



## Wine Industry Interlaboratory Program

### Summary Report #055- Spring 2017

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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 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)

<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.



## Analysis 901

Spring 2017

## Ethanol (% of volume)

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2DTWK6		7.945	0.022	0.36	7.940	0.016	0.26
2GD9YZ	*	7.930	0.007	0.11	7.895	-0.029	-0.47
2ZNXCX	*	7.805	-0.118	-1.95	7.785	-0.139	-2.25
49E4J4		7.875	-0.048	-0.79	7.890	-0.034	-0.55
63KLHX		7.940	0.017	0.28	7.945	0.021	0.34
6J9YWP		7.910	-0.013	-0.22	7.910	-0.014	-0.22
6Q7Q3Y		7.935	0.012	0.20	7.920	-0.004	-0.06
72JBYZ	X	8.040	0.117	1.93	8.100	0.176	2.85
862P6L		7.980	0.057	0.94	7.980	0.056	0.91
8QZVWX		7.920	-0.003	-0.05	7.920	-0.004	-0.06
8YVYZU		7.965	0.042	0.69	7.955	0.031	0.50
9CCBQU		7.920	-0.003	-0.05	7.925	0.001	0.02
9QWTJX		7.900	-0.023	-0.38	7.910	-0.014	-0.22
9T3D8Y		7.900	-0.023	-0.38	7.890	-0.034	-0.55
9WNZ6R	*	8.045	0.122	2.01	8.065	0.141	2.28
A2ADGZ		7.880	-0.043	-0.71	7.890	-0.034	-0.55
AK3DAH	*	7.790	-0.133	-2.19	7.810	-0.114	-1.84
ATGZJL		7.950	0.027	0.44	7.940	0.016	0.26
BAKUQK		7.829	-0.094	-1.55	7.845	-0.079	-1.27
BCPMKJ		7.920	-0.003	-0.05	7.925	0.001	0.02
BDK3Y2	X	7.740	-0.183	-3.02	7.610	-0.314	-5.08
BNLTDH		8.000	0.077	1.27	8.000	0.076	1.23
C2MNAP		7.925	0.002	0.03	7.920	-0.004	-0.06
CM44PV		7.940	0.017	0.28	7.940	0.016	0.26
CR2FP2		7.935	0.012	0.20	7.915	-0.009	-0.14
DVT4LY		7.950	0.027	0.44	7.960	0.036	0.59
E6XB2Y		7.950	0.027	0.44	7.955	0.031	0.50
GJ7BJT		7.930	0.007	0.11	7.920	-0.004	-0.06
GNYBXP	X	7.810	-0.113	-1.87	7.100	-0.824	-13.33
GZRRPB		7.910	-0.013	-0.22	7.920	-0.004	-0.06
H3Y9KL		7.920	-0.003	-0.05	7.920	-0.004	-0.06
HFZ6GT	X	7.890	-0.033	-0.55	7.930	0.006	0.10
HPDWAC		7.925	0.002	0.03	7.930	0.006	0.10
J6Y2RP	X	8.300	0.377	6.21	8.200	0.276	4.47
JJKGVN		7.910	-0.013	-0.22	7.910	-0.014	-0.22

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #055  
Spring 2017****Analysis 901  
Ethanol (% of volume)**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JLME7G		7.945	0.022	0.36	7.965	0.041	0.67
JZQG7D		7.875	-0.048	-0.79	7.875	-0.049	-0.79
KBJGX8		7.950	0.027	0.44	7.945	0.021	0.34
KFXWQK		7.945	0.021	0.35	7.948	0.024	0.39
KRRBPG		7.950	0.027	0.44	7.950	0.026	0.42
KV8ZTQ		7.970	0.047	0.77	7.980	0.056	0.91
L36VMJ		7.890	-0.033	-0.55	7.900	-0.024	-0.38
L8YRAN	X	8.330	0.407	6.71	8.100	0.176	2.85
LB2RC7		7.910	-0.013	-0.22	7.905	-0.019	-0.30
LRN9DH		7.890	-0.033	-0.55	7.905	-0.019	-0.30
LTEC7P		7.910	-0.013	-0.22	7.915	-0.009	-0.14
M8VRPE		7.945	0.022	0.36	7.935	0.011	0.18
MCMY8M		7.950	0.027	0.44	7.950	0.026	0.42
NKWMKL		7.950	0.027	0.44	7.955	0.031	0.50
NLBAW9	X	7.100	-0.823	-13.57	7.200	-0.724	-11.71
NNYLVE		7.915	-0.008	-0.13	7.890	-0.034	-0.55
NW8CYG	X	8.150	0.227	3.74	8.000	0.076	1.23
NYWL9H		7.950	0.027	0.44	7.950	0.026	0.42
P2GT7K	X	7.925	0.002	0.03	7.850	-0.074	-1.19
P4AGTM	X	7.775	-0.148	-2.44	7.825	-0.099	-1.60
T2P4CE		7.895	-0.028	-0.46	7.900	-0.024	-0.38
THDGQ8	*	8.065	0.142	2.34	8.080	0.156	2.53
TK2TPC		8.035	0.112	1.84	8.035	0.111	1.80
TM7F63	X	8.260	0.337	5.55	8.470	0.546	8.84
UE8BN7		7.790	-0.133	-2.19	7.785	-0.139	-2.25
UPB9WF		7.885	-0.038	-0.63	7.880	-0.044	-0.71
VEMU94		7.940	0.017	0.28	7.935	0.011	0.18
VMHWCZ		7.900	-0.023	-0.38	7.900	-0.024	-0.38
VZNTTG		7.800	-0.123	-2.03	7.800	-0.124	-2.00
WQYGWU	X	7.840	-0.083	-1.37	7.795	-0.129	-2.08
WXGUXE		7.875	-0.048	-0.79	7.870	-0.054	-0.87
X78XG2		7.940	0.017	0.28	7.935	0.011	0.18
X9AXED		7.890	-0.033	-0.55	7.910	-0.014	-0.22
XBY6YB		7.905	-0.018	-0.30	7.900	-0.024	-0.38
XPFUZX		7.875	-0.048	-0.79	7.860	-0.064	-1.03



Analysis 901  
Ethanol (% of volume)

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
XRLHD3	*	7.750	-0.173	-2.85	7.765	-0.159	-2.57
XUAUC9	*	7.980	0.057	0.94	8.010	0.086	1.39
Y698PD		8.000	0.077	1.27	8.000	0.076	1.23
YBU6EZ		7.900	-0.023	-0.38	7.900	-0.024	-0.38
YPEM86		7.910	-0.013	-0.22	7.895	-0.029	-0.47
YR2Y9V	*	8.110	0.187	3.08	8.115	0.191	3.09
Z3FH3C		7.920	-0.003	-0.05	7.930	0.006	0.10
ZGFGQ9		8.015	0.092	1.51	8.000	0.076	1.23
ZJ4TRY		7.915	-0.008	-0.13	7.915	-0.009	-0.14
ZM7R3R		7.900	-0.023	-0.38	7.900	-0.024	-0.38

Grand Means	Summary Statistics
7.9231 percent	7.9238 percent
Std Dev Btwn Labs 0.0607 percent	0.0618 percent

**Statistics based on 68 of 80 reporting participants**

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #901**

- NLBAW9 (X) - Data for both samples are low. Inconsistent within the determinations of both samples.
- WQYGWU (X) - Inconsistent in testing between samples.
- TM7F63 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA09.
- J6Y2RP (X) - Data for both samples are high. Possible Systematic Error.
- HFZ6GT (X) - Inconsistent in testing between samples.
- L8YRAN (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA09.
- P2GT7K (X) - Inconsistent in testing between samples.
- GNYBXP (X) - Inconsistent in testing between samples, data for sample SA10 are low. Inconsistent within the determinations of sample SA09.
- 72JBYZ (X) - Inconsistent in testing between samples, data for sample SA10 are high.
- NW8CYG (X) - Inconsistent in testing between samples, data for sample SA09 are high. Inconsistent within the determinations of sample SA09.
- P4AGTM (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA10.
- BDK3Y2 (X) - Data for both samples are low. Possible Systematic Error.

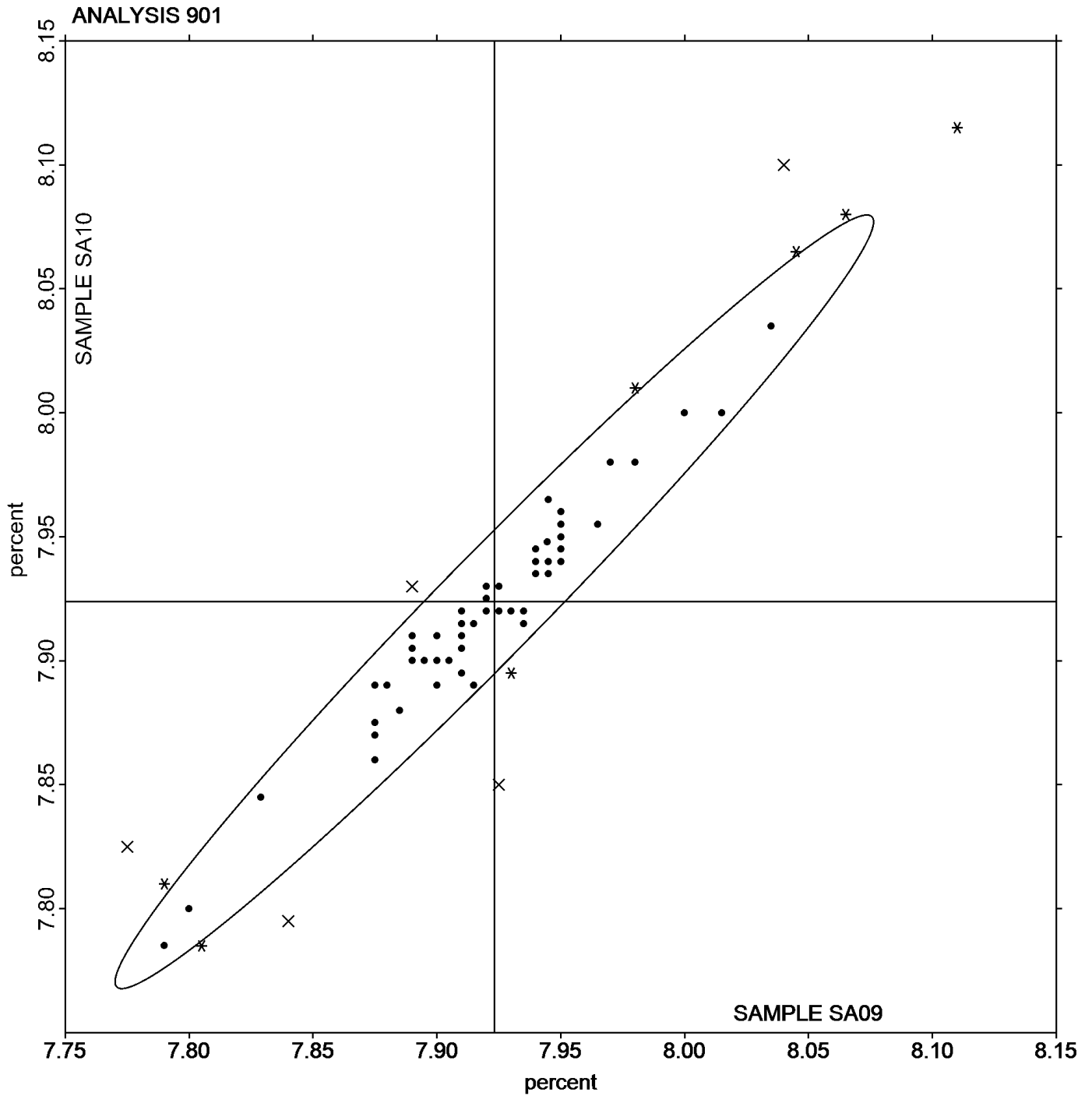


Analysis 901  
Ethanol (% of volume)

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA09 <i>White Zinfandel</i>			Sample SA10 <i>White 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	8.035	0.000	0.112	8.035	0.000	0.111	1/2
Ebulliometer Method	7.950	0.000	0.027	7.950	0.000	0.026	1/3
Gas Chromatography Method	7.980	0.088	0.057	7.993	0.093	0.069	4/5
Near Infrared Method	7.923	0.034	-0.001	7.922	0.038	-0.002	47/51
Dist. / Density Method	7.847	0.061	-0.076	7.852	0.059	-0.072	7/9
FTIR	7.951	0.111	0.028	7.951	0.107	0.028	7/8
Other _____	7.920	0.000	-0.003	7.920	0.000	-0.004	1/2







Analysis 902  
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2DTWK6	*	122.5	-24.7	-2.46	122.0	-23.1	-2.48
2GD9YZ		147.5	0.3	0.03	141.5	-3.6	-0.39
2ZNXCX		146.0	-1.2	-0.12	145.5	0.4	0.04
49E4J4		150.0	2.8	0.28	147.5	2.4	0.26
63KLHX	X	111.0	-36.2	-3.61	108.5	-36.6	-3.94
6J9YWP		145.0	-2.2	-0.22	140.5	-4.6	-0.49
6Q7Q3Y		147.5	0.3	0.03	145.5	0.4	0.04
72JBYZ		140.0	-7.2	-0.72	139.0	-6.1	-0.65
862P6L		145.5	-1.7	-0.17	139.0	-6.1	-0.65
8QZVWX		147.5	0.3	0.03	147.8	2.7	0.29
8YVYZU		141.5	-5.7	-0.57	137.5	-7.6	-0.82
9CCBQU		153.0	5.8	0.58	154.0	8.9	0.96
9QWTJX		147.5	0.3	0.03	141.5	-3.6	-0.39
9T3D8Y		146.5	-0.7	-0.07	146.5	1.4	0.15
9WNZ6R		150.0	2.8	0.28	144.5	-0.6	-0.06
A2ADGZ		143.5	-3.7	-0.37	139.0	-6.1	-0.65
AK3DAH		164.0	16.8	1.68	159.0	13.9	1.50
ATGZJL		156.0	8.8	0.88	153.0	7.9	0.85
BAKUQK		155.2	8.0	0.80	154.4	9.3	1.00
BCPMKJ		154.8	7.6	0.76	150.2	5.1	0.55
BNLTDH		166.0	18.8	1.88	157.5	12.4	1.34
C2MNAP		159.5	12.3	1.23	153.5	8.4	0.91
CM44PV		149.0	1.8	0.18	155.0	9.9	1.07
DVT4LY		138.0	-9.2	-0.92	135.0	-10.1	-1.09
E6XB2Y		142.5	-4.7	-0.47	136.0	-9.1	-0.98
GJ7BJT		152.0	4.8	0.48	148.0	2.9	0.31
GZRRPB		145.0	-2.2	-0.22	151.0	5.9	0.64
H3Y9KL	*	121.0	-26.2	-2.61	122.0	-23.1	-2.48
HFZ6GT		152.0	4.8	0.48	151.0	5.9	0.64
HPDWAC		161.3	14.1	1.41	154.4	9.3	1.01
J6Y2RP		145.5	-1.7	-0.17	143.4	-1.7	-0.18
JJKGVN		146.0	-1.2	-0.12	142.5	-2.6	-0.28
JLME7G		129.0	-18.2	-1.81	123.0	-22.1	-2.38
JZQG7D		139.0	-8.2	-0.82	139.5	-5.6	-0.60
KBJGX8		154.5	7.3	0.73	147.0	1.9	0.21



Analysis 902  
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KFXWQK		150.0	2.8	0.28	148.5	3.4	0.37
KRRBPG	X	149.5	2.3	0.23	172.0	26.9	2.90
KV8ZTQ	*	151.1	3.9	0.39	137.3	-7.8	-0.84
L8YRAN		159.9	12.7	1.26	160.5	15.4	1.66
LB2RC7		148.5	1.3	0.13	139.5	-5.6	-0.60
LRN9DH		147.5	0.3	0.03	149.5	4.4	0.47
LTEC7P		148.5	1.3	0.13	141.0	-4.1	-0.44
M8VRPE		148.0	0.8	0.08	148.5	3.4	0.37
MCMY8M	X	97.0	-50.2	-5.01	99.5	-45.6	-4.90
NKWMKL		127.5	-19.7	-1.96	130.5	-14.6	-1.57
NNYLVE		143.5	-3.7	-0.37	140.0	-5.1	-0.55
NW8CYG	X	89.0	-58.2	-5.80	93.0	-52.1	-5.60
NYWL9H		160.5	13.3	1.33	158.5	13.4	1.44
P2GT7K		146.5	-0.7	-0.07	143.0	-2.1	-0.22
P4AGTM		139.9	-7.2	-0.72	141.2	-3.9	-0.42
T2P4CE		150.5	3.3	0.33	148.5	3.4	0.37
THDGQ8		136.5	-10.7	-1.07	144.0	-1.1	-0.12
TK2TPC		137.5	-9.7	-0.97	136.0	-9.1	-0.98
TM7F63		160.5	13.3	1.33	152.0	6.9	0.74
UE8BN7	*	152.3	5.1	0.51	161.0	15.9	1.71
UPB9WF		142.4	-4.8	-0.48	142.4	-2.7	-0.29
VEMU94		144.5	-2.7	-0.27	145.5	0.4	0.04
VMHWCZ		138.0	-9.2	-0.92	145.0	-0.1	-0.01
VZNTTG		146.0	-1.2	-0.12	143.5	-1.6	-0.17
WQYGWU	*	121.5	-25.7	-2.56	128.5	-16.6	-1.78
WXGUXE		138.0	-9.2	-0.92	135.0	-10.1	-1.09
X78XG2		159.0	11.8	1.18	160.5	15.4	1.66
X9AXED		169.5	22.3	2.23	161.0	15.9	1.71
XPFUZX		157.0	9.8	0.98	154.5	9.4	1.01
XRLHD3		165.0	17.8	1.78	158.5	13.4	1.44
Y698PD		147.5	0.3	0.03	150.0	4.9	0.53
YBU6EZ		144.5	-2.7	-0.27	145.0	-0.1	-0.01
YPEM86		141.0	-6.2	-0.62	139.0	-6.1	-0.65
YR2Y9V		146.0	-1.2	-0.12	142.5	-2.6	-0.28
Z3FH3C		140.0	-7.2	-0.72	139.0	-6.1	-0.65



Analysis 902  
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ZGFGQ9		149.0	1.8	0.18	145.0	-0.1	-0.01
ZJ4TRY		134.5	-12.7	-1.27	130.0	-15.1	-1.62
ZM7R3R		160.0	12.8	1.28	160.0	14.9	1.60

Grand Means		Summary Statistics	
	147.19 mg/L		145.09 mg/L
Std Dev Btw Labs			9.29 mg/L
	10.03 mg/L		
<b>Statistics based on 69 of 73 reporting participants</b>			

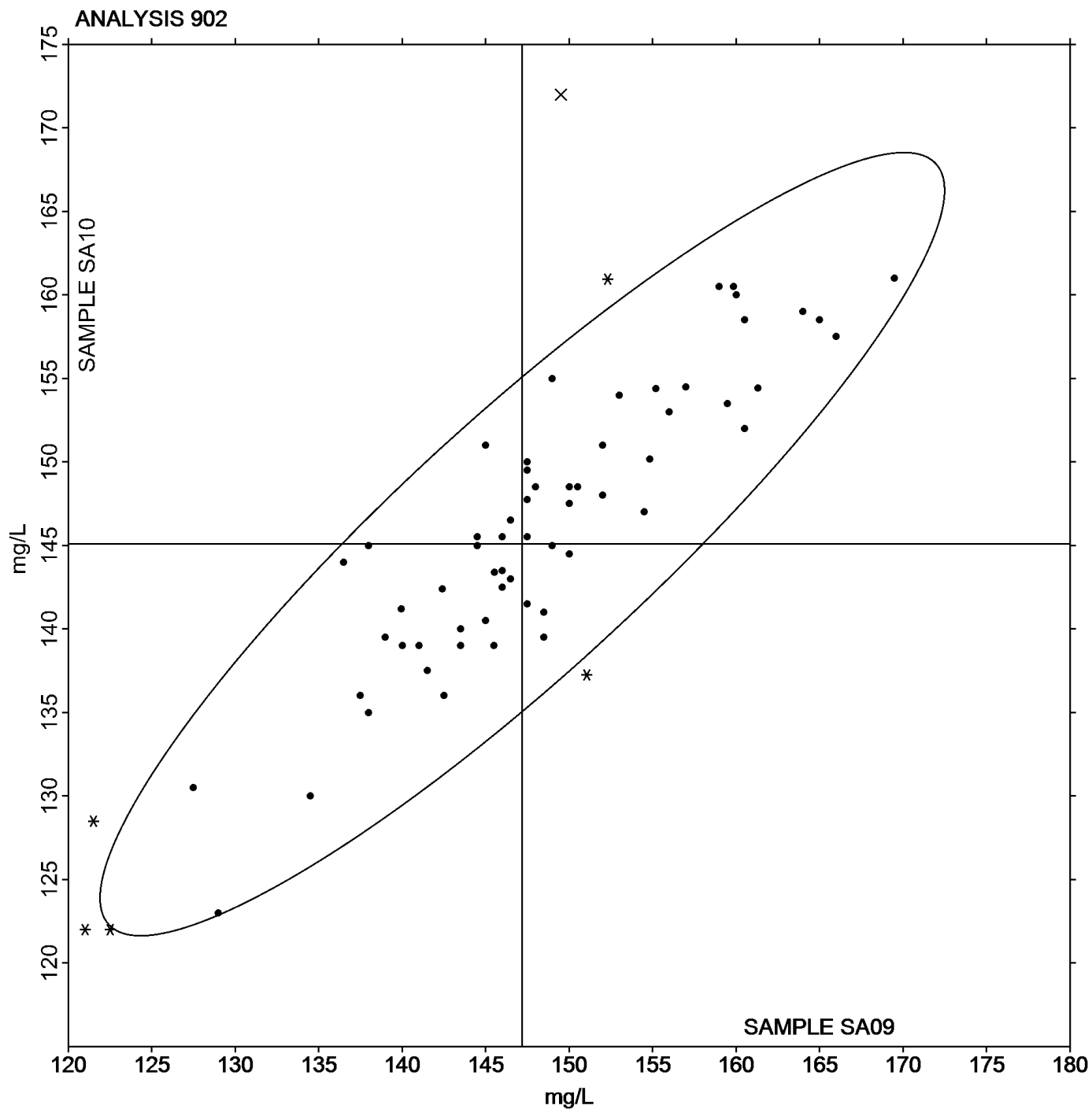
Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #902**

- MCMY8M (X) - Data for both samples are low. Possible Systematic Error.
- 63KLHX (X) - Data for both samples are low. Possible Systematic Error.
- KRRBPG (X) - Inconsistent in testing between samples, data for sample SA10 are high.
- NW8CYG (X) - Data for both samples are low. Possible Systematic Error.

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

Test Methodology	Sample SA09 <i>White Zinfandel</i>			Sample SA10 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btw Lab STD	Diff from GM	Group Mean	Btw Lab STD	Diff from GM	
Please specify method used	147.500	0.000	0.3	141.500	0.000	-3.6	1/1
Ripper Method	144.962	8.075	-2.2	142.623	8.249	-2.5	28/31
Aeration Oxidation (AO) Method	142.529	10.754	-4.7	142.555	9.714	-2.5	16/17
Segmented Flow Analyzer	152.833	10.572	5.6	151.417	10.906	6.3	6/6
Enzymatic Method	164.500	7.071	17.3	157.250	5.303	12.2	2/2
Colorimetric Analyzer	147.644	11.777	0.5	145.665	12.104	0.6	6/6
FTIR	157.000	11.314	9.8	151.750	9.546	6.7	2/2
Flow Injection Analysis	152.892	5.069	5.7	149.323	4.123	4.2	8/8





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #055  
Spring 2017

## Analysis 903 Free Sulfur Dioxide

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2DTWK6		22.00	-3.11	-1.01	20.50	-3.63	-1.10
2GD9YZ		22.00	-3.11	-1.01	20.00	-4.13	-1.25
2ZNXCX		27.50	2.39	0.77	26.00	1.87	0.56
49E4J4		25.50	0.39	0.13	23.50	-0.63	-0.19
63KLHX		21.50	-3.61	-1.17	21.00	-3.13	-0.94
6J9YWP		23.75	-1.36	-0.44	22.15	-1.98	-0.60
6Q7Q3Y		25.50	0.39	0.13	24.50	0.37	0.11
72JBYZ		27.00	1.89	0.61	27.00	2.87	0.87
862P6L		25.00	-0.11	-0.03	24.50	0.37	0.11
8QZVWX		25.35	0.24	0.08	23.95	-0.18	-0.05
8YVYZU		22.50	-2.61	-0.84	20.50	-3.63	-1.10
9CCBQU		25.00	-0.11	-0.03	25.00	0.87	0.26
9QWTJX		31.00	5.89	1.91	28.50	4.37	1.32
9T3D8Y		29.50	4.39	1.42	28.50	4.37	1.32
9WNZ6R		24.00	-1.11	-0.36	22.00	-2.13	-0.64
A2ADGZ		28.00	2.89	0.94	27.50	3.37	1.02
AK3DAH		24.00	-1.11	-0.36	21.50	-2.63	-0.79
ATGZJL		26.00	0.89	0.29	24.00	-0.13	-0.04
AZHCG4		27.50	2.39	0.77	25.90	1.77	0.53
BCPMKJ		24.60	-0.51	-0.17	23.02	-1.11	-0.34
BNLTDH		32.00	6.89	2.23	31.50	7.37	2.22
C2MNAP		28.00	2.89	0.94	28.00	3.87	1.17
CM44PV		28.00	2.89	0.94	28.00	3.87	1.17
CR2FP2		19.60	-5.51	-1.78	18.10	-6.03	-1.82
DVT4LY		24.00	-1.11	-0.36	21.00	-3.13	-0.94
E6XB2Y		26.50	1.39	0.45	23.50	-0.63	-0.19
GJ7BJT		22.00	-3.11	-1.01	21.50	-2.63	-0.79
GNYBXP		22.01	-3.10	-1.00	21.20	-2.93	-0.88
GZRRPB		24.00	-1.11	-0.36	20.00	-4.13	-1.25
H3Y9KL		23.00	-2.11	-0.68	21.50	-2.63	-0.79
HFZ6GT		25.00	-0.11	-0.03	23.70	-0.43	-0.13
HPDWAC		26.50	1.39	0.45	23.40	-0.73	-0.22
J6Y2RP	X	37.45	12.34	4.00	41.73	17.60	5.31
JJKGVN		23.20	-1.91	-0.62	22.60	-1.53	-0.46
JLME7G		18.50	-6.61	-2.14	17.00	-7.13	-2.15



# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #055  
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## Analysis 903 Free Sulfur Dioxide

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JZQG7D		25.00	-0.11	-0.03	24.50	0.37	0.11
KBJGX8		23.50	-1.61	-0.52	23.50	-0.63	-0.19
KFXWQK	*	16.50	-8.61	-2.79	17.50	-6.63	-2.00
KR9PTK		27.50	2.39	0.77	27.00	2.87	0.87
KRRBPG		27.50	2.39	0.77	29.50	5.37	1.62
KV8ZTQ	X	36.16	11.05	3.58	30.13	6.00	1.81
L8YRAN	X	36.20	11.09	3.59	34.72	10.59	3.20
LB2RC7		28.00	2.89	0.94	24.00	-0.13	-0.04
LRN9DH		21.50	-3.61	-1.17	20.50	-3.63	-1.10
LTEC7P		24.00	-1.11	-0.36	24.00	-0.13	-0.04
M8VRPE		25.50	0.39	0.13	25.50	1.37	0.41
MCMY8M		21.00	-4.11	-1.33	20.00	-4.13	-1.25
NKWMKL	X	19.50	-5.61	-1.82	23.00	-1.13	-0.34
NNYLVE		25.00	-0.11	-0.03	24.00	-0.13	-0.04
NW8CYG		25.50	0.39	0.13	26.00	1.87	0.56
NYWL9H		31.00	5.89	1.91	30.50	6.37	1.92
P2GT7K		27.00	1.89	0.61	26.00	1.87	0.56
P4AGTM		25.22	0.11	0.04	25.22	1.09	0.33
T2P4CE		28.00	2.89	0.94	28.00	3.87	1.17
THDGQ8		26.50	1.39	0.45	24.00	-0.13	-0.04
TK2TPC		27.50	2.39	0.77	27.00	2.87	0.87
TM7F63	*	26.00	0.89	0.29	29.00	4.87	1.47
UPB9WF		24.00	-1.11	-0.36	24.00	-0.13	-0.04
VEMU94		24.00	-1.11	-0.36	23.00	-1.13	-0.34
VMHWCZ		25.50	0.39	0.13	26.00	1.87	0.56
VZNTTG		25.00	-0.11	-0.03	25.00	0.87	0.26
WQYGWU		22.00	-3.11	-1.01	22.50	-1.63	-0.49
WXGUXE		21.00	-4.11	-1.33	20.00	-4.13	-1.25
X78XG2		25.50	0.39	0.13	26.00	1.87	0.56
X9AXED		23.50	-1.61	-0.52	21.00	-3.13	-0.94
XPFUZX		22.50	-2.61	-0.84	22.00	-2.13	-0.64
XRLHD3	*	33.00	7.89	2.56	31.50	7.37	2.22
XUAUC9		22.65	-2.46	-0.80	22.00	-2.13	-0.64
Y698PD	*	22.50	-2.61	-0.84	25.50	1.37	0.41
YBU6EZ		25.90	0.79	0.26	23.10	-1.03	-0.31



Analysis 903  
Free Sulfur Dioxide

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
YPEM86		21.50	-3.61	-1.17	19.00	-5.13	-1.55
YR2Y9V		25.00	-0.11	-0.03	23.00	-1.13	-0.34
Z3FH3C		24.00	-1.11	-0.36	22.00	-2.13	-0.64
ZGFGQ9		32.00	6.89	2.23	31.00	6.87	2.07
ZJ4TRY		28.00	2.89	0.94	25.50	1.37	0.41
ZM7R3R		29.00	3.89	1.26	29.00	4.87	1.47

Grand Means		Summary Statistics	
	25.108 mg/L		24.130 mg/L
<b>Stnd Dev Btwn Labs</b>	3.088 mg/L		3.313 mg/L
<b>Statistics based on 72 of 76 reporting participants</b>			

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #903**

- J6Y2RP (X) - Data for both samples are high. Possible Systematic Error.
- L8YRAN (X) - Data for both samples are high. Possible Systematic Error.
- NKWMKL (X) - Inconsistent in testing between samples.
- KV8ZTQ (X) - Inconsistent in testing between samples, data for sample SA09 are high. Inconsistent within the determinations of sample SA09.

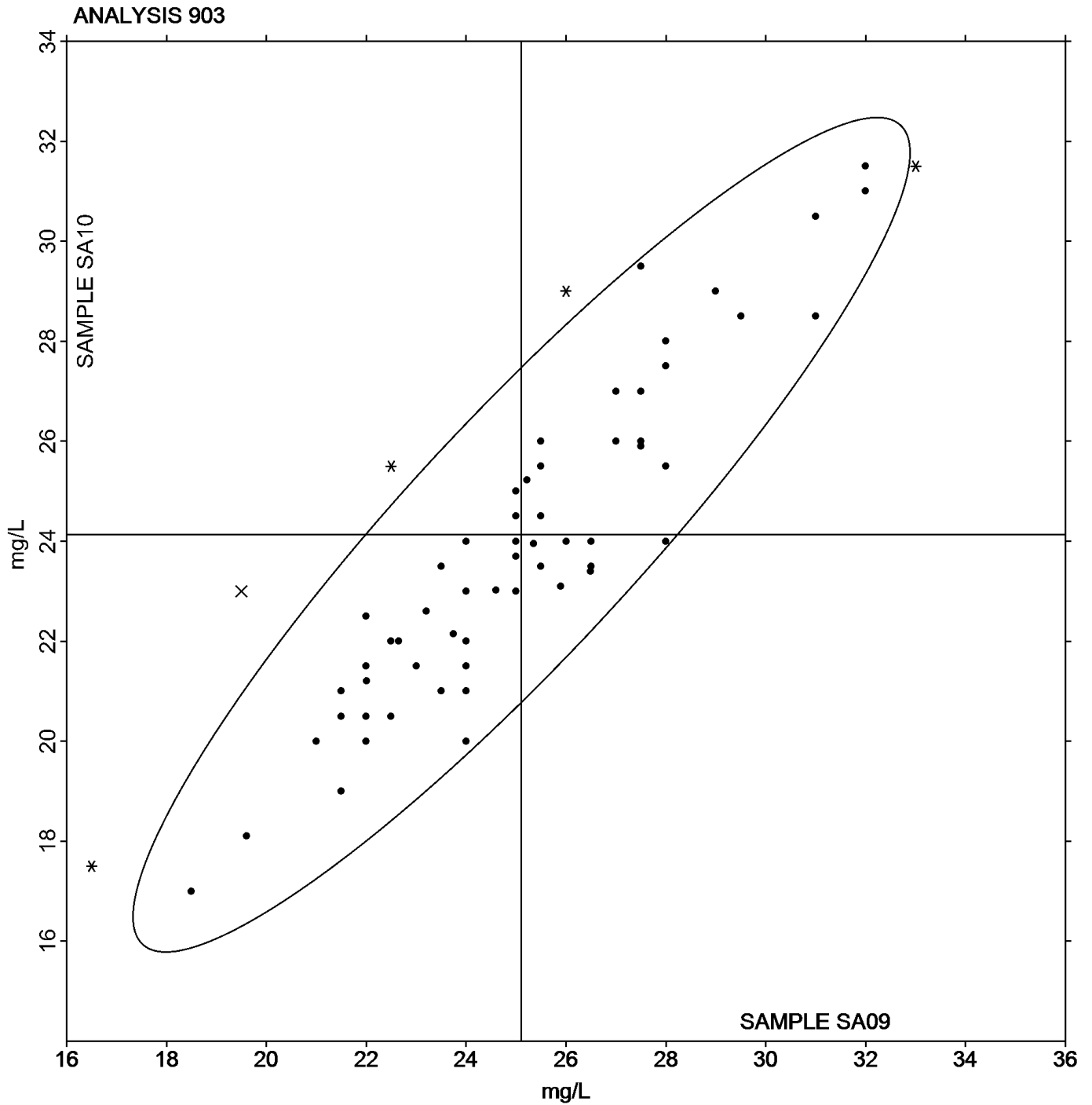
**Results by Methodology (as reported by laboratory)**

Test Methodology	Sample SA09 <i>White Zinfandel</i>			Sample SA10 <i>White 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	31.000	0.000	5.89	28.500	0.000	4.37	1/1
Ripper Method	24.527	2.879	-0.58	23.699	3.212	-0.43	21/21
Aeration Oxidation (AO) Method	24.316	2.581	-0.79	23.304	2.932	-0.83	28/31
Segmented Flow Analyzer	26.679	3.613	1.57	26.079	3.959	1.95	7/7
Enzymatic Method	28.000	0.000	2.89	28.000	0.000	3.87	1/1
Colorimetric Analyzer	27.125	2.323	2.02	25.625	3.010	1.50	4/5
Flow Injection Analysis	24.074	1.571	-1.03	22.889	1.366	-1.24	8/8
FTIR	32.500	0.707	7.39	31.250	0.354	7.12	2/2





Analysis 903  
Free Sulfur Dioxide



Analysis 904  
Titratable Acidity

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2DTWK6		6.700	0.245	0.95	6.750	0.318	1.28
2GD9YZ		6.400	-0.055	-0.22	6.400	-0.032	-0.13
2ZNXCX		6.225	-0.230	-0.90	6.265	-0.167	-0.67
49E4J4		6.490	0.035	0.13	6.565	0.133	0.54
63KLHX		6.245	-0.210	-0.82	6.250	-0.182	-0.73
6J9YWP		6.420	-0.035	-0.14	6.465	0.033	0.13
6Q7Q3Y		6.300	-0.155	-0.60	6.300	-0.132	-0.53
72JBYZ		6.280	-0.175	-0.68	6.290	-0.142	-0.57
862P6L		6.450	-0.005	-0.02	6.250	-0.182	-0.73
8QZVWX		6.295	-0.160	-0.62	6.365	-0.067	-0.27
8YVYZU		6.205	-0.250	-0.97	6.150	-0.282	-1.14
9CCBQU	X	7.350	0.895	3.48	7.050	0.618	2.49
9T3D8Y		6.485	0.030	0.11	6.475	0.043	0.18
9WNZ6R		6.450	-0.005	-0.02	6.450	0.018	0.07
A2ADGZ		6.545	0.090	0.35	6.545	0.113	0.46
AK3DAH		6.190	-0.265	-1.03	6.190	-0.242	-0.97
ATGZJL		7.000	0.545	2.12	6.950	0.518	2.09
AZHCG4		6.900	0.445	1.73	6.900	0.468	1.89
BAKUQK		6.461	0.006	0.02	6.453	0.021	0.08
BCPMKJ		6.150	-0.305	-1.19	6.085	-0.347	-1.40
BDK3Y2	X	6.850	0.395	1.53	7.200	0.768	3.10
BNLTDH		6.200	-0.255	-0.99	6.250	-0.182	-0.73
C2MNAP		6.750	0.295	1.15	6.600	0.168	0.68
CM44PV		6.450	-0.005	-0.02	6.250	-0.182	-0.73
CR2FP2		7.030	0.575	2.23	6.905	0.473	1.91
DVT4LY		6.330	-0.125	-0.49	6.275	-0.157	-0.63
E6XB2Y		6.970	0.515	2.00	6.820	0.388	1.57
GJ7BJT		6.165	-0.290	-1.13	6.140	-0.292	-1.18
GNVYXP		6.750	0.295	1.15	6.700	0.268	1.08
GZRRPB		6.310	-0.146	-0.57	6.307	-0.125	-0.50
H3Y9KL		6.850	0.395	1.53	6.700	0.268	1.08
HFZ6GT	*	6.500	0.045	0.17	6.700	0.268	1.08
HPDWAC		6.400	-0.055	-0.22	6.400	-0.032	-0.13
J6Y2RP		6.300	-0.155	-0.60	6.300	-0.132	-0.53
JJKGVN	X	7.650	1.195	4.65	7.600	1.168	4.71



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

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WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JLME7G		6.565	0.110	0.43	6.570	0.138	0.56
JZQG7D		6.250	-0.205	-0.80	6.200	-0.232	-0.93
KBJGX8		6.400	-0.055	-0.22	6.400	-0.032	-0.13
KFXWQK		6.260	-0.195	-0.76	6.165	-0.267	-1.08
KR9PTK		7.010	0.555	2.16	6.950	0.518	2.09
KRRBPG		6.200	-0.255	-0.99	6.200	-0.232	-0.93
KV8ZTQ		6.430	-0.025	-0.10	6.505	0.073	0.30
L36VMJ		6.800	0.345	1.34	6.750	0.318	1.28
LB2RC7	X	7.000	0.545	2.12	7.350	0.918	3.70
LRN9DH		6.690	0.235	0.91	6.720	0.288	1.16
LTEC7P		6.400	-0.055	-0.22	6.400	-0.032	-0.13
M8VRPE	X	7.850	1.395	5.42	7.800	1.368	5.52
MCMY8M		6.250	-0.205	-0.80	6.300	-0.132	-0.53
NKWMKL		6.200	-0.255	-0.99	6.200	-0.232	-0.93
NNYLVE		6.230	-0.225	-0.88	6.210	-0.222	-0.89
NW8CYG		6.350	-0.105	-0.41	6.300	-0.132	-0.53
NYWL9H		6.200	-0.255	-0.99	6.100	-0.332	-1.34
P2GT7K		6.850	0.395	1.53	6.800	0.368	1.49
P4AGTM		6.675	0.220	0.85	6.525	0.093	0.38
T2P4CE		6.850	0.395	1.53	6.900	0.468	1.89
THDGQ8		6.230	-0.225	-0.88	6.220	-0.212	-0.85
TK2TPC		6.795	0.340	1.32	6.730	0.298	1.20
TM7F63		6.015	-0.440	-1.71	5.950	-0.482	-1.94
UE8BN7		6.902	0.446	1.73	6.837	0.405	1.64
UPB9WF		6.450	-0.005	-0.02	6.450	0.018	0.07
VEMU94		6.300	-0.155	-0.60	6.250	-0.182	-0.73
VMHWCZ		6.230	-0.225	-0.88	6.390	-0.042	-0.17
VZNTTG		5.905	-0.550	-2.14	5.885	-0.547	-2.20
WQYGWU	X	8.102	1.646	6.40	8.045	1.613	6.51
WXGUXE		6.250	-0.205	-0.80	6.200	-0.232	-0.93
X78XG2		6.300	-0.155	-0.60	6.300	-0.132	-0.53
X9AXED		6.100	-0.355	-1.38	6.100	-0.332	-1.34
XBY6YB		6.435	-0.020	-0.08	6.455	0.023	0.09
XPFUZX		6.350	-0.105	-0.41	6.350	-0.082	-0.33
XRLHD3		6.560	0.105	0.41	6.580	0.148	0.60



**Analysis 904  
Titratable Acidity**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
XUAUC9		6.600	0.145	0.56	6.400	-0.032	-0.13
Y698PD		6.640	0.185	0.72	6.635	0.203	0.82
YBU6EZ	X	6.435	-0.020	-0.08	6.765	0.333	1.34
YPEM86	X	7.150	0.695	2.70	7.300	0.868	3.50
YR2Y9V		6.500	0.045	0.17	6.500	0.068	0.28
Z3FH3C		6.500	0.045	0.17	6.600	0.168	0.68
ZGFGQ9		6.290	-0.165	-0.64	6.260	-0.172	-0.69
ZJ4TRY		6.580	0.125	0.48	6.510	0.078	0.32
ZM7R3R		6.600	0.145	0.56	6.400	-0.032	-0.13

Grand Means		Summary Statistics	
	6.4555 g/L as tartaric acid		6.4316 g/L as tartaric acid
Std Dev Btw Labs			0.2479 g/L as tartaric acid
	0.2571 g/L as tartaric acid		
<b>Statistics based on 71 of 79 reporting participants</b>			

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #904**

- YBU6EZ (X) - Inconsistent in testing between samples.
- WQYGWU (X) - Data for both samples are high. Possible Systematic Error.
- LB2RC7 (X) - Inconsistent in testing between samples, data for sample SA10 are high. Inconsistent within the determinations of sample SA10.
- JJKGVN (X) - Data for both samples are high. Possible Systematic Error.
- 9CCBQU (X) - Inconsistent in testing between samples, data for sample SA09 are high. Inconsistent within the determinations of sample SA09.
- YPEM86 (X) - Inconsistent in testing between samples, data for sample SA10 are high.
- M8VRPE (X) - Data for both samples are high. Possible Systematic Error.
- BDK3Y2 (X) - Inconsistent in testing between samples, data for sample SA10 are high. Inconsistent within the determinations of sample SA10.



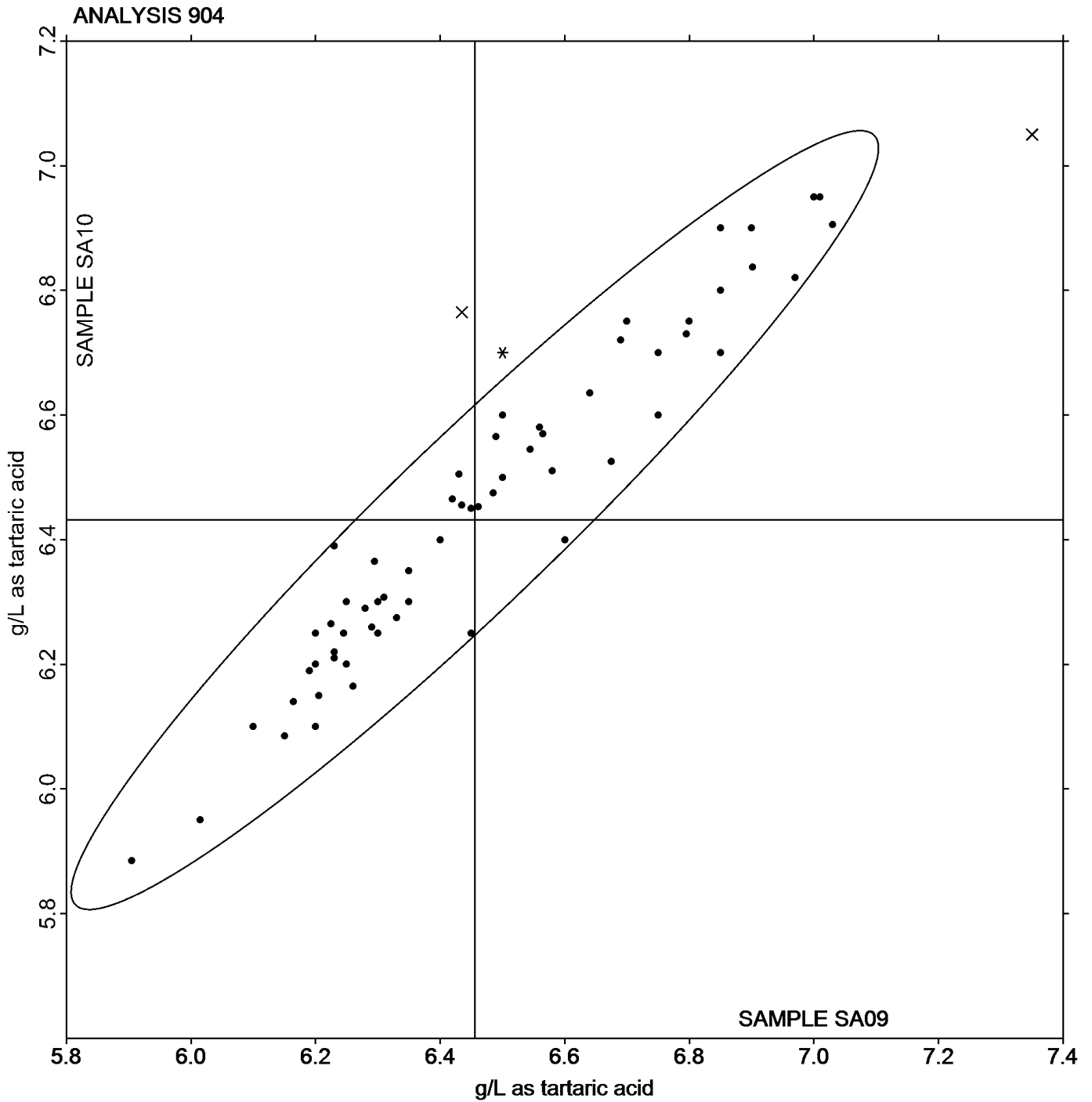
**Analysis 904  
Titratable Acidity**

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

Test Methodology	Sample SA09 <i>White Zinfandel</i>			Sample SA10 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Autotitration	6.450	0.254	-0.006	6.425	0.245	-0.006	46/50
Manual Titration	6.480	0.285	0.024	6.462	0.269	0.031	19/23
FTIR	6.388	0.224	-0.067	6.380	0.256	-0.052	5/5
Segmented Flow Analyzer	6.600	0.000	0.145	6.400	0.000	-0.032	1/1



Analysis 904  
Titratable Acidity





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #055  
Spring 2017

## Analysis 905 Volatile Acidity

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2DTWK6		0.2900	0.0936	1.38	0.2800	0.0791	1.17
2GD9YZ		0.1400	-0.0564	-0.83	0.1400	-0.0609	-0.90
2ZNXCX		0.2400	0.0436	0.65	0.2700	0.0691	1.02
49E4J4		0.2600	0.0636	0.94	0.2900	0.0891	1.32
63KLHX		0.1500	-0.0464	-0.69	0.1550	-0.0459	-0.68
6J9YWP		0.1750	-0.0214	-0.32	0.1700	-0.0309	-0.46
6Q7Q3Y		0.3000	0.1036	1.53	0.3200	0.1191	1.77
72JBYZ		0.2300	0.0336	0.50	0.2200	0.0191	0.28
862P6L		0.2300	0.0336	0.50	0.2300	0.0291	0.43
8QZVWX		0.1850	-0.0114	-0.17	0.1900	-0.0109	-0.16
8YVYZU		0.1250	-0.0714	-1.06	0.1300	-0.0709	-1.05
9CCBQU		0.1230	-0.0734	-1.09	0.1330	-0.0679	-1.01
9QWTJX	*	0.3600	0.1636	2.42	0.3400	0.1391	2.06
9T3D8Y		0.1200	-0.0764	-1.13	0.1400	-0.0609	-0.90
9WNZ6R		0.1800	-0.0164	-0.24	0.1800	-0.0209	-0.31
A2ADGZ		0.1142	-0.0822	-1.22	0.1255	-0.0754	-1.12
AK3DAH		0.2150	0.0186	0.28	0.2150	0.0141	0.21
ATGZJL		0.1850	-0.0114	-0.17	0.1900	-0.0109	-0.16
AZHCG4		0.1800	-0.0164	-0.24	0.1800	-0.0209	-0.31
BDK3Y2	X	0.1950	-0.0014	-0.02	0.2450	0.0441	0.65
BNLTDH		0.2500	0.0536	0.79	0.2300	0.0291	0.43
C2MNAP		0.1650	-0.0314	-0.46	0.1850	-0.0159	-0.24
CM44PV		0.2300	0.0336	0.50	0.2500	0.0491	0.73
CR2FP2	*	0.0300	-0.1664	-2.46	0.0300	-0.1709	-2.54
DVT4LY		0.1950	-0.0014	-0.02	0.1950	-0.0059	-0.09
E6XB2Y	*	0.1350	-0.0614	-0.91	0.1750	-0.0259	-0.38
GJ7BJT		0.1150	-0.0814	-1.20	0.1200	-0.0809	-1.20
GNYBXP		0.1600	-0.0364	-0.54	0.1550	-0.0459	-0.68
GZRRPB	X	0.4860	0.2896	4.28	0.5160	0.3151	4.68
H3Y9KL		0.1265	-0.0699	-1.03	0.1180	-0.0829	-1.23
HFZ6GT		0.1900	-0.0064	-0.09	0.1950	-0.0059	-0.09
HPDWAC		0.1350	-0.0614	-0.91	0.1400	-0.0609	-0.90
J6Y2RP		0.1980	0.0016	0.02	0.1980	-0.0029	-0.04
JJKGVN		0.1050	-0.0914	-1.35	0.1000	-0.1009	-1.50
JLME7G		0.1800	-0.0164	-0.24	0.1750	-0.0259	-0.38



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

**Report #055**  
**Spring 2017**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JZQG7D		0.1900	-0.0064	-0.09	0.1800	-0.0209	-0.31
KBJGX8		0.1800	-0.0164	-0.24	0.1850	-0.0159	-0.24
KFXWQK		0.1850	-0.0114	-0.17	0.1850	-0.0159	-0.24
KR9PTK		0.1600	-0.0364	-0.54	0.1750	-0.0259	-0.38
KRRBPG	X	0.1500	-0.0464	-0.69	0.2600	0.0591	0.88
KV8ZTQ	X	0.3780	0.1816	2.69	0.4440	0.2431	3.61
L36VMJ		0.1950	-0.0014	-0.02	0.2100	0.0091	0.13
LB2RC7		0.1600	-0.0364	-0.54	0.1700	-0.0309	-0.46
LRN9DH		0.2100	0.0136	0.20	0.2200	0.0191	0.28
LTEC7P		0.1000	-0.0964	-1.43	0.1000	-0.1009	-1.50
M8VRPE		0.1250	-0.0714	-1.06	0.1200	-0.0809	-1.20
MCMY8M		0.3000	0.1036	1.53	0.3000	0.0991	1.47
NKWMKL	X	0.3450	0.1486	2.20	0.3850	0.1841	2.73
NNYLVE		0.1100	-0.0864	-1.28	0.1200	-0.0809	-1.20
NW8CYG		0.1500	-0.0464	-0.69	0.1650	-0.0359	-0.53
NYWL9H		0.2100	0.0136	0.20	0.2150	0.0141	0.21
P2GT7K		0.1500	-0.0464	-0.69	0.1500	-0.0509	-0.76
T2P4CE		0.1500	-0.0464	-0.69	0.1600	-0.0409	-0.61
THDGQ8		0.2850	0.0886	1.31	0.2800	0.0791	1.17
TK2TPC		0.1300	-0.0664	-0.98	0.1450	-0.0559	-0.83
TM7F63		0.2100	0.0136	0.20	0.2050	0.0041	0.06
VEMU94		0.1950	-0.0014	-0.02	0.2000	-0.0009	-0.01
VMHWCZ		0.2150	0.0186	0.28	0.2400	0.0391	0.58
VZNTTG		0.2800	0.0836	1.24	0.2850	0.0841	1.25
WQYGWU	X	0.6050	0.4086	6.04	0.3250	0.1241	1.84
WXGUXE		0.2350	0.0386	0.57	0.2300	0.0291	0.43
X78XG2		0.3200	0.1236	1.83	0.3200	0.1191	1.77
X9AXED	X	0.2000	0.0036	0.05	0.2600	0.0591	0.88
XBY6YB		0.2850	0.0886	1.31	0.2900	0.0891	1.32
XPFUZX		0.1950	-0.0014	-0.02	0.1950	-0.0059	-0.09
XRLHD3		0.1050	-0.0914	-1.35	0.1150	-0.0859	-1.28
XUAUC9		0.2000	0.0036	0.05	0.1850	-0.0159	-0.24
Y698PD	*	0.3700	0.1736	2.57	0.3850	0.1841	2.73
YBU6EZ		0.2530	0.0566	0.84	0.2735	0.0726	1.08
YPEM86		0.2000	0.0036	0.05	0.2050	0.0041	0.06





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

**Report #055**  
**Spring 2017**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
YR2Y9V		0.3450	0.1486	2.20	0.3350	0.1341	1.99
Z3FH3C		0.2800	0.0836	1.24	0.3000	0.0991	1.47
ZGFGQ9		0.2400	0.0436	0.65	0.2500	0.0491	0.73
ZJ4TRY		0.2100	0.0136	0.20	0.2000	-0.0009	-0.01
ZM7R3R		0.2100	0.0136	0.20	0.2050	0.0041	0.06

Grand Means		Summary Statistics	
	0.19639 g/L as acetic acid		0.20093 g/L as acetic acid
Std Dev Btwn Labs			
	0.06760 g/L as acetic acid		0.06739 g/L as acetic acid
<b>Statistics based on 68 of 75 reporting participants</b>			

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #905**

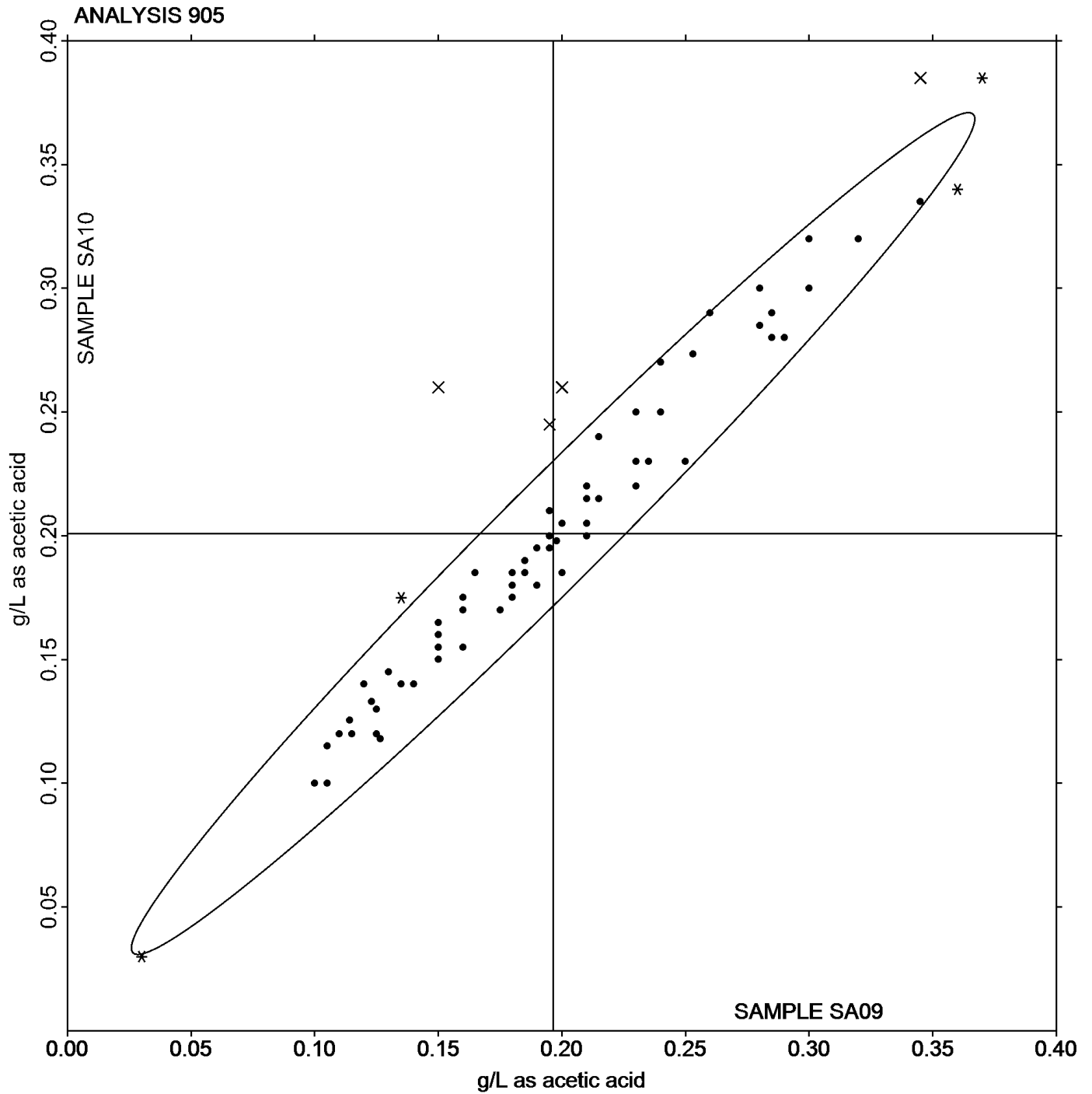
- GZRRPB (X) - Data for both samples are high. Possible Systematic Error.
- WQYGWU (X) - Inconsistent in testing between samples, data for sample SA09 are high. Inconsistent within the determinations of sample SA10.
- X9AXED (X) - Inconsistent in testing between samples.
- NKWMKL (X) - Inconsistent in testing between samples.
- KRRBPG (X) - Inconsistent in testing between samples.
- KV8ZTQ (X) - Inconsistent in testing between samples, data for sample SA10 are high.
- BDK3Y2 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

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

Test Methodology	Sample SA09 <i>White Zinfandel</i>			Sample SA10 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Cash Still method	0.287	0.047	0.0902	0.297	0.039	0.0958	11/15
Enzymatic method	0.164	0.036	-0.0328	0.168	0.035	-0.0327	37/40
HPLC	0.114	0.000	-0.0822	0.126	0.000	-0.0754	1/1
GC	0.197	0.002	0.0001	0.197	0.002	-0.0044	2/2
Seg. Flow / Colorimetric Analyzer	0.259	0.038	0.0622	0.261	0.043	0.0598	7/7
FTIR	0.183	0.085	-0.0134	0.183	0.082	-0.0179	10/10



Analysis 905  
Volatile Acidity





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #055  
Spring 2017

## Analysis 906 Specific Gravity

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2DTWK6		1.012	0.000	0.69	1.012	0.000	0.69
2GD9YZ		1.012	0.001	0.76	1.012	0.001	0.77
2ZNXCX		1.011	0.000	0.26	1.011	0.000	0.33
49E4J4		1.011	0.000	0.12	1.011	0.000	0.26
63KLHX		1.011	0.000	0.16	1.011	0.000	0.16
6J9YWP		1.012	0.000	0.47	1.012	0.000	0.40
6Q7Q3Y		1.011	0.000	0.19	1.011	0.000	0.18
8QZVWX	*	1.011	-0.001	-0.89	1.011	0.000	-0.61
8YVYZU		1.011	0.000	0.19	1.011	0.000	0.26
9QWTJX		1.011	0.000	0.29	1.011	0.000	0.28
9T3D8Y	X	1.011	-0.001	-0.99	1.010	-0.001	-1.56
9WNZ6R	X	1.012	0.001	1.07	1.012	0.000	0.40
A2ADGZ		1.011	0.000	0.35	1.011	0.000	0.35
AK3DAH		1.011	0.000	0.15	1.011	0.000	0.25
ATGZJL		1.012	0.000	0.40	1.011	0.000	0.26
BAKUQK		1.011	0.000	0.14	1.011	0.000	0.13
BCPMKJ	*	1.010	-0.002	-2.25	1.010	-0.002	-2.37
BDK3Y2		1.011	0.000	0.18	1.011	0.000	0.23
BNLTDH		1.011	0.000	0.25	1.011	0.000	0.28
C2MNAP		1.012	0.001	0.72	1.012	0.000	0.72
CM44PV		1.010	-0.001	-1.24	1.010	-0.001	-1.11
DVT4LY		1.011	0.000	-0.31	1.011	0.000	-0.46
E6XB2Y	*	1.009	-0.002	-2.53	1.010	-0.002	-2.34
GJ7BJT		1.012	0.000	0.69	1.012	0.001	0.76
GZRRPB		1.010	-0.001	-1.46	1.010	-0.001	-1.62
HFZ6GT		1.011	0.000	0.16	1.011	0.000	0.15
J6Y2RP		1.011	-0.001	-1.03	1.011	-0.001	-1.04
JJKGVN		1.011	0.000	-0.31	1.011	0.000	-0.32
JLME7G	X	1.011	0.000	0.06	1.009	-0.002	-2.60
JZQG7D		1.012	0.001	0.83	1.012	0.001	0.98
KBJGX8		1.011	0.000	0.26	1.011	0.000	0.26
KFXWQK		1.011	0.000	0.12	1.011	0.000	0.11
KRRBPG		1.012	0.001	1.26	1.012	0.001	1.41
KV8ZTQ	X	1.011	0.000	0.25	1.011	0.000	-0.20
L36VMJ	X	1.009	-0.002	-2.69	1.007	-0.004	-5.60



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

Report #055  
Spring 2017

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
LRN9DH		1.011	0.000	0.23	1.011	0.000	0.18
LTEC7P		1.011	0.000	-0.60	1.011	0.000	-0.61
M8VRPE		1.012	0.000	0.53	1.012	0.000	0.52
NKWMKL		1.010	-0.001	-2.03	1.010	-0.001	-2.05
NNYLVE		1.011	0.000	-0.17	1.011	0.000	-0.32
NW8CYG	*	1.012	0.001	1.54	1.012	0.001	1.27
NYWL9H		1.011	0.000	0.04	1.011	0.000	0.04
P2GT7K	*	1.009	-0.002	-2.60	1.009	-0.002	-2.63
P4AGTM		1.013	0.001	1.91	1.013	0.001	1.92
THDGQ8		1.011	0.000	0.12	1.011	0.000	0.11
TK2TPC		1.010	-0.002	-2.31	1.010	-0.002	-2.30
TM7F63	X	1.008	-0.003	-4.17	1.007	-0.004	-6.37
UPB9WF		1.012	0.000	0.40	1.012	0.000	0.55
VEMU94		1.011	0.000	0.25	1.011	0.000	0.25
VMHWCZ	*	1.013	0.002	2.55	1.013	0.002	2.56
VZNTTG	X	1.010	-0.002	-2.39	1.010	-0.001	-1.98
WQYGWU		1.012	0.000	0.48	1.011	0.000	0.37
WXGUXE		1.012	0.000	0.61	1.012	0.000	0.60
X78XG2	X	1.101	0.090	128.53	1.101	0.090	129.61
X9AXED		1.011	0.000	0.12	1.011	0.000	0.13
XPFUZX	X	1.009	-0.002	-3.01	1.007	-0.004	-5.48
Y698PD		1.011	0.000	0.19	1.011	0.000	0.04
YBU6EZ		1.011	0.000	0.03	1.011	0.000	-0.01
YPEM86	X	1.017	0.005	7.55	1.019	0.008	11.21
YR2Y9V		1.011	0.000	-0.31	1.011	0.000	-0.39
Z3FH3C		1.011	0.000	0.12	1.011	0.000	0.26
ZGFGQ9		1.011	0.000	0.04	1.011	0.000	-0.10
ZJ4TRY		1.011	0.000	0.04	1.011	0.000	0.03
ZM7R3R		1.011	0.000	0.26	1.011	0.000	0.26



Analysis 906  
Specific Gravity

Grand Means	Summary Statistics
1.0112 sp gr 20/20 C	1.0112 sp gr 20/20 C
Stnd Dev Btwn Labs	
0.0007 sp gr 20/20 C	0.0007 sp gr 20/20 C
<b>Statistics based on 54 of 64 reporting participants</b>	

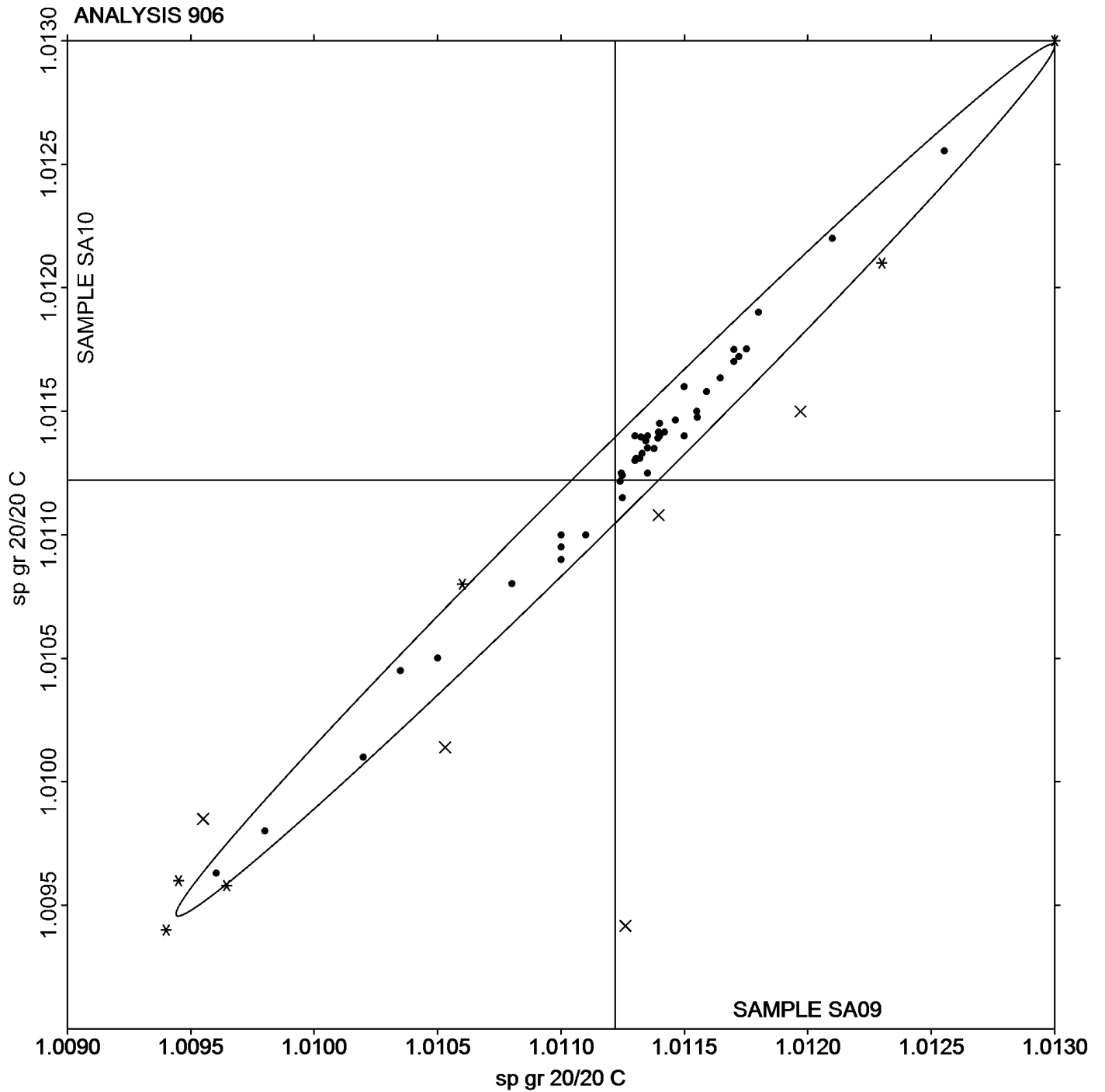
Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #906**

- 9WNZ6R (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA09.
- JLME7G (X) - Inconsistent in testing between samples.
- X78XG2 (X) - Data for both samples are high.
- TM7F63 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample SA10.
- XPFUZX (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- 9T3D8Y (X) - Inconsistent in testing between samples.
- VZNTTG (X) - Inconsistent in testing between samples.
- YPEM86 (X) - Data for both samples are high. Inconsistent within the determinations of both samples.
- L36VMJ (X) - Inconsistent in testing between samples, data for sample SA10 are low. Inconsistent within the determinations of sample SA10.
- KV8ZTQ (X) - Inconsistent in testing between samples.



Analysis 906  
Specific Gravity





**ASEV-CTS Wine Industry Interlaboratory Testing Program**  
**Analysis 907**  
**pH**

**Report #055**  
**Spring 2017**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2DTWK6		3.140	0.004	0.11	3.150	0.009	0.23
2GD9YZ		3.130	-0.006	-0.16	3.140	-0.001	-0.03
2ZNXCX		3.110	-0.026	-0.71	3.095	-0.046	-1.22
49E4J4	X	3.115	-0.021	-0.57	3.085	-0.056	-1.49
63KLHX		3.120	-0.016	-0.44	3.120	-0.021	-0.56
6J9YWP		3.140	0.004	0.11	3.145	0.004	0.10
6Q7Q3Y		3.140	0.004	0.11	3.150	0.009	0.23
72JBYZ		3.140	0.004	0.11	3.150	0.009	0.23
862P6L		3.160	0.024	0.65	3.145	0.004	0.10
8QZVWX		3.165	0.029	0.79	3.160	0.019	0.50
8YVYZU		3.140	0.004	0.11	3.150	0.009	0.23
9CCBQU		3.075	-0.061	-1.66	3.085	-0.056	-1.49
9QWTJX		3.135	-0.001	-0.03	3.130	-0.011	-0.30
9T3D8Y		3.100	-0.036	-0.98	3.105	-0.036	-0.96
9WNZ6R		3.135	-0.001	-0.03	3.140	-0.001	-0.03
A2ADGZ	*	3.250	0.114	3.10	3.250	0.109	2.88
AK3DAH		3.140	0.004	0.11	3.140	-0.001	-0.03
ATGZJL		3.155	0.019	0.52	3.170	0.029	0.76
AZHCG4		3.170	0.034	0.92	3.170	0.029	0.76
BCPMKJ		3.079	-0.057	-1.55	3.090	-0.052	-1.37
BDK3Y2		3.170	0.034	0.92	3.160	0.019	0.50
BNLTDH		3.105	-0.031	-0.84	3.105	-0.036	-0.96
C2MNAP		3.135	-0.001	-0.03	3.130	-0.011	-0.30
CM44PV		3.090	-0.046	-1.25	3.100	-0.041	-1.09
CR2FP2		3.135	-0.002	-0.04	3.135	-0.006	-0.16
DVT4LY		3.145	0.009	0.24	3.160	0.019	0.50
E6XB2Y		3.170	0.034	0.92	3.180	0.039	1.03
GJ7BJT		3.145	0.009	0.24	3.160	0.019	0.50
GNYBXP		3.180	0.044	1.20	3.190	0.049	1.29
GZRRPB		3.135	-0.001	-0.03	3.145	0.004	0.10
H3Y9KL		3.150	0.014	0.38	3.150	0.009	0.23
HFZ6GT		3.130	-0.006	-0.16	3.130	-0.011	-0.30
HPDWAC		3.205	0.069	1.88	3.215	0.074	1.95
J6Y2RP		3.090	-0.046	-1.25	3.090	-0.051	-1.35
JJKGVN		3.160	0.024	0.65	3.160	0.019	0.50



**ASEV-CTS Wine Industry Interlaboratory Testing Program**  
**Analysis 907**  
**pH**

**Report #055**  
**Spring 2017**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
JLME7G	*	3.105	-0.031	-0.84	3.140	-0.001	-0.03
JZQG7D		3.125	-0.011	-0.30	3.120	-0.021	-0.56
KBJGX8		3.165	0.029	0.79	3.175	0.034	0.89
KFXWQK		3.120	-0.016	-0.44	3.120	-0.021	-0.56
KR9PTK		3.200	0.064	1.74	3.205	0.064	1.69
KRRBPG	*	3.095	-0.041	-1.12	3.125	-0.016	-0.43
KV8ZTQ		3.080	-0.056	-1.52	3.090	-0.051	-1.35
L36VMJ		3.090	-0.046	-1.25	3.085	-0.056	-1.49
LB2RC7		3.200	0.064	1.74	3.220	0.079	2.08
LRN9DH		3.160	0.024	0.65	3.170	0.029	0.76
LTEC7P		3.170	0.034	0.92	3.180	0.039	1.03
M8VRPE		3.120	-0.016	-0.44	3.125	-0.016	-0.43
MCMY8M		3.140	0.004	0.11	3.150	0.009	0.23
NKWMKL		3.140	0.004	0.11	3.145	0.004	0.10
NNYLVE		3.120	-0.016	-0.44	3.130	-0.011	-0.30
NW8CYG		3.140	0.004	0.11	3.130	-0.011	-0.30
NYWL9H		3.155	0.019	0.52	3.160	0.019	0.50
P2GT7K	*	3.115	-0.021	-0.57	3.145	0.004	0.10
P4AGTM		3.120	-0.016	-0.44	3.130	-0.011	-0.30
T2P4CE		3.130	-0.006	-0.16	3.135	-0.006	-0.16
THDGQ8		3.135	-0.001	-0.03	3.140	-0.001	-0.03
TK2TPC		3.125	-0.011	-0.30	3.150	0.009	0.23
TM7F63		3.175	0.039	1.06	3.185	0.044	1.16
UPB9WF		3.050	-0.086	-2.34	3.050	-0.091	-2.41
VEMU94		3.120	-0.016	-0.44	3.125	-0.016	-0.43
VMHWCZ	*	3.055	-0.081	-2.20	3.040	-0.101	-2.68
VZNTTG		3.125	-0.011	-0.30	3.135	-0.006	-0.16
WQYGWU	X	3.110	-0.026	-0.71	2.985	-0.156	-4.13
WXGUXE		3.145	0.009	0.24	3.150	0.009	0.23
X78XG2		3.148	0.012	0.33	3.154	0.012	0.33
X9AXED		3.180	0.044	1.20	3.180	0.039	1.03
XBY6YB		3.150	0.014	0.38	3.160	0.019	0.50
XPFUZX		3.060	-0.076	-2.07	3.065	-0.076	-2.02
XRLHD3		3.130	-0.006	-0.16	3.130	-0.011	-0.30
XUAUC9		3.120	-0.016	-0.44	3.120	-0.021	-0.56





**ASEV-CTS Wine Industry Interlaboratory Testing Program**  
**Analysis 907**  
**pH**

**Report #055**  
**Spring 2017**

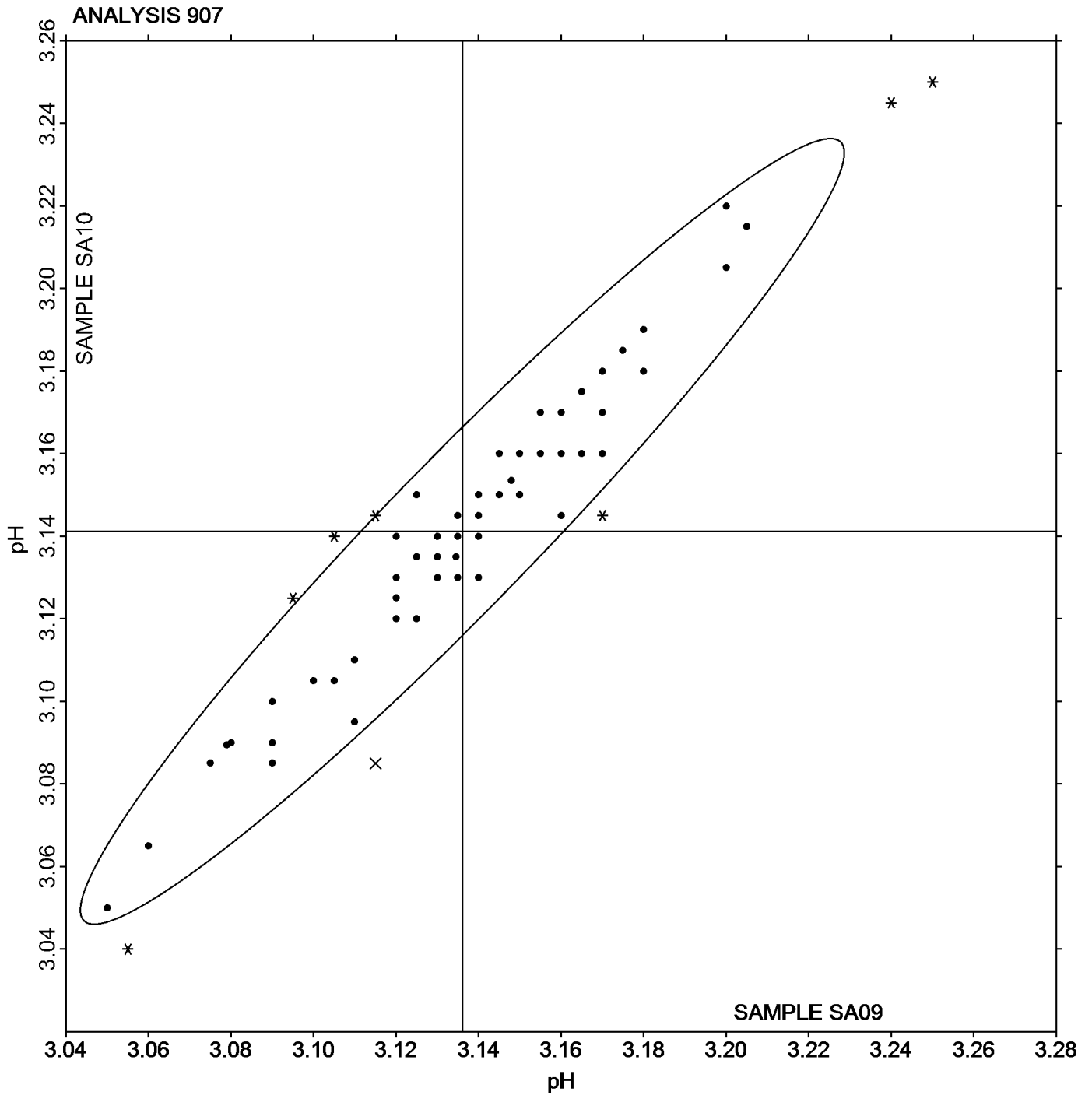
WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
Y698PD	*	3.240	0.104	2.83	3.245	0.104	2.75
YBU6EZ		3.120	-0.016	-0.44	3.120	-0.021	-0.56
YPEM86	*	3.170	0.034	0.92	3.145	0.004	0.10
YR2Y9V		3.110	-0.026	-0.71	3.110	-0.031	-0.83
Z3FH3C		3.120	-0.016	-0.44	3.140	-0.001	-0.03
ZGFGQ9	X	3.040	-0.096	-2.61	3.020	-0.121	-3.21
ZJ4TRY		3.130	-0.006	-0.16	3.130	-0.011	-0.30

Grand Means		Summary Statistics	
	3.1360 pH		3.1412 pH
Std Dev Btwn Labs			
	0.0368 pH		0.0378 pH
<b>Statistics based on 74 of 77 reporting participants</b>			

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #907**

- WQYGWU (X) - Inconsistent in testing between samples, data for sample SA10 are low. Inconsistent within the determinations of both samples.
- ZGFGQ9 (X) - Inconsistent in testing between samples, data for sample SA10 are low. Inconsistent within the determinations of sample SA09.
- 49E4J4 (X) - Inconsistent in testing between samples.





**Analysis 908  
Residual Sugar**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
49E4J4	*	35.97	-0.75	-0.38	34.48	-2.26	-1.21
862P6L		33.19	-3.53	-1.79	33.45	-3.29	-1.76
9QWTJX		35.50	-1.22	-0.62	35.35	-1.39	-0.74
A2ADGZ		37.42	0.70	0.36	37.23	0.49	0.27
BNLTDH		34.65	-2.07	-1.05	35.55	-1.19	-0.64
HFZ6GT		38.52	1.80	0.91	38.58	1.84	0.99
HPDWAC		38.15	1.43	0.73	38.15	1.41	0.76
J6Y2RP	X	8.30	-28.42	-14.41	8.20	-28.54	-15.31
KBJGX8		38.50	1.78	0.90	38.60	1.86	1.00
KV8ZTQ		36.18	-0.54	-0.27	36.47	-0.27	-0.15
L8YRAN		36.55	-0.16	-0.08	37.17	0.43	0.23
TM7F63		41.29	4.57	2.32	40.58	3.84	2.06
UPB9WF		36.60	-0.12	-0.06	36.60	-0.14	-0.07
VZNTTG		34.56	-2.16	-1.09	34.57	-2.17	-1.16
WQYGWU		37.30	0.58	0.30	37.72	0.98	0.53
Y698PD		34.70	-2.02	-1.02	35.15	-1.59	-0.85
YR2Y9V		35.25	-1.47	-0.74	35.30	-1.44	-0.77
ZGFGQ9		37.59	0.87	0.44	37.32	0.58	0.31
ZM7R3R		39.00	2.28	1.16	39.00	2.26	1.21

Grand Means		Summary Statistics	
	36.717 g/L		36.736 g/L
Std Dev Btwn Labs			
	1.973 g/L		1.864 g/L
<b>Statistics based on 18 of 19 reporting participants</b>			

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #908**

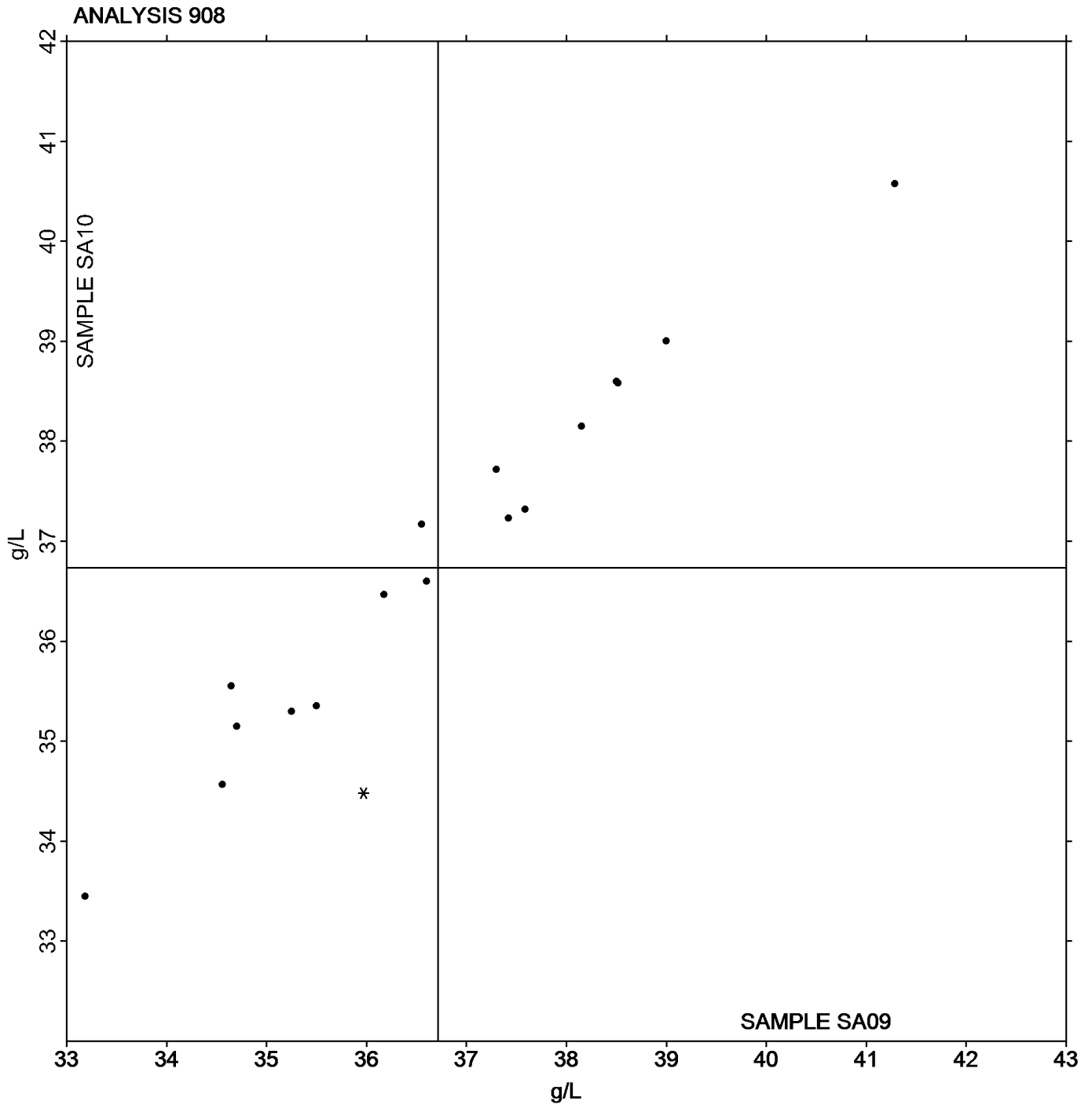
J6Y2RP (X) - Data for both samples are low.



**Analysis 908  
Residual Sugar**

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

Test Methodology	Sample SA09 <i>White Zinfandel</i>			Sample SA10 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Cu Reduction Method	36.420	1.132	-0.30	36.180	1.361	-0.56	7/8
Segmented Flow	36.825	3.076	0.11	37.275	2.440	0.54	2/2
FTIR	37.734	2.423	1.02	37.726	2.112	0.99	6/6
Other _____	35.305	1.846	-1.41	35.694	1.975	-1.04	3/3



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

Report #055  
Spring 2017

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2DTWK6		2.420	0.170	1.01	2.505	0.254	1.43
2GD9YZ		2.315	0.065	0.39	2.390	0.139	0.78
2ZNXCX		2.250	0.000	0.00	2.250	-0.001	-0.01
63KLHX		2.334	0.083	0.50	2.320	0.069	0.39
6J9YWP		2.324	0.074	0.44	2.339	0.087	0.49
6Q7Q3Y		2.115	-0.135	-0.81	2.025	-0.226	-1.28
72JBYZ		2.400	0.150	0.89	2.290	0.039	0.22
862P6L	X	1.580	-0.670	-4.01	2.225	-0.026	-0.15
8QZVWX		2.215	-0.035	-0.21	2.205	-0.046	-0.26
8YVYZU		2.410	0.160	0.95	2.475	0.224	1.26
9CCBQU		2.200	-0.050	-0.30	2.210	-0.041	-0.23
9QWTJX		2.100	-0.150	-0.90	2.075	-0.176	-0.99
9T3D8Y		2.175	-0.075	-0.45	2.135	-0.116	-0.66
9WNZ6R		2.343	0.092	0.55	2.342	0.091	0.51
A2ADGZ		2.585	0.334	2.00	2.577	0.325	1.84
AK3DAH		2.135	-0.115	-0.69	2.125	-0.126	-0.71
ATGZJL		2.291	0.040	0.24	2.296	0.044	0.25
AZHCG4	X	1.200	-1.050	-6.28	0.890	-1.361	-7.69
BDK3Y2	X	1.240	-1.010	-6.04	1.200	-1.051	-5.94
C2MNAP		2.157	-0.093	-0.56	2.214	-0.037	-0.21
CM44PV		2.350	0.100	0.59	2.250	-0.001	-0.01
CR2FP2	X	3.560	1.310	7.82	3.780	1.529	8.63
DVT4LY		2.135	-0.115	-0.69	2.145	-0.106	-0.60
E6XB2Y	*	2.230	-0.020	-0.12	2.395	0.144	0.81
GJ7BJT	*	1.735	-0.515	-3.08	1.720	-0.531	-3.00
GNYBXP		2.000	-0.250	-1.50	2.005	-0.246	-1.39
GZRRPB		2.080	-0.170	-1.02	2.157	-0.094	-0.53
H3Y9KL		2.095	-0.156	-0.93	2.112	-0.139	-0.79
HFZ6GT		2.344	0.094	0.56	2.332	0.081	0.46
J6Y2RP		2.270	0.020	0.12	2.220	-0.031	-0.18
JJGKVN		1.905	-0.345	-2.06	1.880	-0.371	-2.10
JLME7G		2.625	0.375	2.24	2.620	0.369	2.08
JZQG7D		2.176	-0.074	-0.44	2.189	-0.062	-0.35
KBJGX8		2.307	0.056	0.33	2.299	0.048	0.27
KFXWQK		2.510	0.260	1.55	2.595	0.344	1.94



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

**Report #055**  
**Spring 2017**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KR9PTK		2.340	0.090	0.53	2.330	0.079	0.45
KV8ZTQ		2.162	-0.089	-0.53	2.117	-0.135	-0.76
L36VMJ		2.145	-0.105	-0.63	2.225	-0.026	-0.15
L8YRAN		2.216	-0.034	-0.21	2.212	-0.040	-0.22
LB2RC7		2.352	0.102	0.61	2.323	0.071	0.40
LRN9DH		2.255	0.005	0.03	2.250	-0.001	-0.01
LTEC7P		2.330	0.080	0.48	2.280	0.029	0.16
M8VRPE	*	1.775	-0.475	-2.84	1.765	-0.486	-2.74
MCMY8M		2.295	0.045	0.27	2.295	0.044	0.25
NKWMKL		2.454	0.203	1.21	2.545	0.294	1.66
NNYLVE		2.405	0.155	0.92	2.440	0.189	1.07
NW8CYG		2.100	-0.150	-0.90	2.200	-0.051	-0.29
NYWL9H		2.319	0.068	0.41	2.314	0.063	0.36
P2GT7K		2.367	0.117	0.70	2.380	0.129	0.73
T2P4CE		2.375	0.125	0.74	2.379	0.128	0.72
THDGQ8		2.195	-0.055	-0.33	2.225	-0.026	-0.15
TK2TPC	X	1.350	-0.900	-5.38	1.400	-0.851	-4.81
TM7F63		2.375	0.125	0.74	2.380	0.129	0.73
UPB9WF		2.141	-0.109	-0.65	2.121	-0.130	-0.73
VEMU94		2.365	0.115	0.68	2.325	0.074	0.42
VMHWCZ	*	2.295	0.045	0.27	2.150	-0.101	-0.57
VZNTTG		2.105	-0.145	-0.87	2.145	-0.106	-0.60
WXGUXE	*	2.394	0.143	0.85	2.254	0.003	0.02
X78XG2		2.260	0.010	0.06	2.265	0.014	0.08
XPFUZX		2.380	0.130	0.77	2.380	0.129	0.73
XRLHD3		1.910	-0.340	-2.03	1.890	-0.361	-2.04
XUAUC9		2.460	0.210	1.25	2.505	0.254	1.43
Y698PD	X	2.445	0.195	1.16	2.650	0.399	2.25
YBU6EZ	*	2.313	0.063	0.37	2.164	-0.087	-0.49
YPEM86		2.310	0.060	0.36	2.300	0.049	0.28
YR2Y9V		2.270	0.020	0.12	2.335	0.084	0.47
Z3FH3C		2.290	0.040	0.24	2.310	0.059	0.33
ZGFGQ9		2.225	-0.025	-0.15	2.245	-0.006	-0.03
ZJ4TRY		2.075	-0.175	-1.05	2.080	-0.171	-0.97



Grand Means	Summary Statistics
2.2505 g/L	2.2511 g/L
Std Dev Btwn Labs 0.1674 g/L	0.1771 g/L

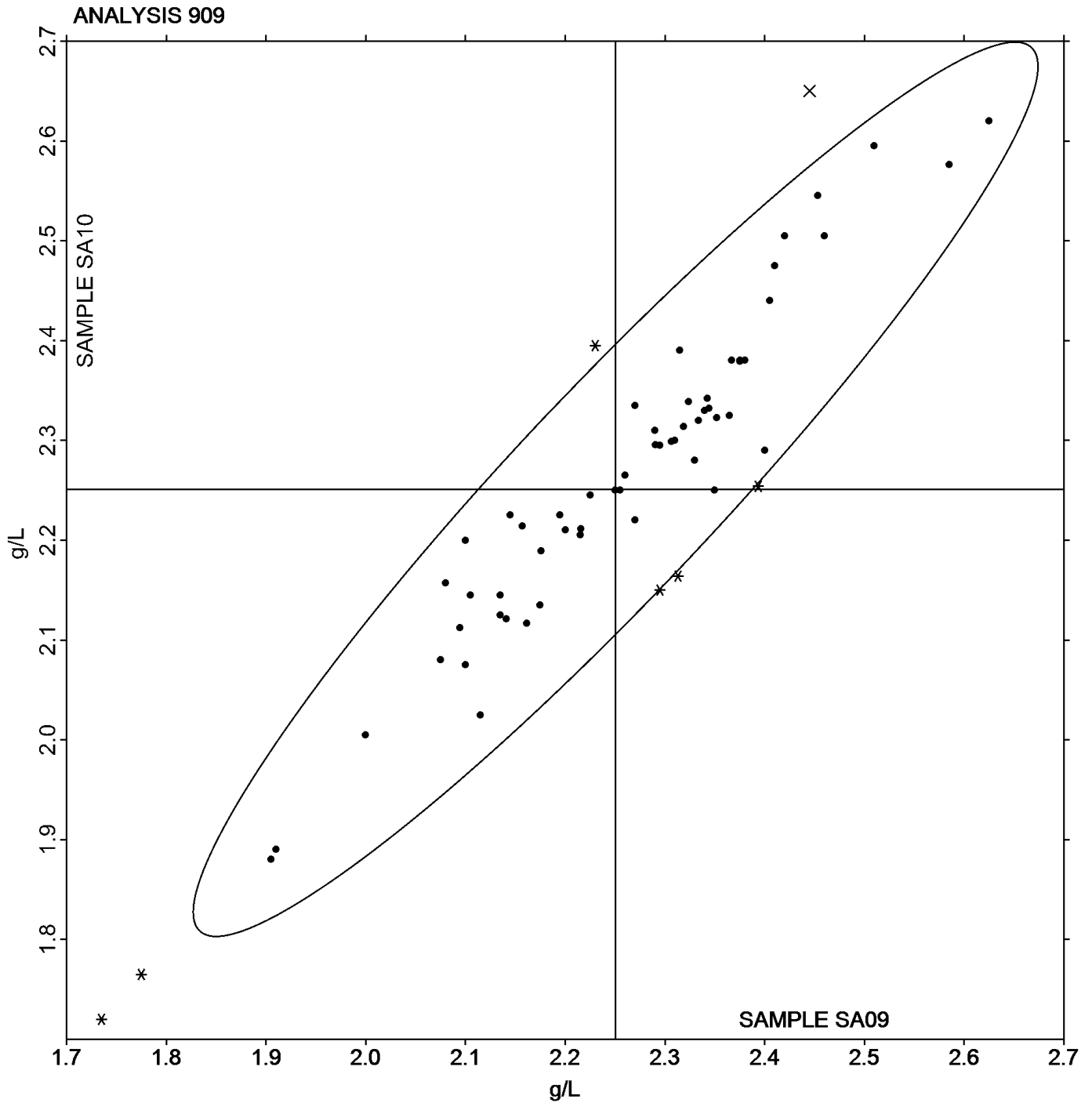
**Statistics based on 63 of 69 reporting participants**

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #909**

- 862P6L (X) - Inconsistent in testing between samples, data for sample SA09 are low. Inconsistent within the determinations of sample SA10.
- TK2TPC (X) - Data for both samples are low. Possible Systematic Error.
- Y698PD (X) - Inconsistent in testing between samples.
- CR2FP2 (X) - Data for both samples are high. Possible Systematic Error.
- AZHCG4 (X) - Data for both samples are low. Possible Systematic Error.
- BDK3Y2 (X) - Data for both samples are low. Possible Systematic Error.







# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #055  
Spring 2017

## Analysis 910 Glucose + Fructose

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2DTWK6	X	34.00	-2.33	-1.14	31.85	-4.52	-2.13
2GD9YZ		35.90	-0.43	-0.21	35.70	-0.67	-0.31
2ZNXCX	X	13.28	-23.05	-11.26	13.31	-23.06	-10.86
49E4J4		36.36	0.03	0.01	36.70	0.33	0.16
63KLHX		37.60	1.27	0.62	37.80	1.43	0.68
6J9YWP		35.93	-0.40	-0.20	37.01	0.64	0.30
6Q7Q3Y		37.50	1.17	0.57	36.25	-0.12	-0.05
72JBYZ		38.10	1.77	0.86	37.30	0.93	0.44
862P6L		33.19	-3.14	-1.54	33.45	-2.92	-1.37
8QZVWX	*	35.45	-0.88	-0.43	33.75	-2.62	-1.23
8YVYZU		35.95	-0.38	-0.19	36.05	-0.32	-0.15
9CCBQU		36.86	0.53	0.26	36.52	0.15	0.07
9T3D8Y		36.10	-0.23	-0.11	37.00	0.63	0.30
9WNZ6R		39.60	3.27	1.60	39.35	2.98	1.41
A2ADGZ		35.32	-1.01	-0.49	35.70	-0.67	-0.31
AK3DAH		37.05	0.72	0.35	36.60	0.23	0.11
ATGZJL		37.15	0.82	0.40	37.15	0.78	0.37
AZHCG4		35.30	-1.03	-0.50	35.20	-1.17	-0.55
BAKUQK		37.00	0.67	0.33	37.15	0.78	0.37
BCPMKJ		38.60	2.27	1.11	38.70	2.33	1.10
BDK3Y2	X	7.19	-29.14	-14.23	6.64	-29.72	-14.00
C2MNAP		38.00	1.67	0.82	37.65	1.28	0.61
CM44PV		38.50	2.17	1.06	38.50	2.13	1.01
DVT4LY		35.05	-1.28	-0.63	35.70	-0.67	-0.31
E6XB2Y		32.49	-3.84	-1.88	31.80	-4.57	-2.15
GJ7BJT		36.75	0.42	0.21	37.60	1.23	0.58
GNYBXP	*	31.05	-5.28	-2.58	30.30	-6.07	-2.86
GZRRPB	*	39.05	2.72	1.33	40.45	4.08	1.92
H3Y9KL		35.36	-0.97	-0.47	35.19	-1.17	-0.55
HFZ6GT		38.31	1.98	0.97	39.29	2.92	1.38
JJGVN		34.50	-1.83	-0.89	35.00	-1.37	-0.64
JLME7G		37.75	1.42	0.69	38.25	1.88	0.89
JZQG7D		38.80	2.47	1.21	38.10	1.73	0.82
KBGX8		38.90	2.57	1.26	38.15	1.78	0.84
KFXWQK		32.31	-4.02	-1.96	33.07	-3.30	-1.55

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #055  
Spring 2017****Analysis 910  
Glucose + Fructose**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
KR9PTK		33.58	-2.75	-1.34	33.26	-3.11	-1.47
KRRBPG		32.80	-3.53	-1.72	32.40	-3.97	-1.87
KV8ZTQ		36.17	-0.16	-0.08	34.88	-1.49	-0.70
L36VMJ		37.70	1.37	0.67	37.58	1.21	0.57
LB2RC7		38.70	2.37	1.16	38.45	2.08	0.98
LRN9DH		37.99	1.66	0.81	37.44	1.07	0.50
LTEC7P		35.40	-0.93	-0.45	35.50	-0.87	-0.41
M8VRPE		34.25	-2.08	-1.02	34.20	-2.17	-1.02
MCMY8M		38.05	1.72	0.84	38.41	2.04	0.96
NKWMKL		35.77	-0.56	-0.28	35.60	-0.77	-0.36
NNYLVE		36.10	-0.23	-0.11	36.15	-0.22	-0.10
NW8CYG		33.10	-3.23	-1.58	33.70	-2.67	-1.26
NYWL9H		35.80	-0.53	-0.26	35.90	-0.47	-0.22
P2GT7K		38.90	2.57	1.26	39.40	3.03	1.43
T2P4CE		39.05	2.72	1.33	39.35	2.98	1.41
THDGQ8		37.26	0.93	0.45	37.39	1.02	0.48
TK2TPC	*	30.40	-5.93	-2.90	30.30	-6.07	-2.86
VEMU94		36.10	-0.23	-0.11	35.95	-0.42	-0.20
VMHWCZ	*	33.17	-3.16	-1.55	34.82	-1.55	-0.73
WXGUXE		36.50	0.17	0.08	36.40	0.03	0.02
X78XG2		37.00	0.67	0.33	37.25	0.88	0.42
X9AXED		37.43	1.10	0.53	37.42	1.05	0.50
XBY6YB		36.70	0.37	0.18	36.60	0.23	0.11
XPFUZX		36.60	0.27	0.13	37.85	1.48	0.70
XRLHD3		37.25	0.92	0.45	37.30	0.93	0.44
XUAUC9		38.39	2.06	1.01	38.55	2.18	1.03
Y698PD		39.30	2.97	1.45	39.35	2.98	1.41
YBU6EZ		37.19	0.86	0.42	36.87	0.50	0.24
YR2Y9V		34.98	-1.35	-0.66	34.84	-1.53	-0.72
Z3FH3C		35.45	-0.88	-0.43	35.90	-0.47	-0.22
ZGFGQ9		36.89	0.56	0.27	37.16	0.79	0.37
ZJ4TRY		37.15	0.82	0.40	36.70	0.33	0.16
ZM7R3R		34.60	-1.73	-0.84	34.50	-1.87	-0.88



**Analysis 910  
Glucose + Fructose**

Grand Means		Summary Statistics	
	36.330 g/L		36.365 g/L
<b>Std Dev Btwn Labs</b>	2.047 g/L		2.123 g/L
<b>Statistics based on 65 of 68 reporting participants</b>			

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #910**

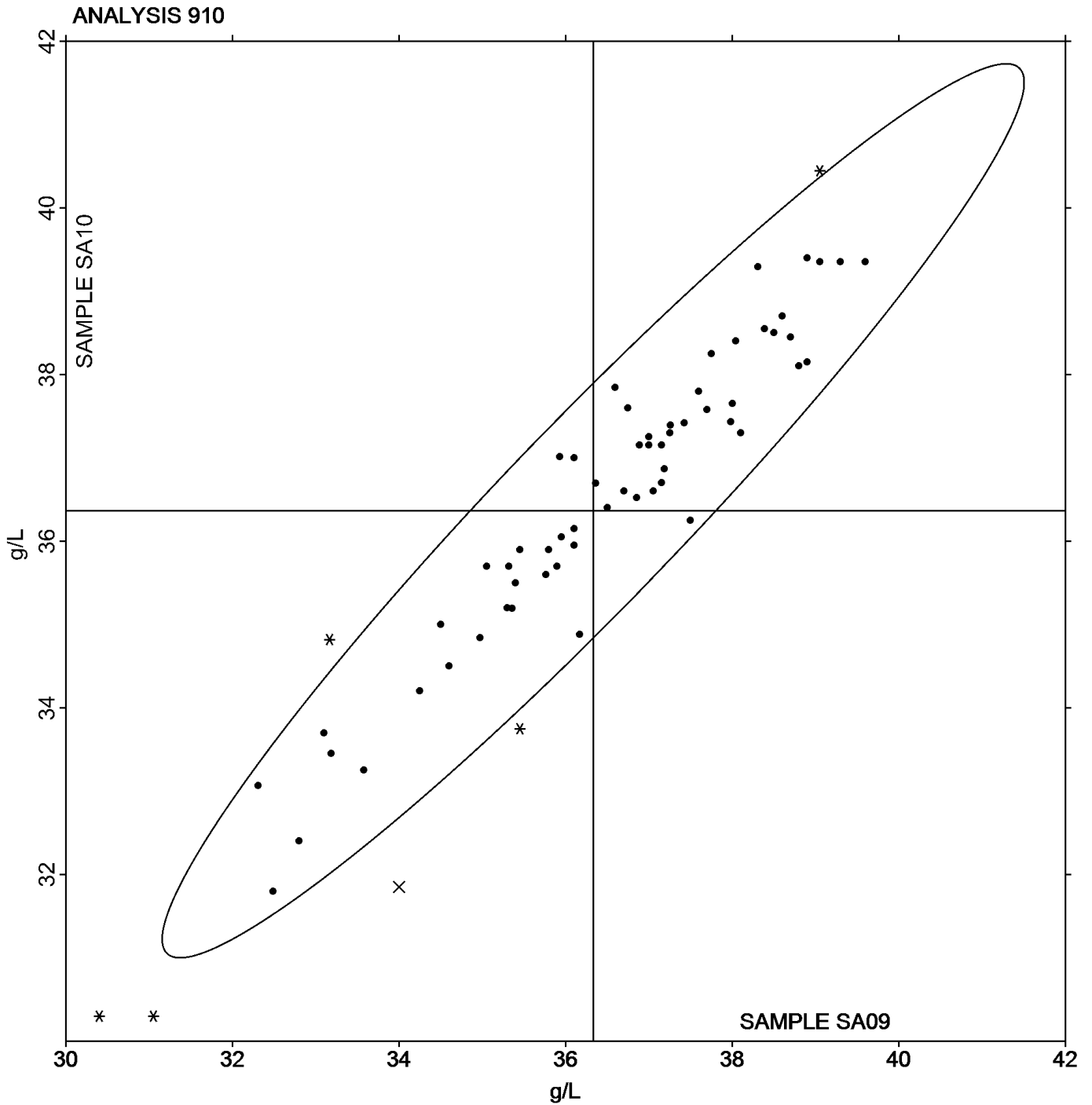
- 2ZNXCX (X) - Data for both samples are low.
- 2DTWK6 (X) - Inconsistent in testing between samples.
- BDK3Y2 (X) - Data for both samples are low.

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

Test Methodology	Sample SA09 <i>White Zinfandel</i>			Sample SA10 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
HPLC	34.959	0.508	-1.37	35.099	0.848	-1.27	2/2
Enzymatic/Spectrophotometric	36.316	2.120	-0.01	36.334	2.192	-0.03	59/62
FTIR	37.297	0.432	0.97	37.568	0.595	1.20	3/3
Other _____	37.000	0.000	0.67	37.150	0.000	0.78	1/1



Analysis 910  
Glucose + Fructose





Analysis 911  
Copper Content

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
8YVYZU		0.1100	-0.0041	-0.13	0.0500	-0.0136	-0.51
9QWTJX		0.1200	0.0059	0.19	0.1150	0.0514	1.95
9T3D8Y		0.0400	-0.0741	-2.37	0.0350	-0.0286	-1.08
9WNZ6R		0.1100	-0.0041	-0.13	0.1000	0.0364	1.38
A2ADGZ		0.1485	0.0344	1.10	0.0880	0.0244	0.93
BNLTDH		0.1175	0.0034	0.11	0.0545	-0.0091	-0.34
CM44PV	X	2.8000	2.6859	85.90	3.1000	3.0364	115.15
GJ7BJT		0.1210	0.0069	0.22	0.0595	-0.0041	-0.15
HFZ6GT		0.1230	0.0088	0.28	0.0508	-0.0128	-0.49
HPDWAC		0.1450	0.0309	0.99	0.0800	0.0164	0.62
JLME7G		0.1800	0.0659	2.11	0.1150	0.0514	1.95
JZQG7D		0.1335	0.0194	0.62	0.0640	0.0004	0.02
KBJGX8		0.0595	-0.0546	-1.75	0.0350	-0.0286	-1.08
LRN9DH		0.1300	0.0159	0.51	0.0700	0.0064	0.24
M8VRPE	X	0.2900	0.1759	5.62	0.2380	0.1744	6.62
THDGQ8		0.1370	0.0229	0.73	0.0650	0.0014	0.05
VEMU94		0.0960	-0.0181	-0.58	0.0445	-0.0191	-0.72
VMHWCZ		0.0820	-0.0321	-1.03	0.0700	0.0064	0.24
XPFUZX	X	0.1465	0.0324	1.04	0.2355	0.1719	6.52
YBU6EZ		0.0900	-0.0241	-0.77	0.0100	-0.0536	-2.03
YR2Y9V	X	0.2600	0.1459	4.67	0.3900	0.3264	12.38
ZGFGQ9		0.0985	-0.0156	-0.50	0.0465	-0.0171	-0.65
ZJ4TRY		0.1210	0.0069	0.22	0.0585	-0.0051	-0.19
ZM7R3R		0.1200	0.0059	0.19	0.0600	-0.0036	-0.14

Grand Means	Summary Statistics
0.11412 mg/L	0.06356 mg/L
Std Dev Btwn Labs	
0.03127 mg/L	0.02637 mg/L
<b>Statistics based on 20 of 24 reporting participants</b>	

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel



**Comments on Assigned Data Flags for Test #911**

XPFUZX (X) - Data for sample SA10 are high.

YR2Y9V (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

CM44PV (X) - Data for both samples are high. Inconsistent within the determinations of sample SA09.

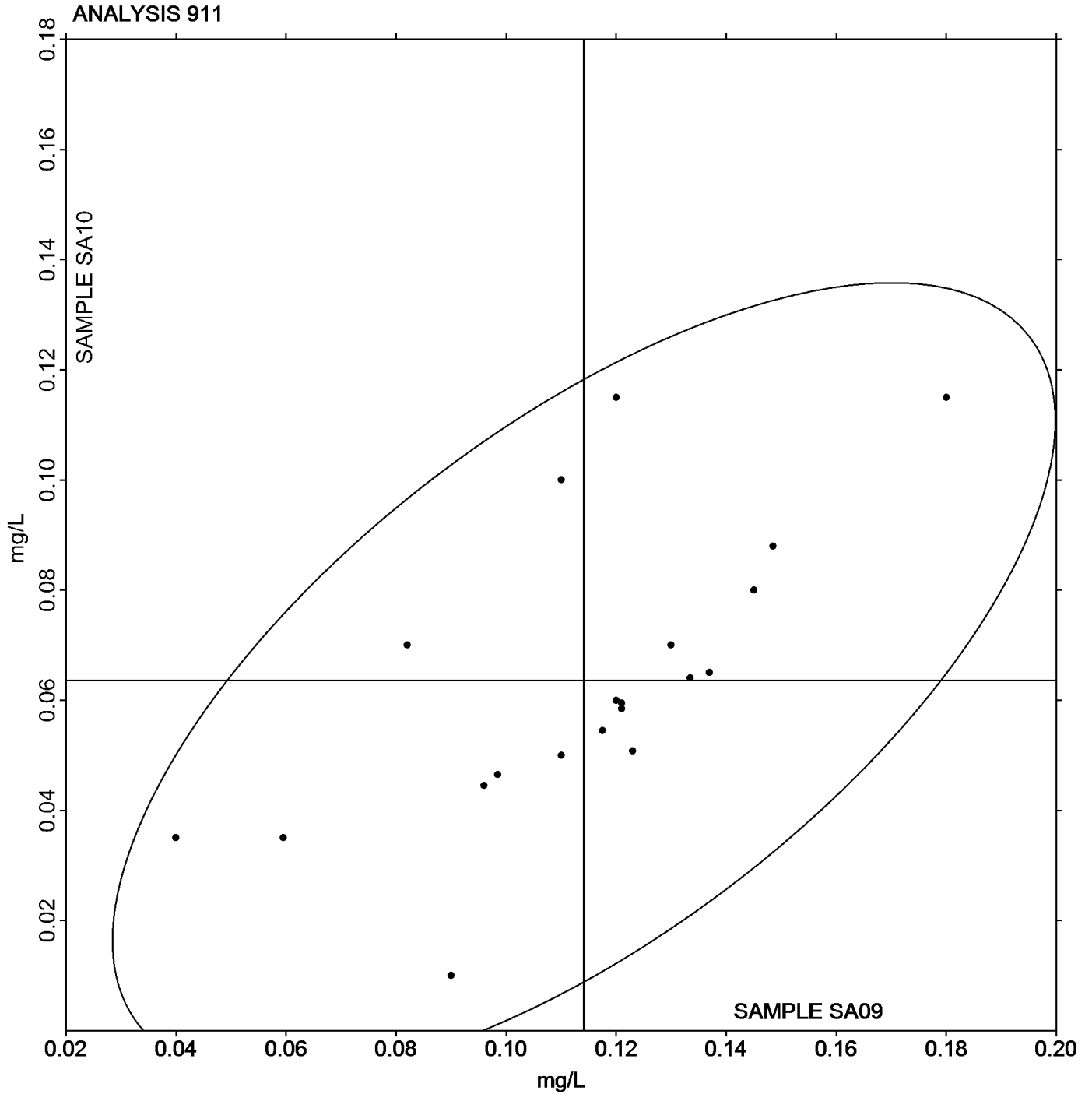
M8VRPE (X) - Data for both samples are high. Inconsistent within the determinations of sample SA10.

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

Test Methodology	Sample SA09 <i>White Zinfandel</i>			Sample SA10 <i>White 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	0.101	0.027	-0.0131	0.065	0.007	0.0014	2/2
Atomic Absorption Spectroscopy	0.106	0.039	-0.0080	0.050	0.022	-0.0138	8/10
ICP-OES	0.115	0.018	0.0007	0.072	0.029	0.0084	7/7
Other _____	0.143	0.033	0.0284	0.080	0.031	0.0163	3/5



Analysis 911  
Copper Content







**Analysis 912  
Potassium (K) Content**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
6J9YWP		749.5	30.1	0.29	695.5	-16.5	-0.16
8YVYZU		950.0	230.6	2.20	949.0	237.0	2.29
9QWTJX		640.0	-79.4	-0.76	650.0	-62.0	-0.60
9T3D8Y		648.0	-71.4	-0.68	670.0	-42.0	-0.41
9WNZ6R		679.0	-40.4	-0.39	678.0	-34.0	-0.33
A2ADGZ		616.8	-102.7	-0.98	602.4	-109.6	-1.06
CM44PV		882.5	163.1	1.56	911.5	199.5	1.93
GJ7BJT		718.5	-0.9	-0.01	743.0	31.0	0.30
HFZ6GT		737.0	17.6	0.17	745.7	33.7	0.33
KFXWQK		627.8	-91.6	-0.87	597.1	-114.9	-1.11
LRN9DH		710.0	-9.4	-0.09	700.0	-12.0	-0.12
THDGQ8		705.5	-13.9	-0.13	713.0	1.0	0.01
UE8BN7		637.5	-81.9	-0.78	659.1	-52.9	-0.51
VEMU94		574.0	-145.4	-1.39	588.0	-124.0	-1.20
VMHWCZ		854.0	134.6	1.29	857.0	145.0	1.40
X78XG2		650.0	-69.4	-0.66	654.0	-58.0	-0.56
XPFUZX	X	1,396.0	676.6	6.46	1,200.0	488.0	4.71
YBU6EZ		712.5	-6.9	-0.07	610.0	-102.0	-0.98
YR2Y9V		905.5	186.1	1.78	811.0	99.0	0.96
ZGFGQ9		760.0	40.6	0.39	775.0	63.0	0.61
ZM7R3R		630.0	-89.4	-0.85	630.0	-82.0	-0.79

Grand Means		Summary Statistics	
	719.40 mg/L		711.97 mg/L
Std Dev Btwn Labs			
	104.72 mg/L		103.60 mg/L
<b>Statistics based on 20 of 21 reporting participants</b>			

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #912**

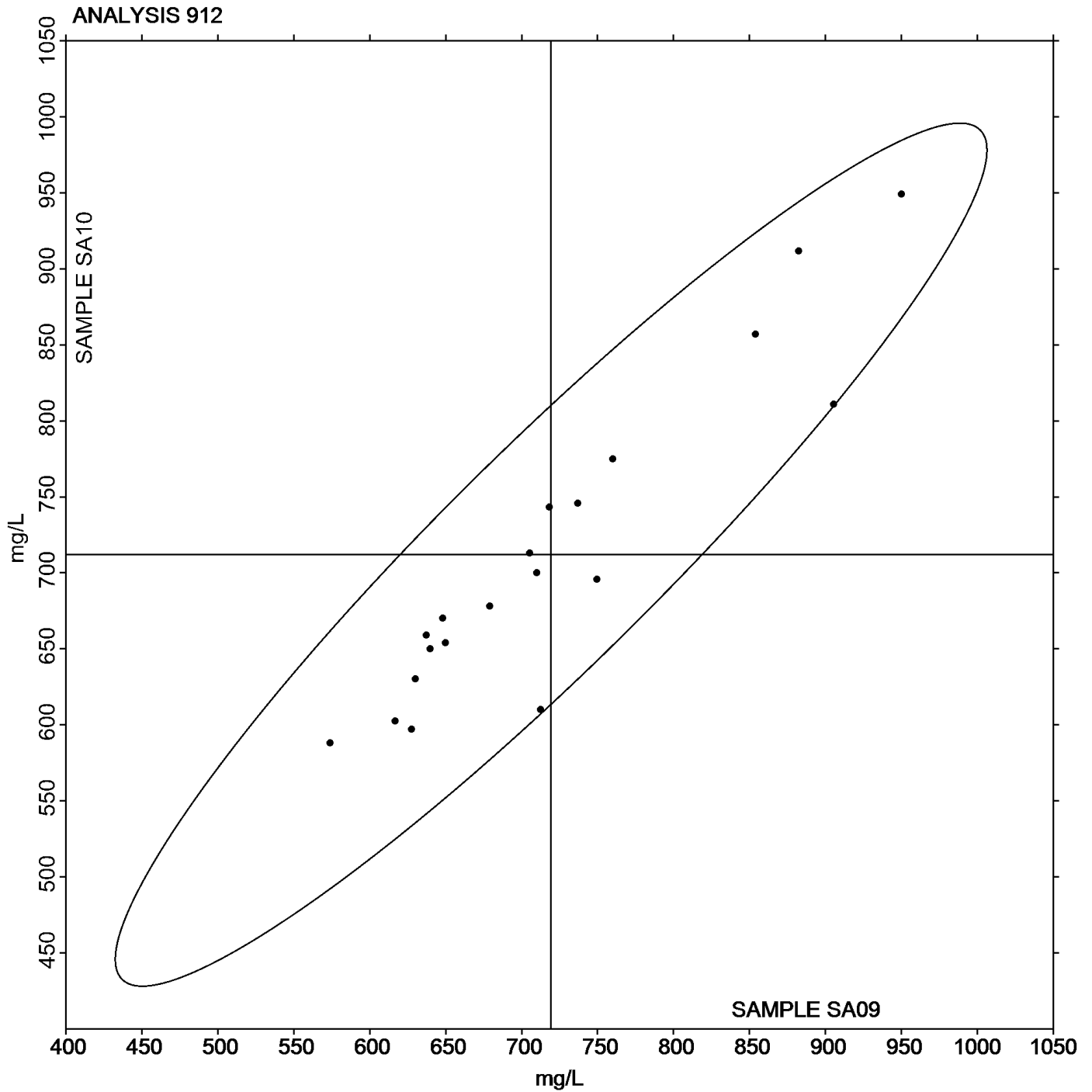
XPFUZX (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA10.



Analysis 912  
Potassium (K) Content

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

Test Methodology	Sample SA09 <i>White Zinfandel</i>			Sample SA10 <i>White 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	854.000	0.000	134.6	857.000	0.000	145.0	1/1
Atomic Absorption Spectroscopy	675.875	38.595	-43.5	663.025	42.321	-48.9	4/5
ICP-OES	689.750	123.460	-29.7	694.914	123.044	-17.1	7/7
FTIR	748.500	16.263	29.1	760.350	20.718	48.4	2/2
Other _____	750.885	120.551	31.5	724.184	117.517	12.2	6/6





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #055  
Spring 2017

## Analysis 915 A420nm (1cm path)

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2DTWK6		0.2090	-0.0127	-0.70	0.2060	-0.0185	-1.09
2GD9YZ		0.2185	-0.0032	-0.18	0.2258	0.0013	0.08
2ZNXCX		0.2210	-0.0007	-0.04	0.2255	0.0010	0.06
6Q7Q3Y		0.2540	0.0323	1.79	0.2590	0.0345	2.04
72JBYZ	X	0.0200	-0.2017	-11.14	0.0200	-0.2045	-12.07
8YVYZU		0.2205	-0.0012	-0.06	0.2230	-0.0015	-0.09
9CCBQU		0.2500	0.0283	1.57	0.2500	0.0255	1.51
9T3D8Y		0.1950	-0.0267	-1.47	0.2000	-0.0245	-1.45
9WNZ6R		0.2130	-0.0087	-0.48	0.2160	-0.0085	-0.50
A2ADGZ		0.2236	0.0019	0.11	0.2248	0.0003	0.02
AK3DAH		0.2175	-0.0042	-0.23	0.2225	-0.0020	-0.12
ATGZJL		0.2110	-0.0107	-0.59	0.2125	-0.0120	-0.71
BDK3Y2		0.1800	-0.0417	-2.30	0.1900	-0.0345	-2.04
CM44PV		0.2250	0.0033	0.18	0.2250	0.0005	0.03
DVT4LY		0.2205	-0.0012	-0.06	0.2245	0.0000	0.00
E6XB2Y	*	0.2760	0.0543	3.00	0.2740	0.0495	2.92
GJ7BJT		0.2140	-0.0077	-0.42	0.2180	-0.0065	-0.38
GZRRPB		0.2105	-0.0112	-0.62	0.2165	-0.0080	-0.47
HFZ6GT		0.2198	-0.0019	-0.10	0.2218	-0.0027	-0.16
HPDWAC	X	0.2485	0.0268	1.48	0.2264	0.0020	0.12
J6Y2RP		0.1944	-0.0273	-1.51	0.1989	-0.0256	-1.51
JLME7G		0.2290	0.0073	0.41	0.2305	0.0060	0.36
KFXWQK		0.2100	-0.0117	-0.64	0.2160	-0.0085	-0.50
KRRBPG		0.2250	0.0033	0.18	0.2250	0.0005	0.03
KV8ZTQ		0.2350	0.0133	0.74	0.2365	0.0120	0.71
LRN9DH		0.2185	-0.0032	-0.18	0.2235	-0.0010	-0.06
LTEC7P		0.2020	-0.0197	-1.09	0.2130	-0.0115	-0.68
M8VRPE		0.2175	-0.0042	-0.23	0.2180	-0.0065	-0.38
NYWL9H	*	0.2640	0.0423	2.34	0.2680	0.0435	2.57
P4AGTM		0.2125	-0.0092	-0.51	0.2175	-0.0070	-0.41
THDGQ8		0.2115	-0.0102	-0.56	0.2195	-0.0050	-0.29
TM7F63	X	0.2000	-0.0217	-1.20	0.2250	0.0005	0.03
UPB9WF		0.2220	0.0003	0.02	0.2200	-0.0045	-0.26
VMHWCZ	X	0.2970	0.0753	4.16	0.2960	0.0715	4.22
VZNTTG		0.2420	0.0203	1.12	0.2365	0.0120	0.71



**ASEV-CTS Wine Industry Interlaboratory Testing Program**  
**Analysis 915**  
**A420nm (1cm path)**

**Report #055**  
**Spring 2017**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
WQYGWU	X	0.2315	0.0098	0.54	0.0910	-0.1335	-7.88
WXGUXE	*	0.2326	0.0109	0.60	0.2453	0.0208	1.23
X78XG2	X	0.1350	-0.0867	-4.79	0.1450	-0.0795	-4.69
XBY6YB	*	0.2335	0.0118	0.65	0.2255	0.0010	0.06
Y698PD		0.2210	-0.0007	-0.04	0.2230	-0.0015	-0.09
YBU6EZ	X	0.2765	0.0548	3.03	0.2190	-0.0055	-0.32
YR2Y9V		0.2165	-0.0052	-0.29	0.2190	-0.0055	-0.32
Z3FH3C		0.2200	-0.0017	-0.09	0.2215	-0.0030	-0.18
ZGFGQ9		0.2135	-0.0082	-0.45	0.2120	-0.0125	-0.74
ZJ4TRY		0.2240	0.0023	0.13	0.2260	0.0015	0.09

Grand Means		Summary Statistics	
	0.22167 Absorbance Units		0.22447 Absorbance Units
<b>Std Dev Btwn Labs</b>	0.01810 Absorbance Units		0.01693 Absorbance Units
<b>Statistics based on 38 of 45 reporting participants</b>			

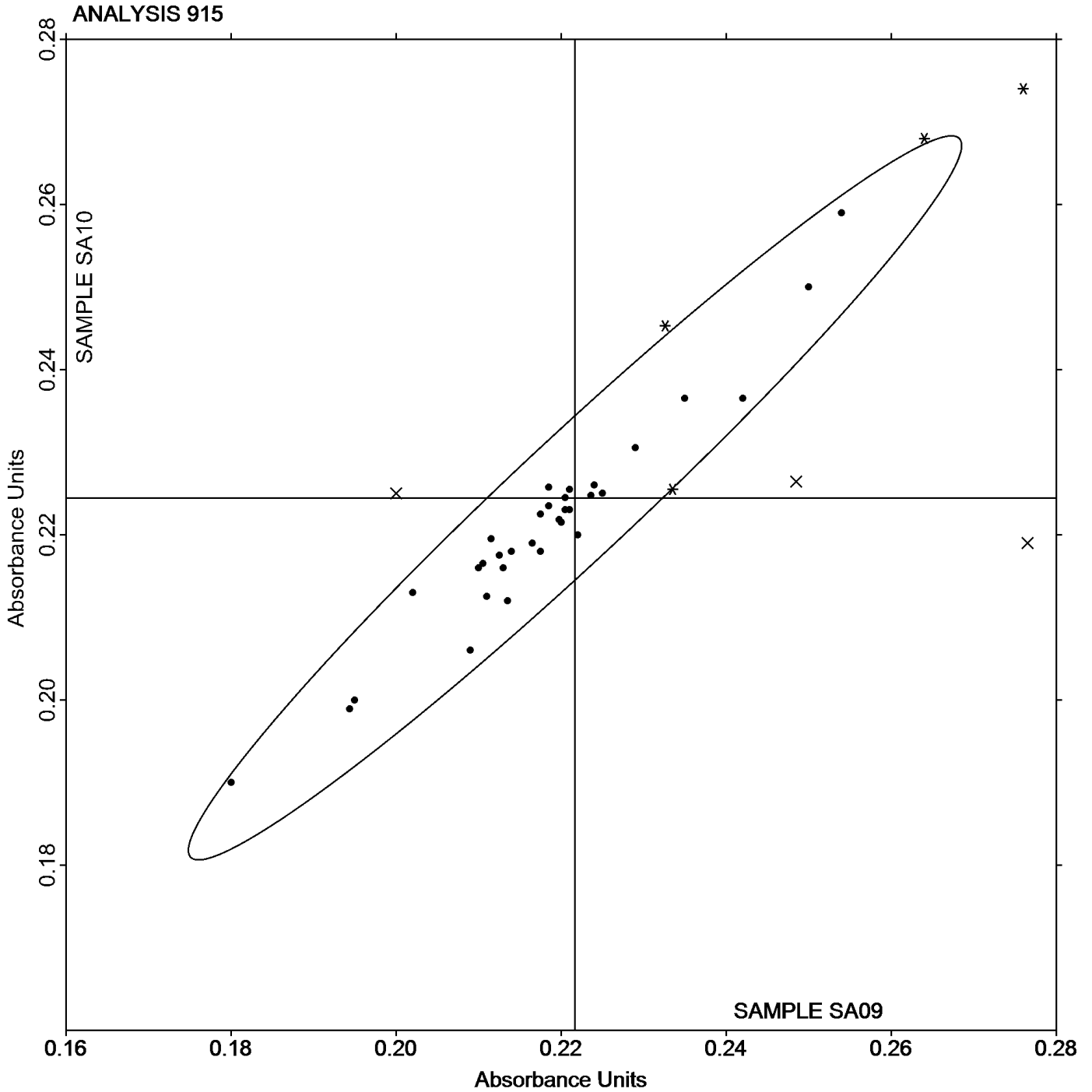
Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #915**

- X78XG2 (X) - Data for both samples are low. Possible Systematic Error.
- YBU6EZ (X) - Inconsistent in testing, data for sample SA09 are high.
- HPDWAC (X) - Inconsistent in testing between samples.
- WQYGWU (X) - Inconsistent in testing between samples, data for sample SA10 are low. Inconsistent within the determinations of sample SA09.
- TM7F63 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA10.
- VMHWCZ (X) - Data for both samples are high. Possible Systematic Error.
- 72JBYZ (X) - Data for both samples are low.



Analysis 915  
A420nm (1cm path)





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #055  
Spring 2017

## Analysis 916 A520nm (1cm path)

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2DTWK6		0.1535	-0.0023	-0.17	0.1490	-0.0111	-0.80
2GD9YZ		0.1564	0.0006	0.04	0.1662	0.0061	0.44
2ZNXCX		0.1540	-0.0018	-0.14	0.1640	0.0039	0.28
6Q7Q3Y		0.1865	0.0307	2.31	0.1945	0.0344	2.49
72JBYZ	X	0.0200	-0.1358	-10.20	0.0200	-0.1401	-10.14
8YVYZU		0.1540	-0.0018	-0.14	0.1595	-0.0006	-0.04
9CCBQU		0.1700	0.0142	1.07	0.1700	0.0099	0.72
9T3D8Y		0.1600	0.0042	0.32	0.1500	-0.0101	-0.73
9WNZ6R		0.1495	-0.0063	-0.47	0.1605	0.0004	0.03
A2ADGZ		0.1529	-0.0030	-0.22	0.1575	-0.0026	-0.19
AK3DAH		0.1460	-0.0098	-0.74	0.1530	-0.0071	-0.52
ATGZJL		0.1445	-0.0113	-0.85	0.1490	-0.0111	-0.80
BDK3Y2		0.1600	0.0042	0.32	0.1500	-0.0101	-0.73
CM44PV		0.1550	-0.0008	-0.06	0.1550	-0.0051	-0.37
DVT4LY		0.1500	-0.0058	-0.44	0.1575	-0.0026	-0.19
E6XB2Y	*	0.1955	0.0397	2.98	0.2000	0.0399	2.89
GJ7BJT		0.1465	-0.0093	-0.70	0.1540	-0.0061	-0.44
GZRRPB		0.1480	-0.0078	-0.59	0.1570	-0.0031	-0.23
HFZ6GT		0.1562	0.0004	0.03	0.1616	0.0015	0.11
HPDWAC	X	0.1837	0.0279	2.10	0.1586	-0.0016	-0.11
J6Y2RP		0.1367	-0.0191	-1.43	0.1427	-0.0174	-1.26
JLME7G		0.1590	0.0032	0.24	0.1640	0.0039	0.28
KFXWQK		0.1500	-0.0058	-0.44	0.1600	-0.0001	-0.01
KRRBPG		0.1510	-0.0048	-0.36	0.1510	-0.0091	-0.66
KV8ZTQ		0.1590	0.0032	0.24	0.1620	0.0019	0.14
L36VMJ		0.1250	-0.0308	-2.31	0.1250	-0.0351	-2.54
LRN9DH		0.1510	-0.0048	-0.36	0.1600	-0.0001	-0.01
LTEC7P		0.1430	-0.0128	-0.96	0.1560	-0.0041	-0.30
M8VRPE		0.1495	-0.0063	-0.47	0.1525	-0.0076	-0.55
NYWL9H	X	0.1480	-0.0078	-0.59	0.1970	0.0369	2.67
P4AGTM		0.1530	-0.0028	-0.21	0.1625	0.0024	0.17
THDGQ8		0.1460	-0.0098	-0.74	0.1555	-0.0046	-0.33
TM7F63	*	0.1850	0.0292	2.19	0.1800	0.0199	1.44
UPB9WF		0.1550	-0.0008	-0.06	0.1610	0.0009	0.06
VMHWCZ	X	0.2300	0.0742	5.57	0.2350	0.0749	5.42



**ASEV-CTS Wine Industry Interlaboratory Testing Program**  
**Analysis 916**  
**A520nm (1cm path)**

**Report #055**  
**Spring 2017**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
VZNTTG		0.1670	0.0112	0.84	0.1720	0.0119	0.86
WQYGWU	X	0.1620	0.0062	0.47	0.0120	-0.1481	-10.72
WXGUXE	*	0.1826	0.0268	2.01	0.1967	0.0365	2.64
X78XG2	X	0.1000	-0.0558	-4.19	0.1050	-0.0551	-3.99
XBY6YB		0.1620	0.0062	0.47	0.1590	-0.0011	-0.08
Y698PD		0.1520	-0.0038	-0.29	0.1570	-0.0031	-0.23
YBU6EZ	X	0.1880	0.0322	2.42	0.1590	-0.0011	-0.08
YR2Y9V		0.1520	-0.0038	-0.29	0.1565	-0.0036	-0.26
Z3FH3C		0.1545	-0.0013	-0.10	0.1550	-0.0051	-0.37
ZGFGQ9		0.1535	-0.0023	-0.17	0.1540	-0.0061	-0.44
ZJ4TRY		0.1510	-0.0048	-0.36	0.1540	-0.0061	-0.44

Grand Means		Summary Statistics	
0.15580	Absorbance Units	0.16012	Absorbance Units
0.01331	Absorbance Units	0.01381	Absorbance Units

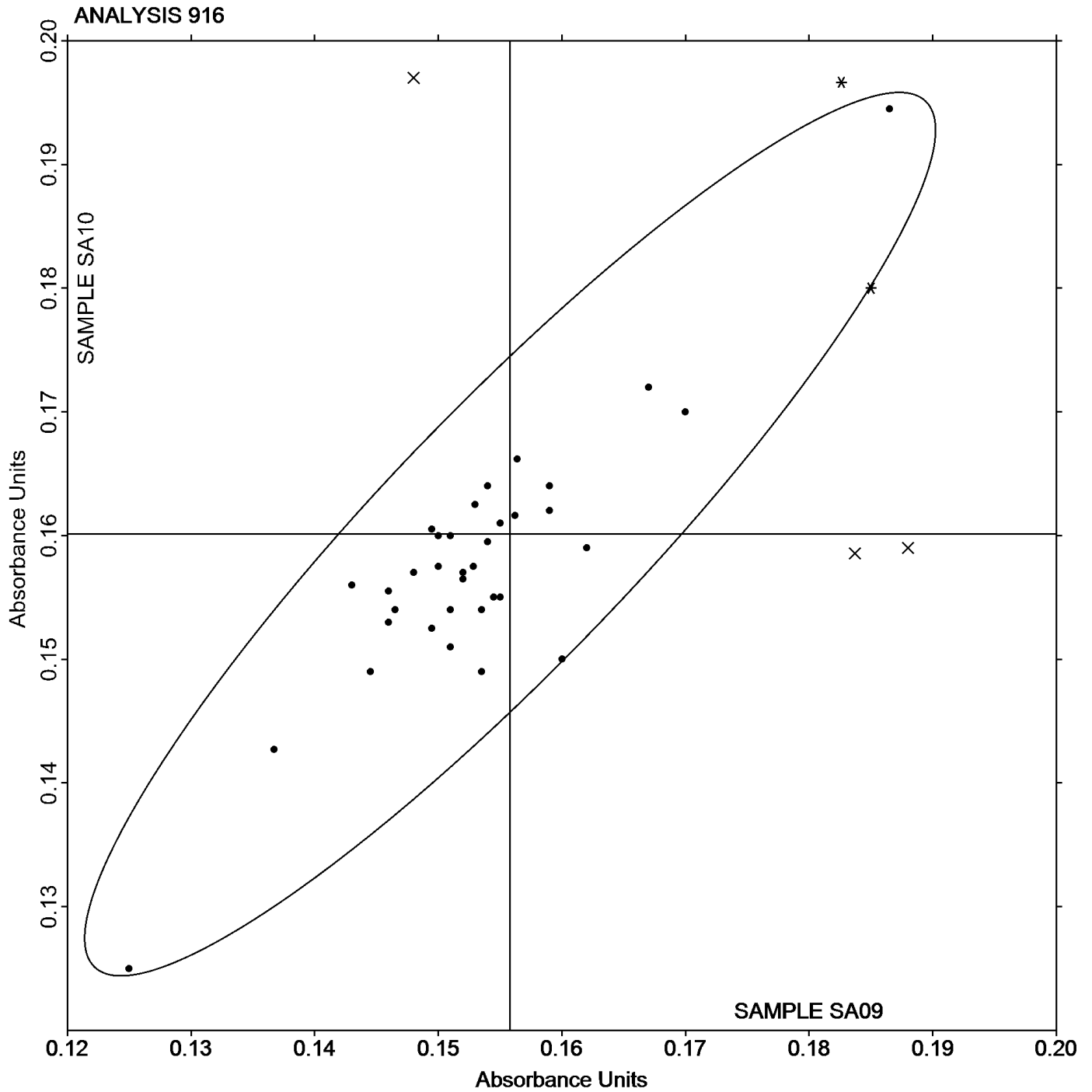
**Statistics based on 39 of 46 reporting participants**

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Comments on Assigned Data Flags for Test #916**

- X78XG2 (X) - Data for both samples are low. Possible Systematic Error.
- YBU6EZ (X) - Inconsistent in testing between samples.
- HPDWAC (X) - Inconsistent in testing between samples.
- WQYGWU (X) - Inconsistent in testing between samples, data for sample SA10 are low. Inconsistent within the determinations of sample SA09.
- VMHWCZ (X) - Data for both samples are high. Possible Systematic Error.
- NYWL9H (X) - Inconsistent in testing between samples.
- 72JBYZ (X) - Data for both samples are low.



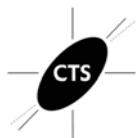




**ASEV-CTS Wine Industry Interlaboratory Testing Program**  
**Research Property 950**  
**Research Property - Turbidity**

**Report #055**  
**Spring 2017**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
2DTWK6	X	0.4505	0.2562	131.8%	0.2020	0.0119	6.3%
2GD9YZ		0.1785	-0.0158	-8.1%	0.1825	-0.0076	-4.0%
63KLHX		0.1650	-0.0293	-15.1%	0.2000	0.0099	5.2%
6Q7Q3Y		0.1600	-0.0343	-17.7%	0.1700	-0.0201	-10.6%
72JBYZ		0.1500	-0.0443	-22.8%	0.1600	-0.0301	-15.8%
862P6L		0.1775	-0.0168	-8.7%	0.1770	-0.0131	-6.9%
8QZVWX		0.2300	0.0357	18.4%	0.2250	0.0349	18.4%
8YVYZU		0.2870	0.0927	47.7%	0.2785	0.0884	46.5%
9CCBQU		0.1685	-0.0258	-13.3%	0.1670	-0.0231	-12.1%
9QWTJX		0.2000	0.0057	2.9%	0.2100	0.0199	10.5%
9WNZ6R		0.2000	0.0057	2.9%	0.2000	0.0099	5.2%
A2ADGZ		0.1950	0.0007	0.3%	0.1850	-0.0051	-2.7%
AK3DAH		0.1550	-0.0393	-20.2%	0.1600	-0.0301	-15.8%
ATGZJL		0.1970	0.0027	1.4%	0.2410	0.0509	26.8%
BCPMKJ	*	0.3435	0.1492	76.8%	0.2545	0.0644	33.9%
BDK3Y2	X	0.3700	0.1757	90.4%	0.2300	0.0399	21.0%
C2MNAP		0.1475	-0.0468	-24.1%	0.1530	-0.0371	-19.5%
CM44PV		0.3250	0.1307	67.2%	0.3100	0.1199	63.1%
DVT4LY		0.2250	0.0307	15.8%	0.2200	0.0299	15.7%
E6XB2Y		0.0400	-0.1543	-79.4%	0.0800	-0.1101	-57.9%
GJ7BJT		0.1665	-0.0278	-14.3%	0.1625	-0.0276	-14.5%
GZRRPB		0.1500	-0.0443	-22.8%	0.1545	-0.0356	-18.7%
HFZ6GT		0.2013	0.0069	3.6%	0.1513	-0.0388	-20.4%
HPDWAC		0.3015	0.1072	55.1%	0.2920	0.1019	53.6%
JJKGVN		0.2450	0.0507	26.1%	0.2750	0.0849	44.7%
JLME7G	X	0.3825	0.1882	96.8%	0.6250	0.4349	228.8%
JZQG7D		0.2635	0.0692	35.6%	0.1920	0.0019	1.0%
KBJGX8		0.1505	-0.0438	-22.6%	0.1485	-0.0416	-21.9%
KFXWQK	X	0.9200	0.7257	373.4%	0.9600	0.7699	405.1%
KR9PTK	X	0.2500	0.0557	28.6%	0.3600	0.1699	89.4%
KRRBPG	X	0.4450	0.2507	129.0%	0.9400	0.7499	394.6%
LB2RC7		0.2565	0.0622	32.0%	0.2325	0.0424	22.3%
LRN9DH		0.1050	-0.0893	-46.0%	0.1120	-0.0781	-41.1%
LTEC7P		0.3100	0.1157	59.5%	0.3300	0.1399	73.6%
M8VRPE		0.2100	0.0157	8.1%	0.1950	0.0049	2.6%



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

**Report #055**  
**Spring 2017**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
NKWMKL		0.2550	0.0607	31.2%	0.2350	0.0449	23.6%
NNYLVE		0.1735	-0.0208	-10.7%	0.1740	-0.0161	-8.5%
NW8CYG	X	0.5400	0.3457	177.9%	0.3100	0.1199	63.1%
NYWL9H		0.1550	-0.0393	-20.2%	0.1535	-0.0366	-19.2%
P2GT7K		0.2100	0.0157	8.1%	0.2450	0.0549	28.9%
P4AGTM		0.1350	-0.0593	-30.5%	0.1500	-0.0401	-21.1%
THDGQ8	*	0.3200	0.1257	64.7%	0.2350	0.0449	23.6%
TM7F63	*	0.0100	-0.1843	-94.9%	0.0050	-0.1851	-97.4%
UPB9WF		0.1800	-0.0143	-7.4%	0.1800	-0.0101	-5.3%
VMHWCZ	M	No data reported for this sample			0.0050	-0.1851	-97.4%
VZNTTG		0.3350	0.1407	72.4%	0.3550	0.1649	86.8%
WQYGWU	*	0.3550	0.1607	82.7%	0.3750	0.1849	97.3%
WXGUXE		0.1700	-0.0243	-12.5%	0.1800	-0.0101	-5.3%
X9AXED	*	0.2140	0.0197	10.1%	0.1190	-0.0711	-37.4%
XPFUZX		0.1620	-0.0323	-16.6%	0.1540	-0.0361	-19.0%
XUAUC9	X	0.3500	0.1557	80.1%	0.1100	-0.0801	-42.1%
Y698PD		0.1000	-0.0943	-48.5%	0.1000	-0.0901	-47.4%
YBU6EZ		0.2150	0.0207	10.6%	0.2000	0.0099	5.2%
YPEM86		0.0760	-0.1183	-60.9%	0.0755	-0.1146	-60.3%
YR2Y9V		0.1100	-0.0843	-43.4%	0.1015	-0.0886	-46.6%
Z3FH3C		0.1425	-0.0518	-26.7%	0.1410	-0.0491	-25.8%
ZGFGQ9		0.1405	-0.0538	-27.7%	0.1465	-0.0436	-22.9%
ZJ4TRY		0.1595	-0.0348	-17.9%	0.1695	-0.0206	-10.8%

Research Property Target Value		
<b>Target Value</b>	<b>0.19433</b> NTU	<b>0.19007</b> NTU
<i>For Test 950, CTS has chosen not to designate a target value for this property instead of using an average value.</i>		

**Wines tested:** SA09: White Zinfandel; SA10: White Zinfandel

**Consensus Average**  
(may differ from target value)      0.19433 NTU      0.19007 NTU

*This consensus average is based on 49 reporting participants.*



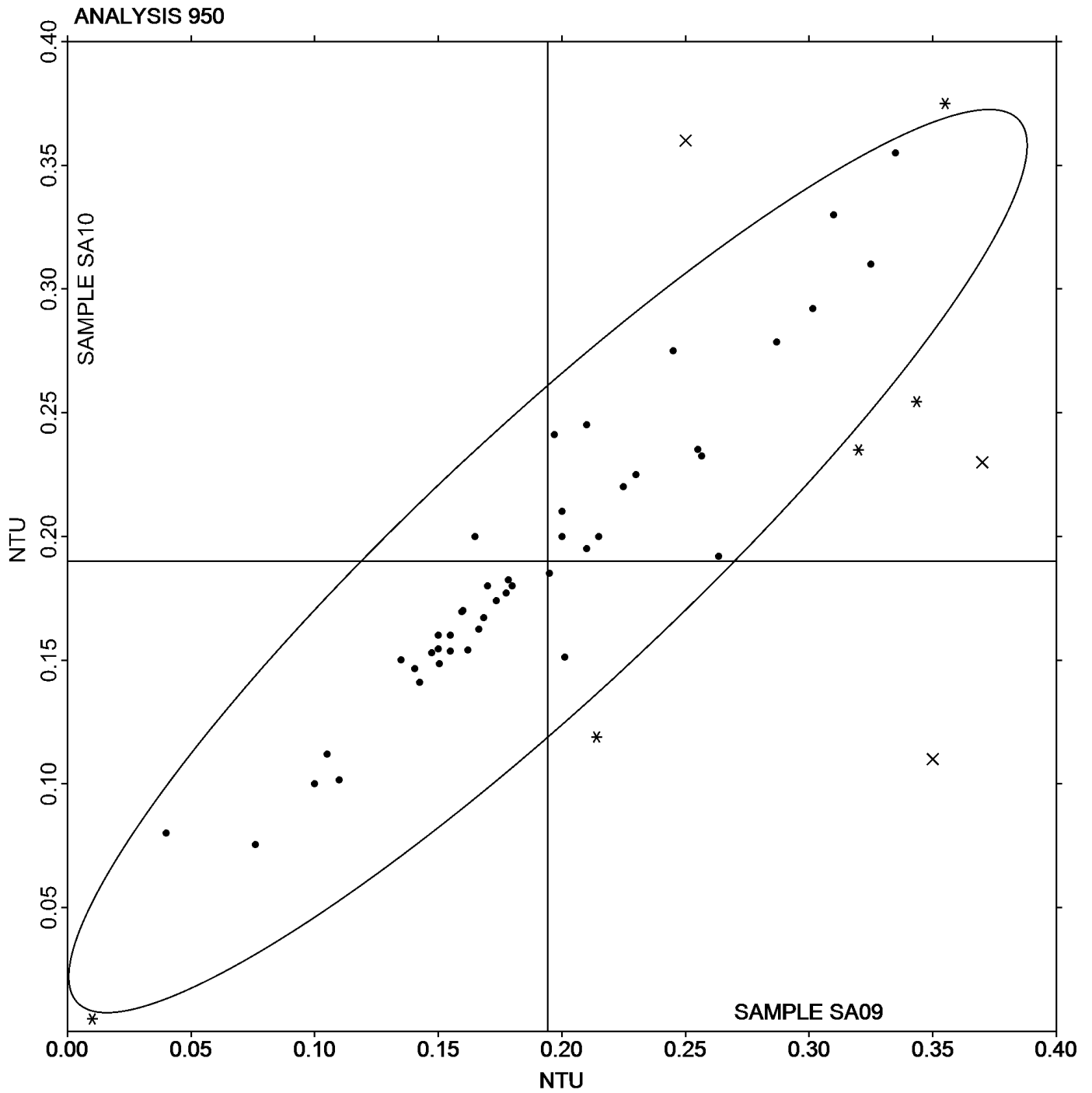
**ASEV-CTS Wine Industry Interlaboratory Testing Program**  
**Research Property 950**  
**Research Property - Turbidity**

**Report #055**  
**Spring 2017**

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**Comments on Assigned Data Flags for Test #950**

- JLME7G (X) - Data for sample SA10 are high. Inconsistent within the determinations of sample SA10.
- VMHWCZ (M) - Participant did not submit data for Sample SA09.
- KRRBPG (X) - Data for both samples are high. Inconsistent within the determinations of sample SA10.
- KR9PTK (X) - Inconsistent in testing between samples.
- NW8CYG (X) - Data for sample SA09 are high.
- KFXWQK (X) - Data for both samples are high.
- 2DTWK6 (X) - Inconsistent in testing between samples, data for sample SA09 are high. Inconsistent within the determinations of both samples.
- XUAUC9 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- BDK3Y2 (X) - Inconsistent in testing between samples.





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

**Report #055**  
**Spring 2017**

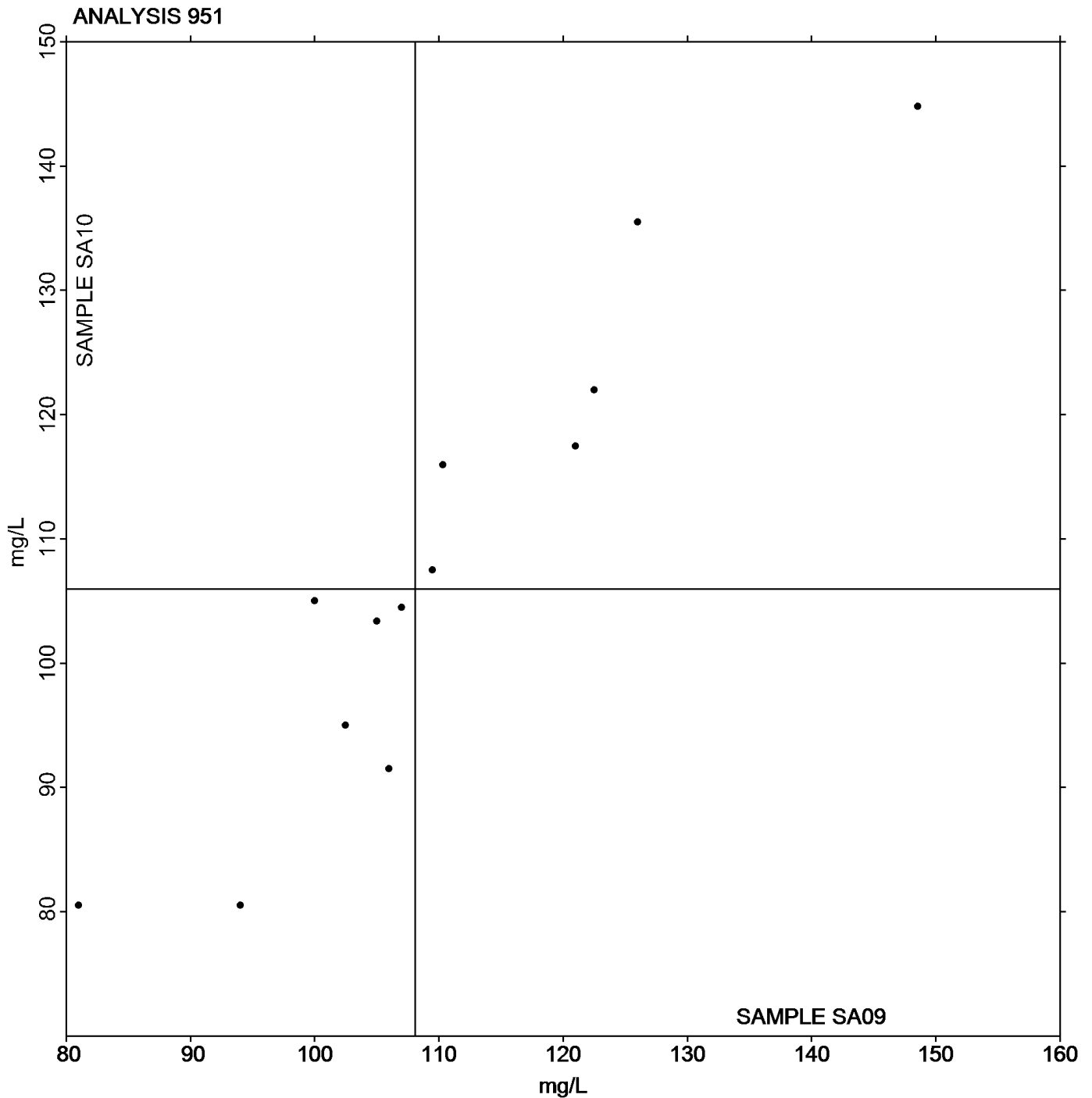
WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
8YVYZU		107.0	-1.1	-1.0%	104.5	-1.5	-1.4%
9QWTJX		122.5	14.4	13.3%	122.0	16.0	15.1%
A2ADGZ		105.0	-3.1	-2.9%	103.4	-2.6	-2.4%
BNLTDH		106.0	-2.1	-1.9%	91.5	-14.5	-13.7%
CM44PV		126.0	17.9	16.6%	135.5	29.5	27.9%
GJ7BJT		109.5	1.4	1.3%	107.5	1.5	1.4%
HFZ6GT		94.0	-14.1	-13.0%	80.5	-25.5	-24.0%
KFXWQK		110.3	2.2	2.0%	116.0	10.0	9.4%
KV8ZTQ		148.5	40.4	37.4%	144.8	38.8	36.6%
THDGQ8		102.5	-5.6	-5.2%	95.0	-11.0	-10.4%
XBY6YB		121.0	12.9	11.9%	117.5	11.5	10.8%
XPFUZX		80.0	-28.1	-26.0%	80.0	-26.0	-24.5%
ZGFGQ9		81.0	-27.1	-25.1%	80.5	-25.5	-24.0%
ZM7R3R		100.0	-8.1	-7.5%	105.0	-1.0	-0.9%

Research Property Target Value		
Target Value	108.10 mg/L	105.97 mg/L
<p align="center"><i>For Test 951, CTS has chosen not to designate a target value for this property instead of using an average value.</i></p>		

Wines tested: SA09: White Zinfandel; SA10: White Zinfandel

**Consensus Average**  
(may differ from target value)      108.10 mg/L      105.97 mg/L

*This consensus average is based on 14 reporting participants.*



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



**Analysis 952**

**Research Property: Iron (Fe) Content**

WebCode	Data Flag	Sample SA09			Sample SA10		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
8YVYZU		1.820	0.329	22.0%	2.025	0.359	21.5%
9QWTJX		1.600	0.109	7.3%	1.700	0.034	2.0%
A2ADGZ		1.575	0.084	5.6%	1.748	0.082	4.9%
CM44PV	X	0.105	-1.387	-93.0%	0.050	-1.616	-97.0%
GJ7BJT		1.600	0.109	7.3%	1.865	0.199	11.9%
HFZ6GT		2.000	0.509	34.1%	2.000	0.334	20.0%
LRN9DH		0.670	-0.822	-55.1%	0.770	-0.896	-53.8%
VEMU94		1.400	-0.092	-6.1%	1.550	-0.116	-7.0%
X78XG2		1.300	-0.192	-12.8%	1.500	-0.166	-10.0%
XPFUZX		1.370	-0.122	-8.1%	1.480	-0.186	-11.2%
YBU6EZ		1.700	0.209	14.0%	2.000	0.334	20.0%
YR2Y9V		1.450	-0.042	-2.8%	1.750	0.084	5.0%
ZGFGQ9		1.405	-0.087	-5.8%	1.570	-0.096	-5.8%
ZM7R3R		1.500	0.009	0.6%	1.700	0.034	2.0%

**Research Property Target Value**

Target Value

1.4915 mg/L

1.6660 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: SA09: White Zinfandel; SA10: White Zinfandel

Consensus Average  
(may differ from target value)

1.4915 mg/L

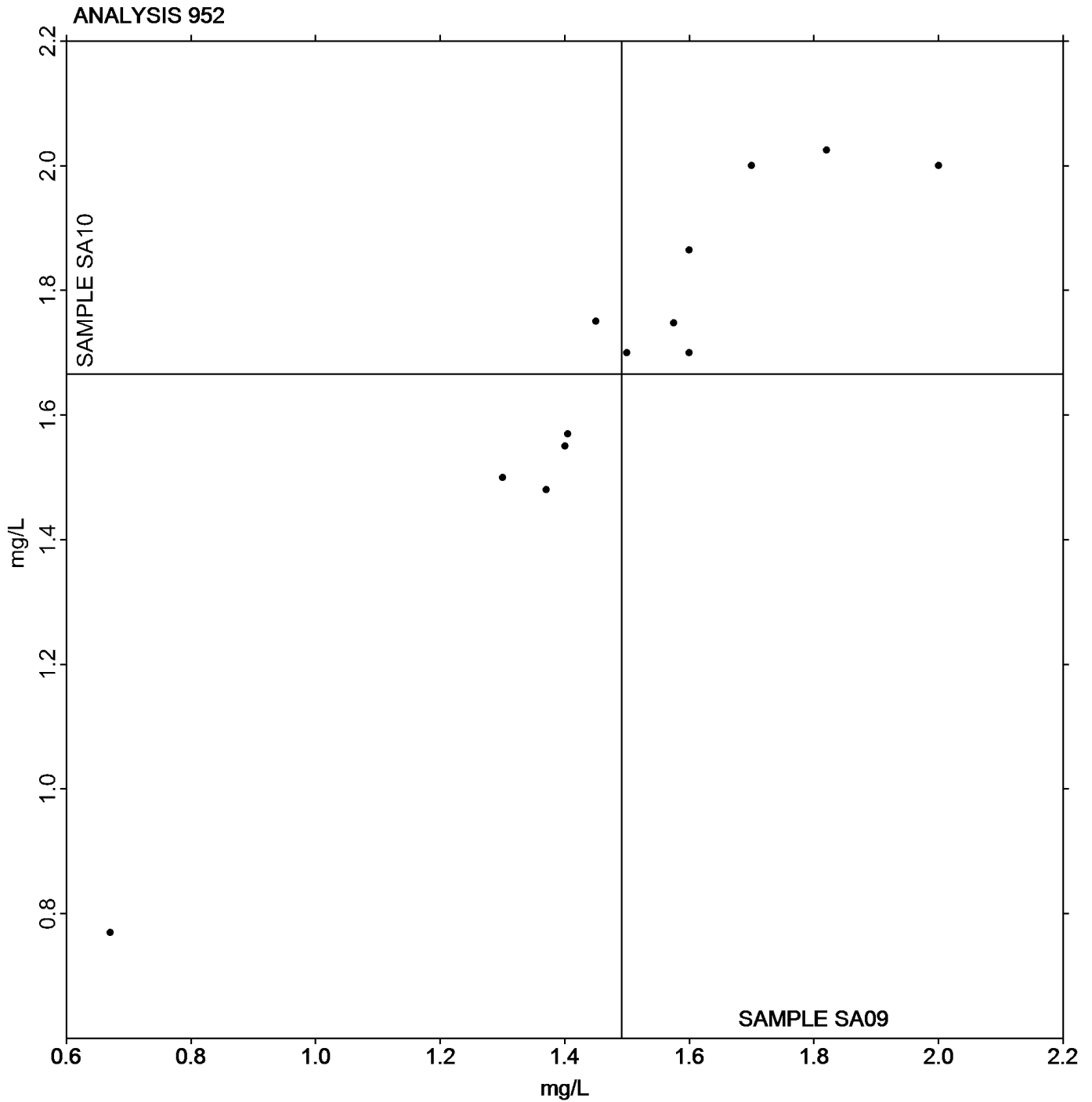
1.6660 mg/L

*This consensus average is based on 13 reporting participants.*

**Comments on Assigned Data Flags for Test #952**

CM44PV (X) - Low data for both samples.





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