Alcohol meter for wine

Direct alcohol determination, tailored to your needs

The determination of alcohol is common practice for manufacturers of wine, cider, and related products. Knowledge of the alcohol content is crucial for production monitoring, quality control, blending, and labelling.

Alcolyzer Wine M/ME is virtually maintenance-free and can be configured to meet your needs now and in the future.

Thanks to the modularity, you can choose your configuration meeting your exact requirement.

The modular system

▶ **Alcolyzer Wine M/ME** for selective alcohol determination (%v/v) in wine, sparkling wine, cider, rice wine, alcopops, and fermenting must

▶ **DMA M** density meters combined with an Alcolyzer Wine M/ME allow the simultaneous determination of alcohol %w/w, specific gravity, and total extract (g/L) for volume calculation, truck loading, and bottle filling heights.

▶ **HazeQC ME** to measure turbidity – important for filtering with cross flow or other filters, which requires a low turbidity to avoid clogged filters and keep costs down

▶ **pH ME Beverage** for simultaneous determination of the pH value

▶ **Xsample 320 Beverage** sample filling unit for automatic filling out of a sample vial or directly out of a bottle

▶ **Xsample 520** sample changer optionally added for increased efficiency – fully automatic measurement of up to 24 samples

Results in less than three minutes

Alcolyzer Wine M/ME uses a built-in Peltier thermostat to ensure accurate and automatic control of the temperature in the shortest time. Consequently, there is no need for manual temperature adjustment and correction.

Measurement with Alcolyzer Wine M/ME requires minimum sample preparation. Samples can be measured immediately after each other with one and the same adjustment.

To increase your efficiency connect a plug and play Xsample 520 sample changer to automate up to 24 measurements at once. Filling and measuring takes less than three minutes per sample.

Selective alcohol determination

Alcolyzer Wine M/ME uses selective alcohol determination based on near infrared (NIR) spectroscopy to determine the alcohol content in a highly alcohol-specific range of the spectrum. The alcohol results based on this type of evaluation are virtually free of influences from other known wine constituents. Therefore, a simple adjustment with water and one binary solution is sufficient to cover the entire range of wine.

Alcolyzer Wine M/ME utilizes an optical setup without any moving parts. The instrument consists of a near infrared LED, a sample cell, and a grating spectrometer with a detector array. The absorption information read by the detector array is used to determine the alcohol content of the sample.

Patented method for precise results

Certain established methods are either time-consuming or do require experienced operators. Methods such as the combined density and refractive index method or boiling point determination tend to be inaccurate because the underlying measuring properties are non-specific to alcohol. Anton Paar developed Alcolyzer Wine M/ME to make these problems a thing of the past.

Alcolyzer Wine M/ME from Anton Paar uses a NIR-based method to selectively determine the alcohol content. For this reason, the other constituents of the beverage do not influence the result and the measurement is valid for all vintages, regions, and products.

Whether you measure white or red wine, sweet or dry wine – one adjustment is valid for all wine types.

Compared to distillation, the acknowledged reference method for alcohol determination at present, the Alcolyzer Wine M/ME (employing an NIR method as also described in "Resolution OIV/OENO 390/2010 Appendix 1") achieves repeatabilities of ±0.01 %v/v alcohol.

Easy operation

- Independent of vintage and product composition with one and the same adjustment

- No extensive calibration and adjustment required

- USB keyboard, USB bar code reader, and USB mouse support

- Selective NIR-based alcohol determination as also described in "Resolution OIV/OENO 390/2010 Appendix 1"

- Free user-definable display, data format, memory and output to printer or file

- 1000 results optionally stored in the system and printed (USB or RS-232) or exported via USB, RS-232, or LAN (Ethernet) to a central data acquisition server

Technical data

Measuring range	0 %v/v to 20 %v/v (data will be displayed up to 30 %v/v)
Repeatability (s. d.)	± 0.01 %v/v alcohol
Temperature control	Built-in solid state thermostat (Peltier) Repeatability: ± 0.01 °C
Minimum amount of sample	approx. 3 mL
Typical sampling time	Less than 3 minutes including filling
Sample throughput	10 to 30 samples per hour including filling
Alcolyzer Wine M stand-alone instrument	
Dimensions (L x W x H)	495 mm x 330 mm x 230 mm (19.5 in x 13 in x 9.1 in)
Weight	approx. 17.6 kg (38.8 lbs)
Power supply	AC 100 V to 240 V, 50/60 Hz
Power consumption	50 VA to 80 VA
Interfaces	Ethernet (LAN), 4x USB, RS-232, CAN, VGA

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