

Wine Industry Interlaboratory Program

Summary Report #049- Spring 2015

[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: Turbidity</u> |
| <u>951</u> | <u>Research Property: Methanol Content</u> |
| <u>952</u> | <u>Research: Ethanol by Dist. / Density Method</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.

For further information concerning this report contact:

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

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

(Toll-free fax within the U.S.: 1-866-fax-2cts)

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

Key for Web Summary Report (Page 1 of 2)

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

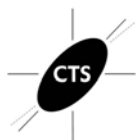
| <u>DATA FLAG</u> | <u>STATISTICALLY INCLUDED/EXCLUDED</u> | <u>ACTION REQUIRED</u> |
|------------------|--|--|
| * | INCLUDED | CAUTION - review testing procedure and monitor future results. Results fall outside 95% ellipse but within a 99% ellipse that is calculated but not drawn. |
| X | EXCLUDED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

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

Common Problems Highlighted in Footnotes

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

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



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 901

Ethanol (% of volume)

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2Y6AHM | X | 8.300 | -0.028 | -0.60 | 8.650 | 0.129 | 2.38 |
| 2ZDGLF | | 8.385 | 0.057 | 1.20 | 8.600 | 0.079 | 1.45 |
| 3LC6QG | * | 8.460 | 0.132 | 2.79 | 8.680 | 0.159 | 2.93 |
| 3N2EZH | | 8.400 | 0.072 | 1.52 | 8.600 | 0.079 | 1.45 |
| 6MWVQC | | 8.400 | 0.072 | 1.52 | 8.590 | 0.069 | 1.27 |
| 6XDKPH | | 8.360 | 0.032 | 0.67 | 8.540 | 0.019 | 0.35 |
| 76RNBB | | 8.330 | 0.002 | 0.04 | 8.520 | -0.001 | -0.02 |
| 7L2FDF | | 8.410 | 0.082 | 1.73 | 8.610 | 0.089 | 1.64 |
| 7R6EN6 | | 8.285 | -0.043 | -0.92 | 8.490 | -0.031 | -0.57 |
| 86PGK3 | | 8.350 | 0.022 | 0.46 | 8.525 | 0.004 | 0.07 |
| 8J94UZ | | 8.340 | 0.012 | 0.25 | 8.540 | 0.019 | 0.35 |
| 93ZAZ6 | | 8.370 | 0.042 | 0.88 | 8.545 | 0.024 | 0.44 |
| 9LRF8W | | 8.355 | 0.027 | 0.56 | 8.555 | 0.034 | 0.63 |
| 9LRHVF | | 8.330 | 0.002 | 0.04 | 8.510 | -0.011 | -0.20 |
| 9PQQ4V | X | 8.075 | -0.253 | -5.36 | 8.250 | -0.271 | -4.99 |
| 9PQTQE | | 8.345 | 0.017 | 0.35 | 8.540 | 0.019 | 0.35 |
| 9PRQ2B | | 8.340 | 0.012 | 0.25 | 8.525 | 0.004 | 0.07 |
| 9RFZBC | | 8.365 | 0.037 | 0.78 | 8.560 | 0.039 | 0.72 |
| B8L2ZX | | 8.245 | -0.083 | -1.76 | 8.450 | -0.071 | -1.31 |
| BJWEFD | X | 8.545 | 0.217 | 4.58 | 8.630 | 0.109 | 2.01 |
| BW4LWV | X | 8.475 | 0.147 | 3.10 | 8.550 | 0.029 | 0.53 |
| CTKRU3 | | 8.265 | -0.063 | -1.34 | 8.460 | -0.061 | -1.12 |
| D6Q2Y6 | | 8.280 | -0.048 | -1.02 | 8.460 | -0.061 | -1.12 |
| D6RWKV | | 8.355 | 0.027 | 0.56 | 8.555 | 0.034 | 0.63 |
| DHXAGM | | 8.410 | 0.082 | 1.73 | 8.600 | 0.079 | 1.45 |



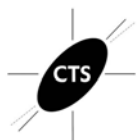
ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 901

Ethanol (% of volume)

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| E6L2DV | | 8.375 | 0.047 | 0.99 | 8.600 | 0.079 | 1.45 |
| EDECL6 | | 8.315 | -0.013 | -0.28 | 8.500 | -0.021 | -0.39 |
| EKZ9PU | | 8.345 | 0.017 | 0.35 | 8.545 | 0.024 | 0.44 |
| F2JN7V | | 8.355 | 0.027 | 0.56 | 8.555 | 0.034 | 0.63 |
| FZN629 | | 8.300 | -0.028 | -0.60 | 8.500 | -0.021 | -0.39 |
| G82D6V | | 8.355 | 0.027 | 0.56 | 8.540 | 0.019 | 0.35 |
| GT6WFX | | 8.360 | 0.032 | 0.67 | 8.580 | 0.059 | 1.09 |
| H6RNFR | | 8.365 | 0.037 | 0.78 | 8.555 | 0.034 | 0.63 |
| HLHTLZ | | 8.370 | 0.042 | 0.88 | 8.570 | 0.049 | 0.90 |
| HUDTZT | | 8.345 | 0.017 | 0.35 | 8.540 | 0.019 | 0.35 |
| J67APU | | 8.265 | -0.063 | -1.34 | 8.460 | -0.061 | -1.12 |
| JHDKUV | | 8.305 | -0.023 | -0.49 | 8.500 | -0.021 | -0.39 |
| K976L2 | | 8.235 | -0.093 | -1.97 | 8.415 | -0.106 | -1.95 |
| LCYLDL | | 8.300 | -0.028 | -0.60 | 8.480 | -0.041 | -0.76 |
| LQZX9K | | 8.325 | -0.003 | -0.07 | 8.510 | -0.011 | -0.20 |
| M9FQAU | * | 8.250 | -0.078 | -1.66 | 8.400 | -0.121 | -2.23 |
| MNTYDJ | | 8.280 | -0.048 | -1.02 | 8.460 | -0.061 | -1.12 |
| MT68DM | | 8.360 | 0.032 | 0.67 | 8.545 | 0.024 | 0.44 |
| NBDUCZ | | 8.280 | -0.048 | -1.02 | 8.450 | -0.071 | -1.31 |
| NCDRPG | | 8.310 | -0.018 | -0.39 | 8.540 | 0.019 | 0.35 |
| PANK6K | | 8.255 | -0.073 | -1.55 | 8.445 | -0.076 | -1.40 |
| PLUXYQ | | 8.315 | -0.013 | -0.28 | 8.480 | -0.041 | -0.76 |
| QLB9DP | | 8.380 | 0.052 | 1.09 | 8.590 | 0.069 | 1.27 |
| R3DBN3 | | 8.320 | -0.008 | -0.18 | 8.490 | -0.031 | -0.57 |
| R3DBQM | X | 8.500 | 0.172 | 3.63 | 8.400 | -0.121 | -2.23 |



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 901
Ethanol (% of volume)

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| R6G7AQ | | 8.370 | 0.042 | 0.88 | 8.570 | 0.049 | 0.90 |
| RAEPCN | X | 8.100 | -0.228 | -4.83 | 8.400 | -0.121 | -2.23 |
| RGD8NF | | 8.355 | 0.027 | 0.56 | 8.580 | 0.059 | 1.09 |
| THZ96M | | 8.320 | -0.008 | -0.18 | 8.515 | -0.006 | -0.11 |
| THZBUR | | 8.310 | -0.018 | -0.39 | 8.490 | -0.031 | -0.57 |
| TKCQNT | | 8.270 | -0.058 | -1.23 | 8.455 | -0.066 | -1.22 |
| TRAF8H | | 8.360 | 0.032 | 0.67 | 8.540 | 0.019 | 0.35 |
| U4X2QH | | 8.335 | 0.007 | 0.14 | 8.515 | -0.006 | -0.11 |
| UGNVZQ | * | 8.280 | -0.048 | -1.02 | 8.510 | -0.011 | -0.20 |
| UTZZCT | | 8.260 | -0.068 | -1.45 | 8.430 | -0.091 | -1.68 |
| UY38TG | | 8.310 | -0.018 | -0.39 | 8.510 | -0.011 | -0.20 |
| V7J38Q | * | 8.260 | -0.068 | -1.45 | 8.480 | -0.041 | -0.76 |
| W3HJKH | X | 8.280 | -0.048 | -1.02 | 8.810 | 0.289 | 5.32 |
| W72EMB | | 8.325 | -0.003 | -0.07 | 8.485 | -0.036 | -0.66 |
| WF32DL | | 8.315 | -0.013 | -0.28 | 8.510 | -0.011 | -0.20 |
| Y3QDDN | | 8.285 | -0.043 | -0.92 | 8.465 | -0.056 | -1.03 |
| YEJT3P | | 8.300 | -0.028 | -0.60 | 8.500 | -0.021 | -0.39 |
| Z7LLYA | X | 8.010 | -0.318 | -6.74 | 8.140 | -0.381 | -7.02 |

| Grand Means | | Summary Statistics | |
|--|----------------|--------------------|----------------|
| | 8.3283 percent | | 8.5210 percent |
| Std Dev Btwn Labs | | | |
| | 0.0473 percent | | 0.0543 percent |
| Statistics based on 60 of 68 reporting participants | | | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel



Analysis 901
Ethanol (% of volume)

Comments on assigned Data Flags

2Y6AHM (X) - Inconsistent in testing between samples and inconsistent within the determinations for both samples.

9PQQ4V (X) - Data for both samples are low. Possible Systematic Error.

BJWEFD (X) - Inconsistent in testing between samples, data for Sample SA95 are high.

BW4LWV (X) - Inconsistent in testing between samples, data for Sample SA95 are high. Also inconsistent in testing within the determinations for Sample SA96.

R3DBQM (X) - Inconsistent in testing between samples, data for Sample SA95 are high.

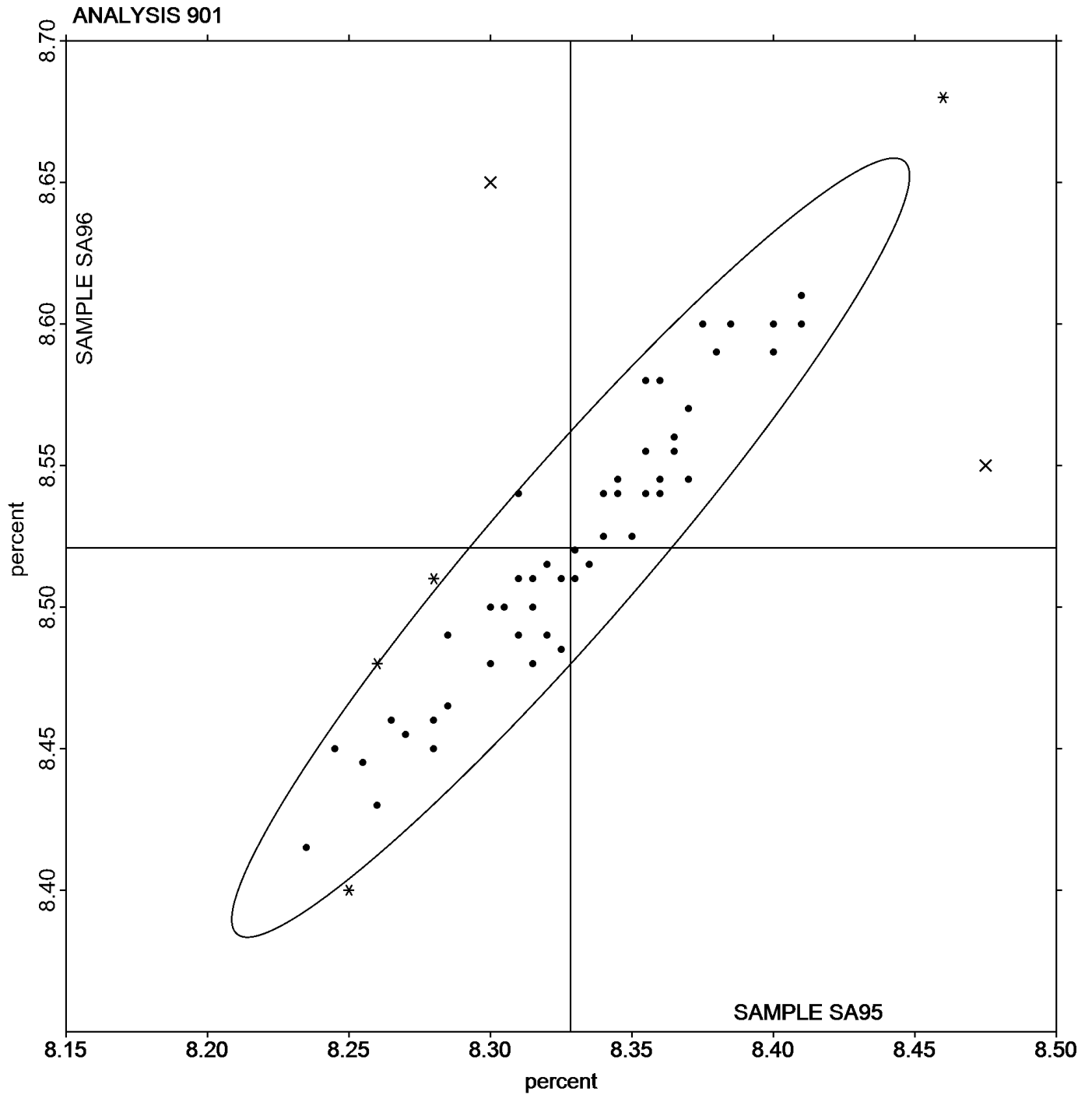
RAEPCN (X) - Inconsistent in testing between samples, data for Sample SA95 are low.

W3HJKH (X) - Inconsistent in testing between samples, data for Sample SA96 are high. Also inconsistent in testing within the determinations for both sample sets.

Z7LLYA (X) - Data for both samples are low.

Results by Methodology (as reported by laboratory)

| Test Methodology | Sample SA95 <i>White Zinfandel</i> | | | Sample SA96 <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 | 8.245 | 0.000 | -0.083 | 8.450 | 0.000 | -0.071 | 1 | 1 |
| Gas Chromatography Method | 8.410 | 0.000 | 0.082 | 8.610 | 0.000 | 0.089 | 1 | 2 |
| Near Infrared Method | 8.330 | 0.037 | 0.002 | 8.522 | 0.041 | 0.001 | 40 | 44 |
| Dist. / Density Method | 8.309 | 0.020 | -0.019 | 8.499 | 0.034 | -0.022 | 5 | 8 |
| FTIR | 8.337 | 0.061 | 0.009 | 8.531 | 0.075 | 0.010 | 9 | 11 |



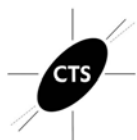


ASEV-CTS Wine Industry Interlaboratory Testing Program

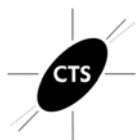
Report #049
Spring 2015

Analysis 902 Total Sulfur Dioxide

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2ZDGLF | | 163.5 | -6.6 | -0.60 | 173.5 | 0.0 | 0.00 |
| 3LC6QG | | 186.5 | 16.4 | 1.49 | 197.0 | 23.5 | 1.91 |
| 3N2EZH | | 177.0 | 6.9 | 0.63 | 173.5 | 0.0 | 0.00 |
| 6MWVQC | | 173.0 | 2.9 | 0.27 | 177.0 | 3.5 | 0.29 |
| 6XDKPH | | 173.5 | 3.4 | 0.31 | 178.0 | 4.5 | 0.37 |
| 76RNBB | | 174.0 | 3.9 | 0.36 | 181.0 | 7.5 | 0.61 |
| 7L2FDF | | 164.0 | -6.1 | -0.55 | 170.0 | -3.5 | -0.28 |
| 7R6EN6 | | 174.0 | 3.9 | 0.36 | 174.0 | 0.5 | 0.04 |
| 86PGK3 | | 155.0 | -15.1 | -1.37 | 159.0 | -14.5 | -1.18 |
| 8J94UZ | * | 198.0 | 27.9 | 2.54 | 204.0 | 30.5 | 2.48 |
| 93ZAZ6 | | 177.0 | 6.9 | 0.63 | 178.5 | 5.0 | 0.41 |
| 9LRF8W | | 168.5 | -1.6 | -0.14 | 172.0 | -1.5 | -0.12 |
| 9LRHVF | | 173.0 | 2.9 | 0.27 | 179.0 | 5.5 | 0.45 |
| 9PQQ4V | | 175.2 | 5.1 | 0.46 | 172.2 | -1.3 | -0.11 |
| 9PQTQE | | 178.0 | 7.9 | 0.72 | 179.5 | 6.0 | 0.49 |
| 9PRQ2B | | 171.5 | 1.4 | 0.13 | 173.5 | 0.0 | 0.00 |
| 9RFZBC | X | 131.5 | -38.6 | -3.50 | 97.0 | -76.5 | -6.22 |
| B8L2ZX | | 156.0 | -14.1 | -1.28 | 154.0 | -19.5 | -1.58 |
| BJWEFD | | 182.5 | 12.4 | 1.13 | 185.5 | 12.0 | 0.98 |
| BW4LWV | * | 146.5 | -23.6 | -2.14 | 142.0 | -31.5 | -2.56 |
| CTKRU3 | | 171.0 | 0.9 | 0.09 | 184.0 | 10.5 | 0.86 |
| D6Q2Y6 | | 183.0 | 12.9 | 1.18 | 183.0 | 9.5 | 0.78 |
| D6RWKV | | 170.0 | -0.1 | -0.01 | 176.0 | 2.5 | 0.21 |
| DHXAGM | | 164.0 | -6.1 | -0.55 | 161.0 | -12.5 | -1.01 |
| E6L2DV | | 187.0 | 16.9 | 1.54 | 188.0 | 14.5 | 1.18 |

**ASEV-CTS Wine Industry Interlaboratory Testing Program****Report #049
Spring 2015****Analysis 902
Total Sulfur Dioxide**

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| EDECL6 | | 155.5 | -14.6 | -1.32 | 160.5 | -13.0 | -1.06 |
| EKZ9PU | | 168.0 | -2.1 | -0.19 | 173.0 | -0.5 | -0.04 |
| F2JN7V | | 169.5 | -0.6 | -0.06 | 168.8 | -4.7 | -0.38 |
| FZN629 | | 179.5 | 9.4 | 0.86 | 186.0 | 12.5 | 1.02 |
| G82D6V | | 181.5 | 11.4 | 1.04 | 184.0 | 10.5 | 0.86 |
| GT6WFX | | 183.0 | 12.9 | 1.18 | 187.0 | 13.5 | 1.10 |
| H6RNFR | | 187.5 | 17.4 | 1.58 | 190.5 | 17.0 | 1.39 |
| HLHTLZ | | 189.0 | 18.9 | 1.72 | 197.5 | 24.0 | 1.95 |
| HUDTZT | | 144.0 | -26.1 | -2.37 | 145.0 | -28.5 | -2.32 |
| J67APU | | 172.0 | 1.9 | 0.18 | 171.5 | -2.0 | -0.16 |
| JHDKUV | | 152.0 | -18.1 | -1.64 | 152.5 | -21.0 | -1.71 |
| JRMMHG | | 166.0 | -4.1 | -0.37 | 178.5 | 5.0 | 0.41 |
| K976L2 | | 173.5 | 3.4 | 0.31 | 181.5 | 8.0 | 0.65 |
| LCYLDL | | 164.0 | -6.1 | -0.55 | 169.0 | -4.5 | -0.36 |
| LQZX9K | | 169.5 | -0.6 | -0.05 | 176.5 | 3.0 | 0.25 |
| M9FQAU | | 175.0 | 4.9 | 0.45 | 179.0 | 5.5 | 0.45 |
| MNTYDJ | | 179.0 | 8.9 | 0.81 | 184.5 | 11.0 | 0.90 |
| MT68DM | | 170.5 | 0.4 | 0.04 | 170.5 | -3.0 | -0.24 |
| NBDUCZ | | 161.5 | -8.6 | -0.78 | 167.0 | -6.5 | -0.53 |
| NCDRPG | | 152.0 | -18.1 | -1.64 | 153.0 | -20.5 | -1.67 |
| PANK6K | | 176.0 | 5.9 | 0.54 | 176.0 | 2.5 | 0.21 |
| PLUXYQ | | 153.0 | -17.1 | -1.55 | 162.5 | -11.0 | -0.89 |
| QLB9DP | | 184.0 | 13.9 | 1.27 | 185.0 | 11.5 | 0.94 |
| R3DBN3 | | 156.0 | -14.1 | -1.28 | 157.5 | -16.0 | -1.30 |
| R3DBQM | | 180.0 | 9.9 | 0.90 | 180.0 | 6.5 | 0.53 |



ASEV-CTS Wine Industry Interlaboratory Testing Program

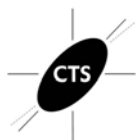
Report #049
Spring 2015

Analysis 902 Total Sulfur Dioxide

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| R6G7AQ | | 166.5 | -3.6 | -0.32 | 164.5 | -9.0 | -0.73 |
| RAEPCN | | 165.0 | -5.1 | -0.46 | 165.0 | -8.5 | -0.69 |
| RGD8NF | | 169.0 | -1.1 | -0.10 | 173.5 | 0.0 | 0.00 |
| THZ96M | X | 214.5 | 44.4 | 4.04 | 217.5 | 44.0 | 3.58 |
| THZBUR | | 151.5 | -18.6 | -1.69 | 154.0 | -19.5 | -1.58 |
| TKCQNT | X | 155.5 | -14.6 | -1.32 | 141.5 | -32.0 | -2.60 |
| TRAF8H | | 164.8 | -5.3 | -0.48 | 168.0 | -5.5 | -0.45 |
| U4X2QH | X | 180.5 | 10.4 | 0.95 | 166.5 | -7.0 | -0.57 |
| UGNVZQ | | 174.5 | 4.4 | 0.40 | 174.5 | 1.0 | 0.08 |
| UTZZCT | | 164.0 | -6.1 | -0.55 | 169.5 | -4.0 | -0.32 |
| UY38TG | | 164.0 | -6.1 | -0.55 | 160.5 | -13.0 | -1.06 |
| V7J38Q | * | 170.5 | 0.4 | 0.04 | 160.5 | -13.0 | -1.06 |
| W3HJKH | | 173.5 | 3.4 | 0.31 | 186.0 | 12.5 | 1.02 |
| W72EMB | X | 132.4 | -37.6 | -3.42 | 160.9 | -12.6 | -1.02 |
| WF32DL | | 159.5 | -10.6 | -0.96 | 167.5 | -6.0 | -0.49 |
| Y3QDDN | | 181.0 | 10.9 | 0.99 | 188.0 | 14.5 | 1.18 |
| YEJT3P | | 162.0 | -8.1 | -0.73 | 174.0 | 0.5 | 0.04 |
| Z7LLYA | | 164.8 | -5.3 | -0.48 | 171.2 | -2.3 | -0.18 |

| Grand Means | | Summary Statistics | |
|--|-------------|--------------------|-------------|
| | 170.06 mg/L | | 173.47 mg/L |
| Std Dev Btwn Labs | | | |
| | 11.01 mg/L | | 12.29 mg/L |
| Statistics based on 63 of 68 reporting participants | | | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel



Analysis 902
Total Sulfur Dioxide

Comments on assigned Data Flags

9RFZBC (X) - Data for both samples are low. Also inconsistent in testing within the determinations for both samples.

THZ96M (X) - Data for both samples are high. Possible Systematic Error.

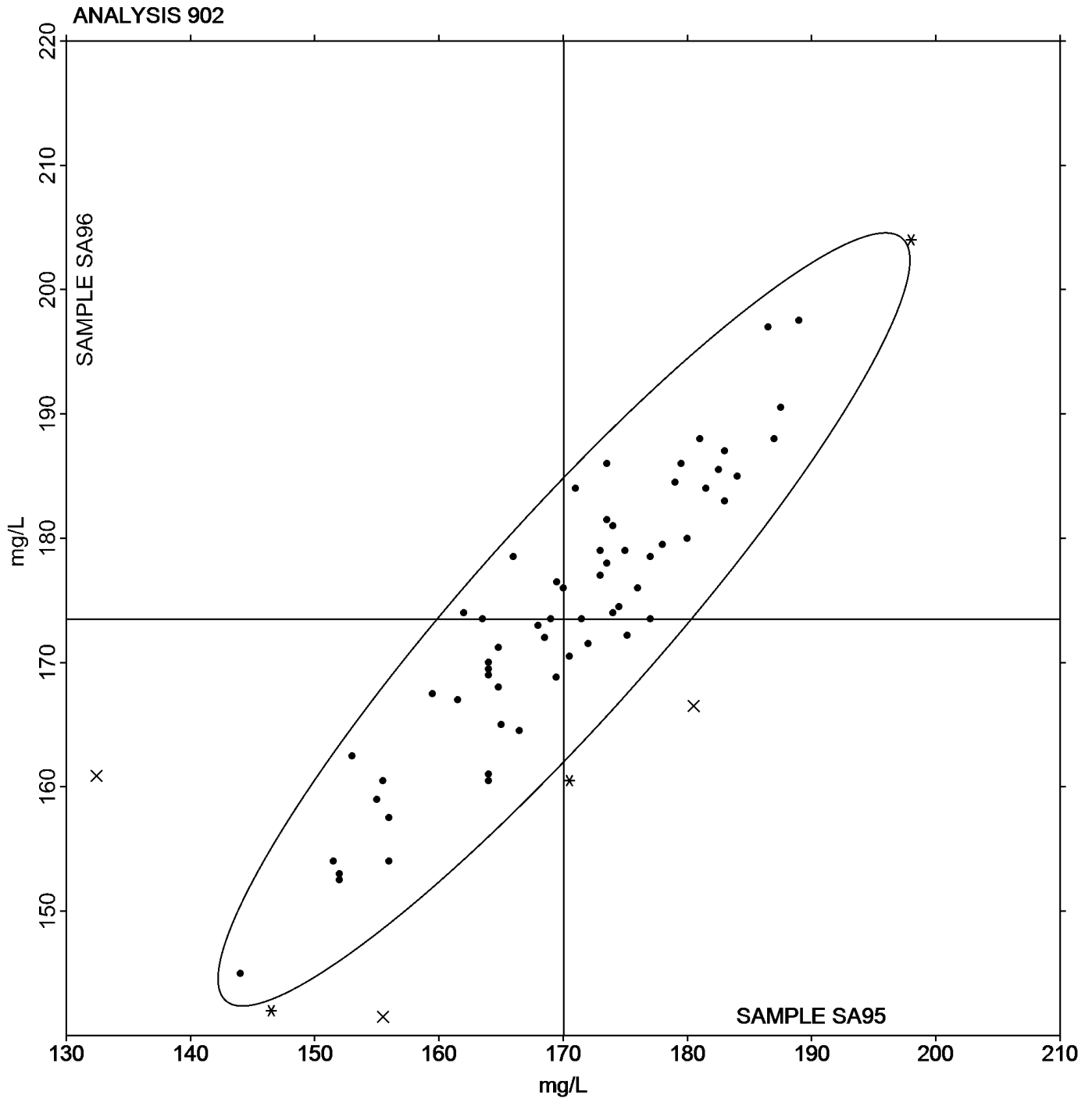
TKCQNT (X) - Inconsistent in testing between samples.

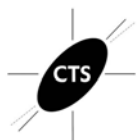
U4X2QH (X) - Inconsistent in testing between samples.

W72EMB (X) - Inconsistent in testing between samples, data for Sample SA96 are low. Also inconsistent in testing within the determinations for Sample SA96.

Results by Methodology (as reported by laboratory)

| Test Methodology | Sample SA95 <i>White Zinfandel</i> | | | Sample SA96 <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 | 144.0 | 0.0 | -26.1 | 145.0 | 0.0 | -28.5 | 1 | 1 |
| Ripper Method | 169.1 | 10.5 | -0.9 | 172.9 | 11.5 | -0.5 | 24 | 29 |
| Aeration Oxidation (AO) Method | 169.5 | 7.4 | -0.6 | 173.7 | 5.8 | 0.2 | 11 | 11 |
| Segmented Flow Analyzer | 172.1 | 12.6 | 2.0 | 173.6 | 13.6 | 0.1 | 7 | 8 |
| Enzymatic Method | 171.5 | 10.6 | 1.4 | 176.8 | 11.0 | 3.3 | 2 | 4 |
| Colorimetric Analyzer | 169.1 | 6.3 | -1.0 | 171.5 | 9.8 | -2.0 | 5 | 5 |
| FTIR | 164.3 | 13.1 | -5.8 | 170.3 | 15.9 | -3.2 | 2 | 2 |
| Flow Injection Analysis | 176.3 | 9.3 | 6.3 | 181.3 | 9.7 | 7.8 | 8 | 8 |





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 903 Free Sulfur Dioxide

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2WF2B8 | | 23.20 | -0.97 | -0.22 | 26.00 | -2.43 | -0.54 |
| 2Y6AHM | | 29.00 | 4.83 | 1.11 | 35.50 | 7.07 | 1.58 |
| 2ZDGLF | * | 34.00 | 9.83 | 2.26 | 35.00 | 6.57 | 1.47 |
| 3LC6QG | | 23.00 | -1.17 | -0.27 | 28.00 | -0.43 | -0.10 |
| 3N2EZH | | 23.50 | -0.67 | -0.15 | 27.50 | -0.93 | -0.21 |
| 6MWVQC | * | 27.00 | 2.83 | 0.65 | 35.00 | 6.57 | 1.47 |
| 6XDKPH | | 30.00 | 5.83 | 1.34 | 35.00 | 6.57 | 1.47 |
| 76RNBB | | 24.00 | -0.17 | -0.04 | 29.00 | 0.57 | 0.13 |
| 7L2FDF | | 27.00 | 2.83 | 0.65 | 32.00 | 3.57 | 0.80 |
| 7R6EN6 | | 25.00 | 0.83 | 0.19 | 30.00 | 1.57 | 0.35 |
| 86PGK3 | X | 43.80 | 19.63 | 4.50 | 47.00 | 18.57 | 4.16 |
| 8J94UZ | X | 19.00 | -5.17 | -1.19 | 29.50 | 1.07 | 0.24 |
| 93ZAZ6 | | 28.00 | 3.83 | 0.88 | 33.50 | 5.07 | 1.14 |
| 9LRF8W | | 20.50 | -3.67 | -0.84 | 25.00 | -3.43 | -0.77 |
| 9LRHVF | | 22.00 | -2.17 | -0.50 | 28.00 | -0.43 | -0.10 |
| 9PQQ4V | | 25.41 | 1.24 | 0.28 | 30.02 | 1.59 | 0.36 |
| 9PQTQE | | 24.00 | -0.17 | -0.04 | 28.00 | -0.43 | -0.10 |
| 9PRQ2B | | 22.50 | -1.67 | -0.38 | 26.00 | -2.43 | -0.54 |
| 9RFZBC | | 24.00 | -0.17 | -0.04 | 27.00 | -1.43 | -0.32 |
| B8L2ZX | | 18.00 | -6.17 | -1.42 | 22.00 | -6.43 | -1.44 |
| BJWEFD | | 19.50 | -4.67 | -1.07 | 24.50 | -3.93 | -0.88 |
| BW4LWV | | 18.50 | -5.67 | -1.30 | 23.50 | -4.93 | -1.10 |
| CTKRU3 | | 16.00 | -8.17 | -1.88 | 21.50 | -6.93 | -1.55 |
| D6Q2Y6 | | 23.50 | -0.67 | -0.15 | 28.50 | 0.07 | 0.02 |
| D6RWKV | | 24.00 | -0.17 | -0.04 | 26.50 | -1.93 | -0.43 |



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 903 Free Sulfur Dioxide

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| DHXAGM | | 31.00 | 6.83 | 1.57 | 35.00 | 6.57 | 1.47 |
| E6L2DV | | 22.50 | -1.67 | -0.38 | 26.50 | -1.93 | -0.43 |
| EDECL6 | | 22.00 | -2.17 | -0.50 | 27.00 | -1.43 | -0.32 |
| EKZ9PU | | 19.00 | -5.17 | -1.19 | 22.50 | -5.93 | -1.33 |
| F2JN7V | | 22.55 | -1.62 | -0.37 | 26.05 | -2.38 | -0.53 |
| FZN629 | * | 36.00 | 11.83 | 2.71 | 41.00 | 12.57 | 2.82 |
| G82D6V | | 23.00 | -1.17 | -0.27 | 27.00 | -1.43 | -0.32 |
| GT6WFX | | 18.00 | -6.17 | -1.42 | 23.00 | -5.43 | -1.22 |
| H6RNFR | | 23.00 | -1.17 | -0.27 | 29.00 | 0.57 | 0.13 |
| HLHTLZ | | 23.50 | -0.67 | -0.15 | 27.50 | -0.93 | -0.21 |
| HUdTZT | | 22.00 | -2.17 | -0.50 | 26.00 | -2.43 | -0.54 |
| J67APU | | 27.00 | 2.83 | 0.65 | 28.00 | -0.43 | -0.10 |
| JHDKUV | | 19.00 | -5.17 | -1.19 | 24.00 | -4.43 | -0.99 |
| JRMMHG | | 24.50 | 0.33 | 0.08 | 29.50 | 1.07 | 0.24 |
| K976L2 | * | 36.50 | 12.33 | 2.83 | 42.00 | 13.57 | 3.04 |
| LCYLDL | | 22.50 | -1.67 | -0.38 | 25.50 | -2.93 | -0.66 |
| LQZX9K | | 22.00 | -2.17 | -0.50 | 26.50 | -1.93 | -0.43 |
| MNTYDJ | | 26.50 | 2.33 | 0.53 | 30.00 | 1.57 | 0.35 |
| MT68DM | | 21.70 | -2.47 | -0.57 | 25.45 | -2.98 | -0.67 |
| NBDUCZ | | 27.00 | 2.83 | 0.65 | 31.00 | 2.57 | 0.58 |
| NCDRPG | | 22.00 | -2.17 | -0.50 | 27.00 | -1.43 | -0.32 |
| PANK6K | | 26.50 | 2.33 | 0.53 | 31.50 | 3.07 | 0.69 |
| PLUXYQ | X | 15.50 | -8.67 | -1.99 | 13.00 | -15.43 | -3.45 |
| QLB9DP | * | 18.00 | -6.17 | -1.42 | 19.00 | -9.43 | -2.11 |
| R3DBN3 | | 27.00 | 2.83 | 0.65 | 30.50 | 2.07 | 0.46 |



Analysis 903
Free Sulfur Dioxide

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| R3DBQM | X | 29.00 | 4.83 | 1.11 | 26.00 | -2.43 | -0.54 |
| R6G7AQ | | 14.00 | -10.17 | -2.33 | 18.00 | -10.43 | -2.33 |
| RAEPCN | | 25.00 | 0.83 | 0.19 | 31.00 | 2.57 | 0.58 |
| RGD8NF | | 23.00 | -1.17 | -0.27 | 30.00 | 1.57 | 0.35 |
| THZ96M | | 22.00 | -2.17 | -0.50 | 29.50 | 1.07 | 0.24 |
| THZBUR | | 23.00 | -1.17 | -0.27 | 26.50 | -1.93 | -0.43 |
| TKCQNT | | 27.00 | 2.83 | 0.65 | 30.50 | 2.07 | 0.46 |
| TRAF8H | * | 28.80 | 4.63 | 1.06 | 28.80 | 0.37 | 0.08 |
| U4X2QH | | 20.00 | -4.17 | -0.96 | 24.00 | -4.43 | -0.99 |
| UGNVZQ | | 27.50 | 3.33 | 0.76 | 32.00 | 3.57 | 0.80 |
| UTZZCT | | 25.00 | 0.83 | 0.19 | 29.00 | 0.57 | 0.13 |
| UY38TG | | 33.50 | 9.33 | 2.14 | 37.00 | 8.57 | 1.92 |
| V7J38Q | | 22.00 | -2.17 | -0.50 | 25.00 | -3.43 | -0.77 |
| W3HJKH | * | 28.50 | 4.33 | 0.99 | 29.00 | 0.57 | 0.13 |
| W72EMB | | 24.34 | 0.17 | 0.04 | 27.49 | -0.94 | -0.21 |
| WF32DL | | 24.00 | -0.17 | -0.04 | 28.00 | -0.43 | -0.10 |
| Y3QDDN | | 23.00 | -1.17 | -0.27 | 28.00 | -0.43 | -0.10 |
| YEJT3P | | 22.00 | -2.17 | -0.50 | 28.00 | -0.43 | -0.10 |
| Z7LLYA | X | 39.59 | 15.42 | 3.54 | 46.01 | 17.58 | 3.94 |

| Grand Means | | Summary Statistics | |
|---|-------------|--------------------|-------------|
| | 24.172 mg/L | | 28.427 mg/L |
| Stnd Dev Btwn Labs | | | |
| | 4.358 mg/L | | 4.466 mg/L |
| Statistics based on 64 of 69 reporting participants | | | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel



Comments on assigned Data Flags

86PGK3 (X) - Data for both samples are high. Possible Systematic Error.

8J94UZ (X) - Inconsistent in testing between samples and inconsistent within the determinations for both samples.

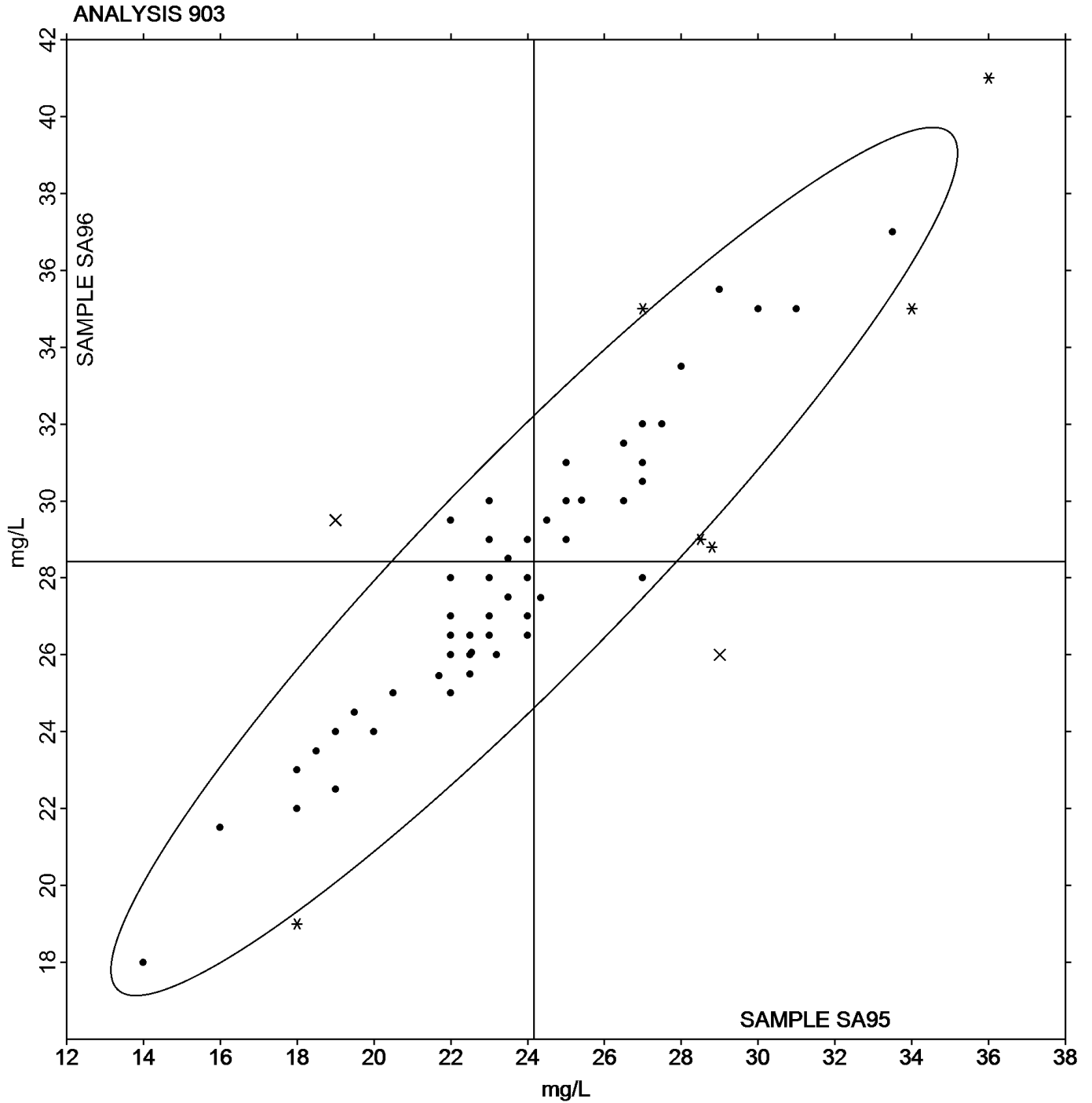
PLUXYQ (X) - Inconsistent in testing between samples, data for Sample SA96 are low. Also inconsistent in testing within the determinations for both samples.

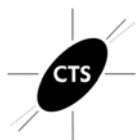
R3DBQM (X) - Inconsistent in testing between samples.

Z7LLYA (X) - Data for both samples are high. Possible Systematic Error.

Results by Methodology (as reported by laboratory)

| Test Methodology | Sample SA95 <i>White Zinfandel</i> | | | Sample SA96 <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 | 20.00 | 2.83 | -4.17 | 24.00 | 2.83 | -4.43 | 2 | 2 |
| Ripper Method | 22.27 | 3.01 | -1.90 | 26.71 | 3.09 | -1.71 | 14 | 15 |
| Aeration Oxidation (AO) Method | 24.16 | 2.41 | -0.02 | 28.34 | 2.85 | -0.09 | 22 | 29 |
| Segmented Flow Analyzer | 22.92 | 4.08 | -1.26 | 28.00 | 4.00 | -0.43 | 6 | 8 |
| Colorimetric Analyzer | 31.50 | 1.80 | 7.33 | 35.67 | 1.15 | 7.24 | 3 | 3 |
| Flow Injection Analysis | 22.30 | 3.22 | -1.87 | 26.90 | 3.18 | -1.53 | 10 | 10 |





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 904 Titratable Acidity

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2WF2B8 | X | 6.500 | -0.147 | -0.63 | 6.825 | 0.186 | 0.90 |
| 2Y6AHM | X | 6.375 | -0.272 | -1.16 | 6.115 | -0.525 | -2.55 |
| 2ZDGLF | | 6.450 | -0.197 | -0.84 | 6.500 | -0.140 | -0.68 |
| 3LC6QG | | 6.945 | 0.299 | 1.28 | 6.855 | 0.216 | 1.05 |
| 3N2EZH | | 6.400 | -0.247 | -1.06 | 6.400 | -0.240 | -1.17 |
| 6MWVQC | | 6.520 | -0.127 | -0.54 | 6.640 | 0.001 | 0.00 |
| 6XDKPH | | 6.440 | -0.207 | -0.89 | 6.430 | -0.210 | -1.02 |
| 76RNBB | * | 7.300 | 0.654 | 2.80 | 7.100 | 0.461 | 2.24 |
| 7L2FDF | | 6.400 | -0.247 | -1.06 | 6.500 | -0.140 | -0.68 |
| 7R6EN6 | | 6.900 | 0.254 | 1.09 | 6.700 | 0.061 | 0.29 |
| 86PGK3 | | 6.450 | -0.197 | -0.84 | 6.455 | -0.185 | -0.90 |
| 8J94UZ | * | 7.200 | 0.554 | 2.37 | 7.200 | 0.561 | 2.73 |
| 93ZAZ6 | | 7.050 | 0.404 | 1.73 | 7.000 | 0.361 | 1.76 |
| 9LRF8W | * | 6.550 | -0.097 | -0.41 | 6.750 | 0.111 | 0.54 |
| 9LRHVF | | 6.600 | -0.047 | -0.20 | 6.500 | -0.140 | -0.68 |
| 9PQQ4V | | 6.770 | 0.124 | 0.53 | 6.720 | 0.081 | 0.39 |
| 9PQTQE | * | 7.150 | 0.504 | 2.16 | 7.200 | 0.561 | 2.73 |
| 9PRQ2B | | 6.625 | -0.022 | -0.09 | 6.645 | 0.006 | 0.03 |
| 9RFZBC | | 6.790 | 0.144 | 0.62 | 6.825 | 0.186 | 0.90 |
| B8L2ZX | | 6.950 | 0.304 | 1.30 | 6.860 | 0.221 | 1.07 |
| BJWEFD | | 6.350 | -0.297 | -1.27 | 6.350 | -0.290 | -1.41 |
| BW4LWV | | 6.550 | -0.097 | -0.41 | 6.500 | -0.140 | -0.68 |
| CTKRU3 | | 6.400 | -0.247 | -1.06 | 6.400 | -0.240 | -1.17 |
| D6Q2Y6 | | 6.350 | -0.297 | -1.27 | 6.400 | -0.240 | -1.17 |
| D6RWKV | | 6.510 | -0.137 | -0.59 | 6.555 | -0.085 | -0.41 |

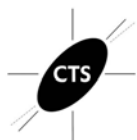


ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 904 Titratable Acidity

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| DHXAGM | | 6.830 | 0.184 | 0.79 | 6.800 | 0.161 | 0.78 |
| E6L2DV | | 6.800 | 0.154 | 0.66 | 6.700 | 0.061 | 0.29 |
| EDECL6 | | 6.885 | 0.239 | 1.02 | 6.745 | 0.106 | 0.51 |
| EKZ9PU | | 6.720 | 0.074 | 0.32 | 6.580 | -0.060 | -0.29 |
| F2JN7V | | 6.590 | -0.057 | -0.24 | 6.585 | -0.055 | -0.27 |
| FZN629 | | 6.400 | -0.247 | -1.06 | 6.500 | -0.140 | -0.68 |
| G82D6V | X | 7.650 | 1.004 | 4.30 | 7.500 | 0.861 | 4.19 |
| GT6WFX | | 6.545 | -0.102 | -0.44 | 6.550 | -0.090 | -0.44 |
| H6RNFR | | 6.800 | 0.154 | 0.66 | 6.900 | 0.261 | 1.27 |
| HLHTLZ | | 6.750 | 0.104 | 0.44 | 6.700 | 0.061 | 0.29 |
| JHDKUV | | 6.700 | 0.054 | 0.23 | 6.600 | -0.040 | -0.19 |
| JRMMHG | | 6.510 | -0.137 | -0.59 | 6.555 | -0.085 | -0.41 |
| K976L2 | | 6.665 | 0.019 | 0.08 | 6.630 | -0.010 | -0.05 |
| LCYLDL | | 6.840 | 0.194 | 0.83 | 6.685 | 0.046 | 0.22 |
| LQZX9K | X | 7.475 | 0.829 | 3.55 | 7.125 | 0.486 | 2.36 |
| M9FQAU | | 6.700 | 0.054 | 0.23 | 6.800 | 0.161 | 0.78 |
| MNTYDJ | | 6.300 | -0.347 | -1.49 | 6.350 | -0.290 | -1.41 |
| MT68DM | | 6.650 | 0.004 | 0.02 | 6.650 | 0.011 | 0.05 |
| NBDUCZ | | 6.650 | 0.004 | 0.02 | 6.550 | -0.090 | -0.44 |
| NCDRPG | | 6.600 | -0.047 | -0.20 | 6.600 | -0.040 | -0.19 |
| PANK6K | | 6.600 | -0.047 | -0.20 | 6.600 | -0.040 | -0.19 |
| PLUXYQ | X | 7.725 | 1.079 | 4.62 | 8.460 | 1.821 | 8.86 |
| QLB9DP | | 6.310 | -0.337 | -1.44 | 6.395 | -0.245 | -1.19 |
| R3DBN3 | | 6.530 | -0.117 | -0.50 | 6.540 | -0.100 | -0.48 |
| R3DBQM | | 6.700 | 0.054 | 0.23 | 6.650 | 0.011 | 0.05 |



Analysis 904
Titratable Acidity

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| R6G7AQ | | 6.725 | 0.079 | 0.34 | 6.605 | -0.035 | -0.17 |
| RAEPCN | | 6.580 | -0.067 | -0.29 | 6.585 | -0.055 | -0.27 |
| RGD8NF | | 6.600 | -0.047 | -0.20 | 6.550 | -0.090 | -0.44 |
| THZ96M | | 6.430 | -0.217 | -0.93 | 6.560 | -0.080 | -0.39 |
| THZBUR | | 6.480 | -0.167 | -0.71 | 6.505 | -0.135 | -0.65 |
| TKCQNT | | 6.600 | -0.047 | -0.20 | 6.650 | 0.011 | 0.05 |
| TRAF8H | | 6.265 | -0.382 | -1.64 | 6.300 | -0.340 | -1.65 |
| U4X2QH | | 7.200 | 0.554 | 2.37 | 7.100 | 0.461 | 2.24 |
| UGNVZQ | | 6.640 | -0.007 | -0.03 | 6.715 | 0.076 | 0.37 |
| UTZZCT | | 6.500 | -0.147 | -0.63 | 6.500 | -0.140 | -0.68 |
| UY38TG | | 6.885 | 0.239 | 1.02 | 7.000 | 0.361 | 1.76 |
| V7J38Q | X | 6.540 | -0.107 | -0.46 | 7.080 | 0.441 | 2.14 |
| W3HJKH | X | 6.225 | -0.422 | -1.81 | 6.880 | 0.241 | 1.17 |
| W72EMB | X | 6.785 | 0.139 | 0.59 | 8.800 | 2.161 | 10.52 |
| WF32DL | | 6.440 | -0.207 | -0.89 | 6.430 | -0.210 | -1.02 |
| Y3QDDN | | 6.500 | -0.147 | -0.63 | 6.500 | -0.140 | -0.68 |
| YEJT3P | | 6.700 | 0.054 | 0.23 | 6.700 | 0.061 | 0.29 |
| Z7LLYA | | 6.520 | -0.127 | -0.54 | 6.520 | -0.120 | -0.58 |

| Grand Means | | Summary Statistics | |
|--|-----------------------------|--------------------|-----------------------------|
| | 6.6465 g/L as tartaric acid | | 6.6395 g/L as tartaric acid |
| Std Dev Btwn Labs | | | |
| | 0.2333 g/L as tartaric acid | | 0.2054 g/L as tartaric acid |
| Statistics based on 60 of 68 reporting participants | | | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel



Comments on assigned Data Flags

2WF2B8 (X) - Inconsistent in testing between samples.

2Y6AHM (X) - Inconsistent in testing between samples.

G82D6V (X) - Data for both samples are high. Possible Systematic Error.

LQZX9K (X) - Inconsistent in testing between samples, data for Sample SA95 are high.

PLUXYQ (X) - Data for both samples are high. Also inconsistent in testing within the determinations for both samples.

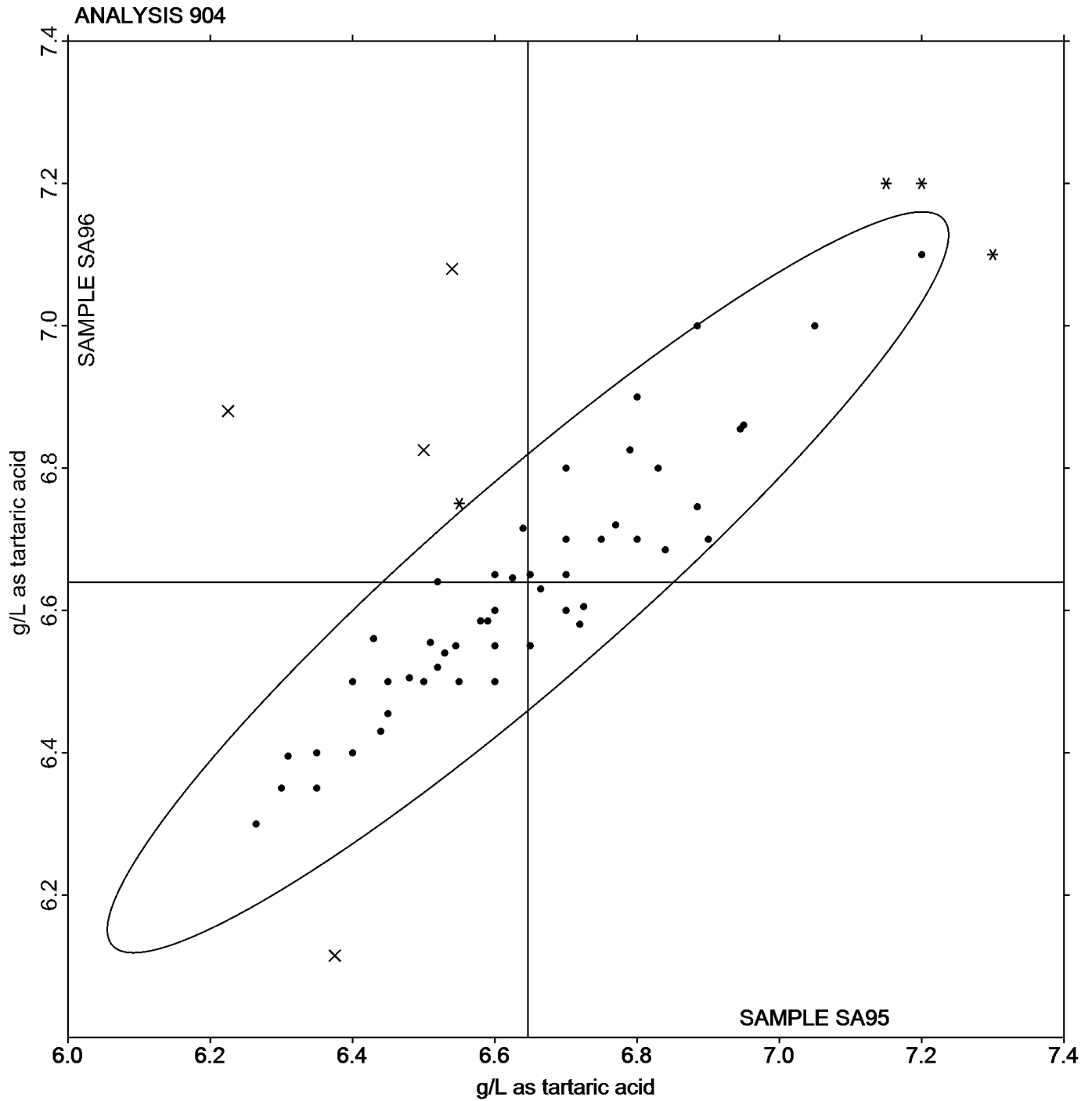
V7J38Q (X) - Inconsistent in testing between samples.

W3HJKH (X) - Inconsistent in testing between samples and inconsistent within the determinations for Sample SA96.

W72EMB (X) - Inconsistent in testing between samples, data for Sample SA96 are high.

Results by Methodology (as reported by laboratory)

| Test Methodology | Sample SA95 <i>White Zinfandel</i> | | | Sample SA96 <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 | 6.950 | 0.000 | 0.304 | 6.860 | 0.000 | 0.221 | 1 | 1 |
| Autotitration | 6.636 | 0.204 | -0.011 | 6.618 | 0.180 | -0.021 | 40 | 43 |
| Manual Titration | 6.493 | 0.123 | -0.153 | 6.542 | 0.117 | -0.098 | 8 | 16 |
| FTIR | 6.594 | 0.192 | -0.052 | 6.592 | 0.157 | -0.048 | 6 | 7 |
| Segmented Flow Analyzer | 6.700 | 0.000 | 0.054 | 6.650 | 0.000 | 0.011 | 1 | 1 |



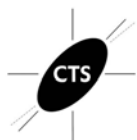


ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 905 Volatile Acidity

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2WF2B8 | | 0.1100 | -0.1324 | -1.59 | 0.0800 | -0.1307 | -1.59 |
| 2Y6AHM | | 0.3000 | 0.0576 | 0.69 | 0.2400 | 0.0293 | 0.36 |
| 2ZDGLF | | 0.4250 | 0.1826 | 2.20 | 0.4000 | 0.1893 | 2.30 |
| 3N2EZH | | 0.3550 | 0.1126 | 1.35 | 0.3200 | 0.1093 | 1.33 |
| 6MWVQC | | 0.2400 | -0.0024 | -0.03 | 0.2100 | -0.0007 | -0.01 |
| 6XDKPH | | 0.1500 | -0.0924 | -1.11 | 0.1150 | -0.0957 | -1.16 |
| 76RNBB | | 0.1750 | -0.0674 | -0.81 | 0.1400 | -0.0707 | -0.86 |
| 7L2FDF | | 0.1700 | -0.0724 | -0.87 | 0.1400 | -0.0707 | -0.86 |
| 7R6EN6 | | 0.2850 | 0.0426 | 0.51 | 0.2500 | 0.0393 | 0.48 |
| 86PGK3 | | 0.2400 | -0.0024 | -0.03 | 0.2100 | -0.0007 | -0.01 |
| 8J94UZ | X | 0.4700 | 0.2276 | 2.74 | 0.5250 | 0.3143 | 3.82 |
| 93ZAZ6 | | 0.2850 | 0.0426 | 0.51 | 0.2350 | 0.0243 | 0.30 |
| 9LRF8W | | 0.3050 | 0.0626 | 0.75 | 0.2850 | 0.0743 | 0.90 |
| 9LRHVF | X | 0.6000 | 0.3576 | 4.30 | 0.5000 | 0.2893 | 3.51 |
| 9PQQ4V | | 0.1850 | -0.0574 | -0.69 | 0.1500 | -0.0607 | -0.74 |
| 9PQTQE | | 0.2700 | 0.0276 | 0.33 | 0.2450 | 0.0343 | 0.42 |
| 9PRQ2B | | 0.1400 | -0.1024 | -1.23 | 0.1200 | -0.0907 | -1.10 |
| 9RFZBC | | 0.1750 | -0.0674 | -0.81 | 0.1550 | -0.0557 | -0.68 |
| B8L2ZX | | 0.3900 | 0.1476 | 1.77 | 0.3400 | 0.1293 | 1.57 |
| BJWEFD | | 0.2950 | 0.0526 | 0.63 | 0.2400 | 0.0293 | 0.36 |
| BW4LWV | | 0.3000 | 0.0576 | 0.69 | 0.2700 | 0.0593 | 0.72 |
| CTKRU3 | X | 0.2750 | 0.0326 | 0.39 | 0.0900 | -0.1207 | -1.47 |
| D6Q2Y6 | | 0.1400 | -0.1024 | -1.23 | 0.1200 | -0.0907 | -1.10 |
| D6RWKV | | 0.2450 | 0.0026 | 0.03 | 0.1850 | -0.0257 | -0.31 |
| DHXAGM | | 0.1300 | -0.1124 | -1.35 | 0.1100 | -0.1007 | -1.22 |



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 905 Volatile Acidity

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| E6L2DV | | 0.2350 | -0.0074 | -0.09 | 0.2050 | -0.0057 | -0.07 |
| EDECL6 | | 0.1650 | -0.0774 | -0.93 | 0.1300 | -0.0807 | -0.98 |
| EKZ9PU | | 0.2300 | -0.0124 | -0.15 | 0.1900 | -0.0207 | -0.25 |
| F2JN7V | | 0.1580 | -0.0844 | -1.01 | 0.1270 | -0.0837 | -1.02 |
| FZN629 | | 0.3650 | 0.1226 | 1.47 | 0.3550 | 0.1443 | 1.75 |
| G82D6V | | 0.1900 | -0.0524 | -0.63 | 0.1850 | -0.0257 | -0.31 |
| GT6WFX | | 0.3750 | 0.1326 | 1.59 | 0.3400 | 0.1293 | 1.57 |
| H6RNFRR | | 0.3000 | 0.0576 | 0.69 | 0.2700 | 0.0593 | 0.72 |
| HLHTLZ | | 0.2500 | 0.0076 | 0.09 | 0.1950 | -0.0157 | -0.19 |
| HUdTZT | * | 0.2700 | 0.0276 | 0.33 | 0.2800 | 0.0693 | 0.84 |
| JHDKUV | | 0.3250 | 0.0826 | 0.99 | 0.3200 | 0.1093 | 1.33 |
| JRMMHG | | 0.2350 | -0.0074 | -0.09 | 0.1800 | -0.0307 | -0.37 |
| K976L2 | | 0.1500 | -0.0924 | -1.11 | 0.1250 | -0.0857 | -1.04 |
| LCYLDL | | 0.2050 | -0.0374 | -0.45 | 0.1550 | -0.0557 | -0.68 |
| LQZX9K | | 0.1535 | -0.0889 | -1.07 | 0.1255 | -0.0852 | -1.03 |
| M9FQAU | * | 0.4500 | 0.2076 | 2.50 | 0.4000 | 0.1893 | 2.30 |
| MNTYDJ | | 0.3150 | 0.0726 | 0.87 | 0.2550 | 0.0443 | 0.54 |
| MT68DM | | 0.1450 | -0.0974 | -1.17 | 0.1000 | -0.1107 | -1.34 |
| NBDUCZ | | 0.3350 | 0.0926 | 1.11 | 0.3150 | 0.1043 | 1.27 |
| NCDRPG | | 0.3850 | 0.1426 | 1.71 | 0.3600 | 0.1493 | 1.81 |
| PANK6K | | 0.2400 | -0.0024 | -0.03 | 0.2300 | 0.0193 | 0.23 |
| PLUXYQ | X | 0.6750 | 0.4326 | 5.20 | 0.6150 | 0.4043 | 4.91 |
| QLB9DP | | 0.1650 | -0.0774 | -0.93 | 0.1350 | -0.0757 | -0.92 |
| R3DBN3 | | 0.3800 | 0.1376 | 1.65 | 0.3350 | 0.1243 | 1.51 |
| R3DBQM | X | 0.2700 | 0.0276 | 0.33 | 0.3200 | 0.1093 | 1.33 |



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 905 Volatile Acidity

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| RAEPCN | | 0.2600 | 0.0176 | 0.21 | 0.2350 | 0.0243 | 0.30 |
| RGD8NF | X | 0.4200 | 0.1776 | 2.14 | 0.3400 | 0.1293 | 1.57 |
| THZBUR | | 0.1550 | -0.0874 | -1.05 | 0.1250 | -0.0857 | -1.04 |
| TKCQNT | | 0.2450 | 0.0026 | 0.03 | 0.2200 | 0.0093 | 0.11 |
| TRAF8H | | 0.1770 | -0.0654 | -0.79 | 0.1480 | -0.0627 | -0.76 |
| U4X2QH | | 0.1650 | -0.0774 | -0.93 | 0.1400 | -0.0707 | -0.86 |
| UGNVZQ | | 0.2700 | 0.0276 | 0.33 | 0.2300 | 0.0193 | 0.23 |
| UTZZCT | | 0.1700 | -0.0724 | -0.87 | 0.1400 | -0.0707 | -0.86 |
| UY38TG | | 0.1350 | -0.1074 | -1.29 | 0.1100 | -0.1007 | -1.22 |
| V7J38Q | | 0.3110 | 0.0686 | 0.82 | 0.2810 | 0.0703 | 0.85 |
| W3HJKH | | 0.2500 | 0.0076 | 0.09 | 0.2300 | 0.0193 | 0.23 |
| WF32DL | | 0.1900 | -0.0524 | -0.63 | 0.1400 | -0.0707 | -0.86 |
| Y3QDDN | | 0.1700 | -0.0724 | -0.87 | 0.1400 | -0.0707 | -0.86 |
| YEJT3P | | 0.2200 | -0.0224 | -0.27 | 0.2200 | 0.0093 | 0.11 |
| Z7LLYA | | 0.2520 | 0.0096 | 0.12 | 0.1980 | -0.0127 | -0.15 |

| Grand Means | | Summary Statistics | |
|--|----------------------------|--------------------|----------------------------|
| | 0.24240 g/L as acetic acid | | 0.21067 g/L as acetic acid |
| Stnd Dev Btwn Labs | 0.08317 g/L as acetic acid | | 0.08231 g/L as acetic acid |
| Statistics based on 59 of 65 reporting participants | | | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel



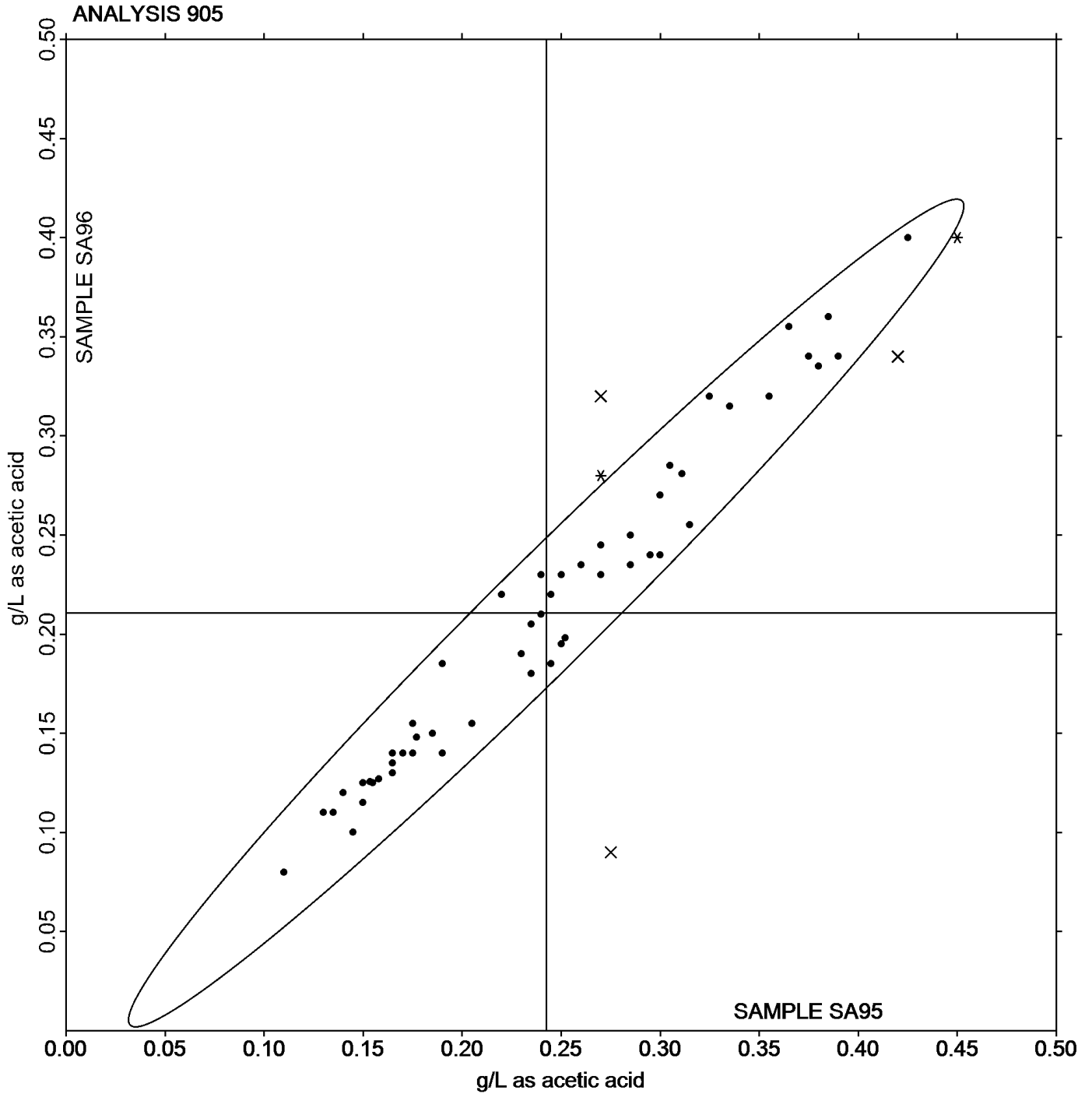
Analysis 905
Volatile Acidity

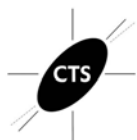
Comments on assigned Data Flags

- 8J94UZ (X) - Data for both samples are high.
- 9LRHVF (X) - Data for both samples are high.
- CTKRU3 (X) - Inconsistent in testing between samples.
- PLUXYQ (X) - Data for both samples are high.
- R3DBQM (X) - Inconsistent in testing between samples.
- RGD8NF (X) - Inconsistent in testing between samples.

Results by Methodology (as reported by laboratory)

| Test Methodology | Sample SA95 <i>White Zinfandel</i> | | | Sample SA96 <i>White Zinfandel</i> | | | Labs Incl / Rpt | |
|-----------------------------------|---------------------------------------|--------------|--------------|---------------------------------------|--------------|--------------|-----------------|----|
| | Group Mean | Btwn Lab STD | Diff from GM | Group Mean | Btwn Lab STD | Diff from GM | | |
| Cash Still method | 0.3076 | 0.0527 | 0.0652 | 0.2776 | 0.0483 | 0.0669 | 10 | 16 |
| Enzymatic method | 0.1962 | 0.0562 | -0.0462 | 0.1614 | 0.0513 | -0.0493 | 29 | 29 |
| HPLC | 0.1850 | 0.0000 | -0.0574 | 0.1500 | 0.0000 | -0.0607 | 1 | 1 |
| GC | 0.1960 | 0.0792 | -0.0464 | 0.1590 | 0.0552 | -0.0517 | 2 | 2 |
| Seg. Flow / Colorimetric Analyzer | 0.3364 | 0.0442 | 0.0940 | 0.3071 | 0.0475 | 0.0965 | 7 | 9 |
| FTIR | 0.2356 | 0.0857 | -0.0068 | 0.2094 | 0.0859 | -0.0013 | 8 | 8 |





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 906 Specific Gravity

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2ZDGLF | | 1.011 | 0.000 | -0.78 | 1.011 | 0.000 | -0.77 |
| 3LC6QG | | 1.012 | 0.000 | 0.25 | 1.011 | 0.000 | 0.48 |
| 3N2EZH | | 1.012 | 0.000 | 0.07 | 1.011 | 0.000 | 0.01 |
| 6MWVQC | | 1.011 | -0.001 | -1.99 | 1.010 | -0.001 | -1.82 |
| 6XDKPH | | 1.012 | 0.000 | 0.08 | 1.011 | 0.000 | -0.10 |
| 76RNBB | | 1.012 | 0.000 | 0.59 | 1.011 | 0.000 | 0.48 |
| 7L2FDF | | 1.012 | 0.000 | 0.27 | 1.010 | 0.000 | -0.94 |
| 7R6EN6 | | 1.012 | 0.000 | 0.01 | 1.011 | 0.000 | -0.07 |
| 86PGK3 | | 1.012 | 0.000 | 0.29 | 1.011 | 0.000 | 0.00 |
| 8J94UZ | X | 1.015 | 0.003 | 5.57 | 1.010 | -0.001 | -1.82 |
| 93ZAZ6 | | 1.011 | -0.001 | -0.95 | 1.011 | 0.000 | -0.38 |
| 9LRF8W | * | 1.010 | -0.002 | -2.59 | 1.009 | -0.001 | -2.87 |
| 9LRHVF | X | 1.010 | -0.002 | -3.61 | 1.008 | -0.003 | -5.57 |
| 9PQQ4V | | 1.012 | 0.000 | 0.59 | 1.011 | 0.000 | 0.67 |
| 9PQTQE | * | 1.010 | -0.002 | -2.78 | 1.009 | -0.002 | -3.25 |
| 9PRQ2B | | 1.012 | 0.000 | 0.42 | 1.011 | 0.000 | -0.86 |
| 9RFZBC | | 1.012 | 0.000 | 0.11 | 1.011 | 0.000 | -0.02 |
| B8L2ZX | | 1.012 | 0.000 | 0.42 | 1.011 | 0.000 | 0.10 |
| BJWEFD | | 1.012 | 0.000 | 0.08 | 1.011 | 0.000 | 0.10 |
| BW4LWV | | 1.011 | -0.001 | -1.64 | 1.010 | -0.001 | -1.53 |
| CTKRU3 | | 1.012 | 0.000 | 0.21 | 1.011 | 0.000 | 0.21 |
| D6Q2Y6 | X | 1.016 | 0.005 | 7.90 | 1.011 | 0.000 | 0.65 |
| E6L2DV | | 1.012 | 0.000 | 0.26 | 1.011 | 0.000 | 0.11 |
| EDECL6 | | 1.012 | 0.000 | -0.44 | 1.011 | 0.000 | -0.10 |
| EKZ9PU | | 1.012 | 0.000 | 0.11 | 1.011 | 0.000 | 0.01 |

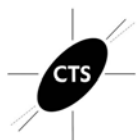


ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 906 Specific Gravity

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| F2JN7V | | 1.012 | 0.000 | 0.26 | 1.011 | 0.000 | 0.16 |
| FZN629 | | 1.012 | 0.000 | 0.07 | 1.011 | 0.000 | -0.08 |
| G82D6V | | 1.012 | 0.000 | 0.39 | 1.012 | 0.001 | 1.93 |
| GT6WFX | | 1.012 | 0.000 | 0.33 | 1.011 | 0.000 | 0.10 |
| H6RNFR | X | 1.009 | -0.003 | -4.65 | 1.009 | -0.002 | -4.50 |
| HLHTLZ | | 1.012 | 0.000 | 0.57 | 1.011 | 0.000 | -0.29 |
| HUDTZT | | 1.012 | 0.000 | 0.28 | 1.011 | 0.000 | 0.13 |
| J67APU | | 1.012 | 0.000 | 0.00 | 1.011 | 0.000 | -0.04 |
| JHDKUV | X | 1.013 | 0.002 | 2.65 | 1.011 | 0.000 | 0.22 |
| JRMMHG | | 1.013 | 0.001 | 1.45 | 1.012 | 0.001 | 1.34 |
| LCYLDL | | 1.012 | 0.000 | -0.44 | 1.011 | 0.000 | -0.38 |
| M9FQAU | | 1.012 | 0.000 | 0.12 | 1.011 | 0.000 | -0.02 |
| MNTYDJ | | 1.012 | 0.000 | 0.02 | 1.011 | 0.000 | -0.11 |
| NBDUCZ | | 1.012 | 0.000 | -0.03 | 1.011 | 0.000 | -0.23 |
| PANK6K | X | 1.015 | 0.003 | 4.72 | 1.014 | 0.003 | 5.27 |
| PLUXYQ | | 1.012 | 0.000 | 0.76 | 1.011 | 0.000 | 0.77 |
| R3DBN3 | | 1.012 | 0.000 | 0.16 | 1.011 | 0.000 | 0.10 |
| R3DBQM | X | 1.011 | -0.001 | -1.30 | 1.012 | 0.001 | 1.63 |
| R6G7AQ | | 1.013 | 0.001 | 2.49 | 1.012 | 0.001 | 2.40 |
| RAEPCN | | 1.012 | 0.000 | -0.27 | 1.011 | 0.000 | 0.48 |
| RGD8NF | | 1.012 | 0.000 | 0.08 | 1.011 | 0.000 | 0.00 |
| THZ96M | | 1.012 | 0.000 | -0.35 | 1.011 | 0.000 | 0.19 |
| THZBUR | * | 1.010 | -0.002 | -3.27 | 1.010 | -0.001 | -2.20 |
| TKCQNT | | 1.012 | 0.000 | 0.28 | 1.011 | 0.000 | 0.34 |
| TRAF8H | | 1.012 | 0.000 | -0.44 | 1.011 | 0.000 | 0.29 |



Analysis 906
Specific Gravity

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| U4X2QH | | 1.012 | 0.000 | 0.76 | 1.011 | 0.000 | 0.67 |
| UGNVZQ | | 1.012 | 0.000 | 0.85 | 1.011 | 0.000 | 0.86 |
| UY38TG | | 1.011 | 0.000 | -0.77 | 1.011 | 0.000 | -0.06 |
| V7J38Q | | 1.012 | 0.000 | 0.09 | 1.011 | 0.000 | 0.04 |
| W3HJKH | X | 1.009 | -0.003 | -4.39 | 1.008 | -0.003 | -4.88 |
| W72EMB | | 1.013 | 0.001 | 1.59 | 1.012 | 0.001 | 1.84 |
| WF32DL | X | 1.041 | 0.029 | 50.24 | 1.013 | 0.002 | 4.50 |
| Y3QDDN | | 1.012 | 0.000 | 0.42 | 1.011 | 0.000 | 0.10 |
| YEJT3P | | 1.012 | 0.000 | 0.25 | 1.011 | 0.000 | 0.29 |
| Z7LLYA | | 1.012 | 0.000 | 0.42 | 1.011 | 0.000 | 0.10 |

| Grand Means | | Summary Statistics | |
|-------------------|---------------|---|---------------|
| 1.0118 | sp gr 20/20 C | 1.0109 | sp gr 20/20 C |
| Std Dev Btwn Labs | | 0.0005 | sp gr 20/20 C |
| 0.0006 | sp gr 20/20 C | Statistics based on 51 of 60 reporting participants | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel



Comments on assigned Data Flags

8J94UZ (X) - Data for Sample SA95 are high.

9LRHVF (X) - Data for both samples are low.

D6Q2Y6 (X) - High data for Sample SA95.

H6RNFR (X) - Data for both samples are low.

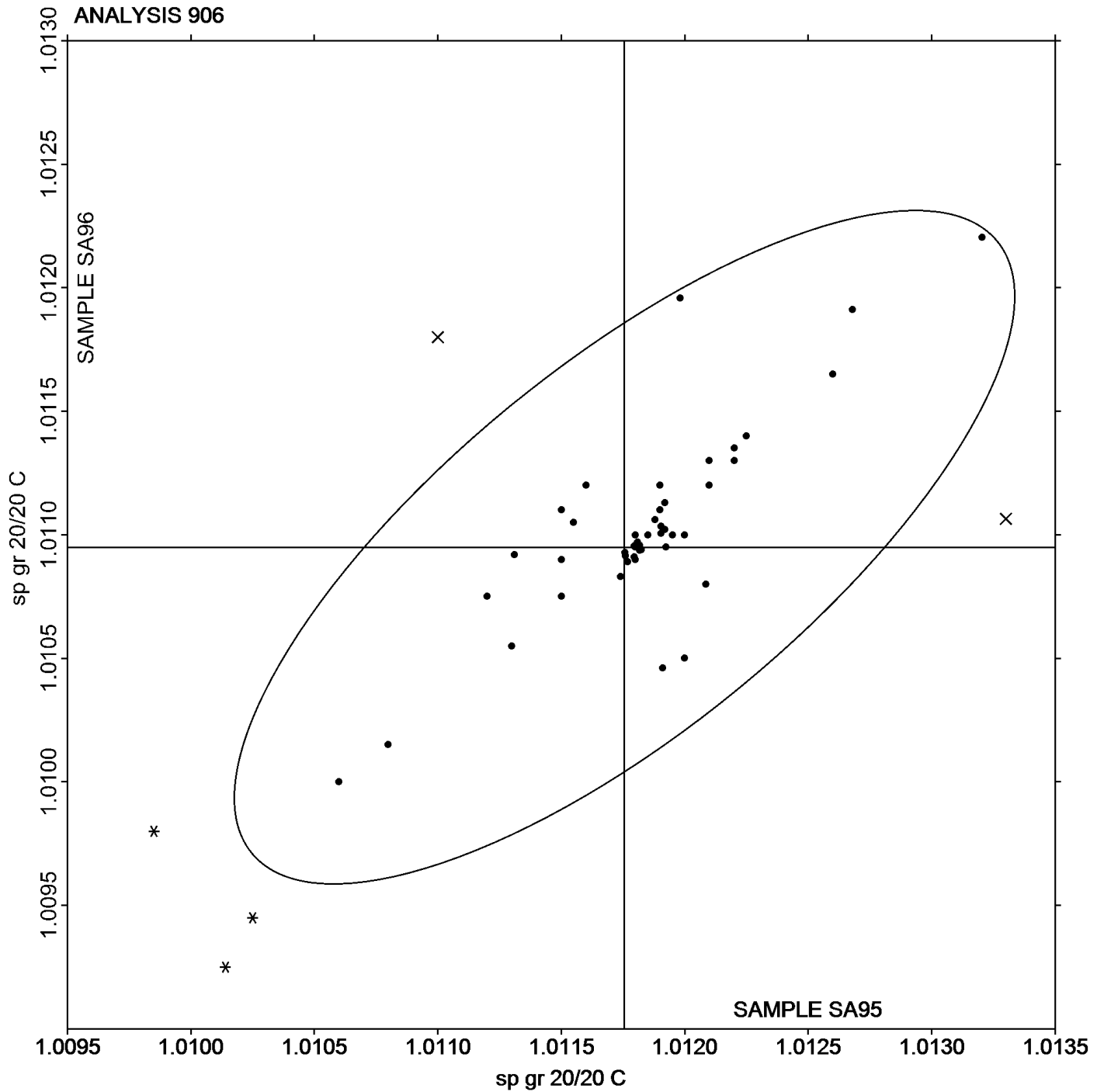
JHDKUV (X) - Inconsistent in testing between samples.

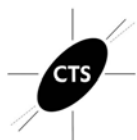
PANK6K (X) - Data for both samples are high.

R3DBQM (X) - Inconsistent in testing between samples.

W3HJKH (X) - Data for both samples are low.

WF32DL (X) - Data for both samples are high.





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 907

pH

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2WF2B8 | | 3.130 | -0.011 | -0.30 | 3.100 | -0.025 | -0.69 |
| 2Y6AHM | | 3.135 | -0.006 | -0.16 | 3.120 | -0.005 | -0.13 |
| 2ZDGLF | | 3.150 | 0.009 | 0.25 | 3.130 | 0.005 | 0.15 |
| 3LC6QG | | 3.141 | 0.000 | -0.01 | 3.125 | 0.000 | -0.01 |
| 3N2EZH | | 3.120 | -0.021 | -0.57 | 3.100 | -0.025 | -0.69 |
| 6MWVQC | X | 3.120 | -0.021 | -0.57 | 3.160 | 0.035 | 0.99 |
| 6XDKPH | | 3.140 | -0.001 | -0.02 | 3.120 | -0.005 | -0.13 |
| 76RNBB | | 3.105 | -0.036 | -0.99 | 3.080 | -0.045 | -1.25 |
| 7L2FDF | | 3.110 | -0.031 | -0.85 | 3.100 | -0.025 | -0.69 |
| 7R6EN6 | | 3.140 | -0.001 | -0.02 | 3.110 | -0.015 | -0.41 |
| 86PGK3 | | 3.125 | -0.016 | -0.44 | 3.115 | -0.010 | -0.27 |
| 8J94UZ | X | 3.170 | 0.029 | 0.80 | 3.080 | -0.045 | -1.25 |
| 93ZAZ6 | | 3.145 | 0.004 | 0.11 | 3.120 | -0.005 | -0.13 |
| 9LRF8W | | 3.095 | -0.046 | -1.26 | 3.090 | -0.035 | -0.97 |
| 9LRHVF | | 3.120 | -0.021 | -0.57 | 3.100 | -0.025 | -0.69 |
| 9PQQ4V | | 3.205 | 0.064 | 1.76 | 3.200 | 0.075 | 2.10 |
| 9PQTQE | | 3.180 | 0.039 | 1.08 | 3.160 | 0.035 | 0.99 |
| 9PRQ2B | | 3.170 | 0.029 | 0.80 | 3.140 | 0.015 | 0.43 |
| 9RFZBC | | 3.060 | -0.081 | -2.22 | 3.045 | -0.080 | -2.23 |
| B8L2ZX | | 3.185 | 0.044 | 1.21 | 3.170 | 0.045 | 1.26 |
| BJWEFD | | 3.175 | 0.034 | 0.94 | 3.145 | 0.020 | 0.57 |
| BW4LWV | | 3.185 | 0.044 | 1.21 | 3.170 | 0.045 | 1.26 |
| CTKRU3 | | 3.120 | -0.021 | -0.57 | 3.115 | -0.010 | -0.27 |
| D6Q2Y6 | | 3.160 | 0.019 | 0.53 | 3.140 | 0.015 | 0.43 |
| D6RWKV | | 3.110 | -0.031 | -0.85 | 3.105 | -0.020 | -0.55 |



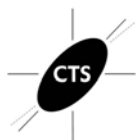
ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 907

pH

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| DHXAGM | | 3.130 | -0.011 | -0.30 | 3.120 | -0.005 | -0.13 |
| E6L2DV | | 3.195 | 0.054 | 1.49 | 3.175 | 0.050 | 1.40 |
| EDECL6 | | 3.150 | 0.009 | 0.25 | 3.130 | 0.005 | 0.15 |
| EKZ9PU | | 3.190 | 0.049 | 1.35 | 3.185 | 0.060 | 1.68 |
| F2JN7V | | 3.160 | 0.019 | 0.53 | 3.145 | 0.020 | 0.57 |
| G82D6V | | 3.140 | -0.001 | -0.02 | 3.110 | -0.015 | -0.41 |
| GT6WFX | | 3.115 | -0.026 | -0.71 | 3.100 | -0.025 | -0.69 |
| H6RNFR | * | 3.075 | -0.066 | -1.81 | 3.085 | -0.040 | -1.11 |
| HLHTLZ | | 3.145 | 0.004 | 0.11 | 3.120 | -0.005 | -0.13 |
| HUDTZT | * | 3.050 | -0.091 | -2.50 | 3.030 | -0.095 | -2.65 |
| JHDKUV | | 3.100 | -0.041 | -1.12 | 3.075 | -0.050 | -1.39 |
| JRMMHG | | 3.105 | -0.036 | -0.99 | 3.095 | -0.030 | -0.83 |
| K976L2 | | 3.210 | 0.069 | 1.90 | 3.200 | 0.075 | 2.10 |
| LCYLDL | | 3.085 | -0.056 | -1.54 | 3.070 | -0.055 | -1.53 |
| LQZX9K | | 3.125 | -0.016 | -0.44 | 3.125 | 0.000 | 0.01 |
| MNTYDJ | | 3.130 | -0.011 | -0.30 | 3.115 | -0.010 | -0.27 |
| MT68DM | | 3.120 | -0.021 | -0.57 | 3.105 | -0.020 | -0.55 |
| NBDUCZ | | 3.090 | -0.051 | -1.40 | 3.085 | -0.040 | -1.11 |
| NCDRPG | | 3.160 | 0.019 | 0.53 | 3.145 | 0.020 | 0.57 |
| PANK6K | | 3.145 | 0.004 | 0.11 | 3.125 | 0.000 | 0.01 |
| PLUXYQ | | 3.105 | -0.036 | -0.99 | 3.070 | -0.055 | -1.53 |
| QLB9DP | X | 3.470 | 0.329 | 9.05 | 3.460 | 0.335 | 9.36 |
| R3DBN3 | | 3.160 | 0.019 | 0.53 | 3.145 | 0.020 | 0.57 |
| R3DBQM | X | 2.995 | -0.146 | -4.01 | 3.050 | -0.075 | -2.09 |
| R6G7AQ | | 3.180 | 0.039 | 1.08 | 3.160 | 0.035 | 0.99 |



Analysis 907

pH

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| RAEPCN | | 3.203 | 0.062 | 1.71 | 3.173 | 0.048 | 1.35 |
| RGD8NF | | 3.130 | -0.011 | -0.30 | 3.115 | -0.010 | -0.27 |
| THZ96M | | 3.155 | 0.014 | 0.39 | 3.130 | 0.005 | 0.15 |
| THZBUR | | 3.125 | -0.016 | -0.44 | 3.105 | -0.020 | -0.55 |
| TKCQNT | | 3.165 | 0.024 | 0.66 | 3.140 | 0.015 | 0.43 |
| TRAF8H | | 3.110 | -0.031 | -0.85 | 3.100 | -0.025 | -0.69 |
| U4X2QH | | 3.170 | 0.029 | 0.80 | 3.155 | 0.030 | 0.85 |
| UGNVZQ | | 3.200 | 0.059 | 1.63 | 3.180 | 0.055 | 1.54 |
| UTZZCT | | 3.200 | 0.059 | 1.63 | 3.190 | 0.065 | 1.82 |
| UY38TG | | 3.155 | 0.014 | 0.39 | 3.140 | 0.015 | 0.43 |
| V7J38Q | | 3.140 | -0.001 | -0.02 | 3.120 | -0.005 | -0.13 |
| W3HJKH | X | 3.155 | 0.014 | 0.39 | 3.085 | -0.040 | -1.11 |
| W72EMB | X | 2.885 | -0.256 | -7.03 | 2.955 | -0.170 | -4.74 |
| WF32DL | | 3.145 | 0.004 | 0.11 | 3.130 | 0.005 | 0.15 |
| Y3QDDN | | 3.185 | 0.044 | 1.21 | 3.175 | 0.050 | 1.40 |
| YEJT3P | * | 3.120 | -0.021 | -0.57 | 3.130 | 0.005 | 0.15 |
| Z7LLYA | | 3.120 | -0.021 | -0.57 | 3.110 | -0.015 | -0.41 |

| Grand Means | | Summary Statistics | |
|-------------------|-----------|---|-----------|
| | 3.1409 pH | | 3.1247 pH |
| Std Dev Btwn Labs | | | 0.0358 pH |
| | 0.0364 pH | Statistics based on 61 of 67 reporting participants | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel



Comments on assigned Data Flags

6MWVQC (X) - Inconsistent in testing between samples.

8J94UZ (X) - Inconsistent in testing between samples.

QLB9DP (X) - Data for both samples are high.

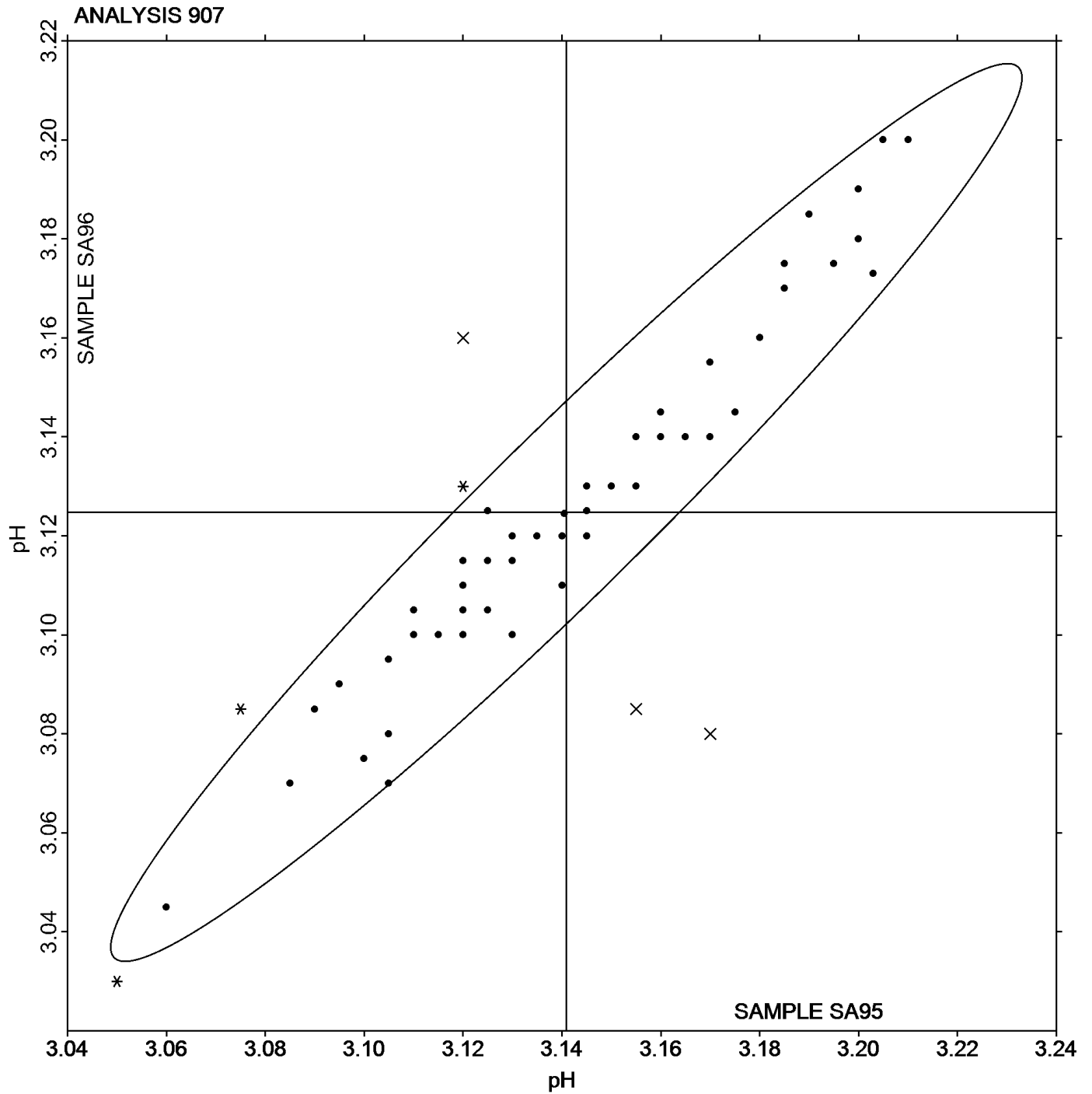
R3DBQM (X) - Inconsistent in testing between samples, data for Sample SA95 are low. Also inconsistent in testing within the determinations for Sample SA96.

W3HJKH (X) - Inconsistent in testing between samples and inconsistent within the determinations for Sample SA96.

W72EMB (X) - Data for both samples are low. Also inconsistent in testing within the determinations for Sample SA96.



pH





Analysis 908
Residual Sugar

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|--------|-------------|----------------------|--------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2ZDGLF | | 36.90 | -2.67 | -1.21 | 35.40 | -3.21 | -1.27 |
| 6MWVQC | | 39.37 | -0.20 | -0.09 | 37.74 | -0.87 | -0.34 |
| 86PGK3 | | 38.45 | -1.13 | -0.51 | 36.28 | -2.33 | -0.92 |
| 8J94UZ | X | 6.00 | -33.57 | -15.15 | 6.00 | -32.61 | -12.88 |
| 9PQQ4V | | 39.34 | -0.23 | -0.10 | 38.31 | -0.30 | -0.12 |
| FZN629 | | 39.25 | -0.32 | -0.14 | 37.75 | -0.86 | -0.34 |
| G82D6V | | 39.75 | 0.18 | 0.08 | 38.30 | -0.31 | -0.12 |
| HUdTZT | | 37.30 | -2.27 | -1.03 | 36.50 | -2.11 | -0.83 |
| NBDUCZ | | 37.30 | -2.27 | -1.03 | 37.60 | -1.01 | -0.40 |
| R3DBQM | | 40.50 | 0.93 | 0.42 | 42.50 | 3.89 | 1.54 |
| TRAF8H | | 43.00 | 3.43 | 1.55 | 43.00 | 4.39 | 1.73 |
| U4X2QH | | 39.79 | 0.21 | 0.10 | 39.48 | 0.87 | 0.34 |
| W3HJKH | | 44.40 | 4.83 | 2.18 | 43.20 | 4.59 | 1.81 |
| W72EMB | | 38.50 | -1.07 | -0.48 | 36.60 | -2.01 | -0.79 |
| Y3QDDN | | 42.80 | 3.23 | 1.46 | 40.75 | 2.14 | 0.85 |
| YEJT3P | | 36.90 | -2.67 | -1.21 | 35.70 | -2.91 | -1.15 |
| Z7LLYA | | 39.60 | 0.03 | 0.01 | 38.60 | -0.01 | 0.00 |

| Grand Means | | Summary Statistics | |
|---|------------|--------------------|------------|
| | 39.571 g/L | | 38.607 g/L |
| Std Dev Btwn Labs | | | |
| | 2.216 g/L | | 2.532 g/L |
| Statistics based on 16 of 17 reporting participants | | | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel

Comments on assigned Data Flags

8J94UZ (X) - Data for both samples are low.



Results by Methodology (as reported by laboratory)

| Test Methodology | Sample SA95 <i>White Zinfandel</i> | | | Sample SA96 <i>White Zinfandel</i> | | | Labs Incl / Rpt | |
|---------------------|---------------------------------------|--------------|--------------|---------------------------------------|--------------|--------------|-----------------|---|
| | Group Mean | Btwn Lab STD | Diff from GM | Group Mean | Btwn Lab STD | Diff from GM | | |
| Cu Reduction Method | 38.84 | 2.11 | -0.73 | 38.00 | 2.45 | -0.61 | 7 | 8 |
| Segmented Flow | 39.88 | 0.88 | 0.30 | 40.13 | 3.36 | 1.52 | 2 | 2 |
| FTIR | 40.64 | 2.97 | 1.07 | 39.08 | 2.99 | 0.47 | 5 | 5 |
| Other _____ | 39.14 | 0.91 | -0.43 | 38.04 | 2.03 | -0.57 | 2 | 2 |



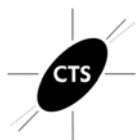
ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 909

L-Malic Acid

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|--------|-------------|----------------------|--------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2WF2B8 | | 2.120 | -0.353 | -2.38 | 2.090 | -0.306 | -1.98 |
| 2ZDGLF | | 2.555 | 0.082 | 0.55 | 2.465 | 0.069 | 0.45 |
| 3N2EZH | | 2.495 | 0.022 | 0.15 | 2.435 | 0.039 | 0.25 |
| 6XDKPH | | 2.540 | 0.067 | 0.45 | 2.475 | 0.079 | 0.51 |
| 76RNBB | | 2.687 | 0.214 | 1.44 | 2.604 | 0.207 | 1.34 |
| 7L2FDF | | 2.635 | 0.162 | 1.09 | 2.546 | 0.150 | 0.97 |
| 86PGK3 | | 2.185 | -0.288 | -1.94 | 2.160 | -0.236 | -1.53 |
| 8J94UZ | X | 38.725 | 36.252 | 244.52 | 39.400 | 37.004 | 239.56 |
| 93ZAZ6 | | 2.530 | 0.057 | 0.39 | 2.380 | -0.016 | -0.10 |
| 9LRF8W | | 2.581 | 0.108 | 0.73 | 2.505 | 0.109 | 0.70 |
| 9LRHVF | | 2.211 | -0.262 | -1.77 | 2.117 | -0.280 | -1.81 |
| 9PQQ4V | | 2.325 | -0.148 | -1.00 | 2.190 | -0.206 | -1.33 |
| 9PQTQE | | 2.315 | -0.158 | -1.06 | 2.300 | -0.096 | -0.62 |
| 9PRQ2B | | 2.555 | 0.082 | 0.55 | 2.495 | 0.099 | 0.64 |
| 9RFZBC | | 2.760 | 0.287 | 1.94 | 2.700 | 0.304 | 1.97 |
| B8L2ZX | | 2.670 | 0.197 | 1.33 | 2.560 | 0.164 | 1.06 |
| BJWEFD | | 2.480 | 0.007 | 0.05 | 2.515 | 0.119 | 0.77 |
| BW4LWV | | 2.500 | 0.027 | 0.18 | 2.550 | 0.154 | 1.00 |
| CTKRU3 | | 2.415 | -0.058 | -0.39 | 2.470 | 0.074 | 0.48 |
| D6Q2Y6 | | 2.515 | 0.042 | 0.28 | 2.460 | 0.064 | 0.41 |
| D6RWKV | | 2.570 | 0.097 | 0.66 | 2.480 | 0.084 | 0.54 |
| DHXAGM | | 2.480 | 0.007 | 0.05 | 2.300 | -0.096 | -0.62 |
| E6L2DV | | 2.810 | 0.337 | 2.27 | 2.720 | 0.324 | 2.10 |
| EDECL6 | | 2.643 | 0.170 | 1.15 | 2.537 | 0.141 | 0.91 |
| EKZ9PU | | 2.600 | 0.127 | 0.86 | 2.510 | 0.114 | 0.74 |



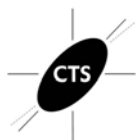
ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 909

L-Malic Acid

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| F2JN7V | | 2.575 | 0.102 | 0.69 | 2.595 | 0.199 | 1.29 |
| G82D6V | | 2.520 | 0.047 | 0.32 | 2.455 | 0.059 | 0.38 |
| GT6WFX | | 2.515 | 0.042 | 0.28 | 2.450 | 0.054 | 0.35 |
| H6RNFR | | 2.250 | -0.223 | -1.50 | 2.180 | -0.216 | -1.40 |
| HLHTLZ | | 2.411 | -0.062 | -0.42 | 2.379 | -0.017 | -0.11 |
| JHDKUV | | 2.445 | -0.028 | -0.19 | 2.395 | -0.001 | -0.01 |
| JRMMHG | | 2.510 | 0.037 | 0.25 | 2.385 | -0.011 | -0.07 |
| K976L2 | | 2.375 | -0.098 | -0.66 | 2.270 | -0.126 | -0.82 |
| LCYLDL | | 2.355 | -0.118 | -0.80 | 2.385 | -0.011 | -0.07 |
| LQZX9K | | 2.414 | -0.059 | -0.40 | 2.336 | -0.060 | -0.39 |
| MT68DM | | 2.390 | -0.083 | -0.56 | 2.280 | -0.116 | -0.75 |
| NBDUCZ | | 2.505 | 0.032 | 0.22 | 2.465 | 0.069 | 0.45 |
| PANK6K | | 2.595 | 0.122 | 0.82 | 2.515 | 0.119 | 0.77 |
| PLUXYQ | * | 2.230 | -0.243 | -1.64 | 2.050 | -0.346 | -2.24 |
| QLB9DP | | 2.593 | 0.120 | 0.81 | 2.488 | 0.091 | 0.59 |
| R3DBN3 | | 2.525 | 0.052 | 0.35 | 2.495 | 0.099 | 0.64 |
| RAEPCN | | 2.305 | -0.168 | -1.13 | 2.195 | -0.201 | -1.30 |
| RGD8NF | | 2.475 | 0.002 | 0.01 | 2.430 | 0.034 | 0.22 |
| THZ96M | | 2.476 | 0.003 | 0.02 | 2.369 | -0.028 | -0.18 |
| THZBUR | | 2.265 | -0.208 | -1.40 | 2.205 | -0.191 | -1.24 |
| TKCQNT | | 2.492 | 0.019 | 0.13 | 2.447 | 0.051 | 0.33 |
| TRAF8H | | 2.378 | -0.095 | -0.64 | 2.224 | -0.173 | -1.12 |
| U4X2QH | | 2.365 | -0.108 | -0.73 | 2.277 | -0.119 | -0.77 |
| UGNVZQ | | 2.535 | 0.062 | 0.42 | 2.395 | -0.001 | -0.01 |
| UY38TG | | 2.360 | -0.113 | -0.76 | 2.270 | -0.126 | -0.82 |



| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| V7J38Q | * | 2.641 | 0.168 | 1.13 | 2.431 | 0.035 | 0.23 |
| W3HJKH | X | 2.345 | -0.128 | -0.86 | 2.545 | 0.149 | 0.96 |
| WF32DL | | 2.280 | -0.193 | -1.30 | 2.130 | -0.266 | -1.72 |
| Y3QDDN | | 2.637 | 0.164 | 1.10 | 2.540 | 0.144 | 0.93 |
| Z7LLYA | X | 1.887 | -0.586 | -3.95 | 1.874 | -0.522 | -3.38 |

| Grand Means | | Summary Statistics | |
|--|------------|--------------------|------------|
| | 2.4729 g/L | | 2.3961 g/L |
| Std Dev Btwn Labs | | | |
| | 0.1483 g/L | | 0.1545 g/L |
| Statistics based on 52 of 55 reporting participants | | | |

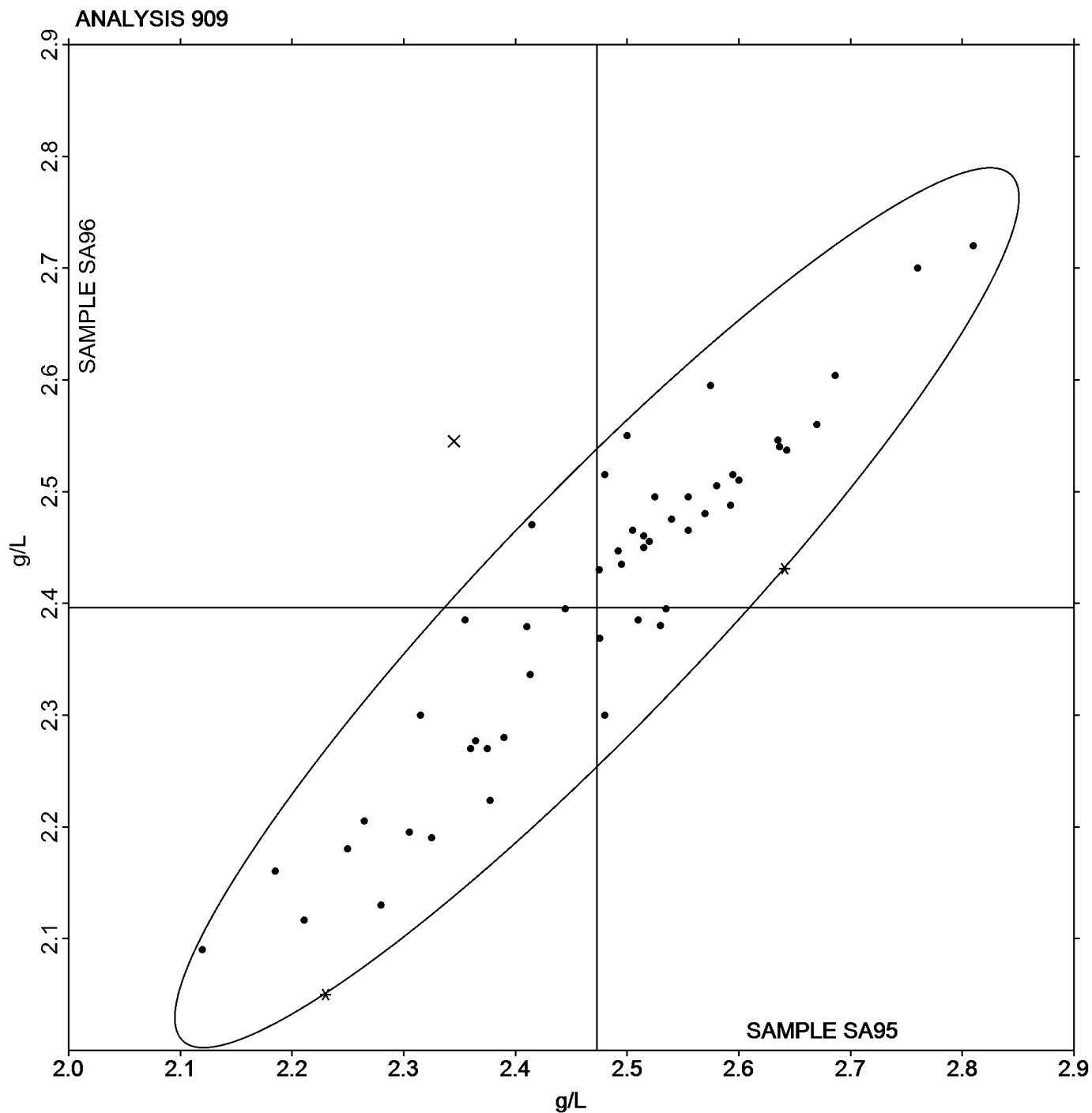
Wines tested: SA95: White Zinfandel; SA96: White Zinfandel

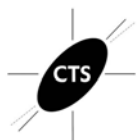
Comments on assigned Data Flags

8J94UZ (X) - Data for both samples are high.

W3HJKH (X) - Inconsistent in testing between samples and inconsistent within the determinations for Sample SA96.

Z7LLYA (X) - Data for both samples are low. Possible Systematic Error.





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 910 Glucose + Fructose

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|--------|-------------|----------------------|--------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2WF2B8 | X | 31.85 | -7.01 | -4.05 | 30.12 | -7.25 | -4.48 |
| 2ZDGLF | | 37.50 | -1.36 | -0.79 | 35.75 | -1.62 | -1.00 |
| 3LC6QG | | 40.40 | 1.54 | 0.89 | 38.80 | 1.43 | 0.88 |
| 3N2EZH | | 38.20 | -0.66 | -0.38 | 36.75 | -0.62 | -0.39 |
| 6XDKPH | | 38.55 | -0.31 | -0.18 | 37.60 | 0.23 | 0.14 |
| 76RNBB | | 41.50 | 2.64 | 1.52 | 39.30 | 1.93 | 1.19 |
| 7L2FDF | | 41.60 | 2.74 | 1.58 | 39.90 | 2.53 | 1.56 |
| 7R6EN6 | | 38.20 | -0.66 | -0.38 | 35.95 | -1.42 | -0.88 |
| 86PGK3 | | 38.08 | -0.79 | -0.45 | 36.22 | -1.16 | -0.72 |
| 8J94UZ | X | 1.73 | -37.13 | -21.46 | 1.79 | -35.59 | -22.00 |
| 93ZAZ6 | | 38.57 | -0.29 | -0.17 | 37.06 | -0.31 | -0.19 |
| 9LRF8W | | 38.95 | 0.09 | 0.05 | 38.15 | 0.78 | 0.48 |
| 9LRHVF | | 39.18 | 0.31 | 0.18 | 37.86 | 0.48 | 0.30 |
| 9PQQ4V | | 41.56 | 2.70 | 1.56 | 39.85 | 2.47 | 1.53 |
| 9PQTQE | | 35.77 | -3.10 | -1.79 | 34.65 | -2.73 | -1.69 |
| 9PRQ2B | | 39.95 | 1.09 | 0.63 | 38.50 | 1.13 | 0.70 |
| 9RFZBC | * | 40.70 | 1.84 | 1.06 | 37.10 | -0.27 | -0.17 |
| B8L2ZX | * | 36.70 | -2.16 | -1.25 | 37.30 | -0.07 | -0.05 |
| BJWEFD | | 36.90 | -1.96 | -1.13 | 35.40 | -1.97 | -1.22 |
| BW4LWV | X | 32.36 | -6.50 | -3.76 | 29.29 | -8.09 | -5.00 |
| CTKRU3 | | 38.15 | -0.71 | -0.41 | 37.30 | -0.07 | -0.05 |
| D6Q2Y6 | | 39.14 | 0.28 | 0.16 | 37.68 | 0.31 | 0.19 |
| D6RWKV | * | 34.60 | -4.26 | -2.46 | 34.20 | -3.17 | -1.96 |
| DHXAGM | | 42.20 | 3.34 | 1.93 | 40.50 | 3.13 | 1.93 |
| E6L2DV | | 39.35 | 0.49 | 0.28 | 37.55 | 0.18 | 0.11 |



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 910 Glucose + Fructose

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| EDECL6 | | 41.90 | 3.04 | 1.76 | 39.25 | 1.88 | 1.16 |
| EKZ9PU | | 40.29 | 1.43 | 0.83 | 38.66 | 1.28 | 0.79 |
| F2JN7V | | 38.88 | 0.01 | 0.01 | 36.67 | -0.70 | -0.44 |
| G82D6V | | 36.80 | -2.06 | -1.19 | 35.70 | -1.67 | -1.04 |
| GT6WFX | | 37.30 | -1.56 | -0.90 | 35.25 | -2.12 | -1.31 |
| H6RNFR | | 36.95 | -1.91 | -1.10 | 35.65 | -1.72 | -1.07 |
| HLHTLZ | | 39.18 | 0.32 | 0.18 | 37.98 | 0.61 | 0.37 |
| JHDKUV | | 37.15 | -1.71 | -0.99 | 35.85 | -1.52 | -0.94 |
| JRMMHG | | 35.74 | -3.13 | -1.81 | 33.70 | -3.68 | -2.27 |
| K976L2 | | 39.75 | 0.89 | 0.51 | 38.20 | 0.83 | 0.51 |
| LCYLDL | * | 39.45 | 0.59 | 0.34 | 39.55 | 2.18 | 1.34 |
| LQZX9K | | 39.65 | 0.78 | 0.45 | 37.92 | 0.54 | 0.33 |
| MNTYDJ | | 37.40 | -1.47 | -0.85 | 35.17 | -2.21 | -1.37 |
| MT68DM | | 36.00 | -2.86 | -1.65 | 34.50 | -2.87 | -1.78 |
| NBDUCZ | | 39.50 | 0.64 | 0.37 | 38.00 | 0.63 | 0.39 |
| PANK6K | | 38.61 | -0.25 | -0.15 | 37.30 | -0.08 | -0.05 |
| PLUXYQ | | 40.65 | 1.79 | 1.03 | 38.30 | 0.93 | 0.57 |
| QLB9DP | | 40.35 | 1.49 | 0.86 | 38.40 | 1.03 | 0.63 |
| R3DBN3 | | 37.70 | -1.16 | -0.67 | 36.64 | -0.74 | -0.46 |
| R3DBQM | X | 38.00 | -0.86 | -0.50 | 40.00 | 2.63 | 1.62 |
| RAEPCN | X | 33.96 | -4.91 | -2.84 | 36.95 | -0.43 | -0.27 |
| RGD8NF | | 38.50 | -0.36 | -0.21 | 37.00 | -0.37 | -0.23 |
| THZ96M | | 38.90 | 0.04 | 0.02 | 37.60 | 0.23 | 0.14 |
| THZBUR | | 38.85 | -0.01 | -0.01 | 37.55 | 0.18 | 0.11 |
| TKCQNT | | 38.00 | -0.86 | -0.50 | 37.00 | -0.37 | -0.23 |



Analysis 910
Glucose + Fructose

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|--------|-------------|----------------------|--------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| U4X2QH | | 39.79 | 0.92 | 0.53 | 39.48 | 2.10 | 1.30 |
| UGNVZQ | | 40.80 | 1.94 | 1.12 | 39.60 | 2.23 | 1.38 |
| UTZZCT | | 40.60 | 1.74 | 1.00 | 38.70 | 1.33 | 0.82 |
| UY38TG | | 37.45 | -1.41 | -0.82 | 35.60 | -1.77 | -1.10 |
| V7J38Q | | 39.40 | 0.54 | 0.31 | 38.91 | 1.54 | 0.95 |
| W72EMB | X | 2.50 | -36.36 | -21.01 | 2.30 | -35.07 | -21.68 |
| WF32DL | | 38.05 | -0.81 | -0.47 | 36.70 | -0.67 | -0.42 |
| Y3QDDN | | 41.50 | 2.64 | 1.52 | 39.35 | 1.98 | 1.22 |

| Grand Means | | Summary Statistics | |
|---|------------|--------------------|------------|
| | 38.862 g/L | | 37.375 g/L |
| Std Dev Btwn Labs | | | 1.618 g/L |
| | 1.730 g/L | | |
| Statistics based on 52 of 58 reporting participants | | | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel

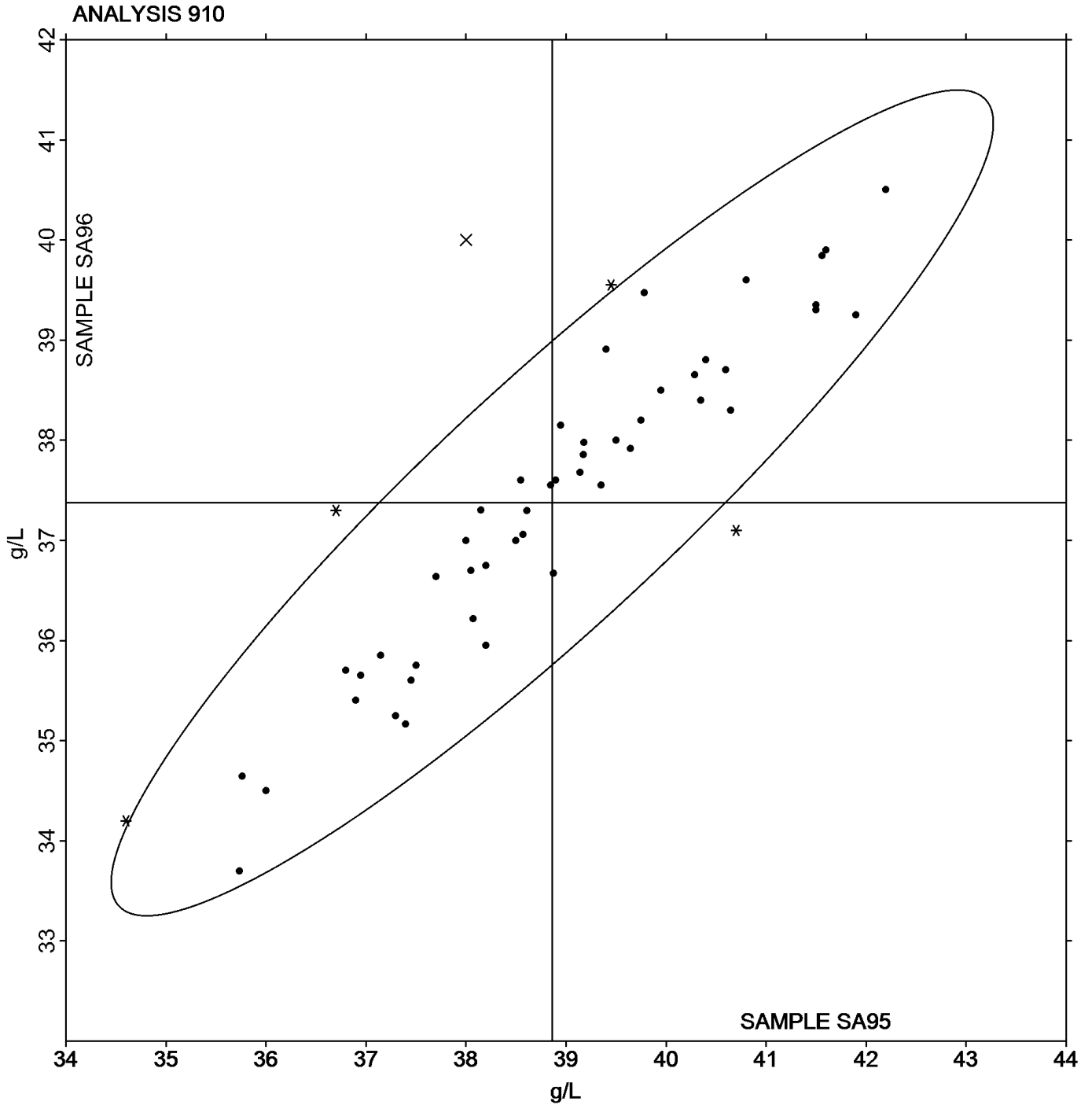
Comments on assigned Data Flags

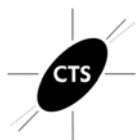
- 2WF2B8 (X) - Data for both samples are low. Possible Systematic Error.
- 8J94UZ (X) - Data for both samples are low.
- BW4LWV (X) - Data for both samples are low.
- R3DBQM (X) - Inconsistent in testing between samples.
- RAEPCN (X) - Inconsistent in testing between samples, data for Sample SA95 are low.
- W72EMB (X) - Data for both samples are low.



Results by Methodology (as reported by laboratory)

| Test Methodology | Sample SA95 <i>White Zinfandel</i> | | | Sample SA96 <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 | 39.50 | 0.00 | 0.64 | 38.00 | 0.00 | 0.63 | 1 | 1 |
| HPLC | 41.56 | 0.00 | 2.70 | 39.85 | 0.00 | 2.47 | 1 | 2 |
| Enzymatic/Spectrophotometric | 38.85 | 1.67 | -0.01 | 37.34 | 1.63 | -0.03 | 41 | 49 |
| FTIR | 39.06 | 1.26 | 0.19 | 37.28 | 1.27 | -0.09 | 5 | 6 |





Analysis 911
Copper Content

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 3N2EZH | | 0.1150 | -0.0158 | -0.61 | 0.1200 | -0.0118 | -0.50 |
| 6MWVQC | | 0.1250 | -0.0058 | -0.23 | 0.1260 | -0.0058 | -0.25 |
| 6XDKPH | | 0.1385 | 0.0077 | 0.30 | 0.1360 | 0.0042 | 0.18 |
| 76RNBB | | 0.1250 | -0.0058 | -0.23 | 0.1300 | -0.0018 | -0.08 |
| 7L2FDF | | 0.1300 | -0.0008 | -0.03 | 0.1400 | 0.0082 | 0.35 |
| 86PGK3 | | 0.1170 | -0.0138 | -0.54 | 0.1180 | -0.0138 | -0.59 |
| 93ZAZ6 | | 0.1200 | -0.0108 | -0.42 | 0.1300 | -0.0018 | -0.08 |
| 9PQQ4V | | 0.1450 | 0.0142 | 0.55 | 0.1300 | -0.0018 | -0.08 |
| 9RFZBC | * | 0.0850 | -0.0458 | -1.78 | 0.1250 | -0.0068 | -0.29 |
| D6Q2Y6 | X | 0.4105 | 0.2797 | 10.85 | 0.4100 | 0.2782 | 11.78 |
| E6L2DV | | 0.1950 | 0.0642 | 2.49 | 0.1950 | 0.0632 | 2.68 |
| FZN629 | | 0.1320 | 0.0012 | 0.05 | 0.1390 | 0.0072 | 0.30 |
| G82D6V | | 0.1400 | 0.0092 | 0.36 | 0.1400 | 0.0082 | 0.35 |
| HUdTZT | | 0.1200 | -0.0108 | -0.42 | 0.1200 | -0.0118 | -0.50 |
| R3DBN3 | | 0.1250 | -0.0058 | -0.23 | 0.1300 | -0.0018 | -0.08 |
| R3DBQM | | 0.1500 | 0.0192 | 0.74 | 0.1450 | 0.0132 | 0.56 |
| UTZZCT | | 0.1350 | 0.0042 | 0.16 | 0.1250 | -0.0068 | -0.29 |
| UY38TG | | 0.1300 | -0.0008 | -0.03 | 0.1100 | -0.0218 | -0.93 |
| V7J38Q | | 0.1750 | 0.0442 | 1.71 | 0.1700 | 0.0382 | 1.62 |
| Y3QDDN | | 0.0830 | -0.0478 | -1.85 | 0.0760 | -0.0558 | -2.37 |

| Grand Means | | Summary Statistics | |
|---|--------------|--------------------|--------------|
| | 0.13082 mg/L | | 0.13184 mg/L |
| Stnd Dev Btwn Labs | | | 0.02360 mg/L |
| | 0.02578 mg/L | | |
| Statistics based on 19 of 20 reporting participants | | | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel



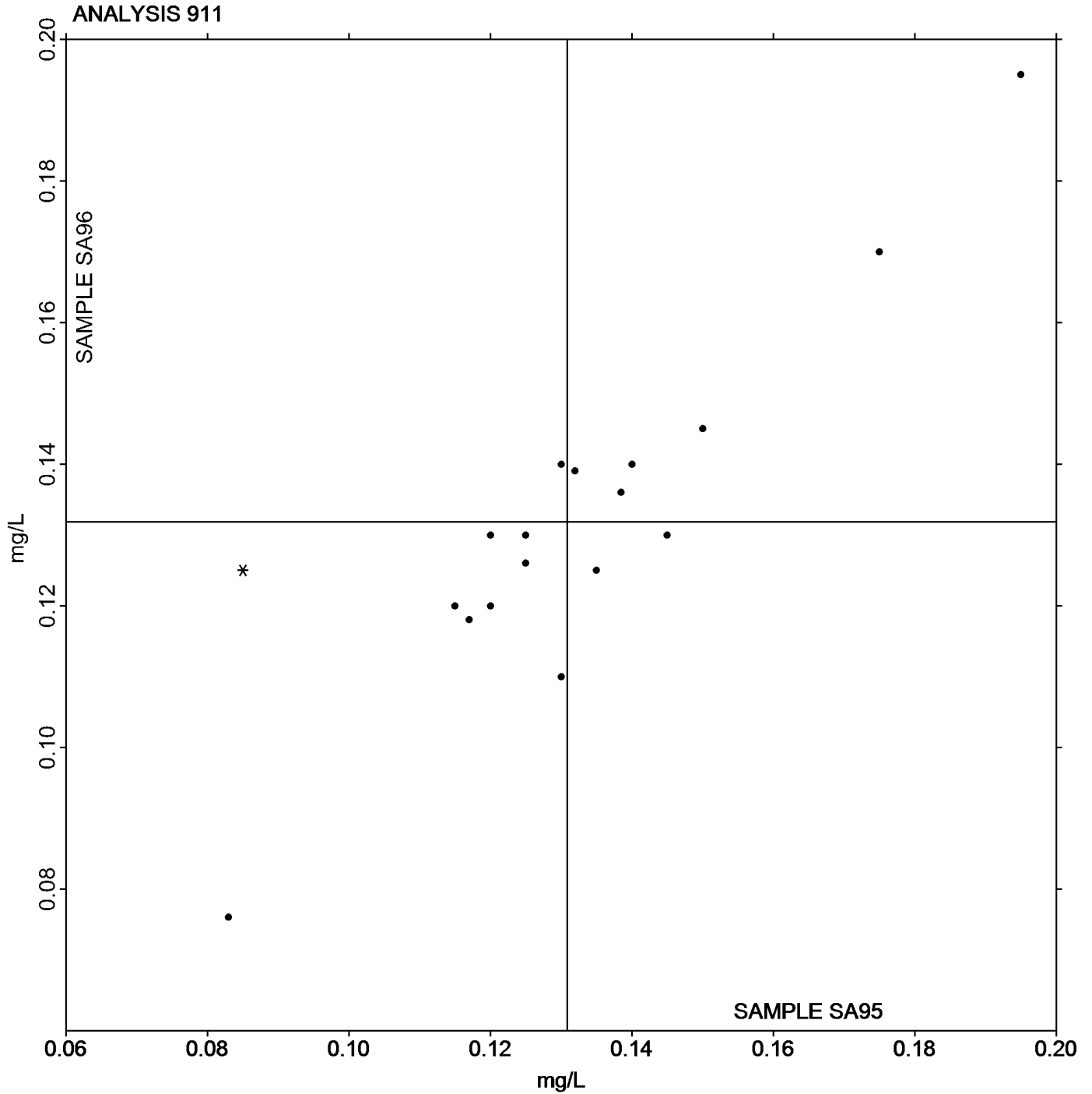
Analysis 911
Copper Content

Comments on assigned Data Flags

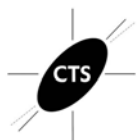
D6Q2Y6 (X) - Data for both samples are high.

Results by Methodology (as reported by laboratory)

| Test Methodology | Sample SA95 <i>White Zinfandel</i> | | | Sample SA96 <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 | 0.1375 | 0.0177 | 0.0067 | 0.1355 | 0.0134 | 0.0037 | 2 | 3 |
| Atomic Absorption Spectroscopy | 0.1392 | 0.0300 | 0.0083 | 0.1342 | 0.0318 | 0.0024 | 10 | 11 |
| ICP-OES | 0.1205 | 0.0067 | -0.0103 | 0.1245 | 0.0104 | -0.0073 | 4 | 4 |
| Other _____ | 0.1260 | 0.0085 | -0.0048 | 0.1345 | 0.0064 | 0.0027 | 2 | 2 |



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



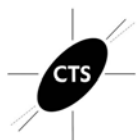
Analysis 912

Potassium (K) Content

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2ZDGLF | | 714.0 | -52.9 | -0.51 | 732.5 | -41.9 | -0.35 |
| 3N2EZH | | 673.5 | -93.4 | -0.89 | 667.5 | -106.9 | -0.89 |
| 7L2FDF | | 722.0 | -44.9 | -0.43 | 690.0 | -84.4 | -0.70 |
| 86PGK3 | | 855.0 | 88.1 | 0.84 | 840.0 | 65.6 | 0.54 |
| 93ZAZ6 | | 781.0 | 14.1 | 0.13 | 782.0 | 7.6 | 0.06 |
| 9PQQ4V | | 935.5 | 168.6 | 1.61 | 941.5 | 167.1 | 1.38 |
| D6Q2Y6 | * | 979.0 | 212.1 | 2.03 | 1,078.5 | 304.1 | 2.52 |
| G82D6V | | 745.0 | -21.9 | -0.21 | 805.0 | 30.6 | 0.25 |
| HUdTZT | | 647.5 | -119.4 | -1.14 | 640.0 | -134.4 | -1.11 |
| M9FQAU | | 695.0 | -71.9 | -0.69 | 672.5 | -101.9 | -0.84 |
| NBDUCZ | | 906.0 | 139.1 | 1.33 | 877.0 | 102.6 | 0.85 |
| R3DBN3 | | 656.5 | -110.4 | -1.05 | 650.0 | -124.4 | -1.03 |
| R3DBQM | | 685.0 | -81.9 | -0.78 | 720.0 | -54.4 | -0.45 |
| UY38TG | | 746.0 | -20.9 | -0.20 | 772.0 | -2.4 | -0.02 |
| V7J38Q | | 762.5 | -4.4 | -0.04 | 747.5 | -26.9 | -0.22 |

| Grand Means | | Summary Statistics | |
|--|-------------|--------------------|-------------|
| | 766.90 mg/L | | 774.40 mg/L |
| Stnd Dev Btwn Labs | 104.72 mg/L | | 120.75 mg/L |
| Statistics based on 15 of 15 reporting participants | | | |

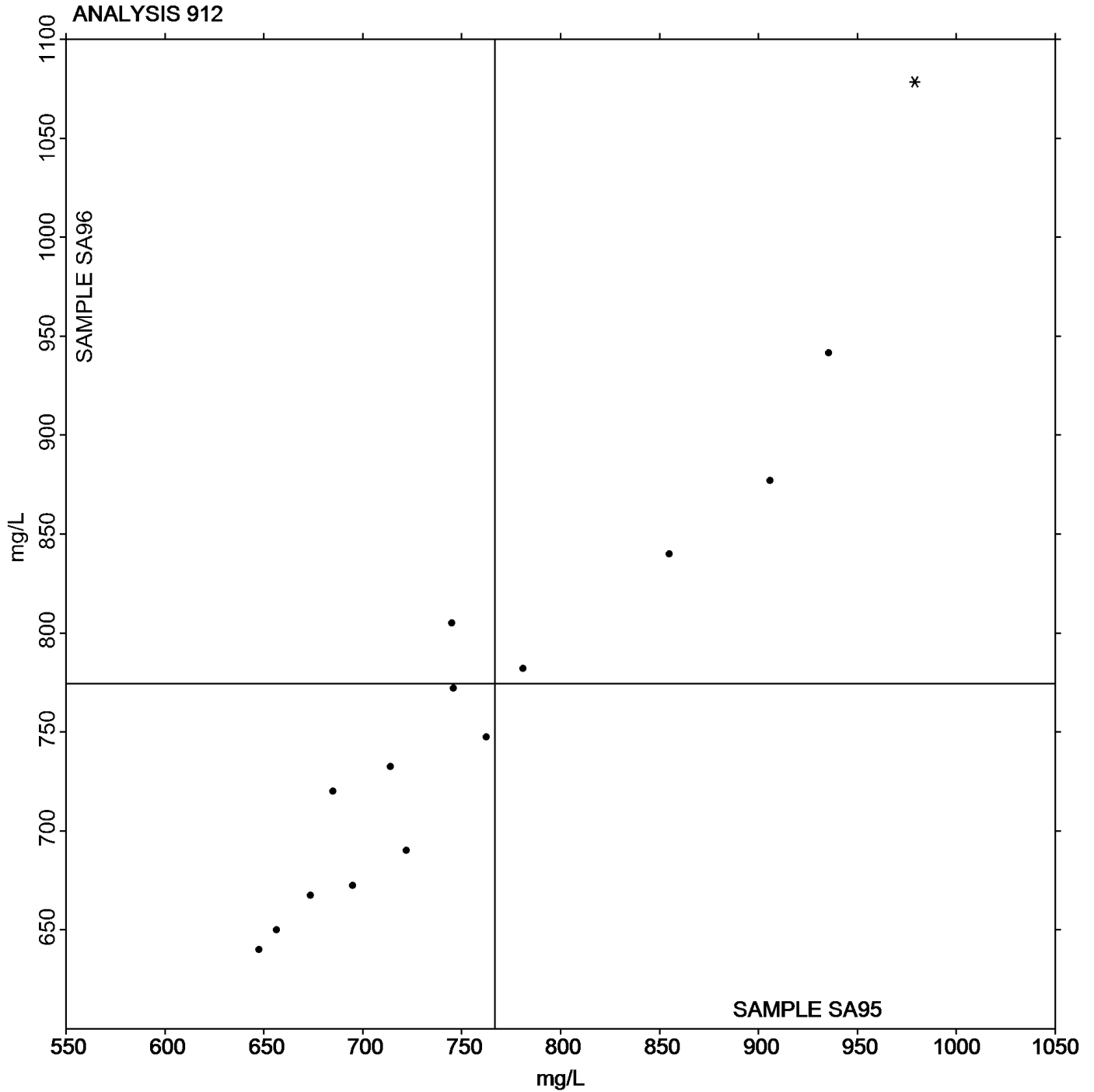
Wines tested: SA95: White Zinfandel; SA96: White Zinfandel



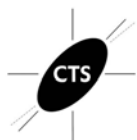
Potassium (K) Content

Results by Methodology (as reported by laboratory)

| Test Methodology | Sample SA95 <i>White Zinfandel</i> | | | Sample SA96 <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 | 715.0 | 48.4 | -51.9 | 710.5 | 58.5 | -63.9 | 4 | 5 |
| ICP-OES | 681.0 | 37.8 | -85.9 | 665.8 | 25.0 | -108.6 | 3 | 3 |
| FTIR | 812.4 | 102.0 | 45.5 | 829.8 | 86.9 | 55.4 | 4 | 4 |
| Other _____ | 790.7 | 110.8 | 23.8 | 793.0 | 79.1 | 18.6 | 3 | 3 |



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 #049
Spring 2015

Analysis 915 A420nm (1cm path)

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|--------|-------------|----------------------|--------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2ZDGLF | | 0.2555 | -0.0297 | -1.46 | 0.2450 | -0.0328 | -1.69 |
| 3N2EZH | | 0.2550 | -0.0302 | -1.49 | 0.2550 | -0.0228 | -1.17 |
| 6MWVQC | | 0.2720 | -0.0132 | -0.65 | 0.2500 | -0.0278 | -1.43 |
| 6XDKPH | | 0.2800 | -0.0052 | -0.26 | 0.2800 | 0.0022 | 0.11 |
| 7L2FDF | | 0.2850 | -0.0002 | -0.01 | 0.2760 | -0.0018 | -0.09 |
| 7R6EN6 | X | 0.5375 | 0.2523 | 12.40 | 0.4760 | 0.1982 | 10.20 |
| 86PGK3 | | 0.2655 | -0.0197 | -0.97 | 0.2650 | -0.0128 | -0.66 |
| 8J94UZ | * | 0.3465 | 0.0613 | 3.01 | 0.3285 | 0.0507 | 2.61 |
| 93ZAZ6 | | 0.2805 | -0.0047 | -0.23 | 0.2745 | -0.0033 | -0.17 |
| 9LRHVF | | 0.2795 | -0.0057 | -0.28 | 0.2705 | -0.0073 | -0.38 |
| 9PQQ4V | | 0.2700 | -0.0152 | -0.75 | 0.2700 | -0.0078 | -0.40 |
| 9PQTQE | | 0.3090 | 0.0238 | 1.17 | 0.2900 | 0.0122 | 0.63 |
| 9PRQ2B | | 0.2895 | 0.0043 | 0.21 | 0.2750 | -0.0028 | -0.15 |
| 9RFZBC | | 0.2600 | -0.0252 | -1.24 | 0.2550 | -0.0228 | -1.17 |
| BJWEFD | | 0.2770 | -0.0082 | -0.41 | 0.2690 | -0.0088 | -0.45 |
| D6Q2Y6 | | 0.2918 | 0.0065 | 0.32 | 0.2843 | 0.0064 | 0.33 |
| DHXAGM | | 0.2860 | 0.0008 | 0.04 | 0.2780 | 0.0002 | 0.01 |
| E6L2DV | | 0.2855 | 0.0003 | 0.01 | 0.2790 | 0.0012 | 0.06 |
| EKZ9PU | | 0.2875 | 0.0023 | 0.11 | 0.2805 | 0.0027 | 0.14 |
| F2JN7V | | 0.2930 | 0.0078 | 0.38 | 0.2890 | 0.0112 | 0.57 |
| G82D6V | | 0.2760 | -0.0092 | -0.45 | 0.2695 | -0.0083 | -0.43 |
| GT6WFX | | 0.2895 | 0.0043 | 0.21 | 0.2805 | 0.0027 | 0.14 |
| J67APU | | 0.2915 | 0.0063 | 0.31 | 0.2840 | 0.0062 | 0.32 |
| JHDKUV | | 0.2840 | -0.0012 | -0.06 | 0.2790 | 0.0012 | 0.06 |
| JRMMHG | X | 0.0433 | -0.2420 | -11.89 | 0.0458 | -0.2321 | -11.94 |



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 915 A420nm (1cm path)

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| NBDUCZ | | 0.2775 | -0.0077 | -0.38 | 0.2760 | -0.0018 | -0.09 |
| PANK6K | | 0.2575 | -0.0277 | -1.36 | 0.2490 | -0.0288 | -1.48 |
| PLUXYQ | | 0.2920 | 0.0068 | 0.33 | 0.2810 | 0.0032 | 0.16 |
| R3DBN3 | | 0.2805 | -0.0047 | -0.23 | 0.2745 | -0.0033 | -0.17 |
| R3DBQM | | 0.3070 | 0.0218 | 1.07 | 0.3120 | 0.0342 | 1.76 |
| RAEPCN | X | 0.1500 | -0.1352 | -6.65 | 0.1490 | -0.1288 | -6.63 |
| RGD8NF | | 0.3250 | 0.0398 | 1.95 | 0.3170 | 0.0392 | 2.02 |
| THZBUR | | 0.2950 | 0.0098 | 0.48 | 0.2785 | 0.0007 | 0.03 |
| TRAF8H | * | 0.3300 | 0.0448 | 2.20 | 0.3320 | 0.0542 | 2.79 |
| UGNVZQ | | 0.2915 | 0.0063 | 0.31 | 0.2840 | 0.0062 | 0.32 |
| UTZZCT | * | 0.3097 | 0.0244 | 1.20 | 0.2847 | 0.0069 | 0.35 |
| UY38TG | | 0.2550 | -0.0302 | -1.49 | 0.2500 | -0.0278 | -1.43 |
| V7J38Q | | 0.2785 | -0.0067 | -0.33 | 0.2695 | -0.0083 | -0.43 |
| W3HJKH | | 0.2650 | -0.0202 | -1.00 | 0.2625 | -0.0153 | -0.79 |
| W72EMB | | 0.2710 | -0.0142 | -0.70 | 0.2765 | -0.0013 | -0.07 |
| Z7LLYA | | 0.2943 | 0.0091 | 0.45 | 0.2832 | 0.0054 | 0.28 |

| Grand Means | | Summary Statistics | |
|--|------------------|--------------------|------------------|
| 0.28524 | Absorbance Units | 0.27783 | Absorbance Units |
| Std Dev Btwn Labs | | | |
| 0.02034 | Absorbance Units | 0.01943 | Absorbance Units |
| Statistics based on 38 of 41 reporting participants | | | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel



Comments on assigned Data Flags

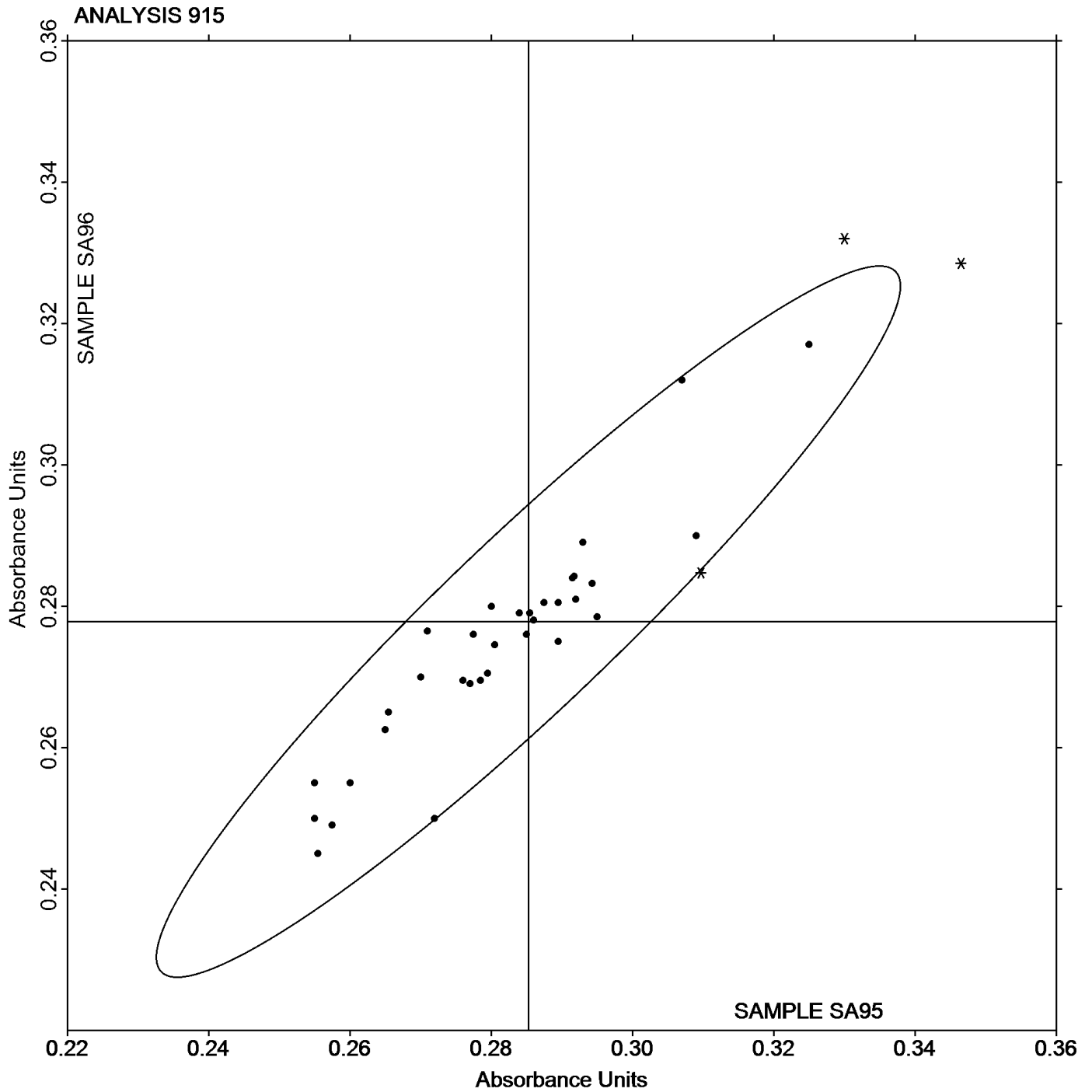
7R6EN6 (X) - Data for both samples are high.

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

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

Results by Methodology (as reported by laboratory)

| Test Methodology | Sample SA95 <i>White Zinfandel</i> | | | Sample SA96 <i>White Zinfandel</i> | | | Labs Incl / Rpt | |
|-----------------------------------|---------------------------------------|--------------|--------------|---------------------------------------|--------------|--------------|-----------------|----|
| | Group Mean | Btwn Lab STD | Diff from GM | Group Mean | Btwn Lab STD | Diff from GM | | |
| Code not used by CTS at this time | 0.2815 | 0.0158 | -0.0037 | 0.2746 | 0.0154 | -0.0032 | 35 | 41 |





ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 916 A520nm (1cm path)

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 2ZDGLF | | 0.1925 | -0.0233 | -1.40 | 0.1810 | -0.0247 | -1.49 |
| 3N2EZH | | 0.2000 | -0.0158 | -0.95 | 0.2000 | -0.0057 | -0.35 |
| 6MWVQC | | 0.2070 | -0.0088 | -0.53 | 0.1840 | -0.0217 | -1.31 |
| 6XDKPH | | 0.2100 | -0.0058 | -0.35 | 0.2100 | 0.0043 | 0.26 |
| 7L2FDF | | 0.2120 | -0.0038 | -0.23 | 0.2020 | -0.0037 | -0.23 |
| 7R6EN6 | X | 0.6210 | 0.4052 | 24.37 | 0.5660 | 0.3603 | 21.75 |
| 86PGK3 | | 0.2025 | -0.0133 | -0.80 | 0.1965 | -0.0092 | -0.56 |
| 8J94UZ | * | 0.2670 | 0.0512 | 3.08 | 0.2465 | 0.0408 | 2.46 |
| 93ZAZ6 | | 0.2095 | -0.0063 | -0.38 | 0.2000 | -0.0057 | -0.35 |
| 9LRHVF | | 0.2130 | -0.0028 | -0.17 | 0.2065 | 0.0008 | 0.05 |
| 9PQQ4V | | 0.2100 | -0.0058 | -0.35 | 0.1900 | -0.0157 | -0.95 |
| 9PQTQE | * | 0.2450 | 0.0292 | 1.76 | 0.2130 | 0.0073 | 0.44 |
| 9PRQ2B | | 0.2215 | 0.0057 | 0.34 | 0.2020 | -0.0037 | -0.23 |
| 9RFZBC | | 0.1950 | -0.0208 | -1.25 | 0.2000 | -0.0057 | -0.35 |
| BJWEFD | | 0.2060 | -0.0098 | -0.59 | 0.1940 | -0.0117 | -0.71 |
| D6Q2Y6 | | 0.2180 | 0.0022 | 0.13 | 0.2069 | 0.0012 | 0.07 |
| DHXAGM | | 0.2050 | -0.0108 | -0.65 | 0.1950 | -0.0107 | -0.65 |
| E6L2DV | | 0.2120 | -0.0038 | -0.23 | 0.2020 | -0.0037 | -0.23 |
| EKZ9PU | | 0.2140 | -0.0018 | -0.11 | 0.2050 | -0.0007 | -0.04 |
| F2JN7V | | 0.2180 | 0.0022 | 0.13 | 0.2105 | 0.0048 | 0.29 |
| G82D6V | | 0.2085 | -0.0073 | -0.44 | 0.1955 | -0.0102 | -0.62 |
| GT6WFX | | 0.2140 | -0.0018 | -0.11 | 0.2015 | -0.0042 | -0.26 |
| J67APU | | 0.2170 | 0.0012 | 0.07 | 0.2055 | -0.0002 | -0.01 |
| JHDKUV | | 0.2105 | -0.0053 | -0.32 | 0.2025 | -0.0032 | -0.20 |
| JRMMHG | | 0.2216 | 0.0058 | 0.35 | 0.2039 | -0.0018 | -0.11 |



ASEV-CTS Wine Industry Interlaboratory Testing Program

Report #049
Spring 2015

Analysis 916
A520nm (1cm path)

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|-------|-------------|----------------------|-------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| NBDUCZ | | 0.2050 | -0.0108 | -0.65 | 0.2010 | -0.0047 | -0.29 |
| PANK6K | | 0.2090 | -0.0068 | -0.41 | 0.2095 | 0.0038 | 0.23 |
| PLUXYQ | | 0.2185 | 0.0027 | 0.16 | 0.2060 | 0.0003 | 0.02 |
| R3DBN3 | | 0.2095 | -0.0063 | -0.38 | 0.2005 | -0.0052 | -0.32 |
| R3DBQM | * | 0.2320 | 0.0162 | 0.97 | 0.2425 | 0.0368 | 2.22 |
| RAEPCN | | 0.2200 | 0.0042 | 0.25 | 0.2220 | 0.0163 | 0.98 |
| RGD8NF | | 0.2495 | 0.0337 | 2.03 | 0.2365 | 0.0308 | 1.86 |
| THZBUR | | 0.2205 | 0.0047 | 0.28 | 0.2010 | -0.0047 | -0.29 |
| TRAF8H | * | 0.2600 | 0.0442 | 2.66 | 0.2590 | 0.0533 | 3.22 |
| UGNVZQ | | 0.2190 | 0.0032 | 0.19 | 0.2080 | 0.0023 | 0.14 |
| UTZZCT | | 0.2374 | 0.0216 | 1.30 | 0.2094 | 0.0037 | 0.22 |
| UY38TG | | 0.2000 | -0.0158 | -0.95 | 0.2000 | -0.0057 | -0.35 |
| V7J38Q | | 0.2115 | -0.0043 | -0.26 | 0.1975 | -0.0082 | -0.50 |
| W3HJKH | | 0.2035 | -0.0123 | -0.74 | 0.1975 | -0.0082 | -0.50 |
| W72EMB | | 0.2195 | 0.0037 | 0.22 | 0.2150 | 0.0093 | 0.56 |
| Z7LLYA | | 0.1876 | -0.0282 | -1.70 | 0.1706 | -0.0351 | -2.12 |

| Grand Means | | Summary Statistics | |
|-------------------|------------------|---|------------------|
| 0.21580 | Absorbance Units | 0.20574 | Absorbance Units |
| Std Dev Btwn Labs | | 0.01656 | Absorbance Units |
| 0.01663 | Absorbance Units | Statistics based on 40 of 41 reporting participants | |

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel

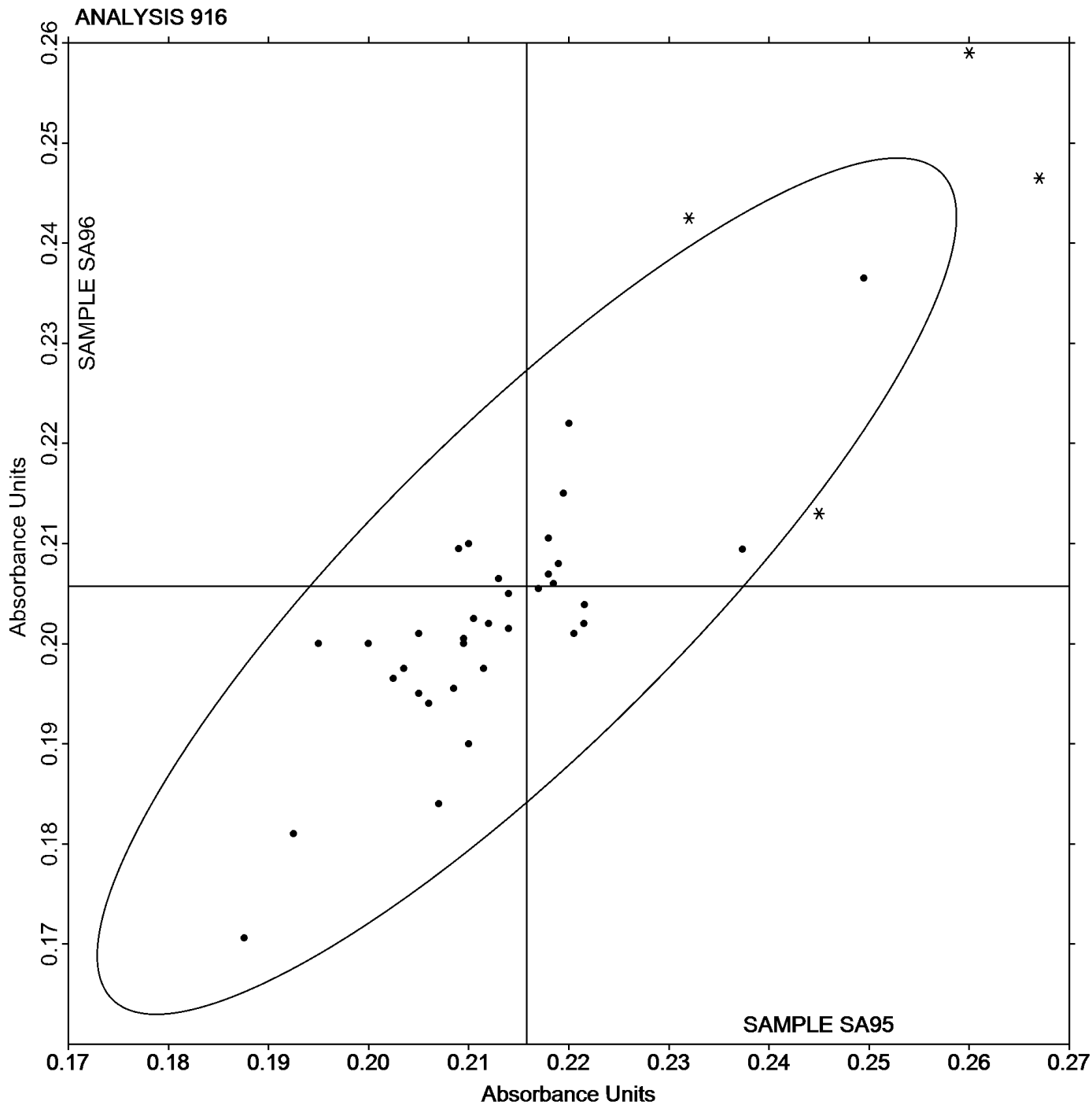
Comments on assigned Data Flags

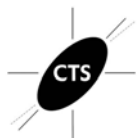
7R6EN6 (X) - Data for both samples are high.



Results by Methodology (as reported by laboratory)

| Test Methodology | Sample SA95 <i>White Zinfandel</i> | | | Sample SA96 <i>White Zinfandel</i> | | | Labs Incl / Rpt | |
|-----------------------------------|---------------------------------------|--------------|--------------|---------------------------------------|--------------|--------------|-----------------|----|
| | Group Mean | Btwn Lab STD | Diff from GM | Group Mean | Btwn Lab STD | Diff from GM | | |
| Code not used by CTS at this time | 0.2119 | 0.0114 | -0.0039 | 0.2019 | 0.0110 | -0.0038 | 36 | 41 |

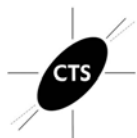




ASEV-CTS Wine Industry Interlaboratory Testing Program
Research Property 950
Research Property - Turbidity

Report #049
Spring 2015

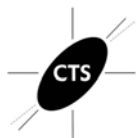
| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|------------------------|--------------------------|-------------|------------------------|--------------------------|
| | | Lab Mean | Diff from Target Value | % Diff from Target Value | Lab Mean | Diff from Target Value | % Diff from Target Value |
| 2ZDGLF | | 0.1035 | -0.1005 | -49.3% | 0.2040 | 0.0068 | 3.4% |
| 3LC6QG | | 0.2355 | 0.0315 | 15.4% | 0.2545 | 0.0573 | 29.1% |
| 6MWVQC | | 0.2000 | -0.0040 | -2.0% | 0.3000 | 0.1028 | 52.1% |
| 6XDKPH | | 0.1750 | -0.0290 | -14.2% | 0.2400 | 0.0428 | 21.7% |
| 76RNBB | | 0.2955 | 0.0915 | 44.9% | 0.1745 | -0.0227 | -11.5% |
| 7L2FDF | | 0.2000 | -0.0040 | -2.0% | 0.2000 | 0.0028 | 1.4% |
| 7R6EN6 | | 0.1840 | -0.0200 | -9.8% | 0.1480 | -0.0492 | -24.9% |
| 86PGK3 | | 0.2620 | 0.0580 | 28.4% | 0.2180 | 0.0208 | 10.5% |
| 8J94UZ | X | 1.4500 | 1.2460 | 610.8% | 0.3000 | 0.1028 | 52.1% |
| 93ZAZ6 | | 0.2700 | 0.0660 | 32.4% | 0.3150 | 0.1178 | 59.7% |
| 9LRHVF | | 0.1870 | -0.0170 | -8.3% | 0.1580 | -0.0392 | -19.9% |
| 9PQQ4V | X | 0.2600 | 0.0560 | 27.5% | 0.8050 | 0.6078 | 308.2% |
| 9PQTQE | X | 0.1850 | -0.0190 | -9.3% | 0.4750 | 0.2778 | 140.9% |
| 9PRQ2B | | 0.2295 | 0.0255 | 12.5% | 0.2040 | 0.0068 | 3.4% |
| 9RFZBC | X | 0.5100 | 0.3060 | 150.0% | 0.5750 | 0.3778 | 191.6% |
| B8L2ZX | | 0.1350 | -0.0690 | -33.8% | 0.1700 | -0.0272 | -13.8% |
| BJWEFD | | 0.1490 | -0.0550 | -27.0% | 0.1295 | -0.0677 | -34.3% |
| CTKRU3 | | 0.0150 | -0.1890 | -92.6% | 0.0450 | -0.1522 | -77.2% |
| D6Q2Y6 | | 0.1950 | -0.0090 | -4.4% | 0.1975 | 0.0003 | 0.2% |
| D6RWKV | | 0.2095 | 0.0055 | 2.7% | 0.2165 | 0.0193 | 9.8% |
| DHXAGM | | 0.1400 | -0.0640 | -31.4% | 0.1400 | -0.0572 | -29.0% |
| E6L2DV | | 0.2800 | 0.0760 | 37.3% | 0.1750 | -0.0222 | -11.3% |
| EDECL6 | X | 0.6650 | 0.4610 | 226.0% | 0.4850 | 0.2878 | 145.9% |



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

Report #049
Spring 2015

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|------------------------|--------------------------|------------------------------------|------------------------|--------------------------|
| | | Lab Mean | Diff from Target Value | % Diff from Target Value | Lab Mean | Diff from Target Value | % Diff from Target Value |
| EKZ9PU | | 0.1985 | -0.0055 | -2.7% | 0.1990 | 0.0018 | 0.9% |
| F2JN7V | | 0.1930 | -0.0110 | -5.4% | 0.1885 | -0.0087 | -4.4% |
| G82D6V | | 0.0160 | -0.1880 | -92.2% | 0.0190 | -0.1782 | -90.4% |
| GT6WFX | | 0.1555 | -0.0485 | -23.8% | 0.1925 | -0.0047 | -2.4% |
| H6RNF | M | 0.2000 | -0.0040 | -2.0% | No data reported for this sample % | | |
| HLHTLZ | | 0.2000 | -0.0040 | -2.0% | 0.1850 | -0.0122 | -6.2% |
| HUDTZT | | 0.0800 | -0.1240 | -60.8% | 0.0650 | -0.1322 | -67.0% |
| J67APU | | 0.1955 | -0.0085 | -4.2% | 0.1965 | -0.0007 | -0.4% |
| JHDKUV | | 0.2250 | 0.0210 | 10.3% | 0.2400 | 0.0428 | 21.7% |
| JRMMHG | X | 0.3200 | 0.1160 | 56.9% | 0.4750 | 0.2778 | 140.9% |
| LCYLDL | | 0.0970 | -0.1070 | -52.5% | 0.1000 | -0.0972 | -49.3% |
| LQZX9K | | 0.2715 | 0.0675 | 33.1% | 0.2310 | 0.0338 | 17.1% |
| MNTYDJ | | 0.1130 | -0.0910 | -44.6% | 0.1520 | -0.0452 | -22.9% |
| NBDUCZ | | 0.3000 | 0.0960 | 47.1% | 0.3000 | 0.1028 | 52.1% |
| PANK6K | X | 0.6765 | 0.4725 | 231.6% | 0.2790 | 0.0818 | 41.5% |
| QLB9DP | X | 0.5950 | 0.3910 | 191.7% | 0.5800 | 0.3828 | 194.1% |
| R3DBN3 | | 0.2850 | 0.0810 | 39.7% | 0.2550 | 0.0578 | 29.3% |
| R6G7AQ | | 0.3850 | 0.1810 | 88.7% | 0.2850 | 0.0878 | 44.5% |
| RAEPCN | | 0.2900 | 0.0860 | 42.2% | 0.2300 | 0.0328 | 16.6% |
| RGD8NF | X | 1.6400 | 1.4360 | 703.9% | 0.2065 | 0.0093 | 4.7% |
| THZBUR | | 0.2205 | 0.0165 | 8.1% | 0.1885 | -0.0087 | -4.4% |
| TKCQNT | X | 0.6910 | 0.4870 | 238.7% | 0.5145 | 0.3173 | 160.9% |
| TRAF8H | M | 0.2500 | 0.0460 | 22.5% | No data reported for this sample % | | |



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

Report #049
Spring 2015

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|------------------------|--------------------------|-------------|------------------------|--------------------------|
| | | Lab Mean | Diff from Target Value | % Diff from Target Value | Lab Mean | Diff from Target Value | % Diff from Target Value |
| U4X2QH | | 0.3750 | 0.1710 | 83.8% | 0.2750 | 0.0778 | 39.5% |
| UTZZCT | | 0.3170 | 0.1130 | 55.4% | 0.3205 | 0.1233 | 62.5% |
| UY38TG | | 0.1100 | -0.0940 | -46.1% | 0.2000 | 0.0028 | 1.4% |
| V7J38Q | X | 0.4950 | 0.2910 | 142.6% | 0.2950 | 0.0978 | 49.6% |
| W72EMB | | 0.1900 | -0.0140 | -6.9% | 0.1760 | -0.0212 | -10.8% |
| WF32DL | | 0.3000 | 0.0960 | 47.1% | 0.2500 | 0.0528 | 26.8% |
| Y3QDDN | | 0.2545 | 0.0505 | 24.8% | 0.2545 | 0.0573 | 29.1% |
| YEJT3P | | 0.2400 | 0.0360 | 17.6% | 0.2400 | 0.0428 | 21.7% |
| Z7LLYA | | 0.0900 | -0.1140 | -55.9% | 0.0500 | -0.1472 | -74.6% |

| Research Property Target Value | | |
|--|--------------------|--------------------|
| Target Value | 0.20400 NTU | 0.19720 NTU |
| <p align="center"><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: SA95: White Zinfandel; SA96: White Zinfandel

| | | |
|---|-------------|-------------|
| Consensus Average (may differ from target value) | 0.20399 NTU | 0.19720 NTU |
|---|-------------|-------------|

This consensus average is based on 42 reporting participants.



Comments on assigned Data Flags

8J94UZ (X) - High data for Sample SA95. Also inconsistent in testing within the determinations for both samples.

9PQQ4V (X) - High data for Sample SA96.

9PQTQE (X) - Inconsistent in testing between samples, data for Sample SA96 are high.

9RFZBC (X) - Data for both samples are high.

EDECL6 (X) - Data for both samples are high.

H6RNFR (M) - Laboratory did not submit data for Sample SA96.

JRMMHG (X) - High data for Sample SA96.

PANK6K (X) - High data for Sample SA95.

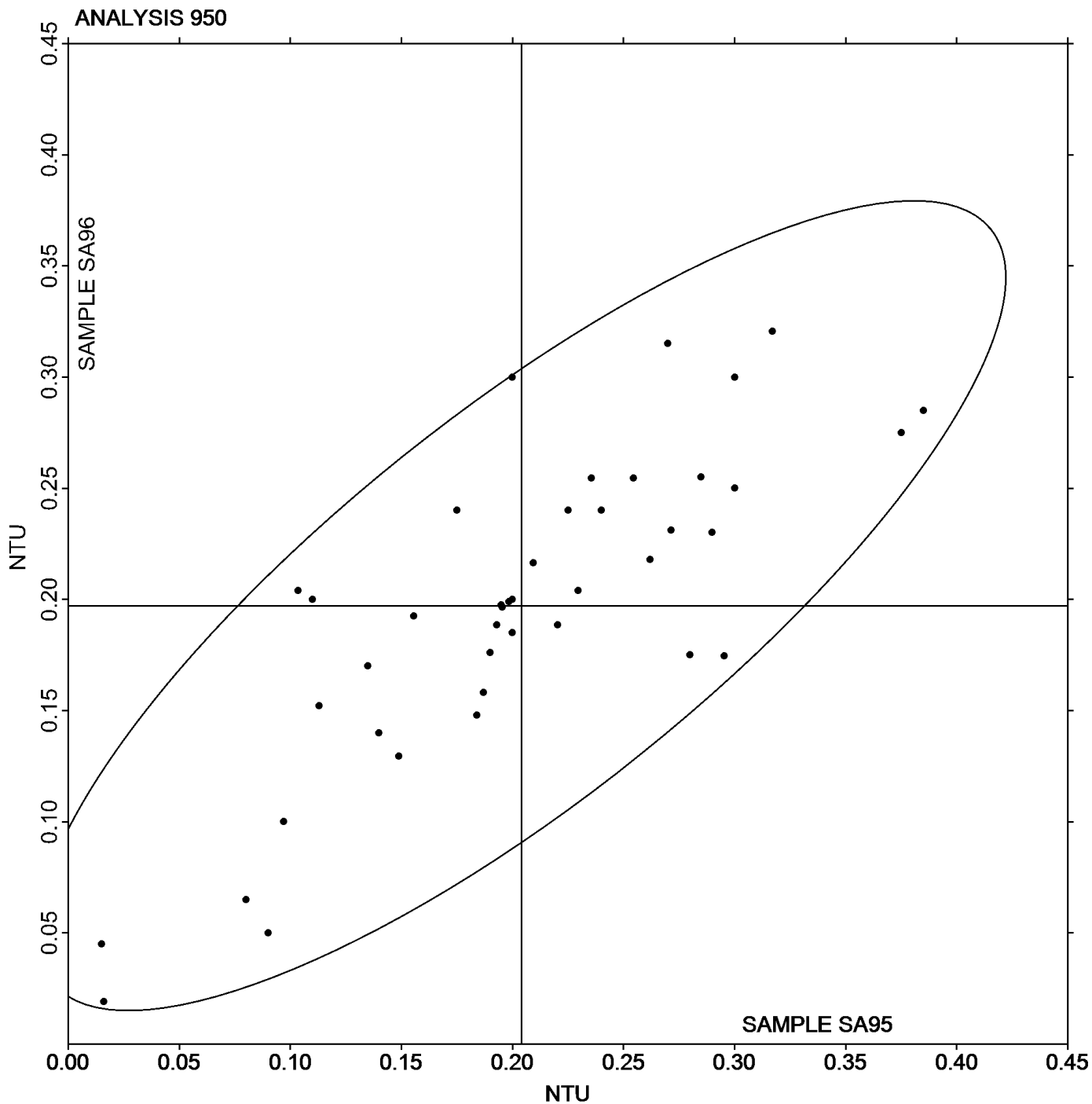
QLB9DP (X) - Data for both samples are high.

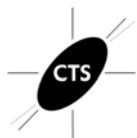
RGD8NF (X) - High data for Sample SA95.

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

TRAF8H (M) - Laboratory did not submit data for Sample SA96.

V7J38Q (X) - Inconsistent in testing between samples, data for Sample SA95 are high.





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

Report #049
Spring 2015

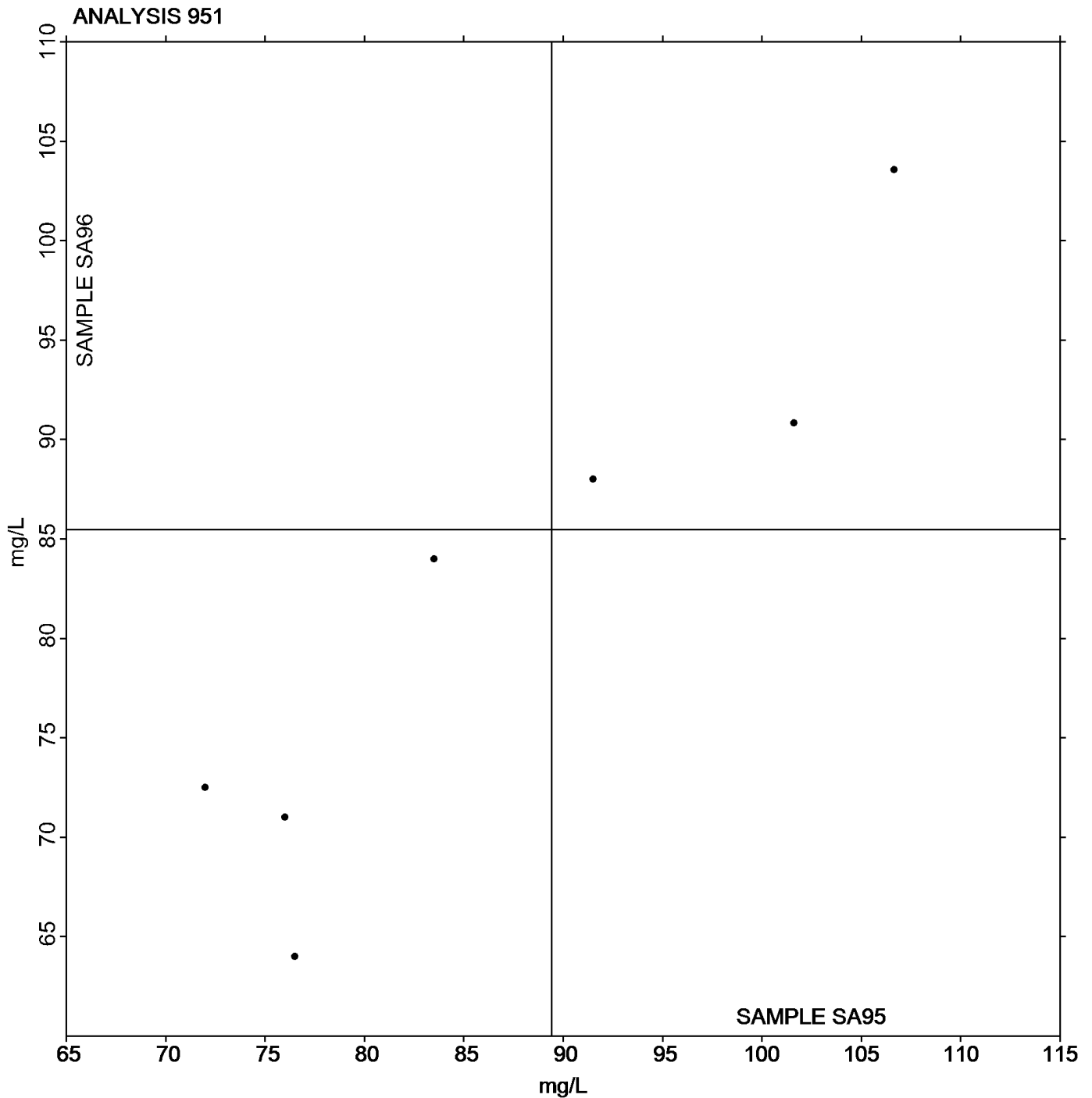
| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|------------------------|--------------------------|-------------|------------------------|--------------------------|
| | | Lab Mean | Diff from Target Value | % Diff from Target Value | Lab Mean | Diff from Target Value | % Diff from Target Value |
| 7L2FDF | | 76.00 | -13.41 | -15.0% | 71.00 | -14.48 | -16.9% |
| 86PGK3 | | 72.00 | -17.41 | -19.5% | 72.50 | -12.98 | -15.2% |
| 93ZAZ6 | | 107.50 | 18.09 | 20.2% | 110.00 | 24.52 | 28.7% |
| 9PQQ4V | | 101.61 | 12.20 | 13.6% | 90.82 | 5.34 | 6.2% |
| F2JN7V | | 106.65 | 17.24 | 19.3% | 103.55 | 18.07 | 21.1% |
| FZN629 | | 91.50 | 2.09 | 2.3% | 88.00 | 2.52 | 2.9% |
| R3DBN3 | | 76.50 | -12.91 | -14.4% | 64.00 | -21.48 | -25.1% |
| R3DBQM | | 83.50 | -5.91 | -6.6% | 84.00 | -1.48 | -1.7% |

| Research Property Target Value | | |
|--|--------------------|--------------------|
| Target Value | 89.408 mg/L | 85.484 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: SA95: White Zinfandel; SA96: White Zinfandel

| | | |
|---|--------------------|--------------------|
| Consensus Average (may differ from target value) | 89.408 mg/L | 85.484 mg/L |
|---|--------------------|--------------------|

This consensus average is based on 8 reporting participants.



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



Research Property: Ethanol (% of Volume) using Dist. / Density Method

| WebCode | Data Flag | Sample SA95 | | | Sample SA96 | | |
|---------|-----------|-------------|----------------------|--------|-------------|----------------------|---------|
| | | Lab Mean | Diff from Grand Mean | CPV | Lab Mean | Diff from Grand Mean | CPV |
| 76RNBB | X | 1.010 | -7.294 | -54.78 | 1.009 | -7.437 | -132.65 |
| 7L2FDF | X | 16.450 | 8.146 | 61.18 | 16.840 | 8.393 | 149.70 |
| 86PGK3 | | 8.370 | 0.066 | 0.49 | 8.560 | 0.113 | 2.02 |
| 9LRHVF | | 8.250 | -0.054 | -0.41 | 8.450 | 0.003 | 0.06 |
| 9PQQ4V | | 8.290 | -0.014 | -0.11 | 8.395 | -0.052 | -0.92 |
| FZN629 | | 8.300 | -0.004 | -0.03 | 8.500 | 0.053 | 0.95 |
| M9FQAU | | 8.250 | -0.054 | -0.41 | 8.400 | -0.047 | -0.83 |
| NBDUCZ | | 8.320 | 0.016 | 0.12 | 8.460 | 0.013 | 0.24 |
| R3DBQM | | 8.600 | 0.296 | 2.22 | 8.400 | -0.047 | -0.83 |
| RAEPCN | | 8.100 | -0.204 | -1.54 | 8.400 | -0.047 | -0.83 |
| V7J38Q | | 8.260 | -0.044 | -0.33 | 8.455 | 0.008 | 0.15 |

Research Property Target Value

Target Value

8.3044

Percent of volume

8.4467

Percent of volume

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

Wines tested: SA95: White Zinfandel; SA96: White Zinfandel

Consensus Average (may differ from target value)

8.3044

Percent of volume

8.4467

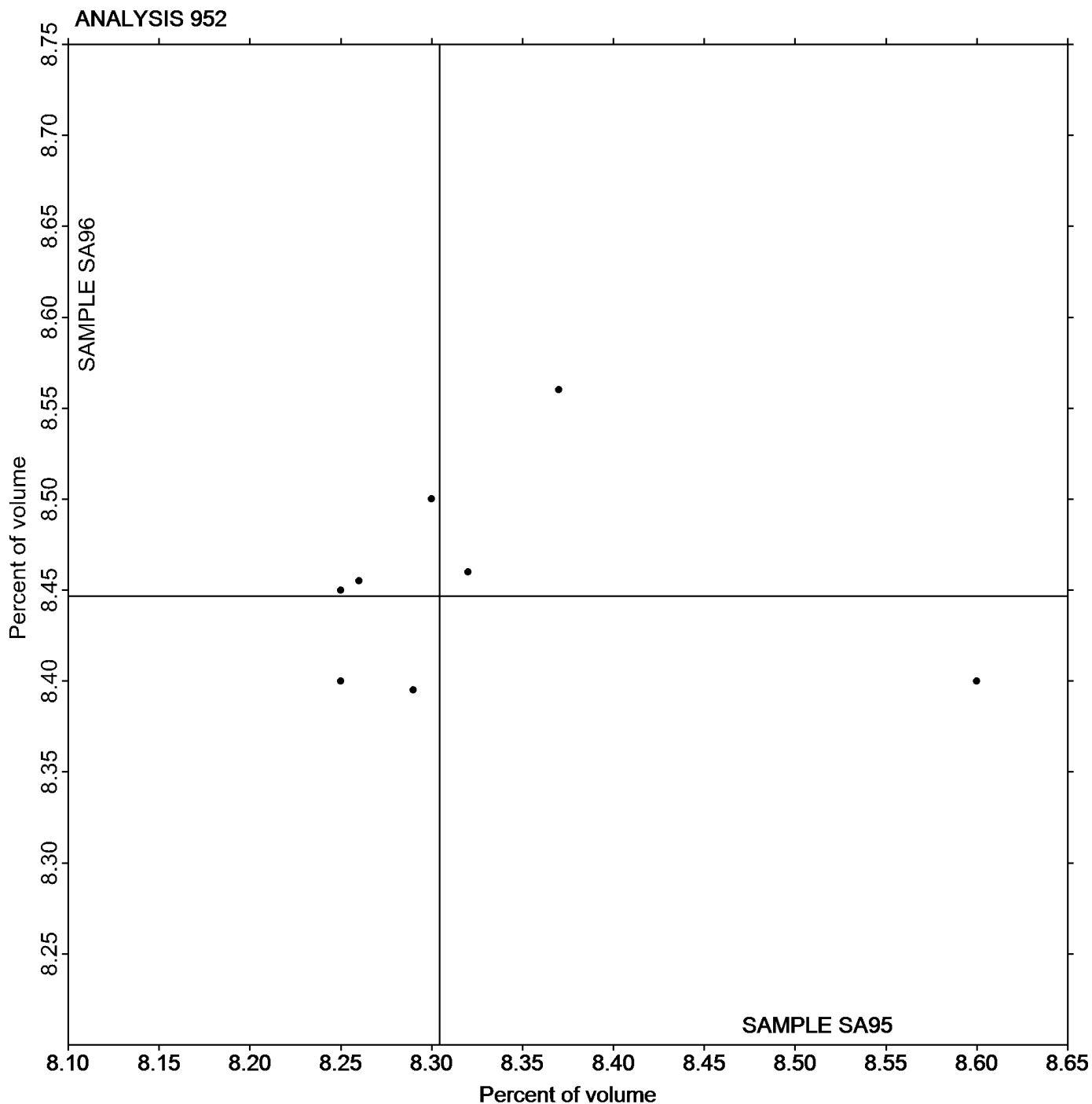
Percent of volume

This consensus average is based on 9 reporting participants.

Comments on assigned Data Flags

76RNBB (X) - Data for both samples are low.

7L2FDF (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.