



Sparkling Wine Review Analytical Results 2010

The first Sparkling Wine Review was held on 9th and 10th November 2010 at Denbies Wine Estate in Dorking, Surrey, UK. Wines from 13 different sparkling wine regions in 10 different countries entered the Review: Argentina, Australia, Chile, England, France (Burgundy, Champagne & Loire), Italy, Languedoc, Loire, New Zealand, Portugal, Russia and Spain.

All wines submitted were first analysed by Corkwise Ltd using wine scan. The chemical analysis consisted of Pressure (bar), Alcohol in % vol (both actual and on the label), Total Acidity (g/l as tartaric), Volatile Acidity (g/l), pH, Residual Sugar (g/l) and Free and Total SO₂ (ppm).

For the organoleptic assessment, wines from the 10 participating countries were first tasted blind. No indication of country or method of carbonisation was given to the members of the tasting panel who assessed the wines and produced tasting notes.

After the initial assessment, the tasting panel was provided with the following information: the country, region, sweetness classification, variety, production method and chemical analysis.

The panel then conducted a general assessment of the wine and its regional typicity.

As would be expected, the analytical analyses showed general regional similarities, however there were also some wide variations both within regions and more broadly. Observations are summarised below.

Pressure

The pressure of the headspace between the bottom of the cork and the top of the wine in the bottle was measured. This is an indication of the wine's effervescence.

Pressure within the bottle varied widely from 6.7 to 3.6 atmospheres in wines fermented in the bottle. Generally French wines were the most consistent in pressure (and highest) with the greatest fluctuations occurring amongst Italian and Spanish entries.

All wines that gained 90 or more points contained greater than 5 atmospheres.

Sulphur Dioxide

Sulphur Dioxide (SO₂) has been used in winemaking for centuries and is added for the dual purpose of avoiding oxidation and for its anti microbial attributes.

Levels of Free SO₂, which actively plays a part in wine conservation, varied from virtually nil to a maximum of 31. Total SO₂, which is an indicator of wine handling, ranged from 24 to 163.

French Sparkling Wines tended to lower Free and Total SO₂, whereas the sparkling wines from Italy were all high. English sparkling wines were analytically virtually identical to their Champagne counterparts, reflecting the similarity in climate as well as the influence that the Champagne region has had on English Sparkling technology.

Interestingly high priced new world wines tended to have higher SO₂ than their northern counterparts, perhaps reflecting a greater fear of oxidation and higher pHs in warmer climates.

pH and Total Acidity

pH is a measure of the acidic or basic nature of a wine and is important for wine stability (generally the lower the better), whereas total acidity is a measure the acid taste of the wine and has a large part to play in the overall balance of a wine.

All countries showed a relatively low pH of between 2.85 and 3.3. Total Acidities varied hugely from a minimum of 4.4 g/l to a maximum of 9.2 g/l. All wines that scored over 90 points, regardless of sugar level, had an acidity over 6 g/l.

Volatile Acidity

The two main constituents of VA are Acetic Acid and Ethyl Acetate: oxidative spoilage characters directly related to poor quality fruit and/or bad winemaking practices. The lower the VA the better, and the samples analysed ranged from 0.22 g/l to 0.56 g/l in whites wines and 0.78 g/l in reds.

Sugar

The sweetness of sparkling wines varies and should balance the acidity. Amongst the samples tested, residual sugar varied from 1.7 g/l to 32 g/l.

Alcohol

Alcohol content varied from 8.06% (a low alcohol carbonated wine from South Africa) to 12.71%. All wines that scored above 90 points ranged from 11.5% to 12.5%.

AVERAGE WINE ANALYSIS BY COUNTRY

Country	TA	VA	pH	FSO2	TSO2	BAR	Sugar	Alcohol	Score
Australia	5.9	0.44	3.24	12	98	4.25	18.0	11.89	86.3
Chile	6.9	0.34	3.08	6	88	4.94	10.1	11.89	77.4
England	6.9	0.47	3.16	7	48	5.16	11.5	11.81	82.7
France	6.7	0.39	3.10	4	59	5.36	13.6	11.14	87.1
Italy	5.5	0.23	3.17	13	128	4.05	15.6	11.04	83.7
New Zealand	6.9	0.40	3.09	7	82	4.98	13.1	12.16	86.5
Portugal	5.7	0.53	3.17	7	137	4.75	5.7	11.76	87.5
Russia	7.2	0.31	3.07	1	92	4.03	13.2	12.23	81.0
S Africa	6.2	0.36	3.21	17	92	4.77	9.2	10.63	84.8
Spain	6.4	0.27	3.02	8	94	4.93	12.6	11.55	84.5

The average chemical analysis and the average score in the organoleptic assessment for each country is tabled above.

Prepared by the Sparkling Wine Review 2011
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