



## Wine Industry Interlaboratory Program

### Summary Report #060 - Fall 2018

---

[Introduction to the Wine Program](#)

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

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

---

## **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.

For further information concerning this report contact:

**Collaborative Testing Services, Inc.  
21331 Gentry Drive  
Sterling, Virginia 20166 USA**

**+1-571-434-1925  
FAX #: +1-571-434-1937  
wine@cts-interlab.com**

**Office Hours: 8:00 a.m. - 4:30 p.m. ET**

## 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.

---

### Common Problems Highlighted in Footnotes

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

---

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

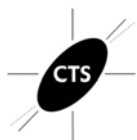
Analysis 901  
Ethanol (% of volume)

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29LJM4		12.16	0.03	0.52	12.18	0.03	0.49
2FK4RK		12.17	0.03	0.60	12.19	0.04	0.74
2MX63M		12.14	0.01	0.17	12.16	0.01	0.15
2VYCP3		12.12	-0.01	-0.18	12.14	-0.01	-0.11
3E3L2K	*	11.99	-0.14	-2.43	12.00	-0.15	-2.57
3H7DC7		12.18	0.04	0.78	12.19	0.04	0.74
3XKGZL		12.17	0.04	0.69	12.15	0.00	0.06
4GR42K		12.21	0.07	1.29	12.22	0.07	1.25
4HZH76		12.14	0.01	0.17	12.17	0.02	0.32
4MUETB	X	13.08	0.95	16.45	13.11	0.96	16.29
4V87KU		12.15	0.02	0.34	12.13	-0.02	-0.27
6G46HC		12.05	-0.08	-1.39	12.10	-0.05	-0.78
6HE2RM	*	12.08	-0.05	-0.87	12.16	0.01	0.23
6TDYD3		12.01	-0.12	-2.08	12.03	-0.12	-1.97
6VQCHY		12.13	-0.01	-0.09	12.15	0.00	0.06
6ZXX7V		12.12	-0.01	-0.18	12.14	-0.01	-0.11
7D3DRQ	X	11.92	-0.22	-3.73	12.13	-0.02	-0.27
7GJ3TF		12.19	0.06	1.03	12.25	0.10	1.68
88AVNY		12.13	0.00	0.00	12.18	0.03	0.49
8GH973	X	12.13	0.00	0.00	12.24	0.09	1.59
8KBEHK		12.14	0.01	0.17	12.16	0.01	0.23
8VGCAU		12.10	-0.03	-0.52	12.13	-0.02	-0.27
98K2JF		12.16	0.03	0.52	12.19	0.04	0.74
99VYWW		12.00	-0.13	-2.26	12.00	-0.15	-2.48
99ZGWG		12.15	0.01	0.26	12.15	0.00	-0.02
9BPMER		12.21	0.07	1.29	12.20	0.05	0.83
9DRNFP		12.21	0.08	1.38	12.18	0.03	0.57
9KCL7X		12.11	-0.02	-0.35	12.13	-0.02	-0.36
9W4DTM		12.20	0.07	1.21	12.20	0.05	0.91
A37NEL		12.20	0.06	1.12	12.21	0.06	1.00
AFBZTL	X	11.91	-0.23	-3.90	11.90	-0.25	-4.27
AHZ7CW		12.13	0.00	0.00	12.16	0.01	0.23
AJDX4D		12.20	0.07	1.21	12.20	0.05	0.91
AL46MP		12.17	0.04	0.69	12.21	0.06	1.00
ARRPRQ		12.15	0.02	0.34	12.13	-0.02	-0.27



Analysis 901  
Ethanol (% of volume)

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
AV3WTV		12.12	-0.02	-0.26	12.14	-0.01	-0.11
AV8ETE		12.12	-0.01	-0.18	12.13	-0.02	-0.27
AXWLCQ		12.19	0.05	0.95	12.17	0.02	0.40
AY8ATG	X	12.19	0.05	0.95	12.10	-0.05	-0.78
B2CFP3		12.10	-0.04	-0.61	12.14	-0.01	-0.19
C49JWF		12.14	0.01	0.17	12.17	0.02	0.32
C9NWW3		12.17	0.04	0.69	12.14	-0.01	-0.11
D2KETB	X	12.17	0.04	0.69	11.91	-0.24	-4.01
D9NBM9		12.22	0.09	1.55	12.21	0.06	1.00
DP84AQ		12.12	-0.01	-0.18	12.14	-0.01	-0.11
EHQTVQ	X	12.30	0.17	2.94	12.40	0.25	4.31
EJXEZH	X	12.47	0.33	5.80	12.39	0.24	4.14
EP3A4Q		12.17	0.04	0.69	12.23	0.08	1.42
EXVJBZ		12.16	0.03	0.52	12.18	0.03	0.49
FXB4VX		12.00	-0.13	-2.26	12.00	-0.15	-2.48
G9QA8R		12.11	-0.03	-0.44	12.13	-0.02	-0.27
GBT9HK		12.15	0.01	0.26	12.15	0.00	0.06
GQ9HZF		12.17	0.04	0.69	12.15	0.00	0.06
H3H9NA		11.99	-0.14	-2.43	12.01	-0.14	-2.40
HZFB DG	X	12.30	0.17	2.94	12.20	0.05	0.91
J3CDFM		12.14	0.01	0.17	12.15	0.00	-0.02
JH8V87		12.14	0.00	0.08	12.17	0.02	0.40
JHQNZ4		12.06	-0.08	-1.30	12.10	-0.05	-0.78
JWMV3C		12.16	0.03	0.52	12.14	-0.01	-0.11
JX23NT		12.13	0.00	0.00	12.18	0.03	0.57
K92DA9	X	12.10	-0.03	-0.52	12.19	0.04	0.74
K9HAZM		12.19	0.05	0.95	12.21	0.06	1.08
KJHZJA		12.02	-0.11	-1.91	12.03	-0.12	-1.97
KMZ3NU		12.08	-0.05	-0.87	12.09	-0.06	-0.95
KZ3NT6		12.13	0.00	0.00	12.18	0.03	0.49
LV9B78		12.20	0.07	1.21	12.20	0.05	0.91
LVATK6	X	12.30	0.17	2.94	12.25	0.10	1.76
LVNGJB		12.10	-0.03	-0.52	12.12	-0.03	-0.53
MCUWNC		12.27	0.13	2.33	12.29	0.14	2.36
MGZPGM		12.11	-0.03	-0.44	12.12	-0.03	-0.53

Analysis 901  
Ethanol (% of volume)

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MPFBPQ		12.00	-0.13	-2.26	12.00	-0.15	-2.48
MTXTKG		12.14	0.01	0.17	12.16	0.01	0.23
N3H4Q2		12.15	0.01	0.26	12.18	0.03	0.57
NPQPA6		12.12	-0.02	-0.26	12.16	0.01	0.15
NYENYP		12.08	-0.06	-0.96	12.10	-0.05	-0.87
NZ7NWZ		12.14	0.00	0.08	12.18	0.03	0.49
P8BHWN		12.11	-0.02	-0.35	12.12	-0.03	-0.53
QGVCLP	X	12.40	0.27	4.67	12.45	0.30	5.16
QRB7VW		12.12	-0.02	-0.26	12.14	-0.01	-0.11
QRT8L7		12.16	0.02	0.43	12.15	0.00	-0.02
R36YP7		12.11	-0.02	-0.35	12.16	0.01	0.23
R6D9EH		12.00	-0.13	-2.26	12.00	-0.15	-2.48
REHWUA		12.10	-0.03	-0.52	12.12	-0.03	-0.44
RTHX7B		12.15	0.02	0.34	12.17	0.02	0.32
T4DFD4	X	12.10	-0.03	-0.52	12.35	0.20	3.46
T8DLUU		12.04	-0.10	-1.65	12.04	-0.11	-1.80
TEDYWJ		12.17	0.04	0.69	12.18	0.03	0.57
UBE6D9		12.15	0.02	0.34	12.17	0.02	0.32
UGY7V7		12.13	0.00	0.00	12.11	-0.04	-0.61
UQPQYJ		12.08	-0.06	-0.96	12.13	-0.02	-0.27
UVHQDE		12.12	-0.01	-0.18	12.14	-0.01	-0.11
UZR9AL		12.26	0.13	2.30	12.26	0.12	1.96
VDUYRK	X	12.10	-0.03	-0.52	12.20	0.05	0.91
VJXX3A		12.13	0.00	0.00	12.14	-0.01	-0.19
VMF6HW	X	12.25	0.12	2.07	12.05	-0.10	-1.63
W43XQ2		12.12	-0.02	-0.26	12.14	-0.01	-0.11
X2U9YC		12.20	0.07	1.21	12.25	0.10	1.68
XQQZBY		12.09	-0.05	-0.78	12.07	-0.08	-1.38
Y4DHPN		12.12	-0.02	-0.26	12.14	-0.01	-0.11
YC48ZX		12.15	0.02	0.34	12.20	0.05	0.91
YGHK6Q		12.19	0.05	0.95	12.19	0.04	0.74
YMAUEP		12.14	0.01	0.17	12.17	0.02	0.32
YMRTFT	X	11.35	-0.79	-13.60	11.61	-0.54	-9.11
ZBRPP6		12.17	0.03	0.60	12.18	0.03	0.49
ZFQ4AA		12.14	0.00	0.08	12.12	-0.03	-0.53



Analysis 901
Ethanol (% of volume)

Table with 8 columns: WebCode, Data Flag, Lab Mean, Diff from Grand Mean, CPV for Sample SA19, and Lab Mean, Diff from Grand Mean, CPV for Sample SA20. Row 1: ZJ4NCN, 12.17, 0.03, 0.60, 12.20, 0.05, 0.83

Summary Statistics table with 2 columns: Grand Means (12.130 percent), Stnd Dev Btw Labs (0.058 percent) and Summary Statistics (12.146 percent, 0.059 percent). Includes note: Statistics based on 90 of 106 reporting participants

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

Comments on Assigned Data Flags for Test #901

- 8GH973 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA20.
QGVCPL (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
VDUYRK (X) - Inconsistent in testing between samples.
4MUETB (X) - Data for both samples are high.
HZFBDB (X) - Inconsistent in testing, data for sample SA19 are high.
7D3DRQ (X) - Inconsistent in testing, data for sample SA19 are low.
EHQTVQ (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA19.
AFBZTL (X) - Data for both samples are low. Possible Systematic Error.
K92DA9 (X) - Inconsistent in testing between samples.
YMRTFT (X) - Data for both samples are low. Inconsistent within the determinations of sample SA19.
VMF6HW (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
AY8ATG (X) - Inconsistent in testing between samples.
LVATK6 (X) - Inconsistent in testing, data for sample SA19 are high. Inconsistent within the determinations of sample SA20.
D2KETB (X) - Data for sample SA20 are low.
EJXEZH (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA20.
T4DFD4 (X) - Inconsistent in testing, data for sample SA20 are high. Inconsistent within the determinations of both samples.





Analysis 901  
Ethanol (% of volume)

Results by Methodology (as reported by laboratory)

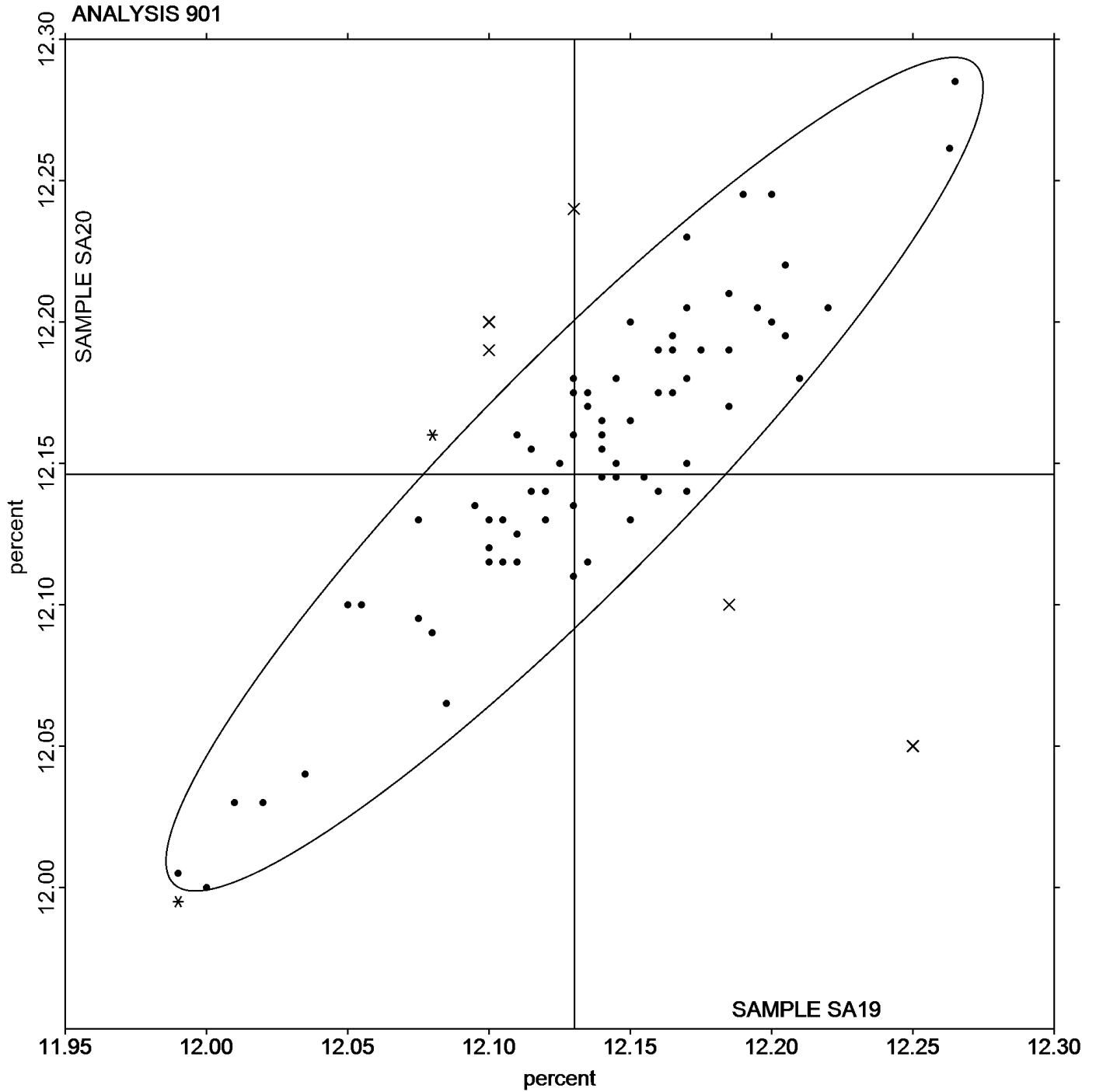
Test Methodology	Sample SA19 <i>Pinot Grigio</i>			Sample SA20 <i>Pinot Grigio</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	12.170	0.035	0.04	12.193	0.018	0.05	2/2
Ebulliometer Method	12.183	0.029	0.05	12.200	0.000	0.05	3/9
Gas Chromatography Method	12.180	0.091	0.05	12.200	0.073	0.05	4/5
Near Infrared Method	12.135	0.036	0.00	12.151	0.035	0.01	56/59
Dist. / Density Method	12.072	0.073	-0.06	12.082	0.082	-0.06	12/15
FTIR	12.109	0.117	-0.02	12.122	0.115	-0.02	6/7
Other _____	12.146	0.020	0.02	12.169	0.016	0.02	7/9



Analysis 901

Fall 2018

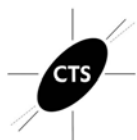
Ethanol (% of volume)





Analysis 902  
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29LJM4		105.50	7.82	1.05	121.5	16.0	1.91
2FK4RK	*	81.00	-16.68	-2.24	97.5	-8.0	-0.95
2MX63M		97.00	-0.68	-0.09	104.0	-1.5	-0.18
2VYCP3		94.00	-3.68	-0.50	101.5	-4.0	-0.48
3E3L2K		96.50	-1.18	-0.16	100.5	-5.0	-0.59
3H7DC7		95.50	-2.18	-0.29	108.0	2.5	0.30
3XKGZL		91.00	-6.68	-0.90	93.0	-12.5	-1.49
4GR42K		95.50	-2.18	-0.29	102.5	-3.0	-0.36
4HZH76	*	82.50	-15.18	-2.04	84.0	-21.5	-2.56
4MUETB	*	119.95	22.27	2.99	130.7	25.2	3.01
4V87KU		95.65	-2.03	-0.27	103.8	-1.7	-0.20
6G46HC		94.50	-3.18	-0.43	101.9	-3.6	-0.43
6HE2RM		89.50	-8.18	-1.10	92.0	-13.5	-1.61
6TDYD3		109.50	11.82	1.59	117.5	12.0	1.43
6VQCHY		94.35	-3.33	-0.45	106.7	1.2	0.14
6ZXX7V	X	76.50	-21.18	-2.85	93.0	-12.5	-1.49
7D3DRQ		100.50	2.82	0.38	114.0	8.5	1.02
88AVNY		99.00	1.32	0.18	103.5	-2.0	-0.24
8GH973		105.00	7.32	0.98	109.5	4.0	0.48
8KBEHK		97.95	0.27	0.04	99.6	-5.9	-0.70
8VGCAU		97.50	-0.18	-0.02	105.5	0.0	0.00
98K2JF		100.00	2.32	0.31	115.0	9.5	1.14
99VYWW		106.50	8.82	1.19	113.5	8.0	0.96
99ZGWG		100.00	2.32	0.31	109.0	3.5	0.42
9BPMER		99.20	1.51	0.20	106.6	1.1	0.13
9DRNFP	X	128.00	30.32	4.08	139.5	34.0	4.06
9KCL7X		90.50	-7.18	-0.97	99.0	-6.5	-0.77
9W4DTM		94.00	-3.68	-0.50	99.5	-6.0	-0.71
A37NEL		92.50	-5.18	-0.70	97.0	-8.5	-1.01
AHZ7CW		102.00	4.32	0.58	109.0	3.5	0.42
AJDX4D	*	90.00	-7.68	-1.03	86.0	-19.5	-2.32
AL46MP		96.80	-0.88	-0.12	105.6	0.1	0.01
ARRPRQ		90.00	-7.68	-1.03	106.0	0.5	0.06
AV3WTV		102.85	5.17	0.69	109.5	4.0	0.48
AXWLCQ		102.00	4.32	0.58	103.5	-2.0	-0.24



Analysis 902  
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
AY8ATG		92.00	-5.68	-0.76	101.5	-4.0	-0.48
B2CFP3		95.00	-2.68	-0.36	109.5	4.0	0.48
C49JWF		103.00	5.32	0.72	105.1	-0.4	-0.05
C9NWW3		98.80	1.12	0.15	103.2	-2.3	-0.27
D2KETB		93.45	-4.23	-0.57	101.7	-3.8	-0.46
D9NBM9		94.00	-3.68	-0.50	97.0	-8.5	-1.01
DP84AQ		95.00	-2.68	-0.36	107.5	2.0	0.24
EHQTVQ		86.50	-11.18	-1.50	89.0	-16.5	-1.97
EJXEZH		89.05	-8.63	-1.16	103.4	-2.1	-0.25
EP3A4Q		101.00	3.32	0.45	110.5	5.0	0.60
EXVJBZ		99.50	1.82	0.24	103.0	-2.5	-0.30
FXB4VX		107.20	9.52	1.28	107.2	1.7	0.20
G9QA8R		102.50	4.82	0.65	109.0	3.5	0.42
GBT9HK		103.50	5.82	0.78	109.0	3.5	0.42
GQ9HZF		102.00	4.32	0.58	113.0	7.5	0.90
GU623D		84.00	-13.68	-1.84	86.8	-18.7	-2.23
H3H9NA		98.00	0.32	0.04	108.0	2.5	0.30
HZFBGD		100.58	2.90	0.39	107.0	1.5	0.18
J3CDFM		100.50	2.82	0.38	113.5	8.0	0.96
JH8V87		100.00	2.32	0.31	110.5	5.0	0.60
JHQNZ4		92.00	-5.68	-0.76	109.0	3.5	0.42
JWMV3C		104.50	6.82	0.92	111.0	5.5	0.66
JX23NT		84.00	-13.68	-1.84	88.0	-17.5	-2.09
K92DA9	X	55.50	-42.18	-5.67	74.5	-31.0	-3.70
K9HAZM		99.00	1.32	0.18	111.0	5.5	0.66
KMZ3NU		92.00	-5.68	-0.76	95.0	-10.5	-1.25
KZ3NT6		93.50	-4.18	-0.56	103.5	-2.0	-0.24
LV9B78		92.20	-5.48	-0.74	105.0	-0.5	-0.06
LVATK6		97.50	-0.18	-0.02	107.0	1.5	0.18
MCUWNC		96.00	-1.68	-0.23	111.0	5.5	0.66
MGZPGM		108.50	10.82	1.45	121.5	16.0	1.91
MPFBPQ		91.50	-6.18	-0.83	104.5	-1.0	-0.12
MTXTKG	X	100.50	2.82	0.38	91.0	-14.5	-1.73
MY6YKT	*	117.00	19.32	2.60	120.5	15.0	1.79
N3H4Q2		101.50	3.82	0.51	103.5	-2.0	-0.24

Analysis 902  
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NPQPA6	*	116.50	18.82	2.53	124.5	19.0	2.27
NYENYP		99.95	2.27	0.31	111.4	5.9	0.70
NZ7NWZ		106.00	8.32	1.12	105.5	0.0	0.00
P8BHWN		101.50	3.82	0.51	106.5	1.0	0.12
QGVCLP		94.50	-3.18	-0.43	104.0	-1.5	-0.18
QRB7VW		95.50	-2.18	-0.29	98.0	-7.5	-0.89
QRT8L7		91.50	-6.18	-0.83	100.5	-5.0	-0.59
R36YP7		88.00	-9.68	-1.30	96.0	-9.5	-1.13
R6D9EH	X	97.50	-0.18	-0.02	280.0	174.5	20.82
REHWUA		103.00	5.32	0.72	103.5	-2.0	-0.24
RTHX7B		96.40	-1.28	-0.17	103.3	-2.2	-0.26
T8DLUU		101.50	3.82	0.51	117.0	11.5	1.37
TEDYWJ		97.50	-0.18	-0.02	104.0	-1.5	-0.18
UBE6D9		107.50	9.82	1.32	110.0	4.5	0.54
UGY7V7		94.50	-3.18	-0.43	108.5	3.0	0.36
UQPQYJ		100.00	2.32	0.31	103.5	-2.0	-0.24
UVHQDE		104.50	6.82	0.92	110.0	4.5	0.54
UZR9AL		111.38	13.69	1.84	116.6	11.1	1.32
VJXX3A		87.50	-10.18	-1.37	97.5	-8.0	-0.95
W43XQ2		95.00	-2.68	-0.36	102.0	-3.5	-0.42
X2U9YC		99.50	1.82	0.24	113.5	8.0	0.96
XQQZBY		90.50	-7.18	-0.97	98.0	-7.5	-0.89
Y4DHPN		94.50	-3.18	-0.43	104.5	-1.0	-0.12
YAXLCX		87.50	-10.18	-1.37	94.0	-11.5	-1.37
YC48ZX		92.00	-5.68	-0.76	95.5	-10.0	-1.19
YGHK6Q		102.50	4.82	0.65	111.5	6.0	0.72
YMAUEP	*	117.50	19.82	2.66	125.0	19.5	2.33
YMRTFT		88.00	-9.68	-1.30	99.0	-6.5	-0.77
ZBRPP6		98.00	0.32	0.04	109.0	3.5	0.42
ZFQ4AA		94.50	-3.18	-0.43	106.5	1.0	0.12
ZJ4NCN	X	106.50	8.82	1.19	97.0	-8.5	-1.01



Analysis 902  
Total Sulfur Dioxide

Grand Means		Summary Statistics	
	97.682 mg/L		105.48 mg/L
Std Dev Btwn Labs			8.38 mg/L
	7.437 mg/L		
<b>Statistics based on 95 of 101 reporting participants</b>			

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

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

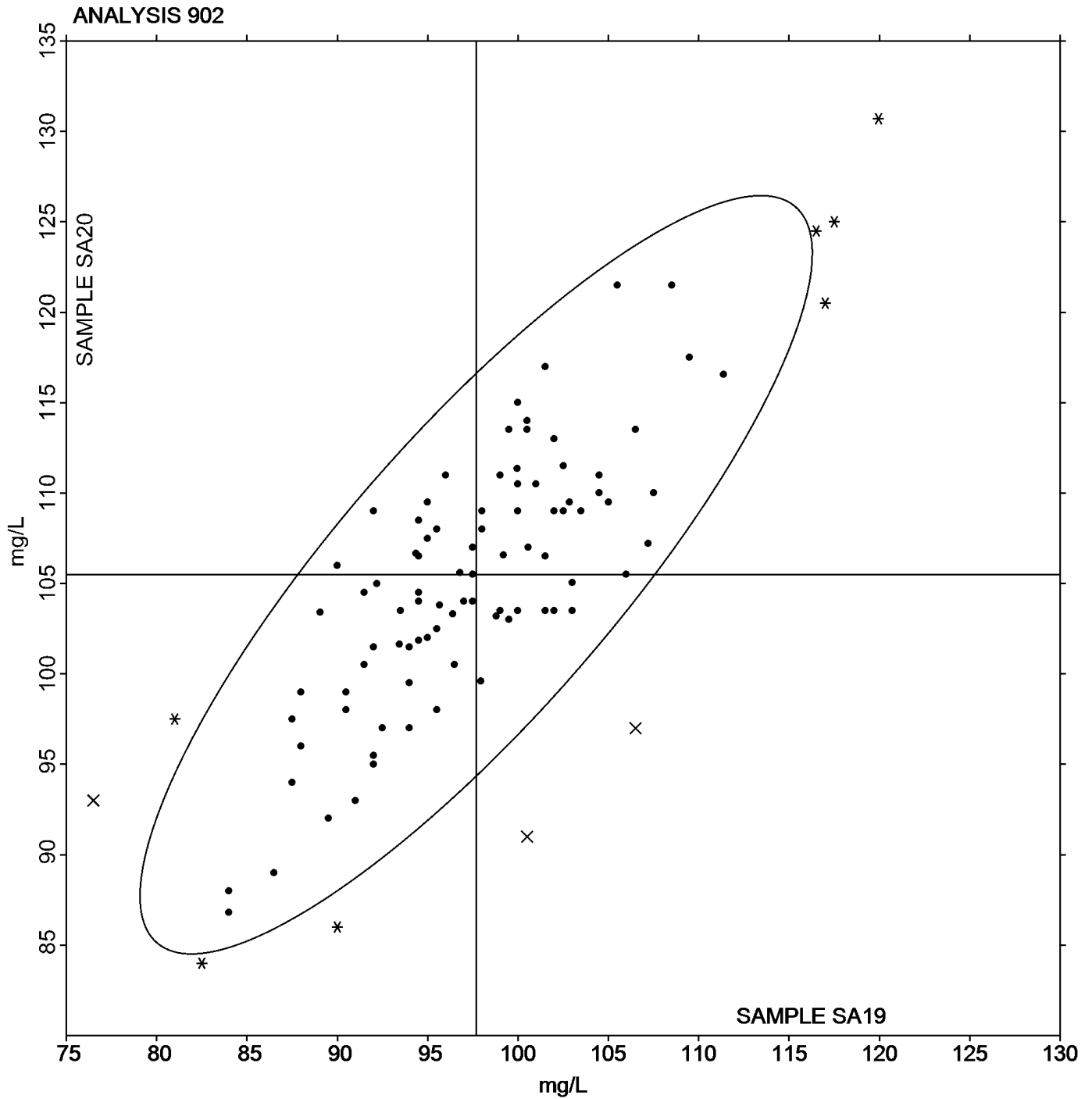
- R6D9EH (X) - Inconsistent in testing, data for sample SA20 are high. Inconsistent within the determinations of sample SA20.
- 6ZXX7V (X) - Inconsistent in testing, data for sample SA19 are low.
- 9DRNFP (X) - Data for both samples are high. Possible Systematic Error.
- MTXTKG (X) - Inconsistent in testing between samples.
- K92DA9 (X) - Data for both samples are low. Possible Systematic Error.
- ZJ4NCN (X) - Inconsistent in testing between samples.

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

Test Methodology	Sample SA19 <i>Pinot Grigio</i>			Sample SA20 <i>Pinot Grigio</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	92.975	7.036	-4.71	97.800	2.546	-7.68	2/2
Ripper Method	94.967	6.469	-2.71	102.600	7.457	-2.88	44/45
Aeration Oxidation (AO) Method	97.396	5.289	-0.29	105.833	6.112	0.35	18/21
Segmented Flow Analyzer	95.469	5.348	-2.21	104.881	6.805	-0.60	8/8
Enzymatic Method	103.808	8.557	6.13	113.000	11.415	7.52	6/6
Colometric Analyzer	106.421	9.869	8.74	112.743	12.787	7.26	7/8
FTIR	102.750	9.546	5.07	114.250	4.596	8.77	2/3
Flow Injection Analysis	103.134	4.989	5.45	108.881	4.632	3.40	8/8



Analysis 902  
Total Sulfur Dioxide





## Analysis 903

Fall 2018

## Free Sulfur Dioxide

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29LJM4		23.50	-0.64	-0.23	29.00	0.16	0.05
2FK4RK		24.00	-0.14	-0.05	30.00	1.16	0.38
2MX63M		26.00	1.86	0.68	28.50	-0.34	-0.11
2VYCP3		18.00	-6.14	-2.24	24.50	-4.34	-1.43
3E3L2K		19.00	-5.14	-1.88	23.50	-5.34	-1.76
3H7DC7		25.00	0.86	0.32	32.00	3.16	1.04
3XKGZL		25.00	0.86	0.32	26.00	-2.84	-0.93
4GR42K		20.00	-4.14	-1.51	24.00	-4.84	-1.59
4HZH76		23.50	-0.64	-0.23	30.50	1.66	0.55
4MUETB		25.50	1.36	0.50	32.00	3.16	1.04
4V87KU		24.60	0.46	0.17	30.35	1.51	0.50
6G46HC		19.69	-4.45	-1.63	23.59	-5.25	-1.73
6HE2RM		19.50	-4.64	-1.70	27.30	-1.54	-0.51
6TDYD3	*	31.50	7.36	2.69	35.00	6.16	2.03
6VQCHY		22.00	-2.14	-0.78	31.00	2.16	0.71
6ZXX7V		23.00	-1.14	-0.42	32.00	3.16	1.04
7D3DRQ		23.50	-0.64	-0.23	30.50	1.66	0.55
7GJ3TF		19.50	-4.64	-1.70	25.50	-3.34	-1.10
88AVNY		23.00	-1.14	-0.42	25.00	-3.84	-1.26
8GH973		25.50	1.36	0.50	28.00	-0.84	-0.28
8KBEHK		20.20	-3.94	-1.44	24.35	-4.49	-1.48
8VGCAU		25.00	0.86	0.32	30.00	1.16	0.38
98K2JF	X	33.00	8.86	3.24	37.00	8.16	2.69
99VYWW		29.00	4.86	1.78	31.00	2.16	0.71
99ZGWG		25.00	0.86	0.32	30.00	1.16	0.38
9BPMER		27.54	3.40	1.25	31.82	2.98	0.98
9DRNFP	*	30.50	6.36	2.33	37.00	8.16	2.69
9KCL7X		22.50	-1.64	-0.60	27.00	-1.84	-0.61
9W4DTM	*	17.00	-7.14	-2.61	21.00	-7.84	-2.58
A37NEL		24.00	-0.14	-0.05	27.50	-1.34	-0.44
AFBZTL		22.06	-2.08	-0.76	26.01	-2.83	-0.93
AHZ7CW		25.00	0.86	0.32	27.00	-1.84	-0.61
AJDX4D		26.00	1.86	0.68	28.00	-0.84	-0.28
AL46MP		24.00	-0.14	-0.05	30.40	1.56	0.51
ARRPRQ		21.15	-2.99	-1.09	28.50	-0.34	-0.11





## Analysis 903

Fall 2018

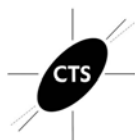
## Free Sulfur Dioxide

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
AV3WTV		20.95	-3.19	-1.16	23.80	-5.04	-1.66
AV8ETE		22.40	-1.74	-0.63	25.23	-3.61	-1.19
AXWLCQ		26.00	1.86	0.68	27.50	-1.34	-0.44
AY8ATG		23.00	-1.14	-0.42	25.50	-3.34	-1.10
B2CFP3		23.00	-1.14	-0.42	30.00	1.16	0.38
C49JWF		24.80	0.66	0.24	29.45	0.61	0.20
C9NWW3		24.60	0.46	0.17	26.65	-2.19	-0.72
D2KETB		21.55	-2.59	-0.95	24.80	-4.04	-1.33
D9NBM9		25.00	0.86	0.32	26.00	-2.84	-0.93
DP84AQ		24.50	0.36	0.13	32.50	3.66	1.21
EHQTVQ		20.50	-3.64	-1.33	25.50	-3.34	-1.10
EJXEZH		20.45	-3.69	-1.35	28.95	0.11	0.04
EP3A4Q		24.00	-0.14	-0.05	30.00	1.16	0.38
EXVJBZ		26.50	2.36	0.86	29.50	0.66	0.22
G9QA8R		28.00	3.86	1.41	32.00	3.16	1.04
GBT9HK		27.50	3.36	1.23	28.50	-0.34	-0.11
GQ9HZF		26.00	1.86	0.68	31.00	2.16	0.71
GU623D	*	29.60	5.46	2.00	36.80	7.96	2.62
H3H9NA		25.00	0.86	0.32	29.50	0.66	0.22
HZFB DG		25.68	1.54	0.56	33.17	4.33	1.43
J3CDFM		25.00	0.86	0.32	29.00	0.16	0.05
JH8V87		28.00	3.86	1.41	33.00	4.16	1.37
JHQNZ4		22.00	-2.14	-0.78	31.00	2.16	0.71
JWMV3C		26.00	1.86	0.68	30.00	1.16	0.38
JX23NT		22.00	-2.14	-0.78	23.50	-5.34	-1.76
K9HAZM		24.00	-0.14	-0.05	30.50	1.66	0.55
KJHZJA		28.30	4.16	1.52	30.95	2.11	0.70
KMZ3NU		27.00	2.86	1.05	32.00	3.16	1.04
KZ3NT6		21.50	-2.64	-0.96	29.50	0.66	0.22
LV9B78		23.00	-1.14	-0.42	30.70	1.86	0.61
LVATK6		27.00	2.86	1.05	35.00	6.16	2.03
LVNGJB		26.00	1.86	0.68	31.00	2.16	0.71
MCUWNC		27.00	2.86	1.05	30.00	1.16	0.38
MGZPGM		23.50	-0.64	-0.23	29.50	0.66	0.22
MPFBPQ		24.50	0.36	0.13	33.00	4.16	1.37



Free Sulfur Dioxide

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MTXTKG		25.00	0.86	0.32	27.50	-1.34	-0.44
MY6YKT	X	35.00	10.86	3.97	34.00	5.16	1.70
N3H4Q2		23.00	-1.14	-0.42	27.00	-1.84	-0.61
NPQPA6		26.00	1.86	0.68	30.00	1.16	0.38
NYENYP		25.05	0.91	0.33	32.00	3.16	1.04
NZ7NWZ		24.00	-0.14	-0.05	26.50	-2.34	-0.77
P8BHWN		25.00	0.86	0.32	29.00	0.16	0.05
QGVCLP		24.00	-0.14	-0.05	31.00	2.16	0.71
QRB7VW		27.50	3.36	1.23	30.50	1.66	0.55
QRT8L7		24.50	0.36	0.13	28.00	-0.84	-0.28
R36YP7		22.50	-1.64	-0.60	28.50	-0.34	-0.11
REHWUA		23.50	-0.64	-0.23	28.00	-0.84	-0.28
RTHX7B		26.80	2.66	0.97	29.35	0.51	0.17
T4DFD4		20.00	-4.14	-1.51	28.00	-0.84	-0.28
T8DLUU		22.00	-2.14	-0.78	29.00	0.16	0.05
TEDYWJ		27.00	2.86	1.05	30.00	1.16	0.38
UBE6D9		24.50	0.36	0.13	29.00	0.16	0.05
UGY7V7		23.50	-0.64	-0.23	31.50	2.66	0.88
UQPQYJ		23.50	-0.64	-0.23	25.00	-3.84	-1.26
UVHQDE		28.00	3.86	1.41	31.00	2.16	0.71
UZR9AL		25.44	1.30	0.48	26.81	-2.03	-0.67
VDUYRK		30.00	5.86	2.14	32.50	3.66	1.21
VJXX3A		20.00	-4.14	-1.51	26.00	-2.84	-0.93
VMF6HW		22.40	-1.74	-0.63	26.40	-2.44	-0.80
W43XQ2		21.00	-3.14	-1.15	24.00	-4.84	-1.59
X2U9YC		21.50	-2.64	-0.96	29.00	0.16	0.05
XQQZBY		22.50	-1.64	-0.60	26.00	-2.84	-0.93
Y4DHPN		27.00	2.86	1.05	30.00	1.16	0.38
YAXLCX		20.50	-3.64	-1.33	24.50	-4.34	-1.43
YC48ZX		26.30	2.16	0.79	27.80	-1.04	-0.34
YGHK6Q		25.50	1.36	0.50	30.00	1.16	0.38
YMAUEP		22.00	-2.14	-0.78	25.50	-3.34	-1.10
YMRTFT		24.00	-0.14	-0.05	29.50	0.66	0.22
ZBRPP6	*	25.50	1.36	0.50	23.50	-5.34	-1.76
ZFQ4AA		23.00	-1.14	-0.42	31.00	2.16	0.71



Free Sulfur Dioxide

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ZJ4NCN		24.00	-0.14	-0.05	33.00	4.16	1.37

Grand Means	Summary Statistics
24.135 mg/L	28.838 mg/L
<b>Stnd Dev Btwn Labs</b>	
2.735 mg/L	3.037 mg/L
<b>Statistics based on 104 of 106 reporting participants</b>	

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

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

MY6YKT (X) - Data for sample SA19 are high.

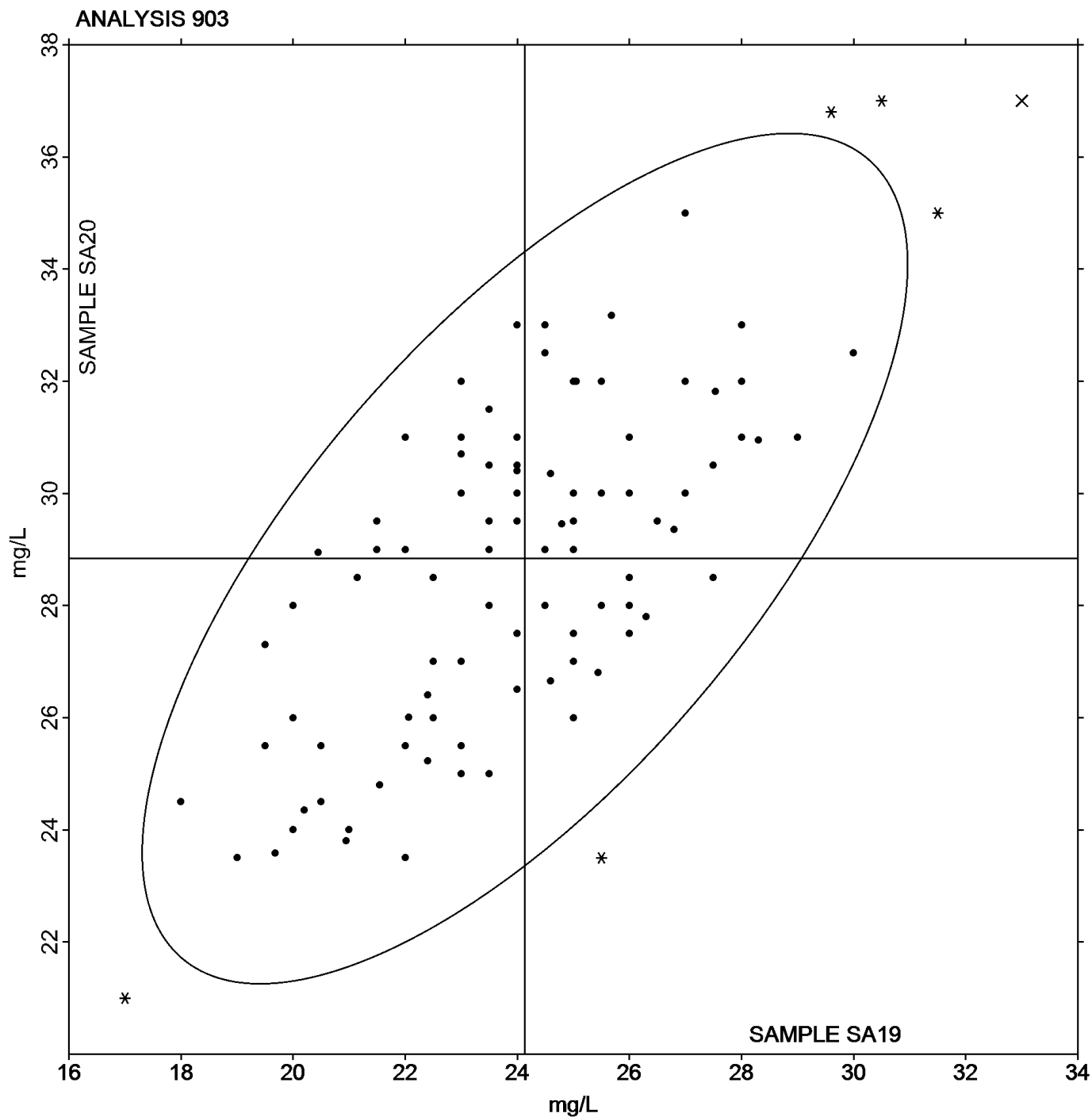
98K2JF (X) - Data for sample SA19 are high.

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

Test Methodology	Sample SA19 <i>Pinot Grigio</i>			Sample SA20 <i>Pinot Grigio</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	21.417	1.156	-2.72	25.883	2.277	-2.95	3/3
Ripper Method	23.586	2.092	-0.55	28.800	2.743	-0.04	35/37
Aeration Oxidation (AO) Method	23.985	2.838	-0.15	28.531	3.178	-0.31	40/40
Segmented Flow Analyzer	24.550	2.931	0.41	29.733	2.384	0.90	9/9
Colormetric Analyzer	24.417	2.289	0.28	29.417	3.137	0.58	6/6
Flow Injection Analysis	25.558	2.802	1.42	28.270	2.599	-0.57	8/8
FTIR	29.667	2.363	5.53	34.000	3.606	5.16	3/3



Analysis 903  
Free Sulfur Dioxide





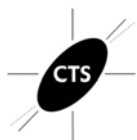
Analysis 904  
Titratable Acidity

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29LJM4		5.700	-0.114	-0.34	5.600	-0.201	-0.61
2FK4RK		5.650	-0.164	-0.49	5.550	-0.251	-0.76
2MX63M		5.800	-0.014	-0.04	5.800	-0.001	0.00
2VYCP3		5.450	-0.364	-1.08	5.400	-0.401	-1.21
3E3L2K		5.454	-0.359	-1.07	5.358	-0.444	-1.34
3H7DC7		5.500	-0.314	-0.93	5.500	-0.301	-0.91
3XKGZL		5.900	0.086	0.26	5.870	0.069	0.21
4GR42K		5.475	-0.339	-1.01	5.510	-0.291	-0.88
4HZH76	X	7.850	2.036	6.07	7.865	2.064	6.23
4MUETB	X	8.050	2.236	6.66	7.795	1.994	6.02
4V87KU		5.750	-0.064	-0.19	5.650	-0.151	-0.46
6G46HC		5.505	-0.309	-0.92	5.505	-0.296	-0.89
6HE2RM	X	6.428	0.614	1.83	6.750	0.949	2.86
6TDYD3		5.930	0.116	0.35	5.920	0.119	0.36
6VQCHY		5.545	-0.269	-0.80	5.565	-0.236	-0.71
6ZXX7V		5.700	-0.114	-0.34	5.700	-0.101	-0.31
7D3DRQ	X	6.285	0.471	1.40	6.615	0.814	2.46
7GJ3TF		6.000	0.186	0.56	5.950	0.149	0.45
88AVNY		5.560	-0.254	-0.76	5.585	-0.216	-0.65
8GH973		5.400	-0.414	-1.23	5.400	-0.401	-1.21
8KBEHK		5.643	-0.171	-0.51	5.710	-0.092	-0.28
8VGCAU		5.545	-0.269	-0.80	5.575	-0.226	-0.68
98K2JF	*	6.100	0.286	0.85	5.900	0.099	0.30
99VYWW		5.380	-0.434	-1.29	5.460	-0.341	-1.03
99ZGWG		6.100	0.286	0.85	6.000	0.199	0.60
9BPMER		5.895	0.081	0.24	5.855	0.054	0.16
9DRNFP		6.260	0.446	1.33	6.270	0.469	1.42
9KCL7X		5.550	-0.264	-0.78	5.570	-0.231	-0.70
9W4DTM		5.780	-0.034	-0.10	5.835	0.034	0.10
A37NEL		6.380	0.566	1.69	6.360	0.559	1.69
AFBZTL		5.665	-0.149	-0.44	5.665	-0.136	-0.41
AHZ7CW		6.000	0.186	0.56	6.000	0.199	0.60
AJDX4D		5.700	-0.114	-0.34	5.700	-0.101	-0.31
AL46MP	*	5.400	-0.414	-1.23	5.600	-0.201	-0.61
ARRPRQ		5.850	0.036	0.11	5.800	-0.001	0.00



Analysis 904  
Titratable Acidity

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
AV3WTV		6.010	0.196	0.59	6.040	0.239	0.72
AV8ETE	X	6.600	0.786	2.34	6.750	0.949	2.86
AXWLCQ	X	7.220	1.406	4.19	6.950	1.149	3.47
AY8ATG		6.100	0.286	0.85	6.100	0.299	0.90
B2CFP3		5.310	-0.504	-1.50	5.290	-0.511	-1.54
C49JWF	*	6.799	0.985	2.94	6.683	0.882	2.66
C9NWW3		5.608	-0.205	-0.61	5.578	-0.224	-0.67
D2KETB		6.140	0.326	0.97	6.105	0.304	0.92
D9NBM9		5.770	-0.044	-0.13	5.730	-0.071	-0.21
DP84AQ		5.900	0.086	0.26	5.800	-0.001	0.00
EHQTVQ		5.950	0.136	0.41	5.850	0.049	0.15
EJXEZH	X	7.375	1.561	4.65	7.420	1.619	4.89
EP3A4Q	X	5.500	-0.314	-0.93	5.800	-0.001	0.00
EXVJBZ	X	7.200	1.386	4.13	7.150	1.349	4.07
FXB4VX	*	5.698	-0.116	-0.34	5.901	0.099	0.30
G9QA8R		5.500	-0.314	-0.93	5.550	-0.251	-0.76
GBT9HK		6.150	0.336	1.00	6.185	0.384	1.16
GQ9HZF		5.540	-0.274	-0.81	5.570	-0.231	-0.70
GU623D		5.460	-0.354	-1.05	5.465	-0.336	-1.01
H3H9NA		5.700	-0.114	-0.34	5.700	-0.101	-0.31
HZFB DG		5.175	-0.639	-1.90	5.175	-0.626	-1.89
J3CDFM		5.636	-0.178	-0.53	5.595	-0.206	-0.62
JH8V87		5.700	-0.114	-0.34	5.550	-0.251	-0.76
JHQNZ4		6.195	0.381	1.14	6.020	0.219	0.66
JWMV3C		5.580	-0.234	-0.70	5.530	-0.271	-0.82
JX23NT		5.600	-0.214	-0.64	5.600	-0.201	-0.61
K92DA9		5.350	-0.464	-1.38	5.300	-0.501	-1.51
K9HAZM		5.780	-0.034	-0.10	5.925	0.124	0.37
KJHZJA		5.700	-0.114	-0.34	5.700	-0.101	-0.31
KMZ3NU		6.090	0.276	0.82	6.135	0.334	1.01
KZ3NT6	X	6.210	0.396	1.18	5.930	0.129	0.39
LV9B78		6.300	0.486	1.45	6.300	0.499	1.51
LVATK6	X	7.700	1.886	5.62	7.400	1.599	4.83
LVNGJB	X	6.200	0.386	1.15	6.800	0.999	3.02
MCUWNC		5.470	-0.344	-1.02	5.435	-0.366	-1.11



Analysis 904  
Titratable Acidity

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MGZPGM		5.500	-0.314	-0.93	5.400	-0.401	-1.21
MPFBPQ		5.850	0.036	0.11	5.950	0.149	0.45
MTXTKG		5.900	0.086	0.26	5.900	0.099	0.30
MY6YKT		6.145	0.331	0.99	6.155	0.354	1.07
N3H4Q2		5.900	0.086	0.26	6.000	0.199	0.60
NPQPA6		6.030	0.216	0.64	6.000	0.199	0.60
NYENYP		5.585	-0.229	-0.68	5.605	-0.196	-0.59
NZ7NWZ		5.700	-0.114	-0.34	5.750	-0.051	-0.15
P8BHWN		5.990	0.176	0.53	5.875	0.074	0.22
QGVCLP		5.850	0.036	0.11	5.865	0.064	0.19
QRB7VW		6.050	0.236	0.70	6.150	0.349	1.05
QRT8L7		5.900	0.086	0.26	6.000	0.199	0.60
R6D9EH		6.150	0.336	1.00	6.100	0.299	0.90
REHWUA		5.580	-0.234	-0.70	5.600	-0.201	-0.61
RTHX7B		5.990	0.176	0.53	5.930	0.129	0.39
T4DFD4	X	7.165	1.351	4.03	6.905	1.104	3.33
T8DLUU		5.600	-0.214	-0.64	5.600	-0.201	-0.61
TEDYWJ		5.270	-0.544	-1.62	5.260	-0.541	-1.63
UBE6D9		6.000	0.186	0.56	6.010	0.209	0.63
UGY7V7		6.400	0.586	1.75	6.250	0.449	1.35
UQPQYJ		6.450	0.636	1.90	6.450	0.649	1.96
UVHQDE		6.215	0.401	1.20	6.160	0.359	1.08
UZR9AL		5.395	-0.419	-1.25	5.380	-0.421	-1.27
VDUYRK	X	6.600	0.786	2.34	6.200	0.399	1.20
VJXX3A		6.300	0.486	1.45	6.250	0.449	1.35
VMF6HW	*	6.788	0.974	2.90	6.750	0.949	2.86
W43XQ2		6.550	0.736	2.19	6.550	0.749	2.26
X2U9YC	*	5.485	-0.329	-0.98	5.660	-0.141	-0.43
XQQZBY		5.850	0.036	0.11	5.700	-0.101	-0.31
Y4DHPN		5.665	-0.149	-0.44	5.665	-0.136	-0.41
YAXLCX		6.050	0.236	0.70	6.050	0.249	0.75
YC48ZX	*	6.450	0.636	1.90	6.550	0.749	2.26
YGHK6Q	X	5.950	0.136	0.41	5.650	-0.151	-0.46
YMAUEP	X	7.000	1.186	3.53	6.900	1.099	3.32
YMRTFT		5.550	-0.264	-0.78	5.550	-0.251	-0.76



**Analysis 904  
Titratable Acidity**

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ZBRPP6		5.795	-0.019	-0.06	5.740	-0.061	-0.18
ZFQ4AA		5.735	-0.079	-0.23	5.675	-0.126	-0.38
ZJ4NCN	*	5.400	-0.414	-1.23	5.200	-0.601	-1.81

Grand Means	Summary Statistics
5.8135 g/L as tartaric acid	5.8011 g/L as tartaric acid
<b>Std Dev Btwn Labs</b>	
0.3358 g/L as tartaric acid	0.3313 g/L as tartaric acid
<b>Statistics based on 92 of 108 reporting participants</b>	

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

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

- 4HZH76 (X) - Data for both samples are high. Possible Systematic Error.
- VDUYRK (X) - Inconsistent in testing between samples.
- EXVJBZ (X) - Data for both samples are high. Possible Systematic Error.
- 4MUETB (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA19.
- AXWLCQ (X) - Data for both samples are high. Possible Systematic Error.
- 7D3DRQ (X) - Inconsistent in testing between samples.
- EP3A4Q (X) - Inconsistent in testing between samples.
- AV8ETE (X) - Data for sample SA20 are high.
- KZ3NT6 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- 6HE2RM (X) - Inconsistent in testing, data for sample SA20 are high.
- LVATK6 (X) - Data for both samples are high. Possible Systematic Error.
- YGHK6Q (X) - Inconsistent in testing between samples.
- YMAUEP (X) - Data for both samples are high. Possible Systematic Error.
- LVNGJB (X) - Inconsistent in testing, data for sample SA20 are high.
- EJXEZH (X) - Data for both samples are high. Possible Systematic Error.
- T4DFD4 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA19.





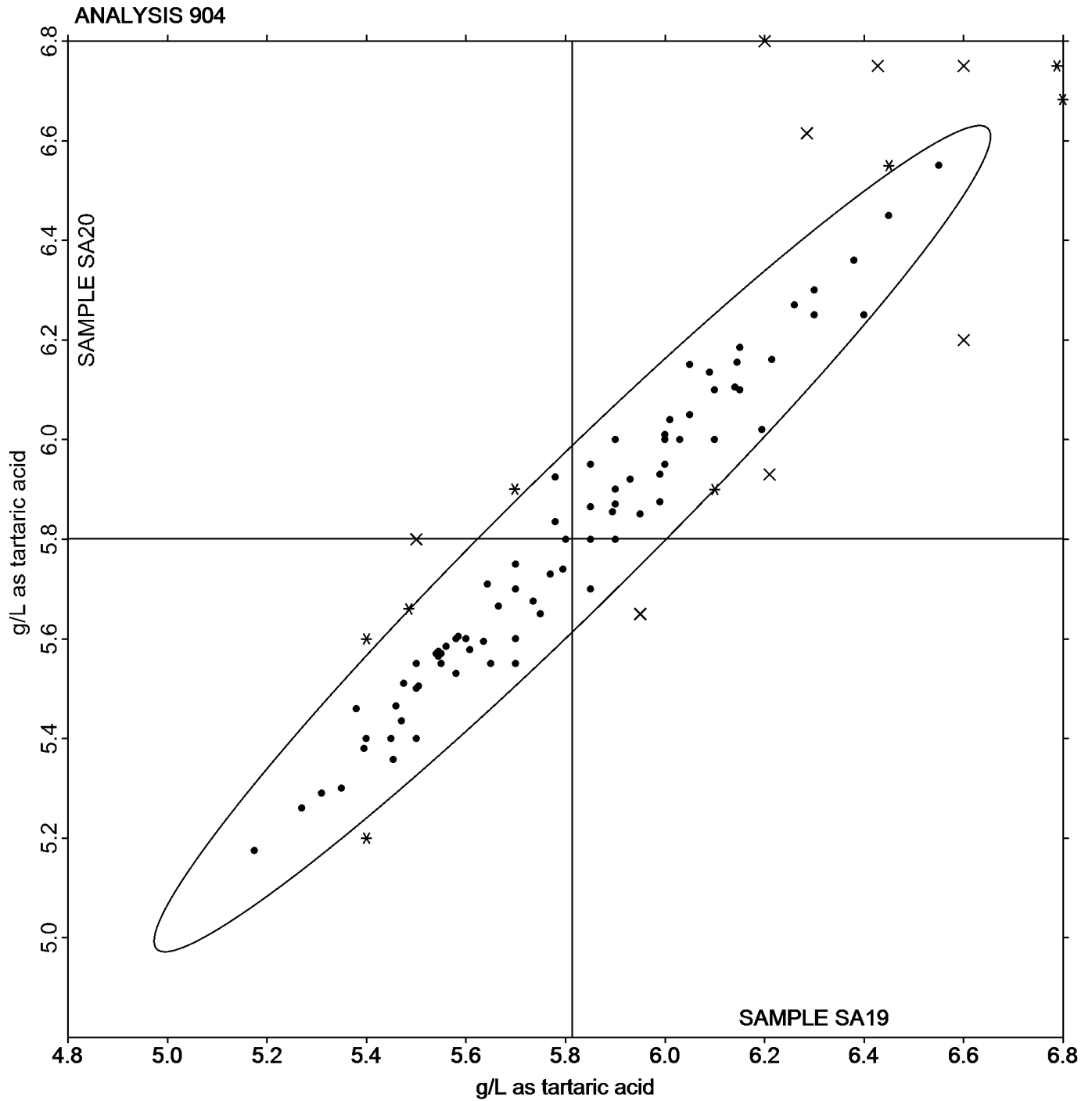
Analysis 904  
Titratable Acidity

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA19 <i>Pinot Grigio</i>			Sample SA20 <i>Pinot Grigio</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Autotitration	5.829	0.324	0.016	5.807	0.322	0.006	63/70
Manual Titration	5.799	0.383	-0.014	5.814	0.370	0.013	22/30
FTIR	5.735	0.337	-0.079	5.733	0.341	-0.068	6/7
Segmented Flow Analyzer	5.608	0.000	-0.205	5.578	0.000	-0.224	1/1



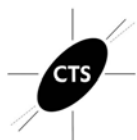
Analysis 904  
Titratable Acidity



Analysis 905  
Volatile Acidity

Fall 2018

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29LJM4	*	0.1450	-0.0092	-0.20	0.1750	0.0221	0.47
2FK4RK		0.2350	0.0808	1.76	0.2200	0.0671	1.42
2MX63M		0.1250	-0.0292	-0.64	0.1300	-0.0229	-0.49
2VYCP3		0.1800	0.0258	0.56	0.1800	0.0271	0.57
3E3L2K		0.1591	0.0049	0.11	0.1469	-0.0060	-0.13
3H7DC7		0.0650	-0.0892	-1.95	0.0650	-0.0879	-1.86
3XKGZL		0.1900	0.0358	0.78	0.2000	0.0471	1.00
4GR42K		0.1350	-0.0192	-0.42	0.1350	-0.0179	-0.38
4HZH76		0.1550	0.0008	0.02	0.1400	-0.0129	-0.27
4MUETB		0.1325	-0.0217	-0.47	0.1320	-0.0209	-0.44
4V87KU	*	0.2600	0.1058	2.31	0.2400	0.0871	1.85
6G46HC		0.2000	0.0458	1.00	0.2050	0.0521	1.11
6HE2RM		0.1006	-0.0536	-1.17	0.0862	-0.0667	-1.42
6TDYD3		0.1100	-0.0442	-0.96	0.1000	-0.0529	-1.12
6VQCHY		0.1300	-0.0242	-0.53	0.1300	-0.0229	-0.49
6ZXX7V		0.1100	-0.0442	-0.96	0.1050	-0.0479	-1.02
7D3DRQ		0.1700	0.0158	0.35	0.1750	0.0221	0.47
7GJ3TF		0.1250	-0.0292	-0.64	0.1350	-0.0179	-0.38
88AVNY		0.2170	0.0628	1.37	0.2065	0.0536	1.14
8GH973		0.1300	-0.0242	-0.53	0.1300	-0.0229	-0.49
8KBEHK		0.1150	-0.0392	-0.86	0.1400	-0.0129	-0.27
8VGCAU	*	0.1550	0.0008	0.02	0.1850	0.0321	0.68
98K2JF		0.1700	0.0158	0.35	0.1600	0.0071	0.15
99VYWW		0.1800	0.0258	0.56	0.1750	0.0221	0.47
99ZGWG		0.1450	-0.0092	-0.20	0.1400	-0.0129	-0.27
9DRNFP		0.1200	-0.0342	-0.75	0.1200	-0.0329	-0.70
9KCL7X		0.1800	0.0258	0.56	0.1550	0.0021	0.04
9W4DTM		0.2150	0.0608	1.33	0.2250	0.0721	1.53
A37NEL	*	0.0250	-0.1292	-2.82	0.0200	-0.1329	-2.82
AFBZTL		0.0800	-0.0742	-1.62	0.0900	-0.0629	-1.33
AHZ7CW		0.1900	0.0358	0.78	0.1800	0.0271	0.57
AJDX4D		0.1100	-0.0442	-0.96	0.1000	-0.0529	-1.12
ARRPRQ		0.1050	-0.0492	-1.07	0.0950	-0.0579	-1.23
AV3WTV		0.1180	-0.0362	-0.79	0.1170	-0.0359	-0.76
AV8ETE		0.1600	0.0058	0.13	0.1600	0.0071	0.15



Analysis 905  
Volatile Acidity

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
AXWLCQ	*	0.1350	-0.0192	-0.42	0.1000	-0.0529	-1.12
AY8ATG		0.1650	0.0108	0.24	0.1600	0.0071	0.15
B2CFP3		0.1750	0.0208	0.45	0.1600	0.0071	0.15
C49JWF		0.1550	0.0008	0.02	0.1500	-0.0029	-0.06
C9NWW3		0.1470	-0.0072	-0.16	0.1470	-0.0059	-0.13
D2KETB		0.2250	0.0708	1.55	0.2300	0.0771	1.64
D9NBM9		0.1400	-0.0142	-0.31	0.1500	-0.0029	-0.06
DP84AQ		0.1500	-0.0042	-0.09	0.1500	-0.0029	-0.06
EHQTVQ		0.2450	0.0908	1.98	0.2450	0.0921	1.95
EJXEZH	X	0.3850	0.2308	5.04	0.3400	0.1871	3.97
EP3A4Q	X	0.1500	-0.0042	-0.09	0.1050	-0.0479	-1.02
EXVJBZ		0.2050	0.0508	1.11	0.2100	0.0571	1.21
FXB4VX		0.2200	0.0658	1.44	0.2025	0.0496	1.05
G9QA8R		0.2000	0.0458	1.00	0.2100	0.0571	1.21
GBT9HK		0.1450	-0.0092	-0.20	0.1500	-0.0029	-0.06
GQ9HZF		0.1200	-0.0342	-0.75	0.1100	-0.0429	-0.91
GU623D		0.2500	0.0958	2.09	0.2450	0.0921	1.95
H3H9NA		0.0550	-0.0992	-2.17	0.0500	-0.1029	-2.18
HP9TH4		0.1300	-0.0242	-0.53	0.1300	-0.0229	-0.49
HZFBGD	X	0.1800	0.0258	0.56	0.1260	-0.0269	-0.57
J3CDFM	X	0.3700	0.2158	4.71	0.3650	0.2121	4.50
JH8V87		0.1550	0.0008	0.02	0.1700	0.0171	0.36
JHQNZ4		0.1550	0.0008	0.02	0.1700	0.0171	0.36
JWMV3C		0.1400	-0.0142	-0.31	0.1450	-0.0079	-0.17
JX23NT		0.1600	0.0058	0.13	0.1650	0.0121	0.26
K92DA9	X	0.4900	0.3358	7.33	0.5800	0.4271	9.06
K9HAZM		0.1250	-0.0292	-0.64	0.1300	-0.0229	-0.49
KJHZJA		0.1300	-0.0242	-0.53	0.1300	-0.0229	-0.49
KMZ3NU		0.1100	-0.0442	-0.96	0.1250	-0.0279	-0.59
KZ3NT6		0.1800	0.0258	0.56	0.1550	0.0021	0.04
LV9B78	*	0.0320	-0.1222	-2.67	0.0240	-0.1289	-2.73
LVATK6	X	0.1560	0.0018	0.04	0.2100	0.0571	1.21
LVNGJB	X	0.3400	0.1858	4.06	0.3900	0.2371	5.03
MCUWNC		0.1850	0.0308	0.67	0.1750	0.0221	0.47
MGZPGM		0.1500	-0.0042	-0.09	0.1400	-0.0129	-0.27



Analysis 905  
Volatile Acidity

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MPFBPQ		0.1600	0.0058	0.13	0.1650	0.0121	0.26
MTXTKG	M	0.1050	-0.0492	-1.07	No data reported for this sample		
N3H4Q2	X	0.2300	0.0758	1.66	0.2650	0.1121	2.38
NPQPA6		0.1100	-0.0442	-0.96	0.1200	-0.0329	-0.70
NYENYP		0.1300	-0.0242	-0.53	0.1100	-0.0429	-0.91
NZ7NWZ		0.1250	-0.0292	-0.64	0.1250	-0.0279	-0.59
P8BHWN		0.0850	-0.0692	-1.51	0.0650	-0.0879	-1.86
QGVCLP	X	0.3000	0.1458	3.18	0.3300	0.1771	3.76
QRB7VW		0.1400	-0.0142	-0.31	0.1300	-0.0229	-0.49
QRT8L7		0.1750	0.0208	0.45	0.1800	0.0271	0.57
R36YP7		0.2200	0.0658	1.44	0.2300	0.0771	1.64
REHWUA		0.1550	0.0008	0.02	0.1500	-0.0029	-0.06
RTHX7B		0.1230	-0.0312	-0.68	0.1045	-0.0484	-1.03
T8DLUU		0.1800	0.0258	0.56	0.1800	0.0271	0.57
TEDYWJ		0.1700	0.0158	0.35	0.1800	0.0271	0.57
UBE6D9		0.1350	-0.0192	-0.42	0.1300	-0.0229	-0.49
UGY7V7		0.1600	0.0058	0.13	0.1500	-0.0029	-0.06
UQPQYJ	*	0.2850	0.1308	2.86	0.2850	0.1321	2.80
UVHQDE		0.1550	0.0008	0.02	0.1700	0.0171	0.36
UZR9AL		0.1450	-0.0092	-0.20	0.1450	-0.0079	-0.17
VDUYRK	X	0.2400	0.0858	1.87	0.2000	0.0471	1.00
VJXX3A		0.1800	0.0258	0.56	0.1850	0.0321	0.68
VMF6HW		0.1500	-0.0042	-0.09	0.1500	-0.0029	-0.06
W43XQ2		0.1800	0.0258	0.56	0.1600	0.0071	0.15
X2U9YC		0.2250	0.0708	1.55	0.2300	0.0771	1.64
XQQZBY		0.1550	0.0008	0.02	0.1650	0.0121	0.26
Y4DHPN		0.1800	0.0258	0.56	0.1850	0.0321	0.68
YAXLCX		0.1950	0.0408	0.89	0.1950	0.0421	0.89
YC48ZX		0.1350	-0.0192	-0.42	0.1350	-0.0179	-0.38
YGHK6Q		0.1700	0.0158	0.35	0.1600	0.0071	0.15
YMAUEP		0.1200	-0.0342	-0.75	0.1250	-0.0279	-0.59
YMRTFT	X	0.1635	0.0093	0.20	0.0990	-0.0539	-1.14
ZBRPP6		0.1305	-0.0237	-0.52	0.1300	-0.0229	-0.49
ZFQ4AA		0.1850	0.0308	0.67	0.2000	0.0471	1.00
ZJ4NCN	X	0.1200	-0.0342	-0.75	0.1700	0.0171	0.36



**Analysis 905  
Volatile Acidity**

Grand Means		Summary Statistics	
	0.15418 g/L as acetic acid		0.15290 g/L as acetic acid
Std Dev Btwn Labs			
	0.04581 g/L as acetic acid		0.04715 g/L as acetic acid
<b>Statistics based on 92 of 105 reporting participants</b>			

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

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

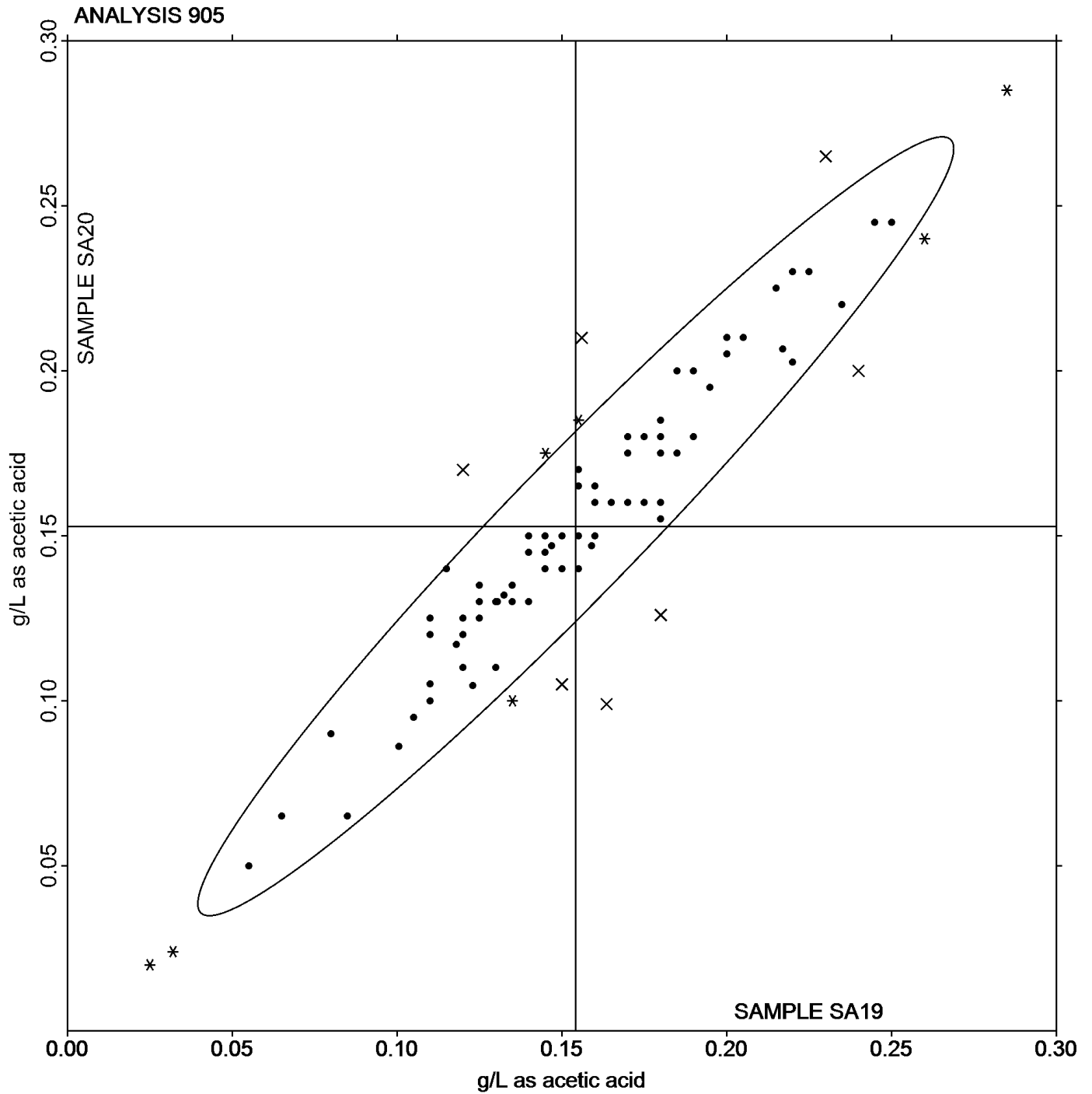
- J3CDFM (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA19.
- QGVCLP (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA20.
- VDUYRK (X) - Inconsistent in testing between samples.
- HZFBGD (X) - Inconsistent in testing between samples.
- EP3A4Q (X) - Inconsistent in testing between samples.
- MTXTKG (M) - Participant did not submit data for sample SA20.
- K92DA9 (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA20.
- YMRTFT (X) - Inconsistent in testing between samples.
- LVATK6 (X) - Inconsistent in testing between samples.
- N3H4Q2 (X) - Inconsistent in testing between samples.
- ZJ4NCN (X) - Inconsistent in testing between samples.
- LVNGJB (X) - Data for both samples are high. Possible Systematic Error.
- EJXEZH (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA19.

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

Test Methodology	Sample SA19 <i>Pinot Grigio</i>			Sample SA20 <i>Pinot Grigio</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method	0.225	0.000	0.0708	0.230	0.000	0.0771	1/1
Cash Still method	0.200	0.042	0.0463	0.198	0.037	0.0449	13/21
Enzymatic method	0.145	0.041	-0.0092	0.144	0.044	-0.0093	64/66
HPLC	0.131	0.000	-0.0237	0.130	0.000	-0.0229	1/1
GC	0.110	0.000	-0.0442	0.125	0.000	-0.0279	1/2
Colorimetric Analysis	0.120	0.000	-0.0342	0.125	0.000	-0.0279	1/2
Seg. Flow / Colorimetric Analyzer	0.185	0.029	0.0312	0.190	0.032	0.0375	5/5
FTIR	0.132	0.045	-0.0225	0.124	0.044	-0.0287	6/7



Analysis 905  
Volatile Acidity





Analysis 906  
Specific Gravity

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29LJM4		0.9954	0.0003	0.37	0.9954	0.0003	0.39
2FK4RK		0.9955	0.0004	0.50	0.9955	0.0004	0.48
2MX63M		0.9952	0.0001	0.13	0.9952	0.0001	0.18
2VYCP3	X	0.9909	-0.0042	-5.50	0.9909	-0.0042	-5.50
3E3L2K		0.9953	0.0002	0.27	0.9954	0.0003	0.39
3H7DC7		0.9954	0.0003	0.42	0.9953	0.0003	0.35
4GR42K		0.9953	0.0002	0.24	0.9953	0.0002	0.29
4HZH76		0.9953	0.0001	0.18	0.9952	0.0002	0.21
4MUETB		0.9955	0.0003	0.44	0.9954	0.0003	0.42
4V87KU		0.9954	0.0003	0.43	0.9954	0.0004	0.46
6G46HC		0.9954	0.0003	0.37	0.9954	0.0003	0.42
6HE2RM		0.9955	0.0004	0.48	0.9955	0.0004	0.52
6ZXX7V		0.9953	0.0002	0.22	0.9953	0.0002	0.28
7D3DRQ		0.9953	0.0002	0.29	0.9954	0.0004	0.48
88AVNY		0.9952	0.0001	0.10	0.9952	0.0001	0.18
8GH973		0.9953	0.0002	0.27	0.9953	0.0002	0.27
8KBEHK		0.9956	0.0004	0.58	0.9955	0.0004	0.58
8VGCAU		0.9936	-0.0015	-1.94	0.9936	-0.0015	-1.90
98K2JF		0.9954	0.0002	0.32	0.9953	0.0002	0.33
9BPMER		0.9953	0.0002	0.30	0.9953	0.0002	0.32
9DRNFP		0.9950	-0.0001	-0.10	0.9950	-0.0001	-0.14
9KCL7X		0.9952	0.0000	0.04	0.9953	0.0002	0.29
9W4DTM		0.9952	0.0000	0.04	0.9954	0.0003	0.42
A37NEL		0.9933	-0.0018	-2.39	0.9931	-0.0020	-2.60
AFBZTL		0.9961	0.0010	1.35	0.9961	0.0011	1.39
AHZ7CW		0.9953	0.0002	0.24	0.9953	0.0002	0.29
AJDX4D		0.9962	0.0011	1.43	0.9961	0.0010	1.33
AL46MP		0.9952	0.0001	0.11	0.9953	0.0002	0.29
ARRPRQ		0.9949	-0.0002	-0.29	0.9950	-0.0001	-0.11
AV3WTV		0.9957	0.0006	0.77	0.9957	0.0006	0.74
AXWLCQ		0.9939	-0.0012	-1.60	0.9938	-0.0013	-1.68
AY8ATG		0.9968	0.0017	2.20	0.9968	0.0017	2.24
B2CFP3		0.9955	0.0004	0.50	0.9955	0.0004	0.55
C9NWW3		0.9954	0.0002	0.32	0.9954	0.0003	0.42
D9NBM9		0.9950	-0.0002	-0.22	0.9949	-0.0002	-0.30





Analysis 906  
Specific Gravity

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
DP84AQ		0.9930	-0.0021	-2.79	0.9930	-0.0021	-2.73
EHQTVQ		0.9947	-0.0004	-0.55	0.9942	-0.0009	-1.16
EJXEZH		0.9945	-0.0007	-0.88	0.9947	-0.0004	-0.57
EP3A4Q		0.9950	-0.0002	-0.22	0.9948	-0.0003	-0.44
FXB4VX		0.9954	0.0003	0.34	0.9954	0.0003	0.46
G9QA8R		0.9953	0.0002	0.21	0.9953	0.0002	0.28
GBT9HK	X	0.9941	-0.0011	-1.39	0.9934	-0.0017	-2.19
GQ9HZF		0.9957	0.0006	0.77	0.9955	0.0004	0.55
GU623D	X	1.0035	0.0084	11.03	1.0034	0.0083	10.90
HZFB DG		0.9955	0.0004	0.50	0.9955	0.0004	0.55
J3CDFM		0.9942	-0.0010	-1.26	0.9944	-0.0007	-0.96
JH8V87		0.9943	-0.0008	-1.09	0.9943	-0.0008	-1.04
JHQNZ4		0.9955	0.0004	0.52	0.9955	0.0004	0.59
JWMV3C		0.9927	-0.0024	-3.18	0.9927	-0.0024	-3.12
JX23NT		0.9955	0.0004	0.51	0.9955	0.0004	0.50
K92DA9		0.9950	-0.0001	-0.11	0.9946	-0.0005	-0.64
K9HAZM		0.9958	0.0007	0.90	0.9957	0.0006	0.81
KJHZJA		0.9970	0.0019	2.48	0.9969	0.0018	2.38
KMZ3NU		0.9955	0.0004	0.54	0.9955	0.0004	0.58
KZ3NT6		0.9953	0.0002	0.23	0.9950	0.0000	-0.05
LV9B78		0.9963	0.0012	1.54	0.9963	0.0012	1.58
LVATK6		0.9965	0.0014	1.87	0.9965	0.0015	1.91
LVNGJB	X	0.9963	0.0012	1.61	0.9954	0.0003	0.40
MCUWNC		0.9953	0.0002	0.20	0.9952	0.0001	0.17
MGZPGM		0.9948	-0.0003	-0.43	0.9948	-0.0003	-0.38
MPFBPQ		0.9940	-0.0011	-1.47	0.9940	-0.0011	-1.42
MTXTKG		0.9948	-0.0003	-0.42	0.9947	-0.0004	-0.50
N3H4Q2	*	0.9948	-0.0003	-0.42	0.9953	0.0003	0.34
NPQA6		0.9937	-0.0014	-1.87	0.9936	-0.0015	-1.94
NYENYP		0.9954	0.0003	0.37	0.9956	0.0005	0.61
NZ7NWZ	X	0.9959	0.0008	1.03	0.9936	-0.0015	-1.99
P8BHWN	X	0.9988	0.0037	4.90	0.9991	0.0041	5.32
QGVCLP	*	0.9948	-0.0003	-0.35	0.9953	0.0003	0.35
QRB7VW	*	0.9958	0.0007	0.96	0.9953	0.0002	0.24
QRT8L7	X	0.9912	-0.0039	-5.17	0.9935	-0.0015	-2.01



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

**Report #060**  
**Fall 2018**

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
R36YP7		0.9955	0.0004	0.49	0.9955	0.0004	0.52
R6D9EH		0.9955	0.0004	0.48	0.9954	0.0004	0.46
REHWUA		0.9945	-0.0006	-0.81	0.9945	-0.0006	-0.76
RTHX7B		0.9951	-0.0001	-0.09	0.9953	0.0002	0.29
T4DFD4	X	1.0015	0.0064	8.46	1.0012	0.0062	8.08
T8DLUU		0.9953	0.0002	0.24	0.9953	0.0002	0.29
TEDYWJ		0.9948	-0.0003	-0.42	0.9949	-0.0002	-0.24
UBE6D9		0.9949	-0.0002	-0.29	0.9950	-0.0001	-0.11
UQPQYJ		0.9937	-0.0014	-1.86	0.9937	-0.0014	-1.83
UVHQDE		0.9954	0.0003	0.37	0.9952	0.0001	0.15
VJXX3A		0.9957	0.0006	0.77	0.9957	0.0006	0.81
VMF6HW		0.9951	-0.0001	-0.09	0.9951	0.0000	-0.04
W43XQ2		0.9953	0.0001	0.17	0.9952	0.0001	0.19
X2U9YC		0.9952	0.0001	0.11	0.9952	0.0001	0.15
XQQZBY		0.9953	0.0001	0.17	0.9952	0.0001	0.15
Y4DHPN		0.9954	0.0002	0.31	0.9954	0.0003	0.35
YAXLCX		0.9939	-0.0012	-1.62	0.9938	-0.0012	-1.63
YC48ZX		0.9933	-0.0018	-2.39	0.9933	-0.0018	-2.34
YGHK6Q		0.9956	0.0005	0.65	0.9956	0.0005	0.65
YMAUEP	*	0.9955	0.0003	0.44	0.9949	-0.0002	-0.24
ZBRPP6		0.9954	0.0003	0.34	0.9954	0.0003	0.38
ZFQ4AA		0.9952	0.0001	0.11	0.9951	0.0000	0.02
ZJ4NCN	X	0.9895	-0.0056	-7.41	0.9893	-0.0058	-7.60

Grand Means	Summary Statistics
0.99512 sp gr 20/20 C	0.99508 sp gr 20/20 C
Std Dev Btwn Labs	0.00076 sp gr 20/20 C
0.00076 sp gr 20/20 C	
<b>Statistics based on 84 of 93 reporting participants</b>	

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio



---

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

P8BHWN (X) - Data for both samples are high.

QRT8L7 (X) - Data for sample SA19 are low.

2VYCP3 (X) - Data for both samples are low.

GBT9HK (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.

NZ7NWZ (X) - Inconsistent in testing between samples.

ZJ4NCN (X) - Data for both samples are low.

LVNGJB (X) - Inconsistent in testing between samples.

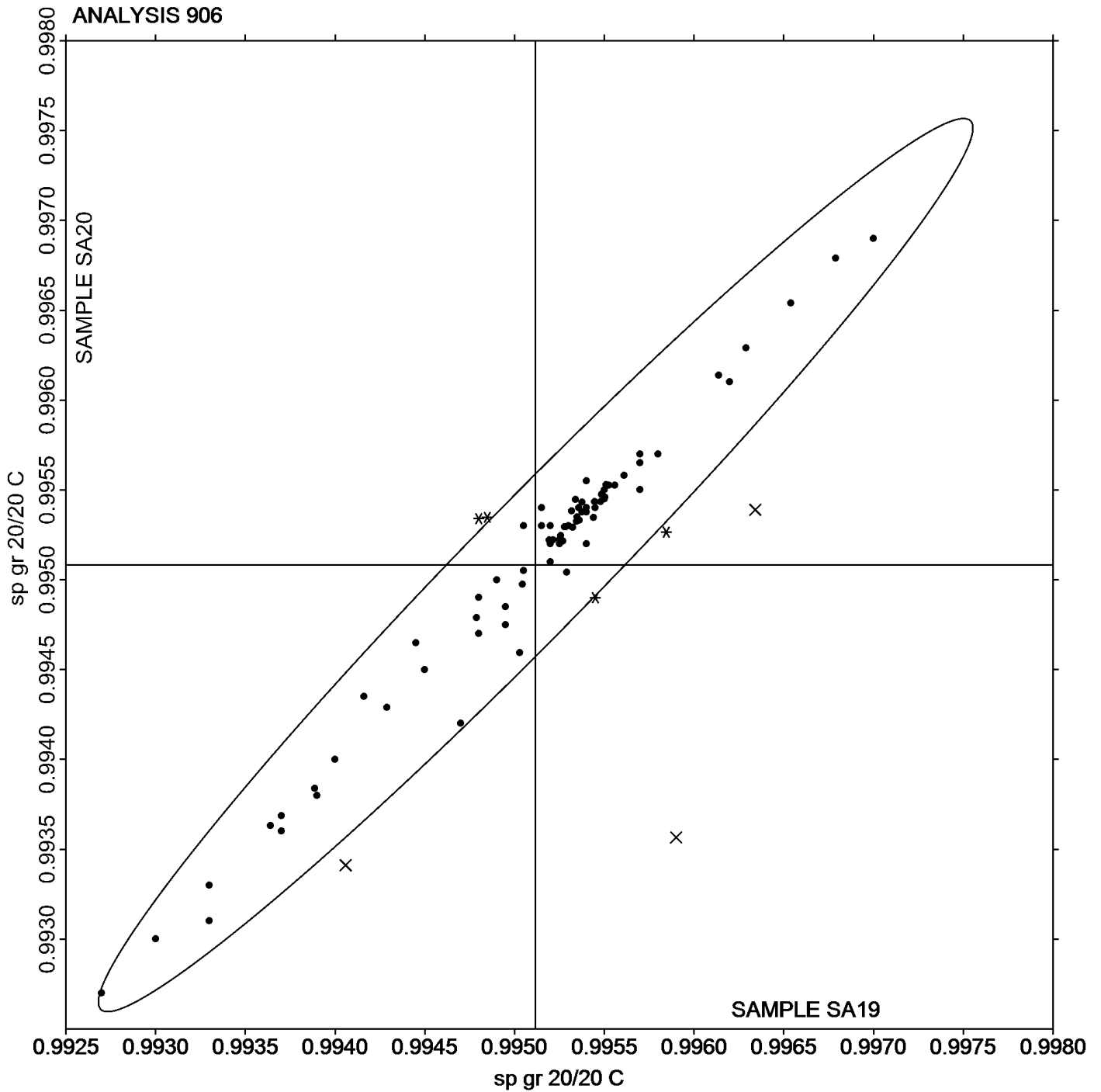
T4DFD4 (X) - Data for both samples are high.

GU623D (X) - Data for both samples are high.



Analysis 906  
Specific Gravity

Fall 2018





## pH

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29LJM4		3.270	0.031	0.92	3.280	0.042	1.29
2FK4RK		3.220	-0.019	-0.58	3.220	-0.018	-0.55
2MX63M		3.260	0.021	0.62	3.260	0.022	0.67
2VYCP3		3.255	0.016	0.47	3.275	0.037	1.13
3E3L2K		3.215	-0.024	-0.73	3.230	-0.008	-0.25
3H7DC7		3.245	0.006	0.17	3.250	0.012	0.37
3XKGZL		3.250	0.011	0.32	3.250	0.012	0.37
4GR42K		3.255	0.016	0.47	3.260	0.022	0.67
4HZH76		3.255	0.016	0.47	3.255	0.017	0.52
4MUETB		3.300	0.061	1.82	3.280	0.042	1.29
4V87KU		3.230	-0.009	-0.28	3.230	-0.008	-0.25
6G46HC		3.264	0.024	0.72	3.260	0.021	0.66
6HE2RM		3.220	-0.019	-0.58	3.220	-0.018	-0.55
6TDYD3		3.200	-0.039	-1.18	3.200	-0.038	-1.17
6VQCHY		3.260	0.021	0.62	3.260	0.022	0.67
6ZXX7V		3.280	0.041	1.22	3.285	0.047	1.44
7D3DRQ		3.220	-0.019	-0.58	3.210	-0.028	-0.86
7GJ3TF		3.255	0.016	0.47	3.250	0.012	0.37
88AVNY		3.255	0.016	0.47	3.240	0.002	0.06
8GH973		3.260	0.021	0.62	3.260	0.022	0.67
8KBEHK		3.195	-0.044	-1.33	3.210	-0.028	-0.86
8VGCAU		3.220	-0.019	-0.58	3.225	-0.013	-0.40
98K2JF		3.240	0.001	0.02	3.250	0.012	0.37
99VYWW		3.225	-0.014	-0.43	3.220	-0.018	-0.55
99ZGWG		3.240	0.001	0.02	3.240	0.002	0.06
9BPMER		3.181	-0.058	-1.75	3.181	-0.058	-1.77
9DRNFP		3.300	0.061	1.82	3.300	0.062	1.90
9KCL7X		3.260	0.021	0.62	3.255	0.017	0.52
9W4DTM		3.235	-0.004	-0.13	3.240	0.002	0.06
A37NEL		3.240	0.001	0.02	3.255	0.017	0.52
AFBZTL		3.260	0.021	0.62	3.260	0.022	0.67
AHZ7CW		3.240	0.001	0.02	3.240	0.002	0.06
AJDX4D	*	3.310	0.071	2.12	3.290	0.052	1.59
AL46MP		3.180	-0.059	-1.78	3.180	-0.058	-1.78
ARRPRQ		3.260	0.021	0.62	3.260	0.022	0.67



# ASEV-CTS Wine Industry Interlaboratory Testing Program

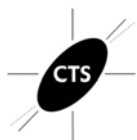
Report #060

## Analysis 907

Fall 2018

### pH

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
AV3WTV		3.224	-0.016	-0.48	3.221	-0.018	-0.54
AV8ETE		3.240	0.001	0.02	3.250	0.012	0.37
AXWLCQ		3.215	-0.024	-0.73	3.220	-0.018	-0.55
AY8ATG		3.245	0.006	0.17	3.245	0.007	0.21
B2CFP3		3.250	0.011	0.32	3.255	0.017	0.52
C49JWF		3.212	-0.028	-0.84	3.216	-0.022	-0.68
C9NWW3		3.260	0.021	0.62	3.250	0.012	0.37
D2KETB		3.255	0.016	0.47	3.250	0.012	0.37
D9NBM9		3.255	0.016	0.47	3.240	0.002	0.06
DP84AQ	X	3.260	0.021	0.62	3.290	0.052	1.59
EHQTVQ		3.245	0.006	0.17	3.250	0.012	0.37
EJXEZH		3.300	0.061	1.82	3.295	0.057	1.75
EP3A4Q		3.180	-0.059	-1.78	3.170	-0.068	-2.09
EXVJBZ		3.235	-0.004	-0.13	3.240	0.002	0.06
G9QA8R		3.270	0.031	0.92	3.270	0.032	0.98
GBT9HK		3.240	0.001	0.02	3.230	-0.008	-0.25
GQ9HZF		3.260	0.021	0.62	3.260	0.022	0.67
GU623D	X	3.175	-0.064	-1.93	3.230	-0.008	-0.25
H3H9NA		3.245	0.006	0.17	3.250	0.012	0.37
HP9TH4	X	3.280	0.041	1.22	3.240	0.002	0.06
HZFB DG	*	3.270	0.031	0.92	3.240	0.002	0.06
J3CDFM	X	3.260	0.021	0.62	3.080	-0.158	-4.85
JH8V87		3.220	-0.019	-0.58	3.220	-0.018	-0.55
JHQNZ4	*	3.245	0.006	0.17	3.215	-0.023	-0.71
JWMV3C		3.220	-0.019	-0.58	3.220	-0.018	-0.55
JX23NT		3.225	-0.014	-0.43	3.225	-0.013	-0.40
K9HAZM		3.295	0.056	1.67	3.295	0.057	1.75
KJHZJA		3.205	-0.034	-1.03	3.200	-0.038	-1.17
KMZ3NU		3.270	0.031	0.92	3.280	0.042	1.29
KZ3NT6	*	3.150	-0.089	-2.68	3.170	-0.068	-2.09
LV9B78		3.240	0.001	0.02	3.240	0.002	0.06
LVATK6		3.270	0.031	0.92	3.250	0.012	0.37
LVNGJB		3.240	0.001	0.02	3.250	0.012	0.37
MCUWNC		3.225	-0.014	-0.43	3.220	-0.018	-0.55
MGZPGM	*	3.330	0.091	2.72	3.330	0.092	2.82



# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #060

## Analysis 907

Fall 2018

### pH

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MPFBPQ	X	3.190	-0.049	-1.48	3.260	0.022	0.67
MTXTKG		3.250	0.011	0.32	3.230	-0.008	-0.25
MY6YKT		3.229	-0.011	-0.33	3.225	-0.014	-0.42
N3H4Q2		3.230	-0.009	-0.28	3.250	0.012	0.37
NPQPA6		3.185	-0.054	-1.63	3.180	-0.058	-1.78
NYENYP		3.215	-0.024	-0.73	3.220	-0.018	-0.55
NZ7NWZ		3.245	0.006	0.17	3.240	0.002	0.06
P8BHWN		3.215	-0.024	-0.73	3.230	-0.008	-0.25
QGVCLP	*	3.170	-0.069	-2.08	3.158	-0.080	-2.46
QRB7VW		3.225	-0.014	-0.43	3.205	-0.033	-1.01
QRT8L7		3.255	0.016	0.47	3.250	0.012	0.37
R36YP7		3.250	0.011	0.32	3.230	-0.008	-0.25
REHWUA		3.245	0.006	0.17	3.240	0.002	0.06
RTHX7B		3.267	0.028	0.83	3.270	0.032	0.98
T4DFD4	X	3.120	-0.119	-3.58	3.070	-0.168	-5.16
T8DLUU		3.205	-0.034	-1.03	3.205	-0.033	-1.01
TEDYWJ		3.220	-0.019	-0.58	3.210	-0.028	-0.86
UBE6D9		3.255	0.016	0.47	3.265	0.027	0.83
UGY7V7		3.255	0.016	0.47	3.250	0.012	0.37
UQPQYJ	X	3.175	-0.064	-1.93	3.220	-0.018	-0.55
UVHQDE	*	3.150	-0.089	-2.68	3.150	-0.088	-2.70
UZR9AL		3.284	0.044	1.32	3.272	0.034	1.04
VDUYRK		3.235	-0.004	-0.13	3.220	-0.018	-0.55
VJXX3A		3.185	-0.054	-1.63	3.180	-0.058	-1.78
VMF6HW		3.280	0.041	1.22	3.290	0.052	1.59
W43XQ2		3.255	0.016	0.47	3.260	0.022	0.67
X2U9YC		3.225	-0.014	-0.43	3.225	-0.013	-0.40
XQQZBY		3.235	-0.004	-0.13	3.240	0.002	0.06
Y4DHPN		3.290	0.051	1.52	3.270	0.032	0.98
YAXLCX		3.190	-0.049	-1.48	3.190	-0.048	-1.47
YC48ZX		3.230	-0.009	-0.28	3.225	-0.013	-0.40
YGHK6Q		3.240	0.001	0.02	3.230	-0.008	-0.25
YMAUEP	X	3.080	-0.159	-4.79	3.085	-0.153	-4.70
YMRTFT	X	3.300	0.061	1.82	3.350	0.112	3.43
ZBRPP6		3.260	0.021	0.62	3.265	0.027	0.83



WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ZFQ4AA		3.240	0.001	0.02	3.240	0.002	0.06
ZJ4NCN		3.160	-0.079	-2.38	3.170	-0.068	-2.09

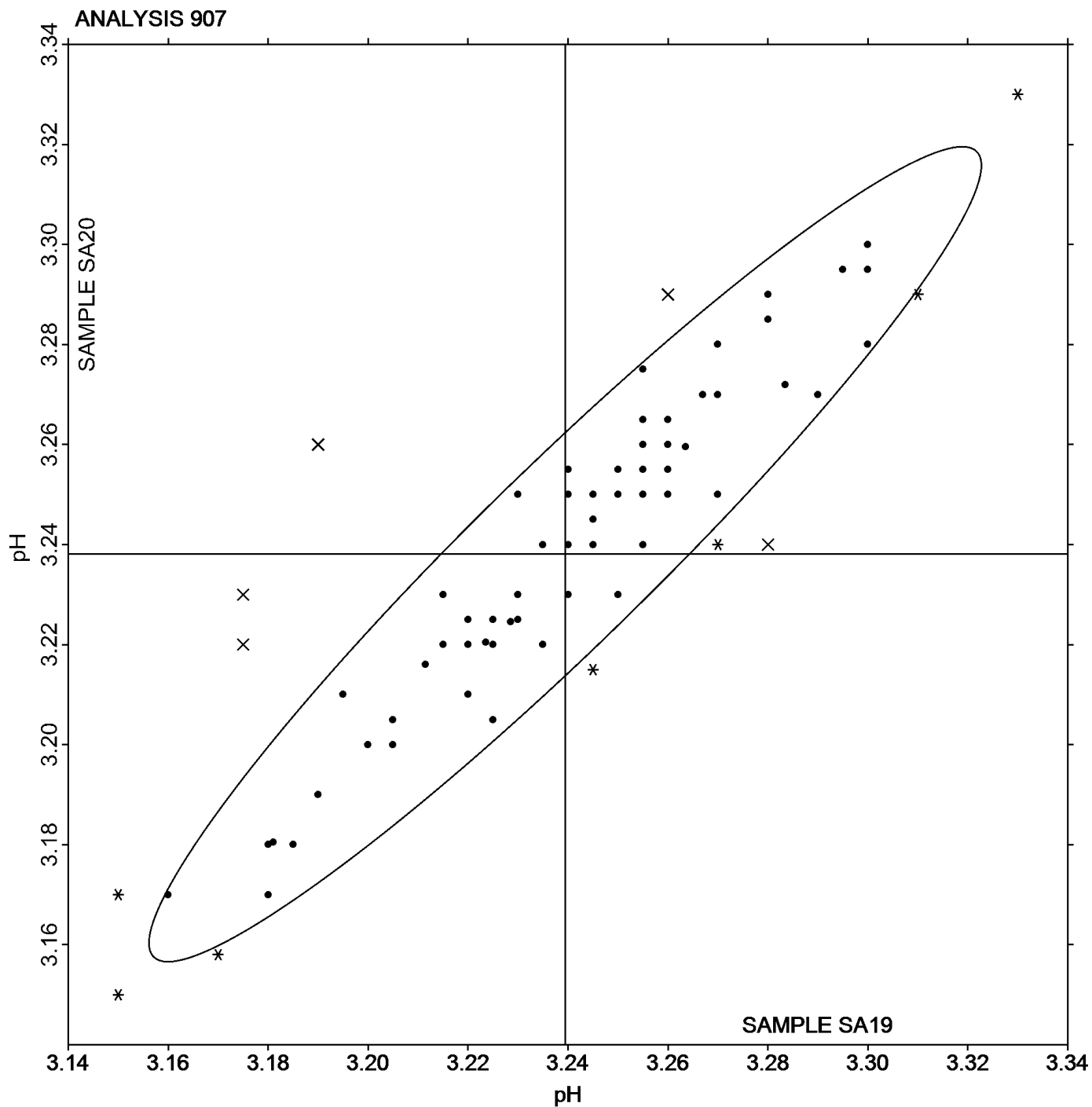
Grand Means	Summary Statistics
3.2394 pH	3.2381 pH
Std Dev Btwn Labs	
0.0333 pH	0.0326 pH
<b>Statistics based on 98 of 107 reporting participants</b>	

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

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

- J3CDFM (X) - Inconsistent in testing, data for sample SA20 are low.
- UQPQYJ (X) - Inconsistent in testing between samples.
- MPFBPQ (X) - Inconsistent in testing between samples.
- DP84AQ (X) - Inconsistent in testing between samples.
- HP9TH4 (X) - Inconsistent in testing between samples.
- YMRTFT (X) - Inconsistent in testing, data for sample SA20 are high.
- YMAUEP (X) - Data for both samples are low. Possible Systematic Error.
- T4DFD4 (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- GU623D (X) - Inconsistent in testing between samples.







Analysis 908  
Residual Sugar

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3E3L2K		12.60	1.24	1.62	12.70	1.33	1.69
6ZXX7V		10.14	-1.22	-1.59	10.27	-1.10	-1.39
7D3DRQ		10.73	-0.63	-0.83	10.89	-0.48	-0.60
99VYWW		11.09	-0.27	-0.35	11.42	0.05	0.07
9W4DTM	*	10.00	-1.36	-1.77	9.50	-1.87	-2.37
AHZ7CW		12.30	0.94	1.23	12.20	0.83	1.06
AJDX4D		11.50	0.14	0.19	11.20	-0.17	-0.21
AL46MP		11.25	-0.11	-0.14	11.40	0.03	0.04
C9NWW3		11.34	-0.02	-0.02	11.46	0.09	0.11
D2KETB		13.15	1.79	2.34	13.05	1.68	2.14
HZFB DG		11.60	0.24	0.32	11.50	0.13	0.17
JHQNZ4		11.80	0.44	0.58	12.05	0.68	0.87
JWMV3C		11.40	0.04	0.05	11.30	-0.07	-0.08
JX23NT		11.40	0.04	0.05	11.50	0.13	0.17
K92DA9	X	11.25	-0.11	-0.14	12.45	1.08	1.38
MCUWNC		11.53	0.17	0.22	11.57	0.20	0.26
N3H4Q2		10.60	-0.76	-0.99	10.70	-0.67	-0.84
R36YP7		11.80	0.44	0.58	11.70	0.33	0.42
T8DLUU		11.00	-0.36	-0.47	11.00	-0.37	-0.46
TEDYWJ		11.41	0.05	0.07	11.34	-0.03	-0.03
Y4DHPN		10.81	-0.55	-0.72	10.71	-0.66	-0.83
YMRTFT		10.41	-0.95	-1.24	10.55	-0.82	-1.03
ZBRPP6		12.03	0.67	0.88	12.04	0.67	0.86
ZJ4NCN	X	0.95	-10.41	-13.58	0.97	-10.40	-13.19

Grand Means	Summary Statistics
11.358 g/L	11.366 g/L
Stnd Dev Btwn Labs	
0.766 g/L	0.788 g/L
<b>Statistics based on 22 of 24 reporting participants</b>	

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

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

K92DA9 (X) - Inconsistent in testing between samples.

ZJ4NCN (X) - Data for both samples are low.



**Analysis 908  
Residual Sugar**

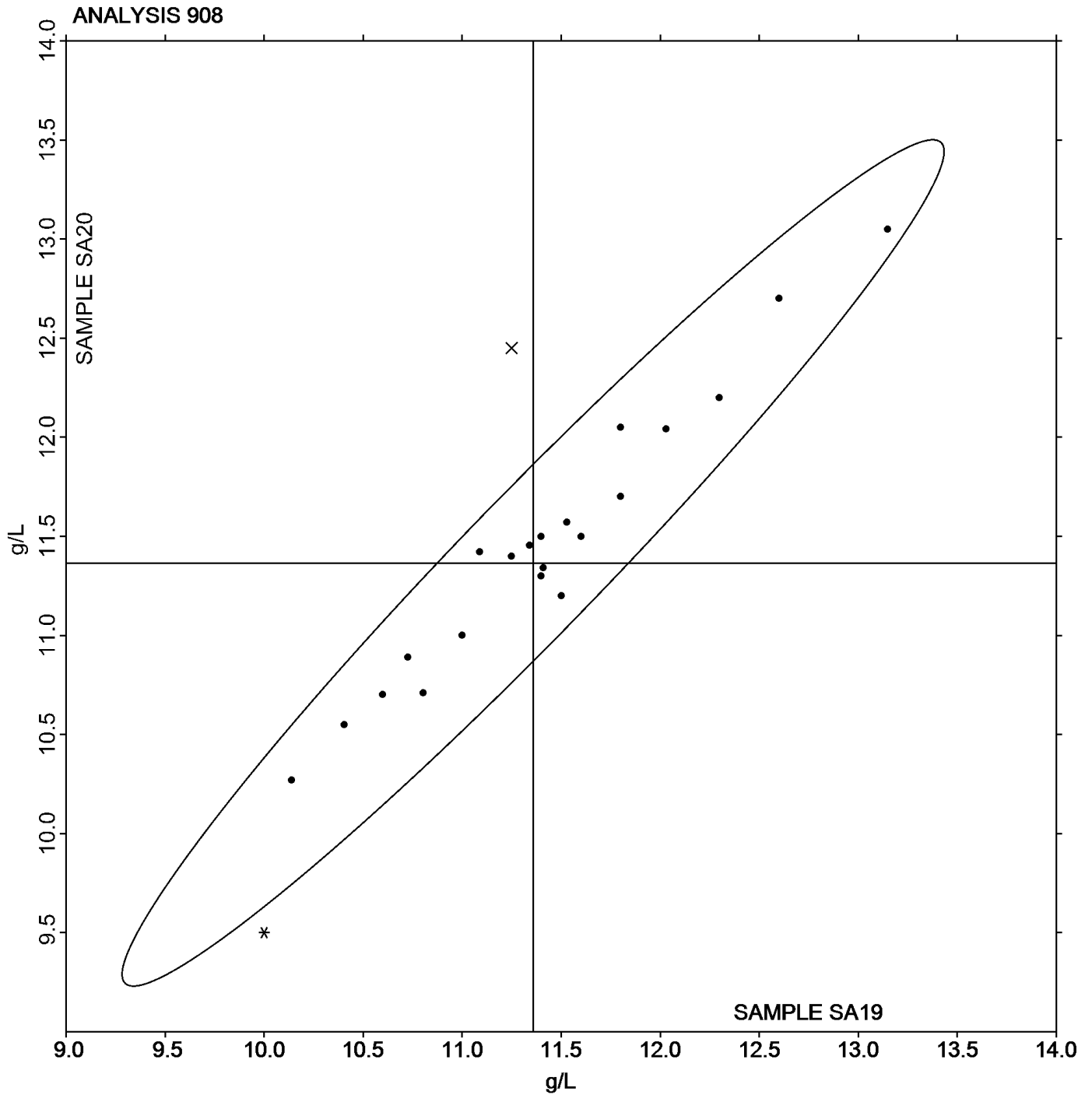
**Results by Methodology (as reported by laboratory)**

Test Methodology	Sample SA19 <i>Pinot Grigio</i>			Sample SA20 <i>Pinot Grigio</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	10.405	0.000	-0.95	10.550	0.000	-0.82	1/2
Cu Reduction Method	11.381	0.410	0.02	11.463	0.398	0.10	9/9
Segmented Flow	11.340	0.000	-0.02	11.455	0.000	0.09	1/1
FTIR	11.620	1.016	0.26	11.520	1.221	0.15	5/5
Other _____	11.268	1.053	-0.09	11.212	0.979	-0.15	6/7



Analysis 908  
Residual Sugar

Fall 2018





WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2FK4RK		1.915	-0.059	-0.38	1.925	-0.048	-0.32
2MX63M		2.075	0.101	0.65	2.095	0.122	0.82
2VYCP3		1.910	-0.064	-0.41	1.920	-0.053	-0.36
3H7DC7		1.843	-0.132	-0.85	1.845	-0.128	-0.86
3XKGZL		1.830	-0.144	-0.93	1.830	-0.143	-0.96
4GR42K		1.975	0.001	0.01	2.000	0.027	0.18
4HZH76		2.045	0.071	0.46	2.010	0.037	0.25
4MUETB		2.005	0.031	0.20	1.985	0.012	0.08
4V87KU		2.005	0.031	0.20	2.000	0.027	0.18
6G46HC		2.121	0.147	0.95	2.080	0.106	0.71
6HE2RM	X	2.044	0.069	0.45	2.304	0.330	2.21
6TDYD3	*	1.500	-0.474	-3.06	1.540	-0.433	-2.91
6VQCHY		2.156	0.182	1.17	2.163	0.190	1.27
6ZXX7V		1.869	-0.106	-0.68	1.807	-0.167	-1.12
7GJ3TF		2.055	0.081	0.52	2.085	0.112	0.75
88AVNY	*	2.049	0.075	0.48	2.149	0.175	1.17
8GH973		2.100	0.126	0.81	2.121	0.147	0.99
8VGCAU		2.160	0.186	1.20	2.100	0.127	0.85
98K2JF		2.000	0.026	0.17	2.000	0.027	0.18
99ZGWW		2.100	0.126	0.81	2.115	0.142	0.95
9DRNFP		1.885	-0.089	-0.57	1.890	-0.083	-0.56
9KCL7X		2.125	0.151	0.97	2.085	0.112	0.75
9W4DTM		2.185	0.211	1.36	2.165	0.192	1.29
A37NEL		2.020	0.046	0.30	1.970	-0.003	-0.02
AFBZTL		2.010	0.036	0.23	1.995	0.022	0.15
AHZ7CW		1.820	-0.154	-0.99	1.830	-0.143	-0.96
AJDX4D		1.920	-0.054	-0.35	1.900	-0.073	-0.49
AL46MP		1.942	-0.032	-0.21	2.030	0.056	0.38
ARRPRQ		1.835	-0.139	-0.90	1.840	-0.133	-0.89
AV3WTV		2.203	0.229	1.47	2.164	0.190	1.28
AV8ETE		2.105	0.131	0.84	2.130	0.157	1.05
AXWLCQ		2.045	0.071	0.46	1.995	0.022	0.15
AY8ATG		2.130	0.156	1.00	2.100	0.127	0.85
B2CFP3		2.104	0.129	0.83	2.119	0.145	0.97
C49JWF	*	1.580	-0.394	-2.54	1.615	-0.358	-2.40



# ASEV-CTS Wine Industry Interlaboratory Testing Program

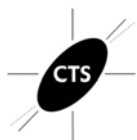
Report #060

Fall 2018

## Analysis 909

### L-Malic Acid

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
D9NBM9		1.860	-0.114	-0.74	1.860	-0.113	-0.76
DP84AQ		2.131	0.157	1.01	2.088	0.115	0.77
EJXEZH		1.805	-0.169	-1.09	1.835	-0.138	-0.93
EP3A4Q		2.061	0.087	0.56	2.053	0.080	0.53
EXVJBZ		2.099	0.124	0.80	2.098	0.125	0.84
G9QA8R		2.129	0.155	1.00	2.120	0.146	0.98
GBT9HK		2.065	0.091	0.59	2.070	0.097	0.65
GQ9HZF	*	1.740	-0.234	-1.51	1.670	-0.303	-2.03
H3H9NA	X	1.435	-0.539	-3.47	1.460	-0.513	-3.44
HZFB DG		1.820	-0.154	-0.99	1.870	-0.103	-0.69
J3CDFM		2.126	0.152	0.98	2.093	0.120	0.80
JH8V87		1.880	-0.094	-0.61	1.890	-0.083	-0.56
JHQNZ4		1.815	-0.159	-1.03	1.830	-0.143	-0.96
JWMV3C		2.090	0.115	0.74	2.087	0.114	0.76
JX23NT		1.965	-0.009	-0.06	2.015	0.042	0.28
K92DA9	X	1.973	-0.002	-0.01	1.800	-0.173	-1.16
K9HAZM		2.100	0.126	0.81	2.040	0.067	0.45
KJHZJA		1.809	-0.165	-1.06	1.844	-0.129	-0.87
KMZ3NU		2.000	0.026	0.17	1.990	0.017	0.11
KZ3NT6		2.130	0.156	1.00	2.110	0.137	0.92
MCUWNC	*	1.550	-0.424	-2.73	1.540	-0.433	-2.91
MGZPGM		1.978	0.003	0.02	2.035	0.061	0.41
MPFBPQ		1.950	-0.024	-0.16	1.920	-0.053	-0.36
MTXTKG	X	1.985	0.011	0.07	3.700	1.727	11.58
NPQA6		2.025	0.051	0.33	2.045	0.072	0.48
NYENYP		2.197	0.223	1.44	2.152	0.179	1.20
NZ7NWZ	X	2.050	0.076	0.49	1.900	-0.073	-0.49
P8BHWN		1.809	-0.166	-1.07	1.830	-0.144	-0.96
QRB7VW	X	1.202	-0.773	-4.98	1.290	-0.684	-4.59
QRT8L7		1.830	-0.144	-0.93	1.830	-0.143	-0.96
R36YP7		1.900	-0.074	-0.48	1.900	-0.073	-0.49
REHWUA		1.995	0.021	0.13	2.039	0.065	0.44
RTHX7B		1.881	-0.093	-0.60	1.893	-0.080	-0.54
T8DLUU		1.910	-0.064	-0.41	1.920	-0.053	-0.36
UBE6D9		2.015	0.041	0.26	2.020	0.047	0.31



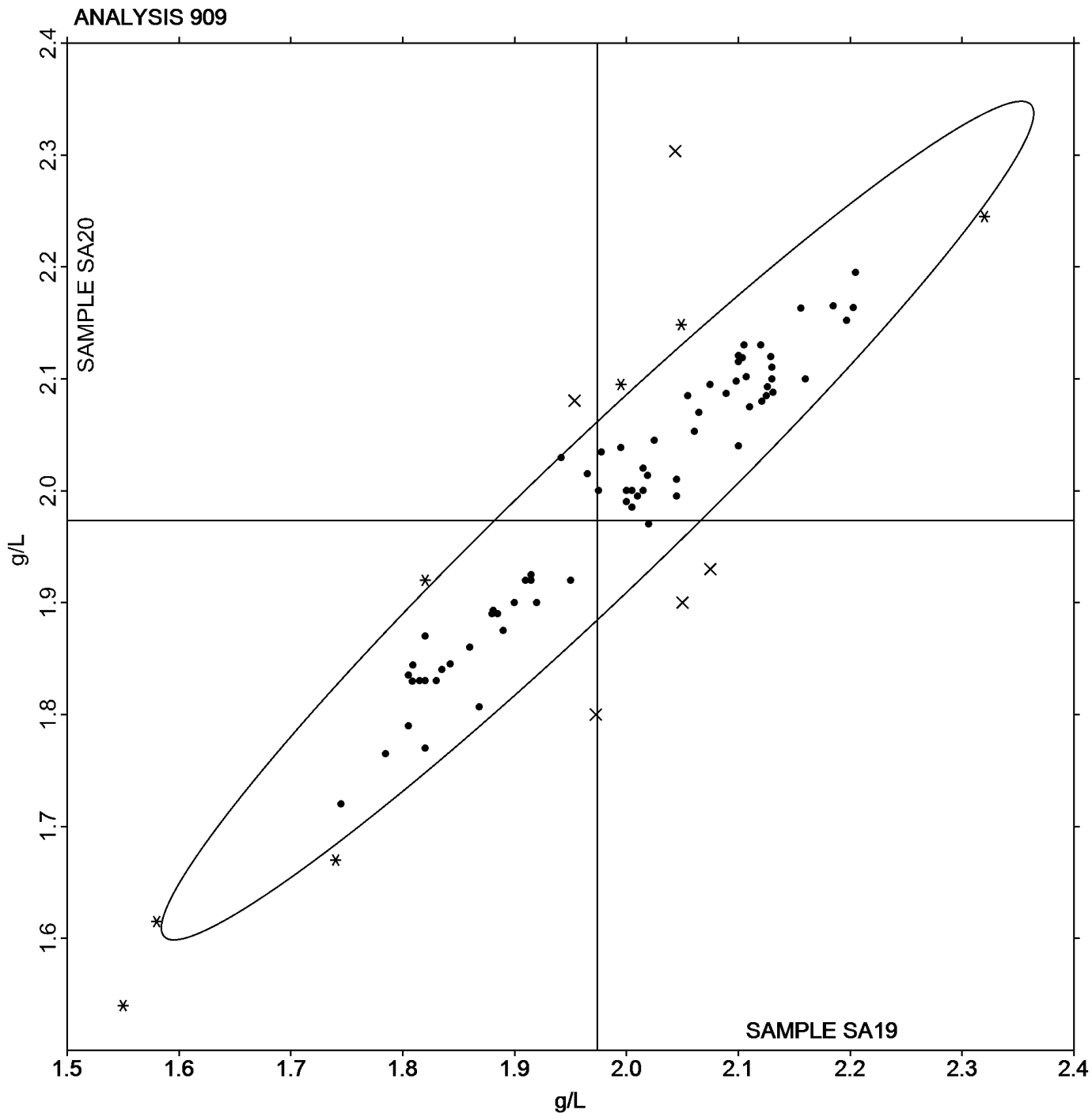
WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UGY7V7		2.107	0.133	0.86	2.102	0.128	0.86
UQPQYJ		2.120	0.146	0.94	2.130	0.157	1.05
UVHQDE		1.785	-0.189	-1.22	1.765	-0.208	-1.40
VJXX3A	X	1.954	-0.021	-0.13	2.081	0.107	0.72
VMF6HW	X	2.075	0.101	0.65	1.930	-0.043	-0.29
W43XQ2		2.019	0.045	0.29	2.014	0.040	0.27
X2U9YC		1.890	-0.084	-0.54	1.875	-0.098	-0.66
XQQZBY		1.915	-0.059	-0.38	1.920	-0.053	-0.36
Y4DHPN	*	1.995	0.021	0.13	2.095	0.122	0.82
YAXLCX		2.110	0.136	0.88	2.075	0.102	0.68
YC48ZX		2.205	0.231	1.49	2.195	0.222	1.49
YGHK6Q		1.745	-0.229	-1.48	1.720	-0.253	-1.70
YMAUEP		1.805	-0.169	-1.09	1.790	-0.183	-1.23
YMRTFT		1.820	-0.154	-0.99	1.770	-0.203	-1.36
ZBRPP6	*	2.320	0.346	2.23	2.245	0.272	1.82
ZFQ4AA		2.015	0.041	0.26	2.000	0.027	0.18
ZJ4NCN	*	1.820	-0.154	-0.99	1.920	-0.053	-0.36

Grand Means		Summary Statistics	
	1.9741 g/L		1.9734 g/L
Std Dev Btwn Labs			0.1491 g/L
	0.1552 g/L		
<b>Statistics based on 79 of 87 reporting participants</b>			

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

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

- VJXX3A (X) - Inconsistent in testing between samples.
- MTXTKG (X) - Inconsistent in testing, data for sample SA20 are high.
- K92DA9 (X) - Inconsistent in testing between samples.
- 6HE2RM (X) - Inconsistent in testing between samples.
- H3H9NA (X) - Data for both samples are low. Possible Systematic Error.
- VMF6HW (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- NZ7NWZ (X) - Inconsistent in testing between samples.
- QRB7VW (X) - Data for both samples are low. Possible Systematic Error.







# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #060

Fall 2018

## Analysis 910

### Glucose + Fructose

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
29LJM4	X	11.24	0.79	1.32	9.93	-0.50	-0.88
2FK4RK		10.70	0.25	0.42	10.90	0.48	0.85
2MX63M		10.65	0.20	0.34	10.60	0.18	0.32
2VYCP3		9.60	-0.85	-1.42	9.50	-0.92	-1.63
3E3L2K		11.10	0.65	1.09	11.25	0.83	1.47
3H7DC7		10.15	-0.30	-0.50	10.30	-0.12	-0.22
3XKGZL		10.70	0.25	0.42	10.60	0.18	0.32
4GR42K		10.73	0.28	0.46	10.75	0.32	0.57
4HZH76		9.90	-0.55	-0.92	9.70	-0.72	-1.28
4MUETB		10.74	0.29	0.48	10.71	0.29	0.51
4V87KU		10.33	-0.12	-0.20	10.42	-0.01	-0.01
6G46HC		11.40	0.95	1.59	11.45	1.03	1.82
6HE2RM		10.53	0.08	0.13	10.48	0.05	0.10
6TDYD3		11.65	1.20	2.01	11.70	1.28	2.27
6VQCHY		11.25	0.80	1.34	11.20	0.78	1.38
6ZXX7V		10.14	-0.31	-0.51	10.27	-0.15	-0.27
7D3DRQ		10.50	0.05	0.08	10.30	-0.12	-0.22
7GJ3TF		10.39	-0.06	-0.10	10.29	-0.14	-0.24
88AVNY		10.27	-0.18	-0.30	10.21	-0.22	-0.38
8GH973		11.35	0.90	1.51	11.35	0.93	1.65
8KBEHK		11.46	1.01	1.69	11.57	1.14	2.03
8VGCAU		9.90	-0.55	-0.92	9.65	-0.77	-1.37
98K2JF		10.05	-0.40	-0.66	10.30	-0.12	-0.22
99ZGWG		10.50	0.05	0.08	10.36	-0.06	-0.11
9BPMER		11.45	1.00	1.68	11.30	0.88	1.56
9DRNFP		10.30	-0.15	-0.25	10.35	-0.07	-0.13
9KCL7X		10.30	-0.15	-0.25	10.40	-0.02	-0.04
9W4DTM	*	10.00	-0.45	-0.75	9.50	-0.92	-1.63
A37NEL		10.62	0.17	0.29	10.35	-0.07	-0.13
AFBZTL		9.62	-0.83	-1.39	9.65	-0.78	-1.38
AHZ7CW		10.00	-0.45	-0.75	10.10	-0.32	-0.57
AJDX4D		11.50	1.05	1.76	11.20	0.78	1.38
AL46MP		10.64	0.19	0.32	10.59	0.17	0.29
ARRPRQ		10.35	-0.10	-0.16	10.35	-0.07	-0.13
AV3WTV		10.89	0.44	0.73	10.63	0.20	0.36



Glucose + Fructose

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
AV8ETE	X	2.22	-8.23	-13.77	2.20	-8.23	-14.59
AXWLCQ		10.22	-0.23	-0.38	9.92	-0.50	-0.89
AY8ATG		10.11	-0.34	-0.57	10.18	-0.24	-0.43
B2CFP3		11.10	0.65	1.09	11.15	0.73	1.29
C49JWF		9.45	-1.00	-1.67	9.65	-0.77	-1.37
C9NWW3		10.03	-0.42	-0.71	10.32	-0.10	-0.18
D9NBM9		10.27	-0.18	-0.30	10.23	-0.19	-0.34
DP84AQ		11.30	0.85	1.43	11.00	0.58	1.03
EHQTVQ		11.33	0.88	1.48	11.22	0.80	1.42
EJXEZH		10.45	0.00	0.00	10.56	0.13	0.24
EP3A4Q		10.44	-0.01	-0.01	10.46	0.04	0.07
EXVJBZ		11.20	0.75	1.26	11.20	0.78	1.38
FXB4VX	X	2.33	-8.12	-13.59	2.35	-8.07	-14.31
G9QA8R		11.49	1.04	1.74	11.17	0.75	1.33
GBT9HK		10.32	-0.13	-0.21	10.11	-0.32	-0.56
GQ9HZF	*	10.65	0.20	0.34	10.08	-0.34	-0.61
GU623D		10.18	-0.27	-0.45	10.35	-0.07	-0.13
H3H9NA		10.00	-0.45	-0.75	10.15	-0.27	-0.48
HP9TH4		10.23	-0.22	-0.36	10.24	-0.18	-0.32
J3CDFM		10.45	0.00	0.00	10.57	0.14	0.25
JH8V87		10.70	0.25	0.42	10.40	-0.02	-0.04
JHQNZ4		9.95	-0.50	-0.83	10.24	-0.18	-0.32
JWMV3C		11.45	1.00	1.68	11.30	0.88	1.56
JX23NT	*	10.74	0.29	0.48	10.18	-0.24	-0.43
K92DA9	X	11.25	0.80	1.34	12.45	2.03	3.60
K9HAZM	X	7.58	-2.87	-4.81	7.67	-2.76	-4.89
KJHZJA		10.33	-0.12	-0.20	10.43	0.01	0.01
KMZ3NU		9.59	-0.86	-1.44	9.70	-0.73	-1.29
KZ3NT6		10.05	-0.40	-0.67	10.16	-0.27	-0.47
MCUWNC		9.87	-0.58	-0.97	10.03	-0.39	-0.69
MGZPGM		10.25	-0.20	-0.33	10.15	-0.27	-0.48
MPFBPQ		10.76	0.31	0.52	10.55	0.12	0.22
MTXTKG	X	9.86	-0.59	-0.99	0.04	-10.38	-18.41
NPQPA6		11.19	0.74	1.23	11.22	0.80	1.42
NYENYP		10.03	-0.42	-0.70	9.85	-0.58	-1.02



Analysis 910

Glucose + Fructose

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NZ7NWZ		10.93	0.48	0.80	11.02	0.59	1.05
P8BHWN		9.55	-0.90	-1.50	9.55	-0.87	-1.55
QRB7VW		9.40	-1.05	-1.75	9.60	-0.82	-1.46
QRT8L7	X	9.04	-1.41	-2.36	8.45	-1.97	-3.50
R36YP7		10.00	-0.45	-0.75	10.15	-0.27	-0.48
REHWUA		10.30	-0.15	-0.25	10.35	-0.07	-0.13
RTHX7B		9.82	-0.63	-1.05	9.80	-0.62	-1.10
T8DLUU		10.40	-0.05	-0.08	10.40	-0.02	-0.04
TEDYWJ	X	4.69	-5.76	-9.63	4.00	-6.42	-11.39
UBE6D9		9.96	-0.49	-0.82	9.98	-0.44	-0.78
UGY7V7		11.40	0.95	1.59	11.30	0.88	1.56
UQPQYJ		10.76	0.31	0.52	10.87	0.45	0.79
UVHQDE		9.54	-0.91	-1.52	9.55	-0.87	-1.55
UZR9AL		11.55	1.10	1.85	11.50	1.08	1.91
VJXX3A		9.10	-1.35	-2.25	9.35	-1.07	-1.90
W43XQ2		10.61	0.16	0.27	10.40	-0.03	-0.05
X2U9YC		10.19	-0.26	-0.44	10.20	-0.22	-0.39
XQQZBY		9.35	-1.10	-1.84	9.40	-1.02	-1.81
Y4DHPN		10.51	0.06	0.10	10.80	0.38	0.67
YAXLCX	X	12.47	2.02	3.38	11.63	1.21	2.14
YC48ZX		10.58	0.13	0.21	10.51	0.08	0.15
YGHK6Q		9.60	-0.85	-1.42	9.65	-0.77	-1.37
YMAUEP		10.60	0.15	0.26	10.55	0.13	0.23
YMRTFT	X	13.81	3.36	5.63	13.48	3.06	5.42
ZBRPP6		10.87	0.42	0.70	10.66	0.23	0.41
ZFQ4AA		10.70	0.25	0.42	10.45	0.03	0.05
ZJ4NCN		9.50	-0.95	-1.58	9.70	-0.72	-1.28

Grand Means	Summary Statistics
10.447 g/L	10.422 g/L
Std Dev Btwn Labs	
0.598 g/L	0.564 g/L
<b>Statistics based on 87 of 97 reporting participants</b>	

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

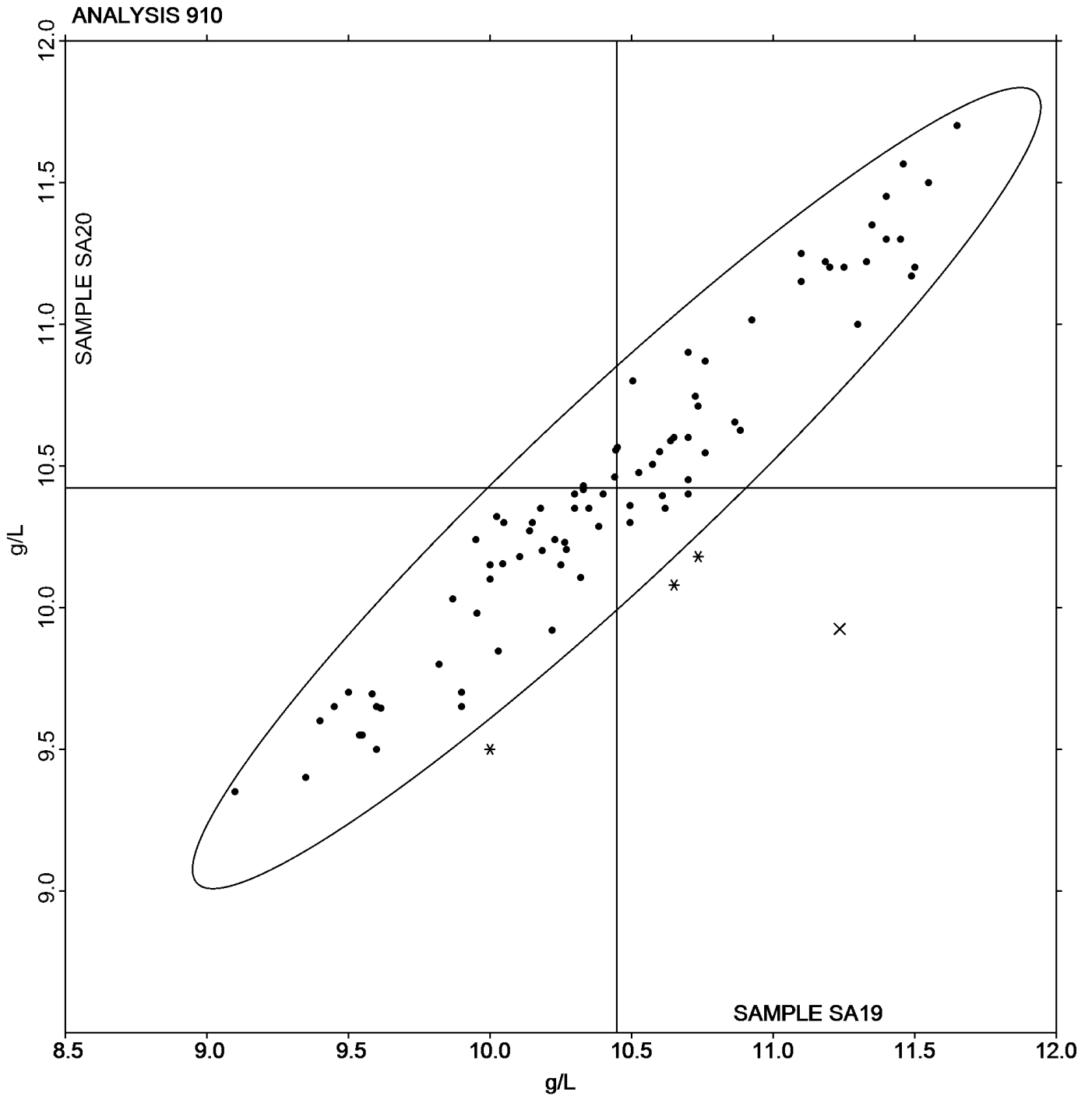


**Comments on Assigned Data Flags for Test #910**

- K9HAZM (X) - Data for both samples are low. Possible Systematic Error.
- FXB4VX (X) - Data for both samples are low.
- TEDYWJ (X) - Data for both samples are low.
- QRT8L7 (X) - Data for sample SA20 are low.
- 29LJM4 (X) - Inconsistent in testing between samples.
- MTXTKG (X) - Inconsistent in testing, data for sample SA20 are low.
- AV8ETE (X) - Data for both samples are low.
- K92DA9 (X) - Inconsistent in testing, data for sample SA20 are high.
- YMRTFT (X) - Data for both samples are high. Possible Systematic Error.
- YAXLCX (X) - Inconsistent in testing, data for sample SA19 are high. Inconsistent within the determinations of sample SA19.

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

Test Methodology	Sample SA19 <i>Pinot Grigio</i>			Sample SA20 <i>Pinot Grigio</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	11.100	0.000	0.65	11.250	0.000	0.83	1/1
HPLC	10.445	0.594	0.00	10.488	0.237	0.07	2/2
Enzymatic/Spectrophotometric	10.451	0.591	0.00	10.422	0.545	0.00	77/84
FTIR	10.344	0.750	-0.10	10.256	0.870	-0.17	5/7
Other _____	10.213	1.008	-0.23	10.358	0.930	-0.06	2/3





Analysis 911  
Copper Content

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3E3L2K		0.1621	-0.0026	-0.08	0.1623	0.0052	0.16
4HZH76		0.1350	-0.0296	-0.89	0.1150	-0.0421	-1.28
6G46HC		0.1750	0.0104	0.31	0.1700	0.0129	0.39
88AVNY		0.1650	0.0004	0.01	0.1350	-0.0221	-0.67
8GH973		0.1500	-0.0146	-0.44	0.1500	-0.0071	-0.21
9DRNFP		0.2400	0.0754	2.26	0.2400	0.0829	2.52
9KCL7X		0.1445	-0.0201	-0.61	0.1355	-0.0216	-0.65
AHZ7CW		0.1500	-0.0146	-0.44	0.1200	-0.0371	-1.13
B2CFP3		0.2250	0.0604	1.81	0.2145	0.0574	1.74
C9NWW3		0.1500	-0.0146	-0.44	0.1550	-0.0021	-0.06
G9QA8R		0.1500	-0.0146	-0.44	0.1500	-0.0071	-0.21
JHQNZ4		0.2400	0.0754	2.26	0.2150	0.0579	1.76
KMZ3NU		0.1600	-0.0046	-0.14	0.1700	0.0129	0.39
MCUWNC		0.1195	-0.0451	-1.36	0.1175	-0.0396	-1.20
R36YP7		0.1500	-0.0146	-0.44	0.1400	-0.0171	-0.52
R6D9EH		0.1375	-0.0271	-0.82	0.1395	-0.0176	-0.53
T8DLUU		0.1400	-0.0246	-0.74	0.1500	-0.0071	-0.21
UVHQDE		0.1660	0.0014	0.04	0.1700	0.0129	0.39
UZR9AL		0.1950	0.0304	0.91	0.1700	0.0129	0.39
X2U9YC	X	0.1850	0.0204	0.61	0.0800	-0.0771	-2.34
Y4DHPN		0.1500	-0.0146	-0.44	0.1250	-0.0321	-0.97
ZBRPP6		0.1530	-0.0116	-0.35	0.1540	-0.0031	-0.09

Grand Means	Summary Statistics
0.16465 mg/L	0.15706 mg/L
Stnd Dev Btwn Labs	
0.03328 mg/L	0.03293 mg/L
<b>Statistics based on 21 of 22 reporting participants</b>	

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

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

X2U9YC (X) - Inconsistent in testing between samples.



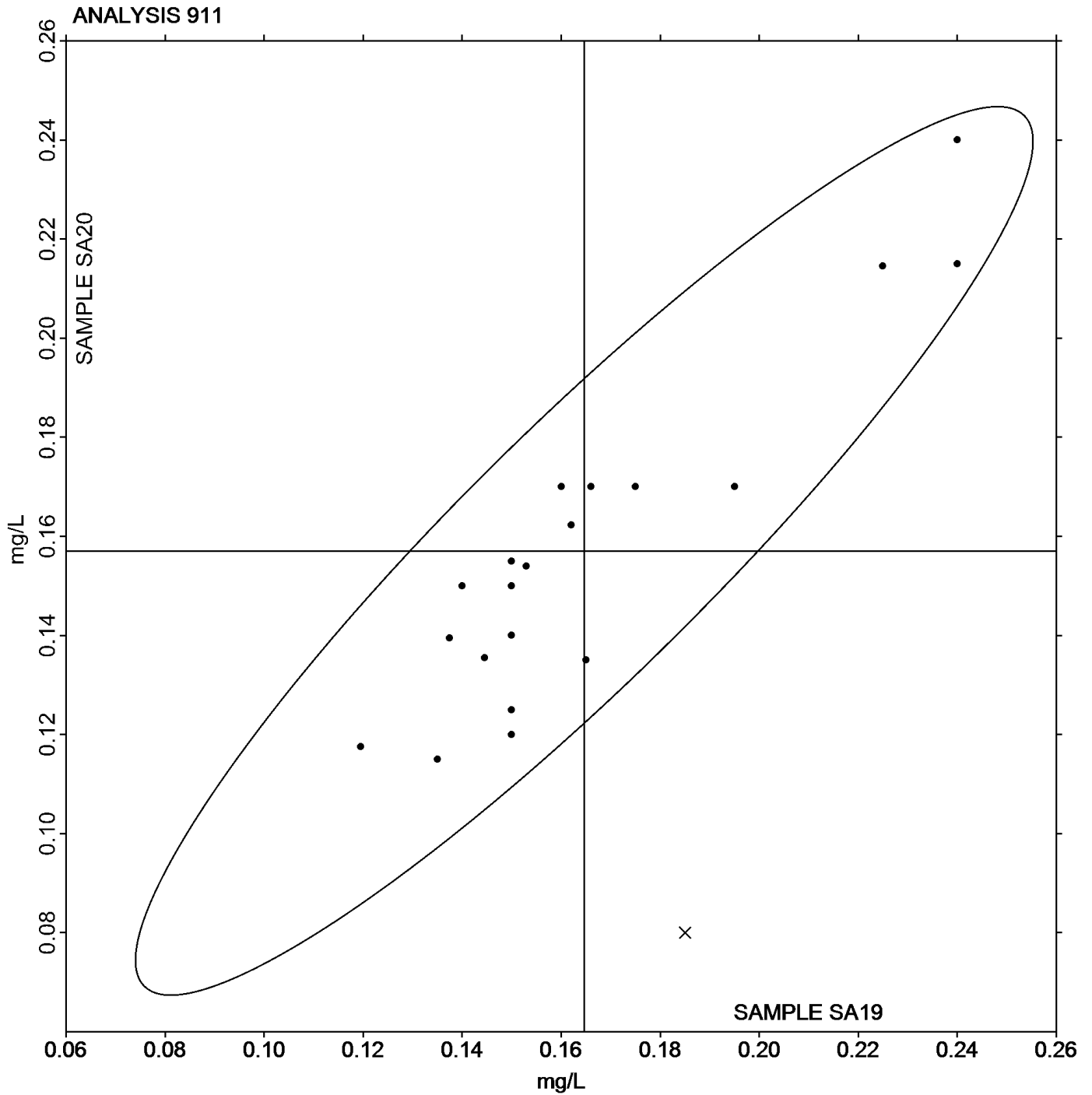
**Analysis 911  
Copper Content**

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

Test Methodology	Sample SA19 <i>Pinot Grigio</i>			Sample SA20 <i>Pinot Grigio</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Atomic Absorption Spectroscopy	0.180	0.034	0.0149	0.171	0.037	0.0140	9/10
ICP-OES	0.147	0.013	-0.0176	0.144	0.015	-0.0129	7/7
Other _____	0.163	0.044	-0.0021	0.150	0.039	-0.0072	5/5



Analysis 911  
Copper Content







**Potassium (K) Content**

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3E3L2K		561.8	-42.3	-0.35	577.6	-23.7	-0.19
4GR42K		705.0	100.9	0.84	694.0	92.7	0.74
88AVNY		517.5	-86.6	-0.72	508.0	-93.3	-0.74
8GH973		522.5	-81.6	-0.68	524.0	-77.3	-0.62
9DRNFP	*	939.0	334.9	2.78	948.5	347.2	2.77
9KCL7X		572.5	-31.6	-0.26	545.5	-55.8	-0.45
AHZ7CW		512.0	-92.1	-0.76	512.0	-89.3	-0.71
AV3WTV	*	656.0	51.8	0.43	586.0	-15.4	-0.12
C9NWW3		494.5	-109.6	-0.91	499.0	-102.3	-0.82
G9QA8R		598.5	-5.6	-0.05	606.0	4.7	0.04
JX23NT		569.0	-35.1	-0.29	562.0	-39.3	-0.31
KMZ3NU		783.0	178.9	1.48	817.5	216.2	1.72
MCUWNC		735.0	130.9	1.09	720.0	118.7	0.95
MPFBPQ	X	3,445.0	2,840.9	23.57	3,355.0	2,753.7	21.96
NYENYP		590.5	-13.6	-0.11	575.0	-26.3	-0.21
R6D9EH		475.5	-128.6	-1.07	480.0	-121.3	-0.97
T8DLUU		453.5	-150.6	-1.25	445.5	-155.8	-1.24
X2U9YC		560.5	-43.6	-0.36	568.0	-33.3	-0.27
YC48ZX		675.5	71.4	0.59	706.5	105.2	0.84
ZBRPP6		556.3	-47.8	-0.40	549.8	-51.5	-0.41

Grand Means		Summary Statistics	
	604.11 mg/L		601.31 mg/L
Std Dev Btwn Labs			125.41 mg/L
	120.55 mg/L		
<b>Statistics based on 19 of 20 reporting participants</b>			

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

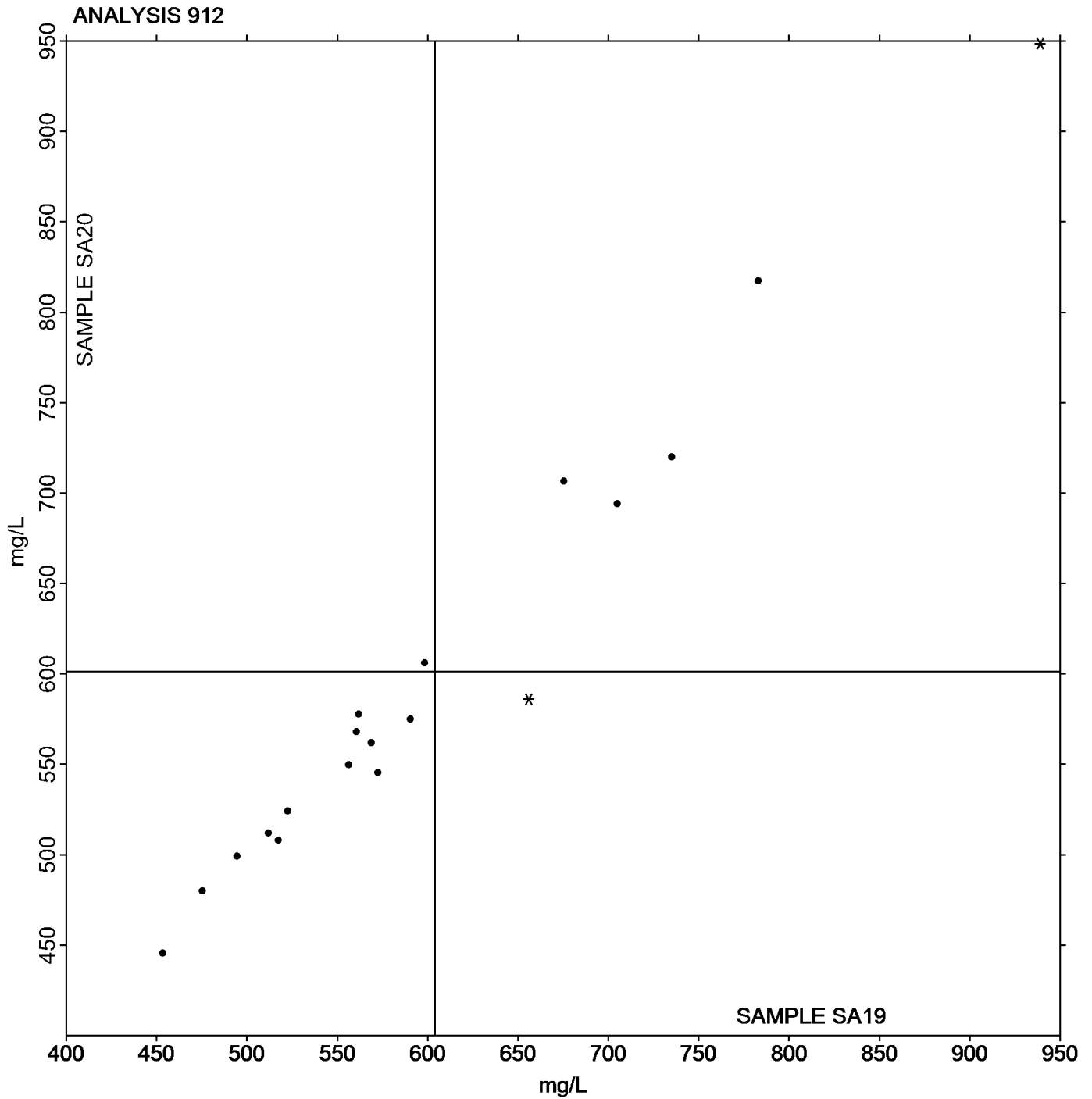
**Comments on Assigned Data Flags for Test #912**

MPFBPQ (X) - Extreme data.

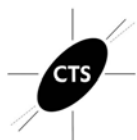


**Results by Methodology (as reported by laboratory)**

Test Methodology	Sample SA19 <i>Pinot Grigio</i>			Sample SA20 <i>Pinot Grigio</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	561.770	0.000	-42.3	577.640	0.000	-23.7	1/1
Atomic Absorption Spectroscopy	621.500	195.431	17.4	627.917	205.835	26.6	6/6
ICP-OES	562.450	31.804	-41.7	556.325	34.987	-45.0	4/4
FTIR	623.500	157.685	19.4	616.000	147.078	14.7	2/2
Other _____	615.075	78.324	11.0	603.742	80.699	2.4	6/7



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 #060

Fall 2018

## Analysis 915 A420nm (1cm path)

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2FK4RK		0.0640	0.0088	1.91	0.0610	0.0068	1.29
2MX63M		0.0590	0.0038	0.83	0.0585	0.0043	0.81
2VYCP3	X	0.0010	-0.0542	-11.74	0.0020	-0.0522	-9.94
3E3L2K		0.0520	-0.0032	-0.69	0.0495	-0.0047	-0.90
3XKGZL		0.0560	0.0008	0.18	0.0530	-0.0012	-0.23
4HZH76	X	0.0710	0.0158	3.43	0.0675	0.0133	2.52
4MUETB		0.0485	-0.0067	-1.45	0.0470	-0.0072	-1.38
4V87KU		0.0600	0.0048	1.05	0.0600	0.0058	1.10
6HE2RM		0.0607	0.0055	1.20	0.0582	0.0040	0.75
7D3DRQ		0.0535	-0.0017	-0.36	0.0565	0.0023	0.43
88AVNY	X	0.0510	-0.0042	-0.90	0.0575	0.0033	0.62
8GH973		0.0495	-0.0057	-1.23	0.0490	-0.0052	-1.00
98K2JF		0.0540	-0.0012	-0.25	0.0530	-0.0012	-0.23
99VYWW		0.0610	0.0058	1.26	0.0620	0.0078	1.48
9DRNFP		0.0485	-0.0067	-1.45	0.0480	-0.0062	-1.19
9KCL7X		0.0550	-0.0002	-0.04	0.0520	-0.0022	-0.42
9W4DTM		0.0590	0.0038	0.83	0.0570	0.0028	0.53
AHZ7CW		0.0580	0.0028	0.61	0.0600	0.0058	1.10
AL46MP	X	0.1035	0.0483	10.48	0.1035	0.0493	9.37
AV3WTV		0.0550	-0.0002	-0.04	0.0550	0.0008	0.15
AV8ETE		0.0550	-0.0002	-0.04	0.0540	-0.0002	-0.04
C49JWF		0.0550	-0.0002	-0.04	0.0550	0.0008	0.15
D2KETB	X	0.0540	-0.0012	-0.25	0.0400	-0.0142	-2.71
EJXEZH		0.0585	0.0033	0.72	0.0570	0.0028	0.53
GQ9HZF		0.0544	-0.0008	-0.17	0.0528	-0.0014	-0.27
HZFB DG		0.0547	-0.0005	-0.10	0.0552	0.0010	0.18
J3CDFM		0.0500	-0.0052	-1.12	0.0490	-0.0052	-1.00
JH8V87		0.0500	-0.0052	-1.12	0.0500	-0.0042	-0.81
JHQNZ4		0.0475	-0.0077	-1.66	0.0460	-0.0082	-1.57
JX23NT		0.0510	-0.0042	-0.90	0.0500	-0.0042	-0.81
K92DA9		0.0605	0.0053	1.16	0.0615	0.0073	1.38
LV9B78		0.0550	-0.0002	-0.04	0.0560	0.0018	0.34
MCUWNC		0.0515	-0.0037	-0.81	0.0508	-0.0035	-0.66
MPFBPQ	X	0.0670	0.0118	2.56	0.0590	0.0048	0.91
MTXTKG		0.0495	-0.0057	-1.23	0.0480	-0.0062	-1.19



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

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
MY6YKT		0.0495	-0.0057	-1.23	0.0500	-0.0042	-0.81
N3H4Q2		0.0560	0.0008	0.18	0.0560	0.0018	0.34
NYENYP	X	0.0875	0.0323	7.01	0.0850	0.0308	5.85
NZ7NWZ		0.0585	0.0033	0.72	0.0605	0.0063	1.19
QGVCLP		0.0520	-0.0032	-0.69	0.0470	-0.0072	-1.38
QRB7VW	X	0.0545	-0.0007	-0.14	0.0440	-0.0102	-1.95
QRT8L7		0.0555	0.0003	0.07	0.0545	0.0003	0.05
REHWUA		0.0530	-0.0022	-0.47	0.0520	-0.0022	-0.42
T8DLUU		0.0565	0.0013	0.29	0.0550	0.0008	0.15
TEDYWJ	X	0.0420	-0.0132	-2.85	0.0480	-0.0062	-1.19
UQPQYJ		0.0545	-0.0007	-0.14	0.0525	-0.0017	-0.33
UVHQDE		0.0595	0.0043	0.94	0.0610	0.0068	1.29
UZ9AL		0.0561	0.0009	0.20	0.0531	-0.0012	-0.22
VJXX3A		0.0500	-0.0052	-1.12	0.0450	-0.0092	-1.76
X2U9YC		0.0550	-0.0002	-0.04	0.0515	-0.0027	-0.52
XQQZBY		0.0550	-0.0002	-0.04	0.0550	0.0008	0.15
Y4DHPN	X	0.0500	-0.0052	-1.12	0.0700	0.0158	3.00
YC48ZX	*	0.0700	0.0148	3.21	0.0700	0.0158	3.00
YGHK6Q		0.0620	0.0068	1.48	0.0620	0.0078	1.48
YMRTFT		0.0560	0.0008	0.18	0.0580	0.0038	0.72
ZBRPP6		0.0490	-0.0062	-1.34	0.0460	-0.0082	-1.57
ZFQ4AA		0.0585	0.0033	0.72	0.0550	0.0008	0.15

Grand Means		Summary Statistics	
0.05517	Absorbance Units	0.05423	Absorbance Units
<b>Stnd Dev Btwn Labs</b>			
0.00461	Absorbance Units	0.00526	Absorbance Units
<b>Statistics based on 47 of 57 reporting participants</b>			

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio



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

---

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

4HZH76 (X) - Inconsistent in testing, data for sample SA19 are high.

88AVNY (X) - Inconsistent in testing between samples.

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

MPFBPQ (X) - Inconsistent in testing between samples.

TEDYWJ (X) - Inconsistent in testing, data for sample SA19 are low.

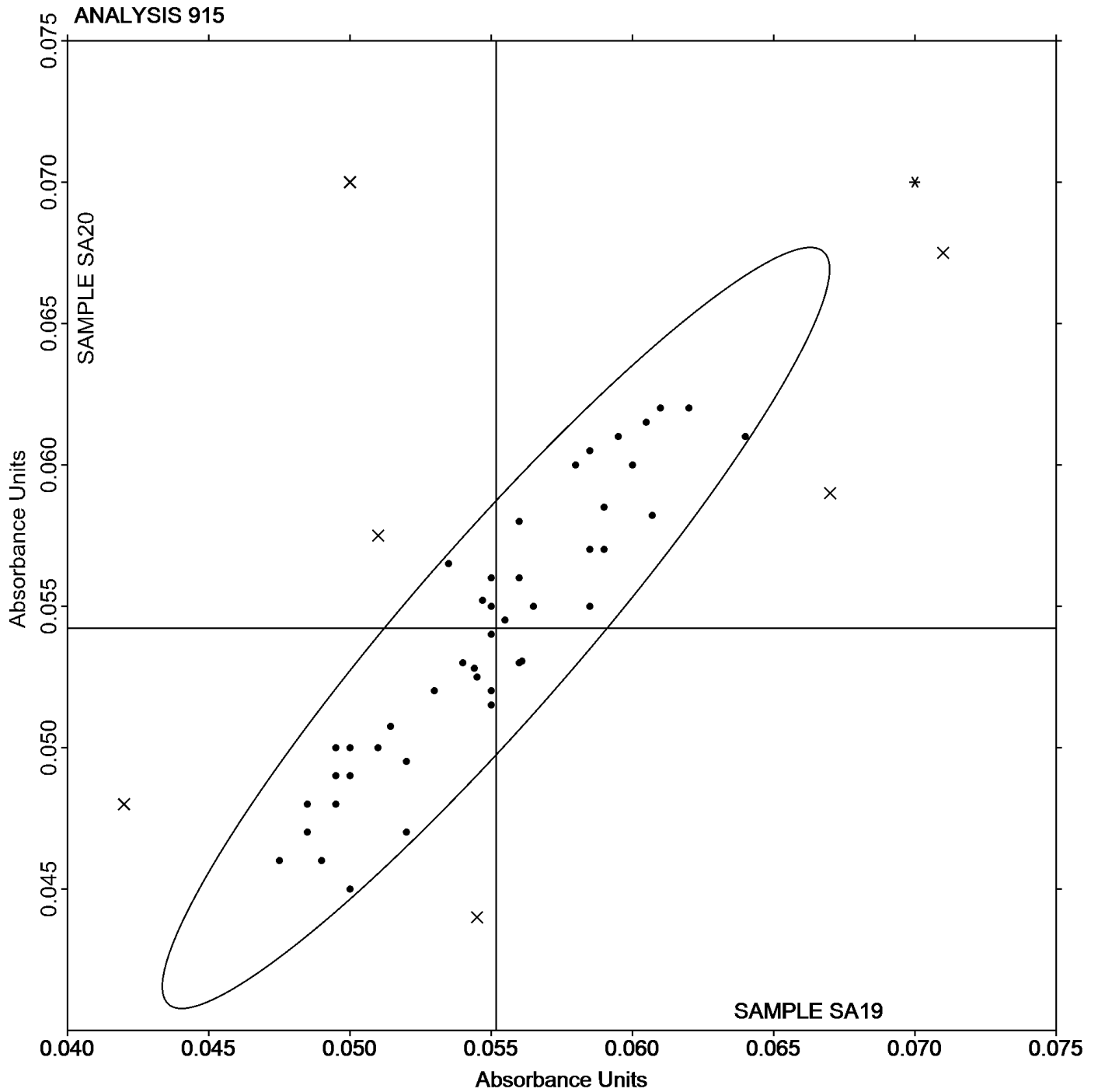
AL46MP (X) - Data for both samples are high.

2VYCP3 (X) - Data for both samples are low.

Y4DHPN (X) - Inconsistent in testing, data for sample SA20 are high. Inconsistent within the determinations of sample SA20.

D2KETB (X) - Inconsistent in testing, data for sample SA20 are low.

QRB7VW (X) - Inconsistent in testing between samples.





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #060

Fall 2018

## Analysis 916 A520nm (1cm path)

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2FK4RK	X	0.0290	0.0167	5.12	0.0250	0.0135	4.01
2MX63M		0.0145	0.0022	0.68	0.0130	0.0015	0.44
3E3L2K		0.0120	-0.0003	-0.09	0.0095	-0.0020	-0.61
3XKGZL		0.0120	-0.0003	-0.09	0.0110	-0.0005	-0.16
4HZH76	*	0.0225	0.0102	3.13	0.0205	0.0090	2.67
4MUETB		0.0135	0.0012	0.37	0.0100	-0.0015	-0.46
4V87KU		0.0100	-0.0023	-0.70	0.0150	0.0035	1.03
6HE2RM		0.0160	0.0037	1.14	0.0130	0.0015	0.44
7D3DRQ		0.0140	0.0017	0.53	0.0125	0.0010	0.29
88AVNY		0.0100	-0.0023	-0.70	0.0140	0.0025	0.73
8GH973		0.0105	-0.0018	-0.55	0.0110	-0.0005	-0.16
98K2JF		0.0120	-0.0003	-0.09	0.0120	0.0005	0.14
99VYWW	*	0.0160	0.0037	1.14	0.0200	0.0085	2.52
9DRNFP	X	0.0335	0.0212	6.50	0.0905	0.0790	23.50
9KCL7X		0.0130	0.0007	0.22	0.0110	-0.0005	-0.16
9W4DTM		0.0140	0.0017	0.53	0.0130	0.0015	0.44
AHZ7CW		0.0130	0.0007	0.22	0.0150	0.0035	1.03
AL46MP	X	0.0530	0.0407	12.48	0.0540	0.0425	12.64
AV3WTV		0.0130	0.0007	0.22	0.0135	0.0020	0.58
AV8ETE		0.0120	-0.0003	-0.09	0.0115	0.0000	-0.01
C49JWF		0.0125	0.0002	0.07	0.0130	0.0015	0.44
D2KETB		0.0130	0.0007	0.22	0.0075	-0.0040	-1.20
EJXEZH		0.0150	0.0027	0.83	0.0135	0.0020	0.58
GQ9HZF		0.0099	-0.0024	-0.73	0.0090	-0.0025	-0.76
HZFBGD		0.0134	0.0011	0.34	0.0125	0.0010	0.29
J3CDFM		0.0110	-0.0013	-0.39	0.0095	-0.0020	-0.61
JH8V87		0.0100	-0.0023	-0.70	0.0100	-0.0015	-0.46
JHQNZ4		0.0100	-0.0023	-0.70	0.0060	-0.0055	-1.65
JX23NT		0.0110	-0.0013	-0.39	0.0100	-0.0015	-0.46
K92DA9		0.0110	-0.0013	-0.39	0.0110	-0.0005	-0.16
LV9B78		0.0140	0.0017	0.53	0.0140	0.0025	0.73
MCUWNC		0.0145	0.0022	0.68	0.0139	0.0024	0.70
MPFBPQ		0.0170	0.0047	1.45	0.0150	0.0035	1.03
MTXTKG		0.0095	-0.0028	-0.85	0.0090	-0.0025	-0.76
MY6YKT		0.0105	-0.0018	-0.55	0.0150	0.0035	1.03





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

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
N3H4Q2		0.0110	-0.0013	-0.39	0.0090	-0.0025	-0.76
NYENYP	X	0.0450	0.0327	10.03	0.0400	0.0285	8.47
NZ7NWZ		0.0060	-0.0063	-1.92	0.0070	-0.0045	-1.35
QGVCLP		0.0120	-0.0003	-0.09	0.0080	-0.0035	-1.05
QRB7VW	*	0.0025	-0.0098	-3.00	0.0060	-0.0055	-1.65
QRT8L7		0.0140	0.0017	0.53	0.0135	0.0020	0.58
REHWUA		0.0120	-0.0003	-0.09	0.0105	-0.0010	-0.31
T8DLUU	X	0.0130	0.0007	0.22	0.0550	0.0435	12.93
TEDYWJ	X	0.0010	-0.0113	-3.46	0.0060	-0.0055	-1.65
UQPQYJ		0.0125	0.0002	0.07	0.0115	0.0000	-0.01
UVHQDE		0.0150	0.0027	0.83	0.0150	0.0035	1.03
UZR9AL		0.0110	-0.0013	-0.39	0.0084	-0.0031	-0.93
VJXX3A		0.0150	0.0027	0.83	0.0100	-0.0015	-0.46
X2U9YC		0.0140	0.0017	0.53	0.0110	-0.0005	-0.16
XQQZBY		0.0120	-0.0003	-0.09	0.0120	0.0005	0.14
Y4DHPN		0.0100	-0.0023	-0.70	0.0100	-0.0015	-0.46
YC48ZX	X	0.0300	0.0177	5.43	0.0300	0.0185	5.49
YGHK6Q		0.0110	-0.0013	-0.39	0.0100	-0.0015	-0.46
YMRTFT		0.0130	0.0007	0.22	0.0150	0.0035	1.03
ZBRPP6	*	0.0030	-0.0093	-2.84	0.0010	-0.0105	-3.14
ZFQ4AA		0.0175	0.0052	1.60	0.0130	0.0015	0.44

Grand Means		Summary Statistics	
0.01228	Absorbance Units	0.01154	Absorbance Units
Std Dev Btwn Labs			
0.00326	Absorbance Units	0.00336	Absorbance Units
<b>Statistics based on 49 of 56 reporting participants</b>			

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio



---

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

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

TEDYWJ (X) - Inconsistent in testing, data for sample SA19 are low.

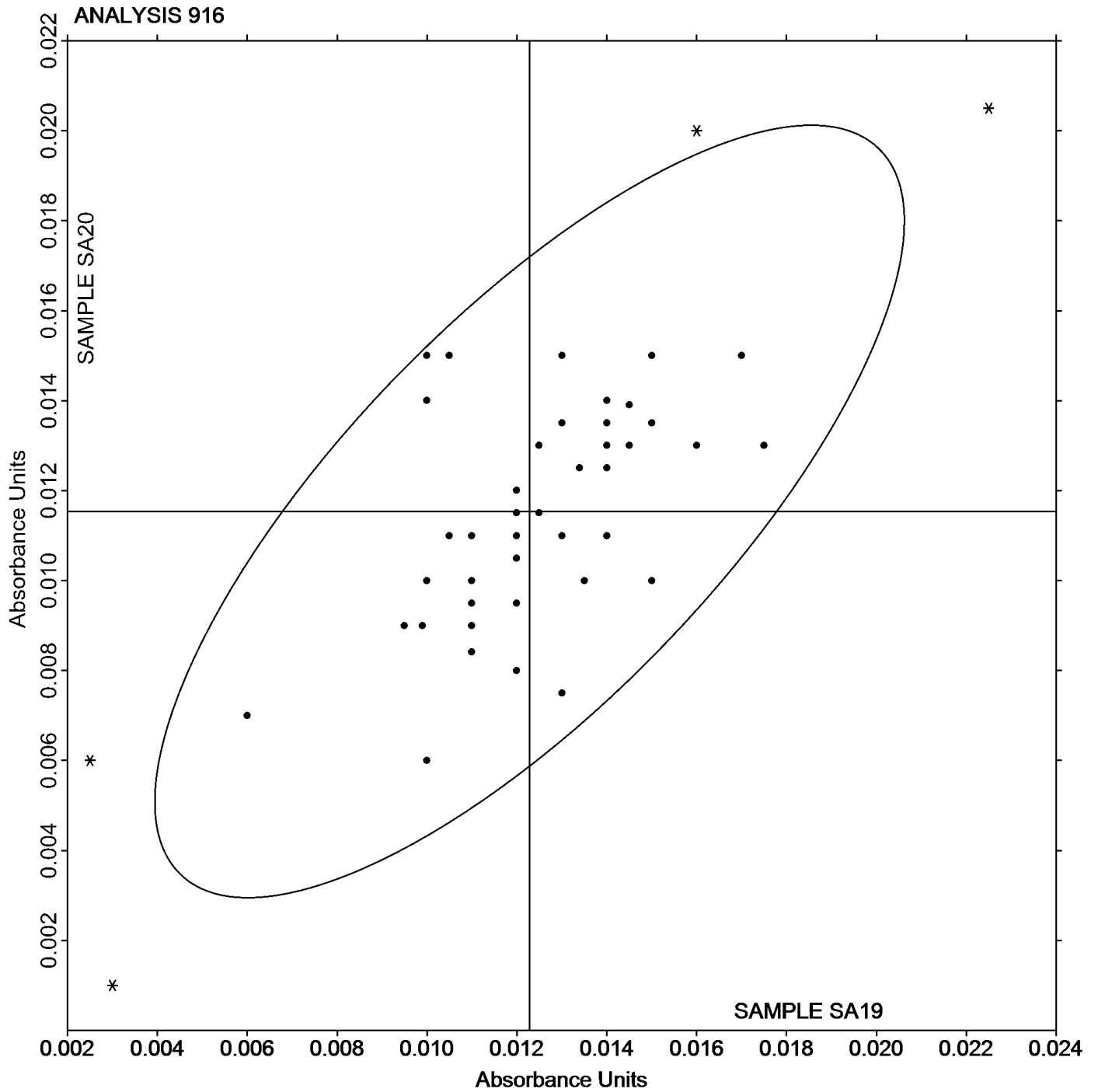
AL46MP (X) - Data for both samples are high.

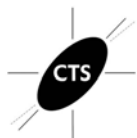
9DRNFP (X) - Data for both samples are high. Inconsistent within the determinations of sample SA20.

2FK4RK (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA20.

T8DLUU (X) - Inconsistent in testing, data for sample SA20 are high.

YC48ZX (X) - Data for both samples are high. Possible Systematic Error.





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

**Report #060**  
**Fall 2018**

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
2MX63M		52.50	1.55	0.07	56.50	3.81	0.15
8GH973		48.50	-2.45	-0.10	46.75	-5.94	-0.24
98K2JF		50.00	-0.95	-0.04	49.00	-3.69	-0.15
9KCL7X		51.50	0.55	0.02	51.00	-1.69	-0.07
AHZ7CW		0.04	-50.91	-2.18	0.04	-52.65	-2.10
C9NWW3		46.05	-4.90	-0.21	45.45	-7.24	-0.29
D2KETB	X	0.02	-50.93	-2.18	0.01	-52.69	-2.10
K92DA9	*	117.00	66.05	2.82	125.00	72.31	2.88
MCUWNC		42.00	-8.95	-0.38	37.00	-15.69	-0.63
QRT8L7		57.00	6.05	0.26	67.00	14.31	0.57
R36YP7		59.50	8.55	0.37	61.00	8.31	0.33
X2U9YC		37.50	-13.45	-0.57	45.00	-7.69	-0.31
Y4DHPN		63.58	12.63	0.54	58.91	6.22	0.25
YGHK6Q		43.00	-7.95	-0.34	48.00	-4.69	-0.19
ZBRPP6		42.52	-8.43	-0.36	45.77	-6.93	-0.28
ZFQ4AA		53.50	2.55	0.11	54.00	1.31	0.05

**Research Property Consensus Value**

Consensus Average

50.946 mg/L

52.694 mg/L

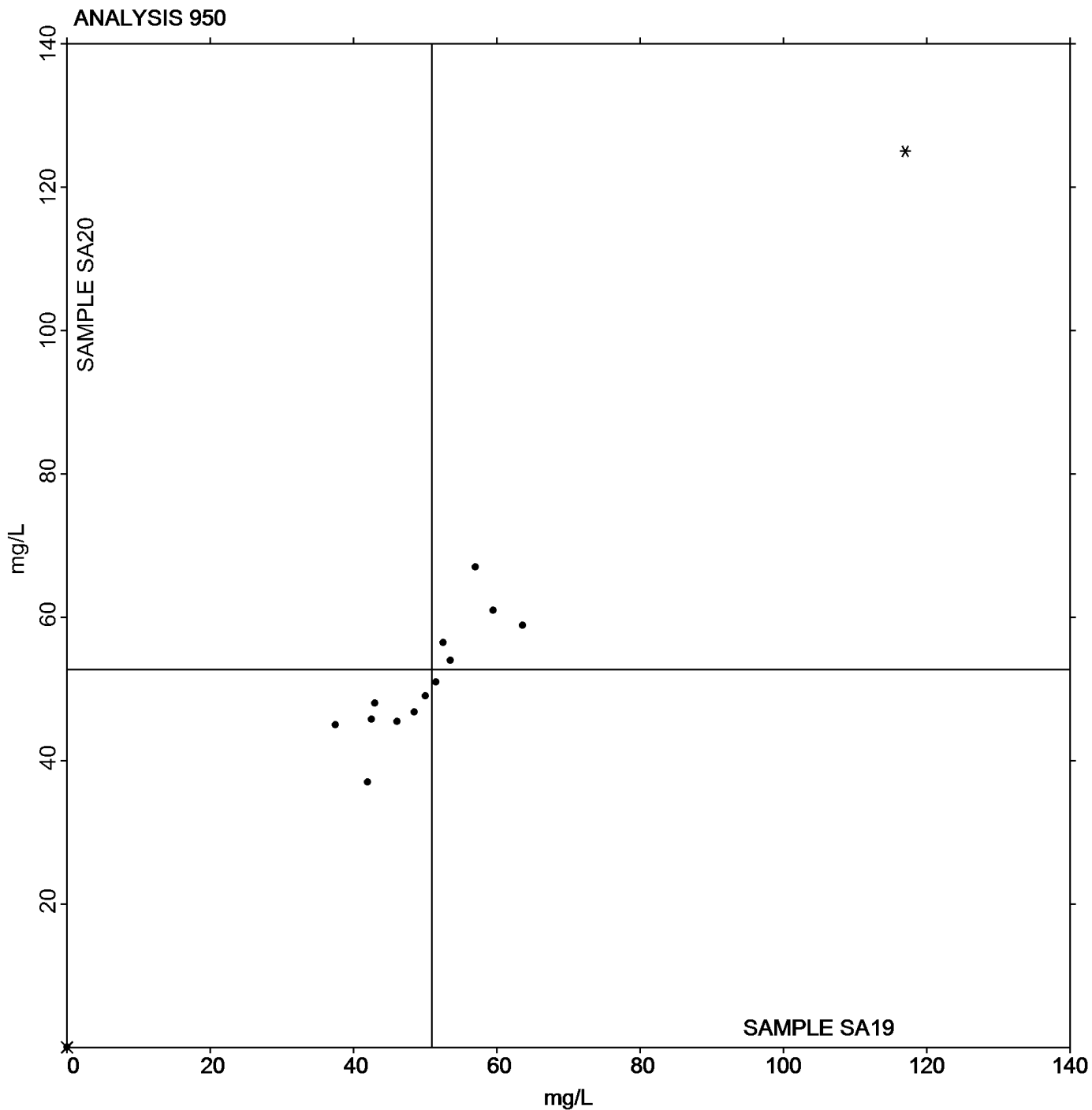
Note: Tests 950, 951 and 952, are research tests. As a result participants should use caution when evaluating data for these tests.

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

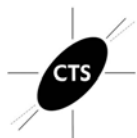
Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

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

D2KETB (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.



**ASEV-CTS Wine Industry Interlaboratory Testing Program**  
**Research Property 951**  
**Research Property: Citric Acid**

**Report #060**  
**Fall 2018**

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
2MX63M		0.3350	-0.0219	-0.27	0.3450	-0.0123	-0.15
4GR42K		0.3550	-0.0019	-0.02	0.3550	-0.0023	-0.03
88AVNY		0.3900	0.0331	0.41	0.3950	0.0377	0.47
8GH973		0.3865	0.0296	0.36	0.3755	0.0182	0.23
98K2JF		0.3600	0.0031	0.04	0.3600	0.0027	0.03
9DRNFP		0.3300	-0.0269	-0.33	0.3350	-0.0223	-0.28
9KCL7X		0.3600	0.0031	0.04	0.3300	-0.0273	-0.34
9W4DTM		0.1880	-0.1689	-2.07	0.1980	-0.1593	-2.00
AH77CW		0.3300	-0.0269	-0.33	0.3600	0.0027	0.03
C49JWF		0.3650	0.0081	0.10	0.3600	0.0027	0.03
G9QA8R		0.3165	-0.0404	-0.49	0.3110	-0.0463	-0.58
JHQNZ4		0.4850	0.1281	1.57	0.4750	0.1177	1.47
JX23NT		0.3360	-0.0209	-0.26	0.3400	-0.0173	-0.22
K92DA9		0.2365	-0.1204	-1.47	0.2370	-0.1203	-1.51
MCUWNC		0.3750	0.0181	0.22	0.3850	0.0277	0.35
NZ7NWZ	X	0.0900	-0.2669	-3.26	0.0700	-0.2873	-3.60
QRT8L7		0.4000	0.0431	0.53	0.4100	0.0527	0.66
T8DLUU		0.3000	-0.0569	-0.70	0.3000	-0.0573	-0.72
VJXX3A		0.3300	-0.0269	-0.33	0.3400	-0.0173	-0.22
X2U9YC		0.3450	-0.0119	-0.15	0.3300	-0.0273	-0.34
YMRTFT	X	4.9800	4.6231	56.56	4.9900	4.6327	58.06
ZBRPP6	*	0.6055	0.2486	3.04	0.6025	0.2452	3.07
ZFQ4AA		0.3650	0.0081	0.10	0.3600	0.0027	0.03

**Research Property Consensus Value**

Consensus Average

0.35686 g/L

0.35733 g/L

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

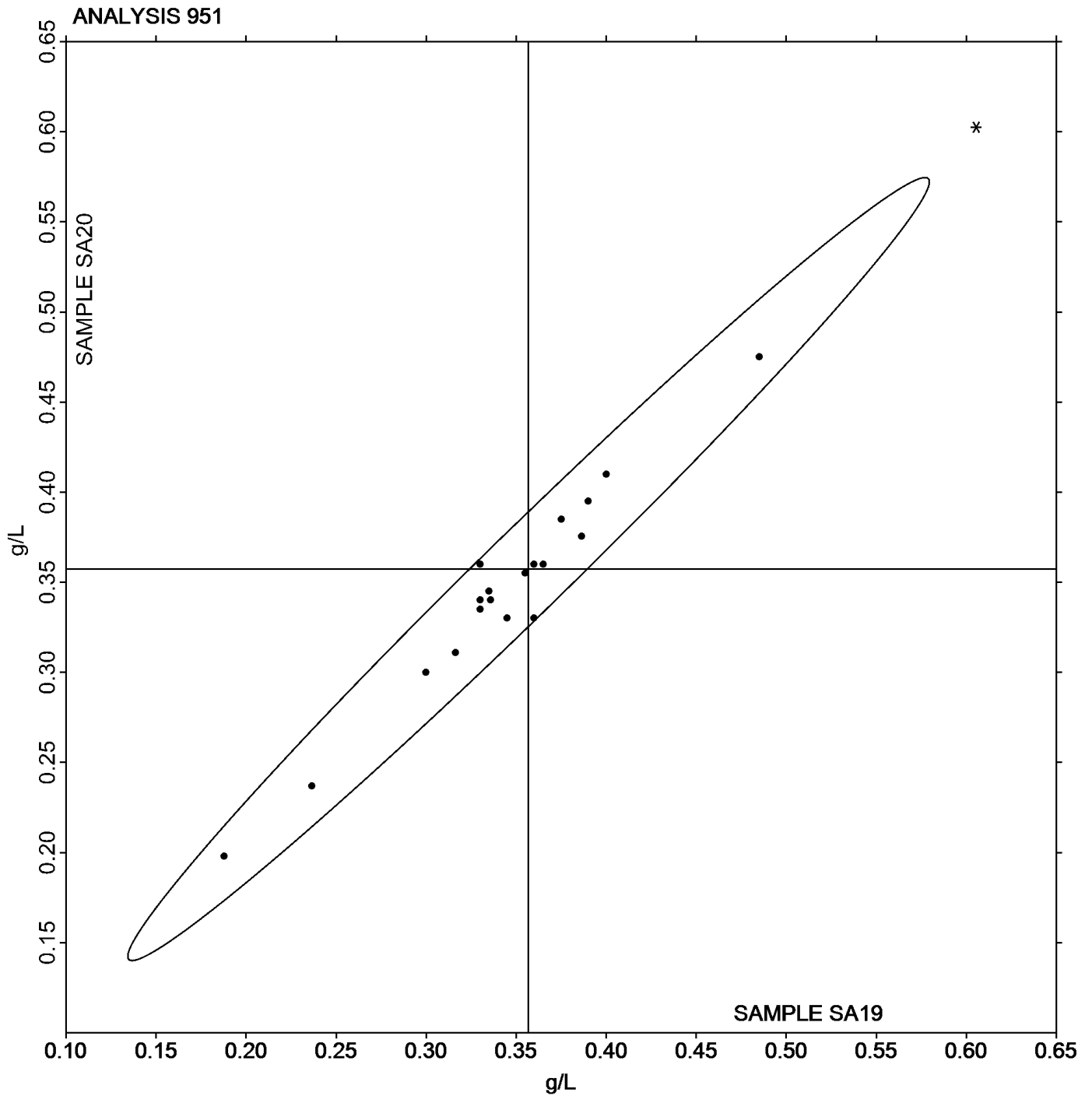
*This consensus average is based on 21 reporting participants.*

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

**Comments on Assigned Data Flags for Test #951**

YMRTFT (X) - Extreme data.

NZ7NWZ (X) - Data for both samples are high.





Research Property: Turbidity

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
29LJM4		0.1250	-0.0838	-0.95	0.1150	-0.0933	-0.99
2FK4RK	X	0.6650	0.4562	5.19	0.7250	0.5167	5.46
2MX63M		0.1430	-0.0658	-0.75	0.1500	-0.0583	-0.62
2VYCP3	*	0.4750	0.2662	3.03	0.5000	0.2917	3.08
3E3L2K		0.2500	0.0412	0.47	0.2935	0.0852	0.90
4GR42K		0.1950	-0.0138	-0.16	0.1900	-0.0183	-0.19
4HZH76		0.3050	0.0962	1.10	0.3450	0.1367	1.44
4MUETB		0.1950	-0.0138	-0.16	0.2150	0.0067	0.07
6G46HC		0.1445	-0.0643	-0.73	0.1290	-0.0793	-0.84
6HE2RM		0.2000	-0.0088	-0.10	0.2050	-0.0033	-0.03
6VQCHY	X	0.7700	0.5612	6.39	0.2250	0.0167	0.18
88AVNY		0.2100	0.0012	0.01	0.2700	0.0617	0.65
8GH973		0.3500	0.1412	1.61	0.3500	0.1417	1.50
8VGCAU	X	0.6800	0.4712	5.36	0.8200	0.6117	6.46
98K2JF		0.2450	0.0362	0.41	0.1650	-0.0433	-0.46
99VYWW	*	0.4400	0.2312	2.63	0.4500	0.2417	2.55
99ZGWG	X	0.3610	0.1522	1.73	0.2335	0.0252	0.27
9BPMER		0.2290	0.0202	0.23	0.2005	-0.0078	-0.08
9KCL7X		0.1520	-0.0568	-0.65	0.1565	-0.0518	-0.55
9W4DTM		0.1500	-0.0588	-0.67	0.1000	-0.1083	-1.14
A37NEL		0.2600	0.0512	0.58	0.1900	-0.0183	-0.19
AFBZTL		0.3005	0.0917	1.04	0.2955	0.0872	0.92
AHZ7CW		0.1700	-0.0388	-0.44	0.1900	-0.0183	-0.19
AJDX4D	X	0.6600	0.4512	5.14	0.5500	0.3417	3.61
AL46MP		0.0650	-0.1438	-1.64	0.0050	-0.2033	-2.15
ARRPRQ	*	0.1850	-0.0238	-0.27	0.3100	0.1017	1.07
AV3WTV		0.1490	-0.0598	-0.68	0.1460	-0.0623	-0.66
AV8ETE		0.3850	0.1762	2.01	0.3300	0.1217	1.29
AXWLCQ		0.1800	-0.0288	-0.33	0.1900	-0.0183	-0.19
AY8ATG	*	0.3500	0.1412	1.61	0.4500	0.2417	2.55
B2CFP3		0.2175	0.0087	0.10	0.2485	0.0402	0.42
D2KETB		0.1470	-0.0618	-0.70	0.1355	-0.0728	-0.77
D9NBM9		0.2200	0.0112	0.13	0.2250	0.0167	0.18
DP84AQ		0.2000	-0.0088	-0.10	0.1800	-0.0283	-0.30
EJXEZH		0.1900	-0.0188	-0.21	0.1150	-0.0933	-0.99
EP3A4Q	X	0.6450	0.4362	4.96	0.7600	0.5517	5.83





Analysis 952

Research Property: Turbidity

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
EXVJBZ		0.1895	-0.0193	-0.22	0.1930	-0.0153	-0.16
GQ9HZF		0.1900	-0.0188	-0.21	0.1800	-0.0283	-0.30
GU623D		0.1250	-0.0838	-0.95	0.1050	-0.1033	-1.09
J3CDFM		0.1395	-0.0693	-0.79	0.1500	-0.0583	-0.62
JH8V87		0.2480	0.0392	0.45	0.2315	0.0232	0.25
JHQNZ4	X	0.4250	0.2162	2.46	0.1680	-0.0403	-0.43
JWMV3C		0.1100	-0.0988	-1.12	0.1400	-0.0683	-0.72
JX23NT		0.0975	-0.1113	-1.27	0.0985	-0.1098	-1.16
KZ3NT6	X	0.5000	0.2912	3.31	0.6050	0.3967	4.19
LV9B78		0.1800	-0.0288	-0.33	0.1800	-0.0283	-0.30
LVNGJB	X	0.9900	0.7812	8.89	0.2150	0.0067	0.07
MCUWNC		0.2530	0.0442	0.50	0.2485	0.0402	0.42
MGZPGM		0.1525	-0.0563	-0.64	0.1500	-0.0583	-0.62
MPFBPQ		0.1100	-0.0988	-1.12	0.1800	-0.0283	-0.30
MTXTKG	*	0.3400	0.1312	1.49	0.2450	0.0367	0.39
N3H4Q2	X	0.4790	0.2702	3.08	0.1995	-0.0088	-0.09
NPQPA6		0.1100	-0.0988	-1.12	0.0950	-0.1133	-1.20
NYENYP		0.2275	0.0187	0.21	0.1545	-0.0538	-0.57
NZ7NWZ		0.3750	0.1662	1.89	0.3250	0.1167	1.23
QGVCLP	X	0.3855	0.1767	2.01	0.1720	-0.0363	-0.38
QRB7VW		0.1700	-0.0388	-0.44	0.1600	-0.0483	-0.51
QRT8L7		0.3400	0.1312	1.49	0.3700	0.1617	1.71
R36YP7		0.1600	-0.0488	-0.55	0.1700	-0.0383	-0.40
REHWUA		0.1550	-0.0538	-0.61	0.1555	-0.0528	-0.56
RTHX7B		0.1700	-0.0388	-0.44	0.1850	-0.0233	-0.25
T8DLUU		0.3100	0.1012	1.15	0.3100	0.1017	1.07
TEDYWJ		0.2000	-0.0088	-0.10	0.2000	-0.0083	-0.09
UQPQYJ		0.2880	0.0792	0.90	0.2515	0.0432	0.46
UVHQDE		0.2175	0.0087	0.10	0.2400	0.0317	0.34
UZR9AL		0.2225	0.0137	0.16	0.2255	0.0172	0.18
VJXX3A		0.2650	0.0562	0.64	0.2350	0.0267	0.28
W43XQ2	X	0.4040	0.1952	2.22	0.1755	-0.0328	-0.35
X2U9YC	X	0.3100	0.1012	1.15	0.1600	-0.0483	-0.51
XQQZBY		0.2090	0.0002	0.00	0.2125	0.0042	0.04
Y4DHPN	X	0.9800	0.7712	8.78	0.8000	0.5917	6.25
YAXLCX		0.1665	-0.0423	-0.48	0.1760	-0.0323	-0.34



Analysis 952

Research Property: Turbidity

WebCode	Data Flag	Sample SA19			Sample SA20		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
YC48ZX		0.0550	-0.1538	-1.75	0.0600	-0.1483	-1.57
YGHK6Q		0.0250	-0.1838	-2.09	0.0200	-0.1883	-1.99
YMAUEP		0.1500	-0.0588	-0.67	0.1550	-0.0533	-0.56
YMRTFT		0.2000	-0.0088	-0.10	0.3000	0.0917	0.97
ZBRPP6		0.1650	-0.0438	-0.50	0.1750	-0.0333	-0.35
ZFQ4AA		0.2570	0.0482	0.55	0.2475	0.0392	0.41
ZJ4NCN		0.1685	-0.0403	-0.46	0.1685	-0.0398	-0.42

Research Property Consensus Value

Consensus Average

0.20875 NTU

0.20828 NTU

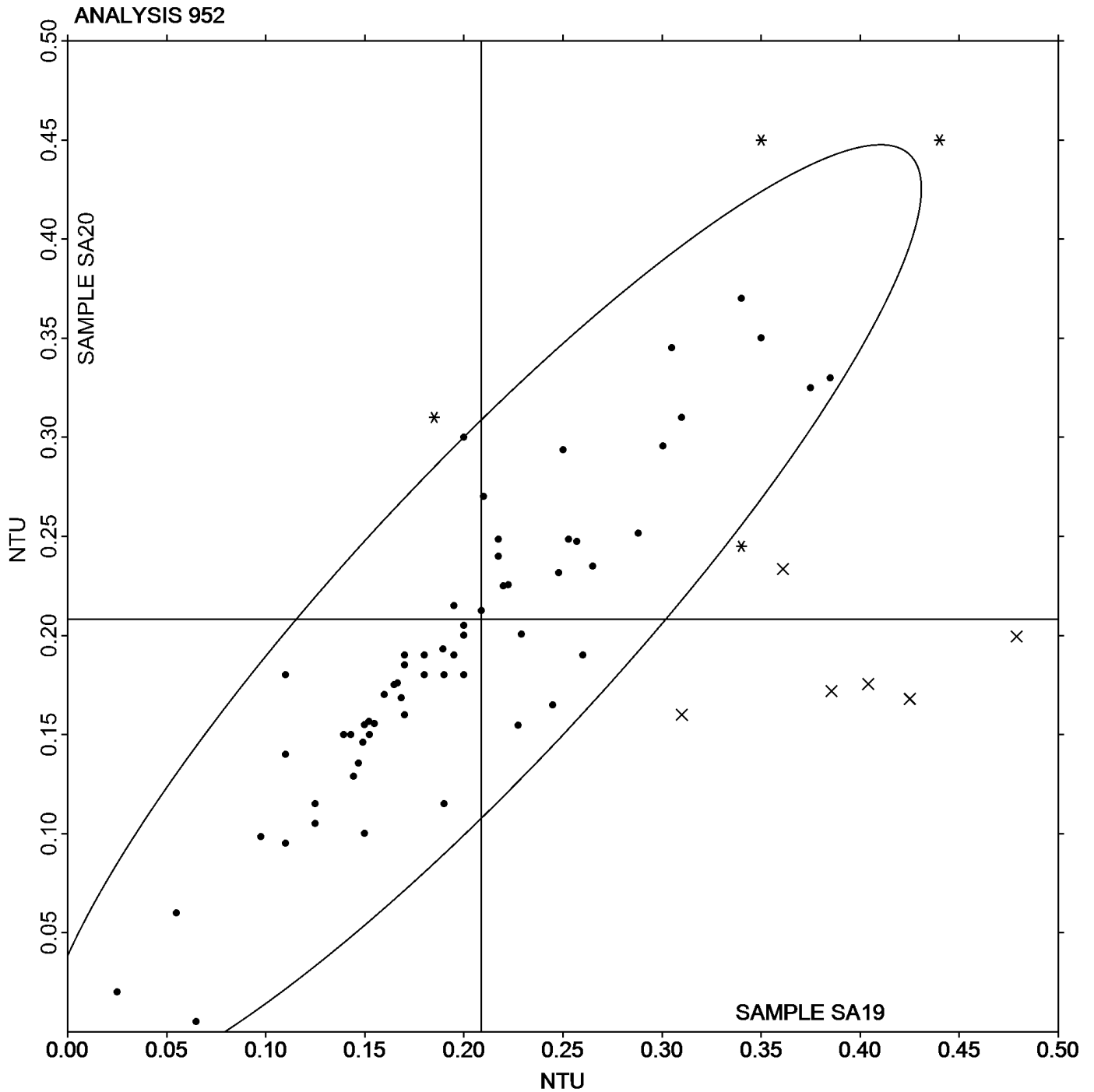
Note: Tests 950, 951 and 952, are research tests. As a result participants should use caution when evaluating data for these tests.

This consensus average is based on 65 reporting participants.

Wines tested: SA19: Pinot Grigio; SA20: Pinot Grigio

Comments on Assigned Data Flags for Test #952

- X2U9YC (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA19.
- QGVCLP (X) - Inconsistent in testing between samples.
- W43XQ2 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA19.
- EP3A4Q (X) - Data for both samples are high. Possible Systematic Error.
- 6VQCHY (X) - Data for sample SA19 are high.
- 8VGCAU (X) - Data for both samples are high.
- 99ZGWG (X) - Inconsistent in testing between samples.
- KZ3NT6 (X) - Data for both samples are high. Inconsistent within the determinations of both samples.
- AJDX4D (X) - Data for both samples are high.
- Y4DHPN (X) - Data for both samples are high.
- 2FK4RK (X) - Data for both samples are high. P
- N3H4Q2 (X) - Data for sample SA19 are high.
- JHQNZ4 (X) - Inconsistent in testing between samples.
- LVNGJB (X) - Data for sample SA19 are high.



-End of Report-