



## Wine Industry Interlaboratory Program

### Summary Report #054- Fall 2016

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## **About the Wine Industry Interlaboratory Program**

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

### **About CTS**

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

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

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

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

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

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### Common Problems Highlighted in Footnotes

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

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

Analysis 901  
Ethanol (% of volume)

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3AYXWP		11.32	0.02	0.30	11.31	0.01	0.20
3LRELQ		11.31	0.01	0.21	11.32	0.02	0.38
3PN2GY		11.29	-0.01	-0.16	11.30	0.01	0.12
3ULM4V		11.20	-0.10	-1.94	11.20	-0.10	-1.75
3ZCR7C		11.29	-0.01	-0.16	11.30	0.00	0.03
43BU3R		11.37	0.07	1.24	11.37	0.08	1.36
4DRAD7		11.26	-0.04	-0.73	11.25	-0.04	-0.77
4HJL6W	X	11.20	-0.10	-1.85	11.45	0.16	2.78
4NBR4R	X	11.90	0.60	11.25	11.90	0.61	10.76
64KWRW		11.32	0.02	0.40	11.32	0.02	0.38
74FYTK		11.37	0.07	1.24	11.39	0.10	1.71
76P8XY		11.31	0.01	0.21	11.31	0.02	0.29
7RXHXT		11.29	-0.01	-0.26	11.28	-0.01	-0.24
7WFHFU	X	11.40	0.10	1.89	11.20	-0.09	-1.66
7WJZL6	*	11.43	0.13	2.36	11.45	0.16	2.78
7YK7YQ		11.42	0.12	2.27	11.41	0.12	2.07
897QHT		11.26	-0.04	-0.73	11.28	-0.01	-0.24
8C2MZT	X	11.56	0.26	4.89	11.55	0.26	4.55
8RFQMM	X	11.87	0.57	10.69	11.87	0.58	10.23
97GKXW		11.29	-0.01	-0.26	11.27	-0.02	-0.42
9DDEVV	*	11.40	0.10	1.89	11.36	0.07	1.18
9ME49P		11.28	-0.02	-0.35	11.27	-0.02	-0.42
9YVRLW	*	11.21	-0.09	-1.66	11.17	-0.13	-2.28
AYTEH2		11.27	-0.03	-0.63	11.29	0.00	-0.06
B9CCJQ		11.27	-0.03	-0.63	11.29	-0.01	-0.15
BGRW4P		11.31	0.01	0.12	11.32	0.02	0.38
BURXFQ		11.31	0.01	0.21	11.31	0.01	0.20
CFRHQG		11.23	-0.07	-1.38	11.23	-0.07	-1.22
CN4ALL		11.30	0.00	-0.07	11.31	0.01	0.20
D4QAPQ		11.28	-0.02	-0.44	11.30	0.01	0.12
D9KBPJ		11.33	0.03	0.58	11.32	0.03	0.47
DF666P	X	11.50	0.20	3.76	11.45	0.16	2.78
DR2BYN		11.24	-0.06	-1.10	11.23	-0.06	-1.13
DYWCXE		11.34	0.04	0.68	11.33	0.04	0.65
EML27H		11.34	0.04	0.68	11.33	0.03	0.56



Analysis 901  
Ethanol (% of volume)

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EW87DG		11.28	-0.02	-0.35	11.28	-0.02	-0.33
EXKX4D		11.26	-0.04	-0.73	11.24	-0.05	-0.95
EZPPXC		11.27	-0.03	-0.54	11.26	-0.03	-0.59
F7WA3W		11.34	0.04	0.68	11.33	0.04	0.65
FJHP7V	*	11.18	-0.12	-2.21	11.20	-0.09	-1.65
FT4XMC		11.27	-0.03	-0.54	11.28	-0.01	-0.24
G2R8AC		11.31	0.01	0.12	11.32	0.03	0.47
G9RKAF		11.34	0.04	0.77	11.31	0.02	0.29
HG46RH		11.25	-0.05	-1.01	11.23	-0.06	-1.13
HJTCCE		11.39	0.09	1.71	11.39	0.10	1.71
HNZZPG		11.20	-0.10	-1.85	11.20	-0.09	-1.66
HXPLYK	*	11.35	0.05	0.86	11.29	-0.01	-0.15
JMNFKD	X	12.49	1.19	22.19	12.64	1.35	23.88
JR32PD		11.38	0.08	1.52	11.40	0.11	1.89
K3TCDB		11.26	-0.04	-0.73	11.23	-0.06	-1.13
K8N7BC		11.32	0.02	0.40	11.32	0.03	0.47
KAE8EE	X	11.10	-0.20	-3.72	11.20	-0.09	-1.66
KYYBDH		11.32	0.02	0.40	11.30	0.01	0.12
LB3ZQA		11.26	-0.04	-0.73	11.26	-0.04	-0.68
LEN3D9		11.28	-0.02	-0.44	11.28	-0.01	-0.24
LQCYGR		11.38	0.08	1.52	11.35	0.06	1.00
LUWW6H		11.28	-0.02	-0.35	11.28	-0.02	-0.33
MVMEH4		11.36	0.06	1.15	11.33	0.03	0.56
NJQQ4F		11.30	0.00	0.02	11.30	0.01	0.12
P4UTGB		11.30	0.00	-0.07	11.29	-0.01	-0.15
PECEL6		11.28	-0.02	-0.35	11.28	-0.01	-0.24
PU2H8F	X	11.10	-0.20	-3.72	10.92	-0.37	-6.63
QAUE64		11.31	0.01	0.21	11.30	0.00	0.03
QX3TY9	X	11.37	0.07	1.24	11.52	0.23	4.02
RB7TR4		11.39	0.09	1.71	11.40	0.11	1.89
RJE742		11.26	-0.04	-0.73	11.25	-0.04	-0.77
RJY2AA		11.24	-0.06	-1.19	11.23	-0.07	-1.22
RR9DM8		11.30	0.00	0.02	11.30	0.01	0.12
T9C8U8		11.30	0.00	-0.07	11.25	-0.04	-0.77
TJB3R3		11.30	0.00	0.02	11.27	-0.02	-0.42



Analysis 901
Ethanol (% of volume)

Table with 8 columns: WebCode, Data Flag, Lab Mean, Diff from Grand Mean, CPV (repeated for Sample SA07 and Sample SA08). Rows include various lab codes like UN4GW4, UXB2FY, etc.

Summary Statistics table comparing Grand Means and Stnd Dev Btwn Labs for two groups, based on 73 of 86 reporting participants.

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio



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

- 4HJL6W (X) - Inconsistent in testing between samples, data for sample SA08 are high. Inconsistent within the determinations of sample SA08.
- 7WFHFU (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA08.
- 8C2MZT (X) - Data for both samples are high. Possible Systematic Error.
- QX3TY9 (X) - Inconsistent in testing between samples, data for sample SA08 are high. Inconsistent within the determinations of both samples.
- KAE8EE (X) - Inconsistent in testing between samples, data for sample SA07 are low.
- ZBHZQR (X) - Data for both samples are low. Possible Systematic Error.
- 8RFQMM (X) - Data for both samples are high.
- DF666P (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA08.
- X2E278 (X) - Inconsistent in testing between samples, data for sample SA07 are low.
- PU2H8F (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample SA07.
- YGMDB6 (X) - Inconsistent in testing between samples, data for sample SA08 are high. Inconsistent within the determinations of sample SA07.
- JMNFKD (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA08.
- 4NBR4R (X) - Data for both samples are high.

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

Test Methodology	Sample SA07 <i>Pinot Grigio</i>			Sample SA08 <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	11.345	0.000	0.05	11.285	0.000	-0.01	1/2
Ebulliometer Method	11.300	0.000	0.00	11.300	0.000	0.01	1/5
Gas Chromatography Method	11.393	0.046	0.09	11.388	0.088	0.09	2/4
Near Infrared Method	11.301	0.047	0.00	11.295	0.050	0.00	51/52
Dist. / Density Method	11.233	0.046	-0.07	11.241	0.046	-0.05	5/7
FTIR	11.302	0.066	0.00	11.298	0.074	0.00	11/14
Other _____	11.270	0.014	-0.03	11.280	0.000	-0.01	2/2





Analysis 902  
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3AYXWP	*	105.5	-10.3	-1.52	85.50	-14.32	-2.43
3LRELQ		122.5	6.7	1.00	105.00	5.18	0.88
3PN2GY		120.0	4.2	0.63	101.00	1.18	0.20
3ULM4V		107.5	-8.3	-1.22	90.00	-9.82	-1.67
3ZCR7C		115.0	-0.8	-0.11	98.00	-1.82	-0.31
43BU3R		120.0	4.2	0.63	101.00	1.18	0.20
4DRAD7		108.5	-7.3	-1.08	94.50	-5.32	-0.90
4HJL6W		117.0	1.2	0.19	98.00	-1.82	-0.31
64KWRW		116.5	0.7	0.11	105.50	5.68	0.96
74FYTK		117.5	1.7	0.26	98.50	-1.32	-0.22
76P8XY		114.0	-1.8	-0.26	100.50	0.68	0.12
7RXHXT		115.0	-0.8	-0.11	100.00	0.18	0.03
7WJZL6		121.0	5.2	0.78	99.00	-0.82	-0.14
7YK7YQ	X	48.6	-67.2	-9.97	49.20	-50.62	-8.59
897QHT		113.0	-2.8	-0.41	99.00	-0.82	-0.14
8C2MZT		118.0	2.2	0.33	94.00	-5.82	-0.99
8RFQMM		119.8	4.1	0.61	102.72	2.90	0.49
97GKXW		115.0	-0.8	-0.11	99.00	-0.82	-0.14
9DDEVV		106.0	-9.8	-1.45	91.00	-8.82	-1.50
9YVRLW		119.5	3.7	0.56	101.50	1.68	0.29
AYTEH2		131.0	15.2	2.26	114.00	14.18	2.41
B9CCJQ		118.5	2.7	0.41	101.00	1.18	0.20
BGRW4P		125.5	9.7	1.45	109.50	9.68	1.64
BURXFQ		109.0	-6.8	-1.00	93.00	-6.82	-1.16
CFRHQG	X	103.0	-12.8	-1.89	104.00	4.18	0.71
CN4ALL		114.0	-1.8	-0.26	102.00	2.18	0.37
D4QAPQ		106.0	-9.8	-1.45	94.00	-5.82	-0.99
D9KBPJ		116.5	0.7	0.11	97.00	-2.82	-0.48
DF666P	X	86.5	-29.3	-4.34	76.50	-23.32	-3.96
DR2BYN		125.0	9.2	1.37	106.50	6.68	1.13
DYWCXE		115.2	-0.6	-0.08	99.20	-0.62	-0.10
EKWVLK	*	98.5	-17.3	-2.56	87.00	-12.82	-2.17
EML27H		112.5	-3.3	-0.48	102.50	2.68	0.46
EW87DG		113.5	-2.3	-0.33	99.00	-0.82	-0.14
EXKX4D		117.0	1.2	0.19	96.00	-3.82	-0.65

Analysis 902  
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EZPPXC		119.5	3.7	0.56	104.00	4.18	0.71
F7WA3W		109.0	-6.8	-1.00	97.00	-2.82	-0.48
FJHP7V		104.8	-11.0	-1.63	96.30	-3.52	-0.60
FT4XMC		124.0	8.2	1.22	109.00	9.18	1.56
G2R8AC		127.0	11.2	1.67	107.50	7.68	1.30
G9RKAF		113.0	-2.8	-0.41	101.00	1.18	0.20
HG46RH		125.0	9.2	1.37	109.50	9.68	1.64
HJTCCE		120.5	4.7	0.70	106.00	6.18	1.05
HXPLYK		117.0	1.2	0.19	98.00	-1.82	-0.31
JMNFKD		117.3	1.5	0.23	101.45	1.63	0.28
JR32PD		120.5	4.7	0.70	104.50	4.68	0.79
K3TCDB		112.0	-3.8	-0.56	98.00	-1.82	-0.31
K8N7BC		123.5	7.7	1.15	108.00	8.18	1.39
KAE8EE	X	100.0	-15.8	-2.34	99.00	-0.82	-0.14
KYYBDH		120.5	4.7	0.70	103.50	3.68	0.62
LB3ZQA		114.5	-1.3	-0.19	96.50	-3.32	-0.56
LEN3D9		125.0	9.2	1.37	107.00	7.18	1.22
LQCYGR	X	101.0	-14.8	-2.19	77.00	-22.82	-3.87
LUWW6H		111.7	-4.1	-0.61	95.45	-4.37	-0.74
MVMEH4		117.0	1.2	0.19	97.00	-2.82	-0.48
NJQQ4F	X	116.0	0.2	0.04	87.50	-12.32	-2.09
P4UTGB	*	97.0	-18.8	-2.78	83.50	-16.32	-2.77
PECEL6		112.0	-3.8	-0.56	95.00	-4.82	-0.82
QAUE64		106.5	-9.3	-1.37	90.00	-9.82	-1.67
QX3TY9		120.0	4.2	0.63	102.00	2.18	0.37
RJE742		112.5	-3.3	-0.48	94.00	-5.82	-0.99
RJY2AA	*	127.0	11.2	1.67	101.00	1.18	0.20
RR9DM8		116.0	0.2	0.04	101.00	1.18	0.20
T9C8U8		123.0	7.2	1.08	102.50	2.68	0.46
TJB3R3		114.6	-1.2	-0.17	103.75	3.93	0.67
UN4GW4		116.5	0.7	0.11	101.50	1.68	0.29
UXB2FY	*	104.5	-11.3	-1.67	97.50	-2.32	-0.39
V8C4W2		114.0	-1.8	-0.26	104.00	4.18	0.71
V9LW84		121.0	5.2	0.78	102.00	2.18	0.37
VUAF68		112.0	-3.8	-0.56	91.50	-8.32	-1.41



Analysis 902
Total Sulfur Dioxide

Table with 8 columns: WebCode, Data Flag, Lab Mean, Diff from Grand Mean, CPV (for Sample SA07), Lab Mean, Diff from Grand Mean, CPV (for Sample SA08). Rows include VX6AY3, W3WV6V, WHCW48 (with red X), WHQMPW, X2E278, X86JHX, XG8Y4V, YYPEN4, ZBHZQR, ZEGBW, ZQ96WZ.

Summary Statistics box containing Grand Means (115.75 mg/L for SA07, 99.817 mg/L for SA08), Std Dev Btwn Labs (6.74 mg/L for SA07, 5.894 mg/L for SA08), and a note: Statistics based on 74 of 81 reporting participants.

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

Comments on Assigned Data Flags for Test #902

- LQCYGR (X) - Data for sample SA08 are low.
KAE8EE (X) - Inconsistent in testing between samples.
CFRHQG (X) - Inconsistent in testing between samples.
DF666P (X) - Data for both samples are low. Possible Systematic Error.
WHCW48 (X) - Inconsistent in testing between samples, data for sample SA07 are high.
NJQQ4F (X) - Inconsistent in testing between samples.
7YK7YQ (X) - Data for both samples are low. Inconsistent within the determinations of sample SA07.

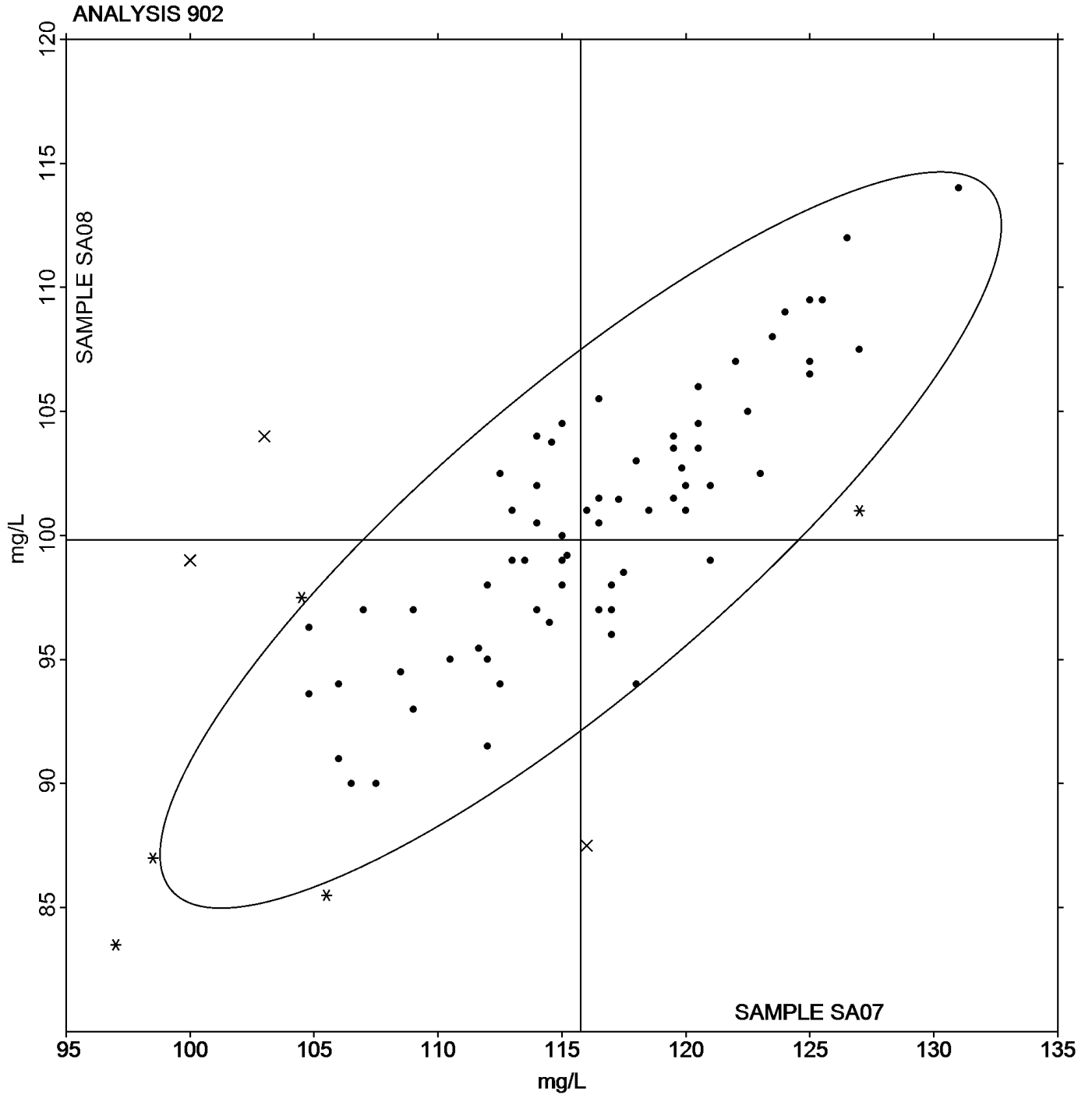


**Results by Methodology (as reported by laboratory)**

Test Methodology	Sample SA07 <i>Pinot Grigio</i>			Sample SA08 <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	112.000	0.000	-3.8	95.000	0.000	-4.8	1/1
Ripper Method	114.735	6.624	-1.0	99.733	5.694	-0.1	33/36
Aeration Oxidation (AO) Method	114.559	5.390	-1.2	98.829	4.265	-1.0	16/18
Segmented Flow Analyzer	111.500	4.708	-4.3	97.500	6.494	-2.3	4/4
Enzymatic Method	125.700	3.801	9.9	106.400	4.891	6.6	5/6
Colormetric Analyzer	113.917	7.426	-1.8	96.750	7.666	-3.1	6/6
FTIR	112.500	7.071	-3.3	94.250	6.010	-5.6	2/2
Flow Injection Analysis	121.643	4.160	5.9	104.000	5.083	4.2	7/8



Analysis 902  
Total Sulfur Dioxide





## Analysis 903

Fall 2016

## Free Sulfur Dioxide

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3AYXWP		35.50	0.13	0.04	25.50	0.59	0.19
3LRELQ		36.50	1.13	0.33	26.00	1.09	0.35
3PN2GY		41.00	5.63	1.65	26.50	1.59	0.51
3ULM4V		34.00	-1.37	-0.40	25.00	0.09	0.03
3ZCR7C		34.00	-1.37	-0.40	23.50	-1.41	-0.46
43BU3R		32.50	-2.87	-0.84	22.50	-2.41	-0.78
4DRAD7		34.00	-1.37	-0.40	23.00	-1.91	-0.62
4HJL6W	*	44.00	8.63	2.53	29.00	4.09	1.32
4NBR4R		30.00	-5.37	-1.57	21.00	-3.91	-1.27
64KWRW	X	22.50	-12.87	-3.77	17.00	-7.91	-2.56
74FYTK		30.50	-4.87	-1.43	23.50	-1.41	-0.46
76P8XY		34.50	-0.87	-0.25	25.00	0.09	0.03
7RXHXT		38.00	2.63	0.77	25.00	0.09	0.03
7WFHFU		39.50	4.13	1.21	24.50	-0.41	-0.13
7WJZL6		36.50	1.13	0.33	22.50	-2.41	-0.78
7YK7YQ	X	8.96	-26.41	-7.73	6.40	-18.51	-6.00
897QHT		33.50	-1.87	-0.55	25.00	0.09	0.03
8C2MZT		37.50	2.13	0.63	27.00	2.09	0.68
8RFQMM		40.66	5.29	1.55	32.10	7.19	2.33
97GKXW		34.00	-1.37	-0.40	24.00	-0.91	-0.30
9DDEVV		32.00	-3.37	-0.99	23.00	-1.91	-0.62
9ME49P		39.50	4.13	1.21	27.00	2.09	0.68
9YVRLW		35.00	-0.37	-0.11	23.00	-1.91	-0.62
AYTEH2		41.00	5.63	1.65	30.00	5.09	1.65
B9CCJQ		32.50	-2.87	-0.84	23.00	-1.91	-0.62
BGRW4P		39.50	4.13	1.21	30.00	5.09	1.65
BURXFQ		34.50	-0.87	-0.25	23.50	-1.41	-0.46
CFRHQG	X	24.00	-11.37	-3.33	24.50	-0.41	-0.13
CN4ALL		33.00	-2.37	-0.69	23.50	-1.41	-0.46
D4QAPQ	*	26.50	-8.87	-2.60	17.50	-7.41	-2.40
D9KBPJ		36.00	0.63	0.19	25.00	0.09	0.03
DF666P		35.00	-0.37	-0.11	22.00	-2.91	-0.94
DR2BYN		36.50	1.13	0.33	26.00	1.09	0.35
DYWCXE		40.00	4.63	1.36	27.20	2.29	0.74
EKWVLK		36.00	0.63	0.19	26.00	1.09	0.35

Analysis 903  
Free Sulfur Dioxide

Fall 2016

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EML27H		33.00	-2.37	-0.69	21.50	-3.41	-1.11
EW87DG		33.50	-1.87	-0.55	25.00	0.09	0.03
EXKX4D	X	45.00	9.63	2.82	29.00	4.09	1.32
EZPPXC		32.50	-2.87	-0.84	25.00	0.09	0.03
F7WA3W		33.50	-1.87	-0.55	24.50	-0.41	-0.13
FT4XMC		41.00	5.63	1.65	32.00	7.09	2.30
G2R8AC		37.00	1.63	0.48	23.50	-1.41	-0.46
G9RKAF		36.00	0.63	0.19	29.00	4.09	1.32
HG46RH		35.00	-0.37	-0.11	25.00	0.09	0.03
HJTCCE		41.00	5.63	1.65	31.50	6.59	2.13
HNZZPG	X	127.00	91.63	26.84	109.00	84.09	27.25
HXPLYK		35.00	-0.37	-0.11	23.00	-1.91	-0.62
JMNFKD		34.35	-1.02	-0.30	24.35	-0.56	-0.18
JR32PD		35.50	0.13	0.04	25.00	0.09	0.03
K3TCDB		32.00	-3.37	-0.99	21.00	-3.91	-1.27
K8N7BC		32.00	-3.37	-0.99	22.00	-2.91	-0.94
KAE8EE		36.50	1.13	0.33	27.50	2.59	0.84
KYYBDH		32.00	-3.37	-0.99	24.00	-0.91	-0.30
LB3ZQA		36.50	1.13	0.33	24.00	-0.91	-0.30
LEN3D9	*	34.50	-0.87	-0.25	28.50	3.59	1.16
LQCYGR		37.00	1.63	0.48	25.00	0.09	0.03
LUWW6H		33.50	-1.87	-0.55	22.20	-2.71	-0.88
MVMEH4		32.00	-3.37	-0.99	21.00	-3.91	-1.27
NJQQ4F		38.00	2.63	0.77	29.00	4.09	1.32
P4UTGB		28.00	-7.37	-2.16	20.00	-4.91	-1.59
PECEL6		39.00	3.63	1.06	26.00	1.09	0.35
PU2H8F		34.60	-0.77	-0.22	22.24	-2.67	-0.87
QAUE64		31.50	-3.87	-1.13	22.00	-2.91	-0.94
QX3TY9		31.00	-4.37	-1.28	19.00	-5.91	-1.92
RB7TR4		30.85	-4.52	-1.32	18.75	-6.16	-2.00
RJE742		35.00	-0.37	-0.11	24.00	-0.91	-0.30
RJY2AA		38.80	3.43	1.01	29.20	4.29	1.39
RR9DM8		34.05	-1.32	-0.39	24.25	-0.66	-0.22
T9C8U8		33.50	-1.87	-0.55	22.00	-2.91	-0.94
TJB3R3		32.45	-2.92	-0.85	23.80	-1.11	-0.36





WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UN4GW4		35.00	-0.37	-0.11	24.00	-0.91	-0.30
UXB2FY		38.50	3.13	0.92	27.50	2.59	0.84
V8C4W2		37.00	1.63	0.48	28.00	3.09	1.00
V9LW84		40.00	4.63	1.36	28.00	3.09	1.00
VUAF68		35.00	-0.37	-0.11	21.00	-3.91	-1.27
VX6AY3		33.50	-1.87	-0.55	24.00	-0.91	-0.30
W3WV6V		34.00	-1.37	-0.40	26.00	1.09	0.35
WHCW48		40.00	4.63	1.36	28.00	3.09	1.00
WHQMPW		38.00	2.63	0.77	28.50	3.59	1.16
X2E278		28.00	-7.37	-2.16	20.00	-4.91	-1.59
X86JHX		41.50	6.13	1.80	31.00	6.09	1.97
XG8Y4V		37.50	2.13	0.63	27.00	2.09	0.68
YYPEN4		32.50	-2.87	-0.84	24.50	-0.41	-0.13
ZBHZQR	X	33.60	-1.77	-0.52	34.40	9.49	3.07
ZEGBW		39.50	4.13	1.21	28.00	3.09	1.00
ZQ96WZ		36.00	0.63	0.19	25.50	0.59	0.19

Grand Means		Summary Statistics	
	35.366 mg/L		24.914 mg/L
Std Dev Btwn Labs			
	3.414 mg/L		3.086 mg/L
<b>Statistics based on 80 of 86 reporting participants</b>			

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

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

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

EXKX4D (X) - Inconsistent in testing between samples, data for sample SA07 are high.

ZBHZQR (X) - Inconsistent in testing between samples, data for sample SA08 are high.

CFRHQG (X) - Inconsistent in testing between samples, data for sample SA07 are low.

64KWRW (X) - Inconsistent in testing between samples, data for sample SA07 are low.

7YK7YQ (X) - Data for both samples are low.

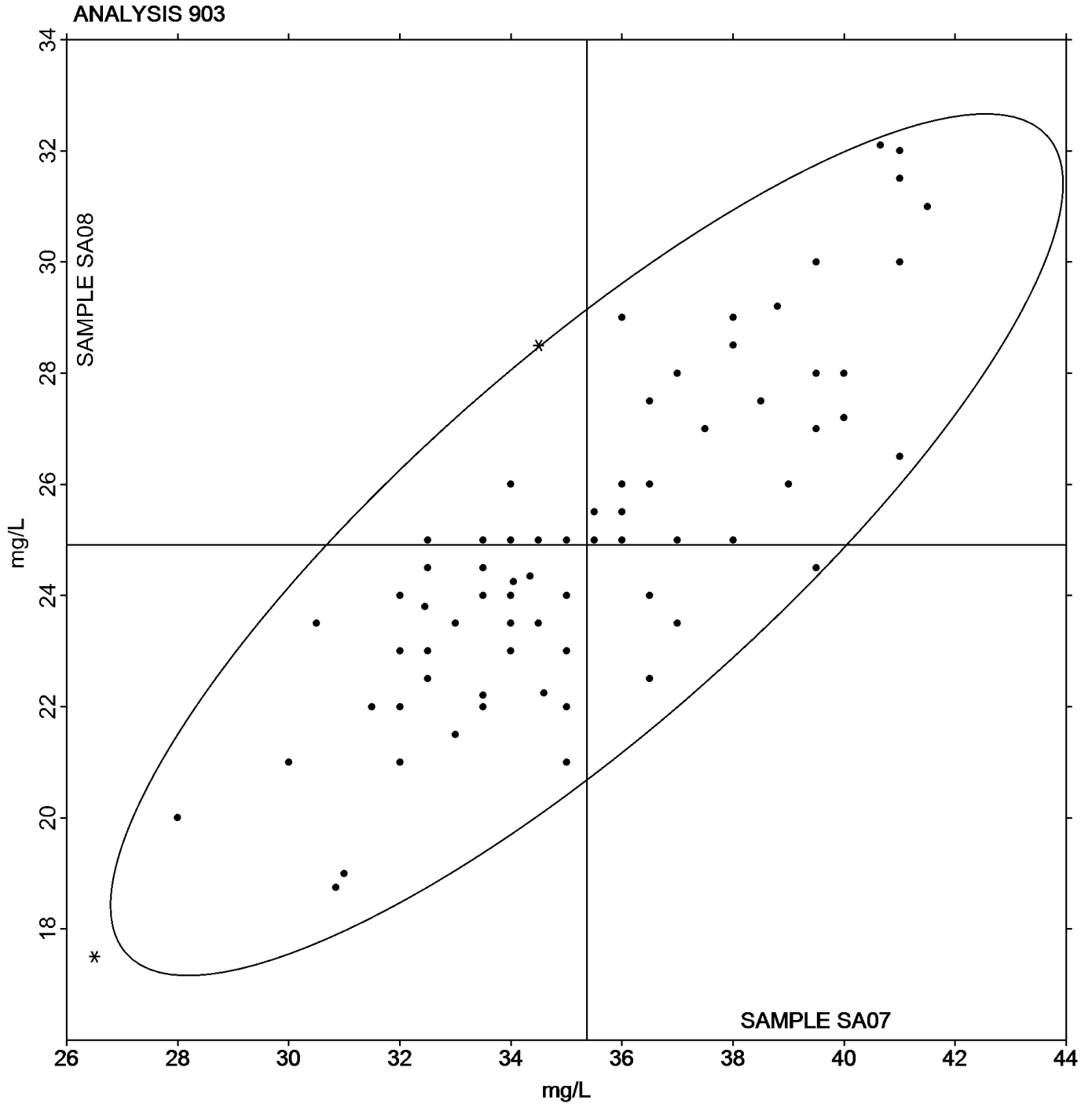


Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA07 <i>Pinot Grigio</i>			Sample SA08 <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	33.283	4.969	-2.08	21.917	3.711	-3.00	3/3
Ripper Method	35.438	3.625	0.07	25.154	3.190	0.24	24/24
Aeration Oxidation (AO) Method	35.168	3.167	-0.20	24.793	2.961	-0.12	32/36
Segmented Flow Analyzer	35.310	3.169	-0.06	24.650	2.289	-0.26	5/5
Enzymatic Method	41.000	0.000	5.63	30.000	0.000	5.09	1/1
Colormetric Analyzer	38.000	4.108	2.63	27.800	3.616	2.89	5/5
Flow Injection Analysis	35.188	2.506	-0.18	23.688	2.235	-1.23	8/10
FTIR	32.250	2.475	-3.12	24.250	1.061	-0.66	2/2



Analysis 903  
Free Sulfur Dioxide





Analysis 904  
Titratable Acidity

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3AYXWP		5.910	-0.154	-0.54	5.895	-0.126	-0.49
3LRELQ		5.985	-0.079	-0.28	6.005	-0.016	-0.06
3PN2GY		6.000	-0.064	-0.23	5.950	-0.071	-0.27
3ULM4V		6.210	0.146	0.51	6.180	0.159	0.62
3ZCR7C		5.900	-0.164	-0.58	5.900	-0.121	-0.47
43BU3R	X	7.700	1.636	5.78	7.700	1.679	6.48
4DRAD7		6.015	-0.049	-0.17	5.965	-0.056	-0.22
4HJL6W		6.035	-0.029	-0.10	5.990	-0.031	-0.12
4NBR4R	*	6.700	0.636	2.24	6.500	0.479	1.85
64KWRW		6.290	0.226	0.80	6.195	0.174	0.67
74FYTK		5.880	-0.184	-0.65	5.830	-0.191	-0.74
76P8XY		6.005	-0.059	-0.21	5.930	-0.091	-0.35
7RXHXT		5.590	-0.474	-1.67	5.585	-0.436	-1.68
7WFHFU	X	7.150	1.086	3.83	5.900	-0.121	-0.47
7WJZL6		5.700	-0.364	-1.29	5.700	-0.321	-1.24
7YK7YQ	X	3.670	-2.394	-8.45	4.295	-1.726	-6.66
897QHT	*	6.185	0.121	0.43	6.300	0.279	1.08
8C2MZT	*	5.240	-0.824	-2.91	5.220	-0.801	-3.09
8RFQMM		5.625	-0.439	-1.55	5.625	-0.396	-1.53
97GKXW	X	7.600	1.536	5.42	7.650	1.629	6.29
9DDEVV		6.030	-0.034	-0.12	5.990	-0.031	-0.12
9ME49P		6.020	-0.044	-0.16	6.100	0.079	0.31
9YVRLW		6.050	-0.014	-0.05	6.050	0.029	0.11
AYTEH2		6.350	0.286	1.01	6.300	0.279	1.08
B9CCJQ	X	6.265	0.201	0.71	6.445	0.424	1.64
BGRW4P		6.300	0.236	0.83	6.300	0.279	1.08
BURXFQ		6.650	0.586	2.07	6.500	0.479	1.85
CFRHQG		5.625	-0.439	-1.55	5.625	-0.396	-1.53
CN4ALL		6.310	0.246	0.87	6.200	0.179	0.69
D4QAPQ		5.690	-0.374	-1.32	5.745	-0.276	-1.06
D9KBPJ		5.800	-0.264	-0.93	5.800	-0.221	-0.85
DF666P		6.050	-0.014	-0.05	6.050	0.029	0.11
DR2BYN		6.500	0.436	1.54	6.350	0.329	1.27
DYWCXE		5.850	-0.214	-0.76	5.780	-0.241	-0.93
EKWVLK	X	6.575	0.511	1.80	6.905	0.884	3.41



Analysis 904  
Titratable Acidity

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EML27H	*	6.170	0.106	0.37	6.300	0.279	1.08
EW87DG	X	4.980	-1.084	-3.83	4.830	-1.191	-4.60
EXKX4D		5.950	-0.114	-0.40	5.950	-0.071	-0.27
EZPPXC		6.550	0.486	1.72	6.500	0.479	1.85
F7WA3W		6.260	0.196	0.69	6.170	0.149	0.58
FJHP7V		6.714	0.650	2.29	6.552	0.531	2.05
FT4XMC	X	7.200	1.136	4.01	6.950	0.929	3.59
G2R8AC		6.100	0.036	0.13	6.000	-0.021	-0.08
G9RKAF		6.100	0.036	0.13	6.000	-0.021	-0.08
HG46RH		5.900	-0.164	-0.58	5.900	-0.121	-0.47
HJTCCE		5.800	-0.264	-0.93	5.750	-0.271	-1.05
HNZZPG		6.100	0.036	0.13	6.100	0.079	0.31
HXPLYK	X	6.920	0.856	3.02	6.955	0.934	3.61
JMNFKD		6.000	-0.064	-0.23	6.000	-0.021	-0.08
JR32PD		5.900	-0.164	-0.58	5.900	-0.121	-0.47
K3TCDB		5.800	-0.264	-0.93	5.700	-0.321	-1.24
K8N7BC		6.100	0.036	0.13	5.900	-0.121	-0.47
KAE8EE	X	5.700	-0.364	-1.29	6.055	0.034	0.13
KYYBDH		5.800	-0.264	-0.93	5.800	-0.221	-0.85
LB3ZQA		5.750	-0.314	-1.11	5.700	-0.321	-1.24
LEN3D9		6.325	0.261	0.92	6.285	0.264	1.02
LQCYGR		6.225	0.161	0.57	6.200	0.179	0.69
LUWW6H		5.855	-0.209	-0.74	5.805	-0.216	-0.83
MVMEH4		6.365	0.301	1.06	6.160	0.139	0.54
NJQQ4F		5.900	-0.164	-0.58	5.900	-0.121	-0.47
P4UTGB		6.050	-0.014	-0.05	6.100	0.079	0.31
PU2H8F		6.205	0.141	0.50	6.075	0.054	0.21
QAUE64		6.450	0.386	1.36	6.250	0.229	0.89
QX3TY9		5.965	-0.099	-0.35	5.880	-0.141	-0.54
RB7TR4		6.500	0.436	1.54	6.450	0.429	1.66
RJE742		5.900	-0.164	-0.58	5.900	-0.121	-0.47
RJY2AA		5.800	-0.264	-0.93	5.800	-0.221	-0.85
RR9DM8		5.600	-0.464	-1.64	5.600	-0.421	-1.62
T9C8U8		6.400	0.336	1.19	6.350	0.329	1.27
TJB3R3		6.400	0.336	1.19	6.400	0.379	1.46



**Analysis 904  
Titratable Acidity**

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UN4GW4	X	7.095	1.031	3.64	7.045	1.024	3.96
UXB2FY		5.950	-0.114	-0.40	5.950	-0.071	-0.27
V8C4W2		6.000	-0.064	-0.23	6.050	0.029	0.11
V9LW84		6.235	0.171	0.60	6.175	0.154	0.60
VUAF68		5.800	-0.264	-0.93	5.800	-0.221	-0.85
VX6AY3		6.305	0.241	0.85	6.305	0.284	1.10
W3WV6V	*	6.050	-0.014	-0.05	5.835	-0.186	-0.72
X2E278		5.900	-0.164	-0.58	5.800	-0.221	-0.85
X86JHX		6.150	0.086	0.30	6.140	0.119	0.46
XG8Y4V		6.150	0.086	0.30	6.050	0.029	0.11
YGMDB6	X	6.500	0.436	1.54	5.900	-0.121	-0.47
YYPEN4		6.400	0.336	1.19	6.200	0.179	0.69
ZBHZQR	X	8.250	2.186	7.72	7.650	1.629	6.29
ZEGEBW		5.900	-0.164	-0.58	5.900	-0.121	-0.47
ZQ96WZ		6.350	0.286	1.01	6.350	0.329	1.27

Grand Means		Summary Statistics	
6.0642 g/L as tartaric acid		6.0207 g/L as tartaric acid	
Std Dev Btwn Labs		0.2590 g/L as tartaric acid	
0.2833 g/L as tartaric acid			
<b>Statistics based on 72 of 85 reporting participants</b>			

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio



Analysis 904  
Titratable Acidity

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

- 43BU3R (X) - Data for both samples are high. Possible Systematic Error.
- EKWVLK (X) - Inconsistent in testing between samples, data for sample SA08 are high.
- 7WFHFU (X) - Inconsistent in testing between samples, data for sample SA07 are high.
- KAE8EE (X) - Inconsistent in testing between samples.
- ZBHZQR (X) - Data for both samples are high. Inconsistent within the determinations of both samples.
- FT4XMC (X) - Data for both samples are high. Possible Systematic Error.
- EW87DG (X) - Data for both samples are low. Possible Systematic Error.
- B9CCJQ (X) - Inconsistent in testing between samples.
- 97GKXW (X) - Data for both samples are high. Possible Systematic Error.
- HXPLYK (X) - Data for both samples are high. Possible Systematic Error.
- YGMDB6 (X) - Inconsistent in testing between samples.
- UN4GW4 (X) - Data for both samples are high. Possible Systematic Error.
- 7YK7YQ (X) - Data for both samples are low.

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

Test Methodology	Sample SA07 <i>Pinot Grigio</i>			Sample SA08 <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	6.500	0.000	0.436	6.450	0.000	0.429	1/2
Autotitration	6.069	0.285	0.004	6.017	0.259	-0.004	48/54
Manual Titration	6.033	0.268	-0.031	6.018	0.260	-0.002	13/19
FTIR	6.089	0.274	0.025	6.044	0.230	0.024	9/9
Segmented Flow Analyzer	5.600	0.000	-0.464	5.600	0.000	-0.421	1/1





Analysis 905  
Volatile Acidity

Fall 2016

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3AYXWP		0.1250	-0.0444	-1.01	0.1250	-0.0470	-1.08
3LRELQ		0.1300	-0.0394	-0.89	0.1350	-0.0370	-0.85
3PN2GY		0.2250	0.0556	1.26	0.2250	0.0530	1.22
3ULM4V		0.1050	-0.0644	-1.46	0.1100	-0.0620	-1.42
3ZCR7C		0.2050	0.0356	0.80	0.2100	0.0380	0.87
43BU3R		0.2000	0.0306	0.69	0.2200	0.0480	1.10
4DRAD7		0.2100	0.0406	0.92	0.2150	0.0430	0.99
4HJL6W	X	0.4500	0.2806	6.35	0.3000	0.1280	2.94
4NBR4R	X	0.0300	-0.1394	-3.15	0.1500	-0.0220	-0.50
64KWRW		0.1750	0.0056	0.13	0.1850	0.0130	0.30
74FYTK		0.1750	0.0056	0.13	0.1800	0.0080	0.18
76P8XY		0.1300	-0.0394	-0.89	0.1400	-0.0320	-0.73
7RXHXT		0.1500	-0.0194	-0.44	0.1550	-0.0170	-0.39
7WFHFU	X	0.2700	0.1006	2.28	0.3300	0.1580	3.63
7WJZL6		0.1600	-0.0094	-0.21	0.1600	-0.0120	-0.28
7YK7YQ		0.1700	0.0006	0.01	0.1650	-0.0070	-0.16
897QHT		0.1330	-0.0364	-0.82	0.1165	-0.0555	-1.27
8C2MZT	X	0.5550	0.3856	8.72	0.5250	0.3530	8.10
8RFQMM		0.1440	-0.0254	-0.58	0.1440	-0.0280	-0.64
97GKXW		0.2100	0.0406	0.92	0.2100	0.0380	0.87
9DDEVV		0.1600	-0.0094	-0.21	0.1600	-0.0120	-0.28
9YVRLW		0.1500	-0.0194	-0.44	0.1750	0.0030	0.07
AYTEH2		0.1550	-0.0144	-0.33	0.1700	-0.0020	-0.05
B9CCJQ		0.1945	0.0251	0.57	0.2020	0.0300	0.69
BGRW4P		0.1225	-0.0469	-1.06	0.1275	-0.0445	-1.02
BURXFQ		0.1050	-0.0644	-1.46	0.1200	-0.0520	-1.19
CFRHQG		0.1450	-0.0244	-0.55	0.1300	-0.0420	-0.96
CN4ALL		0.1250	-0.0444	-1.01	0.1400	-0.0320	-0.73
D4QAPQ		0.1800	0.0106	0.24	0.1900	0.0180	0.41
D9KBPJ		0.1200	-0.0494	-1.12	0.1200	-0.0520	-1.19
DF666P		0.2700	0.1006	2.28	0.2700	0.0980	2.25
DR2BYN		0.1750	0.0056	0.13	0.1750	0.0030	0.07
DYWCXE		0.1130	-0.0564	-1.28	0.1180	-0.0540	-1.24
EML27H		0.2375	0.0681	1.54	0.2325	0.0605	1.39
EW87DG		0.1750	0.0056	0.13	0.1700	-0.0020	-0.05

Analysis 905  
Volatile Acidity

Fall 2016

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EXKX4D		0.2400	0.0706	1.60	0.2400	0.0680	1.56
EZPPXC		0.1600	-0.0094	-0.21	0.1600	-0.0120	-0.28
F7WA3W		0.1400	-0.0294	-0.67	0.1400	-0.0320	-0.73
FT4XMC		0.1200	-0.0494	-1.12	0.1100	-0.0620	-1.42
G2R8AC	X	0.1150	-0.0544	-1.23	0.1750	0.0030	0.07
G9RKAF		0.2000	0.0306	0.69	0.2000	0.0280	0.64
HG46RH		0.1550	-0.0144	-0.33	0.1550	-0.0170	-0.39
HJTCCE		0.1800	0.0106	0.24	0.1800	0.0080	0.18
HXPLYK		0.1250	-0.0444	-1.01	0.1200	-0.0520	-1.19
JMNFKD	*	0.2800	0.1106	2.50	0.2650	0.0930	2.14
JR32PD		0.1900	0.0206	0.47	0.1850	0.0130	0.30
K3TCDB		0.1350	-0.0344	-0.78	0.1400	-0.0320	-0.73
K8N7BC	X	0.4000	0.2306	5.22	0.4000	0.2280	5.23
KAE8EE		0.1650	-0.0044	-0.10	0.1700	-0.0020	-0.05
KYYBDH		0.1800	0.0106	0.24	0.1950	0.0230	0.53
LB3ZQA		0.0850	-0.0844	-1.91	0.0850	-0.0870	-2.00
LEN3D9		0.1475	-0.0219	-0.50	0.1400	-0.0320	-0.73
LQCYGR		0.1450	-0.0244	-0.55	0.1550	-0.0170	-0.39
LUWW6H		0.1850	0.0156	0.35	0.1800	0.0080	0.18
P4UTGB		0.1600	-0.0094	-0.21	0.1700	-0.0020	-0.05
PECEL6	X	0.1150	-0.0544	-1.23	0.1500	-0.0220	-0.50
PU2H8F		0.1150	-0.0544	-1.23	0.1200	-0.0520	-1.19
QAUE64		0.1850	0.0156	0.35	0.2000	0.0280	0.64
QX3TY9		0.2150	0.0456	1.03	0.2150	0.0430	0.99
RB7TR4		0.1450	-0.0244	-0.55	0.1650	-0.0070	-0.16
RJE742	X	0.2350	0.0656	1.48	0.2000	0.0280	0.64
RJY2AA		0.1400	-0.0294	-0.67	0.1350	-0.0370	-0.85
T9C8U8		0.1200	-0.0494	-1.12	0.1100	-0.0620	-1.42
TJB3R3		0.1950	0.0256	0.58	0.2100	0.0380	0.87
UN4GW4		0.1650	-0.0044	-0.10	0.1650	-0.0070	-0.16
V8C4W2		0.1800	0.0106	0.24	0.1800	0.0080	0.18
V9LW84		0.1450	-0.0244	-0.55	0.1500	-0.0220	-0.50
VUAF68		0.2150	0.0456	1.03	0.2350	0.0630	1.45
VX6AY3	X	0.2400	0.0706	1.60	0.1800	0.0080	0.18
WHCW48	X	0.2700	0.1006	2.28	0.2300	0.0580	1.33



**Analysis 905  
Volatile Acidity**

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
X2E278		0.2300	0.0606	1.37	0.2300	0.0580	1.33
X86JHX		0.1200	-0.0494	-1.12	0.1200	-0.0520	-1.19
XG8Y4V		0.1700	0.0006	0.01	0.1750	0.0030	0.07
YGMDB6		0.2100	0.0406	0.92	0.2050	0.0330	0.76
YYPEN4	*	0.2600	0.0906	2.05	0.2400	0.0680	1.56
ZBHZQR	*	0.3000	0.1306	2.95	0.2950	0.1230	2.82
ZEGEBW		0.1750	0.0056	0.13	0.1850	0.0130	0.30
ZQ96WZ		0.1700	0.0006	0.01	0.1750	0.0030	0.07

Grand Means		Summary Statistics	
	0.16944 g/L as acetic acid		0.17199 g/L as acetic acid
Std Dev Btwn Labs			
	0.04420 g/L as acetic acid		0.04356 g/L as acetic acid
<b>Statistics based on 68 of 78 reporting participants</b>			

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

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

- VX6AY3 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- K8N7BC (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- 4HJL6W (X) - Data for both samples are high. Inconsistent within the determinations of sample SA07.
- 7WFHFU (X) - Inconsistent in testing between samples, data for sample SA08 are high. Inconsistent within the determinations of both samples.
- 8C2MZT (X) - Data for both samples are high. Inconsistent within the determinations of sample SA07.
- RJE742 (X) - Inconsistent in testing between samples.
- PECEL6 (X) - Inconsistent in testing between samples.
- G2R8AC (X) - Inconsistent in testing between samples.
- WHCW48 (X) - Inconsistent in testing between samples.
- 4NBR4R (X) - Inconsistent in testing between samples, data for sample SA07 are low.



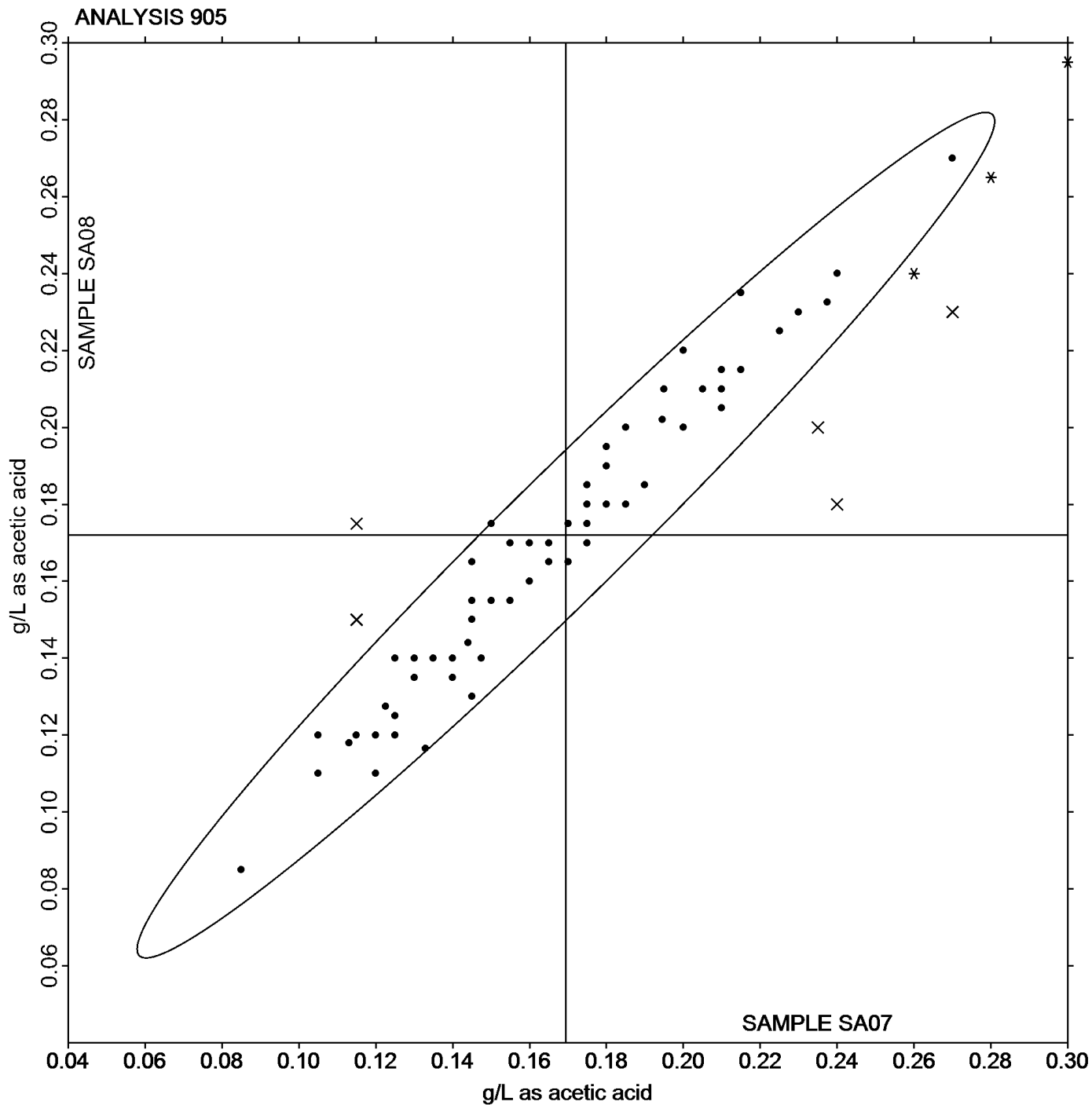
**Analysis 905  
Volatile Acidity**

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

Test Methodology	Sample SA07 <i>Pinot Grigio</i>			Sample SA08 <i>Pinot Grigio</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Cash Still method	0.217	0.052	0.0475	0.214	0.051	0.0418	14/20
Enzymatic method	0.146	0.027	-0.0234	0.149	0.027	-0.0225	35/38
HPLC	0.195	0.000	0.0251	0.202	0.000	0.0300	1/1
GC	0.145	0.025	-0.0248	0.140	0.028	-0.0323	3/3
Seg. Flow / Colorimetric Analyzer	0.188	0.019	0.0181	0.198	0.022	0.0255	8/8
FTIR	0.178	0.044	0.0084	0.181	0.042	0.0094	7/8



Analysis 905  
Volatile Acidity





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #054

## Analysis 906 Specific Gravity

Fall 2016

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3AYXWP	*	0.9989	0.0026	2.79	0.9988	0.0025	2.75
3LRELQ		0.9969	0.0006	0.68	0.9969	0.0006	0.71
3PN2GY		0.9967	0.0004	0.42	0.9965	0.0002	0.22
3ZCR7C		0.9966	0.0003	0.31	0.9965	0.0002	0.27
43BU3R	X	0.9945	-0.0018	-1.94	0.9925	-0.0037	-4.11
4DRAD7		0.9966	0.0003	0.31	0.9964	0.0001	0.16
4HJL6W		0.9954	-0.0009	-0.93	0.9955	-0.0008	-0.83
4NBR4R	X	0.9850	-0.0113	-12.13	0.9830	-0.0133	-14.59
64KWRW		0.9967	0.0004	0.42	0.9967	0.0004	0.44
74FYTK		0.9966	0.0003	0.36	0.9966	0.0003	0.33
76P8XY		0.9956	-0.0007	-0.77	0.9957	-0.0006	-0.66
7RXHXT	X	0.9913	-0.0050	-5.40	0.9921	-0.0042	-4.63
7WJZL6		0.9966	0.0003	0.31	0.9965	0.0003	0.31
7YK7YQ		0.9966	0.0004	0.40	0.9966	0.0004	0.40
8C2MZT		0.9967	0.0004	0.42	0.9967	0.0004	0.49
8RFQMM		0.9960	-0.0003	-0.28	0.9960	-0.0003	-0.28
97GKXW		0.9966	0.0003	0.37	0.9966	0.0004	0.39
9ME49P		0.9971	0.0008	0.85	0.9970	0.0007	0.77
9YVRLW		0.9964	0.0001	0.14	0.9964	0.0002	0.21
AYTEH2	X	0.8000	-0.1963	-211.43	0.8000	-0.1963	-216.06
B9CCJQ		0.9967	0.0004	0.44	0.9967	0.0004	0.46
BURXFQ		0.9948	-0.0015	-1.58	0.9947	-0.0016	-1.71
CFRHQG		0.9950	-0.0013	-1.42	0.9949	-0.0014	-1.49
CN4ALL		0.9966	0.0003	0.35	0.9966	0.0003	0.37
D4QAPQ		0.9965	0.0002	0.25	0.9965	0.0002	0.27
D9KBPI		0.9967	0.0005	0.52	0.9967	0.0004	0.44
DR2BYN		0.9968	0.0005	0.58	0.9967	0.0004	0.49
DYWCXE		0.9965	0.0002	0.25	0.9967	0.0004	0.44
EKWVLK		0.9946	-0.0017	-1.79	0.9945	-0.0018	-1.93
EML27H	*	0.9965	0.0002	0.22	0.9967	0.0005	0.50
EW87DG		0.9965	0.0002	0.24	0.9965	0.0002	0.24
EXKX4D		0.9960	-0.0003	-0.28	0.9959	-0.0004	-0.39
F7WA3W		0.9967	0.0004	0.47	0.9967	0.0004	0.49
FJHP7V	X	0.9895	-0.0068	-7.32	0.9918	-0.0045	-4.94
FT4XMC		0.9950	-0.0013	-1.42	0.9949	-0.0014	-1.49



Analysis 906  
Specific Gravity

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
G2R8AC	X	0.9849	-0.0113	-12.21	0.9849	-0.0113	-12.49
G9RKAF	X	0.9958	-0.0005	-0.50	0.9967	0.0004	0.44
HG46RH	X	0.9955	-0.0007	-0.77	0.9960	-0.0002	-0.26
HJTCCE		0.9948	-0.0014	-1.53	0.9948	-0.0015	-1.60
HNZZPG		0.9967	0.0004	0.47	0.9967	0.0004	0.49
HXPLYK		0.9960	-0.0003	-0.28	0.9960	-0.0003	-0.28
JMNFKD	X	0.9947	-0.0016	-1.69	0.9941	-0.0022	-2.37
JR32PD		0.9965	0.0002	0.25	0.9965	0.0002	0.22
K3TCDB		0.9964	0.0002	0.17	0.9964	0.0002	0.18
K8N7BC	*	0.9936	-0.0027	-2.87	0.9936	-0.0027	-2.92
KAE8EE		0.9970	0.0007	0.79	0.9970	0.0007	0.82
KYYBDH		0.9970	0.0007	0.79	0.9970	0.0007	0.82
LEN3D9		0.9949	-0.0014	-1.47	0.9950	-0.0013	-1.38
LQCYGR		0.9965	0.0002	0.27	0.9965	0.0002	0.25
LUWW6H		0.9967	0.0004	0.42	0.9965	0.0002	0.27
MVMEH4		0.9965	0.0002	0.25	0.9966	0.0003	0.33
NJQQ4F		0.9975	0.0012	1.33	0.9975	0.0012	1.37
PECEL6		0.9966	0.0004	0.40	0.9966	0.0004	0.43
QAUE64		0.9968	0.0005	0.58	0.9968	0.0005	0.56
QX3TY9	*	0.9939	-0.0024	-2.55	0.9939	-0.0024	-2.64
RJE742		0.9968	0.0005	0.52	0.9968	0.0005	0.55
RJY2AA		0.9965	0.0002	0.26	0.9965	0.0003	0.28
RR9DM8		0.9966	0.0003	0.31	0.9966	0.0003	0.38
T9C8U8	X	0.9802	-0.0160	-17.27	0.9873	-0.0090	-9.87
TJB3R3		0.9967	0.0004	0.44	0.9967	0.0004	0.47
UN4GW4		0.9972	0.0009	1.01	0.9970	0.0007	0.82
UXB2FY		0.9966	0.0003	0.33	0.9965	0.0003	0.31
V8C4W2		0.9975	0.0012	1.28	0.9974	0.0011	1.21
V9LW84		0.9964	0.0001	0.15	0.9964	0.0001	0.16
VUAF68	*	0.9946	-0.0017	-1.85	0.9948	-0.0015	-1.65
VX6AY3		0.9966	0.0003	0.31	0.9965	0.0002	0.27
W3WV6V	*	0.9945	-0.0017	-1.86	0.9947	-0.0015	-1.67
WHQMPW	X	0.9720	-0.0242	-26.12	0.9960	-0.0002	-0.26
X86JHX	X	0.9965	0.0002	0.25	0.9961	-0.0001	-0.16
XG8Y4V	X	0.9909	-0.0053	-5.75	0.9902	-0.0060	-6.63



**Analysis 906  
Specific Gravity**

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
YYPEN4		0.9958	-0.0005	-0.51	0.9958	-0.0004	-0.45
ZBHZQR	X	0.9007	-0.0955	-102.93	0.9007	-0.0955	-105.18

Grand Means	Summary Statistics
0.99626 sp gr 20/20 C	0.99625 sp gr 20/20 C
Std Dev Btwn Labs	
0.00093 sp gr 20/20 C	0.00091 sp gr 20/20 C
<b>Statistics based on 58 of 72 reporting participants</b>	

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

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

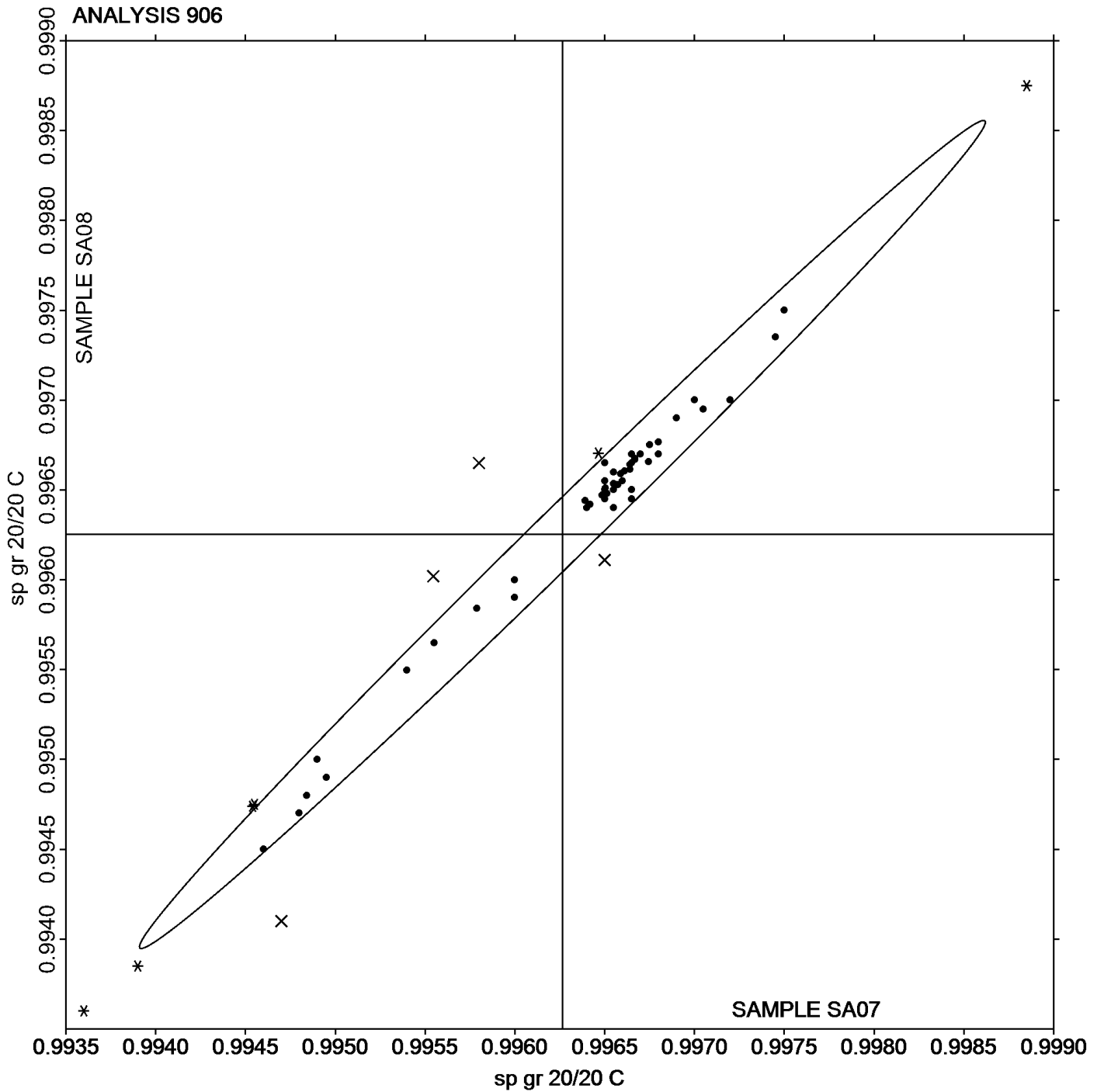
- FJHP7V (X) - Data for both samples are low. Inconsistent within the determinations of both samples.
- AYTEH2 (X) - Extreme data.
- 43BU3R (X) - Data for sample SA08 are low.
- HG46RH (X) - Inconsistent in testing between samples.
- T9C8U8 (X) - Data for both samples are low. Inconsistent within the determinations of both samples.
- 7RXHXT (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of both samples.
- ZBHZQR (X) - Data for both samples are low.
- X86JHX (X) - Inconsistent in testing between samples.
- XG8Y4V (X) - Data for both samples are low. Possible Systematic Error.
- WHQMPW (X) - Inconsistent in testing between samples, data for sample SA07 are low. Inconsistent within the - determinations of both samples.
- G2R8AC (X) - Data for both samples are low.
- G9RKAF (X) - Inconsistent in testing between samples.
- JMNFKD (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA08.
- 4NBR4R (X) - Data for both samples are low.





Analysis 906  
Specific Gravity

Fall 2016





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #054

## Analysis 907

Fall 2016

### pH

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3AYXWP	*	3.350	0.119	2.42	3.370	0.135	2.54
3LRELQ		3.265	0.034	0.69	3.280	0.045	0.84
3PN2GY		3.245	0.014	0.28	3.245	0.010	0.18
3ULM4V		3.205	-0.026	-0.54	3.210	-0.025	-0.48
3ZCR7C		3.260	0.029	0.58	3.260	0.025	0.46
43BU3R		3.265	0.034	0.69	3.270	0.035	0.65
4DRAD7		3.290	0.059	1.20	3.295	0.060	1.12
4HJL6W	X	3.274	0.043	0.87	3.244	0.008	0.15
4NBR4R		3.280	0.049	0.99	3.290	0.055	1.03
64KWRW		3.250	0.019	0.38	3.255	0.020	0.37
74FYTK	*	3.160	-0.071	-1.45	3.135	-0.100	-1.90
76P8XY	X	3.205	-0.026	-0.54	3.255	0.020	0.37
7RXHXT		3.205	-0.026	-0.54	3.210	-0.025	-0.48
7WFHFU		3.215	-0.016	-0.33	3.205	-0.030	-0.58
7WJZL6		3.220	-0.011	-0.23	3.220	-0.015	-0.29
7YK7YQ		3.175	-0.056	-1.15	3.170	-0.065	-1.24
897QHT		3.210	-0.021	-0.43	3.220	-0.015	-0.29
8C2MZT	X	3.190	-0.041	-0.84	3.240	0.005	0.09
8RFQMM		3.133	-0.098	-2.00	3.133	-0.102	-1.94
97GKXW		3.220	-0.011	-0.23	3.225	-0.010	-0.20
9DDEVV		3.240	0.009	0.18	3.240	0.005	0.09
9ME49P		3.230	-0.001	-0.03	3.235	0.000	-0.01
9YVRLW		3.245	0.014	0.28	3.235	0.000	-0.01
AYTEH2		3.255	0.024	0.48	3.250	0.015	0.27
B9CCJQ		3.305	0.074	1.50	3.315	0.080	1.50
BGRW4P		3.305	0.074	1.50	3.320	0.085	1.60
BURXFQ		3.235	0.004	0.08	3.245	0.010	0.18
CFRHQG	*	3.115	-0.116	-2.37	3.125	-0.110	-2.09
CN4ALL		3.235	0.004	0.08	3.250	0.015	0.27
D4QAPQ		3.220	-0.011	-0.23	3.230	-0.005	-0.10
D9KBPJ		3.225	-0.006	-0.13	3.220	-0.015	-0.29
DF666P		3.300	0.069	1.40	3.295	0.060	1.12
DR2BYN		3.200	-0.031	-0.64	3.215	-0.020	-0.39
DYWCXE		3.200	-0.031	-0.64	3.200	-0.035	-0.67
EKWVLK	X	3.268	0.037	0.75	3.182	-0.054	-1.02



# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #054

## Analysis 907

Fall 2016

### pH

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EML27H		3.210	-0.021	-0.43	3.210	-0.025	-0.48
EW87DG	*	3.200	-0.031	-0.64	3.175	-0.060	-1.14
EXKX4D		3.120	-0.111	-2.27	3.120	-0.115	-2.18
EZPPXC		3.220	-0.011	-0.23	3.220	-0.015	-0.29
F7WA3W		3.215	-0.016	-0.33	3.225	-0.010	-0.20
FT4XMC		3.230	-0.001	-0.03	3.240	0.005	0.09
G2R8AC		3.200	-0.031	-0.64	3.205	-0.030	-0.58
G9RKAF		3.220	-0.011	-0.23	3.230	-0.005	-0.10
HG46RH		3.260	0.029	0.58	3.260	0.025	0.46
HJTCCE		3.250	0.019	0.38	3.245	0.010	0.18
HXPLYK		3.175	-0.056	-1.15	3.180	-0.055	-1.05
JMNFKD		3.255	0.024	0.48	3.263	0.028	0.52
JR32PD		3.290	0.059	1.20	3.290	0.055	1.03
K3TCDB		3.230	-0.001	-0.03	3.250	0.015	0.27
K8N7BC		3.240	0.009	0.18	3.240	0.005	0.09
KAE8EE	*	3.120	-0.111	-2.27	3.135	-0.100	-1.90
KYYBDH		3.220	-0.011	-0.23	3.210	-0.025	-0.48
LB3ZQA		3.210	-0.021	-0.43	3.225	-0.010	-0.20
LEN3D9	*	3.330	0.099	2.01	3.355	0.120	2.26
LQCYGR		3.225	-0.006	-0.13	3.230	-0.005	-0.10
LUWW6H		3.220	-0.011	-0.23	3.225	-0.010	-0.20
MVMEH4		3.196	-0.036	-0.73	3.210	-0.025	-0.48
NJQQ4F		3.235	0.004	0.08	3.230	-0.005	-0.10
P4UTGB		3.235	0.004	0.08	3.240	0.005	0.09
PECEL6		3.200	-0.031	-0.64	3.180	-0.055	-1.05
PU2H8F		3.270	0.039	0.79	3.280	0.045	0.84
QAUE64		3.205	-0.026	-0.54	3.205	-0.030	-0.58
QX3TY9	X	3.225	-0.006	-0.13	2.225	-1.010	-19.09
RB7TR4		3.275	0.044	0.89	3.270	0.035	0.65
RJE742		3.220	-0.011	-0.23	3.230	-0.005	-0.10
RJY2AA		3.240	0.009	0.18	3.250	0.015	0.27
T9C8U8		3.215	-0.016	-0.33	3.220	-0.015	-0.29
TJB3R3		3.310	0.079	1.60	3.310	0.075	1.41
UN4GW4		3.230	-0.001	-0.03	3.240	0.005	0.09
UXB2FY		3.220	-0.011	-0.23	3.230	-0.005	-0.10



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

**Report #054**  
**Fall 2016**

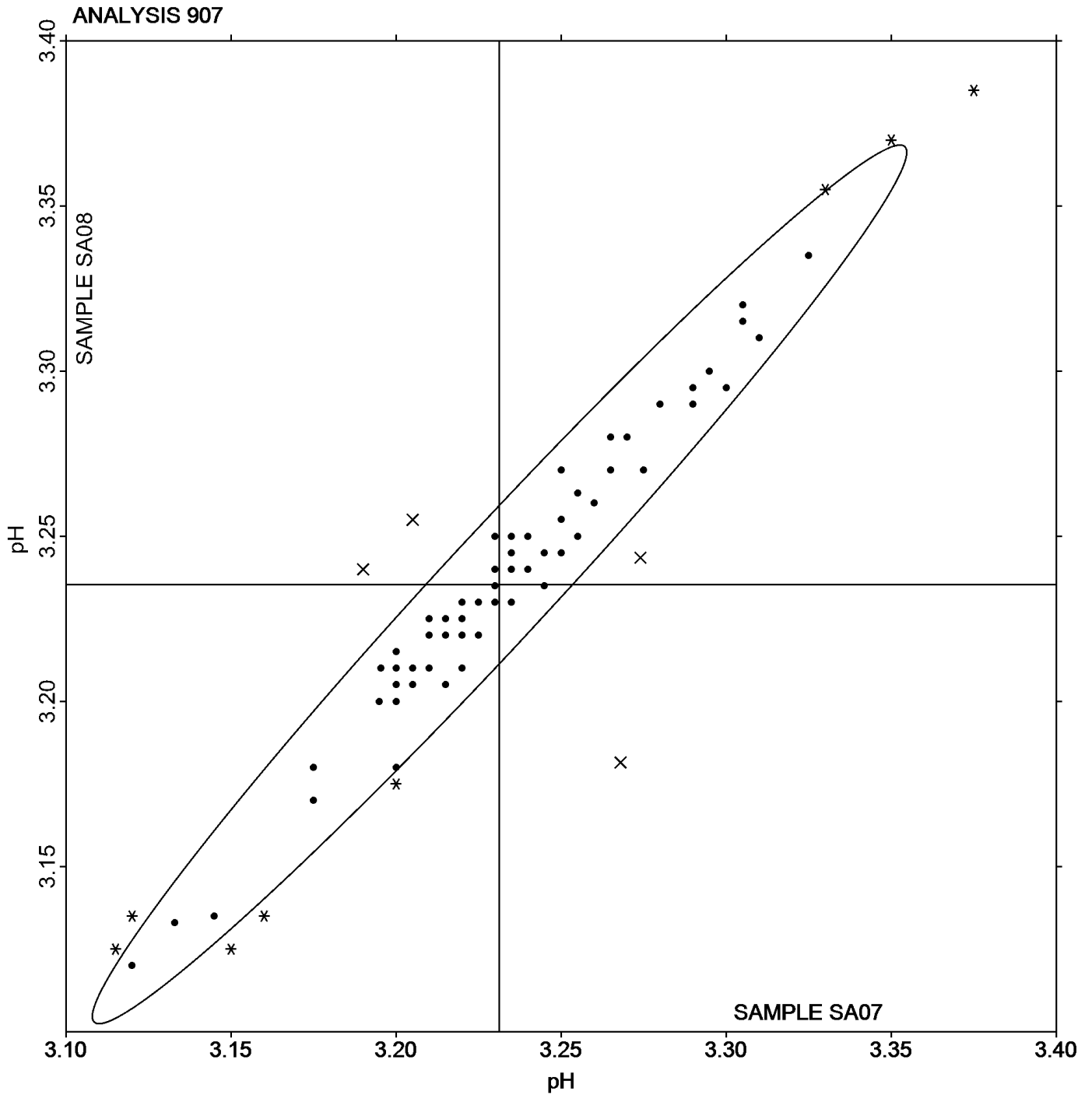
WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
V8C4W2		3.250	0.019	0.38	3.270	0.035	0.65
V9LW84		3.230	-0.001	-0.03	3.230	-0.005	-0.10
VUAF68		3.210	-0.021	-0.43	3.225	-0.010	-0.20
VX6AY3	*	3.375	0.144	2.93	3.385	0.150	2.82
W3WV6V	*	3.150	-0.081	-1.66	3.125	-0.110	-2.09
WHCW48		3.265	0.034	0.69	3.280	0.045	0.84
X2E278		3.200	-0.031	-0.64	3.210	-0.025	-0.48
X86JHX		3.195	-0.036	-0.74	3.200	-0.035	-0.67
XG8Y4V		3.210	-0.021	-0.43	3.220	-0.015	-0.29
YGMDB6		3.145	-0.086	-1.76	3.135	-0.100	-1.90
YYPEN4		3.240	0.009	0.18	3.240	0.005	0.09
ZBHZQR		3.325	0.094	1.91	3.335	0.100	1.88
ZEGBW		3.295	0.064	1.30	3.300	0.065	1.22
ZQ96WZ		3.235	0.004	0.08	3.250	0.015	0.27

<b>Grand Means</b>		<b>Summary Statistics</b>	
	3.2313 pH		3.2355 pH
<b>Std Dev Btwn Labs</b>			
	0.0491 pH		0.0529 pH
<b>Statistics based on 79 of 84 reporting participants</b>			

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

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

- 4HJL6W (X) - Inconsistent in testing between samples.
- EKWVLK (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA07.
- 8C2MZT (X) - Inconsistent in testing between samples.
- QX3TY9 (X) - Inconsistent in testing between samples, data for sample SA08 are low.
- 76P8XY (X) - Inconsistent in testing between samples.





Analysis 908  
Residual Sugar

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
74FYTK		11.43	0.40	0.36	10.96	0.04	0.04
8RFQMM		11.50	0.47	0.42	11.50	0.59	0.56
B9CCJQ		11.82	0.79	0.72	11.52	0.60	0.57
CFRHQG		10.87	-0.17	-0.15	10.87	-0.04	-0.04
CN4ALL		10.80	-0.23	-0.21	11.10	0.19	0.18
DYWCXE	*	11.00	-0.03	-0.03	9.95	-0.96	-0.91
EW87DG		9.47	-1.56	-1.43	9.31	-1.61	-1.52
EXKX4D		11.91	0.88	0.80	11.79	0.88	0.83
G2R8AC		11.85	0.82	0.74	11.95	1.04	0.99
HJTCCE		10.80	-0.23	-0.21	10.80	-0.11	-0.11
HXPLYK		10.20	-0.83	-0.76	10.15	-0.76	-0.72
JMNFKD		8.24	-2.79	-2.55	8.30	-2.61	-2.48
PECEL6		11.20	0.17	0.15	10.80	-0.11	-0.11
QX3TY9		13.05	2.01	1.83	12.87	1.95	1.85
RJE742		10.60	-0.43	-0.40	10.70	-0.21	-0.20
RR9DM8		11.50	0.47	0.42	11.70	0.79	0.75
UXB2FY		9.67	-1.36	-1.24	9.91	-1.00	-0.95
YYPEN4		12.30	1.27	1.15	11.80	0.89	0.84
ZEGEBW		11.45	0.42	0.38	11.35	0.44	0.42

Grand Means		Summary Statistics	
	11.034 g/L		10.911 g/L
Std Dev Btwn Labs			
	1.096 g/L		1.054 g/L

**Statistics based on 19 of 19 reporting participants**

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio



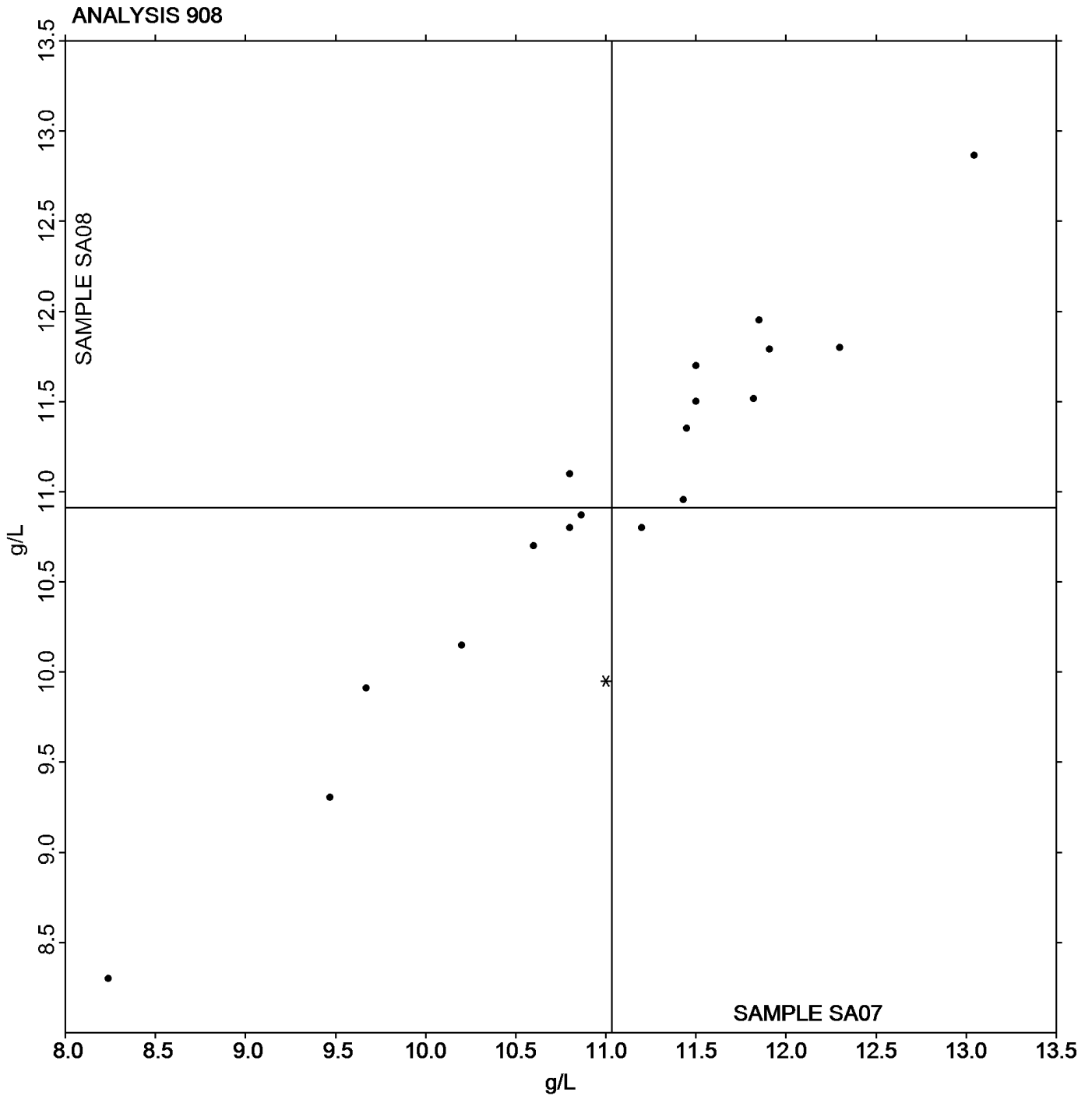
**Analysis 908  
Residual Sugar**

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

Test Methodology	Sample SA07 <i>Pinot Grigio</i>			Sample SA08 <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	10.200	0.000	-0.83	10.150	0.000	-0.76	1/1
Cu Reduction Method	11.041	0.763	0.01	10.699	0.808	-0.21	7/7
HPLC	8.240	0.000	-2.79	8.300	0.000	-2.61	1/1
Segmented Flow	11.500	0.000	0.47	11.700	0.000	0.79	1/1
FTIR	11.594	0.848	0.56	11.544	0.711	0.63	8/8
Other _____	9.670	0.000	-1.36	9.910	0.000	-1.00	1/1



Analysis 908  
Residual Sugar



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





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #054

## Analysis 909

Fall 2016

### L-Malic Acid

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3AYXWP	*	2.180	-0.175	-1.06	2.030	-0.307	-1.72
3LRELQ		2.239	-0.117	-0.71	2.254	-0.083	-0.46
3PN2GY		2.220	-0.135	-0.82	2.220	-0.117	-0.66
3ULM4V		1.970	-0.385	-2.33	1.970	-0.367	-2.06
3ZCR7C		2.345	-0.010	-0.06	2.305	-0.032	-0.18
43BU3R		2.545	0.190	1.15	2.485	0.148	0.83
4DRAD7		2.335	-0.020	-0.12	2.325	-0.012	-0.07
4NBR4R	X	1.150	-1.205	-7.30	1.140	-1.197	-6.72
64KWRW		2.325	-0.030	-0.18	2.345	0.008	0.05
74FYTK		2.200	-0.155	-0.94	2.185	-0.152	-0.85
76P8XY		2.535	0.180	1.09	2.565	0.228	1.28
7RXHXT		2.429	0.073	0.45	2.395	0.058	0.32
7WJZL6		2.414	0.058	0.35	2.400	0.063	0.35
7YK7YQ		1.953	-0.402	-2.44	1.916	-0.421	-2.36
897QHT	X	1.020	-1.335	-8.09	1.018	-1.319	-7.40
8C2MZT		2.235	-0.120	-0.73	2.235	-0.102	-0.57
8RFQMM		2.325	-0.030	-0.18	2.353	0.016	0.09
97GKXW	*	1.895	-0.460	-2.79	1.795	-0.542	-3.04
9DDEVV		2.110	-0.245	-1.49	2.090	-0.247	-1.39
9ME49P		2.491	0.136	0.82	2.518	0.181	1.01
9YVRLW		2.495	0.140	0.85	2.490	0.153	0.86
AYTEH2		2.355	0.000	0.00	2.335	-0.002	-0.01
B9CCJQ	*	2.247	-0.109	-0.66	2.082	-0.255	-1.43
BGRW4P		2.345	-0.010	-0.06	2.210	-0.127	-0.71
BURXFQ		2.390	0.034	0.21	2.424	0.087	0.49
CFRHQG		2.510	0.155	0.94	2.485	0.148	0.83
CN4ALL		2.690	0.335	2.03	2.670	0.333	1.87
D4QAPQ		2.705	0.350	2.12	2.705	0.368	2.07
D9KBPJ		2.358	0.002	0.02	2.305	-0.032	-0.18
DF666P		2.560	0.205	1.24	2.505	0.168	0.94
DR2BYN		2.385	0.030	0.18	2.380	0.043	0.24
DYWCXE		2.289	-0.067	-0.40	2.316	-0.021	-0.12
EML27H		2.560	0.205	1.24	2.554	0.217	1.22
EZPPXC		2.454	0.099	0.60	2.422	0.085	0.48
F7WA3W		2.215	-0.140	-0.85	2.155	-0.182	-1.02

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #054****Analysis 909****Fall 2016****L-Malic Acid**

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FT4XMC	X	2.020	-0.335	-2.03	0.045	-2.292	-12.86
G2R8AC		2.270	-0.085	-0.52	2.290	-0.047	-0.26
G9RKAF		2.300	-0.055	-0.33	2.330	-0.007	-0.04
HG46RH		2.140	-0.215	-1.30	2.110	-0.227	-1.27
HJTCCE		2.470	0.115	0.70	2.437	0.100	0.56
HXPLYK	X	1.255	-1.100	-6.67	1.255	-1.082	-6.07
JR32PD		2.335	-0.020	-0.12	2.305	-0.032	-0.18
K3TCDB		2.446	0.091	0.55	2.434	0.097	0.54
K8N7BC	*	2.341	-0.015	-0.09	2.193	-0.144	-0.81
KAE8EE		2.230	-0.125	-0.76	2.280	-0.057	-0.32
KYYBDH		2.425	0.070	0.42	2.390	0.053	0.30
LB3ZQA		2.550	0.195	1.18	2.495	0.158	0.89
LEN3D9		2.374	0.019	0.12	2.413	0.076	0.43
LQCYGR		2.300	-0.055	-0.33	2.275	-0.062	-0.35
LUWW6H		2.465	0.110	0.67	2.475	0.138	0.78
P4UTGB		2.447	0.091	0.55	2.438	0.101	0.57
PECEL6		2.400	0.045	0.27	2.450	0.113	0.63
PU2H8F		2.140	-0.215	-1.30	2.120	-0.217	-1.22
QAUE64		2.367	0.011	0.07	2.406	0.069	0.39
QX3TY9		2.260	-0.095	-0.58	2.190	-0.147	-0.82
RB7TR4		2.445	0.090	0.55	2.465	0.128	0.72
RJE742		2.320	-0.035	-0.21	2.300	-0.037	-0.21
T9C8U8		2.655	0.300	1.82	2.680	0.343	1.93
TJB3R3		2.625	0.270	1.64	2.545	0.208	1.17
UN4GW4		2.250	-0.105	-0.64	2.265	-0.072	-0.40
UXB2FY		2.207	-0.148	-0.90	2.249	-0.088	-0.49
V8C4W2		2.344	-0.011	-0.07	2.339	0.002	0.01
V9LW84		2.195	-0.160	-0.97	2.195	-0.142	-0.80
VUAF68		2.566	0.210	1.28	2.625	0.288	1.62
VX6AY3		2.120	-0.235	-1.42	2.105	-0.232	-1.30
WHCW48		2.495	0.140	0.85	2.515	0.178	1.00
X86JHX		2.295	-0.060	-0.36	2.300	-0.037	-0.21
XG8Y4V		2.500	0.145	0.88	2.500	0.163	0.92
YGMDB6		2.345	-0.010	-0.06	2.285	-0.052	-0.29
YYPEN4		2.440	0.085	0.52	2.340	0.003	0.02



WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
ZBHZQR	X	1.705	-0.650	-3.94	1.595	-0.742	-4.16
ZQ96WZ		2.426	0.070	0.43	2.411	0.074	0.41

Grand Means	Summary Statistics
2.3550 g/L	2.3369 g/L
Std Dev Btwn Labs	
0.1650 g/L	0.1782 g/L
<b>Statistics based on 67 of 72 reporting participants</b>	

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

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

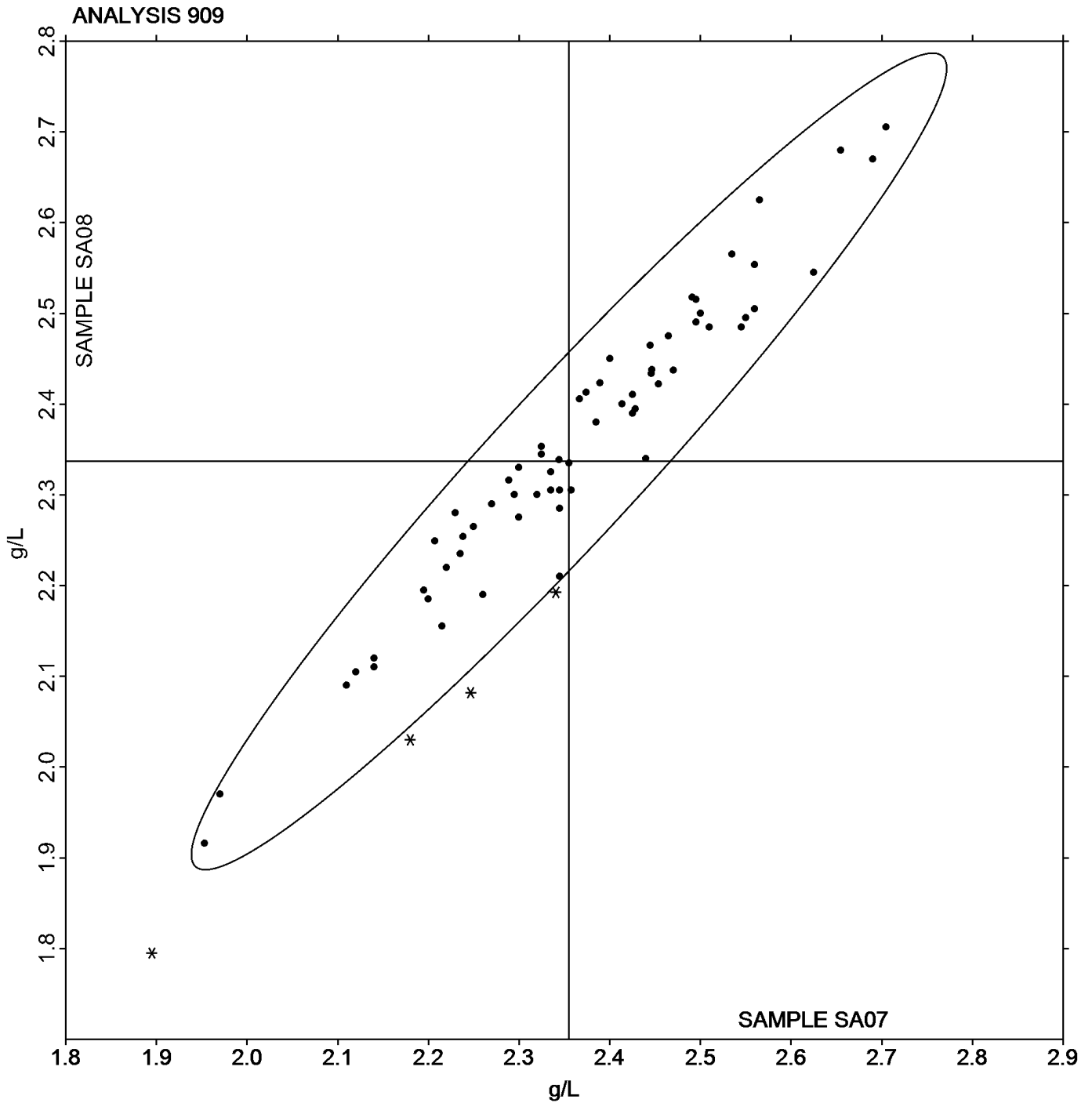
ZBHZQR (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample SA08.

FT4XMC (X) - Inconsistent in testing between samples, data for sample SA08 are low.

897QHT (X) - Data for both samples are low.

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

4NBR4R (X) - Data for both samples are low.





Analysis 910

Glucose + Fructose

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3AYXWP	X	8.73	-1.90	-3.47	9.12	-1.43	-2.62
3LRELQ		10.55	-0.08	-0.15	10.65	0.10	0.19
3PN2GY		10.50	-0.13	-0.24	10.20	-0.35	-0.64
3ULM4V		11.45	0.82	1.48	11.45	0.90	1.66
3ZCR7C		10.75	0.12	0.21	10.75	0.20	0.37
43BU3R		10.96	0.33	0.59	10.68	0.13	0.23
4DRAD7		10.62	-0.02	-0.04	10.61	0.06	0.11
4NBR4R		10.50	-0.13	-0.24	10.50	-0.05	-0.09
64KWRW		10.72	0.08	0.15	10.71	0.16	0.30
74FYTK		9.98	-0.66	-1.20	9.77	-0.78	-1.42
76P8XY		10.46	-0.17	-0.32	10.49	-0.06	-0.10
7RXHXT		11.15	0.52	0.94	11.00	0.45	0.83
7WJZL6		11.35	0.72	1.30	11.55	1.00	1.84
7YK7YQ		11.10	0.47	0.85	11.21	0.66	1.22
897QHT		10.31	-0.32	-0.59	10.28	-0.27	-0.50
8C2MZT	X	9.10	-1.53	-2.79	7.90	-2.65	-4.85
97GKXW	*	9.45	-1.18	-2.16	9.75	-0.80	-1.46
9DDEVV		10.80	0.17	0.30	10.80	0.25	0.46
9ME49P	X	11.03	0.39	0.71	5.56	-4.99	-9.15
9YVRLW		10.40	-0.23	-0.43	10.35	-0.20	-0.36
AYTEH2		10.25	-0.38	-0.70	10.30	-0.25	-0.45
B9CCJQ		9.95	-0.69	-1.25	9.80	-0.75	-1.37
BGRW4P		10.81	0.18	0.32	10.52	-0.03	-0.05
BURXFQ		10.15	-0.48	-0.88	9.98	-0.57	-1.05
CFRHQG		11.10	0.46	0.84	11.00	0.45	0.83
CN4ALL	X	11.10	0.47	0.85	11.95	1.40	2.57
D4QAPQ		10.90	0.27	0.48	10.88	0.33	0.61
D9KBPJ	*	10.60	-0.03	-0.06	10.10	-0.45	-0.82
DF666P		11.13	0.50	0.90	10.76	0.21	0.38
DR2BYN		10.17	-0.47	-0.85	10.25	-0.30	-0.54
EML27H		10.54	-0.10	-0.18	10.38	-0.17	-0.31
EW87DG	X	7.84	-2.79	-5.09	7.02	-3.53	-6.47
EXKX4D		11.44	0.81	1.47	11.24	0.69	1.27
EZPPXC		11.20	0.57	1.03	11.15	0.60	1.11
F7WA3W		9.60	-1.03	-1.88	9.45	-1.10	-2.01



Glucose + Fructose

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
FT4XMC		9.80	-0.83	-1.52	9.80	-0.75	-1.37
G2R8AC		9.75	-0.88	-1.61	9.50	-1.05	-1.92
G9RKA		10.90	0.27	0.48	10.70	0.15	0.28
HG46RH	X	7.31	-3.33	-6.06	7.52	-3.03	-5.56
HJTCCE		11.20	0.57	1.03	11.10	0.55	1.01
HNZZPG		11.00	0.37	0.67	10.90	0.35	0.65
JMNFKD	X	8.24	-2.39	-4.36	8.30	-2.25	-4.12
JR32PD		11.42	0.79	1.43	11.32	0.77	1.42
K3TCDB		11.00	0.37	0.67	10.95	0.40	0.74
K8N7BC		11.47	0.83	1.51	11.48	0.93	1.71
KAE8EE		10.53	-0.10	-0.18	10.54	-0.01	-0.02
KYYBDH		10.45	-0.18	-0.34	10.45	-0.10	-0.18
LB3ZQA		10.45	-0.18	-0.34	10.25	-0.30	-0.54
LEN3D9		10.56	-0.07	-0.13	10.47	-0.08	-0.15
LQCYGR		10.45	-0.18	-0.34	10.25	-0.30	-0.54
LUWW6H		10.45	-0.18	-0.34	10.45	-0.10	-0.19
MVMEH4		11.15	0.52	0.94	11.10	0.55	1.01
P4UTGB		11.35	0.72	1.30	11.10	0.55	1.01
PU2H8F		9.80	-0.83	-1.52	9.75	-0.80	-1.46
QAUE64		10.35	-0.28	-0.52	10.40	-0.15	-0.27
RB7TR4		10.48	-0.16	-0.29	10.20	-0.35	-0.64
RJE742		10.36	-0.27	-0.50	10.41	-0.14	-0.25
RJY2AA		10.59	-0.04	-0.08	10.32	-0.23	-0.43
RR9DM8		10.87	0.24	0.43	10.79	0.24	0.44
T9C8U8		9.30	-1.34	-2.44	9.19	-1.36	-2.50
UN4GW4		10.31	-0.32	-0.59	10.30	-0.25	-0.46
UXB2FY	*	9.67	-0.96	-1.76	9.91	-0.64	-1.17
V8C4W2		10.90	0.27	0.48	10.85	0.30	0.56
V9LW84		10.65	0.02	0.03	10.60	0.05	0.10
VUAF68	*	10.70	0.07	0.12	10.20	-0.35	-0.64
VX6AY3		10.13	-0.50	-0.92	10.01	-0.54	-0.98
WHCW48		10.50	-0.14	-0.25	10.44	-0.11	-0.21
X2E278		10.60	-0.03	-0.06	10.60	0.05	0.10
X86JHX	X	11.15	0.52	0.94	10.50	-0.05	-0.09
XG8Y4V		11.82	1.18	2.15	11.82	1.27	2.33



Analysis 910  
Glucose + Fructose

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
YGMDB6	*	11.95	1.31	2.39	11.66	1.11	2.03
YYPEN4		10.50	-0.13	-0.24	10.40	-0.15	-0.27
ZBHZQR	X	6.95	-3.68	-6.71	7.55	-3.00	-5.50
ZQ96WZ		11.00	0.37	0.67	10.85	0.30	0.56

Grand Means	Summary Statistics
10.635 g/L	10.547 g/L
Stnd Dev Btwn Labs	
0.549 g/L	0.545 g/L
<b>Statistics based on 65 of 74 reporting participants</b>	

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

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

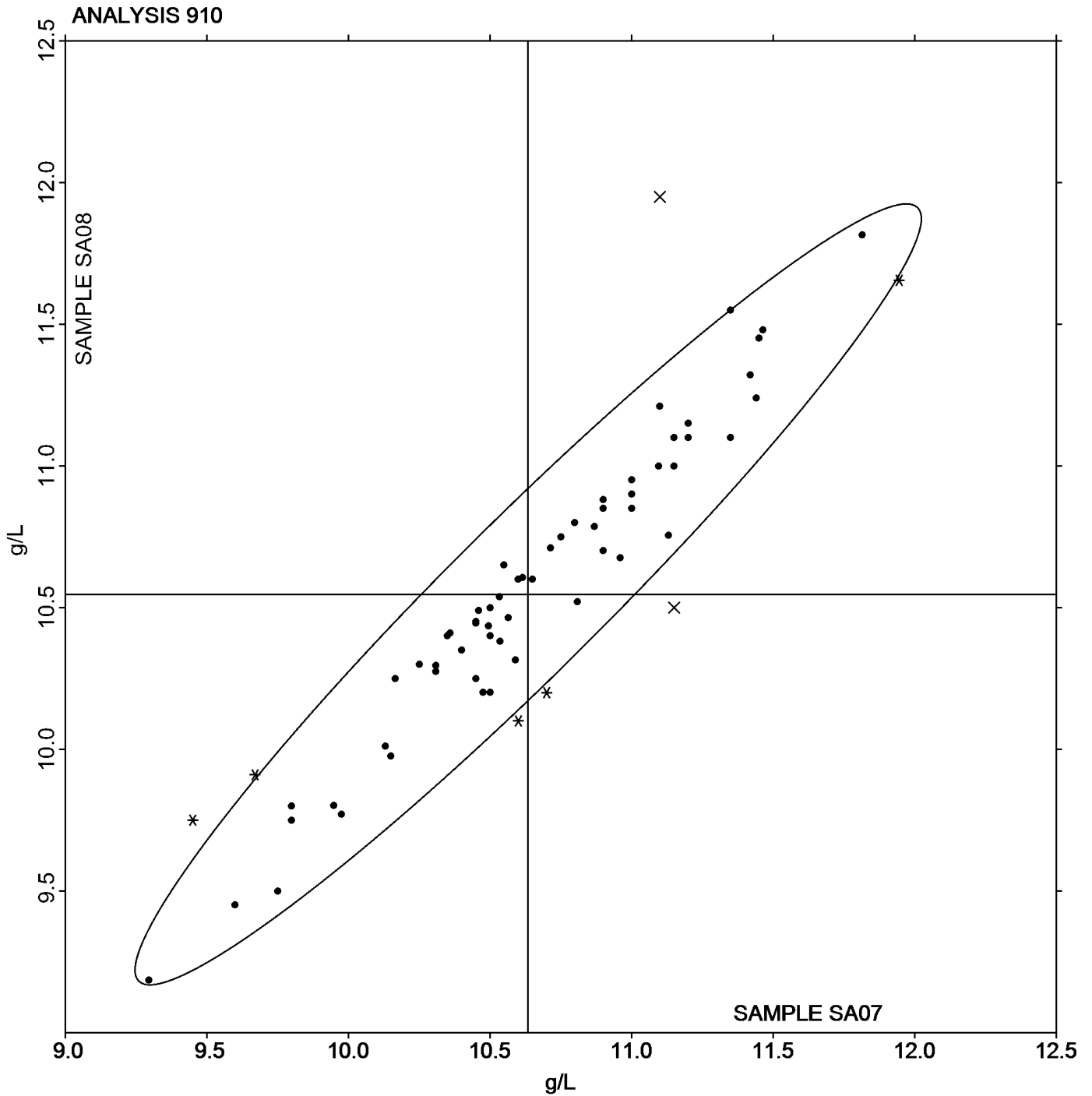
- 8C2MZT (X) - Data for both samples are low. Possible Systematic Error.
- HG46RH (X) - Data for both samples are low. Possible Systematic Error.
- 9ME49P (X) - Inconsistent in testing between samples, data for sample SA08 are low.
- ZBHZQR (X) - Data for both samples are low. Possible Systematic Error.
- 3AYXWP (X) - Inconsistent in testing between samples, data for sample SA07 are low.
- X86JHX (X) - Inconsistent in testing between samples.
- EW87DG (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample SA07.
- JMNFKD (X) - Data for both samples are low. Possible Systematic Error.
- CN4ALL (X) - Inconsistent in testing between samples.

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

Test Methodology	Sample SA07 <i>Pinot Grigio</i>			Sample SA08 <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	10.310	0.000	-0.32	10.295	0.000	-0.25	1/2
HPLC	10.606	0.574	-0.03	10.495	0.604	-0.05	3/4
Enzymatic/Spectrophotometric	10.620	0.548	-0.01	10.537	0.540	-0.01	56/63
FTIR	10.882	0.650	0.25	10.742	0.708	0.20	5/5



Analysis 910  
Glucose + Fructose







Analysis 911  
Copper Content

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
4DRAD7		0.2000	0.0224	1.25	0.2350	0.0347	1.97
64KWRW	*	0.2100	0.0324	1.80	0.1800	-0.0203	-1.15
74FYTK		0.1565	-0.0211	-1.17	0.1950	-0.0053	-0.30
7RXHXT		0.1705	-0.0071	-0.39	0.1840	-0.0163	-0.92
7WJZL6		0.1600	-0.0176	-0.97	0.1950	-0.0053	-0.30
97GKXW		0.1850	0.0074	0.41	0.1850	-0.0153	-0.87
B9CCJQ		0.1995	0.0219	1.22	0.2200	0.0197	1.12
D9KBPJ		0.1600	-0.0176	-0.97	0.1900	-0.0103	-0.58
EML27H		0.1700	-0.0076	-0.42	0.2100	0.0097	0.55
F7WA3W		0.1515	-0.0261	-1.45	0.1845	-0.0158	-0.90
G2R8AC		0.1850	0.0074	0.41	0.1900	-0.0103	-0.58
HJTCCE		0.1900	0.0124	0.69	0.1950	-0.0053	-0.30
LQCYGR		0.1750	-0.0026	-0.14	0.1850	-0.0153	-0.87
PECEL6		0.1550	-0.0226	-1.25	0.2000	-0.0003	-0.01
RJE742	X	0.3300	0.1524	8.47	0.5800	0.3797	21.57
RR9DM8		0.1700	-0.0076	-0.42	0.2100	0.0097	0.55
T9C8U8		0.1795	0.0019	0.11	0.2180	0.0177	1.01
V9LW84		0.1760	-0.0016	-0.09	0.2135	0.0132	0.75
X86JHX	X	0.0600	-0.1176	-6.53	0.0200	-0.1803	-10.24
XG8Y4V		0.1700	-0.0076	-0.42	0.1800	-0.0203	-1.15
ZEGBW		0.2100	0.0324	1.80	0.2350	0.0347	1.97

Grand Means		Summary Statistics	
	0.17755 mg/L		0.20026 mg/L
Std Dev Btwn Labs			0.01760 mg/L
	0.01801 mg/L		
<b>Statistics based on 19 of 21 reporting participants</b>			

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

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

RJE742 (X) - Data for both samples are high. Inconsistent within the determinations of both samples.

X86JHX (X) - Data for both samples are low.



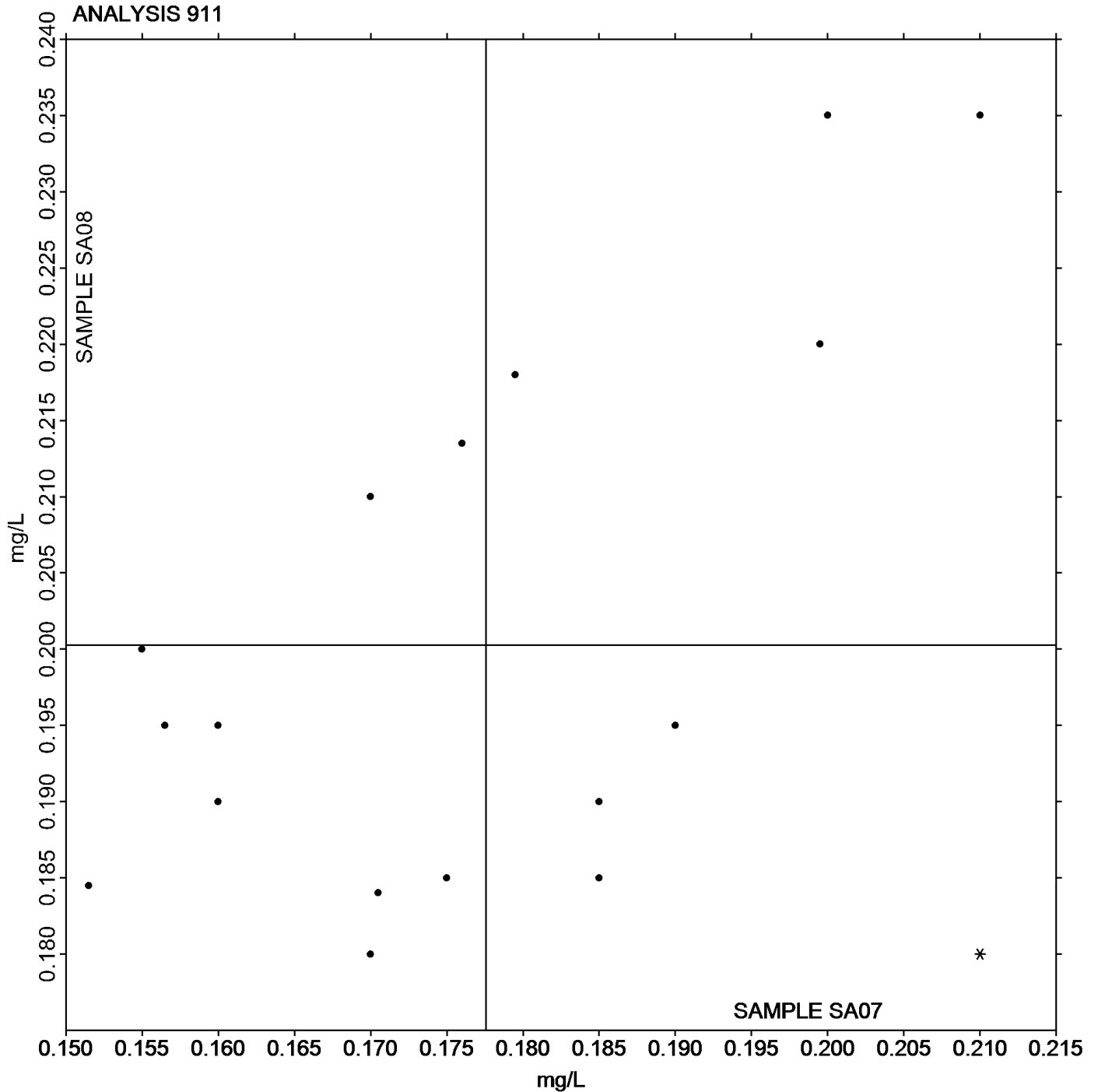
Analysis 911  
Copper Content

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA07 <i>Pinot Grigio</i>			Sample SA08 <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	0.170	0.000	-0.0076	0.210	0.000	0.0097	1/1
Atomic Absorption Spectroscopy	0.185	0.013	0.0076	0.207	0.020	0.0070	9/10
ICP-OES	0.164	0.018	-0.0138	0.197	0.012	-0.0028	6/6
Other _____	0.185	0.022	0.0074	0.182	0.003	-0.0186	3/4



Analysis 911  
Copper Content



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



**Potassium (K) Content**

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
4DRAD7		590.0	-2.0	-0.01	586.5	-6.9	-0.04
64KWRW		470.0	-122.0	-0.66	510.0	-83.4	-0.49
74FYTK		740.0	148.0	0.80	725.0	131.6	0.77
7WJZL6		566.5	-25.5	-0.14	564.5	-28.9	-0.17
9ME49P	X	2,413.0	1,821.0	9.85	995.5	402.1	2.35
B9CCJQ		502.5	-89.5	-0.48	501.6	-91.8	-0.54
D4QAPQ		475.8	-116.2	-0.63	460.4	-133.0	-0.78
D9KBPJ		550.5	-41.5	-0.22	550.0	-43.4	-0.25
EML27H		492.0	-100.0	-0.54	572.5	-20.9	-0.12
F7WA3W		888.5	296.5	1.60	905.0	311.6	1.82
FJHP7V		528.6	-63.5	-0.34	534.4	-59.0	-0.34
G2R8AC		559.0	-33.0	-0.18	571.0	-22.4	-0.13
HNZZPG		571.5	-20.5	-0.11	571.0	-22.4	-0.13
KAE8EE		788.0	196.0	1.06	791.5	198.1	1.16
KYYBDH		531.5	-60.5	-0.33	586.0	-7.4	-0.04
PECEL6		530.0	-62.0	-0.34	535.0	-58.4	-0.34
PU2H8F	X	1,555.0	963.0	5.21	1,505.0	911.6	5.33
RJE742		801.0	209.0	1.13	804.0	210.6	1.23
RR9DM8		496.0	-96.0	-0.52	493.5	-99.9	-0.58
T9C8U8		677.0	85.0	0.46	624.0	30.6	0.18
UXB2FY		549.0	-43.0	-0.23	564.5	-28.9	-0.17
X86JHX	*	1,015.0	423.0	2.29	902.0	308.6	1.80
XG8Y4V	*	110.0	-482.0	-2.61	108.0	-485.4	-2.84

Grand Means		Summary Statistics	
	592.02 mg/L		593.35 mg/L
Std Dev Btwn Labs			171.00 mg/L
	184.83 mg/L		
<b>Statistics based on 21 of 23 reporting participants</b>			

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

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

9ME49P (X) - Data for sample SA07 are high. Inconsistent within the determinations of both samples.

PU2H8F (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA08.



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

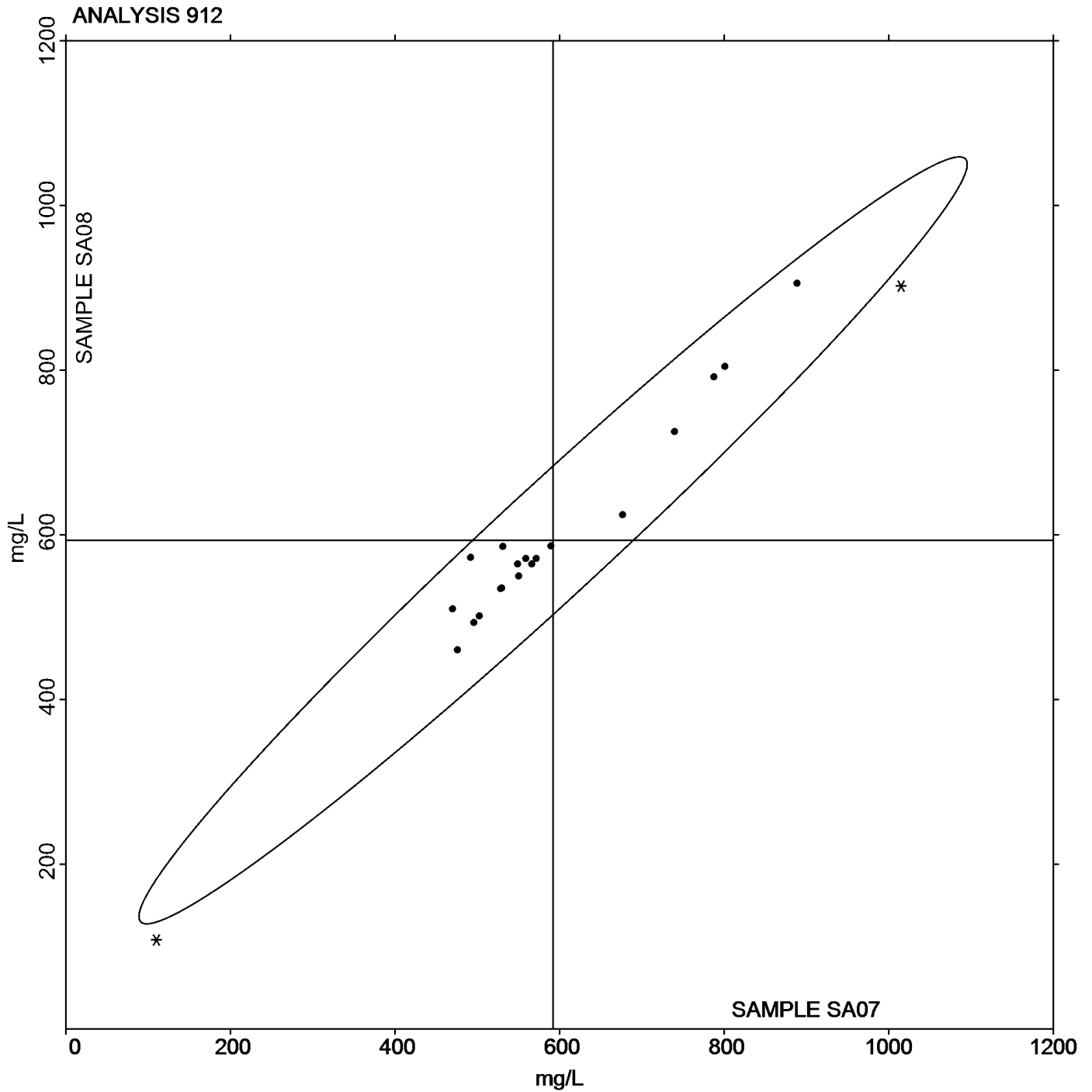
Test Methodology	Sample SA07 <i>Pinot Grigio</i>			Sample SA08 <i>Pinot Grigio</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	668.500	168.999	76.5	678.000	160.513	84.6	2/2
Atomic Absorption Spectroscopy	645.675	191.477	53.7	631.733	135.514	38.4	6/6
ICP-OES	607.600	158.841	15.6	611.220	165.879	17.9	5/5
FTIR	700.000	125.861	108.0	700.000	118.495	106.6	3/3
Other _____	416.654	173.106	-175.4	431.573	186.656	-161.8	5/7



Analysis 912

Fall 2016

Potassium (K) Content





# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #054

Fall 2016

## Analysis 915 A420nm (1cm path)

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3LRELQ		0.0440	0.0018	0.43	0.0575	0.0120	2.18
3PN2GY		0.0340	-0.0082	-1.97	0.0375	-0.0080	-1.45
3ZCR7C		0.0400	-0.0022	-0.53	0.0500	0.0045	0.82
43BU3R		0.0350	-0.0072	-1.73	0.0450	-0.0005	-0.09
4DRAD7		0.0470	0.0048	1.14	0.0480	0.0025	0.46
4HJL6W		0.0440	0.0018	0.43	0.0450	-0.0005	-0.09
64KWRW	*	0.0315	-0.0107	-2.57	0.0310	-0.0145	-2.62
74FYTK		0.0410	-0.0012	-0.29	0.0440	-0.0015	-0.27
7WJZL6		0.0415	-0.0007	-0.17	0.0460	0.0005	0.09
7YK7YQ		0.0400	-0.0022	-0.53	0.0390	-0.0065	-1.17
8C2MZT	*	0.0445	0.0023	0.55	0.0590	0.0135	2.45
8RFQMM		0.0420	-0.0002	-0.05	0.0372	-0.0083	-1.50
97GKXW		0.0430	0.0008	0.19	0.0440	-0.0015	-0.27
9DDEVV		0.0400	-0.0022	-0.53	0.0500	0.0045	0.82
9YVRLW		0.0460	0.0038	0.91	0.0478	0.0023	0.42
B9CCJQ		0.0410	-0.0013	-0.30	0.0451	-0.0004	-0.07
BGRW4P		0.0500	0.0078	1.86	0.0550	0.0095	1.73
CFRHQG	X	0.1850	0.1428	34.17	0.1950	0.1495	27.11
CN4ALL		0.0495	0.0073	1.74	0.0475	0.0020	0.37
D4QAPQ		0.0425	0.0003	0.07	0.0445	-0.0010	-0.18
DYWCXE		0.0420	-0.0002	-0.05	0.0450	-0.0005	-0.09
EKWVLK		0.0405	-0.0017	-0.41	0.0480	0.0025	0.46
F7WA3W	*	0.0520	0.0098	2.34	0.0480	0.0025	0.46
G2R8AC		0.0385	-0.0037	-0.89	0.0415	-0.0040	-0.72
JR32PD		0.0410	-0.0012	-0.29	0.0430	-0.0025	-0.45
K3TCDB		0.0450	0.0028	0.67	0.0400	-0.0055	-0.99
K8N7BC		0.0375	-0.0047	-1.13	0.0405	-0.0050	-0.90
KAE8EE	X	0.1075	0.0653	15.63	0.1110	0.0655	11.88
KYYBDH		0.0415	-0.0007	-0.17	0.0460	0.0005	0.09
LEN3D9	X	0.0870	0.0448	10.72	0.0880	0.0425	7.71
LQCYGR		0.0500	0.0078	1.86	0.0525	0.0070	1.27
PU2H8F		0.0400	-0.0022	-0.53	0.0455	0.0000	0.00
QAUE64		0.0425	0.0003	0.07	0.0450	-0.0005	-0.09
QX3TY9	X	0.0505	0.0083	1.98	0.0720	0.0265	4.81
RJE742		0.0420	-0.0002	-0.05	0.0440	-0.0015	-0.27



Analysis 915
A420nm (1cm path)

Table with columns: WebCode, Data Flag, Sample SA07 (Lab Mean, Diff from Grand Mean, CPV), Sample SA08 (Lab Mean, Diff from Grand Mean, CPV). Rows include codes like RR9DM8, UN4GW4, UXB2FY, etc.

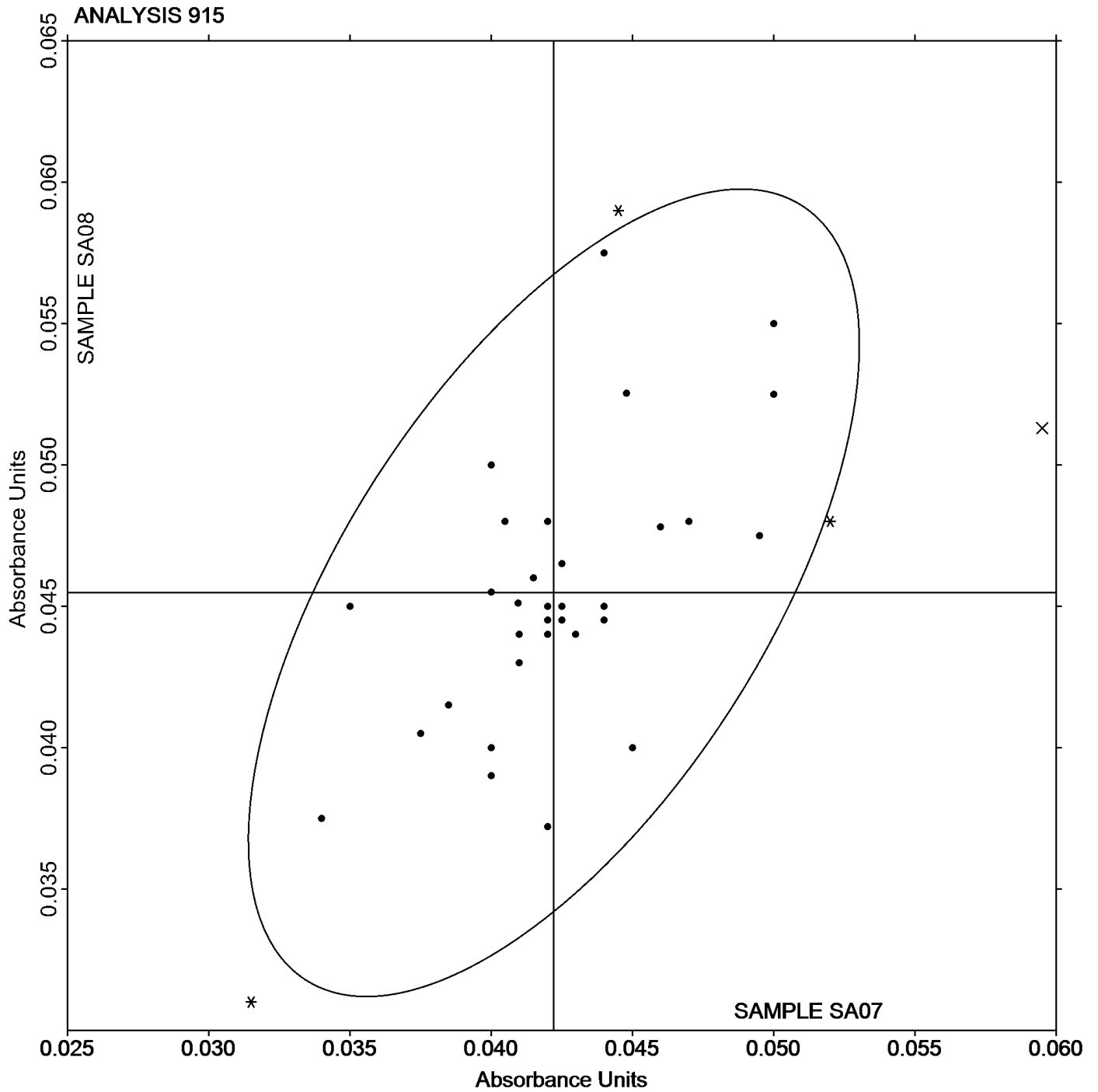
Summary Statistics table with columns: Grand Means, Std Dev Btwn Labs. Values: 0.04222, 0.04548, 0.00418, 0.00552 Absorbance Units.

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

Comments on Assigned Data Flags for Test #915

- QX3TY9 (X) - Data for sample SA08 are high. Inconsistent within the determinations of sample SA08.
KAE8EE (X) - Data for both samples are high.
ZBHZQR (X) - Data for both samples are low.
UXB2FY (X) - Data for both samples are low.
CFRHQG (X) - Data for both samples are high.
YYPEN4 (X) - Data for sample SA07 are high.
LEN3D9 (X) - Data for both samples are high.







# ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #054

Fall 2016

## Analysis 916 A520nm (1cm path)

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3LRELQ	X	0.0110	0.0018	0.60	0.0210	0.0114	3.85
3PN2GY		0.0025	-0.0067	-2.18	0.0030	-0.0066	-2.23
43BU3R		0.0035	-0.0057	-1.86	0.0040	-0.0056	-1.89
4DRAD7		0.0125	0.0033	1.09	0.0120	0.0024	0.81
4HJL6W		0.0110	0.0018	0.60	0.0105	0.0009	0.30
64KWRW		0.0065	-0.0027	-0.87	0.0070	-0.0026	-0.88
74FYTK		0.0091	-0.0001	-0.02	0.0095	-0.0001	-0.03
7WJZL6		0.0085	-0.0007	-0.22	0.0095	-0.0001	-0.03
7YK7YQ		0.0070	-0.0022	-0.71	0.0085	-0.0011	-0.37
8C2MZT	X	0.0090	-0.0002	-0.05	0.0205	0.0109	3.68
8RFQMM		0.0087	-0.0005	-0.15	0.0044	-0.0052	-1.76
97GKXW		0.0120	0.0028	0.93	0.0115	0.0019	0.64
9DDEVV		0.0100	0.0008	0.27	0.0100	0.0004	0.13
9YVRLW		0.0087	-0.0005	-0.17	0.0124	0.0027	0.93
B9CCJQ		0.0065	-0.0027	-0.89	0.0078	-0.0018	-0.61
BGRW4P		0.0100	0.0008	0.27	0.0150	0.0054	1.82
CFRHQG	X	0.1050	0.0958	31.40	0.0750	0.0654	22.06
CN4ALL		0.0150	0.0058	1.91	0.0115	0.0019	0.64
D4QAPQ		0.0100	0.0008	0.27	0.0100	0.0004	0.13
DYWCXE		0.0095	0.0003	0.11	0.0110	0.0014	0.47
EKWVLK		0.0100	0.0008	0.27	0.0155	0.0059	1.99
F7WA3W	*	0.0165	0.0073	2.40	0.0125	0.0029	0.98
G2R8AC		0.0070	-0.0022	-0.71	0.0080	-0.0016	-0.54
JMNFKD		0.0090	-0.0002	-0.05	0.0090	-0.0006	-0.20
JR32PD		0.0080	-0.0012	-0.38	0.0090	-0.0006	-0.20
K3TCDB		0.0090	-0.0002	-0.05	0.0090	-0.0006	-0.20
K8N7BC		0.0080	-0.0012	-0.38	0.0085	-0.0011	-0.37
KAE8EE	X	0.0680	0.0588	19.28	0.0700	0.0604	20.38
KYYBDH		0.0075	-0.0017	-0.54	0.0095	-0.0001	-0.03
LEN3D9	X	0.0500	0.0408	13.38	0.0490	0.0394	13.29
LQCYGR		0.0145	0.0053	1.75	0.0140	0.0044	1.48
PU2H8F		0.0070	-0.0022	-0.71	0.0100	0.0004	0.13
QAUE64		0.0100	0.0008	0.27	0.0105	0.0009	0.30
QX3TY9	X	0.0355	0.0263	8.63	0.1105	0.1009	34.04
RJE742		0.0095	0.0003	0.11	0.0090	-0.0006	-0.20



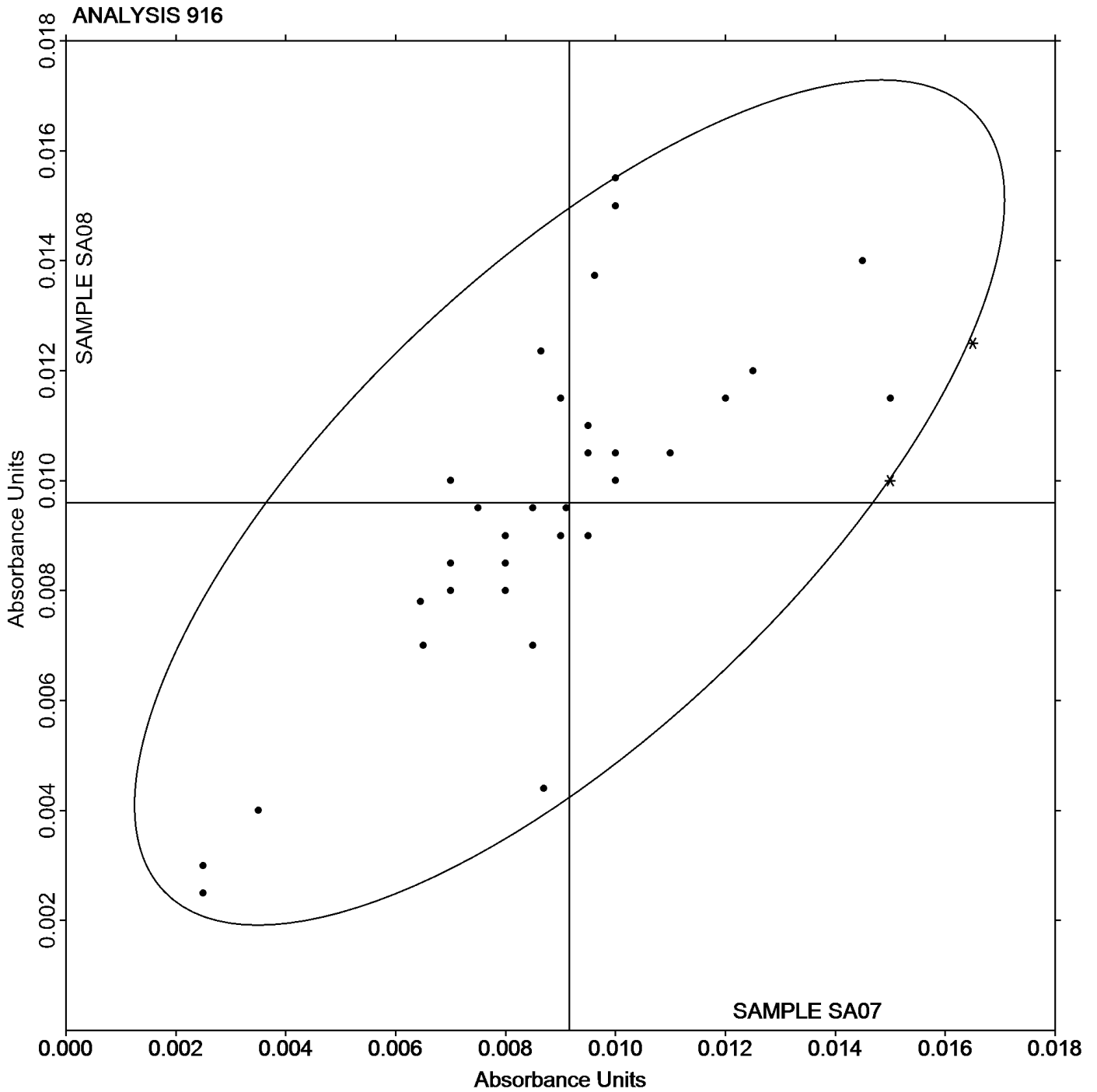
WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RR9DM8		0.0085	-0.0007	-0.22	0.0070	-0.0026	-0.88
UN4GW4		0.0090	-0.0002	-0.05	0.0115	0.0019	0.64
V9LW84		0.0100	0.0008	0.27	0.0100	0.0004	0.13
VX6AY3		0.0080	-0.0012	-0.38	0.0080	-0.0016	-0.54
X86JHX	*	0.0150	0.0058	1.91	0.0100	0.0004	0.13
XG8Y4V		0.0095	0.0003	0.11	0.0105	0.0009	0.30
YYPEN4	X	0.0275	0.0183	6.01	0.0150	0.0054	1.82
ZBHZQR		0.0025	-0.0067	-2.18	0.0025	-0.0071	-2.40
ZEGEBW		0.0096	0.0005	0.15	0.0137	0.0041	1.39

Grand Means		Summary Statistics	
0.00916	Absorbance Units	0.00960	Absorbance Units
Std Dev Btwn Labs		0.00296 Absorbance Units	
0.00305	Absorbance Units		
<b>Statistics based on 37 of 44 reporting participants</b>			

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

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

- 8C2MZT (X) - Data for sample SA08 are high.
- QX3TY9 (X) - Data for both samples are high. Inconsistent within the determinations of sample SA08.
- KAE8EE (X) - Data for both samples are high.
- 3LRELQ (X) - Data for sample SA08 are high.
- CFRHQG (X) - Data for both samples are high. Inconsistent within the determinations of both samples.
- YYPEN4 (X) - Data for sample SA07 are high.
- LEN3D9 (X) - Data for both samples are high.





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

**Report #054**  
**Fall 2016**

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
3AYXWP		0.5700	0.2577	82.5%	0.4850	0.1955	67.5%
3LRELQ		0.3590	0.0467	14.9%	0.3260	0.0365	12.6%
3PN2GY		0.2600	-0.0523	-16.8%	0.2300	-0.0595	-20.6%
43BU3R	*	0.5700	0.2577	82.5%	0.4100	0.1205	41.6%
4DRAD7		0.3000	-0.0123	-3.9%	0.3050	0.0155	5.4%
4HJL6W		0.2510	-0.0613	-19.6%	0.2325	-0.0570	-19.7%
64KWRW		0.1410	-0.1713	-54.9%	0.1600	-0.1295	-44.7%
74FYTK		0.4085	0.0962	30.8%	0.3060	0.0165	5.7%
76P8XY		0.3185	0.0062	2.0%	0.2995	0.0100	3.5%
7RXHXT		0.2025	-0.1098	-35.2%	0.2050	-0.0845	-29.2%
7WJZL6		0.2000	-0.1123	-36.0%	0.2500	-0.0395	-13.6%
8C2MZT	X	1.0400	0.7277	233.0%	1.3800	1.0905	376.7%
97GKXW		0.2550	-0.0573	-18.4%	0.2600	-0.0295	-10.2%
9YVRLW		0.2150	-0.0973	-31.2%	0.2070	-0.0825	-28.5%
AYTEH2	*	0.5215	0.2092	67.0%	0.3595	0.0700	24.2%
B9CCJQ		0.5600	0.2477	79.3%	0.4150	0.1255	43.4%
BGRW4P		0.3445	0.0322	10.3%	0.3005	0.0110	3.8%
BURXFQ		0.4000	0.0877	28.1%	0.3400	0.0505	17.4%
CFRHQG		0.4100	0.0977	31.3%	0.3900	0.1005	34.7%
D4QAPQ		0.3250	0.0127	4.1%	0.2950	0.0055	1.9%
DR2BYN		0.2230	-0.0893	-28.6%	0.2405	-0.0490	-16.9%
DYWCXE		0.1300	-0.1823	-58.4%	0.2000	-0.0895	-30.9%
EML27H		0.3150	0.0027	0.9%	0.2350	-0.0545	-18.8%
EXKX4D		0.2000	-0.1123	-36.0%	0.2000	-0.0895	-30.9%
EZPPXC		0.3050	-0.0073	-2.3%	0.2850	-0.0045	-1.6%
F7WA3W		0.2895	-0.0228	-7.3%	0.2530	-0.0365	-12.6%
G2R8AC		0.2200	-0.0923	-29.6%	0.2550	-0.0345	-11.9%
G9RKAF	*	0.4435	0.1312	42.0%	0.4875	0.1980	68.4%
HG46RH		0.1450	-0.1673	-53.6%	0.1450	-0.1445	-49.9%
HJTCCE		0.4485	0.1362	43.6%	0.3210	0.0315	10.9%
HXPLYK		0.3000	-0.0123	-3.9%	0.2700	-0.0195	-6.7%
JMNFKD		0.2845	-0.0278	-8.9%	0.2875	-0.0020	-0.7%
JR32PD		0.2220	-0.0903	-28.9%	0.2210	-0.0685	-23.7%
K3TCDB		0.3085	-0.0038	-1.2%	0.2610	-0.0285	-9.8%
K8N7BC	X	0.2550	-0.0573	-18.4%	0.3900	0.1005	34.7%



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

**Report #054**  
**Fall 2016**

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
KAE8EE	X	0.5500	0.2377	76.1%	0.2800	-0.0095	-3.3%
KYYBDH		0.3305	0.0182	5.8%	0.3365	0.0470	16.2%
LB3ZQA		0.3000	-0.0123	-3.9%	0.2500	-0.0395	-13.6%
LEN3D9		0.1200	-0.1923	-61.6%	0.0900	-0.1995	-68.9%
LQCYGR	X	0.7000	0.3877	124.1%	0.7250	0.4355	150.4%
LUWW6H		0.3000	-0.0123	-3.9%	0.3250	0.0355	12.3%
MVMEH4		0.2293	-0.0831	-26.6%	0.2785	-0.0110	-3.8%
NJQQ4F		0.4900	0.1777	56.9%	0.4900	0.2005	69.3%
P4UTGB		0.2800	-0.0323	-10.4%	0.2600	-0.0295	-10.2%
PECEL6		0.3000	-0.0123	-3.9%	0.3200	0.0305	10.5%
QAUE64	X	0.4200	0.1077	34.5%	0.6550	0.3655	126.3%
RB7TR4		0.0850	-0.2273	-72.8%	0.1000	-0.1895	-65.5%
RJE742		0.1825	-0.1298	-41.6%	0.1940	-0.0955	-33.0%
RJY2AA		0.1955	-0.1168	-37.4%	0.1565	-0.1330	-45.9%
T9C8U8		0.2845	-0.0278	-8.9%	0.3285	0.0390	13.5%
UN4GW4		0.3700	0.0577	18.5%	0.3550	0.0655	22.6%
V8C4W2		0.0450	-0.2673	-85.6%	0.0500	-0.2395	-82.7%
V9LW84		0.4750	0.1627	52.1%	0.4000	0.1105	38.2%
VUAF68		0.4350	0.1227	39.3%	0.3750	0.0855	29.5%
W3WV6V		0.5400	0.2277	72.9%	0.4850	0.1955	67.5%
WHCW48		0.4050	0.0927	29.7%	0.4350	0.1455	50.3%
WHQMPW		0.3045	-0.0078	-2.5%	0.3115	0.0220	7.6%
X2E278	X	0.7500	0.4377	140.1%	0.6900	0.4005	138.3%
X86JHX		0.1800	-0.1323	-42.4%	0.1900	-0.0995	-34.4%
XG8Y4V		0.3950	0.0827	26.5%	0.3550	0.0655	22.6%
YYPEN4		0.4150	0.1027	32.9%	0.3950	0.1055	36.4%
ZEGEBW		0.3825	0.0702	22.5%	0.2940	0.0045	1.6%
ZQ96WZ	X	0.4575	0.1452	46.5%	0.6250	0.3355	115.9%



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

**Report #054**  
**Fall 2016**

Research Property Target Value		
Target Value	0.31233 NTU	0.28950 NTU
<p><i>For Test 950, CTS has chosen not to designate a target value for this property instead of using an average value.</i></p>		

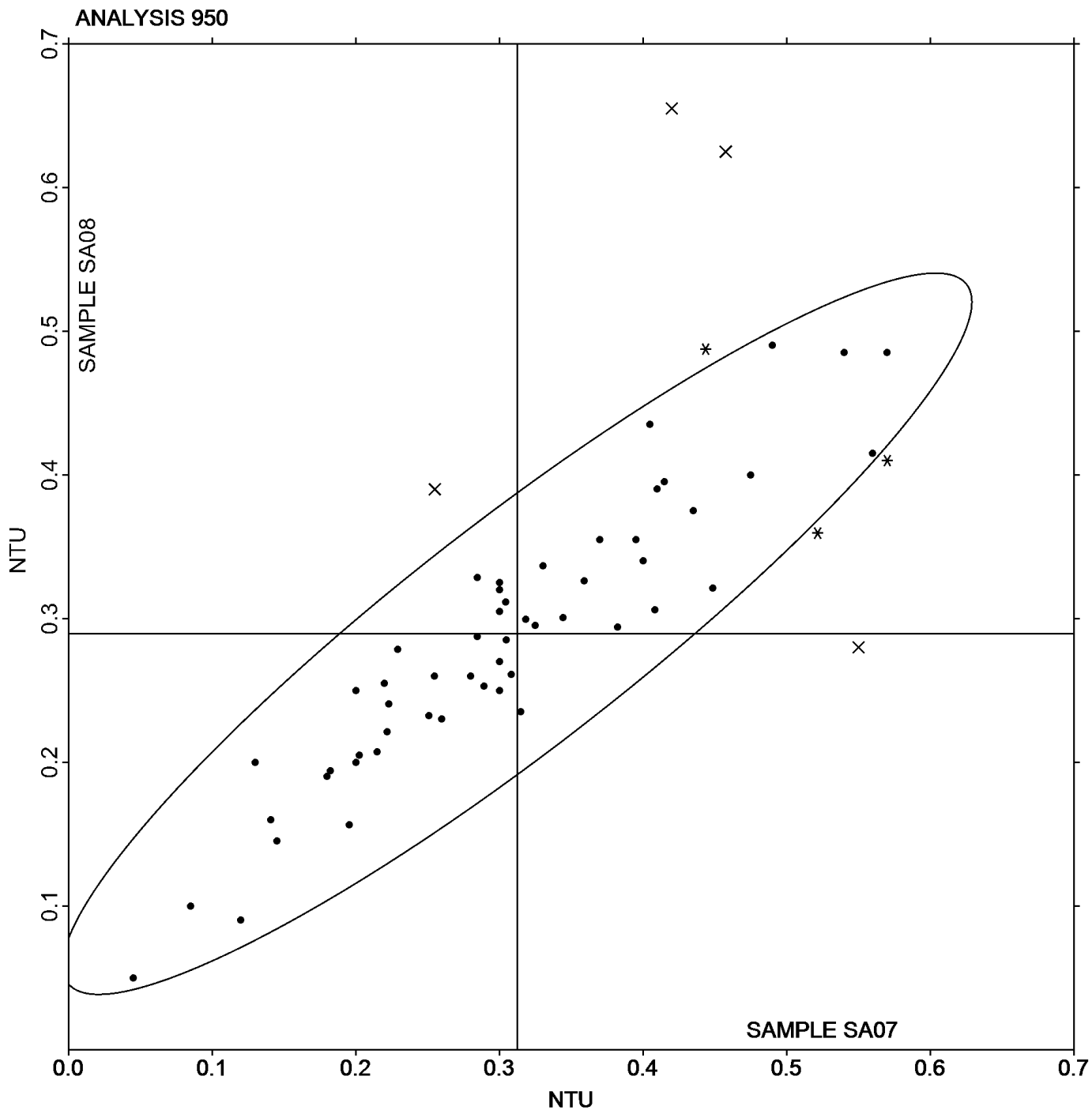
**Wines tested:** SA07: Pinot Grigio; SA08: Pinot Grigio

**Consensus Average** (may differ from target value)      0.31233 NTU      0.28950 NTU

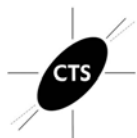
*This consensus average is based on 56 reporting participants.*

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

- LQCYGR (X) - Data for both samples are high.
- K8N7BC (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA08.
- ZQ96WZ (X) - Data for sample SA08 are high.
- 8C2MZT (X) - Data for both samples are high. Inconsistent within the determinations of both samples.
- KAE8EE (X) - Inconsistent in testing between samples.
- QAUE64 (X) - Data for sample SA08 are high.
- X2E278 (X) - Data for both samples are high.







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

**Report #054**  
**Fall 2016**

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
4DRAD7		54.00	-1.73	-3.1%	52.50	-3.66	-6.5%
74FYTK		57.00	1.27	2.3%	57.00	0.84	1.5%
7WJZL6		40.50	-15.23	-27.3%	44.50	-11.66	-20.8%
7YK7YQ		86.60	30.87	55.4%	82.10	25.94	46.2%
B9CCJQ		57.49	1.76	3.2%	58.24	2.07	3.7%
CFRHQG	X	145.00	89.27	160.2%	140.00	83.84	149.3%
F7WA3W		51.50	-4.23	-7.6%	52.00	-4.16	-7.4%
G2R8AC	X	0.69	-55.04	-98.8%	0.30	-55.86	-99.5%
PECEL6		46.00	-9.73	-17.5%	46.00	-10.16	-18.1%
RR9DM8		52.50	-3.23	-5.8%	53.00	-3.16	-5.6%
TJB3R3		53.18	-2.55	-4.6%	54.78	-1.39	-2.5%
XG8Y4V		58.50	2.77	5.0%	61.50	5.34	9.5%

Research Property Target Value		
Target Value	55.726 mg/L	56.161 mg/L
<p align="center"><i>For Test 951, CTS has chosen not to designate a target value for this property instead of using an average value.</i></p>		

Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

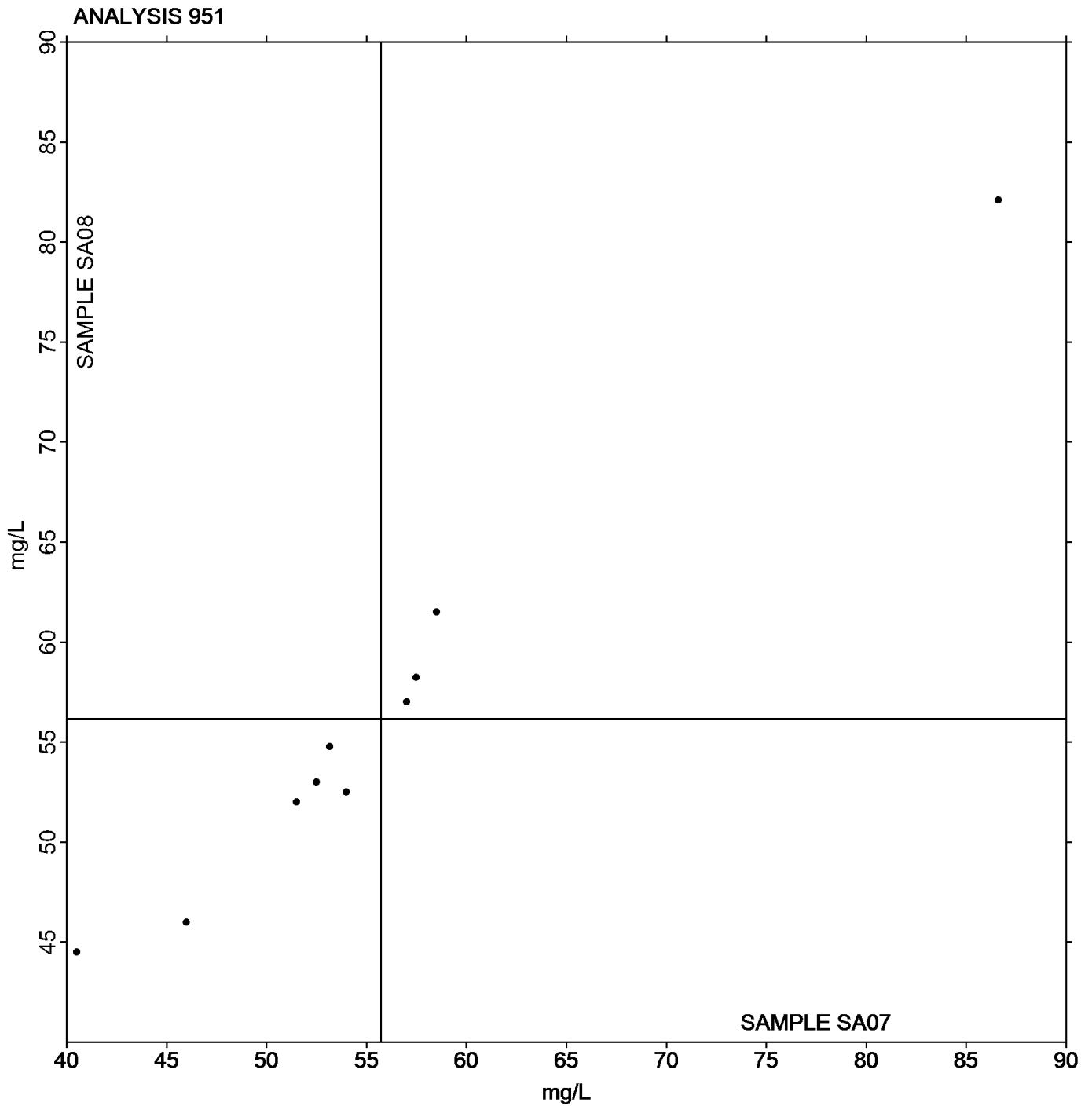
Consensus Average (may differ from target value)      55.726 mg/L      56.161 mg/L

*This consensus average is based on 10 reporting participants.*

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

G2R8AC (X) - Data for both samples are low.

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



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



Analysis 952

Research Property: Sodium (mg/L)

WebCode	Data Flag	Sample SA07			Sample SA08		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
64KWRW		26.00	-12.63	-32.7%	28.00	-11.03	-28.3%
74FYTK		39.00	0.37	1.0%	38.50	-0.53	-1.3%
7WJZL6		40.50	1.87	4.8%	41.00	1.97	5.1%
B9CCJQ		35.76	-2.88	-7.4%	36.86	-2.17	-5.6%
D4QAPQ		34.77	-3.86	-10.0%	34.79	-4.24	-10.9%
D9KBPJ		38.50	-0.13	-0.3%	38.50	-0.53	-1.3%
EML27H		37.50	-1.13	-2.9%	39.00	-0.03	-0.1%
F7WA3W		46.15	7.52	19.5%	47.30	8.27	21.2%
FJHP7V		43.39	4.76	12.3%	43.88	4.85	12.4%
PECEL6		39.00	0.37	1.0%	40.00	0.97	2.5%
RR9DM8		37.00	-1.63	-4.2%	36.50	-2.53	-6.5%
XG8Y4V		46.00	7.37	19.1%	44.00	4.97	12.7%

Research Property Target Value

Target Value

38.630 mg/L

39.026 mg/L

For Test 952, CTS has chosen not to designate a target value for this property instead of using an average value.

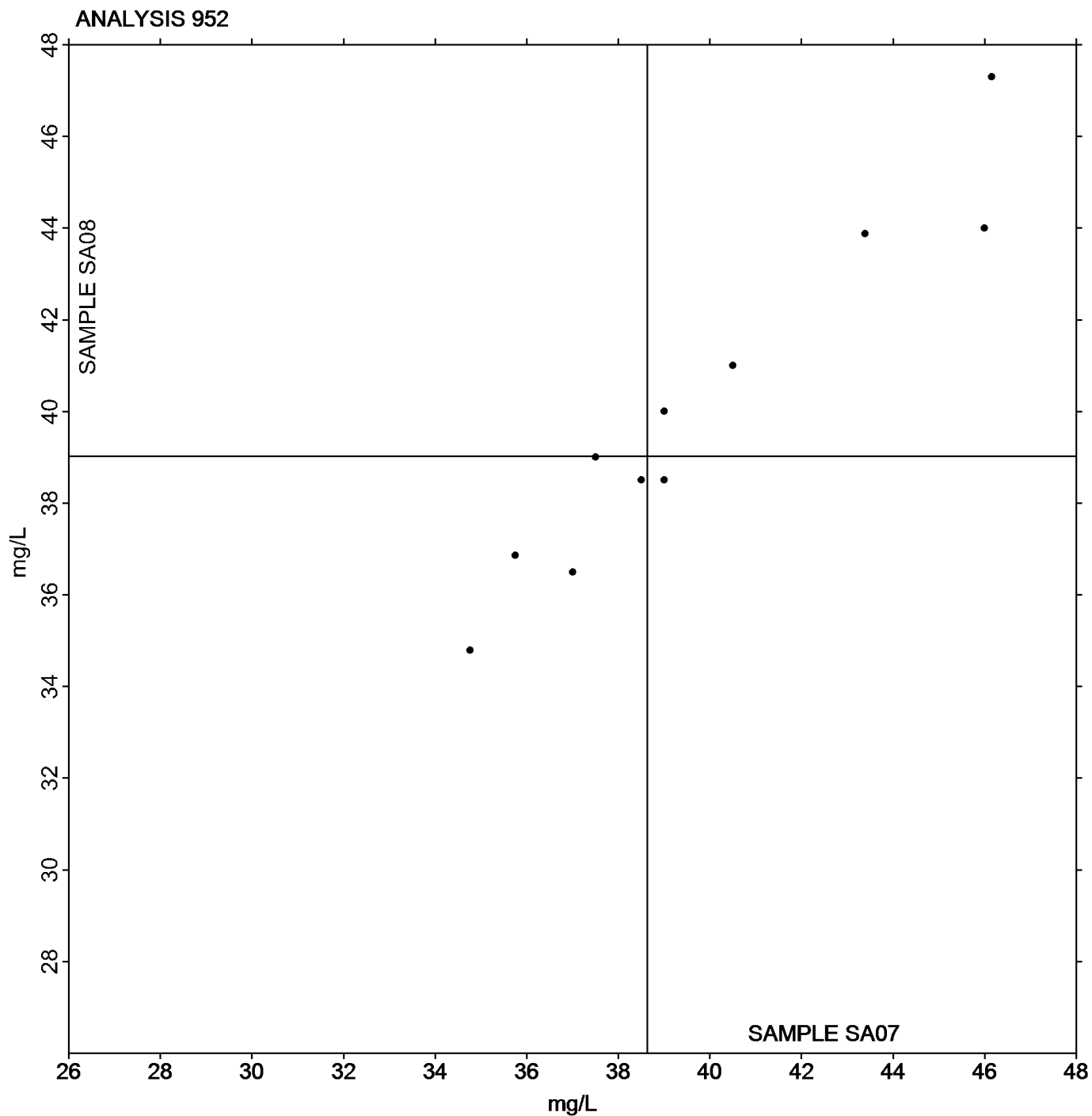
Wines tested: SA07: Pinot Grigio; SA08: Pinot Grigio

Consensus Average (may differ from target value)

38.630 mg/L

39.026 mg/L

This consensus average is based on 12 reporting participants.



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