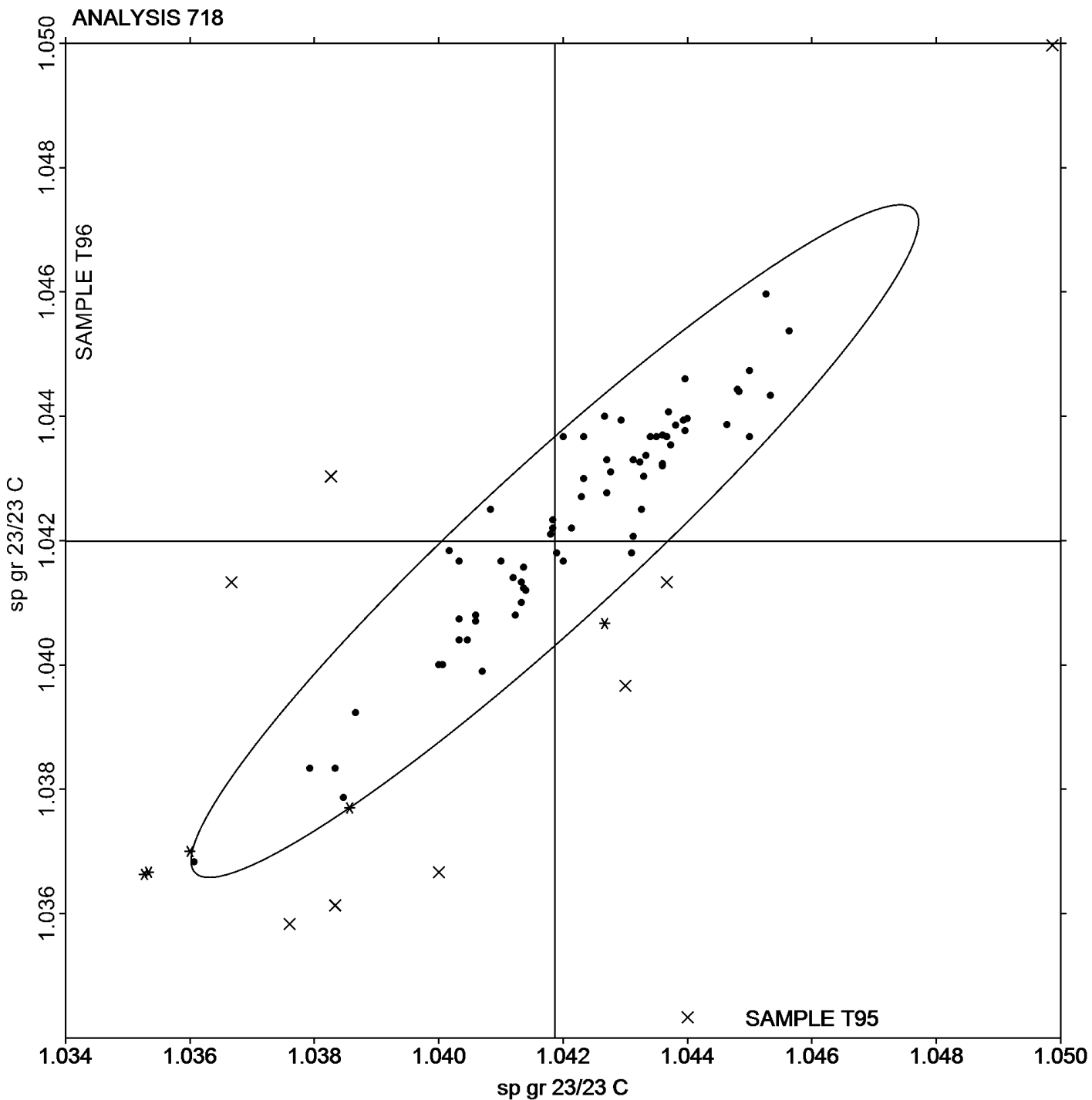
Analysis 718

Specific Gravity - sp gr 23/23 C

Report #128

4th Qtr 2023

Grand Mean Sample T95: 1.0419 sp gr 23/23 C Grand Mean Sample T96: 1.0420 sp gr 23/23 C





Plastics Interlaboratory Testing Program

Report #128

Analysis 720

4th Qtr 2023

Flexural Modulus- ksi

WebCode	Data Flag	Sample J95			Sample J96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2CPQG7	X	252.6	-94.9	-4.63	274.0	-74.4	-3.53
3RJN78		349.2	1.6	0.08	347.9	-0.5	-0.02
4MGUX6		361.8	14.3	0.70	360.2	11.8	0.56
83QPVN		353.7	6.2	0.30	355.5	7.1	0.34
87LJTP		349.7	2.2	0.11	353.5	5.1	0.24
88CW4V		344.5	-3.0	-0.15	338.7	-9.7	-0.46
8MCNWD		380.5	33.0	1.61	384.4	36.0	1.70
8YLDPM	X	235.8	-111.7	-5.45	238.4	-110.0	-5.21
9PEVQP		336.4	-11.1	-0.54	339.9	-8.5	-0.40
ADGMBJ		342.6	-4.9	-0.24	338.4	-10.0	-0.47
B9J48Z		346.4	-1.2	-0.06	344.4	-4.0	-0.19
BCW9EU		324.9	-22.6	-1.10	326.7	-21.7	-1.03
BQK7LJ		329.7	-17.8	-0.87	334.5	-13.9	-0.66
BUZEAJ		353.8	6.3	0.31	353.8	5.4	0.26
CCDTFJ		339.7	-7.8	-0.38	334.5	-13.9	-0.66
CV6TR9		319.2	-28.3	-1.38	322.0	-26.4	-1.25
EJR6WG		346.9	-0.7	-0.03	345.4	-3.0	-0.14
F8Q4UW		369.8	22.2	1.08	371.9	23.5	1.11
GJ2UAD		329.0	-18.5	-0.90	327.1	-21.3	-1.01
H2GMCL	X	346.6	-0.9	-0.04	313.2	-35.2	-1.67
HMVAZC		359.7	12.2	0.59	367.8	19.4	0.92
HT2XML		354.0	6.5	0.32	365.4	17.0	0.81
HW6EBH		357.0	9.4	0.46	355.0	6.6	0.31
JW2ENM		330.8	-16.7	-0.82	329.8	-18.6	-0.88
K7HH9R		313.5	-34.0	-1.66	311.0	-37.4	-1.77
KNHEHA		354.8	7.2	0.35	353.6	5.1	0.24
L2HQDZ		356.0	8.4	0.41	356.2	7.8	0.37
L7FBGJ		360.6	13.0	0.64	362.5	14.1	0.67
LQ3TKP		347.8	0.3	0.01	348.7	0.3	0.01
LVH8DP		369.2	21.6	1.05	366.3	17.9	0.85
MW69VH		379.1	31.5	1.54	378.6	30.2	1.43
MXZTHH		316.7	-30.8	-1.50	314.4	-34.0	-1.61
N42K6K		344.8	-2.7	-0.13	351.2	2.8	0.13
NATUEH		347.2	-0.3	-0.02	345.7	-2.7	-0.13
NBKQ4C	*	399.0	51.5	2.51	406.2	57.8	2.74



Plastics Interlaboratory Testing Program

Report #128

Analysis 720

4th Qtr 2023

Flexural Modulus- ksi

WebCode	Data Flag	Sample J95			Sample J96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NGNWGU		327.6	-20.0	-0.97	331.0	-17.4	-0.83
P6CLQJ		333.0	-14.5	-0.71	338.3	-10.1	-0.48
PN4VNE		318.1	-29.4	-1.43	316.9	-31.5	-1.49
PQVQD9		328.5	-19.0	-0.93	331.2	-17.2	-0.82
RKF3PG		322.3	-25.3	-1.23	325.8	-22.6	-1.07
RYGN4Y		317.0	-30.6	-1.49	319.0	-29.4	-1.39
T6J8QV		335.8	-11.7	-0.57	326.5	-21.9	-1.04
TC3BVC		343.2	-4.3	-0.21	339.6	-8.8	-0.42
TD6HRA	X	228.8	-118.8	-5.79	227.6	-120.8	-5.72
TTMBFG	X	262.6	-84.9	-4.14	264.8	-83.6	-3.96
UEJ42C		384.9	37.4	1.82	383.4	35.0	1.66
UFBZP6	M	No data reported for this sample			347.1	-1.3	-0.06
UQTPE3		325.0	-22.5	-1.10	326.6	-21.8	-1.03
UVAX33		374.3	26.8	1.31	377.1	28.7	1.36
UZ6P9D		350.5	3.0	0.15	352.0	3.6	0.17
VAKZVB		350.0	2.5	0.12	350.1	1.7	0.08
XMLBGM		343.9	-3.6	-0.17	351.3	2.9	0.14
XVWVHY		339.8	-7.7	-0.38	346.8	-1.6	-0.08
YL94V7		374.2	26.7	1.30	380.3	31.9	1.51
YMH9AU	*	393.0	45.5	2.22	384.7	36.3	1.72

Summary Statistics		
	Sample J95	Sample J96
Grand Means	347.53 ksi	348.41 ksi
Stnd Dev Btwn Labs	20.51 ksi	21.10 ksi
Statistics based on 49 of 55 reporting participants		

Sample J95: ABS & Sample J96: ABS

Comments on Assigned Data Flags for Test #720

- H2GMCL (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- TD6HRA (X) - Data for both samples are low. Possible Systematic Error.
- 2CPQG7 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- TTMBFG (X) - Data for both samples are low. Possible Systematic Error.
- 8YLDPM (X) - Data for both samples are low. Possible Systematic Error.
- UFBZP6 (M) - Participant did not submit data for sample J95.



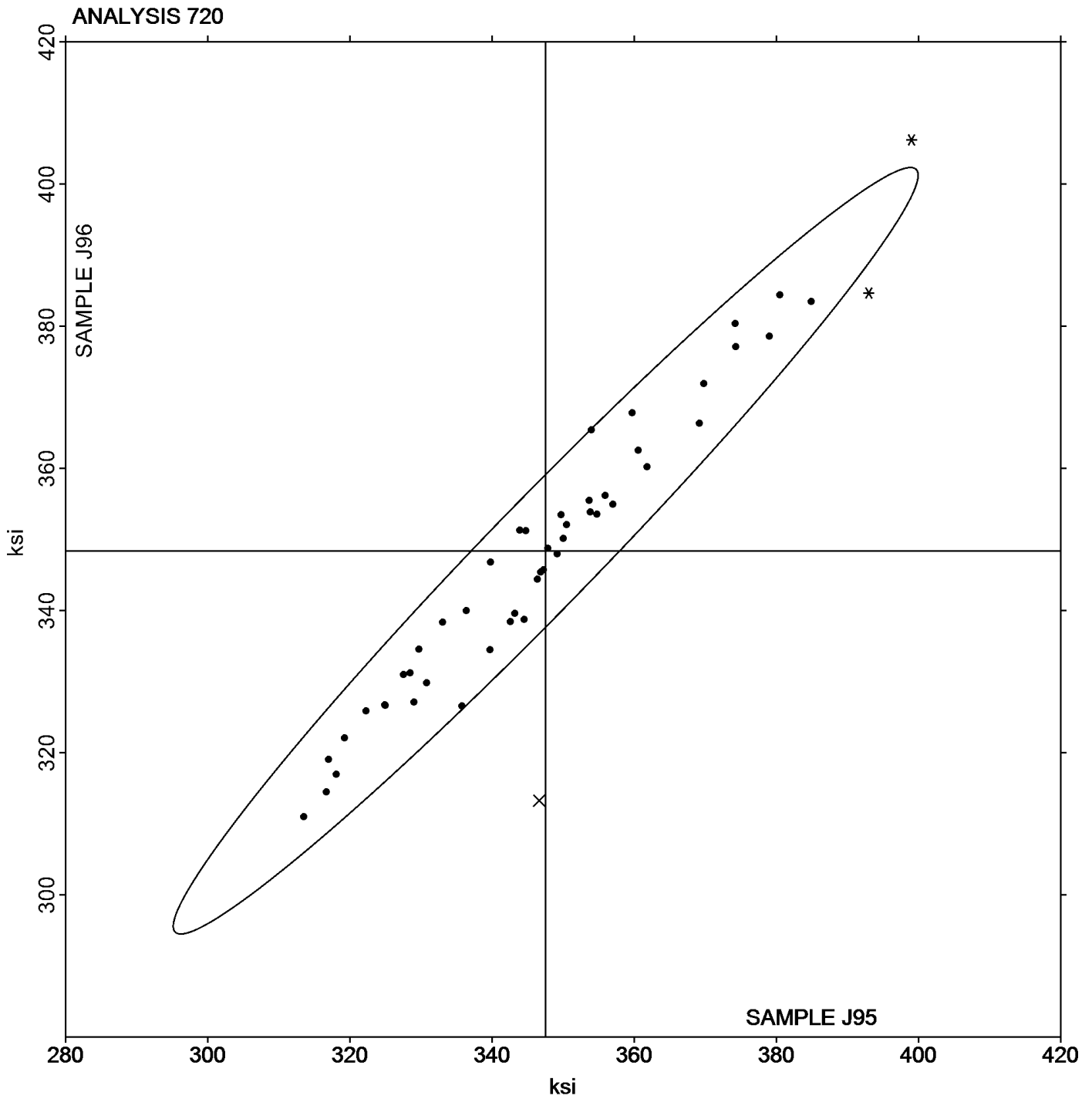
Plastics Interlaboratory Testing Program

Analysis 720 Flexural Modulus- ksi

Report #128

4th Qtr 2023

Grand Mean Sample J95: 347.53 ksi Grand Mean Sample J96: 348.41 ksi





Plastics Interlaboratory Testing Program

Report #128

Analysis 721

4th Qtr 2023

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J95			Sample J96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
83QPVN		10,157	257	0.47	10,232	294	0.53
87LJTP		10,134	233	0.43	10,232	294	0.53
88CW4V		10,425	525	0.96	10,399	461	0.84
8MCNWD		10,101	201	0.37	10,205	268	0.49
8YLDPM	*	8,359	-1,541	-2.83	8,431	-1,507	-2.74
9PEVQP		9,724	-176	-0.32	9,675	-262	-0.48
ADGMBJ		9,950	50	0.09	9,928	-10	-0.02
B9J48Z		10,053	153	0.28	9,967	29	0.05
BCW9EU		9,636	-264	-0.49	9,653	-285	-0.52
BQK7LJ		9,714	-186	-0.34	9,826	-112	-0.20
BUZEAJ		9,424	-477	-0.88	9,450	-488	-0.89
CCDTFJ		9,744	-156	-0.29	9,756	-181	-0.33
CV6TR9	X	10,007	107	0.20	9,718	-220	-0.40
F8Q4UW		10,374	473	0.87	10,358	420	0.76
GJ2UAD		9,671	-229	-0.42	9,712	-226	-0.41
H2GMCL		10,112	212	0.39	10,223	285	0.52
HT2XML	*	11,122	1,222	2.25	11,259	1,322	2.40
HW6EBH		10,061	161	0.30	10,043	106	0.19
JW2ENM		9,374	-526	-0.97	9,404	-534	-0.97
K7HH9R		9,660	-241	-0.44	9,713	-225	-0.41
KNHEHA		10,025	125	0.23	10,002	64	0.12
L2HQDZ		9,995	95	0.17	10,039	102	0.18
L7FBGJ		10,087	187	0.34	10,109	171	0.31
LQ3TKP		9,938	38	0.07	9,922	-15	-0.03
MW69VH		10,608	708	1.30	10,651	713	1.29
MXZTHH		9,114	-786	-1.44	9,190	-748	-1.36
N42K6K		9,642	-258	-0.47	9,810	-128	-0.23
NATUEH		9,946	45	0.08	10,047	109	0.20
NBKQ4C		10,620	720	1.32	10,680	742	1.35
P6CLQJ		10,379	479	0.88	10,433	495	0.90
PQVQD9		9,631	-269	-0.49	9,700	-238	-0.43
RKF3PG		9,354	-546	-1.00	9,418	-520	-0.94
RYGN4Y		9,177	-723	-1.33	9,249	-689	-1.25
TC3BVC		9,800	-100	-0.18	9,774	-164	-0.30
TD6HRA	*	8,426	-1,474	-2.71	8,349	-1,589	-2.88



Plastics Interlaboratory Testing Program

Report #128

Analysis 721

4th Qtr 2023

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J95			Sample J96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
TTMBFG		9,410	-490	-0.90	9,532	-406	-0.74
UEJ42C	X	9,594	-306	-0.56	9,209	-728	-1.32
UQTPE3		10,703	803	1.48	10,691	754	1.37
UVAX33		10,139	238	0.44	10,121	184	0.33
UZ6P9D		9,937	37	0.07	9,994	57	0.10
VAKZVB		10,024	123	0.23	10,098	160	0.29
XMLBGM	X	9,950	49	0.09	10,269	331	0.60
XVWVHY		10,104	204	0.37	10,034	96	0.17
YL94V7	*	10,466	566	1.04	10,709	771	1.40
YMH9AU		10,492	592	1.09	10,368	430	0.78

Summary Statistics

	Sample J95	Sample J96
Grand Means	9,900.4 psi	9,937.7 psi
Stnd Dev Btwn Labs	544.2 psi	550.7 psi

Statistics based on 42 of 45 reporting participants

Sample J95: ABS & Sample J96: ABS

Comments on Assigned Data Flags for Test #721

- XMLBGM (X) - Inconsistent in testing between samples.
- CV6TR9 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J95.
- UEJ42C (X) - Inconsistent in testing between samples.



Plastics Interlaboratory Testing Program

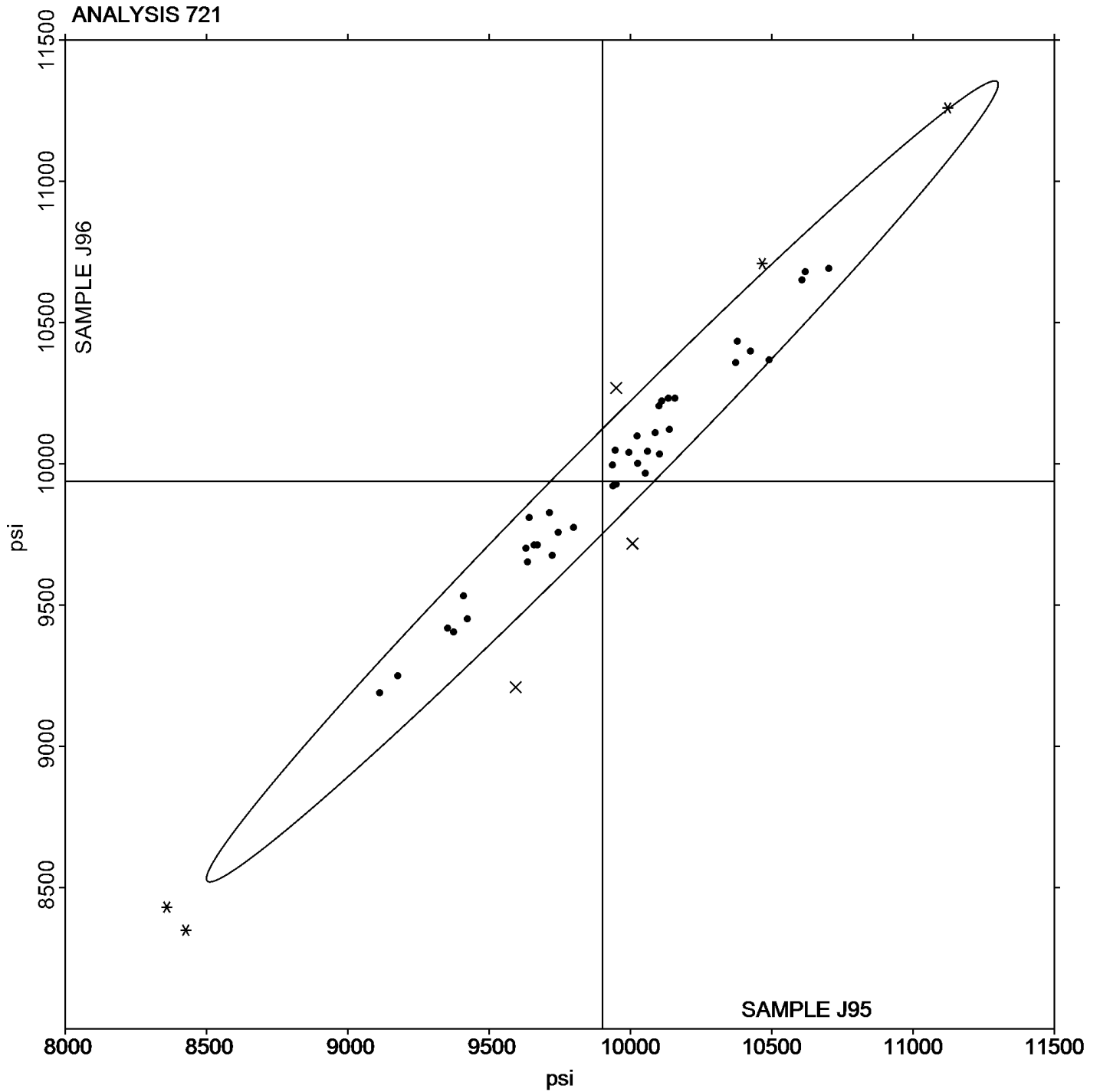
Report #128

Analysis 721

4th Qtr 2023

Flexural Stress at 5% Strain - psi

Grand Mean Sample J95: 9,900.43 psi Grand Mean Sample J96: 9,937.73 psi





Plastics Interlaboratory Testing Program

Report #128

Analysis 722

4th Qtr 2023

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J95			Sample J96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2CPQG7	X	6,832	-3,082	-5.82	6,826	-3,115	-5.89
4MGUX6		10,400	486	0.92	10,400	459	0.87
83QPVN		10,166	252	0.48	10,237	296	0.56
87LJTP		10,130	216	0.41	10,225	284	0.54
88CW4V		10,456	542	1.02	10,422	481	0.91
8MCNWD		10,153	239	0.45	10,242	301	0.57
8YLDPM	*	8,436	-1,478	-2.79	8,518	-1,423	-2.69
9PEVQP		9,737	-177	-0.33	9,688	-253	-0.48
ADGMBJ		9,892	-22	-0.04	9,882	-59	-0.11
B9J48Z		10,085	171	0.32	10,010	69	0.13
BCW9EU		9,636	-278	-0.52	9,640	-301	-0.57
BQK7LJ		9,725	-189	-0.36	9,840	-101	-0.19
BUZEAJ		9,920	6	0.01	9,947	6	0.01
CCDTFJ		9,953	39	0.07	9,939	-2	0.00
CV6TR9	X	8,702	-1,212	-2.29	8,168	-1,773	-3.35
GJ2UAD		9,692	-223	-0.42	9,729	-212	-0.40
H2GMCL		10,132	218	0.41	10,238	297	0.56
HT2XML	*	11,137	1,223	2.31	11,280	1,338	2.53
HW6EBH	M	No data reported for this sample			9,973	32	0.06
JW2ENM		9,401	-513	-0.97	9,433	-509	-0.96
K7HH9R		9,675	-239	-0.45	9,739	-203	-0.38
KNHEHA		10,041	127	0.24	10,010	69	0.13
L2HQDZ		10,017	103	0.19	10,053	112	0.21
L7FBGJ		10,121	207	0.39	10,145	204	0.39
LQ3TKP		9,977	63	0.12	9,971	30	0.06
LVH8DP		10,265	351	0.66	10,240	299	0.57
MW69VH		10,617	703	1.33	10,661	720	1.36
MXZTHH		9,175	-739	-1.39	9,213	-728	-1.38
N42K6K		9,682	-232	-0.44	9,832	-109	-0.21
NATUEH		10,018	104	0.20	10,163	222	0.42
P6CLQJ		10,389	475	0.90	10,441	500	0.95
PN4VNE		10,002	88	0.17	9,974	32	0.06
PQVQD9		9,643	-271	-0.51	9,705	-236	-0.45
RKF3PG		9,428	-486	-0.92	9,485	-456	-0.86
RYGN4Y		9,215	-699	-1.32	9,288	-653	-1.23



Plastics Interlaboratory Testing Program

Report #128

Analysis 722

4th Qtr 2023

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J95			Sample J96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
T6J8QV		9,694	-220	-0.42	9,561	-381	-0.72
TC3BVC		9,819	-95	-0.18	9,860	-81	-0.15
TD6HRA	*	8,331	-1,583	-2.99	8,339	-1,602	-3.03
TTMBFG	M	No data reported for this sample			9,390	-551	-1.04
UEJ42C	X	9,206	-708	-1.34	8,695	-1,246	-2.36
UFBZP6	X	7,709	-2,205	-4.16	10,470	528	1.00
UQTPE3		10,700	786	1.48	10,720	779	1.47
UZ6P9D		9,964	50	0.09	10,013	72	0.14
VAKZVB		10,031	117	0.22	10,107	165	0.31
XMLBGM	X	9,950	36	0.07	10,298	356	0.67
XVWVHY		10,172	258	0.49	10,062	121	0.23
YMH9AU		10,533	619	1.17	10,398	457	0.86

Summary Statistics

	Sample J95	Sample J96
Grand Means	9,914.0 psi	9,941.3 psi
Std Dev Btwn Labs	529.9 psi	528.7 psi

Statistics based on 40 of 47 reporting participants

Sample J95: ABS & Sample J96: ABS

Comments on Assigned Data Flags for Test #722

- XMLBGM (X) - Inconsistent in testing between samples.
- CV6TR9 (X) - Data for sample J96 are low. Inconsistent within the determinations of both samples.
- HW6EBH (M) - Participant did not submit data for sample J95.
- 2CPQG7 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- UEJ42C (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J96.
- TTMBFG (M) - Participant did not submit data for sample J95.
- UFBZP6 (X) - Data for sample J95 are low.



Plastics Interlaboratory Testing Program

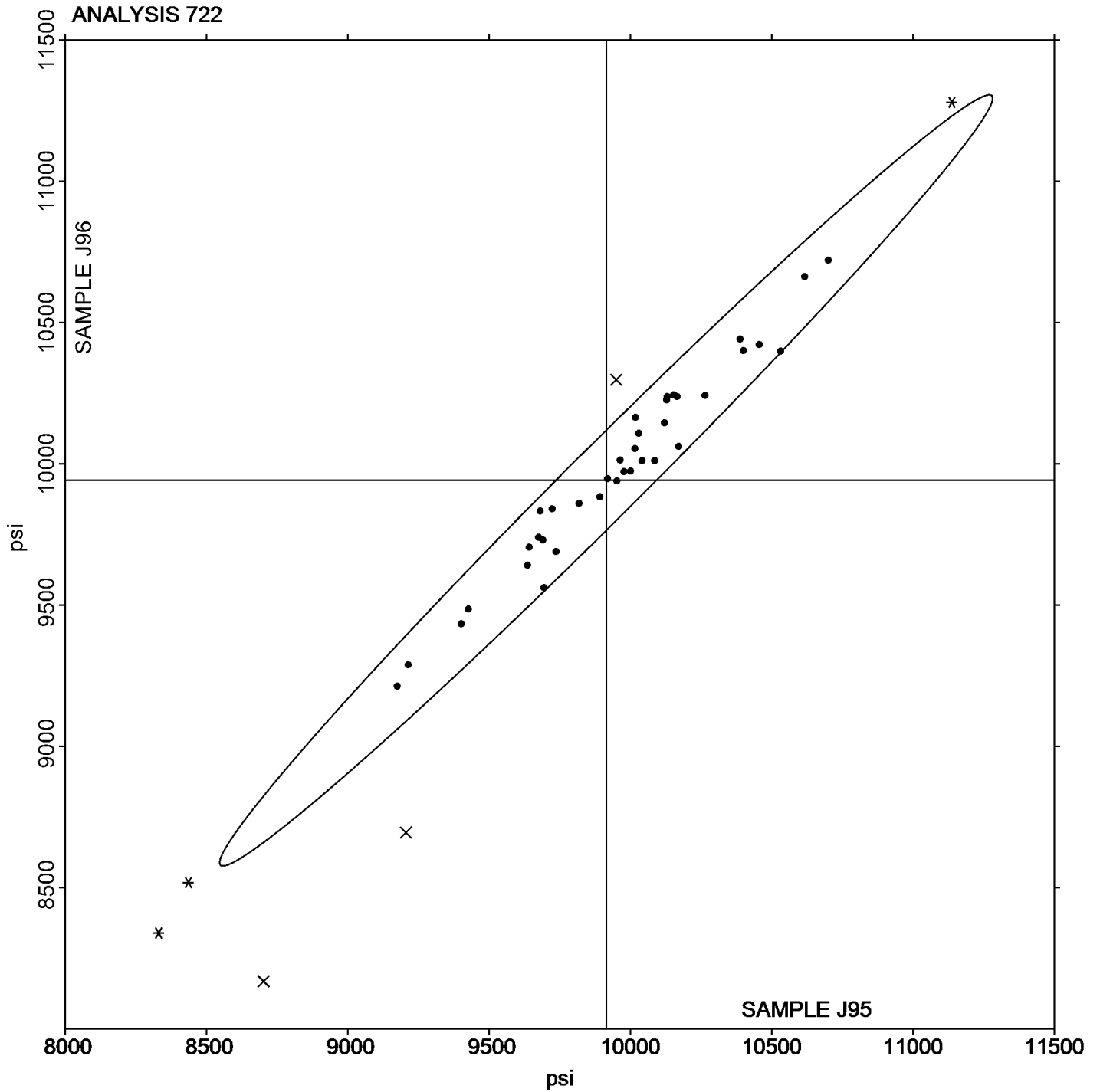
Report #128

Analysis 722

4th Qtr 2023

Flexural Stress at Yield - psi

Grand Mean Sample J95: 9,914.02 psi Grand Mean Sample J96: 9,941.35 psi





Plastics Interlaboratory Testing Program

Report #128

Analysis 730

4th Qtr 2023

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C95			Sample C96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2LEEDU	X	52.62	2.83	4.61	52.66	2.87	4.58
3B9UN7	X	51.56	1.77	2.89	51.00	1.21	1.94
3GDQAR		48.89	-0.90	-1.47	48.90	-0.89	-1.41
6MXR7M		49.41	-0.38	-0.62	49.18	-0.61	-0.97
87LJTP		49.25	-0.54	-0.88	49.29	-0.50	-0.80
8G2MPN		49.70	-0.09	-0.15	49.64	-0.15	-0.23
9BFZJP		50.25	0.46	0.75	50.18	0.40	0.64
9PEVQP		49.30	-0.49	-0.80	49.17	-0.62	-0.98
B8R8H7		50.67	0.88	1.44	50.63	0.84	1.34
BC2NRU		49.75	-0.04	-0.06	49.38	-0.41	-0.65
C9TTKW		50.25	0.46	0.76	50.22	0.44	0.70
CCDTFJ	X	48.42	-1.37	-2.24	49.14	-0.65	-1.03
CNN46U	X	52.93	3.14	5.12	53.29	3.51	5.59
D99B49		50.08	0.29	0.47	50.06	0.27	0.44
DHXZZW		49.72	-0.07	-0.11	49.82	0.03	0.05
DKHX7E		48.77	-1.02	-1.67	48.83	-0.95	-1.52
EG24N8		49.82	0.03	0.05	49.72	-0.07	-0.10
EQMANW		49.18	-0.61	-1.00	49.36	-0.43	-0.68
F8Q4UW		49.43	-0.36	-0.59	49.32	-0.46	-0.74
G4AW7W		49.82	0.03	0.05	49.82	0.04	0.06
GE8WJ2		49.70	-0.09	-0.15	49.56	-0.23	-0.36
GJ2UAD		48.90	-0.89	-1.45	49.21	-0.57	-0.91
HMVAZC		50.08	0.29	0.47	50.19	0.40	0.64
HW6EBH		48.94	-0.85	-1.38	49.07	-0.71	-1.14
J2AVWB		49.22	-0.57	-0.93	49.36	-0.43	-0.68
JEYNJC		50.03	0.23	0.38	50.08	0.30	0.47
JMPAMP	X	49.65	-0.14	-0.24	48.46	-1.33	-2.11
JY68FZ		50.26	0.47	0.76	50.17	0.38	0.61
K7HH9R		49.18	-0.61	-0.99	48.97	-0.82	-1.30
KNHEHA	X	47.45	-2.34	-3.81	48.03	-1.75	-2.80
L6LBEE		50.03	0.24	0.38	50.22	0.43	0.69
L7FBGJ		49.39	-0.40	-0.66	49.21	-0.58	-0.92
LVH8DP		49.96	0.17	0.28	49.70	-0.09	-0.14
MMFH9Q		50.29	0.50	0.81	50.55	0.77	1.23
MNR4W7		50.51	0.72	1.17	50.28	0.49	0.79



Plastics Interlaboratory Testing Program

Report #128

Analysis 730

4th Qtr 2023

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C95			Sample C96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NA82ZZ	X	49.72	-0.07	-0.11	50.51	0.72	1.15
NATUEH		50.72	0.93	1.51	50.79	1.00	1.60
NBKQ4C		49.51	-0.28	-0.46	49.34	-0.44	-0.71
NGNWGU		48.64	-1.15	-1.88	48.62	-1.17	-1.86
NL466U		50.45	0.66	1.07	50.25	0.46	0.74
P698DH	X	47.94	-1.85	-3.01	49.48	-0.31	-0.49
P6CLQJ		50.80	1.01	1.65	50.76	0.97	1.55
PN4VNE		50.36	0.57	0.93	50.32	0.54	0.86
PTGD7V		50.53	0.74	1.21	50.75	0.96	1.54
PUM8EZ		49.54	-0.25	-0.41	49.86	0.07	0.12
QHA8H8		50.18	0.39	0.64	50.21	0.42	0.67
R6M8DQ		49.82	0.03	0.04	49.95	0.16	0.26
RWPF6W		49.44	-0.35	-0.57	49.80	0.01	0.02
T6J8QV		49.47	-0.32	-0.52	49.74	-0.05	-0.08
T9HJLV	X	49.46	-0.33	-0.54	48.82	-0.96	-1.53
TDALU2		50.21	0.42	0.68	50.26	0.48	0.76
TTMBFG	X	48.78	-1.01	-1.65	48.04	-1.75	-2.78
U4W3K2		50.36	0.57	0.93	50.21	0.42	0.67
UDRYVJ	*	48.34	-1.45	-2.37	48.01	-1.78	-2.84
UFBZP6		49.06	-0.73	-1.19	48.89	-0.90	-1.43
UN8T7C		48.82	-0.97	-1.58	48.80	-0.99	-1.57
UQTPE3		49.68	-0.11	-0.18	49.82	0.03	0.05
UVAX33		49.97	0.18	0.30	49.98	0.19	0.31
UXDQUF		50.94	1.15	1.87	50.78	1.00	1.59
UZ6P9D		49.29	-0.50	-0.82	49.14	-0.65	-1.03
VAHHPY		50.03	0.24	0.39	50.12	0.33	0.53
W3FTKZ	X	49.11	-0.68	-1.11	47.95	-1.84	-2.93
WPCFE2		49.55	-0.24	-0.40	49.86	0.07	0.12
XAFKFF		49.60	-0.19	-0.31	49.48	-0.31	-0.49
XDGLGX		50.39	0.60	0.98	50.48	0.69	1.10
XJL3DD		51.12	1.33	2.17	50.96	1.18	1.88
XNEDXB		50.01	0.22	0.36	50.37	0.59	0.94
ZH2EG3		50.46	0.67	1.09	50.15	0.37	0.59
ZTWKBZ		49.78	-0.01	-0.02	49.78	-0.01	-0.01



Plastics Interlaboratory Testing Program

Report #128

Analysis 730

4th Qtr 2023

Tensile Stress at Yield - MPa

Summary Statistics	Sample C95	Sample C96
Grand Means	49.790 MPa	49.786 MPa
Stnd Dev Btwn Labs	0.613 MPa	0.627 MPa
Statistics based on 58 of 69 reporting participants		

Sample C95: ABS/PC & Sample C96: ABS/PC

Comments on Assigned Data Flags for Test #730

- NA82ZZ (X) - Inconsistent in testing between samples.
- T9HJLV (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample C95.
- P698DH (X) - Data for sample C95 are low. Inconsistent within the determinations of sample C95.
- CNN46U (X) - Data for both samples are high. Possible Systematic Error.
- TTMBFG (X) - Data for sample C96 are low. Inconsistent within the determinations of sample C96.
- JMPAMP (X) - Inconsistent in testing between samples.
- 3B9UN7 (X) - Data for sample C95 are high. Inconsistent within the determinations of both samples.
- KNHEHA (X) - Data for both samples are low. Possible Systematic Error.
- 2LEEDU (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample C95.
- W3FTKZ (X) - Data for sample C96 are low. Inconsistent within the determinations of sample C95.
- CCDTFJ (X) - Inconsistent in testing between samples.



Plastics Interlaboratory Testing Program

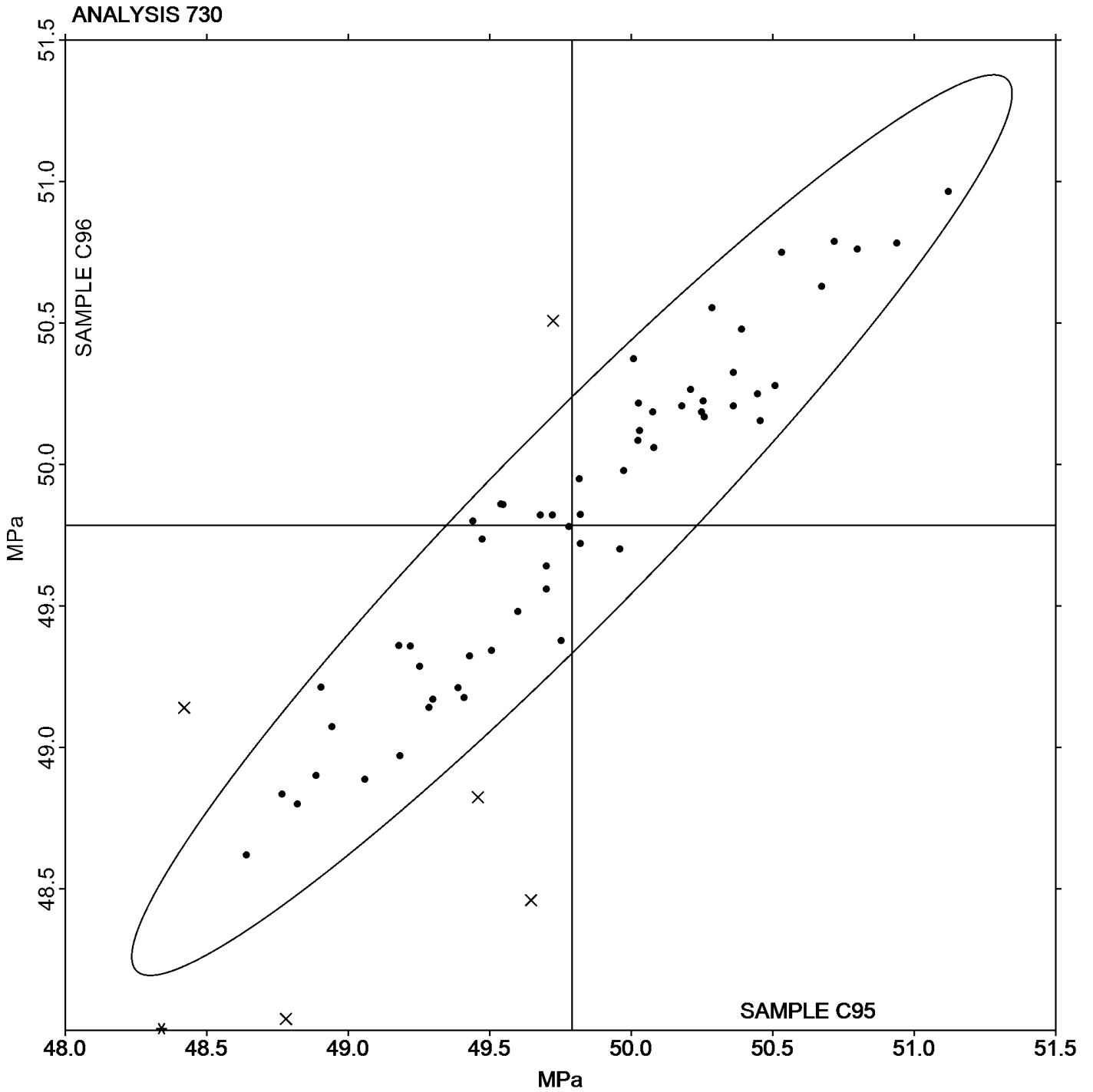
Analysis 730

Tensile Stress at Yield - MPa

Report #128

4th Qtr 2023

Grand Mean Sample C95: 49.790 MPa Grand Mean Sample C96: 49.786 MPa





Plastics Interlaboratory Testing Program

Report #128

Analysis 731

4th Qtr 2023

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C95			Sample C96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2LEEDU		50.78	3.77	1.39	53.40	6.47	2.38
3B9UN7		50.41	3.40	1.25	47.43	0.50	0.18
3GDQAR		49.45	2.44	0.90	51.13	4.20	1.54
6MXR7M		43.63	-3.38	-1.24	44.54	-2.39	-0.88
87LJTP		46.98	-0.03	-0.01	45.48	-1.45	-0.53
8G2MPN		49.66	2.65	0.98	49.42	2.49	0.91
9BFZJP		48.22	1.22	0.45	48.96	2.02	0.74
9PEVQP		45.67	-1.34	-0.49	42.29	-4.65	-1.71
B8R8H7		48.45	1.44	0.53	50.06	3.13	1.15
BC2NRU		51.23	4.23	1.56	51.55	4.62	1.70
C9TTKW		45.08	-1.93	-0.71	45.49	-1.44	-0.53
CCDTFJ		43.88	-3.13	-1.15	43.88	-3.05	-1.12
CNN46U		49.13	2.12	0.78	49.70	2.77	1.02
D99B49		45.62	-1.39	-0.51	47.26	0.33	0.12
DKHX7E		49.58	2.57	0.95	49.38	2.45	0.90
EG24N8		48.04	1.03	0.38	45.66	-1.27	-0.47
EQMANW		41.82	-5.19	-1.91	42.52	-4.41	-1.62
F8Q4UW		43.86	-3.15	-1.16	43.59	-3.35	-1.23
G4AW7W		50.31	3.31	1.22	49.90	2.96	1.09
GJ2UAD		46.64	-0.37	-0.14	50.72	3.79	1.39
HW6EBH		48.87	1.86	0.69	49.85	2.91	1.07
J2AVWB		43.77	-3.24	-1.19	43.91	-3.02	-1.11
JEYNJC		43.40	-3.61	-1.33	43.96	-2.97	-1.09
JMPAMP		50.43	3.42	1.26	50.10	3.17	1.17
JY68FZ		44.43	-2.57	-0.95	45.76	-1.18	-0.43
K7HH9R		45.42	-1.59	-0.58	45.26	-1.67	-0.61
KNHEHA		44.72	-2.29	-0.84	44.18	-2.75	-1.01
L7FBGJ		43.94	-3.06	-1.13	43.80	-3.13	-1.15
MMFH9Q		48.12	1.12	0.41	46.57	-0.36	-0.13
MNR4W7		44.99	-2.02	-0.74	45.01	-1.92	-0.71
NA82ZZ		46.17	-0.84	-0.31	46.54	-0.40	-0.15
NATUEH	*	51.61	4.60	1.69	45.01	-1.92	-0.71
NBKQ4C	*	49.51	2.50	0.92	43.59	-3.34	-1.23
P698DH		42.33	-4.68	-1.72	43.30	-3.63	-1.33
P6CLQJ		49.94	2.93	1.08	45.80	-1.13	-0.42



Plastics Interlaboratory Testing Program

Report #128

Analysis 731

4th Qtr 2023

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C95			Sample C96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PTGD7V		44.98	-2.03	-0.75	45.24	-1.69	-0.62
PUM8EZ		44.92	-2.09	-0.77	47.34	0.41	0.15
QHA8H8		45.69	-1.32	-0.48	47.73	0.80	0.29
R6M8DQ		49.38	2.37	0.87	52.26	5.33	1.96
RWPF6W		49.44	2.43	0.90	49.80	2.87	1.05
T6J8QV		46.27	-0.74	-0.27	47.35	0.42	0.15
T9HJLV		46.55	-0.45	-0.17	46.65	-0.29	-0.11
TDALU2		50.98	3.97	1.46	46.81	-0.12	-0.04
TTMBFG		42.54	-4.47	-1.64	47.42	0.49	0.18
U4W3K2		50.47	3.46	1.27	49.54	2.61	0.96
UDRYVJ		46.45	-0.56	-0.20	44.38	-2.55	-0.94
UFBZP6		42.64	-4.37	-1.61	44.03	-2.91	-1.07
UN8T7C		42.66	-4.35	-1.60	42.62	-4.31	-1.58
UQTPE3		44.26	-2.75	-1.01	43.84	-3.09	-1.14
UVAX33		45.38	-1.63	-0.60	50.62	3.69	1.36
UZ6P9D		49.59	2.58	0.95	47.53	0.60	0.22
V9U2GC		47.98	0.97	0.36	49.97	3.04	1.12
VAHHPY		48.82	1.81	0.67	47.24	0.30	0.11
W3FTKZ		48.86	1.85	0.68	47.64	0.71	0.26
WPCFE2		50.10	3.10	1.14	48.21	1.28	0.47
XAFKFF		44.54	-2.47	-0.91	43.68	-3.25	-1.19
XDGLGX		50.06	3.05	1.12	48.78	1.85	0.68
XJL3DD		45.74	-1.27	-0.47	45.35	-1.58	-0.58
XNEDXB		49.61	2.60	0.96	47.87	0.94	0.35
ZH2EG3		46.05	-0.95	-0.35	46.21	-0.72	-0.26
ZTWKBZ		47.42	0.41	0.15	49.75	2.82	1.04

Summary Statistics		
	Sample C95	Sample C96
Grand Means	47.007 MPa	46.932 MPa
Stnd Dev Btwn Labs	2.716 MPa	2.722 MPa

Statistics based on 61 of 61 reporting participants

Sample C95: ABS/PC & Sample C96: ABS/PC



Plastics Interlaboratory Testing Program

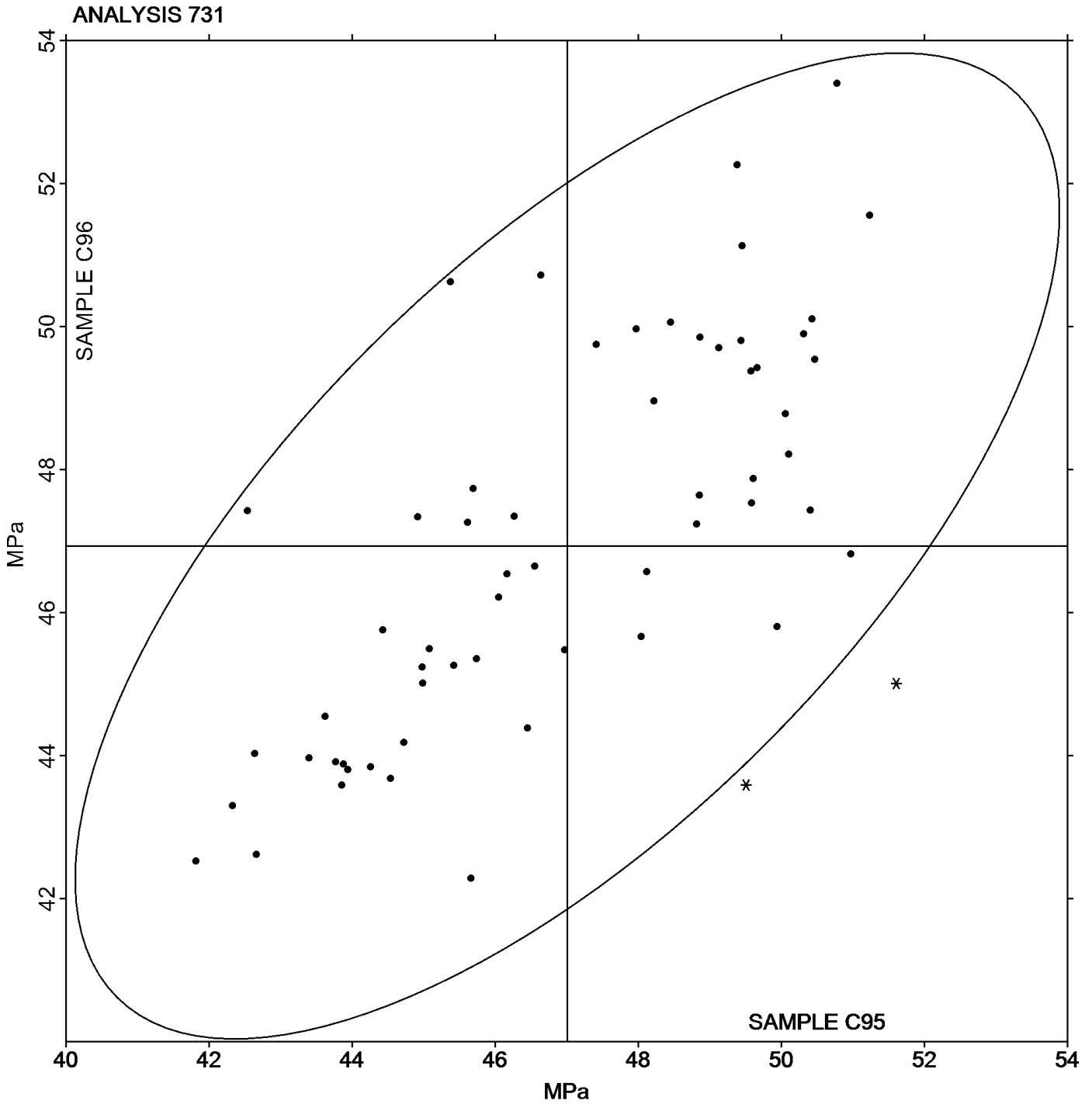
Analysis 731

Tensile Stress at Break - MPa

Report #128

4th Qtr 2023

Grand Mean Sample C95: 47.007 MPa Grand Mean Sample C96: 46.932 MPa





Plastics Interlaboratory Testing Program

Report #128

Analysis 732

4th Qtr 2023

Percent Strain at Yield

WebCode	Data Flag	Sample C95			Sample C96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2LEEDU	X	1.766	-2.426	-19.44	1.852	-2.324	-19.74
3B9UN7		4.024	-0.168	-1.35	4.026	-0.150	-1.27
3GDQAR		4.136	-0.057	-0.45	4.149	-0.027	-0.23
6MXR7M		4.316	0.124	0.99	4.282	0.105	0.89
87LJTP		4.042	-0.150	-1.20	4.052	-0.124	-1.06
8G2MPN		4.020	-0.172	-1.38	4.080	-0.096	-0.82
9BFZJP		4.282	0.090	0.72	4.282	0.106	0.90
9PEVQP		4.138	-0.054	-0.44	4.126	-0.050	-0.43
B8R8H7		4.260	0.068	0.54	4.270	0.094	0.80
BC2NRU		4.152	-0.040	-0.32	4.166	-0.010	-0.09
C9TTKW		4.128	-0.064	-0.52	4.108	-0.068	-0.58
CCDTFJ		4.260	0.068	0.54	4.330	0.154	1.30
CNN46U		4.122	-0.070	-0.56	4.222	0.046	0.39
D99B49		4.140	-0.052	-0.42	4.140	-0.036	-0.31
DHXZZW		4.170	-0.022	-0.18	4.204	0.028	0.23
DKHX7E		4.193	0.000	0.00	4.103	-0.073	-0.62
EG24N8		4.334	0.142	1.13	4.238	0.062	0.52
EQMANW		4.342	0.150	1.20	4.384	0.208	1.76
F8Q4UW	X	3.158	-1.034	-8.29	3.172	-1.004	-8.53
G4AW7W		4.172	-0.020	-0.16	4.150	-0.026	-0.22
GE8WJ2		4.132	-0.060	-0.48	4.148	-0.028	-0.24
GJ2UAD	*	3.862	-0.330	-2.65	3.952	-0.224	-1.91
HW6EBH		4.214	0.022	0.17	4.176	0.000	0.00
J2AVWB		4.354	0.162	1.29	4.274	0.098	0.83
JEYNJC		3.934	-0.258	-2.07	3.974	-0.202	-1.72
JMPAMP		4.272	0.080	0.64	4.210	0.034	0.29
JY68FZ	*	4.184	-0.008	-0.07	3.980	-0.196	-1.67
K7HH9R		4.150	-0.042	-0.34	4.178	0.002	0.01
KNHEHA		4.330	0.138	1.10	4.278	0.102	0.86
L7FBGJ	X	4.064	-0.128	-1.03	4.336	0.160	1.36
MMFH9Q		4.282	0.090	0.72	4.252	0.076	0.64
MNR4W7		4.184	-0.008	-0.07	4.132	-0.044	-0.38
NA82ZZ		4.124	-0.068	-0.55	4.133	-0.043	-0.37
NBKQ4C		4.282	0.090	0.72	4.120	-0.056	-0.48
NL466U		4.290	0.098	0.78	4.282	0.106	0.90



Plastics Interlaboratory Testing Program

Report #128

Analysis 732

4th Qtr 2023

Percent Strain at Yield

WebCode	Data Flag	Sample C95			Sample C96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
P698DH	X	3.522	-0.670	-5.37	3.638	-0.538	-4.57
P6CLQJ		4.360	0.168	1.34	4.300	0.124	1.05
PTGD7V		4.254	0.062	0.49	4.184	0.008	0.06
PUM8EZ		4.218	0.026	0.21	4.214	0.038	0.32
QHA8H8	X	4.804	0.612	4.90	5.374	1.198	10.17
R6M8DQ		4.262	0.070	0.56	4.264	0.088	0.74
RWPF6W	X	3.820	-0.372	-2.98	3.640	-0.536	-4.56
T6J8QV		4.152	-0.040	-0.32	4.198	0.022	0.18
T9HJLV	*	4.118	-0.074	-0.60	3.936	-0.240	-2.04
TDALU2		3.888	-0.304	-2.44	3.952	-0.224	-1.91
U4W3K2		4.292	0.100	0.80	4.268	0.092	0.78
UDRYVJ	X	7.070	2.878	23.05	7.028	2.852	24.22
UFBZP6		4.160	-0.032	-0.26	4.080	-0.096	-0.82
UN8T7C	*	4.418	0.226	1.81	4.502	0.326	2.77
UQTPE3		4.140	-0.052	-0.42	4.140	-0.036	-0.31
UVAX33		4.290	0.098	0.78	4.278	0.102	0.86
UXDQUF	X	4.372	0.180	1.44	4.634	0.458	3.89
UZ6P9D		3.984	-0.208	-1.67	4.030	-0.146	-1.24
VAHPY		4.274	0.082	0.65	4.270	0.094	0.80
W3FTKZ	X	3.146	-1.046	-8.38	2.851	-1.325	-11.26
WPCFE2	*	4.284	0.092	0.73	4.076	-0.100	-0.85
XAFKFF		4.120	-0.072	-0.58	4.100	-0.076	-0.65
XDGLGX		4.230	0.038	0.30	4.242	0.066	0.56
XJL3DD		4.457	0.265	2.12	4.366	0.190	1.61
XNEDXB	X	3.350	-0.842	-6.75	3.366	-0.810	-6.88
ZH2EG3		4.176	-0.016	-0.13	4.254	0.078	0.66
ZTWKBZ		4.102	-0.090	-0.72	4.117	-0.059	-0.50

Summary Statistics

Grand Means

Sample C95
4.1924 Percent

Sample C96
4.1764 Percent

Std Dev Btwn Labs

0.1248 Percent

0.1177 Percent

Statistics based on 52 of 62 reporting participants

Sample C95: ABS/PC & Sample C96: ABS/PC



Comments on Assigned Data Flags for Test #732

- RWPF6W (X) - Data for both samples are low. Possible Systematic Error.
- L7FBGJ (X) - Inconsistent in testing between samples.
- UXDQUF (X) - Data for sample C96 are high. Inconsistent within the determinations of both samples.
- UDRYVJ (X) - Extreme data.
- F8Q4UW (X) - Data for both samples are low. Inconsistent within the determinations of both samples.
- P698DH (X) - Data for both samples are low. Possible Systematic Error.
- XNEDXB (X) - Data for both samples are low. Possible Systematic Error.
- 2LEEDU (X) - Extreme data.
- W3FTKZ (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample C95.
- QHA8H8 (X) - Data for both samples are high. Inconsistent within the determinations of both samples.



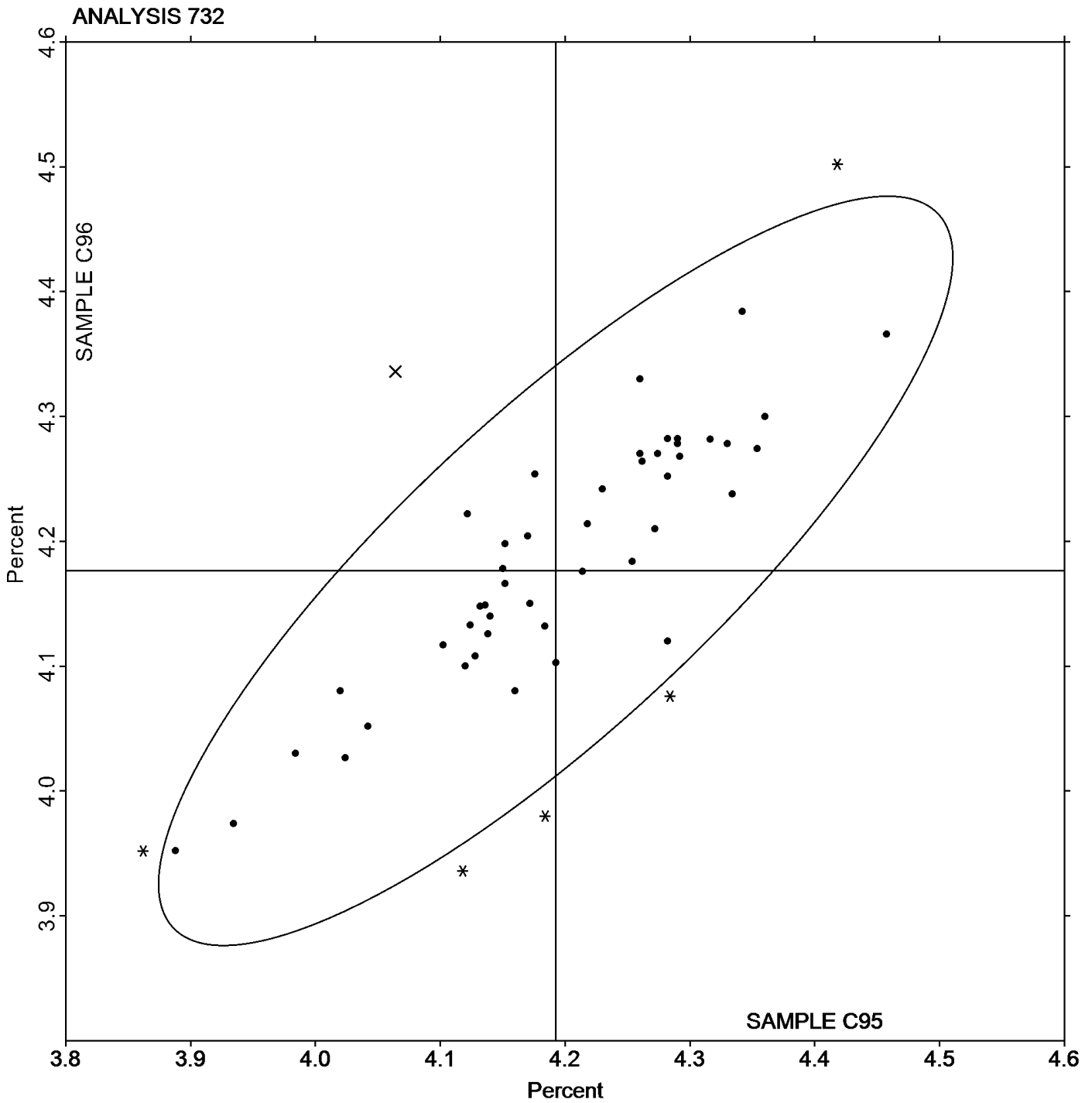
Plastics Interlaboratory Testing Program

Analysis 732 Percent Strain at Yield

Report #128

4th Qtr 2023

Grand Mean Sample C95: 4.1924 Percent Grand Mean Sample C96: 4.1764 Percent





Plastics Interlaboratory Testing Program

Report #128

Analysis 734

4th Qtr 2023

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C95			Sample C96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2LEEDU		2,408	107	1.10	2,406	108	1.04
3B9UN7		2,334	34	0.35	2,362	64	0.62
3GDQAR		2,349	48	0.50	2,338	40	0.39
6MXR7M		2,307	6	0.07	2,288	-10	-0.09
87LJTP		2,345	45	0.46	2,360	62	0.60
8G2MPN		2,300	0	0.00	2,303	5	0.05
9BFZJP		2,276	-24	-0.25	2,279	-19	-0.19
9PEVQP		2,297	-4	-0.04	2,310	12	0.12
B8R8H7		2,485	184	1.89	2,494	196	1.89
BC2NRU		2,334	34	0.35	2,340	42	0.40
C9TTKW		2,350	50	0.51	2,349	51	0.50
CCDTFJ		2,244	-57	-0.58	2,238	-60	-0.58
CNN46U		2,230	-70	-0.72	2,174	-124	-1.20
D99B49		2,356	56	0.57	2,315	17	0.16
DHXZZW		2,302	1	0.01	2,315	17	0.16
DKHX7E	X	2,112	-188	-1.93	2,199	-99	-0.96
EG24N8		2,184	-117	-1.20	2,141	-157	-1.52
EQMANW		2,328	28	0.28	2,322	24	0.24
G4AW7W		2,330	29	0.30	2,321	23	0.22
GJ2UAD		2,285	-16	-0.16	2,286	-12	-0.12
HW6EBH		2,319	19	0.19	2,336	38	0.37
J2AVWB		2,309	9	0.09	2,309	11	0.11
JEYNJC		2,248	-53	-0.54	2,265	-33	-0.32
JMPAMP		2,347	47	0.48	2,374	76	0.74
JY68FZ		2,422	122	1.25	2,360	62	0.60
K7HH9R		2,318	18	0.18	2,302	4	0.04
KNHEHA	X	1,943	-357	-3.67	2,003	-295	-2.85
L7FBGJ		2,284	-16	-0.16	2,287	-11	-0.10
MMFH9Q		2,393	93	0.95	2,374	76	0.73
MNR4W7		2,339	39	0.40	2,381	83	0.81
NA82ZZ		2,153	-147	-1.51	2,187	-111	-1.07
NBKQ4C		2,222	-78	-0.80	2,248	-50	-0.48
NL466U		2,241	-60	-0.61	2,246	-52	-0.50
P6CLQJ		2,210	-90	-0.93	2,196	-102	-0.98
PN4VNE		2,325	25	0.26	2,308	10	0.10



Plastics Interlaboratory Testing Program

Report #128

Analysis 734

4th Qtr 2023

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C95			Sample C96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PTGD7V		2,308	8	0.08	2,252	-46	-0.44
PUM8EZ		2,280	-20	-0.21	2,294	-4	-0.04
QHA8H8	X	1,712	-588	-6.04	1,739	-559	-5.40
R6M8DQ		2,204	-96	-0.99	2,179	-119	-1.15
RWPF6W	*	2,584	284	2.91	2,623	325	3.14
T6J8QV	*	2,269	-32	-0.32	2,178	-120	-1.16
T9HJLV	*	2,044	-256	-2.63	2,035	-263	-2.54
TDALU2		2,367	67	0.69	2,357	59	0.57
TTMBFG	X	3,164	864	8.87	3,122	824	7.96
U4W3K2		2,286	-14	-0.15	2,282	-16	-0.15
UDRYVJ		2,085	-216	-2.21	2,081	-217	-2.10
UFBZP6		2,357	57	0.58	2,377	79	0.77
UN8T7C		2,148	-152	-1.56	2,100	-198	-1.91
UQTPE3		2,280	-20	-0.21	2,266	-32	-0.31
UVAX33		2,281	-19	-0.20	2,318	21	0.20
UXDQUF		2,102	-198	-2.03	2,137	-161	-1.55
UZ6P9D		2,298	-2	-0.02	2,319	21	0.20
V9U2GC	X	2,594	294	3.01	2,483	185	1.79
VAHHPY		2,265	-35	-0.36	2,311	14	0.13
WPCFE2		2,321	21	0.22	2,292	-5	-0.05
XAFKFF		2,261	-39	-0.40	2,257	-41	-0.40
XDGLGX		2,383	83	0.85	2,358	60	0.58
XJL3DD		2,331	31	0.32	2,352	54	0.52
XNEDXB	*	2,566	266	2.73	2,592	294	2.84
ZH2EG3		2,390	89	0.92	2,331	33	0.32
ZTWKBZ		2,233	-67	-0.69	2,278	-20	-0.20

Summary Statistics		Sample C95	Sample C96
Grand Means		2,300.2 MPa	2,297.9 MPa
Std Dev Btwn Labs		97.4 MPa	103.5 MPa
Statistics based on 56 of 61 reporting participants			

Sample C95: ABS/PC & Sample C96: ABS/PC



Plastics Interlaboratory Testing Program

Analysis 734

Modulus of Elasticity - MPa

Report #128

4th Qtr 2023

Comments on Assigned Data Flags for Test #734

- V9U2GC (X) - Data for sample C95 are high. Inconsistent within the determinations of sample C96.
- TTMBFG (X) - Data for both samples are high.
- DKHX7E (X) - Inconsistent in testing between samples.
- KNHEHA (X) - Data for both samples are low. Possible Systematic Error.
- QHA8H8 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample C96.



Plastics Interlaboratory Testing Program

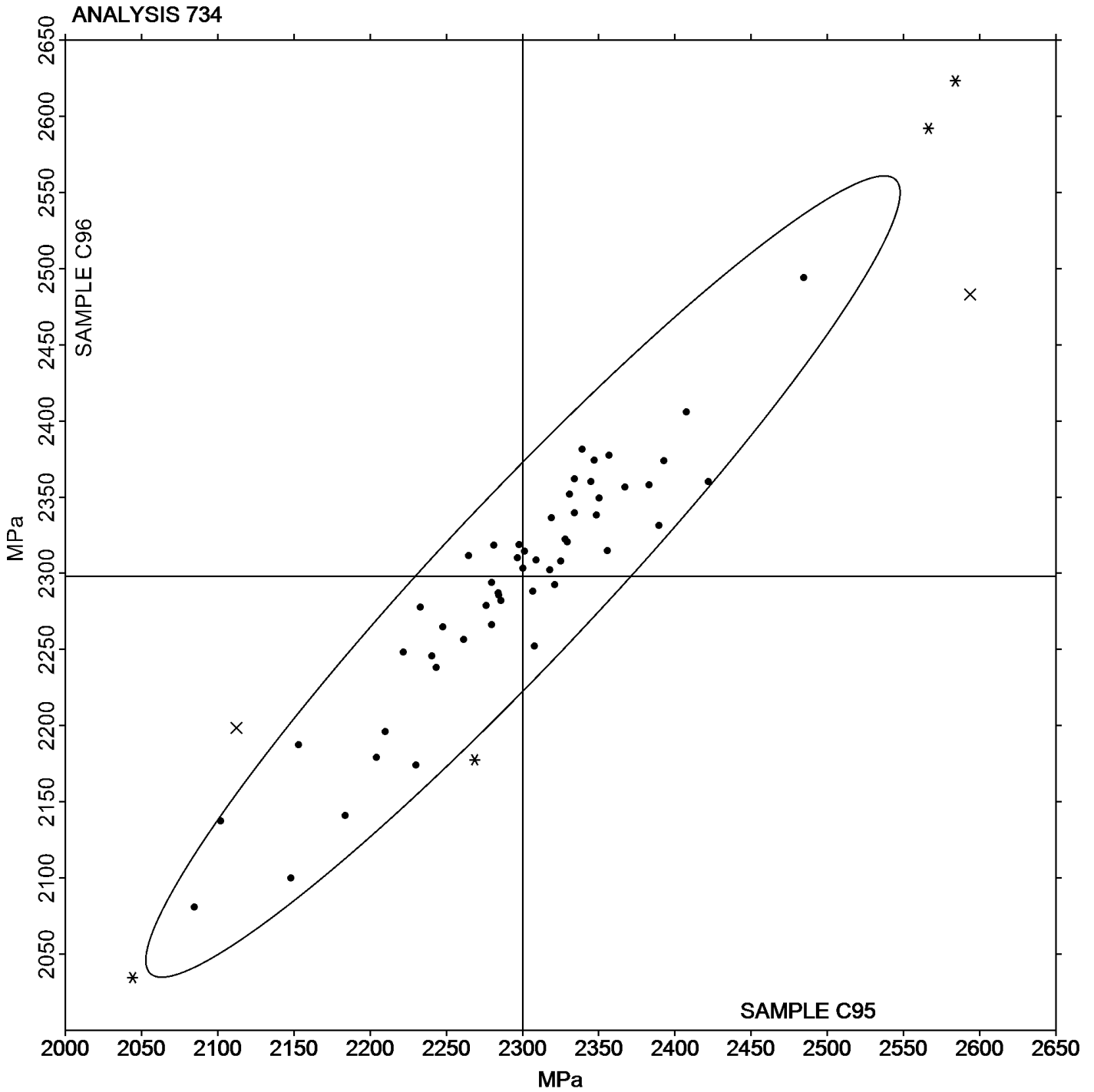
Analysis 734

Modulus of Elasticity - MPa

Report #128

4th Qtr 2023

Grand Mean Sample C95: 2,300.25 MPa Grand Mean Sample C96: 2,297.86 MPa





Plastics Interlaboratory Testing Program

Report #128

Analysis 736

4th Qtr 2023

Flexural Modulus - MPa

WebCode	Data Flag	Sample K95			Sample K96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2LEEDU		2,484	165	1.62	2,437	122	1.32
3B9UN7		2,322	3	0.03	2,306	-9	-0.10
4NEDND	X	2,191	-128	-1.25	2,487	172	1.86
6MXR7M		2,137	-182	-1.79	2,147	-168	-1.82
7JWUJ2		2,312	-7	-0.07	2,285	-30	-0.32
87LJTP		2,435	116	1.14	2,428	113	1.22
8G2MPN		2,416	97	0.95	2,397	82	0.89
9BFZJP		2,419	100	0.98	2,414	99	1.07
9PEVQP		2,303	-16	-0.15	2,318	3	0.04
B8R8H7		2,292	-27	-0.26	2,290	-24	-0.26
BC2NRU		2,444	125	1.23	2,436	122	1.32
C9TTKW		2,262	-57	-0.56	2,236	-79	-0.85
CNN46U		2,150	-169	-1.66	2,196	-119	-1.29
D99B49		2,261	-58	-0.57	2,296	-19	-0.20
DHXZZW		2,273	-46	-0.45	2,249	-65	-0.71
EG24N8		2,201	-119	-1.16	2,205	-110	-1.19
EQMANW		2,372	53	0.52	2,357	43	0.46
FGFRRK		2,166	-153	-1.50	2,210	-104	-1.13
G4AW7W		2,317	-3	-0.02	2,293	-22	-0.24
GE8WJ2		2,204	-115	-1.13	2,198	-117	-1.26
GJ2UAD		2,268	-51	-0.50	2,265	-50	-0.54
HMVAZC		2,308	-11	-0.11	2,302	-13	-0.14
HW6EBH		2,210	-109	-1.07	2,211	-104	-1.13
J2AVWB	X	2,246	-73	-0.72	2,321	6	0.07
JEYNJC		2,357	37	0.37	2,382	67	0.73
JMPAMP		2,381	62	0.61	2,390	76	0.82
JY68FZ		2,321	2	0.02	2,302	-13	-0.14
K7HH9R		2,339	20	0.19	2,314	0	0.00
L6LBEE		2,377	58	0.57	2,369	54	0.58
L7FBGJ		2,370	51	0.50	2,378	63	0.68
LVH8DP		2,384	65	0.64	2,366	51	0.56
MNR4W7		2,388	69	0.67	2,385	71	0.77
MVDAGK		2,274	-45	-0.44	2,272	-42	-0.46
NA82ZZ	*	2,541	222	2.18	2,547	232	2.52
NBKQ4C		2,451	132	1.29	2,451	136	1.48



Plastics Interlaboratory Testing Program

Report #128

Analysis 736

4th Qtr 2023

Flexural Modulus - MPa

WebCode	Data Flag	Sample K95			Sample K96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NGNWGU		2,292	-27	-0.27	2,286	-29	-0.31
NZ2CZA	*	2,381	62	0.61	2,318	3	0.04
P698DH		2,381	61	0.60	2,367	53	0.57
P6CLQJ		2,302	-17	-0.17	2,284	-31	-0.33
PN4VNE		2,323	4	0.04	2,337	23	0.25
PTGD7V		2,341	22	0.21	2,349	34	0.37
PUM8EZ		2,262	-57	-0.56	2,270	-45	-0.48
QHA8H8	X	2,843	524	5.14	2,867	552	5.98
R6M8DQ		2,303	-17	-0.16	2,299	-16	-0.17
RWPF6W	*	2,102	-217	-2.13	2,169	-146	-1.58
T6J8QV		2,134	-185	-1.82	2,169	-146	-1.58
T9HJLV		2,249	-70	-0.69	2,233	-82	-0.88
TTMBFG		2,532	213	2.09	2,482	167	1.81
UFBZP6		2,323	4	0.03	2,304	-10	-0.11
UVAX33		2,350	30	0.30	2,356	41	0.44
UXDQUF	*	2,039	-280	-2.74	2,036	-279	-3.02
UZ6P9D		2,225	-94	-0.92	2,210	-105	-1.13
V9U2GC		2,347	27	0.27	2,335	20	0.22
VAHHPY		2,265	-54	-0.53	2,272	-43	-0.47
WPCFE2		2,411	92	0.90	2,399	84	0.91
XAFKFF		2,319	0	0.00	2,322	7	0.08
XDGLGX		2,403	84	0.83	2,401	86	0.93
XJL3DD	X	2,377	57	0.56	2,280	-35	-0.38
XNEDXB		2,446	127	1.25	2,441	126	1.37
ZH2EG3		2,414	95	0.93	2,368	53	0.58
ZTWKBZ		2,305	-14	-0.14	2,299	-16	-0.17

Summary Statistics		Sample K95	Sample K96
Grand Means		2,319.1 MPa	2,314.7 MPa
Std Dev Btwn Labs		101.9 MPa	92.3 MPa
Statistics based on 57 of 61 reporting participants			

Sample K95: ABS/PC & Sample K96: ABS/PC



Plastics Interlaboratory Testing Program

Analysis 736

Flexural Modulus - MPa

Report #128

4th Qtr 2023

Comments on Assigned Data Flags for Test #736

- 4NEDND (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- XJL3DD (X) - Inconsistent in testing between samples.
- J2AVWB (X) - Inconsistent in testing between samples.
- QHA8H8 (X) - Data for both samples are high. Possible Systematic Error.



Plastics Interlaboratory Testing Program

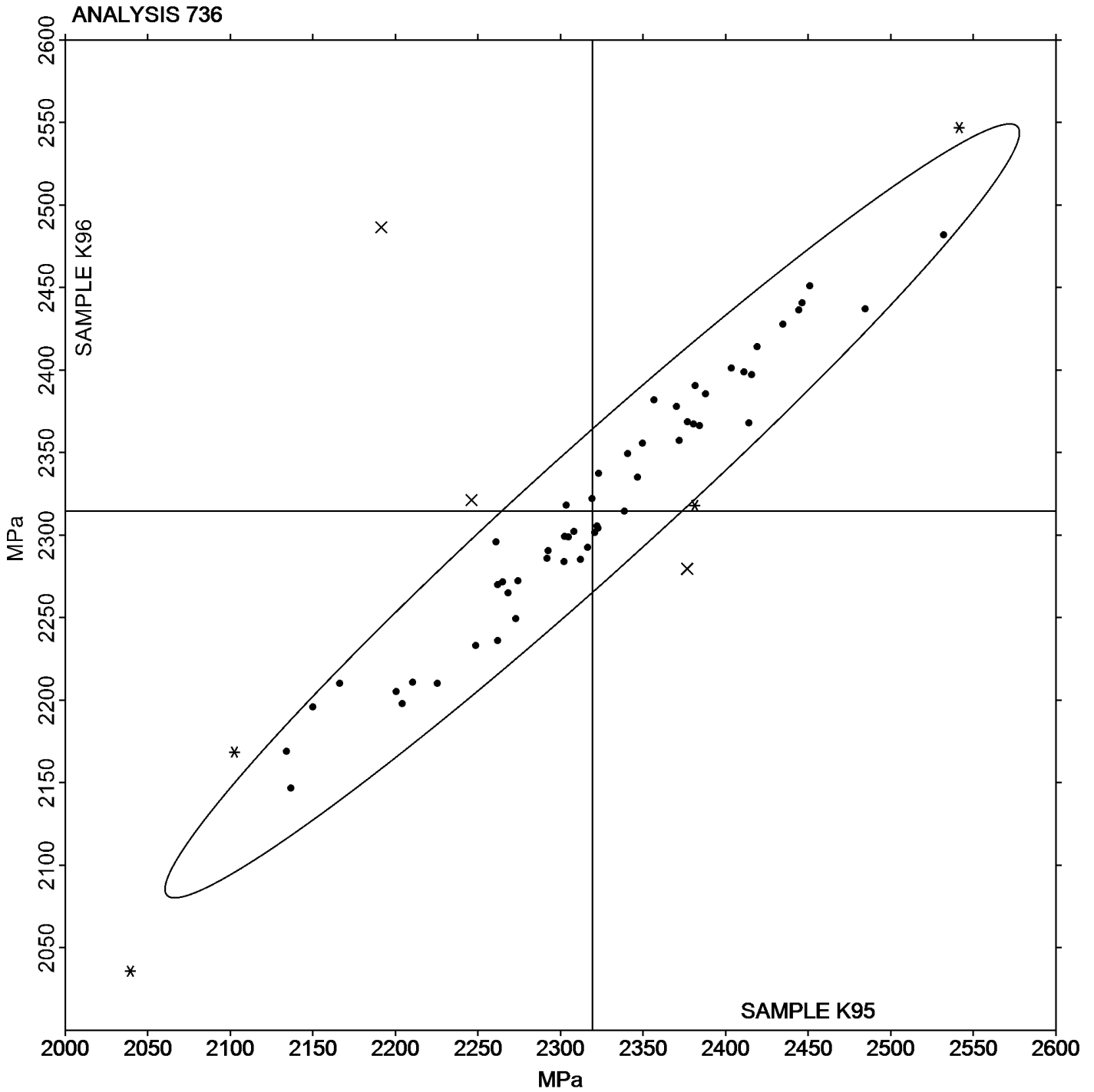
Analysis 736

Flexural Modulus - MPa

Report #128

4th Qtr 2023

Grand Mean Sample K95: 2,319.11 MPa Grand Mean Sample K96: 2,314.73 MPa





Plastics Interlaboratory Testing Program

Report #128

Analysis 737

4th Qtr 2023

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K95			Sample K96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2LEEDU		75.18	4.10	2.12	73.82	2.95	1.72
3B9UN7		71.02	-0.06	-0.03	71.47	0.59	0.34
4NEDND	X	74.41	3.33	1.72	79.59	8.71	5.09
6MXR7M		69.63	-1.45	-0.75	69.68	-1.19	-0.70
87LJTP		73.86	2.78	1.44	73.60	2.72	1.59
8G2MPN		73.46	2.39	1.23	72.88	2.01	1.17
9BFZJP		70.12	-0.96	-0.50	69.78	-1.10	-0.64
9PEVQP		68.49	-2.59	-1.34	68.88	-1.99	-1.16
B8R8H7		70.63	-0.45	-0.23	70.20	-0.68	-0.40
BC2NRU		73.56	2.48	1.28	72.18	1.31	0.76
C9TTKW		71.46	0.38	0.20	71.02	0.14	0.08
CNN46U		69.23	-1.85	-0.96	69.61	-1.26	-0.74
D99B49		71.01	-0.07	-0.04	71.52	0.64	0.37
DHXZZW		70.16	-0.92	-0.48	69.81	-1.07	-0.62
EG24N8		69.57	-1.51	-0.78	69.82	-1.06	-0.62
EQMANW		68.72	-2.36	-1.22	69.20	-1.68	-0.98
FGFRRK		68.48	-2.60	-1.34	68.81	-2.06	-1.21
G4AW7W		70.38	-0.70	-0.36	70.37	-0.51	-0.30
GJ2UAD		70.09	-0.99	-0.51	69.67	-1.21	-0.71
HW6EBH		68.04	-3.04	-1.57	68.03	-2.85	-1.66
J2AVWB		69.92	-1.16	-0.60	69.92	-0.96	-0.56
JEYNJC		67.67	-3.41	-1.76	67.97	-2.91	-1.70
JMPAMP		70.43	-0.64	-0.33	70.77	-0.11	-0.07
JY68FZ		70.96	-0.12	-0.06	70.37	-0.51	-0.30
K7HH9R		69.98	-1.10	-0.57	69.49	-1.39	-0.81
L7FBGJ		71.01	-0.06	-0.03	71.01	0.13	0.08
MNR4W7		74.59	3.52	1.82	74.62	3.74	2.18
MVDAGK		69.62	-1.46	-0.75	69.52	-1.36	-0.79
NA82ZZ		70.63	-0.45	-0.23	70.79	-0.09	-0.05
NBKQ4C	*	74.51	3.44	1.78	74.79	3.91	2.28
NZ2CZA	*	70.55	-0.52	-0.27	69.13	-1.75	-1.02
P698DH		72.56	1.49	0.77	72.39	1.51	0.88
P6CLQJ		72.14	1.06	0.55	71.62	0.75	0.44
PUM8EZ		70.02	-1.05	-0.55	69.78	-1.10	-0.64
QHA8H8	X	84.53	13.45	6.95	84.82	13.94	8.14



Plastics Interlaboratory Testing Program

Report #128

Analysis 737

4th Qtr 2023

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K95			Sample K96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
R6M8DQ		71.18	0.10	0.05	71.11	0.23	0.13
RWPF6W		69.46	-1.62	-0.84	70.64	-0.24	-0.14
T9HJLV		69.70	-1.38	-0.71	69.56	-1.32	-0.77
TTMBFG		74.46	3.38	1.75	73.50	2.62	1.53
UVAX33		71.18	0.10	0.05	71.10	0.22	0.13
UZ6P9D		69.85	-1.23	-0.63	69.72	-1.16	-0.68
V9U2GC		72.39	1.31	0.68	72.30	1.42	0.83
VAHHPY		68.42	-2.66	-1.38	68.64	-2.23	-1.30
WPCFE2		73.59	2.52	1.30	73.28	2.40	1.40
XAFKFF		70.56	-0.52	-0.27	70.22	-0.66	-0.38
XDGLGX		74.12	3.04	1.57	73.64	2.76	1.61
XJL3DD		72.36	1.29	0.66	70.77	-0.11	-0.07
XNEDXB		72.63	1.55	0.80	72.66	1.78	1.04
ZH2EG3		73.12	2.04	1.06	71.62	0.74	0.43
ZTWKBZ	X	79.20	8.12	4.20	79.20	8.33	4.86

Summary Statistics

	Sample K95	Sample K96
Grand Means	71.079 MPa	70.879 MPa
Stnd Dev Btwn Labs	1.935 MPa	1.713 MPa

Statistics based on 47 of 50 reporting participants

Sample K95: ABS/PC & Sample K96: ABS/PC

Comments on Assigned Data Flags for Test #737

- 4NEDND (X) - Data for sample K96 are high.
- ZTWKBZ (X) - Data for both samples are high. Possible Systematic Error.
- QHA8H8 (X) - Data for both samples are high. Possible Systematic Error.



Plastics Interlaboratory Testing Program

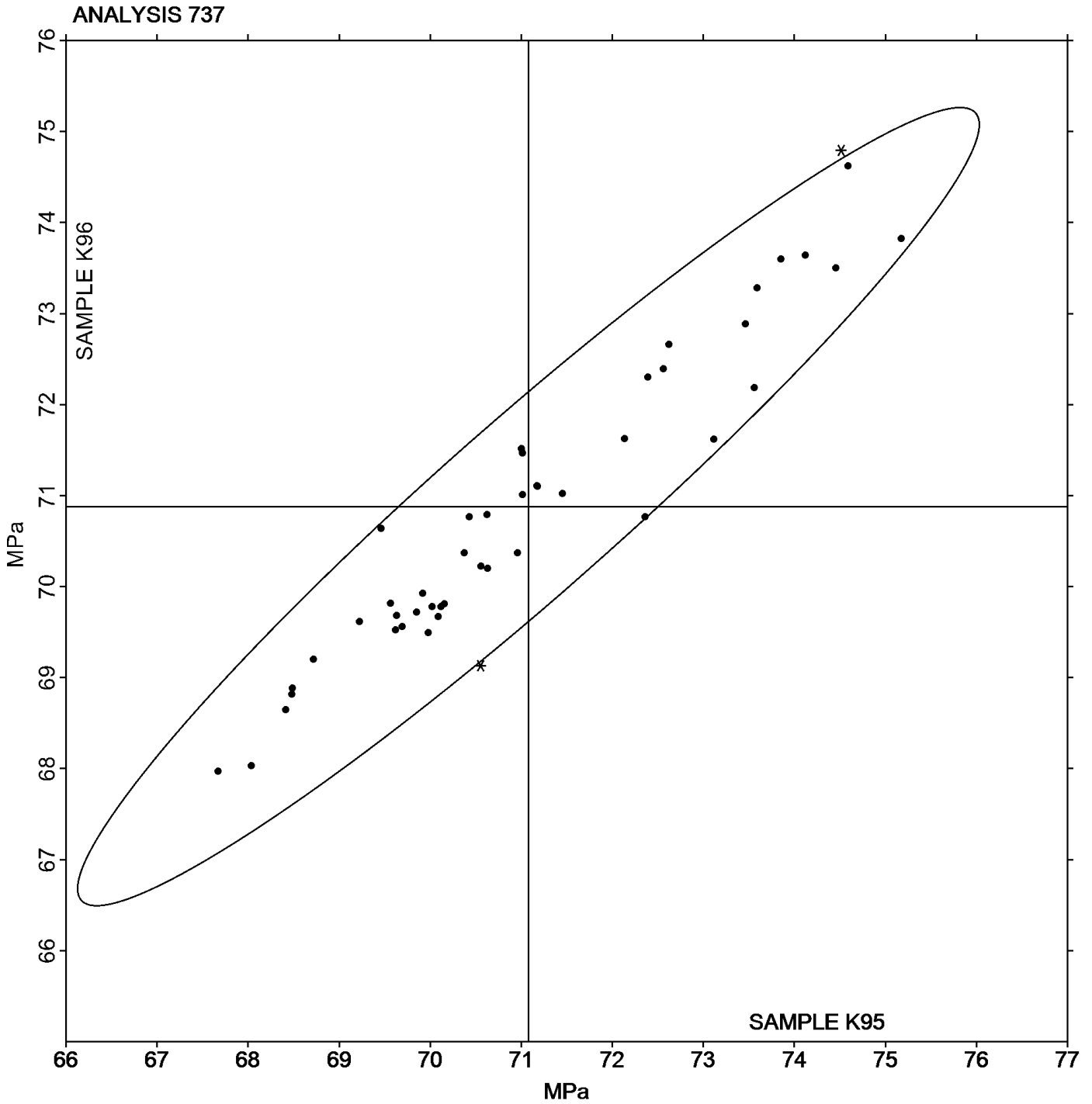
Report #128

Analysis 737

4th Qtr 2023

Flexural Stress at 3.5% Strain - MPa

Grand Mean Sample K95: 71.079 MPa Grand Mean Sample K96: 70.879 MPa





Plastics Interlaboratory Testing Program

Report #128

Analysis 738

4th Qtr 2023

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K95			Sample K96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2LEEDU	*	83.37	3.53	1.63	81.68	1.99	1.02
6MXR7M		77.50	-2.34	-1.08	78.08	-1.62	-0.83
87LJTP		82.60	2.76	1.28	82.39	2.70	1.39
9BFZJP		77.86	-1.98	-0.92	77.23	-2.47	-1.27
9PEVQP		77.23	-2.61	-1.21	77.71	-1.99	-1.02
B8R8H7		79.64	-0.20	-0.09	79.14	-0.56	-0.29
BC2NRU	X	84.37	4.53	2.10	80.44	0.74	0.38
C9TTKW		80.37	0.53	0.25	80.12	0.43	0.22
CNN46U		82.19	2.35	1.09	82.02	2.33	1.20
D99B49		79.15	-0.69	-0.32	79.46	-0.23	-0.12
EG24N8		77.60	-2.24	-1.04	78.20	-1.49	-0.77
EQMANW		76.04	-3.80	-1.76	76.38	-3.31	-1.70
FGFRRK		76.95	-2.89	-1.34	77.26	-2.44	-1.25
GJ2UAD		79.66	-0.18	-0.08	78.54	-1.15	-0.59
J2AVWB		79.59	-0.25	-0.11	79.87	0.18	0.09
JEYNJC	X	68.49	-11.35	-5.26	68.74	-10.95	-5.63
JMPAMP	X	17.44	-62.40	-28.91	18.00	-61.70	-31.69
JY68FZ		80.55	0.71	0.33	79.78	0.09	0.05
K7HH9R		77.61	-2.23	-1.03	77.59	-2.10	-1.08
L7FBGJ		79.44	-0.40	-0.19	79.41	-0.28	-0.15
LVH8DP		81.05	1.21	0.56	80.94	1.25	0.64
MNR4W7		83.86	4.02	1.86	83.42	3.73	1.91
MVDAGK		79.09	-0.75	-0.35	79.25	-0.44	-0.23
NZ2CZA		79.43	-0.41	-0.19	78.56	-1.13	-0.58
P698DH		81.63	1.79	0.83	81.44	1.75	0.90
P6CLQJ		83.05	3.21	1.49	82.08	2.39	1.23
PN4VNE		80.60	0.76	0.35	80.44	0.75	0.38
PTGD7V		83.44	3.60	1.67	83.54	3.85	1.98
PUM8EZ		80.38	0.54	0.25	80.12	0.43	0.22
QHA8H8	X	91.43	11.59	5.37	92.27	12.58	6.46
R6M8DQ		79.85	0.01	0.00	80.01	0.31	0.16
RWPF6W		78.44	-1.40	-0.65	79.70	0.01	0.00
T9HJLV		79.31	-0.53	-0.24	78.86	-0.83	-0.43
UFBZP6		82.02	2.18	1.01	80.98	1.28	0.66
UXDQUF		75.99	-3.85	-1.79	76.02	-3.67	-1.89



Plastics Interlaboratory Testing Program

Report #128

Analysis 738

4th Qtr 2023

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K95			Sample K96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UZ6P9D		79.32	-0.52	-0.24	78.98	-0.71	-0.37
V9U2GC		82.14	2.30	1.06	82.12	2.43	1.25
VAHHPY		76.57	-3.27	-1.51	76.62	-3.07	-1.58
XAFKFF	X	73.32	-6.52	-3.02	72.50	-7.19	-3.70
XNEDXB		81.52	1.68	0.78	81.84	2.14	1.10
ZTWKBZ		79.20	-0.64	-0.30	79.20	-0.49	-0.25

Summary Statistics		Sample K95	Sample K96
Grand Means		79.840 MPa	79.695 MPa
Std Dev Btwn Labs		2.158 MPa	1.947 MPa
Statistics based on 36 of 41 reporting participants			

Sample K95: ABS/PC & Sample K96: ABS/PC

Comments on Assigned Data Flags for Test #738

- BC2NRU (X) - Inconsistent in testing between samples.
- XAFKFF (X) - Data for both samples are low. Possible Systematic Error.
- JMPAMP (X) - Extreme data.
- QHA8H8 (X) - Data for both samples are high. Possible Systematic Error.
- JEYNJC (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

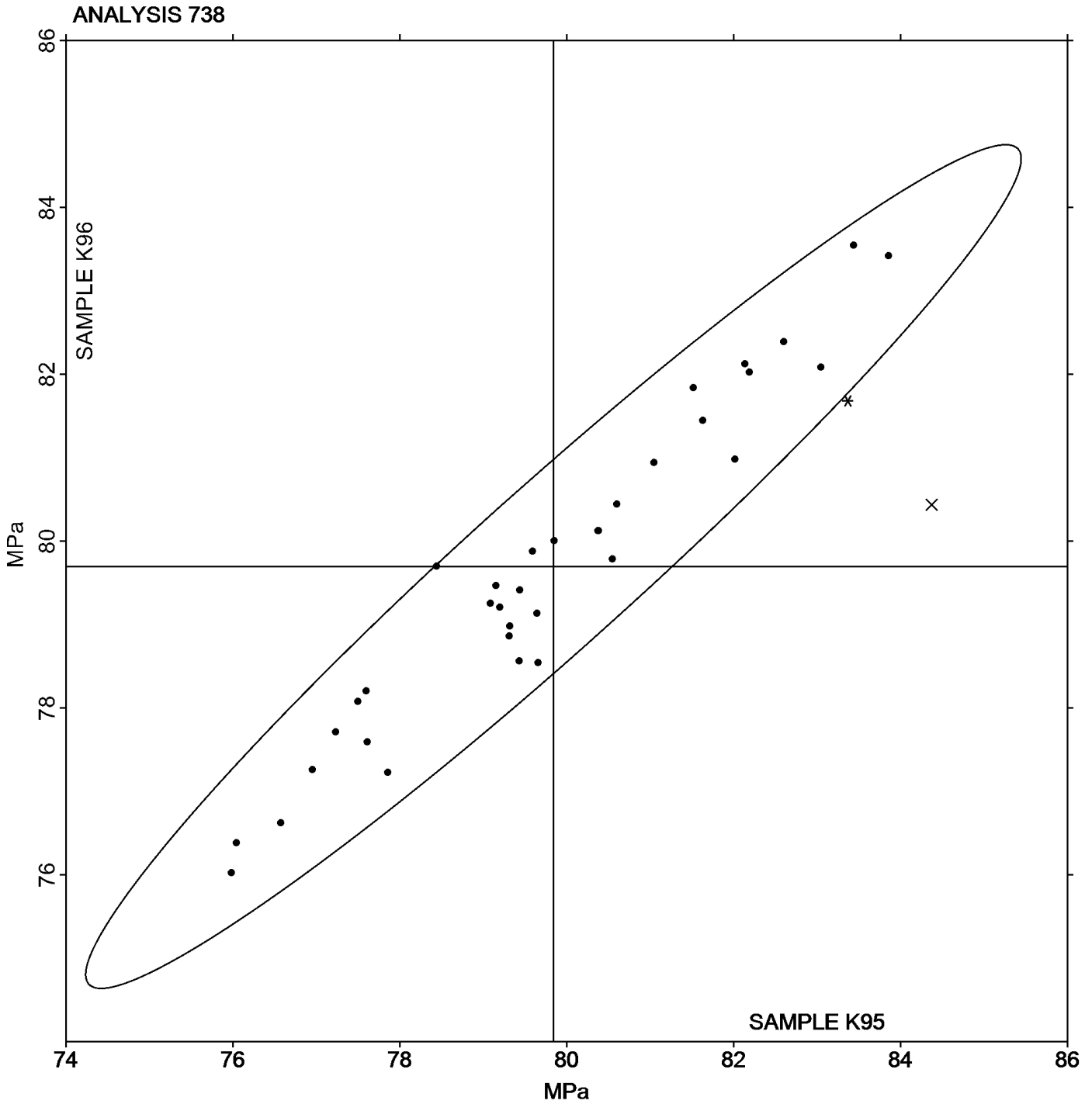
Report #128

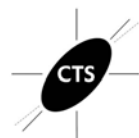
Analysis 738

4th Qtr 2023

Flexural Stress at Yield - MPa

Grand Mean Sample K95: 79.840 MPa Grand Mean Sample K96: 79.695 MPa





Plastics Interlaboratory Testing Program

Report #128

Analysis 750

4th Qtr 2023

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

WebCode	Data Flag	Sample X95			Sample X96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2PYCUW	M	No data reported for this sample			4.83	-7.88	-10.89	TM
39NTUK		12.60	0.45	0.61	13.40	0.69	0.95	TY
3EUPF6	X	12.00	-0.15	-0.20	15.03	2.31	3.20	TO
3JHH36		11.29	-0.86	-1.16	12.07	-0.64	-0.89	TO
4MGUX6		12.72	0.57	0.77	13.57	0.86	1.19	RR
4NEDND		11.70	-0.45	-0.60	12.05	-0.66	-0.91	TO
4TQA8T	*	14.20	2.05	2.78	13.95	1.24	1.71	TO
7LGVDM		11.85	-0.30	-0.40	12.90	0.19	0.26	WZ
83QPVN		12.05	-0.10	-0.13	12.50	-0.21	-0.29	CE
873ZLX		11.85	-0.30	-0.40	12.80	0.09	0.12	WZ
87LJTP		11.30	-0.85	-1.15	11.98	-0.73	-1.01	KA
8G2MPN		11.75	-0.40	-0.54	12.17	-0.54	-0.75	WZ
8MCNWD		11.23	-0.92	-1.25	12.52	-0.20	-0.27	TO
99N4UV		12.42	0.27	0.37	12.06	-0.65	-0.90	TO
9BFZJP	X	19.58	7.43	10.06	20.71	7.99	11.04	CE
9PEVQP		11.10	-1.05	-1.42	12.35	-0.36	-0.50	CE
ADGMBJ		13.37	1.22	1.65	13.29	0.58	0.80	KA
AF2G7Y		11.91	-0.24	-0.33	13.00	0.29	0.40	TO
B8R8H7		12.40	0.25	0.34	13.10	0.39	0.54	TO
BC2NRU		12.30	0.15	0.21	12.75	0.04	0.05	TO
BCW9EU		11.61	-0.53	-0.72	11.94	-0.78	-1.07	CE
CNN46U		11.84	-0.31	-0.41	12.35	-0.36	-0.50	WZ
CUVLMV		11.82	-0.32	-0.44	12.55	-0.16	-0.22	TO
D99B49		12.30	0.15	0.21	13.80	1.09	1.50	WZ
DKKJ2U		11.91	-0.23	-0.32	12.78	0.07	0.09	XX
EQMANW		11.02	-1.13	-1.53	11.32	-1.39	-1.92	TO
F8Q4UW		13.99	1.84	2.49	14.10	1.38	1.91	KA
FDFGVK		12.10	-0.05	-0.06	11.80	-0.91	-1.26	XX
FGFRRK		13.00	0.86	1.16	13.04	0.33	0.45	DY
FNEEGY		13.10	0.95	1.29	12.50	-0.21	-0.29	WZ
FNX3YU		11.92	-0.23	-0.30	12.93	0.22	0.30	TO
G4AW7W		11.85	-0.30	-0.40	11.40	-1.31	-1.81	WZ
GJ2UAD		12.22	0.07	0.09	13.30	0.58	0.81	TY
HJGCTP		12.38	0.23	0.31	13.03	0.32	0.44	GO
HMVAZC		12.78	0.63	0.85	13.46	0.75	1.03	XX



Plastics Interlaboratory Testing Program

Report #128

Analysis 750

4th Qtr 2023

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

WebCode	Data Flag	Sample X95			Sample X96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
HXVRKM		11.48	-0.67	-0.90	12.17	-0.54	-0.75	CE
JEYNJC		12.65	0.50	0.68	12.86	0.14	0.20	XX
JMPAMP	X	54.41	42.26	57.19	61.48	48.77	67.36	CE
K7HH9R		12.29	0.14	0.19	12.39	-0.32	-0.44	DY
KLQJUF		12.01	-0.14	-0.19	12.44	-0.27	-0.37	TO
L7FBGJ	X	14.75	2.60	3.52	12.10	-0.61	-0.84	TO
LBVH6H	X	5.05	-7.10	-9.61	5.95	-6.77	-9.35	DY
LVH8DP		11.79	-0.36	-0.48	12.34	-0.37	-0.51	TO
M87TWP		11.40	-0.75	-1.01	12.30	-0.41	-0.57	TO
MNR4W7		11.89	-0.26	-0.35	12.31	-0.41	-0.56	DY
N78WXF	*	11.40	-0.75	-1.01	13.30	0.59	0.81	TO
N9D96G		12.09	-0.06	-0.08	13.07	0.35	0.49	DY
NA82ZZ	X	6.51	-5.64	-7.63	7.52	-5.19	-7.17	DY
NATUEH		11.45	-0.70	-0.94	11.74	-0.98	-1.35	TO
NBKQ4C	X	4.20	-7.95	-10.76	3.93	-8.79	-12.14	TO
NGNWGU		12.62	0.47	0.64	13.10	0.38	0.53	XX
P2RNAF		11.63	-0.52	-0.70	12.66	-0.05	-0.07	TO
P698DH		11.71	-0.44	-0.60	12.58	-0.14	-0.19	TO
P6CLQJ		13.25	1.10	1.49	13.55	0.84	1.16	TO
PJ8XBG		13.50	1.35	1.83	13.50	0.79	1.09	WZ
PN4VNE		11.97	-0.18	-0.25	13.42	0.71	0.98	TO
PTGD7V		11.86	-0.29	-0.39	12.02	-0.69	-0.95	WZ
PUM8EZ		11.66	-0.49	-0.66	12.34	-0.37	-0.51	WZ
Q2RYPJ		13.42	1.27	1.72	13.52	0.81	1.12	XX
Q3246T		12.58	0.43	0.59	13.55	0.84	1.16	TO
QA2M4H		12.04	-0.11	-0.15	13.14	0.42	0.59	TO
QHA8H8		10.45	-1.70	-2.30	11.20	-1.51	-2.09	CE
R6M8DQ		12.20	0.05	0.07	12.65	-0.06	-0.08	TO
RW8NVC	*	13.84	1.69	2.28	13.21	0.49	0.68	TO
RWPF6W		11.58	-0.57	-0.77	13.11	0.40	0.55	CE
T6J8QV		11.59	-0.56	-0.75	12.33	-0.38	-0.53	TO
TB3KGG		11.88	-0.27	-0.36	13.04	0.33	0.46	DY
TC3BVC	X	11.80	-0.35	-0.47	8.40	-4.31	-5.96	XX
TF4EPK		12.50	0.35	0.48	13.30	0.59	0.81	TO
UBZ37P		12.19	0.04	0.05	12.59	-0.12	-0.17	CE



Plastics Interlaboratory Testing Program

Report #128

Analysis 750

4th Qtr 2023

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

WebCode	Data Flag	Sample X95			Sample X96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
ULGTK2	*	13.79	1.64	2.22	14.74	2.02	2.80	CE
UQTPE3		12.09	-0.06	-0.08	12.48	-0.24	-0.33	GO
UZ6P9D		11.90	-0.25	-0.33	12.40	-0.31	-0.43	WZ
UZZAVD		11.82	-0.33	-0.45	12.81	0.10	0.14	TO
V8JVHP		11.87	-0.28	-0.38	12.27	-0.44	-0.61	WZ
VAHHPY		11.00	-1.15	-1.55	10.95	-1.76	-2.43	CE
VPWNXD	X	15.46	3.31	4.48	15.97	3.25	4.50	CE
WN2B2C		13.36	1.21	1.64	14.43	1.71	2.37	DY
WPCFE2		12.02	-0.13	-0.18	12.88	0.16	0.23	DY
XAFKFF		13.29	1.14	1.55	13.56	0.85	1.17	GO
XDGLGX		12.04	-0.11	-0.14	12.15	-0.57	-0.78	DY
XHU7NJ		11.75	-0.40	-0.54	11.65	-1.06	-1.47	KA
XMLBGM		12.02	-0.13	-0.18	12.68	-0.03	-0.04	TO
XZNWW7		12.10	-0.05	-0.06	12.95	0.24	0.33	TO
YL94V7		12.15	0.00	0.00	11.95	-0.76	-1.05	CE
Z36ZG9	X	17.28	5.13	6.95	17.02	4.30	5.94	TO
ZH2EG3		11.22	-0.93	-1.25	11.76	-0.96	-1.32	XX

Summary Statistics

Grand Means

Sample X95
12.146 grams/10 mins

Sample X96
12.711 grams/10 mins

Std Dev Btwn Labs

0.739 grams/10 mins

0.724 grams/10 mins

Statistics based on 76 of 87 reporting participants

Sample X95: PP & Sample X96: PP



Plastics Interlaboratory Testing Program

Report #128

Analysis 750

4th Qtr 2023

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

Comments on Assigned Data Flags for Test #750

- NA82ZZ (X) - Data for both samples are low.
- L7FBGJ (X) - Data for sample X95 are high.
- LBVH6H (X) - Data for both samples are low.
- 3EUPF6 (X) - Data for sample X96 are high.
- 9BFZJP (X) - Data for both samples are high.
- NBKQ4C (X) - Data for both samples are low.
- 2PYCUW (M) - Participant did not submit data for sample X95.
- TC3BVC (X) - Data for sample X96 are low.
- Z36ZG9 (X) - Data for both samples are high. Possible Systematic Error.
- VPWNXD (X) - Data for both samples are high. Possible Systematic Error.
- JMPAMP (X) - Extreme data.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample X95			Sample X96			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Procedure A of ASTM D1238	12.284	0.781	0.14	12.784	0.756	0.07	36/44
Procedure B of ASTM D1238	12.131	0.675	-0.02	12.785	0.530	0.07	17/18
Procedure A of ISO 1133	11.816	0.659	-0.33	12.363	0.820	-0.35	16/17
Procedure B of ISO 1133	12.283	0.797	0.14	12.984	0.640	0.27	6/7

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

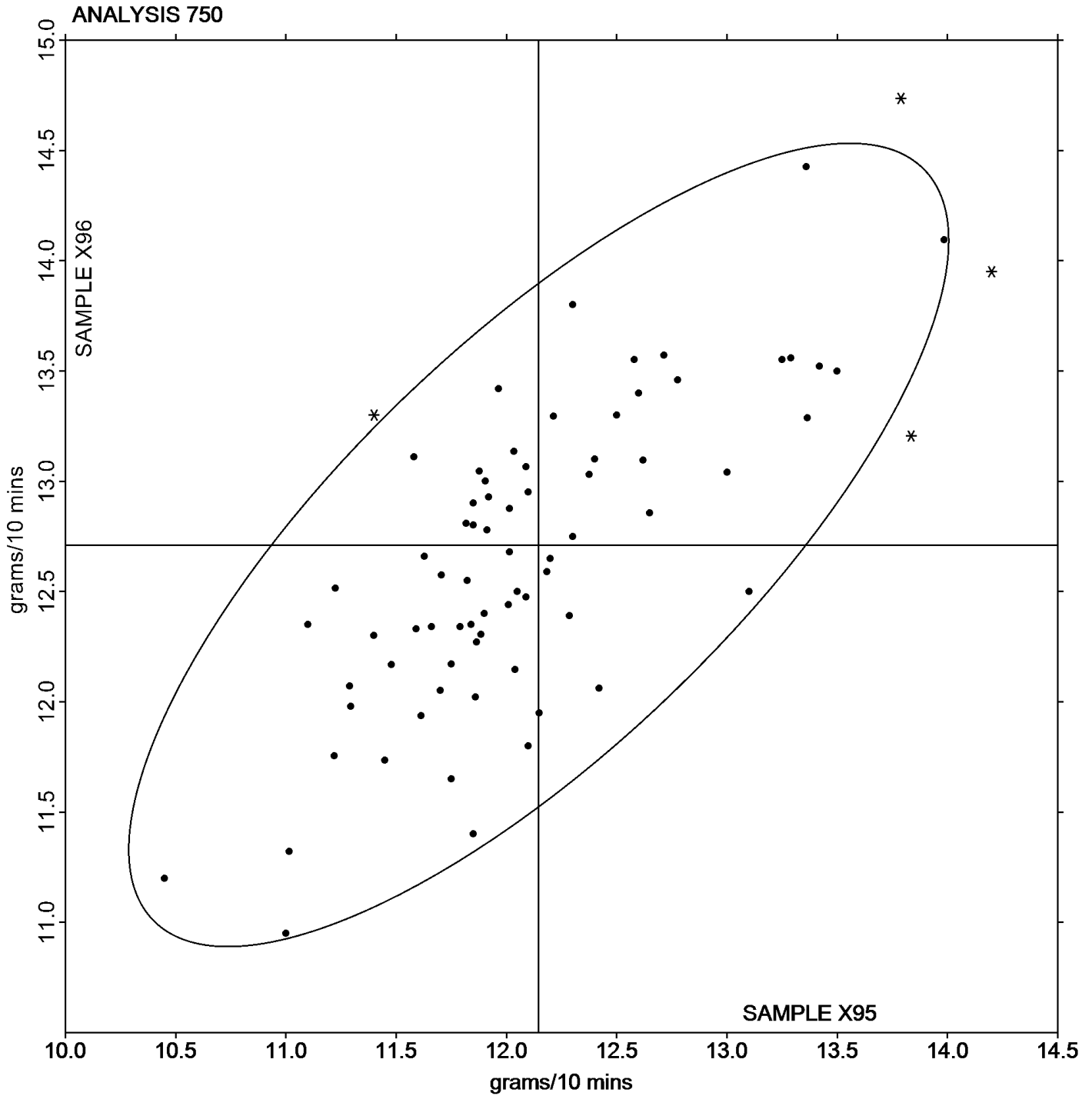
Report #128

Analysis 750

4th Qtr 2023

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

Grand Mean Sample X95: 12.146 grams/10 mins Grand Mean Sample X96: 12.711 grams/10 mins





Plastics Interlaboratory Testing Program

Report #128

Analysis 755

4th Qtr 2023

Moisture Content of Plastics

WebCode	Data Flag	Sample Y95			Sample Y96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2LEEDU		0.11633	0.01514	0.78	0.11833	0.01351	0.79	CT
3B9UN7		0.11153	0.01034	0.53	0.10620	0.00138	0.08	AZ
4NEDND		0.09433	-0.00686	-0.35	0.09767	-0.00715	-0.42	ML
7Z2BGM		0.12800	0.02681	1.39	0.12450	0.01968	1.14	MU
87LJTP		0.09000	-0.01119	-0.58	0.09700	-0.00782	-0.45	MU
8G2MPN		0.12233	0.02114	1.09	0.12750	0.02268	1.32	BA
8MCNWD		0.12717	0.02597	1.34	0.12323	0.01841	1.07	ML
8Z2NNF		0.11400	0.01281	0.66	0.12300	0.01818	1.06	CT
99N4UV	*	0.07067	-0.03053	-1.58	0.06567	-0.03915	-2.27	CT
9BFZJP		0.08500	-0.01619	-0.84	0.09000	-0.01482	-0.86	MU
9PEVQP		0.10500	0.00381	0.20	0.11067	0.00585	0.34	MU
BCW9EU		0.08633	-0.01486	-0.77	0.08733	-0.01749	-1.02	MU
CNN46U		0.08543	-0.01576	-0.81	0.08440	-0.02042	-1.19	MU
D99B49		0.08967	-0.01153	-0.60	0.09533	-0.00949	-0.55	MU
EQMANW		0.06267	-0.03853	-1.99	0.07600	-0.02882	-1.67	AZ
FDFGVK		0.10270	0.00151	0.08	0.10417	-0.00065	-0.04	MK
FNEEGY		0.11567	0.01447	0.75	0.11700	0.01218	0.71	MK
GBZN7B		0.10800	0.00681	0.35	0.11750	0.01268	0.74	SB
GL4WUM		0.11567	0.01447	0.75	0.12167	0.01685	0.98	CS
GUGX8B		0.10513	0.00394	0.20	0.10800	0.00318	0.18	XX
HMUDPG		0.12600	0.02481	1.28	0.11800	0.01318	0.77	SA
HT2XML		0.11900	0.01781	0.92	0.12220	0.01738	1.01	AZ
KNHEHA		0.10533	0.00414	0.21	0.10333	-0.00149	-0.09	BA
KPXRAR		0.06267	-0.03853	-1.99	0.07600	-0.02882	-1.67	MU
L7FBGJ		0.10933	0.00814	0.42	0.10433	-0.00049	-0.03	MU
LBVH6H	X	0.20733	0.10614	5.49	0.11837	0.01355	0.79	AZ
MXZTHH		0.08133	-0.01986	-1.03	0.08433	-0.02049	-1.19	MU
NATUEH		0.08430	-0.01689	-0.87	0.08873	-0.01609	-0.93	BA
PTGD7V		0.10973	0.00854	0.44	0.11447	0.00965	0.56	CT
RVWMAD		0.06100	-0.04019	-2.08	0.07233	-0.03249	-1.89	AZ
RW8NVC	*	0.06867	-0.03253	-1.68	0.08867	-0.01615	-0.94	CT
T6J8QV		0.11333	0.01214	0.63	0.11567	0.01085	0.63	AZ
TTMBFG		0.10550	0.00431	0.22	0.11600	0.01118	0.65	CT
UXDQUF		0.11433	0.01314	0.68	0.11800	0.01318	0.77	CT
WGH2PA		0.11027	0.00907	0.47	0.11120	0.00638	0.37	MS



Plastics Interlaboratory Testing Program

Report #128

Analysis 755

4th Qtr 2023

Moisture Content of Plastics

WebCode	Data Flag	Sample Y95			Sample Y96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
WPCFE2		0.11987	0.01868	0.97	0.12377	0.01895	1.10	XX
XDGLGX		0.12233	0.02114	1.09	0.12750	0.02268	1.32	BA
XZNWW7		0.09550	-0.00569	-0.29	0.09867	-0.00615	-0.36	XX

Summary Statistics

	Sample Y95	Sample Y96
Grand Means	0.101193 Percent	0.104821 Percent
Std Dev Btwn Labs	0.019341 Percent	0.017213 Percent
Statistics based on 37 of 38 reporting participants		

Sample Y95: ABS/PC & Sample Y96: ABS/PC

Comments on Assigned Data Flags for Test #755

LBVH6H (X) - Data for sample Y95 are low. Inconsistent within the determinations of sample Y95.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample Y95 <i>ABS/PC</i>			Sample Y96 <i>ABS/PC</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
ASTM D6869	0.100812	0.018704	-0.0004	0.104433	0.016084	-0.0004	11/11
ISO 15512 Method B	0.093033	0.007399	-0.0082	0.095392	0.008226	-0.0094	4/4
ASTM D6980	0.094324	0.025817	-0.0069	0.099058	0.021770	-0.0058	11/11
ASTM D7191	0.110395	0.013193	0.0092	0.112428	0.013159	0.0076	6/7

Key to Instrument Codes Reported by Participants

AZ Arizona Instruments Moisture Analyzer	BA Brabender Aquatrac
CS Cosa Instruments	CT Computrac Moisture Analyzer
MK Mitsubishi KF Analyzer CA	ML Metrohm Coulometer
MS Metrohm Coulometer 831 KF	MU Mettler Toledo
SA Sartorius MA30	SB Sartorius Mark 3
XX Instrument manufacturer not specified by lab	



Plastics Interlaboratory Testing Program

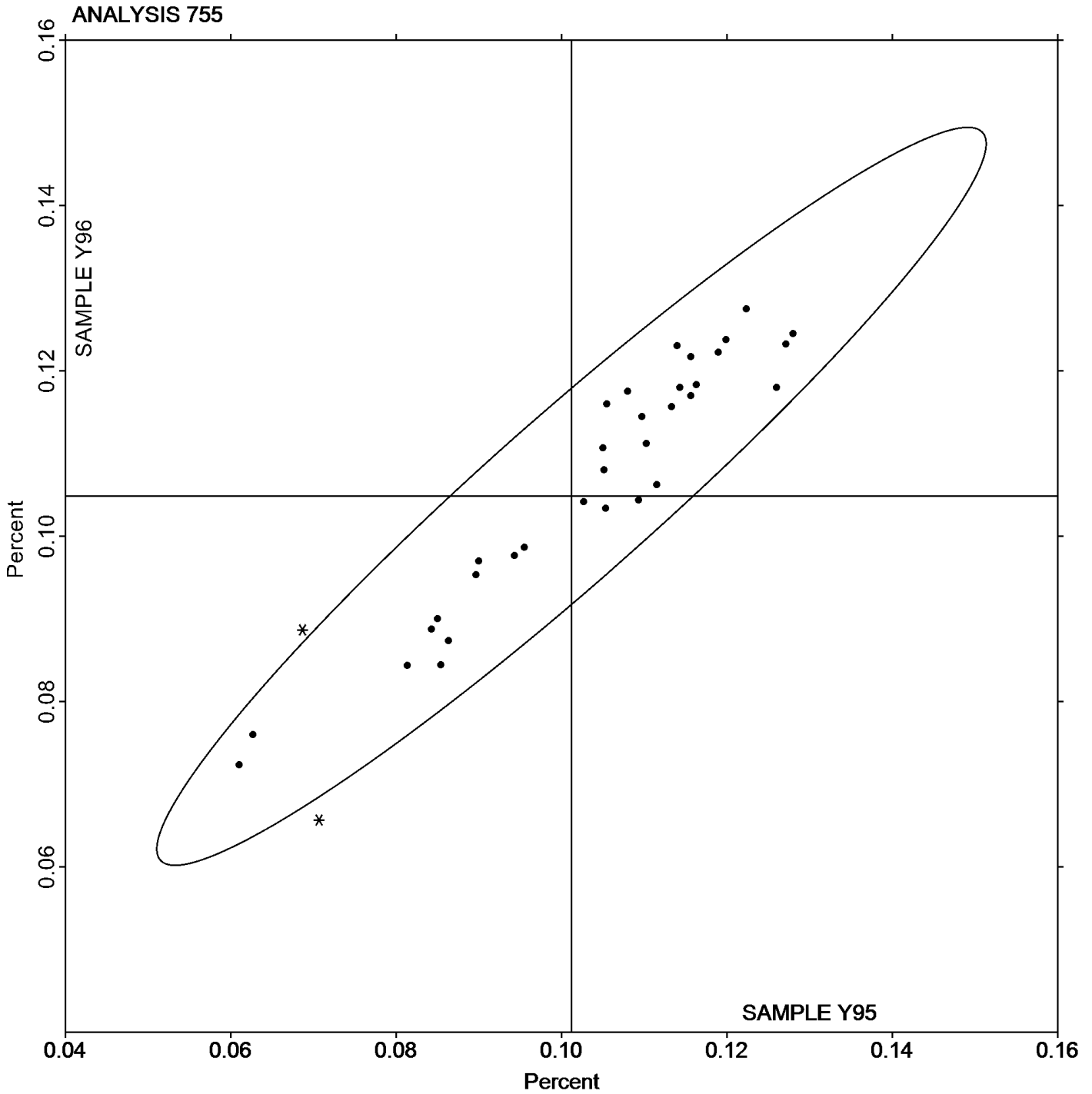
Analysis 755

Moisture Content of Plastics

Report #128

4th Qtr 2023

Grand Mean Sample Y95: 0.10119 Percent Grand Mean Sample Y96: 0.10482 Percent





Plastics Interlaboratory Testing Program

Report #128

Analysis 757

4th Qtr 2023

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L95			Sample L96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2KMJPZ		29.606	-0.092	-1.87	29.627	-0.075	-1.23
2LEEDU		29.685	-0.012	-0.25	29.625	-0.077	-1.26
369K7K		29.681	-0.016	-0.33	29.641	-0.061	-1.00
3B9UN7		29.700	0.003	0.05	29.795	0.093	1.54
4MGUX6		29.715	0.018	0.36	29.740	0.038	0.63
4NEDND		29.685	-0.012	-0.25	29.755	0.053	0.88
7JWUJ2		29.730	0.033	0.66	29.745	0.043	0.71
7LGVDM		29.660	-0.037	-0.76	29.620	-0.082	-1.35
7WHAMZ	X	30.130	0.432	8.79	29.782	0.080	1.32
837C6Q		29.750	0.053	1.07	29.765	0.063	1.04
87LJTP		29.695	-0.002	-0.05	29.810	0.108	1.78
8G2MPN	*	29.550	-0.147	-3.00	29.600	-0.102	-1.68
8MCNWD		29.680	-0.017	-0.35	29.590	-0.112	-1.84
99N4UV	X	29.615	-0.082	-1.68	29.310	-0.392	-6.46
9BFZJP		29.600	-0.097	-1.98	29.700	-0.002	-0.03
ADGMBJ		29.715	0.018	0.36	29.785	0.083	1.37
B8R8H7		29.690	-0.007	-0.15	29.740	0.038	0.63
BCW9EU		29.787	0.090	1.83	29.730	0.029	0.47
CNN46U		29.755	0.058	1.17	29.733	0.031	0.52
D99B49		29.705	0.008	0.15	29.690	-0.012	-0.19
DHXZZW		29.716	0.019	0.38	29.763	0.061	1.01
EG24N8		29.655	-0.042	-0.86	29.660	-0.042	-0.69
EQMANW		29.705	0.008	0.15	29.800	0.098	1.62
F8Q4UW	X	28.720	-0.978	-19.87	28.656	-1.046	-17.24
FNEEGY		29.770	0.073	1.47	29.745	0.043	0.71
G4AW7W		29.695	-0.002	-0.05	29.690	-0.012	-0.19
GL4WUM		29.730	0.033	0.66	29.745	0.043	0.71
HMVAZC		29.665	-0.032	-0.66	29.715	0.013	0.22
HW6EBH		29.705	0.008	0.15	29.635	-0.067	-1.10
L7FBGJ		29.705	0.008	0.15	29.775	0.073	1.21
LVH8DP		29.670	-0.027	-0.56	29.600	-0.102	-1.68
NBKQ4C		29.700	0.003	0.05	29.670	-0.032	-0.52
NGNWXU	X	28.956	-0.741	-15.07	29.471	-0.231	-3.81
NZ2CZA		29.700	0.003	0.05	29.690	-0.012	-0.19
P698DH		29.680	-0.017	-0.35	29.700	-0.002	-0.03



Plastics Interlaboratory Testing Program

Report #128

Analysis 757

4th Qtr 2023

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L95			Sample L96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
P6CLQJ		29.695	-0.002	-0.05	29.595	-0.107	-1.76
PN4VNE	X	29.320	-0.377	-7.67	29.355	-0.347	-5.72
PTGD7V	X	29.270	-0.427	-8.69	29.455	-0.247	-4.07
Q2RYPJ		29.710	0.013	0.25	29.710	0.008	0.14
R6M8DQ		29.755	0.058	1.17	29.650	-0.052	-0.85
RVWMAD		29.770	0.073	1.47	29.745	0.043	0.71
RW8NVC		29.760	0.063	1.27	29.725	0.023	0.38
RWPF6W		29.635	-0.062	-1.27	29.640	-0.062	-1.02
T6J8QV		29.755	0.058	1.17	29.790	0.088	1.46
TC3BVC	X	29.595	-0.102	-2.08	29.460	-0.242	-3.98
TF4EPK		29.680	-0.017	-0.35	29.715	0.013	0.22
TTMBFG	X	29.900	0.203	4.12	29.500	-0.202	-3.33
UN8T7C		29.720	0.023	0.46	29.690	-0.012	-0.19
UQTPE3		29.760	0.063	1.27	29.735	0.033	0.55
UVAX33		29.735	0.038	0.76	29.725	0.023	0.38
UZ6P9D	*	29.565	-0.132	-2.69	29.590	-0.112	-1.84
V8JVHP		29.700	0.003	0.05	29.715	0.013	0.22
WC7DND		29.650	-0.047	-0.96	29.700	-0.002	-0.03
WGH2PA		29.670	-0.027	-0.56	29.665	-0.037	-0.61
WPCFE2		29.725	0.028	0.56	29.675	-0.027	-0.44
XAFKFF		29.710	0.013	0.25	29.770	0.068	1.13
XDGLGX		29.695	-0.002	-0.05	29.670	-0.032	-0.52
XZNWW7	X	29.505	-0.192	-3.91	29.605	-0.097	-1.59

Summary Statistics		
	Sample L95	Sample L96
Grand Means	29.6975 Percent	29.7017 Percent
Std Dev Btwn Labs	0.0492 Percent	0.0607 Percent
Statistics based on 49 of 58 reporting participants		

Sample L95: PBT & Sample L96: PBT



Plastics Interlaboratory Testing Program

Analysis 757

Ash Content in Thermoplastics - Percent

Report #128

4th Qtr 2023

Comments on Assigned Data Flags for Test #757

- NGNWXU (X) - Data for both samples are low.
- PTGD7V (X) - Data for both samples are low.
- PN4VNE (X) - Data for both samples are low. Inconsistent within the determinations of both samples.
- 99N4UV (X) - Data for sample L96 are low. Inconsistent within the determinations of sample L96.
- 7WHAMZ (X) - Data for sample L95 are high. Inconsistent within the determinations of sample L95.
- F8Q4UW (X) - Data for both samples are low. Inconsistent within the determinations of sample L96.
- TC3BVC (X) - Data for sample L96 are low. Inconsistent within the determinations of sample L96.
- XZNWW7 (X) - Data for sample L95 are low.
- TTMBFG (X) - Data for sample L95 are high and data for sample L96 are low.



Plastics Interlaboratory Testing Program

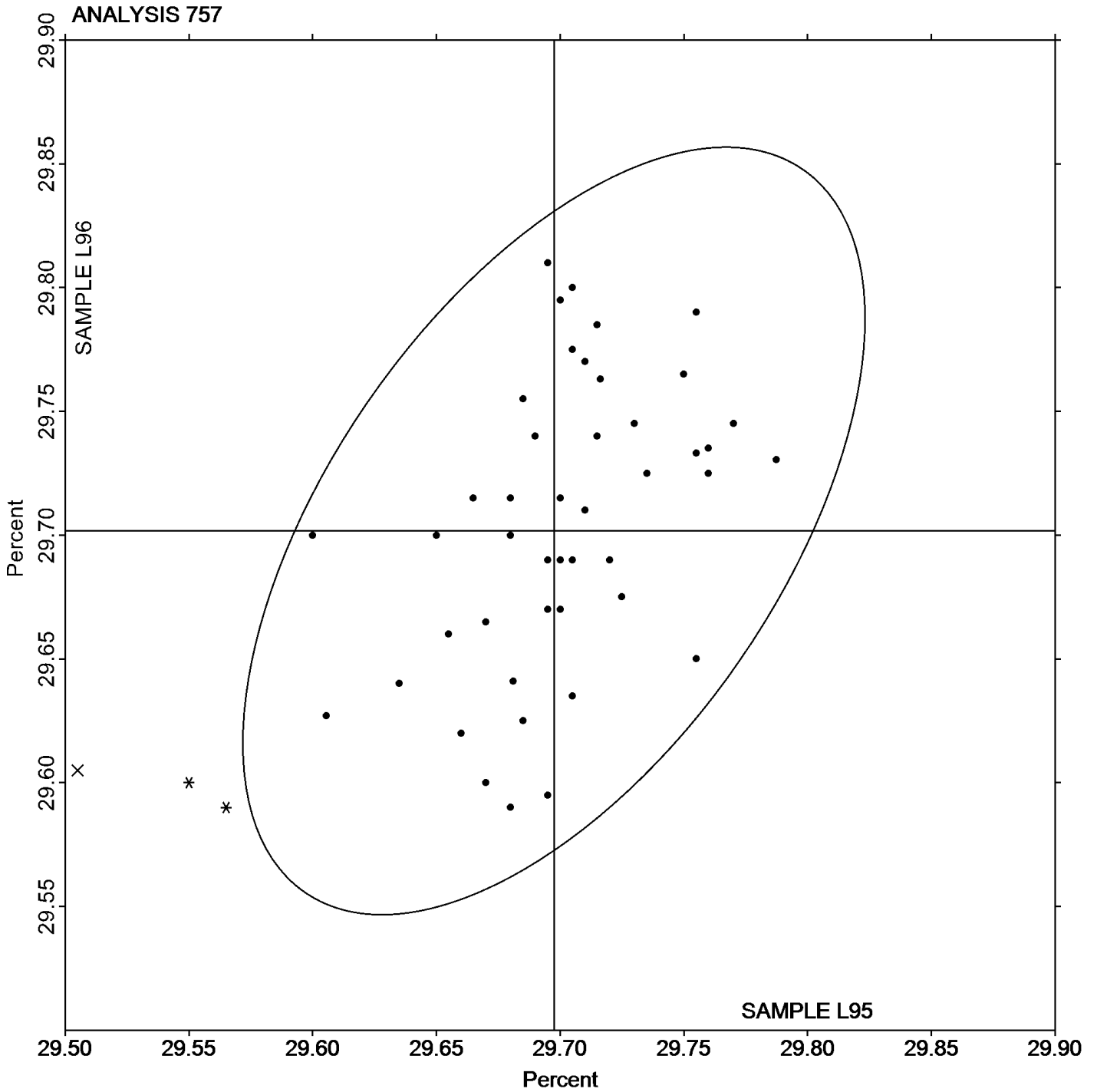
Analysis 757

Ash Content in Thermoplastics - Percent

Report #128

4th Qtr 2023

Grand Mean Sample L95: 29.697 Percent Grand Mean Sample L96: 29.702 Percent





Plastics Interlaboratory Testing Program

Report #128

Analysis 758

4th Qtr 2023

Thermogravimetric Analysis

WebCode	Data Flag	Sample A95			Sample A96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7WHAMZ	M	78.88	-0.38	-0.50	No data reported for this sample			PE
87LJTP		79.11	-0.15	-0.20	78.96	-0.14	-0.13	TA
8MCNWD		80.12	0.86	1.16	79.54	0.44	0.41	TA
C74D7U		79.68	0.42	0.57	79.57	0.48	0.44	TA
C9TTKW		79.74	0.48	0.64	80.94	1.85	1.71	XX
HK46ER		80.76	1.50	2.01	79.70	0.60	0.56	TA
K7HH9R		78.31	-0.95	-1.27	78.55	-0.54	-0.50	TA
LVH8DP		78.04	-1.22	-1.63	76.31	-2.79	-2.57	PE
Q2RYPJ		78.95	-0.31	-0.41	79.56	0.47	0.43	TA
RVWMAD		79.30	0.04	0.06	79.15	0.06	0.05	TA
T6J8QV		78.92	-0.34	-0.46	79.68	0.58	0.54	TA
UZ6P9D		79.44	0.18	0.24	78.97	-0.13	-0.12	TA
WPCFE2		79.50	0.24	0.33	79.31	0.22	0.20	TA
XAFKFF		78.49	-0.77	-1.03	77.99	-1.11	-1.02	XX

Summary Statistics		Sample A95	Sample A96
Grand Means		79.257 Percent	79.092 Percent
Stnd Dev Btwn Labs		0.747 Percent	1.086 Percent
Statistics based on 13 of 14 reporting participants			

Sample A95: PP & Sample A96: PP

Comments on Assigned Data Flags for Test #758

7WHAMZ (M) - Participant did not submit data for sample A96.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample A95			Sample A96			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
ASTM D3850	79.323	0.900	0.07	78.861	1.297	-0.23	6/7
ISO 11358	79.235	0.672	-0.02	79.221	0.411	0.13	5/5

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

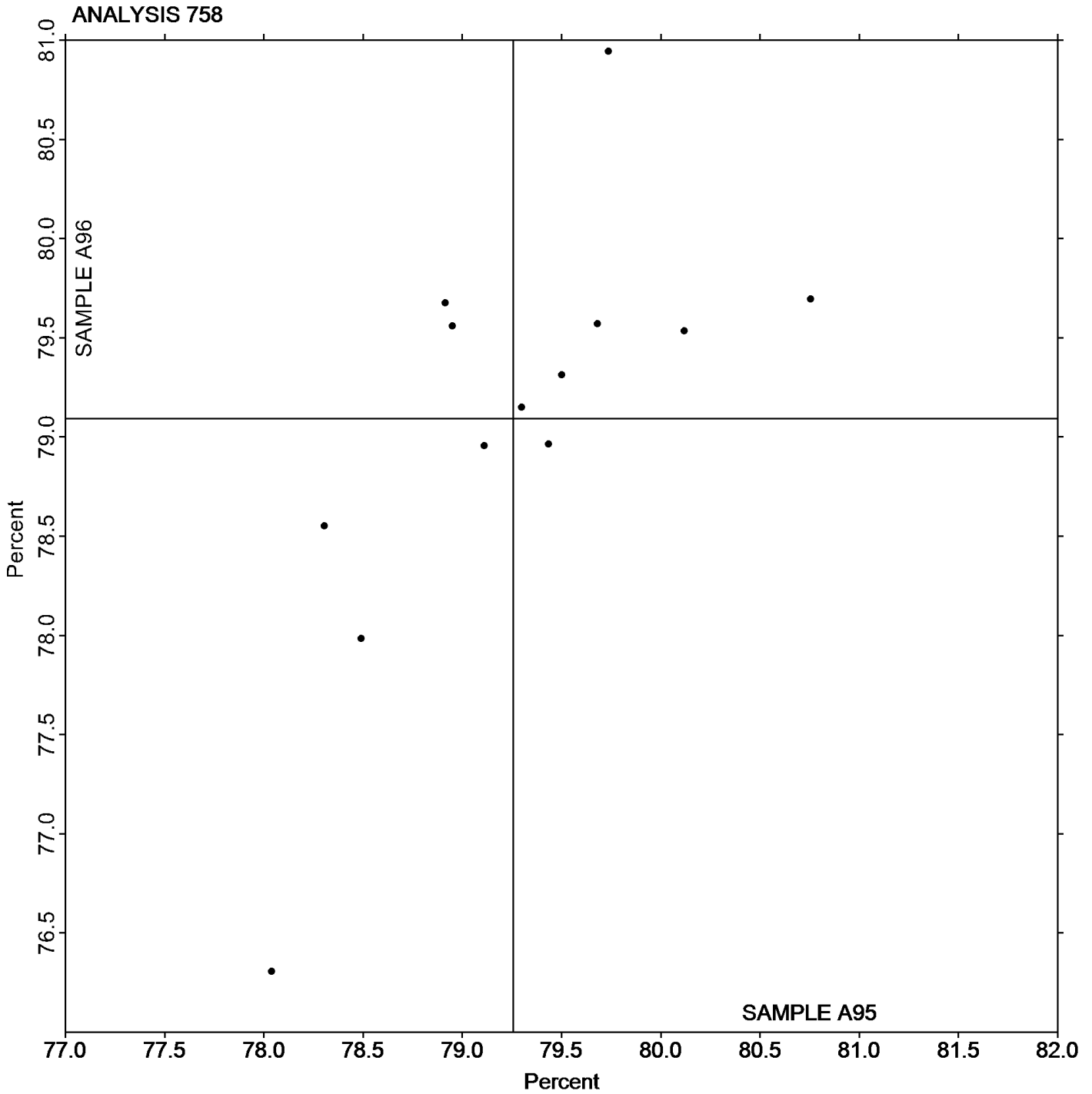
Analysis 758

Thermogravimetric Analysis

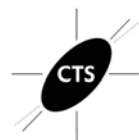
Report #128

4th Qtr 2023

Grand Mean Sample A95: 79.257 Percent Grand Mean Sample A96: 79.092 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 #128

Analysis 760

4th Qtr 2023

DSC Crystallization Temperature

WebCode	Data Flag	Sample W95			Sample W96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZED2Q		174.70	0.82	0.15	174.83	0.91	0.17	NZ
39NTUK		181.55	7.67	1.39	181.58	7.66	1.41	SH
3WDH49		168.93	-4.94	-0.90	168.63	-5.29	-0.97	NZ
4E6ZKN		171.81	-2.07	-0.38	171.81	-2.11	-0.39	TA
9BFZJP		175.05	1.18	0.21	174.96	1.04	0.19	TA
C74D7U	*	189.92	16.04	2.91	189.30	15.38	2.84	TA
C9TTKW		179.80	5.93	1.08	178.87	4.95	0.91	XX
CNN46U		179.45	5.57	1.01	179.46	5.54	1.02	TA
DA8EWJ		176.05	2.17	0.39	176.25	2.33	0.43	TA
E69MY7	*	167.11	-6.77	-1.23	168.26	-5.66	-1.04	TA
G4AW7W		170.37	-3.51	-0.64	170.30	-3.62	-0.67	TA
GUGX8B		169.07	-4.81	-0.87	168.60	-5.32	-0.98	XX
HMVAZC		174.84	0.96	0.17	174.93	1.01	0.19	TA
HW6EBH	X	173.17	-0.71	-0.13	175.47	1.55	0.29	TA
JEYNJC		177.73	3.86	0.70	177.60	3.68	0.68	TA
K7HH9R		177.40	3.52	0.64	177.16	3.24	0.60	TA
KGZZ2X		168.51	-5.37	-0.97	168.87	-5.05	-0.93	PE
L VH8DP	*	184.77	10.89	1.98	185.60	11.68	2.15	TA
MN9MEH	X	199.86	25.98	4.71	199.75	25.83	4.76	TA
MNR4W7		170.42	-3.45	-0.63	170.10	-3.82	-0.70	TA
NA82ZZ		183.42	9.55	1.73	183.53	9.61	1.77	TA
NGNWGU		171.06	-2.82	-0.51	171.60	-2.32	-0.43	TA
PJ8XBG		170.06	-3.81	-0.69	170.60	-3.32	-0.61	TA
PTGD7V		171.32	-2.55	-0.46	171.06	-2.86	-0.53	TA
Q2RYPJ		169.87	-4.01	-0.73	169.67	-4.25	-0.78	TA
QHA8H8		172.91	-0.97	-0.18	172.58	-1.34	-0.25	MT
U4W3K2		174.98	1.11	0.20	175.31	1.39	0.26	PE
UDRYVJ		169.97	-3.91	-0.71	169.64	-4.28	-0.79	MT
UZ6P9D		172.76	-1.12	-0.20	173.28	-0.64	-0.12	TA
UZXR2		172.23	-1.64	-0.30	172.10	-1.82	-0.34	TA
V8JVHP		174.66	0.78	0.14	174.91	0.99	0.18	TA
VAHPY		167.31	-6.57	-1.19	168.19	-5.73	-1.06	TA
WPCFE2		168.76	-5.12	-0.93	168.94	-4.98	-0.92	TA
XAFKFF		178.55	4.67	0.85	178.19	4.27	0.79	TA
XDGLGX		169.40	-4.47	-0.81	169.60	-4.32	-0.80	XX



Plastics Interlaboratory Testing Program

Report #128

Analysis 760

4th Qtr 2023

DSC Crystallization Temperature

WebCode	Data Flag	Sample W95			Sample W96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
XZNWW7		167.10	-6.78	-1.23	166.93	-6.99	-1.29	NZ

Summary Statistics

	Sample W95	Sample W96
Grand Means	173.877 Degrees Celsius	173.919 Degrees Celsius
Std Dev Btwn Labs	5.510 Degrees Celsius	5.422 Degrees Celsius

Statistics based on 34 of 36 reporting participants

Sample W95: PBT & Sample W96: PBT

Comments on Assigned Data Flags for Test #760

HW6EBH (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample W95.

MN9MEH (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample W95.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

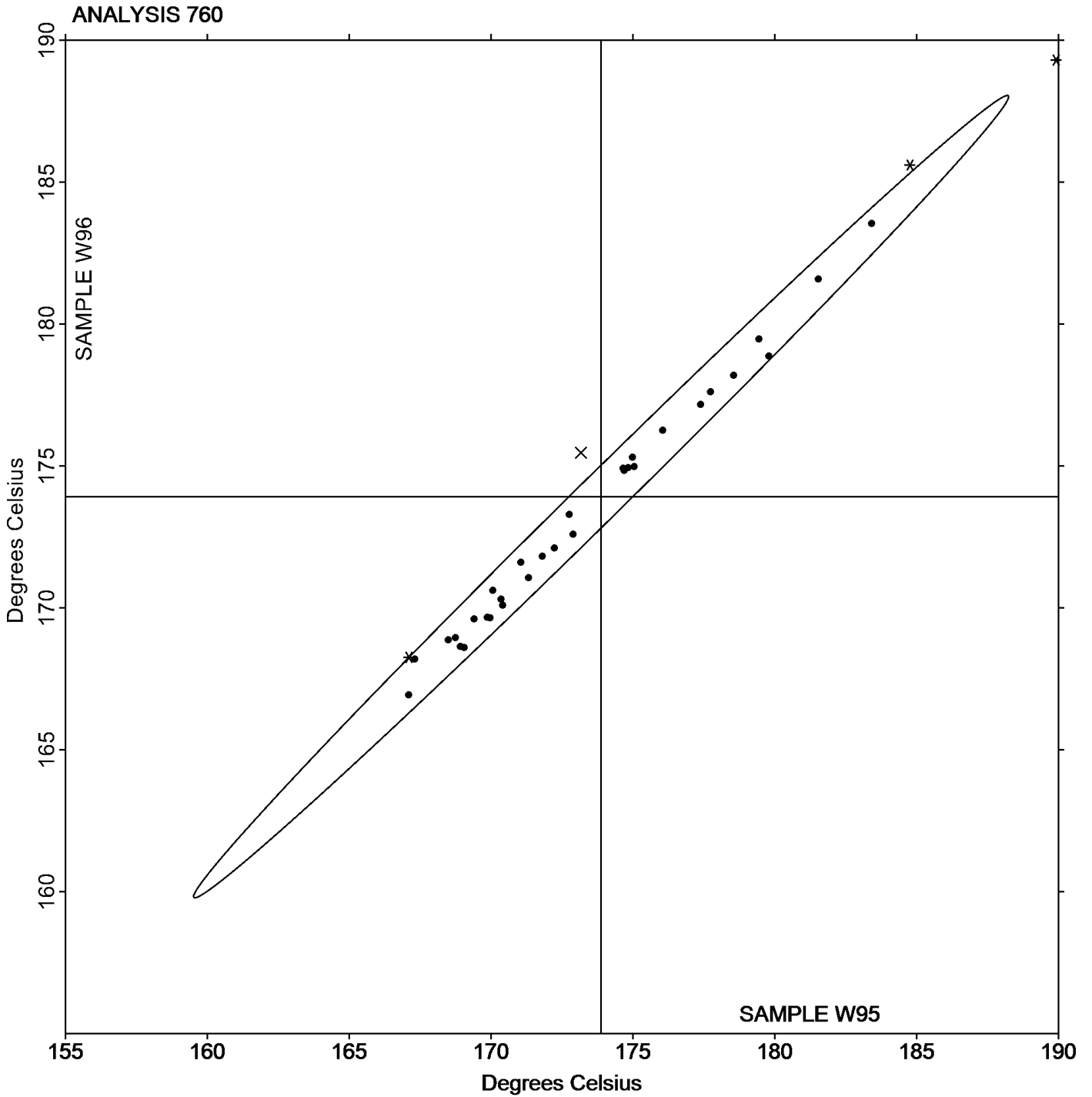
Analysis 760

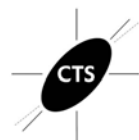
DSC Crystallization Temperature

Report #128

4th Qtr 2023

Grand Mean Sample W95: 173.88 Degrees Celsius Grand Mean Sample W96: 173.92 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #128

Analysis 761

4th Qtr 2023

DSC Melt Temperature

WebCode	Data Flag	Sample W95			Sample W96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UU43U		222.59	-0.65	-0.55	222.84	-0.37	-0.31	TA
2ZED2Q		220.43	-2.80	-2.37	220.40	-2.81	-2.35	NZ
369K7K		222.66	-0.58	-0.49	222.89	-0.32	-0.27	TA
39NTUK		223.99	0.75	0.63	224.54	1.33	1.11	SH
3B9UN7	X	226.37	3.14	2.65	225.11	1.90	1.59	TA
3WDH49		222.10	-1.14	-0.96	222.13	-1.08	-0.90	NZ
4E6ZKN		222.66	-0.58	-0.49	222.91	-0.30	-0.25	TA
8MCNWD		223.84	0.61	0.51	224.24	1.03	0.86	TA
9BFZJP		223.35	0.11	0.09	223.94	0.72	0.61	TA
C74D7U		222.04	-1.20	-1.01	222.19	-1.02	-0.85	TA
C9TTKW		224.00	0.76	0.65	224.33	1.12	0.93	XX
CNN46U		222.17	-1.06	-0.90	221.87	-1.35	-1.12	TA
DA8EWJ	X	226.60	3.36	2.84	227.66	4.45	3.72	TA
E69MY7		223.44	0.20	0.17	222.97	-0.24	-0.20	TA
G4AW7W		222.87	-0.37	-0.31	222.80	-0.41	-0.34	TA
GUGX8B		223.83	0.60	0.50	223.50	0.29	0.24	XX
HMVAZC		225.19	1.95	1.65	224.88	1.66	1.39	XX
HW6EBH		223.80	0.56	0.48	223.40	0.19	0.16	TA
JEYNJC		221.60	-1.64	-1.39	221.27	-1.95	-1.63	TA
JMPAMP	X	231.87	8.63	7.30	232.20	8.99	7.51	NZ
K7HH9R		223.45	0.21	0.18	223.18	-0.03	-0.03	TA
KGZZ2X		223.20	-0.03	-0.03	223.37	0.16	0.13	PE
LVH8DP		224.30	1.06	0.90	223.80	0.59	0.49	TA
MN9MEH	*	226.48	3.24	2.74	226.46	3.25	2.72	TA
MNR4W7		223.06	-0.17	-0.15	222.96	-0.25	-0.21	TA
NA82ZZ		224.81	1.57	1.33	224.40	1.18	0.99	TA
NATUEH		221.28	-1.95	-1.65	221.24	-1.98	-1.65	TA
NGNWGU	X	226.50	3.26	2.76	225.13	1.91	1.60	XX
PJ8XBG		224.05	0.81	0.68	223.98	0.76	0.64	TA
PTGD7V		224.11	0.88	0.74	224.06	0.84	0.71	TA
Q2RYPJ		222.63	-0.60	-0.51	222.60	-0.61	-0.51	TA
QHA8H8		220.89	-2.35	-1.99	220.58	-2.63	-2.20	XX
U4W3K2		224.42	1.19	1.00	224.44	1.22	1.02	XX
UDRYVJ		223.08	-0.15	-0.13	222.64	-0.58	-0.48	MT
UZ6P9D		222.56	-0.68	-0.58	222.70	-0.52	-0.43	TA



Plastics Interlaboratory Testing Program

Report #128

Analysis 761

4th Qtr 2023

DSC Melt Temperature

WebCode	Data Flag	Sample W95			Sample W96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
UZXRP2		221.67	-1.57	-1.33	222.07	-1.15	-0.96	TA
V8JVHP		224.07	0.83	0.70	224.39	1.18	0.98	TA
VAHHPY		223.96	0.72	0.61	223.64	0.43	0.36	TA
WPCFE2		223.42	0.18	0.15	223.11	-0.10	-0.08	TA
XAFKFF		223.59	0.35	0.30	223.63	0.42	0.35	TA
XDGLGX		223.73	0.49	0.42	223.71	0.50	0.42	XX
XZNNW7		223.33	0.10	0.08	223.67	0.45	0.38	NZ
ZY6PMU		223.61	0.37	0.32	223.55	0.34	0.29	TA

Summary Statistics

	Sample W95	Sample W96
Grand Means	223.237 Degrees Celsius	223.212 Degrees Celsius
Std Dev Btwn Labs	1.182 Degrees Celsius	1.196 Degrees Celsius

Statistics based on 39 of 43 reporting participants

Sample W95: PBT & Sample W96: PBT

Comments on Assigned Data Flags for Test #761

- NGNWXG (X) - Data for sample W95 are high. Inconsistent within the determinations of sample W96.
- DA8EWJ (X) - Data for both samples are high. Possible Systematic Error.
- JMPAMP (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- 3B9UN7 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

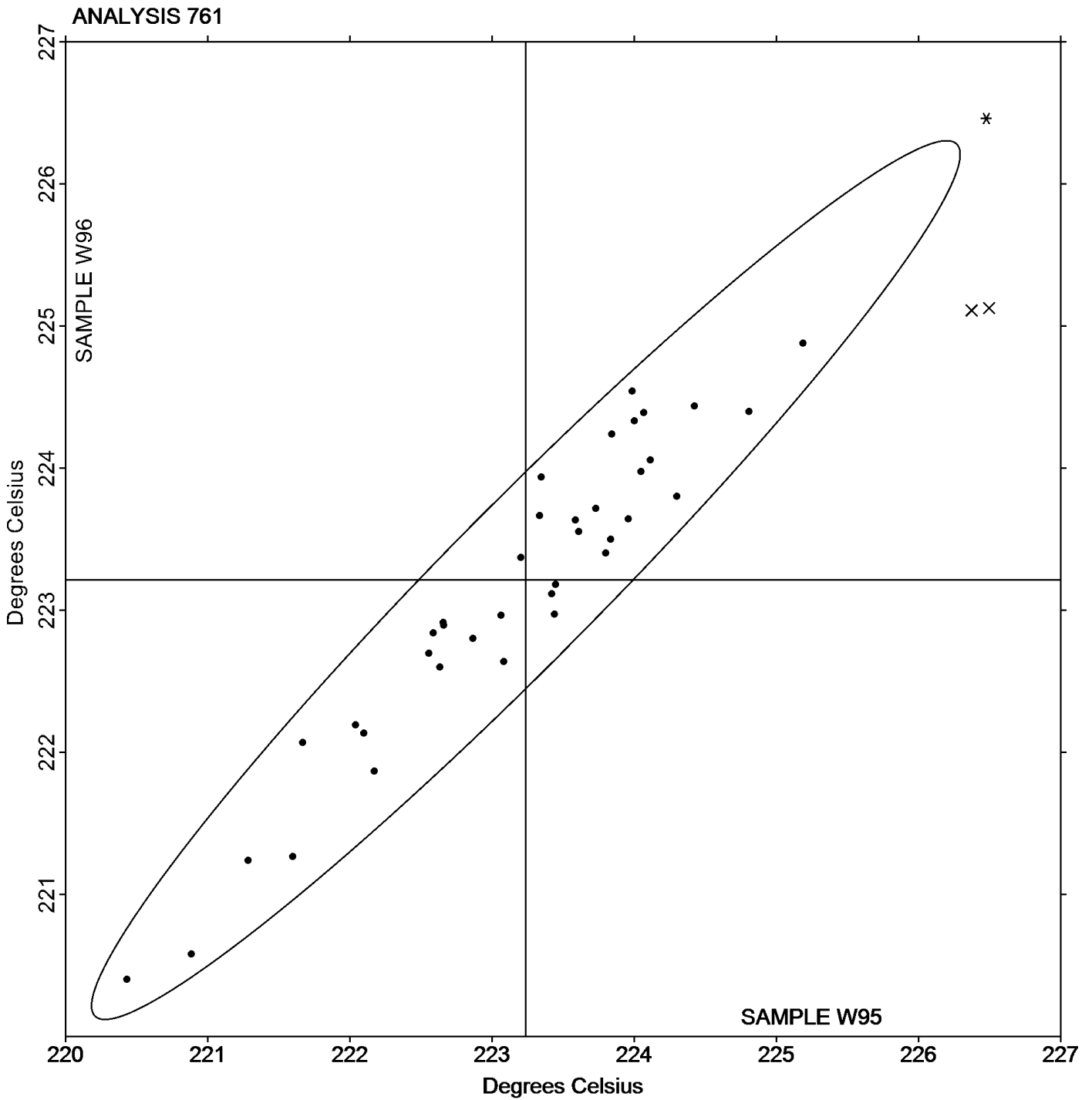
Report #128

Analysis 761

4th Qtr 2023

DSC Melt Temperature

Grand Mean Sample W95: 223.24 Degrees Celsius Grand Mean Sample W96: 223.21 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #128

Analysis 762

4th Qtr 2023

DSC Enthalpy of Crystallization

WebCode	Data Flag	Sample W95			Sample W96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UU43U		45.11	-2.82	-0.64	45.36	-2.38	-0.62	TA
2ZED2Q		46.95	-0.97	-0.22	47.94	0.20	0.05	NZ
3WDH49		50.90	2.97	0.68	49.40	1.66	0.43	XX
4E6ZKN		45.69	-2.23	-0.51	45.37	-2.37	-0.62	TA
9BFZJP		49.04	1.12	0.26	49.14	1.40	0.37	TA
C74D7U		48.01	0.09	0.02	47.85	0.11	0.03	TA
C9TTKW		53.81	5.88	1.35	51.29	3.55	0.93	XX
CNN46U		55.29	7.37	1.69	55.49	7.75	2.02	TA
DA8EWJ		41.80	-6.12	-1.40	41.75	-5.99	-1.56	TA
E69MY7		46.28	-1.64	-0.38	45.95	-1.79	-0.47	TA
G4AW7W		48.62	0.69	0.16	47.43	-0.31	-0.08	TA
GUGX8B		46.12	-1.80	-0.41	46.30	-1.44	-0.38	XX
HW6EBH		47.77	-0.16	-0.04	45.16	-2.58	-0.67	TA
K7HH9R		44.74	-3.18	-0.73	45.39	-2.35	-0.61	TA
KGZZ2X		38.87	-9.05	-2.07	39.82	-7.92	-2.07	PE
LVH8DP		55.81	7.89	1.81	53.92	6.18	1.61	TA
MN9MEH		46.59	-1.34	-0.31	46.83	-0.91	-0.24	XX
MNR4W7		51.33	3.41	0.78	51.26	3.52	0.92	TA
NA82ZZ		57.31	9.38	2.15	55.01	7.27	1.90	TA
PJ8XBG		48.04	0.11	0.03	47.39	-0.35	-0.09	TA
PTGD7V		43.74	-4.18	-0.96	43.66	-4.08	-1.06	TA
Q2RYPJ		46.79	-1.13	-0.26	46.57	-1.17	-0.30	TA
QHA8H8	X	47.50	-0.42	-0.10	42.73	-5.01	-1.31	XX
UDRYVJ		45.28	-2.64	-0.60	46.08	-1.66	-0.43	MT
UZ6P9D		46.76	-1.17	-0.27	47.41	-0.33	-0.09	TA
V8JVHP		50.77	2.85	0.65	50.16	2.42	0.63	XX
VAHHPY	*	55.39	7.47	1.71	56.31	8.57	2.24	XX
WPCFE2		47.01	-0.92	-0.21	47.60	-0.14	-0.04	TA
XAFKFF		46.93	-0.99	-0.23	45.81	-1.93	-0.50	TA
XDGLGX		45.46	-2.47	-0.56	45.15	-2.59	-0.68	XX
XZNNW7	*	41.47	-6.45	-1.48	45.37	-2.37	-0.62	NZ



Plastics Interlaboratory Testing Program

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Analysis 762

4th Qtr 2023

DSC Enthalpy of Crystallization

Summary Statistics

Sample W95

Sample W96

Grand Means

47.923 Joules Per Gram

47.740 Joules Per Gram

Stnd Dev Btwn Labs

4.367 Joules Per Gram

3.830 Joules Per Gram

Statistics based on 30 of 31 reporting participants

Sample W95: PBT & Sample W96: PBT

Comments on Assigned Data Flags for Test #762

QHA8H8 (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

NZ Netzsch Instruments

PE Perkins Elmer Instruments

TA TA Instruments

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

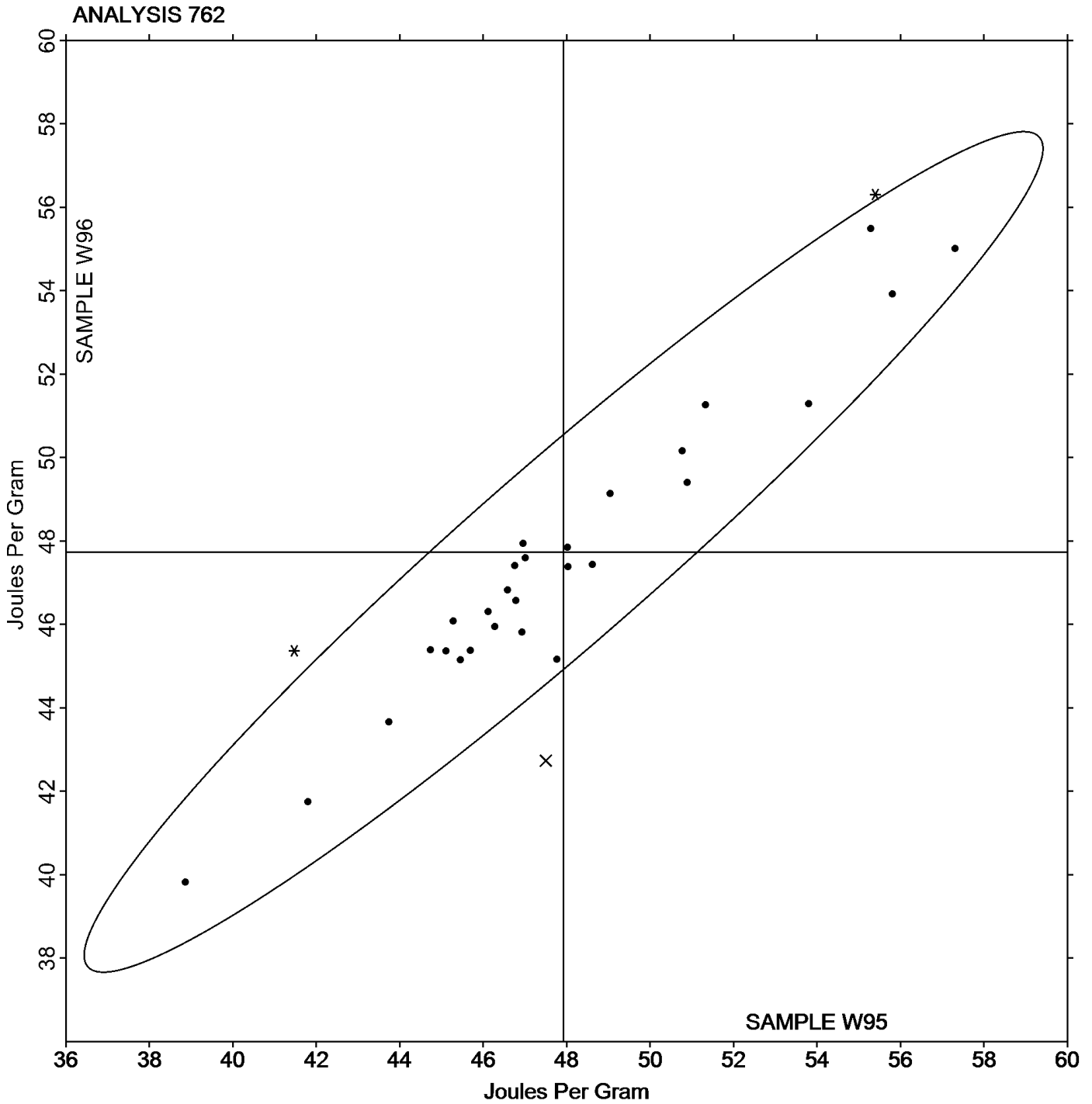
Analysis 762

DSC Enthalpy of Crystallization

Report #128

4th Qtr 2023

Grand Mean Sample W95: 47.923 Joules Per Gram Grand Mean Sample W96: 47.740 Joules Per Gram





Plastics Interlaboratory Testing Program

Report #128

Analysis 763

4th Qtr 2023

DSC Enthalpy of Fusion

WebCode	Data Flag	Sample W95			Sample W96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UU43U		45.77	4.48	1.02	44.28	3.25	0.74	TA
2ZED2Q		43.23	1.94	0.44	43.48	2.45	0.56	NZ
3WDH49		46.19	4.90	1.11	45.70	4.67	1.07	NZ
4E6ZKN		40.96	-0.33	-0.07	43.10	2.07	0.48	TA
9BFZJP		52.43	11.14	2.53	52.26	11.23	2.57	TA
C74D7U	X	51.47	10.18	2.31	39.51	-1.52	-0.35	TA
C9TTKW		41.15	-0.14	-0.03	40.24	-0.79	-0.18	XX
CNN46U	X	55.88	14.59	3.32	56.39	15.36	3.52	TA
DA8EWJ		39.95	-1.34	-0.31	38.10	-2.93	-0.67	TA
E69MY7		36.66	-4.63	-1.05	37.05	-3.98	-0.91	TA
G4AW7W		41.26	-0.03	-0.01	41.05	0.02	0.00	TA
GUGX8B		36.23	-5.06	-1.15	36.93	-4.10	-0.94	XX
HW6EBH		37.12	-4.17	-0.95	35.27	-5.76	-1.32	TA
K7HH9R		37.24	-4.05	-0.92	37.68	-3.35	-0.77	TA
KGZZ2X		34.43	-6.86	-1.56	34.33	-6.70	-1.53	PE
LVH8DP		43.96	2.67	0.61	42.39	1.36	0.31	TA
MN9MEH	X	30.78	-10.51	-2.39	37.66	-3.37	-0.77	TA
MNR4W7		40.38	-0.91	-0.21	42.24	1.21	0.28	TA
NA82ZZ		46.39	5.10	1.16	44.42	3.39	0.78	TA
PJ8XBG		37.90	-3.39	-0.77	38.45	-2.58	-0.59	TA
PTGD7V		36.76	-4.53	-1.03	36.75	-4.28	-0.98	TA
Q2RYPJ		38.28	-3.01	-0.68	37.84	-3.19	-0.73	TA
QHA8H8	*	42.20	0.91	0.21	38.76	-2.27	-0.52	XX
UDRYVJ		38.16	-3.13	-0.71	38.04	-2.99	-0.69	MT
UZ6P9D		45.86	4.57	1.04	46.21	5.18	1.19	TA
V8JVHP		44.46	3.17	0.72	43.62	2.59	0.59	XX
VAHHPY		46.81	5.52	1.25	48.05	7.02	1.61	TA
WPCFE2		44.49	3.20	0.73	44.76	3.73	0.86	TA
XAFKFF		35.32	-5.97	-1.36	35.90	-5.13	-1.18	TA
XDGLGX		41.85	0.56	0.13	41.43	0.40	0.09	XX
XZNNW7		36.19	-5.10	-1.16	35.96	-5.07	-1.16	NZ
ZY6PMU		45.79	4.50	1.02	45.57	4.54	1.04	TA



Plastics Interlaboratory Testing Program

Report #128

Analysis 763

4th Qtr 2023

DSC Enthalpy of Fusion

Summary Statistics		
	<u>Sample W95</u>	<u>Sample W96</u>
Grand Means	41.290 Joules Per Gram	41.030 Joules Per Gram
Stnd Dev Btwn Labs	4.397 Joules Per Gram	4.365 Joules Per Gram
Statistics based on 29 of 32 reporting participants		

Sample W95: PBT & Sample W96: PBT

Comments on Assigned Data Flags for Test #763

CNN46U (X) - Data for both samples are high.

MN9MEH (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

C74D7U (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

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



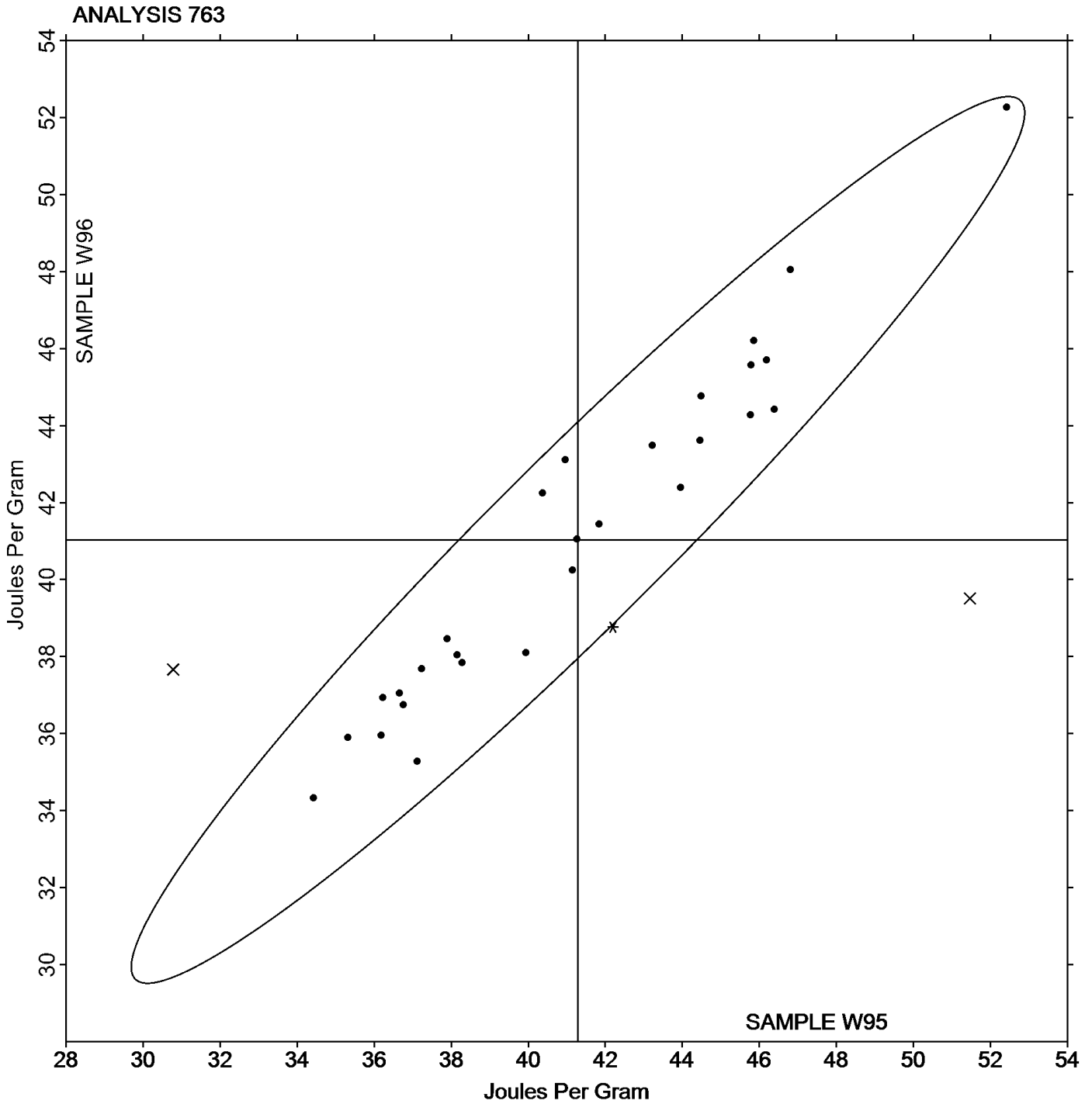
Plastics Interlaboratory Testing Program

Analysis 763 DSC Enthalpy of Fusion

Report #128

4th Qtr 2023

Grand Mean Sample W95: 41.290 Joules Per Gram Grand Mean Sample W96: 41.030 Joules Per Gram





Plastics Interlaboratory Testing Program

Report #128

Analysis 764

4th Qtr 2023

DSC Glass Transition Temperature

WebCode	Data Flag	Sample V95			Sample V96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UU43U		81.32	-0.49	-0.34	81.19	-0.62	-0.45	TA
2ZED2Q	*	77.23	-4.57	-3.23	77.30	-4.51	-3.30	NZ
39NTUK	*	83.69	1.88	1.33	82.92	1.10	0.81	SH
3WDH49		82.17	0.36	0.26	82.37	0.55	0.40	NZ
4E6ZKN		81.60	-0.21	-0.15	81.71	-0.11	-0.08	TA
9BFZJP		80.64	-1.16	-0.82	80.44	-1.37	-1.00	TA
C74D7U	X	72.45	-9.35	-6.61	72.01	-9.81	-7.16	TA
C9TTKW		82.95	1.15	0.81	83.04	1.22	0.89	XX
CNN46U	X	72.04	-9.77	-6.91	71.68	-10.13	-7.40	TA
DA8EWJ		79.74	-2.06	-1.46	80.29	-1.52	-1.11	TA
E69MY7		82.76	0.95	0.67	83.25	1.43	1.05	TA
GUGX8B		82.07	0.26	0.19	81.97	0.15	0.11	XX
HW6EBH		81.67	-0.14	-0.10	81.83	0.02	0.01	TA
K7HH9R		82.93	1.13	0.80	82.81	1.00	0.73	TA
KGZZ2X		83.35	1.55	1.10	83.58	1.76	1.29	PE
LVH8DP		82.80	1.00	0.70	82.80	0.99	0.72	TA
MN9MEH		79.92	-1.88	-1.33	80.23	-1.58	-1.16	TA
MNR4W7		82.88	1.08	0.76	82.81	1.00	0.73	TA
MXXBC7		80.92	-0.88	-0.63	81.05	-0.77	-0.56	PE
NA82ZZ	X	74.54	-7.26	-5.14	75.06	-6.75	-4.93	TA
PJ8XBG		82.55	0.75	0.53	82.29	0.48	0.35	TA
PTGD7V		81.10	-0.70	-0.50	81.28	-0.54	-0.39	TA
Q2RYPJ		82.40	0.60	0.42	82.17	0.35	0.26	TA
QHA8H8	*	79.50	-2.30	-1.63	79.03	-2.78	-2.03	XX
UDRYVJ		81.19	-0.62	-0.44	81.36	-0.45	-0.33	MT
UZ6P9D		82.91	1.11	0.78	82.68	0.86	0.63	TA
VAHHPY		82.33	0.53	0.37	82.39	0.58	0.42	TA
WPCFE2		81.42	-0.39	-0.27	81.43	-0.39	-0.28	TA
XAFKFF		82.76	0.96	0.68	83.04	1.22	0.89	TA
XDGLGX		82.23	0.43	0.30	82.20	0.38	0.28	XX
XZNNW7		83.60	1.80	1.27	83.13	1.32	0.96	NZ
ZY6PMU		81.70	-0.11	-0.08	82.02	0.21	0.15	TA



Plastics Interlaboratory Testing Program

Report #128

Analysis 764

4th Qtr 2023

DSC Glass Transition Temperature

Summary Statistics	Sample V95	Sample V96
Grand Means	81.804 Degrees Celsius	81.814 Degrees Celsius
Stnd Dev Btwn Labs	1.414 Degrees Celsius	1.369 Degrees Celsius
Statistics based on 29 of 32 reporting participants		

Sample V95: PET & Sample V96: PET

Comments on Assigned Data Flags for Test #764

NA82ZZ (X) - Data for both samples are low. Possible Systematic Error.

CNN46U (X) - Data for both samples are low.

C74D7U (X) - Data for both samples are low. Inconsistent within the determinations of sample V96.

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

NZ Netzsch Instruments

PE Perkins Elmer Instruments

SH Shimadzu

TA TA Instruments

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

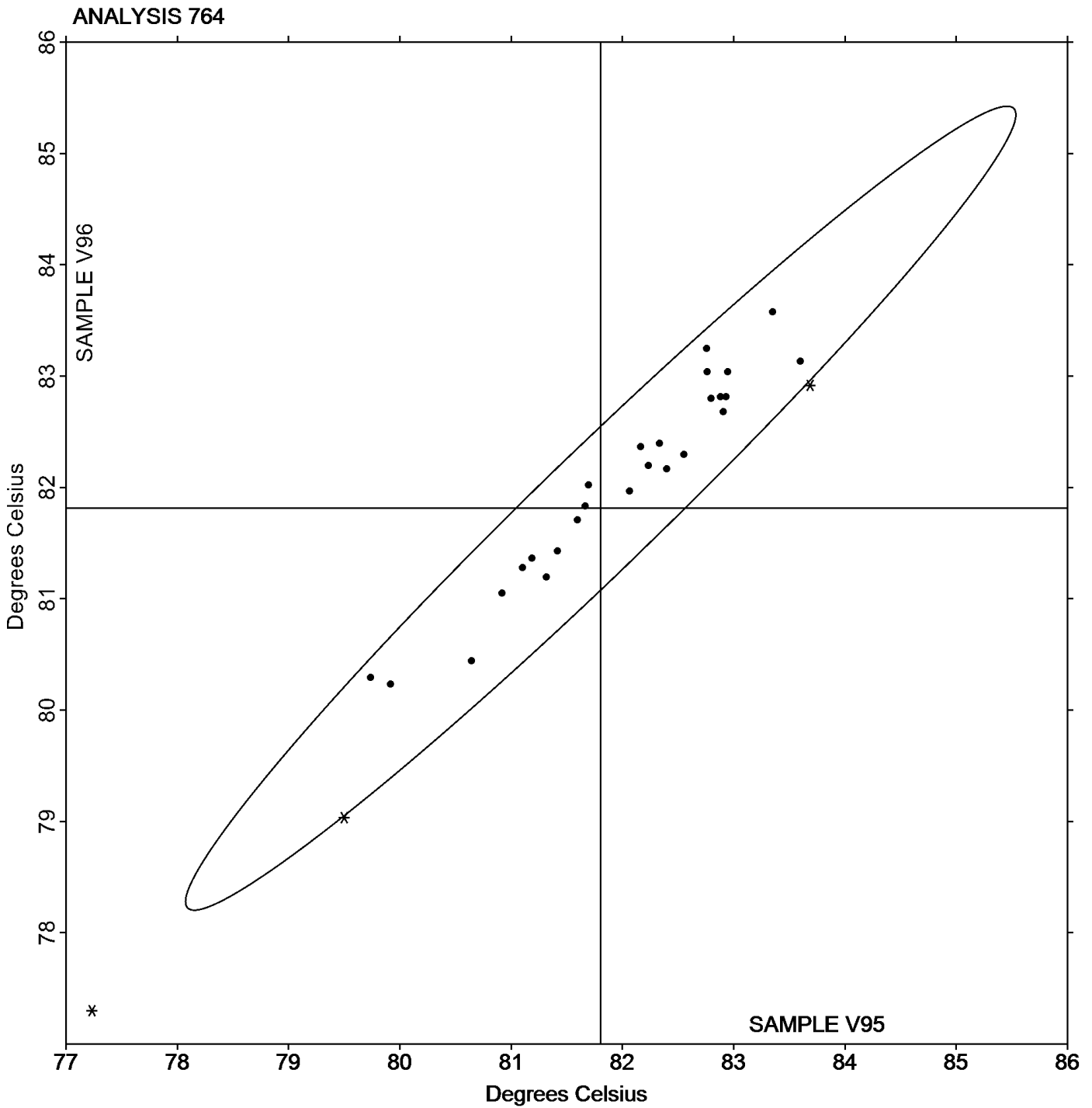
Analysis 764

DSC Glass Transition Temperature

Report #128

4th Qtr 2023

Grand Mean Sample V95: 81.804 Degrees Celsius Grand Mean Sample V96: 81.814 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #128

Analysis 765

4th Qtr 2023

Research Crystallization Peak Temperature

WebCode	Data Flag	Sample W95			Sample W96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZED2Q		178.53	2.97	0.47	176.37	0.96	0.16	NZ
C74D7U		189.84	14.28	2.27	189.30	13.89	2.25	TA
CNN46U		179.45	3.89	0.62	179.46	4.06	0.66	TA
DA8EWJ		176.05	0.49	0.08	176.25	0.84	0.14	TA
GUGX8B		169.07	-6.49	-1.03	168.60	-6.80	-1.10	XX
K7HH9R		177.33	1.77	0.28	177.80	2.40	0.39	TA
MN9MEH	X	199.86	24.30	3.86	199.75	24.35	3.95	TA
Q2RYPJ		170.60	-4.96	-0.79	169.77	-5.64	-0.91	TA
T6J8QV		173.20	-2.36	-0.37	174.27	-1.14	-0.18	TA
UZ6P9D		172.76	-2.80	-0.44	173.28	-2.12	-0.34	TA
WPCFE2		168.76	-6.80	-1.08	168.94	-6.46	-1.05	TA

Summary Statistics		
	Sample W95	Sample W96
Grand Means	175.559 Degrees Celsius	175.403 Degrees Celsius
Std Dev Btwn Labs	6.305 Degrees Celsius	6.169 Degrees Celsius
Statistics based on 10 of 11 reporting participants		

Sample W95: PBT & Sample W96: PBT

Comments on Assigned Data Flags for Test #765

MN9MEH (X) - Data for both samples are high. Inconsistent within the determinations of sample W95.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

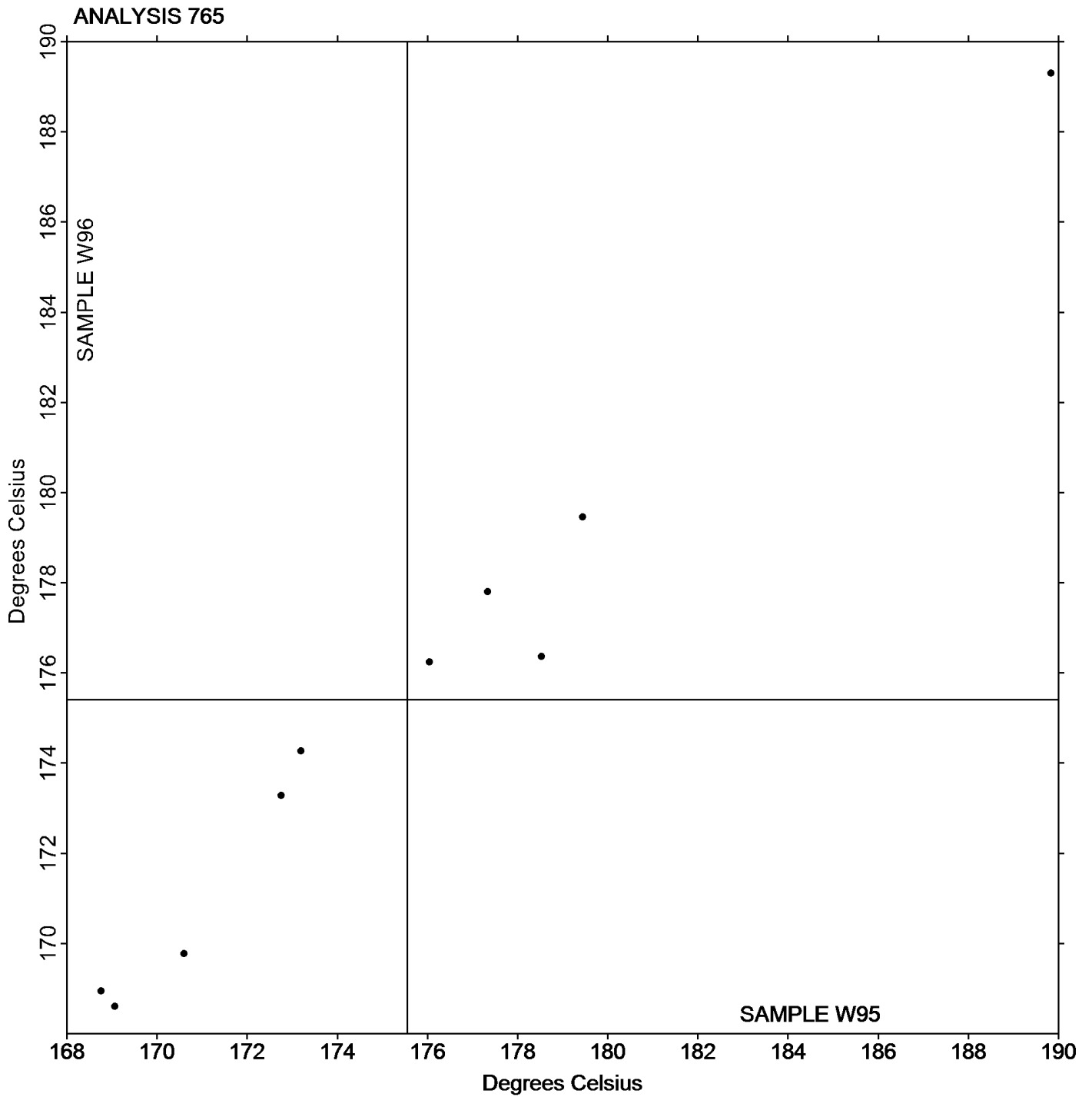
Analysis 765

Research Crystallization Peak Temperature

Report #128

4th Qtr 2023

Grand Mean Sample W95: 175.56 Degrees Celsius Grand Mean Sample W96: 175.40 Degrees Celsius



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



Plastics Interlaboratory Testing Program

Report #128

Analysis 766

4th Qtr 2023

Research Melting Peak Temperature

WebCode	Data Flag	Sample W95			Sample W96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZED2Q		220.33	-2.93	-1.65	220.40	-2.95	-1.52	NZ
369K7K		222.66	-0.60	-0.34	222.89	-0.46	-0.24	TA
C74D7U		222.04	-1.22	-0.69	222.19	-1.17	-0.60	TA
CNN46U		222.17	-1.09	-0.61	221.87	-1.49	-0.77	TA
DA8EWJ		226.60	3.33	1.87	227.66	4.31	2.22	TA
GUGX8B		223.83	0.57	0.32	223.50	0.15	0.08	XX
K7HH9R		223.67	0.40	0.23	223.43	0.08	0.04	TA
MN9MEH		226.48	3.21	1.81	226.46	3.11	1.60	TA
Q2RYPJ		222.43	-0.83	-0.47	222.83	-0.52	-0.27	TA
T6J8QV		222.97	-0.30	-0.17	223.20	-0.15	-0.08	TA
UZ6P9D		222.56	-0.71	-0.40	222.70	-0.66	-0.34	TA
WPCFE2		223.42	0.16	0.09	223.11	-0.24	-0.12	XX

Summary Statistics		
	Sample W95	Sample W96
Grand Means	223.263 Degrees Celsius	223.354 Degrees Celsius
Std Dev Btwn Labs	1.780 Degrees Celsius	1.943 Degrees Celsius
Statistics based on 12 of 12 reporting participants		

Sample W95: PBT & Sample W96: PBT

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

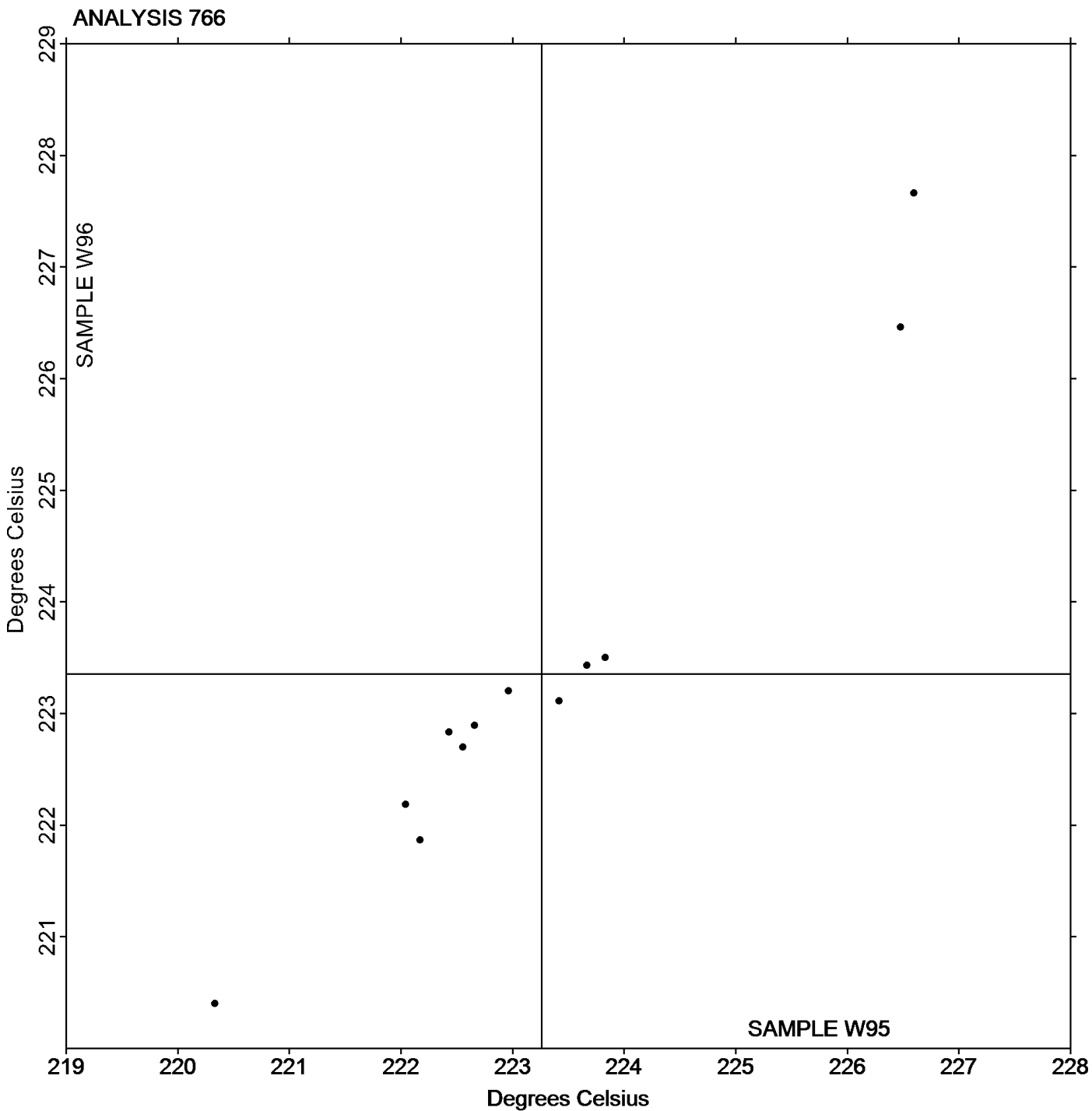
Analysis 766

Research Melting Peak Temperature

Report #128

4th Qtr 2023

Grand Mean Sample W95: 223.26 Degrees Celsius Grand Mean Sample W96: 223.35 Degrees Celsius



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



Plastics Interlaboratory Testing Program

Report #128

Analysis 767

4th Qtr 2023

Research Heat of Crystallization

WebCode	Data Flag	Sample W95			Sample W96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZED2Q		49.07	1.01	0.26	48.08	0.23	0.06	NZ
C74D7U		54.45	6.38	1.64	53.45	5.60	1.49	TA
CNN46U		55.29	7.22	1.85	55.49	7.64	2.04	TA
DA8EWJ		41.80	-6.27	-1.61	41.75	-6.10	-1.62	TA
GUGX8B		46.12	-1.94	-0.50	46.30	-1.54	-0.41	XX
K7HH9R		45.07	-3.00	-0.77	45.73	-2.11	-0.56	TA
MN9MEH		46.59	-1.48	-0.38	46.83	-1.02	-0.27	TA
Q2RYPJ		47.62	-0.44	-0.11	45.45	-2.40	-0.64	TA
T6J8QV		48.96	0.90	0.23	48.22	0.38	0.10	TA
UZ6P9D		46.76	-1.31	-0.34	47.41	-0.43	-0.12	TA
WPCFE2		47.01	-1.06	-0.27	47.60	-0.25	-0.07	XX

Summary Statistics		
	Sample W95	Sample W96
Grand Means	48.067 Joules Per Gram	47.847 Joules Per Gram
Std Dev Btwn Labs	3.898 Joules Per Gram	3.755 Joules Per Gram
Statistics based on 11 of 11 reporting participants		

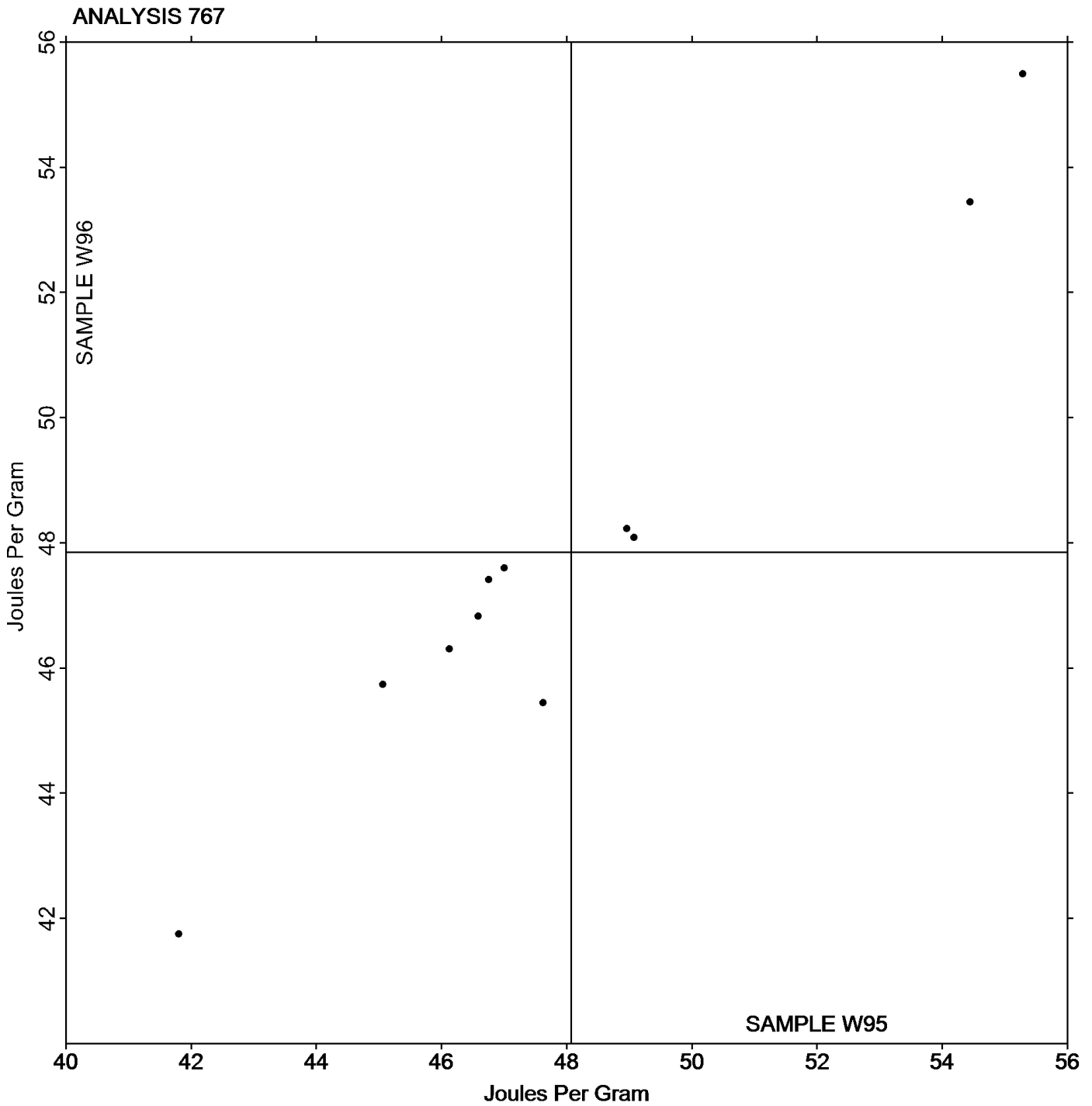
Sample W95: PBT & Sample W96: PBT

Key to Instrument Codes Reported by Participants

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



Grand Mean Sample W95: 48.067 Joules Per Gram Grand Mean Sample W96: 47.847 Joules Per Gram



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



Plastics Interlaboratory Testing Program

Report #128

Analysis 768

4th Qtr 2023

Research Heat of Fusion

WebCode	Data Flag	Sample W95			Sample W96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZED2Q		40.93	-2.92	-0.47	42.08	-1.44	-0.23	NZ
C74D7U		51.09	7.24	1.15	47.28	3.76	0.61	TA
CNN46U		55.88	12.03	1.92	56.39	12.87	2.07	TA
DA8EWJ		39.95	-3.90	-0.62	38.10	-5.43	-0.87	TA
GUGX8B		36.23	-7.62	-1.21	36.93	-6.59	-1.06	XX
K7HH9R		37.40	-6.45	-1.03	38.20	-5.32	-0.86	TA
MN9MEH	X	23.32	-20.53	-3.27	37.67	-5.86	-0.94	TA
Q2RYPJ		39.54	-4.31	-0.69	37.47	-6.05	-0.97	TA
T6J8QV		47.13	3.28	0.52	47.82	4.29	0.69	TA
UZ6P9D		45.86	2.01	0.32	46.21	2.69	0.43	TA
WPCFE2		44.49	0.64	0.10	44.76	1.24	0.20	XX

Summary Statistics

	Sample W95	Sample W96
Grand Means	43.850 Joules Per Gram	43.525 Joules Per Gram
Std Dev Btwn Labs	6.276 Joules Per Gram	6.208 Joules Per Gram

Statistics based on 10 of 11 reporting participants

Sample W95: PBT & Sample W96: PBT

Comments on Assigned Data Flags for Test #768

MN9MEH (X) - Data for sample W95 are low. Inconsistent within the determinations of sample W96.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

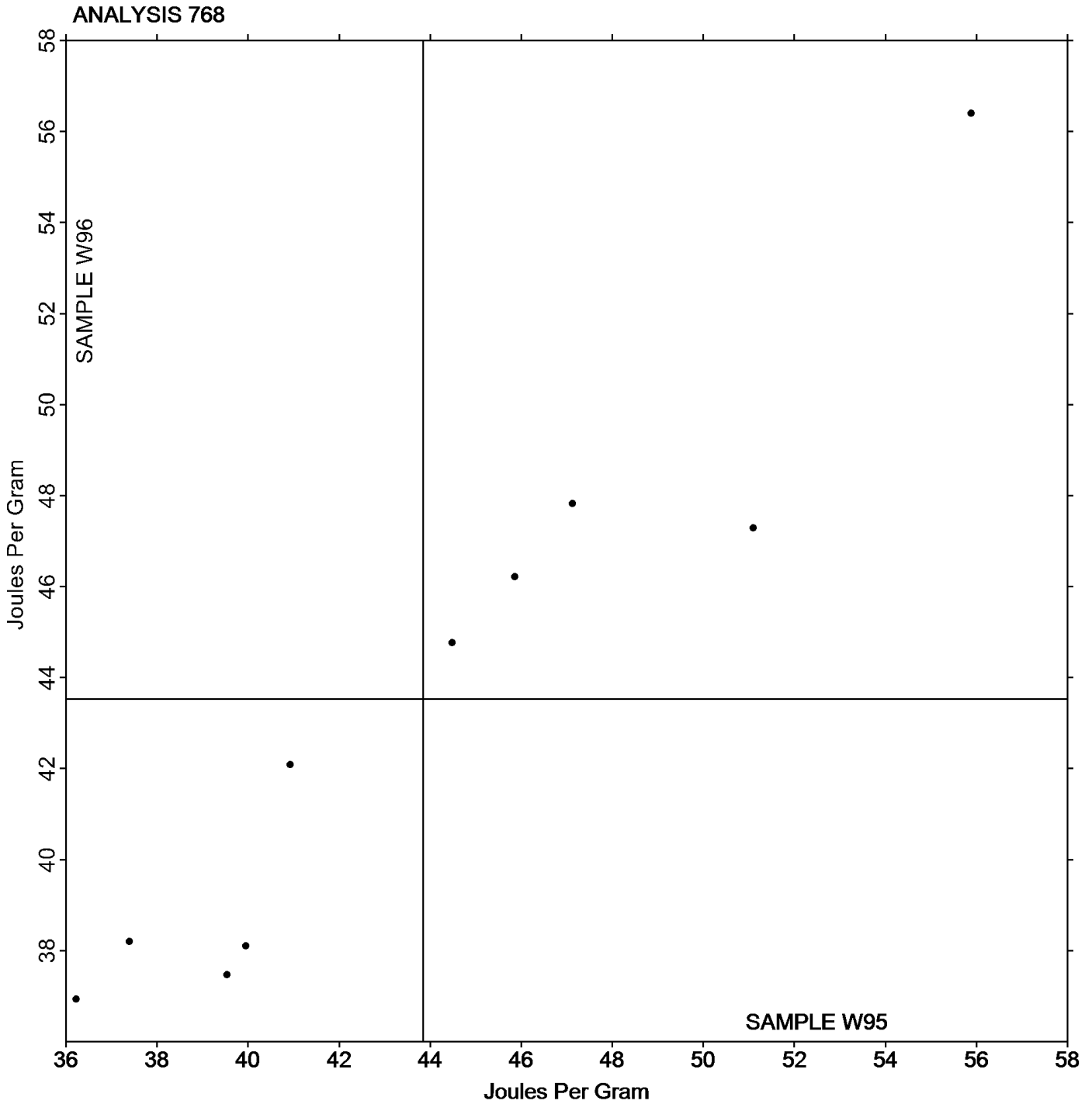
Analysis 768

Research Heat of Fusion

Report #128

4th Qtr 2023

Grand Mean Sample W95: 43.850 Joules Per Gram Grand Mean Sample W96: 43.525 Joules Per Gram



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



Plastics Interlaboratory Testing Program

Report #128

Analysis 769

4th Qtr 2023

Research Glass Transition Temperature

WebCode	Data Flag	Sample V95			Sample V96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2ZED2Q		77.37	-2.14	-0.54	77.57	-1.92	-0.47	NZ
C74D7U		72.33	-7.17	-1.80	71.82	-7.66	-1.86	TA
CNN46U		72.04	-7.47	-1.87	71.68	-7.80	-1.90	TA
DA8EWJ		79.74	0.23	0.06	80.29	0.81	0.20	TA
GUGX8B		82.07	2.56	0.64	81.97	2.48	0.60	XX
K7HH9R		83.30	3.79	0.95	83.00	3.52	0.85	TA
MN9MEH		79.92	0.41	0.10	80.06	0.58	0.14	TA
Q2RYPJ		82.53	3.03	0.76	82.53	3.05	0.74	TA
T6J8QV		80.94	1.44	0.36	81.29	1.81	0.44	TA
UZ6P9D		82.91	3.40	0.85	82.68	3.19	0.78	TA
WPCFE2		81.42	1.91	0.48	81.43	1.94	0.47	XX

Summary Statistics		
	Sample V95	Sample V96
Grand Means	79.506 Degrees Celsius	79.484 Degrees Celsius
Std Dev Btwn Labs	3.993 Degrees Celsius	4.114 Degrees Celsius
Statistics based on 11 of 11 reporting participants		

Sample V95: PET & Sample V96: PET

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

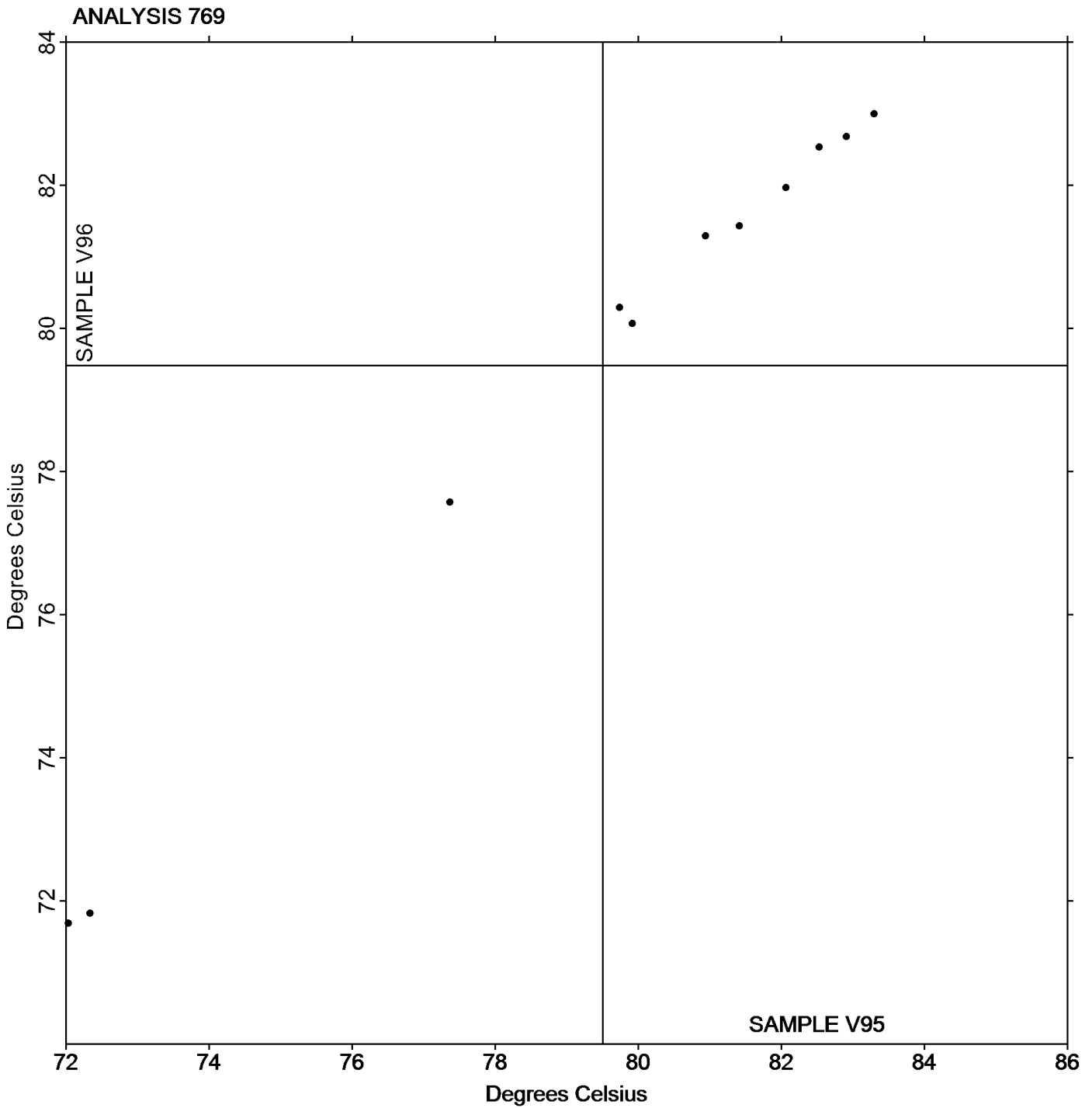
Analysis 769

Research Glass Transition Temperature

Report #128

4th Qtr 2023

Grand Mean Sample V95: 79.506 Degrees Celsius Grand Mean Sample V96: 79.484 Degrees Celsius



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



Plastics Interlaboratory Testing Program

Report #128

Analysis 770

4th Qtr 2023

Tensile Stress at Yield, Film Samples - psi

WebCode	Data Flag	Sample B95			Sample B96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2PYCUW		1,714	28	0.18	1,732	51	0.38	OA
39NTUK	X	2,229	543	3.44	1,457	-224	-1.65	WZ
3U3P2U		1,653	-33	-0.21	1,634	-46	-0.34	IM
873ZLX		1,575	-111	-0.70	1,653	-27	-0.20	IN
CV6TR9		1,922	236	1.49	1,812	132	0.97	TO
FGFRRK		1,655	-31	-0.20	1,654	-27	-0.20	SH
H2GMCL		1,743	57	0.36	1,781	101	0.74	WZ
HJGCTP		1,784	99	0.62	1,792	112	0.83	IN
JY68FZ		1,718	33	0.21	1,842	162	1.19	UC
KNHEHA	X	3,771	2,085	13.20	1,946	265	1.96	IN
KTGRMM		1,405	-281	-1.78	1,391	-289	-2.13	TO
NBKQ4C		1,651	-35	-0.22	1,736	56	0.41	IN
NXTDEF		1,473	-213	-1.35	1,408	-272	-2.01	IN
T6J8QV		1,702	16	0.10	1,723	43	0.31	IN
UVAX33		1,586	-100	-0.63	1,542	-138	-1.02	IN
WKGFD		1,623	-63	-0.40	1,659	-22	-0.16	IN
YGRW87	*	2,073	387	2.45	1,825	145	1.07	LI
YMH9AU		1,697	11	0.07	1,701	21	0.15	IN
ZY6PMU	X	3,340	1,654	10.47	3,102	1,422	10.48	IN

Summary Statistics		
	Sample B95	Sample B96
Grand Means	1,685.9 psi	1,680.3 psi
Stnd Dev Btwn Labs	158.0 psi	135.7 psi
Statistics based on 16 of 19 reporting participants		

Sample B95: LDPE & Sample B96: LDPE

Comments on Assigned Data Flags for Test #770

- 39NTUK (X) - Data for sample B95 are high.
- KNHEHA (X) - Data for sample B95 are high.
- ZY6PMU (X) - Data for both samples are high.

Key to Instrument Codes Reported by Participants

- | | | | |
|----|------------------------|----|-----------------|
| IM | Instru-Met Instruments | IN | Instron |
| LI | Lloyd Instruments | OA | Oakland Testing |
| SH | Shimadzu | TO | Tinius Olsen |
| UC | United | WZ | Zwick |



Plastics Interlaboratory Testing Program

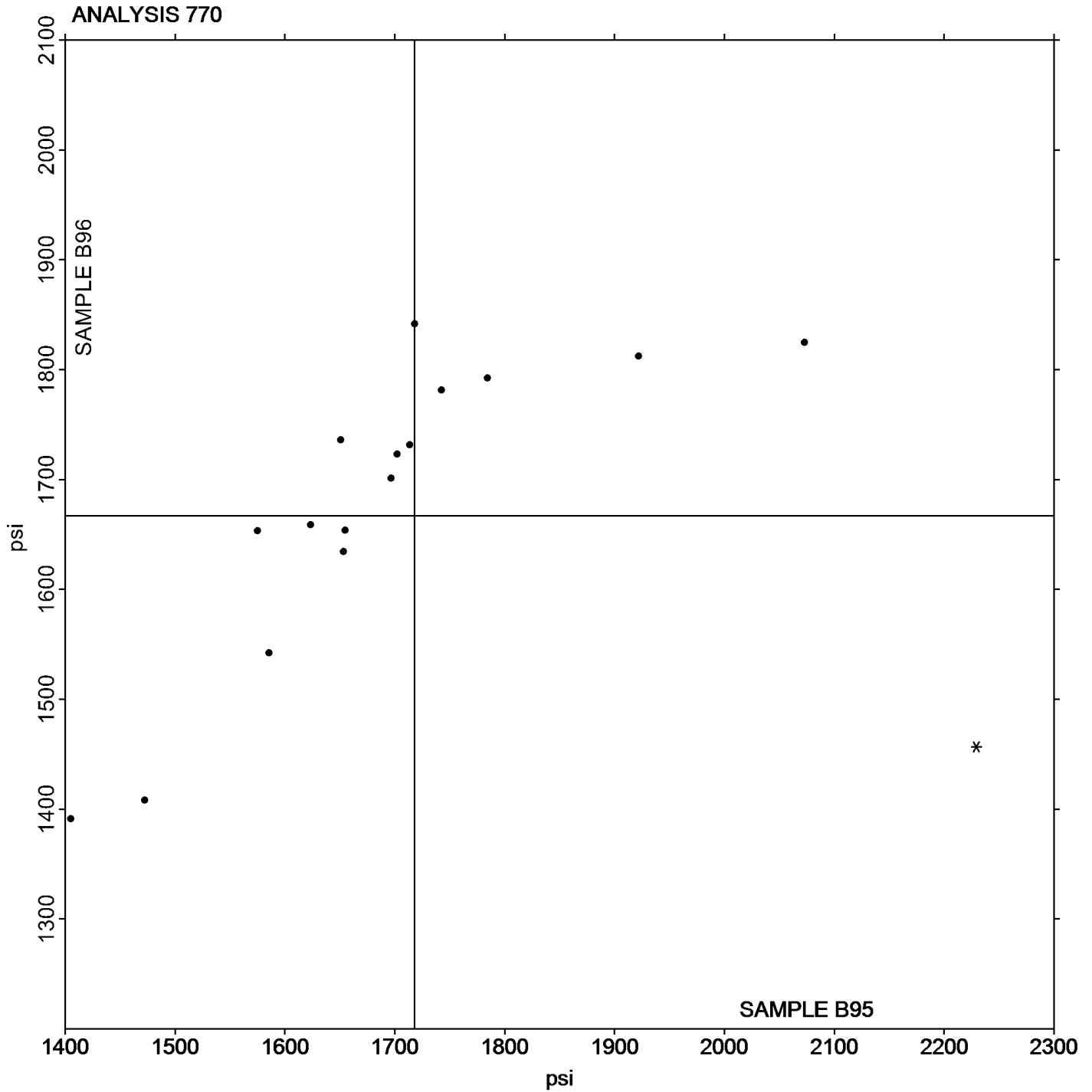
Report #128

Analysis 770

4th Qtr 2023

Tensile Stress at Yield, Film Samples - psi

Grand Mean Sample B95: 1,685.86 psi Grand Mean Sample B96: 1,680.27 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 #128

Analysis 771

4th Qtr 2023

Tensile Stress at Break, Film Samples - psi

WebCode	Data Flag	Sample B95			Sample B96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2PYCUW		4,033	620	1.43	3,742	563	1.23	OA
39NTUK	X	4,857	1,444	3.33	2,671	-507	-1.11	WZ
3U3P2U		3,534	120	0.28	3,341	162	0.35	IM
873ZLX		3,454	41	0.09	3,285	106	0.23	IN
CV6TR9		2,890	-523	-1.21	2,561	-618	-1.35	TO
FGFRRK		3,102	-312	-0.72	3,017	-162	-0.35	SH
H2GMCL		3,830	417	0.96	3,755	576	1.26	WZ
HJGCTP		3,945	532	1.23	3,618	439	0.96	IN
JY68FZ		2,867	-547	-1.26	2,757	-422	-0.92	UC
KNHEHA		3,771	358	0.82	3,738	559	1.22	IN
KTGRMM		2,773	-640	-1.48	2,233	-946	-2.06	TO
NBKQ4C		2,645	-768	-1.77	2,728	-451	-0.98	IN
NXTDEF		3,457	44	0.10	2,842	-336	-0.73	IN
T6J8QV		3,786	373	0.86	3,332	153	0.33	IN
UVAX33		3,847	434	1.00	3,662	483	1.05	IN
WKGfad		3,388	-25	-0.06	3,255	76	0.17	IN
YGRW87		3,253	-161	-0.37	2,857	-321	-0.70	LI
YMH9AU		3,452	39	0.09	3,315	136	0.30	IN

Summary Statistics

	Sample B95	Sample B96
Grand Means	3,413.4 psi	3,178.6 psi
Std Dev Btwn Labs	433.9 psi	459.2 psi

Statistics based on 17 of 18 reporting participants

Sample B95: LDPE & Sample B96: LDPE

Comments on Assigned Data Flags for Test #771

39NTUK (X) - Data for sample B95 are high. Inconsistent within the determinations of sample B96.

Key to Instrument Codes Reported by Participants

IM	Instru-Met Instruments	IN	Instron
LI	Lloyd Instruments	OA	Oakland Testing
SH	Shimadzu	TO	Tinius Olsen
UC	United	WZ	Zwick



Plastics Interlaboratory Testing Program

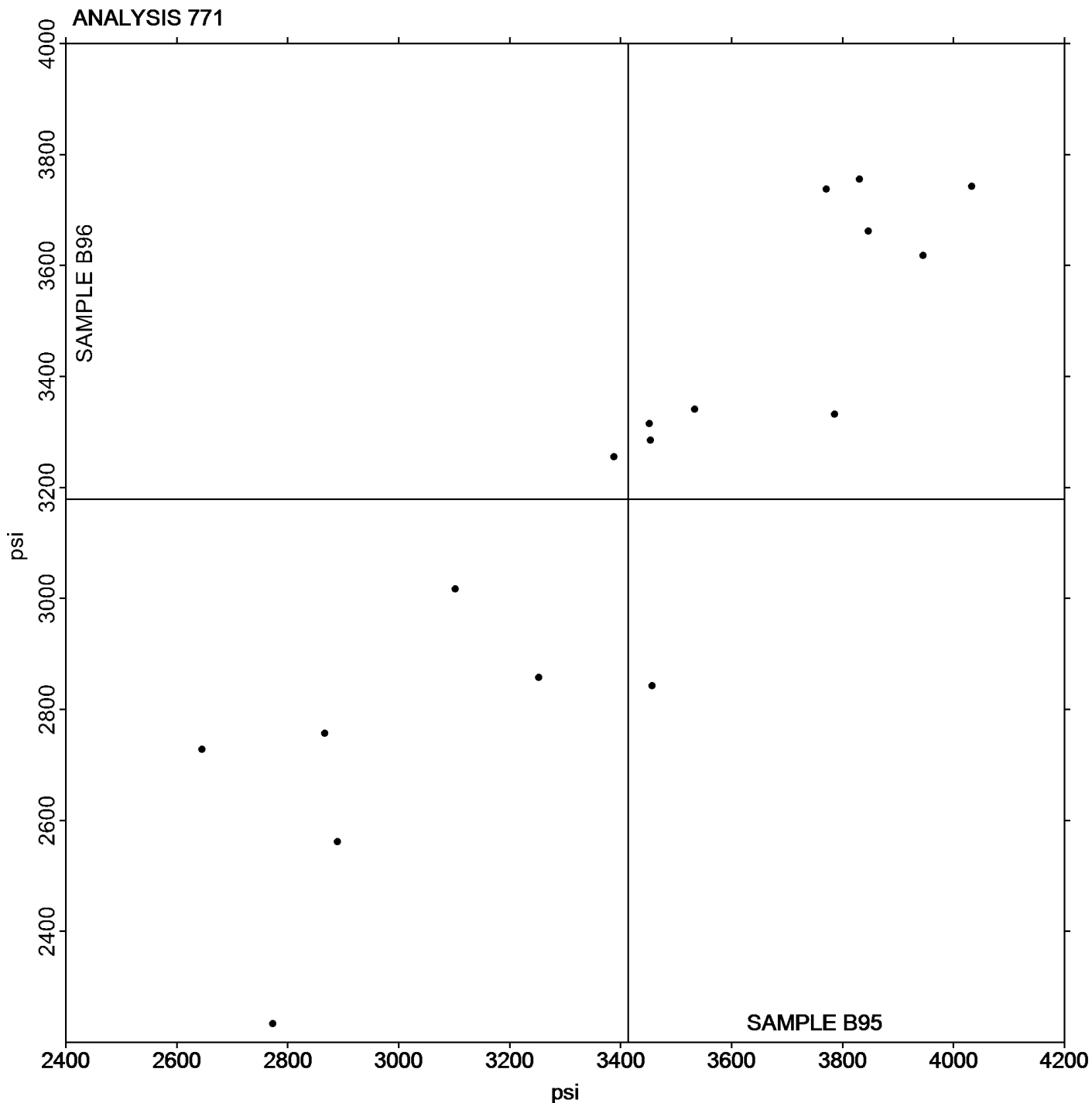
Report #128

Analysis 771

4th Qtr 2023

Tensile Stress at Break, Film Samples - psi

Grand Mean Sample B95: 3,413.37 psi Grand Mean Sample B96: 3,178.64 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 #128

Analysis 772

4th Qtr 2023

Percent Elongation at Yield, Films

WebCode	Data Flag	Sample B95			Sample B96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
39NTUK		37.00	-0.91	-0.06	58.80	-3.26	-0.12	WZ
3U3P2U		18.00	-19.91	-1.30	18.06	-44.00	-1.63	IM
873ZLX		46.77	8.86	0.58	68.45	6.39	0.24	IN
CV6TR9		28.66	-9.25	-0.61	27.47	-34.59	-1.28	TO
FGFRRK		50.44	12.53	0.82	70.66	8.60	0.32	SH
H2GMCL		42.14	4.23	0.28	72.45	10.39	0.38	WZ
HJGCTP		21.29	-16.62	-1.09	64.94	2.88	0.11	IN
KNHEHA		57.28	19.37	1.27	93.18	31.12	1.15	IN
KTGRMM		22.21	-15.70	-1.03	19.54	-42.52	-1.57	TO
NBKQ4C		48.36	10.45	0.68	86.71	24.65	0.91	IN
NXTDEF		58.56	20.65	1.35	90.73	28.67	1.06	IN
T6J8QV		31.16	-6.75	-0.44	60.74	-1.32	-0.05	IN
UVAX33		7.91	-30.00	-1.97	7.89	-54.17	-2.00	IN
WKG FAD		53.33	15.42	1.01	78.05	15.99	0.59	IN
YGRW87		25.29	-12.63	-0.83	84.82	22.76	0.84	LI
YMH9AU		46.11	8.20	0.54	75.48	13.42	0.50	IN
ZY6PMU		50.00	12.09	0.79	77.03	14.97	0.55	IN

Summary Statistics

	Sample B95	Sample B96
Grand Means	37.913 Percent	62.058 Percent
Std Dev Btwn Labs	15.260 Percent	27.035 Percent

Statistics based on 17 of 17 reporting participants

Sample B95: LDPE & Sample B96: LDPE

Key to Instrument Codes Reported by Participants

IM	Instru-Met Instruments	IN	Instron
LI	Lloyd Instruments	SH	Shimadzu
TO	Tinius Olsen	WZ	Zwick



Plastics Interlaboratory Testing Program

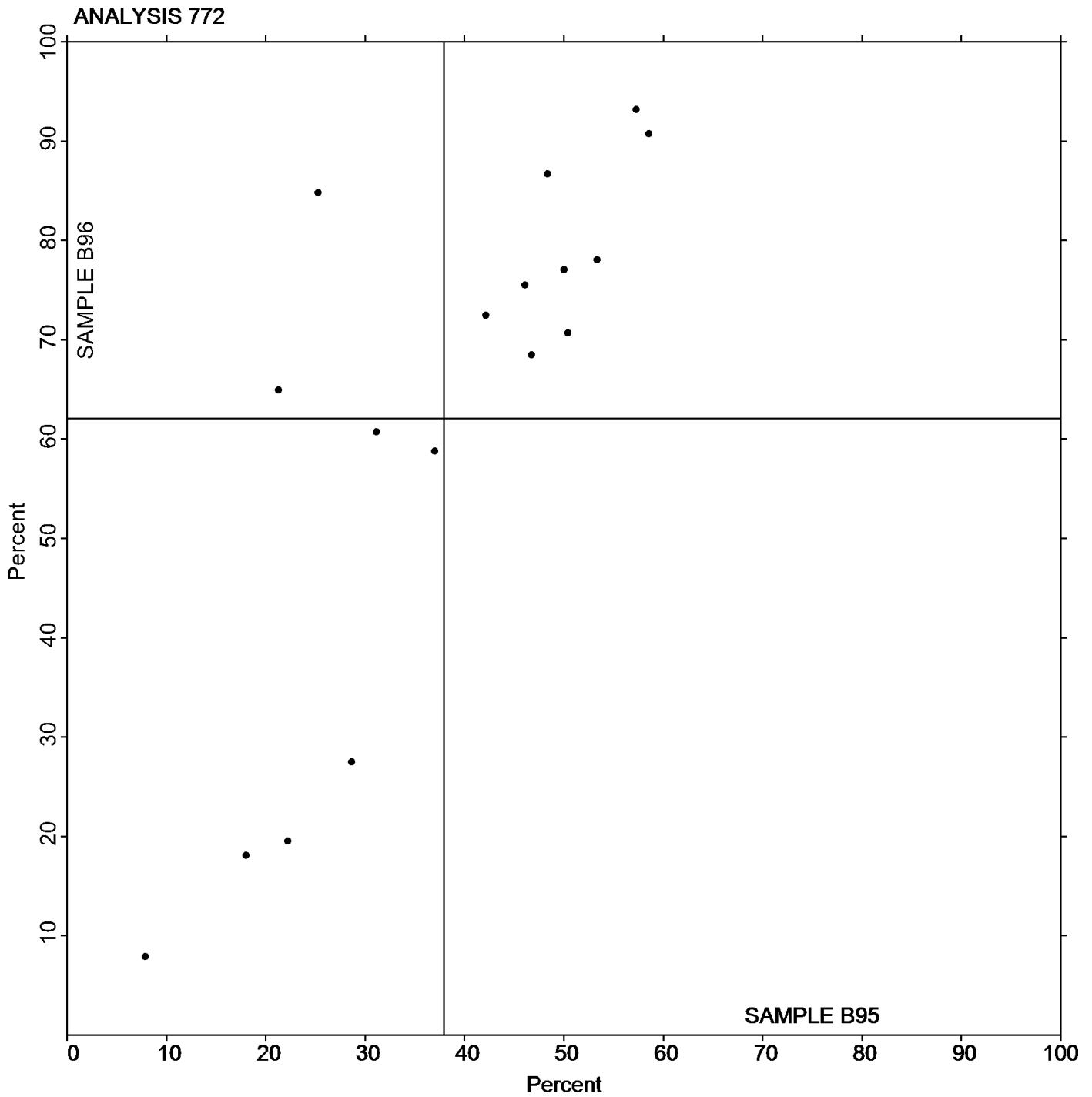
Analysis 772

Percent Elongation at Yield, Films

Report #128

4th Qtr 2023

Grand Mean Sample B95: 37.913 Percent Grand Mean Sample B96: 62.058 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 #128

Analysis 773

4th Qtr 2023

Percent Elongation at Break, Film Samples

WebCode	Data Flag	Sample B95			Sample B96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2PYCUW		877.5	-7.5	-0.06	765.9	12.6	0.10	OA
39NTUK		684.0	-201.0	-1.47	551.0	-202.3	-1.64	WZ
3U3P2U		912.7	27.7	0.20	758.0	4.7	0.04	IM
873ZLX		931.3	46.3	0.34	804.9	51.6	0.42	IN
CV6TR9		940.9	55.9	0.41	683.2	-70.1	-0.57	TO
FGFRRK		888.3	3.3	0.02	780.2	26.9	0.22	SH
H2GMCL		968.3	83.3	0.61	867.8	114.5	0.93	WZ
HJGCTP		708.1	-176.9	-1.29	654.9	-98.5	-0.80	IN
KNHEHA		1,000.0	115.0	0.84	993.8	240.4	1.95	IN
KTGRMM		992.4	107.4	0.78	698.3	-55.0	-0.45	TO
NBKQ4C		776.9	-108.1	-0.79	658.2	-95.1	-0.77	IN
NXTDEF		1,207.7	322.7	2.36	942.9	189.5	1.54	IN
T6J8QV		694.3	-190.7	-1.39	582.0	-171.3	-1.39	IN
UVAX33		729.9	-155.1	-1.13	647.1	-106.2	-0.86	IN
WKG FAD		943.6	58.6	0.43	846.4	93.1	0.76	IN
YGRW87		801.1	-83.9	-0.61	667.8	-85.5	-0.69	LI
YMH9AU		1,029.0	144.0	1.05	906.0	152.7	1.24	IN
ZY6PMU		844.1	-40.9	-0.30	751.9	-1.4	-0.01	IN

Summary Statistics

	Sample B95	Sample B96
Grand Means	885.00 Percent	753.35 Percent
Stnd Dev Btwn Labs	136.90 Percent	123.18 Percent

Statistics based on 18 of 18 reporting participants

Sample B95: LDPE & Sample B96: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

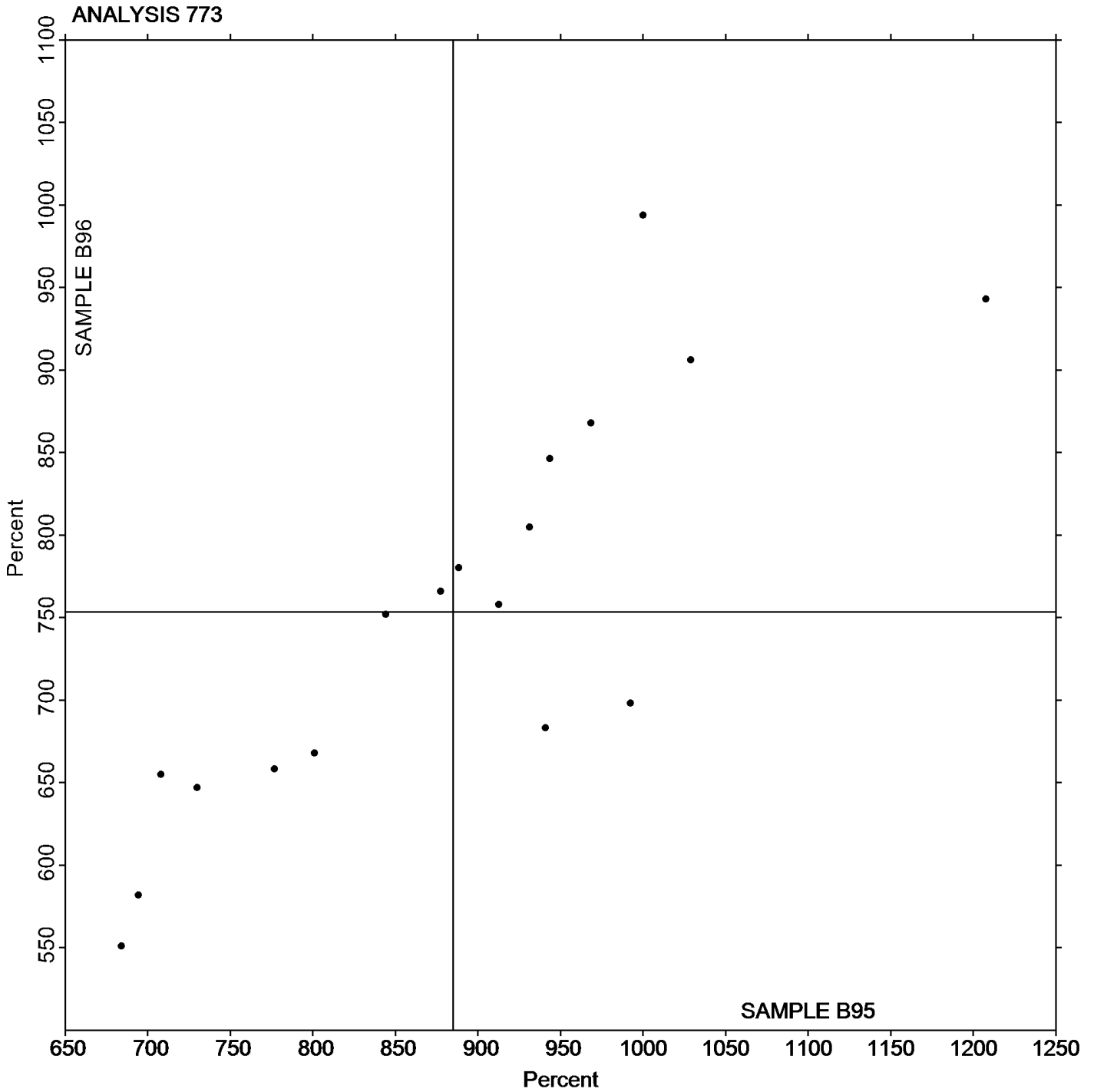
Report #128

Analysis 773

4th Qtr 2023

Percent Elongation at Break, Film Samples

Grand Mean Sample B95: 885.00 Percent Grand Mean Sample B96: 753.35 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 #128

Analysis 774

4th Qtr 2023

Thickness of Film Tensile Samples - mils

WebCode	Data Flag	Sample B95			Sample B96		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2PYCUW		2.7670	-0.1128	-0.59	2.7560	-0.0147	-0.11
39NTUK	X	2.4094	-0.4704	-2.47	3.3465	0.5758	4.18
3U3P2U		3.0400	0.1602	0.84	2.8100	0.0393	0.29
873ZLX		3.1400	0.2602	1.37	2.9400	0.1693	1.23
CV6TR9		2.9150	0.0352	0.18	2.7000	-0.0707	-0.51
FGFRRK		2.7953	-0.0846	-0.44	2.7283	-0.0423	-0.31
H2GMCL		3.0315	0.1517	0.80	2.7598	-0.0108	-0.08
HJGCTP		2.5079	-0.3719	-1.95	2.7796	0.0089	0.06
JY68FZ		3.1600	0.2802	1.47	2.7900	0.0193	0.14
KNHEHA		2.6250	-0.2548	-1.34	2.7250	-0.0457	-0.33
KTGRMM		3.1064	0.2265	1.19	3.0040	0.2333	1.70
NBKQ4C		2.9530	0.0732	0.38	2.7700	-0.0007	0.00
NV9CJU		2.9190	0.0392	0.21	2.8020	0.0313	0.23
NXTDEF		3.0600	0.1802	0.95	2.8700	0.0993	0.72
PY9MFT		2.7610	-0.1188	-0.62	2.5270	-0.2437	-1.77
T6J8QV		2.5600	-0.3198	-1.68	2.5070	-0.2637	-1.92
UVAX33		2.8800	0.0002	0.00	2.6370	-0.1337	-0.97
WKG FAD		2.9990	0.1192	0.63	3.0450	0.2743	1.99
YGRW87		2.7528	-0.1270	-0.67	2.6780	-0.0927	-0.67
YMH9AU		2.9190	0.0392	0.21	2.9000	0.1293	0.94
ZY6PMU		2.7050	-0.1748	-0.92	2.6850	-0.0857	-0.62

Summary Statistics		
	Sample B95	Sample B96
Grand Means	2.87984 mils	2.77069 mils
Stnd Dev Btwn Labs	0.19039 mils	0.13762 mils
Statistics based on 20 of 21 reporting participants		

Sample B95: LDPE & Sample B96: LDPE

Comments on Assigned Data Flags for Test #774

39NTUK (X) - Data for sample B96 are high.



Plastics Interlaboratory Testing Program

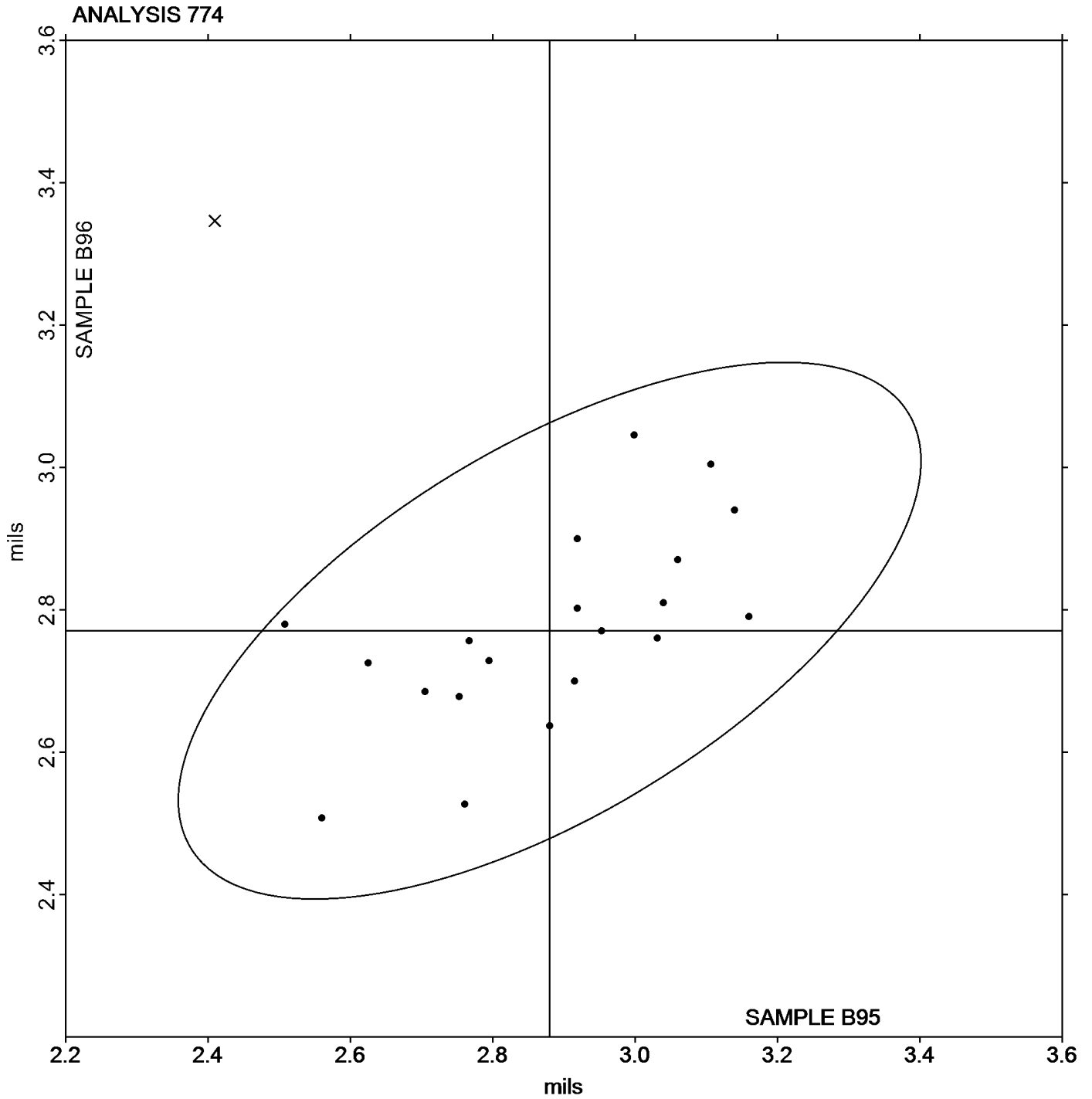
Analysis 774

Thickness of Film Tensile Samples - mils

Report #128

4th Qtr 2023

Grand Mean Sample B95: 2.8798 mils Grand Mean Sample B96: 2.7707 mils





Plastics Interlaboratory Testing Program

Report #128

Analysis 775

4th Qtr 2023

Secant Modulus at 1% Strain - psi

WebCode	Data Flag	Sample B95			Sample B96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2PYCUW		32,633	1,047	0.25	33,067	2,711	0.73	OA
39NTUK	X	67,530	35,944	8.54	38,957	8,601	2.31	WZ
3U3P2U		30,161	-1,425	-0.34	29,013	-1,343	-0.36	IM
873ZLX		33,103	1,517	0.36	30,959	603	0.16	IN
FGFRRK		23,467	-8,119	-1.93	21,379	-8,978	-2.41	SH
H2GMCL		36,200	4,613	1.10	33,839	3,483	0.93	WZ
KNHEHA		34,741	3,154	0.75	31,621	1,265	0.34	IN
KTGRMM		29,330	-2,256	-0.54	28,300	-2,056	-0.55	TO
NBKQ4C	X	52,902	21,315	5.06	53,117	22,761	6.11	IN
T6J8QV		37,600	6,014	1.43	35,780	5,424	1.46	IN
UVAX33		32,259	672	0.16	29,864	-493	-0.13	IN
WKGFD		32,080	494	0.12	30,731	375	0.10	IN
YGRW87		25,878	-5,708	-1.36	29,365	-991	-0.27	LI

Summary Statistics		
	Sample B95	Sample B96
Grand Means	31,586.5 psi	30,356.3 psi
Std Dev Btwn Labs	4,208.5 psi	3,726.3 psi
Statistics based on 11 of 13 reporting participants		

Sample B95: LDPE & Sample B96: LDPE

Comments on Assigned Data Flags for Test #775

39NTUK (X) - Data for sample B95 are high. Inconsistent within the determinations of both samples.

NBKQ4C (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

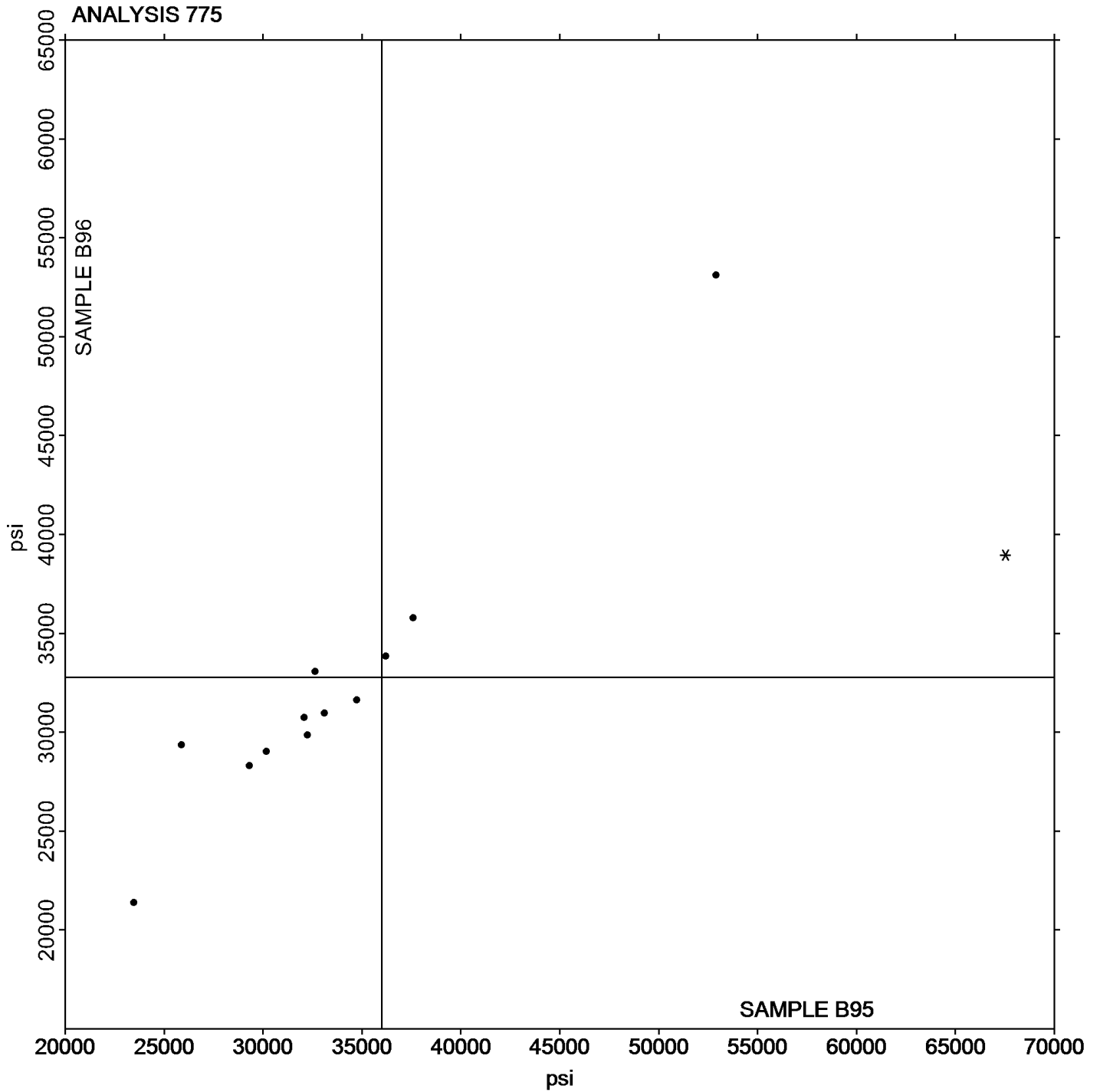
Report #128

Analysis 775

4th Qtr 2023

Secant Modulus at 1% Strain - psi

Grand Mean Sample B95: 31,586.49 psi Grand Mean Sample B96: 30,356.27 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 #128

Analysis 776

4th Qtr 2023

Secant Modulus at 2% Strain - psi

WebCode	Data Flag	Sample B95			Sample B96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3U3P2U		26,429	-1,652	-0.57	25,100	-1,821	-0.87	IM
873ZLX		28,564	483	0.17	27,478	557	0.27	IN
FGFRRK		26,368	-1,712	-0.59	24,439	-2,482	-1.18	SH
H2GMCL		29,704	1,624	0.56	28,005	1,084	0.52	WZ
KNHEHA		30,316	2,236	0.77	27,596	675	0.32	IN
KTGRMM		29,430	1,349	0.46	28,400	1,479	0.71	TO
NBKQ4C	X	38,535	10,454	3.59	37,919	10,998	5.25	IN
T6J8QV		33,010	4,929	1.69	31,410	4,489	2.14	IN
UVAX33		28,285	204	0.07	26,103	-818	-0.39	MT
WKGfAD		26,444	-1,637	-0.56	25,500	-1,420	-0.68	IN
YGRW87		22,256	-5,825	-2.00	25,177	-1,744	-0.83	LI

Summary Statistics		
	Sample B95	Sample B96
Grand Means	28,080.5 psi	26,920.8 psi
Std Dev Btwn Labs	2,911.7 psi	2,094.5 psi
Statistics based on 10 of 11 reporting participants		

Sample B95: LDPE & Sample B96: LDPE

Comments on Assigned Data Flags for Test #776

NBKQ4C (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

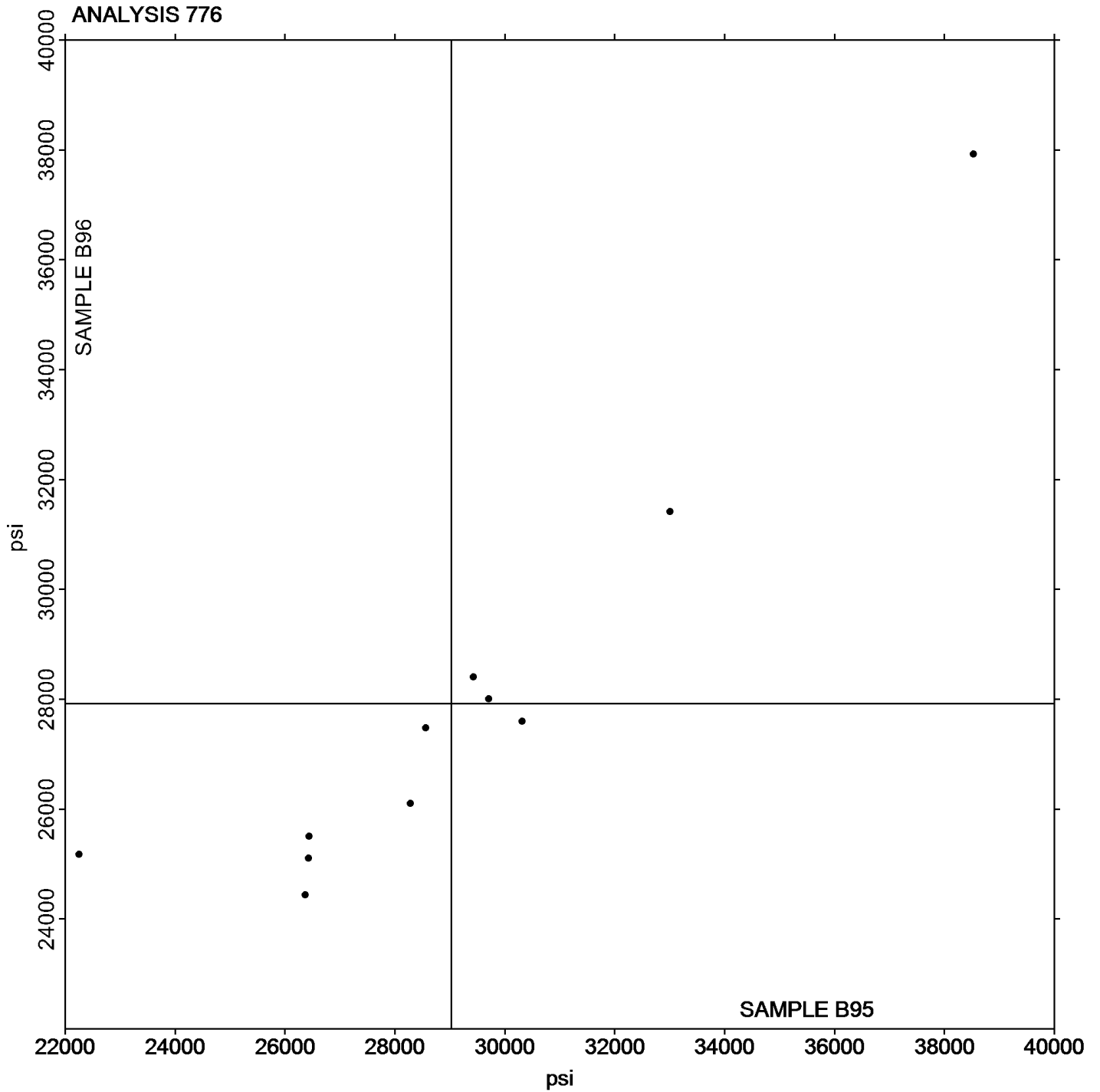
Report #128

Analysis 776

4th Qtr 2023

Secant Modulus at 2% Strain - psi

Grand Mean Sample B95: 28,080.51 psi Grand Mean Sample B96: 26,920.75 psi



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



Plastics Interlaboratory Testing Program

Report #128

Analysis 780

4th Qtr 2023

Coefficient of Static Friction

WebCode	Data Flag	Sample P95			Sample P96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2CPQG7		0.1230	-0.0337	-0.99	0.0996	-0.0423	-1.20	XX
2PYCUW		0.1704	0.0137	0.40	0.1466	0.0047	0.13	DY
39NTUK		0.2020	0.0453	1.34	0.1900	0.0481	1.37	SA
3U3P2U		0.1358	-0.0209	-0.62	0.1218	-0.0201	-0.57	TH
873ZLX		0.2080	0.0513	1.51	0.1634	0.0215	0.61	TM
CV6TR9		0.0996	-0.0571	-1.68	0.0890	-0.0529	-1.50	TO
KTGRMM		0.1324	-0.0243	-0.72	0.1326	-0.0093	-0.26	RD
L2HQDZ		0.1780	0.0213	0.63	0.1628	0.0209	0.60	MI
N42K6K		0.1418	-0.0149	-0.44	0.1292	-0.0127	-0.36	IG
NBKQ4C		0.1532	-0.0035	-0.10	0.1240	-0.0179	-0.51	TH
UVAX33		0.1792	0.0225	0.66	0.2016	0.0597	1.70	MI

Summary Statistics		
	Sample P95	Sample P96
Grand Means	0.15667 COF	0.14187 COF
Stnd Dev Btwn Labs	0.03389 COF	0.03516 COF
Statistics based on 11 of 11 reporting participants		

Sample P95: LDPE & Sample P96: LDPE

Key to Instrument Codes Reported by Participants

- | | |
|--|--|
| DY Dynisco Model D1055 | IG Instron |
| MI MTS Insight | RD RDM CF |
| SA Shimadzu Autograph | TH Thwing Albert Friction/Peel Tester Model 225-1 |
| TM TMI Slip and Friction Tester | TO Tinius Olsen |
| XX Instrument make/model not specified by lab | |



Plastics Interlaboratory Testing Program

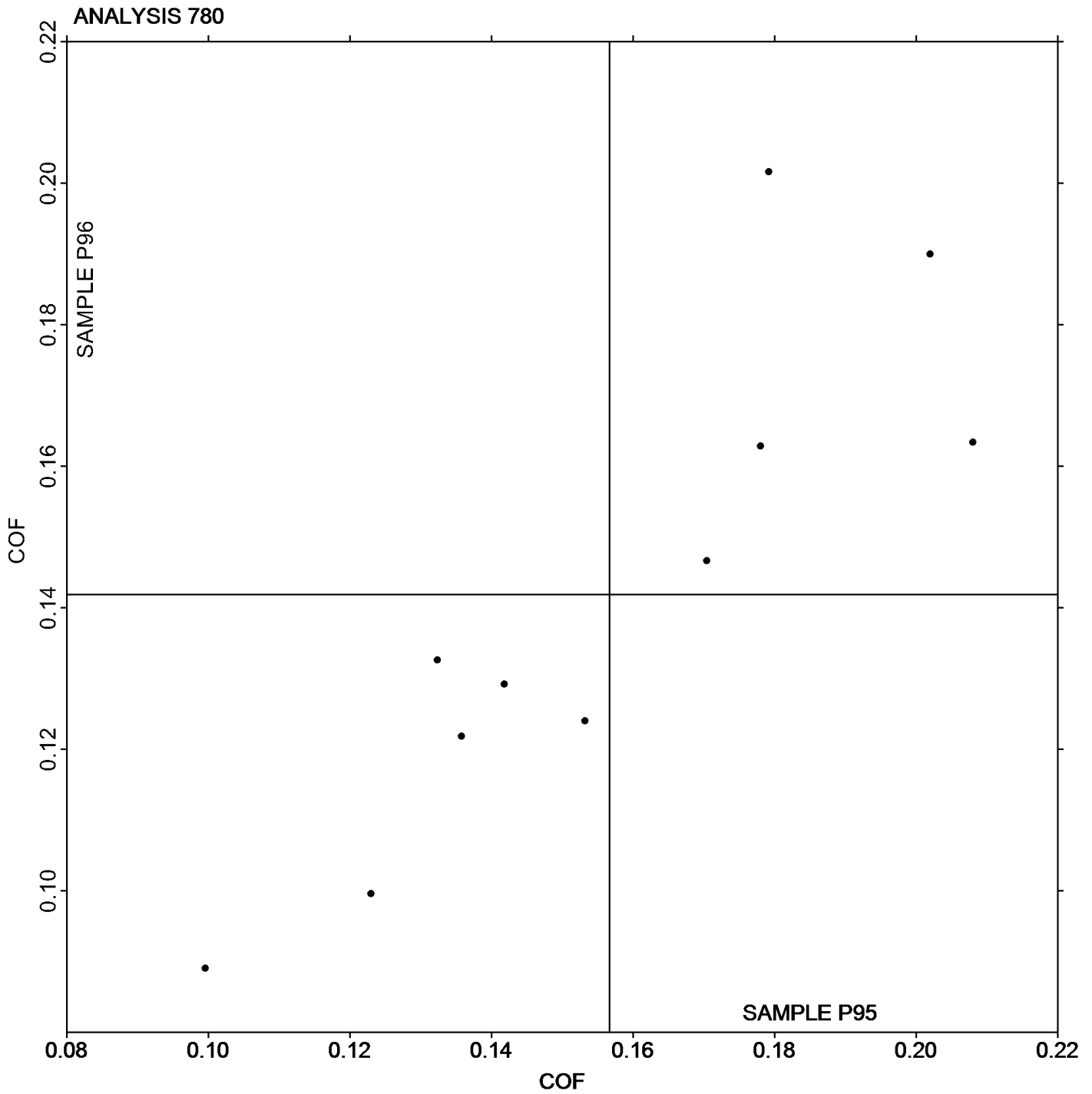
Report #128

Analysis 780

4th Qtr 2023

Coefficient of Static Friction

Grand Mean Sample P95: 0.15667 COF Grand Mean Sample P96: 0.14187 COF



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



Plastics Interlaboratory Testing Program

Report #128

Analysis 781

4th Qtr 2023

Coefficient of Kinetic Friction

WebCode	Data Flag	Sample P95			Sample P96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2CPQG7		0.0984	-0.0005	-0.03	0.0832	-0.0076	-0.34	XX
2PYCUW		0.1154	0.0165	0.90	0.1004	0.0096	0.43	DY
39NTUK		0.1000	0.0011	0.06	0.0980	0.0072	0.32	SA
3U3P2U		0.0798	-0.0191	-1.04	0.0724	-0.0184	-0.82	TH
873ZLX		0.1392	0.0403	2.19	0.1394	0.0486	2.17	TM
CV6TR9		0.0904	-0.0085	-0.46	0.0702	-0.0206	-0.92	TO
KTGRMM		0.1204	0.0215	1.17	0.1188	0.0280	1.25	RD
L2HQDZ		0.0864	-0.0125	-0.68	0.0734	-0.0174	-0.78	MI
N42K6K		0.0814	-0.0175	-0.95	0.0755	-0.0153	-0.68	IG
NBKQ4C		0.1026	0.0037	0.20	0.0828	-0.0080	-0.36	TH
T6J8QV		0.0946	-0.0043	-0.23	0.1078	0.0170	0.76	TH
UVAX33		0.0782	-0.0207	-1.13	0.0678	-0.0230	-1.03	MI

Summary Statistics

	Sample P95	Sample P96
Grand Means	0.09890 COF	0.09081 COF
Stnd Dev Btwn Labs	0.01839 COF	0.02242 COF

Statistics based on 12 of 12 reporting participants

Sample P95: LDPE & Sample P96: LDPE

Key to Instrument Codes Reported by Participants

DY	Dynisco Model D1055	IG	Instron
MI	MTS Insight	RD	RDM CF
SA	Shimadzu Autograph	TH	Thwing Albert Friction/Peel Tester Model 225-1
TM	TMI Slip and Friction Tester	TO	Tinius Olsen
XX	Instrument make/model not specified by lab		



Plastics Interlaboratory Testing Program

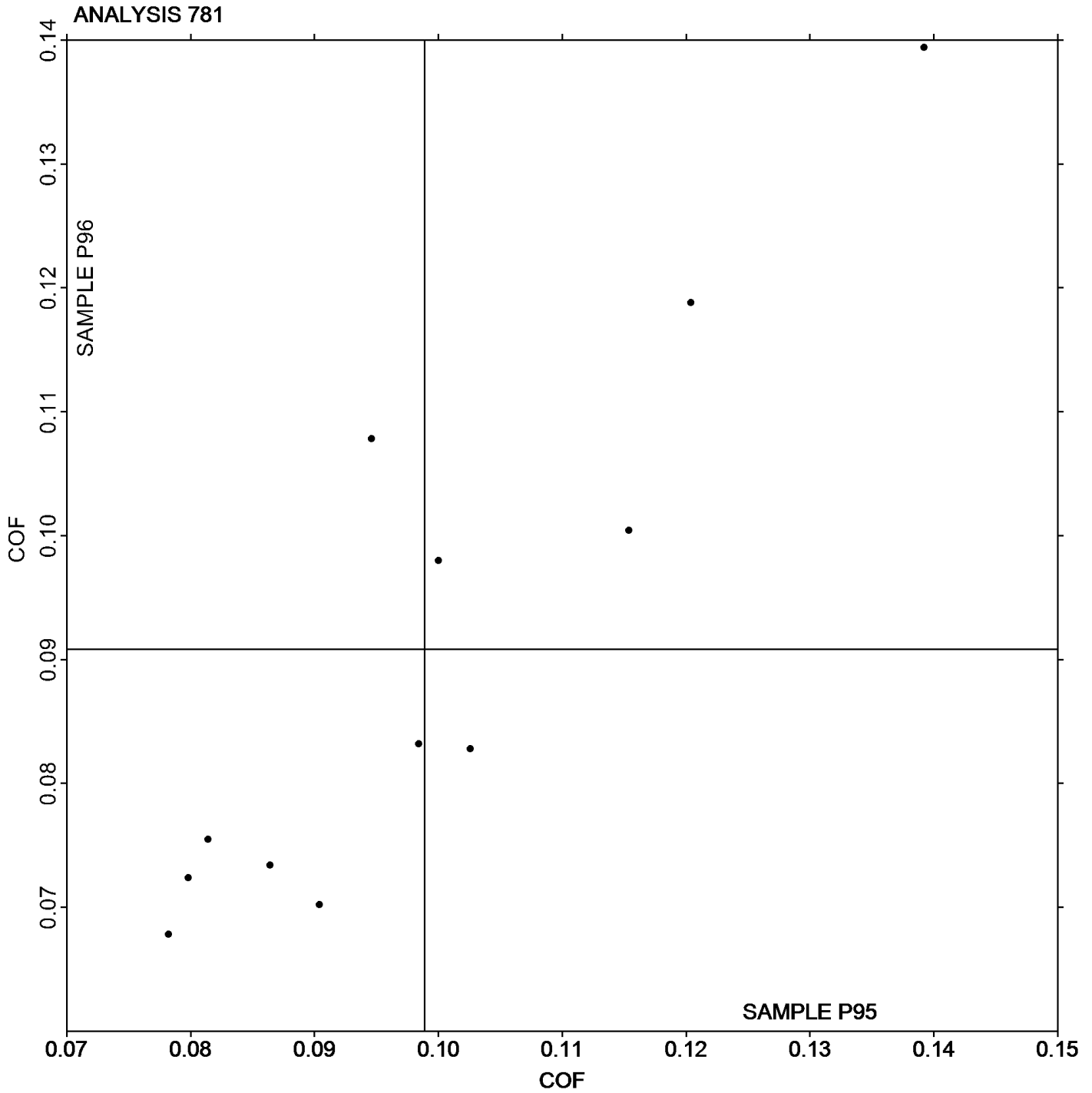
Analysis 781

Coefficient of Kinetic Friction

Report #128

4th Qtr 2023

Grand Mean Sample P95: 0.09890 COF Grand Mean Sample P96: 0.09081 COF



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



Plastics Interlaboratory Testing Program

Report #128

Analysis 782

4th Qtr 2023

Tear Resistance of Films

WebCode	Data Flag	Sample Q95			Sample Q96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2PYCUW		339.6	39.8	0.73	287.8	41.5	0.98	TA
39NTUK		265.1	-34.6	-0.64	258.2	11.8	0.28	LO
3U3P2U		214.8	-85.0	-1.56	211.5	-34.8	-0.82	EM
873ZLX		331.4	31.6	0.58	186.0	-60.4	-1.43	TM
HJGCTP		358.2	58.4	1.07	285.5	39.2	0.93	SZ
T6J8QV		349.2	49.4	0.91	292.1	45.8	1.08	TE
UVAX33		302.4	2.7	0.05	249.7	3.3	0.08	TE
XP7CCA		237.4	-62.4	-1.15	200.0	-46.3	-1.10	TG

Summary Statistics

	Sample Q95	Sample Q96
Grand Means	299.76 grams-force	246.35 grams-force
Std Dev Btwn Labs	54.46 grams-force	42.26 grams-force
Statistics based on 8 of 8 reporting participants		

Sample Q95: LDPE & Sample Q96: LDPE

Key to Instrument Codes Reported by Participants

EM	Elmendorf Tear Tester	LO	Lorentzen & Wettre Model II
SZ	Textest FX 3700	TA	Thwing-Albert
TE	Thwing-Albert Pro Tear	TG	Thwing-Albert Model 93
TM	TMI No. 83-1100		



Plastics Interlaboratory Testing Program

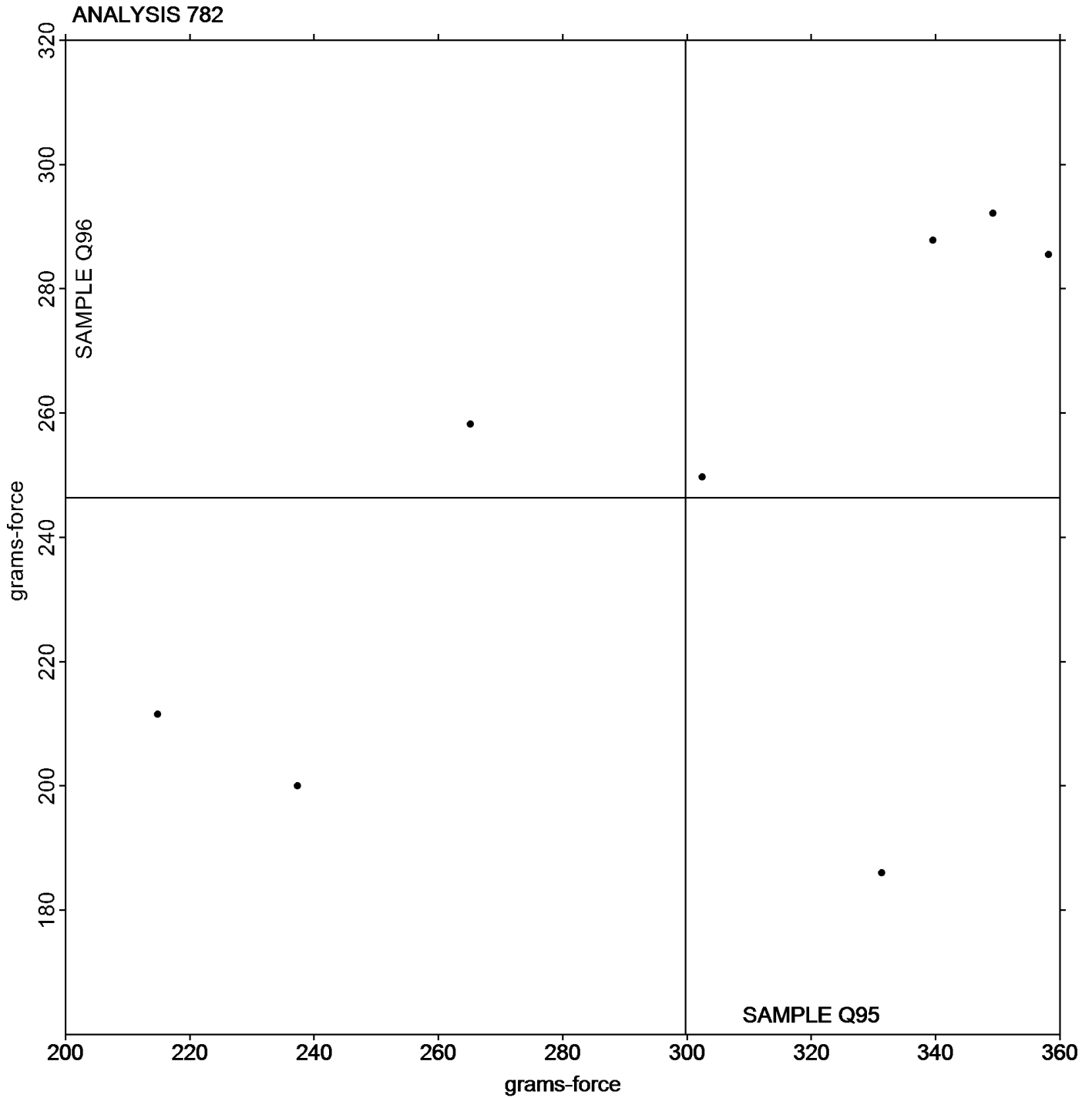
Report #128

Analysis 782

4th Qtr 2023

Tear Resistance of Films

Grand Mean Sample Q95: 299.76 grams-force Grand Mean Sample Q96: 246.35 grams-force



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



Plastics Interlaboratory Testing Program

Report #128

Analysis 785

4th Qtr 2023

Percent Haze of Film

WebCode	Data Flag	Sample D95			Sample D96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2PYCUW		26.599	0.074	0.06	19.840	0.643	0.90	XR
3U3P2U		27.038	0.513	0.41	19.409	0.211	0.29	BJ
6T4CED		27.200	0.676	0.54	19.563	0.365	0.51	BJ
7WHAMZ		26.225	-0.299	-0.24	18.675	-0.523	-0.73	BJ
873ZLX		26.825	0.301	0.24	18.675	-0.522	-0.73	BJ
9YYD83		25.100	-1.424	-1.15	19.038	-0.160	-0.22	BJ
CEKZ46		27.726	1.202	0.97	20.601	1.404	1.96	XR
F94MQM		26.410	-0.114	-0.09	19.780	0.583	0.81	BJ
GJ2UAD		27.345	0.821	0.66	19.534	0.336	0.47	BJ
GUJH3Q	*	23.834	-2.691	-2.17	16.913	-2.285	-3.19	XR
HJGCTP		26.425	-0.099	-0.08	19.025	-0.172	-0.24	BJ
L7FBGJ		26.625	0.101	0.08	19.188	-0.010	-0.01	BJ
LQZAKT		28.984	2.459	1.98	19.920	0.723	1.01	XR
NBKQ4C		28.088	1.563	1.26	19.463	0.265	0.37	BJ
NQBV8Z		25.338	-1.187	-0.95	18.588	-0.610	-0.85	BJ
PV2EZG		26.625	0.101	0.08	18.850	-0.347	-0.49	BJ
PY9MFT		27.775	1.251	1.01	19.663	0.465	0.65	BJ
QA2M4H		26.800	0.276	0.22	19.400	0.203	0.28	BJ
QFP7NK		24.050	-2.474	-1.99	17.850	-1.347	-1.88	HL
T6J8QV		27.225	0.701	0.56	19.413	0.215	0.30	BJ
ULGTK2		27.138	0.613	0.49	19.300	0.103	0.14	BJ
UVAX33	*	24.088	-2.437	-1.96	19.313	0.115	0.16	BJ
W7HK3D		27.378	0.853	0.69	19.149	-0.049	-0.07	XX
X32CED		25.663	-0.862	-0.69	19.100	-0.097	-0.14	BJ
XP7CCA		26.975	0.451	0.36	18.888	-0.310	-0.43	BJ
YWM8R4		26.158	-0.367	-0.30	20.003	0.805	1.12	XX

Summary Statistics		Sample D95	Sample D96
Grand Means		26.5243 Percent	19.1975 Percent
Std Dev Btwn Labs		1.2428 Percent	0.7161 Percent
Statistics based on 26 of 26 reporting participants			

Sample D95: LDPE & Sample D96: LDPE



Plastics Interlaboratory Testing Program

Analysis 785

Percent Haze of Film

Report #128

4th Qtr 2023

Key to Instrument Codes Reported by Participants

BJ BYK-Gardner Haze-Gard Plus/i

HL Hunterlab Ultrascan

XR X-Rite Spectrocolorimeter (any model)

XX Instrument make/model not specified by lab



Plastics Interlaboratory Testing Program

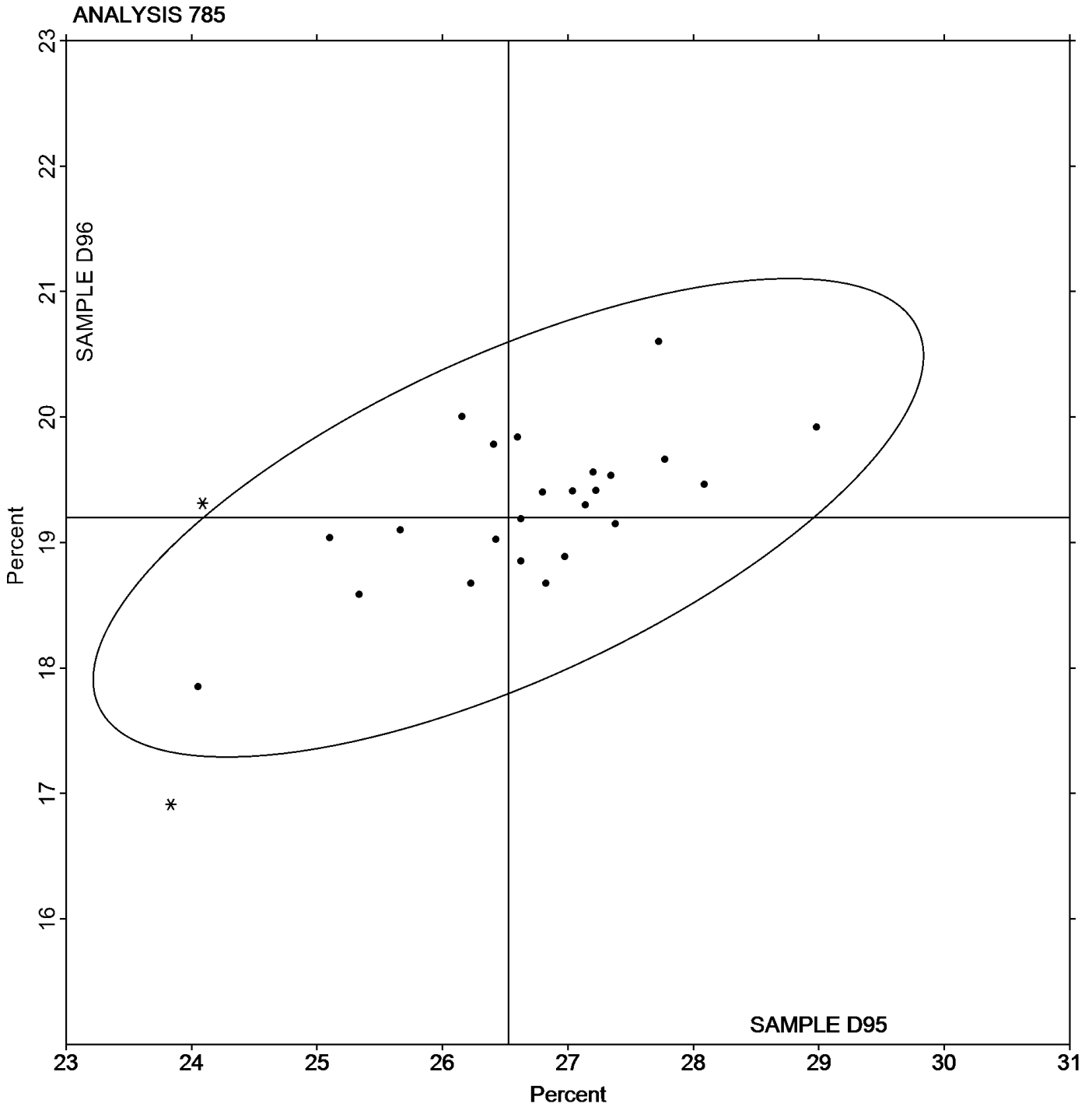
Analysis 785

Percent Haze of Film

Report #128

4th Qtr 2023

Grand Mean Sample D95: 26.524 Percent Grand Mean Sample D96: 19.198 Percent





Plastics Interlaboratory Testing Program

Report #128

Analysis 786

4th Qtr 2023

Total Luminous Transmittance of Film

WebCode	Data Flag	Sample D95			Sample D96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3U3P2U		93.39	0.62	0.52	93.53	0.68	0.58	BJ
6T4CED		94.04	1.27	1.07	94.08	1.23	1.05	BJ
7WHAMZ		93.28	0.51	0.43	93.41	0.56	0.48	BJ
873ZLX		93.06	0.29	0.25	93.24	0.39	0.33	BJ
9YYD83		93.46	0.69	0.58	93.84	0.99	0.85	BJ
CEKZ46		91.97	-0.79	-0.67	91.81	-1.04	-0.89	XR
F94MQM		93.19	0.42	0.35	93.28	0.43	0.37	BJ
GJ2UAD		93.14	0.37	0.31	93.20	0.35	0.30	BJ
GUJH3Q		91.54	-1.22	-1.03	91.58	-1.27	-1.08	XR
HJGCTP	X	70.44	-22.33	-18.79	76.26	-16.59	-14.18	BJ
L7FBGJ		93.16	0.39	0.33	93.40	0.55	0.47	BJ
LQZAKT		92.06	-0.71	-0.59	91.88	-0.97	-0.83	XR
NBKQ4C		94.41	1.64	1.38	94.35	1.50	1.28	BJ
NQBV8Z		94.06	1.29	1.09	94.18	1.33	1.13	BJ
PV2EZG		93.45	0.68	0.57	93.39	0.54	0.46	BJ
PY9MFT		94.19	1.42	1.19	94.25	1.40	1.20	BJ
QA2M4H		92.60	-0.17	-0.14	92.79	-0.06	-0.05	BJ
QFP7NK		90.13	-2.64	-2.22	90.45	-2.40	-2.05	HL
T6J8QV		89.70	-3.07	-2.58	89.79	-3.06	-2.62	BJ
ULGTK2		92.29	-0.48	-0.40	92.59	-0.26	-0.22	BJ
UVAX33		93.09	0.32	0.27	93.23	0.38	0.32	BJ
W7HK3D	*	92.49	-0.28	-0.24	92.01	-0.84	-0.72	XX
X32CED		93.28	0.51	0.43	93.13	0.28	0.24	BJ
XP7CCA		91.23	-1.54	-1.30	91.74	-1.11	-0.95	BJ
YWM8R4		93.25	0.48	0.40	93.28	0.43	0.37	XX

Summary Statistics		
	Sample D95	Sample D96
Grand Means	92.768 Percent	92.849 Percent
Stnd Dev Btwn Labs	1.188 Percent	1.169 Percent
Statistics based on 24 of 25 reporting participants		

Sample D95: LDPE & Sample D96: LDPE

Comments on Assigned Data Flags for Test #786

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



Plastics Interlaboratory Testing Program

Analysis 786

Total Luminous Transmittance of Film

Report #128

4th Qtr 2023

Key to Instrument Codes Reported by Participants

BJ BYK-Gardner Haze-Gard Plus/i

HL Hunterlab Ultrascan XE

XR X-Rite Spectrocolorimeter (any model)

XX Instrument make/model not specified by lab



Plastics Interlaboratory Testing Program

Report #128

Analysis 790

4th Qtr 2023

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S95			Sample S96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UU43U	X	2.30	0.40	2.76	2.13	0.24	1.63	WZ
3EUPF6		2.08	0.18	1.24	2.05	0.16	1.07	BA
3PQRGD		1.90	0.00	0.03	1.91	0.02	0.14	TM
4MGUX6		1.82	-0.08	-0.56	1.88	-0.01	-0.07	TO
4TQA8T		1.93	0.03	0.19	1.98	0.09	0.59	WZ
83QPVN		1.82	-0.08	-0.53	1.79	-0.10	-0.70	CE
87LJTP		1.83	-0.07	-0.46	1.87	-0.03	-0.17	CE
8MCNWD		1.70	-0.20	-1.34	1.73	-0.16	-1.12	TO
99N4UV		1.94	0.04	0.28	1.93	0.04	0.26	TO
9PEVQP		1.84	-0.06	-0.40	1.87	-0.02	-0.13	IN
BCW9EU		1.92	0.02	0.16	1.98	0.09	0.64	CE
C4JCC9		1.79	-0.11	-0.75	1.77	-0.12	-0.81	TO
CUTZRE	X	0.27	-1.62	-11.12	0.33	-1.56	-10.64	TM
CV6TR9		1.93	0.03	0.21	1.95	0.06	0.39	WZ
D6Q4TN		1.80	-0.10	-0.68	1.72	-0.17	-1.19	TO
FGFRRK	X	8.00	6.10	41.75	1.83	-0.06	-0.40	WZ
GJ2UAD		1.89	-0.01	-0.08	1.87	-0.02	-0.15	TY
HMVAZC		1.88	-0.01	-0.10	1.78	-0.11	-0.77	XX
HT2XML	X	1.86	-0.04	-0.25	1.58	-0.31	-2.14	TO
HW6EBH		2.00	0.10	0.68	1.95	0.06	0.43	TM
J2AVWB		1.95	0.05	0.35	1.95	0.06	0.44	CS
K7HH9R		1.71	-0.19	-1.28	1.74	-0.15	-1.02	WZ
L7FBGJ		1.92	0.02	0.13	1.95	0.06	0.38	WZ
LH8DP		1.76	-0.14	-0.93	1.77	-0.12	-0.82	CE
M87TWP		2.01	0.11	0.75	1.97	0.08	0.54	TM
MVDAGK		1.75	-0.15	-1.05	1.76	-0.13	-0.89	DY
NATUEH	M	No data reported for this sample			0.01	-1.88	-12.81	IN
NBKQ4C		1.73	-0.17	-1.18	1.76	-0.13	-0.91	TO
NGNWGU		1.86	-0.04	-0.29	1.80	-0.09	-0.64	XX
NZ2CZA		2.15	0.25	1.71	2.16	0.27	1.80	TM
P6CLQJ		1.91	0.01	0.07	1.87	-0.02	-0.12	WZ
PZDDFG	X	2.27	0.37	2.51	1.58	-0.31	-2.09	TO
Q2RYPJ		1.77	-0.13	-0.88	1.77	-0.12	-0.80	CE
QA2M4H		1.84	-0.06	-0.39	1.89	0.00	-0.01	CE
QDXAYQ		1.77	-0.13	-0.88	1.75	-0.14	-0.94	TO



Plastics Interlaboratory Testing Program

Report #128

Analysis 790

4th Qtr 2023

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S95			Sample S96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
RVWMAD		1.85	-0.05	-0.31	1.88	-0.01	-0.10	TM
RW8NVC	X	1.64	-0.26	-1.76	1.86	-0.03	-0.20	TO
T6J8QV		1.87	-0.03	-0.20	1.85	-0.04	-0.25	CE
TC3BVC	*	2.36	0.46	3.13	2.37	0.48	3.24	XX
TDALU2		1.92	0.02	0.14	1.91	0.02	0.16	TY
TTMBFG		1.99	0.10	0.65	2.01	0.12	0.78	TO
UFBZP6	*	2.21	0.31	2.13	2.08	0.19	1.28	TO
ULGTK2		1.79	-0.11	-0.76	1.73	-0.16	-1.09	TO
UN8T7C		1.86	-0.04	-0.27	1.83	-0.06	-0.44	TO
UVAX33		1.71	-0.19	-1.31	1.69	-0.20	-1.37	TO
UZ6P9D		1.90	0.00	0.03	1.88	-0.01	-0.04	WZ
WGH2PA	*	2.15	0.25	1.71	2.23	0.34	2.28	TO
XMLBGM		2.18	0.28	1.91	2.10	0.21	1.43	TO
YL94V7		1.77	-0.13	-0.90	1.70	-0.19	-1.28	TO

Summary Statistics		
	Sample S95	Sample S96
Grand Means	1.899 ft.lbf/in	1.891 ft.lbf/in
Stnd Dev Btwn Labs	0.146 ft.lbf/in	0.147 ft.lbf/in

Statistics based on 42 of 49 reporting participants

Sample S95: HIPS & Sample S96: HIPS

Comments on Assigned Data Flags for Test #790

- RW8NVC (X) - Inconsistent in testing between samples.
- NATUEH (M) - Participant did not submit data for sample S95.
- 2UU43U (X) - Data for sample S95 are high.
- FGFRRK (X) - Extreme data for sample S95.
- PZDDFG (X) - Inconsistent in testing between samples.
- HT2XML (X) - Inconsistent in testing between samples.
- CUTZRE (X) - Data for both samples are low.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

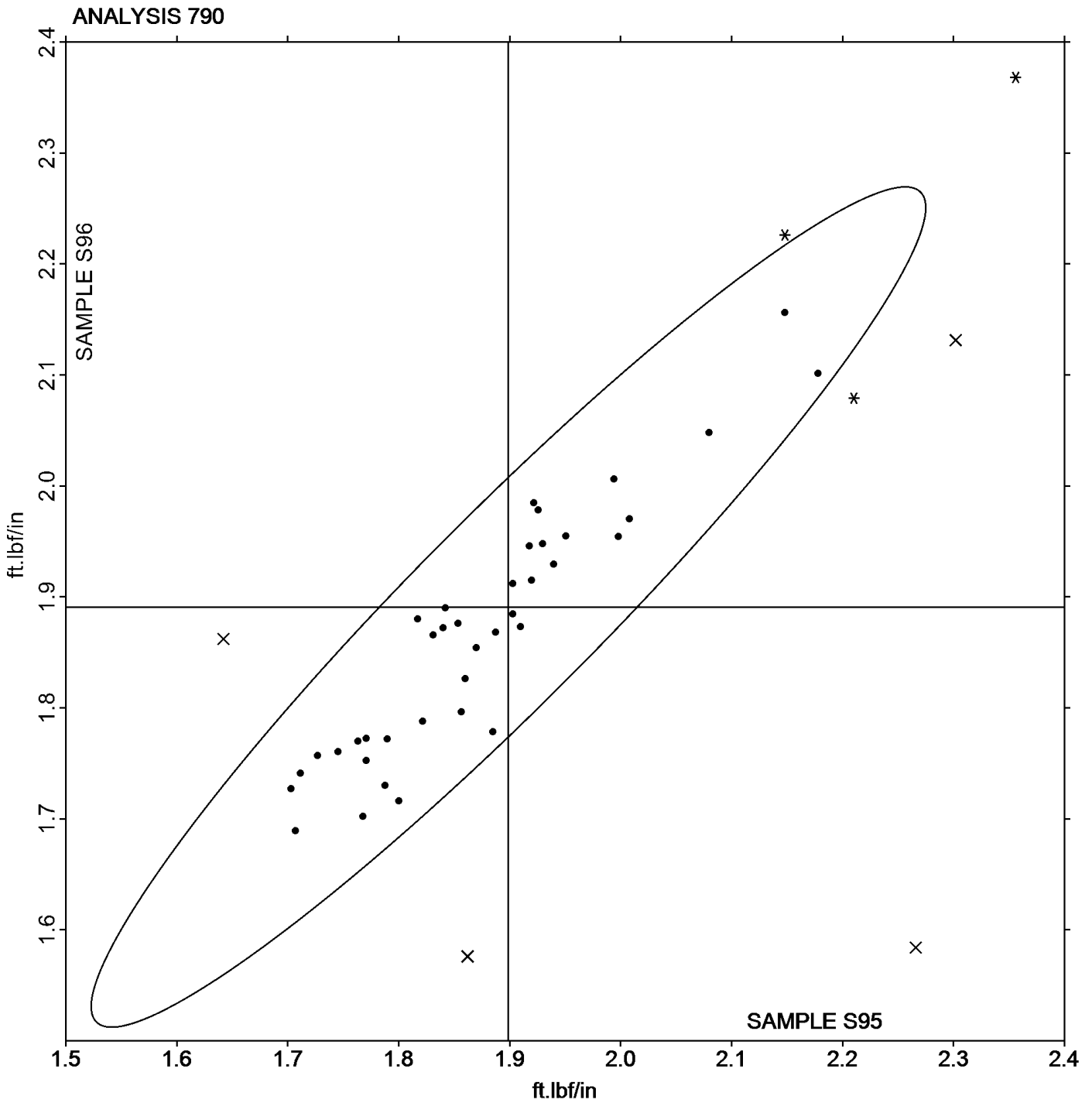
Analysis 790

Notched Izod Impact - ft.lbf/in

Report #128

4th Qtr 2023

Grand Mean Sample S95: 1.8989 ft.lbf/in Grand Mean Sample S96: 1.8908 ft.lbf/in





Plastics Interlaboratory Testing Program

Report #128

Analysis 791

4th Qtr 2023

Notched Izod Impact - kJ/m²

WebCode	Data Flag	Sample Z95			Sample Z96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2LEEDU		22.48	-0.01	0.00	22.98	0.46	0.37	TO
3B9UN7		22.55	0.07	0.06	22.21	-0.31	-0.24	IN
7JWUJ2		22.29	-0.20	-0.17	22.34	-0.17	-0.14	XX
B8R8H7		21.17	-1.31	-1.13	21.44	-1.08	-0.86	TO
BC2NRU		21.88	-0.60	-0.52	22.23	-0.29	-0.23	CE
BZ86DP		20.06	-2.43	-2.10	20.21	-2.31	-1.83	XX
C9TTKW		23.69	1.20	1.04	23.34	0.82	0.65	XX
CNN46U	X	22.92	0.43	0.37	21.45	-1.07	-0.85	WZ
D99B49		21.68	-0.81	-0.69	21.92	-0.60	-0.47	TO
DHXZZW		22.13	-0.35	-0.31	21.96	-0.56	-0.45	CE
F8Q4UW		22.90	0.41	0.36	23.14	0.62	0.49	TO
G4AW7W		23.14	0.65	0.56	23.02	0.50	0.40	TO
GJ2UAD		23.27	0.78	0.68	23.09	0.57	0.45	XX
HMVAZC		20.29	-2.19	-1.89	20.56	-1.96	-1.56	XX
JEYNJC		20.25	-2.23	-1.93	20.50	-2.02	-1.60	IE
JMPAMP		23.68	1.19	1.03	23.50	0.98	0.78	WZ
JTWNEL		23.30	0.81	0.70	23.42	0.90	0.72	WZ
L6LBEE		21.40	-1.08	-0.93	21.31	-1.21	-0.96	TY
MNR4W7		23.65	1.16	1.00	23.62	1.10	0.87	CE
NA82ZZ		25.21	2.73	2.35	25.54	3.03	2.40	CE
NBKQ4C		21.64	-0.85	-0.73	21.41	-1.11	-0.88	TO
NGNWGU	*	20.04	-2.44	-2.11	19.41	-3.11	-2.47	XX
P6CLQJ		22.86	0.37	0.32	22.59	0.08	0.06	WZ
PJ8XBG		22.73	0.25	0.21	23.11	0.59	0.47	CE
QHA8H8		23.42	0.93	0.81	23.37	0.85	0.68	CE
R6M8DQ		22.49	0.01	0.01	22.10	-0.42	-0.33	CE
RWPF6W		23.61	1.13	0.97	23.68	1.16	0.92	WZ
T6J8QV		22.48	-0.01	0.00	22.98	0.46	0.37	CE
TDALU2		23.04	0.55	0.48	23.42	0.91	0.72	TY
TTMBFG	*	24.42	1.93	1.67	25.40	2.88	2.29	TO
UFBZP6		22.66	0.17	0.15	22.68	0.16	0.13	TO
UN8T7C		22.93	0.45	0.39	22.03	-0.48	-0.38	TO
UQTPE3		21.31	-1.18	-1.02	21.05	-1.46	-1.16	WZ
UVAX33		22.81	0.33	0.28	22.19	-0.33	-0.26	TO
UWZBC8		21.62	-0.87	-0.75	21.57	-0.94	-0.75	IN



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Analysis 791

4th Qtr 2023

Notched Izod Impact - kJ/m²

WebCode	Data Flag	Sample Z95			Sample Z96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
UXDQUF		22.28	-0.21	-0.18	22.37	-0.15	-0.12	TO
UZ6P9D		22.69	0.20	0.17	23.42	0.90	0.72	WZ
V9U2GC		22.16	-0.33	-0.28	21.84	-0.68	-0.54	TO
VAHHPY		24.25	1.77	1.53	24.40	1.88	1.49	CE
XAFKFF		22.80	0.31	0.27	22.58	0.06	0.05	WZ
ZTWKBZ		22.16	-0.33	-0.28	22.78	0.26	0.21	TO

Summary Statistics

	Sample Z95	Sample Z96
Grand Means	22.485 kJ/m ²	22.518 kJ/m ²
Stnd Dev Btwn Labs	1.159 kJ/m ²	1.260 kJ/m ²

Statistics based on 40 of 41 reporting participants

Sample Z95: ABS & Sample Z96: ABS

Comments on Assigned Data Flags for Test #791

CNN46U (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

- CE Ceast
- IN Instron
- TY Toyoseiki
- XX Instrument manufacturer not specified by lab
- IE International Equipments
- TO Tinius Olsen
- WZ Zwick



Plastics Interlaboratory Testing Program

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4th Qtr 2023

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M95			Sample M96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2LEEDU		22.01	-0.64	-0.71	22.37	-0.25	-0.28	TO
3B9UN7		23.76	1.11	1.23	23.91	1.29	1.46	IN
6MXR7M		21.45	-1.20	-1.34	22.02	-0.60	-0.67	WZ
6T4CED		22.04	-0.61	-0.68	22.30	-0.32	-0.36	TO
8G2MPN		23.40	0.75	0.83	23.46	0.84	0.95	WZ
8MCNWD		22.38	-0.27	-0.30	22.62	0.00	0.00	TO
9BFZJP		22.42	-0.22	-0.25	22.51	-0.11	-0.12	IN
B8R8H7	*	23.34	0.70	0.77	22.20	-0.42	-0.48	TO
BC2NRU		23.88	1.23	1.37	23.85	1.23	1.40	CE
C9TTKW		22.44	-0.21	-0.23	22.40	-0.22	-0.25	WZ
CNN46U		22.58	-0.06	-0.07	22.94	0.32	0.37	WZ
D99B49		20.66	-1.99	-2.21	20.64	-1.98	-2.24	TO
DHXZZW		23.21	0.56	0.63	22.96	0.34	0.38	CE
EQMANW		22.57	-0.07	-0.08	23.29	0.67	0.76	CE
F8Q4UW		23.14	0.49	0.55	22.92	0.30	0.34	TO
FDFGVK		21.87	-0.78	-0.86	22.00	-0.62	-0.70	XX
FGFRRK	X	30.63	7.98	8.87	50.85	28.23	31.98	XX
GE8WJ2	*	22.90	0.25	0.28	21.88	-0.74	-0.84	IN
GJ2UAD		22.67	0.02	0.02	22.95	0.33	0.37	TY
HMVAZC		21.10	-1.55	-1.72	21.02	-1.60	-1.81	XX
JEYNJC	X	30.34	7.69	8.55	31.00	8.38	9.49	XX
JMPAMP		22.18	-0.47	-0.52	22.14	-0.48	-0.54	WZ
K7HH9R		23.07	0.42	0.47	22.76	0.14	0.16	WZ
KNHEHA		21.89	-0.76	-0.85	21.90	-0.72	-0.82	CE
L6LBEE		21.30	-1.35	-1.50	21.48	-1.14	-1.30	TY
L7FBGJ		22.64	-0.01	-0.01	22.62	0.00	0.00	WZ
L VH8DP		23.72	1.07	1.19	23.57	0.95	1.08	IN
MNR4W7		23.93	1.28	1.42	23.44	0.82	0.93	CE
N78WXF		21.34	-1.31	-1.45	21.05	-1.57	-1.77	TM
NA82ZZ		23.68	1.03	1.15	24.27	1.65	1.87	CE
NBKQ4C		22.91	0.26	0.29	22.80	0.18	0.20	TO
NGNWGU	*	20.22	-2.42	-2.69	20.36	-2.26	-2.56	XX
P6CLQJ		22.32	-0.33	-0.36	22.67	0.05	0.06	WZ
PJ8XBG		23.14	0.49	0.55	23.14	0.52	0.59	CE
PN4VNE		23.21	0.56	0.62	23.71	1.09	1.24	CE



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4th Qtr 2023

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M95			Sample M96			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
PTGD7V		22.72	0.07	0.08	22.71	0.09	0.10	CE
PUM8EZ		22.70	0.05	0.06	22.51	-0.11	-0.13	WZ
QHA8H8		23.93	1.28	1.42	23.80	1.18	1.33	XX
R6M8DQ		23.02	0.37	0.41	22.60	-0.02	-0.03	CE
RWPF6W		23.52	0.88	0.97	23.51	0.89	1.01	WZ
T6J8QV		23.20	0.55	0.61	22.84	0.22	0.25	CE
T9HJLV		23.67	1.02	1.14	23.59	0.97	1.10	TO
TC3BVC	X	26.38	3.73	4.14	26.75	4.13	4.68	XX
UFBZP6		22.88	0.23	0.26	23.12	0.50	0.57	TO
UQTPE3		22.33	-0.32	-0.35	22.38	-0.24	-0.27	WZ
UVAX33		22.12	-0.53	-0.59	22.31	-0.31	-0.36	TO
UXDQUF		22.18	-0.47	-0.53	21.67	-0.95	-1.08	TO
UZ6P9D		22.91	0.26	0.29	22.34	-0.28	-0.31	WZ
V9U2GC		21.54	-1.11	-1.23	21.82	-0.80	-0.91	TO
VAHPY		21.67	-0.98	-1.09	21.59	-1.03	-1.16	CE
WPCFE2		23.85	1.21	1.34	23.04	0.42	0.47	WZ
XAFKFF		22.60	-0.05	-0.05	22.68	0.06	0.07	WZ
XDGLGX		22.37	-0.27	-0.31	22.18	-0.44	-0.49	WZ
XMLBGM	X	27.36	4.71	5.24	27.64	5.02	5.68	TO
YL94V7		22.46	-0.19	-0.21	22.58	-0.04	-0.04	TO
ZH2EG3		24.70	2.05	2.28	24.80	2.18	2.47	CE

Summary Statistics		
	Sample M95	Sample M96
Grand Means	22.649 kJ/m ²	22.620 kJ/m ²
Std Dev Btwn Labs	0.900 kJ/m ²	0.883 kJ/m ²
Statistics based on 52 of 56 reporting participants		

Sample M95: ABS & Sample M96: ABS

Comments on Assigned Data Flags for Test #792

- XMLBGM (X) - Data for both samples are high. Possible Systematic Error.
- FGFRRK (X) - Extreme data for sample M96.
- TC3BVC (X) - Data for both samples are high. Possible Systematic Error.
- JEYNJC (X) - Data for both samples are high. Inconsistent within the determinations of both samples.



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Notched Charpy Impact - kJ/m^2

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

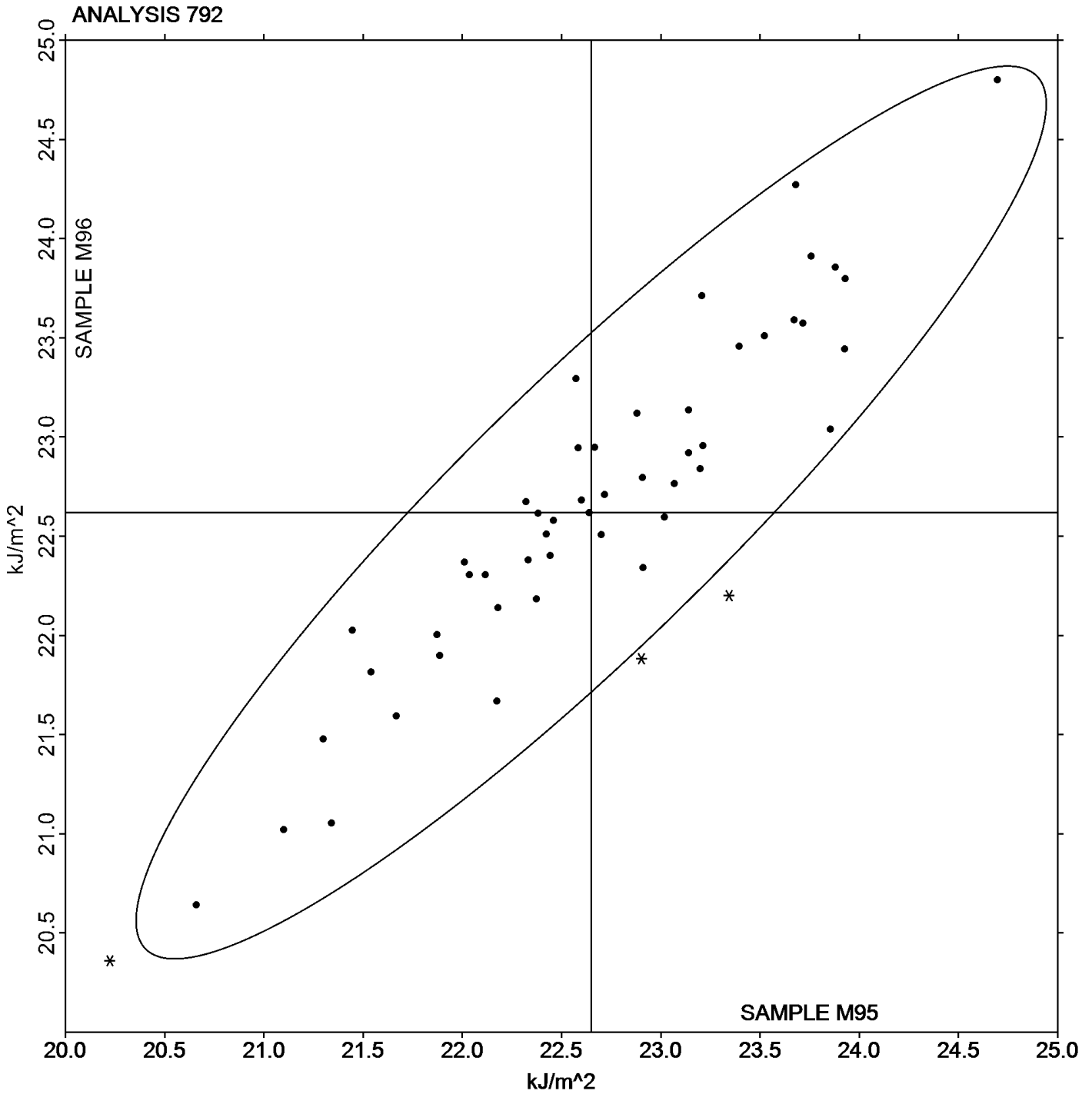
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4th Qtr 2023

Notched Charpy Impact - kJ/m^2

Grand Mean Sample M95: 22.649 kJ/m^2 Grand Mean Sample M96: 22.620 kJ/m^2



-End of Report-