



Wine Industry Interlaboratory Program

Summary Report #053- Summer 2016

[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>Titratable 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>Residual Sugar</u>
<u>909</u>	<u>L-Malic Acid</u>
<u>910</u>	<u>Glucose + Fructose</u>
<u>911</u>	<u>Copper Content</u>
<u>912</u>	<u>Potassium Content</u>
<u>915</u>	<u>A420nm (1cm path)</u>
<u>916</u>	<u>A520nm (1cm path)</u>
<u>950</u>	<u>Research Property: Turbidity</u>
<u>951</u>	<u>Research Property: Methanol Content</u>
<u>952</u>	<u>Research: Sodium 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 Ad Hoc Committee. 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 80 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.

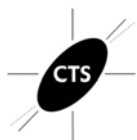
Labs flagged with an * are not typically included in the footnotes of a data table. These labs may locate their position in the control ellipse and use the definitions above to help identify the type of testing error. An * should serve as a caution flag, a "yellow light", to a lab. If this error is repeated 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.

Analysis 901
Ethanol (% of volume)

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2FWVKN		13.42	0.04	0.63	13.90	0.05	0.75
2QM86H		13.38	0.00	0.00	13.85	-0.01	-0.12
32VJPP		13.37	-0.01	-0.27	13.83	-0.03	-0.43
3CW8GM		13.36	-0.02	-0.36	13.85	-0.01	-0.12
4PW9TN	*	13.24	-0.14	-2.51	13.69	-0.16	-2.55
6AJ8JJ	*	13.30	-0.08	-1.44	13.80	-0.05	-0.82
6HRN7H	X	13.45	0.07	1.26	13.85	0.00	-0.04
6RNEXK		13.40	0.02	0.36	13.88	0.02	0.36
6TU7GL		13.41	0.03	0.54	13.88	0.03	0.43
6UPPJM		13.40	0.02	0.27	13.86	0.01	0.12
77EYRD		13.38	0.00	0.00	13.87	0.01	0.20
7C692C		13.35	-0.03	-0.63	13.82	-0.03	-0.51
7DZR4D		13.37	-0.01	-0.18	13.84	-0.01	-0.19
7LQD9B	*	13.45	0.07	1.17	13.96	0.11	1.69
7XKTXC		13.35	-0.03	-0.63	13.82	-0.03	-0.51
8N94MK	*	13.30	-0.08	-1.44	13.80	-0.05	-0.82
8QFLLG		13.45	0.07	1.26	13.92	0.07	1.06
8YEYRC		13.44	0.06	0.99	13.89	0.03	0.51
9393BH	X	13.27	-0.11	-2.06	13.80	-0.06	-0.90
9CU7HG	X	13.30	-0.08	-1.44	13.90	0.05	0.75
A6CB2D		13.41	0.03	0.54	13.89	0.04	0.59
A73HZG		13.35	-0.03	-0.63	13.82	-0.04	-0.59
B4YZN7		13.43	0.05	0.90	13.89	0.04	0.59
BC63LC		13.39	0.01	0.09	13.86	0.01	0.12
BU8N4D		13.36	-0.02	-0.45	13.82	-0.03	-0.51
BZYPR8	X	13.55	0.17	3.06	14.20	0.35	5.47
CE7C8E		13.40	0.02	0.27	13.89	0.03	0.51
CT7BVB		13.42	0.04	0.72	13.89	0.04	0.59
CX2V88		13.36	-0.02	-0.45	13.83	-0.02	-0.35
DABVG7		13.34	-0.04	-0.72	13.81	-0.04	-0.67
DEK9Y6	X	13.36	-0.02	-0.45	13.77	-0.08	-1.29
DJZJC9	X	13.56	0.18	3.15	14.11	0.25	3.97
DW6PGF		13.36	-0.02	-0.45	13.83	-0.03	-0.43
DWQFD7		13.43	0.05	0.81	13.91	0.05	0.83
ENQFE6		13.32	-0.06	-1.17	13.80	-0.06	-0.90

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #053****Analysis 901****Summer 2016****Ethanol (% of volume)**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EWEDUC		13.39	0.01	0.18	13.89	0.03	0.51
F8F2L9		13.35	-0.03	-0.63	13.85	-0.01	-0.12
FBFCH9	X	13.45	0.07	1.26	13.85	0.00	-0.04
FY2ED6	X	13.53	0.15	2.61	13.67	-0.19	-2.95
G6RY37	*	13.54	0.16	2.79	14.04	0.19	2.95
GJ783A		13.39	0.01	0.09	13.86	0.01	0.12
GJN4KC		13.43	0.05	0.81	13.91	0.05	0.83
GPFB67		13.32	-0.06	-1.05	13.79	-0.06	-1.02
GQQCR4		13.36	-0.02	-0.36	13.83	-0.02	-0.35
JBRXQ2	X	13.28	-0.10	-1.79	13.58	-0.27	-4.28
K39444		13.27	-0.11	-1.97	13.73	-0.12	-1.92
KD74G8		13.43	0.05	0.90	13.92	0.07	1.06
KG93RZ	X	12.80	-0.58	-10.51	13.33	-0.52	-8.21
KRQJK8		13.41	0.03	0.54	13.89	0.04	0.59
L746R4		13.33	-0.05	-0.99	13.79	-0.07	-1.06
LBYYP6		13.37	-0.01	-0.18	13.85	-0.01	-0.12
LNLBT3		13.41	0.03	0.45	13.86	0.01	0.12
N329WU		13.25	-0.13	-2.33	13.70	-0.15	-2.40
N3GEBX		13.42	0.04	0.63	13.89	0.04	0.59
N94364		13.43	0.05	0.90	13.92	0.07	1.06
NGH2LZ		13.39	0.01	0.18	13.87	0.02	0.28
PPRPYY		13.39	0.01	0.18	13.85	0.00	-0.04
Q836UY		13.40	0.02	0.27	13.86	0.00	0.04
QJVKHZ		13.46	0.08	1.44	13.95	0.09	1.46
QUCEN2		13.35	-0.03	-0.54	13.79	-0.07	-1.06
RJPQCY		13.45	0.07	1.17	13.93	0.07	1.14
RPZTEU	X	13.17	-0.21	-3.77	13.61	-0.25	-3.89
TETBGW	X	12.93	-0.45	-8.09	13.65	-0.20	-3.18
TEXTFV		13.42	0.04	0.72	13.90	0.05	0.75
TQMR7X		13.44	0.06	1.08	13.92	0.06	0.99
U6L4ZM	*	13.26	-0.12	-2.09	13.70	-0.16	-2.44
UC6AXU		13.43	0.05	0.81	13.91	0.05	0.83
ULVV3T		13.35	-0.03	-0.54	13.83	-0.02	-0.35
VCZC2P		13.32	-0.06	-1.08	13.77	-0.08	-1.29
VPAR9U		13.25	-0.13	-2.33	13.70	-0.15	-2.40



Analysis 901
Ethanol (% of volume)

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
VVVRFU		13.40	0.02	0.36	13.84	-0.01	-0.19
WVPWAT		13.35	-0.03	-0.63	13.82	-0.04	-0.59
WY6H6L	X	13.06	-0.32	-5.74	13.73	-0.12	-1.92
X2VQ4P		13.39	0.01	0.18	13.87	0.01	0.20
X774LM		13.42	0.04	0.63	13.89	0.04	0.59
XZK4EM		13.39	0.01	0.09	13.87	0.02	0.28
YA28YR		13.44	0.06	0.99	13.91	0.06	0.91
YQA2TM		13.44	0.06	1.08	13.90	0.05	0.75
YRZARP		13.45	0.07	1.26	13.93	0.07	1.14
Z3DUPR		13.39	0.01	0.18	13.86	0.01	0.12
ZU3HHL		13.35	-0.03	-0.54	13.80	-0.05	-0.82

Grand Means	Summary Statistics
13.380 percent	13.852 percent
Std Dev Btwn Labs	
0.056 percent	0.064 percent
Statistics based on 68 of 81 reporting participants	

Wines tested: SA05: Merlot; SA06: Zinfandel

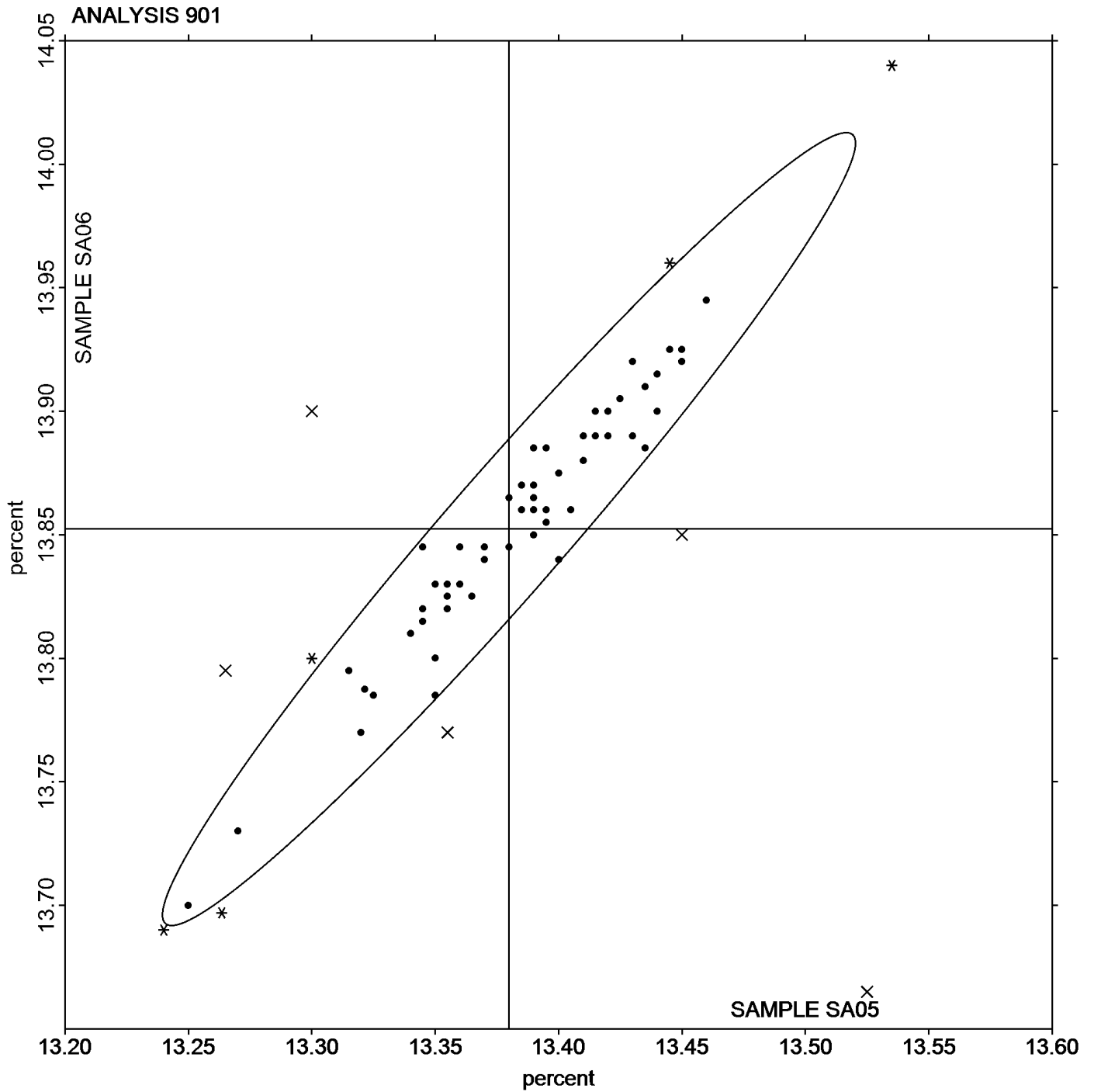
Comments on Assigned Data Flags for Test #901

- JBRXQ2 (X) - Inconsistent in testing between samples, data for Sample SA06 are low.
- DJZJC9 (X) - Data for both samples are high. Possible Systematic Error.
- BZYPR8 (X) - Data for both samples are high.
- DEK9Y6 (X) - Inconsistent in testing between samples.
- WY6H6L (X) - Inconsistent in testing between samples, data for sample SA05 are low. Inconsistent within the determinations of sample SA05.
- FBFCH9 (X) - Inconsistent in testing between samples.
- 9393BH (X) - Inconsistent in testing between samples.
- TETBGW (X) - Data for both samples are low.
- 9CU7HG (X) - Inconsistent in testing between samples.
- RPZTEU (X) - Data for both samples are low. Possible Systematic Error.
- KG93RZ (X) - Data for both samples are low.
- FY2ED6 (X) - Inconsistent in testing between samples, data for sample SA06 are low.
- 6HRN7H (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.



Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA05 <i>Merlot</i>			Sample SA06 <i>Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used							0/2
Ebulliometer Method							0/3
Gas Chromatography Method	13.385	0.056	0.01	13.842	0.051	-0.01	3/5
Near Infrared Method	13.384	0.043	0.00	13.857	0.047	0.01	45/47
Dist. / Density Method	13.308	0.063	-0.07	13.770	0.075	-0.08	9/12
FTIR	13.434	0.046	0.05	13.918	0.059	0.07	8/9
Other _____	13.387	0.037	0.01	13.858	0.028	0.01	3/3





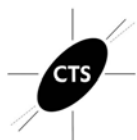
Analysis 902

Total Sulfur Dioxide

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2FWVKN		51.50	-3.01	-0.40	54.50	-0.19	-0.02
2QM86H		56.00	1.49	0.20	59.50	4.81	0.63
32VJPP	X	20.00	-34.51	-4.57	25.00	-29.69	-3.87
3CW8GM		61.50	6.99	0.92	60.50	5.81	0.76
4PW9TN		61.50	6.99	0.92	65.50	10.81	1.41
6AJ8JJ	X	74.00	19.49	2.58	65.50	10.81	1.41
6RNEXK		58.00	3.49	0.46	56.00	1.31	0.17
6TU7GL		54.50	-0.01	0.00	54.00	-0.69	-0.09
6UPPJM		52.00	-2.51	-0.33	53.50	-1.19	-0.15
77EYRD		56.00	1.49	0.20	58.00	3.31	0.43
7C692C		67.50	12.99	1.72	68.50	13.81	1.80
7LQD9B		47.00	-7.51	-0.99	46.00	-8.69	-1.13
7XKTXC		68.00	13.49	1.78	67.50	12.81	1.67
8N94MK	X	58.00	3.49	0.46	46.50	-8.19	-1.07
8QFLLG		66.00	11.49	1.52	66.00	11.31	1.47
8YEYRC		47.00	-7.51	-0.99	47.00	-7.69	-1.00
9393BH		46.50	-8.01	-1.06	48.50	-6.19	-0.81
9CU7HG		56.00	1.49	0.20	52.00	-2.69	-0.35
A6CB2D		54.00	-0.51	-0.07	53.00	-1.69	-0.22
A73HZG		49.00	-5.51	-0.73	48.50	-6.19	-0.81
B4YZN7		51.00	-3.51	-0.46	51.00	-3.69	-0.48
BC63LC		54.00	-0.51	-0.07	57.00	2.31	0.30
BU8N4D	*	68.36	13.84	1.83	72.52	17.83	2.33
BZYPR8		52.00	-2.51	-0.33	49.50	-5.19	-0.68
CE7C8E		43.50	-11.01	-1.46	47.50	-7.19	-0.94
CT7BVB		46.50	-8.01	-1.06	48.00	-6.69	-0.87
CU2UWC		61.50	6.99	0.92	60.50	5.81	0.76
CX2V88		71.50	16.99	2.25	72.50	17.81	2.32
DABVG7		67.50	12.99	1.72	65.50	10.81	1.41
DEK9Y6		48.00	-6.51	-0.86	49.60	-5.09	-0.66
DJZJC9	X	67.56	13.05	1.73	48.00	-6.69	-0.87
DW6PGF		46.00	-8.51	-1.13	46.50	-8.19	-1.07
DWQFD7		50.50	-4.01	-0.53	49.50	-5.19	-0.68
ENQFE6	*	53.00	-1.51	-0.20	60.00	5.31	0.69
EWEDUC		55.50	0.99	0.13	56.50	1.81	0.24

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #053****Analysis 902****Summer 2016****Total Sulfur Dioxide**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
F8F2L9		51.00	-3.51	-0.46	51.50	-3.19	-0.42
FBFCH9		45.50	-9.01	-1.19	41.50	-13.19	-1.72
FY2ED6		68.00	13.49	1.78	63.50	8.81	1.15
G6RY37		47.00	-7.51	-0.99	47.00	-7.69	-1.00
GJ783A		62.00	7.49	0.99	62.00	7.31	0.95
GJN4KC		54.50	-0.01	0.00	54.00	-0.69	-0.09
GPFB67		48.00	-6.51	-0.86	48.00	-6.69	-0.87
GQOCR4		58.50	3.99	0.53	57.50	2.81	0.37
JBRXQ2		51.20	-3.31	-0.44	48.00	-6.69	-0.87
K39444		52.00	-2.51	-0.33	53.50	-1.19	-0.15
KD74G8		50.50	-4.01	-0.53	50.50	-4.19	-0.55
KG93RZ		57.00	2.49	0.33	55.50	0.81	0.11
KRQJK8		52.50	-2.01	-0.27	50.50	-4.19	-0.55
L746R4		41.50	-13.01	-1.72	42.00	-12.69	-1.65
LBYYP6		45.00	-9.51	-1.26	48.00	-6.69	-0.87
LNLBT3		65.50	10.99	1.45	66.00	11.31	1.47
N329WU		54.50	-0.01	0.00	55.50	0.81	0.11
N94364		54.50	-0.01	0.00	55.50	0.81	0.11
NGH2LZ		58.50	3.99	0.53	53.50	-1.19	-0.15
Q836UY		49.00	-5.51	-0.73	48.00	-6.69	-0.87
QJVKHZ		40.50	-14.01	-1.85	44.50	-10.19	-1.33
QUCEN2		47.00	-7.51	-0.99	46.00	-8.69	-1.13
RJPQCY	*	54.50	-0.01	0.00	48.00	-6.69	-0.87
TEXTFV		60.50	5.99	0.79	61.50	6.81	0.89
TQMR7X		52.00	-2.51	-0.33	52.50	-2.19	-0.29
U6L4ZM		61.50	6.99	0.92	62.00	7.31	0.95
UC6AXU		49.50	-5.01	-0.66	48.50	-6.19	-0.81
ULVV3T		50.50	-4.01	-0.53	49.00	-5.69	-0.74
VCZC2P		51.50	-3.01	-0.40	51.00	-3.69	-0.48
VPAR9U	*	67.00	12.49	1.65	62.00	7.31	0.95
VVVRFU		54.00	-0.51	-0.07	53.50	-1.19	-0.15
WVPWAT		64.00	9.49	1.25	68.50	13.81	1.80
WY6H6L		50.29	-4.22	-0.56	50.29	-4.40	-0.57
X2VQ4P		44.25	-10.26	-1.36	43.00	-11.69	-1.52
X774LM		62.50	7.99	1.06	64.00	9.31	1.21



Analysis 902
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
YA28YR		56.50	1.99	0.26	56.50	1.81	0.24
YQA2TM		49.00	-5.51	-0.73	51.00	-3.69	-0.48
YRZARP		42.38	-12.13	-1.61	47.44	-7.25	-0.95
Z3DUPR		69.00	14.49	1.92	71.50	16.81	2.19
ZU3HHL		57.00	2.49	0.33	56.00	1.31	0.17

Grand Means		Summary Statistics	
	54.514 mg/L		54.688 mg/L
Std Dev Btwn Labs			7.670 mg/L
	7.559 mg/L		
Statistics based on 71 of 75 reporting participants			

Wines tested: SA05: Merlot; SA06: Zinfandel

Comments on Assigned Data Flags for Test #902

6AJ8JJ (X) - Inconsistent in testing between samples.

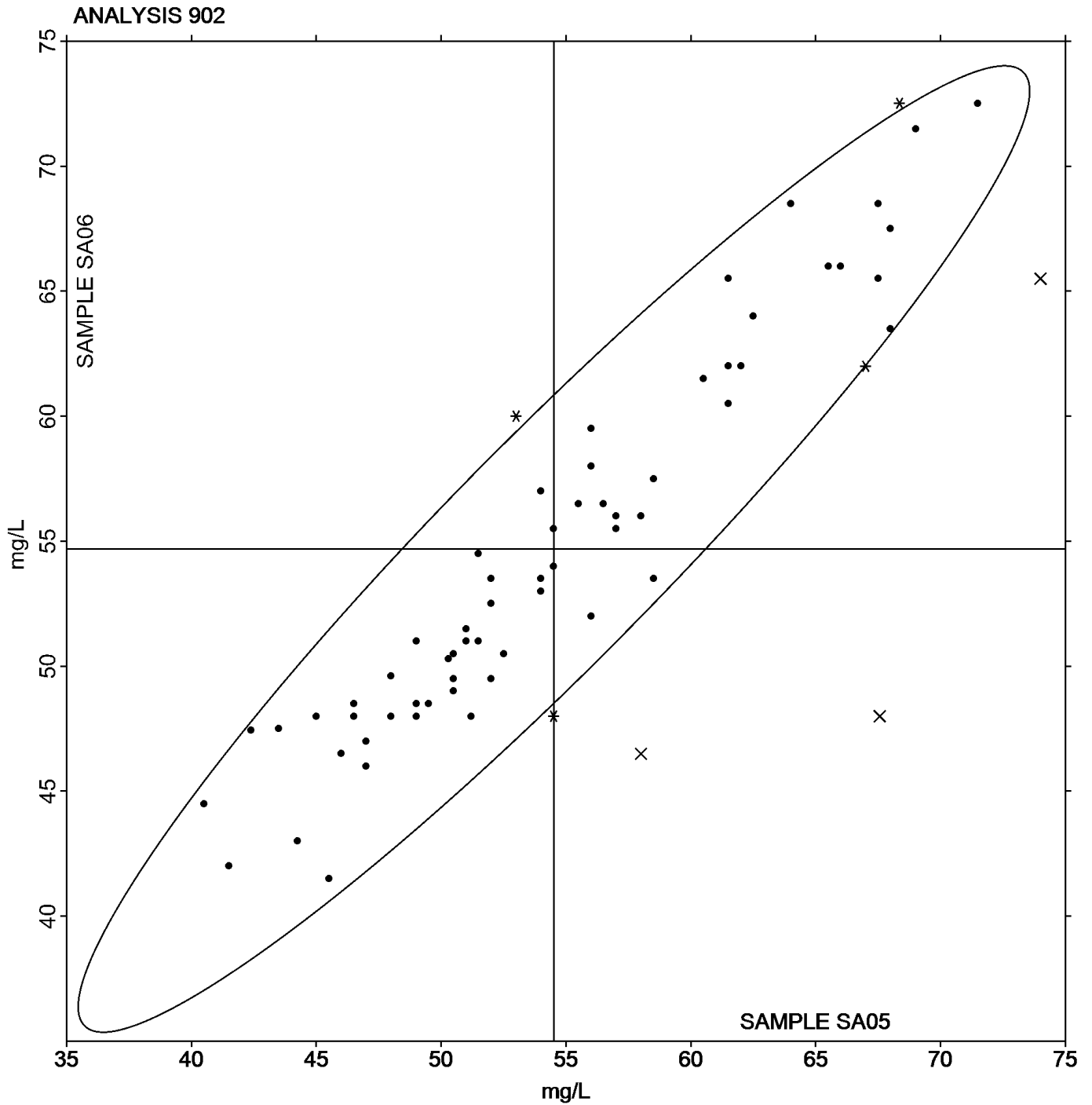
DJZJC9 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

8N94MK (X) - Inconsistent in testing between samples.

32VJPP (X) - Data for both samples are low. Possible Systematic Error.

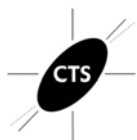
Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA05 <i>Merlot</i>			Sample SA06 <i>Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	54.500	0.000	-0.01	55.500	0.000	0.81	1/1
Ripper Method	57.499	8.565	2.99	57.757	9.224	3.07	29/32
Aeration Oxidation (AO) Method	52.325	6.523	-2.19	51.895	5.673	-2.79	20/20
Segmented Flow Analyzer	53.500	5.115	-1.01	53.250	4.628	-1.44	4/4
Enzymatic Method	53.900	7.853	-0.61	54.800	6.281	0.11	5/5
Colorimetric Analyzer	53.800	7.783	-0.71	55.600	7.995	0.91	5/5
FTIR	54.000	0.000	-0.51	53.000	0.000	-1.69	1/1
Flow Injection Analysis	49.250	2.842	-5.26	49.417	2.616	-5.27	6/7



**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #053****Analysis 903****Summer 2016****Free Sulfur Dioxide**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2FWVKN		21.00	0.96	0.46	22.00	1.68	0.74
2QM86H		19.05	-1.00	-0.48	18.40	-1.92	-0.85
32VJPP	X	6.00	-14.05	-6.77	7.50	-12.82	-5.67
3CW8GM		16.50	-3.55	-1.71	17.00	-3.32	-1.47
4PW9TN		20.50	0.46	0.22	20.00	-0.32	-0.14
6AJ8JJ	X	28.00	7.96	3.84	18.50	-1.82	-0.80
6HRN7H		20.85	0.81	0.39	20.90	0.58	0.26
6RNEXK		19.50	-0.55	-0.26	20.00	-0.32	-0.14
6TU7GL		23.50	3.46	1.67	23.00	2.68	1.19
6UPPJM		22.50	2.46	1.18	22.50	2.18	0.97
77EYRD	*	22.00	1.96	0.94	24.50	4.18	1.85
7C692C		24.00	3.96	1.91	25.00	4.68	2.07
7DZR4D		19.00	-1.05	-0.50	19.50	-0.82	-0.36
7LQD9B		18.00	-2.05	-0.99	18.00	-2.32	-1.02
7XKTXC	X	30.00	9.96	4.80	29.50	9.18	4.06
8N94MK	X	24.00	3.96	1.91	21.00	0.68	0.30
8QFLLG		17.50	-2.55	-1.23	19.00	-1.32	-0.58
8YEYRC		18.50	-1.55	-0.75	18.00	-2.32	-1.02
9393BH		16.00	-4.05	-1.95	16.50	-3.82	-1.69
9CU7HG		21.50	1.46	0.70	21.50	1.18	0.52
A6CB2D		18.50	-1.55	-0.75	18.50	-1.82	-0.80
A73HZG		18.00	-2.05	-0.99	20.00	-0.32	-0.14
B4YZN7		24.00	3.96	1.91	24.00	3.68	1.63
BC63LC		18.00	-2.05	-0.99	19.00	-1.32	-0.58
BU8N4D		23.28	3.23	1.56	24.26	3.94	1.74
BZYPR8		18.50	-1.55	-0.75	18.00	-2.32	-1.02
CE7C8E		17.50	-2.55	-1.23	18.00	-2.32	-1.02
CT7BVB		18.00	-2.05	-0.99	18.00	-2.32	-1.02
CU2UWC		23.00	2.96	1.42	24.00	3.68	1.63
CX2V88		20.00	-0.05	-0.02	21.00	0.68	0.30
DABVG7		23.50	3.46	1.67	22.50	2.18	0.97
DEK9Y6		22.40	2.36	1.14	20.80	0.48	0.21
DJZJC9	X	19.70	-0.35	-0.17	23.85	3.53	1.56
DW6PGF		18.00	-2.05	-0.99	18.50	-1.82	-0.80
DWQFD7		19.50	-0.55	-0.26	20.50	0.18	0.08



Analysis 903

Summer 2016

Free Sulfur Dioxide

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ENQFE6		21.00	0.96	0.46	22.00	1.68	0.74
EWEDUC		24.00	3.96	1.91	25.00	4.68	2.07
F8F2L9		19.50	-0.55	-0.26	20.50	0.18	0.08
FBFCH9	X	5.50	-14.55	-7.01	5.50	-14.82	-6.55
FY2ED6		19.00	-1.05	-0.50	19.00	-1.32	-0.58
G6RY37		19.50	-0.55	-0.26	18.50	-1.82	-0.80
GJ783A		22.00	1.96	0.94	21.50	1.18	0.52
GJN4KC		19.50	-0.55	-0.26	19.50	-0.82	-0.36
GPFB67		19.00	-1.05	-0.50	20.00	-0.32	-0.14
GQOCR4		24.50	4.46	2.15	24.50	4.18	1.85
JBRXQ2	*	19.20	-0.85	-0.41	16.80	-3.52	-1.55
K39444		20.50	0.46	0.22	20.50	0.18	0.08
KD74G8		19.00	-1.05	-0.50	19.50	-0.82	-0.36
KG93RZ	*	17.85	-2.20	-1.06	20.15	-0.17	-0.07
KRQJK8		19.50	-0.55	-0.26	19.50	-0.82	-0.36
L746R4		18.50	-1.55	-0.75	18.00	-2.32	-1.02
LBYYP6		18.00	-2.05	-0.99	17.00	-3.32	-1.47
LNLBT3		19.00	-1.05	-0.50	19.40	-0.92	-0.41
N329WU		21.50	1.46	0.70	21.00	0.68	0.30
N3GEBX		19.40	-0.65	-0.31	18.75	-1.57	-0.69
N94364		22.00	1.96	0.94	23.00	2.68	1.19
NGH2LZ		18.00	-2.05	-0.99	18.00	-2.32	-1.02
Q836UY		18.00	-2.05	-0.99	17.50	-2.82	-1.25
QJVKHZ	X	27.00	6.96	3.35	26.50	6.18	2.73
QUCEN2		18.50	-1.55	-0.75	20.00	-0.32	-0.14
RJPQCY		22.50	2.46	1.18	23.50	3.18	1.41
TETBGW	X	1.13	-18.92	-9.12	1.09	-19.23	-8.50
TEXTFV		21.00	0.96	0.46	22.50	2.18	0.97
TQMR7X	X	24.00	3.96	1.91	21.50	1.18	0.52
UC6AXU		17.00	-3.05	-1.47	17.50	-2.82	-1.25
ULVV3T		19.50	-0.55	-0.26	20.00	-0.32	-0.14
VCZC2P		20.00	-0.05	-0.02	20.50	0.18	0.08
VVVRFU		20.00	-0.05	-0.02	20.00	-0.32	-0.14
WVPWAT		23.00	2.96	1.42	23.00	2.68	1.19
WY6H6L		23.54	3.50	1.69	24.61	4.29	1.90



**Analysis 903
Free Sulfur Dioxide**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
X2VQ4P		19.15	-0.90	-0.43	17.70	-2.62	-1.16
X774LM		21.00	0.96	0.46	22.00	1.68	0.74
XZK4EM		21.00	0.96	0.46	21.00	0.68	0.30
YA28YR		18.00	-2.05	-0.99	18.50	-1.82	-0.80
YQA2TM		18.50	-1.55	-0.75	18.00	-2.32	-1.02
YRZARP		19.85	-0.20	-0.10	20.29	-0.03	-0.01
Z3DUPR	X	33.00	12.96	6.25	32.50	12.18	5.39
ZU3HHL		20.00	-0.05	-0.02	20.00	-0.32	-0.14

Grand Means		Summary Statistics	
	20.045 mg/L		20.317 mg/L
Std Dev Btwn Labs			
	2.074 mg/L		2.262 mg/L
Statistics based on 68 of 78 reporting participants			

Wines tested: SA05: Merlot; SA06: Zinfandel

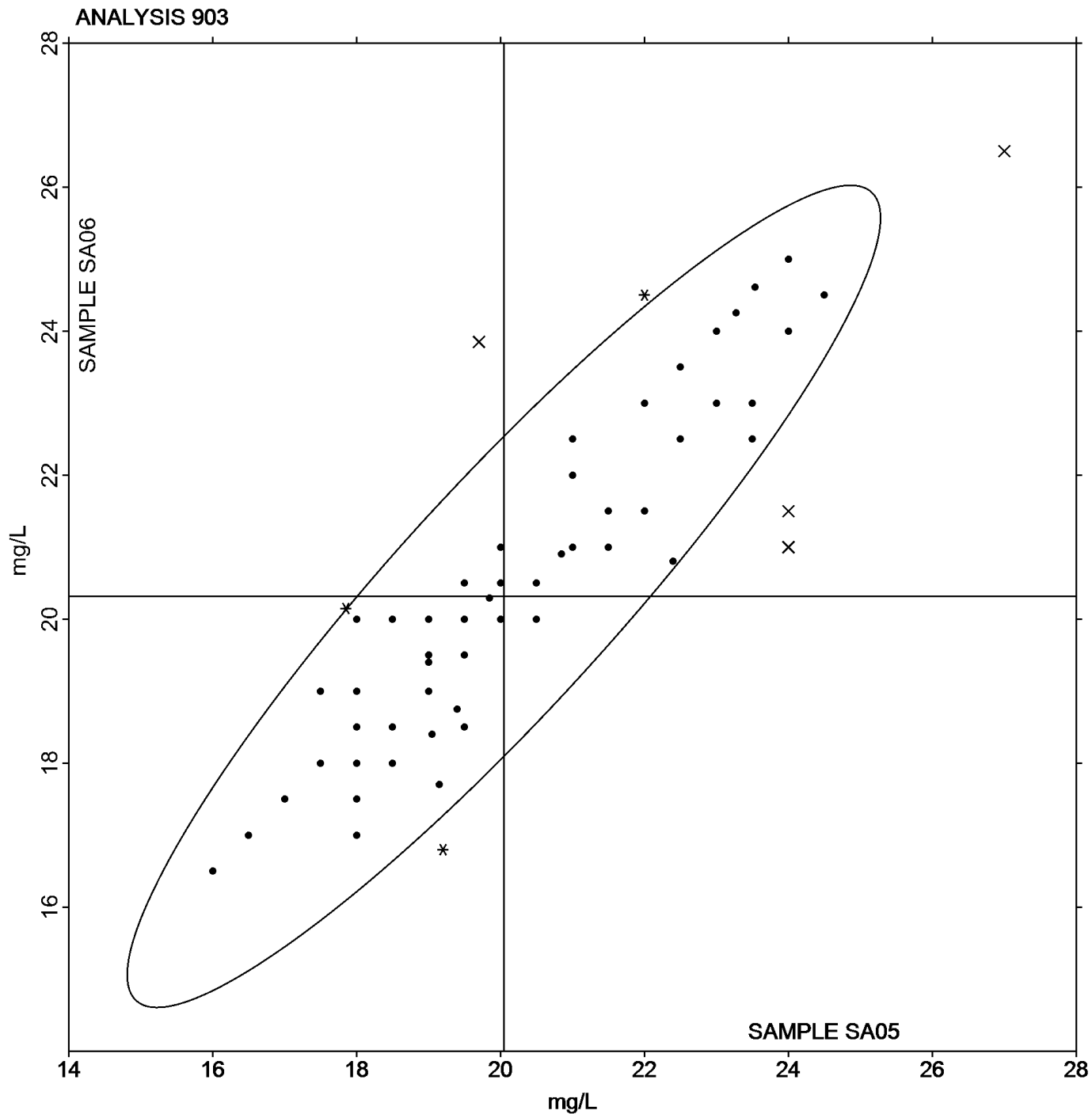
Comments on Assigned Data Flags for Test #903

- QJVKHZ (X) - Inconsistent in testing between samples, data for sample SA05 are high.
- 6AJ8JJ (X) - Inconsistent in testing between samples, data for sample SA05 are high. Inconsistent within the determinations of sample SA05.
- DJZJC9 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA06.
- 7XKTXC (X) - Data for both samples are high. Possible Systematic Error.
- Z3DUPR (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA05.
- TQMR7X (X) - Inconsistent in testing between samples.
- 8N94MK (X) - Inconsistent in testing between samples.
- 32VJPP (X) - Data for both samples are low. Possible Systematic Error.
- FBFCH9 (X) - Data for both samples are low.
- TETBGW (X) - Data for both samples are low.



Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA05 <i>Merlot</i>			Sample SA06 <i>Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	22.000	0.000	1.96	23.000	0.000	2.68	1/1
Ripper Method	21.075	2.208	1.03	21.693	2.307	1.38	15/20
Aeration Oxidation (AO) Method	20.063	2.053	0.02	20.326	2.216	0.01	33/37
Segmented Flow Analyzer	20.392	1.900	0.35	20.483	1.543	0.17	6/6
Colormetric Analyzer	18.625	1.750	-1.42	18.125	1.436	-2.19	4/4
Flow Injection Analysis	18.438	0.943	-1.61	18.563	1.208	-1.75	8/9
FTIR	18.500	0.000	-1.55	18.500	0.000	-1.82	1/1

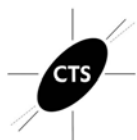




Analysis 904

Titratable Acidity

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2FWVKN		5.950	0.129	0.66	6.360	0.108	0.50
2QM86H		6.100	0.279	1.44	6.600	0.348	1.61
32VJPP		5.815	-0.006	-0.03	6.210	-0.042	-0.20
3CW8GM		5.705	-0.116	-0.60	6.155	-0.097	-0.45
4PW9TN		6.135	0.314	1.62	6.580	0.328	1.52
6AJ8JJ		5.700	-0.121	-0.62	6.150	-0.102	-0.47
6HRN7H	*	6.200	0.379	1.95	6.500	0.248	1.15
6RNEXK		5.740	-0.081	-0.42	6.120	-0.132	-0.61
6TU7GL		5.950	0.129	0.66	6.350	0.098	0.45
6UPPJM		5.700	-0.121	-0.62	6.100	-0.152	-0.71
77EYRD		6.200	0.379	1.95	6.750	0.498	2.31
7C692C		5.500	-0.321	-1.65	5.900	-0.352	-1.63
7DZR4D		5.700	-0.121	-0.62	6.100	-0.152	-0.71
7LQD9B		5.850	0.029	0.15	6.300	0.048	0.22
7XKTXC		5.700	-0.121	-0.62	6.200	-0.052	-0.24
8N94MK		5.400	-0.421	-2.17	5.830	-0.422	-1.96
8QFLLG		5.750	-0.071	-0.36	6.200	-0.052	-0.24
8YEYRC		5.800	-0.021	-0.11	6.250	-0.002	-0.01
9393BH		5.900	0.079	0.41	6.250	-0.002	-0.01
9CU7HG		5.750	-0.071	-0.36	6.300	0.048	0.22
A6CB2D		5.900	0.079	0.41	6.270	0.018	0.08
A73HZG		5.715	-0.106	-0.54	6.060	-0.192	-0.89
B4YZN7		5.880	0.059	0.30	6.280	0.028	0.13
BC63LC	*	6.300	0.479	2.46	6.800	0.548	2.54
BU8N4D		5.960	0.139	0.72	6.540	0.288	1.33
BZYPR8	X	7.050	1.229	6.32	5.850	-0.402	-1.86
CE7C8E		5.700	-0.121	-0.62	6.180	-0.072	-0.34
CT7BVB		5.725	-0.096	-0.49	6.310	0.058	0.27
CU2UWC	X	6.250	0.429	2.21	6.955	0.703	3.26
CX2V88		5.650	-0.171	-0.88	6.050	-0.202	-0.94
DABVG7		6.030	0.209	1.08	6.495	0.243	1.12
DEK9Y6		5.600	-0.221	-1.14	5.900	-0.352	-1.63
DJZJC9	*	5.715	-0.106	-0.54	6.350	0.098	0.45
DW6PGF		5.800	-0.021	-0.11	6.200	-0.052	-0.24
DWQFD7		5.770	-0.051	-0.26	6.250	-0.002	-0.01

Analysis 904
Titratable Acidity

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ENQFE6		5.895	0.074	0.38	6.300	0.048	0.22
EWEDUC		6.000	0.179	0.92	6.400	0.148	0.68
F8F2L9		5.800	-0.021	-0.11	6.200	-0.052	-0.24
FBFCH9	X	6.100	0.279	1.44	6.200	-0.052	-0.24
FY2ED6		6.290	0.469	2.41	6.695	0.443	2.05
G6RY37		6.000	0.179	0.92	6.400	0.148	0.68
GJ783A		6.000	0.179	0.92	6.450	0.198	0.92
GJN4KC	X	5.925	0.104	0.54	6.000	-0.252	-1.17
GPFB67	X	5.095	-0.726	-3.73	5.495	-0.757	-3.51
GQOCR4		5.700	-0.121	-0.62	6.100	-0.152	-0.71
JBRXQ2		5.840	0.019	0.10	6.295	0.043	0.20
K39444		5.600	-0.221	-1.14	5.950	-0.302	-1.40
KD74G8		5.800	-0.021	-0.11	6.300	0.048	0.22
KG93RZ		5.700	-0.121	-0.62	6.100	-0.152	-0.71
KRQJK8	*	5.750	-0.071	-0.36	6.400	0.148	0.68
L746R4		5.735	-0.086	-0.44	6.115	-0.137	-0.64
LBYYP6		5.710	-0.111	-0.57	6.145	-0.107	-0.50
LNLBT3		6.250	0.429	2.21	6.700	0.448	2.08
N329WU		5.905	0.084	0.43	6.205	-0.047	-0.22
N3GEBX	*	6.355	0.534	2.75	6.900	0.648	3.00
NGH2LZ	X	6.085	0.264	1.36	6.275	0.023	0.11
PPRPYY		6.000	0.179	0.92	6.300	0.048	0.22
Q836UY		5.800	-0.021	-0.11	6.200	-0.052	-0.24
QJVKHZ		5.700	-0.121	-0.62	6.100	-0.152	-0.71
QUCEN2		5.800	-0.021	-0.11	6.200	-0.052	-0.24
RJPQCY		5.750	-0.071	-0.36	6.075	-0.177	-0.82
RPZTEU		5.900	0.079	0.41	6.350	0.098	0.45
TETBGW		5.645	-0.176	-0.91	6.140	-0.112	-0.52
TEXTFV		5.700	-0.121	-0.62	6.150	-0.102	-0.47
U6L4ZM		5.743	-0.078	-0.40	6.145	-0.108	-0.50
UC6AXU		5.850	0.029	0.15	6.200	-0.052	-0.24
ULVV3T		5.855	0.034	0.18	6.265	0.013	0.06
VCZC2P		5.725	-0.096	-0.49	6.295	0.043	0.20
VPAR9U		5.850	0.029	0.15	6.400	0.148	0.68
VVVRFU		5.770	-0.051	-0.26	6.230	-0.022	-0.10



**Analysis 904
Titratable Acidity**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
WVPWAT		5.830	0.009	0.05	6.190	-0.062	-0.29
WY6H6L		5.850	0.029	0.15	6.300	0.048	0.22
X2VQ4P		5.840	0.019	0.10	6.190	-0.062	-0.29
X774LM		5.790	-0.031	-0.16	6.245	-0.007	-0.03
XZK4EM		5.745	-0.076	-0.39	6.150	-0.102	-0.47
YA28YR		5.800	-0.021	-0.11	6.240	-0.012	-0.06
YQA2TM		5.700	-0.121	-0.62	6.100	-0.152	-0.71
YRZARP	*	5.285	-0.536	-2.76	5.660	-0.592	-2.75
Z3DUPR		5.700	-0.121	-0.62	6.100	-0.152	-0.71
ZU3HHL		5.500	-0.321	-1.65	5.900	-0.352	-1.63

Grand Means	Summary Statistics
5.8209 g/L as tartaric acid	6.2523 g/L as tartaric acid
Std Dev Btwn Labs	
0.1944 g/L as tartaric acid	0.2157 g/L as tartaric acid
Statistics based on 74 of 80 reporting participants	

Wines tested: SA05: Merlot; SA06: Zinfandel

Comments on Assigned Data Flags for Test #904

- NGH2LZ (X) - Inconsistent in testing between samples.
- BZYPR8 (X) - Inconsistent in testing between samples, data for sample SA05 are high. Inconsistent within the determinations of sample SA05.
- GJN4KC (X) - Inconsistent in testing between samples.
- FBFCH9 (X) - Inconsistent in testing between samples.
- CU2UWC (X) - Inconsistent in testing between samples, data for sample SA06 are high.
- GPF67 (X) - Data for both samples are low. Possible Systematic Error.



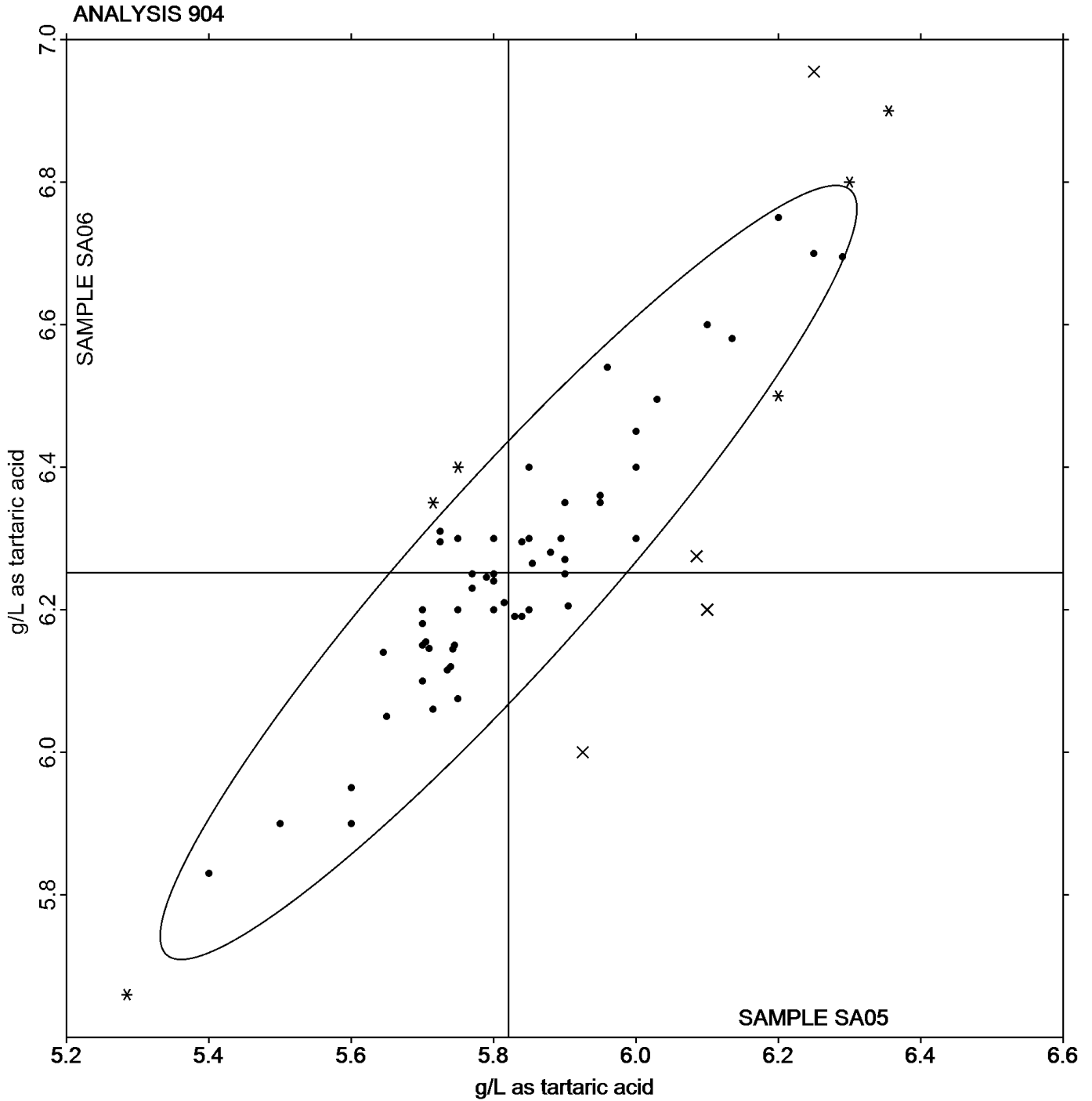
Analysis 904
Titratable Acidity

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA05 <i>Merlot</i>			Sample SA06 <i>Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method	5.770	0.000	-0.051	6.230	0.000	-0.022	1/1
Autotitration	5.822	0.150	0.001	6.263	0.170	0.011	49/50
Manual Titration	5.761	0.285	-0.060	6.176	0.325	-0.077	14/19
FTIR	5.952	0.196	0.131	6.355	0.205	0.103	9/9
Segmented Flow Analyzer	5.500	0.000	-0.321	5.900	0.000	-0.352	1/1



Analysis 904
Titratable Acidity



Analysis 905
Volatile Acidity

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2FWVKN	X	0.7350	0.2437	4.59	0.7950	0.2472	4.12
2QM86H		0.4450	-0.0463	-0.87	0.4950	-0.0528	-0.88
32VJPP		0.5200	0.0287	0.54	0.5700	0.0222	0.37
3CW8GM		0.5300	0.0387	0.73	0.5700	0.0222	0.37
4PW9TN		0.4550	-0.0363	-0.68	0.5100	-0.0378	-0.63
6AJ8JJ	*	0.4900	-0.0013	-0.03	0.4950	-0.0528	-0.88
6HRN7H		0.4550	-0.0363	-0.68	0.5450	-0.0028	-0.05
6RNEXK	X	0.5450	0.0537	1.01	0.5100	-0.0378	-0.63
6TU7GL		0.4850	-0.0063	-0.12	0.5450	-0.0028	-0.05
6UPPJM	*	0.6000	0.1087	2.05	0.6300	0.0822	1.37
77EYRD		0.5100	0.0187	0.35	0.5700	0.0222	0.37
7C692C		0.5200	0.0287	0.54	0.5800	0.0322	0.54
7DZR4D		0.4850	-0.0063	-0.12	0.5550	0.0072	0.12
7LQD9B		0.5450	0.0537	1.01	0.6450	0.0972	1.62
7XKTXC		0.4900	-0.0013	-0.03	0.5450	-0.0028	-0.05
8N94MK		0.5100	0.0187	0.35	0.5500	0.0022	0.04
8QFLLG		0.4200	-0.0713	-1.34	0.4700	-0.0778	-1.30
9393BH		0.4700	-0.0213	-0.40	0.5500	0.0022	0.04
9CU7HG		0.4400	-0.0513	-0.97	0.5000	-0.0478	-0.80
A6CB2D		0.5100	0.0187	0.35	0.5800	0.0322	0.54
A73HZG	X	0.4650	-0.0263	-0.50	0.6050	0.0572	0.95
B4YZN7		0.4400	-0.0513	-0.97	0.4900	-0.0578	-0.96
BC63LC		0.5400	0.0487	0.92	0.6150	0.0672	1.12
BU8N4D		0.5100	0.0187	0.35	0.5700	0.0222	0.37
BZYPR8	*	0.6000	0.1087	2.05	0.6300	0.0822	1.37
CE7C8E		0.5300	0.0387	0.73	0.5850	0.0372	0.62
CT7BVB		0.4500	-0.0413	-0.78	0.5150	-0.0328	-0.55
CU2UWC		0.5050	0.0137	0.26	0.5450	-0.0028	-0.05
CX2V88		0.6150	0.1237	2.33	0.6700	0.1222	2.04
DABVG7		0.4950	0.0037	0.07	0.5500	0.0022	0.04
DEK9Y6		0.4630	-0.0283	-0.53	0.5295	-0.0183	-0.30
DJZJC9		0.4650	-0.0263	-0.50	0.5000	-0.0478	-0.80
DW6PGF		0.4800	-0.0113	-0.21	0.5400	-0.0078	-0.13
DWQFD7	*	0.6225	0.1312	2.47	0.7050	0.1572	2.62
ENQFE6		0.4300	-0.0613	-1.15	0.4700	-0.0778	-1.30

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #053****Analysis 905
Volatile Acidity****Summer 2016**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EWEDUC		0.4400	-0.0513	-0.97	0.5350	-0.0128	-0.21
F8F2L9		0.4400	-0.0513	-0.97	0.4950	-0.0528	-0.88
FBFCH9		0.5400	0.0487	0.92	0.6000	0.0522	0.87
FY2ED6	X	0.7000	0.2087	3.93	0.7000	0.1522	2.54
G6RY37		0.5100	0.0187	0.35	0.5700	0.0222	0.37
GJ783A		0.4400	-0.0513	-0.97	0.4550	-0.0928	-1.55
GPFB67	X	0.6200	0.1287	2.42	0.6100	0.0622	1.04
GQOCR4		0.5000	0.0087	0.16	0.5600	0.0122	0.20
JBRXQ2		0.4050	-0.0863	-1.63	0.4300	-0.1178	-1.96
K39444		0.5250	0.0337	0.63	0.5750	0.0272	0.45
KD74G8		0.5300	0.0387	0.73	0.5750	0.0272	0.45
KG93RZ		0.4750	-0.0163	-0.31	0.5200	-0.0278	-0.46
KRQJK8		0.4500	-0.0413	-0.78	0.4850	-0.0628	-1.05
L746R4		0.5200	0.0287	0.54	0.5350	-0.0128	-0.21
LBYYP6		0.4650	-0.0263	-0.50	0.5300	-0.0178	-0.30
LNLBT3	*	0.3505	-0.1408	-2.65	0.3835	-0.1643	-2.74
N329WU		0.4950	0.0037	0.07	0.5500	0.0022	0.04
N3GEBX		0.4950	0.0037	0.07	0.5700	0.0222	0.37
N94364		0.4950	0.0037	0.07	0.5700	0.0222	0.37
NGH2LZ	X	0.5625	0.0712	1.34	0.5045	-0.0433	-0.72
PPRPYY		0.4850	-0.0063	-0.12	0.5850	0.0372	0.62
Q836UY		0.4950	0.0037	0.07	0.5550	0.0072	0.12
QJVKHZ	X	0.6600	0.1687	3.18	0.8200	0.2722	4.54
QUCEN2		0.5350	0.0437	0.82	0.5800	0.0322	0.54
RJPQCY	X	0.3850	-0.1063	-2.00	0.3650	-0.1828	-3.05
RPZTEU	X	0.7100	0.2187	4.12	0.7650	0.2172	3.62
TETBGW		0.4300	-0.0613	-1.15	0.4800	-0.0678	-1.13
TEXTFV		0.5800	0.0887	1.67	0.6300	0.0822	1.37
U6L4ZM		0.4635	-0.0278	-0.52	0.5445	-0.0033	-0.05
UC6AXU		0.5600	0.0687	1.29	0.6500	0.1022	1.71
ULVV3T		0.4750	-0.0163	-0.31	0.5550	0.0072	0.12
VCZC2P		0.5200	0.0287	0.54	0.6100	0.0622	1.04
VVVRFU		0.4150	-0.0763	-1.44	0.4450	-0.1028	-1.71
WVPWAT		0.4550	-0.0363	-0.68	0.5250	-0.0228	-0.38
WY6H6L		0.4860	-0.0053	-0.10	0.5400	-0.0078	-0.13



Analysis 905
Volatile Acidity

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
X2VQ4P		0.5350	0.0437	0.82	0.5750	0.0272	0.45
X774LM		0.4000	-0.0913	-1.72	0.4400	-0.1078	-1.80
XZK4EM		0.4700	-0.0213	-0.40	0.5450	-0.0028	-0.05
YA28YR		0.5550	0.0637	1.20	0.6150	0.0672	1.12
YQA2TM		0.4100	-0.0813	-1.53	0.4600	-0.0878	-1.46
Z3DUPR		0.5650	0.0737	1.39	0.6500	0.1022	1.71
ZU3HHL		0.4750	-0.0163	-0.31	0.5050	-0.0428	-0.71

Grand Means		Summary Statistics	
	0.49133 g/L as acetic acid		0.54776 g/L as acetic acid
Std Dev Btwn Labs			
	0.05310 g/L as acetic acid		0.05995 g/L as acetic acid
Statistics based on 68 of 77 reporting participants			

Wines tested: SA05: Merlot; SA06: Zinfandel

Comments on Assigned Data Flags for Test #905

- 6RNEXK (X) - Inconsistent in testing between samples.
- RJPQCY (X) - Inconsistent in testing between samples, data for sample SA06 are low.
- QJVKHZ (X) - Data for both samples are high. Possible Systematic Error.
- NGH2LZ (X) - Inconsistent in testing between samples.
- A73HZG (X) - Inconsistent in testing between samples.
- 2FWVKN (X) - Data for both samples are high. Possible Systematic Error.
- GPF67 (X) - Inconsistent in testing between samples.
- RPZTEU (X) - Data for both samples are high. Possible Systematic Error.
- FY2ED6 (X) - Inconsistent in testing between samples, data for sample SA05 are high. Inconsistent within the determinations of both samples.



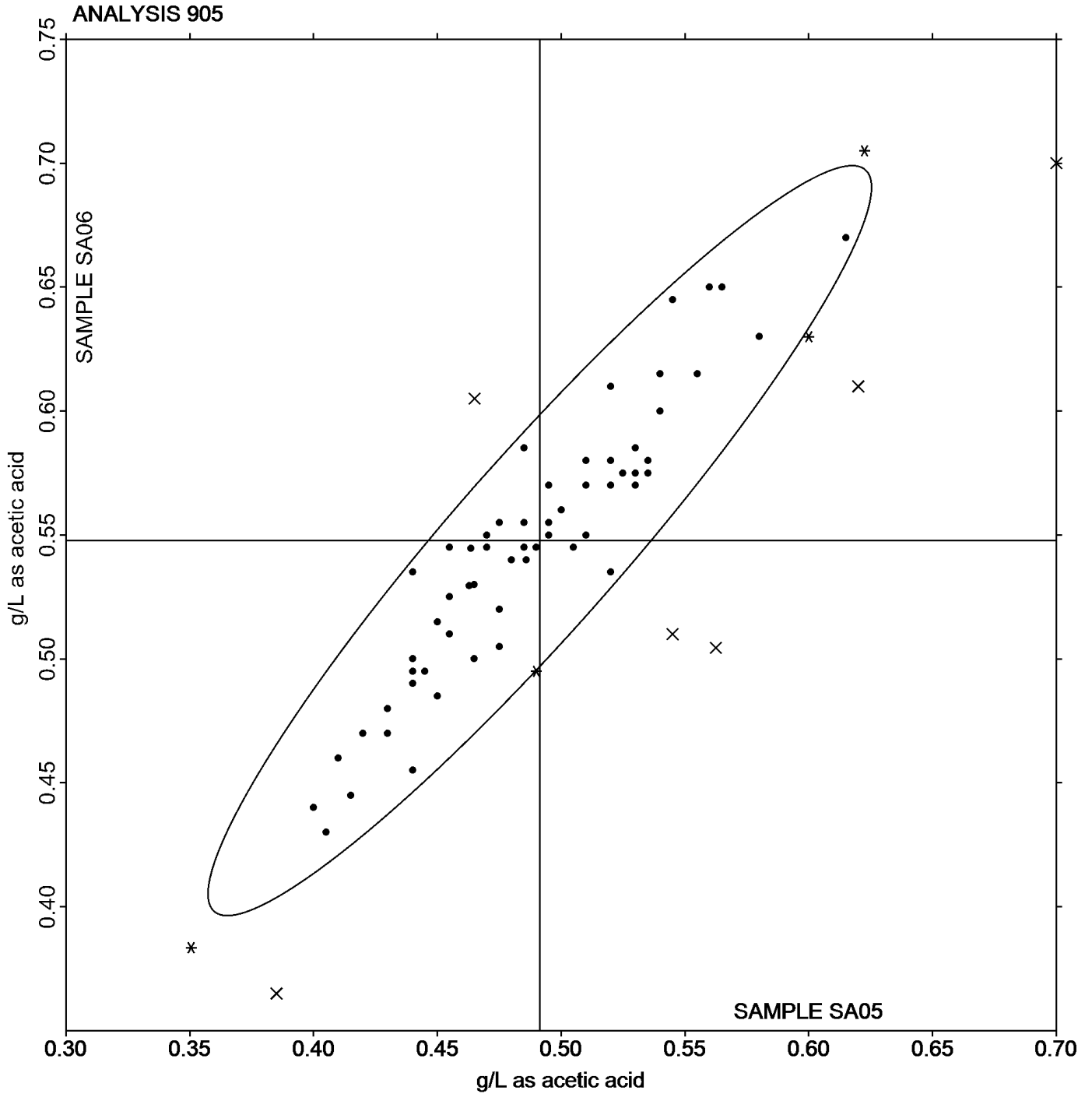
Analysis 905
Volatile Acidity

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA05 <i>Merlot</i>			Sample SA06 <i>Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method	0.560	0.000	0.0687	0.650	0.000	0.1022	1/1
Cash Still method	0.512	0.056	0.0206	0.563	0.066	0.0156	16/21
Enzymatic method	0.475	0.050	-0.0161	0.531	0.056	-0.0172	33/36
HPLC	0.520	0.000	0.0287	0.570	0.000	0.0222	1/1
GC	0.448	0.054	-0.0433	0.500	0.057	-0.0478	2/2
Colorimetric Analysis	0.510	0.000	0.0187	0.550	0.000	0.0022	1/1
Seg. Flow / Colorimetric Analyzer	0.523	0.055	0.0320	0.575	0.059	0.0272	6/6
FTIR	0.489	0.039	-0.0026	0.563	0.054	0.0154	8/9



Analysis 905
Volatile Acidity





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #053
Summer 2016

Analysis 906 Specific Gravity

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2FWVKN	X	0.9965	0.0005	0.80	0.9961	-0.0007	-1.29
2QM86H	X	1.0026	0.0065	11.14	1.0032	0.0064	10.92
32VJPP		0.9962	0.0002	0.29	0.9970	0.0002	0.26
4PW9TN	X	0.9957	-0.0003	-0.53	0.9957	-0.0011	-1.94
6AJ8JJ	X	0.9933	-0.0027	-4.60	0.9941	-0.0028	-4.76
6HRN7H		0.9950	-0.0010	-1.76	0.9959	-0.0009	-1.63
6RNEXK	X	0.9966	0.0006	0.97	0.9977	0.0009	1.46
6TU7GL		0.9964	0.0004	0.61	0.9972	0.0003	0.59
6UPPJM		0.9962	0.0001	0.22	0.9970	0.0001	0.21
7C692C		0.9961	0.0001	0.12	0.9970	0.0001	0.17
7DZR4D		0.9962	0.0001	0.24	0.9970	0.0002	0.26
7LQD9B		0.9966	0.0006	0.97	0.9974	0.0005	0.86
7XKTXC		0.9968	0.0007	1.23	0.9977	0.0009	1.46
8N94MK	*	0.9945	-0.0015	-2.62	0.9953	-0.0015	-2.66
8QFLLG	X	0.9934	-0.0026	-4.50	0.9942	-0.0026	-4.55
8YEYRC		0.9962	0.0002	0.29	0.9970	0.0002	0.26
9393BH		0.9966	0.0006	0.96	0.9974	0.0005	0.93
9CU7HG		0.9973	0.0013	2.17	0.9980	0.0012	1.98
A73HZG		0.9962	0.0001	0.21	0.9970	0.0001	0.22
B4YZN7	*	0.9958	-0.0002	-0.41	0.9964	-0.0005	-0.79
BC63LC	*	0.9943	-0.0017	-2.95	0.9952	-0.0017	-2.89
BZYPR8	X	0.9923	-0.0037	-6.40	0.9928	-0.0041	-6.98
CE7C8E		0.9963	0.0003	0.46	0.9970	0.0002	0.26
CT7BVB	X	0.9952	-0.0008	-1.42	0.9970	0.0002	0.26
CX2V88		0.9962	0.0001	0.22	0.9969	0.0000	0.07
DABVG7		0.9961	0.0001	0.12	0.9969	0.0001	0.09
DEK9Y6		0.9960	0.0000	-0.05	0.9969	0.0001	0.09
DJZJC9	X	0.9935	-0.0026	-4.41	0.9941	-0.0028	-4.81
DW6PGF		0.9962	0.0002	0.29	0.9970	0.0002	0.26
DWQFD7		0.9965	0.0005	0.80	0.9973	0.0005	0.78
FBFCH9	*	0.9943	-0.0017	-2.96	0.9951	-0.0017	-3.01
FY2ED6		0.9961	0.0001	0.10	0.9969	0.0000	0.07
G6RY37		0.9962	0.0002	0.29	0.9970	0.0002	0.26
GJN4KC	X	0.9825	-0.0135	-23.13	0.9820	-0.0149	-25.61
GPFB67		0.9963	0.0002	0.38	0.9971	0.0002	0.37

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #053****Analysis 906
Specific Gravity****Summer 2016**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GQQCR4	X	0.9981	0.0020	3.45	0.9990	0.0022	3.70
JBRXQ2		0.9964	0.0004	0.63	0.9973	0.0004	0.69
K39444		0.9957	-0.0003	-0.55	0.9965	-0.0004	-0.62
KD74G8		0.9965	0.0005	0.80	0.9974	0.0005	0.86
KG93RZ	X	0.9930	-0.0030	-5.18	0.9940	-0.0028	-4.90
KRQJK8	X	0.9978	0.0018	3.01	0.9978	0.0009	1.62
L746R4		0.9962	0.0001	0.20	0.9970	0.0001	0.17
LBYYP6		0.9962	0.0002	0.32	0.9970	0.0002	0.28
N329WU		0.9960	0.0000	-0.05	0.9970	0.0002	0.26
N94364	*	0.9944	-0.0016	-2.79	0.9952	-0.0016	-2.83
NGH2LZ		0.9963	0.0002	0.41	0.9971	0.0002	0.40
Q836UY		0.9962	0.0001	0.20	0.9970	0.0001	0.21
QJVKHZ		0.9962	0.0001	0.23	0.9970	0.0001	0.21
RJPQCY		0.9962	0.0001	0.23	0.9972	0.0003	0.52
TEXTFV	*	0.9965	0.0005	0.80	0.9971	0.0003	0.43
TQMR7X	X	0.9969	0.0009	1.53	0.9969	0.0000	0.02
U6L4ZM		0.9961	0.0001	0.17	0.9969	0.0001	0.14
UC6AXU		0.9961	0.0001	0.12	0.9969	0.0001	0.09
ULVV3T		0.9962	0.0002	0.29	0.9971	0.0003	0.43
VCZC2P		0.9960	0.0000	0.01	0.9970	0.0002	0.30
VPAR9U		0.9962	0.0001	0.20	0.9970	0.0001	0.18
VVVRFU		0.9960	0.0000	-0.05	0.9970	0.0002	0.26
WVPWAT		0.9956	-0.0005	-0.82	0.9964	-0.0004	-0.77
WY6H6L	X	0.9950	-0.0010	-1.76	0.9950	-0.0018	-3.18
X2VQ4P		0.9959	-0.0001	-0.23	0.9967	-0.0002	-0.34
X774LM		0.9959	-0.0001	-0.23	0.9967	-0.0001	-0.26
YA28YR		0.9961	0.0001	0.19	0.9970	0.0001	0.21
YQA2TM		0.9961	0.0001	0.19	0.9970	0.0002	0.26
Z3DUPR		0.9962	0.0002	0.27	0.9970	0.0001	0.19
ZU3HHL		0.9962	0.0002	0.29	0.9970	0.0002	0.26



Analysis 906
Specific Gravity

Grand Means	Summary Statistics
0.99603 sp gr 20/20 C	0.99685 sp gr 20/20 C
Stnd Dev Btwn Labs	
0.00059 sp gr 20/20 C	0.00058 sp gr 20/20 C
Statistics based on 50 of 65 reporting participants	

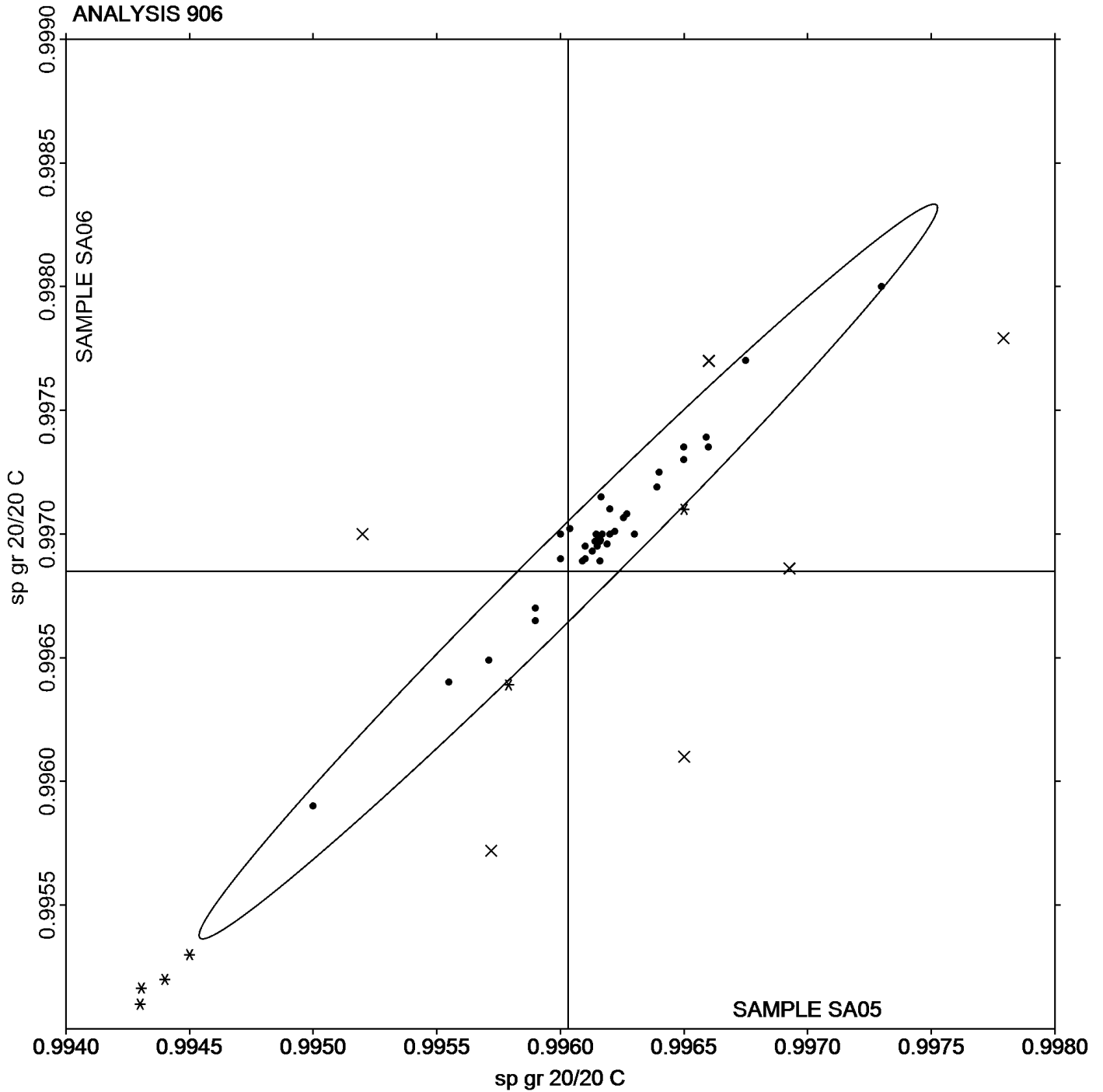
Wines tested: SA05: Merlot; SA06: Zinfandel

Comments on Assigned Data Flags for Test #906

- 6RNEXK (X) - Inconsistent in testing between samples.
- 6AJ8JJ (X) - Data for both samples are low. Possible Systematic Error.
- DJZJC9 (X) - Data for both samples are low. Possible Systematic Error.
- BZYPR8 (X) - Data for both samples are low. Possible Systematic Error.
- 2QM86H (X) - Data for both samples are high.
- WY6H6L (X) - Inconsistent in testing between samples, data for sample SA06 are low.
- 4PW9TN (X) - Inconsistent in testing between samples.
- TQMR7X (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA06.
- GJN4KC (X) - Data for both samples are low.
- KRQJK8 (X) - Inconsistent in testing between samples, data for sample SA05 are high.
- 8QFLLG (X) - Data for both samples are low. Possible Systematic Error.
- CT7BVB (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA05.
- 2FWVKN (X) - Inconsistent in testing between samples.
- KG93RZ (X) - Data for both samples are low. Possible Systematic Error.
- GQQCR4 (X) - Data for both samples are high. Possible Systematic Error.



Analysis 906
Specific Gravity



**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #053****Analysis 907****Summer 2016****pH**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2FWVKN		3.455	-0.040	-1.19	3.455	-0.038	-1.14
2QM86H		3.520	0.025	0.76	3.530	0.037	1.11
32VJPP	*	3.545	0.050	1.51	3.565	0.072	2.15
3CW8GM		3.500	0.005	0.16	3.500	0.007	0.21
4PW9TN		3.460	-0.035	-1.04	3.460	-0.033	-0.99
6AJ8JJ		3.480	-0.015	-0.44	3.480	-0.013	-0.39
6HRN7H		3.475	-0.020	-0.59	3.470	-0.023	-0.69
6RNEXK		3.480	-0.015	-0.44	3.480	-0.013	-0.39
6TU7GL		3.465	-0.030	-0.89	3.455	-0.038	-1.14
6UPPJM		3.485	-0.010	-0.29	3.485	-0.008	-0.24
77EYRD		3.520	0.025	0.76	3.520	0.027	0.81
7C692C		3.495	0.000	0.01	3.490	-0.003	-0.09
7DZR4D		3.490	-0.005	-0.14	3.490	-0.003	-0.09
7LQD9B		3.450	-0.045	-1.34	3.450	-0.043	-1.29
7XKTXC		3.490	-0.005	-0.14	3.485	-0.008	-0.24
8N94MK		3.450	-0.045	-1.34	3.435	-0.058	-1.73
8QFLLG		3.535	0.040	1.21	3.535	0.042	1.25
8YEYRC		3.500	0.005	0.16	3.490	-0.003	-0.09
9393BH		3.535	0.040	1.21	3.530	0.037	1.11
9CU7HG		3.500	0.005	0.16	3.490	-0.003	-0.09
A6CB2D	*	3.560	0.065	1.96	3.540	0.047	1.40
A73HZG		3.450	-0.045	-1.34	3.450	-0.043	-1.29
B4YZN7		3.500	0.005	0.16	3.500	0.007	0.21
BC63LC	X	3.600	0.105	3.15	3.570	0.077	2.30
BU8N4D		3.480	-0.015	-0.44	3.480	-0.013	-0.39
BZYPR8		3.445	-0.050	-1.49	3.440	-0.053	-1.58
CE7C8E		3.550	0.055	1.66	3.550	0.057	1.70
CT7BVB		3.500	0.005	0.16	3.490	-0.003	-0.09
CU2UWC		3.550	0.055	1.66	3.530	0.037	1.11
CX2V88		3.530	0.035	1.06	3.530	0.037	1.11
DABVG7		3.495	0.000	0.01	3.490	-0.003	-0.09
DEK9Y6		3.470	-0.025	-0.74	3.475	-0.018	-0.54
DJZJC9	X	3.650	0.155	4.65	3.700	0.207	6.19
DW6PGF		3.450	-0.045	-1.34	3.440	-0.053	-1.58
DWQFD7		3.470	-0.025	-0.74	3.465	-0.028	-0.84

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #053****Analysis 907****Summer 2016****pH**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ENQFE6		3.520	0.025	0.76	3.520	0.027	0.81
EWEDUC	*	3.435	-0.060	-1.79	3.455	-0.038	-1.14
F8F2L9	*	3.530	0.035	1.06	3.505	0.012	0.36
FBFCH9		3.530	0.035	1.06	3.525	0.032	0.96
FY2ED6	X	3.430	-0.065	-1.93	3.460	-0.033	-0.99
G6RY37	X	3.540	0.045	1.36	3.570	0.077	2.30
GJ783A		3.535	0.040	1.21	3.535	0.042	1.25
GJN4KC		3.470	-0.025	-0.74	3.470	-0.023	-0.69
GPFB67		3.415	-0.080	-2.38	3.415	-0.078	-2.33
GQOCR4		3.460	-0.035	-1.04	3.475	-0.018	-0.54
JBRXQ2		3.435	-0.060	-1.79	3.430	-0.063	-1.88
K39444		3.505	0.010	0.31	3.500	0.007	0.21
KD74G8		3.475	-0.020	-0.59	3.480	-0.013	-0.39
KG93RZ		3.550	0.055	1.66	3.550	0.057	1.70
KRQJK8		3.455	-0.040	-1.19	3.460	-0.033	-0.99
L746R4		3.510	0.015	0.46	3.520	0.027	0.81
LBYYP6		3.500	0.005	0.16	3.495	0.002	0.06
LNLBT3		3.495	0.000	0.01	3.475	-0.018	-0.54
N329WU		3.460	-0.035	-1.04	3.460	-0.033	-0.99
N3GEBX		3.505	0.010	0.31	3.495	0.002	0.06
N94364		3.495	0.000	0.01	3.495	0.002	0.06
NGH2LZ		3.490	-0.005	-0.14	3.480	-0.013	-0.39
PPRPYY	X	3.490	-0.005	-0.14	3.525	0.032	0.96
Q836UY		3.480	-0.015	-0.44	3.480	-0.013	-0.39
QJVKHZ		3.490	-0.005	-0.14	3.480	-0.013	-0.39
QUCEN2		3.465	-0.030	-0.89	3.460	-0.033	-0.99
RJPQCY		3.475	-0.020	-0.59	3.470	-0.023	-0.69
RPZTEU		3.485	-0.010	-0.29	3.485	-0.008	-0.24
TETBGW		3.500	0.005	0.16	3.500	0.007	0.21
TEXTFV		3.500	0.005	0.16	3.500	0.007	0.21
UC6AXU	*	3.520	0.025	0.76	3.540	0.047	1.40
ULVV3T	*	3.580	0.085	2.55	3.580	0.087	2.60
VCZC2P		3.480	-0.015	-0.44	3.495	0.002	0.06
VVVRFU		3.535	0.040	1.21	3.535	0.042	1.25
WVPWAT		3.470	-0.025	-0.74	3.480	-0.013	-0.39



Analysis 907

pH

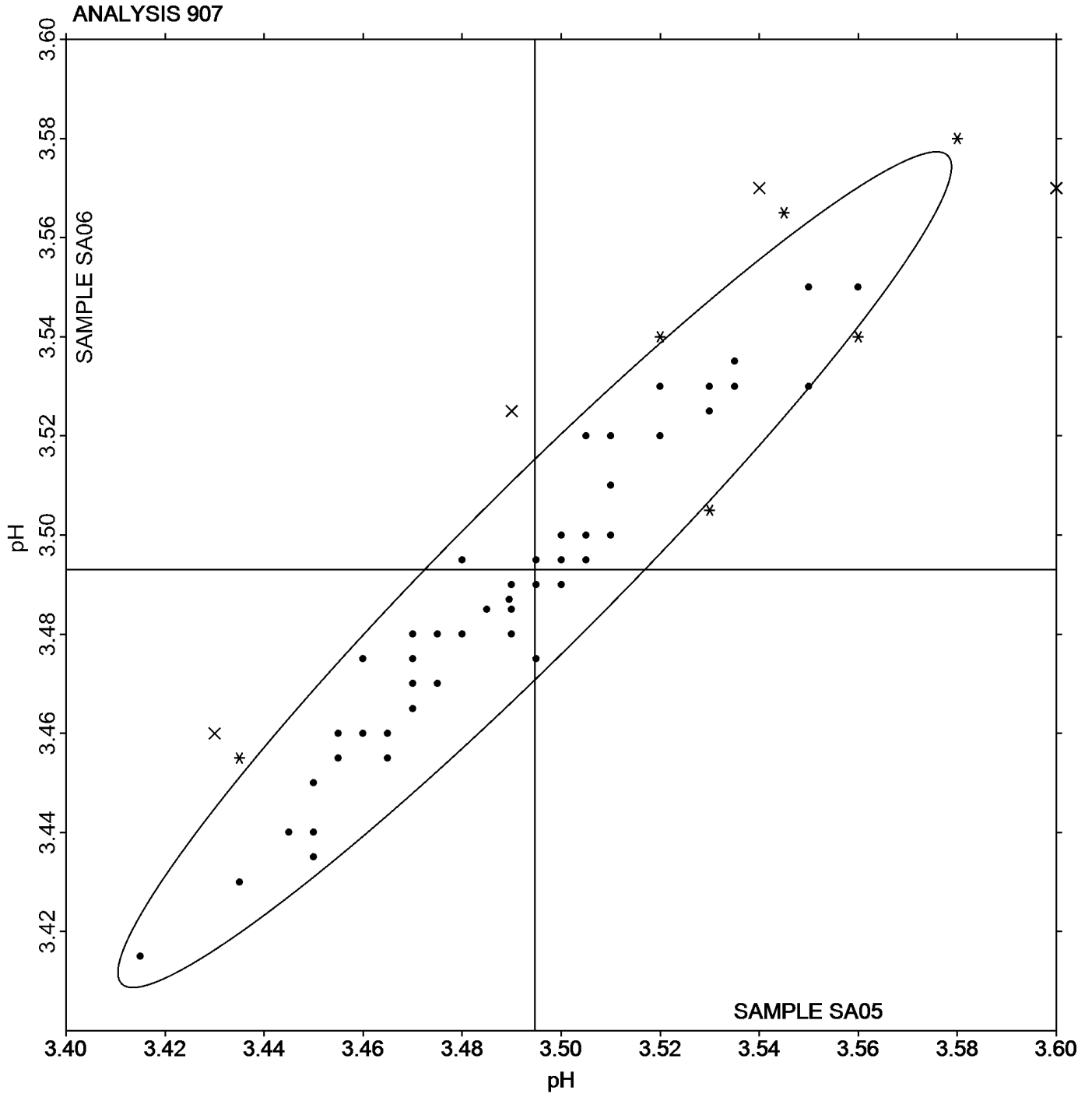
WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
WY6H6L		3.510	0.015	0.46	3.510	0.017	0.51
X2VQ4P		3.510	0.015	0.46	3.520	0.027	0.81
X774LM		3.560	0.065	1.96	3.550	0.057	1.70
XZK4EM		3.510	0.015	0.46	3.500	0.007	0.21
YA28YR		3.490	-0.005	-0.15	3.487	-0.006	-0.18
YQA2TM		3.500	0.005	0.16	3.490	-0.003	-0.09
YRZARP	X	3.175	-0.320	-9.57	3.170	-0.323	-9.65
Z3DUPR		3.505	0.010	0.31	3.520	0.027	0.81

Grand Means		Summary Statistics	
	3.4946 pH		3.4930 pH
Std Dev Btwn Labs			
	0.0334 pH		0.0335 pH
Statistics based on 72 of 78 reporting participants			

Wines tested: SA05: Merlot; SA06: Zinfandel

Comments on Assigned Data Flags for Test #907

- BC63LC (X) - Inconsistent in testing between samples, data for sample SA05 are high.
- G6RY37 (X) - Inconsistent in testing between samples.
- PPRPPY (X) - Inconsistent in testing between samples.
- DJZJC9 (X) - Data for both samples are high.
- YRZARP (X) - Data for both samples are low.
- FY2ED6 (X) - Inconsistent in testing between samples.





Analysis 908
Residual Sugar

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2QM86H		5.450	-1.636	-1.44	6.750	-2.150	-1.39
32VJPP		7.240	0.154	0.14	8.695	-0.205	-0.13
6RNEXK	X	7.200	0.114	0.10	5.800	-3.100	-2.01
7LQD9B		8.400	1.314	1.16	9.950	1.050	0.68
8N94MK		7.470	0.384	0.34	9.855	0.955	0.62
A73HZG		7.525	0.439	0.39	10.395	1.495	0.97
B4YZN7		6.800	-0.286	-0.25	8.530	-0.370	-0.24
CE7C8E		5.720	-1.366	-1.20	6.930	-1.970	-1.27
DEK9Y6		7.650	0.564	0.50	9.800	0.900	0.58
DJZJC9		5.280	-1.806	-1.59	5.709	-3.191	-2.06
F8F2L9		5.865	-1.221	-1.08	7.390	-1.510	-0.98
FY2ED6		8.850	1.764	1.56	11.600	2.700	1.75
GJN4KC		9.450	2.364	2.08	11.600	2.700	1.75
JBRXQ2		5.650	-1.436	-1.27	7.550	-1.350	-0.87
KG93RZ		6.865	-0.221	-0.19	8.465	-0.435	-0.28
KRQJK8		6.350	-0.736	-0.65	7.850	-1.050	-0.68
N94364		7.600	0.514	0.45	9.550	0.650	0.42
PPRPYY		6.100	-0.986	-0.87	8.000	-0.900	-0.58
VCZC2P		7.900	0.814	0.72	10.100	1.200	0.78
WY6H6L		7.700	0.614	0.54	9.700	0.800	0.52
YRZARP		7.390	0.304	0.27	8.830	-0.070	-0.05
ZU3HHL		7.550	0.464	0.41	9.650	0.750	0.49

Grand Means	Summary Statistics
7.0860 g/L	8.8999 g/L
Stnd Dev Btwn Labs	
1.1341 g/L	1.5457 g/L
Statistics based on 21 of 22 reporting participants	

Wines tested: SA05: Merlot; SA06: Zinfandel

Comments on Assigned Data Flags for Test #908

6RNEXK (X) - Inconsistent in testing between samples.



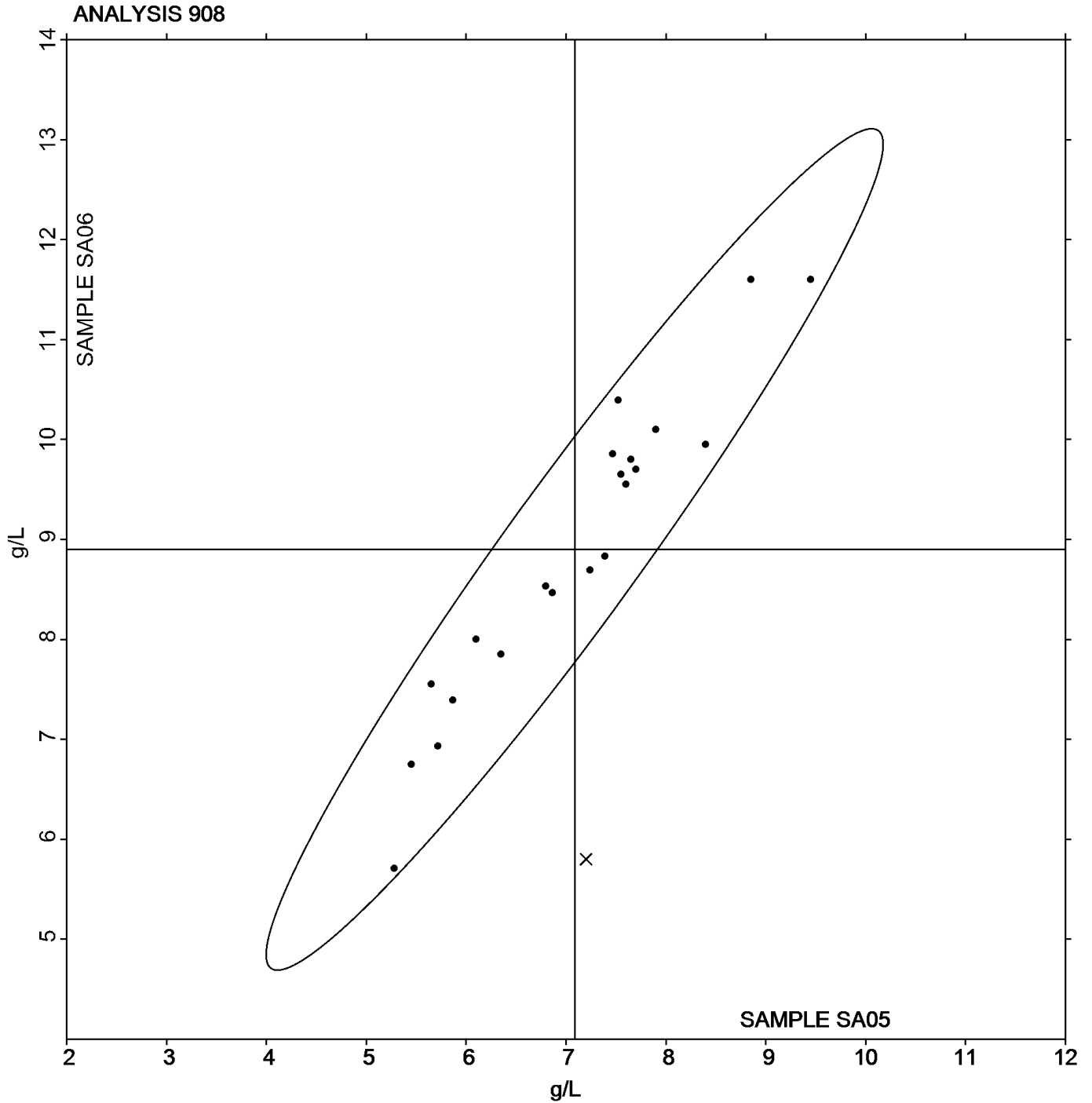
**Analysis 908
Residual Sugar**

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA05 <i>Merlot</i>			Sample SA06 <i>Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	5.450	0.000	-1.636	6.750	0.000	-2.150	1/2
Cu Reduction Method	7.342	0.710	0.256	9.456	0.915	0.556	8/8
HPLC	6.865	0.000	-0.221	8.465	0.000	-0.435	1/1
Segmented Flow	7.550	0.000	0.464	9.650	0.000	0.750	1/1
FTIR	7.319	1.576	0.233	9.034	2.152	0.134	7/7
Other _____	6.325	0.925	-0.761	7.717	0.991	-1.183	3/3



Analysis 908
Residual Sugar





Analysis 909
L-Malic Acid

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2QM86H		0.1250	-0.0199	-0.45	0.1700	-0.0065	-0.13
32VJPP		0.1600	0.0151	0.34	0.1900	0.0135	0.27
3CW8GM		0.1500	0.0051	0.12	0.1800	0.0035	0.07
4PW9TN		0.1700	0.0251	0.57	0.1900	0.0135	0.27
6AJ8JJ		0.2235	0.0786	1.79	0.2595	0.0830	1.67
6HRN7H		0.1600	0.0151	0.34	0.2050	0.0285	0.57
6RNEXK		0.1550	0.0101	0.23	0.1750	-0.0015	-0.03
6TU7GL		0.0750	-0.0699	-1.59	0.1100	-0.0665	-1.34
77EYRD		0.1390	-0.0059	-0.13	0.1710	-0.0055	-0.11
7C692C		0.1395	-0.0054	-0.12	0.1705	-0.0060	-0.12
7DZR4D	X	0.2825	0.1376	3.14	0.2960	0.1195	2.41
7XKTXC		0.1280	-0.0169	-0.38	0.1625	-0.0140	-0.28
8N94MK	*	0.1900	0.0451	1.03	0.1800	0.0035	0.07
8QFLLG		0.1655	0.0206	0.47	0.2370	0.0605	1.22
9393BH		0.1650	0.0201	0.46	0.2100	0.0335	0.68
9CU7HG		0.1200	-0.0249	-0.57	0.1250	-0.0515	-1.04
A6CB2D	*	0.0250	-0.1199	-2.73	0.0600	-0.1165	-2.35
B4YZN7	X	0.1100	-0.0349	-0.80	0.0200	-0.1565	-3.15
BC63LC	*	0.0500	-0.0949	-2.16	0.0500	-0.1265	-2.55
BU8N4D		0.1450	0.0001	0.00	0.1715	-0.0050	-0.10
CE7C8E		0.1840	0.0391	0.89	0.2095	0.0330	0.67
CT7BVB		0.1500	0.0051	0.12	0.1900	0.0135	0.27
CU2UWC		0.1600	0.0151	0.34	0.1900	0.0135	0.27
CX2V88		0.2000	0.0551	1.26	0.2600	0.0835	1.68
DABVG7		0.1325	-0.0124	-0.28	0.1645	-0.0120	-0.24
DEK9Y6		0.1150	-0.0299	-0.68	0.1390	-0.0375	-0.75
DJZJC9	M	No data reported for this sample			0.0750	-0.1015	-2.04
DW6PGF		0.1665	0.0216	0.49	0.2210	0.0445	0.90
DWQFD7	*	0.2000	0.0551	1.26	0.1900	0.0135	0.27
ENQFE6		0.0350	-0.1099	-2.51	0.0550	-0.1215	-2.45
EWEDUC		0.1350	-0.0099	-0.23	0.1850	0.0085	0.17
FBFCH9		0.1600	0.0151	0.34	0.1900	0.0135	0.27
FY2ED6		0.1960	0.0511	1.17	0.2220	0.0455	0.92
G6RY37		0.1420	-0.0029	-0.07	0.1790	0.0025	0.05
GJ783A		0.1690	0.0241	0.55	0.2210	0.0445	0.90



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #053

Analysis 909

Summer 2016

L-Malic Acid

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GJN4KC		0.1950	0.0501	1.14	0.2250	0.0485	0.98
GPFB67		0.1500	0.0051	0.12	0.1850	0.0085	0.17
GQQCR4		0.1385	-0.0064	-0.15	0.1715	-0.0050	-0.10
KD74G8	X	0.1400	-0.0049	-0.11	0.2450	0.0685	1.38
KG93RZ	X	0.3100	0.1651	3.77	0.5250	0.3485	7.02
KRQJK8	*	0.0350	-0.1099	-2.51	0.0500	-0.1265	-2.55
L746R4		0.1000	-0.0449	-1.02	0.1350	-0.0415	-0.84
LBYY6		0.1400	-0.0049	-0.11	0.1800	0.0035	0.07
LNLBT3		0.1250	-0.0199	-0.45	0.1550	-0.0215	-0.43
N329WU		0.1000	-0.0449	-1.02	0.1350	-0.0415	-0.84
N3GEBX		0.1600	0.0151	0.34	0.1800	0.0035	0.07
N94364		0.0650	-0.0799	-1.82	0.0700	-0.1065	-2.14
NGH2LZ		0.1835	0.0386	0.88	0.2285	0.0520	1.05
Q836UY		0.1315	-0.0134	-0.30	0.1695	-0.0070	-0.14
QJVKHZ		0.1350	-0.0099	-0.23	0.1750	-0.0015	-0.03
QUCEN2		0.1650	0.0201	0.46	0.1960	0.0195	0.39
RJPQCY		0.1800	0.0351	0.80	0.2000	0.0235	0.47
RPZTEU		0.2000	0.0551	1.26	0.2600	0.0835	1.68
TETBGW	X	0.0350	-0.1099	-2.51	0.1450	-0.0315	-0.63
TEXTFV		0.1200	-0.0249	-0.57	0.1300	-0.0465	-0.94
ULVV3T		0.1750	0.0301	0.69	0.2100	0.0335	0.68
VCZC2P		0.1600	0.0151	0.34	0.1900	0.0135	0.27
VVVRFU		0.1300	-0.0149	-0.34	0.1900	0.0135	0.27
WVPWAT		0.1500	0.0051	0.12	0.2000	0.0235	0.47
WY6H6L		0.2300	0.0851	1.94	0.2500	0.0735	1.48
X2VQ4P		0.1300	-0.0149	-0.34	0.1700	-0.0065	-0.13
X774LM		0.1900	0.0451	1.03	0.2150	0.0385	0.78
XZK4EM		0.1160	-0.0289	-0.66	0.1445	-0.0320	-0.64
YA28YR	M	No data reported for this sample			0.2050	0.0285	0.57
YQA2TM		0.1250	-0.0199	-0.45	0.1300	-0.0465	-0.94
Z3DUPR		0.1875	0.0426	0.97	0.2330	0.0565	1.14



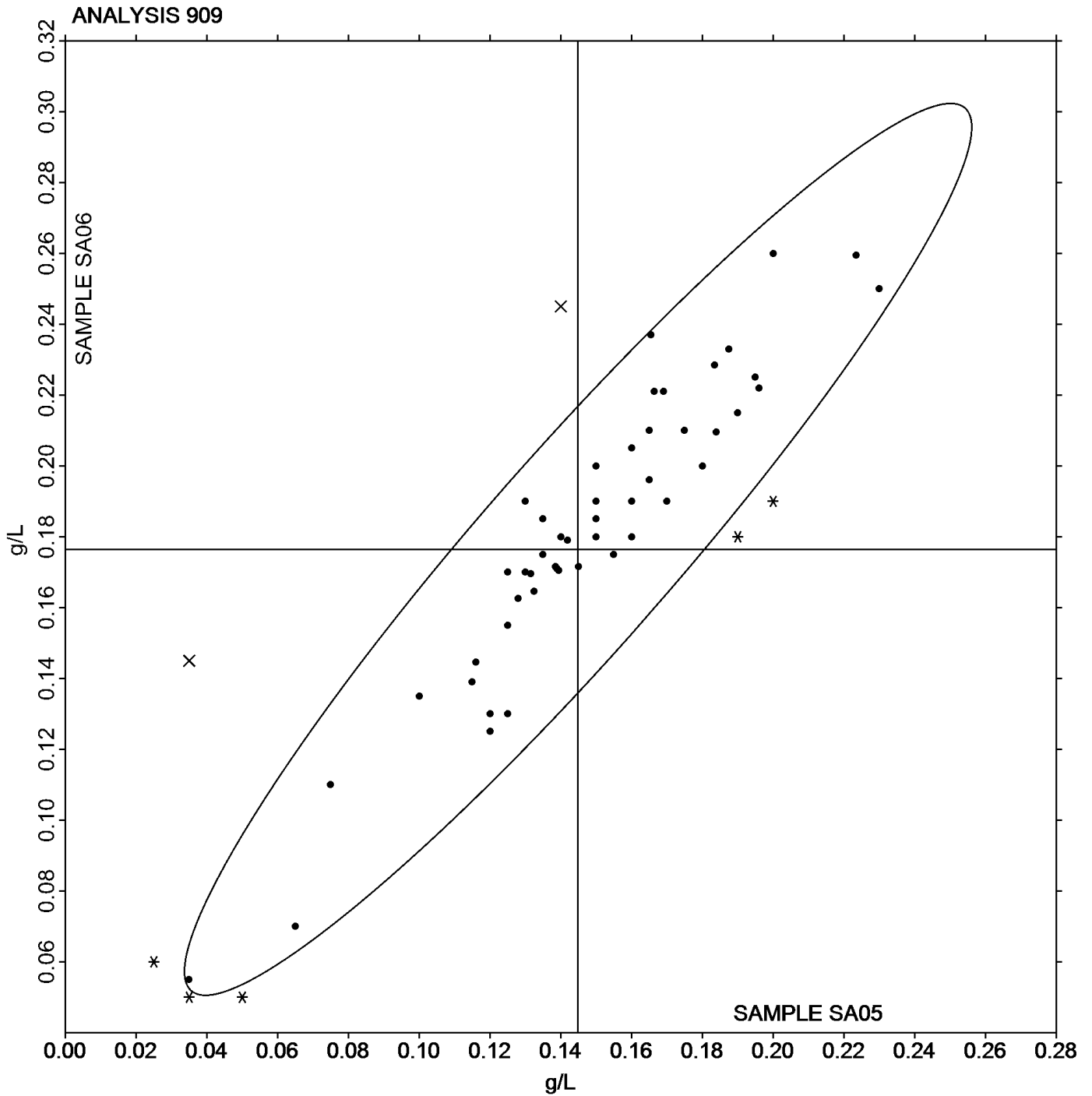
Grand Means	Summary Statistics
0.14487 g/L	0.17646 g/L
Std Dev Btwn Labs	
0.04386 g/L	0.04965 g/L

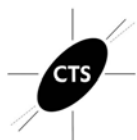
Statistics based on 59 of 66 reporting participants

Wines tested: SA05: Merlot; SA06: Zinfandel

Comments on Assigned Data Flags for Test #909

- YA28YR (M) - Participant did not submit data for sample SA05.
- DJZJC9 (M) - Participant did not submit data for sample SA05.
- B4YZN7 (X) - Inconsistent in testing between samples, data for sample SA06 are low.
- 7DZR4D (X) - Data for sample SA05 are high. Inconsistent within the determinations of both samples.
- KD74G8 (X) - Inconsistent in testing between samples.
- TETBGW (X) - Inconsistent in testing between samples.
- KG93RZ (X) - Data for both samples are high.





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #053
Summer 2016

Analysis 910 Glucose + Fructose

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2FWVKN		5.850	-0.088	-0.23	7.400	0.002	0.00
32VJPP		6.590	0.652	1.70	8.030	0.632	1.31
3CW8GM		5.300	-0.638	-1.66	6.650	-0.749	-1.55
4PW9TN		5.900	-0.038	-0.10	7.400	0.002	0.00
6AJ8JJ		5.982	0.044	0.11	6.928	-0.471	-0.98
6HRN7H	X	6.200	0.262	0.68	6.850	-0.549	-1.14
6RNEXK		5.800	-0.138	-0.36	7.200	-0.199	-0.41
6TU7GL		5.960	0.022	0.06	7.530	0.132	0.27
6UPPJM	X	5.655	-0.283	-0.74	8.075	0.677	1.40
77EYRD		6.100	0.162	0.42	7.500	0.102	0.21
7C692C		6.050	0.112	0.29	7.400	0.002	0.00
7DZR4D		5.405	-0.533	-1.39	6.790	-0.609	-1.26
7LQD9B	*	5.200	-0.738	-1.92	7.000	-0.399	-0.83
7XKTXC		6.100	0.162	0.42	7.800	0.402	0.83
8N94MK		6.117	0.179	0.46	8.052	0.654	1.35
8QFLLG		5.400	-0.538	-1.40	6.800	-0.599	-1.24
8YEYRC		6.200	0.262	0.68	7.800	0.402	0.83
9CU7HG		5.400	-0.538	-1.40	6.750	-0.649	-1.34
A6CB2D		6.500	0.562	1.46	8.400	1.002	2.08
A73HZG		5.405	-0.533	-1.39	7.010	-0.389	-0.81
B4YZN7	X	6.660	0.722	1.88	6.430	-0.969	-2.01
BC63LC		5.630	-0.308	-0.80	7.315	-0.084	-0.17
BU8N4D		6.450	0.512	1.33	8.000	0.602	1.25
CE7C8E		5.720	-0.218	-0.57	6.930	-0.469	-0.97
CT7BVB		6.160	0.222	0.58	7.695	0.297	0.61
CU2UWC		5.950	0.012	0.03	7.435	0.037	0.08
CX2V88	*	5.850	-0.088	-0.23	6.645	-0.754	-1.56
DABVG7		6.400	0.462	1.20	7.900	0.502	1.04
DW6PGF		6.050	0.112	0.29	7.400	0.002	0.00
ENQFE6		5.415	-0.523	-1.36	6.800	-0.599	-1.24
EWEDUC		5.950	0.012	0.03	7.550	0.152	0.31
F8F2L9		5.865	-0.073	-0.19	7.390	-0.009	-0.02
FBFCH9		5.770	-0.168	-0.44	6.785	-0.614	-1.27
FY2ED6	X	8.600	2.662	6.93	11.150	3.752	7.78
G6RY37		6.400	0.462	1.20	7.950	0.552	1.14

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #053****Analysis 910****Summer 2016****Glucose + Fructose**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GJ783A		5.800	-0.138	-0.36	7.050	-0.349	-0.72
GJN4KC		6.300	0.362	0.94	7.700	0.302	0.63
GPFB67		6.395	0.457	1.19	8.050	0.652	1.35
GQQCR4		6.100	0.162	0.42	7.150	-0.249	-0.52
KD74G8		5.965	0.027	0.07	7.480	0.082	0.17
KG93RZ		6.865	0.927	2.41	8.485	1.087	2.25
KRQJK8		5.850	-0.088	-0.23	7.400	0.002	0.00
L746R4		5.785	-0.153	-0.40	7.300	-0.099	-0.20
LBYYP6		6.400	0.462	1.20	7.850	0.452	0.94
LNLBT3		5.735	-0.203	-0.53	7.140	-0.259	-0.54
N329WU		5.862	-0.076	-0.20	7.036	-0.363	-0.75
N3GEBX		5.830	-0.108	-0.28	6.980	-0.419	-0.87
NGH2LZ		5.640	-0.298	-0.78	7.055	-0.344	-0.71
Q836UY		6.200	0.262	0.68	7.800	0.402	0.83
QJVKHZ		5.700	-0.238	-0.62	7.100	-0.299	-0.62
QUCEN2		5.985	0.047	0.12	7.415	0.017	0.03
RJPQCY		5.800	-0.138	-0.36	6.800	-0.599	-1.24
RPZTEU		6.785	0.847	2.20	8.265	0.867	1.80
TETBGW		5.500	-0.438	-1.14	6.900	-0.499	-1.03
TEXTFV		5.450	-0.488	-1.27	6.850	-0.549	-1.14
U6L4ZM		6.620	0.682	1.78	8.450	1.052	2.18
UC6AXU		6.100	0.162	0.42	7.650	0.252	0.52
ULVV3T		6.300	0.362	0.94	7.860	0.462	0.96
VCZC2P		6.355	0.417	1.09	7.990	0.592	1.23
VVVRFU		5.800	-0.138	-0.36	7.100	-0.299	-0.62
WVPWAT		5.950	0.012	0.03	7.490	0.092	0.19
X2VQ4P		5.890	-0.048	-0.12	7.350	-0.049	-0.10
X774LM		5.980	0.042	0.11	7.450	0.052	0.11
XZK4EM	*	5.075	-0.863	-2.25	6.690	-0.709	-1.47
YA28YR		6.000	0.062	0.16	7.600	0.202	0.42
YQA2TM		5.300	-0.638	-1.66	6.735	-0.664	-1.38
Z3DUPR		5.900	-0.038	-0.10	7.700	0.302	0.63
ZU3HHL	X	5.650	-0.288	-0.75	8.150	0.752	1.56



Grand Means		Summary Statistics	
	5.9379 g/L		7.3985 g/L
Std Dev Btwn Labs			0.4824 g/L
	0.3842 g/L		
Statistics based on 63 of 68 reporting participants			

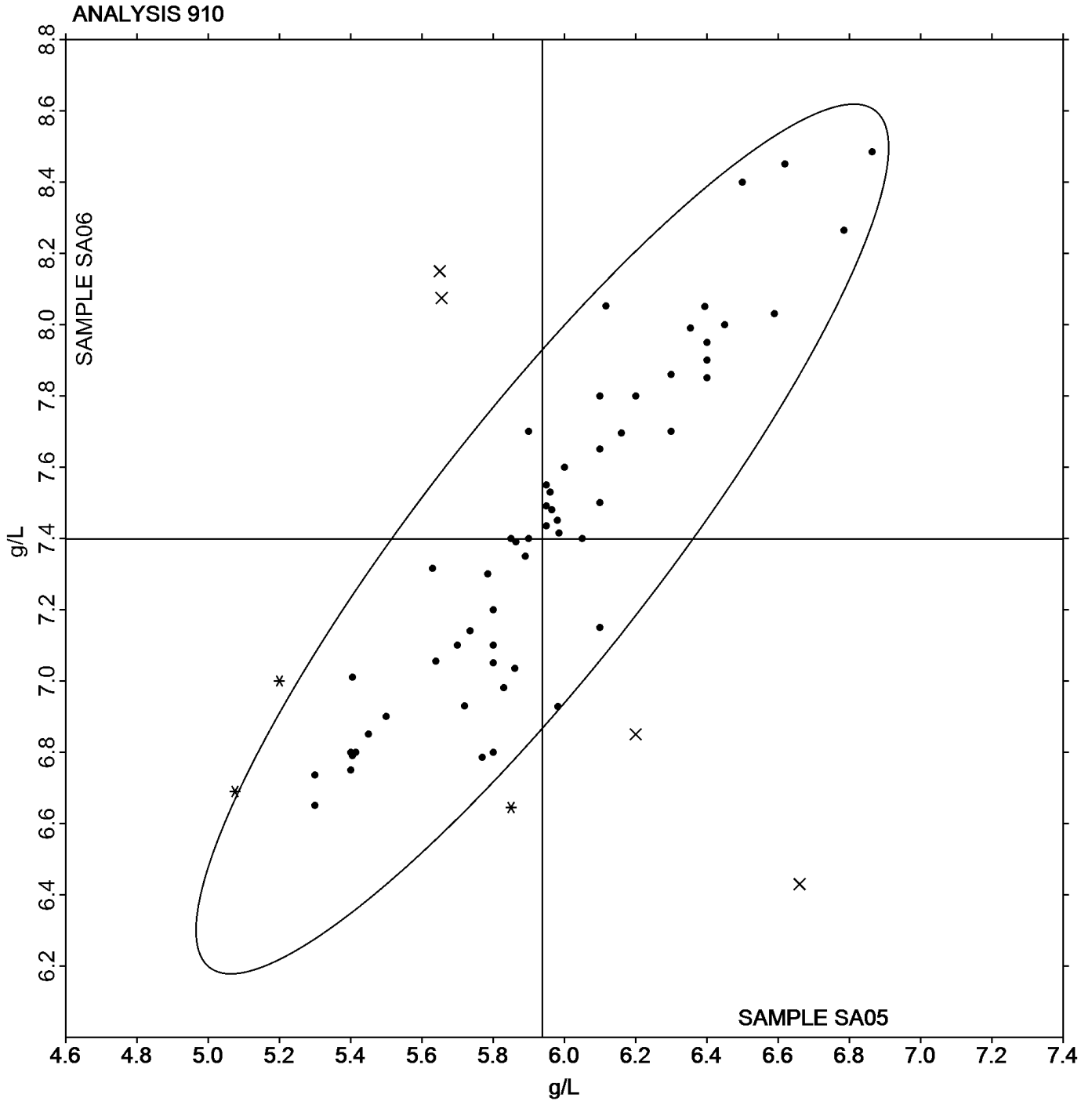
Wines tested: SA05: Merlot; SA06: Zinfandel

Comments on Assigned Data Flags for Test #910

- ZU3HHL (X) - Inconsistent in testing between samples.
- B4YZN7 (X) - Inconsistent in testing between samples.
- 6UPPJM (X) - Inconsistent in testing between samples.
- FY2ED6 (X) - Data for both samples are high.
- 6HRN7H (X) - Inconsistent in testing between samples.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA05 <i>Merlot</i>			Sample SA06 <i>Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	5.830	0.000	-0.108	6.980	0.000	-0.419	1/1
HPLC	6.481	0.438	0.543	8.091	0.505	0.693	4/5
Enzymatic/Spectrophotometric	5.903	0.342	-0.035	7.337	0.418	-0.062	52/54
FTIR	5.804	0.526	-0.134	7.452	0.722	0.054	5/7
Other _____	6.355	0.000	0.417	7.990	0.000	0.592	1/1





**Analysis 911
Copper Content**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
32VJPP		0.0600	0.0112	0.50	0.0400	-0.0025	-0.10
4PW9TN		0.0200	-0.0288	-1.29	0.0300	-0.0125	-0.50
6RNEXK		0.0265	-0.0223	-1.00	0.0420	-0.0005	-0.02
6TU7GL		0.0400	-0.0088	-0.39	0.0250	-0.0175	-0.70
7C692C		0.0630	0.0142	0.63	0.0420	-0.0005	-0.02
B4YZN7		0.0290	-0.0198	-0.89	0.0190	-0.0235	-0.94
G6RY37		0.0710	0.0222	0.99	0.0525	0.0100	0.40
GJN4KC	M	0.0169	-0.0319	-1.43	No data reported for this sample		
KG93RZ		0.0300	-0.0188	-0.84	0.0300	-0.0125	-0.50
L746R4		0.0450	-0.0038	-0.17	0.0300	-0.0125	-0.50
LBYY6		0.0450	-0.0038	-0.17	0.0340	-0.0085	-0.34
N94364		0.0450	-0.0038	-0.17	0.0300	-0.0125	-0.50
NGH2LZ		0.0200	-0.0288	-1.29	0.0100	-0.0325	-1.30
PPRPYY		0.0800	0.0312	1.39	0.1000	0.0575	2.30
Q836UY		0.1000	0.0512	2.29	0.1000	0.0575	2.30
YQA2TM		0.0565	0.0077	0.34	0.0450	0.0025	0.10
ZU3HHL		0.0500	0.0012	0.05	0.0500	0.0075	0.30

Grand Means		Summary Statistics	
	0.04881 mg/L		0.04247 mg/L
Std Dev Btwn Labs			0.02502 mg/L
	0.02236 mg/L		
Statistics based on 16 of 17 reporting participants			

Wines tested: SA05: Merlot; SA06: Zinfandel

Comments on Assigned Data Flags for Test #911

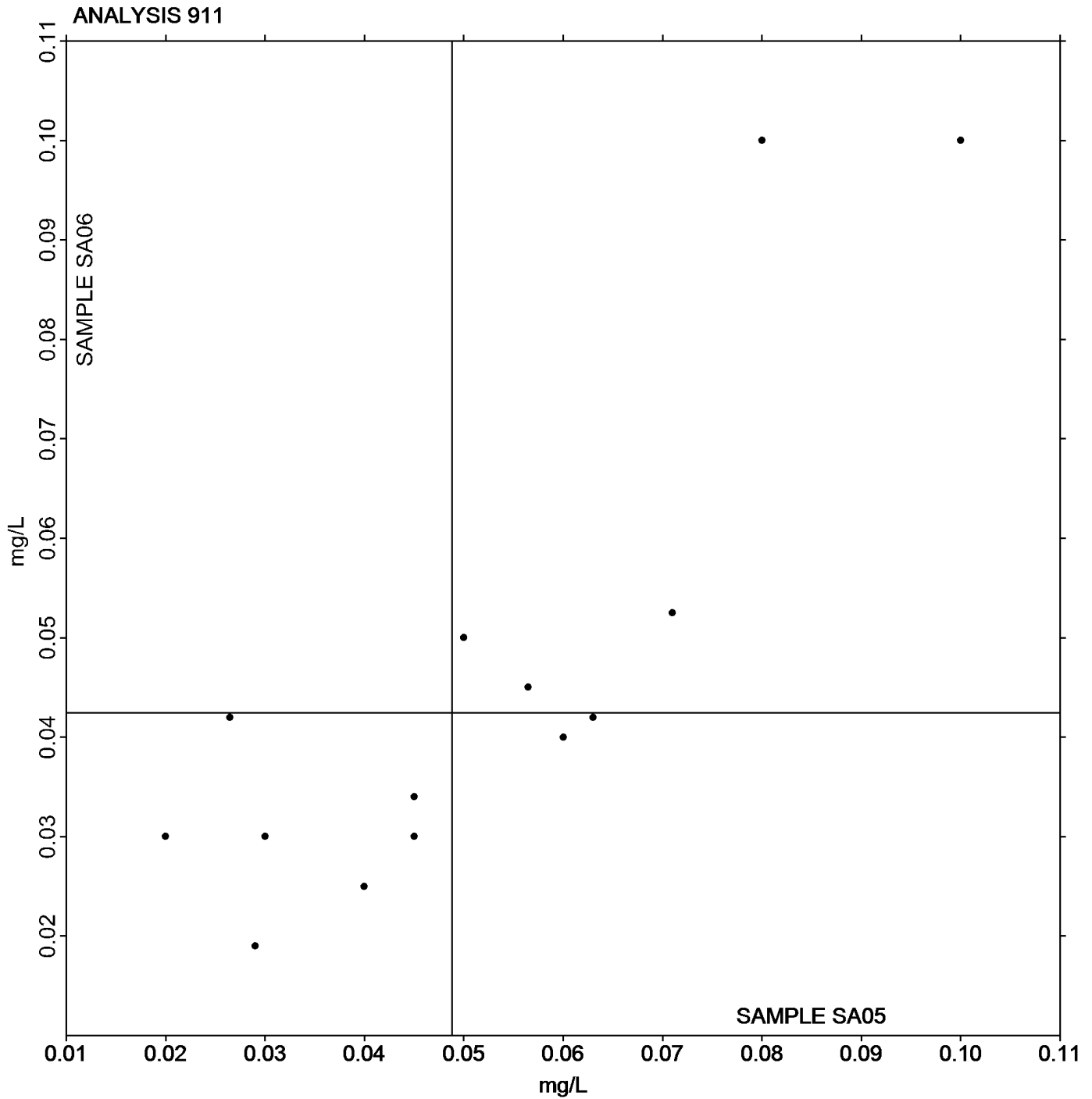
GJN4KC (M) - Participant did not submit data for sample SA06.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA05 <i>Merlot</i>			Sample SA06 <i>Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	0.050	0.000	0.0012	0.050	0.000	0.0075	1/1
Atomic Absorption Spectroscopy	0.049	0.021	0.0001	0.040	0.024	-0.0022	10/11
ICP-OES	0.050	0.034	0.0016	0.051	0.033	0.0080	4/4
Other _____	0.040	0.000	-0.0088	0.025	0.000	-0.0175	1/1



Analysis 911
Copper Content



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



**Analysis 912
Potassium (K) Content**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
32VJPP		940.0	-64.6	-0.47	823.8	-127.4	-0.88
4PW9TN		845.0	-159.6	-1.16	779.5	-171.7	-1.18
6RNEXK		1,070.0	65.4	0.47	1,165.0	213.8	1.47
6TU7GL		1,034.0	29.4	0.21	988.5	37.3	0.26
7DZR4D		937.5	-67.1	-0.49	899.0	-52.2	-0.36
7LQD9B		945.0	-59.6	-0.43	968.0	16.8	0.12
GJN4KC		1,075.0	70.4	0.51	1,020.0	68.8	0.47
KG93RZ		1,060.4	55.8	0.40	1,005.3	54.1	0.37
L746R4		1,010.0	5.4	0.04	970.0	18.8	0.13
N94364		975.0	-29.6	-0.21	927.5	-23.7	-0.16
NGH2LZ	*	1,122.5	117.9	0.85	831.0	-120.2	-0.83
Q836UY		896.5	-108.1	-0.78	852.5	-98.7	-0.68
U6L4ZM		906.9	-97.7	-0.71	869.0	-82.2	-0.57
VCZC2P		1,331.5	326.9	2.37	1,289.0	337.8	2.33
VPAR9U		943.0	-61.6	-0.45	920.5	-30.7	-0.21
YA28YR		904.0	-100.6	-0.73	854.0	-97.2	-0.67
YQA2TM		1,281.0	276.4	2.00	1,198.5	247.3	1.71
ZU3HHL		805.0	-199.6	-1.45	760.0	-191.2	-1.32

Grand Means	Summary Statistics
1,004.57 mg/L	951.17 mg/L
Stnd Dev Btwn Labs	
138.05 mg/L	145.03 mg/L
Statistics based on 18 of 18 reporting participants	

Wines tested: SA05: Merlot; SA06: Zinfandel

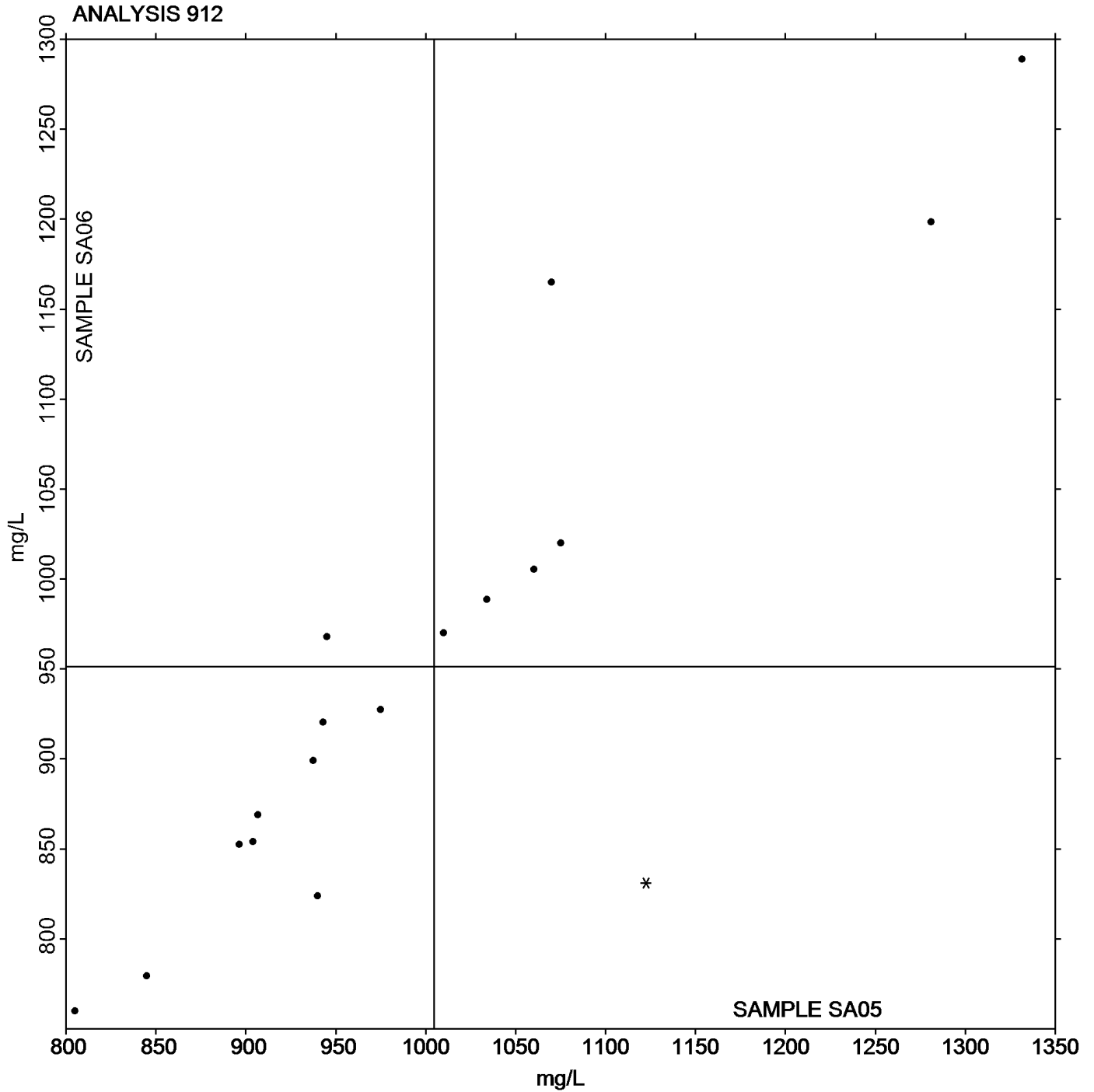
Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA05 <i>Merlot</i>			Sample SA06 <i>Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Atomic Absorption Spectroscopy	1006.55	149.23	2.0	923.93	135.81	-27.2	7/7
ICP-OES	974.31	75.82	-30.3	938.01	129.30	-13.2	6/6
FTIR	1010.00	91.92	5.4	994.00	36.77	42.8	2/2
Other _____	1056.83	263.99	52.3	1012.50	265.32	61.3	3/3

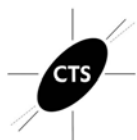


Analysis 912

Potassium (K) 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****Report #053****Analysis 915****Summer 2016****A420nm (1cm path)**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
32VJPP	X	3.355	0.573	4.95	2.940	0.419	3.47
3CW8GM		2.700	-0.082	-0.71	2.500	-0.021	-0.18
4PW9TN		2.495	-0.287	-2.48	2.250	-0.271	-2.25
6AJ8JJ		2.775	-0.007	-0.06	2.520	-0.001	-0.01
6RNEXK		2.855	0.073	0.63	2.620	0.099	0.82
6TU7GL		2.855	0.073	0.63	2.670	0.149	1.23
7DZR4D	X	0.059	-2.723	-23.51	0.053	-2.468	-20.44
7LQD9B	X	3.245	0.463	4.00	3.055	0.534	4.42
8N94MK	X	2.500	-0.282	-2.43	2.450	-0.071	-0.59
9393BH		2.755	-0.027	-0.23	2.470	-0.051	-0.43
A6CB2D		2.850	0.068	0.59	2.550	0.029	0.24
B4YZN7	*	3.000	0.218	1.89	2.816	0.295	2.44
BZYPR8	*	2.760	-0.022	-0.19	2.612	0.091	0.75
CT7BVB		2.870	0.088	0.76	2.505	-0.016	-0.14
CX2V88	X	3.726	0.944	8.15	3.231	0.709	5.87
DABVG7	X	3.215	0.433	3.74	2.810	0.289	2.39
DEK9Y6		2.752	-0.030	-0.26	2.561	0.040	0.33
DJZJC9		2.655	-0.127	-1.09	2.416	-0.105	-0.87
DW6PGF		2.875	0.093	0.81	2.620	0.099	0.82
DWQFD7		2.770	-0.012	-0.10	2.515	-0.006	-0.05
F8F2L9		2.940	0.158	1.36	2.652	0.130	1.08
FY2ED6		2.845	0.063	0.55	2.580	0.059	0.49
GJN4KC	X	1.982	-0.800	-6.91	1.934	-0.587	-4.86
GPF67		2.790	0.008	0.07	2.557	0.036	0.30
KD74G8		2.793	0.011	0.09	2.506	-0.015	-0.13
L746R4		2.775	-0.007	-0.06	2.485	-0.036	-0.30
LBYY6		2.825	0.043	0.37	2.535	0.014	0.11
LNLBT3		2.895	0.113	0.98	2.620	0.099	0.82
N329WU		2.844	0.062	0.53	2.607	0.086	0.71
NGH2LZ		2.799	0.017	0.15	2.467	-0.055	-0.45
PPRPYY	X	3.636	0.854	7.38	3.061	0.540	4.47
Q836UY		2.816	0.034	0.30	2.536	0.014	0.12
RJPQCY		2.780	-0.002	-0.01	2.480	-0.041	-0.34
TETBGW		2.783	0.001	0.01	2.525	0.004	0.03
TEXTFV		2.837	0.055	0.48	2.547	0.026	0.21



**Analysis 915
A420nm (1cm path)**

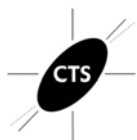
WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
TQMR7X		2.770	-0.012	-0.10	2.499	-0.023	-0.19
UC6AXU		2.747	-0.035	-0.30	2.491	-0.030	-0.25
ULVV3T		2.778	-0.004	-0.04	2.522	0.000	0.00
VCZC2P	X	0.568	-2.214	-19.12	0.515	-2.006	-16.61
WY6H6L		2.910	0.128	1.11	2.600	0.079	0.65
X774LM		2.820	0.038	0.33	2.570	0.049	0.40
YA28YR		2.510	-0.272	-2.35	2.255	-0.266	-2.21
YRZARP	*	2.440	-0.342	-2.95	2.155	-0.366	-3.03
Z3DUPR		2.698	-0.084	-0.72	2.435	-0.086	-0.71
ZU3HHL	X	3.564	0.782	6.76	3.244	0.723	5.98

Grand Means		Summary Statistics	
	2.7817 Absorbance Units		2.5213 Absorbance Units
Std Dev Btwn Labs	0.1158 Absorbance Units		0.1208 Absorbance Units
Statistics based on 35 of 45 reporting participants			

Wines tested: SA05: Merlot; SA06: Zinfandel

Comments on Assigned Data Flags for Test #915

- PPRYYY (X) - Data for both samples are high. Inconsistent within the determinations of sample SA05.
- VCZC2P (X) - Data for both samples are low.
- CX2V88 (X) - Data for both samples are high. Inconsistent within the determinations of sample SA05.
- ZU3HHL (X) - Data for both samples are high.
- 7LQD9B (X) - Data for both samples are high. Possible Systematic Error.
- DABVG7 (X) - Inconsistent in testing between samples, data for sample SA05 are high.
- 7DZR4D (X) - Data for both samples are low.
- GJN4KC (X) - Data for both samples are low.
- 8N94MK (X) - Inconsistent in testing between samples.
- 32VJPP (X) - Data for both samples are high. Possible Systematic Error.

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #053****Analysis 916****Summer 2016****A520nm (1cm path)**

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
32VJPP	*	4.595	1.064	3.05	4.020	0.742	2.93
3CW8GM		3.450	-0.081	-0.23	3.200	-0.078	-0.31
4PW9TN		3.165	-0.366	-1.05	2.965	-0.313	-1.23
6AJ8JJ		3.460	-0.071	-0.20	3.240	-0.038	-0.15
6RNEXK		3.685	0.154	0.44	3.410	0.132	0.52
6TU7GL		3.700	0.169	0.49	3.460	0.182	0.72
7DZR4D	X	0.075	-3.456	-9.91	0.068	-3.210	-12.67
7LQD9B	X	4.200	0.669	1.92	4.020	0.742	2.93
8N94MK		3.325	-0.206	-0.59	3.315	0.037	0.15
9393BH		3.560	0.029	0.08	3.235	-0.043	-0.17
A6CB2D		3.645	0.114	0.33	3.360	0.082	0.32
BZYPR8		3.010	-0.521	-1.49	3.010	-0.268	-1.06
CT7BVB		3.615	0.084	0.24	3.225	-0.053	-0.21
CX2V88		3.258	-0.273	-0.78	3.159	-0.119	-0.47
DABVG7		4.090	0.559	1.60	3.650	0.372	1.47
DEK9Y6		3.445	-0.086	-0.25	3.290	0.012	0.05
DJZJC9	X	1.848	-1.683	-4.83	1.838	-1.440	-5.68
DW6PGF		3.675	0.144	0.41	3.400	0.122	0.48
DWQFD7		2.950	-0.581	-1.66	2.865	-0.413	-1.63
F8F2L9		3.827	0.296	0.85	3.460	0.182	0.72
FY2ED6		3.530	-0.001	0.00	3.265	-0.013	-0.05
GJN4KC	*	2.508	-1.023	-2.93	2.486	-0.792	-3.13
GPFB67		3.619	0.088	0.25	3.389	0.111	0.44
KD74G8		3.614	0.083	0.24	3.294	0.016	0.06
KRQJK8	*	3.180	-0.351	-1.01	3.230	-0.048	-0.19
L746R4		3.595	0.064	0.18	3.275	-0.003	-0.01
LBYYP6		3.685	0.154	0.44	3.350	0.072	0.29
LNLBT3		3.780	0.249	0.72	3.450	0.172	0.68
N329WU		3.707	0.176	0.50	3.406	0.128	0.51
NGH2LZ		3.619	0.088	0.25	3.206	-0.072	-0.28
PPRPYY	X	2.999	-0.531	-1.52	3.308	0.030	0.12
Q836UY		3.650	0.119	0.34	3.332	0.054	0.21
RJPQCY		3.620	0.089	0.26	3.310	0.032	0.13
TETBGW	X	3.546	0.015	0.04	3.729	0.451	1.78
TEXTFV		3.644	0.113	0.32	3.330	0.052	0.21



Analysis 916
A520nm (1cm path)

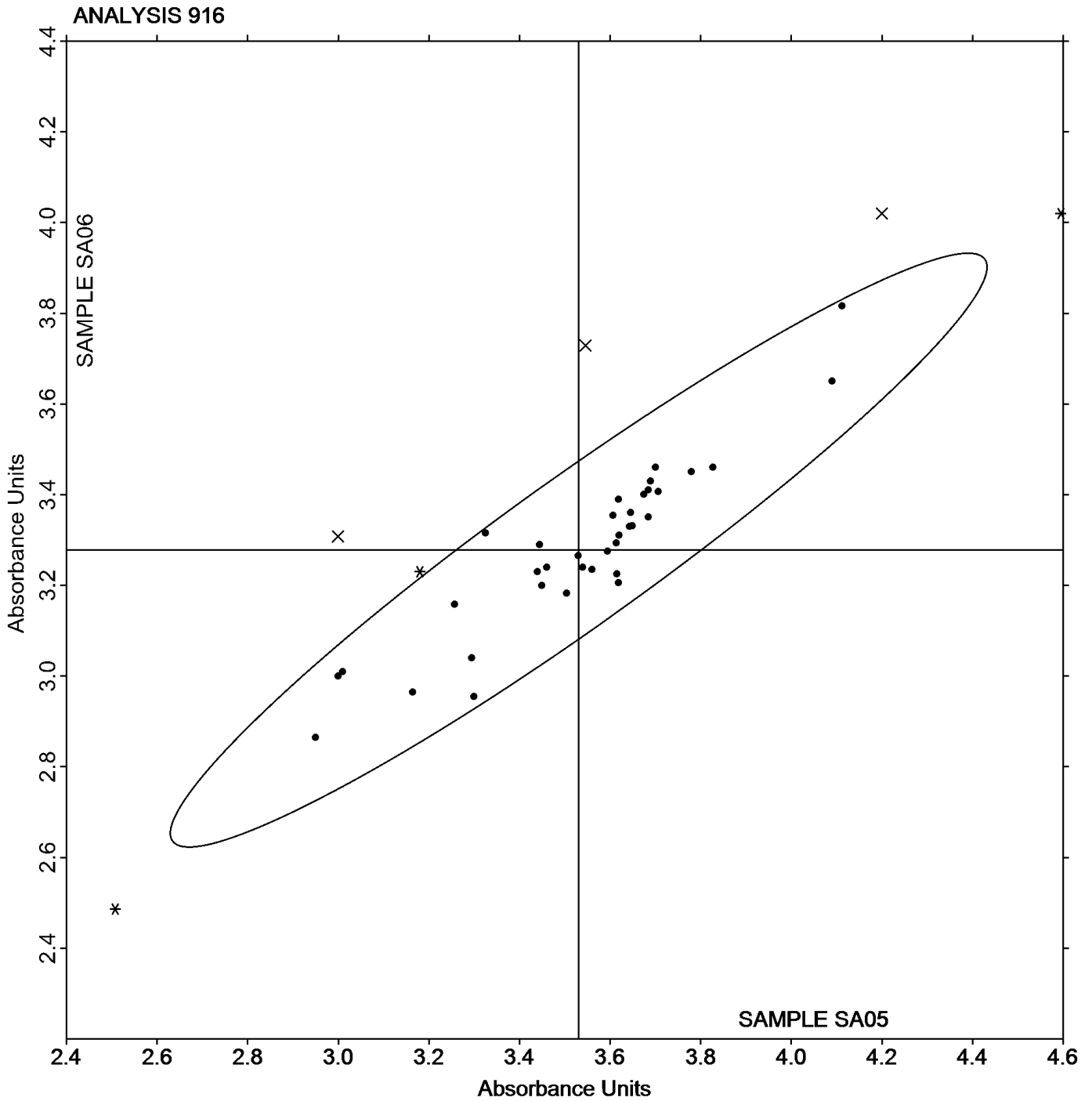
WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
TQMR7X		3.000	-0.531	-1.52	3.000	-0.278	-1.10
UC6AXU		3.505	-0.026	-0.07	3.182	-0.096	-0.38
ULVV3T		3.607	0.076	0.22	3.355	0.077	0.30
VCZC2P	X	0.730	-2.801	-8.03	0.680	-2.598	-10.26
WY6H6L		3.440	-0.091	-0.26	3.230	-0.048	-0.19
X774LM		3.690	0.159	0.46	3.430	0.152	0.60
YA28YR		3.295	-0.236	-0.68	3.040	-0.238	-0.94
YRZARP		3.300	-0.231	-0.66	2.955	-0.323	-1.27
Z3DUPR		3.540	0.009	0.03	3.240	-0.038	-0.15
ZU3HHL		4.112	0.581	1.67	3.816	0.538	2.13

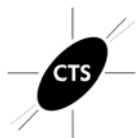
Grand Means		Summary Statistics	
	3.5305 Absorbance Units		3.2778 Absorbance Units
Std Dev Btwn Labs			
	0.3488 Absorbance Units		0.2533 Absorbance Units
Statistics based on 39 of 45 reporting participants			

Wines tested: SA05: Merlot; SA06: Zinfandel

Comments on Assigned Data Flags for Test #916

- PPRPYY (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA06.
- VCZC2P (X) - Data for both samples are low.
- DJZJC9 (X) - Data for both samples are low.
- 7LQD9B (X) - Data for sample SA06 are high.
- 7DZR4D (X) - Data for both samples are low.
- TETBGW (X) - Inconsistent in testing between samples.

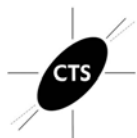




ASEV-CTS Wine Industry Interlaboratory Testing Program
Research Property 950
Research Property - Turbidity

Report #053
Summer 2016

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
2FWVKN	*	0.6600	0.3533	115.2%	0.4500	0.1921	74.5%
32VJPP		0.2900	-0.0167	-5.4%	0.2700	0.0121	4.7%
3CW8GM		0.2600	-0.0467	-15.2%	0.2200	-0.0379	-14.7%
6AJ8JJ		0.3145	0.0078	2.5%	0.2210	-0.0369	-14.3%
6RNEXK		0.2255	-0.0812	-26.5%	0.2405	-0.0174	-6.7%
6TU7GL	*	0.6300	0.3233	105.4%	0.4450	0.1871	72.5%
6UPPJM		0.2655	-0.0412	-13.4%	0.1850	-0.0729	-28.3%
7C692C		0.3025	-0.0042	-1.4%	0.2505	-0.0074	-2.9%
7DZR4D		0.0100	-0.2967	-96.7%	0.0100	-0.2479	-96.1%
7LQD9B		0.3220	0.0153	5.0%	0.2600	0.0021	0.8%
7XKTXC	X	0.3450	0.0383	12.5%	0.6050	0.3471	134.6%
8N94MK		0.2850	-0.0217	-7.1%	0.3350	0.0771	29.9%
8QFLLG		0.4850	0.1783	58.1%	0.3300	0.0721	28.0%
8YEYRC		0.2710	-0.0357	-11.6%	0.1930	-0.0649	-25.2%
9393BH	*	0.3330	0.0263	8.6%	0.4695	0.2116	82.0%
9CU7HG		0.5400	0.2333	76.1%	0.3550	0.0971	37.7%
B4YZN7		0.3000	-0.0067	-2.2%	0.2000	-0.0579	-22.5%
BC63LC		0.3200	0.0133	4.3%	0.2700	0.0121	4.7%
BU8N4D		0.2900	-0.0167	-5.4%	0.2300	-0.0279	-10.8%
CU2UWC		0.3250	0.0183	6.0%	0.2800	0.0221	8.6%
CX2V88		0.0500	-0.2567	-83.7%	0.0250	-0.2329	-90.3%
DABVG7		0.2690	-0.0377	-12.3%	0.2095	-0.0484	-18.8%
DEK9Y6		0.2400	-0.0667	-21.7%	0.3600	0.1021	39.6%
DJZJC9	X	0.4500	0.1433	46.7%	0.1000	-0.1579	-61.2%
DW6PGF		0.1450	-0.1617	-52.7%	0.1150	-0.1429	-55.4%
DWQFD7		0.3550	0.0483	15.7%	0.1750	-0.0829	-32.1%
EWEDUC		0.2500	-0.0567	-18.5%	0.2300	-0.0279	-10.8%
FBFCH9		0.4250	0.1183	38.6%	0.4300	0.1721	66.7%
G6RY37		0.3385	0.0318	10.4%	0.2260	-0.0319	-12.4%
GJN4KC	X	0.4700	0.1633	53.2%	0.9550	0.6971	270.3%
GPFB67		0.3500	0.0433	14.1%	0.3400	0.0821	31.8%
GQOCR4		0.0900	-0.2167	-70.7%	0.0700	-0.1879	-72.9%
JBRXQ2		0.3400	0.0333	10.9%	0.2150	-0.0429	-16.6%
KD74G8		0.3105	0.0038	1.2%	0.2145	-0.0434	-16.8%
KRQJK8		0.3000	-0.0067	-2.2%	0.2600	0.0021	0.8%



ASEV-CTS Wine Industry Interlaboratory Testing Program
Research Property 950
Research Property - Turbidity

Report #053
Summer 2016

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
L746R4		0.3050	-0.0017	-0.6%	0.2500	-0.0079	-3.1%
LBYY6		0.2865	-0.0202	-6.6%	0.2385	-0.0194	-7.5%
LNLBT3		0.2505	-0.0562	-18.3%	0.2455	-0.0124	-4.8%
N329WU		0.3250	0.0183	6.0%	0.1350	-0.1229	-47.7%
N3GEBX	X	0.1600	-0.1467	-47.8%	0.3700	0.1121	43.5%
N94364		0.2000	-0.1067	-34.8%	0.2100	-0.0479	-18.6%
NGH2LZ	X	0.2550	-0.0517	-16.9%	0.5250	0.2671	103.6%
PPRPYY		0.2700	-0.0367	-12.0%	0.2055	-0.0524	-20.3%
Q836UY		0.2500	-0.0567	-18.5%	0.2500	-0.0079	-3.1%
QUCEN2		0.5200	0.2133	69.5%	0.4400	0.1821	70.6%
RJPQCY		0.5500	0.2433	79.3%	0.5200	0.2621	101.6%
TEXTFV		0.2900	-0.0167	-5.4%	0.2400	-0.0179	-6.9%
TQMR7X		0.2340	-0.0727	-23.7%	0.1910	-0.0669	-25.9%
UC6AXU		0.1700	-0.1367	-44.6%	0.2125	-0.0454	-17.6%
VCZC2P		0.3250	0.0183	6.0%	0.2800	0.0221	8.6%
WVPWAT		0.2235	-0.0832	-27.1%	0.1870	-0.0709	-27.5%
WY6H6L	M	No data reported for this sample			0.4400	0.1821	70.6%
X2VQ4P		0.3100	0.0033	1.1%	0.2650	0.0071	2.8%
X774LM		0.3650	0.0583	19.0%	0.4450	0.1871	72.5%
YQA2TM		0.2615	-0.0452	-14.7%	0.2575	-0.0004	-0.2%
Z3DUPR		0.3045	-0.0022	-0.7%	0.2360	-0.0219	-8.5%

Research Property Target Value

Target Value

0.30670 NTU

0.25790 NTU

For Test 950, CTS has chosen not to designate a target value for this property instead of using an average value.

Wines tested: SA05: Merlot; SA06: Zinfandel

Consensus Average
(may differ from target value)

0.30665 NTU

0.25786 NTU

This consensus average is based on 50 reporting participants.

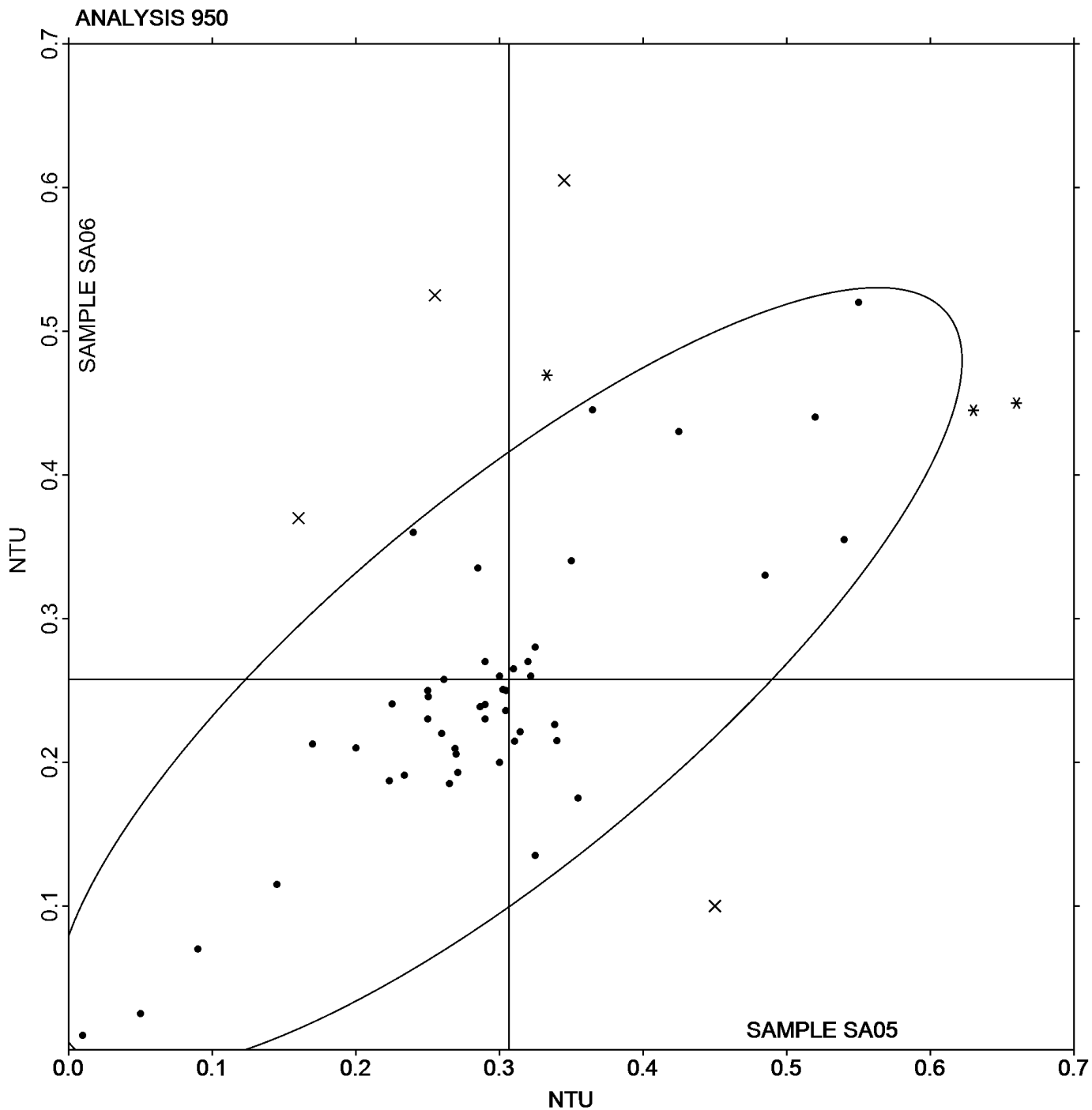


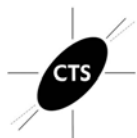
ASEV-CTS Wine Industry Interlaboratory Testing Program
Research Property 950
Research Property - Turbidity

Report #053
Summer 2016

Comments on Assigned Data Flags for Test #950

- NGH2LZ (X) - Inconsistent in testing between samples.
- DJZJC9 (X) - Inconsistent in testing between samples.
- 7XKTXC (X) - Data for sample SA06 are high.
- WY6H6L (M) - Participant did not submit data for sample SA05.
- GJN4KC (X) - Data for sample SA06 are high.
- N3GEBX (X) - Inconsistent in testing between samples.





ASEV-CTS Wine Industry Interlaboratory Testing Program
Research Property 951
Research Property: Methanol Content

Report #053
Summer 2016

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
32VJPP		165.7	-34.1	-17.1%	182.1	-41.9	-18.7%
6TU7GL		267.0	67.2	33.6%	285.0	61.0	27.2%
8N94MK		200.0	0.2	0.1%	220.0	-4.0	-1.8%
L746R4		197.5	-2.3	-1.2%	241.5	17.5	7.8%
Q836UY		193.0	-6.8	-3.4%	219.5	-4.5	-2.0%
U6L4ZM		184.0	-15.9	-7.9%	191.7	-32.3	-14.4%
VPAR9U		191.5	-8.3	-4.2%	222.0	-2.0	-0.9%
ZU3HHL		200.0	0.2	0.1%	230.0	6.0	2.7%

Research Property Target Value

Target Value

199.83 mg/L

223.98 mg/L

For Test 951, CTS has chosen not to designate a target value for this property instead of using an average value.

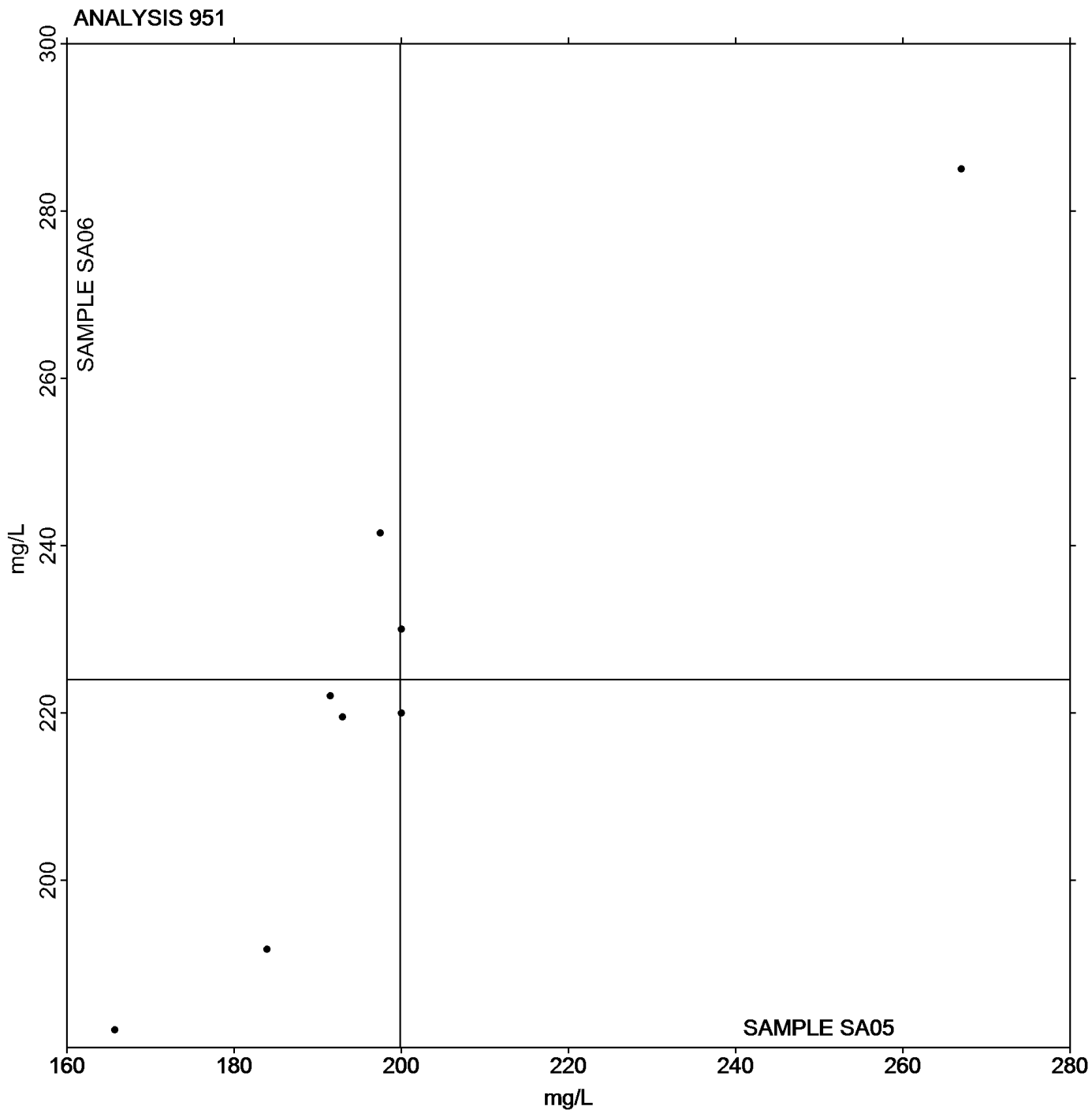
Wines tested: SA05: Merlot; SA06: Zinfandel

Consensus Average
(may differ from target value)

199.83 mg/L

223.98 mg/L

This consensus average is based on 8 reporting participants.



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



Research Property: Sodium (mg/L)

WebCode	Data Flag	Sample SA05			Sample SA06		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
32VJPP		22.13	-0.31	-1.4%	22.07	-1.29	-5.5%
6RNEXK		21.90	-0.53	-2.4%	20.85	-2.50	-10.7%
6TU7GL		19.45	-2.98	-13.3%	17.40	-5.95	-25.5%
N94364		25.00	2.57	11.4%	26.00	2.65	11.3%
NGH2LZ	X	93.00	70.57	314.5%	24.00	0.65	2.8%
Q836UY		21.50	-0.93	-4.2%	24.00	0.65	2.8%
VPAR9U		27.00	4.57	20.4%	30.00	6.65	28.5%
YA28YR		22.50	0.07	0.3%	25.00	1.65	7.1%
ZU3HHL		20.00	-2.43	-10.9%	21.50	-1.85	-7.9%

Research Property Target Value

Target Value

22.434 mg/L

23.352 mg/L

For Test 952, CTS has chosen not to designate a target value for this property instead of using an average value.

Wines tested: SA05: Merlot; SA06: Zinfandel

Consensus Average (may differ from target value)

22.434 mg/L

23.352 mg/L

This consensus average is based on 8 reporting participants.

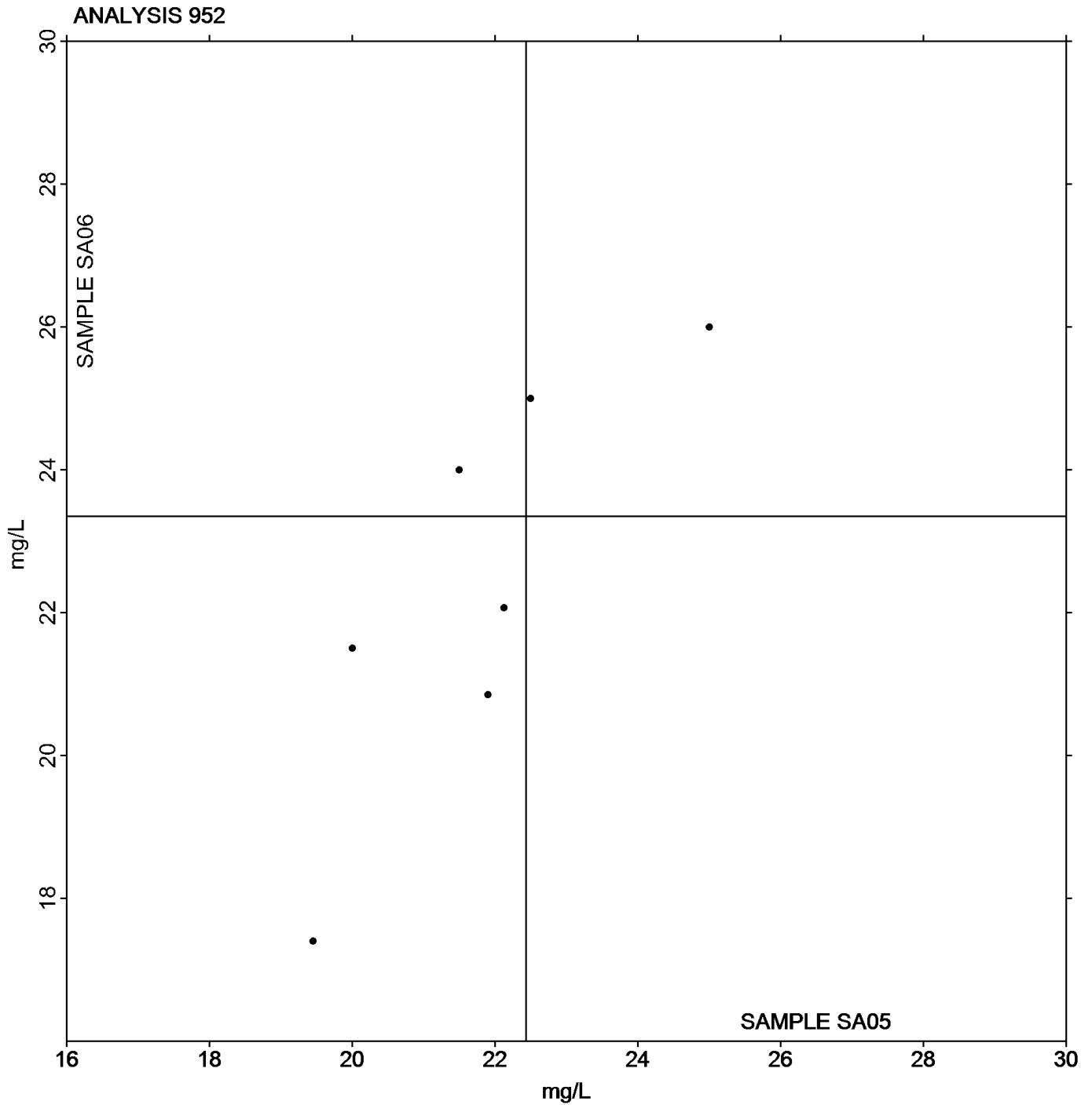
Comments on Assigned Data Flags for Test #952

NGH2LZ (X) - Inconsistent in testing between samples, data for Sample SA05 are high.



Analysis 952

Research Property: Sodium (mg/L)



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