



Wine Industry Interlaboratory Program

Summary Report #022- Spring 2006

[Introduction to the Wine Program](#)

[Explanation of Tables and Definitions of Terms](#)

Analysis	Analysis Name
<u>901</u>	<u>Ethanol (% of volume)</u>
<u>902</u>	<u>Total Sulfur Dioxide</u>
<u>903</u>	<u>Free Sulfur Dioxide</u>
<u>904</u>	<u>Titrateable Acidity</u>
<u>905</u>	<u>Volatile Acidity</u>
<u>906</u>	<u>Specific Gravity</u>
<u>907</u>	<u>pH</u>
<u>908</u>	<u>Reducing Sugar</u>
<u>909</u>	<u>L-Malic Acid</u>
<u>910</u>	<u>Glucose + Fructose</u>
<u>950</u>	<u>Research Property: Copper (Cu) Content</u>
<u>951</u>	<u>Research Property: Calcium (Ca) Content</u>

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:

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

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
1XZB17		12.80	-0.01	-0.09	13.04	-0.01	-0.07
3N8JLT		12.76	-0.05	-0.42	12.99	-0.05	-0.40
3QTEYL		12.77	-0.04	-0.33	13.01	-0.03	-0.27
4SCXMP		12.82	0.01	0.06	13.09	0.04	0.32
589NNZ		12.60	-0.21	-1.65	12.80	-0.24	-1.93
63KF2W		12.85	0.04	0.30	13.08	0.04	0.28
66QWJ1	X	12.75	-0.06	-0.48	13.10	0.06	0.44
6L6S1H		12.80	-0.01	-0.09	13.02	-0.03	-0.23
7Q99HG		12.73	-0.08	-0.64	12.95	-0.09	-0.74
7SEFK4	X	12.75	-0.06	-0.48	13.10	0.06	0.44
8AW4ZV	X	13.10	0.29	2.24	13.40	0.36	2.82
8YXZQP		12.60	-0.21	-1.65	12.83	-0.22	-1.73
9CMBWH		12.83	0.01	0.10	13.07	0.03	0.21
9JH8BH		12.80	-0.01	-0.09	13.05	0.01	0.05
9M2T4A		12.70	-0.11	-0.87	12.95	-0.09	-0.74
A611G2		12.83	0.02	0.14	13.02	-0.02	-0.19
ACLWKR		12.79	-0.02	-0.17	13.02	-0.03	-0.23
AUJBRJ		12.81	-0.01	-0.05	13.05	0.00	0.01
AZNZLR		12.85	0.04	0.30	13.09	0.05	0.36
B3LL9M		12.79	-0.03	-0.21	13.02	-0.03	-0.23
B6SDN1	*	12.45	-0.36	-2.81	12.70	-0.34	-2.73
B6YMT7		12.81	0.00	-0.01	13.06	0.02	0.13
CCVLW2		12.75	-0.06	-0.48	12.99	-0.05	-0.43
CEULF1	X	12.65	-0.16	-1.26	12.71	-0.34	-2.69
CWWTL7		12.70	-0.11	-0.87	12.97	-0.07	-0.59
EX7WH1		12.80	-0.01	-0.09	13.05	0.01	0.05
FPMEWT		12.89	0.07	0.57	13.12	0.07	0.56
FSL9FA		12.79	-0.02	-0.17	13.04	0.00	-0.03
GW2UEV		12.82	0.00	0.02	13.05	0.01	0.05
HPL8E4		13.00	0.19	1.46	13.20	0.16	1.24
J185MF		13.11	0.30	2.31	13.32	0.28	2.19
JD35TQ		12.93	0.12	0.92	13.14	0.10	0.76
L3C9GF	X	13.25	0.43	3.36	12.97	-0.07	-0.59
LY738B	X	13.60	0.79	6.12	12.93	-0.12	-0.94
LYDEH7	X	13.18	0.36	2.82	13.25	0.21	1.63

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Analysis 901

Ethanol (% of volume)

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NGVPIJ		12.85	0.03	0.26	13.08	0.04	0.28
NYXC53		12.90	0.09	0.68	13.11	0.07	0.52
PS4N1R	X	13.00	0.19	1.46	13.10	0.06	0.44
QAEVVK		12.76	-0.05	-0.40	13.01	-0.04	-0.31
QGLGSU		12.85	0.03	0.26	13.06	0.01	0.09
QVHTYC		13.10	0.29	2.24	13.30	0.26	2.03
QXW3BJ		12.89	0.08	0.61	13.13	0.08	0.64
RZFKUF		12.81	0.00	-0.01	13.04	0.00	-0.03
SW13WX	X	12.95	0.14	1.07	13.00	-0.04	-0.35
T866ES		12.76	-0.05	-0.40	12.99	-0.06	-0.47
TSNKEF		12.88	0.07	0.53	13.11	0.07	0.52
VQTJGG		13.00	0.19	1.46	13.20	0.16	1.24
WKPZ8G		12.90	0.09	0.68	13.18	0.13	1.04
WR6SLV		12.79	-0.03	-0.21	13.04	-0.01	-0.07
XXN4Z3		13.00	0.19	1.46	13.25	0.21	1.63
Y74JVG	X	12.47	-0.35	-2.69	12.53	-0.52	-4.11
Y7QESV	*	12.50	-0.31	-2.42	12.70	-0.34	-2.73
ZH6M5B		12.79	-0.03	-0.21	13.04	0.00	-0.03

Grand Means

12.812 percent

Summary Statistics

13.044 percent

Std Dev Btwn Labs

0.129 percent

0.126 percent

Statistics based on 43 of 53 reporting participants

Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Analysis 901

Ethanol (% of volume)

Comments on assigned Data Flags

66QWJ1 (X) - Inconsistent in testing between samples.

7SEFK4 (X) - Inconsistent in testing between samples.

8AW4ZV (X) - Inconsistent in testing between samples. Data for Sample SA42 are high.

CEULF1 (X) - Inconsistent in testing between samples.

L3C9GF (X) - Inconsistent in testing between samples. Data for Sample SA41 are high.

LY738B (X) - Inconsistent in testing between samples. Data for Sample SA41 are high.

LYDEH7 (X) - Inconsistent in testing between samples. Data for Sample SA41 are high. Also inconsistent in testing within Sample SA41.

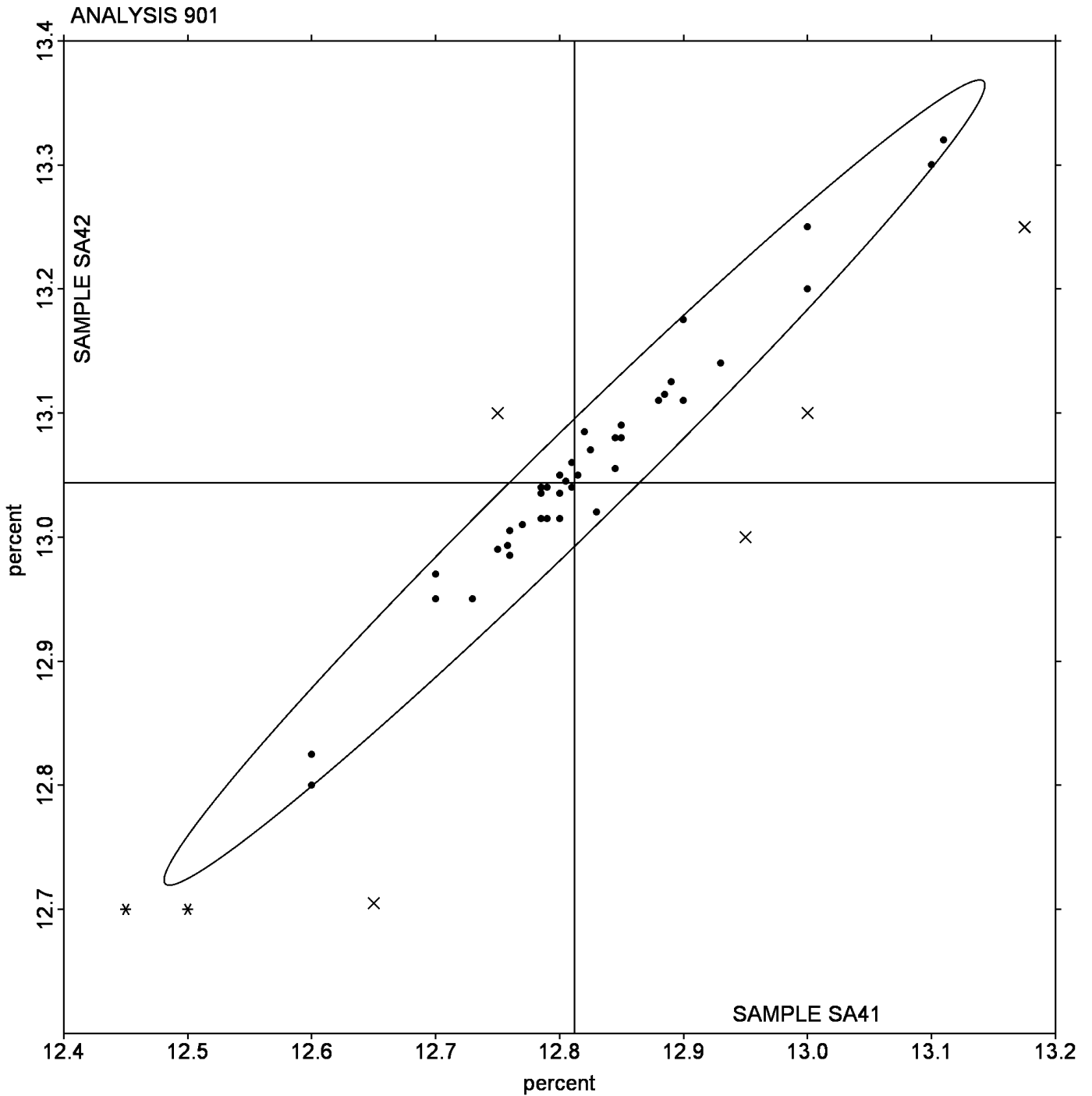
PS4N1R (X) - Inconsistent in testing between samples.

SW13WX (X) - Inconsistent in testing between samples.

Y74JVG (X) - Data for both samples are low.

Analysis 901

Ethanol (% of volume)



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 902

Total Sulfur Dioxide

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
23PMUQ	X	143.5	23.9	3.39	121.00	36.86	6.44
2NWU74		114.9	-4.8	-0.68	80.96	-3.18	-0.56
46XA25		117.5	-2.1	-0.30	81.50	-2.64	-0.46
4B35NZ		114.0	-5.6	-0.80	79.00	-5.14	-0.90
4B35QL		112.5	-7.1	-1.02	84.31	0.17	0.03
4RZ8E5	*	114.0	-5.6	-0.80	88.00	3.86	0.67
53VKJW		115.0	-4.6	-0.66	81.00	-3.14	-0.55
6543A5		120.0	0.4	0.05	81.50	-2.64	-0.46
666VWY	X	119.2	-0.4	-0.06	58.80	-25.34	-4.42
7SQ99B		123.0	3.4	0.48	83.50	-0.64	-0.11
8DJQ1J		132.5	12.9	1.83	90.50	6.36	1.11
8EJQ34	X	80.5	-39.1	-5.56	58.00	-26.14	-4.56
AU1D8R		114.0	-5.6	-0.80	81.00	-3.14	-0.55
BZJK65		132.5	12.9	1.83	95.00	10.86	1.90
C49LEW		122.5	2.9	0.41	84.50	0.36	0.06
D4QSMZ		114.5	-5.1	-0.73	78.00	-6.14	-1.07
DKE7FY		118.0	-1.6	-0.23	82.50	-1.64	-0.29
DN8K7G		116.0	-3.6	-0.52	81.50	-2.64	-0.46
DR8GCW		125.5	5.9	0.83	88.00	3.86	0.67
EFQCPX		122.5	2.9	0.41	88.00	3.86	0.67
EUNEBW		126.5	6.9	0.97	92.50	8.36	1.46
FR4PLS	*	130.0	10.4	1.47	98.00	13.86	2.42
GFWXBJ		113.5	-6.1	-0.87	78.00	-6.14	-1.07
GJSUEQ		115.0	-4.6	-0.66	78.00	-6.14	-1.07
GW5RZM		128.0	8.4	1.19	90.00	5.86	1.02
HHGM61		115.0	-4.6	-0.66	78.00	-6.14	-1.07
HVLC5G		117.0	-2.6	-0.38	79.00	-5.14	-0.90
J75VJX	*	123.0	3.4	0.48	94.50	10.36	1.81
J96QV3		120.5	0.9	0.12	80.00	-4.14	-0.72
JBZBW6		132.0	12.4	1.76	92.00	7.86	1.37
JQ8ZC9		124.0	4.4	0.62	83.00	-1.14	-0.20
N438SJ		121.0	1.4	0.19	87.00	2.86	0.50
N5S3B1		102.0	-17.6	-2.51	72.50	-11.64	-2.03
NQVBJP		108.5	-11.1	-1.58	76.50	-7.64	-1.33
PJWXNF		110.0	-9.6	-1.37	76.00	-8.14	-1.42

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 902

Total Sulfur Dioxide

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PQV1FE		124.0	4.4	0.62	86.00	1.86	0.32
Q69184	X	147.5	27.9	3.96	109.50	25.36	4.43
QMTUJ1		117.5	-2.1	-0.30	81.00	-3.14	-0.55
QNTCYW		112.0	-7.6	-1.09	83.50	-0.64	-0.11
REPE9J		134.5	14.9	2.11	94.50	10.36	1.81
RYGBUJ		121.5	1.9	0.26	87.00	2.86	0.50
SVNWDW	X	142.0	22.4	3.18	133.50	49.36	8.62
T2H382		122.5	2.9	0.41	80.50	-3.64	-0.64
T396W3		119.0	-0.6	-0.09	83.00	-1.14	-0.20
WGK7EH		111.5	-8.1	-1.16	79.50	-4.64	-0.81
WLDQGV	X	105.0	-14.6	-2.08	85.00	0.86	0.15
WZH67X		117.0	-2.6	-0.38	83.50	-0.64	-0.11
XQTNJG	X	119.5	-0.1	-0.02	61.50	-22.64	-3.95
YCW7NM		122.0	2.4	0.33	87.00	2.86	0.50
YZN69G		119.5	-0.1	-0.02	84.00	-0.14	-0.02
ZF7YEU		128.5	8.9	1.26	89.00	4.86	0.85

Grand Means

119.65 mg/L

Summary Statistics

84.143 mg/L

Std Dev Btwn Labs

7.04 mg/L

5.727 mg/L

Statistics based on 44 of 51 reporting participants

Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Analysis 902

Total Sulfur Dioxide

Comments on assigned Data Flags

23PMUQ (X) - Data for both samples are high.

666VWY (X) - Inconsistent in testing between samples. Data for sample SA42 are low.

8EJQ34 (X) - Data for both samples are low.

Q69184 (X) - Data for both samples are low.

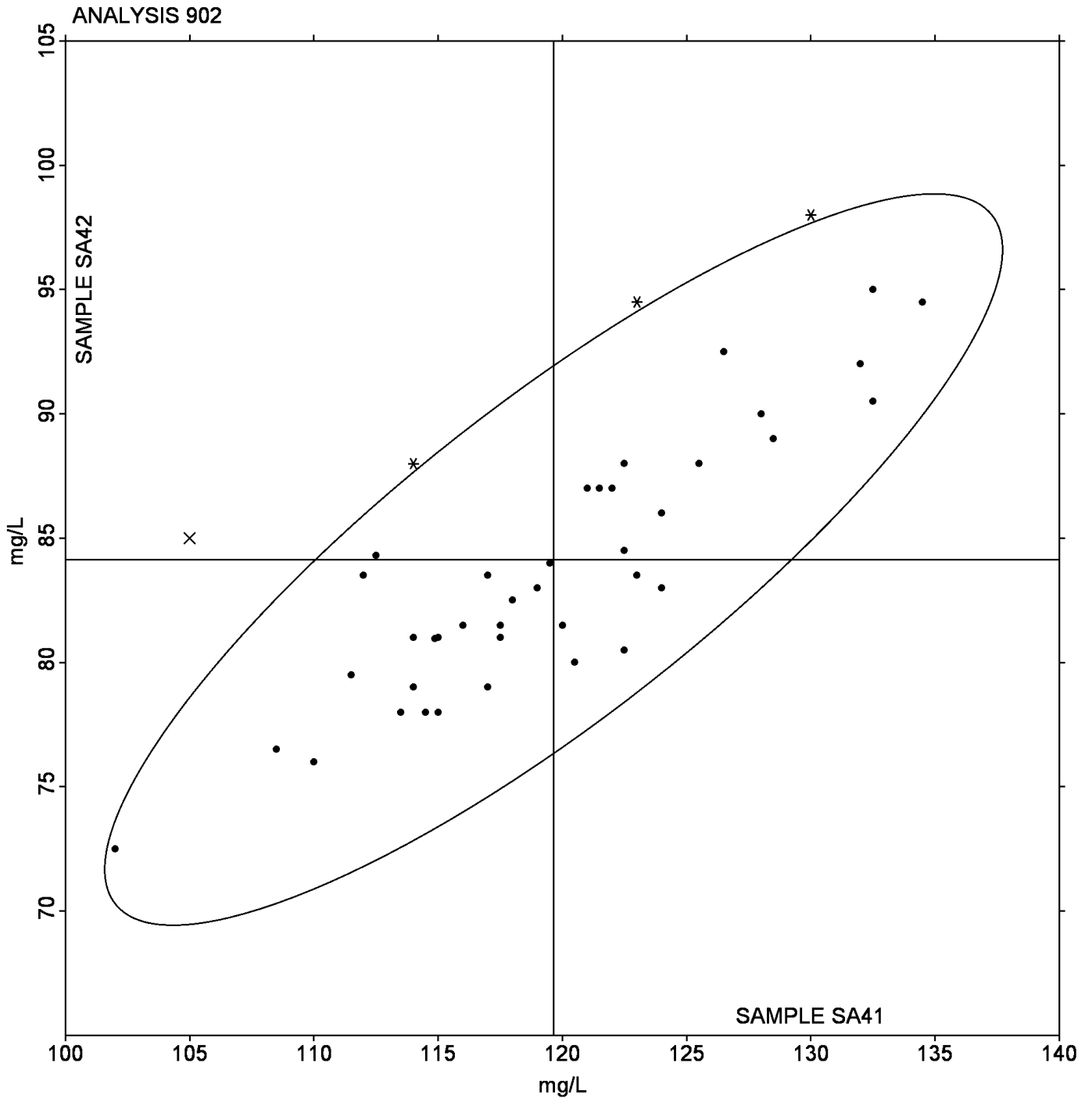
SVNWDW (X) - Data for both samples are high.

WLDQGV (X) - Inconsistent in testing between samples.

XQTNJG (X) - Inconsistent in testing between samples. Data for Sample SA42 are low.

Analysis 902

Total Sulfur Dioxide



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 903

Free Sulfur Dioxide

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
1LRL7C		29.00	3.13	0.83	28.00	2.34	0.68
2R7HD6		25.50	-0.37	-0.10	26.00	0.34	0.10
31S89X		26.00	0.13	0.03	25.50	-0.16	-0.05
3QTJK9		29.00	3.13	0.83	27.00	1.34	0.39
4XZNVK		22.00	-3.87	-1.03	21.50	-4.16	-1.20
4YHMAN		26.50	0.63	0.17	26.00	0.34	0.10
5HMMJM		24.50	-1.37	-0.37	23.00	-2.66	-0.77
5NFHMF		25.00	-0.87	-0.23	27.00	1.34	0.39
6G38MW		20.50	-5.37	-1.43	24.00	-1.66	-0.48
71ZU2M		18.00	-7.87	-2.10	18.00	-7.66	-2.22
7JCCCS		29.00	3.13	0.83	28.50	2.84	0.82
88JPCG		27.50	1.63	0.43	28.50	2.84	0.82
8RNYLU		19.00	-6.87	-1.83	20.00	-5.66	-1.64
92YDUU		28.00	2.13	0.57	24.00	-1.66	-0.48
9QDMZJ	*	26.50	0.63	0.17	32.00	6.34	1.84
BDRV4X		26.00	0.13	0.03	26.50	0.84	0.24
C3GLK7		24.50	-1.37	-0.37	25.00	-0.66	-0.19
CZ1G99		29.50	3.63	0.97	29.00	3.34	0.97
D3686G		27.00	1.13	0.30	25.50	-0.16	-0.05
DFHNBE		23.20	-2.67	-0.71	19.60	-6.06	-1.75
DHAAE4		24.50	-1.37	-0.37	23.50	-2.16	-0.62
DX4ZAZ		29.00	3.13	0.83	29.50	3.84	1.11
E8APWG		24.50	-1.37	-0.37	25.00	-0.66	-0.19
EBMN1V		28.50	2.63	0.70	29.00	3.34	0.97
EE6WBA		23.50	-2.37	-0.63	25.00	-0.66	-0.19
FLJHBZ		29.00	3.13	0.83	28.50	2.84	0.82
HHDJGB		24.00	-1.87	-0.50	27.50	1.84	0.53
HQ1423		23.00	-2.87	-0.77	24.00	-1.66	-0.48
J3RAJ6	*	31.50	5.63	1.50	26.00	0.34	0.10
JQDP46		28.98	3.11	0.83	30.85	5.19	1.50
KD5NHL		22.47	-3.41	-0.91	22.78	-2.88	-0.83
L6XCA6		27.50	1.63	0.43	26.50	0.84	0.24
M3L74R		18.00	-7.87	-2.10	17.00	-8.66	-2.51
NJXE4Z		24.00	-1.87	-0.50	24.50	-1.16	-0.34
QESCT9		23.00	-2.87	-0.77	22.00	-3.66	-1.06

ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 903

Free Sulfur Dioxide

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RH5CCU	*	36.00	10.13	2.70	33.00	7.34	2.13
S2Y4A4		27.50	1.63	0.43	26.00	0.34	0.10
S7BMSL		25.00	-0.87	-0.23	26.00	0.34	0.10
T8GG3B		17.60	-8.27	-2.21	19.60	-6.06	-1.75
TX8XK9		28.00	2.13	0.57	26.00	0.34	0.10
U197JH		27.50	1.63	0.43	28.50	2.84	0.82
U8KDAE		27.00	1.13	0.30	23.00	-2.66	-0.77
UCGXEY		23.50	-2.37	-0.63	23.00	-2.66	-0.77
VYS6NL		30.00	4.13	1.10	28.00	2.34	0.68
W1WCTE		26.00	0.13	0.03	28.50	2.84	0.82
W9HWCC		32.50	6.63	1.77	28.00	2.34	0.68
WHA1S8		26.00	0.13	0.03	24.00	-1.66	-0.48
XEHX9E		26.50	0.63	0.17	26.00	0.34	0.10
XRG3QD		22.00	-3.87	-1.03	24.50	-1.16	-0.34
XVYFE7		27.00	1.13	0.30	29.00	3.34	0.97
YFXHU3		32.50	6.63	1.77	32.00	6.34	1.84
ZENDVQ		28.00	2.13	0.57	27.50	1.84	0.53
ZSBWNE		21.00	-4.87	-1.30	21.00	-4.66	-1.35

Grand Means

25.873 mg/L

Summary Statistics

25.657 mg/L

Std Dev Btwn Labs

3.752 mg/L

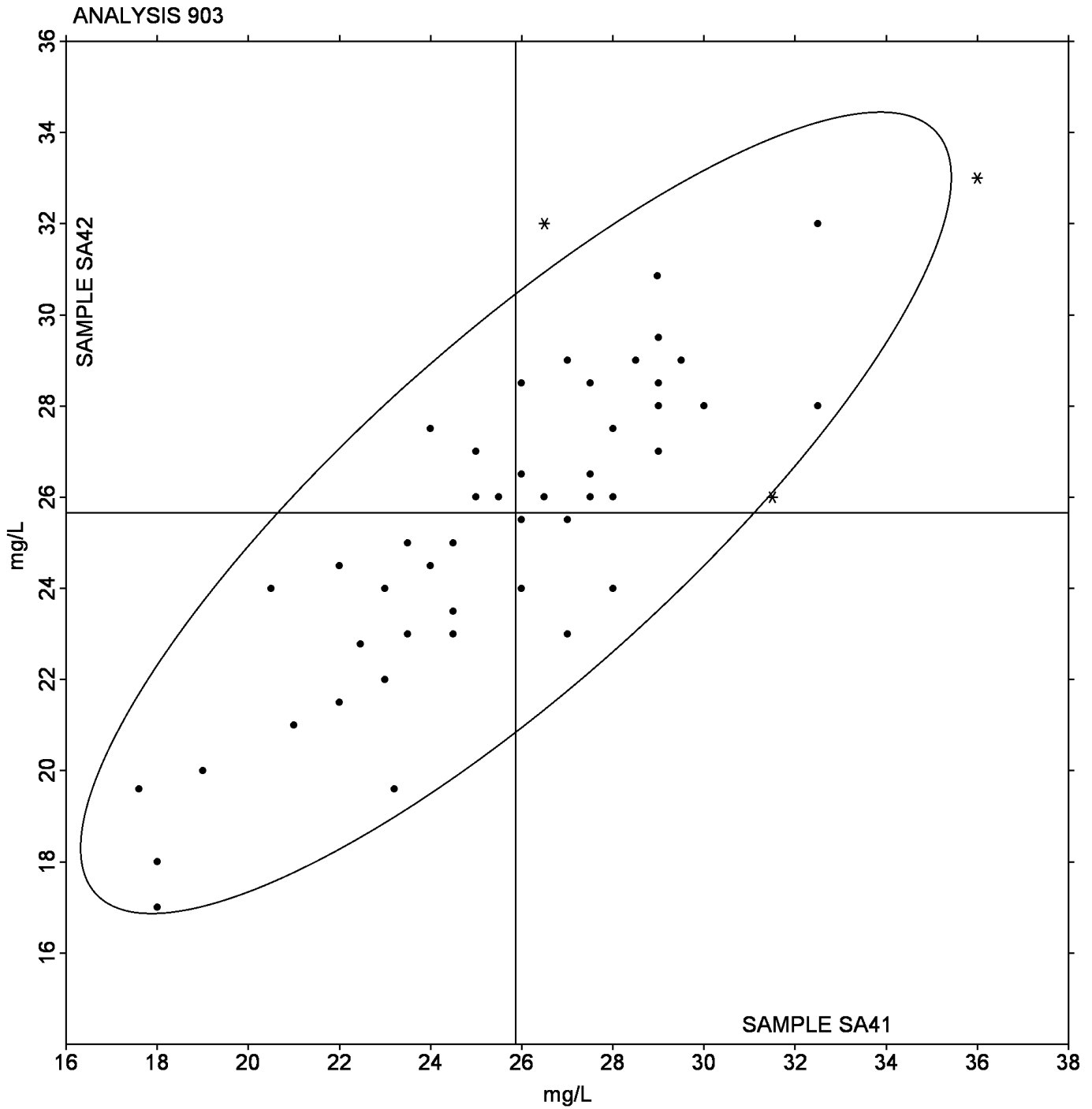
3.452 mg/L

Statistics based on 53 of 53 reporting participants

Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Analysis 903

Free Sulfur Dioxide



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 904

Titratable Acidity

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
1PQW6T		5.640	0.098	0.92	6.200	0.141	1.15
27A4PF		5.470	-0.072	-0.68	6.075	0.016	0.13
32PNXF		5.600	0.058	0.54	6.100	0.041	0.34
32WMEW		5.480	-0.062	-0.59	6.040	-0.019	-0.15
3TW4MN		5.700	0.158	1.48	6.250	0.191	1.56
44MGX4	X	5.810	0.268	2.52	5.810	-0.249	-2.03
4YBXRD	X	5.380	-0.162	-1.53	6.215	0.156	1.28
56VVDA		5.500	-0.042	-0.40	6.000	-0.059	-0.48
5AN3E6		5.555	0.013	0.12	6.119	0.060	0.49
6439B7		5.550	0.008	0.07	6.050	-0.009	-0.07
6974YN		5.450	-0.092	-0.87	6.000	-0.059	-0.48
6KRN7R		5.524	-0.018	-0.17	5.941	-0.118	-0.96
71HJNN		5.450	-0.092	-0.87	6.000	-0.059	-0.48
71JL3		5.315	-0.227	-2.14	5.910	-0.149	-1.21
7DZ9VJ	*	5.700	0.158	1.48	6.075	0.016	0.13
7J7JZ7	X	5.850	0.308	2.90	6.170	0.111	0.91
8DEBCX		5.600	0.058	0.54	6.100	0.041	0.34
9QYQLJ		5.555	0.013	0.12	6.060	0.001	0.01
AJKMM3		5.700	0.158	1.48	6.200	0.141	1.15
BN1CXH		5.360	-0.182	-1.72	5.810	-0.249	-2.03
D9Q27S		5.460	-0.082	-0.77	6.015	-0.044	-0.36
DE2CF3	X	6.050	0.508	4.78	6.500	0.441	3.60
ECFFS7		5.500	-0.042	-0.40	5.900	-0.159	-1.30
EM2215		5.495	-0.047	-0.44	6.000	-0.059	-0.48
ENQ8SA		5.450	-0.092	-0.87	5.850	-0.209	-1.70
ESX5AH		5.550	0.008	0.07	6.050	-0.009	-0.07
GX6ZP4		5.600	0.058	0.54	6.200	0.141	1.15
HNEV4H		5.500	-0.042	-0.40	5.950	-0.109	-0.89
HTKMZ8		5.750	0.208	1.95	6.290	0.231	1.89
KRERUP		5.500	-0.042	-0.40	5.920	-0.139	-1.13
LQ5KLZ		5.500	-0.042	-0.40	6.000	-0.059	-0.48
LVH23F		5.500	-0.042	-0.40	6.000	-0.059	-0.48
LYC886		5.600	0.058	0.54	6.050	-0.009	-0.07
M7LMLE		5.500	-0.042	-0.40	6.050	-0.009	-0.07
M7R52J	X	5.665	0.123	1.15	6.490	0.431	3.52

ASEV-CTS Wine Industry Interlaboratory Testing Program
Analysis 904
Titrateable Acidity

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NHHSB6		5.410	-0.132	-1.24	5.935	-0.124	-1.01
NSY46H		5.505	-0.037	-0.35	6.050	-0.009	-0.07
QBC7N6		5.515	-0.027	-0.26	6.040	-0.019	-0.15
QJ4BYN		5.650	0.108	1.01	6.250	0.191	1.56
R7RYMK		5.650	0.108	1.01	6.200	0.141	1.15
RYHBQC		5.750	0.208	1.95	6.200	0.141	1.15
SHF7J2		5.400	-0.142	-1.34	5.850	-0.209	-1.70
SRJU3D		5.700	0.158	1.48	6.200	0.141	1.15
TW8UYK		5.400	-0.142	-1.34	5.900	-0.159	-1.30
U8S85M		5.680	0.138	1.30	6.320	0.261	2.13
UJG5DR		5.640	0.098	0.92	6.130	0.071	0.58
V1E2EF		5.500	-0.042	-0.40	6.100	0.041	0.34
VHL597		5.450	-0.092	-0.87	6.050	-0.009	-0.07
W6D4JE		5.400	-0.142	-1.34	5.900	-0.159	-1.30
WNNDUL		5.450	-0.092	-0.87	6.000	-0.059	-0.48
YVBRV6		5.550	0.008	0.07	6.080	0.021	0.17
ZSGLEE		5.650	0.108	1.01	6.200	0.141	1.15
ZXVUQ2		5.675	0.133	1.25	6.205	0.146	1.20

Grand Means

5.5423 g/L as tartaric acid

Summary Statistics

6.0586 g/L as tartaric acid

Std Dev Btwn Labs

0.1063 g/L as tartaric acid

0.1225 g/L as tartaric acid

Statistics based on 48 of 53 reporting participants

Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Comments on assigned Data Flags

44MGX4 (X) - Inconsistent in testing between samples.

4YBXR D (X) - Inconsistent in testing between samples.

7J7JZ7 (X) - Inconsistent in testing between samples. Data for Sample SA41 are high.

DE2CF3 (X) - Data for both samples are high.

M7R52J (X) - Inconsistent in testing between samples. Data for Sample SA42 are high, also inconsistent in testing within Sample SA42.

ASEV-CTS Wine Industry Interlaboratory Testing Program
Analysis 905
Volatile Acidity

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
1CQLFX		0.4850	0.1165	1.89	0.6050	0.0217	0.34
1XWVK1		0.3750	0.0065	0.11	0.5350	-0.0483	-0.77
284HUE		0.3600	-0.0085	-0.14	0.5450	-0.0383	-0.61
2EAGTQ		0.3350	-0.0335	-0.54	0.6350	0.0517	0.82
346G9B		0.3600	-0.0085	-0.14	0.5650	-0.0183	-0.29
4BNWMB		0.3250	-0.0435	-0.71	0.5300	-0.0533	-0.84
4V882Q		0.4050	0.0365	0.59	0.5700	-0.0133	-0.21
4W2HZT		0.3450	-0.0235	-0.38	0.5650	-0.0183	-0.29
5UJP44		0.4300	0.0615	1.00	0.6100	0.0267	0.42
6HR4WD		0.3200	-0.0485	-0.79	0.5550	-0.0283	-0.45
7BDS6Q		0.3500	-0.0185	-0.30	0.5750	-0.0083	-0.13
7DPHMM		0.2950	-0.0735	-1.19	0.5100	-0.0733	-1.16
7FQRA4		0.3900	0.0215	0.35	0.6650	0.0817	1.29
7HQMHE		0.2700	-0.0985	-1.60	0.5200	-0.0633	-1.00
8HMFPB		0.3600	-0.0085	-0.14	0.5700	-0.0133	-0.21
ABGA46	*	0.5250	0.1565	2.54	0.6900	0.1067	1.69
AEN3HJ		0.3450	-0.0235	-0.38	0.5450	-0.0383	-0.61
AUPHZ6		0.2950	-0.0735	-1.19	0.4700	-0.1133	-1.80
BD2VQ6		0.3750	0.0065	0.11	0.6100	0.0267	0.42
BFAFLG	*	0.2600	-0.1085	-1.76	0.4050	-0.1783	-2.83
BG7LSF		0.3650	-0.0035	-0.06	0.6200	0.0367	0.58
DA1FKF		0.3415	-0.0270	-0.44	0.6655	0.0822	1.30
DHG1NS		0.3600	-0.0085	-0.14	0.6300	0.0467	0.74
DNPYC5		0.3400	-0.0285	-0.46	0.6000	0.0167	0.26
DX5FFR		0.3500	-0.0185	-0.30	0.5800	-0.0033	-0.05
E88TGR		0.3800	0.0115	0.19	0.5800	-0.0033	-0.05
ET8NXF		0.4150	0.0465	0.76	0.6650	0.0817	1.29
F2BNY7		0.2905	-0.0780	-1.27	0.4525	-0.1308	-2.07
FEE21D		0.4150	0.0465	0.76	0.5250	-0.0583	-0.92
GCW74P		0.4800	0.1115	1.81	0.6000	0.0167	0.26
H2ZA5W		0.3500	-0.0185	-0.30	0.6200	0.0367	0.58
H9BK59		0.3100	-0.0585	-0.95	0.6050	0.0217	0.34
LHZ7AP		0.3850	0.0165	0.27	0.6150	0.0317	0.50
LX4ZCS		0.4400	0.0715	1.16	0.6350	0.0517	0.82
M487MT	*	0.5450	0.1765	2.87	0.6875	0.1042	1.65

ASEV-CTS Wine Industry Interlaboratory Testing Program
Analysis 905
Volatile Acidity

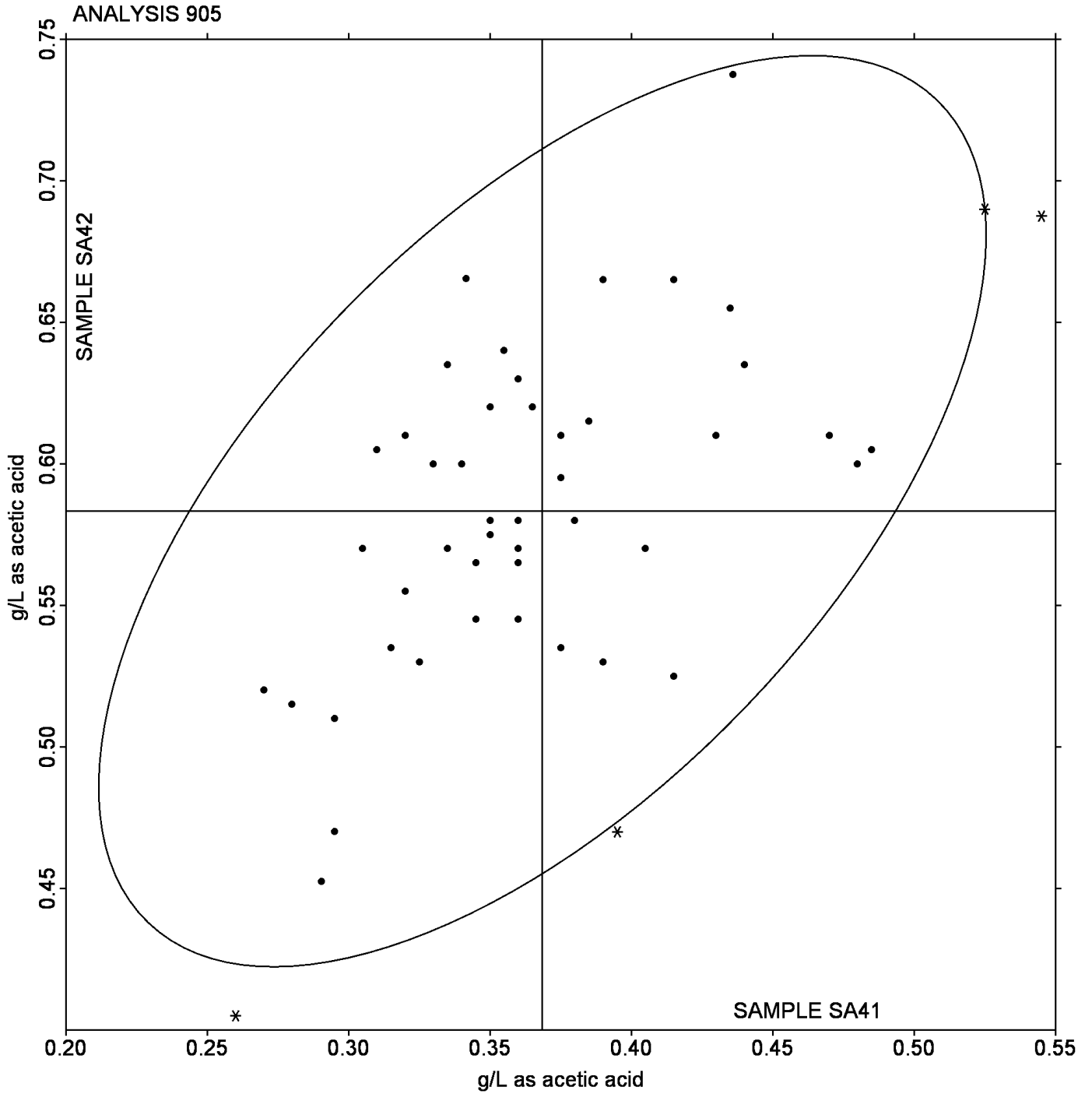
WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MB5PDY		0.4360	0.0675	1.10	0.7375	0.1542	2.44
NQBYXS		0.3450	-0.0235	-0.38	0.5650	-0.0183	-0.29
PFA9XN		0.3050	-0.0635	-1.03	0.5700	-0.0133	-0.21
Q9RTCW		0.3750	0.0065	0.11	0.6100	0.0267	0.42
QQ9EAM		0.4700	0.1015	1.65	0.6100	0.0267	0.42
QQWPFA		0.3150	-0.0535	-0.87	0.5350	-0.0483	-0.77
QSSRJ1		0.4350	0.0665	1.08	0.6550	0.0717	1.14
SGXXVL		0.3550	-0.0135	-0.22	0.6400	0.0567	0.90
TBJED4		0.2800	-0.0885	-1.44	0.5150	-0.0683	-1.08
UV4CZ7		0.3350	-0.0335	-0.54	0.5700	-0.0133	-0.21
VA54UA		0.3200	-0.0485	-0.79	0.6100	0.0267	0.42
W16AD4		0.3600	-0.0085	-0.14	0.5800	-0.0033	-0.05
W5JTVL	*	0.3950	0.0265	0.43	0.4700	-0.1133	-1.80
WWVBMQ		0.3300	-0.0385	-0.63	0.6000	0.0167	0.26
YNFFM2		0.3750	0.0065	0.11	0.5950	0.0117	0.19
ZGQYK5		0.3900	0.0215	0.35	0.5300	-0.0533	-0.84

Grand Means		Summary Statistics	
	0.36849 g/L as acetic acid		0.58329 g/L as acetic acid
Std Dev Btwn Labs			0.06310 g/L as acetic acid
	0.06153 g/L as acetic acid		
Statistics based on 51 of 51 reporting participants			

Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Analysis 905

Volatile Acidity



ASEV-CTS Wine Industry Interlaboratory Testing Program
Analysis 906
Specific Gravity

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
12ADXB		0.9934	-0.0001	-0.09	0.9932	-0.0001	-0.09
18VPUC		0.9933	-0.0001	-0.11	0.9932	-0.0001	-0.11
1AZ8NE		0.9933	-0.0002	-0.19	0.9931	-0.0002	-0.20
3GCY7B	*	0.9920	-0.0015	-1.29	0.9914	-0.0020	-1.68
56UUJC		0.9932	-0.0003	-0.28	0.9932	-0.0002	-0.16
59P2AZ		0.9936	0.0001	0.11	0.9936	0.0002	0.18
5HJKUX		0.9934	-0.0001	-0.07	0.9933	-0.0001	-0.05
63QNER		0.9928	-0.0007	-0.60	0.9928	-0.0005	-0.46
6MXWS4	X	0.9833	-0.0102	-8.89	0.9829	-0.0104	-8.81
81N3FA		0.9906	-0.0029	-2.51	0.9905	-0.0028	-2.40
8H1WG6		0.9934	-0.0001	-0.08	0.9932	-0.0001	-0.08
8M6R4M	X	0.9919	-0.0015	-1.34	0.9945	0.0012	1.02
947V44		0.9935	0.0000	-0.02	0.9933	0.0000	-0.03
9SJ9DN		0.9936	0.0001	0.11	0.9934	0.0001	0.05
A32RK6		0.9934	-0.0001	-0.08	0.9935	0.0002	0.16
A8CY8K		0.9933	-0.0002	-0.15	0.9931	-0.0002	-0.18
AN11GP		0.9923	-0.0012	-1.07	0.9921	-0.0013	-1.09
BCT85U		0.9934	-0.0001	-0.10	0.9932	-0.0001	-0.10
CUJDP7		0.9933	-0.0002	-0.16	0.9932	-0.0001	-0.09
DBU8BT	*	0.9968	0.0033	2.90	0.9968	0.0035	2.92
F6XBSK		0.9948	0.0013	1.15	0.9943	0.0010	0.80
FJHU93	*	0.9968	0.0033	2.90	0.9968	0.0035	2.92
FMMVLF		0.9934	-0.0001	-0.08	0.9934	0.0000	0.04
FULW1E		0.9935	0.0000	-0.02	0.9936	0.0003	0.22
G6ZMMA	*	0.9920	-0.0015	-1.29	0.9913	-0.0021	-1.76
H8KNS2		0.9933	-0.0001	-0.12	0.9932	-0.0001	-0.11
HC2SXB		0.9928	-0.0007	-0.60	0.9928	-0.0005	-0.46
HCFQ1P		0.9937	0.0002	0.19	0.9937	0.0004	0.34
LA8BJR		0.9916	-0.0019	-1.68	0.9914	-0.0019	-1.64
MQMN2C		0.9933	-0.0002	-0.15	0.9932	-0.0001	-0.12
NKAB7J		0.9939	0.0004	0.35	0.9934	0.0000	0.03
NZ6GRD	*	0.9926	-0.0009	-0.76	0.9930	-0.0003	-0.29
P9KFJH		0.9933	-0.0002	-0.17	0.9932	-0.0001	-0.11
QNF6UK		0.9938	0.0003	0.28	0.9936	0.0003	0.21
RK8814		0.9948	0.0013	1.15	0.9946	0.0013	1.06

ASEV-CTS Wine Industry Interlaboratory Testing Program
Analysis 906
Specific Gravity

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RM5H7S		0.9935	0.0000	-0.02	0.9933	0.0000	-0.03
RT5W1F		0.9933	-0.0002	-0.17	0.9933	0.0000	-0.04
UEPGYS		0.9934	-0.0001	-0.09	0.9932	-0.0001	-0.12
WHAKFQ		0.9960	0.0026	2.25	0.9958	0.0025	2.07
WWETHQ		0.9934	-0.0001	-0.06	0.9928	-0.0005	-0.45
Y5N8XJ		0.9940	0.0005	0.46	0.9939	0.0006	0.48
YNXJ8F		0.9929	-0.0006	-0.50	0.9929	-0.0005	-0.41
Z7PWET		0.9943	0.0008	0.72	0.9944	0.0011	0.90
ZZ9YZL		0.9934	-0.0001	-0.06	0.9932	-0.0001	-0.12

Grand Means		Summary Statistics	
	0.99347 sp gr 20/20 C		0.99334 sp gr 20/20 C
Std Dev Btwn Labs			
	0.00114 sp gr 20/20 C		0.00118 sp gr 20/20 C
Statistics based on 42 of 44 reporting participants			

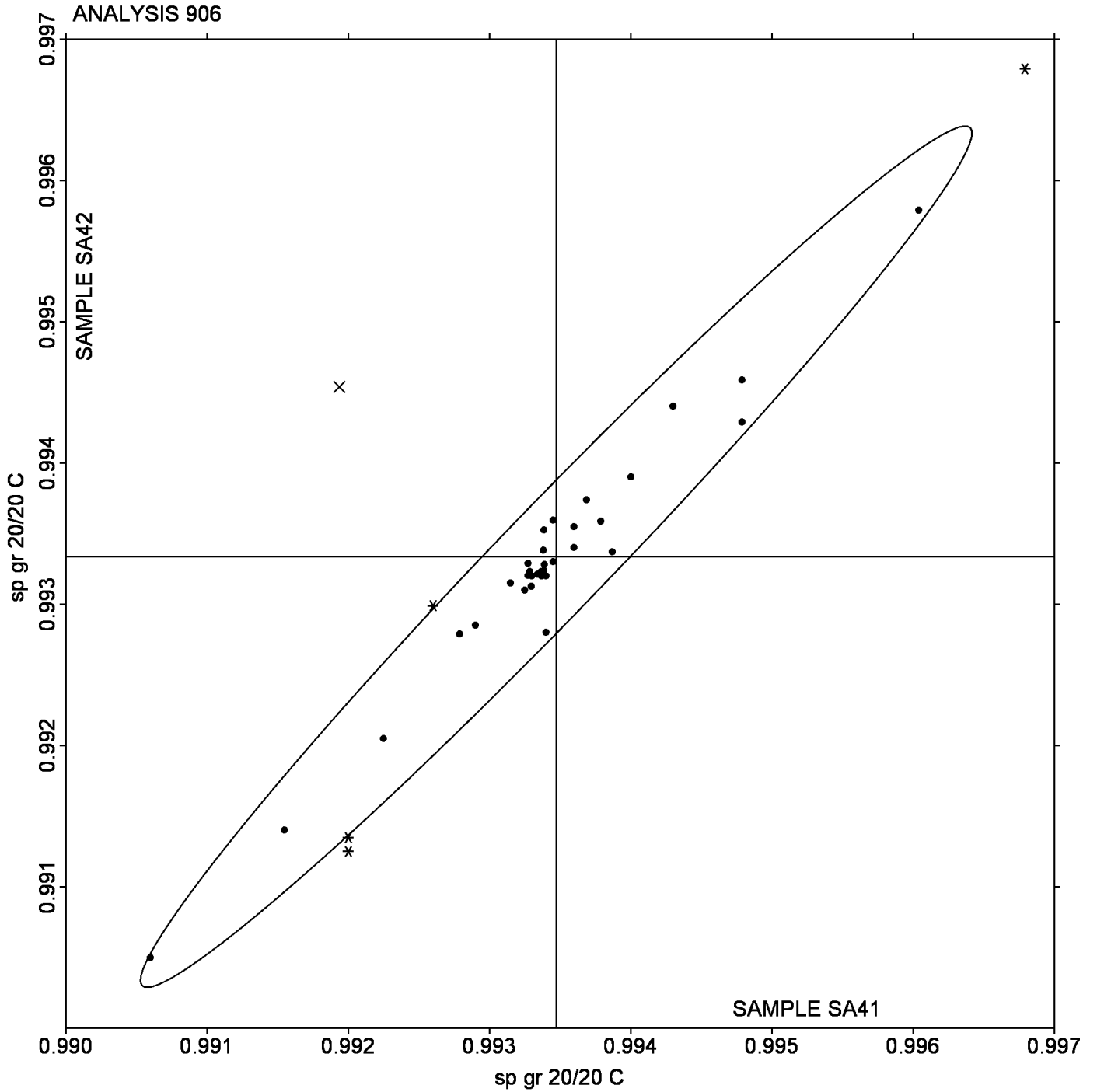
Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Comments on assigned Data Flags

6MXWS4 (X) - Data for both samples are low.

8M6R4M (X) - Inconsistent in testing between samples.

Analysis 906
Specific Gravity



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 907

pH

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
1P8TKD		3.320	-0.008	-0.20	3.250	-0.007	-0.18
1UDN8U		3.310	-0.018	-0.47	3.220	-0.037	-0.92
35SFRE		3.365	0.037	0.99	3.290	0.033	0.81
3FMVFQ		3.365	0.037	0.99	3.310	0.053	1.31
4LCHUV	*	3.274	-0.054	-1.43	3.229	-0.028	-0.70
4NXGZC		3.320	-0.008	-0.20	3.225	-0.032	-0.80
53A4T7		3.310	-0.018	-0.47	3.240	-0.017	-0.43
5JME49		3.365	0.037	0.99	3.310	0.053	1.31
5XNRDM	*	3.380	0.052	1.39	3.280	0.023	0.56
5YCKWA		3.330	0.002	0.06	3.260	0.003	0.07
69Z65S		3.320	-0.008	-0.20	3.250	-0.007	-0.18
7WXS1Z		3.355	0.027	0.73	3.290	0.033	0.81
8C57VS		3.370	0.042	1.13	3.315	0.058	1.43
9596C1		3.310	-0.018	-0.47	3.235	-0.022	-0.55
95GK8V		3.350	0.022	0.59	3.275	0.018	0.44
9BNNFN	*	3.220	-0.108	-2.87	3.140	-0.117	-2.91
BAQCZW		3.310	-0.018	-0.47	3.240	-0.017	-0.43
C4F9Z3		3.340	0.012	0.33	3.265	0.008	0.19
CLTGT5		3.325	-0.003	-0.07	3.260	0.003	0.07
D2CFE4		3.340	0.012	0.33	3.275	0.018	0.44
EPGD27		3.330	0.002	0.06	3.265	0.008	0.19
G3KR1R		3.360	0.032	0.86	3.290	0.033	0.81
GD71SB		3.345	0.017	0.46	3.285	0.028	0.69
GHNCZD		3.290	-0.038	-1.00	3.220	-0.037	-0.92
GWBXJT		3.295	-0.033	-0.87	3.220	-0.037	-0.92
GZHUAW		3.265	-0.063	-1.67	3.205	-0.052	-1.30
HBJRVG		3.315	-0.013	-0.34	3.225	-0.032	-0.80
HFVQWP		3.280	-0.048	-1.27	3.210	-0.047	-1.17
K7C6N9		3.305	-0.023	-0.60	3.220	-0.037	-0.92
LB76SX		3.325	-0.003	-0.07	3.255	-0.002	-0.06
LZEPYQ		3.340	0.012	0.33	3.260	0.003	0.07
N9NW5V		3.390	0.062	1.66	3.325	0.068	1.68
NUU79Y		3.255	-0.073	-1.94	3.175	-0.082	-2.04
NWYVFN		3.290	-0.038	-1.00	3.230	-0.027	-0.68
P59DND	*	3.405	0.077	2.06	3.355	0.098	2.42

Analysis 907

pH

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
P5SWSQ		3.350	0.022	0.59	3.290	0.033	0.81
P8LGYN		3.310	-0.018	-0.47	3.250	-0.007	-0.18
QJS2D8		3.335	0.007	0.20	3.265	0.008	0.19
R2EXEU		3.330	0.002	0.06	3.260	0.003	0.07
RCMF9B	*	3.390	0.062	1.66	3.295	0.038	0.93
SG7CYF		3.360	0.032	0.86	3.290	0.033	0.81
SLT2UE		3.320	-0.008	-0.20	3.260	0.003	0.07
U89MAA	X	2.755	-0.573	-15.25	2.670	-0.587	-14.55
ULJG6E		3.290	-0.038	-1.00	3.220	-0.037	-0.92
UY4NS2		3.380	0.052	1.39	3.330	0.073	1.80
VK8V8R		3.330	0.002	0.06	3.265	0.008	0.19
VLA2VZ		3.360	0.032	0.86	3.275	0.018	0.44
VYZY7G		3.305	-0.023	-0.60	3.230	-0.027	-0.68
WZBE3P		3.325	-0.003	-0.07	3.245	-0.012	-0.30
Y38Q2M		3.365	0.037	0.99	3.290	0.033	0.81
Y3BVFF		3.255	-0.073	-1.94	3.180	-0.077	-1.91
YVCRRZ		3.335	0.007	0.20	3.270	0.013	0.31
ZB8QRL		3.330	0.002	0.06	3.265	0.008	0.19

Grand Means

3.3277 pH

Summary Statistics

3.2573 pH

Std Dev Btwn Labs

0.0376 pH

0.0404 pH

Statistics based on 52 of 53 reporting participants

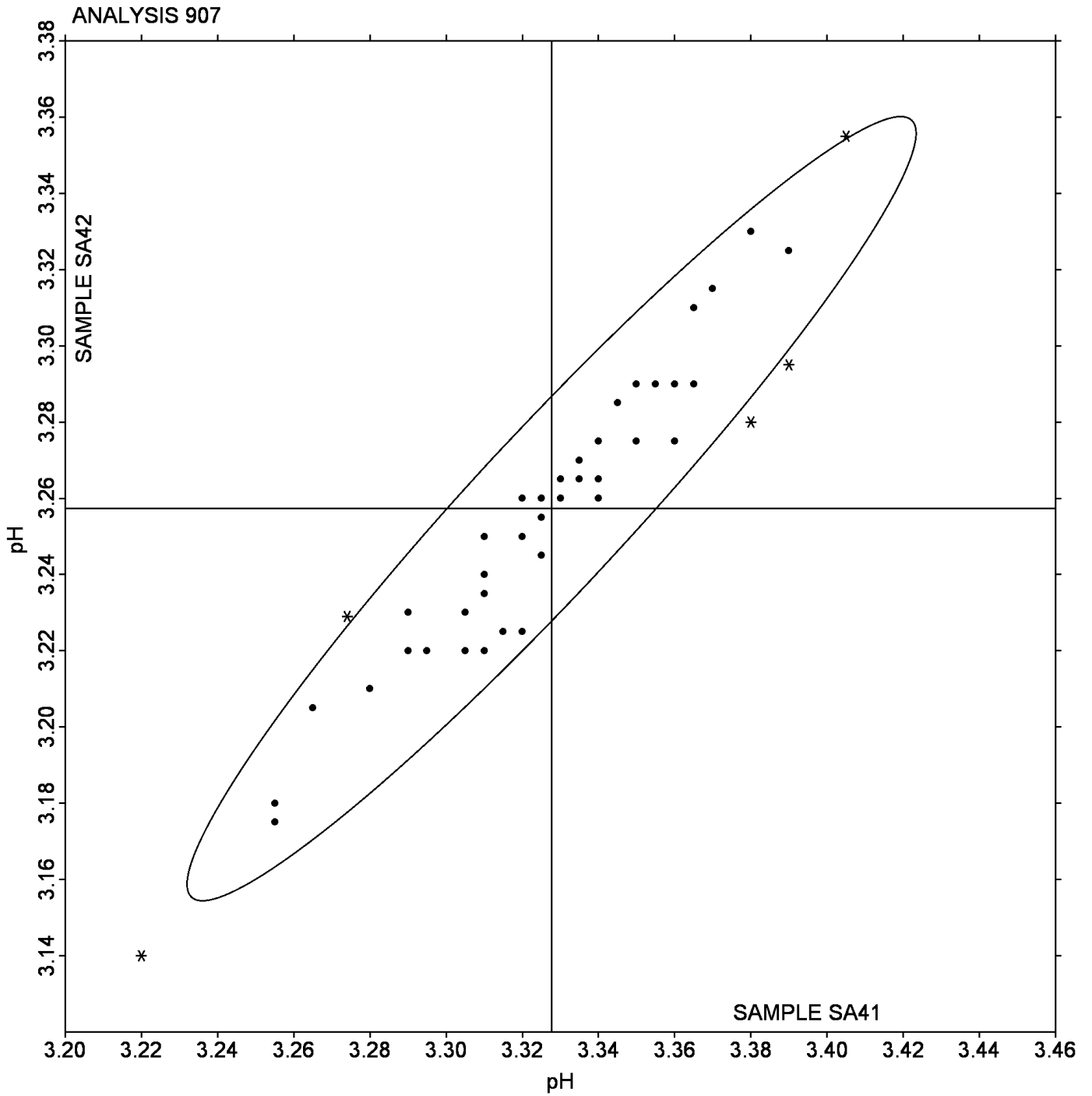
Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Comments on assigned Data Flags

U89MAA (X) - Data for both samples are low.

Analysis 907

pH



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 908

Reducing Sugar

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
1F7D6L		7.950	1.272	1.19	8.085	1.178	0.95
233RX9		7.600	0.922	0.86	7.665	0.758	0.61
25NPYK		7.600	0.922	0.86	7.550	0.643	0.52
2GPY12		6.000	-0.678	-0.63	6.500	-0.407	-0.33
4LV7GW		6.836	0.158	0.15	7.145	0.238	0.19
641Q1P	*	6.250	-0.428	-0.40	7.400	0.493	0.40
8UQXY8		7.900	1.222	1.14	8.550	1.643	1.32
9HYHSB		7.350	0.672	0.63	7.850	0.943	0.76
AZFB98		7.325	0.647	0.60	7.875	0.968	0.78
CGSF99		4.165	-2.513	-2.35	3.875	-3.032	-2.43
CV31UU		7.000	0.322	0.30	7.000	0.093	0.07
DFZEP5		5.000	-1.678	-1.57	5.000	-1.907	-1.53
EB674G		7.450	0.772	0.72	7.750	0.843	0.68
HGPLES		6.000	-0.678	-0.63	6.000	-0.907	-0.73
KUC6AY		6.400	-0.278	-0.26	6.850	-0.057	-0.05
R2KMV8		5.000	-1.678	-1.57	5.000	-1.907	-1.53
RHP8ZF		7.500	0.822	0.77	7.800	0.893	0.72
V1BLT2		6.500	-0.178	-0.17	6.700	-0.207	-0.17
YV98KP		6.000	-0.678	-0.63	5.500	-1.407	-1.13
Z79U3Z		7.730	1.052	0.98	8.050	1.143	0.92

Grand Means

6.6778 g/L

Summary Statistics

6.9073 g/L

Std Dev Btwn Labs

1.0713 g/L

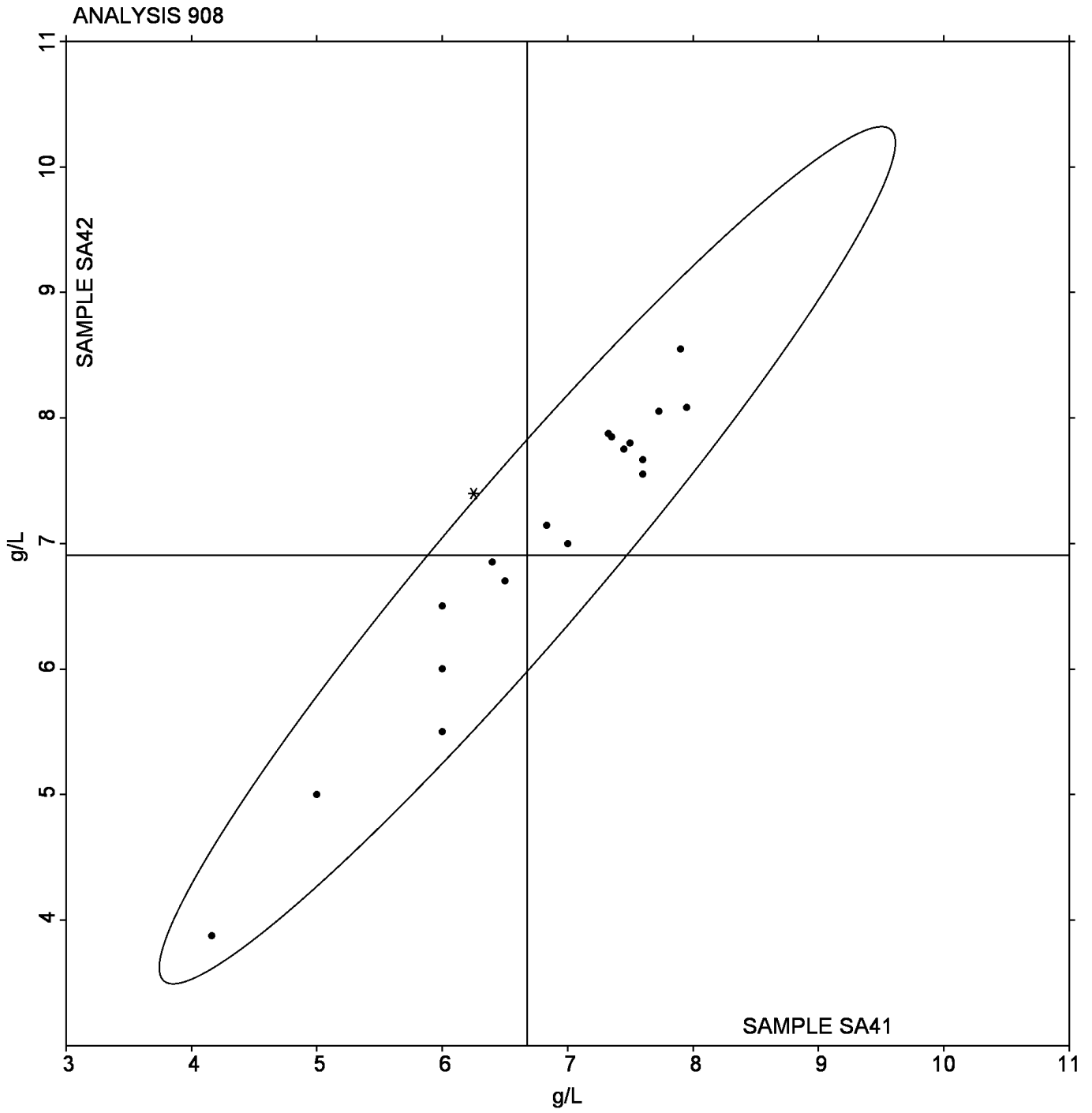
1.2461 g/L

Statistics based on 20 of 20 reporting participants

Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Analysis 908

Reducing Sugar



ASEV-CTS Wine Industry Interlaboratory Testing Program
Analysis 909
L-Malic Acid

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
1G9A62		1.528	0.010	0.07	1.045	0.000	0.00
2R2PES		1.310	-0.208	-1.38	0.905	-0.140	-1.27
3ETF95		1.545	0.027	0.18	1.020	-0.025	-0.23
4885RH		1.620	0.102	0.68	1.105	0.060	0.54
4JLHU		1.600	0.082	0.54	1.080	0.035	0.32
4ZMRJ7		1.765	0.247	1.64	1.260	0.215	1.95
5KC6RU	*	1.210	-0.308	-2.04	0.955	-0.090	-0.81
7TKGBG		1.535	0.017	0.11	1.040	-0.005	-0.04
85WHRU		1.300	-0.218	-1.45	0.905	-0.140	-1.27
9FMU46		1.550	0.032	0.21	1.020	-0.025	-0.23
9KXWZ9		1.700	0.182	1.21	1.160	0.115	1.04
B9SLQQ		1.480	-0.038	-0.25	1.085	0.040	0.36
BP8G9S	*	1.100	-0.418	-2.77	0.700	-0.345	-3.13
D4P99W		1.775	0.257	1.70	1.230	0.185	1.68
DLY71U		1.558	0.039	0.26	1.029	-0.016	-0.14
E5KEU2		1.460	-0.058	-0.39	0.970	-0.075	-0.68
FDMPC6	X	0.193	-1.325	-8.79	0.127	-0.918	-8.32
GK6TWZ	X	1.652	0.133	0.88	0.955	-0.090	-0.81
GW4CQC		1.480	-0.038	-0.25	0.975	-0.070	-0.63
HBURE5		1.485	-0.034	-0.22	1.012	-0.033	-0.30
JQHNEE		1.447	-0.071	-0.47	0.973	-0.072	-0.66
JWHB67	X	1.107	-0.411	-2.73	1.578	0.533	4.83
KNL4YM		1.445	-0.073	-0.48	1.055	0.010	0.09
L8JHRB		1.870	0.352	2.33	1.322	0.277	2.51
LDQJWS		1.583	0.065	0.43	1.077	0.032	0.29
LVPWUA		1.560	0.042	0.28	1.100	0.055	0.50
MPBYH1		1.516	-0.002	-0.01	1.028	-0.017	-0.15
MUVPNW		1.445	-0.073	-0.48	0.990	-0.055	-0.50
N2C42X		1.504	-0.015	-0.10	1.037	-0.008	-0.07
NT65QA		1.460	-0.058	-0.39	1.070	0.025	0.23
PF1MUM		1.585	0.067	0.44	1.065	0.020	0.18
Q51TCF		1.485	-0.033	-0.22	1.010	-0.035	-0.32
R22F88		1.490	-0.028	-0.19	0.950	-0.095	-0.86
RG9WBJ		1.610	0.092	0.61	1.060	0.015	0.14
SCJ6ZR	X	2.625	1.107	7.34	1.805	0.760	6.89

ASEV-CTS Wine Industry Interlaboratory Testing Program
Analysis 909
L-Malic Acid

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
SF9DDM		1.729	0.210	1.39	1.185	0.140	1.27
STBYMC		1.269	-0.249	-1.65	0.898	-0.147	-1.33
TM7X3H		1.610	0.092	0.61	1.075	0.030	0.27
UMYMWQ		1.635	0.117	0.77	1.100	0.055	0.50
V9VMTD		1.395	-0.123	-0.82	0.950	-0.095	-0.86
W72N5M	X	0.345	-1.174	-7.78	0.351	-0.694	-6.29
WN2AZK		1.660	0.142	0.94	1.195	0.150	1.36
WNP7U		1.533	0.015	0.10	1.046	0.001	0.01
XDRCPM		1.435	-0.083	-0.55	0.965	-0.080	-0.72
XFWKQ8	*	1.460	-0.058	-0.39	1.150	0.105	0.95
ZQFZXE	X	15.735	14.217	94.27	10.625	9.580	86.85

Grand Means		Summary Statistics	
	1.5181 g/L		1.0449 g/L
Std Dev Btwn Labs			0.1103 g/L
	0.1508 g/L		
Statistics based on 40 of 46 reporting participants			

Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Comments on assigned Data Flags

FDMP6 (X) - Extreme data. Data appear to be off by a factor of 10.

GK6TWZ (X) - Inconsistent in testing between samples.

JWHB67 (X) - Inconsistent in testing between samples. Data appear to be switched between sample sets.

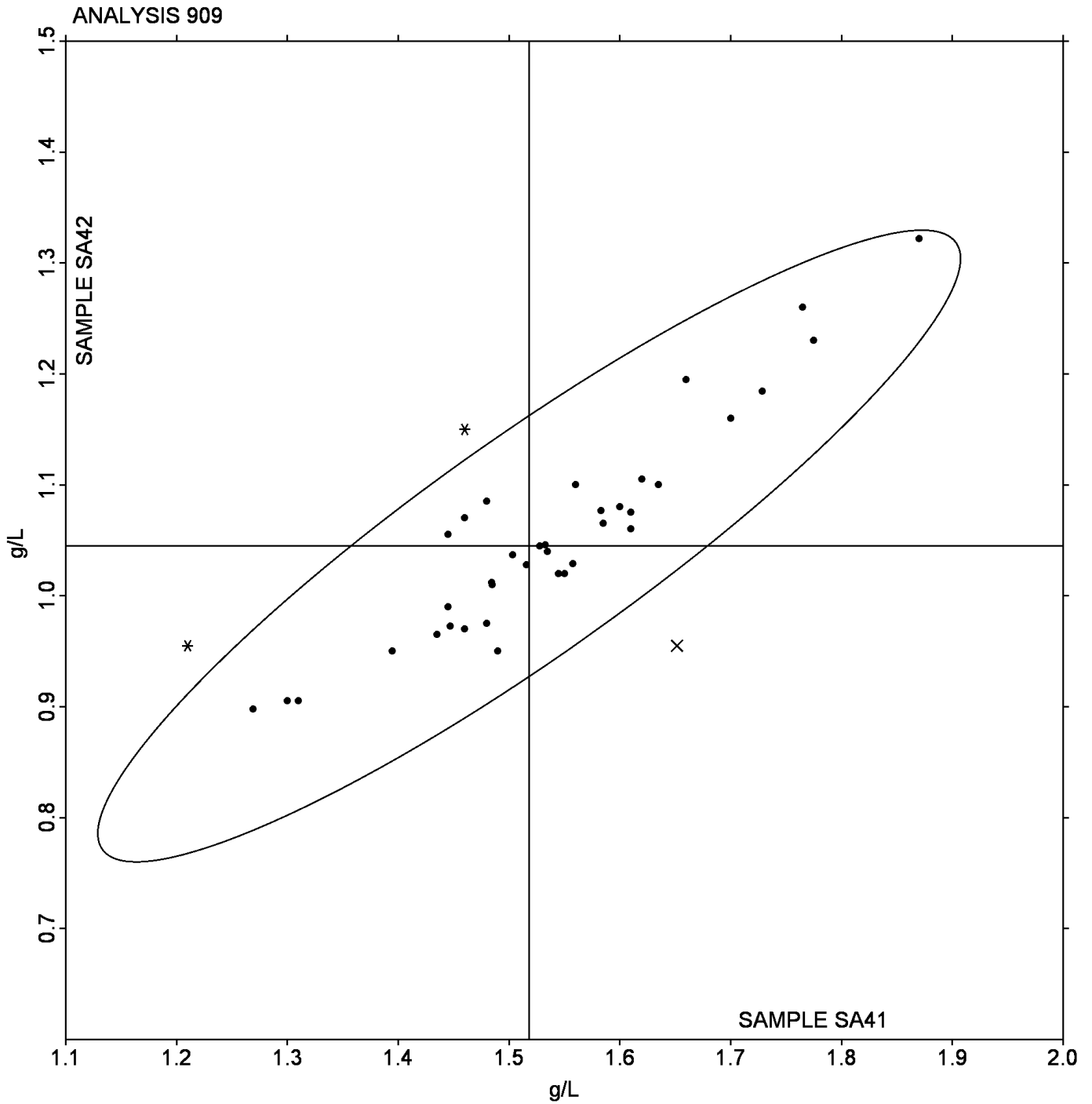
SCJ6ZR (X) - Data for both samples are high.

W72N5M (X) - Data for both samples are low.

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

Analysis 909

L-Malic Acid



ASEV-CTS Wine Industry Interlaboratory Testing Program

Analysis 910

Glucose + Fructose

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2154Y5		6.560	0.385	0.83	6.875	0.477	0.96
3Y15MH		6.095	-0.080	-0.17	6.420	0.022	0.04
43F3MH		6.150	-0.025	-0.05	6.400	0.002	0.00
46BE6Q		6.250	0.075	0.16	6.750	0.352	0.71
4X7LC4		6.600	0.425	0.92	6.500	0.102	0.20
5JV85W		6.390	0.215	0.46	6.735	0.337	0.68
7EWYKS		6.390	0.215	0.46	6.570	0.172	0.35
7QFPHH		6.190	0.015	0.03	6.395	-0.003	-0.01
7RF5Y9		6.175	0.000	0.00	6.535	0.137	0.27
8RGDKS		5.880	-0.295	-0.64	6.225	-0.173	-0.35
8ZP6MG		6.350	0.175	0.38	6.600	0.202	0.41
AX1H4K		6.320	0.145	0.31	6.635	0.237	0.48
BHVN3		6.089	-0.086	-0.19	6.409	0.011	0.02
BWJWK8		5.830	-0.345	-0.74	6.275	-0.123	-0.25
DECEPU		6.450	0.275	0.59	6.650	0.252	0.51
DYJQUX	*	6.560	0.385	0.83	6.235	-0.163	-0.33
EGX12W		6.735	0.560	1.21	6.805	0.407	0.82
EZQZVP		5.500	-0.675	-1.45	5.500	-0.898	-1.80
FYFSMZ	*	4.760	-1.415	-3.05	5.220	-1.178	-2.37
GJBLE3		6.300	0.125	0.27	6.350	-0.048	-0.10
GMKZVN	*	6.500	0.325	0.70	7.250	0.852	1.71
JNHWMM		6.530	0.355	0.77	6.225	-0.173	-0.35
JUB5GZ		5.730	-0.445	-0.96	5.805	-0.593	-1.19
KYEHNX		5.980	-0.195	-0.42	6.318	-0.081	-0.16
MNJBEQ		6.800	0.625	1.35	7.100	0.702	1.41
N8CHT1		6.350	0.175	0.38	6.700	0.302	0.61
PTAPJX		6.035	-0.140	-0.30	6.405	0.007	0.01
PU963T		5.940	-0.235	-0.51	5.920	-0.478	-0.96
QDYGA7		6.800	0.625	1.35	7.200	0.802	1.61
RBDXC8		6.270	0.095	0.20	6.715	0.317	0.64
SA945E		6.285	0.110	0.24	6.585	0.187	0.38
SQ76SE		5.320	-0.855	-1.84	5.600	-0.798	-1.60
SS6QZV		5.525	-0.650	-1.40	5.315	-1.083	-2.18
T9JCW8		6.460	0.285	0.61	6.630	0.232	0.47
TKVU16		6.000	-0.175	-0.38	6.350	-0.048	-0.10

Analysis 910

Glucose + Fructose

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
TMNF4V	X	4.165	-2.010	-4.33	3.875	-2.523	-5.07
UW3V5A		6.750	0.575	1.24	6.850	0.452	0.91
UW79RB		6.200	0.025	0.05	6.600	0.202	0.41
V5XR36		6.600	0.425	0.92	6.750	0.352	0.71
WHWJ4U		6.105	-0.070	-0.15	6.315	-0.083	-0.17
YKHV4B	*	4.900	-1.275	-2.75	5.050	-1.348	-2.71
Z3S5CN		6.520	0.345	0.74	6.560	0.162	0.33
ZE5HB3	X	3.260	-2.915	-6.28	2.170	-4.228	-8.50

Grand Means		Summary Statistics	
	6.1750 g/L		6.3982 g/L
Std Dev Btwn Labs			0.4977 g/L
	0.4640 g/L	Statistics based on 41 of 43 reporting participants	

Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Comments on assigned Data Flags

TMNF4V (X) - Data for both samples are low.

ZE5HB3 (X) - Data for both samples are low.

ASEV-CTS Wine Industry Interlaboratory Testing Program
Research Property 950
Research Property - Copper (Cu) Content

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
48LY9Y		0.0260	0.0010	4.0%	0.0260	-0.0040	-13.3%
BUM4AC		0.0250	0.0000	0.0%	0.0300	0.0000	0.0%
CHTPYS		0.0525	0.0275	110.0%	0.0505	0.0205	68.3%
DG3PR8		0.0300	0.0050	20.0%	0.0400	0.0100	33.3%
EWVEPR		0.0350	0.0100	40.0%	0.0300	0.0000	0.0%
GE8PV9		0.0250	0.0000	0.0%	0.0400	0.0100	33.3%
GW4UVH		0.0240	-0.0010	-4.0%	0.0210	-0.0090	-30.0%
MG68WV		0.1700	0.1450	580.0%	0.3700	0.3400	1,133.3%
P6UZQV		0.0550	0.0300	120.0%	0.0800	0.0500	166.7%
QH7CPA		0.0300	0.0050	20.0%	0.0300	0.0000	0.0%
QHW9R3		0.5250	0.5000	2,000.0%	0.5000	0.4700	1,566.7%
V1YW2B		0.0100	-0.0150	-60.0%	0.0100	-0.0200	-66.7%
WVLJBP		0.2500	0.2250	900.0%	0.0500	0.0200	66.7%
ZB57HP		0.1000	0.0750	300.0%	0.0600	0.0300	100.0%

Research Property Target Value

Target Value

0.02500 mg/L

0.03000 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 two laboratories accredited for this property under ISO 17025, with the difference between those laboratories being less than 10% of the target value.

Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Consensus Average
(may differ from target value)

0.09696 mg/L

0.09554 mg/L

This consensus average is based on 14 reporting participants.

ASEV-CTS Wine Industry Interlaboratory Testing Program

Research Property 951

Research Property - Calcium (Ca) Content

WebCode	Data Flag	Sample SA41			Sample SA42		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
11W4MQ		152.88	63.11	70.3%	117.75	47.51	67.6%
354B2K		67.00	-22.76	-25.4%	57.00	-13.24	-18.9%
61L2WK		69.00	-20.76	-23.1%	108.50	38.26	54.5%
7WYTVX		98.00	8.24	9.2%	80.00	9.76	13.9%
85S9BE		85.50	-4.26	-4.8%	65.00	-5.24	-7.5%
DN2591		90.90	1.14	1.3%	67.40	-2.84	-4.0%
GBP6KW		94.03	4.27	4.8%	75.49	5.24	7.5%
JZMZSP		81.00	-8.76	-9.8%	64.00	-6.24	-8.9%
NSJSHD		99.20	9.44	10.5%	69.40	-0.84	-1.2%
WETUD6		65.16	-24.60	-27.4%	83.71	13.46	19.2%

Research Property Target Value

Target Value

89.765 mg/L

70.243 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 two laboratories accredited for this property under ISO 17025, with the difference between those laboratories being less than 10% of the target value.

Wines tested: SA41: Pinot Grigio; SA42: Sauvignon Blanc

Consensus Average

(may differ from target value)

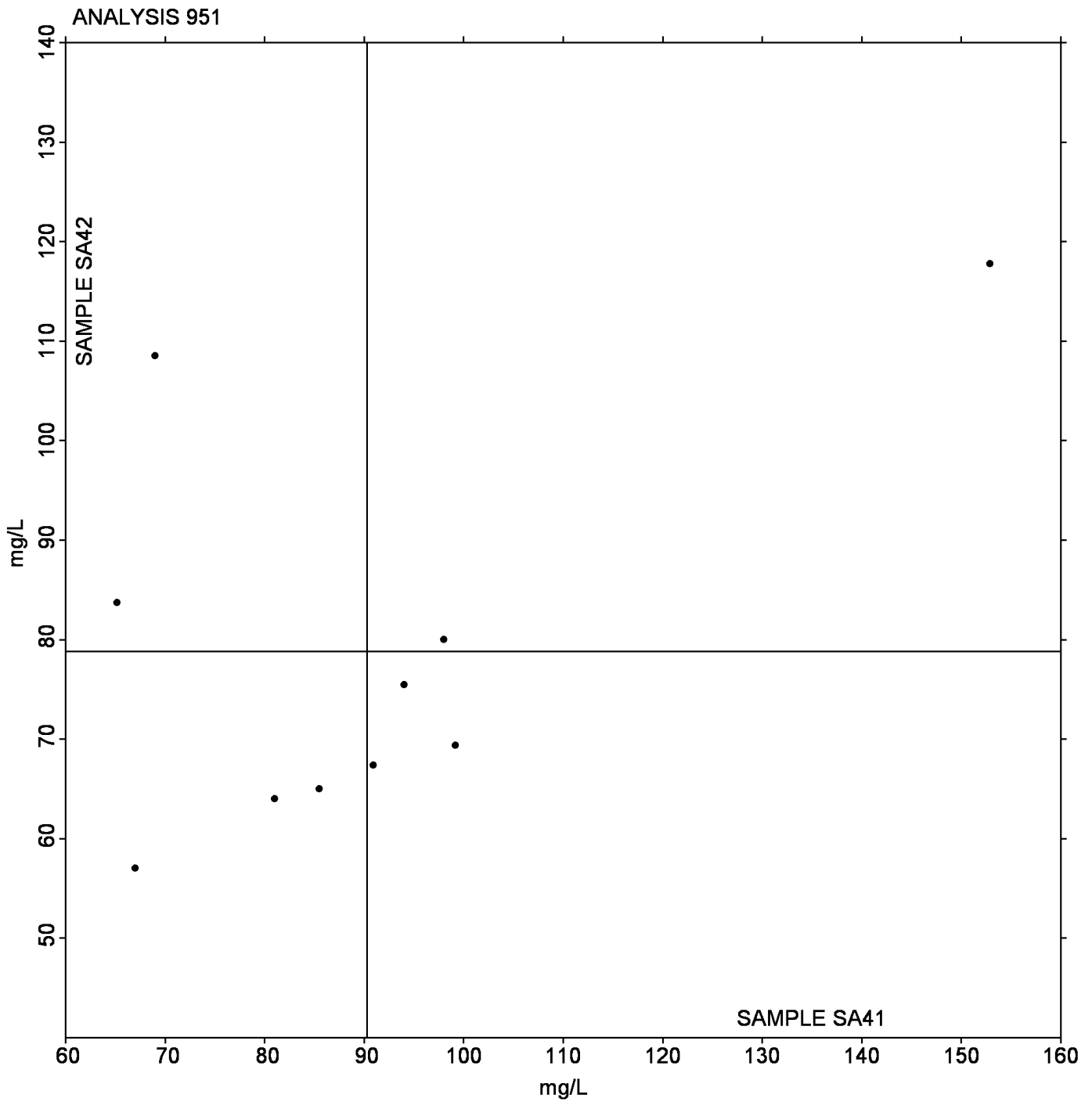
90.267 mg/L

78.824 mg/L

This consensus average is based on 10 reporting participants.

Research Property 951

Research Property - Calcium (Ca) Content



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