



## Wine Industry Interlaboratory Program

### Summary Report #047- Summer 2014

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Analysis	Analysis Name
<u><a href="#">901</a></u>	<u><a href="#">Ethanol (% of volume)</a></u>
<u><a href="#">902</a></u>	<u><a href="#">Total Sulfur Dioxide</a></u>
<u><a href="#">903</a></u>	<u><a href="#">Free Sulfur Dioxide</a></u>
<u><a href="#">904</a></u>	<u><a href="#">Titratable Acidity</a></u>
<u><a href="#">905</a></u>	<u><a href="#">Volatile Acidity</a></u>
<u><a href="#">906</a></u>	<u><a href="#">Specific Gravity</a></u>
<u><a href="#">907</a></u>	<u><a href="#">pH</a></u>
<u><a href="#">908</a></u>	<u><a href="#">Residual Sugar</a></u>
<u><a href="#">909</a></u>	<u><a href="#">L-Malic Acid</a></u>
<u><a href="#">910</a></u>	<u><a href="#">Glucose + Fructose</a></u>
<u><a href="#">911</a></u>	<u><a href="#">Copper Content</a></u>
<u><a href="#">912</a></u>	<u><a href="#">Potassium Content</a></u>
<u><a href="#">915</a></u>	<u><a href="#">A420nm (1cm path)</a></u>
<u><a href="#">916</a></u>	<u><a href="#">A520nm (1cm path)</a></u>
<u><a href="#">950</a></u>	<u><a href="#">Research Property: Turbidity</a></u>
<u><a href="#">951</a></u>	<u><a href="#">Research Property: Methanol Content</a></u>
<u><a href="#">952</a></u>	<u><a href="#">Research Property: Iron Content</a></u>

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## **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 80 countries, currently participate in the CTS programs.

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## Key for Web Summary Report (Page 1 of 2)

<b>WebCode</b>	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.
<b>Lab Mean</b>	The average of the test results obtained by the participant.
<b>Grand Mean</b>	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.
<b>Difference from Grand Mean</b>	The difference of the LAB MEAN from the GRAND MEAN.
<b>Between-Lab Standard Deviation</b>	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).
<b>Comparative Performance Value</b>	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.
<b>Data Flag</b>	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	<b>CAUTION</b> - 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	<b>STOP</b> - 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	<b>PROCEED</b> - 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.

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### 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.

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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 SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2C8CXH		13.23	0.06	1.42	13.93	0.05	1.06
2G27VJ		13.15	-0.01	-0.34	13.87	-0.01	-0.27
2KZKGM		13.22	0.06	1.29	13.90	0.02	0.51
37XBCE		13.24	0.08	1.77	13.94	0.06	1.29
3HTNAP		13.20	0.04	0.83	13.90	0.02	0.51
78YEFC		13.16	-0.01	-0.22	13.87	-0.01	-0.16
7LFFAH		13.13	-0.04	-0.92	13.84	-0.04	-0.83
7NNMDB		13.09	-0.08	-1.85	13.78	-0.10	-2.28
9C337J	X	13.01	-0.15	-3.61	13.65	-0.23	-5.17
9RXKX3		13.19	0.02	0.48	13.91	0.03	0.62
9ZP3CB	X	12.96	-0.21	-4.89	13.66	-0.22	-4.95
9ZTMYE		13.16	0.00	-0.10	13.89	0.01	0.28
BJTPPE	X	13.19	0.03	0.60	13.67	-0.21	-4.61
BT3UZI		13.16	0.00	-0.10	13.91	0.03	0.73
BXWQPB	X	13.70	0.54	12.52	14.35	0.47	10.52
D8CJU3	X	12.98	-0.18	-4.31	13.69	-0.19	-4.28
DGZD4D		13.16	0.00	-0.10	13.90	0.02	0.51
DY6KHF	*	13.28	0.12	2.70	14.00	0.12	2.62
DZB67F		13.09	-0.07	-1.74	13.78	-0.10	-2.16
FDR23U		13.20	0.04	0.83	13.92	0.04	0.95
FELPGJ		13.18	0.01	0.25	13.91	0.03	0.62
G4HWP4		13.19	0.03	0.60	13.89	0.01	0.17
G7NHD4		13.17	0.00	0.02	13.89	0.01	0.17
GCWJX9		13.15	-0.02	-0.45	13.85	-0.03	-0.61
GRNFZ3		13.24	0.07	1.65	13.94	0.06	1.40
GTH77H		13.18	0.02	0.37	13.90	0.02	0.51
H9U3Z4		13.11	-0.06	-1.39	13.84	-0.04	-0.94

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 901

## Ethanol (% of volume)

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
HNJ87C		13.14	-0.02	-0.57	13.85	-0.03	-0.61
HW2HKD	X	13.32	0.16	3.64	13.91	0.03	0.73
J3YPFR		13.15	-0.02	-0.45	13.86	-0.02	-0.49
J4UDUG		13.20	0.04	0.83	13.90	0.02	0.51
JXQ8HY		13.15	-0.01	-0.34	13.85	-0.03	-0.61
K2MAK7		13.15	-0.01	-0.34	13.82	-0.06	-1.27
KB8J7E		13.19	0.02	0.54	13.91	0.03	0.62
KM6MB9		13.16	-0.01	-0.22	13.88	0.00	0.06
KRXNE8		13.11	-0.05	-1.27	13.85	-0.03	-0.61
KUNQKV		13.20	0.03	0.72	13.91	0.03	0.73
L4JFE3		13.16	0.00	-0.10	13.87	-0.01	-0.16
L6EYHN	X	13.50	0.34	7.85	14.15	0.27	6.07
LC2RR3		13.19	0.03	0.60	13.90	0.02	0.51
MUCXHP		13.20	0.04	0.83	13.94	0.06	1.40
MW36Z2	*	13.11	-0.06	-1.39	13.87	-0.01	-0.27
NCCAP6		13.16	-0.01	-0.22	13.87	-0.01	-0.27
NV6D77		13.20	0.04	0.83	13.90	0.02	0.51
NVL6JW	X	13.30	0.14	3.17	13.85	-0.03	-0.61
P4EZUZ		13.22	0.05	1.18	13.94	0.06	1.29
P984M6		13.16	0.00	-0.10	13.88	0.00	0.06
PKZN4V	X	13.19	0.03	0.60	13.72	-0.16	-3.50
QC3D9Q		13.10	-0.06	-1.50	13.80	-0.08	-1.72
QGY2PX		13.14	-0.03	-0.69	13.85	-0.03	-0.61
QLP9AR		13.15	-0.02	-0.45	13.86	-0.02	-0.38
R6K2VP		13.18	0.02	0.37	13.91	0.03	0.62
RKB72X		13.21	0.05	1.07	13.92	0.04	0.84
RRBQ29		13.24	0.08	1.77	13.96	0.08	1.84

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 901

## Ethanol (% of volume)

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RRRHEY		13.10	-0.06	-1.50	13.85	-0.03	-0.72
T6DGH7		13.22	0.05	1.18	13.95	0.07	1.51
TJU8JU		13.15	-0.02	-0.45	13.85	-0.03	-0.72
UBXWNP		13.14	-0.03	-0.69	13.85	-0.03	-0.61
UDM47Z		13.10	-0.06	-1.50	13.80	-0.08	-1.72
URM2UX	X	13.15	-0.01	-0.34	13.78	-0.10	-2.16
VCLPYX	X	12.88	-0.29	-6.76	13.76	-0.12	-2.61
VKFXG4		13.09	-0.07	-1.74	13.83	-0.05	-1.16
VNGYJL		13.13	-0.03	-0.80	13.82	-0.06	-1.27
VTDMZT		13.18	0.01	0.25	13.90	0.02	0.40
W6JX8F		13.17	0.00	0.02	13.86	-0.02	-0.49
W7DNDU		13.20	0.03	0.72	13.90	0.02	0.51
WRXNHP	X	12.85	-0.31	-7.35	13.60	-0.28	-6.17
XBL8A3	*	13.14	-0.03	-0.69	13.81	-0.07	-1.61
XDVG2Y		13.16	0.00	-0.10	13.89	0.01	0.17
XRD6DH		13.13	-0.03	-0.80	13.84	-0.04	-0.94
Z2PBZW	X	13.75	0.59	13.69	13.15	-0.73	-16.18
ZWZVDB	X	13.08	-0.09	-2.09	13.73	-0.15	-3.28

## Grand Means

13.164 percent

## Summary Statistics

13.877 percent

## Std Dev Btwn Labs

0.043 percent

0.045 percent

Statistics based on 58 of 72 reporting participants

Wines tested: SA91: Merlot; SA92: Zinfadel

Analysis 901

Ethanol (% of volume)

**Comments on assigned Data Flags**

9C337J (X) - Data for both samples are low.

9ZP3CB (X) - Data for both samples are low. Possible Systematic Error.

BJTPPE (X) - Inconsistent in testing between samples. Data low for Sample SA92.

BXWQP B (X) - Data for both samples are high.

D8CJU3 (X) - Data for both samples are low. Possible Systematic Error.

HW2HKD (X) - Inconsistent in testing between samples. High data for Sample SA91 and inconsistent in testing within both sample sets.

L6EYHN (X) - Data for both samples are high.

NVL6JW (X) - Inconsistent in testing between samples. Data high for Sample SA91 and inconsistent in testing within Sample SA92.

PKZN4V (X) - Inconsistent in testing between samples. Data low for Sample SA92.

URM2UX (X) - Inconsistent in testing between samples.

VCLPYX (X) - Inconsistent in testing between samples. Low data for Sample SA91.

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

Z2PBZW (X) - Inconsistent in testing between samples. Lab may have transposed data between sample sets.

ZWZVDB (X) - Inconsistent in testing between samples. Data low for Sample SA92.

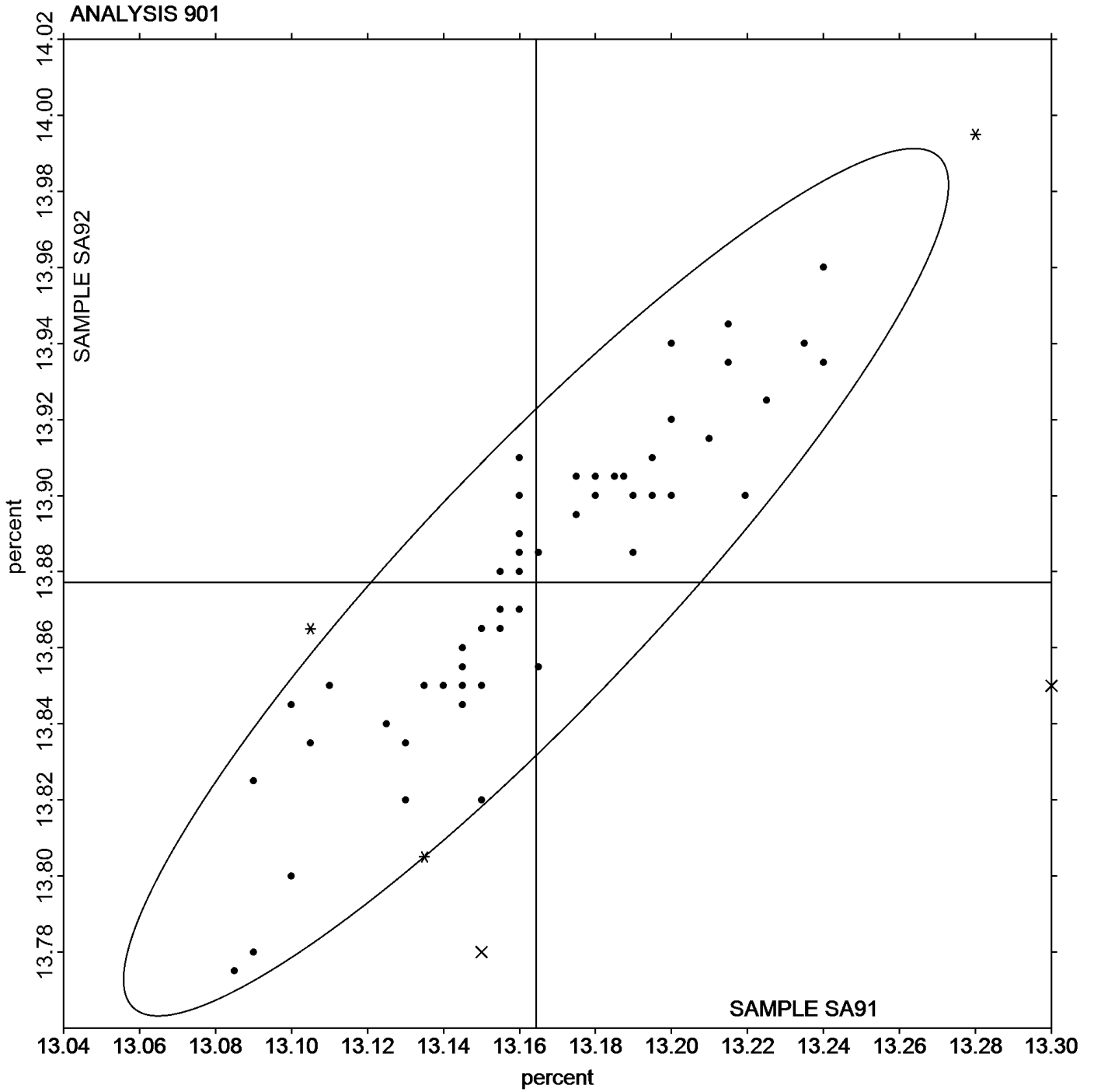
**Results by Methodology (as reported by laboratory)**

Test Methodology	Sample SA91 <i>Merlot</i>			Sample SA92 <i>Zinfadel</i>			Labs Incl / Rpt	
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM		
Gas Chromatography Method	13.13	0.04	-0.03	13.86	0.04	-0.02	2	3
Near Infrared Method	13.16	0.04	0.00	13.88	0.04	0.00	40	43
Dist. / Density Method	13.12	0.03	-0.04	13.83	0.04	-0.05	4	10
FTIR	13.19	0.04	0.02	13.90	0.04	0.02	7	10
Other _____	13.21	0.03	0.05	13.91	0.04	0.04	2	2



Analysis 901

Ethanol (% of volume)



## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 902

## Total Sulfur Dioxide

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2C8CXH		53.50	5.09	0.64	69.50	6.87	0.81
2G27VJ		55.00	6.59	0.83	65.50	2.87	0.34
2KZKGM		44.00	-4.41	-0.56	64.00	1.37	0.16
37XBCE		43.00	-5.41	-0.68	57.00	-5.63	-0.66
3HTNAP		46.00	-2.41	-0.30	62.00	-0.63	-0.07
78YEFC	X	93.00	44.59	5.64	111.00	48.37	5.71
7LFFAH		47.50	-0.91	-0.12	65.50	2.87	0.34
7NNMDB		43.50	-4.91	-0.62	60.50	-2.13	-0.25
8MMCUC		47.18	-1.23	-0.16	58.67	-3.97	-0.47
9C337J		43.50	-4.91	-0.62	56.50	-6.13	-0.72
9RXKX3		43.00	-5.41	-0.68	58.00	-4.63	-0.55
9ZP3CB		46.00	-2.41	-0.30	61.50	-1.13	-0.13
9ZTMYE		53.50	5.09	0.64	67.50	4.87	0.57
BJTPPE		44.94	-3.47	-0.44	59.92	-2.71	-0.32
BT3UZJ		44.00	-4.41	-0.56	56.00	-6.63	-0.78
BXWQPB	M	42.50	-5.91	-0.75	No data reported for this sample		
D8CJU3	*	66.00	17.59	2.23	75.50	12.87	1.52
DGZD4D	X	66.50	18.09	2.29	67.00	4.37	0.51
DY6KHF		42.50	-5.91	-0.75	54.50	-8.13	-0.96
DZB67F		46.00	-2.41	-0.30	61.00	-1.63	-0.19
FDR23U		45.50	-2.91	-0.37	60.50	-2.13	-0.25
FELPGJ		44.00	-4.41	-0.56	57.50	-5.13	-0.61
G4HWP4	*	70.50	22.09	2.79	86.00	23.37	2.76
G7NHD4		48.00	-0.41	-0.05	59.00	-3.63	-0.43
GCWJX9	X	49.00	0.59	0.07	50.00	-12.63	-1.49
GRNFZ3		47.61	-0.81	-0.10	63.39	0.75	0.09
GTH77H		39.00	-9.41	-1.19	57.00	-5.63	-0.66

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 902

## Total Sulfur Dioxide

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
H9U3Z4		46.33	-2.08	-0.26	62.44	-0.19	-0.02
HW2HKD		67.00	18.59	2.35	79.50	16.87	1.99
J3YPFR		54.50	6.09	0.77	73.50	10.87	1.28
J4UDUG		44.00	-4.41	-0.56	58.50	-4.13	-0.49
JXQ8HY		58.50	10.09	1.28	68.50	5.87	0.69
K2MAK7		46.00	-2.41	-0.30	59.50	-3.13	-0.37
KB8J7E		44.50	-3.91	-0.49	55.75	-6.88	-0.81
KM6MB9	*	70.50	22.09	2.79	87.50	24.87	2.93
KRXNE8		43.50	-4.91	-0.62	57.00	-5.63	-0.66
KUNQKV		42.00	-6.41	-0.81	54.00	-8.63	-1.02
L4JFE3		42.50	-5.91	-0.75	51.00	-11.63	-1.37
L6EYHN		60.50	12.09	1.53	78.50	15.87	1.87
LC2RR3		63.00	14.59	1.85	81.00	18.37	2.17
MUCXHP		46.00	-2.41	-0.30	67.00	4.37	0.51
MW36Z2		38.40	-10.01	-1.27	51.20	-11.43	-1.35
NCCAP6		49.50	1.09	0.14	65.50	2.87	0.34
NV6D77		45.50	-2.91	-0.37	60.00	-2.63	-0.31
NVL6JW		46.00	-2.41	-0.30	57.50	-5.13	-0.61
P4EZUZ		43.00	-5.41	-0.68	61.50	-1.13	-0.13
P984M6		57.00	8.59	1.09	76.50	13.87	1.64
PKZN4V		49.00	0.59	0.07	57.00	-5.63	-0.66
QC3D9Q	X	64.00	15.59	1.97	50.50	-12.13	-1.43
QGY2PX		49.50	1.09	0.14	64.00	1.37	0.16
QLP9AR		50.00	1.59	0.20	63.50	0.87	0.10
R6K2VP		53.50	5.09	0.64	68.50	5.87	0.69
RKB72X		59.00	10.59	1.34	67.50	4.87	0.57
RRBQ29		49.00	0.59	0.07	56.00	-6.63	-0.78

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 902

## Total Sulfur Dioxide

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RRRHEY		64.50	16.09	2.04	76.00	13.37	1.58
T6DGH7		39.50	-8.91	-1.13	53.00	-9.63	-1.14
TJU8JU		46.00	-2.41	-0.30	58.50	-4.13	-0.49
UBXWNP		40.50	-7.91	-1.00	51.50	-11.13	-1.31
UDM47Z		51.00	2.59	0.33	68.00	5.37	0.63
URM2UX	X	36.50	-11.91	-1.51	15.50	-47.13	-5.56
VCLPYX		34.50	-13.91	-1.76	51.50	-11.13	-1.31
VKFXG4		42.00	-6.41	-0.81	58.00	-4.63	-0.55
VNGYJL		44.50	-3.91	-0.49	56.00	-6.63	-0.78
VTDMZT		41.50	-6.91	-0.87	57.50	-5.13	-0.61
W6JX8F		55.00	6.59	0.83	70.00	7.37	0.87
W7DNDU		42.00	-6.41	-0.81	58.00	-4.63	-0.55
WRXNHP		41.92	-6.49	-0.82	58.64	-3.99	-0.47
XBL8A3		40.00	-8.41	-1.06	54.00	-8.63	-1.02
XDVG2Y		43.00	-5.41	-0.68	54.00	-8.63	-1.02
XRD6DH		45.50	-2.91	-0.37	58.00	-4.63	-0.55
Z2PBZW		55.20	6.79	0.86	74.40	11.77	1.39
ZWZVDB		46.50	-1.91	-0.24	58.00	-4.63	-0.55

## Grand Means

48.410 mg/L

## Summary Statistics

62.635 mg/L

## Std Dev Btwn Labs

7.905 mg/L

8.477 mg/L

Statistics based on 66 of 72 reporting participants

Wines tested: SA91: Merlot; SA92: Zinfadel

## Analysis 902

## Total Sulfur Dioxide

**Comments on assigned Data Flags**

78YEFC (X) - Data for both samples are high.

BXWQPB (M) - Laboratory did not submit data for Sample SA92.

DGZD4D (X) - Inconsistent in testing between samples.

GCWJX9 (X) - Inconsistent in testing between samples.

QC3D9Q (X) - Inconsistent in testing between samples.

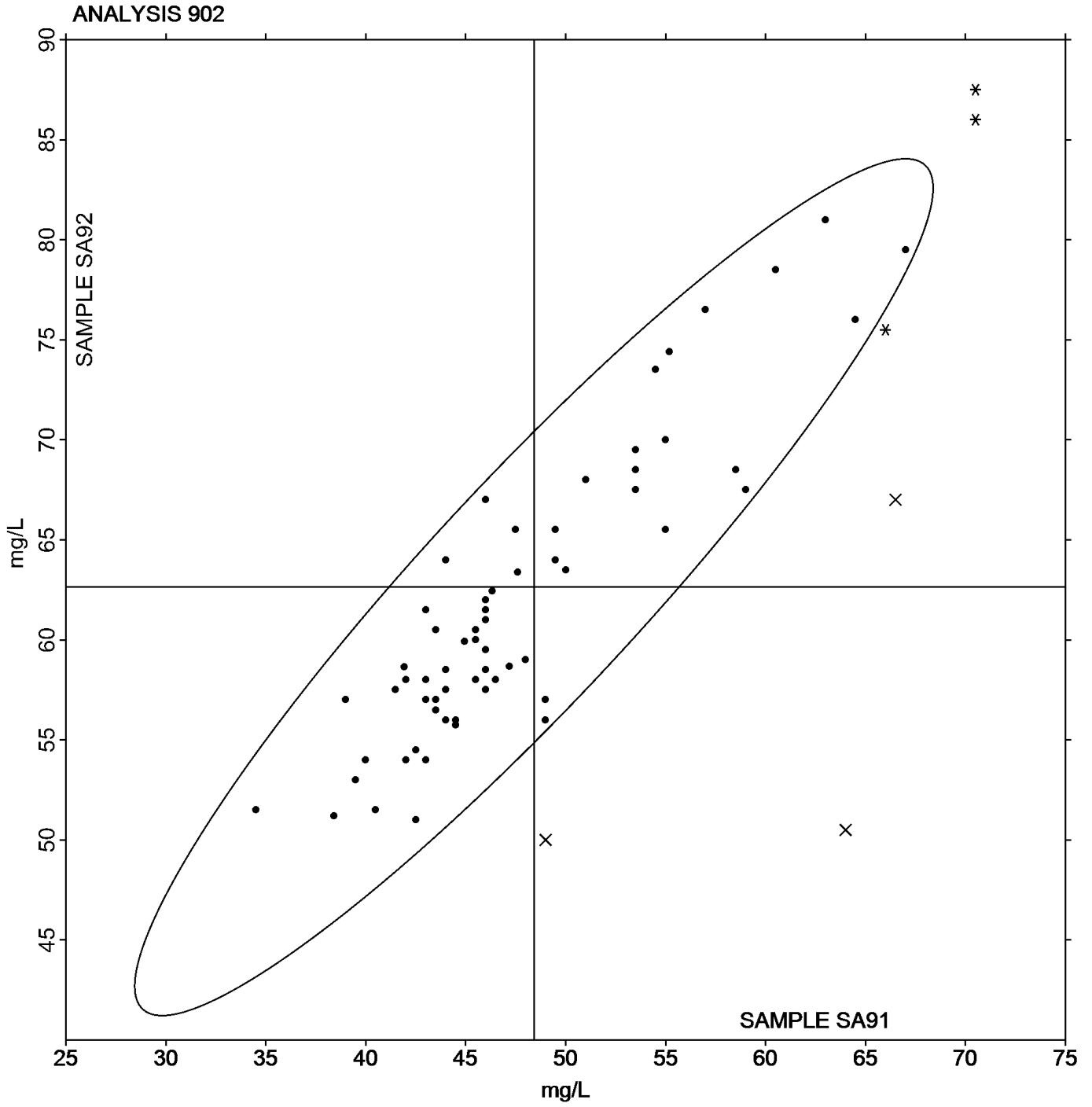
URM2UX (X) - Inconsistent in testing between samples. Data low for Sample SA92.

**Results by Methodology (as reported by laboratory)**

Test Methodology	Sample SA91 <i>Merlot</i>			Sample SA92 <i>Zinfadel</i>			Labs Incl / Rpt	
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM		
Please specify method used	41.50	0.00	-6.91	57.50	0.00	-5.13	1	1
Ripper Method	50.90	8.05	2.49	64.86	8.90	2.22	24	30
Aeration Oxidation (AO) Method	45.66	4.81	-2.75	61.10	6.06	-1.53	13	15
Segmented Flow Analyzer	45.64	3.65	-2.77	59.43	4.78	-3.21	7	7
Enzymatic Method	47.00	4.43	-1.41	61.25	5.69	-1.38	4	4
Colormetric Analyzer	49.67	8.14	1.26	61.50	5.29	-1.13	3	3
FTIR	43.67	4.01	-4.74	60.83	6.83	-1.80	3	3
Flow Injection Analysis	42.98	2.45	-5.43	56.06	3.38	-6.58	8	9

Analysis 902

Total Sulfur Dioxide



## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 903

## Free Sulfur Dioxide

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2C8CXH		21.00	1.08	0.57	20.50	0.70	0.31
2G27VJ	*	25.00	5.08	2.69	24.00	4.20	1.87
2KZKGM		17.15	-2.77	-1.47	17.40	-2.40	-1.07
37XBCE		20.50	0.58	0.31	20.50	0.70	0.31
3HTNAP		21.00	1.08	0.57	20.00	0.20	0.09
78YEFC	*	21.50	1.58	0.84	24.50	4.70	2.10
7LFFAH		17.95	-1.97	-1.04	17.90	-1.90	-0.85
7NNMDB		18.50	-1.42	-0.75	20.00	0.20	0.09
8MMCUC		19.87	-0.05	-0.03	17.69	-2.11	-0.94
9C337J		24.00	4.08	2.16	23.00	3.20	1.43
9RXKX3		20.50	0.58	0.31	20.00	0.20	0.09
9ZP3CB		19.50	-0.42	-0.22	20.50	0.70	0.31
9ZTMYE		20.50	0.58	0.31	19.00	-0.80	-0.36
BJTPPE		21.40	1.48	0.78	23.54	3.74	1.67
BT3UZJ		18.50	-1.42	-0.75	18.00	-1.80	-0.80
BXWQPB		20.00	0.08	0.04	20.00	0.20	0.09
D8CJU3		22.50	2.58	1.37	22.50	2.70	1.21
DGZD4D		20.00	0.08	0.04	19.50	-0.30	-0.13
DY6KHF		18.00	-1.92	-1.02	17.00	-2.80	-1.25
DZB67F		17.50	-2.42	-1.28	15.00	-4.80	-2.14
FDR23U		18.50	-1.42	-0.75	19.00	-0.80	-0.36
FELPGJ		20.50	0.58	0.31	19.50	-0.30	-0.13
G4HWP4	X	19.00	-0.92	-0.49	22.50	2.70	1.21
G7NHD4		17.50	-2.42	-1.28	16.00	-3.80	-1.70
GCWJX9		20.00	0.08	0.04	20.00	0.20	0.09
GRNFZ3		18.27	-1.65	-0.87	18.35	-1.45	-0.65
GTH77H		22.50	2.58	1.37	20.50	0.70	0.31

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 903

## Free Sulfur Dioxide

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
H9U3Z4		19.56	-0.36	-0.19	19.35	-0.45	-0.20
HNJ87C		19.25	-0.67	-0.35	19.05	-0.75	-0.33
HW2HKD		20.50	0.58	0.31	22.50	2.70	1.21
J3YPFR		19.00	-0.92	-0.49	19.00	-0.80	-0.36
J4UDUG		16.50	-3.42	-1.81	16.50	-3.30	-1.47
JXQ8HY		18.50	-1.42	-0.75	17.00	-2.80	-1.25
K2MAK7		19.00	-0.92	-0.49	17.50	-2.30	-1.03
KB8J7E		22.00	2.08	1.10	21.50	1.70	0.76
KM6MB9		19.00	-0.92	-0.49	18.50	-1.30	-0.58
KRXNE8		22.00	2.08	1.10	22.50	2.70	1.21
KUNQKV		20.50	0.58	0.31	19.50	-0.30	-0.13
L4JFE3		18.15	-1.77	-0.94	18.70	-1.10	-0.49
L6EYHN		19.20	-0.72	-0.38	19.20	-0.60	-0.27
LC2RR3	X	32.50	12.58	6.66	31.00	11.20	5.00
MJTNUW		17.00	-2.92	-1.55	18.00	-1.80	-0.80
MUCXHP		22.00	2.08	1.10	23.00	3.20	1.43
MW36Z2		19.20	-0.72	-0.38	19.20	-0.60	-0.27
NCCAP6		22.50	2.58	1.37	22.50	2.70	1.21
NV6D77		21.00	1.08	0.57	20.00	0.20	0.09
NVL6JW		17.50	-2.42	-1.28	16.50	-3.30	-1.47
P4EZUZ		23.00	3.08	1.63	23.00	3.20	1.43
P984M6		22.00	2.08	1.10	24.00	4.20	1.87
PKZN4V		24.00	4.08	2.16	25.00	5.20	2.32
QC3D9Q		20.00	0.08	0.04	22.00	2.20	0.98
QGY2PX		24.50	4.58	2.43	24.50	4.70	2.10
QLP9AR		19.00	-0.92	-0.49	18.00	-1.80	-0.80
R6K2VP		19.00	-0.92	-0.49	19.00	-0.80	-0.36



## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 903

## Free Sulfur Dioxide

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RKB72X		19.00	-0.92	-0.49	19.50	-0.30	-0.13
RRBQ29		23.00	3.08	1.63	22.50	2.70	1.21
RRRHEY		18.50	-1.42	-0.75	17.50	-2.30	-1.03
T6DGH7		20.00	0.08	0.04	20.00	0.20	0.09
TJU8JU		18.00	-1.92	-1.02	17.50	-2.30	-1.03
UBXWNP		19.00	-0.92	-0.49	18.00	-1.80	-0.80
URM2UX	X	18.00	-1.92	-1.02	4.00	-15.80	-7.05
VCLPYX	X	25.00	5.08	2.69	28.00	8.20	3.66
VKFXG4		20.00	0.08	0.04	19.50	-0.30	-0.13
VNGYJL		19.00	-0.92	-0.49	18.00	-1.80	-0.80
VTDMZT		19.50	-0.42	-0.22	19.00	-0.80	-0.36
W6JX8F		18.00	-1.92	-1.02	18.50	-1.30	-0.58
W7DNDU		18.00	-1.92	-1.02	19.00	-0.80	-0.36
WRXNHP		19.04	-0.88	-0.47	20.00	0.20	0.09
XBL8A3		18.50	-1.42	-0.75	18.00	-1.80	-0.80
XDVG2Y		20.00	0.08	0.04	21.00	1.20	0.54
XRD6DH		19.00	-0.92	-0.49	20.00	0.20	0.09
ZWZVDB		20.00	0.08	0.04	19.00	-0.80	-0.36

## Grand Means

19.920 mg/L

## Summary Statistics

19.800 mg/L

## Std Dev Btwn Labs

1.889 mg/L

2.241 mg/L

Statistics based on 68 of 72 reporting participants

Wines tested: SA91: Merlot; SA92: Zinfandel

## Analysis 903

## Free Sulfur Dioxide

**Comments on assigned Data Flags**

G4HWP4 (X) - Inconsistent in testing between samples.

LC2RR3 (X) - Data for both samples are high.

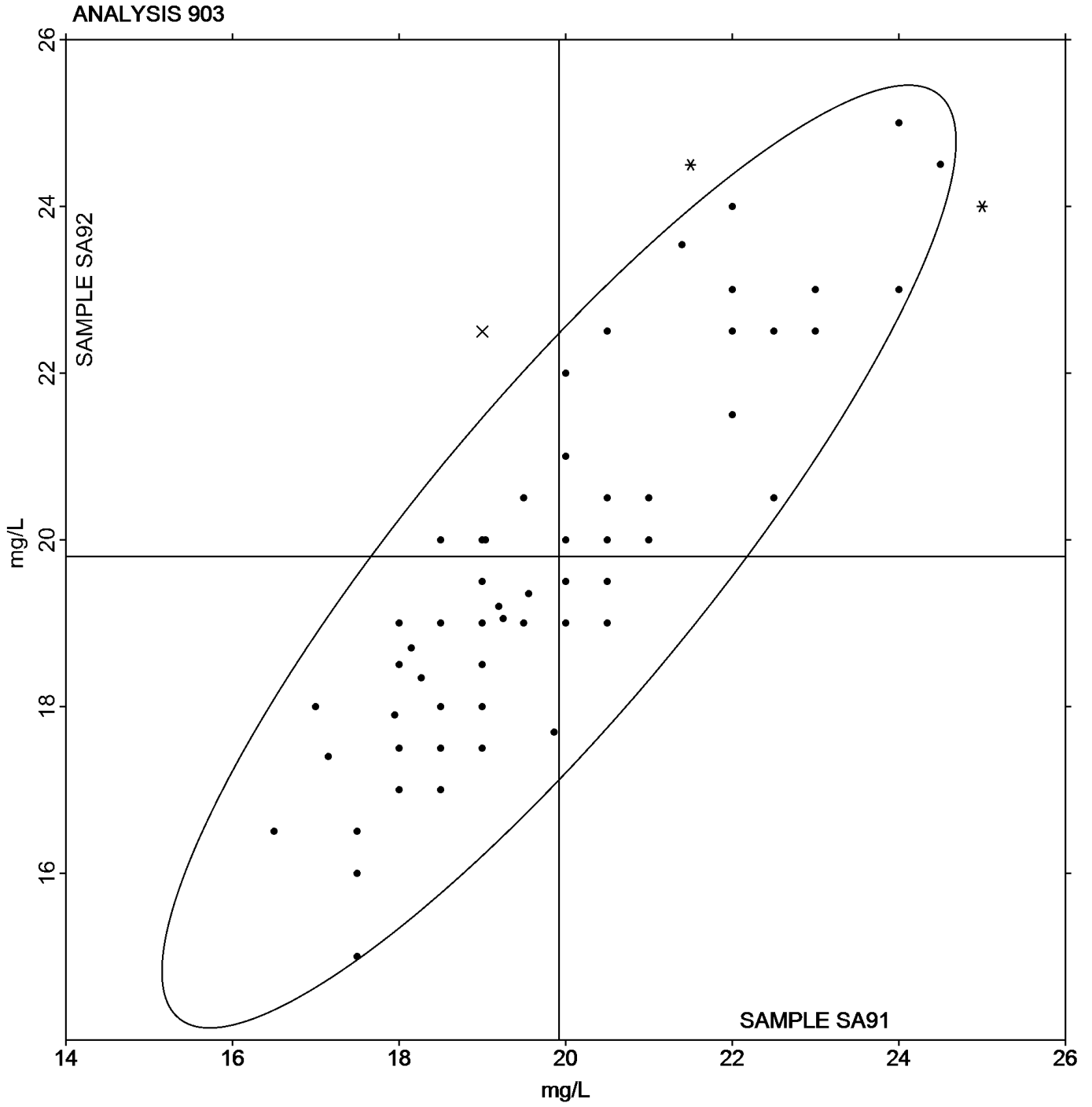
URM2UX (X) - Inconsistent in testing between samples. Data low for Sample SA92.

VCLPYX (X) - Inconsistent in testing between samples. Data high for Sample SA92

**Results by Methodology (as reported by laboratory)**

Test Methodology	Sample SA91 <i>Merlot</i>			Sample SA92 <i>Zinfadel</i>			Labs Incl / Rpt	
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM		
Please specify method used	19.50	0.00	-0.42	19.00	0.00	-0.80	1	1
Ripper Method	19.97	2.42	0.05	19.60	3.10	-0.20	14	17
Aeration Oxidation (AO) Method	20.07	1.90	0.15	20.19	2.08	0.39	28	31
Segmented Flow Analyzer	20.08	0.92	0.16	19.75	1.08	-0.05	6	6
Enzymatic Method	22.00	0.00	2.08	22.50	0.00	2.70	1	1
Colormetric Analyzer	19.63	0.75	-0.29	19.13	1.11	-0.67	4	4
Flow Injection Analysis	19.01	0.87	-0.91	18.48	0.81	-1.32	9	9
FTIR	18.37	1.47	-1.55	18.43	1.38	-1.37	3	3

Analysis 903  
Free Sulfur Dioxide



## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 904

## Titratable Acidity

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2C8CXH		5.800	-0.104	-0.74	6.300	-0.100	-0.64
2G27VJ		5.850	-0.054	-0.39	6.300	-0.100	-0.64
2KZKGM		5.945	0.041	0.29	6.355	-0.045	-0.29
37XBCE		6.000	0.096	0.68	6.450	0.050	0.32
3HTNAP		5.800	-0.104	-0.74	6.250	-0.150	-0.96
78YEFC		5.900	-0.004	-0.03	6.300	-0.100	-0.64
7LFFAH	X	5.350	-0.554	-3.93	5.750	-0.650	-4.16
7NNMDB		5.880	-0.024	-0.17	6.315	-0.085	-0.54
8MMCUC	*	6.230	0.326	2.31	6.825	0.425	2.72
9C337J		5.780	-0.124	-0.88	6.250	-0.150	-0.96
9RXKX3		5.900	-0.004	-0.03	6.400	0.000	0.00
9ZP3CB		6.000	0.096	0.68	6.450	0.050	0.32
9ZTMYE		6.000	0.096	0.68	6.535	0.135	0.86
BJTPPE		5.700	-0.204	-1.45	6.300	-0.100	-0.64
BT3UZJ		5.650	-0.254	-1.80	6.200	-0.200	-1.28
BXWQPB	X	6.350	0.446	3.16	6.400	0.000	0.00
DGZD4D		5.960	0.056	0.39	6.500	0.100	0.64
DY6KHF		6.200	0.296	2.09	6.700	0.300	1.92
DZB67F	X	9.465	3.561	25.22	7.065	0.665	4.25
FDR23U		5.925	0.021	0.15	6.445	0.045	0.29
FELPGJ		5.780	-0.124	-0.88	6.280	-0.120	-0.77
G4HWP4		5.950	0.046	0.32	6.400	0.000	0.00
G7NHD4		5.845	-0.059	-0.42	6.345	-0.055	-0.35
GCWJX9		5.920	0.016	0.11	6.465	0.065	0.41
GRNFZ3		6.110	0.206	1.46	6.600	0.200	1.28
GTH77H	X	0.580	-5.324	-37.71	0.630	-5.770	-36.90
H9U3Z4		5.915	0.011	0.08	6.410	0.010	0.06

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 904

## Titratable Acidity

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
HNJ87C		5.950	0.046	0.32	6.425	0.025	0.16
HW2HKD		5.670	-0.234	-1.66	6.080	-0.320	-2.05
J3YPFR		5.850	-0.054	-0.39	6.400	0.000	0.00
J4UDUG		5.900	-0.004	-0.03	6.400	0.000	0.00
JXQ8HY		5.750	-0.154	-1.09	6.225	-0.175	-1.12
K2MAK7	X	5.650	-0.254	-1.80	6.505	0.105	0.67
KB8J7E		5.833	-0.072	-0.51	6.323	-0.078	-0.50
KM6MB9		5.750	-0.154	-1.09	6.250	-0.150	-0.96
KRXNE8		6.020	0.116	0.82	6.555	0.155	0.99
KUNQKV		6.000	0.096	0.68	6.460	0.060	0.38
L4JFE3		5.800	-0.104	-0.74	6.400	0.000	0.00
L6EYHN	*	6.000	0.096	0.68	6.675	0.275	1.76
LC2RR3		5.900	-0.004	-0.03	6.400	0.000	0.00
MJTNUW		5.900	-0.004	-0.03	6.450	0.050	0.32
MUCXHP	X	5.200	-0.704	-4.99	5.500	-0.900	-5.76
MW36Z2	X	5.400	-0.504	-3.57	5.900	-0.500	-3.20
NCCAP6	*	6.275	0.371	2.63	6.830	0.430	2.75
NV6D77		6.000	0.096	0.68	6.350	-0.050	-0.32
NVL6JW		6.100	0.196	1.39	6.550	0.150	0.96
P4EZUZ		6.110	0.206	1.46	6.620	0.220	1.41
P984M6		5.690	-0.214	-1.52	6.195	-0.205	-1.31
PKZN4V		5.920	0.016	0.11	6.420	0.020	0.13
QC3D9Q	X	5.590	-0.314	-2.23	5.870	-0.530	-3.39
QGY2PX		5.830	-0.074	-0.53	6.315	-0.085	-0.54
QLP9AR		5.800	-0.104	-0.74	6.150	-0.250	-1.60
R6K2VP		5.855	-0.049	-0.35	6.380	-0.020	-0.13
RKB72X		6.200	0.296	2.09	6.745	0.345	2.21

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

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RRBQ29		5.900	-0.004	-0.03	6.350	-0.050	-0.32
RRRHEY		5.800	-0.104	-0.74	6.400	0.000	0.00
T6DGH7		5.910	0.006	0.04	6.280	-0.120	-0.77
TJU8JU		5.900	-0.004	-0.03	6.300	-0.100	-0.64
UBXWNP		5.955	0.051	0.36	6.465	0.065	0.41
UDM47Z		5.900	-0.004	-0.03	6.400	0.000	0.00
URM2UX	X	5.500	-0.404	-2.86	6.300	-0.100	-0.64
VCLPYX		5.965	0.061	0.43	6.600	0.200	1.28
VKFXG4		5.945	0.041	0.29	6.450	0.050	0.32
VNGYJL		5.800	-0.104	-0.74	6.350	-0.050	-0.32
W6JX8F	*	6.200	0.296	2.09	6.600	0.200	1.28
W7DNDU		5.800	-0.104	-0.74	6.250	-0.150	-0.96
WRXNHP		5.738	-0.167	-1.18	6.300	-0.100	-0.64
XBL8A3		5.800	-0.104	-0.74	6.400	0.000	0.00
XDVG2Y		5.865	-0.039	-0.28	6.375	-0.025	-0.16
XRD6DH		5.600	-0.304	-2.16	6.100	-0.300	-1.92
Z2PBZW		5.850	-0.054	-0.39	6.300	-0.100	-0.64
ZWZVDB		5.905	0.001	0.00	6.315	-0.085	-0.54

**Grand Means**

5.9044 g/L as tartaric acid

**Summary Statistics**

6.4001 g/L as tartaric acid

**Std Dev Btwn Labs**

0.1412 g/L as tartaric acid

0.1564 g/L as tartaric acid

Statistics based on 63 of 72 reporting participants

Wines tested: SA91: Merlot; SA92: Zinfandel

**Analysis 904**  
**Titrateable Acidity**

**Comments on assigned Data Flags**

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

BXWQPB (X) - Inconsistent in testing between samples. Data high for Sample SA91 and inconsistent in testing within Sample SA91.

DZB67F (X) - Data for both samples are high.

GTH77H (X) - Data for both samples are low. Lab indicated reporting in g/L, but data appear to be in g/100mL.

K2MAK7 (X) - Inconsistent in testing between samples.

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

MW36Z2 (X) - Data for both samples are low. Possible Systematic Error.

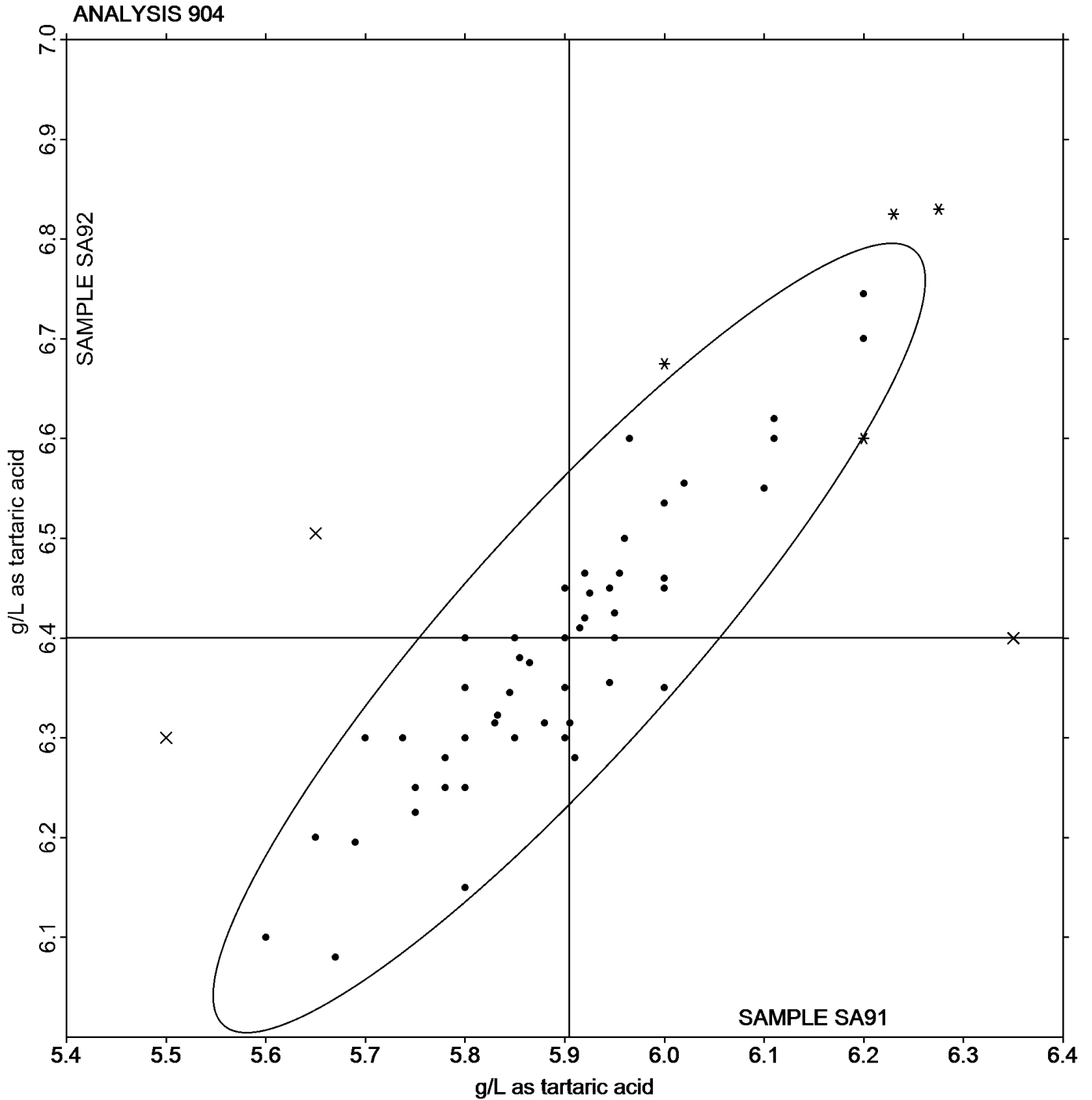
QC3D9Q (X) - Inconsistent in testing between samples. Data low for Sample SA92.

URM2UX (X) - Inconsistent in testing between samples.

**Results by Methodology (as reported by laboratory)**

Test Methodology	Sample SA91 <i>Merlot</i>			Sample SA92 <i>Zinfadel</i>			Labs Incl / Rpt	
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM		
Autotitration	5.870	0.119	-0.034	6.368	0.128	-0.032	39	44
Manual Titration	5.908	0.114	0.003	6.423	0.110	0.023	13	19
FTIR	5.922	0.169	0.017	6.347	0.201	-0.053	6	8
Segmented Flow Analyzer	6.000	0.000	0.096	6.350	0.000	-0.050	1	1

Analysis 904  
Titratable Acidity





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

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WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2C8CXH		0.4400	-0.0009	-0.02	0.5650	0.0166	0.29
2G27VJ		0.4300	-0.0109	-0.25	0.5300	-0.0184	-0.32
2KZKGM		0.4300	-0.0109	-0.25	0.5255	-0.0229	-0.40
37XBCE		0.4400	-0.0009	-0.02	0.5350	-0.0134	-0.23
3HTNAP		0.4500	0.0091	0.21	0.5400	-0.0084	-0.15
78YEFC		0.4400	-0.0009	-0.02	0.5250	-0.0234	-0.41
7LFFAH		0.5000	0.0591	1.38	0.6600	0.1116	1.96
7NNMDB		0.4500	0.0091	0.21	0.5450	-0.0034	-0.06
8MMCUC		0.4500	0.0091	0.21	0.5450	-0.0034	-0.06
9C337J	X	0.0465	-0.3944	-9.17	0.0525	-0.4959	-8.71
9RXKX3		0.5250	0.0841	1.96	0.6250	0.0766	1.35
9ZP3CB	X	0.5900	0.1491	3.47	0.6000	0.0516	0.91
9ZTMYE		0.4400	-0.0009	-0.02	0.5550	0.0066	0.12
BJTPPE		0.4300	-0.0109	-0.25	0.5400	-0.0084	-0.15
BT3UZJ		0.4000	-0.0409	-0.95	0.4900	-0.0584	-1.03
BXWQPB	X	0.6000	0.1591	3.70	0.3000	-0.2484	-4.36
DGZD4D		0.4845	0.0436	1.02	0.5805	0.0321	0.56
DY6KHF		0.3700	-0.0709	-1.65	0.4800	-0.0684	-1.20
DZB67F		0.5100	0.0691	1.61	0.6150	0.0666	1.17
FDR23U		0.4500	0.0091	0.21	0.5700	0.0216	0.38
FELPGJ		0.4300	-0.0109	-0.25	0.5300	-0.0184	-0.32
G4HWP4		0.4400	-0.0009	-0.02	0.5450	-0.0034	-0.06
GCWJX9		0.3850	-0.0559	-1.30	0.4950	-0.0534	-0.94
GTH77H		0.4100	-0.0309	-0.72	0.5300	-0.0184	-0.32
HW2HKD		0.4550	0.0141	0.33	0.6050	0.0566	0.99
J3YPFR		0.3915	-0.0494	-1.15	0.4855	-0.0629	-1.10
J4UDUG		0.4850	0.0441	1.03	0.5900	0.0416	0.73

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 905

## Volatile Acidity

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JXQ8HY		0.3400	-0.1009	-2.35	0.4300	-0.1184	-2.08
K2MAK7	*	0.5100	0.0691	1.61	0.6850	0.1366	2.40
KB8J7E		0.4000	-0.0409	-0.95	0.4975	-0.0509	-0.89
KM6MB9		0.3850	-0.0559	-1.30	0.4750	-0.0734	-1.29
KRXNE8		0.4400	-0.0009	-0.02	0.5400	-0.0084	-0.15
KUNQKV		0.4700	0.0291	0.68	0.5800	0.0316	0.56
L4JFE3		0.4000	-0.0409	-0.95	0.5050	-0.0434	-0.76
L6EYHN	X	0.4550	0.0141	0.33	0.4600	-0.0884	-1.55
LC2RR3		0.4800	0.0391	0.91	0.6100	0.0616	1.08
MJTNUW	X	0.3450	-0.0959	-2.23	0.5250	-0.0234	-0.41
MUCXHP	X	0.5400	0.0991	2.31	0.5700	0.0216	0.38
MW36Z2	*	0.3490	-0.0919	-2.14	0.4030	-0.1454	-2.55
NCCAP6		0.4750	0.0341	0.79	0.5650	0.0166	0.29
NV6D77		0.4350	-0.0059	-0.14	0.5500	0.0016	0.03
NVL6JW		0.4200	-0.0209	-0.49	0.5250	-0.0234	-0.41
P4EZUZ		0.5150	0.0741	1.72	0.6100	0.0616	1.08
P984M6		0.4300	-0.0109	-0.25	0.5400	-0.0084	-0.15
PKZN4V		0.5300	0.0891	2.07	0.6300	0.0816	1.43
QC3D9Q		0.4050	-0.0359	-0.83	0.5350	-0.0134	-0.23
QGY2PX		0.4450	0.0041	0.10	0.5500	0.0016	0.03
QLP9AR		0.4350	-0.0059	-0.14	0.5950	0.0466	0.82
R6K2VP		0.5000	0.0591	1.38	0.5950	0.0466	0.82
RKB72X		0.3900	-0.0509	-1.18	0.4950	-0.0534	-0.94
RRBQ29		0.3950	-0.0459	-1.07	0.4750	-0.0734	-1.29
RRRHEY		0.4000	-0.0409	-0.95	0.5000	-0.0484	-0.85
T6DGH7		0.4650	0.0241	0.56	0.5950	0.0466	0.82
TJU8JU		0.3900	-0.0509	-1.18	0.4900	-0.0584	-1.03

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

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UBXWNP		0.4525	0.0116	0.27	0.5482	-0.0002	0.00
UDM47Z	X	0.6000	0.1591	3.70	0.7000	0.1516	2.66
URM2UX	*	0.5000	0.0591	1.38	0.6800	0.1316	2.31
VCLPYX	X	0.3900	-0.0509	-1.18	0.5650	0.0166	0.29
VKFXG4	*	0.3850	-0.0559	-1.30	0.4300	-0.1184	-2.08
VNGYJL		0.4550	0.0141	0.33	0.5450	-0.0034	-0.06
VTDMZT		0.4600	0.0191	0.45	0.5800	0.0316	0.56
W6JX8F		0.4300	-0.0109	-0.25	0.5300	-0.0184	-0.32
W7DNDU		0.5000	0.0591	1.38	0.6250	0.0766	1.35
WRXNHP		0.4440	0.0031	0.07	0.5665	0.0181	0.32
XBL8A3		0.4350	-0.0059	-0.14	0.5400	-0.0084	-0.15
XDVG2Y		0.4900	0.0491	1.14	0.6050	0.0566	0.99
XRD6DH		0.4400	-0.0009	-0.02	0.5600	0.0116	0.20
ZWZVDB		0.4200	-0.0209	-0.49	0.5100	-0.0384	-0.67

**Grand Means**

0.44086 g/L as acetic acid

**Summary Statistics**

0.54836 g/L as acetic acid

**Std Dev Btwn Labs**

0.04299 g/L as acetic acid

0.05693 g/L as acetic acid

Statistics based on 60 of 68 reporting participants

Wines tested: SA91: Merlot; SA92: Zinfadel

## Analysis 905

## Volatile Acidity

**Comments on assigned Data Flags**

9C337J (X) - Data for both samples are low. Lab indicated reporting in g/L, but data may be in g/100mL

9ZP3CB (X) - Data for both samples are high.

BXWQPB (X) - Data for Sample SA91 are high, and data for Sample SA92 are low.

L6EYHN (X) - Inconsistent in testing between samples.

MJTNUW (X) - Inconsistent in testing between samples.

MUCXHP (X) - Inconsistent in testing between samples.

UDM47Z (X) - Data for both samples are high.

VCLPYX (X) - Inconsistent in testing between samples.

**Results by Methodology (as reported by laboratory)**

Test Methodology	Sample SA91 <i>Merlot</i>			Sample SA92 <i>Zinfadel</i>			Labs Incl / Rpt	
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM		
Cash Still method	0.4610	0.0392	0.0201	0.5659	0.0406	0.0175	14	23
Enzymatic method	0.4246	0.0361	-0.0162	0.5310	0.0415	-0.0173	22	23
HPLC	0.4525	0.0000	0.0116	0.5482	0.0000	-0.0002	1	1
GC	0.4150	0.0212	-0.0259	0.5150	0.0354	-0.0334	2	2
Colorimetric Analysis	0.4050	0.0000	-0.0359	0.5350	0.0000	-0.0134	1	1
Seg. Flow / Colorimetric Analyzer	0.4550	0.0372	0.0141	0.5544	0.0422	0.0060	8	9
FTIR	0.4481	0.0470	0.0073	0.5688	0.0674	0.0204	8	9



## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 906

## Specific Gravity

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2C8CXH		0.9959	0.0000	0.05	0.9963	0.0000	0.07
2G27VJ	X	1.0000	0.0041	5.97	1.0005	0.0042	6.28
2KZKGM		0.9959	0.0000	0.03	0.9963	0.0000	0.06
37XBCE		0.9959	0.0000	0.00	0.9963	0.0000	0.03
3HTNAP		0.9960	0.0001	0.08	0.9963	0.0000	0.04
78YEFC	X	0.9949	-0.0010	-1.39	0.9963	0.0000	0.02
7LFFAH		0.9958	-0.0001	-0.13	0.9962	-0.0001	-0.11
7NNMDB		0.9960	0.0001	0.09	0.9964	0.0001	0.11
9C337J		0.9960	0.0001	0.11	0.9964	0.0001	0.11
9RXKX3		0.9962	0.0002	0.36	0.9964	0.0001	0.18
9ZTMYE		0.9955	-0.0004	-0.59	0.9955	-0.0008	-1.16
BJTPPE	X	0.9930	-0.0029	-4.23	0.9930	-0.0033	-4.89
BT3UZJ		0.9961	0.0002	0.24	0.9965	0.0002	0.37
D8CJU3		0.9968	0.0009	1.25	0.9972	0.0009	1.30
DGZD4D		0.9960	0.0001	0.12	0.9965	0.0002	0.27
DZB67F	X	1.0000	0.0041	5.97	0.9000	-0.0963	-143.38
FDR23U		0.9958	-0.0002	-0.22	0.9961	-0.0002	-0.27
FELPGJ	X	0.9962	0.0003	0.38	0.9973	0.0010	1.49
G4HWP4		0.9961	0.0002	0.24	0.9965	0.0002	0.28
G7NHD4		0.9974	0.0015	2.17	0.9977	0.0014	2.10
GCWJX9	*	0.9975	0.0016	2.33	0.9976	0.0013	1.89
GRNFZ3		0.9960	0.0001	0.09	0.9963	0.0000	0.02
GTH77H		0.9971	0.0012	1.75	0.9974	0.0011	1.67
H9U3Z4		0.9960	0.0001	0.14	0.9964	0.0001	0.18
HNJ87C		0.9961	0.0002	0.29	0.9965	0.0002	0.33
HW2HKD		0.9943	-0.0016	-2.34	0.9946	-0.0017	-2.50
J4UDUG		0.9960	0.0001	0.14	0.9964	0.0001	0.18

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

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WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JXQ8HY	X	0.9830	-0.0130	-18.88	0.9836	-0.0127	-18.88
K2MAK7		0.9943	-0.0016	-2.39	0.9948	-0.0015	-2.24
KB8J7E	*	0.9939	-0.0020	-2.95	0.9945	-0.0018	-2.69
KM6MB9		0.9960	0.0001	0.09	0.9964	0.0001	0.21
KRXNE8		0.9960	0.0001	0.14	0.9964	0.0001	0.18
KUNQKV		0.9959	0.0000	0.06	0.9963	0.0001	0.08
LC2RR3		0.9960	0.0001	0.08	0.9964	0.0001	0.12
MJTNUW		0.9963	0.0003	0.51	0.9966	0.0003	0.47
MUCXHP		0.9966	0.0007	1.02	0.9969	0.0006	0.92
MW36Z2		0.9960	0.0001	0.14	0.9960	-0.0003	-0.42
NV6D77		0.9960	0.0001	0.14	0.9964	0.0001	0.18
NVL6JW	*	0.9951	-0.0009	-1.24	0.9950	-0.0013	-1.91
P4EZUZ	X	0.9977	0.0018	2.61	0.9986	0.0024	3.52
P984M6		0.9961	0.0002	0.29	0.9965	0.0002	0.33
PKZN4V		0.9960	0.0001	0.11	0.9963	0.0000	0.01
QC3D9Q		0.9944	-0.0015	-2.19	0.9947	-0.0016	-2.35
QGY2PX		0.9944	-0.0015	-2.19	0.9949	-0.0014	-2.13
QLP9AR		0.9958	-0.0001	-0.16	0.9963	0.0001	0.09
R6K2VP		0.9957	-0.0002	-0.29	0.9961	-0.0002	-0.27
RKB72X		0.9961	0.0002	0.29	0.9961	-0.0002	-0.27
RRBQ29		0.9960	0.0001	0.09	0.9963	0.0001	0.09
RRRHEY		0.9942	-0.0017	-2.55	0.9945	-0.0017	-2.59
TJU8JU		0.9960	0.0001	0.14	0.9964	0.0001	0.17
UBXWNP		0.9960	0.0001	0.14	0.9964	0.0001	0.18
UDM47Z		0.9959	0.0000	0.00	0.9963	0.0000	0.04
VCLPYX		0.9960	0.0001	0.18	0.9964	0.0001	0.20
VKFXG4		0.9960	0.0001	0.14	0.9963	0.0000	0.03

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

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
VNGYJL		0.9960	0.0001	0.16	0.9964	0.0002	0.23
VTDMZT		0.9960	0.0001	0.13	0.9964	0.0001	0.16
W6JX8F		0.9961	0.0002	0.23	0.9963	0.0000	0.07
W7DNDU		0.9959	0.0000	0.00	0.9963	0.0000	0.03
WRXNHP		0.9960	0.0001	0.14	0.9965	0.0002	0.33
XBL8A3		0.9960	0.0001	0.08	0.9964	0.0001	0.10
XDVG2Y		0.9959	0.0000	0.00	0.9963	0.0000	0.03
XRD6DH	X	0.9969	0.0010	1.45	0.9957	-0.0006	-0.87
Z2PBZW		0.9960	0.0000	0.07	0.9963	0.0001	0.09
ZWZVDB		0.9962	0.0003	0.38	0.9966	0.0003	0.42

Grand Means		Summary Statistics	
0.99590	sp gr 20/20 C	0.99628	sp gr 20/20 C
Std Dev Btwn Labs			
0.00069	sp gr 20/20 C	0.00067	sp gr 20/20 C
<b>Statistics based on 56 of 64 reporting participants</b>			

**Wines tested:** SA91: Merlot; SA92: Zinfadel

**Comments on assigned Data Flags**

2G27VJ (X) - Data for both samples are high.

78YEFC (X) - High Data for Sample SA92.

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

DZB67F (X) - Inconsistent in testing between samples.

FELPGJ (X) - Inconsistent in testing between samples.

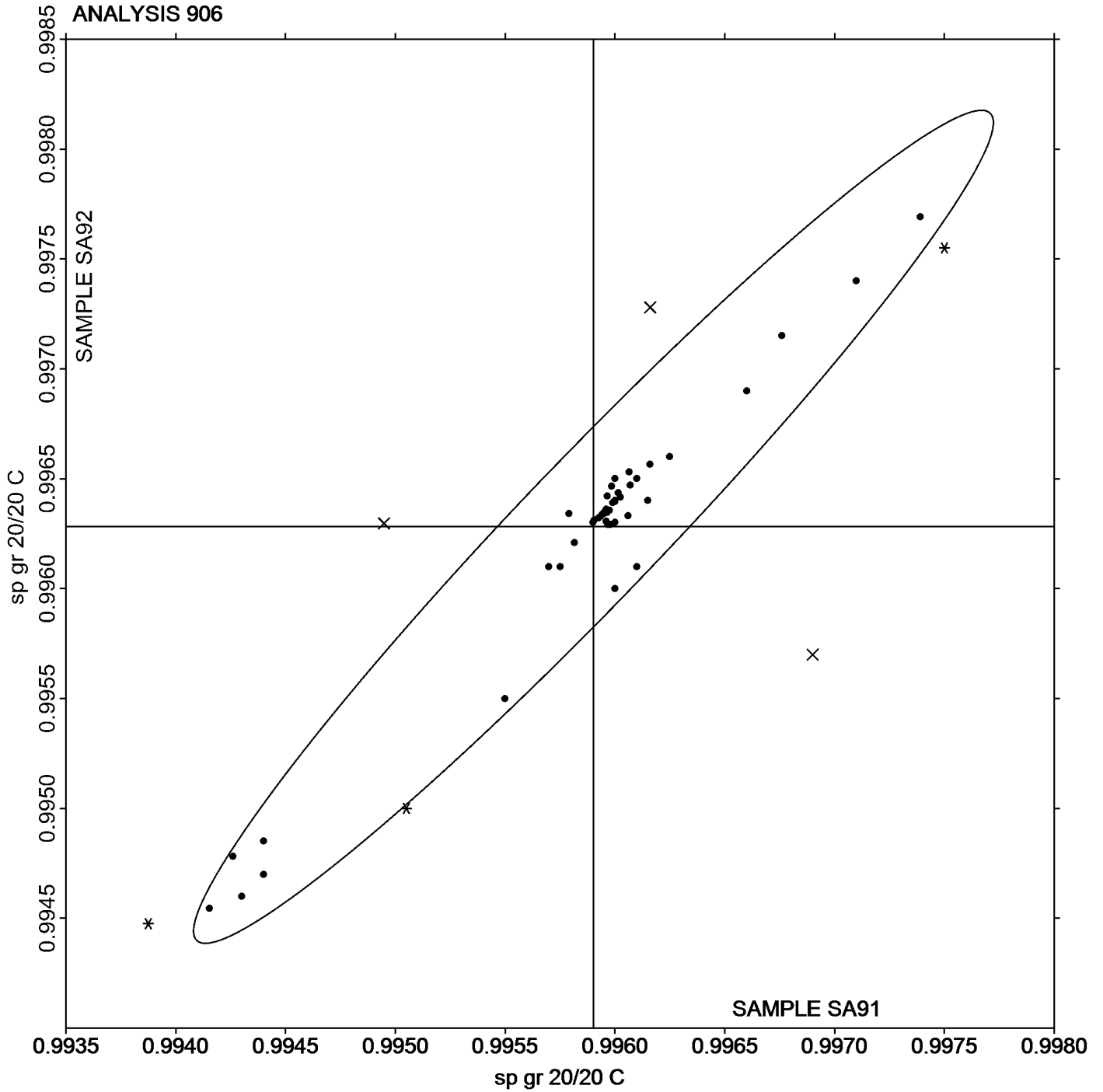
JXQ8HY (X) - Data for both samples are low.

P4EZUZ (X) - Low Data for Sample SA92.

XRD6DH (X) - Inconsistent in testing between samples. Also inconsistent in testing within Sample SA92.



Analysis 906  
Specific Gravity



## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 907

## pH

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2C8CXH		3.480	-0.018	-0.92	3.530	-0.013	-0.66
2G27VJ		3.505	0.007	0.38	3.550	0.007	0.34
2KZKGM		3.475	-0.023	-1.18	3.530	-0.013	-0.66
37XBCE		3.505	0.007	0.38	3.545	0.002	0.09
3HTNAP		3.530	0.032	1.68	3.570	0.027	1.35
78YEFC		3.480	-0.018	-0.92	3.535	-0.008	-0.41
7LFFAH	*	3.520	0.022	1.16	3.545	0.002	0.09
7NNMDB	*	3.470	-0.028	-1.44	3.535	-0.008	-0.41
8MMCUC	X	3.420	-0.078	-4.04	3.465	-0.078	-3.93
9RXKX3		3.490	-0.008	-0.40	3.540	-0.003	-0.16
9ZP3CB		3.520	0.022	1.16	3.570	0.027	1.35
9ZTMYE		3.510	0.012	0.64	3.555	0.012	0.59
BJTPPE	X	3.390	-0.108	-5.61	3.430	-0.113	-5.69
BT3UZI		3.520	0.022	1.16	3.560	0.017	0.84
BXWQPB		3.525	0.027	1.42	3.570	0.027	1.35
DGZD4D		3.495	-0.003	-0.14	3.540	-0.003	-0.16
DY6KHF		3.530	0.032	1.68	3.585	0.042	2.10
DZB67F		3.475	-0.023	-1.18	3.520	-0.023	-1.17
FDR23U		3.515	0.017	0.90	3.550	0.007	0.34
FELPGJ	X	3.540	0.042	2.21	3.560	0.017	0.84
G4HWP4		3.480	-0.018	-0.92	3.525	-0.018	-0.91
G7NHD4	X	3.580	0.082	4.29	3.630	0.087	4.36
GCWJX9		3.490	-0.008	-0.40	3.530	-0.013	-0.66
GRNFZ3	X	3.560	0.062	3.25	3.535	-0.008	-0.41
GTH77H		3.485	-0.013	-0.66	3.515	-0.028	-1.42
H9U3Z4		3.496	-0.002	-0.11	3.545	0.001	0.07
HNJ87C		3.490	-0.008	-0.40	3.555	0.012	0.59

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 907

## pH

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
HW2HKD	X	3.640	0.142	7.41	3.605	0.062	3.10
J3YPFR		3.500	0.002	0.12	3.540	-0.003	-0.16
J4UDUG		3.510	0.012	0.64	3.550	0.007	0.34
JXQ8HY		3.490	-0.008	-0.40	3.540	-0.003	-0.16
K2MAK7		3.485	-0.013	-0.66	3.515	-0.028	-1.42
KB8J7E		3.480	-0.018	-0.92	3.528	-0.016	-0.79
KM6MB9		3.480	-0.018	-0.92	3.520	-0.023	-1.17
KRXNE8		3.520	0.022	1.16	3.560	0.017	0.84
KUNQKV		3.525	0.027	1.42	3.570	0.027	1.35
L4JFE3		3.480	-0.018	-0.92	3.530	-0.013	-0.66
L6EYHN		3.500	0.002	0.12	3.540	-0.003	-0.16
LC2RR3		3.490	-0.008	-0.40	3.540	-0.003	-0.16
MJTNUW	X	3.480	-0.018	-0.92	3.565	0.022	1.10
MUCXHP	X	3.395	-0.103	-5.35	3.450	-0.093	-4.68
MW36Z2		3.490	-0.008	-0.40	3.540	-0.003	-0.16
NCCAP6	X	3.565	0.067	3.51	3.585	0.042	2.10
NV6D77	X	3.500	0.002	0.12	3.600	0.057	2.85
NVL6JW		3.480	-0.018	-0.92	3.515	-0.028	-1.42
P4EZUZ		3.490	-0.008	-0.40	3.540	-0.003	-0.16
P984M6		3.480	-0.018	-0.92	3.530	-0.013	-0.66
PKZN4V		3.480	-0.018	-0.92	3.530	-0.013	-0.66
QC3D9Q	*	3.540	0.042	2.21	3.600	0.057	2.85
QGY2PX		3.510	0.012	0.64	3.550	0.007	0.34
QLP9AR		3.500	0.002	0.12	3.540	-0.003	-0.16
R6K2VP		3.470	-0.028	-1.44	3.510	-0.033	-1.67
RKB72X		3.510	0.012	0.64	3.555	0.012	0.59
RRBQ29	X	3.480	-0.018	-0.92	3.560	0.017	0.84

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 907

## pH

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RRRHEY		3.470	-0.028	-1.44	3.520	-0.023	-1.17
T6DGH7	X	3.555	0.057	2.99	3.540	-0.003	-0.16
TJU8JU		3.500	0.002	0.12	3.540	-0.003	-0.16
UBXWNP	X	3.570	0.072	3.77	3.605	0.062	3.10
URM2UX	X	3.495	-0.003	-0.14	3.480	-0.063	-3.18
VCLPYX		3.540	0.042	2.21	3.585	0.042	2.10
VKFXG4		3.475	-0.023	-1.18	3.520	-0.023	-1.17
VNGYJL		3.480	-0.018	-0.92	3.525	-0.018	-0.91
VTDMZT		3.500	0.002	0.12	3.550	0.007	0.34
W6JX8F	X	3.500	0.002	0.12	3.490	-0.053	-2.67
W7DN DU		3.510	0.012	0.64	3.565	0.022	1.10
WRXNHP		3.483	-0.015	-0.76	3.526	-0.017	-0.86
XBL8A3		3.505	0.007	0.38	3.550	0.007	0.34
XDVG2Y		3.530	0.032	1.68	3.580	0.037	1.85
XRD6DH		3.485	-0.013	-0.66	3.530	-0.013	-0.66
ZWZVDB	X	3.520	0.022	1.16	3.515	-0.028	-1.42

## Grand Means

3.4977 pH

## Summary Statistics

3.5432 pH

## Std Dev Btwn Labs

0.0192 pH

0.0199 pH

Statistics based on 54 of 70 reporting participants

Wines tested: SA91: Merlot; SA92: Zinfadel

## Analysis 907

## pH

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**Comments on assigned Data Flags**

8MMCUC (X) - Data for both samples are low. Possible Systematic Error.

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

FELPGJ (X) - Inconsistent in testing between samples.

G7NHD4 (X) - Data for both samples are high. Possible Systematic Error.

GRNFZ3 (X) - Inconsistent in testing between samples. Low data for Sample SA91.

HW2HKD (X) - Data for both samples are high.

MJTNUW (X) - Inconsistent in testing between samples.

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

NCCAP6 (X) - Inconsistent in testing between samples. High data for Sample SA91.

NV6D77 (X) - inconsistent in testing between samples. High data for Sample SA92.

RRBQ29 (X) - Inconsistent in testing between samples.

T6DGH7 (X) - Inconsistent in testing between samples.

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

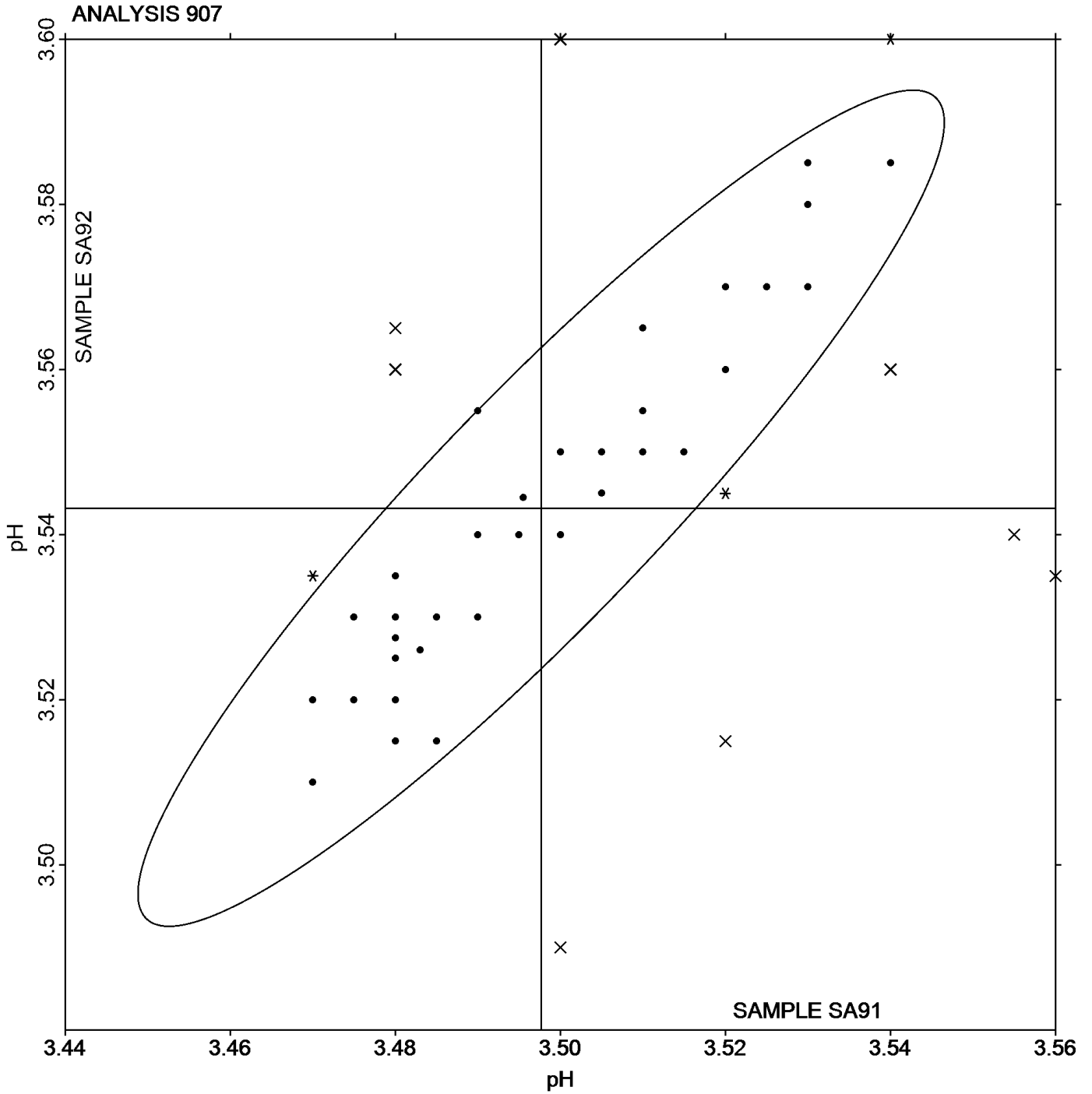
URM2UX (X) - Inconsistent in testing between samples. Data low for Sample SA92 and inconsistent in testing within Sample SA92.

W6JX8F (X) - Inconsistent in testing between samples.

ZWZVDB (X) - Inconsistent in testing between samples.

Analysis 907

pH



**ASEV-CTS Wine Industry Interlaboratory Testing Program**  
**Analysis 908**  
**Residual Sugar**

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2G27VJ		5.800	-1.136	-0.80	7.250	-1.103	-0.64
3HTNAP		10.100	3.164	2.24	12.000	3.647	2.10
7LFFAH		6.915	-0.021	-0.02	8.225	-0.128	-0.07
7NNMDB		6.995	0.059	0.04	8.285	-0.068	-0.04
BJTPPE		7.400	0.464	0.33	8.700	0.347	0.20
GRNFZ3		5.360	-1.576	-1.11	5.920	-2.433	-1.40
HW2HKD		5.195	-1.741	-1.23	8.300	-0.053	-0.03
KRXNE8		5.250	-1.686	-1.19	6.900	-1.453	-0.84
KUNQKV		7.050	0.114	0.08	9.000	0.647	0.37
L6EYHN	*	5.500	-1.436	-1.02	4.500	-3.853	-2.22
MW36Z2		7.150	0.214	0.15	9.150	0.797	0.46
NV6D77		7.400	0.464	0.33	8.900	0.547	0.31
PKZN4V		6.530	-0.406	-0.29	7.830	-0.523	-0.30
QC3D9Q		7.855	0.919	0.65	9.020	0.667	0.38
QLP9AR		5.350	-1.586	-1.12	6.750	-1.603	-0.92
UBXWNP		8.055	1.118	0.79	9.806	1.452	0.84
VCLPYX		9.550	2.614	1.85	10.925	2.572	1.48
VTDMZT		7.400	0.464	0.33	8.900	0.547	0.31

Grand Means		Summary Statistics	
	6.9364 g/L		8.3534 g/L
Std Dev Btwn Labs			1.7355 g/L
	1.4150 g/L	Statistics based on 18 of 18 reporting participants	

Wines tested: SA91: Merlot; SA92: Zinfadel

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 908

## Residual Sugar

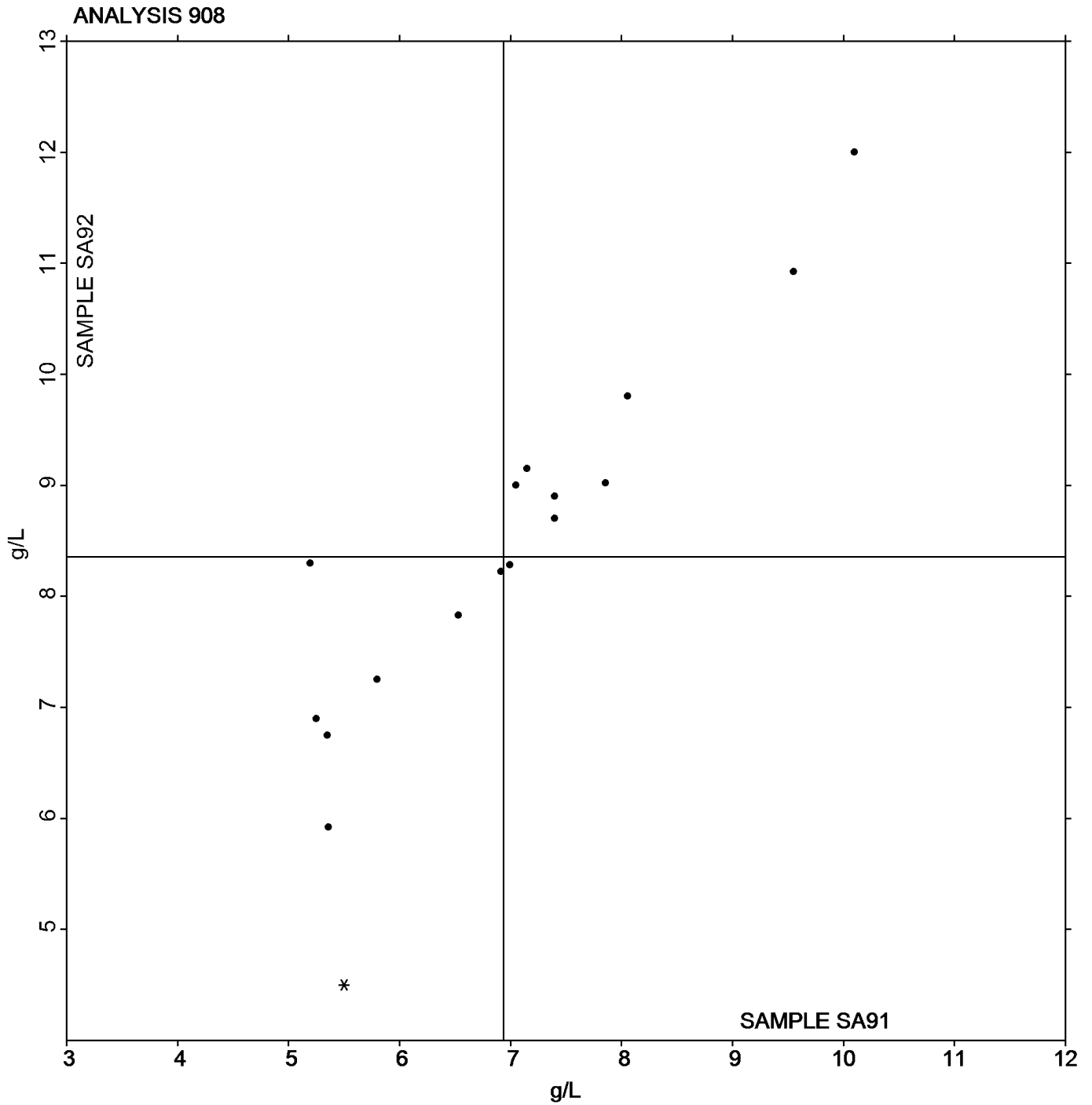
## Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA91 <i>Merlot</i>			Sample SA92 <i>Zinfadel</i>			Labs Incl / Rpt	
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM		
Cu Reduction Method	7.665	0.858	0.729	9.126	0.883	0.773	8	9
Segmented Flow	8.750	1.909	1.814	10.450	2.192	2.097	2	2
FTIR	5.875	0.857	-1.061	7.756	0.948	-0.597	5	5
Other _____	5.580	0.311	-1.356	6.585	0.940	-1.768	2	2



Analysis 908

Residual Sugar



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**  
**Analysis 909**  
**L-Malic Acid**

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WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2G27VJ		0.1440	-0.0078	-0.13	0.1885	-0.0036	-0.05
2KZKGM		0.1400	-0.0118	-0.19	0.1980	0.0059	0.08
37XBCE		0.0100	-0.1418	-2.27	0.0250	-0.1671	-2.25
78YEFC		0.1760	0.0242	0.39	0.2215	0.0294	0.40
7LFFAH	*	0.0250	-0.1268	-2.03	0.0100	-0.1821	-2.46
9C337J		0.1650	0.0132	0.21	0.2150	0.0229	0.31
9RXKX3		0.1200	-0.0318	-0.51	0.1550	-0.0371	-0.50
9ZP3CB		0.1630	0.0112	0.18	0.2260	0.0339	0.46
9ZTMYE		0.2200	0.0682	1.09	0.2600	0.0679	0.92
BJTPPE	X	0.2000	0.0482	0.77	0.1900	-0.0021	-0.03
BT3UZJ	M	0.1850	0.0332	0.53	No data reported for this sample		
DGZD4D		0.1930	0.0412	0.66	0.2465	0.0544	0.73
DZB67F		0.2000	0.0482	0.77	0.2450	0.0529	0.71
FDR23U		0.1850	0.0332	0.53	0.2300	0.0379	0.51
FELPGJ		0.1250	-0.0268	-0.43	0.1800	-0.0121	-0.16
G4HWP4		0.1600	0.0082	0.13	0.2140	0.0219	0.30
GCWJX9		0.1350	-0.0168	-0.27	0.1500	-0.0421	-0.57
GTH77H		0.1585	0.0067	0.11	0.2110	0.0189	0.26
HNJ87C		0.1115	-0.0403	-0.65	0.1760	-0.0161	-0.22
J3YPFR		0.1270	-0.0248	-0.40	0.1665	-0.0256	-0.35
J4UDUG	M	No data reported for this sample			0.2050	0.0129	0.17
JXQ8HY		0.1350	-0.0168	-0.27	0.1800	-0.0121	-0.16
K2MAK7		0.2100	0.0582	0.93	0.2650	0.0729	0.98
KB8J7E		0.0650	-0.0868	-1.39	0.0775	-0.1146	-1.55
KM6MB9		0.2700	0.1182	1.89	0.3400	0.1479	2.00
KUNQKV	X	0.1200	-0.0318	-0.51	0.2100	0.0179	0.24
L4JFE3		0.2300	0.0782	1.25	0.2550	0.0629	0.85

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

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WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
L6EYHN		0.1150	-0.0368	-0.59	0.1455	-0.0466	-0.63
MUCXHP		0.1300	-0.0218	-0.35	0.1850	-0.0071	-0.10
MW36Z2		0.1050	-0.0468	-0.75	0.1365	-0.0556	-0.75
NCCAP6		0.1850	0.0332	0.53	0.2350	0.0429	0.58
NVL6JW		0.1550	0.0032	0.05	0.2000	0.0079	0.11
P4EZUZ		0.1700	0.0182	0.29	0.2150	0.0229	0.31
P984M6		0.1480	-0.0038	-0.06	0.1910	-0.0011	-0.01
QC3D9Q		0.1350	-0.0168	-0.27	0.1550	-0.0371	-0.50
QGY2PX		0.1505	-0.0013	-0.02	0.1985	0.0064	0.09
R6K2VP		0.1550	0.0032	0.05	0.1900	-0.0021	-0.03
RKB72X		0.1600	0.0082	0.13	0.2050	0.0129	0.17
RRBQ29	X	0.1250	-0.0268	-0.43	0.0850	-0.1071	-1.44
RRRHEY		0.2075	0.0557	0.89	0.2410	0.0489	0.66
T6DGH7		0.0200	-0.1318	-2.11	0.0500	-0.1421	-1.92
TJU8JU		0.2360	0.0842	1.35	0.2815	0.0894	1.21
UBXWNP	*	0.3228	0.1710	2.74	0.3879	0.1958	2.64
URM2UX		0.2100	0.0582	0.93	0.2550	0.0629	0.85
VKFXG4		0.1600	0.0082	0.13	0.2050	0.0129	0.17
VNGYJL		0.1650	0.0132	0.21	0.2250	0.0329	0.44
VTDMZT		0.0500	-0.1018	-1.63	0.0550	-0.1371	-1.85
W6JX8F		0.0200	-0.1318	-2.11	0.0200	-0.1721	-2.32
W7DNDU		0.2300	0.0782	1.25	0.2600	0.0679	0.92
WRXNHP		0.1150	-0.0368	-0.59	0.1540	-0.0381	-0.51
XBL8A3		0.1530	0.0012	0.02	0.2005	0.0084	0.11
XDVG2Y		0.1250	-0.0268	-0.43	0.1800	-0.0121	-0.16
XRD6DH		0.1975	0.0457	0.73	0.2145	0.0224	0.30
ZWZVDB		0.1500	-0.0018	-0.03	0.1900	-0.0021	-0.03

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 909

## L-Malic Acid

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		Summary Statistics	
<b>Grand Means</b>	0.15180 g/L		0.19207 g/L
<b>Stnd Dev Btwn Labs</b>	0.06241 g/L		0.07410 g/L
<b>Statistics based on 49 of 54 reporting participants</b>			

**Wines tested:** SA91: Merlot; SA92: Zinfadel

**Comments on assigned Data Flags**

BJTPPE (X) - Inconsistent in testing between samples.

BT3UZJ (M) - Laboratory did not submit data for Sample SA92.

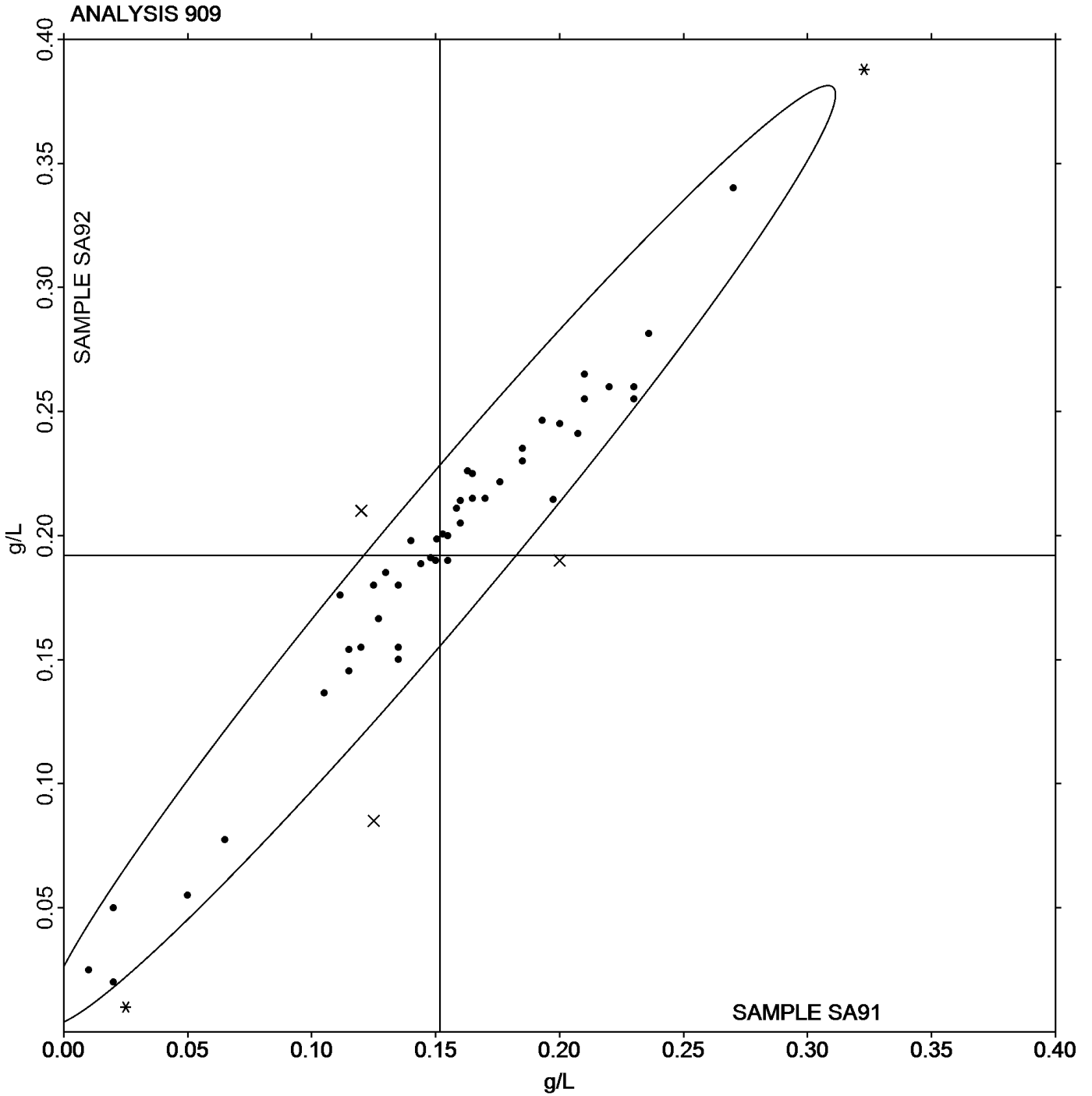
J4UDUG (M) - Laboratory did not submit data for Sample SA91.

KUNQKV (X) - Inconsistent in testing between samples.

RRBQ29 (X) - Inconsistent in testing between samples.

Analysis 909

L-Malic Acid



## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 910

## Glucose + Fructose

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2C8CXH		5.220	-0.248	-0.60	6.305	-0.542	-0.94
2G27VJ		5.800	0.332	0.80	7.250	0.403	0.70
2KZKGM		5.445	-0.023	-0.06	6.785	-0.062	-0.11
37XBCE		5.450	-0.018	-0.04	6.990	0.143	0.25
78YEFC		5.830	0.362	0.87	7.500	0.653	1.13
7LFFAH		5.580	0.112	0.27	7.380	0.533	0.93
8MMCUC		5.370	-0.098	-0.24	6.775	-0.072	-0.12
9C337J		5.610	0.142	0.34	6.655	-0.192	-0.33
9RXKX3		4.850	-0.618	-1.49	6.100	-0.747	-1.30
9ZTMYE		5.950	0.482	1.16	7.450	0.603	1.05
BT3UZJ		5.325	-0.143	-0.35	6.960	0.113	0.20
BXWQPB	X	2.490	-2.978	-7.18	2.970	-3.877	-6.73
DGZD4D		5.595	0.127	0.31	7.240	0.393	0.68
DY6KHF		5.050	-0.418	-1.01	6.500	-0.347	-0.60
DZB67F	X	0.445	-5.023	-12.11	0.540	-6.307	-10.95
FDR23U		5.525	0.057	0.14	6.915	0.068	0.12
FELPGJ		5.750	0.282	0.68	7.100	0.253	0.44
G4HWP4		5.275	-0.193	-0.47	6.685	-0.162	-0.28
GCWJX9		5.000	-0.468	-1.13	6.100	-0.747	-1.30
GTH77H		5.215	-0.253	-0.61	6.500	-0.347	-0.60
H9U3Z4		5.650	0.182	0.44	7.150	0.303	0.53
HNJ87C		5.200	-0.268	-0.65	6.350	-0.497	-0.86
J3YPFR		5.235	-0.233	-0.56	6.520	-0.327	-0.57
J4UDUG		5.400	-0.068	-0.16	6.850	0.003	0.01
JXQ8HY		5.300	-0.168	-0.41	6.550	-0.297	-0.52
K2MAK7		4.770	-0.698	-1.68	6.025	-0.822	-1.43
KB8J7E		4.925	-0.543	-1.31	6.175	-0.672	-1.17

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 910

## Glucose + Fructose

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KM6MB9		5.740	0.272	0.65	7.150	0.303	0.53
KRXNE8	*	6.000	0.532	1.28	8.100	1.253	2.18
KUNQKV	X	5.800	0.332	0.80	6.100	-0.747	-1.30
L4JFE3		5.050	-0.418	-1.01	6.350	-0.497	-0.86
L6EYHN		5.272	-0.196	-0.47	6.583	-0.264	-0.46
LC2RR3		5.500	0.032	0.08	6.900	0.053	0.09
MUCXHP		5.400	-0.068	-0.16	6.500	-0.347	-0.60
NCCAP6		5.730	0.262	0.63	7.130	0.283	0.49
NV6D77		5.700	0.232	0.56	7.000	0.153	0.27
NVL6JW	X	4.805	-0.663	-1.60	6.890	0.043	0.08
P4EZUZ		5.900	0.432	1.04	7.150	0.303	0.53
P984M6		5.600	0.132	0.32	6.800	-0.047	-0.08
PKZN4V		6.010	0.542	1.31	7.730	0.883	1.53
QC3D9Q		6.425	0.957	2.31	8.250	1.403	2.44
QGY2PX		5.600	0.132	0.32	7.000	0.153	0.27
R6K2VP		5.400	-0.068	-0.16	6.950	0.103	0.18
RKB72X		5.455	-0.013	-0.03	6.900	0.053	0.09
RRBQ29		5.000	-0.468	-1.13	6.300	-0.547	-0.95
RRRHEY		4.950	-0.518	-1.25	6.575	-0.272	-0.47
T6DGH7	X	5.800	0.332	0.80	8.150	1.303	2.26
TJU8JU		4.975	-0.493	-1.19	6.330	-0.517	-0.90
UBXWNP	X	6.904	1.436	3.46	6.771	-0.076	-0.13
UDM47Z	*	5.950	0.482	1.16	6.950	0.103	0.18
URM2UX	*	4.385	-1.083	-2.61	5.535	-1.312	-2.28
VKFXG4		6.230	0.762	1.84	7.670	0.823	1.43
VNGYJL		5.400	-0.068	-0.16	6.500	-0.347	-0.60
W6JX8F	*	6.500	1.032	2.49	8.550	1.703	2.96

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 910

## Glucose + Fructose

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
W7DNDU		5.050	-0.418	-1.01	6.000	-0.847	-1.47
WRXNHP		5.243	-0.225	-0.54	6.350	-0.497	-0.86
XBL8A3		5.800	0.332	0.80	7.150	0.303	0.53
XDVG2Y		5.405	-0.063	-0.15	6.560	-0.287	-0.50
XRD6DH	X	6.035	0.567	1.37	6.075	-0.772	-1.34
ZWZVDB		5.835	0.367	0.88	7.105	0.258	0.45

Grand Means		Summary Statistics	
	5.4684 g/L		6.8467 g/L
Std Dev Btwn Labs			0.5757 g/L
	0.4147 g/L		
Statistics based on 53 of 60 reporting participants			

Wines tested: SA91: Merlot; SA92: Zinfadel

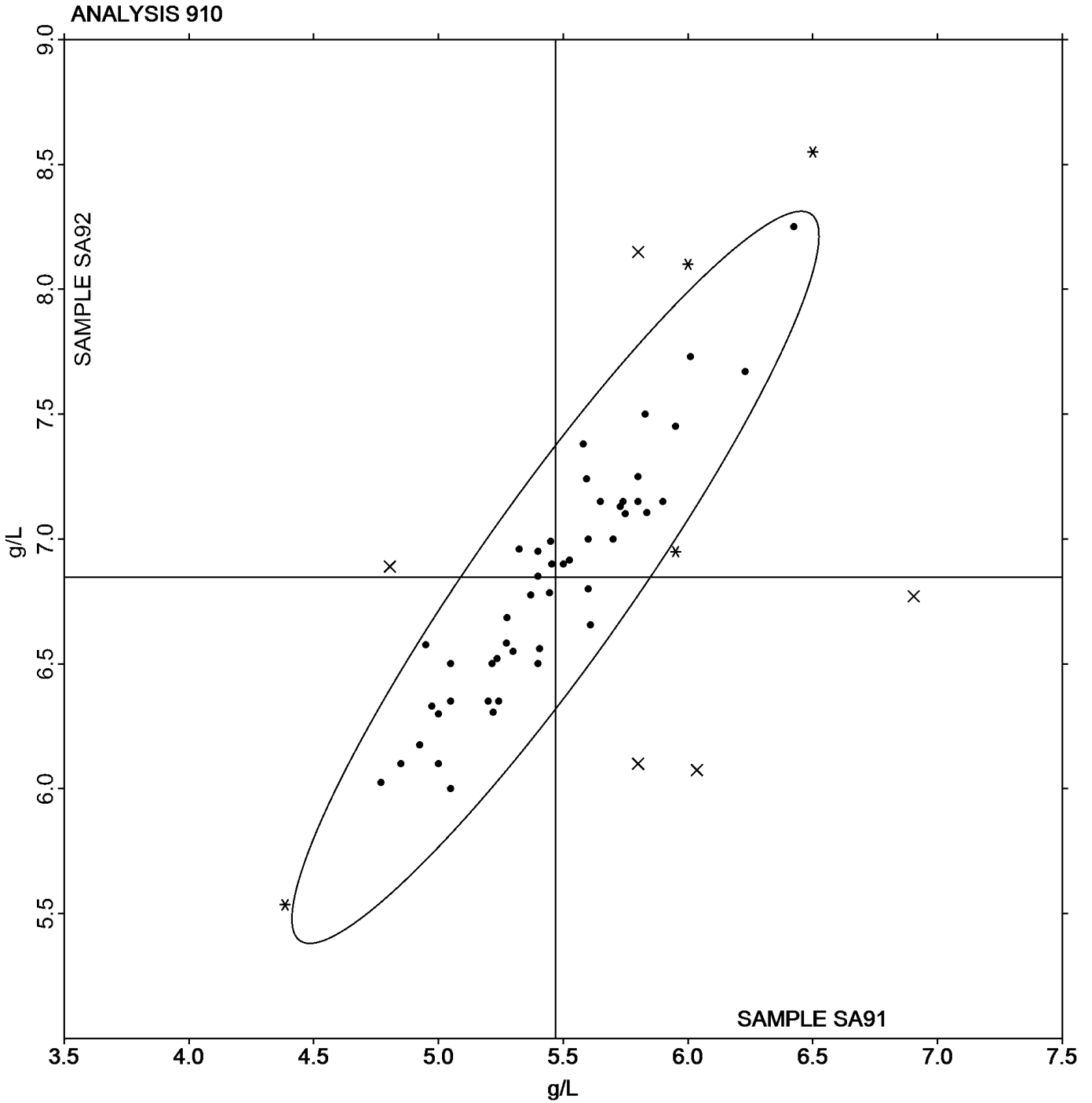
Comments on assigned Data Flags

## Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA91 <i>Merlot</i>			Sample SA92 <i>Zinfadel</i>			Labs Incl / Rpt	
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM		
Please specify method used	5.610	0.000	0.142	6.655	0.000	-0.192	1	1
HPLC	5.700	0.000	0.232	7.000	0.000	0.153	1	3
Enzymatic/Spectrophotometric	5.415	0.330	-0.053	6.754	0.423	-0.092	41	48
FTIR	5.410	0.478	-0.058	6.978	0.687	0.131	4	6
Other _____	6.013	0.583	0.544	7.625	0.884	0.778	2	2



Analysis 910  
Glucose + Fructose



**ASEV-CTS Wine Industry Interlaboratory Testing Program**  
**Analysis 911**  
**Copper Content**

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
37XBCE		0.0300	-0.0247	-1.18	0.0150	-0.0239	-1.08
3HTNAP		0.0410	-0.0137	-0.66	0.0250	-0.0139	-0.63
7LFFAH	X	0.4350	0.3803	18.14	0.2800	0.2411	10.89
BT3UZJ		0.0595	0.0048	0.23	0.0455	0.0066	0.30
DGZD4D	*	0.0900	0.0353	1.68	0.0400	0.0011	0.05
DY6KHF		0.0700	0.0153	0.73	0.0650	0.0261	1.18
FELPGJ		0.0350	-0.0197	-0.94	0.0165	-0.0224	-1.01
JXQ8HY		0.0520	-0.0027	-0.13	0.0240	-0.0149	-0.67
KRXNE8		0.0590	0.0043	0.20	0.0510	0.0121	0.54
KUNQKV		0.0838	0.0291	1.39	0.0570	0.0180	0.81
NV6D77		0.0500	-0.0047	-0.23	0.0500	0.0111	0.50
P984M6		0.0300	-0.0247	-1.18	0.0200	-0.0189	-0.86
PKZN4V		0.0490	-0.0057	-0.27	0.0400	0.0011	0.05
RKB72X		0.0250	-0.0297	-1.42	0.0150	-0.0239	-1.08
UBXWNP		0.0615	0.0068	0.32	0.0580	0.0191	0.86
VTDMZT		0.0500	-0.0047	-0.23	0.0300	-0.0089	-0.40
W6JX8F		0.0595	0.0048	0.23	0.0240	-0.0149	-0.67
XBL8A3		0.1000	0.0453	2.16	0.1000	0.0611	2.76
XDVG2Y		0.0400	-0.0147	-0.70	0.0250	-0.0139	-0.63

Grand Means		Summary Statistics	
	0.05474 mg/L		0.03894 mg/L
Stnd Dev Btwn Labs			0.02214 mg/L
	0.02096 mg/L		
<b>Statistics based on 18 of 19 reporting participants</b>			

Wines tested: SA91: Merlot; SA92: Zinfadel

**Comments on assigned Data Flags**

## ASEV-CTS Wine Industry Interlaboratory Testing Program

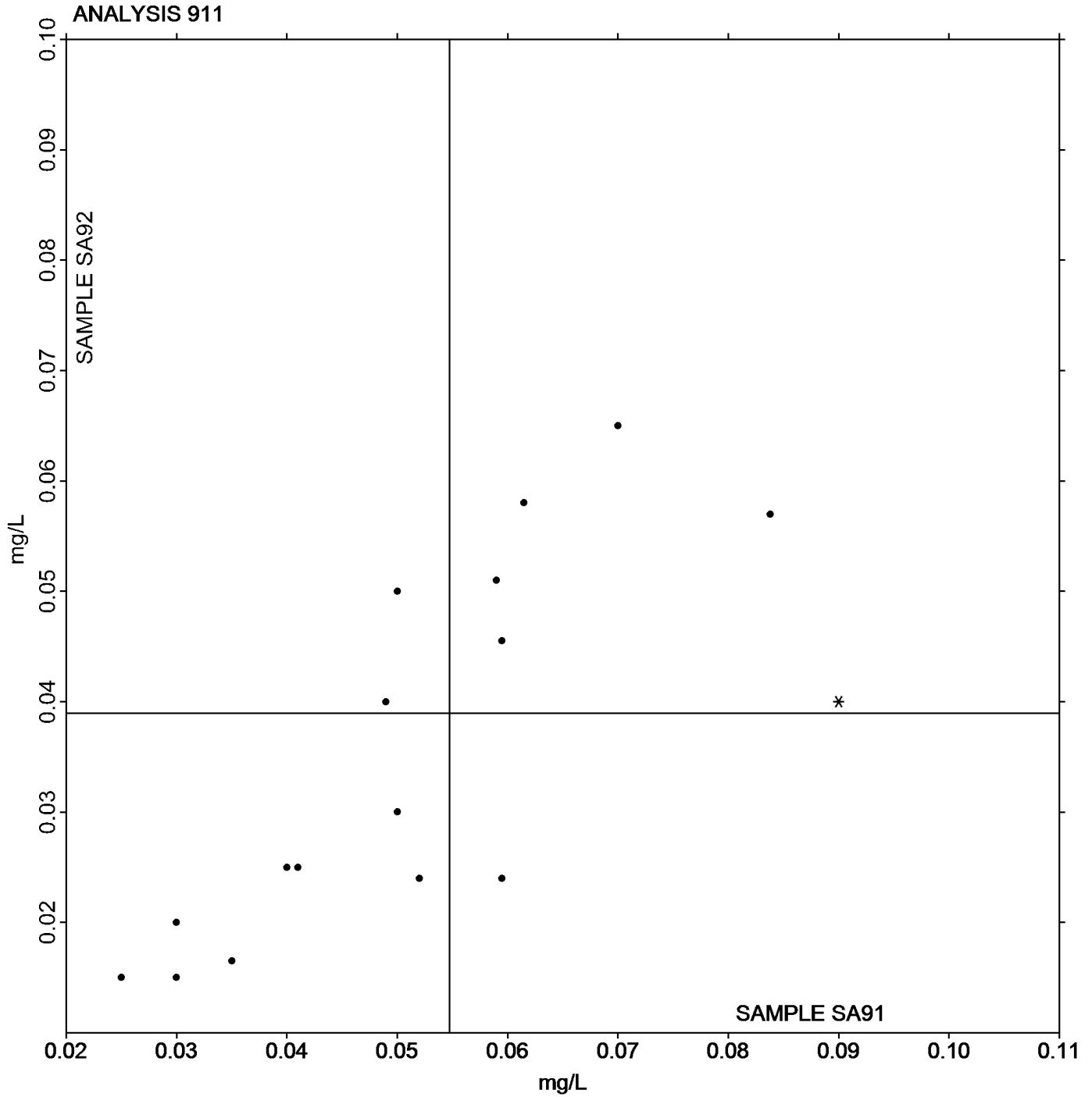
Analysis 911  
Copper Content

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**Results by Methodology (as reported by laboratory)**

Test Methodology	Sample SA91 <i>Merlot</i>			Sample SA92 <i>Zinfadel</i>			Labs Incl / Rpt	
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM		
Please specify method used	0.0495	0.0007	-0.0052	0.0450	0.0071	0.0061	2	2
Atomic Absorption Spectroscopy	0.0523	0.0189	-0.0024	0.0377	0.0194	-0.0012	10	11
ICP-OES	0.0673	0.0283	0.0126	0.0513	0.0423	0.0124	3	4
Other _____	0.0355	0.0078	-0.0192	0.0200	0.0071	-0.0189	2	2

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.

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 912

## Potassium (K) Content

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
37XBCE		999.5	11.8	0.11	1,128.5	54.1	0.40
7LFFAH		1,175.0	187.3	1.70	1,140.0	65.6	0.48
BT3UZJ		1,042.5	54.8	0.50	1,106.0	31.6	0.23
DGZD4D		1,122.5	134.8	1.22	1,187.5	113.1	0.83
J4UDUG		941.5	-46.2	-0.42	1,027.0	-47.4	-0.35
JXQ8HY	*	1,200.0	212.3	1.93	1,465.0	390.6	2.87
NV6D77		845.0	-142.7	-1.30	940.0	-134.4	-0.99
RKB72X		912.0	-75.7	-0.69	1,020.5	-53.9	-0.40
UBXWNP		906.1	-81.6	-0.74	955.6	-118.9	-0.87
UDM47Z		922.0	-65.7	-0.60	994.0	-80.4	-0.59
VTDMZT		960.0	-27.7	-0.25	1,045.0	-29.4	-0.22
XBL8A3		884.0	-103.7	-0.94	953.0	-121.4	-0.89
XDVG2Y		916.0	-71.7	-0.65	986.5	-87.9	-0.65
Z2PBZW		1,002.0	14.3	0.13	1,093.5	19.1	0.14

## Grand Means

987.72 mg/L

## Summary Statistics

1,074.43 mg/L

## Std Dev Btwn Labs

110.08 mg/L

136.18 mg/L

Statistics based on 14 of 14 reporting participants

Wines tested: SA91: Merlot; SA92: Zinfandel

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 912

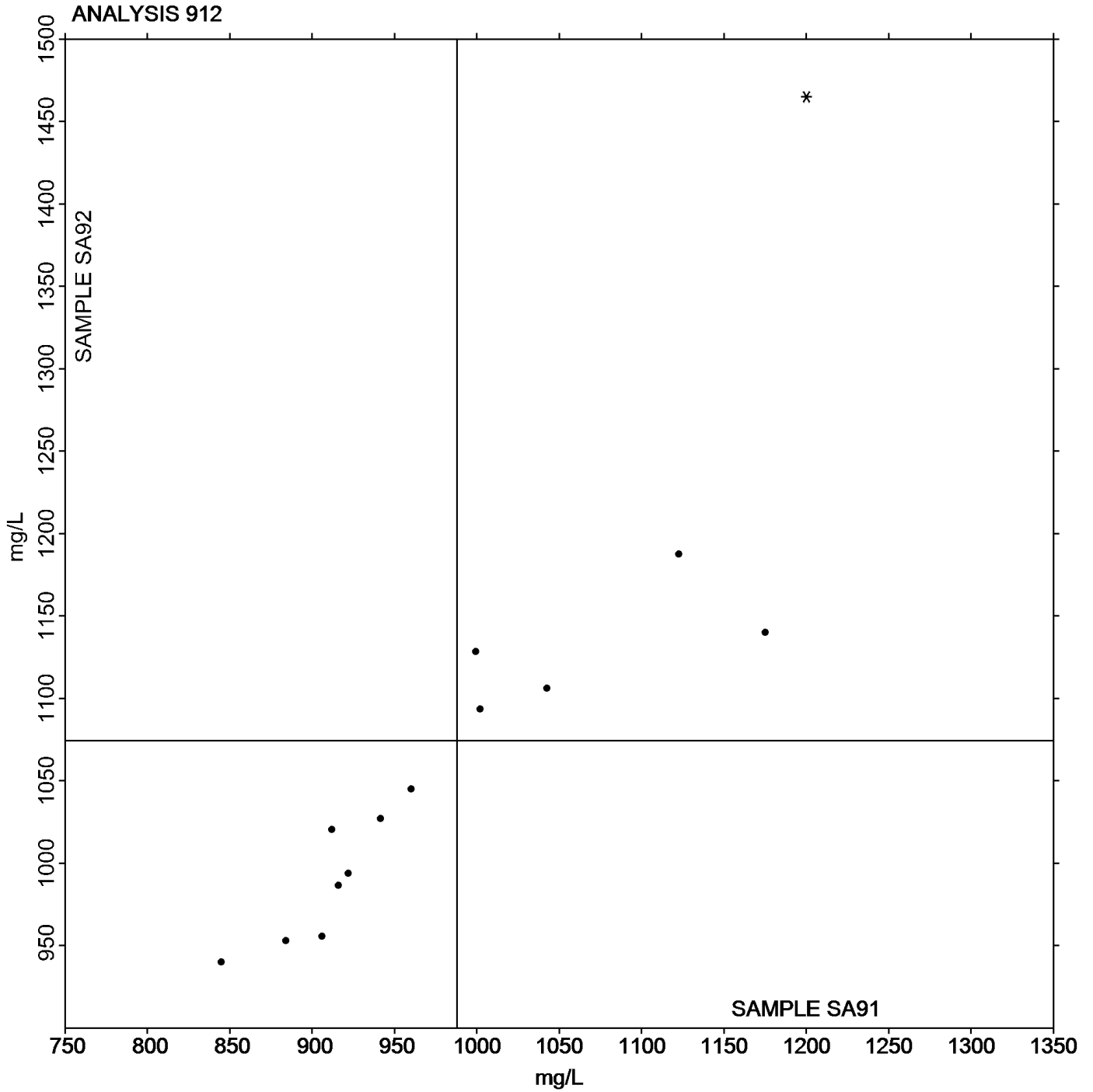
## Potassium (K) Content

## Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA91 <i>Merlot</i>			Sample SA92 <i>Zinfadel</i>			Labs Incl / Rpt	
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM		
Please specify method used	845.0	0.0	-142.7	940.0	0.0	-134.4	1	1
Atomic Absorption Spectroscopy	974.7	83.7	-13.0	1,049.1	82.5	-25.4	7	7
ICP-OES	928.5	39.6	-59.2	1,008.3	48.8	-66.1	3	4
FTIR	1,175.0	0.0	187.3	1,140.0	0.0	65.6	1	1
Other _____	999.5	0.0	11.8	1,128.5	0.0	54.1	1	1

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

## Analysis 915

## A420nm (1cm path)

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2KZKGM		2.880	0.059	0.56	2.680	0.059	0.53
37XBCE		3.000	0.179	1.71	2.800	0.179	1.62
7LFFAH		2.820	-0.001	-0.01	2.615	-0.006	-0.05
9C337J		2.918	0.097	0.92	2.760	0.139	1.26
9RXKX3		2.920	0.099	0.94	2.740	0.119	1.07
BJTPPE	*	2.742	-0.079	-0.75	2.443	-0.178	-1.60
D8CJU3	X	1.174	-1.647	-15.68	1.078	-1.543	-13.93
DGZD4D		2.769	-0.052	-0.49	2.568	-0.053	-0.48
DY6KHF	X	3.244	0.423	4.02	2.848	0.227	2.04
DZB67F		2.790	-0.031	-0.29	2.600	-0.021	-0.19
FDR23U	X	3.256	0.436	4.15	3.069	0.448	4.04
FELPGJ		2.785	-0.036	-0.34	2.580	-0.041	-0.37
GRNFZ3		2.820	-0.001	-0.01	2.625	0.004	0.04
HW2HKD		2.720	-0.101	-0.96	2.525	-0.096	-0.87
J3YPFR	*	3.055	0.234	2.23	2.800	0.179	1.62
J4UDUG		2.635	-0.186	-1.77	2.440	-0.181	-1.63
JXQ8HY	*	2.955	0.134	1.28	2.860	0.239	2.16
K2MAK7		2.765	-0.056	-0.53	2.570	-0.051	-0.46
KB8J7E		2.910	0.089	0.85	2.683	0.062	0.56
KUNQKV		2.773	-0.048	-0.46	2.605	-0.016	-0.14
L6EYHN		2.825	0.004	0.04	2.623	0.002	0.02
LC2RR3	X	3.475	0.654	6.23	6.685	4.064	36.68
MW36Z2		2.692	-0.129	-1.23	2.489	-0.132	-1.19
PKZN4V		2.809	-0.012	-0.11	2.606	-0.015	-0.13
QC3D9Q	X	0.003	-2.818	-26.82	0.002	-2.618	-23.63
R6K2VP		2.825	0.004	0.04	2.599	-0.022	-0.20
RKB72X	*	2.490	-0.331	-3.15	2.320	-0.301	-2.72



## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 915

## A420nm (1cm path)

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RRBQ29		2.805	-0.016	-0.15	2.685	0.064	0.58
RRRHEY		2.870	0.049	0.47	2.710	0.089	0.80
T6DGH7		2.875	0.054	0.52	2.650	0.029	0.26
UBXWNP		2.749	-0.072	-0.69	2.557	-0.064	-0.58
VCLPYX		2.796	-0.025	-0.24	2.574	-0.047	-0.43
VKFXG4	X	2.685	-0.136	-1.29	2.685	0.064	0.58
VNGYJL		2.855	0.034	0.33	2.665	0.044	0.40
W6JX8F		2.799	-0.022	-0.21	2.614	-0.007	-0.06
W7DNDU		2.807	-0.014	-0.14	2.536	-0.085	-0.77
WRXNHP		2.820	-0.001	-0.01	2.605	-0.016	-0.14
XBL8A3		2.939	0.118	1.12	2.730	0.109	0.98
XDVG2Y		2.875	0.054	0.52	2.635	0.014	0.13
ZWZVDB	X	0.561	-2.260	-21.52	0.521	-2.100	-18.96

Grand Means		Summary Statistics	
2.8207	Absorbance Units	2.6209	Absorbance Units
Std Dev Btwn Labs			
0.1051	Absorbance Units	0.1108	Absorbance Units
Statistics based on 33 of 40 reporting participants			

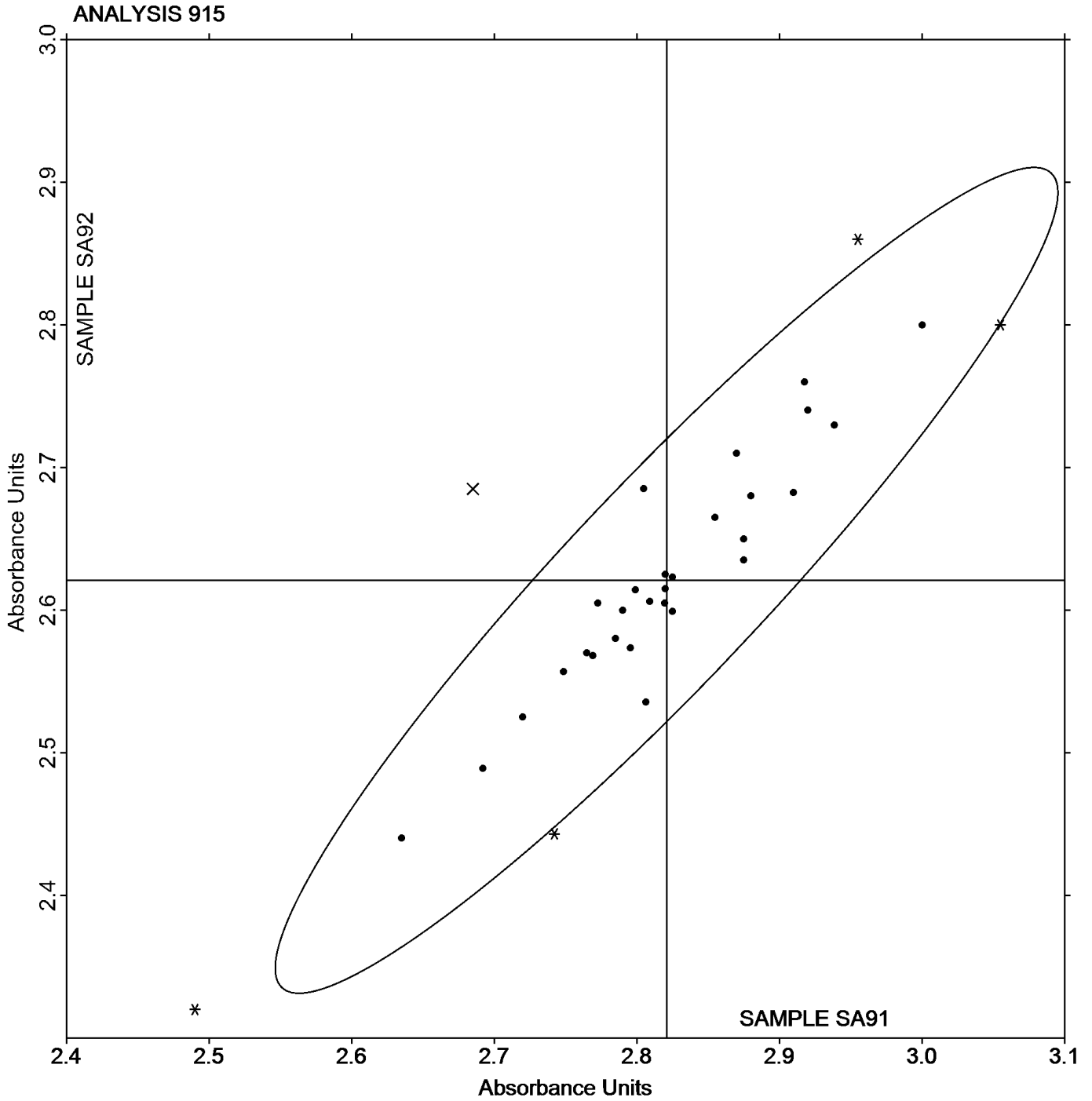
Wines tested: SA91: Merlot; SA92: Zinfadel

### Comments on assigned Data Flags

### Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA91 <i>Merlot</i>			Sample SA92 <i>Zinfadel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Code not used by CTS at this time	2.822	0.077	0.001	2.623	0.080	0.002	29 40

Analysis 915  
A420nm (1cm path)



## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 916

## A520nm (1cm path)

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2KZKGM		3.755	0.054	0.16	3.465	0.087	0.34
37XBCE		4.140	0.439	1.27	3.680	0.302	1.18
7LFFAH		3.860	0.159	0.46	3.465	0.087	0.34
9C337J		3.870	0.169	0.49	3.585	0.207	0.81
9RXKX3		3.095	-0.606	-1.75	3.015	-0.363	-1.43
9ZTMYE	*	4.400	0.699	2.02	4.050	0.672	2.64
BJTPPE		3.760	0.059	0.17	3.367	-0.012	-0.05
D8CJU3	X	1.585	-2.116	-6.11	1.411	-1.967	-7.73
DGZD4D	X	2.494	-1.207	-3.49	3.383	0.004	0.02
DY6KHF		3.755	0.054	0.16	3.342	-0.037	-0.15
DZB67F		3.010	-0.691	-2.00	2.920	-0.458	-1.80
FDR23U	X	4.808	1.108	3.20	4.434	1.055	4.14
FELPGJ		3.690	-0.011	-0.03	3.295	-0.083	-0.33
GRNFZ3		3.685	-0.016	-0.05	3.380	0.002	0.01
HW2HKD	*	2.710	-0.991	-2.86	2.620	-0.758	-2.98
J3YPFR		4.055	0.354	1.02	3.580	0.202	0.79
J4UDUG		3.610	-0.091	-0.26	3.215	-0.163	-0.64
JXQ8HY		3.875	0.174	0.50	3.670	0.292	1.14
K2MAK7		3.285	-0.416	-1.20	3.120	-0.258	-1.01
KB8J7E		4.011	0.310	0.90	3.533	0.154	0.60
KUNQKV		3.736	0.035	0.10	3.425	0.047	0.18
L6EYHN		3.010	-0.691	-2.00	3.010	-0.368	-1.45
LC2RR3	X	4.675	0.974	2.82	8.665	5.287	20.76
PKZN4V		3.780	0.079	0.23	3.430	0.052	0.20
QC3D9Q	X	0.004	-3.696	-10.68	0.003	-3.375	-13.25
R6K2VP		3.849	0.148	0.43	3.397	0.019	0.07
RKB72X		3.375	-0.326	-0.94	3.040	-0.338	-1.33

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Analysis 916

## A520nm (1cm path)

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RRBQ29		3.915	0.214	0.62	3.515	0.137	0.54
RRRHEY		3.780	0.079	0.23	3.440	0.062	0.24
T6DGH7		3.880	0.179	0.52	3.480	0.102	0.40
UBXWNP		3.618	-0.083	-0.24	3.273	-0.106	-0.42
VCLPYX		3.862	0.161	0.47	3.392	0.013	0.05
VKFXG4	*	3.520	-0.181	-0.52	3.520	0.142	0.56
VNGYJL		3.870	0.169	0.49	3.530	0.152	0.60
W6JX8F		3.756	0.055	0.16	3.393	0.014	0.06
W7DNDU		3.591	-0.110	-0.32	3.338	-0.040	-0.16
WRXNHP		3.817	0.116	0.34	3.422	0.044	0.17
XBL8A3		3.973	0.272	0.79	3.528	0.150	0.59
XDVG2Y		3.930	0.229	0.66	3.435	0.057	0.22
ZWZVDB	X	0.757	-2.944	-8.51	0.689	-2.690	-10.56

Grand Means		Summary Statistics	
3.7008	Absorbance Units	3.3785	Absorbance Units
Std Dev Btwn Labs		0.2547	Absorbance Units
0.3460	Absorbance Units	Statistics based on 34 of 40 reporting participants	

Wines tested: SA91: Merlot; SA92: Zinfadel

### Comments on assigned Data Flags

### Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA91 <i>Merlot</i>			Sample SA92 <i>Zinfadel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Code not used by CTS at this time	3.716	0.285	0.015	3.377	0.191	-0.002	31 40



## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Research Property 950

## Research Property - Turbidity

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
2C8CXH		0.2570	0.0114	4.7%	0.1945	-0.0344	-15.0%
2G27VJ		0.2050	-0.0406	-16.5%	0.2500	0.0211	9.2%
2KZKGM		0.2010	-0.0446	-18.1%	0.1985	-0.0304	-13.3%
37XBCE	*	0.4950	0.2494	101.6%	0.4300	0.2011	87.9%
7LFFAH		0.2665	0.0209	8.5%	0.2795	0.0506	22.1%
9RXKX3		0.2445	-0.0011	-0.4%	0.2320	0.0031	1.4%
9ZTMYE		0.2510	0.0054	2.2%	0.2150	-0.0139	-6.1%
BJTPPE	*	0.4300	0.1844	75.1%	0.3000	0.0711	31.1%
D8CJU3		0.1765	-0.0691	-28.1%	0.2085	-0.0204	-8.9%
DGZD4D		0.3200	0.0744	30.3%	0.2500	0.0211	9.2%
DY6KHF		0.1820	-0.0636	-25.9%	0.1905	-0.0384	-16.8%
DZB67F		0.2550	0.0094	3.8%	0.2300	0.0011	0.5%
FDR23U		0.2190	-0.0266	-10.8%	0.2005	-0.0284	-12.4%
FELPGJ		0.2030	-0.0426	-17.3%	0.2365	0.0076	3.3%
G4HWP4		0.3500	0.1044	42.5%	0.3700	0.1411	61.6%
G7NHD4		0.3150	0.0694	28.3%	0.3400	0.1111	48.5%
GRNFZ3		0.2085	-0.0371	-15.1%	0.2105	-0.0184	-8.0%
J3YPFR		0.1680	-0.0776	-31.6%	0.2090	-0.0199	-8.7%
JXQ8HY	X	0.8200	0.5744	233.9%	0.3400	0.1111	48.5%
K2MAK7		0.2700	0.0244	9.9%	0.2700	0.0411	18.0%
KB8J7E		0.2815	0.0359	14.6%	0.2095	-0.0194	-8.5%
KM6MB9	*	0.0350	-0.2106	-85.7%	0.0200	-0.2089	-91.3%
KRXNE8		0.2265	-0.0191	-7.8%	0.2130	-0.0159	-6.9%

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Research Property 950

## Research Property - Turbidity

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
KUNQKV		0.2100	-0.0356	-14.5%	0.2500	0.0211	9.2%
L6EYHN		0.1500	-0.0956	-38.9%	0.1500	-0.0789	-34.5%
MUCXHP		0.3700	0.1244	50.7%	0.3300	0.1011	44.2%
MW36Z2	M	0.0200	-0.2256	-91.9%	No data reported for this sample %		
NVL6JW		0.2900	0.0444	18.1%	0.2900	0.0611	26.7%
P4EZUZ	X	0.4000	0.1544	62.9%	0.2000	-0.0289	-12.6%
P984M6		0.1840	-0.0616	-25.1%	0.1560	-0.0729	-31.8%
QC3D9Q	X	0.9600	0.7144	290.9%	0.7400	0.5111	223.3%
QGY2PX		0.2400	-0.0056	-2.3%	0.2300	0.0011	0.5%
QLP9AR		0.2300	-0.0156	-6.3%	0.2100	-0.0189	-8.3%
R6K2VP		0.2195	-0.0261	-10.6%	0.2060	-0.0229	-10.0%
RKB72X		0.1000	-0.1456	-59.3%	0.1000	-0.1289	-56.3%
RRBQ29	X	0.3850	0.1394	56.8%	0.4700	0.2411	105.3%
RRRHEY		0.2155	-0.0301	-12.2%	0.2200	-0.0089	-3.9%
UBXWNP		0.2300	-0.0156	-6.3%	0.2500	0.0211	9.2%
URM2UX	X	0.4300	0.1844	75.1%	0.1920	-0.0369	-16.1%
VCLPYX	X	0.3450	0.0994	40.5%	0.6550	0.4261	186.2%
VKFXG4		0.2650	0.0194	7.9%	0.2650	0.0361	15.8%
VNGYJL		0.3800	0.1344	54.7%	0.2700	0.0411	18.0%
VTDMZT		0.4000	0.1544	62.9%	0.3000	0.0711	31.1%
W6JX8F		0.2300	-0.0156	-6.3%	0.1950	-0.0339	-14.8%
W7DNDU		0.2550	0.0094	3.8%	0.1790	-0.0499	-21.8%
WRXNHP	*	0.0750	-0.1706	-69.5%	0.0400	-0.1889	-82.5%

## ASEV-CTS Wine Industry Interlaboratory Testing Program

## Research Property 950

## Research Property - Turbidity

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
XBL8A3		0.2000	-0.0456	-18.6%	0.2000	-0.0289	-12.6%
XDVG2Y		0.2450	-0.0006	-0.2%	0.2350	0.0061	2.7%
ZWZVDB		0.2650	0.0194	7.9%	0.2800	0.0511	22.3%

## Research Property Target Value

Target Value

**0.24557** NTU**0.22889** NTU

*For Test 950, CTS has not designated a target value for this property instead of using an average value.*

**Wines tested:** SA91: Merlot; SA92: Zinfadel

Consensus Average  
(may differ from target value)

0.24557 NTU

0.22889 NTU

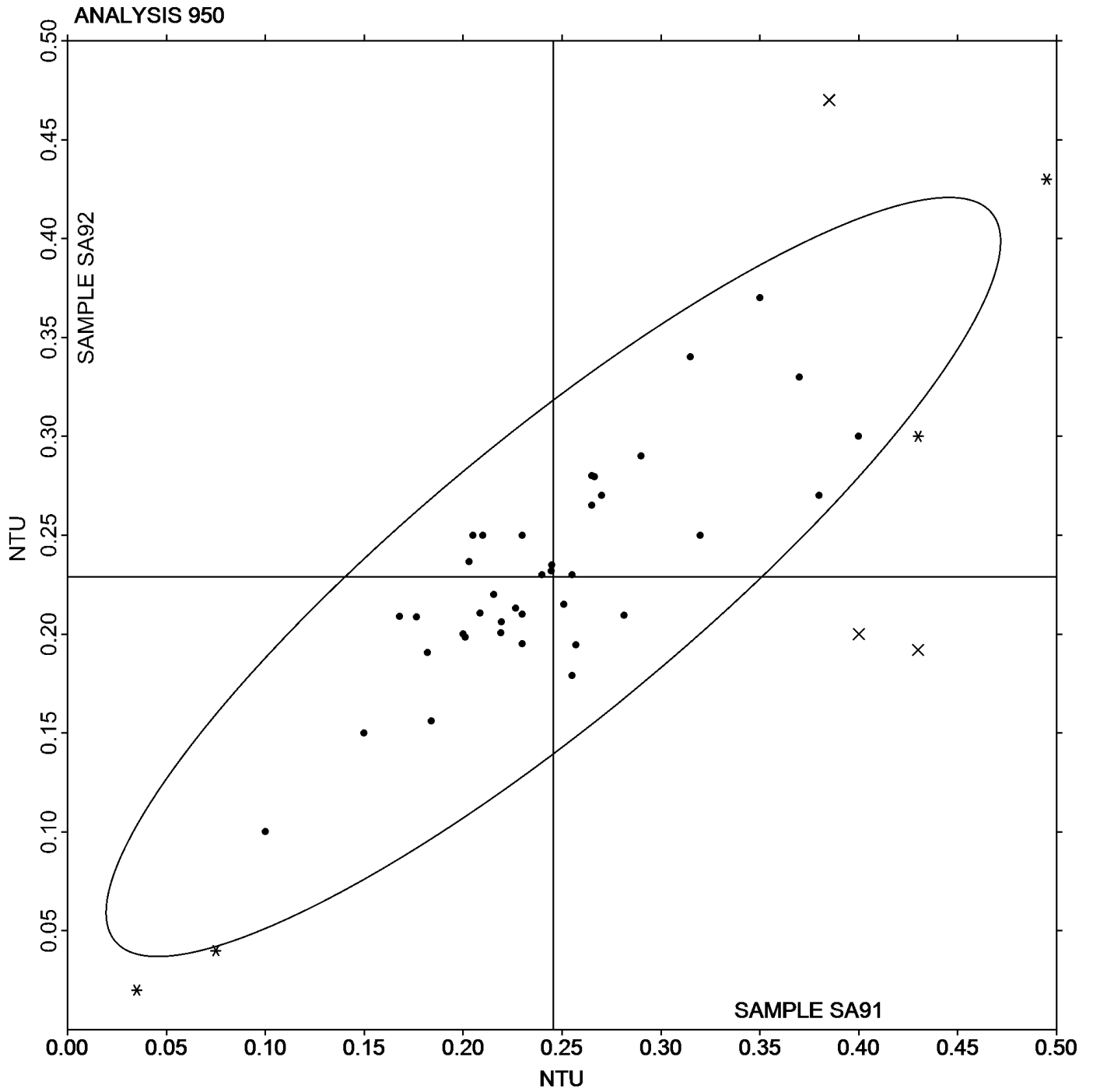
*This consensus average is based on 42 reporting participants.*

**Comments on assigned Data Flags**



Research Property 950

Research Property - Turbidity



## ASEV-CTS Wine Industry Interlaboratory Testing Program

### Research Property 951

#### Research Property: Methanol Content

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
2KZKGM		206.5	-0.6	-0.3%	224.1	-5.1	-2.2%
37XBCE		235.0	28.0	13.5%	262.0	32.9	14.4%
3HTNAP		190.5	-16.5	-8.0%	217.0	-12.1	-5.3%
7LFFAH		165.0	-42.0	-20.3%	205.0	-24.1	-10.5%
JXQ8HY		197.2	-9.8	-4.7%	216.9	-12.2	-5.3%
NV6D77		206.0	-1.0	-0.5%	232.0	2.9	1.3%
QC3D9Q	X	0.3	-206.7	-99.8%	0.3	-228.8	-99.9%
UBXWNP		156.5	-50.5	-24.4%	169.6	-59.5	-26.0%
UDM47Z		200.0	-7.0	-3.4%	300.0	70.9	30.9%
W6JX8F		208.0	1.0	0.5%	204.0	-25.1	-11.0%
XBL8A3		204.5	-2.5	-1.2%	223.0	-6.1	-2.7%
XDVG2Y		236.5	29.5	14.2%	242.5	13.4	5.8%
Z2PBZW		278.6	71.5	34.6%	253.2	24.1	10.5%

**Research Property Target Value**

Target Value	<b>207.02</b> mg/L	<b>229.11</b> mg/L
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*For Test 951, CTS has not designated a target value for this property instead of using an average value.*

**Wines tested:** SA91: Merlot; SA92: Zinfandel

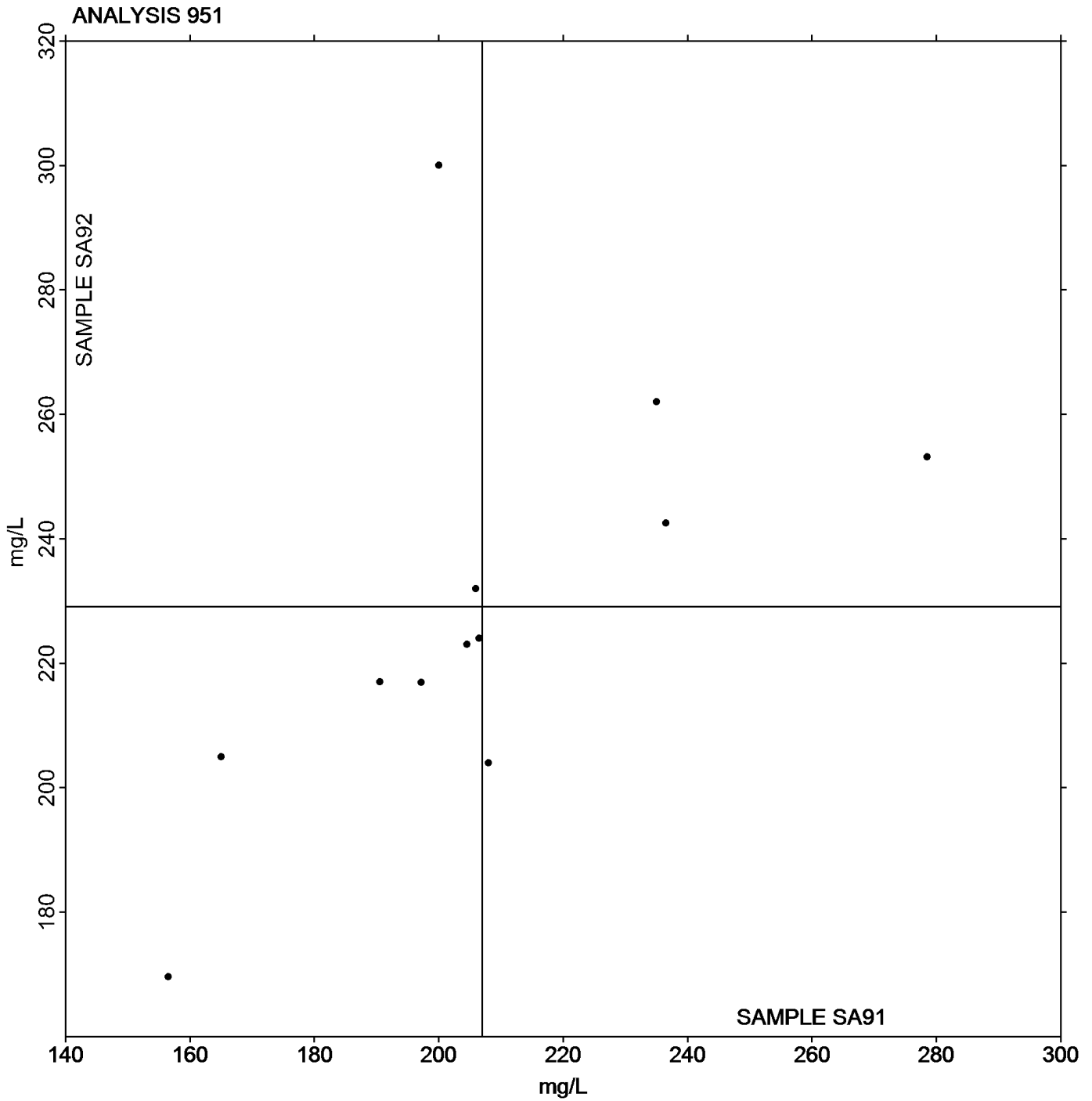
Consensus Average (may differ from target value)	207.02 mg/L	229.11 mg/L
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*This consensus average is based on 12 reporting participants.*

**Comments on assigned Data Flags**

Research Property 951

Research Property: Methanol 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

## Analysis 952

## Research Property: Iron (Fe) Content

WebCode	Data Flag	Sample SA91			Sample SA92		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
37XBCE		2.450	-0.078	-0.16	2.150	-0.283	-0.38
7LFFAH		2.440	-0.088	-0.18	2.160	-0.273	-0.37
BT3UZJ		2.400	-0.128	-0.25	2.200	-0.233	-0.32
DGZD4D		3.700	1.172	2.32	4.100	1.667	2.26
J4UDUG		2.300	-0.228	-0.45	2.100	-0.333	-0.45
JXQ8HY		2.710	0.182	0.36	2.510	0.077	0.10
KUNQKV		2.333	-0.196	-0.39	2.145	-0.288	-0.39
NV6D77		1.975	-0.553	-1.10	1.895	-0.538	-0.73
PKZN4V	*	3.576	1.048	2.08	4.256	1.823	2.47
RKB72X		2.435	-0.093	-0.18	2.285	-0.148	-0.20
UBXWNP		2.810	0.282	0.56	2.596	0.162	0.22
VTDMZT		2.100	-0.428	-0.85	2.000	-0.433	-0.59
W6JX8F		2.377	-0.152	-0.30	2.141	-0.293	-0.40
XBL8A3		2.350	-0.178	-0.35	2.200	-0.233	-0.32
XDVG2Y		1.970	-0.558	-1.11	1.765	-0.668	-0.91

## Research Property Target Value

Target Value

**2.5284** mg/L**2.4335** mg/L

*For Test 952, CTS has not designated a target value for this property instead of using an average value.*

**Wines tested:** SA91: Merlot; SA92: Zinfandel

Consensus Average  
(may differ from target value)

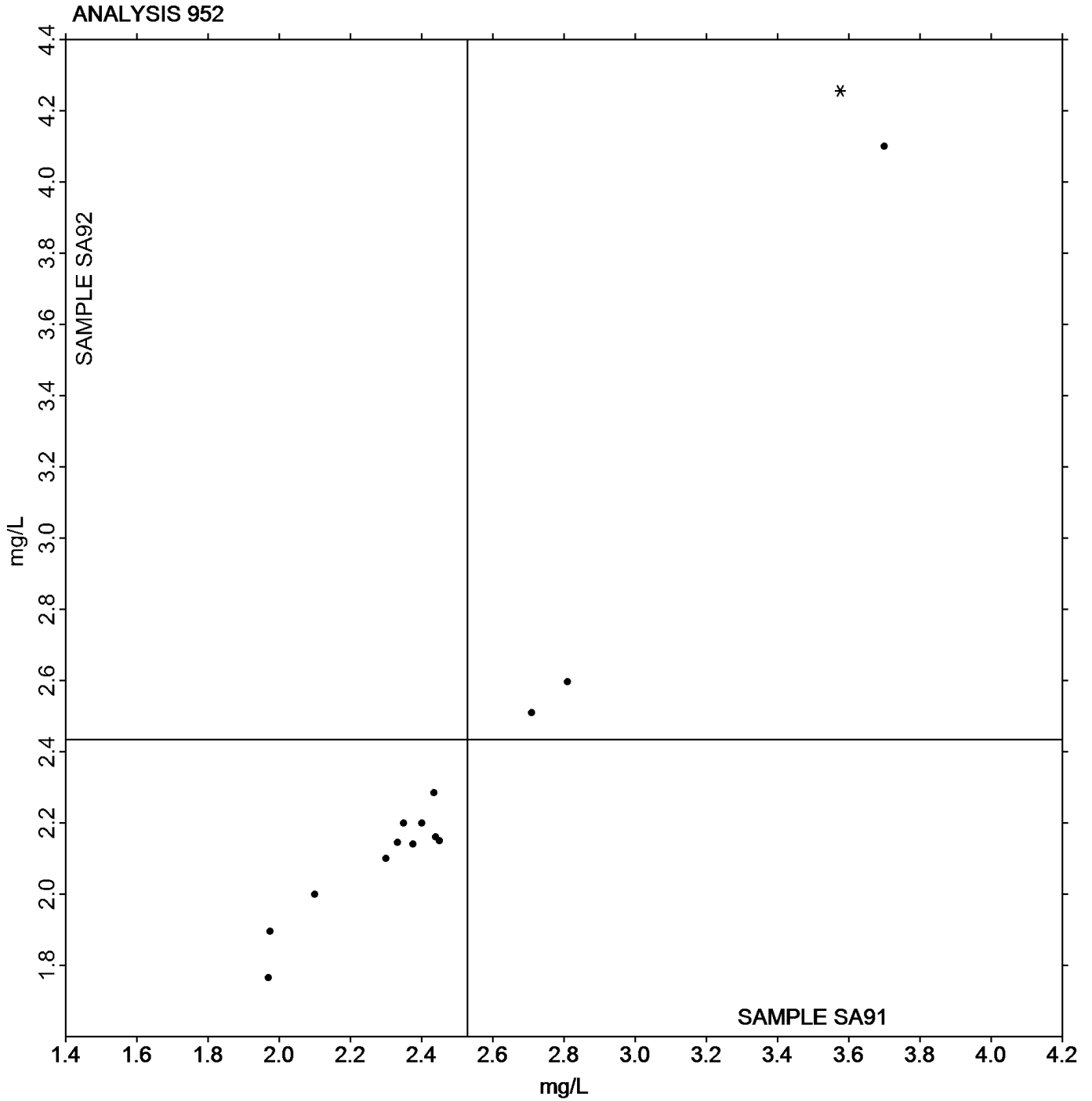
2.5284 mg/L

2.4335 mg/L

*This consensus average is based on 15 reporting participants.*

Analysis 952

Research Property: Iron (Fe) Content



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