

A man wearing glasses and a black and white striped long-sleeved shirt is standing in a laboratory. He is leaning over a counter, touching the top of a wine bottle. There are several other wine bottles on the counter. In the background, there is a computer monitor and various laboratory equipment. The scene is brightly lit, suggesting a clean and professional environment.

# Testing time decreases ten-fold for a commercial wine lab in Germany

The Pfalz wine region is a narrow nine-mile stretch of land sheltered to the west by the Pfazerwald and bordered to the east by the Rhine River. It is the second largest German wine grape growing region and extends as far south as the Alsace region in France. The ratio of grapevines to people in this idyllic landscape is said to be 600:1. One of Germany's warmest growing regions boasting an average 1800 hours of sunshine per year, the Pfalz region's grapes benefit from dry summers and mild winters. Reisling is the most common white wine varietal grown followed closely by a red wine varietal called Dornfelder.

Weinlabor Braun, a commercial wine analysis laboratory located in the heart of the Pfalz wine region, tests the following local varietals: Riesling, Silvaner, Pinot Blanc, Pinot Grigio, Chardonnay, Dornfelder, Pinot Noir, and Portugieser. Gunter Braun, his wife Ewa, and two part time associates process about 10,000 samples per year for alcohol, sugar, total acid, density, and sulfite aiming to meet certain strict parameters so that the finished wine can be labeled from this region. The laboratory is officially certified by the Chamber of Agriculture Rheinland-Pfalz to examine and provide quality control for wine and sparkling wine from the region.

Their busiest testing period from October to April occurs during and immediately after harvest. Up to 120 samples per day arrive during harvest at which time they test for sugar, acetic acid, total acidity, and alcohol. After harvest malic, lactic and tartaric acids are the required tests.

In the laboratory they have been able to replace older HPLC methods with a Thermo Scientific™ Gallery™ discrete analyzer to test organic acids.

*“The Gallery analyzer is much faster than HPLC. It used to take about 30 minutes to run one sample and sometimes, tests would run overnight.”*

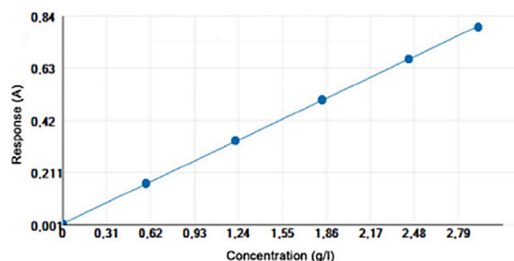
Now they can complete all the necessary tests at the same time in about 30 minutes.

*“If a sample is in before 4 PM, we can provide results the same day.”*

Their new Gallery discrete analyzer is equivalent in capacity to their older Thermo Scientific™ Arena™ 20XT discrete analyzer. These two instruments combined allow the lab to measure several parameters simultaneously and offer enough flexibility to alter tests if necessary.

*“We need the ability to measure several parameters at once and also be flexible enough to change our mind.”*

Currently, acetic acid is one of the most important tests and can easily be measured with precision and repeatability using a discrete analyzer. In the near future they hope to add a sulfur dioxide test, for total SO<sub>2</sub> and free SO<sub>2</sub>, to their current regimen in order to comply with certain strict legal limits that need to be met. Customers expect consistent results and as an experienced lab technician, Mr. Braun can provide them.



**Fig 1. Thermo Scientific Gallery discrete analyzer calibration curve for glucose**

Sample	Response	Calc. Conc.	Theoretical
Water	0.001	-0.016	0.000
Dry wine	0.167	0.598	0.586
Dry wine	0.337	1.226	1.220
Dry wine	0.502	1.837	1.830
Dry wine	0.666	2.445	2.440
Dry wine	0.793	2.915	2.928

**Table 1. Results report**



“The Gallery analyzer is much faster than HPLC. If a sample is in before 4 PM, we can provide results the same day.”

—Gunter Braun,  
Viticulture Laboratory Technician, Weinlabor Braun

Reported results are from Weinlabor Braun; results may vary for other laboratories.

Find out more at [thermofisher.com/discreteanalysis](https://thermofisher.com/discreteanalysis)

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