Collaborative Testing Services, Inc.

Fasteners & Metals Interlaboratory Testing Program

Summary Report Cycle 118, 2nd Qtr 2017

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ABOUT THE FASTENERS & METALS PROGRAM

Collaborative Testing Services operates and maintains the program for Fasteners and Metals as part of a series of Proficiency and Interlaboratory Testing Programs offered by CTS in cooperation with various associations for a wide range of industries. Personnel from the National Institute of Standards and Technology (formerly the National Bureau of Standards), Industrial Fasteners Institute (IFI), and the Naval Shipyard Laboratories provide technical guidance and advice to this program.

The purpose of the program is to give participating laboratories a means to compare periodically the level and uniformity of their testing with that of other laboratories in the industry. It also provides a realistic assessment of the state of fasteners and metals testing proficiency.

In each report, there is a summary of the statistics for the analysis and a graphical representation of the data for each test. 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 TO TABLES AND GRAPHS for an explanation of terms and guidelines to interpreting the results.

ABOUT CTS

Founded in 1971, 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 50 countries, currently participate in the CTS programs.
For further information contact:

COLLABORATIVE TESTING SERVICES, INC.
21331 Gentry Drive
Sterling, VA 20166

Phone: (571) 434-1925
FAX: (571)434-1937
e-mail: metals@cts-interlab.com
www.collaborativetesting.com
Office Hours: 8:00 a.m. - 4:30 p.m. ET

Key for Fasteners & Metals Program Web Summary Report

WebCode - Assigned laboratory identification number(temporary)used to ensure lab confidentiality while permitting a lab to locate its data in the report published on the CTS website.

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.

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 (CPV) - 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. CPV = (LAB MEAN - GRAND MEAN)/ BETWEEN-LAB STANDARD DEVIATION. 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).

Instr. Code - A code indicating the manufacturer of the instrument used to perform the test (see separate INSTRUMENT CODE LIST for each test section).

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:

Data Flags

Data Flag Type	Statistically Included/Excluded	ACTION REQUIRED
*	INCLUDED	CAUTION - review testing procedure and monitor future results. Results fall outside the drawn 95% ellipse but within a 99% ellipse that is calculated but not drawn. Labs flagged with an * do not typically receive a specific note regarding the flag. If this error is repeated in future rounds, however, a lab may need to stop and review its testing procedures. The initial data flag is not cause for alarm.
X	EXCLUDED	STOP - immediate review of data and/or testing procedure is required (all tests exept Chemical Analyses). Results fall outside the 99% ellipse. See the specific note following the data for more information on why the data are excluded. For Chemical Analyses see an additional Memo.
M	EXCLUDED	PROCEED - lab was unable to report data for at least one sample. However, a lab receiving two or more M flags for a test may need to stop and review its testing procedures.

Graph - For each laboratory, the Lab Mean for the second sample (y-axis) is plotted against the Lab Mean for the first sample (x-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 included 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. Labs not receiving a data flag appear as points on the plot.

		Sample X43			Sample X44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2DKD29		140.10	-1.43	-0.86	169.10	0.96	0.59
2JDF8T		141.98	0.44	0.26	170.45	2.31	1.44
2THV68		143.06	1.52	0.91	167.23	-0.91	-0.57
3G3NYC		142.13	0.59	0.36	165.43	-2.71	-1.68
48TQLT		141.30	-0.24	-0.14	168.83	0.69	0.43
6AV8V9		144.10	2.56	1.53	171.83	3.69	2.30
6XNXUD		139.07	-2.47	-1.48	169.10	0.96	0.60
79EJKN		138.66	-2.88	-1.72	166.81	-1.33	-0.83
89DQY7		143.52	1.98	1.18	168.01	-0.13	-0.08
8MY737		143.63	2.09	1.25	166.80	-1.34	-0.83
9HCTT2		141.93	0.39	0.23	167.01	-1.13	-0.70
9HEYYX		139.82	-1.72	-1.03	166.02	-2.12	-1.32
9QVYRU		141.17	-0.37	-0.22	166.73	-1.41	-0.87
9R7W26		141.56	0.02	0.01	168.71	0.57	0.35
AQ6KE2		143.97	2.43	1.45	168.23	0.09	0.06
AW822M		143.50	1.96	1.17	169.00	0.86	0.53
B7WB3P		141.48	-0.06	-0.03	168.54	0.40	0.25
BMJ29W		141.38	-0.16	-0.09	167.69	-0.45	-0.28
BPNNNM		141.37	-0.17	-0.10	167.17	-0.97	-0.61
BU22H2		143.47	1.93	1.15	169.73	1.59	0.99
CYUTCW		141.08	-0.46	-0.28	166.88	-1.26	-0.78
DT24D6		140.43	-1.11	-0.66	169.46	1.32	0.82
ELF8QN		139.97	-1.57	-0.94	166.13	-2.01	-1.25
EUTGD3		142.02	0.48	0.29	168.91	0.77	0.48
EWCHCV		140.63	-0.91	-0.54	171.17	3.03	1.88
FHA4HY		139.77	-1.77	-1.06	166.90	-1.24	-0.77
FZUP3P	X	135.40	-6.14	-3.67	162.63	-5.51	-3.42
GFM8LX		143.52	1.99	1.19	168.64	0.50	0.31
GGCHDQ		140.13	-1.41	-0.84	169.83	1.69	1.05
H3PTTE		140.49	-1.04	-0.62	167.08	-1.06	-0.66
HFBRKW	X	151.54	10.00	5.98	175.86	7.72	4.80
HUE9UP		140.90	-0.64	-0.38	167.68	-0.46	-0.29
J78CBN		141.67	0.13	0.08	169.67	1.53	0.95
JPXGZ2		142.20	0.66	0.40	168.60	0.46	0.29
JXD36Y		140.68	-0.85	-0.51	169.74	1.60	0.99
KNGQ7N		140.70	-0.84	-0.50	167.80	-0.34	-0.21
KX97VR		145.08	3.54	2.11	167.68	-0.47	-0.29
L3HPUK		140.56	-0.98	-0.59	168.46	0.32	0.20
LMMVAL		141.67	0.13	0.08	168.50	0.36	0.22
LTWENZ		144.37	2.83	1.69	167.73	-0.41	-0.25
LZUB4P		143.17	1.63	0.97	168.52	0.38	0.24
M3W9EH		139.90	-1.64	-0.98	166.90	-1.24	-0.77
M44HWL		142.90	1.36	0.81	167.33	-0.81	-0.50
M62YGQ		141.17	-0.37	-0.22	168.77	0.63	0.39
N3BPVB		141.85	0.31	0.19	169.03	0.89	0.55
NDATBJ		137.83	-3.71	-2.22	165.50	-2.64	-1.64
NENENR		139.60	-1.94	-1.16	164.53	-3.61	-2.24

		Sample X43			Sample X44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
NFW4YB		138.46	-3.07	-1.84	167.67	-0.48	-0.30
QFPWMT		141.95	0.41	0.25	171.98	3.84	2.39
QK2PV7		141.40	-0.14	-0.08	166.87	-1.27	-0.79
QTUHYC		138.33	-3.21	-1.92	165.77	-2.37	-1.48
QUC9AG		141.20	-0.34	-0.20	168.73	0.59	0.37
QX8T68		141.00	-0.54	-0.32	166.20	-1.94	-1.21
RGFE4K		142.96	1.42	0.85	170.06	1.92	1.19
RLE4TK	X	146.77	5.24	3.13	174.75	6.61	4.11
TH9TLN		143.26	1.73	1.03	166.08	-2.06	-1.28
TLNHKR		143.47	1.93	1.15	167.60	-0.54	-0.34
URQYP7		141.17	-0.37	-0.22	167.43	-0.71	-0.44
V3PJFJ		140.71	-0.83	-0.49	167.74	-0.40	-0.25
VL2YNJ		140.67	-0.87	-0.52	167.33	-0.81	-0.50
VV78EC		140.07	-1.47	-0.88	167.07	-1.07	-0.67
WA4PPV	*	144.89	3.36	2.01	172.11	3.97	2.47
XAK6H4		140.67	-0.87	-0.52	167.00	-1.14	-0.71
YC2DEM		144.21	2.67	1.60	169.62	1.48	0.92
YYWULG		143.36	1.82	1.09	169.63	1.49	0.93
ZVAC4W		139.70	-1.84	-1.10	170.10	1.96	1.22

Summary Statistics

	Sample X43		Sample X44	
Grand Means	141.54	ksi	168.14	ksi
Stnd Dev Btwn Labs	1.67	ksi	1.61	ksi

Samples X43, X44 : 3/8-16x2 1/4, 3/8-16x2 1/4

Statistics based on 63 of 66 reporting participants

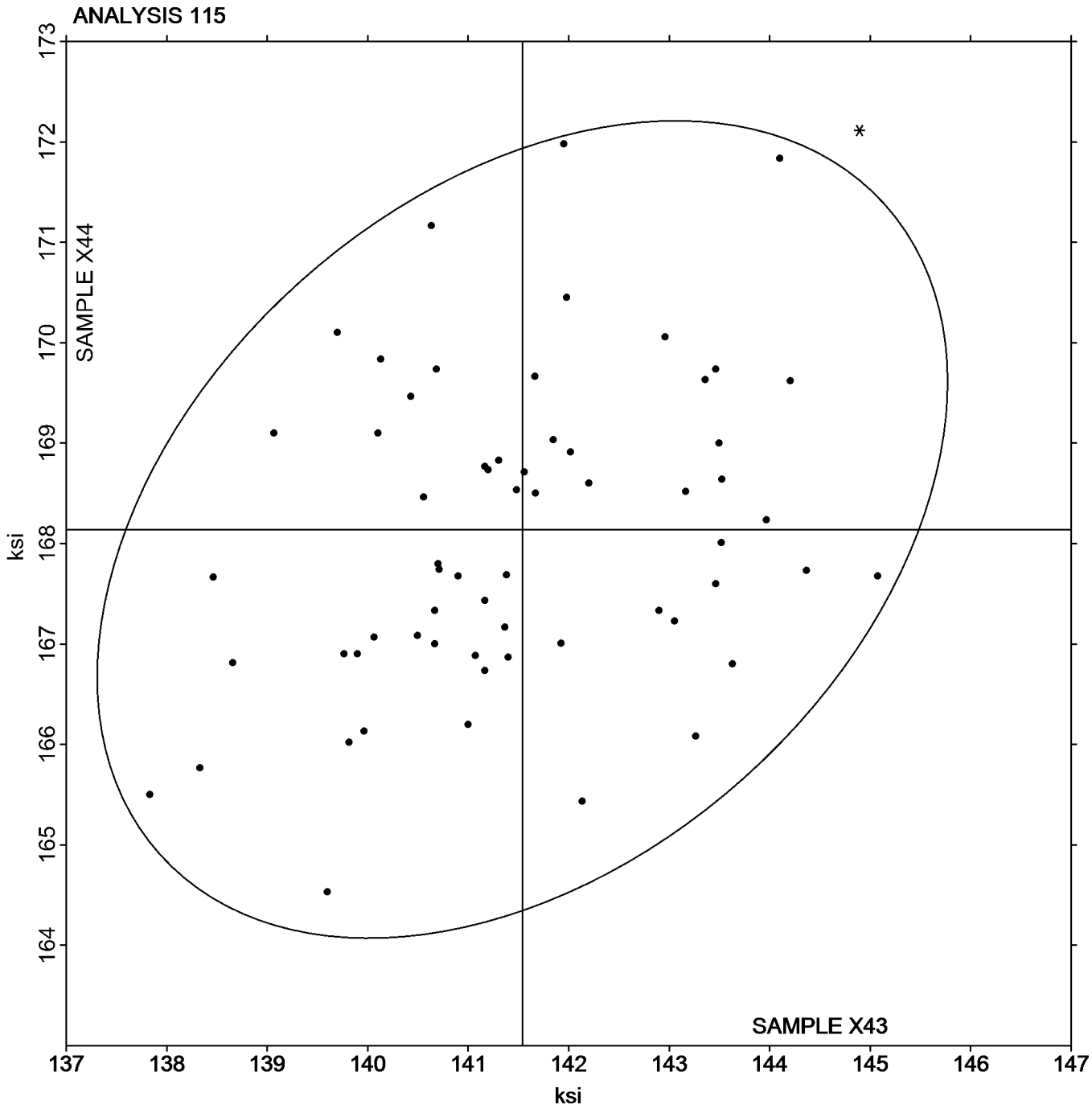
Comments on Assigned Data Flags for Test #115

FZUP3P (X) - Data for both samples are low.

HFBRKW (X) - Data for both samples are high. Inconsistent within the determinations of sample X44.

RLE4TK (X) - Data for both samples are high. Inconsistent within the determinations of sample X44.

SAMPLE X43	SAMPLE X44
141.54 ksi	168.14 ksi



		Sample Q43			Sample Q44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2JDF8T		145.20	0.74	0.40	168.60	0.96	0.54
3G3NYC		143.23	-1.23	-0.67	168.07	0.43	0.24
46ZDM3		141.25	-3.21	-1.74	165.03	-2.60	-1.45
48TQLT		145.76	1.30	0.71	167.57	-0.07	-0.04
6AV8V9	*	148.87	4.40	2.39	172.50	4.86	2.71
6C2XD4		145.03	0.57	0.31	167.74	0.11	0.06
6XNXUD		143.83	-0.63	-0.34	165.20	-2.44	-1.36
79EJKN		145.02	0.56	0.30	167.42	-0.21	-0.12
89C2Q3		145.81	1.34	0.73	168.60	0.96	0.54
8MY737		142.97	-1.50	-0.81	167.33	-0.30	-0.17
8PZN7M		144.06	-0.40	-0.22	166.11	-1.53	-0.85
9HCTT2		142.08	-2.38	-1.29	165.63	-2.00	-1.12
9HEYYX		141.56	-2.90	-1.58	165.34	-2.29	-1.28
9QVYRU		143.87	-0.60	-0.32	170.40	2.76	1.54
ALT8LN	X	167.54	23.08	12.53	192.74	25.11	13.99
AW822M		145.47	1.00	0.55	168.67	1.03	0.57
B7WB3P		144.73	0.27	0.15	166.37	-1.27	-0.71
BMJ29W		144.20	-0.26	-0.14	165.29	-2.34	-1.31
BPNNNM		143.37	-1.10	-0.59	169.13	1.50	0.83
BU22H2		145.30	0.84	0.45	167.97	0.33	0.18
CCEB6Z		142.88	-1.58	-0.86	169.43	1.80	1.00
DA3K74		143.10	-1.37	-0.74	168.43	0.79	0.44
DRAHRN		140.72	-3.75	-2.03	164.69	-2.95	-1.64
DT24D6		146.37	1.90	1.03	170.32	2.69	1.50
EJBCBR	X	153.44	8.97	4.87	178.20	10.56	5.89
ELF8QN		144.83	0.37	0.20	168.40	0.76	0.43
EUTGD3	X	171.65	27.19	14.76	166.32	-1.32	-0.73
EWCHCV		146.67	2.20	1.20	169.00	1.36	0.76
FYK69Z		145.50	1.04	0.56	167.67	0.03	0.02
GFM8LX		143.27	-1.19	-0.65	165.70	-1.94	-1.08
GHBL72	X	108.55	-35.91	-19.49	129.09	-38.55	-21.48
H3PTTE		143.30	-1.16	-0.63	166.70	-0.94	-0.52
HFBRKW	X	153.73	9.27	5.03	177.12	9.49	5.29
HTM9VT		146.23	1.77	0.96	167.20	-0.44	-0.24
J78CBN		148.17	3.71	2.01	168.26	0.62	0.35
K4W28C	X	102.33	-42.13	-22.87	117.67	-49.97	-27.85
KFTTJP		145.40	0.94	0.51	168.60	0.96	0.54
KWBW2A		145.87	1.40	0.76	167.05	-0.59	-0.33
KX97VR		145.08	0.61	0.33	166.87	-0.77	-0.43
L3HPUK		145.41	0.95	0.51	168.00	0.37	0.20
LMMVAL		145.73	1.27	0.69	166.39	-1.24	-0.69
LZUB4P		145.74	1.27	0.69	170.71	3.08	1.71
M3W9EH		142.97	-1.50	-0.81	168.30	0.66	0.37
M44HWL		144.10	-0.36	-0.20	165.03	-2.60	-1.45
M62YGQ		145.27	0.80	0.44	169.70	2.06	1.15
MYYGYD		143.50	-0.97	-0.52	168.31	0.67	0.37
N3BPVB		145.08	0.61	0.33	164.59	-3.05	-1.70

		Sample Q43			Sample Q44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
NDATBJ	*	139.67	-4.80	-2.60	165.67	-1.97	-1.10
NFW4YB		142.52	-1.94	-1.05	164.38	-3.26	-1.82
Q8DGY7		147.67	3.21	1.74	170.14	2.50	1.39
QFPWMT		146.30	1.84	1.00	167.92	0.29	0.16
QK2PV7		143.67	-0.80	-0.43	165.10	-2.54	-1.41
QTUHYC		145.87	1.40	0.76	168.77	1.13	0.63
QUC9AG		143.50	-0.96	-0.52	167.37	-0.27	-0.15
RGFE4K		143.97	-0.49	-0.27	170.06	2.43	1.35
RLRZCR		140.90	-3.56	-1.93	167.27	-0.37	-0.21
TDGQBW		144.41	-0.05	-0.03	168.21	0.58	0.32
TH9TLN		142.16	-2.30	-1.25	166.06	-1.58	-0.88
TLNHKR		142.07	-2.40	-1.30	166.33	-1.30	-0.73
U4KK4W		146.78	2.32	1.26	169.57	1.94	1.08
V3PJFJ		143.56	-0.90	-0.49	166.55	-1.09	-0.61
VV78EC		144.43	-0.03	-0.02	166.40	-1.24	-0.69
WZFVFK		146.25	1.78	0.97	167.61	-0.02	-0.01
YYWULG		147.00	2.53	1.38	169.13	1.49	0.83
ZVAC4W		145.27	0.80	0.44	171.07	3.43	1.91
ZZNHQB		144.98	0.52	0.28	168.27	0.63	0.35

Summary Statistics

	Sample Q43		Sample Q44	
Grand Means	144.46	ksi	167.64	ksi
Stnd Dev Btwn Labs	1.84	ksi	1.79	ksi

Samples Q43, Q44 : 3/8-16x2 1/4, 3/8-16x2 1/4

Statistics based on 60 of 66 reporting participants

Comments on Assigned Data Flags for Test #116

ALT8LN (X) - Data for both samples are extremely high.

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

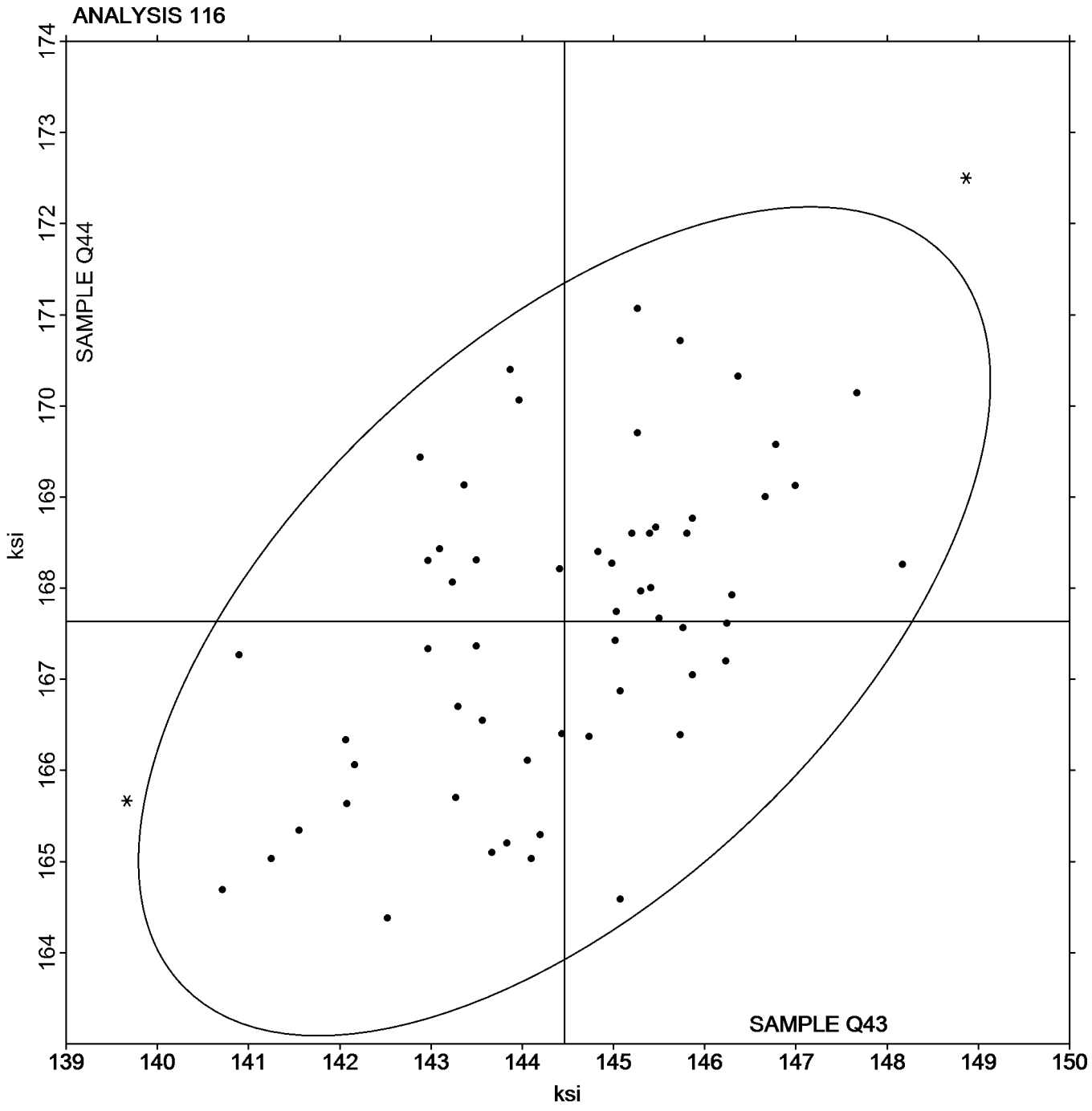
EUTGD3 (X) - Data for sample Q43 are extremely high.

GHBL72 (X) - Data for both samples are extremely low.

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

K4W28C (X) - Data for both samples are extremely low.

SAMPLE Q43	SAMPLE Q44
144.46 ksi	167.64 ksi



		Sample E43			Sample E44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
274A42		60.06	0.21	0.56	55.06	0.11	0.27
2A79JZ		59.96	0.11	0.30	54.86	-0.09	-0.23
2BHRJW		59.86	0.01	0.04	54.86	-0.09	-0.23
2JDF8T		59.58	-0.27	-0.70	54.76	-0.19	-0.48
2KLXFJ		59.92	0.07	0.20	55.00	0.05	0.12
2QTNKB		59.54	-0.31	-0.80	54.56	-0.39	-0.98
3ZEWZR		60.26	0.41	1.09	54.98	0.03	0.07
4ULAPJ		59.90	0.05	0.14	55.04	0.09	0.22
6VEKXQ		60.02	0.17	0.46	54.82	-0.13	-0.33
6VYJAA		59.34	-0.51	-1.32	54.86	-0.09	-0.23
74JG8T		59.00	-0.85	-2.22	54.00	-0.95	-2.37
7B2ALR		60.08	0.23	0.62	55.42	0.47	1.16
7MV7J6		59.14	-0.71	-1.85	54.60	-0.35	-0.88
7P3UAB		60.00	0.15	0.41	55.06	0.11	0.27
7QJHKW		60.24	0.39	1.04	55.22	0.27	0.66
7RUWWQ	X	58.20	-1.65	-4.32	53.96	-0.99	-2.47
88L83U		59.32	-0.53	-1.38	54.50	-0.45	-1.12
8MY737		60.00	0.15	0.41	55.00	0.05	0.12
A89M62		59.50	-0.35	-0.91	54.50	-0.45	-1.12
A9NGWF		59.64	-0.21	-0.54	54.84	-0.11	-0.28
AGGZNP		59.46	-0.39	-1.01	54.04	-0.91	-2.27
AU32TF	*	59.00	-0.85	-2.22	54.66	-0.29	-0.73
B22Q9Y		59.70	-0.15	-0.38	55.04	0.09	0.22
BAUTZG		59.40	-0.45	-1.17	55.08	0.13	0.32
BFZCB4		60.54	0.70	1.83	55.29	0.34	0.83
BGYX7Z		59.58	-0.27	-0.70	55.32	0.37	0.91
BP9WNX	X	59.26	-0.59	-1.53	53.66	-1.29	-3.21
BPNNNM		60.22	0.37	0.98	55.08	0.13	0.32
BWTX6A		60.00	0.15	0.41	55.14	0.19	0.47
BX4ZTU	X	58.60	-1.25	-3.27	52.88	-2.07	-5.15
C482Q3		60.10	0.25	0.67	55.48	0.53	1.31
C6WGUJ		59.38	-0.47	-1.22	54.24	-0.71	-1.77
C92Z6Y		60.10	0.25	0.67	55.60	0.65	1.61
CKQPPG		59.68	-0.17	-0.43	54.82	-0.13	-0.33
CQXRHJ		59.95	0.10	0.28	55.38	0.43	1.07
CW6GGX		60.12	0.27	0.72	55.20	0.25	0.61
CYUTCW		59.82	-0.03	-0.07	55.50	0.55	1.36
DANYUG		59.68	-0.17	-0.43	54.60	-0.35	-0.88
DRP2CL		59.94	0.09	0.25	55.00	0.05	0.12
DVLGW2		59.76	-0.09	-0.22	54.76	-0.19	-0.48
E2TFTD		59.86	0.01	0.04	55.42	0.47	1.16
E6LQHH		60.22	0.37	0.98	55.34	0.39	0.96
E8G3NH		59.40	-0.45	-1.17	54.70	-0.25	-0.63
EFNZA2		60.18	0.33	0.88	55.22	0.27	0.66
ENLGYK		59.96	0.11	0.30	55.06	0.11	0.27
EWCHCV		60.16	0.31	0.83	54.88	-0.07	-0.18
EWVWQE		59.90	0.05	0.14	54.60	-0.35	-0.88

		Sample E43			Sample E44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
EZZMXU		59.92	0.07	0.20	55.24	0.29	0.71
FDWTDN		59.68	-0.17	-0.43	54.58	-0.37	-0.93
FJZ86D		60.20	0.35	0.93	55.30	0.35	0.86
FQKT8B		59.76	-0.09	-0.22	54.52	-0.43	-1.08
FYK69Z		59.30	-0.55	-1.43	54.44	-0.51	-1.27
FYWJLV		60.08	0.23	0.62	54.90	-0.05	-0.13
G64TJV		60.24	0.39	1.04	55.30	0.35	0.86
GDXFFG		59.54	-0.31	-0.80	54.40	-0.55	-1.37
GHDBE6		59.74	-0.11	-0.28	54.44	-0.51	-1.27
H7P22V		59.90	0.05	0.14	55.12	0.17	0.42
HTMBKX		59.90	0.05	0.14	55.32	0.37	0.91
HTPX4W		59.30	-0.55	-1.43	54.40	-0.55	-1.37
J3HPGU		59.10	-0.75	-1.95	54.68	-0.27	-0.68
J4HZGP		60.30	0.45	1.19	55.40	0.45	1.11
J78CBN		60.60	0.75	1.98	55.40	0.45	1.11
JD2Y7N		59.72	-0.13	-0.33	55.16	0.21	0.51
JPXGZ2		60.20	0.35	0.93	55.04	0.09	0.22
KBEZTW		60.18	0.33	0.88	55.38	0.43	1.06
KFTTJP	*	59.22	-0.63	-1.64	55.10	0.15	0.37
KLQ74J		59.52	-0.33	-0.85	54.94	-0.01	-0.03
KXB789		59.66	-0.18	-0.48	55.19	0.23	0.58
KZCE8C		59.58	-0.27	-0.70	55.08	0.13	0.32
LBA3V6		60.34	0.49	1.30	55.32	0.37	0.91
M3W9EH	X	58.36	-1.49	-3.90	53.56	-1.39	-3.46
M44HWL	X	59.58	-0.27	-0.70	53.82	-1.13	-2.81
MDUAQL		59.92	0.07	0.20	54.80	-0.15	-0.38
MDXW7E		59.40	-0.45	-1.17	54.38	-0.57	-1.42
MKAME7		60.34	0.49	1.30	55.42	0.47	1.16
N3BPVB		60.48	0.63	1.67	55.88	0.93	2.30
N47XUZ		59.50	-0.35	-0.91	54.60	-0.35	-0.88
N897CC		60.20	0.35	0.93	55.56	0.61	1.51
NJY3A4		59.90	0.05	0.14	54.86	-0.09	-0.23
NQXUTC		59.58	-0.27	-0.70	54.50	-0.45	-1.12
PBE9M7		60.04	0.19	0.51	55.00	0.05	0.12
QFM7FB		60.52	0.67	1.77	55.62	0.67	1.66
QHY7Q6	*	59.14	-0.71	-1.85	53.78	-1.17	-2.91
QNZVG4		59.86	0.01	0.04	54.92	-0.03	-0.08
QRJH43		59.72	-0.13	-0.33	54.40	-0.55	-1.37
QTUHYC		60.52	0.67	1.77	55.52	0.57	1.41
R3FB2E		60.46	0.61	1.60	55.68	0.73	1.81
R99HH3		60.26	0.41	1.09	55.60	0.65	1.61
RERBJ7		59.88	0.03	0.09	55.42	0.47	1.16
RFNN6D		59.48	-0.37	-0.96	54.40	-0.55	-1.37
RJ6LJB		60.16	0.31	0.83	55.28	0.33	0.81
RLE4TK		59.52	-0.33	-0.85	54.48	-0.47	-1.17
RLRZCR		59.72	-0.13	-0.33	55.24	0.29	0.71
RZTW9Y		59.88	0.03	0.09	54.92	-0.03	-0.08

WebCode	Data Flag	Sample E43 Lab Mean	Sample E43 Diff. from Grand Mean	Sample E43 CPV	Sample E44 Lab Mean	Sample E44 Diff. from Grand Mean	Sample E44 CPV
TEN988		59.80	-0.05	-0.12	54.32	-0.63	-1.57
TH74CK		60.06	0.21	0.56	55.14	0.19	0.47
TJL2E4	X	57.80	-2.05	-5.36	53.64	-1.31	-3.26
TQFRQJ		60.30	0.45	1.19	55.54	0.59	1.46
TVW323		59.42	-0.43	-1.12	54.24	-0.71	-1.77
TW9WJM		60.23	0.38	1.01	55.60	0.64	1.60
UMXWK7		59.80	-0.05	-0.12	54.94	-0.01	-0.03
UTKKHW		59.26	-0.59	-1.53	54.38	-0.57	-1.42
V2VXMT		60.22	0.37	0.98	55.16	0.21	0.51
V3PJFJ		60.40	0.55	1.46	55.14	0.19	0.47
VJRDYC		59.73	-0.12	-0.31	55.10	0.15	0.36
VL2YNJ		59.92	0.07	0.20	54.66	-0.29	-0.73
VRPU24	*	59.22	-0.63	-1.64	55.02	0.07	0.17
VV3TTN		59.86	0.01	0.04	55.16	0.21	0.51
WA4PPV		60.58	0.73	1.93	55.26	0.31	0.76
WM8KWG		59.98	0.13	0.35	55.06	0.11	0.27
WWEDBH		59.80	-0.05	-0.12	54.90	-0.05	-0.13
WY7NDR		60.06	0.21	0.56	55.12	0.17	0.42
XDJAZU		59.50	-0.35	-0.91	54.72	-0.23	-0.58
XPC8U2		60.00	0.15	0.41	55.00	0.05	0.12
XQ49UW		59.58	-0.27	-0.70	54.86	-0.09	-0.23
XYFDTA		59.30	-0.55	-1.43	54.80	-0.15	-0.38
YAC9GA		60.00	0.15	0.41	55.12	0.17	0.42
YC2DEM		60.48	0.63	1.67	54.98	0.03	0.07
YDFCG7		60.08	0.23	0.62	54.98	0.03	0.07
YNDEHE		59.90	0.05	0.14	54.42	-0.53	-1.32
YQ6DWD		59.54	-0.31	-0.80	54.60	-0.35	-0.88
YWCAUC		59.88	0.03	0.09	54.90	-0.05	-0.13
Z2HV3N		60.10	0.25	0.67	54.90	-0.05	-0.13
Z44JHV	X	61.56	1.71	4.50	56.00	1.05	2.60
ZLYETX		59.58	-0.27	-0.70	54.80	-0.15	-0.38
ZN9EX6	*	58.80	-1.05	-2.74	53.94	-1.01	-2.52
ZZNHQB		60.10	0.25	0.67	55.28	0.33	0.81

Summary Statistics

	Sample E43		Sample E44	
Grand Means	59.85	HRC	54.95	HRC
Stnd Dev Btwn Labs	0.38	HRC	0.40	HRC

Samples E43, E44 : Steel, Steel

Statistics based on 120 of 127 reporting participants

Comments on Assigned Data Flags for Test #118

7RUWWQ (X) - Data for sample E43 are low.

BP9WNX (X) - Data for sample E44 are low.

BX4ZTU (X) - Data for both samples are low. Possible Systematic Error.

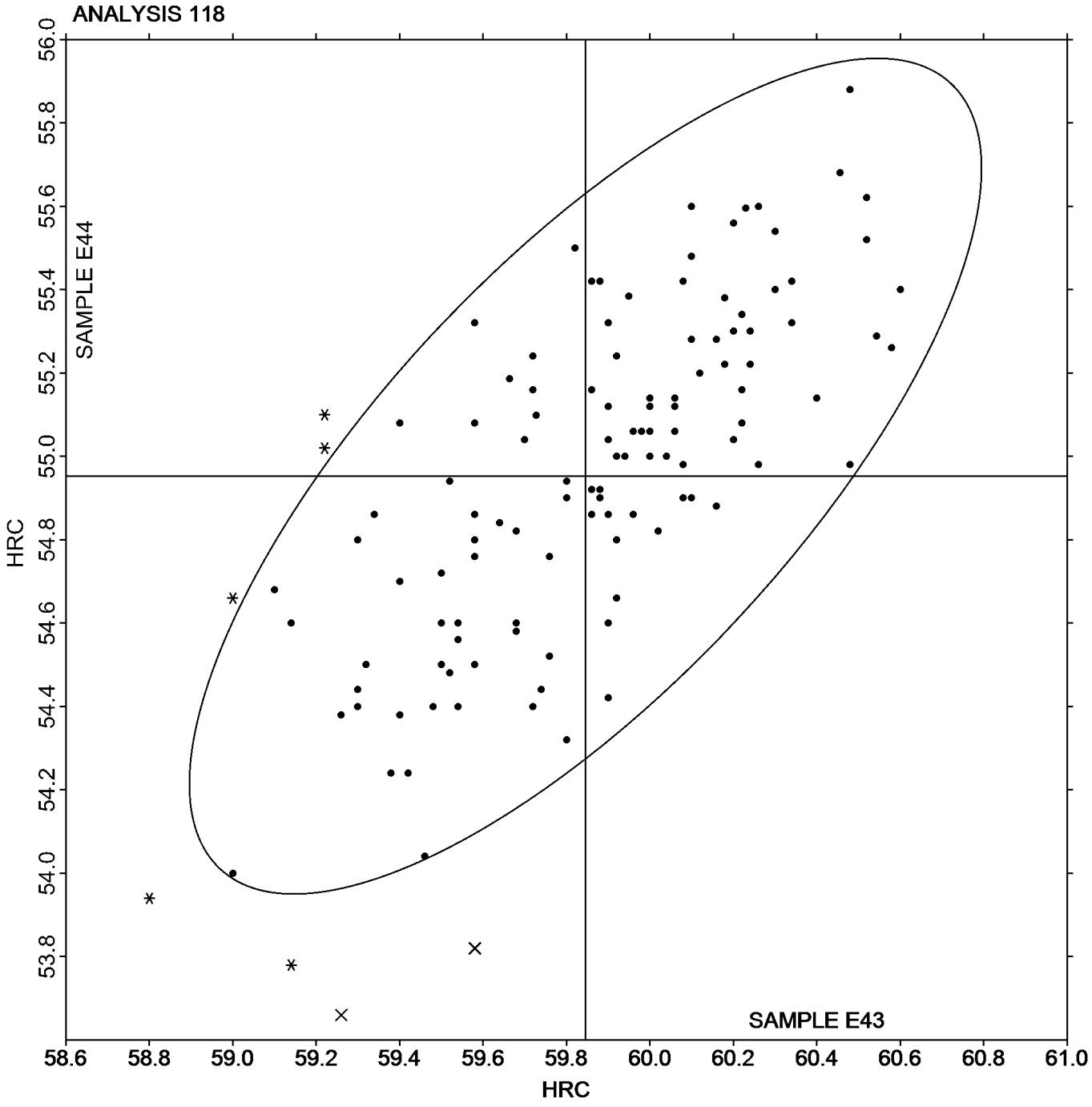
M3W9EH (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample E43.

M44HWL (X) - Data for sample E44 are low.

TJL2E4 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample E43.

Z44JHV (X) - Data for sample E43 are high. Inconsistent within the determinations of both samples.

SAMPLE E43	SAMPLE E44
59.85 HRC	54.95 HRC



		Sample E43			Sample E44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2THV68		60.02	0.23	0.52	54.84	-0.13	-0.30
3WU9X7		59.62	-0.17	-0.40	55.02	0.05	0.12
4CNE6L		59.00	-0.79	-1.83	54.56	-0.41	-0.96
4GHCUC		59.82	0.03	0.06	54.88	-0.09	-0.21
4WB4CR		58.96	-0.83	-1.92	54.52	-0.45	-1.05
6TMJXU		59.30	-0.49	-1.14	55.00	0.03	0.07
7RTMVY		59.40	-0.39	-0.91	54.60	-0.37	-0.86
8A42QY		59.72	-0.07	-0.17	54.62	-0.35	-0.82
8PZN7M		60.70	0.91	2.09	55.22	0.25	0.58
8QBYAX		60.44	0.65	1.49	55.66	0.69	1.61
96RDP3		59.98	0.19	0.43	54.40	-0.57	-1.33
9HFF9U		59.30	-0.49	-1.14	54.76	-0.21	-0.49
9R7W26		60.26	0.47	1.07	55.06	0.09	0.21
AW822M		59.66	-0.13	-0.31	54.50	-0.47	-1.10
B6KDTE		59.22	-0.57	-1.32	54.46	-0.51	-1.19
B7D8T4		59.68	-0.11	-0.26	55.44	0.47	1.10
BE6N2K		60.02	0.23	0.52	55.00	0.03	0.07
BMJ29W		59.68	-0.11	-0.26	54.66	-0.31	-0.72
CYN7NB		59.86	0.07	0.15	54.56	-0.41	-0.96
DLJA3N		60.02	0.23	0.52	55.56	0.59	1.38
DRJVQG		59.66	-0.13	-0.31	55.14	0.17	0.40
EHDUZV		59.44	-0.35	-0.82	54.42	-0.55	-1.28
ELF8QN		59.80	0.01	0.01	54.80	-0.17	-0.40
ELYQXG		60.06	0.27	0.61	55.46	0.49	1.14
EPUP7K		59.32	-0.47	-1.09	54.42	-0.55	-1.28
EZZMXU		60.04	0.25	0.57	54.56	-0.41	-0.96
F2LQ2L		59.50	-0.29	-0.68	54.76	-0.21	-0.49
GB94KG		59.84	0.05	0.10	54.68	-0.29	-0.68
GGCHDQ		60.24	0.45	1.03	55.44	0.47	1.10
GN9W2R		59.36	-0.43	-1.00	54.82	-0.15	-0.35
HM2RCB		60.26	0.47	1.07	55.32	0.35	0.82
HQXE3D		59.76	-0.03	-0.08	55.58	0.61	1.42
HQZRJZ		59.96	0.17	0.38	54.52	-0.45	-1.05
HUHNUQ		60.52	0.73	1.67	55.38	0.41	0.96
J3HPGU		59.10	-0.69	-1.60	54.68	-0.29	-0.68
JTLXCV		60.18	0.39	0.89	55.08	0.11	0.26
K4W28C		59.46	-0.33	-0.77	55.20	0.23	0.54
K8ERKF		59.24	-0.55	-1.28	54.32	-0.65	-1.52
LTWENZ		60.34	0.55	1.26	55.52	0.55	1.28
LZUB4P		60.02	0.23	0.52	55.16	0.19	0.44
MMJGED		60.18	0.38	0.88	55.32	0.35	0.83
MMKVY6		60.26	0.47	1.07	55.22	0.25	0.58
MT98NE		59.40	-0.39	-0.91	54.26	-0.71	-1.66
MWMWXQ	*	59.02	-0.77	-1.78	53.76	-1.21	-2.82
NB7DLT		59.64	-0.15	-0.36	55.30	0.33	0.77
P78T3N		60.62	0.83	1.90	55.56	0.59	1.38
Q3ZYJA		59.64	-0.15	-0.36	54.62	-0.35	-0.82

WebCode	Data Flag	Sample E43 Lab Mean	Sample E43 Diff. from Grand Mean	Sample E43 CPV	Sample E44 Lab Mean	Sample E44 Diff. from Grand Mean	Sample E44 CPV
QBB6B7		59.86	0.07	0.15	54.84	-0.13	-0.30
QHB7MY		60.10	0.31	0.70	55.40	0.43	1.00
QJ8W6U		59.16	-0.63	-1.46	54.30	-0.67	-1.56
QQRFGM		59.26	-0.53	-1.23	54.68	-0.29	-0.68
QX8T68		60.10	0.31	0.70	54.88	-0.09	-0.21
R7W9FA		58.92	-0.87	-2.01	54.64	-0.33	-0.77
TB6LLU		59.96	0.17	0.38	55.18	0.21	0.49
TLNHKR		59.52	-0.27	-0.63	55.28	0.31	0.72
TW7J88		59.78	-0.01	-0.03	54.82	-0.15	-0.35
TXJ7KF		59.90	0.11	0.24	55.70	0.73	1.70
U6GQDF		59.62	-0.17	-0.40	54.86	-0.11	-0.26
U8KJ8E		59.58	-0.21	-0.49	54.90	-0.07	-0.16
U9GAMN		59.94	0.15	0.34	55.10	0.13	0.30
V44HL8		60.50	0.71	1.62	55.74	0.77	1.80
VXCB4Y		59.98	0.19	0.43	54.84	-0.13	-0.30
WC9HJU		59.99	0.19	0.45	54.96	-0.01	-0.02
WZFVFK		59.70	-0.09	-0.22	54.84	-0.13	-0.30
XEWJD2		60.38	0.59	1.35	55.10	0.13	0.30
XGLHH7		59.50	-0.29	-0.68	55.50	0.53	1.24
XNHCF6		60.16	0.37	0.84	54.86	-0.11	-0.26
XWCKV4	*	60.94	1.15	2.64	56.17	1.20	2.80
Y6ZTW7		59.44	-0.35	-0.82	54.74	-0.23	-0.54
YJXEA7		59.54	-0.25	-0.59	54.92	-0.05	-0.12
YM2FLK		59.78	-0.02	-0.04	55.39	0.42	0.97
ZLN9XH		60.00	0.21	0.47	55.30	0.33	0.77
ZVAC4W		59.88	0.09	0.20	55.26	0.29	0.68

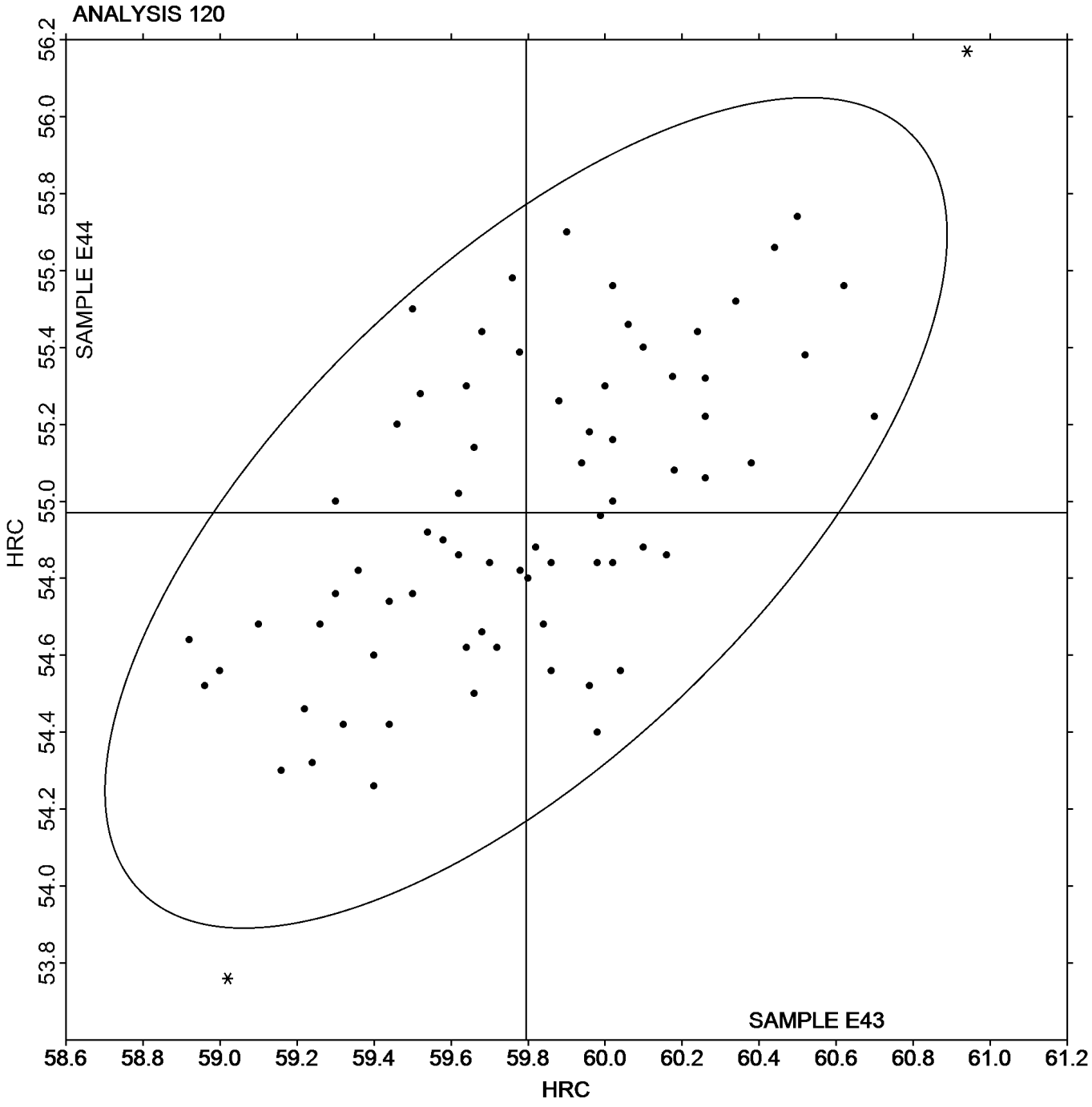
Summary Statistics

	Sample E43		Sample E44	
Grand Means	59.79	HRC	54.97	HRC
Stnd Dev Btwn Labs	0.43	HRC	0.43	HRC

Samples E43, E44 : Steel, Steel

Statistics based on 73 of 73 reporting participants

SAMPLE E43	SAMPLE E44
59.79 HRC	54.97 HRC



		Sample G43			Sample G44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2JDF8T		36.06	-0.06	-0.13	36.36	0.19	0.37
2QUJ73		35.51	-0.60	-1.32	35.95	-0.23	-0.45
3G3NYC		35.47	-0.65	-1.41	35.61	-0.56	-1.13
3UQZ6U		36.17	0.05	0.11	36.44	0.26	0.53
46ZDM3		36.01	-0.11	-0.24	36.19	0.01	0.02
6AV8V9		36.66	0.55	1.19	36.26	0.09	0.17
6J4FZN		35.98	-0.14	-0.29	35.95	-0.23	-0.45
6W2987		36.67	0.55	1.20	35.94	-0.23	-0.47
6XNXUD		35.38	-0.74	-1.61	35.43	-0.74	-1.50
84K2L3		36.09	-0.02	-0.05	35.83	-0.34	-0.69
84YZRQ		36.50	0.38	0.84	36.48	0.30	0.60
89C2Q3		36.73	0.61	1.33	36.88	0.70	1.41
89DQY7		36.21	0.09	0.20	36.09	-0.09	-0.18
967VN2		36.06	-0.06	-0.13	36.01	-0.16	-0.33
9FM4CP		36.66	0.54	1.18	36.06	-0.11	-0.23
9HCTT2		35.93	-0.19	-0.42	36.26	0.09	0.17
9HEYYX		36.21	0.09	0.20	36.89	0.72	1.44
9QVYRU		36.34	0.22	0.48	35.89	-0.28	-0.57
9R7W26		36.94	0.82	1.79	36.71	0.54	1.08
AGJEL4		35.91	-0.21	-0.46	36.30	0.12	0.25
AGVD22		36.07	-0.05	-0.10	36.10	-0.08	-0.15
ALT8LN		36.06	-0.05	-0.12	36.29	0.12	0.24
B7WB3P		35.59	-0.53	-1.15	35.03	-1.14	-2.30
BPNNNM	*	36.74	0.62	1.35	35.94	-0.24	-0.48
CCEB6Z		35.92	-0.19	-0.42	35.66	-0.52	-1.04
DNL6QW		36.04	-0.08	-0.17	36.41	0.23	0.46
DRAHRN		36.44	0.33	0.71	36.63	0.46	0.91
DT24D6		36.51	0.39	0.85	36.19	0.02	0.04
EWCHCV		36.12	0.00	0.00	36.10	-0.08	-0.15
EYHMRJ		36.79	0.67	1.46	36.52	0.34	0.69
FYK69Z		35.78	-0.34	-0.74	35.60	-0.58	-1.16
G64TJV		35.88	-0.24	-0.51	36.49	0.31	0.63
GHBL72		35.19	-0.92	-2.01	35.41	-0.76	-1.53
GHQK9K		35.58	-0.54	-1.17	36.37	0.19	0.39
H3PTTE		35.66	-0.46	-1.00	35.88	-0.30	-0.60
HFBRKW	X	34.34	-1.78	-3.87	34.59	-1.59	-3.19
J78CBN		36.44	0.33	0.71	36.58	0.41	0.81
JPWQRX		35.83	-0.29	-0.63	35.70	-0.48	-0.96
JXD36Y		36.51	0.40	0.86	36.89	0.72	1.44
K2VJ6V		36.16	0.05	0.10	35.73	-0.45	-0.91
KNGQ7N		35.91	-0.20	-0.44	35.89	-0.29	-0.58
KWBW2A		35.94	-0.17	-0.38	36.70	0.52	1.05
KX97VR	*	35.35	-0.77	-1.67	34.73	-1.44	-2.90
L3HPUK		35.70	-0.42	-0.91	35.65	-0.53	-1.06
L9MTVZ		36.12	0.00	0.00	36.21	0.03	0.06
LUJRV4		36.02	-0.10	-0.21	36.28	0.10	0.20
M3W9EH		36.15	0.03	0.07	36.23	0.05	0.10

		Sample G43			Sample G44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
M44HWL		36.08	-0.04	-0.09	36.07	-0.11	-0.22
M62YGQ		36.23	0.11	0.25	36.43	0.25	0.50
N3BPVB		36.34	0.22	0.48	36.59	0.41	0.83
NDATBJ		36.98	0.86	1.88	37.40	1.22	2.46
NENENR	*	34.86	-1.25	-2.73	35.11	-1.06	-2.14
NFW4YB		36.79	0.68	1.47	37.11	0.94	1.88
NUGCLG		36.42	0.30	0.66	36.26	0.08	0.16
PBHXPH		35.63	-0.49	-1.07	35.75	-0.43	-0.86
PHGX2A		36.86	0.75	1.62	36.54	0.36	0.73
PR8W2B	*	34.98	-1.14	-2.47	34.84	-1.34	-2.69
PTYHJL		36.79	0.68	1.47	36.58	0.41	0.81
QFPWMT		37.11	0.99	2.16	36.94	0.76	1.53
QK2PV7	X	35.16	-0.96	-2.09	32.91	-3.27	-6.57
QNZVG4		35.83	-0.29	-0.62	36.60	0.42	0.85
QTUHYC		35.93	-0.19	-0.40	36.52	0.34	0.69
QUC9AG		36.04	-0.08	-0.17	35.80	-0.38	-0.76
RGGAPC		36.31	0.19	0.41	36.17	-0.01	-0.01
RLRZCR		35.94	-0.17	-0.38	36.42	0.24	0.49
RVFL79		35.93	-0.19	-0.40	35.64	-0.54	-1.08
TEN988		36.81	0.70	1.52	36.92	0.74	1.49
TH9TLN		36.01	-0.10	-0.23	36.16	-0.02	-0.04
TNWAHU		35.92	-0.20	-0.43	35.90	-0.28	-0.56
U3TA2M		36.27	0.15	0.33	35.98	-0.20	-0.40
U4KK4W		36.35	0.23	0.51	37.11	0.93	1.87
UMG9BL		35.73	-0.39	-0.85	35.96	-0.21	-0.43
UQX6PF		36.12	0.00	0.00	36.16	-0.02	-0.04
URQYP7		36.82	0.70	1.53	36.23	0.05	0.10
V98JKF		36.16	0.04	0.09	36.13	-0.04	-0.09
VL2YNJ	X	35.13	-0.99	-2.16	33.86	-2.31	-4.65
VQUX7K		36.06	-0.06	-0.13	36.07	-0.11	-0.22
W4J376		35.50	-0.62	-1.34	35.86	-0.31	-0.63
WD34DL		35.88	-0.24	-0.53	36.37	0.19	0.39
XAK6H4		36.13	0.01	0.02	36.38	0.20	0.40
XZW8V4		35.76	-0.35	-0.77	35.96	-0.22	-0.44
Y9FCQ9		36.33	0.21	0.46	36.77	0.59	1.19
ZQF3N9		35.81	-0.30	-0.66	36.02	-0.16	-0.32
ZZNHQB		36.80	0.68	1.49	36.83	0.66	1.32

Summary Statistics

	Sample G43		Sample G44	
Grand Means	36.12	HRC	36.18	HRC
Stnd Dev Btwn Labs	0.46	HRC	0.50	HRC

Samples G43, G44 : 1/2-20x2 1/2, 1/2-20x2 3/4

Statistics based on 81 of 84 reporting participants

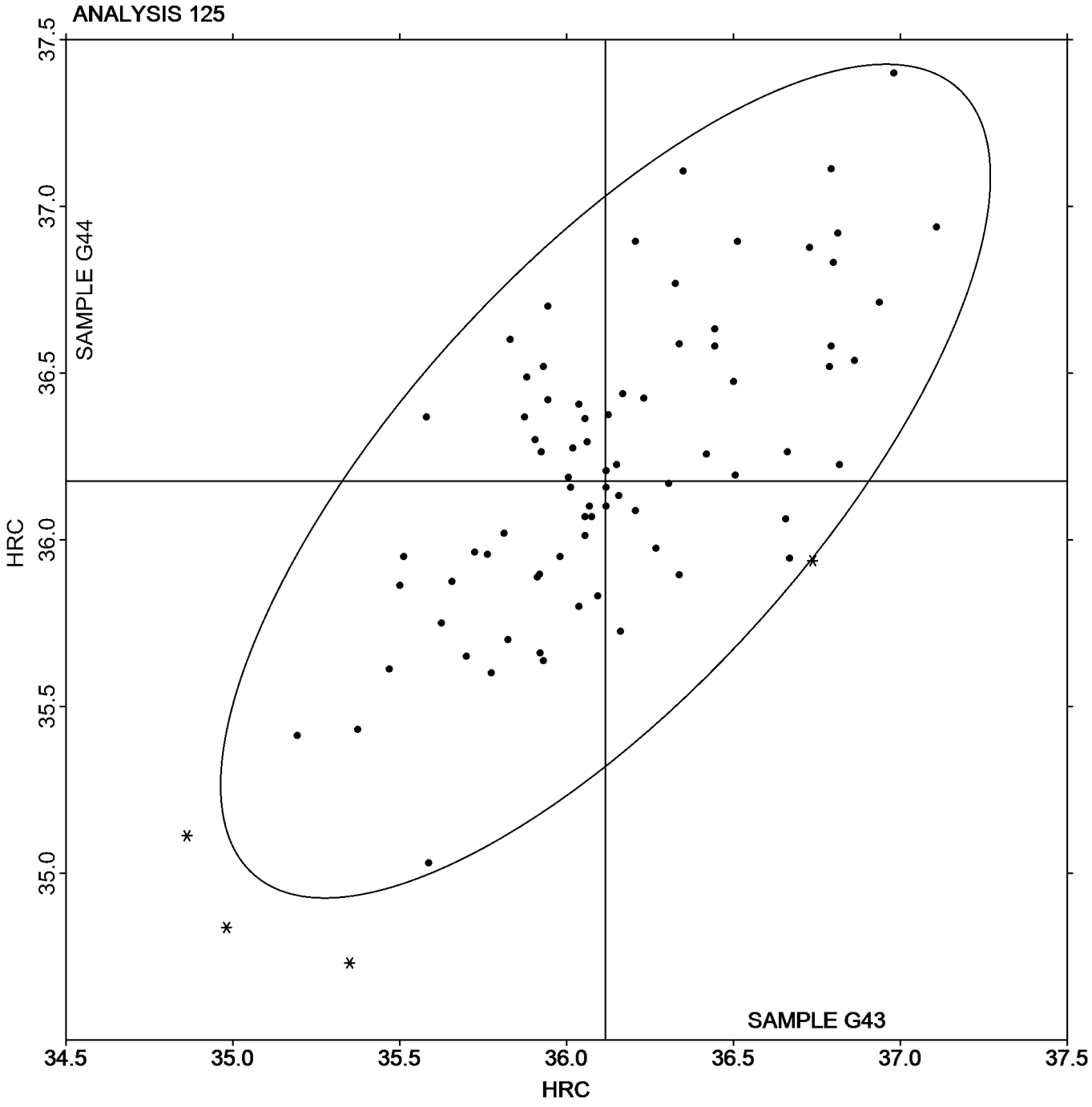
Comments on Assigned Data Flags for Test #125

HFBRKW (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample G43.

QK2PV7 (X) - Data for sample G44 are very low. Inconsistent within the determinations of both samples.

VL2YNJ (X) - Data for sample G44 are low. Inconsistent within the determinations of sample G44.

SAMPLE G43	SAMPLE G44
36.12 HRC	36.18 HRC



		Sample V43			Sample V44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
3A63QP		358.13	0.90	0.12	355.06	-1.86	-0.24
4WAD7A		351.63	-5.60	-0.73	355.38	-1.55	-0.20
8QRCD2		356.31	-0.91	-0.12	355.69	-1.23	-0.16
9HEYYX		354.88	-2.35	-0.31	353.50	-3.42	-0.44
9Y4ZZV		359.06	1.84	0.24	358.06	1.14	0.15
BP9WNX		353.09	-4.14	-0.54	356.16	-0.76	-0.10
CEKVTZ		357.31	0.09	0.01	356.38	-0.55	-0.07
D6BFBE		361.63	4.40	0.58	359.81	2.89	0.37
EYHMRJ		359.66	2.43	0.32	357.93	1.00	0.13
GHBL72		360.38	3.15	0.41	358.94	2.02	0.26
K2VJ6V		362.63	5.40	0.71	363.69	6.77	0.86
KX97VR		353.89	-3.34	-0.44	358.16	1.24	0.16
M62YGQ		358.31	1.09	0.14	357.88	0.95	0.12
N47XUZ	*	332.10	-25.12	-3.29	334.52	-22.40	-2.86
PR8W2B		351.20	-6.02	-0.79	349.67	-7.25	-0.92
QQRFGM		372.19	14.96	1.96	373.38	16.45	2.10
RA22A9	X	347.50	-9.72	-1.27	358.63	1.70	0.22
TGXPFX		344.44	-12.79	-1.67	339.75	-17.17	-2.19
TH9TLN		356.39	-0.84	-0.11	353.79	-3.13	-0.40
TW7J88		352.75	-4.47	-0.59	352.63	-4.30	-0.55
UMG9BL		363.63	6.40	0.84	362.18	5.25	0.67
VQUX7K		359.44	2.22	0.29	354.83	-2.09	-0.27
VXCB4Y		363.18	5.96	0.78	363.16	6.24	0.80
WM8KWG		366.10	8.88	1.16	366.99	10.07	1.28
XAK6H4		360.81	3.59	0.47	361.13	4.20	0.54
Y9FCQ9		361.47	4.24	0.55	364.40	7.47	0.95

Summary Statistics

	Sample V43		Sample V44	
Grand Means	357.22	HV	356.92	HV
Stnd Dev Btwn Labs	7.64	HV	7.84	HV

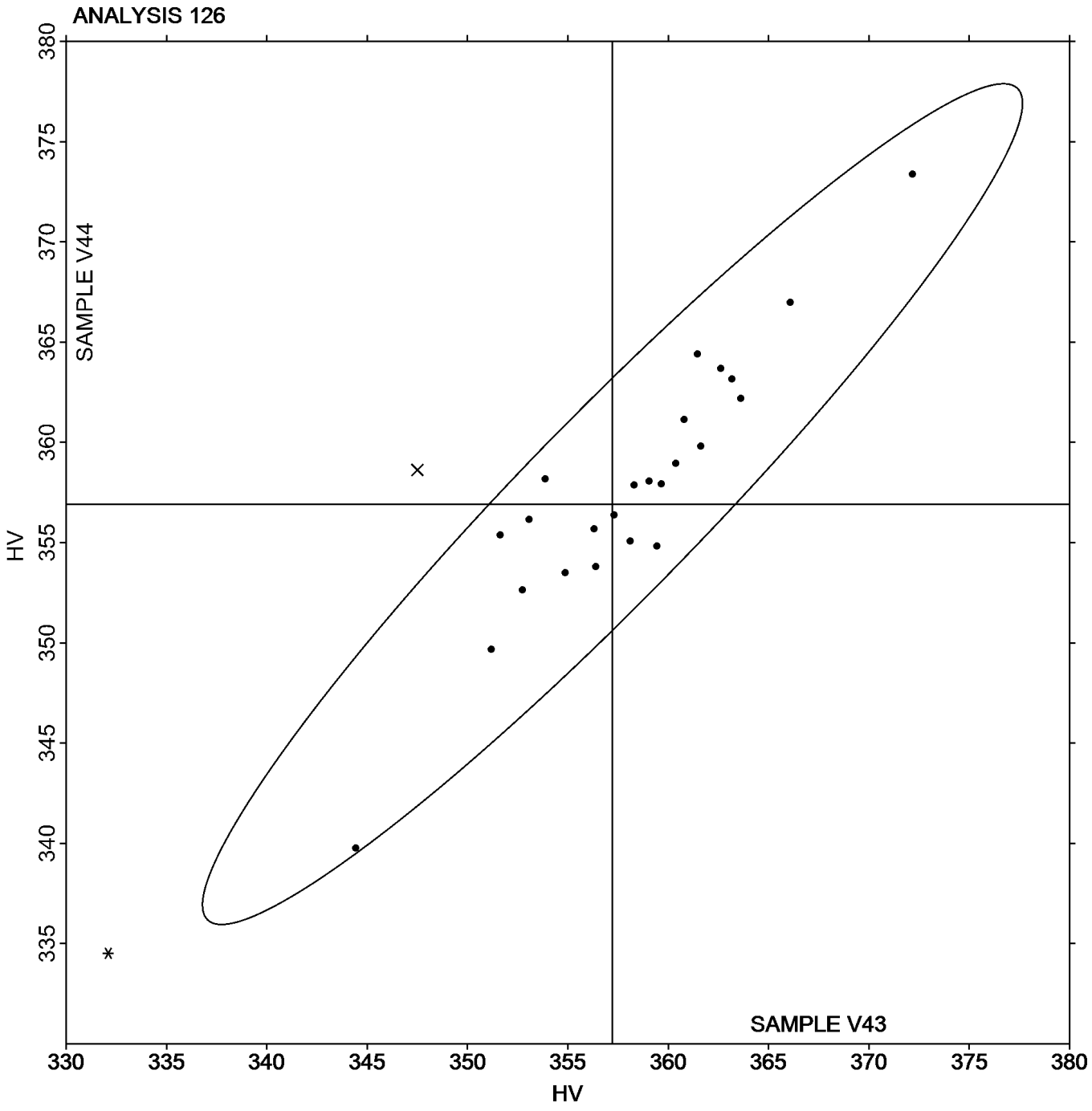
Samples V43, V44 : 1/2-20x2 1/2, 1/2-20x2 3/4

Statistics based on 25 of 26 reporting participants

Comments on Assigned Data Flags for Test #126

RA22A9 (X) - Inconsistent in testing between samples.

SAMPLE V43	SAMPLE V44
357.22 HV	356.92 HV



		Sample B43			Sample B44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
2QUJ73		1,166	13	1.36	1,168	2	0.18
3A63QP		1,148	-5	-0.48	1,161	-4	-0.29
84K2L3		1,137	-16	-1.67	1,160	-5	-0.39
8QRCD2		1,153	0	0.04	1,158	-8	-0.56
967VN2		1,140	-13	-1.36	1,170	4	0.31
9FM4CP		1,147	-6	-0.62	1,161	-5	-0.34
9QVYRU		1,163	10	1.02	1,180	15	1.07
AGJEL4		1,152	-1	-0.12	1,156	-9	-0.68
AGVD22		1,158	5	0.50	1,153	-12	-0.87
CDALRA		1,143	-10	-1.00	1,150	-15	-1.12
CEKVTZ		1,161	8	0.85	1,170	5	0.37
DNL6QW		1,161	8	0.85	1,164	-2	-0.12
E7N6EQ		1,143	-10	-1.04	1,144	-21	-1.53
G64TJV		1,165	12	1.27	1,181	15	1.13
HM2RCB	*	1,177	24	2.49	1,206	41	2.98
JXD36Y		1,143	-10	-1.07	1,155	-10	-0.73
M3DMLR		1,146	-7	-0.73	1,170	5	0.37
M3W9EH		1,150	-3	-0.32	1,185	20	1.44
N47XUZ		1,153	0	0.04	1,144	-21	-1.53
P9AQDG		1,152	-1	-0.06	1,166	1	0.05
RA22A9		1,148	-5	-0.52	1,156	-9	-0.65
RGGAPC		1,148	-5	-0.54	1,154	-11	-0.80
TNWAHU		1,143	-10	-1.04	1,157	-8	-0.58
UMG9BL		1,172	19	1.96	1,184	19	1.37
V98JKF		1,146	-7	-0.73	1,155	-10	-0.72
VL2YNJ		1,157	4	0.39	1,163	-2	-0.14
VQUX7K		1,157	4	0.44	1,183	18	1.33
W4J376		1,156	3	0.29	1,172	6	0.47
XZW8V4		1,151	-2	-0.20	1,165	-1	-0.04

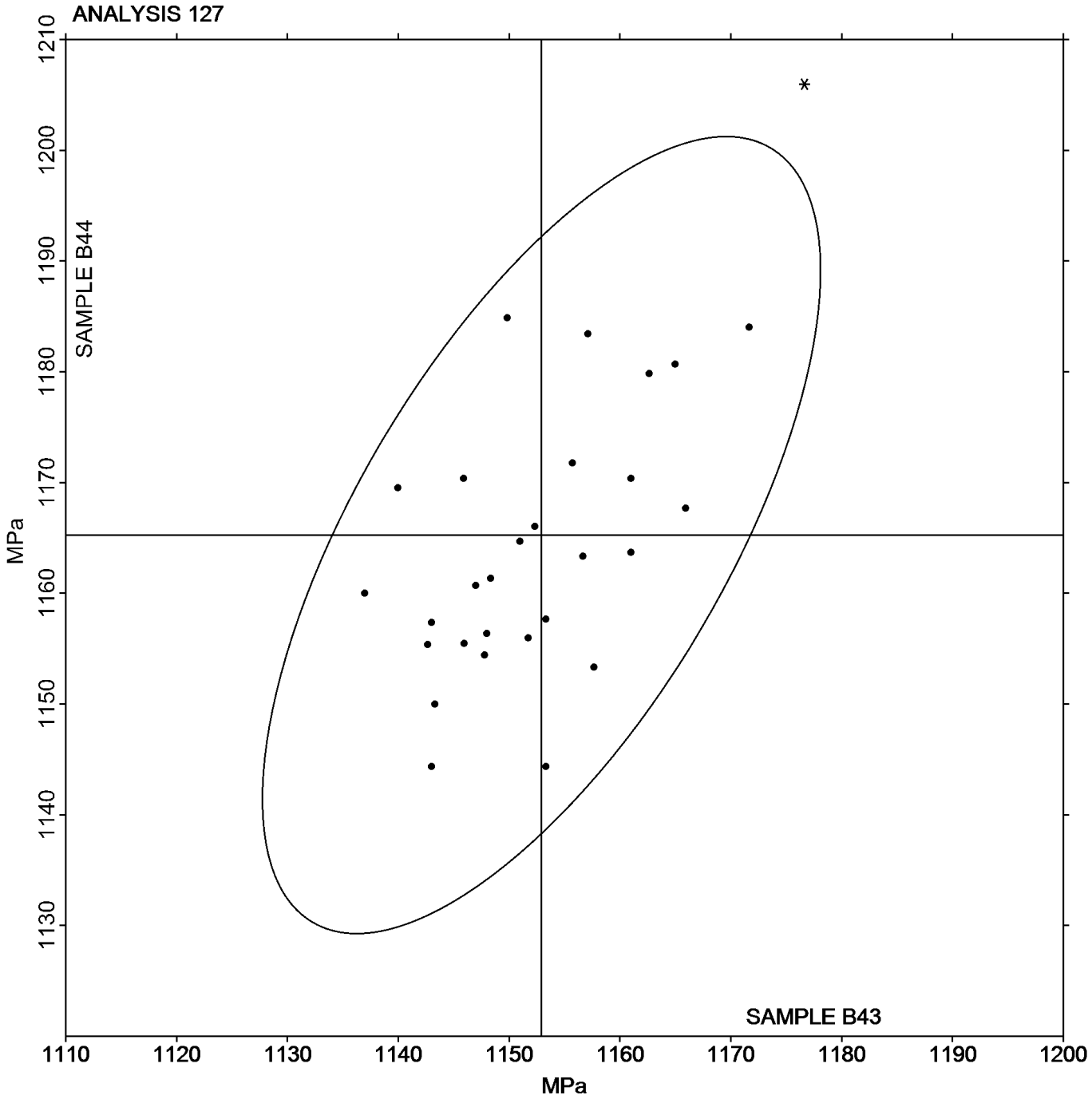
Summary Statistics

	Sample B43		Sample B44	
Grand Means	1,153	MPa	1,165	MPa
Stnd Dev Btwn Labs	10	MPa	14	MPa

Samples B43, B44 : M10x1.5x70, M10x1.5x75

Statistics based on 29 of 29 reporting participants

SAMPLE B43	SAMPLE B44
1,153 MPa	1,165 MPa



Fasteners and Metals Interlaboratory Testing Program

Analysis 128

Fastener Axial Tensile - Metric
ASTM F606M

		Sample T43			Sample T44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
3A63QP		1,157	-3	-0.15	1,173	2	0.08
4M3238		1,155	-5	-0.26	1,157	-14	-0.49
84YZRQ		1,160	0	-0.02	1,177	6	0.21
B7D8T4		1,138	-22	-1.05	1,134	-37	-1.33
CEKVTZ		1,163	3	0.16	1,186	15	0.53
DANYUG	*	1,221	61	2.94	1,254	84	2.98
JXD36Y		1,141	-19	-0.90	1,165	-6	-0.21
M3DMLR		1,145	-15	-0.74	1,162	-9	-0.31
P9AQDG		1,155	-5	-0.26	1,162	-8	-0.30
R2J3M4		1,161	1	0.03	1,162	-9	-0.31
UMG9BL		1,175	15	0.71	1,169	-1	-0.05
UQX6PF		1,150	-10	-0.48	1,152	-18	-0.66
V98JKF		1,161	0	0.02	1,167	-4	-0.14

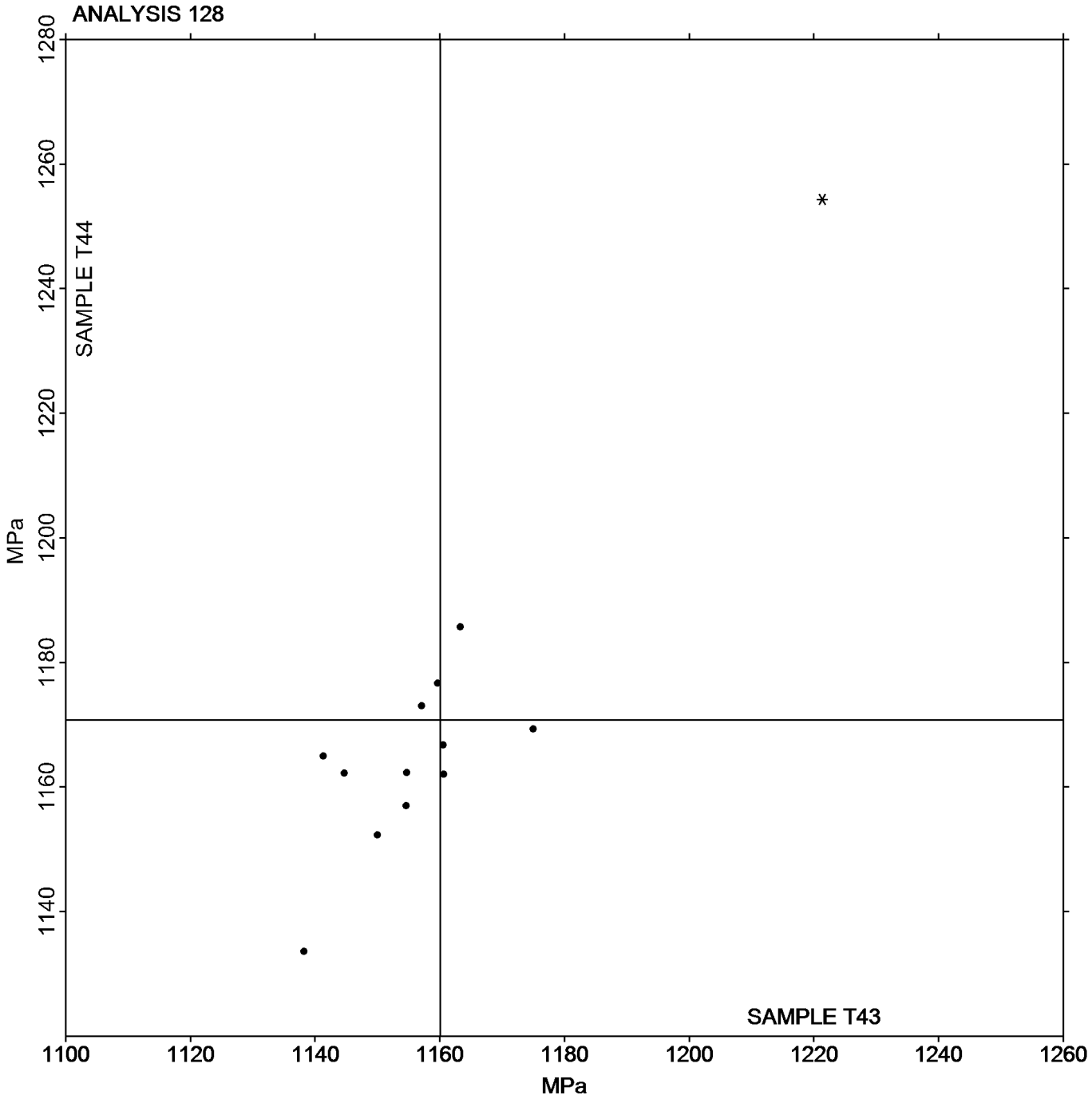
Summary Statistics

	Sample T43		Sample T44	
Grand Means	1,160	MPa	1,171	MPa
Stnd Dev Btwn Labs	21	MPa	28	MPa

Samples T43, T44 : M10x1.5x70, M10x1.5x75

Statistics based on 13 of 13 reporting participants

SAMPLE T43	SAMPLE T44
1,160 MPa	1,171 MPa



		Sample Z43			Sample Z44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
46ZDM3	X	13,402	-5,854	-14.37	15,335	-6,420	-12.03
6AV8V9		19,600	343	0.84	22,017	261	0.49
6C2XD4		19,067	-190	-0.47	21,276	-479	-0.90
6XNXUD		19,888	631	1.55	22,626	870	1.63
89C2Q3		20,017	760	1.87	22,300	544	1.02
9CA9JY		19,584	327	0.80	21,980	224	0.42
ALT8LN		19,364	108	0.26	21,216	-539	-1.01
BPNNNM		19,062	-194	-0.48	21,142	-614	-1.15
CYUTCW		18,783	-473	-1.16	21,433	-322	-0.60
EJBCBR		18,728	-529	-1.30	20,938	-818	-1.53
FYK69Z		18,970	-287	-0.70	21,567	-189	-0.35
G64TJV		19,051	-205	-0.50	21,653	-103	-0.19
GHBL72		18,727	-530	-1.30	21,211	-545	-1.02
HUE9UP		19,198	-58	-0.14	21,775	20	0.04
JPXGZ2		18,917	-340	-0.83	21,378	-378	-0.71
K4W28C		19,036	-221	-0.54	21,276	-480	-0.90
P2DVFH	X	22,022	2,765	6.79	19,673	-2,082	-3.90
QFPWMT		19,424	167	0.41	21,931	175	0.33
QTUHYC		19,233	-24	-0.06	22,167	412	0.77
RGFE4K		18,836	-420	-1.03	21,758	3	0.01
U4KK4W		19,170	-87	-0.21	21,760	4	0.01
WWEDBH		19,868	611	1.50	22,863	1,107	2.07
YF4FZH	X	20,934	1,677	4.12	21,439	-316	-0.59
ZVAC4W		19,867	610	1.50	22,600	844	1.58

Summary Statistics

	Sample Z43		Sample Z44	
Grand Means	19,257	lb	21,756	lb
Stnd Dev Btwn Labs	408	lb	534	lb

Samples Z43, Z44 : 3/8-16x2 1/4, 3/8-16x2 1/4

Statistics based on 21 of 24 reporting participants

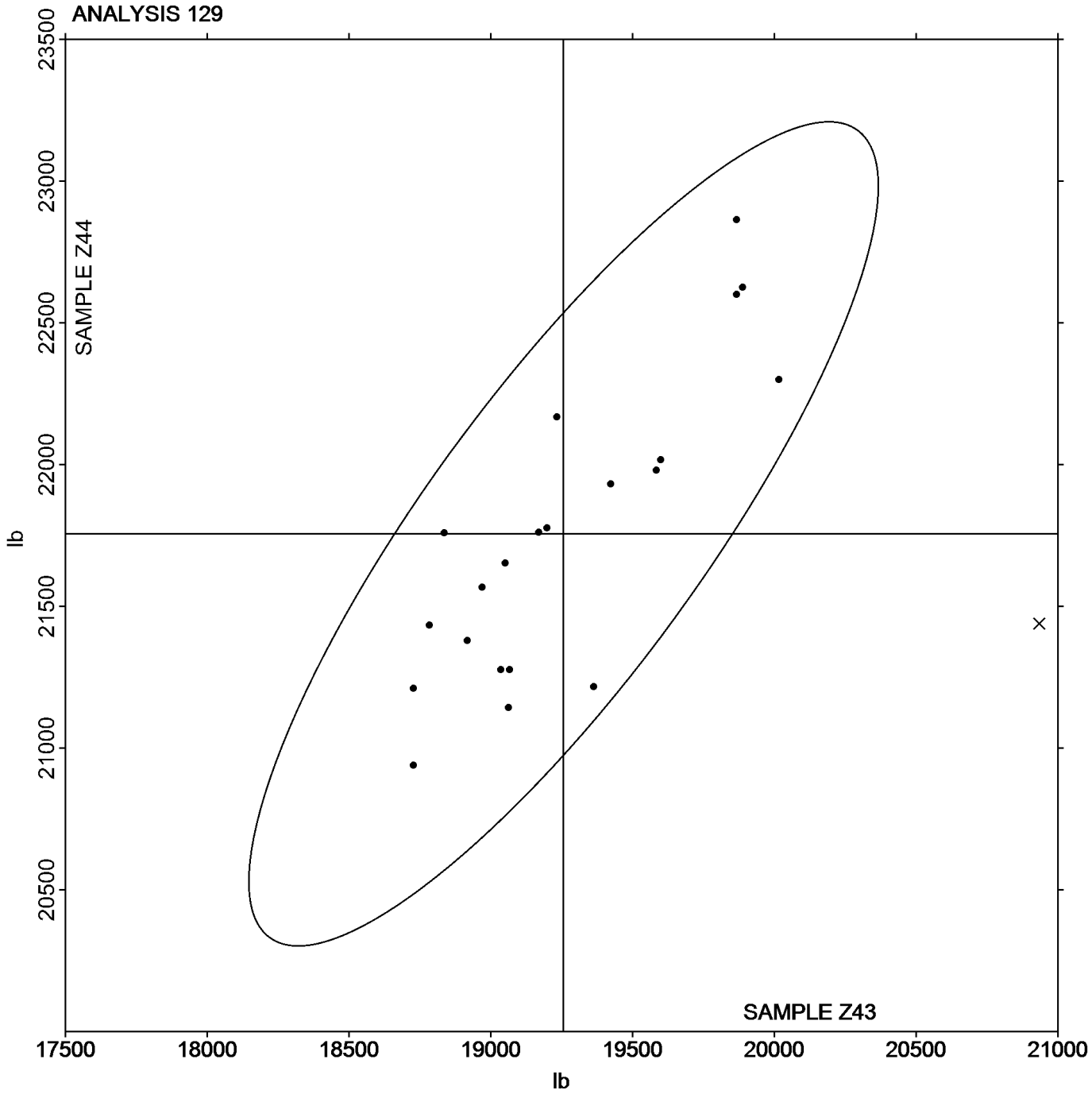
Comments on Assigned Data Flags for Test #129

46ZDM3 (X) - Data for both samples are extremely low.

P2DVFH (X) - Data for sample Z43 are very high and data for sample Z44 are low.

YF4FZH (X) - Data for sample Z43 are high. Inconsistent within the determinations of sample Z43.

SAMPLE Z43	SAMPLE Z44
19,257 lb	21,756 lb



		Sample F43			Sample F44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
24EY92		43.30	-0.57	-0.70	45.20	0.40	0.60
2BUTY4		43.27	-0.60	-0.74	44.08	-0.72	-1.09
2LW3QM		44.30	0.43	0.54	44.70	-0.10	-0.15
2ZK2LW		45.37	1.50	1.86	45.13	0.33	0.50
32QPYZ		43.39	-0.48	-0.59	43.53	-1.27	-1.92
34VGPT		43.15	-0.72	-0.88	44.59	-0.21	-0.32
3VZEKV		44.00	0.13	0.17	44.30	-0.50	-0.76
3WWKTU		44.00	0.13	0.17	45.20	0.40	0.60
3WXMTF		43.79	-0.07	-0.09	44.20	-0.60	-0.91
4CNE6L		44.24	0.37	0.46	45.25	0.45	0.68
4KEP43		44.70	0.83	1.03	44.80	0.00	0.00
4ULAPJ		45.50	1.63	2.02	46.10	1.30	1.96
66ZBBN	X	46.91	3.05	3.76	45.12	0.32	0.48
6J4FZN		43.00	-0.87	-1.07	44.50	-0.30	-0.45
6NXECY		44.30	0.43	0.54	45.50	0.70	1.06
6QDQQA		44.51	0.64	0.79	44.93	0.13	0.19
6VYJAA		42.50	-1.37	-1.69	44.67	-0.13	-0.19
6X4EP7		44.00	0.13	0.17	45.20	0.40	0.60
79HVVH		42.61	-1.26	-1.55	44.70	-0.11	-0.16
7MV7J6		43.09	-0.77	-0.96	45.01	0.20	0.31
7TLGVN		44.30	0.43	0.54	45.40	0.60	0.91
7WK87P		44.10	0.23	0.29	44.40	-0.40	-0.61
89ABKK		43.40	-0.47	-0.57	44.60	-0.20	-0.30
89WH76		43.60	-0.27	-0.33	43.60	-1.20	-1.81
8UER6H		43.98	0.11	0.14	44.96	0.16	0.24
96RDP3		44.40	0.53	0.66	45.90	1.10	1.66
9DYUZ3		43.20	-0.67	-0.82	44.20	-0.60	-0.91
9WCPTF		44.00	0.13	0.17	43.70	-1.10	-1.66
A7C2N3		43.60	-0.27	-0.33	44.70	-0.10	-0.15
A89M62		42.81	-1.06	-1.31	43.84	-0.96	-1.45
A8RBPG		44.09	0.23	0.28	44.96	0.16	0.24
AHPC2K		42.70	-1.17	-1.44	43.80	-1.00	-1.51
AQ6KE2		44.80	0.93	1.15	46.00	1.20	1.81
ATTWFR		44.52	0.65	0.81	45.37	0.57	0.86
AU32TF		45.06	1.19	1.47	45.81	1.01	1.53
B2YTNA		44.80	0.93	1.15	45.40	0.60	0.91
BTM6YV		43.63	-0.24	-0.29	44.99	0.19	0.28
BZRCRZ		42.75	-1.12	-1.38	43.25	-1.55	-2.34
C7QQ2K	*	42.10	-1.77	-2.18	44.50	-0.30	-0.45
C8M4MR		44.47	0.60	0.75	45.32	0.52	0.79
CFTPDL	*	46.05	2.18	2.70	46.18	1.38	2.08
CKQPPG		44.53	0.66	0.82	45.30	0.50	0.75
CP4W4N		44.18	0.31	0.39	44.53	-0.27	-0.41
CRDEBC		44.24	0.37	0.46	45.11	0.31	0.46
CTZN8E		43.31	-0.56	-0.69	45.10	0.30	0.45
CW6GGX		42.10	-1.77	-2.18	43.80	-1.00	-1.51
D6BFBE		43.66	-0.21	-0.26	44.82	0.02	0.02

		Sample F43			Sample F44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
DCBPVK		45.10	1.23	1.52	45.40	0.60	0.91
DRP2CL		43.96	0.10	0.12	44.12	-0.68	-1.03
DVLGW2		43.80	-0.06	-0.08	44.67	-0.13	-0.19
E6LQHH		45.00	1.13	1.40	45.40	0.60	0.91
E7N6EQ		43.38	-0.48	-0.60	44.24	-0.56	-0.85
EBVX72		43.14	-0.73	-0.90	43.49	-1.32	-1.99
EWVWQE		43.90	0.03	0.04	45.20	0.40	0.60
F8DZCJ		43.10	-0.77	-0.94	45.40	0.60	0.91
FDWTDN		44.94	1.07	1.32	45.82	1.02	1.55
FX6VCT		44.00	0.13	0.17	44.50	-0.30	-0.45
FZUP3P		42.70	-1.17	-1.44	44.60	-0.20	-0.30
G9WHJU		45.10	1.23	1.52	45.80	1.00	1.51
GDXFFG		44.14	0.27	0.33	45.03	0.23	0.35
GFMNPH		44.16	0.29	0.36	44.42	-0.38	-0.58
GJ2PXN		44.35	0.49	0.60	45.53	0.73	1.10
GULQ44		44.58	0.72	0.89	45.22	0.42	0.64
HDTD8N		44.40	0.53	0.66	44.90	0.10	0.15
HLL2CJ		45.09	1.22	1.51	45.80	1.00	1.51
J68V2Q		42.20	-1.67	-2.06	43.50	-1.30	-1.96
JCA3JF	*	45.66	1.79	2.22	45.09	0.29	0.44
JTLXCV		43.40	-0.47	-0.57	44.50	-0.30	-0.45
KBEZTW		44.00	0.13	0.17	45.00	0.20	0.30
KBWJHH		43.44	-0.43	-0.53	44.89	0.09	0.13
KLQ74J		44.30	0.43	0.54	45.70	0.90	1.36
L7FM8D		43.73	-0.14	-0.17	44.51	-0.29	-0.44
LPB7AR	X	42.30	-1.57	-1.93	42.40	-2.40	-3.63
ME97AT		43.51	-0.35	-0.44	44.67	-0.13	-0.19
MYTCD9		43.76	-0.11	-0.13	44.01	-0.79	-1.19
MYYGYD		43.92	0.05	0.07	44.35	-0.45	-0.68
NB3VJN		44.17	0.30	0.38	43.90	-0.90	-1.36
NLKQPA		42.90	-0.97	-1.20	44.07	-0.73	-1.11
PMER97		44.10	0.23	0.29	44.70	-0.10	-0.15
PNKCW7		43.60	-0.27	-0.33	44.40	-0.40	-0.61
PQ9Z7L		43.30	-0.57	-0.70	45.20	0.40	0.60
PR8W2B		44.96	1.10	1.35	45.98	1.18	1.78
PUQZNM		44.40	0.53	0.66	45.20	0.40	0.60
Q3JRAL		42.50	-1.37	-1.69	44.20	-0.60	-0.91
Q8D8XD		44.00	0.13	0.17	46.00	1.20	1.81
QJ8Z96		44.95	1.08	1.34	45.21	0.41	0.62
QYPJFD		43.20	-0.67	-0.82	44.00	-0.80	-1.21
R6K7HW		44.00	0.13	0.17	45.20	0.40	0.60
RFNN6D		43.95	0.08	0.10	44.67	-0.13	-0.19
RLRZCR		42.90	-0.97	-1.19	44.00	-0.80	-1.21
RYGRNZ		43.80	-0.07	-0.08	44.90	0.10	0.15
TB6LLU	X	47.00	3.13	3.87	44.40	-0.40	-0.61
TJL2E4		43.70	-0.17	-0.21	44.44	-0.36	-0.54
U46U46		44.77	0.90	1.12	45.81	1.01	1.53

		Sample F43			Sample F44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
U9XXX9	X	51.70	7.83	9.67	56.20	11.40	17.22
UTKKHW		44.09	0.23	0.28	44.96	0.16	0.24
UTZMQC		43.59	-0.27	-0.34	43.59	-1.21	-1.83
VJRDYC		44.38	0.52	0.64	45.40	0.60	0.90
WC9HJU		43.36	-0.50	-0.62	44.77	-0.03	-0.05
WD34DL		43.10	-0.77	-0.94	44.10	-0.70	-1.06
WHEEHE		44.10	0.23	0.29	45.30	0.50	0.75
WXRCLA		42.50	-1.37	-1.69	44.30	-0.50	-0.76
XP7XW9		44.16	0.30	0.37	44.67	-0.13	-0.20
XPT77D	X	39.95	-3.91	-4.83	41.22	-3.58	-5.41
YAC9GA		42.21	-1.66	-2.05	44.38	-0.42	-0.63
YZ6VJ9		44.48	0.61	0.76	45.62	0.82	1.24
Z2HV3N		43.80	-0.07	-0.08	44.80	0.00	0.00
ZN9EX6		43.74	-0.12	-0.15	44.15	-0.65	-0.98
ZT2G26		44.40	0.53	0.66	44.70	-0.10	-0.15
ZXTNHR		42.60	-1.27	-1.56	44.57	-0.23	-0.35

Summary Statistics

	Sample F43		Sample F44	
Grand Means	43.87	ksi	44.80	ksi
Stnd Dev Btwn Labs	0.81	ksi	0.66	ksi

Samples F43, F44 : AISI 1010 - 16G (T), AISI 1010 - 14G (X)

Statistics based on 105 of 110 reporting participants

Comments on Assigned Data Flags for Test #130

66ZBBN (X) - Data for sample F43 are high.

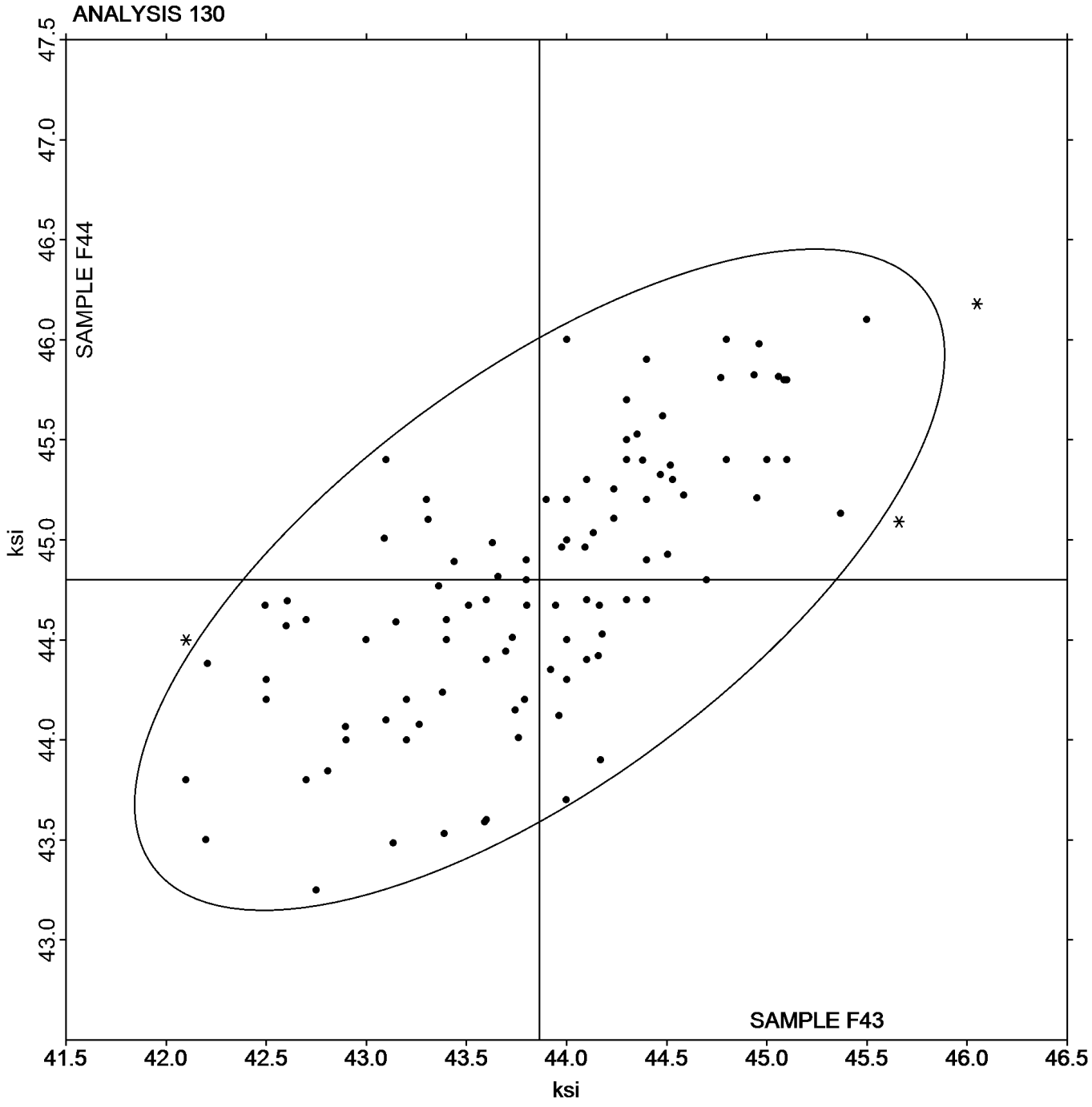
LPB7AR (X) - Data for sample F44 are low.

TB6LLU (X) - Data for sample F43 are high.

U9XXX9 (X) - Data for both samples are extremely high.

XPT77D (X) - Data for both samples are low.

SAMPLE F43	SAMPLE F44
43.87 ksi	44.80 ksi



		Sample F43			Sample F44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
24EY92		19.80	-3.30	-1.63	26.60	-0.68	-0.59
2BUTY4		24.21	1.10	0.54	28.21	0.93	0.80
2LW3QM		25.00	1.90	0.93	27.80	0.52	0.45
2ZK2LW		26.73	3.62	1.78	27.86	0.58	0.50
32QPYZ	X	27.97	4.87	2.40	31.57	4.29	3.71
34VGPT		23.07	-0.03	-0.02	28.54	1.26	1.09
3VZEKV		24.40	1.30	0.64	27.20	-0.08	-0.07
3WWKTU		21.40	-1.70	-0.84	27.10	-0.18	-0.16
3WXMTF	X	11.99	-11.11	-5.47	27.12	-0.16	-0.14
4CNE6L		20.74	-2.36	-1.16	26.54	-0.74	-0.64
4KEP43		26.00	2.90	1.43	27.60	0.32	0.28
4ULAPJ		26.10	3.00	1.47	28.00	0.72	0.62
66ZBBN	*	26.95	3.84	1.89	26.72	-0.56	-0.49
6J4FZN	X	24.80	1.70	0.84	37.00	9.72	8.40
6NXECY		22.20	-0.90	-0.44	27.40	0.12	0.10
6QDQQA	X	36.64	13.54	6.66	35.78	8.49	7.34
6VYJAA		19.00	-4.10	-2.02	27.27	-0.01	-0.01
6X4EP7		23.70	0.60	0.29	27.30	0.02	0.02
79HVVH		20.36	-2.74	-1.35	26.10	-1.18	-1.02
7MV7J6		21.13	-1.97	-0.97	27.35	0.07	0.06
7TLGVN		23.70	0.60	0.29	27.00	-0.28	-0.24
7WK87P		22.90	-0.20	-0.10	26.90	-0.38	-0.33
89ABKK		22.70	-0.40	-0.20	27.10	-0.18	-0.16
89WH76		21.90	-1.20	-0.59	26.60	-0.68	-0.59
8UER6H		20.49	-2.61	-1.28	26.40	-0.88	-0.76
96RDP3		22.50	-0.60	-0.30	27.10	-0.18	-0.16
9DYUZ3		23.90	0.80	0.39	28.70	1.42	1.23
9WCPTF		22.05	-1.05	-0.52	26.32	-0.96	-0.83
A7C2N3	X	29.70	6.60	3.25	24.40	-2.88	-2.49
A89M62		22.98	-0.13	-0.06	25.90	-1.38	-1.19
A8RBPG		24.51	1.41	0.69	26.83	-0.45	-0.39
AHPC2K		20.00	-3.10	-1.53	26.40	-0.88	-0.76
AQ6KE2		22.90	-0.20	-0.10	27.30	0.02	0.02
ATTWFR		24.75	1.65	0.81	27.73	0.45	0.39
AU32TF		21.96	-1.14	-0.56	26.68	-0.60	-0.52
B2YTNA		25.60	2.50	1.23	27.60	0.32	0.28
BTM6YV		22.81	-0.29	-0.15	26.96	-0.32	-0.28
BZRCRZ		24.00	0.90	0.44	26.00	-1.28	-1.11
C7QQ2K		20.60	-2.50	-1.23	28.10	0.82	0.71
C8M4MR		23.68	0.58	0.29	26.06	-1.22	-1.05
CKQPPG		21.88	-1.22	-0.60	26.68	-0.60	-0.52
CP4W4N		20.87	-2.23	-1.10	25.66	-1.62	-1.40
CRDEBC		21.76	-1.35	-0.66	27.27	-0.01	-0.01
CTZN8E		22.65	-0.45	-0.22	29.20	1.92	1.66
CW6GGX		22.00	-1.10	-0.54	27.00	-0.28	-0.24
D6BFBE		22.05	-1.06	-0.52	27.85	0.57	0.49
DCBPVK		24.50	1.40	0.69	26.80	-0.48	-0.42

		Sample F43			Sample F44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
DRP2CL		23.05	-0.06	-0.03	25.48	-1.80	-1.55
DVLGW2		22.92	-0.19	-0.09	26.11	-1.17	-1.02
E6LQHH		23.00	-0.10	-0.05	28.50	1.22	1.05
E7N6EQ		21.78	-1.32	-0.65	27.15	-0.13	-0.11
EBVX72		20.32	-2.79	-1.37	25.11	-2.17	-1.88
EWVWQE		22.20	-0.90	-0.44	27.10	-0.18	-0.16
F8DZCJ		20.60	-2.50	-1.23	27.70	0.42	0.36
FDWTDN		25.54	2.44	1.20	28.11	0.83	0.72
FX6VCT		23.90	0.80	0.39	26.80	-0.48	-0.42
FZUP3P		21.60	-1.50	-0.74	27.10	-0.18	-0.16
G9WHJU	*	27.50	4.40	2.16	30.00	2.72	2.35
GDXFFG		25.54	2.44	1.20	28.63	1.35	1.17
GFMNPH		25.03	1.93	0.95	27.01	-0.27	-0.23
GJ2PXN		24.80	1.70	0.84	27.69	0.41	0.35
GULQ44		25.16	2.06	1.01	26.92	-0.36	-0.31
HDTD8N	X	12.50	-10.60	-5.22	27.50	0.22	0.19
HLL2CJ		25.17	2.07	1.02	27.45	0.17	0.15
J68V2Q		22.90	-0.20	-0.10	28.10	0.82	0.71
JCA3JF		25.24	2.14	1.05	26.37	-0.91	-0.79
JTLXCV		24.00	0.90	0.44	26.40	-0.88	-0.76
KBWJHH		19.90	-3.20	-1.58	26.69	-0.59	-0.51
KLQ74J		23.30	0.20	0.10	28.10	0.82	0.71
LPB7AR		22.10	-1.00	-0.49	24.70	-2.58	-2.23
ME97AT		20.16	-2.94	-1.45	27.12	-0.16	-0.14
MYTCD9		24.23	1.13	0.55	26.85	-0.43	-0.37
MYYGYD		23.73	0.63	0.31	26.49	-0.79	-0.68
NB3VJN	X	27.83	4.73	2.33	25.66	-1.62	-1.40
NLKQPA		19.96	-3.14	-1.55	26.36	-0.92	-0.80
PMER97		23.70	0.60	0.29	26.50	-0.78	-0.68
PNKCW7		24.00	0.90	0.44	27.00	-0.28	-0.24
PQ9Z7L	*	25.10	2.00	0.98	30.50	3.22	2.78
PR8W2B	*	27.70	4.60	2.26	30.31	3.03	2.62
PUQZNM		25.70	2.60	1.28	29.80	2.52	2.18
Q3JRAL		22.60	-0.50	-0.25	28.20	0.92	0.79
Q8D8XD		27.00	3.90	1.92	29.00	1.72	1.49
QJ8Z96		23.55	0.45	0.22	27.49	0.21	0.18
QYPJFD		20.00	-3.10	-1.53	25.80	-1.48	-1.28
R6K7HW		23.80	0.70	0.34	27.30	0.02	0.02
RFNN6D		26.11	3.00	1.48	28.57	1.29	1.12
RLRZCR		20.50	-2.60	-1.28	26.00	-1.28	-1.11
RYGRNZ		22.40	-0.70	-0.35	27.10	-0.18	-0.16
TB6LLU	X	36.30	13.20	6.49	27.00	-0.28	-0.24
TJL2E4		23.70	0.59	0.29	26.42	-0.86	-0.74
U46U46		22.90	-0.20	-0.10	28.07	0.78	0.68
U9XXX9	X	30.90	7.80	3.84	38.60	11.32	9.78
UTKKHW		24.08	0.97	0.48	26.98	-0.30	-0.26
UTZMQC		24.92	1.81	0.89	27.42	0.13	0.12

WebCode	Data Flag	Sample F43 Lab Mean	Sample F43 Diff. from Grand Mean	Sample F43 CPV	Sample F44 Lab Mean	Sample F44 Diff. from Grand Mean	Sample F44 CPV
VJRDYC		23.79	0.68	0.34	28.28	1.00	0.87
WC9HJU		22.07	-1.03	-0.51	27.31	0.02	0.02
WD34DL		20.60	-2.50	-1.23	26.60	-0.68	-0.59
WHEEHE		23.60	0.50	0.24	27.70	0.42	0.36
WXRCLA		19.60	-3.50	-1.72	26.50	-0.78	-0.68
XP7XW9		21.58	-1.52	-0.75	26.36	-0.92	-0.79
XPT77D		19.84	-3.26	-1.60	24.54	-2.75	-2.37
YAC9GA		22.08	-1.02	-0.50	28.55	1.27	1.10
YZ6VJ9	*	25.59	2.48	1.22	30.21	2.93	2.53
Z2HV3N		24.90	1.80	0.88	27.90	0.62	0.53
ZN9EX6		20.16	-2.94	-1.45	25.05	-2.23	-1.93
ZT2G26		26.40	3.30	1.62	28.90	1.62	1.40
ZXTNHR	*	22.06	-1.04	-0.51	29.45	2.17	1.87

Summary Statistics

	Sample F43		Sample F44	
Grand Means	23.10	ksi	27.28	ksi
Stnd Dev Btwn Labs	2.03	ksi	1.16	ksi

Samples F43, F44 : AISI 1010 - 16G (T), AISI 1010 - 14G (X)

Statistics based on 98 of 107 reporting participants

Comments on Assigned Data Flags for Test #131

32QPYZ (X) - Data for sample F44 are high.

3WXMTF (X) - Data for sample F43 are low.

6J4FZN (X) - Data for sample F44 are very high.

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

A7C2N3 (X) - Data for sample F43 are high.

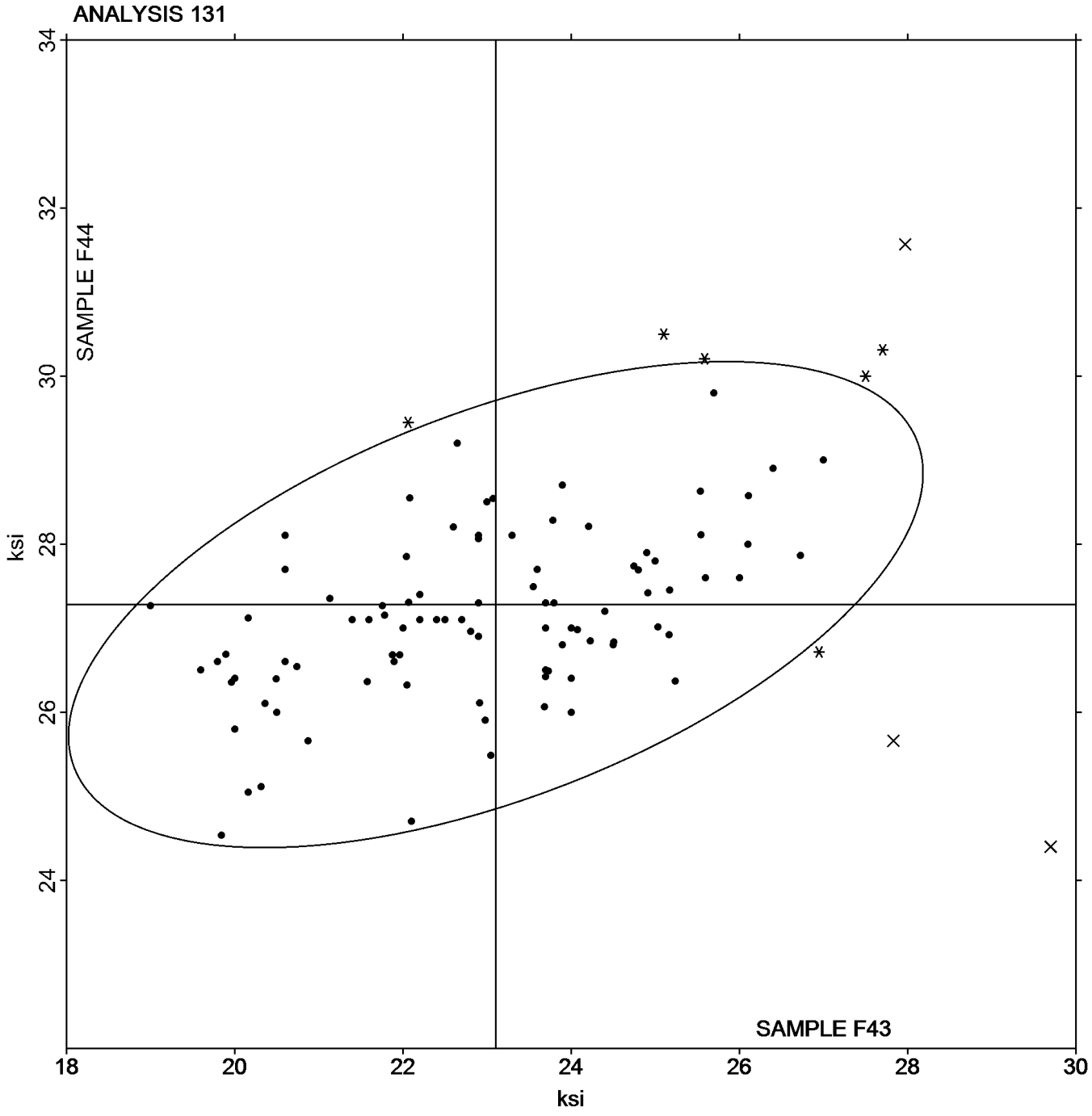
HDTD8N (X) - Data for sample F43 are low.

NB3VJN (X) - Inconsistent in testing between samples.

TB6LLU (X) - Data for sample F43 are very high.

U9XXX9 (X) - Data for Sample F43 are high. Data for Sample F44 are very high.

SAMPLE F43	SAMPLE F44
23.10 ksi	27.28 ksi



		Sample F43			Sample F44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
24EY92		49.60	3.21	1.14	46.70	1.78	0.65
2BUTY4		50.10	3.71	1.32	48.40	3.48	1.27
2LW3QM		48.80	2.41	0.86	47.40	2.48	0.91
2ZK2LW		40.50	-5.89	-2.10	39.90	-5.02	-1.83
32QPYZ	*	47.45	1.06	0.38	48.50	3.58	1.31
34VGPT		47.42	1.03	0.37	45.38	0.46	0.17
3VZEKV		48.70	2.31	0.82	44.70	-0.22	-0.08
3WWKTU		44.00	-2.39	-0.85	42.00	-2.92	-1.07
3WXMTF		48.21	1.82	0.65	47.22	2.30	0.84
4CNE6L		45.80	-0.59	-0.21	44.10	-0.82	-0.30
4KEP43		43.80	-2.59	-0.92	42.60	-2.32	-0.85
4ULAPJ		48.00	1.61	0.57	46.00	1.08	0.40
66ZBBN	X	41.30	-5.09	-1.81	44.70	-0.22	-0.08
6J4FZN		50.00	3.61	1.28	50.00	5.08	1.86
6NXECY		48.50	2.11	0.75	47.00	2.08	0.76
6QDQQA		47.39	1.00	0.35	45.62	0.70	0.26
6VYJAA		41.70	-4.69	-1.67	41.50	-3.42	-1.25
6X4EP7		43.40	-2.99	-1.07	41.50	-3.42	-1.25
79HVVH		45.85	-0.54	-0.19	44.05	-0.87	-0.32
7MV7J6		48.80	2.41	0.86	46.90	1.98	0.72
7TLGVN		42.40	-3.99	-1.42	40.30	-4.62	-1.69
7WK87P	*	42.50	-3.89	-1.39	44.00	-0.92	-0.34
89ABKK	X	41.75	-4.64	-1.65	44.90	-0.02	-0.01
89WH76		49.80	3.41	1.21	49.30	4.38	1.60
8UER6H		46.30	-0.09	-0.03	44.60	-0.32	-0.12
96RDP3	X	51.50	5.11	1.82	43.90	-1.02	-0.37
9DYUZ3	*	39.00	-7.39	-2.63	37.90	-7.02	-2.57
9WCPTF		44.36	-2.03	-0.72	43.42	-1.50	-0.55
A7C2N3		40.00	-6.39	-2.28	39.30	-5.62	-2.05
A89M62		50.00	3.61	1.28	50.00	5.08	1.86
A8RBPG		47.50	1.11	0.39	45.40	0.48	0.18
AHPC2K		44.50	-1.89	-0.67	43.50	-1.42	-0.52
AQ6KE2		41.00	-5.39	-1.92	39.00	-5.92	-2.16
ATTWFR		48.40	2.01	0.71	47.10	2.18	0.80
AU32TF		43.82	-2.57	-0.92	42.44	-2.48	-0.91
B2YTNA		50.90	4.51	1.60	48.40	3.48	1.27
BTM6YV		45.50	-0.89	-0.32	44.20	-0.72	-0.26
BZRCRZ		46.90	0.51	0.18	43.60	-1.32	-0.48
C7QQ2K		45.40	-0.99	-0.35	43.80	-1.12	-0.41
C8M4MR		46.70	0.31	0.11	46.30	1.38	0.51
CFTPDL	X	50.00	3.61	1.28	43.75	-1.17	-0.43
CKQPPG		47.12	0.73	0.26	44.55	-0.37	-0.13
CP4W4N		46.18	-0.21	-0.08	44.01	-0.91	-0.33
CRDEBC		42.00	-4.39	-1.56	43.00	-1.92	-0.70
CTZN8E		51.00	4.61	1.64	48.00	3.08	1.13
CW6GGX		43.30	-3.09	-1.10	42.80	-2.12	-0.77
D6BFBE		50.00	3.61	1.28	49.00	4.08	1.49

		Sample F43			Sample F44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
DCBPVK		47.00	0.61	0.22	46.00	1.08	0.40
DRP2CL		45.40	-0.99	-0.35	44.20	-0.72	-0.26
DVLGW2		45.50	-0.89	-0.32	44.70	-0.22	-0.08
E6LQHH		45.10	-1.29	-0.46	43.50	-1.42	-0.52
E7N6EQ		48.40	2.01	0.71	46.60	1.68	0.62
EBVX72		48.85	2.46	0.87	48.05	3.13	1.15
EWVWQE		43.80	-2.59	-0.92	43.10	-1.82	-0.66
F8DZCJ		47.90	1.51	0.54	46.00	1.08	0.40
FDWTDN		48.90	2.51	0.89	46.30	1.38	0.51
FX6VCT	X	47.50	1.11	0.39	32.50	-12.42	-4.54
FZUP3P		45.40	-0.99	-0.35	43.40	-1.52	-0.55
G9WHJU		46.00	-0.39	-0.14	43.40	-1.52	-0.55
GDXFFG		43.90	-2.49	-0.89	43.00	-1.92	-0.70
GFMNPH		49.10	2.71	0.96	48.10	3.18	1.16
GJ2PXN		44.10	-2.29	-0.82	41.90	-3.02	-1.10
GULQ44		43.70	-2.69	-0.96	41.30	-3.62	-1.32
HDTD8N	*	50.30	3.91	1.39	46.20	1.28	0.47
HLL2CJ		49.70	3.31	1.18	47.10	2.18	0.80
J68V2Q		46.40	0.01	0.00	47.20	2.28	0.83
JCA3JF	X	45.83	-0.56	-0.20	50.00	5.08	1.86
JTLXCV		50.00	3.61	1.28	47.10	2.18	0.80
KBWJHH		46.40	0.01	0.00	43.60	-1.32	-0.48
KLQ74J	X	51.00	4.61	1.64	42.90	-2.02	-0.74
L7FM8D	X	43.75	-2.64	-0.94	50.00	5.08	1.86
LPB7AR		46.50	0.11	0.04	46.50	1.58	0.58
ME97AT		49.00	2.61	0.93	49.00	4.08	1.49
MYTCD9	*	50.00	3.61	1.28	51.00	6.08	2.22
MYYGYD		48.98	2.58	0.92	48.95	4.03	1.47
NB3VJN	X	45.20	-1.19	-0.42	48.75	3.83	1.40
NLKQPA		46.20	-0.19	-0.07	44.90	-0.02	-0.01
PMER97		45.00	-1.39	-0.50	43.50	-1.42	-0.52
PNKCW7	X	25.70	-20.69	-7.37	23.30	-21.62	-7.91
PQ9Z7L	X	37.00	-9.39	-3.34	37.40	-7.52	-2.75
PR8W2B		46.04	-0.35	-0.13	45.50	0.58	0.21
PUQZNM	X	36.00	-10.39	-3.70	36.30	-8.62	-3.15
Q3JRAL		43.80	-2.59	-0.92	42.20	-2.72	-0.99
Q8D8XD	X	39.00	-7.39	-2.63	41.00	-3.92	-1.43
QJ8Z96		49.32	2.93	1.04	45.78	0.86	0.32
QYPJFD		46.80	0.41	0.14	46.20	1.28	0.47
R6K7HW		45.50	-0.89	-0.32	43.10	-1.82	-0.66
RLRZCR		45.80	-0.59	-0.21	44.80	-0.12	-0.04
RYGRNZ		45.00	-1.39	-0.50	42.50	-2.42	-0.88
TB6LLU		45.00	-1.39	-0.50	44.30	-0.62	-0.23
TJL2E4		46.40	0.01	0.00	43.80	-1.12	-0.41
U46U46		46.90	0.51	0.18	45.60	0.68	0.25
U9XXX9		44.70	-1.69	-0.60	42.80	-2.12	-0.77
UTKKHW		46.00	-0.39	-0.14	44.00	-0.92	-0.34

WebCode	Data Flag	Sample F43 Lab Mean	Sample F43 Diff. from Grand Mean	Sample F43 CPV	Sample F44 Lab Mean	Sample F44 Diff. from Grand Mean	Sample F44 CPV
UTZMQC	*	53.65	7.26	2.58	50.80	5.88	2.15
VJRDYC		42.20	-4.19	-1.49	40.50	-4.42	-1.62
WC9HJU		42.00	-4.39	-1.56	42.50	-2.42	-0.88
WD34DL		49.30	2.91	1.03	48.20	3.28	1.20
WHEEHE		42.10	-4.29	-1.53	41.30	-3.62	-1.32
WXRCLA		49.60	3.21	1.14	48.20	3.28	1.20
XP7XW9		45.90	-0.49	-0.18	43.70	-1.22	-0.45
XPT77D	X	20.00	-26.39	-9.40	19.90	-25.02	-9.15
YAC9GA		45.89	-0.50	-0.18	43.56	-1.36	-0.50
YZ6VJ9		45.05	-1.34	-0.48	42.42	-2.50	-0.91
Z2HV3N		49.40	3.01	1.07	46.30	1.38	0.51
ZN9EX6		47.70	1.31	0.47	45.70	0.78	0.29
ZT2G26		43.80	-2.59	-0.92	42.50	-2.42	-0.88
ZXTNHR		49.00	2.61	0.93	48.00	3.08	1.13

Summary Statistics

	Sample F43		Sample F44	
Grand Means	46.39	Percent	44.92	Percent
Stnd Dev Btwn Labs	2.81	Percent	2.73	Percent

Samples F43, F44 : AISI 1010 - 16G (T), AISI 1010 - 14G (X)

Statistics based on 94 of 108 reporting participants

Comments on Assigned Data Flags for Test #132

66ZBBN (X) - Inconsistent in testing between samples.

89ABKK (X) - Inconsistent in testing between samples.

96RDP3 (X) - Inconsistent in testing between samples.

CFTPDL (X) - Inconsistent in testing between samples.

FX6VCT (X) - Data for sample F44 are low.

JCA3JF (X) - Inconsistent in testing between samples.

KLQ74J (X) - Inconsistent in testing between samples.

L7FM8D (X) - Inconsistent in testing between samples.

NB3VJN (X) - Inconsistent in testing between samples.

PNKCW7 (X) - Data for both samples are very low. Possible Systematic Error.

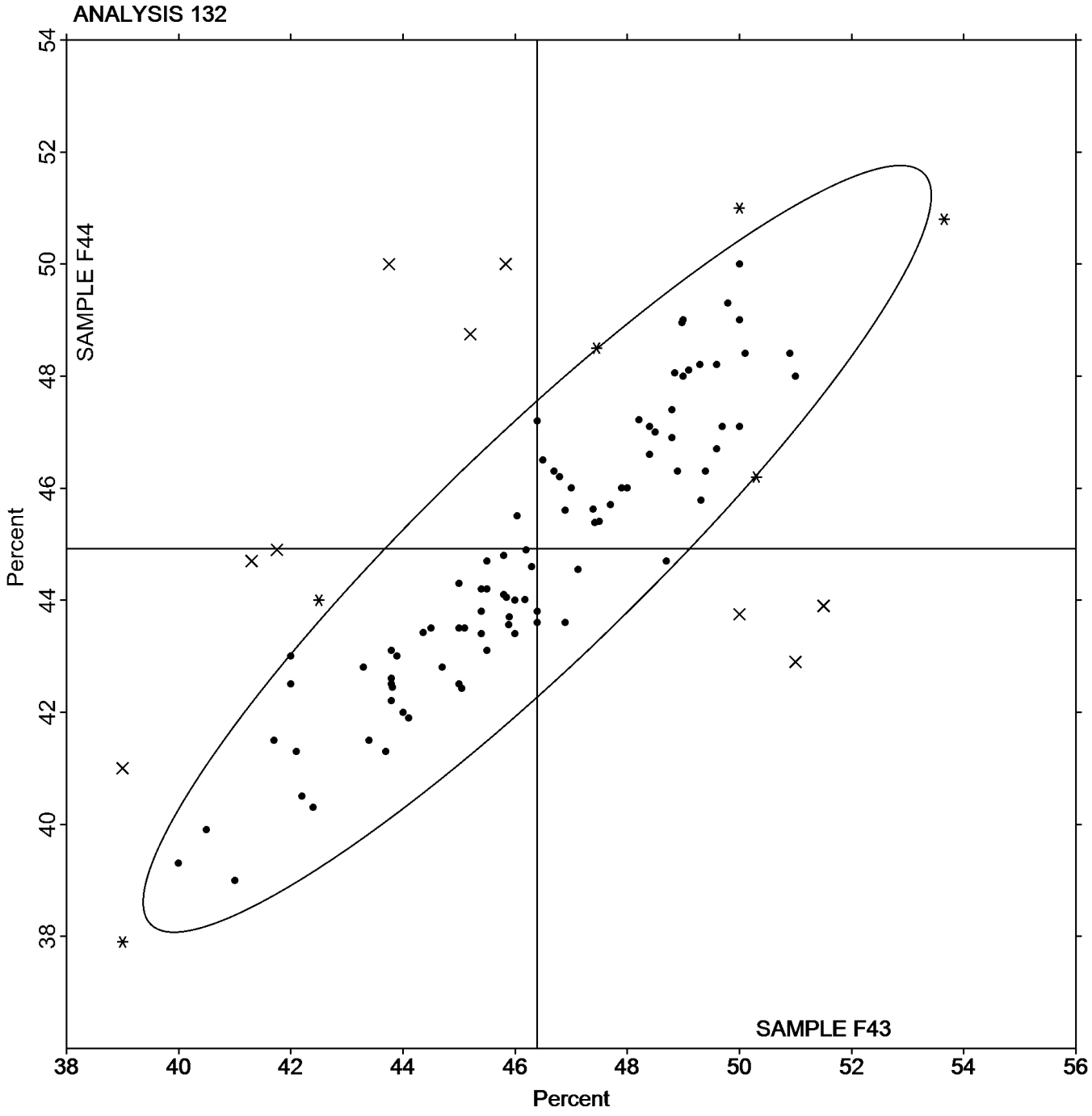
PQ9Z7L (X) - Data for sample F43 are low.

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

Q8D8XD (X) - Inconsistent in testing between samples.

XPT77D (X) - Data for both samples are very low. Possible Systematic Error.

SAMPLE F43	SAMPLE F44
46.39 Percent	44.92 Percent



		Sample E43			Sample E44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
274A42		77.58	0.37	0.72	72.44	-0.70	-1.27
2QUJ73		77.02	-0.19	-0.36	73.54	0.40	0.74
3VZEKV		77.76	0.55	1.07	73.42	0.28	0.52
4WAD7A		77.80	0.59	1.14	73.64	0.50	0.92
7MV7J6		76.80	-0.41	-0.79	72.90	-0.24	-0.43
84K2L3		78.42	1.21	2.34	74.22	1.08	1.98
8NMKMA		77.26	0.05	0.10	73.18	0.04	0.08
8PZN7M		77.70	0.49	0.95	73.98	0.84	1.54
9ZXCQA	X	75.90	-1.31	-2.52	71.10	-2.04	-3.71
A9NGWF		76.96	-0.25	-0.48	72.30	-0.84	-1.52
BFZCB4		77.55	0.35	0.67	73.61	0.47	0.86
BWTX6A		76.94	-0.27	-0.52	73.90	0.76	1.39
C7QQ2K		76.84	-0.37	-0.71	73.60	0.46	0.85
CW6GGX		77.78	0.57	1.10	73.42	0.28	0.52
DVLGW2		78.10	0.89	1.72	74.44	1.30	2.38
EJBCBR		77.16	-0.05	-0.09	73.22	0.08	0.15
EPUP7K		77.48	0.27	0.53	72.94	-0.20	-0.36
EWCHCV		76.38	-0.83	-1.60	72.48	-0.66	-1.19
EWVWQE		77.08	-0.13	-0.25	72.68	-0.46	-0.83
FYK69Z		76.32	-0.89	-1.71	72.66	-0.48	-0.87
G64TJV		77.30	0.09	0.18	72.76	-0.38	-0.68
GB94KG		76.88	-0.33	-0.63	72.88	-0.26	-0.47
GFM8LX		76.70	-0.51	-0.98	72.88	-0.26	-0.47
GGCHDQ		77.30	0.09	0.18	72.40	-0.74	-1.34
HTM9VT		77.94	0.73	1.41	73.62	0.48	0.88
HTMBKX		77.52	0.31	0.60	73.34	0.20	0.37
JLZ6YA		76.98	-0.23	-0.44	72.42	-0.72	-1.30
K2VJ6V		76.74	-0.47	-0.90	73.78	0.64	1.17
K7MVVL		76.84	-0.37	-0.71	71.90	-1.24	-2.25
LBA3V6		76.82	-0.39	-0.75	73.70	0.56	1.03
M44HWL		76.74	-0.47	-0.90	72.98	-0.16	-0.28
MMJGED		77.19	-0.01	-0.03	72.83	-0.31	-0.56
MYYGYD		77.76	0.55	1.07	73.36	0.22	0.41
N3BPVB		77.28	0.07	0.14	72.84	-0.30	-0.54
NDATBJ	*	76.00	-1.21	-2.33	73.00	-0.14	-0.25
QNZVG4		77.50	0.29	0.56	72.20	-0.94	-1.70
QTUHYC		77.62	0.41	0.80	73.44	0.30	0.55
QX8T68		77.60	0.39	0.76	73.10	-0.04	-0.06
R99HH3		77.58	0.37	0.72	73.58	0.44	0.81
RLRZCR		78.00	0.79	1.53	73.38	0.24	0.45
TH74CK		77.26	0.05	0.10	73.44	0.30	0.55
TJL2E4		76.10	-1.11	-2.14	72.24	-0.90	-1.63
V2VXMT		77.54	0.33	0.64	73.10	-0.04	-0.06
VJRDYC		77.14	-0.07	-0.13	72.95	-0.19	-0.34
VL2YNJ		76.46	-0.75	-1.44	72.66	-0.48	-0.87
W4J376		77.16	-0.05	-0.09	73.62	0.48	0.88
WA4PPV	X	72.68	-4.53	-8.73	64.72	-8.42	-15.33

WebCode	Data Flag	Sample E43 Lab Mean	Sample E43 Diff. from Grand Mean	Sample E43 CPV	Sample E44 Lab Mean	Sample E44 Diff. from Grand Mean	Sample E44 CPV
XYFDTA		76.96	-0.25	-0.48	73.20	0.06	0.12
XZW8V4		77.26	0.05	0.10	73.34	0.20	0.37
ZQJ3UX		76.84	-0.37	-0.71	73.00	-0.14	-0.25

Summary Statistics

	Sample E43		Sample E44	
Grand Means	77.21	HR30N	73.14	HR30N
Stnd Dev Btwn Labs	0.52	HR30N	0.55	HR30N

Samples E43, E44 : Steel, Steel

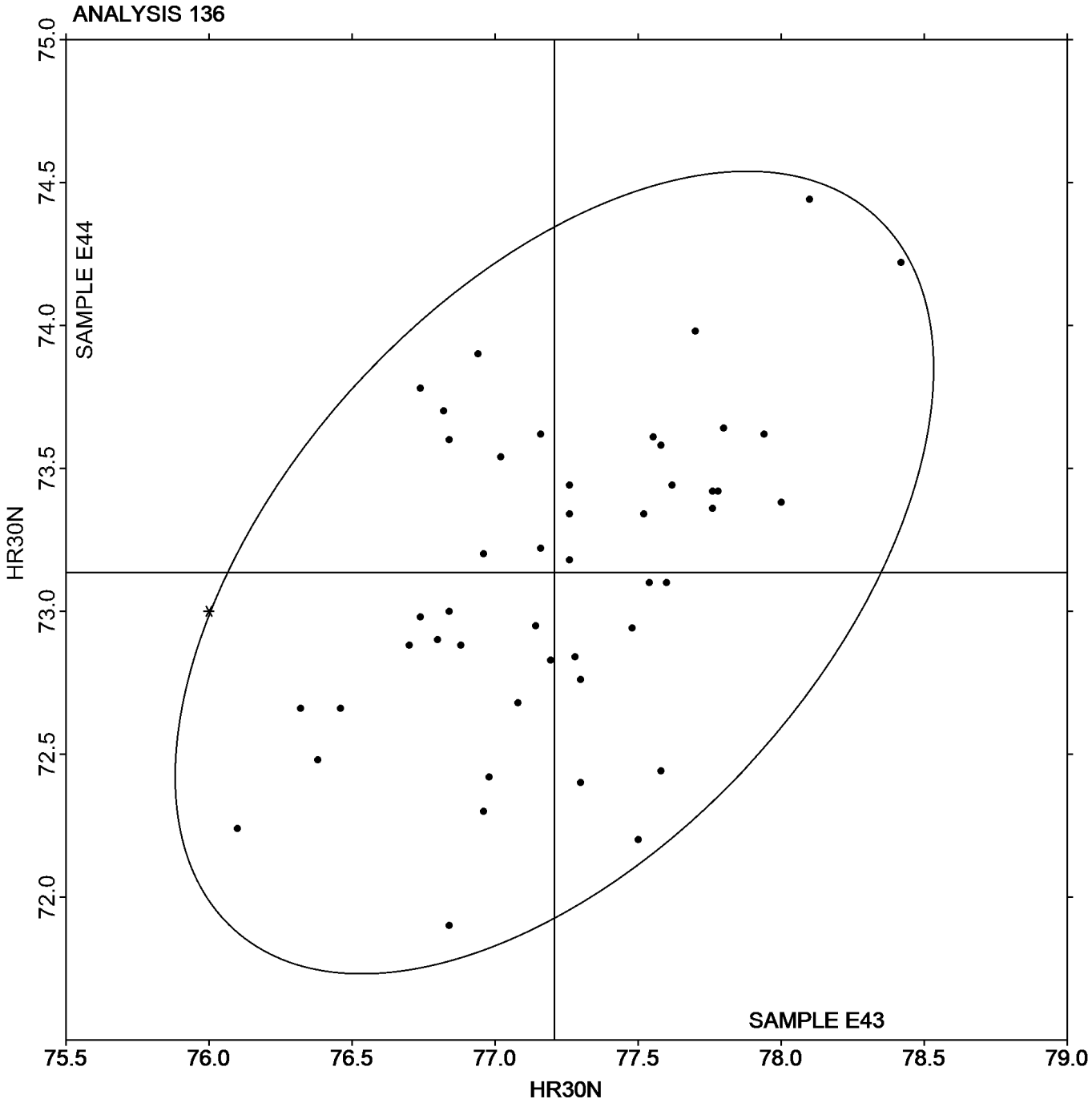
Statistics based on 48 of 50 reporting participants

Comments on Assigned Data Flags for Test #136

9ZXCQA (X) - Data for sample E44 are low.

WA4PPV (X) - Data for both samples are extremely low. Very inconsistent within the determinations of both samples.

SAMPLE E43	SAMPLE E44
77.21 HR30N	73.14 HR30N



		Sample C43			Sample C44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
274A42		0.0293	0.0023	0.51	0.0315	0.0025	0.51
2THV68		0.0260	-0.0010	-0.21	0.0292	0.0002	0.05
4ULAPJ	*	0.0369	0.0099	2.14	0.0350	0.0061	1.24
7B2ALR		0.0335	0.0065	1.41	0.0336	0.0047	0.95
7MV7J6		0.0358	0.0088	1.90	0.0393	0.0104	2.12
7RTMVY		0.0276	0.0006	0.13	0.0309	0.0020	0.40
9QVYRU		0.0266	-0.0004	-0.08	0.0276	-0.0014	-0.28
A89M62		0.0315	0.0045	0.98	0.0335	0.0046	0.94
AW822M		0.0262	-0.0007	-0.15	0.0284	-0.0006	-0.11
B22Q9Y		0.0291	0.0022	0.47	0.0315	0.0025	0.51
BPNNNM		0.0286	0.0016	0.36	0.0292	0.0002	0.05
BWTX6A		0.0264	-0.0006	-0.12	0.0308	0.0018	0.37
BX4ZTU		0.0308	0.0039	0.83	0.0326	0.0037	0.75
DVLGW2		0.0290	0.0020	0.44	0.0280	-0.0010	-0.21
GB94KG		0.0226	-0.0044	-0.94	0.0240	-0.0050	-1.01
H7P22V		0.0258	-0.0011	-0.24	0.0261	-0.0029	-0.60
HUHNUQ		0.0254	-0.0016	-0.34	0.0284	-0.0006	-0.12
J3HPGU		0.0259	-0.0010	-0.22	0.0311	0.0021	0.44
JPXGZ2	*	0.0175	-0.0094	-2.04	0.0241	-0.0049	-0.99
KFTTJP		0.0272	0.0002	0.05	0.0262	-0.0028	-0.57
LY2PPL		0.0256	-0.0014	-0.29	0.0282	-0.0008	-0.16
M3DMLR		0.0322	0.0053	1.13	0.0324	0.0034	0.69
M3W9EH		0.0267	-0.0002	-0.05	0.0306	0.0016	0.34
M44HWL		0.0320	0.0050	1.09	0.0356	0.0066	1.36
M62YGQ		0.0280	0.0010	0.22	0.0331	0.0041	0.84
MMJGED		0.0304	0.0034	0.74	0.0344	0.0054	1.11
N7U8AT		0.0288	0.0018	0.40	0.0320	0.0030	0.62
N897CC	X	0.0170	-0.0099	-2.14	0.0280	-0.0010	-0.20
NG9YGW		0.0178	-0.0091	-1.97	0.0181	-0.0108	-2.22
NKU7XP		0.0234	-0.0036	-0.77	0.0276	-0.0014	-0.28
PHGX2A		0.0233	-0.0037	-0.80	0.0250	-0.0040	-0.81
QJ8W6U		0.0256	-0.0014	-0.29	0.0280	-0.0010	-0.20
QK2PV7		0.0253	-0.0016	-0.36	0.0260	-0.0030	-0.61
QNZVG4	*	0.0142	-0.0128	-2.76	0.0138	-0.0152	-3.11
QTUHYC		0.0224	-0.0046	-0.98	0.0268	-0.0022	-0.44
QX8T68		0.0300	0.0030	0.66	0.0290	0.0000	0.01
R99HH3		0.0272	0.0002	0.04	0.0302	0.0013	0.26
TH74CK		0.0340	0.0070	1.52	0.0360	0.0070	1.44
TH9TLN		0.0249	-0.0021	-0.45	0.0287	-0.0003	-0.06
TJL2E4		0.0201	-0.0068	-1.47	0.0215	-0.0074	-1.52
UMXWK7		0.0230	-0.0039	-0.85	0.0264	-0.0026	-0.53
VQUX7K		0.0292	0.0023	0.49	0.0319	0.0029	0.59
W4J376		0.0231	-0.0039	-0.84	0.0229	-0.0061	-1.24
WD34DL		0.0332	0.0062	1.34	0.0360	0.0070	1.43
WM8KWG		0.0253	-0.0016	-0.35	0.0263	-0.0026	-0.54
WWEDBH		0.0243	-0.0026	-0.57	0.0244	-0.0046	-0.93
X4QW3F		0.0304	0.0034	0.74	0.0339	0.0049	1.00

WebCode	Data Flag	Sample C43 Lab Mean	Sample C43 Diff. from Grand Mean	Sample C43 CPV	Sample C44 Lab Mean	Sample C44 Diff. from Grand Mean	Sample C44 CPV
XEWJD2		0.0280	0.0010	0.23	0.0260	-0.0030	-0.61
YWCAUC		0.0309	0.0040	0.86	0.0333	0.0043	0.88
ZE4A7N		0.0197	-0.0073	-1.57	0.0205	-0.0085	-1.74

Summary Statistics

	Sample C43		Sample C44	
Grand Means	0.0270	inches	0.0290	inches
Stnd Dev Btwn Labs	0.0046	inches	0.0049	inches

Samples C43, C44 : Steel, Steel

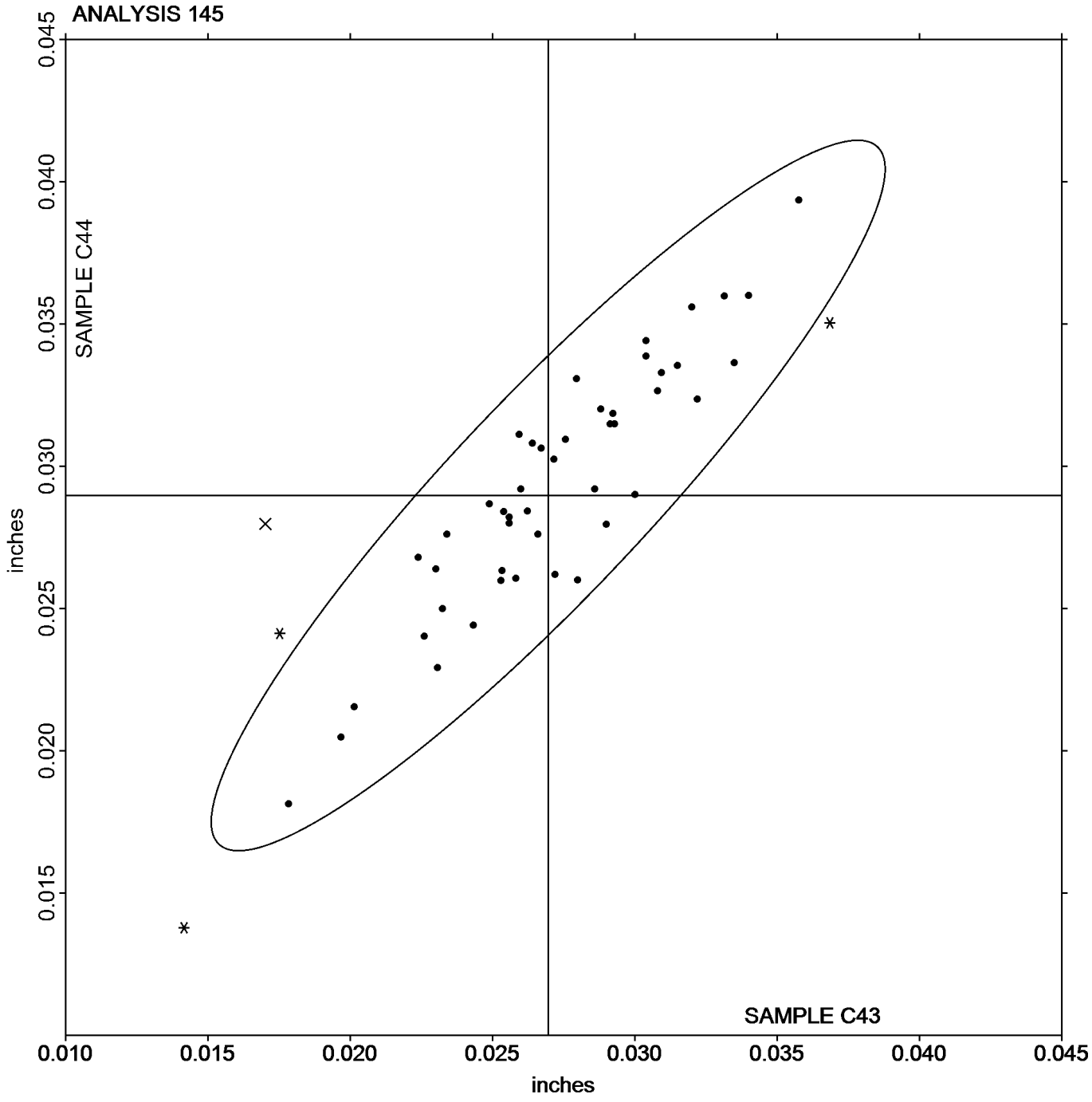
Statistics based on 49 of 50 reporting participants

Comments on Assigned Data Flags for Test #145

N897CC (X) - Inconsistent in testing between samples.

SAMPLE C43
0.0270 inches

SAMPLE C44
0.0290 inches



		Sample C43			Sample C44		
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV
274A42		0.0262	0.0005	0.36	0.0281	0.0006	0.41
2THV68		0.0252	-0.0005	-0.31	0.0282	0.0007	0.47
46ZDM3		0.0271	0.0014	0.93	0.0295	0.0019	1.34
79EJKN		0.0261	0.0004	0.28	0.0264	-0.0011	-0.77
7B2ALR		0.0272	0.0015	0.97	0.0283	0.0008	0.58
7MV7J6		0.0265	0.0008	0.53	0.0273	-0.0002	-0.15
7RTMVY		0.0256	-0.0001	-0.05	0.0291	0.0015	1.07
89WH76		0.0272	0.0015	0.97	0.0299	0.0024	1.67
9HCTT2		0.0269	0.0012	0.77	0.0269	-0.0006	-0.41
9QVYRU		0.0244	-0.0013	-0.83	0.0258	-0.0017	-1.19
A89M62		0.0276	0.0019	1.23	0.0276	0.0000	0.03
AW822M		0.0232	-0.0025	-1.61	0.0268	-0.0007	-0.50
B22Q9Y		0.0240	-0.0017	-1.09	0.0264	-0.0011	-0.77
BMJQ4Z		0.0265	0.0009	0.57	0.0291	0.0016	1.09
BPNNNM		0.0254	-0.0003	-0.18	0.0268	-0.0007	-0.50
BWTX6A		0.0248	-0.0009	-0.57	0.0288	0.0013	0.89
BX4ZTU		0.0269	0.0012	0.78	0.0292	0.0017	1.16
DCBPVK		0.0262	0.0005	0.34	0.0250	-0.0025	-1.75
DVLGW2	*	0.0293	0.0036	2.35	0.0264	-0.0011	-0.75
GB94KG		0.0228	-0.0029	-1.89	0.0251	-0.0024	-1.66
GHQK9K		0.0269	0.0012	0.81	0.0287	0.0012	0.80
H7P22V		0.0252	-0.0005	-0.31	0.0276	0.0000	0.03
HUHNUQ		0.0246	-0.0011	-0.70	0.0278	0.0003	0.20
J3HPGU		0.0248	-0.0009	-0.56	0.0286	0.0011	0.74
JPXGZ2		0.0242	-0.0015	-0.96	0.0258	-0.0017	-1.19
KFTTJP		0.0266	0.0009	0.60	0.0300	0.0025	1.72
KXB789	X	0.0140	-0.0117	-7.60	0.0278	0.0003	0.20
LMMVAL	X	66.42	66.3943	43,200.78	66.46	66.4325	46,093.38
LY2PPL		0.0248	-0.0009	-0.57	0.0286	0.0011	0.75
M3DMLR		0.0262	0.0005	0.36	0.0251	-0.0024	-1.66
M3W9EH		0.0246	-0.0011	-0.71	0.0278	0.0003	0.22
M44HWL		0.0244	-0.0013	-0.83	0.0270	-0.0005	-0.36
M62YGQ		0.0268	0.0011	0.72	0.0283	0.0008	0.58
MMJGED		0.0268	0.0011	0.73	0.0288	0.0013	0.89
N7U8AT		0.0258	0.0001	0.08	0.0290	0.0015	1.03
NENENR		0.0278	0.0021	1.38	0.0300	0.0025	1.72
NFW4YB		0.0270	0.0013	0.87	0.0269	-0.0007	-0.46
NG9YGW		0.0247	-0.0010	-0.66	0.0251	-0.0024	-1.65
PHGX2A		0.0234	-0.0023	-1.48	0.0258	-0.0017	-1.19
QBB6B7		0.0268	0.0011	0.71	0.0284	0.0009	0.63
QJ8W6U		0.0222	-0.0035	-2.26	0.0256	-0.0019	-1.33
QK2PV7		0.0259	0.0002	0.13	0.0271	-0.0004	-0.30
QNZVG4		0.0288	0.0031	2.01	0.0294	0.0019	1.34
QTUHYC	*	0.0218	-0.0039	-2.52	0.0272	-0.0003	-0.22
QX8T68		0.0278	0.0021	1.38	0.0284	0.0009	0.61
RLRZCR		0.0272	0.0015	0.99	0.0288	0.0013	0.89
TARZPD		0.0277	0.0020	1.33	0.0262	-0.0014	-0.94

WebCode	Data Flag	Sample C43 Lab Mean	Sample C43 Diff. from Grand Mean	Sample C43 CPV	Sample C44 Lab Mean	Sample C44 Diff. from Grand Mean	Sample C44 CPV
TH74CK		0.0244	-0.0012	-0.80	0.0272	-0.0003	-0.23
TH9TLN		0.0249	-0.0007	-0.47	0.0293	0.0018	1.27
TJL2E4		0.0265	0.0008	0.51	0.0272	-0.0003	-0.21
UMXWK7		0.0240	-0.0017	-1.08	0.0266	-0.0009	-0.63
V8FJKJ		0.0252	-0.0005	-0.31	0.0280	0.0005	0.34
VA48C7		0.0264	0.0007	0.45	0.0284	0.0008	0.59
VQUX7K		0.0253	-0.0004	-0.25	0.0264	-0.0011	-0.74
W4J376		0.0257	0.0000	0.02	0.0265	-0.0010	-0.72
WA4PPV		0.0245	-0.0012	-0.77	0.0269	-0.0007	-0.46
WD34DL		0.0263	0.0006	0.41	0.0274	-0.0001	-0.08
WM8KWG		0.0267	0.0010	0.66	0.0274	-0.0001	-0.08
WWEDBH		0.0274	0.0017	1.12	0.0272	-0.0003	-0.22
X4QW3F		0.0242	-0.0015	-0.98	0.0274	-0.0001	-0.08
XEWJD2	*	0.0254	-0.0003	-0.17	0.0238	-0.0037	-2.58
YF4FZH		0.0257	0.0000	-0.01	0.0307	0.0032	2.24
YWCAUC		0.0236	-0.0021	-1.35	0.0266	-0.0009	-0.64
ZVAC4W		0.0240	-0.0017	-1.09	0.0262	-0.0013	-0.91

Summary Statistics

	Sample C43		Sample C44	
Grand Means	0.0257	inches	0.0275	inches
Stnd Dev Btwn Labs	0.0015	inches	0.0014	inches

Samples C43, C44 : Steel, Steel

Statistics based on 62 of 64 reporting participants

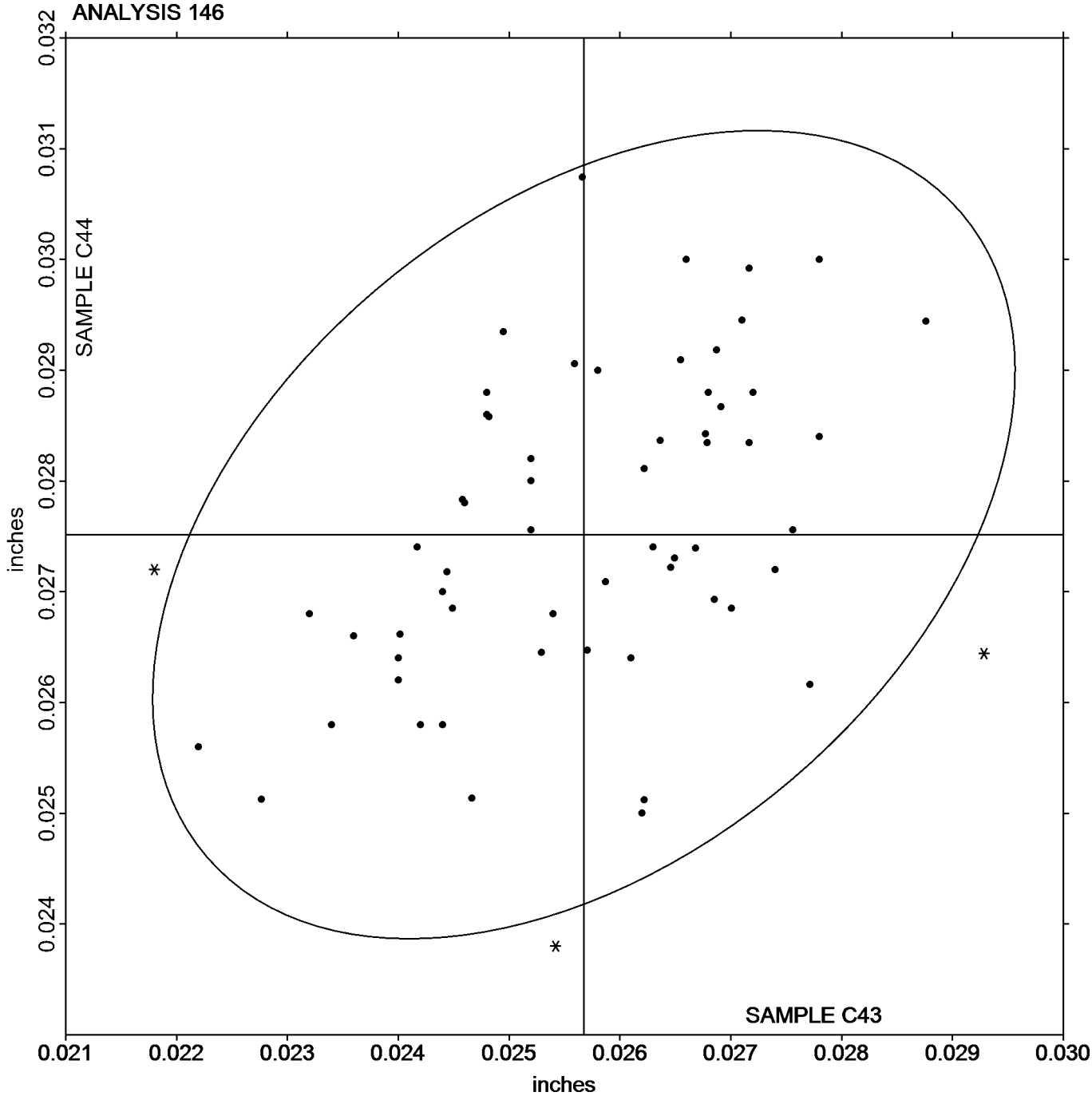
Comments on Assigned Data Flags for Test #146

KXB789 (X) - Data for sample C43 are very low.

LMMVAL (X) - Apparently reported Hardness values in lieu of Case Depth.

SAMPLE C43
0.0257 inches

SAMPLE C44
0.0275 inches



		Sample Y43			Sample Y44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
274A42		5.30	-0.43	-0.72	9.70	0.08	0.08	Comparison Method
4CNE6L		6.22	0.49	0.81	10.21	0.59	0.57	Automatic Image Analysis
4LC3NA		5.02	-0.71	-1.20	10.15	0.53	0.52	N/A
4ULAPJ	X	10.00	4.27	7.15	5.00	-4.62	-4.53	Comparison Method
66ZBBN		6.40	0.67	1.12	9.74	0.12	0.12	Planimetric (Jeffries)
6AV8V9		5.90	0.17	0.28	8.50	-1.12	-1.10	Comparison Method
6FJQDQ		5.60	-0.13	-0.22	11.00	1.38	1.35	Comparison Method
6W2987		5.20	-0.53	-0.89	8.00	-1.62	-1.59	Comparison Method
6XNXUD		5.20	-0.53	-0.89	8.80	-0.82	-0.80	Comparison Method
7RUWWQ		6.30	0.57	0.95	9.80	0.18	0.18	Comparison Method
7TJQN7		5.80	0.07	0.11	9.84	0.22	0.21	Heyn Linear Intercept
89WH76		5.60	-0.13	-0.22	8.90	-0.72	-0.71	Abrams Three-Circle
A89M62		7.00	1.27	2.12	10.60	0.98	0.96	Comparison Method
ABBRC9		5.00	-0.73	-1.23	9.00	-0.62	-0.61	Comparison Method
ADWCMP		5.50	-0.23	-0.39	10.72	1.10	1.08	Heyn Linear Intercept
AKVNX2	X	45.68	39.95	66.91	48.10	38.48	37.69	Automatic Image Analysis
AU32TF		5.70	-0.03	-0.05	8.80	-0.82	-0.80	Comparison Method
B22Q9Y		5.40	-0.33	-0.56	9.60	-0.02	-0.02	Comparison Method
BTM6YV		4.80	-0.93	-1.56	7.90	-1.72	-1.69	Comparison Method
C38AAM		4.90	-0.83	-1.39	10.20	0.58	0.57	Comparison Method
C482Q3		5.10	-0.63	-1.06	9.70	0.08	0.08	Comparison Method
C92Z6Y		5.22	-0.51	-0.85	9.51	-0.11	-0.11	Abrams Three-Circle
CP4W4N		5.91	0.17	0.29	10.00	0.38	0.37	Automatic Image Analysis
DLJA3N		5.50	-0.23	-0.39	9.74	0.12	0.12	Abrams Three-Circle
EFNZA2		5.90	0.17	0.28	9.20	-0.42	-0.41	Comparison Method
EZZMXU		6.30	0.57	0.95	9.40	-0.22	-0.22	Comparison Method
GDXFFG		6.04	0.31	0.52	10.36	0.74	0.72	N/A
GHBL72	X	10.00	4.27	7.15	5.00	-4.62	-4.53	Comparison Method
J3HPGU	M	4.70	-1.03	-1.73	No Data Reported			Comparison Method
J78CBN		5.50	-0.23	-0.39	8.50	-1.12	-1.10	Comparison Method
JD2Y7N		7.20	1.47	2.46	11.20	1.58	1.55	General Intercept
JPXGZ2		5.62	-0.11	-0.19	9.82	0.20	0.20	Abrams Three-Circle
KFTTJP		5.80	0.07	0.11	9.90	0.28	0.27	Comparison Method
MMKVY6		5.50	-0.23	-0.39	9.10	-0.52	-0.51	Comparison Method
QFM7FB		6.00	0.27	0.45	8.00	-1.62	-1.59	Comparison Method
QFPWMT		6.70	0.97	1.62	9.40	-0.22	-0.22	Comparison Method
QK2PV7		6.20	0.47	0.78	10.00	0.38	0.37	Comparison Method
QQRFGM		5.30	-0.43	-0.72	9.30	-0.32	-0.31	Comparison Method
QTUHYC		6.30	0.57	0.95	11.00	1.38	1.35	Comparison Method
R99HH3		6.00	0.27	0.45	10.00	0.38	0.37	Comparison Method
RERBJ7		5.20	-0.53	-0.89	9.30	-0.32	-0.31	Comparison Method
RJ6LJB		6.50	0.77	1.29	9.90	0.28	0.27	Comparison Method
TJL2E4		6.60	0.87	1.45	12.00	2.38	2.33	Comparison Method
U6GQDF	*	5.83	0.09	0.16	6.84	-2.78	-2.72	Comparison Method
UMXWK7		6.00	0.27	0.45	9.50	-0.12	-0.12	Comparison Method
UTZMQC		6.50	0.77	1.29	10.30	0.68	0.67	General Intercept
WD34DL		5.66	-0.07	-0.12	10.24	0.62	0.61	Abrams Three-Circle

WebCode	Data Flag	Sample Y43 Lab Mean	Sample Y43 Diff. from Grand Mean	Sample Y43 CPV	Sample Y44 Lab Mean	Sample Y44 Diff. from Grand Mean	Sample Y44 CPV	Method
WWEDBH		5.20	-0.53	-0.89	9.10	-0.52	-0.51	Comparison Method
WZWHZZ		5.00	-0.73	-1.23	10.00	0.38	0.37	Comparison Method
YWCAUC		5.60	-0.13	-0.22	11.80	2.18	2.13	Comparison Method
Z76RHY		4.40	-1.33	-2.23	7.60	-2.02	-1.98	N/A

Summary Statistics

	Sample Y43		Sample Y44	
Grand Means	5.73	ASTM, G	9.62	ASTM, G
Stnd Dev Btwn Labs	0.60	ASTM, G	1.02	ASTM, G

Samples Y43, Y44 : AISI 304, AISI 304

Statistics based on 47 of 51 reporting participants

Comments on Assigned Data Flags for Test #147

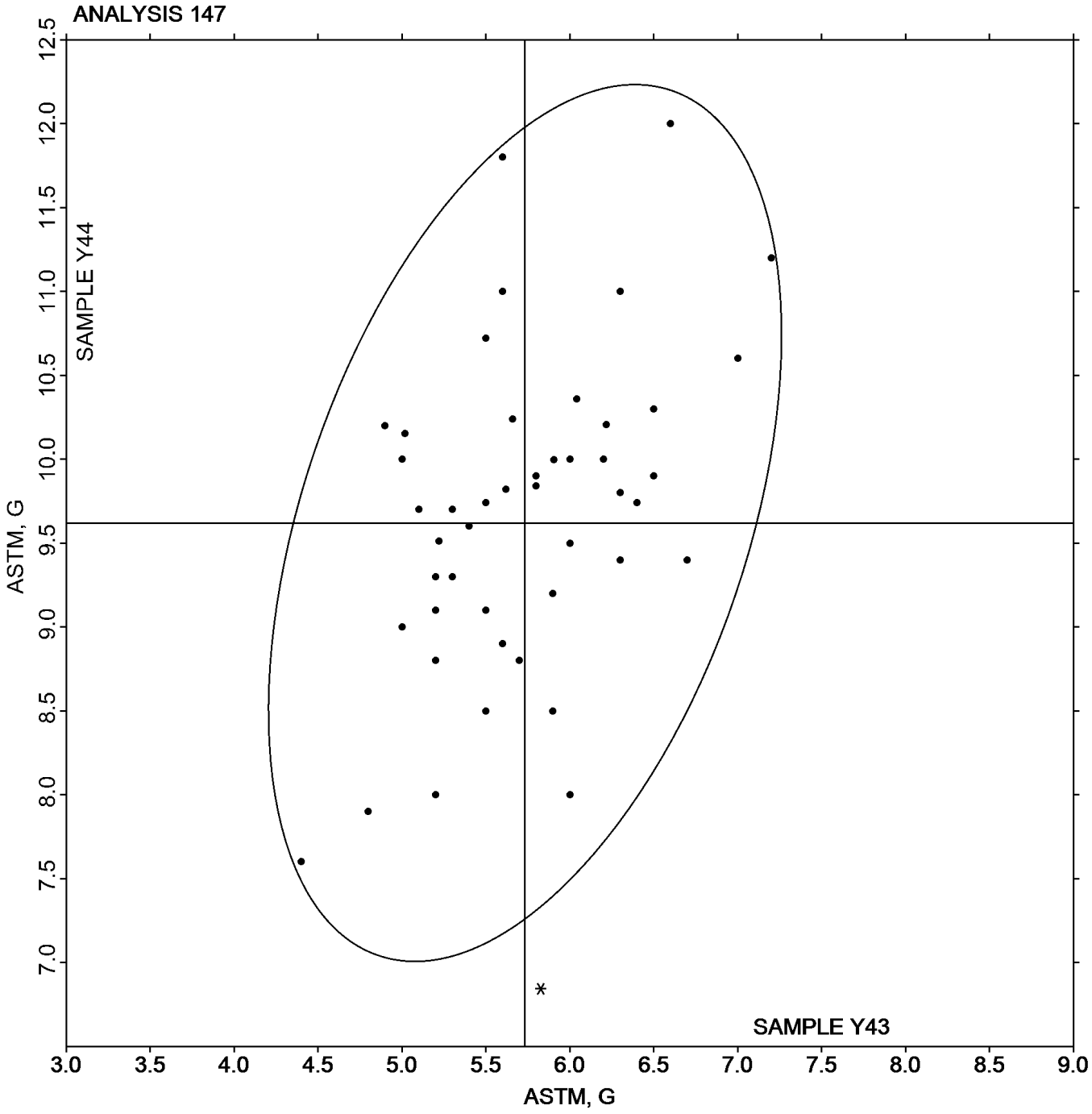
4ULAPJ (X) - Data appear to be transposed between samples.

AKVNX2 (X) - Extreme data.

GHBL72 (X) - Data appear to be transposed between samples.

J3HPGU (M) - Participant indicated results for sample Y44 to be greater than 10.

SAMPLE Y43	SAMPLE Y44
5.73 ASTM, G	9.62 ASTM, G



		Sample J43			Sample J44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
366D9C	*	18.79	0.69	3.04	18.18	0.51	2.40	OE
47FNNF		18.14	0.03	0.15	17.75	0.08	0.40	IC
4ULAPJ		18.30	0.20	0.87	18.00	0.33	1.58	GD
83QFTC		18.02	-0.08	-0.35	17.55	-0.12	-0.57	IC
A7JN3G		18.11	0.01	0.05	17.69	0.03	0.12	XR
AQ6KE2		18.06	-0.04	-0.19	17.69	0.02	0.11	OE
AW822M		18.04	-0.07	-0.29	17.46	-0.20	-0.96	OE
BE6N2K		17.74	-0.37	-1.61	17.37	-0.30	-1.42	OE
BPNNNM		18.16	0.06	0.25	17.67	0.01	0.03	OE
C92Z6Y		18.14	0.04	0.17	17.84	0.17	0.80	OE
CN89WL		18.31	0.20	0.89	17.91	0.24	1.15	WD
DJGWF2		18.00	-0.10	-0.45	17.70	0.03	0.16	GD
ELF8QN		18.17	0.07	0.31	17.63	-0.04	-0.17	OE
FYK69Z		17.96	-0.14	-0.61	17.61	-0.06	-0.27	OE
GDXFFG		18.55	0.45	1.98	17.93	0.26	1.25	WD
GHDBE6		17.59	-0.51	-2.26	17.14	-0.52	-2.47	OE
GWNFKR		17.88	-0.23	-1.00	17.46	-0.20	-0.97	WD
HB6TDD		18.16	0.06	0.25	17.67	0.01	0.03	OE
JPXGZ2		17.98	-0.12	-0.53	17.61	-0.06	-0.27	OE
JTLXCV		18.13	0.03	0.14	17.67	0.01	0.03	XR
KFTTJP		18.17	0.06	0.28	17.77	0.11	0.50	DR
LTWENZ		18.17	0.06	0.28	17.72	0.06	0.27	ED
N48689		17.93	-0.18	-0.78	17.46	-0.21	-0.98	OE
N897CC		17.97	-0.13	-0.57	17.45	-0.22	-1.02	OE
NP6KKP		18.53	0.42	1.87	18.13	0.46	2.18	OE
QK2PV7		18.00	-0.10	-0.45	17.80	0.13	0.63	GD
QQRFGM		17.99	-0.11	-0.48	17.59	-0.08	-0.38	WD
QZW4Z7		18.06	-0.05	-0.20	17.43	-0.24	-1.13	IC
TLNHKR		18.35	0.25	1.09	17.71	0.04	0.19	OE
TMGJH3	X	0.0340	-18.07	-79.72	0.0337	-17.63	-83.37	OE
V8FJKJ		17.99	-0.12	-0.51	18.10	0.43	2.03	OE
VTGFHE		18.03	-0.07	-0.32	17.61	-0.05	-0.25	WD
WA4PPV		18.02	-0.09	-0.38	17.67	0.01	0.03	OE
YC2DEM		17.97	-0.13	-0.57	17.58	-0.09	-0.42	OE
ZND6DF		17.97	-0.14	-0.60	17.54	-0.12	-0.58	WD

Summary Statistics

	Sample J43		Sample J44	
Grand Means	18.10	Percent	17.67	Percent
Stnd Dev Btwn Labs	0.23	Percent	0.21	Percent

Samples J43, J44 : Alloy 718, Alloy 718

Statistics based on 33 of 35 reporting participants

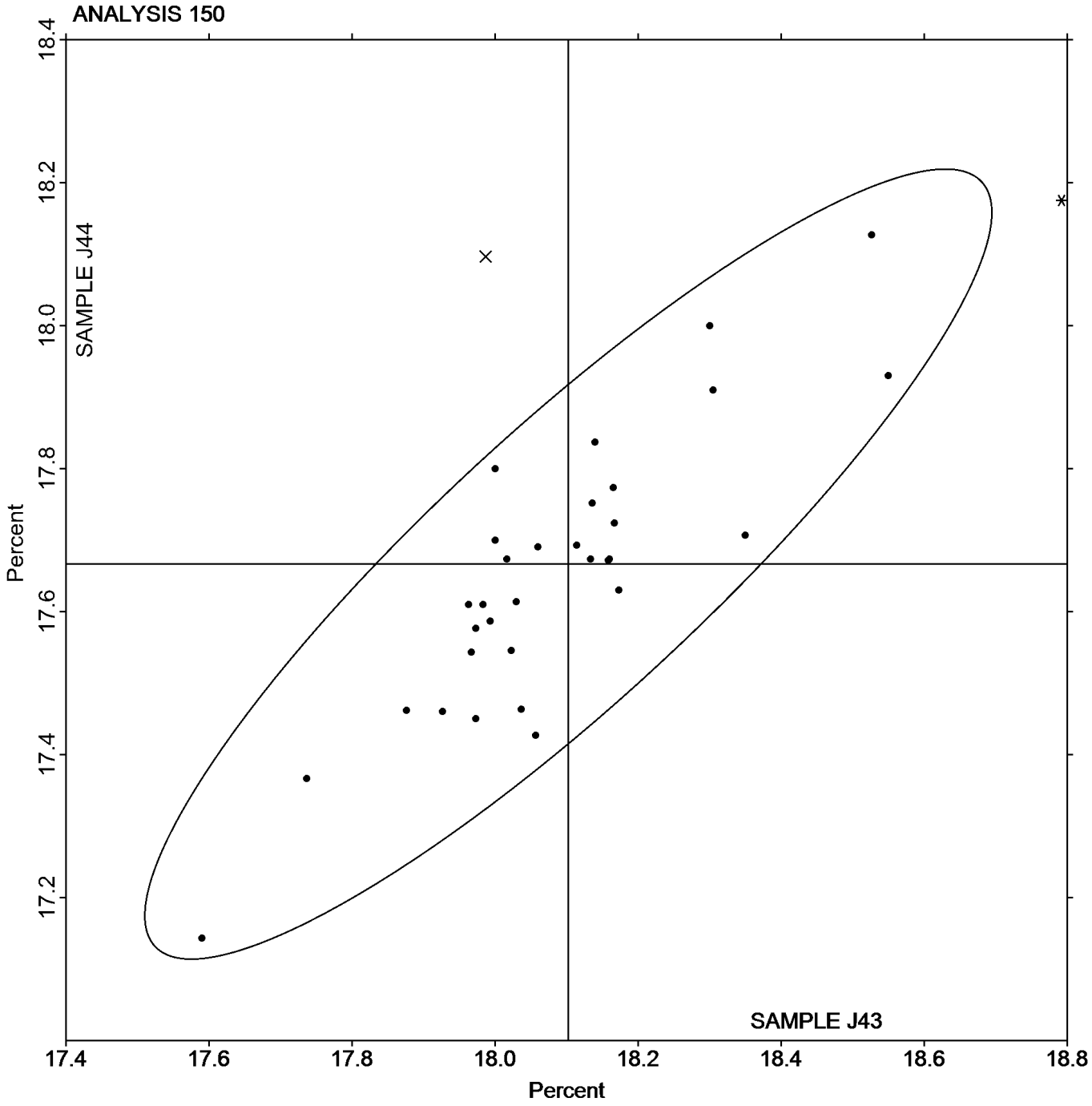
Key to Method Codes Reported by Participants

DR	Spectrometry - Direct Reading OE (DROES)	ED	X-Ray Fluorescence - Energy Dispersive (EDX)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XR	X-Ray Fluorescence - ED or WD not specified		

Comments on Assigned Data Flags for Test #150

TMGJH3 (X) - Data for both samples are extremely low. Possible Systematic Error.

SAMPLE J43	SAMPLE J44
18.10 Percent	17.67 Percent



		Sample J43			Sample J44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
366D9C		0.1087	0.0146	1.81	0.0810	0.0149	1.75	OE
47FNNF		0.0946	0.0005	0.07	0.0671	0.0010	0.12	IC
4ULAPJ		0.0920	-0.0021	-0.25	0.0650	-0.0011	-0.13	GD
83QFTC		0.0961	0.0020	0.25	0.0676	0.0015	0.17	IC
A7JN3G		0.0880	-0.0061	-0.75	0.0557	-0.0105	-1.23	OE
AQ6KE2		0.0947	0.0006	0.08	0.0660	-0.0002	-0.02	OE
AW822M	*	0.0930	-0.0011	-0.13	0.0567	-0.0095	-1.11	OE
BE6N2K		0.1027	0.0086	1.06	0.0757	0.0095	1.12	OE
BPNNNM		0.0903	-0.0037	-0.46	0.0657	-0.0005	-0.05	OE
C92Z6Y		0.0917	-0.0023	-0.29	0.0630	-0.0031	-0.37	OE
CN89WL	*	0.0687	-0.0254	-3.14	0.0380	-0.0281	-3.31	WD
DJGWF2		0.0887	-0.0054	-0.67	0.0643	-0.0018	-0.21	GD
ELF8QN		0.0917	-0.0024	-0.29	0.0660	-0.0001	-0.01	OE
FYK69Z		0.0837	-0.0104	-1.28	0.0607	-0.0055	-0.64	OE
GDXFFG		0.1057	0.0116	1.44	0.0773	0.0112	1.32	WD
GHDBE6		0.1110	0.0169	2.09	0.0797	0.0135	1.59	OE
GWNFKR		0.0840	-0.0101	-1.24	0.0550	-0.0111	-1.31	WD
HB6TDD		0.0977	0.0036	0.45	0.0660	-0.0002	-0.02	XX
JPXGZ2		0.0987	0.0046	0.57	0.0700	0.0039	0.46	OE
JTLXCV		0.1003	0.0063	0.78	0.0740	0.0079	0.93	XR
N48689		0.0986	0.0045	0.56	0.0767	0.0105	1.24	OE
N897CC		0.0910	-0.0031	-0.38	0.0640	-0.0021	-0.25	OE
NP6KKP		0.0970	0.0029	0.36	0.0730	0.0069	0.81	OE
QK2PV7		0.0920	-0.0021	-0.26	0.0611	-0.0051	-0.59	GD
QQRFGM		0.0843	-0.0097	-1.20	0.0563	-0.0098	-1.15	WD
QZW4Z7		0.0917	-0.0024	-0.29	0.0613	-0.0048	-0.56	IC
TLNHKR		0.0917	-0.0024	-0.29	0.0643	-0.0018	-0.21	OE
TMGJH3		0.1080	0.0139	1.72	0.0777	0.0115	1.36	OE
V8FJKJ		0.0920	-0.0021	-0.25	0.0690	0.0029	0.34	OE
VTGFHE		0.0960	0.0019	0.24	0.0653	-0.0008	-0.09	OE
WA4PPV		0.0930	-0.0011	-0.13	0.0677	0.0015	0.18	OE
YC2DEM		0.0920	-0.0021	-0.25	0.0650	-0.0011	-0.13	OE
ZND6DF		0.0947	0.0006	0.08	0.0663	0.0002	0.02	WD

Summary Statistics

	Sample J43		Sample J44	
Grand Means	0.0941	Percent	0.0661	Percent
Stnd Dev Btwn Labs	0.0081	Percent	0.0085	Percent

Samples J43, J44 : Alloy 718, Alloy 718

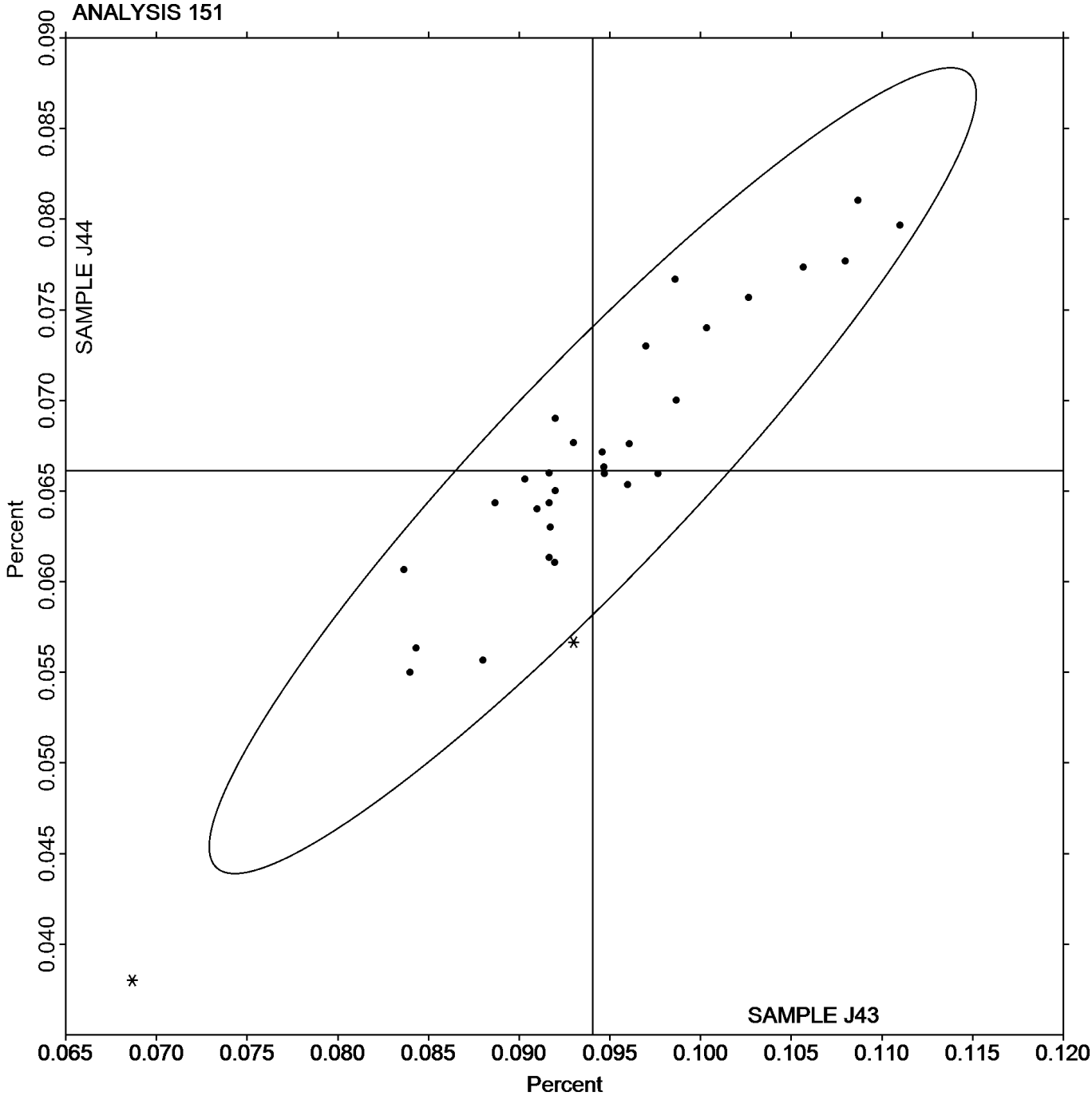
Statistics based on 33 of 33 reporting participants

Key to Method Codes Reported by Participants

GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XR	X-Ray Fluorescence - ED or WD not specified	XX	Please Indicate Method Used for Current Element

SAMPLE J43
0.0941 Percent

SAMPLE J44
0.0661 Percent



		Sample J43			Sample J44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
366D9C		17.60	-0.25	-0.67	18.44	-0.16	-0.38	OE
47FNNF		18.09	0.24	0.65	18.88	0.27	0.64	IC
4ULAPJ		17.10	-0.75	-2.00	17.80	-0.81	-1.88	GD
83QFTC		17.93	0.08	0.23	18.45	-0.16	-0.36	IC
A7JN3G		17.98	0.13	0.36	18.76	0.15	0.35	XR
AQ6KE2		17.99	0.15	0.39	18.78	0.18	0.41	OE
AW822M		17.93	0.09	0.23	18.75	0.14	0.33	OE
BE6N2K		18.12	0.27	0.73	18.81	0.21	0.48	OE
BPNNNM		17.95	0.10	0.27	18.78	0.17	0.40	OE
C92Z6Y		17.97	0.12	0.33	18.76	0.15	0.36	OE
CN89WL		18.04	0.19	0.52	18.83	0.22	0.51	WD
DJGWF2	*	16.83	-1.01	-2.71	17.50	-1.11	-2.58	GD
ELF8QN		18.01	0.16	0.43	18.79	0.18	0.42	OE
FYK69Z		17.97	0.12	0.33	18.84	0.23	0.54	OE
GDXFFG	*	16.89	-0.96	-2.56	17.70	-0.91	-2.13	WD
GHDBE6		17.01	-0.84	-2.24	17.56	-1.05	-2.45	OE
GWNFKR		17.82	-0.03	-0.08	18.64	0.03	0.07	WD
HB6TDD		18.01	0.16	0.43	18.79	0.18	0.43	OE
JPXGZ2		18.29	0.44	1.18	19.15	0.54	1.27	OE
JTLXCV		18.04	0.19	0.51	18.78	0.17	0.40	XR
KFTTJP		17.96	0.11	0.29	18.54	-0.07	-0.17	DR
LTWENZ		18.22	0.37	1.00	18.99	0.38	0.89	ED
N48689		17.73	-0.12	-0.31	18.48	-0.13	-0.29	OE
N897CC		18.21	0.36	0.96	18.99	0.39	0.90	OE
NP6KKP		17.46	-0.38	-1.03	18.23	-0.37	-0.87	OE
QK2PV7	*	17.60	-0.25	-0.66	18.00	-0.61	-1.42	GD
QQRFGM		18.07	0.23	0.60	18.84	0.23	0.55	WD
QZW4Z7		17.91	0.06	0.16	18.65	0.05	0.11	IC
TLNHKR		18.17	0.33	0.87	19.02	0.42	0.97	OE
TMGJH3		18.03	0.18	0.49	18.90	0.29	0.68	OE
V8FJKJ	X	18.03	0.18	0.48	16.38	-2.23	-5.21	OE
VTGFHE		17.92	0.08	0.20	18.71	0.10	0.23	WD
WA4PPV		18.14	0.29	0.77	19.15	0.55	1.28	OE
YC2DEM		17.93	0.08	0.22	18.66	0.06	0.13	OE
ZND6DF		17.89	0.04	0.11	18.69	0.08	0.19	WD

Summary Statistics

	Sample J43		Sample J44	
Grand Means	17.85	Percent	18.61	Percent
Stnd Dev Btwn Labs	0.37	Percent	0.43	Percent

Samples J43, J44 : Alloy 718, Alloy 718

Statistics based on 34 of 35 reporting participants

Key to Method Codes Reported by Participants

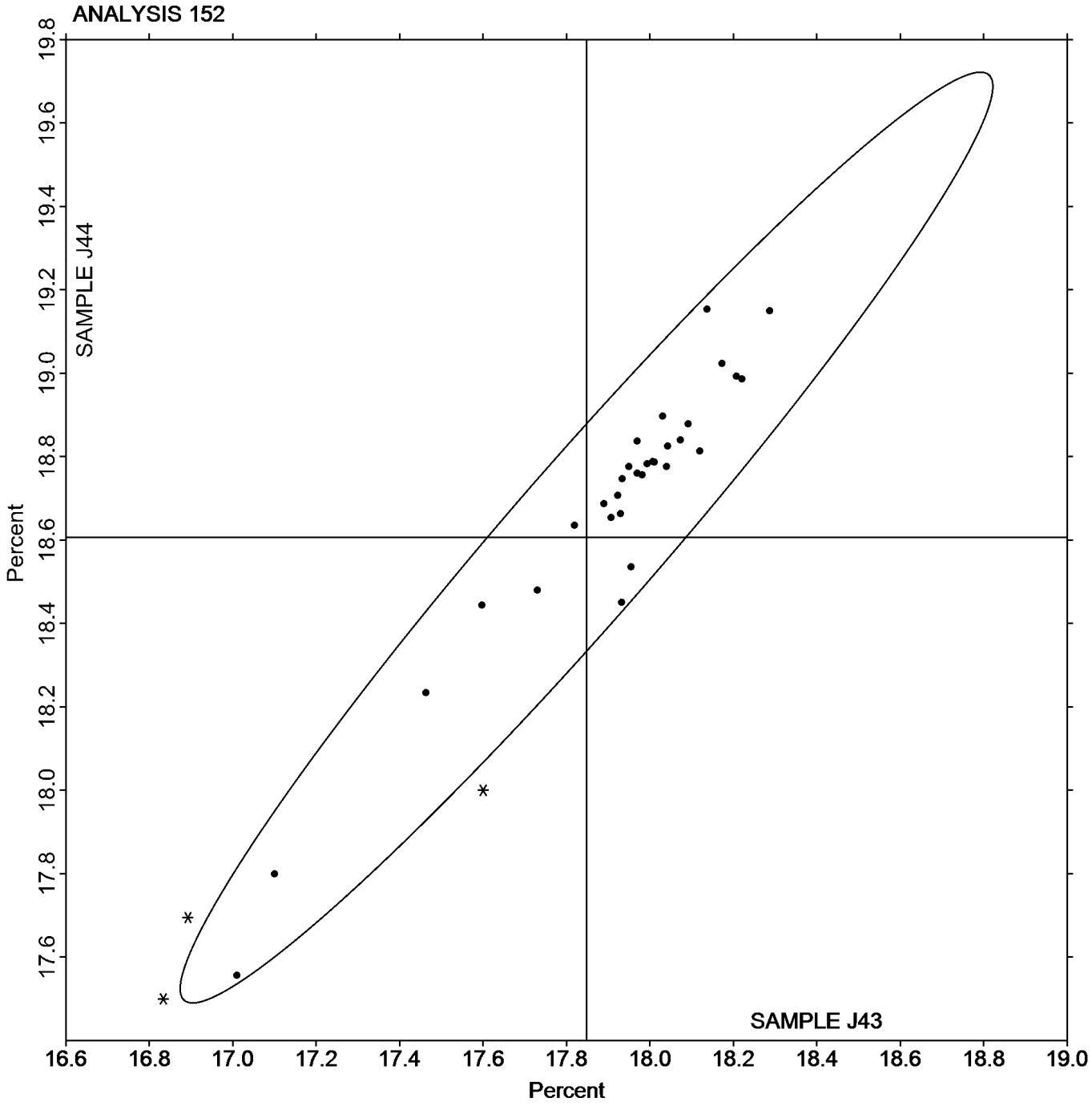
DR	Spectrometry - Direct Reading OE (DROES)	ED	X-Ray Fluorescence - Energy Dispersive (EDX)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XR	X-Ray Fluorescence - ED or WD not specified		

Comments on Assigned Data Flags for Test #152

V8FJKJ (X) - Data for sample J44 are low.

SAMPLE J43
17.85 Percent

SAMPLE J44
18.61 Percent



		Sample J43			Sample J44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
366D9C		2.945	-0.067	-2.37	2.855	-0.039	-1.18	XX
47FNNF		3.002	-0.011	-0.38	2.944	0.051	1.58	IC
4ULAPJ	X	3.550	0.537	18.93	3.470	0.577	17.74	GD
83QFTC		3.029	0.016	0.56	2.911	0.018	0.56	IC
A7JN3G		3.032	0.020	0.69	2.914	0.020	0.63	XR
AQ6KE2		2.977	-0.036	-1.27	2.863	-0.030	-0.92	OE
AW822M		2.995	-0.018	-0.63	2.860	-0.033	-1.01	OE
BE6N2K		3.007	-0.006	-0.21	2.870	-0.023	-0.71	OE
BPNNNM		3.002	-0.011	-0.37	2.880	-0.014	-0.42	OE
C92Z6Y		3.033	0.021	0.73	2.880	-0.013	-0.41	OE
CN89WL		3.033	0.020	0.72	2.916	0.022	0.69	WD
DJGWF2		3.000	-0.013	-0.44	2.883	-0.010	-0.30	GD
ELF8QN		3.029	0.016	0.56	2.919	0.025	0.78	OE
FYK69Z	*	3.027	0.014	0.49	2.830	-0.063	-1.94	OE
GDXFFG		3.023	0.011	0.38	2.903	0.010	0.31	WD
GHDBE6	X	3.223	0.210	7.40	3.124	0.231	7.10	OE
GWNFKR		2.948	-0.064	-2.26	2.830	-0.063	-1.94	WD
HB6TDD		3.016	0.003	0.11	2.884	-0.009	-0.28	OE
JPXGZ2		2.986	-0.027	-0.94	2.874	-0.020	-0.60	OE
JTLXCV		3.035	0.022	0.79	2.912	0.019	0.58	XR
KFTTJP	*	3.040	0.027	0.96	2.982	0.088	2.72	DR
LTWENZ		3.004	-0.009	-0.30	2.882	-0.011	-0.34	ED
N48689		3.017	0.004	0.14	2.903	0.010	0.31	OE
N897CC		3.022	0.010	0.34	2.923	0.030	0.93	OE
NP6KKP		3.050	0.037	1.32	2.927	0.033	1.03	OE
QK2PV7	X	2.740	-0.273	-9.60	2.627	-0.267	-8.20	GD
QQRFGM		3.007	-0.006	-0.21	2.893	0.000	0.00	WD
QZW4Z7		3.015	0.002	0.07	2.861	-0.032	-0.99	IC
TLNHKR		2.953	-0.060	-2.10	2.873	-0.020	-0.62	OE
TMGJH3		3.043	0.031	1.08	2.890	-0.003	-0.10	OE
V8FJKJ	X	3.014	0.002	0.06	3.033	0.140	4.31	OE
VTGFHE		3.016	0.004	0.13	2.900	0.007	0.21	WD
WA4PPV	X	2.889	-0.124	-4.35	2.787	-0.106	-3.27	OE
YC2DEM		3.057	0.044	1.55	2.923	0.030	0.93	OE
ZND6DF		3.037	0.024	0.85	2.910	0.017	0.52	WD

Summary Statistics

	Sample J43		Sample J44	
Grand Means	3.013	Percent	2.893	Percent
Stnd Dev Btwn Labs	0.028	Percent	0.033	Percent

Samples J43, J44 : Alloy 718, Alloy 718

Statistics based on 30 of 35 reporting participants

Key to Method Codes Reported by Participants

DR	Spectrometry - Direct Reading OE (DROES)	ED	X-Ray Fluorescence - Energy Dispersive (EDX)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XR	X-Ray Fluorescence - ED or WD not specified	XX	Please Indicate Method Used for Current Element

Comments on Assigned Data Flags for Test #153

4ULAPJ (X) - Data for both samples are extremely high.

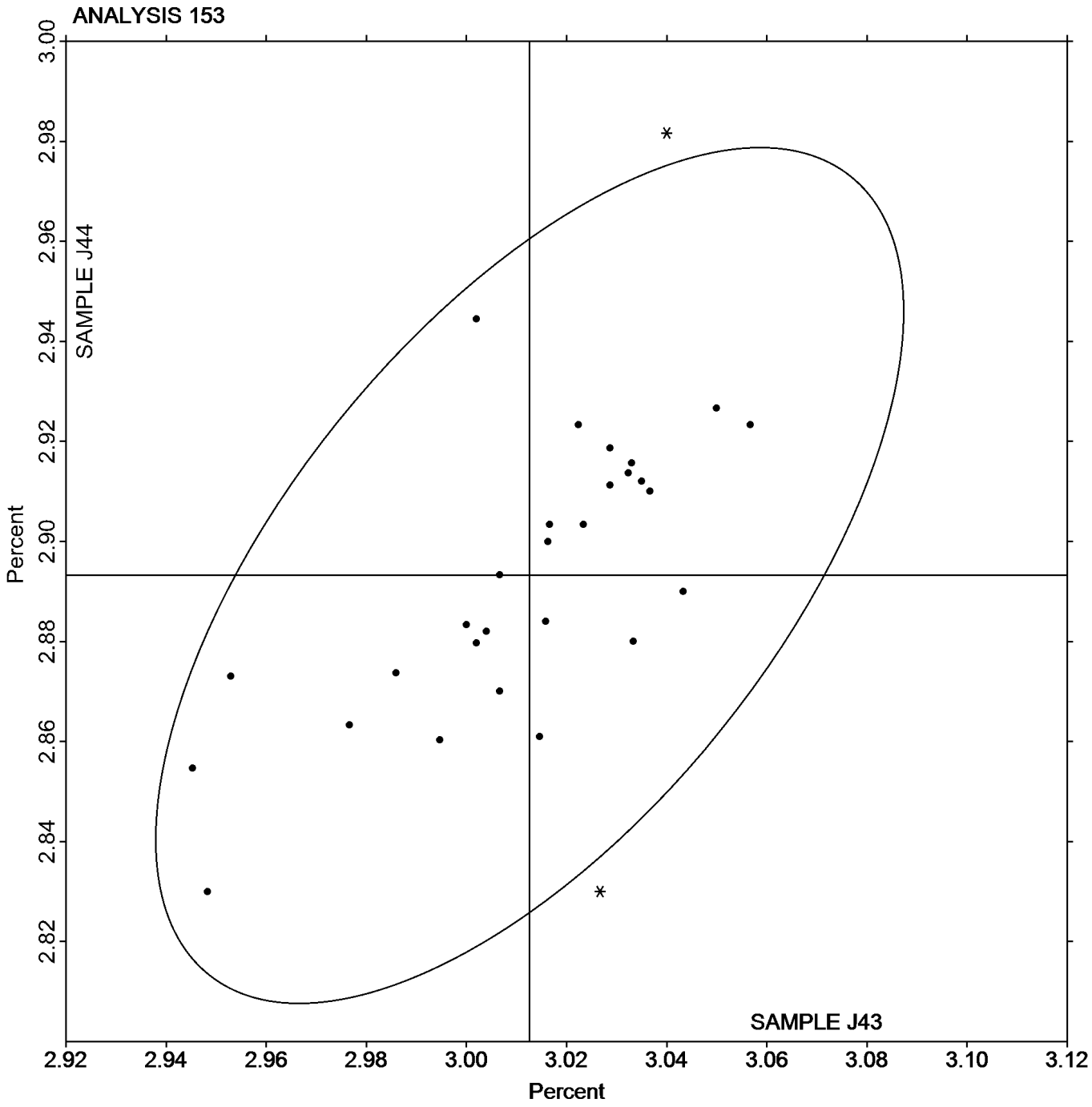
GHDBE6 (X) - Data for both samples are very high.

QK2PV7 (X) - Data for both samples are very low.

V8FJKJ (X) - Data for sample J44 are high.

WA4PPV (X) - Data for both samples are low.

SAMPLE J43	SAMPLE J44
3.013 Percent	2.893 Percent



		Sample J43			Sample J44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
366D9C		0.5113	0.0058	0.35	0.5077	0.0056	0.33	XX
47FNNF		0.5095	0.0040	0.25	0.5088	0.0067	0.41	IC
4ULAPJ		0.5180	0.0125	0.76	0.5140	0.0119	0.72	GD
83QFTC		0.5071	0.0016	0.10	0.5059	0.0038	0.23	IC
A7JN3G		0.4987	-0.0068	-0.41	0.4997	-0.0024	-0.15	OE
AQ6KE2		0.5257	0.0202	1.22	0.5197	0.0176	1.06	OE
AW822M		0.4877	-0.0178	-1.08	0.4860	-0.0161	-0.97	OE
BE6N2K		0.4987	-0.0068	-0.41	0.5060	0.0039	0.23	OE
BPNNNM		0.5107	0.0052	0.31	0.5077	0.0056	0.33	OE
C92Z6Y		0.4987	-0.0068	-0.41	0.4937	-0.0084	-0.51	OE
CN89WL		0.4933	-0.0122	-0.74	0.4907	-0.0114	-0.69	WD
ELF8QN		0.5150	0.0095	0.58	0.5147	0.0126	0.76	OE
FYK69Z		0.5110	0.0055	0.33	0.4900	-0.0121	-0.73	OE
GDXFFG	*	0.5350	0.0295	1.79	0.5133	0.0112	0.68	WD
GHDBE6	X	0.4067	-0.0988	-6.00	0.4030	-0.0991	-5.95	OE
GWNFKR	*	0.4550	-0.0505	-3.06	0.4543	-0.0478	-2.87	WD
HB6TDD		0.5304	0.0250	1.51	0.5328	0.0307	1.85	OE
JPXGZ2		0.5150	0.0095	0.58	0.5207	0.0186	1.12	OE
JTLXCV		0.5247	0.0192	1.16	0.5190	0.0169	1.02	XR
KFTTJP		0.5000	-0.0055	-0.33	0.4877	-0.0144	-0.87	DR
N48689	X	0.4177	-0.0878	-5.33	0.4140	-0.0881	-5.29	OE
N897CC		0.5107	0.0052	0.31	0.5017	-0.0004	-0.03	OE
NP6KKP		0.5067	0.0012	0.07	0.5000	-0.0021	-0.13	OE
QK2PV7		0.4710	-0.0345	-2.09	0.4683	-0.0338	-2.03	GD
QQRFGM		0.5100	0.0045	0.27	0.5003	-0.0018	-0.11	WD
QZW4Z7		0.4920	-0.0135	-0.82	0.4980	-0.0041	-0.25	IC
TLNHKR		0.5023	-0.0032	-0.19	0.5033	0.0012	0.07	OE
TMGJH3		0.5100	0.0045	0.27	0.5000	-0.0021	-0.13	OE
V8FJKJ		0.5203	0.0148	0.90	0.5297	0.0276	1.66	OE
VTGFHE		0.4933	-0.0122	-0.74	0.4897	-0.0124	-0.75	WD
WA4PPV		0.5190	0.0135	0.82	0.5213	0.0192	1.16	OE
YC2DEM		0.4970	-0.0085	-0.51	0.4933	-0.0088	-0.53	OE
ZND6DF		0.4923	-0.0132	-0.80	0.4870	-0.0151	-0.91	OE

Summary Statistics

	Sample J43		Sample J44	
Grand Means	0.5055	Percent	0.5021	Percent
Stnd Dev Btwn Labs	0.0165	Percent	0.0166	Percent

Samples J43, J44 : Alloy 718, Alloy 718

Statistics based on 31 of 33 reporting participants

Key to Method Codes Reported by Participants

DR	Spectrometry - Direct Reading OE (DROES)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)	XR	X-Ray Fluorescence - ED or WD not specified
XX	Please Indicate Method Used for Current Element		

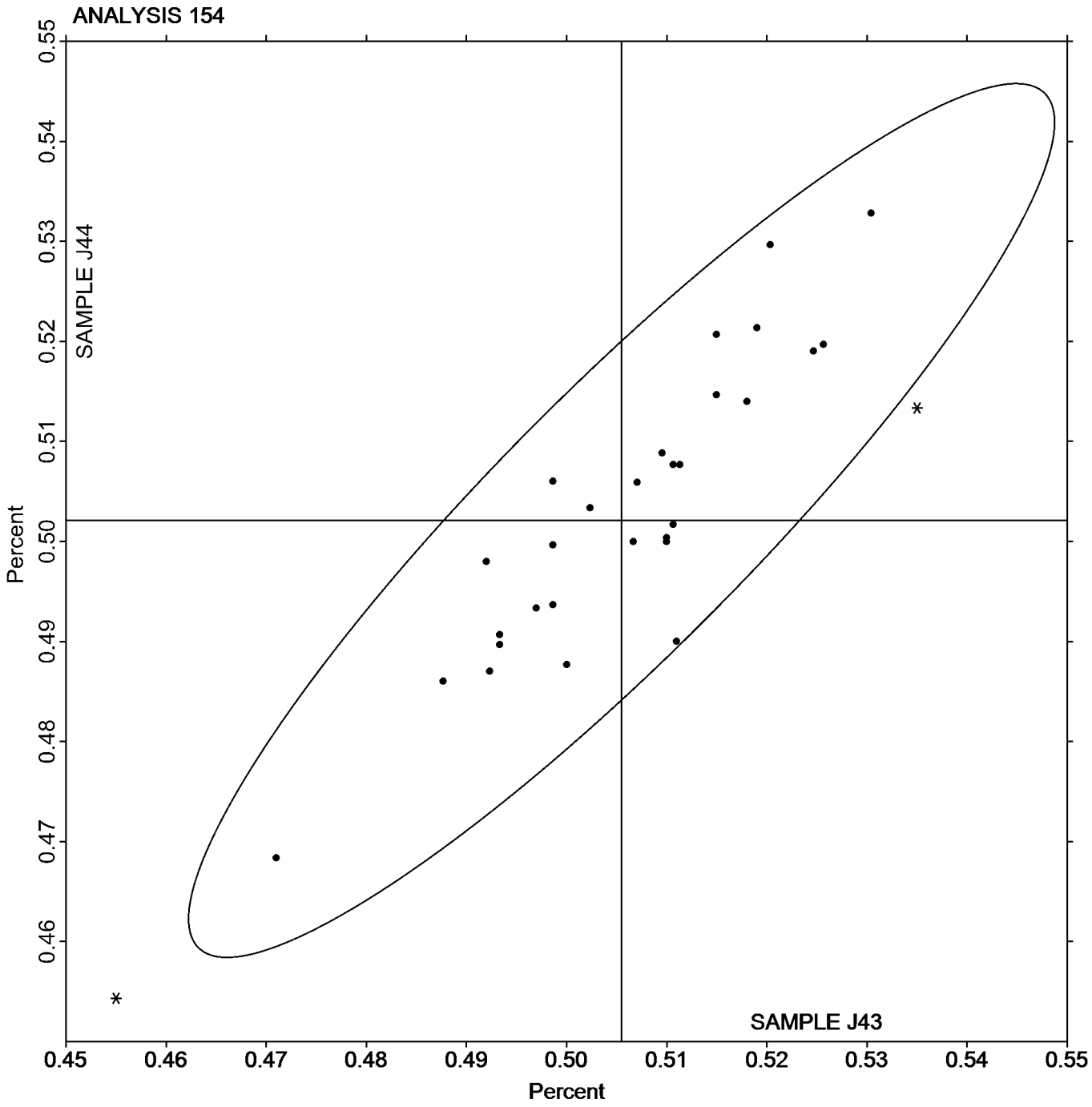
Comments on Assigned Data Flags for Test #154

GHDBE6 (X) - Data for both samples are low. Possible Systematic Error.

N48689 (X) - Data for both samples are low. Possible Systematic Error.

SAMPLE J43
0.5055 Percent

SAMPLE J44
0.5021 Percent



Fasteners and Metals Interlaboratory Testing Program

Analysis 155

Nickel-based Alloy, Element #6
COBALT (Co)

Cycle 118
2nd Qtr
2017

		Sample J43			Sample J44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
366D9C		0.1970	-0.0021	-0.24	0.1427	0.0042	0.62	OE
47FNNF		0.1983	-0.0008	-0.10	0.1425	0.0040	0.60	IC
4ULAPJ	X	0.2550	0.0559	6.44	0.1550	0.0165	2.44	GD
83QFTC		0.1904	-0.0087	-1.01	0.1332	-0.0053	-0.78	IC
A7JN3G		0.2090	0.0099	1.14	0.1540	0.0155	2.29	OE
AQ6KE2		0.2177	0.0186	2.14	0.1523	0.0139	2.05	OE
AW822M	*	0.2207	0.0216	2.48	0.1353	-0.0031	-0.46	OE
BE6N2K		0.2060	0.0069	0.79	0.1297	-0.0088	-1.30	OE
BPNNNM		0.1987	-0.0004	-0.05	0.1447	0.0062	0.92	OE
C92Z6Y	X	0.2333	0.0342	3.94	0.1870	0.0485	7.17	OE
CN89WL		0.1977	-0.0014	-0.17	0.1400	0.0015	0.23	WD
ELF8QN		0.2023	0.0032	0.37	0.1283	-0.0101	-1.50	OE
FYK69Z		0.1957	-0.0034	-0.40	0.1377	-0.0008	-0.12	OE
GDXFFG		0.1880	-0.0111	-1.28	0.1330	-0.0055	-0.81	WD
GHDBE6	X	0.1543	-0.0448	-5.16	0.0537	-0.0848	-12.52	OE
GWNFKR		0.1957	-0.0034	-0.40	0.1327	-0.0058	-0.86	WD
HB6TDD		0.1875	-0.0116	-1.34	0.1301	-0.0084	-1.24	OE
JPXGZ2		0.1967	-0.0024	-0.28	0.1353	-0.0031	-0.46	OE
JTLXCV	X	0.2303	0.0312	3.60	0.1737	0.0352	5.20	XR
N48689		0.1923	-0.0068	-0.78	0.1333	-0.0051	-0.76	OE
N897CC		0.2017	0.0026	0.30	0.1453	0.0069	1.01	OE
NP6KKP		0.2000	0.0009	0.10	0.1500	0.0115	1.70	OE
QK2PV7		0.1997	0.0006	0.06	0.1340	-0.0045	-0.66	GD
QQRFGM		0.1987	-0.0004	-0.05	0.1367	-0.0018	-0.26	WD
QZW4Z7		0.2110	0.0119	1.37	0.1410	0.0025	0.37	IC
TLNHKR	X	0.2343	0.0352	4.06	0.1313	-0.0071	-1.05	OE
TMGJH3		0.2040	0.0049	0.56	0.1440	0.0055	0.82	OE
V8FJKJ		0.1883	-0.0108	-1.24	0.1353	-0.0031	-0.46	OE
VTGFHE		0.1940	-0.0051	-0.59	0.1373	-0.0011	-0.17	WD
WA4PPV		0.1923	-0.0068	-0.78	0.1410	0.0025	0.37	OE
YC2DEM		0.2063	0.0072	0.83	0.1327	-0.0058	-0.86	OE
ZND6DF		0.1863	-0.0128	-1.47	0.1363	-0.0021	-0.31	WD

Summary Statistics

	Sample J43		Sample J44	
Grand Means	0.1991	Percent	0.1385	Percent
Stnd Dev Btwn Labs	0.0087	Percent	0.0068	Percent

Samples J43, J44 : Alloy 718, Alloy 718

Statistics based on 27 of 32 reporting participants

Key to Method Codes Reported by Participants

GD Spectrometry - Glow Discharge (GDS)
IC Spectrometry - Inductively Coupled Plasma (ICP)
OE Spectrometry - Optical Emission (OES)
WD X-Ray Fluorescence - Wavelength Dispersive (WDX)
XR X-Ray Fluorescence - ED or WD not specified

Comments on Assigned Data Flags for Test #155

4ULAPJ (X) - Data for sample J43 are very high.

C92Z6Y (X) - Data for Sample J43 are high. Data for Sample J44 are very high.

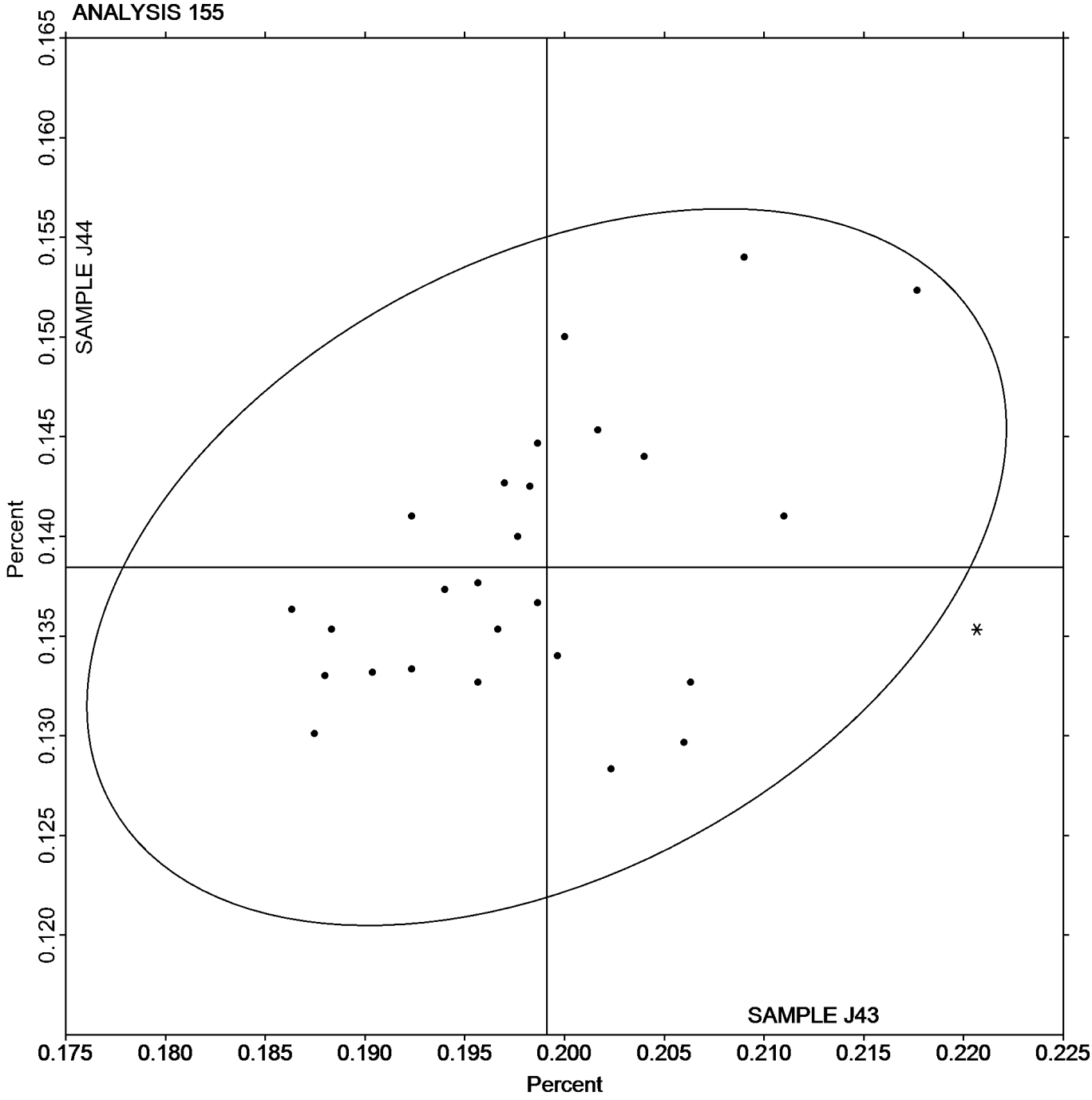
GHDBE6 (X) - Data for Sample J43 are low. Data for Sample J44 are extremely low.

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

TLNHKR (X) - Data for sample J43 are high.

SAMPLE J43
0.1991 Percent

SAMPLE J44
0.1385 Percent



Fasteners and Metals Interlaboratory Testing Program

Analysis 156

Nickel-based Alloy, Element #7
NIOBIUM (Nb)

Cycle 118
2nd Qtr
2017

		Sample J43			Sample J44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
366D9C		4.911	-0.020	-0.32	5.068	0.026	0.51	OE
4ULAPJ		5.020	0.089	1.48	5.110	0.068	1.31	GD
83QFTC		4.949	0.018	0.31	5.050	0.009	0.17	IC
A7JN3G		4.951	0.020	0.34	5.081	0.039	0.75	XR
AQ6KE2		4.920	-0.011	-0.17	5.010	-0.032	-0.60	OE
AW822M		4.961	0.030	0.50	5.008	-0.034	-0.65	OE
BE6N2K	X	4.570	-0.361	-5.96	4.797	-0.245	-4.69	OE
BPNNNM		4.916	-0.015	-0.24	4.999	-0.043	-0.82	OE
C92Z6Y		4.940	0.009	0.16	5.027	-0.015	-0.29	OE
CN89WL		4.927	-0.004	-0.06	5.041	-0.001	-0.01	WD
DJGWF2		5.010	0.079	1.31	5.113	0.072	1.37	GD
ELF8QN		4.919	-0.012	-0.20	5.086	0.044	0.85	OE
FYK69Z		4.960	0.029	0.49	4.993	-0.048	-0.92	OE
GDXFFG		4.870	-0.061	-1.00	4.987	-0.055	-1.05	WD
GHDBE6		4.951	0.020	0.34	5.035	-0.007	-0.13	OE
GWNFKR		4.828	-0.103	-1.70	4.931	-0.111	-2.12	WD
HB6TDD		4.944	0.013	0.22	5.055	0.014	0.26	OE
JPXGZ2		4.992	0.061	1.01	5.109	0.067	1.29	OE
JTLXCV		4.937	0.006	0.11	5.043	0.002	0.03	XR
KFTTJP		5.038	0.107	1.77	5.071	0.029	0.56	DR
LTWENZ		4.927	-0.004	-0.06	5.040	-0.002	-0.03	ED
N48689	*	4.790	-0.141	-2.32	4.910	-0.132	-2.52	OE
N897CC		4.872	-0.058	-0.96	5.001	-0.041	-0.78	OE
NP6KKP		4.823	-0.107	-1.77	4.947	-0.095	-1.82	OE
QK2PV7		4.897	-0.034	-0.56	5.097	0.055	1.05	GD
QQRFGM		4.913	-0.017	-0.28	5.043	0.002	0.03	WD
QZW4Z7		4.977	0.047	0.77	5.021	-0.020	-0.39	IC
TLNHKR		4.995	0.065	1.07	5.117	0.075	1.44	OE
TMGJH3	*	4.807	-0.124	-2.05	5.060	0.018	0.35	OE
V8FJKJ	X	4.933	0.003	0.05	5.206	0.165	3.15	OE
VTGFHE		4.902	-0.029	-0.48	5.027	-0.015	-0.29	WD
WA4PPV		4.985	0.054	0.89	5.081	0.040	0.76	OE
YC2DEM		4.960	0.029	0.49	5.083	0.042	0.80	OE
ZND6DF		4.987	0.056	0.93	5.087	0.045	0.86	WD

Summary Statistics

	Sample J43		Sample J44	
Grand Means	4.931	Percent	5.042	Percent
Stnd Dev Btwn Labs	0.061	Percent	0.052	Percent

Samples J43, J44 : Alloy 718, Alloy 718

Statistics based on 32 of 34 reporting participants

Key to Method Codes Reported by Participants

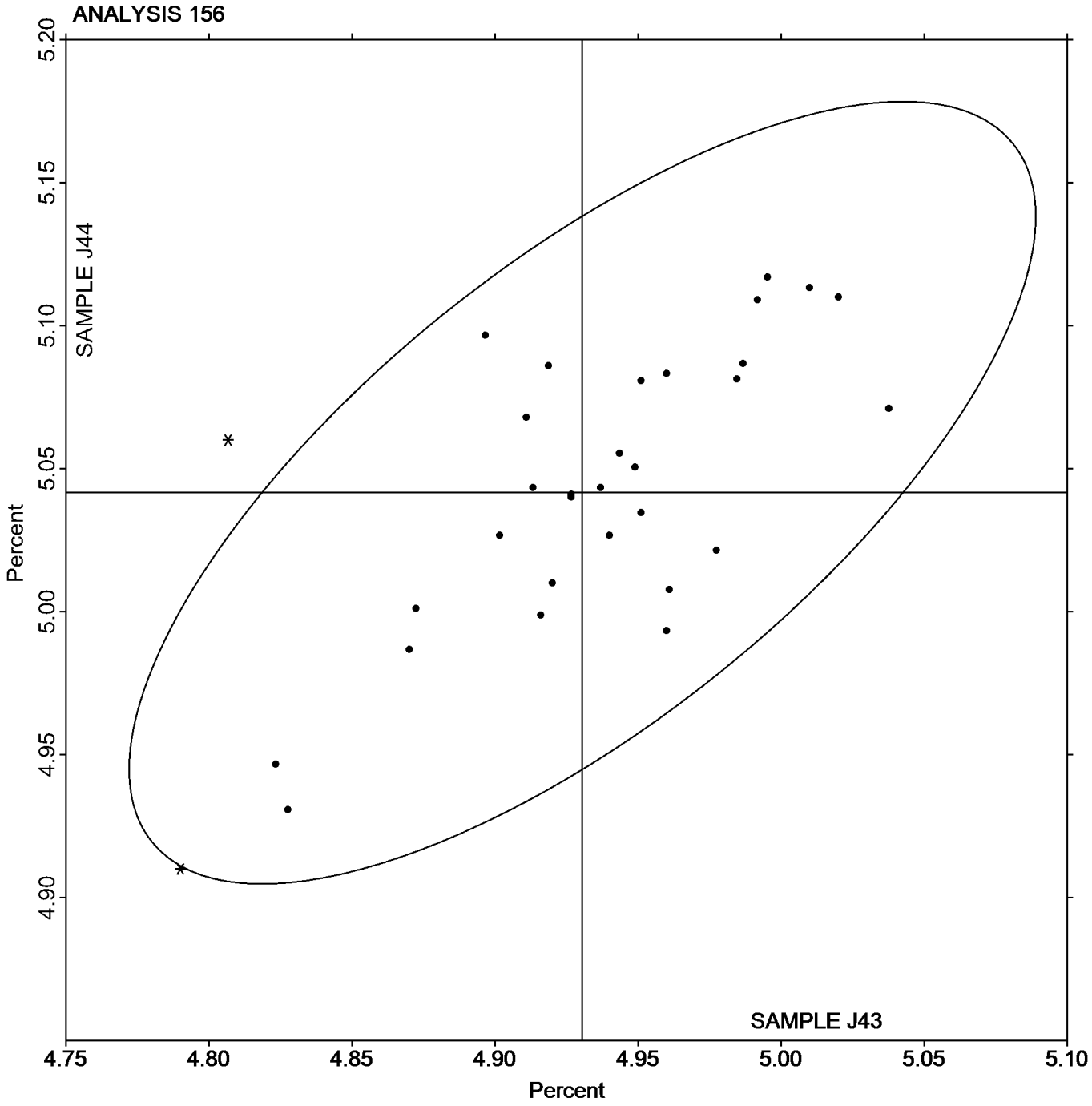
DR	Spectrometry - Direct Reading OE (DROES)	ED	X-Ray Fluorescence - Energy Dispersive (EDX)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XR	X-Ray Fluorescence - ED or WD not specified		

Comments on Assigned Data Flags for Test #156

BE6N2K (X) - Data for both samples are low.

V8FJKJ (X) - Data for sample J44 are high.

SAMPLE J43	SAMPLE J44
4.931 Percent	5.042 Percent



		Sample J43			Sample J44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
366D9C		0.9367	0.0464	2.36	1.002	0.0492	2.21	OE
47FNNF		0.8832	-0.0071	-0.36	0.9524	-0.0001	-0.01	IC
4ULAPJ		0.9210	0.0307	1.56	0.9920	0.0395	1.77	XX
83QFTC		0.8831	-0.0072	-0.37	0.9417	-0.0108	-0.49	IC
A7JN3G		0.8767	-0.0136	-0.69	0.9460	-0.0065	-0.29	OE
AQ6KE2		0.8823	-0.0080	-0.41	0.9370	-0.0155	-0.70	OE
AW822M		0.9020	0.0117	0.60	0.9660	0.0135	0.61	OE
BE6N2K	X	0.9900	0.0997	5.08	1.057	0.1042	4.67	OE
BPNNNM		0.8883	-0.0020	-0.10	0.9483	-0.0042	-0.19	OE
C92Z6Y		0.8910	0.0007	0.04	0.9447	-0.0078	-0.35	OE
CN89WL		0.8980	0.0077	0.39	0.9653	0.0128	0.58	WD
DJGWF2		0.8797	-0.0106	-0.54	0.9370	-0.0155	-0.70	GD
ELF8QN	*	0.8790	-0.0113	-0.58	0.9610	0.0085	0.38	OE
FYK69Z		0.8797	-0.0106	-0.54	0.9240	-0.0285	-1.28	OE
GDXFFG		0.9233	0.0330	1.68	0.9833	0.0308	1.38	WD
GHDBE6		0.8670	-0.0233	-1.19	0.9237	-0.0288	-1.29	OE
GWNFKR		0.8887	-0.0016	-0.08	0.9477	-0.0048	-0.22	WD
HB6TDD		0.8783	-0.0120	-0.61	0.9371	-0.0154	-0.69	OE
JPXGZ2		0.9240	0.0337	1.72	0.9863	0.0338	1.52	OE
JTLXCV		0.8823	-0.0080	-0.41	0.9473	-0.0052	-0.23	XR
KFTTJP		0.8926	0.0023	0.12	0.9445	-0.0080	-0.36	DR
LTWENZ		0.8817	-0.0086	-0.44	0.9403	-0.0122	-0.55	ED
N48689		0.8837	-0.0066	-0.34	0.9427	-0.0098	-0.44	OE
N897CC		0.8828	-0.0075	-0.38	0.9494	-0.0031	-0.14	OE
NP6KKP	*	0.9400	0.0497	2.53	1.017	0.0642	2.88	OE
QK2PV7	X	1.050	0.1597	8.13	1.047	0.0942	4.22	GD
QQRFGM		0.8810	-0.0093	-0.47	0.9407	-0.0118	-0.53	WD
QZW4Z7		0.8987	0.0084	0.43	0.9530	0.0005	0.02	IC
TLNHKR		0.8800	-0.0103	-0.52	0.9487	-0.0038	-0.17	OE
TMGJH3		0.8633	-0.0270	-1.37	0.9300	-0.0225	-1.01	OE
V8FJKJ		0.8417	-0.0486	-2.48	0.9300	-0.0225	-1.01	OE
VTGFHE		0.8890	-0.0013	-0.07	0.9530	0.0005	0.02	WD
WA4PPV		0.8537	-0.0366	-1.86	0.9187	-0.0338	-1.52	OE
YC2DEM		0.8900	-0.0003	-0.02	0.9510	-0.0015	-0.07	OE
ZND6DF		0.8890	-0.0013	-0.07	0.9493	-0.0032	-0.14	WD

Summary Statistics

	Sample J43		Sample J44	
Grand Means	0.8903	Percent	0.9525	Percent
Stnd Dev Btwn Labs	0.0196	Percent	0.0223	Percent

Samples J43, J44 : Alloy 718, Alloy 718

Statistics based on 32 of 35 reporting participants

Key to Method Codes Reported by Participants

DR	Spectrometry - Direct Reading OE (DROES)	ED	X-Ray Fluorescence - Energy Dispersive (EDX)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XR	X-Ray Fluorescence - ED or WD not specified	XX	Please Indicate Method Used for Current Element

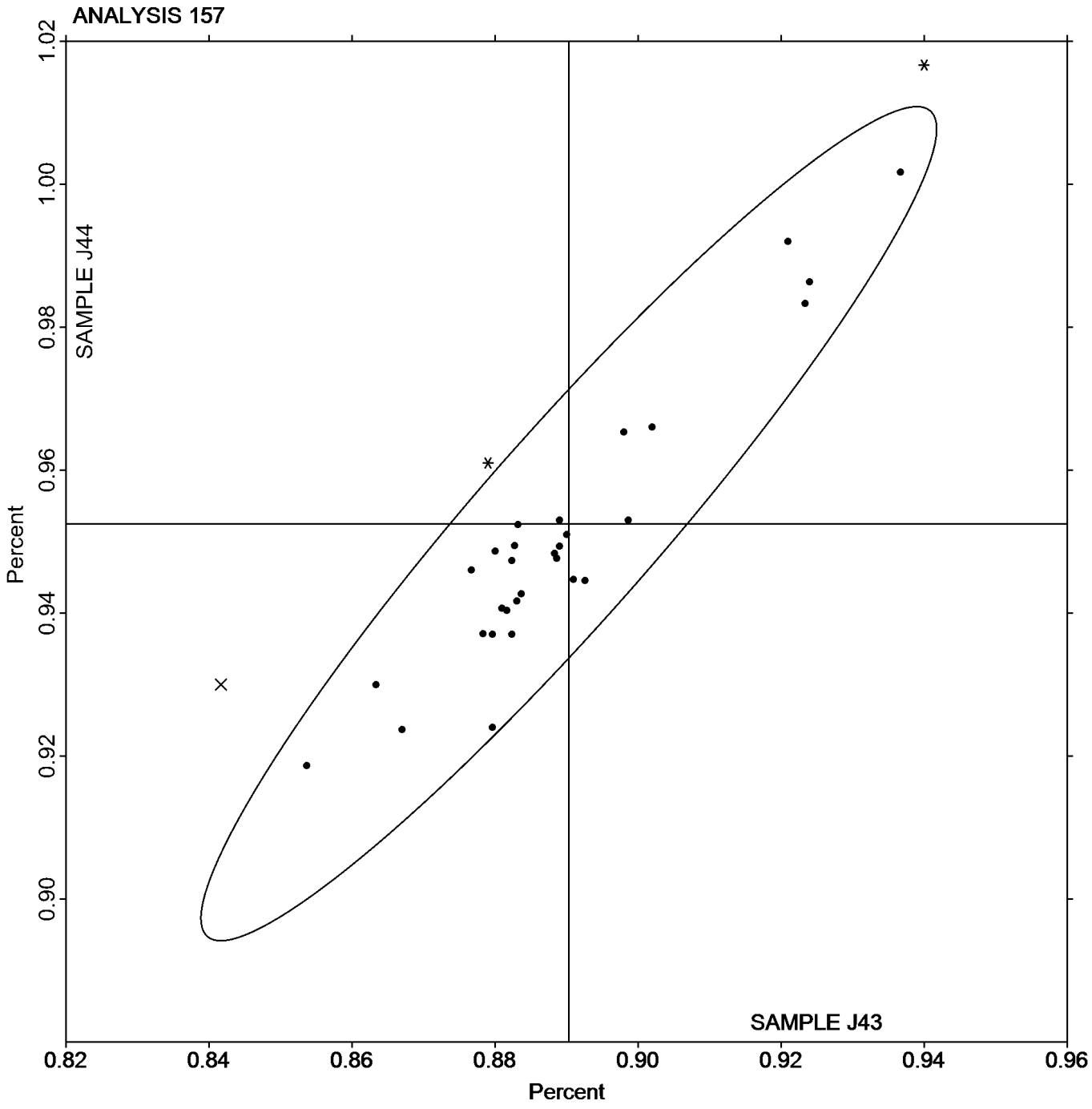
Comments on Assigned Data Flags for Test #157

BE6N2K (X) - Data for both samples are high. Possible Systematic Error.

QK2PV7 (X) - Data for Sample J43 are very high. Data for Sample J44 are high.

SAMPLE J43
0.8903 Percent

SAMPLE J44
0.9525 Percent



		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2ZK2LW		0.0463	-0.0021	-0.82	0.0170	-0.0015	-0.61	CO
3A63QP		0.0473	-0.0011	-0.44	0.0180	-0.0005	-0.20	OE
4ULAPJ		0.0500	0.0015	0.60	0.0170	-0.0015	-0.61	GD
66ZBBN		0.0509	0.0025	0.97	0.0225	0.0041	1.67	OE
7MV7J6	X	0.0386	-0.0099	-3.83	0.0102	-0.0083	-3.43	OE
7WK87P		0.0537	0.0052	2.03	0.0195	0.0010	0.42	OE
8B26JA		0.0470	-0.0015	-0.56	0.0170	-0.0015	-0.61	CI
96RDP3		0.0440	-0.0044	-1.72	0.0172	-0.0013	-0.53	OE
9R7W26	*	0.0540	0.0055	2.16	0.0257	0.0072	2.96	OE
A7JN3G		0.0470	-0.0015	-0.56	0.0180	-0.0005	-0.20	CO
A89M62		0.0507	0.0022	0.86	0.0197	0.0012	0.49	GD
ABBRC9		0.0447	-0.0038	-1.47	0.0133	-0.0052	-2.12	OE
AW822M		0.0513	0.0029	1.12	0.0194	0.0009	0.36	OE
BE6N2K	X	0.5000	0.4515	175.50	0.0210	0.0025	1.03	OE
BPNNNM		0.0495	0.0010	0.41	0.0195	0.0010	0.40	CO
C8M4MR		0.0478	-0.0007	-0.25	0.0169	-0.0016	-0.65	CI
C92Z6Y		0.0443	-0.0041	-1.60	0.0194	0.0009	0.39	OE
CKRW3Q		0.0484	-0.0001	-0.02	0.0186	0.0001	0.05	CI
CNURNE		0.0503	0.0019	0.73	0.0187	0.0002	0.07	CI
DJGWF2		0.0495	0.0010	0.41	0.0193	0.0008	0.33	GD
ELF8QN		0.0484	-0.0001	-0.02	0.0166	-0.0019	-0.76	CI
ENLGYK		0.0514	0.0030	1.16	0.0158	-0.0027	-1.12	OE
FYK69Z		0.0500	0.0015	0.60	0.0203	0.0018	0.76	OE
GDXFFG		0.0472	-0.0013	-0.49	0.0158	-0.0027	-1.09	CI
GHDBE6	X	0.0461	-0.0024	-0.93	0.00950	-0.0090	-3.70	OE
GULQ44		0.0467	-0.0018	-0.69	0.0173	-0.0012	-0.48	OE
GW96WK		0.0430	-0.0055	-2.12	0.0170	-0.0015	-0.61	OE
JPXGZ2		0.0488	0.0004	0.15	0.0193	0.0008	0.35	OE
KFTTJP		0.0478	-0.0006	-0.24	0.0195	0.0010	0.40	CO
L4WJL2		0.0465	-0.0020	-0.76	0.0156	-0.0029	-1.19	CI
L9MTVZ		0.0516	0.0032	1.24	0.0241	0.0057	2.33	OE
LERUT9		0.0483	-0.0002	-0.06	0.0176	-0.0009	-0.35	CI
M3DMLR		0.0473	-0.0011	-0.44	0.0203	0.0018	0.76	OE
M44HWL		0.0510	0.0025	0.99	0.0192	0.0007	0.28	OE
N897CC		0.0493	0.0009	0.34	0.0180	-0.0005	-0.20	OE
NG9YGW	X	0.0387	-0.0097	-3.78	0.0353	0.0168	6.91	OE
NP6KKP		0.0458	-0.0026	-1.02	0.0150	-0.0035	-1.44	OE
NQXUTC		0.0497	0.0012	0.47	0.0190	0.0005	0.21	GD
PR8W2B		0.0454	-0.0031	-1.19	0.0182	-0.0002	-0.10	OE
QK2PV7		0.0472	-0.0012	-0.47	0.0176	-0.0009	-0.35	GD
QQRFGM		0.0480	-0.0005	-0.18	0.0187	0.0002	0.07	CO
QZW4Z7		0.0507	0.0022	0.86	0.0192	0.0007	0.28	CO
RERBJ7		0.0483	-0.0002	-0.06	0.0191	0.0006	0.24	CI
TLNHKR		0.0470	-0.0015	-0.58	0.0202	0.0017	0.71	OE
TMGJH3	*	0.0523	0.0039	1.51	0.0160	-0.0025	-1.03	OE
UMXWK7		0.0523	0.0039	1.51	0.0223	0.0038	1.58	CI
UQX6PF		0.0520	0.0035	1.38	0.0230	0.0045	1.86	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 180

Corrosion Resistant Steel, Element #1

CARBON (C)

Cycle 118
2nd Qtr
2017

WebCode	Data Flag	Sample M43 Lab Mean	Sample M43 Diff. from Grand Mean	Sample M43 CPV	Sample M44 Lab Mean	Sample M44 Diff. from Grand Mean	Sample M44 CPV	Method
V8FJKJ		0.0445	-0.0040	-1.55	0.0164	-0.0021	-0.87	CO
WA4PPV		0.0436	-0.0048	-1.87	0.0141	-0.0044	-1.81	OE
WC9HJU	*	0.0464	-0.0021	-0.81	0.0235	0.0050	2.07	OE
YC2DEM		0.0497	0.0012	0.47	0.0200	0.0015	0.62	OE
YF4FZH		0.0490	0.0005	0.21	0.0163	-0.0022	-0.89	OE
YGA2NH		0.0490	0.0005	0.21	0.0167	-0.0018	-0.75	CI
ZKPTCP		0.0484	-0.0001	-0.02	0.0195	0.0010	0.42	CO
ZND6DF		0.0451	-0.0033	-1.29	0.0171	-0.0014	-0.56	CI
ZQWQWB		0.0497	0.0012	0.47	0.0177	-0.0008	-0.34	OE
ZZ2QH6		0.0497	0.0012	0.47	0.0171	-0.0014	-0.57	CI

Summary Statistics

	Sample M43		Sample M44	
Grand Means	0.0485	Percent	0.0185	Percent
Stnd Dev Btwn Labs	0.0026	Percent	0.0024	Percent

Samples M43, M44 : AISI 316H, AISI 316L

Statistics based on 53 of 57 reporting participants

Key to Method Codes Reported by Participants

CI	Combustion / IR	CO	Combustion
GD	Spectrometry - Glow Discharge (GDS)	OE	Spectrometry - Optical Emission (OES)

Comments on Assigned Data Flags for Test #180

7MV7J6 (X) - Data for both samples are low.

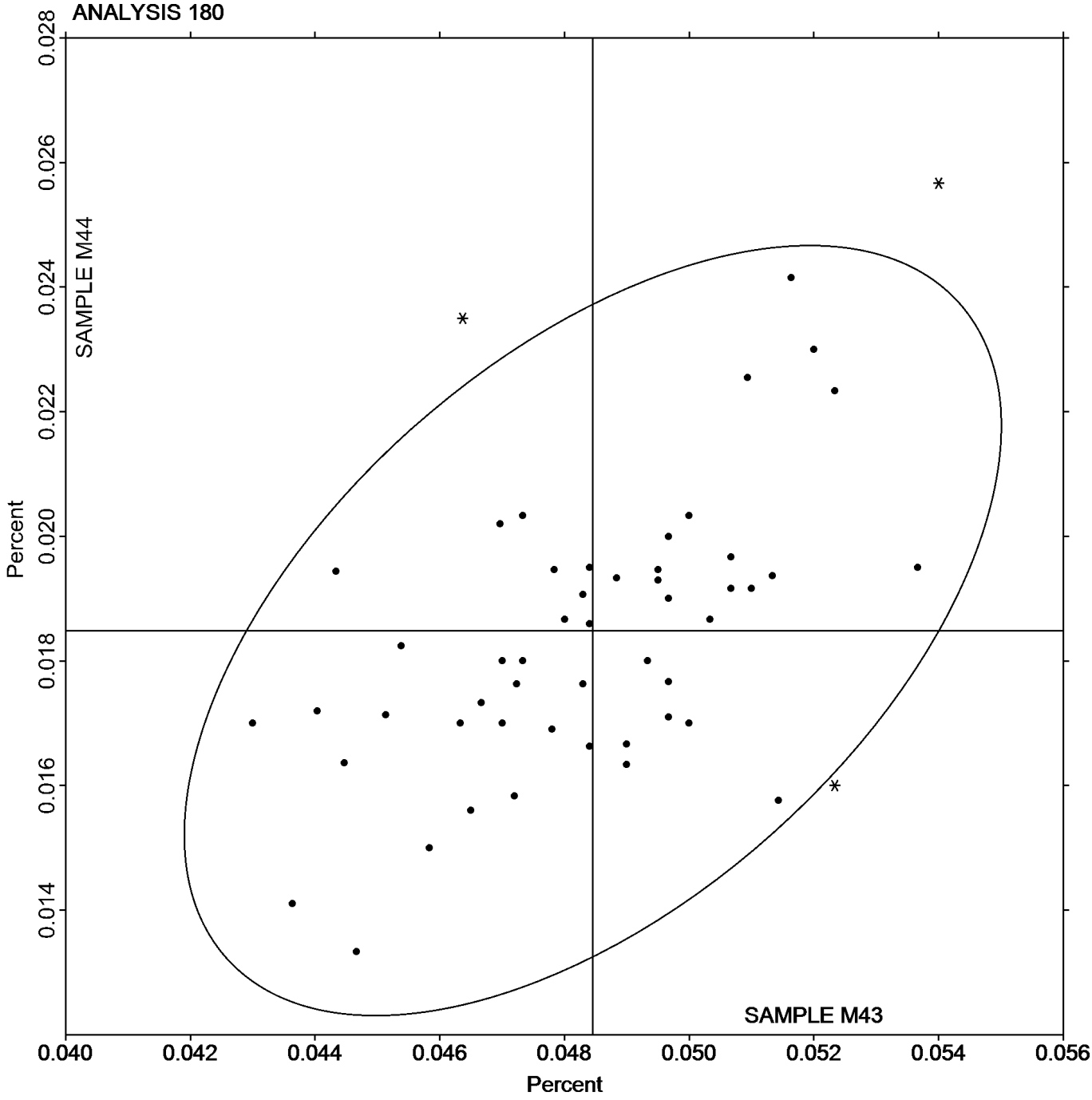
BE6N2K (X) - Extreme data for sample M43. Inconsistent within the determinations of sample M44.

GHDBE6 (X) - Data for sample M44 are low.

NG9YGW (X) - Data for sample M43 are low and data for sample M44 are very high.

SAMPLE M43
0.0485 Percent

SAMPLE M44
0.0185 Percent



		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2ZK2LW	X	1.520	0.085	4.80	1.843	0.115	4.69	ED
3A63QP		1.437	0.001	0.07	1.737	0.008	0.33	XX
4ULAPJ		1.410	-0.025	-1.45	1.680	-0.049	-1.99	GD
66ZBBN	*	1.390	-0.045	-2.56	1.703	-0.026	-1.06	OE
7MV7J6		1.457	0.021	1.20	1.741	0.013	0.52	OE
7WK87P		1.454	0.019	1.07	1.727	-0.002	-0.08	OE
8B26JA		1.419	-0.016	-0.94	1.722	-0.007	-0.29	WD
96RDP3		1.440	0.005	0.26	1.733	0.005	0.19	OE
9R7W26		1.453	0.018	1.01	1.727	-0.002	-0.08	OE
A7JN3G		1.429	-0.006	-0.35	1.722	-0.007	-0.27	XR
A89M62		1.427	-0.009	-0.50	1.680	-0.049	-1.99	GD
ABBRC9		1.440	0.005	0.26	1.743	0.015	0.60	OE
AW822M		1.441	0.006	0.31	1.731	0.003	0.11	OE
BE6N2K	X	1.530	0.095	5.37	1.897	0.168	6.86	OE
BPNNNM		1.445	0.010	0.54	1.725	-0.004	-0.16	OE
C8M4MR		1.428	-0.007	-0.43	1.732	0.004	0.15	WD
C92Z6Y		1.473	0.038	2.15	1.760	0.031	1.28	OE
CKRW3Q		1.418	-0.017	-0.97	1.718	-0.010	-0.42	XR
CNURNE		1.456	0.021	1.16	1.778	0.050	2.03	DR
DJGWF2	*	1.427	-0.009	-0.50	1.763	0.035	1.42	GD
ELF8QN		1.439	0.004	0.22	1.749	0.021	0.84	OE
ENLGYK		1.432	-0.004	-0.20	1.705	-0.023	-0.95	OE
FYK69Z		1.410	-0.025	-1.45	1.713	-0.015	-0.63	OE
GDXFFG		1.407	-0.029	-1.64	1.710	-0.019	-0.76	WD
GHDBE6		1.442	0.007	0.37	1.734	0.005	0.22	OE
GULQ44		1.427	-0.009	-0.50	1.730	0.001	0.05	WD
GW96WK		1.435	-0.001	-0.05	1.752	0.023	0.95	OE
HZ6BPV	X	1.410	-0.025	-1.45	1.620	-0.109	-4.44	ED
JPXGZ2		1.418	-0.017	-0.99	1.695	-0.034	-1.39	OE
KFTTJP		1.435	0.000	-0.01	1.723	-0.006	-0.23	DR
L4WJL2		1.430	-0.005	-0.31	1.706	-0.023	-0.93	OE
L9MTVZ		1.426	-0.009	-0.52	1.704	-0.024	-1.00	OE
LERUT9		1.431	-0.004	-0.25	1.729	0.000	0.00	WD
LXNNR7	X	1.534	0.099	5.61	1.726	-0.003	-0.12	AA
M3DMLR		1.450	0.015	0.82	1.730	0.001	0.05	OE
M44HWL		1.420	-0.015	-0.88	1.683	-0.045	-1.85	OE
N897CC		1.430	-0.005	-0.31	1.714	-0.015	-0.61	OE
NG9YGW		1.460	0.025	1.41	1.761	0.032	1.32	OE
NP6KKP	*	1.480	0.045	2.53	1.797	0.068	2.78	OE
NQXUTC		1.430	-0.005	-0.31	1.710	-0.019	-0.76	GD
PR8W2B		1.476	0.040	2.27	1.771	0.043	1.75	OE
QK2PV7		1.436	0.000	0.01	1.706	-0.023	-0.93	GD
QQRFGM		1.447	0.011	0.63	1.747	0.018	0.74	WD
QZW4Z7		1.441	0.006	0.33	1.731	0.002	0.08	IC
RERBJ7		1.433	-0.003	-0.16	1.727	-0.002	-0.07	IC
TLNHKR		1.424	-0.011	-0.65	1.736	0.007	0.30	OE
TMGJH3	X	1.447	0.011	0.63	1.823	0.095	3.87	OE

WebCode	Data Flag	Sample M43 Lab Mean	Sample M43 Diff. from Grand Mean	Sample M43 CPV	Sample M44 Lab Mean	Sample M44 Diff. from Grand Mean	Sample M44 CPV	Method
UMXWK7		1.430	-0.005	-0.31	1.717	-0.012	-0.49	IC
UQX6PF		1.415	-0.020	-1.14	1.694	-0.034	-1.40	OE
V8FJKJ		1.435	0.000	-0.01	1.712	-0.017	-0.68	OE
WA4PPV		1.440	0.005	0.28	1.759	0.031	1.25	OE
WC9HJU		1.471	0.036	2.04	1.774	0.046	1.87	OE
YC2DEM		1.420	-0.015	-0.88	1.717	-0.012	-0.49	OE
YF4FZH		1.423	-0.012	-0.69	1.737	0.008	0.33	OE
YGA2NH		1.419	-0.016	-0.92	1.720	-0.009	-0.37	WD
ZKPTCP		1.440	0.005	0.27	1.724	-0.005	-0.19	OE
ZND6DF		1.430	-0.005	-0.31	1.723	-0.005	-0.22	WD
ZQWQWB		1.437	0.001	0.07	1.734	0.005	0.22	OE
ZZ2QH6		1.452	0.016	0.93	1.752	0.023	0.94	OE

Summary Statistics

	Sample M43		Sample M44	
Grand Means	1.435	Percent	1.729	Percent
Stnd Dev Btwn Labs	0.018	Percent	0.024	Percent

Samples M43, M44 : AISI 316H, AISI 316L

Statistics based on 54 of 59 reporting participants

Key to Method Codes Reported by Participants

AA	Spectrometry - Atomic Absorption (AAS)	DR	Spectrometry - Direct Reading OE (DROES)
ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)	XR	X-Ray Fluorescence - ED or WD not specified
XX	Please Indicate Method Used for Current Element		

Comments on Assigned Data Flags for Test #181

2ZK2LW (X) - Data for both samples are high. Inconsistent within the determinations of both samples. Inconsistent within the determinations of both samples. Inconsistent within the determinations of both samples.

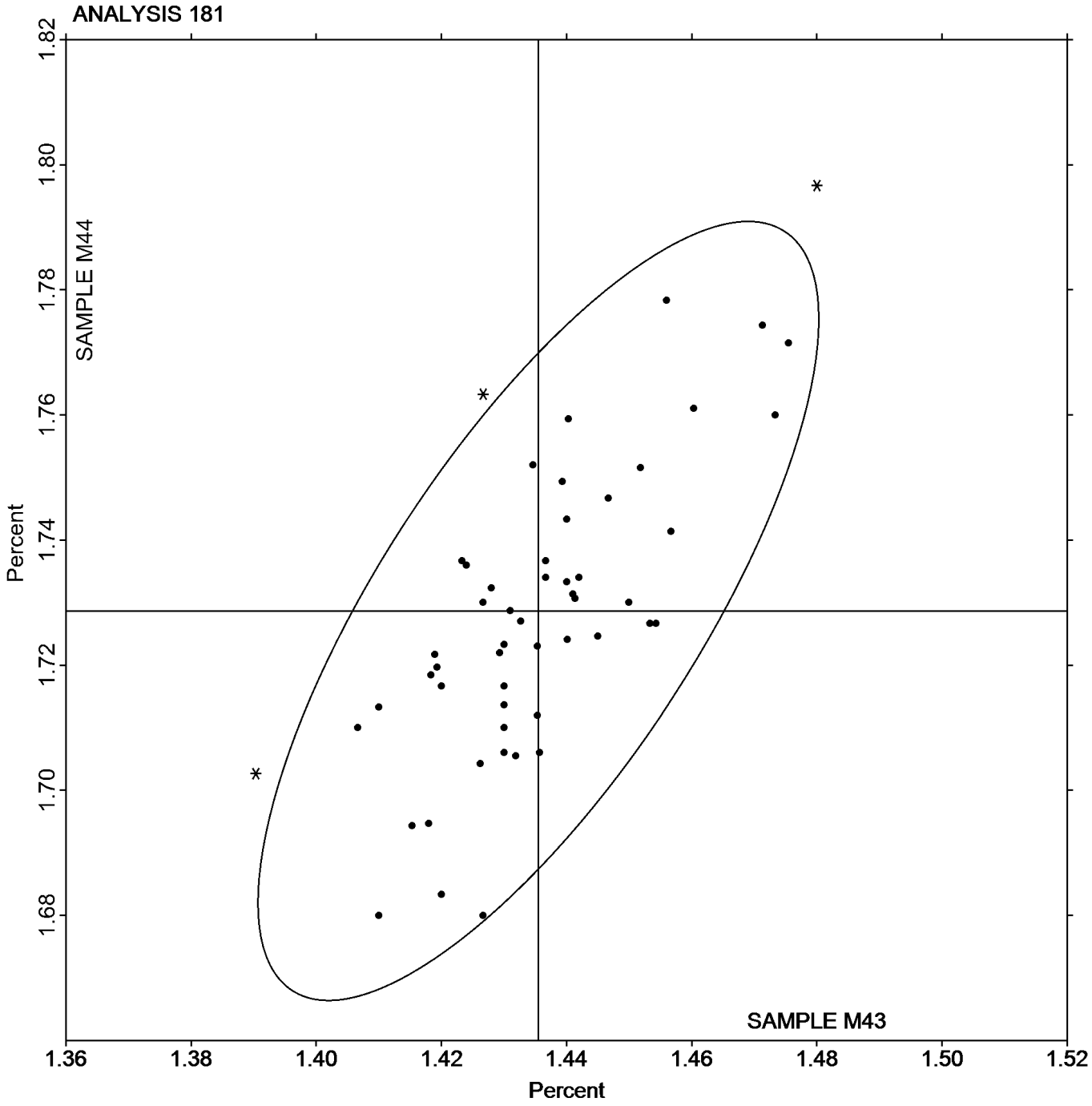
BE6N2K (X) - Data for both samples are high.

HZ6BPV (X) - Data for sample M44 are low.

LXNNR7 (X) - Data for sample M43 are high.

TMGJH3 (X) - Data for sample M44 are high.

SAMPLE M43	SAMPLE M44
1.435 Percent	1.729 Percent



		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2ZK2LW	*	0.3373	0.0314	2.77	0.3253	0.0327	2.89	OE
3A63QP		0.3150	0.0091	0.80	0.3000	0.0073	0.65	XX
4ULAPJ		0.3020	-0.0039	-0.35	0.2900	-0.0027	-0.23	GD
66ZBBN		0.3117	0.0058	0.51	0.2980	0.0054	0.47	OE
7MV7J6	*	0.3343	0.0284	2.51	0.3237	0.0310	2.74	OE
7WK87P		0.3063	0.0004	0.04	0.2917	-0.0010	-0.09	OE
8B26JA		0.3017	-0.0043	-0.38	0.2870	-0.0057	-0.50	WD
96RDP3		0.3060	0.0001	0.01	0.2930	0.0003	0.03	OE
9R7W26		0.3040	-0.0019	-0.17	0.2917	-0.0010	-0.09	OE
A7JN3G		0.2963	-0.0096	-0.85	0.2830	-0.0097	-0.85	OE
A89M62		0.3057	-0.0003	-0.02	0.2947	0.0020	0.18	GD
ABBRC9		0.3333	0.0274	2.42	0.3200	0.0273	2.41	IC
AW822M		0.3040	-0.0019	-0.17	0.2937	0.0010	0.09	OE
BE6N2K		0.2963	-0.0096	-0.85	0.2803	-0.0123	-1.09	OE
BPNNNM		0.3103	0.0044	0.39	0.2953	0.0027	0.24	OE
C8M4MR		0.3009	-0.0050	-0.44	0.2901	-0.0026	-0.23	WD
C92Z6Y		0.3170	0.0111	0.98	0.3030	0.0103	0.91	OE
CKRW3Q		0.3032	-0.0027	-0.24	0.2898	-0.0029	-0.25	XR
CNURNE		0.3147	0.0087	0.77	0.3010	0.0083	0.74	DR
DJGWF2	X	0.3043	-0.0016	-0.14	0.2997	0.0070	0.62	GD
ENLGYK	*	0.2707	-0.0353	-3.11	0.2577	-0.0350	-3.09	OE
FYK69Z		0.3000	-0.0059	-0.52	0.3000	0.0073	0.65	OE
GDXFFG	*	0.3000	-0.0059	-0.52	0.2917	-0.0010	-0.09	WD
GHDBE6		0.3100	0.0041	0.36	0.2930	0.0003	0.03	OE
GULQ44		0.3050	-0.0009	-0.08	0.2937	0.0010	0.09	WD
GW96WK		0.3077	0.0017	0.15	0.2913	-0.0013	-0.12	OE
HZ6BPV	X	0.2200	-0.0859	-7.59	0.1900	-0.1027	-9.07	ED
JPXGZ2		0.2953	-0.0106	-0.94	0.2837	-0.0090	-0.79	OE
KFTTJP		0.2996	-0.0064	-0.56	0.2867	-0.0060	-0.53	DR
L4WJL2		0.3020	-0.0039	-0.35	0.2880	-0.0047	-0.41	OE
L9MTVZ		0.3090	0.0031	0.27	0.2953	0.0026	0.23	OE
LERUT9		0.2980	-0.0079	-0.70	0.2860	-0.0067	-0.59	WD
M3DMLR		0.3117	0.0057	0.51	0.2970	0.0043	0.38	OE
M44HWL		0.3260	0.0201	1.77	0.3150	0.0223	1.97	OE
N897CC		0.2980	-0.0079	-0.70	0.2840	-0.0087	-0.76	OE
NG9YGW		0.2923	-0.0137	-1.21	0.2790	-0.0137	-1.21	OE
NP6KKP		0.2993	-0.0066	-0.58	0.2857	-0.0070	-0.62	OE
NQXUTC		0.2970	-0.0089	-0.79	0.2840	-0.0087	-0.76	GD
PR8W2B		0.2985	-0.0074	-0.66	0.2855	-0.0072	-0.64	OE
QK2PV7		0.2863	-0.0196	-1.73	0.2791	-0.0136	-1.20	GD
QQRFGM		0.3140	0.0081	0.71	0.2997	0.0070	0.62	WD
QZW4Z7		0.3063	0.0004	0.04	0.2917	-0.0010	-0.09	IC
RERBJ7		0.3047	-0.0013	-0.11	0.2913	-0.0013	-0.12	IC
TLNHKR		0.2847	-0.0213	-1.88	0.2650	-0.0277	-2.44	OE
UMXWK7		0.2993	-0.0066	-0.58	0.2893	-0.0033	-0.29	IC
V8FJKJ		0.3050	-0.0009	-0.08	0.2917	-0.0010	-0.09	OE
WA4PPV		0.3033	-0.0026	-0.23	0.2897	-0.0030	-0.26	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 182

Corrosion Resistant Steel, Element #3
COBALT (Co)

Cycle 118
2nd Qtr
2017

WebCode	Data Flag	Sample M43 Lab Mean	Sample M43 Diff. from Grand Mean	Sample M43 CPV	Sample M44 Lab Mean	Sample M44 Diff. from Grand Mean	Sample M44 CPV	Method
WC9HJU	*	0.3246	0.0186	1.65	0.3072	0.0145	1.28	OE
YC2DEM		0.3023	-0.0036	-0.32	0.2893	-0.0033	-0.29	OE
YGA2NH		0.3070	0.0011	0.09	0.2933	0.0007	0.06	WD
ZKPTCP		0.3025	-0.0034	-0.30	0.2877	-0.0050	-0.44	OE
ZND6DF		0.3017	-0.0043	-0.38	0.2870	-0.0057	-0.50	WD
ZQWQWB		0.2957	-0.0103	-0.91	0.2840	-0.0087	-0.76	OE
ZZ2QH6		0.3039	-0.0020	-0.18	0.2902	-0.0025	-0.22	OE

Summary Statistics

	Sample M43		Sample M44	
Grand Means	0.3059	Percent	0.2927	Percent
Stnd Dev Btwn Labs	0.0113	Percent	0.0113	Percent

Samples M43, M44 : AISI 316H, AISI 316L

Statistics based on 49 of 54 reporting participants

Key to Method Codes Reported by Participants

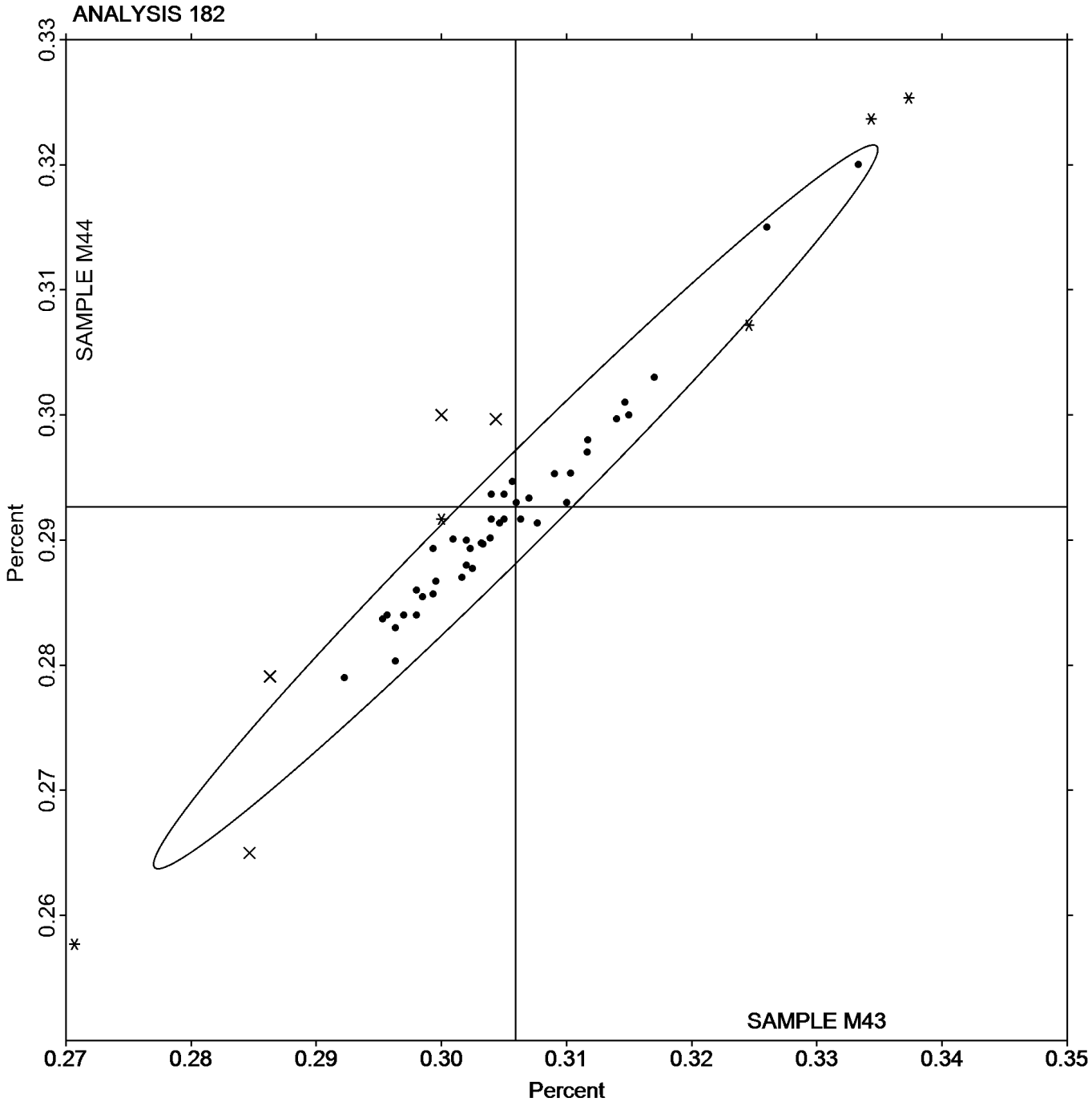
DR	Spectrometry - Direct Reading OE (DROES)	ED	X-Ray Fluorescence - Energy Dispersive (EDX)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XR	X-Ray Fluorescence - ED or WD not specified	XX	Please Indicate Method Used for Current Element

Comments on Assigned Data Flags for Test #182

DJGWF2 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

HZ6BPV (X) - Data for both samples are very low. Possible Systematic Error.

SAMPLE M43	SAMPLE M44
0.3059 Percent	0.2927 Percent



		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2ZK2LW	X	0.0517	-0.0269	-2.95	0.0530	-0.0189	-2.13	OE
3A63QP		0.0800	0.0014	0.15	0.0737	0.0017	0.19	XX
4ULAPJ		0.0830	0.0044	0.48	0.0780	0.0061	0.68	GD
66ZBBN	*	0.1073	0.0287	3.14	0.1003	0.0283	3.19	OE
7MV7J6		0.0750	-0.0036	-0.40	0.0680	-0.0039	-0.44	OE
7WK87P		0.0783	-0.0003	-0.03	0.0707	-0.0013	-0.14	OE
96RDP3		0.0867	0.0081	0.89	0.0770	0.0050	0.57	OE
9R7W26		0.0803	0.0017	0.19	0.0733	0.0014	0.16	OE
A7JN3G		0.0810	0.0024	0.26	0.0690	-0.0029	-0.33	OE
A89M62		0.0703	-0.0083	-0.91	0.0627	-0.0093	-1.04	GD
ABBRC9		0.0767	-0.0019	-0.21	0.0733	0.0014	0.16	IC
AW822M		0.0760	-0.0026	-0.29	0.0713	-0.0006	-0.07	OE
BE6N2K		0.0837	0.0051	0.55	0.0723	0.0004	0.04	OE
BPNNNM		0.0740	-0.0046	-0.50	0.0673	-0.0046	-0.52	OE
C8M4MR		0.0755	-0.0031	-0.34	0.0683	-0.0037	-0.41	IC
C92Z6Y		0.0726	-0.0060	-0.66	0.0668	-0.0052	-0.58	OE
CKRW3Q	*	0.0787	0.0001	0.01	0.0783	0.0064	0.72	OE
DJGWF2		0.0730	-0.0056	-0.61	0.0697	-0.0023	-0.26	GD
ENLGYK		0.0668	-0.0118	-1.29	0.0639	-0.0081	-0.91	OE
FYK69Z	*	0.0887	0.0101	1.10	0.0757	0.0037	0.42	OE
GDXFFG		0.0750	-0.0036	-0.40	0.0683	-0.0036	-0.41	WD
GHDBE6		0.0603	-0.0183	-2.00	0.0533	-0.0186	-2.10	WD
GULQ44		0.0743	-0.0043	-0.47	0.0693	-0.0027	-0.30	OE
GW96WK	X	0.0290	-0.0496	-5.43	0.0283	-0.0436	-4.91	OE
JPXGZ2		0.0999	0.0213	2.33	0.0940	0.0221	2.48	OE
L4WJL2		0.0760	-0.0026	-0.29	0.0730	0.0011	0.12	OE
L9MTVZ		0.0675	-0.0111	-1.21	0.0624	-0.0096	-1.08	OE
LERUT9		0.0793	0.0007	0.08	0.0697	-0.0023	-0.26	WD
M44HWL		0.0787	0.0001	0.01	0.0737	0.0017	0.19	OE
NG9YGW		0.0697	-0.0089	-0.97	0.0504	-0.0215	-2.43	OE
NP6KKP		0.0692	-0.0094	-1.03	0.0628	-0.0091	-1.03	OE
NQXUTC		0.0757	-0.0029	-0.32	0.0697	-0.0023	-0.26	GD
PR8W2B		0.0999	0.0213	2.33	0.0935	0.0216	2.43	OE
QK2PV7		0.0768	-0.0018	-0.20	0.0724	0.0005	0.06	GD
QZW4Z7		0.0773	-0.0013	-0.14	0.0697	-0.0023	-0.26	IC
RERBJ7		0.0730	-0.0056	-0.61	0.0660	-0.0059	-0.67	IC
TLNHKR		0.0783	-0.0003	-0.03	0.0720	0.0001	0.01	OE
UMXWK7		0.0753	-0.0033	-0.36	0.0680	-0.0039	-0.44	IC
V8FJKJ		0.0707	-0.0079	-0.87	0.0660	-0.0059	-0.67	OE
WA4PPV		0.0840	0.0054	0.59	0.0773	0.0054	0.61	OE
WC9HJU		0.0719	-0.0067	-0.73	0.0621	-0.0098	-1.10	OE
YC2DEM		0.0843	0.0057	0.63	0.0763	0.0044	0.49	OE
ZKPTCP		0.0924	0.0138	1.51	0.0856	0.0137	1.54	OE
ZND6DF		0.0880	0.0094	1.03	0.0800	0.0081	0.91	WD
ZQWQWB		0.0777	-0.0009	-0.10	0.0683	-0.0036	-0.41	OE
ZZ2QH6		0.0669	-0.0117	-1.28	0.0605	-0.0114	-1.29	OE

Summary Statistics

	Sample M43		Sample M44	
Grand Means	0.0786	Percent	0.0719	Percent
Stnd Dev Btwn Labs	0.0091	Percent	0.0089	Percent

Samples M43, M44 : AISI 316H, AISI 316L

Statistics based on 43 of 46 reporting participants

Key to Method Codes Reported by Participants

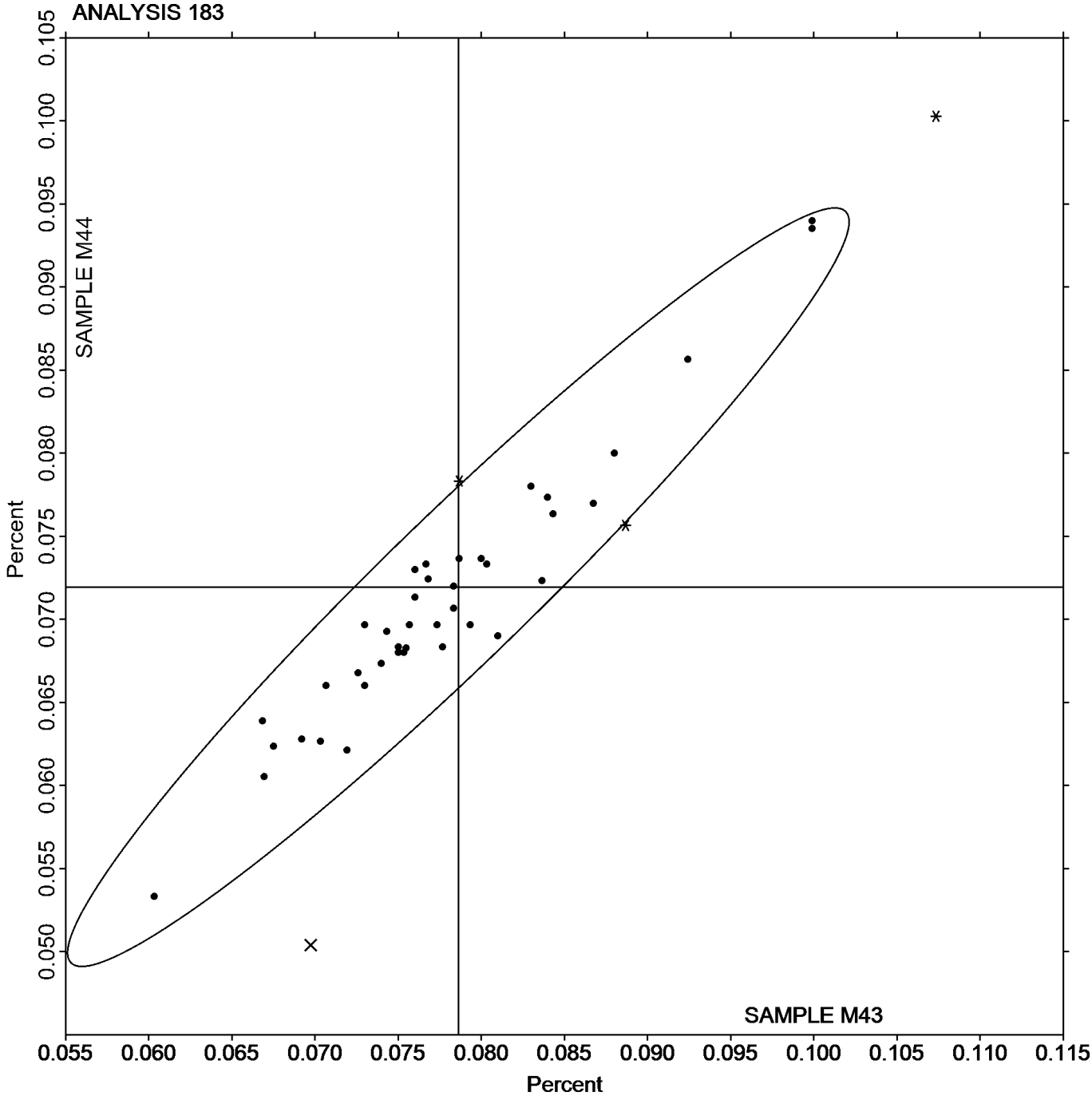
GD Spectrometry - Glow Discharge (GDS)
IC Spectrometry - Inductively Coupled Plasma (ICP)
OE Spectrometry - Optical Emission (OES)
WD X-Ray Fluorescence - Wavelength Dispersive (WDX)
XX Please Indicate Method Used for Current Element

Comments on Assigned Data Flags for Test #183

2ZK2LW (X) - Data for sample M43 are low.

GW96WK (X) - Data for both samples are low. Possible Systematic Error.

SAMPLE M43	SAMPLE M44
0.0786 Percent	0.0719 Percent



		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2ZK2LW	X	0.3833	-0.0485	-4.42	0.4167	-0.0392	-3.49	ED
3A63QP	*	0.4360	0.0042	0.38	0.4463	-0.0095	-0.85	XX
4ULAPJ		0.4240	-0.0078	-0.71	0.4540	-0.0018	-0.16	GD
66ZBBN		0.4278	-0.0040	-0.37	0.4543	-0.0015	-0.14	OE
7MV7J6		0.4110	-0.0208	-1.90	0.4367	-0.0192	-1.71	OE
7WK87P		0.4317	-0.0001	-0.01	0.4513	-0.0045	-0.40	OE
8B26JA		0.4203	-0.0115	-1.05	0.4477	-0.0082	-0.73	WD
96RDP3		0.4453	0.0135	1.24	0.4700	0.0142	1.26	OE
9R7W26		0.4220	-0.0098	-0.89	0.4400	-0.0158	-1.41	OE
A7JN3G		0.4253	-0.0065	-0.59	0.4437	-0.0122	-1.08	OE
A89M62		0.4327	0.0009	0.08	0.4607	0.0048	0.43	GD
ABBRC9		0.4167	-0.0151	-1.38	0.4433	-0.0125	-1.11	OE
AW822M		0.4263	-0.0055	-0.50	0.4530	-0.0028	-0.25	OE
BE6N2K		0.4460	0.0142	1.30	0.4690	0.0132	1.17	OE
BPNNNM		0.4280	-0.0038	-0.35	0.4453	-0.0105	-0.94	OE
C8M4MR		0.4327	0.0009	0.08	0.4593	0.0035	0.31	WD
C92Z6Y		0.4433	0.0115	1.05	0.4577	0.0018	0.16	OE
CKRW3Q		0.4580	0.0262	2.39	0.4800	0.0242	2.15	OE
CNURNE		0.4433	0.0115	1.05	0.4703	0.0145	1.29	DR
DJGWF2		0.4460	0.0142	1.30	0.4757	0.0198	1.76	GD
ELF8QN		0.4393	0.0075	0.69	0.4633	0.0075	0.67	OE
ENLGYK		0.4208	-0.0110	-1.00	0.4438	-0.0120	-1.07	OE
FYK69Z		0.4133	-0.0185	-1.69	0.4633	0.0075	0.67	OE
GDXFFG		0.4333	0.0015	0.14	0.4567	0.0008	0.07	XX
GHDBE6		0.4240	-0.0078	-0.71	0.4430	-0.0128	-1.14	OE
GULQ44		0.4300	-0.0018	-0.16	0.4533	-0.0025	-0.22	WD
GW96WK		0.4293	-0.0025	-0.22	0.4417	-0.0142	-1.26	OE
HZ6BPV		0.4100	-0.0218	-1.99	0.4400	-0.0158	-1.41	ED
JPXGZ2	*	0.4600	0.0282	2.57	0.4883	0.0325	2.89	OE
KFTTJP		0.4144	-0.0174	-1.59	0.4391	-0.0168	-1.49	DR
L4WJL2		0.4213	-0.0105	-0.96	0.4543	-0.0015	-0.13	OE
L9MTVZ		0.4466	0.0148	1.35	0.4512	-0.0046	-0.41	OE
LERUT9		0.4290	-0.0028	-0.26	0.4507	-0.0052	-0.46	WD
M3DMLR		0.4463	0.0145	1.33	0.4637	0.0078	0.70	OE
M44HWL	X	0.4137	-0.0181	-1.66	0.4720	0.0162	1.44	OE
N897CC		0.4370	0.0052	0.48	0.4600	0.0042	0.37	OE
NG9YGW		0.4476	0.0158	1.44	0.4718	0.0160	1.42	OE
NP6KKP		0.4157	-0.0161	-1.47	0.4393	-0.0165	-1.47	OE
NQXUTC	X	0.3887	-0.0431	-3.94	0.4337	-0.0222	-1.97	GD
PR8W2B		0.4240	-0.0078	-0.71	0.4531	-0.0027	-0.24	OE
QK2PV7		0.4285	-0.0033	-0.30	0.4630	0.0071	0.63	GD
QQRFGM		0.4200	-0.0118	-1.08	0.4467	-0.0092	-0.82	WD
QZW4Z7		0.4293	-0.0025	-0.22	0.4527	-0.0032	-0.28	IC
RERBJ7	X	0.4600	0.0282	2.57	0.4623	0.0065	0.58	IC
TLNHKR		0.4350	0.0032	0.29	0.4617	0.0058	0.52	OE
TMGJH3		0.4407	0.0089	0.81	0.4560	0.0002	0.01	OE
UMXWK7		0.4440	0.0122	1.11	0.4680	0.0122	1.08	IC

WebCode	Data Flag	Sample M43 Lab Mean	Sample M43 Diff. from Grand Mean	Sample M43 CPV	Sample M44 Lab Mean	Sample M44 Diff. from Grand Mean	Sample M44 CPV	Method
UQX6PF		0.4330	0.0012	0.11	0.4480	-0.0078	-0.70	OE
V8FJKJ		0.4260	-0.0058	-0.53	0.4473	-0.0085	-0.76	OE
WA4PPV		0.4433	0.0115	1.05	0.4690	0.0132	1.17	OE
WC9HJU		0.4422	0.0104	0.95	0.4669	0.0111	0.99	OE
YC2DEM		0.4350	0.0032	0.29	0.4600	0.0042	0.37	OE
YF4FZH		0.4323	0.0005	0.05	0.4600	0.0042	0.37	OE
YGA2NH		0.4273	-0.0045	-0.41	0.4570	0.0012	0.10	WD
ZKPTCP		0.4283	-0.0035	-0.32	0.4590	0.0032	0.28	OE
ZND6DF		0.4280	-0.0038	-0.35	0.4550	-0.0008	-0.07	WD
ZQWQWB		0.4270	-0.0048	-0.44	0.4580	0.0022	0.19	OE
ZZ2QH6		0.4349	0.0031	0.28	0.4550	-0.0009	-0.08	OE

Summary Statistics

	Sample M43		Sample M44	
Grand Means	0.4318	Percent	0.4558	Percent
Stnd Dev Btwn Labs	0.0110	Percent	0.0112	Percent

Samples M43, M44 : AISI 316H, AISI 316L

Statistics based on 52 of 58 reporting participants

Key to Method Codes Reported by Participants

DR	Spectrometry - Direct Reading OE (DROES)	ED	X-Ray Fluorescence - Energy Dispersive (EDX)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XX	Please Indicate Method Used for Current Element		

Comments on Assigned Data Flags for Test #184

2ZK2LW (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.

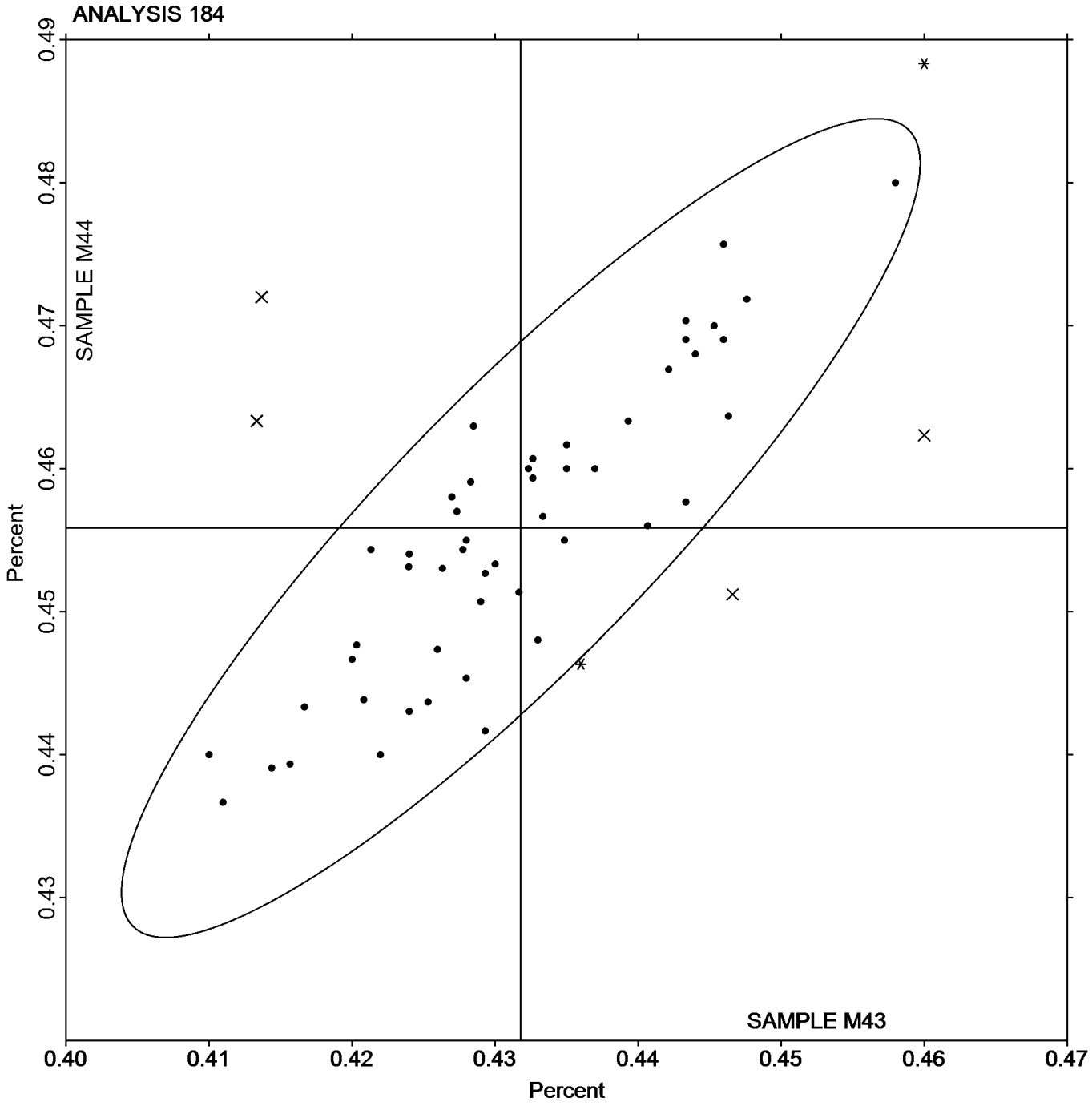
M44HWL (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample M43.

NQXUTC (X) - Data for sample M43 are low. Inconsistent within the determinations of sample M43.

RERBJ7 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample M43.

SAMPLE M43
0.4318 Percent

SAMPLE M44
0.4558 Percent



		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2ZK2LW	X	0.1033	0.0287	6.39	0.0500	-0.0116	-2.82	ED
3A63QP		0.0720	-0.0026	-0.58	0.0603	-0.0013	-0.31	XX
4ULAPJ		0.0660	-0.0086	-1.91	0.0530	-0.0086	-2.09	GD
66ZBBN		0.0749	0.0003	0.07	0.0597	-0.0019	-0.46	OE
7MV7J6		0.0777	0.0031	0.68	0.0660	0.0044	1.06	OE
7WK87P		0.0730	-0.0016	-0.36	0.0600	-0.0016	-0.39	OE
8B26JA		0.0740	-0.0006	-0.13	0.0603	-0.0013	-0.31	WD
96RDP3		0.0736	-0.0010	-0.22	0.0626	0.0009	0.23	OE
9R7W26		0.0830	0.0084	1.87	0.0710	0.0094	2.27	OE
A7JN3G		0.0730	-0.0016	-0.36	0.0620	0.0004	0.09	OE
A89M62		0.0757	0.0011	0.24	0.0633	0.0017	0.41	GD
ABBRC9		0.0653	-0.0093	-2.06	0.0523	-0.0093	-2.25	OE
AW822M		0.0730	-0.0016	-0.36	0.0610	-0.0006	-0.15	OE
BE6N2K		0.0683	-0.0063	-1.39	0.0580	-0.0036	-0.88	OE
BPNNNM		0.0740	-0.0006	-0.13	0.0617	0.0000	0.01	OE
C8M4MR		0.0757	0.0011	0.24	0.0611	-0.0005	-0.12	IC
C92Z6Y		0.0766	0.0020	0.44	0.0635	0.0019	0.45	OE
CKRW3Q		0.0840	0.0094	2.09	0.0707	0.0090	2.19	OE
CNURNE		0.0720	-0.0026	-0.58	0.0590	-0.0026	-0.64	DR
DJGWF2	*	0.0813	0.0067	1.50	0.0617	0.0000	0.01	GD
ELF8QN		0.0743	-0.0003	-0.06	0.0637	0.0020	0.49	OE
ENLGYK		0.0740	-0.0006	-0.13	0.0614	-0.0002	-0.05	OE
FYK69Z		0.0737	-0.0009	-0.21	0.0600	-0.0016	-0.39	OE
GDXFFG		0.0767	0.0021	0.46	0.0647	0.0030	0.74	WD
GHDBE6		0.0720	-0.0026	-0.58	0.0600	-0.0016	-0.39	OE
GULQ44		0.0753	0.0007	0.16	0.0647	0.0030	0.74	OE
GW96WK		0.0780	0.0034	0.76	0.0597	-0.0020	-0.48	OE
JPXGZ2	*	0.0777	0.0031	0.68	0.0590	-0.0026	-0.64	OE
L4WJL2		0.0670	-0.0076	-1.69	0.0557	-0.0060	-1.44	OE
L9MTVZ		0.0696	-0.0050	-1.12	0.0579	-0.0037	-0.90	OE
LERUT9		0.0740	-0.0006	-0.13	0.0610	-0.0006	-0.15	WD
M3DMLR		0.0730	-0.0016	-0.36	0.0620	0.0004	0.09	OE
M44HWL		0.0797	0.0051	1.13	0.0637	0.0020	0.49	OE
N897CC		0.0763	0.0017	0.39	0.0640	0.0024	0.57	OE
NG9YGW		0.0696	-0.0050	-1.10	0.0611	-0.0005	-0.13	OE
NP6KKP		0.0766	0.0020	0.44	0.0633	0.0017	0.41	OE
NQXUTC	*	0.0650	-0.0096	-2.13	0.0503	-0.0113	-2.74	GD
PR8W2B		0.0802	0.0056	1.25	0.0631	0.0014	0.35	OE
QK2PV7		0.0794	0.0048	1.07	0.0669	0.0053	1.28	GD
QQRFGM	X	0.0567	-0.0179	-3.99	0.0500	-0.0116	-2.82	WD
QZW4Z7		0.0737	-0.0009	-0.21	0.0607	-0.0010	-0.23	IC
RERBJ7		0.0800	0.0054	1.20	0.0657	0.0040	0.98	IC
TLNHKR		0.0670	-0.0076	-1.69	0.0570	-0.0046	-1.12	OE
UMXWK7		0.0830	0.0084	1.87	0.0683	0.0067	1.62	IC
UQX6PF		0.0780	0.0034	0.76	0.0670	0.0054	1.30	OE
V8FJKJ		0.0740	-0.0006	-0.13	0.0617	0.0000	0.01	OE
WA4PPV		0.0807	0.0061	1.35	0.0697	0.0080	1.95	OE

WebCode	Data Flag	Sample M43 Lab Mean	Sample M43 Diff. from Grand Mean	Sample M43 CPV	Sample M44 Lab Mean	Sample M44 Diff. from Grand Mean	Sample M44 CPV	Method
WC9HJU		0.0695	-0.0051	-1.13	0.0566	-0.0050	-1.22	OE
YC2DEM		0.0740	-0.0006	-0.13	0.0613	-0.0003	-0.07	OE
YGA2NH		0.0733	-0.0013	-0.28	0.0600	-0.0016	-0.39	WD
ZKPTCP		0.0774	0.0028	0.62	0.0643	0.0026	0.64	OE
ZND6DF		0.0733	-0.0013	-0.28	0.0600	-0.0016	-0.39	WD
ZQWQWB		0.0783	0.0037	0.83	0.0637	0.0020	0.49	OE
ZZ2QH6		0.0718	-0.0028	-0.63	0.0596	-0.0020	-0.49	OE

Summary Statistics

	Sample M43		Sample M44	
Grand Means	0.0746	Percent	0.0616	Percent
Stnd Dev Btwn Labs	0.0045	Percent	0.0041	Percent

Samples M43, M44 : AISI 316H, AISI 316L

Statistics based on 52 of 54 reporting participants

Key to Method Codes Reported by Participants

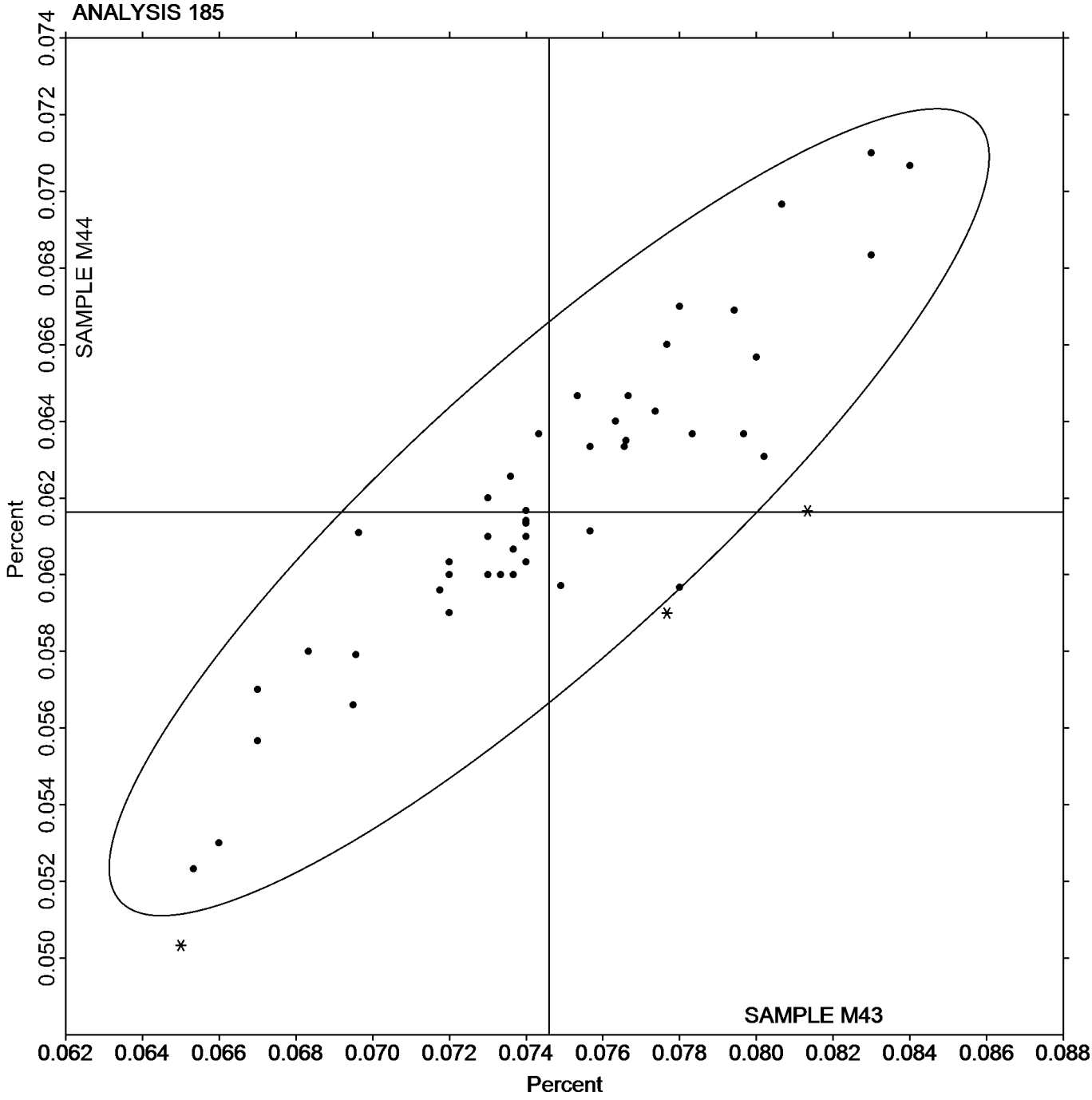
DR	Spectrometry - Direct Reading OE (DROES)	ED	X-Ray Fluorescence - Energy Dispersive (EDX)
GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XX	Please Indicate Method Used for Current Element		

Comments on Assigned Data Flags for Test #185

2ZK2LW (X) - Data for sample M43 are very high and data for sample M44 are low. Inconsistent in testing between samples. Very inconsistent within the determinations of both samples.

QQRFGM (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample M43.

SAMPLE M43	SAMPLE M44
0.0746 Percent	0.0616 Percent



		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2ZK2LW		10.11	0.09	0.70	10.12	-0.01	-0.18	XX
3A63QP		10.08	0.06	0.48	10.14	0.01	0.06	XX
4ULAPJ		10.30	0.28	2.22	10.30	0.17	1.93	GD
66ZBBN		9.974	-0.05	-0.40	10.15	0.02	0.20	OE
7MV7J6		9.793	-0.23	-1.85	9.951	-0.18	-2.16	OE
7WK87P		10.13	0.10	0.83	10.18	0.04	0.49	OE
8B26JA		9.983	-0.04	-0.32	10.16	0.03	0.34	WD
96RDP3		9.957	-0.07	-0.54	10.12	-0.01	-0.14	OE
9N333Z		9.975	-0.05	-0.39	10.16	0.02	0.27	WC
9R7W26	X	9.610	-0.41	-3.32	9.510	-0.62	-7.32	OE
A7JN3G		10.06	0.04	0.29	10.20	0.06	0.75	XR
A89M62		10.23	0.21	1.69	10.23	0.10	1.15	GD
ABBRC9		10.03	0.01	0.08	10.15	0.02	0.22	OE
AW822M		10.06	0.03	0.27	10.18	0.05	0.53	IC
BE6N2K		9.923	-0.10	-0.81	10.24	0.10	1.19	OE
BPNNNM		9.997	-0.03	-0.22	10.07	-0.07	-0.80	OE
C8M4MR		9.958	-0.07	-0.52	10.12	-0.02	-0.22	WD
C92Z6Y		10.06	0.03	0.27	10.09	-0.04	-0.49	OE
CKRW3Q		9.912	-0.11	-0.90	10.08	-0.06	-0.65	XR
CNURNE		9.864	-0.16	-1.28	10.02	-0.11	-1.30	DR
DJGWF2	*	10.37	0.34	2.76	10.20	0.07	0.76	GD
ELF8QN		10.01	-0.01	-0.12	10.15	0.02	0.22	OE
ENLGYK		10.14	0.12	0.98	10.17	0.03	0.36	OE
FYK69Z	*	9.907	-0.12	-0.94	10.27	0.13	1.54	OE
GDXFFG		10.03	0.01	0.08	10.16	0.02	0.25	WD
GHDBE6		10.09	0.06	0.51	10.09	-0.05	-0.53	OE
GULQ44		9.957	-0.07	-0.54	10.12	-0.01	-0.15	WD
GW96WK		9.849	-0.17	-1.40	10.18	0.05	0.57	OE
HZ6BPV		9.800	-0.22	-1.80	9.950	-0.18	-2.17	ED
JPXGZ2		10.10	0.08	0.62	10.15	0.01	0.14	OE
KFTTJP		9.874	-0.15	-1.20	10.11	-0.02	-0.26	DR
L4WJL2		9.802	-0.22	-1.78	9.933	-0.20	-2.37	OE
L9MTVZ		10.19	0.16	1.32	10.18	0.05	0.57	OE
LERUT9		10.01	-0.01	-0.12	10.14	0.01	0.08	WD
LTWENZ		10.01	-0.01	-0.11	10.19	0.06	0.64	ED
LXNNR7		10.25	0.23	1.85	10.26	0.12	1.43	AA
M3DMLR		10.13	0.10	0.83	10.18	0.05	0.53	OE
M44HWL		10.15	0.12	0.99	10.09	-0.05	-0.57	OE
N897CC		10.05	0.02	0.19	10.13	-0.01	-0.10	OE
NG9YGW		10.05	0.03	0.24	10.21	0.07	0.84	OE
NQXUTC		10.10	0.08	0.64	10.28	0.14	1.66	GD
PR8W2B		9.960	-0.06	-0.51	10.11	-0.03	-0.34	OE
QK2PV7	X	10.54	0.51	4.13	11.04	0.91	10.65	GD
QQRFGM		10.08	0.06	0.48	10.22	0.08	0.96	WD
QZW4Z7		10.10	0.08	0.64	10.18	0.05	0.53	IC
RERBJ7		10.02	-0.01	-0.05	10.14	0.01	0.10	IC
TLNHKR		9.957	-0.07	-0.54	10.12	-0.01	-0.18	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 186

Corrosion Resistant Steel, Element #7

NICKEL (Ni)

Cycle 118
2nd Qtr
2017

		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
TMGJH3		10.13	0.10	0.83	10.11	-0.03	-0.33	OE
UMXWK7		10.10	0.08	0.62	10.20	0.07	0.76	IC
UQX6PF		9.936	-0.09	-0.71	10.02	-0.12	-1.39	OE
V8FJKJ		10.07	0.05	0.40	10.08	-0.06	-0.68	OE
WA4PPV	*	9.764	-0.26	-2.09	9.885	-0.25	-2.93	OE
WC9HJU		10.17	0.14	1.15	10.10	-0.04	-0.45	OE
YC2DEM		9.903	-0.12	-0.97	9.980	-0.15	-1.82	OE
YF4FZH	*	9.883	-0.14	-1.13	10.27	0.14	1.62	OE
YGA2NH		9.939	-0.08	-0.68	10.11	-0.03	-0.33	WD
ZKPTCP		10.06	0.04	0.31	10.12	-0.01	-0.13	OE
ZND6DF		9.980	-0.04	-0.35	10.12	-0.01	-0.14	WD
ZQWQWB		10.02	0.00	0.00	10.14	0.01	0.10	OE
ZZ2QH6	X	9.571	-0.45	-3.63	9.656	-0.48	-5.61	OE

Summary Statistics

	Sample M43		Sample M44	
Grand Means	10.02	Percent	10.13	Percent
Stnd Dev Btwn Labs	0.12	Percent	0.09	Percent

Samples M43, M44 : AISI 316H, AISI 316L

Statistics based on 57 of 60 reporting participants

Key to Method Codes Reported by Participants

AA	Spectrometry - Atomic Absorption (AAS)	DR	Spectrometry - Direct Reading OE (DROES)
ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
WC	Wet Chemistry	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XR	X-Ray Fluorescence - ED or WD not specified	XX	Please Indicate Method Used for Current Element

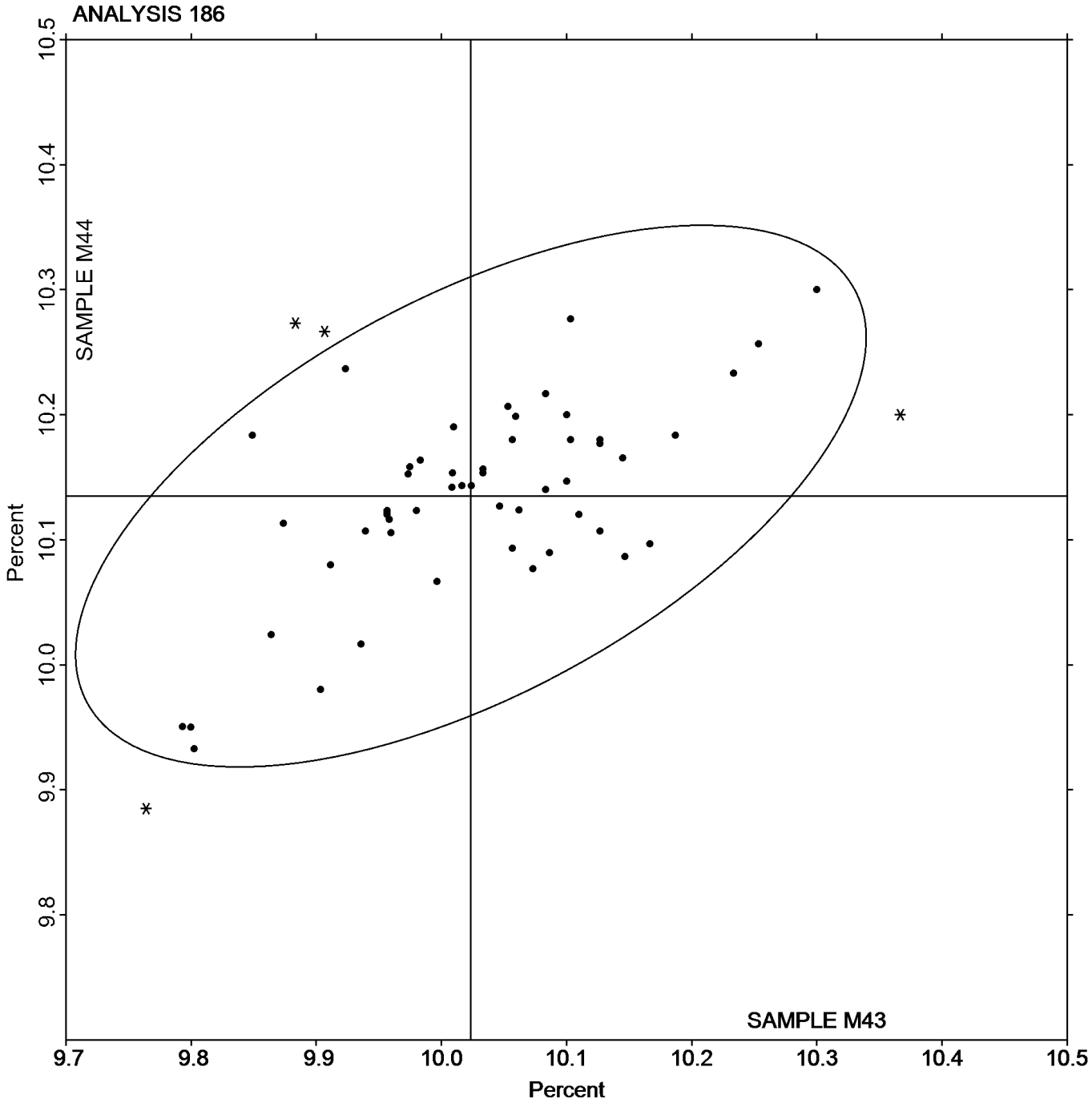
Comments on Assigned Data Flags for Test #186

9R7W26 (X) - Data for sample M43 are low and data for sample M44 are very low. Inconsistent within the determinations of sample M44.

QK2PV7 (X) - Data for sample M43 are high and data for sample M44 are extremely high. Inconsistent within the determinations of sample M44.

ZZ2QH6 (X) - Data for both samples are low. Inconsistent within the determinations of both samples.

SAMPLE M43	SAMPLE M44
10.02 Percent	10.13 Percent



		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2ZK2LW	*	16.99	0.21	2.55	16.99	0.14	1.66	ED
3A63QP		16.66	-0.11	-1.34	16.80	-0.04	-0.46	XX
4ULAPJ		16.70	-0.07	-0.90	16.80	-0.04	-0.50	GD
66ZBBN		16.65	-0.12	-1.48	16.73	-0.11	-1.32	OE
7MV7J6		16.71	-0.06	-0.74	16.70	-0.15	-1.69	OE
7WK87P		16.73	-0.05	-0.58	16.78	-0.06	-0.73	OE
8B26JA		16.74	-0.03	-0.37	16.80	-0.05	-0.53	WD
96RDP3	X	16.77	0.00	-0.01	10.12	-6.72	-77.61	OE
9N333Z		16.71	-0.07	-0.80	16.80	-0.05	-0.55	WC
9R7W26		16.93	0.15	1.82	16.94	0.09	1.10	OE
A7JN3G		16.80	0.03	0.34	16.86	0.02	0.19	XR
A89M62		16.77	-0.01	-0.10	16.83	-0.01	-0.11	GD
ABBRC9		16.73	-0.04	-0.50	16.74	-0.10	-1.15	OE
AW822M		16.74	-0.03	-0.38	16.76	-0.09	-1.00	OE
BE6N2K		16.86	0.09	1.03	17.00	0.16	1.81	OE
BPNNNM		16.79	0.02	0.23	16.88	0.03	0.39	OE
C8M4MR		16.77	-0.01	-0.07	16.84	-0.01	-0.09	WD
C92Z6Y		16.77	-0.01	-0.10	16.86	0.02	0.19	OE
CKRW3Q		16.71	-0.06	-0.74	16.78	-0.07	-0.77	XR
CNURNE		16.71	-0.06	-0.73	16.78	-0.07	-0.78	DR
DJGWF2		16.73	-0.04	-0.50	16.83	-0.01	-0.11	GD
ELF8QN		16.86	0.09	1.03	16.94	0.10	1.12	OE
ENLGYK		16.77	-0.01	-0.11	16.87	0.02	0.26	OE
FYK69Z		16.79	0.01	0.15	16.89	0.05	0.58	OE
GDXFFG		16.67	-0.11	-1.30	16.79	-0.05	-0.58	WD
GHDBE6		16.87	0.10	1.15	16.77	-0.07	-0.81	OE
GULQ44		16.79	0.02	0.21	16.87	0.02	0.29	WD
GW96WK		16.79	0.02	0.23	16.75	-0.10	-1.11	OE
HZ6BPV		16.70	-0.07	-0.90	16.83	-0.01	-0.15	ED
JPXGZ2		16.83	0.06	0.71	16.87	0.02	0.27	OE
KFTTJP		16.78	0.01	0.11	16.86	0.02	0.23	DR
L4WJL2		16.82	0.04	0.51	16.92	0.08	0.90	OE
L9MTVZ		16.61	-0.17	-2.02	16.63	-0.21	-2.44	OE
LERUT9		16.82	0.04	0.52	16.86	0.01	0.14	WD
LTWENZ		16.85	0.08	0.95	16.89	0.05	0.58	ED
LXNNR7	X	16.44	-0.33	-4.03	16.35	-0.49	-5.70	AA
M3DMLR		16.81	0.03	0.39	16.91	0.06	0.73	OE
M44HWL	*	16.80	0.03	0.31	17.00	0.15	1.77	OE
N897CC		16.80	0.02	0.27	16.88	0.04	0.46	OE
NG9YGW		16.71	-0.06	-0.74	16.80	-0.04	-0.46	OE
NP6KKP		16.93	0.15	1.83	17.02	0.17	2.00	OE
NQXUTC		16.85	0.07	0.87	16.89	0.05	0.54	GD
PR8W2B		16.70	-0.07	-0.88	16.75	-0.09	-1.06	OE
QK2PV7		16.81	0.04	0.47	16.85	0.01	0.12	GD
QQRFGM		16.73	-0.05	-0.58	16.76	-0.08	-0.96	WD
QZW4Z7		16.73	-0.04	-0.50	16.78	-0.07	-0.77	IC
RERBJ7		16.78	0.00	0.03	16.84	0.00	-0.04	IC

Fasteners and Metals Interlaboratory Testing Program

Analysis 187

Corrosion Resistant Steel, Element #8
CHROMIUM (Cr)

Cycle 118
2nd Qtr
2017

		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
TLNHKR	*	16.68	-0.10	-1.18	16.86	0.02	0.19	OE
TMGJH3		16.78	0.01	0.11	16.79	-0.05	-0.58	OE
UMXWK7		16.59	-0.19	-2.26	16.69	-0.16	-1.81	IC
UQX6PF	*	16.96	0.19	2.27	17.07	0.23	2.66	OE
V8FJKJ		16.82	0.04	0.51	16.93	0.09	1.04	OE
WA4PPV		16.80	0.02	0.27	16.86	0.01	0.16	OE
WC9HJU		16.86	0.08	0.99	16.93	0.08	0.96	OE
YC2DEM		16.79	0.02	0.19	16.86	0.02	0.23	OE
YF4FZH	*	16.97	0.20	2.35	16.96	0.12	1.39	OE
YGA2NH		16.69	-0.08	-1.00	16.75	-0.10	-1.12	WD
ZKPTCP		16.76	-0.02	-0.19	16.79	-0.05	-0.63	OE
ZND6DF		16.85	0.08	0.95	16.87	0.03	0.35	WD
ZQWQWB		16.69	-0.08	-1.02	16.74	-0.11	-1.23	OE
ZZ2QH6		16.76	-0.01	-0.18	16.88	0.03	0.38	OE

Summary Statistics

	Sample M43		Sample M44	
Grand Means	16.77	Percent	16.84	Percent
Stnd Dev Btwn Labs	0.08	Percent	0.09	Percent

Samples M43, M44 : AISI 316H, AISI 316L

Statistics based on 58 of 61 reporting participants

Key to Method Codes Reported by Participants

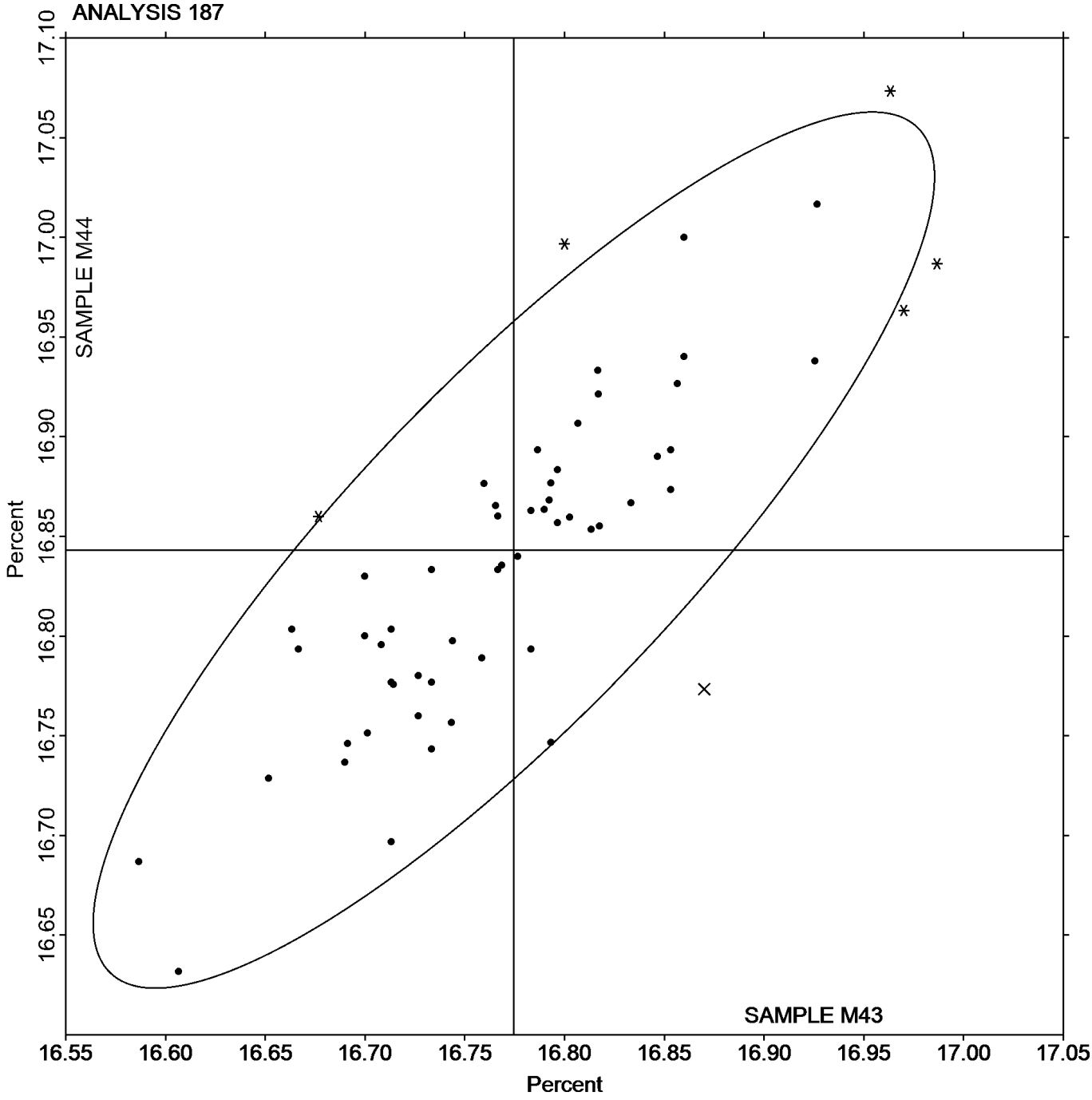
AA	Spectrometry - Atomic Absorption (AAS)	DR	Spectrometry - Direct Reading OE (DROES)
ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
WC	Wet Chemistry	WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)
XR	X-Ray Fluorescence - ED or WD not specified	XX	Please Indicate Method Used for Current Element

Comments on Assigned Data Flags for Test #187

96RDP3 (X) - Data for sample M44 are extremely low.

LXNNR7 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample M44.

SAMPLE M43	SAMPLE M44
16.77 Percent	16.84 Percent



		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2ZK2LW	X	2.130	0.109	4.41	2.030	-0.003	-0.12	XX
3A63QP	X	2.350	0.329	13.35	2.333	0.300	11.86	XX
4ULAPJ	*	1.960	-0.061	-2.48	1.970	-0.063	-2.49	GD
66ZBBN	*	2.089	0.068	2.75	2.103	0.070	2.78	OE
7MV7J6		1.999	-0.022	-0.90	2.012	-0.021	-0.83	OE
7WK87P		2.045	0.024	0.96	2.048	0.015	0.59	OE
8B26JA		2.029	0.007	0.30	2.047	0.014	0.55	WD
96RDP3		2.027	0.005	0.22	2.047	0.014	0.54	OE
9R7W26		2.053	0.032	1.30	2.063	0.030	1.20	OE
A7JN3G		2.026	0.005	0.21	2.046	0.013	0.51	XR
A89M62		2.017	-0.005	-0.18	2.027	-0.006	-0.25	GD
ABBRC9		2.083	0.062	2.52	2.047	0.014	0.54	OE
AW822M		2.023	0.002	0.09	2.052	0.019	0.74	OE
BE6N2K		1.997	-0.025	-1.00	2.003	-0.030	-1.17	OE
BPNNNM		2.027	0.005	0.22	2.035	0.002	0.08	OE
C8M4MR		2.023	0.002	0.09	2.047	0.014	0.54	WD
C92Z6Y		2.010	-0.011	-0.45	2.010	-0.023	-0.91	OE
CKRW3Q		2.000	-0.021	-0.87	2.021	-0.012	-0.47	XR
CNURNE		1.994	-0.027	-1.10	2.020	-0.013	-0.53	DR
DJGWF2		2.033	0.012	0.49	2.023	-0.010	-0.38	GD
ELF8QN		2.002	-0.019	-0.78	2.021	-0.012	-0.46	OE
ENLGYK	*	1.960	-0.061	-2.48	1.958	-0.075	-2.96	OE
FYK69Z		2.000	-0.021	-0.86	2.027	-0.006	-0.25	OE
GDXFFG		2.003	-0.018	-0.73	2.025	-0.008	-0.32	WD
GHDBE6		2.047	0.026	1.05	2.063	0.030	1.17	OE
GULQ44		2.019	-0.002	-0.09	2.038	0.005	0.20	WD
GW96WK		2.032	0.011	0.44	2.048	0.015	0.61	OE
HZ6BPV	X	1.950	-0.071	-2.89	2.010	-0.023	-0.91	ED
JPXGZ2		2.053	0.032	1.30	2.040	0.007	0.29	OE
KFTTJP		2.058	0.036	1.48	2.078	0.045	1.77	DR
L4WJL2		2.016	-0.005	-0.20	2.023	-0.010	-0.40	OE
L9MTVZ		2.008	-0.013	-0.54	1.999	-0.034	-1.34	OE
LERUT9		2.029	0.008	0.33	2.045	0.012	0.47	WD
LTWENZ		2.005	-0.016	-0.66	2.028	-0.005	-0.20	ED
LXNNR7	X	1.852	-0.170	-6.88	1.899	-0.134	-5.29	AA
M3DMLR		2.027	0.005	0.22	2.020	-0.013	-0.51	OE
M44HWL		2.023	0.002	0.09	2.033	0.000	0.01	OE
N897CC		2.029	0.007	0.30	2.036	0.003	0.11	OE
NG9YGW		2.014	-0.008	-0.31	2.038	0.005	0.21	OE
NP6KKP	*	2.090	0.069	2.79	2.103	0.070	2.78	OE
NQXUTC		2.017	-0.005	-0.18	2.053	0.020	0.80	GD
PR8W2B		1.983	-0.038	-1.56	1.994	-0.039	-1.55	OE
QK2PV7	X	2.239	0.217	8.82	2.168	0.135	5.35	GD
QQRFGM		2.023	0.002	0.09	2.040	0.007	0.28	WD
QZW4Z7		2.034	0.013	0.52	2.049	0.016	0.62	IC
RERBJ7		2.027	0.005	0.22	2.035	0.002	0.07	IC
TLNHKR		2.047	0.025	1.03	2.041	0.008	0.33	OE

Fasteners and Metals Interlaboratory Testing Program

Analysis 188

Corrosion Resistant Steel, Element #9
MOLYBDENUM (Mo)

Cycle 118
2nd Qtr
2017

		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
TMGJH3		2.030	0.009	0.36	2.030	-0.003	-0.12	OE
UMXWK7		2.010	-0.011	-0.45	2.017	-0.016	-0.65	IC
UQX6PF		2.021	0.000	0.00	2.019	-0.014	-0.55	OE
V8FJKJ		2.031	0.010	0.41	2.032	-0.001	-0.04	OE
WA4PPV		1.976	-0.045	-1.82	1.997	-0.036	-1.44	OE
WC9HJU	*	2.045	0.024	0.96	2.027	-0.006	-0.24	OE
YC2DEM		2.013	-0.008	-0.32	2.023	-0.010	-0.38	OE
YF4FZH		2.027	0.005	0.22	2.047	0.014	0.54	OE
YGA2NH		1.999	-0.023	-0.91	2.022	-0.011	-0.45	WD
ZKPTCP		2.025	0.004	0.17	2.038	0.004	0.18	OE
ZND6DF		2.030	0.009	0.36	2.047	0.014	0.54	WD
ZQWQWB		2.011	-0.011	-0.43	2.035	0.002	0.09	OE
ZZ2QH6		2.030	0.008	0.34	2.040	0.007	0.29	OE

Summary Statistics

	Sample M43		Sample M44	
Grand Means	2.021	Percent	2.033	Percent
Stnd Dev Btwn Labs	0.025	Percent	0.025	Percent

Samples M43, M44 : AISI 316H, AISI 316L

Statistics based on 54 of 60 reporting participants

Key to Method Codes Reported by Participants

AA	Spectrometry - Atomic Absorption (AAS)	DR	Spectrometry - Direct Reading OE (DROES)
ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)	XR	X-Ray Fluorescence - ED or WD not specified
XX	Please Indicate Method Used for Current Element		

Comments on Assigned Data Flags for Test #188

2ZK2LW (X) - Data for sample M43 are high. Inconsistent within the determinations of sample M43.

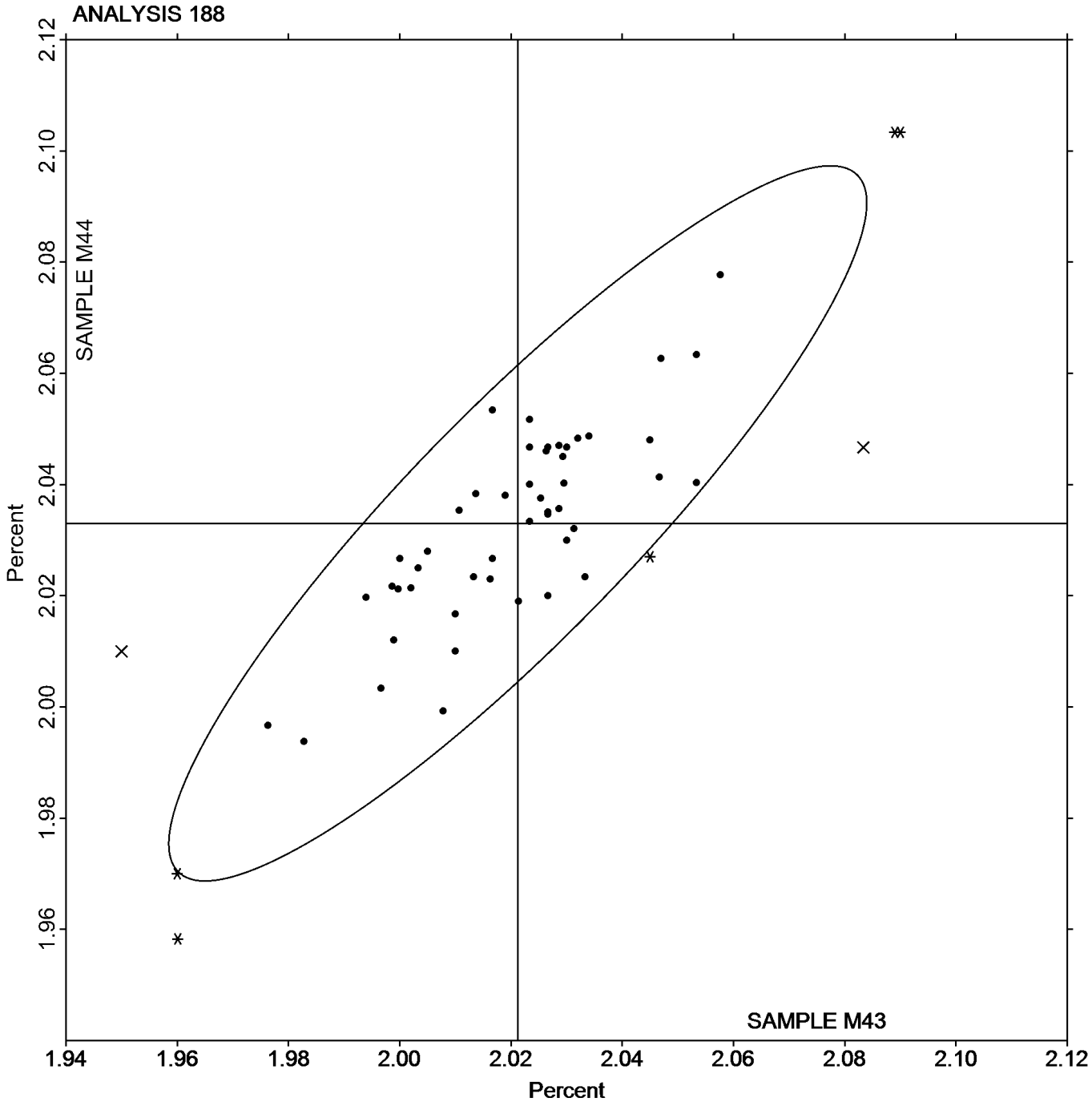
3A63QP (X) - Data for both samples are extremely high. Possible Systematic Error.

HZ6BPV (X) - Data for sample M43 are low.

LXNNR7 (X) - Data for both samples are low. Possible Systematic Error.

QK2PV7 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample M44.

SAMPLE M43	SAMPLE M44
2.021 Percent	2.033 Percent



		Sample M43			Sample M44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
2ZK2LW		0.3100	-0.0114	-1.50	0.4967	0.0146	1.17	XX
3A63QP		0.3287	0.0073	0.97	0.4783	-0.0037	-0.30	XX
4ULAPJ		0.3300	0.0086	1.15	0.4670	-0.0151	-1.21	GD
66ZBBN		0.3275	0.0062	0.81	0.4754	-0.0067	-0.54	OE
7MV7J6		0.3185	-0.0028	-0.37	0.4823	0.0003	0.02	OE
7WK87P		0.3303	0.0090	1.19	0.4813	-0.0007	-0.06	OE
8B26JA		0.3210	-0.0004	-0.05	0.4823	0.0003	0.02	WD
96RDP3		0.3147	-0.0067	-0.89	0.4817	-0.0004	-0.03	OE
9R7W26	X	0.3657	0.0443	5.87	0.5167	0.0346	2.78	OE
A7JN3G		0.3123	-0.0090	-1.19	0.4830	0.0009	0.07	OE
A89M62		0.3117	-0.0097	-1.28	0.4650	-0.0171	-1.37	GD
ABBRC9		0.3167	-0.0047	-0.62	0.4700	-0.0121	-0.97	OE
AW822M		0.3283	0.0070	0.92	0.4833	0.0013	0.10	OE
BE6N2K		0.3143	-0.0070	-0.93	0.4897	0.0076	0.61	OE
BPNNNM		0.3220	0.0006	0.09	0.4747	-0.0074	-0.59	OE
C8M4MR		0.3220	0.0006	0.09	0.4850	0.0029	0.24	WD
C92Z6Y	X	0.3290	0.0076	1.01	0.3030	-0.1791	-14.38	OE
CKRW3Q		0.3258	0.0045	0.59	0.4908	0.0087	0.70	XR
CNURNE		0.3193	-0.0020	-0.27	0.4790	-0.0031	-0.25	DR
DJGWF2		0.3153	-0.0060	-0.80	0.4790	-0.0031	-0.25	GD
ELF8QN		0.3333	0.0120	1.59	0.4680	-0.0141	-1.13	OE
ENLGYK		0.3212	-0.0002	-0.02	0.4704	-0.0117	-0.94	OE
FYK69Z		0.3200	-0.0014	-0.18	0.4867	0.0046	0.37	OE
GDXFFG		0.3200	-0.0014	-0.18	0.4800	-0.0021	-0.17	WD
GHDBE6		0.3383	0.0170	2.25	0.4960	0.0139	1.12	OE
GULQ44		0.3200	-0.0014	-0.18	0.4800	-0.0021	-0.17	WD
GW96WK		0.3120	-0.0094	-1.24	0.4560	-0.0261	-2.09	OE
HZ6BPV	X	0.3900	0.0686	9.09	0.5200	0.0379	3.05	ED
JPXGZ2		0.3357	0.0143	1.90	0.5027	0.0206	1.65	OE
KFTTJP		0.3154	-0.0059	-0.78	0.4785	-0.0036	-0.29	DR
L4WJL2		0.3193	-0.0020	-0.27	0.4853	0.0033	0.26	OE
L9MTVZ		0.3288	0.0074	0.98	0.4810	-0.0011	-0.09	OE
LERUT9		0.3180	-0.0034	-0.44	0.4853	0.0033	0.26	WD
LXNNR7		0.3245	0.0031	0.42	0.4654	-0.0166	-1.34	AA
M3DMLR		0.3203	-0.0010	-0.13	0.4967	0.0146	1.17	OE
M44HWL		0.3230	0.0016	0.22	0.4700	-0.0121	-0.97	OE
N897CC		0.3297	0.0083	1.10	0.4857	0.0036	0.29	OE
NG9YGW	X	0.3182	-0.0031	-0.41	0.0353	-0.4468	-35.88	OE
NP6KKP		0.3097	-0.0117	-1.55	0.4737	-0.0084	-0.67	OE
NQXUTC		0.3173	-0.0040	-0.53	0.4683	-0.0137	-1.10	GD
PR8W2B		0.3269	0.0056	0.74	0.5125	0.0304	2.44	OE
QK2PV7	X	0.3457	0.0243	3.22	0.5547	0.0726	5.83	GD
QQRFGM		0.3267	0.0053	0.70	0.4900	0.0079	0.64	WD
QZW4Z7		0.3283	0.0070	0.92	0.4827	0.0006	0.05	IC
RERBJ7		0.3253	0.0040	0.53	0.4910	0.0089	0.72	IC
TLNHKR		0.3183	-0.0030	-0.40	0.5000	0.0179	1.44	OE
UMXWK7		0.3227	0.0013	0.17	0.4830	0.0009	0.07	IC

Fasteners and Metals Interlaboratory Testing Program

Analysis 189

Corrosion Resistant Steel, Element #10

COPPER (Cu)

Cycle 118
2nd Qtr
2017

WebCode	Data Flag	Sample M43 Lab Mean	Sample M43 Diff. from Grand Mean	Sample M43 CPV	Sample M44 Lab Mean	Sample M44 Diff. from Grand Mean	Sample M44 CPV	Method
UQX6PF		0.3373	0.0160	2.12	0.4993	0.0173	1.39	OE
V8FJKJ		0.3243	0.0030	0.40	0.4823	0.0003	0.02	OE
WA4PPV		0.3087	-0.0127	-1.68	0.4640	-0.0181	-1.45	OE
WC9HJU	*	0.3018	-0.0196	-2.59	0.4495	-0.0326	-2.62	OE
YC2DEM		0.3167	-0.0047	-0.62	0.4780	-0.0041	-0.33	OE
YGA2NH		0.3190	-0.0024	-0.31	0.4820	-0.0001	-0.01	WD
ZKPTCP	*	0.3136	-0.0077	-1.02	0.5053	0.0232	1.87	OE
ZND6DF		0.3230	0.0016	0.22	0.4890	0.0069	0.56	WD
ZQWQWB		0.3243	0.0030	0.40	0.5037	0.0216	1.73	OE
ZZ2QH6		0.3182	-0.0031	-0.41	0.4811	-0.0009	-0.07	OE

Summary Statistics

	Sample M43		Sample M44	
Grand Means	0.3214	Percent	0.4821	Percent
Stnd Dev Btwn Labs	0.0075	Percent	0.0125	Percent

Samples M43, M44 : AISI 316H, AISI 316L

Statistics based on 52 of 57 reporting participants

Key to Method Codes Reported by Participants

AA	Spectrometry - Atomic Absorption (AAS)	DR	Spectrometry - Direct Reading OE (DROES)
ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
WD	X-Ray Fluorescence - Wavelength Dispersive (WDX)	XR	X-Ray Fluorescence - ED or WD not specified
XX	Please Indicate Method Used for Current Element		

Comments on Assigned Data Flags for Test #189

9R7W26 (X) - Data for both samples are high.

C92Z6Y (X) - Data for sample M44 are extremely low.

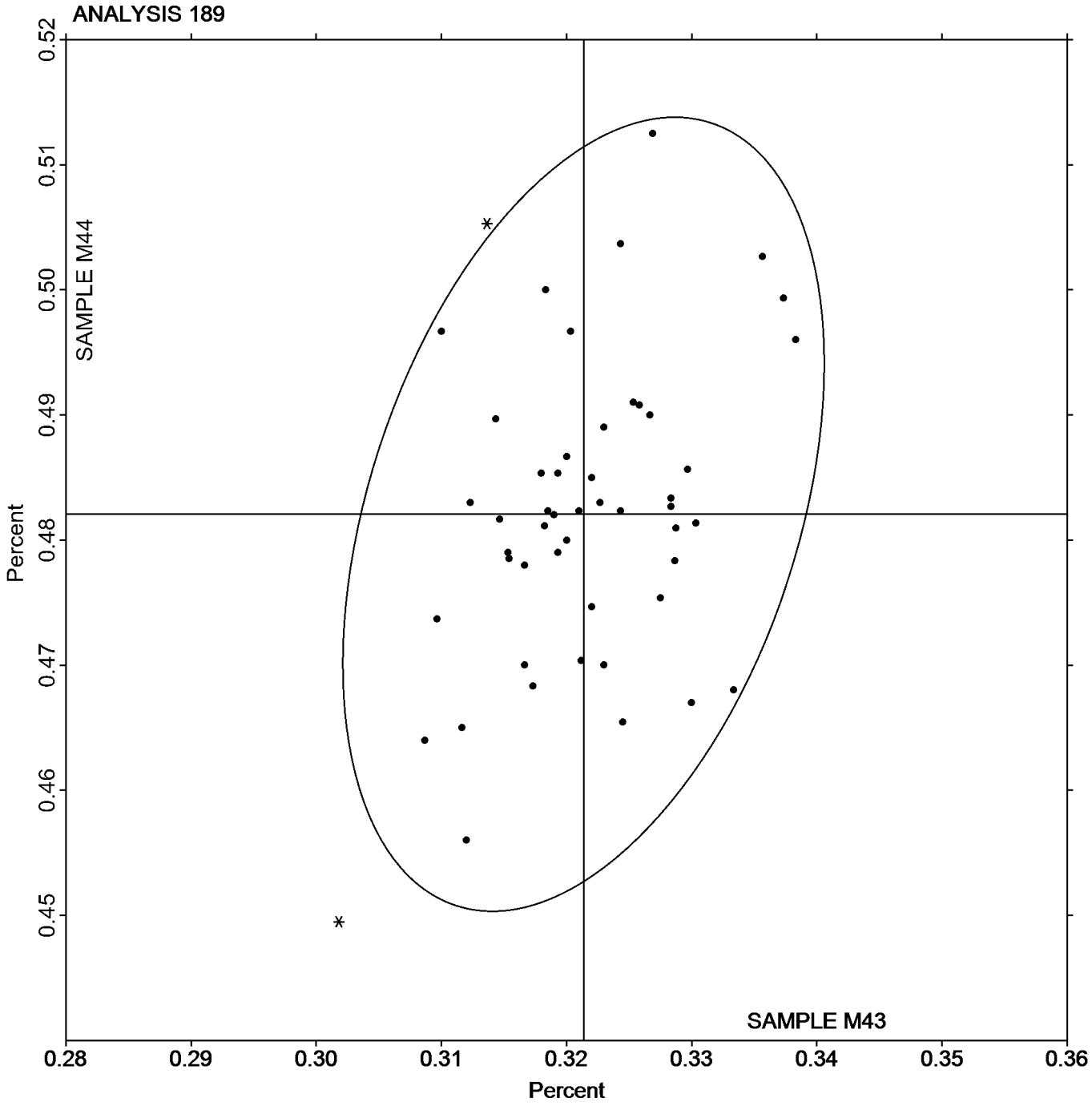
HZ6BPV (X) - Data for sample M43 are extremely high and data for sample M44 are high.

NG9YGW (X) - Data for sample M44 are extremely low.

QK2PV7 (X) - Data for both samples are high.

SAMPLE M43
0.3214 Percent

SAMPLE M44
0.4821 Percent



		Sample A43			Sample A44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
4ULAPJ		0.7090	0.1149	1.92	0.8220	0.1579	2.24	GD
6FJQDQ		0.5820	-0.0121	-0.20	0.6453	-0.0188	-0.27	OE
7B2ALR		0.4790	-0.1151	-1.92	0.5350	-0.1291	-1.83	IC
A89M62		0.6850	0.0909	1.52	0.7810	0.1169	1.66	GD
ABBRC9		0.5133	-0.0807	-1.35	0.5633	-0.1008	-1.43	OE
AHPC2K	*	0.4933	-0.1007	-1.68	0.5967	-0.0674	-0.96	ED
BE6N2K		0.5800	-0.0141	-0.23	0.6400	-0.0241	-0.34	OE
EHF3WG		0.5690	-0.0251	-0.42	0.6413	-0.0228	-0.32	OE
ENLGYK		0.6175	0.0234	0.39	0.6693	0.0052	0.07	OE
FLUQER	X	0.1408	-0.4533	-7.57	0.1587	-0.5054	-7.16	OE
GBNGXT		0.6010	0.0069	0.12	0.6900	0.0259	0.37	IC
H9DREG		0.6226	0.0286	0.48	0.7013	0.0372	0.53	XR
HB6TDD		0.6415	0.0474	0.79	0.7162	0.0521	0.74	OE
LT4E6L		0.5983	0.0043	0.07	0.6427	-0.0214	-0.30	OE
N48689		0.6300	0.0359	0.60	0.7047	0.0406	0.57	OE
V8FJKJ		0.5850	-0.0091	-0.15	0.6317	-0.0324	-0.46	OE
V9E2WF		0.5940	-0.0001	0.00	0.6440	-0.0201	-0.28	OE
V9TEBD		0.5987	0.0046	0.08	0.6653	0.0012	0.02	OE
YZJGTB	X	0.0113	-0.5827	-9.73	0.0120	-0.6521	-9.23	OE

Summary Statistics

	Sample A43		Sample A44	
Grand Means	0.5941	Percent	0.6641	Percent
Stnd Dev Btwn Labs	0.0599	Percent	0.0706	Percent

Samples A43, A44 : AA6262, AA6262

Statistics based on 17 of 19 reporting participants

Key to Method Codes Reported by Participants

ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
XR	X-Ray Fluorescence - ED or WD not specified		

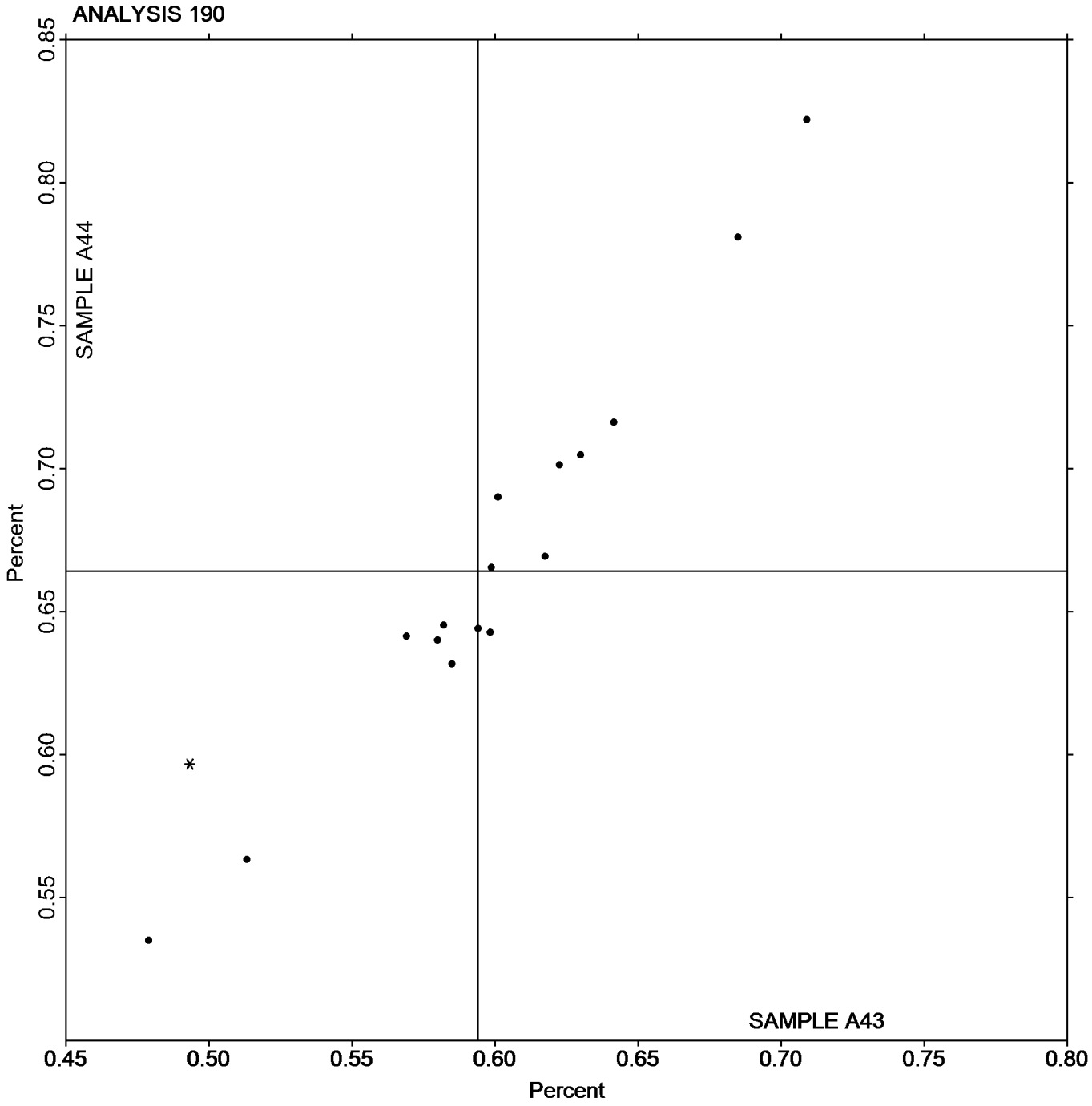
Comments on Assigned Data Flags for Test #190

FLUQER (X) - Data for both samples are very low.

YZJGTB (X) - Data for both samples are very low.

SAMPLE A43
0.5941 Percent

SAMPLE A44
0.6641 Percent



Fasteners and Metals Interlaboratory Testing Program

Analysis 191

Aluminum, Element #2
COPPER (Cu)

Cycle 118
2nd Qtr
2017

		Sample A43			Sample A44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
4ULAPJ		0.3020	0.0105	0.94	0.3970	0.0282	1.57	GD
6FJQDQ		0.2903	-0.0011	-0.10	0.3643	-0.0045	-0.25	OE
7B2ALR		0.3150	0.0235	2.11	0.3903	0.0215	1.20	GD
A89M62		0.3103	0.0189	1.69	0.4030	0.0342	1.91	GD
ABBRC9		0.2767	-0.0148	-1.32	0.3533	-0.0155	-0.87	OE
AHPC2K	X	0.3167	0.0252	2.26	0.4533	0.0845	4.72	ED
BE6N2K	X	0.4133	0.1219	10.91	0.4890	0.1202	6.71	OE
EHF3WG		0.2777	-0.0138	-1.23	0.3577	-0.0112	-0.62	OE
ENLGYK		0.3009	0.0094	0.85	0.3775	0.0087	0.48	OE
FLUQER		0.2884	-0.0030	-0.27	0.3611	-0.0077	-0.43	OE
FYK69Z		0.2910	-0.0005	-0.04	0.3707	0.0018	0.10	OE
GBNGXT		0.2977	0.0062	0.56	0.3740	0.0052	0.29	IC
H9DREG	X	0.3733	0.0818	7.32	0.4788	0.1100	6.15	XR
HB6TDD		0.3013	0.0098	0.88	0.3878	0.0190	1.06	OE
LT4E6L		0.2790	-0.0125	-1.11	0.3600	-0.0088	-0.49	OE
M7TMPT		0.2840	-0.0075	-0.67	0.3640	-0.0048	-0.27	OE
N48689		0.2877	-0.0038	-0.34	0.3607	-0.0082	-0.46	OE
QQRFGM		0.2847	-0.0068	-0.61	0.3560	-0.0128	-0.72	OE
V8FJKJ		0.2930	0.0015	0.14	0.3687	-0.0002	-0.01	OE
V9E2WF	*	0.2740	-0.0175	-1.56	0.3230	-0.0458	-2.56	OE
V9TEBD		0.2907	-0.0008	-0.07	0.3687	-0.0002	-0.01	OE
YZJGTB	X	0.0170	-0.2745	-24.56	0.0190	-0.3498	-19.54	OE
ZE4A7N		0.2933	0.0019	0.17	0.3700	0.0012	0.07	OE

Summary Statistics

	Sample A43		Sample A44	
Grand Means	0.2915	Percent	0.3688	Percent
Stnd Dev Btwn Labs	0.0112	Percent	0.0179	Percent

Samples A43, A44 : AA6262, AA6262

Statistics based on 19 of 23 reporting participants

Key to Method Codes Reported by Participants

ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
XR	X-Ray Fluorescence - ED or WD not specified		

Comments on Assigned Data Flags for Test #191

AHPC2K (X) - Data for sample A44 are high. Inconsistent within the determinations of both samples.

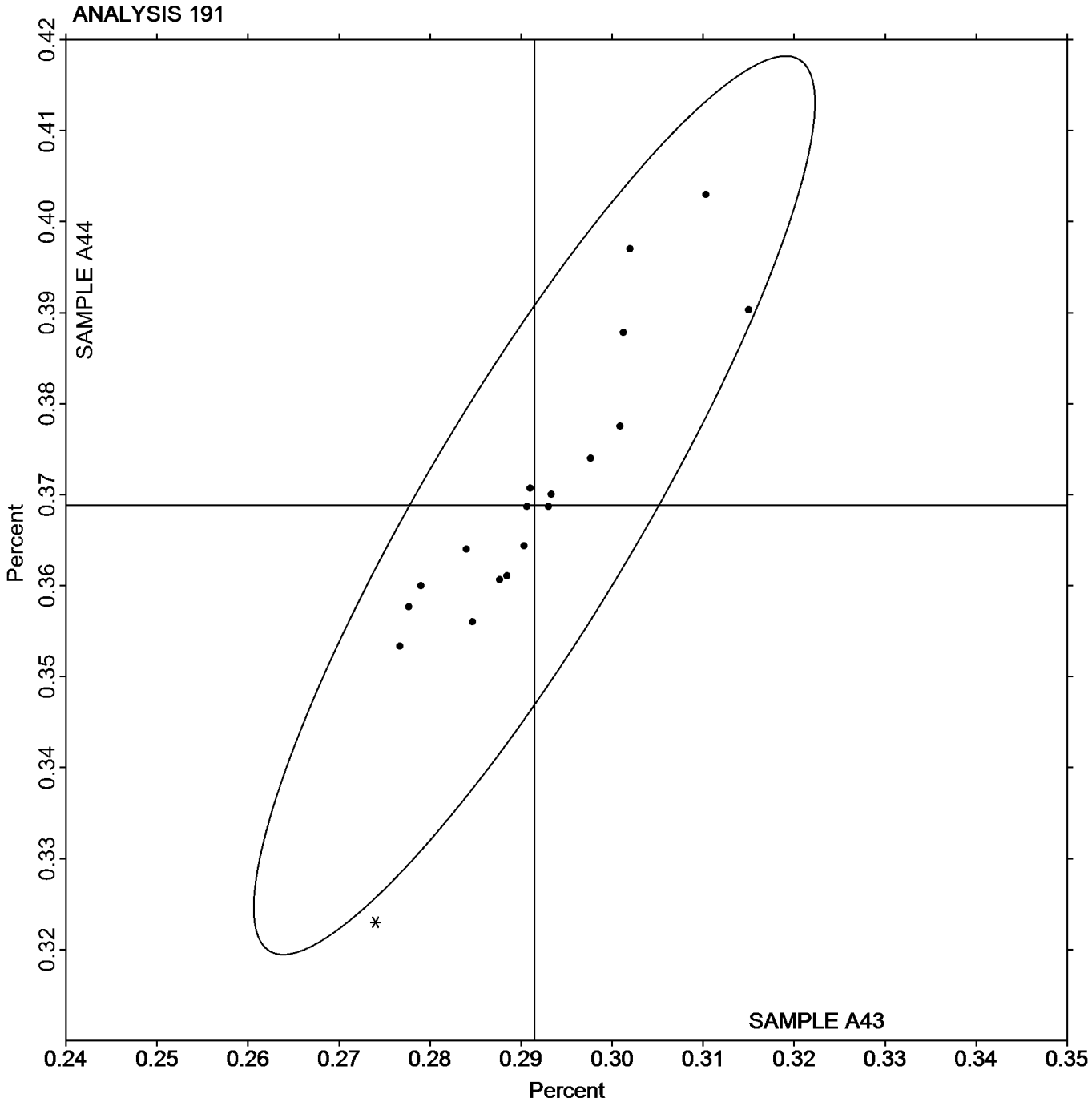
BE6N2K (X) - Data for both samples are very high.

H9DREG (X) - Data for both samples are very high.

YZJGTB (X) - Data for both samples are extremely low.

SAMPLE A43
0.2915 Percent

SAMPLE A44
0.3688 Percent



Fasteners and Metals Interlaboratory Testing Program

Analysis 192

Aluminum, Element #3
IRON (Fe)

Cycle 118
2nd Qtr 2017

		Sample A43			Sample A44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
4ULAPJ		0.3960	-0.0107	-0.29	0.3040	-0.0169	-0.46	XX
6FJQDQ		0.3940	-0.0127	-0.35	0.3040	-0.0169	-0.46	OE
7B2ALR	*	0.5093	0.1026	2.81	0.4333	0.1125	3.07	GD
A89M62		0.4107	0.0039	0.11	0.3147	-0.0062	-0.17	GD
ABBRC9		0.3767	-0.0301	-0.82	0.2933	-0.0275	-0.75	OE
AHPC2K		0.4833	0.0766	2.10	0.4000	0.0791	2.16	ED
BE6N2K		0.3563	-0.0504	-1.38	0.2857	-0.0352	-0.96	OE
EHF3WG		0.3853	-0.0214	-0.59	0.3013	-0.0195	-0.53	OE
ENLGYK		0.3978	-0.0090	-0.25	0.3044	-0.0165	-0.45	OE
FLUQER		0.4031	-0.0037	-0.10	0.3074	-0.0135	-0.37	OE
FYK69Z		0.4040	-0.0027	-0.07	0.3170	-0.0039	-0.11	OE
GBNGXT		0.3927	-0.0141	-0.39	0.3023	-0.0185	-0.51	IC
H9DREG		0.4759	0.0691	1.90	0.3848	0.0640	1.75	XR
HB6TDD		0.4220	0.0153	0.42	0.3278	0.0069	0.19	OE
LT4E6L		0.4050	-0.0017	-0.05	0.3210	0.0001	0.00	OE
M7TMPT		0.3947	-0.0121	-0.33	0.3120	-0.0089	-0.24	OE
N48689		0.3860	-0.0207	-0.57	0.3037	-0.0172	-0.47	OE
QQRFGM		0.3983	-0.0084	-0.23	0.3020	-0.0189	-0.52	OE
V8FJKJ		0.3943	-0.0124	-0.34	0.3143	-0.0065	-0.18	OE
V9E2WF		0.3930	-0.0137	-0.38	0.3120	-0.0089	-0.24	OE
V9TEBD		0.3897	-0.0171	-0.47	0.3110	-0.0099	-0.27	OE
YZJGTB	X	0.00070	-0.4060	-11.14	0.00070	-0.3202	-8.75	OE
ZE4A7N		0.3800	-0.0267	-0.73	0.3033	-0.0175	-0.48	OE

Summary Statistics

	Sample A43		Sample A44	
Grand Means	0.4067	Percent	0.3209	Percent
Stnd Dev Btwn Labs	0.0364	Percent	0.0366	Percent

Samples A43, A44 : AA6262, AA6262

Statistics based on 22 of 23 reporting participants

Key to Method Codes Reported by Participants

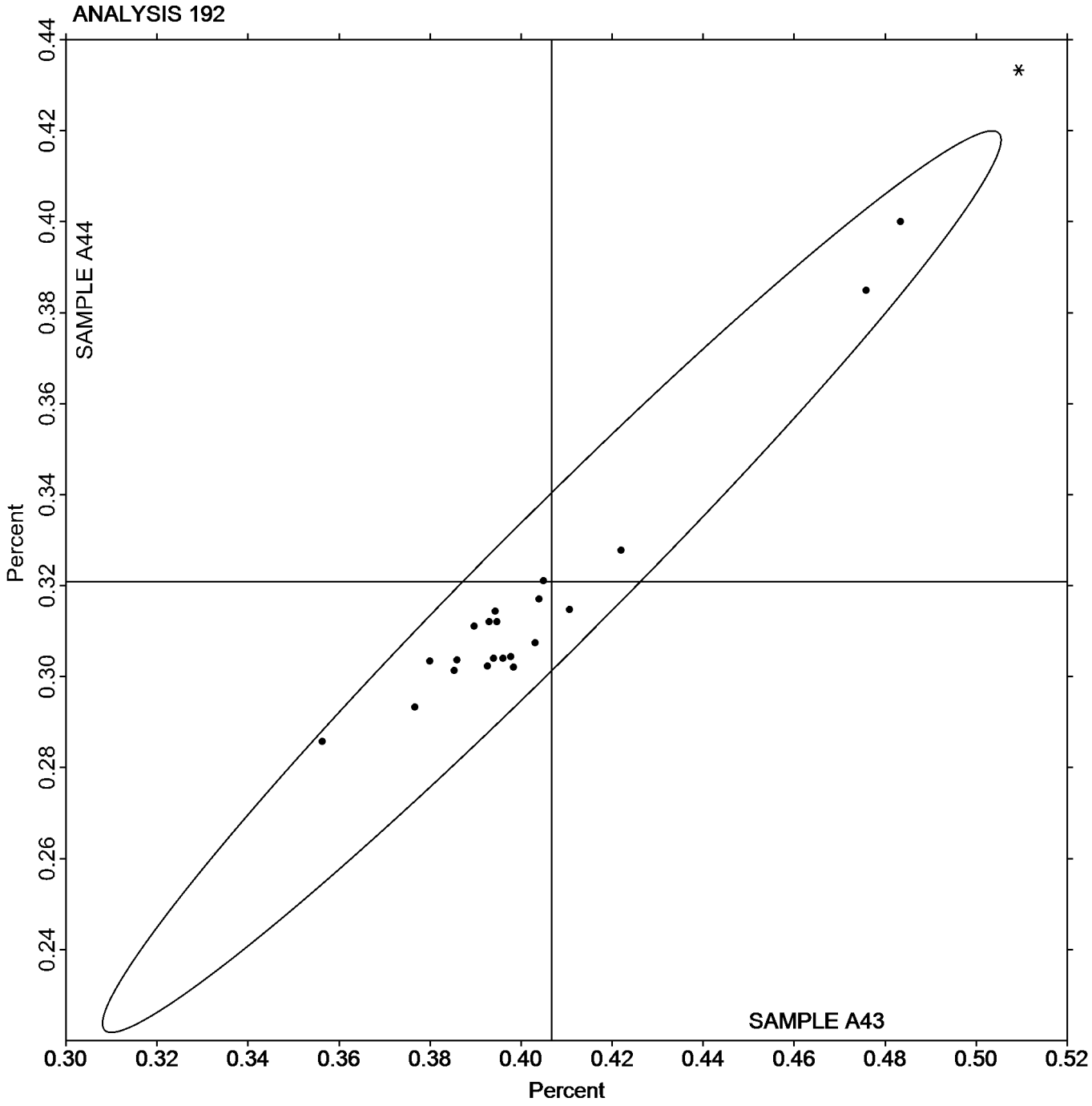
ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
XR	X-Ray Fluorescence - ED or WD not specified	XX	Please Indicate Method Used for Current Element

Comments on Assigned Data Flags for Test #192

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

SAMPLE A43
0.4067 Percent

SAMPLE A44
0.3209 Percent



		Sample A43			Sample A44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
4ULAPJ	*	0.6040	-0.0734	-1.89	0.6950	-0.0581	-1.39	GD
6FJQDQ		0.6900	0.0126	0.32	0.7597	0.0065	0.16	OE
7B2ALR	*	0.7193	0.0419	1.08	0.8210	0.0679	1.62	GD
A89M62		0.6370	-0.0404	-1.04	0.7107	-0.0425	-1.01	GD
ABBRC9		0.6900	0.0126	0.32	0.7667	0.0135	0.32	OE
AHPC2K	X	0.8400	0.1626	4.18	0.8133	0.0602	1.43	ED
BE6N2K		0.7233	0.0459	1.18	0.8133	0.0602	1.43	OE
EHF3WG		0.6210	-0.0564	-1.45	0.6963	-0.0568	-1.35	OE
ENLGYK		0.6996	0.0221	0.57	0.7727	0.0195	0.47	OE
FLUQER		0.6953	0.0179	0.46	0.7728	0.0197	0.47	OE
FYK69Z		0.6980	0.0206	0.53	0.7753	0.0222	0.53	OE
GBNGXT		0.6250	-0.0524	-1.35	0.7017	-0.0515	-1.23	GR
H9DREG		0.6678	-0.0096	-0.25	0.7396	-0.0135	-0.32	XR
HB6TDD		0.6885	0.0110	0.28	0.7556	0.0025	0.06	OE
LT4E6L		0.6517	-0.0258	-0.66	0.7290	-0.0241	-0.58	OE
M7TMPT		0.6893	0.0119	0.31	0.7633	0.0102	0.24	OE
N48689		0.6957	0.0182	0.47	0.7790	0.0259	0.62	OE
QQRFGM		0.7073	0.0299	0.77	0.7690	0.0159	0.38	OE
V8FJKJ		0.7003	0.0229	0.59	0.7777	0.0245	0.58	OE
V9E2WF		0.7220	0.0446	1.15	0.7910	0.0379	0.90	OE
V9TEBD		0.6737	-0.0038	-0.10	0.7457	-0.0075	-0.18	OE
YZJGTB	*	0.5917	-0.0858	-2.20	0.6473	-0.1058	-2.52	OE
ZE4A7N		0.7133	0.0359	0.92	0.7867	0.0335	0.80	OE

Summary Statistics

	Sample A43		Sample A44	
Grand Means	0.6774	Percent	0.7531	Percent
Stnd Dev Btwn Labs	0.0389	Percent	0.0420	Percent

Samples A43, A44 : AA6262, AA6262

Statistics based on 22 of 23 reporting participants

Key to Method Codes Reported by Participants

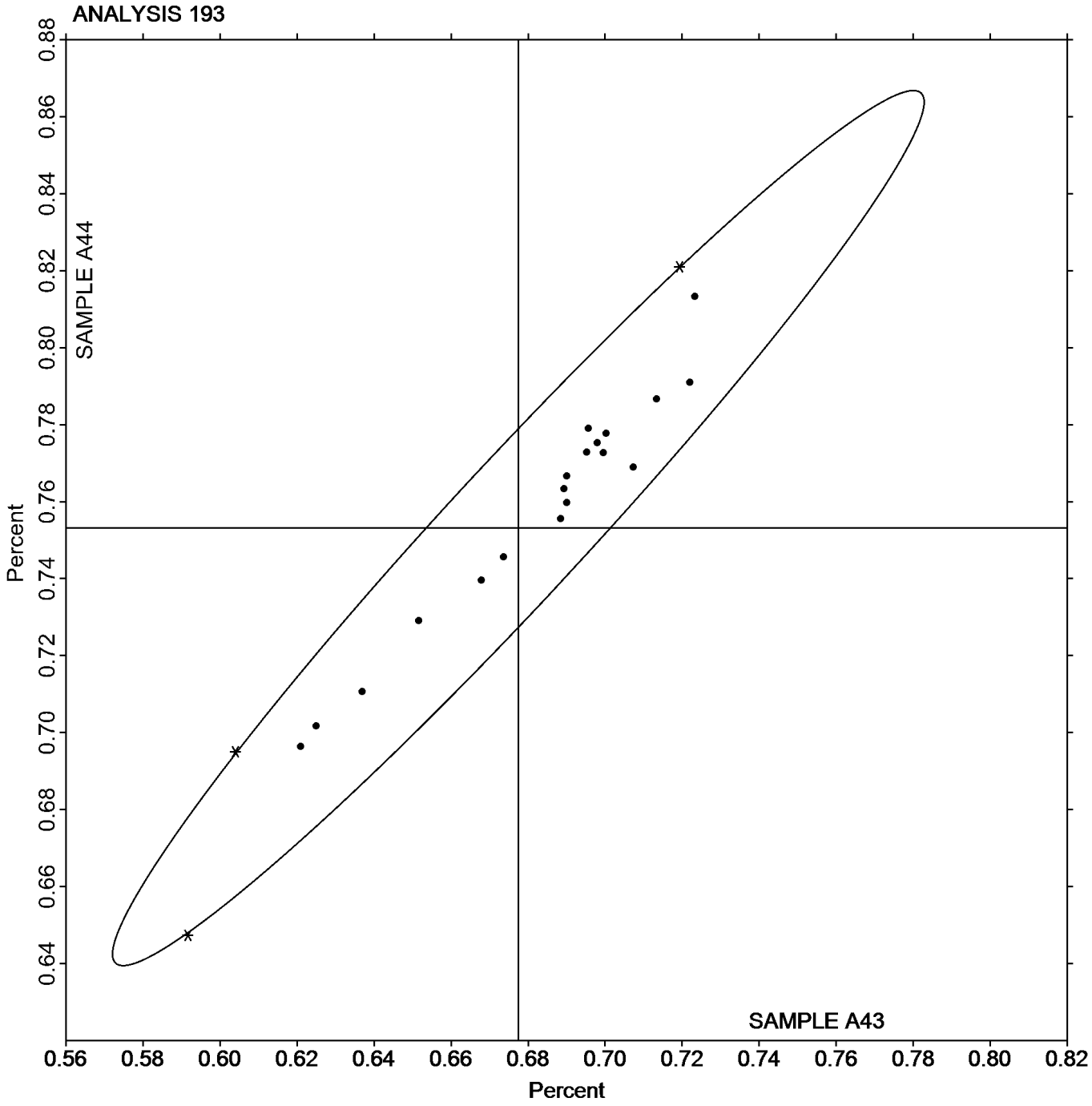
ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
GR	Gravimetry	OE	Spectrometry - Optical Emission (OES)
XR	X-Ray Fluorescence - ED or WD not specified		

Comments on Assigned Data Flags for Test #193

AHPC2K (X) - Data for sample A43 are high. Inconsistent within the determinations of both samples.

SAMPLE A43
0.6774 Percent

SAMPLE A44
0.7531 Percent



Fasteners and Metals Interlaboratory Testing Program

Analysis 194

Aluminum, Element #5
MANGANESE (Mn)

Cycle 118
2nd Qtr
2017

		Sample A43			Sample A44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
4ULAPJ		0.1570	0.0111	1.36	0.1480	0.0089	1.08	GD
6FJQDQ		0.1480	0.0021	0.26	0.1420	0.0029	0.35	OE
7B2ALR		0.1397	-0.0062	-0.76	0.1350	-0.0041	-0.51	GD
A89M62		0.1570	0.0111	1.36	0.1527	0.0135	1.65	GD
ABBRC9		0.1400	-0.0059	-0.72	0.1300	-0.0091	-1.11	OE
AHPC2K	X	0.1367	-0.0092	-1.13	0.1400	0.0009	0.10	ED
BE6N2K		0.1437	-0.0022	-0.27	0.1390	-0.0001	-0.02	OE
EHF3WG		0.1580	0.0121	1.49	0.1510	0.0119	1.44	OE
ENLGYK		0.1531	0.0073	0.89	0.1452	0.0060	0.74	OE
FLUQER		0.1433	-0.0026	-0.32	0.1364	-0.0028	-0.34	OE
FYK69Z		0.1403	-0.0055	-0.68	0.1350	-0.0041	-0.51	OE
GBNGXT		0.1420	-0.0039	-0.47	0.1333	-0.0058	-0.71	IC
H9DREG		0.1597	0.0139	1.70	0.1540	0.0149	1.81	XR
HB6TDD		0.1520	0.0061	0.75	0.1444	0.0053	0.64	OE
LT4E6L		0.1403	-0.0055	-0.68	0.1353	-0.0038	-0.46	OE
M7TMPT		0.1390	-0.0069	-0.84	0.1333	-0.0058	-0.71	OE
N48689		0.1357	-0.0102	-1.25	0.1300	-0.0091	-1.11	OE
QQRFGM		0.1383	-0.0075	-0.92	0.1310	-0.0081	-0.99	OE
V8FJKJ		0.1343	-0.0115	-1.41	0.1263	-0.0128	-1.56	OE
V9E2WF		0.1420	-0.0039	-0.47	0.1350	-0.0041	-0.51	OE
V9TEBD		0.1540	0.0081	1.00	0.1460	0.0069	0.83	OE

Summary Statistics

	Sample A43		Sample A44	
Grand Means	0.1459	Percent	0.1391	Percent
Stnd Dev Btwn Labs	0.0082	Percent	0.0082	Percent

Samples A43, A44 : AA6262, AA6262

Statistics based on 20 of 21 reporting participants

Key to Method Codes Reported by Participants

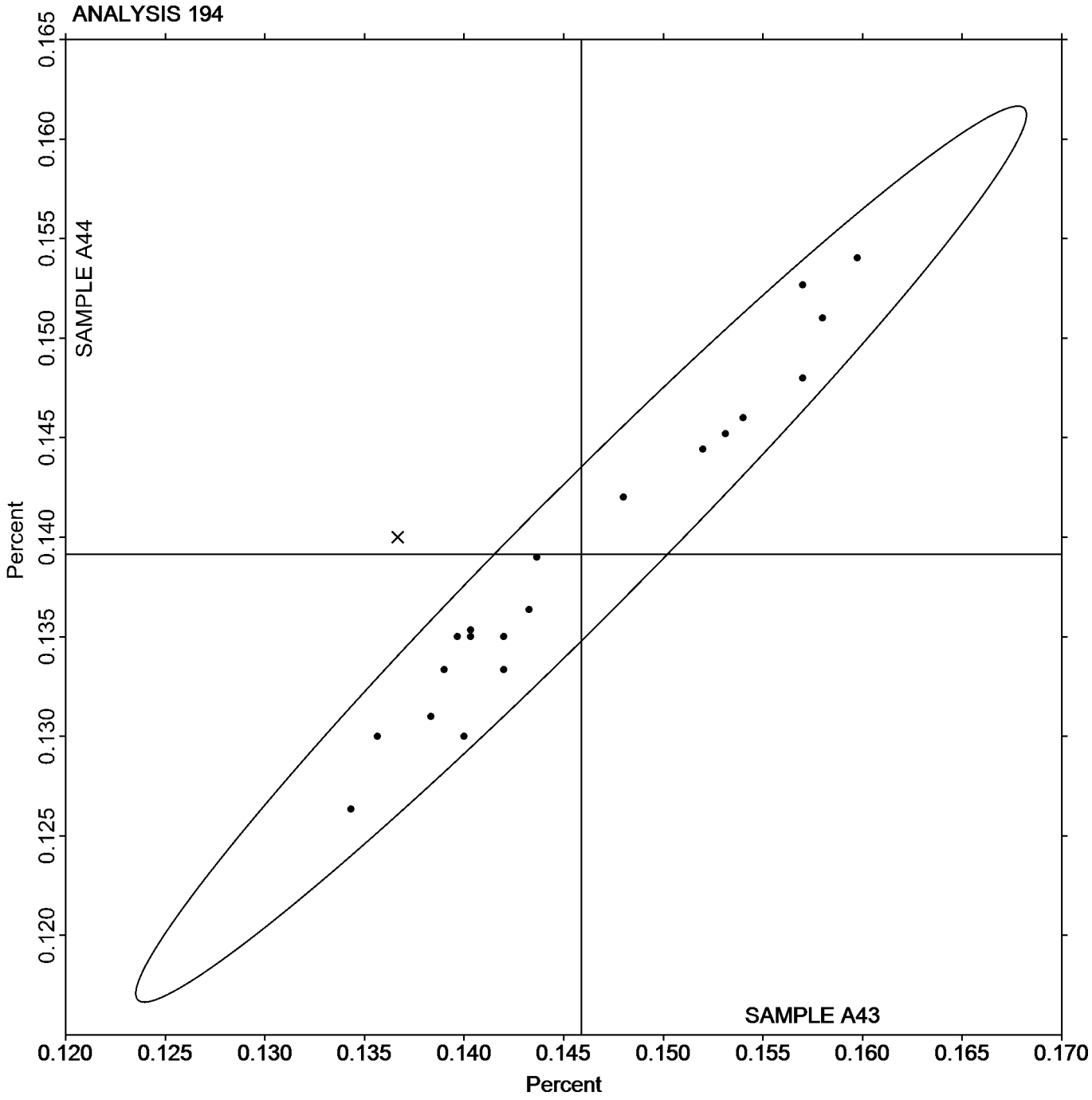
ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
XR	X-Ray Fluorescence - ED or WD not specified		

Comments on Assigned Data Flags for Test #194

AHPC2K (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

SAMPLE A43
0.1459 Percent

SAMPLE A44
0.1391 Percent



Fasteners and Metals Interlaboratory Testing Program

Analysis 195

Aluminum, Element #6
MAGNESIUM (Mg)

Cycle 118
2nd Qtr
2017

		Sample A43			Sample A44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
4ULAPJ		1.050	-0.023	-0.52	1.000	-0.022	-0.51	GD
6FJQDQ		1.101	0.028	0.64	1.057	0.035	0.83	OE
7B2ALR		1.107	0.034	0.76	1.013	-0.008	-0.20	GD
A89M62		1.047	-0.026	-0.59	0.9987	-0.023	-0.55	GD
ABBRC9		1.140	0.067	1.51	1.090	0.068	1.62	OE
BE6N2K		1.017	-0.056	-1.27	1.003	-0.018	-0.44	OE
EHF3WG		0.9660	-0.107	-2.41	0.9307	-0.091	-2.16	OE
ENLGYK		1.066	-0.007	-0.15	1.012	-0.010	-0.23	OE
FLUQER		1.103	0.030	0.68	1.061	0.039	0.93	OE
FYK69Z		1.116	0.043	0.97	1.065	0.044	1.04	OE
GBNGXT		1.037	-0.036	-0.82	0.9823	-0.039	-0.93	IC
H9DREG	X	0.7394	-0.334	-7.53	0.6087	-0.413	-9.81	XR
HB6TDD		1.111	0.038	0.86	1.064	0.042	1.00	OE
M7TMPT		1.097	0.024	0.54	1.047	0.025	0.59	OE
N48689		1.047	-0.026	-0.59	0.9957	-0.026	-0.62	OE
QQRFGM		1.050	-0.023	-0.51	0.9853	-0.036	-0.86	OE
V8FJKJ		1.115	0.042	0.95	1.037	0.015	0.36	OE
V9E2WF		1.040	-0.033	-0.74	0.9750	-0.047	-1.11	OE
YZJGTB	X	0.00001	-1.073	-24.22	0.00001	-1.022	-24.27	OE
ZE4A7N		1.103	0.030	0.69	1.073	0.052	1.23	OE

Summary Statistics

	Sample A43		Sample A44	
Grand Means	1.073	Percent	1.022	Percent
Stnd Dev Btwn Labs	0.044	Percent	0.042	Percent

Samples A43, A44 : AA6262, AA6262

Statistics based on 18 of 20 reporting participants

Key to Method Codes Reported by Participants

GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	XR	X-Ray Fluorescence - ED or WD not specified

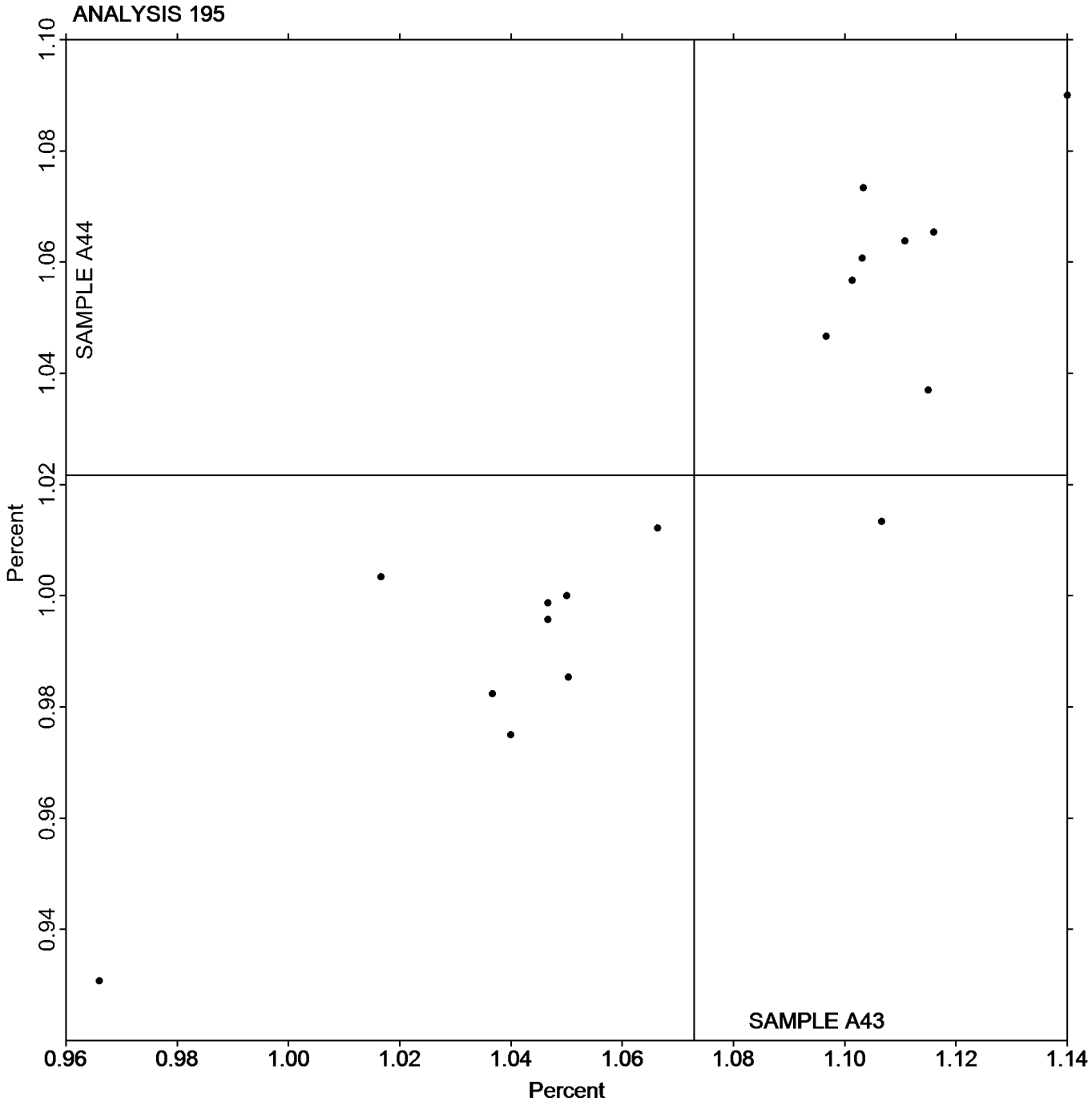
Comments on Assigned Data Flags for Test #195

H9DREG (X) - Data for both samples are very low. Possible Systematic Error.

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

SAMPLE A43
1.073 Percent

SAMPLE A44
1.022 Percent



Fasteners and Metals Interlaboratory Testing Program

Analysis 196

Aluminum, Element #7
CHROMIUM (Cr)

Cycle 118
2nd Qtr
2017

		Sample A43			Sample A44			
WebCode	Data Flag	Lab Mean	Diff. from Grand Mean	CPV	Lab Mean	Diff. from Grand Mean	CPV	Method
4ULAPJ		0.1200	0.0097	1.09	0.1170	0.0086	1.07	GD
6FJQDQ		0.1087	-0.0016	-0.18	0.1053	-0.0030	-0.37	OE
7B2ALR		0.1087	-0.0016	-0.18	0.1097	0.0013	0.16	GD
A89M62		0.1227	0.0124	1.39	0.1217	0.0133	1.65	GD
ABBRC9		0.1000	-0.0103	-1.15	0.1000	-0.0084	-1.04	OE
BE6N2K		0.1163	0.0061	0.68	0.1140	0.0056	0.70	OE
EHF3WG		0.1040	-0.0063	-0.70	0.1017	-0.0067	-0.83	OE
ENLGYK		0.1094	-0.0009	-0.10	0.1067	-0.0016	-0.20	OE
FLUQER		0.1094	-0.0009	-0.10	0.1075	-0.0009	-0.11	OE
FYK69Z		0.1077	-0.0026	-0.29	0.1050	-0.0034	-0.42	OE
GBNGXT		0.1107	0.0004	0.04	0.1087	0.0003	0.04	IC
H9DREG	*	0.1359	0.0257	2.87	0.1310	0.0226	2.81	XR
HB6TDD		0.1100	-0.0003	-0.03	0.1073	-0.0010	-0.13	OE
LT4E6L		0.1120	0.0017	0.19	0.1087	0.0003	0.04	OE
M7TMPT		0.1040	-0.0063	-0.70	0.1033	-0.0050	-0.62	OE
N48689		0.1007	-0.0096	-1.07	0.0993	-0.0091	-1.13	OE
QQRFGM		0.1097	-0.0006	-0.07	0.1060	-0.0024	-0.29	OE
V8FJKJ		0.1090	-0.0013	-0.14	0.1050	-0.0034	-0.42	OE
V9E2WF		0.0930	-0.0173	-1.93	0.0940	-0.0144	-1.78	OE
V9TEBD		0.1173	0.0071	0.79	0.1137	0.0053	0.66	OE
ZE4A7N	*	0.1067	-0.0036	-0.40	0.1100	0.0016	0.20	OE

Summary Statistics

	Sample A43		Sample A44	
Grand Means	0.1103	Percent	0.1084	Percent
Stnd Dev Btwn Labs	0.0089	Percent	0.0081	Percent

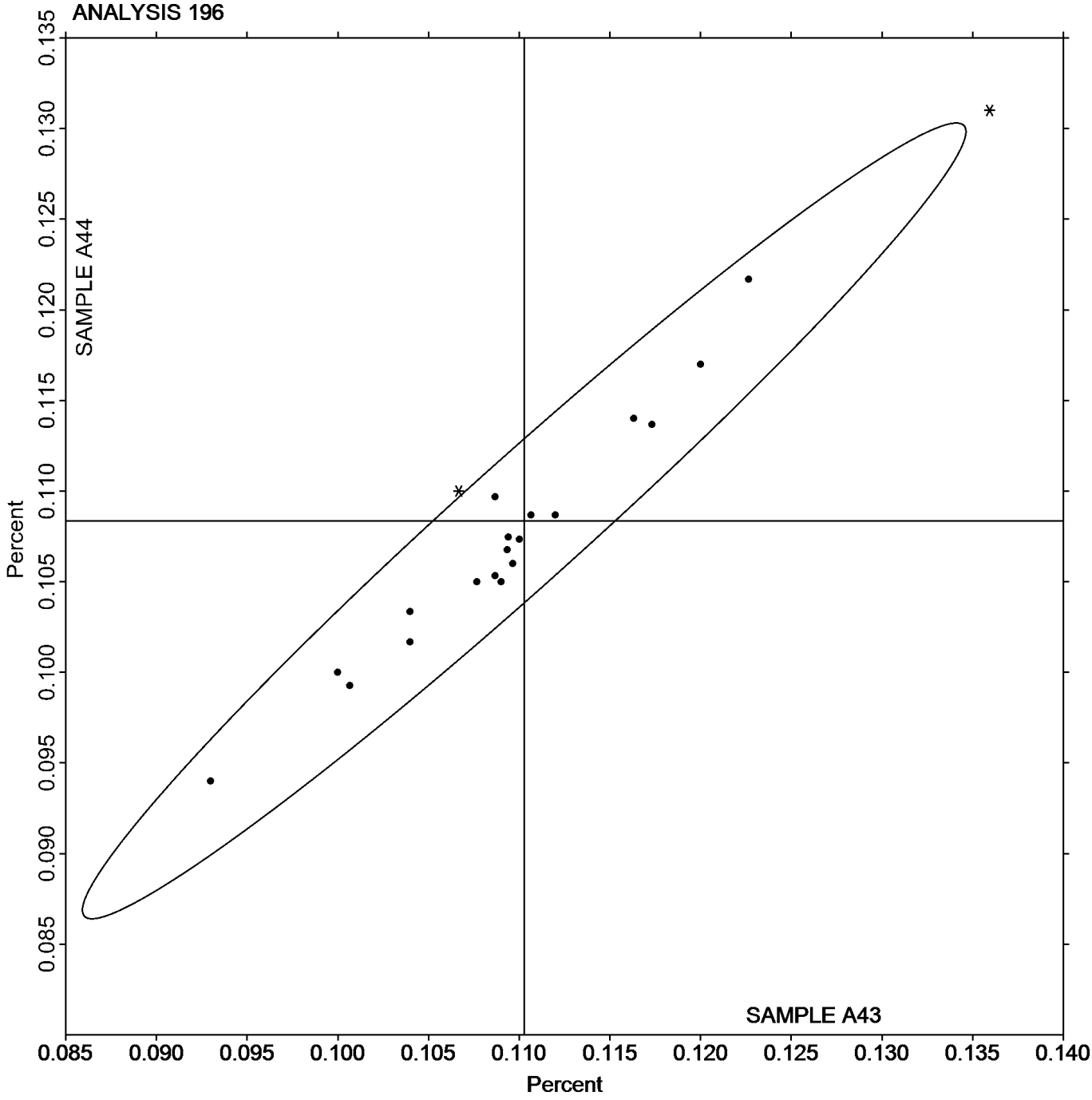
Samples A43, A44 : AA6262, AA6262

Statistics based on 21 of 21 reporting participants

Key to Method Codes Reported by Participants

GD	Spectrometry - Glow Discharge (GDS)	IC	Spectrometry - Inductively Coupled Plasma (ICP)
OE	Spectrometry - Optical Emission (OES)	XR	X-Ray Fluorescence - ED or WD not specified

SAMPLE A43	SAMPLE A44
0.1103 Percent	0.1084 Percent



WebCode	Data Flag	Sample A43 Lab Mean	Sample A43 Diff. from Grand Mean	Sample A43 CPV	Sample A44 Lab Mean	Sample A44 Diff. from Grand Mean	Sample A44 CPV	Method
6FJQDQ		0.4540	-0.0103	-0.16	0.5637	0.0091	0.12	OE
7B2ALR		0.4017	-0.0626	-1.00	0.4807	-0.0739	-1.01	IC
A89M62		0.4587	-0.0056	-0.09	0.5570	0.0025	0.03	GD
ABBRC9		0.4933	0.0291	0.47	0.5933	0.0388	0.53	IC
AHPC2K		0.4333	-0.0309	-0.50	0.5367	-0.0179	-0.24	ED
BE6N2K		0.3380	-0.1263	-2.03	0.3937	-0.1609	-2.20	OE
EHF3WG		0.4370	-0.0273	-0.44	0.4983	-0.0562	-0.77	OE
ENLGYK		0.5818	0.1176	1.89	0.6679	0.1134	1.55	OE
GBNGXT		0.4800	0.0157	0.25	0.5833	0.0288	0.39	IC
H9DREG		0.5351	0.0708	1.14	0.6313	0.0768	1.05	XR
N48689		0.4973	0.0331	0.53	0.6053	0.0508	0.70	OE
V9E2WF		0.4610	-0.0033	-0.05	0.5433	-0.0112	-0.15	OE

Summary Statistics

	Sample A43		Sample A44	
Grand Means	0.4643	Percent	0.5545	Percent
Stnd Dev Btwn Labs	0.0623	Percent	0.0730	Percent

Samples A43, A44 : AA6262, AA6262

Statistics based on 12 of 12 reporting participants

Key to Method Codes Reported by Participants

ED	X-Ray Fluorescence - Energy Dispersive (EDX)	GD	Spectrometry - Glow Discharge (GDS)
IC	Spectrometry - Inductively Coupled Plasma (ICP)	OE	Spectrometry - Optical Emission (OES)
XR	X-Ray Fluorescence - ED or WD not specified		

SAMPLE A43
0.4643 Percent

SAMPLE A44
0.5545 Percent