



Wine Industry Interlaboratory Program

Summary Report #064 - Spring 2020

[Introduction to the Wine Program](#)

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

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

About the Wine Industry Interlaboratory Program

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

About CTS

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

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Key for Web Summary Report (Page 1 of 2)

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

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

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

Common Problems Highlighted in Footnotes

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

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



ASEV-CTS Wine Industry Interlaboratory Testing Program

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Spring 2020

Analysis 901 Ethanol (% of volume)

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BD4Q7		8.160	-0.044	-1.00	8.120	-0.044	-0.88
2EXJCE		8.175	-0.029	-0.66	8.130	-0.034	-0.68
2PE4WB		8.175	-0.029	-0.66	8.130	-0.034	-0.68
36MUG9		8.245	0.041	0.92	8.210	0.046	0.93
3DY7AZ	X	8.350	0.146	3.30	8.365	0.201	4.05
3ER2YT		8.205	0.001	0.02	8.160	-0.004	-0.08
3Y3QCQ	X	8.560	0.356	8.05	8.400	0.236	4.76
44N4NY		8.195	-0.009	-0.21	8.145	-0.019	-0.38
47GZDT	X	8.500	0.296	6.70	8.500	0.336	6.77
4UM7VC		8.195	-0.009	-0.21	8.160	-0.004	-0.08
4UMJNR		8.225	0.021	0.47	8.170	0.006	0.12
4XMGRG		8.150	-0.054	-1.23	8.070	-0.094	-1.89
644M9W		8.220	0.016	0.36	8.180	0.016	0.33
6888QA		8.300	0.096	2.17	8.275	0.111	2.24
6UW82N		8.200	-0.004	-0.10	8.145	-0.019	-0.38
7RNEKU		8.230	0.026	0.58	8.200	0.036	0.73
8GJQ73		8.160	-0.044	-1.00	8.110	-0.054	-1.08
8H3ZC6		8.145	-0.059	-1.34	8.080	-0.084	-1.69
8N68R9	*	8.155	-0.049	-1.12	8.165	0.001	0.02
8UVUUL		8.180	-0.024	-0.55	8.135	-0.029	-0.58
8WYPDP		8.200	-0.004	-0.10	8.165	0.001	0.02
9HCYRR		8.205	0.001	0.02	8.155	-0.009	-0.18
9LCBMR		8.240	0.036	0.81	8.190	0.026	0.53
9VXC42	*	8.300	0.096	2.17	8.300	0.136	2.74
A248PM		8.180	-0.024	-0.55	8.130	-0.034	-0.68
A7DL7L		8.205	0.001	0.02	8.155	-0.009	-0.18
A7X2MN		8.140	-0.064	-1.45	8.120	-0.044	-0.88
AZBCZT		8.265	0.061	1.38	8.225	0.061	1.23
BL93WJ		8.160	-0.044	-1.00	8.095	-0.069	-1.39
BM3T3X		8.185	-0.019	-0.44	8.170	0.006	0.12
BQFTYP		8.235	0.031	0.70	8.200	0.036	0.73
BV8ZGX		8.210	0.006	0.13	8.170	0.006	0.12
C6VB7J		8.185	-0.019	-0.44	8.150	-0.014	-0.28
CRRF46	X	8.600	0.396	8.96	8.225	0.061	1.23
D2CJVG		8.230	0.026	0.58	8.185	0.021	0.43



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Analysis 901 Ethanol (% of volume)

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
DEZHLJ		8.165	-0.039	-0.89	8.125	-0.039	-0.78
DV7MAV	X	8.370	0.166	3.75	8.315	0.151	3.04
DWX9XZ		8.220	0.016	0.36	8.180	0.016	0.33
EJLXPG		8.225	0.021	0.47	8.170	0.006	0.12
ENK9LG		8.210	0.006	0.13	8.120	-0.044	-0.88
ETCJVE	*	8.240	0.036	0.81	8.260	0.096	1.94
FJ62XG		8.200	-0.004	-0.10	8.200	0.036	0.73
GGTNTK	*	8.326	0.122	2.75	8.298	0.134	2.70
GMKVBT		8.220	0.016	0.36	8.175	0.011	0.23
GNUXZD		8.155	-0.049	-1.12	8.115	-0.049	-0.98
GTPRWE		8.170	-0.034	-0.78	8.140	-0.024	-0.48
HB2ZBK		8.245	0.041	0.92	8.205	0.041	0.83
HE4YLD		8.250	0.046	1.04	8.215	0.051	1.03
HFG9YJ		8.285	0.081	1.83	8.245	0.081	1.63
HW4LDC		8.185	-0.019	-0.44	8.130	-0.034	-0.68
J3MCBQ		8.275	0.071	1.60	8.220	0.056	1.13
KR2MQC		8.210	0.006	0.13	8.155	-0.009	-0.18
KUMBBP		8.245	0.041	0.92	8.200	0.036	0.73
LACXW8		8.210	0.006	0.13	8.160	-0.004	-0.08
MDCAR8	*	8.070	-0.134	-3.04	8.040	-0.124	-2.49
ME8F2T	X	8.350	0.146	3.30	8.400	0.236	4.76
MW38MR		8.160	-0.044	-1.00	8.120	-0.044	-0.88
NDAYAA		8.200	-0.004	-0.10	8.160	-0.004	-0.08
NEKZV9		8.170	-0.034	-0.78	8.160	-0.004	-0.08
NWLN8		8.155	-0.049	-1.12	8.090	-0.074	-1.49
NXFETL		8.280	0.076	1.71	8.230	0.066	1.33
NXT4UD	X	8.400	0.196	4.43	8.500	0.336	6.77
P4EF97		8.220	0.016	0.36	8.145	-0.019	-0.38
PMQ6L4		8.235	0.031	0.70	8.210	0.046	0.93
Q4UYQH		8.230	0.026	0.58	8.175	0.011	0.23
Q63C8J		8.170	-0.034	-0.78	8.120	-0.044	-0.88
QD6NLP		8.205	0.001	0.02	8.180	0.016	0.33
QEF4Z3		8.220	0.016	0.36	8.175	0.011	0.23
R3W9X9		8.235	0.031	0.70	8.160	-0.004	-0.08
RAUZ73		8.200	-0.004	-0.10	8.200	0.036	0.73



Analysis 901
Ethanol (% of volume)

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RBMQBG		8.230	0.026	0.58	8.220	0.056	1.13
REM38G		8.230	0.026	0.58	8.190	0.026	0.53
RPTA6P		8.220	0.016	0.36	8.160	-0.004	-0.08
T932R4		8.180	-0.024	-0.55	8.140	-0.024	-0.48
TB8UJG		8.205	0.001	0.02	8.160	-0.004	-0.08
TFH9JN	*	8.095	-0.109	-2.47	8.040	-0.124	-2.49
TVD3Z2		8.225	0.021	0.47	8.170	0.006	0.12
U6XTZY	X	8.070	-0.134	-3.04	8.065	-0.099	-1.99
UFVUD3		8.210	0.006	0.13	8.195	0.031	0.63
UJXUDZ		8.205	0.001	0.02	8.165	0.001	0.02
UKRKJE		8.180	-0.024	-0.55	8.140	-0.024	-0.48
UZHICY		8.215	0.011	0.24	8.165	0.001	0.02
V4WHG2		8.215	0.011	0.24	8.170	0.006	0.12
VFQWFC	X	11.775	3.571	80.84	11.750	3.586	72.23
VKLQCD		8.185	-0.019	-0.44	8.140	-0.024	-0.48
VMT9TH		8.130	-0.074	-1.68	8.075	-0.089	-1.79
W4C22Y		8.160	-0.044	-1.00	8.120	-0.044	-0.88
W7ZXJK		8.180	-0.024	-0.55	8.135	-0.029	-0.58
WA3CCW		8.240	0.036	0.81	8.210	0.046	0.93
WEW7AX		8.145	-0.059	-1.34	8.115	-0.049	-0.98
X678VX		8.220	0.016	0.36	8.165	0.001	0.02
YDUETU	*	8.310	0.106	2.39	8.250	0.086	1.74
YFEUCG		8.185	-0.019	-0.44	8.115	-0.049	-0.98
YH4FCC		8.150	-0.054	-1.23	8.150	-0.014	-0.28
Z2TDRA		8.190	-0.014	-0.32	8.150	-0.014	-0.28
Z8JQTX	*	8.225	0.021	0.47	8.240	0.076	1.53

Grand Means	Summary Statistics
8.2043 percent	8.1638 percent
Stnd Dev Btwn Labs	
0.0442 percent	0.0496 percent
Statistics based on 87 of 96 reporting participants	

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel



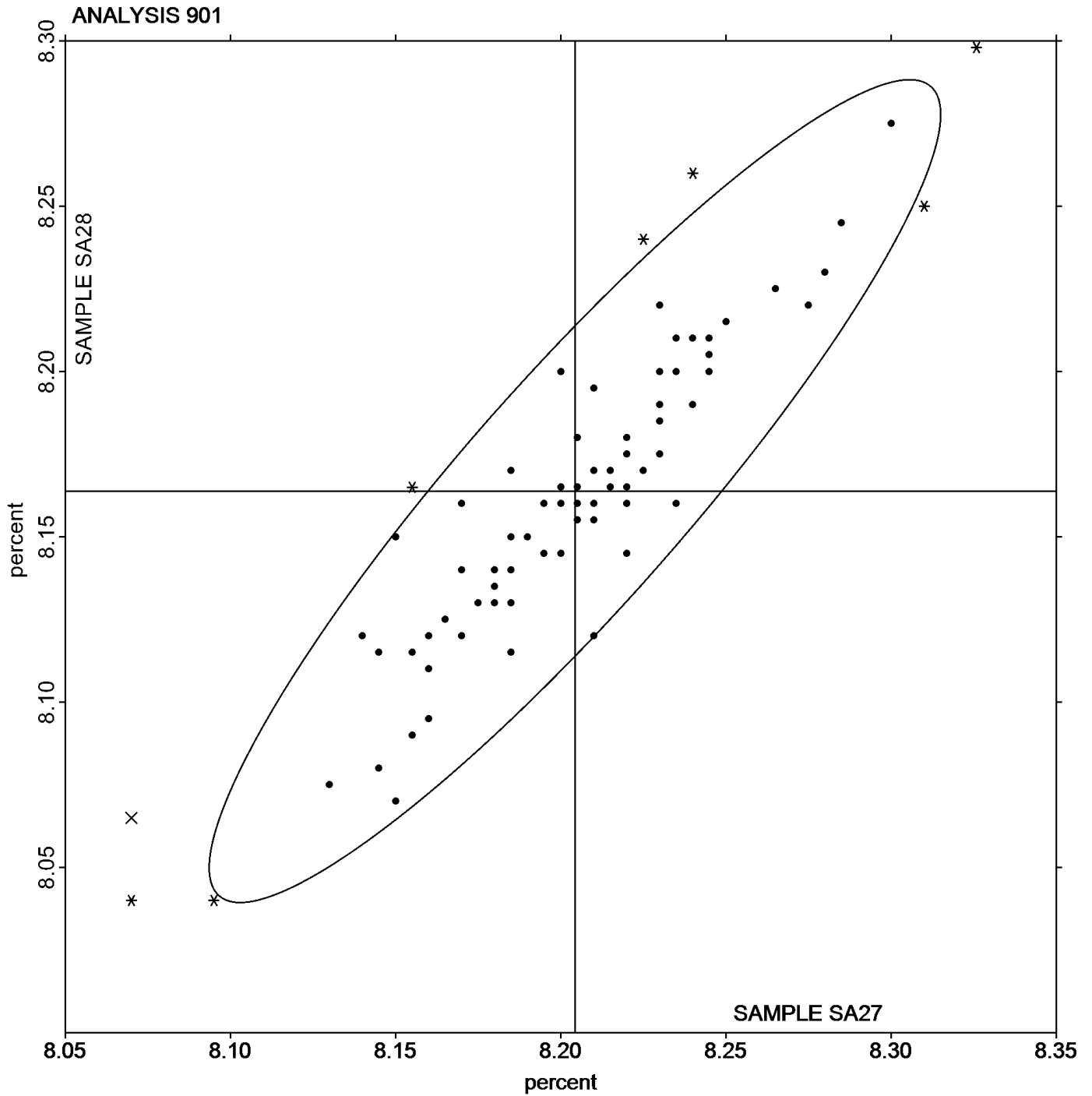
Analysis 901
Ethanol (% of volume)

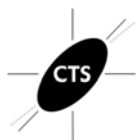
Comments on Assigned Data Flags for Test #901

- 3DY7AZ (X) - Data for both samples are high. Possible Systematic Error.
- NXT4UD (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA27.
- U6XTZY (X) - Inconsistent in testing between samples. Data for sample SA27 are low.
- 3Y3QCQ (X) - Data for both samples are high. Possible Systematic Error.
- 47GZDT (X) - Data for both samples are high. Possible Systematic Error.
- DV7MAV (X) - Data for both samples are high. Possible Systematic Error.
- VFQWFC (X) - Data for both samples are high.
- ME8F2T (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of both samples.
- CRRF46 (X) - Inconsistent in testing between samples. Data for sample SA27 are high.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA27 <i>White Zinfandel</i>			Sample SA28 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Ebulliometer Method	8.252	0.084	0.047	8.247	0.072	0.083	3/8
Gas Chromatography Method	8.268	0.080	0.063	8.236	0.062	0.072	4/5
Near Infrared Method	8.201	0.035	-0.003	8.157	0.039	-0.007	65/65
Dist. / Density Method	8.170	0.045	-0.034	8.145	0.073	-0.019	7/8
FTIR	8.214	0.045	0.010	8.168	0.058	0.004	5/7
Other _____	8.212	0.024	0.007	8.180	0.010	0.016	3/3





Analysis 902
Total Sulfur Dioxide

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BD4Q7		153.2	16.0	1.63	154.5	13.7	1.40
2EXJCE		122.5	-14.7	-1.49	129.5	-11.3	-1.15
2PE4WB		132.5	-4.7	-0.48	132.0	-8.8	-0.90
36MUG9	*	135.5	-1.7	-0.17	147.0	6.2	0.64
3DY7AZ		122.0	-15.2	-1.54	124.0	-16.8	-1.71
3ER2YT		132.0	-5.2	-0.53	130.0	-10.8	-1.10
3Y3QCQ		135.9	-1.3	-0.13	135.9	-4.9	-0.50
44N4NY		131.0	-6.2	-0.63	134.0	-6.8	-0.69
47GZDT	X	96.0	-41.2	-4.18	91.0	-49.8	-5.08
4UMJNR		130.5	-6.7	-0.68	137.5	-3.3	-0.33
4XMGRC		144.0	6.8	0.69	151.0	10.2	1.04
644M9W		145.5	8.3	0.85	151.0	10.2	1.04
6888QA		134.4	-2.8	-0.28	144.0	3.2	0.33
6UW82N		136.0	-1.2	-0.12	139.5	-1.3	-0.13
73QZ3A		125.0	-12.2	-1.24	129.0	-11.8	-1.20
7RNEKU		142.5	5.3	0.54	148.0	7.2	0.74
8H3ZC6	*	133.0	-4.2	-0.42	128.0	-12.8	-1.30
8N68R9	X	128.1	-9.1	-0.92	143.8	3.0	0.30
8UVUUL		154.0	16.8	1.71	157.0	16.2	1.66
8WYPDP		130.5	-6.7	-0.68	132.5	-8.3	-0.84
9HCYRR		150.0	12.8	1.30	152.5	11.7	1.20
9LCBMR		142.0	4.8	0.49	143.0	2.2	0.23
9VXC42		135.7	-1.5	-0.15	135.7	-5.1	-0.52
A248PM		132.5	-4.7	-0.48	140.0	-0.8	-0.08
A7DL7L		138.1	0.9	0.09	140.9	0.1	0.01
A7X2MN		136.0	-1.2	-0.12	140.0	-0.8	-0.08
AZBCZT		128.0	-9.2	-0.93	133.0	-7.8	-0.79
BL93WJ		121.5	-15.7	-1.59	125.5	-15.3	-1.56
BM3T3X		131.5	-5.7	-0.58	131.0	-9.8	-1.00
BQFTYP		135.0	-2.2	-0.22	137.5	-3.3	-0.33
BV8ZGX		142.0	4.8	0.49	141.0	0.2	0.02
C6VB7J		127.5	-9.7	-0.98	129.5	-11.3	-1.15
D2CJVG		139.0	1.8	0.19	142.0	1.2	0.12
DEZHLJ		146.5	9.3	0.95	151.0	10.2	1.04
DV7MAV		138.0	0.8	0.08	144.5	3.7	0.38



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Analysis 902 Total Sulfur Dioxide

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
DWX9XZ		137.1	-0.1	-0.01	142.5	1.7	0.17
EJLXPG		143.0	5.8	0.59	143.5	2.7	0.28
ENK9LG		133.0	-4.2	-0.42	138.5	-2.3	-0.23
ETCJVE		160.0	22.8	2.32	160.0	19.2	1.96
FJ62XG		142.0	4.8	0.49	141.0	0.2	0.02
GGTNTK		146.2	9.0	0.92	150.6	9.8	1.00
GMKVBT		126.0	-11.2	-1.14	129.5	-11.3	-1.15
GNUXZD		145.9	8.7	0.89	152.3	11.5	1.18
GTPRWE		138.5	1.3	0.13	138.5	-2.3	-0.23
HB2ZBK	X	113.0	-24.2	-2.46	110.0	-30.8	-3.14
HE4YLD		145.5	8.3	0.85	150.5	9.7	0.99
HFG9YJ		135.0	-2.2	-0.22	138.0	-2.8	-0.28
HW4LDC		151.2	14.0	1.42	160.1	19.3	1.97
KR2MQC		130.5	-6.7	-0.68	134.0	-6.8	-0.69
KUMBBP		143.0	5.8	0.59	148.0	7.2	0.74
LACXW8		141.5	4.3	0.44	146.5	5.7	0.58
MDCAR8		130.0	-7.2	-0.73	135.0	-5.8	-0.59
ME8F2T		132.5	-4.7	-0.48	133.0	-7.8	-0.79
MW38MR	*	111.0	-26.2	-2.66	118.0	-22.8	-2.32
NDAYAA		133.0	-4.2	-0.42	135.0	-5.8	-0.59
NEKZV9		155.0	17.8	1.81	158.0	17.2	1.76
NWLN8	X	143.5	6.3	0.64	136.0	-4.8	-0.49
NXFETL		141.0	3.8	0.39	147.0	6.2	0.64
P4EF97		143.0	5.8	0.59	142.5	1.7	0.18
PMQ6L4		134.5	-2.7	-0.27	136.0	-4.8	-0.49
Q4UYQH		145.5	8.3	0.85	154.5	13.7	1.40
Q63C8J		138.5	1.3	0.13	139.0	-1.8	-0.18
QEF4Z3		133.5	-3.7	-0.37	136.5	-4.3	-0.44
R3W9X9		138.5	1.3	0.13	144.5	3.7	0.38
RAUZ73		136.0	-1.2	-0.12	142.0	1.2	0.12
RBMQBG	*	153.0	15.8	1.61	149.5	8.7	0.89
REM38G		128.0	-9.2	-0.93	129.5	-11.3	-1.15
RPTA6P		116.5	-20.7	-2.10	123.0	-17.8	-1.81
T932R4		151.1	13.9	1.41	154.9	14.1	1.44
TB8UJG		148.1	10.9	1.11	149.1	8.3	0.84



ASEV-CTS Wine Industry Interlaboratory Testing Program
Analysis 902
Total Sulfur Dioxide

Report #064
Spring 2020

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
TFH9JN		153.0	15.8	1.61	156.5	15.7	1.60
TVD3Z2		140.5	3.3	0.34	145.0	4.2	0.43
U6XTZY		142.0	4.8	0.49	143.0	2.2	0.23
UFVUD3	*	114.0	-23.2	-2.36	125.0	-15.8	-1.61
UJXUDZ		125.0	-12.2	-1.24	127.0	-13.8	-1.41
UKRKJE		135.0	-2.2	-0.22	138.5	-2.3	-0.23
UZHICY		129.0	-8.2	-0.83	133.0	-7.8	-0.79
V4WHG2		130.5	-6.7	-0.68	136.0	-4.8	-0.49
VKLQCD		143.5	6.3	0.64	148.5	7.7	0.79
VMT9TH		149.0	11.8	1.20	154.0	13.2	1.35
W4C22Y		156.5	19.3	1.96	160.5	19.7	2.01
W7ZXJK		139.0	1.8	0.19	139.7	-1.1	-0.11
WA3CCW		144.0	6.8	0.69	145.0	4.2	0.43
WEW7AX	X	178.2	41.0	4.16	179.6	38.8	3.96
X678VX		144.0	6.8	0.69	149.0	8.2	0.84
YDUETU		138.0	0.8	0.08	147.0	6.2	0.64
YFEUCG		128.0	-9.2	-0.93	132.0	-8.8	-0.90
YH4FCC		118.0	-19.2	-1.95	122.0	-18.8	-1.92
Z2TDRA		127.0	-10.2	-1.03	131.5	-9.3	-0.95
Z8JQTX		134.0	-3.2	-0.32	141.0	0.2	0.02

Grand Means		Summary Statistics	
	137.18 mg/L		140.78 mg/L
Std Dev Btwn Labs	9.84 mg/L		9.80 mg/L
Statistics based on 85 of 90 reporting participants			

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel

Comments on Assigned Data Flags for Test #902

- HB2ZBK (X) - Inconsistent in testing between samples. Data for sample SA28 are low.
- WEW7AX (X) - Data for both samples are high. Possible Systematic Error.
- NWLN8 (X) - Inconsistent in testing between samples.
- 47GZDT (X) - Data for both samples are low. Possible Systematic Error.
- 8N68R9 (X) - Inconsistent in testing between samples.



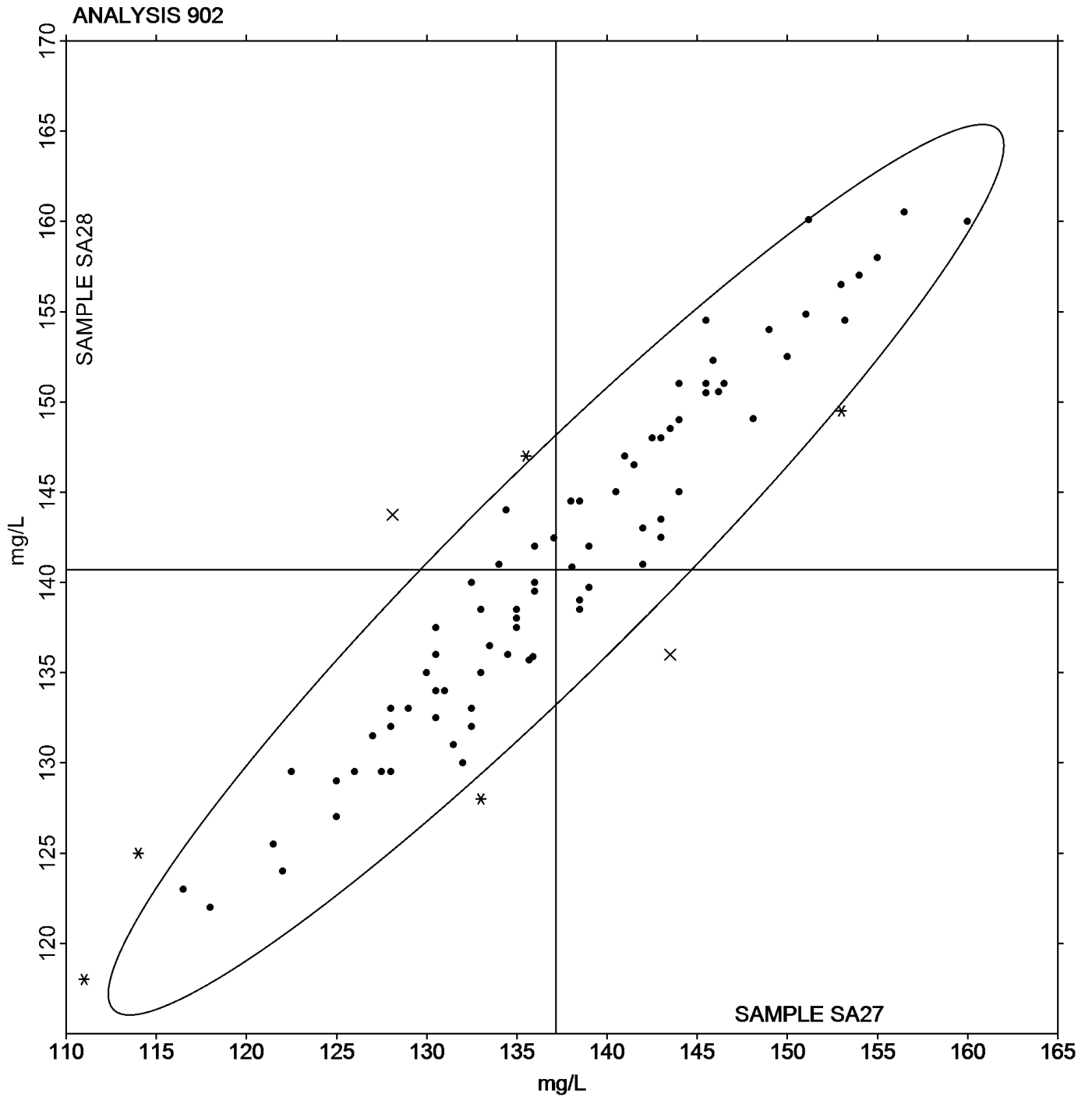
**Analysis 902
Total Sulfur Dioxide**

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA27 <i>White Zinfandel</i>			Sample SA28 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	126.250	5.303	-10.9	132.250	3.889	-8.5	2/2
Ripper Method	133.991	8.698	-3.2	137.457	8.024	-3.3	35/38
Aeration Oxidation (AO) Method	135.581	4.293	-1.6	139.263	5.417	-1.5	11/12
Segmented Flow Analyzer	138.267	11.457	1.1	142.200	12.258	1.4	9/9
Enzymatic Method	141.783	9.286	4.6	147.600	10.394	6.8	6/6
Colormetric Analyzer	141.414	13.162	4.2	145.005	12.942	4.2	11/12
FTIR	145.625	11.086	8.4	146.000	13.491	5.2	4/4
Flow Injection Analysis	141.929	7.814	4.7	144.878	7.394	4.1	7/7



Analysis 902
Total Sulfur Dioxide





ASEV-CTS Wine Industry Interlaboratory Testing Program
Analysis 903
Free Sulfur Dioxide

Report #064
Spring 2020

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BD4Q7		21.86	1.97	0.68	25.81	3.07	1.03
2EXJCE		18.50	-1.39	-0.48	21.50	-1.23	-0.42
2PE4WB		19.50	-0.39	-0.13	24.00	1.27	0.43
36MUG9		16.00	-3.89	-1.35	21.50	-1.23	-0.42
3DY7AZ	*	13.00	-6.89	-2.39	18.00	-4.73	-1.59
3ER2YT		19.00	-0.89	-0.31	23.00	0.27	0.09
3Y3QCQ		24.61	4.72	1.64	27.82	5.09	1.71
44N4NY		18.00	-1.89	-0.65	22.50	-0.23	-0.08
47GZDT		19.00	-0.89	-0.31	22.00	-0.73	-0.25
4UM7VC		18.50	-1.39	-0.48	23.50	0.77	0.26
4UMJNR		17.50	-2.39	-0.83	20.00	-2.73	-0.92
4XMGRC		17.00	-2.89	-1.00	20.00	-2.73	-0.92
644M9W		21.50	1.61	0.56	27.00	4.27	1.44
6888QA		20.49	0.60	0.21	25.60	2.87	0.96
6UW82N		16.50	-3.39	-1.17	17.00	-5.73	-1.93
73QZ3A		16.00	-3.89	-1.35	19.50	-3.23	-1.09
7RNEKU	*	23.00	3.11	1.08	29.00	6.27	2.11
8GJQ73		16.15	-3.74	-1.30	19.60	-3.13	-1.05
8H3ZC6	X	22.50	2.61	0.91	19.00	-3.73	-1.26
8N68R9		18.45	-1.44	-0.50	21.95	-0.78	-0.26
8UVUUL	*	27.50	7.61	2.64	30.00	7.27	2.44
8WYPDP		20.00	0.11	0.04	22.00	-0.73	-0.25
9HCYRR		22.00	2.11	0.73	24.50	1.77	0.59
9LCBMR		23.50	3.61	1.25	26.00	3.27	1.10
9VXC42		23.00	3.11	1.08	25.60	2.87	0.96
A248PM		19.00	-0.89	-0.31	22.00	-0.73	-0.25
A7DL7L		17.60	-2.29	-0.79	19.80	-2.93	-0.99
A7X2MN		22.00	2.11	0.73	23.25	0.52	0.17
AZBCZT		19.00	-0.89	-0.31	22.00	-0.73	-0.25
BL93WJ		22.50	2.61	0.91	24.50	1.77	0.59
BM3T3X	X	20.50	0.61	0.21	17.90	-4.83	-1.63
BQFTYP		20.00	0.11	0.04	23.00	0.27	0.09
BV8ZGX	*	27.00	7.11	2.47	27.00	4.27	1.44
C6VB7J		17.00	-2.89	-1.00	20.50	-2.23	-0.75
CRRF46		18.00	-1.89	-0.65	22.40	-0.33	-0.11

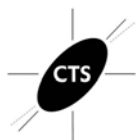


ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #064
Spring 2020

Analysis 903 Free Sulfur Dioxide

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
D2CJVG		19.00	-0.89	-0.31	21.50	-1.23	-0.42
DEZHLJ		19.50	-0.39	-0.13	21.50	-1.23	-0.42
DV7MAV		19.00	-0.89	-0.31	21.50	-1.23	-0.42
DWX9XZ		20.65	0.76	0.26	23.45	0.72	0.24
EJLXPG		20.00	0.11	0.04	23.50	0.77	0.26
ENK9LG		16.50	-3.39	-1.17	19.00	-3.73	-1.26
ETCJVE	*	28.00	8.11	2.81	29.50	6.77	2.28
FJ62XG	*	20.50	0.61	0.21	20.00	-2.73	-0.92
GGTNTK		16.89	-3.00	-1.04	20.41	-2.33	-0.78
GMKVBT		19.00	-0.89	-0.31	21.50	-1.23	-0.42
GNUXZD		20.90	1.01	0.35	24.05	1.32	0.44
GTPRWE		23.00	3.11	1.08	25.00	2.27	0.76
HB2ZBK		18.50	-1.39	-0.48	21.00	-1.73	-0.58
HE4YLD		19.50	-0.39	-0.13	21.50	-1.23	-0.42
HFG9YJ		18.00	-1.89	-0.65	21.00	-1.73	-0.58
HW4LDC		18.10	-1.79	-0.62	22.15	-0.58	-0.20
J3MCBQ		17.00	-2.89	-1.00	19.50	-3.23	-1.09
KR2MQC		20.00	0.11	0.04	23.00	0.27	0.09
KUMBBP		20.00	0.11	0.04	23.50	0.77	0.26
LACXW8		16.50	-3.39	-1.17	18.00	-4.73	-1.59
MDCAR8		21.00	1.11	0.39	24.00	1.27	0.43
ME8F2T		18.00	-1.89	-0.65	19.00	-3.73	-1.26
MW38MR	*	13.50	-6.39	-2.21	14.00	-8.73	-2.94
NDAYAA		21.50	1.61	0.56	24.00	1.27	0.43
NEKZV9		26.00	6.11	2.12	30.00	7.27	2.44
NWLN8		19.00	-0.89	-0.31	23.50	0.77	0.26
NXFETL		23.00	3.11	1.08	27.00	4.27	1.44
NXT4UD		25.00	5.11	1.77	26.00	3.27	1.10
P4EF97	*	23.00	3.11	1.08	22.50	-0.23	-0.08
PMQ6L4		18.20	-1.69	-0.59	21.10	-1.63	-0.55
Q4UYQH		16.50	-3.39	-1.17	19.50	-3.23	-1.09
Q63C8J		21.00	1.11	0.39	24.00	1.27	0.43
QD6NLP		15.50	-4.39	-1.52	17.00	-5.73	-1.93
QEF4Z3		21.50	1.61	0.56	25.50	2.77	0.93
R3W9X9		19.00	-0.89	-0.31	21.50	-1.23	-0.42

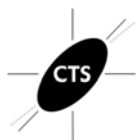


Analysis 903
Free Sulfur Dioxide

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
RAUZ73	X	26.00	6.11	2.12	25.00	2.27	0.76
RBMQBG	X	25.00	5.11	1.77	23.00	0.27	0.09
REM38G		22.00	2.11	0.73	22.50	-0.23	-0.08
RPTA6P	X	10.50	-9.39	-3.25	15.50	-7.23	-2.43
T932R4		23.90	4.01	1.39	26.75	4.02	1.35
TB8UJG		19.65	-0.24	-0.08	24.60	1.87	0.63
TFH9JN		21.00	1.11	0.39	24.50	1.77	0.59
TVD3Z2		18.05	-1.84	-0.64	20.65	-2.08	-0.70
U6XTZY		22.50	2.61	0.91	25.50	2.77	0.93
UFVUD3		17.00	-2.89	-1.00	19.00	-3.73	-1.26
UJXUDZ		19.00	-0.89	-0.31	21.50	-1.23	-0.42
UKRKJE		19.50	-0.39	-0.13	21.50	-1.23	-0.42
UZHICY		20.00	0.11	0.04	21.00	-1.73	-0.58
V4WHG2		20.00	0.11	0.04	23.00	0.27	0.09
VFQWFC		18.00	-1.89	-0.65	22.40	-0.33	-0.11
VKLQCD	X	29.00	9.11	3.16	24.50	1.77	0.59
VMT9TH		21.00	1.11	0.39	23.50	0.77	0.26
W4C22Y		24.50	4.61	1.60	27.50	4.77	1.60
W7ZXJK		18.00	-1.89	-0.65	20.00	-2.73	-0.92
WA3CCW		24.50	4.61	1.60	26.00	3.27	1.10
WEW7AX		21.00	1.11	0.39	23.00	0.27	0.09
X678VX	X	15.50	-4.39	-1.52	23.00	0.27	0.09
YDUETU		19.00	-0.89	-0.31	22.00	-0.73	-0.25
YFEUCG		18.50	-1.39	-0.48	21.50	-1.23	-0.42
YH4FCC		20.00	0.11	0.04	25.00	2.27	0.76
Z2TDRA		18.00	-1.89	-0.65	21.00	-1.73	-0.58
Z8JQTX	X	16.00	-3.89	-1.35	12.00	-10.73	-3.61

Grand Means		Summary Statistics	
	19.888 mg/L		22.735 mg/L
Std Dev Btwn Labs			
	2.884 mg/L		2.972 mg/L
Statistics based on 89 of 97 reporting participants			

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel



**Analysis 903
Free Sulfur Dioxide**

Comments on Assigned Data Flags for Test #903

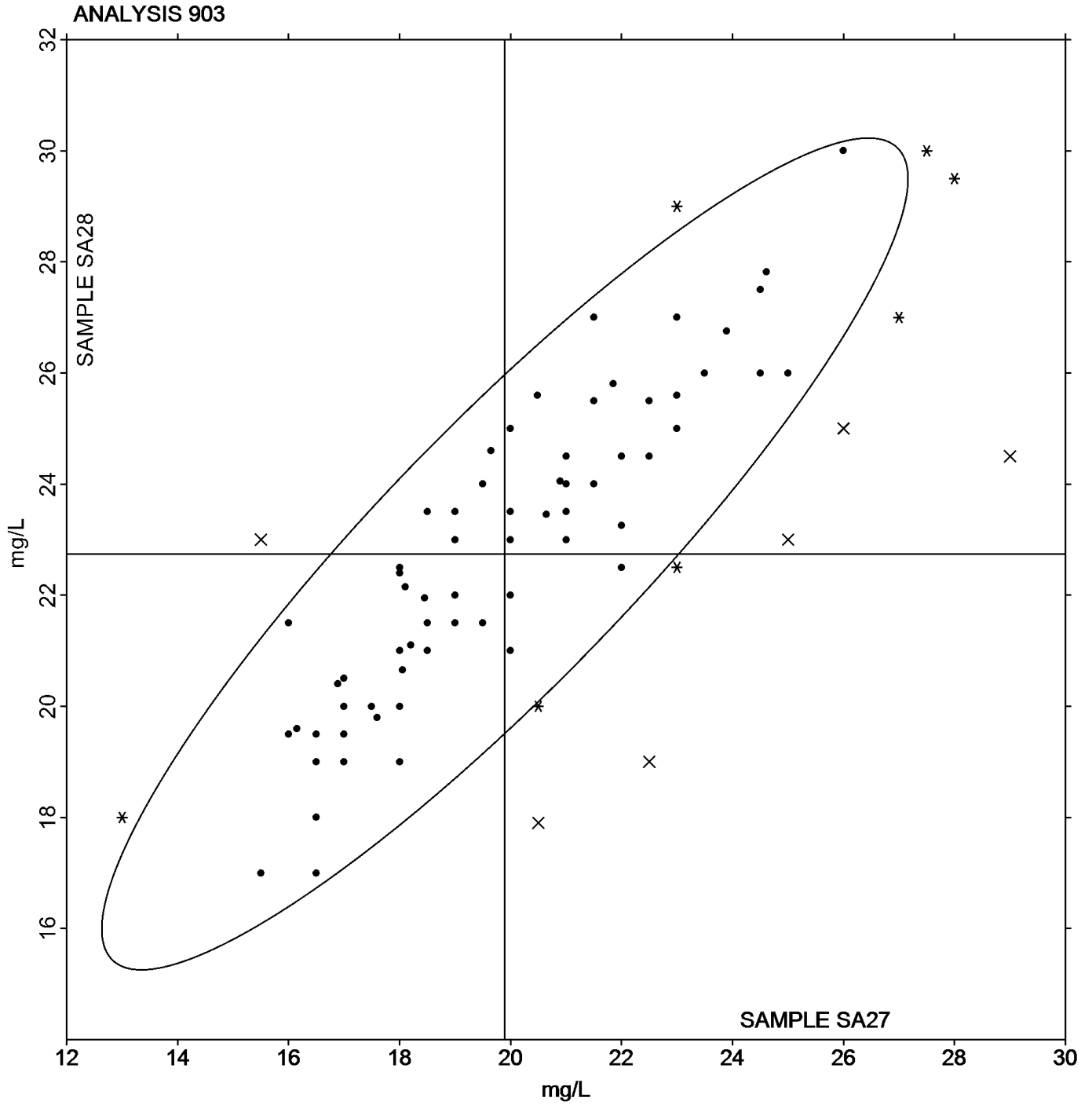
- RAUZ73 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA27.
- Z8JQTX (X) - Inconsistent in testing between samples, data for sample SA28 are low. Inconsistent within the determinations of sample SA27.
- X678VX (X) - Inconsistent in testing between samples.
- VKLQCD (X) - Inconsistent in testing between samples. Data for sample SA27 are high.
- BM3T3X (X) - Inconsistent in testing between samples.
- RBMQBG (X) - Inconsistent in testing between samples.
- 8H3ZC6 (X) - Inconsistent in testing between samples.
- RPTA6P (X) - Inconsistent in testing between samples. Data for sample SA27 are low.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA27 <i>White Zinfandel</i>			Sample SA28 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	20.050	1.354	0.16	22.983	1.314	0.25	3/3
Ripper Method	20.426	2.641	0.54	23.378	2.443	0.64	27/30
Aeration Oxidation (AO) Method	18.907	2.826	-0.98	21.612	3.179	-1.12	31/35
Segmented Flow Analyzer	19.772	3.634	-0.12	22.856	3.445	0.12	9/9
Enzymatic Method	18.000	0.000	-1.89	19.000	0.000	-3.73	1/1
Colormetric Analyzer	21.343	2.375	1.46	24.036	2.527	1.30	7/7
Flow Injection Analysis	19.127	1.692	-0.76	22.330	2.171	-0.40	7/7
FTIR	23.250	3.884	3.36	26.000	3.342	3.27	4/5



Analysis 903
Free Sulfur Dioxide





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #064
Spring 2020

Analysis 904 Titratable Acidity

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BD4Q7		6.826	-0.336	-0.98	6.800	-0.330	-1.03
2EXJCE		7.360	0.198	0.58	7.235	0.105	0.33
2PE4WB	X	7.600	0.438	1.28	7.200	0.070	0.22
36MUG9	X	8.550	1.388	4.07	7.385	0.255	0.80
3DY7AZ		6.930	-0.232	-0.68	7.025	-0.105	-0.33
3ER2YT		7.400	0.238	0.70	7.350	0.220	0.69
3Y3QCQ		6.750	-0.412	-1.21	6.750	-0.380	-1.19
44N4NY		6.850	-0.312	-0.91	6.850	-0.280	-0.88
47GZDT		6.750	-0.412	-1.21	6.700	-0.430	-1.35
4UM7VC		6.850	-0.312	-0.91	6.750	-0.380	-1.19
4UMJNR		7.000	-0.162	-0.47	7.000	-0.130	-0.41
4XMGRC		6.685	-0.477	-1.40	6.620	-0.510	-1.60
644M9W		7.235	0.073	0.21	7.215	0.085	0.27
6888QA		7.200	0.038	0.11	7.100	-0.030	-0.09
6UW82N	X	6.825	-0.337	-0.99	6.415	-0.715	-2.24
73QZ3A		7.900	0.738	2.16	7.800	0.670	2.10
7RNEKU	X	8.550	1.388	4.07	8.550	1.420	4.45
8GJQ73		7.585	0.423	1.24	7.465	0.335	1.05
8H3ZC6	X	4.360	-2.802	-8.21	4.265	-2.865	-8.97
8N68R9		7.525	0.363	1.06	7.570	0.440	1.38
8UVUUL	*	7.885	0.723	2.12	7.665	0.535	1.68
8WYPDP		6.925	-0.237	-0.69	6.890	-0.240	-0.75
9HCYRR		7.240	0.078	0.23	7.145	0.015	0.05
9LCBMR		6.800	-0.362	-1.06	6.800	-0.330	-1.03
9VXC42	*	7.880	0.718	2.10	7.880	0.750	2.35
A248PM		7.185	0.023	0.07	7.075	-0.055	-0.17
A7DL7L		7.260	0.098	0.29	7.185	0.055	0.17
A7X2MN		6.835	-0.327	-0.96	6.880	-0.250	-0.78
AZBCZT		7.015	-0.147	-0.43	6.950	-0.180	-0.56
BL93WJ		7.525	0.363	1.06	7.340	0.210	0.66
BM3T3X	X	9.600	2.438	7.14	8.900	1.770	5.54
BQFTYP		7.230	0.068	0.20	7.190	0.060	0.19
BV8ZGX		7.200	0.038	0.11	7.200	0.070	0.22
C6VB7J		7.050	-0.112	-0.33	7.000	-0.130	-0.41
D2CJVG		6.940	-0.222	-0.65	7.010	-0.120	-0.38



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #064
Spring 2020

Analysis 904 Titratable Acidity

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
DEZHLJ		7.150	-0.012	-0.03	7.150	0.020	0.06
DV7MAV		7.100	-0.062	-0.18	7.100	-0.030	-0.09
DWX9XZ		7.350	0.188	0.55	7.300	0.170	0.53
EJLXPG		6.905	-0.257	-0.75	6.885	-0.245	-0.77
ENK9LG	X	7.300	0.138	0.40	7.050	-0.080	-0.25
ETCJVE		7.545	0.383	1.12	7.540	0.410	1.28
FJ62XG		6.760	-0.402	-1.18	6.740	-0.390	-1.22
GGTNTK		7.345	0.183	0.54	7.230	0.100	0.31
GMKVBT		7.550	0.388	1.14	7.450	0.320	1.00
GNUXZD		7.055	-0.107	-0.31	7.015	-0.115	-0.36
GTPRWE		6.900	-0.262	-0.77	6.880	-0.250	-0.78
HB2ZBK		7.850	0.688	2.02	7.850	0.720	2.25
HE4YLD		6.935	-0.227	-0.66	6.975	-0.155	-0.49
HFG9YJ	*	7.100	-0.062	-0.18	7.250	0.120	0.38
HW4LDC		6.800	-0.362	-1.06	6.900	-0.230	-0.72
J3MCBQ		7.400	0.238	0.70	7.350	0.220	0.69
KR2MQC		7.550	0.388	1.14	7.450	0.320	1.00
KUMBBP		7.200	0.038	0.11	7.300	0.170	0.53
LACXW8		7.700	0.538	1.58	7.600	0.470	1.47
ME8F2T		7.700	0.538	1.58	7.700	0.570	1.78
MW38MR		7.000	-0.162	-0.47	7.000	-0.130	-0.41
NDAYAA		7.600	0.438	1.28	7.600	0.470	1.47
NEKZV9		7.400	0.238	0.70	7.300	0.170	0.53
NWLN8		7.945	0.783	2.29	7.840	0.710	2.22
NXFETL		7.100	-0.062	-0.18	7.100	-0.030	-0.09
NXT4UD	X	8.455	1.293	3.79	7.295	0.165	0.52
P4EF97		6.850	-0.312	-0.91	6.850	-0.280	-0.88
PMQ6L4		7.400	0.238	0.70	7.450	0.320	1.00
Q4UYQH		7.200	0.038	0.11	7.050	-0.080	-0.25
Q63C8J		7.450	0.288	0.84	7.400	0.270	0.85
QD6NLP		7.050	-0.112	-0.33	7.000	-0.130	-0.41
QEF4Z3		6.895	-0.267	-0.78	6.915	-0.215	-0.67
R3W9X9		7.165	0.003	0.01	7.165	0.035	0.11
RAUZ73		6.950	-0.212	-0.62	6.950	-0.180	-0.56
RBMQBG	X	7.900	0.738	2.16	8.100	0.970	3.04



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

Report #064
Spring 2020

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
REM38G		7.255	0.093	0.27	7.145	0.015	0.05
RPTA6P	X	7.850	0.688	2.02	8.050	0.920	2.88
T932R4		7.415	0.253	0.74	7.380	0.250	0.78
TB8UJG		7.989	0.827	2.42	7.907	0.776	2.43
TFH9JN		6.900	-0.262	-0.77	6.850	-0.280	-0.88
TVD3Z2		6.870	-0.292	-0.85	6.955	-0.175	-0.55
U6XTZY		7.050	-0.112	-0.33	7.030	-0.100	-0.31
UFVUD3		7.000	-0.162	-0.47	7.100	-0.030	-0.09
UJXUDZ		6.800	-0.362	-1.06	6.800	-0.330	-1.03
UKRKJE		6.960	-0.202	-0.59	6.970	-0.160	-0.50
UZHKCY		7.500	0.338	0.99	7.350	0.220	0.69
V4WHG2		6.835	-0.327	-0.96	6.800	-0.330	-1.03
VFQWFC		6.600	-0.562	-1.65	6.620	-0.510	-1.60
VKLQCD		7.115	-0.047	-0.14	7.050	-0.080	-0.25
VMT9TH		6.900	-0.262	-0.77	6.900	-0.230	-0.72
W4C22Y		6.935	-0.227	-0.66	6.915	-0.215	-0.67
W7ZXJK		6.900	-0.262	-0.77	6.900	-0.230	-0.72
WA3CCW		6.620	-0.542	-1.59	6.605	-0.525	-1.65
WEW7AX	X	8.965	1.803	5.28	8.655	1.525	4.78
X678VX		7.005	-0.157	-0.46	6.925	-0.205	-0.64
YDUETU		7.300	0.138	0.40	7.200	0.070	0.22
YFEUCG		7.050	-0.112	-0.33	7.050	-0.080	-0.25
YH4FCC		6.550	-0.612	-1.79	6.500	-0.630	-1.97
Z2TDRA	X	8.100	0.938	2.75	7.810	0.680	2.13
Z8JQTX	X	7.300	0.138	0.40	7.500	0.370	1.16

Grand Means		Summary Statistics	
	7.1618 g/L as tartaric acid		7.1302 g/L as tartaric acid
Std Dev Btwn Labs			
	0.3414 g/L as tartaric acid		0.3193 g/L as tartaric acid
Statistics based on 82 of 95 reporting participants			

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel



Analysis 904
Titratable Acidity

Comments on Assigned Data Flags for Test #904

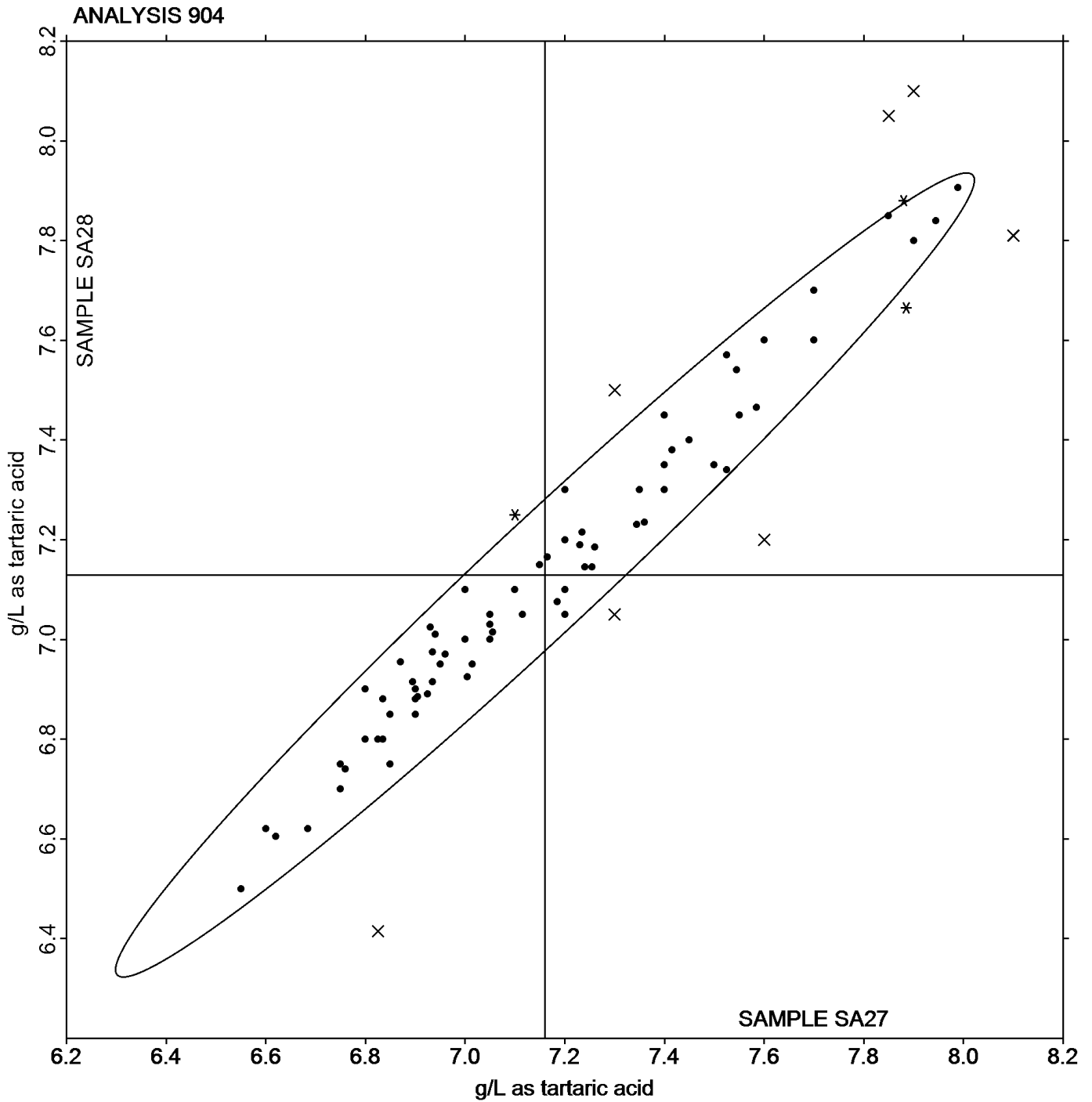
- NXT4UD (X) - Inconsistent in testing between samples, data for sample SA27 are high. Inconsistent within the determinations of sample SA28.
- 7RNEKU (X) - Data for both samples are high. Possible Systematic Error.
- WEW7AX (X) - Data for both samples are high. Possible Systematic Error.
- 6UW82N (X) - Inconsistent in testing between samples.
- Z8JQTX (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA27.
- ENK9LG (X) - Inconsistent in testing between samples.
- Z2TDRA (X) - Inconsistent in testing between samples.
- 36MUG9 (X) - Inconsistent in testing between samples, data for sample SA27 are high. Inconsistent within the determinations of sample SA27.
- BM3T3X (X) - Data for both samples are high. Possible Systematic Error.
- RBMQBG (X) - Inconsistent in testing between samples. Data for sample SA28 are high.
- 2PE4WB (X) - Inconsistent in testing between samples.
- 8H3ZC6 (X) - Data for both samples are low. Possible Systematic Error.
- RPTA6P (X) - Inconsistent in testing between samples data for sample SA28 are high. Inconsistent within the determinations of sample SA27.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA27 <i>White Zinfandel</i>			Sample SA28 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Autotitration	7.162	0.348	0.000	7.125	0.315	-0.005	57/61
Manual Titration	7.134	0.362	-0.027	7.115	0.372	-0.015	18/27
FTIR	7.291	0.209	0.129	7.251	0.211	0.121	6/6
Segmented Flow Analyzer	6.870	0.000	-0.292	6.955	0.000	-0.175	1/1



Analysis 904
Titratable Acidity





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #064
Spring 2020

Analysis 905 Volatile Acidity

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BD4Q7	*	0.3000	0.0390	0.61	0.3350	0.0745	1.18
2EXJCE		0.2400	-0.0210	-0.33	0.2300	-0.0305	-0.48
2PE4WB		0.2100	-0.0510	-0.80	0.1850	-0.0755	-1.20
36MUG9		0.1850	-0.0760	-1.20	0.2000	-0.0605	-0.96
3DY7AZ		0.3650	0.1040	1.64	0.3800	0.1195	1.89
3ER2YT		0.3100	0.0490	0.77	0.3100	0.0495	0.78
3Y3QCQ		0.2880	0.0270	0.43	0.2880	0.0275	0.44
47GZDT		0.2300	-0.0310	-0.49	0.2100	-0.0505	-0.80
4UM7VC	*	0.4200	0.1590	2.51	0.3950	0.1345	2.13
4UMJNR		0.3100	0.0490	0.77	0.2950	0.0345	0.55
4XMGRC	X	0.3700	0.1090	1.72	0.3200	0.0595	0.94
644M9W		0.2200	-0.0410	-0.65	0.2200	-0.0405	-0.64
6UW82N		0.3450	0.0840	1.32	0.3500	0.0895	1.42
73QZ3A		0.2650	0.0040	0.06	0.2700	0.0095	0.15
7RNEKU		0.2200	-0.0410	-0.65	0.2300	-0.0305	-0.48
8GJQ73	X	0.2450	-0.0160	-0.25	0.3100	0.0495	0.78
8H3ZC6		0.1400	-0.1210	-1.91	0.1650	-0.0955	-1.51
8N68R9		0.3650	0.1040	1.64	0.3750	0.1145	1.81
8UVUUL		0.2700	0.0090	0.14	0.2750	0.0145	0.23
8WYPDP		0.2600	-0.0010	-0.02	0.2500	-0.0105	-0.17
9HCYRR		0.2950	0.0340	0.54	0.2800	0.0195	0.31
9LCBMR		0.2000	-0.0610	-0.96	0.1800	-0.0805	-1.28
A248PM		0.2550	-0.0060	-0.09	0.2550	-0.0055	-0.09
A7DL7L		0.3555	0.0945	1.49	0.3470	0.0865	1.37
A7X2MN		0.2402	-0.0208	-0.33	0.2361	-0.0244	-0.39
AZBCZT		0.2750	0.0140	0.22	0.2750	0.0145	0.23
BL93WJ		0.2600	-0.0010	-0.02	0.2450	-0.0155	-0.25
BM3T3X	X	0.3600	0.0990	1.56	0.2880	0.0275	0.44
BQFTYP		0.3895	0.1285	2.03	0.3655	0.1050	1.66
BV8ZGX		0.3100	0.0490	0.77	0.3250	0.0645	1.02
C6VB7J		0.2200	-0.0410	-0.65	0.2300	-0.0305	-0.48
D2CJVG		0.2200	-0.0410	-0.65	0.2450	-0.0155	-0.25
DEZHLJ		0.2950	0.0340	0.54	0.2850	0.0245	0.39
DV7MAV		0.1950	-0.0660	-1.04	0.1800	-0.0805	-1.28
DWX9XZ		0.3550	0.0940	1.48	0.3650	0.1045	1.66



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #064
Spring 2020

Analysis 905 Volatile Acidity

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
EJLXPG		0.2400	-0.0210	-0.33	0.2300	-0.0305	-0.48
ENK9LG	X	0.3200	0.0590	0.93	0.2600	-0.0005	-0.01
ETCJVE		0.1100	-0.1510	-2.38	0.1100	-0.1505	-2.38
FJ62XG		0.3350	0.0740	1.17	0.3400	0.0795	1.26
GGTNTK		0.2400	-0.0210	-0.33	0.2400	-0.0205	-0.32
GMKVBT		0.3800	0.1190	1.88	0.3750	0.1145	1.81
GINUXZD	X	0.3000	0.0390	0.61	0.2500	-0.0105	-0.17
GTPRWE		0.2300	-0.0310	-0.49	0.2200	-0.0405	-0.64
HB2ZBK		0.2600	-0.0010	-0.02	0.2500	-0.0105	-0.17
HE4YLD		0.2800	0.0190	0.30	0.2800	0.0195	0.31
HFG9YJ		0.2300	-0.0310	-0.49	0.2200	-0.0405	-0.64
HW4LDC	*	0.4350	0.1740	2.74	0.4100	0.1495	2.37
J3MCBQ		0.2350	-0.0260	-0.41	0.2300	-0.0305	-0.48
KR2MQC		0.3250	0.0640	1.01	0.3400	0.0795	1.26
KUMBBP		0.1900	-0.0710	-1.12	0.1950	-0.0655	-1.04
LACXW8		0.2300	-0.0310	-0.49	0.2300	-0.0305	-0.48
MDCAR8		0.2200	-0.0410	-0.65	0.2300	-0.0305	-0.48
ME8F2T		0.2500	-0.0110	-0.17	0.2450	-0.0155	-0.25
MW38MR		0.2500	-0.0110	-0.17	0.2500	-0.0105	-0.17
NDAYAA		0.2800	0.0190	0.30	0.2800	0.0195	0.31
NEKZV9		0.3000	0.0390	0.61	0.3000	0.0395	0.63
NWLN8		0.3300	0.0690	1.09	0.3300	0.0695	1.10
NXFETL		0.2500	-0.0110	-0.17	0.2300	-0.0305	-0.48
NXT4UD	X	0.5400	0.2790	4.40	0.3950	0.1345	2.13
P4EF97		0.1700	-0.0910	-1.43	0.1700	-0.0905	-1.43
PMQ6L4		0.2150	-0.0460	-0.73	0.2050	-0.0555	-0.88
Q4UYQH		0.2600	-0.0010	-0.02	0.2600	-0.0005	-0.01
Q63C8J		0.1250	-0.1360	-2.14	0.1200	-0.1405	-2.23
QD6NLP		0.2550	-0.0060	-0.09	0.2750	0.0145	0.23
QEF4Z3		0.2300	-0.0310	-0.49	0.2500	-0.0105	-0.17
R3W9X9	*	0.2600	-0.0010	-0.02	0.2950	0.0345	0.55
RAUZ73		0.3450	0.0840	1.32	0.3400	0.0795	1.26
RBMQBG		0.2200	-0.0410	-0.65	0.2100	-0.0505	-0.80
REM38G		0.2050	-0.0560	-0.88	0.2250	-0.0355	-0.56
RPTA6P		0.3850	0.1240	1.95	0.3750	0.1145	1.81



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

Report #064
Spring 2020

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
T932R4		0.2540	-0.0070	-0.11	0.2550	-0.0055	-0.09
TB8UJG		0.2700	0.0090	0.14	0.2750	0.0145	0.23
TFH9JN		0.2900	0.0290	0.46	0.2800	0.0195	0.31
TVD3Z2		0.3400	0.0790	1.25	0.3550	0.0945	1.50
U6XTZY		0.1300	-0.1310	-2.07	0.1250	-0.1355	-2.15
UFVUD3		0.2400	-0.0210	-0.33	0.2500	-0.0105	-0.17
UJXUDZ		0.3000	0.0390	0.61	0.2950	0.0345	0.55
UKRKJE	*	0.2250	-0.0360	-0.57	0.2650	0.0045	0.07
UZHKCY	X	0.5150	0.2540	4.00	0.5150	0.2545	4.03
V4WHG2		0.2400	-0.0210	-0.33	0.2250	-0.0355	-0.56
VFQWFC		0.2200	-0.0410	-0.65	0.2250	-0.0355	-0.56
VKLQCD	*	0.2450	-0.0160	-0.25	0.2050	-0.0555	-0.88
VMT9TH		0.2750	0.0140	0.22	0.2650	0.0045	0.07
W4C22Y		0.2300	-0.0310	-0.49	0.2350	-0.0255	-0.40
W7ZXJK		0.2500	-0.0110	-0.17	0.2400	-0.0205	-0.32
WA3CCW		0.2000	-0.0610	-0.96	0.1900	-0.0705	-1.12
WEW7AX		0.2760	0.0150	0.24	0.2715	0.0110	0.17
X678VX		0.2350	-0.0260	-0.41	0.2300	-0.0305	-0.48
YFEUCG		0.2550	-0.0060	-0.09	0.2650	0.0045	0.07
YH4FCC		0.2265	-0.0345	-0.54	0.2250	-0.0355	-0.56
Z2TDRA		0.1750	-0.0860	-1.36	0.1800	-0.0805	-1.28
Z8JQTX		0.2300	-0.0310	-0.49	0.2500	-0.0105	-0.17

Grand Means		Summary Statistics	
	0.26100 g/L as acetic acid		0.26051 g/L as acetic acid
Std Dev Btwn Labs			
	0.06343 g/L as acetic acid		0.06313 g/L as acetic acid
Statistics based on 85 of 92 reporting participants			

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel



**Analysis 905
Volatile Acidity**

Comments on Assigned Data Flags for Test #905

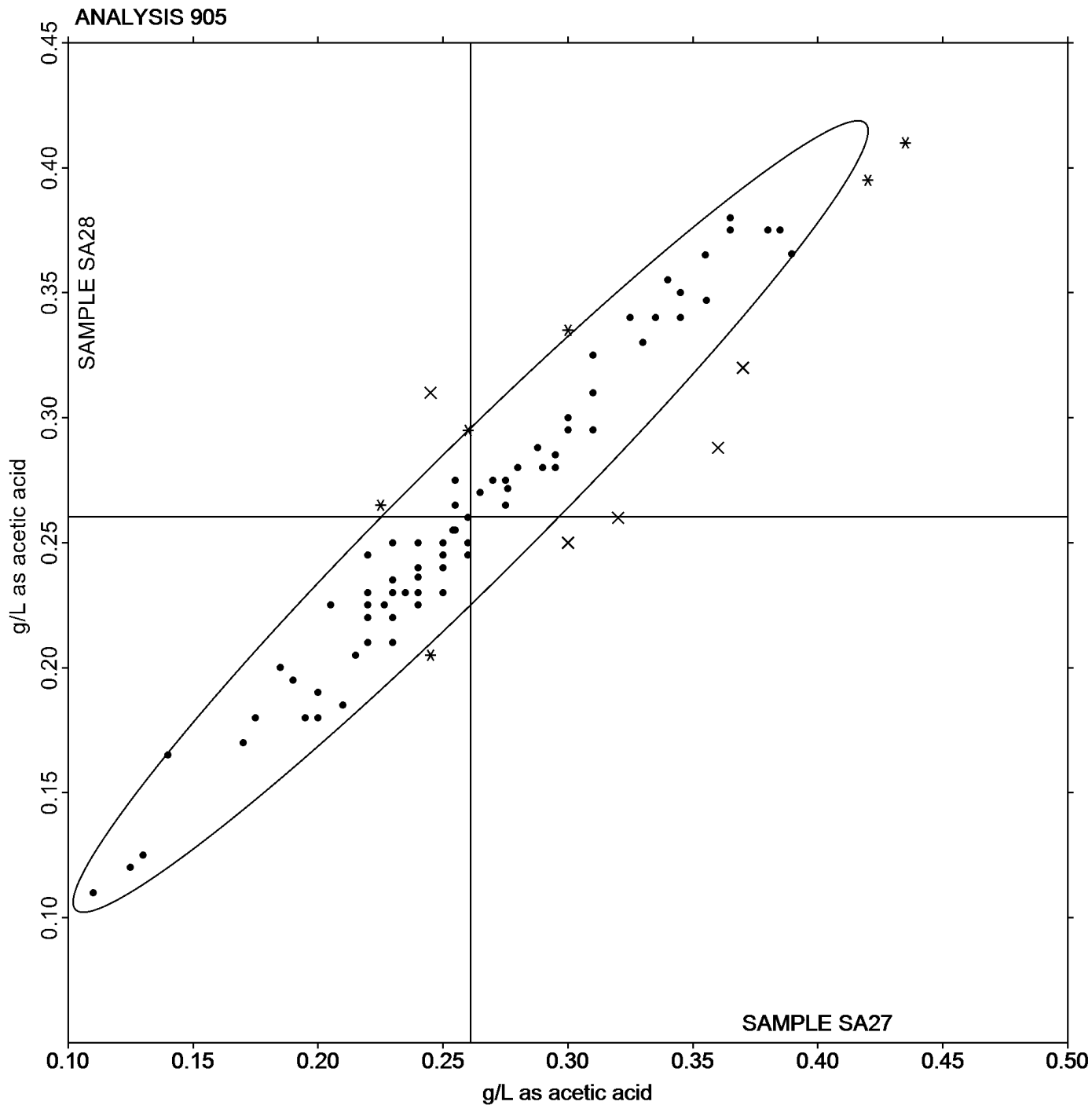
- NXT4UD (X) - Inconsistent in testing between samples data for sample SA27 are high. Inconsistent within the determinations of sample SA28.
- GNUXZD (X) - Inconsistent in testing between samples.
- UZHICY (X) - Data for both samples are high. Possible Systematic Error.
- ENK9LG (X) - Inconsistent in testing between samples.
- 8GJQ73 (X) - Inconsistent in testing between samples.
- BM3T3X (X) - Inconsistent in testing between samples.
- 4XMGRG (X) - Inconsistent in testing between samples.

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA27 <i>White Zinfandel</i>			Sample SA28 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method	0.315	0.057	0.0540	0.315	0.071	0.0545	2/2
Cash Still method	0.361	0.045	0.1001	0.353	0.039	0.0929	12/16
Enzymatic method	0.242	0.038	-0.0193	0.242	0.041	-0.0189	54/57
HPLC	0.240	0.000	-0.0208	0.236	0.000	-0.0244	1/1
GC	0.260	0.000	-0.0010	0.245	0.000	-0.0155	1/1
Colorimetric Analysis	0.225	0.000	-0.0360	0.265	0.000	0.0045	1/1
Seg. Flow / Colorimetric Analyzer	0.331	0.029	0.0703	0.340	0.040	0.0795	4/4
FTIR	0.212	0.068	-0.0488	0.212	0.066	-0.0485	10/10



Analysis 905
Volatile Acidity





Analysis 906
Specific Gravity

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BD4Q7	X	1.011	-0.002	-1.87	1.012	0.000	0.40
2EXJCE		1.010	-0.002	-2.22	1.010	-0.002	-2.20
2PE4WB		1.012	0.000	0.35	1.012	0.000	0.43
36MUG9		1.010	-0.002	-2.10	1.010	-0.002	-2.07
3DY7AZ		1.012	0.000	0.32	1.012	0.000	0.46
3Y3QCQ		1.012	0.000	-0.10	1.012	0.000	-0.03
44N4NY		1.012	0.000	0.31	1.012	0.000	0.54
47GZDT		1.013	0.001	1.47	1.013	0.001	1.33
4UM7VC		1.013	0.001	0.63	1.012	0.000	0.52
4UMJNR		1.012	0.000	0.29	1.012	0.000	0.39
4XMGRC		1.012	0.000	0.38	1.012	0.000	0.37
6888QA	X	1.013	0.001	0.87	1.018	0.006	7.14
73QZ3A		1.012	0.000	-0.52	1.011	-0.001	-1.33
8H3ZC6	X	1.010	-0.002	-2.39	1.009	-0.003	-3.30
8N68R9		1.012	0.000	0.08	1.012	0.000	0.15
8WYPDP		1.011	-0.002	-1.91	1.011	-0.001	-1.81
9HCYRR		1.012	0.000	0.26	1.012	0.000	0.34
9LCBMR		1.012	0.000	0.29	1.012	0.000	0.40
9VXC42	*	1.014	0.002	2.69	1.014	0.002	2.81
A248PM		1.012	0.000	-0.10	1.012	0.000	0.03
A7DL7L		1.012	0.000	0.45	1.013	0.001	0.83
A7X2MN		1.012	0.000	0.35	1.012	0.000	0.47
AZBCZT		1.012	0.000	-0.10	1.013	0.001	0.65
BL93WJ	*	1.012	0.000	0.32	1.012	-0.001	-0.63
BM3T3X		1.012	0.000	0.28	1.012	0.000	0.03
BQFTYP		1.012	0.000	0.18	1.012	0.000	0.29
BV8ZGX		1.012	0.000	0.29	1.012	0.000	0.41
C6VB7J		1.012	0.000	0.09	1.012	0.000	0.09
CRRF46	X	1.013	0.001	1.48	1.012	0.000	-0.28
D2CJVG		1.013	0.000	0.51	1.013	0.001	0.71
DEZHLJ		1.012	0.000	0.41	1.013	0.000	0.61
DWX9XZ	X	1.009	-0.003	-3.19	1.011	-0.001	-1.15
ENK9LG		1.012	0.000	-0.22	1.012	0.000	-0.40
ETCJVE		1.012	-0.001	-0.67	1.012	0.000	-0.60
GMKVBT		1.012	0.000	0.32	1.012	0.000	-0.40



Analysis 906
Specific Gravity

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GINUXZD		1.013	0.000	0.51	1.013	0.001	0.83
GTPRWE		1.012	0.000	0.22	1.012	0.000	0.32
HB2ZBK		1.012	0.000	0.36	1.012	0.000	0.48
HE4YLD		1.010	-0.002	-1.97	1.011	-0.002	-1.87
HFG9YJ		1.013	0.001	0.97	1.012	0.000	0.38
HW4LDC		1.012	0.000	0.42	1.012	0.000	0.40
KR2MQC	X	1.008	-0.004	-4.94	1.013	0.001	1.20
KUMBBP		1.013	0.000	0.57	1.013	0.001	0.65
LACXW8		1.010	-0.002	-1.98	1.010	-0.002	-1.91
MDCAR8		1.012	0.000	0.48	1.012	0.000	0.55
MW38MR	X	1.012	0.000	-0.10	1.015	0.003	3.43
NDAYAA		1.011	-0.001	-1.79	1.011	-0.001	-1.64
NEKZV9		1.012	0.000	0.41	1.012	0.000	0.49
NWLN8		1.012	0.000	0.45	1.012	0.000	0.34
NXFETL		1.013	0.000	0.53	1.013	0.000	0.61
P4EF97		1.011	-0.001	-1.58	1.011	-0.001	-1.53
Q4UYQH		1.013	0.001	0.87	1.012	0.000	0.34
Q63C8J		1.012	0.000	0.26	1.012	0.000	0.34
QD6NLP	X	1.033	0.021	25.87	1.033	0.021	26.23
QEF4Z3	*	1.010	-0.002	-2.76	1.010	-0.002	-2.88
R3W9X9		1.013	0.001	1.23	1.013	0.001	1.45
RAUZ73		1.012	0.000	0.08	1.012	0.000	0.21
RBMQBG		1.012	0.000	0.41	1.012	0.000	0.57
REM38G		1.013	0.001	0.65	1.013	0.000	0.60
RPTA6P		1.013	0.001	0.63	1.013	0.001	0.65
T932R4		1.013	0.001	0.63	1.013	0.001	0.77
TB8UJG		1.012	0.000	0.24	1.012	0.000	0.36
TFH9JN		1.011	-0.001	-0.95	1.011	-0.001	-0.90
TVD3Z2		1.012	0.000	0.38	1.012	0.000	0.44
U6XTZY		1.010	-0.002	-2.04	1.011	-0.001	-1.45
UFVUD3		1.013	0.001	0.87	1.013	0.001	0.96
UJXUDZ		1.012	0.000	0.35	1.012	0.000	0.43
UKRKJE		1.011	-0.001	-1.00	1.011	-0.001	-0.96
UZHICY		1.012	0.000	0.36	1.012	0.000	0.44
V4WHG2		1.013	0.000	0.57	1.013	0.001	0.71



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

Report #064
Spring 2020

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
VKLQCD		1.011	-0.001	-1.79	1.010	-0.002	-2.01
VMT9TH		1.012	0.000	0.26	1.012	0.000	0.34
W4C22Y		1.012	0.000	0.39	1.012	0.000	0.40
W7ZXJK		1.013	0.001	1.11	1.013	0.001	1.20
WA3CCW		1.012	0.000	0.46	1.012	0.000	0.57
WEW7AX		1.012	0.000	0.28	1.012	0.000	0.42
X678VX		1.012	0.000	0.26	1.012	0.000	0.21
YFEUCG		1.012	0.000	0.39	1.012	0.000	0.46
YH4FCC	*	1.010	-0.002	-2.33	1.011	-0.001	-1.68
Z2TDRA		1.013	0.001	0.63	1.013	0.000	0.58
Z8JQTX		1.013	0.000	0.57	1.012	0.000	0.52

Grand Means		Summary Statistics	
1.0121	sp gr 20/20 C	1.0120	sp gr 20/20 C
Std Dev Btw Labs		0.0008	sp gr 20/20 C
Statistics based on 73 of 81 reporting participants			

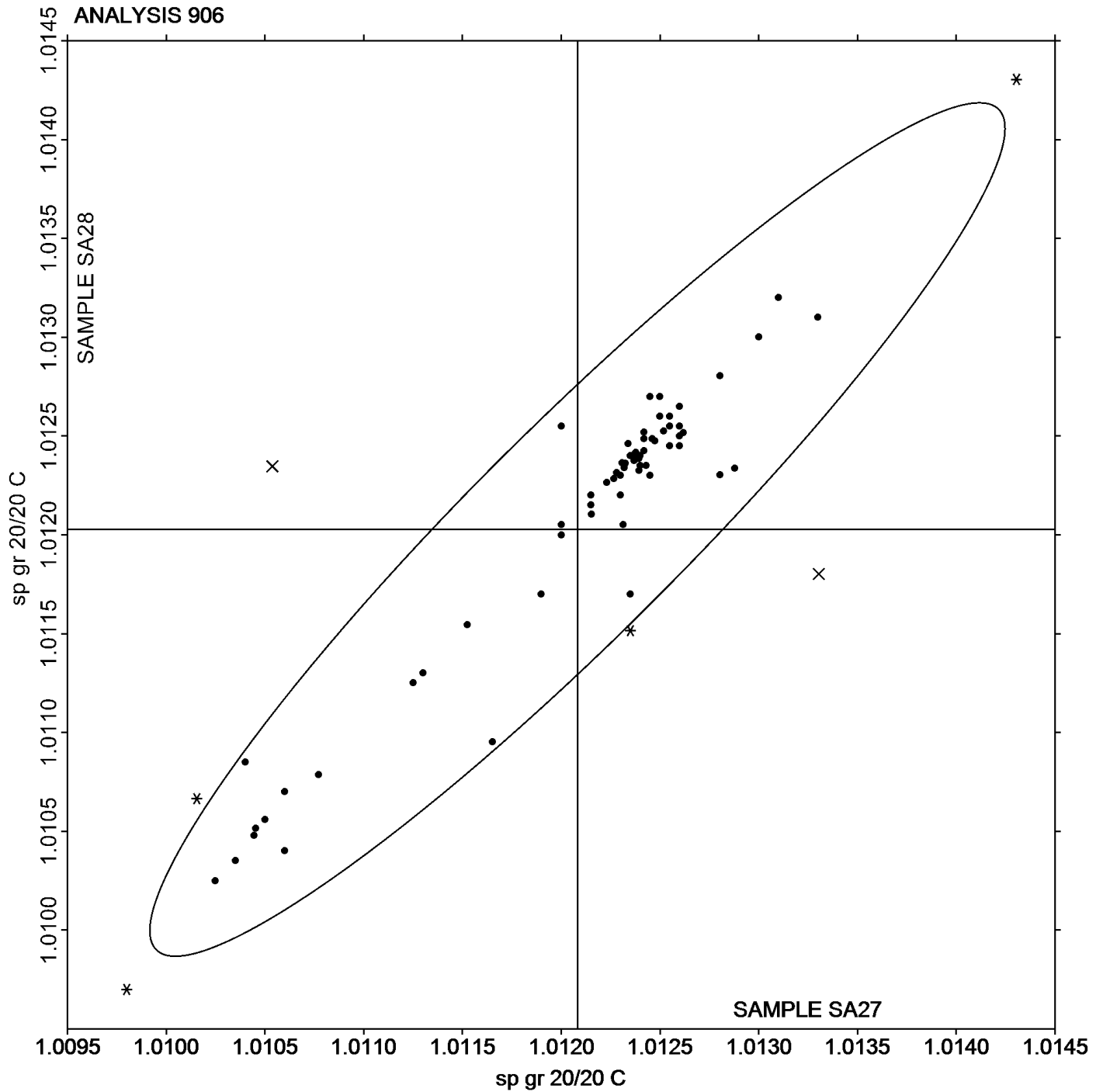
Wines tested: SA27: White Zinfandel; SA28: White Zinfandel

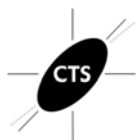
Comments on Assigned Data Flags for Test #906

- KR2MQC (X) - Data for sample SA27 are low.
- 2BD4Q7 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA27.
- DWX9XZ (X) - Data for sample SA27 are low. Inconsistent within the determinations of sample SA28.
- 8H3ZC6 (X) - Data for sample SA28 are low.
- CRRF46 (X) - Inconsistent in testing between samples. Inconsistent within the determinations of both samples.
- 6888QA (X) - Data for sample SA28 are high. Inconsistent within the determinations of sample SA28.
- MW38MR (X) - Data for sample SA28 are high.
- QD6NLP (X) - Data for both samples are high.



Analysis 906
Specific Gravity





ASEV-CTS Wine Industry Interlaboratory Testing Program
Analysis 907
pH

Report #064
Spring 2020

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BD4Q7		3.065	-0.033	-1.21	3.055	-0.044	-1.68
2EXJCE	X	3.095	-0.003	-0.12	3.125	0.026	0.96
2PE4WB		3.150	0.052	1.88	3.150	0.051	1.91
36MUG9	*	3.085	-0.013	-0.48	3.105	0.006	0.21
3DY7AZ		3.050	-0.048	-1.76	3.045	-0.054	-2.05
3ER2YT		3.120	0.022	0.79	3.120	0.021	0.77
3Y3QCQ	X	3.220	0.122	4.43	3.220	0.121	4.54
44N4NY		3.095	-0.003	-0.12	3.090	-0.009	-0.36
47GZDT		3.140	0.042	1.52	3.140	0.041	1.53
4UM7VC		3.095	-0.003	-0.12	3.090	-0.009	-0.36
4UMJNR		3.090	-0.008	-0.30	3.090	-0.009	-0.36
4XMGRC		3.060	-0.038	-1.39	3.070	-0.029	-1.11
644M9W		3.090	-0.008	-0.30	3.085	-0.014	-0.54
6888QA	X	2.980	-0.118	-4.30	2.980	-0.119	-4.50
6UW82N	X	3.000	-0.098	-3.57	2.985	-0.114	-4.31
73QZ3A		3.070	-0.028	-1.03	3.070	-0.029	-1.11
7RNEKU		3.090	-0.008	-0.30	3.095	-0.004	-0.17
8GJQ73	*	3.080	-0.018	-0.67	3.065	-0.034	-1.30
8H3ZC6		3.120	0.022	0.79	3.120	0.021	0.77
8N68R9		3.105	0.007	0.24	3.120	0.021	0.77
8UVUUL		3.100	0.002	0.06	3.100	0.001	0.02
8WYPDP		3.135	0.037	1.33	3.130	0.031	1.15
9HCYRR		3.095	-0.003	-0.12	3.110	0.011	0.40
9LCBMR		3.095	-0.003	-0.12	3.100	0.001	0.02
9VXC42		3.090	-0.008	-0.30	3.100	0.001	0.02
A248PM		3.130	0.032	1.15	3.130	0.031	1.15
A7DL7L		3.102	0.004	0.13	3.096	-0.003	-0.13
A7X2MN	X	3.040	-0.058	-2.12	3.095	-0.004	-0.17
AZBCZT		3.080	-0.018	-0.67	3.075	-0.024	-0.92
BL93WJ		3.090	-0.008	-0.30	3.095	-0.004	-0.17
BM3T3X	X	3.100	0.002	0.06	3.005	-0.094	-3.56
BQFTYP		3.080	-0.018	-0.67	3.080	-0.019	-0.73
BV8ZGX		3.080	-0.018	-0.67	3.080	-0.019	-0.73
C6VB7J		3.075	-0.023	-0.85	3.080	-0.019	-0.73
CRRF46	X	3.075	-0.023	-0.85	3.125	0.026	0.96



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #064
Spring 2020

Analysis 907

pH

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
D2CJVG		3.100	0.002	0.06	3.100	0.001	0.02
DEZHLJ		3.145	0.047	1.70	3.145	0.046	1.72
DV7MAV		3.065	-0.033	-1.21	3.075	-0.024	-0.92
DWX9XZ	X	3.240	0.142	5.15	3.215	0.116	4.36
EJLXPG		3.150	0.052	1.88	3.150	0.051	1.91
ENK9LG		3.080	-0.018	-0.67	3.080	-0.019	-0.73
ETCJVE	X	3.190	0.092	3.33	3.190	0.091	3.41
FJ62XG		3.075	-0.023	-0.85	3.080	-0.019	-0.73
GGTNTK		3.112	0.013	0.48	3.124	0.024	0.91
GMKVBT		3.110	0.012	0.43	3.115	0.016	0.59
GNUXZD		3.095	-0.003	-0.12	3.095	-0.004	-0.17
GTPRWE		3.100	0.002	0.06	3.100	0.001	0.02
HB2ZBK		3.125	0.027	0.97	3.130	0.031	1.15
HE4YLD	*	3.070	-0.028	-1.03	3.090	-0.009	-0.36
HFG9YJ		3.100	0.002	0.06	3.105	0.006	0.21
HW4LDC		3.090	-0.008	-0.30	3.095	-0.004	-0.17
J3MCBQ		3.110	0.012	0.43	3.110	0.011	0.40
KR2MQC		3.100	0.002	0.06	3.100	0.001	0.02
KUMBBP		3.080	-0.018	-0.67	3.090	-0.009	-0.36
LACXW8		3.160	0.062	2.24	3.150	0.051	1.91
MDCAR8		3.075	-0.023	-0.85	3.075	-0.024	-0.92
ME8F2T		3.055	-0.043	-1.57	3.060	-0.039	-1.49
MP7QEM	X	3.070	-0.028	-1.03	3.030	-0.069	-2.62
MW38MR		3.090	-0.008	-0.30	3.090	-0.009	-0.36
NDAYAA		3.080	-0.018	-0.67	3.080	-0.019	-0.73
NEKZV9		3.110	0.012	0.43	3.110	0.011	0.40
NWLN8		3.075	-0.023	-0.85	3.080	-0.019	-0.73
NXFETL		3.120	0.022	0.79	3.120	0.021	0.77
NXT4UD	X	3.145	0.047	1.70	3.090	-0.009	-0.36
P4EF97		3.090	-0.008	-0.30	3.090	-0.009	-0.36
PMQ6L4		3.090	-0.008	-0.30	3.100	0.001	0.02
Q4UYQH		3.145	0.047	1.70	3.140	0.041	1.53
Q63C8J		3.165	0.067	2.43	3.165	0.066	2.47
QD6NLP		3.140	0.042	1.52	3.135	0.036	1.34
QEF4Z3		3.070	-0.028	-1.03	3.070	-0.029	-1.11



ASEV-CTS Wine Industry Interlaboratory Testing Program
Analysis 907
pH

Report #064
Spring 2020

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
R3W9X9		3.090	-0.008	-0.30	3.095	-0.004	-0.17
RAUZ73		3.110	0.012	0.43	3.115	0.016	0.59
RBMQBG		3.090	-0.008	-0.30	3.085	-0.014	-0.54
REM38G		3.080	-0.018	-0.67	3.070	-0.029	-1.11
RPTA6P		3.130	0.032	1.15	3.125	0.026	0.96
T932R4		3.090	-0.008	-0.30	3.091	-0.008	-0.32
TB8UJG		3.047	-0.052	-1.88	3.058	-0.042	-1.58
TFH9JN		3.100	0.002	0.06	3.115	0.016	0.59
U6XTZY	*	3.130	0.032	1.15	3.110	0.011	0.40
UFVUD3		3.045	-0.053	-1.94	3.040	-0.059	-2.24
UJXUDZ		3.110	0.012	0.43	3.110	0.011	0.40
UKRKJE		3.130	0.032	1.15	3.130	0.031	1.15
UZHKCY		3.120	0.022	0.79	3.125	0.026	0.96
V4WHG2		3.090	-0.008	-0.30	3.090	-0.009	-0.36
VFQWFC		3.145	0.047	1.70	3.140	0.041	1.53
VKLQCD		3.120	0.022	0.79	3.115	0.016	0.59
VMT9TH		3.100	0.002	0.06	3.100	0.001	0.02
W4C22Y		3.075	-0.023	-0.85	3.085	-0.014	-0.54
W7ZXJK		3.130	0.032	1.15	3.125	0.026	0.96
WA3CCW	*	3.030	-0.068	-2.48	3.030	-0.069	-2.62
WEW7AX		3.100	0.002	0.06	3.100	0.001	0.02
X678VX		3.065	-0.033	-1.21	3.075	-0.024	-0.92
YDUETU		3.070	-0.028	-1.03	3.070	-0.029	-1.11
YFEUCG		3.100	0.002	0.06	3.090	-0.009	-0.36
YH4FCC	X	3.150	0.052	1.88	3.200	0.101	3.79
Z2TDRA		3.110	0.012	0.43	3.110	0.011	0.40
Z8JQTX		3.120	0.022	0.79	3.120	0.021	0.77

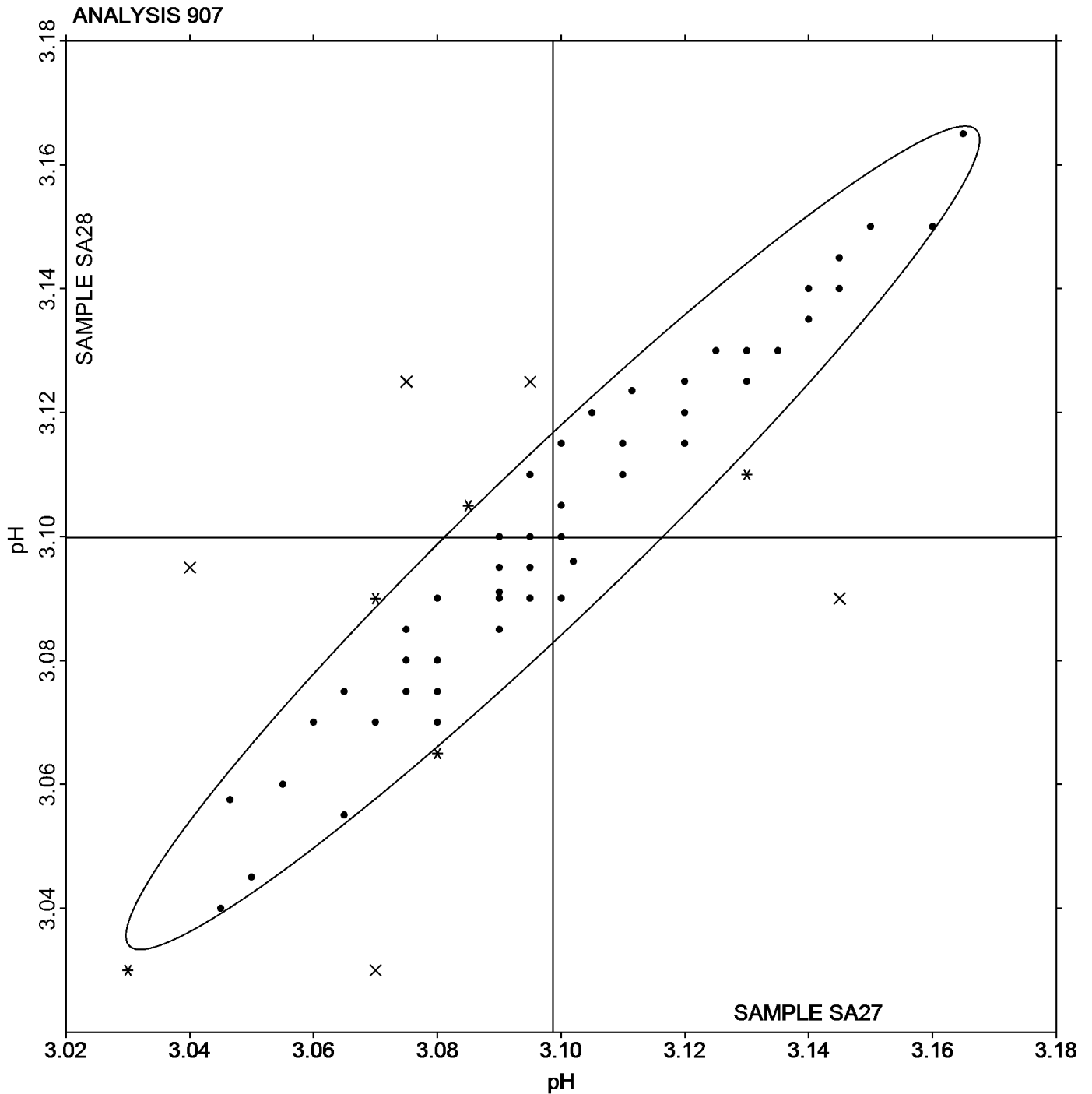
Grand Means		Summary Statistics	
	3.0983 pH		3.0994 pH
Std Dev Btwn Labs			
	0.0275 pH		0.0265 pH
Statistics based on 85 of 97 reporting participants			

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel



Comments on Assigned Data Flags for Test #907

- NXT4UD (X) - Inconsistent in testing between samples.
- 3Y3QCQ (X) - Data for both samples are high. Possible Systematic Error.
- ETCJVE (X) - Data for both samples are high. Possible Systematic Error.
- 6UW82N (X) - Data for both samples are low. Possible Systematic Error.
- A7X2MN (X) - Inconsistent in testing between samples.
- MP7QEM (X) - Inconsistent in testing between samples.
- YH4FCC (X) - Inconsistent in testing between samples, data for sample SA28 are high. Inconsistent within the determinations of sample SA27.
- BM3T3X (X) - Inconsistent in testing between samples data for sample SA28 are low.
- DWX9XZ (X) - Data for both samples are high. Possible Systematic Error.
- CRRF46 (X) - Inconsistent in testing between samples.
- 2EXJCE (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA28.
- 6888QA (X) - Data for both samples are low. Possible Systematic Error.





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

Report #064
Spring 2020

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3Y3QCQ		42.60	3.61	1.32	42.50	3.62	1.27
47GZDT		37.50	-1.49	-0.54	36.50	-2.38	-0.84
4XMGRC		37.90	-1.09	-0.40	39.10	0.22	0.08
6UW82N		36.98	-2.01	-0.73	37.06	-1.83	-0.64
8H3ZC6		37.70	-1.29	-0.47	37.45	-1.43	-0.51
A7X2MN		40.35	1.36	0.50	40.40	1.52	0.53
ETCJVE		38.65	-0.34	-0.12	38.75	-0.13	-0.05
FJ62XG		37.14	-1.85	-0.68	37.14	-1.75	-0.62
MDCAR8		43.40	4.41	1.61	43.40	4.52	1.59
NEKZV9		42.00	3.01	1.10	42.20	3.32	1.17
TVD3Z2		31.90	-7.09	-2.58	32.00	-6.88	-2.43
U6XTZY		38.30	-0.69	-0.25	38.00	-0.88	-0.31
UFVUD3	X	87.00	48.01	17.49	91.00	52.12	18.37
UJXUDZ		40.65	1.66	0.61	40.80	1.92	0.68
VMT9TH		40.00	1.01	0.37	40.00	1.12	0.39
WA3CCW		40.40	1.41	0.51	40.20	1.31	0.46
YH4FCC		38.35	-0.64	-0.23	36.65	-2.23	-0.79

Grand Means		Summary Statistics	
	38.988 g/L		38.883 g/L
Std Dev Btwn Labs			2.837 g/L
	2.744 g/L		
Statistics based on 16 of 17 reporting participants			

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel

Comments on Assigned Data Flags for Test #908

UFVUD3 (X) - Data for both samples are high.



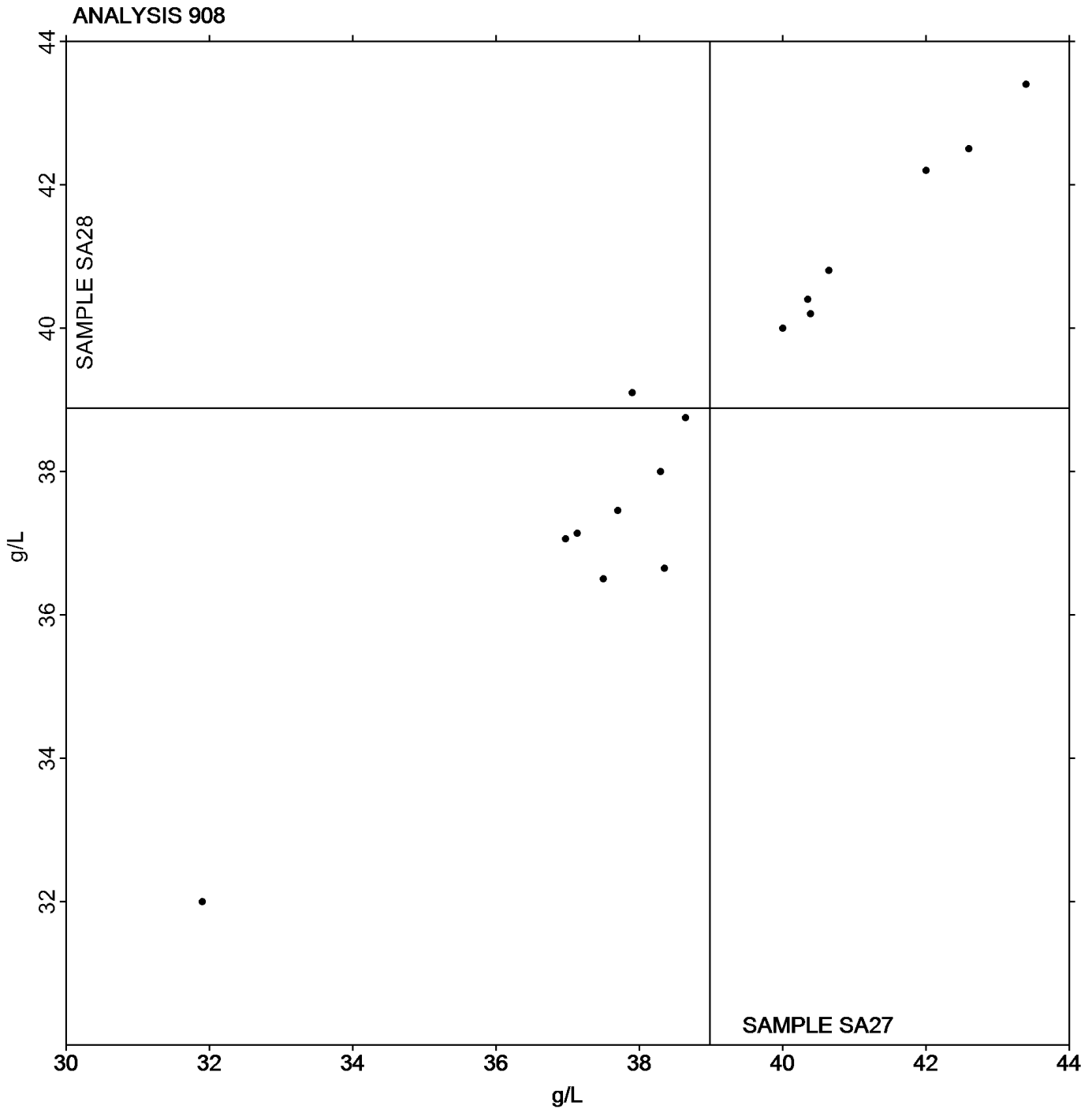
Analysis 908
Residual Sugar

Results by Methodology (as reported by laboratory)

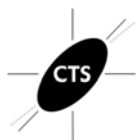
Test Methodology	Sample SA27 <i>White Zinfandel</i>			Sample SA28 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	38.300	0.000	-0.69	38.000	0.000	-0.88	1/1
Cu Reduction Method	39.044	2.040	0.06	38.977	2.160	0.09	7/7
Segmented Flow	31.900	0.000	-7.09	32.000	0.000	-6.88	1/1
FTIR	40.466	2.095	1.48	40.466	2.184	1.58	6/7
Other _____	37.500	0.000	-1.49	36.500	0.000	-2.38	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
Analysis 909
L-Malic Acid

Report #064
Spring 2020

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2EXJCE		2.640	0.129	0.84	2.680	0.155	1.04
2PE4WB	*	2.122	-0.389	-2.51	2.204	-0.321	-2.16
36MUG9		2.510	-0.001	0.00	2.470	-0.055	-0.37
3DY7AZ		2.415	-0.096	-0.62	2.375	-0.150	-1.01
3ER2YT		2.435	-0.076	-0.49	2.495	-0.030	-0.20
3Y3QCQ		2.356	-0.155	-1.00	2.389	-0.137	-0.92
44N4NY		2.678	0.167	1.08	2.675	0.149	1.00
47GZDT	*	2.400	-0.111	-0.71	2.550	0.025	0.16
4UMJNR		2.427	-0.084	-0.54	2.454	-0.071	-0.48
4XMGRG	X	1.830	-0.681	-4.40	1.945	-0.580	-3.89
644M9W		2.335	-0.176	-1.13	2.335	-0.190	-1.28
73QZ3A		2.575	0.064	0.42	2.615	0.090	0.60
7RNEKU		2.600	0.089	0.57	2.614	0.089	0.59
8GJQ73		2.555	0.044	0.29	2.560	0.035	0.23
8H3ZC6		2.520	0.009	0.06	2.630	0.105	0.70
8N68R9		2.350	-0.161	-1.04	2.440	-0.085	-0.57
8UVUUL		2.674	0.163	1.06	2.669	0.143	0.96
8WYPDP		2.680	0.169	1.09	2.675	0.150	1.00
9HCYRR		2.190	-0.321	-2.07	2.295	-0.230	-1.54
9LCBMR		2.408	-0.103	-0.66	2.426	-0.099	-0.67
A248PM		2.515	0.004	0.03	2.525	0.000	0.00
A7DL7L		2.468	-0.043	-0.28	2.367	-0.158	-1.06
A7X2MN		2.743	0.232	1.50	2.670	0.145	0.97
AZBCZT		2.535	0.024	0.16	2.585	0.060	0.40
BL93WJ		2.685	0.174	1.13	2.705	0.180	1.20
BQFTYP		2.505	-0.006	-0.04	2.518	-0.008	-0.05
BV8ZGX		2.500	-0.011	-0.07	2.450	-0.075	-0.51
C6VB7J		2.475	-0.036	-0.23	2.540	0.015	0.10
D2CJVG		2.626	0.115	0.75	2.633	0.108	0.72
DEZHLJ		2.490	-0.021	-0.13	2.500	-0.025	-0.17
DV7MAV	*	2.945	0.434	2.81	2.950	0.425	2.85
EJLXPG	X	0.162	-2.349	-15.18	0.166	-2.359	-15.82
ENK9LG		2.470	-0.041	-0.26	2.400	-0.125	-0.84
ETCJVE		2.240	-0.271	-1.75	2.250	-0.275	-1.85
GMKVBT		2.585	0.074	0.48	2.495	-0.030	-0.20



ASEV-CTS Wine Industry Interlaboratory Testing Program

**Report #064
Spring 2020**

Analysis 909

L-Malic Acid

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GINUXZD		2.476	-0.035	-0.23	2.530	0.005	0.03
GTPRWE		2.730	0.219	1.42	2.760	0.235	1.57
HB2ZBK		2.400	-0.111	-0.71	2.500	-0.025	-0.17
HFG9YJ		2.652	0.141	0.91	2.649	0.123	0.83
HW4LDC		2.660	0.149	0.97	2.715	0.190	1.27
J3MCBQ		2.615	0.104	0.67	2.640	0.115	0.77
KR2MQC		2.622	0.111	0.72	2.621	0.095	0.64
KUMBBP		2.500	-0.011	-0.07	2.600	0.075	0.50
LACXW8		2.653	0.142	0.92	2.656	0.131	0.88
MDCAR8		2.450	-0.061	-0.39	2.475	-0.050	-0.34
ME8F2T		2.660	0.149	0.97	2.660	0.135	0.90
MW38MR		2.240	-0.271	-1.75	2.240	-0.285	-1.91
NDAYAA		2.626	0.115	0.75	2.625	0.100	0.67
NEKZV9		2.650	0.139	0.90	2.610	0.085	0.57
NWLN8		2.695	0.184	1.19	2.731	0.206	1.38
NXFETL	*	2.470	-0.041	-0.26	2.360	-0.165	-1.11
P4EF97		2.260	-0.251	-1.62	2.270	-0.255	-1.71
PMQ6L4	*	2.325	-0.186	-1.20	2.485	-0.040	-0.27
Q4UYQH		2.605	0.094	0.61	2.610	0.085	0.57
Q63C8J		2.650	0.139	0.90	2.630	0.105	0.70
QD6NLP		2.575	0.064	0.42	2.590	0.065	0.43
QEF4Z3		2.510	-0.001	0.00	2.600	0.075	0.50
R3W9X9		2.380	-0.131	-0.84	2.405	-0.120	-0.81
RAUZ73		2.420	-0.091	-0.59	2.405	-0.120	-0.81
REM38G		2.440	-0.071	-0.46	2.445	-0.080	-0.54
T932R4		2.672	0.161	1.04	2.686	0.161	1.08
TB8UJG		2.245	-0.266	-1.72	2.285	-0.240	-1.61
TFH9JN		2.380	-0.131	-0.84	2.385	-0.140	-0.94
U6XTZY		2.335	-0.176	-1.13	2.365	-0.160	-1.08
UFVUD3	X	2.430	-0.081	-0.52	2.910	0.385	2.58
UJXUDZ		2.180	-0.331	-2.14	2.195	-0.330	-2.22
UKRKJE		2.575	0.064	0.42	2.655	0.130	0.87
UZHKCY		2.550	0.039	0.25	2.550	0.025	0.16
V4WHG2		2.430	-0.081	-0.52	2.470	-0.055	-0.37
VKLQCD		2.575	0.064	0.42	2.594	0.068	0.46



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

Report #064
Spring 2020

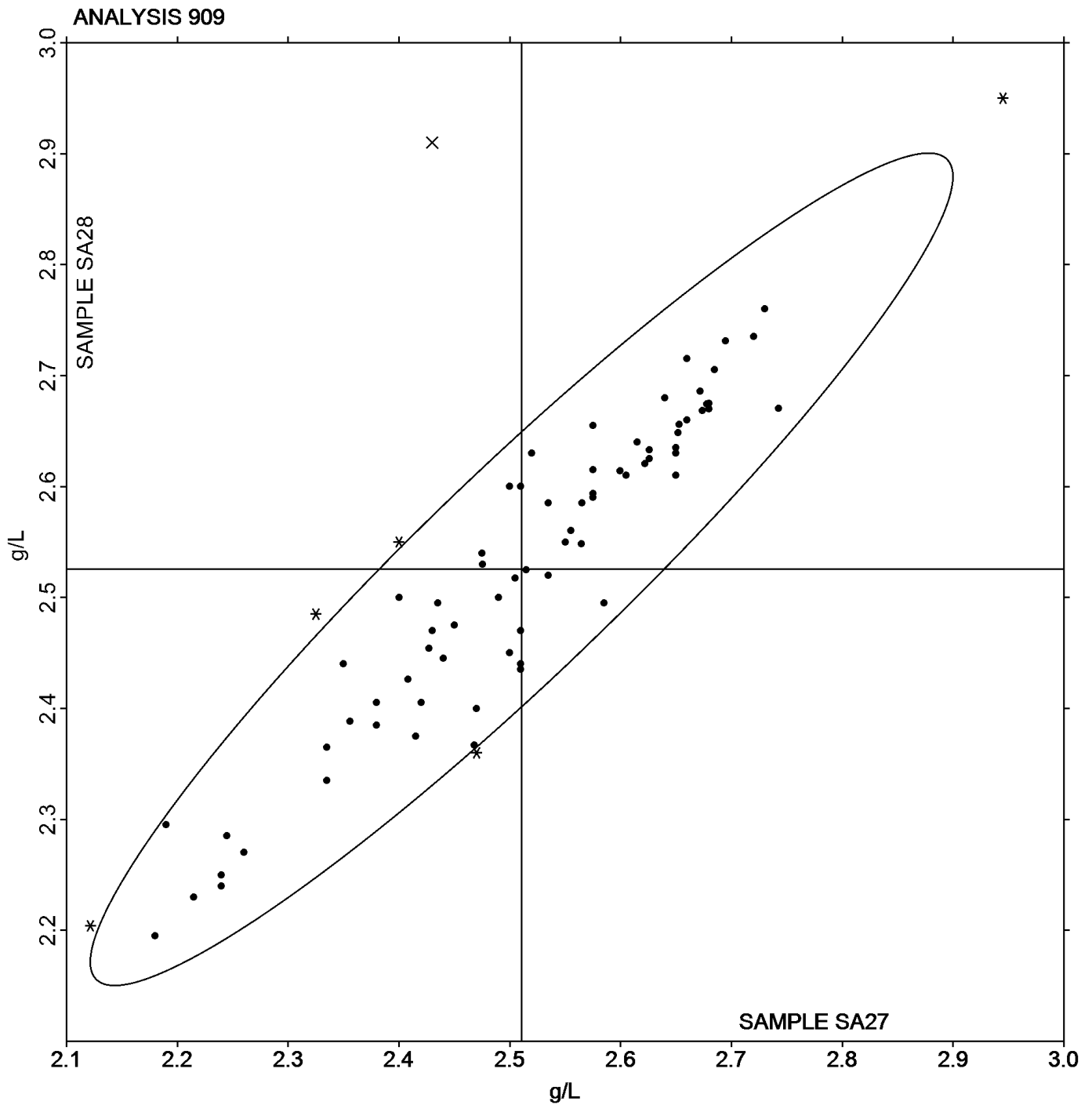
WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
VMT9TH		2.650	0.139	0.90	2.635	0.110	0.73
W4C22Y		2.565	0.054	0.35	2.549	0.023	0.15
W7ZXJK		2.720	0.209	1.35	2.735	0.210	1.41
WA3CCW		2.510	-0.001	0.00	2.440	-0.085	-0.57
WEW7AX		2.215	-0.296	-1.91	2.230	-0.295	-1.98
X678VX		2.565	0.054	0.35	2.585	0.060	0.40
YFEUCG		2.535	0.024	0.16	2.520	-0.005	-0.04
YH4FCC		2.680	0.169	1.09	2.670	0.145	0.97
Z2TDRA		2.510	-0.001	0.00	2.435	-0.090	-0.61
Z8JQTX	X	4.110	1.599	10.34	3.900	1.375	9.22

Grand Means		Summary Statistics	
	2.5106 g/L		2.5254 g/L
Std Dev Btwn Labs			
	0.1547 g/L		0.1491 g/L
Statistics based on 76 of 80 reporting participants			

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel

Comments on Assigned Data Flags for Test #909

- UFVUD3 (X) - Inconsistent in testing between samples.
- Z8JQTX (X) - Data for both samples are high.
- EJLXPG (X) - Data for both samples are low.
- 4XMGRG (X) - Data for both samples are low. Possible Systematic Error.





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #064
Spring 2020

Analysis 910 Glucose + Fructose

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2BD4Q7		41.33	2.17	0.88	42.00	2.72	1.11
2EXJCE	X	30.79	-8.37	-3.41	30.07	-9.21	-3.75
2PE4WB	X	36.50	-2.66	-1.08	43.50	4.22	1.72
36MUG9		43.22	4.06	1.66	43.98	4.70	1.92
3DY7AZ		37.94	-1.22	-0.50	37.65	-1.63	-0.66
3ER2YT		41.75	2.59	1.06	42.70	3.42	1.39
44N4NY		42.60	3.44	1.40	43.15	3.87	1.58
47GZDT		37.25	-1.91	-0.78	36.50	-2.78	-1.13
4UMJNR		36.55	-2.61	-1.06	36.55	-2.73	-1.11
4XMGRG		36.49	-2.67	-1.09	36.66	-2.62	-1.07
644M9W		39.80	0.64	0.26	39.90	0.62	0.25
73QZ3A		35.90	-3.26	-1.33	35.58	-3.70	-1.51
7RNEKU		41.80	2.64	1.08	42.15	2.87	1.17
8GJQ73		38.25	-0.91	-0.37	37.62	-1.66	-0.68
8H3ZC6		37.40	-1.76	-0.72	36.70	-2.58	-1.05
8N68R9	*	36.50	-2.66	-1.08	38.30	-0.98	-0.40
8UVUUL		43.00	3.84	1.57	43.00	3.72	1.52
8WYPDP		39.34	0.18	0.07	39.40	0.12	0.05
9HCYRR	X	42.40	3.24	1.32	40.30	1.02	0.42
9LCBMR		41.00	1.84	0.75	40.45	1.17	0.48
A248PM		39.10	-0.06	-0.02	38.25	-1.03	-0.42
A7DL7L	X	67.60	28.44	11.60	69.75	30.47	12.41
A7X2MN		40.46	1.30	0.53	40.37	1.09	0.44
AZBCZT		34.63	-4.53	-1.85	34.69	-4.59	-1.87
BL93WJ		40.50	1.34	0.55	41.15	1.87	0.76
BM3T3X	X	8.03	-31.13	-12.69	8.14	-31.14	-12.68
BQFTYP		40.43	1.27	0.52	40.71	1.43	0.58
BV8ZGX		39.50	0.34	0.14	39.00	-0.28	-0.11
C6VB7J		38.50	-0.66	-0.27	39.00	-0.28	-0.11
D2CJVG		41.65	2.49	1.02	41.10	1.82	0.74
DEZHLJ		43.45	4.29	1.75	44.40	5.12	2.09
DV7MAV		37.80	-1.36	-0.55	36.70	-2.58	-1.05
EJLXPG		41.70	2.54	1.04	41.60	2.32	0.95
ENK9LG		36.43	-2.73	-1.11	36.94	-2.34	-0.95
ETCJVE		38.65	-0.51	-0.21	38.75	-0.53	-0.21



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #064
Spring 2020

Analysis 910 Glucose + Fructose

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
GGTNTK	*	43.60	4.44	1.81	42.30	3.02	1.23
GMKVBT		38.35	-0.81	-0.33	38.00	-1.28	-0.52
GINUXZD		41.60	2.44	1.00	42.75	3.47	1.41
GTPRWE		41.64	2.48	1.01	41.75	2.47	1.01
HB2ZBK		34.50	-4.66	-1.90	35.50	-3.78	-1.54
HE4YLD		37.85	-1.31	-0.53	38.05	-1.23	-0.50
HFG9YJ	*	44.30	5.14	2.10	43.25	3.97	1.62
HW4LDC		39.95	0.79	0.32	41.46	2.18	0.89
J3MCBQ		35.78	-3.38	-1.38	35.19	-4.09	-1.67
KR2MQC		37.60	-1.56	-0.63	38.05	-1.23	-0.50
KUMBBP		38.25	-0.91	-0.37	38.50	-0.78	-0.32
LACXW8	X	39.95	0.79	0.32	44.28	5.00	2.04
MDCAR8		39.45	0.29	0.12	39.75	0.47	0.19
ME8F2T		36.65	-2.51	-1.02	36.90	-2.38	-0.97
MW38MR		40.00	0.84	0.34	40.20	0.92	0.38
NDAYAA		42.75	3.59	1.47	42.90	3.62	1.48
NEKZV9		40.50	1.34	0.55	40.80	1.52	0.62
NWLN8		34.15	-5.01	-2.04	34.50	-4.78	-1.95
NXFETL		38.20	-0.96	-0.39	38.30	-0.98	-0.40
P4EF97		37.50	-1.66	-0.68	38.50	-0.78	-0.32
PMQ6L4		39.00	-0.16	-0.06	38.50	-0.78	-0.32
Q4UYQH		40.35	1.19	0.49	40.40	1.12	0.46
Q63C8J		39.84	0.68	0.28	41.31	2.03	0.83
QD6NLP		36.72	-2.44	-1.00	36.27	-3.01	-1.23
QEF4Z3	X	38.30	-0.86	-0.35	43.70	4.42	1.80
R3W9X9		42.17	3.01	1.23	41.40	2.12	0.86
RAUZ73		38.74	-0.42	-0.17	39.08	-0.20	-0.08
RBMQBG		39.40	0.24	0.10	39.25	-0.03	-0.01
REM38G		41.47	2.31	0.94	41.69	2.41	0.98
T932R4		40.17	1.01	0.41	39.33	0.05	0.02
TB8UJG	X	29.50	-9.66	-3.94	28.50	-10.78	-4.39
TFH9JN		38.69	-0.47	-0.19	38.40	-0.88	-0.36
TVD3Z2		39.65	0.49	0.20	39.60	0.32	0.13
UFVUD3		37.20	-1.96	-0.80	37.30	-1.98	-0.81
UJXUDZ		41.42	2.26	0.92	41.38	2.10	0.86



**Analysis 910
Glucose + Fructose**

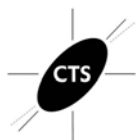
WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
UKRKJE		36.76	-2.40	-0.98	36.20	-3.08	-1.25
UZHKCY		41.30	2.14	0.87	41.45	2.17	0.89
V4WHG2		39.30	0.14	0.06	39.35	0.07	0.03
VKLQCD		42.00	2.84	1.16	42.25	2.97	1.21
VMT9TH		38.00	-1.16	-0.47	38.00	-1.28	-0.52
W4C22Y		38.45	-0.71	-0.29	39.05	-0.23	-0.09
W7ZXJK		38.20	-0.96	-0.39	38.40	-0.88	-0.36
WA3CCW		38.55	-0.61	-0.25	38.85	-0.43	-0.17
WEW7AX	*	33.04	-6.12	-2.49	33.98	-5.30	-2.16
YDUETU		41.70	2.54	1.04	41.70	2.42	0.99
YFEUCG		37.60	-1.56	-0.63	37.00	-2.28	-0.93
Z2TDRA		35.37	-3.79	-1.55	36.44	-2.84	-1.16
Z8JQTX		36.16	-3.00	-1.22	37.66	-1.62	-0.66

Grand Means	Summary Statistics
39.156 g/L	39.277 g/L
Std Dev Btwn Labs	
2.453 g/L	2.455 g/L
Statistics based on 75 of 83 reporting participants	

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel

Comments on Assigned Data Flags for Test #910

- 9HCYRR (X) - Inconsistent in testing between samples.
- QEF4Z3 (X) - Inconsistent in testing between samples.
- LACXW8 (X) - Inconsistent in testing between samples.
- A7DL7L (X) - Data for both samples are high.
- TB8UJG (X) - Data for both samples are low. Possible Systematic Error. Inconsistent within the determinations of sample SA28.
- BM3T3X (X) - Data for both samples are low.
- 2PE4WB (X) - Inconsistent in testing between samples. Inconsistent within the determinations of sample SA28.
- 2EXJCE (X) - Data for both samples are low. Possible Systematic Error.



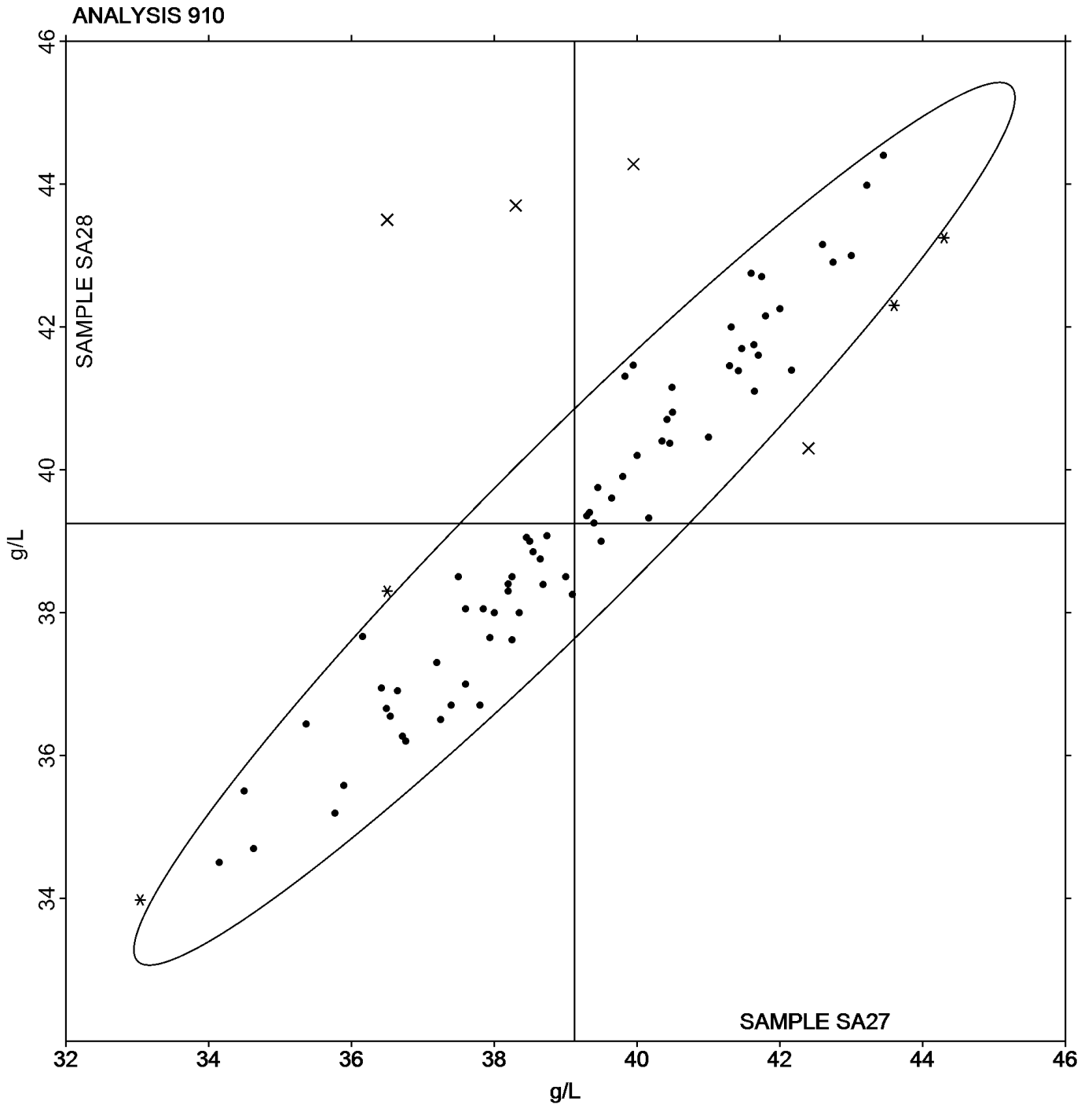
**Analysis 910
Glucose + Fructose**

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA27 <i>White Zinfandel</i>			Sample SA28 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
HPLC	40.055	0.573	0.90	39.983	0.542	0.71	2/2
Enzymatic/Spectrophotometric	39.263	2.529	0.11	39.414	2.513	0.14	66/74
FTIR	37.696	1.931	-1.46	37.608	2.003	-1.67	5/5
Other _____	38.400	0.212	-0.76	38.233	0.873	-1.04	2/2



Analysis 910
Glucose + Fructose





Analysis 911
Copper Content

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3DY7AZ		0.1500	0.0258	1.19	0.1300	0.0265	1.12
44N4NY		0.1300	0.0058	0.27	0.1000	-0.0035	-0.15
4XMGRC		0.1600	0.0358	1.65	0.1450	0.0415	1.75
8H3ZC6	*	0.1030	-0.0212	-0.98	0.1120	0.0085	0.36
9HCYRR		0.1105	-0.0137	-0.63	0.0950	-0.0085	-0.36
9LCBMR		0.1100	-0.0142	-0.66	0.0900	-0.0135	-0.57
A7X2MN		0.1085	-0.0157	-0.73	0.0860	-0.0175	-0.74
AZBCZT		0.1366	0.0124	0.57	0.1056	0.0020	0.09
BL93WJ		0.1580	0.0338	1.56	0.1380	0.0345	1.46
BQFTYP	X	0.2000	0.0758	3.49	0.0700	-0.0335	-1.42
D2CJVG	X	0.1800	0.0558	2.57	0.3740	0.2705	11.44
DEZHLJ		0.1000	-0.0242	-1.12	0.0800	-0.0235	-0.99
GTPRWE		0.1400	0.0158	0.73	0.1300	0.0265	1.12
HFG9YJ		0.1500	0.0258	1.19	0.1100	0.0065	0.27
MDCAR8		0.1100	-0.0142	-0.66	0.0900	-0.0135	-0.57
NEKZV9		0.1200	-0.0042	-0.20	0.1000	-0.0035	-0.15
NXFETL		0.0855	-0.0387	-1.79	0.0500	-0.0535	-2.26
TVD3Z2		0.1300	0.0058	0.27	0.1100	0.0065	0.27
UJXUDZ		0.1000	-0.0242	-1.12	0.0750	-0.0285	-1.21
V4WHG2		0.1395	0.0153	0.70	0.1260	0.0225	0.95
VMT9TH	X	0.2650	0.1408	6.49	0.2150	0.1115	4.71
WA3CCW		0.1190	-0.0052	-0.24	0.0940	-0.0095	-0.40

Grand Means	Summary Statistics
0.12424 mg/L	0.10350 mg/L
Std Dev Btwn Labs	
0.02168 mg/L	0.02365 mg/L
Statistics based on 19 of 22 reporting participants	

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel

Comments on Assigned Data Flags for Test #911

- BQFTYP (X) - Data for sample SA27 are high.
- D2CJVG (X) - Data for both samples are high.
- VMT9TH (X) - Data for both samples are high.



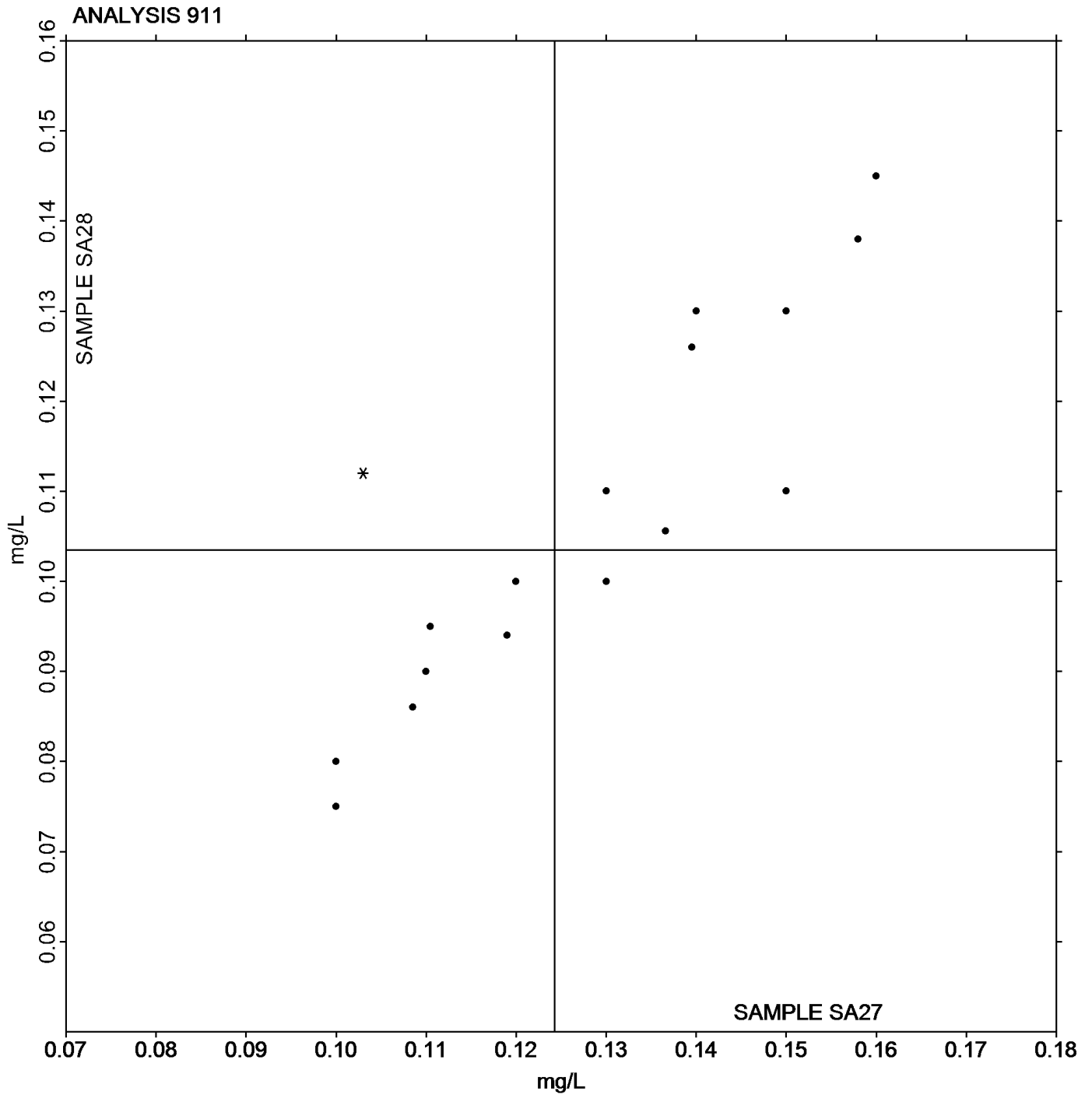
**Analysis 911
Copper Content**

Results by Methodology (as reported by laboratory)

Test Methodology	Sample SA27 <i>White Zinfandel</i>			Sample SA28 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Atomic Absorption Spectroscopy	0.131	0.026	0.0063	0.108	0.030	0.0041	7/10
ICP	0.119	0.014	-0.0056	0.099	0.014	-0.0041	10/10
FTIR	0.160	0.000	0.0358	0.145	0.000	0.0415	1/1
Other _____	0.100	0.000	-0.0242	0.075	0.000	-0.0285	1/1



Analysis 911
Copper Content



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



**Analysis 912
Potassium (K) Content**

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
3DY7AZ		667.0	-47.1	-0.46	679.5	-36.6	-0.33
44N4NY		665.0	-49.1	-0.47	667.5	-48.6	-0.44
4UMJNR		772.5	58.4	0.56	756.5	40.4	0.37
8H3ZC6		651.0	-63.1	-0.61	653.0	-63.1	-0.57
9LCBMR		581.0	-133.1	-1.29	588.5	-127.6	-1.16
A7X2MN		609.0	-105.1	-1.02	605.7	-110.4	-1.00
AZBCZT		921.3	207.2	2.00	928.8	212.7	1.93
BL93WJ	X	597.5	-116.6	-1.13	102.0	-614.1	-5.57
BQFTYP		680.0	-34.1	-0.33	595.0	-121.1	-1.10
DEZHLJ		953.0	238.9	2.31	937.0	220.9	2.00
GNUXZD	*	736.0	21.9	0.21	843.5	127.4	1.15
GTPRWE		664.6	-49.6	-0.48	656.4	-59.7	-0.54
LACXW8		778.5	64.4	0.62	760.5	44.4	0.40
MDCAR8		671.0	-43.1	-0.42	666.0	-50.1	-0.45
NEKZV9		895.0	180.9	1.75	893.0	176.9	1.60
NXFETL		644.0	-70.1	-0.68	645.0	-71.1	-0.64
TVD3Z2		631.0	-83.1	-0.80	624.0	-92.1	-0.83
UJXUDZ		641.0	-73.1	-0.71	630.5	-85.6	-0.78
V4WHG2		722.0	7.9	0.08	780.5	64.4	0.58
VMT9TH		665.0	-49.1	-0.47	661.0	-55.1	-0.50
WA3CCW		735.0	20.9	0.20	750.0	33.9	0.31

Grand Means		Summary Statistics	
	714.15 mg/L		716.09 mg/L
Std Dev Btwn Labs			
	103.54 mg/L		110.32 mg/L
Statistics based on 20 of 21 reporting participants			

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel

Comments on Assigned Data Flags for Test #912

BL93WJ (X) - Data for sample SA28 are low.



**Analysis 912
Potassium (K) Content**

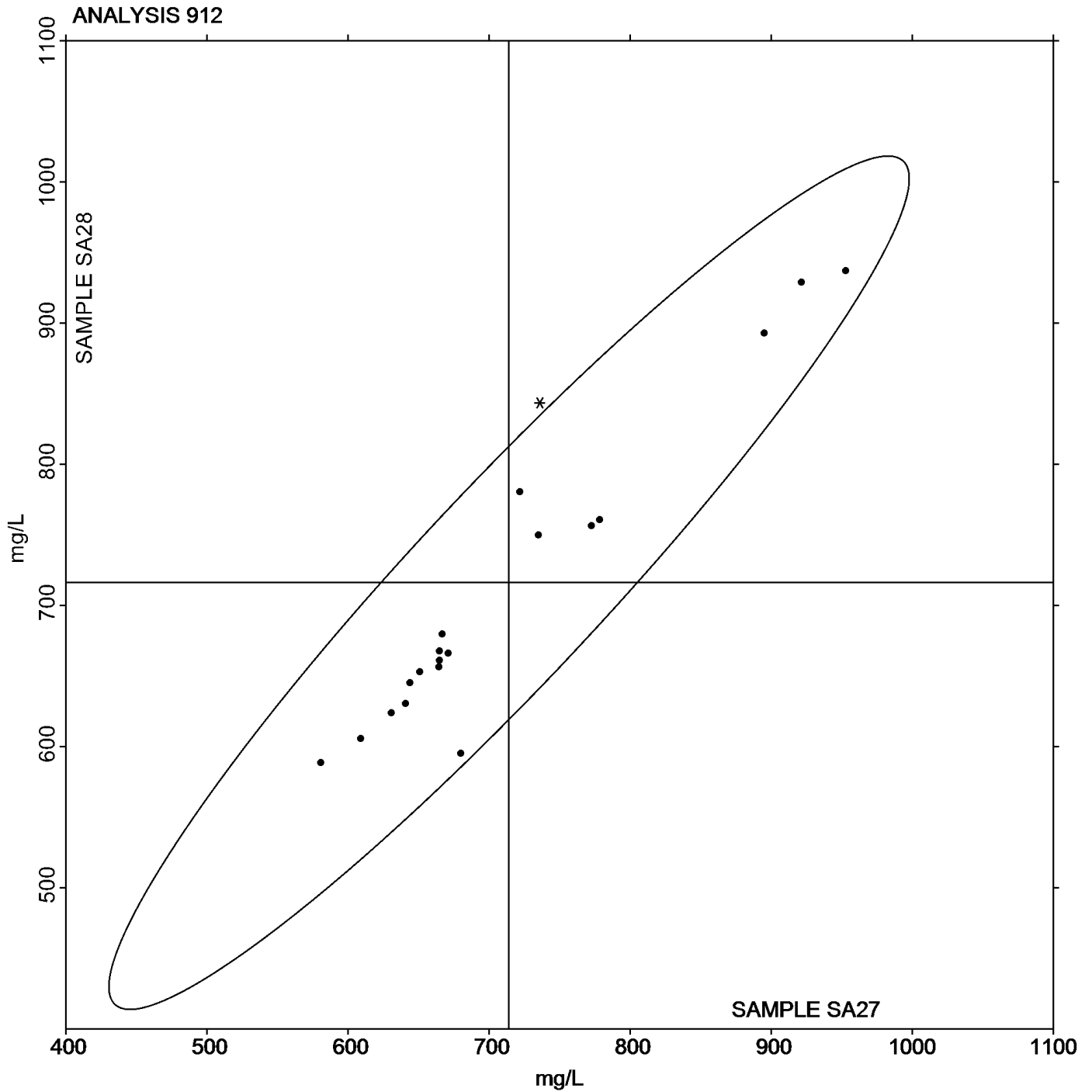
Results by Methodology (as reported by laboratory)

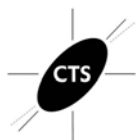
Test Methodology	Sample SA27 <i>White Zinfandel</i>			Sample SA28 <i>White Zinfandel</i>			Labs Incl / Rpt
	Group Mean	Btwn Lab STD	Diff from GM	Group Mean	Btwn Lab STD	Diff from GM	
Please specify method used	778.500	0.000	64.4	760.500	0.000	44.4	1/1
Atomic Absorption Spectroscopy	682.177	45.730	-32.0	665.573	52.858	-50.5	6/7
ICP	681.418	105.820	-32.7	689.239	113.023	-26.9	8/8
FTIR	735.000	0.000	20.9	750.000	0.000	33.9	1/1
Other _____	797.000	220.617	82.9	783.750	216.728	67.7	2/2
Colorimetric Analysis	815.500	112.430	101.4	868.250	35.002	152.2	2/2



Analysis 912

Potassium (K) Content



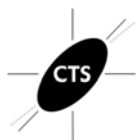


ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #064
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Analysis 915 A420nm (1cm path)

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2PE4WB		0.1840	-0.0070	-0.85	0.1780	-0.0099	-1.15
3DY7AZ		0.1795	-0.0115	-1.40	0.1720	-0.0159	-1.85
3ER2YT		0.1860	-0.0050	-0.61	0.1790	-0.0089	-1.04
3Y3QCQ		0.1764	-0.0146	-1.78	0.1711	-0.0168	-1.96
44N4NY		0.1930	0.0020	0.24	0.1850	-0.0029	-0.34
47GZDT	X	0.2900	0.0990	12.09	0.3200	0.1321	15.42
4UMJNR	*	0.2010	0.0100	1.22	0.1885	0.0006	0.07
4XMGRC		0.1755	-0.0155	-1.89	0.1710	-0.0169	-1.97
6888QA		0.1910	0.0000	0.00	0.1890	0.0011	0.13
6UW82N		0.1870	-0.0040	-0.49	0.1910	0.0031	0.36
8H3ZC6		0.1815	-0.0095	-1.16	0.1825	-0.0054	-0.63
8N68R9		0.1955	0.0045	0.55	0.1910	0.0031	0.36
9HCYRR		0.2015	0.0105	1.28	0.1930	0.0051	0.60
9VXC42		0.1900	-0.0010	-0.12	0.1920	0.0041	0.48
A248PM		0.1940	0.0030	0.37	0.1895	0.0016	0.19
A7X2MN		0.1938	0.0028	0.34	0.1939	0.0060	0.70
AZBCZT		0.1980	0.0070	0.86	0.1970	0.0091	1.07
BL93WJ		0.1940	0.0030	0.37	0.1915	0.0036	0.42
BM3T3X	*	0.1860	-0.0050	-0.61	0.1935	0.0056	0.66
BQFTYP		0.1980	0.0070	0.86	0.1885	0.0006	0.07
BV8ZGX		0.1830	-0.0080	-0.98	0.1830	-0.0049	-0.57
C6VB7J		0.1900	-0.0010	-0.12	0.1900	0.0021	0.25
DEZHLJ		0.2000	0.0090	1.10	0.1930	0.0051	0.60
DWX9XZ		0.1910	0.0000	0.00	0.1850	-0.0029	-0.34
ENK9LG		0.1810	-0.0100	-1.22	0.1840	-0.0039	-0.45
ETCJVE	*	0.2100	0.0190	2.32	0.2100	0.0221	2.58
GGTNTK		0.1947	0.0037	0.45	0.1920	0.0041	0.48
GMKVBT	X	0.1610	-0.0300	-3.66	0.1405	-0.0474	-5.53
GINUXD	X	0.2875	0.0965	11.78	0.2575	0.0696	8.13
GTPRWE		0.1920	0.0010	0.12	0.1930	0.0051	0.60
HB2ZBK		0.1975	0.0065	0.79	0.1945	0.0066	0.77
KR2MQC		0.1800	-0.0110	-1.34	0.1750	-0.0129	-1.50
KUMBBP		0.2010	0.0100	1.22	0.2030	0.0151	1.77
LACXW8	X	0.2670	0.0760	9.28	0.2540	0.0661	7.72
NEKZV9		0.1870	-0.0040	-0.49	0.1850	-0.0029	-0.34



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

Report #064
Spring 2020

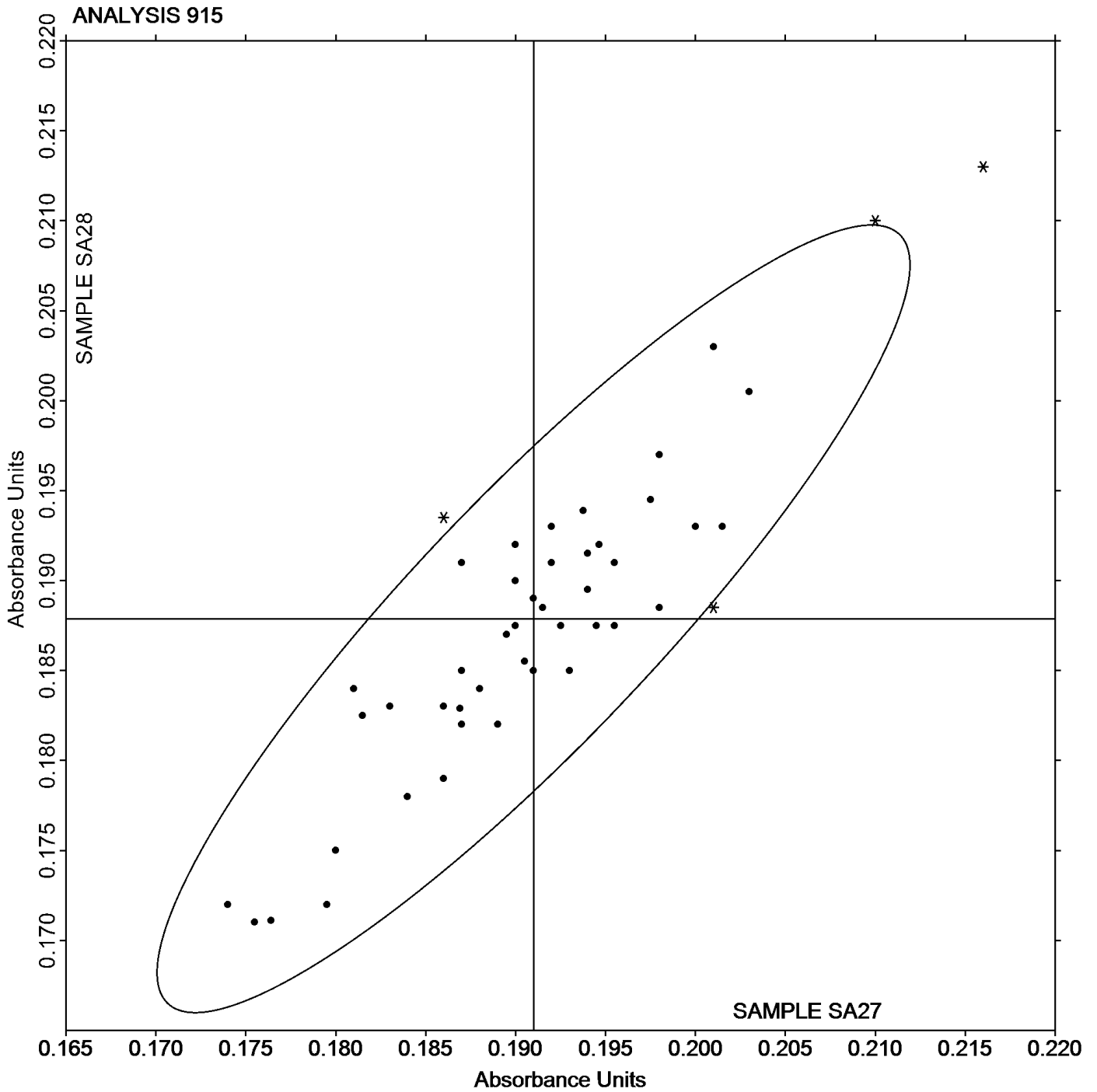
WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
NXFETL		0.1869	-0.0041	-0.50	0.1829	-0.0050	-0.58
P4EF97		0.1915	0.0005	0.06	0.1885	0.0006	0.07
PMQ6L4		0.1920	0.0010	0.12	0.1910	0.0031	0.36
Q63C8J		0.1895	-0.0015	-0.18	0.1870	-0.0009	-0.10
RAUZ73	*	0.2160	0.0250	3.05	0.2130	0.0251	2.93
RBMQBG		0.1890	-0.0020	-0.24	0.1820	-0.0059	-0.69
REM38G		0.2030	0.0120	1.47	0.2005	0.0126	1.47
RPTA6P		0.1900	-0.0010	-0.12	0.1900	0.0021	0.25
T932R4		0.1905	-0.0005	-0.06	0.1855	-0.0024	-0.28
TB8UJG		0.1900	-0.0010	-0.12	0.1875	-0.0004	-0.04
UJXUDZ		0.1945	0.0035	0.43	0.1875	-0.0004	-0.04
UZHICY		0.1955	0.0045	0.55	0.1875	-0.0004	-0.04
V4WHG2		0.1870	-0.0040	-0.49	0.1820	-0.0059	-0.69
VMT9TH		0.1925	0.0015	0.18	0.1875	-0.0004	-0.04
W4C22Y		0.1900	-0.0010	-0.12	0.1900	0.0021	0.25
WA3CCW		0.1860	-0.0050	-0.61	0.1830	-0.0049	-0.57
WEW7AX		0.1740	-0.0170	-2.07	0.1720	-0.0159	-1.85
YFEUCG		0.1880	-0.0030	-0.37	0.1840	-0.0039	-0.45
YH4FCC	X	0.0765	-0.1145	-13.98	0.1570	-0.0309	-3.60

Grand Means		Summary Statistics	
0.19099	Absorbance Units	0.18788	Absorbance Units
Std Dev Btwn Labs			
0.00819	Absorbance Units	0.00857	Absorbance Units
Statistics based on 49 of 54 reporting participants			

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel

Comments on Assigned Data Flags for Test #915

- GINUXD (X) - Data for both samples are high.
- LACXW8 (X) - Data for both samples are high.
- 47GZDT (X) - Data for both samples are high.
- GMKVBT (X) - Data for both samples are low. Possible Systematic Error.
- YH4FCC (X) - Data for both samples are low.





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #064
Spring 2020

Analysis 916 A520nm (1cm path)

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
2PE4WB		0.1485	-0.0076	-1.27	0.1410	-0.0089	-1.42
3DY7AZ		0.1460	-0.0101	-1.69	0.1385	-0.0114	-1.82
3ER2YT		0.1500	-0.0061	-1.02	0.1410	-0.0089	-1.42
3Y3QCQ		0.1526	-0.0035	-0.59	0.1479	-0.0020	-0.32
44N4NY		0.1570	0.0009	0.14	0.1465	-0.0034	-0.54
4UMJNR	X	0.1745	0.0184	3.06	0.1500	0.0001	0.02
4XMGRC		0.1440	-0.0121	-2.02	0.1380	-0.0119	-1.90
6888QA		0.1550	-0.0011	-0.19	0.1485	-0.0014	-0.22
6UW82N	*	0.1515	-0.0046	-0.77	0.1580	0.0081	1.29
8H3ZC6		0.1505	-0.0056	-0.94	0.1525	0.0026	0.42
8N68R9		0.1595	0.0034	0.56	0.1480	-0.0019	-0.30
9HCYRR		0.1665	0.0104	1.73	0.1590	0.0091	1.45
9VXC42		0.1620	0.0059	0.98	0.1580	0.0081	1.29
A248PM		0.1640	0.0079	1.31	0.1555	0.0056	0.89
A7X2MN		0.1623	0.0062	1.03	0.1574	0.0075	1.19
AZBCZT		0.1595	0.0034	0.56	0.1550	0.0051	0.82
BL93WJ		0.1645	0.0084	1.39	0.1625	0.0126	2.01
BM3T3X	X	0.1530	-0.0031	-0.52	0.1740	0.0241	3.84
BQFTYP		0.1595	0.0034	0.56	0.1485	-0.0014	-0.22
BV8ZGX		0.1500	-0.0061	-1.02	0.1450	-0.0049	-0.78
C6VB7J	X	0.1750	0.0189	3.14	0.1750	0.0251	4.00
DEZHLJ		0.1685	0.0124	2.06	0.1625	0.0126	2.01
DWX9XZ		0.1520	-0.0041	-0.69	0.1450	-0.0049	-0.78
ENK9LG		0.1490	-0.0071	-1.19	0.1480	-0.0019	-0.30
ETCJVE	X	0.2200	0.0639	10.64	0.2200	0.0701	11.18
GGTNTK		0.1541	-0.0021	-0.34	0.1462	-0.0037	-0.59
GMKVBT	X	0.1285	-0.0276	-4.60	0.1270	-0.0229	-3.65
GNUMXD	X	0.2575	0.1014	16.88	0.2325	0.0826	13.17
GTPRWE		0.1560	-0.0001	-0.02	0.1530	0.0031	0.50
HB2ZBK		0.1625	0.0064	1.06	0.1505	0.0006	0.10
KR2MQC	X	0.1800	0.0239	3.97	0.1650	0.0151	2.41
KUMBBP		0.1630	0.0069	1.14	0.1630	0.0131	2.09
LACXW8	X	0.2190	0.0629	10.47	0.2060	0.0561	8.95
NEKZV9		0.1620	0.0059	0.98	0.1470	-0.0029	-0.46
NXFETL		0.1509	-0.0052	-0.87	0.1443	-0.0056	-0.89



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

Report #064
Spring 2020

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Grand Mean	CPV	Lab Mean	Diff from Grand Mean	CPV
P4EF97		0.1565	0.0004	0.06	0.1495	-0.0004	-0.06
PMQ6L4		0.1550	-0.0011	-0.19	0.1480	-0.0019	-0.30
Q63C8J		0.1630	0.0069	1.14	0.1555	0.0056	0.89
RAUZ73	X	0.1995	0.0434	7.22	0.1925	0.0426	6.79
RBMQBG		0.1510	-0.0051	-0.86	0.1450	-0.0049	-0.78
REM38G		0.1625	0.0064	1.06	0.1595	0.0096	1.53
RPTA6P		0.1550	-0.0011	-0.19	0.1500	0.0001	0.02
T932R4		0.1545	-0.0016	-0.27	0.1490	-0.0009	-0.14
TB8UJG		0.1580	0.0019	0.31	0.1505	0.0006	0.10
UJXUDZ	*	0.1645	0.0084	1.39	0.1475	-0.0024	-0.38
UZHKCY		0.1585	0.0024	0.39	0.1490	-0.0009	-0.14
V4WHG2		0.1530	-0.0031	-0.52	0.1445	-0.0054	-0.86
VMT9TH		0.1565	0.0004	0.06	0.1475	-0.0024	-0.38
W4C22Y		0.1540	-0.0021	-0.36	0.1525	0.0026	0.42
WA3CCW		0.1530	-0.0031	-0.52	0.1475	-0.0024	-0.38
WEW7AX		0.1460	-0.0101	-1.69	0.1440	-0.0059	-0.94
YFEUCG		0.1520	-0.0041	-0.69	0.1455	-0.0044	-0.70
YH4FCC	X	0.0785	-0.0776	-12.93	0.1780	0.0281	4.48

Grand Means		Summary Statistics	
0.15614	Absorbance Units	0.14989	Absorbance Units
0.00600	Absorbance Units	0.00627	Absorbance Units

Statistics based on 43 of 53 reporting participants

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel



Comments on Assigned Data Flags for Test #916

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

RAUZ73 (X) - Data for both samples are high. Possible Systematic Error.

4UMJNR (X) - Data for sample SA27 are high. Inconsistent within the determinations of sample SA27.

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

LACXW8 (X) - Data for both samples are high.

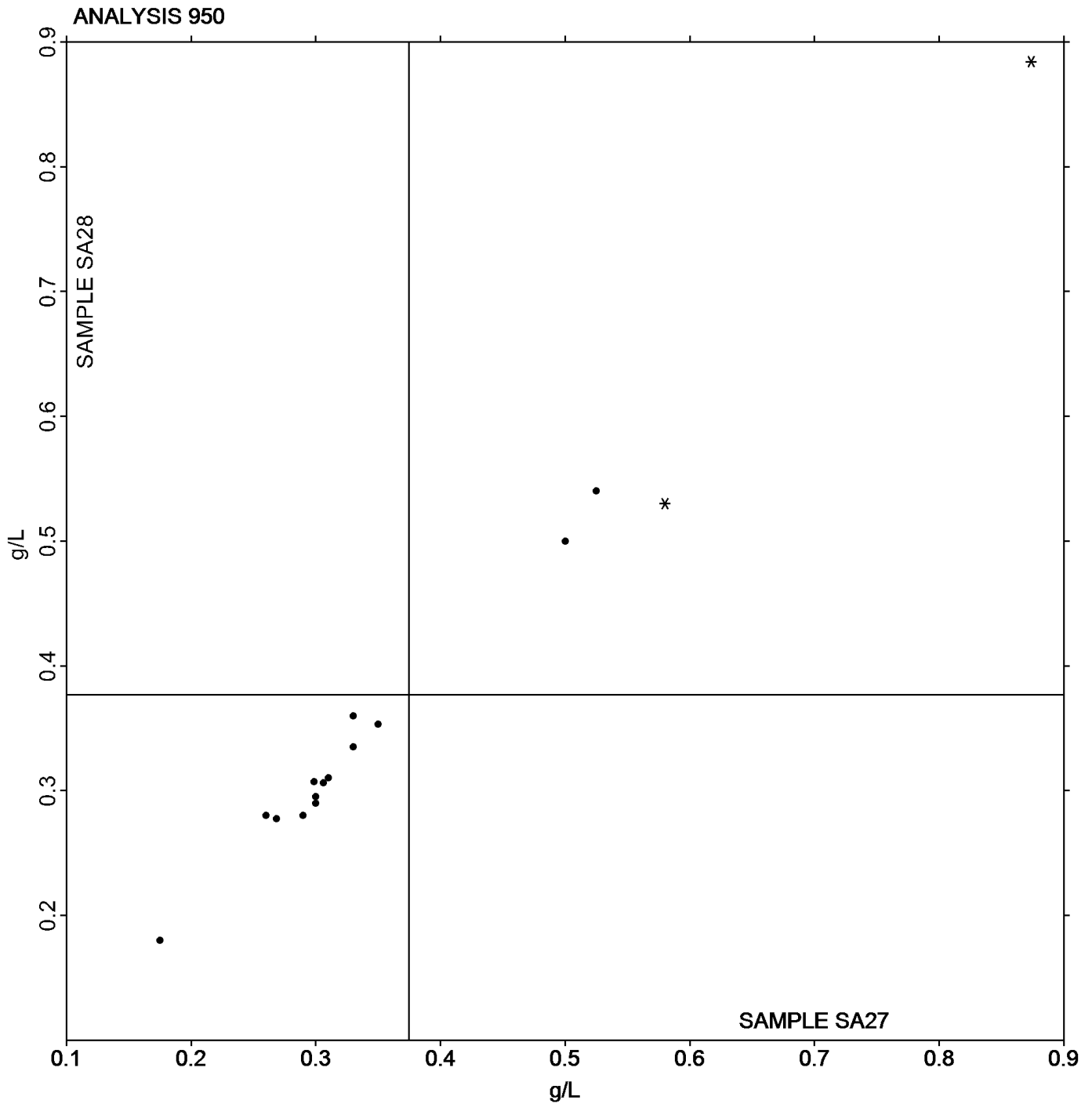
KR2MQC (X) - Data for sample SA27 are high. Inconsistent within the determinations of both samples.

C6VB7J (X) - Data for both samples are high. Possible Systematic Error. Inconsistent within the determinations of sample SA28.

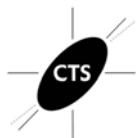
GMKVBT (X) - Data for both samples are low. Possible Systematic Error.

YH4FCC (X) - Data for sample SA27 are low and data for sample SA28 are high. Inconsistent in testing between samples.

BM3T3X (X) - Data for sample SA28 are high.



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: Potassium Sorbate as Sorbic Acid

Report #064
Spring 2020

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
3DY7AZ		174.5	10.9	1.05	176.5	14.0	1.20
44N4NY		169.0	5.4	0.52	169.5	7.0	0.60
4XMGRC		150.0	-13.6	-1.31	154.5	-8.0	-0.69
9HCYRR		162.0	-1.6	-0.15	166.0	3.5	0.30
A248PM		165.5	1.9	0.18	165.5	3.0	0.26
AZBCZT		159.5	-4.1	-0.39	156.0	-6.5	-0.56
BQFTYP	*	154.0	-9.6	-0.92	134.5	-28.0	-2.41
BV8ZGX		168.0	4.4	0.42	169.0	6.5	0.56
DEZHLJ		160.5	-3.1	-0.30	164.5	2.0	0.17
NEKZV9		174.0	10.4	1.00	169.0	6.5	0.56
NXFETL		165.0	1.4	0.14	166.0	3.5	0.30
Q63C8J		190.0	26.4	2.54	184.5	22.0	1.89
RBMQBG		163.0	-0.6	-0.06	162.0	-0.5	-0.05
TVD3Z2		150.9	-12.7	-1.22	151.4	-11.1	-0.95
UJXUDZ		173.0	9.4	0.91	173.0	10.5	0.90
V4WHG2		162.0	-1.6	-0.15	162.5	0.0	0.00
VMT9TH		155.0	-8.6	-0.83	155.0	-7.5	-0.65
WEW7AX		148.6	-15.0	-1.44	146.0	-16.5	-1.42

Research Property Consensus Value

Consensus Average

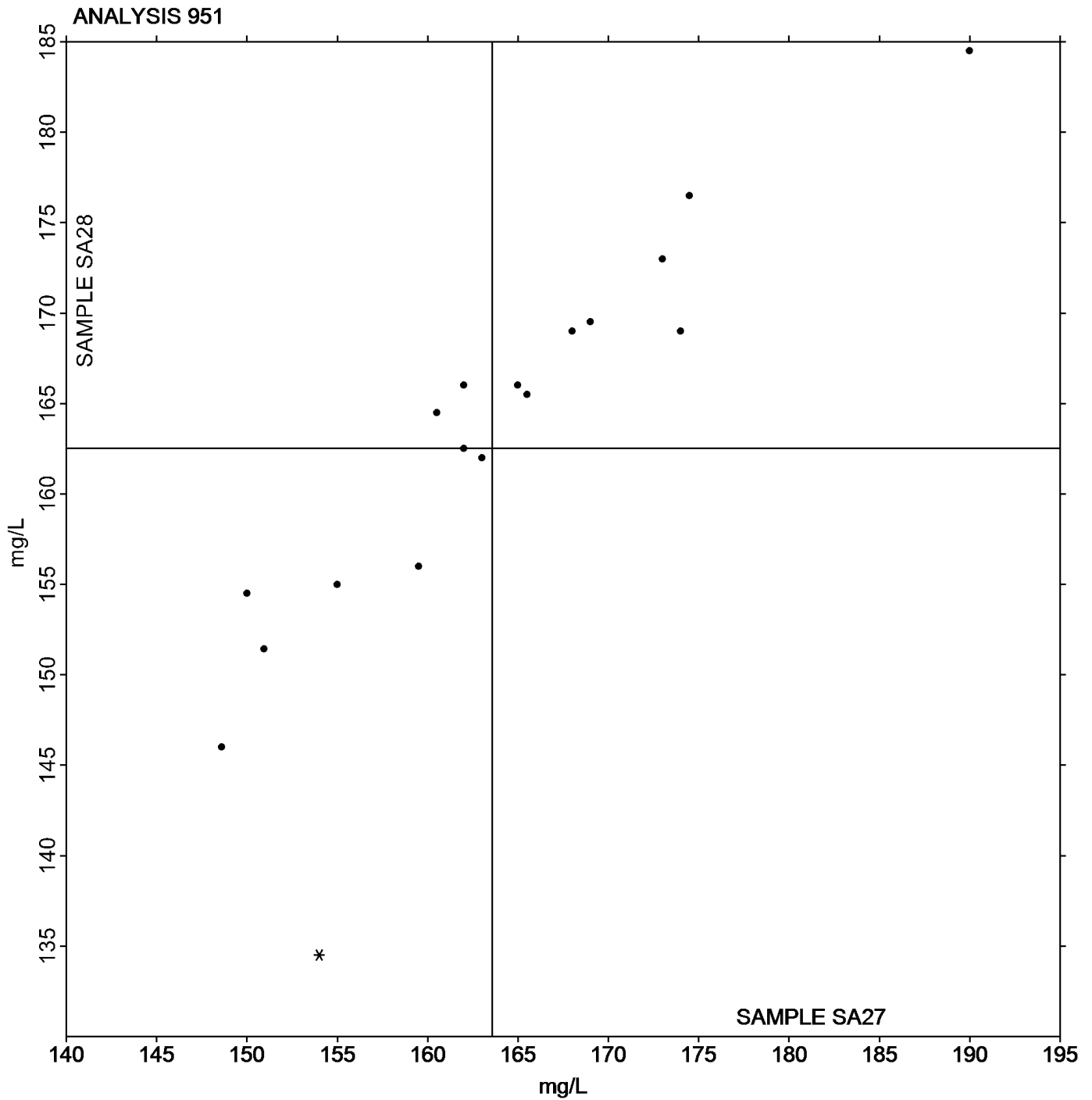
163.59 mg/L

162.52 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 18 reporting participants.

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel



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



Analysis 952

Research Property: Methanol Content

WebCode	Data Flag	Sample SA27			Sample SA28		
		Lab Mean	Diff from Target Value	% Diff from Target Value	Lab Mean	Diff from Target Value	% Diff from Target Value
3DY7AZ		106.00	6.51	0.25	102.50	4.31	0.17
44N4NY		90.75	-8.74	-0.33	93.60	-4.59	-0.18
A7X2MN		86.91	-12.58	-0.48	96.85	-1.34	-0.05
AZBCZT		102.00	2.51	0.10	100.50	2.31	0.09
BV8ZGX		89.00	-10.49	-0.40	80.00	-18.19	-0.73
DEZHLJ		121.50	22.01	0.84	103.00	4.81	0.19
MDCAR8		115.00	15.51	0.59	114.00	15.81	0.63
NEKZV9		74.96	-24.53	-0.93	82.55	-15.64	-0.63
NXFETL		91.00	-8.49	-0.32	91.00	-7.19	-0.29
TVD3Z2		82.80	-16.69	-0.64	80.00	-18.19	-0.73
V4WHG2		104.50	5.01	0.19	102.00	3.81	0.15
WA3CCW		61.00	-38.49	-1.47	62.50	-35.69	-1.43
YDUETU		168.00	68.51	2.61	168.00	69.81	2.80

Research Property Consensus Value

Consensus Average

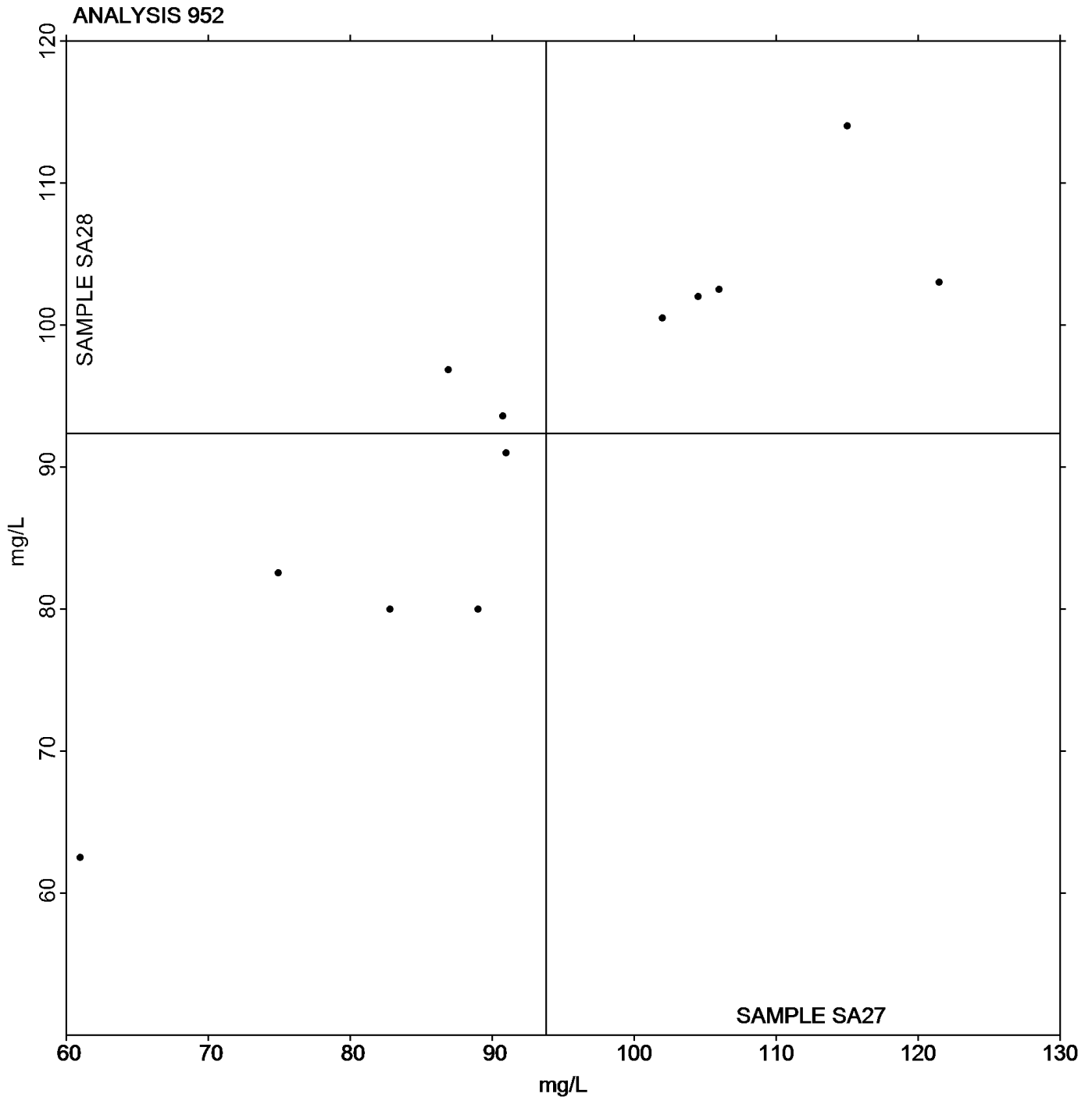
99.494 mg/L

98.193 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 13 reporting participants.

Wines tested: SA27: White Zinfandel; SA28: White Zinfandel



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

-End of Report-