



Plastics Interlaboratory Testing Program

Web Summary Report #115, 3rd Qtr 2020

[About CTS and the Plastics Interlaboratory Program](#)

[Key for Web Summary Report](#)

[Results Summary for this Report](#)

Analysis Analysis Name

[704 Tensile Stress at Yield, Plastic Samples](#)

[705 Tensile Stress at Break, Plastic Samples](#)

[706 Percent Elongation at Yield, Plastic Samples](#)

[708 Modulus of Elasticity, Plastic Samples](#)

[710 Deflection Temp. Under Flexural Load \(1.82 MPa\)](#)

[711 Deflection Temp. Under Flexural Load \(0.455 MPa\)](#)

[712 Temp. of Deflection Under Flexural Load 1.80 MPa](#)

[715 Vicat Softening Temperature \(Rate A\)](#)

[716 Vicat Softening Temperature \(Rate B\)](#)

[718 Specific Gravity](#)

[720 Flexural Modulus](#)

[721 Flexural Stress at 5% Strain](#)

[722 Flexural Stress at Yield](#)

[730 Tensile Stress at Yield, ISO Plastic Samples](#)

[731 Tensile Stress at Break, ISO Plastic Samples](#)

[732 Percent Strain at Yield, ISO Plastic Samples](#)

[734 Modulus of Elasticity, ISO Plastic Samples](#)

[736 Flexural Modulus, ISO Plastic Samples](#)

[737 Flexural Stress at 3.5% Strain](#)

[738 Flexural Stress at Yield](#)

[750 Flow Rates of Thermoplastics \(2.16 kg load\)](#)

[755 Moisture Content of Plastics](#)

[757 Ash Content in Thermoplastics](#)

[758 Thermogravimetric Analysis](#)

[760 DSC Crystallization Temperature](#)

Analysis Analysis Name

[761 DSC Melt Temperature](#)

[762 DSC Enthalpy of Crystallization](#)

[763 DSC Enthalpy of Fusion](#)

[764 DSC Glass Transition Temperature](#)

[765 DSC Crystallization Peak Temperature - Research](#)

[766 DSC Melting Peak Temperature - Research](#)

[767 DSC Heat of Crystallization - Research](#)

[768 DSC Heat of Fusion - Research](#)

[769 DSC Glass Transition Temperature - Research](#)

[770 Tensile Stress at Yield, Film Samples](#)

[771 Tensile Stress at Break, Film Samples](#)

[772 Percent Elongation at Yield, Film Samples](#)

[773 Percent Elongation at Break, Film Samples](#)

[774 Thickness of Film Tensile Samples](#)

[775 Secant Modulus at 1% Strain](#)

[776 Secant Modulus at 2% Strain](#)

[780 Coefficient of Friction: Static](#)

[781 Coefficient of Friction: Kinetic](#)

[782 Tear Resistance of Films](#)

[785 Optical Properties of Films - Percent Haze](#)

[786 Optical Properties of Films: % Transmittance](#)

[790 Notched Izod Impact](#)

[791 Notched Izod Impact \(ISO\)](#)

[792 Notched Charpy Impact, ISO Plastic Samples](#)

About CTS and the Plastics Interlaboratory Program

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

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

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

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

For further information contact:

COLLABORATIVE TESTING SERVICES, INC.
21331 Gentry Drive
Sterling, VA 20166
Phone: (571) 434-1925
FAX: (571) 434-1937
e-mail: plastics@cts-interlab.com

Office Hours: 8:00 a.m. - 4:30 p.m. ET

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 #115, 3rd Qtr 2020

Analysis 704 - Tensile Stress at Yield

Material: ABS/PC	Sample F69	7,499.88	psi	1.64% COV
	Sample F70	7,505.53	psi	1.74% COV

Analysis 705 - Tensile Stress at Break

Material: ABS/PC	Sample F69	7,387.91	psi	8.36% COV
	Sample F70	7,467.13	psi	8.04% COV

Analysis 706 - Percent Elongation at Yield

Material: ABS/PC	Sample F69	4.6921	Percent	3.25% COV
	Sample F70	4.6851	Percent	3.60% COV

Analysis 708 - Modulus of Elasticity

Material: ABS/PC	Sample F69	323.04	ksi	5.05% COV
	Sample F70	323.17	ksi	5.57% COV

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

Material: HIPS	Sample E69	78.718	Degrees C	1.13% COV
	Sample E70	78.509	Degrees C	0.959% COV

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

Material: PP	Sample G69	86.448	Degrees C	1.95% COV
	Sample G70	86.879	Degrees C	2.02% COV

Analysis 712 - Temperature of Deflection (1.80 MPa)

Material: HIPS	Sample N69	78.362	Degrees C	0.974% COV
	Sample N70	78.452	Degrees C	1.01% COV

Analysis 715 - Vicat Temperature (Rate A)

Material: ABS	Sample H69	103.73	Degrees C	0.650% COV
	Sample H70	103.75	Degrees C	0.651% COV

Analysis 716 - Vicat Temperature (Rate B)

Material: ABS	Sample R69	105.57	Degrees C	0.702% COV
	Sample R70	105.52	Degrees C	0.662% COV

Analysis 718 - Specific Gravity

Material: ABS/PC	Sample T69	1.1393	sp gr 23/23 C	0.182% COV
	Sample T70	1.1391	sp gr 23/23 C	0.189% COV

Analysis 720 - Flexural Modulus

Material: ABS/PC	Sample J69	339.34	ksi	5.00% COV
	Sample J70	339.16	ksi	4.71% COV

Analysis 721 - Flexural Stress at 5% Strain

Material: ABS/PC	Sample J69	11,914.28	psi	4.18% COV
	Sample J70	11,931.09	psi	4.07% COV

Analysis 722 - Flexural Stress at Yield

Material: ABS/PC	Sample J69	12,033.05	psi	4.08% COV
	Sample J70	12,068.20	psi	3.98% COV

Analysis 730 - Tensile Stress at Yield, ISO Method

Material: HIPS	Sample C69	28.043	MPa	3.49% COV
	Sample C70	27.963	MPa	3.81% COV

Analysis 731 - Tensile Stress at Break, ISO Method

Material: HIPS	Sample C69	21.108	MPa	3.24% COV
	Sample C70	21.260	MPa	3.66% COV



Plastics Interlaboratory Testing Program

Results Summary for Report #115, 3rd Qtr 2020

Analysis 732 - Strain at Yield, ISO Method

Material: HIPS	Sample C69	1.2969	Percent	5.00% COV
	Sample C70	1.2925	Percent	4.81% COV

Analysis 734 - Modulus of Elasticity, ISO Method

Material: HIPS	Sample C69	2,402.46	MPa	4.63% COV
	Sample C70	2,392.80	MPa	4.82% COV

Analysis 736 - Flexural Modulus

Material: HIPS	Sample K69	2,300.26	MPa	5.11% COV
	Sample K70	2,295.35	MPa	5.03% COV

Analysis 737 - Flexural Stress at 3.5% Strain

Material: HIPS	Sample K69	39.502	MPa	4.78% COV
	Sample K70	39.565	MPa	4.60% COV

Analysis 738 - Flexural Stress at Yield

Material: HIPS	Sample K69	39.739	MPa	4.75% COV
	Sample K70	39.765	MPa	4.53% COV

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

Material: LDPE	Sample X69	20.945	grams/10 mins	4.40% COV
	Sample X70	20.908	grams/10 mins	4.44% COV

Analysis 755 - Moisture Content

Material: ABS	Sample Y69	0.25786	Percent	13.7% COV
	Sample Y70	0.25748	Percent	14.9% COV

Analysis 757 - Ash Content

Material: PP	Sample L69	19.753	Percent	0.296% COV
	Sample L70	19.752	Percent	0.282% COV

Analysis 758 - TGA

Material: PBT	Sample A69	65.465	Percent	5.56% COV
	Sample A70	64.833	Percent	6.47% COV

Analysis 760 - DSC Crystallization Temperature

Material: PP	Sample W69	113.89	Degrees Celsius	3.72% COV
	Sample W70	113.97	Degrees Celsius	3.70% COV

Analysis 761 - DSC Melt Temperature

Material: PP	Sample W69	163.63	Degrees Celsius	1.10% COV
	Sample W70	163.63	Degrees Celsius	1.21% COV

Analysis 762 - DSC Enthalpy of Crystallization

Material: PP	Sample W69	94.584	Joules Per Gram	8.09% COV
	Sample W70	92.886	Joules Per Gram	8.54% COV

Analysis 763 - DSC Enthalpy of Fusion

Material: PP	Sample W69	90.054	Joules Per Gram	14.4% COV
	Sample W70	88.243	Joules Per Gram	14.5% COV

Analysis 764 - DSC Glass Transition Temperature

Material: PET	Sample V69	86.192	Degrees Celsius	3.35% COV
	Sample V70	86.204	Degrees Celsius	3.33% COV

Analysis 765 - Research Crystallization Peak Temperature

Material: PP	Sample W69	110.64	Degrees Celsius	9.74% COV
	Sample W70	110.62	Degrees Celsius	9.73% COV



Plastics Interlaboratory Testing Program

Results Summary for Report #115, 3rd Qtr 2020

Analysis 766 - Research Melting Peak Temperature

Material: PP	Sample W69	162.93	Degrees Celsius	0.892% COV
	Sample W70	163.17	Degrees Celsius	0.904% COV

Analysis 767 - Research Heat of Crystallization

Material: PP	Sample W69	95.385	Joules Per Gram	3.37% COV
	Sample W70	94.983	Joules Per Gram	3.80% COV

Analysis 768 - Research Heat of Fusion

Material: PP	Sample W69	90.435	Joules Per Gram	9.29% COV
	Sample W70	88.750	Joules Per Gram	10.1% COV

Analysis 769 - Research Glass Transition Temperature

Material: PET	Sample V69	84.860	Degrees Celsius	3.92% COV
	Sample V70	85.632	Degrees Celsius	1.84% COV

Analysis 770 - Tensile Stress at Yield, Films

Material: LDPE	Sample B69	1,819.70	psi	14.1% COV
	Sample B70	1,815.63	psi	14.7% COV

Analysis 771 - Tensile Stress at Break, Films

Material: LDPE	Sample B69	3,637.56	psi	18.6% COV
	Sample B70	3,536.41	psi	20.0% COV

Analysis 772 - Elongation at Yield, Films

Material: LDPE	Sample B69	81.711	Percent	24.7% COV
	Sample B70	84.701	Percent	24.3% COV

Analysis 773 - Elongation at Break, Films

Material: LDPE	Sample B69	846.59	Percent	14.5% COV
	Sample B70	839.87	Percent	16.1% COV

Analysis 774 - Thickness of Film Specimens

Material: LDPE	Sample B69	3.6798	mils	3.45% COV
	Sample B70	3.7023	mils	3.12% COV

Analysis 775 - Secant Modulus at 1% Strain

Material: LDPE	Sample B69	30,732.93	psi	11.0% COV
	Sample B70	31,187.90	psi	10.5% COV

Analysis 776 - Secant Modulus at 2% Strain

Material: LDPE	Sample B69	26,101.68	psi	8.05% COV
	Sample B70	26,568.35	psi	8.26% COV

Analysis 780 - Static Friction

Material: LDPE	Sample P69	0.14493	COF	33.2% COV
	Sample P70	0.14357	COF	35.4% COV

Analysis 781 - Kinetic Friction

Material: LDPE	Sample P69	0.09735	COF	21.9% COV
	Sample P70	0.09558	COF	17.6% COV

Analysis 782 - Tear Resistance of Film

Material: LDPE	Sample Q69	335.27	grams-force	36.6% COV
	Sample Q70	321.23	grams-force	38.1% COV

Analysis 785 - Percent Haze

Material: LDPE	Sample D69	10.611	Percent	5.24% COV
	Sample D70	10.584	Percent	4.96% COV



Plastics Interlaboratory Testing Program

Results Summary for Report #115, 3rd Qtr 2020

Analysis 786 - Total Transmittance

Material: LDPE	Sample D69	92.596	Percent	1.02% COV
	Sample D70	92.568	Percent	1.02% COV

Analysis 790 - Notched Izod Impact

Material: ABS	Sample S69	3.8625	ft.lbf/in	7.40% COV
	Sample S70	3.8772	ft.lbf/in	7.42% COV

Analysis 791 - Notched Izod Impact

Material: ABS/PC	Sample Z69	43.862	kJ/m ²	7.24% COV
	Sample Z70	44.186	kJ/m ²	7.38% COV

Analysis 792 - Notched Charpy Impact

Material: ABS/PC	Sample M69	47.834	kJ/m ²	9.85% COV
	Sample M70	47.503	kJ/m ²	9.88% COV



Plastics Interlaboratory Testing Program

Report #115

Analysis 704

3rd Qtr 2020

Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F69			Sample F70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U		7,399.6	-100.3	-0.82	7,384.0	-121.5	-0.93
3D9D29		7,421.4	-78.5	-0.64	7,394.0	-111.5	-0.85
3RUT69		7,494.0	-5.9	-0.05	7,514.0	8.5	0.06
4G2AVM		7,362.0	-137.9	-1.12	7,406.0	-99.5	-0.76
64AZUY		7,516.6	16.7	0.14	7,524.0	18.5	0.14
68FVZ3		7,510.0	10.1	0.08	7,522.0	16.5	0.13
7HWYK8		7,675.5	175.7	1.43	7,698.4	192.9	1.48
7KCXTP		7,639.4	139.5	1.14	7,638.0	132.5	1.01
7KVZ2P		7,551.2	51.3	0.42	7,552.8	47.3	0.36
823R3Y		7,584.3	84.4	0.69	7,598.1	92.6	0.71
8EL8JY		7,541.8	41.9	0.34	7,488.0	-17.5	-0.13
8KBJKM		7,373.8	-126.1	-1.03	7,425.8	-79.7	-0.61
8X4F8Y		7,240.3	-259.5	-2.12	7,237.4	-268.1	-2.05
8XWWWW		7,334.0	-165.8	-1.35	7,371.8	-133.8	-1.02
A72Q6U		7,507.2	7.3	0.06	7,505.6	0.1	0.00
BL94YW	X	8,004.0	504.1	4.11	8,024.6	519.1	3.97
BLJ8W3		7,524.0	24.1	0.20	7,527.2	21.7	0.17
BYZTWH		7,569.0	69.1	0.56	7,577.0	71.5	0.55
D7TKHG		7,542.0	42.1	0.34	7,542.0	36.5	0.28
DB4V9P		7,586.0	86.1	0.70	7,596.0	90.5	0.69
DE3ATU		7,576.0	76.1	0.62	7,564.2	58.7	0.45
E93L2Y	X	8,102.5	602.6	4.91	8,055.0	549.5	4.20
EJR9MF		7,244.0	-255.9	-2.09	7,294.0	-211.5	-1.62
EUW7MC		7,698.1	198.2	1.62	7,732.4	226.9	1.74
EXJ69T	X	5,741.4	-1,758.5	-14.34	5,721.6	-1,784.0	-13.65
F9Q6VQ		7,413.7	-86.2	-0.70	7,421.8	-83.7	-0.64
FYKZ6V	X	7,596.8	96.9	0.79	7,763.6	258.1	1.97
GJ6GNE		7,670.6	170.7	1.39	7,645.6	140.1	1.07
H4PFRN	X	14,321.2	6,821.3	55.62	7,341.4	-164.1	-1.26
HHWYPN		7,599.4	99.5	0.81	7,611.2	105.7	0.81
HXFHXB		7,680.4	180.5	1.47	7,745.2	239.7	1.83
HYY98V		7,474.0	-25.9	-0.21	7,565.8	60.3	0.46
J6JNDD		7,524.0	24.1	0.20	7,511.0	5.5	0.04
J9JY7R		7,655.2	155.3	1.27	7,696.8	191.3	1.46
JCKAPR		7,485.0	-14.9	-0.12	7,473.2	-32.3	-0.25



Plastics Interlaboratory Testing Program

Report #115

Analysis 704

3rd Qtr 2020

Tensile Stress at Yield - psi

WebCode	Data Flag	Sample F69			Sample F70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JTP8NC	X	7,796.2	296.3	2.42	7,647.8	142.3	1.09
KTN4VR		7,529.0	29.1	0.24	7,476.0	-29.5	-0.23
KUTM8M		7,648.2	148.3	1.21	7,616.6	111.0	0.85
LQ9UWK		7,600.0	100.1	0.82	7,590.0	84.5	0.65
LRJWHJ		7,348.8	-151.1	-1.23	7,342.2	-163.3	-1.25
MZRNM8		7,673.8	173.9	1.42	7,696.8	191.3	1.46
N48H2J		7,561.0	61.1	0.50	7,546.2	40.7	0.31
N6JE7N	*	7,672.2	172.3	1.41	7,766.0	260.5	1.99
NZK6U2		7,492.7	-7.2	-0.06	7,527.5	22.0	0.17
Q2HHXE		7,330.0	-169.9	-1.39	7,298.0	-207.5	-1.59
QJF9U3		7,440.8	-59.1	-0.48	7,410.4	-95.1	-0.73
QLFJNH		7,401.2	-98.7	-0.80	7,320.6	-184.9	-1.41
R3JDVG		7,580.3	80.4	0.66	7,588.2	82.6	0.63
RDQKWG	*	7,496.8	-3.1	-0.03	7,404.4	-101.1	-0.77
RT6TXK		7,320.6	-179.3	-1.46	7,350.4	-155.1	-1.19
RZDVWL		7,628.8	128.9	1.05	7,657.0	151.5	1.16
TGKCHE	X	7,689.4	189.5	1.55	7,540.0	34.5	0.26
TZCHNJ		7,455.3	-44.6	-0.36	7,442.0	-63.6	-0.49
UQHRJ3		7,493.0	-6.9	-0.06	7,456.7	-48.8	-0.37
VDW9NJ		7,361.2	-138.7	-1.13	7,396.6	-108.9	-0.83
WUY8BC	X	6,843.5	-656.4	-5.35	6,749.7	-755.9	-5.78
XA3R3U		7,482.8	-17.1	-0.14	7,490.4	-15.1	-0.12
XZD468		7,314.0	-185.9	-1.52	7,308.5	-197.0	-1.51
Y96N3R		7,442.0	-57.9	-0.47	7,408.0	-97.5	-0.75
YD6JUD		7,417.4	-82.4	-0.67	7,423.5	-82.0	-0.63
YM88L6	X	3,818.6	-3,681.3	-30.02	3,808.1	-3,697.4	-28.28
YPB368	X	8,042.0	542.1	4.42	8,042.0	536.5	4.10
YQBFDF		7,478.5	-21.3	-0.17	7,485.2	-20.4	-0.16
YU7W39		7,229.8	-270.1	-2.20	7,273.8	-231.8	-1.77
Z87VQ7		7,523.0	23.1	0.19	7,528.0	22.5	0.17
ZRHK44		7,679.4	179.5	1.46	7,743.6	238.1	1.82



Plastics Interlaboratory Testing Program

Report #115

Analysis 704

3rd Qtr 2020

Tensile Stress at Yield - psi

Summary Statistics	<u>Sample F69</u>	<u>Sample F70</u>
Grand Means	7,499.88 psi	7,505.53 psi
Std Dev Btwn Labs	122.64 psi	130.73 psi
Statistics based on 56 of 66 reporting participants		

Sample F69: ABS/PC & Sample F70: ABS/PC

Comments on Assigned Data Flags for Test #704

- JTP8NC (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- FYKZ6V (X) - Inconsistent in testing between samples.
- YM88L6 (X) - Data for both samples are low. Possible Systematic Error.
- YPB368 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- BL94YW (X) - Data for both samples are high. Possible Systematic Error.
- TGKCHE (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample F69.
- H4PFRN (X) - Data for sample F69 are high.
- E93L2Y (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- EXJ69T (X) - Data for both samples are low. Possible Systematic Error.
- WUY8BC (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

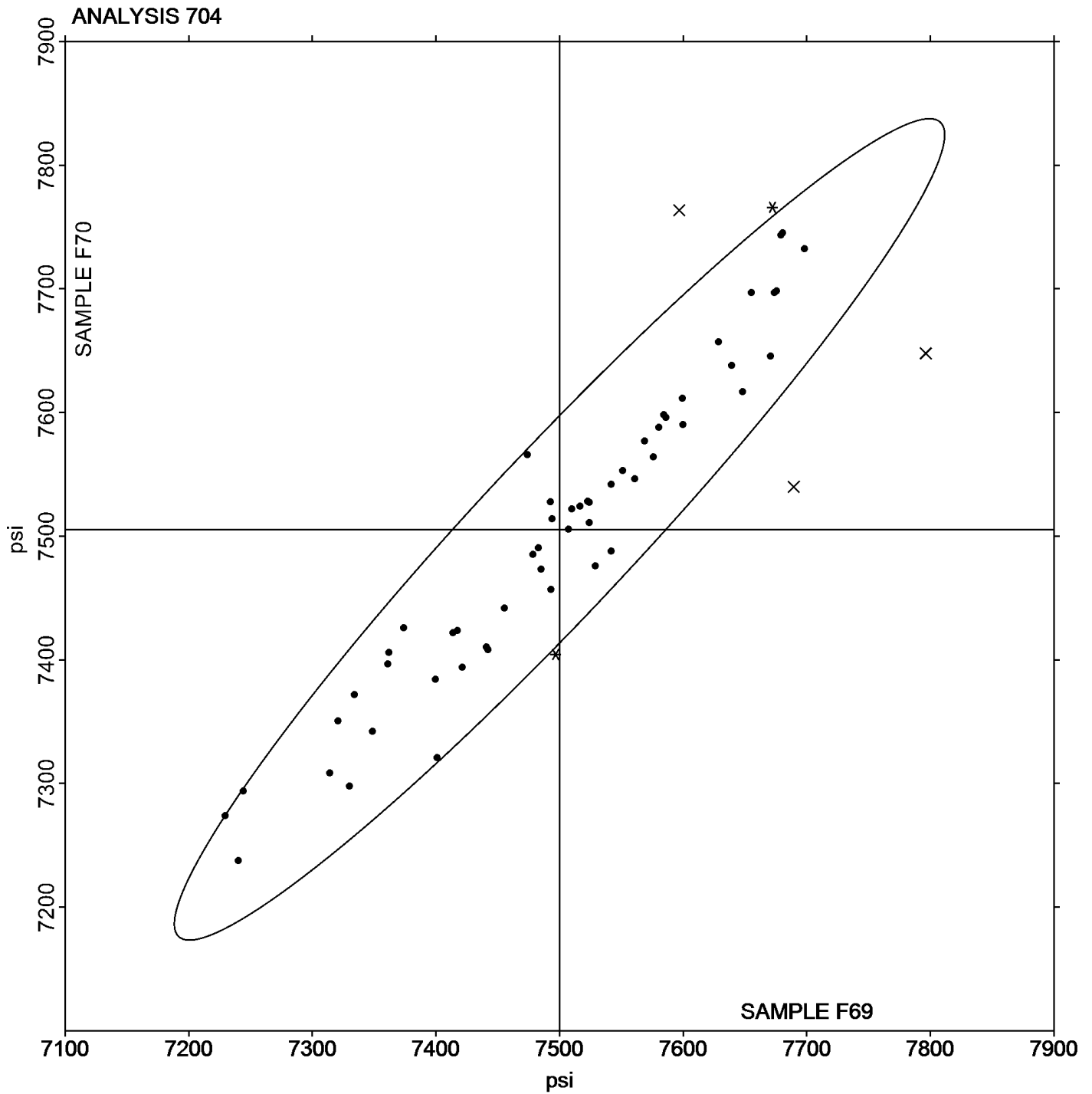
Report #115

Analysis 704

3rd Qtr 2020

Tensile Stress at Yield - psi

Grand Mean Sample F69: 7,499.88 psi Grand Mean Sample F70: 7,505.53 psi





Plastics Interlaboratory Testing Program

Report #115

Analysis 705

3rd Qtr 2020

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F69			Sample F70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U		7,672.6	284.7	0.46	7,972.4	505.3	0.84
3D9D29		6,640.2	-747.7	-1.21	6,468.4	-998.7	-1.66
3RUT69		6,522.0	-865.9	-1.40	6,652.0	-815.1	-1.36
4G2AVM	*	6,944.0	-443.9	-0.72	7,930.0	462.9	0.77
64AZUY		7,777.2	389.3	0.63	7,845.8	378.7	0.63
68FVZ3		7,343.3	-44.7	-0.07	7,540.6	73.5	0.12
7DURUW		7,640.8	252.9	0.41	7,646.4	179.3	0.30
7HWYK8		8,075.4	687.5	1.11	8,209.2	742.0	1.24
7KCXTP		8,733.6	1,345.7	2.18	8,410.6	943.5	1.57
7KVZ2P		8,239.0	851.1	1.38	8,068.0	600.9	1.00
823R3Y		7,741.9	354.0	0.57	7,637.1	170.0	0.28
8EL8JY		8,422.2	1,034.3	1.68	8,474.8	1,007.7	1.68
8XWWWW		7,971.1	583.1	0.94	7,864.6	397.5	0.66
A72Q6U		7,835.0	447.1	0.72	7,905.2	438.1	0.73
BL94YW	X	8,924.6	1,536.7	2.49	7,597.8	130.7	0.22
BLJ8W3		7,756.2	368.3	0.60	7,729.8	262.7	0.44
BYZTWH		7,688.6	300.7	0.49	8,388.6	921.5	1.53
D7TKHG		7,832.1	444.2	0.72	7,339.0	-128.2	-0.21
DE3ATU		7,456.4	68.5	0.11	7,540.6	73.5	0.12
E93L2Y		7,229.4	-158.5	-0.26	7,919.9	452.7	0.75
EUW7MC		6,921.0	-466.9	-0.76	7,443.2	-23.9	-0.04
EXJ69T		8,448.4	1,060.5	1.72	8,105.7	638.6	1.06
F9Q6VQ		6,626.2	-761.7	-1.23	6,711.4	-755.7	-1.26
FYKZ6V		7,201.2	-186.7	-0.30	7,567.6	100.5	0.17
GJ6GNE		7,776.8	388.9	0.63	7,826.6	359.5	0.60
H4PFRN	X	14,982.6	7,594.7	12.30	7,330.2	-136.9	-0.23
HHWYPN		6,882.4	-505.5	-0.82	7,418.8	-48.3	-0.08
HXFHXB	*	7,160.6	-227.3	-0.37	6,493.6	-973.5	-1.62
J6JNDD		7,289.2	-98.7	-0.16	7,083.6	-383.5	-0.64
J9JY7R		6,749.2	-638.7	-1.03	7,359.4	-107.7	-0.18
JCKAPR		7,258.2	-129.7	-0.21	7,770.4	303.3	0.51
KTN4VR		7,397.0	9.1	0.01	7,741.8	274.7	0.46
KUTM8M	X	8,171.5	783.6	1.27	7,029.8	-437.4	-0.73
LRJWHJ		6,461.4	-926.5	-1.50	6,451.6	-1,015.5	-1.69
MCTLVM		7,209.4	-178.5	-0.29	7,425.4	-41.7	-0.07



Plastics Interlaboratory Testing Program

Report #115

Analysis 705

3rd Qtr 2020

Tensile Stress at Break - psi

WebCode	Data Flag	Sample F69			Sample F70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MZRNM8		6,575.6	-812.3	-1.32	6,611.2	-855.9	-1.43
N48H2J		8,015.8	627.9	1.02	8,272.8	805.7	1.34
NZK6U2		6,625.4	-762.5	-1.24	6,608.0	-859.2	-1.43
Q2HHXE		6,704.0	-683.9	-1.11	7,106.0	-361.1	-0.60
QJF9U3		6,525.8	-862.1	-1.40	6,348.8	-1,118.3	-1.86
R3JDVG		8,014.6	626.7	1.02	7,808.6	341.5	0.57
RDQKWG		7,701.4	313.5	0.51	7,735.8	268.7	0.45
RT6TXK		7,516.0	128.1	0.21	7,559.4	92.3	0.15
RZDVWL	X	6,751.2	-636.7	-1.03	5,581.4	-1,885.7	-3.14
TGKCHE		8,044.0	656.1	1.06	7,906.0	438.9	0.73
TQKYAB		7,514.0	126.1	0.20	7,692.0	224.9	0.37
TZCHNJ		7,595.1	207.2	0.34	7,669.1	202.0	0.34
UQHRJ3		6,691.5	-696.4	-1.13	6,655.5	-811.7	-1.35
VDW9NJ		6,572.6	-815.3	-1.32	6,631.8	-835.3	-1.39
WUY8BC		5,959.4	-1,428.5	-2.31	6,179.6	-1,287.5	-2.14
XA3R3U		7,865.8	477.9	0.77	7,693.0	225.9	0.38
XZD468		7,617.4	229.5	0.37	7,411.5	-55.6	-0.09
Y96N3R		6,354.0	-1,033.9	-1.67	6,363.0	-1,104.1	-1.84
YD6JUD		7,656.3	268.4	0.43	7,602.7	135.6	0.23
YM88L6	X	3,403.7	-3,984.2	-6.45	3,449.6	-4,017.5	-6.69
YPB368		8,030.0	642.1	1.04	8,014.0	546.9	0.91
YQBDFD		7,014.9	-373.0	-0.60	7,055.6	-411.5	-0.69
YU7W39	X	7,664.4	276.5	0.45	6,448.1	-1,019.0	-1.70
Z87VQ7		8,058.0	670.1	1.09	7,982.4	515.3	0.86
ZRHK44		7,393.2	5.3	0.01	7,376.2	-90.9	-0.15

Summary Statistics		
	Sample F69	Sample F70
Grand Means	7,387.91 psi	7,467.13 psi
Stnd Dev Btwn Labs	617.32 psi	600.49 psi
Statistics based on 54 of 60 reporting participants		

Sample F69: ABS/PC & Sample F70: ABS/PC



Plastics Interlaboratory Testing Program

Analysis 705

Tensile Stress at Break - psi

Report #115

3rd Qtr 2020

Comments on Assigned Data Flags for Test #705

YU7W39 (X) - Inconsistent in testing between samples.

KUTM8M (X) - Inconsistent in testing between samples.

RZDVWL (X) - Data for sample F70 are low. Inconsistent within the determinations of sample F70.

YM88L6 (X) - Data for both samples are low. Possible Systematic Error.

BL94YW (X) - Inconsistent in testing between samples.

H4PFRN (X) - Data for sample F69 are high.



Plastics Interlaboratory Testing Program

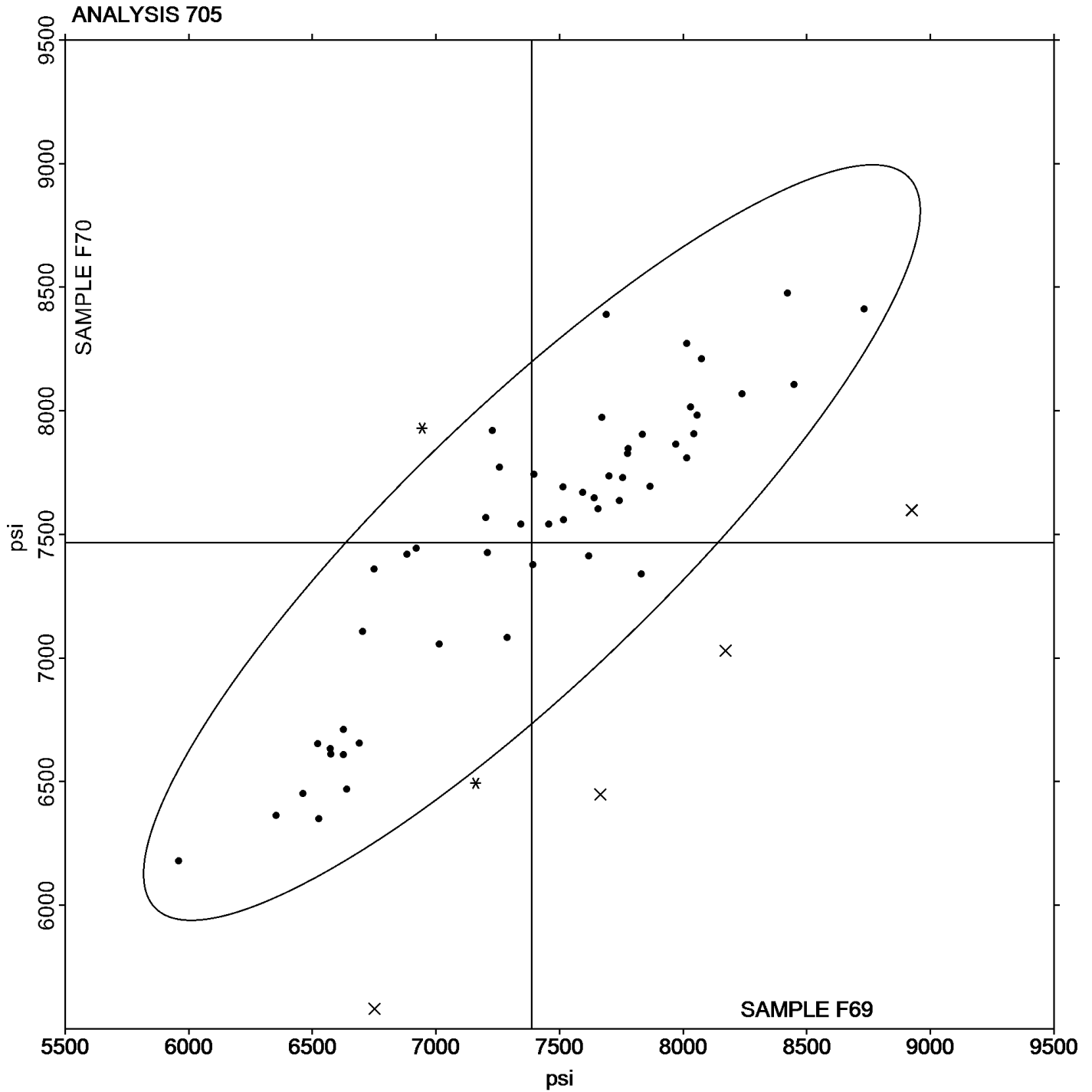
Report #115

Analysis 705

3rd Qtr 2020

Tensile Stress at Break - psi

Grand Mean Sample F69: 7,387.91 psi Grand Mean Sample F70: 7,467.13 psi





Plastics Interlaboratory Testing Program

Report #115

Analysis 706

3rd Qtr 2020

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F69			Sample F70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U		4.766	0.074	0.48	4.832	0.147	0.87
3D9D29		4.800	0.108	0.71	4.914	0.229	1.36
3RUT69		4.660	-0.032	-0.21	4.752	0.067	0.40
4G2AVM	X	10.330	5.638	36.94	10.460	5.775	34.27
64AZUY		4.688	-0.004	-0.03	4.608	-0.077	-0.46
68FVZ3		4.596	-0.096	-0.63	4.378	-0.307	-1.82
7HWYK8	X	3.635	-1.058	-6.93	3.659	-1.026	-6.09
7KCXTP		4.806	0.114	0.75	4.830	0.145	0.86
7KVZ2P		4.930	0.238	1.56	4.986	0.301	1.79
823R3Y		4.560	-0.132	-0.87	4.520	-0.165	-0.98
8EL8JY	X	127.672	122.980	805.88	130.116	125.431	744.32
8KBJKM		4.764	0.072	0.47	4.656	-0.029	-0.17
8X4F8Y		4.636	-0.056	-0.37	4.816	0.131	0.78
8XWWWW		4.518	-0.174	-1.14	4.674	-0.011	-0.07
A72Q6U		4.634	-0.058	-0.38	4.668	-0.017	-0.10
BL94YW	X	5.744	1.052	6.89	5.238	0.553	3.28
BLJ8W3		4.620	-0.072	-0.47	4.706	0.021	0.12
BYZTWH		4.892	0.200	1.31	4.858	0.173	1.03
D7TKHG		4.706	0.014	0.09	4.756	0.071	0.42
DE3ATU		4.834	0.142	0.93	4.688	0.003	0.02
E93L2Y		4.978	0.285	1.87	4.863	0.177	1.05
EUW7MC	X	4.000	-0.692	-4.54	5.000	0.315	1.87
EXJ69T	X	2.040	-2.652	-17.38	2.020	-2.665	-15.81
F9Q6VQ	X	3.254	-1.438	-9.42	3.082	-1.603	-9.51
FYKZ6V		4.721	0.029	0.19	4.634	-0.051	-0.30
GJ6GNE		4.486	-0.206	-1.35	4.482	-0.203	-1.21
H4PFRN	X	0.666	-4.026	-26.38	0.654	-4.031	-23.92
HHWYPN		4.676	-0.016	-0.10	4.588	-0.097	-0.57
HXFHXB		4.683	-0.009	-0.06	4.653	-0.032	-0.19
HYY98V		4.758	0.066	0.43	4.722	0.037	0.22
J6JNDD		4.764	0.072	0.47	4.812	0.127	0.75
J9JY7R		4.658	-0.034	-0.22	4.670	-0.015	-0.09
JCKAPR		4.680	-0.012	-0.08	4.650	-0.035	-0.21
JTP8NC		4.500	-0.192	-1.26	4.500	-0.185	-1.10
KTN4VR	X	2.818	-1.874	-12.28	3.414	-1.271	-7.54



Plastics Interlaboratory Testing Program

Report #115

Analysis 706

3rd Qtr 2020

Percent Elongation at Yield - Percent

WebCode	Data Flag	Sample F69			Sample F70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KUTM8M		4.682	-0.010	-0.07	4.762	0.077	0.46
LQ9UWK		4.682	-0.010	-0.07	4.770	0.085	0.50
LRJWHJ		4.774	0.082	0.54	4.686	0.001	0.01
MZRNM8	*	4.646	-0.046	-0.30	4.930	0.245	1.45
N48H2J		4.776	0.084	0.55	4.750	0.065	0.39
NZK6U2		4.844	0.152	1.00	4.888	0.203	1.20
Q2HHXE		4.430	-0.262	-1.72	4.502	-0.183	-1.09
QJF9U3		4.307	-0.385	-2.52	4.314	-0.371	-2.20
QLFJNH		4.678	-0.014	-0.09	4.608	-0.077	-0.46
R3JDVG		4.952	0.260	1.70	4.982	0.297	1.76
RT6TXK		4.576	-0.116	-0.76	4.638	-0.047	-0.28
TGKCHE	*	4.300	-0.392	-2.57	4.500	-0.185	-1.10
TQKYAB	X	85.920	81.228	532.28	94.380	89.695	532.26
TZCHNJ		4.714	0.022	0.14	4.690	0.005	0.03
UQHRJ3		4.700	0.008	0.05	4.524	-0.161	-0.96
VDW9NJ	X	4.566	-0.126	-0.83	4.148	-0.537	-3.19
WUY8BC	X	2.296	-2.396	-15.70	2.250	-2.435	-14.45
XA3R3U		4.916	0.224	1.47	4.790	0.105	0.62
XZD468		4.686	-0.006	-0.04	4.512	-0.173	-1.03
Y96N3R		4.452	-0.240	-1.57	4.280	-0.405	-2.40
YD6JUD		4.700	0.008	0.05	4.697	0.012	0.07
YM88L6		4.596	-0.096	-0.63	4.386	-0.299	-1.77
YPB368		5.000	0.308	2.02	4.960	0.275	1.63
YQBFDF		4.647	-0.045	-0.30	4.585	-0.100	-0.59
YU7W39	X	3.878	-0.815	-5.34	3.904	-0.781	-4.63
Z87VQ7		4.822	0.130	0.85	4.814	0.129	0.77
ZRHK44		4.720	0.028	0.18	4.784	0.099	0.59

Summary Statistics

	Sample F69	Sample F70
Grand Means	4.6921 Percent	4.6851 Percent
Std Dev Btwn Labs	0.1526 Percent	0.1685 Percent

Statistics based on 49 of 62 reporting participants

Sample F69: ABS/PC & Sample F70: ABS/PC



Comments on Assigned Data Flags for Test #706

YU7W39 (X) - Data for both samples are low. Possible Systematic Error.

TQKYAB (X) - Extreme data.

F9Q6VQ (X) - Data for both samples are low. Possible Systematic Error.

BL94YW (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample F69.

H4PFRN (X) - Extreme data.

8EL8JY (X) - Extreme data.

EUW7MC (X) - Data for sample F69 are low.

4G2AVM (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample F69.

KTN4VR (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

VDW9NJ (X) - Data for sample F70 are low. Inconsistent within the determinations of both samples.

7HWYK8 (X) - Data for both samples are low. Possible Systematic Error.

EXJ69T (X) - Data for both samples are low. Possible Systematic Error.

WUY8BC (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

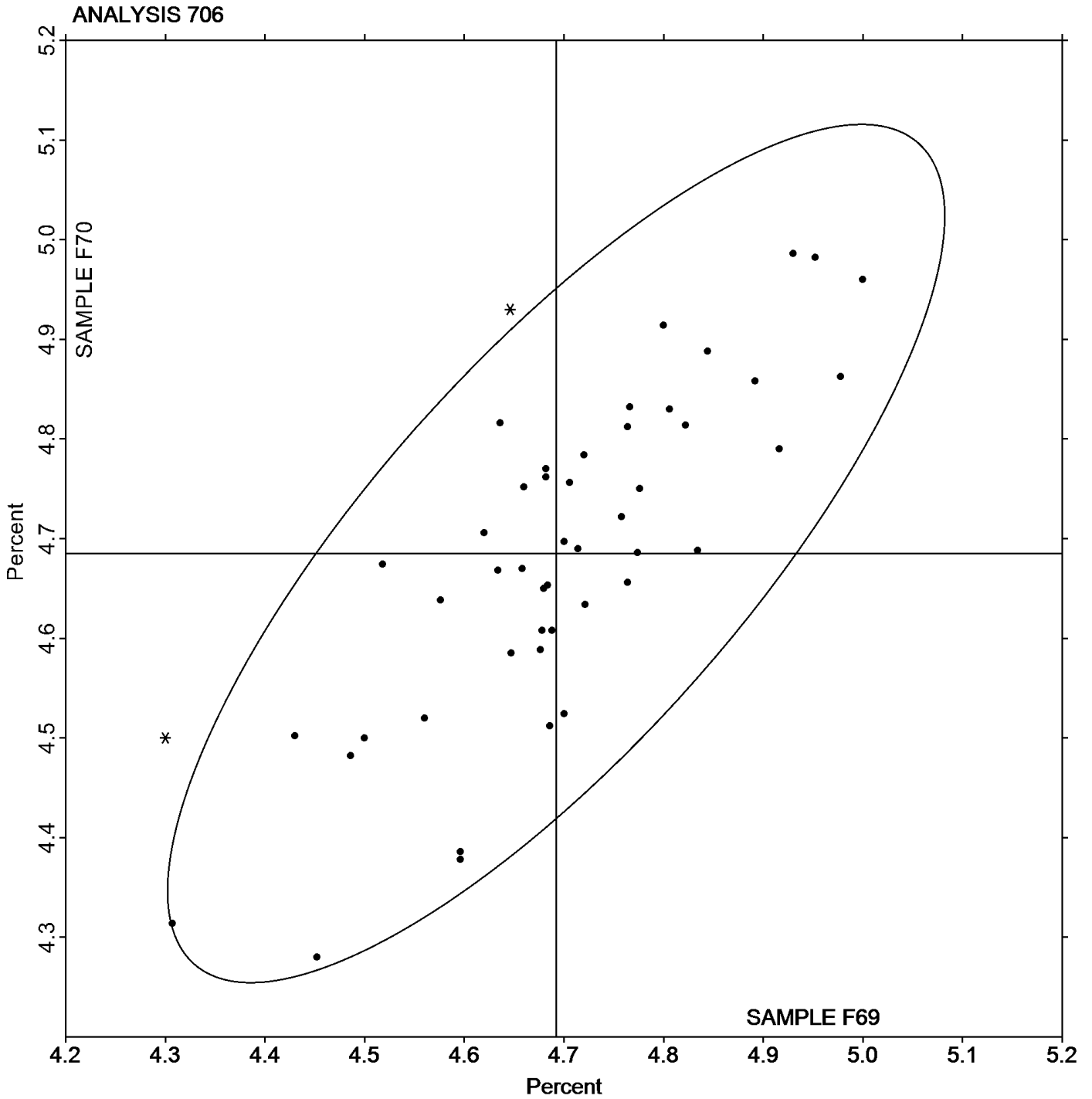
Report #115

Analysis 706

3rd Qtr 2020

Percent Elongation at Yield - Percent

Grand Mean Sample F69: 4.6921 Percent Grand Mean Sample F70: 4.6851 Percent





Plastics Interlaboratory Testing Program

Report #115

Analysis 708

3rd Qtr 2020

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F69			Sample F70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U		323.44	0.40	0.02	320.78	-2.39	-0.13
3D9D29		305.20	-17.84	-1.09	301.80	-21.37	-1.19
3RUT69	X	515.80	192.76	11.82	525.80	202.63	11.25
4G2AVM	X	121.40	-201.64	-12.36	119.40	-203.77	-11.31
64AZUY		326.96	3.92	0.24	326.48	3.31	0.18
68FVZ3	X	303.20	-19.84	-1.22	332.40	9.23	0.51
7DURUW		338.18	15.14	0.93	339.36	16.19	0.90
7HWYK8		334.29	11.25	0.69	333.62	10.45	0.58
7KVZ2P		317.86	-5.18	-0.32	316.28	-6.89	-0.38
823R3Y		331.98	8.94	0.55	332.98	9.81	0.54
8EL8JY		337.32	14.28	0.88	333.36	10.19	0.57
8KBJKM		317.12	-5.93	-0.36	316.42	-6.75	-0.37
8X4F8Y	X	337.82	14.78	0.91	318.42	-4.75	-0.26
8XWWWW		317.89	-5.16	-0.32	318.00	-5.17	-0.29
A72Q6U	*	330.53	7.49	0.46	316.53	-6.64	-0.37
BL94YW		298.00	-25.04	-1.54	294.80	-28.37	-1.57
BLJ8W3		331.50	8.46	0.52	324.66	1.49	0.08
BYZTWH		307.30	-15.74	-0.97	310.70	-12.47	-0.69
D7TKHG		340.15	17.10	1.05	334.95	11.78	0.65
DE3ATU		329.91	6.87	0.42	327.65	4.48	0.25
E93L2Y		301.93	-21.12	-1.29	301.40	-21.77	-1.21
EUW7MC	X	426.99	103.95	6.37	420.70	97.53	5.41
EXJ69T		309.46	-13.58	-0.83	309.92	-13.25	-0.74
F9Q6VQ		314.40	-8.64	-0.53	304.85	-18.32	-1.02
FYKZ6V	*	338.52	15.48	0.95	353.26	30.09	1.67
GJ6GNE		357.72	34.68	2.13	359.98	36.81	2.04
H4PFRN	X	3,096.44	2,773.40	170.00	1,669.67	1,346.50	74.74
HHWYPN		342.90	19.86	1.22	345.08	21.91	1.22
HXFHXB		342.09	19.04	1.17	347.89	24.72	1.37
HYY98V		330.52	7.48	0.46	324.92	1.75	0.10
J6JNDD		332.66	9.62	0.59	344.66	21.49	1.19
J9JY7R		346.60	23.56	1.44	353.08	29.91	1.66
JCKAPR		312.14	-10.90	-0.67	309.80	-13.37	-0.74
JTP8NC		305.82	-17.22	-1.06	317.40	-5.77	-0.32
KTN4VR	X	659.68	336.64	20.64	645.38	322.21	17.88



Plastics Interlaboratory Testing Program

Report #115

Analysis 708

3rd Qtr 2020

Modulus of Elasticity - ksi

WebCode	Data Flag	Sample F69			Sample F70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KUTM8M		339.89	16.84	1.03	345.56	22.39	1.24
LQ9UWK		319.80	-3.24	-0.20	330.60	7.43	0.41
LRJWHJ		299.70	-23.34	-1.43	299.12	-24.05	-1.33
MCTLVM	X	391.80	68.76	4.21	396.00	72.83	4.04
MZRNM8		341.08	18.04	1.11	339.08	15.91	0.88
N48H2J		308.34	-14.70	-0.90	306.54	-16.63	-0.92
NZK6U2		312.41	-10.63	-0.65	309.80	-13.37	-0.74
Q2HHXE		283.60	-39.44	-2.42	279.60	-43.57	-2.42
QJF9U3		329.60	6.56	0.40	329.40	6.23	0.35
QLFJNH		334.94	11.90	0.73	334.82	11.65	0.65
R3JDVG		314.27	-8.77	-0.54	314.50	-8.67	-0.48
RT6TXK		321.64	-1.40	-0.09	321.38	-1.79	-0.10
TGKCHE		334.22	11.18	0.69	329.18	6.01	0.33
TZCHNJ		316.42	-6.63	-0.41	316.65	-6.52	-0.36
UQHRJ3		289.33	-33.71	-2.07	289.99	-33.18	-1.84
WUY8BC		353.12	30.08	1.84	362.22	39.05	2.17
XA3R3U	X	299.44	-23.60	-1.45	320.20	-2.97	-0.16
XZD468		316.16	-6.89	-0.42	326.05	2.88	0.16
Y96N3R		321.80	-1.24	-0.08	317.60	-5.57	-0.31
YD6JUD		302.74	-20.30	-1.24	297.45	-25.72	-1.43
YM88L6	X	184.22	-138.82	-8.51	184.75	-138.42	-7.68
YPB368		325.60	2.56	0.16	325.40	2.23	0.12
YQBFDF		337.28	14.24	0.87	328.47	5.30	0.29
YU7W39		302.65	-20.40	-1.25	308.20	-14.97	-0.83
Z87VQ7		325.20	2.16	0.13	326.28	3.11	0.17

Summary Statistics		
	Sample F69	Sample F70
Grand Means	323.043 ksi	323.170 ksi
Stnd Dev Btwn Labs	16.314 ksi	18.016 ksi
Statistics based on 50 of 60 reporting participants		

Sample F69: ABS/PC & Sample F70: ABS/PC



Comments on Assigned Data Flags for Test #708

- XA3R3U (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample F70.
- YM88L6 (X) - Data for both samples are low. Possible Systematic Error.
- H4PFRN (X) - Extreme data.
- EUW7MC (X) - Data for both samples are high. Possible Systematic Error.
- 4G2AVM (X) - Data for both samples are low. Possible Systematic Error.
- KTN4VR (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample F69.
- 3RUT69 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- 8X4F8Y (X) - Inconsistent in testing between samples.
- 68FVZ3 (X) - Inconsistent in testing between samples.
- MCTLVM (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample F69.



Plastics Interlaboratory Testing Program

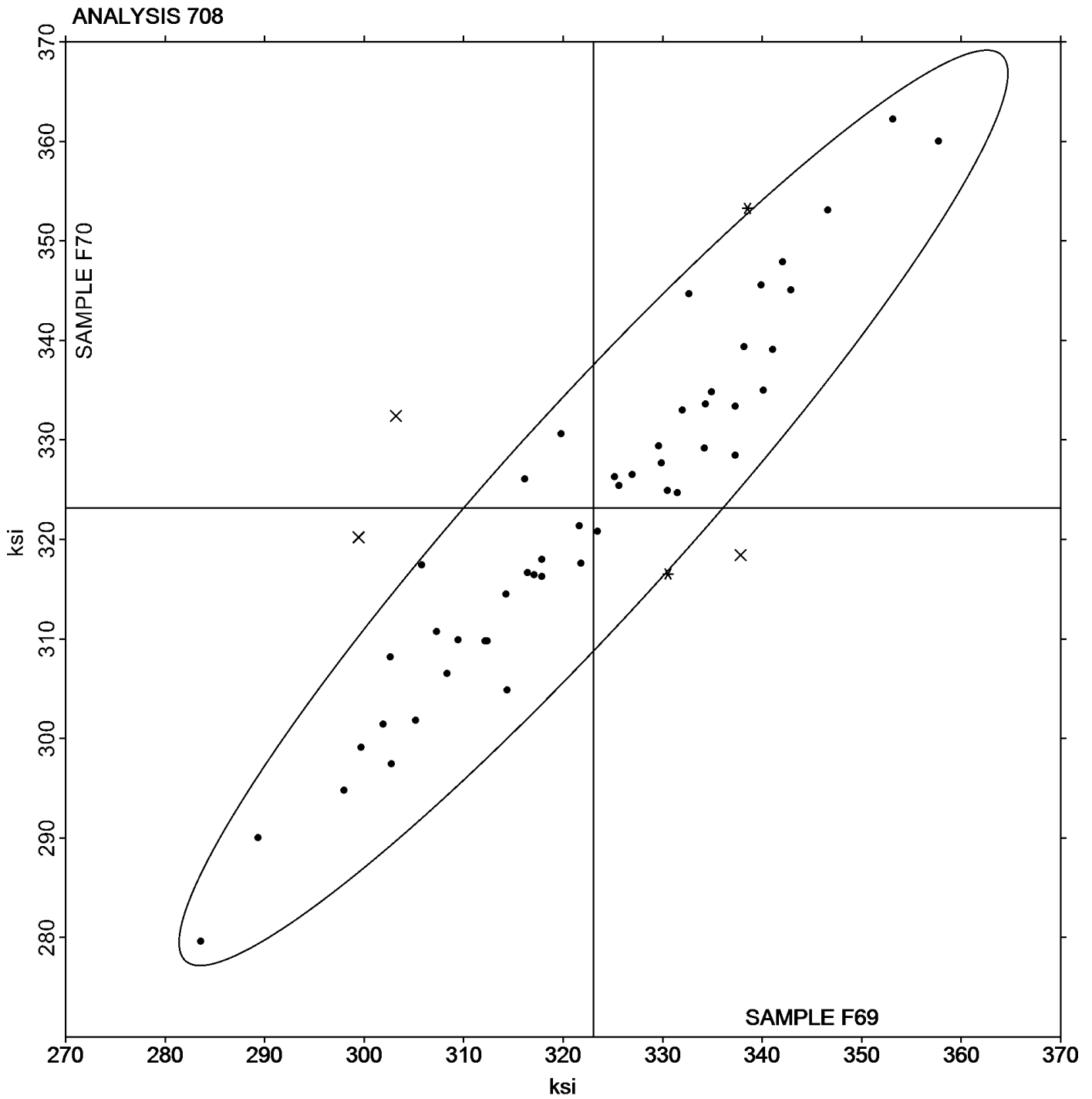
Report #115

Analysis 708

3rd Qtr 2020

Modulus of Elasticity - ksi

Grand Mean Sample F69: 323.04 ksi Grand Mean Sample F70: 323.17 ksi





Plastics Interlaboratory Testing Program

Report #115

Analysis 710

3rd Qtr 2020

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

WebCode	Data Flag	Sample E69			Sample E70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		77.30	-1.42	-1.60	77.85	-0.66	-0.88	CE
3D9D29	*	81.10	2.38	2.69	79.73	1.22	1.61	XX
46QXMY		78.95	0.23	0.26	78.68	0.17	0.22	IN
64AZUY		78.50	-0.22	-0.25	78.08	-0.43	-0.58	DN
7KCXTP		78.28	-0.44	-0.50	78.10	-0.41	-0.54	TO
823R3Y		78.00	-0.72	-0.81	78.10	-0.41	-0.54	TO
8EL8JY		77.98	-0.74	-0.84	77.88	-0.63	-0.84	IN
8XWWW		78.40	-0.32	-0.36	78.43	-0.08	-0.11	TY
9NQEYY		79.43	0.71	0.80	79.60	1.09	1.45	XX
BL94YW		78.75	0.03	0.04	78.73	0.22	0.29	CF
BYZTWH		79.38	0.66	0.74	78.70	0.19	0.25	CE
D7TKHG		77.65	-1.07	-1.21	77.28	-1.23	-1.64	RO
DE3ATU		78.85	0.13	0.15	78.90	0.39	0.52	IN
EB2MGG		78.38	-0.34	-0.39	78.28	-0.23	-0.31	TO
JTP8NC		79.23	0.51	0.57	79.40	0.89	1.18	CE
KUTM8M		78.53	-0.19	-0.22	78.40	-0.11	-0.15	CE
N6JE7N		77.60	-1.12	-1.26	77.23	-1.28	-1.71	TO
QLFJNH		77.45	-1.27	-1.43	77.13	-1.38	-1.84	TO
R3JDVG		78.90	0.18	0.21	78.80	0.29	0.39	ZW
RZDVWL		78.48	-0.24	-0.27	78.45	-0.06	-0.08	TO
RZV2VC		79.18	0.46	0.52	79.05	0.54	0.72	IN
TGKCHE		79.08	0.36	0.40	78.95	0.44	0.59	CE
TZCHNJ		80.20	1.48	1.67	80.00	1.49	1.98	AT
XA3R3U		79.68	0.96	1.08	78.53	0.02	0.02	CE
Z87VQ7	X	77.83	-0.89	-1.01	73.65	-4.86	-6.45	RR

Summary Statistics		
	Sample E69	Sample E70
Grand Means	78.718 Degrees C	78.509 Degrees C
Std Dev Btwn Labs	0.886 Degrees C	0.753 Degrees C
Statistics based on 24 of 25 reporting participants		

Sample E69: HIPS & Sample E70: HIPS

Comments on Assigned Data Flags for Test #710

Z87VQ7 (X) - Data for sample E70 are low.



Plastics Interlaboratory Testing Program

Report #115

Analysis 710

3rd Qtr 2020

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

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

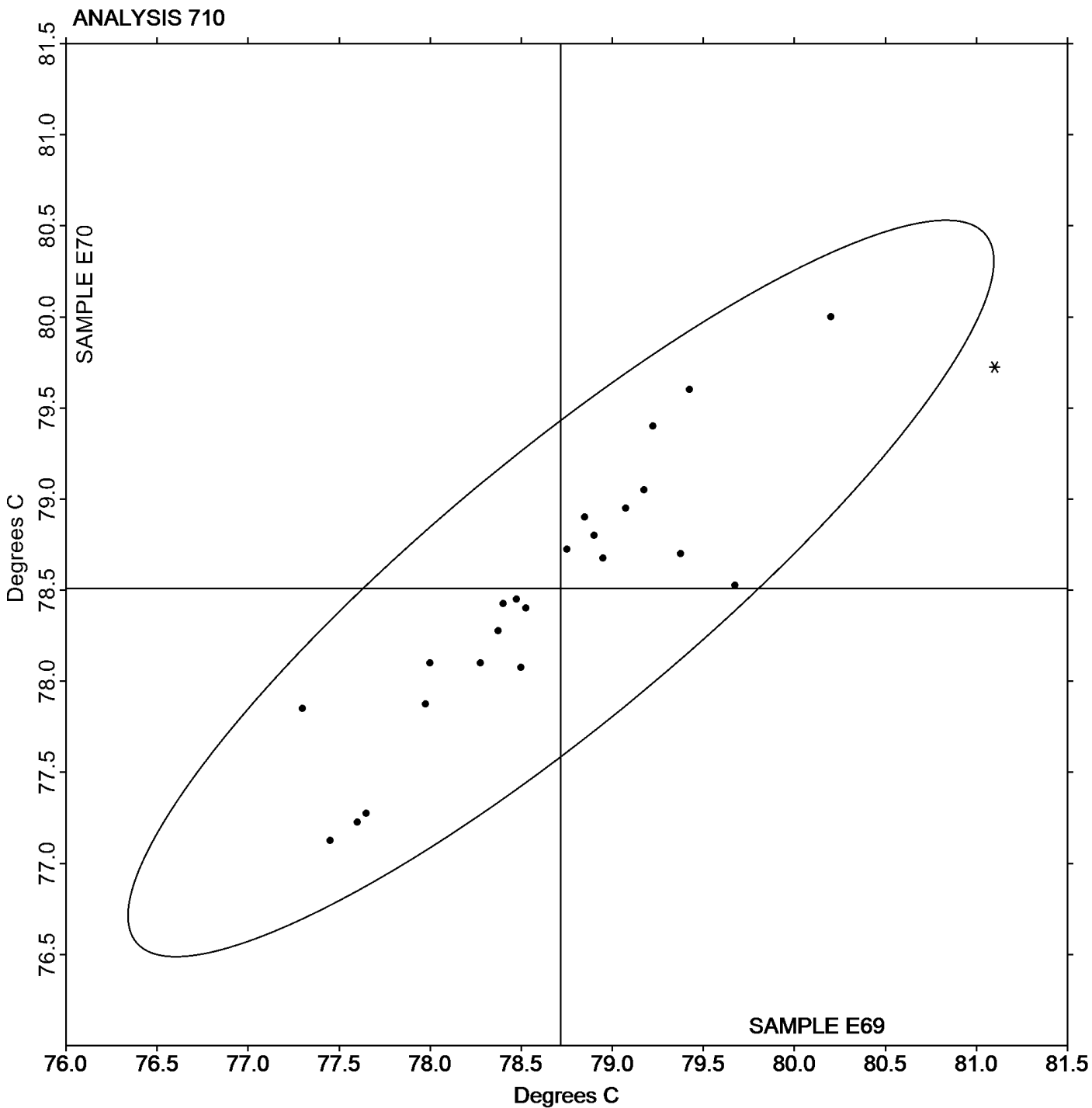
Report #115

Analysis 710

3rd Qtr 2020

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

Grand Mean Sample E69: 78.718 Degrees C Grand Mean Sample E70: 78.509 Degrees C





Plastics Interlaboratory Testing Program

Report #115

Analysis 711

3rd Qtr 2020

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

WebCode	Data Flag	Sample G69			Sample G70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		86.4	-0.1	-0.04	87.2	0.3	0.15	CE
7KCXTP		85.0	-1.5	-0.87	84.7	-2.2	-1.23	TO
AA4NFM		89.3	2.9	1.71	88.8	1.9	1.08	ZW
DE3ATU		84.4	-2.1	-1.25	86.3	-0.6	-0.36	IN
GE3HZP		84.3	-2.1	-1.27	86.1	-0.8	-0.47	CE
N6JE7N		88.1	1.6	0.95	88.9	2.0	1.14	TO
QLFJNH		85.4	-1.1	-0.65	84.9	-2.0	-1.14	TO
R3JDVG		87.2	0.7	0.42	84.7	-2.2	-1.27	ZW
RZDVWL		85.9	-0.5	-0.31	86.2	-0.7	-0.42	TO
TGKCHE		85.9	-0.5	-0.33	89.5	2.6	1.49	TO
TZCHNJ		89.1	2.6	1.56	88.9	2.0	1.15	AT
YPB368		86.6	0.2	0.09	86.7	-0.2	-0.13	CE

Summary Statistics		
	Sample G69	Sample G70
Grand Means	86.45 Degrees C	86.88 Degrees C
Stnd Dev Btwn Labs	1.68 Degrees C	1.76 Degrees C
Statistics based on 12 of 12 reporting participants		

Sample G69: PP & Sample G70: PP

Key to Instrument Codes Reported by Participants

- | | |
|------------|-----------------|
| AT Atlas | CE Ceast |
| IN Instron | TO Tinius Olsen |
| ZW Zwick | |



Plastics Interlaboratory Testing Program

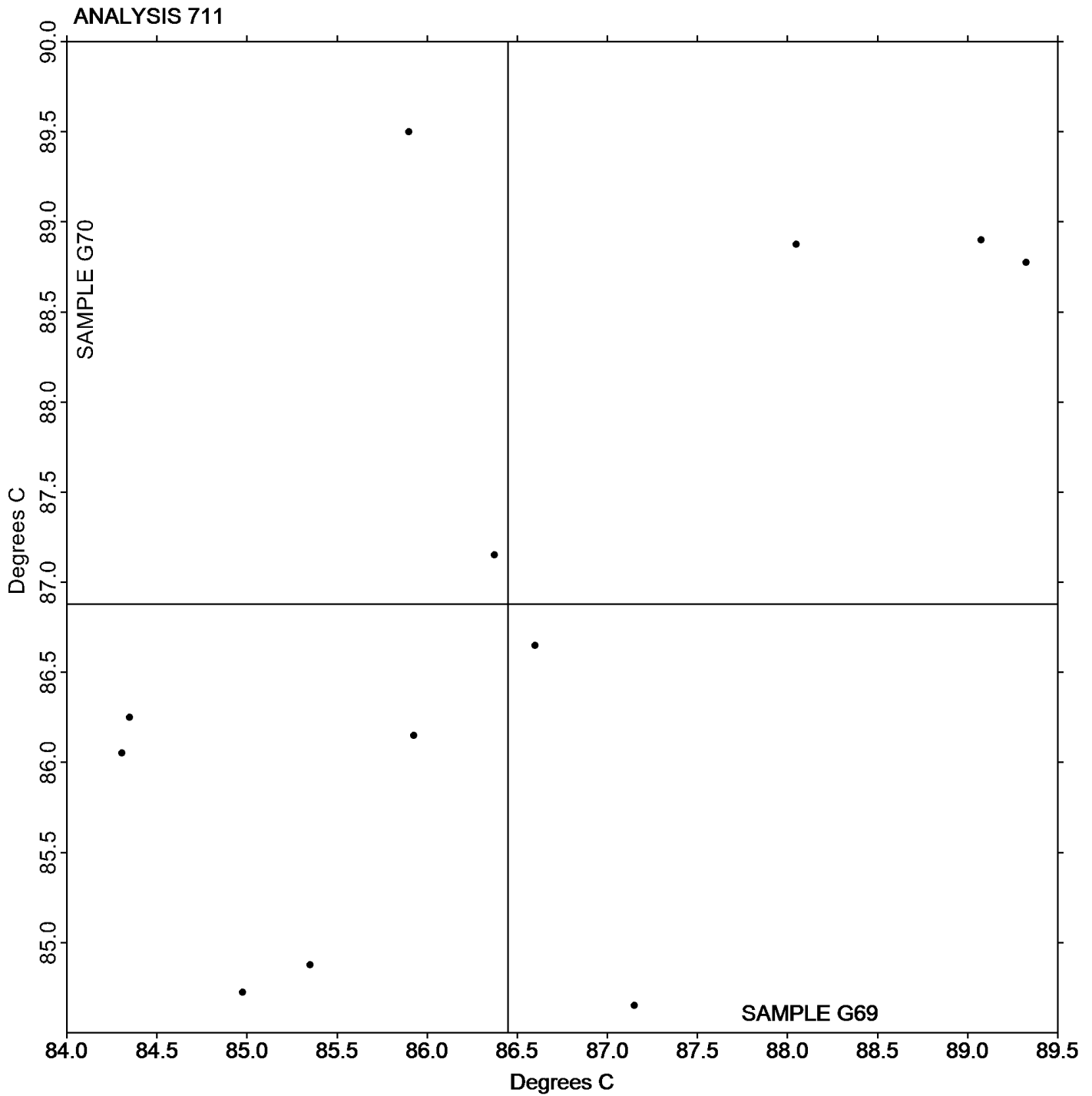
Report #115

Analysis 711

3rd Qtr 2020

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

Grand Mean Sample G69: 86.448 Degrees C Grand Mean Sample G70: 86.879 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 #115

Analysis 712

3rd Qtr 2020

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

WebCode	Data Flag	Sample N69			Sample N70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U	X	76.73	-1.64	-2.14	77.95	-0.50	-0.63	CE
3D9D29		78.90	0.54	0.71	78.63	0.17	0.22	XX
3Y6HJ2		78.83	0.46	0.61	79.08	0.62	0.78	ZW
4ANLQ7		78.58	0.21	0.28	78.55	0.10	0.12	XX
86HRZL		78.00	-0.36	-0.47	77.60	-0.85	-1.07	CE
8KBJKM		78.48	0.11	0.15	79.00	0.55	0.69	IN
8XWWWW		78.68	0.31	0.41	79.13	0.67	0.85	TY
AC7LNU		79.08	0.71	0.93	79.35	0.90	1.13	CE
B24NFK		78.48	0.11	0.15	78.48	0.02	0.03	TO
BJNEEJ		77.40	-0.96	-1.26	77.43	-1.03	-1.29	TO
BUDDP4		78.08	-0.29	-0.38	77.88	-0.58	-0.73	CF
DB4V9P	*	76.35	-2.01	-2.64	76.83	-1.63	-2.05	XX
DE3ATU		78.73	0.36	0.48	79.15	0.70	0.88	IN
E9V3QW		78.28	-0.09	-0.11	78.70	0.25	0.31	TY
EBHK9G		78.00	-0.36	-0.47	78.03	-0.43	-0.54	CE
EJR9MF		77.13	-1.24	-1.62	76.98	-1.48	-1.86	XX
HVBW9P		79.38	1.01	1.33	79.83	1.37	1.73	CE
N6JE7N		77.67	-0.70	-0.91	77.90	-0.55	-0.69	TO
NBG9QQ		77.88	-0.49	-0.64	78.03	-0.43	-0.54	TO
Q6VTQ4		78.25	-0.11	-0.15	78.10	-0.35	-0.44	CE
R3JDVG		78.75	0.39	0.51	78.53	0.07	0.09	ZW
TGKCHE		78.90	0.54	0.71	78.73	0.27	0.34	TO
TTV4NY		78.58	0.21	0.28	78.45	0.00	0.00	CE
TZCHNJ		80.05	1.69	2.21	79.75	1.30	1.63	AT
UDE7GD		79.33	0.96	1.26	79.65	1.20	1.51	CF
WKR2AC		77.93	-0.44	-0.57	77.83	-0.63	-0.79	TO
XZD468		77.53	-0.84	-1.10	77.75	-0.70	-0.88	CE
YKZTFY	X	73.08	-5.29	-6.93	72.55	-5.90	-7.42	IN
YPB368		78.60	0.24	0.31	78.90	0.45	0.56	CF



Plastics Interlaboratory Testing Program

Report #115

Analysis 712

3rd Qtr 2020

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

Summary Statistics		
	<u>Sample N69</u>	<u>Sample N70</u>
Grand Means	78.362 Degrees C	78.452 Degrees C
Stnd Dev Btwn Labs	0.763 Degrees C	0.795 Degrees C
Statistics based on 27 of 29 reporting participants		

Sample N69: HIPS & Sample N70: HIPS

Comments on Assigned Data Flags for Test #712

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

2UJ78U (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

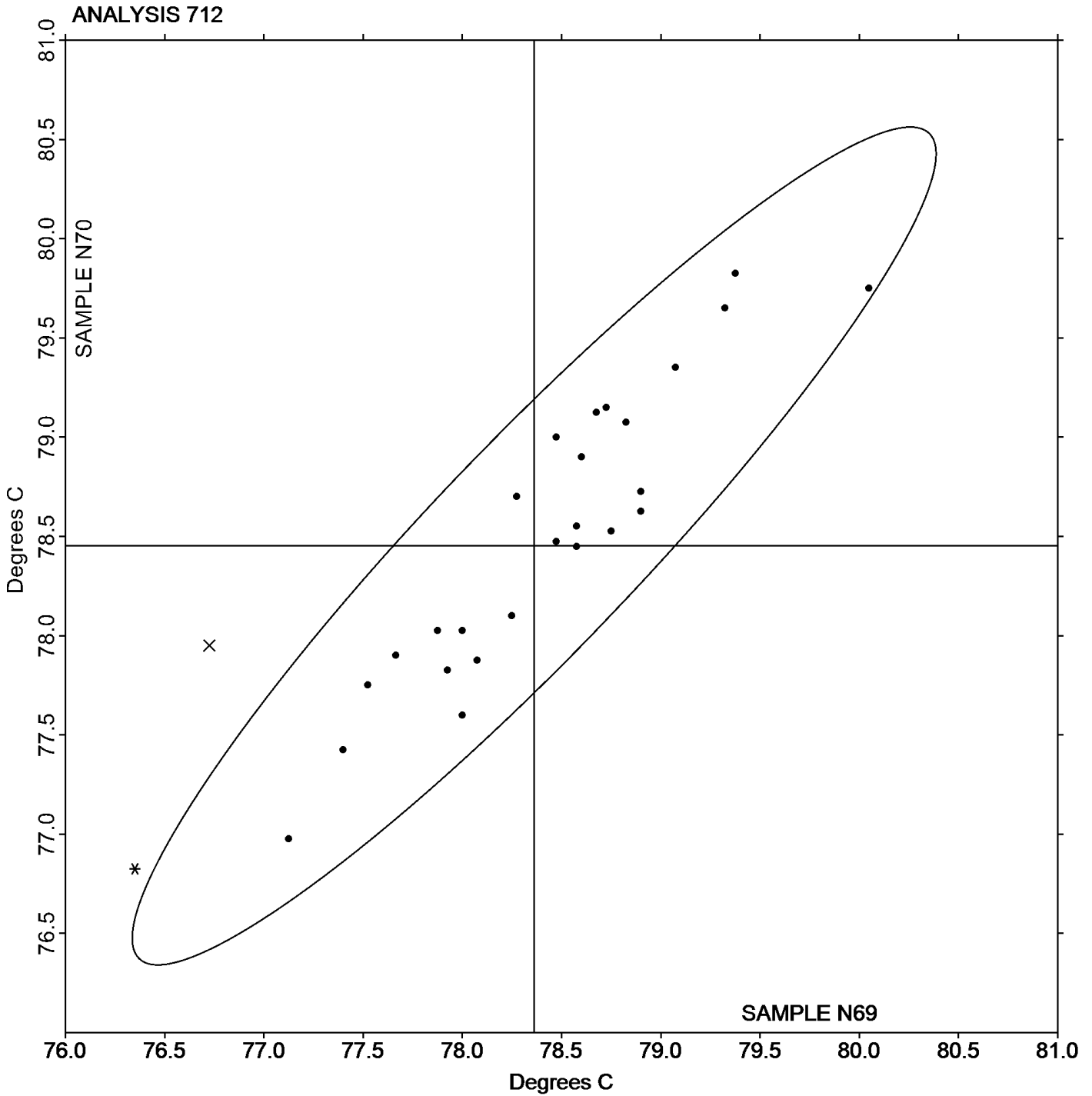
Report #115

Analysis 712

3rd Qtr 2020

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

Grand Mean Sample N69: 78.362 Degrees C Grand Mean Sample N70: 78.452 Degrees C





Plastics Interlaboratory Testing Program

Report #115

Analysis 715

3rd Qtr 2020

Vicat Softening Temperature (Rate A)

WebCode	Data Flag	Sample H69			Sample H70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		103.23	-0.50	-0.74	103.35	-0.40	-0.59	CE
32TUH8		103.92	0.18	0.27	103.87	0.12	0.17	AT
3D9D29	X	104.08	0.35	0.52	105.18	1.43	2.12	XX
46QXMY	X	95.98	-7.75	-11.50	95.72	-8.03	-11.89	IN
79ZU67		103.03	-0.70	-1.04	103.12	-0.63	-0.94	CE
823R3Y		102.90	-0.83	-1.24	102.92	-0.83	-1.23	TO
86HRZL		103.78	0.05	0.08	103.70	-0.05	-0.07	CE
8XWWW		105.52	1.78	2.65	105.53	1.78	2.64	TY
AC7LNU		105.05	1.32	1.95	105.03	1.28	1.90	CF
BYZTWH		103.62	-0.12	-0.17	103.40	-0.35	-0.52	CE
D7TKHG		103.35	-0.38	-0.57	103.45	-0.30	-0.44	RO
DE3ATU	*	103.80	0.07	0.10	103.47	-0.28	-0.42	TO
ER8R4U		103.00	-0.73	-1.09	103.00	-0.75	-1.11	TO
F6QUZQ		102.85	-0.88	-1.31	102.95	-0.80	-1.18	CE
J6JNDD		103.05	-0.68	-1.01	103.03	-0.72	-1.06	TO
N6JE7N		103.43	-0.30	-0.44	103.55	-0.20	-0.29	TO
R3JDVG		104.27	0.53	0.79	104.43	0.68	1.01	CF
TGKCHE	X	100.83	-2.90	-4.30	104.35	0.60	0.89	TO
TZCHNJ		104.28	0.55	0.82	104.38	0.63	0.94	WZ
V6XAQW		103.47	-0.27	-0.39	103.60	-0.15	-0.22	CE
XA3R3U		103.92	0.18	0.27	103.80	0.05	0.08	CE
XVLWMX		103.92	0.18	0.27	103.97	0.22	0.32	TO
XZD468		103.53	-0.20	-0.30	103.53	-0.22	-0.32	CE
YPB368		104.30	0.57	0.84	104.37	0.62	0.91	CF
Z87VQ7		103.90	0.17	0.25	104.02	0.27	0.40	RR

Summary Statistics		
	Sample H69	Sample H70
Grand Means	103.733 Degrees C	103.748 Degrees C
Std Dev Btwn Labs	0.674 Degrees C	0.676 Degrees C
Statistics based on 22 of 25 reporting participants		

Sample H69: ABS & Sample H70: ABS



Plastics Interlaboratory Testing Program

Report #115

Analysis 715

3rd Qtr 2020

Vicat Softening Temperature (Rate A)

Comments on Assigned Data Flags for Test #715

46QXMY (X) - Data for both samples are low. Possible Systematic Error.

TGKCHE (X) - Data for sample H69 are low.

3D9D29 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample H69.

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

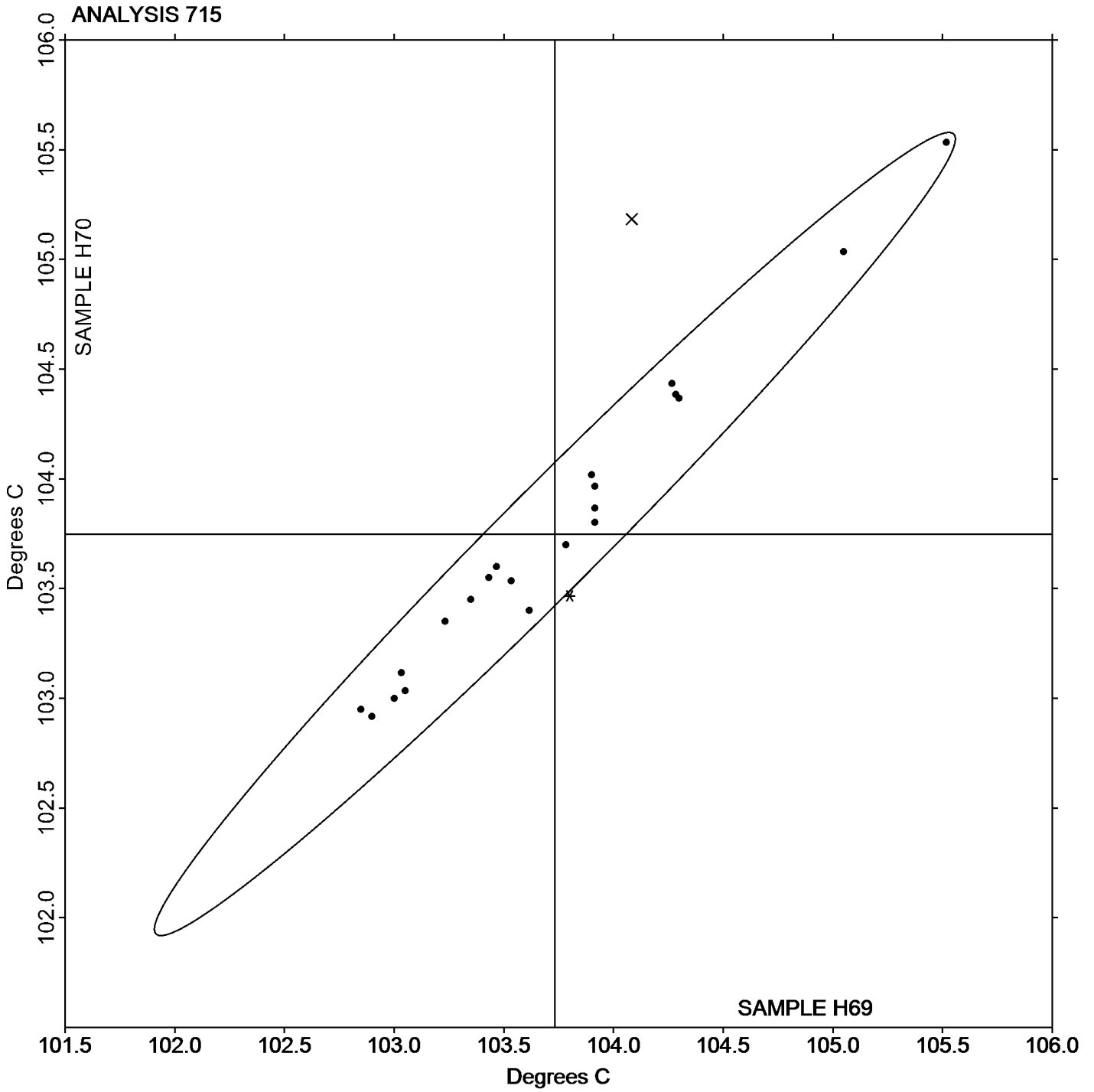
Report #115

Analysis 715

3rd Qtr 2020

Vicat Softening Temperature (Rate A)

Grand Mean Sample H69: 103.73 Degrees C Grand Mean Sample H70: 103.75 Degrees C





Plastics Interlaboratory Testing Program

Report #115

Analysis 716

3rd Qtr 2020

Vicat Softening Temperature (Rate B)

WebCode	Data Flag	Sample R69			Sample R70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
32TUH8		105.32	-0.26	-0.35	105.28	-0.23	-0.33	AT
3D9D29		107.40	1.83	2.46	107.02	1.50	2.15	XX
46QXMY		106.27	0.69	0.93	105.92	0.40	0.57	IN
823R3Y		105.53	-0.04	-0.06	105.25	-0.27	-0.38	TO
86HRZL		104.73	-0.84	-1.14	104.80	-0.72	-1.02	CE
8XWWW		106.67	1.09	1.47	106.88	1.37	1.96	TY
AC7LNU		106.43	0.86	1.16	106.33	0.82	1.17	CF
BYZTWH		105.92	0.34	0.46	105.07	-0.45	-0.64	CE
D7TKHG		104.83	-0.74	-1.00	104.80	-0.72	-1.02	RO
DE3ATU		105.32	-0.26	-0.35	105.40	-0.12	-0.16	TO
ER8R4U		104.50	-1.07	-1.45	104.17	-1.35	-1.93	TO
F6QUZQ		104.90	-0.67	-0.91	105.08	-0.43	-0.62	CE
J6JNDD		104.40	-1.17	-1.59	104.72	-0.80	-1.14	TO
N6JE7N		104.82	-0.76	-1.02	105.02	-0.50	-0.71	TO
R3JDVG		105.38	-0.19	-0.26	105.42	-0.10	-0.14	CF
TGKCHE		105.90	0.33	0.44	105.90	0.38	0.55	TO
TZCHNJ		106.32	0.74	1.00	106.47	0.95	1.36	AT
V6XAQW		105.25	-0.32	-0.44	105.18	-0.33	-0.48	CE
XA3R3U		105.70	0.13	0.17	105.18	-0.33	-0.48	CE
XVLWMX		105.85	0.28	0.37	105.85	0.33	0.48	TO
XZD468		105.17	-0.41	-0.55	105.75	0.23	0.34	CE
YPB368		106.03	0.46	0.62	105.77	0.25	0.36	CF
Z87VQ7		105.58	0.01	0.01	105.60	0.08	0.12	RR

Summary Statistics		
	Sample R69	Sample R70
Grand Means	105.575 Degrees C	105.515 Degrees C
Stnd Dev Btwn Labs	0.741 Degrees C	0.698 Degrees C
Statistics based on 23 of 23 reporting participants		

Sample R69: ABS & Sample R70: ABS



Plastics Interlaboratory Testing Program

Analysis 716

Vicat Softening Temperature (Rate B)

Report #115

3rd Qtr 2020

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

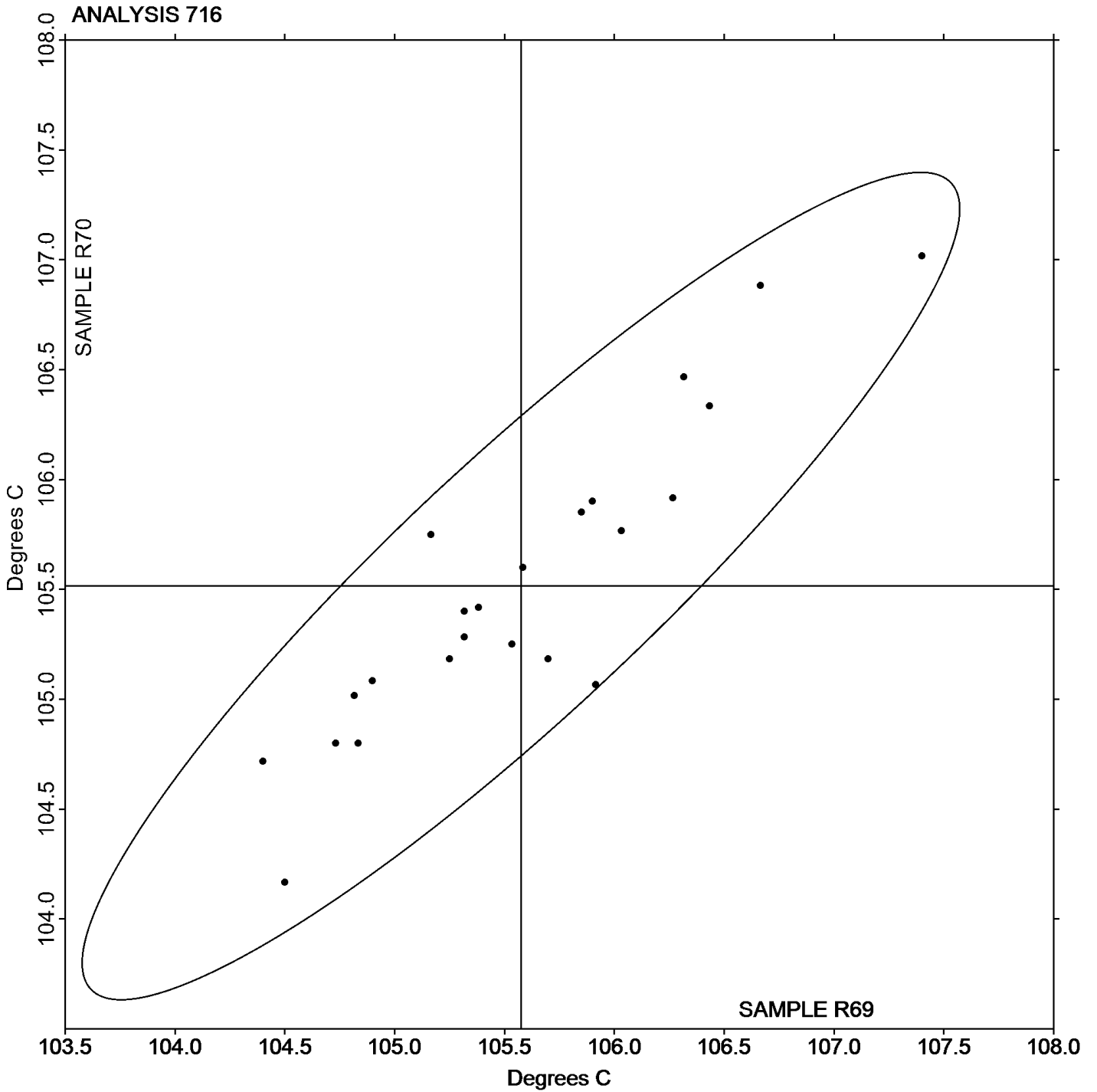
Report #115

Analysis 716

3rd Qtr 2020

Vicat Softening Temperature (Rate B)

Grand Mean Sample R69: 105.57 Degrees C Grand Mean Sample R70: 105.52 Degrees C





Plastics Interlaboratory Testing Program

Report #115

Analysis 718

3rd Qtr 2020

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T69			Sample T70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2HJJWN		1.13933	0.00004	0.02	1.14000	0.00086	0.40
2MPATB		1.13969	0.00040	0.19	1.13945	0.00031	0.14
2UJ78U		1.13933	0.00004	0.02	1.13963	0.00049	0.23
348QAC		1.14033	0.00104	0.50	1.14000	0.00086	0.40
3D9D29		1.13800	-0.00129	-0.62	1.13800	-0.00114	-0.53
3MJFMA		1.13877	-0.00052	-0.25	1.13960	0.00046	0.21
3NUGA9		1.14167	0.00238	1.14	1.14167	0.00252	1.17
3Y6HJ2	X	1.13433	-0.00496	-2.38	1.13733	-0.00181	-0.84
4ANLQ7	*	1.13857	-0.00072	-0.35	1.13627	-0.00288	-1.33
4DGF28	X	1.13233	-0.00696	-3.35	1.13800	-0.00114	-0.53
64AZUY		1.14077	0.00148	0.71	1.14087	0.00172	0.80
64GEN9	X	1.13603	-0.00326	-1.57	1.13900	-0.00014	-0.07
7KCXTP		1.14020	0.00091	0.44	1.14100	0.00186	0.86
84Q336		1.13867	-0.00062	-0.30	1.13867	-0.00048	-0.22
86HRZL	X	1.15197	0.01268	6.10	1.15223	0.01309	6.08
8EL8JY	X	1.13187	-0.00742	-3.57	1.13247	-0.00668	-3.10
8KBJKM	*	1.14033	0.00104	0.50	1.13800	-0.00114	-0.53
8XWWWW		1.13600	-0.00329	-1.58	1.13600	-0.00314	-1.46
8ZK9W2		1.14000	0.00071	0.34	1.13887	-0.00028	-0.13
96B6XX		1.13777	-0.00152	-0.73	1.13850	-0.00064	-0.30
9DBU23		1.13573	-0.00356	-1.71	1.13557	-0.00358	-1.66
9FTLQ6		1.13580	-0.00349	-1.68	1.13643	-0.00271	-1.26
9Y8YJV		1.14063	0.00134	0.65	1.14010	0.00096	0.44
ALKK66		1.14000	0.00071	0.34	1.13867	-0.00048	-0.22
BWTBXL		1.14137	0.00208	1.00	1.14140	0.00226	1.05
BYZTWH		1.13533	-0.00396	-1.90	1.13567	-0.00348	-1.61
CQJGGV		1.13600	-0.00329	-1.58	1.13533	-0.00381	-1.77
CVTUYU		1.14013	0.00084	0.41	1.13990	0.00076	0.35
CX3PWE		1.14107	0.00178	0.86	1.14147	0.00232	1.08
CYG7XZ		1.14133	0.00204	0.98	1.14123	0.00209	0.97
DB4V9P		1.13933	0.00004	0.02	1.13900	-0.00014	-0.07
DE3ATU		1.13743	-0.00186	-0.89	1.13623	-0.00291	-1.35
DLVJPR		1.13800	-0.00129	-0.62	1.13833	-0.00081	-0.38
EBHK9G		1.14080	0.00151	0.73	1.14150	0.00236	1.09
EJR9MF		1.13533	-0.00396	-1.90	1.13533	-0.00381	-1.77



Plastics Interlaboratory Testing Program

Report #115

Analysis 718

3rd Qtr 2020

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T69			Sample T70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FEKCZY		1.14067	0.00138	0.66	1.14073	0.00159	0.74
FHZA9G		1.13933	0.00004	0.02	1.14033	0.00119	0.55
FYKZ6V		1.14203	0.00274	1.32	1.14187	0.00272	1.26
G6AAEY		1.13807	-0.00122	-0.59	1.13827	-0.00088	-0.41
GJ6GNE		1.14267	0.00338	1.62	1.14207	0.00292	1.36
H4PFRN		1.13990	0.00061	0.29	1.13967	0.00052	0.24
HFJY7U		1.13850	-0.00079	-0.38	1.13667	-0.00248	-1.15
HMJC4C		1.13780	-0.00149	-0.72	1.13740	-0.00174	-0.81
HVBW9P		1.14153	0.00224	1.08	1.14137	0.00222	1.03
HYY98V		1.14237	0.00308	1.48	1.14243	0.00329	1.53
J6JNDD		1.14123	0.00194	0.94	1.14093	0.00179	0.83
JMEE7L		1.13747	-0.00182	-0.88	1.13730	-0.00184	-0.86
JTP8NC		1.14193	0.00264	1.27	1.14170	0.00256	1.19
KUTM8M		1.13933	0.00004	0.02	1.13867	-0.00048	-0.22
LJB3NQ	X	1.13653	-0.00276	-1.33	1.13310	-0.00604	-2.80
MCTLVM		1.13770	-0.00159	-0.76	1.13760	-0.00154	-0.72
MEKKAK		1.13900	-0.00029	-0.14	1.13900	-0.00014	-0.07
MHG9QR		1.14097	0.00168	0.81	1.14125	0.00211	0.98
N6JE7N		1.14087	0.00158	0.76	1.14080	0.00166	0.77
NZK6U2		1.13633	-0.00296	-1.42	1.13767	-0.00148	-0.69
PXZCYL		1.14000	0.00071	0.34	1.13967	0.00052	0.24
Q6VTQ4		1.14107	0.00178	0.86	1.14117	0.00202	0.94
QKV4JM	X	1.11723	-0.02206	-10.61	1.11710	-0.02204	-10.23
QLFJNH		1.13690	-0.00239	-1.15	1.13830	-0.00084	-0.39
QUAPGH		1.14127	0.00198	0.95	1.14107	0.00192	0.89
R3JDVG		1.14163	0.00234	1.13	1.14173	0.00259	1.20
RJ9NHJ		1.13907	-0.00022	-0.11	1.13980	0.00066	0.30
RQDUJM		1.13533	-0.00396	-1.90	1.13567	-0.00348	-1.61
RZDVWL	*	1.14007	0.00078	0.37	1.13753	-0.00161	-0.75
TGKCHE		1.13447	-0.00482	-2.32	1.13430	-0.00484	-2.25
TQKYAB		1.14117	0.00188	0.90	1.14063	0.00149	0.69
TZCHNJ		1.14093	0.00164	0.79	1.14033	0.00119	0.55
UPUPZE	X	1.13583	-0.00346	-1.66	1.13930	0.00016	0.07
VFN83G		1.14067	0.00138	0.66	1.14200	0.00286	1.33
W2CR9C		1.13867	-0.00062	-0.30	1.13867	-0.00048	-0.22



Plastics Interlaboratory Testing Program

Report #115

Analysis 718

3rd Qtr 2020

Specific Gravity - sp gr 23/23 C

WebCode	Data Flag	Sample T69			Sample T70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
WUY8BC		1.13733	-0.00196	-0.94	1.13787	-0.00128	-0.59
XA3R3U	X	1.13367	-0.00562	-2.71	1.13567	-0.00348	-1.61
XYRN2C		1.14040	0.00111	0.53	1.14080	0.00166	0.77
XZD468		1.14033	0.00104	0.50	1.14033	0.00119	0.55
Y8XTQ8	*	1.13800	-0.00129	-0.62	1.13567	-0.00348	-1.61
YG2ERA		1.13750	-0.00179	-0.86	1.13723	-0.00191	-0.89
YKZTFY		1.14323	0.00394	1.90	1.14317	0.00402	1.87
YPB368		1.13500	-0.00429	-2.06	1.13500	-0.00414	-1.92
YPVJLB		1.14203	0.00274	1.32	1.14193	0.00279	1.30
ZBAQA9		1.13920	-0.00009	-0.04	1.13887	-0.00028	-0.13
ZRHK44		1.13913	-0.00016	-0.08	1.13817	-0.00098	-0.45

Summary Statistics		Sample T69	Sample T70
Grand Means		1.139289 sp gr 23/23 C	1.139143 sp gr 23/23 C
Std Dev Btwn Labs		0.002078 sp gr 23/23 C	0.002155 sp gr 23/23 C
Statistics based on 72 of 81 reporting participants			

Sample T69: ABS/PC & Sample T70: ABS/PC

Comments on Assigned Data Flags for Test #718

- 86HRZL (X) - Data for both samples are high. Possible Systematic Error.
- XA3R3U (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample T70.
- LJB3NQ (X) - Data for sample T70 are low.
- 4DGF28 (X) - Data for sample T69 are low.
- 3Y6HJ2 (X) - Inconsistent in testing between samples.
- 8EL8JY (X) - Data for both samples are low. Possible Systematic Error.
- QKV4JM (X) - Data for both samples are low. Possible Systematic Error.
- 64GEN9 (X) - Inconsistent in testing between samples.
- UPUPZE (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample T69.



Plastics Interlaboratory Testing Program

Report #115

Analysis 718

3rd Qtr 2020

Specific Gravity - sp gr 23/23 C

Results by Methodology (as reported by laboratory)

Test Methodology	Sample T69 <i>ABS/PC</i>			Sample T70 <i>ABS/PC</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
ASTM D792 Method A (water)	1.139150	0.002000	0.000	1.139000	0.002000	0.000	58/63
ASTM D792 Method B (not water)	1.139233	0.002000	0.000	1.139000	0.001000	0.000	3/4
ASTM D1505	1.139333	0.000000	0.000	1.140000	0.000000	0.000	1/1
ISO 1183	1.140110	0.002000	0.001	1.140000	0.002000	0.001	10/13



Plastics Interlaboratory Testing Program

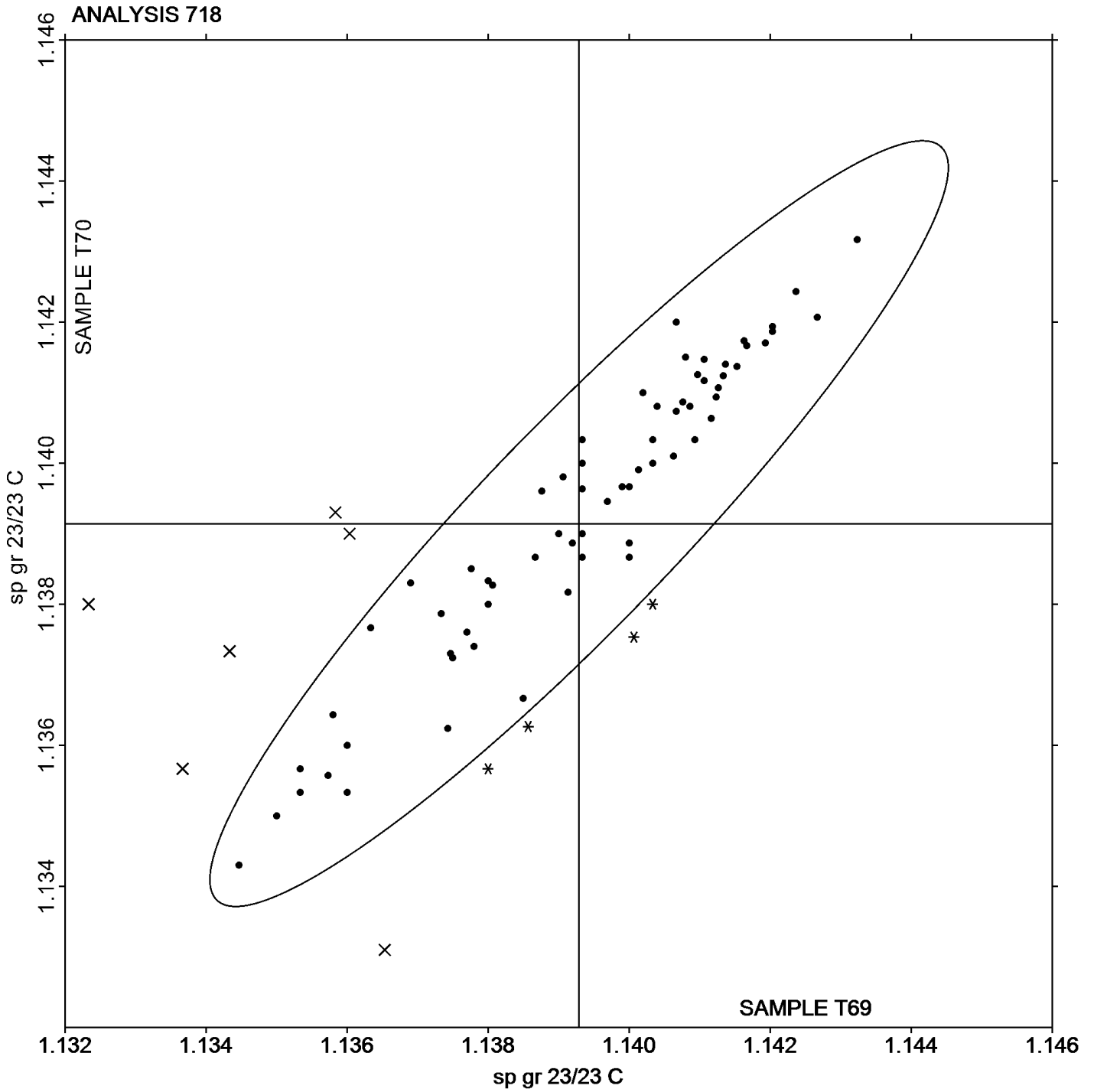
Analysis 718

Specific Gravity - sp gr 23/23 C

Report #115

3rd Qtr 2020

Grand Mean Sample T69: 1.1393 sp gr 23/23 C Grand Mean Sample T70: 1.1391 sp gr 23/23 C





Plastics Interlaboratory Testing Program

Report #115

Analysis 720

3rd Qtr 2020

Flexural Modulus- ksi

WebCode	Data Flag	Sample J69			Sample J70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U		350.8	11.5	0.68	349.0	9.9	0.62
3D9D29		344.8	5.5	0.32	340.2	1.0	0.07
4G2AVM	*	301.8	-37.5	-2.21	300.8	-38.4	-2.40
64AZUY		348.7	9.3	0.55	348.4	9.2	0.58
7DURUW		338.8	-0.6	-0.03	337.7	-1.5	-0.09
7HWYK8		358.5	19.2	1.13	358.6	19.4	1.22
7KCXTP		346.5	7.1	0.42	345.5	6.4	0.40
7YKCY Y	X	338.1	-1.3	-0.07	350.7	11.5	0.72
7ZQ8BK		313.1	-26.3	-1.55	317.5	-21.7	-1.36
823R3Y		325.9	-13.5	-0.80	324.5	-14.7	-0.92
8EL8JY		342.2	2.9	0.17	342.5	3.4	0.21
8XWWWW		318.3	-21.1	-1.24	317.9	-21.3	-1.33
A72Q6U		342.2	2.8	0.17	339.1	-0.1	0.00
A78AEX		323.1	-16.2	-0.96	325.9	-13.3	-0.83
BL94YW		355.5	16.2	0.95	351.0	11.9	0.74
BLJ8W3		340.6	1.3	0.08	344.0	4.8	0.30
BPWFX3		339.1	-0.2	-0.01	340.2	1.0	0.06
CKWRUZ	*	307.5	-31.9	-1.88	313.7	-25.5	-1.59
D7TKHG		356.7	17.3	1.02	355.9	16.7	1.05
DB4V9P		346.4	7.0	0.41	346.1	6.9	0.43
DE3ATU		364.3	25.0	1.47	364.0	24.8	1.55
E93L2Y		339.8	0.5	0.03	342.4	3.2	0.20
EJR9MF		335.3	-4.0	-0.24	337.9	-1.2	-0.08
EUW7MC		344.7	5.4	0.32	344.3	5.2	0.32
EXJ69T		372.1	32.7	1.93	366.4	27.2	1.70
F78QRQ		324.9	-14.4	-0.85	329.4	-9.7	-0.61
FYKZ6V		339.8	0.5	0.03	339.6	0.4	0.03
GJ6GNE	X	353.2	13.8	0.81	360.9	21.8	1.36
H4PFRN	X	345.0	5.7	0.33	327.9	-11.3	-0.71
HXFHXB		330.3	-9.1	-0.54	327.7	-11.4	-0.72
HYY98V		350.2	10.9	0.64	351.1	12.0	0.75
J9JY7R		338.8	-0.5	-0.03	338.4	-0.8	-0.05
JTP8NC		335.3	-4.0	-0.24	331.9	-7.2	-0.45
KTN4VR		354.2	14.9	0.88	354.4	15.3	0.96
KUTM8M	*	290.9	-48.4	-2.86	295.7	-43.5	-2.72



Plastics Interlaboratory Testing Program

Report #115

Analysis 720

3rd Qtr 2020

Flexural Modulus- ksi

WebCode	Data Flag	Sample J69			Sample J70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
LQ9UWK		343.0	3.7	0.22	342.4	3.2	0.20
MCTLVM		355.4	16.1	0.95	355.2	16.0	1.00
MFN3LG		354.6	15.3	0.90	350.4	11.2	0.70
MJ8XN9		316.8	-22.5	-1.33	315.9	-23.3	-1.46
MZRNM8		331.0	-8.4	-0.49	328.3	-10.9	-0.68
N6JE7N		335.0	-4.4	-0.26	336.3	-2.8	-0.18
Q2HHXE	X	399.0	59.7	3.52	406.4	67.2	4.21
QHNPFD		359.1	19.8	1.17	356.8	17.6	1.10
QJF9U3		324.4	-14.9	-0.88	327.2	-12.0	-0.75
QLFJNH		360.0	20.7	1.22	358.4	19.3	1.21
R3JDVG		322.0	-17.4	-1.02	322.3	-16.9	-1.06
RJ9NHJ		360.3	21.0	1.24	361.0	21.8	1.37
RZDVWL		329.0	-10.3	-0.61	332.0	-7.2	-0.45
TGKCHE		351.8	12.5	0.73	349.6	10.4	0.65
TZCHNJ		330.1	-9.2	-0.54	328.1	-11.1	-0.69
UQHRJ3		332.9	-6.4	-0.38	329.9	-9.3	-0.58
V8T39F		338.4	-1.0	-0.06	338.9	-0.3	-0.02
WGRPDD		334.6	-4.7	-0.28	329.9	-9.3	-0.58
WUY8BC		356.3	17.0	1.00	355.8	16.6	1.04
XLUJKD		344.2	4.8	0.28	348.9	9.8	0.61
XZD468		307.9	-31.4	-1.85	308.3	-30.9	-1.93
Z87VQ7		335.8	-3.6	-0.21	336.8	-2.3	-0.15
ZRHK44		363.8	24.4	1.44	361.5	22.4	1.40
ZYT8QC		356.5	17.2	1.01	358.2	19.0	1.19

Summary Statistics		
	Sample J69	Sample J70
Grand Means	339.34 ksi	339.16 ksi
Stnd Dev Btwn Labs	16.96 ksi	15.98 ksi
Statistics based on 55 of 59 reporting participants		

Sample J69: ABS/PC & Sample J70: ABS/PC



Plastics Interlaboratory Testing Program

Analysis 720 Flexural Modulus- ksi

Report #115

3rd Qtr 2020

Comments on Assigned Data Flags for Test #720

GJ6GNE (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

H4PFRN (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J69.

Q2HHXE (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample J69.

7YKCY (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J70.



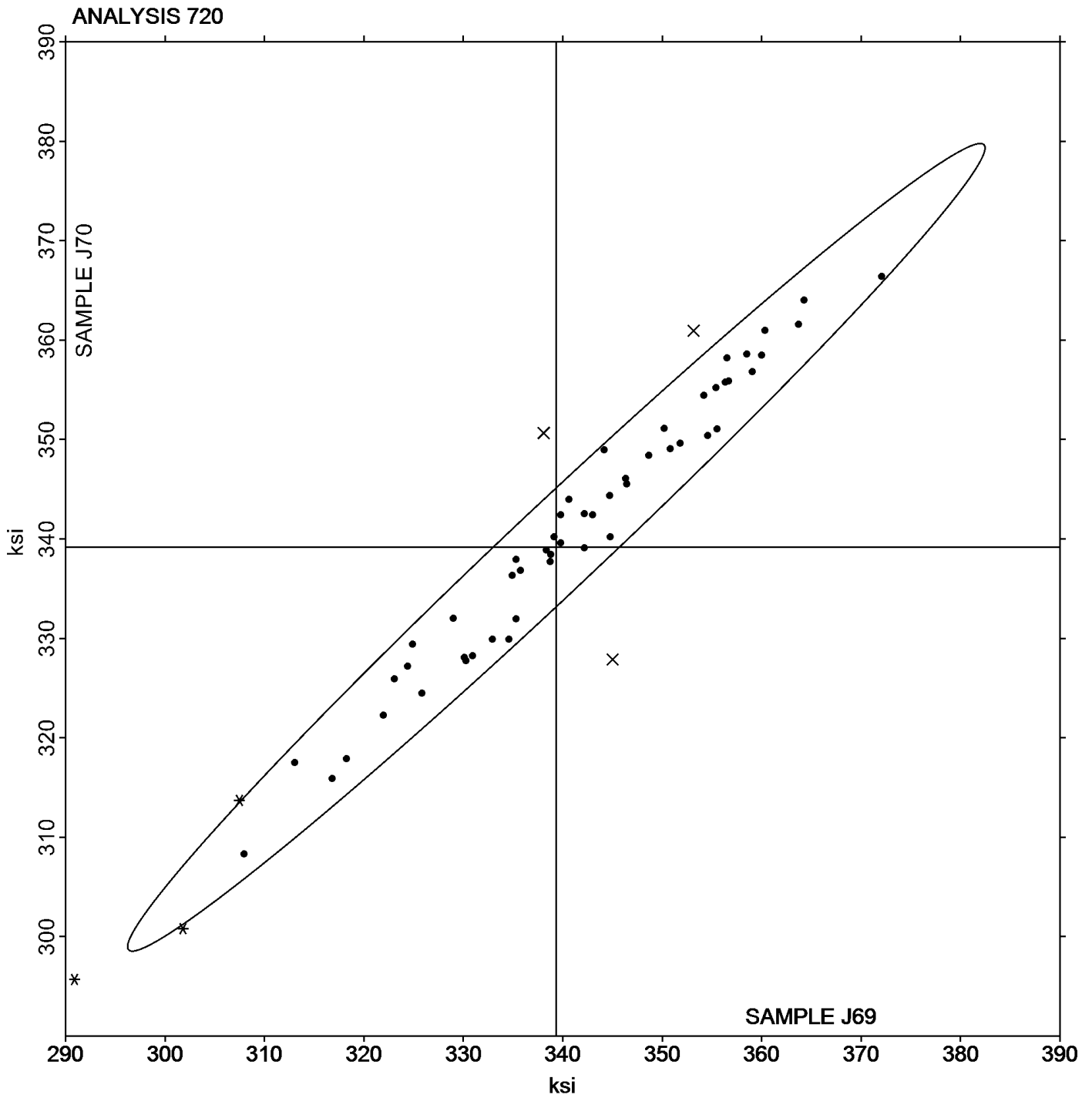
Plastics Interlaboratory Testing Program

Analysis 720 Flexural Modulus- ksi

Report #115

3rd Qtr 2020

Grand Mean Sample J69: 339.34 ksi Grand Mean Sample J70: 339.16 ksi





Plastics Interlaboratory Testing Program

Report #115

Analysis 721

3rd Qtr 2020

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J69			Sample J70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3D9D29		12,384	470	0.94	12,259	328	0.67
4G2AVM	*	10,480	-1,434	-2.88	10,540	-1,391	-2.87
64AZUY		11,974	60	0.12	12,064	133	0.27
7DURUW		12,058	144	0.29	12,000	69	0.14
7HWYK8		12,626	711	1.43	12,560	629	1.30
7YKCY Y	X	12,020	105	0.21	12,339	408	0.84
7ZQ8BK		11,531	-383	-0.77	11,634	-297	-0.61
823R3Y		11,663	-252	-0.51	11,614	-317	-0.65
8EL8JY		12,149	235	0.47	12,154	223	0.46
8XWWWW		11,568	-346	-0.69	11,664	-267	-0.55
A72Q6U		11,941	26	0.05	11,948	16	0.03
A78AEX		11,216	-698	-1.40	11,272	-659	-1.36
BL94YW		12,098	184	0.37	12,023	92	0.19
BLJ8W3		12,063	149	0.30	12,120	189	0.39
CKWRUZ		11,274	-640	-1.29	11,347	-584	-1.20
D7TKHG		12,108	193	0.39	12,119	188	0.39
DE3ATU		12,259	345	0.69	12,233	302	0.62
E93L2Y	*	11,766	-149	-0.30	12,006	75	0.15
EUW7MC		11,314	-600	-1.21	11,364	-567	-1.17
EXJ69T		11,452	-463	-0.93	11,521	-410	-0.85
F78QRQ		12,506	592	1.19	12,647	716	1.47
FYKZ6V		11,500	-414	-0.83	11,500	-431	-0.89
GJ6GNE		12,010	96	0.19	12,094	163	0.34
H4PFRN		11,423	-492	-0.99	11,340	-591	-1.22
HXFHXB		11,249	-665	-1.34	11,305	-626	-1.29
HYY98V		12,603	689	1.38	12,583	652	1.34
J9JY7R		11,500	-414	-0.83	11,480	-451	-0.93
KTN4VR		12,474	560	1.12	12,425	494	1.02
MCTLVM		12,034	120	0.24	12,050	119	0.25
MFN3LG		12,028	113	0.23	12,041	110	0.23
MJ8XN9		11,413	-502	-1.01	11,439	-492	-1.01
MZRN M8		12,318	404	0.81	12,280	349	0.72
Q2HHXE		13,140	1,226	2.46	13,160	1,229	2.53
QJF9U3		11,269	-645	-1.30	11,396	-535	-1.10
QLFJNH		12,289	375	0.75	12,312	381	0.78



Plastics Interlaboratory Testing Program

Report #115

Analysis 721

3rd Qtr 2020

Flexural Stress at 5% Strain - psi

WebCode	Data Flag	Sample J69			Sample J70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
R3JDVG		11,840	-75	-0.15	11,848	-83	-0.17
RJ9NHJ		11,564	-351	-0.70	11,515	-416	-0.86
RZDVWL		11,524	-390	-0.78	11,638	-293	-0.60
TGKCHE		11,880	-34	-0.07	11,900	-31	-0.06
TZCHNJ		12,408	494	0.99	12,357	426	0.88
UQHRJ3		11,668	-246	-0.49	11,526	-405	-0.83
V8T39F		12,423	509	1.02	12,403	472	0.97
WGRPDD		12,012	98	0.20	12,044	113	0.23
WUY8BC		11,861	-53	-0.11	11,882	-50	-0.10
XLUJKD		12,115	201	0.40	12,133	202	0.42
XZD468		11,783	-132	-0.26	11,708	-223	-0.46
Z87VQ7		11,832	-82	-0.16	11,852	-79	-0.16
ZRHK44		12,852	938	1.88	12,894	963	1.98
ZYT8QC		12,445	531	1.07	12,497	566	1.17

Summary Statistics		
	Sample J69	Sample J70
Grand Means	11,914.3 psi	11,931.1 psi
Stnd Dev Btwn Labs	498.1 psi	485.5 psi
Statistics based on 48 of 49 reporting participants		

Sample J69: ABS/PC & Sample J70: ABS/PC

Comments on Assigned Data Flags for Test #721

7YKCY (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample J70.



Plastics Interlaboratory Testing Program

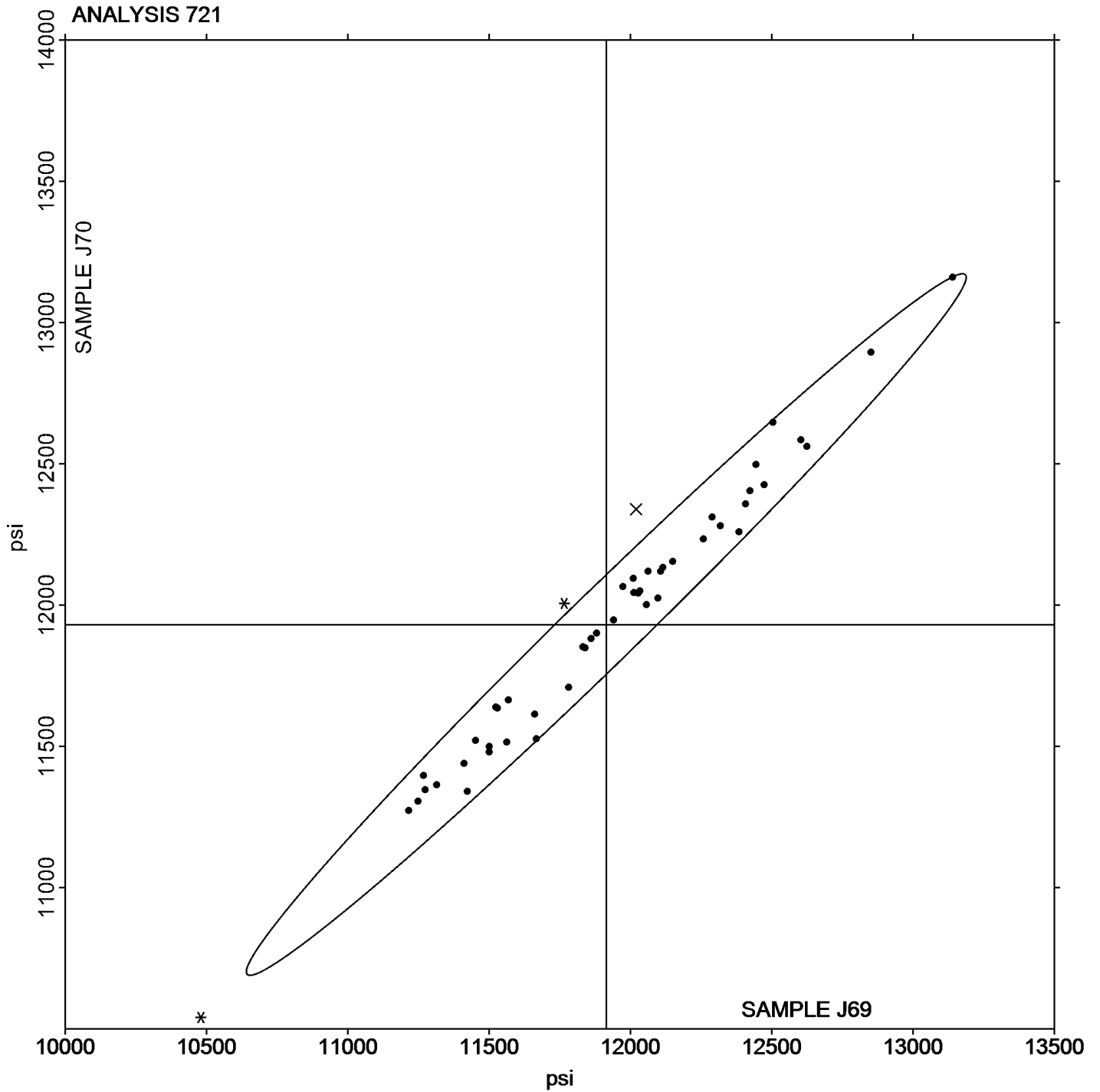
Report #115

Analysis 721

3rd Qtr 2020

Flexural Stress at 5% Strain - psi

Grand Mean Sample J69: 11,914.28 psi Grand Mean Sample J70: 11,931.09 psi





Plastics Interlaboratory Testing Program

Report #115

Analysis 722

3rd Qtr 2020

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J69			Sample J70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
4G2AVM	*	10,700	-1,333	-2.72	10,780	-1,288	-2.68
7DURUW		12,287	254	0.52	12,244	176	0.37
7HWYK8		12,868	835	1.70	12,845	777	1.62
7KCXTP		12,102	69	0.14	12,154	86	0.18
7YKCY Y	X	12,306	273	0.56	12,599	530	1.10
7ZQ8BK		11,812	-221	-0.45	11,894	-175	-0.36
823R3Y		12,172	139	0.28	12,163	94	0.20
8XWWW W		11,832	-201	-0.41	11,980	-88	-0.18
A72Q6U		11,978	-55	-0.11	11,983	-85	-0.18
A78AEX		11,454	-579	-1.18	11,467	-602	-1.25
BL94YW		12,288	255	0.52	12,243	175	0.36
BLJ8W3		12,491	458	0.93	12,549	481	1.00
CKWRUZ		11,420	-613	-1.25	11,524	-544	-1.13
D7TKHG		12,154	121	0.25	12,154	86	0.18
DE3ATU		12,349	316	0.64	12,326	258	0.54
EUW7MC		11,313	-720	-1.47	11,363	-705	-1.47
EXJ69T	X	8,803	-3,230	-6.58	9,311	-2,757	-5.73
F78QRQ		12,024	-9	-0.02	12,168	100	0.21
GJ6GNE		12,242	209	0.43	12,330	262	0.54
H4PFRN		11,423	-610	-1.24	11,343	-725	-1.51
HXFHXB		11,283	-750	-1.53	11,353	-715	-1.49
KTN4VR		12,587	554	1.13	12,550	482	1.00
KUTM8M		12,703	669	1.36	12,764	696	1.45
LQ9UWK		12,160	127	0.26	12,140	72	0.15
MCTLVM		12,228	195	0.40	12,264	196	0.41
MFN3LG		12,661	628	1.28	12,674	606	1.26
MJ8XN9		11,580	-453	-0.92	11,617	-451	-0.94
Q2HHXE		13,000	967	1.97	13,020	952	1.98
QHNPDF		12,235	202	0.41	12,273	205	0.43
QJF9U3		11,408	-625	-1.27	11,540	-528	-1.10
R3JDVG		11,921	-112	-0.23	12,117	48	0.10
RJ9NHJ		11,721	-312	-0.64	11,680	-388	-0.81
RZDVWL	*	11,801	-232	-0.47	12,017	-51	-0.11
TGKCHE		11,880	-153	-0.31	11,900	-168	-0.35
TZCHNJ		12,737	704	1.43	12,774	706	1.47



Plastics Interlaboratory Testing Program

Report #115

Analysis 722

3rd Qtr 2020

Flexural Stress at Yield - psi

WebCode	Data Flag	Sample J69			Sample J70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UQHRJ3		11,840	-193	-0.39	11,729	-339	-0.71
V8T39F	X	12,686	653	1.33	12,403	335	0.70
WGRPDD		12,146	113	0.23	12,202	134	0.28
WUY8BC		12,010	-23	-0.05	12,035	-33	-0.07
XLUJKD		11,734	-299	-0.61	11,774	-294	-0.61
XZD468		11,999	-34	-0.07	11,935	-134	-0.28
Z87VQ7		12,007	-26	-0.05	12,029	-39	-0.08
ZYT8QC		12,772	739	1.51	12,828	760	1.58

Summary Statistics

	Sample J69	Sample J70
Grand Means	12,033.1 psi	12,068.2 psi
Std Dev Btwn Labs	490.9 psi	480.9 psi

Statistics based on 40 of 43 reporting participants

Sample J69: ABS/PC & Sample J70: ABS/PC

Comments on Assigned Data Flags for Test #722

V8T39F (X) - Inconsistent in testing between samples.

EXJ69T (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

7YKCY (X) - Inconsistent in testing between samples.



Plastics Interlaboratory Testing Program

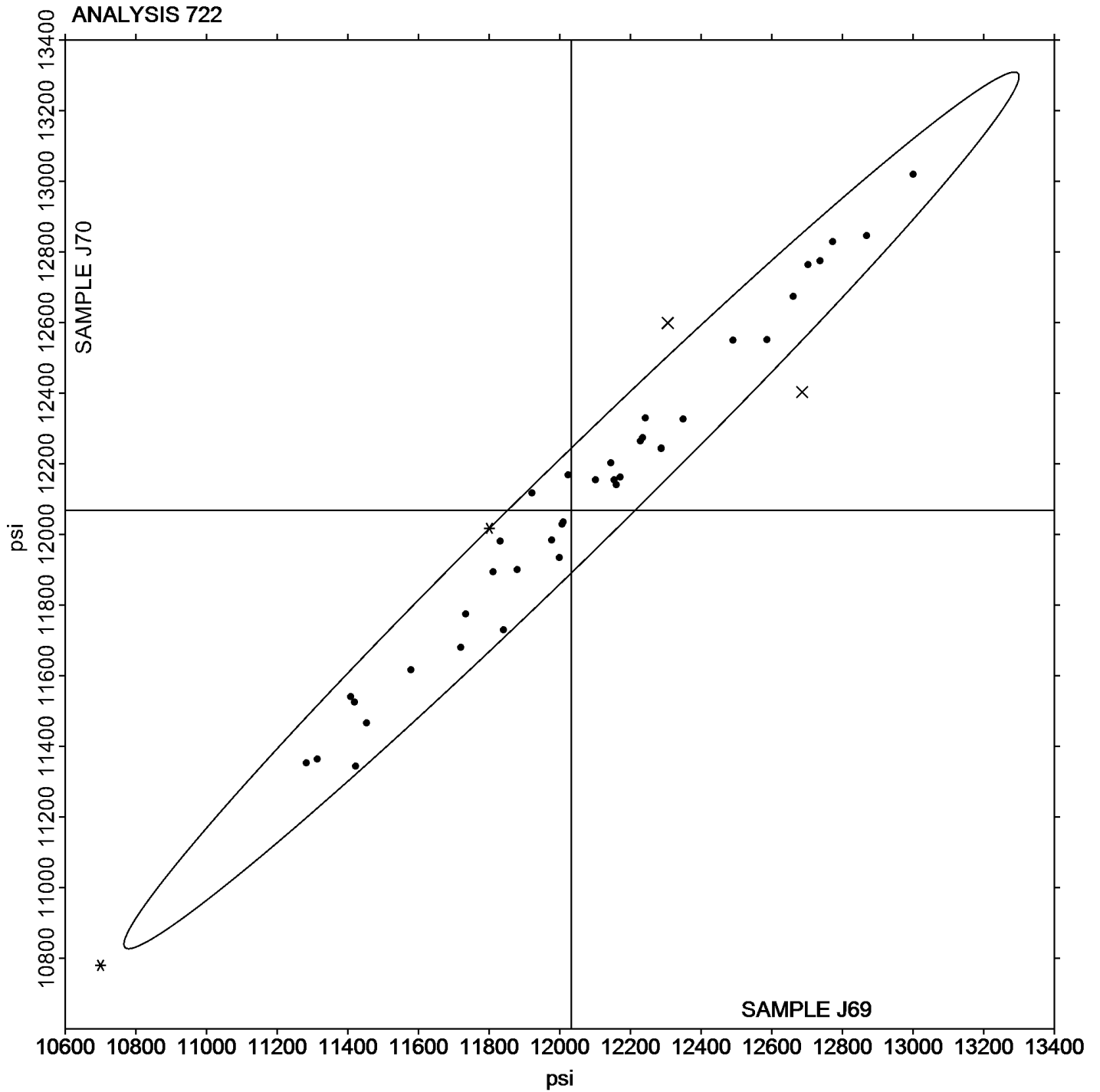
Analysis 722

Flexural Stress at Yield - psi

Report #115

3rd Qtr 2020

Grand Mean Sample J69: 12,033.05 psi Grand Mean Sample J70: 12,068.20 psi





Plastics Interlaboratory Testing Program

Report #115

Analysis 730

3rd Qtr 2020

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C69			Sample C70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U	*	26.95	-1.09	-1.11	26.24	-1.72	-1.62
32JEB7	X	26.96	-1.08	-1.11	27.80	-0.16	-0.15
3PHG3R		27.02	-1.02	-1.04	27.11	-0.86	-0.81
3Y6HJ2		27.50	-0.54	-0.55	27.56	-0.40	-0.37
46QXMY		27.40	-0.64	-0.66	27.38	-0.58	-0.55
4ANLQ7	*	28.19	0.15	0.15	28.72	0.75	0.71
7BRQUZ		28.30	0.26	0.26	28.28	0.32	0.30
7KVZ2P		27.37	-0.68	-0.69	27.54	-0.42	-0.40
86HRZL		28.20	0.16	0.16	28.17	0.21	0.19
8EL8JY		27.65	-0.39	-0.40	27.76	-0.20	-0.19
8GAJJ4		28.99	0.94	0.96	29.03	1.07	1.00
8XWWW		27.47	-0.57	-0.58	27.55	-0.42	-0.39
9DBU23		27.68	-0.36	-0.37	27.86	-0.10	-0.10
9FTLQ6		28.29	0.25	0.25	28.33	0.37	0.34
AC7LNU		29.56	1.52	1.55	29.56	1.60	1.50
B24NFK		29.44	1.40	1.43	29.36	1.40	1.31
BCRPHU		28.19	0.15	0.15	27.65	-0.31	-0.29
BJNEEJ		29.34	1.30	1.32	29.32	1.36	1.28
BPWFX3		26.55	-1.50	-1.53	26.57	-1.39	-1.31
CCNNVZ		27.55	-0.50	-0.51	27.42	-0.54	-0.51
CVTUYU		28.16	0.11	0.12	28.01	0.05	0.05
CYG7XZ		26.78	-1.27	-1.29	26.86	-1.11	-1.04
DB4V9P		27.95	-0.09	-0.10	27.63	-0.33	-0.31
DE3ATU		28.12	0.08	0.08	28.41	0.44	0.42
E9V3QW		29.83	1.79	1.82	29.75	1.78	1.68
EBHK9G		27.87	-0.18	-0.18	27.84	-0.12	-0.11
EJR9MF	*	26.98	-1.06	-1.09	26.28	-1.68	-1.58
ER8R4U		29.22	1.18	1.20	28.96	1.00	0.94
EVTAME		27.46	-0.58	-0.60	27.28	-0.68	-0.64
FHZA9G		28.47	0.43	0.44	28.37	0.41	0.38
FVT7UU		29.61	1.56	1.60	29.77	1.81	1.70
HVBW9P		29.58	1.54	1.57	29.69	1.72	1.62
J2ZTAL		28.18	0.14	0.14	28.16	0.20	0.19
JBLXGK		25.72	-2.32	-2.37	25.34	-2.62	-2.46
JP4Q7R		27.78	-0.26	-0.27	27.68	-0.29	-0.27



Plastics Interlaboratory Testing Program

Report #115

Analysis 730

3rd Qtr 2020

Tensile Stress at Yield - MPa

WebCode	Data Flag	Sample C69			Sample C70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JTP8NC		27.66	-0.39	-0.39	27.51	-0.45	-0.43
LKHPV4		27.87	-0.17	-0.17	27.47	-0.49	-0.46
MY97RM		28.58	0.54	0.55	28.72	0.76	0.71
N6JE7N	*	28.94	0.89	0.91	28.22	0.26	0.25
NBG9QQ		29.22	1.18	1.20	29.66	1.70	1.59
NQ2PA8		28.31	0.26	0.27	28.34	0.38	0.35
NZK6U2		27.40	-0.64	-0.66	27.28	-0.68	-0.64
PF76TL		29.36	1.32	1.34	29.33	1.37	1.29
Q2HHXE		27.52	-0.52	-0.53	27.26	-0.70	-0.66
Q93K6G	X	23.66	-4.38	-4.47	23.44	-4.52	-4.25
QKV4JM		27.16	-0.88	-0.90	26.84	-1.12	-1.05
R3JDVG		27.63	-0.41	-0.42	27.83	-0.13	-0.12
RHEXC6		28.61	0.57	0.58	28.50	0.54	0.50
RJ9NHJ		26.87	-1.18	-1.20	26.75	-1.21	-1.14
TGKCHE		27.98	-0.06	-0.06	27.88	-0.08	-0.08
TKJQ4H		27.95	-0.10	-0.10	27.91	-0.05	-0.05
TTV4NY		28.26	0.22	0.22	28.17	0.21	0.19
TZCHNJ		26.69	-1.36	-1.38	26.63	-1.33	-1.25
UDE7GD		28.93	0.89	0.91	28.99	1.03	0.96
UPUPZE		29.12	1.08	1.10	29.12	1.16	1.09
W77L7D		29.67	1.63	1.66	29.62	1.66	1.56
XVLWMX		29.02	0.98	1.00	28.82	0.86	0.81
XZD468		27.12	-0.92	-0.94	26.90	-1.06	-1.00
YKZTFY	*	25.58	-2.46	-2.51	25.47	-2.49	-2.34
YPB368		28.88	0.84	0.85	28.88	0.92	0.86
Z87VQ7		28.28	0.24	0.24	28.08	0.12	0.11
ZRHK44	X	22.43	-5.62	-5.73	20.48	-7.48	-7.03
ZYT8QC		26.63	-1.41	-1.44	26.16	-1.81	-1.70



Plastics Interlaboratory Testing Program

Report #115

Analysis 730

3rd Qtr 2020

Tensile Stress at Yield - MPa

Summary Statistics	<u>Sample C69</u>	<u>Sample C70</u>
Grand Means	28.043 MPa	27.963 MPa
Stnd Dev Btwn Labs	0.980 MPa	1.064 MPa
Statistics based on 60 of 63 reporting participants		

Sample C69: HIPS & Sample C70: HIPS

Comments on Assigned Data Flags for Test #730

ZRHK44 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample C70.

Q93K6G (X) - Data for both samples are low. Possible Systematic Error.

32JEB7 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample C69.



Plastics Interlaboratory Testing Program

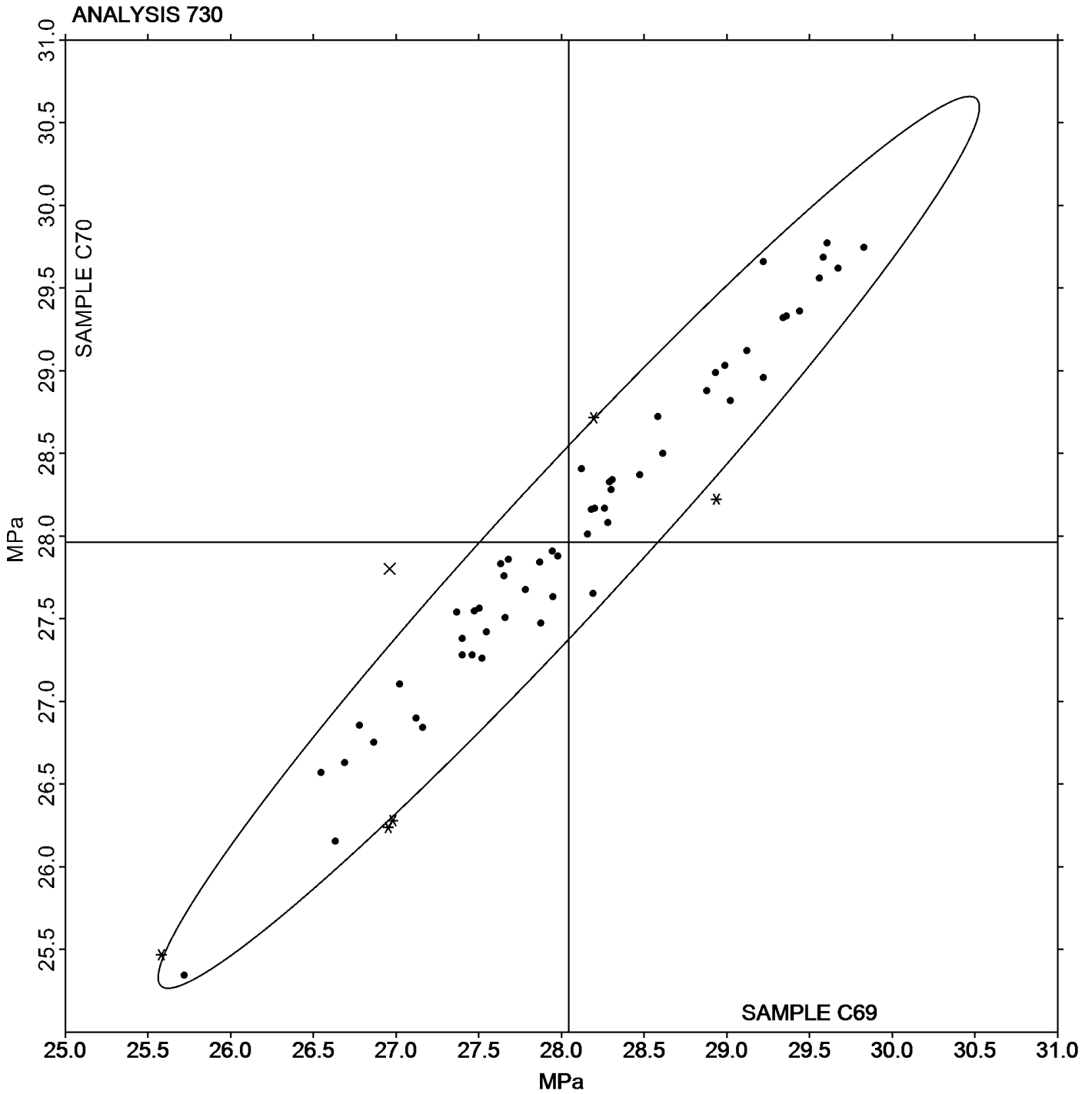
Report #115

Analysis 730

3rd Qtr 2020

Tensile Stress at Yield - MPa

Grand Mean Sample C69: 28.043 MPa Grand Mean Sample C70: 27.963 MPa





Plastics Interlaboratory Testing Program

Report #115

Analysis 731

3rd Qtr 2020

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C69			Sample C70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U		20.28	-0.82	-1.20	19.81	-1.45	-1.86
32JEB7		20.23	-0.88	-1.28	20.67	-0.59	-0.76
3PHG3R		20.49	-0.62	-0.91	20.78	-0.48	-0.61
3Y6HJ2		20.42	-0.69	-1.01	20.55	-0.71	-0.91
46QXMY		20.46	-0.65	-0.95	20.72	-0.54	-0.69
4ANLQ7	*	21.10	-0.01	-0.02	22.10	0.84	1.07
7BRQUZ		21.02	-0.09	-0.13	21.16	-0.10	-0.13
7KVZ2P		20.43	-0.68	-1.00	21.13	-0.13	-0.16
86HRZL		21.46	0.35	0.51	21.64	0.38	0.49
8EL8JY		20.44	-0.67	-0.98	20.96	-0.30	-0.39
8GAJJ4		21.60	0.49	0.72	21.81	0.55	0.70
8XWWWW		20.32	-0.79	-1.16	20.65	-0.61	-0.78
9FTLQ6		21.10	-0.01	-0.02	21.08	-0.18	-0.23
AC7LNU		21.96	0.85	1.25	22.08	0.82	1.05
B24NFK		22.02	0.91	1.33	22.10	0.84	1.08
BCRPHU		21.05	-0.06	-0.09	20.80	-0.46	-0.59
BJNEEJ		22.00	0.89	1.30	22.10	0.84	1.08
BPWFX3		20.51	-0.60	-0.87	20.77	-0.49	-0.64
CCNNVZ		19.63	-1.48	-2.16	19.56	-1.70	-2.18
CVTUYU		21.94	0.83	1.21	21.77	0.51	0.65
DE3ATU		21.12	0.01	0.02	21.18	-0.08	-0.10
E9V3QW		22.25	1.14	1.67	22.49	1.23	1.58
EBHK9G		21.06	-0.05	-0.08	21.19	-0.07	-0.09
EVTAME		20.72	-0.38	-0.56	20.76	-0.50	-0.64
FHZA9G		21.45	0.34	0.50	22.01	0.75	0.96
FVT7UU		22.34	1.24	1.81	22.71	1.45	1.86
HVBW9P	*	22.32	1.21	1.77	23.18	1.92	2.46
J2ZTAL		21.10	-0.01	-0.01	21.70	0.44	0.56
JBLXGK	X	19.78	-1.33	-1.94	18.62	-2.64	-3.39
JP4Q7R		20.94	-0.17	-0.25	21.25	-0.01	-0.01
NBG9QQ		22.20	1.09	1.60	22.36	1.10	1.41
NQ2PA8		21.30	0.19	0.28	21.36	0.10	0.13
NZK6U2		20.94	-0.17	-0.25	21.10	-0.16	-0.21
PF76TL		21.81	0.70	1.02	22.06	0.80	1.02
Q2HHXE		20.42	-0.69	-1.01	20.56	-0.70	-0.90



Plastics Interlaboratory Testing Program

Report #115

Analysis 731

3rd Qtr 2020

Tensile Stress at Break - MPa

WebCode	Data Flag	Sample C69			Sample C70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
Q93K6G	X	17.18	-3.93	-5.74	16.98	-4.28	-5.50
QKV4JM		20.50	-0.61	-0.89	20.34	-0.92	-1.18
R3JDVG		21.64	0.53	0.78	21.74	0.48	0.62
RHEXC6		21.56	0.45	0.65	21.54	0.28	0.36
RJ9NHJ		20.86	-0.24	-0.36	20.75	-0.52	-0.66
TGKCHE		21.23	0.13	0.18	21.04	-0.22	-0.29
TKJQ4H		20.27	-0.84	-1.22	20.01	-1.26	-1.61
TTV4NY		21.10	0.00	-0.01	21.33	0.07	0.09
TZCHNJ		20.88	-0.23	-0.33	20.81	-0.45	-0.57
UDE7GD		21.21	0.10	0.15	21.64	0.38	0.49
UPUPZE		21.74	0.63	0.92	21.78	0.52	0.67
W77L7D		22.25	1.14	1.67	22.16	0.90	1.16
XVLWMX	X	29.02	7.91	11.56	28.82	7.56	9.71
XZD468		20.00	-1.11	-1.62	19.88	-1.38	-1.77
YKZTFY		20.60	-0.50	-0.74	20.59	-0.67	-0.86
YPB368		21.80	0.69	1.01	22.00	0.74	0.95
Z87VQ7		20.92	-0.19	-0.27	20.76	-0.50	-0.64
ZRHK44	X	20.83	-0.28	-0.40	19.15	-2.11	-2.71
ZYT8QC		20.41	-0.70	-1.02	20.49	-0.77	-0.99

Summary Statistics		
	Sample C69	Sample C70
Grand Means	21.108 MPa	21.260 MPa
Std Dev Btwn Labs	0.684 MPa	0.779 MPa

Statistics based on 50 of 54 reporting participants

Sample C69: HIPS & Sample C70: HIPS

Comments on Assigned Data Flags for Test #731

- XVLWMX (X) - Data for both samples are high. Possible Systematic Error.
- JBLXGK (X) - Data for sample C70 are low.
- ZRHK44 (X) - Data for sample C70 are low.
- Q93K6G (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

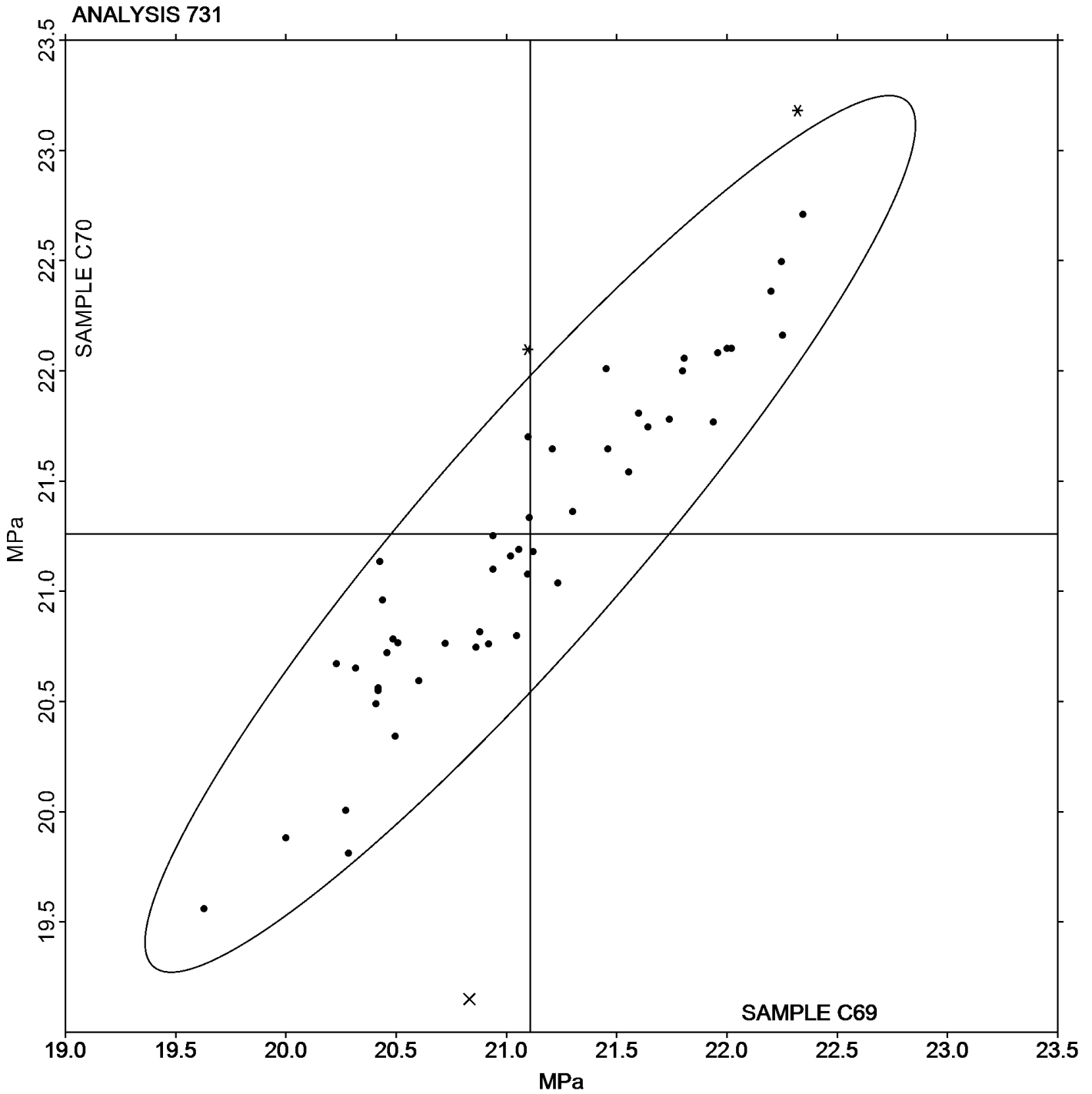
Analysis 731

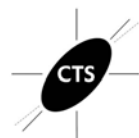
Tensile Stress at Break - MPa

Report #115

3rd Qtr 2020

Grand Mean Sample C69: 21.108 MPa Grand Mean Sample C70: 21.260 MPa





Plastics Interlaboratory Testing Program

Report #115

Analysis 732

3rd Qtr 2020

Percent Strain at Yield

WebCode	Data Flag	Sample C69			Sample C70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U		1.280	-0.017	-0.26	1.266	-0.027	-0.43
32JEB7	X	1.070	-0.227	-3.50	1.048	-0.244	-3.93
3PHG3R	*	1.350	0.053	0.82	1.260	-0.033	-0.52
3Y6HJ2	*	1.212	-0.085	-1.31	1.286	-0.007	-0.11
46QXMY		1.220	-0.077	-1.19	1.220	-0.073	-1.17
4ANLQ7		1.272	-0.025	-0.38	1.302	0.009	0.15
7BRQUZ		1.342	0.045	0.69	1.328	0.035	0.57
7KVZ2P		1.226	-0.071	-1.09	1.266	-0.027	-0.43
8EL8JY		1.258	-0.039	-0.60	1.292	-0.001	-0.01
8GAJJ4		1.310	0.013	0.20	1.310	0.017	0.28
8XWWWW		1.274	-0.023	-0.35	1.274	-0.019	-0.30
9DBU23		1.338	0.041	0.63	1.266	-0.027	-0.43
9FTLQ6	X	1.062	-0.235	-3.62	0.908	-0.385	-6.18
AC7LNU		1.300	0.003	0.05	1.300	0.007	0.12
B24NFK		1.292	-0.005	-0.08	1.308	0.015	0.25
BCRPHU		1.382	0.085	1.31	1.348	0.055	0.89
BJNEEJ		1.300	0.003	0.05	1.280	-0.013	-0.20
CCNNVZ		1.326	0.029	0.45	1.284	-0.009	-0.14
CVTUYU	X	1.660	0.363	5.60	1.640	0.347	5.58
CYG7XZ		1.188	-0.109	-1.68	1.232	-0.061	-0.97
DE3ATU		1.338	0.041	0.63	1.305	0.012	0.20
E9V3QW		1.202	-0.095	-1.46	1.190	-0.103	-1.65
EBHK9G		1.284	-0.013	-0.20	1.304	0.011	0.18
ER8R4U		1.300	0.003	0.05	1.300	0.007	0.12
EVTAME		1.228	-0.069	-1.06	1.210	-0.083	-1.33
FHZA9G		1.250	-0.047	-0.72	1.268	-0.025	-0.39
FVT7UU	*	1.456	0.159	2.45	1.464	0.171	2.76
HVBW9P		1.330	0.033	0.51	1.318	0.025	0.41
J2ZTAL	*	1.452	0.155	2.39	1.456	0.163	2.63
JBLXGK		1.307	0.010	0.16	1.354	0.061	0.98
JP4Q7R		1.223	-0.074	-1.15	1.209	-0.083	-1.34
JTP8NC		1.290	-0.007	-0.11	1.280	-0.013	-0.20
LKHPV4		1.284	-0.013	-0.20	1.284	-0.009	-0.14
NBG9QQ		1.260	-0.037	-0.57	1.210	-0.083	-1.33
NQ2PA8		1.316	0.019	0.29	1.314	0.021	0.34



Plastics Interlaboratory Testing Program

Report #115

Analysis 732

3rd Qtr 2020

Percent Strain at Yield

WebCode	Data Flag	Sample C69			Sample C70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NZK6U2		1.324	0.027	0.42	1.302	0.009	0.15
PF76TL		1.388	0.091	1.40	1.398	0.106	1.70
Q2HHXE		1.314	0.017	0.26	1.308	0.015	0.25
QKV4JM		1.306	0.009	0.14	1.278	-0.015	-0.23
R3JDVG		1.322	0.025	0.39	1.350	0.057	0.92
RHEXC6		1.316	0.019	0.29	1.312	0.019	0.31
RJ9NHJ		1.227	-0.070	-1.08	1.225	-0.068	-1.09
TGKCHE		1.310	0.013	0.20	1.288	-0.005	-0.07
TKJQ4H		1.325	0.028	0.43	1.277	-0.015	-0.25
TTV4NY		1.308	0.011	0.17	1.287	-0.005	-0.09
TZCHNJ		1.252	-0.045	-0.69	1.252	-0.041	-0.65
UDE7GD		1.306	0.009	0.14	1.304	0.011	0.18
UPUPZE		1.296	-0.001	-0.01	1.294	0.001	0.02
W77L7D		1.296	-0.001	-0.01	1.300	0.007	0.12
XVLWMX		1.300	0.003	0.05	1.300	0.007	0.12
XZD468		1.236	-0.061	-0.94	1.254	-0.039	-0.62
YPB368		1.400	0.103	1.59	1.380	0.087	1.41
Z87VQ7	*	1.104	-0.193	-2.98	1.104	-0.189	-3.03
ZRHK44	X	0.962	-0.335	-5.17	0.772	-0.521	-8.37
ZYT8QC		1.426	0.129	1.99	1.418	0.125	2.02

Summary Statistics		
	Sample C69	Sample C70
Grand Means	1.2969 Percent	1.2925 Percent
Stnd Dev Btwn Labs	0.0648 Percent	0.0622 Percent

Statistics based on 51 of 55 reporting participants

Sample C69: HIPS & Sample C70: HIPS

Comments on Assigned Data Flags for Test #732

- 9FTLQ6 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- ZRHK44 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- CVTUYU (X) - Data for both samples are high. Possible Systematic Error.
- 32JEB7 (X) - Data for both samples are low. Possible Systematic Error.



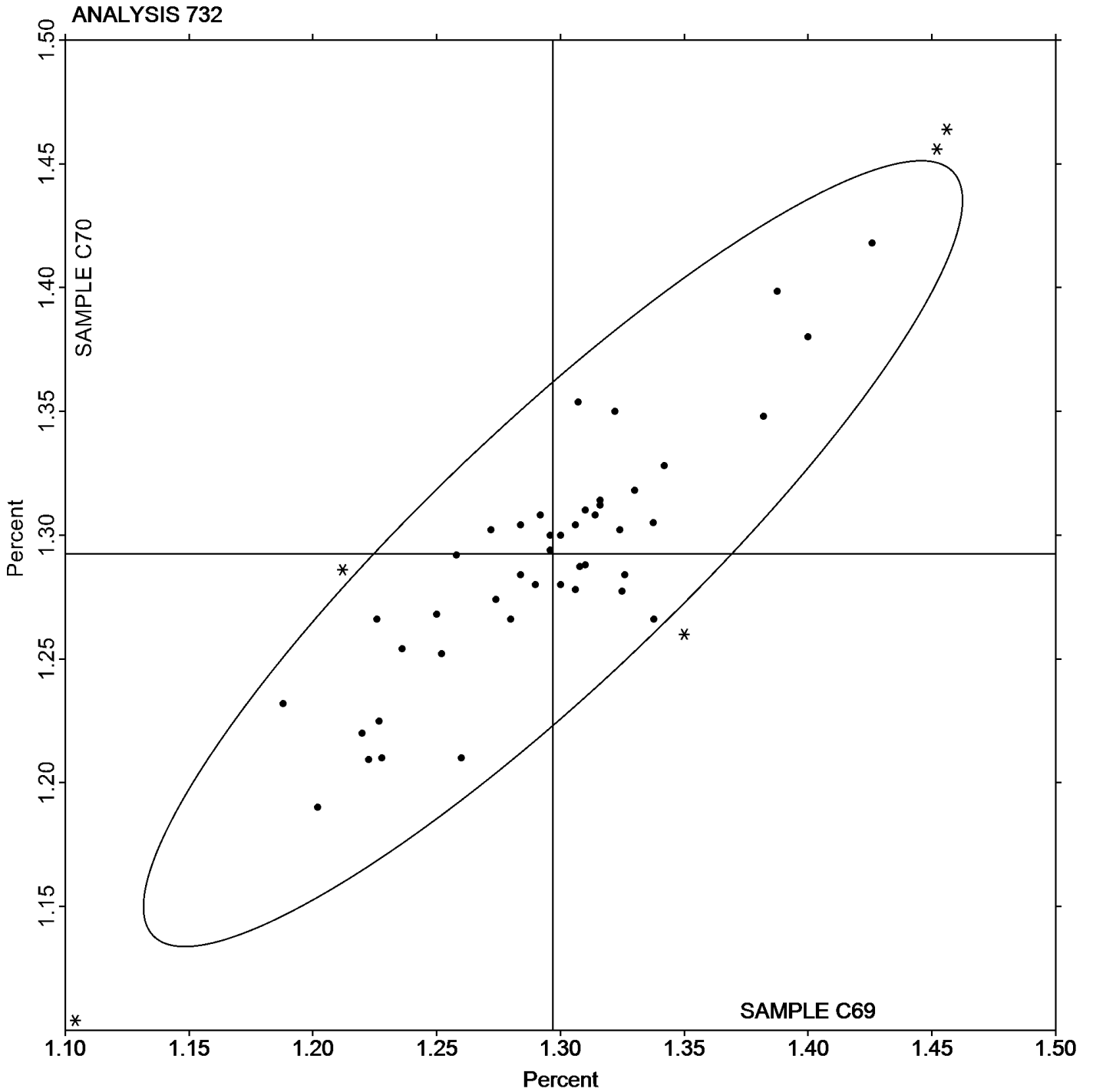
Plastics Interlaboratory Testing Program

Analysis 732 Percent Strain at Yield

Report #115

3rd Qtr 2020

Grand Mean Sample C69: 1.2969 Percent Grand Mean Sample C70: 1.2925 Percent





Plastics Interlaboratory Testing Program

Report #115

Analysis 734

3rd Qtr 2020

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C69			Sample C70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U		2,243	-160	-1.43	2,195	-198	-1.72
32JEB7	X	2,463	61	0.55	2,626	233	2.02
3PHG3R		2,406	4	0.03	2,407	14	0.12
3Y6HJ2	X	2,450	48	0.43	2,594	201	1.74
46QXMY	X	3,177	775	6.96	3,090	697	6.04
4ANLQ7		2,534	132	1.18	2,523	130	1.13
7BRQUZ		2,343	-59	-0.53	2,313	-80	-0.70
7KVZ2P		2,484	82	0.74	2,497	105	0.91
8EL8JY		2,396	-6	-0.05	2,313	-80	-0.69
8GAJJ4		2,511	109	0.98	2,547	154	1.34
8XWWWW		2,355	-48	-0.43	2,348	-45	-0.39
9FTLQ6	X	4,517	2,115	19.00	6,205	3,813	33.05
AC7LNU		2,488	85	0.77	2,481	88	0.76
B24NFK		2,520	118	1.06	2,490	97	0.84
BCRPHU	X	1,565	-837	-7.52	1,557	-836	-7.24
BJNEEJ		2,420	17	0.15	2,437	44	0.38
CCNNVZ		2,409	6	0.06	2,393	0	0.00
CYG7XZ		2,530	128	1.15	2,529	136	1.18
DE3ATU		2,370	-33	-0.30	2,390	-3	-0.02
E9V3QW		2,618	216	1.94	2,631	239	2.07
EBHK9G		2,372	-31	-0.28	2,410	17	0.15
ER8R4U		2,422	20	0.18	2,474	81	0.70
EVTAME		2,550	148	1.33	2,486	93	0.81
FHZA9G		2,524	122	1.09	2,454	61	0.53
FVT7UU		2,164	-238	-2.14	2,172	-221	-1.92
HVBW9P	X	2,530	127	1.14	2,633	240	2.08
J2ZTAL		2,396	-6	-0.06	2,351	-42	-0.37
JBLXGK	X	1,958	-445	-4.00	2,042	-350	-3.04
JP4Q7R		2,369	-33	-0.30	2,385	-8	-0.07
JTP8NC		2,345	-57	-0.51	2,307	-86	-0.74
LKHPV4		2,510	108	0.97	2,486	93	0.81
NBG9QQ		2,462	59	0.53	2,481	88	0.76
NQ2PA8		2,387	-15	-0.14	2,387	-6	-0.05
NZK6U2		2,288	-114	-1.03	2,286	-107	-0.93
PF76TL		2,579	176	1.58	2,515	123	1.06



Plastics Interlaboratory Testing Program

Report #115

Analysis 734

3rd Qtr 2020

Modulus of Elasticity - MPa

WebCode	Data Flag	Sample C69			Sample C70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
Q2HHXE		2,324	-78	-0.70	2,374	-19	-0.16
Q93K6G		2,330	-72	-0.65	2,344	-49	-0.42
QKV4JM		2,323	-80	-0.72	2,300	-93	-0.81
R3JDVG		2,316	-86	-0.77	2,297	-96	-0.83
RHEXC6		2,383	-19	-0.17	2,378	-14	-0.12
RJ9NHJ		2,482	80	0.72	2,470	77	0.67
TGKCHE		2,234	-168	-1.51	2,204	-188	-1.63
TKJQ4H		2,382	-21	-0.19	2,358	-35	-0.30
TTV4NY		2,342	-60	-0.54	2,353	-40	-0.34
TZCHNJ		2,342	-60	-0.54	2,327	-65	-0.57
UDE7GD		2,394	-8	-0.08	2,408	15	0.13
UPUPZE		2,555	153	1.37	2,555	162	1.40
W77L7D		2,524	122	1.09	2,505	113	0.98
XVLWMX		2,406	4	0.03	2,394	1	0.01
XZD468		2,352	-51	-0.46	2,352	-41	-0.35
YKZTFY		2,158	-244	-2.19	2,146	-247	-2.14
YPB368		2,490	88	0.79	2,448	55	0.48
Z87VQ7		2,461	59	0.53	2,495	103	0.89
ZYT8QC	*	2,121	-282	-2.53	2,066	-327	-2.83

Summary Statistics		
	Sample C69	Sample C70
Grand Means	2,402.5 MPa	2,392.8 MPa
Stnd Dev Btwn Labs	111.3 MPa	115.4 MPa
Statistics based on 47 of 54 reporting participants		

Sample C69: HIPS & Sample C70: HIPS



Comments on Assigned Data Flags for Test #734

- 9FTLQ6 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- JBLXGK (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- 3Y6HJ2 (X) - Inconsistent in testing between samples.
- 46QXMY (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- HVBW9P (X) - Inconsistent in testing between samples.
- BCRPHU (X) - Data for both samples are low. Possible Systematic Error.
- 32JEB7 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample C70.



Plastics Interlaboratory Testing Program

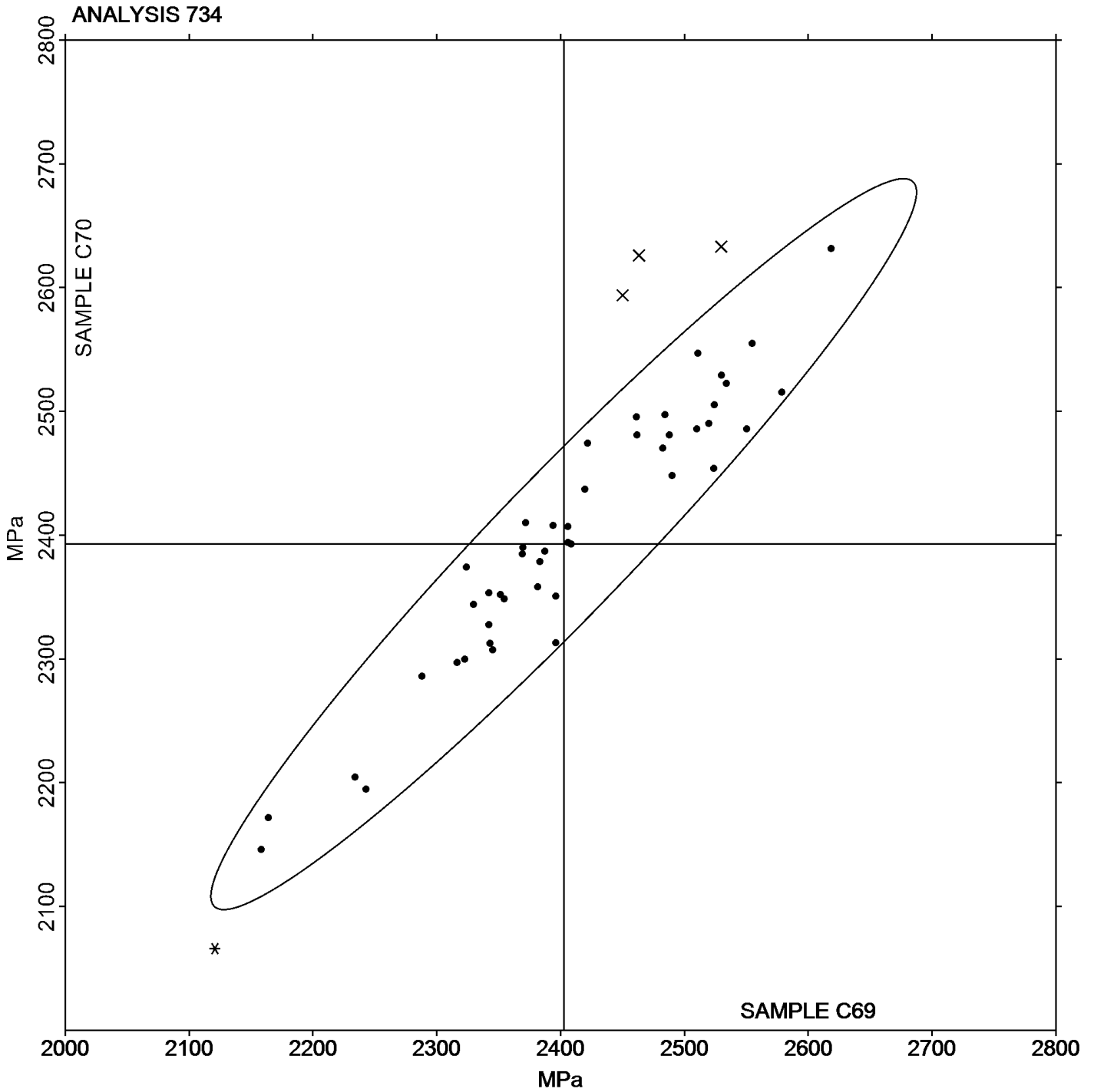
Analysis 734

Modulus of Elasticity - MPa

Report #115

3rd Qtr 2020

Grand Mean Sample C69: 2,402.46 MPa Grand Mean Sample C70: 2,392.80 MPa





Plastics Interlaboratory Testing Program

Report #115

Analysis 736

3rd Qtr 2020

Flexural Modulus - MPa

WebCode	Data Flag	Sample K69			Sample K70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U		2,257	-43	-0.37	2,286	-10	-0.08
3Y6HJ2		2,203	-97	-0.82	2,235	-60	-0.52
46QXMY		2,383	83	0.71	2,366	71	0.61
4ANLQ7		2,361	61	0.52	2,338	43	0.37
7BRQUZ		2,296	-4	-0.03	2,289	-6	-0.06
86HRZL		2,182	-118	-1.00	2,174	-122	-1.05
8EL8JY		2,219	-82	-0.69	2,247	-48	-0.42
8XWWW		2,191	-109	-0.93	2,159	-136	-1.18
9DBU23		2,107	-193	-1.64	2,093	-203	-1.76
AA4NFM		2,198	-102	-0.87	2,177	-118	-1.03
AC7LNU	*	2,422	122	1.03	2,352	57	0.49
B24NFK		2,119	-181	-1.54	2,107	-188	-1.63
BCRPHU		2,235	-66	-0.56	2,237	-58	-0.51
BJNEEJ		2,211	-89	-0.76	2,245	-51	-0.44
CYG7XZ		2,298	-2	-0.02	2,287	-8	-0.07
DE3ATU		2,363	63	0.54	2,343	48	0.41
DLVJPR		2,169	-132	-1.12	2,184	-111	-0.96
E9V3QW		2,252	-48	-0.41	2,259	-36	-0.31
EBHK9G		2,250	-50	-0.42	2,239	-57	-0.49
ER8R4U		2,324	24	0.20	2,288	-7	-0.06
FHZA9G		2,272	-28	-0.24	2,286	-9	-0.08
FVT7UU		2,426	125	1.07	2,427	132	1.14
HVBW9P		2,453	153	1.30	2,467	172	1.49
J2ZTAL		2,206	-95	-0.81	2,210	-85	-0.74
JBLXGK		2,152	-148	-1.26	2,114	-182	-1.57
JP4Q7R		2,123	-178	-1.51	2,115	-180	-1.56
LKHPV4		2,206	-94	-0.80	2,207	-88	-0.76
MY97RM		2,467	167	1.42	2,472	176	1.53
N6JE7N		2,296	-5	-0.04	2,288	-7	-0.06
NBG9QQ	*	2,540	240	2.04	2,476	181	1.57
PF76TL		2,450	150	1.27	2,450	155	1.34
Q2HHXE		2,574	274	2.33	2,566	271	2.35
Q93K6G		2,220	-80	-0.68	2,208	-87	-0.76
QKV4JM		2,340	39	0.33	2,273	-22	-0.19
R3JDVG		2,291	-10	-0.08	2,297	1	0.01



Plastics Interlaboratory Testing Program

Report #115

Analysis 736

3rd Qtr 2020

Flexural Modulus - MPa

WebCode	Data Flag	<u>Sample K69</u>			<u>Sample K70</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RHEXC6		2,277	-23	-0.20	2,261	-34	-0.30
TGKCHE		2,260	-40	-0.34	2,275	-21	-0.18
TKJQ4H	X	1,103	-1,198	-10.19	1,129	-1,166	-10.11
TTV4NY		2,289	-11	-0.09	2,271	-25	-0.21
TZCHNJ		2,240	-60	-0.51	2,258	-38	-0.33
UDE7GD		2,431	130	1.11	2,412	116	1.01
UPUPZE		2,411	111	0.94	2,411	116	1.00
W77L7D		2,440	140	1.19	2,465	169	1.47
XZD468		2,140	-160	-1.37	2,166	-129	-1.12
YKZTFY		2,457	157	1.34	2,453	158	1.37
YM88L6		2,449	149	1.27	2,461	166	1.43
YPB368		2,362	62	0.53	2,392	97	0.84

Summary Statistics		
	<u>Sample K69</u>	<u>Sample K70</u>
Grand Means	2,300.3 MPa	2,295.4 MPa
Std Dev Btwn Labs	117.5 MPa	115.4 MPa
Statistics based on 46 of 47 reporting participants		

Sample K69: HIPS & Sample K70: HIPS

Comments on Assigned Data Flags for Test #736

TKJQ4H (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

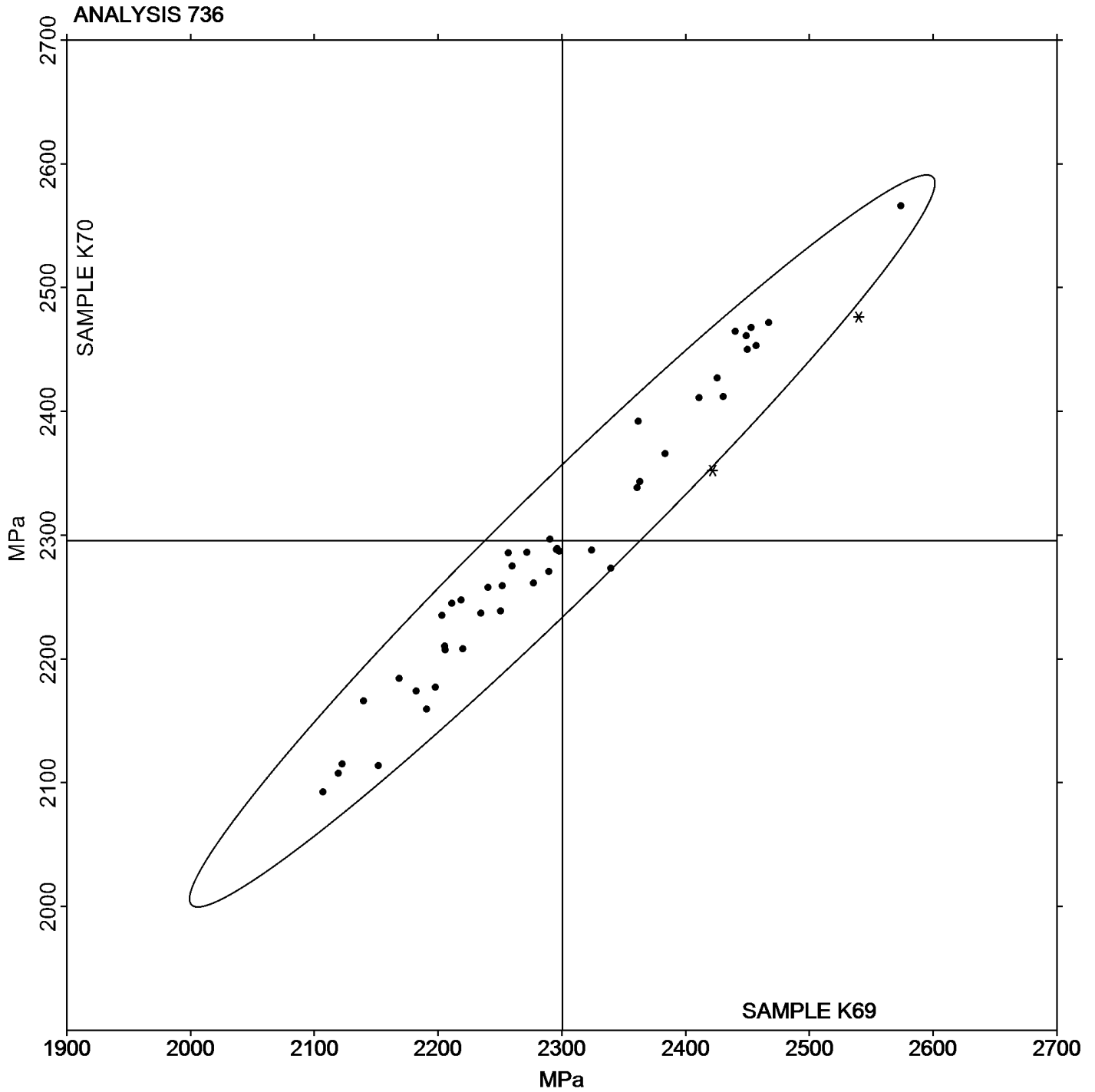
Analysis 736

Flexural Modulus - MPa

Report #115

3rd Qtr 2020

Grand Mean Sample K69: 2,300.26 MPa Grand Mean Sample K70: 2,295.35 MPa





Plastics Interlaboratory Testing Program

Report #115

Analysis 737

3rd Qtr 2020

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	Sample K69			Sample K70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3Y6HJ2		39.72	0.21	0.11	39.75	0.19	0.10
46QXMY	X	98.53	59.02	31.25	38.42	-1.15	-0.63
4ANLQ7		39.87	0.37	0.19	39.16	-0.40	-0.22
7BRQUZ		39.58	0.08	0.04	39.60	0.04	0.02
86HRZL		38.81	-0.69	-0.36	38.76	-0.80	-0.44
8EL8JY		38.25	-1.25	-0.66	38.88	-0.68	-0.37
8XWWWW		39.14	-0.36	-0.19	38.90	-0.66	-0.37
AA4NFM		37.83	-1.67	-0.88	37.72	-1.84	-1.01
AC7LNU	X	39.40	-0.10	-0.05	38.00	-1.56	-0.86
B24NFK		38.45	-1.05	-0.56	38.48	-1.08	-0.60
BCRPHU		38.83	-0.68	-0.36	39.12	-0.44	-0.24
CYG7XZ		39.27	-0.23	-0.12	39.28	-0.28	-0.16
DE3ATU		39.93	0.42	0.22	39.73	0.16	0.09
DLVJPR		39.36	-0.14	-0.07	39.48	-0.08	-0.05
E9V3QW		39.88	0.38	0.20	39.88	0.31	0.17
EBHK9G		38.96	-0.54	-0.29	39.15	-0.41	-0.23
FHZA9G		39.15	-0.35	-0.19	38.96	-0.60	-0.33
FVT7UU		41.70	2.19	1.16	41.70	2.13	1.17
HVBW9P	*	42.70	3.20	1.69	43.46	3.90	2.14
J2ZTAL	*	33.84	-5.66	-3.00	34.04	-5.52	-3.04
JP4Q7R		38.46	-1.04	-0.55	38.53	-1.03	-0.57
PF76TL		36.90	-2.60	-1.38	37.30	-2.26	-1.25
Q2HHXE		41.54	2.04	1.08	41.04	1.48	0.81
Q93K6G	*	35.22	-4.28	-2.27	36.24	-3.32	-1.83
QKV4JM		42.11	2.61	1.38	41.90	2.34	1.29
R3JDVG		40.84	1.34	0.71	40.81	1.25	0.68
RHEXC6		39.80	0.30	0.16	39.79	0.22	0.12
TGKCHE		40.64	1.14	0.60	40.71	1.15	0.63
TKJQ4H	X	19.03	-20.47	-10.84	18.82	-20.74	-11.41
TTV4NY		38.64	-0.86	-0.45	38.34	-1.22	-0.67
TZCHNJ		39.05	-0.45	-0.24	39.15	-0.41	-0.23
UDE7GD		41.18	1.68	0.89	41.31	1.75	0.96
UPUPZE		40.62	1.12	0.59	40.54	0.98	0.54
W77L7D		42.22	2.72	1.44	42.50	2.93	1.61
XZD468		37.24	-2.26	-1.20	37.40	-2.17	-1.19



Plastics Interlaboratory Testing Program

Report #115

Analysis 737

3rd Qtr 2020

Flexural Stress at 3.5% Strain - MPa

WebCode	Data Flag	<u>Sample K69</u>			<u>Sample K70</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
YKZTFY		42.25	2.74	1.45	42.04	2.48	1.36
YM88L6		40.14	0.64	0.34	40.37	0.81	0.44
YPB368		40.43	0.92	0.49	40.72	1.16	0.64

Summary Statistics

	<u>Sample K69</u>	<u>Sample K70</u>
Grand Means	39.502 MPa	39.565 MPa
Std Dev Btwn Labs	1.889 MPa	1.818 MPa

Statistics based on 35 of 38 reporting participants

Sample K69: HIPS & Sample K70: HIPS

Comments on Assigned Data Flags for Test #737

- TKJQ4H (X) - Data for both samples are low. Possible Systematic Error.
- AC7LNU (X) - Inconsistent in testing between samples.
- 46QXMY (X) - Data for sample K69 are high. Inconsistent within the determinations of sample K69.



Plastics Interlaboratory Testing Program

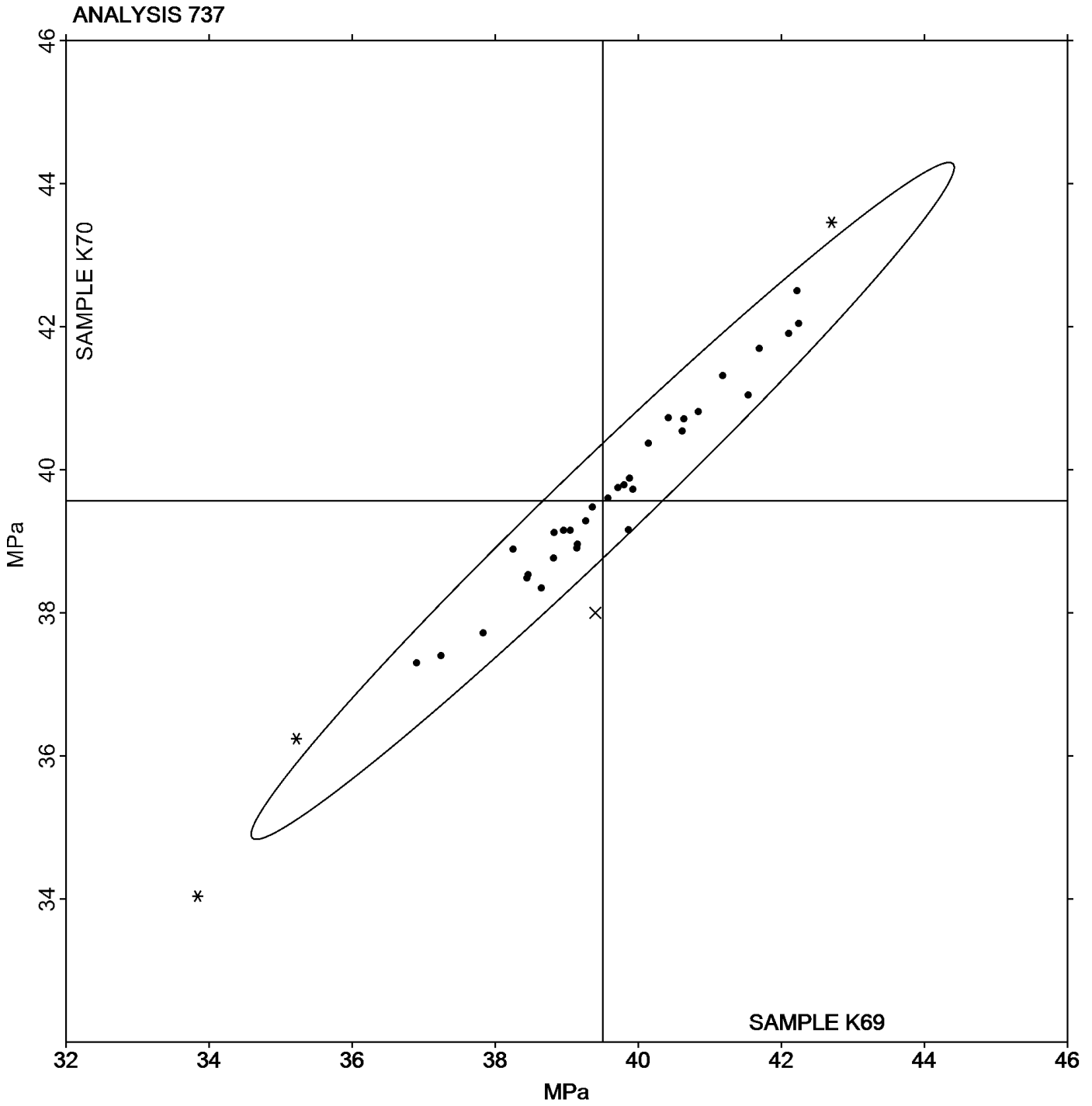
Analysis 737

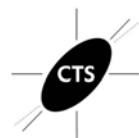
Flexural Stress at 3.5% Strain - MPa

Report #115

3rd Qtr 2020

Grand Mean Sample K69: 39.502 MPa Grand Mean Sample K70: 39.565 MPa





Plastics Interlaboratory Testing Program

Report #115

Analysis 738

3rd Qtr 2020

Flexural Stress at Yield - MPa

WebCode	Data Flag	Sample K69			Sample K70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3Y6HJ2		40.43	0.69	0.36	40.43	0.66	0.37
46QXMY		38.68	-1.06	-0.56	38.64	-1.13	-0.62
4ANLQ7		40.38	0.64	0.34	40.33	0.57	0.31
7BRQUZ		40.42	0.68	0.36	40.64	0.87	0.49
86HRZL		39.78	0.04	0.02	40.55	0.79	0.44
8EL8JY		38.60	-1.14	-0.60	39.20	-0.57	-0.32
8XWWWW		40.76	1.02	0.54	40.08	0.31	0.17
9DBU23		36.84	-2.90	-1.53	36.96	-2.81	-1.56
AA4NFM		38.21	-1.53	-0.81	38.07	-1.70	-0.94
AC7LNU		39.66	-0.08	-0.04	38.60	-1.17	-0.65
B24NFK		39.10	-0.64	-0.34	39.12	-0.65	-0.36
BCRPHU		39.22	-0.52	-0.28	39.48	-0.29	-0.16
DE3ATU		40.61	0.87	0.46	40.23	0.46	0.26
DLVJPR		40.00	0.26	0.14	40.22	0.45	0.25
E9V3QW		40.29	0.55	0.29	40.26	0.49	0.27
ER8R4U		39.72	-0.02	-0.01	39.48	-0.29	-0.16
FVT7UU		42.18	2.44	1.29	42.18	2.42	1.34
J2ZTAL	*	34.34	-5.40	-2.86	34.58	-5.19	-2.88
JP4Q7R		38.92	-0.82	-0.43	39.64	-0.13	-0.07
LKHPV4		40.04	0.30	0.16	40.30	0.53	0.30
NBG9QQ		42.30	2.56	1.36	42.12	2.35	1.31
PF76TL		37.30	-2.44	-1.29	36.90	-2.87	-1.59
Q2HHXE		39.56	-0.18	-0.09	38.94	-0.83	-0.46
Q93K6G	*	35.72	-4.02	-2.13	36.94	-2.83	-1.57
QKV4JM		42.09	2.35	1.24	42.42	2.66	1.48
R3JDVG		41.50	1.76	0.93	41.71	1.95	1.08
RHEXC6		40.58	0.84	0.45	40.45	0.69	0.38
TTV4NY		39.78	0.04	0.02	39.71	-0.05	-0.03
TZCHNJ		39.91	0.17	0.09	39.82	0.05	0.03
UDE7GD		42.73	2.99	1.58	41.75	1.98	1.10
W77L7D		42.88	3.14	1.66	43.27	3.50	1.94
XZD468		38.03	-1.71	-0.91	38.24	-1.52	-0.84
YM88L6		40.85	1.11	0.59	40.98	1.22	0.68
YPB368	X	28.88	-10.86	-5.75	28.88	-10.89	-6.04



Plastics Interlaboratory Testing Program

Report #115

Analysis 738

3rd Qtr 2020

Flexural Stress at Yield - MPa

Summary Statistics	<u>Sample K69</u>	<u>Sample K70</u>
Grand Means	39.739 MPa	39.765 MPa
Stnd Dev Btwn Labs	1.889 MPa	1.802 MPa

Statistics based on 33 of 34 reporting participants

Sample K69: HIPS & Sample K70: HIPS

Comments on Assigned Data Flags for Test #738

YPB368 (X) - Data for both samples are low. Possible Systematic Error.



Plastics Interlaboratory Testing Program

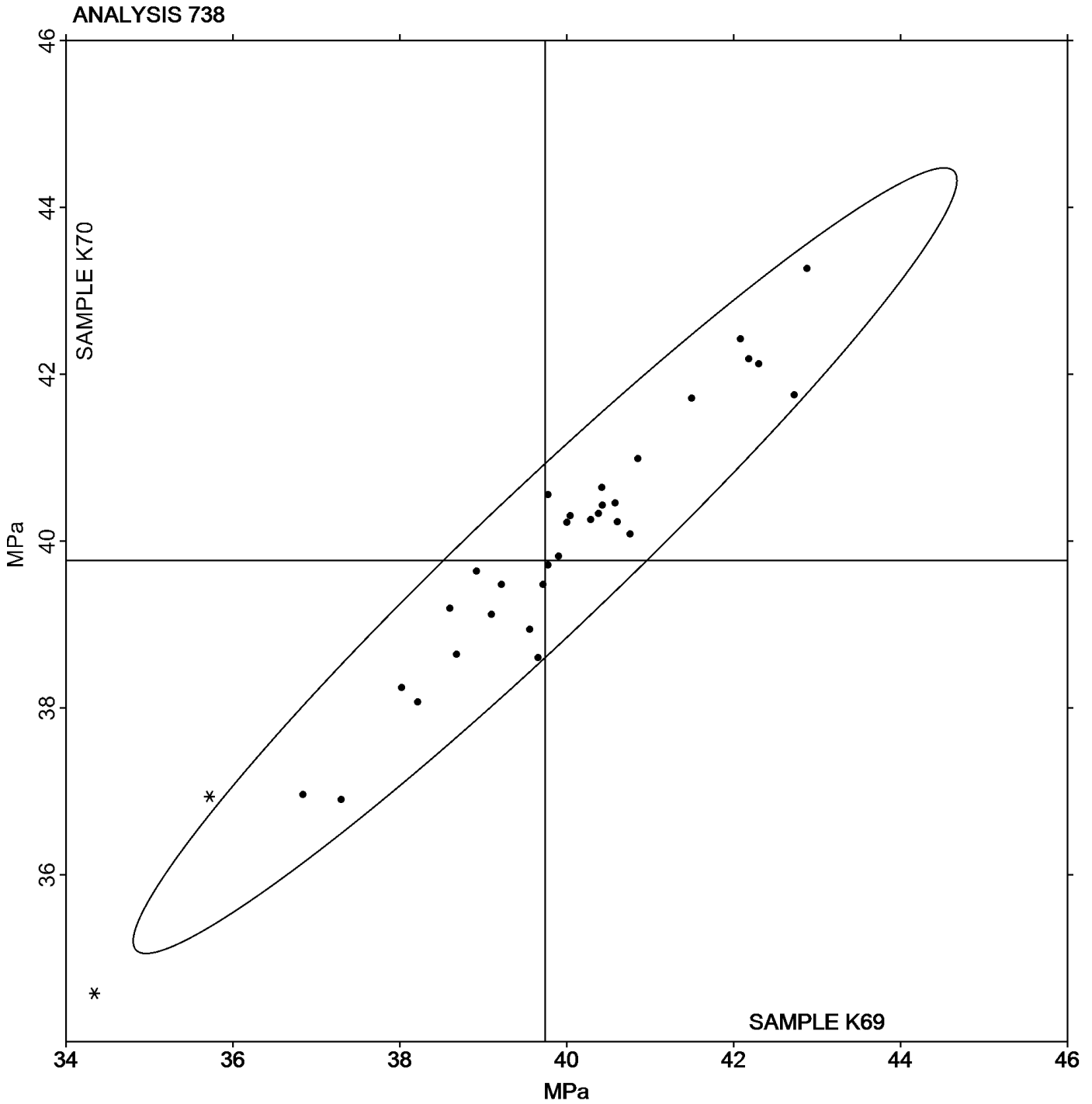
Report #115

Analysis 738

3rd Qtr 2020

Flexural Stress at Yield - MPa

Grand Mean Sample K69: 39.739 MPa Grand Mean Sample K70: 39.765 MPa





Plastics Interlaboratory Testing Program

Report #115

Analysis 750

3rd Qtr 2020

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

WebCode	Data Flag	Sample X69			Sample X70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2HJJWN		21.10	0.15	0.16	20.18	-0.72	-0.78	TO
2UJ78U		21.80	0.86	0.93	21.60	0.69	0.74	TO
3D9D29	X	19.35	-1.59	-1.73	21.55	0.64	0.69	XX
3MJFMA		19.92	-1.03	-1.12	19.61	-1.30	-1.40	CE
3RUT69		21.14	0.19	0.21	20.63	-0.28	-0.30	TO
46QXMY		20.94	0.00	-0.01	20.92	0.01	0.01	WZ
478RPU		21.73	0.79	0.85	21.46	0.55	0.60	TO
4ANLQ7		20.75	-0.19	-0.21	20.40	-0.51	-0.55	WZ
64GEN9		20.30	-0.64	-0.70	20.70	-0.21	-0.22	TO
6KJP8Z		21.80	0.86	0.93	21.90	0.99	1.07	TO
7KCXTP		21.25	0.31	0.33	21.30	0.39	0.42	TO
7M7NY4		20.30	-0.65	-0.70	20.74	-0.17	-0.18	TO
823R3Y		22.15	1.21	1.31	21.75	0.84	0.91	TO
84Q336		22.31	1.37	1.48	22.42	1.51	1.62	DY
86HRZL		21.25	0.31	0.33	21.39	0.48	0.52	DY
8KBJKM	*	18.30	-2.64	-2.87	18.70	-2.21	-2.38	TO
8XWWW		20.82	-0.13	-0.14	21.25	0.34	0.37	TY
9AVLD3		21.15	0.21	0.22	20.65	-0.26	-0.28	TO
9DBU23		21.48	0.53	0.57	22.03	1.12	1.20	TO
9FTLQ6		20.10	-0.84	-0.92	20.60	-0.31	-0.33	KA
A72Q6U		21.90	0.96	1.04	22.20	1.29	1.39	TO
AC7LNU		20.55	-0.40	-0.43	20.86	-0.04	-0.05	GO
BBU8UT		20.20	-0.74	-0.81	20.25	-0.66	-0.71	TO
BL94YW		20.91	-0.03	-0.04	21.34	0.43	0.46	DY
CCNNVZ		21.15	0.21	0.22	21.30	0.39	0.42	WZ
CQJGGV		20.45	-0.49	-0.54	20.35	-0.56	-0.60	TO
D7TKHG		21.73	0.79	0.85	20.75	-0.16	-0.18	TO
DB4V9P		19.89	-1.06	-1.15	20.24	-0.67	-0.72	XX
EBHK9G		22.15	1.21	1.31	22.00	1.09	1.18	TO
EJR9MF		20.99	0.04	0.05	20.07	-0.84	-0.91	XX
ER8R4U		20.50	-0.44	-0.48	20.00	-0.91	-0.98	TO
F6QUZQ	X	20.55	-0.39	-0.43	22.80	1.89	2.04	TO
FHZA9G		21.08	0.13	0.14	21.10	0.19	0.20	TO
FQCX7U		21.87	0.92	1.00	21.91	1.01	1.08	DY
GAZA9F	X	19.40	-1.54	-1.67	21.04	0.13	0.14	TO



Plastics Interlaboratory Testing Program

Report #115

Analysis 750

3rd Qtr 2020

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

WebCode	Data Flag	Sample X69			Sample X70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
GJ6GNE	X	13.87	-7.07	-7.67	14.04	-6.87	-7.39	TO
HUPH4U		20.88	-0.07	-0.08	21.27	0.36	0.39	TO
HVBW9P		21.57	0.62	0.67	21.61	0.70	0.76	DY
J2ZTAL		21.07	0.12	0.13	20.21	-0.70	-0.76	TO
JMEE7L		20.95	0.01	0.01	20.70	-0.21	-0.22	TO
JTP8NC		20.40	-0.54	-0.59	20.50	-0.41	-0.44	TO
KUTM8M		22.79	1.85	2.00	22.63	1.72	1.85	TO
LQ9UWK		20.57	-0.38	-0.41	20.14	-0.77	-0.83	TO
M2WHQT		23.13	2.18	2.36	23.11	2.20	2.37	TO
M4RYJ8	*	21.40	0.46	0.49	20.20	-0.71	-0.76	TO
MY97RM		20.23	-0.72	-0.78	20.47	-0.44	-0.47	XX
N48H2J	X	19.70	-1.24	-1.35	17.95	-2.96	-3.18	TO
N6JE7N	X	22.05	1.11	1.20	18.40	-2.51	-2.70	TO
N7ZZ3Q		20.38	-0.57	-0.62	20.20	-0.71	-0.77	CE
PF76TL		21.10	0.16	0.17	21.58	0.67	0.72	XX
Q93K6G		20.98	0.03	0.03	20.96	0.05	0.05	TO
QHNPFD		22.39	1.45	1.57	21.83	0.92	0.99	RR
QKV4JM		19.92	-1.03	-1.12	19.27	-1.64	-1.76	WZ
QLFJNH		21.30	0.36	0.38	21.20	0.29	0.31	CE
QUAPGH		20.55	-0.39	-0.43	20.45	-0.46	-0.49	WZ
R3JDVG		21.15	0.20	0.22	20.84	-0.07	-0.07	TO
RT6TXK		21.72	0.77	0.83	21.70	0.79	0.85	TO
RV4UD3		20.50	-0.44	-0.48	21.35	0.44	0.48	TY
RWVTR2		20.61	-0.33	-0.36	20.95	0.04	0.05	DY
RZDVWL		19.00	-1.95	-2.11	19.21	-1.70	-1.83	TO
RZV2VC		21.15	0.21	0.22	21.60	0.69	0.74	TO
TGKCHE		19.72	-1.22	-1.33	19.72	-1.19	-1.28	TO
TZCHNJ		20.68	-0.27	-0.29	21.24	0.33	0.35	TO
UDE7GD		21.09	0.14	0.15	20.75	-0.16	-0.17	GO
UPUPZE		21.50	0.56	0.60	21.15	0.24	0.26	TO
V9JYBA	X	19.25	-1.69	-1.84	17.95	-2.96	-3.18	HA
VVXWEH		20.82	-0.13	-0.14	21.39	0.48	0.52	TO
W2CR9C		21.20	0.26	0.28	21.45	0.54	0.58	DY
WFBTLD		22.26	1.31	1.42	21.80	0.90	0.96	XX
WKR2AC		21.50	0.56	0.60	21.50	0.59	0.64	DY



Plastics Interlaboratory Testing Program

Report #115

Analysis 750

3rd Qtr 2020

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

WebCode	Data Flag	Sample X69			Sample X70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
XA3R3U		20.55	-0.39	-0.43	20.45	-0.46	-0.49	WZ
XLUJKD		19.34	-1.60	-1.74	19.56	-1.35	-1.45	DY
XZD468		20.58	-0.36	-0.40	20.75	-0.16	-0.18	GO
Y8XTQ8		22.70	1.76	1.90	22.56	1.65	1.77	TO
YAL6QD		20.78	-0.16	-0.17	21.06	0.15	0.17	TO
YD6JUD	*	18.37	-2.58	-2.80	18.42	-2.49	-2.67	XX
YM88L6		20.89	-0.06	-0.06	20.92	0.01	0.01	TO
YPB368		21.40	0.45	0.49	21.67	0.76	0.82	GO
YYW8D8	*	19.07	-1.87	-2.03	18.48	-2.43	-2.61	TM

Summary Statistics

	Sample X69	Sample X70
Grand Means	20.945 grams/10 mins	20.908 grams/10 mins
Stnd Dev Btwn Labs	0.923 grams/10 mins	0.929 grams/10 mins

Statistics based on 72 of 79 reporting participants

Sample X69: LDPE & Sample X70: LDPE

Comments on Assigned Data Flags for Test #750

- GJ6GNE (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample X70.
- GAZA9F (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample X70.
- N6JE7N (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample X69.
- V9JYBA (X) - Data for sample X70 are low.
- F6QUZQ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample X70.
- N48H2J (X) - Data for sample X70 are low.
- 3D9D29 (X) - Inconsistent in testing between samples.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample X69 LDPE			Sample X70 LDPE			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Procedure A of ASTM D1238	20.842	1.008	-0.10	20.800	1.020	-0.11	41/47
Procedure B of ASTM D1238	21.162	1.089	0.22	21.043	1.009	0.13	12/12
Procedure A of ISO 1133	21.107	0.513	0.16	21.067	0.680	0.16	13/14
Procedure B of ISO 1133	20.988	0.657	0.04	21.150	0.588	0.24	5/5



Plastics Interlaboratory Testing Program

Analysis 750

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

Report #115

3rd Qtr 2020

Key to Instrument Codes Reported by Participants

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

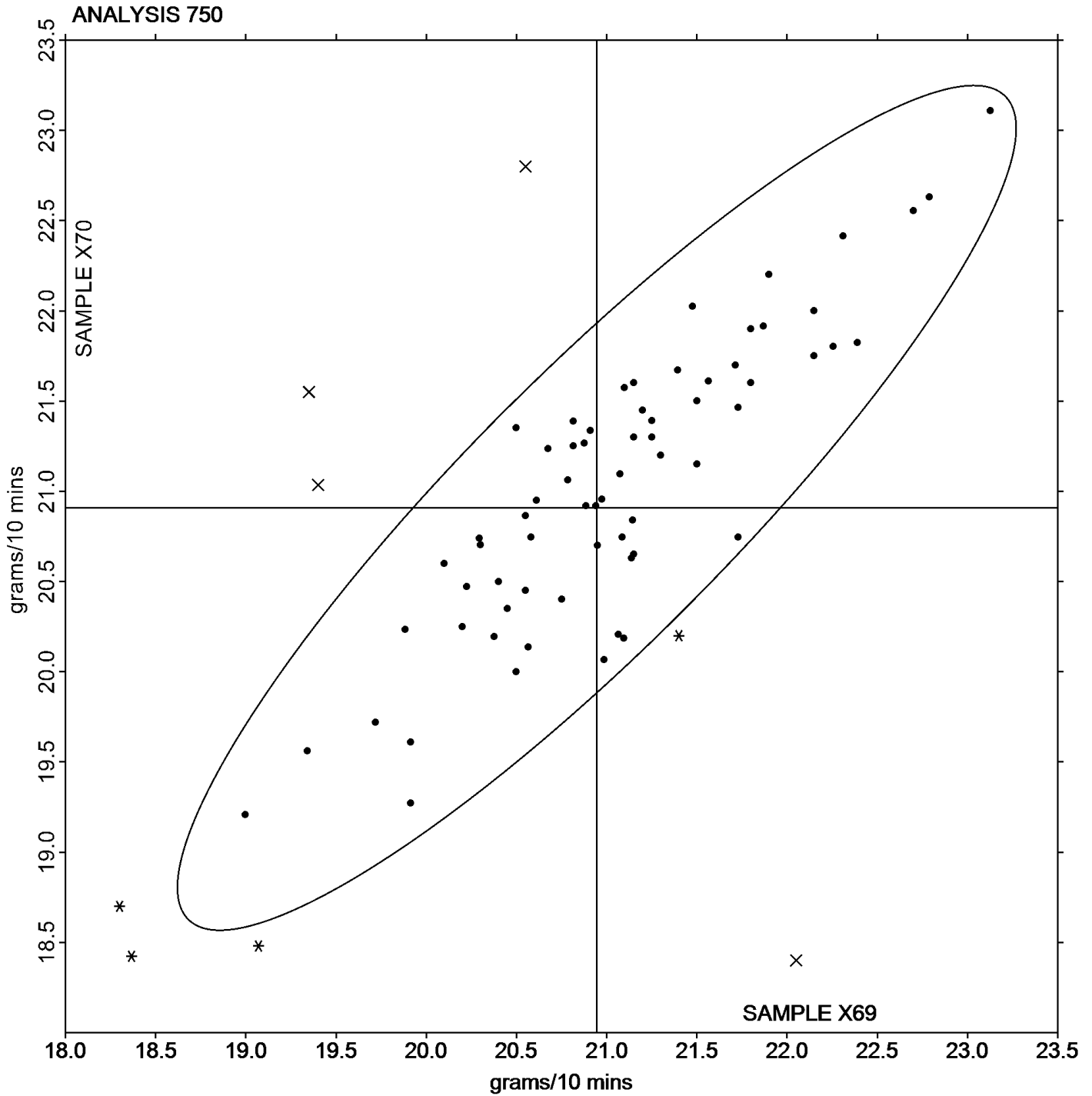
Report #115

Analysis 750

3rd Qtr 2020

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

Grand Mean Sample X69: 20.945 grams/10 mins Grand Mean Sample X70: 20.908 grams/10 mins





Plastics Interlaboratory Testing Program

Report #115

Analysis 755

3rd Qtr 2020

Moisture Content of Plastics

WebCode	Data Flag	Sample Y69			Sample Y70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2YEAKD		0.25243	-0.00543	-0.15	0.25150	-0.00598	-0.16	ML
3MJFMA		0.22100	-0.03686	-1.04	0.22000	-0.03748	-0.98	MU
3PHG3R		0.26267	0.00480	0.14	0.26400	0.00652	0.17	MI
3Y6HJ2		0.18333	-0.07453	-2.10	0.17133	-0.08614	-2.24	CT
4WWP4T		0.27647	0.01860	0.53	0.27277	0.01529	0.40	MK
64AZUY		0.27600	0.01814	0.51	0.27867	0.02119	0.55	MJ
64GEN9	X	0.25750	-0.00036	-0.01	0.22833	-0.02914	-0.76	XX
7KCXTP		0.24933	-0.00853	-0.24	0.25333	-0.00414	-0.11	SA
823R3Y		0.33000	0.07214	2.04	0.33667	0.07919	2.06	MU
84Q336		0.27333	0.01547	0.44	0.27667	0.01919	0.50	MU
9DBU23		0.25400	-0.00386	-0.11	0.25250	-0.00498	-0.13	CT
BRLG4V	*	0.19240	-0.06546	-1.85	0.20357	-0.05391	-1.40	MT
DLVJPR		0.27853	0.02067	0.58	0.27420	0.01672	0.44	MK
DXEY7R	X	0.09956	-0.15830	-4.47	0.10004	-0.15744	-4.10	MU
E6R88T		0.24767	-0.01020	-0.29	0.24600	-0.01148	-0.30	MU
E93L2Y		0.27793	0.02007	0.57	0.28450	0.02702	0.70	AZ
EBHK9G		0.28150	0.02364	0.67	0.29850	0.04102	1.07	ML
FHZA9G		0.26823	0.01037	0.29	0.26620	0.00872	0.23	ML
HVBW9P		0.28750	0.02964	0.84	0.29000	0.03252	0.85	XX
J2ZTAL		0.21500	-0.04286	-1.21	0.21533	-0.04214	-1.10	AZ
JAWXPM		0.26793	0.01007	0.28	0.26690	0.00942	0.25	AZ
LJX6HR	X	0.51053	0.25267	7.14	0.51653	0.25906	6.74	MS
LQ9UWK		0.26310	0.00524	0.15	0.26270	0.00522	0.14	AZ
MPHKLP		0.28700	0.02914	0.82	0.28867	0.03119	0.81	CS
N6JE7N		0.25567	-0.00220	-0.06	0.26333	0.00586	0.15	AQ
Q6VTQ4		0.24833	-0.00953	-0.27	0.23567	-0.02181	-0.57	MR
RJ9NHJ	*	0.17033	-0.08753	-2.47	0.15267	-0.10481	-2.73	MK
RMU7Z6		0.31300	0.05514	1.56	0.30950	0.05202	1.35	CT
RQDUJM		0.24800	-0.00986	-0.28	0.24350	-0.01398	-0.36	SB
RZDVWL		0.26333	0.00547	0.15	0.26467	0.00719	0.19	BA
RZV2VC		0.24940	-0.00846	-0.24	0.23960	-0.01788	-0.47	MD
UPUPZE		0.25800	0.00014	0.00	0.25700	-0.00048	-0.01	MB
W2CR9C		0.30520	0.04734	1.34	0.29470	0.03722	0.97	AZ
XA3R3U	X	0.32600	0.06814	1.92	0.29533	0.03786	0.98	AZ
XLUJKD		0.28400	0.02614	0.74	0.29467	0.03719	0.97	AZ



Plastics Interlaboratory Testing Program

Report #115

Analysis 755

3rd Qtr 2020

Moisture Content of Plastics

WebCode	Data Flag	Sample Y69			Sample Y70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
YM88L6		0.21100	-0.04686	-1.32	0.21000	-0.04748	-1.24	CT

Summary Statistics		Sample Y69	Sample Y70
Grand Means		0.257864 Percent	0.257478 Percent
Stnd Dev Btwn Labs		0.035409 Percent	0.038432 Percent
Statistics based on 32 of 36 reporting participants			

Sample Y69: ABS & Sample Y70: ABS

Comments on Assigned Data Flags for Test #755

- XA3R3U (X) - Inconsistent in testing between samples.
- DXEY7R (X) - Data for both samples are low. Possible Systematic Error.
- LJX6HR (X) - Data for both samples are high. Possible Systematic Error.
- 64GEN9 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample Y69.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample Y69 <i>ABS</i>			Sample Y70 <i>ABS</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
ASTM D6869	0.249040	0.033000	-0.0088	0.247000	0.039000	-0.0104	10/12
ISO 15512 Method B	0.255447	0.038000	-0.0024	0.257000	0.037000	-0.0005	5/6
ASTM D6980	0.248900	0.038000	-0.0090	0.248000	0.041000	-0.0091	10/11
ASTM D7191	0.277500	0.017000	0.0196	0.277000	0.014000	0.0198	6/6

Key to Instrument Codes Reported by Participants

- | | |
|---|--|
| AQ Aquastar | AZ Arizona Instruments Moisture Analyzer |
| BA Brabender Aquatrac | CS Cosa Instruments |
| CT Computrac Moisture Analyzer | MB Omnimark Mark 3 |
| MD Mettler Toledo DL37 | MI Mitsubishi MCI Series |
| MJ Mitsubishi KF Analyzer Series | MK Mitsubishi KF Analyzer CA |
| ML Metrohm Coulometer | MR Metrohm Coulometer 756 KF |
| MS Metrohm Coulometer 831 KF | MT Mettler Toledo DL39 |
| MU Mettler Toledo | SA Sartorius MA30 |
| SB Sartorius Mark 3 | XX Instrument manufacturer not specified by lab |



Plastics Interlaboratory Testing Program

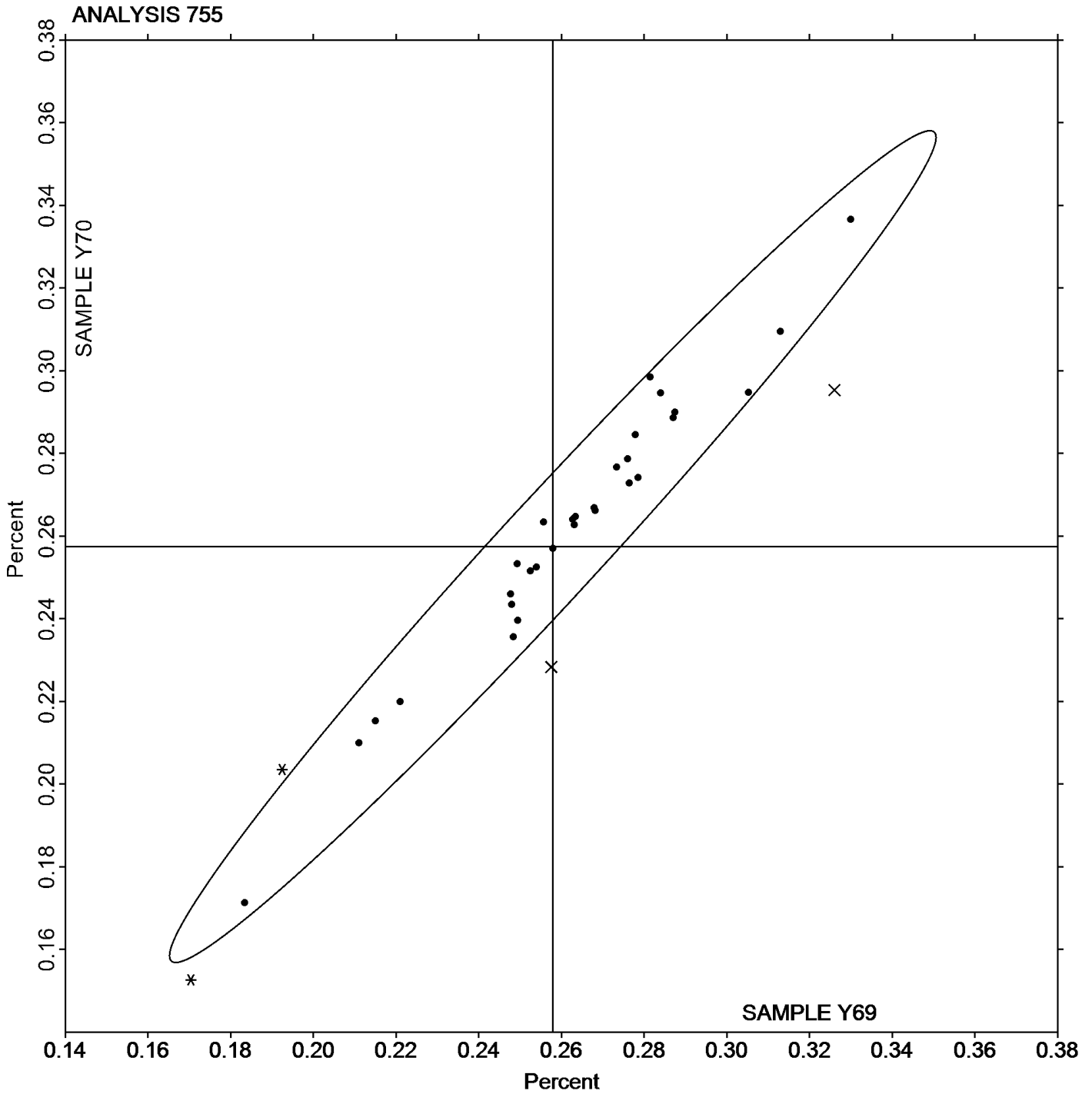
Analysis 755

Moisture Content of Plastics

Report #115

3rd Qtr 2020

Grand Mean Sample Y69: 0.25786 Percent Grand Mean Sample Y70: 0.25748 Percent





Plastics Interlaboratory Testing Program

Report #115

Analysis 757

3rd Qtr 2020

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	Sample L69			Sample L70		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U		19.788	0.035	0.60	19.775	0.022	0.40
3D9D29	X	19.205	-0.548	-9.38	19.255	-0.497	-8.93
3MJFMA	X	19.996	0.243	4.17	19.908	0.156	2.79
3Y6HJ2		19.735	-0.018	-0.31	19.720	-0.032	-0.58
478RPU		19.732	-0.021	-0.36	19.768	0.015	0.28
4WWP4T		19.780	0.027	0.46	19.810	0.058	1.04
6KJP8Z		19.780	0.027	0.46	19.805	0.053	0.95
79ZU67		19.775	0.022	0.38	19.750	-0.002	-0.04
7KCXTP		19.765	0.012	0.21	19.745	-0.007	-0.13
823R3Y		19.685	-0.068	-1.16	19.630	-0.122	-2.19
84Q336	X	18.350	-1.403	-24.03	20.000	0.248	4.45
86HRZL		19.795	0.042	0.72	19.785	0.033	0.59
88UYL9		19.660	-0.093	-1.59	19.615	-0.137	-2.46
8EL8JY		19.750	-0.003	-0.05	19.715	-0.037	-0.67
96B6XX		19.770	0.017	0.29	19.803	0.051	0.91
9DBU23	X	19.040	-0.713	-12.21	19.660	-0.092	-1.65
9NQEYY		19.740	-0.013	-0.22	19.795	0.043	0.77
9Y8YJV		19.835	0.082	1.41	19.815	0.063	1.13
AC7LNU	X	19.395	-0.358	-6.13	19.485	-0.267	-4.80
ARJXFM		19.780	0.027	0.46	19.765	0.013	0.23
B24NFK	X	19.745	-0.008	-0.14	19.535	-0.217	-3.90
BJNEEJ		19.680	-0.073	-1.25	19.670	-0.082	-1.47
BRLG4V		19.775	0.022	0.38	19.805	0.053	0.95
DB4V9P	X	19.460	-0.293	-5.02	19.675	-0.077	-1.38
DE3ATU	X	17.535	-2.218	-37.99	19.795	0.043	0.77
EBHK9G		19.770	0.017	0.29	19.765	0.013	0.23
EJR9MF		19.671	-0.082	-1.41	19.683	-0.069	-1.24
FHZA9G		19.775	0.022	0.38	19.780	0.028	0.50
HYY98V	X	19.615	-0.138	-2.36	19.815	0.063	1.13
J2ZTAL		19.843	0.090	1.54	19.791	0.039	0.69
JAWXPM	X	19.497	-0.256	-4.38	19.780	0.027	0.49
KUTM8M	X	19.465	-0.288	-4.93	19.450	-0.302	-5.43
N6JE7N	X	19.390	-0.363	-6.22	19.225	-0.527	-9.47
NBG9QQ	X	19.455	-0.298	-5.10	19.410	-0.342	-6.14
NZK6U2		19.795	0.042	0.72	19.790	0.038	0.68



Plastics Interlaboratory Testing Program

Report #115

Analysis 757

3rd Qtr 2020

Ash Content in Thermoplastics - Percent

WebCode	Data Flag	<u>Sample L69</u>			<u>Sample L70</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
Q6VTQ4		19.800	0.047	0.81	19.795	0.043	0.77
Q93K6G		19.800	0.047	0.81	19.800	0.048	0.86
R3JDVG	*	19.565	-0.188	-3.22	19.615	-0.137	-2.46
TGKCHE		19.835	0.082	1.41	19.765	0.013	0.23
TTV4NY		19.770	0.017	0.29	19.760	0.008	0.14
TZCHNJ		19.700	-0.053	-0.91	19.700	-0.052	-0.94
UDE7GD		19.785	0.032	0.55	19.760	0.008	0.14
UPUPZE		19.775	0.022	0.38	19.780	0.028	0.50
URH2YK	*	19.669	-0.084	-1.44	19.760	0.008	0.14
YPB368		19.735	-0.018	-0.31	19.725	-0.027	-0.49
YU7W39		19.735	-0.018	-0.31	19.781	0.028	0.51

Summary Statistics		
	<u>Sample L69</u>	<u>Sample L70</u>
Grand Means	19.7530 Percent	19.7521 Percent
Stnd Dev Btwn Labs	0.0584 Percent	0.0557 Percent
Statistics based on 33 of 46 reporting participants		

Sample L69: PP & Sample L70: PP



Comments on Assigned Data Flags for Test #757

- B24NFK (X) - Data for sample L70 are low. Inconsistent within the determinations of sample L70.
- KUTM8M (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- N6JE7N (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- HYY98V (X) - Inconsistent in testing between samples.
- AC7LNU (X) - Data for both samples are low. Possible Systematic Error.
- DB4V9P (X) - Data for sample L69 are low. Inconsistent within the determinations of sample L69.
- DE3ATU (X) - Data for sample L69 are low. Inconsistent within the determinations of sample L69.
- 84Q336 (X) - Data for sample L69 are low and data for sample L70 are high. Inconsistent in testing between samples. Inconsistent within the determinations of sample L70.
- 3MJFMA (X) - Data for both samples are high. Possible Systematic Error.
- 3D9D29 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- 9DBU23 (X) - Data for sample L69 are low.
- NBG9QQ (X) - Data for both samples are low. Possible Systematic Error.
- JAWXPM (X) - Data for sample L69 are low.



Plastics Interlaboratory Testing Program

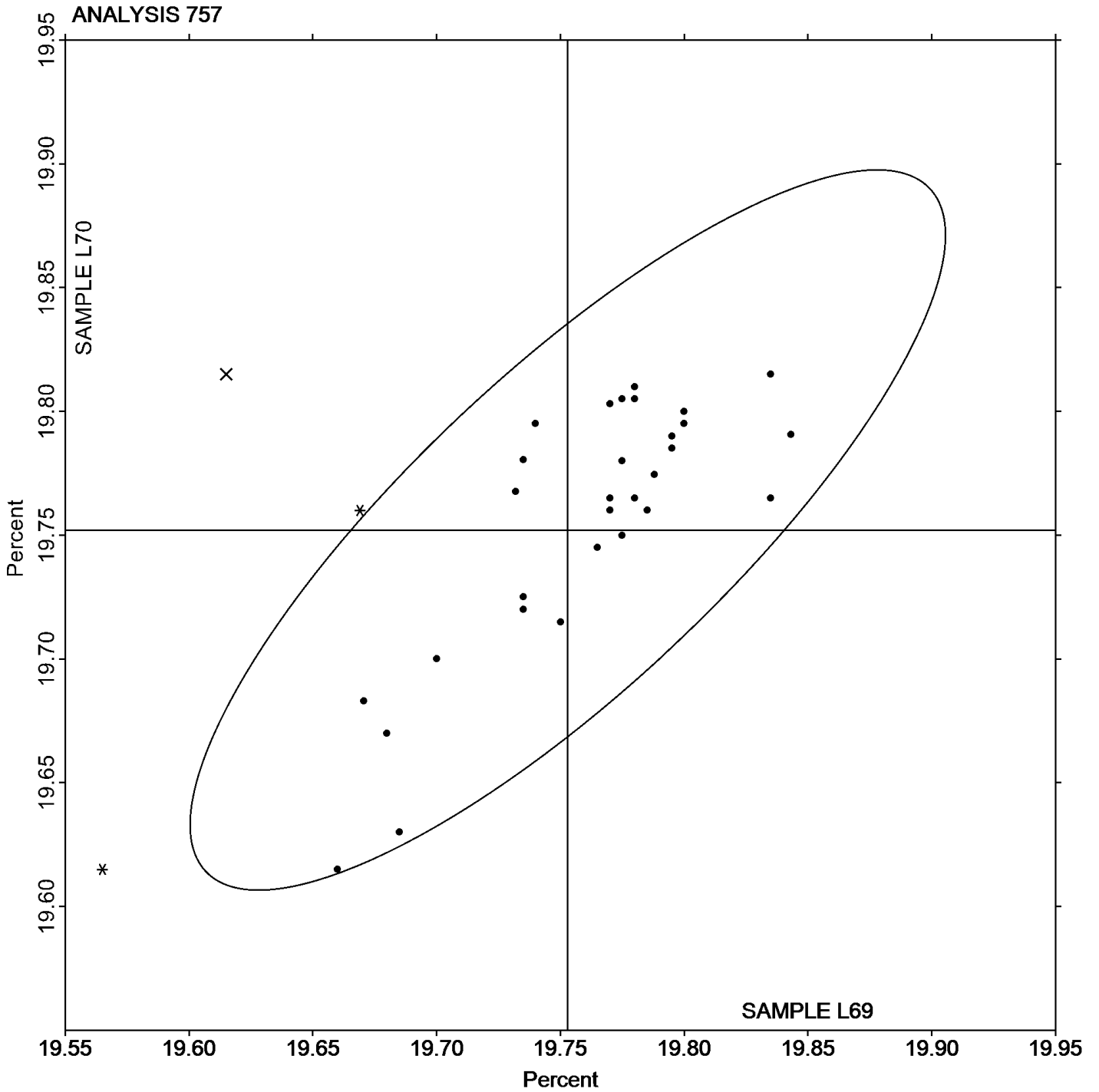
Report #115

Analysis 757

3rd Qtr 2020

Ash Content in Thermoplastics - Percent

Grand Mean Sample L69: 19.753 Percent Grand Mean Sample L70: 19.752 Percent





Plastics Interlaboratory Testing Program

Report #115

Analysis 758

3rd Qtr 2020

Thermogravimetric Analysis

WebCode	Data Flag	<u>Sample A69</u>			<u>Sample A70</u>			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
7KCXTP		63.85000	-1.61500	-0.44	62.57500	-2.25800	-0.54	TA
BL94YW		62.91500	-2.55000	-0.70	62.25400	-2.57900	-0.62	TA
JT9KCU		69.63000	4.16500	1.15	69.67000	4.83700	1.15	TA

Summary Statistics

	<u>Sample A69</u>	<u>Sample A70</u>
Grand Means	65.465000 Percent	64.833000 Percent
Std Dev Btwn Labs	3.637166 Percent	4.192039 Percent
Statistics based on 3 of 3 reporting participants		

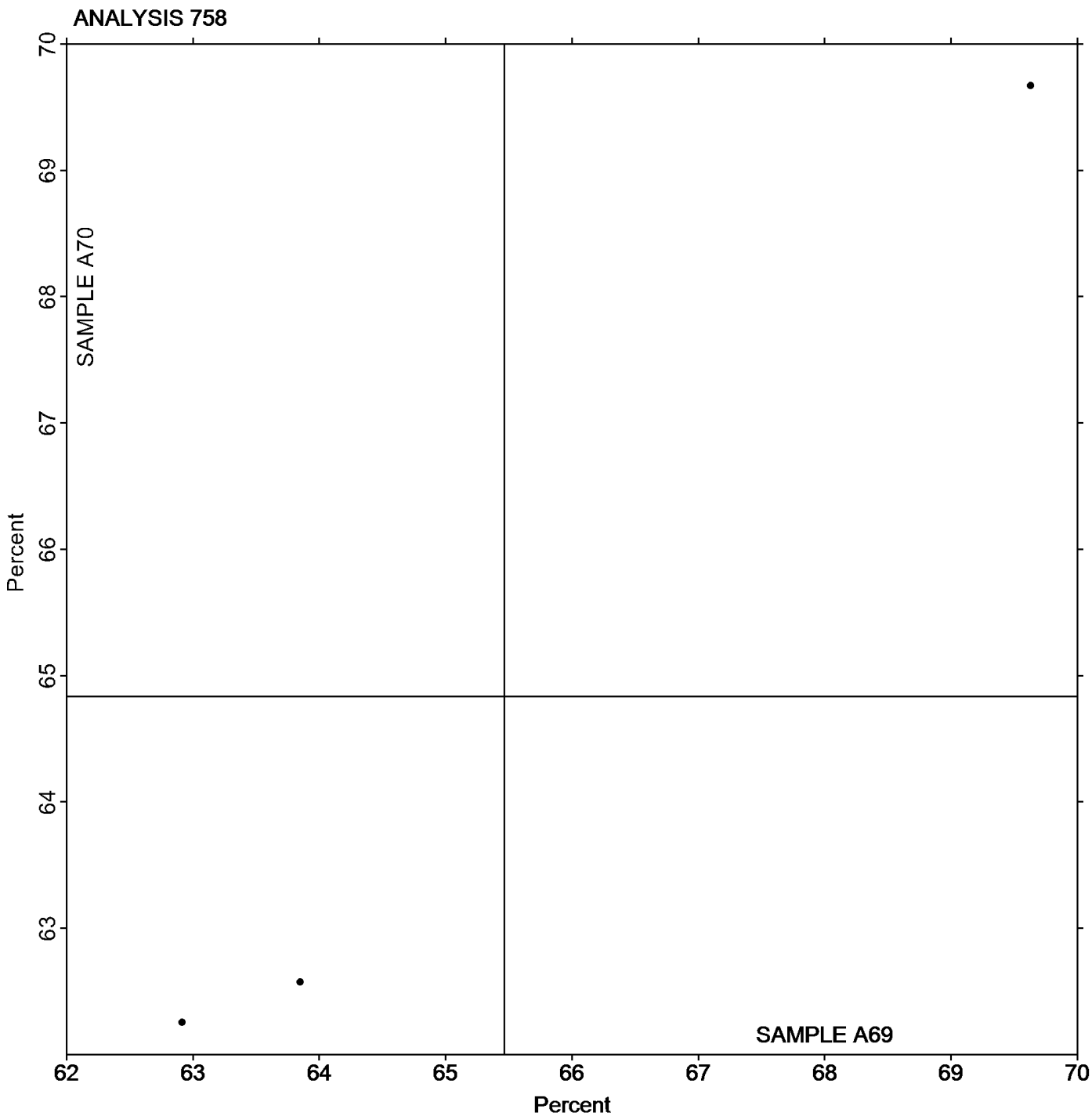
Sample A69: PBT & Sample A70: PBT

Key to Instrument Codes Reported by Participants

TA TA Instruments



Grand Mean Sample A69: 65.465 Percent Grand Mean Sample A70: 64.833 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 #115

Analysis 760

3rd Qtr 2020

DSC Crystallization Temperature

WebCode	Data Flag	Sample W69			Sample W70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
64GEN9		110.87	-3.02	-0.71	111.17	-2.80	-0.67	NZ
68FVZ3		118.53	4.64	1.10	118.04	4.07	0.97	TA
7KCXTP		115.03	1.14	0.27	114.97	1.00	0.24	TA
8EL8JY		116.23	2.34	0.55	116.13	2.17	0.51	TA
AC7LNU		116.09	2.20	0.52	116.64	2.68	0.64	TA
BL94YW		112.71	-1.18	-0.28	113.04	-0.93	-0.22	TA
BRLG4V		113.63	-0.26	-0.06	113.05	-0.91	-0.22	TA
DB4V9P		113.55	-0.34	-0.08	113.35	-0.61	-0.15	TA
DLVJPR		116.18	2.29	0.54	116.44	2.48	0.59	TA
EJR9MF		117.66	3.77	0.89	118.18	4.21	1.00	TA
ER8R4U	*	107.00	-6.89	-1.63	105.43	-8.53	-2.03	TA
FXW2DW		108.20	-5.69	-1.34	107.80	-6.17	-1.46	NZ
J7BMRC		112.07	-1.82	-0.43	111.90	-2.07	-0.49	PE
JHBKYQ		110.13	-3.76	-0.89	110.40	-3.57	-0.85	NZ
JT9KCU		120.01	6.12	1.45	120.05	6.08	1.44	XX
LQ9UWK		110.00	-3.89	-0.92	110.78	-3.19	-0.76	MT
QKV4JM		108.96	-4.93	-1.16	109.52	-4.45	-1.06	TA
R3JDVG	*	106.90	-6.99	-1.65	108.49	-5.47	-1.30	TA
RV4UD3		123.00	9.11	2.15	123.03	9.06	2.15	SH
RZV2VC		118.77	4.88	1.15	118.80	4.83	1.15	TA
TQKYAB	X	153.66	39.77	9.39	153.37	39.40	9.36	TA
UPUPZE		114.63	0.74	0.18	114.73	0.77	0.18	TA
XDMGM8		116.90	3.01	0.71	116.13	2.17	0.51	TA
XZD468		115.20	1.31	0.31	115.67	1.71	0.40	TA
YKZTFY	X	113.20	-0.69	-0.16	109.13	-4.84	-1.15	TA
YM88L6		111.10	-2.79	-0.66	111.47	-2.50	-0.59	XX

Summary Statistics		
	Sample W69	Sample W70
Grand Means	113.890 Degrees Celsius	113.968 Degrees Celsius
Stnd Dev Btwn Labs	4.234 Degrees Celsius	4.211 Degrees Celsius
Statistics based on 24 of 26 reporting participants		

Sample W69: PP & Sample W70: PP



Comments on Assigned Data Flags for Test #760

YKZTFY (X) - Inconsistent in testing between samples.

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

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

PE Perkins Elmer Instruments

TA TA Instruments

NZ Netzsch Instruments

SH Shimadzu

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

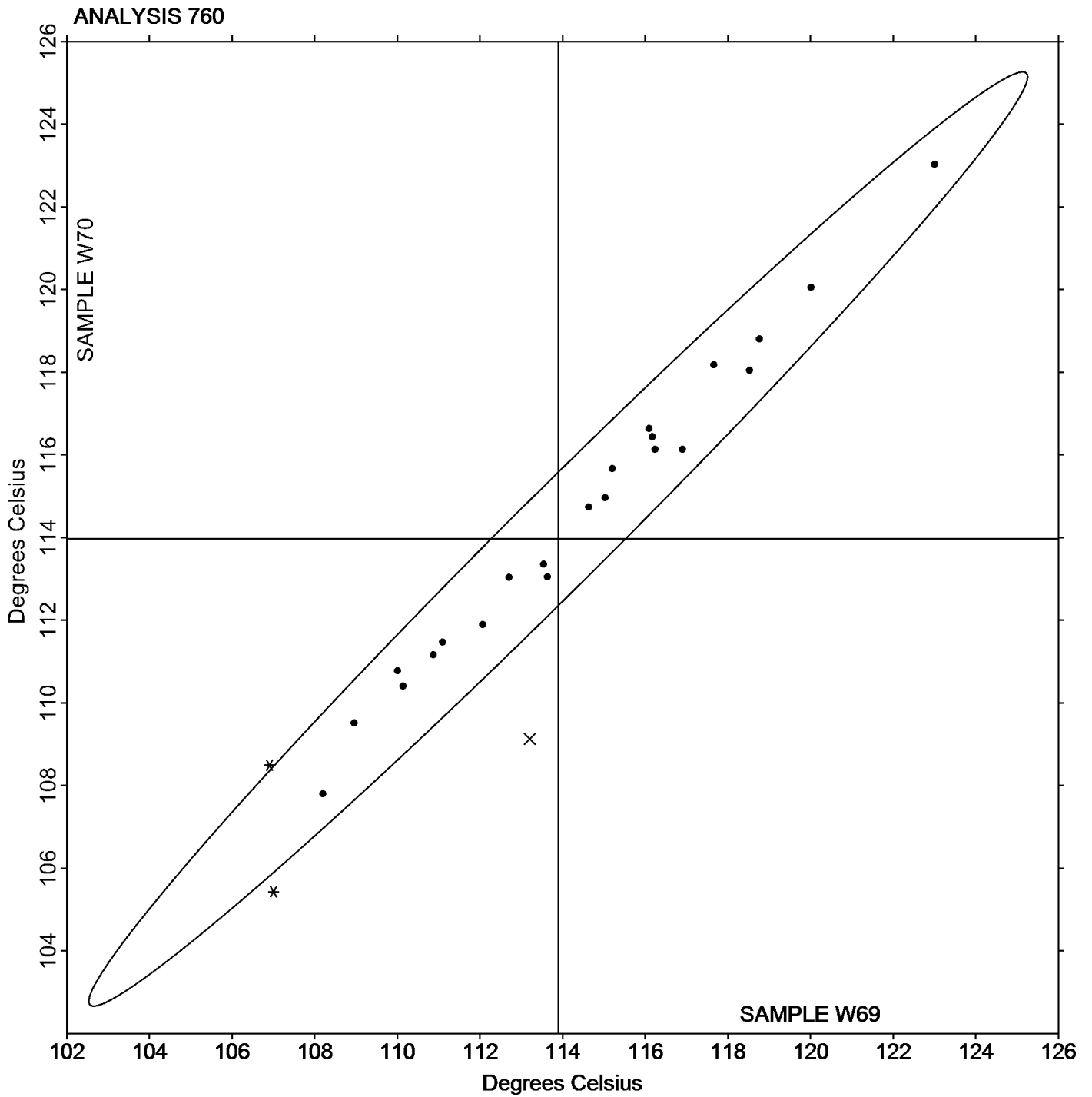
Analysis 760

DSC Crystallization Temperature

Report #115

3rd Qtr 2020

Grand Mean Sample W69: 113.89 Degrees Celsius Grand Mean Sample W70: 113.97 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #115

Analysis 761

3rd Qtr 2020

DSC Melt Temperature

WebCode	Data Flag	Sample W69			Sample W70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
478RPU		162.66	-0.97	-0.54	163.29	-0.35	-0.17	TA
64GEN9		164.63	1.00	0.56	164.87	1.23	0.62	NZ
68FVZ3		166.33	2.70	1.51	167.25	3.62	1.82	TA
7KCXTP		163.93	0.30	0.17	163.40	-0.23	-0.12	TA
8EL8JY		161.27	-2.36	-1.32	161.40	-2.23	-1.12	TA
AC7LNU		162.46	-1.17	-0.65	162.50	-1.14	-0.57	TA
BL94YW		162.83	-0.80	-0.44	163.40	-0.24	-0.12	XX
BRLG4V		160.77	-2.86	-1.60	161.00	-2.63	-1.32	TA
DB4V9P		164.09	0.46	0.26	164.81	1.18	0.59	XX
DLVJPR		160.15	-3.48	-1.94	160.24	-3.40	-1.71	TA
EJR9MF		163.64	0.01	0.00	162.86	-0.78	-0.39	XX
ER8R4U		163.90	0.27	0.15	164.60	0.97	0.49	TA
FHZA9G		164.91	1.28	0.71	166.50	2.87	1.44	TA
FXW2DW	X	166.70	3.07	1.71	173.70	10.07	5.07	NZ
J7BMRC		164.43	0.80	0.45	164.53	0.90	0.45	PE
JHBKYQ		165.73	2.10	1.17	165.77	2.13	1.07	NZ
JT9KCU	X	162.58	-1.05	-0.59	168.17	4.54	2.28	TA
LQ9UWK		166.89	3.26	1.82	165.66	2.03	1.02	MT
QKV4JM		164.08	0.45	0.25	164.04	0.41	0.21	TA
R3JDVG		163.70	0.07	0.04	162.33	-1.30	-0.65	TA
RJ9NHJ		164.34	0.71	0.40	163.06	-0.57	-0.29	MT
RV4UD3		163.96	0.33	0.18	163.77	0.14	0.07	SH
RZDVWL		160.05	-3.58	-2.00	160.13	-3.51	-1.76	TA
UPUPZE		164.60	0.97	0.54	163.43	-0.20	-0.10	TA
V9JYBA		164.00	0.37	0.21	164.20	0.57	0.29	XX
XDMGM8		161.20	-2.43	-1.36	161.50	-2.13	-1.07	TA
XZD468		162.53	-1.10	-0.61	161.42	-2.21	-1.11	TA
YKZTFY	*	165.73	2.10	1.17	167.84	4.21	2.12	TA
YM88L6		165.20	1.57	0.88	164.30	0.67	0.34	XX



Plastics Interlaboratory Testing Program

Report #115

Analysis 761

3rd Qtr 2020

DSC Melt Temperature

Summary Statistics	<u>Sample W69</u>	<u>Sample W70</u>
Grand Means	163.630 Degrees Celsius	163.633 Degrees Celsius
Stnd Dev Btwn Labs	1.792 Degrees Celsius	1.987 Degrees Celsius
Statistics based on 27 of 29 reporting participants		

Sample W69: PP & Sample W70: PP

Comments on Assigned Data Flags for Test #761

FXW2DW (X) - Data for sample W70 are high.

JT9KCU (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

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



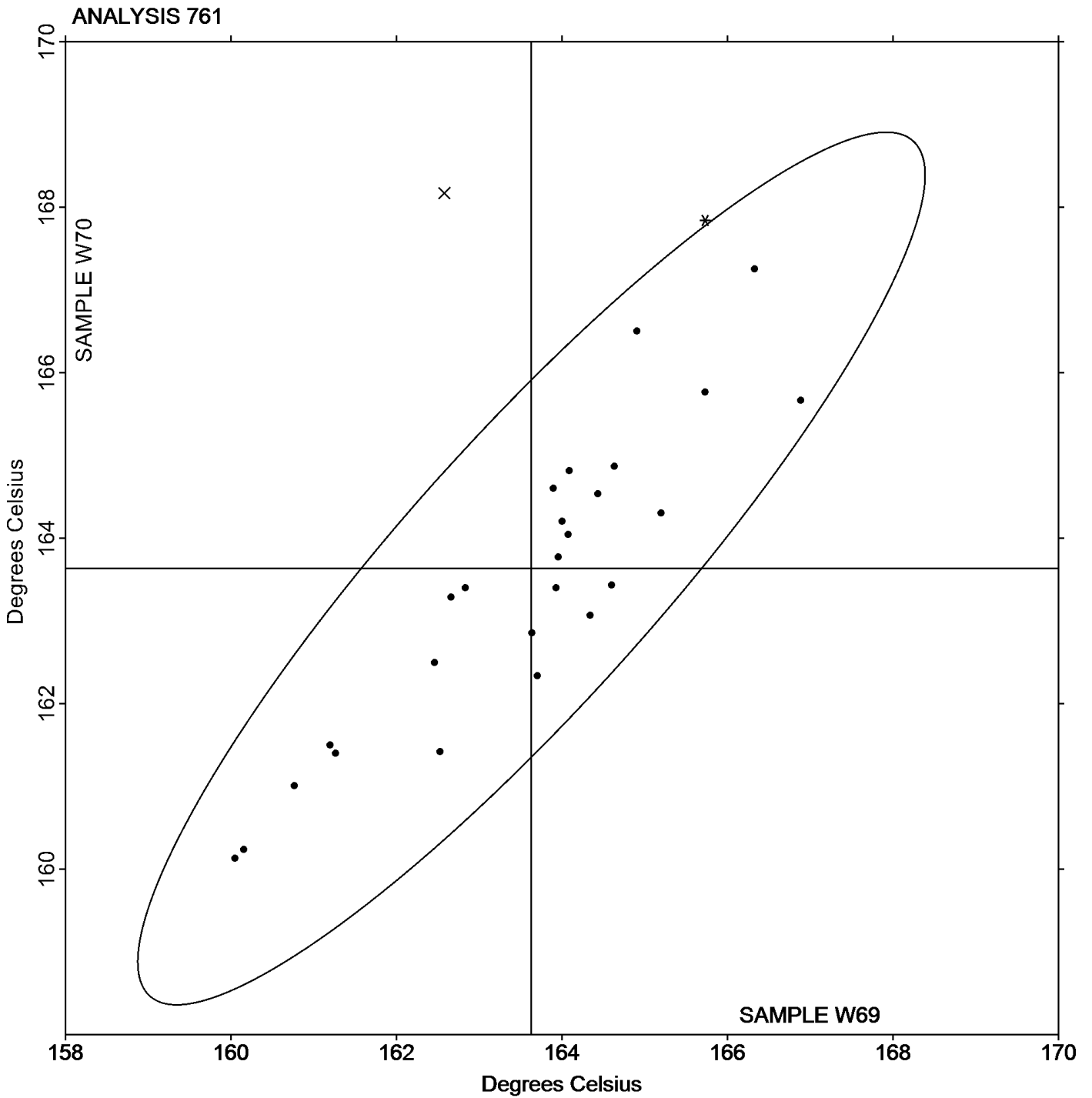
Plastics Interlaboratory Testing Program

Analysis 761
DSC Melt Temperature

Report #115

3rd Qtr 2020

Grand Mean Sample W69: 163.63 Degrees Celsius Grand Mean Sample W70: 163.63 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #115

Analysis 762

3rd Qtr 2020

DSC Enthalpy of Crystallization

WebCode	Data Flag	Sample W69			Sample W70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
64GEN9		92.47	-2.11	-0.28	92.15	-0.74	-0.09	NZ
8EL8JY		100.28	5.70	0.74	101.19	8.30	1.05	TA
AC7LNU		96.77	2.19	0.29	97.28	4.39	0.55	TA
BL94YW		97.99	3.41	0.45	98.10	5.21	0.66	XX
BRLG4V		88.91	-5.67	-0.74	88.82	-4.07	-0.51	TA
DLVJPR		93.16	-1.42	-0.19	92.92	0.04	0.00	TA
FXW2DW	*	100.50	5.92	0.77	85.11	-7.78	-0.98	NZ
J7BMRC		96.14	1.56	0.20	96.37	3.49	0.44	PE
JHBKYQ		94.64	0.06	0.01	94.06	1.17	0.15	NZ
JT9KCU		106.20	11.62	1.52	99.23	6.34	0.80	TA
QKV4JM		98.93	4.35	0.57	97.42	4.53	0.57	TA
R3JDVG		99.97	5.39	0.70	100.53	7.65	0.96	TA
RV4UD3		81.73	-12.85	-1.68	79.31	-13.58	-1.71	SH
RZV2VC		101.00	6.42	0.84	101.77	8.88	1.12	TA
UPUPZE		95.28	0.70	0.09	94.89	2.01	0.25	TA
XDMGM8		95.38	0.79	0.10	94.25	1.37	0.17	TA
XZD468		92.37	-2.21	-0.29	95.00	2.11	0.27	TA
YKZTFY	*	71.48	-23.10	-3.02	71.07	-21.82	-2.75	TA
YM88L6		93.87	-0.72	-0.09	85.37	-7.52	-0.95	XX

Summary Statistics		
	Sample W69	Sample W70
Grand Means	94.584 Joules Per Gram	92.886 Joules Per Gram
Std Dev Btwn Labs	7.654 Joules Per Gram	7.930 Joules Per Gram
Statistics based on 19 of 19 reporting participants		

Sample W69: PP & Sample W70: PP

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

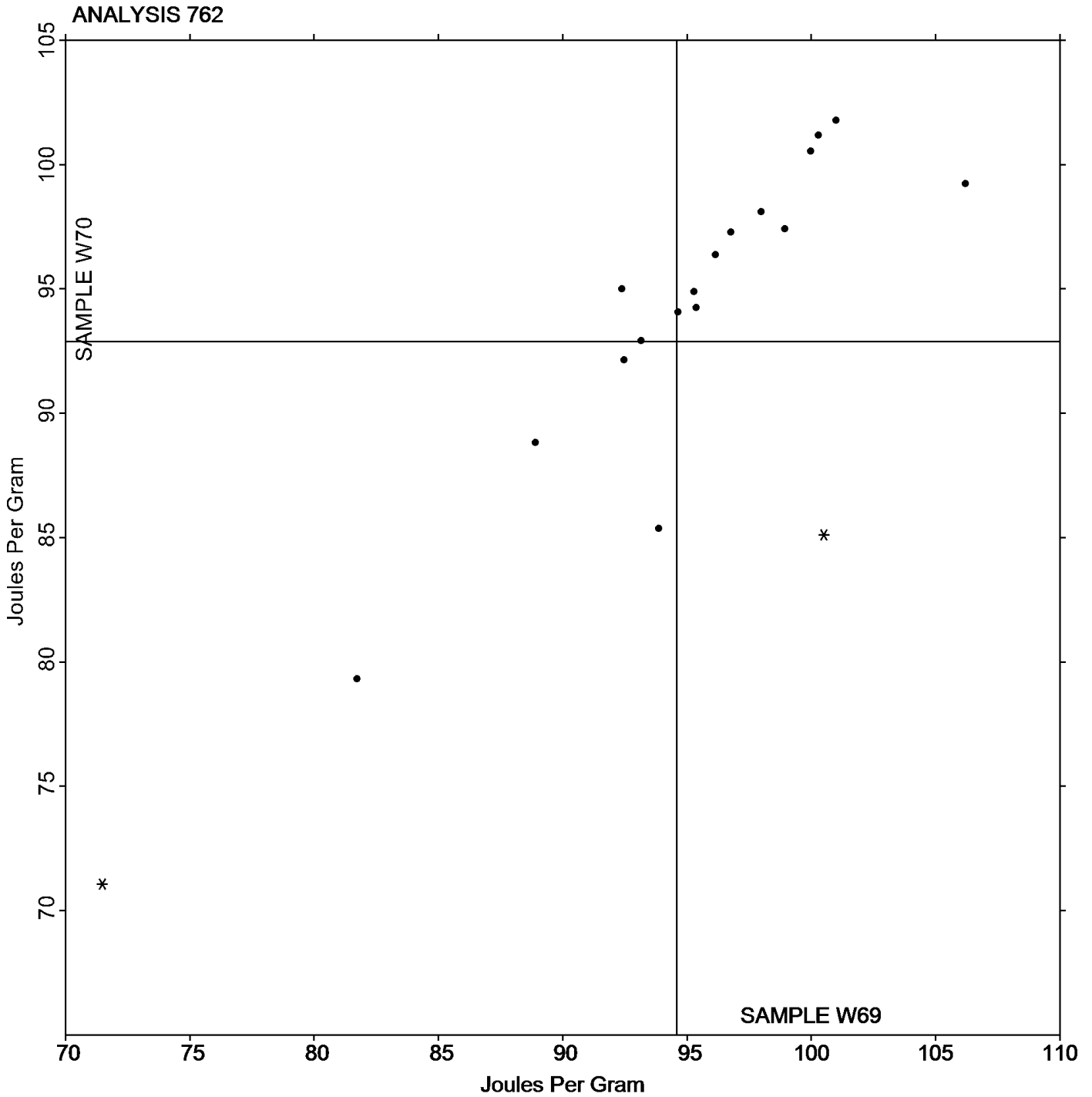
Report #115

Analysis 762

3rd Qtr 2020

DSC Enthalpy of Crystallization

Grand Mean Sample W69: 94.584 Joules Per Gram Grand Mean Sample W70: 92.886 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 #115

Analysis 763

3rd Qtr 2020

DSC Enthalpy of Fusion

WebCode	Data Flag	Sample W69			Sample W70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
64GEN9		86.97	-3.09	-0.24	79.63	-8.61	-0.67	NZ
8EL8JY		104.13	14.08	1.08	107.37	19.12	1.50	TA
AC7LNU		100.15	10.09	0.78	100.75	12.50	0.98	TA
BL94YW		102.57	12.51	0.96	95.72	7.48	0.59	XX
BRLG4V		72.79	-17.27	-1.33	75.30	-12.95	-1.01	TA
DLVJPR		94.80	4.75	0.37	92.66	4.41	0.35	TA
FHZA9G		82.79	-7.27	-0.56	78.12	-10.12	-0.79	TA
FXW2DW	*	106.90	16.85	1.29	82.78	-5.46	-0.43	NZ
J7BMRC		99.57	9.52	0.73	98.40	10.16	0.80	PE
JHBKYQ		97.74	7.69	0.59	95.93	7.68	0.60	NZ
JT9KCU		73.91	-16.14	-1.24	68.17	-20.07	-1.57	XX
QKV4JM		92.36	2.30	0.18	98.33	10.09	0.79	TA
R3JDVG		90.26	0.21	0.02	99.58	11.34	0.89	TA
RV4UD3		75.09	-14.97	-1.15	73.18	-15.06	-1.18	SH
RZV2VC		83.87	-6.19	-0.48	84.30	-3.94	-0.31	TA
UPUPZE		95.34	5.28	0.41	95.34	7.09	0.56	TA
V9JYBA		94.13	4.08	0.31	90.80	2.56	0.20	NZ
XDMGM8		98.51	8.45	0.65	99.16	10.92	0.85	TA
XZD468		91.47	1.41	0.11	91.53	3.29	0.26	TA
YKZTFY	*	52.17	-37.88	-2.91	55.66	-32.58	-2.55	TA
YM88L6		95.63	5.58	0.43	90.40	2.16	0.17	XX

Summary Statistics		Sample W69	Sample W70
Grand Means		90.054 Joules Per Gram	88.243 Joules Per Gram
Stnd Dev Btwn Labs		13.011 Joules Per Gram	12.772 Joules Per Gram
Statistics based on 21 of 21 reporting participants			

Sample W69: PP & Sample W70: PP

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



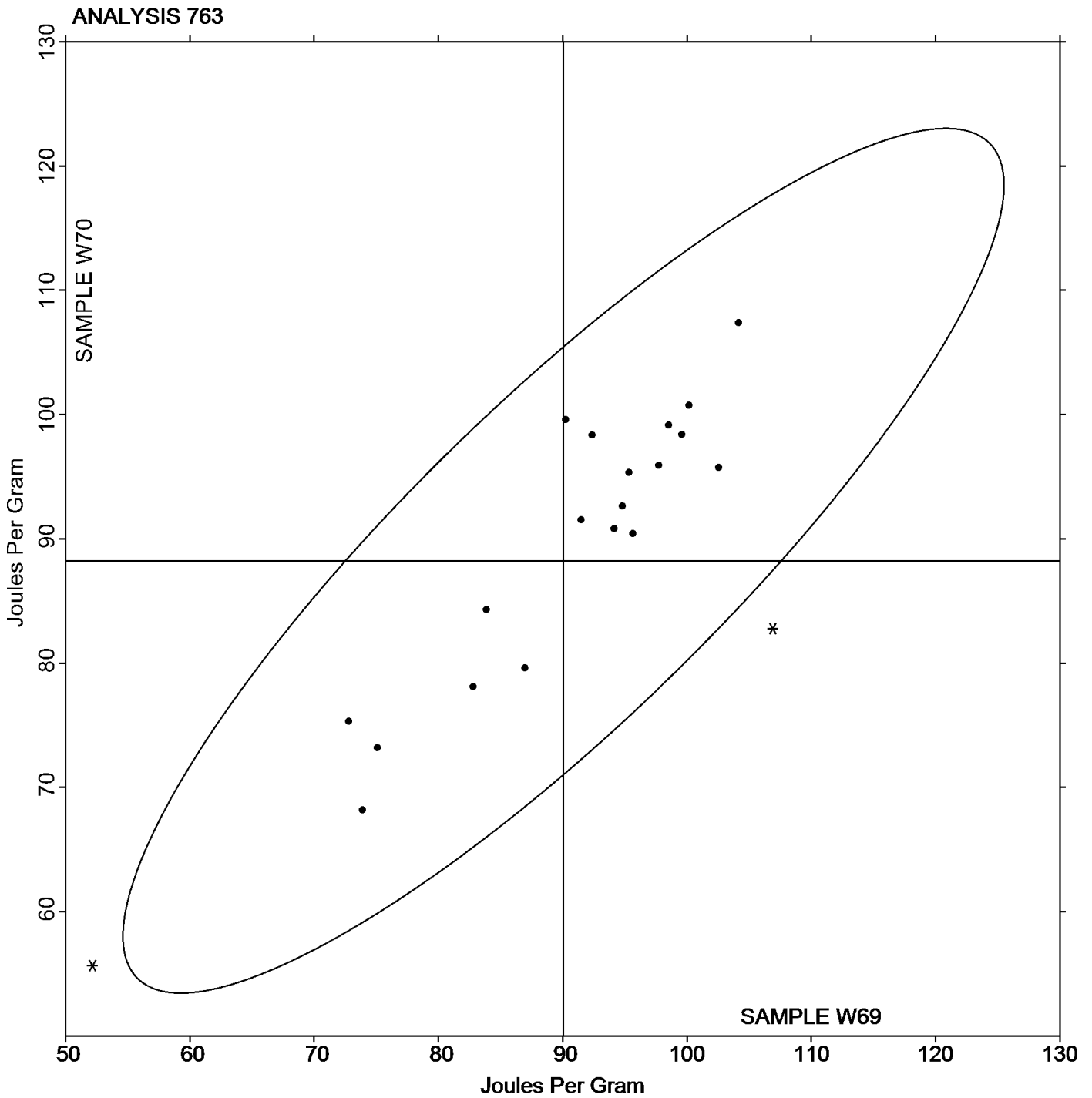
Plastics Interlaboratory Testing Program

Analysis 763 DSC Enthalpy of Fusion

Report #115

3rd Qtr 2020

Grand Mean Sample W69: 90.054 Joules Per Gram Grand Mean Sample W70: 88.243 Joules Per Gram





Plastics Interlaboratory Testing Program

Report #115

Analysis 764

3rd Qtr 2020

DSC Glass Transition Temperature

WebCode	Data Flag	Sample V69			Sample V70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
64GEN9		88.77	2.57	0.89	87.97	1.76	0.61	NZ
68FVZ3	*	76.93	-9.26	-3.20	76.79	-9.42	-3.28	TA
7KCXTP		87.93	1.74	0.60	87.37	1.16	0.40	TA
8EL8JY		85.47	-0.73	-0.25	85.57	-0.64	-0.22	TA
AC7LNU		87.74	1.55	0.54	88.24	2.04	0.71	TA
BL94YW		88.41	2.22	0.77	88.61	2.41	0.84	XX
BRLG4V	X	77.20	-8.99	-3.11	83.54	-2.67	-0.93	TA
DLVJPR		86.13	-0.06	-0.02	86.12	-0.08	-0.03	TA
FXW2DW		86.35	0.16	0.05	87.00	0.80	0.28	NZ
J7BMRC		86.70	0.51	0.18	86.70	0.50	0.17	PE
JHBKYQ		86.67	0.47	0.16	86.70	0.50	0.17	NZ
JT9KCU		88.08	1.89	0.65	87.31	1.11	0.38	XX
LQ9UWK		89.65	3.45	1.19	90.35	4.14	1.44	MT
QKV4JM		87.11	0.91	0.32	86.92	0.71	0.25	TA
R3JDVG		86.73	0.53	0.18	86.55	0.34	0.12	TA
RV4UD3		86.74	0.55	0.19	86.60	0.40	0.14	SH
RZV2VC		84.83	-1.36	-0.47	84.80	-1.40	-0.49	TA
UPUPZE		83.93	-2.26	-0.78	84.17	-2.04	-0.71	TA
V9JYBA		86.37	0.17	0.06	86.77	0.56	0.20	NZ
XDMGM8		80.27	-5.93	-2.05	80.63	-5.57	-1.94	TA
XZD468		87.20	1.01	0.35	87.28	1.08	0.37	TA
YM88L6		88.03	1.84	0.64	87.86	1.66	0.58	XX

Summary Statistics

Grand Means

Sample V69
86.192 Degrees Celsius

Sample V70
86.204 Degrees Celsius

Std Dev Btwn Labs

2.891 Degrees Celsius

2.874 Degrees Celsius

Statistics based on 21 of 22 reporting participants

Sample V69: PET & Sample V70: PET

Comments on Assigned Data Flags for Test #764

BRLG4V (X) - Data for sample V69 are low. Inconsistent within the determinations of both samples.



Plastics Interlaboratory Testing Program

Analysis 764

DSC Glass Transition Temperature

Report #115

3rd Qtr 2020

Key to Instrument Codes Reported by Participants

MT Mettler Toledo Instruments

PE Perkins Elmer Instruments

TA TA Instruments

NZ Netzsch Instruments

SH Shimadzu

XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

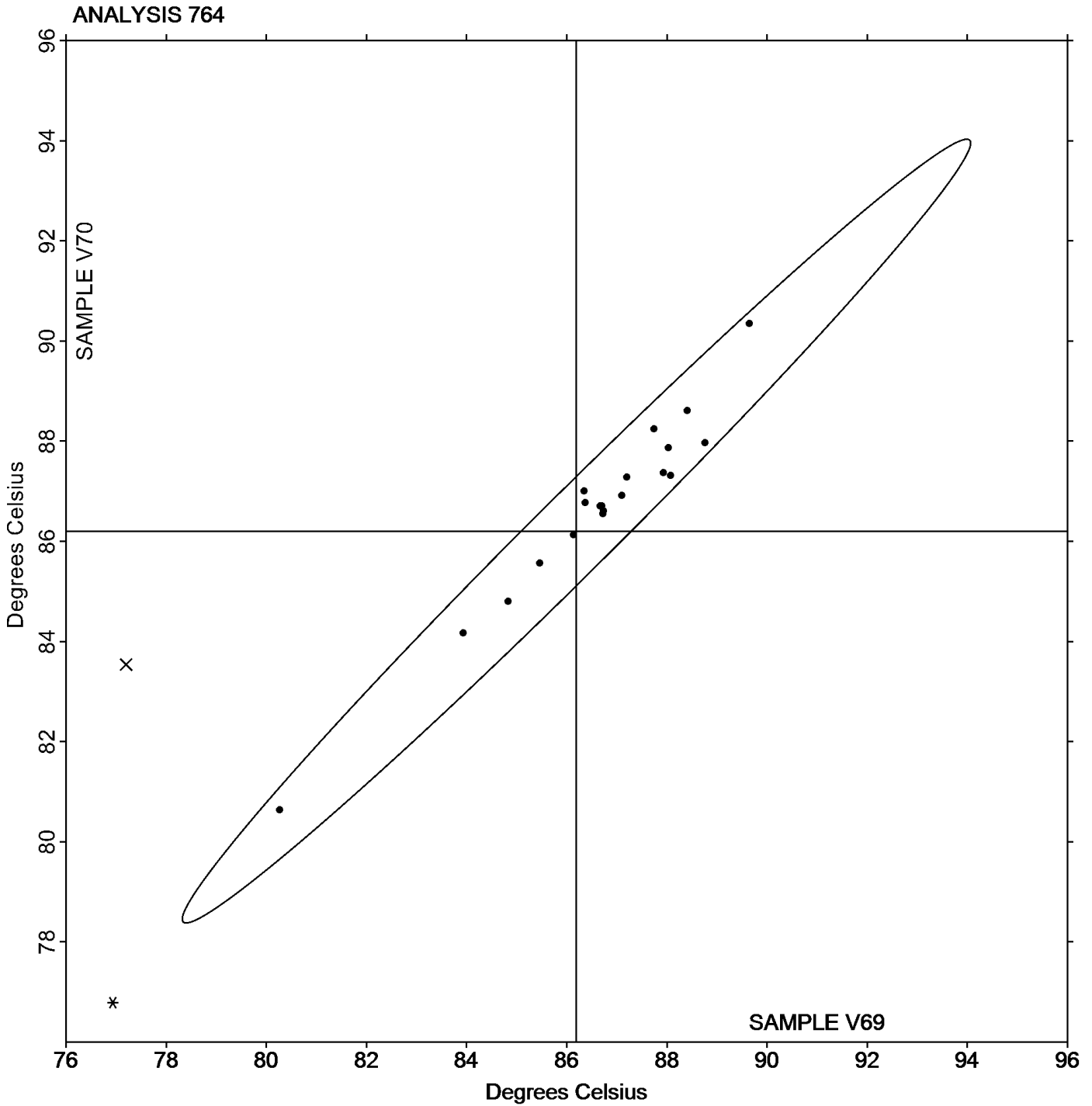
Analysis 764

DSC Glass Transition Temperature

Report #115

3rd Qtr 2020

Grand Mean Sample V69: 86.192 Degrees Celsius Grand Mean Sample V70: 86.204 Degrees Celsius





Plastics Interlaboratory Testing Program

Report #115

Analysis 765

3rd Qtr 2020

Research Crystallization Peak Temperature

WebCode	Data Flag	Sample W69			Sample W70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		114.87	4.22	0.39	114.93	4.31	0.40	TA
BL94YW		83.85	-26.80	-2.49	83.49	-27.13	-2.52	XX
BRLG4V		113.63	2.99	0.28	113.05	2.43	0.23	XX
DLVJPR		119.37	8.73	0.81	119.22	8.60	0.80	TA
J7BMRC		112.87	2.22	0.21	112.47	1.84	0.17	XX
JHBKYQ		110.13	-0.51	-0.05	110.40	-0.22	-0.02	NZ
NR2YPP		115.40	4.75	0.44	114.79	4.17	0.39	TA
R3JDVG		106.90	-3.74	-0.35	108.49	-2.13	-0.20	TA
RZV2VC		118.77	8.12	0.75	118.77	8.14	0.76	TA

Summary Statistics		
	Sample W69	Sample W70
Grand Means	110.643 Degrees Celsius	110.624 Degrees Celsius
Stnd Dev Btwn Labs	10.775 Degrees Celsius	10.759 Degrees Celsius
Statistics based on 9 of 9 reporting participants		

Sample W69: PP & Sample W70: PP

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

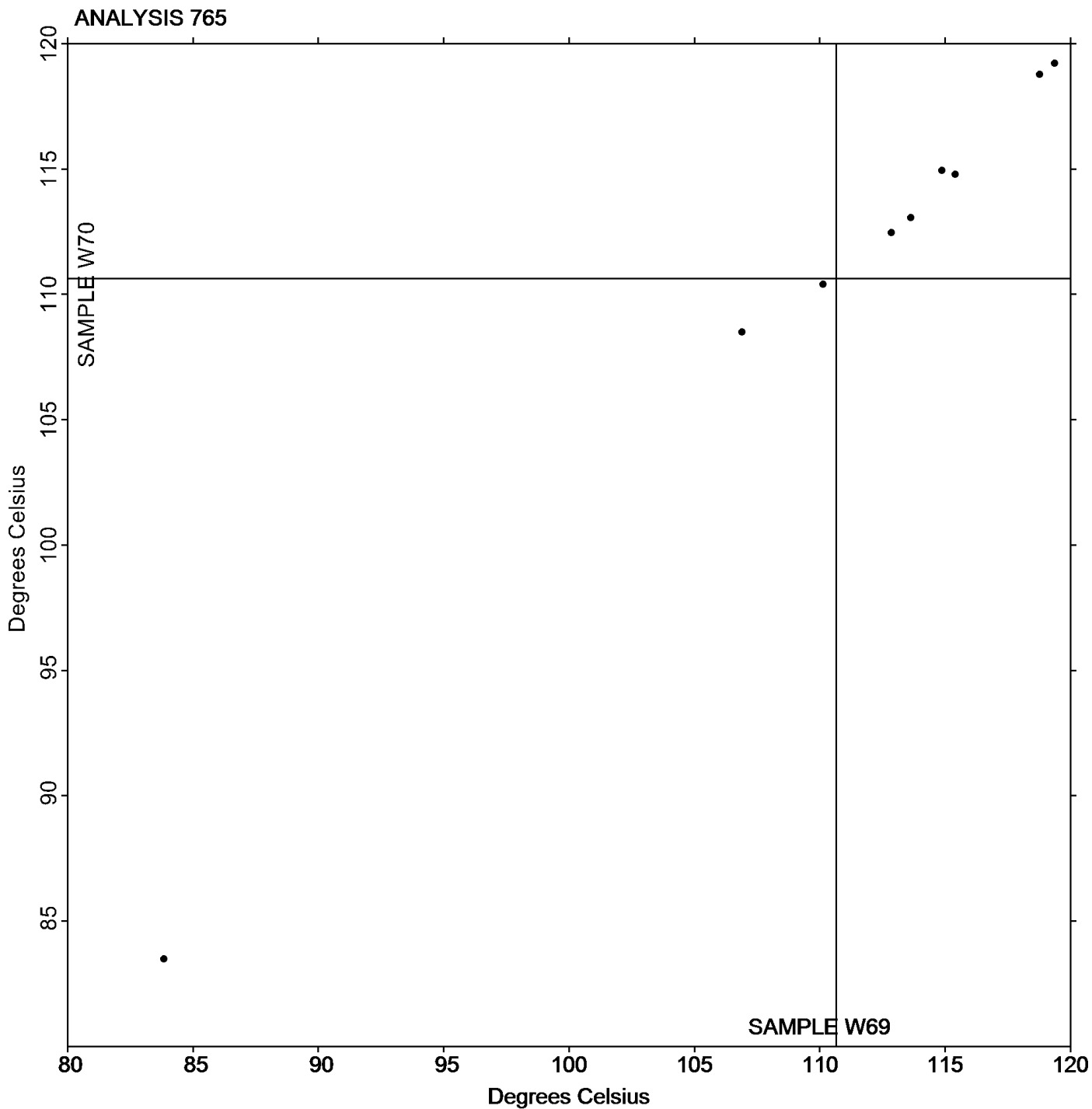
Analysis 765

Research Crystallization Peak Temperature

Report #115

3rd Qtr 2020

Grand Mean Sample W69: 110.64 Degrees Celsius Grand Mean Sample W70: 110.62 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 #115

Analysis 766

3rd Qtr 2020

Research Melting Peak Temperature

WebCode	Data Flag	<u>Sample W69</u>			<u>Sample W70</u>			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		162.90	-0.03	-0.02	163.13	-0.03	-0.02	TA
BL94YW		162.83	-0.10	-0.07	163.40	0.23	0.16	XX
BRLG4V		160.77	-2.16	-1.49	161.00	-2.16	-1.47	XX
DLVJPR		161.22	-1.71	-1.18	161.58	-1.59	-1.08	TA
FHZA9G		163.99	1.06	0.73	164.79	1.62	1.10	XX
J7BMRC		161.67	-1.26	-0.87	162.10	-1.07	-0.72	XX
JHBKYQ		165.73	2.80	1.93	165.77	2.60	1.76	NZ
NR2YPP		163.12	0.19	0.13	164.21	1.04	0.70	TA
R3JDVG		163.70	0.77	0.53	162.33	-0.83	-0.56	TA
RZV2VC		163.37	0.44	0.30	163.37	0.20	0.14	XX

Summary Statistics		
	<u>Sample W69</u>	<u>Sample W70</u>
Grand Means	162.930 Degrees Celsius	163.167 Degrees Celsius
Std Dev Btwn Labs	1.454 Degrees Celsius	1.476 Degrees Celsius
Statistics based on 10 of 10 reporting participants		

Sample W69: PP & Sample W70: PP

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

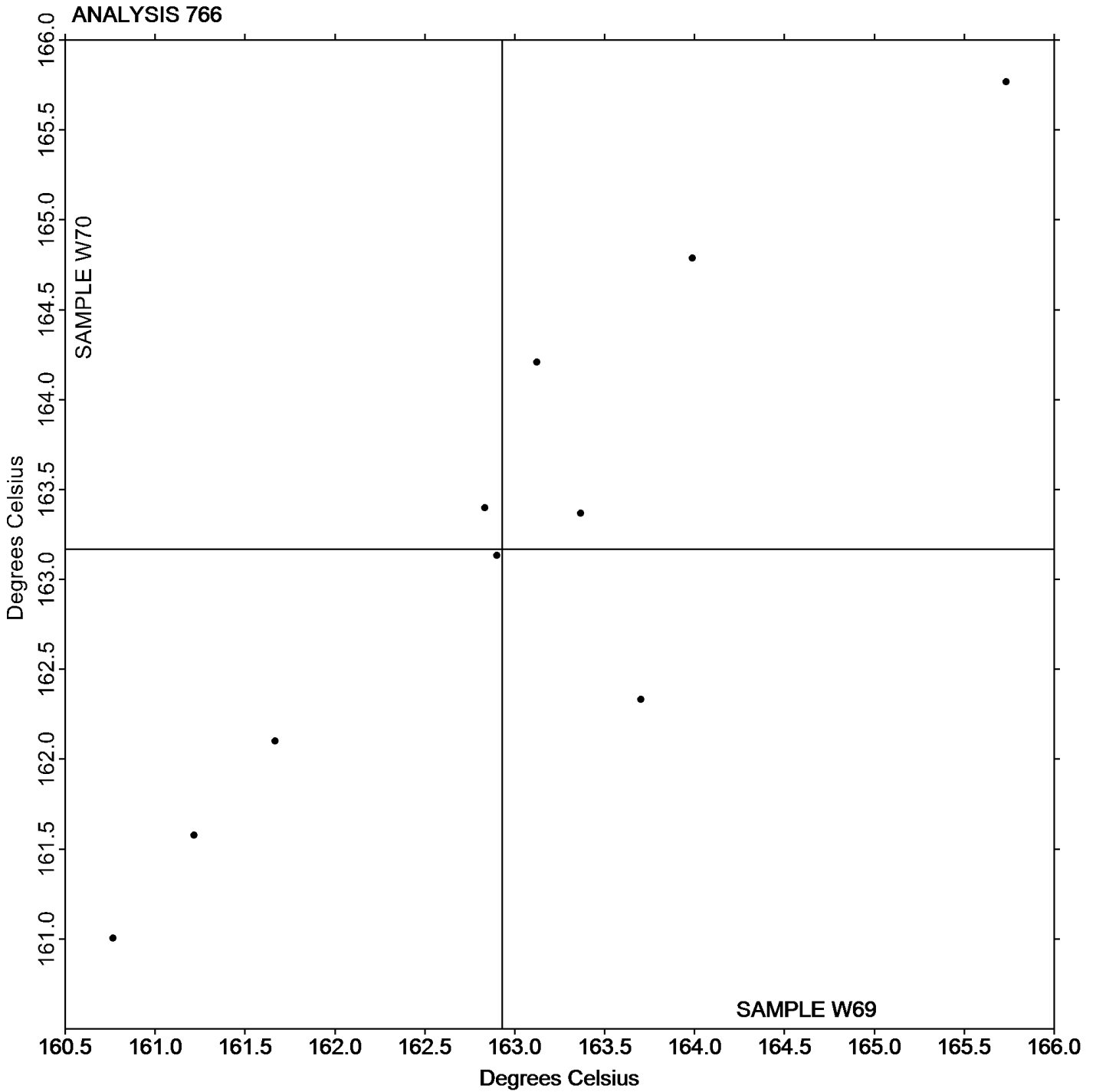
Analysis 766

Research Melting Peak Temperature

Report #115

3rd Qtr 2020

Grand Mean Sample W69: 162.93 Degrees Celsius Grand Mean Sample W70: 163.17 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 #115

Analysis 767

3rd Qtr 2020

Research Heat of Crystallization

WebCode	Data Flag	Sample W69			Sample W70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		94.39	-0.99	-0.31	95.71	0.72	0.20	TA
BL94YW		97.99	2.61	0.81	98.10	3.12	0.86	XX
BRLG4V		88.91	-6.47	-2.01	88.82	-6.17	-1.71	XX
DLVJPR		96.22	0.84	0.26	96.69	1.71	0.47	TA
J7BMRC		95.08	-0.30	-0.09	92.65	-2.33	-0.65	XX
JHBKYQ		94.64	-0.74	-0.23	94.06	-0.92	-0.26	XX
NR2YPP		95.87	0.48	0.15	93.30	-1.68	-0.47	TA
R3JDVG		99.97	4.59	1.43	100.53	5.55	1.54	TA

Summary Statistics

	Sample W69	Sample W70
Grand Means	95.385 Joules Per Gram	94.983 Joules Per Gram
Std Dev Btwn Labs	3.214 Joules Per Gram	3.607 Joules Per Gram

Statistics based on 8 of 8 reporting participants

Sample W69: PP & Sample W70: PP

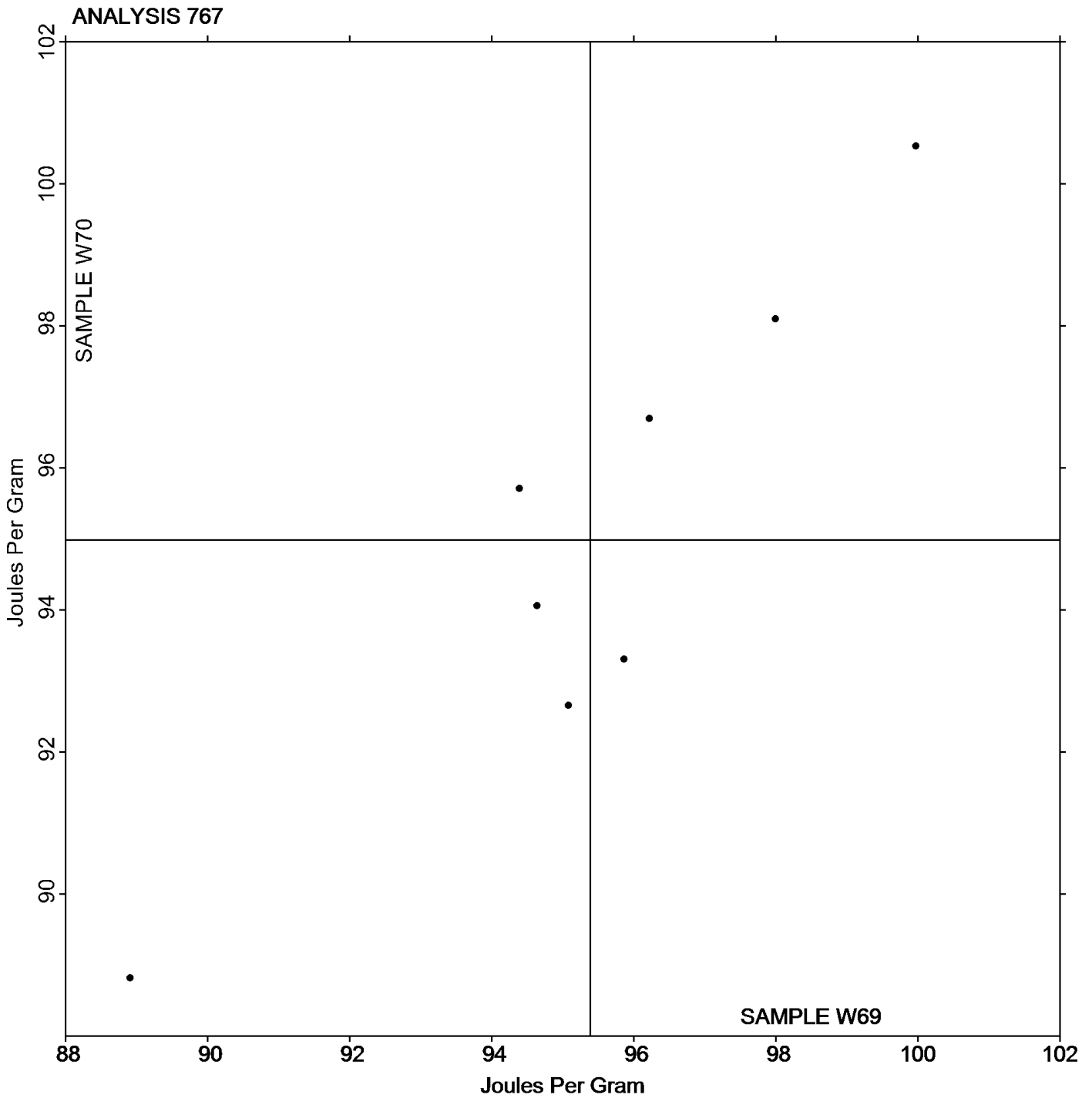
Key to Instrument Codes Reported by Participants

TA TA Instruments

XX Instrument manufacturer not specified by lab



Grand Mean Sample W69: 95.385 Joules Per Gram Grand Mean Sample W70: 94.983 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 #115

Analysis 768

3rd Qtr 2020

Research Heat of Fusion

WebCode	Data Flag	Sample W69			Sample W70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		87.82	-2.62	-0.31	88.53	-0.22	-0.02	TA
BL94YW		102.57	12.13	1.44	95.72	6.97	0.78	XX
BRLG4V		72.79	-17.65	-2.10	75.30	-13.45	-1.50	XX
DLVJPR		93.98	3.55	0.42	93.65	4.90	0.55	TA
FHZA9G		86.46	-3.97	-0.47	75.70	-13.05	-1.46	XX
J7BMRC		93.98	3.55	0.42	91.83	3.08	0.34	XX
JHBKYQ		97.74	7.31	0.87	95.93	7.18	0.80	NZ
NR2YPP		88.32	-2.12	-0.25	82.50	-6.25	-0.70	TA
R3JDVG		90.26	-0.17	-0.02	99.58	10.83	1.21	TA

Summary Statistics		
	Sample W69	Sample W70
Grand Means	90.435 Joules Per Gram	88.750 Joules Per Gram
Stnd Dev Btwn Labs	8.399 Joules Per Gram	8.954 Joules Per Gram
Statistics based on 9 of 9 reporting participants		

Sample W69: PP & Sample W70: PP

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

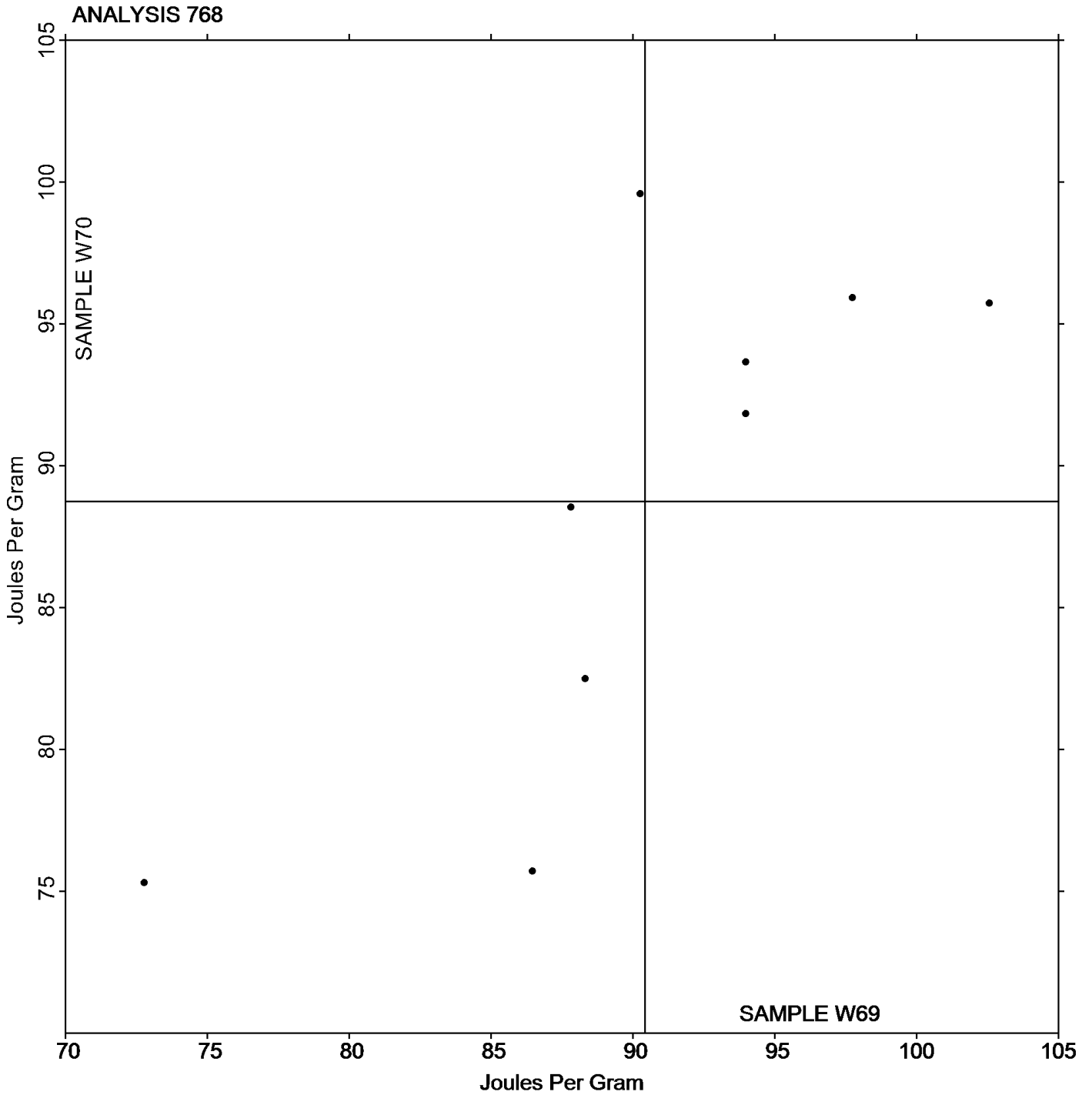
Analysis 768

Research Heat of Fusion

Report #115

3rd Qtr 2020

Grand Mean Sample W69: 90.435 Joules Per Gram Grand Mean Sample W70: 88.750 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 #115

Analysis 769

3rd Qtr 2020

Research Glass Transition Temperature

WebCode	Data Flag	Sample V69			Sample V70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		84.97	0.11	0.03	84.43	-1.20	-0.76	TA
BL94YW		88.41	3.55	1.07	88.61	2.98	1.89	XX
BRLG4V		77.20	-7.66	-2.30	83.54	-2.10	-1.33	XX
DLVJPR		82.84	-2.02	-0.61	85.18	-0.45	-0.28	TA
J7BMRC		86.60	1.74	0.52	86.00	0.37	0.23	XX
JHBKYQ		87.40	2.54	0.76	87.07	1.43	0.91	NZ
NR2YPP		84.77	-0.09	-0.03	84.51	-1.12	-0.71	TA
R3JDVG		86.73	1.87	0.56	86.55	0.91	0.58	TA
RZV2VC		84.83	-0.03	-0.01	84.80	-0.83	-0.53	XX

Summary Statistics

	Sample V69	Sample V70
Grand Means	84.860 Degrees Celsius	85.632 Degrees Celsius
Stnd Dev Btwn Labs	3.323 Degrees Celsius	1.576 Degrees Celsius

Statistics based on 9 of 9 reporting participants

Sample V69: PET & Sample V70: PET

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

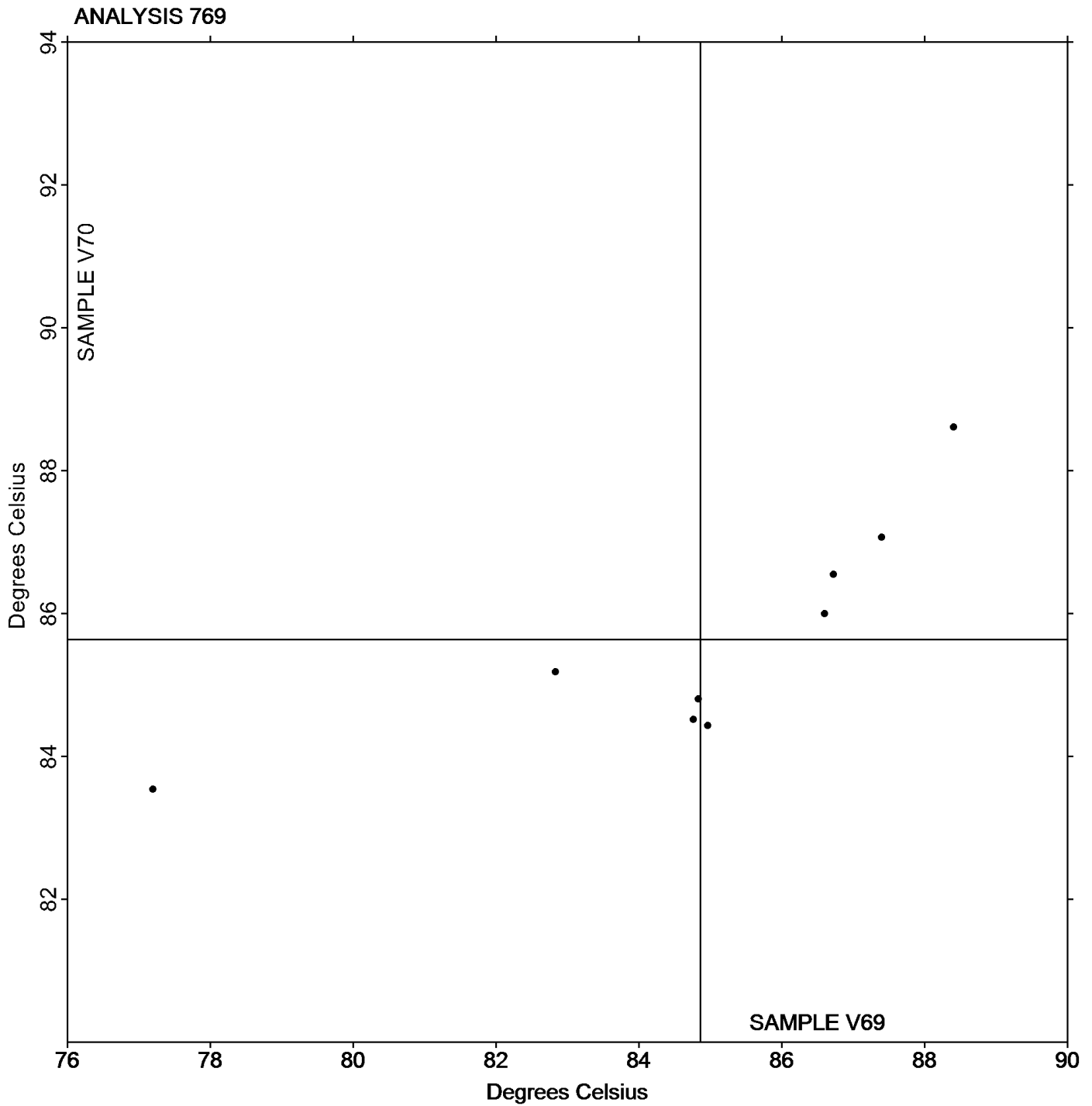
Analysis 769

Research Glass Transition Temperature

Report #115

3rd Qtr 2020

Grand Mean Sample V69: 84.860 Degrees Celsius Grand Mean Sample V70: 85.632 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 #115

Analysis 770

3rd Qtr 2020

Tensile Stress at Yield, Film Samples - psi

WebCode	Data Flag	Sample B69			Sample B70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		1,935	115	0.45	1,978	162	0.61	IN
3FKQ76		1,867	47	0.18	1,849	33	0.12	IN
3KV4N4		1,538	-282	-1.10	1,599	-216	-0.81	MT
3N9EE8	X	5	-1,815	-7.09	5	-1,810	-6.78	XX
6QRHMB		1,934	114	0.44	1,940	124	0.47	IN
BDHHTY	X	8	-1,812	-7.08	9	-1,807	-6.77	IN
CMMQ9Y	X	6	-1,814	-7.08	6	-1,810	-6.78	IN
DE3ATU	*	1,064	-755	-2.95	988	-828	-3.10	IN
DGQLRY		1,904	85	0.33	1,862	46	0.17	IN
FXW2DW		1,927	108	0.42	1,970	155	0.58	IN
GJ6GNE		1,772	-48	-0.19	1,918	103	0.38	UC
KKYJQU		1,919	99	0.39	1,852	36	0.13	SH
M8RBDM	X	6	-1,814	-7.09	6	-1,810	-6.78	IN
NNV6JL	X	8	-1,811	-7.08	8	-1,808	-6.77	IN
QUAPGH		2,001	181	0.71	1,904	88	0.33	IN
V634UH		1,909	90	0.35	1,901	85	0.32	MT
VB8BAF	X	8	-1,811	-7.08	9	-1,807	-6.77	XX
VNRPDE	X	9	-1,810	-7.07	9	-1,806	-6.77	IN
VRR2AE	X	8	-1,811	-7.08	8	-1,807	-6.77	XX
WFBTLD		1,890	70	0.27	1,871	56	0.21	LI
YYW8D8		1,996	176	0.69	1,972	156	0.59	OA

Summary Statistics		Sample B69	Sample B70
Grand Means		1,819.7 psi	1,815.6 psi
Std Dev Btwn Labs		256.0 psi	266.9 psi
Statistics based on 13 of 21 reporting participants			

Sample B69: LDPE & Sample B70: LDPE



Comments on Assigned Data Flags for Test #770

- BDHHTY (X) - Extreme data.
- M8RBDM (X) - Extreme data.
- VRR2AE (X) - Extreme data.
- VNRPDE (X) - Extreme data.
- NNV6JL (X) - Extreme data.
- CMMQ9Y (X) - Extreme data.
- VB8BAF (X) - Extreme data.
- 3N9EE8 (X) - Extreme data.

Key to Instrument Codes Reported by Participants

- | | |
|--|-----------------------------|
| IN Instron | LI Lloyd Instruments |
| MT MTS/Sintech | OA Oakland Testing |
| SH Shimadzu | UC United |
| XX Instrument manufacturer not specified by lab | |



Plastics Interlaboratory Testing Program

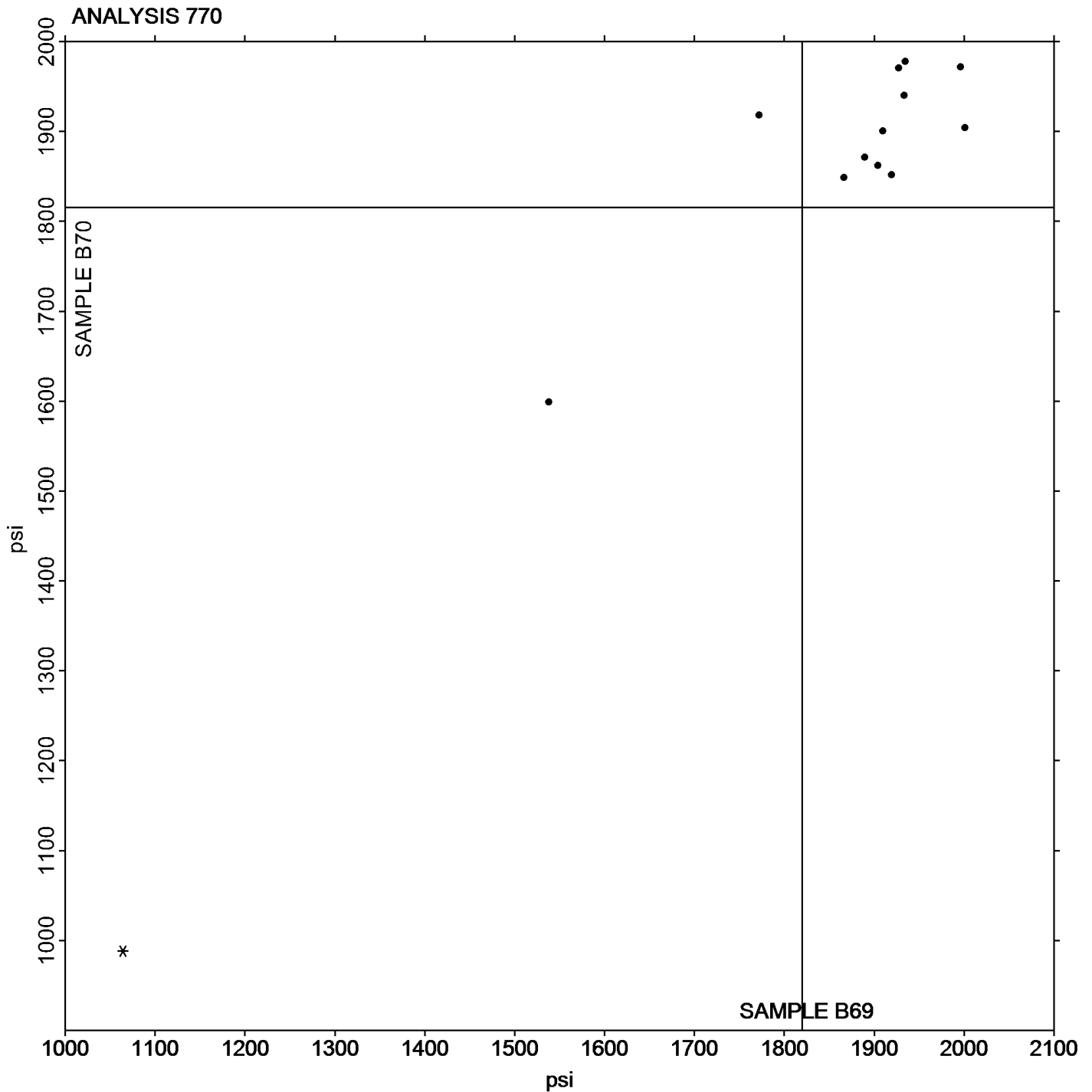
Report #115

Analysis 770

3rd Qtr 2020

Tensile Stress at Yield, Film Samples - psi

Grand Mean Sample B69: 1,819.70 psi Grand Mean Sample B70: 1,815.63 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 #115

Analysis 771

3rd Qtr 2020

Tensile Stress at Break, Film Samples - psi

WebCode	Data Flag	Sample B69			Sample B70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		4,218	580	0.86	4,183	646	0.91	IN
3FKQ76		3,662	24	0.04	3,574	37	0.05	IN
3KV4N4		3,487	-151	-0.22	3,436	-101	-0.14	MT
6QRHMB		3,956	318	0.47	3,951	414	0.59	IN
DE3ATU	*	1,514	-2,123	-3.15	1,467	-2,070	-2.92	IN
DGQLRY		3,897	259	0.38	3,670	134	0.19	IN
FXW2DW		3,705	68	0.10	3,801	265	0.37	IN
GJ6GNE		3,046	-592	-0.88	3,329	-207	-0.29	UC
KKYJQU		4,100	463	0.69	3,991	454	0.64	SH
QUAPGH		4,213	575	0.85	4,008	472	0.67	IN
RV4UD3		3,934	296	0.44	3,805	269	0.38	SH
TGKCHE	*	3,172	-465	-0.69	2,347	-1,189	-1.68	IN
WFBTLD		3,726	89	0.13	3,750	214	0.30	LI
WG4PB8		3,375	-263	-0.39	3,245	-292	-0.41	IN
YRKHYD		3,884	246	0.36	3,986	450	0.64	IN
YYW8D8		4,312	675	1.00	4,040	504	0.71	OA

Summary Statistics

	Sample B69	Sample B70
Grand Means	3,637.6 psi	3,536.4 psi
Stnd Dev Btwn Labs	675.0 psi	708.0 psi
Statistics based on 16 of 16 reporting participants		

Sample B69: LDPE & Sample B70: LDPE

Key to Instrument Codes Reported by Participants

IN	Instron	LI	Lloyd Instruments
MT	MTS/Sintech	OA	Oakland Testing
SH	Shimadzu	UC	United



Plastics Interlaboratory Testing Program

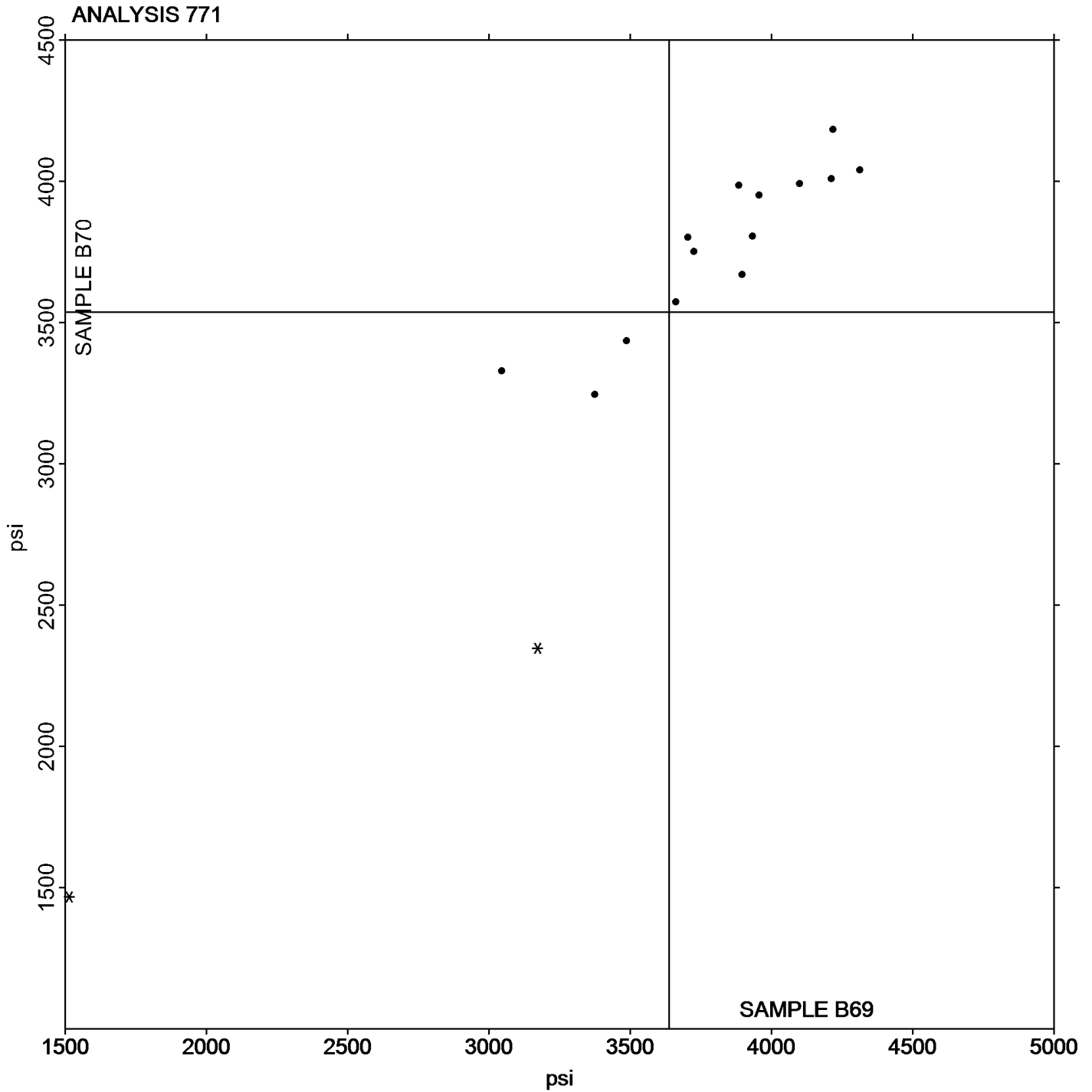
Report #115

Analysis 771

3rd Qtr 2020

Tensile Stress at Break, Film Samples - psi

Grand Mean Sample B69: 3,637.56 psi Grand Mean Sample B70: 3,536.41 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 #115

Analysis 772

3rd Qtr 2020

Percent Elongation at Yield, Films

WebCode	Data Flag	Sample B69			Sample B70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		73.49	-8.22	-0.41	80.77	-3.93	-0.19	IN
3FKQ76		94.74	13.03	0.65	94.56	9.86	0.48	IN
3KV4N4		89.62	7.91	0.39	100.08	15.38	0.75	MT
6QRHMB		95.64	13.92	0.69	98.87	14.17	0.69	IN
DE3ATU	X	6.67	-75.04	-3.72	4.00	-80.70	-3.92	IN
DGQLRY		74.79	-6.92	-0.34	75.46	-9.24	-0.45	IN
FXW2DW		35.20	-46.51	-2.30	35.89	-48.81	-2.37	IN
KKYJQU		101.12	19.40	0.96	100.55	15.85	0.77	SH
QUAPGH		94.19	12.48	0.62	94.94	10.24	0.50	IN
WFBTLD		76.62	-5.09	-0.25	81.19	-3.51	-0.17	LI

Summary Statistics		
	Sample B69	Sample B70
Grand Means	81.711 Percent	84.701 Percent
Stnd Dev Btwn Labs	20.196 Percent	20.574 Percent
Statistics based on 9 of 10 reporting participants		

Sample B69: LDPE & Sample B70: 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

DE3ATU (X) - Extreme data.

Key to Instrument Codes Reported by Participants

IN	Instron	LI	Lloyd Instruments
MT	MTS/Sintech	SH	Shimadzu



Plastics Interlaboratory Testing Program

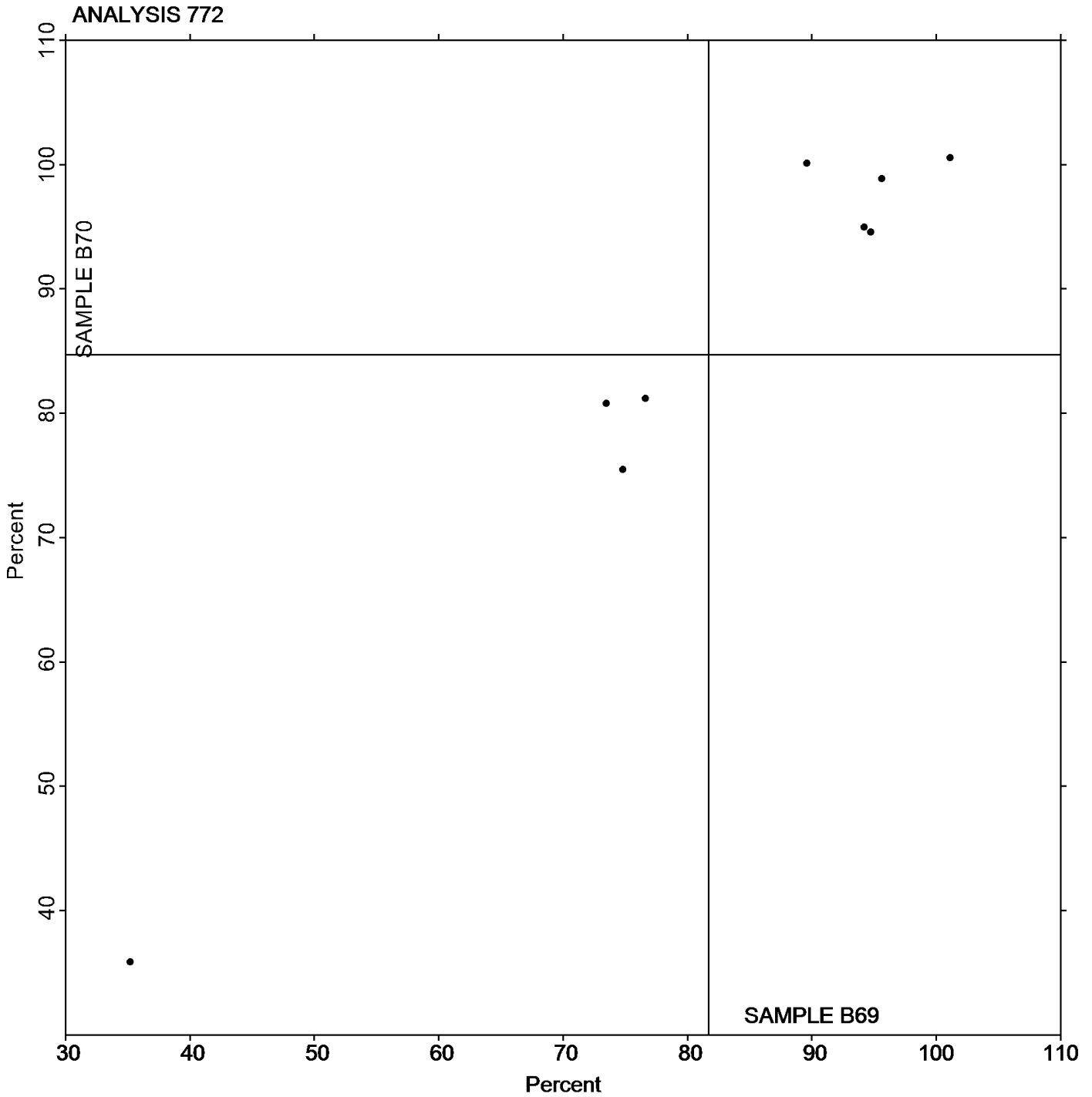
Analysis 772

Percent Elongation at Yield, Films

Report #115

3rd Qtr 2020

Grand Mean Sample B69: 81.711 Percent Grand Mean Sample B70: 84.701 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 #115

Analysis 773

3rd Qtr 2020

Percent Elongation at Break, Film Samples

WebCode	Data Flag	Sample B69			Sample B70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		660.2	-186.4	-1.52	649.5	-190.4	-1.41	IN
3FKQ76		899.1	52.5	0.43	892.6	52.7	0.39	IN
3KV4N4		755.2	-91.4	-0.75	756.3	-83.6	-0.62	MT
6QRHMB		860.3	13.7	0.11	825.9	-14.0	-0.10	IN
DE3ATU	X	241.0	-605.6	-4.94	241.1	-598.8	-4.43	IN
DGQLRY		637.8	-208.8	-1.70	617.2	-222.7	-1.65	IN
FXW2DW		676.2	-170.4	-1.39	736.5	-103.3	-0.76	IN
GJ6GNE	X	16.1	-830.5	-6.77	17.4	-822.4	-6.08	UC
KKYJQU		980.5	133.9	1.09	1,015.2	175.3	1.30	SH
QUAPGH		947.8	101.2	0.83	975.0	135.1	1.00	IN
RV4UD3		899.9	53.3	0.43	898.5	58.6	0.43	SH
TGKCHE		1,044.6	198.0	1.62	715.5	-124.4	-0.92	IN
WFBTLD		896.8	50.2	0.41	967.2	127.3	0.94	LI
WG4PB8		899.8	53.2	0.43	825.8	-14.1	-0.10	IN
YRKHYD		822.4	-24.2	-0.20	1,056.1	216.2	1.60	IN
YYW8D8		871.6	25.0	0.20	827.0	-12.9	-0.10	OA

Summary Statistics

	Sample B69	Sample B70
Grand Means	846.59 Percent	839.87 Percent
Stnd Dev Btwn Labs	122.61 Percent	135.22 Percent
Statistics based on 14 of 16 reporting participants		

Sample B69: LDPE & Sample B70: LDPE

Comments on Assigned Data Flags for Test #773

GJ6GNE (X) - Extreme data.

DE3ATU (X) - Extreme data.

Key to Instrument Codes Reported by Participants

IN	Instron	LI	Lloyd Instruments
MT	MTS/Sintech	OA	Oakland Testing
SH	Shimadzu	UC	United



Plastics Interlaboratory Testing Program

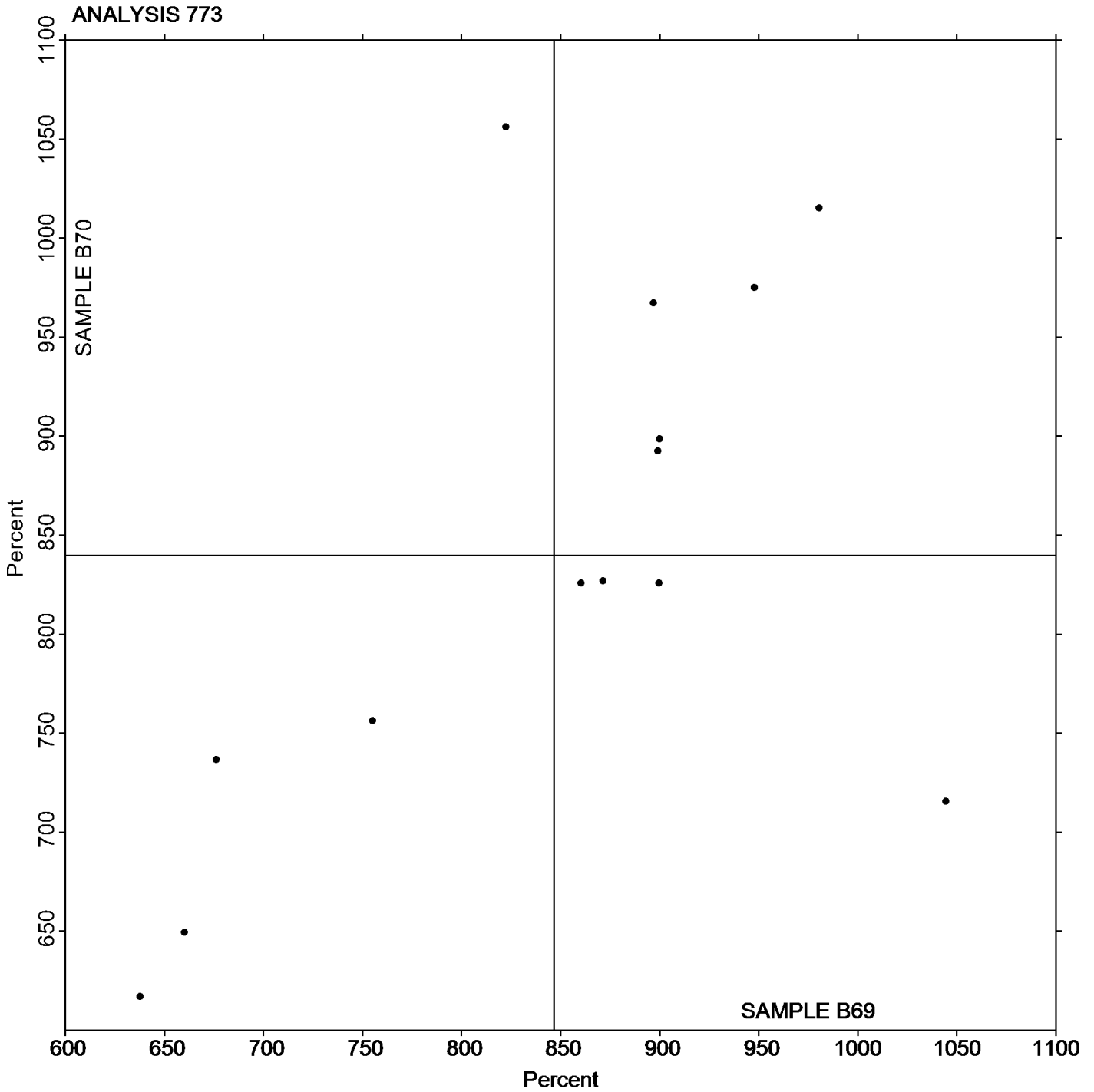
Report #115

Analysis 773

3rd Qtr 2020

Percent Elongation at Break, Film Samples

Grand Mean Sample B69: 846.59 Percent Grand Mean Sample B70: 839.87 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 #115

Analysis 774

3rd Qtr 2020

Thickness of Film Tensile Samples - mils

WebCode	Data Flag	<u>Sample B69</u>			<u>Sample B70</u>		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2UJ78U		3.6260	-0.0538	-0.42	3.7490	0.0467	0.40
3FKQ76		3.9340	0.2542	2.00	3.8690	0.1667	1.44
3KV4N4		3.6530	-0.0268	-0.21	3.5710	-0.1313	-1.14
6QRHMB		3.6300	-0.0498	-0.39	3.6800	-0.0223	-0.19
DE3ATU		3.7690	0.0892	0.70	3.7360	0.0337	0.29
DGQLRY		3.6064	-0.0734	-0.58	3.7087	0.0064	0.06
FXW2DW		3.7140	0.0342	0.27	3.7000	-0.0023	-0.02
GJ6GNE		3.6300	-0.0498	-0.39	3.7700	0.0677	0.59
KKYJQU		3.5583	-0.1215	-0.96	3.7402	0.0379	0.33
PE7VC4		3.5090	-0.1708	-1.34	3.4890	-0.2133	-1.85
QUAPGH		3.6000	-0.0798	-0.63	3.7100	0.0077	0.07
RV4UD3		3.7756	0.0958	0.75	3.6772	-0.0252	-0.22
TGKCHE		3.9700	0.2902	2.28	3.9500	0.2477	2.15
WFBTLD		3.7638	0.0841	0.66	3.6808	-0.0216	-0.19
WG4PB8		3.5512	-0.1286	-1.01	3.4843	-0.2181	-1.89
WZH23X		3.7300	0.0502	0.40	3.8000	0.0977	0.85
YRKHYD		3.5510	-0.1288	-1.01	3.6220	-0.0803	-0.70
YYW8D8		3.6650	-0.0148	-0.12	3.7050	0.0027	0.02

Summary Statistics		
	<u>Sample B69</u>	<u>Sample B70</u>
Grand Means	3.67980 mils	3.70234 mils
Stnd Dev Btwn Labs	0.12703 mils	0.11542 mils
Statistics based on 18 of 18 reporting participants		

Sample B69: LDPE & Sample B70: LDPE



Plastics Interlaboratory Testing Program

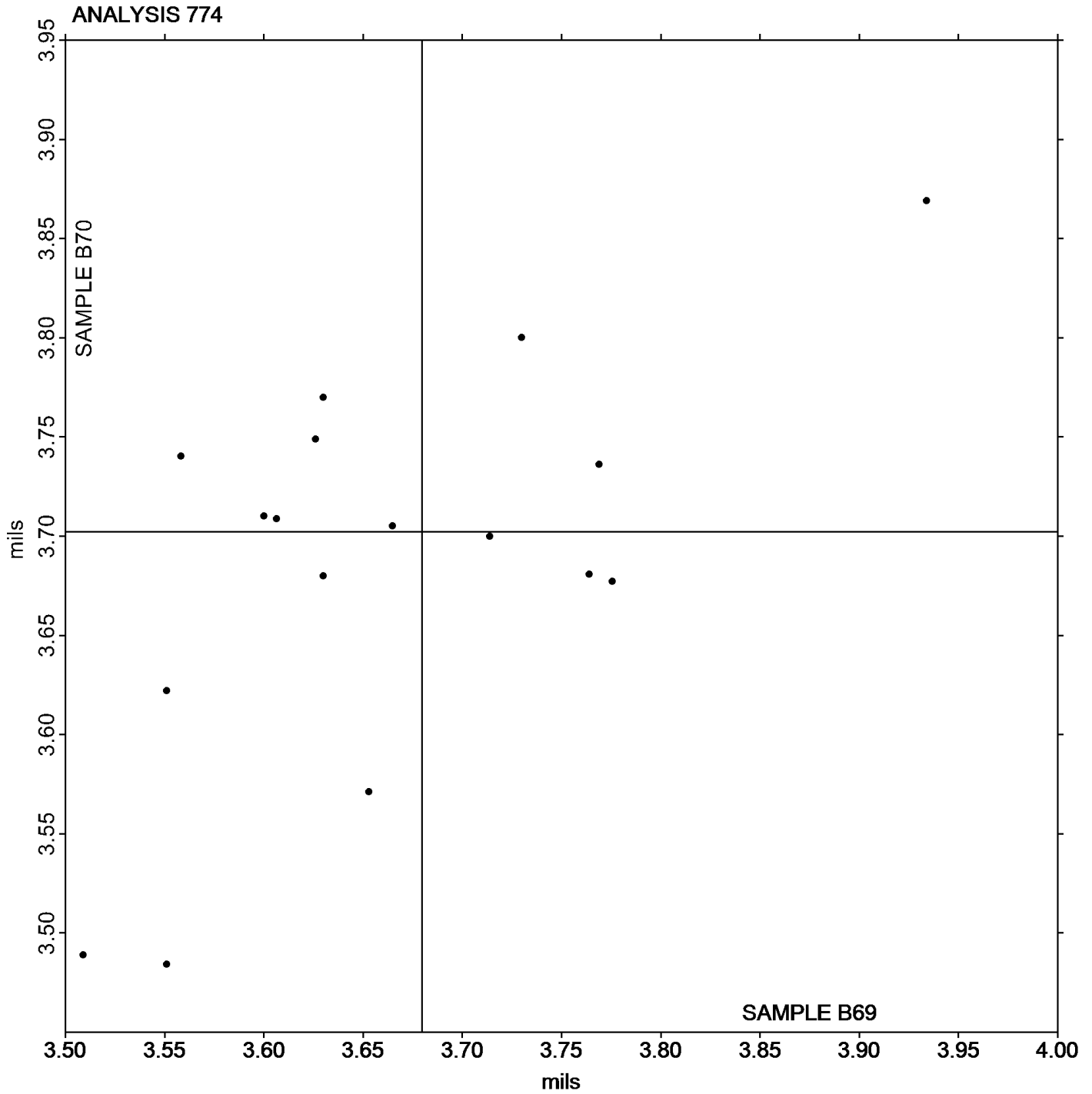
Analysis 774

Thickness of Film Tensile Samples - mils

Report #115

3rd Qtr 2020

Grand Mean Sample B69: 3.6798 mils Grand Mean Sample B70: 3.7023 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 #115

Analysis 775

3rd Qtr 2020

Secant Modulus at 1% Strain - psi

WebCode	Data Flag	Sample B69			Sample B70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		32,160	1,427	0.42	31,987	799	0.24	IN
3FKQ76		28,700	-2,033	-0.60	28,543	-2,645	-0.81	IN
DE3ATU		25,982	-4,751	-1.40	30,949	-239	-0.07	IN
FXW2DW		33,310	2,577	0.76	34,628	3,440	1.05	IN
KKYJQU		34,809	4,076	1.20	35,767	4,579	1.40	SH
QUAPGH		31,808	1,075	0.32	31,202	14	0.00	IN
TGKCHE		32,554	1,821	0.54	31,209	21	0.01	IN
WFBTLD		28,064	-2,669	-0.79	29,832	-1,356	-0.42	LI
WG4PB8		25,559	-5,174	-1.52	24,242	-6,946	-2.13	IN
YYW8D8		34,384	3,651	1.08	33,520	2,332	0.71	OA

Summary Statistics		
	Sample B69	Sample B70
Grand Means	30,732.9 psi	31,187.9 psi
Std Dev Btwn Labs	3,394.4 psi	3,266.0 psi
Statistics based on 10 of 10 reporting participants		

Sample B69: LDPE & Sample B70: LDPE

Key to Instrument Codes Reported by Participants

- | | |
|--------------------|----------------------|
| IN Instron | LI Lloyd Instruments |
| OA Oakland Testing | SH Shimadzu |



Plastics Interlaboratory Testing Program

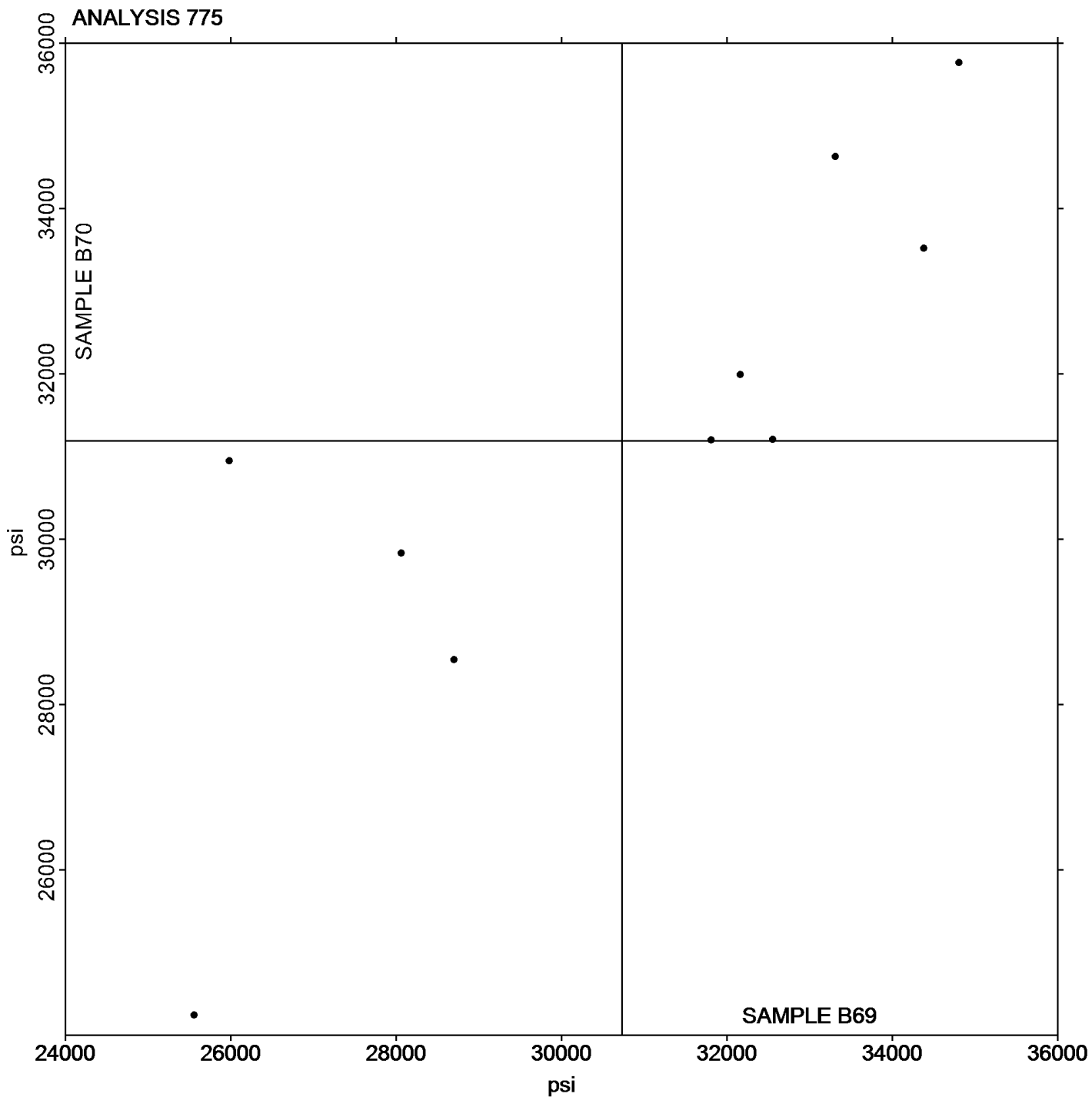
Report #115

Analysis 775

3rd Qtr 2020

Secant Modulus at 1% Strain - psi

Grand Mean Sample B69: 30,732.93 psi Grand Mean Sample B70: 31,187.90 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 #115

Analysis 776

3rd Qtr 2020

Secant Modulus at 2% Strain - psi

WebCode	Data Flag	Sample B69			Sample B70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
3FKQ76		23,967	-2,134	-1.02	23,831	-2,737	-1.25	IN
3KV4N4		28,359	2,257	1.07	28,974	2,406	1.10	MT
DE3ATU		23,881	-2,220	-1.06	26,244	-325	-0.15	MT
FXW2DW		29,089	2,988	1.42	29,801	3,233	1.47	IN
KKYJQU		27,688	1,586	0.75	28,500	1,932	0.88	SH
QUAPGH		27,426	1,325	0.63	27,164	595	0.27	IN
TGKCHE		26,143	42	0.02	25,602	-966	-0.44	IN
WFBTLD		23,880	-2,222	-1.06	25,256	-1,312	-0.60	LI
WG4PB8		24,481	-1,621	-0.77	23,742	-2,826	-1.29	IN

Summary Statistics

	Sample B69	Sample B70
Grand Means	26,101.7 psi	26,568.3 psi
Stnd Dev Btwn Labs	2,101.8 psi	2,195.6 psi

Statistics based on 9 of 9 reporting participants

Sample B69: LDPE & Sample B70: LDPE

Key to Instrument Codes Reported by Participants

IN	Instron	LI	Lloyd Instruments
MT	MTS/Sintech	SH	Shimadzu



Plastics Interlaboratory Testing Program

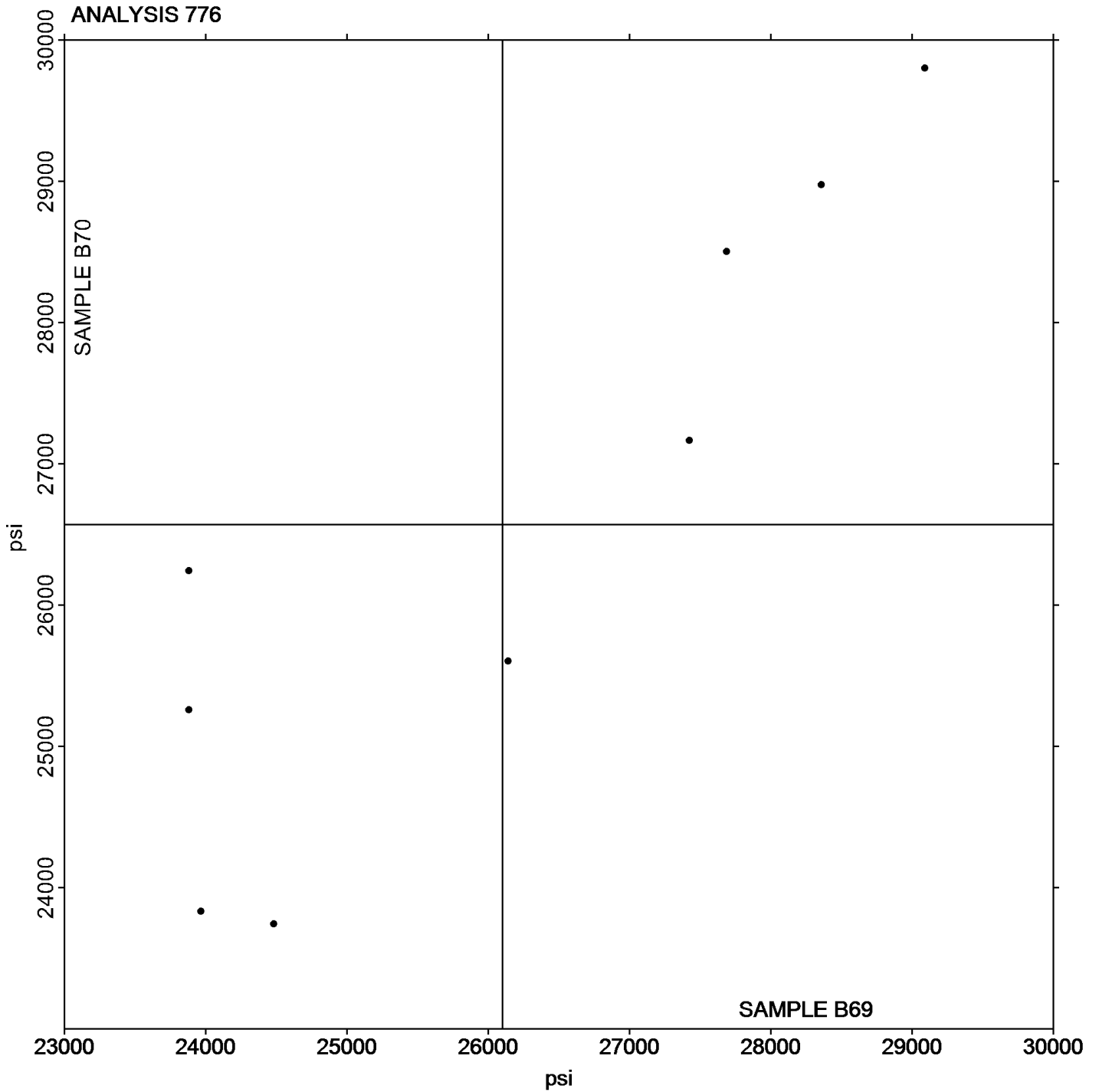
Report #115

Analysis 776

3rd Qtr 2020

Secant Modulus at 2% Strain - psi

Grand Mean Sample B69: 26,101.68 psi Grand Mean Sample B70: 26,568.35 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 #115

Analysis 780

3rd Qtr 2020

Coefficient of Static Friction

WebCode	Data Flag	Sample P69			Sample P70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		0.1514	0.0065	0.13	0.1436	0.0000	0.00	TH
FXW2DW		0.0780	-0.0669	-1.39	0.0660	-0.0776	-1.52	TH
FYKZ6V		0.1376	-0.0073	-0.15	0.1216	-0.0220	-0.43	IG
KKYJQU		0.1851	0.0402	0.83	0.2160	0.0725	1.42	SA
QUAPGH		0.2186	0.0737	1.53	0.2254	0.0818	1.61	TM
RV4UD3		0.1774	0.0325	0.67	0.1600	0.0164	0.32	SA
TGKCHE		0.0980	-0.0469	-0.97	0.1148	-0.0288	-0.57	TH
YG2ERA		0.1740	0.0291	0.60	0.1227	-0.0209	-0.41	IG
YRKHYD		0.0740	-0.0709	-1.47	0.0936	-0.0500	-0.98	IS
YYW8D8		0.1552	0.0103	0.21	0.1720	0.0284	0.56	DY

Summary Statistics		Sample P69	Sample P70
Grand Means		0.14493 COF	0.14357 COF
Stnd Dev Btwn Labs		0.04814 COF	0.05087 COF
Statistics based on 10 of 10 reporting participants			

Sample P69: LDPE & Sample P70: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

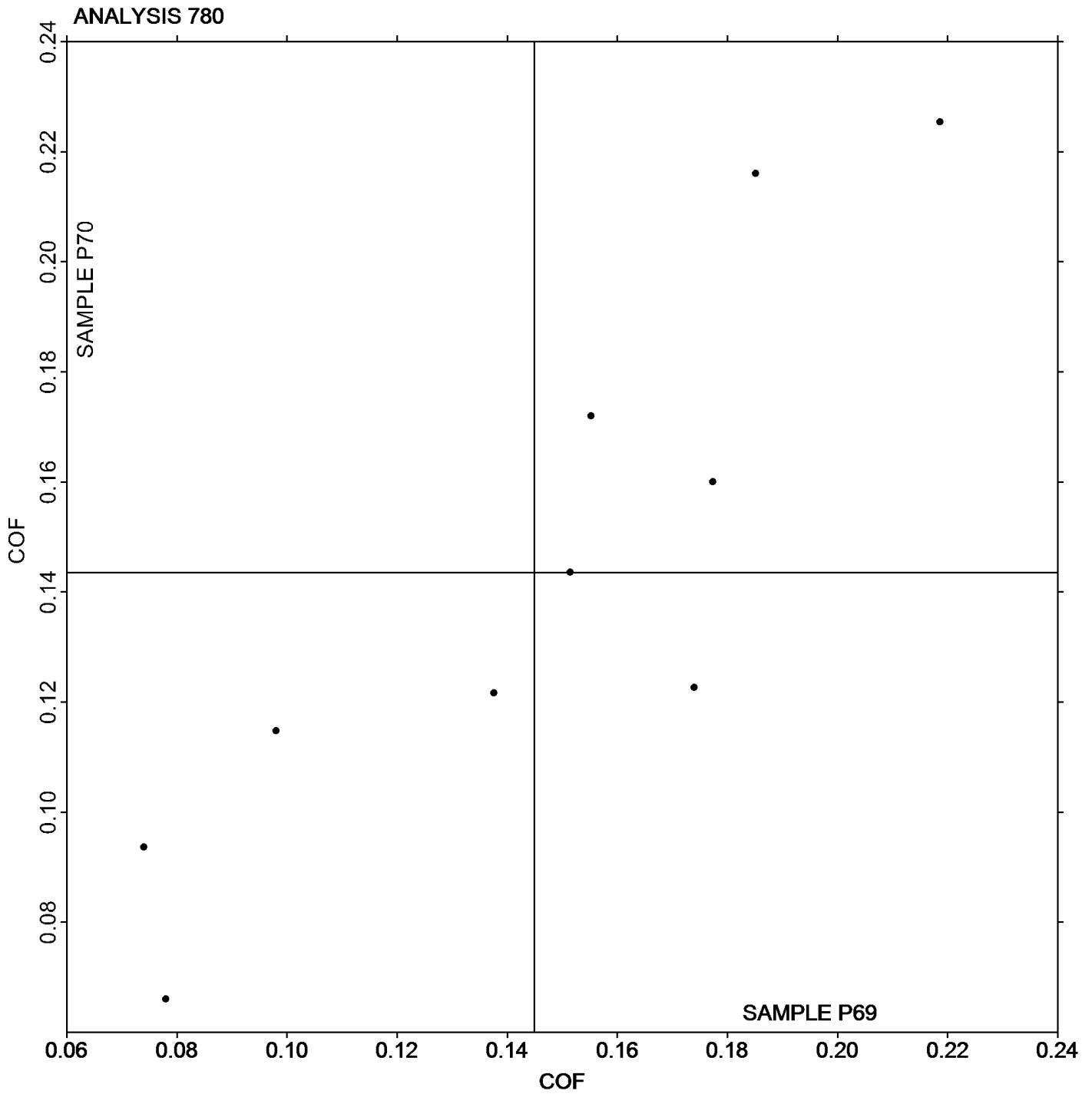
Analysis 780

Coefficient of Static Friction

Report #115

3rd Qtr 2020

Grand Mean Sample P69: 0.14493 COF Grand Mean Sample P70: 0.14357 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 #115

Analysis 781

3rd Qtr 2020

Coefficient of Kinetic Friction

WebCode	Data Flag	Sample P69			Sample P70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		0.1316	0.0342	1.60	0.1292	0.0336	2.00	TH
3N9EE8		0.0860	-0.0114	-0.53	0.0740	-0.0216	-1.28	XX
88UYL9		0.0840	-0.0133	-0.62	0.1015	0.0059	0.35	IP
BDHHTY		0.1000	0.0026	0.12	0.0940	-0.0016	-0.09	DY
CMMQ9Y		0.1000	0.0026	0.12	0.0840	-0.0116	-0.69	DY
FXW2DW		0.0620	-0.0354	-1.66	0.0600	-0.0356	-2.12	TH
FYKZ6V		0.1026	0.0052	0.25	0.0976	0.0020	0.12	IG
KKYJQU		0.0804	-0.0169	-0.79	0.0997	0.0041	0.25	SA
M8RBDM		0.0880	-0.0094	-0.44	0.0860	-0.0096	-0.57	DY
NNV6JL		0.0940	-0.0034	-0.16	0.0980	0.0024	0.14	DY
QUAPGH		0.0664	-0.0310	-1.45	0.0782	-0.0174	-1.03	TM
RV4UD3		0.1114	0.0140	0.66	0.0930	-0.0026	-0.15	SA
TGKCHE		0.0800	-0.0174	-0.81	0.0984	0.0028	0.17	TH
VB8BAF		0.1020	0.0046	0.22	0.0980	0.0024	0.14	XX
VNRPDE		0.1100	0.0126	0.59	0.1200	0.0244	1.45	XX
YG2ERA	*	0.1454	0.0480	2.25	0.0964	0.0008	0.05	IG
YRKHYD	X	0.0088	-0.0886	-4.15	0.0322	-0.0634	-3.77	IS
YYW8D8		0.1112	0.0138	0.65	0.1168	0.0212	1.26	DY

Summary Statistics		
	Sample P69	Sample P70
Grand Means	0.09735 COF	0.09558 COF
Std Dev Btwn Labs	0.02135 COF	0.01681 COF
Statistics based on 17 of 18 reporting participants		

Sample P69: LDPE & Sample P70: LDPE

Comments on Assigned Data Flags for Test #781

YRKHYD (X) - Extreme data.

Key to Instrument Codes Reported by Participants

DY	Dynisco Model D1055	IG	Instron
IP	Instron 4000 Series	IS	Instron 5000 Series
SA	Shimadzu Autograph	TH	Thwing Albert Friction/Peel Tester Model 225-1
TM	TMI Slip and Friction Tester	XX	Instrument make/model not specified by lab



Plastics Interlaboratory Testing Program

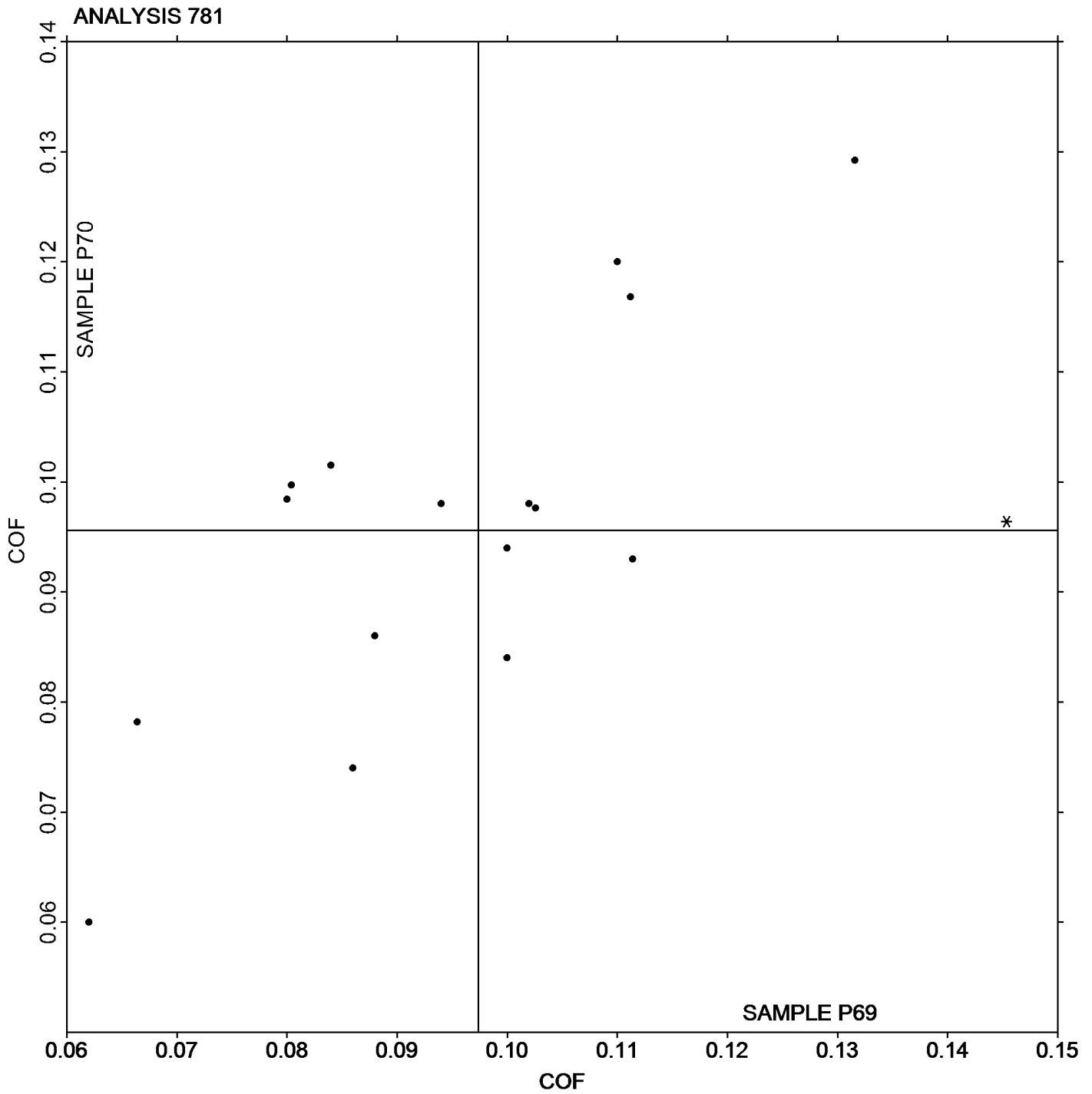
Analysis 781

Coefficient of Kinetic Friction

Report #115

3rd Qtr 2020

Grand Mean Sample P69: 0.09735 COF Grand Mean Sample P70: 0.09558 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 #115

Analysis 782

3rd Qtr 2020

Tear Resistance of Films

WebCode	Data Flag	Sample Q69			Sample Q70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		261.6	-73.7	-0.60	291.2	-30.0	-0.25	TE
DE3ATU		327.4	-7.9	-0.06	254.7	-66.5	-0.54	TE
DGQLRY		250.5	-84.8	-0.69	274.0	-47.2	-0.39	SZ
FXW2DW		312.6	-22.6	-0.18	316.8	-4.4	-0.04	TE
KKYJQU		616.2	280.9	2.29	619.2	298.0	2.43	TE
QUAPGH		228.9	-106.4	-0.87	243.5	-77.7	-0.63	TM
RV4UD3		374.0	38.8	0.32	287.6	-33.7	-0.27	LO
YYW8D8		310.9	-24.4	-0.20	282.9	-38.3	-0.31	TA

Summary Statistics

	Sample Q69	Sample Q70
Grand Means	335.27 grams-force	321.23 grams-force
Std Dev Btwn Labs	122.77 grams-force	122.48 grams-force

Statistics based on 8 of 8 reporting participants

Sample Q69: LDPE & Sample Q70: LDPE

Key to Instrument Codes Reported by Participants

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



Plastics Interlaboratory Testing Program

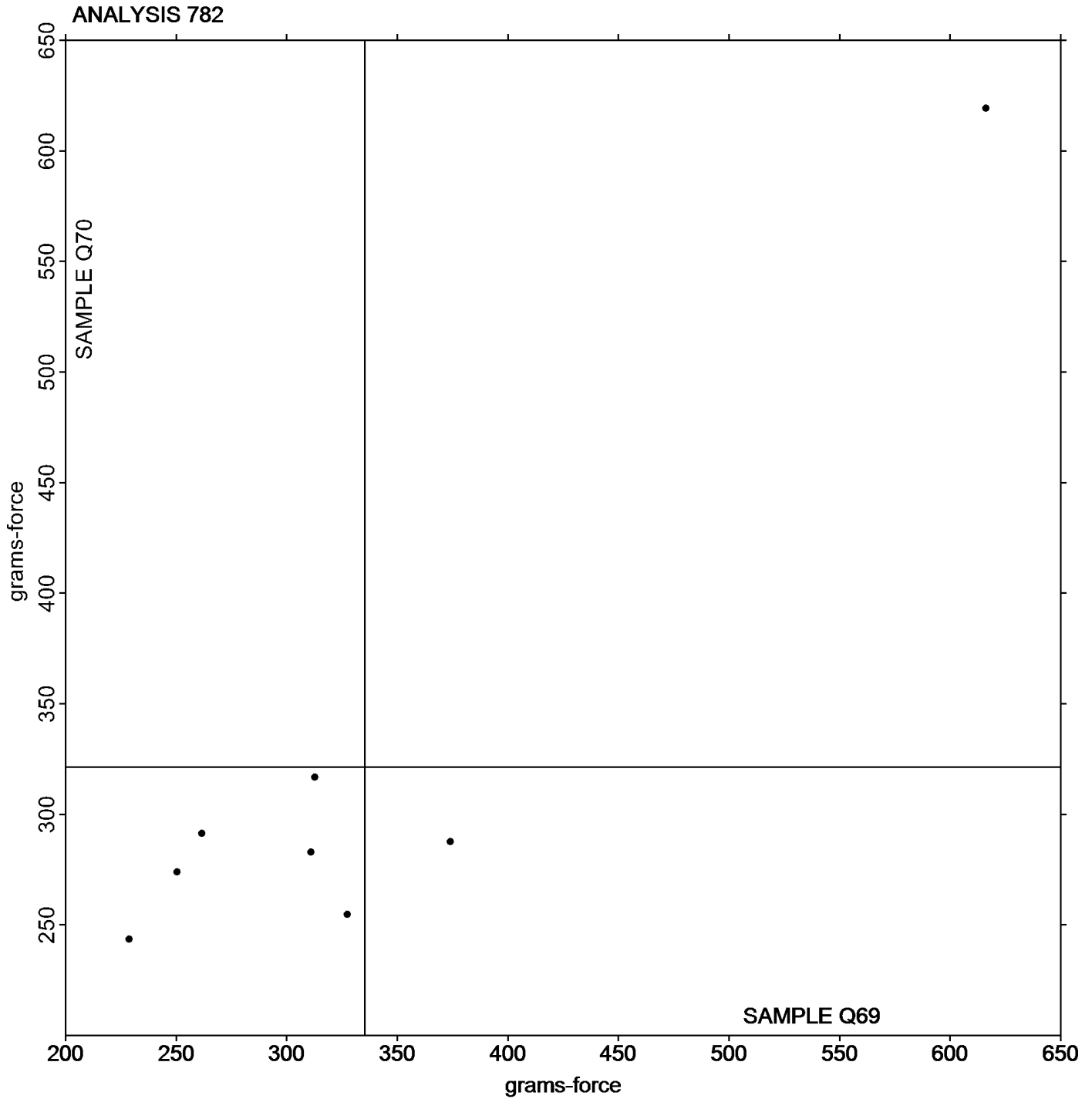
Report #115

Analysis 782

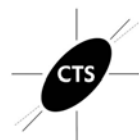
3rd Qtr 2020

Tear Resistance of Films

Grand Mean Sample Q69: 335.27 grams-force Grand Mean Sample Q70: 321.23 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 #115

Analysis 785

3rd Qtr 2020

Percent Haze of Film

WebCode	Data Flag	Sample D69			Sample D70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		10.258	-0.354	-0.64	10.316	-0.268	-0.51	BJ
32TUH8		9.570	-1.041	-1.87	9.480	-1.104	-2.10	HL
3PHG3R		10.788	0.176	0.32	10.775	0.191	0.36	BJ
4HYDVP		11.043	0.431	0.78	10.603	0.018	0.03	XR
79ZU67		10.963	0.351	0.63	10.825	0.241	0.46	BJ
7RXMD4		10.563	-0.049	-0.09	10.763	0.178	0.34	BJ
7Y6TE2		10.525	-0.086	-0.16	10.550	-0.034	-0.07	BJ
8XWWW		10.863	0.251	0.45	10.971	0.387	0.74	BJ
9BJK8L		10.115	-0.496	-0.89	10.619	0.034	0.07	BJ
A78AEX		10.690	0.079	0.14	10.573	-0.012	-0.02	BJ
BFRZEU		9.989	-0.623	-1.12	9.935	-0.649	-1.24	XR
CVHV2Z		10.616	0.005	0.01	10.559	-0.026	-0.05	XX
DE3ATU		10.875	0.264	0.47	10.613	0.028	0.05	BJ
DGQLRY		10.725	0.114	0.20	10.863	0.278	0.53	BJ
EB2MGG		11.563	0.951	1.71	11.663	1.078	2.05	BT
FXW2DW		10.716	0.105	0.19	10.763	0.178	0.34	BJ
JDVCBQ		9.569	-1.043	-1.88	9.436	-1.148	-2.19	XR
JJF3BL		10.551	-0.060	-0.11	10.426	-0.158	-0.30	BJ
KKYJQU		10.638	0.026	0.05	10.363	-0.222	-0.42	BJ
PE7VC4		10.865	0.254	0.46	11.138	0.553	1.05	BJ
QUAPGH		11.163	0.551	0.99	11.100	0.516	0.98	BJ
RM4JXX		10.008	-0.604	-1.09	10.086	-0.498	-0.95	BJ
RT6TXK		10.888	0.276	0.50	10.875	0.291	0.55	BJ
TGKCHE		10.838	0.226	0.41	10.319	-0.266	-0.51	BJ
YBU8PB		9.575	-1.036	-1.87	9.888	-0.697	-1.33	HL
YM88L6		11.550	0.939	1.69	11.338	0.753	1.43	DS
YR32J7		10.829	0.217	0.39	10.551	-0.033	-0.06	BJ
YYW8D8		9.859	-0.753	-1.35	10.086	-0.498	-0.95	XR
Z4B6KU		11.539	0.927	1.67	11.478	0.893	1.70	XR



Plastics Interlaboratory Testing Program

Report #115

Analysis 785

3rd Qtr 2020

Percent Haze of Film

Summary Statistics		
	<u>Sample D69</u>	<u>Sample D70</u>
Grand Means	10.6113 Percent	10.5845 Percent
Stnd Dev Btwn Labs	0.5555 Percent	0.5255 Percent
Statistics based on 29 of 29 reporting participants		

Sample D69: LDPE & Sample D70: LDPE

Key to Instrument Codes Reported by Participants

- | | |
|---|--|
| BJ BYK-Gardner Haze-Gard Plus/i | BT BYK Gardner TCS Series |
| DS Diffusion Systems EEL 57D Hazemeter | HL Hunterlab Ultrascan |
| XR X-Rite Spectrocolorimeter (any model) | XX Instrument make/model not specified by lab |



Plastics Interlaboratory Testing Program

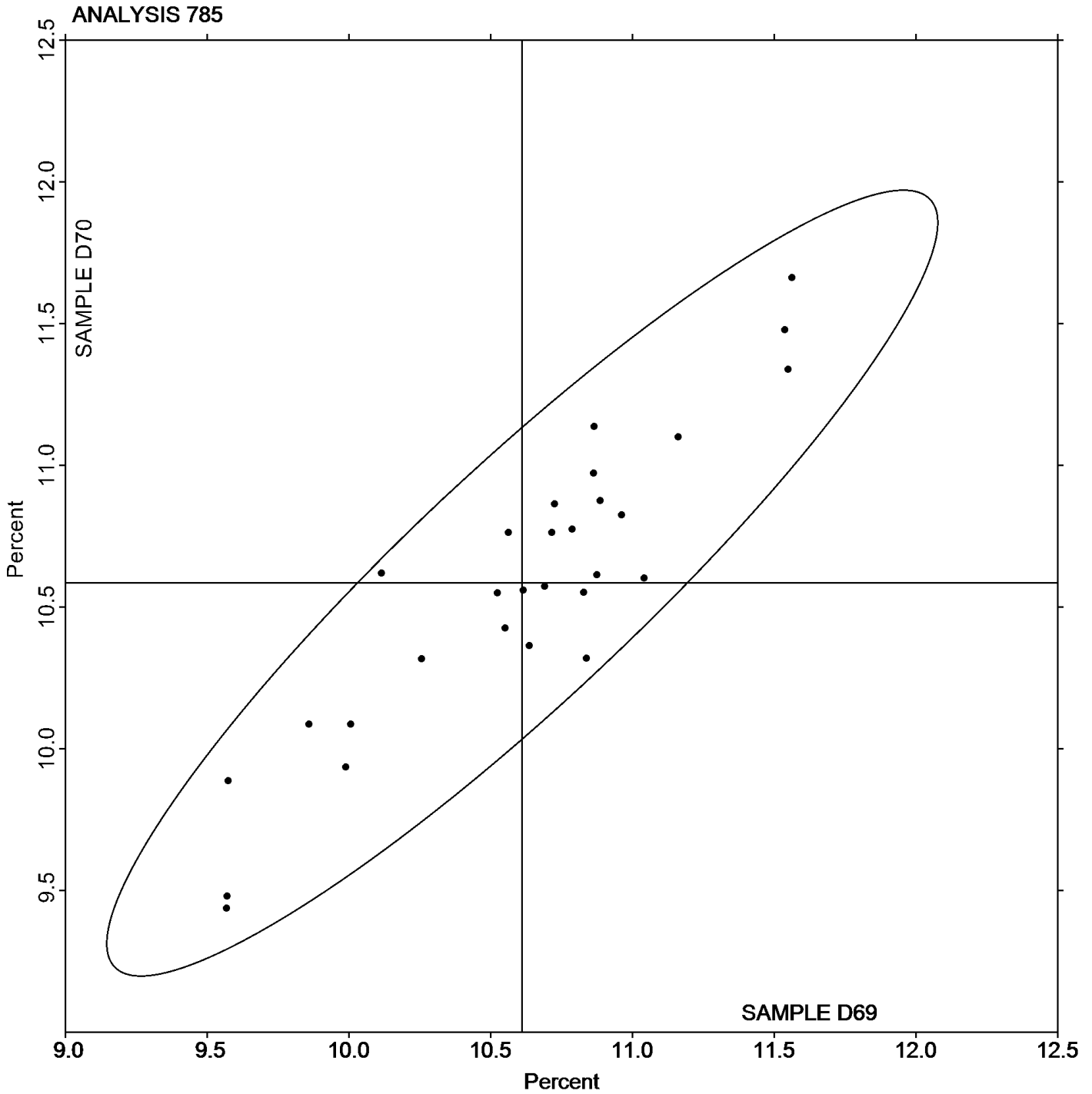
Analysis 785

Percent Haze of Film

Report #115

3rd Qtr 2020

Grand Mean Sample D69: 10.611 Percent Grand Mean Sample D70: 10.584 Percent





Plastics Interlaboratory Testing Program

Report #115

Analysis 786

3rd Qtr 2020

Total Luminous transmittance of film

WebCode	Data Flag	Sample D69			Sample D70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		91.44	-1.16	-1.22	91.46	-1.11	-1.17	BJ
32TUH8		91.16	-1.43	-1.51	91.11	-1.46	-1.54	HL
3PHG3R		94.50	1.90	2.01	94.46	1.89	2.01	BJ
4HYDVP		91.83	-0.76	-0.81	91.81	-0.76	-0.81	XR
79ZU67		93.39	0.79	0.84	93.53	0.96	1.01	BJ
7RXMD4		92.51	-0.09	-0.09	92.61	0.04	0.05	BJ
7Y6TE2		93.33	0.73	0.77	93.25	0.68	0.72	BJ
8XWWW		93.10	0.50	0.53	93.14	0.57	0.60	BJ
9BJK8L		93.79	1.19	1.26	93.76	1.19	1.27	BJ
A78AEX		93.36	0.77	0.81	93.46	0.89	0.95	BJ
BFRZEU		91.13	-1.46	-1.54	91.14	-1.42	-1.51	XR
CVHV2Z		91.98	-0.62	-0.65	91.99	-0.58	-0.62	XX
DE3ATU		91.64	-0.96	-1.01	91.70	-0.87	-0.92	BJ
DGQLRY		92.45	-0.15	-0.15	92.38	-0.19	-0.20	BJ
EB2MGG		92.44	-0.16	-0.17	92.41	-0.16	-0.17	BT
FXW2DW		92.44	-0.16	-0.17	92.39	-0.18	-0.19	BJ
JDVCBQ		91.39	-1.21	-1.27	91.29	-1.28	-1.36	XR
JJF3BL		93.70	1.11	1.17	93.73	1.16	1.23	BJ
KKYJQU		92.96	0.37	0.39	92.71	0.14	0.15	BJ
PE7VC4		93.61	1.02	1.07	93.43	0.86	0.91	BJ
QUAPGH		93.28	0.68	0.72	93.30	0.73	0.78	BJ
RM4JXX		93.45	0.85	0.90	93.49	0.92	0.98	BJ
RT6TXK		92.61	0.02	0.02	92.64	0.07	0.07	BJ
TGKCHE		93.20	0.60	0.64	93.09	0.52	0.55	BJ
YBU8PB		91.00	-1.60	-1.68	90.94	-1.63	-1.73	HL
YM88L6		91.70	-0.90	-0.94	91.71	-0.86	-0.91	XX
YR32J7	*	93.34	0.74	0.78	93.03	0.46	0.48	BJ
Z4B6KU		91.96	-0.64	-0.67	91.97	-0.59	-0.63	XR



Plastics Interlaboratory Testing Program

Report #115

Analysis 786

3rd Qtr 2020

Total Luminous transmittance of film

Summary Statistics		
	<u>Sample D69</u>	<u>Sample D70</u>
Grand Means	92.596 Percent	92.568 Percent
Stnd Dev Btwn Labs	0.948 Percent	0.943 Percent
Statistics based on 28 of 28 reporting participants		

Sample D69: LDPE & Sample D70: LDPE

Key to Instrument Codes Reported by Participants

- | | | | |
|----|--|----|--|
| 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

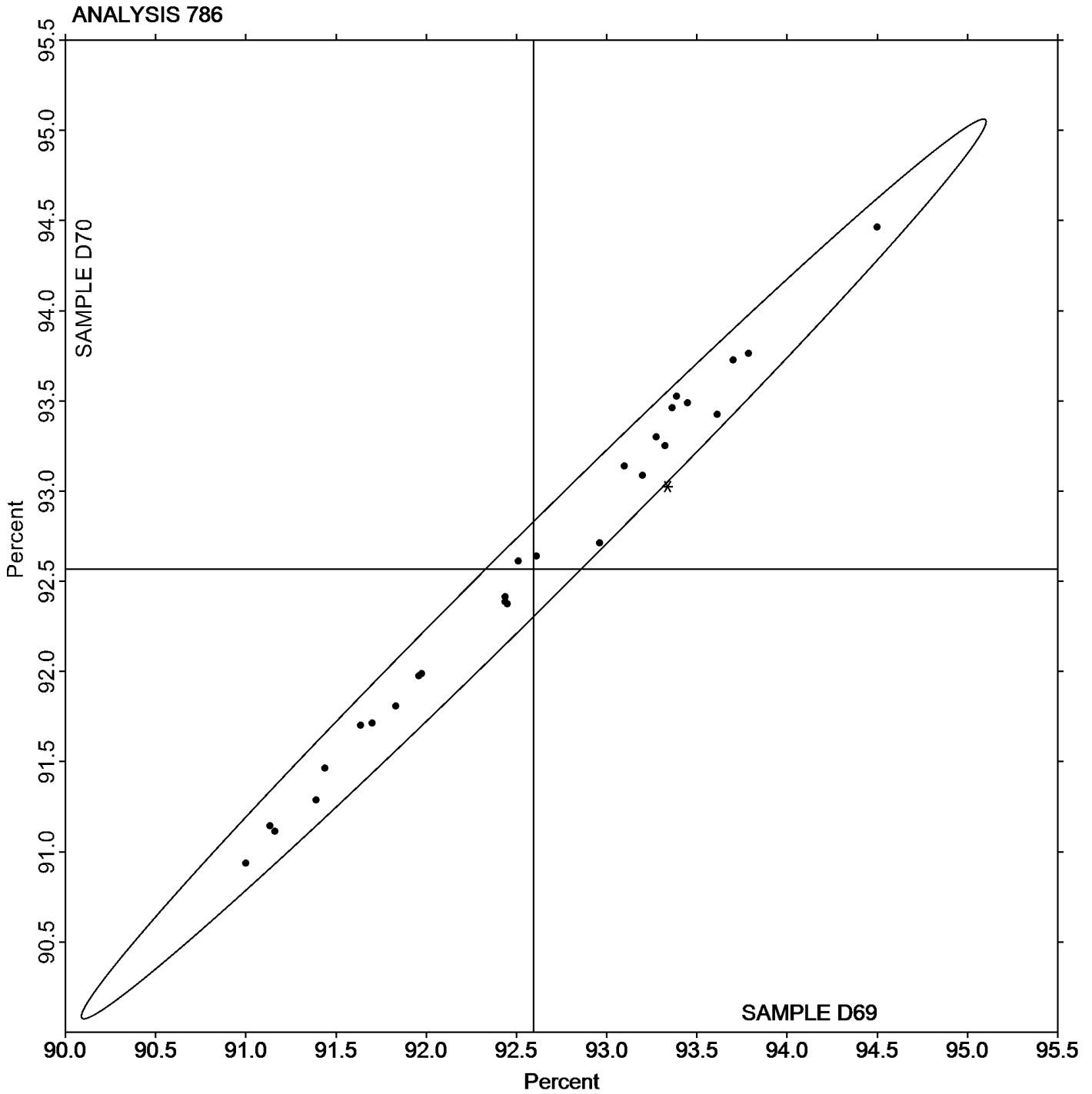
Report #115

Analysis 786

3rd Qtr 2020

Total Luminous transmittance of film

Grand Mean Sample D69: 92.596 Percent Grand Mean Sample D70: 92.568 Percent





Plastics Interlaboratory Testing Program

Report #115

Analysis 790

3rd Qtr 2020

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S69			Sample S70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		4.21	0.35	1.22	4.03	0.15	0.52	CE
3D9D29		4.14	0.28	0.98	4.14	0.27	0.93	XX
3Y6HJ2		3.85	-0.01	-0.03	3.82	-0.05	-0.18	TO
46QXMY		3.90	0.04	0.13	3.90	0.02	0.07	WZ
64AZUY		3.84	-0.02	-0.07	3.80	-0.08	-0.26	TO
7HWYK8		3.80	-0.06	-0.21	4.09	0.21	0.72	WZ
7KCXTP		3.91	0.05	0.17	4.03	0.15	0.52	TO
7KVZ2P		3.61	-0.25	-0.88	3.46	-0.42	-1.45	TM
7M7NY4		4.11	0.25	0.87	4.00	0.12	0.43	BA
823R3Y		3.44	-0.42	-1.48	3.54	-0.34	-1.18	TO
8EL8JY		4.20	0.34	1.18	4.34	0.46	1.62	TM
8KBJKM		3.69	-0.17	-0.60	3.76	-0.12	-0.41	CE
8XWWW		3.75	-0.11	-0.40	3.78	-0.09	-0.32	TY
9NQEYY		3.49	-0.37	-1.30	3.52	-0.36	-1.26	DS
A72Q6U		3.87	0.01	0.03	3.67	-0.20	-0.71	CE
BBU8UT		4.27	0.41	1.43	4.11	0.23	0.80	TM
BL94YW		4.47	0.61	2.12	4.49	0.61	2.12	CE
BYZTWH		3.30	-0.56	-1.96	3.43	-0.45	-1.55	TO
CQJGGV	*	4.01	0.15	0.52	4.30	0.43	1.48	TO
CVTUYU		4.10	0.23	0.82	4.03	0.15	0.54	TM
D7TKHG		3.98	0.11	0.40	3.97	0.09	0.33	TO
DB4V9P		3.96	0.10	0.33	4.06	0.18	0.63	XX
DE3ATU		3.76	-0.10	-0.36	3.74	-0.14	-0.48	TO
EJR9MF		3.91	0.04	0.15	3.81	-0.07	-0.24	XX
F6QUZQ		4.37	0.51	1.77	4.49	0.61	2.12	TO
GJ6GNE		4.03	0.16	0.57	4.07	0.19	0.68	TO
HXFHXB		3.86	0.00	-0.01	3.72	-0.16	-0.55	TO
HYY98V		3.76	-0.11	-0.37	3.82	-0.06	-0.21	TO
J6JNDD		3.73	-0.13	-0.46	3.81	-0.07	-0.23	TO
JMEE7L		3.88	0.02	0.06	3.96	0.08	0.28	TO
KUTM8M		3.73	-0.13	-0.45	3.79	-0.09	-0.30	TO
LQ9UWK		4.58	0.72	2.52	4.55	0.67	2.35	RR
MCTLVM		3.87	0.01	0.03	3.84	-0.04	-0.13	TM
N48H2J		3.30	-0.56	-1.97	3.34	-0.54	-1.87	TO
N6JE7N	X	3.71	-0.15	-0.53	4.52	0.64	2.22	TO



Plastics Interlaboratory Testing Program

Report #115

Analysis 790

3rd Qtr 2020

Notched Izod Impact - ft.lbf/in

WebCode	Data Flag	Sample S69			Sample S70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
NZK6U2		3.63	-0.23	-0.80	3.67	-0.20	-0.71	TO
Q2HHXE		4.32	0.46	1.61	4.22	0.34	1.19	TO
QHNPFD		3.82	-0.04	-0.16	3.82	-0.06	-0.22	TO
QLFJNH		3.65	-0.21	-0.74	3.72	-0.16	-0.54	TO
R3JDVG		4.08	0.22	0.77	4.13	0.25	0.88	WZ
RT6TXK		3.98	0.12	0.40	3.94	0.06	0.20	CE
RZDVWL		3.62	-0.25	-0.86	3.87	-0.01	-0.02	TO
RZV2VC		3.70	-0.16	-0.57	3.72	-0.16	-0.55	IN
TGKCHE		3.49	-0.37	-1.31	3.53	-0.34	-1.20	TO
TZCHNJ		3.84	-0.02	-0.07	3.90	0.03	0.09	WZ
V634UH		3.89	0.03	0.09	3.90	0.02	0.08	XX
V6XAQW	X	5.13	1.27	4.44	4.91	1.03	3.59	TO
WUY8BC		3.92	0.06	0.20	3.87	-0.01	-0.02	TM
XA3R3U		3.42	-0.45	-1.56	3.25	-0.63	-2.19	TO
XZD468		3.78	-0.08	-0.28	3.79	-0.09	-0.32	CE
ZYMQ77		3.44	-0.43	-1.49	3.45	-0.43	-1.49	TM

Summary Statistics		
	Sample S69	Sample S70
Grand Means	3.863 ft.lbf/in	3.877 ft.lbf/in
Stnd Dev Btwn Labs	0.286 ft.lbf/in	0.287 ft.lbf/in
Statistics based on 49 of 51 reporting participants		

Sample S69: ABS & Sample S70: ABS

Comments on Assigned Data Flags for Test #790

V6XAQW (X) - Data for both samples are high. Possible Systematic Error.

N6JE7N (X) - Inconsistent in testing between samples.

Key to Instrument Codes Reported by Participants

BA Baldwin	CE Ceast
DS Dynisco	IN Instron
RR Ray-Ran Polymer Testing Equipment	TM TMI
TO Tinius Olsen	TY Toyoseiki
WZ Zwick	XX Instrument manufacturer not specified by lab



Plastics Interlaboratory Testing Program

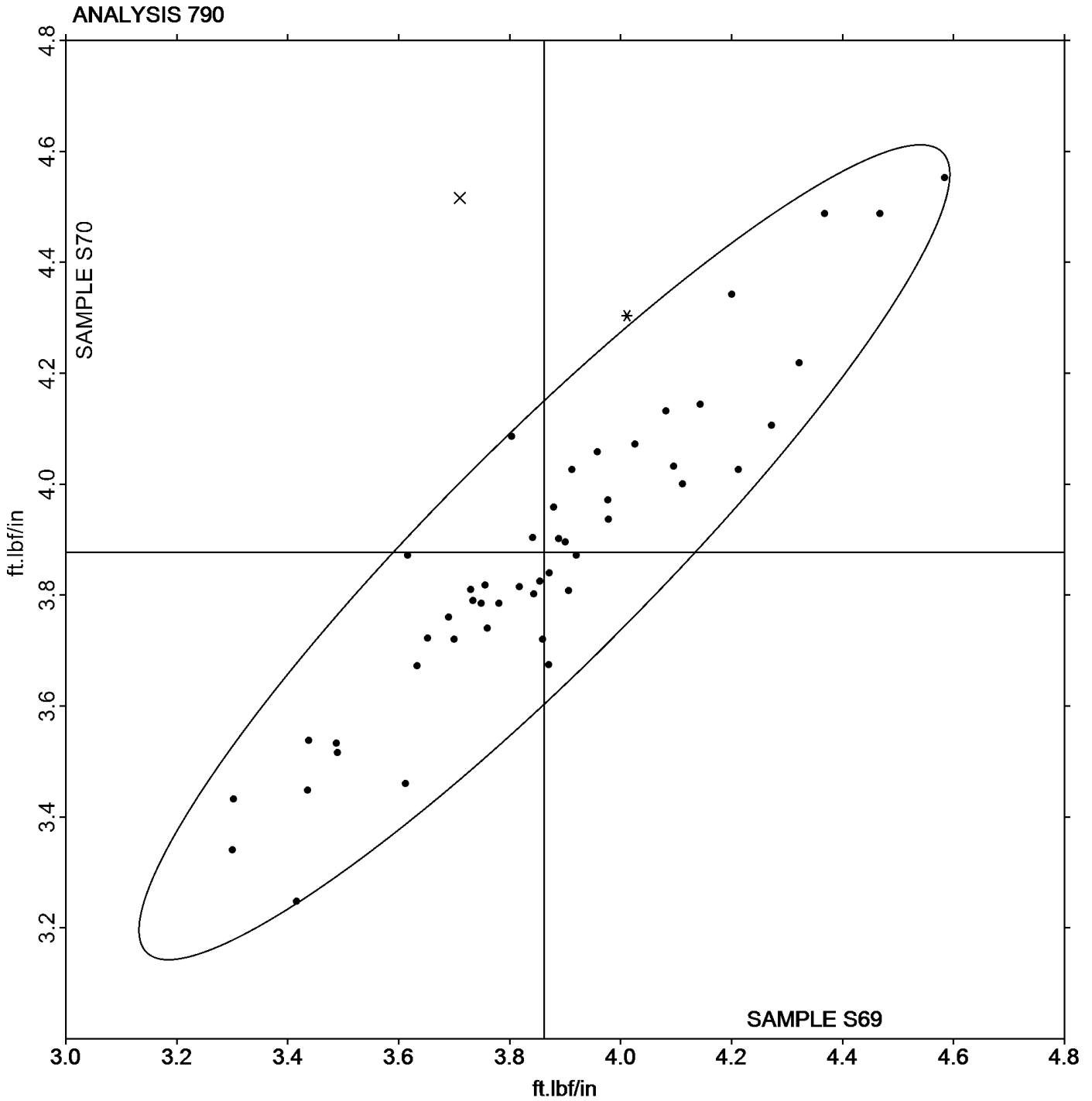
Analysis 790

Notched Izod Impact - ft.lbf/in

Report #115

3rd Qtr 2020

Grand Mean Sample S69: 3.8625 ft.lbf/in Grand Mean Sample S70: 3.8772 ft.lbf/in





Plastics Interlaboratory Testing Program

Report #115

Analysis 791

3rd Qtr 2020

Notched Izod Impact - kJ/m²

WebCode	Data Flag	Sample Z69			Sample Z70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U	*	44.53400	0.67231	0.21	49.39800	5.21179	1.60	CE
3PHG3R		42.91800	-0.94369	-0.30	42.20000	-1.98621	-0.61	TO
46QXMY		47.28800	3.42631	1.08	49.54200	5.35579	1.64	WZ
729NY6		43.17200	-0.68969	-0.22	45.96600	1.77979	0.55	CE
86HRZL		47.14200	3.28031	1.03	44.79400	0.60779	0.19	CE
8KBJKM		46.57500	2.71331	0.85	47.12500	2.93879	0.90	CE
8XWWW		47.26000	3.39831	1.07	48.55800	4.37179	1.34	XX
9DBU23		39.81540	-4.04629	-1.27	41.08460	-3.10161	-0.95	TO
AA4NFM		47.72000	3.85831	1.21	46.06000	1.87379	0.57	TO
AC7LNU		45.93200	2.07031	0.65	45.02200	0.83579	0.26	WZ
CYG7XZ		39.97600	-3.88569	-1.22	40.07000	-4.11621	-1.26	CE
DE3ATU		49.17300	5.31131	1.67	48.96860	4.78239	1.47	XX
F9Q6VQ		38.90140	-4.96029	-1.56	37.90960	-6.27661	-1.93	XX
FHZA9G		43.71220	-0.14949	-0.05	43.91480	-0.27141	-0.08	TO
FVT7UU		40.82600	-3.03569	-0.96	40.54600	-3.64021	-1.12	XX
HMJC4C		43.49780	-0.36389	-0.11	44.08160	-0.10461	-0.03	XX
N6JE7N		39.38400	-4.47769	-1.41	40.49600	-3.69021	-1.13	TO
NBG9QQ		45.96600	2.10431	0.66	47.78800	3.60179	1.10	TM
NZK6U2		41.60800	-2.25369	-0.71	42.98040	-1.20581	-0.37	TO
Q6VTQ4		48.24200	4.38031	1.38	46.99000	2.80379	0.86	CE
Q93K6G		45.41400	1.55231	0.49	45.02400	0.83779	0.26	CE
QKV4JM		46.65400	2.79231	0.88	45.79400	1.60779	0.49	CE
R3JDVG		42.20200	-1.65969	-0.52	41.92800	-2.25821	-0.69	WZ
TGKCHE		40.25800	-3.60369	-1.13	39.66600	-4.52021	-1.39	TO
TTV4NY		48.03740	4.17571	1.31	48.29400	4.10779	1.26	CE
TZCHNJ		41.97800	-1.88369	-0.59	41.49200	-2.69421	-0.83	WZ
W77L7D		45.09420	1.23251	0.39	44.80120	0.61499	0.19	CE
YKZTFY		37.98640	-5.87529	-1.85	40.44840	-3.73781	-1.15	CE
YM88L6		42.13200	-1.72969	-0.54	41.73800	-2.44821	-0.75	XX
YPB368		42.45200	-1.40969	-0.44	42.90600	-1.28021	-0.39	WZ



Plastics Interlaboratory Testing Program

Report #115

Analysis 791

3rd Qtr 2020

Notched Izod Impact - kJ/m²

Summary Statistics

	<u>Sample Z69</u>	<u>Sample Z70</u>
Grand Means	43.861693 kJ/m ²	44.186207 kJ/m ²
Stnd Dev Btwn Labs	3.177242 kJ/m ²	3.260491 kJ/m ²

Statistics based on 30 of 30 reporting participants

Sample Z69: ABS/PC & Sample Z70: ABS/PC

Key to Instrument Codes Reported by Participants

- | | | | |
|----|--|----|-------|
| CE | Ceast | TM | TMI |
| TO | Tinius Olsen | WZ | Zwick |
| XX | Instrument manufacturer not specified by lab | | |



Plastics Interlaboratory Testing Program

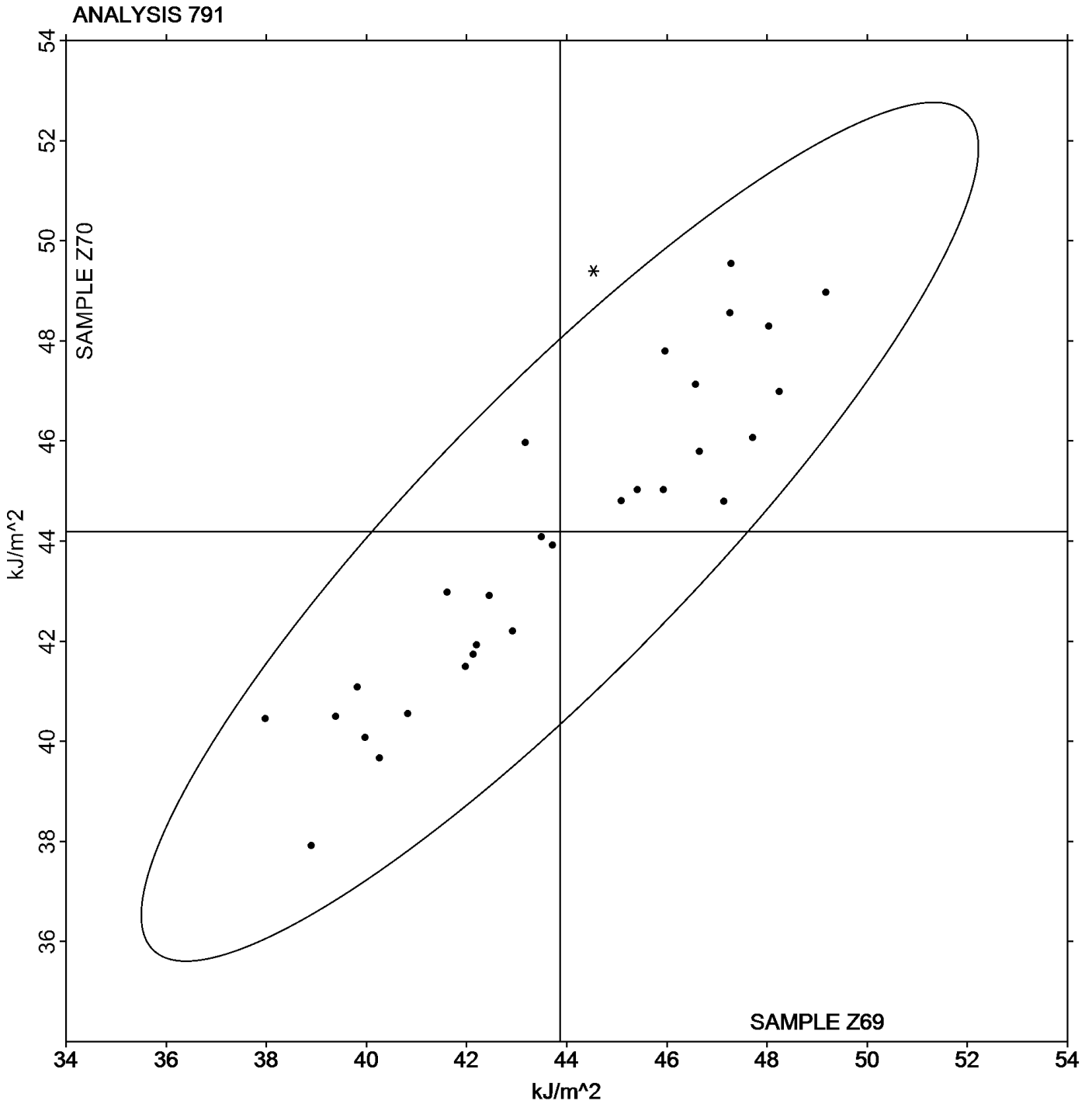
Analysis 791

Notched Izod Impact - kJ/m^2

Report #115

3rd Qtr 2020

Grand Mean Sample Z69: 43.862 kJ/m^2 Grand Mean Sample Z70: 44.186 kJ/m^2





Plastics Interlaboratory Testing Program

Report #115

Analysis 792

3rd Qtr 2020

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M69			Sample M70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
2UJ78U		51.16	3.32	0.71	50.21	2.71	0.58	CE
32JEB7		49.23	1.40	0.30	49.12	1.62	0.34	WZ
32TUH8		43.81	-4.03	-0.85	44.00	-3.50	-0.75	TM
3D9D29		45.03	-2.81	-0.60	43.06	-4.44	-0.95	XX
46QXMY		48.38	0.55	0.12	48.99	1.49	0.32	TM
4ANLQ7		44.70	-3.13	-0.66	46.70	-0.80	-0.17	WZ
7BRQUZ		54.91	7.07	1.50	53.93	6.42	1.37	XX
7KVZ2P		52.19	4.35	0.92	53.26	5.76	1.23	TM
86HRZL		50.49	2.65	0.56	52.00	4.50	0.96	CE
8KBJKM		47.96	0.13	0.03	47.44	-0.06	-0.01	IN
8XWWW		48.40	0.57	0.12	48.74	1.24	0.26	TY
9DBU23		43.29	-4.55	-0.97	41.47	-6.03	-1.28	TO
AC7LNU		36.94	-10.89	-2.31	36.74	-10.76	-2.29	WZ
ARJXFM		54.09	6.25	1.33	52.43	4.92	1.05	TO
BJNEEJ		52.00	4.17	0.88	49.98	2.48	0.53	TO
CYG7XZ		42.39	-5.45	-1.16	42.05	-5.45	-1.16	CE
D7TKHG		50.22	2.38	0.51	50.46	2.95	0.63	TO
DB4V9P		45.24	-2.59	-0.55	45.74	-1.76	-0.38	XX
DE3ATU		53.03	5.19	1.10	51.65	4.15	0.88	XX
E9V3QW		50.18	2.34	0.50	48.07	0.56	0.12	WZ
EBHK9G		47.48	-0.36	-0.08	46.20	-1.30	-0.28	TO
EJR9MF		41.40	-6.43	-1.37	41.48	-6.02	-1.28	XX
ER8R4U	*	56.39	8.56	1.82	58.50	10.99	2.34	TM
FHZA9G		47.44	-0.40	-0.08	47.27	-0.23	-0.05	TO
FVT7UU		43.75	-4.09	-0.87	43.96	-3.54	-0.75	XX
HVBW9P		49.35	1.52	0.32	48.31	0.81	0.17	WZ
J2ZTAL		48.05	0.22	0.05	47.50	-0.01	0.00	CE
JP4Q7R		52.88	5.05	1.07	50.65	3.15	0.67	XX
JTP8NC	*	56.66	8.83	1.87	53.56	6.06	1.29	TO
MY97RM		50.67	2.84	0.60	50.40	2.90	0.62	CE
N6JE7N		41.27	-6.56	-1.39	42.88	-4.62	-0.98	TO
NBG9QQ		52.76	4.93	1.05	52.04	4.53	0.97	TM
PF76TL		49.68	1.85	0.39	50.32	2.81	0.60	CE
Q2HHXE	*	35.26	-12.57	-2.67	34.90	-12.60	-2.69	TO
Q93K6G		48.67	0.83	0.18	47.71	0.20	0.04	CE



Plastics Interlaboratory Testing Program

Report #115

Analysis 792

3rd Qtr 2020

Notched Charpy Impact - kJ/m²

WebCode	Data Flag	Sample M69			Sample M70			Instr Code
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV	
QKV4JM	*	50.92	3.08	0.65	53.98	6.47	1.38	CE
QLFJNH		47.62	-0.21	-0.05	47.28	-0.22	-0.05	TO
R3JDVG		43.91	-3.92	-0.83	43.82	-3.68	-0.78	WZ
RHEXC6		44.84	-2.99	-0.64	43.38	-4.12	-0.88	TO
RZV2VC		45.72	-2.11	-0.45	43.18	-4.32	-0.92	IN
TGKCHE		47.30	-0.53	-0.11	48.22	0.72	0.15	TO
TTV4NY		52.66	4.83	1.03	50.90	3.40	0.72	IN
TZCHNJ		42.70	-5.13	-1.09	42.96	-4.55	-0.97	WZ
UDE7GD		54.44	6.61	1.40	54.62	7.12	1.52	WZ
UPUPZE		51.24	3.41	0.72	51.70	4.19	0.89	WZ
XZD468		49.87	2.03	0.43	48.74	1.24	0.26	WZ
YKZTFY		44.18	-3.65	-0.78	44.36	-3.14	-0.67	CE
YM88L6		41.89	-5.94	-1.26	41.19	-6.31	-1.35	TM
YPB368		44.51	-3.32	-0.70	44.60	-2.91	-0.62	WZ
ZYT8QC		44.56	-3.27	-0.69	44.50	-3.00	-0.64	PO

Summary Statistics		
	Sample M69	Sample M70
Grand Means	47.834 kJ/m ²	47.503 kJ/m ²
Stnd Dev Btwn Labs	4.710 kJ/m ²	4.693 kJ/m ²
Statistics based on 50 of 50 reporting participants		

Sample M69: ABS/PC & Sample M70: ABS/PC

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

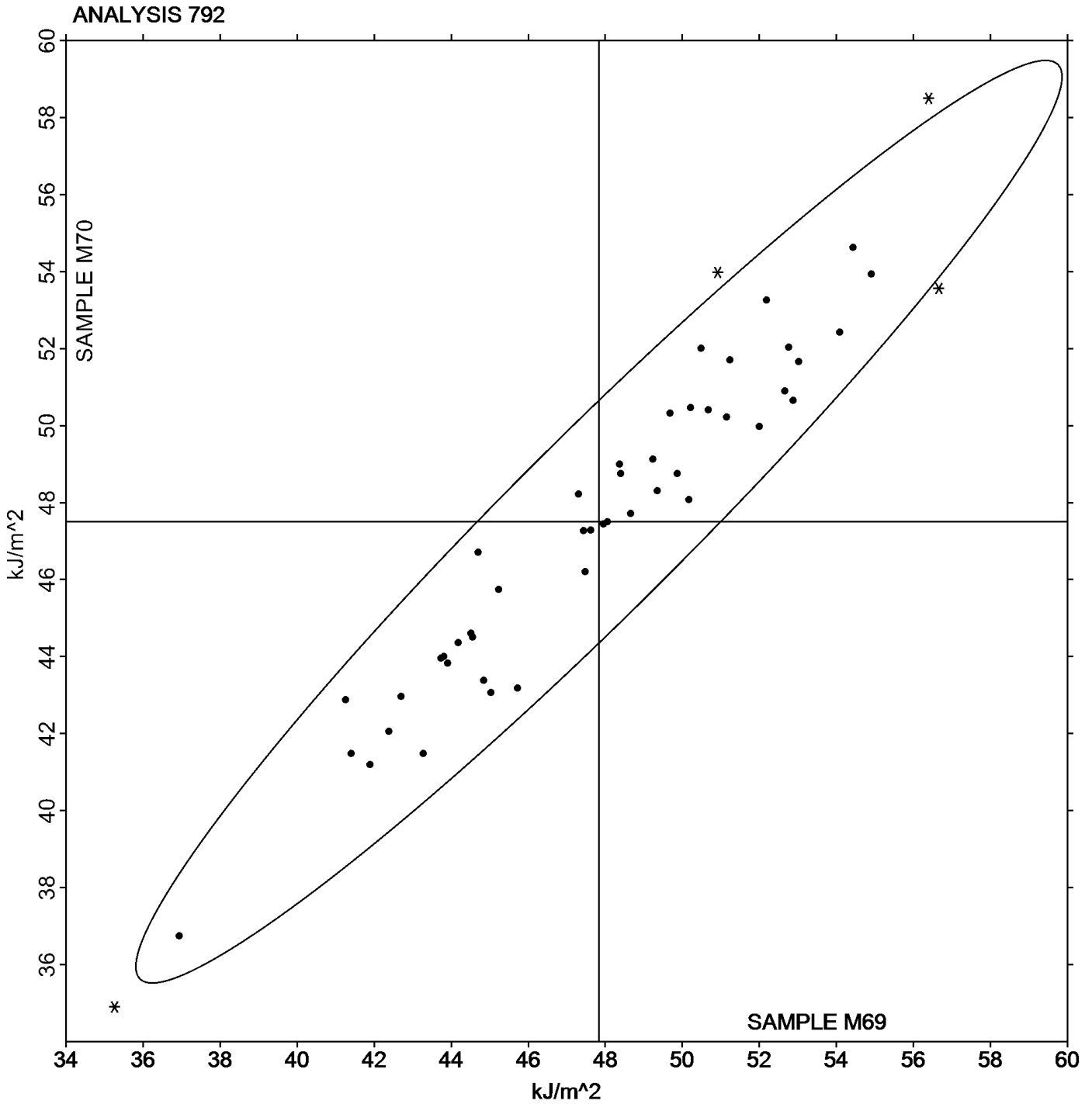
Report #115

Analysis 792

3rd Qtr 2020

Notched Charpy Impact - kJ/m^2

Grand Mean Sample M69: 47.834 kJ/m^2 Grand Mean Sample M70: 47.503 kJ/m^2



-End of Report-