– CUSTOMER SUCCESS STORY –

Sarco Laboratory, Floirac, France

Accurate devices, high throughput, and full traceability in wine testing

In the beverage testing laboratory Sarco Laboratory accurate results and full traceability of each and every sample are of the utmost importance. The employees' job isn't easy, especially during the harvest season when countless samples arrive at the lab day by day making high sample throughput a factor that must be taken into account. The dedication and knowledge of the experts at Sarco guarantee that everything works perfectly – and the world's most accurate density meter also contributes its share.

Relevant for: wine

The Sarco Laboratory is located in the city of Floirac, close to Bordeaux, France, and was created in 1991. It currently has 25 employees and, following a strategic rapprochement between Excell and Sarco laboratories in 2018, a combination of knowledge and high-tech equipment has led to a unique center of expertise for beverage analysis. Sarco is a highly specialized but versatile beverage testing lab – performing any task from sample collection to data interpretation – which can provide its customers with more than 700 measured parameters. It mainly analyzes wine samples, but also beer, spirits, and non-alcoholic drinks can be tested. As of today, 50,000 samples per year are measured. To calculate this number, the sample throughput for the main analyzed parameters, such as density and alcohol content, is taken into account.

Sarco has been compliant to the ISO 17025 standard for 20 years already for most of the measured parameters. This asks for an efficient quality management system that involves the whole organization of the laboratory. All the skills needed for sample analysis have to be covered. Accurate measurement by well-trained operators, accurate devices, and irreproachable traceability are guaranteed.

The Sarco Laboratory can provide its customers with more than 700 measured parameters.

Going digital with Anton Paar

At Sarco, until 2016 density measurements were performed using hydrometers. However, this came with some disadvantages as Guillaume Chamont Haro, Oenologist and Development Responsible, explains: “First of all, there is a real risk of damage. Plus the measuring time is long: roughly five minutes per sample. And all the traceability has to be written by hand, which, of course, bears a high risk of human error.” So, the Sarco Laboratory eventually looked for a different way to determine the density and the alcohol content. “The solution was not difficult to find because the laboratory has also been a happy user of CarboQC, Anton Paar’s device for determining the dissolved CO_2 in beverages, since 2014,” explains Mr. Chamont Haro.

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>
> *Nadine Etcheverry*

Another important factor that played a role in the decision was that density measurement based on the technology of an oscillating U-tube density meter is compliant with the wine standard OIV-MA-AS2-01A. Nadine Etcheverry, Oenology Technical Responsible, describes why Sarco and Anton Paar are a perfect match: “Anton Paar has been constantly improving the technology of digital density meters ever since its invention in the 1960s. The Sarco laboratory needs the most accurate devices. We chose to measure with a DMA 5000 M density meter because it is the most accurate digital density meter on the market.”

DMA 5000 M and Xsample 122 for high accuracy and high throughput

DMA 5000 M and Xsample 122 – high accuracy and high throughput

At Sarco, the benchtop density meter DMA 5000 M is used for measuring the density of incoming samples – mainly of must for fermentation monitoring, wine, spirits, and non-alcoholic beverages – as well as for determining the alcoholic strength by volume after the distillation of certain samples. During the harvest time roughly 800 samples have to be measured in eight weeks. Thanks to the sample changer Xsample 122, the throughput is considerably increased compared to the manual density determination that was carried out before. This way precious time is saved and this enables the operators to perform further analyses. The employees at Sarco also greatly appreciate the benefits of the LIMS Bridge software: DMA 5000 M is able to receive sample lists that were written on a computer and the measurement data can be exported to the LIMS with all the information required, for example sample name or batch number. Not only technology, but also customer service is what makes the difference for Sarco. “The spirit of Anton Paar is not only to provide high-tech devices but also to be very close to the customer.” says Ms. Etcheverry and explains further: “The support team at Anton Paar made a quick and efficient installation of the device possible, for example by helping with methods settings and LIMS connectivity”.

Ms. Etcheverry

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Anton Paar equipment is up for the challenge: During the harvest time about 800 samples are measured in eight weeks.

The DMA 5000 M density meter has quickly become the reference method for density and alcohol measurements at the Sarco Laboratory and is also employed in adjusting the same parameters for use in other technologies, for example in FTIR. Sarco Laboratory and Anton Paar – it really is a perfect match.

Main points at a glance

MEASURED PARAMETERS Density and alcoholic strength by volume

INSTRUMENTS DMA 5000 M, Xsample 122

ACCURACY ±0.000007 g/cm^3

SAMPLE THROUGHPUT 30 samples per hour