



## Wine Industry Interlaboratory Program

### Summary Report #058 - Spring 2018

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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 2018

## Ethanol (% of volume)

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3A8NKH		10.56	-0.02	-0.31	10.57	0.00	-0.03
3G7D2L		10.51	-0.06	-1.31	10.52	-0.05	-1.01
3HWJBK	X	10.60	0.03	0.60	10.70	0.13	2.63
3JB47F		10.55	-0.02	-0.41	10.57	0.00	-0.03
3WHRHJ		10.64	0.07	1.41	10.64	0.07	1.40
3YKPTC		10.61	0.04	0.80	10.63	0.06	1.20
4BVGWC		10.58	0.01	0.20	10.59	0.02	0.38
4C6RMN	*	10.46	-0.11	-2.23	10.45	-0.12	-2.50
4EVTRC		10.58	0.01	0.20	10.58	0.00	0.07
6T8NKD		10.60	0.03	0.60	10.60	0.03	0.58
6VZJ8M	X	11.03	0.45	9.20	11.09	0.51	10.53
6W9RBF		10.53	-0.04	-0.82	10.53	-0.05	-0.96
79EBZL		10.63	0.06	1.21	10.63	0.05	1.09
7P4C44		10.62	0.05	1.01	10.62	0.05	0.99
7QWCVN		10.62	0.04	0.90	10.61	0.03	0.68
84Y3CL	X	10.75	0.18	3.64	10.75	0.18	3.66
87NKE8		10.56	-0.01	-0.21	10.55	-0.02	-0.44
8B4VRB		10.54	-0.03	-0.61	10.57	0.00	-0.03
8NTUJD		10.52	-0.05	-1.02	10.52	-0.05	-1.06
8VMWMB		10.50	-0.07	-1.42	10.50	-0.07	-1.47
9LKRGF		10.67	0.10	2.02	10.67	0.10	2.02
9Y7CQB		10.57	0.00	-0.01	10.55	-0.02	-0.44
A3L2PE	*	10.54	-0.04	-0.71	10.58	0.00	0.07
ACMQ8F		10.54	-0.04	-0.71	10.53	-0.04	-0.85
ADDWGE		10.52	-0.05	-1.02	10.51	-0.06	-1.27
AY37N8	X	10.52	-0.05	-1.02	10.58	0.01	0.17
BCK9XH		10.60	0.03	0.60	10.59	0.02	0.38
BKX8EF		10.53	-0.05	-0.92	10.53	-0.05	-0.96
BWRN4G		10.58	0.01	0.20	10.60	0.02	0.48
C2HFQ4		10.62	0.05	1.01	10.62	0.05	0.99
C3WME7		10.60	0.03	0.60	10.61	0.04	0.79
C6GP6C	X	10.25	-0.32	-6.48	10.25	-0.32	-6.60
C7U4QZ	X	10.63	0.05	1.11	10.67	0.10	2.02
C7WTVX		10.60	0.03	0.60	10.58	0.01	0.17
C8M7AA		10.66	0.08	1.71	10.67	0.10	2.02



## Analysis 901

Spring 2018

## Ethanol (% of volume)

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
C8MATC	X	10.67	0.10	2.02	10.30	-0.28	-5.68
CUG4U7		10.58	0.00	0.10	10.59	0.01	0.27
E4DZKD	X	10.69	0.12	2.42	10.63	0.05	1.09
E6A7C7		10.57	0.00	-0.01	10.61	0.03	0.68
EWJNVC		10.54	-0.03	-0.61	10.54	-0.03	-0.65
F4E6K8		10.62	0.04	0.90	10.61	0.04	0.79
F4XNTZ	X	10.58	0.00	0.10	10.48	-0.09	-1.88
FRKNW8		10.57	0.00	-0.01	10.58	0.01	0.17
FY4R6U		10.67	0.09	1.92	10.65	0.07	1.51
GCJEP C	*	10.53	-0.04	-0.82	10.49	-0.08	-1.68
GDX22Y	X	10.80	0.23	4.65	10.80	0.23	4.69
GVE3W2		10.51	-0.06	-1.22	10.53	-0.05	-0.96
GX2TX7		10.56	-0.02	-0.31	10.56	-0.01	-0.24
H7DXUW		10.55	-0.02	-0.41	10.55	-0.02	-0.44
HBMD2Z		10.55	-0.03	-0.51	10.54	-0.03	-0.65
HUWBKW		10.60	0.03	0.60	10.59	0.01	0.27
J43HZV		10.59	0.02	0.40	10.56	-0.01	-0.24
JMQ9M9		10.52	-0.05	-1.02	10.54	-0.04	-0.75
JYAD67		10.52	-0.06	-1.12	10.51	-0.06	-1.27
KLYFJ4		10.50	-0.07	-1.42	10.53	-0.05	-0.96
LCMMLT	X	10.15	-0.42	-8.51	10.10	-0.47	-9.68
MKXAAM	X	10.69	0.12	2.42	10.50	-0.07	-1.47
N7WUMX		10.55	-0.02	-0.41	10.55	-0.02	-0.44
NFJW6T		10.57	-0.01	-0.11	10.55	-0.02	-0.44
NVDH9Z		10.63	0.06	1.21	10.63	0.05	1.09
P9VPLR		10.58	0.00	0.10	10.59	0.02	0.38
PNP8N4		10.51	-0.06	-1.22	10.51	-0.06	-1.27
Q4XHU3		10.58	0.01	0.20	10.58	0.01	0.17
QA6XNK		10.60	0.02	0.50	10.58	0.01	0.17
QBF2YM		10.50	-0.07	-1.42	10.50	-0.07	-1.47
QBXWF4		10.53	-0.04	-0.82	10.54	-0.03	-0.65
QWHPQJ		10.64	0.06	1.31	10.64	0.07	1.40
R6734N		10.64	0.07	1.41	10.64	0.07	1.40
TDD7GZ	X	10.67	0.10	2.02	10.78	0.21	4.28
UB72RH		10.57	-0.01	-0.11	10.56	-0.01	-0.24



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

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UCX4AR		10.69	0.11	2.32	10.68	0.11	2.22
UDCLFH		10.60	0.02	0.50	10.60	0.02	0.48
UE6PXR		10.54	-0.03	-0.61	10.56	-0.01	-0.24
UJYEPW		10.61	0.04	0.80	10.61	0.04	0.79
VPJ4EY		10.60	0.02	0.50	10.58	0.01	0.17
W7K6QX		10.62	0.05	1.01	10.61	0.04	0.79
X3JAUF		10.53	-0.05	-0.92	10.53	-0.05	-0.96
X4CCCP		10.63	0.05	1.11	10.61	0.04	0.79
X7ZYTJ		10.55	-0.03	-0.51	10.55	-0.02	-0.44
XCLUUM	*	10.44	-0.13	-2.64	10.44	-0.14	-2.80
Y7FFNC		10.57	0.00	-0.01	10.58	0.00	0.07
YF679J		10.60	0.03	0.60	10.61	0.04	0.79
YQLV8N	*	10.53	-0.04	-0.82	10.57	0.00	-0.03
ZK9JJM	X	10.53	-0.04	-0.82	10.45	-0.12	-2.50
ZT8WPG		10.58	0.01	0.20	10.58	0.01	0.17
ZUEELR	X	10.30	-0.27	-5.47	10.10	-0.47	-9.68

Grand Means		Summary Statistics	
	10.570 percent		10.572 percent
<b>Stnd Dev Btwn Labs</b>	0.049 percent		0.049 percent
<b>Statistics based on 71 of 86 reporting participants</b>			

Wines tested: SA15: Rose; SA16: Rose



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

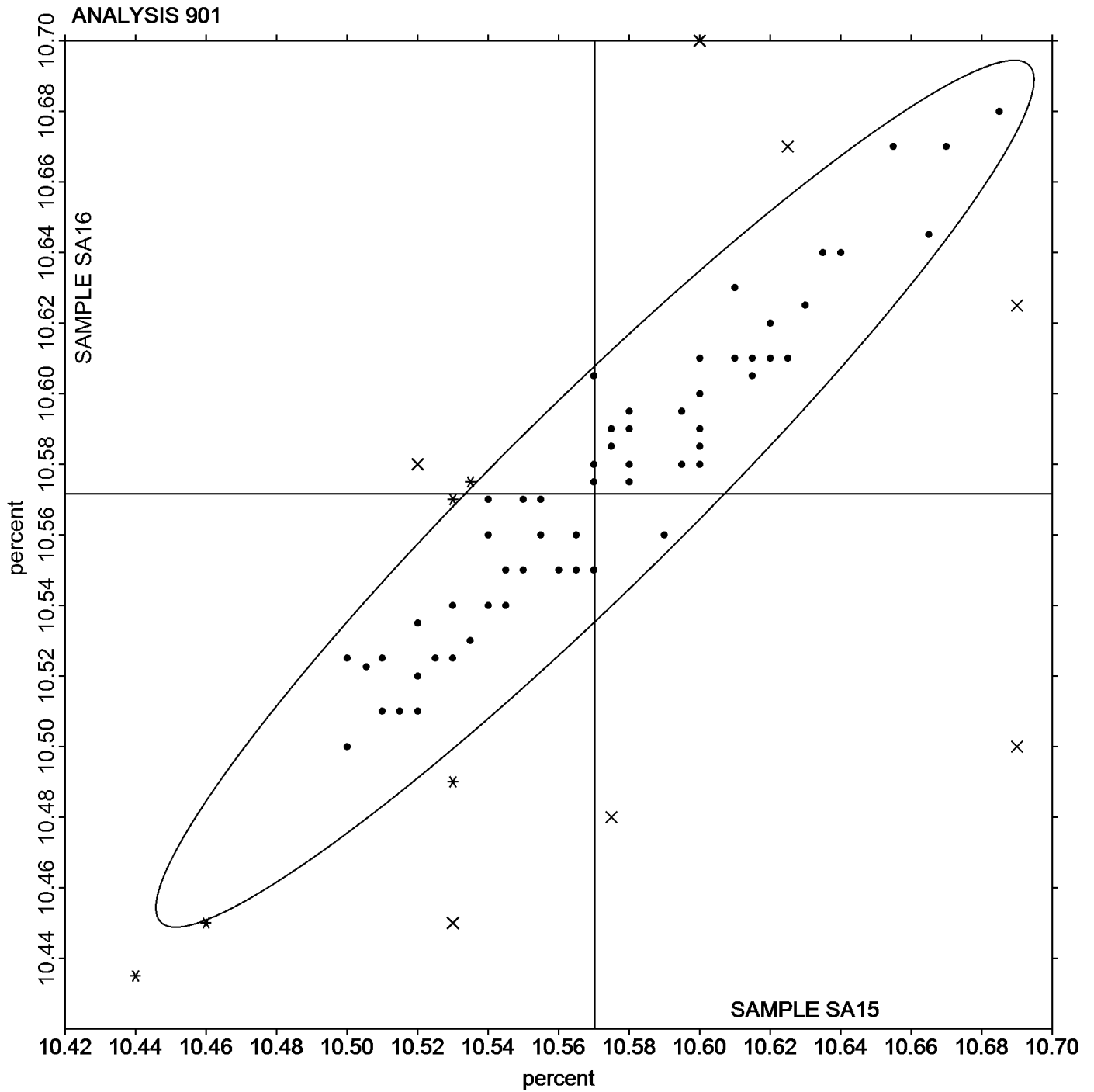
**Comments on Assigned Data Flags for Test #901**

- C8MATC (X) - Data for sample SA16 are low. Inconsistent within the determinations of sample SA15.
- C6GP6C (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- ZUEELR (X) - Data for both samples are low. Possible Systematic Error.
- 6VZJ8M (X) - Data for both samples are high. Possible Systematic Error.
- C7U4QZ (X) - Inconsistent in testing between samples.
- MKXAAM (X) - Inconsistent in testing between samples.
- AY37N8 (X) - Inconsistent in testing between samples.
- GDX22Y (X) - Data for both samples are high. Possible Systematic Error.
- F4XNTZ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA16.
- LCMMLT (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample SA15.
- 3HWJBK (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA15.
- ZK9JJM (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA15.
- 84Y3CL (X) - Data for both samples are high. Possible Systematic Error.
- TDD7GZ (X) - Data for sample SA16 are high. Inconsistent within the determinations of both samples.
- E4DZKD (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA16.

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

Test Methodology	Sample SA15 <i>Rose</i>			Sample SA16 <i>Rose</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Ebulliometer Method							0/5
Gas Chromatography Method	10.623	0.050	0.05	10.633	0.033	0.06	3/7
Near Infrared Method	10.577	0.041	0.01	10.580	0.040	0.01	51/55
Dist. / Density Method	10.535	0.057	-0.04	10.529	0.052	-0.04	9/10
FTIR	10.543	0.083	-0.03	10.536	0.076	-0.04	5/6
Other _____	10.560	0.035	-0.01	10.563	0.025	-0.01	3/3







Analysis 902  
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3A8NKH		132.5	13.0	1.42	136.5	14.2	1.51
3G7D2L		121.5	2.0	0.22	129.5	7.2	0.77
3HWJBK	X	104.5	-15.0	-1.63	96.0	-26.3	-2.79
3JB47F		117.0	-2.5	-0.27	117.5	-4.8	-0.51
3WHRHJ		119.5	0.0	0.00	123.0	0.7	0.08
3YKPTC		120.5	1.0	0.11	123.5	1.2	0.13
4BVGWC		124.0	4.4	0.48	125.1	2.8	0.29
4C6RMN		105.0	-14.5	-1.58	107.0	-15.3	-1.62
4EVTRC		127.5	8.0	0.87	124.0	1.7	0.18
6T8NKD		119.0	-0.5	-0.05	126.0	3.7	0.39
6VZJ8M		116.0	-3.5	-0.38	115.5	-6.8	-0.72
6W9RBF	*	131.5	12.0	1.31	126.5	4.2	0.45
79EBZL	X	166.0	46.5	5.06	170.5	48.2	5.12
7P4C44		112.0	-7.5	-0.82	113.5	-8.8	-0.93
84Y3CL		121.5	2.0	0.22	125.4	3.1	0.33
87NKE8	*	133.0	13.5	1.47	127.0	4.7	0.50
8B4VRB		130.0	10.5	1.14	132.0	9.7	1.03
8NTUJD		119.0	-0.5	-0.05	120.0	-2.3	-0.24
8VMWMB		126.5	7.0	0.76	126.0	3.7	0.39
9LKRGF		112.5	-7.0	-0.76	114.5	-7.8	-0.83
9Y7CQB		135.7	16.2	1.76	134.0	11.8	1.25
A3L2PE		140.0	20.5	2.23	142.5	20.2	2.15
ACMQ8F		112.0	-7.5	-0.82	118.0	-4.3	-0.46
ADDWGE		113.0	-6.5	-0.71	115.0	-7.3	-0.77
AY37N8		123.5	4.0	0.44	125.5	3.2	0.34
BCK9XH		105.5	-14.0	-1.52	112.5	-9.8	-1.04
BWRN4G		118.5	-1.0	-0.11	121.5	-0.8	-0.08
C2HFQ4		117.5	-2.0	-0.22	122.5	0.2	0.02
C3WME7		129.5	9.9	1.08	129.2	6.9	0.73
C7U4QZ		115.2	-4.3	-0.47	118.3	-4.0	-0.43
C7WTVX		118.0	-1.5	-0.16	118.0	-4.3	-0.46
C8M7AA		112.5	-7.0	-0.76	116.0	-6.3	-0.67
CMGTDF		117.0	-2.5	-0.27	120.0	-2.3	-0.24
CUG4U7		117.0	-2.5	-0.27	121.3	-1.0	-0.11
E6A7C7		118.0	-1.5	-0.16	128.0	5.7	0.61



# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #058  
Spring 2018

## Analysis 902 Total Sulfur Dioxide

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EWJNVC	*	95.5	-24.0	-2.61	96.5	-25.8	-2.74
F4E6K8		116.0	-3.5	-0.38	118.5	-3.8	-0.40
F4XNTZ		122.0	2.5	0.27	128.5	6.2	0.66
FRKNW8		114.0	-5.5	-0.60	124.0	1.7	0.18
FY4R6U		126.0	6.5	0.71	127.5	5.2	0.55
GCJEPC		119.5	0.0	0.00	121.5	-0.8	-0.08
GDX22Y	X	79.0	-40.5	-4.41	80.0	-42.3	-4.49
GVE3W2		119.5	0.0	0.00	123.5	1.2	0.13
GX2TX7		110.0	-9.6	-1.04	113.3	-9.0	-0.96
H7DXUW		120.0	0.5	0.05	122.5	0.2	0.02
HBMD2Z		118.5	-1.0	-0.11	123.0	0.7	0.08
HUWBKW		110.0	-9.5	-1.03	113.0	-9.3	-0.99
J43HZV		118.0	-1.5	-0.16	120.0	-2.3	-0.24
JMQ9M9		121.2	1.6	0.18	126.3	4.0	0.43
JYAD67		125.0	5.5	0.60	127.5	5.2	0.55
KLYFJ4	X	112.8	-6.7	-0.73	96.8	-25.5	-2.71
MKXAAM		116.6	-2.9	-0.31	120.9	-1.4	-0.15
N7WUMX		126.0	6.5	0.71	126.5	4.2	0.45
NFJW6T		121.0	1.5	0.16	123.5	1.2	0.13
NVDH9Z		116.5	-3.0	-0.33	120.5	-1.8	-0.19
P9VPLR		119.0	-0.5	-0.05	121.5	-0.8	-0.08
PNP8N4		122.5	3.0	0.33	129.5	7.2	0.77
Q4XHU3	X	96.6	-22.9	-2.49	115.1	-7.2	-0.77
QA6XNK		115.2	-4.3	-0.47	118.4	-3.9	-0.41
QBF2YM		113.5	-6.0	-0.65	122.5	0.2	0.02
QWHPQJ		119.5	0.0	0.00	120.0	-2.3	-0.24
R6734N		129.0	9.5	1.03	125.0	2.7	0.29
TDD7GZ		99.0	-20.5	-2.23	99.5	-22.8	-2.42
UB72RH		133.5	14.0	1.52	135.0	12.7	1.35
UDCLFH		108.0	-11.5	-1.25	109.0	-13.3	-1.41
UE6PXR		107.0	-12.5	-1.36	110.5	-11.8	-1.25
UJYEPW		126.5	7.0	0.76	129.5	7.2	0.77
VPJ4EY		122.5	3.0	0.33	125.5	3.2	0.34
X3JAUF		123.5	4.0	0.44	134.0	11.7	1.24
X4CCCP		111.5	-8.0	-0.87	116.5	-5.8	-0.62



Analysis 902  
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
X7ZYTJ	*	140.0	20.5	2.23	148.5	26.2	2.78
XCLUUM	*	144.0	24.5	2.67	149.0	26.7	2.84
Y7FFNC		125.0	5.5	0.60	126.0	3.7	0.39
YF679J		116.0	-3.5	-0.38	117.5	-4.8	-0.51
YQLV8N	*	99.5	-20.0	-2.18	96.5	-25.8	-2.74
ZT8WPG		113.5	-6.0	-0.65	117.0	-5.3	-0.56
ZUEELR	X	65.0	-54.5	-5.93	65.5	-56.8	-6.03

Grand Means	Summary Statistics
119.50 mg/L	122.29 mg/L
Stnd Dev Btwn Labs	
9.19 mg/L	9.41 mg/L
<b>Statistics based on 71 of 77 reporting participants</b>	

Wines tested: SA15: Rose; SA16: Rose

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

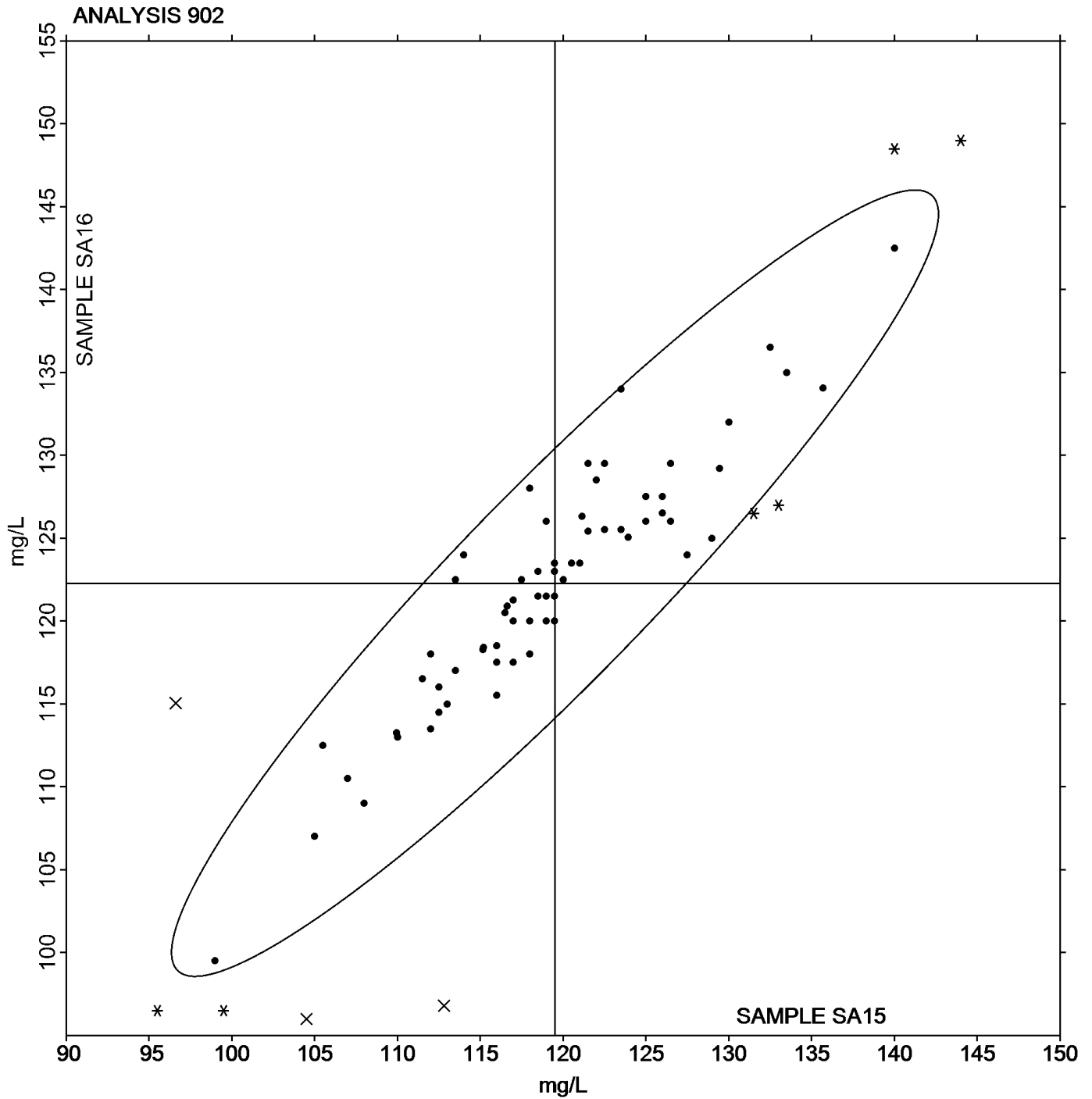
- KLYFJ4 (X) - Inconsistent in testing between samples.
- ZUEELR (X) - Data for both samples are low. Possible Systematic Error.
- GDX22Y (X) - Data for both samples are low. Possible Systematic Error.
- 3HWJBK (X) - Inconsistent in testing between samples. Data for sample SA16 are low.
- Q4XHU3 (X) - Inconsistent in testing between samples.
- 79EBZL (X) - Data for both samples are high. Possible Systematic Error.

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

Test Methodology	Sample SA15 <i>Rose</i>			Sample SA16 <i>Rose</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	118.000	0.000	-1.5	118.000	0.000	-4.3	1/2
Ripper Method	116.782	8.842	-2.7	119.123	9.240	-3.2	28/30
Aeration Oxidation (AO) Method	118.177	5.318	-1.3	121.582	4.392	-0.7	16/19
Segemented Flow Analyzer	113.917	10.293	-5.6	118.000	11.891	-4.3	6/6
Enzymatic Method	131.190	9.360	11.7	133.540	11.377	11.3	5/5
Colormetric Analyzer	122.300	7.767	2.8	123.600	7.578	1.3	5/5
FTIR	135.000	12.728	15.5	138.250	15.203	16.0	2/2
Flow Injection Analysis	123.125	7.126	3.6	126.700	5.308	4.4	8/8



Analysis 902  
Total Sulfur Dioxide





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #058  
Spring 2018

## Analysis 903 Free Sulfur Dioxide

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3A8NKH		22.00	-1.27	-0.51	21.50	-2.70	-1.08
3HWJBK	X	24.00	0.73	0.29	28.50	4.30	1.72
3JB47F		18.00	-5.27	-2.13	19.00	-5.20	-2.09
3WHRHJ		23.00	-0.27	-0.11	23.00	-1.20	-0.48
3YKPTC		21.00	-2.27	-0.92	21.50	-2.70	-1.08
4BVGWC		23.90	0.63	0.25	24.50	0.30	0.12
4C6RMN		22.50	-0.77	-0.31	22.50	-1.70	-0.68
4EVTRC		19.00	-4.27	-1.73	20.50	-3.70	-1.48
6T8NKD		22.00	-1.27	-0.51	23.50	-0.70	-0.28
6VZJ8M	X	17.25	-6.02	-2.43	23.00	-1.20	-0.48
6W9RBF		24.50	1.23	0.50	23.50	-0.70	-0.28
79EBZL	X	19.00	-4.27	-1.73	24.00	-0.20	-0.08
7P4C44		23.00	-0.27	-0.11	22.15	-2.05	-0.82
7QWCVN		25.30	2.03	0.82	25.80	1.60	0.64
84Y3CL		23.30	0.03	0.01	25.90	1.70	0.68
87NKE8		24.00	0.73	0.29	25.00	0.80	0.32
8B4VRB		24.00	0.73	0.29	25.00	0.80	0.32
8NTUJD		23.00	-0.27	-0.11	23.00	-1.20	-0.48
8VMWMB		25.00	1.73	0.70	25.00	0.80	0.32
9LKRGF		21.50	-1.77	-0.72	23.00	-1.20	-0.48
9Y7CQB		26.01	2.74	1.11	25.79	1.58	0.64
A3L2PE		28.00	4.73	1.91	30.00	5.80	2.33
ACMQ8F		22.50	-0.77	-0.31	25.50	1.30	0.52
ADDWGE		27.00	3.73	1.51	29.00	4.80	1.93
AY37N8		22.00	-1.27	-0.51	24.50	0.30	0.12
BCK9XH		19.85	-3.42	-1.38	21.20	-3.00	-1.20
BKX8EF		22.90	-0.37	-0.15	24.50	0.30	0.12
BWRN4G		25.00	1.73	0.70	27.50	3.30	1.32
C3WME7		21.95	-1.32	-0.53	21.70	-2.50	-1.00
C7U4QZ		22.27	-1.01	-0.41	24.02	-0.19	-0.07
C7WTVX		27.00	3.73	1.51	28.00	3.80	1.52
C8M7AA		21.00	-2.27	-0.92	22.00	-2.20	-0.88
CMGTDF		22.00	-1.27	-0.51	24.00	-0.20	-0.08
CUG4U7		21.35	-1.92	-0.78	23.35	-0.85	-0.34
E4DZKD		19.20	-4.07	-1.64	20.80	-3.40	-1.36



# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #058  
Spring 2018

## Analysis 903 Free Sulfur Dioxide

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
E6A7C7		20.50	-2.77	-1.12	21.50	-2.70	-1.08
EWJNVC		23.00	-0.27	-0.11	24.50	0.30	0.12
F4E6K8		22.00	-1.27	-0.51	23.00	-1.20	-0.48
F4XNTZ		25.00	1.73	0.70	25.00	0.80	0.32
FRKNW8		18.00	-5.27	-2.13	20.50	-3.70	-1.48
FY4R6U		26.00	2.73	1.10	26.50	2.30	0.92
GCJEPC		22.50	-0.77	-0.31	23.00	-1.20	-0.48
GDX22Y		20.50	-2.77	-1.12	20.00	-4.20	-1.69
GVE3W2	*	24.50	1.23	0.50	28.00	3.80	1.52
GX2TX7		20.25	-3.02	-1.22	21.55	-2.65	-1.06
H7DXUW		23.00	-0.27	-0.11	25.00	0.80	0.32
HBMD2Z		24.50	1.23	0.50	25.00	0.80	0.32
HUWBKW		19.50	-3.77	-1.52	20.00	-4.20	-1.69
J43HZV		25.50	2.23	0.90	25.00	0.80	0.32
JMQ9M9		24.35	1.08	0.44	25.70	1.50	0.60
JYAD67		25.50	2.23	0.90	26.50	2.30	0.92
LCMMLT		20.96	-2.31	-0.93	21.28	-2.92	-1.17
MKXAAM	*	29.96	6.69	2.70	28.89	4.69	1.88
N7WUMX		25.00	1.73	0.70	27.00	2.80	1.12
NFJW6T		25.00	1.73	0.70	25.00	0.80	0.32
NVDH9Z		22.00	-1.27	-0.51	23.00	-1.20	-0.48
P9VPLR		24.00	0.73	0.29	23.00	-1.20	-0.48
PNP8N4	X	33.50	10.23	4.13	36.00	11.80	4.73
Q4XHU3		24.95	1.68	0.68	28.05	3.85	1.54
QA6XNK		20.80	-2.47	-1.00	22.40	-1.80	-0.72
QBF2YM		26.00	2.73	1.10	27.50	3.30	1.32
QBXWF4		24.25	0.98	0.40	25.65	1.45	0.58
QWHPQJ		28.00	4.73	1.91	30.00	5.80	2.33
R6734N		23.00	-0.27	-0.11	23.00	-1.20	-0.48
TDD7GZ		22.00	-1.27	-0.51	22.50	-1.70	-0.68
UB72RH		25.00	1.73	0.70	24.50	0.30	0.12
UCX4AR		19.00	-4.27	-1.73	21.50	-2.70	-1.08
UDCLFH		20.50	-2.77	-1.12	21.50	-2.70	-1.08
UE6PXR		22.00	-1.27	-0.51	23.00	-1.20	-0.48
UJYEPW		27.00	3.73	1.51	27.65	3.45	1.38



**Analysis 903  
Free Sulfur Dioxide**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
VPJ4EY		26.50	3.23	1.30	25.50	1.30	0.52
W7K6QX		22.00	-1.27	-0.51	22.00	-2.20	-0.88
X3JAUF		25.50	2.23	0.90	26.00	1.80	0.72
X4CCCP		26.50	3.23	1.30	27.50	3.30	1.32
X7ZYTJ		24.80	1.53	0.62	25.20	1.00	0.40
XCLUUM	X	32.00	8.73	3.53	33.00	8.80	3.53
Y7FFNC		26.00	2.73	1.10	26.00	1.80	0.72
YF679J		21.00	-2.27	-0.92	22.00	-2.20	-0.88
YQLV8N		23.50	0.23	0.09	25.00	0.80	0.32
ZT8WPG		22.50	-0.77	-0.31	23.50	-0.70	-0.28
ZUEELR	X	15.00	-8.27	-3.34	14.50	-9.70	-3.89

Grand Means		Summary Statistics	
	23.271 mg/L		24.201 mg/L
Std Dev Btwn Labs			2.493 mg/L
	2.475 mg/L		
<b>Statistics based on 75 of 81 reporting participants</b>			

Wines tested: SA15: Rose; SA16: Rose

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

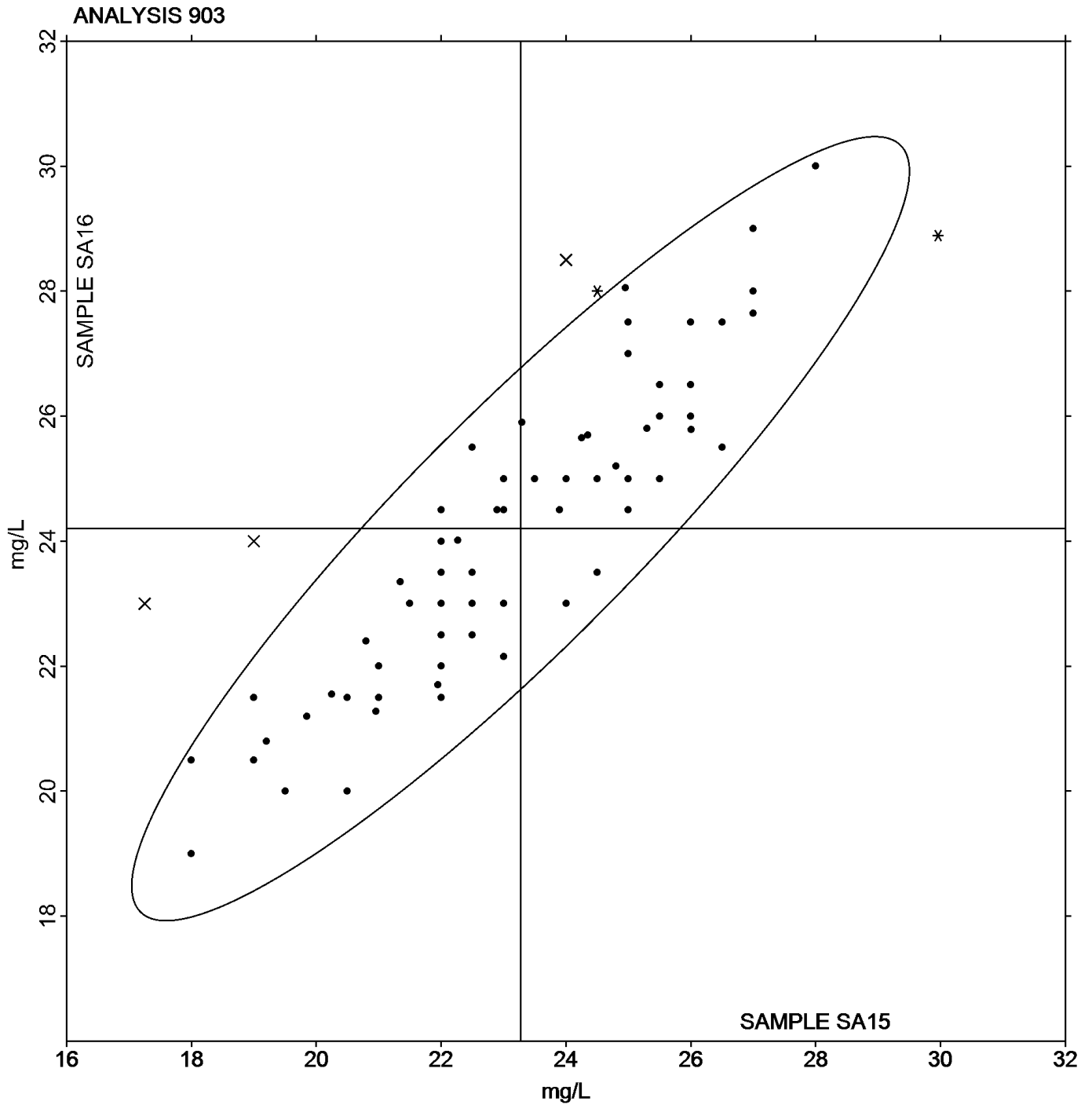
- XCLUUM (X) - Data for both samples are high. Possible Systematic Error.
- ZUEELR (X) - Data for both samples are low. Possible Systematic Error.
- 6VZJ8M (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA16.
- 3HWJBK (X) - Inconsistent in testing between samples.
- PNP8N4 (X) - Data for both samples are high. Possible Systematic Error.
- 79EBZL (X) - Inconsistent in testing between samples.





Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA15 <i>Rose</i>			Sample SA16 <i>Rose</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	25.975	1.450	2.70	28.025	0.035	3.82	2/2
Ripper Method	22.614	2.266	-0.66	23.364	2.139	-0.84	21/22
Aeration Oxidation (AO) Method	23.265	2.578	-0.01	24.083	2.599	-0.12	31/34
Segmented Flow Analyzer	22.379	2.802	-0.89	23.829	2.366	-0.37	7/7
Colormetric Analyzer	25.625	2.428	2.35	27.250	3.096	3.05	4/4
Flow Injection Analysis	23.569	1.759	0.30	24.389	1.379	0.19	9/9
FTIR	26.000	0.000	2.73	26.500	0.000	2.30	1/3



Analysis 904  
Titratable Acidity

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3A8NKH		5.720	-0.006	-0.04	5.690	-0.028	-0.22
3G7D2L		5.716	-0.010	-0.07	5.719	0.000	0.00
3HWJBK	X	6.400	0.674	4.88	6.200	0.482	3.70
3JB47F		5.650	-0.076	-0.55	5.600	-0.118	-0.91
3WHRHJ		5.600	-0.126	-0.91	5.600	-0.118	-0.91
3YKPTC		5.800	0.074	0.54	5.850	0.132	1.01
4BVGWC		5.795	0.069	0.50	5.780	0.062	0.48
4C6RMN		5.783	0.057	0.42	5.801	0.082	0.63
4EVTRC		5.480	-0.246	-1.78	5.480	-0.238	-1.83
6T8NKD		5.900	0.174	1.26	5.900	0.182	1.40
6VZJ8M	X	6.280	0.554	4.01	6.250	0.532	4.08
6W9RBF		5.895	0.169	1.23	5.885	0.167	1.28
79EBZL	X	6.035	0.309	2.24	6.125	0.407	3.12
7P4C44		6.000	0.274	1.98	6.000	0.282	2.16
7QWCVN		5.745	0.019	0.14	5.705	-0.013	-0.10
84Y3CL		5.625	-0.101	-0.73	5.590	-0.128	-0.98
87NKE8		5.700	-0.026	-0.18	5.750	0.032	0.24
8B4VRB		5.800	0.074	0.54	5.800	0.082	0.63
8NTUJD		5.855	0.129	0.94	5.890	0.172	1.32
8VMWMB		5.570	-0.156	-1.12	5.590	-0.128	-0.98
9LKRGF		5.665	-0.061	-0.44	5.675	-0.043	-0.33
9Y7CQB		5.600	-0.126	-0.91	5.600	-0.118	-0.91
A3L2PE		5.700	-0.026	-0.18	5.700	-0.018	-0.14
ACMQ8F		5.650	-0.076	-0.55	5.600	-0.118	-0.91
ADDWGE		5.590	-0.136	-0.98	5.600	-0.118	-0.91
AY37N8		5.800	0.074	0.54	5.800	0.082	0.63
BCK9XH		5.844	0.118	0.86	5.738	0.019	0.15
BKX8EF		5.795	0.069	0.50	5.795	0.077	0.59
BWRN4G		5.800	0.074	0.54	5.800	0.082	0.63
C2HFQ4		5.800	0.074	0.54	5.700	-0.018	-0.14
C3WME7		5.765	0.039	0.29	5.760	0.042	0.32
C7U4QZ		5.685	-0.041	-0.29	5.705	-0.013	-0.10
C8M7AA		5.645	-0.081	-0.58	5.640	-0.078	-0.60
CMGTDF		5.740	0.014	0.10	5.740	0.022	0.17
CUG4U7		5.585	-0.141	-1.02	5.595	-0.123	-0.94

Analysis 904  
Titratable Acidity

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
E4DZKD		5.400	-0.326	-2.35	5.400	-0.318	-2.44
E6A7C7		5.700	-0.026	-0.18	5.700	-0.018	-0.14
EWJNVC		5.700	-0.026	-0.18	5.650	-0.068	-0.52
F4E6K8		5.750	0.024	0.18	5.710	-0.008	-0.06
F4XNTZ		5.545	-0.181	-1.31	5.545	-0.173	-1.33
FRKNW8		5.700	-0.026	-0.18	5.700	-0.018	-0.14
FY4R6U		5.590	-0.136	-0.98	5.600	-0.118	-0.91
GCJEP		5.650	-0.076	-0.55	5.645	-0.073	-0.56
GDX22Y		5.800	0.074	0.54	5.750	0.032	0.24
GVE3W2		5.700	-0.026	-0.18	5.700	-0.018	-0.14
GX2TX7		5.715	-0.011	-0.08	5.710	-0.008	-0.06
H7DXUW		5.800	0.074	0.54	5.700	-0.018	-0.14
HBMD2Z		5.660	-0.066	-0.47	5.655	-0.063	-0.48
HUWBKW		5.690	-0.036	-0.26	5.675	-0.043	-0.33
J43HZV		5.800	0.074	0.54	5.750	0.032	0.24
JMQ9M9		5.715	-0.011	-0.08	5.614	-0.104	-0.80
JYAD67		5.505	-0.221	-1.59	5.520	-0.198	-1.52
KLYFJ4		5.835	0.109	0.79	5.833	0.115	0.88
LCMMLT		5.910	0.184	1.33	5.890	0.172	1.32
MKXAAM		5.700	-0.026	-0.18	5.775	0.057	0.44
N7WUMX		5.680	-0.046	-0.33	5.680	-0.038	-0.29
NFJW6T		5.750	0.024	0.18	5.800	0.082	0.63
NVDH9Z		5.700	-0.026	-0.18	5.700	-0.018	-0.14
P9VPLR		5.850	0.124	0.90	5.750	0.032	0.24
PNP8N4		5.800	0.074	0.54	5.800	0.082	0.63
Q4XHU3		5.885	0.159	1.15	5.792	0.073	0.56
QA6XNK		5.800	0.074	0.54	5.800	0.082	0.63
QBF2YM		5.925	0.199	1.44	5.855	0.137	1.05
QBXWF4		6.000	0.274	1.98	6.000	0.282	2.16
QWHPQJ	*	6.080	0.354	2.56	6.080	0.362	2.78
R6734N		5.730	0.004	0.03	5.685	-0.033	-0.25
TDD7GZ	X	3.740	-1.986	-14.36	3.715	-2.003	-15.37
UB72RH		5.700	-0.026	-0.18	5.700	-0.018	-0.14
UCX4AR		5.950	0.224	1.62	5.850	0.132	1.01
UDCLFH		5.650	-0.076	-0.55	5.700	-0.018	-0.14



**Analysis 904  
Titratable Acidity**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UE6PXR		5.750	0.024	0.18	5.650	-0.068	-0.52
UJYEPW		5.390	-0.336	-2.43	5.440	-0.278	-2.13
VPJ4EY		5.800	0.074	0.54	5.800	0.082	0.63
W7K6QX		5.886	0.160	1.16	5.898	0.179	1.38
X3JAUF		5.730	0.004	0.03	5.710	-0.008	-0.06
X4CCCP	*	5.335	-0.391	-2.82	5.410	-0.308	-2.36
X7ZYTJ		5.800	0.074	0.54	5.800	0.082	0.63
XCLUUM		5.890	0.164	1.19	5.880	0.162	1.24
Y7FFNC		5.655	-0.071	-0.51	5.720	0.002	0.01
YF679J		5.800	0.074	0.54	5.800	0.082	0.63
YQLV8N	*	5.635	-0.091	-0.65	5.750	0.032	0.24
ZK9JJM		5.700	-0.026	-0.18	5.800	0.082	0.63
ZT8WPG	*	5.380	-0.346	-2.50	5.370	-0.348	-2.67
ZUEELR		5.630	-0.096	-0.69	5.630	-0.088	-0.68

Grand Means	Summary Statistics
5.7255 g/L as tartaric acid	5.7181 g/L as tartaric acid
<b>Std Dev Btwn Labs</b>	
0.1383 g/L as tartaric acid	0.1303 g/L as tartaric acid
<b>Statistics based on 80 of 84 reporting participants</b>	

Wines tested: SA15: Rose; SA16: Rose

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

- 6VZJ8M (X) - Data for both samples are high. Possible Systematic Error.
- 3HWJBK (X) - Data for both samples are high. Possible Systematic Error.
- TDD7GZ (X) - Data for both samples are low.
- 79EBZL (X) - Inconsistent in testing between samples, data for sample SA16 are high. Inconsistent within the determinations of sample SA15.



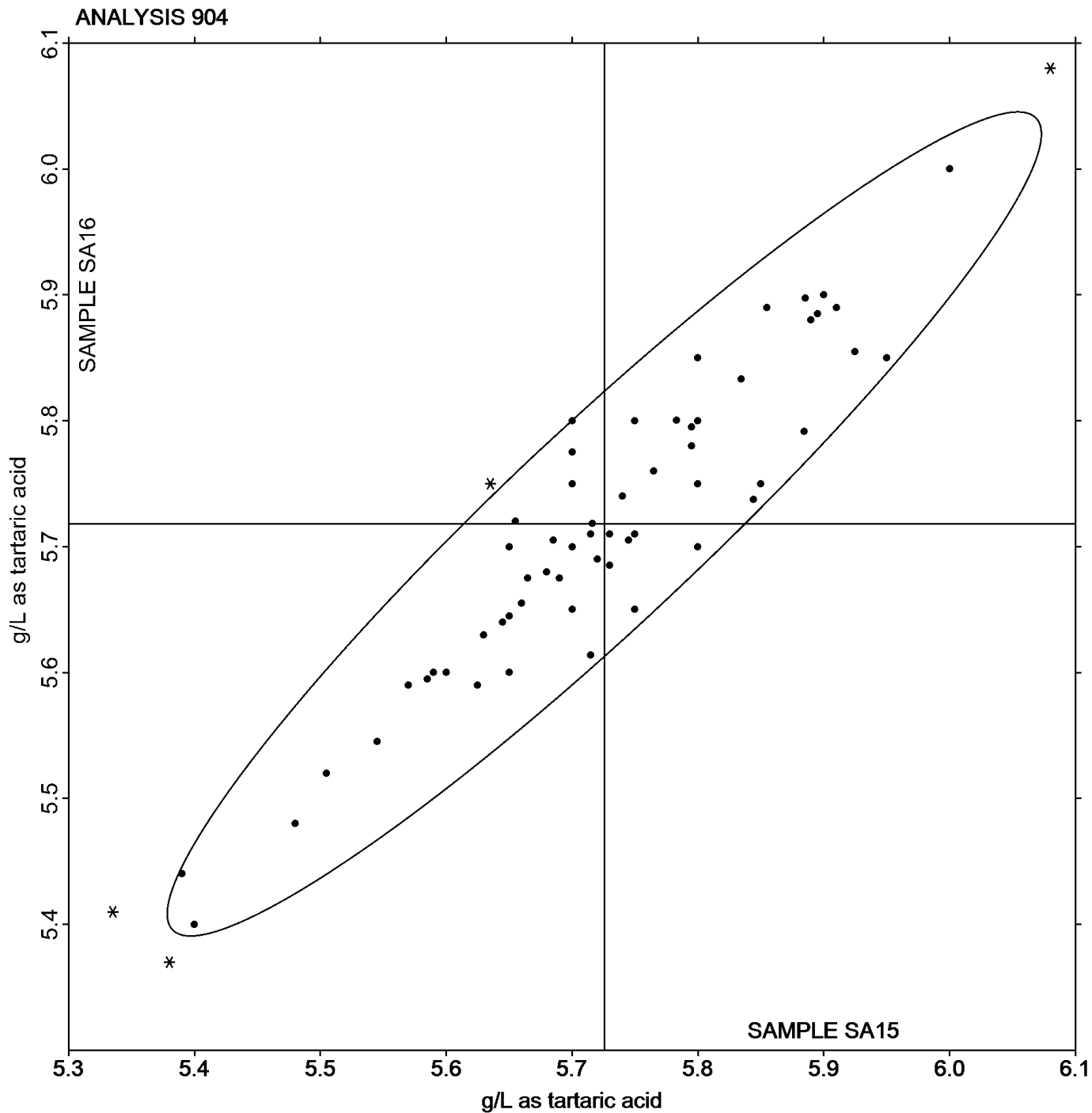
Analysis 904  
Titratable Acidity

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA15 <i>Rose</i>			Sample SA16 <i>Rose</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Autotitration	5.710	0.105	-0.015	5.699	0.103	-0.019	53/54
Manual Titration	5.745	0.171	0.020	5.741	0.153	0.023	19/21
FTIR	5.836	0.177	0.111	5.837	0.163	0.119	7/8
Segmented Flow Analyzer	5.390	0.000	-0.336	5.440	0.000	-0.278	1/1



Analysis 904  
Titratable Acidity





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #058  
Spring 2018

## Analysis 905 Volatile Acidity

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3A8NKH	X	0.3500	0.1757	3.17	0.4000	0.2250	4.19
3HWJBK		0.1400	-0.0343	-0.62	0.1600	-0.0150	-0.28
3JB47F		0.1900	0.0157	0.28	0.1900	0.0150	0.28
3YKPTC		0.2400	0.0657	1.18	0.2250	0.0500	0.93
4BVGWC		0.2910	0.1167	2.10	0.2850	0.1100	2.05
4C6RMN		0.2900	0.1157	2.09	0.2750	0.1000	1.86
4EVTRC		0.1500	-0.0243	-0.44	0.1500	-0.0250	-0.47
6T8NKD		0.2400	0.0657	1.18	0.2350	0.0600	1.12
6VZJ8M	X	0.6075	0.4332	7.81	0.6000	0.4250	7.91
6W9RBF	X	0.3110	0.1367	2.46	0.2735	0.0985	1.83
79EBZL		0.1400	-0.0343	-0.62	0.1400	-0.0350	-0.65
7P4C44		0.1050	-0.0693	-1.25	0.1000	-0.0750	-1.40
7QWCVN	X	0.1400	-0.0343	-0.62	0.2600	0.0850	1.58
87NKE8		0.1800	0.0057	0.10	0.1800	0.0050	0.09
8B4VRB		0.1850	0.0107	0.19	0.1950	0.0200	0.37
8NTUJD	X	0.2750	0.1007	1.82	0.3000	0.1250	2.33
8VMWMB	*	0.2850	0.1107	2.00	0.3000	0.1250	2.33
9LKRGF		0.2200	0.0457	0.82	0.2200	0.0450	0.84
9Y7CQB		0.1650	-0.0093	-0.17	0.1800	0.0050	0.09
A3L2PE		0.1350	-0.0393	-0.71	0.1350	-0.0400	-0.75
ACMQ8F	X	0.4050	0.2307	4.16	0.4100	0.2350	4.37
ADDWGE		0.1900	0.0157	0.28	0.1700	-0.0050	-0.09
AY37N8	X	0.3200	0.1457	2.63	0.2650	0.0900	1.68
BCK9XH		0.1171	-0.0572	-1.03	0.1169	-0.0582	-1.08
BKX8EF		0.1350	-0.0393	-0.71	0.1350	-0.0400	-0.75
BWRN4G		0.1750	0.0007	0.01	0.1700	-0.0050	-0.09
C2HFQ4	*	0.1050	-0.0693	-1.25	0.1350	-0.0400	-0.75
C3WME7		0.1310	-0.0433	-0.78	0.1355	-0.0395	-0.74
C7WTVX		0.2300	0.0557	1.00	0.2200	0.0450	0.84
C8M7AA		0.1250	-0.0493	-0.89	0.1350	-0.0400	-0.75
CMGTDF	X	0.2950	0.1207	2.18	0.2600	0.0850	1.58
CUG4U7		0.1100	-0.0643	-1.16	0.1050	-0.0700	-1.30
E4DZKD		0.1350	-0.0393	-0.71	0.1450	-0.0300	-0.56
E6A7C7		0.1400	-0.0343	-0.62	0.1400	-0.0350	-0.65
EWJNVC		0.1350	-0.0393	-0.71	0.1550	-0.0200	-0.37



Analysis 905  
Volatile Acidity

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
F4E6K8		0.1600	-0.0143	-0.26	0.1500	-0.0250	-0.47
F4XNTZ		0.1800	0.0057	0.10	0.1800	0.0050	0.09
FRKNW8		0.2450	0.0707	1.27	0.2400	0.0650	1.21
FY4R6U		0.2750	0.1007	1.82	0.2800	0.1050	1.95
GCJEP C		0.1700	-0.0043	-0.08	0.1800	0.0050	0.09
GDX22Y		0.2800	0.1057	1.91	0.2850	0.1100	2.05
GVE3W2		0.2350	0.0607	1.09	0.2500	0.0750	1.40
GX2TX7		0.1600	-0.0143	-0.26	0.1600	-0.0150	-0.28
H7DXUW		0.1800	0.0057	0.10	0.1750	0.0000	0.00
HBMD2Z		0.1900	0.0157	0.28	0.1850	0.0100	0.19
HUWBKW		0.1150	-0.0593	-1.07	0.1200	-0.0550	-1.02
J43HZV		0.1400	-0.0343	-0.62	0.1350	-0.0400	-0.75
JM9M9		0.2500	0.0757	1.36	0.2550	0.0800	1.49
JYAD67		0.1050	-0.0693	-1.25	0.1050	-0.0700	-1.30
LCMMLT		0.1400	-0.0343	-0.62	0.1450	-0.0300	-0.56
MKXAAM		0.2340	0.0597	1.08	0.2340	0.0590	1.10
N7WUMX		0.1550	-0.0193	-0.35	0.1550	-0.0200	-0.37
NFJW6T	X	0.1600	-0.0143	-0.26	0.1100	-0.0650	-1.21
NVDH9Z		0.1400	-0.0343	-0.62	0.1400	-0.0350	-0.65
P9VPLR		0.1250	-0.0493	-0.89	0.1300	-0.0450	-0.84
PNP8N4		0.1550	-0.0193	-0.35	0.1500	-0.0250	-0.47
Q4XHU3		0.1400	-0.0343	-0.62	0.1450	-0.0300	-0.56
QA6XNK		0.1305	-0.0438	-0.79	0.1295	-0.0455	-0.85
QBF2YM		0.2350	0.0607	1.09	0.2350	0.0600	1.12
QBXWF4		0.1150	-0.0593	-1.07	0.1150	-0.0600	-1.12
QWHPQJ		0.1400	-0.0343	-0.62	0.1400	-0.0350	-0.65
R6734N	*	0.0400	-0.1343	-2.42	0.0650	-0.1100	-2.05
TDD7GZ		0.2730	0.0987	1.78	0.2705	0.0955	1.78
UB72RH		0.1550	-0.0193	-0.35	0.1550	-0.0200	-0.37
UCX4AR	*	0.1800	0.0057	0.10	0.1500	-0.0250	-0.47
UDCLFH		0.1750	0.0007	0.01	0.1750	0.0000	0.00
UE6PXR	*	0.3200	0.1457	2.63	0.3100	0.1350	2.51
UJYEPW		0.1750	0.0007	0.01	0.1800	0.0050	0.09
VPJ4EY		0.1450	-0.0293	-0.53	0.1350	-0.0400	-0.75
W7K6QX		0.1700	-0.0043	-0.08	0.1950	0.0200	0.37



**Analysis 905  
Volatile Acidity**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
X4CCCP		0.1800	0.0057	0.10	0.1750	0.0000	0.00
X7ZYTJ		0.1500	-0.0243	-0.44	0.1650	-0.0100	-0.19
XCLUUM		0.1300	-0.0443	-0.80	0.1200	-0.0550	-1.02
Y7FFNC		0.1250	-0.0493	-0.89	0.1200	-0.0550	-1.02
YF679J		0.2000	0.0257	0.46	0.2000	0.0250	0.47
YQLV8N		0.1800	0.0057	0.10	0.1700	-0.0050	-0.09
ZK9JJM	X	0.2450	0.0707	1.27	0.2800	0.1050	1.95
ZT8WPG		0.1500	-0.0243	-0.44	0.1400	-0.0350	-0.65
ZUEELR		0.2000	0.0257	0.46	0.2000	0.0250	0.47

Grand Means		Summary Statistics	
	0.17430 g/L as acetic acid		0.17502 g/L as acetic acid
Std Dev Btwn Labs			0.05371 g/L as acetic acid
	0.05547 g/L as acetic acid		
<b>Statistics based on 69 of 79 reporting participants</b>			

Wines tested: SA15: Rose; SA16: Rose

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

- 8NTUJD (X) - Inconsistent in testing between samples.
- 6W9RBF (X) - Inconsistent in testing between samples.
- 3A8NKH (X) - Data for both samples are high. Possible Systematic Error.
- 6VZJ8M (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- ACMQ8F (X) - Data for both samples are high. Possible Systematic Error.
- AY37N8 (X) - Inconsistent in testing between samples.
- NFJW6T (X) - Inconsistent in testing between samples.
- ZK9JJM (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA15.
- 7QWCVN (X) - Inconsistent in testing between samples.
- CMGTDF (X) - Inconsistent in testing between samples.



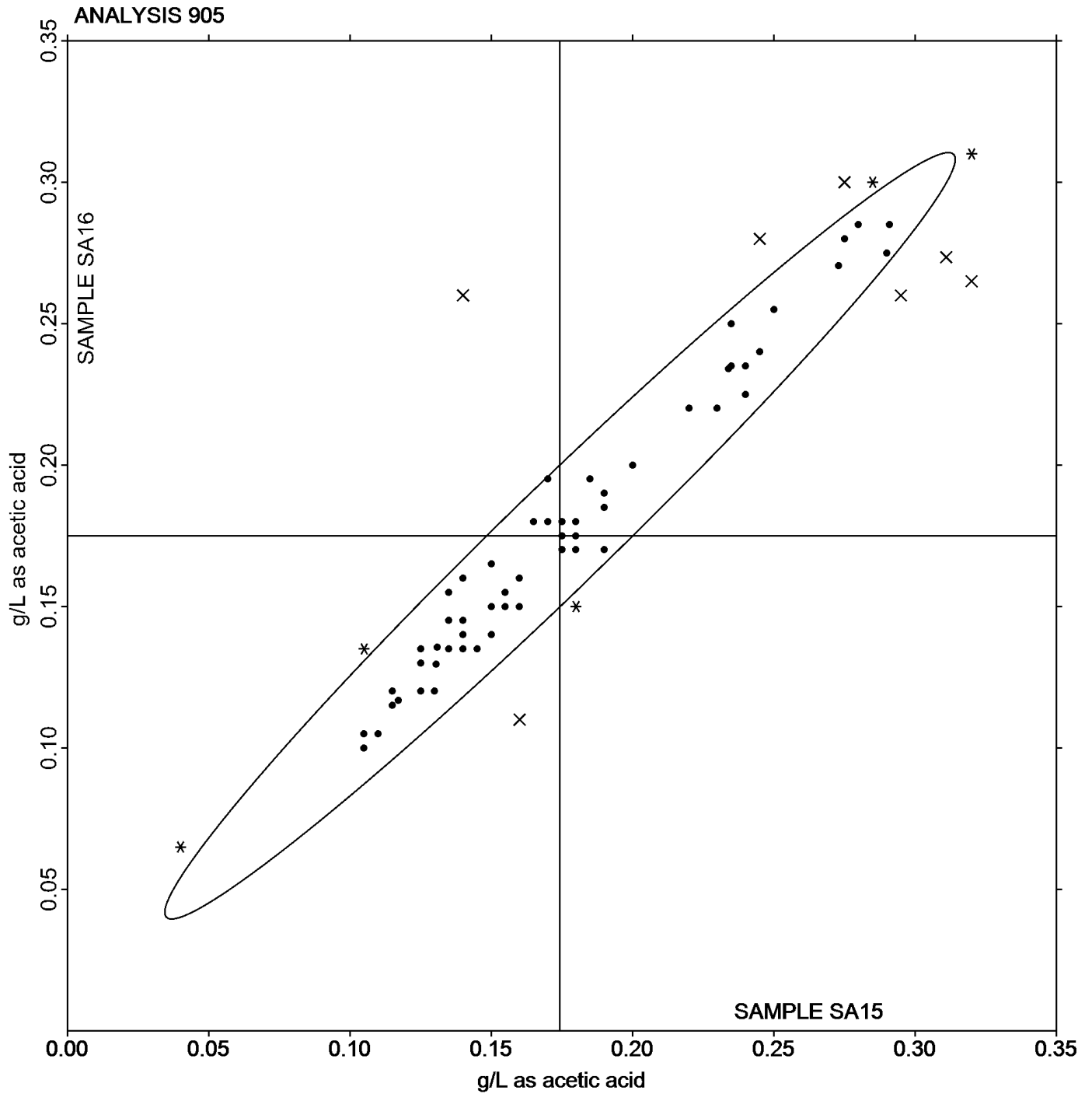
**Analysis 905  
Volatile Acidity**

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

Test Methodology	Sample SA15 <i>Rose</i>			Sample SA16 <i>Rose</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Cash Still method	0.256	0.045	0.0813	0.255	0.044	0.0795	10/17
Enzymatic method	0.147	0.032	-0.0271	0.149	0.029	-0.0265	43/46
HPLC	0.150	0.000	-0.0243	0.140	0.000	-0.0350	1/1
GC	0.185	0.070	0.0102	0.195	0.056	0.0195	2/2
Seg. Flow / Colorimetric Analyzer	0.216	0.029	0.0417	0.215	0.025	0.0400	5/5
FTIR	0.193	0.064	0.0186	0.193	0.067	0.0175	8/8



Analysis 905  
Volatile Acidity





Analysis 906  
Specific Gravity

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3A8NKH	X	1.008	-0.001	-0.82	1.008	0.000	0.02
3G7D2L		1.009	0.000	0.28	1.009	0.000	0.31
3HWJBK		1.009	0.001	0.89	1.009	0.001	0.99
3JB47F		1.009	0.000	0.38	1.009	0.000	0.36
3WHRHJ		1.009	0.000	0.30	1.009	0.000	0.32
3YKPTC		1.009	0.000	0.51	1.009	0.000	0.54
4BVGWC		1.009	0.000	0.21	1.009	0.000	0.58
4C6RMN		1.009	0.000	0.29	1.009	0.000	0.33
6T8NKD		1.009	0.000	0.43	1.009	0.000	0.46
6VZJ8M		1.009	0.000	0.62	1.009	0.000	0.58
6W9RBF		1.009	0.000	0.26	1.009	0.000	0.52
7QWCVN	*	1.009	0.001	1.02	1.009	0.000	0.51
84Y3CL		1.010	0.001	1.90	1.010	0.001	1.96
87NKE8	*	1.009	0.001	1.29	1.009	0.001	0.79
8B4VRB		1.008	0.000	-0.40	1.008	0.000	-0.52
8NTUJD		1.009	0.001	0.89	1.009	0.001	0.86
8VMWMB		1.007	-0.002	-2.15	1.007	-0.002	-2.11
9LKRGF		1.009	0.000	0.28	1.009	0.000	0.30
ACMQ8F		1.009	0.000	0.29	1.009	0.000	0.31
AY37N8	*	1.006	-0.002	-2.69	1.006	-0.002	-2.73
BCK9XH		1.009	0.000	0.26	1.009	0.000	0.30
BKX8EF		1.009	0.000	0.41	1.009	0.000	0.30
C2HFQ4	X	1.082	0.073	99.15	1.082	0.073	101.40
C3WME7		1.009	0.000	0.41	1.009	0.000	0.44
C7U4QZ	X	1.009	0.000	0.28	1.008	-0.001	-0.90
C7WTVX		1.007	-0.001	-2.02	1.007	-0.001	-2.04
C8M7AA		1.007	-0.002	-2.15	1.007	-0.002	-2.18
CMGTDF		1.007	-0.002	-2.15	1.007	-0.002	-2.18
CUG4U7		1.009	0.000	0.28	1.009	0.000	0.30
E6A7C7		1.009	0.000	0.21	1.009	0.000	0.30
EWJNVC		1.009	0.000	0.28	1.009	0.000	0.36
F4E6K8		1.008	0.000	-0.26	1.008	0.000	-0.25
F4XNTZ		1.009	0.000	0.21	1.009	0.000	0.30
FRKNW8		1.009	0.000	0.31	1.009	0.000	0.33
FY4R6U		1.008	0.000	-0.13	1.008	0.000	0.03



Analysis 906  
Specific Gravity

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GCJEP		1.009	0.000	0.34	1.009	0.000	0.41
GDX22Y	*	1.006	-0.002	-2.62	1.007	-0.002	-2.59
GVE3W2		1.009	0.000	0.29	1.009	0.000	0.35
GX2TX7		1.008	0.000	-0.06	1.008	0.000	0.03
H7DXUW		1.008	0.000	-0.26	1.008	0.000	-0.25
HBMD2Z		1.009	0.001	1.22	1.009	0.001	1.20
HUWBKW		1.009	0.001	0.82	1.009	0.001	0.86
J43HZV		1.008	0.000	-0.53	1.008	0.000	-0.52
JMQ9M9		1.009	0.000	0.32	1.009	0.000	0.28
JYAD67		1.009	0.000	0.21	1.009	0.000	0.37
KLYFJ4		1.009	0.000	0.24	1.009	0.000	0.31
LCMMLT		1.008	0.000	-0.53	1.008	0.000	-0.52
MKXAAM	X	1.009	0.000	0.14	1.009	0.001	0.86
N7WUMX		1.009	0.000	0.28	1.009	0.000	0.30
NFJW6T	*	1.006	-0.002	-2.69	1.006	-0.002	-2.73
NVDH9Z		1.009	0.000	0.29	1.009	0.000	0.32
P9VPLR		1.007	-0.001	-1.48	1.007	-0.001	-1.49
PNP8N4		1.009	0.001	0.75	1.009	0.000	0.30
Q4XHU3		1.009	0.000	0.45	1.009	0.000	0.48
QA6XNK		1.009	0.000	0.14	1.009	0.000	0.23
QBF2YM		1.009	0.000	0.21	1.008	0.000	0.03
QBXWF4		1.008	0.000	0.01	1.008	0.000	-0.18
QWHPQJ		1.008	0.000	-0.53	1.008	0.000	-0.52
R6734N		1.008	0.000	-0.13	1.008	0.000	-0.11
UB72RH		1.009	0.000	0.41	1.009	0.000	0.44
UDCLFH		1.009	0.000	0.29	1.009	0.000	0.32
UE6PXR		1.009	0.001	1.02	1.009	0.001	0.99
UJYEPW		1.009	0.000	0.29	1.009	0.000	0.32
W7K6QX		1.007	-0.001	-2.02	1.007	-0.001	-2.04
X3JAUF		1.009	0.001	0.95	1.009	0.001	0.99
X4CCCP		1.009	0.000	0.41	1.009	0.000	0.58
X7ZYTJ	X	1.007	-0.002	-2.29	1.009	0.000	0.29
Y7FFNC		1.009	0.000	0.21	1.008	0.000	-0.04
YF679J	X	1.007	-0.001	-1.88	1.009	0.001	0.86
YQLV8N	X	1.009	0.001	0.99	1.009	0.000	0.37



Analysis 906  
Specific Gravity

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ZT8WPG		1.009	0.000	0.28	1.009	0.000	0.30

Grand Means	Summary Statistics
1.0084 sp gr 20/20 C	1.0084 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 64 of 71 reporting participants</b>	

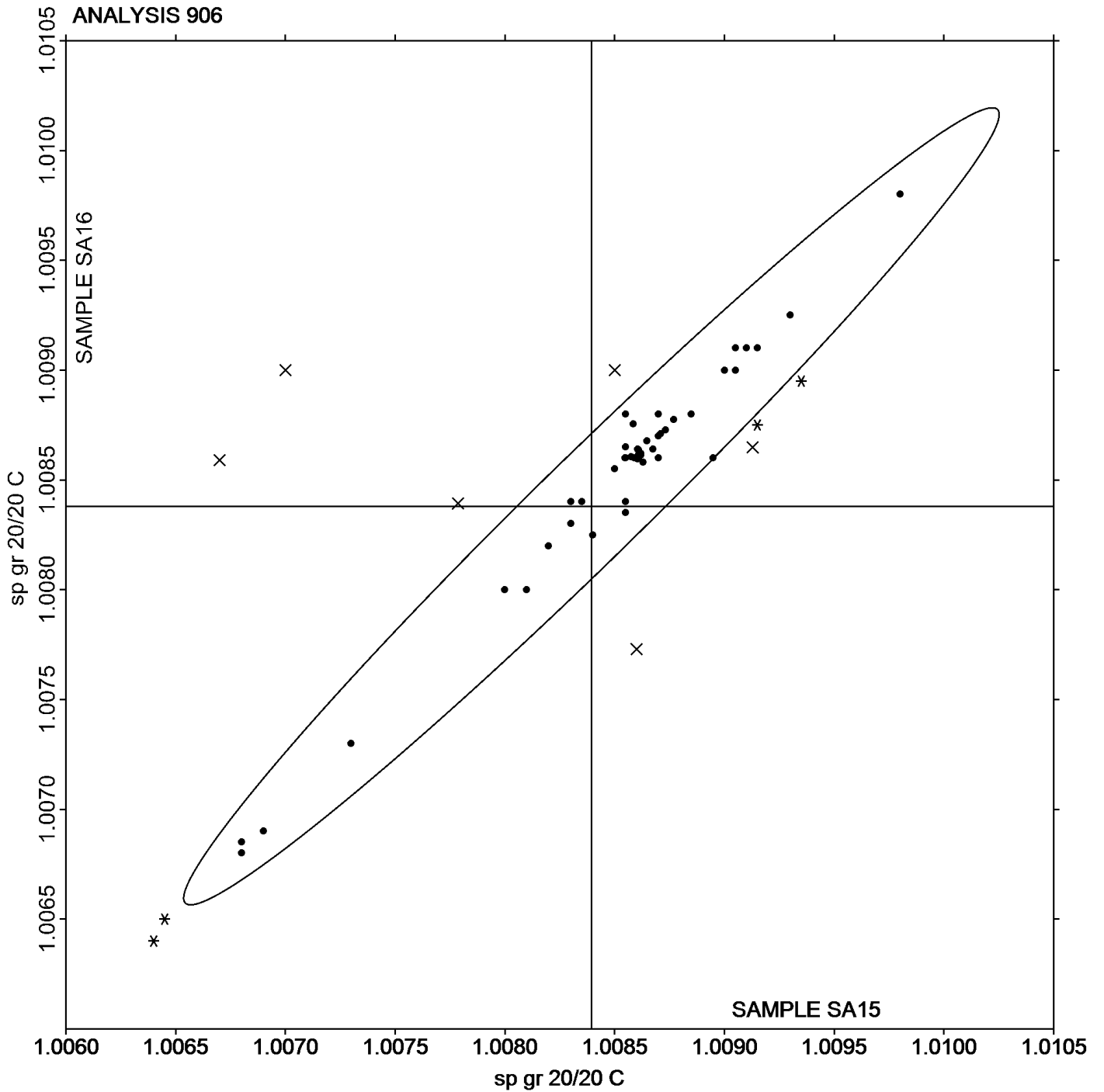
Wines tested: SA15: Rose; SA16: Rose

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

- YQLV8N (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA15.
- 3A8NKH (X) - Inconsistent in testing between samples.
- C7U4QZ (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA16.
- MKXAAM (X) - Inconsistent in testing between samples. Original data off by factor of 1000, corrected by CTS.
- YF679J (X) - Inconsistent in testing between samples.
- X7ZYTJ (X) - Inconsistent in testing between samples.
- C2HFQ4 (X) - Extreme data.



Analysis 906  
Specific Gravity







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

**Report #058**  
**Spring 2018**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3A8NKH		3.350	0.001	0.03	3.360	0.009	0.30
3HWJBK	*	3.360	0.011	0.38	3.385	0.034	1.13
3JB47F		3.390	0.041	1.41	3.390	0.039	1.29
3WHRHJ		3.320	-0.029	-1.01	3.320	-0.031	-1.02
3YKPTC	*	3.350	0.001	0.03	3.375	0.024	0.80
4BVGWC		3.331	-0.019	-0.65	3.341	-0.010	-0.32
4C6RMN	X	3.385	0.036	1.24	3.350	-0.001	-0.03
4EVTRC		3.345	-0.004	-0.14	3.340	-0.011	-0.36
6T8NKD		3.350	0.001	0.03	3.350	-0.001	-0.03
6VZJ8M		3.355	0.006	0.20	3.365	0.014	0.47
6W9RBF		3.340	-0.009	-0.32	3.335	-0.016	-0.52
79EBZL	X	3.440	0.091	3.14	3.420	0.069	2.28
7P4C44		3.345	-0.004	-0.14	3.350	-0.001	-0.03
7QWCVN		3.375	0.026	0.89	3.385	0.034	1.13
84Y3CL		3.360	0.011	0.38	3.350	-0.001	-0.03
87NKE8		3.350	0.001	0.03	3.350	-0.001	-0.03
8B4VRB		3.340	-0.009	-0.32	3.330	-0.021	-0.69
8NTUJD		3.345	-0.004	-0.14	3.345	-0.006	-0.19
8VMWMB		3.295	-0.054	-1.87	3.300	-0.051	-1.67
9LKRGF		3.330	-0.019	-0.66	3.335	-0.016	-0.52
9Y7CQB		3.330	-0.019	-0.66	3.340	-0.011	-0.36
A3L2PE	X	3.310	-0.039	-1.36	3.335	-0.016	-0.52
ACMQ8F	*	3.320	-0.029	-1.01	3.300	-0.051	-1.67
ADDWGE		3.350	0.001	0.03	3.350	-0.001	-0.03
AY37N8		3.390	0.041	1.41	3.380	0.029	0.96
BCK9XH	X	3.270	-0.079	-2.74	3.295	-0.056	-1.84
BKX8EF		3.365	0.016	0.55	3.360	0.009	0.30
BWRN4G		3.360	0.011	0.38	3.360	0.009	0.30
C2HFQ4		3.390	0.041	1.41	3.390	0.039	1.29
C3WME7		3.319	-0.030	-1.04	3.320	-0.031	-1.02
C7U4QZ		3.316	-0.033	-1.15	3.325	-0.026	-0.85
C7WTVX		3.320	-0.029	-1.01	3.330	-0.021	-0.69
C8M7AA		3.355	0.006	0.20	3.360	0.009	0.30
CMGTDF	X	3.310	-0.039	-1.36	3.280	-0.071	-2.33
CUG4U7		3.330	-0.019	-0.66	3.330	-0.021	-0.69



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

**Report #058**  
**Spring 2018**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
E4DZKD		3.350	0.001	0.03	3.350	-0.001	-0.03
E6A7C7		3.320	-0.029	-1.01	3.320	-0.031	-1.02
EWJNVC		3.365	0.016	0.55	3.365	0.014	0.47
F4E6K8		3.340	-0.009	-0.32	3.340	-0.011	-0.36
F4XNTZ		3.330	-0.019	-0.66	3.335	-0.016	-0.52
FRKNW8		3.340	-0.009	-0.32	3.340	-0.011	-0.36
FY4R6U		3.330	-0.019	-0.66	3.325	-0.026	-0.85
GCJEP		3.350	0.001	0.03	3.355	0.004	0.14
GDX22Y	*	3.425	0.076	2.63	3.430	0.079	2.61
GVE3W2	X	3.345	-0.004	-0.14	3.310	-0.041	-1.35
GX2TX7		3.340	-0.009	-0.32	3.340	-0.011	-0.36
H7DXUW		3.330	-0.019	-0.66	3.330	-0.021	-0.69
HBMD2Z		3.375	0.026	0.89	3.365	0.014	0.47
HUWBKW		3.390	0.041	1.41	3.400	0.049	1.62
J43HZV		3.365	0.016	0.55	3.365	0.014	0.47
JMQ9M9	X	3.236	-0.113	-3.92	3.270	-0.081	-2.66
JYAD67		3.360	0.011	0.38	3.360	0.009	0.30
LCMMLT		3.370	0.021	0.72	3.375	0.024	0.80
MKXAAM	X	3.350	0.001	0.03	3.390	0.039	1.29
N7WUMX		3.370	0.021	0.72	3.370	0.019	0.63
NFJW6T		3.360	0.011	0.38	3.370	0.019	0.63
NVDH9Z		3.360	0.011	0.38	3.360	0.009	0.30
P9VPLR		3.375	0.026	0.89	3.385	0.034	1.13
PNP8N4		3.355	0.006	0.20	3.355	0.004	0.14
Q4XHU3		3.300	-0.049	-1.70	3.300	-0.051	-1.67
QA6XNK		3.305	-0.044	-1.53	3.310	-0.041	-1.35
QBF2YM	X	3.371	0.021	0.74	3.341	-0.010	-0.34
QBXWF4		3.410	0.061	2.11	3.420	0.069	2.28
QWHPQJ		3.310	-0.039	-1.36	3.310	-0.041	-1.35
R6734N		3.340	-0.009	-0.32	3.340	-0.011	-0.36
TDD7GZ	*	3.390	0.041	1.41	3.375	0.024	0.80
UB72RH		3.380	0.031	1.07	3.380	0.029	0.96
UCX4AR		3.360	0.011	0.38	3.360	0.009	0.30
UDCLFH		3.315	-0.034	-1.18	3.320	-0.031	-1.02
UE6PXR	X	3.255	-0.094	-3.26	3.285	-0.066	-2.17



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

**Report #058**  
**Spring 2018**

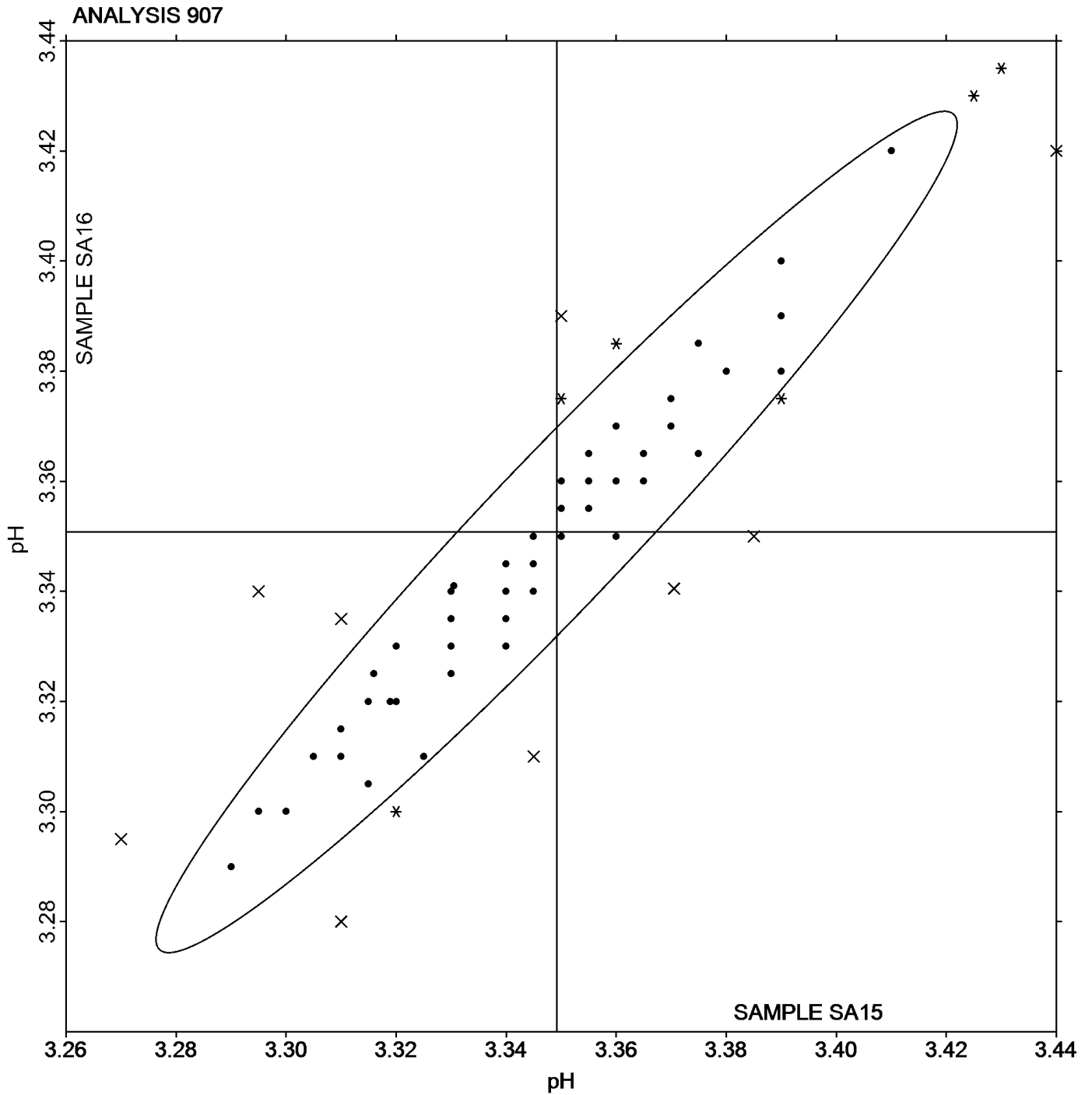
WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
VPJ4EY		3.340	-0.009	-0.32	3.345	-0.006	-0.19
W7K6QX		3.325	-0.024	-0.84	3.310	-0.041	-1.35
X3JAUF	*	3.430	0.081	2.80	3.435	0.084	2.78
X4CCCP		3.310	-0.039	-1.36	3.315	-0.036	-1.18
X7ZYTJ		3.350	0.001	0.03	3.355	0.004	0.14
XCLUUM		3.290	-0.059	-2.05	3.290	-0.061	-2.00
Y7FFNC		3.370	0.021	0.72	3.375	0.024	0.80
YF679J		3.320	-0.029	-1.01	3.320	-0.031	-1.02
YQLV8N		3.315	-0.034	-1.18	3.305	-0.046	-1.51
ZK9JJM	X	3.295	-0.054	-1.87	3.340	-0.011	-0.36
ZT8WPG		3.390	0.041	1.41	3.390	0.039	1.29
ZUEELR		3.365	0.016	0.55	3.365	0.014	0.47

Grand Means		Summary Statistics	
	3.3492 pH		3.3508 pH
Std Dev Btwn Labs			0.0303 pH
	0.0289 pH		
<b>Statistics based on 71 of 82 reporting participants</b>			

Wines tested: SA15: Rose; SA16: Rose

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

- A3L2PE (X) - Inconsistent in testing between samples.
- 4C6RMN (X) - Inconsistent in testing between samples.
- QBF2YM (X) - Inconsistent in testing between samples.
- MKXAAM (X) - Inconsistent in testing between samples.
- GVE3W2 (X) - Inconsistent in testing between samples.
- ZK9JJM (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA15.
- UE6PXR (X) - Inconsistent in testing between samples. Data for sample SA15 are low.
- BCK9XH (X) - Inconsistent in testing between samples. Data for sample SA15 are low.
- JMQ9M9 (X) - Inconsistent in testing between samples. Data for sample SA15 are low.
- CMGTDF (X) - Inconsistent in testing between samples.
- 79EBZL (X) - Inconsistent in testing between samples. Data for sample SA15 are high.





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

**Report #058**  
**Spring 2018**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
4C6RMN		42.13	3.24	1.21	41.15	2.10	0.64
6VZJ8M		39.45	0.56	0.21	41.20	2.15	0.66
7QWCVN	*	45.50	6.61	2.46	48.00	8.95	2.74
8B4VRB		39.80	0.91	0.34	39.70	0.65	0.20
8VMWMB		37.43	-1.46	-0.55	36.53	-2.53	-0.78
9Y7CQB		38.60	-0.29	-0.11	38.60	-0.45	-0.14
C7WTVX		38.00	-0.89	-0.33	38.00	-1.05	-0.32
FY4R6U		38.79	-0.10	-0.04	39.03	-0.03	-0.01
GCJEP		38.00	-0.89	-0.33	38.25	-0.80	-0.25
GVE3W2		33.50	-5.39	-2.01	32.51	-6.55	-2.01
MKXAAM		38.80	-0.09	-0.03	38.20	-0.85	-0.26
P9VPLR	X	78.10	39.21	14.62	75.95	36.90	11.31
PNP8N4		37.70	-1.19	-0.44	37.60	-1.45	-0.45
QA6XNK		35.80	-3.09	-1.15	36.40	-2.65	-0.81
UDCLFH		37.50	-1.39	-0.52	37.55	-1.50	-0.46
UJYEPW		42.30	3.41	1.27	43.10	4.05	1.24
VPJ4EY		40.00	1.11	0.41	39.75	0.70	0.21
ZT8WPG		37.82	-1.07	-0.40	38.37	-0.68	-0.21

<b>Grand Means</b>		<b>Summary Statistics</b>	
	38.888 g/L		39.054 g/L
<b>Std Dev Btwn Labs</b>			
	2.683 g/L		3.261 g/L
<b>Statistics based on 17 of 18 reporting participants</b>			

Wines tested: SA15: Rose; SA16: Rose

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

P9VPLR (X) - Data for both samples are high. Inconsistent within the determinations of sample SA16.



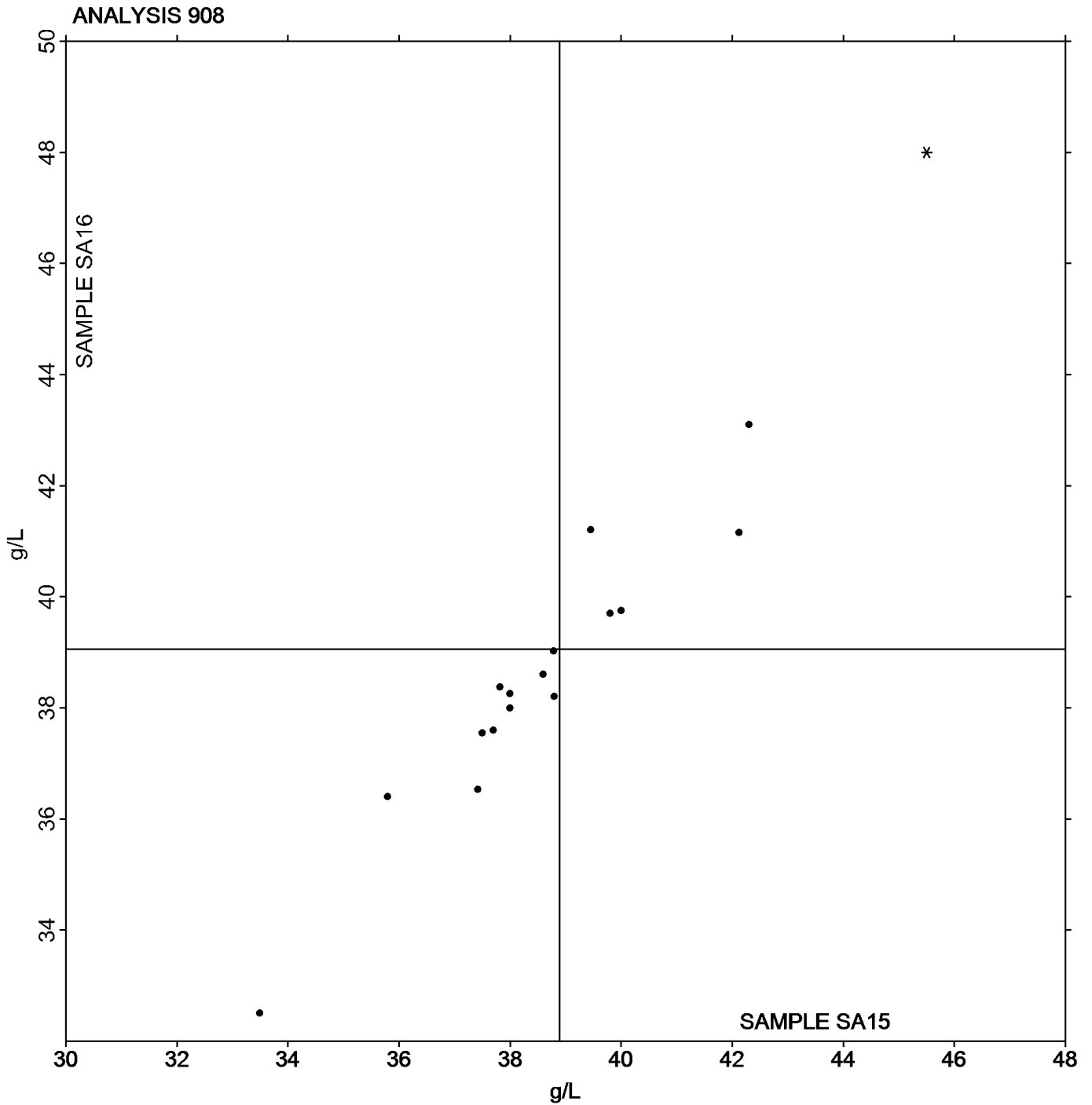
**Analysis 908  
Residual Sugar**

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

Test Methodology	Sample SA15 <i>Rose</i>			Sample SA16 <i>Rose</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	45.500	0.000	6.61	48.000	0.000	8.95	1/1
Cu Reduction Method	38.031	2.612	-0.86	37.741	2.635	-1.31	8/8
Segmented Flow	42.300	0.000	3.41	43.100	0.000	4.05	1/1
FTIR	38.320	0.926	-0.57	38.290	0.893	-0.76	5/6
Other _____	38.725	1.025	-0.16	39.725	2.086	0.67	2/2



Analysis 908  
Residual Sugar



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



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

Report #058  
Spring 2018

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3A8NKH	*	1.942	-0.343	-2.62	1.979	-0.319	-2.50
3HWJBK		2.600	0.315	2.41	2.550	0.253	1.98
3JB47F		2.316	0.031	0.24	2.327	0.029	0.23
3YKPTC		2.230	-0.055	-0.42	2.240	-0.057	-0.45
4BVGWC		2.168	-0.117	-0.90	2.114	-0.184	-1.44
4EVTRC		2.408	0.123	0.94	2.391	0.094	0.73
6T8NKD		2.435	0.150	1.15	2.400	0.103	0.81
6VZJ8M		2.255	-0.030	-0.23	2.365	0.068	0.53
6W9RBF		2.505	0.220	1.69	2.470	0.172	1.35
7P4C44	*	1.955	-0.330	-2.53	2.030	-0.267	-2.09
7QWCVN		2.245	-0.040	-0.30	2.305	0.008	0.06
8B4VRB		2.370	0.085	0.65	2.340	0.043	0.33
8NTUJD		2.220	-0.065	-0.50	2.220	-0.077	-0.61
9LKRGF		2.280	-0.005	-0.04	2.325	0.028	0.22
A3L2PE		2.259	-0.026	-0.20	2.316	0.019	0.15
ACMQ8F		2.270	-0.015	-0.11	2.210	-0.087	-0.68
ADDWGE		2.060	-0.225	-1.72	2.070	-0.227	-1.78
AY37N8	*	2.329	0.044	0.34	2.481	0.183	1.44
BCK9XH		2.400	0.115	0.88	2.350	0.052	0.41
BKX8EF		2.396	0.111	0.85	2.430	0.132	1.04
BWRN4G		2.399	0.114	0.87	2.404	0.106	0.83
C2HFQ4		2.385	0.100	0.77	2.435	0.138	1.08
C3WME7		2.359	0.074	0.56	2.333	0.035	0.28
C7WTVX		2.375	0.090	0.69	2.400	0.103	0.81
C8M7AA		2.020	-0.265	-2.03	2.030	-0.267	-2.09
CMGTDF		2.340	0.055	0.42	2.330	0.033	0.26
CUG4U7		2.375	0.090	0.69	2.380	0.083	0.65
E4DZKD		2.330	0.045	0.35	2.320	0.023	0.18
EWJNVC		2.380	0.095	0.73	2.295	-0.002	-0.02
F4E6K8		2.435	0.150	1.15	2.440	0.143	1.12
F4XNTZ		2.330	0.045	0.35	2.305	0.008	0.06
FRKNW8		2.275	-0.010	-0.07	2.285	-0.012	-0.10
FY4R6U	X	2.255	-0.030	-0.23	2.050	-0.247	-1.94
GCJEP		2.310	0.025	0.19	2.290	-0.007	-0.06
GDX22Y		2.335	0.050	0.38	2.355	0.058	0.45





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

Report #058  
Spring 2018

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GX2TX7		2.375	0.090	0.69	2.385	0.088	0.69
H7DXUW		2.285	0.000	0.00	2.295	-0.002	-0.02
HBMD2Z		2.290	0.005	0.04	2.290	-0.007	-0.06
HUWBKW		2.155	-0.130	-0.99	2.085	-0.212	-1.66
J43HZV		2.340	0.055	0.42	2.345	0.048	0.37
JMQ9M9	X	1.750	-0.535	-4.10	1.715	-0.582	-4.56
JYAD67		2.391	0.106	0.81	2.397	0.099	0.78
LCMMLT		2.315	0.030	0.23	2.335	0.038	0.30
MKXAAM		2.160	-0.125	-0.96	2.160	-0.137	-1.08
N7WUMX		2.070	-0.215	-1.64	2.075	-0.222	-1.74
NFJW6T		2.443	0.158	1.21	2.440	0.143	1.12
NVDH9Z		2.452	0.167	1.28	2.460	0.162	1.27
P9VPLR		2.240	-0.045	-0.34	2.255	-0.042	-0.33
PNP8N4		2.280	-0.005	-0.04	2.320	0.023	0.18
QA6XNK		2.171	-0.114	-0.87	2.261	-0.036	-0.28
QBF2YM		2.225	-0.060	-0.46	2.280	-0.017	-0.14
QBXWF4	X	1.190	-1.095	-8.38	1.185	-1.112	-8.72
QWHPQJ		2.200	-0.085	-0.65	2.185	-0.112	-0.88
R6734N		2.290	0.005	0.04	2.380	0.083	0.65
TDD7GZ	*	2.215	-0.070	-0.53	2.375	0.078	0.61
UB72RH		2.323	0.038	0.29	2.379	0.081	0.64
UCX4AR		2.355	0.070	0.54	2.315	0.018	0.14
UDCLFH		2.335	0.050	0.38	2.285	-0.012	-0.10
UE6PXR		2.325	0.040	0.31	2.360	0.063	0.49
VPJ4EY		2.427	0.142	1.09	2.419	0.121	0.95
W7K6QX		2.335	0.050	0.38	2.340	0.043	0.33
X4CCCP		2.410	0.125	0.96	2.405	0.108	0.84
XCLUUM		1.965	-0.320	-2.45	1.985	-0.312	-2.45
Y7FFNC	*	2.090	-0.195	-1.49	2.015	-0.282	-2.21
YF679J		2.205	-0.080	-0.61	2.314	0.016	0.13
YQLV8N		2.215	-0.070	-0.53	2.265	-0.032	-0.25
ZK9JJM		2.165	-0.120	-0.92	2.205	-0.092	-0.72
ZT8WPG		2.175	-0.110	-0.84	2.205	-0.092	-0.72



<b>Grand Means</b>		<b>Summary Statistics</b>	
	2.2847 g/L		2.2973 g/L
<b>Std Dev Btwn Labs</b>			0.1276 g/L
	0.1306 g/L		

**Statistics based on 65 of 68 reporting participants**

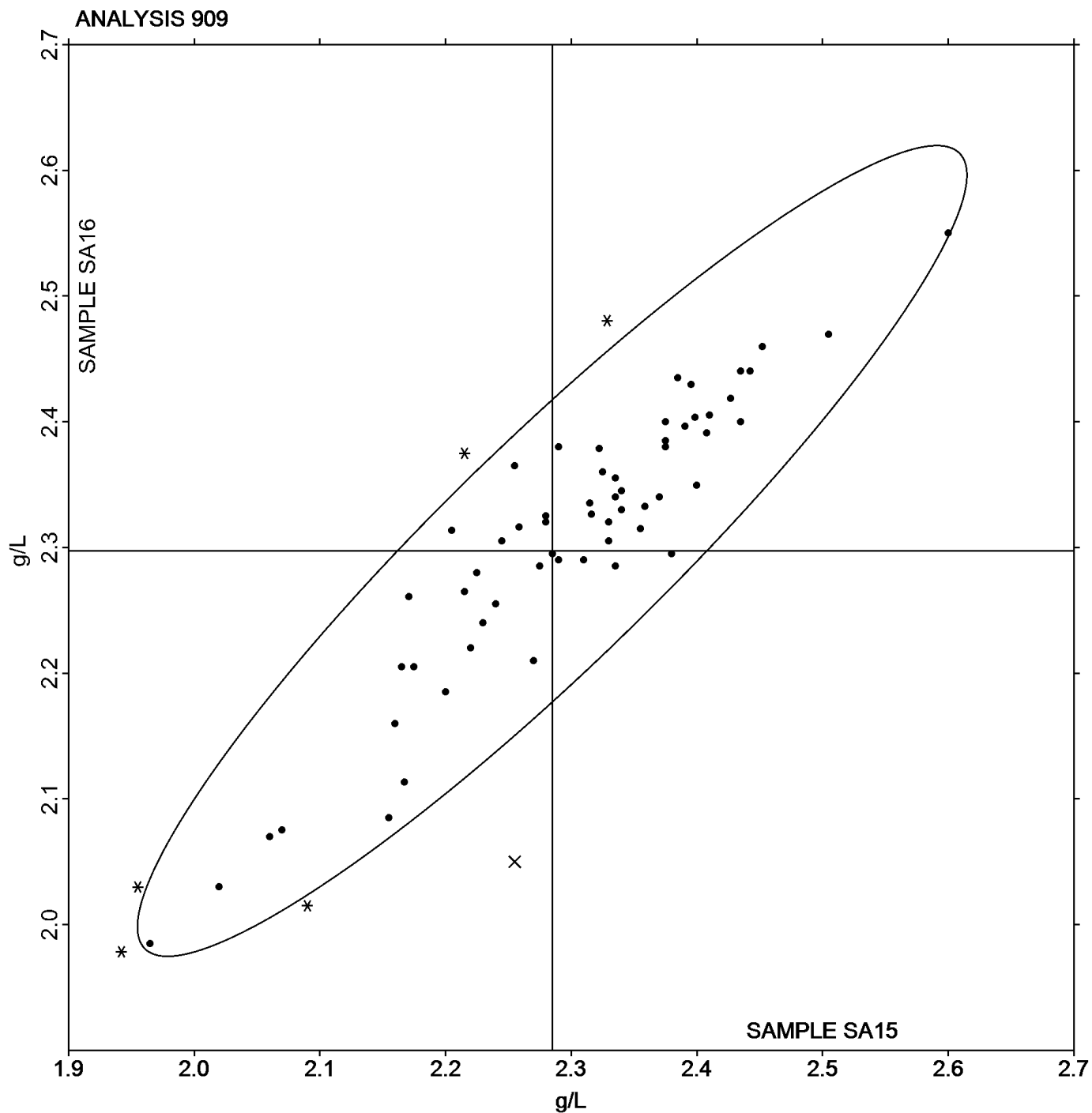
Wines tested: SA15: Rose; SA16: Rose

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

FY4R6U (X) - Inconsistent in testing between samples.

QBXWF4 (X) - Data for both samples are low. Possible Systematic Error.

JMQ9M9 (X) - Data for both samples are low. Data changed from g/L to g/100mL by CTS.





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #058  
Spring 2018

## Analysis 910 Glucose + Fructose

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3A8NKH		36.59	-0.48	-0.24	36.48	-0.64	-0.34
3G7D2L	*	38.85	1.78	0.90	37.65	0.53	0.28
3HWJBK		36.70	-0.37	-0.19	36.75	-0.37	-0.19
3JB47F		37.25	0.18	0.09	37.65	0.53	0.28
3YKPTC	*	33.00	-4.07	-2.05	32.50	-4.62	-2.42
4BVGWC		36.75	-0.32	-0.16	37.10	-0.02	-0.01
4EVTRC		39.15	2.08	1.05	39.70	2.58	1.35
6T8NKD		38.57	1.50	0.76	38.13	1.01	0.53
6W9RBF		36.31	-0.76	-0.38	36.62	-0.50	-0.26
7P4C44		33.25	-3.82	-1.93	33.75	-3.37	-1.76
87NKE8		37.10	0.03	0.02	37.60	0.48	0.25
8B4VRB		38.10	1.03	0.52	38.20	1.08	0.56
8NTUJD	X	37.55	0.48	0.24	39.60	2.48	1.30
9LKRGF		32.21	-4.86	-2.46	32.45	-4.67	-2.44
A3L2PE		37.75	0.68	0.34	37.25	0.13	0.07
ACMQ8F		38.07	1.00	0.50	38.90	1.77	0.93
ADDWGE	*	42.30	5.23	2.64	42.60	5.48	2.87
AY37N8		38.40	1.33	0.67	39.20	2.08	1.09
BCK9XH		36.09	-0.97	-0.49	36.99	-0.13	-0.07
BKX8EF		38.05	0.98	0.50	37.75	0.63	0.33
BWRN4G		38.45	1.38	0.70	37.75	0.63	0.33
C2HFQ4	*	33.22	-3.85	-1.95	34.37	-2.76	-1.44
C3WME7		37.35	0.28	0.14	36.85	-0.27	-0.14
C7U4QZ		39.65	2.58	1.30	38.80	1.68	0.88
C7WTVX		38.15	1.08	0.55	38.05	0.93	0.49
C8M7AA		33.59	-3.48	-1.76	33.51	-3.62	-1.89
CMGTDF	X	30.30	-6.77	-3.42	30.20	-6.92	-3.62
CUG4U7		37.79	0.72	0.36	37.74	0.62	0.32
E4DZKD		37.30	0.23	0.12	37.65	0.53	0.28
E6A7C7		39.35	2.28	1.15	39.70	2.58	1.35
EWJNVC		38.10	1.03	0.52	38.32	1.19	0.62
F4E6K8		36.90	-0.17	-0.08	37.10	-0.02	-0.01
F4XNTZ		40.04	2.97	1.50	39.40	2.27	1.19
FRKNW8		37.25	0.18	0.09	36.95	-0.17	-0.09
FY4R6U		35.73	-1.34	-0.68	35.64	-1.49	-0.78



# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #058  
Spring 2018

## Analysis 910 Glucose + Fructose

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GCJEP		38.00	0.93	0.47	38.25	1.13	0.59
GDX22Y		37.91	0.84	0.42	38.00	0.87	0.46
GVE3W2		35.04	-2.03	-1.02	34.92	-2.20	-1.15
GX2TX7		35.35	-1.72	-0.87	35.35	-1.77	-0.93
H7DXUW		36.20	-0.87	-0.44	36.20	-0.92	-0.48
HBMD2Z		36.25	-0.82	-0.41	36.55	-0.57	-0.30
HUWBKW		35.10	-1.97	-0.99	35.30	-1.82	-0.95
J43HZV		38.75	1.68	0.85	38.70	1.58	0.83
JMQ9M9	X	14.15	-22.92	-11.57	14.10	-23.02	-12.05
JYAD67		38.30	1.23	0.62	38.85	1.73	0.90
LCMMLT		34.83	-2.24	-1.13	34.48	-2.65	-1.38
N7WUMX		37.50	0.43	0.22	37.25	0.13	0.07
NFJW6T		39.45	2.38	1.20	39.40	2.28	1.19
NVDH9Z		40.00	2.93	1.48	39.45	2.33	1.22
P9VPLR		32.70	-4.37	-2.21	33.50	-3.62	-1.90
PNP8N4		36.10	-0.97	-0.49	36.35	-0.77	-0.40
Q4XHU3		36.59	-0.48	-0.24	37.15	0.02	0.01
QBF2YM		37.69	0.62	0.31	37.78	0.65	0.34
QBXWF4		37.20	0.13	0.07	37.15	0.03	0.02
QWHPQJ		39.05	1.98	1.00	38.65	1.53	0.80
TDD7GZ		37.81	0.74	0.37	38.24	1.11	0.58
UB72RH		38.30	1.23	0.62	38.70	1.58	0.83
UCX4AR		35.04	-2.03	-1.02	34.75	-2.38	-1.24
UDCLFH		37.14	0.07	0.04	37.00	-0.13	-0.07
UE6PXR	X	31.10	-5.97	-3.01	29.70	-7.42	-3.88
UJYEPW		37.20	0.13	0.07	37.20	0.07	0.04
VPJ4EY		37.70	0.63	0.32	37.50	0.38	0.20
W7K6QX		39.40	2.33	1.18	39.54	2.42	1.27
X4CCCP		32.87	-4.20	-2.12	33.21	-3.91	-2.05
X7ZYTJ		38.34	1.27	0.64	38.01	0.89	0.47
XCLUUM		37.90	0.83	0.42	38.00	0.88	0.46
YF679J		36.50	-0.57	-0.29	36.50	-0.62	-0.33
YQLV8N		35.60	-1.47	-0.74	35.55	-1.57	-0.82
ZK9JJM	X	21.37	-15.70	-7.93	21.43	-15.70	-8.22
ZT8WPG		36.28	-0.79	-0.40	36.36	-0.76	-0.40



Analysis 910  
Glucose + Fructose

Grand Means		Summary Statistics	
	37.068 g/L		37.121 g/L
Std Dev Btwn Labs			1.911 g/L
	1.980 g/L		
<b>Statistics based on 65 of 70 reporting participants</b>			

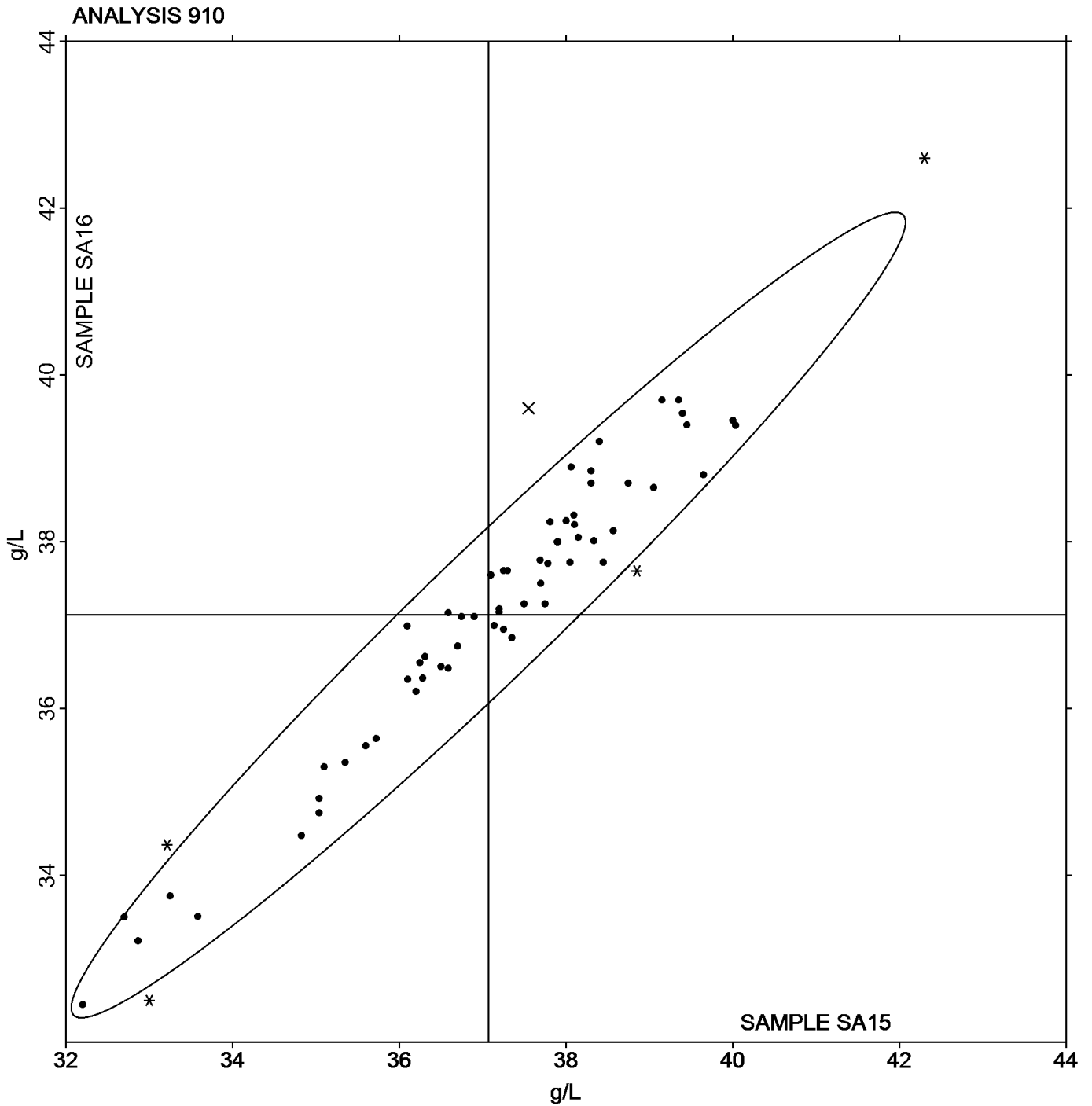
Wines tested: SA15: Rose; SA16: Rose

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

- 8NTUJD (X) - Inconsistent in testing between samples.
- ZK9JIM (X) - Data for both samples are low. Possible Systematic Error.
- UE6PXR (X) - Data for both samples are low. Possible Systematic Error.
- JMQ9M9 (X) - Data for both samples are low.
- CMGTDF (X) - Data for both samples are low. Possible Systematic Error.

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

Test Methodology	Sample SA15 <i>Rose</i>			Sample SA16 <i>Rose</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
HPLC	37.200	0.000	0.13	37.195	0.000	0.07	1/1
Enzymatic/Spectrophotometric	37.056	2.045	-0.01	37.129	1.977	0.01	59/64
FTIR	36.759	1.267	-0.31	36.855	1.461	-0.27	4/4
Other _____	38.850	0.000	1.78	37.650	0.000	0.53	1/1





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

**Report #058**  
**Spring 2018**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3WHRHJ		0.1425	-0.0202	-0.65	0.1415	-0.0210	-0.60
3YKPTC		0.1820	0.0193	0.62	0.1895	0.0270	0.77
6W9RBF		0.1350	-0.0277	-0.90	0.1350	-0.0275	-0.78
8B4VRB	*	0.1500	-0.0127	-0.41	0.1100	-0.0525	-1.49
9LKRGF		0.1700	0.0073	0.23	0.1800	0.0175	0.50
9Y7CQB		0.2400	0.0773	2.49	0.2450	0.0825	2.34
C7WTVX		0.1600	-0.0027	-0.09	0.1600	-0.0025	-0.07
E6A7C7		0.2100	0.0473	1.53	0.2200	0.0575	1.63
F4E6K8		0.1320	-0.0307	-0.99	0.1355	-0.0270	-0.77
F4XNTZ		0.1500	-0.0127	-0.41	0.1550	-0.0075	-0.21
FRKNW8		0.1150	-0.0477	-1.54	0.1200	-0.0425	-1.21
FY4R6U		0.1405	-0.0222	-0.72	0.1405	-0.0220	-0.62
HBMD2Z		0.1485	-0.0142	-0.46	0.1430	-0.0195	-0.55
JYAD67		0.2025	0.0398	1.28	0.2005	0.0380	1.08
N7WUMX		0.1790	0.0163	0.52	0.1820	0.0195	0.55
NVDH9Z		0.1500	-0.0127	-0.41	0.1600	-0.0025	-0.07
QWHPQJ		0.1900	0.0273	0.88	0.1900	0.0275	0.78
UJYEPW		0.1500	-0.0127	-0.41	0.1500	-0.0125	-0.35
ZT8WPG		0.1450	-0.0177	-0.57	0.1300	-0.0325	-0.92

<b>Grand Means</b>		<b>Summary Statistics</b>	
	0.16274 mg/L		0.16250 mg/L
<b>Std Dev Btwn Labs</b>	0.03099 mg/L		0.03525 mg/L
<b>Statistics based on 19 of 19 reporting participants</b>			

Wines tested: SA15: Rose; SA16: Rose





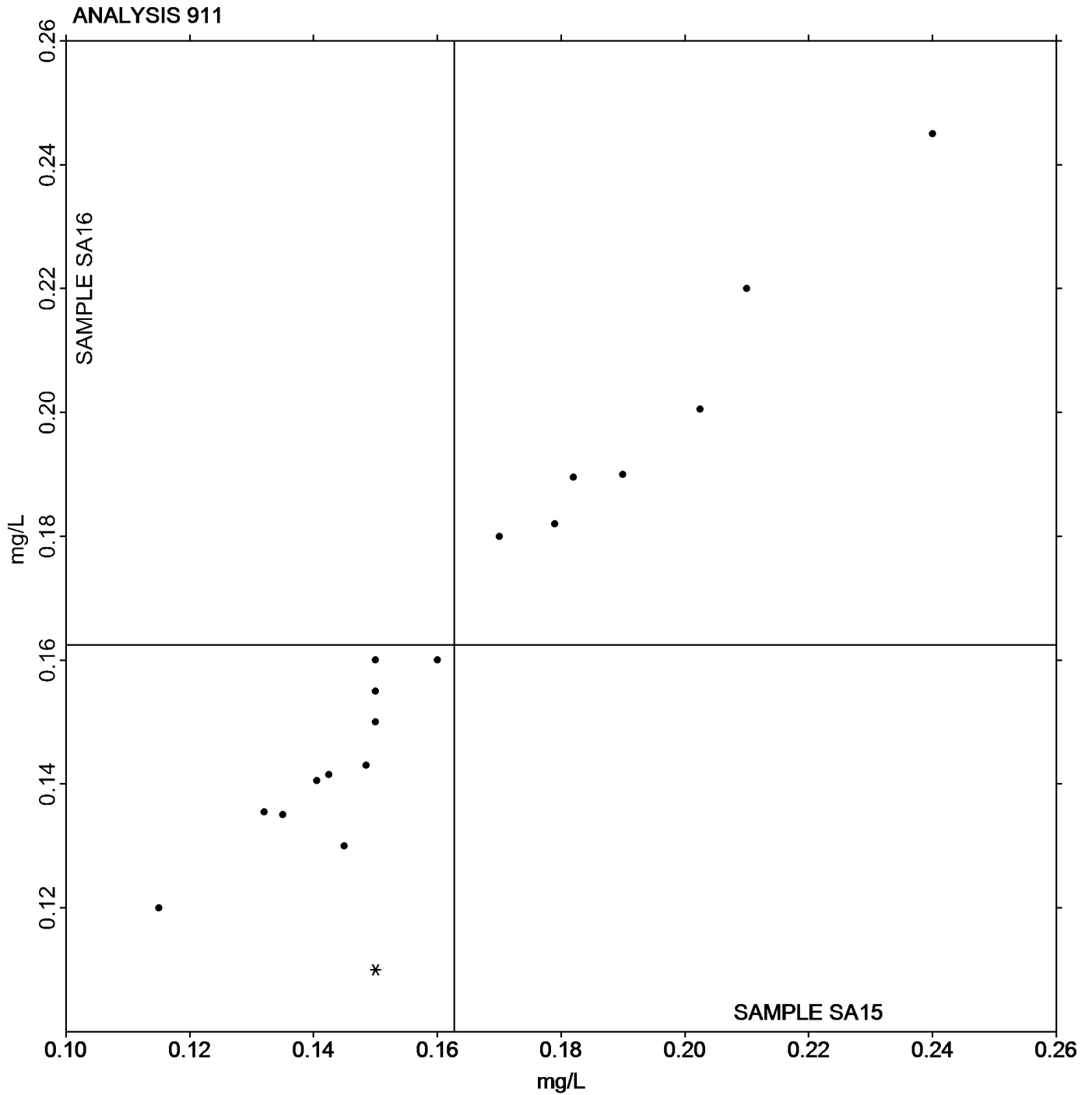
Analysis 911  
Copper Content

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

Test Methodology	Sample SA15 <i>Rose</i>			Sample SA16 <i>Rose</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	0.146	0.005	-0.0165	0.148	0.010	-0.0143	2/2
Atomic Absorption Spectroscopy	0.184	0.032	0.0215	0.184	0.041	0.0211	9/9
ICP-OES	0.142	0.015	-0.0212	0.141	0.015	-0.0212	7/7
Other _____	0.150	0.000	-0.0127	0.150	0.000	-0.0125	1/1



Analysis 911  
Copper Content



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



**Analysis 912  
Potassium (K) Content**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3WHRHJ		758.0	-93.6	-1.00	762.0	-93.7	-1.05
6W9RBF		837.5	-14.1	-0.15	837.5	-18.2	-0.20
8B4VRB		1,010.0	158.4	1.70	1,019.0	163.3	1.82
9LKRGF		884.5	32.9	0.35	888.0	32.3	0.36
BKX8EF		930.5	78.9	0.85	867.5	11.8	0.13
C7WTVX		757.5	-94.1	-1.01	787.5	-68.2	-0.76
F4E6K8		994.5	142.9	1.53	991.5	135.8	1.52
F4XNTZ		832.1	-19.5	-0.21	828.7	-27.0	-0.30
FRKNW8		745.5	-106.1	-1.14	745.5	-110.2	-1.23
FY4R6U		915.0	63.4	0.68	929.5	73.8	0.82
HBMD2Z		846.5	-5.1	-0.05	861.5	5.8	0.06
KLYFJ4		788.9	-62.7	-0.67	768.5	-87.2	-0.97
NVDH9Z		816.0	-35.6	-0.38	816.0	-39.7	-0.44
QBF2YM		1,035.0	183.4	1.96	1,010.0	154.3	1.72
UDCLFH		871.0	19.4	0.21	872.5	16.8	0.19
UJYEPW		737.0	-114.6	-1.23	742.0	-113.7	-1.27
X4CCCP	*	800.0	-51.6	-0.55	912.5	56.8	0.63
ZT8WPG		769.1	-82.5	-0.88	762.8	-92.9	-1.04

Grand Means		Summary Statistics	
	851.59 mg/L		855.69 mg/L
<b>Stnd Dev Btwn Labs</b>	93.35 mg/L		89.60 mg/L
<b>Statistics based on 18 of 18 reporting participants</b>			

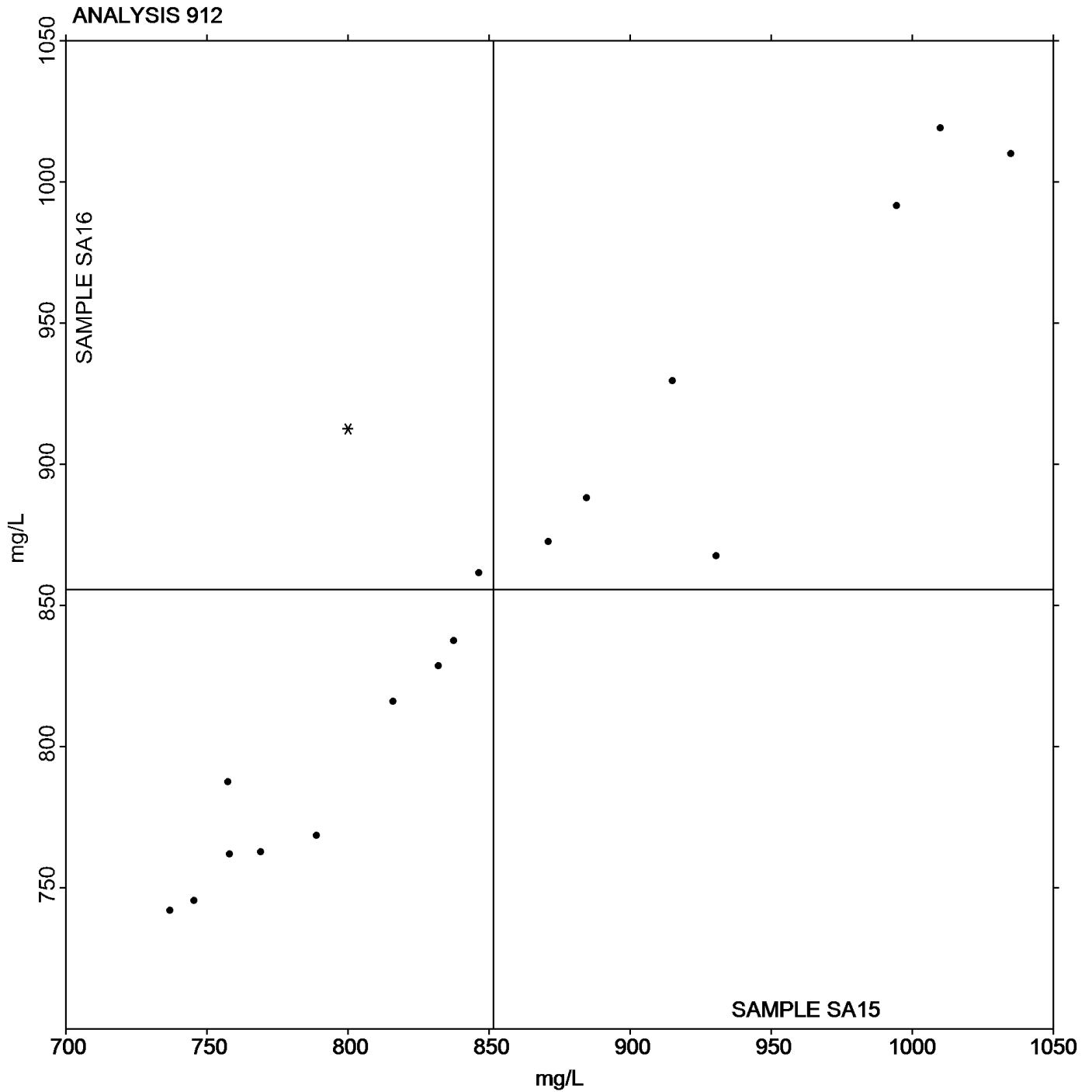
Wines tested: SA15: Rose; SA16: Rose



**Analysis 912  
Potassium (K) Content**

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

Test Methodology	Sample SA15 <i>Rose</i>			Sample SA16 <i>Rose</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	795.050	52.397	-56.5	795.325	47.129	-60.4	2/2
Atomic Absorption Spectroscopy	836.950	47.827	-14.6	831.317	60.014	-24.4	3/3
ICP-OES	821.517	92.954	-30.1	827.458	90.223	-28.2	6/6
FTIR	962.500	67.175	110.9	974.250	63.286	118.6	2/2
Other _____	874.700	115.504	23.1	880.900	96.448	25.2	5/5



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 #058  
Spring 2018

## Analysis 915 A420nm (1cm path)

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3A8NKH		0.1930	-0.0049	-0.73	0.1925	-0.0055	-0.89
3YKPTC		0.1915	-0.0064	-0.96	0.1890	-0.0090	-1.45
4C6RMN		0.1925	-0.0054	-0.81	0.1925	-0.0055	-0.89
6T8NKD		0.2000	0.0021	0.32	0.2000	0.0020	0.32
6VZJ8M		0.1970	-0.0009	-0.13	0.1980	0.0000	0.00
6W9RBF		0.1930	-0.0049	-0.73	0.2000	0.0020	0.32
7P4C44		0.2020	0.0041	0.62	0.2035	0.0055	0.88
84Y3CL		0.1930	-0.0049	-0.73	0.1925	-0.0055	-0.89
87NKE8		0.2100	0.0121	1.83	0.2060	0.0080	1.28
8B4VRB		0.1900	-0.0079	-1.18	0.1900	-0.0080	-1.29
8NTUJD		0.2010	0.0031	0.47	0.2015	0.0035	0.56
8VMWMB		0.2040	0.0061	0.92	0.1990	0.0010	0.16
9LKRGF		0.1920	-0.0059	-0.88	0.1985	0.0005	0.08
9Y7CQB		0.1902	-0.0077	-1.16	0.1880	-0.0100	-1.61
A3L2PE	X	0.2290	0.0311	4.69	0.2290	0.0310	4.97
ACMQ8F		0.2020	0.0041	0.62	0.2010	0.0030	0.48
ADDWGE		0.1960	-0.0019	-0.28	0.1970	-0.0010	-0.16
BCK9XH		0.2065	0.0086	1.30	0.2065	0.0085	1.36
BKX8EF	X	0.2000	0.0021	0.32	0.3000	0.1020	16.38
C2HFQ4		0.1995	0.0016	0.25	0.1940	-0.0040	-0.65
C3WME7		0.2000	0.0021	0.32	0.2015	0.0035	0.56
C8M7AA		0.2115	0.0136	2.05	0.2100	0.0120	1.92
CMGTDF		0.2020	0.0041	0.62	0.1980	0.0000	0.00
F4E6K8		0.2040	0.0061	0.92	0.2060	0.0080	1.28
F4XNTZ		0.2020	0.0041	0.62	0.2040	0.0060	0.96
FRKNW8	*	0.2160	0.0181	2.73	0.2130	0.0150	2.41
FY4R6U		0.1860	-0.0119	-1.79	0.1855	-0.0125	-2.01
GCJEP		0.1960	-0.0019	-0.28	0.1920	-0.0060	-0.97
GVE3W2		0.1900	-0.0079	-1.18	0.1925	-0.0055	-0.89
HBMD2Z		0.1930	-0.0049	-0.73	0.1950	-0.0030	-0.49
J43HZV		0.1900	-0.0079	-1.18	0.1950	-0.0030	-0.49
JMQ9M9	X	0.0375	-0.1604	-24.15	0.0370	-0.1610	-25.86
LCMMLT		0.2025	0.0046	0.70	0.2020	0.0040	0.64
MKXAAM		0.1940	-0.0039	-0.58	0.1930	-0.0050	-0.81
N7WUMX		0.2050	0.0071	1.07	0.2050	0.0070	1.12



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

**Report #058**  
**Spring 2018**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NVDH9Z		0.1965	-0.0014	-0.20	0.1975	-0.0005	-0.08
QA6XNK		0.2010	0.0031	0.47	0.2000	0.0020	0.32
QBF2YM	X	0.2185	0.0206	3.11	0.2260	0.0280	4.49
QBXWF4		0.1910	-0.0069	-1.03	0.1910	-0.0070	-1.13
QWHPQJ	X	0.2400	0.0421	6.34	0.2410	0.0430	6.90
TDD7GZ		0.2030	0.0051	0.77	0.2065	0.0085	1.36
UB72RH		0.1935	-0.0044	-0.66	0.1925	-0.0055	-0.89
UDCLFH		0.2010	0.0031	0.47	0.1995	0.0015	0.24
UE6PXR	*	0.1910	-0.0069	-1.03	0.1990	0.0010	0.16
X4CCCP		0.1900	-0.0079	-1.18	0.1900	-0.0080	-1.29
YF679J	X	0.1800	-0.0179	-2.69	0.1950	-0.0030	-0.49
YQLV8N		0.1980	0.0001	0.02	0.1990	0.0010	0.16
ZT8WPG		0.2000	0.0021	0.32	0.2000	0.0020	0.32

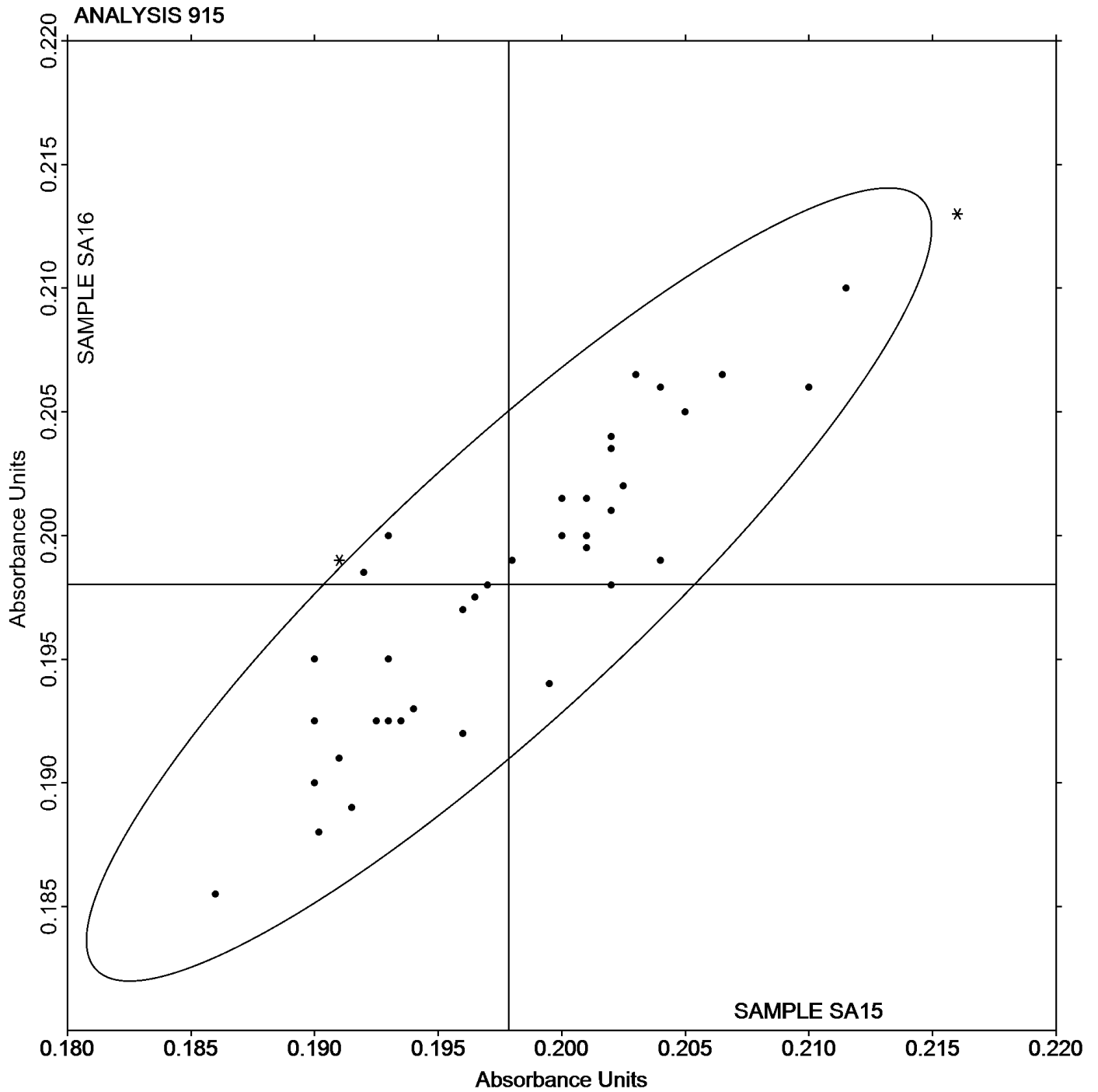
Grand Means		Summary Statistics	
0.19786	Absorbance Units	0.19802	Absorbance Units
0.00664	Absorbance Units	0.00623	Absorbance Units

**Statistics based on 42 of 48 reporting participants**

Wines tested: SA15: Rose; SA16: Rose

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

- A3L2PE (X) - Data for both samples are high. Possible Systematic Error.
- BKX8EF (X) - Inconsistent in testing between samples. Data for sample SA16 are high.
- QBF2YM (X) - Data for both samples are high. Possible Systematic Error.
- QWHPQJ (X) - Data for both samples are high. Possible Systematic Error.
- YF679J (X) - Inconsistent in testing between samples.
- JMQ9M9 (X) - Data for both samples are low.







# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #058  
Spring 2018

## Analysis 916 A520nm (1cm path)

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3A8NKH		0.1040	-0.0007	-0.18	0.1015	-0.0026	-0.66
3YKPTC		0.1015	-0.0032	-0.81	0.0985	-0.0056	-1.42
4C6RMN		0.1025	-0.0022	-0.56	0.1000	-0.0041	-1.04
6T8NKD		0.1100	0.0053	1.33	0.1100	0.0059	1.49
6VZJ8M		0.1025	-0.0022	-0.56	0.1020	-0.0021	-0.54
6W9RBF		0.1000	-0.0047	-1.19	0.1060	0.0019	0.47
7P4C44		0.1050	0.0003	0.07	0.1050	0.0009	0.22
84Y3CL	X	0.1085	0.0038	0.95	0.0940	-0.0101	-2.56
87NKE8	*	0.1150	0.0103	2.59	0.1110	0.0069	1.74
8B4VRB		0.1000	-0.0047	-1.19	0.1000	-0.0041	-1.04
8NTUJD		0.1075	0.0028	0.70	0.1065	0.0024	0.60
8VMWMB		0.1110	0.0063	1.58	0.1110	0.0069	1.74
9LKRGF		0.1015	-0.0032	-0.81	0.1055	0.0014	0.35
9Y7CQB	X	0.1668	0.0621	15.65	0.1679	0.0637	16.11
ACMQ8F		0.1040	-0.0007	-0.18	0.1035	-0.0006	-0.16
ADDWGE		0.1020	-0.0027	-0.68	0.1020	-0.0021	-0.54
BCK9XH		0.1040	-0.0007	-0.18	0.1040	-0.0001	-0.03
BKX8EF	X	0.1000	-0.0047	-1.19	0.2000	0.0959	24.24
C2HFQ4		0.1080	0.0033	0.83	0.1025	-0.0016	-0.41
C3WME7		0.1045	-0.0002	-0.05	0.1045	0.0004	0.10
C8M7AA		0.1085	0.0038	0.95	0.1060	0.0019	0.47
CMGTDF	X	0.0700	-0.0347	-8.75	0.0660	-0.0381	-9.64
F4E6K8		0.1100	0.0053	1.33	0.1100	0.0059	1.49
F4XNTZ		0.1055	0.0008	0.20	0.1060	0.0019	0.47
FRKNW8		0.1080	0.0033	0.83	0.1060	0.0019	0.47
FY4R6U		0.0970	-0.0077	-1.94	0.0960	-0.0081	-2.05
GCJEPC		0.1025	-0.0022	-0.56	0.0965	-0.0076	-1.93
GVE3W2		0.1010	-0.0037	-0.94	0.1010	-0.0031	-0.79
HBMD2Z		0.1020	-0.0027	-0.68	0.1030	-0.0011	-0.28
J43HZV		0.1000	-0.0047	-1.19	0.1050	0.0009	0.22
JMQ9M9	X	0.0090	-0.0957	-24.12	0.0090	-0.0951	-24.05
LCMMLT		0.1065	0.0018	0.45	0.1060	0.0019	0.47
MKXAAM		0.1070	0.0023	0.58	0.1080	0.0039	0.98
N7WUMX		0.1100	0.0053	1.33	0.1090	0.0049	1.23
NVDH9Z		0.1045	-0.0002	-0.05	0.1045	0.0004	0.10



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

**Report #058**  
**Spring 2018**

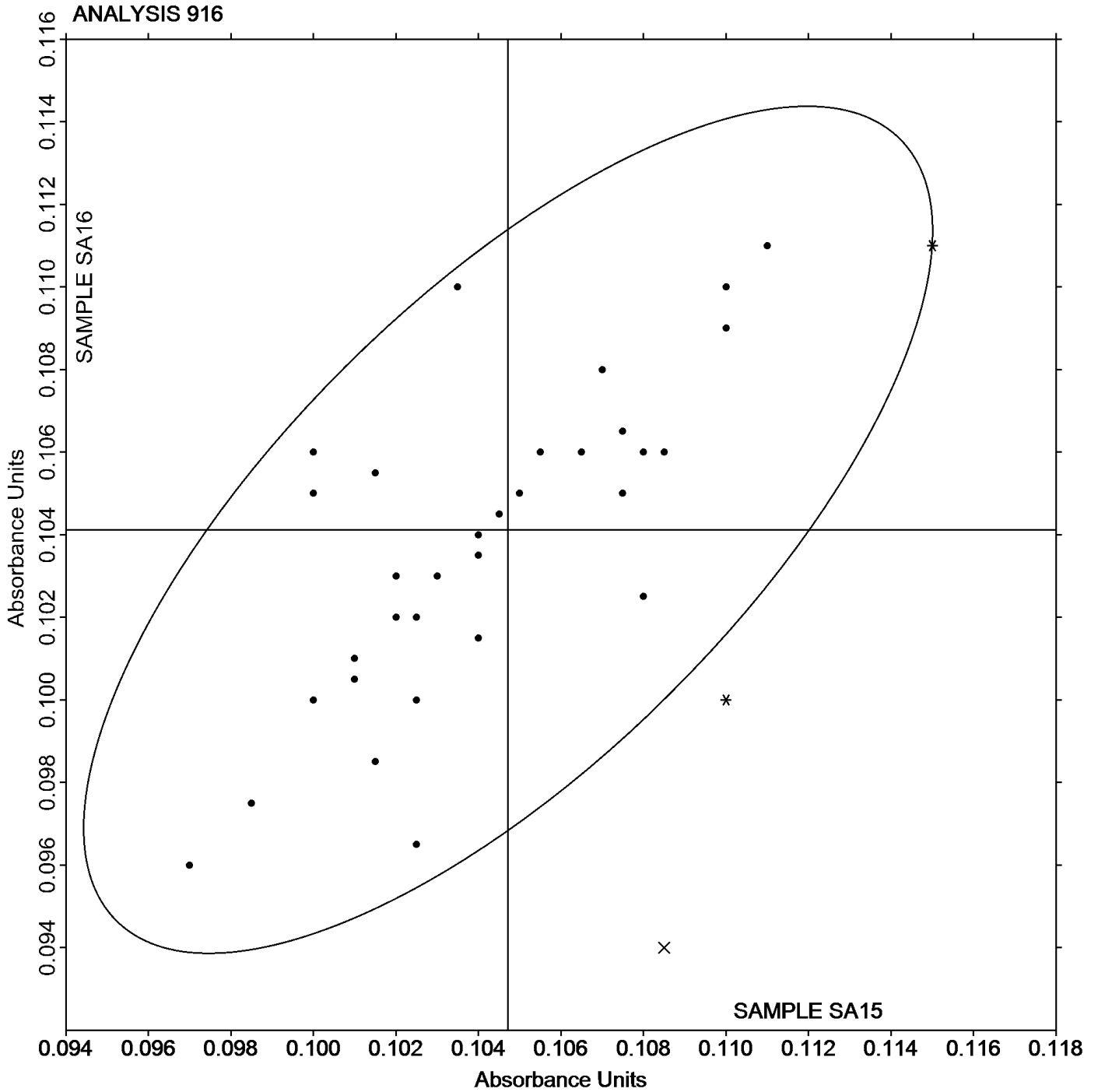
WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
QA6XNK		0.1030	-0.0017	-0.43	0.1030	-0.0011	-0.28
QBF2YM	X	0.1240	0.0193	4.86	0.1325	0.0284	7.17
QBXWF4		0.0985	-0.0062	-1.57	0.0975	-0.0066	-1.67
QWHPQJ	X	0.1210	0.0163	4.10	0.1210	0.0169	4.27
UB72RH		0.1010	-0.0037	-0.94	0.1005	-0.0036	-0.92
UDCLFH		0.1075	0.0028	0.70	0.1050	0.0009	0.22
UE6PXR		0.1035	-0.0012	-0.31	0.1100	0.0059	1.49
X4CCCP	X	0.1000	-0.0047	-1.19	0.1300	0.0259	6.54
YF679J	X	0.1050	0.0003	0.07	0.1200	0.0159	4.01
YQLV8N		0.1055	0.0008	0.20	0.1060	0.0019	0.47
ZT8WPG	*	0.1100	0.0053	1.33	0.1000	-0.0041	-1.04

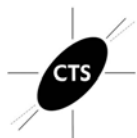
Grand Means		Summary Statistics	
0.10472	Absorbance Units	0.10412	Absorbance Units
0.00397	Absorbance Units	0.00396	Absorbance Units
<b>Statistics based on 37 of 46 reporting participants</b>			

Wines tested: SA15: Rose; SA16: Rose

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

- 9Y7CQB (X) - Data for both samples are high. Inconsistent within the determinations of sample SA16.
- BKX8EF (X) - Data for sample SA16 are high.
- QBF2YM (X) - Data for both samples are high.
- QWHPQJ (X) - Data for both samples are high.
- YF679J (X) - Data for sample SA16 are high. Inconsistent within the determinations of both samples.
- X4CCCP (X) - Data for sample SA16 are high. Inconsistent within the determinations of sample SA16.
- 84Y3CL (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA16.
- JMQ9M9 (X) - Data for both samples are low.
- CMGTDF (X) - Data for both samples are low.





**ASEV-CTS Wine Industry Interlaboratory Testing Program**  
**Research Property 950**  
**Research Property - Citric Acid Content**

**Report #058**  
**Spring 2018**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
4BVGWC		0.3220	-0.0130	-0.24	0.3230	-0.0151	-0.32
6T8NKD		0.2600	-0.0750	-1.39	0.3000	-0.0381	-0.80
6W9RBF		0.3850	0.0500	0.92	0.3550	0.0169	0.35
8B4VRB		0.3600	0.0250	0.46	0.3600	0.0219	0.46
9LKRGF		0.3850	0.0500	0.92	0.3800	0.0419	0.88
CUG4U7		0.3400	0.0050	0.09	0.3400	0.0019	0.04
F4E6K8		0.3250	-0.0100	-0.19	0.3300	-0.0081	-0.17
FRKNW8		0.3250	-0.0100	-0.19	0.3450	0.0069	0.14
FY4R6U		0.4450	0.1100	2.03	0.4500	0.1119	2.34
GX2TX7		0.3250	-0.0100	-0.19	0.3300	-0.0081	-0.17
HBMD2Z		0.3250	-0.0100	-0.19	0.3200	-0.0181	-0.38
JMQ9M9		0.3650	0.0300	0.55	0.3600	0.0219	0.46
N7WUMX		0.3290	-0.0060	-0.11	0.3305	-0.0076	-0.16
NVDH9Z		0.3385	0.0035	0.06	0.3330	-0.0051	-0.11
QWHPQJ		0.3600	0.0250	0.46	0.3650	0.0269	0.56
UDCLFH		0.3160	-0.0190	-0.35	0.3215	-0.0166	-0.35
ZT8WPG		0.1900	-0.1450	-2.68	0.2050	-0.1331	-2.79

**Research Property Consensus Value**

Consensus Average

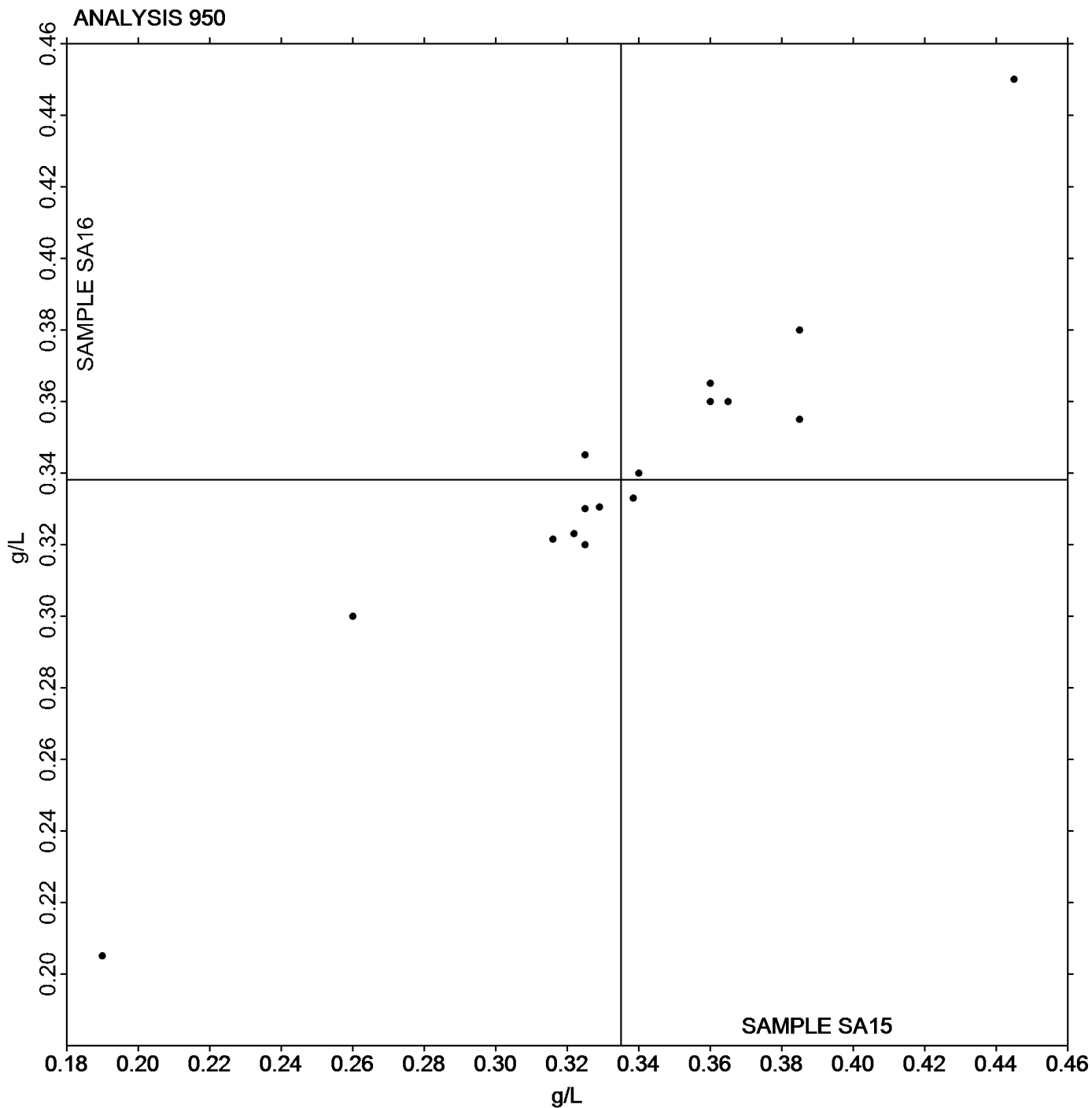
0.33503 g/L

0.33812 g/L

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

Wines tested: SA15: Rose; SA16: Rose

*This consensus average is based on 17 reporting participants.*



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 Property: Tartaric Acid Content**

**Report #058**  
**Spring 2018**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
3JB47F		1,845.0	-79.9	-0.32	1,845.0	-111.3	-0.44
6T8NKD		1,900.0	-24.9	-0.10	1,920.0	-36.3	-0.14
8B4VRB		1,930.0	5.1	0.02	2,020.0	63.7	0.25
9LKRGF		1,790.0	-134.9	-0.54	1,825.0	-131.3	-0.52
C7WTVX		1,700.0	-224.9	-0.89	1,800.0	-156.3	-0.62
FY4R6U		2,205.0	280.1	1.11	2,170.0	213.7	0.84
GX2TX7		1,514.5	-410.4	-1.63	1,512.5	-443.8	-1.75
LCMMLT		1,670.0	-254.9	-1.01	1,740.0	-216.3	-0.85
NVDH9Z		2,034.0	109.1	0.43	2,065.0	108.7	0.43
QWHPQJ		2,450.0	525.1	2.09	2,500.0	543.7	2.14
X4CCCP		1,895.0	-29.9	-0.12	1,910.0	-46.3	-0.18
YQLV8N		2,210.0	285.1	1.13	2,275.0	318.7	1.26
ZT8WPG		1,880.0	-44.9	-0.18	1,850.0	-106.3	-0.42

**Research Property Consensus Value**

Consensus Average

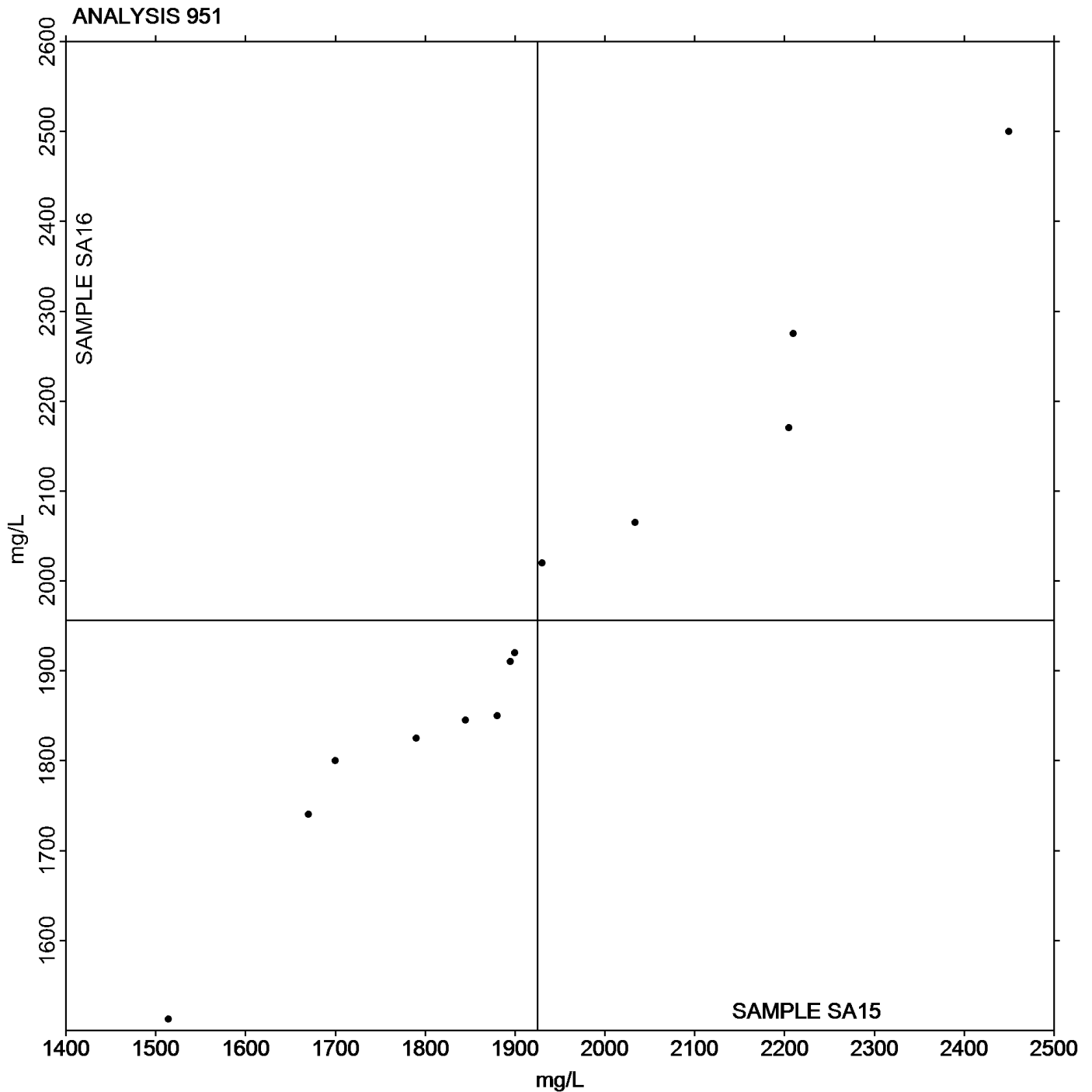
1,924.88 mg/L

1,956.35 mg/L

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

Wines tested: SA15: Rose; SA16: Rose

*This consensus average is based on 13 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: Conductivity @20C**

WebCode	Data Flag	Sample SA15			Sample SA16		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
6T8NKD		1,900.0	-220.5	-1.12	1,900.0	-216.2	-1.09
6W9RBF		2,276.0	155.5	0.79	2,279.5	163.3	0.82
7P4C44	X	4.5	-2,116.1	-10.73	4.6	-2,111.6	-10.64
8B4VRB		1,923.0	-197.5	-1.00	1,909.0	-207.2	-1.04
9LKRGF		1,819.8	-300.7	-1.53	1,814.9	-301.3	-1.52
9Y7CQB		2,339.5	219.0	1.11	2,339.5	223.3	1.13
BCK9XH		2,270.0	149.5	0.76	2,250.0	133.8	0.67
C7WTVX		2,020.0	-100.5	-0.51	2,020.0	-96.2	-0.48
C8M7AA		2,292.0	171.5	0.87	2,291.5	175.3	0.88
CUG4U7		2,065.0	-55.5	-0.28	2,045.0	-71.2	-0.36
EWJNVC	X	6.4	-2,114.1	-10.72	6.4	-2,109.8	-10.63
F4XNTZ		1,897.4	-223.1	-1.13	1,888.1	-228.1	-1.15
FY4R6U		2,036.5	-84.0	-0.43	2,034.5	-81.7	-0.41
GCJEPC		2,308.0	187.5	0.95	2,311.5	195.3	0.98
JYAD67		2,140.0	19.5	0.10	2,140.0	23.8	0.12
NFJW6T	X	2,370.5	250.0	1.27	2,289.5	173.3	0.87
P9VPLR		2,390.5	270.0	1.37	2,394.5	278.3	1.40
QBF2YM	X	9.6	-2,110.9	-10.71	8.2	-2,107.9	-10.62
UB72RH		2,030.0	-90.5	-0.46	2,030.0	-86.2	-0.43
UDCLFH		2,404.5	284.0	1.44	2,397.0	280.8	1.42
YQLV8N		1,835.5	-285.0	-1.45	1,834.5	-281.7	-1.42
ZT8WPG		2,221.5	101.0	0.51	2,211.5	95.3	0.48

**Research Property Consensus Value**

Consensus Average

2,120.51 uS/cm

2,116.16 uS/cm

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

Wines tested: SA15: Rose; SA16: Rose

*This consensus average is based on 18 reporting participants.*





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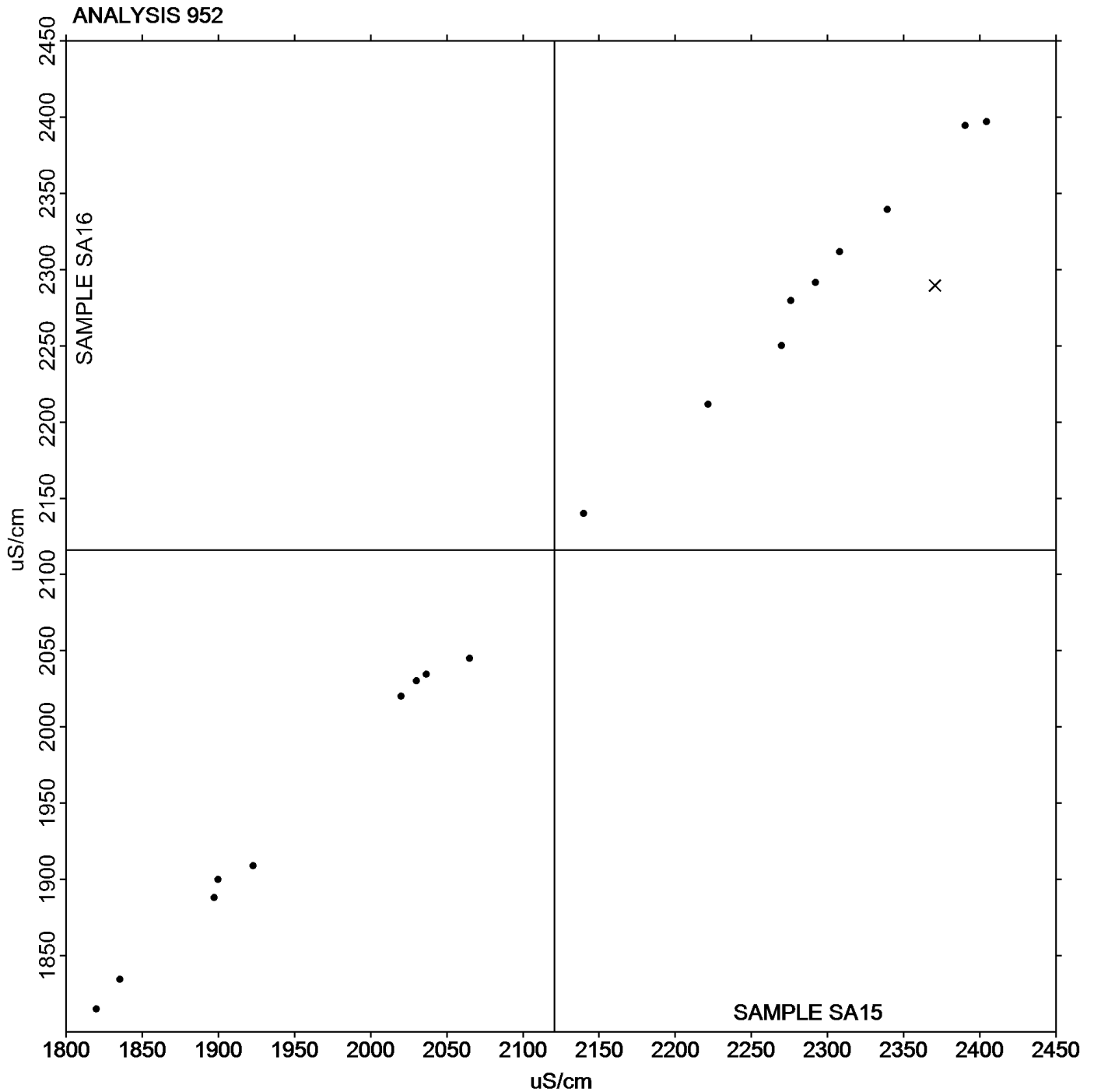
**Comments on Assigned Data Flags for Test #952**

EWJNVC (X) - Extreme data.

QBF2YM (X) - Extreme data.

7P4C44 (X) - Extreme data.

NFJW6T (X) - Inconsistent in testing between samples.



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