Collaborative Testing Services, Inc.

Wine Industry Interlaboratory Program

Summary Report #029- Summer 2008

Introduction to the Wine Program

Explanation of Tables and Definitions of Terms

Analysis	Analysis Name
901	Ethanol (% of volume)
902	Total Sulfur Dioxide
903	Free Sulfur Dioxide
904	Titratable Acidity
905	Volatile Acidity
906	Specific Gravity
907	pH
908	Residual Sugar
909	L-Malic Acid
910	Glucose + Fructose
950	Research Property: Copper (Cu) Content
951	Research: A520nm (1cm path)

About the Wine Industry Interlaboratory Program

This interlaboratory survey was administered by Collaborative Testing Services, Inc. (CTS) through an agreement with The American Society for Enology and Viticulture (ASEV) with technical assistance provided by the Laboratory Proficiency Testing Guidance Committee (LPTGC) of the Technical Projects Committee (TPC). The purpose of the survey was to evaluate laboratory performance and assess the performance of the industry with respect to quality assurance testing conducted on commercially produced wine through an on-going interlaboratory testing program. Two bottles of differing wines were supplied to participant laboratories. The samples for each type of wine were chosen consecutively from a single production run, to minimize variation between bottles. Participating laboratories were asked to analyze the samples' ten properties in accordance with their normal laboratory procedures and return the results and methodology information to CTS.

About CTS

Founded in 1971, Collaborative Testing Services, Inc. (CTS) is a privately - owned company that specializes in interlaboratory tests for a variety of sectors: including rubber, plastics, fasteners and metals, containerboard, paper, wine and color, as well as proficiency tests for forensic laboratories. All of the tests are designed to assist organizations in achieving and maintaining quality assurance objectives. Labs from the U.S., as well as more than 55 countries, currently participate in the CTS programs.

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Key for Web Summary Report (Page 1 of 2)

WebCode Assigned laboratory identification number (temporary) used to ensure lab confidentiality while permitting a lab to locate its data in the Wine Web Summary Report published on the CTS web site. The WebCode for each analysis can be found in the Performance Analysis Report mailed to each participant.

Lab Mean The average of the test results obtained by the participant.

Grand Mean The average of the LAB MEANS for all included participants. Laboratories flagged with an X or an M (see DATA FLAG column) are excluded from the GRAND MEAN.

Difference from Grand Mean The difference of the LAB MEAN from the GRAND MEAN.

Between-Lab Standard Deviation An indication of the precision of measurement between the laboratories. The greater the spread of the LAB MEANS about the GRAND MEAN, the larger the BETWEEN-LAB STANDARD DEVIATION (and vice versa).

Comparative Performance Value An indication of how well a laboratory's results agree with the other participants. The CPV is a ratio indicating the number of standard deviations from the GRAND MEAN. The closer a laboratory's COMPARATIVE PERFORMANCE VALUE is to zero, the more consistent its results are with the other participants' data (and vice versa). The critical value for each CPV will vary depending on the number of labs participating in a test.

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

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

Common Problems Highlighted in Footnotes

1. ***Extreme data*** - The laboratory's results for one or both samples are so inconsistent with those of the other participants that the lab mean(s) fall outside the plot. The participant is advised to immediately review his data and/or testing procedure.

2. ***Systematic bias*** - The laboratory's results are either consistently high or low for both samples when compared to the other participants (the plotted point falls near the top or bottom of the ellipse). This indicates that the participant is performing the test with a constant bias. Causes of systematic errors include improper calibration, the particular make/model of equipment or a modification to the testing procedure.

3. ***Inconsistency in testing between samples/sample sets*** - The laboratory's results indicate that there are differences in the way the two samples tested (the plotted point falls to the side of the ellipse). This type of error may be attributed to the analyst deviating from the procedure when testing one of the samples or a material interaction occurrence with the instrument or room conditions. The inconsistency is reflected in the CPVs for the two samples, such as a +1.5 CPV for sample A and a -2.2 CPV for sample B. CTS also will specify if the laboratory's data for one sample are high/low compared to the other participants. If this inconsistency is slight, the lab's plotted point will be an * that falls on the edge of the ellipse.

4. ***Inconsistency in testing within a sample*** - The laboratory's within-lab standard deviation for a specified sample is high when compared to the other participants, often causing the lab's plotted point to fall outside of the ellipse.

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

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 901

Ethanol (% of volume)

		Sample SA55			Sample SA56		
WebCod	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
1D1YX7		13.07	-0.01	-0.17	13.10	-0.03	-0.47
1GDXK7		13.11	0.02	0.24	13.15	0.02	0.23
28UMHL		13.05	-0.03	-0.40	13.13	-0.01	-0.12
29CXMR		12.98	-0.11	-1.27	13.05	-0.08	-1.17
3PMEML	X	12.80	-0.28	-3.31	13.00	-0.13	-1.86
41HFP7		13.18	0.10	1.12	13.23	0.10	1.34
4255F1		13.13	0.05	0.53	13.18	0.05	0.64
4MJDAK		13.13	0.04	0.47	13.15	0.02	0.23
4VEFFH	X	13.40	0.32	3.68	13.50	0.37	5.10
64CD6J		13.12	0.04	0.42	13.19	0.05	0.71
7GWX8H		13.22	0.13	1.52	13.24	0.10	1.41
7HJNZB		13.10	0.01	0.13	13.15	0.02	0.23
916GG6		13.13	0.04	0.47	13.12	-0.01	-0.19
94K6S3		13.07	-0.02	-0.22	13.11	-0.03	-0.40
9M6HT9	*	13.05	-0.03	-0.40	13.00	-0.13	-1.86
9WTK4H		13.00	-0.08	-0.98	13.00	-0.13	-1.86
AATJSE	X	12.75	-0.34	-3.95	12.77	-0.36	-5.07
AE5HWS		13.06	-0.02	-0.28	13.19	0.05	0.71
AHJ77P		13.05	-0.04	-0.46	13.18	0.04	0.57
AHX9L6		13.18	0.10	1.12	13.21	0.08	1.06
B9K9DT		13.12	0.04	0.42	13.18	0.04	0.57
C5BR7K		12.97	-0.11	-1.33	13.07	-0.06	-0.89
C5QZBE		13.20	0.12	1.35	13.23	0.09	1.27
D6BC1A	X	13.03	-0.06	-0.69	12.87	-0.26	-3.67
DEQ7CW	X	12.63	-0.46	-5.35	12.70	-0.43	-6.04
E1RWMA	X	12.93	-0.15	-1.80	13.13	0.00	-0.05
ETPQXU		12.90	-0.18	-2.15	13.00	-0.13	-1.86
FEQY2W	X	13.10	0.02	0.18	13.40	0.27	3.71
G8RVQX	*	12.97	-0.12	-1.39	13.13	0.00	-0.05
GF2JHR		13.07	-0.01	-0.17	13.09	-0.04	-0.61
GMQUJL		13.29	0.20	2.34	13.25	0.12	1.62
GSF4ZL	X	12.81	-0.28	-3.25	12.87	-0.27	-3.74
GUCZW1		13.14	0.06	0.65	13.22	0.08	1.13
H7C3F8		13.10	0.01	0.13	13.11	-0.02	-0.33
J3XU19		13.07	-0.01	-0.17	13.12	-0.01	-0.19

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 901

Ethanol (% of volume)

		Sample SA55			Sample SA56		
WebCod	Data Flag	Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JFG55K		13.13	0.05	0.53	13.15	0.01	0.16
JJK861		13.08	-0.01	-0.11	13.14	0.01	0.09
JK8VB9		13.10	0.02	0.18	13.14	0.01	0.09
KPWNDG		13.10	0.01	0.13	13.18	0.04	0.57
KV3ZT3	*	13.30	0.22	2.51	13.35	0.22	3.01
KXF122		13.00	-0.08	-0.98	13.10	-0.03	-0.47
L3VPT4		12.95	-0.13	-1.56	13.01	-0.13	-1.79
LKMGX3		13.15	0.07	0.77	13.20	0.07	0.92
MWUMNV		13.11	0.02	0.24	13.15	0.02	0.23
N82T1G		13.07	-0.02	-0.22	13.13	0.00	-0.05
NBFHBD		13.26	0.18	2.05	13.22	0.08	1.13
NQFJRZ		13.16	0.08	0.88	13.17	0.04	0.50
NTV7V5		13.09	0.01	0.07	13.15	0.02	0.23
P7U8AR		13.04	-0.05	-0.57	13.07	-0.06	-0.89
PJ97BE	X	12.95	-0.13	-1.56	12.85	-0.28	-3.95
PNHKPT		13.08	-0.01	-0.11	13.11	-0.03	-0.40
PZZE3L		13.01	-0.08	-0.92	13.04	-0.10	-1.38
QDZDRH		13.07	-0.02	-0.22	13.12	-0.01	-0.19
RHYYGC		13.13	0.05	0.53	13.22	0.08	1.13
RK8Q31		13.22	0.13	1.52	13.20	0.07	0.92
SGP4YK		13.05	-0.03	-0.40	13.08	-0.06	-0.82
SN7U6Z		13.06	-0.03	-0.34	13.12	-0.02	-0.26
TQE3VJ		13.11	0.03	0.30	13.15	0.01	0.16
TYT7C9		13.10	0.02	0.18	13.16	0.03	0.37
U294F5	X	13.30	0.22	2.51	13.50	0.37	5.10
U2M8LB		13.08	-0.01	-0.11	13.12	-0.01	-0.19
UKUFGB	*	12.90	-0.18	-2.15	12.95	-0.18	-2.56
ULADQ8		12.99	-0.09	-1.10	13.06	-0.07	-1.03
UN8CTE		13.12	0.03	0.36	13.21	0.07	0.99
URN1XK	X	12.75	-0.33	-3.89	12.80	-0.33	-4.65
UYVE59		13.12	0.04	0.42	13.14	0.01	0.09
V2YTQY		12.89	-0.19	-2.26	13.03	-0.11	-1.51
V5M2C6		12.98	-0.10	-1.21	13.03	-0.10	-1.45
VJM1Z3		13.06	-0.02	-0.28	13.12	-0.01	-0.19
VZFNCN		13.10	0.01	0.13	13.15	0.02	0.23

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 901

Ethanol (% of volume)

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
XKPZC3		13.20	0.11	1.29	13.23	0.10	1.34
Y3MQ19		13.05	-0.03	-0.40	13.10	-0.03	-0.47
YAR1CE	*	12.97	-0.12	-1.39	13.15	0.01	0.16
YXW53V		13.10	0.01	0.13	13.11	-0.02	-0.33
YZLHWZ		13.03	-0.06	-0.69	13.08	-0.06	-0.82
Z3WSRT	X	12.96	-0.12	-1.45	12.92	-0.22	-3.05
ZKF2U3		13.20	0.11	1.29	13.19	0.06	0.78

Summary Statistics

	Sample SA55		Sample SA56	
Grand Means	13.084	percent	13.134	percent
Stnd Dev Btwn Labs	0.086	percent	0.072	percent

Statistics based on 65 of 77 reporting participants

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

Comments on assigned Data Flags

3PMEML (X) - Inconsistent in testing between samples, data for Sample SA55 are low.

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

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

D6BC1A (X) - Inconsistent in testing between samples, data for Sample SA56 are low.

DEQ7CW (X) - Data for both samples are low.

E1RWMA (X) - Inconsistent in testing between samples.

FEQY2W (X) - Inconsistent in testing between samples, data for Sample SA56 are high.

GSF4ZL (X) - Data for both samples are low. Possible Systematic Error.

PJ97BE (X) - Inconsistent in testing between samples, data for Sample SA56 are low. Also Inconsistent in testing within Sample SA56.

U294F5 (X) - Inconsistent in testing between samples, data for Sample SA56 are high.

URN1XK (X) - Data for both samples are low. Possible Systematic Error.

Z3WSRT (X) - Inconsistent in testing between samples, data for Sample SA56 are low.

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 901

Ethanol (% of volume)

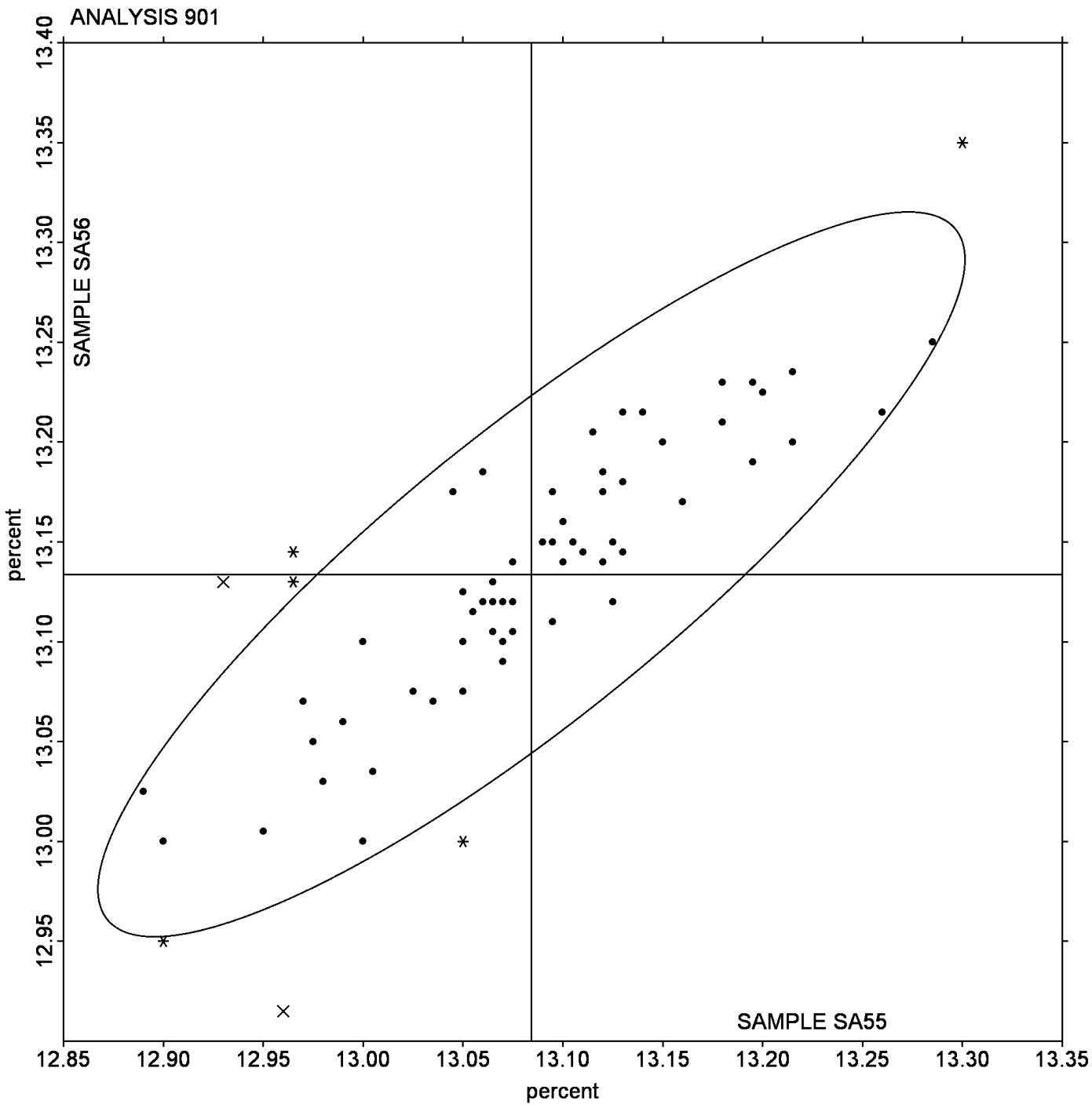
Results by Methodology (as reported by laboratory)

	Sample SA55 *Cabernet Sauvignon*			Sample SA56 *Merlot*				
Test Methodology	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	Labs Incl / Rpt	
Ebulliometer Method	13.07	0.06	-0.02	13.10	0.07	-0.04	5	10
Gas Chromatography Method	13.10	0.07	0.02	13.17	0.06	0.03	9	9
Near Infrared Method	13.09	0.06	0.00	13.13	0.05	0.00	32	35
Dist. / Density Method	13.00	0.12	-0.09	13.08	0.09	-0.05	5	13
FTIR	13.13	0.08	0.05	13.16	0.07	0.03	9	10

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 901

Ethanol (% of volume)



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 902

Total Sulfur Dioxide

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
1293TZ		121.0	7.2	0.77	112.5	10.0	1.22
1SXQ85		122.5	8.7	0.93	104.5	2.0	0.25
2CGFET		106.5	-7.3	-0.79	101.5	-1.0	-0.12
2N2QVZ		124.5	10.7	1.15	110.5	8.0	0.97
2RACTJ		96.0	-17.8	-1.92	96.0	-6.5	-0.78
33B6DG		112.5	-1.3	-0.15	106.0	3.5	0.43
34GF2K		114.5	0.7	0.07	99.0	-3.5	-0.42
35LL7M		107.0	-6.8	-0.74	94.0	-8.5	-1.03
4E9W1E		118.0	4.2	0.45	108.0	5.5	0.67
53WXYK		102.0	-11.8	-1.28	90.5	-12.0	-1.45
5LD1VX		102.0	-11.8	-1.28	98.4	-4.1	-0.49
6JTEVN		118.5	4.7	0.50	105.5	3.0	0.37
7GESXL		114.5	0.7	0.07	106.0	3.5	0.43
7PNY1X		121.0	7.2	0.77	111.0	8.5	1.03
8K2NEC		116.5	2.7	0.29	105.0	2.5	0.31
945NYH		127.0	13.2	1.42	119.0	16.5	2.00
A266PE		111.0	-2.8	-0.31	90.0	-12.5	-1.51
B68PZ1		108.2	-5.6	-0.61	92.7	-9.8	-1.18
BME776		118.5	4.7	0.50	112.0	9.5	1.16
BSFM3T		109.5	-4.3	-0.47	93.0	-9.5	-1.15
CYW8M4		110.9	-3.0	-0.32	98.8	-3.6	-0.44
D9Z3R1		125.0	11.2	1.20	120.0	17.5	2.12
DV187E		119.5	5.7	0.61	110.0	7.5	0.91
EM5DZ8		110.4	-3.4	-0.37	101.0	-1.5	-0.18
EQK5W3		106.0	-7.8	-0.85	95.5	-7.0	-0.84
FBXTLZ	X	129.0	15.2	1.63	98.5	-4.0	-0.48
FEVPDS		112.7	-1.2	-0.13	102.8	0.3	0.03
FRSFUC		117.0	3.2	0.34	111.0	8.5	1.03
G25ZRE		99.8	-14.0	-1.51	97.9	-4.5	-0.55
G543RN		105.0	-8.8	-0.95	94.0	-8.5	-1.03
GAKX1X		110.5	-3.3	-0.36	97.0	-5.5	-0.66
H1C7N8		114.5	0.7	0.07	91.5	-11.0	-1.33
HJMA51		117.0	3.2	0.34	101.0	-1.5	-0.18
JEWFFK		119.0	5.2	0.56	100.5	-2.0	-0.24
JQE64H		129.0	15.2	1.63	108.0	5.5	0.67

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 902

Total Sulfur Dioxide

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
KHNVZ7		112.0	-1.8	-0.20	96.0	-6.5	-0.78
KR2T9R		99.5	-14.3	-1.55	101.0	-1.5	-0.18
LGZHKL		109.5	-4.3	-0.47	94.0	-8.5	-1.03
LLPFR3		104.5	-9.3	-1.01	100.5	-2.0	-0.24
LT1B5J	X	123.0	9.2	0.99	90.5	-12.0	-1.45
LZLSWN		129.0	15.2	1.63	115.0	12.5	1.52
M63C97	X	62.0	-51.8	-5.58	62.0	-40.5	-4.90
MCWMW		125.6	11.8	1.27	110.4	7.9	0.96
MEKHQC	X	129.9	16.0	1.73	129.5	27.0	3.28
N5Y2SG		114.5	0.7	0.07	106.5	4.0	0.49
NSDYQX		115.0	1.2	0.12	105.0	2.5	0.31
NXYT9V	*	142.0	28.2	3.03	123.5	21.0	2.55
PHPJME	X	146.5	32.7	3.52	130.5	28.0	3.40
PUCHMA		103.0	-10.8	-1.17	96.5	-6.0	-0.72
Q6HX3E		117.5	3.7	0.39	107.0	4.5	0.55
Q9VQSU		109.5	-4.3	-0.47	98.0	-4.5	-0.54
QT23JF		120.0	6.2	0.66	107.5	5.0	0.61
R4FJPS		101.0	-12.8	-1.38	92.0	-10.5	-1.27
R5P9KJ		100.5	-13.3	-1.44	96.0	-6.5	-0.78
R74XPN		99.5	-14.3	-1.55	88.5	-14.0	-1.69
R9YZWK		105.0	-8.8	-0.95	98.0	-4.5	-0.54
RK96X5		96.0	-17.8	-1.92	91.5	-11.0	-1.33
SCMLNY		124.0	10.2	1.09	107.0	4.5	0.55
SWQ2F4	*	106.5	-7.3	-0.79	85.5	-17.0	-2.06
T863V3		113.5	-0.3	-0.04	98.5	-4.0	-0.48
TLC55Y		114.5	0.7	0.07	106.5	4.0	0.49
TT4RUJ		126.5	12.7	1.36	116.5	14.0	1.70
UGRUJD		111.0	-2.8	-0.31	99.0	-3.5	-0.42
V8SMFY		106.0	-7.8	-0.85	97.5	-5.0	-0.60
VA9K63		118.0	4.2	0.45	107.0	4.5	0.55
VWF886		117.0	3.2	0.34	95.0	-7.5	-0.90
WYDUVN		105.0	-8.8	-0.95	99.0	-3.5	-0.42
X48BBD		120.5	6.7	0.72	109.0	6.5	0.79
X5Y6UA		118.0	4.2	0.45	97.0	-5.5	-0.66
XMDXH1		131.5	17.7	1.90	115.0	12.5	1.52

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 902

Total Sulfur Dioxide

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
YUFEP4		112.0	-1.8	-0.20	100.0	-2.5	-0.30
Z1RJ3Q		126.5	12.7	1.36	114.0	11.5	1.40
ZFGPT6		120.0	6.2	0.66	110.0	7.5	0.91

Summary Statistics

	Sample SA55	Sample SA56
Grand Means	113.85 mg/L	102.46 mg/L
Stnd Dev Btwn Labs	9.28 mg/L	8.25 mg/L

Statistics based on 68 of 73 reporting participants

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

Comments on assigned Data Flags

FBXTLZ (X) - Inconsistent in testing between samples and inconsistent within the determinations for Sample SA56.

LT1B5J (X) - Inconsistent in testing between samples.

M63C97 (X) - Data for both samples are low.

MEKHQC (X) - Inconsistent in testing between samples, data for Sample SA56 are high.

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

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 902

Total Sulfur Dioxide

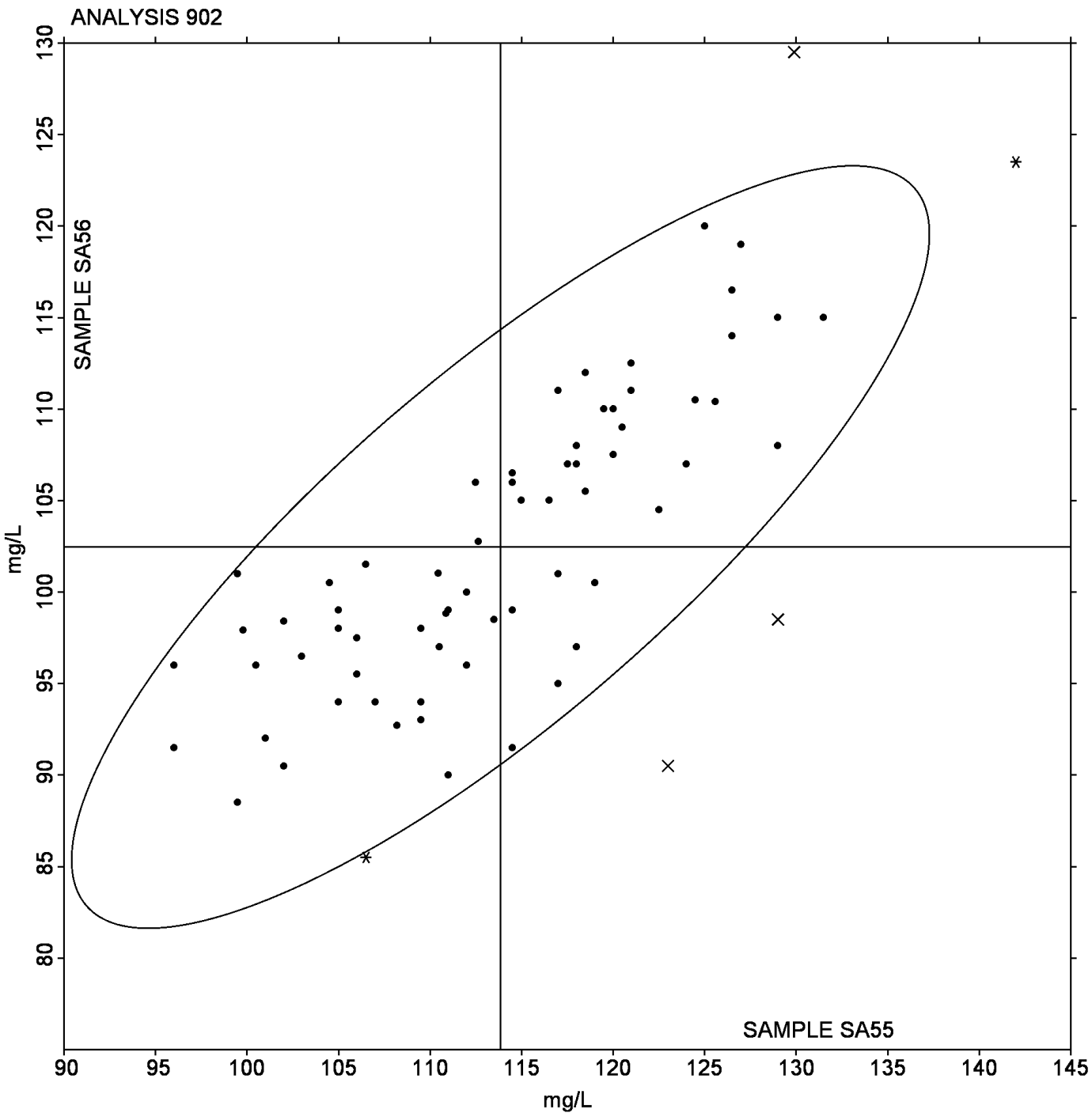
Results by Methodology (as reported by laboratory)

	Sample SA55 *Cabernet Sauvignon*			Sample SA56 *Merlot*				
Test Methodology	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	Labs Incl	/ Rpt
Please specify method used	108.8	5.9	-5.0	100.1	5.2	-2.3	3	3
Ripper Method	117.0	7.9	3.2	105.6	7.7	3.2	28	31
Aeration Oxidation (AO) Method	110.4	8.6	-3.4	99.9	6.7	-2.5	18	21
Segemented Flow Analyzer	106.3	10.6	-7.5	98.4	9.0	-4.1	5	5
Enzymatic Method	100.5	0.0	-13.3	96.0	0.0	-6.5	1	1
Colormetric Analyzer	114.4	7.4	0.6	100.3	6.5	-2.2	8	8
FTIR	114.5	0.0	0.7	91.5	0.0	-11.0	1	1
Flow Injection Analysis	119.8	0.4	5.9	110.0	0.0	7.5	2	3

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 902

Total Sulfur Dioxide



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 903

Free Sulfur Dioxide

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
16VTHX		30.00	-3.50	-0.77	37.50	1.25	0.26
182D8H		34.00	0.50	0.11	34.00	-2.25	-0.46
1MWU3H		32.00	-1.50	-0.33	32.80	-3.45	-0.71
1UNGAF	*	27.00	-6.50	-1.43	23.00	-13.25	-2.71
2M2CVE		34.64	1.14	0.25	36.88	0.63	0.13
2NHWAQ		30.00	-3.50	-0.77	32.00	-4.25	-0.87
3KGK2Q		33.50	0.00	0.00	36.50	0.25	0.05
3YVM3R		35.00	1.50	0.33	38.00	1.75	0.36
4QVHDV		33.50	0.00	0.00	36.00	-0.25	-0.05
4SNCGR		30.56	-2.94	-0.65	39.12	2.87	0.59
5KTGGZ		36.00	2.50	0.55	35.50	-0.75	-0.15
5PNQU2	*	41.50	8.00	1.76	38.00	1.75	0.36
6AB3L3		30.00	-3.50	-0.77	38.00	1.75	0.36
77DAEW		34.00	0.50	0.11	34.95	-1.30	-0.27
7KPM5X		35.00	1.50	0.33	38.00	1.75	0.36
7P3BFU		29.00	-4.50	-0.99	34.00	-2.25	-0.46
7PA4ZP		28.88	-4.63	-1.02	37.44	1.19	0.24
8G2CHC		35.00	1.50	0.33	40.00	3.75	0.77
9T9G85		35.00	1.50	0.33	37.00	0.75	0.15
A413KN		33.50	0.00	0.00	36.00	-0.25	-0.05
ANNBFA		35.50	2.00	0.44	35.00	-1.25	-0.26
CFRY15		41.50	8.00	1.76	44.00	7.75	1.59
CRMVPZ		33.60	0.10	0.02	36.60	0.35	0.07
CT8FJH		27.00	-6.50	-1.43	30.00	-6.25	-1.28
CUTE87		27.50	-6.00	-1.32	30.50	-5.75	-1.18
D2T758		28.00	-5.50	-1.21	34.00	-2.25	-0.46
D564FB		35.00	1.50	0.33	32.50	-3.75	-0.77
D8LSLF		31.00	-2.50	-0.55	37.50	1.25	0.26
DMTFBR		33.00	-0.50	-0.11	38.00	1.75	0.36
DR74MM		43.00	9.50	2.09	45.50	9.25	1.89
EH2SMH		34.00	0.50	0.11	36.00	-0.25	-0.05
EH9EBJ		37.32	3.82	0.84	39.16	2.91	0.60
FCSXDS		35.00	1.50	0.33	31.00	-5.25	-1.07
FR6UBU		26.00	-7.50	-1.65	31.00	-5.25	-1.07
G7KM5Y		32.00	-1.50	-0.33	33.50	-2.75	-0.56

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 903

Free Sulfur Dioxide

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
GHGD8B		35.00	1.50	0.33	37.00	0.75	0.15
GSC6C9		36.50	3.00	0.66	40.00	3.75	0.77
H6PVMK		30.00	-3.50	-0.77	30.00	-6.25	-1.28
J29GEA		31.50	-2.00	-0.44	37.50	1.25	0.26
J8RFPA		32.50	-1.00	-0.22	39.00	2.75	0.56
KW6FJ1		31.00	-2.50	-0.55	38.00	1.75	0.36
KZL17N		38.50	5.00	1.10	42.00	5.75	1.18
L4S6ZZ	X	11.00	-22.50	-4.95	15.00	-21.25	-4.35
L6QBWL		33.50	0.00	0.00	32.00	-4.25	-0.87
LVYQK3		34.40	0.90	0.20	37.60	1.35	0.28
MAKRF7		33.00	-0.50	-0.11	39.50	3.25	0.66
MKRAJH		33.50	0.00	0.00	35.50	-0.75	-0.15
NHF7C3		31.00	-2.50	-0.55	34.50	-1.75	-0.36
NKWLPC		28.50	-5.00	-1.10	29.50	-6.75	-1.38
P9KLZP		34.00	0.50	0.11	36.00	-0.25	-0.05
PHNNZ3	*	40.00	6.50	1.43	48.00	11.75	2.40
PM4TEW		43.00	9.50	2.09	46.00	9.75	1.99
PUNC3V		23.50	-10.00	-2.20	29.00	-7.25	-1.48
Q14S2T		29.00	-4.50	-0.99	35.00	-1.25	-0.26
Q51UCD		33.00	-0.50	-0.11	36.00	-0.25	-0.05
Q6SYJT		35.00	1.50	0.33	35.50	-0.75	-0.15
QJ4ERB		31.00	-2.50	-0.55	29.50	-6.75	-1.38
QKR1YF		36.00	2.50	0.55	45.00	8.75	1.79
S67K5N		36.00	2.50	0.55	37.00	0.75	0.15
SB3ETV		31.20	-2.30	-0.51	33.88	-2.38	-0.49
SPAKJN		25.00	-8.50	-1.87	29.00	-7.25	-1.48
SRMKBV		35.00	1.50	0.33	38.50	2.25	0.46
SX2K1F		34.00	0.50	0.11	32.00	-4.25	-0.87
TH4852		31.00	-2.50	-0.55	33.00	-3.25	-0.67
TKG1UG		40.50	7.00	1.54	45.00	8.75	1.79
TSPBFH		34.00	0.50	0.11	36.00	-0.25	-0.05
TYGZHD		39.01	5.51	1.21	40.67	4.41	0.90
U6RCUW	*	22.50	-11.00	-2.42	21.50	-14.75	-3.02
ULK77H		34.00	0.50	0.11	38.50	2.25	0.46
VP9JUZ		30.00	-3.50	-0.77	34.00	-2.25	-0.46

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 903

Free Sulfur Dioxide

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
WEB6Y5		32.00	-1.50	-0.33	33.00	-3.25	-0.67
XC3VXZ		32.50	-1.00	-0.22	35.50	-0.75	-0.15
Y8MSLP	*	45.00	11.50	2.53	45.00	8.75	1.79
Z1LSP7		41.50	8.00	1.76	42.50	6.25	1.28
ZFW26G		34.50	1.00	0.22	38.00	1.75	0.36
ZJARHD		33.00	-0.50	-0.11	35.50	-0.75	-0.15
ZMMR9L		44.50	11.00	2.42	45.50	9.25	1.89

Summary Statistics

	Sample SA55	Sample SA56
Grand Means	33.501 mg/L	36.251 mg/L
Stnd Dev Btwn Labs	4.548 mg/L	4.888 mg/L

Statistics based on 76 of 77 reporting participants

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

Comments on assigned Data Flags

L4S6ZZ (X) - Data for both samples are low. Also inconsistent in testing within Sample SA55.

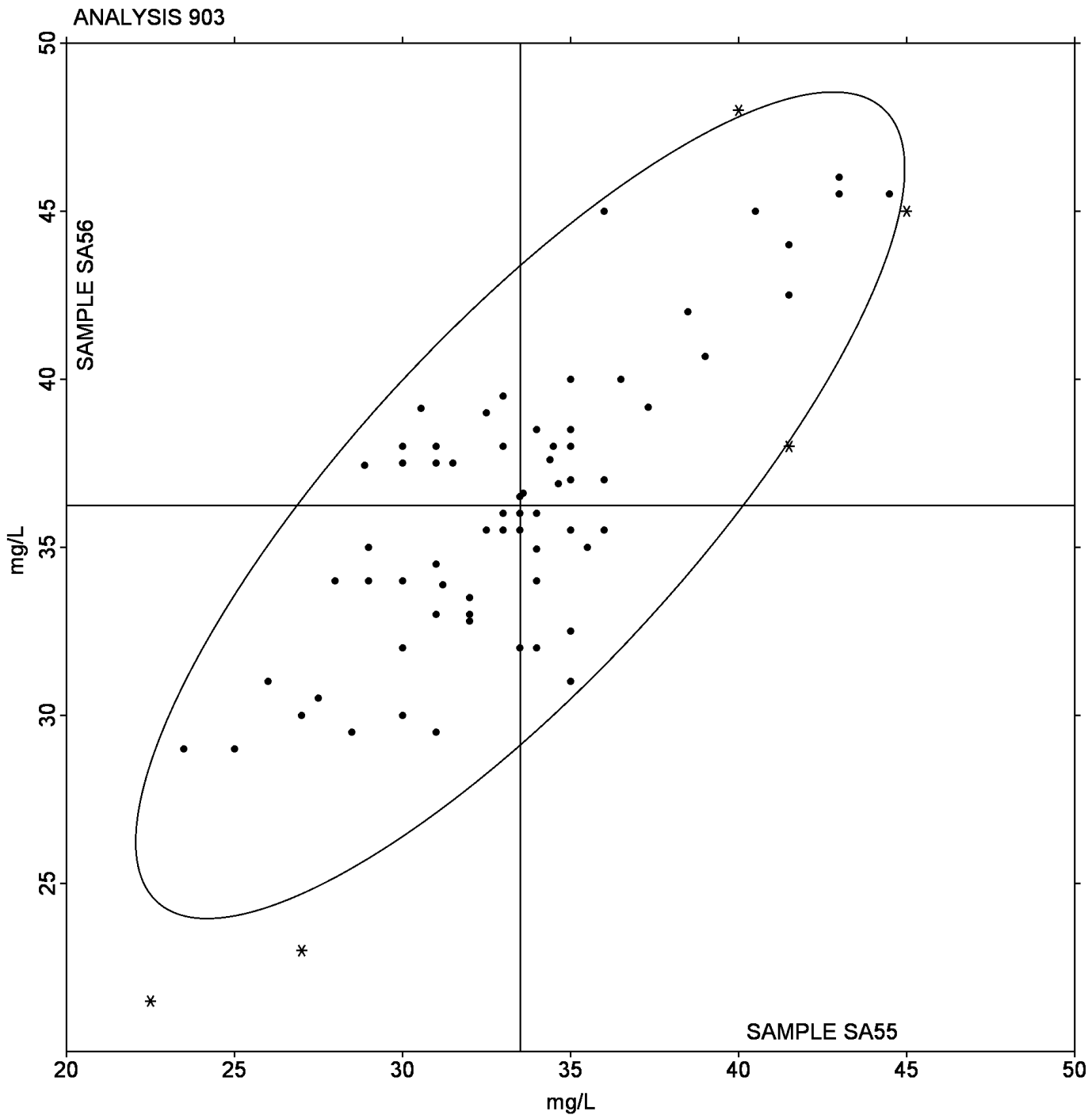
Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA55 *Cabernet Sauvignon* Group Mean	Btwn Lab STD	Diff from GM	Sample SA56 *Merlot* Group Mean	Btwn Lab STD	Diff from GM	Labs Incl	/ Rpt
Please specify method used	30.63	1.97	-2.88	35.75	1.71	-0.50	4	4
Ripper Method	35.84	4.68	2.33	38.93	4.45	2.68	18	19
Aeration Oxidation (AO) Method	32.69	2.51	-0.81	35.42	3.10	-0.83	32	36
Segmented Flow Analyzer	36.17	4.65	2.67	39.33	4.16	3.08	3	4
Enzymatic Method	25.00	0.00	-8.50	29.00	0.00	-7.25	1	1
Colormetric Analyzer	32.31	5.20	-1.19	33.81	4.65	-2.44	8	8
Flow Injection Analysis	32.90	4.46	-0.60	37.00	4.14	0.75	5	5

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 903

Free Sulfur Dioxide



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 904

Titratable Acidity

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
15GSR9	X	6.150	0.201	0.92	6.050	0.445	2.11
4HTUJ3		5.800	-0.149	-0.68	5.500	-0.105	-0.50
4KQ1LG		5.550	-0.399	-1.83	5.195	-0.410	-1.94
4XMGRG		6.280	0.331	1.51	5.815	0.210	0.99
54F27P		6.250	0.301	1.37	5.750	0.145	0.69
581YWT	X	6.250	0.301	1.37	6.140	0.535	2.53
5ERQMF		6.030	0.081	0.37	5.675	0.070	0.33
5FAUHF		5.475	-0.474	-2.17	5.125	-0.480	-2.27
66G2NU		6.000	0.051	0.23	5.690	0.085	0.40
69L847		6.020	0.071	0.32	5.685	0.080	0.38
6ETL4Q		6.000	0.051	0.23	5.700	0.095	0.45
7KYS18		5.950	0.001	0.00	5.500	-0.105	-0.50
9589U3		6.000	0.051	0.23	5.650	0.045	0.21
96JPA3		6.135	0.186	0.85	5.795	0.190	0.90
9A7WEX		5.900	-0.049	-0.23	5.600	-0.005	-0.02
9P4K1R		6.270	0.321	1.47	5.890	0.285	1.35
9QKTDL		5.415	-0.534	-2.44	5.125	-0.480	-2.27
AP9NPU		5.940	-0.009	-0.04	5.600	-0.005	-0.02
AXYL8M		6.100	0.151	0.69	5.700	0.095	0.45
BA5PHN		5.895	-0.054	-0.25	5.695	0.090	0.43
BAV7PP		5.850	-0.099	-0.45	5.500	-0.105	-0.50
BR4NPJ		5.700	-0.249	-1.14	5.250	-0.355	-1.68
BVB29A		5.500	-0.449	-2.05	5.180	-0.425	-2.01
BZKLVW	X	6.700	0.751	3.43	6.500	0.895	4.24
DGAUUY		5.525	-0.424	-1.94	5.225	-0.380	-1.80
DLAGWT		5.900	-0.049	-0.23	5.500	-0.105	-0.50
DLBMX9		5.950	0.001	0.00	5.600	-0.005	-0.02
E7DM95	*	5.850	-0.099	-0.45	5.325	-0.280	-1.33
E87HQM		6.050	0.101	0.46	5.650	0.045	0.21
F4RBML	X	6.800	0.851	3.89	6.300	0.695	3.29
F6ZYHJ		6.100	0.151	0.69	5.650	0.045	0.21
FJLYVY		5.800	-0.149	-0.68	5.500	-0.105	-0.50
FYKUDK		6.050	0.101	0.46	5.750	0.145	0.69
G3NL1H		5.985	0.036	0.16	5.670	0.065	0.31
GXTQ3R		6.105	0.156	0.71	5.770	0.165	0.78

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 904

Titratable Acidity

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
H9CFW6		6.000	0.051	0.23	5.500	-0.105	-0.50
HC34NL	X	5.950	0.001	0.00	5.100	-0.505	-2.39
HCZZVH		6.200	0.251	1.15	5.900	0.295	1.40
HN1UFF		5.950	0.001	0.00	5.700	0.095	0.45
J63FNY		6.050	0.101	0.46	5.690	0.085	0.40
KS4PR2		6.150	0.201	0.92	5.850	0.245	1.16
KWLY9Z		6.000	0.051	0.23	5.600	-0.005	-0.02
KXVDQY		6.335	0.386	1.76	5.930	0.325	1.54
KY5VHX		6.080	0.131	0.60	5.635	0.030	0.14
KYR1YW	X	3.190	-2.759	-12.62	0.545	-5.060	-23.97
KYW979		5.825	-0.124	-0.57	5.555	-0.050	-0.24
L6V38F		6.000	0.051	0.23	5.600	-0.005	-0.02
LLUXR3		6.150	0.201	0.92	5.950	0.345	1.63
LMT2NP	X	6.000	0.051	0.23	5.400	-0.205	-0.97
LP2KVD		5.950	0.001	0.00	5.600	-0.005	-0.02
LP2MFB		6.150	0.201	0.92	5.700	0.095	0.45
M3PDC6	*	5.300	-0.649	-2.97	5.050	-0.555	-2.63
MG8M5H		6.000	0.051	0.23	5.700	0.095	0.45
MHH1LJ		5.850	-0.099	-0.45	5.650	0.045	0.21
MLPQFU		6.025	0.076	0.35	5.680	0.075	0.35
MP3FCP		6.000	0.051	0.23	5.600	-0.005	-0.02
NTVLHK		5.700	-0.249	-1.14	5.360	-0.245	-1.16
NW29CV		6.031	0.082	0.37	5.676	0.070	0.33
P7FQH7		6.055	0.106	0.48	5.730	0.125	0.59
QWXGK6		6.120	0.171	0.78	5.775	0.170	0.80
QYVNMJ		5.745	-0.204	-0.93	5.440	-0.165	-0.78
RWY896		5.830	-0.119	-0.55	5.480	-0.125	-0.59
SRHK1N	X	5.800	-0.149	-0.68	5.800	0.195	0.92
TX8U24		5.980	0.031	0.14	5.630	0.025	0.12
UHLWBH	*	5.365	-0.584	-2.67	5.045	-0.560	-2.65
UNNRZP		6.100	0.151	0.69	5.765	0.160	0.76
UVLB5R		6.100	0.151	0.69	5.800	0.195	0.92
V6ZSA3		5.870	-0.079	-0.36	5.540	-0.065	-0.31
VQ3PCS		6.200	0.251	1.15	5.800	0.195	0.92
W977Y1		5.900	-0.049	-0.23	5.600	-0.005	-0.02

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 904

Titratable Acidity

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
WEVUDE		6.100	0.151	0.69	5.750	0.145	0.69
WFATRG		6.200	0.251	1.15	5.800	0.195	0.92
WJZE15		6.000	0.051	0.23	5.600	-0.005	-0.02
WY2761	X	5.400	-0.549	-2.51	5.400	-0.205	-0.97
X74KBP		5.685	-0.264	-1.21	5.385	-0.220	-1.04
X811L1		5.920	-0.029	-0.13	5.550	-0.055	-0.26
XA9JSU	*	6.038	0.088	0.40	5.870	0.265	1.25
XT89VX		5.950	0.001	0.00	5.750	0.145	0.69
ZTBEW4		6.175	0.226	1.03	5.860	0.255	1.21

Summary Statistics

	Sample SA55	Sample SA56
Grand Means	5.9493 g/L as tartaric acid	5.6051 g/L as tartaric acid
Stnd Dev Btwn Labs	0.2187 g/L as tartaric acid	0.2111 g/L as tartaric acid

Statistics based on 70 of 79 reporting participants

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

Comments on assigned Data Flags

15GSR9 (X) - Inconsistent in testing between samples.

581YWT (X) - Inconsistent in testing between samples.

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

F4RBML (X) - Data for both samples are high. Possible Systematic Error.

HC34NL (X) - Inconsistent in testing between samples.

KYR1YW (X) - Data for both samples are low. Also inconsistent in testing within Sample SA55.

LMT2NP (X) - Inconsistent in testing between samples.

SRHK1N (X) - Inconsistent in testing between samples.

WY2761 (X) - Inconsistent in testing between samples.

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 904

Titratable Acidity

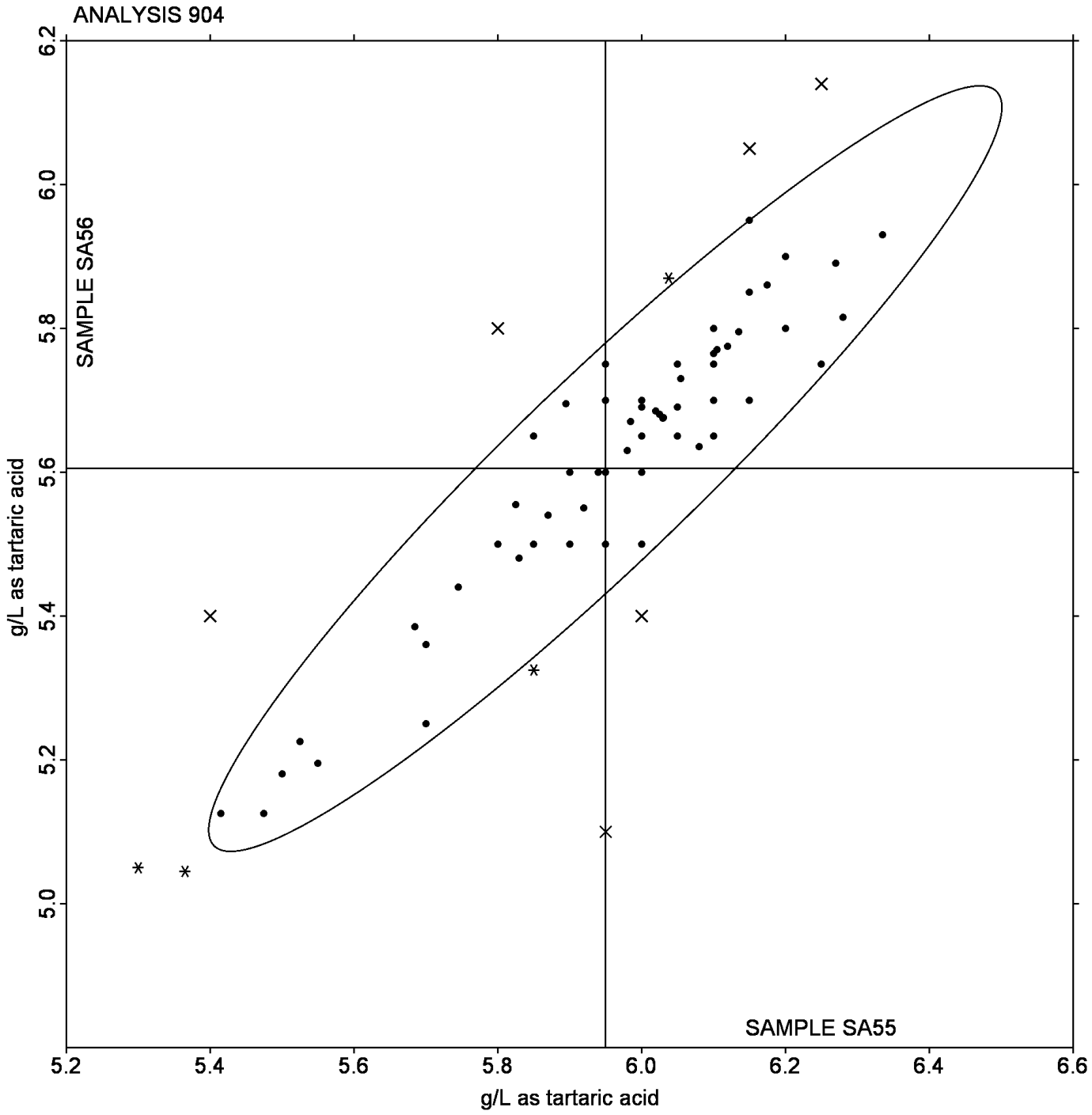
Results by Methodology (as reported by laboratory)

	Sample SA55 *Cabernet Sauvignon*			Sample SA56 *Merlot*				
Test Methodology	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	Labs Incl	/ Rpt
Autotitration	5.962	0.173	0.012	5.612	0.168	0.007	39	42
Manual Titration	6.007	0.207	0.058	5.661	0.198	0.055	20	28
FTIR	5.908	0.303	-0.041	5.580	0.285	-0.025	6	8
Segmented Flow Analyzer	5.800	0.000	-0.149	5.500	0.000	-0.105	1	1

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 904

Titratable Acidity



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 905

Volatile Acidity

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
17XFE3		0.5750	-0.0814	-1.28	0.4600	-0.0668	-1.20
1FYXKL	*	0.8250	0.1686	2.65	0.6525	0.1257	2.26
1XRQPL		0.7400	0.0836	1.31	0.6000	0.0732	1.32
2DQLL2		0.5800	-0.0764	-1.20	0.4450	-0.0818	-1.47
2K4JN4		0.8050	0.1486	2.34	0.6450	0.1182	2.13
2R794T		0.7400	0.0836	1.31	0.6000	0.0732	1.32
3VG3K5		0.6800	0.0236	0.37	0.5150	-0.0118	-0.21
4ACDRT		0.6150	-0.0414	-0.65	0.5000	-0.0268	-0.48
4KU2AE		0.6650	0.0086	0.14	0.5400	0.0132	0.24
56WAEH		0.6000	-0.0564	-0.89	0.4800	-0.0468	-0.84
5BPY7N		0.6150	-0.0414	-0.65	0.4850	-0.0418	-0.75
5YGTGV	*	0.6680	0.0116	0.18	0.5940	0.0672	1.21
61P27D		0.6550	-0.0014	-0.02	0.5300	0.0032	0.06
718KUQ	X	0.4400	-0.2164	-3.40	0.3900	-0.1368	-2.46
7DW7X6		0.6250	-0.0314	-0.49	0.5000	-0.0268	-0.48
7XJETT		0.5400	-0.1164	-1.83	0.3950	-0.1318	-2.37
8E8L8C		0.6650	0.0086	0.14	0.5200	-0.0068	-0.12
8FVBZ6		0.6500	-0.0064	-0.10	0.5300	0.0032	0.06
8LYU2Y		0.5500	-0.1064	-1.67	0.4050	-0.1218	-2.19
9KH6U4		0.6350	-0.0214	-0.34	0.5100	-0.0168	-0.30
9NWV6Z		0.7300	0.0736	1.16	0.6050	0.0782	1.41
A2WUTX		0.5240	-0.1324	-2.08	0.4115	-0.1153	-2.07
ADWXB4		0.6400	-0.0164	-0.26	0.5050	-0.0218	-0.39
AE9XMZ	X	0.3780	-0.2784	-4.38	0.2645	-0.2623	-4.72
AWX1EN		0.5540	-0.1024	-1.61	0.4640	-0.0628	-1.13
AYH5H1		0.6800	0.0236	0.37	0.5500	0.0232	0.42
CP2PPC		0.7900	0.1336	2.10	0.6500	0.1232	2.22
CY85D2		0.6100	-0.0464	-0.73	0.5050	-0.0218	-0.39
DBP1ZL	X	0.5900	-0.0664	-1.04	0.3850	-0.1418	-2.55
DDBJYY	X	0.7800	0.1236	1.94	0.0805	-0.4463	-8.03
DGLV4L	X	6.6000	5.9436	93.49	5.2500	4.7232	84.93
DULUSH		0.6300	-0.0264	-0.42	0.5050	-0.0218	-0.39
EB1KB9	*	0.6200	-0.0364	-0.57	0.5600	0.0332	0.60
FY3KN5		0.6600	0.0036	0.06	0.4950	-0.0318	-0.57
GDNPAY		0.6300	-0.0264	-0.42	0.4700	-0.0568	-1.02

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 905

Volatile Acidity

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
GNYY3B		0.6850	0.0286	0.45	0.5350	0.0082	0.15
J1UGEP		0.6000	-0.0564	-0.89	0.4950	-0.0318	-0.57
JM9JD6		0.6500	-0.0064	-0.10	0.5100	-0.0168	-0.30
K87CRE		0.6950	0.0386	0.61	0.5550	0.0282	0.51
KURP2W		0.6700	0.0136	0.21	0.4850	-0.0418	-0.75
L812BG		0.7450	0.0886	1.39	0.5550	0.0282	0.51
LM7BEB		0.6800	0.0236	0.37	0.5750	0.0482	0.87
MU6APQ		0.6450	-0.0114	-0.18	0.4850	-0.0418	-0.75
N5DG2B		0.7150	0.0586	0.92	0.5950	0.0682	1.23
NC6W93		0.6000	-0.0564	-0.89	0.4900	-0.0368	-0.66
NNR7SU		0.6000	-0.0564	-0.89	0.5250	-0.0018	-0.03
PF2PJ6		0.5700	-0.0864	-1.36	0.4900	-0.0368	-0.66
PZT8JB	X	0.8100	0.1536	2.42	0.7250	0.1982	3.56
RSJH4B		0.6400	-0.0164	-0.26	0.5100	-0.0168	-0.30
SH5WR7		0.6100	-0.0464	-0.73	0.5000	-0.0268	-0.48
SURRUU		0.6500	-0.0064	-0.10	0.5250	-0.0018	-0.03
T7CEC7		0.7350	0.0786	1.24	0.6050	0.0782	1.41
U4733K		0.6500	-0.0064	-0.10	0.5100	-0.0168	-0.30
U4M5P4		0.6200	-0.0364	-0.57	0.5400	0.0132	0.24
UAYQAH		0.7500	0.0936	1.47	0.6000	0.0732	1.32
UH64H6		0.7050	0.0486	0.76	0.5650	0.0382	0.69
ULKTT3		0.7350	0.0786	1.24	0.5900	0.0632	1.14
UPZPYE		0.5700	-0.0864	-1.36	0.4650	-0.0618	-1.11
UZYWM6		0.7200	0.0636	1.00	0.5700	0.0432	0.78
V3YQD1		0.7557	0.0993	1.56	0.6060	0.0792	1.42
VEDPEP		0.6950	0.0386	0.61	0.5400	0.0132	0.24
VHM2R3		0.7000	0.0436	0.69	0.5850	0.0582	1.05
VJRDQK		0.6000	-0.0564	-0.89	0.4650	-0.0618	-1.11
VY9GRT		0.6500	-0.0064	-0.10	0.5450	0.0182	0.33
WQ2NAD		0.6250	-0.0314	-0.49	0.5000	-0.0268	-0.48
WVU7GV		0.6600	0.0036	0.06	0.5250	-0.0018	-0.03
X9PZCW		0.6600	0.0036	0.06	0.5200	-0.0068	-0.12
XH1NCX		0.6250	-0.0314	-0.49	0.5150	-0.0118	-0.21
YE4PAQ	X	0.9300	0.2736	4.30	0.7500	0.2232	4.01
YJX79X		0.6550	-0.0014	-0.02	0.5000	-0.0268	-0.48

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 905

Volatile Acidity

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
YT4NYM	X	0.5350	-0.1214	-1.91	0.6400	0.1132	2.04
YZZK9D		0.6850	0.0286	0.45	0.5500	0.0232	0.42
Z84LZR		0.6200	-0.0364	-0.57	0.4900	-0.0368	-0.66

Summary Statistics

	Sample SA55	Sample SA56
Grand Means	0.65641 g/L as acetic acid	0.52682 g/L as acetic acid
Stnd Dev Btwn Labs	0.06358 g/L as acetic acid	0.05561 g/L as acetic acid

Statistics based on 65 of 73 reporting participants

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

Comments on assigned Data Flags

718KUQ (X) - Inconsistent in testing between samples, data for Sample SA55 are low.

AE9XMZ (X) - Data for both samples are low.

DBP1ZL (X) - Inconsistent in testing between samples.

DDBJYY (X) - Inconsistent in testing between samples, data for Sample SA56 are low.

DGLV4L (X) - Extreme data. Lab indicated reporting in g/100mL, but data appear to be in g/L.

PZT8JB (X) - Inconsistent in testing between samples, data for Sample SA56 are high.

YE4PAQ (X) - Data for both samples are high.

YT4NYM (X) - Inconsistent in testing between samples. Data may have been transposed.

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 905

Volatile Acidity

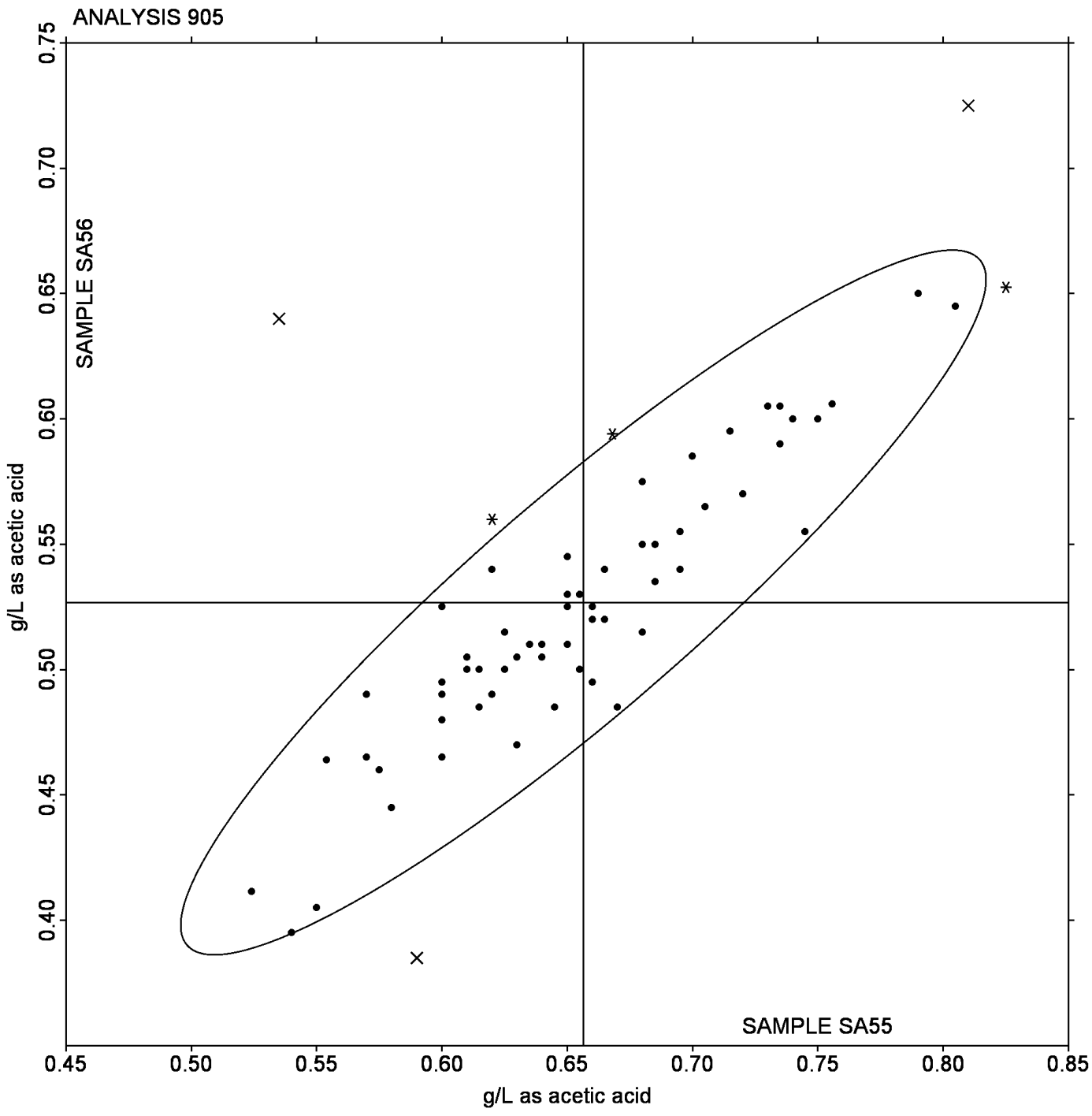
Results by Methodology (as reported by laboratory)

	Sample SA55 *Cabernet Sauvignon*			Sample SA56 *Merlot*				
Test Methodology	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	Labs Incl	/ Rpt
Cash Still method	0.6677	0.0710	0.0113	0.5342	0.0651	0.0074	28	36
Enzymatic method	0.6296	0.0285	-0.0268	0.4961	0.0218	-0.0307	14	17
HPLC	0.6000	0.0000	-0.0564	0.5250	0.0000	-0.0018	1	1
GC	0.6170	0.0891	-0.0394	0.5070	0.0608	-0.0198	2	2
Seg. Flow / Colorimetric Analyzer	0.6778	0.0428	0.0214	0.5389	0.0369	0.0121	9	9
FTIR	0.6388	0.0687	-0.0177	0.5181	0.0584	-0.0087	8	8

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 905

Volatile Acidity



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 906

Specific Gravity

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
125NMZ		0.9962	0.0001	0.13	0.9950	0.0001	0.11
1EN4UD		0.9963	0.0002	0.23	0.9951	0.0002	0.21
1XFMPS		0.9945	-0.0016	-1.59	0.9935	-0.0014	-1.47
2N7TZC		0.9964	0.0003	0.28	0.9952	0.0003	0.26
2SKQAF		0.9945	-0.0015	-1.56	0.9933	-0.0016	-1.59
2VYG7A		0.9968	0.0007	0.68	0.9956	0.0007	0.67
38MZK4		0.9963	0.0002	0.24	0.9952	0.0003	0.26
3FC5W7	*	0.9940	-0.0021	-2.09	0.9930	-0.0019	-1.93
3L6KLZ		0.9954	-0.0007	-0.68	0.9943	-0.0006	-0.61
4FY9C5	X	0.9961	0.0000	0.04	0.9953	0.0004	0.44
4WRXTV		0.9963	0.0002	0.23	0.9951	0.0002	0.21
56JB2L		0.9960	-0.0001	-0.09	0.9949	0.0000	-0.05
5MY26L		0.9964	0.0003	0.28	0.9950	0.0001	0.11
6AL5WF	X	-0.9000	-1.8961	-1,916.12	-1.2000	-2.1949	-2,234.00
6WN5YL		0.9948	-0.0013	-1.29	0.9935	-0.0014	-1.42
7QBJL7		0.9963	0.0003	0.27	0.9952	0.0003	0.26
8MP8YN	X	1.0003	0.0042	4.27	0.9992	0.0043	4.37
9XFNFQ		0.9963	0.0002	0.23	0.9950	0.0001	0.11
ABVT5P		0.9968	0.0007	0.74	0.9956	0.0007	0.72
BLU8HF	X	0.9950	-0.0011	-1.08	0.9930	-0.0019	-1.93
BNZG6J		0.9945	-0.0016	-1.59	0.9934	-0.0015	-1.52
CLJ422		0.9964	0.0003	0.33	0.9951	0.0002	0.21
CYGDVN		0.9964	0.0003	0.29	0.9952	0.0003	0.27
D9VV1Z		0.9964	0.0003	0.29	0.9951	0.0002	0.24
DCJ9ZV		0.9937	-0.0024	-2.40	0.9925	-0.0024	-2.44
DPPH8C		0.9945	-0.0016	-1.64	0.9933	-0.0016	-1.68
E3QF5A		0.9963	0.0002	0.23	0.9951	0.0002	0.21
EZ225E		0.9962	0.0001	0.08	0.9950	0.0001	0.05
FGJCJ1	*	0.9936	-0.0025	-2.55	0.9925	-0.0024	-2.49
FVULX4	*	0.9978	0.0017	1.74	0.9968	0.0019	1.93
FXJ25R	X	0.9962	0.0001	0.08	0.9942	-0.0007	-0.71
G4HXRW		0.9977	0.0016	1.64	0.9964	0.0015	1.57
H49BF8		0.9968	0.0007	0.73	0.9958	0.0009	0.91
J7W7WY		0.9963	0.0002	0.23	0.9951	0.0002	0.16
J8UE5H		0.9975	0.0014	1.39	0.9962	0.0013	1.33

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 906

Specific Gravity

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
KMMLLR	X	8.2906	7.2945	7,371.60	8.2806	7.2857	7,415.48
MKWZ5D		0.9963	0.0002	0.20	0.9951	0.0002	0.24
MUDNPZ		0.9963	0.0002	0.24	0.9951	0.0002	0.23
NGJDAY	*	0.9962	0.0001	0.15	0.9953	0.0004	0.41
PCP7YN		0.9946	-0.0015	-1.52	0.9934	-0.0015	-1.50
PKLS3P		0.9963	0.0002	0.21	0.9951	0.0002	0.22
PVGPRH	X	996.4000	995.4039	1,005,926.39	995.2000	994.2051	1,011,918.60
PWWJGW	X	0.9970	0.0009	0.94	0.9955	0.0006	0.56
Q6N17R		0.9954	-0.0007	-0.69	0.9941	-0.0008	-0.77
Q7RHPP	X	0.9965	0.0004	0.43	0.9949	0.0000	0.04
QCFLMY		0.9963	0.0002	0.24	0.9951	0.0002	0.24
QP58CL	X	0.9963	0.0002	0.24	0.9942	-0.0007	-0.67
QT9P9H		0.9948	-0.0013	-1.29	0.9935	-0.0014	-1.42
R181WJ		0.9963	0.0003	0.26	0.9952	0.0003	0.26
R63593		0.9963	0.0002	0.25	0.9951	0.0002	0.23
R7ANXE	X	996.3200	995.3239	1,005,845.55	995.1100	994.1151	1,011,827.00
RG1PC9	X	0.9950	-0.0011	-1.08	0.9945	-0.0004	-0.40
RH42LQ		0.9963	0.0003	0.27	0.9951	0.0002	0.25
RJ9BAT		0.9982	0.0021	2.14	0.9969	0.0020	2.08
SRTC65	X	0.9962	0.0001	0.08	0.9945	-0.0004	-0.45
T54Q49		0.9968	0.0007	0.74	0.9956	0.0007	0.72
T5E9DZ	X	0.9963	0.0003	0.26	0.9959	0.0010	1.06
T7S83L		0.9964	0.0004	0.37	0.9952	0.0003	0.33
TJT3NJ		0.9960	-0.0001	-0.07	0.9948	-0.0001	-0.15
UN8R6V		0.9962	0.0001	0.13	0.9950	0.0001	0.11
V7K87X		0.9972	0.0011	1.13	0.9961	0.0012	1.22
VCKD9H	X	0.9954	-0.0007	-0.73	0.9970	0.0021	2.14
VTL7SB		0.9967	0.0006	0.61	0.9955	0.0006	0.59
W55F62		0.9963	0.0002	0.23	0.9951	0.0002	0.21
X3AUV5	X	0.9960	-0.0001	-0.07	0.9960	0.0011	1.12
XP9V78	X	-0.9500	-1.9461	-1,966.64	-1.1500	-2.1449	-2,183.11
YBXFHK		0.9963	0.0002	0.23	0.9952	0.0003	0.26
Z78HA3		0.9963	0.0002	0.23	0.9952	0.0003	0.26
ZG715W	*	0.9962	0.0001	0.13	0.9953	0.0004	0.41
ZXZQMN		0.9971	0.0010	1.04	0.9959	0.0010	1.02

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 906

Specific Gravity

Summary Statistics

Grand Means		
	0.99607 sp gr 20/20 C	0.99490 sp gr 20/20 C
Stnd Dev Btwn Labs		
	0.00099 sp gr 20/20 C	0.00098 sp gr 20/20 C

Statistics based on 53 of 70 reporting participants

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

Comments on assigned Data Flags

4FY9C5 (X) - Inconsistent in testing between samples.

6AL5WF (X) - Extreme data.

8MP8YN (X) - Data for both samples are high.

BLU8HF (X) - Inconsistent in testing between samples.

FXJ25R (X) - Inconsistent in testing between samples.

KMMLLR (X) - Extreme data. Data appear to be off by a factor of 10.

PVGPRH (X) - Extreme data. Data appear to be off by a factor of 1000.

PWWJGW (X) - Inconsistent in testing between samples.

Q7RHPP (X) - Inconsistent in testing between samples.

QP58CL (X) - Inconsistent in testing between samples.

R7ANXE (X) - Extreme data. Data appear to be off by a factor of 1000.

RG1PC9 (X) - Inconsistent in testing between samples.

SRTC65 (X) - Inconsistent in testing between samples.

T5E9DZ (X) - Inconsistent in testing between samples.

VCKD9H (X) - Inconsistent in testing between samples.

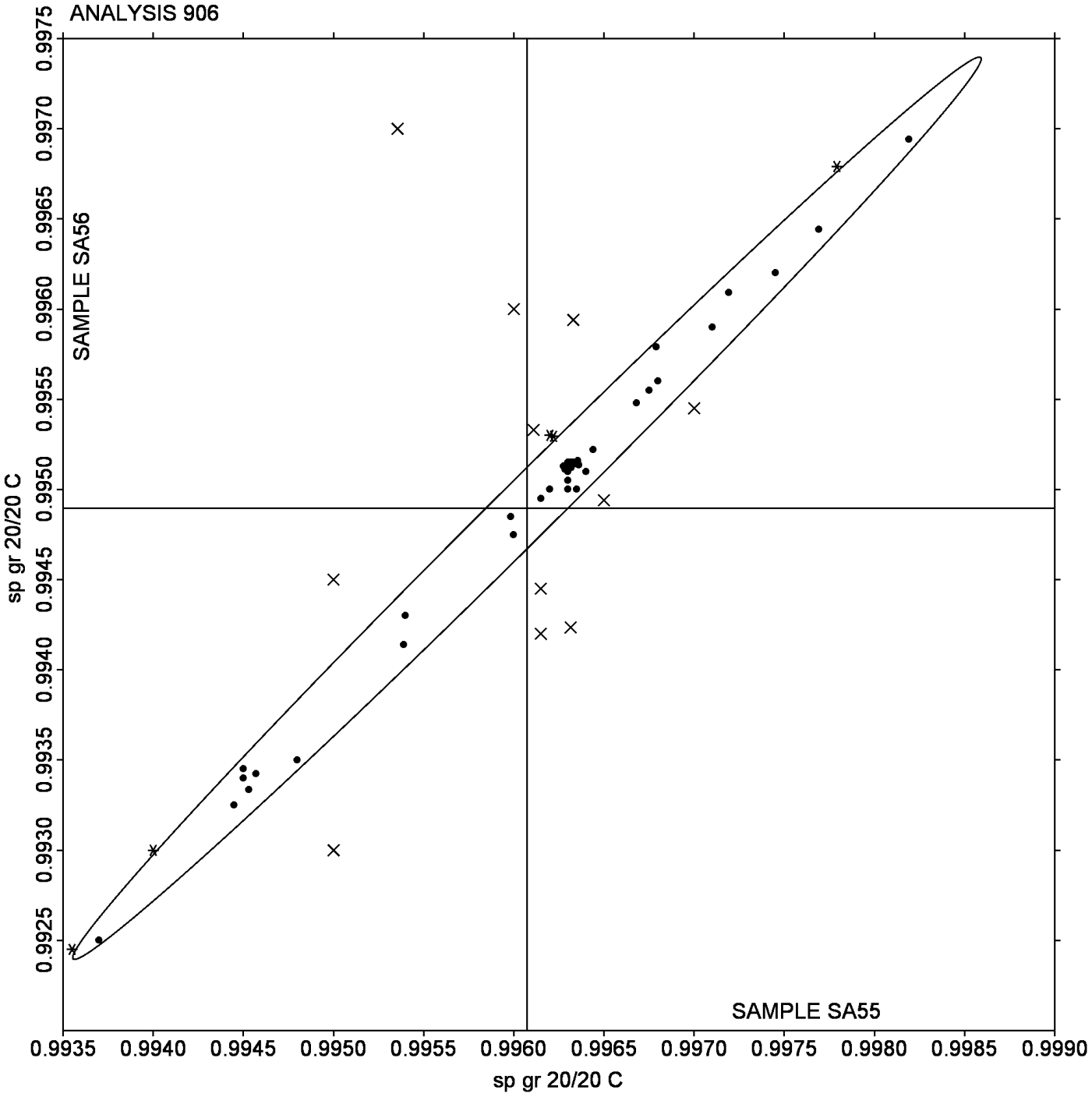
X3AUV5 (X) - Inconsistent in testing between samples.

XP9V78 (X) - Extreme data.

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 906

Specific Gravity



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 907

pH

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
1QFVX4		3.550	0.003	0.08	3.470	-0.005	-0.14
1RD1UR		3.535	-0.012	-0.38	3.470	-0.005	-0.14
1U8D33		3.570	0.023	0.70	3.500	0.025	0.77
25C28C		3.520	-0.027	-0.85	3.440	-0.035	-1.05
2JD1W9	X	3.590	0.043	1.32	3.455	-0.020	-0.59
2LTKBK	X	3.630	0.083	2.56	3.480	0.005	0.17
2RZ5BA		3.570	0.023	0.70	3.490	0.015	0.47
347A23	*	3.590	0.043	1.32	3.540	0.065	1.99
3DLXP3		3.520	-0.027	-0.85	3.440	-0.035	-1.05
3SXSJZ		3.550	0.003	0.08	3.470	-0.005	-0.14
3VBFUW		3.520	-0.027	-0.85	3.450	-0.025	-0.75
4885Z3		3.530	-0.017	-0.54	3.460	-0.015	-0.44
4NBGWF	*	3.637	0.089	2.76	3.560	0.085	2.58
5M76EP		3.565	0.018	0.55	3.500	0.025	0.77
6UCA8M		3.505	-0.042	-1.31	3.455	-0.020	-0.59
7H1B6S	X	3.440	-0.107	-3.32	3.350	-0.125	-3.78
7LEZGN		3.510	-0.037	-1.16	3.450	-0.025	-0.75
8U7FWK		3.585	0.038	1.16	3.490	0.015	0.47
9GT9AY		3.500	-0.047	-1.46	3.415	-0.060	-1.81
A1CRKH		3.535	-0.012	-0.38	3.470	-0.005	-0.14
A4GY51		3.530	-0.017	-0.54	3.455	-0.020	-0.59
A61X2H		3.565	0.018	0.55	3.490	0.015	0.47
A8VG9P		3.530	-0.017	-0.54	3.455	-0.020	-0.59
BCJ6WE		3.540	-0.007	-0.23	3.460	-0.015	-0.44
C886S2		3.500	-0.047	-1.46	3.415	-0.060	-1.81
CS5392		3.550	0.003	0.08	3.480	0.005	0.17
CVJSKY		3.530	-0.017	-0.54	3.465	-0.010	-0.29
D6XFMA		3.545	-0.002	-0.07	3.490	0.015	0.47
DP3WQV		3.590	0.043	1.32	3.510	0.035	1.08
DY4V63	X	3.520	-0.027	-0.85	3.355	-0.120	-3.63
E1QXD9		3.550	0.003	0.08	3.490	0.015	0.47
EEPX7Y	X	3.665	0.118	3.64	3.625	0.150	4.57
EWPL4A		3.545	-0.002	-0.07	3.490	0.015	0.47
EZGS71		3.570	0.023	0.70	3.510	0.035	1.08
FA4LEM		3.610	0.063	1.94	3.540	0.065	1.99

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 907

pH

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
FPHHCP		3.580	0.033	1.01	3.485	0.010	0.32
G1T4L9		3.605	0.058	1.78	3.515	0.040	1.23
GQZJHQ	*	3.540	-0.007	-0.23	3.435	-0.040	-1.20
HACYXU	X	3.405	-0.142	-4.40	3.355	-0.120	-3.63
J2XM8A		3.535	-0.012	-0.38	3.455	-0.020	-0.59
J4MDAL		3.555	0.008	0.24	3.470	-0.005	-0.14
JDD4KF		3.550	0.003	0.08	3.480	0.005	0.17
K1ADJD		3.540	-0.007	-0.23	3.460	-0.015	-0.44
KWWP8H		3.545	-0.002	-0.07	3.475	0.000	0.01
LP3XHT		3.560	0.013	0.39	3.480	0.005	0.17
M32ZWF		3.530	-0.017	-0.54	3.450	-0.025	-0.75
M5HJBQ		3.530	-0.017	-0.54	3.460	-0.015	-0.44
NH89Q7	X	3.525	-0.022	-0.69	3.505	0.030	0.93
Q3VXSK		3.530	-0.017	-0.54	3.445	-0.030	-0.90
Q44NKN		3.570	0.023	0.70	3.510	0.035	1.08
QKFHFR		3.500	-0.047	-1.46	3.435	-0.040	-1.20
QQ3PWR		3.565	0.018	0.55	3.495	0.020	0.62
QSZ14Q		3.530	-0.017	-0.54	3.450	-0.025	-0.75
RC1DG9		3.565	0.018	0.55	3.485	0.010	0.32
RGE3S6		3.565	0.018	0.55	3.500	0.025	0.77
RKUUP1		3.520	-0.027	-0.85	3.445	-0.030	-0.90
SAY9PS		3.520	-0.027	-0.85	3.470	-0.005	-0.14
T221C1		3.550	0.003	0.08	3.485	0.010	0.32
T3H96H	*	3.645	0.098	3.02	3.570	0.095	2.90
TLM8KH		3.550	0.003	0.08	3.480	0.005	0.17
U5QSYB		3.560	0.013	0.39	3.490	0.015	0.47
UEFW6W		3.515	-0.032	-1.00	3.445	-0.030	-0.90
UWTNJ8	*	3.460	-0.087	-2.70	3.380	-0.095	-2.87
V7GP6N		3.530	-0.017	-0.54	3.460	-0.015	-0.44
WDHJGV	*	3.545	-0.002	-0.07	3.505	0.030	0.93
WW8953		3.530	-0.017	-0.54	3.460	-0.015	-0.44
XTGE27	X	3.610	0.063	1.94	3.490	0.015	0.47
XUY6YN		3.505	-0.042	-1.31	3.430	-0.045	-1.35
Y6YFMH		3.535	-0.012	-0.38	3.465	-0.010	-0.29
YSYE7W		3.600	0.053	1.63	3.510	0.035	1.08

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 907

pH

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
ZC8Q7B		3.560	0.013	0.39	3.490	0.015	0.47
ZGMEJ8		3.555	0.008	0.24	3.475	0.000	0.01
ZKBQRD	X	3.490	-0.057	-1.77	3.555	0.080	2.44
ZKYEAE	X	3.460	-0.087	-2.70	0.280	-3.195	-97.07
ZMTSJS		3.585	0.038	1.16	3.505	0.030	0.93
ZY5BRZ		3.520	-0.027	-0.85	3.450	-0.025	-0.75

Summary Statistics

	SA55	SA56
Grand Means	3.5474 pH	3.4745 pH
Stnd Dev Btwn Labs	0.0323 pH	0.0329 pH

Statistics based on 66 of 76 reporting participants

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

Comments on assigned Data Flags

2JD1W9 (X) - Inconsistent in testing between samples.

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

7H1B6S (X) - Data for both samples are low. Possible Systematic Error.

DY4V63 (X) - Inconsistent in testing between samples, data for Sample SA56 are low.

EEPX7Y (X) - Data for both samples are high.

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

NH89Q7 (X) - Inconsistent in testing between samples.

XTGE27 (X) - Inconsistent in testing between samples.

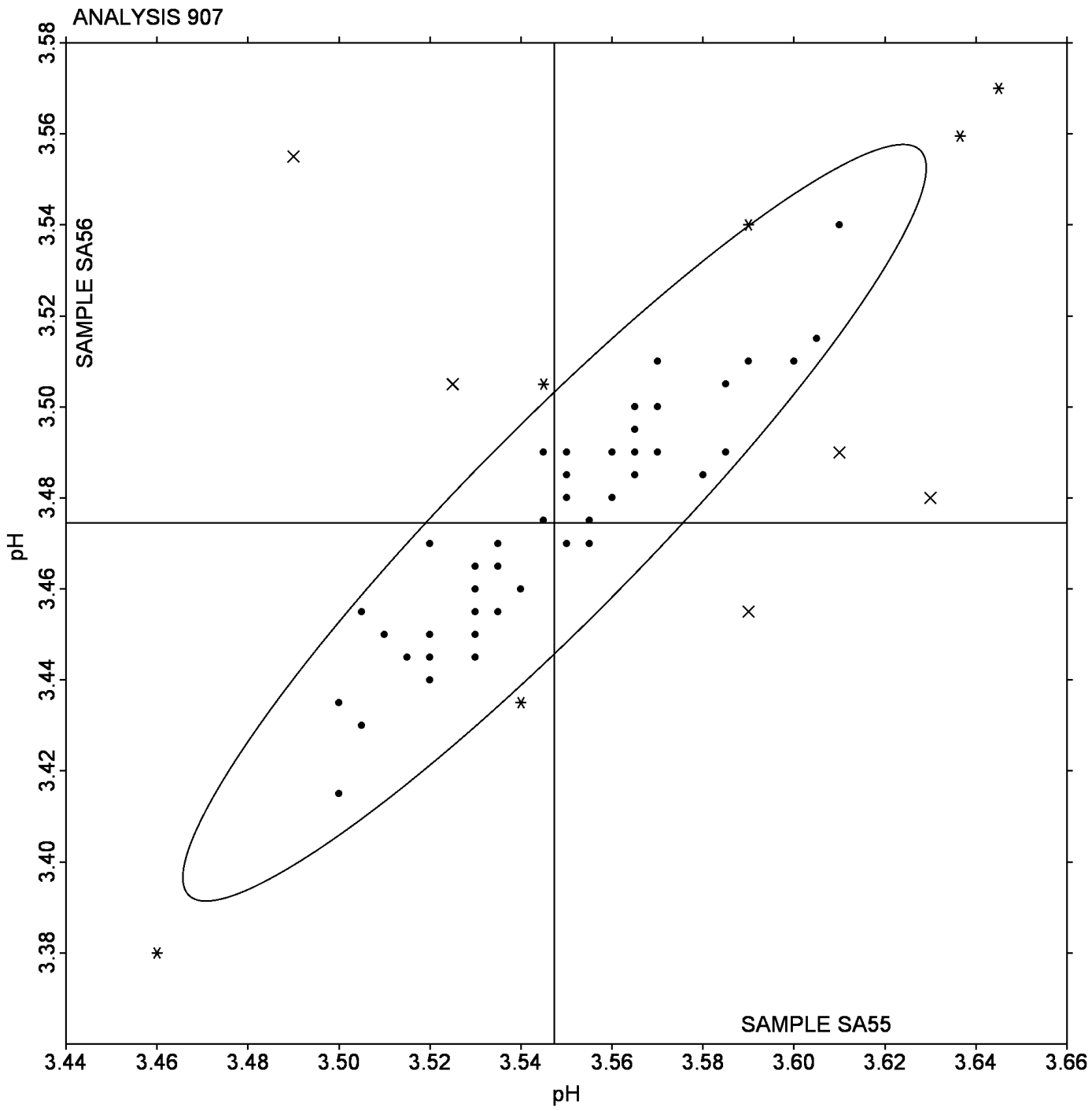
ZKBQRD (X) - Inconsistent in testing between samples.

ZKYEAE (X) - Inconsistent in testing between samples, extreme data for Sample SA56.

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 907

pH



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 908

Residual Sugar

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
1MQ656		5.050	-0.684	-0.71	3.810	-1.088	-1.16
2SMLSR	X	10.000	4.266	4.45	7.500	2.602	2.78
3P4NC1		5.450	-0.284	-0.30	4.300	-0.598	-0.64
5TF5SN		4.850	-0.884	-0.92	4.450	-0.448	-0.48
6CY54P		7.100	1.366	1.43	6.200	1.302	1.39
71Z9K7		5.350	-0.384	-0.40	4.350	-0.548	-0.59
7LUBV7		4.950	-0.784	-0.82	4.750	-0.148	-0.16
9R7DYW		5.450	-0.284	-0.30	4.150	-0.748	-0.80
BE8X8Y		6.325	0.591	0.62	6.050	1.152	1.23
DJKEML		6.085	0.351	0.37	4.345	-0.553	-0.59
DXQJFK		4.000	-1.734	-1.81	4.000	-0.898	-0.96
DZTVME		4.100	-1.634	-1.71	3.640	-1.258	-1.35
EPXMT9		5.510	-0.224	-0.23	4.330	-0.568	-0.61
F35D12		5.900	0.166	0.17	4.950	0.052	0.06
F8Z9YT		6.090	0.356	0.37	5.125	0.227	0.24
FKVYVZ		7.700	1.966	2.05	6.500	1.602	1.71
J4GJG8		6.125	0.391	0.41	5.015	0.117	0.13
KCEBW7		5.895	0.161	0.17	4.860	-0.038	-0.04
KXNL65		4.950	-0.784	-0.82	3.450	-1.448	-1.55
KZV8UN		4.900	-0.834	-0.87	4.100	-0.798	-0.85
MNVPJU		6.850	1.116	1.16	6.050	1.152	1.23
MZDJBL		5.700	-0.034	-0.04	5.300	0.402	0.43
NA7FHS		7.785	2.051	2.14	7.090	2.192	2.34
NQ2ZU9		6.250	0.516	0.54	5.200	0.302	0.32
P47BLU	*	4.855	-0.879	-0.92	5.520	0.622	0.67
SXMNZM		5.600	-0.134	-0.14	4.550	-0.348	-0.37
TK7XEX		5.150	-0.584	-0.61	4.150	-0.748	-0.80
UEXKCC		6.860	1.126	1.17	6.010	1.112	1.19
X9NL6A	X	15.450	9.716	10.14	19.400	14.502	15.51

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 908

Residual Sugar

Summary Statistics

	Sample SA55	Sample SA56
Grand Means	5.7344 g/L	4.8980 g/L
Stnd Dev Btwn Labs	0.9581 g/L	0.9348 g/L

Statistics based on 27 of 29 reporting participants

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

Comments on assigned Data Flags

2SMLSR (X) - Data for both samples are high. Also inconsistent in testing within Sample SA56.

X9NL6A (X) - Data for both samples are high.

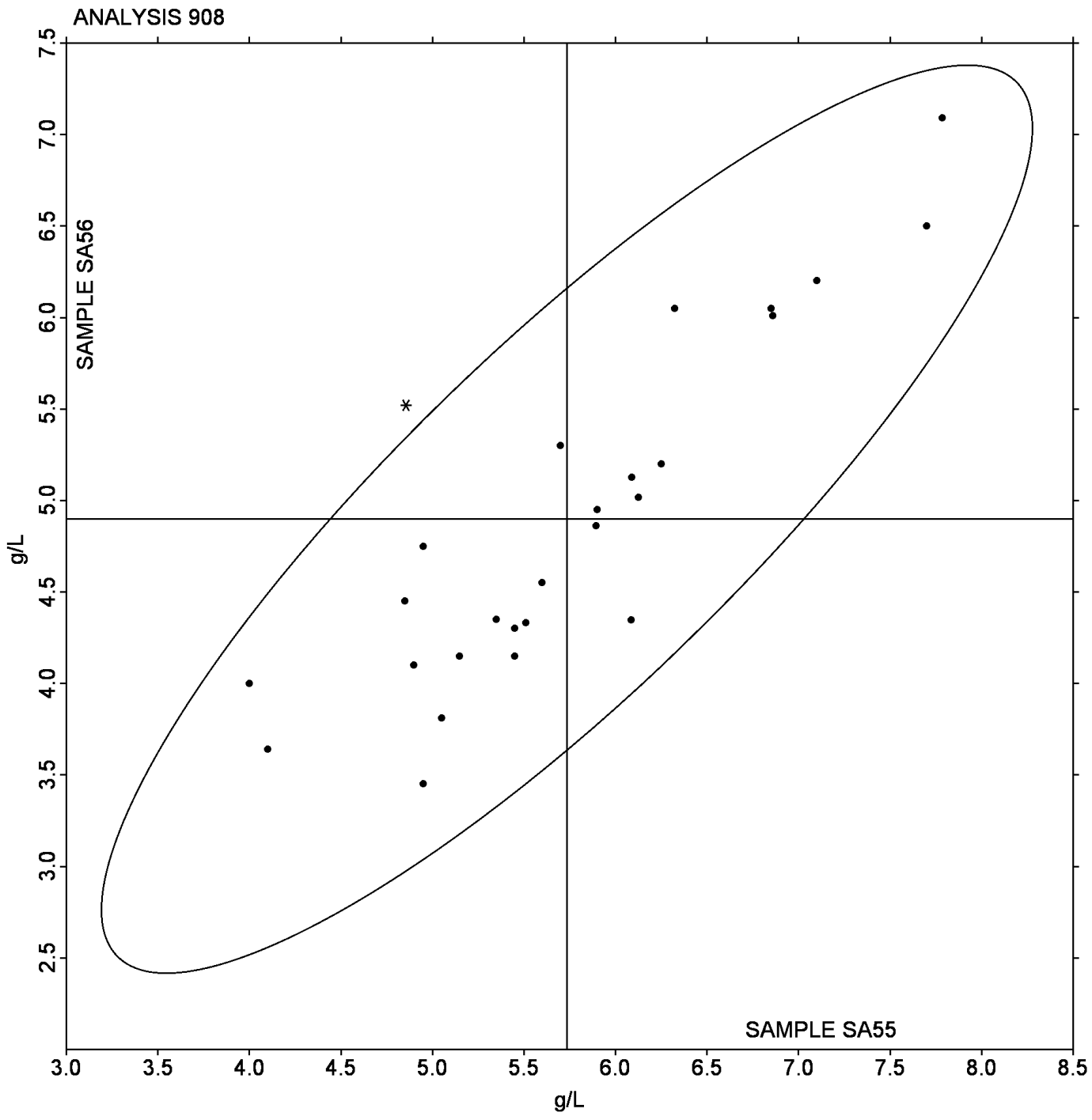
Results by Methodology (as reported by laboratory)

	Sample SA55 *Cabernet Sauvignon*			Sample SA56 *Merlot*				
Test Methodology	**Group Mean**	**Btwn Lab STD**	**Diff from GM**	**Group Mean**	**Btwn Lab STD**	**Diff from GM**	**Labs Incl**	**/ Rpt**
Cu Reduction Method	5.954	0.963	0.219	5.116	0.912	0.218	18	21
Segmented Flow	5.950	1.021	0.216	4.967	1.087	0.069	3	3
FTIR	5.240	0.281	-0.494	3.935	0.389	-0.963	4	4
Other _____	4.000	0.000	-1.734	4.000	0.000	-0.898	1	1

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 908

Residual Sugar



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 909

L-Malic Acid

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
142GQW	X	0.2485	0.1507	3.69	0.2585	0.1594	3.92
1YBJ6U		0.1250	0.0272	0.67	0.1500	0.0509	1.25
436RPC		0.0950	-0.0028	-0.07	0.1000	0.0009	0.02
44TGF6		0.0495	-0.0483	-1.18	0.0635	-0.0356	-0.88
4LS753		0.0990	0.0012	0.03	0.0925	-0.0066	-0.16
4UP34R	X	0.1000	0.0022	0.05	0.2500	0.1509	3.71
5B3R3K	X	0.0650	-0.0328	-0.80	0.1750	0.0759	1.87
5Q2TG7		0.0425	-0.0553	-1.35	0.0420	-0.0571	-1.41
648321	X	0.5300	0.4322	10.57	0.3850	0.2859	7.03
6MFAX1		0.0780	-0.0198	-0.48	0.0840	-0.0151	-0.37
7A7VY1		0.1200	0.0222	0.54	0.1300	0.0309	0.76
7KK97N	X	10.0000	9.9022	242.17	20.0000	19.9009	489.67
8YK8UK		0.0620	-0.0358	-0.87	0.0635	-0.0356	-0.88
93UTFB		0.0800	-0.0178	-0.43	0.0700	-0.0291	-0.72
9GTUVY		0.1230	0.0252	0.62	0.1270	0.0279	0.69
9L7J6U		0.0535	-0.0443	-1.08	0.0485	-0.0506	-1.25
9REUEP		0.0900	-0.0078	-0.19	0.0900	-0.0091	-0.22
A99GAZ		0.1400	0.0422	1.03	0.1400	0.0409	1.01
ANTXJQ		0.0700	-0.0278	-0.68	0.0800	-0.0191	-0.47
BB8LCY	X	0.1200	0.0222	0.54	0.2210	0.1219	3.00
BPP92G		0.0400	-0.0578	-1.41	0.0450	-0.0541	-1.33
CJ5VD9		0.0880	-0.0098	-0.24	0.0930	-0.0061	-0.15
DBN7ZT	X	0.3950	0.2972	7.27	0.5350	0.4359	10.72
EAB3BM		0.1000	0.0022	0.05	0.1000	0.0009	0.02
EHEA13		0.0080	-0.0898	-2.20	0.0027	-0.0964	-2.37
EQYKWX	*	0.2100	0.1122	2.74	0.2188	0.1196	2.94
G91EED		0.1535	0.0557	1.36	0.1535	0.0544	1.34
GX1AW6	X	0.1500	0.0522	1.28	0.1000	0.0009	0.02
HQPUD4		0.1350	0.0372	0.91	0.1200	0.0209	0.51
JJ66SL		0.1050	0.0072	0.18	0.1050	0.0059	0.14
K9F118	X	0.0800	-0.0178	-0.43	0.1950	0.0959	2.36
L5J1S9	X	1.2300	1.1322	27.69	0.3050	0.2059	5.07
MSYJRN		0.1350	0.0372	0.91	0.1250	0.0259	0.64
MZHYM2		0.0670	-0.0308	-0.75	0.0605	-0.0386	-0.95
N64UD3	X	0.1450	0.0472	1.16	0.0760	-0.0231	-0.57

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 909

L-Malic Acid

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
NAHK9X	*	0.0800	-0.0178	-0.43	0.0500	-0.0491	-1.21
NQ54N6		0.1650	0.0672	1.64	0.1600	0.0609	1.50
NT4VQ6		0.1000	0.0022	0.05	0.1100	0.0109	0.27
PPJVYB		0.0700	-0.0278	-0.68	0.0750	-0.0241	-0.59
TS3EVP		0.0600	-0.0378	-0.92	0.0750	-0.0241	-0.59
U1JR4E		0.1800	0.0822	2.01	0.1650	0.0659	1.62
U3W6P7		0.0750	-0.0228	-0.56	0.0750	-0.0241	-0.59
U4AKLG		0.0650	-0.0328	-0.80	0.0700	-0.0291	-0.72
U4WMEH		0.0920	-0.0058	-0.14	0.1000	0.0009	0.02
U8ADBC		0.0850	-0.0128	-0.31	0.0950	-0.0041	-0.10
UNYQQD	X	0.2500	0.1522	3.72	0.1595	0.0604	1.49
VF32RE		0.1340	0.0362	0.89	0.1200	0.0209	0.51
VFYQSX		0.1700	0.0722	1.77	0.1600	0.0609	1.50
VLACZ9		0.1050	0.0072	0.18	0.1000	0.0009	0.02
VWAKN1		0.0750	-0.0228	-0.56	0.0800	-0.0191	-0.47
VYQB1W		0.0645	-0.0333	-0.81	0.0645	-0.0346	-0.85
WNDBB8	*	0.0948	-0.0030	-0.07	0.1297	0.0305	0.75
X61NDR	X	0.3100	0.2122	5.19	0.2700	0.1709	4.20
Y3PVHK		0.0925	-0.0053	-0.13	0.1015	0.0024	0.06
YG9VAR		0.1000	0.0022	0.05	0.1000	0.0009	0.02
YUU1AD		0.1500	0.0522	1.28	0.1500	0.0509	1.25
Z6F9ZL		0.0747	-0.0231	-0.57	0.0765	-0.0226	-0.56

Summary Statistics

	Sample SA55		Sample SA56	
Grand Means	0.09776	g/L	0.09913	g/L
Stnd Dev Btwn Labs	0.04089	g/L	0.04064	g/L

Statistics based on 44 of 57 reporting participants

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 909

L-Malic Acid

Comments on assigned Data Flags

142GQW (X) - Data for both samples are high.

4UP34R (X) - Data for both samples are high.

5B3R3K (X) - Inconsistent in testing between samples.

648321 (X) - Data for both samples are high.

7KK97N (X) - Data for both samples are high.

BB8LCY (X) - Inconsistent in testing between samples, data for Sample SA56 are high.

DBN7ZT (X) - Data for both samples are high.

GX1AW6 (X) - Inconsistent in testing between samples.

K9F118 (X) - Inconsistent in testing between samples.

L5J1S9 (X) - Inconsistent in testing between samples.

N64UD3 (X) - Inconsistent in testing between samples.

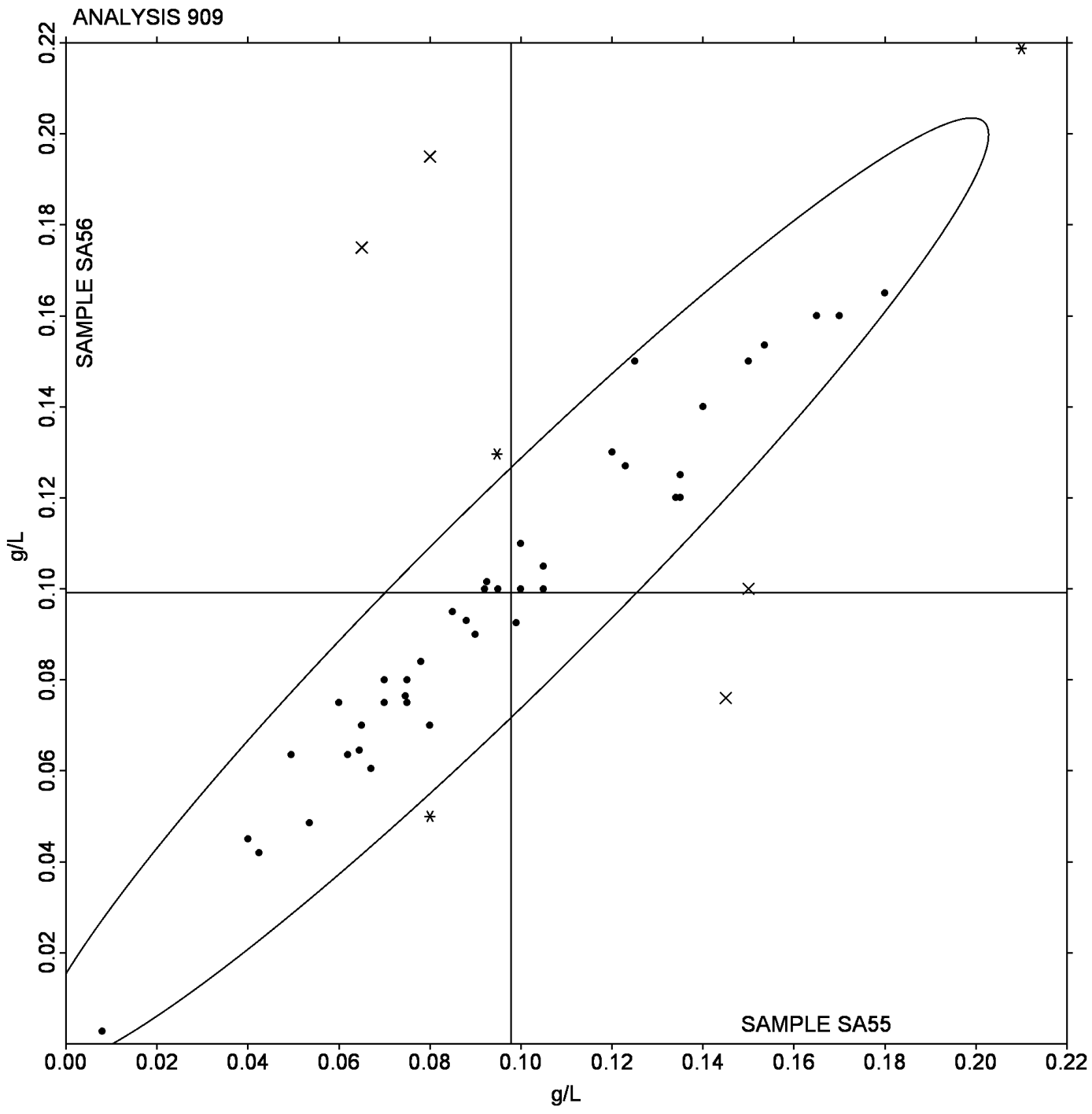
UNYQQD (X) - Inconsistent in testing between samples, data for Sample SA55 are high.

X61NDR (X) - Inconsistent in testing between samples, data for Sample SA56 are high. Also inconsistent in testing within Sample Set SA56.

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 909

L-Malic Acid



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 910

Glucose + Fructose

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
13TAM3		3.715	-0.156	-0.45	2.655	-0.266	-0.79
1D97B7	*	3.100	-0.771	-2.24	1.950	-0.971	-2.88
2PMR88		4.125	0.254	0.74	3.215	0.294	0.87
34GDGM		4.450	0.579	1.68	3.400	0.479	1.42
4TDADJ		3.650	-0.221	-0.64	2.950	0.029	0.09
4WC5ZK		3.525	-0.346	-1.00	2.550	-0.371	-1.10
59PMRF		4.200	0.329	0.96	3.500	0.579	1.71
87K42G		3.840	-0.031	-0.09	2.845	-0.076	-0.23
8JBA3M		3.850	-0.021	-0.06	2.950	0.029	0.09
9YTZ16		3.815	-0.056	-0.16	2.830	-0.091	-0.27
BH3J9U		4.100	0.229	0.67	3.100	0.179	0.53
BP14DW		3.410	-0.461	-1.34	2.430	-0.491	-1.46
CA3CHY	X	4.550	0.679	1.97	3.000	0.079	0.23
CB6UZV		4.300	0.429	1.25	3.300	0.379	1.12
CEF8T2		4.000	0.129	0.38	3.050	0.129	0.38
CHVXY6		4.050	0.179	0.52	2.950	0.029	0.09
DMJDWX		3.700	-0.171	-0.50	2.750	-0.171	-0.51
DUJKNT		4.000	0.129	0.38	3.100	0.179	0.53
E3VQ32		3.900	0.029	0.09	2.900	-0.021	-0.06
E8244L		3.900	0.029	0.09	2.800	-0.121	-0.36
F9ULP7		3.790	-0.081	-0.23	2.745	-0.176	-0.52
FZ24RC		3.910	0.039	0.11	2.935	0.014	0.04
GQCPNU		3.765	-0.106	-0.31	3.015	0.094	0.28
GZLYWS	X	4.300	0.429	1.25	4.105	1.184	3.51
HD634U		3.450	-0.421	-1.22	2.450	-0.471	-1.40
J9KSG9		3.370	-0.501	-1.45	2.545	-0.376	-1.11
JES3Q3		3.695	-0.176	-0.51	2.780	-0.141	-0.42
JQ3AXH		3.850	-0.021	-0.06	2.950	0.029	0.09
MVBTJM		3.650	-0.221	-0.64	2.700	-0.221	-0.66
N2E1XU		3.745	-0.126	-0.36	2.960	0.039	0.11
NLMCG4	X	1.950	-1.921	-5.58	1.465	-1.456	-4.31
PTM5AK		3.945	0.074	0.22	3.055	0.134	0.40
PWZ1MN		3.275	-0.596	-1.73	2.440	-0.481	-1.43
PZDSHG		3.850	-0.021	-0.06	2.900	-0.021	-0.06
QPQEL5	*	4.830	0.959	2.79	3.665	0.744	2.20

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 910

Glucose + Fructose

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Grand Mean	Sample SA55 CPV	Sample SA56 Lab Mean	Sample SA56 Diff from Grand Mean	Sample SA56 CPV
R16943		3.595	-0.276	-0.80	2.910	-0.011	-0.03
R46WPD		4.630	0.759	2.21	3.760	0.839	2.48
R84U85		3.750	-0.121	-0.35	2.700	-0.221	-0.66
RHR2P1		3.629	-0.242	-0.70	2.856	-0.066	-0.19
RKDLNC		4.470	0.599	1.74	3.416	0.494	1.46
RQLWW7		3.950	0.079	0.23	2.950	0.029	0.09
SRDDHT		4.200	0.329	0.96	3.200	0.279	0.83
SV515F	X	4.915	1.044	3.03	2.995	0.074	0.22
U3UEWR		4.141	0.271	0.79	3.022	0.101	0.30
UC8U4Y		4.200	0.329	0.96	3.310	0.389	1.15
UCXW58		3.700	-0.171	-0.50	2.800	-0.121	-0.36
VVYWC1	X	5.050	1.179	3.43	3.350	0.429	1.27
W2SH91		4.000	0.129	0.38	3.100	0.179	0.53
X27MBC		3.500	-0.371	-1.08	2.550	-0.371	-1.10
XD8JPZ		3.230	-0.641	-1.86	2.500	-0.421	-1.25
XGA4FV		4.250	0.379	1.10	3.200	0.279	0.83
XJUWNE		3.590	-0.281	-0.81	2.795	-0.126	-0.37
XMLJ83		4.000	0.129	0.38	2.900	-0.021	-0.06
Y4FN2P	*	3.600	-0.271	-0.79	2.300	-0.621	-1.84
YCK69D		4.000	0.129	0.38	3.300	0.379	1.12
YCVLC8		4.300	0.429	1.25	3.200	0.279	0.83
Z1JRG9		3.850	-0.021	-0.06	2.895	-0.026	-0.08
ZJR3ZJ		3.800	-0.071	-0.20	2.800	-0.121	-0.36

Summary Statistics

	SA55	SA56
Grand Means	3.8706 g/L	2.9213 g/L
Stnd Dev Btwn Labs	0.3443 g/L	0.3376 g/L

Statistics based on 53 of 58 reporting participants

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 910

Glucose + Fructose

Comments on assigned Data Flags

CA3CHY (X) - Inconsistent in testing between samples.

GZLYWS (X) - Inconsistent in testing between samples, data for Sample SA56 are high.

NLMCG4 (X) - Data for both samples are low.

SV515F (X) - Inconsistent in testing between samples, data for Sample SA55 are high.

VVYWC1 (X) - Inconsistent in testing between samples, data for Sample SA55 are high.

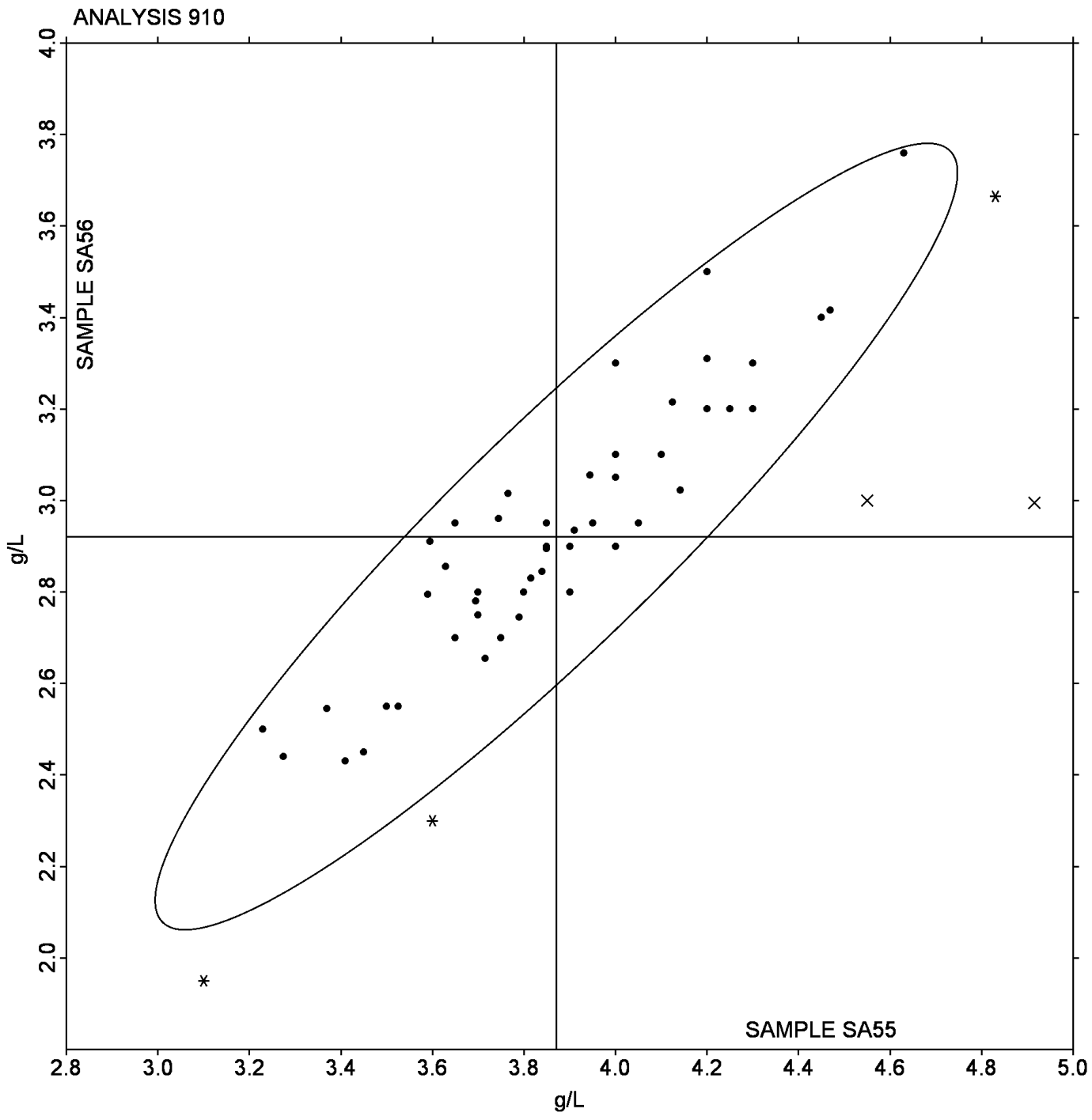
Results by Methodology (as reported by laboratory)

	Sample SA55 *Cabernet Sauvignon*			Sample SA56 *Merlot*				
Test Methodology	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	Labs Incl / Rpt	
Enzymatic/Spectrophotometric	3.879	0.308	0.008	2.946	0.286	0.025	47	49
FTIR	3.767	0.284	-0.104	2.817	0.333	-0.105	3	6

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 910

Glucose + Fructose



ASEV-CTS Wine Industry Interlaboratory Testing Program

Research Property 950

Research Property - Copper (Cu) Content

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Target Value	Sample SA55 % Diff from Target Value	Sample SA56 Lab Mean	Sample SA56 Diff from Target Value	Sample SA56 % Diff from Target Value
4SJUC1		0.1010	0.0200	24.7%	0.0850	0.0100	13.3%
6WHELQ		0.1000	0.0190	23.5%	0.1000	0.0250	33.3%
75YEMR		0.0730	-0.0080	-9.9%	0.0810	0.0060	8.0%
A6759H		0.2000	0.1190	146.9%	0.1900	0.1150	153.3%
BHEAZB		0.0550	-0.0260	-32.1%	0.0700	-0.0050	-6.7%
BSJW5Y		0.1500	0.0690	85.2%	0.1000	0.0250	33.3%
CTVFLT		0.0650	-0.0160	-19.8%	0.0500	-0.0250	-33.3%
D8EL3S		0.0300	-0.0510	-63.0%	0.0100	-0.0650	-86.7%
EYQ619		0.0890	0.0080	9.9%	0.0770	0.0020	2.7%
F6U9T7		0.1000	0.0190	23.5%	0.0800	0.0050	6.7%
JKL8C6		0.0630	-0.0180	-22.2%	0.0570	-0.0180	-24.0%
L8DNVR		0.0950	0.0140	17.3%	0.0850	0.0100	13.3%
LD83EC		0.0700	-0.0110	-13.6%	0.0600	-0.0150	-20.0%
M1DNXA		0.0500	-0.0310	-38.3%	No data reported for this sample		%
NAMVSN		0.0850	0.0040	4.9%	0.0765	0.0015	2.0%
NK4JB8		0.0800	-0.0010	-1.2%	0.0700	-0.0050	-6.7%
Q3S42Y		0.0800	-0.0010	-1.2%	0.0750	0.0000	0.0%
QMECXL		0.1350	0.0540	66.7%	0.1550	0.0800	106.7%
S8VW4T		0.0093	-0.0718	-88.6%	0.0595	-0.0155	-20.7%
T5HALX		0.0790	-0.0020	-2.5%	0.0800	0.0050	6.7%

Research Property Target Value

	Sample SA55		Sample SA56	
Target Value	**0.08100**	mg/L	**0.07500**	mg/L

CTS has chosen to designate a target value for this property instead of using an average value. The target value was calculated from the average of designated laboratories accredited for this property under ISO 17025, with the difference between those laboratories being less than 10% of the target value.

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

	Sample SA55		Sample SA56	
Consensus Average (may differ from target value)	0.08733	mg/L	0.08216	mg/L

This consensus average is based on 19 reporting participants.

ASEV-CTS Wine Industry Interlaboratory Testing Program

Research Property 950

Research Property - Copper (Cu) Content

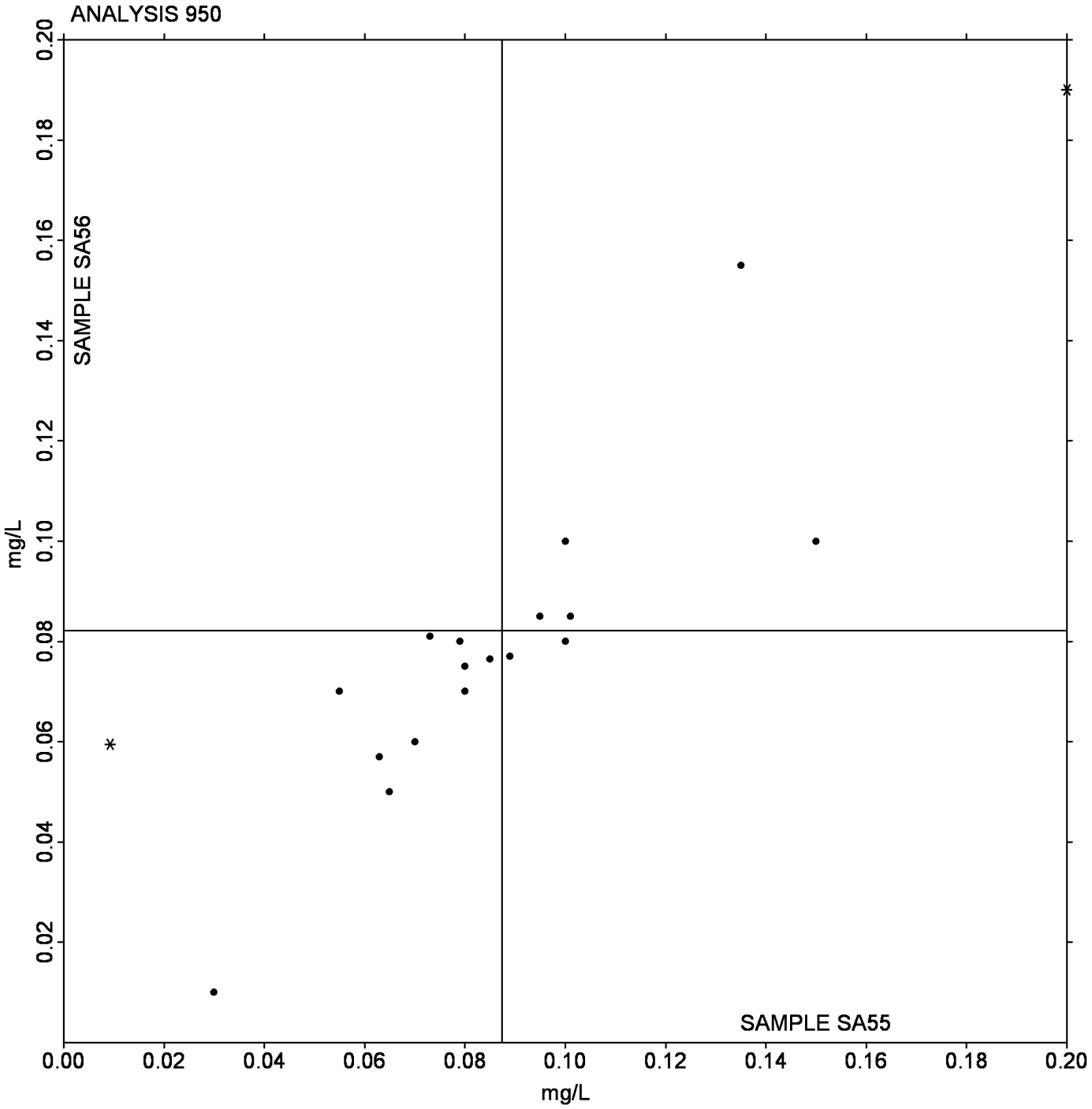
Comments on assigned Data Flags

M1DNXA (M) - Laboratory did not submit data for Sample SA56.

ASEV-CTS Wine Industry Interlaboratory Testing Program

Research Property 950

Research Property - Copper (Cu) Content



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

ASEV-CTS Wine Industry Interlaboratory Testing Program

Research Property 951

Research Property: A520nm (1cm path)

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Target Value	Sample SA55 % Diff from Target Value	Sample SA56 Lab Mean	Sample SA56 Diff from Target Value	Sample SA56 % Diff from Target Value
16S57K		1.670	-1.519	-47.6%	1.513	-1.385	-47.8%
3AQPTE		2.154	-1.035	-32.5%	2.096	-0.801	-27.7%
3UFBBB		3.315	0.126	4.0%	2.980	0.083	2.9%
44QH2J		3.420	0.231	7.3%	2.986	0.089	3.1%
68DZAE		0.663	-2.526	-79.2%	0.610	-2.287	-78.9%
6KMAB4		4.070	0.881	27.6%	3.880	0.983	33.9%
7J9EPG		3.245	0.056	1.8%	2.945	0.048	1.7%
7R6ZTJ		3.415	0.226	7.1%	2.970	0.073	2.5%
8VFRAA		3.313	0.124	3.9%	3.134	0.237	8.2%
9CFDMP		3.698	0.509	16.0%	3.458	0.560	19.3%
C31DFN		2.945	-0.244	-7.6%	2.770	-0.127	-4.4%
E9BNWA		3.575	0.386	12.1%	3.135	0.238	8.2%
ERAKTR		3.800	0.611	19.2%	3.230	0.333	11.5%
EYATBC		0.431	-2.758	-86.5%	0.418	-2.479	-85.6%
GAVJ78		3.445	0.256	8.0%	3.090	0.193	6.7%
GHJ3QF		2.181	-1.008	-31.6%	2.175	-0.723	-24.9%
GZ1QWG		3.420	0.231	7.3%	3.085	0.188	6.5%
HUTENN		2.722	-0.467	-14.7%	2.701	-0.196	-6.8%
J57WTZ		3.200	0.011	0.4%	2.800	-0.097	-3.4%
KSNGVK		3.420	0.231	7.3%	3.023	0.125	4.3%
M24DZV		3.396	0.207	6.5%	2.810	-0.087	-3.0%
M4X56Z		2.036	-1.153	-36.2%	2.087	-0.810	-28.0%
MZYBBY		3.169	-0.020	-0.6%	2.804	-0.093	-3.2%
NR5HFC		3.365	0.176	5.5%	3.010	0.113	3.9%
P6QD6F		4.690	1.501	47.1%	4.210	1.313	45.3%
TGDGEW		3.310	0.121	3.8%	3.087	0.190	6.6%
TK98AN		3.380	0.191	6.0%	2.942	0.045	1.5%
TTDDRJ		3.177	-0.012	-0.4%	2.892	-0.005	-0.2%
UAF1Y2		3.120	-0.069	-2.2%	2.915	0.018	0.6%
VZBSN4		3.035	-0.154	-4.8%	2.810	-0.088	-3.0%
W1N5BR		3.180	-0.009	-0.3%	2.890	-0.007	-0.2%

ASEV-CTS Wine Industry Interlaboratory Testing Program

Research Property 951

Research Property: A520nm (1cm path)

WebCod	Data Flag	Sample SA55 Lab Mean	Sample SA55 Diff from Target Value	Sample SA55 % Diff from Target Value	Sample SA56 Lab Mean	Sample SA56 Diff from Target Value	Sample SA56 % Diff from Target Value
WMPRZA		2.755	-0.434	-13.6%	2.515	-0.382	-13.2%
WV8PHF		3.311	0.122	3.8%	3.068	0.171	5.9%
YHDRBG		3.414	0.225	7.0%	2.870	-0.027	-0.9%
YKM8K6		3.215	0.026	0.8%	2.914	0.017	0.6%
ZCTAUA		2.860	-0.329	-10.3%	2.710	-0.187	-6.5%

Research Property Target Value

Target Value	**3.1888**	Absorbance Units	**2.8971**	Absorbance Units

CTS has chosen to use an average value as the target value for this round.

Wines tested: SA55: Cabernet Sauvignon; SA56: Merlot

Consensus Average (may differ from target value)	3.1888	Absorbance Units	2.8971	Absorbance Units

This consensus average is based on 34 reporting participants.

Comments on assigned Data Flags

68DZAE (X) - Data for both samples are low.

EYATBC (X) - Data for both samples are low. Data may be off by a factor of 10, but would still be High if converted.

ASEV-CTS Wine Industry Interlaboratory Testing Program

Research Property 951

Research Property: A520nm (1cm path)