

Rugged, Portable Density Monitoring For Quality Wine Production

Winemaking has a long tradition, and good vintages reflect both environmental conditions and the vintner's care. At the Arenenberg Center in Switzerland, METTLER TOLEDO's Density2Go™ handheld density meter is used for daily measurements in vineyard and cellar alike, helping to produce the finest wines.



METTLER TOLEDO

The Arenenberg Center, on Lake Constance, in Switzerland, has a winemaking tradition dating back to the days of Napoleon. More than three hectares of vineyards are cultivated to produce both red and white wine, and viticulture techniques are taught to aspiring oenologists.

Since 2019, Peter Mössner, who manages Arenenberg’s winery, has been using METTLER TOLEDO’s Density2Go handheld density meter both to check the ripeness of the grapes in the vineyards and to monitor wine fermentation in the cellar—helping to ensure the quality of each vintage.

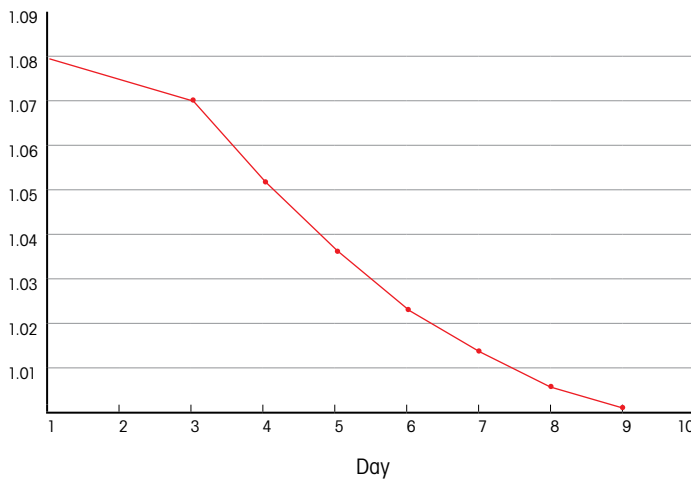
Ensuring high quality wines

One of the most important parameters in wine production is the sugar content of the grapes. Accurately determining this value is crucial to deciding when to harvest for the highest quality wine. After grapes are harvested and crushed, the must (whole fruit juice) ferments in tanks for 10 to 14 days. During this time,

yeast in the must metabolize the sugar in the grape juice, resulting in the production of ethanol and CO₂ (technically waste products), along with flavors. To monitor this process, winemakers typically measure density or specific gravity (SG) at least once per day, generating a fermentation curve (Figure 1). Tracking the slope of the curve provides insight into the fermentation process and allows the winemaker to influence it, adding nutrients or adjusting the temperature for optimal quality.

The ideal solution

Since his acquisition of a Density2Go for the Arenenberg Center, Peter Mössner has found it simple and comfortable to use. It sits easily in his hand; the measuring cell is filled automatically by pushing a joystick, allowing one-handed operation—ideal when working in the vineyard to check the ripeness of the grapes, as the second hand is left free to assist with sampling.



Day	Density (SG)
1	1.0793
3	1.0697
4	1.0517
5	1.0359
6	1.0228
7	1.0133
8	1.0054
9	1.0008

Figure 1. Sample fermentation curve: density or specific gravity is measured at least once per day during fermentation, permitting the winemaking process to be tracked and adjusted for a high-quality outcome.

All results are saved automatically, allowing Mr. Mössner to move quickly from one vine to the next without needing to transcribe values. The visibility is excellent indoors and outdoors, with the bright color display easy to read in both sunny vineyards and the dark wine cellar. The protective cover guards against minor scratches and damage from use in the vineyards, and the accompanying wrist strap prevents accidental dropping of the instrument.

With favorable growing conditions and support from the Density2Go handheld density meter, Mr. Mössner can continue Arenenberg's two century tradition of producing the finest wines.

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► www.mt.com/Densito
<http://y2u.be/pbjaiHV5I-k>



Density2Go™ Handheld Density Meter

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Laboratory
Local contact: www.mt.com/contacts

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