



Wine Industry Interlaboratory Program

Summary Report #068 - Summer 2021

[Introduction to the Wine Program](#)

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

Analysis	Analysis Name
<u>901</u>	<u>Ethanol (% of volume)</u>
<u>902</u>	<u>Total Sulfur Dioxide</u>
<u>903</u>	<u>Free Sulfur Dioxide</u>
<u>904</u>	<u>Titratable Acidity</u>
<u>905</u>	<u>Volatile Acidity</u>
<u>906</u>	<u>Specific Gravity</u>
<u>907</u>	<u>pH</u>
<u>908</u>	<u>Residual Sugar</u>
<u>909</u>	<u>L-Malic Acid</u>
<u>910</u>	<u>Glucose + Fructose</u>
<u>911</u>	<u>Copper Content</u>
<u>912</u>	<u>Potassium Content</u>
<u>915</u>	<u>A420nm (1cm path)</u>
<u>916</u>	<u>A520nm (1cm path)</u>
<u>950</u>	<u>Research Property: L-Lactic Acid</u>
<u>951</u>	<u>Research: Conductivity @ 20C</u>
<u>952</u>	<u>Research Property: Methanol Content</u>

About the Wine Industry Interlaboratory Program

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

About CTS

Founded in 1971, Collaborative Testing Services, Inc. (CTS) is a privately - owned company that specializes in interlaboratory tests for a variety of sectors: including rubber, plastics, fasteners and metals, containerboard, paper, wine and color, as well as proficiency tests for forensic laboratories. All of the tests are designed to assist organizations in achieving and maintaining quality assurance objectives. Labs from the U.S., as well as more than 80 countries, currently participate in the CTS programs.

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Key for Web Summary Report (Page 1 of 2)

WebCode	Assigned laboratory identification number (temporary) used to ensure lab confidentiality while permitting a lab to locate its data in the Wine Web Summary Report published on the CTS web site. The WebCode for each analysis can be found in the Performance Analysis Report mailed to each participant.
Lab Mean	The average of the test results obtained by the participant.
Grand Mean	The average of the LAB MEANS for all included participants. Laboratories flagged with an X or an M (see DATA FLAG column) are excluded from the GRAND MEAN.
Difference from Grand Mean	The difference of the LAB MEAN from the GRAND MEAN.
Between-Lab Standard Deviation	An indication of the precision of measurement between the laboratories. The greater the spread of the LAB MEANS about the GRAND MEAN, the larger the BETWEEN-LAB STANDARD DEVIATION (and vice versa).
Comparative Performance Value	An indication of how well a laboratory's results agree with the other participants. The CPV is a ratio indicating the number of standard deviations from the GRAND MEAN. The closer a laboratory's COMPARATIVE PERFORMANCE VALUE is to zero, the more consistent its results are with the other participants' data (and vice versa). The critical value for each CPV will vary depending on the number of labs participating in a test.
Data Flag	DATA FLAGS are assigned based on the simultaneous analysis of both samples tested. Refer to the following chart for an explanation of each symbol:

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

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

Common Problems Highlighted in Footnotes

1. **Extreme data** - The laboratory's results for one or both samples are so inconsistent with those of the other participants that the lab mean(s) fall outside the plot. The participant is advised to immediately review his data and/or testing procedure.
2. **Systematic bias** - The laboratory's results are either consistently high or low for both samples when compared to the other participants (the plotted point falls near the top or bottom of the ellipse). This indicates that the participant is performing the test with a constant bias. Causes of systematic errors include improper calibration, the particular make/model of equipment or a modification to the testing procedure.
3. **Inconsistency in testing between samples/sample sets** - The laboratory's results indicate that there are differences in the way the two samples tested (the plotted point falls to the side of the ellipse). This type of error may be attributed to the analyst deviating from the procedure when testing one of the samples or a material interaction occurrence with the instrument or room conditions. The inconsistency is reflected in the CPVs for the two samples, such as a +1.5 CPV for sample A and a -2.2 CPV for sample B. CTS also will specify if the laboratory's data for one sample are high/low compared to the other participants. If this inconsistency is slight, the lab's plotted point will be an * that falls on the edge of the ellipse.
4. **Inconsistency in testing within a sample** - The laboratory's within-lab standard deviation for a specified sample is high when compared to the other participants, often causing the lab's plotted point to fall outside of the ellipse.

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

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #068****Analysis 901****Summer 2021****Ethanol (% of volume)**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JTMFK		13.45	-0.02	-0.36	13.45	-0.03	-0.49
2WGNVD		13.44	-0.03	-0.55	13.45	-0.02	-0.39
38DAHG	X	13.37	-0.09	-1.81	13.52	0.05	0.92
3KKZFH	X	13.24	-0.22	-4.33	13.28	-0.20	-3.66
3MM37J		13.52	0.06	1.09	13.52	0.05	0.92
3Q7TWN		13.51	0.05	0.90	13.53	0.06	1.10
3WBWHG		13.55	0.08	1.58	13.54	0.06	1.20
43TJRC		13.50	0.04	0.71	13.50	0.03	0.54
4CH9PZ		13.48	0.02	0.32	13.50	0.03	0.54
4FHJKZ	X	13.58	0.12	2.26	13.50	0.03	0.54
4XMQY2		13.49	0.03	0.51	13.50	0.03	0.54
4YYM67		13.41	-0.05	-1.04	13.41	-0.06	-1.14
6CE6EL		13.47	0.01	0.13	13.49	0.02	0.35
76DF7F		13.40	-0.06	-1.23	13.41	-0.06	-1.14
76E3PF		13.44	-0.02	-0.46	13.44	-0.03	-0.58
7QTRY4		13.48	0.01	0.22	13.50	0.02	0.45
7Y8GXC		13.48	0.01	0.22	13.44	-0.03	-0.58
84XDY8		13.52	0.06	1.09	13.53	0.05	1.01
8HJQD3		13.49	0.02	0.42	13.48	0.01	0.17
8XTADF		13.42	-0.04	-0.84	13.46	-0.02	-0.30
968KZF		13.50	0.04	0.71	13.50	0.03	0.54
98BB8V		13.54	0.08	1.48	13.54	0.06	1.20
9BDEUB		13.45	-0.02	-0.36	13.45	-0.03	-0.49
9ECPRW	X	13.30	-0.16	-3.17	13.40	-0.07	-1.33
9VJNYE		13.51	0.05	0.90	13.52	0.04	0.82
9YXJJH	X	13.18	-0.29	-5.59	13.30	-0.17	-3.19
A62M8V		13.40	-0.06	-1.23	13.43	-0.05	-0.86
A6H4Y3		13.55	0.09	1.68	13.55	0.08	1.48
BAV4WU	*	13.39	-0.07	-1.42	13.34	-0.13	-2.45
C7PV8B		13.40	-0.07	-1.33	13.43	-0.04	-0.77
CEJ4PF		13.44	-0.02	-0.46	13.44	-0.03	-0.58
CK7UCB		13.51	0.04	0.80	13.52	0.05	0.92
CUWEHA		13.49	0.03	0.51	13.50	0.03	0.54
D7K22A	X	13.35	-0.11	-2.20	13.43	-0.04	-0.77
DL2WG7		13.49	0.02	0.42	13.48	0.01	0.17



Analysis 901

Summer 2021

Ethanol (% of volume)

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
DXRTEX	X	13.00	-0.46	-8.98	13.05	-0.42	-7.86
ECQUV6		13.52	0.06	1.09	13.52	0.05	0.92
EEWG44		13.45	-0.01	-0.26	13.46	-0.01	-0.21
EF4UPB		13.48	0.01	0.22	13.50	0.03	0.54
EJPFHY		13.38	-0.08	-1.62	13.37	-0.11	-1.98
EPD739		13.44	-0.03	-0.55	13.44	-0.03	-0.58
EVJW8Z		13.50	0.04	0.71	13.50	0.03	0.54
F6LEH3		13.46	0.00	-0.07	13.47	0.00	-0.02
F6LEKN		13.50	0.04	0.71	13.51	0.04	0.73
FCK4Y8		13.49	0.03	0.51	13.50	0.03	0.54
FPVER3		13.53	0.07	1.29	13.53	0.06	1.10
FXLX8W		13.50	0.04	0.71	13.50	0.03	0.54
GC43W6		13.47	0.00	0.03	13.45	-0.02	-0.39
GHRPPP		13.48	0.02	0.32	13.51	0.03	0.63
GYP8DY		13.42	-0.04	-0.84	13.45	-0.02	-0.39
H448AQ	X	13.47	0.01	0.13	13.37	-0.10	-1.89
HZ6R23		13.45	-0.02	-0.36	13.48	0.00	0.07
J74TE2		13.49	0.02	0.42	13.50	0.02	0.45
JCPP24		13.44	-0.03	-0.55	13.43	-0.04	-0.77
JEHJZT		13.45	-0.01	-0.26	13.43	-0.05	-0.86
JQABLX		13.48	0.02	0.32	13.44	-0.04	-0.67
JU9LGX		13.50	0.03	0.61	13.51	0.04	0.73
KCKT7Y		13.50	0.03	0.61	13.51	0.04	0.73
LHRJBP		13.45	-0.02	-0.36	13.46	-0.02	-0.30
LVWUJX		13.41	-0.06	-1.13	13.41	-0.06	-1.14
LX6RBT		13.50	0.04	0.71	13.50	0.03	0.54
MJKRXZ		13.46	-0.01	-0.17	13.44	-0.03	-0.58
MU2CHW		13.53	0.06	1.19	13.55	0.08	1.48
MZ6KHW		13.48	0.02	0.32	13.48	0.01	0.17
NAP9WW	X	13.66	0.19	3.71	13.69	0.22	4.09
NBJWBL		13.48	0.02	0.32	13.50	0.03	0.54
NL2D4R		13.56	0.10	1.87	13.57	0.10	1.85
NQUHWW		13.38	-0.09	-1.72	13.41	-0.06	-1.14
P2PBHT		13.51	0.05	0.90	13.52	0.04	0.82
PD2D4Q		13.45	-0.01	-0.26	13.46	-0.01	-0.21



**Analysis 901
Ethanol (% of volume)**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PJ8AMQ		13.45	-0.01	-0.26	13.46	-0.01	-0.21
PMQYDU		13.43	-0.04	-0.75	13.43	-0.05	-0.86
PQT6NU		13.57	0.11	2.06	13.58	0.10	1.94
PVNYLV		13.43	-0.04	-0.75	13.40	-0.08	-1.42
Q6639L		13.55	0.08	1.58	13.59	0.11	2.13
QKGE2E		13.48	0.02	0.32	13.49	0.01	0.26
QULLFE		13.50	0.03	0.61	13.51	0.04	0.73
R6LCY2		13.47	0.01	0.13	13.50	0.02	0.45
REB3HM		13.45	-0.01	-0.26	13.46	-0.02	-0.30
UD6REF		13.48	0.01	0.22	13.49	0.02	0.35
UE32AH		13.49	0.02	0.42	13.49	0.02	0.35
ULL87P		13.33	-0.14	-2.68	13.36	-0.11	-2.07
V3KKFQ		13.60	0.14	2.64	13.60	0.13	2.41
V8YEVM		13.52	0.05	1.00	13.52	0.05	0.92
VDMXFQ		13.42	-0.04	-0.84	13.42	-0.06	-1.05
VR7KPN	X	13.22	-0.24	-4.72	13.23	-0.25	-4.60
VTZ94D		13.45	-0.01	-0.26	13.43	-0.04	-0.77
W6NWCH		13.55	0.08	1.58	13.56	0.09	1.66
X4APNF		13.46	0.00	-0.07	13.46	-0.01	-0.21
XZ9KBV		13.34	-0.12	-2.39	13.36	-0.11	-2.07
Z6RNUA		13.46	0.00	-0.07	13.47	0.00	-0.02
Z6XZFK	X	13.50	0.04	0.71	13.60	0.13	2.41
ZDLWDE		13.35	-0.11	-2.20	13.35	-0.12	-2.26
ZR4N2L		13.43	-0.03	-0.65	13.44	-0.04	-0.67

Grand Means		Summary Statistics	
	13.464 percent		13.471 percent
Std Dev Btwn Labs		0.054 percent	
	0.052 percent		
Statistics based on 83 of 94 reporting participants			

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot



Analysis 901
Ethanol (% of volume)

Comments on Assigned Data Flags for Test #901

- 4FHJKZ (X) - Inconsistent in testing between samples.
9ECPRW (X) - Inconsistent in testing between samples, data for sample SA35 are low.
DXRTEX (X) - Data for both samples are low. Inconsistent within the determinations of sample SA36.
H448AQ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA36.
3KKZFH (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample SA35.
D7K22A (X) - Inconsistent in testing between samples.
VR7KPN (X) - Data for both samples are low. Possible Systematic Error.
NAP9WW (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
Z6XZFK (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA35.
38DAHG (X) - Inconsistent in testing between samples.
9YXJH (X) - Data for both samples are low. Possible Systematic Error.

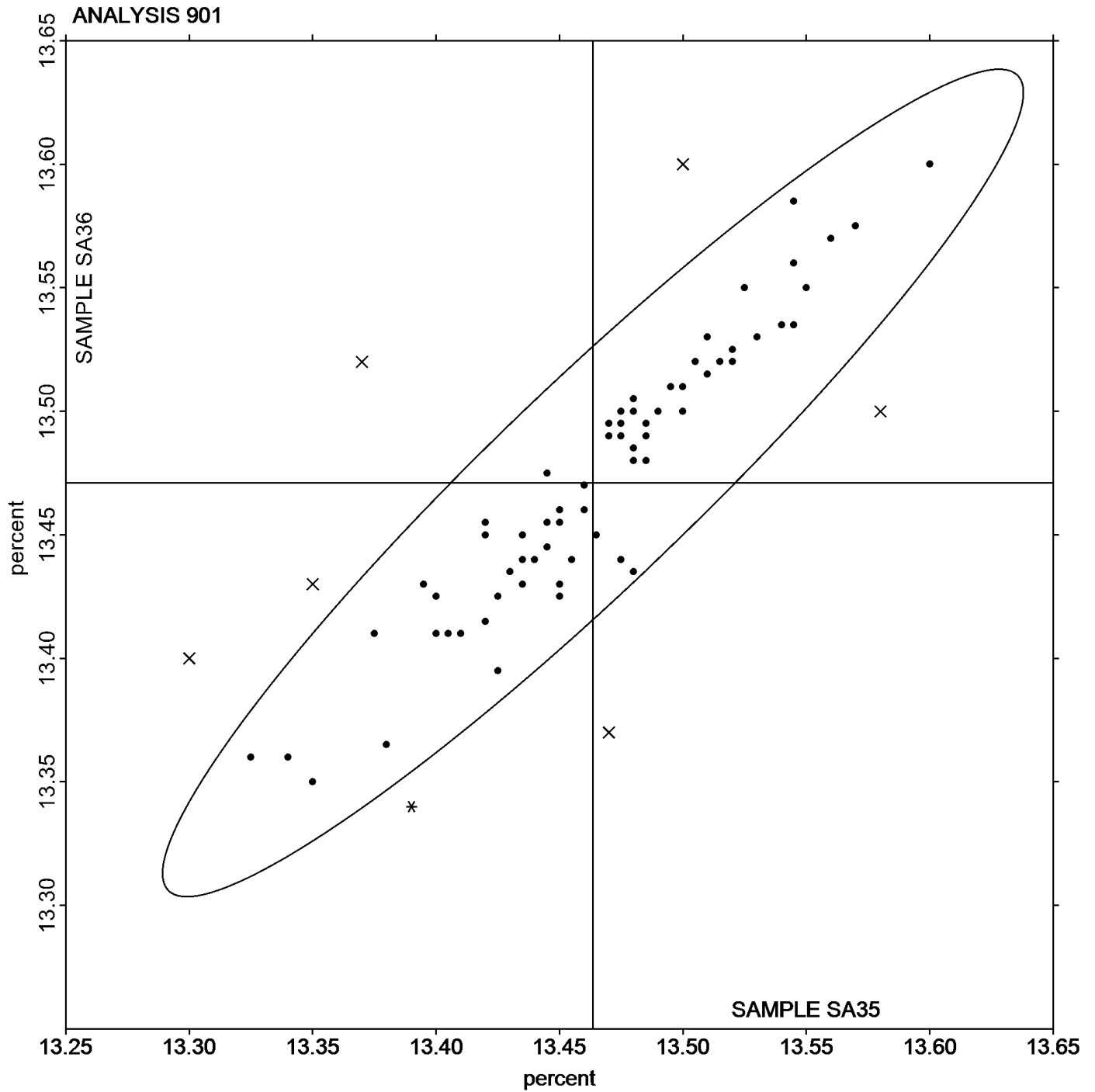
Results by Methodology (as reported by laboratory)

Table with 8 columns: Test Methodology, Sample SA35 (Cabernet Sauvignon) - Group Mean, Btwn Lab STD, Diff from GM, Sample SA36 (Merlot) - Group Mean, Btwn Lab STD, Diff from GM, Labs Incl / Rpt. Rows include Ebulliometer Method, Gas Chromatography Method, Near Infrared Method, Dist. / Density Method, FTIR, and Other.



Analysis 901

Ethanol (% of volume)





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #068
Summer 2021

Analysis 902 Total Sulfur Dioxide

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JTMFK		53.00	0.70	0.12	50.50	2.52	0.44
2WGNVD		46.50	-5.80	-1.02	42.85	-5.13	-0.91
38DAHG		48.50	-3.80	-0.67	43.50	-4.48	-0.79
3KKZFH		55.00	2.70	0.48	53.00	5.02	0.89
3MM37J		49.50	-2.80	-0.49	44.00	-3.98	-0.70
3Q7TWN		54.00	1.70	0.30	51.00	3.02	0.53
3WBWHG		55.00	2.70	0.48	49.00	1.02	0.18
43TJRC		55.00	2.70	0.48	50.00	2.02	0.36
4CH9PZ		50.50	-1.80	-0.32	45.50	-2.48	-0.44
4FHJKZ		51.00	-1.30	-0.23	46.00	-1.98	-0.35
4XMQY2		46.00	-6.30	-1.11	43.50	-4.48	-0.79
4YYM67		52.00	-0.30	-0.05	46.50	-1.48	-0.26
6CE6EL		55.50	3.20	0.56	53.50	5.52	0.97
76DF7F		51.50	-0.80	-0.14	51.00	3.02	0.53
76E3PF		60.00	7.70	1.36	55.50	7.52	1.33
7QTRY4		45.00	-7.30	-1.28	39.50	-8.48	-1.50
7Y8GXC		47.50	-4.80	-0.84	42.00	-5.98	-1.06
84XDY8		55.75	3.45	0.61	51.90	3.92	0.69
8HJQD3		58.50	6.20	1.09	54.00	6.02	1.06
8XTADF		44.50	-7.80	-1.37	41.00	-6.98	-1.23
968KZF		48.00	-4.30	-0.76	44.00	-3.98	-0.70
98BB8V		52.60	0.30	0.05	47.35	-0.63	-0.11
9BDEUB		51.50	-0.80	-0.14	49.50	1.52	0.27
9ECPRW	*	66.50	14.20	2.50	63.00	15.02	2.65
9VJNYE		49.00	-3.30	-0.58	43.50	-4.48	-0.79
9YXJJH		54.40	2.10	0.37	52.00	4.02	0.71
A62M8V		51.33	-0.97	-0.17	45.09	-2.89	-0.51
A6H4Y3		51.63	-0.67	-0.12	46.50	-1.48	-0.26
BAV4WU		52.00	-0.30	-0.05	46.00	-1.98	-0.35
BMH7G8		49.50	-2.80	-0.49	45.00	-2.98	-0.53
C7PV8B		52.00	-0.30	-0.05	48.00	0.02	0.00
CEJ4PF		54.30	2.00	0.35	49.30	1.32	0.23
CK7UCB		56.00	3.70	0.65	52.50	4.52	0.80
CUWEHA		50.00	-2.30	-0.40	49.00	1.02	0.18
DL2WG7		56.50	4.20	0.74	51.50	3.52	0.62



Analysis 902
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ECQUV6		52.00	-0.30	-0.05	46.00	-1.98	-0.35
EEWG44		61.00	8.70	1.53	52.00	4.02	0.71
EF4UPB		56.50	4.20	0.74	51.50	3.52	0.62
EJPFHY		54.50	2.20	0.39	50.00	2.02	0.36
EPD739		50.00	-2.30	-0.40	45.00	-2.98	-0.53
EVJW8Z		51.80	-0.50	-0.09	43.45	-4.53	-0.80
F6LEH3		55.00	2.70	0.48	50.50	2.52	0.44
F6LEKN	X	35.00	-17.30	-3.05	36.00	-11.98	-2.11
FCK4Y8	X	68.00	15.70	2.77	83.00	35.02	6.18
FPVER3		45.65	-6.65	-1.17	39.20	-8.78	-1.55
FXLX8W		55.00	2.70	0.48	47.00	-0.98	-0.17
GC43W6	*	39.00	-13.30	-2.34	38.50	-9.48	-1.67
GHRPPP		43.50	-8.80	-1.55	39.00	-8.98	-1.59
GYP8DY		53.50	1.20	0.21	49.50	1.52	0.27
H448AQ		59.50	7.20	1.27	58.00	10.02	1.77
HZ6R23		53.50	1.20	0.21	49.50	1.52	0.27
J74TE2		52.00	-0.30	-0.05	45.50	-2.48	-0.44
JCPP24		51.00	-1.30	-0.23	44.50	-3.48	-0.61
JEHJZT	*	35.50	-16.80	-2.96	32.00	-15.98	-2.82
JQABLX		51.00	-1.30	-0.23	43.50	-4.48	-0.79
JU9LGX		62.50	10.20	1.80	57.50	9.52	1.68
KCKT7Y		55.50	3.20	0.56	52.00	4.02	0.71
LHRJBP		51.50	-0.80	-0.14	43.50	-4.48	-0.79
LVWUJX		54.50	2.20	0.39	51.50	3.52	0.62
LX6RBT		55.00	2.70	0.48	54.50	6.52	1.15
MJKRXZ		58.00	5.70	1.00	54.00	6.02	1.06
MU2CHW		58.00	5.70	1.00	50.00	2.02	0.36
MZ6KHW		49.50	-2.80	-0.49	44.50	-3.48	-0.61
NAP9WW		54.70	2.40	0.42	52.95	4.97	0.88
NBJWBL		61.00	8.70	1.53	55.00	7.02	1.24
NL2D4R		53.00	0.70	0.12	51.00	3.02	0.53
NQUHWW		60.50	8.20	1.44	52.00	4.02	0.71
P2PBHT	X	70.00	17.70	3.12	68.50	20.52	3.62
PD2D4Q	*	56.00	3.70	0.65	57.50	9.52	1.68
PJ8AMQ		50.50	-1.80	-0.32	41.50	-6.48	-1.14



**Analysis 902
Total Sulfur Dioxide**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PMQYDU		49.00	-3.30	-0.58	43.00	-4.98	-0.88
PQT6NU		51.50	-0.80	-0.14	49.50	1.52	0.27
PVNYLV		54.50	2.20	0.39	52.50	4.52	0.80
Q6639L		43.73	-8.57	-1.51	39.73	-8.26	-1.46
QKGE2E		56.50	4.20	0.74	49.50	1.52	0.27
QULLFE		49.00	-3.30	-0.58	45.50	-2.48	-0.44
R6LCY2	*	35.50	-16.80	-2.96	34.00	-13.98	-2.47
REB3HM		54.00	1.70	0.30	50.00	2.02	0.36
RHADHT	*	36.29	-16.01	-2.82	36.38	-11.60	-2.05
UD6REF		52.50	0.20	0.04	47.00	-0.98	-0.17
UE32AH		55.50	3.20	0.56	54.50	6.52	1.15
V3KKFQ		58.30	6.00	1.06	58.30	10.32	1.82
VDMXFQ		54.09	1.79	0.32	48.70	0.72	0.13
VR7KPN		53.50	1.20	0.21	47.00	-0.98	-0.17
VTZ94D		53.50	1.20	0.21	46.50	-1.48	-0.26
W6NWCH		44.00	-8.30	-1.46	40.00	-7.98	-1.41
X4APNF		54.25	1.95	0.34	47.85	-0.13	-0.02
XZ9KBV	*	44.00	-8.30	-1.46	46.00	-1.98	-0.35
Z6RNUA		60.50	8.20	1.44	57.00	9.02	1.59
ZDLWDE		60.00	7.70	1.36	53.50	5.52	0.97

Grand Means		Summary Statistics	
	52.297 mg/L		47.983 mg/L
Std Dev Btwn Labs			
	5.679 mg/L		5.666 mg/L
Statistics based on 87 of 90 reporting participants			

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot

Comments on Assigned Data Flags for Test #902

- F6LEKN (X) - Inconsistent in testing between samples, data for sample SA35 are low.
- P2PBHT (X) - Data for both samples are high. Possible Systematic Error.
- FCK4Y8 (X) - Data for both samples are high.



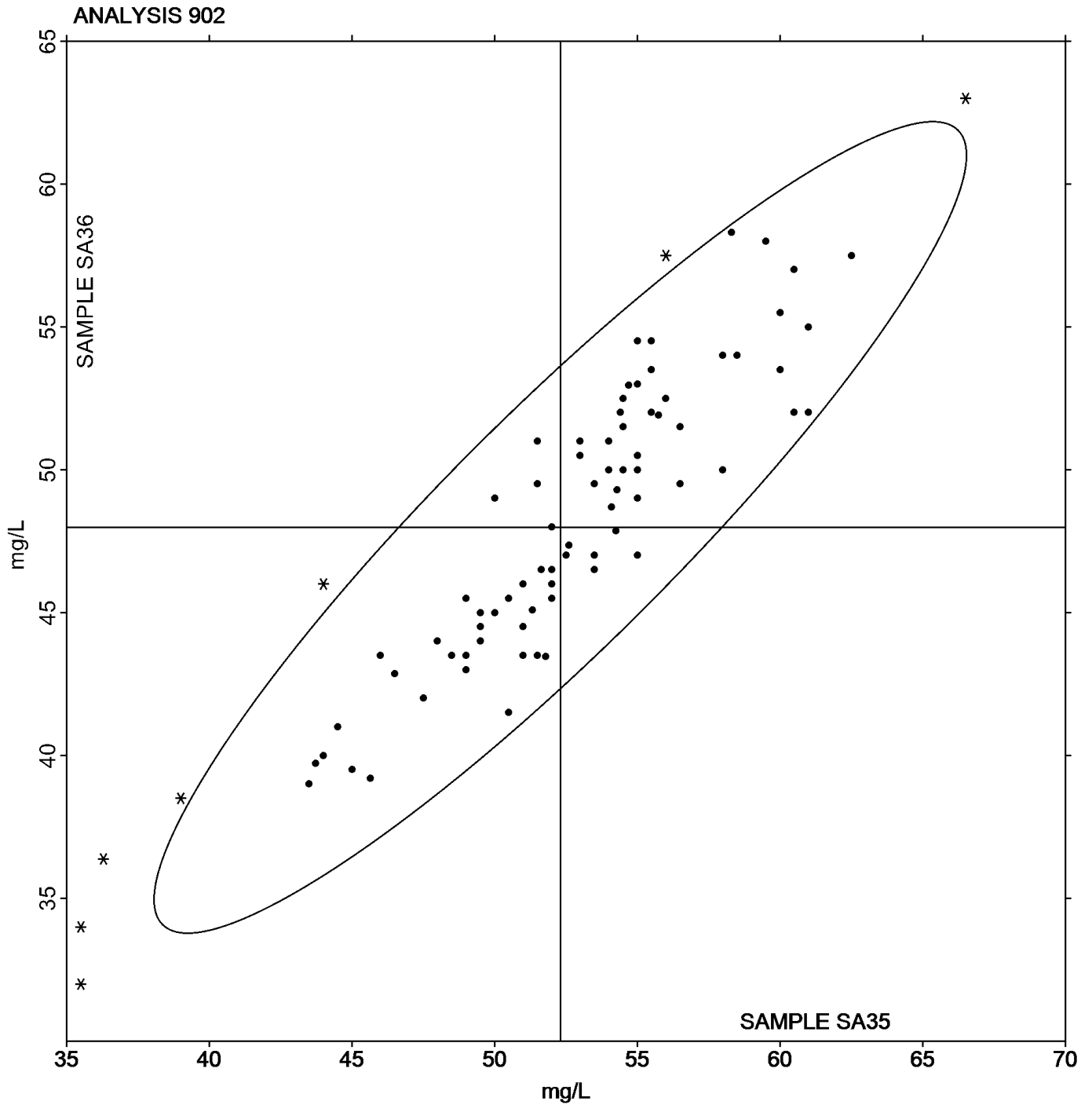
**Analysis 902
Total Sulfur Dioxide**

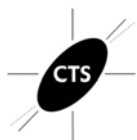
Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA35 <i>Cabernet Sauvignon</i>			Sample SA36 <i>Merlot</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	53.500	0.000	1.20	49.500	0.000	1.52	1/1
Ripper Method	52.983	6.350	0.69	49.663	6.290	1.68	32/35
Aeration Oxidation (AO) Method	50.999	6.017	-1.30	45.789	4.707	-2.19	11/11
Segmented Flow Analyzer	50.553	7.378	-1.74	44.633	5.860	-3.35	9/9
Enzymatic Method	54.163	4.843	1.87	49.125	4.875	1.14	12/12
Colormetric Analyzer	52.527	3.354	0.23	48.132	4.780	0.15	11/11
FTIR	48.625	5.360	-3.67	45.125	6.005	-2.86	4/4
Flow Injection Analysis	51.807	4.256	-0.49	47.288	4.859	-0.70	7/7



Analysis 902
Total Sulfur Dioxide





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Analysis 903 Free Sulfur Dioxide

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JTMFK		22.50	-0.47	-0.20	22.50	-0.12	-0.05
2WGNVD		22.40	-0.57	-0.24	21.70	-0.92	-0.38
38DAHG		21.05	-1.92	-0.82	20.80	-1.82	-0.76
3KKZFH		19.70	-3.27	-1.39	20.90	-1.72	-0.72
3MM37J		24.00	1.03	0.44	24.00	1.38	0.57
3Q7TWN		23.00	0.03	0.01	24.00	1.38	0.57
3WBWHG	X	22.50	-0.47	-0.20	18.00	-4.62	-1.93
43TJRC		28.00	5.03	2.14	28.00	5.38	2.24
4CH9PZ		22.50	-0.47	-0.20	23.00	0.38	0.16
4FHJKZ		23.00	0.03	0.01	24.00	1.38	0.57
4XMQY2		25.50	2.53	1.07	26.50	3.88	1.61
4YYM67		19.50	-3.47	-1.48	20.00	-2.62	-1.09
6CE6EL		21.00	-1.97	-0.84	21.00	-1.62	-0.68
76DF7F		24.00	1.03	0.44	24.00	1.38	0.57
76E3PF		24.00	1.03	0.44	22.50	-0.12	-0.05
7QTRY4		22.00	-0.97	-0.41	22.00	-0.62	-0.26
7Y8GXC		23.00	0.03	0.01	22.50	-0.12	-0.05
84XDY8		22.75	-0.22	-0.10	23.90	1.28	0.53
8HJQD3		26.50	3.53	1.50	26.50	3.88	1.61
8XTADF	X	9.50	-13.47	-5.73	9.50	-13.12	-5.47
968KZF		22.00	-0.97	-0.41	21.00	-1.62	-0.68
98BB8V		25.05	2.08	0.88	24.95	2.33	0.97
9BDEUB	*	27.50	4.53	1.93	28.50	5.88	2.45
9ECPRW	X	16.00	-6.97	-2.97	18.00	-4.62	-1.93
9VJNYE		23.50	0.53	0.22	22.50	-0.12	-0.05
9YXJJH	X	40.30	17.33	7.37	32.65	10.03	4.17
A62M8V		22.63	-0.35	-0.15	20.92	-1.71	-0.71
A6H4Y3		23.10	0.13	0.05	22.89	0.27	0.11
BAV4WU		22.00	-0.97	-0.41	22.50	-0.12	-0.05
BMH7G8		20.50	-2.47	-1.05	20.50	-2.12	-0.88
C7PV8B		21.00	-1.97	-0.84	22.00	-0.62	-0.26
CEJ4PF		25.20	2.23	0.95	24.35	1.73	0.72
CK7UCB		21.00	-1.97	-0.84	20.50	-2.12	-0.88
CUWEHA		25.00	2.03	0.86	26.00	3.38	1.41
DL2WG7		20.00	-2.97	-1.26	19.50	-3.12	-1.30



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Analysis 903 Free Sulfur Dioxide

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
DXRTEX	*	28.00	5.03	2.14	26.00	3.38	1.41
ECQUV6		21.00	-1.97	-0.84	21.00	-1.62	-0.68
EEWG44		20.00	-2.97	-1.26	19.50	-3.12	-1.30
EF4UPB		22.00	-0.97	-0.41	22.00	-0.62	-0.26
EJPFHY		26.00	3.03	1.29	25.50	2.88	1.20
EPD739		24.50	1.53	0.65	23.00	0.38	0.16
EVJW8Z		21.35	-1.62	-0.69	18.95	-3.67	-1.53
F6LEH3		25.50	2.53	1.07	25.50	2.88	1.20
F6LEKN		26.00	3.03	1.29	25.00	2.38	0.99
FCK4Y8		23.00	0.03	0.01	23.00	0.38	0.16
FPVER3		21.70	-1.27	-0.54	20.80	-1.82	-0.76
FXLX8W		23.00	0.03	0.01	22.00	-0.62	-0.26
GC43W6		24.50	1.53	0.65	24.00	1.38	0.57
GHRPPP		20.50	-2.47	-1.05	20.00	-2.62	-1.09
GYP8DY		20.00	-2.97	-1.26	19.00	-3.62	-1.51
H448AQ	X	27.50	4.53	1.93	22.00	-0.62	-0.26
HZ6R23		23.50	0.53	0.22	24.00	1.38	0.57
J74TE2		21.50	-1.47	-0.63	21.00	-1.62	-0.68
JCPP24	X	26.00	3.03	1.29	22.00	-0.62	-0.26
JEHJZT		21.50	-1.47	-0.63	20.00	-2.62	-1.09
JQABLX	*	21.50	-1.47	-0.63	24.00	1.38	0.57
JU9LGX		22.75	-0.22	-0.10	22.00	-0.62	-0.26
KCKT7Y		22.00	-0.97	-0.41	23.00	0.38	0.16
LHRJBP		22.50	-0.47	-0.20	22.00	-0.62	-0.26
LVWUJX		22.50	-0.47	-0.20	23.00	0.38	0.16
LX6RBT		25.00	2.03	0.86	25.50	2.88	1.20
MJKRXZ		25.50	2.53	1.07	24.50	1.88	0.78
MZ6KHW		22.00	-0.97	-0.41	21.00	-1.62	-0.68
NAP9WW		25.70	2.73	1.16	23.70	1.08	0.45
NBJWBL		24.00	1.03	0.44	24.00	1.38	0.57
NL2D4R		23.50	0.53	0.22	22.00	-0.62	-0.26
NQUHWW		19.50	-3.47	-1.48	18.50	-4.12	-1.72
P2PBHT	*	30.00	7.03	2.99	28.50	5.88	2.45
PD2D4Q		18.50	-4.47	-1.90	19.00	-3.62	-1.51
PJ8AMQ		23.00	0.03	0.01	22.00	-0.62	-0.26



**Analysis 903
Free Sulfur Dioxide**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PMQYDU		23.15	0.18	0.07	22.15	-0.47	-0.20
PQT6NU		20.00	-2.97	-1.26	18.50	-4.12	-1.72
PVNYLV	X	24.50	1.53	0.65	32.00	9.38	3.90
Q6639L		19.24	-3.74	-1.59	18.48	-4.15	-1.73
QKGE2E		22.50	-0.47	-0.20	21.50	-1.12	-0.47
QULLFE		23.00	0.03	0.01	23.00	0.38	0.16
R6LCY2		23.00	0.03	0.01	24.50	1.88	0.78
REB3HM		25.50	2.53	1.07	24.50	1.88	0.78
RHADHT		17.64	-5.34	-2.27	17.48	-5.14	-2.14
UD6REF		20.50	-2.47	-1.05	20.00	-2.62	-1.09
UE32AH		23.00	0.03	0.01	23.00	0.38	0.16
ULL87P		26.45	3.48	1.48	24.45	1.83	0.76
V3KKFQ		27.90	4.93	2.10	27.90	5.28	2.20
V8YEVM		24.00	1.03	0.44	23.00	0.38	0.16
VDMXFQ	X	22.10	-0.87	-0.37	24.93	2.30	0.96
VR7KPN		25.00	2.03	0.86	24.50	1.88	0.78
VTZ94D		24.00	1.03	0.44	22.50	-0.12	-0.05
W6NWCH		22.00	-0.97	-0.41	22.00	-0.62	-0.26
X4APNF		22.20	-0.77	-0.33	22.20	-0.42	-0.18
XZ9KBV		24.00	1.03	0.44	22.00	-0.62	-0.26
Z6RNUA		26.00	3.03	1.29	26.00	3.38	1.41
Z6XZFK		20.80	-2.17	-0.92	19.20	-3.42	-1.43
ZDLWDE		20.00	-2.97	-1.26	20.00	-2.62	-1.09
ZR4N2L		21.50	-1.47	-0.63	22.00	-0.62	-0.26

Grand Means		Summary Statistics	
	22.974 mg/L		22.625 mg/L
Std Dev Btwn Labs			2.401 mg/L
	2.351 mg/L		
Statistics based on 86 of 94 reporting participants			

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot



**Analysis 903
Free Sulfur Dioxide**

Comments on Assigned Data Flags for Test #903

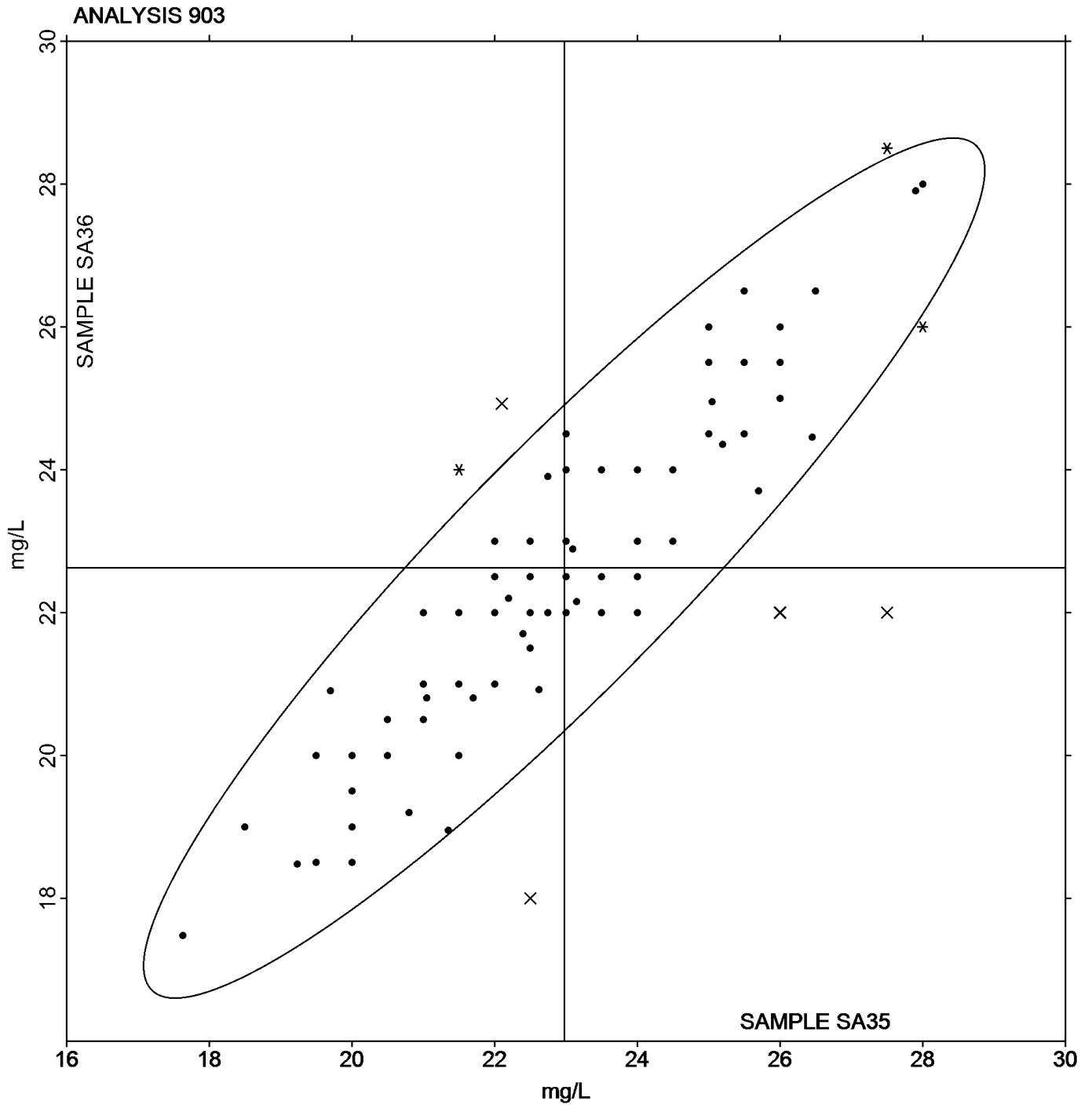
- 9ECPRW (X) - Inconsistent in testing between samples, data for sample SA35 are low.
- H448AQ (X) - Inconsistent in testing between samples.
- JCPP24 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- 3WBWHG (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA36.
- PVNYLV (X) - Inconsistent in testing between samples, data for sample SA36 are high.
- VDMXFQ (X) - Inconsistent in testing between samples.
- 8XTADF (X) - Data for both samples are low. Possible Systematic Error.
- 9YXJH (X) - Data for both samples are high. Inconsistent within the determinations of sample SA35.

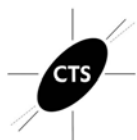
Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA35 <i>Cabernet Sauvignon</i>			Sample SA36 <i>Merlot</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	23.500	0.000	0.53	24.000	0.000	1.38	1/1
Ripper Method	24.088	2.224	1.11	24.158	2.209	1.53	24/28
Aeration Oxidation (AO) Method	22.738	2.713	-0.24	22.231	2.360	-0.39	27/29
Segmented Flow Analyzer	22.885	1.562	-0.09	22.354	1.701	-0.27	10/10
Enzymatic Method	21.988	2.503	-0.99	21.463	2.207	-1.16	4/4
Colorimetric Analyzer	23.063	2.112	0.09	22.513	2.471	-0.11	8/8
Flow Injection Analysis	21.926	1.738	-1.05	21.586	2.234	-1.04	8/9
FTIR	20.875	1.797	-2.10	19.875	1.548	-2.75	4/5



Analysis 903
Free Sulfur Dioxide





Analysis 904
Titratable Acidity

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JTMFK		5.805	0.021	0.11	5.930	0.016	0.09
2WGNVD		5.710	-0.074	-0.38	5.875	-0.039	-0.22
38DAHG		6.020	0.236	1.21	6.130	0.216	1.21
3KKZFH		5.830	0.046	0.23	5.960	0.046	0.26
3MM37J		5.710	-0.074	-0.38	5.825	-0.089	-0.50
3Q7TWN		5.700	-0.084	-0.43	5.800	-0.114	-0.64
3WBWHG		6.175	0.391	2.00	6.220	0.306	1.71
43TJRC		5.600	-0.184	-0.94	5.800	-0.114	-0.64
4CH9PZ		5.630	-0.154	-0.79	5.755	-0.159	-0.89
4FHJKZ		5.600	-0.184	-0.94	5.750	-0.164	-0.92
4XMQY2		5.700	-0.084	-0.43	5.900	-0.014	-0.08
4YYM67		5.600	-0.184	-0.94	5.800	-0.114	-0.64
6CE6EL		6.080	0.296	1.51	6.130	0.216	1.21
76DF7F		5.715	-0.069	-0.35	5.855	-0.059	-0.33
76E3PF		6.000	0.216	1.10	6.100	0.186	1.04
7QTRY4		5.900	0.116	0.59	5.900	-0.014	-0.08
7Y8GXC		5.900	0.116	0.59	6.100	0.186	1.04
84XDY8		5.735	-0.049	-0.25	5.865	-0.049	-0.27
8HJQD3		5.480	-0.304	-1.56	5.705	-0.209	-1.17
8XTADF	X	3.525	-2.259	-11.57	3.650	-2.264	-12.68
968KZF		5.590	-0.194	-0.99	5.710	-0.204	-1.14
98BB8V		5.730	-0.054	-0.28	5.865	-0.049	-0.27
9BDEUB		5.790	0.006	0.03	5.820	-0.094	-0.53
9ECPRW		5.550	-0.234	-1.20	5.800	-0.114	-0.64
9VJNYE		5.800	0.016	0.08	5.900	-0.014	-0.08
9YXJJH		6.010	0.226	1.16	6.050	0.136	0.76
A62M8V		6.090	0.306	1.57	6.225	0.311	1.74
A6H4Y3	*	5.295	-0.489	-2.51	5.450	-0.464	-2.60
BAV4WU		6.150	0.366	1.87	6.190	0.276	1.55
BMH7G8		5.600	-0.184	-0.94	5.750	-0.164	-0.92
C7PV8B		5.900	0.116	0.59	6.050	0.136	0.76
CEJ4PF	*	5.915	0.131	0.67	5.860	-0.054	-0.30
CK7UCB		5.840	0.056	0.29	6.015	0.101	0.57
CUWEHA		5.850	0.066	0.34	5.990	0.076	0.43
D7K22A	*	5.850	0.066	0.34	6.150	0.236	1.32



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Analysis 904 Titratable Acidity

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
DL2WG7		5.850	0.066	0.34	6.000	0.086	0.48
DXRTEX		5.815	0.031	0.16	5.815	-0.099	-0.55
ECQUV6		5.600	-0.184	-0.94	5.750	-0.164	-0.92
EEWG44		5.500	-0.284	-1.46	5.700	-0.214	-1.20
EF4UPB		5.920	0.136	0.69	6.100	0.186	1.04
EJPFHY		5.755	-0.029	-0.15	5.845	-0.069	-0.39
EPD739		5.700	-0.084	-0.43	5.800	-0.114	-0.64
EVJW8Z		5.790	0.006	0.03	5.925	0.011	0.06
F6LEH3		5.775	-0.009	-0.05	5.930	0.016	0.09
F6LEKN	*	6.075	0.291	1.49	6.325	0.411	2.30
FCK4Y8	*	6.200	0.416	2.13	6.400	0.486	2.72
FPVER3		5.625	-0.159	-0.82	5.770	-0.144	-0.81
FXLX8W		5.600	-0.184	-0.94	5.850	-0.064	-0.36
GC43W6		5.900	0.116	0.59	5.900	-0.014	-0.08
GHRPPP		5.735	-0.049	-0.25	5.915	0.001	0.01
GYP8DY	X	5.090	-0.694	-3.56	5.210	-0.704	-3.94
H448AQ		5.875	0.091	0.46	5.945	0.031	0.17
HZ6R23		5.735	-0.049	-0.25	5.715	-0.199	-1.11
J74TE2		5.800	0.016	0.08	5.900	-0.014	-0.08
JCPP24		6.260	0.476	2.44	6.310	0.396	2.22
JEHJZT		5.775	-0.009	-0.05	5.910	-0.004	-0.02
JQABLX		5.505	-0.279	-1.43	5.635	-0.279	-1.56
JU9LGX		5.800	0.016	0.08	6.000	0.086	0.48
KCKT7Y		5.810	0.026	0.13	5.940	0.026	0.15
LHRJBP	*	5.400	-0.384	-1.97	5.700	-0.214	-1.20
LVWUJX		5.600	-0.184	-0.94	5.800	-0.114	-0.64
LX6RBT		5.475	-0.309	-1.58	5.530	-0.384	-2.15
MJKRXZ		6.100	0.316	1.62	6.200	0.286	1.60
MU2CHW		5.700	-0.084	-0.43	5.800	-0.114	-0.64
MZ6KHW		5.950	0.166	0.85	6.050	0.136	0.76
NAP9WW		5.875	0.091	0.46	5.865	-0.049	-0.27
NBJWBL		5.900	0.116	0.59	6.000	0.086	0.48
NL2D4R		5.590	-0.194	-0.99	5.760	-0.154	-0.86
NQUHWW		5.550	-0.234	-1.20	5.700	-0.214	-1.20
P2PBHT		5.900	0.116	0.59	6.050	0.136	0.76



Analysis 904
Titratable Acidity

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PD2D4Q		6.200	0.416	2.13	6.300	0.386	2.16
PJ8AMQ		5.750	-0.034	-0.18	5.950	0.036	0.20
PMQYDU		5.770	-0.014	-0.07	5.850	-0.064	-0.36
PQT6NU		5.800	0.016	0.08	5.900	-0.014	-0.08
PVNYLV	X	4.845	-0.939	-4.81	5.365	-0.549	-3.07
Q6639L		5.605	-0.179	-0.92	5.735	-0.179	-1.00
QKGE2E		5.790	0.006	0.03	5.935	0.021	0.12
QULLFE		5.670	-0.114	-0.59	5.800	-0.114	-0.64
R6LCY2		5.885	0.101	0.52	5.945	0.031	0.17
REB3HM		5.580	-0.204	-1.05	5.705	-0.209	-1.17
RHADHT		5.555	-0.229	-1.17	5.690	-0.224	-1.25
UD6REF		5.600	-0.184	-0.94	5.800	-0.114	-0.64
UE32AH		5.800	0.016	0.08	5.950	0.036	0.20
ULL87P		5.860	0.076	0.39	5.980	0.066	0.37
V3KKFQ		6.000	0.216	1.10	6.000	0.086	0.48
V8YEVM		6.100	0.316	1.62	6.300	0.386	2.16
VDMXFQ		5.990	0.206	1.05	5.950	0.036	0.20
VR7KPN		5.690	-0.094	-0.48	5.860	-0.054	-0.30
VTZ94D		5.550	-0.234	-1.20	5.745	-0.169	-0.95
W6NWCH	*	5.550	-0.234	-1.20	5.900	-0.014	-0.08
X4APNF		5.770	-0.014	-0.07	5.905	-0.009	-0.05
XZ9KBV	X	5.450	-0.334	-1.71	5.830	-0.084	-0.47
Z6RNUA		5.800	0.016	0.08	5.835	-0.079	-0.44
Z6XZFK		5.665	-0.119	-0.61	5.865	-0.049	-0.27
ZDLWDE	X	4.800	-0.984	-5.04	4.950	-0.964	-5.40
ZR4N2L		6.100	0.316	1.62	6.200	0.286	1.60

Grand Means		Summary Statistics	
	5.7843 g/L as tartaric acid		5.9138 g/L as tartaric acid
Std Dev Btwn Labs			
	0.1953 g/L as tartaric acid		0.1785 g/L as tartaric acid
Statistics based on 91 of 96 reporting participants			

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot



**Analysis 904
Titratable Acidity**

Comments on Assigned Data Flags for Test #904

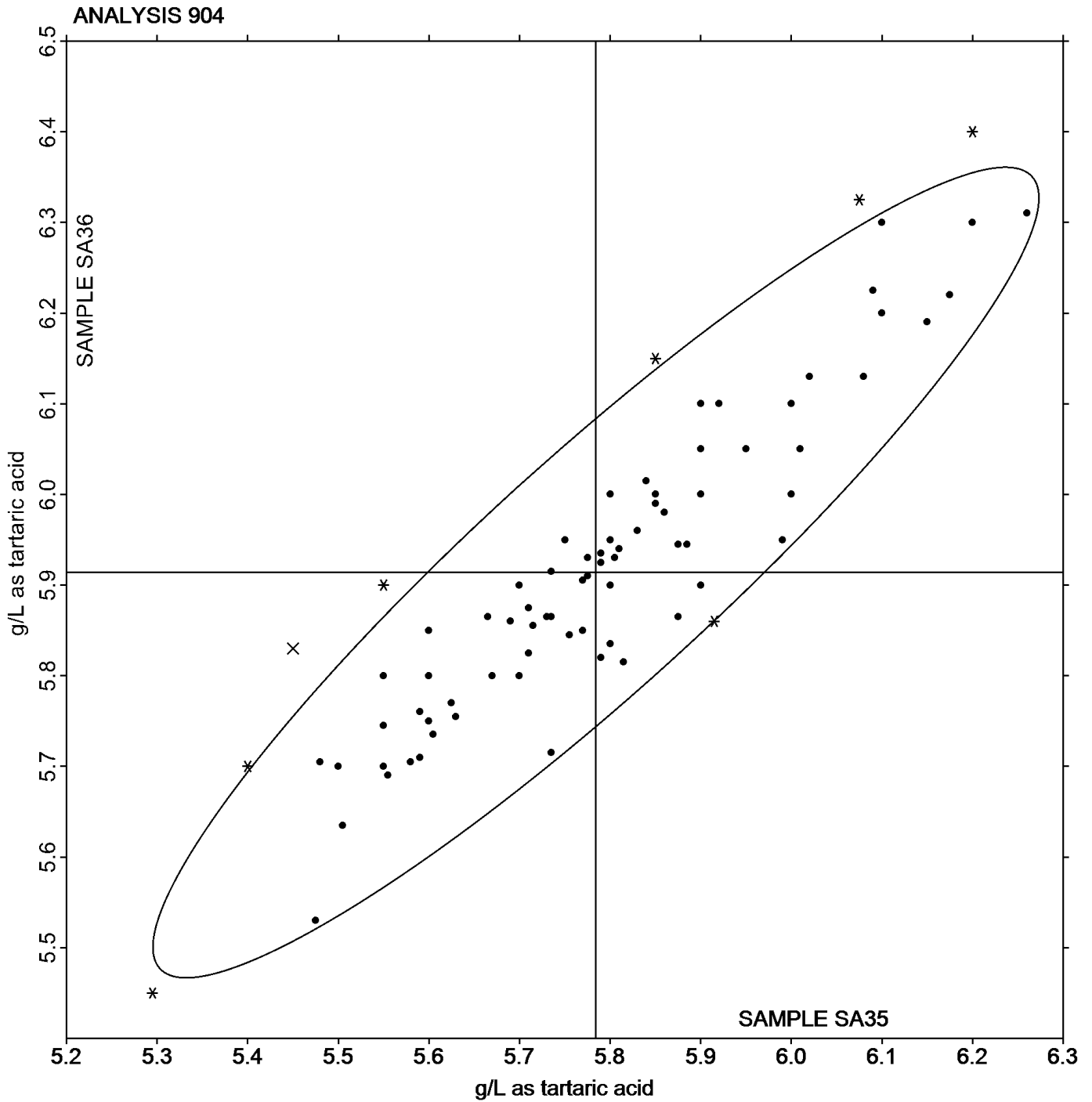
- GYP8DY (X) - Data for both samples are low. Possible Systematic Error.
- ZDLWDE (X) - Data for both samples are low. Possible Systematic Error.
- PVNYLV (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample SA36.
- 8XTADF (X) - Data for both samples are low. Inconsistent within the determinations of sample SA36.
- XZ9KBV (X) - Inconsistent in testing between samples.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA35 <i>Cabernet Sauvignon</i>			Sample SA36 <i>Merlot</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method	5.990	0.000	0.206	5.950	0.000	0.036	1/1
Autotitration	5.767	0.168	-0.017	5.899	0.143	-0.015	60/62
Manual Titration	5.885	0.212	0.100	6.000	0.219	0.086	21/22
FTIR	5.686	0.199	-0.099	5.854	0.204	-0.059	8/10
Segmented Flow Analyzer	5.295	0.000	-0.489	5.450	0.000	-0.464	1/1



Analysis 904
Titratable Acidity





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Analysis 905 Volatile Acidity

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JTMFK		0.5100	0.0219	0.48	0.5550	0.0333	0.75
2WGNVD		0.5150	0.0269	0.60	0.5500	0.0283	0.63
38DAHG		0.5185	0.0304	0.67	0.5800	0.0583	1.31
3KKZFH		0.5500	0.0619	1.37	0.5600	0.0383	0.86
3MM37J		0.4100	-0.0781	-1.73	0.4550	-0.0667	-1.49
3Q7TWN		0.5200	0.0319	0.71	0.5500	0.0283	0.63
3WBWHG		0.4850	-0.0031	-0.07	0.5550	0.0333	0.75
43TJRC		0.5200	0.0319	0.71	0.5500	0.0283	0.63
4CH9PZ		0.4400	-0.0481	-1.06	0.4600	-0.0617	-1.38
4FHJKZ		0.4900	0.0019	0.04	0.5200	-0.0017	-0.04
4XMQY2		0.4900	0.0019	0.04	0.5700	0.0483	1.08
4YYM67	*	0.4600	-0.0281	-0.62	0.5550	0.0333	0.75
6CE6EL		0.4850	-0.0031	-0.07	0.5300	0.0083	0.19
76DF7F		0.4950	0.0069	0.15	0.5200	-0.0017	-0.04
76E3PF		0.4600	-0.0281	-0.62	0.4850	-0.0367	-0.82
7QTRY4		0.4100	-0.0781	-1.73	0.4550	-0.0667	-1.49
7Y8GXC		0.4550	-0.0331	-0.73	0.4900	-0.0317	-0.71
84XDY8		0.4175	-0.0706	-1.56	0.4555	-0.0662	-1.48
8HJQD3		0.5100	0.0219	0.48	0.5300	0.0083	0.19
8XTADF		0.5650	0.0769	1.70	0.5850	0.0633	1.42
968KZF		0.5400	0.0519	1.15	0.5600	0.0383	0.86
98BB8V		0.5110	0.0229	0.51	0.5440	0.0223	0.50
9BDEUB	X	0.5800	0.0919	2.03	0.4950	-0.0267	-0.60
9ECPRW	*	0.5800	0.0919	2.03	0.6350	0.1133	2.54
9VJNYE		0.5200	0.0319	0.71	0.5500	0.0283	0.63
A62M8V	*	0.6000	0.1119	2.48	0.6100	0.0883	1.98
A6H4Y3		0.4600	-0.0281	-0.62	0.4950	-0.0267	-0.60
BAV4WU		0.4800	-0.0081	-0.18	0.5500	0.0283	0.63
BMH7G8		0.4550	-0.0331	-0.73	0.4950	-0.0267	-0.60
C7PV8B		0.5550	0.0669	1.48	0.5900	0.0683	1.53
CEJ4PF		0.4950	0.0069	0.15	0.5300	0.0083	0.19
CK7UCB	*	0.4600	-0.0281	-0.62	0.5450	0.0233	0.52
CUWEHA		0.5300	0.0419	0.93	0.5900	0.0683	1.53
D7K22A		0.4650	-0.0231	-0.51	0.4950	-0.0267	-0.60
DL2WG7		0.4100	-0.0781	-1.73	0.4300	-0.0917	-2.05



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WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
DXRTEX		0.4800	-0.0081	-0.18	0.4800	-0.0417	-0.93
ECQUV6		0.4800	-0.0081	-0.18	0.5100	-0.0117	-0.26
EEWG44		0.5600	0.0719	1.59	0.5700	0.0483	1.08
EF4UPB		0.4275	-0.0606	-1.34	0.4745	-0.0472	-1.06
EJPFHY		0.4425	-0.0456	-1.01	0.4720	-0.0497	-1.11
EPD739		0.4900	0.0019	0.04	0.5350	0.0133	0.30
EVJW8Z		0.5145	0.0264	0.58	0.5435	0.0218	0.49
F6LEH3		0.4400	-0.0481	-1.06	0.4800	-0.0417	-0.93
F6LEKN	X	0.4000	-0.0881	-1.95	0.3900	-0.1317	-2.95
FCK4Y8		0.5200	0.0319	0.71	0.5900	0.0683	1.53
FPVER3		0.4550	-0.0331	-0.73	0.4745	-0.0472	-1.06
FXLX8W		0.4750	-0.0131	-0.29	0.5050	-0.0167	-0.37
GC43W6		0.4450	-0.0431	-0.95	0.4800	-0.0417	-0.93
GHRPPP		0.5250	0.0369	0.82	0.5450	0.0233	0.52
GYP8DY		0.4550	-0.0331	-0.73	0.4850	-0.0367	-0.82
H448AQ		0.5550	0.0669	1.48	0.5850	0.0633	1.42
HZ6R23		0.4450	-0.0431	-0.95	0.4700	-0.0517	-1.16
J74TE2		0.5000	0.0119	0.26	0.5400	0.0183	0.41
JCPP24		0.5850	0.0969	2.14	0.6150	0.0933	2.09
JEHJZT	X	0.4950	0.0069	0.15	0.6700	0.1483	3.32
JQABLX		0.4550	-0.0331	-0.73	0.5150	-0.0067	-0.15
JU9LGX		0.4400	-0.0481	-1.06	0.4800	-0.0417	-0.93
KCKT7Y	*	0.3550	-0.1331	-2.94	0.4000	-0.1217	-2.73
LHRJBP		0.4550	-0.0331	-0.73	0.4700	-0.0517	-1.16
LVWUJX		0.4750	-0.0131	-0.29	0.5100	-0.0117	-0.26
LX6RBT		0.5050	0.0169	0.37	0.4950	-0.0267	-0.60
MJKRXZ		0.4400	-0.0481	-1.06	0.4700	-0.0517	-1.16
MU2CHW		0.5100	0.0219	0.48	0.5600	0.0383	0.86
MZ6KHW		0.4500	-0.0381	-0.84	0.4950	-0.0267	-0.60
NAP9WW		0.5100	0.0219	0.48	0.5100	-0.0117	-0.26
NBJWBL		0.4500	-0.0381	-0.84	0.4700	-0.0517	-1.16
NL2D4R		0.5200	0.0319	0.71	0.5350	0.0133	0.30
NQUHWW		0.4750	-0.0131	-0.29	0.4900	-0.0317	-0.71
P2PBHT		0.5000	0.0119	0.26	0.5350	0.0133	0.30
PD2D4Q		0.4950	0.0069	0.15	0.5450	0.0233	0.52



**Analysis 905
Volatile Acidity**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PJ8AMQ		0.4600	-0.0281	-0.62	0.5100	-0.0117	-0.26
PMQYDU		0.5080	0.0199	0.44	0.5230	0.0013	0.03
PQT6NU		0.4750	-0.0131	-0.29	0.5100	-0.0117	-0.26
PVNYLV		0.4235	-0.0646	-1.43	0.4880	-0.0337	-0.76
Q6639L		0.5335	0.0454	1.00	0.5650	0.0433	0.97
QKGE2E	*	0.5590	0.0709	1.57	0.5365	0.0148	0.33
QULLFE		0.4900	0.0019	0.04	0.5500	0.0283	0.63
R6LCY2		0.4900	0.0019	0.04	0.5150	-0.0067	-0.15
REB3HM		0.4750	-0.0131	-0.29	0.4950	-0.0267	-0.60
RHADHT		0.4450	-0.0431	-0.95	0.4850	-0.0367	-0.82
UE32AH		0.5300	0.0419	0.93	0.5650	0.0433	0.97
ULL87P		0.4600	-0.0281	-0.62	0.4950	-0.0267	-0.60
V8YEVM		0.5600	0.0719	1.59	0.5600	0.0383	0.86
VDMXFQ		0.5000	0.0119	0.26	0.5000	-0.0217	-0.49
VR7KPN		0.4600	-0.0281	-0.62	0.5100	-0.0117	-0.26
VTZ94D		0.4700	-0.0181	-0.40	0.4900	-0.0317	-0.71
W6NWCH		0.5400	0.0519	1.15	0.5650	0.0433	0.97
X4APNF		0.5600	0.0719	1.59	0.6100	0.0883	1.98
XZ9KBV	X	0.5700	0.0819	1.81	0.5300	0.0083	0.19
Z6RNUA		0.4650	-0.0231	-0.51	0.4950	-0.0267	-0.60
ZDLWDE		0.5000	0.0119	0.26	0.5000	-0.0217	-0.49
ZR4N2L		0.4500	-0.0381	-0.84	0.4800	-0.0417	-0.93

Grand Means		Summary Statistics	
	0.48807 g/L as acetic acid		0.52172 g/L as acetic acid
Std Dev Btwn Labs			
	0.04522 g/L as acetic acid		0.04464 g/L as acetic acid
Statistics based on 88 of 92 reporting participants			

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot



Analysis 905
Volatile Acidity

Comments on Assigned Data Flags for Test #905

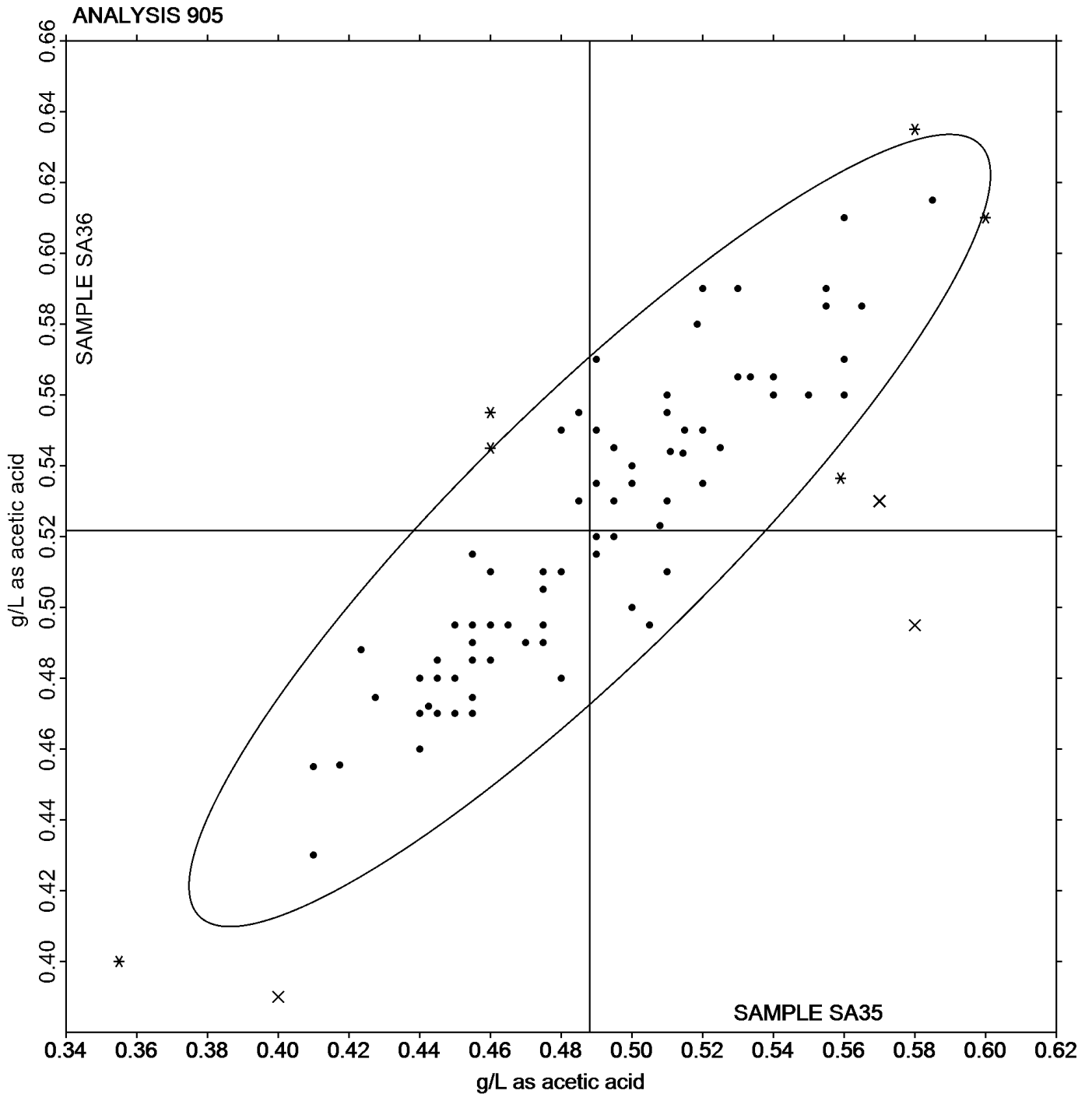
- F6LEKN (X) - Inconsistent in testing between samples, data for sample SA36 are low.
- JEHJZT (X) - Inconsistent in testing between samples, data for sample SA36 are high. Inconsistent within the determinations of both samples.
- 9BDEUB (X) - Inconsistent in testing between samples.
- XZ9KBV (X) - Inconsistent in testing between samples.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA35 <i>Cabernet Sauvignon</i>			Sample SA36 <i>Merlot</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method	0.510	0.064	0.0219	0.543	0.067	0.0208	2/2
Cash Still method	0.507	0.042	0.0193	0.526	0.048	0.0047	8/9
Enzymatic method	0.479	0.044	-0.0086	0.516	0.045	-0.0055	61/62
HPLC	0.515	0.000	0.0269	0.550	0.000	0.0283	1/1
GC							0/1
Colorimetric Analysis	0.460	0.000	-0.0281	0.545	0.000	0.0233	1/1
Seg. Flow / Colorimetric Analyzer	0.488	0.036	0.0001	0.520	0.033	-0.0019	5/5
FTIR	0.521	0.049	0.0328	0.543	0.043	0.0216	10/11



Analysis 905
Volatile Acidity





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Analysis 906 Specific Gravity

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2WGNYS		0.9965	0.0002	0.28	0.9966	0.0002	0.33
38DAHG	X	0.9988	0.0025	4.44	0.9986	0.0021	3.71
3KKZFH		0.9966	0.0003	0.50	0.9968	0.0003	0.53
3MM37J		0.9966	0.0002	0.41	0.9969	0.0004	0.70
3WBWHG		0.9949	-0.0014	-2.58	0.9951	-0.0014	-2.42
43TJRC		0.9963	0.0000	-0.06	0.9965	0.0000	0.08
4CH9PZ		0.9965	0.0001	0.21	0.9967	0.0002	0.34
4FHJKZ		0.9965	0.0001	0.27	0.9966	0.0002	0.31
4XMQY2		0.9965	0.0002	0.34	0.9967	0.0002	0.37
4YYM67		0.9965	0.0002	0.37	0.9967	0.0002	0.39
6CE6EL		0.9965	0.0002	0.30	0.9967	0.0002	0.34
76DF7F		0.9965	0.0002	0.30	0.9966	0.0001	0.26
76E3PF		0.9965	0.0002	0.34	0.9967	0.0002	0.37
7QTRY4		0.9965	0.0002	0.37	0.9967	0.0002	0.35
7Y8GXC		0.9966	0.0002	0.41	0.9968	0.0003	0.54
84XDY8		0.9966	0.0002	0.39	0.9967	0.0002	0.43
8HJQD3		0.9965	0.0002	0.30	0.9967	0.0002	0.43
8XTADF		0.9952	-0.0012	-2.07	0.9951	-0.0013	-2.32
98BB8V		0.9965	0.0002	0.32	0.9967	0.0002	0.36
9ECPRW	X	0.9953	-0.0010	-1.86	0.9968	0.0004	0.62
9VJNYE		0.9965	0.0002	0.29	0.9966	0.0002	0.29
9YXJJH	X	0.9963	0.0000	-0.08	0.9958	-0.0007	-1.14
A62M8V		0.9966	0.0002	0.43	0.9967	0.0003	0.46
A6H4Y3		0.9965	0.0001	0.25	0.9966	0.0002	0.30
BAV4WU	*	0.9968	0.0004	0.75	0.9965	0.0000	0.08
BMH7G8		0.9963	-0.0001	-0.15	0.9964	-0.0001	-0.18
C7PV8B		0.9966	0.0003	0.48	0.9969	0.0004	0.77
CEJ4PF	X	1.0020	0.0057	10.19	1.0023	0.0058	10.10
CK7UCB	*	0.9946	-0.0017	-3.14	0.9947	-0.0018	-3.05
CUWEHA		0.9965	0.0002	0.36	0.9967	0.0002	0.39
D7K22A	*	0.9949	-0.0014	-2.58	0.9949	-0.0016	-2.77
DL2WG7		0.9964	0.0001	0.12	0.9966	0.0001	0.26
ECQUV6		0.9966	0.0003	0.48	0.9966	0.0001	0.26
EEWG44		0.9965	0.0002	0.30	0.9967	0.0002	0.34
EF4UPB		0.9965	0.0002	0.30	0.9966	0.0002	0.30



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Analysis 906 Specific Gravity

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EJPFHY		0.9965	0.0002	0.35	0.9967	0.0002	0.41
EPD739		0.9960	-0.0003	-0.60	0.9960	-0.0005	-0.78
EVJW8Z		0.9970	0.0006	1.11	0.9971	0.0006	1.12
F6LEH3		0.9967	0.0003	0.57	0.9967	0.0002	0.43
F6LEKN		0.9966	0.0003	0.54	0.9968	0.0003	0.57
FCK4Y8		0.9966	0.0002	0.41	0.9967	0.0003	0.46
FPVER3		0.9965	0.0002	0.29	0.9967	0.0002	0.34
FXLX8W		0.9964	0.0001	0.20	0.9966	0.0001	0.25
GC43W6		0.9968	0.0005	0.84	0.9967	0.0002	0.43
GYP8DY		0.9963	0.0000	-0.06	0.9965	0.0000	0.00
H448AQ	X	0.9942	-0.0021	-3.84	0.9944	-0.0021	-3.55
HZ6R23		0.9949	-0.0014	-2.58	0.9949	-0.0016	-2.68
J74TE2	X	0.9968	0.0005	0.83	0.9978	0.0013	2.32
JCPP24	X	0.9950	-0.0013	-2.40	0.9960	-0.0005	-0.78
JEHJZT	X	0.9957	-0.0007	-1.21	0.9950	-0.0015	-2.57
KCKT7Y		0.9962	-0.0001	-0.24	0.9964	-0.0001	-0.09
LVWUJX		0.9966	0.0002	0.39	0.9967	0.0002	0.34
MJKRXZ		0.9966	0.0003	0.46	0.9967	0.0003	0.50
MZ6KHW		0.9965	0.0002	0.28	0.9967	0.0002	0.35
NAP9WW		0.9959	-0.0004	-0.78	0.9960	-0.0005	-0.78
NBJWBL	X	0.9937	-0.0026	-4.74	0.9939	-0.0026	-4.41
NL2D4R		0.9965	0.0001	0.25	0.9964	0.0000	-0.08
P2PBHT		0.9965	0.0002	0.30	0.9966	0.0001	0.26
PD2D4Q	*	0.9945	-0.0018	-3.30	0.9947	-0.0018	-3.03
PJ8AMQ	*	0.9978	0.0015	2.63	0.9978	0.0013	2.32
PMQYDU		0.9960	-0.0003	-0.60	0.9960	-0.0005	-0.78
PVNYLV	X	0.9965	0.0002	0.35	0.9950	-0.0015	-2.52
QKGE2E		0.9965	0.0002	0.37	0.9966	0.0001	0.26
QULLFE		0.9965	0.0002	0.30	0.9968	0.0003	0.60
RHADHT		0.9961	-0.0003	-0.51	0.9965	0.0000	0.00
UD6REF		0.9965	0.0002	0.29	0.9967	0.0002	0.34
UE32AH		0.9965	0.0002	0.30	0.9966	0.0001	0.26
ULL87P	X	1.0013	0.0050	8.94	1.0015	0.0050	8.72
V3KKFQ		0.9968	0.0005	0.83	0.9968	0.0003	0.59
V8YEVM		0.9972	0.0009	1.55	0.9975	0.0011	1.88



**Analysis 906
Specific Gravity**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
VDMXFQ		0.9965	0.0002	0.36	0.9967	0.0002	0.41
VR7KPN		0.9966	0.0003	0.52	0.9967	0.0003	0.51
VTZ94D		0.9957	-0.0006	-1.14	0.9958	-0.0007	-1.13
W6NWCH		0.9967	0.0004	0.66	0.9969	0.0004	0.77
X4APNF		0.9967	0.0004	0.66	0.9969	0.0004	0.69
Z6RNUA		0.9964	0.0001	0.12	0.9965	0.0000	0.08
Z6XZFK		0.9964	0.0001	0.12	0.9966	0.0001	0.17
ZDLWDE		0.9963	0.0000	-0.06	0.9964	-0.0001	-0.18
ZR4N2L		0.9967	0.0004	0.74	0.9970	0.0006	1.02

Grand Means		Summary Statistics	
0.99633	sp gr 20/20 C	0.99645	sp gr 20/20 C
Std Dev Btwn Labs		0.00058 sp gr 20/20 C	
0.00056	sp gr 20/20 C		
Statistics based on 68 of 79 reporting participants			

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot

Comments on Assigned Data Flags for Test #906

- 9ECPRW (X) - Inconsistent in testing between samples.
- JEHJZT (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA35.
- H448AQ (X) - Data for both samples are low. Possible Systematic Error.
- NBJWBL (X) - Data for both samples are low. Possible Systematic Error.
- JCPP24 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA35.
- ULL87P (X) - Data for both samples are high.
- PVNYLV (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA35.
- J74TE2 (X) - Inconsistent in testing between samples.
- 38DAHG (X) - Data for both samples are high. Possible Systematic Error.
- 9YXJH (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA35.
- CEJ4PF (X) - Data for both samples are high.



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #068
Summer 2021

Analysis 907

pH

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JTMFK		3.650	0.025	0.92	3.585	0.025	0.85
2WGNVD		3.645	0.020	0.73	3.585	0.025	0.85
38DAHG		3.610	-0.015	-0.55	3.520	-0.040	-1.35
3KKZFH		3.595	-0.030	-1.10	3.550	-0.010	-0.33
3MM37J		3.600	-0.025	-0.92	3.540	-0.020	-0.67
3Q7TWN		3.680	0.055	2.01	3.610	0.050	1.70
3WBWHG		3.680	0.055	2.01	3.615	0.055	1.87
43TJRC		3.630	0.005	0.18	3.560	0.000	0.01
4CH9PZ		3.630	0.005	0.18	3.560	0.000	0.01
4FHJKZ		3.620	-0.005	-0.18	3.550	-0.010	-0.33
4XMQY2		3.640	0.015	0.55	3.570	0.010	0.35
4YYM67		3.660	0.035	1.28	3.600	0.040	1.36
6CE6EL		3.595	-0.030	-1.10	3.530	-0.030	-1.01
76DF7F		3.635	0.010	0.37	3.550	-0.010	-0.33
76E3PF		3.635	0.010	0.37	3.575	0.015	0.52
7QTRY4	X	3.630	0.005	0.18	3.520	-0.040	-1.35
7Y8GXC		3.650	0.025	0.92	3.580	0.020	0.68
84XDY8		3.641	0.016	0.57	3.570	0.010	0.33
8HJQD3		3.665	0.040	1.47	3.590	0.030	1.02
8XTADF		3.655	0.030	1.10	3.610	0.050	1.70
968KZF		3.620	-0.005	-0.18	3.550	-0.010	-0.33
98BB8V		3.621	-0.004	-0.15	3.554	-0.006	-0.21
9BDEUB		3.660	0.035	1.28	3.600	0.040	1.36
9ECPRW		3.620	-0.005	-0.18	3.540	-0.020	-0.67
9VJNYE		3.655	0.030	1.10	3.585	0.025	0.85
9YXJJH	X	3.510	-0.115	-4.21	3.385	-0.175	-5.93
A62M8V		3.662	0.037	1.34	3.591	0.031	1.06
BAV4WU		3.615	-0.010	-0.37	3.535	-0.025	-0.84
BMH7G8		3.590	-0.035	-1.28	3.510	-0.050	-1.69
C7PV8B		3.580	-0.045	-1.65	3.520	-0.040	-1.35
CEJ4PF		3.610	-0.015	-0.55	3.550	-0.010	-0.33
CUWEHA		3.620	-0.005	-0.18	3.550	-0.010	-0.33
D7K22A	X	3.670	0.045	1.65	3.565	0.005	0.18
DL2WG7		3.680	0.055	2.01	3.615	0.055	1.87
DXRTEX		3.650	0.025	0.92	3.595	0.035	1.19



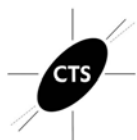
ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #068
Summer 2021

Analysis 907

pH

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ECQUV6		3.620	-0.005	-0.18	3.550	-0.010	-0.33
EEWG44		3.610	-0.015	-0.55	3.550	-0.010	-0.33
EF4UPB		3.620	-0.005	-0.18	3.550	-0.010	-0.33
EJPFHY		3.650	0.025	0.92	3.580	0.020	0.68
EPD739		3.610	-0.015	-0.55	3.540	-0.020	-0.67
EVJW8Z		3.597	-0.028	-1.02	3.528	-0.032	-1.08
F6LEH3		3.660	0.035	1.28	3.580	0.020	0.68
F6LEKN		3.575	-0.050	-1.83	3.515	-0.045	-1.52
FCK4Y8		3.620	-0.005	-0.18	3.550	-0.010	-0.33
FPVER3		3.610	-0.015	-0.55	3.545	-0.015	-0.50
FXLX8W		3.640	0.015	0.55	3.570	0.010	0.35
GC43W6		3.600	-0.025	-0.92	3.545	-0.015	-0.50
GHRPPP	*	3.625	0.000	0.00	3.590	0.030	1.02
GYP8DY		3.585	-0.040	-1.46	3.520	-0.040	-1.35
H448AQ		3.600	-0.025	-0.92	3.540	-0.020	-0.67
HZ6R23		3.645	0.020	0.73	3.580	0.020	0.68
J74TE2		3.630	0.005	0.18	3.560	0.000	0.01
JCPP24		3.650	0.025	0.92	3.605	0.045	1.53
JEHJZT		3.590	-0.035	-1.28	3.530	-0.030	-1.01
JQABLX		3.620	-0.005	-0.18	3.530	-0.030	-1.01
JU9LGX		3.610	-0.015	-0.55	3.545	-0.015	-0.50
KCKT7Y		3.620	-0.005	-0.18	3.560	0.000	0.01
LHRJBP		3.615	-0.010	-0.37	3.560	0.000	0.01
LVWUJX		3.660	0.035	1.28	3.595	0.035	1.19
LX6RBT	*	3.555	-0.070	-2.56	3.480	-0.080	-2.71
MJKRXZ		3.620	-0.005	-0.18	3.550	-0.010	-0.33
MU2CHW		3.645	0.020	0.73	3.570	0.010	0.35
MZ6KHW		3.610	-0.015	-0.55	3.557	-0.003	-0.11
NAP9WW		3.615	-0.010	-0.37	3.560	0.000	0.01
NBJWBL		3.620	-0.005	-0.18	3.550	-0.010	-0.33
NL2D4R	X	3.730	0.105	3.85	3.700	0.140	4.75
NQUHWW		3.625	0.000	0.00	3.555	-0.005	-0.16
P2PBHT		3.680	0.055	2.01	3.620	0.060	2.04
PD2D4Q		3.620	-0.005	-0.18	3.550	-0.010	-0.33
PJ8AMQ		3.630	0.005	0.18	3.565	0.005	0.18



Analysis 907

pH

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PMQYDU		3.590	-0.035	-1.28	3.520	-0.040	-1.35
PQT6NU		3.650	0.025	0.92	3.580	0.020	0.68
PVNYLV	X	3.955	0.330	12.09	3.910	0.350	11.87
Q6639L		3.602	-0.023	-0.84	3.542	-0.018	-0.62
QKGE2E		3.605	-0.020	-0.73	3.560	0.000	0.01
QULLFE		3.620	-0.005	-0.18	3.560	0.000	0.01
R6LCY2		3.630	0.005	0.18	3.575	0.015	0.52
REB3HM		3.605	-0.020	-0.73	3.545	-0.015	-0.50
RHADHT		3.625	0.000	0.00	3.575	0.015	0.52
UD6REF		3.680	0.055	2.01	3.615	0.055	1.87
UE32AH		3.620	-0.005	-0.18	3.550	-0.010	-0.33
ULL87P		3.582	-0.043	-1.57	3.513	-0.047	-1.59
V3KKFQ		3.560	-0.065	-2.38	3.500	-0.060	-2.03
V8YEVM		3.610	-0.015	-0.55	3.555	-0.005	-0.16
VDMXFQ	X	3.730	0.105	3.85	3.730	0.170	5.77
VR7KPN		3.665	0.040	1.47	3.605	0.045	1.53
VTZ94D	*	3.635	0.010	0.37	3.600	0.040	1.36
W6NWCH		3.580	-0.045	-1.65	3.510	-0.050	-1.69
X4APNF		3.630	0.005	0.18	3.545	-0.015	-0.50
XZ9KBV		3.650	0.025	0.92	3.610	0.050	1.70
Z6RNUA		3.600	-0.025	-0.92	3.530	-0.030	-1.01
Z6XZFK		3.620	-0.005	-0.18	3.540	-0.020	-0.67
ZDLWDE	*	3.635	0.010	0.37	3.540	-0.020	-0.67
ZR4N2L		3.625	0.000	0.00	3.575	0.015	0.52

Grand Means		Summary Statistics	
	3.6250 pH		3.5598 pH
Std Dev Btwn Labs			0.0295 pH
	0.0273 pH	Statistics based on 88 of 94 reporting participants	

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot



Comments on Assigned Data Flags for Test #907

7QTRY4 (X) - Inconsistent in testing between samples.

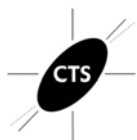
NL2D4R (X) - Data for both samples are high. Possible Systematic Error.

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

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

D7K22A (X) - Inconsistent in testing between samples.

9YXJH (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample SA35.



**Analysis 908
Residual Sugar**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2WGNYP		9.320	2.627	1.95	9.950	2.859	1.96
3Q7TWN		5.400	-1.293	-0.96	5.800	-1.291	-0.88
7QTRY4		8.300	1.607	1.19	8.850	1.759	1.20
8XTADF		8.450	1.757	1.30	8.800	1.709	1.17
9VJNYE		5.900	-0.793	-0.59	6.300	-0.791	-0.54
A6H4Y3		7.135	0.442	0.33	7.630	0.539	0.37
C7PV8B		8.000	1.307	0.97	8.000	0.909	0.62
CK7UCB		5.410	-1.283	-0.95	5.875	-1.216	-0.83
D7K22A		4.900	-1.793	-1.33	5.300	-1.791	-1.22
EEWG44		8.300	1.607	1.19	8.800	1.709	1.17
EJPFHY		4.985	-1.708	-1.26	5.310	-1.781	-1.22
FCK4Y8		5.500	-1.193	-0.88	5.900	-1.191	-0.81
FXLX8W		7.150	0.457	0.34	7.600	0.509	0.35
GYP8DY		6.780	0.087	0.06	7.435	0.344	0.24
J74TE2		5.400	-1.293	-0.96	5.800	-1.291	-0.88
LX6RBT		6.805	0.112	0.08	7.370	0.279	0.19
NBJWBL		5.280	-1.413	-1.05	5.650	-1.441	-0.99
NL2D4R		5.200	-1.493	-1.11	5.450	-1.641	-1.12
PJ8AMQ		6.600	-0.093	-0.07	6.500	-0.591	-0.40
PVNYLV		8.065	1.372	1.02	9.245	2.154	1.47
ULL87P		5.535	-1.158	-0.86	5.810	-1.281	-0.88
VDMXFQ		5.900	-0.793	-0.59	6.250	-0.841	-0.57
VR7KPN	*	7.000	0.307	0.23	6.600	-0.491	-0.34
VTZ94D		7.080	0.387	0.29	7.305	0.214	0.15
XZ9KBV		8.920	2.227	1.65	9.740	2.649	1.81

Grand Means		Summary Statistics	
	6.6926 g/L		7.0908 g/L
Std Dev Btwn Labs			1.4624 g/L
	1.3501 g/L		
Statistics based on 25 of 25 reporting participants			

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot



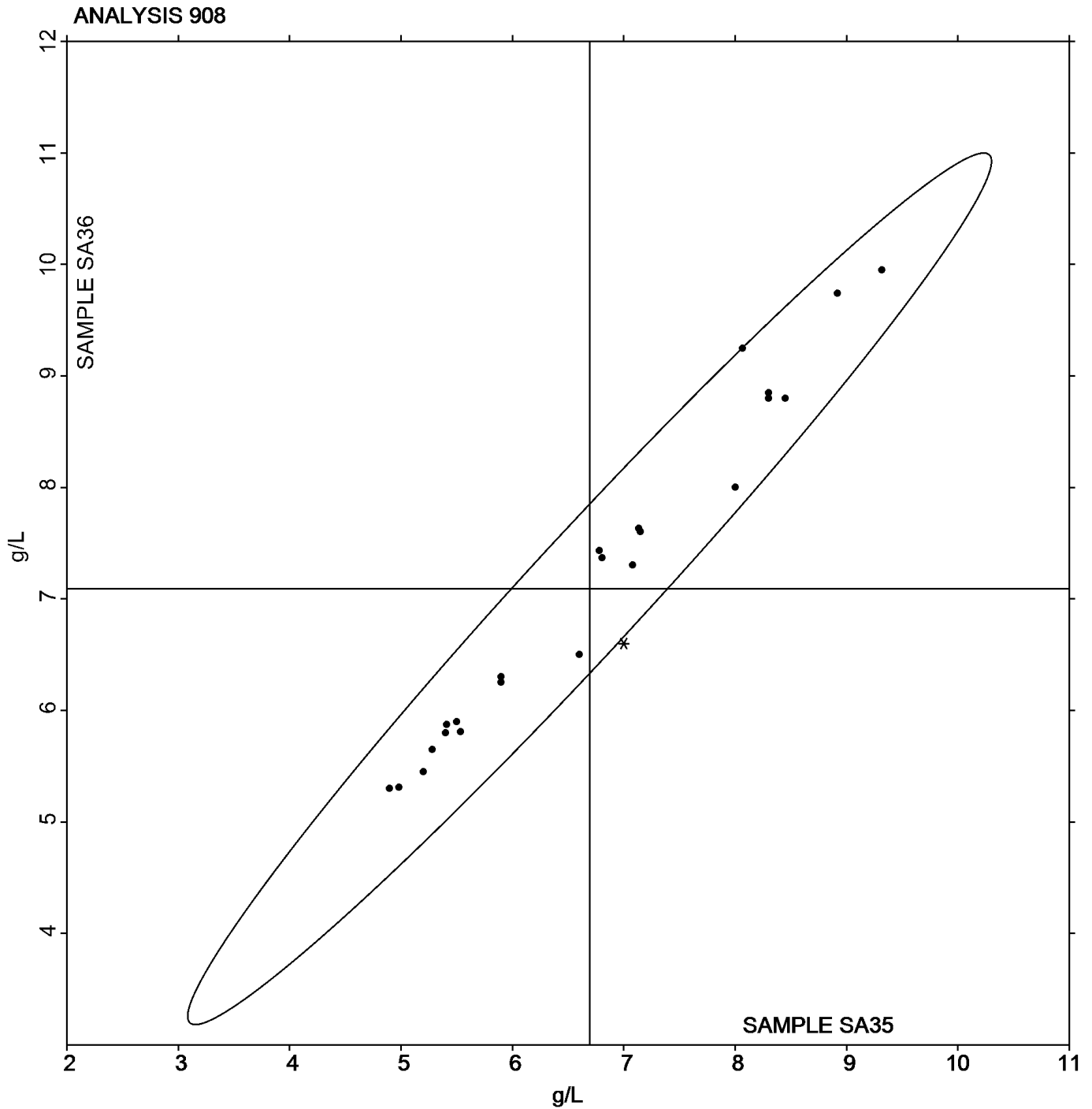
Analysis 908
Residual Sugar

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA35 <i>Cabernet Sauvignon</i>			Sample SA36 <i>Merlot</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	5.603	0.261	-1.089	6.008	0.210	-1.082	3/3
Cu Reduction Method	8.018	1.002	1.326	8.484	1.366	1.393	6/6
Segmented Flow	7.143	0.011	0.450	7.615	0.021	0.524	2/2
FTIR	6.877	1.273	0.184	7.232	1.354	0.141	9/9
Other _____	5.244	0.282	-1.449	5.604	0.273	-1.487	5/5



Analysis 908
Residual Sugar





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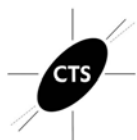
Analysis 909

L-Malic Acid

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JTMFK		0.0950	-0.0438	-0.96	0.0900	-0.0482	-1.11
2WGNVD	*	0.2200	0.0812	1.79	0.1900	0.0518	1.19
38DAHG		0.1200	-0.0188	-0.41	0.1300	-0.0082	-0.19
3MM37J		0.1450	0.0062	0.14	0.1450	0.0068	0.16
3Q7TWN		0.1600	0.0212	0.47	0.1700	0.0318	0.73
3WBWHG		0.1950	0.0562	1.24	0.1950	0.0568	1.30
43TJRC		0.1670	0.0282	0.62	0.1615	0.0233	0.53
4CH9PZ		0.1850	0.0462	1.02	0.1800	0.0418	0.96
4FHJKZ		0.1520	0.0132	0.29	0.1430	0.0048	0.11
4XMQY2		0.0975	-0.0413	-0.91	0.1030	-0.0352	-0.81
4YYM67		0.0905	-0.0483	-1.06	0.0710	-0.0672	-1.54
6CE6EL		0.1800	0.0412	0.91	0.1850	0.0468	1.07
76DF7F		0.1050	-0.0338	-0.74	0.1050	-0.0332	-0.76
76E3PF		0.0550	-0.0838	-1.84	0.0750	-0.0632	-1.45
7QTRY4		0.2000	0.0612	1.35	0.1900	0.0518	1.19
7Y8GXC	*	0.0100	-0.1288	-2.83	0.0100	-0.1282	-2.94
84XDY8		0.1340	-0.0048	-0.10	0.1320	-0.0062	-0.14
8HJQD3		0.1575	0.0187	0.41	0.1635	0.0253	0.58
8XTADF	X	0.2250	0.0862	1.90	0.2850	0.1468	3.37
968KZF		0.1200	-0.0188	-0.41	0.1200	-0.0182	-0.42
98BB8V		0.1150	-0.0238	-0.52	0.1185	-0.0197	-0.45
9BDEUB		0.0995	-0.0393	-0.86	0.1015	-0.0367	-0.84
9ECPRW		0.1610	0.0222	0.49	0.1825	0.0443	1.02
9VJNYE		0.0950	-0.0438	-0.96	0.1200	-0.0182	-0.42
A62M8V		0.1520	0.0133	0.29	0.1403	0.0021	0.05
BAV4WU		0.1400	0.0012	0.03	0.1350	-0.0032	-0.07
BMH7G8		0.0900	-0.0488	-1.07	0.1100	-0.0282	-0.65
C7PV8B	M	0.0100	-0.1288	-2.83	No data reported for this sample		
CEJ4PF		0.1550	0.0162	0.36	0.1700	0.0318	0.73
CK7UCB		0.1500	0.0112	0.25	0.1300	-0.0082	-0.19
CUWEHA		0.1500	0.0112	0.25	0.1500	0.0118	0.27
D7K22A	X	0.2000	0.0612	1.35	0.3000	0.1618	3.71
DL2WG7		0.1275	-0.0113	-0.25	0.1270	-0.0112	-0.26
ECQUV6		0.1600	0.0212	0.47	0.1600	0.0218	0.50
EEWG44		0.2000	0.0612	1.35	0.2000	0.0618	1.42

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #068****Analysis 909****Summer 2021****L-Malic Acid**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EF4UPB		0.1450	0.0062	0.14	0.1450	0.0068	0.16
EJPFHY		0.1300	-0.0088	-0.19	0.1400	0.0018	0.04
EPD739		0.1500	0.0112	0.25	0.1550	0.0168	0.39
EVJW8Z		0.1540	0.0152	0.34	0.1585	0.0203	0.47
F6LEH3		0.2450	0.1062	2.34	0.2300	0.0918	2.11
F6LEKN	*	0.1500	0.0112	0.25	0.1800	0.0418	0.96
FCK4Y8		0.1500	0.0112	0.25	0.1500	0.0118	0.27
FPVER3		0.1695	0.0307	0.68	0.1725	0.0343	0.79
GYP8DY		0.1750	0.0362	0.80	0.1600	0.0218	0.50
H448AQ		0.1295	-0.0093	-0.20	0.1155	-0.0227	-0.52
HZ6R23		0.1700	0.0312	0.69	0.1750	0.0368	0.84
J74TE2		0.1400	0.0012	0.03	0.1400	0.0018	0.04
JCPP24		0.1250	-0.0138	-0.30	0.1200	-0.0182	-0.42
JEHJZT	*	0.0200	-0.1188	-2.61	0.0100	-0.1282	-2.94
JQABLX		0.1250	-0.0138	-0.30	0.1250	-0.0132	-0.30
JU9LGX		0.1800	0.0412	0.91	0.1800	0.0418	0.96
KCKT7Y		0.1150	-0.0238	-0.52	0.1100	-0.0282	-0.65
LHRJBP		0.1610	0.0222	0.49	0.1625	0.0243	0.56
LVWUJX		0.1850	0.0462	1.02	0.1750	0.0368	0.84
MU2CHW		0.1700	0.0312	0.69	0.1400	0.0018	0.04
MZ6KHW		0.1300	-0.0088	-0.19	0.1400	0.0018	0.04
NAP9WW		0.1050	-0.0338	-0.74	0.1150	-0.0232	-0.53
NBJWBL		0.1100	-0.0288	-0.63	0.1000	-0.0382	-0.88
NL2D4R		0.1600	0.0212	0.47	0.1400	0.0018	0.04
NQUHWW		0.1350	-0.0038	-0.08	0.1400	0.0018	0.04
P2PBHT		0.0525	-0.0863	-1.90	0.0755	-0.0627	-1.44
PD2D4Q		0.0600	-0.0788	-1.73	0.0450	-0.0932	-2.14
PJ8AMQ	*	0.0100	-0.1288	-2.83	0.0100	-0.1282	-2.94
PMQYDU		0.1400	0.0012	0.03	0.1400	0.0018	0.04
PQT6NU		0.0950	-0.0438	-0.96	0.1100	-0.0282	-0.65
PVNYLV		0.2300	0.0912	2.01	0.2100	0.0718	1.65
QKGE2E		0.1995	0.0607	1.34	0.1875	0.0493	1.13
QULLFE		0.1400	0.0012	0.03	0.1400	0.0018	0.04
R6LCY2		0.1400	0.0012	0.03	0.1450	0.0068	0.16
REB3HM		0.1375	-0.0013	-0.03	0.1435	0.0053	0.12



Analysis 909

L-Malic Acid

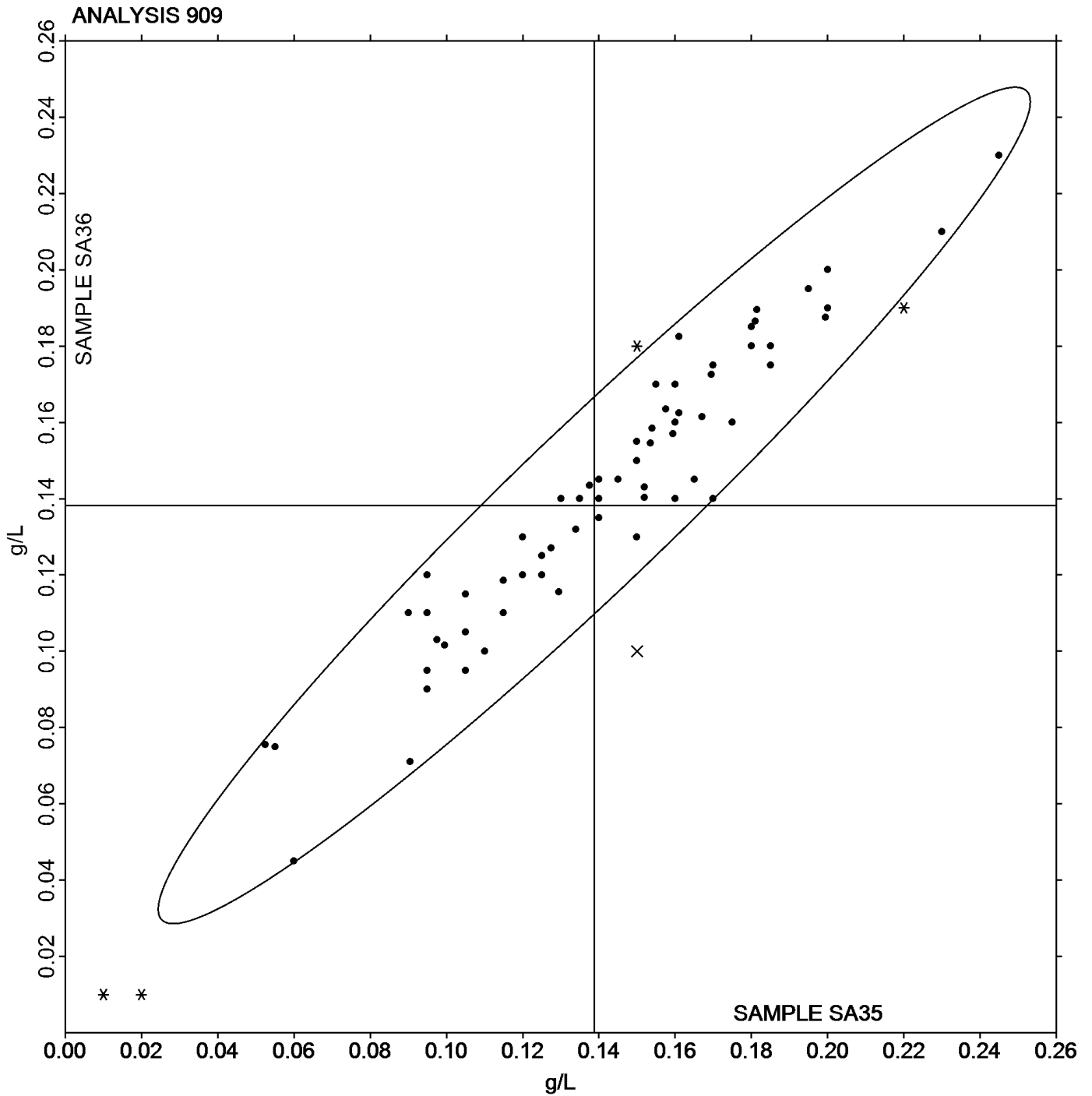
WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RHADHT		0.1650	0.0262	0.58	0.1450	0.0068	0.16
UE32AH		0.1535	0.0147	0.32	0.1545	0.0163	0.37
ULL87P		0.1500	0.0112	0.25	0.1550	0.0168	0.39
V8YEVM	X	0.3315	0.1927	4.24	0.3060	0.1678	3.85
VR7KPN		0.0950	-0.0438	-0.96	0.0950	-0.0432	-0.99
W6NWCH		0.1810	0.0422	0.93	0.1865	0.0483	1.11
X4APNF		0.1815	0.0427	0.94	0.1895	0.0513	1.18
Z6RNUA		0.1595	0.0207	0.46	0.1570	0.0188	0.43
ZDLWDE	X	0.1500	0.0112	0.25	0.1000	-0.0382	-0.88
ZR4N2L		0.1050	-0.0338	-0.74	0.0950	-0.0432	-0.99

Grand Means	Summary Statistics
0.13877 g/L	0.13822 g/L
Std Dev Btwn Labs	
0.04547 g/L	0.04357 g/L
Statistics based on 75 of 80 reporting participants	

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot

Comments on Assigned Data Flags for Test #909

- ZDLWDE (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA35.
- V8YEVM (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- D7K22A (X) - Inconsistent in testing between samples, data for sample SA36 are high.
- C7PV8B (M) - Participant did not submit data for sample SA36.
- 8XTADF (X) - Inconsistent in testing between samples, data for sample SA36 are high.



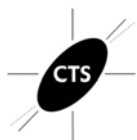


ASEV-CTS Wine Industry Interlaboratory Testing Program

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Summer 2021

Analysis 910 Glucose + Fructose

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2JTMFK		5.610	0.141	0.42	5.940	0.094	0.27
2WGNVD		5.445	-0.024	-0.07	5.795	-0.051	-0.14
38DAHG		4.850	-0.619	-1.87	5.150	-0.696	-1.97
3KKZFH	X	4.650	-0.819	-2.48	5.900	0.054	0.15
3MM37J		5.300	-0.169	-0.51	5.750	-0.096	-0.27
3WBWHG		5.620	0.151	0.45	6.015	0.169	0.48
43TJRC		5.900	0.431	1.30	6.300	0.454	1.29
4CH9PZ		5.400	-0.069	-0.21	5.700	-0.146	-0.41
4FHJKZ		5.750	0.281	0.85	6.200	0.354	1.01
4XMQY2	X	3.800	-1.669	-5.04	4.400	-1.446	-4.10
4YYM67		4.880	-0.589	-1.78	5.090	-0.756	-2.15
6CE6EL		5.565	0.096	0.29	6.020	0.174	0.50
76DF7F		5.345	-0.124	-0.38	5.755	-0.091	-0.26
76E3PF		5.050	-0.419	-1.27	5.500	-0.346	-0.98
7QTRY4	X	5.575	0.106	0.32	3.180	-2.666	-7.57
7Y8GXC		5.105	-0.364	-1.10	5.420	-0.426	-1.21
84XDY8		4.915	-0.554	-1.67	5.250	-0.596	-1.69
8HJQD3		5.900	0.431	1.30	6.300	0.454	1.29
8XTADF	*	5.850	0.381	1.15	6.000	0.154	0.44
968KZF		5.100	-0.369	-1.12	5.400	-0.446	-1.27
98BB8V		5.505	0.036	0.11	5.945	0.099	0.28
9BDEUB	X	4.950	-0.519	-1.57	5.600	-0.246	-0.70
9ECPRW		5.665	0.196	0.59	6.000	0.154	0.44
9VJNYE		5.925	0.456	1.38	6.385	0.539	1.53
A62M8V		5.900	0.431	1.30	6.250	0.404	1.15
A6H4Y3		5.045	-0.424	-1.28	5.410	-0.436	-1.24
BAV4WU		5.950	0.481	1.45	6.390	0.544	1.55
BMH7G8		5.575	0.106	0.32	6.090	0.244	0.69
C7PV8B	X	6.000	0.531	1.60	6.000	0.154	0.44
CEJ4PF		5.140	-0.329	-1.00	5.475	-0.371	-1.05
CUWEHA		5.420	-0.049	-0.15	5.640	-0.206	-0.58
D7K22A		4.900	-0.569	-1.72	5.300	-0.546	-1.55
DL2WG7	*	4.860	-0.609	-1.84	5.065	-0.781	-2.22
ECQUV6		5.900	0.431	1.30	6.300	0.454	1.29
EEWG44	*	6.100	0.631	1.90	6.700	0.854	2.43



ASEV-CTS Wine Industry Interlaboratory Testing Program

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Summer 2021

Analysis 910 Glucose + Fructose

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EF4UPB		5.525	0.056	0.17	5.860	0.014	0.04
EPD739		5.450	-0.019	-0.06	5.800	-0.046	-0.13
EVJW8Z		5.455	-0.014	-0.04	5.835	-0.011	-0.03
F6LEH3		5.550	0.081	0.24	5.950	0.104	0.30
F6LEKN		5.700	0.231	0.70	5.950	0.104	0.30
FPVER3		5.250	-0.219	-0.66	5.625	-0.221	-0.63
GC43W6		5.300	-0.169	-0.51	5.700	-0.146	-0.41
GHRPPP		6.050	0.581	1.75	6.400	0.554	1.57
GYP8DY		5.485	0.016	0.05	5.850	0.004	0.01
H448AQ		5.450	-0.019	-0.06	5.750	-0.096	-0.27
HZ6R23		5.840	0.371	1.12	6.190	0.344	0.98
J74TE2		5.400	-0.069	-0.21	5.800	-0.046	-0.13
JCPP24		5.981	0.512	1.55	6.422	0.576	1.63
JEHJZT	X	5.240	-0.229	-0.69	4.870	-0.976	-2.77
JQABLX		5.595	0.126	0.38	5.960	0.114	0.32
JU9LGX		5.400	-0.069	-0.21	5.800	-0.046	-0.13
KCKT7Y		4.900	-0.569	-1.72	5.400	-0.446	-1.27
LHRJBP		5.700	0.231	0.70	6.050	0.204	0.58
LVWUJX		4.925	-0.544	-1.64	5.340	-0.506	-1.44
MJKRXZ		5.380	-0.089	-0.27	5.785	-0.061	-0.17
MU2CHW		5.370	-0.099	-0.30	5.770	-0.076	-0.21
MZ6KHW	*	4.550	-0.919	-2.78	5.000	-0.846	-2.40
NAP9WW	X	4.825	-0.644	-1.95	5.690	-0.156	-0.44
NBJWBL		5.280	-0.189	-0.57	5.650	-0.196	-0.56
NL2D4R		5.200	-0.269	-0.81	5.450	-0.396	-1.12
NQUHWW	*	5.100	-0.369	-1.12	5.700	-0.146	-0.41
P2PBHT		5.805	0.336	1.01	6.135	0.289	0.82
PD2D4Q		5.595	0.126	0.38	5.970	0.124	0.35
PJ8AMQ		5.300	-0.169	-0.51	5.600	-0.246	-0.70
PMQYDU	*	5.615	0.146	0.44	5.720	-0.126	-0.36
PQT6NU		5.515	0.046	0.14	5.860	0.014	0.04
PVNYLV	X	6.600	1.131	3.41	6.775	0.929	2.64
Q6639L		5.795	0.326	0.98	6.220	0.374	1.06
QKGE2E	X	5.250	-0.219	-0.66	6.115	0.269	0.76
QULLFE		5.900	0.431	1.30	6.300	0.454	1.29



**Analysis 910
Glucose + Fructose**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
R6LCY2		5.300	-0.169	-0.51	5.650	-0.196	-0.56
REB3HM		5.665	0.196	0.59	6.070	0.224	0.64
RHADHT		5.330	-0.139	-0.42	5.670	-0.176	-0.50
UE32AH		5.600	0.131	0.39	6.050	0.204	0.58
ULL87P		5.535	0.066	0.20	5.810	-0.036	-0.10
V8YEVM		5.760	0.291	0.88	6.120	0.274	0.78
VR7KPN		5.305	-0.164	-0.50	5.730	-0.116	-0.33
VTZ94D		5.490	0.021	0.06	5.830	-0.016	-0.04
W6NWCH		5.550	0.081	0.24	5.900	0.054	0.15
X4APNF		5.625	0.156	0.47	6.125	0.279	0.79
Z6RNUA		5.800	0.331	1.00	6.300	0.454	1.29
ZDLWDE		5.650	0.181	0.55	6.050	0.204	0.58
ZR4N2L	*	5.300	-0.169	-0.51	5.895	0.049	0.14

Grand Means	Summary Statistics
5.4695 g/L	5.8456 g/L
Std Dev Btwn Labs	
0.3311 g/L	0.3522 g/L
Statistics based on 74 of 83 reporting participants	

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot

Comments on Assigned Data Flags for Test #910

- 4XMQY2 (X) - Data for both samples are low. Possible Systematic Error.
- QKGE2E (X) - Inconsistent in testing between samples.
- JEHJZT (X) - Inconsistent in testing between samples, data for sample SA36 are low.
- 7QTRY4 (X) - Data for sample SA36 are low.
- 9BDEUB (X) - Inconsistent in testing between samples.
- PVNYLV (X) - Data for sample SA35 are high. Inconsistent within the determinations of sample SA35.
- 3KKZFH (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA35.
- C7PV8B (X) - Inconsistent in testing between samples.
- NAP9WW (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.



Analysis 910
Glucose + Fructose

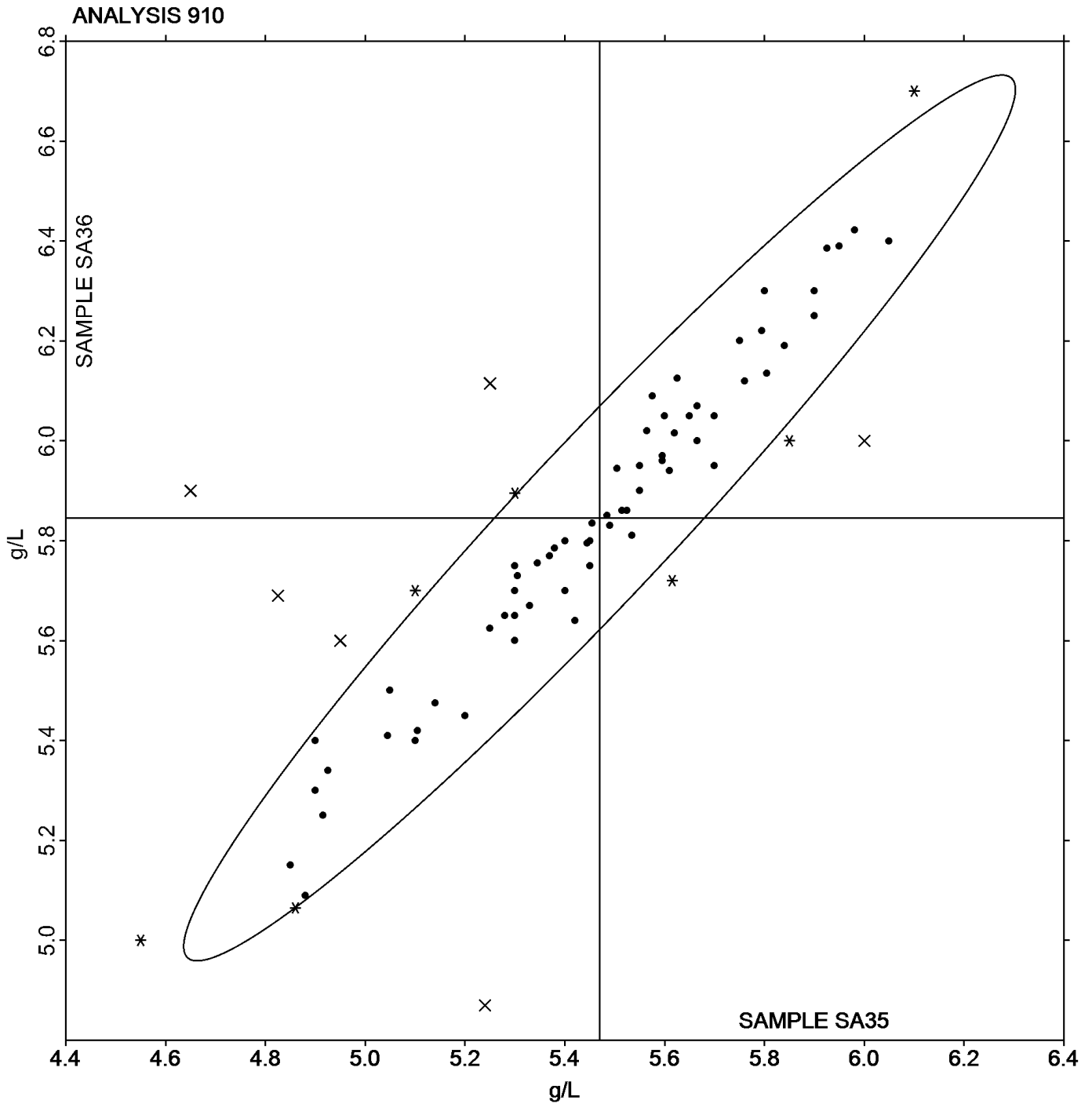
Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA35 <i>Cabernet Sauvignon</i>			Sample SA36 <i>Merlot</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
HPLC	5.245	0.283	-0.224	5.603	0.272	-0.243	2/2
Enzymatic/Spectrophotometric	5.451	0.312	-0.019	5.829	0.331	-0.016	64/70
FTIR	5.738	0.385	0.269	6.076	0.488	0.230	5/8
Other _____	5.574	0.588	0.104	5.971	0.592	0.125	3/3



Analysis 910

Glucose + Fructose





**Analysis 911
Copper Content**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2WGNYP		0.0285	-0.0164	-0.62	0.0315	-0.0142	-0.50
4CH9PZ		0.0295	-0.0154	-0.58	0.0355	-0.0101	-0.36
4FHJKZ		0.1000	0.0551	2.07	0.1000	0.0544	1.90
4XMQY2		0.0170	-0.0279	-1.05	0.0235	-0.0222	-0.78
7QTRY4		0.0600	0.0151	0.57	0.0800	0.0344	1.20
7Y8GXC		0.0100	-0.0349	-1.31	0.0100	-0.0357	-1.25
8XTADF		0.0340	-0.0109	-0.41	0.0420	-0.0036	-0.13
9VJNYE		0.0400	-0.0049	-0.19	0.0500	0.0044	0.15
A62M8V		0.0350	-0.0099	-0.37	0.0200	-0.0257	-0.90
A6H4Y3		0.0300	-0.0149	-0.56	0.0300	-0.0157	-0.55
C7PV8B		0.0500	0.0051	0.19	0.0500	0.0044	0.15
EEWG44		0.0600	0.0151	0.57	0.0600	0.0144	0.50
F6LEH3		0.0340	-0.0109	-0.41	0.0245	-0.0212	-0.74
FXLX8W		0.0305	-0.0144	-0.54	0.0320	-0.0136	-0.48
JEHJZT		0.0740	0.0291	1.09	0.0665	0.0209	0.73
Q6639L		0.0200	-0.0249	-0.94	0.0200	-0.0257	-0.90
QKGE2E		0.0300	-0.0149	-0.56	0.0200	-0.0257	-0.90
QULLFE		0.0300	-0.0149	-0.56	0.0300	-0.0157	-0.55
UE32AH		0.0860	0.0411	1.54	0.0725	0.0269	0.94
VR7KPN		0.1000	0.0551	2.07	0.1150	0.0694	2.43

Grand Means		Summary Statistics	
	0.04493 mg/L		0.04565 mg/L
Std Dev Btwn Labs			0.02858 mg/L
	0.02660 mg/L		
Statistics based on 20 of 20 reporting participants			

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot



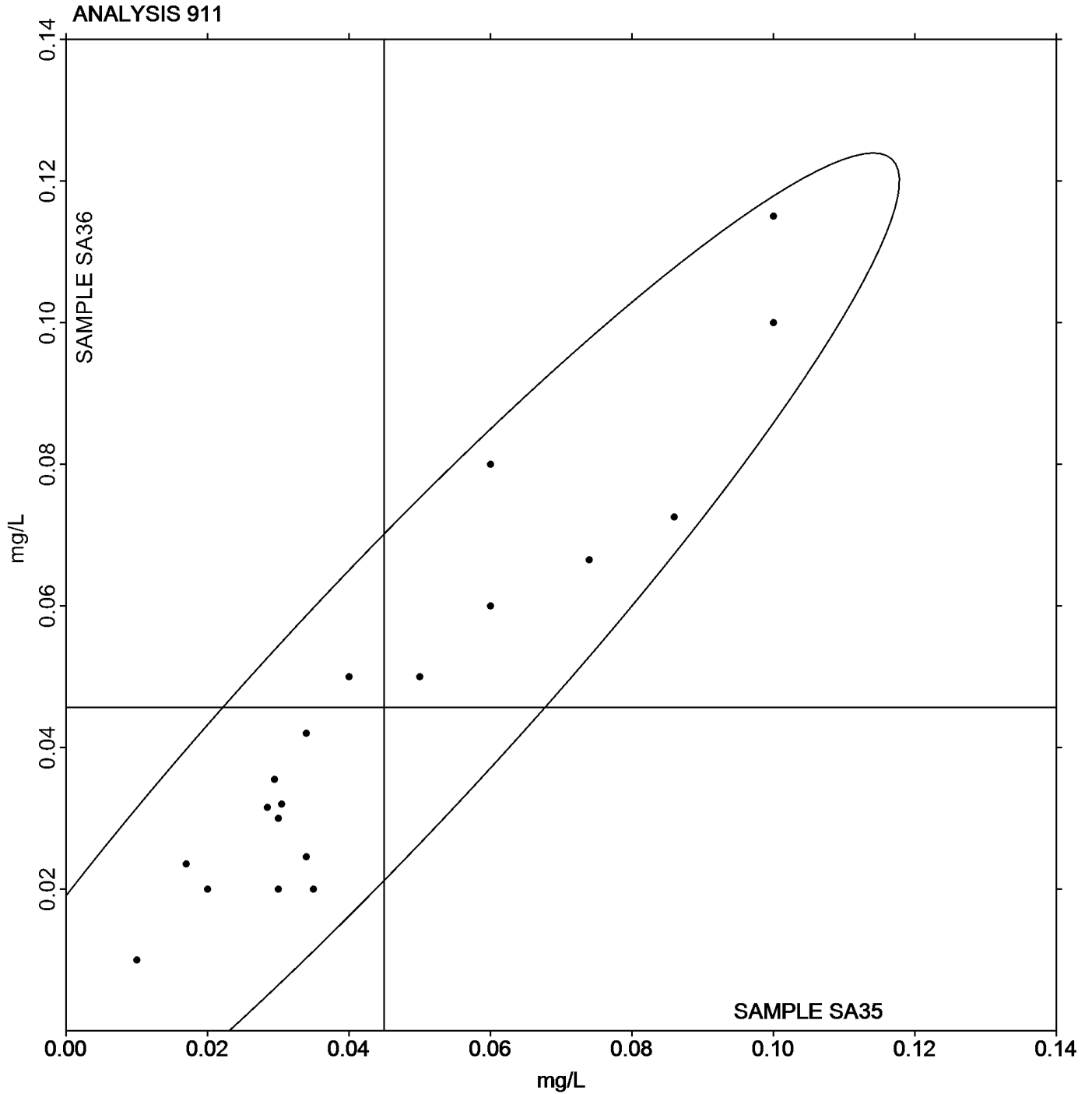
**Analysis 911
Copper Content**

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA35 <i>Cabernet Sauvignon</i>			Sample SA36 <i>Merlot</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Atomic Absorption Spectroscopy	0.047	0.022	0.0023	0.043	0.021	-0.0024	9/9
ICP	0.035	0.026	-0.0101	0.037	0.025	-0.0091	9/9
FTIR	0.100	0.000	0.0551	0.115	0.000	0.0694	1/1
Other _____	0.060	0.000	0.0151	0.080	0.000	0.0344	1/1



Analysis 911
Copper Content





**Analysis 912
Potassium (K) Content**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2WGNYS		1,170.0	-97.0	-0.39	1,017.9	-134.4	-0.51
4CH9PZ		1,158.5	-108.5	-0.43	1,026.5	-125.8	-0.48
4FHJKZ		1,140.0	-127.0	-0.51	1,020.0	-132.3	-0.50
4XMQY2		1,039.5	-227.5	-0.91	895.0	-257.3	-0.97
4YYM67		1,301.5	34.5	0.14	1,124.5	-27.8	-0.11
7QTRY4		1,151.7	-115.3	-0.46	1,102.7	-49.6	-0.19
8XTADF		1,228.8	-38.2	-0.15	1,106.8	-45.5	-0.17
9VJNYE		1,182.8	-84.1	-0.34	1,039.3	-112.9	-0.43
A6H4Y3		1,023.0	-244.0	-0.97	909.5	-242.8	-0.92
C7PV8B		1,002.5	-264.5	-1.05	975.5	-176.8	-0.67
EEWG44		1,246.0	-21.0	-0.08	1,193.0	40.7	0.15
F6LEH3		1,170.0	-97.0	-0.39	1,035.0	-117.3	-0.44
GYP8DY		1,290.0	23.0	0.09	1,120.0	-32.3	-0.12
JEHJZT	*	2,034.0	767.0	3.06	2,001.5	849.2	3.22
NAP9WW		1,305.0	38.0	0.15	1,175.0	22.7	0.09
P2PBHT		1,646.5	379.5	1.51	1,520.5	368.2	1.39
QKGE2E		1,172.5	-94.5	-0.38	1,052.5	-99.8	-0.38
X4APNF		1,543.5	276.5	1.10	1,426.0	273.7	1.04

Grand Means		Summary Statistics	
	1,266.99 mg/L		1,152.29 mg/L
Std Dev Btwn Labs			
	251.01 mg/L		263.96 mg/L
Statistics based on 18 of 18 reporting participants			

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot



**Analysis 912
Potassium (K) Content**

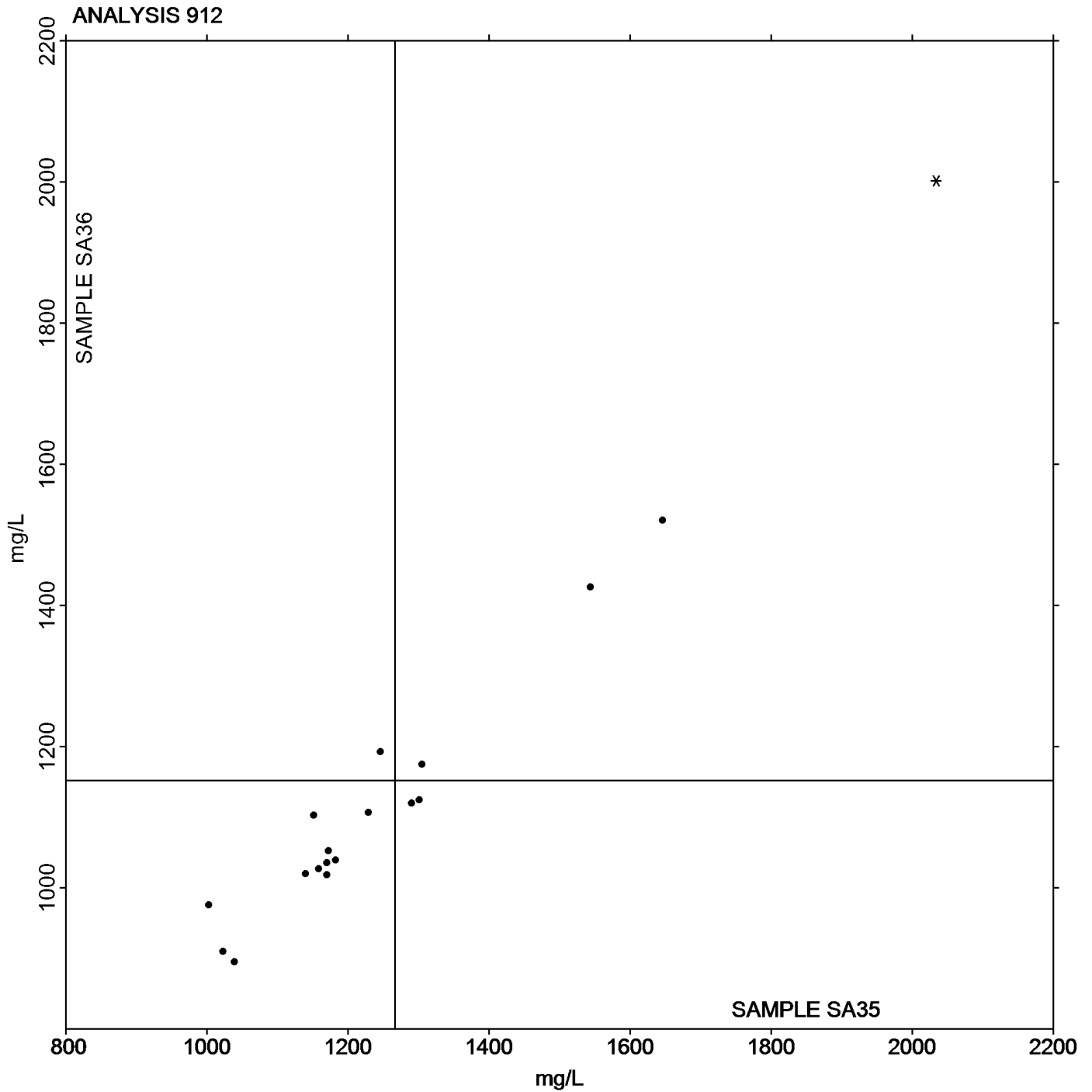
Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA35 <i>Cabernet Sauvignon</i>			Sample SA36 <i>Merlot</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Atomic Absorption Spectroscopy	1,338.668	403.042	71.7	1,238.669	429.707	86.4	5/5
ICP	1,132.824	74.667	-134.2	1,001.518	74.438	-150.8	7/7
FTIR	1,290.000	0.000	23.0	1,120.000	0.000	-32.3	1/1
Other _____	1,367.725	253.306	100.7	1,266.068	223.290	113.8	3/3
Colorimetric Analysis	1,394.750	210.364	127.8	1,309.500	164.756	157.2	2/2



Analysis 912

Potassium (K) Content



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

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #068****Analysis 915****Summer 2021****A420nm (1cm path)**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2WGNYP		3.415	0.125	0.40	3.261	0.092	0.32
38DAHG	X	3.573	0.282	0.89	2.981	-0.187	-0.64
3KKZFH		3.166	-0.124	-0.39	3.027	-0.141	-0.48
4FHJKZ		3.374	0.084	0.27	3.261	0.093	0.32
4YYM67		3.491	0.201	0.64	3.388	0.220	0.75
76DF7F		3.330	0.040	0.13	3.220	0.052	0.18
76E3PF		3.187	-0.104	-0.33	3.092	-0.076	-0.26
7QTRY4		3.430	0.140	0.44	3.270	0.102	0.35
7Y8GXC		3.350	0.060	0.19	3.220	0.052	0.18
8HJQD3		3.410	0.120	0.38	3.260	0.092	0.31
8XTADF		3.239	-0.051	-0.16	3.119	-0.049	-0.17
968KZF		3.310	0.020	0.06	3.190	0.022	0.07
9VJNYE		3.363	0.072	0.23	3.210	0.042	0.14
9YXJJH		3.390	0.100	0.32	3.260	0.092	0.31
C7PV8B	*	3.390	0.100	0.32	3.180	0.012	0.04
CEJ4PF		3.183	-0.107	-0.34	3.044	-0.124	-0.42
CUWEHA	*	2.347	-0.943	-2.98	2.329	-0.839	-2.87
D7K22A		2.550	-0.740	-2.34	2.499	-0.669	-2.29
ECQUV6		3.318	0.028	0.09	3.200	0.032	0.11
EEWG44		3.886	0.596	1.89	3.747	0.579	1.98
EJPFHY		2.999	-0.292	-0.92	2.833	-0.336	-1.15
EPD739		3.279	-0.011	-0.04	3.194	0.025	0.09
EVJW8Z		3.260	-0.030	-0.10	3.164	-0.004	-0.01
F6LEH3		3.299	0.008	0.03	3.149	-0.019	-0.07
F6LEKN		3.415	0.125	0.39	3.345	0.177	0.60
FCK4Y8		3.394	0.104	0.33	3.250	0.082	0.28
GC43W6		3.533	0.243	0.77	3.411	0.243	0.83
GHRPPP		3.600	0.310	0.98	3.475	0.307	1.05
GYP8DY		3.335	0.045	0.14	3.190	0.022	0.07
JEHJZT	X	2.050	-1.240	-3.92	2.670	-0.498	-1.70
MJKRXZ		3.290	-0.001	0.00	3.134	-0.034	-0.12
MZ6KHW	*	2.471	-0.820	-2.59	2.434	-0.735	-2.51
NAP9WW		3.370	0.080	0.25	3.215	0.047	0.16
NL2D4R		3.620	0.330	1.04	3.475	0.307	1.05
PJ8AMQ		3.750	0.460	1.45	3.650	0.482	1.65



Analysis 915
A420nm (1cm path)

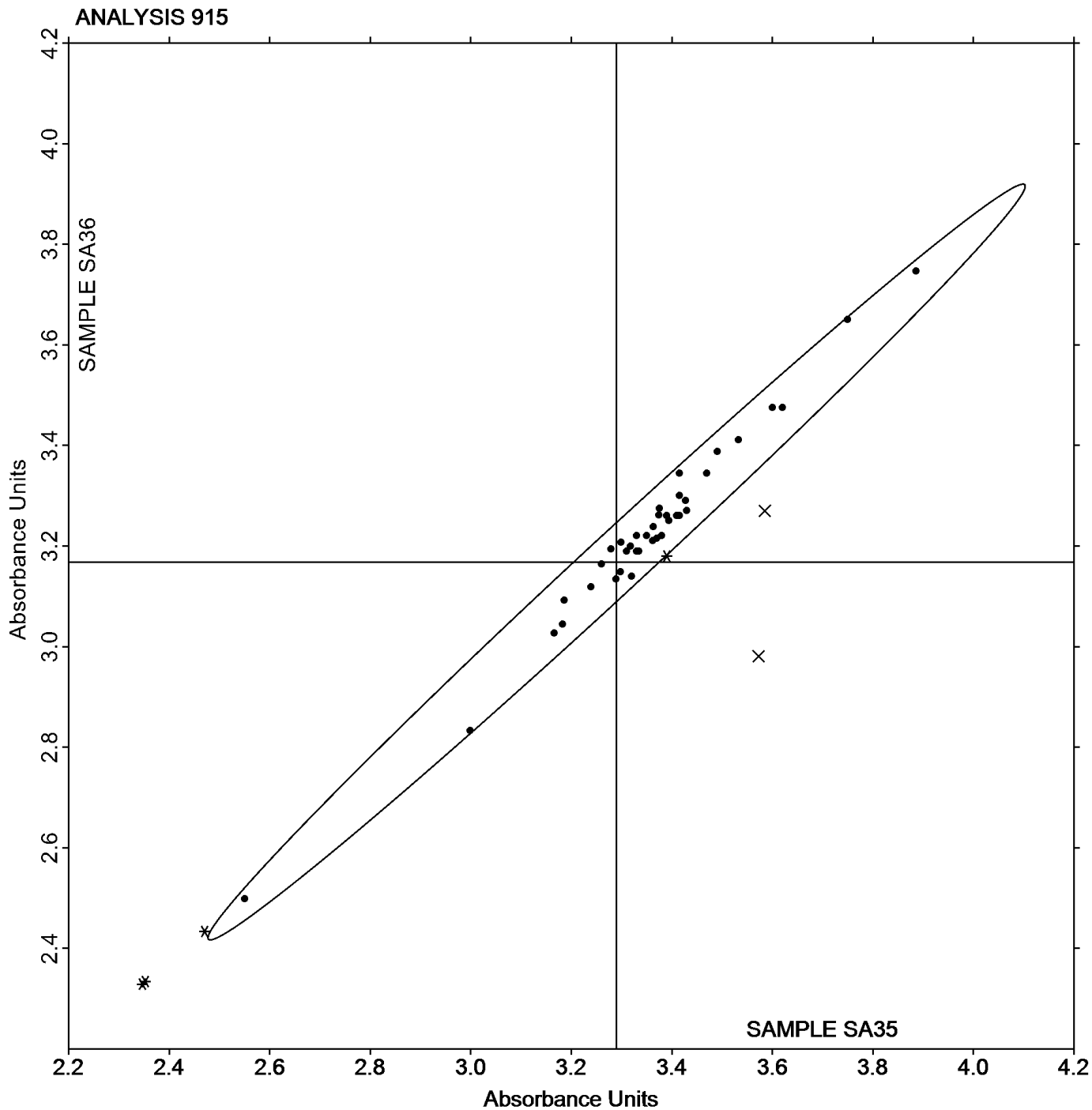
WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PVNYLV	X	0.623	-2.667	-8.43	0.614	-2.554	-8.74
Q6639L		3.428	0.138	0.44	3.290	0.122	0.42
QKGE2E	X	3.585	0.295	0.93	3.270	0.102	0.35
QULLFE		3.330	0.040	0.13	3.190	0.022	0.07
RHADHT		3.375	0.085	0.27	3.275	0.107	0.37
V8YEVM		3.364	0.073	0.23	3.239	0.070	0.24
VR7KPN	*	2.353	-0.938	-2.97	2.334	-0.834	-2.85
VTZ94D		3.320	0.030	0.09	3.140	-0.028	-0.10
X4APNF		3.415	0.125	0.39	3.300	0.132	0.45
XZ9KBV		3.380	0.090	0.28	3.220	0.052	0.18
ZDLWDE		3.299	0.009	0.03	3.207	0.039	0.13
ZR4N2L		3.470	0.180	0.57	3.345	0.177	0.60

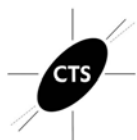
Grand Means		Summary Statistics	
	3.2901 Absorbance Units		3.1682 Absorbance Units
Std Dev Btwn Labs			
	0.3162 Absorbance Units		0.2923 Absorbance Units
Statistics based on 43 of 47 reporting participants			

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot

Comments on Assigned Data Flags for Test #915

- QKGE2E (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA35.
- JEHJZT (X) - Inconsistent in testing between samples, data for sample SA35 are low. Inconsistent within the determinations of both samples.
- PVNYLV (X) - Data for both samples are low. Possible Systematic Error.
- 38DAHG (X) - Inconsistent in testing between samples.



**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #068****Analysis 916****Summer 2021****A520nm (1cm path)**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2WGNYP		4.429	0.240	0.51	4.400	0.214	0.44
38DAHG		3.933	-0.256	-0.54	3.950	-0.236	-0.49
3KKZFH		3.753	-0.436	-0.92	3.692	-0.494	-1.02
4FHJKZ		4.339	0.150	0.32	4.437	0.251	0.52
4YYM67		4.546	0.357	0.76	4.605	0.419	0.86
76DF7F		4.080	-0.109	-0.23	4.080	-0.106	-0.22
76E3PF		3.817	-0.372	-0.79	3.814	-0.372	-0.77
7QTRY4		4.440	0.251	0.53	4.425	0.239	0.49
7Y8GXC		4.320	0.131	0.28	4.340	0.154	0.32
8HJQD3		4.320	0.131	0.28	4.275	0.089	0.18
8XTADF		4.037	-0.152	-0.32	4.007	-0.179	-0.37
968KZF		4.210	0.021	0.04	4.170	-0.016	-0.03
9ECPRW	X	4.250	0.061	0.13	3.630	-0.556	-1.15
9VJNYE		4.310	0.121	0.26	4.285	0.099	0.20
9YXJJH		4.275	0.086	0.18	4.325	0.139	0.29
C7PV8B		4.330	0.141	0.30	4.260	0.074	0.15
CEJ4PF		4.134	-0.055	-0.12	4.096	-0.090	-0.19
CUWEHA	*	2.969	-1.220	-2.59	2.969	-1.217	-2.51
D7K22A		3.154	-1.035	-2.20	3.154	-1.032	-2.13
ECQUV6		4.371	0.182	0.39	4.465	0.279	0.57
EEWG44		4.697	0.508	1.08	4.735	0.549	1.13
EJPFHY		3.801	-0.388	-0.82	3.722	-0.464	-0.96
EPD739		4.336	0.147	0.31	4.316	0.130	0.27
EVJW8Z		4.198	0.009	0.02	4.267	0.081	0.17
F6LEH3	X	4.715	0.526	1.11	4.497	0.311	0.64
F6LEKN		4.365	0.176	0.37	4.440	0.254	0.52
FCK4Y8		4.410	0.221	0.47	4.398	0.212	0.44
GC43W6		4.534	0.345	0.73	4.532	0.346	0.71
GHRPPP		4.755	0.566	1.20	4.710	0.524	1.08
GYP8DY		4.275	0.086	0.18	4.280	0.094	0.19
JEHJZT	X	2.670	-1.519	-3.22	0.975	-3.211	-6.63
MJKRXZ		4.693	0.504	1.07	4.671	0.485	1.00
MZ6KHW	*	2.814	-1.375	-2.92	2.775	-1.411	-2.91
NAP9WW		4.260	0.071	0.15	4.210	0.024	0.05
NL2D4R	X	5.760	1.571	3.33	5.700	1.514	3.12



**Analysis 916
A520nm (1cm path)**

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
PJ8AMQ		4.950	0.761	1.61	5.050	0.864	1.78
PVNYLV	X	0.937	-3.252	-6.90	0.951	-3.235	-6.68
Q6639L		4.409	0.220	0.47	4.428	0.242	0.50
QKGE2E	X	4.706	0.517	1.10	4.462	0.276	0.57
QULLFE		4.275	0.086	0.18	4.280	0.094	0.19
RHADHT		4.375	0.186	0.39	4.425	0.239	0.49
V8YEVM		4.329	0.140	0.30	4.327	0.141	0.29
VR7KPN	*	2.895	-1.294	-2.75	2.876	-1.310	-2.70
VTZ94D		4.210	0.021	0.04	4.120	-0.066	-0.14
X4APNF		4.390	0.201	0.43	4.405	0.219	0.45
XZ9KBV		4.320	0.131	0.28	4.310	0.124	0.26
ZDLWDE		4.648	0.459	0.97	4.577	0.391	0.81
ZR4N2L		4.230	0.041	0.09	4.210	0.024	0.05

Grand Means		Summary Statistics	
4.1889	Absorbance Units	4.1859	Absorbance Units
0.4715	Absorbance Units	0.4847	Absorbance Units

Statistics based on 42 of 48 reporting participants

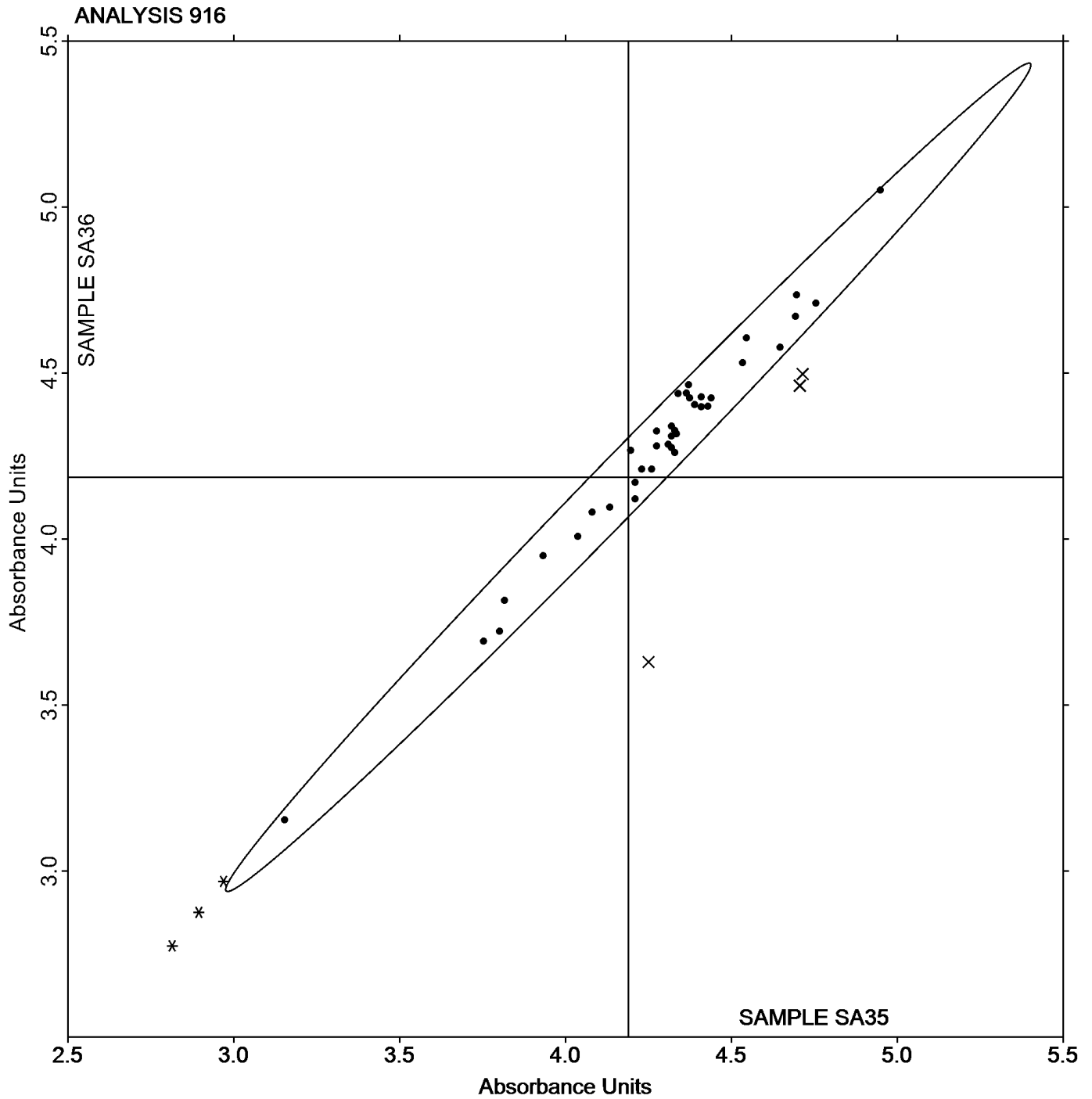
Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot

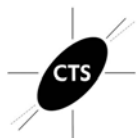
Comments on Assigned Data Flags for Test #916

- QKGE2E (X) - Inconsistent in testing between samples.
- 9ECPRW (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA36.
- JEHJZT (X) - Data for both samples are low. Inconsistent within the determinations of both samples.
- NL2D4R (X) - Data for both samples are high. Possible Systematic Error.
- F6LEH3 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- PVNYLV (X) - Data for both samples are low.



Analysis 916
A520nm (1cm path)





ASEV-CTS Wine Industry Interlaboratory Testing Program
Research Property 950
Research Property - L-Lactic Acid

Report #068
Summer 2021

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
2WGNYS		1.490	0.403	1.54	1.2550	0.3710	1.31
3KKZFH		1.760	0.673	2.57	1.5400	0.6560	2.32
4CH9PZ		1.025	-0.062	-0.24	0.8100	-0.0740	-0.26
4FHJKZ		1.115	0.028	0.11	0.9290	0.0450	0.16
7Y8GXC		1.130	0.043	0.16	0.9900	0.1060	0.37
8HJQD3		1.044	-0.043	-0.16	0.8580	-0.0260	-0.09
8XTADF	*	0.690	-0.397	-1.51	0.2500	-0.6340	-2.24
9VJNYE		1.100	0.013	0.05	0.9500	0.0660	0.23
A62M8V		1.168	0.081	0.31	0.9715	0.0875	0.31
ECQUV6		1.005	-0.082	-0.31	0.8300	-0.0540	-0.19
EEWG44		0.910	-0.177	-0.67	0.6700	-0.2140	-0.76
F6LEH3		1.090	0.003	0.01	0.9250	0.0410	0.14
GYP8DY		0.935	-0.152	-0.58	0.7600	-0.1240	-0.44
QKGE2E		1.083	-0.004	-0.01	0.8850	0.0010	0.00
UE32AH		1.175	0.088	0.34	0.9900	0.1060	0.37
XZ9KBV		0.669	-0.418	-1.59	0.5300	-0.3540	-1.25

Research Property Consensus Value

Consensus Average

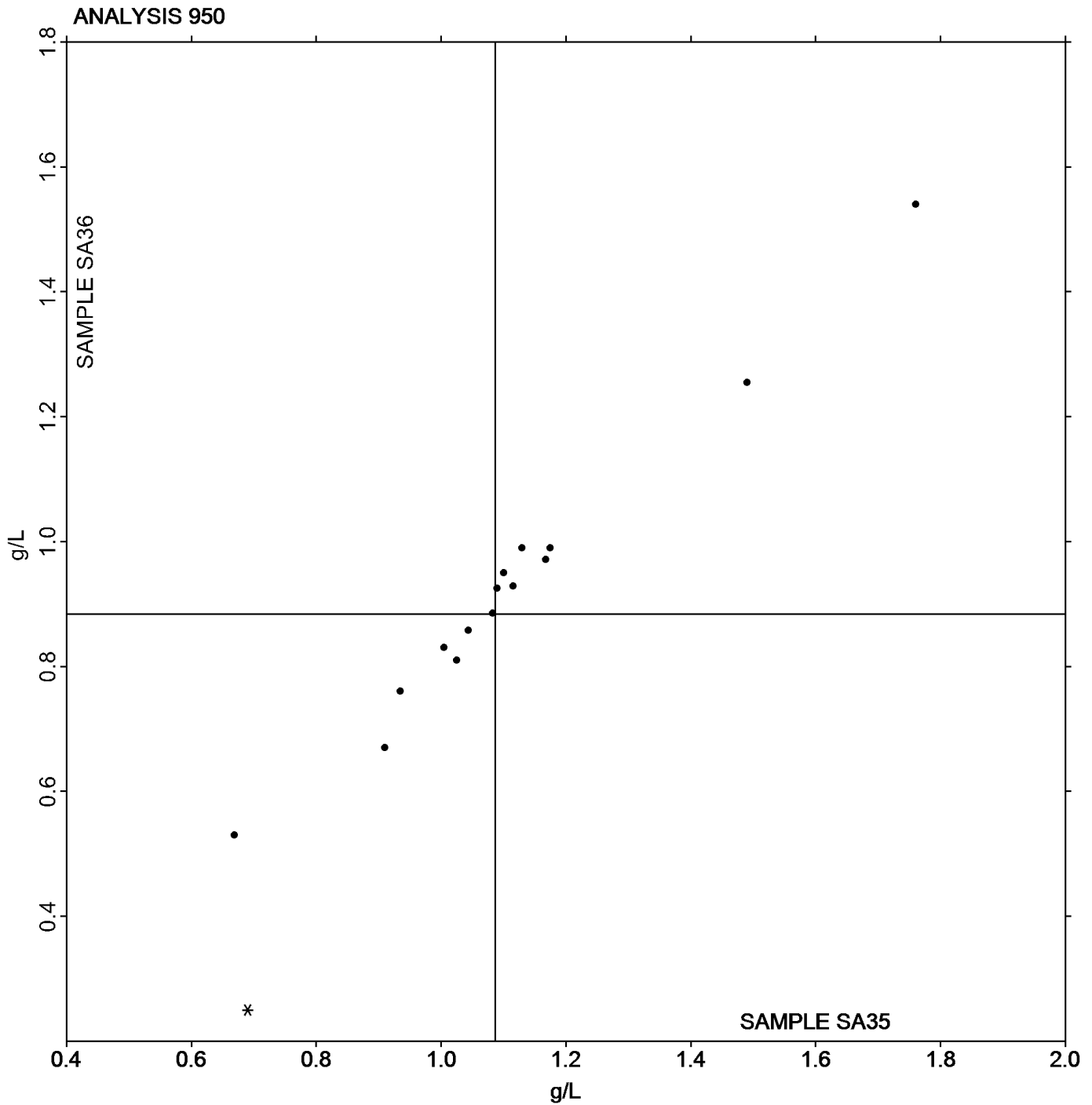
1.0868 g/L

0.88397 g/L

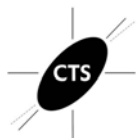
Note: Tests 950, 951 and 952, are research tests. As a result participants should use caution when evaluating data for these tests.

This consensus average is based on 16 reporting participants.

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot



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



ASEV-CTS Wine Industry Interlaboratory Testing Program
Research Property 951
Research: Conductivity @ 20C

Report #068
Summer 2021

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
2WGNYS		2,309.5	108.1	0.18	2,153.5	85.1	0.14
38DAHG		1,920.0	-281.4	-0.46	1,900.0	-168.4	-0.28
4CH9PZ		2,300.0	98.6	0.16	2,100.0	31.6	0.05
4FHJKZ		2,535.0	333.6	0.55	2,395.0	326.6	0.55
84XDY8		2,459.0	257.6	0.42	2,347.0	278.6	0.47
8HJQD3		2,240.0	38.6	0.06	2,110.0	41.6	0.07
8XTADF		2,440.0	238.6	0.39	2,400.0	331.6	0.56
A62M8V		2,532.0	330.6	0.55	2,369.0	300.6	0.51
BMH7G8		2,498.5	297.1	0.49	2,351.5	283.1	0.48
EEWG44		1,938.0	-263.4	-0.43	1,959.0	-109.4	-0.18
EF4UPB		2,210.0	8.6	0.01	2,090.0	21.6	0.04
EJPFHY		2,492.5	291.1	0.48	2,353.0	284.6	0.48
FCK4Y8		3,600.0	1,398.6	2.31	3,300.0	1,231.6	2.08
GYP8DY		1,144.0	-1,057.4	-1.74	1,087.0	-981.4	-1.65
JEHJZT	X	3.7	-2,197.7	-3.63	3.0	-2,065.5	-3.48
KCKT7Y		2,326.5	125.1	0.21	2,190.5	122.1	0.21
PVNYLV		1,176.5	-1,024.9	-1.69	1,165.0	-903.4	-1.52
QKGE2E		2,464.0	262.6	0.43	2,313.5	245.1	0.41
VR7KPN	X	-1.4	-2,202.9	-3.63	-1.3	-2,069.8	-3.49
XZ9KBV	*	1,040.0	-1,161.4	-1.92	648.0	-1,420.4	-2.39

Research Property Consensus Value

Consensus Average

2,201.42 Us/cm

2,068.44 Us/cm

Note: Tests 950, 951 and 952, are research tests. As a result participants should use caution when evaluating data for these tests.

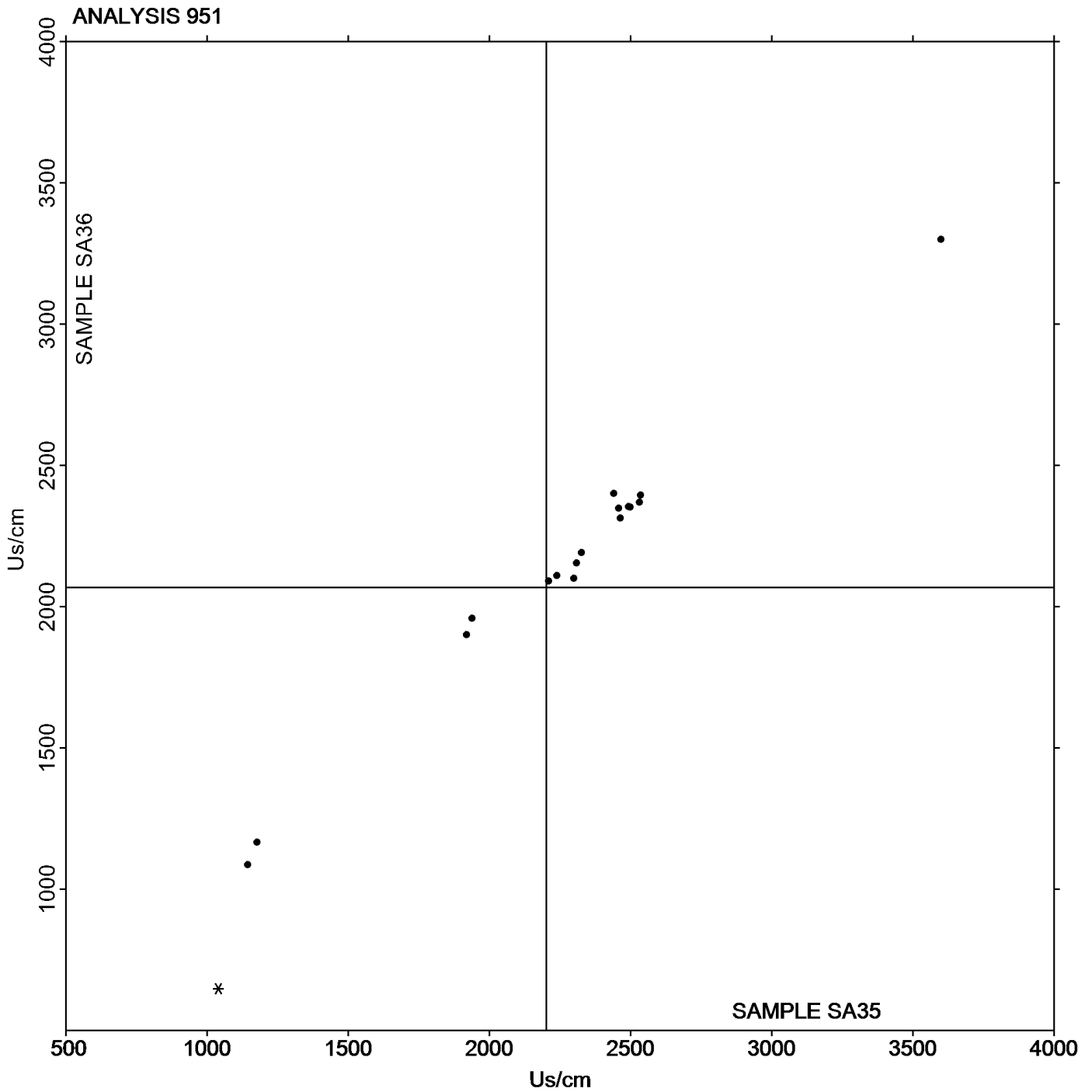
This consensus average is based on 18 reporting participants.

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot

Comments on Assigned Data Flags for Test #951

JEHJZT (X) - Low data for both samples. Lab indicated reporting in percent change in conductivity.

VR7KPN (X) - Extreme data.



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: Methanol Content

WebCode	Data Flag	Sample SA35			Sample SA36		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
2WGNYS		151.7	-23.4	-1.13	181.7	-28.7	-0.99
38DAHG		200.0	24.9	1.21	200.0	-10.4	-0.36
4CH9PZ		188.5	13.4	0.65	222.0	11.6	0.40
4FHJKZ		183.0	7.9	0.38	236.0	25.6	0.88
76E3PF		179.0	3.9	0.19	219.5	9.1	0.31
7Y8GXC		199.0	23.9	1.16	267.0	56.6	1.95
A6H4Y3		160.0	-15.1	-0.73	195.0	-15.4	-0.53
EEWG44		140.0	-35.1	-1.70	170.0	-40.4	-1.40
F6LEH3		188.5	13.4	0.65	224.5	14.1	0.49
FXLX8W		161.0	-14.1	-0.68	188.5	-21.9	-0.76

Research Property Consensus Value

Consensus Average

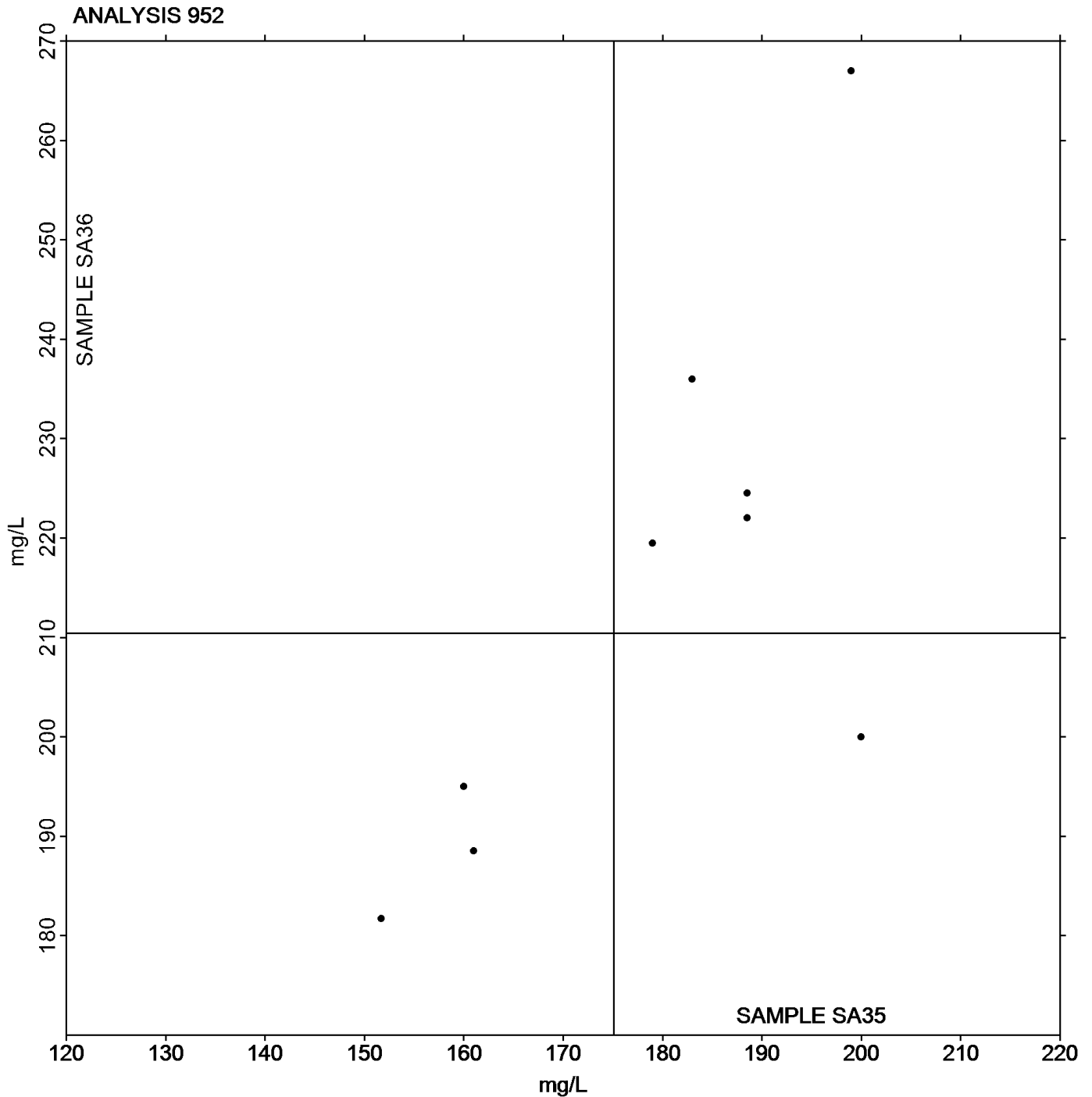
175.07 mg/L

210.42 mg/L

Note: Tests 950, 951 and 952, are research tests. As a result participants should use caution when evaluating data for these tests.

This consensus average is based on 10 reporting participants.

Wines tested: SA35: Cabernet Sauvignon; SA36: Merlot



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

-End of Report-