



Plastics Interlaboratory Testing Program

Web Summary Report #116, 4th Qtr 2020

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About CTS and the Plastics Interlaboratory Program

Founded in 1971, Collaborative Testing Services, Inc. (CTS) is a privately-owned company that specializes in interlaboratory tests for a wide variety of industries, including rubber, plastics, fasteners and metals, containerboard, paper, color and wine, as well as proficiency tests for forensic laboratories. All of the tests are designed to assist organizations in achieving and maintaining quality control objectives. Labs from the U.S., as well as more than 80 countries currently participate in CTS programs.

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

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

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

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Key for Web Summary Report (Page 1 of 2)

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

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

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

Common Problems Highlighted in Footnotes

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

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



Plastics Interlaboratory Testing Program

Results Summary for Report #116, 4th Qtr 2020

Analysis 704 - Tensile Stress at Yield

Material: HIPS	Sample F71	4,168.63	psi	2.73% COV
	Sample F72	4,187.04	psi	2.87% COV

Analysis 705 - Tensile Stress at Break

Material: HIPS	Sample F71	3,213.05	psi	3.76% COV
	Sample F72	3,232.35	psi	3.89% COV

Analysis 706 - Percent Elongation at Yield

Material: HIPS	Sample F71	1.3206	Percent	7.89% COV
	Sample F72	1.3298	Percent	7.48% COV

Analysis 708 - Modulus of Elasticity

Material: HIPS	Sample F71	356.79	ksi	4.34% COV
	Sample F72	357.14	ksi	4.40% COV

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

Material: ABS	Sample E71	81.755	Degrees C	1.32% COV
	Sample E72	81.678	Degrees C	1.05% COV

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

Material: PP	Sample G71	112.73	Degrees C	3.00% COV
	Sample G72	113.20	Degrees C	3.08% COV

Analysis 712 - Temperature of Deflection (1.80 MPa)

Material: ABS	Sample N71	80.375	Degrees C	1.45% COV
	Sample N72	80.442	Degrees C	1.45% COV

Analysis 715 - Vicat Temperature (Rate A)

Material: HIPS	Sample H71	95.563	Degrees C	0.848% COV
	Sample H72	95.515	Degrees C	0.845% COV

Analysis 716 - Vicat Temperature (Rate B)

Material: HIPS	Sample R71	97.677	Degrees C	0.678% COV
	Sample R72	97.692	Degrees C	0.670% COV

Analysis 718 - Specific Gravity

Material: ABS	Sample T71	1.0432	sp gr 23/23 C	0.200% COV
	Sample T72	1.0430	sp gr 23/23 C	0.218% COV

Analysis 720 - Flexural Modulus

Material: ABS	Sample J71	360.10	ksi	5.66% COV
	Sample J72	359.86	ksi	5.70% COV

Analysis 721 - Flexural Stress at 5% Strain

Material: ABS	Sample J71	10,330.09	psi	3.42% COV
	Sample J72	10,348.37	psi	3.32% COV

Analysis 722 - Flexural Stress at Yield

Material: ABS	Sample J71	10,339.36	psi	4.30% COV
	Sample J72	10,346.91	psi	4.20% COV

Analysis 730 - Tensile Stress at Yield, ISO Method

Material: ABS	Sample C71	44.969	MPa	2.35% COV
	Sample C72	45.067	MPa	2.13% COV

Analysis 731 - Tensile Stress at Break, ISO Method

Material: ABS	Sample C71	34.094	MPa	4.67% COV
	Sample C72	34.074	MPa	3.22% COV



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Analysis 732 - Strain at Yield, ISO Method

Material: ABS	Sample C71	2.4314	Percent	3.78% COV
	Sample C72	2.4393	Percent	3.57% COV

Analysis 734 - Modulus of Elasticity, ISO Method

Material: ABS	Sample C71	2,378.89	MPa	3.89% COV
	Sample C72	2,390.08	MPa	3.68% COV

Analysis 736 - Flexural Modulus

Material: ABS	Sample K71	2,420.23	MPa	2.69% COV
	Sample K72	2,427.59	MPa	2.55% COV

Analysis 737 - Flexural Stress at 3.5% Strain

Material: ABS	Sample K71	69.067	MPa	2.85% COV
	Sample K72	69.269	MPa	2.69% COV

Analysis 738 - Flexural Stress at Yield

Material: ABS	Sample K71	70.234	MPa	3.61% COV
	Sample K72	70.566	MPa	3.60% COV

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

Material: PP	Sample X71	13.794	grams/10 mins	5.68% COV
	Sample X72	13.737	grams/10 mins	6.09% COV

Analysis 755 - Moisture Content

Material: ABS/PC	Sample Y71	0.15696	Percent	16.1% COV
	Sample Y72	0.15981	Percent	14.4% COV

Analysis 757 - Ash Content

Material: PBT	Sample L71	30.456	Percent	0.835% COV
	Sample L72	30.468	Percent	0.662% COV

Analysis 758 - TGA

Material: PP	Sample A71	80.465	Percent	1.27% COV
	Sample A72	79.464	Percent	0.933% COV

Analysis 760 - DSC Crystallization Temperature

Material: PBT	Sample W71	179.49	Degrees Celsius	3.20% COV
	Sample W72	179.48	Degrees Celsius	3.23% COV

Analysis 761 - DSC Melt Temperature

Material: PBT	Sample W71	223.79	Degrees Celsius	0.548% COV
	Sample W72	223.76	Degrees Celsius	0.552% COV

Analysis 762 - DSC Enthalpy of Crystallization

Material: PBT	Sample W71	49.156	Joules Per Gram	16.1% COV
	Sample W72	48.712	Joules Per Gram	13.0% COV

Analysis 763 - DSC Enthalpy of Fusion

Material: PBT	Sample W71	43.024	Joules Per Gram	19.8% COV
	Sample W72	42.193	Joules Per Gram	19.7% COV

Analysis 764 - DSC Glass Transition Temperature

Material: ABS	Sample V71	108.94	Degrees Celsius	3.28% COV
	Sample V72	109.01	Degrees Celsius	3.02% COV

Analysis 765 - Research Crystallization Peak Temperature

Material: PBT	Sample W71	183.46	Degrees Celsius	9.57% COV
	Sample W72	184.17	Degrees Celsius	9.35% COV



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Analysis 766 - Research Melting Peak Temperature

Material: PBT	Sample W71	223.87	Degrees Celsius	0.209% COV
	Sample W72	223.73	Degrees Celsius	0.233% COV

Analysis 767 - Research Heat of Crystallization

Material: PBT	Sample W71	48.294	Joules Per Gram	7.32% COV
	Sample W72	46.742	Joules Per Gram	5.06% COV

Analysis 768 - Research Heat of Fusion

Material: PBT	Sample W71	40.511	Joules Per Gram	11.9% COV
	Sample W72	39.279	Joules Per Gram	7.02% COV

Analysis 769 - Research Glass Transition Temperature

Material: ABS	Sample V71	108.66	Degrees Celsius	2.88% COV
	Sample V72	108.70	Degrees Celsius	2.82% COV

Analysis 770 - Tensile Stress at Yield, Films

Material: LDPE	Sample B71	1,942.83	psi	8.30% COV
	Sample B72	1,923.85	psi	9.13% COV

Analysis 771 - Tensile Stress at Break, Films

Material: LDPE	Sample B71	3,348.55	psi	12.5% COV
	Sample B72	3,442.79	psi	13.0% COV

Analysis 772 - Elongation at Yield, Films

Material: LDPE	Sample B71	79.073	Percent	27.0% COV
	Sample B72	78.706	Percent	30.6% COV

Analysis 773 - Elongation at Break, Films

Material: LDPE	Sample B71	720.51	Percent	16.2% COV
	Sample B72	757.19	Percent	16.5% COV

Analysis 774 - Thickness of Film Specimens

Material: LDPE	Sample B71	2.7144	mils	5.44% COV
	Sample B72	2.7806	mils	4.32% COV

Analysis 775 - Secant Modulus at 1% Strain

Material: LDPE	Sample B71	32,342.17	psi	16.0% COV
	Sample B72	32,077.22	psi	17.7% COV

Analysis 776 - Secant Modulus at 2% Strain

Material: LDPE	Sample B71	27,523.10	psi	12.1% COV
	Sample B72	27,349.53	psi	11.3% COV

Analysis 780 - Static Friction

Material: LDPE	Sample P71	0.15510	COF	25.8% COV
	Sample P72	0.15880	COF	28.5% COV

Analysis 781 - Kinetic Friction

Material: LDPE	Sample P71	0.09224	COF	27.4% COV
	Sample P72	0.09073	COF	29.4% COV

Analysis 782 - Tear Resistance of Film

Material: LDPE	Sample Q71	333.45	grams-force	13.9% COV
	Sample Q72	333.70	grams-force	35.1% COV

Analysis 785 - Percent Haze

Material: LDPE	Sample D71	19.944	Percent	4.46% COV
	Sample D72	19.743	Percent	4.39% COV



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Analysis 786 - Total Transmittance

Material: LDPE	Sample D71	92.451	Percent	1.11% COV
	Sample D72	92.502	Percent	1.09% COV

Analysis 790 - Notched Izod Impact

Material: ABS/PC	Sample S71	9.9222	ft.lbf/in	9.54% COV
	Sample S72	9.9220	ft.lbf/in	8.12% COV

Analysis 791 - Notched Izod Impact

Material: HIPS	Sample Z71	8.3105	kJ/m ²	5.73% COV
	Sample Z72	8.2981	kJ/m ²	5.16% COV

Analysis 792 - Notched Charpy Impact

Material: HIPS	Sample M71	7.6330	kJ/m ²	9.54% COV
	Sample M72	7.6905	kJ/m ²	9.05% COV



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Report #116

Analysis 704

4th Qtr 2020

Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F71			Sample F72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
22DTVE		4,316.0	147.4	1.29	4,371.0	184.0	1.53
3D6NME		4,222.9	54.3	0.48	4,237.9	50.8	0.42
3EFLZW		4,206.2	37.6	0.33	4,189.6	2.6	0.02
3WYBGJ		4,048.1	-120.5	-1.06	4,044.2	-142.8	-1.19
6WQDUC		4,266.8	98.1	0.86	4,310.3	123.2	1.03
7E7YVE		4,067.2	-101.4	-0.89	4,109.5	-77.5	-0.65
7HKGBA		4,090.1	-78.5	-0.69	4,090.1	-96.9	-0.81
7U32U8		4,252.2	83.6	0.73	4,218.2	31.2	0.26
7Z68AA		4,124.6	-44.0	-0.39	4,172.4	-14.6	-0.12
7ZN3RB		4,255.4	86.8	0.76	4,290.3	103.2	0.86
843BE2	*	4,084.2	-84.5	-0.74	4,224.2	37.1	0.31
88GVDA		4,151.2	-17.4	-0.15	4,134.2	-52.8	-0.44
8KMYLB		4,235.0	66.4	0.58	4,192.0	5.0	0.04
8R68A8		4,187.8	19.2	0.17	4,148.1	-39.0	-0.32
8V93UB		4,092.0	-76.6	-0.67	4,161.0	-26.0	-0.22
9L2MM3		4,040.8	-127.8	-1.12	4,035.9	-151.2	-1.26
A7ZBR4		4,283.6	115.0	1.01	4,303.0	116.0	0.97
AAFY79		4,289.9	121.3	1.07	4,313.8	126.7	1.06
ADWCL3		4,152.6	-16.0	-0.14	4,238.2	51.2	0.43
AEBR3A		4,133.6	-35.1	-0.31	4,156.8	-30.2	-0.25
AJNBH7		4,125.4	-43.2	-0.38	4,171.4	-15.6	-0.13
APBZ62		4,101.0	-67.6	-0.59	4,016.2	-170.8	-1.42
AX6FJ8		4,099.8	-68.8	-0.60	4,149.6	-37.5	-0.31
B6PNVB		4,164.0	-4.6	-0.04	4,236.0	49.0	0.41
B8P7J6		3,975.2	-193.4	-1.70	4,016.2	-170.8	-1.42
BKV237		4,054.1	-114.5	-1.01	4,072.7	-114.3	-0.95
BYC8X7	*	3,829.0	-339.6	-2.98	3,818.8	-368.2	-3.07
D7QHFY		4,402.0	233.4	2.05	4,400.0	213.0	1.77
D8JNJW		3,986.8	-181.8	-1.60	3,974.9	-212.1	-1.77
DHMJ32		4,184.2	15.6	0.14	4,163.2	-23.8	-0.20
DKQEJJ	X	3,511.0	-657.6	-5.78	3,502.2	-684.8	-5.70
DTY2E6		4,308.8	140.2	1.23	4,351.6	164.6	1.37
DWFFUY	*	4,068.2	-100.4	-0.88	4,203.0	16.0	0.13
EDJA2X		4,090.6	-78.0	-0.69	4,109.8	-77.2	-0.64
FM6NPL		4,076.0	-92.6	-0.81	4,038.0	-149.0	-1.24



Plastics Interlaboratory Testing Program

Report #116

Analysis 704

4th Qtr 2020

Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F71			Sample F72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FZTVJG		4,114.2	-54.4	-0.48	4,066.8	-120.2	-1.00
GVDPEU		4,182.0	13.4	0.12	4,190.0	3.0	0.02
HGQYRW	X	4,258.0	89.4	0.79	4,014.4	-172.6	-1.44
HRADVY		4,260.0	91.4	0.80	4,234.8	47.8	0.40
HX2EKT		4,176.3	7.6	0.07	4,196.0	8.9	0.07
JFR7HV		4,427.4	258.8	2.27	4,417.6	230.6	1.92
JMCAMD		4,100.0	-68.6	-0.60	4,114.0	-73.0	-0.61
JNAF7R		4,019.0	-149.6	-1.31	4,053.0	-134.1	-1.12
KF664R		4,084.8	-83.8	-0.74	4,105.8	-81.2	-0.68
KYMY4U	X	3,324.4	-844.2	-7.42	3,388.8	-798.2	-6.65
L293BR		4,277.6	109.0	0.96	4,252.2	65.2	0.54
LJ866P		4,246.8	78.2	0.69	4,249.4	62.4	0.52
MAGUFF		4,344.6	176.0	1.55	4,369.6	182.6	1.52
P9BJBM		4,096.9	-71.7	-0.63	4,108.8	-78.2	-0.65
P9DDR8		4,066.9	-101.7	-0.89	4,055.3	-131.7	-1.10
PY7CVM		4,150.8	-17.8	-0.16	4,172.8	-14.2	-0.12
Q8T2KL	X	4,380.0	211.4	1.86	4,534.2	347.2	2.89
QFCV7J	M	4,248.4	79.8	0.70	No data reported for this sample		
QNLKKH		4,215.4	46.8	0.41	4,205.6	18.6	0.15
QV3ZB8		4,223.0	54.4	0.48	4,203.4	16.4	0.14
QYK8QT	*	4,322.0	153.4	1.35	4,455.8	268.8	2.24
RG4BWL		4,106.9	-61.7	-0.54	4,131.2	-55.8	-0.46
TFGAHH		4,321.8	153.2	1.35	4,306.8	119.8	1.00
U4QXP6		4,245.6	77.0	0.68	4,269.8	82.8	0.69
U9ER9N		4,109.4	-59.2	-0.52	4,132.4	-54.6	-0.45
VUVEN2		4,075.0	-93.6	-0.82	4,093.4	-93.6	-0.78
WLWDGM		4,274.0	105.4	0.93	4,334.0	147.0	1.22
WRJ43H		4,184.0	15.4	0.14	4,146.0	-41.0	-0.34
Y4QJ9D		4,276.0	107.4	0.94	4,318.0	131.0	1.09
Y7D8KD		4,231.8	63.2	0.55	4,280.8	93.8	0.78
YGYCRD		4,345.5	176.9	1.55	4,363.3	176.3	1.47
YYU4DB	X	3,661.4	-507.3	-4.46	3,632.1	-555.0	-4.62
ZZ7ZHF		4,011.9	-156.7	-1.38	4,107.7	-79.4	-0.66



Plastics Interlaboratory Testing Program

Report #116

Analysis 704

4th Qtr 2020

Tensile Stress at Yield - psi

Summary Statistics	<u>Sample F71</u>	<u>Sample F72</u>
Grand Means	4,168.63 psi	4,187.04 psi
Stnd Dev Btwn Labs	113.83 psi	120.08 psi

Statistics based on 62 of 68 reporting participants

Sample F71: HIPS & Sample F72: HIPS

Comments on Assigned Data Flags for Test #704

- KYMY4U (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample F71.
- QFCV7J (M) - Participant did not submit data for sample F72.
- DKQEJJ (X) - Data for both samples are low. Possible Systematic Error.
- HGQYRW (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample F71.
- YYU4DB (X) - Data for both samples are low. Possible Systematic Error.
- Q8T2KL (X) - Data for sample F72 are high. Inconsistent within the determinations of sample F71.



Plastics Interlaboratory Testing Program

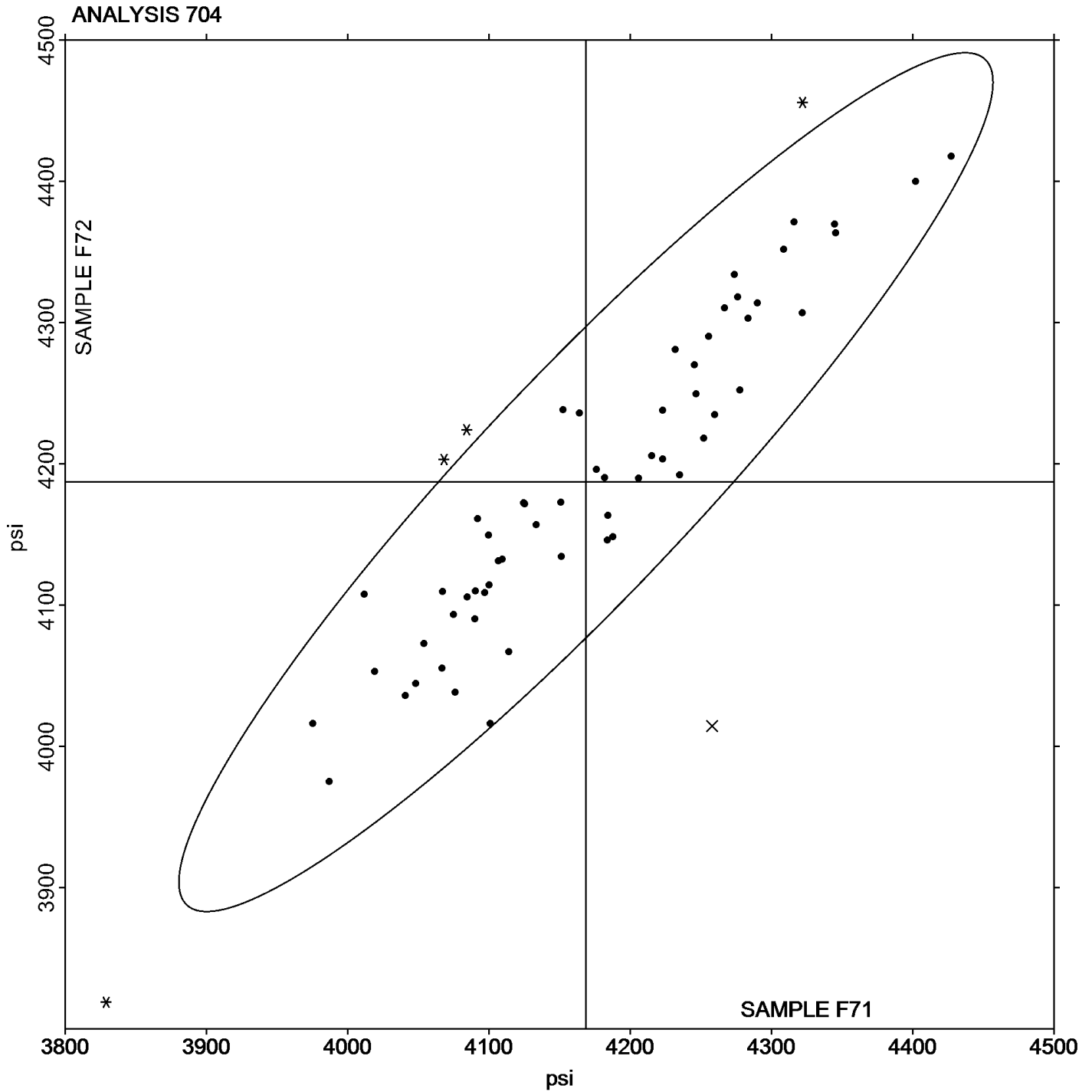
Analysis 704

Tensile Stress at Yield - psi

Report #116

4th Qtr 2020

Grand Mean Sample F71: 4,168.63 psi Grand Mean Sample F72: 4,187.04 psi





Plastics Interlaboratory Testing Program

Report #116

Analysis 705

4th Qtr 2020

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F71			Sample F72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
22DTVE		3,415.4	202.3	1.67	3,424.0	191.7	1.52
3D6NME		3,286.1	73.1	0.60	3,347.1	114.7	0.91
3EFLZW		3,272.2	59.1	0.49	3,267.6	35.3	0.28
3WYBGJ		3,177.7	-35.4	-0.29	3,203.3	-29.1	-0.23
63EVEF		3,172.0	-41.1	-0.34	3,242.0	9.7	0.08
7E7YVE		3,094.0	-119.1	-0.99	3,155.2	-77.2	-0.61
7HKGBA	*	3,161.9	-51.2	-0.42	3,045.8	-186.5	-1.48
7U32U8		3,106.8	-106.3	-0.88	3,162.8	-69.5	-0.55
7Z68AA		3,193.2	-19.9	-0.16	3,277.6	45.3	0.36
7ZN3RB		3,312.7	99.6	0.82	3,393.9	161.6	1.28
843BE2		3,178.7	-34.3	-0.28	3,282.1	49.8	0.40
88GVDA		3,235.2	22.1	0.18	3,219.0	-13.3	-0.11
8KMYLB		3,268.2	55.1	0.46	3,294.2	61.9	0.49
8R68A8		3,024.0	-189.1	-1.56	3,060.6	-171.8	-1.36
9L2MM3		3,228.0	14.9	0.12	3,178.7	-53.7	-0.43
A7ZBR4		3,327.6	114.6	0.95	3,334.3	101.9	0.81
AAFY79		3,307.7	94.6	0.78	3,360.4	128.1	1.02
ADWCL3		3,296.6	83.5	0.69	3,351.0	118.7	0.94
AEBR3A		3,304.4	91.3	0.76	3,331.5	99.1	0.79
AJNBH7		3,214.4	1.3	0.01	3,224.4	-7.9	-0.06
AX6FJ8		3,205.4	-7.6	-0.06	3,266.8	34.4	0.27
B6PNVB		3,212.0	-1.1	-0.01	3,264.0	31.7	0.25
B8P7J6		3,062.0	-151.1	-1.25	3,106.2	-126.1	-1.00
BKV237		3,160.1	-52.9	-0.44	3,167.7	-64.7	-0.51
BYC8X7	*	2,879.2	-333.9	-2.76	2,874.0	-358.3	-2.85
D7QHFY		3,313.4	100.3	0.83	3,283.5	51.2	0.41
D8JNJW		3,205.4	-7.7	-0.06	3,174.9	-57.4	-0.46
DHMJ32		3,199.2	-13.9	-0.11	3,171.4	-60.9	-0.48
DKQEJJ		3,042.0	-171.1	-1.42	3,066.0	-166.3	-1.32
DWFFUY		3,096.8	-116.3	-0.96	3,228.5	-3.8	-0.03
EDJA2X		3,025.4	-187.7	-1.55	3,043.6	-188.7	-1.50
FZTVJG		3,214.0	0.9	0.01	3,190.0	-42.3	-0.34
GVDPEU		3,194.8	-18.3	-0.15	3,186.4	-45.9	-0.36
HGQYRW		3,165.0	-48.1	-0.40	3,203.6	-28.7	-0.23
HRADVY		3,317.4	104.3	0.86	3,239.8	7.5	0.06



Plastics Interlaboratory Testing Program

Report #116

Analysis 705

4th Qtr 2020

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F71			Sample F72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
HX2EKT		3,378.5	165.5	1.37	3,380.3	147.9	1.18
JFR7HV		3,508.4	295.3	2.44	3,510.2	277.9	2.21
JMCAMD	*	2,982.0	-231.1	-1.91	2,928.0	-304.3	-2.42
JNAF7R		3,073.1	-140.0	-1.16	3,123.0	-109.4	-0.87
KF664R	*	3,120.6	-92.5	-0.77	3,292.8	60.5	0.48
KYMY4U	X	2,700.0	-513.1	-4.25	2,803.6	-428.7	-3.41
L293BR		3,334.7	121.7	1.01	3,272.2	39.9	0.32
LJ866P		3,290.7	77.6	0.64	3,308.6	76.3	0.61
MAGUFF		3,271.2	58.1	0.48	3,332.8	100.5	0.80
P9BJBM		3,099.0	-114.0	-0.94	3,131.2	-101.2	-0.80
P9DDR8		3,185.1	-28.0	-0.23	3,158.9	-73.4	-0.58
PY7CVM		3,253.2	40.1	0.33	3,222.0	-10.3	-0.08
Q8T2KL		3,462.8	249.7	2.07	3,482.2	249.9	1.98
QFCV7J	M	3,224.0	10.9	0.09	No data reported for this sample		
QV3ZB8		3,327.2	114.1	0.94	3,298.4	66.1	0.52
QYK8QT	X	3,390.0	176.9	1.46	3,598.0	365.7	2.90
TFGAHH		3,233.2	20.1	0.17	3,237.4	5.1	0.04
U24DN8		3,191.4	-21.7	-0.18	3,254.0	21.7	0.17
U4QXP6		3,305.0	91.9	0.76	3,319.6	87.3	0.69
U9ER9N		3,167.2	-45.9	-0.38	3,157.4	-74.9	-0.60
VUVEN2		3,135.8	-77.3	-0.64	3,121.8	-110.5	-0.88
WLWDGM		3,338.0	124.9	1.03	3,392.0	159.7	1.27
WRJ43H		3,318.0	104.9	0.87	3,314.0	81.7	0.65
Y7D8KD		3,320.0	106.9	0.89	3,395.2	162.9	1.29
YGYCRD		3,292.8	79.7	0.66	3,294.3	61.9	0.49
YYU4DB		2,965.5	-247.6	-2.05	2,951.5	-280.8	-2.23
ZZ7ZHF		3,147.8	-65.2	-0.54	3,208.8	-23.5	-0.19

Summary Statistics

Grand Means

Sample F71

3,213.05 psi

Sample F72

3,232.35 psi

Std Dev Btwn Labs

120.83 psi

125.88 psi

Statistics based on 59 of 62 reporting participants

Sample F71: HIPS & Sample F72: HIPS



Plastics Interlaboratory Testing Program

Analysis 705

Tensile Stress at Break - psi

Report #116

4th Qtr 2020

Comments on Assigned Data Flags for Test #705

KYMY4U (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample F71.

QFCV7J (M) - Participant did not submit data for sample F72.

QYK8QT (X) - Data for sample F72 are high. Inconsistent within the determinations of sample F72.



Plastics Interlaboratory Testing Program

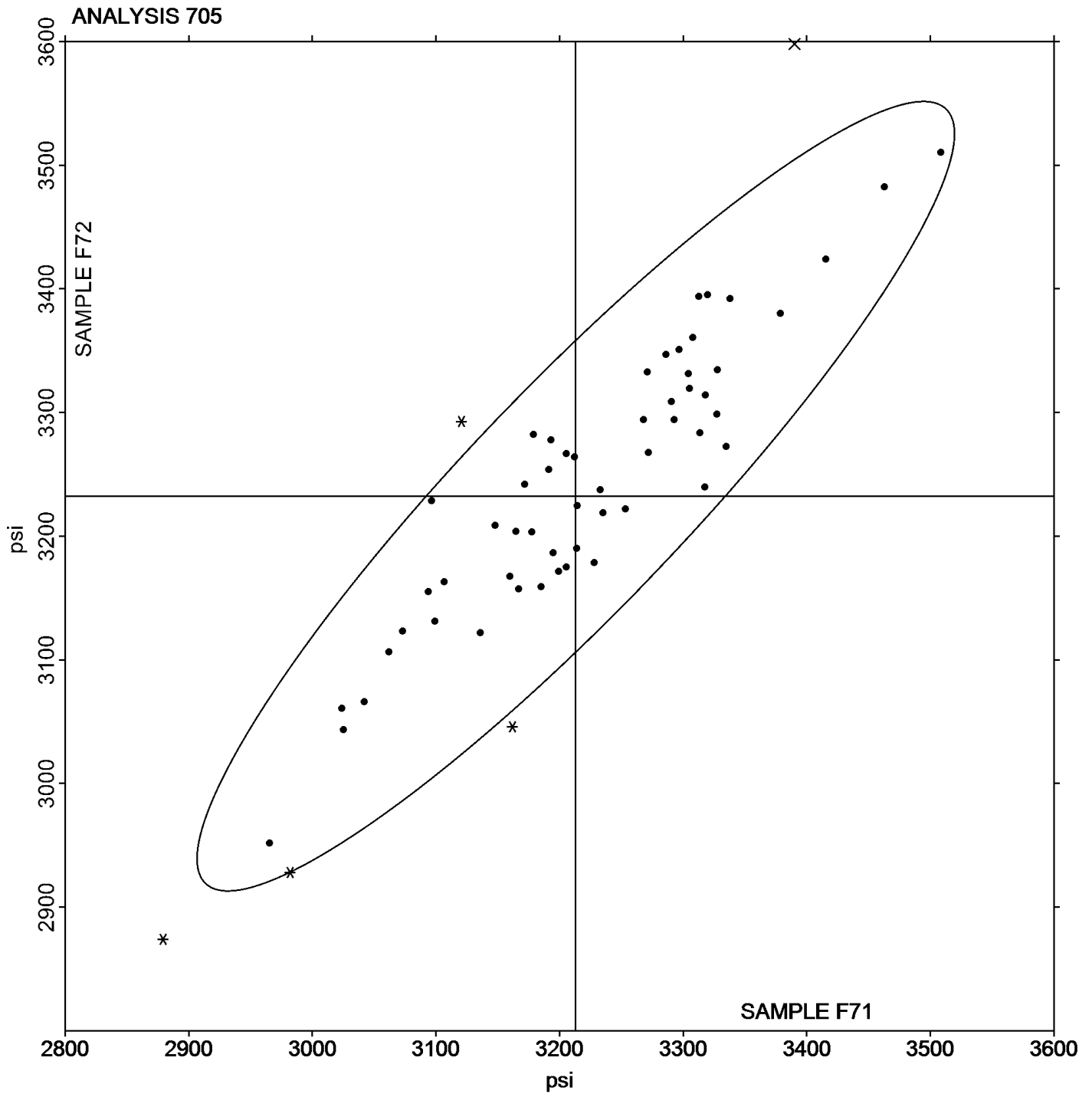
Analysis 705

Tensile Stress at Break - psi

Report #116

4th Qtr 2020

Grand Mean Sample F71: 3,213.05 psi Grand Mean Sample F72: 3,232.35 psi





Plastics Interlaboratory Testing Program

Report #116

Analysis 706

4th Qtr 2020

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F71			Sample F72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
22DTVE		1.346	0.025	0.24	1.384	0.054	0.55
3D6NME	X	1.800	0.479	4.60	2.000	0.670	6.74
3EFLZW		1.358	0.037	0.36	1.370	0.040	0.40
3WYBGJ	*	1.076	-0.245	-2.35	1.135	-0.195	-1.96
7E7YVE		1.340	0.019	0.19	1.364	0.034	0.34
7HKGBA		1.302	-0.019	-0.18	1.296	-0.034	-0.34
7U32U8		1.336	0.015	0.15	1.352	0.022	0.22
7Z68AA		1.378	0.057	0.55	1.414	0.084	0.85
7ZN3RB		1.400	0.079	0.76	1.400	0.070	0.71
88GVDA		1.132	-0.189	-1.81	1.192	-0.138	-1.38
8KMYLB		1.296	-0.025	-0.24	1.320	-0.010	-0.10
8R68A8	X	0.930	-0.391	-3.75	0.810	-0.520	-5.23
8V93UB		1.370	0.049	0.47	1.400	0.070	0.71
9L2MM3		1.328	0.007	0.07	1.328	-0.002	-0.02
A7ZBR4		1.326	0.005	0.05	1.308	-0.022	-0.22
AAFY79		1.392	0.071	0.69	1.384	0.054	0.55
ADWCL3		1.329	0.009	0.08	1.305	-0.025	-0.25
AEBR3A		1.326	0.005	0.05	1.332	0.002	0.02
AJNBH7		1.396	0.075	0.72	1.394	0.064	0.65
APBZ62		1.312	-0.009	-0.08	1.322	-0.008	-0.08
AX6FJ8		1.288	-0.033	-0.32	1.344	0.014	0.15
B6PNVB		1.400	0.079	0.76	1.380	0.050	0.51
B8P7J6		1.272	-0.049	-0.47	1.252	-0.078	-0.78
BKV237		1.336	0.015	0.15	1.348	0.018	0.18
BYC8X7		1.250	-0.071	-0.68	1.238	-0.092	-0.92
D7QHFY		1.480	0.159	1.53	1.466	0.136	1.37
D8JNJW	X	42.176	40.855	392.31	39.428	38.098	383.04
DHMJ32		1.222	-0.099	-0.95	1.208	-0.122	-1.22
DKQEJJ	*	0.998	-0.323	-3.10	1.038	-0.292	-2.93
DWFFUY		1.243	-0.077	-0.74	1.294	-0.036	-0.36
EDJA2X		1.348	0.027	0.26	1.346	0.016	0.16
FZTVJG	*	1.048	-0.273	-2.62	1.056	-0.274	-2.75
GVDPEU		1.302	-0.019	-0.18	1.362	0.032	0.32
HGQYRW	*	1.618	0.297	2.86	1.630	0.300	3.02
HRADVY	X	1.966	0.645	6.20	1.934	0.604	6.08



Plastics Interlaboratory Testing Program

Report #116

Analysis 706

4th Qtr 2020

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F71			Sample F72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
HX2EKT		1.372	0.051	0.49	1.380	0.050	0.51
JFR7HV		1.350	0.029	0.28	1.360	0.030	0.30
JMCAMD		1.356	0.035	0.34	1.348	0.018	0.18
JNAF7R		1.316	-0.005	-0.04	1.326	-0.004	-0.04
KF664R		1.328	0.007	0.07	1.332	0.002	0.02
KYMY4U	X	2.272	0.951	9.14	2.244	0.914	9.19
L293BR		1.364	0.043	0.42	1.338	0.008	0.08
LJ866P		1.420	0.099	0.95	1.440	0.110	1.11
MAGUFF		1.304	-0.017	-0.16	1.326	-0.004	-0.04
P9BJBM		1.277	-0.043	-0.42	1.297	-0.032	-0.33
P9DDR8		1.336	0.015	0.15	1.322	-0.008	-0.08
PY7CVM		1.318	-0.003	-0.03	1.310	-0.020	-0.20
QV3ZB8		1.294	-0.027	-0.26	1.294	-0.036	-0.36
QYK8QT		1.400	0.079	0.76	1.420	0.090	0.91
TFGAHH		1.408	0.087	0.84	1.433	0.103	1.04
U4QXP6		1.548	0.227	2.18	1.528	0.198	1.99
U9ER9N		1.294	-0.027	-0.26	1.298	-0.032	-0.32
VUVEN2		1.352	0.031	0.30	1.378	0.048	0.49
WLWDGM	X	1.496	0.175	1.68	1.384	0.054	0.55
WRJ43H	X	39.000	37.679	361.81	41.900	40.570	407.89
Y7D8KD		1.310	-0.011	-0.10	1.320	-0.010	-0.10
YGYCRD		1.305	-0.016	-0.15	1.307	-0.022	-0.22
YYU4DB		1.185	-0.136	-1.31	1.173	-0.157	-1.58
ZZ7ZHF		1.288	-0.032	-0.31	1.254	-0.075	-0.76

Summary Statistics		
	Sample F71	Sample F72
Grand Means	1.3206 Percent	1.3298 Percent
Std Dev Btwn Labs	0.1041 Percent	0.0995 Percent
Statistics based on 52 of 59 reporting participants		

Sample F71: HIPS & Sample F72: HIPS



Comments on Assigned Data Flags for Test #706

- KYMY4U (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample F71.
- 8R68A8 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- D8JNJW (X) - Extreme data.
- 3D6NME (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample F71.
- HRADVY (X) - Data for both samples are high. Possible Systematic Error.
- WLWDGM (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- WRJ43H (X) - Extreme data.



Plastics Interlaboratory Testing Program

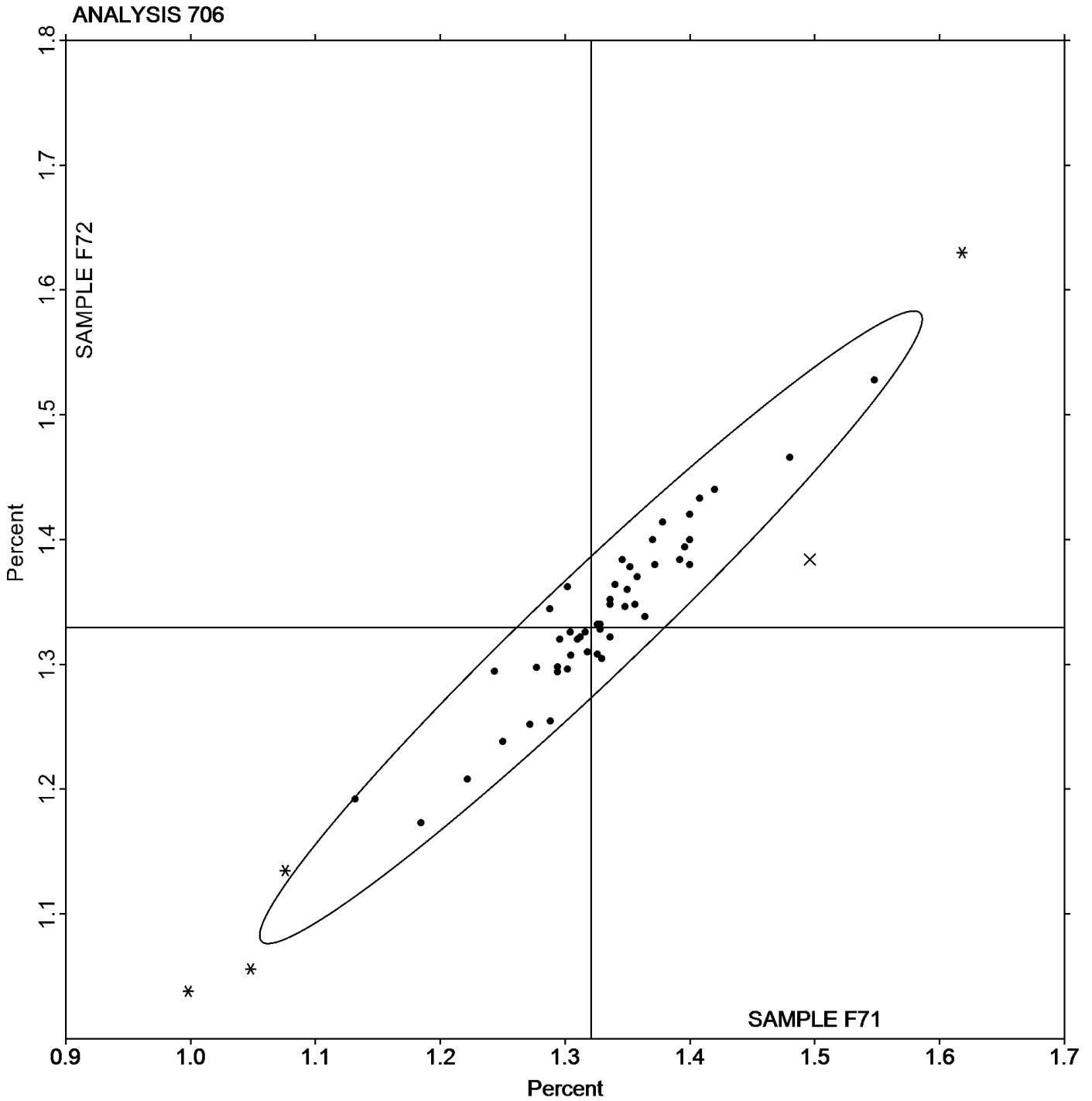
Analysis 706

Percent Elongation at Yield - Percent

Report #116

4th Qtr 2020

Grand Mean Sample F71: 1.3206 Percent Grand Mean Sample F72: 1.3298 Percent





Plastics Interlaboratory Testing Program

Report #116

Analysis 708

4th Qtr 2020

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F71			Sample F72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
22DTVE		383.70	26.91	1.74	376.16	19.02	1.21
3D6NME	X	449.76	92.97	6.01	455.79	98.65	6.27
3EFLZW		357.90	1.11	0.07	359.18	2.04	0.13
3WYBGJ	X	396.29	39.50	2.55	333.69	-23.45	-1.49
7E7YVE		342.18	-14.61	-0.94	341.91	-15.24	-0.97
7HKGBA	*	359.23	2.44	0.16	382.03	24.89	1.58
7U32U8		371.10	14.31	0.92	363.98	6.84	0.43
7Z68AA		339.70	-17.09	-1.10	338.48	-18.66	-1.19
7ZN3RB		348.62	-8.17	-0.53	350.68	-6.47	-0.41
88GVDA		369.20	12.41	0.80	365.00	7.86	0.50
8KMYLB		383.40	26.61	1.72	381.54	24.40	1.55
8R68A8		336.35	-20.44	-1.32	330.19	-26.95	-1.71
8V93UB	X	297.68	-59.11	-3.82	290.44	-66.70	-4.24
9L2MM3		340.49	-16.29	-1.05	340.93	-16.22	-1.03
AAFY79		357.70	0.91	0.06	364.25	7.11	0.45
ADWCL3	*	346.28	-10.51	-0.68	370.53	13.39	0.85
AEBR3A		362.99	6.20	0.40	350.88	-6.27	-0.40
AJNBH7		325.98	-30.81	-1.99	337.98	-19.16	-1.22
APBZ62		364.14	7.35	0.47	355.86	-1.28	-0.08
AX6FJ8		375.67	18.88	1.22	362.58	5.44	0.35
B6PNVB		360.80	4.01	0.26	362.00	4.86	0.31
B8P7J6		363.86	7.07	0.46	376.16	19.02	1.21
BKV237		341.36	-15.42	-1.00	341.54	-15.61	-0.99
BYC8X7		353.30	-3.49	-0.23	363.32	6.18	0.39
D7QH FY		353.12	-3.67	-0.24	352.22	-4.92	-0.31
D8JNJW		367.42	10.64	0.69	352.76	-4.38	-0.28
DHMJ32		375.68	18.89	1.22	379.36	22.22	1.41
DKQEJJ		369.02	12.23	0.79	379.08	21.94	1.40
DWFFUY		394.02	37.23	2.41	391.98	34.83	2.22
EDJA2X		359.26	2.47	0.16	357.32	0.18	0.01
FZTVJG	X	373.93	17.14	1.11	401.18	44.04	2.80
GVDPEU		343.60	-13.19	-0.85	352.40	-4.74	-0.30
HGQYRW	X	282.20	-74.59	-4.82	304.60	-52.54	-3.34
HRADVY	X	247.52	-109.27	-7.06	243.36	-113.78	-7.24
HX2EKT		345.31	-11.48	-0.74	343.25	-13.90	-0.88



Plastics Interlaboratory Testing Program

Report #116

Analysis 708

4th Qtr 2020

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F71			Sample F72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JMCAMD		344.80	-11.99	-0.77	347.20	-9.94	-0.63
JNAF7R		341.91	-14.87	-0.96	337.53	-19.61	-1.25
KF664R		361.60	4.81	0.31	359.80	2.66	0.17
KYMY4U	X	247.48	-109.31	-7.06	260.04	-97.10	-6.18
LJ866P		344.14	-12.65	-0.82	343.94	-13.20	-0.84
MAGUFF		371.00	14.21	0.92	371.66	14.52	0.92
P9BJBM		340.14	-16.64	-1.08	345.03	-12.11	-0.77
P9DDR8		363.47	6.68	0.43	350.41	-6.73	-0.43
PY7CVM		365.22	8.43	0.54	369.08	11.94	0.76
QV3ZB8		362.74	5.95	0.38	367.46	10.32	0.66
QYK8QT		368.00	11.21	0.72	366.55	9.41	0.60
TFGAHH		365.21	8.42	0.54	368.96	11.82	0.75
U4QXP6		342.96	-13.83	-0.89	331.30	-25.84	-1.64
U9ER9N		327.04	-29.75	-1.92	330.60	-26.54	-1.69
VUVEN2		331.84	-24.95	-1.61	332.20	-24.94	-1.59
WLWDGM		338.00	-18.79	-1.21	334.40	-22.74	-1.45
WRJ43H		372.00	15.21	0.98	366.80	9.66	0.61
Y7D8KD		374.08	17.29	1.12	376.68	19.54	1.24
YGYCRD		371.67	14.89	0.96	371.54	14.39	0.92
YYU4DB		346.38	-10.41	-0.67	354.10	-3.05	-0.19
ZZ7ZHF		359.00	2.21	0.14	351.28	-5.87	-0.37

Summary Statistics		
	Sample F71	Sample F72
Grand Means	356.788 ksi	357.144 ksi
Std Dev Btwn Labs	15.480 ksi	15.722 ksi
Statistics based on 49 of 56 reporting participants		

Sample F71: HIPS & Sample F72: HIPS



Comments on Assigned Data Flags for Test #708

- KYMY4U (X) - Data for both samples are low. Possible Systematic Error.
- 8V93UB (X) - Data for both samples are low. Possible Systematic Error.
- 3WYBGJ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample F71.
- FZTVJG (X) - Data for sample F72 are high. Inconsistent within the determinations of both samples.
- 3D6NME (X) - Data for both samples are high. Possible Systematic Error.
- HRADVY (X) - Data for both samples are low. Possible Systematic Error.
- HGQYRW (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample F72.



Plastics Interlaboratory Testing Program

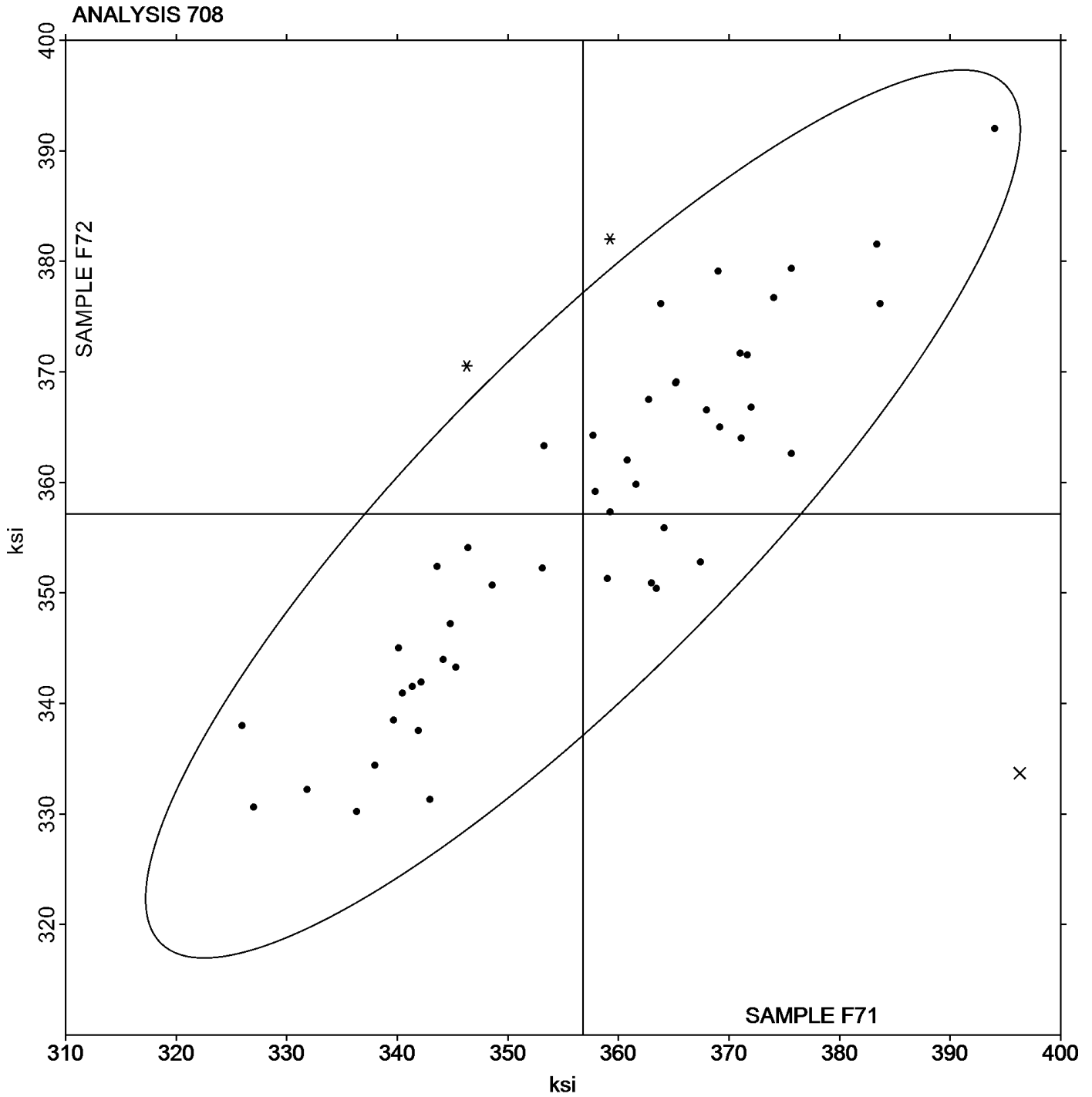
Analysis 708

Modulus of Elasticity - ksi

Report #116

4th Qtr 2020

Grand Mean Sample F71: 356.79 ksi Grand Mean Sample F72: 357.14 ksi





Plastics Interlaboratory Testing Program

Report #116

Analysis 710

4th Qtr 2020

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

WebCode	Data Flag	Sample E71			Sample E72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3EFLZW	*	79.28	-2.48	-2.30	80.83	-0.85	-1.00	RR
4FMFX9		81.20	-0.56	-0.52	81.63	-0.05	-0.06	IN
6WQDUC		80.97	-0.78	-0.73	81.94	0.27	0.31	TO
7B8MYE		82.58	0.82	0.76	82.53	0.85	0.99	XX
7E7YVE		81.20	-0.56	-0.52	81.40	-0.28	-0.32	TY
7HKGBA		81.74	-0.02	-0.01	81.59	-0.09	-0.10	RO
7Z68AA		82.15	0.39	0.37	82.00	0.32	0.38	CE
843BE2		81.04	-0.71	-0.66	80.69	-0.99	-1.15	TO
8KMYLB		81.08	-0.68	-0.63	81.50	-0.18	-0.21	IN
8V93UB		83.30	1.54	1.44	83.20	1.52	1.78	CE
9L2MM3		83.05	1.29	1.20	81.65	-0.03	-0.03	AT
AAFY79		82.48	0.72	0.67	82.13	0.45	0.52	IN
AJNBH7		82.53	0.77	0.72	82.53	0.85	0.99	CE
APBZ62		80.38	-1.38	-1.28	80.45	-1.23	-1.44	TO
BKV237		82.15	0.39	0.37	81.55	-0.13	-0.15	AT
D8JNJW		81.35	-0.41	-0.38	81.73	0.05	0.06	CE
DKQEJJ	X	91.60	9.84	9.15	82.20	0.52	0.61	TO
DTY2E6		80.83	-0.93	-0.86	81.45	-0.23	-0.27	TO
EJRQHY		81.48	-0.28	-0.26	81.58	-0.10	-0.12	TO
FAXZE4		83.00	1.24	1.16	83.25	1.57	1.84	IN
HGQYRW		83.06	1.30	1.21	82.78	1.10	1.29	XX
HX2EKT		82.05	0.29	0.27	82.15	0.47	0.55	ZW
JFR7HV		80.75	-1.01	-0.93	80.38	-1.30	-1.52	TO
PY7CVM		81.58	-0.18	-0.17	81.05	-0.63	-0.73	DN
QFCV7J		82.25	0.49	0.46	81.10	-0.58	-0.68	TO
QUQJXT		81.55	-0.21	-0.19	80.78	-0.90	-1.06	TO
QV3ZB8		81.95	0.19	0.18	82.05	0.37	0.44	IN
RG4BWL		80.03	-1.73	-1.61	80.15	-1.53	-1.79	IN
U4QXP6		82.00	0.24	0.23	81.45	-0.23	-0.27	CF
UBMRPN		81.05	-0.71	-0.66	81.48	-0.20	-0.24	CE
VVTK8G	*	84.75	2.99	2.78	83.80	2.12	2.48	CF
Y7D8KD		81.65	-0.11	-0.10	81.25	-0.43	-0.50	TO



Plastics Interlaboratory Testing Program

Report #116

Analysis 710

4th Qtr 2020

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

Summary Statistics		
	<u>Sample E71</u>	<u>Sample E72</u>
Grand Means	81.755 Degrees C	81.678 Degrees C
Stnd Dev Btwn Labs	1.076 Degrees C	0.855 Degrees C
Statistics based on 31 of 32 reporting participants		

Sample E71: ABS & Sample E72: ABS

Comments on Assigned Data Flags for Test #710

DKQEJJ (X) - Data for sample E71 are high.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

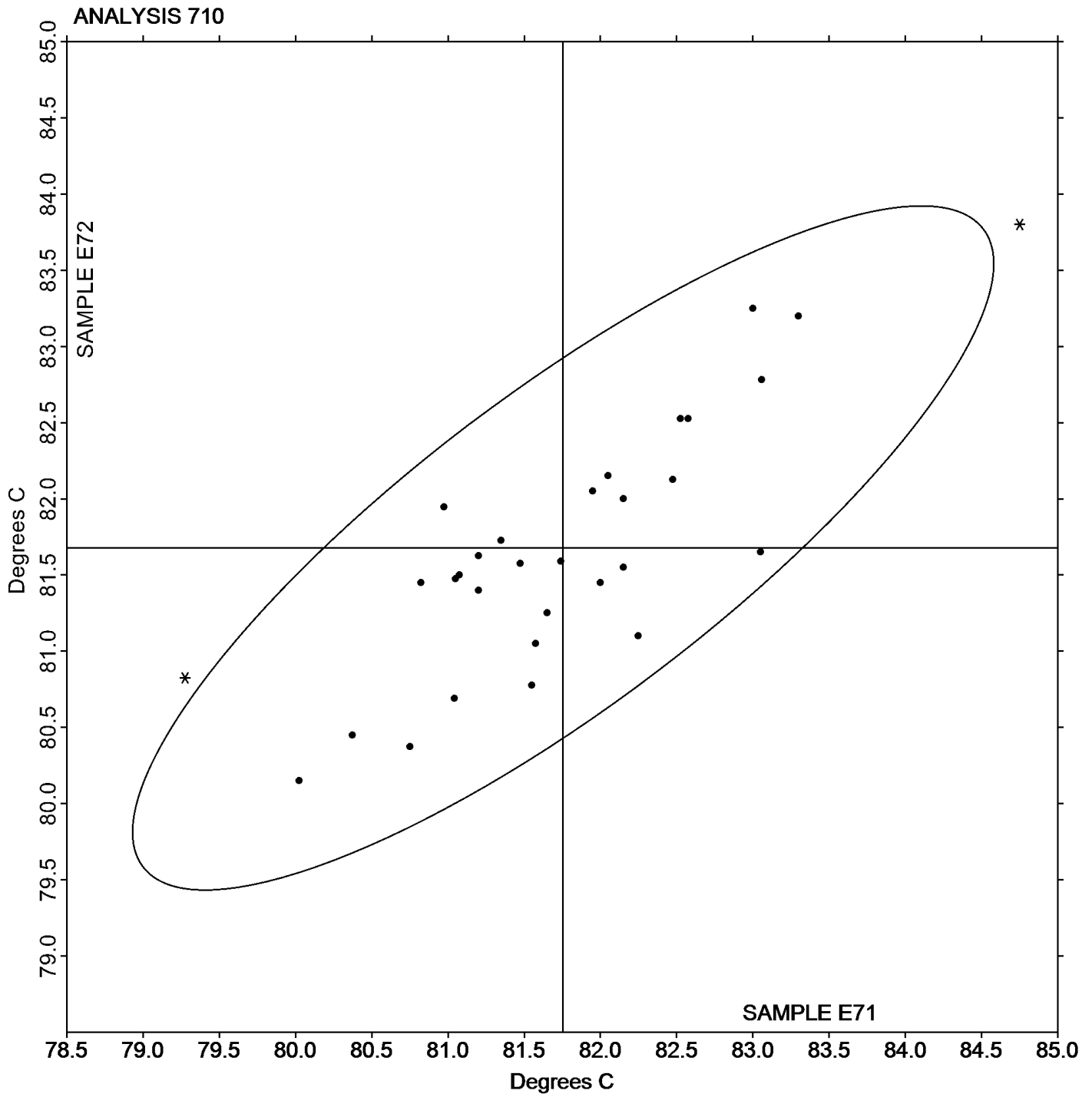
Report #116

Analysis 710

4th Qtr 2020

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

Grand Mean Sample E71: 81.755 Degrees C Grand Mean Sample E72: 81.678 Degrees C





Plastics Interlaboratory Testing Program

Report #116

Analysis 711

4th Qtr 2020

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

WebCode	Data Flag	Sample G71			Sample G72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
6WQDUC		110.8	-2.0	-0.58	112.2	-1.0	-0.29	TO
843BE2		109.7	-3.0	-0.90	115.2	2.0	0.57	TO
9L2MM3		115.0	2.2	0.66	119.7	6.5	1.87	AT
AAFY79		113.6	0.9	0.26	111.3	-1.9	-0.56	IN
APBZ62		111.4	-1.4	-0.40	113.7	0.5	0.13	TO
B6PNVB		115.3	2.5	0.75	114.8	1.6	0.46	CE
DKQEJJ		118.3	5.6	1.65	115.1	1.9	0.55	TO
DLET32		110.5	-2.2	-0.66	110.2	-3.0	-0.85	CE
DTY2E6		105.8	-6.9	-2.05	105.5	-7.7	-2.21	TO
HX2EKT		116.5	3.8	1.12	113.2	0.0	-0.01	ZW
JFR7HV		109.5	-3.2	-0.95	109.6	-3.6	-1.04	TO
PY7CVM		115.9	3.2	0.95	116.3	3.1	0.89	DN
QFCV7J		113.0	0.2	0.07	115.5	2.3	0.65	TO
RG4BWL		110.2	-2.5	-0.74	110.1	-3.1	-0.89	IN
UBMRPN		115.5	2.8	0.82	115.8	2.6	0.74	CE

Summary Statistics		
	Sample G71	Sample G72
Grand Means	112.73 Degrees C	113.20 Degrees C
Stnd Dev Btwn Labs	3.38 Degrees C	3.48 Degrees C
Statistics based on 15 of 15 reporting participants		

Sample G71: PP & Sample G72: PP

Key to Instrument Codes Reported by Participants

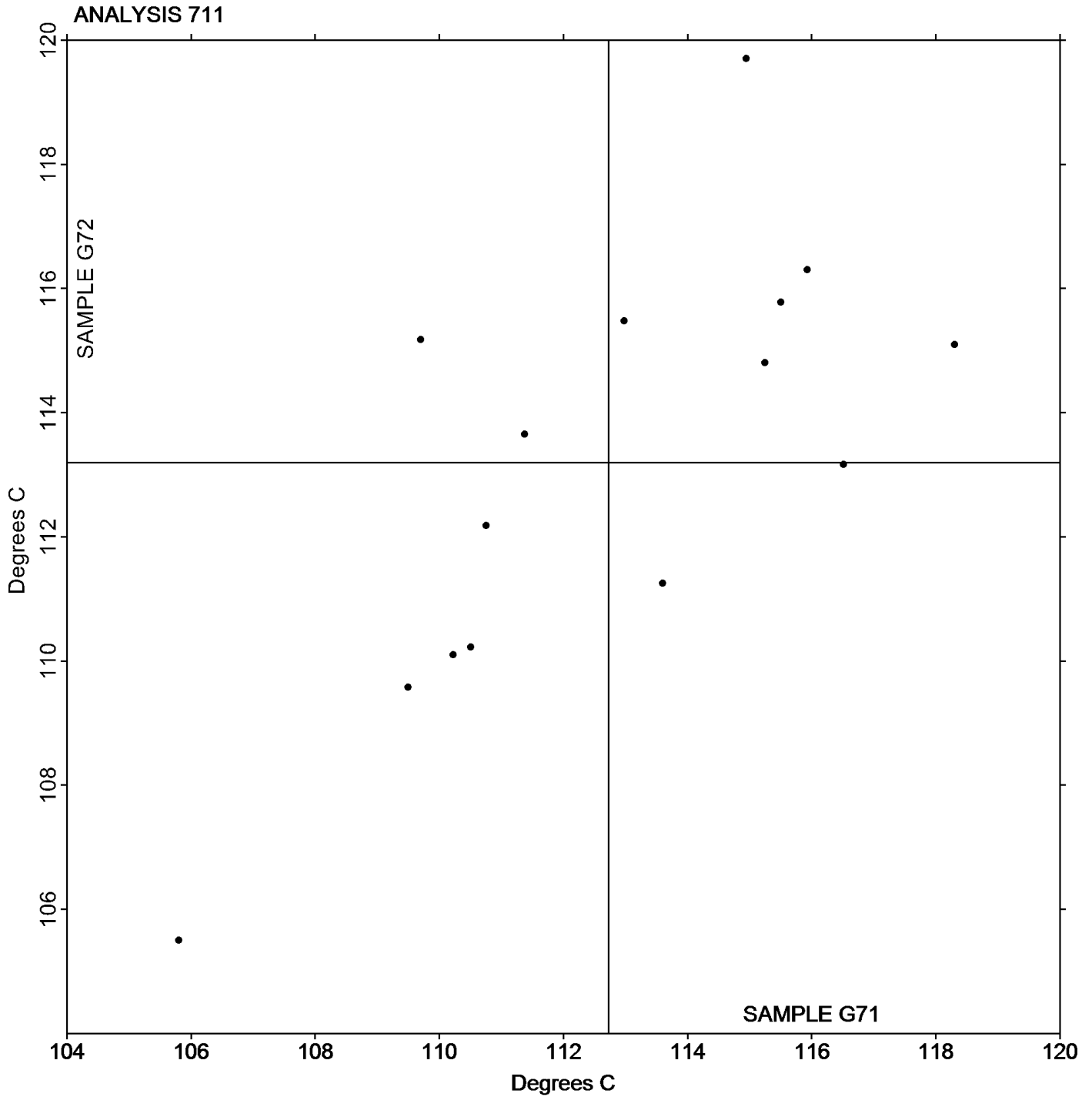
AT Atlas	CE Ceast
DN DYNISCO	IN Instron
TO Tinius Olsen	ZW Zwick



Plastics Interlaboratory Testing Program
Analysis 711
Deflection Temp. Under Flexural Load (0.455 MPa) - Degrees C

Report #116
4th Qtr 2020

Grand Mean Sample G71: 112.73 Degrees C Grand Mean Sample G72: 113.20 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 #116

Analysis 712

4th Qtr 2020

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

WebCode	Data Flag	Sample N71			Sample N72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3CT3YY		79.48	-0.90	-0.77	79.50	-0.94	-0.81	CE
3JC76F		79.50	-0.88	-0.75	79.88	-0.57	-0.49	CE
3THBUB		79.59	-0.79	-0.68	79.57	-0.87	-0.75	DN
6WQDUC		80.24	-0.13	-0.11	80.32	-0.13	-0.11	TO
7E7YVE		80.98	0.60	0.52	81.00	0.56	0.48	TY
843BE2		79.73	-0.65	-0.56	79.84	-0.60	-0.52	TO
8KMYLB		82.53	2.15	1.85	83.03	2.58	2.21	IN
9L2MM3		80.45	0.07	0.06	80.55	0.11	0.09	AT
AAFY79		80.60	0.22	0.19	80.90	0.46	0.39	IN
AXAPL6		80.10	-0.28	-0.24	79.57	-0.88	-0.75	IN
B6PNVB		80.37	-0.01	-0.01	80.97	0.52	0.45	CF
BKE6A8		81.55	1.17	1.01	81.73	1.28	1.10	XX
D3A4Z7		81.88	1.50	1.29	82.08	1.63	1.40	CE
DA8ZJ3		79.43	-0.95	-0.82	79.23	-1.22	-1.04	CE
DKQEJ		80.70	0.32	0.28	81.03	0.58	0.50	TO
DTY2E6		79.93	-0.45	-0.39	79.63	-0.82	-0.70	TO
FAL7VX		80.73	0.35	0.30	80.78	0.33	0.28	TY
FM6NPL		79.10	-1.28	-1.10	78.93	-1.52	-1.30	XX
GDEMKW		80.48	0.10	0.09	80.75	0.31	0.26	CE
HGQYRW		82.78	2.40	2.07	82.78	2.34	2.00	XX
HX2EKT		80.73	0.35	0.30	80.38	-0.07	-0.06	ZW
JNAF7R		79.20	-1.18	-1.01	79.40	-1.04	-0.89	CE
LUN6GC	X	87.20	6.82	5.87	88.08	7.63	6.53	TO
MAXB9M		80.30	-0.08	-0.06	80.33	-0.12	-0.10	TO
MBP8VV		80.75	0.37	0.32	80.18	-0.27	-0.23	TO
MRED8V		81.35	0.97	0.84	81.20	0.76	0.65	CF
NBNTNU		78.93	-1.45	-1.25	79.25	-1.19	-1.02	TO
R3JVTM		80.08	-0.30	-0.26	80.00	-0.44	-0.38	ZW
R7XTXN		82.30	1.92	1.65	81.95	1.51	1.29	CE
RG4BWL		79.20	-1.18	-1.01	79.28	-1.17	-1.00	IN
UBMRPN		79.35	-1.03	-0.88	79.53	-0.92	-0.78	CE
VVTK8G		82.80	2.42	2.08	83.08	2.63	2.25	CF
Y4QJ9D		77.95	-2.43	-2.08	78.40	-2.04	-1.75	XX
YRTRGE		80.68	0.30	0.26	80.53	0.08	0.07	TY
YWURZJ		79.05	-1.33	-1.14	79.55	-0.89	-0.76	TO



Plastics Interlaboratory Testing Program

Report #116

Analysis 712

4th Qtr 2020

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

Summary Statistics		
	<u>Sample N71</u>	<u>Sample N72</u>
Grand Means	80.375 Degrees C	80.442 Degrees C
Stnd Dev Btwn Labs	1.163 Degrees C	1.169 Degrees C
Statistics based on 34 of 35 reporting participants		

Sample N71: ABS & Sample N72: ABS

Comments on Assigned Data Flags for Test #712

LUN6GC (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample N71.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

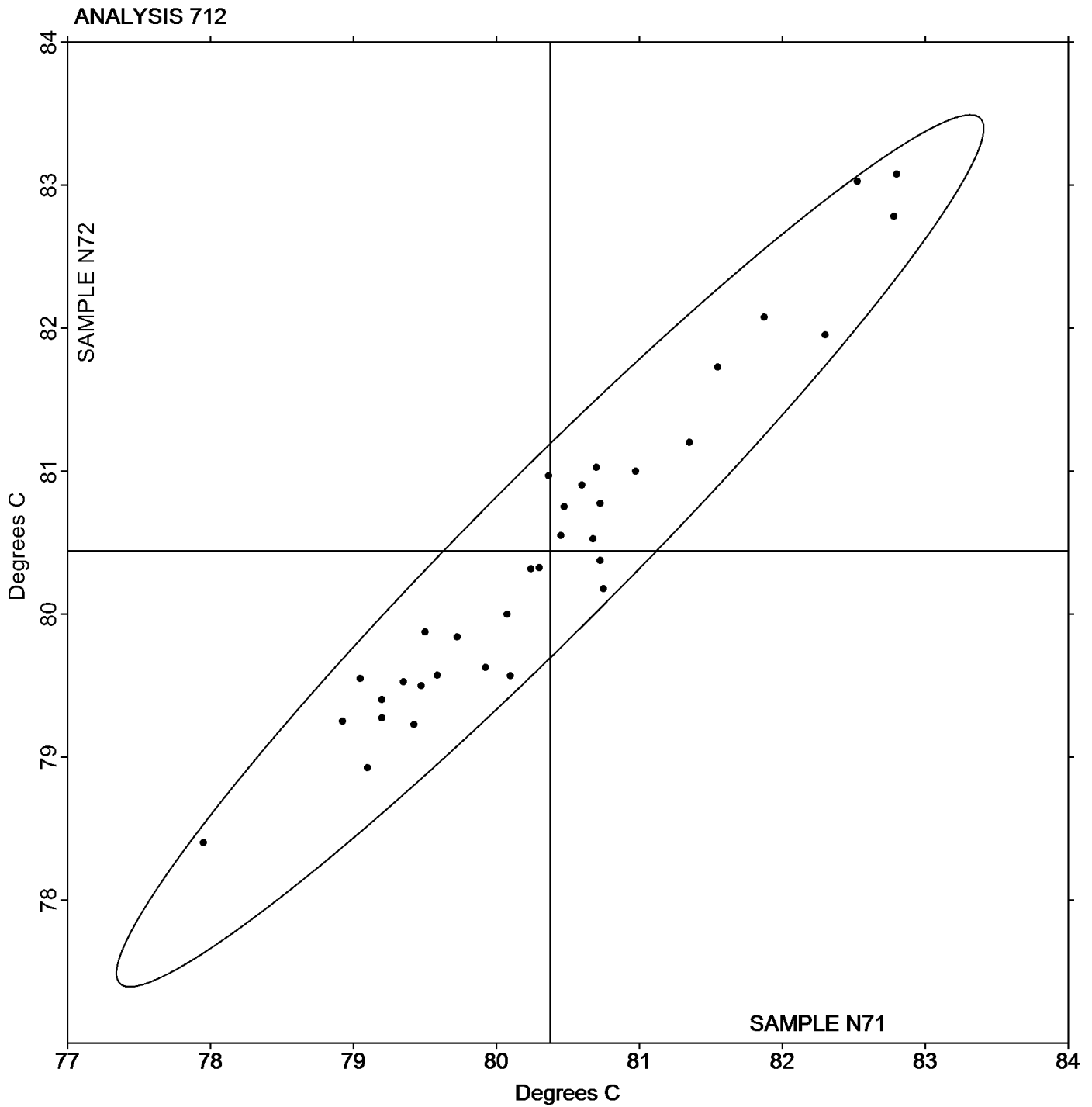
Report #116

Analysis 712

4th Qtr 2020

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

Grand Mean Sample N71: 80.375 Degrees C Grand Mean Sample N72: 80.442 Degrees C





Plastics Interlaboratory Testing Program

Report #116

Analysis 715

4th Qtr 2020

Vicat Softening Temperature (Rate A)

WebCode	Data Flag	Sample H71			Sample H72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3EFLZW		95.87	0.30	0.38	95.95	0.44	0.54	RR
4FMFX9	*	97.87	2.30	2.84	97.82	2.30	2.85	IN
7E7YVE		97.22	1.65	2.04	96.98	1.47	1.82	TY
7HKGBA		94.98	-0.58	-0.72	94.87	-0.65	-0.80	RO
7Z68AA		95.30	-0.26	-0.32	95.18	-0.33	-0.41	CE
843BE2		94.39	-1.17	-1.44	94.26	-1.25	-1.55	TO
882LA2		95.43	-0.13	-0.16	95.35	-0.16	-0.20	CE
9L2MM3		95.28	-0.28	-0.34	95.33	-0.18	-0.22	WZ
AAFY79		95.67	0.10	0.13	95.68	0.17	0.21	IN
AJNBH7		95.22	-0.35	-0.43	95.18	-0.33	-0.41	CE
B6PNVB		95.23	-0.33	-0.41	95.30	-0.22	-0.27	CF
DA8ZJ3		94.92	-0.65	-0.80	94.90	-0.62	-0.76	CE
DCBV36		94.97	-0.60	-0.74	94.82	-0.70	-0.86	AT
DKQEJJ		96.12	0.55	0.68	96.10	0.59	0.72	TO
GDEMKW		96.23	0.67	0.83	96.42	0.90	1.12	CF
HGQYRW	X	96.30	0.73	0.90	95.37	-0.14	-0.18	XX
HX2EKT		96.25	0.69	0.85	96.07	0.55	0.68	CF
JH4LCW		95.32	-0.25	-0.30	95.37	-0.15	-0.18	CE
JNAF7R		95.82	0.25	0.31	95.68	0.17	0.21	CE
MUGFTQ		95.33	-0.23	-0.28	95.08	-0.43	-0.53	TO
PVRW6V		95.48	-0.08	-0.10	95.45	-0.06	-0.08	CE
UBMRPN		94.70	-0.86	-1.06	94.67	-0.85	-1.05	CE
Y7D8KD		94.78	-0.78	-0.96	94.87	-0.65	-0.80	TO

Summary Statistics		
	Sample H71	Sample H72
Grand Means	95.563 Degrees C	95.515 Degrees C
Stnd Dev Btwn Labs	0.810 Degrees C	0.807 Degrees C
Statistics based on 22 of 23 reporting participants		

Sample H71: HIPS & Sample H72: HIPS

Comments on Assigned Data Flags for Test #715

HGQYRW (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample H71.



Plastics Interlaboratory Testing Program

Report #116

Analysis 715

4th Qtr 2020

Vicat Softening Temperature (Rate A)

Key to Instrument Codes Reported by Participants

AT	Atlas	CE	Ceast
CF	Coesfeld	IN	Instron
RO	Rosand	RR	Ray-Ran
TO	Tinius Olsen	TY	Toyoseiki
WZ	Zwick	XX	Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

Report #116

Analysis 716

4th Qtr 2020

Vicat Softening Temperature (Rate B)

WebCode	Data Flag	Sample R71			Sample R72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3EFLZW		98.32	0.64	0.97	98.20	0.51	0.78	RR
4FMFX9	*	95.55	-2.13	-3.21	95.58	-2.11	-3.22	IN
6WQDUC		97.20	-0.48	-0.72	97.22	-0.48	-0.73	TO
7E7YVE		98.87	1.19	1.80	98.90	1.21	1.84	TY
7HKGBA		97.35	-0.33	-0.49	97.33	-0.36	-0.55	RO
7Z68AA		97.75	0.07	0.11	97.90	0.21	0.32	CE
843BE2	X	85.10	-12.58	-18.98	85.00	-12.70	-19.39	TO
9L2MM3		97.85	0.17	0.26	97.88	0.19	0.29	AT
AAFY79		98.05	0.37	0.56	97.93	0.24	0.37	IN
AJNBH7		97.90	0.22	0.34	97.77	0.07	0.11	CE
B6PNVB		97.50	-0.18	-0.27	97.70	0.01	0.01	CF
DA8ZJ3		96.95	-0.73	-1.10	96.98	-0.71	-1.08	CE
DCBV36		97.62	-0.06	-0.09	97.50	-0.19	-0.29	AT
DKQEJJ		98.25	0.57	0.87	98.23	0.54	0.83	TO
GDEMKW		98.17	0.49	0.74	97.95	0.26	0.39	CF
HGQYRW	X	96.48	-1.19	-1.80	97.69	-0.01	-0.01	XX
HX2EKT		97.80	0.12	0.19	97.95	0.26	0.39	CF
JH4LCW		97.42	-0.26	-0.39	97.47	-0.23	-0.34	CE
JNAF7R		97.95	0.27	0.41	98.28	0.59	0.90	CE
MUGFTQ		97.65	-0.03	-0.04	97.65	-0.04	-0.06	TO
PVRW6V		97.97	0.29	0.44	97.95	0.26	0.39	CE
Y7D8KD		97.43	-0.24	-0.37	97.47	-0.23	-0.34	TO

Summary Statistics		
	Sample R71	Sample R72
Grand Means	97.677 Degrees C	97.692 Degrees C
Std Dev Btwn Labs	0.663 Degrees C	0.655 Degrees C
Statistics based on 20 of 22 reporting participants		

Sample R71: HIPS & Sample R72: HIPS

Comments on Assigned Data Flags for Test #716

843BE2 (X) - Data for both samples are low. Possible Systematic Error.

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



Plastics Interlaboratory Testing Program

Report #116

Analysis 716

4th Qtr 2020

Vicat Softening Temperature (Rate B)

Key to Instrument Codes Reported by Participants

AT	Atlas	CE	Ceast
CF	Coesfeld	IN	Instron
RO	Rosand	RR	Ray-Ran
TO	Tinius Olsen	TY	Toyoseiki
XX	Instrument manufacturer not specified by lab		



Plastics Interlaboratory Testing Program

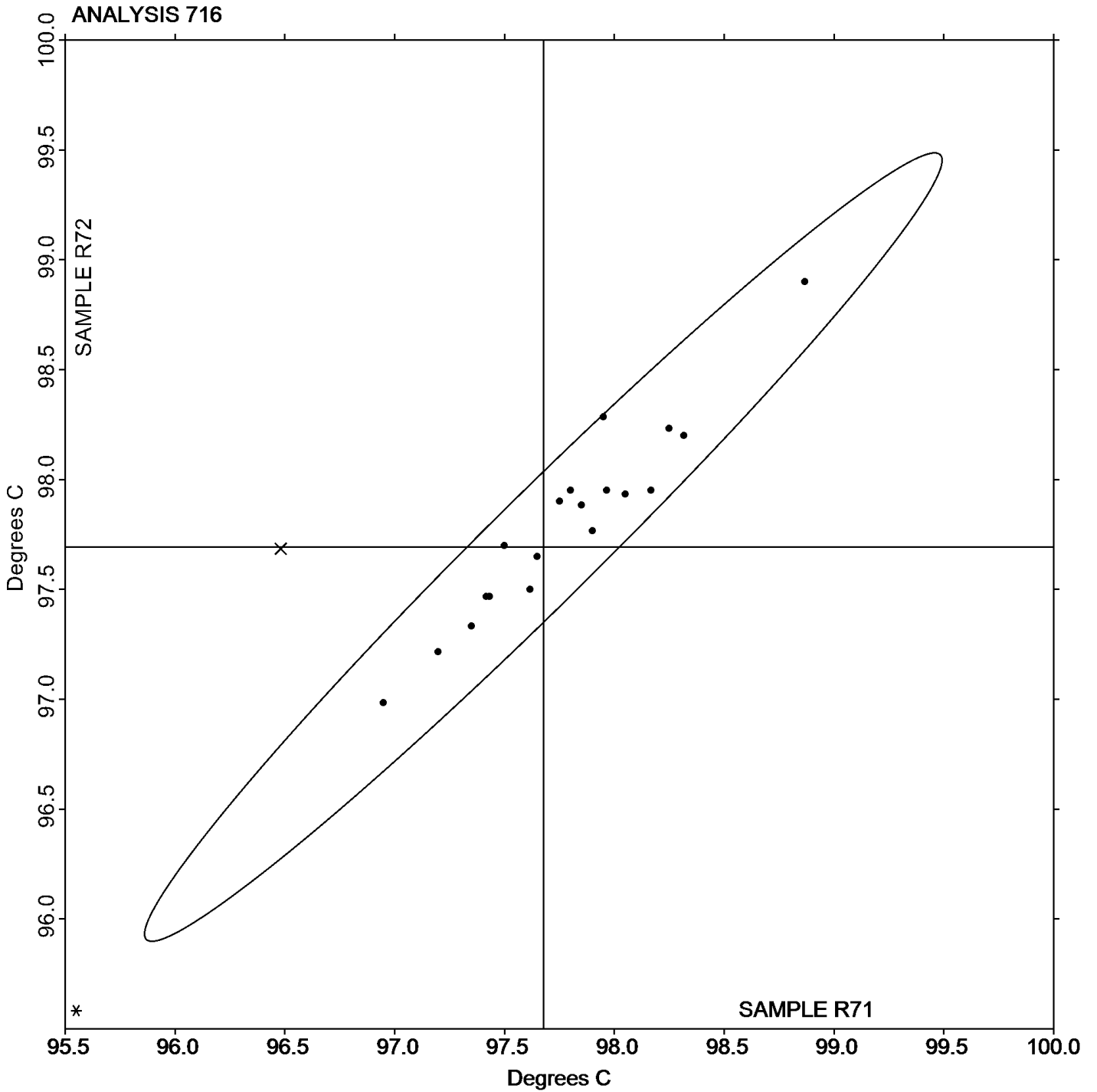
Report #116

Analysis 716

4th Qtr 2020

Vicat Softening Temperature (Rate B)

Grand Mean Sample R71: 97.677 Degrees C Grand Mean Sample R72: 97.692 Degrees C





Plastics Interlaboratory Testing Program

Report #116

Analysis 718

4th Qtr 2020

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T71			Sample T72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3AKWBC		1.04100	-0.00224	-1.07	1.04033	-0.00264	-1.16
3CT3YY		1.04480	0.00156	0.75	1.04437	0.00139	0.61
3JC76F		1.04520	0.00196	0.94	1.04553	0.00256	1.12
3THBUB		1.04267	-0.00058	-0.28	1.04433	0.00136	0.60
3U9HUE		1.04390	0.00066	0.31	1.04283	-0.00014	-0.06
43DPAE		1.04353	0.00029	0.14	1.04353	0.00056	0.24
63EVEF		1.04360	0.00036	0.17	1.04417	0.00119	0.52
6DDQ86		1.04300	-0.00024	-0.12	1.04300	0.00002	0.01
6WQDUC		1.04243	-0.00081	-0.39	1.04263	-0.00034	-0.15
7E7YVE		1.04033	-0.00291	-1.39	1.03967	-0.00331	-1.45
7FW6B6		1.04377	0.00052	0.25	1.04223	-0.00074	-0.33
7Z68AA		1.04233	-0.00091	-0.44	1.04233	-0.00064	-0.28
7ZN3RB		1.04207	-0.00118	-0.56	1.04193	-0.00104	-0.46
843BE2		1.04513	0.00189	0.91	1.04470	0.00172	0.76
8KMYLB	*	1.04417	0.00092	0.44	1.04170	-0.00128	-0.56
8PL3RC		1.04233	-0.00091	-0.44	1.04200	-0.00098	-0.43
8PW4DB		1.04200	-0.00124	-0.59	1.04300	0.00002	0.01
8V93UB	*	1.04850	0.00526	2.52	1.04780	0.00482	2.12
9JBG8C	*	1.03733	-0.00591	-2.83	1.03733	-0.00564	-2.48
9L2MM3		1.04380	0.00056	0.27	1.04343	0.00046	0.20
A7ZBR4		1.04547	0.00222	1.06	1.04533	0.00236	1.03
AAFY79		1.04403	0.00079	0.38	1.04390	0.00092	0.41
AC76LY		1.03963	-0.00361	-1.73	1.03930	-0.00368	-1.61
AJNBH7	X	1.04367	0.00042	0.20	1.04033	-0.00264	-1.16
APBZ62		1.04380	0.00056	0.27	1.04467	0.00169	0.74
AXAPL6		1.04720	0.00396	1.89	1.04743	0.00446	1.96
B2YV97		1.04007	-0.00318	-1.52	1.03987	-0.00311	-1.37
B6PNVB	X	1.03700	-0.00624	-2.99	1.03800	-0.00498	-2.19
BCKZG7		1.04333	0.00009	0.04	1.04233	-0.00064	-0.28
BKV237		1.04200	-0.00124	-0.59	1.04157	-0.00141	-0.62
BL64N6		1.04233	-0.00091	-0.44	1.04147	-0.00151	-0.66
C3TRHZ		1.04430	0.00106	0.51	1.04393	0.00096	0.42
CNUQ6Y		1.04673	0.00349	1.67	1.04600	0.00302	1.33
D2T236		1.04200	-0.00124	-0.59	1.04100	-0.00198	-0.87
D3A4Z7		1.04193	-0.00131	-0.63	1.04237	-0.00061	-0.27



Plastics Interlaboratory Testing Program

Report #116

Analysis 718

4th Qtr 2020

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T71			Sample T72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
D8JNJW		1.04250	-0.00074	-0.36	1.04190	-0.00108	-0.47
DA8ZJ3		1.04300	-0.00024	-0.12	1.04270	-0.00028	-0.12
DHMJ32		1.04703	0.00379	1.81	1.04747	0.00449	1.97
DKQEJJ		1.03967	-0.00358	-1.71	1.03833	-0.00464	-2.04
DTY2E6		1.04440	0.00116	0.55	1.04507	0.00209	0.92
EDJA2X		1.04087	-0.00238	-1.14	1.04103	-0.00194	-0.85
EF8LZ4		1.04277	-0.00048	-0.23	1.04197	-0.00101	-0.44
FM6NPL		1.04000	-0.00324	-1.55	1.03967	-0.00331	-1.45
FZTVJG		1.04000	-0.00324	-1.55	1.04000	-0.00298	-1.31
G66X8X		1.04467	0.00142	0.68	1.04500	0.00202	0.89
GLM49W		1.04277	-0.00048	-0.23	1.04247	-0.00051	-0.22
GTLTPZ		1.04480	0.00156	0.75	1.04367	0.00069	0.30
HGQYRW	*	1.04567	0.00242	1.16	1.04733	0.00436	1.91
HJHQE2	X	1.13080	0.08756	41.92	1.13113	0.08816	38.71
HX2EKT		1.04507	0.00182	0.87	1.04480	0.00182	0.80
J6U76R		1.04197	-0.00128	-0.61	1.04083	-0.00214	-0.94
JFR7HV		1.04563	0.00239	1.14	1.04657	0.00359	1.58
JJUUBZ		1.04243	-0.00081	-0.39	1.04113	-0.00184	-0.81
JNAF7R		1.04827	0.00502	2.41	1.04797	0.00499	2.19
JRPY62		1.04500	0.00176	0.84	1.04500	0.00202	0.89
KF664R		1.04097	-0.00228	-1.09	1.04107	-0.00191	-0.84
KUTAEA		1.04397	0.00072	0.35	1.04473	0.00176	0.77
LUN6GC	X	0.72133	-0.32191	-154.10	0.70970	-0.33328	-146.36
P427TN	*	1.04233	-0.00091	-0.44	1.04000	-0.00298	-1.31
P9DDR8		1.04167	-0.00158	-0.75	1.04200	-0.00098	-0.43
PY7CVM		1.04433	0.00109	0.52	1.04433	0.00136	0.60
QFCV7J		1.04303	-0.00021	-0.10	1.04203	-0.00094	-0.41
QNLKKH		1.04497	0.00172	0.83	1.04490	0.00192	0.84
QV3ZB8	*	1.04160	-0.00164	-0.79	1.03937	-0.00361	-1.59
R3JVTM		1.03867	-0.00458	-2.19	1.03833	-0.00464	-2.04
R88K6J	X	1.03667	-0.00658	-3.15	1.04000	-0.00298	-1.31
RG4BWL		1.04187	-0.00138	-0.66	1.04170	-0.00128	-0.56
RM6Y3R		1.04400	0.00076	0.36	1.04433	0.00136	0.60
RTCDVN		1.04323	-0.00001	0.00	1.04373	0.00076	0.33
THAHCJ		1.04467	0.00142	0.68	1.04433	0.00136	0.60



Plastics Interlaboratory Testing Program

Report #116

Analysis 718

4th Qtr 2020

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T71			Sample T72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
U24DN8		1.04200	-0.00124	-0.59	1.04200	-0.00098	-0.43
UBMRPN		1.04557	0.00232	1.11	1.04537	0.00239	1.05
UGRV6P		1.04342	0.00018	0.08	1.04361	0.00064	0.28
VA68AJ		1.04267	-0.00058	-0.28	1.04233	-0.00064	-0.28
VG964G	X	1.03783	-0.00541	-2.59	1.03983	-0.00314	-1.38
W9CL3E		1.04233	-0.00091	-0.44	1.04267	-0.00031	-0.14
WPCL6L		1.04373	0.00048	0.23	1.04315	0.00017	0.08
XXKQEH		1.04500	0.00176	0.84	1.04467	0.00169	0.74
XYXZY		1.04273	-0.00051	-0.24	1.04300	0.00002	0.01
Y4QJ9D	*	1.04633	0.00309	1.48	1.04400	0.00102	0.45
YRTRGE		1.04383	0.00059	0.28	1.04337	0.00039	0.17
ZM2VD9		1.04230	-0.00094	-0.45	1.04230	-0.00068	-0.30

Summary Statistics

Grand Means

Sample T71
1.043243 sp gr 23/23 C

Sample T72
1.042977 sp gr 23/23 C

Std Dev Btwn Labs

0.002089 sp gr 23/23 C

0.002277 sp gr 23/23 C

Statistics based on 76 of 82 reporting participants

Sample T71: ABS & Sample T72: ABS

Comments on Assigned Data Flags for Test #718

- AJNBH7 (X) - Inconsistent in testing between samples.
- VG964G (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample T72.
- B6PNVB (X) - Data for sample T71 are low.
- HJHQE2 (X) - Data for both samples are high. Possible Systematic Error.
- LUN6GC (X) - Data for both samples are low. Possible Systematic Error.
- R88K6J (X) - Data for sample T71 are low. Inconsistent within the determinations of sample T71.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample T71			Sample T72			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
ASTM D792 Method A (water)	1.043266	0.002000	0.000	1.043000	0.002000	0.000	61/65
ASTM D792 Method B (not water)	1.042333	0.002000	-0.001	1.042000	0.002000	-0.001	3/4
ISO 1183	1.043353	0.002000	0.000	1.043000	0.002000	0.000	12/13



Plastics Interlaboratory Testing Program

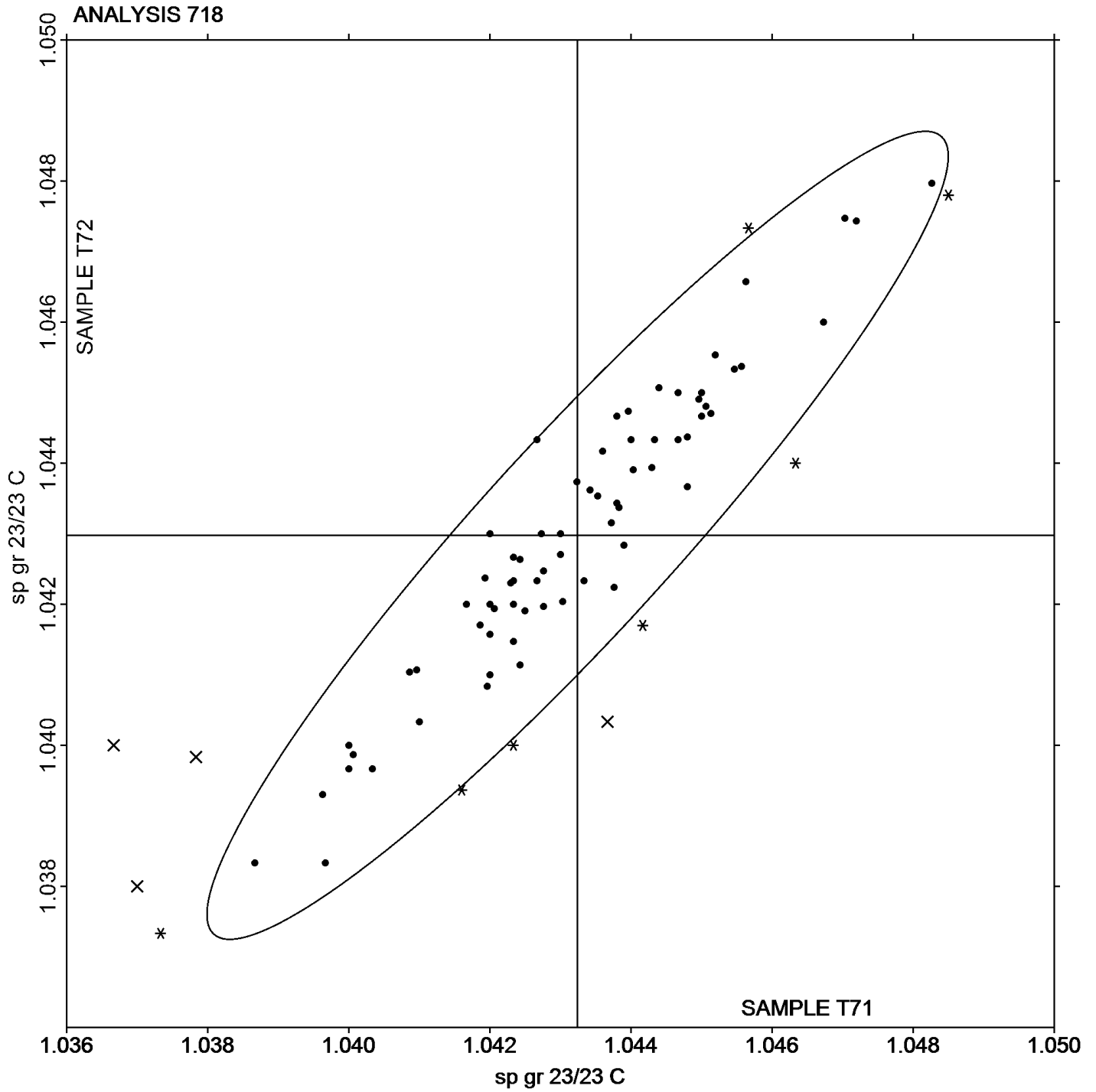
Analysis 718

Specific Gravity - sp gr 23/23 C

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Grand Mean Sample T71: 1.0432 sp gr 23/23 C Grand Mean Sample T72: 1.0430 sp gr 23/23 C





Plastics Interlaboratory Testing Program

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Analysis 720

4th Qtr 2020

Flexural Modulus- ksi

WebCode	Data Flag	Sample J71			Sample J72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
22DTVE		364.9	4.8	0.24	360.8	0.9	0.05
2FVG AJ		376.8	16.7	0.82	379.2	19.3	0.94
3D6NME		396.3	36.2	1.78	397.2	37.3	1.82
3EFLZW		350.9	-9.2	-0.45	349.1	-10.8	-0.53
3XBELU		341.9	-18.2	-0.89	339.3	-20.6	-1.01
4PUYV7	X	345.7	-14.4	-0.71	370.0	10.1	0.49
6WQDUC		408.6	48.5	2.38	407.6	47.7	2.33
7E7YVE		347.7	-12.4	-0.61	350.4	-9.5	-0.46
7HKGBA		354.1	-6.0	-0.30	353.8	-6.1	-0.30
7U32U8		334.7	-25.4	-1.24	331.3	-28.6	-1.39
7Z68AA	X	299.5	-60.6	-2.97	304.7	-55.2	-2.69
7ZN3RB		353.3	-6.8	-0.33	353.5	-6.3	-0.31
843BE2		355.6	-4.5	-0.22	355.4	-4.4	-0.22
8KMYLB		380.0	19.9	0.98	375.3	15.4	0.75
8R68A8		342.8	-17.3	-0.85	341.3	-18.6	-0.91
8V93UB		352.5	-7.6	-0.37	348.6	-11.3	-0.55
9L2MM3		347.4	-12.7	-0.62	351.6	-8.3	-0.40
A7ZBR4		352.4	-7.7	-0.38	353.0	-6.9	-0.33
AAFY79		385.0	24.9	1.22	384.8	24.9	1.22
ADWCL3		332.0	-28.1	-1.38	333.6	-26.3	-1.28
AEBR3A		338.1	-22.0	-1.08	340.9	-18.9	-0.92
AJNBH7	*	313.7	-46.4	-2.28	310.0	-49.8	-2.43
APBZ62		366.9	6.8	0.33	365.1	5.3	0.26
AX6FJ8		359.8	-0.3	-0.01	358.6	-1.3	-0.06
BKV237		347.5	-12.6	-0.62	351.0	-8.8	-0.43
D7QHFY		364.6	4.5	0.22	366.8	6.9	0.34
DHMJ32		376.4	16.3	0.80	378.6	18.7	0.91
DKQEJ		388.8	28.7	1.41	386.2	26.3	1.28
DTY2E6	X	372.5	12.4	0.61	349.9	-10.0	-0.49
EDJA2X		379.8	19.7	0.97	378.8	19.0	0.93
F3HYFU		351.3	-8.8	-0.43	349.1	-10.8	-0.53
FCM8VU		349.0	-11.1	-0.54	349.8	-10.1	-0.49
FM6NPL		353.3	-6.8	-0.33	351.9	-8.0	-0.39
FZTVJG		343.2	-16.9	-0.83	340.9	-19.0	-0.93
HCGG2G		335.1	-25.0	-1.23	333.6	-26.2	-1.28



Plastics Interlaboratory Testing Program

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Analysis 720

4th Qtr 2020

Flexural Modulus- ksi

WebCode	Data Flag	Sample J71			Sample J72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
HGQYRW		339.8	-20.3	-1.00	336.8	-23.1	-1.13
HRADVY		381.9	21.8	1.07	385.9	26.1	1.27
HX2EKT		334.6	-25.5	-1.25	334.4	-25.5	-1.24
JB4BWR	X	252.2	-107.9	-5.29	251.9	-107.9	-5.27
JE3MTR		362.9	2.8	0.14	362.2	2.4	0.11
JFR7HV		365.6	5.5	0.27	366.8	7.0	0.34
JMCAMD		352.8	-7.3	-0.36	351.4	-8.5	-0.41
JNAF7R	X	333.0	-27.1	-1.33	313.8	-46.1	-2.25
KF664R		380.4	20.3	0.99	378.2	18.3	0.89
KYMY4U		380.2	20.1	0.99	378.2	18.4	0.90
L293BR		353.0	-7.1	-0.35	353.6	-6.3	-0.31
LJ866P		399.4	39.3	1.93	402.5	42.6	2.08
MAGUFF		395.9	35.8	1.76	398.2	38.4	1.87
MT4TAQ		341.7	-18.4	-0.90	347.0	-12.9	-0.63
NRT4UL		344.0	-16.1	-0.79	343.5	-16.4	-0.80
PY7CVM		366.6	6.5	0.32	367.5	7.6	0.37
QFCV7J		340.7	-19.4	-0.95	341.7	-18.2	-0.89
QNLKKH		348.7	-11.4	-0.56	348.6	-11.2	-0.55
QQA66T		360.5	0.4	0.02	364.2	4.3	0.21
QV3ZB8		352.4	-7.7	-0.38	348.9	-11.0	-0.53
RG4BWL		375.5	15.4	0.76	374.4	14.5	0.71
THAHCJ		375.7	15.6	0.76	376.9	17.0	0.83
TL9U8J		362.4	2.3	0.11	363.9	4.1	0.20
TNW78P		334.5	-25.6	-1.26	335.7	-24.1	-1.18
U4QXP6		357.2	-2.9	-0.14	354.6	-5.2	-0.26
UBMRPN		368.4	8.3	0.41	368.5	8.7	0.42
VVTK8G		363.4	3.3	0.16	358.8	-1.1	-0.05
WDHLE	*	331.3	-28.8	-1.41	336.7	-23.2	-1.13
WRJ43H	X	311.2	-48.9	-2.40	389.8	29.9	1.46
Y4QJ9D		374.5	14.4	0.71	371.9	12.0	0.59
Y7D8KD	*	414.4	54.3	2.67	412.7	52.8	2.58
YGycRD		363.6	3.5	0.17	361.0	1.1	0.06



Plastics Interlaboratory Testing Program

Report #116

Analysis 720

4th Qtr 2020

Flexural Modulus- ksi

Summary Statistics	<u>Sample J71</u>	<u>Sample J72</u>
Grand Means	360.10 ksi	359.86 ksi
Stnd Dev Btwn Labs	20.39 ksi	20.50 ksi

Statistics based on 61 of 67 reporting participants

Sample J71: ABS & Sample J72: ABS

Comments on Assigned Data Flags for Test #720

- 7Z68AA (X) - Data for sample J71 are low.
- 4PUYV7 (X) - Inconsistent in testing between samples.
- JNAF7R (X) - Inconsistent in testing between samples.
- DTY2E6 (X) - Inconsistent in testing between samples.
- JB4BWR (X) - Data for both samples are low. Possible Systematic Error.
- WRJ43H (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J71.



Plastics Interlaboratory Testing Program

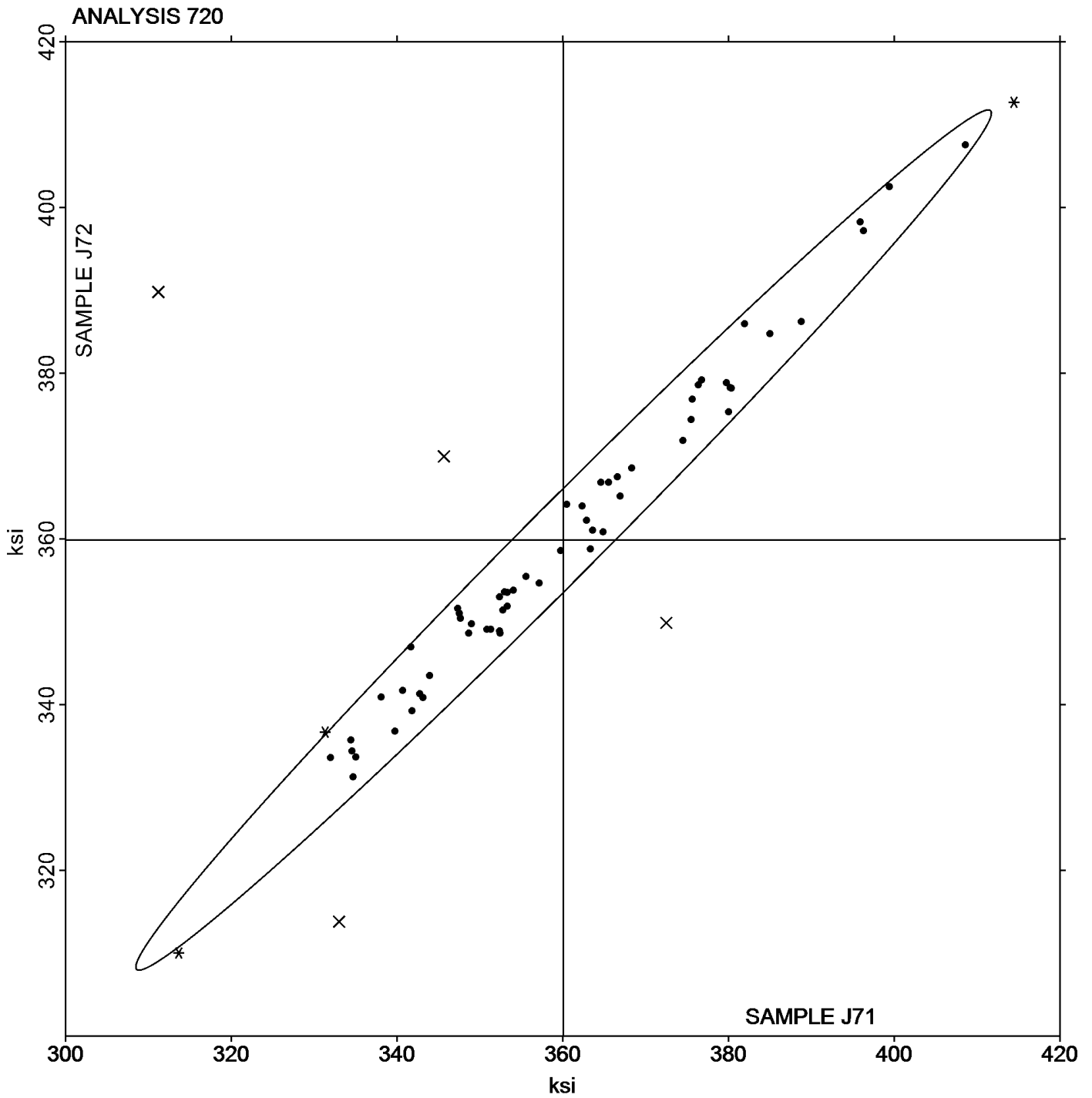
Analysis 720

Flexural Modulus- ksi

Report #116

4th Qtr 2020

Grand Mean Sample J71: 360.10 ksi Grand Mean Sample J72: 359.86 ksi





Plastics Interlaboratory Testing Program

Report #116

Analysis 721

4th Qtr 2020

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J71			Sample J72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
22DTVE		10,035	-295	-0.83	9,970	-378	-1.10
2FVG AJ		10,129	-201	-0.57	10,167	-181	-0.53
3D6NME		10,338	8	0.02	10,350	2	0.00
3EFLZW		10,230	-100	-0.28	10,270	-79	-0.23
3XBELU		9,985	-345	-0.97	10,131	-218	-0.63
4PUYV7	X	9,944	-386	-1.09	10,395	47	0.14
7E7YVE		10,275	-56	-0.16	10,214	-135	-0.39
7HKGBA		9,899	-431	-1.22	9,992	-357	-1.04
7U32U8		10,041	-289	-0.82	10,102	-246	-0.72
7Z68AA		10,262	-68	-0.19	10,174	-175	-0.51
7ZN3RB		10,501	171	0.48	10,559	210	0.61
8KMYLB		10,502	172	0.49	10,467	118	0.34
8R68A8		9,897	-433	-1.23	9,880	-469	-1.36
9L2MM3		10,802	472	1.33	10,842	493	1.44
A7ZBR4		10,260	-70	-0.20	10,300	-48	-0.14
AAFY79		10,536	206	0.58	10,556	208	0.60
ADWCL3		10,505	175	0.50	10,409	60	0.18
AEBR3A	*	10,087	-243	-0.69	10,367	18	0.05
AJNBH7		10,568	238	0.67	10,426	78	0.23
APBZ62		10,277	-53	-0.15	10,335	-13	-0.04
AX6FJ8		9,743	-587	-1.66	9,780	-568	-1.65
BKV237		10,539	209	0.59	10,528	179	0.52
D7QHFY		10,247	-83	-0.24	10,176	-172	-0.50
DHMJ32		10,880	550	1.55	10,860	512	1.49
DKQEJJ		10,980	650	1.84	10,980	632	1.84
DTY2E6	X	10,888	558	1.58	10,569	220	0.64
EDJA2X	X	10,721	391	1.11	10,334	-14	-0.04
FCM8VU		10,516	186	0.52	10,720	372	1.08
FZTVJG		9,749	-581	-1.64	9,687	-661	-1.92
HCGG2G		10,616	286	0.81	10,632	284	0.83
HGQYRW		10,168	-162	-0.46	10,101	-247	-0.72
HRADVY		10,614	284	0.80	10,785	437	1.27
HX2EKT		10,230	-100	-0.28	10,208	-141	-0.41
JB4BWR	X	9,012	-1,318	-3.73	9,015	-1,333	-3.88
JNAF7R		10,262	-68	-0.19	10,143	-206	-0.60



Plastics Interlaboratory Testing Program

Report #116

Analysis 721

4th Qtr 2020

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J71			Sample J72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KF664R		10,716	386	1.09	10,674	326	0.95
KYMY4U		10,777	447	1.26	10,751	403	1.17
L293BR		10,260	-70	-0.20	10,380	32	0.09
LJ866P		10,684	353	1.00	10,633	285	0.83
MAGUFF	X	11,463	1,133	3.20	11,557	1,208	3.51
MT4TAQ		10,323	-7	-0.02	10,294	-54	-0.16
NRT4UL		9,616	-714	-2.02	9,590	-758	-2.21
QFCV7J		10,134	-196	-0.55	10,313	-36	-0.10
QNLKKH		10,592	262	0.74	10,642	294	0.85
QQA66T		10,904	574	1.62	10,774	426	1.24
QV3ZB8		10,273	-57	-0.16	10,459	110	0.32
THAHCJ		10,294	-36	-0.10	10,397	49	0.14
TL9U8J		10,117	-213	-0.60	10,181	-167	-0.49
TNW78P		9,832	-498	-1.41	9,947	-401	-1.17
U4QXP6		10,080	-250	-0.71	10,135	-213	-0.62
VVTK8G		10,337	7	0.02	10,365	16	0.05
WDHLE		9,723	-607	-1.72	9,682	-667	-1.94
WRJ43H	X	9,312	-1,018	-2.88	10,620	272	0.79
Y7D8KD	*	11,281	951	2.69	11,169	821	2.39
YGYCRD		10,558	228	0.64	10,574	225	0.66

Summary Statistics		
	Sample J71	Sample J72
Grand Means	10,330.1 psi	10,348.4 psi
Stnd Dev Btwn Labs	353.7 psi	343.7 psi
Statistics based on 49 of 55 reporting participants		

Sample J71: ABS & Sample J72: ABS

Comments on Assigned Data Flags for Test #721

- MAGUFF (X) - Data for both samples are high. Possible Systematic Error.
- 4PUYV7 (X) - Inconsistent in testing between samples.
- DTY2E6 (X) - Inconsistent in testing between samples.
- JB4BWR (X) - Data for both samples are low. Possible Systematic Error.
- WRJ43H (X) - Data for sample J71 are low.
- EDJA2X (X) - Inconsistent in testing between samples.



Plastics Interlaboratory Testing Program

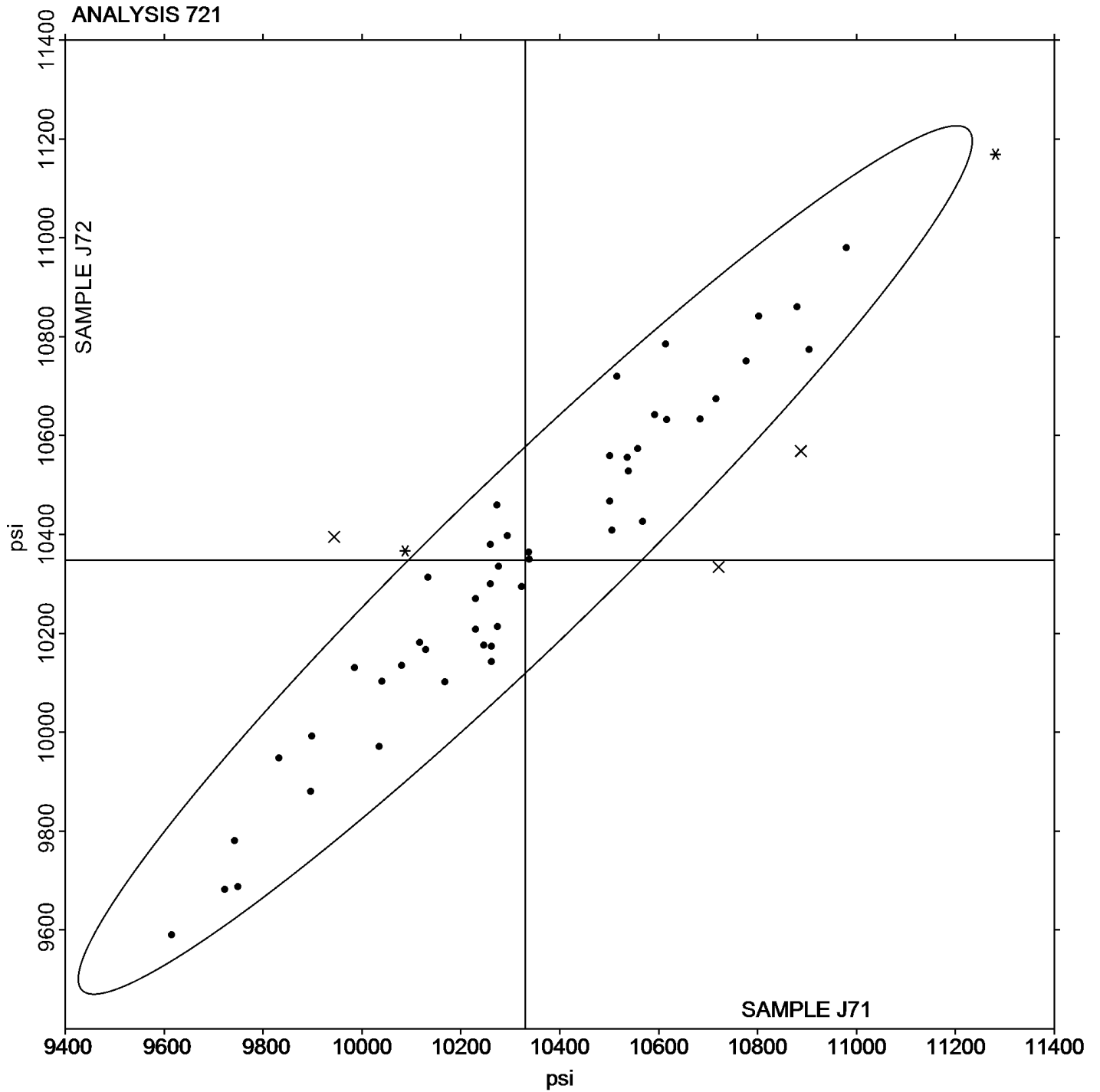
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Analysis 721

4th Qtr 2020

Flexural Stress at 5% Strain - psi

Grand Mean Sample J71: 10,330.09 psi Grand Mean Sample J72: 10,348.37 psi





Plastics Interlaboratory Testing Program

Report #116

Analysis 722

4th Qtr 2020

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J71			Sample J72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
22DTVE		10,073	-266	-0.60	10,008	-339	-0.78
2FVG AJ		10,662	323	0.73	10,702	355	0.82
3D6NME		10,338	-1	0.00	10,349	2	0.01
3EFLZW		10,286	-53	-0.12	10,293	-54	-0.12
3XBELU		10,077	-263	-0.59	10,163	-184	-0.42
4PUYV7	X	9,973	-366	-0.82	10,440	93	0.21
6WQDUC		11,278	939	2.11	11,241	894	2.05
7E7YVE		10,283	-56	-0.13	10,222	-125	-0.29
7HKGBA		9,921	-419	-0.94	10,008	-339	-0.78
7U32U8		10,045	-295	-0.66	10,107	-240	-0.55
7Z68AA		10,351	12	0.03	10,247	-100	-0.23
843BE2		10,160	-179	-0.40	10,020	-327	-0.75
8KMYLB		10,526	187	0.42	10,494	147	0.34
8R68A8		9,904	-435	-0.98	9,887	-460	-1.06
9L2MM3		10,902	563	1.27	10,938	591	1.36
AAFY79		10,575	236	0.53	10,608	261	0.60
ADWCL3		11,265	926	2.08	11,170	823	1.89
AEBR3A		10,096	-244	-0.55	10,373	26	0.06
AJNBH7		10,686	346	0.78	10,527	180	0.41
AX6FJ8		9,784	-555	-1.25	9,824	-523	-1.20
BKV237		10,593	254	0.57	10,581	234	0.54
D7QHFY		10,261	-78	-0.18	10,194	-153	-0.35
D8JNJW		10,650	311	0.70	10,810	463	1.07
DHMJ32		10,980	641	1.44	10,940	593	1.36
EDJA2X	*	10,750	411	0.92	10,430	83	0.19
FCM8VU		10,560	220	0.50	10,796	449	1.03
FZTVJG		9,778	-561	-1.26	9,740	-607	-1.40
HCGG2G		10,130	-209	-0.47	10,163	-184	-0.42
HRADVY		10,682	343	0.77	10,851	504	1.16
HX2EKT		10,191	-149	-0.33	10,144	-203	-0.47
JB4BWR	X	9,788	-551	-1.24	4,461	-5,886	-13.53
JE3MTR		10,488	149	0.33	10,453	106	0.24
JFR7HV	*	9,343	-996	-2.24	9,262	-1,085	-2.50
JMCAMD		10,180	-159	-0.36	10,160	-187	-0.43
JNAF7R		10,308	-32	-0.07	10,201	-146	-0.34



Plastics Interlaboratory Testing Program

Report #116

Analysis 722

4th Qtr 2020

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J71			Sample J72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KF664R		10,812	473	1.06	10,743	396	0.91
KYMY4U		10,800	460	1.03	10,773	426	0.98
LJ866P		9,437	-902	-2.03	9,424	-923	-2.12
MT4TAQ		10,381	42	0.09	10,362	15	0.03
NRT4UL		9,700	-639	-1.44	9,749	-598	-1.38
PY7CVM		10,296	-44	-0.10	10,360	13	0.03
QFCV7J		10,182	-157	-0.35	10,443	96	0.22
QQA66T		10,938	598	1.35	10,814	467	1.07
QV3ZB8	*	10,197	-142	-0.32	10,508	161	0.37
RG4BWL		10,583	244	0.55	10,590	243	0.56
THAHCJ		10,112	-228	-0.51	10,154	-193	-0.44
TL9U8J		9,818	-521	-1.17	9,821	-526	-1.21
TNW78P		9,843	-496	-1.12	9,973	-374	-0.86
U4QXP6		10,101	-238	-0.54	10,155	-192	-0.44
VVTK8G		10,314	-25	-0.06	10,315	-32	-0.07
WDHLE		9,744	-595	-1.34	9,731	-616	-1.42
WRJ43H	X	9,328	-1,011	-2.27	10,660	313	0.72
Y7D8KD		11,348	1,009	2.27	11,263	916	2.11
YGYCRD		10,591	252	0.57	10,612	265	0.61

Summary Statistics		
	Sample J71	Sample J72
Grand Means	10,339.4 psi	10,346.9 psi
Stnd Dev Btwn Labs	444.7 psi	434.9 psi
Statistics based on 51 of 54 reporting participants		

Sample J71: ABS & Sample J72: ABS

Comments on Assigned Data Flags for Test #722

- 4PUYV7 (X) - Inconsistent in testing between samples.
- JB4BWR (X) - Data for sample J72 are low. Inconsistent within the determinations of sample J72.
- WRJ43H (X) - Inconsistent in testing between samples.



Plastics Interlaboratory Testing Program

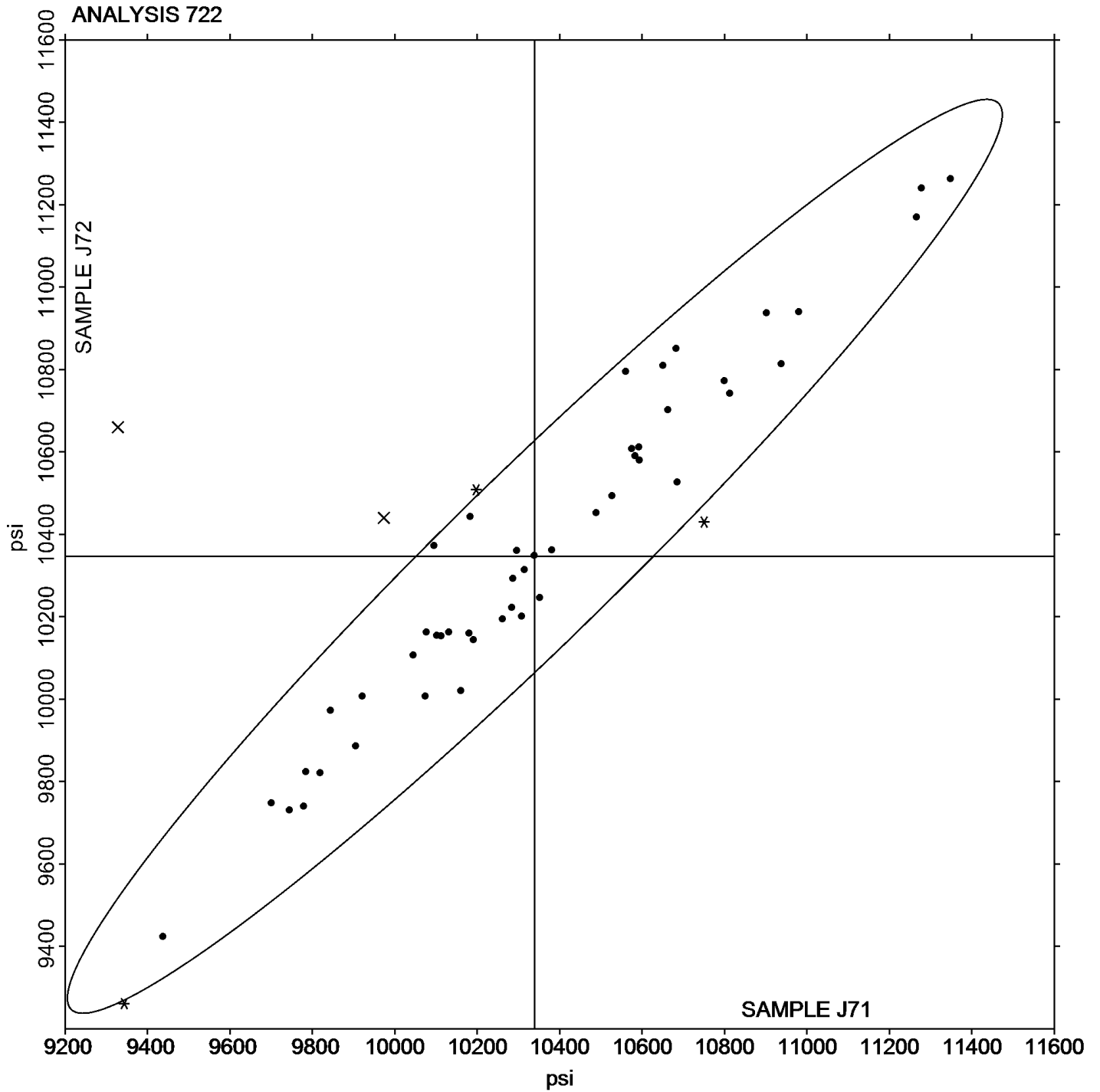
Report #116

Analysis 722

4th Qtr 2020

Flexural Stress at Yield - psi

Grand Mean Sample J71: 10,339.36 psi Grand Mean Sample J72: 10,346.91 psi





Plastics Interlaboratory Testing Program

Report #116

Analysis 730

4th Qtr 2020

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C71			Sample C72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2H24HG		46.42	1.45	1.37	46.56	1.49	1.56
3EFLZW		44.56	-0.41	-0.39	44.72	-0.35	-0.36
3FDRJC	X	42.50	-2.47	-2.33	44.31	-0.76	-0.79
3JC76F		45.00	0.04	0.03	45.05	-0.02	-0.02
3THBUB		45.68	0.71	0.67	45.37	0.30	0.31
4FMFX9		45.24	0.27	0.26	45.50	0.43	0.45
4PUYV7		42.77	-2.20	-2.08	43.17	-1.90	-1.98
6WQDUC		45.73	0.76	0.72	45.82	0.75	0.78
744NM4		44.81	-0.16	-0.15	45.22	0.15	0.16
7E7YVE		44.26	-0.71	-0.67	43.87	-1.19	-1.24
843BE2		45.77	0.80	0.75	46.65	1.58	1.65
86PWYC		46.18	1.21	1.14	45.84	0.77	0.80
87AF74	X	40.56	-4.41	-4.17	40.44	-4.63	-4.82
8KMYLB		45.05	0.08	0.08	44.90	-0.17	-0.18
8PL3RC		44.56	-0.41	-0.39	44.54	-0.53	-0.55
8V93UB		45.02	0.05	0.05	45.09	0.02	0.02
9L2MM3		44.10	-0.87	-0.82	44.05	-1.01	-1.06
AAFY79		45.39	0.42	0.39	46.05	0.98	1.03
AC76LY		44.69	-0.28	-0.26	44.77	-0.30	-0.31
AFKNK8		44.09	-0.88	-0.83	43.94	-1.13	-1.17
AULDMZ		45.95	0.98	0.93	45.11	0.04	0.04
AXAPL6		45.20	0.23	0.22	45.16	0.10	0.10
B6PNVB		43.98	-0.99	-0.93	44.74	-0.33	-0.34
BL64N6		44.61	-0.36	-0.34	45.09	0.02	0.02
BYVZP4		45.10	0.13	0.12	45.41	0.34	0.36
C3TRHZ		44.16	-0.81	-0.76	44.15	-0.92	-0.95
D3A4Z7		45.23	0.26	0.25	45.65	0.58	0.61
DA8ZJ3		45.74	0.77	0.73	45.97	0.90	0.94
DKQEJJ		44.30	-0.66	-0.63	44.85	-0.22	-0.22
DTY2E6		44.90	-0.07	-0.06	45.58	0.51	0.53
F3HYFU		42.91	-2.06	-1.94	43.24	-1.83	-1.91
F67KZ6		44.98	0.01	0.01	44.98	-0.09	-0.09
FAL7VX		46.14	1.18	1.11	46.06	0.99	1.03
FM6NPL		43.06	-1.91	-1.80	43.70	-1.37	-1.43
GDEMKW		45.94	0.97	0.92	45.72	0.65	0.68



Plastics Interlaboratory Testing Program

Report #116

Analysis 730

4th Qtr 2020

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C71			Sample C72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GLM49W		46.92	1.95	1.84	46.70	1.63	1.70
HX2EKT		45.68	0.71	0.67	45.90	0.84	0.87
JNAF7R		43.73	-1.24	-1.17	44.01	-1.05	-1.10
K2DZ9H		45.59	0.62	0.59	45.61	0.54	0.57
MBP8VV		44.12	-0.84	-0.80	44.83	-0.23	-0.24
MRED8V		46.06	1.09	1.03	46.28	1.21	1.26
MUGFTQ		46.06	1.09	1.03	45.96	0.89	0.93
NBNTNU		43.13	-1.84	-1.74	44.17	-0.90	-0.94
P9DDR8		43.56	-1.41	-1.33	43.36	-1.71	-1.78
QUQJXT		45.07	0.10	0.09	44.87	-0.20	-0.21
QV3ZB8		43.97	-1.00	-0.95	45.00	-0.07	-0.07
QY62CP		45.69	0.72	0.68	45.59	0.53	0.55
R3JVTM		45.00	0.03	0.03	44.85	-0.22	-0.23
R7XTXN		45.37	0.41	0.38	45.50	0.43	0.45
RG4BWL		44.13	-0.84	-0.79	44.05	-1.02	-1.06
T7CE8P	X	41.06	-3.91	-3.70	41.31	-3.76	-3.92
THAHCJ	X	40.74	-4.23	-4.00	44.90	-0.17	-0.17
VP3AXH		46.51	1.55	1.46	46.47	1.40	1.46
VP46E4		44.86	-0.11	-0.10	44.94	-0.13	-0.13
W368BG	*	42.00	-2.97	-2.81	42.64	-2.43	-2.53
WMNA6G		45.97	1.01	0.95	45.74	0.67	0.70
WRJ43H	*	46.36	1.39	1.32	45.06	-0.01	-0.01
WZX3JE		44.80	-0.17	-0.16	44.06	-1.01	-1.05
XYYXZY		44.27	-0.70	-0.66	44.46	-0.61	-0.64
Y4QJ9D		45.17	0.21	0.19	45.17	0.10	0.10
YRTRGE		45.48	0.52	0.49	44.65	-0.41	-0.43
YWURZJ	*	47.14	2.17	2.05	47.52	2.45	2.56
Z78DED	X	36.83	-8.14	-7.69	37.67	-7.40	-7.71



Plastics Interlaboratory Testing Program

Report #116

Analysis 730

4th Qtr 2020

Tensile Stress at Yield - MPa

Summary Statistics	<u>Sample C71</u>	<u>Sample C72</u>
Grand Means	44.969 MPa	45.067 MPa
Std Dev Btwn Labs	1.058 MPa	0.959 MPa

Statistics based on 58 of 63 reporting participants

Sample C71: ABS & Sample C72: ABS

Comments on Assigned Data Flags for Test #730

- T7CE8P (X) - Data for both samples are low. Possible Systematic Error.
- THAHCJ (X) - Data for sample C71 are low. Inconsistent within the determinations of sample C72.
- 3FDRJC (X) - Inconsistent in testing between samples.
- 87AF74 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample C71.
- Z78DED (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.



Plastics Interlaboratory Testing Program

Report #116

Analysis 731

4th Qtr 2020

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C71			Sample C72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2H24HG		33.55	-0.55	-0.34	34.68	0.61	0.56
3EFLZW		35.28	1.19	0.75	34.74	0.67	0.61
3FDRJC		36.42	2.32	1.46	35.17	1.09	1.00
3JC76F		34.38	0.29	0.18	33.09	-0.98	-0.90
3THBUB		35.62	1.52	0.96	34.92	0.85	0.77
4FMFX9	*	30.64	-3.45	-2.17	33.54	-0.53	-0.49
4PUYV7		33.77	-0.32	-0.20	34.09	0.02	0.01
744NM4		34.56	0.47	0.30	34.60	0.52	0.48
7E7YVE		32.61	-1.49	-0.93	32.87	-1.21	-1.10
843BE2	X	36.27	2.17	1.37	37.99	3.91	3.57
86PWYC		36.22	2.13	1.34	35.19	1.11	1.01
87AF74	*	29.28	-4.81	-3.02	31.22	-2.85	-2.60
8KMYLB		34.74	0.64	0.41	33.84	-0.23	-0.21
8PL3RC		34.42	0.33	0.21	34.68	0.61	0.55
9L2MM3		32.77	-1.32	-0.83	32.38	-1.69	-1.54
AAFY79		34.36	0.27	0.17	34.62	0.55	0.50
AC76LY	X	35.31	1.21	0.76	42.93	8.85	8.08
AFKNK8		34.41	0.31	0.20	33.63	-0.44	-0.40
AULDMZ		35.15	1.06	0.66	34.29	0.22	0.20
AXAPL6		35.24	1.14	0.72	33.98	-0.10	-0.09
B6PNVB		32.70	-1.39	-0.88	32.76	-1.31	-1.20
BYVZP4		34.70	0.61	0.38	34.37	0.29	0.27
D3A4Z7		33.94	-0.15	-0.10	33.92	-0.15	-0.14
DA8ZJ3		34.14	0.05	0.03	34.47	0.40	0.36
DKQEJJ		32.96	-1.13	-0.71	33.01	-1.06	-0.97
F3HYFU		32.67	-1.42	-0.89	33.64	-0.44	-0.40
F67KZ6		32.31	-1.78	-1.12	33.71	-0.36	-0.33
FAL7VX		35.64	1.55	0.97	35.57	1.50	1.37
GDEMKW		34.40	0.31	0.19	34.08	0.01	0.01
GLM49W		35.16	1.07	0.67	35.06	0.99	0.90
HX2EKT		34.09	0.00	0.00	33.65	-0.42	-0.39
JNAF7R		32.27	-1.82	-1.14	31.97	-2.11	-1.92
K2DZ9H		34.41	0.31	0.20	34.85	0.78	0.71
MBP8VV		33.28	-0.81	-0.51	33.80	-0.27	-0.25
MRED8V		33.86	-0.23	-0.14	33.58	-0.50	-0.45



Plastics Interlaboratory Testing Program

Report #116

Analysis 731

4th Qtr 2020

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C71			Sample C72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MUGFTQ		34.80	0.71	0.44	35.32	1.25	1.14
NBNTNU	*	37.41	3.31	2.08	34.72	0.65	0.59
P9DDR8		34.12	0.03	0.02	33.02	-1.05	-0.96
QUQJXT		35.60	1.51	0.95	36.42	2.34	2.14
QV3ZB8		33.46	-0.63	-0.40	34.58	0.51	0.46
QY62CP		33.12	-0.97	-0.61	33.91	-0.16	-0.15
R3JVTM		34.56	0.46	0.29	34.00	-0.08	-0.07
R7XTXN		35.02	0.93	0.58	34.87	0.80	0.73
T7CE8P		32.87	-1.22	-0.77	32.31	-1.76	-1.61
THAHCJ	*	29.98	-4.11	-2.58	31.78	-2.30	-2.09
U24DN8		33.85	-0.24	-0.15	34.05	-0.02	-0.02
VP3AXH		36.01	1.91	1.20	35.58	1.51	1.38
VP46E4		32.78	-1.31	-0.83	33.26	-0.81	-0.74
W368BG		34.36	0.27	0.17	34.94	0.87	0.79
WMNA6G		35.84	1.75	1.10	35.72	1.64	1.50
WRJ43H		37.26	3.17	1.99	35.18	1.11	1.01
WZX3JE		33.82	-0.27	-0.17	33.58	-0.49	-0.45
XYXXZY		32.16	-1.93	-1.21	32.36	-1.71	-1.56
YRTRGE		34.78	0.69	0.43	34.80	0.73	0.67
YWURZJ		35.18	1.09	0.68	35.54	1.47	1.34
Z78DED	X	31.01	-3.09	-1.94	37.23	3.16	2.88

Summary Statistics		
	Sample C71	Sample C72
Grand Means	34.094 MPa	34.074 MPa
Stnd Dev Btwn Labs	1.591 MPa	1.096 MPa
Statistics based on 53 of 56 reporting participants		

Sample C71: ABS & Sample C72: ABS

Comments on Assigned Data Flags for Test #731

843BE2 (X) - Data for sample C72 are high.

AC76LY (X) - Data for sample C72 are high. Inconsistent within the determinations of sample C72.

Z78DED (X) - Data for sample C72 are high.



Plastics Interlaboratory Testing Program

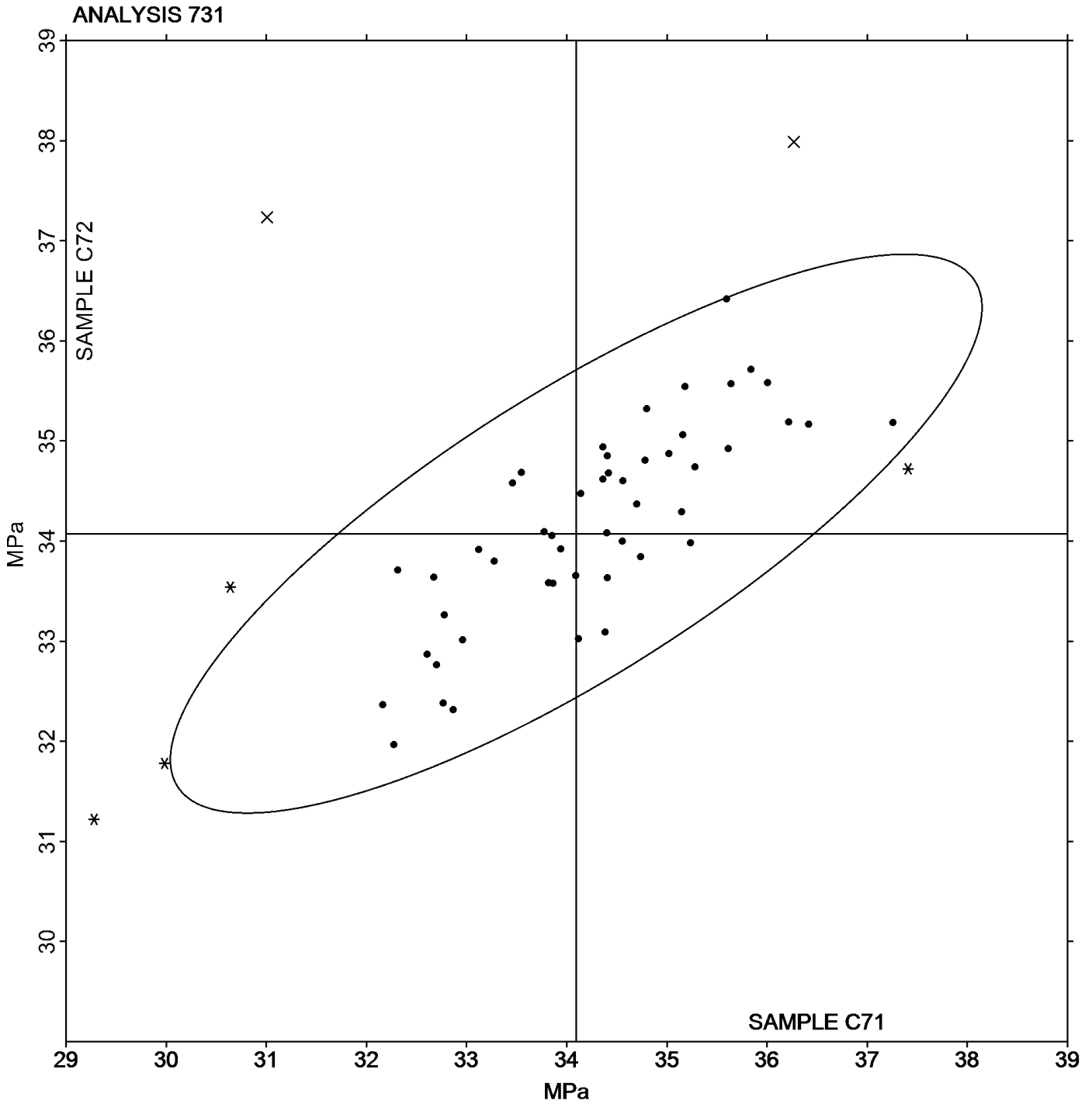
Analysis 731

Tensile Stress at Break - MPa

Report #116

4th Qtr 2020

Grand Mean Sample C71: 34.094 MPa Grand Mean Sample C72: 34.074 MPa





Plastics Interlaboratory Testing Program

Report #116

Analysis 732

4th Qtr 2020

Percent Strain at Yield

WebCode	Data Flag	Sample C71			Sample C72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2H24HG		2.472	0.041	0.44	2.472	0.033	0.37
3EFLZW		2.494	0.063	0.68	2.464	0.025	0.28
3FDRJC	X	2.649	0.218	2.37	2.339	-0.100	-1.15
3JC76F		2.488	0.057	0.62	2.508	0.069	0.79
3THBUB		2.372	-0.059	-0.65	2.392	-0.047	-0.54
4FMFX9		2.540	0.109	1.18	2.540	0.101	1.16
4PUYV7	*	2.222	-0.209	-2.28	2.214	-0.225	-2.59
744NM4		2.450	0.018	0.20	2.448	0.008	0.10
7E7YVE		2.448	0.017	0.18	2.462	0.023	0.26
843BE2	X	2.248	-0.183	-2.00	2.140	-0.299	-3.43
86PWYC	*	2.721	0.290	3.15	2.706	0.267	3.06
87AF74		2.312	-0.119	-1.30	2.352	-0.087	-1.00
8KMYLB		2.370	-0.061	-0.67	2.404	-0.035	-0.41
8PL3RC		2.380	-0.051	-0.56	2.414	-0.025	-0.29
8V93UB		2.400	-0.031	-0.34	2.400	-0.039	-0.45
9L2MM3		2.476	0.045	0.49	2.470	0.031	0.35
AAFY79		2.416	-0.015	-0.17	2.452	0.013	0.15
AC76LY	*	2.272	-0.159	-1.74	2.332	-0.107	-1.23
AFKNK8	X	2.352	-0.079	-0.86	2.274	-0.165	-1.90
AULDMZ		2.449	0.018	0.20	2.444	0.005	0.06
AXAPL6	X	2.843	0.412	4.48	2.888	0.449	5.15
B6PNVB		2.380	-0.051	-0.56	2.400	-0.039	-0.45
BL64N6	X	3.099	0.668	7.27	3.183	0.744	8.53
BYVZP4		2.404	-0.027	-0.30	2.420	-0.019	-0.22
C3TRHZ		2.364	-0.067	-0.73	2.368	-0.071	-0.82
D3A4Z7		2.428	-0.003	-0.04	2.440	0.001	0.01
DKQEJ		2.448	0.017	0.18	2.486	0.047	0.54
DTY2E6		2.396	-0.035	-0.39	2.444	0.005	0.05
F67KZ6		2.592	0.161	1.75	2.607	0.168	1.92
FAL7VX		2.316	-0.115	-1.26	2.304	-0.135	-1.55
GDEMKW		2.420	-0.011	-0.12	2.400	-0.039	-0.45
GLM49W		2.436	0.005	0.05	2.438	-0.001	-0.02
HX2EKT		2.536	0.105	1.14	2.566	0.127	1.45
JNAF7R		2.480	0.049	0.53	2.464	0.025	0.28
K2DZ9H		2.416	-0.015	-0.17	2.438	-0.001	-0.02



Plastics Interlaboratory Testing Program

Report #116

Analysis 732

4th Qtr 2020

Percent Strain at Yield

WebCode	Data Flag	Sample C71			Sample C72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MBP8VV		2.454	0.023	0.25	2.452	0.013	0.15
MRED8V		2.384	-0.047	-0.52	2.406	-0.033	-0.38
MUGFTQ		2.400	-0.031	-0.34	2.400	-0.039	-0.45
NBNTNU	X	2.082	-0.349	-3.80	2.322	-0.117	-1.35
P9DDR8		2.414	-0.017	-0.19	2.384	-0.055	-0.64
QUQJXT	X	2.572	0.141	1.53	2.498	0.059	0.67
QV3ZB8		2.380	-0.051	-0.56	2.436	-0.003	-0.04
QY62CP		2.460	0.029	0.31	2.474	0.035	0.40
R3JVTM		2.394	-0.037	-0.41	2.402	-0.037	-0.43
R7XTXN		2.432	0.001	0.01	2.434	-0.005	-0.06
T7CE8P		2.270	-0.161	-1.76	2.266	-0.173	-1.99
THAHCJ		2.494	0.063	0.69	2.466	0.027	0.31
VP3AXH		2.426	-0.005	-0.06	2.428	-0.011	-0.13
VP46E4		2.406	-0.025	-0.28	2.426	-0.013	-0.15
W368BG	X	3.960	1.529	16.64	3.680	1.241	14.24
WMNA6G	X	3.352	0.921	10.02	3.282	0.843	9.67
WRJ43H		2.490	0.059	0.64	2.480	0.041	0.47
WZX3JE	*	2.698	0.267	2.90	2.684	0.245	2.81
XYXZY	X	1.660	-0.771	-8.40	1.780	-0.659	-7.57
YRTRGE		2.444	0.013	0.14	2.422	-0.017	-0.20
YWURZJ		2.400	-0.031	-0.34	2.400	-0.039	-0.45
Z78DED	X	1.704	-0.728	-7.92	1.854	-0.585	-6.71

Summary Statistics		Sample C71	Sample C72
Grand Means		2.4314 Percent	2.4393 Percent
Std Dev Btwn Labs		0.0919 Percent	0.0871 Percent
Statistics based on 46 of 57 reporting participants			

Sample C71: ABS & Sample C72: ABS



Comments on Assigned Data Flags for Test #732

- AXAPL6 (X) - Data for both samples are high. Possible Systematic Error.
- NBNTNU (X) - Data for sample C71 are low. Inconsistent within the determinations of sample C72.
- 843BE2 (X) - Data for sample C72 are low. Inconsistent within the determinations of both samples.
- 3FDRJC (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- QUQJXT (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample C72.
- XYXZY (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- AFKNK8 (X) - Inconsistent in testing between samples.
- BL64N6 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample C72.
- Z78DED (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample C72.
- WMNA6G (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample C72.
- W368BG (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.



Plastics Interlaboratory Testing Program

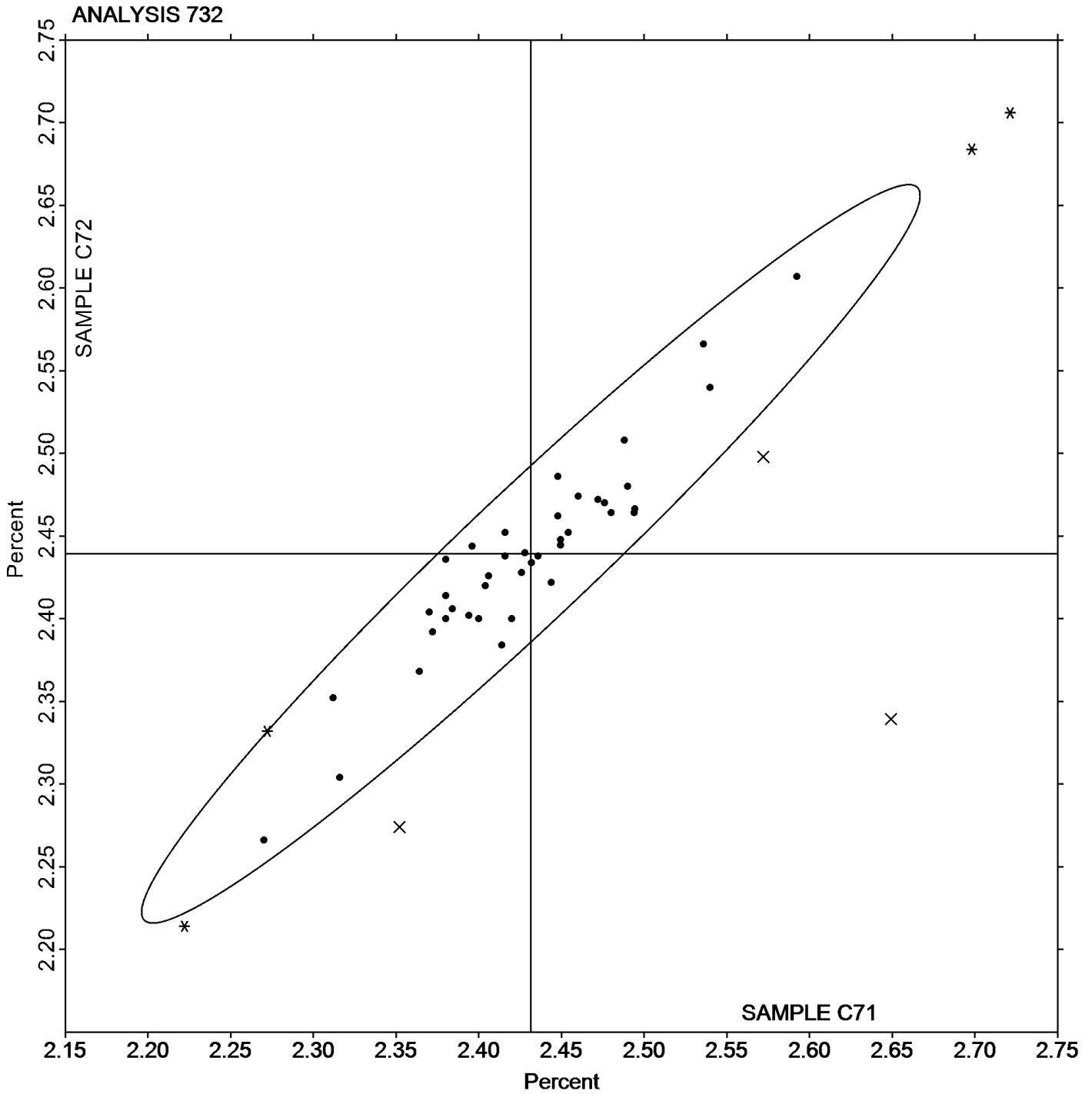
Analysis 732

Percent Strain at Yield

Report #116

4th Qtr 2020

Grand Mean Sample C71: 2.4314 Percent Grand Mean Sample C72: 2.4393 Percent





Plastics Interlaboratory Testing Program

Report #116

Analysis 734

4th Qtr 2020

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C71			Sample C72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2H24HG		2,384	5	0.06	2,337	-53	-0.60
3EFLZW		2,497	118	1.27	2,505	115	1.31
3FDRJC	M	No data reported for this sample			1,881	-509	-5.79
3JC76F		2,276	-103	-1.11	2,376	-14	-0.16
3THBUB		2,429	51	0.55	2,365	-25	-0.29
4FMFX9	*	2,124	-255	-2.75	2,208	-182	-2.08
4PUYV7	X	23	-2,356	-25.44	23	-2,367	-26.93
6WQDUC		2,310	-69	-0.74	2,347	-43	-0.49
744NM4		2,236	-143	-1.54	2,262	-128	-1.45
7E7YVE		2,334	-45	-0.49	2,323	-67	-0.76
86PWYC		2,432	53	0.58	2,421	31	0.36
87AF74	X	2,719	340	3.67	2,779	389	4.43
8KMYLB		2,503	124	1.34	2,488	98	1.11
8PL3RC		2,344	-35	-0.37	2,349	-41	-0.47
8V93UB		2,262	-117	-1.26	2,293	-97	-1.10
9L2MM3		2,232	-147	-1.59	2,228	-162	-1.84
AAFY79		2,357	-22	-0.24	2,376	-14	-0.16
AC76LY	X	3,767	1,388	14.98	3,547	1,157	13.16
AFKNK8	X	3,074	695	7.51	2,684	294	3.34
AULDMZ	X	2,165	-213	-2.31	2,416	26	0.30
AXAPL6		2,432	53	0.58	2,408	18	0.20
B6PNVB		2,436	57	0.62	2,502	112	1.27
BYVZP4		2,334	-45	-0.49	2,396	6	0.07
C3TRHZ		2,297	-82	-0.89	2,306	-84	-0.96
D3A4Z7		2,480	101	1.09	2,488	98	1.12
DKQEJJ		2,476	97	1.04	2,486	96	1.10
DTY2E6		2,412	33	0.36	2,395	5	0.06
F67KZ6		2,416	37	0.40	2,404	14	0.15
FAL7VX		2,523	145	1.56	2,510	120	1.37
GDEMKW		2,381	3	0.03	2,394	4	0.04
GLM49W		2,596	218	2.35	2,543	153	1.74
HX2EKT		2,284	-95	-1.03	2,286	-104	-1.18
JNAF7R		2,209	-170	-1.83	2,222	-168	-1.92
K2DZ9H		2,428	49	0.53	2,461	71	0.81
MBP8VV		2,375	-4	-0.04	2,405	15	0.17



Plastics Interlaboratory Testing Program

Report #116

Analysis 734

4th Qtr 2020

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C71			Sample C72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MRED8V		2,440	61	0.66	2,437	47	0.54
MUGFTQ		2,386	7	0.08	2,380	-10	-0.11
NBNTNU	*	2,402	23	0.25	2,522	132	1.50
P9DDR8		2,264	-115	-1.24	2,298	-92	-1.05
QUQJXT		2,302	-77	-0.83	2,319	-71	-0.81
QV3ZB8	X	2,274	-105	-1.13	2,503	113	1.28
QY62CP		2,340	-39	-0.42	2,350	-40	-0.46
R3JVTM		2,480	101	1.09	2,485	95	1.08
R7XTXN		2,359	-19	-0.21	2,348	-42	-0.48
T7CE8P		2,382	3	0.03	2,390	0	0.00
VP3AXH		2,464	85	0.91	2,466	76	0.86
VP46E4		2,368	-11	-0.12	2,387	-3	-0.04
W368BG		2,408	29	0.31	2,438	48	0.55
WMNA6G	X	1,834	-545	-5.88	1,918	-472	-5.37
WRJ43H		2,456	77	0.83	2,420	30	0.34
WZX3JE		2,308	-71	-0.76	2,281	-109	-1.24
YRTRGE		2,372	-6	-0.07	2,325	-65	-0.75
YWURZJ		2,421	43	0.46	2,447	57	0.64
Z78DED	*	2,477	98	1.06	2,567	177	2.01

Summary Statistics		
	Sample C71	Sample C72
Grand Means	2,378.9 MPa	2,390.1 MPa
Stnd Dev Btwn Labs	92.6 MPa	87.9 MPa
Statistics based on 46 of 54 reporting participants		

Sample C71: ABS & Sample C72: ABS



Comments on Assigned Data Flags for Test #734

- 4PUYV7 (X) - Extreme data.
- AC76LY (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- AULDZM (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- 3FDRJC (M) - Participant did not submit data for sample C71.
- QV3ZB8 (X) - Inconsistent in testing between samples.
- AFKNK8 (X) - Data for both samples are high. Possible Systematic Error.
- 87AF74 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- WMNA6G (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

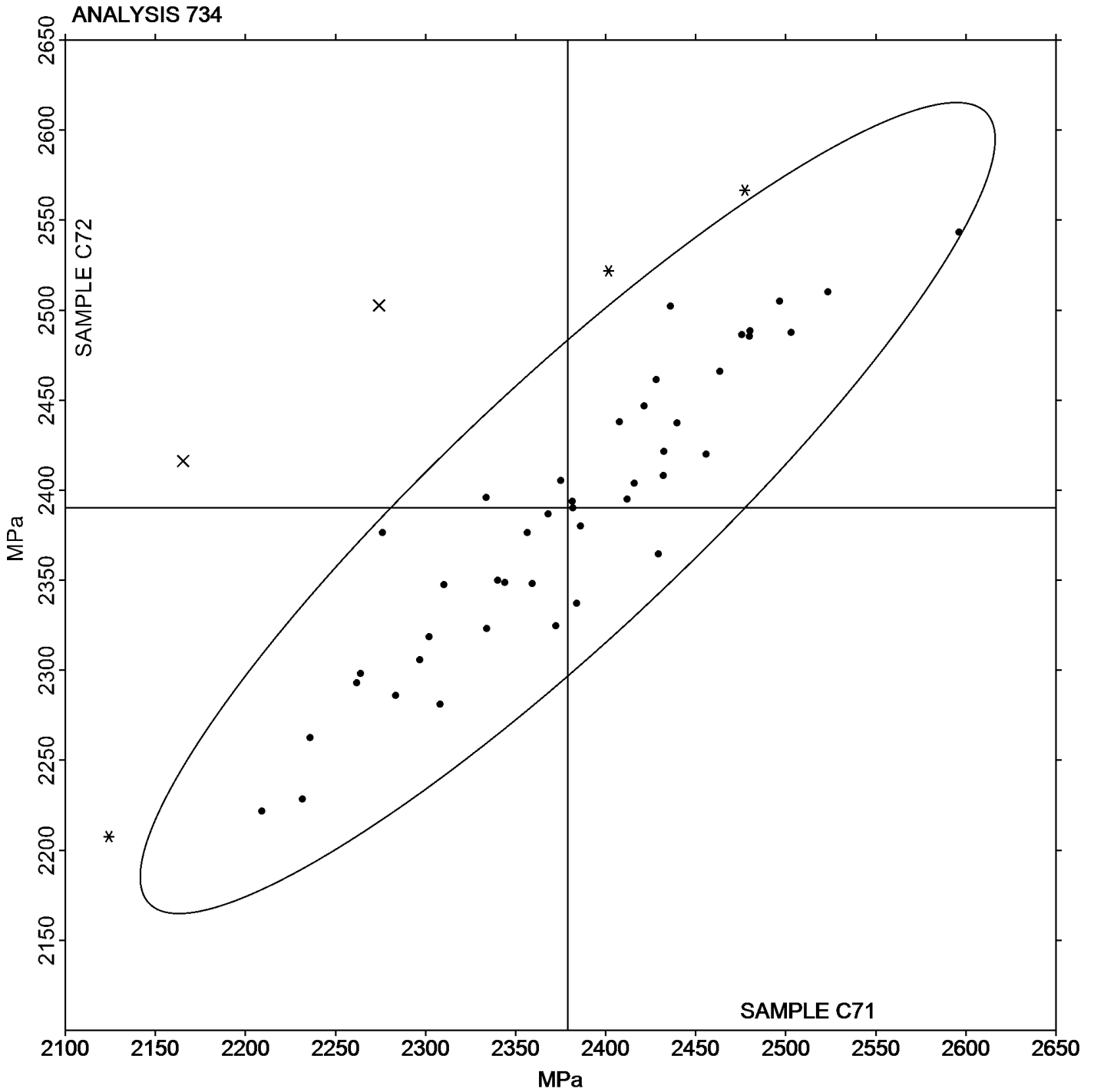
Analysis 734

Modulus of Elasticity - MPa

Report #116

4th Qtr 2020

Grand Mean Sample C71: 2,378.89 MPa Grand Mean Sample C72: 2,390.08 MPa





Plastics Interlaboratory Testing Program

Report #116

Analysis 736

4th Qtr 2020

Flexural Modulus - MPa

WebCode	Data Flag	Sample K71			Sample K72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2H24HG		2,470	50	0.77	2,433	5	0.09
3FDRJC	X	2,244	-176	-2.70	2,208	-220	-3.55
3JC76F		2,423	3	0.04	2,434	6	0.10
3THBUB		2,390	-30	-0.46	2,392	-35	-0.57
4FMFX9		2,409	-11	-0.17	2,461	33	0.54
6WQDUC		2,472	52	0.80	2,454	27	0.43
744NM4		2,316	-104	-1.59	2,359	-68	-1.10
7E7YVE	*	2,297	-123	-1.89	2,368	-60	-0.97
843BE2	X	1,450	-971	-14.91	1,442	-985	-15.93
86PWYC	X	2,718	298	4.57	2,704	276	4.47
87AF74		2,450	30	0.46	2,453	25	0.40
8KMYLB		2,445	25	0.39	2,463	36	0.58
8PL3RC	X	2,681	261	4.01	2,802	374	6.05
9L2MM3		2,381	-39	-0.60	2,385	-42	-0.69
AAFY79		2,517	97	1.49	2,520	92	1.49
AXAPL6		2,407	-13	-0.20	2,412	-15	-0.25
B6PNVB		2,422	2	0.03	2,432	4	0.07
C3TRHZ		2,523	102	1.57	2,532	105	1.69
D3A4Z7		2,339	-81	-1.24	2,375	-52	-0.84
DA8ZJ3		2,423	2	0.04	2,394	-34	-0.55
DKQEJ		2,479	59	0.90	2,442	14	0.23
DTY2E6		2,388	-33	-0.50	2,443	15	0.25
F67KZ6		2,457	37	0.56	2,496	69	1.11
FAL7VX		2,461	41	0.63	2,440	12	0.20
GDEMKW		2,430	10	0.16	2,410	-17	-0.28
GLM49W		2,493	73	1.11	2,496	69	1.11
HX2EKT		2,378	-42	-0.65	2,390	-38	-0.61
JNAF7R		2,285	-135	-2.08	2,314	-114	-1.84
MBP8VV	*	2,283	-138	-2.11	2,255	-173	-2.80
MRED8V		2,443	23	0.36	2,430	3	0.05
NBNTNU	X	2,242	-178	-2.73	2,336	-91	-1.48
QUQJXT		2,418	-2	-0.03	2,458	30	0.49
QV3ZB8		2,346	-74	-1.14	2,338	-90	-1.45
R3JVTM		2,348	-72	-1.10	2,376	-51	-0.83
R7XTXN		2,459	38	0.59	2,434	6	0.10



Plastics Interlaboratory Testing Program

Report #116

Analysis 736

4th Qtr 2020

Flexural Modulus - MPa

WebCode	Data Flag	Sample K71			Sample K72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RG4BWL		2,435	15	0.23	2,444	17	0.27
UBMRPN		2,508	88	1.35	2,517	90	1.45
VA68AJ		2,476	56	0.86	2,487	59	0.96
VP46E4		2,479	58	0.90	2,495	67	1.09
VVTK8G		2,496	75	1.16	2,504	77	1.24
W368BG		2,418	-2	-0.04	2,399	-29	-0.47
WMNA6G		2,424	4	0.06	2,430	2	0.04
WRJ43H	X	2,862	442	6.79	2,884	456	7.38
WZX3JE		2,298	-123	-1.88	2,295	-132	-2.14
YRTRGE		2,467	47	0.72	2,474	46	0.74
YWURZJ		2,455	35	0.54	2,469	42	0.67

Summary Statistics

	Sample K71	Sample K72
Grand Means	2,420.2 MPa	2,427.6 MPa
Std Dev Btwn Labs	65.1 MPa	61.9 MPa

Statistics based on 40 of 46 reporting participants

Sample K71: ABS & Sample K72: ABS

Comments on Assigned Data Flags for Test #736

- NBNTNU (X) - Data for sample K71 are low. Inconsistent within the determinations of sample K72.
- 843BE2 (X) - Data for both samples are low. Possible Systematic Error.
- 3FDRJC (X) - Data for both samples are low. Possible Systematic Error.
- 86PWYC (X) - Data for both samples are high. Possible Systematic Error.
- 8PL3RC (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample K72.
- WRJ43H (X) - Data for both samples are high. Possible Systematic Error.



Plastics Interlaboratory Testing Program

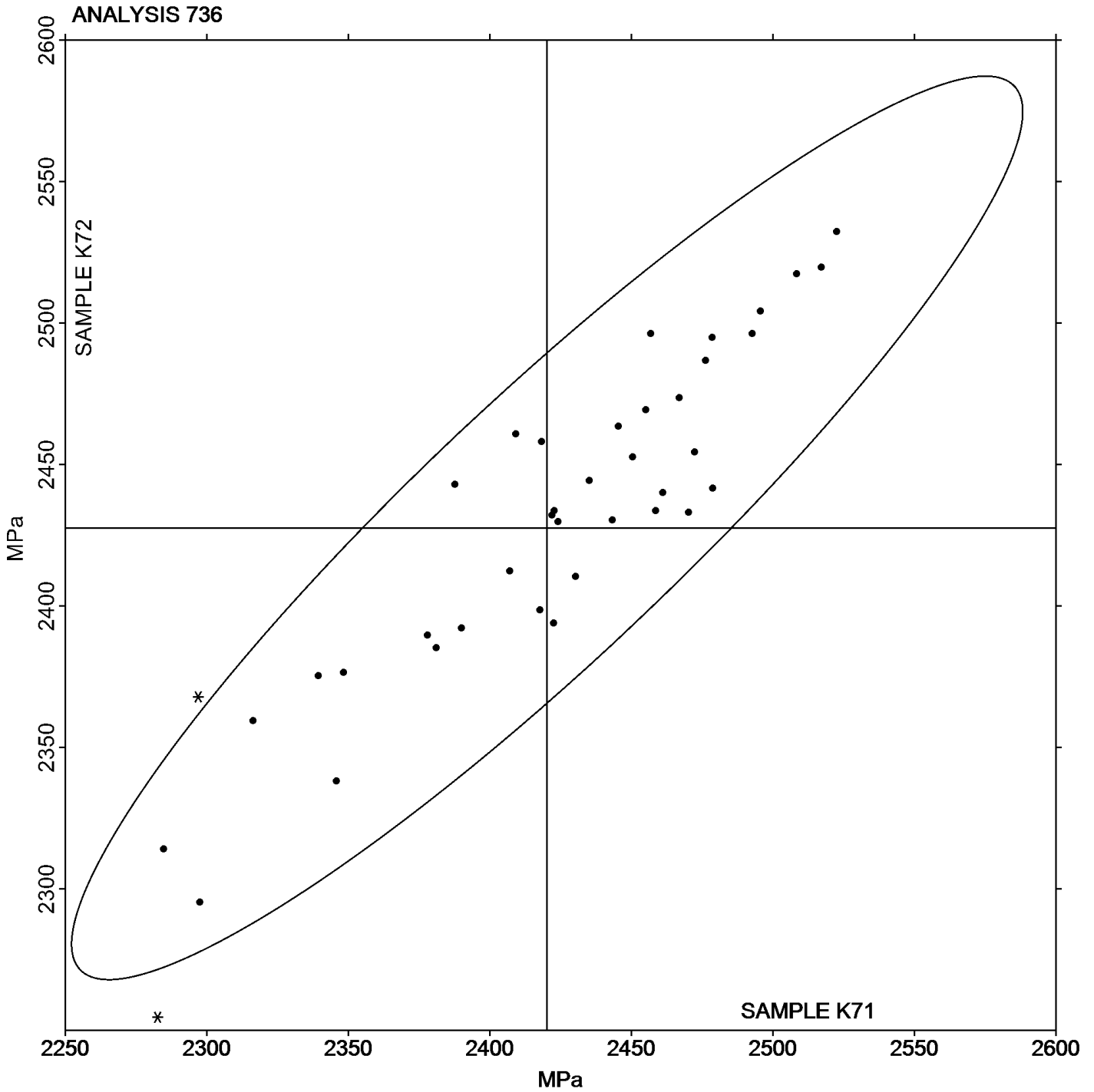
Analysis 736

Flexural Modulus - MPa

Report #116

4th Qtr 2020

Grand Mean Sample K71: 2,420.23 MPa Grand Mean Sample K72: 2,427.59 MPa





Plastics Interlaboratory Testing Program

Report #116

Analysis 737

4th Qtr 2020

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K71			Sample K72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2H24HG		71.95	2.88	1.47	71.43	2.16	1.16
3JC76F		68.06	-1.01	-0.51	68.44	-0.83	-0.45
3THBUB		67.13	-1.94	-0.98	68.09	-1.17	-0.63
4FMFX9		66.00	-3.07	-1.56	65.88	-3.39	-1.82
744NM4		67.82	-1.25	-0.63	68.63	-0.64	-0.34
7E7YVE		66.80	-2.27	-1.15	67.76	-1.51	-0.81
86PWYC		71.28	2.21	1.12	71.02	1.75	0.94
87AF74		68.52	-0.54	-0.28	68.80	-0.47	-0.25
8KMYLB		69.94	0.87	0.44	70.33	1.07	0.57
8PL3RC	X	77.10	8.03	4.08	77.86	8.59	4.61
9L2MM3		67.64	-1.43	-0.73	67.98	-1.29	-0.69
AAFY79		70.55	1.48	0.75	70.86	1.59	0.85
AXAPL6		64.80	-4.27	-2.17	64.90	-4.37	-2.35
B6PNVB		69.57	0.50	0.25	69.83	0.57	0.30
C3TRHZ		70.12	1.05	0.54	69.98	0.71	0.38
D3A4Z7		68.82	-0.24	-0.12	69.36	0.09	0.05
DA8ZJ3		70.11	1.04	0.53	70.37	1.10	0.59
DKQEJJ	*	72.97	3.90	1.98	71.78	2.52	1.35
DTY2E6		69.92	0.85	0.43	70.83	1.57	0.84
FAL7VX		69.79	0.72	0.37	70.00	0.74	0.39
GDEMKW	*	68.98	-0.09	-0.04	67.52	-1.75	-0.94
GLM49W		70.23	1.16	0.59	70.50	1.23	0.66
HX2EKT		68.24	-0.82	-0.42	68.53	-0.74	-0.40
JNAF7R		66.14	-2.93	-1.49	66.39	-2.88	-1.55
MBP8VV		67.61	-1.46	-0.74	68.04	-1.22	-0.66
MRED8V		70.95	1.88	0.96	70.28	1.01	0.54
NBNTNU		68.27	-0.80	-0.41	68.51	-0.76	-0.41
QUQJXT		68.72	-0.35	-0.18	69.35	0.09	0.05
QV3ZB8		67.87	-1.20	-0.61	68.59	-0.68	-0.37
R3JVTM		70.26	1.19	0.60	70.22	0.95	0.51
R7XTXN		68.49	-0.58	-0.30	68.29	-0.98	-0.53
VA68AJ		71.28	2.21	1.12	71.40	2.13	1.14
VP46E4		69.42	0.35	0.18	69.86	0.59	0.32
VVTK8G		68.80	-0.27	-0.13	69.08	-0.19	-0.10
W368BG		70.66	1.59	0.81	71.53	2.26	1.21



Plastics Interlaboratory Testing Program

Report #116

Analysis 737

4th Qtr 2020

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K71			Sample K72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
WMNA6G		71.88	2.81	1.43	71.28	2.01	1.08
WRJ43H		71.52	2.45	1.25	72.42	3.15	1.69
WZX3JE	*	63.72	-5.35	-2.72	63.96	-5.31	-2.85
YRTRGE		69.20	0.13	0.07	69.25	-0.02	-0.01
YWURZJ		69.60	0.53	0.27	70.23	0.96	0.51

Summary Statistics		
	Sample K71	Sample K72
Grand Means	69.067 MPa	69.269 MPa
Std Dev Btwn Labs	1.969 MPa	1.863 MPa
Statistics based on 39 of 40 reporting participants		

Sample K71: ABS & Sample K72: ABS

Comments on Assigned Data Flags for Test #737

8PL3RC (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample K72.



Plastics Interlaboratory Testing Program

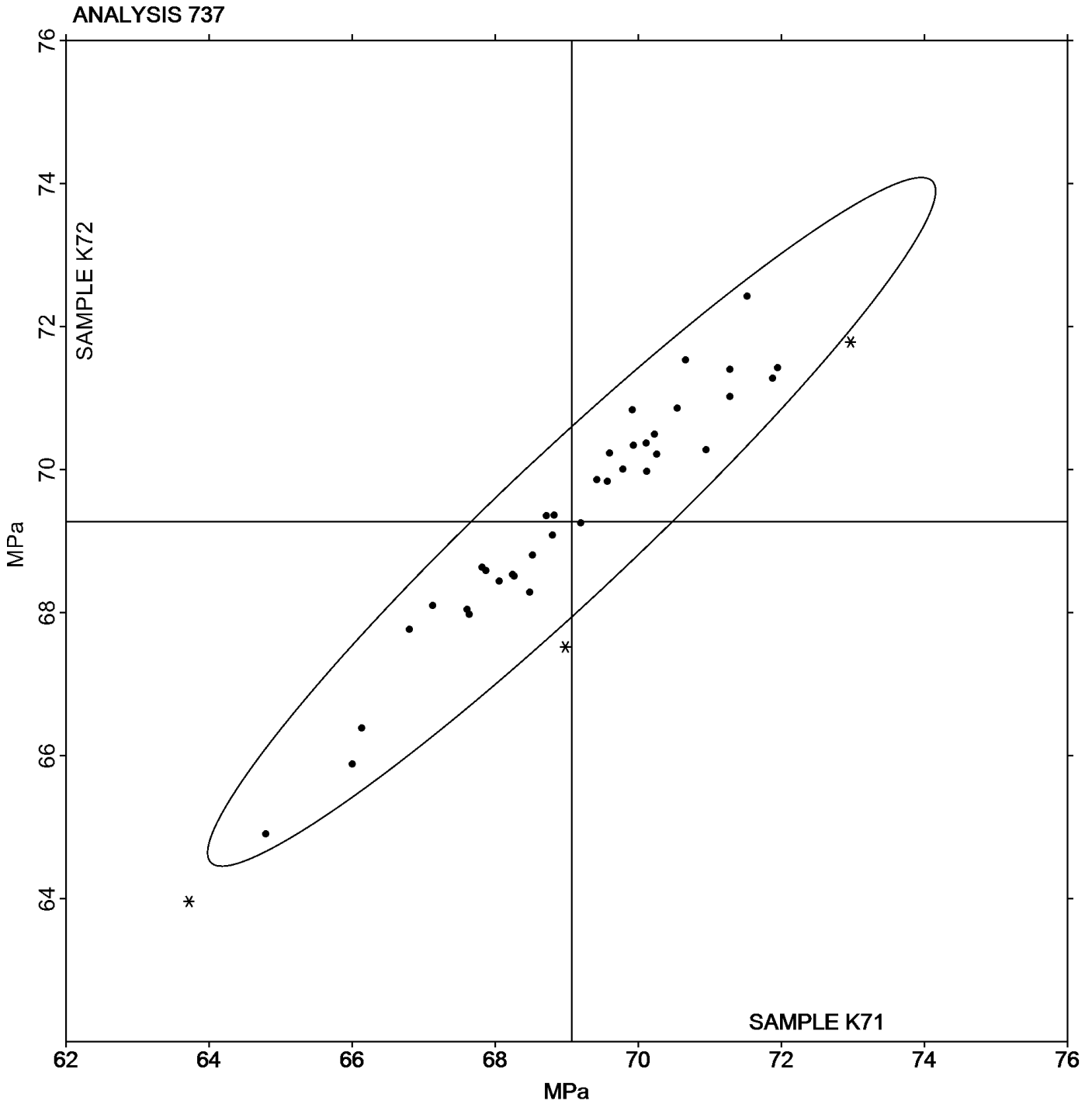
Analysis 737

Flexural Stress at 3.5% Strain - MPa

Report #116

4th Qtr 2020

Grand Mean Sample K71: 69.067 MPa Grand Mean Sample K72: 69.269 MPa





Plastics Interlaboratory Testing Program

Report #116

Analysis 738

4th Qtr 2020

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K71			Sample K72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2H24HG		73.81	3.58	1.41	73.23	2.66	1.05
3JC76F		69.29	-0.95	-0.37	69.83	-0.74	-0.29
4FMFX9		66.66	-3.57	-1.41	66.58	-3.99	-1.57
6WQDUC		70.96	0.72	0.29	71.14	0.57	0.23
744NM4		69.08	-1.15	-0.45	70.36	-0.20	-0.08
7E7YVE		68.32	-1.91	-0.75	69.12	-1.45	-0.57
86PWYC		71.28	1.05	0.41	71.02	0.45	0.18
87AF74	X	117.42	47.19	18.59	119.40	48.83	19.24
8KMYLB		71.21	0.98	0.39	71.59	1.02	0.40
8PL3RC	*	77.94	7.71	3.04	78.80	8.23	3.24
9L2MM3		70.44	0.20	0.08	70.81	0.24	0.09
AAFY79		71.32	1.09	0.43	71.66	1.09	0.43
B6PNVB		70.58	0.34	0.13	71.03	0.47	0.18
DA8ZJ3		71.33	1.10	0.43	72.28	1.71	0.67
F67KZ6		70.92	0.68	0.27	72.31	1.74	0.69
FAL7VX		70.83	0.60	0.24	71.14	0.57	0.22
GDEMKW	*	71.46	1.23	0.48	70.10	-0.47	-0.18
HX2EKT		69.79	-0.44	-0.17	70.38	-0.18	-0.07
JNAF7R		67.69	-2.54	-1.00	68.37	-2.20	-0.87
MBP8VV		69.56	-0.67	-0.26	70.52	-0.05	-0.02
MRED8V		72.36	2.12	0.84	71.22	0.65	0.26
NBNTNU		69.67	-0.57	-0.22	69.93	-0.63	-0.25
QUQJXT		70.41	0.17	0.07	71.10	0.53	0.21
QV3ZB8		70.04	-0.20	-0.08	70.92	0.36	0.14
R3JVTM		71.48	1.24	0.49	71.63	1.06	0.42
R7XTXN		70.15	-0.08	-0.03	70.11	-0.46	-0.18
RG4BWL		69.40	-0.83	-0.33	70.18	-0.39	-0.15
VA68AJ	*	62.40	-7.83	-3.09	62.36	-8.21	-3.23
VP46E4		70.56	0.33	0.13	71.24	0.67	0.27
VVTK8G		69.71	-0.52	-0.21	70.00	-0.57	-0.22
WMNA6G		72.49	2.25	0.89	71.76	1.19	0.47
WRJ43H		70.94	0.71	0.28	71.50	0.93	0.37
WZX3JE		64.56	-5.67	-2.24	65.02	-5.55	-2.19
YRTRGE		70.38	0.14	0.06	70.58	0.01	0.01
YWURZJ		70.94	0.70	0.28	71.46	0.89	0.35



Plastics Interlaboratory Testing Program

Report #116

Analysis 738

4th Qtr 2020

Flexural Stress at Yield - MPa

Summary Statistics	<u>Sample K71</u>	<u>Sample K72</u>
Grand Means	70.234 MPa	70.566 MPa
Stnd Dev Btwn Labs	2.538 MPa	2.538 MPa

Statistics based on 34 of 35 reporting participants

Sample K71: ABS & Sample K72: ABS

Comments on Assigned Data Flags for Test #738

87AF74 (X) - Data for both samples are high. Possible Systematic Error.



Plastics Interlaboratory Testing Program

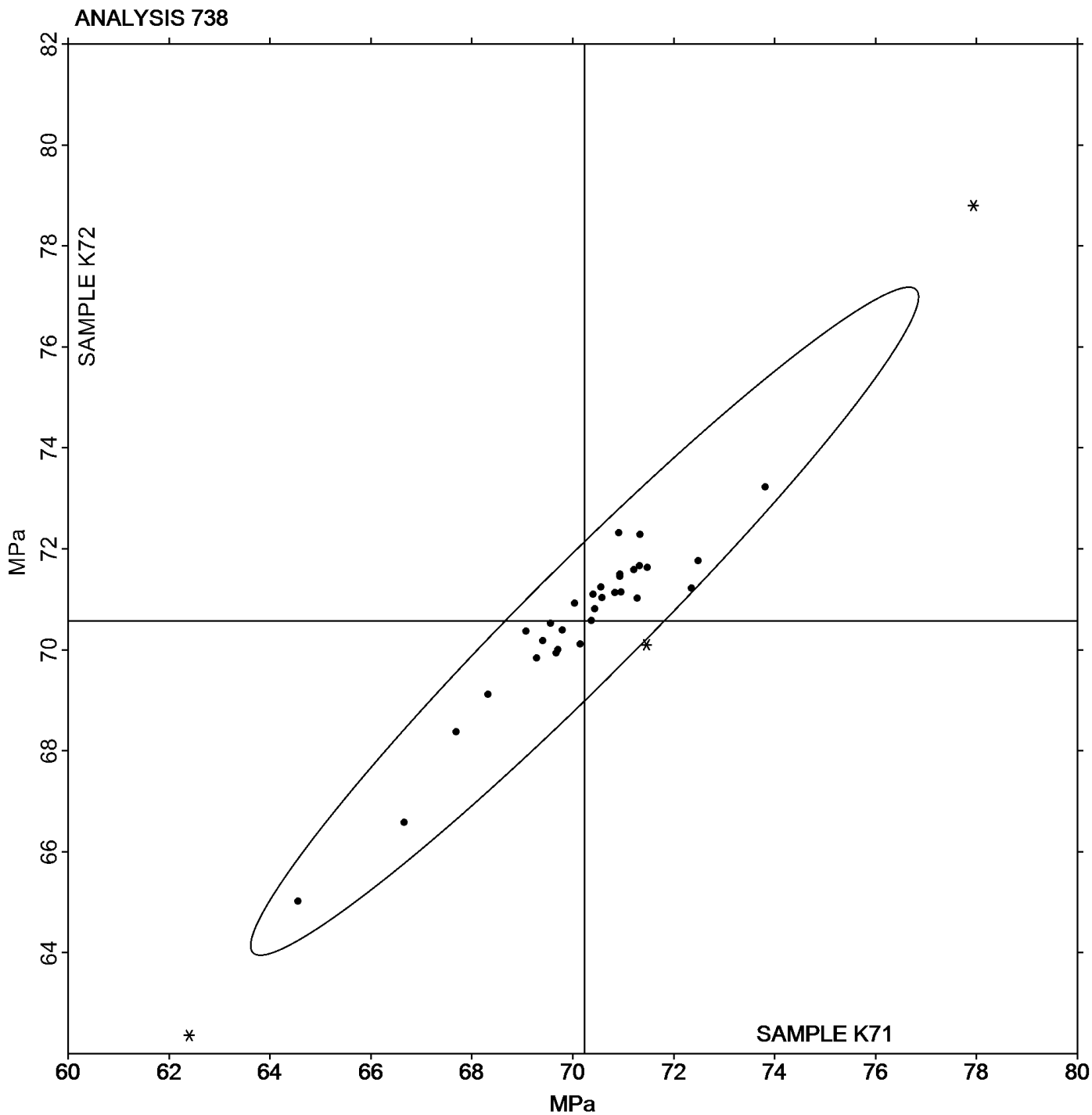
Analysis 738

Flexural Stress at Yield - MPa

Report #116

4th Qtr 2020

Grand Mean Sample K71: 70.234 MPa Grand Mean Sample K72: 70.566 MPa





Plastics Interlaboratory Testing Program

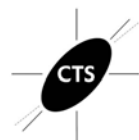
Report #116

Analysis 750

4th Qtr 2020

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

WebCode	Data Flag	Sample X71			Sample X72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3AKWBC		14.82	1.02	1.30	15.05	1.31	1.57	TO
3JC76F		14.15	0.36	0.45	14.30	0.56	0.67	TO
466NMD		14.33	0.54	0.69	14.19	0.45	0.54	TO
4AWTGG		13.72	-0.08	-0.10	13.38	-0.35	-0.42	TO
4FMFX9		12.02	-1.77	-2.27	11.86	-1.88	-2.24	WZ
4LXAEY		14.60	0.81	1.03	14.50	0.76	0.91	TO
6WQDUC		13.92	0.13	0.16	13.93	0.19	0.23	TO
7E7YVE		13.84	0.05	0.06	13.73	-0.01	-0.01	TY
7HKGBA		14.27	0.47	0.60	14.15	0.41	0.49	TO
7ZN3RB		13.45	-0.34	-0.44	13.25	-0.49	-0.58	WZ
843BE2		13.60	-0.19	-0.25	13.26	-0.48	-0.57	TO
86PWYC		12.35	-1.45	-1.85	12.62	-1.12	-1.33	XX
87AF74	X	16.80	3.01	3.84	16.55	2.81	3.36	TO
8KMYLB	*	13.90	0.11	0.13	15.05	1.31	1.57	TO
8PL3RC		12.85	-0.94	-1.21	13.07	-0.67	-0.80	WZ
8V93UB		13.85	0.06	0.07	13.90	0.16	0.20	TO
99NMQ9	X	15.30	1.51	1.92	13.80	0.06	0.08	TY
9JBG8C		14.60	0.81	1.03	14.25	0.51	0.61	TO
9L2MM3		13.30	-0.49	-0.63	12.95	-0.79	-0.94	TO
9XQME6		13.45	-0.34	-0.44	12.70	-1.04	-1.24	TO
AC76LY		13.20	-0.59	-0.76	13.30	-0.44	-0.52	KA
AEBR3A		15.20	1.41	1.79	15.25	1.51	1.81	TO
AFKNK8		13.40	-0.39	-0.50	13.35	-0.39	-0.46	WZ
AJNBH7	X	4.80	-9.00	-11.49	6.23	-7.51	-8.97	WZ
APBZ62		14.35	0.56	0.71	14.25	0.51	0.61	CE
AXAPL6	X	9.29	-4.50	-5.75	5.73	-8.01	-9.57	DY
B2YV97		14.45	0.66	0.84	14.56	0.82	0.98	DY
B6PNVB		13.95	0.15	0.19	14.01	0.27	0.32	GO
B8P7J6		14.60	0.81	1.03	14.49	0.75	0.89	TO
BCKZG7		12.88	-0.92	-1.17	12.77	-0.96	-1.15	TO
BL64N6		13.58	-0.22	-0.28	13.71	-0.03	-0.04	TO
BP6FJ6		13.92	0.12	0.16	14.18	0.45	0.53	TO
D3A4Z7		13.52	-0.28	-0.36	13.72	-0.02	-0.03	DY
D8JNJW	*	15.37	1.57	2.01	15.90	2.16	2.58	TO
DA8ZJ3		14.13	0.34	0.43	14.12	0.38	0.46	DY



Plastics Interlaboratory Testing Program

Report #116

Analysis 750

4th Qtr 2020

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

WebCode	Data Flag	Sample X71			Sample X72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
DHMJ32	*	14.88	1.08	1.38	13.76	0.02	0.02	TO
DKQEJJ	X	11.00	-2.79	-3.57	12.05	-1.69	-2.02	TO
DTY2E6		13.95	0.16	0.20	14.20	0.46	0.55	TO
F2Q22W	X	4.51	-9.28	-11.86	4.62	-9.12	-10.90	HA
FAXZE4		13.56	-0.24	-0.31	14.00	0.26	0.31	TO
FM6NPL		14.85	1.06	1.35	14.94	1.20	1.43	XX
GDEMKW		13.82	0.03	0.03	14.19	0.45	0.54	GO
GLM49W		13.40	-0.39	-0.50	13.70	-0.04	-0.04	DY
GTLTPZ		13.13	-0.67	-0.85	12.80	-0.94	-1.12	CE
HGQYRW	X	10.37	-3.42	-4.37	14.00	0.26	0.31	XX
HX2EKT	X	14.86	1.06	1.36	13.21	-0.52	-0.62	TO
JE3MTR		13.64	-0.15	-0.20	13.49	-0.25	-0.29	RR
JFR7HV		14.55	0.76	0.96	13.95	0.21	0.25	TO
JJUUBZ	*	14.46	0.67	0.86	13.39	-0.35	-0.41	TO
JMCAMD		12.45	-1.35	-1.72	12.70	-1.04	-1.24	TO
JNAF7R	*	12.96	-0.84	-1.07	11.87	-1.87	-2.24	GO
JP2DKQ		14.55	0.76	0.97	14.85	1.11	1.33	CE
KRJ2AV		14.11	0.32	0.40	14.30	0.57	0.68	DY
L4CXUU		14.61	0.82	1.04	14.28	0.54	0.65	DY
LUMAYR		14.45	0.66	0.84	14.05	0.31	0.37	TO
LUN6GC		13.95	0.16	0.20	13.85	0.11	0.14	TO
M2NLVN		13.84	0.04	0.05	13.36	-0.38	-0.46	TO
MAXB9M		14.18	0.39	0.49	14.33	0.59	0.70	DY
MRED8V		14.00	0.20	0.26	14.00	0.27	0.32	GO
NGUBJA	*	11.81	-1.99	-2.54	11.90	-1.84	-2.19	TM
PVRW6V	X	32.75	18.96	24.21	34.15	20.41	24.39	TO
QFCV7J	X	17.70	3.91	4.99	18.25	4.51	5.39	TO
QUQJXT		13.71	-0.08	-0.11	13.38	-0.36	-0.43	AT
RG4BWL		13.78	-0.01	-0.02	13.72	-0.02	-0.02	TO
RTCDVN		12.90	-0.89	-1.14	13.25	-0.49	-0.58	WZ
TL9U8J		13.50	-0.30	-0.38	13.35	-0.39	-0.46	DY
U4QXP6		13.06	-0.73	-0.94	12.84	-0.90	-1.07	DY
U9ER9N		13.90	0.11	0.13	14.15	0.41	0.49	TO
UBMRPN		13.40	-0.39	-0.50	13.10	-0.64	-0.76	TO
UCV7NH	*	11.83	-1.97	-2.51	11.31	-2.43	-2.90	TO



Plastics Interlaboratory Testing Program

Report #116

Analysis 750

4th Qtr 2020

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

WebCode	Data Flag	Sample X71			Sample X72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
VD4J7J		14.08	0.29	0.36	14.12	0.38	0.45	DY
W368BG	X	13.01	-0.78	-1.00	14.45	0.71	0.85	DY
W9CL3E		14.20	0.40	0.51	13.93	0.19	0.23	DY
WLWDGM		13.86	0.07	0.08	13.43	-0.31	-0.37	TO
WZX3JE		12.72	-1.08	-1.38	13.23	-0.51	-0.61	TO
XDWDGK		15.28	1.49	1.90	14.70	0.96	1.15	CE
XVG4FK		14.01	0.21	0.27	13.82	0.08	0.10	TO
Y4QJ9D		14.80	1.01	1.28	15.10	1.36	1.63	XX
Y7D8KD		14.41	0.62	0.79	14.24	0.50	0.60	TO
YRTRGE		12.95	-0.84	-1.08	12.95	-0.79	-0.94	WZ
ZZ7ZHF		12.59	-1.20	-1.54	13.37	-0.37	-0.44	XX

Summary Statistics		
	Sample X71	Sample X72
Grand Means	13.794 grams/10 mins	13.737 grams/10 mins
Std Dev Btwn Labs	0.783 grams/10 mins	0.837 grams/10 mins
Statistics based on 70 of 81 reporting participants		

Sample X71: PP & Sample X72: PP

Comments on Assigned Data Flags for Test #750

- AJNBH7 (X) - Extreme data.
- AXAPL6 (X) - Data for both samples are low. Possible Systematic Error.
- 99NMQ9 (X) - Inconsistent in testing between samples.
- HX2EKT (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample X71.
- QFCV7J (X) - Data for both samples are high. Possible Systematic Error.
- F2Q22W (X) - Extreme data.
- PVRW6V (X) - Extreme data.
- DKQEJJ (X) - Data for sample X71 are low.
- HGQYRW (X) - Data for sample X71 are low.
- 87AF74 (X) - Data for both samples are high. Possible Systematic Error.
- W368BG (X) - Inconsistent in testing between samples.



Plastics Interlaboratory Testing Program

Report #116

Analysis 750

4th Qtr 2020

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

Results by Methodology (as reported by laboratory)

Test Methodology	Sample X71 <i>PP</i>			Sample X72 <i>PP</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Procedure A of ASTM D1238	13.835	0.823	0.04	13.751	0.910	0.01	41/48
Procedure B of ASTM D1238	13.992	0.604	0.20	14.010	0.695	0.27	12/13
Procedure A of ISO 1133	13.490	0.870	-0.30	13.422	0.740	-0.31	13/15
Procedure B of ISO 1133	13.778	0.352	-0.02	13.792	0.614	0.05	4/5

Key to Instrument Codes Reported by Participants

AT Atlas	CE Ceast
DY Dynisco	GO Gottfert
HA Haake	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

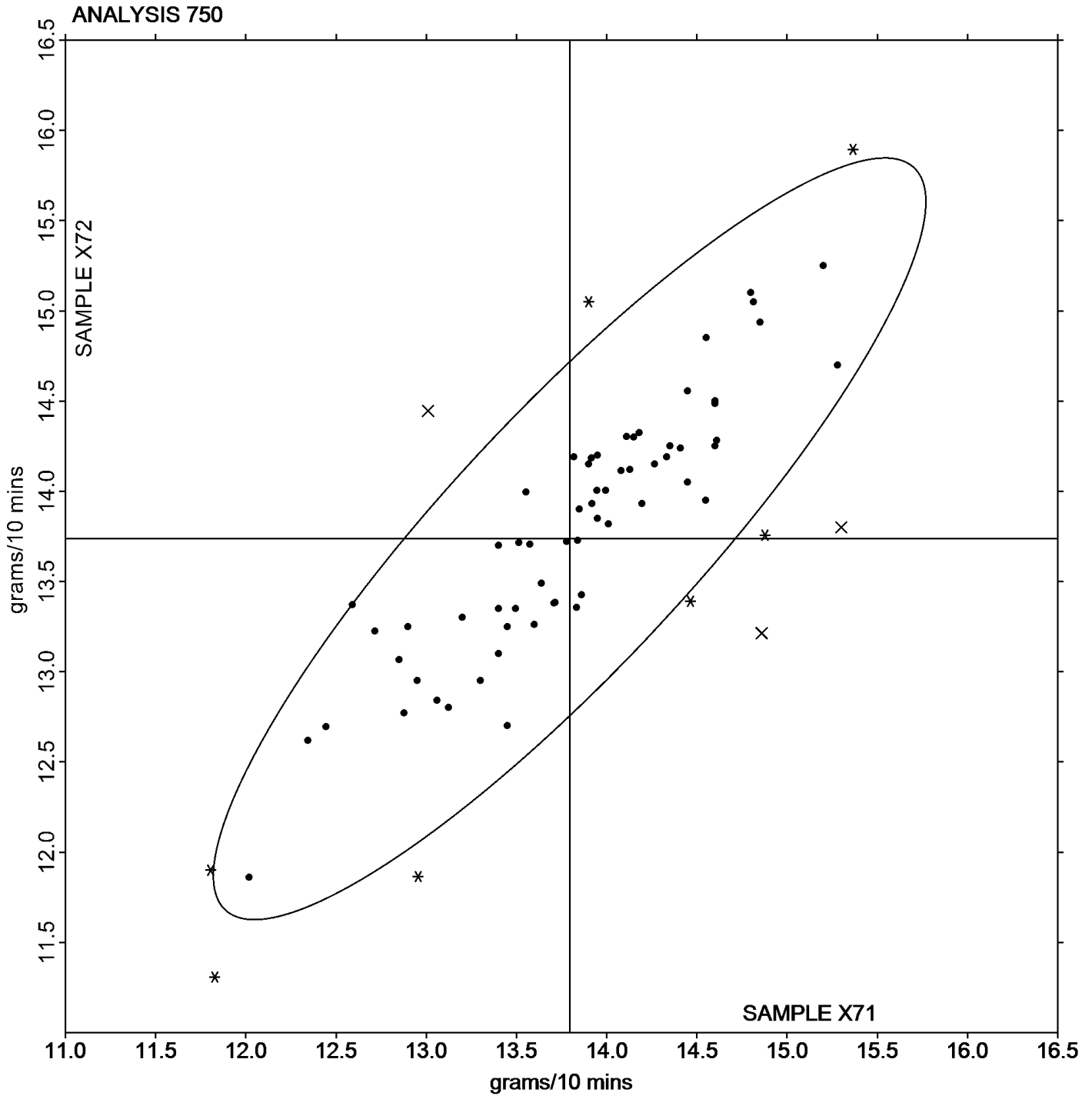
Report #116

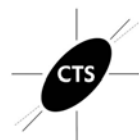
Analysis 750

4th Qtr 2020

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

Grand Mean Sample X71: 13.794 grams/10 mins Grand Mean Sample X72: 13.737 grams/10 mins





Plastics Interlaboratory Testing Program

Report #116

Analysis 755

4th Qtr 2020

Moisture Content of Plastics

WebCode	Data Flag	Sample Y71			Sample Y72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3CT3YY		0.16833	0.01137	0.45	0.18167	0.02185	0.95	MR
3JC76F		0.17050	0.01354	0.54	0.15900	-0.00081	-0.04	ML
3THBUB		0.16567	0.00870	0.34	0.17070	0.01089	0.47	ML
4Q6XQE		0.17600	0.01904	0.75	0.18100	0.02119	0.92	CT
843BE2		0.14197	-0.01500	-0.59	0.14993	-0.00988	-0.43	AQ
AJNBH7		0.18300	0.02604	1.03	0.19100	0.03119	1.35	AZ
B2YV97		0.10867	-0.04830	-1.91	0.10900	-0.05081	-2.20	MU
BL64N6		0.18450	0.02754	1.09	0.18200	0.02219	0.96	CT
C9Z864		0.17307	0.01610	0.64	0.17310	0.01329	0.58	AZ
D2T236		0.19350	0.03654	1.44	0.18350	0.02369	1.03	SB
D3A4Z7	X	0.00002	-0.15695	-6.20	0.00002	-0.15980	-6.93	XX
D4JDNW		0.10300	-0.05396	-2.13	0.11700	-0.04281	-1.86	AZ
D7QHFY		0.17393	0.01697	0.67	0.17017	0.01035	0.45	AZ
DTY2E6		0.10600	-0.05096	-2.01	0.11533	-0.04448	-1.93	MU
EWVYEV		0.12440	-0.03256	-1.29	0.13887	-0.02095	-0.91	MT
F4UWKY		0.17090	0.01394	0.55	0.17197	0.01215	0.53	MK
FAXZE4		0.15460	-0.00236	-0.09	0.15500	-0.00481	-0.21	MD
GLM49W		0.16700	0.01004	0.40	0.16700	0.00719	0.31	AZ
GTLTPZ		0.14233	-0.01463	-0.58	0.14033	-0.01948	-0.84	MU
JFR7HV		0.17867	0.02170	0.86	0.17233	0.01252	0.54	SA
JJUUBZ	*	0.11733	-0.03963	-1.57	0.11300	-0.04681	-2.03	XX
JMCAMD	X	0.26310	0.10614	4.20	0.26270	0.10289	4.46	AZ
JQW4HT		0.11067	-0.04630	-1.83	0.11933	-0.04048	-1.76	CT
K2DZ9H		0.16600	0.00904	0.36	0.16800	0.00819	0.36	MI
MHRF3N		0.14933	-0.00763	-0.30	0.16033	0.00052	0.02	MU
PY7CVM		0.16433	0.00737	0.29	0.16900	0.00919	0.40	MJ
QF8K4L		0.17277	0.01580	0.62	0.17540	0.01559	0.68	ML
QFCV7J		0.16833	0.01137	0.45	0.16900	0.00919	0.40	BA
QR24HQ		0.18500	0.02804	1.11	0.18767	0.02785	1.21	CS
R3JVTM		0.15100	-0.00596	-0.24	0.15433	-0.00548	-0.24	CT
THAHCJ	X	0.14537	-0.01160	-0.46	0.09270	-0.06711	-2.91	MK
TL9U8J		0.16933	0.01237	0.49	0.16900	0.00919	0.40	AZ
UCV7NH	X	0.22833	0.07137	2.82	0.20400	0.04419	1.92	CT
VA68AJ		0.17237	0.01540	0.61	0.17130	0.01149	0.50	MK
W9CL3E		0.16997	0.01300	0.51	0.17267	0.01285	0.56	AZ



Plastics Interlaboratory Testing Program

Report #116

Analysis 755

4th Qtr 2020

Moisture Content of Plastics

WebCode	Data Flag	Sample Y71			Sample Y72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
WZX3JE		0.14933	-0.00763	-0.30	0.16033	0.00052	0.02	AZ
XXKQEH	X	0.08733	-0.06963	-2.75	0.07267	-0.08715	-3.78	AZ
Y3WT6K		0.12833	-0.02863	-1.13	0.13533	-0.02448	-1.06	MU
Y7D8KD		0.17667	0.01970	0.78	0.18000	0.02019	0.88	MU

Summary Statistics		Sample Y71	Sample Y72
Grand Means		0.156965 Percent	0.159812 Percent
Std Dev Btwn Labs		0.025296 Percent	0.023059 Percent
Statistics based on 34 of 39 reporting participants			

Sample Y71: ABS/PC & Sample Y72: ABS/PC

Comments on Assigned Data Flags for Test #755

- XXKQEH (X) - Data for both samples are low. Possible Systematic Error.
- THAH CJ (X) - Data for sample Y72 are low.
- D3A4Z7 (X) - Data for both samples are low. Possible Systematic Error.
- JMCAMD (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample Y71.
- UCV7NH (X) - Data for sample Y71 are high.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample Y71 <i>ABS/PC</i>			Sample Y72 <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	0.159394	0.018000	0.0024	0.164000	0.018000	0.0041	11/12
ISO 15512 Method B	0.152083	0.029000	-0.0049	0.156000	0.025000	-0.0035	6/6
ASTM D6980	0.150750	0.033000	-0.0062	0.152000	0.029000	-0.0075	12/13
ASTM D7191	0.171325	0.003000	0.0144	0.171000	0.002000	0.0114	4/7



Plastics Interlaboratory Testing Program

Report #116

Analysis 755

4th Qtr 2020

Moisture Content of Plastics

Key to Instrument Codes Reported by Participants

AQ Aquastar	AZ Arizona Instruments Moisture Analyzer
BA Brabender Aquatrac	CS Cosa Instruments
CT Computrac Moisture Analyzer	MD Mettler Toledo DL37
MI Mitsubishi MCI Series	MJ Mitsubishi KF Analyzer Series
MK Mitsubishi KF Analyzer CA	ML Metrohm Coulometer
MR Metrohm Coulineter 756 KF	MT Mettler Toledo DL39
MU Mettler Toledo	SA Sartorius MA30
SB Sartorius Mark 3	XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

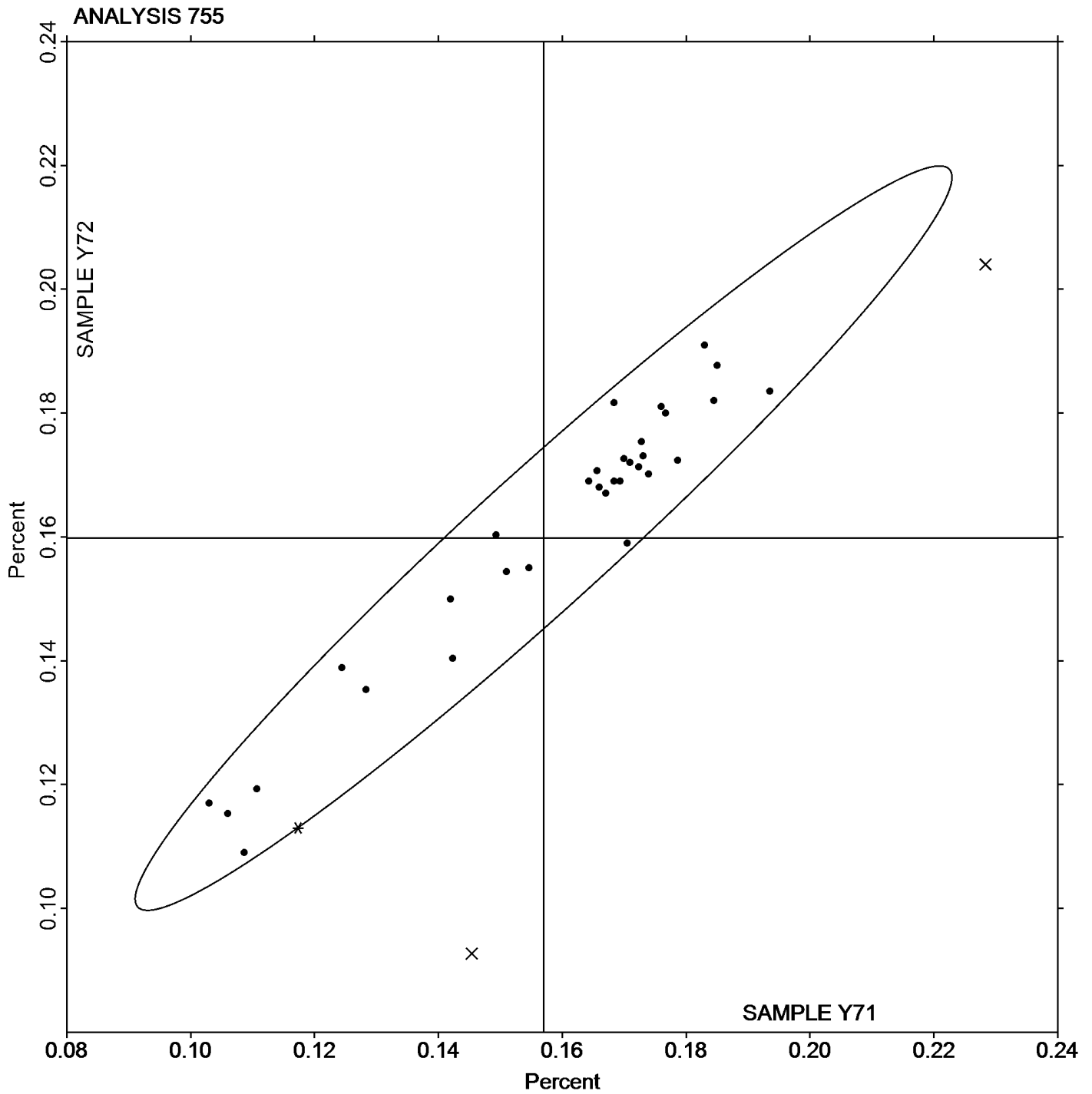
Analysis 755

Moisture Content of Plastics

Report #116

4th Qtr 2020

Grand Mean Sample Y71: 0.15696 Percent Grand Mean Sample Y72: 0.15981 Percent





Plastics Interlaboratory Testing Program

Report #116

Analysis 757

4th Qtr 2020

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L71			Sample L72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3CT3YY	X	31.900	1.444	5.68	31.150	0.682	3.38
3JC76F		30.380	-0.076	-0.30	30.565	0.097	0.48
3THBUB		30.570	0.114	0.45	30.405	-0.063	-0.31
4FMFX9		30.230	-0.226	-0.89	30.280	-0.188	-0.93
6EPBET		30.334	-0.122	-0.48	30.540	0.071	0.35
6WQDUC		30.598	0.141	0.56	30.523	0.055	0.27
7B8MYE	X	31.525	1.069	4.20	31.170	0.702	3.48
7ZN3RB		30.810	0.354	1.39	30.775	0.307	1.52
843BE2	X	30.380	-0.076	-0.30	29.435	-1.033	-5.12
87AF74	X	33.040	2.584	10.16	33.075	2.607	12.92
8KMYLB		30.190	-0.266	-1.05	30.215	-0.253	-1.25
9L2MM3		30.585	0.129	0.51	30.525	0.057	0.28
B2YV97		30.250	-0.206	-0.81	30.465	-0.003	-0.02
B6PNVB		29.930	-0.526	-2.07	30.110	-0.358	-1.77
BKV237		30.595	0.139	0.55	30.495	0.027	0.13
BL64N6		30.205	-0.251	-0.99	30.175	-0.293	-1.45
BYC8X7		30.130	-0.326	-1.28	30.215	-0.253	-1.25
C9Z864		30.685	0.229	0.90	30.650	0.182	0.90
D3A4Z7		30.505	0.049	0.19	30.585	0.117	0.58
D8JNJW		30.285	-0.171	-0.67	30.165	-0.303	-1.50
DA8ZJ3		30.470	0.014	0.05	30.455	-0.013	-0.07
DKQEJJ		30.265	-0.191	-0.75	30.340	-0.128	-0.63
DTY2E6	X	29.825	-0.631	-2.48	29.715	-0.753	-3.73
EWVYEV		30.380	-0.076	-0.30	30.501	0.033	0.16
F4UWKY		30.620	0.164	0.64	30.745	0.277	1.37
FM6NPL		30.257	-0.200	-0.79	30.305	-0.163	-0.81
GDEMKW		30.600	0.144	0.57	30.410	-0.058	-0.29
GLM49W	*	30.180	-0.276	-1.09	30.605	0.137	0.68
GTLTPZ		30.597	0.141	0.55	30.601	0.133	0.66
HGQYRW	*	30.975	0.519	2.04	30.550	0.082	0.41
HX2EKT		30.580	0.124	0.49	30.610	0.142	0.70
JFR7HV		30.570	0.114	0.45	30.505	0.037	0.18
JQW4HT		30.400	-0.056	-0.22	30.350	-0.118	-0.59
LUMAYR		30.900	0.444	1.75	30.745	0.277	1.37
MBP8VV		30.550	0.094	0.37	30.650	0.182	0.90



Plastics Interlaboratory Testing Program

Report #116

Analysis 757

4th Qtr 2020

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L71			Sample L72		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MRED8V		30.795	0.339	1.33	30.885	0.417	2.07
N6G7CD		30.370	-0.086	-0.34	30.555	0.087	0.43
P9BJBM		30.695	0.239	0.94	30.715	0.247	1.22
P9DDR8		30.625	0.169	0.66	30.515	0.047	0.23
QNLKKH		30.520	0.064	0.25	30.380	-0.088	-0.44
QV3ZB8		30.235	-0.221	-0.87	30.205	-0.263	-1.30
R3JVTM		30.485	0.029	0.11	30.610	0.142	0.70
R7XTXN		30.615	0.159	0.62	30.780	0.312	1.54
RG4BWL		30.415	-0.041	-0.16	30.570	0.102	0.50
RHA66Q	X	50.325	19.869	78.13	50.331	19.863	98.41
UBMRPN		30.905	0.449	1.76	30.860	0.392	1.94
UCV7NH		30.258	-0.198	-0.78	30.151	-0.317	-1.57
VG964G		30.605	0.148	0.58	30.468	0.000	0.00
VKL3AJ		30.545	0.088	0.35	30.249	-0.220	-1.09
VVTK8G		30.130	-0.326	-1.28	30.185	-0.283	-1.40
W4CMGM		30.718	0.262	1.03	30.547	0.079	0.39
WZX3JE		30.620	0.164	0.64	30.440	-0.028	-0.14
XXKQEH	X	32.700	2.244	8.82	27.915	-2.553	-12.65
Y4QJ9D		30.050	-0.406	-1.60	30.170	-0.298	-1.48
Y7D8KD		30.420	-0.036	-0.14	30.400	-0.068	-0.34
YWURZJ	*	29.725	-0.731	-2.88	30.195	-0.273	-1.35

Summary Statistics

	Sample L71	Sample L72
Grand Means	30.4562 Percent	30.4682 Percent
Std Dev Btwn Labs	0.2543 Percent	0.2018 Percent

Statistics based on 49 of 56 reporting participants

Sample L71: PBT & Sample L72: PBT



Comments on Assigned Data Flags for Test #757

- 3CT3YY (X) - Data for both samples are high.
- XXKQEH (X) - Data for sample L71 are high and data for sample L72 are low. Inconsistent within the determinations of both samples.
- 843BE2 (X) - Data for sample L72 are low.
- 7B8MYE (X) - Data for both samples are high.
- DTY2E6 (X) - Data for sample L72 are low.
- RHA66Q (X) - Data for both samples are high.
- 87AF74 (X) - Data for both samples are high.



Plastics Interlaboratory Testing Program

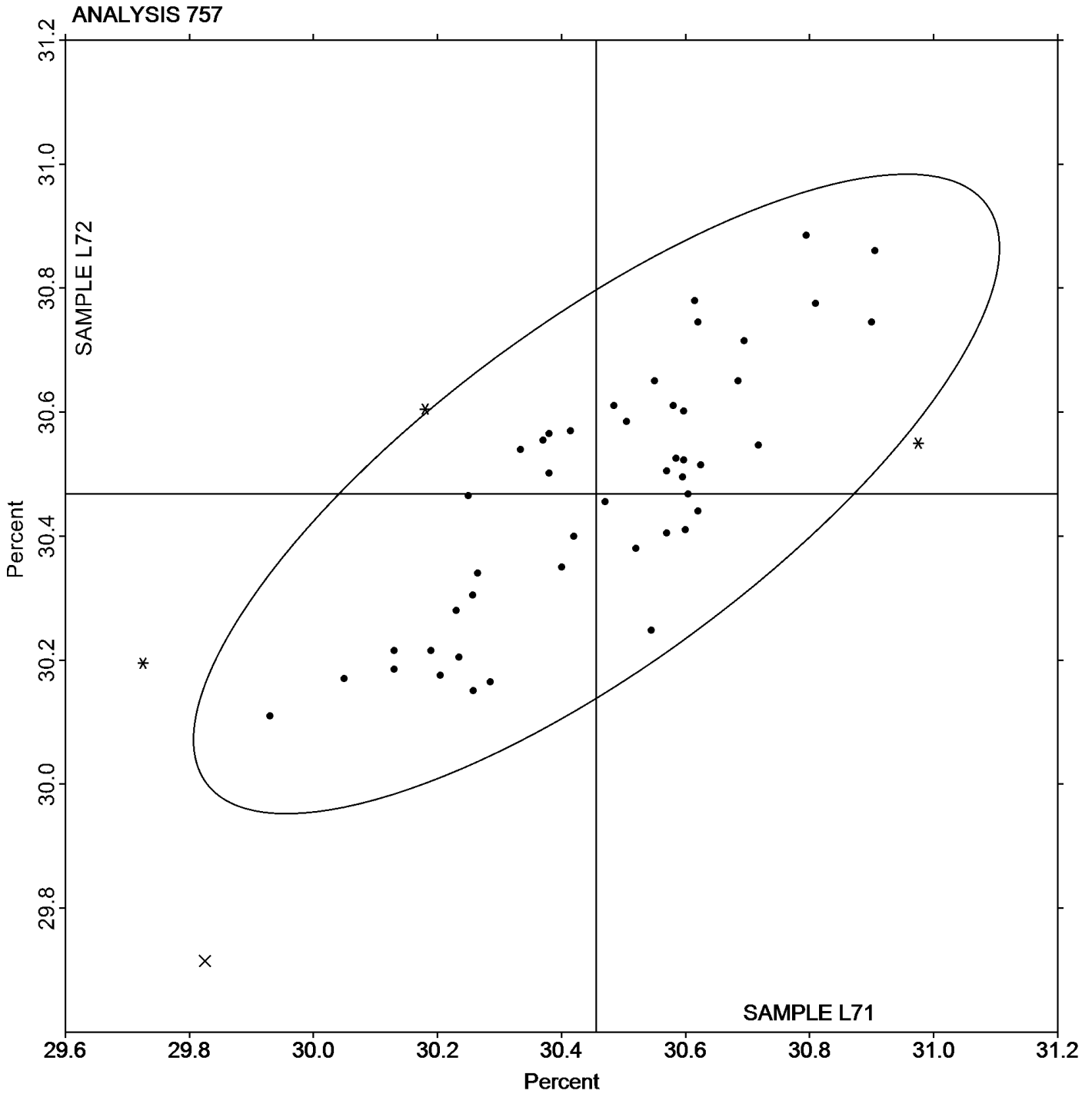
Report #116

Analysis 757

4th Qtr 2020

Ash Content in Thermoplastics - Percent

Grand Mean Sample L71: 30.456 Percent Grand Mean Sample L72: 30.468 Percent





Plastics Interlaboratory Testing Program

Report #116

Analysis 758

4th Qtr 2020

Thermogravimetric Analysis

WebCode	Data Flag	<u>Sample A71</u>			<u>Sample A72</u>			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
JFR7HV		80.04500	-0.41967	-0.41	80.10000	0.63567	0.86	TA
MVVQMP		79.72000	-0.74467	-0.73	78.65000	-0.81433	-1.10	TA
U4QXP6		81.62900	1.16433	1.14	79.64300	0.17867	0.24	TA

Summary Statistics

	<u>Sample A71</u>	<u>Sample A72</u>
Grand Means	80.464667 Percent	79.464333 Percent
Std Dev Btwn Labs	1.021352 Percent	0.741327 Percent
Statistics based on 3 of 3 reporting participants		

Sample A71: PP & Sample A72: PP

Key to Instrument Codes Reported by Participants

TA TA Instruments



Plastics Interlaboratory Testing Program

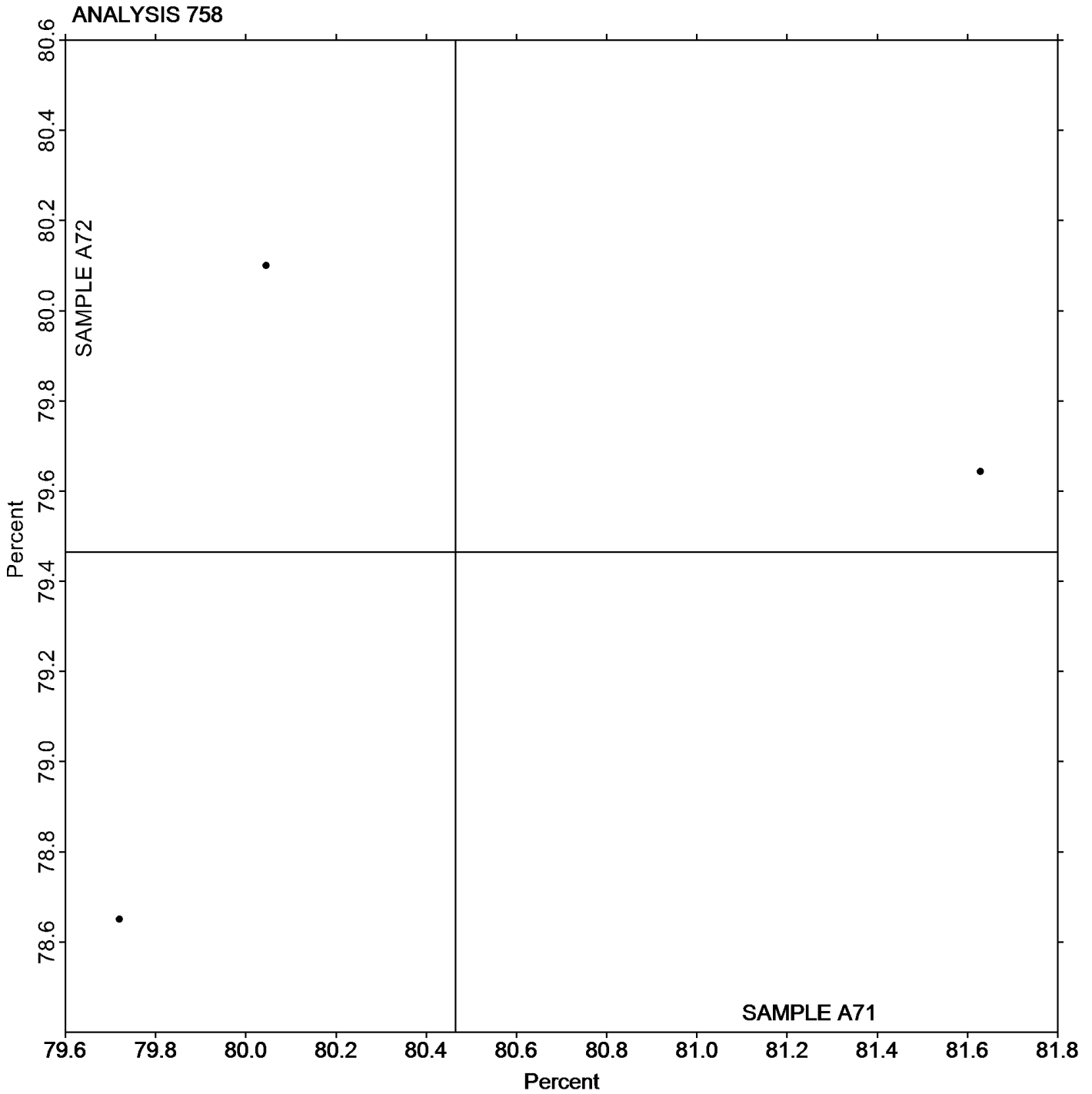
Analysis 758

Thermogravimetric Analysis

Report #116

4th Qtr 2020

Grand Mean Sample A71: 80.465 Percent Grand Mean Sample A72: 79.464 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 #116

Analysis 760

4th Qtr 2020

DSC Crystallization Temperature

WebCode	Data Flag	Sample W71			Sample W72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
63EVEF		179.50	0.01	0.00	179.24	-0.24	-0.04	TA
8PL3RC		173.10	-6.39	-1.11	172.54	-6.94	-1.20	TA
99NMQ9		184.76	5.27	0.92	185.19	5.71	0.98	SH
AXAPL6	X	184.18	4.69	0.82	180.38	0.90	0.16	TA
D4JDNW		183.13	3.64	0.63	184.10	4.62	0.80	TA
DTY2E6		172.47	-7.02	-1.22	173.20	-6.28	-1.08	TA
EQ99R2		184.25	4.76	0.83	184.55	5.07	0.87	NZ
EWVYEV		180.41	0.92	0.16	179.60	0.12	0.02	TA
FAXZE4		182.13	2.64	0.46	182.90	3.42	0.59	TA
FM6NPL		172.48	-7.01	-1.22	172.80	-6.68	-1.15	TA
GLM49W		178.47	-1.02	-0.18	178.33	-1.15	-0.20	TA
GVDPEU		185.10	5.61	0.98	183.52	4.04	0.70	TA
HX2EKT		180.79	1.30	0.23	181.11	1.63	0.28	TA
JFR7HV		175.77	-3.72	-0.65	175.17	-4.31	-0.74	TA
JJUUBZ		170.07	-9.42	-1.64	170.40	-9.08	-1.57	NZ
JMCAMD		183.22	3.73	0.65	183.78	4.30	0.74	MT
JNAF7R		174.83	-4.66	-0.81	174.20	-5.28	-0.91	TA
K2DZ9H		174.47	-5.02	-0.87	174.97	-4.51	-0.78	TA
K6DC6H		171.83	-7.66	-1.33	171.20	-8.28	-1.43	PE
MVVQMP		184.55	5.06	0.88	184.79	5.31	0.91	TA
QV3ZB8		186.20	6.71	1.17	184.93	5.45	0.94	TA
QW27TL		184.37	4.88	0.85	184.33	4.85	0.84	TA
RG4BWL		178.00	-1.49	-0.26	178.07	-1.41	-0.24	TA
U4QXP6		183.84	4.35	0.76	183.93	4.45	0.77	TA
VA68AJ		191.76	12.27	2.13	192.34	12.86	2.22	TA
Y4QJ9D		171.76	-7.73	-1.34	171.83	-7.65	-1.32	TA
YFHEZD	X	175.73	-3.76	-0.65	180.47	0.99	0.17	NZ

Summary Statistics		
	Sample W71	Sample W72
Grand Means	179.491 Degrees Celsius	179.480 Degrees Celsius
Std Dev Btwn Labs	5.748 Degrees Celsius	5.801 Degrees Celsius
Statistics based on 25 of 27 reporting participants		

Sample W71: PBT & Sample W72: PBT



Comments on Assigned Data Flags for Test #760

AXAPL6 (X) - Inconsistent in testing between samples.

YFHEZD (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample W71.

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

NZ Netzsch Instruments

PE Perkins Elmer Instruments

SH Shimadzu

TA TA Instruments



Plastics Interlaboratory Testing Program

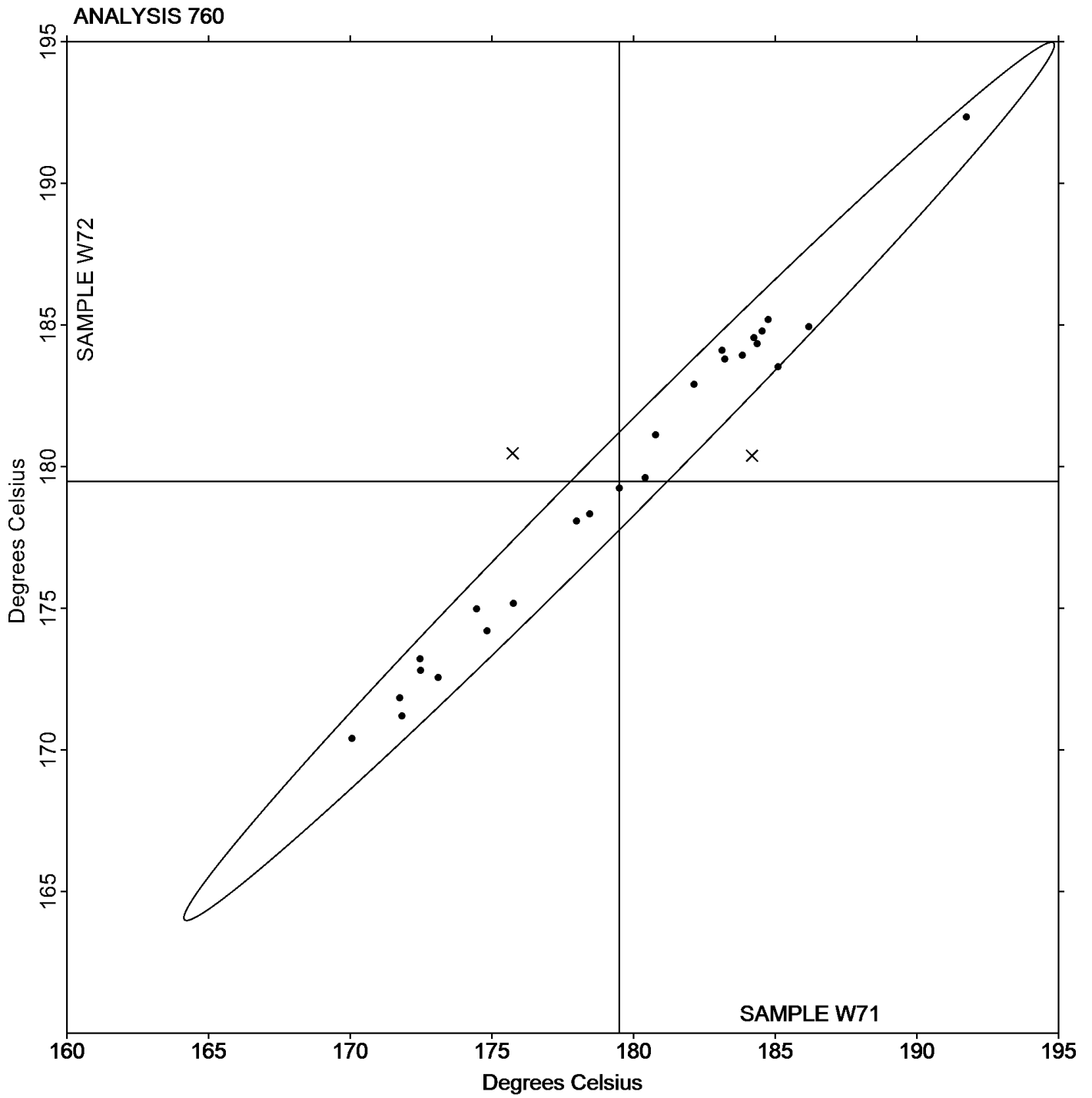
Analysis 760

DSC Crystallization Temperature

Report #116

4th Qtr 2020

Grand Mean Sample W71: 179.49 Degrees Celsius Grand Mean Sample W72: 179.48 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #116

Analysis 761

4th Qtr 2020

DSC Melt Temperature

WebCode	Data Flag	Sample W71			Sample W72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3THBUB		226.18	2.40	1.95	225.23	1.46	1.18	TA
63EVEF		223.72	-0.06	-0.05	223.24	-0.52	-0.42	TA
8PL3RC		224.94	1.15	0.94	225.23	1.47	1.19	TA
99NMQ9		223.74	-0.04	-0.03	223.88	0.11	0.09	SH
AXAPL6	*	225.45	1.66	1.36	226.41	2.65	2.14	TA
D4JDNW		225.27	1.48	1.21	224.17	0.40	0.33	TA
DTY2E6		225.47	1.68	1.37	224.93	1.17	0.95	TA
EQ99R2		222.85	-0.94	-0.76	222.65	-1.11	-0.90	NZ
EWVYEV		222.18	-1.61	-1.31	222.19	-1.57	-1.28	TA
F2Q22W		222.60	-1.19	-0.97	222.70	-1.06	-0.86	NZ
FM6NPL		225.25	1.47	1.20	225.82	2.06	1.66	XX
GLM49W		224.27	0.48	0.39	224.27	0.50	0.41	TA
GVDPEU		221.89	-1.90	-1.55	222.07	-1.70	-1.38	TA
HX2EKT		223.91	0.12	0.10	223.80	0.04	0.03	TA
JFR7HV		224.20	0.41	0.34	223.93	0.17	0.14	TA
JJUUBZ		224.10	0.31	0.26	224.00	0.24	0.19	NZ
JMCAMD		224.34	0.55	0.45	224.11	0.35	0.28	MT
JNAF7R		222.90	-0.89	-0.72	224.07	0.30	0.24	TA
K2DZ9H		224.27	0.48	0.39	224.23	0.47	0.38	TA
K6DC6H		223.37	-0.42	-0.34	223.73	-0.03	-0.03	PE
MVVQMP		222.60	-1.19	-0.97	222.74	-1.03	-0.83	TA
QFCV7J		221.23	-2.55	-2.08	221.47	-2.30	-1.86	TA
QV3ZB8		223.37	-0.42	-0.34	223.67	-0.10	-0.08	TA
QW27TL	*	221.20	-2.59	-2.11	220.33	-3.43	-2.78	TA
RG4BWL		224.27	0.48	0.39	224.17	0.40	0.33	TA
THAHCJ		223.55	-0.24	-0.19	223.81	0.04	0.03	MT
U4QXP6		223.76	-0.03	-0.02	223.84	0.08	0.06	XX
VA68AJ		223.04	-0.74	-0.61	223.32	-0.45	-0.36	TA
VKL3AJ		223.98	0.19	0.16	223.57	-0.19	-0.16	TA
Y4QJ9D		225.02	1.24	1.01	224.75	0.98	0.80	XX
YFHEZD		224.47	0.68	0.55	224.40	0.64	0.51	NZ



Plastics Interlaboratory Testing Program

Report #116

Analysis 761

4th Qtr 2020

DSC Melt Temperature

Summary Statistics

	<u>Sample W71</u>	<u>Sample W72</u>
Grand Means	223.786 Degrees Celsius	223.765 Degrees Celsius
Stnd Dev Btwn Labs	1.227 Degrees Celsius	1.235 Degrees Celsius

Statistics based on 31 of 31 reporting participants

Sample W71: PBT & Sample W72: PBT

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



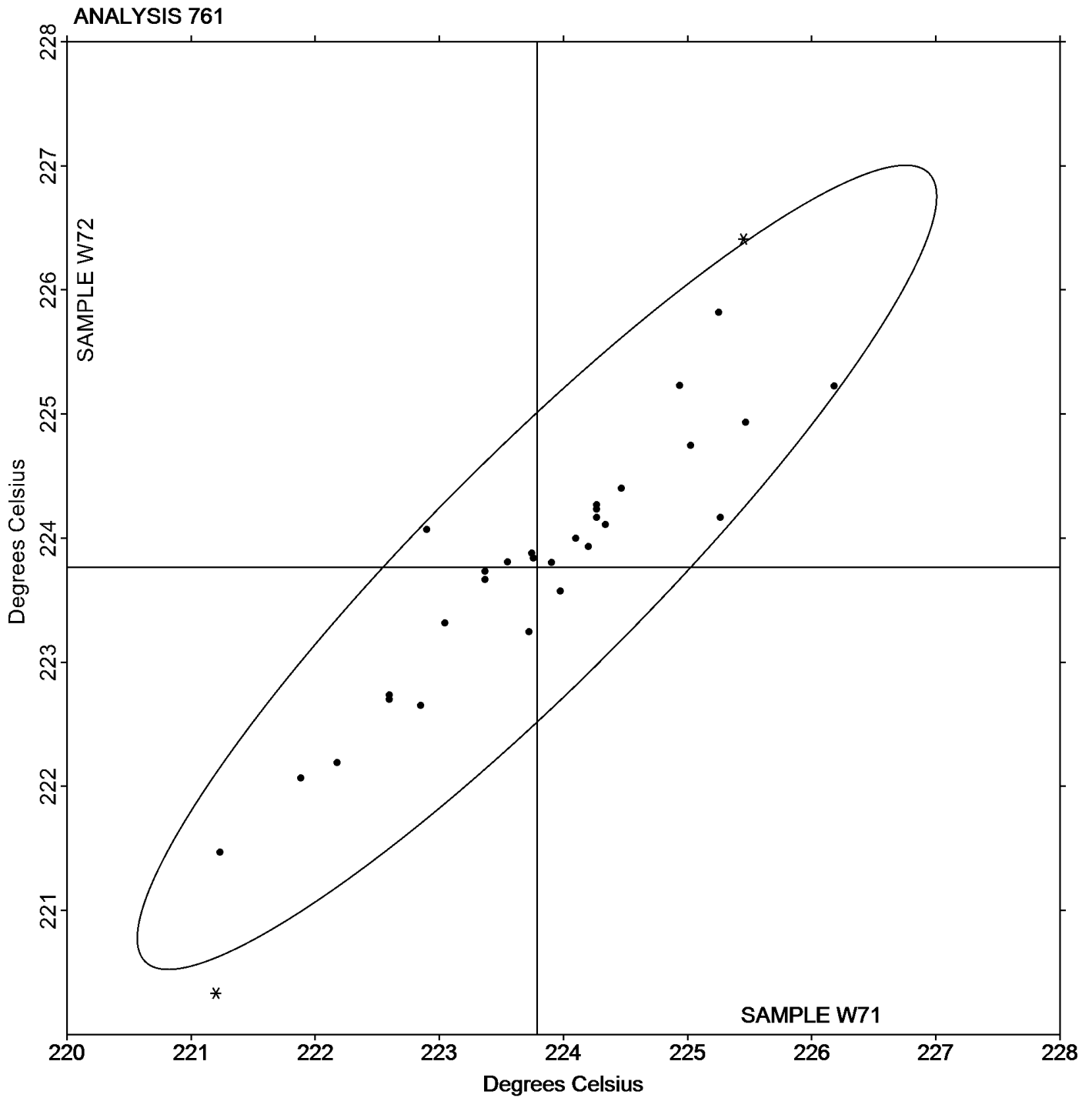
Plastics Interlaboratory Testing Program

Analysis 761 DSC Melt Temperature

Report #116

4th Qtr 2020

Grand Mean Sample W71: 223.79 Degrees Celsius Grand Mean Sample W72: 223.76 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #116

Analysis 762

4th Qtr 2020

DSC Enthalpy of Crystallization

WebCode	Data Flag	Sample W71			Sample W72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
63EVEF		47.87	-1.29	-0.16	46.78	-1.93	-0.30	TA
8PL3RC		45.80	-3.36	-0.43	43.05	-5.67	-0.89	TA
99NMQ9		39.30	-9.86	-1.25	38.13	-10.58	-1.67	SH
AXAPL6		52.86	3.70	0.47	49.34	0.63	0.10	TA
EQ99R2	*	73.52	24.36	3.09	60.49	11.77	1.85	NZ
EWVYEV		52.41	3.25	0.41	52.24	3.53	0.56	TA
GLM49W		44.40	-4.76	-0.60	44.77	-3.95	-0.62	TA
HX2EKT		53.10	3.94	0.50	52.09	3.37	0.53	TA
JJUUBZ		36.23	-12.92	-1.64	41.77	-6.95	-1.09	NZ
JNAF7R		47.87	-1.29	-0.16	48.10	-0.61	-0.10	TA
K2DZ9H		46.84	-2.31	-0.29	46.88	-1.83	-0.29	TA
K6DC6H		41.22	-7.93	-1.00	41.42	-7.29	-1.15	PE
MVVQMP		50.13	0.97	0.12	51.10	2.38	0.38	TA
QV3ZB8		51.44	2.28	0.29	54.45	5.74	0.90	TA
QW27TL	*	54.87	5.72	0.72	61.94	13.22	2.08	TA
RG4BWL		56.63	7.47	0.95	55.87	7.16	1.13	TA
U4QXP6		46.82	-2.33	-0.30	45.27	-3.44	-0.54	XX
VA68AJ		47.35	-1.80	-0.23	47.10	-1.62	-0.25	TA
YFHEZD		45.30	-3.86	-0.49	44.76	-3.95	-0.62	NZ

Summary Statistics		
	Sample W71	Sample W72
Grand Means	49.156 Joules Per Gram	48.712 Joules Per Gram
Stnd Dev Btwn Labs	7.893 Joules Per Gram	6.351 Joules Per Gram
Statistics based on 19 of 19 reporting participants		

Sample W71: PBT & Sample W72: PBT

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

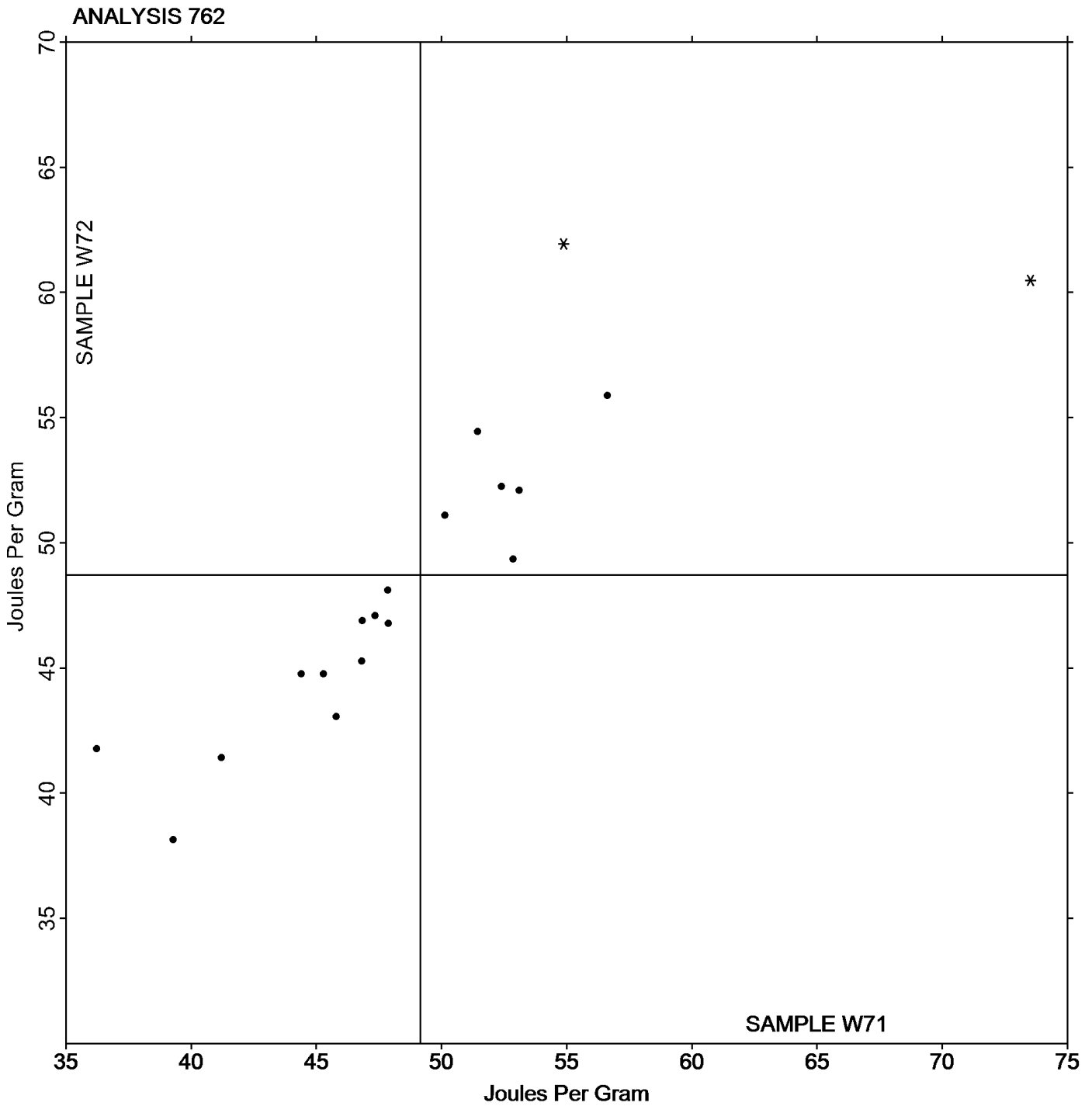
Analysis 762

DSC Enthalpy of Crystallization

Report #116

4th Qtr 2020

Grand Mean Sample W71: 49.156 Joules Per Gram Grand Mean Sample W72: 48.712 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 #116

Analysis 763

4th Qtr 2020

DSC Enthalpy of Fusion

WebCode	Data Flag	Sample W71			Sample W72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3THBUB		34.73	-8.29	-0.97	36.22	-5.98	-0.72	TA
63EVEF		47.22	4.20	0.49	49.51	7.32	0.88	TA
8PL3RC		38.67	-4.35	-0.51	37.49	-4.70	-0.57	TA
99NMQ9		32.26	-10.77	-1.27	33.15	-9.04	-1.09	SH
AXAPL6		42.33	-0.69	-0.08	37.51	-4.68	-0.56	TA
EQ99R2		58.92	15.89	1.87	57.70	15.51	1.87	NZ
EWVYEV		51.73	8.71	1.02	53.04	10.85	1.30	TA
F2Q22W		38.52	-4.50	-0.53	39.76	-2.43	-0.29	NZ
GLM49W		47.43	4.41	0.52	47.03	4.84	0.58	TA
HX2EKT		44.53	1.51	0.18	43.34	1.14	0.14	TA
JJUUBZ		33.20	-9.82	-1.15	34.97	-7.23	-0.87	NZ
JNAF7R		40.83	-2.19	-0.26	37.43	-4.76	-0.57	TA
K2DZ9H		36.30	-6.72	-0.79	35.84	-6.36	-0.76	TA
K6DC6H		36.14	-6.88	-0.81	34.30	-7.89	-0.95	PE
MVVQMP		36.52	-6.50	-0.76	33.65	-8.55	-1.03	XX
QV3ZB8		53.79	10.76	1.27	53.55	11.36	1.37	TA
QW27TL		56.92	13.89	1.63	59.82	17.62	2.12	TA
RG4BWL	*	58.37	15.35	1.80	47.65	5.46	0.66	TA
U4QXP6		38.65	-4.38	-0.51	38.77	-3.42	-0.41	XX
VA68AJ		40.34	-2.68	-0.32	39.31	-2.89	-0.35	TA
YFHEZD		36.08	-6.94	-0.82	36.01	-6.18	-0.74	NZ

Summary Statistics		Sample W71	Sample W72
Grand Means		43.024 Joules Per Gram	42.193 Joules Per Gram
Std Dev Btwn Labs		8.506 Joules Per Gram	8.313 Joules Per Gram
Statistics based on 21 of 21 reporting participants			

Sample W71: PBT & Sample W72: PBT

Key to Instrument Codes Reported by Participants

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



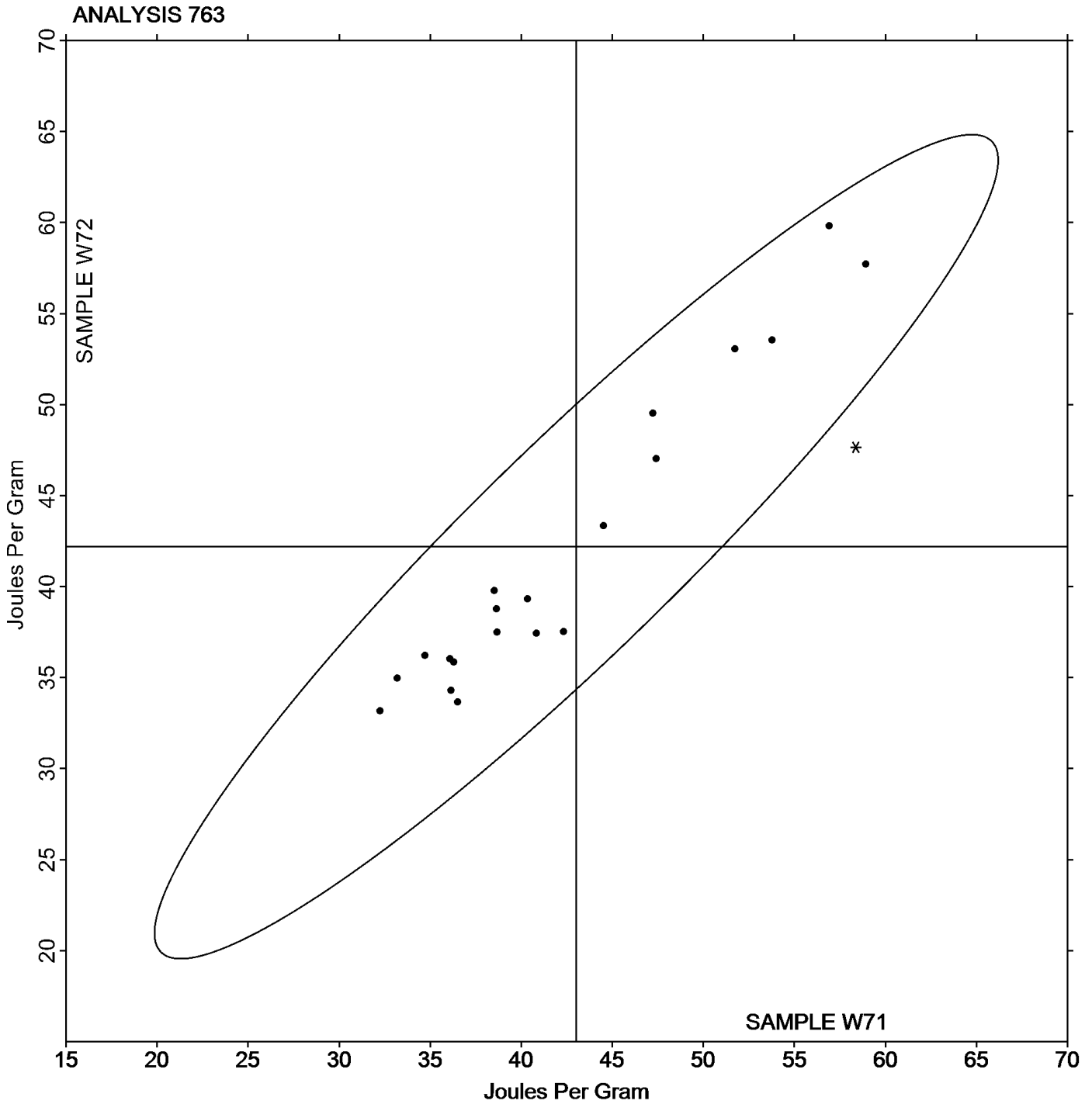
Plastics Interlaboratory Testing Program

Analysis 763 DSC Enthalpy of Fusion

Report #116

4th Qtr 2020

Grand Mean Sample W71: 43.024 Joules Per Gram Grand Mean Sample W72: 42.193 Joules Per Gram





Plastics Interlaboratory Testing Program

Report #116

Analysis 764

4th Qtr 2020

DSC Glass Transition Temperature

WebCode	Data Flag	Sample V71			Sample V72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3THBUB		112.92	3.98	1.11	112.19	3.18	0.97	TA
8PL3RC		112.46	3.51	0.98	112.83	3.83	1.16	TA
99NMQ9		102.10	-6.85	-1.92	102.41	-6.59	-2.00	SH
EQ99R2	*	105.05	-3.89	-1.09	108.70	-0.31	-0.09	NZ
EWVYEV		102.58	-6.36	-1.78	102.04	-6.96	-2.12	TA
F2Q22W		110.70	1.76	0.49	110.80	1.79	0.55	NZ
GLM49W		108.43	-0.51	-0.14	107.77	-1.24	-0.38	TA
GVDPEU		107.76	-1.19	-0.33	107.79	-1.22	-0.37	TA
HX2EKT		108.41	-0.53	-0.15	110.62	1.61	0.49	TA
JFR7HV		111.27	2.32	0.65	111.20	2.19	0.67	TA
JJUUBZ		114.03	5.09	1.43	112.15	3.14	0.96	NZ
JMCAMD		110.93	1.99	0.56	111.68	2.67	0.81	MT
JNAF7R		112.20	3.26	0.91	112.03	3.03	0.92	TA
K2DZ9H		108.00	-0.94	-0.26	107.40	-1.61	-0.49	TA
K6DC6H		108.40	-0.54	-0.15	108.37	-0.64	-0.19	PE
MVVQMP		110.43	1.49	0.42	110.97	1.97	0.60	XX
QV3ZB8		107.00	-1.94	-0.54	107.73	-1.27	-0.39	TA
QW27TL		101.10	-7.84	-2.20	101.80	-7.21	-2.19	TA
RG4BWL		111.67	2.72	0.76	111.90	2.89	0.88	TA
U4QXP6		111.92	2.98	0.83	109.74	0.74	0.22	XX
VA68AJ		109.54	0.59	0.17	108.25	-0.76	-0.23	TA
YFHEZD		109.87	0.92	0.26	109.73	0.73	0.22	NZ

Summary Statistics

Grand Means

Sample V71
108.944 Degrees Celsius

Sample V72
109.005 Degrees Celsius

Std Dev Btwn Labs

3.571 Degrees Celsius

3.288 Degrees Celsius

Statistics based on 22 of 22 reporting participants

Sample V71: ABS & Sample V72: ABS

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

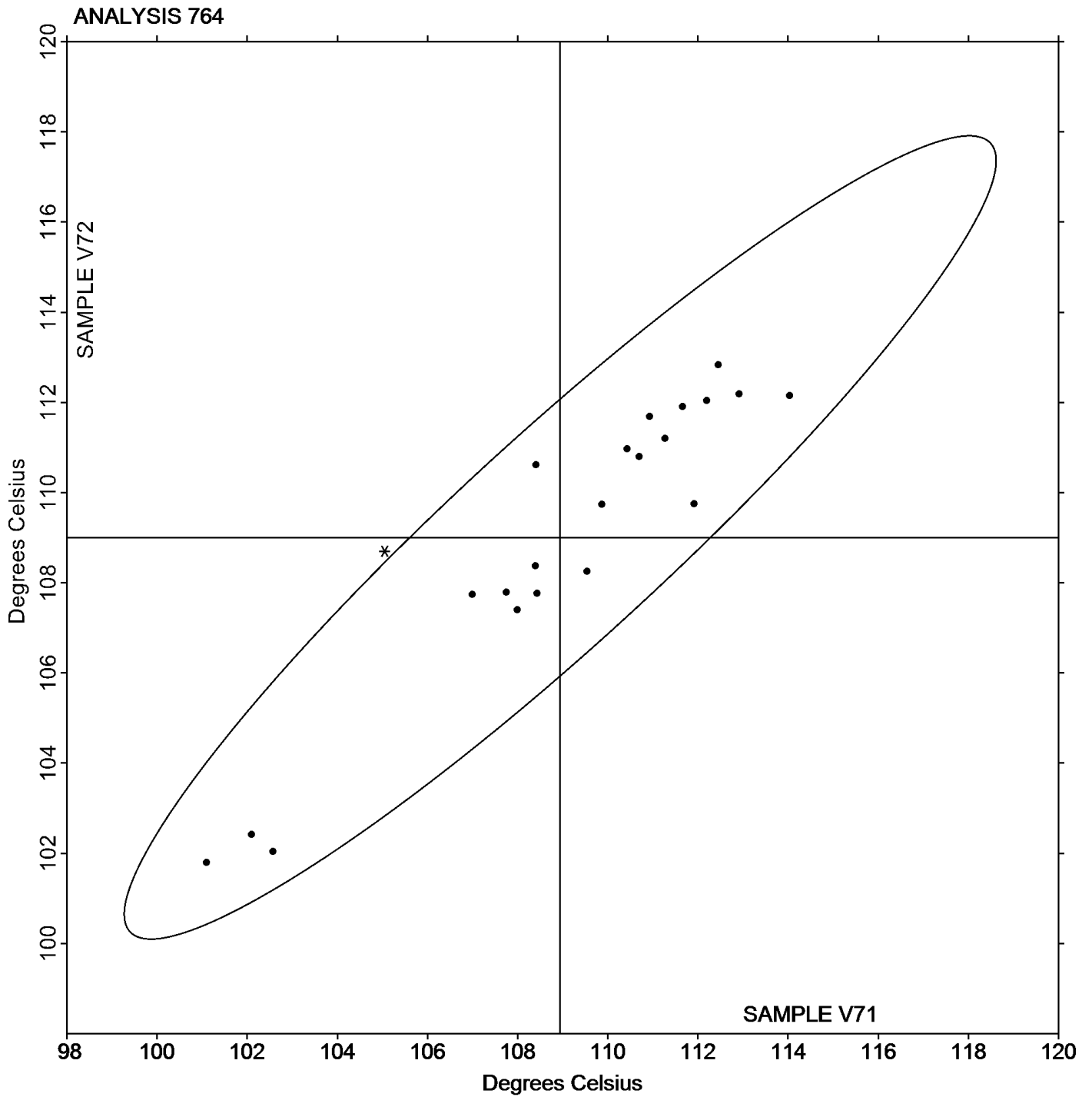
Analysis 764

DSC Glass Transition Temperature

Report #116

4th Qtr 2020

Grand Mean Sample V71: 108.94 Degrees Celsius Grand Mean Sample V72: 109.01 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #116

Analysis 765

4th Qtr 2020

Research Crystallization Peak Temperature

WebCode	Data Flag	Sample W71			Sample W72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
FVE3LW		172.35	-11.11	-0.63	173.75	-10.41	-0.60	TA
HX2EKT		180.79	-2.67	-0.15	181.11	-3.05	-0.18	TA
K2DZ9H		174.47	-8.99	-0.51	174.97	-9.20	-0.53	XX
K6DC6H		171.80	-11.66	-0.66	171.33	-12.83	-0.75	XX
U4QXP6		223.76	40.30	2.29	223.84	39.67	2.30	XX
UBMRPN		176.46	-7.00	-0.40	176.16	-8.01	-0.46	TA
VA68AJ		192.32	8.86	0.50	191.70	7.53	0.44	TA
YFHEZD		175.73	-7.73	-0.44	180.47	-3.70	-0.21	NZ

Summary Statistics

	Sample W71	Sample W72
Grand Means	183.460 Degrees Celsius	184.166 Degrees Celsius
Std Dev Btwn Labs	17.560 Degrees Celsius	17.219 Degrees Celsius
Statistics based on 8 of 8 reporting participants		

Sample W71: PBT & Sample W72: 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

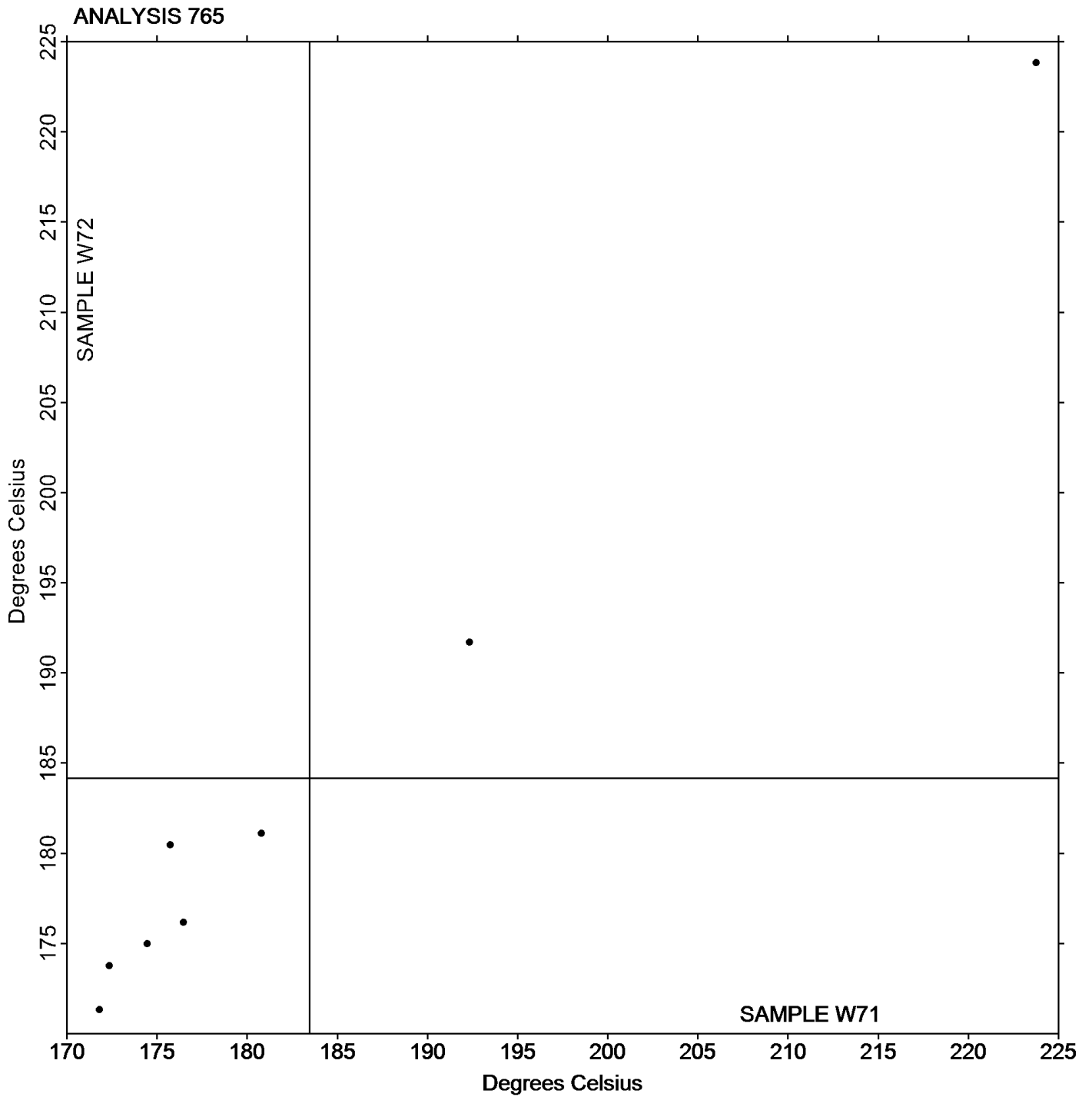
Analysis 765

Research Crystallization Peak Temperature

Report #116

4th Qtr 2020

Grand Mean Sample W71: 183.46 Degrees Celsius Grand Mean Sample W72: 184.17 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 #116

Analysis 766

4th Qtr 2020

Research Melting Peak Temperature

WebCode	Data Flag	Sample W71			Sample W72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
FVE3LW		224.06	0.18	0.39	223.37	-0.36	-0.69	TA
HX2EKT		223.91	0.03	0.07	223.80	0.08	0.15	TA
K2DZ9H		224.27	0.39	0.84	224.23	0.51	0.97	XX
K6DC6H		223.97	0.09	0.20	224.03	0.31	0.59	XX
U4QXP6		223.76	-0.12	-0.25	223.84	0.11	0.22	XX
UBMRPN		223.67	-0.21	-0.44	223.27	-0.46	-0.88	TA
VA68AJ		222.91	-0.96	-2.06	222.87	-0.86	-1.65	TA
YFHEZD		224.47	0.59	1.26	224.40	0.67	1.29	NZ

Summary Statistics		Sample W71	Sample W72
Grand Means		223.875 Degrees Celsius	223.727 Degrees Celsius
Std Dev Btwn Labs		0.468 Degrees Celsius	0.521 Degrees Celsius
Statistics based on 8 of 8 reporting participants			

Sample W71: PBT & Sample W72: 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

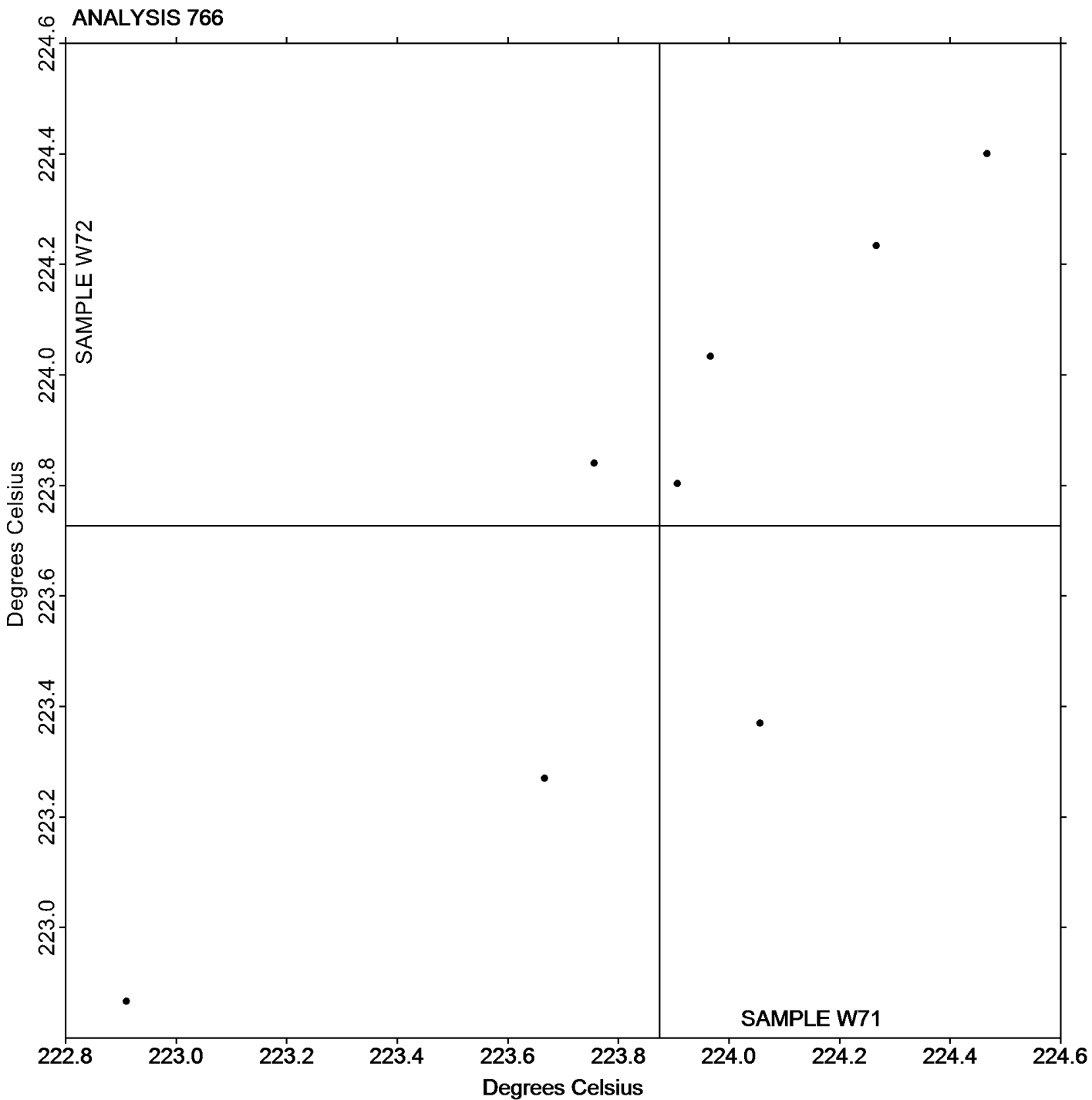
Analysis 766

Research Melting Peak Temperature

Report #116

4th Qtr 2020

Grand Mean Sample W71: 223.87 Degrees Celsius Grand Mean Sample W72: 223.73 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 #116

Analysis 767

4th Qtr 2020

Research Heat of Crystallization

WebCode	Data Flag	Sample W71			Sample W72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
FVE3LW		46.53	-1.76	-0.50	46.17	-0.58	-0.24	TA
HX2EKT		53.10	4.80	1.36	52.09	5.34	2.26	TA
K2DZ9H		46.84	-1.45	-0.41	46.88	0.14	0.06	XX
K6DC6H		54.74	6.45	1.82	46.20	-0.54	-0.23	XX
U4QXP6		46.82	-1.47	-0.42	45.27	-1.47	-0.62	XX
UBMRPN		46.65	-1.64	-0.47	44.97	-1.77	-0.75	TA
VA68AJ		46.37	-1.92	-0.54	47.60	0.85	0.36	TA
YFHEZD		45.30	-3.00	-0.85	44.76	-1.98	-0.84	XX

Summary Statistics

	Sample W71	Sample W72
Grand Means	48.294 Joules Per Gram	46.742 Joules Per Gram
Std Dev Btwn Labs	3.534 Joules Per Gram	2.365 Joules Per Gram

Statistics based on 8 of 8 reporting participants

Sample W71: PBT & Sample W72: PBT

Key to Instrument Codes Reported by Participants

TA TA Instruments

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

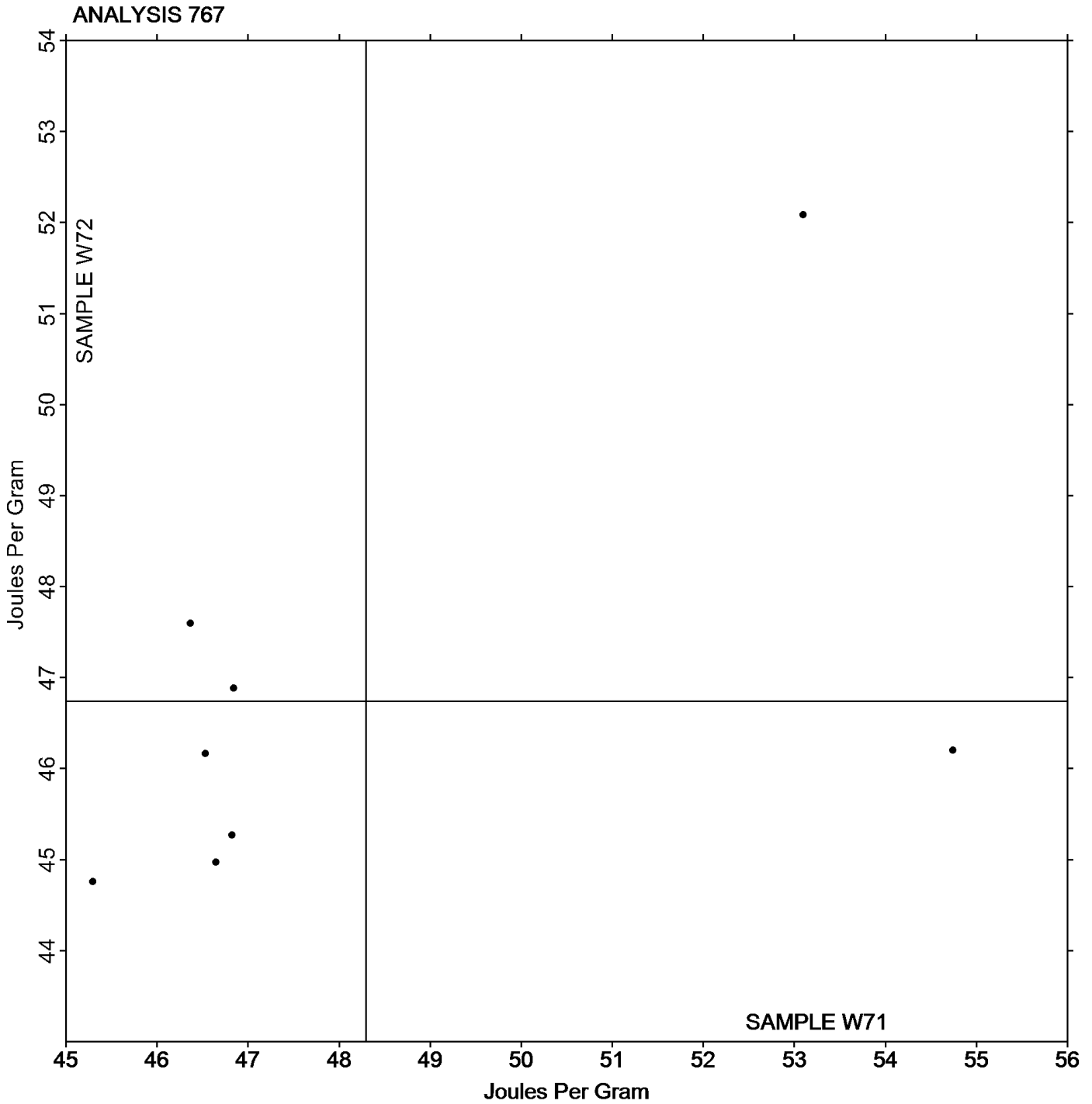
Analysis 767

Research Heat of Crystallization

Report #116

4th Qtr 2020

Grand Mean Sample W71: 48.294 Joules Per Gram Grand Mean Sample W72: 46.742 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 #116

Analysis 768

4th Qtr 2020

Research Heat of Fusion

WebCode	Data Flag	Sample W71			Sample W72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
FVE3LW		37.06	-3.45	-0.71	38.04	-1.24	-0.45	TA
HX2EKT		44.53	4.02	0.83	43.34	4.06	1.47	TA
K2DZ9H		36.30	-4.21	-0.87	35.84	-3.44	-1.25	XX
K6DC6H		50.17	9.66	2.00	42.16	2.88	1.04	XX
U4QXP6		38.65	-1.86	-0.39	38.77	-0.51	-0.18	XX
UBMRPN		41.33	0.82	0.17	41.25	1.97	0.72	TA
VA68AJ		39.96	-0.55	-0.11	38.83	-0.45	-0.16	TA
YFHEZD		36.08	-4.43	-0.92	36.01	-3.27	-1.18	NZ

Summary Statistics		
	Sample W71	Sample W72
Grand Means	40.511 Joules Per Gram	39.279 Joules Per Gram
Std Dev Btwn Labs	4.829 Joules Per Gram	2.756 Joules Per Gram
Statistics based on 8 of 8 reporting participants		

Sample W71: PBT & Sample W72: 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

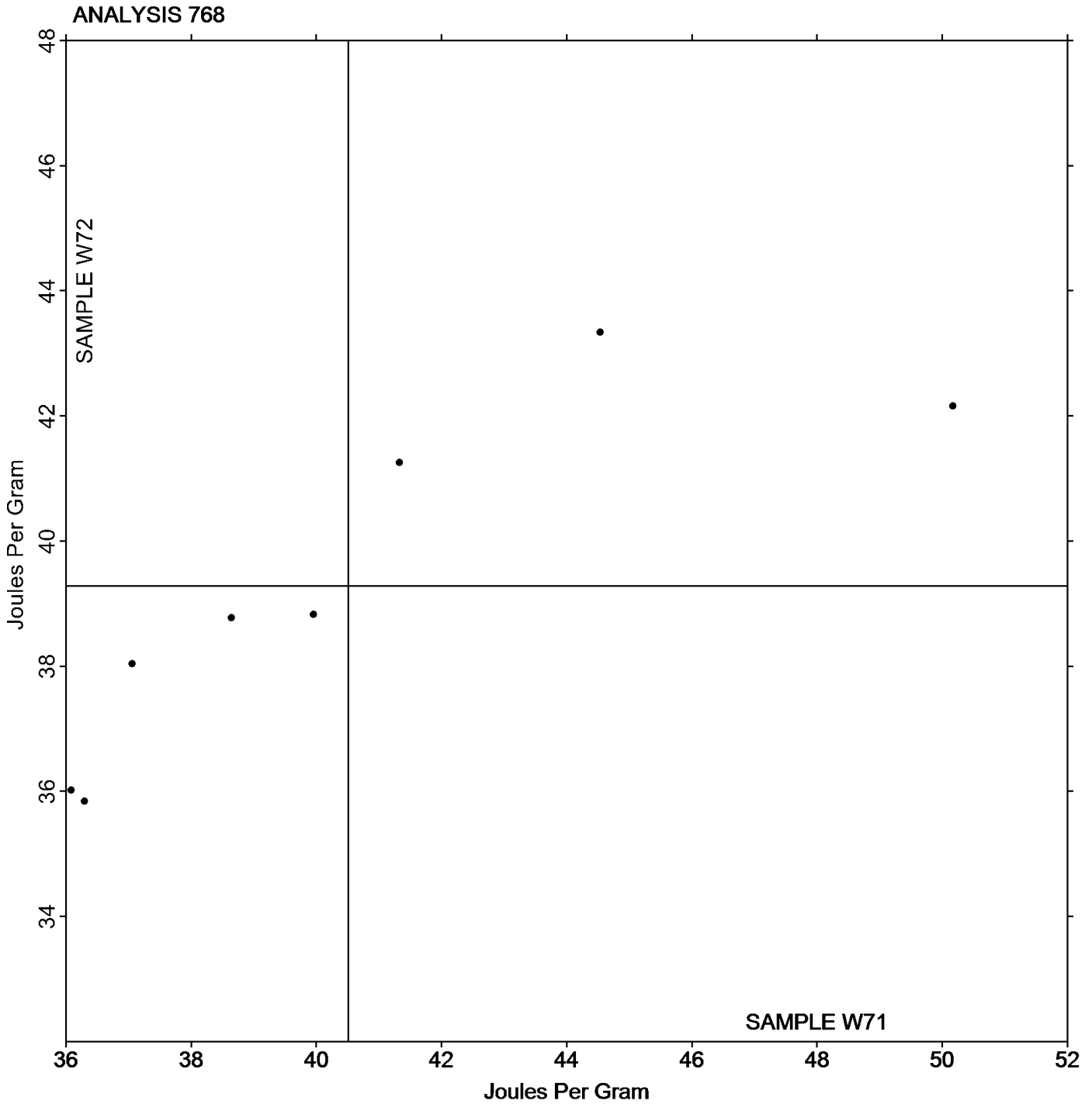
Analysis 768

Research Heat of Fusion

Report #116

4th Qtr 2020

Grand Mean Sample W71: 40.511 Joules Per Gram Grand Mean Sample W72: 39.279 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 #116

Analysis 769

4th Qtr 2020

Research Glass Transition Temperature

WebCode	Data Flag	<u>Sample V71</u>			<u>Sample V72</u>			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
FVE3LW		111.04	2.39	0.76	111.99	3.30	1.08	TA
HX2EKT		108.41	-0.25	-0.08	110.62	1.92	0.63	TA
K2DZ9H		108.00	-0.66	-0.21	107.40	-1.30	-0.42	XX
K6DC6H		108.67	0.01	0.00	108.93	0.24	0.08	XX
QW27TL		101.10	-7.56	-2.41	101.80	-6.90	-2.25	TA
U4QXP6		111.92	3.27	1.04	109.74	1.05	0.34	XX
UBMRPN		109.03	0.38	0.12	107.57	-1.13	-0.37	TA
VA68AJ		109.00	0.34	0.11	108.51	-0.19	-0.06	TA
YFHEZD		110.73	2.08	0.66	111.70	3.00	0.98	NZ

Summary Statistics		
	<u>Sample V71</u>	<u>Sample V72</u>
Grand Means	108.656 Degrees Celsius	108.696 Degrees Celsius
Stnd Dev Btwn Labs	3.133 Degrees Celsius	3.068 Degrees Celsius
Statistics based on 9 of 9 reporting participants		

Sample V71: ABS & Sample V72: ABS

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

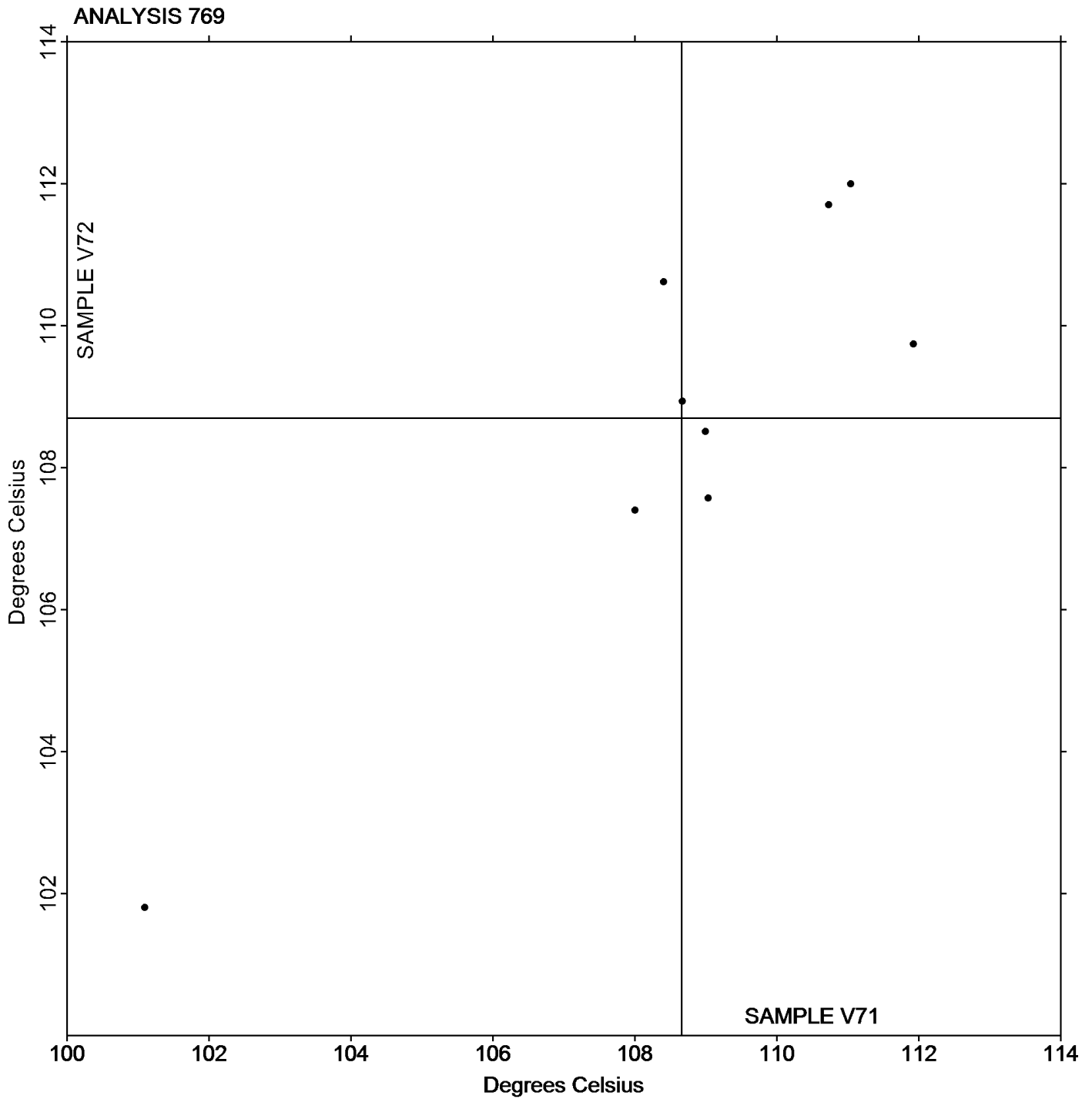
Analysis 769

Research Glass Transition Temperature

Report #116

4th Qtr 2020

Grand Mean Sample V71: 108.66 Degrees Celsius Grand Mean Sample V72: 108.70 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 #116

Analysis 770

4th Qtr 2020

Tensile Stress at Yield, Film Samples - psi

WebCode	Data Flag	Sample B71			Sample B72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7ZN3RB		1,876	-67	-0.41	1,810	-114	-0.65	WZ
AAFY79		1,945	2	0.01	1,850	-74	-0.42	IN
DHMJ32		1,992	49	0.30	1,938	14	0.08	UC
DKQEJJ		1,649	-293	-1.82	1,666	-258	-1.47	IN
EQ99R2		1,996	53	0.33	1,938	14	0.08	IN
G879TZ		2,192	249	1.55	2,163	239	1.36	TO
H6HWTU		1,909	-34	-0.21	1,912	-12	-0.07	MT
HMX6UU		1,962	19	0.12	2,020	97	0.55	SH
JP2DKQ		2,003	60	0.37	1,937	13	0.07	IN
NCE4EM		1,919	-24	-0.15	1,923	-1	0.00	IN
NGUBJA		2,023	80	0.50	2,031	107	0.61	OA
QPEF8Q	*	2,075	132	0.82	2,241	317	1.81	LI
R3LQA8		2,089	146	0.90	2,002	78	0.44	SH
RQK8QR		1,550	-393	-2.44	1,522	-401	-2.29	IN
RTCDVN		1,965	22	0.14	1,905	-19	-0.11	IN

Summary Statistics		
	Sample B71	Sample B72
Grand Means	1,942.8 psi	1,923.8 psi
Stnd Dev Btwn Labs	161.2 psi	175.6 psi
Statistics based on 15 of 15 reporting participants		

Sample B71: LDPE & Sample B72: LDPE

Key to Instrument Codes Reported by Participants

IN	Instron	LI	Lloyd Instruments
MT	MTS/Sintech	OA	Oakland Testing
SH	Shimadzu	TO	Tinius Olsen
UC	United	WZ	Zwick



Plastics Interlaboratory Testing Program

Report #116

Analysis 771

4th Qtr 2020

Tensile Stress at Break, Film Samples - psi

WebCode	Data Flag	Sample B71			Sample B72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7ZN3RB		3,688	340	0.81	3,832	389	0.87	WZ
99NMQ9		3,528	180	0.43	3,345	-98	-0.22	SH
AAFY79		3,501	152	0.36	3,498	56	0.12	IN
ANLUNB		2,963	-385	-0.92	3,002	-440	-0.98	IN
DHMJ32		2,951	-398	-0.95	3,189	-254	-0.57	UC
DKQEJ		2,650	-699	-1.66	2,666	-777	-1.73	IN
EQ99R2		3,881	532	1.27	3,905	462	1.03	IN
G879TZ		2,512	-836	-1.99	2,555	-888	-1.98	TO
HMX6UU		3,618	269	0.64	3,764	322	0.72	SH
JP2DKQ		3,633	284	0.68	3,578	135	0.30	IN
NCE4EM		3,384	35	0.08	3,309	-134	-0.30	IN
NGUBJA		3,839	491	1.17	4,024	581	1.30	OA
QPEF8Q	*	3,234	-115	-0.27	3,846	403	0.90	LI
R3LQA8		3,536	187	0.45	3,755	312	0.70	SH
RQK8QR		2,802	-546	-1.30	2,875	-568	-1.27	IN
RTCDVN		3,564	215	0.51	3,703	260	0.58	IN
TWK7EL		3,642	294	0.70	3,681	238	0.53	IN

Summary Statistics		
	Sample B71	Sample B72
Grand Means	3,348.6 psi	3,442.8 psi
Std Dev Btwn Labs	420.0 psi	448.1 psi
Statistics based on 17 of 17 reporting participants		

Sample B71: LDPE & Sample B72: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

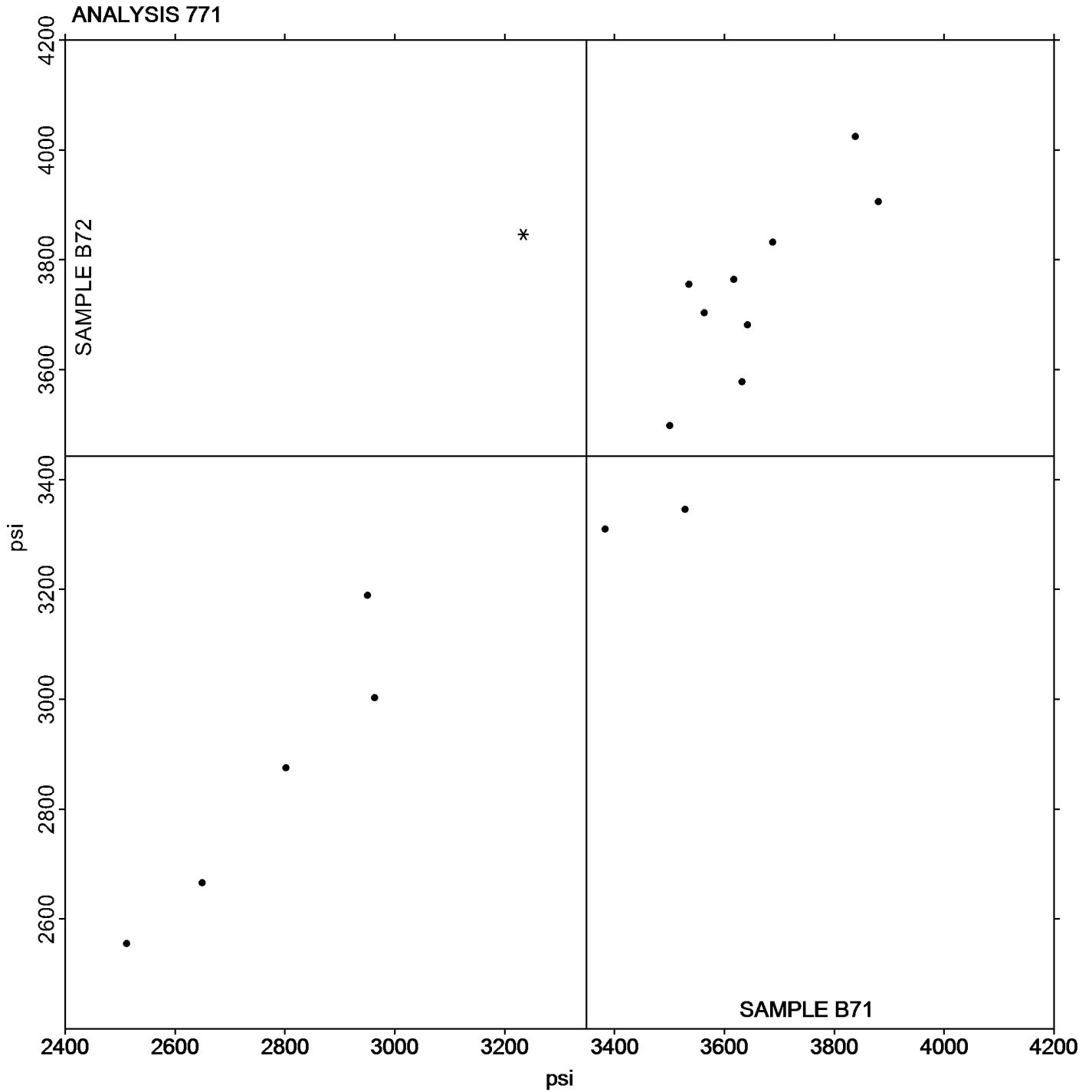
Report #116

Analysis 771

4th Qtr 2020

Tensile Stress at Break, Film Samples - psi

Grand Mean Sample B71: 3,348.55 psi Grand Mean Sample B72: 3,442.79 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 #116

Analysis 772

4th Qtr 2020

Percent Elongation at Yield, Films

WebCode	Data Flag	Sample B71			Sample B72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7ZN3RB		70.12	-8.96	-0.42	63.95	-14.75	-0.61	WZ
AAFY79		77.04	-2.03	-0.10	71.54	-7.17	-0.30	IN
DKQEJ		108.84	29.77	1.40	120.96	42.26	1.76	IN
EQ99R2		26.49	-52.58	-2.47	26.81	-51.90	-2.16	IN
G879TZ	X	326.00	246.93	11.58	325.60	246.89	10.27	TO
HMX6UU		94.41	15.34	0.72	94.59	15.88	0.66	SH
JP2DKQ		69.47	-9.60	-0.45	65.43	-13.28	-0.55	IN
NCE4EM		85.21	6.14	0.29	89.56	10.85	0.45	IN
QPEF8Q		88.55	9.48	0.44	86.95	8.24	0.34	LI
R3LQA8		70.11	-8.96	-0.42	68.48	-10.23	-0.43	SH
RQK8QR		94.43	15.36	0.72	96.34	17.63	0.73	IN
RTCDVN		85.13	6.06	0.28	81.16	2.45	0.10	IN

Summary Statistics		
	Sample B71	Sample B72
Grand Means	79.073 Percent	78.706 Percent
Std Dev Btwn Labs	21.315 Percent	24.049 Percent
Statistics based on 11 of 12 reporting participants		

Sample B71: LDPE & Sample B72: LDPE

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

Comments on Assigned Data Flags for Test #772

G879TZ (X) - Extreme data.

Key to Instrument Codes Reported by Participants

IN Instron	LI Lloyd Instruments
SH Shimadzu	TO Tinius Olsen
WZ Zwick	



Plastics Interlaboratory Testing Program

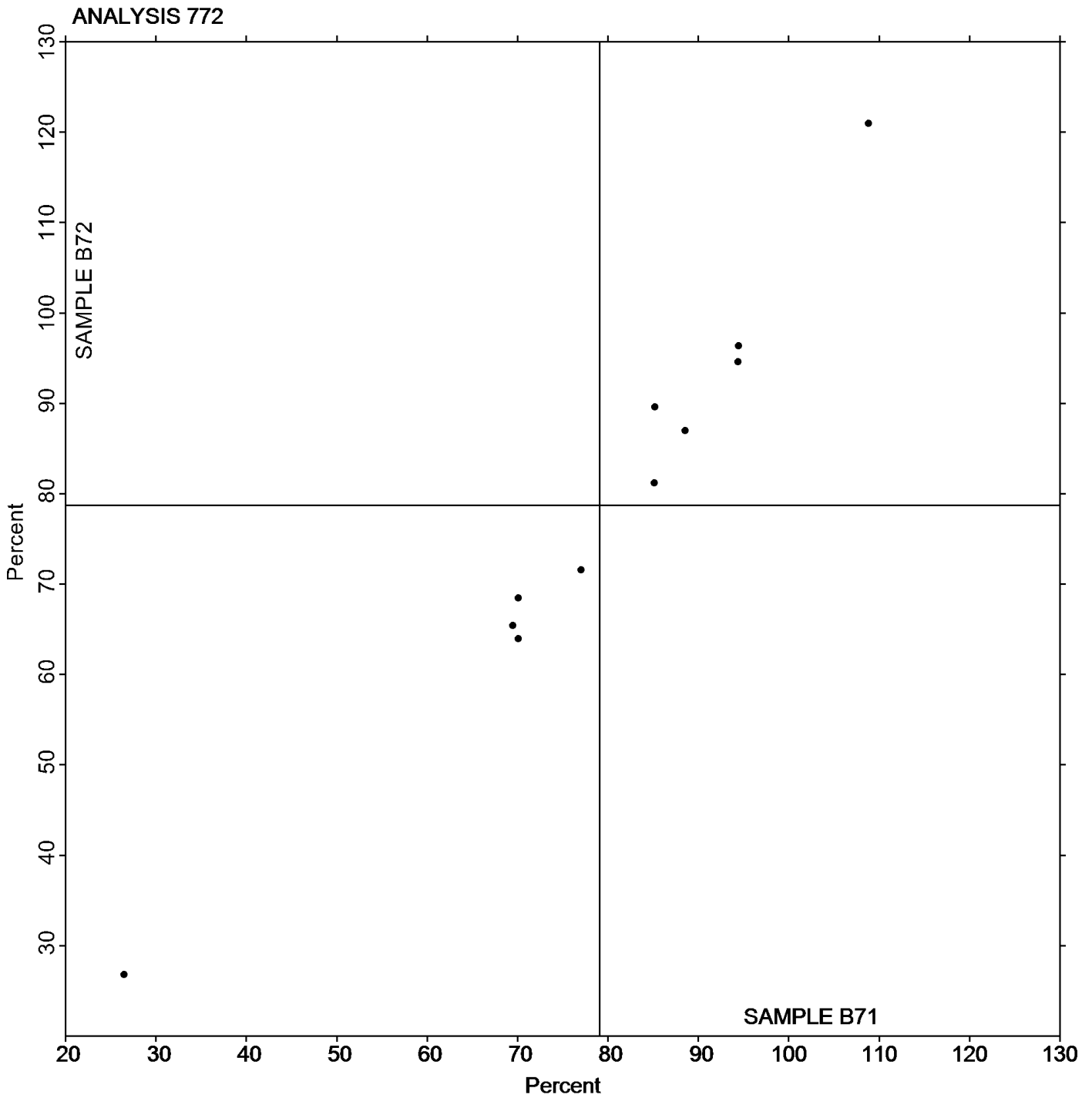
Analysis 772

Percent Elongation at Yield, Films

Report #116

4th Qtr 2020

Grand Mean Sample B71: 79.073 Percent Grand Mean Sample B72: 78.706 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 #116

Analysis 773

4th Qtr 2020

Percent Elongation at Break, Film Samples

WebCode	Data Flag	Sample B71			Sample B72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7ZN3RB		574.0	-146.5	-1.25	622.0	-135.2	-1.08	WZ
99NMQ9		689.8	-30.7	-0.26	744.0	-13.2	-0.11	SH
AAFY79		650.3	-70.2	-0.60	679.2	-77.9	-0.62	IN
ANLUNB		840.7	120.2	1.03	901.2	144.0	1.15	IN
DHMJ32	X	16.4	-704.1	-6.02	18.0	-739.2	-5.91	UC
DKQEJ		830.1	109.6	0.94	791.3	34.1	0.27	IN
EQ99R2		644.0	-76.5	-0.65	680.9	-76.3	-0.61	IN
G879TZ		448.6	-271.9	-2.33	458.0	-299.2	-2.39	TO
HMX6UU		836.5	116.0	0.99	852.2	95.0	0.76	SH
JP2DKQ		594.2	-126.3	-1.08	608.9	-148.3	-1.19	IN
NCE4EM		837.0	116.5	1.00	807.7	50.5	0.40	IN
NGUBJA		729.6	9.1	0.08	758.2	1.0	0.01	OA
QPEF8Q		695.3	-25.2	-0.22	844.3	87.1	0.70	LI
R3LQA8		861.0	140.5	1.20	966.4	209.2	1.67	SH
RQK8QR		729.9	9.4	0.08	767.5	10.3	0.08	IN
RTCDVN		782.7	62.2	0.53	834.1	76.9	0.62	IN
TWK7EL		784.3	63.8	0.55	799.3	42.1	0.34	IN

Summary Statistics

	Sample B71	Sample B72
Grand Means	720.51 Percent	757.19 Percent
Std Dev Btwn Labs	116.92 Percent	125.03 Percent

Statistics based on 16 of 17 reporting participants

Sample B71: LDPE & Sample B72: LDPE

Comments on Assigned Data Flags for Test #773

DHMJ32 (X) - Extreme data.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

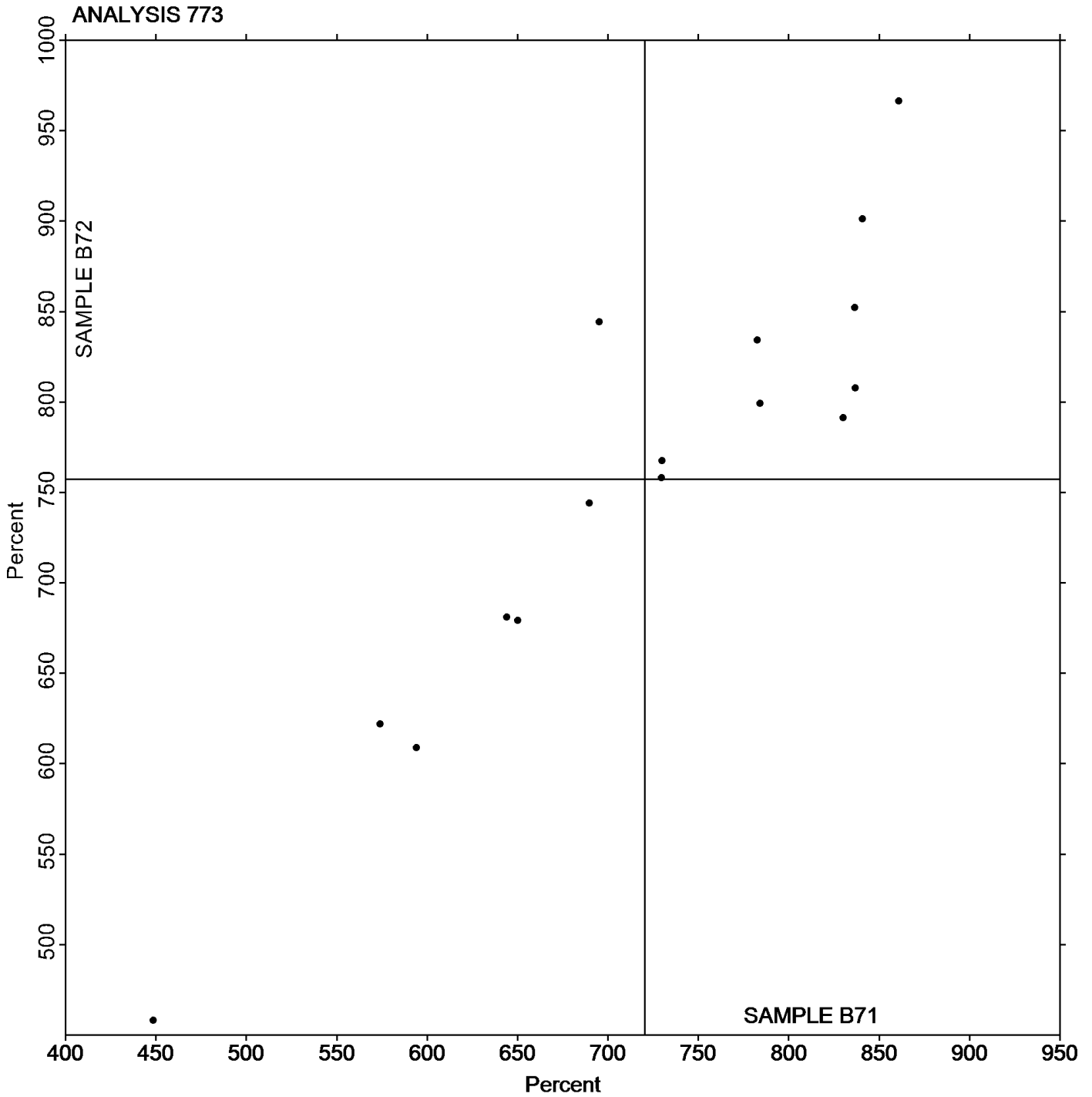
Report #116

Analysis 773

4th Qtr 2020

Percent Elongation at Break, Film Samples

Grand Mean Sample B71: 720.51 Percent Grand Mean Sample B72: 757.19 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 #116

Analysis 774

4th Qtr 2020

Thickness of Film Tensile Samples - mils

WebCode	Data Flag	<u>Sample B71</u>			<u>Sample B72</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
7ZN3RB		2.6237	-0.0908	-0.61	2.7103	-0.0703	-0.59
99NMQ9		2.6142	-0.1003	-0.68	2.8583	0.0776	0.65
AAFY79		2.7490	0.0346	0.23	2.8000	0.0194	0.16
ANLUNB		2.5984	-0.1160	-0.79	2.6929	-0.0877	-0.73
DHMJ32		2.6100	-0.1044	-0.71	2.6900	-0.0906	-0.75
DKQEJ		3.0810	0.3666	2.48	3.0660	0.2854	2.37
E72UJM		2.6100	-0.1044	-0.71	2.8700	0.0894	0.74
EQ99R2		2.6760	-0.0384	-0.26	2.7860	0.0054	0.04
G879TZ		2.8544	0.1399	0.95	2.8859	0.1053	0.88
HMX6UU		2.6288	-0.0856	-0.58	2.5768	-0.2038	-1.70
HTK9MJ		2.4500	-0.2644	-1.79	2.7140	-0.0666	-0.55
JP2DKQ		2.7048	-0.0097	-0.07	2.7402	-0.0404	-0.34
NCE4EM		2.9020	0.1876	1.27	2.8470	0.0664	0.55
NGUBJA		2.7520	0.0376	0.25	2.7730	-0.0076	-0.06
QPEF8Q		2.5749	-0.1396	-0.95	2.5292	-0.2514	-2.09
R3LQA8		2.6772	-0.0373	-0.25	2.7874	0.0068	0.06
RQK8QR		2.7700	0.0556	0.38	2.8200	0.0394	0.33
RTCDVN		2.9120	0.1976	1.34	2.9040	0.1234	1.03
TWK7EL		2.7860	0.0716	0.48	2.7810	0.0004	0.00

Summary Statistics		
	<u>Sample B71</u>	<u>Sample B72</u>
Grand Means	2.71443 mils	2.78063 mils
Stnd Dev Btwn Labs	0.14762 mils	0.12016 mils
Statistics based on 19 of 19 reporting participants		

Sample B71: LDPE & Sample B72: LDPE



Plastics Interlaboratory Testing Program

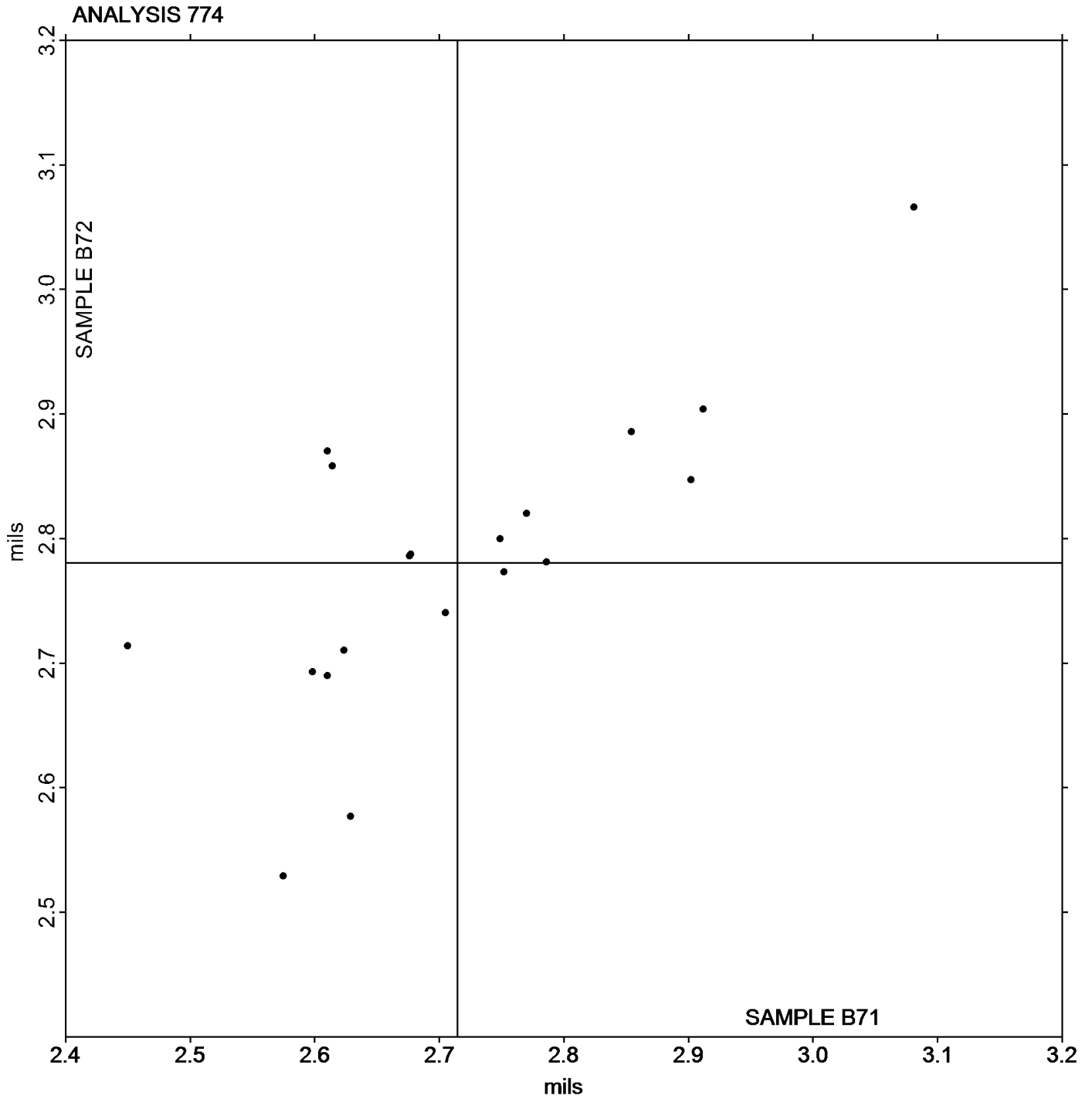
Report #116

Analysis 774

4th Qtr 2020

Thickness of Film Tensile Samples - mils

Grand Mean Sample B71: 2.7144 mils Grand Mean Sample B72: 2.7806 mils



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



Plastics Interlaboratory Testing Program

Report #116

Analysis 775

4th Qtr 2020

Secant Modulus at 1% Strain - psi

WebCode	Data Flag	Sample B71			Sample B72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7ZN3RB		33,170	828	0.16	31,836	-241	-0.04	WZ
AAFY79		29,040	-3,303	-0.64	29,398	-2,680	-0.47	IN
ANLUNB		22,510	-9,832	-1.90	23,163	-8,914	-1.57	IN
DKQEJJ		41,084	8,742	1.69	42,044	9,966	1.75	IN
EQ99R2		33,870	1,528	0.30	28,424	-3,653	-0.64	IN
G879TZ		24,558	-7,784	-1.51	23,080	-8,998	-1.58	TO
HMX6UU		38,493	6,151	1.19	39,480	7,402	1.30	SH
NCE4EM		32,724	382	0.07	33,007	930	0.16	IN
NGUBJA		32,015	-327	-0.06	32,639	562	0.10	OA
QPEF8Q		32,818	476	0.09	35,615	3,538	0.62	LI
R3LQA8		32,779	437	0.08	31,502	-575	-0.10	SH
RTCDVN		35,045	2,702	0.52	34,740	2,663	0.47	IN

Summary Statistics		
	Sample B71	Sample B72
Grand Means	32,342.2 psi	32,077.2 psi
Std Dev Btwn Labs	5,164.7 psi	5,690.9 psi
Statistics based on 12 of 12 reporting participants		

Sample B71: LDPE & Sample B72: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

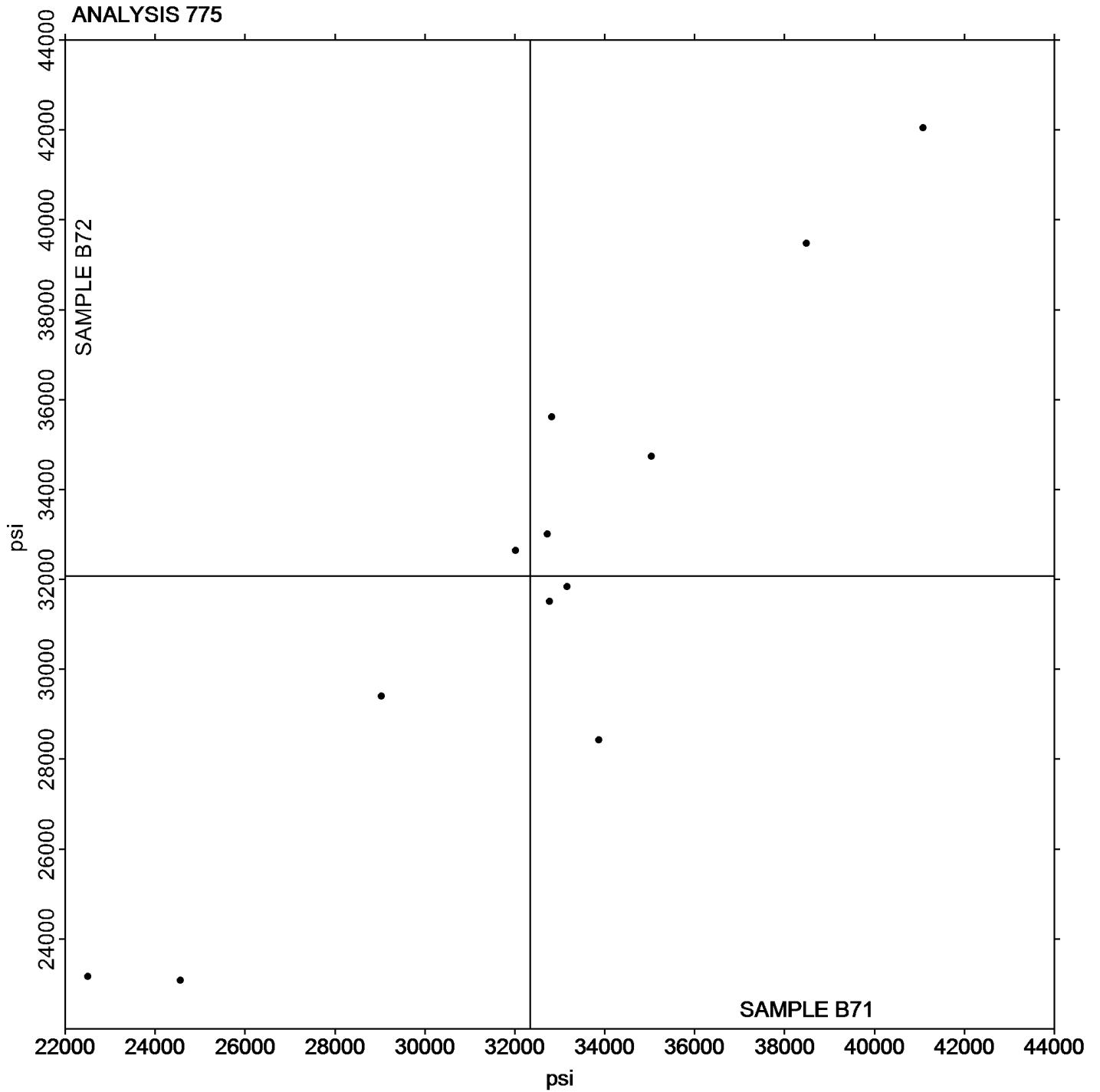
Report #116

Analysis 775

4th Qtr 2020

Secant Modulus at 1% Strain - psi

Grand Mean Sample B71: 32,342.17 psi Grand Mean Sample B72: 32,077.22 psi



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



Plastics Interlaboratory Testing Program

Report #116

Analysis 776

4th Qtr 2020

Secant Modulus at 2% Strain - psi

WebCode	Data Flag	Sample B71			Sample B72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
AAFY79		26,159	-1,364	-0.41	25,859	-1,491	-0.48	MT
ANLUNB		24,294	-3,229	-0.97	24,309	-3,041	-0.98	IN
DKQEJ		29,424	1,901	0.57	30,168	2,819	0.91	IN
EQ99R2		33,223	5,700	1.71	28,295	945	0.31	IN
G879TZ		21,207	-6,316	-1.90	21,021	-6,329	-2.05	TO
HMX6UU		29,849	2,326	0.70	30,734	3,384	1.10	SH
NCE4EM		27,319	-204	-0.06	27,800	450	0.15	IN
QPEF8Q		27,937	414	0.12	30,188	2,838	0.92	LI
R3LQA8		26,281	-1,242	-0.37	25,860	-1,489	-0.48	SH
RTCDVN		29,537	2,014	0.61	29,262	1,913	0.62	IN

Summary Statistics

	Sample B71	Sample B72
Grand Means	27,523.1 psi	27,349.5 psi
Std Dev Btwn Labs	3,325.1 psi	3,090.3 psi
Statistics based on 10 of 10 reporting participants		

Sample B71: LDPE & Sample B72: LDPE

Key to Instrument Codes Reported by Participants

IN	Instron	LI	Lloyd Instruments
MT	MTS/Sintech	SH	Shimadzu
TO	Tinius Olsen		



Plastics Interlaboratory Testing Program

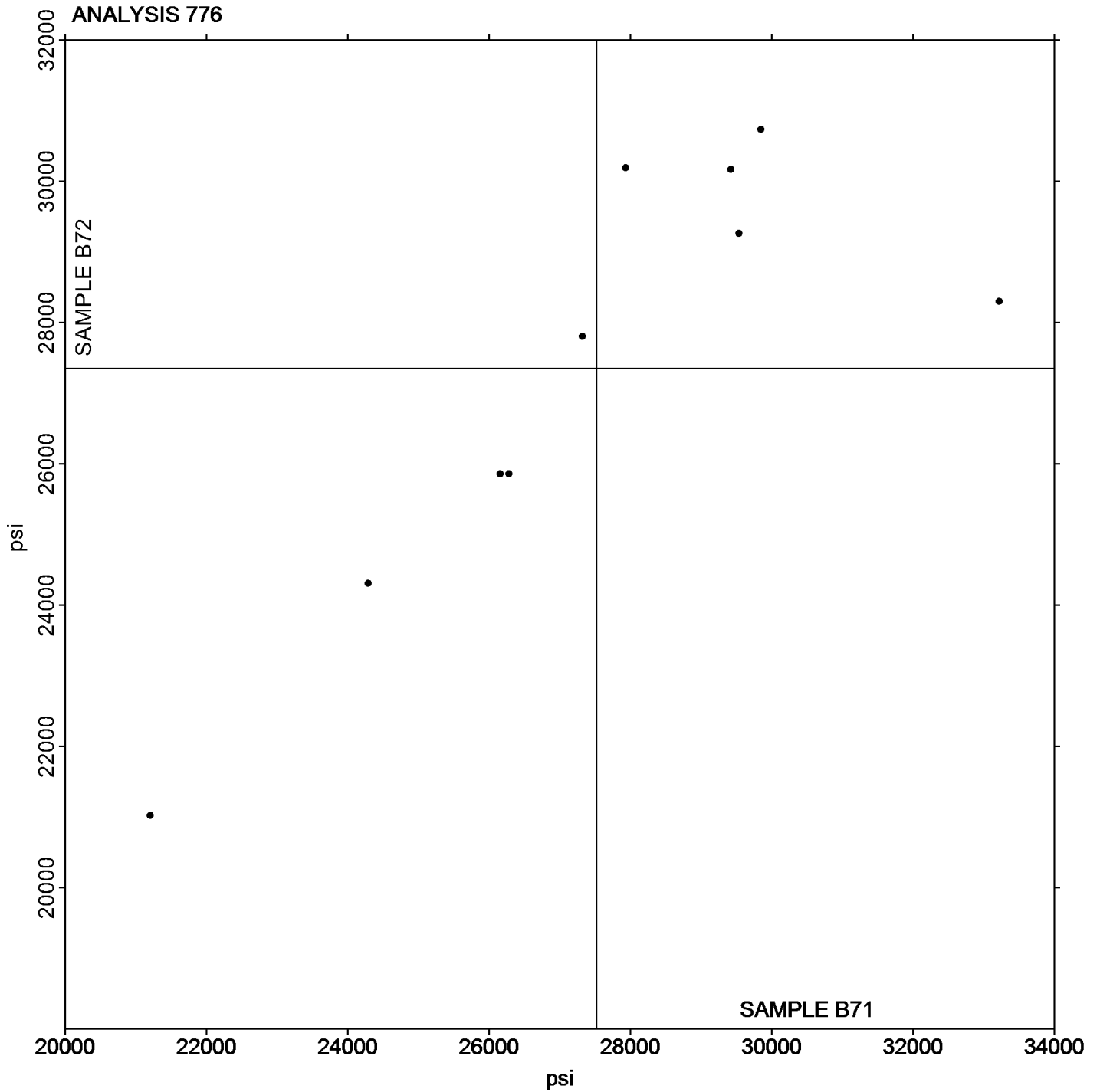
Report #116

Analysis 776

4th Qtr 2020

Secant Modulus at 2% Strain - psi

Grand Mean Sample B71: 27,523.10 psi Grand Mean Sample B72: 27,349.53 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 #116

Analysis 780

4th Qtr 2020

Coefficient of Static Friction

WebCode	Data Flag	Sample P71			Sample P72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7ZN3RB		0.1606	0.0055	0.14	0.1514	-0.0074	-0.16	TH
99NMQ9		0.1086	-0.0465	-1.16	0.1014	-0.0574	-1.27	SA
A7ZBR4		0.1653	0.0102	0.26	0.1588	0.0000	0.00	IG
AAFY79		0.1606	0.0055	0.14	0.1924	0.0336	0.74	MI
EQ99R2		0.1060	-0.0491	-1.23	0.1180	-0.0408	-0.90	TH
G879TZ		0.1546	-0.0005	-0.01	0.1540	-0.0048	-0.11	RD
HJHQE2		0.1117	-0.0434	-1.08	0.1165	-0.0423	-0.94	IG
HMX6UU		0.1818	0.0267	0.67	0.1791	0.0203	0.45	SA
KYMY4U		0.1886	0.0335	0.84	0.1832	0.0244	0.54	TH
NGUBJA		0.1600	0.0049	0.12	0.1518	-0.0070	-0.15	DY
RHA66Q		0.2140	0.0589	1.47	0.2332	0.0744	1.65	IS
RTCDVN		0.2126	0.0575	1.44	0.2328	0.0740	1.64	TM
UBMRPN		0.0918	-0.0633	-1.58	0.0918	-0.0670	-1.48	TH

Summary Statistics

	Sample P71	Sample P72
Grand Means	0.15510 COF	0.15880 COF
Std Dev Btwn Labs	0.04006 COF	0.04520 COF

Statistics based on 13 of 13 reporting participants

Sample P71: LDPE & Sample P72: LDPE

Key to Instrument Codes Reported by Participants

DY	Dynisco Model D1055	IG	Instron
IS	Instron 5000 Series	MI	MTS Insight
RD	RDM CF	SA	Shimadzu Autograph
TH	Thwing Albert Friction/Peel Tester Model 225-1	TM	TMI Slip and Friction Tester



Plastics Interlaboratory Testing Program

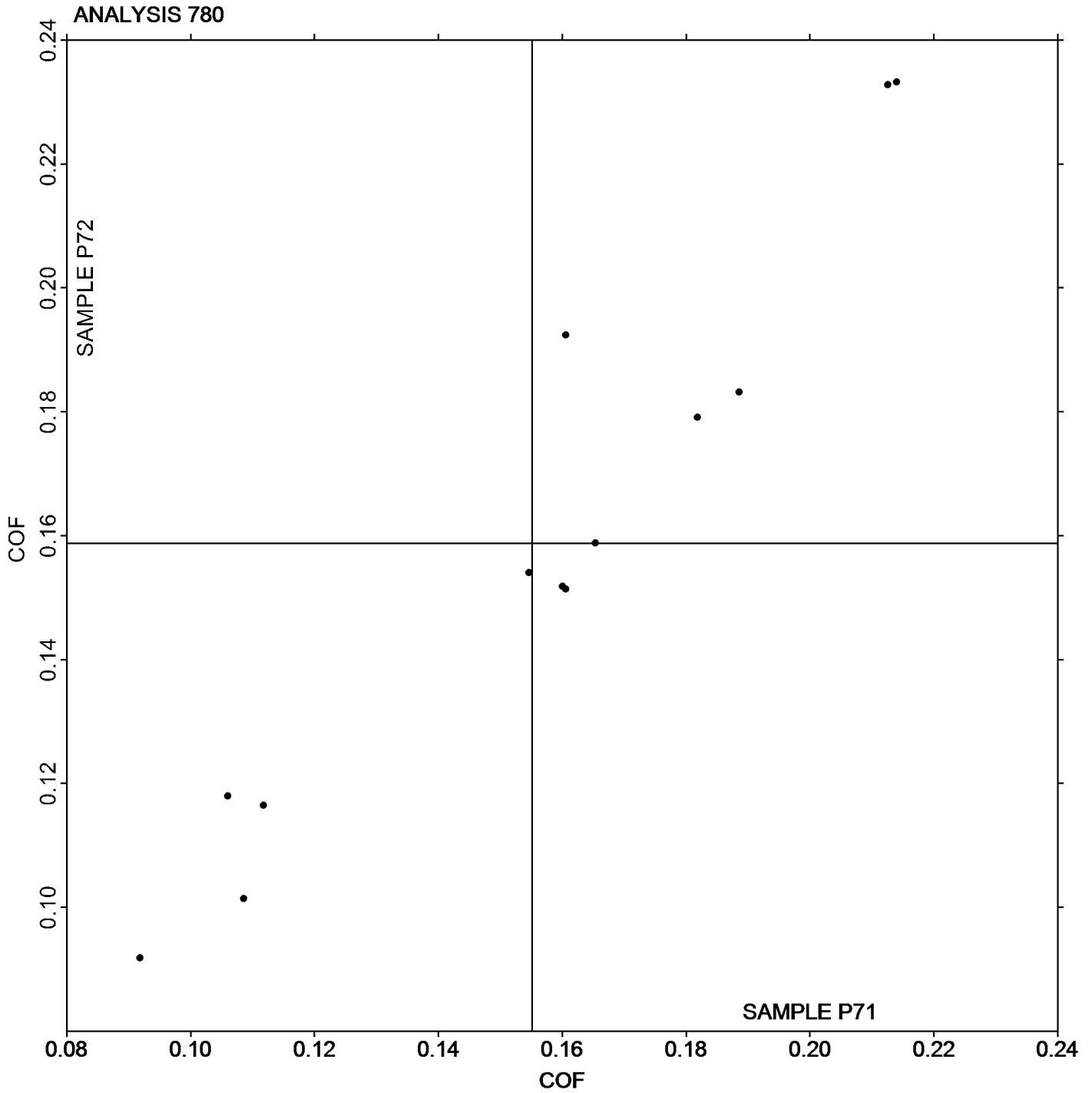
Report #116

Analysis 780

4th Qtr 2020

Coefficient of Static Friction

Grand Mean Sample P71: 0.15510 COF Grand Mean Sample P72: 0.15880 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 #116

Analysis 781

4th Qtr 2020

Coefficient of Kinetic Friction

WebCode	Data Flag	Sample P71			Sample P72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7ZN3RB		0.0816	-0.0106	-0.42	0.0832	-0.0075	-0.28	TH
99NMQ9		0.0320	-0.0602	-2.39	0.0238	-0.0669	-2.51	SA
A7ZBR4		0.0906	-0.0016	-0.06	0.0889	-0.0019	-0.07	IG
AAFY79	X	0.9660	0.8738	34.62	0.1016	0.0109	0.41	MI
EQ99R2		0.0820	-0.0102	-0.41	0.0880	-0.0027	-0.10	TH
G879TZ		0.1302	0.0380	1.50	0.1298	0.0391	1.46	RD
HJHQE2		0.0931	0.0009	0.03	0.0961	0.0054	0.20	IG
HMX6UU		0.0935	0.0012	0.05	0.0844	-0.0063	-0.24	SA
KYMY4U		0.1062	0.0140	0.55	0.1000	0.0093	0.35	TH
NGUBJA		0.1030	0.0108	0.43	0.1070	0.0163	0.61	DY
RTCDVN		0.1186	0.0264	1.04	0.1146	0.0239	0.89	TM
UBMRPN		0.0838	-0.0084	-0.33	0.0822	-0.0085	-0.32	TH

Summary Statistics		
	Sample P71	Sample P72
Grand Means	0.09224 COF	0.09073 COF
Std Dev Btwn Labs	0.02524 COF	0.02671 COF
Statistics based on 11 of 12 reporting participants		

Sample P71: LDPE & Sample P72: LDPE

Comments on Assigned Data Flags for Test #781

AAFY79 (X) - Extreme data for sample P71.

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		



Plastics Interlaboratory Testing Program

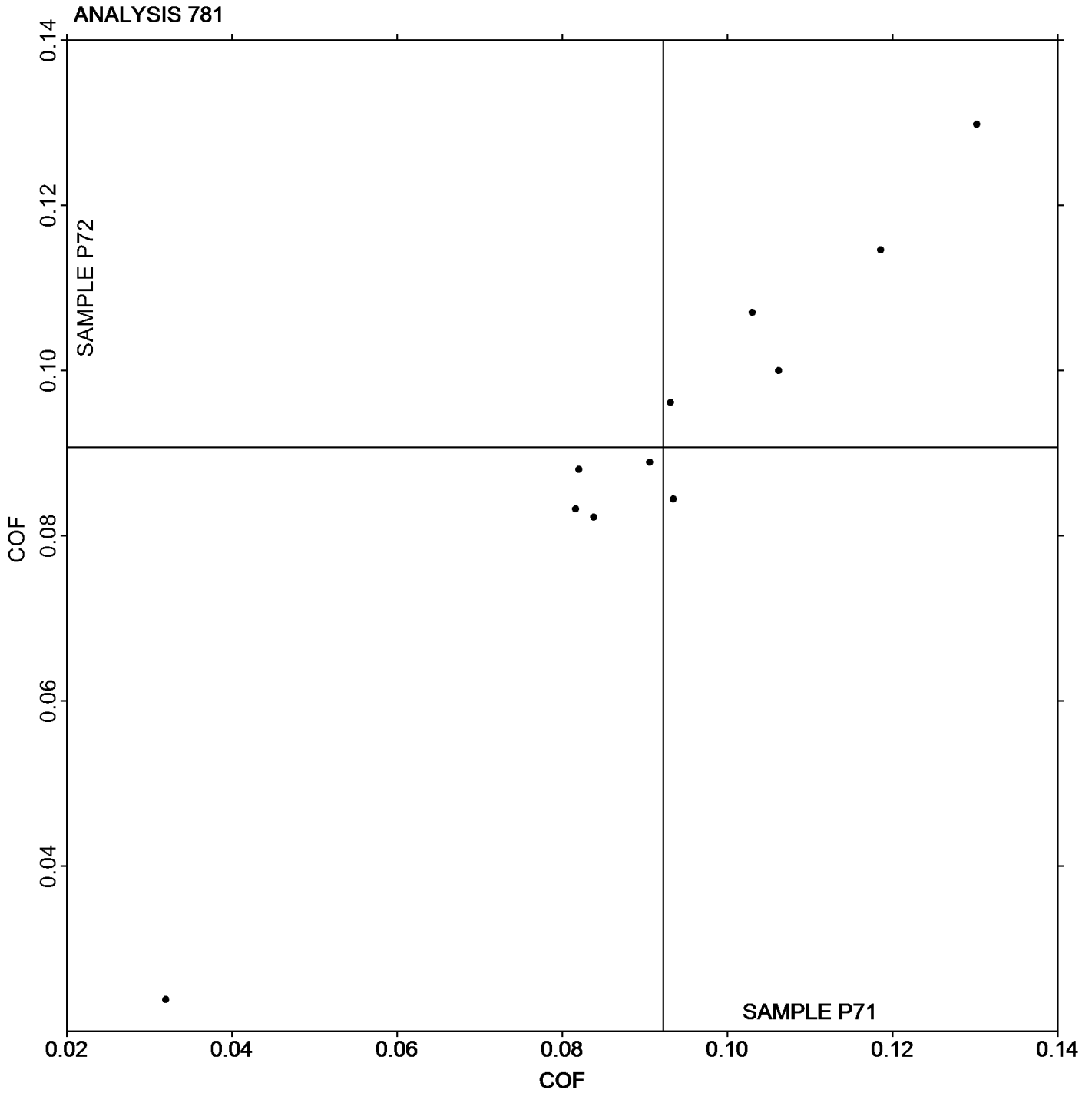
Analysis 781

Coefficient of Kinetic Friction

Report #116

4th Qtr 2020

Grand Mean Sample P71: 0.09224 COF Grand Mean Sample P72: 0.09073 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 #116

Analysis 782

4th Qtr 2020

Tear Resistance of Films

WebCode	Data Flag	Sample Q71			Sample Q72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7ZN3RB		305.3	-28.2	-0.61	239.4	-94.3	-0.81	TA
99NMQ9		409.1	75.7	1.63	454.8	121.1	1.03	LO
AAFY79		321.8	-11.7	-0.25	156.5	-177.2	-1.51	TE
EQ99R2		297.5	-35.9	-0.78	320.8	-12.9	-0.11	TM
HMX6UU		362.7	29.3	0.63	362.9	29.2	0.25	TE
JP2DKQ		375.8	42.4	0.91	378.2	44.5	0.38	SZ
NGUBJA		267.0	-66.4	-1.43	248.0	-85.7	-0.73	TA
RTCDVN		328.4	-5.0	-0.11	509.0	175.3	1.50	TM

Summary Statistics

	Sample Q71	Sample Q72
Grand Means	333.45 grams-force	333.70 grams-force
Std Dev Btwn Labs	46.35 grams-force	117.14 grams-force
Statistics based on 8 of 8 reporting participants		

Sample Q71: LDPE & Sample Q72: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

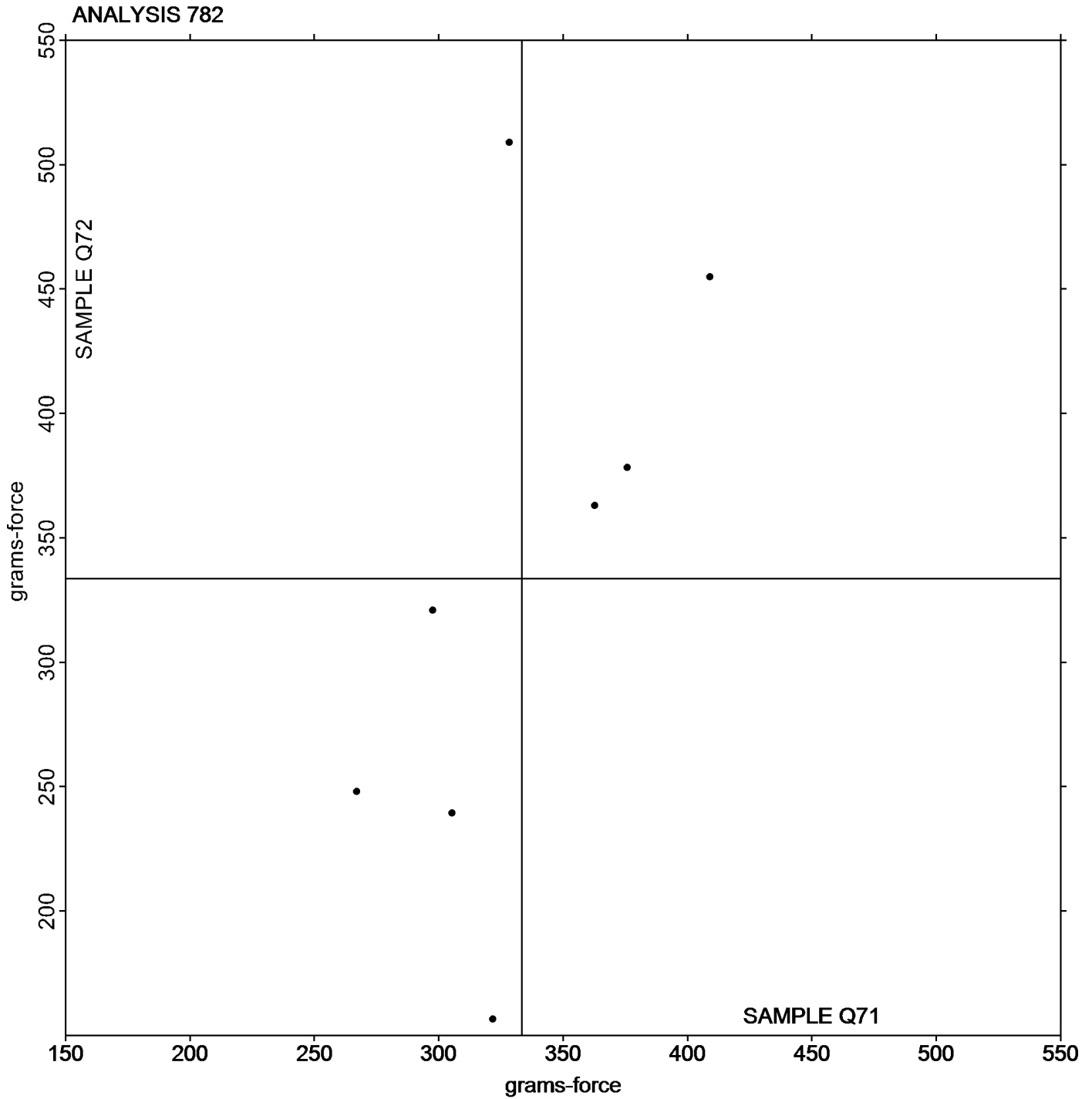
Report #116

Analysis 782

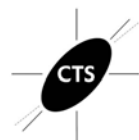
4th Qtr 2020

Tear Resistance of Films

Grand Mean Sample Q71: 333.45 grams-force Grand Mean Sample Q72: 333.70 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 #116

Analysis 785

4th Qtr 2020

Percent Haze of Film

WebCode	Data Flag	Sample D71			Sample D72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
79XR6A		22.121	2.178	2.45	21.934	2.190	2.53	XR
7E7YVE		20.313	0.369	0.41	19.763	0.019	0.02	BJ
7W4BF9		18.805	-1.139	-1.28	19.329	-0.415	-0.48	XX
7ZN3RB		20.275	0.331	0.37	19.625	-0.118	-0.14	BJ
882LA2		19.600	-0.344	-0.39	19.575	-0.168	-0.19	BJ
8KMYLB		20.738	0.794	0.89	19.900	0.157	0.18	BJ
9TYC47		21.096	1.153	1.30	21.006	1.263	1.46	XR
9XRGVP		19.761	-0.182	-0.21	19.543	-0.201	-0.23	BJ
AAFY79		19.938	-0.006	-0.01	19.263	-0.481	-0.56	BJ
B8P7J6		20.313	0.369	0.41	20.338	0.594	0.69	BJ
CMG4KY		19.188	-0.756	-0.85	19.900	0.157	0.18	BJ
DCBV36		18.424	-1.520	-1.71	17.925	-1.818	-2.10	HL
DKQEJ		20.438	0.494	0.56	20.413	0.669	0.77	BJ
EJRQHY		20.150	0.206	0.23	19.850	0.107	0.12	BT
EQ99R2		20.763	0.819	0.92	20.238	0.494	0.57	BJ
HMX6UU		19.638	-0.306	-0.34	19.800	0.057	0.07	BJ
HTK9MJ		19.350	-0.594	-0.67	20.038	0.294	0.34	BJ
JB4BWR		20.350	0.406	0.46	19.713	-0.031	-0.04	BJ
JP2DKQ		19.725	-0.219	-0.25	19.638	-0.106	-0.12	BJ
K2DZ9H		19.763	-0.181	-0.20	19.913	0.169	0.20	BJ
MER8XE		21.035	1.091	1.23	21.260	1.517	1.75	XR
MJJEGM		18.425	-1.519	-1.71	18.475	-1.268	-1.46	HL
NGUBJA		21.324	1.380	1.55	20.351	0.608	0.70	XR
QFM7DM		19.118	-0.826	-0.93	19.600	-0.143	-0.17	XR
QJTMVR		19.350	-0.594	-0.67	18.775	-0.968	-1.12	BJ
RTCDVN		20.188	0.244	0.27	20.288	0.544	0.63	BJ
T4N39K		18.335	-1.609	-1.81	18.023	-1.721	-1.99	XX
UBMRPN		20.200	0.256	0.29	19.613	-0.131	-0.15	BJ
Y4TDPY		19.225	-0.719	-0.81	18.400	-1.343	-1.55	BJ
ZNPGXJ		20.368	0.424	0.48	19.820	0.077	0.09	BJ



Plastics Interlaboratory Testing Program

Report #116

Analysis 785

4th Qtr 2020

Percent Haze of Film

Summary Statistics

	<u>Sample D71</u>	<u>Sample D72</u>
Grand Means	19.9437 Percent	19.7434 Percent
Stnd Dev Btwn Labs	0.8888 Percent	0.8659 Percent

Statistics based on 30 of 30 reporting participants

Sample D71: LDPE & Sample D72: LDPE

Key to Instrument Codes Reported by Participants

- | | | | |
|----|--|----|---------------------------------------|
| BJ | BYK-Gardner Haze-Gard Plus/i | BT | BYK Gardner TCS Series |
| HL | Hunterlab Ultrascan | XR | X-Rite Spectrocolorimeter (any model) |
| XX | Instrument make/model not specified by lab | | |



Plastics Interlaboratory Testing Program

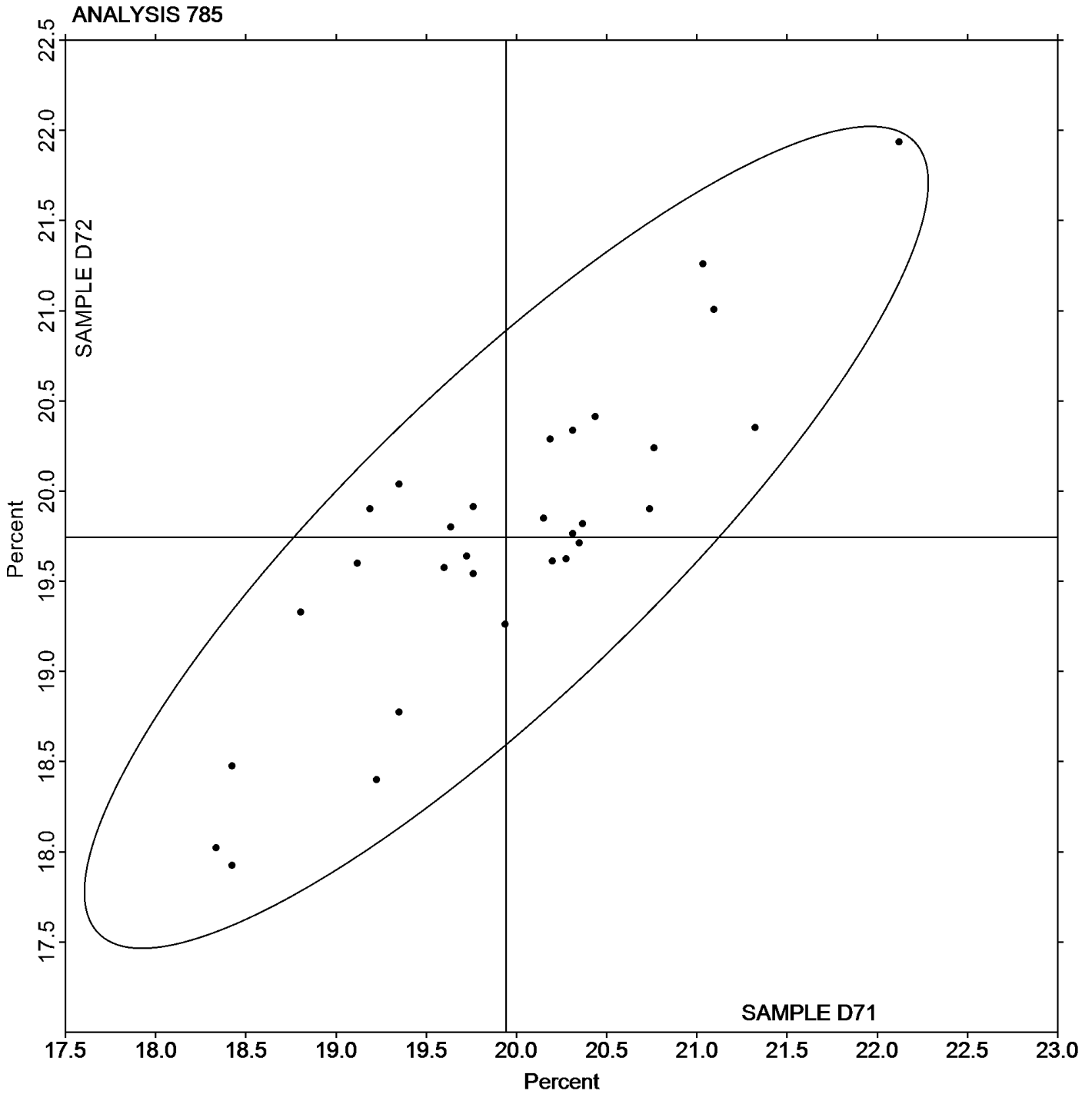
Analysis 785

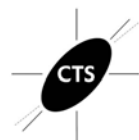
Percent Haze of Film

Report #116

4th Qtr 2020

Grand Mean Sample D71: 19.944 Percent Grand Mean Sample D72: 19.743 Percent





Plastics Interlaboratory Testing Program

Report #116

Analysis 786

4th Qtr 2020

Total Luminous transmittance of film

WebCode	Data Flag	Sample D71			Sample D72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
79XR6A		91.41	-1.04	-1.02	91.46	-1.05	-1.03	XR
7E7YVE		93.46	1.01	0.99	93.48	0.97	0.96	BJ
7W4BF9		90.91	-1.54	-1.50	90.92	-1.58	-1.56	XX
7ZN3RB		92.88	0.42	0.41	92.91	0.41	0.41	BJ
882LA2		93.09	0.64	0.62	92.89	0.39	0.38	BJ
9TYC47		92.19	-0.26	-0.26	92.20	-0.30	-0.30	XR
9XRGVP		93.63	1.18	1.15	93.92	1.42	1.40	BJ
AAFY79		91.50	-0.95	-0.93	91.83	-0.68	-0.67	BJ
B8P7J6		92.80	0.35	0.34	92.78	0.27	0.27	BJ
CMG4KY		93.01	0.56	0.55	92.94	0.44	0.43	BJ
DCBV36		90.83	-1.63	-1.58	90.85	-1.65	-1.63	HL
DKQEJJ	X	93.88	1.42	1.39	94.70	2.20	2.17	BJ
EJRQHY		93.05	0.60	0.58	93.00	0.50	0.49	BT
EQ99R2		92.48	0.02	0.02	92.49	-0.01	-0.01	BJ
HMX6UU		92.48	0.02	0.02	92.56	0.06	0.06	BJ
HTK9MJ		93.68	1.22	1.19	93.76	1.26	1.24	BJ
JB4BWR		93.25	0.80	0.78	93.23	0.72	0.71	BJ
JP2DKQ	X	85.70	-6.75	-6.58	85.74	-6.76	-6.68	BJ
K2DZ9H		94.04	1.59	1.55	94.29	1.79	1.76	BJ
KYMY4U		91.65	-0.80	-0.78	91.68	-0.83	-0.82	BH
MER8XE		91.44	-1.01	-0.98	91.56	-0.94	-0.93	XR
MJJEGM		90.61	-1.84	-1.79	90.76	-1.74	-1.72	HL
QFM7DM		91.20	-1.25	-1.22	91.25	-1.25	-1.23	XR
QJTMVR		93.63	1.17	1.14	93.50	1.00	0.99	BJ
RTCDVN		93.29	0.84	0.82	93.30	0.80	0.79	BJ
T4N39K		92.45	0.00	0.00	92.48	-0.03	-0.03	XX
UBMRPN		91.03	-1.43	-1.39	91.18	-1.33	-1.31	BJ
Y4TDPY		93.46	1.01	0.99	93.49	0.99	0.97	BJ
ZNPGXJ		92.77	0.32	0.31	92.89	0.39	0.39	BJ



Plastics Interlaboratory Testing Program

Report #116

Analysis 786

4th Qtr 2020

Total Luminous transmittance of film

Summary Statistics	<u>Sample D71</u>	<u>Sample D72</u>
Grand Means	92.451 Percent	92.502 Percent
Stnd Dev Btwn Labs	1.026 Percent	1.013 Percent
Statistics based on 27 of 29 reporting participants		

Sample D71: LDPE & Sample D72: LDPE

Comments on Assigned Data Flags for Test #786

JP2DKQ (X) - Data for both samples are low. Possible Systematic Error.

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

Key to Instrument Codes Reported by Participants

- | | |
|---|--|
| BH BYK-Gardner/Pacific Scientific Model XL-211 | BJ BYK-Gardner Haze-Gard Plus/i |
| BT BYK Gardner TCS Plus Spectrophotometer | HL Hunterlab Ultrascan XE |
| XR X-Rite Spectrocolorimeter (any model) | XX Instrument make/model not specified by lab |



Plastics Interlaboratory Testing Program

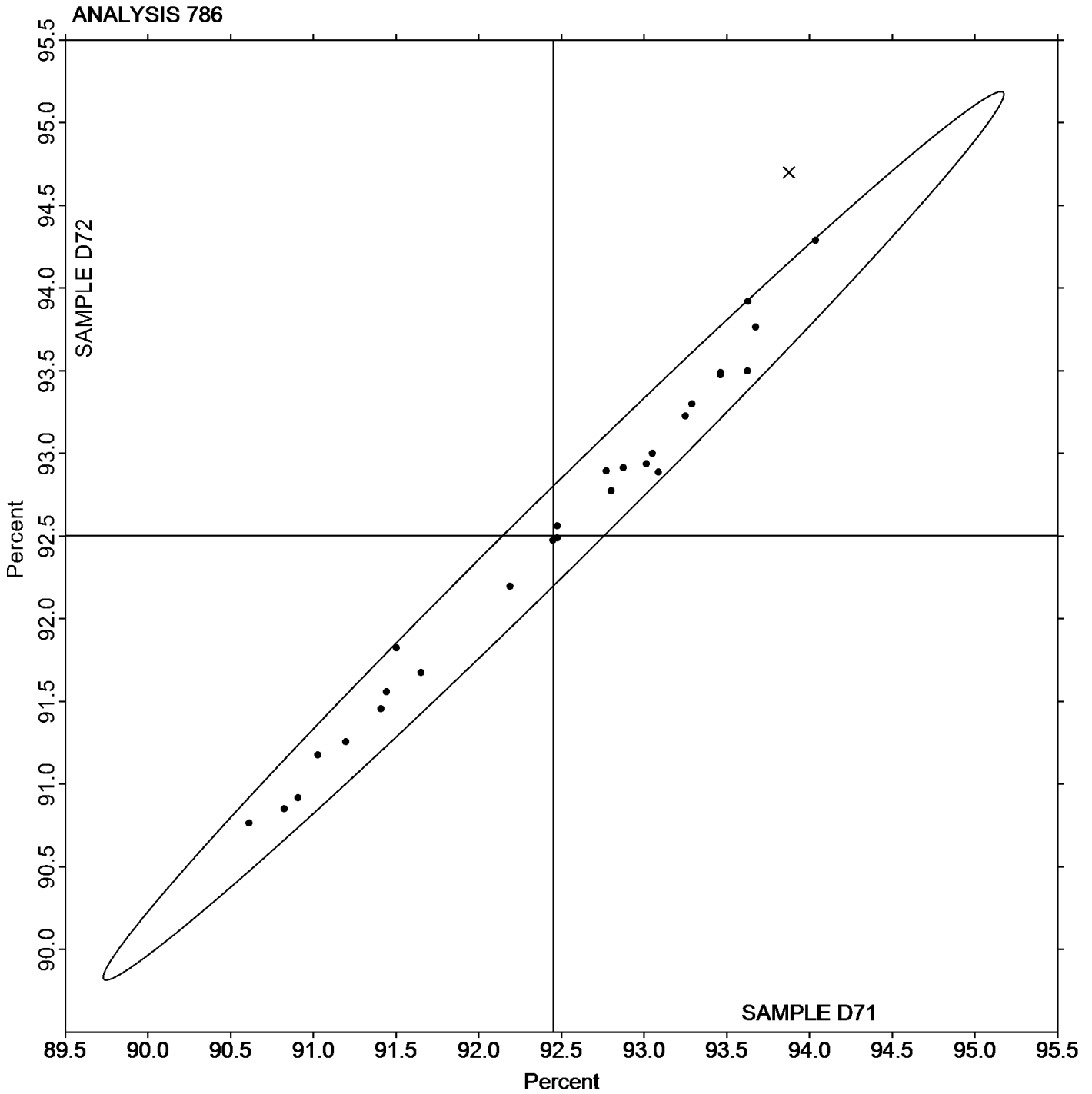
Analysis 786

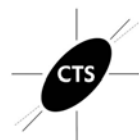
Total Luminous transmittance of film

Report #116

4th Qtr 2020

Grand Mean Sample D71: 92.451 Percent Grand Mean Sample D72: 92.502 Percent





Plastics Interlaboratory Testing Program

Report #116

Analysis 790

4th Qtr 2020

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S71			Sample S72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
22DTVE		11.69	1.77	1.87	11.29	1.37	1.70	TO
3EFLZW		10.42	0.49	0.52	10.65	0.73	0.90	TM
4FMFX9		9.93	0.01	0.01	9.77	-0.15	-0.19	WZ
6WQDUC		10.49	0.57	0.60	10.34	0.41	0.51	CE
7B8MYE		9.44	-0.48	-0.51	9.48	-0.45	-0.55	DS
7E7YVE		10.32	0.40	0.42	10.19	0.27	0.33	TY
7HKGBA		9.68	-0.24	-0.26	9.67	-0.25	-0.31	TO
7Z68AA		9.84	-0.08	-0.09	10.13	0.21	0.26	TO
7ZN3RB		9.60	-0.32	-0.34	9.45	-0.47	-0.58	WZ
843BE2		9.31	-0.61	-0.64	9.31	-0.61	-0.76	TO
8KMYLB		10.30	0.37	0.39	10.42	0.50	0.62	TM
9JBG8C		11.37	1.45	1.53	10.84	0.92	1.14	TO
9L2MM3		9.68	-0.24	-0.26	9.98	0.06	0.07	WZ
9XQME6		10.80	0.88	0.93	10.90	0.98	1.21	TM
AAFY79		10.28	0.36	0.38	10.28	0.36	0.44	TO
AEBR3A	X	9.95	0.03	0.03	9.02	-0.90	-1.12	CE
AJNBH7		9.68	-0.24	-0.25	9.88	-0.05	-0.06	TO
APBZ62		9.55	-0.38	-0.40	9.50	-0.42	-0.53	TO
B8P7J6		10.66	0.73	0.78	10.34	0.41	0.51	CE
BKV237		10.00	0.08	0.08	10.08	0.16	0.20	TM
D4JDNW		8.72	-1.20	-1.27	8.96	-0.96	-1.19	TM
D7QHFY		9.89	-0.04	-0.04	10.26	0.34	0.42	TO
D8JNJW		11.35	1.42	1.50	11.31	1.38	1.72	TO
DHMJ32		9.19	-0.73	-0.77	9.55	-0.37	-0.46	TO
DKQEJJ		9.08	-0.84	-0.89	9.07	-0.85	-1.05	TO
DTY2E6		9.07	-0.85	-0.90	9.29	-0.63	-0.78	TO
EDJA2X		11.06	1.14	1.20	11.06	1.14	1.41	TM
FAXZE4		9.50	-0.42	-0.45	9.86	-0.06	-0.08	IN
FM6NPL		9.06	-0.86	-0.91	9.13	-0.79	-0.98	XX
H6HWTU		9.18	-0.74	-0.78	9.15	-0.77	-0.96	XX
HGQYRW		9.63	-0.29	-0.31	9.74	-0.18	-0.22	XX
HX2EKT		8.85	-1.07	-1.13	9.40	-0.52	-0.64	WZ
JE3MTR		8.29	-1.63	-1.72	8.44	-1.48	-1.84	TO
JFR7HV		9.47	-0.45	-0.48	9.47	-0.45	-0.56	TO
JH4LCW	*	12.76	2.84	3.00	12.31	2.39	2.96	TO



Plastics Interlaboratory Testing Program

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Analysis 790

4th Qtr 2020

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S71			Sample S72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
JMCAMD	*	12.08	2.16	2.28	11.28	1.36	1.69	RR
JNAF7R		9.29	-0.64	-0.67	9.33	-0.59	-0.73	CE
KF664R		11.10	1.18	1.24	10.98	1.06	1.31	TM
LUN6GC	*	12.00	2.07	2.19	11.25	1.32	1.64	TO
M2NLVN		9.23	-0.69	-0.73	9.12	-0.80	-1.00	BA
P9DDR8		9.74	-0.18	-0.19	9.83	-0.09	-0.12	TO
PVRW6V	X	11.13	1.21	1.28	11.89	1.97	2.45	TO
PY7CVM		9.97	0.05	0.05	9.74	-0.18	-0.23	TO
QFCV7J		9.39	-0.53	-0.56	9.56	-0.37	-0.45	TO
QNLKKH		9.90	-0.02	-0.02	10.11	0.19	0.23	TO
QUQJXT	X	9.81	-0.11	-0.12	10.60	0.68	0.85	CS
QV3ZB8		10.45	0.53	0.56	10.59	0.67	0.83	TM
R3JVTM		9.80	-0.12	-0.13	9.92	0.00	0.00	TO
RG4BWL		9.63	-0.29	-0.31	9.54	-0.38	-0.47	CE
U4QXP6	X	8.18	-1.74	-1.84	7.75	-2.17	-2.69	CE
U9ER9N		8.70	-1.22	-1.29	8.50	-1.42	-1.77	TO
UBMRPN		10.43	0.51	0.54	10.32	0.40	0.50	CE
WRJ43H		8.53	-1.39	-1.47	8.78	-1.14	-1.41	TO
X2NBHH		9.29	-0.63	-0.66	8.96	-0.96	-1.19	TM
XYYXZY		10.46	0.54	0.57	10.41	0.48	0.60	TM
Y4QJ9D		9.16	-0.77	-0.81	9.35	-0.58	-0.72	XX
Y7D8KD		8.63	-1.29	-1.36	8.65	-1.27	-1.58	TO
YGYCRD		9.87	-0.05	-0.06	10.07	0.15	0.19	WZ

Summary Statistics		
	Sample S71	Sample S72
Grand Means	9.922 ft.lbf/in	9.922 ft.lbf/in
Std Dev Btwn Labs	0.946 ft.lbf/in	0.805 ft.lbf/in
Statistics based on 54 of 58 reporting participants		

Sample S71: ABS/PC & Sample S72: ABS/PC



Plastics Interlaboratory Testing Program

Analysis 790

Notched Izod Impact - ft.lbf/in

Report #116

4th Qtr 2020

Comments on Assigned Data Flags for Test #790

QUQJXT (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample S72.

AEBR3A (X) - Inconsistent in testing between samples.

PVRW6V (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample S72.

U4QXP6 (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

BA Baldwin

CS CSI

IN Instron

TM TMI

TY Toyoseiki

XX Instrument manufacturer not specified by lab

CE Ceast

DS Dynisco

RR Ray-Ran Polymer Testing Equipment

TO Tinius Olsen

WZ Zwick



Plastics Interlaboratory Testing Program

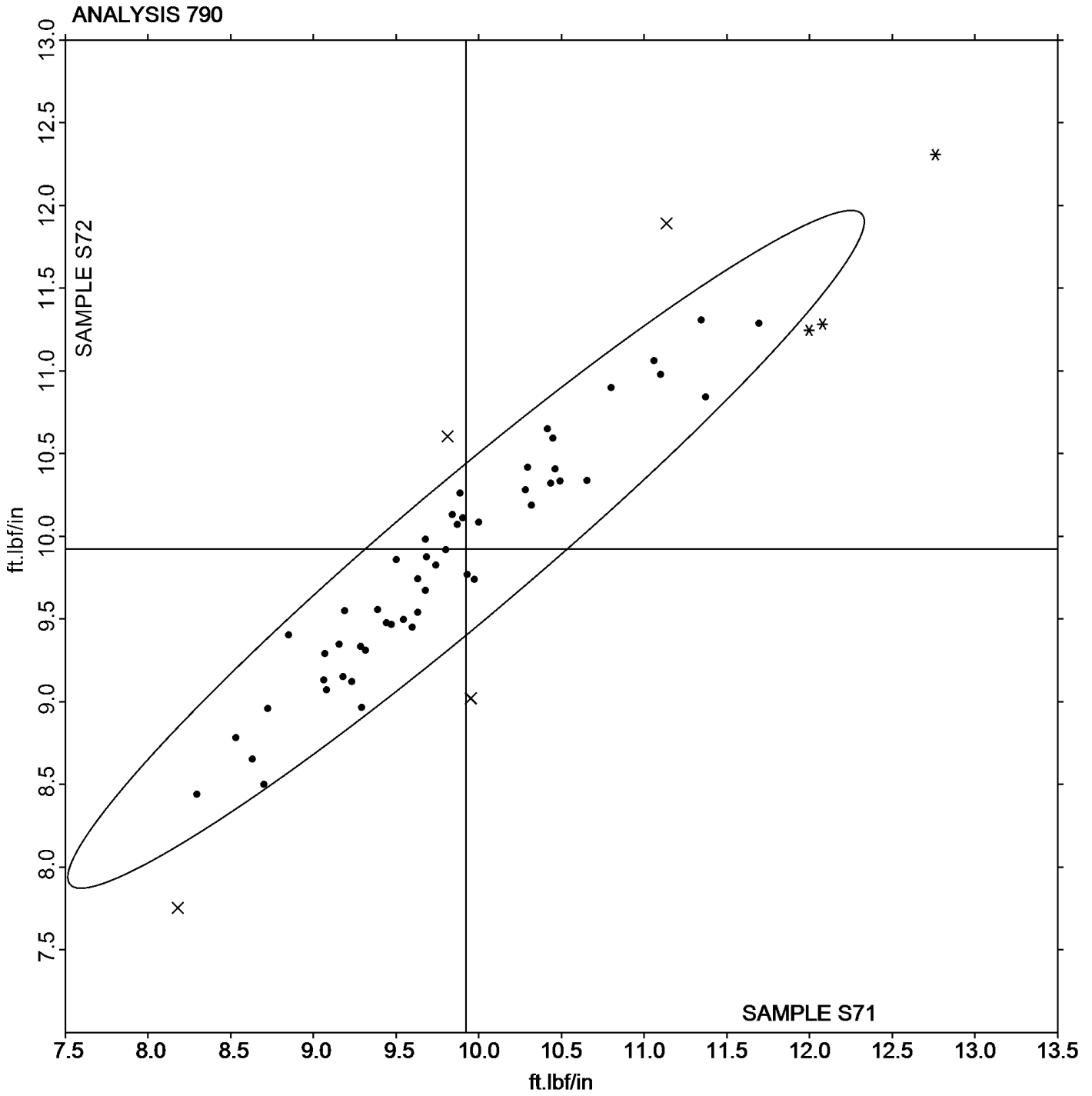
Analysis 790

Notched Izod Impact - ft.lbf/in

Report #116

4th Qtr 2020

Grand Mean Sample S71: 9.9222 ft.lbf/in Grand Mean Sample S72: 9.9220 ft.lbf/in





Plastics Interlaboratory Testing Program

Report #116

Analysis 791

4th Qtr 2020

Notched Izod Impact - kJ/m²

WebCode	Data Flag	Sample Z71			Sample Z72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2H24HG		8.65460	0.34408	0.72	8.64960	0.35149	0.82	CE
3CT3YY		8.38400	0.07348	0.15	8.39000	0.09189	0.21	CE
3THBUB		7.82582	-0.48470	-1.02	7.93200	-0.36611	-0.86	TO
3WYBGJ	X	37.70420	19.39368	61.69	40.93660	32.63849	76.24	XX
4FMFX9		8.44400	0.13348	0.28	8.32000	0.02189	0.05	WZ
7E7YVE		7.96200	-0.34852	-0.73	8.06400	-0.23411	-0.55	XX
843BE2		8.52800	0.21748	0.46	8.32600	0.02789	0.07	TO
87AF74		8.25600	-0.05452	-0.11	7.97600	-0.32211	-0.75	CE
8PL3RC		7.86200	-0.44852	-0.94	8.01800	-0.28011	-0.65	CE
9L2MM3		8.65800	0.34748	0.73	8.62000	0.32189	0.75	WZ
AAFY79		7.98840	-0.32212	-0.68	8.00620	-0.29191	-0.68	XX
AXAPL6		8.11420	-0.19632	-0.41	7.92120	-0.37691	-0.88	CE
B2JCP9		8.11800	-0.19252	-0.40	8.14600	-0.15211	-0.36	CE
B6PNVB		8.38200	0.07148	0.15	8.52200	0.22389	0.52	WZ
BL64N6		8.19976	-0.11076	-0.23	8.29338	-0.00473	-0.01	TO
C3TRHZ		7.96440	-0.34612	-0.73	7.96460	-0.33351	-0.78	CE
DA8ZJ3		8.23800	-0.07252	-0.15	8.22400	-0.07411	-0.17	CE
DKQEJ		7.95600	-0.35452	-0.74	7.93000	-0.36811	-0.86	TO
GDEMKW		7.77400	-0.53652	-1.13	7.81000	-0.48811	-1.14	WZ
HX2EKT		9.24400	0.93348	1.96	9.14400	0.84589	1.98	WZ
K2DZ9H		7.90000	-0.41052	-0.86	7.91000	-0.38811	-0.91	TO
P9DDR8		8.07440	-0.23612	-0.50	8.16400	-0.13411	-0.31	TO
R7XTXN		8.26680	-0.04372	-0.09	8.44760	0.14949	0.35	CE
UBMRPN		8.85800	0.54748	1.15	8.78400	0.48589	1.13	CE
WMNA6G	*	9.80000	1.48948	3.13	9.59200	1.29389	3.02	XX

Summary Statistics		
	Sample Z71	Sample Z72
Grand Means	8.310516 kJ/m ²	8.298108 kJ/m ²
Std Dev Btwn Labs	0.476463 kJ/m ²	0.428125 kJ/m ²
Statistics based on 24 of 25 reporting participants		

Sample Z71: HIPS & Sample Z72: HIPS

Comments on Assigned Data Flags for Test #791

3WYBGJ (X) - Extreme data.



Plastics Interlaboratory Testing Program

Analysis 791

Notched Izod Impact - kJ/m^2

Report #116

4th Qtr 2020

Key to Instrument Codes Reported by Participants

CE Ceast

WZ Zwick

TO Tinius Olsen

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

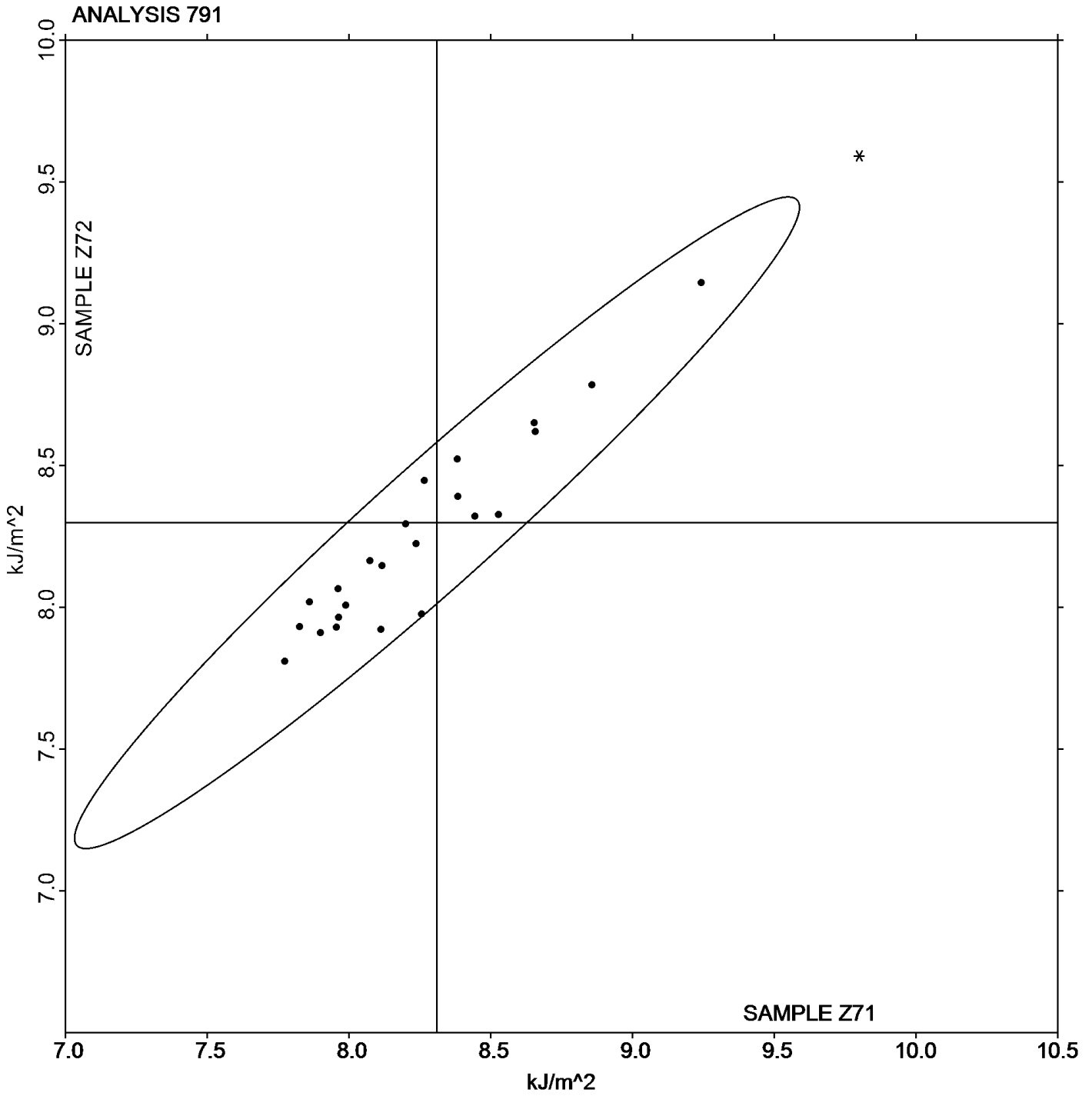
Analysis 791

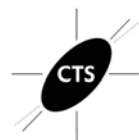
Notched Izod Impact - kJ/m^2

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4th Qtr 2020

Grand Mean Sample Z71: 8.3105 kJ/m^2 Grand Mean Sample Z72: 8.2981 kJ/m^2





Plastics Interlaboratory Testing Program

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4th Qtr 2020

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M71			Sample M72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3JC76F		8.17	0.54	0.74	8.38	0.69	0.99	TO
3THBUB	X	7.49	-0.14	-0.19	6.77	-0.92	-1.32	TO
4FMFX9		7.90	0.27	0.37	7.97	0.28	0.40	TM
4PUYV7		6.51	-1.13	-1.55	6.67	-1.02	-1.46	PO
6WQDUC		8.01	0.38	0.52	7.78	0.09	0.13	CE
744NM4		7.78	0.15	0.21	7.80	0.11	0.16	XX
7E7YVE		7.87	0.24	0.33	8.08	0.39	0.57	TY
7HKGBA		8.29	0.65	0.90	8.31	0.62	0.89	TO
7ZN3RB		7.55	-0.08	-0.11	7.69	0.00	0.01	WZ
843BE2		6.89	-0.74	-1.02	6.89	-0.80	-1.15	TO
86PWYC		8.26	0.63	0.86	8.44	0.75	1.08	CE
87AF74		7.76	0.13	0.18	7.77	0.08	0.11	CE
8KMYLB		6.69	-0.94	-1.29	6.45	-1.24	-1.78	TM
8PL3RC		6.40	-1.24	-1.70	6.85	-0.84	-1.21	CE
8V93UB	X	9.29	1.66	2.28	8.51	0.82	1.18	TO
9L2MM3		7.87	0.24	0.33	7.70	0.00	0.01	WZ
AAFY79		6.33	-1.30	-1.79	6.41	-1.28	-1.83	XX
APBZ62		8.48	0.84	1.16	8.40	0.71	1.02	TO
AXAPL6		8.33	0.69	0.95	8.05	0.36	0.52	CE
B6PNVB		8.16	0.52	0.72	8.37	0.68	0.97	WZ
BL64N6		7.76	0.12	0.17	8.22	0.53	0.77	TO
C3TRHZ		7.99	0.36	0.49	8.00	0.31	0.44	CE
D3A4Z7		8.04	0.41	0.56	8.10	0.41	0.59	WZ
DA8ZJ3		7.01	-0.63	-0.86	7.21	-0.48	-0.69	CE
DCBV36		7.97	0.33	0.46	7.87	0.18	0.26	TM
DKQEJJ		7.26	-0.37	-0.51	7.49	-0.20	-0.28	TO
DTY2E6		7.92	0.28	0.39	8.10	0.41	0.59	TO
F67KZ6		6.34	-1.29	-1.77	6.50	-1.19	-1.71	TO
FAL7VX		8.02	0.38	0.53	7.84	0.15	0.22	WZ
FAXZE4		7.84	0.21	0.28	8.18	0.49	0.70	IN
FM6NPL		6.14	-1.49	-2.05	6.30	-1.39	-2.00	XX
GDEMKW		7.00	-0.63	-0.86	6.83	-0.86	-1.23	WZ
GLM49W		6.70	-0.93	-1.28	6.91	-0.78	-1.13	WZ
HGQYRW		9.24	1.61	2.21	8.93	1.24	1.78	XX
HX2EKT		8.26	0.63	0.86	8.28	0.59	0.84	WZ



Plastics Interlaboratory Testing Program

Report #116

Analysis 792

4th Qtr 2020

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M71			Sample M72			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
JNAF7R		7.75	0.12	0.16	8.14	0.45	0.65	WZ
MRED8V		7.51	-0.13	-0.17	7.53	-0.16	-0.23	WZ
NBNTNU	X	18.62	10.99	15.09	18.44	10.75	15.44	TO
R7XTXN		7.88	0.25	0.34	7.98	0.29	0.42	IN
RG4BWL		7.67	0.04	0.05	7.98	0.29	0.42	CE
VP46E4		8.23	0.59	0.82	7.82	0.13	0.19	XX
W368BG		8.06	0.43	0.59	8.08	0.39	0.55	CE
WMNA6G		8.46	0.82	1.13	8.37	0.68	0.97	XX
WRJ43H		8.57	0.94	1.29	8.59	0.90	1.29	TO
WZX3JE		8.09	0.46	0.63	8.28	0.59	0.84	CE
Y4QJ9D		5.92	-1.71	-2.35	5.98	-1.71	-2.46	XX
YRTRGE		7.63	0.00	0.00	7.83	0.14	0.21	WZ
YWURZJ		7.11	-0.52	-0.71	7.23	-0.46	-0.66	TO
Z78DED		7.47	-0.16	-0.22	7.16	-0.53	-0.76	WZ

Summary Statistics

	Sample M71	Sample M72
Grand Means	7.633 kJ/m ²	7.691 kJ/m ²
Stnd Dev Btwn Labs	0.728 kJ/m ²	0.696 kJ/m ²

Statistics based on 46 of 49 reporting participants

Sample M71: HIPS & Sample M72: HIPS

Comments on Assigned Data Flags for Test #792

- 3THBUB (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample M71.
- NBNTNU (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample M72.
- 8V93UB (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample M72.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

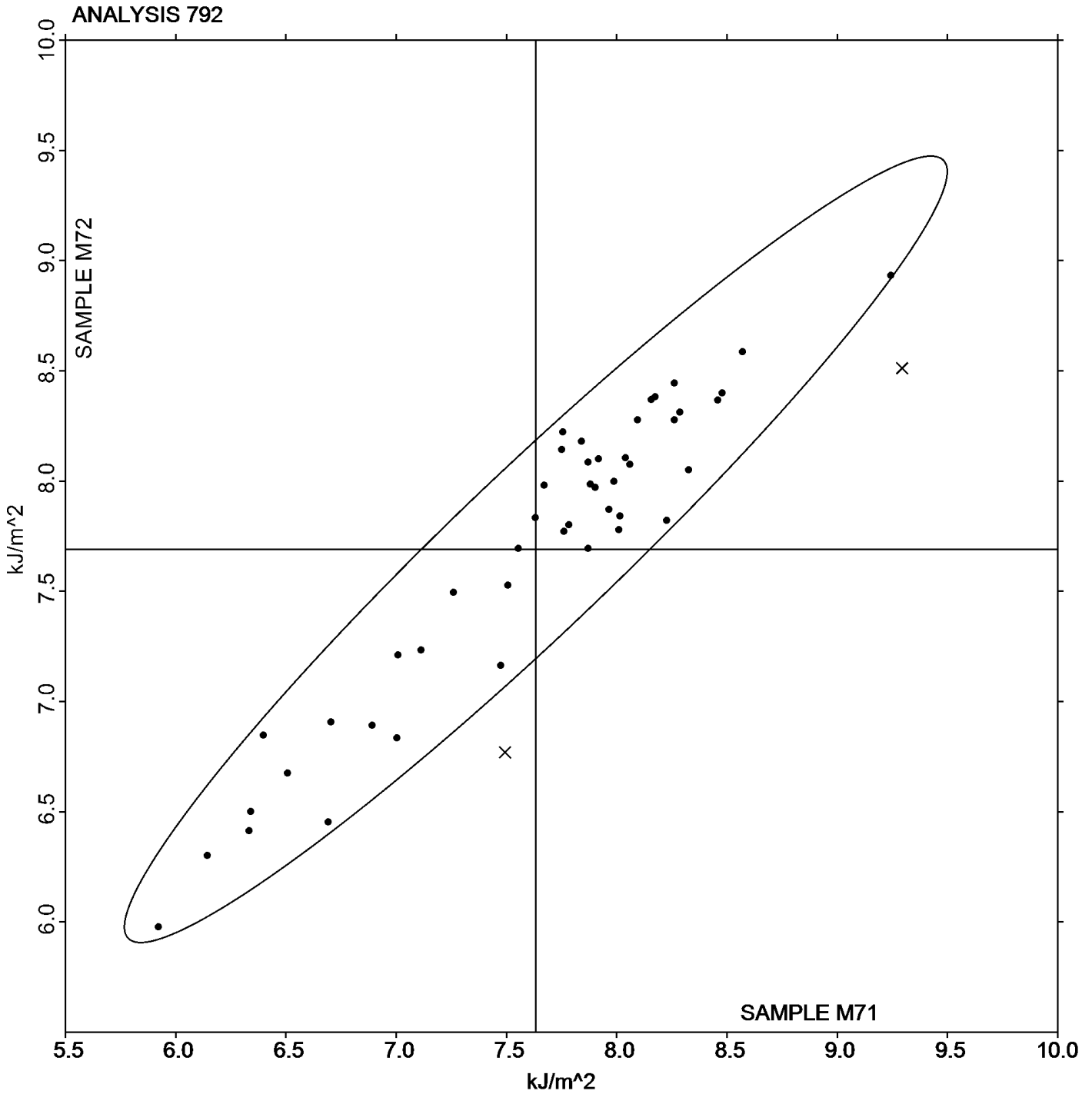
Report #116

Analysis 792

4th Qtr 2020

Notched Charpy Impact - kJ/m²

Grand Mean Sample M71: 7.6330 kJ/m² Grand Mean Sample M72: 7.6905 kJ/m²



-End of Report-