



# SENTIA™

## WINE ANALYZER

THE POWER OF A LAB IN THE PALM OF YOUR HAND



# Sentia is a hand held, portable testing device which will **change the nature of laboratory testing** in the wine industry

## Where Sentia™ is Used

Sentia measures the concentration of free sulfur dioxide (free SO<sub>2</sub>) in post-fermentation wine. It is called free SO<sub>2</sub> because we are only measuring the sulfur dioxide that has not bound with other chemicals in the wine (such as aldehydes, pigments, or sugars).

Sulfur dioxide is an additive used during the production of wine. In bottled wine, free SO<sub>2</sub> acts as a preservative but there is a balance to strike: too much free SO<sub>2</sub> can taint the consumer experience; too little could mean the wine spoils in the bottle. For this reason, measuring free SO<sub>2</sub> is important to winemakers.

The Universal Biosensors team is currently developing more tests that measure other chemicals important to the winemaking process.

## Sentia™ Measurement Performance

Universal Biosensors has proven Sentia's performance by doing specific studies at typical wineries as well as research institutes in the USA and Australia. A typical study involves statistical comparison between test results collected on Sentia and test results collected using a so-called reference method (which is one of several methods currently used by the industry). Reference methods are typically manual laboratory processes or benchtop chemical analyzers.

It is important to note that Sentia's measurement performance has been proven with typical red wine and white wines. For other types of wine (e.g. sparkling wine, rosé and some light reds), results on the Sentia system may not match reference methods as well. In these cases, each user should start by cross-checking Sentia's test results for their particular wine against an alternate method. Once Sentia's performance has been characterised for their particular wine, users can determine free SO<sub>2</sub> levels with confidence.

## How Sentia™ Works

Universal Biosensors' award-winning technology is used by millions of users all over the world under the brands of some of the world's biggest healthcare companies. Sentia is the culmination of over 15 years of innovation and refinement. With its origins in medical applications (such as blood glucose monitoring), Sentia has now been optimised for use in wine analysis.



SENTIA delivers **medical grade** biosensor technology to the wine industry

SENTIA delivers **gold standard** specificity and sensitivity for **free SO<sub>2</sub> testing** and will deliver Glucose, Fructose and Malic Acid testing capability during 2021

SENTIA will deliver **significant cost savings** and productivity gains to the wine industry



### Easy to use

Anyone in the winery can perform SO<sub>2</sub> testing. Its simple to use and can store up to 1000 tests and is WiFi capable. The Sentia™ analyser saves time & money.



**01.** Easy-to-follow prompts



**02.** At-barrel convenience



**03.** Only small sample drop required



**04.** Quick strip eject mechanism

## The Features and benefits of Sentia™

FEATURE	BENEFITS
Calibration and reagent free	There are no messy reagents because everything is packaged into the Sentia Test Strip. Calibration data is automatically and seamlessly transferred to the Analyzer by WiFi as each batch of Test Strips is manufactured at Universal Biosensors. This frees the user from messy and time consuming calibration.
Compatible with future test types (currently under development)	The same analyzer hardware will be able to test for other chemicals in the future. (Note that this will require an in-field software upgrade which is downloaded automatically in the background over WiFi – but will need the user's permission before installation takes place.).
Measuring range: 3 to 50 mg/L (free-SO <sub>2</sub> )	The measuring range is sufficient for the winemaker to make the required decisions with respect to free SO <sub>2</sub> .
Sample size: at least 8 microlitres	The small sample size makes sample application easier to and more reliable.
In-built quality control checks including: <ul style="list-style-type: none"> <li>• Temperature monitoring</li> <li>• Strip integrity checks</li> <li>• Sample application checks</li> <li>• Analyzer tilt and bump</li> </ul>	The in-built quality control checks make the test results more reliable and less subject to external interference.
Stores up to 1000 test results for reviewing or exporting	The large database of historical results (which can be exported to other devices via WiFi) allows test data to be stored and analysed.
Light and portable with long battery life (up to 100 tests) and quick battery charging	The pocket-sized footprint (similar to a typical smartphone), light weight and long battery life (with quick charging time) makes Sentia a truly portable solution that provides quick and easy tests results wherever they are required.
7cm (2.8in) touchscreen colour display	The rich touchscreen display makes for an intuitive software experience that requires virtually no training or experience, allowing the user to focus on what really matters.
Wireless (WiFi) connectivity	The analyzer connects to WiFi to: <ul style="list-style-type: none"> <li>• download calibration data (done automatically and seamlessly in the background),</li> <li>• export test results to external devices (like laptops, smartphones and tablets)</li> <li>• download software updates automatically (software updates are only installed with the user's permission)</li> </ul>
Convenient strip eject mechanism	An ejection mechanism makes for simple and mess-free strip removal.
Designed for robustness in a wide range of environments	The Analyzer is designed for typical wine production environments and is robust enough to do its job wherever it is needed



## Tech Specs

Technical specifications	
Operating conditions	
Temperature	10 °C to 30 °C (50 °F to 86 °F)
Relative humidity	< 80% (without condensation)
Storage conditions (test strips)	
Temperature	2 °C to 8 °C (35.6 °F to 46.4 °F)
Relative humidity	< 80% (without condensation)
Storage conditions (analyzer)	
Temperature	2 °C to 40 °C (35.6 °F to 104 °F)
Relative humidity	< 80% (without condensation)
Features	
Measurement range	3 to 50 mg/L (free sulfur dioxide)
Interface	Wireless (2.4GHz)
Automatic power off	Configurable: disabled, 10 mins, 20 mins, 30 mins
Dimensions	147 × 84 × 32 mm ( 5.79 × 3.31 × 1.26 in)
Weight	210 g (7.41 oz)
Design lifetime	5 years or 20,000 tests
Sample	
Sample type	Post-fermentation red or white wine

## Frequently asked questions

### Who should use Sentia?

Sentia is designed for winemakers that want to measure free sulphur dioxide concentration in post fermentation red and white wine.

### What does Sentia measure?

Sentia currently measures free sulphur dioxide in post fermentation red and white wine. We are currently working on more tests including glucose, fructose and malic acid to name a few.

### Where can I use Sentia?

Sentia is truly portable. It has the same form factor as a typical smartphone so it will even fit in your pocket. You can use Sentia wherever you need a test result.

### Is sample preparation required?

No sample preparation is required. Simply apply a drop of post fermentation red or white wine to the Test Strip when prompted by the Sentia Analyzer.

### How long does it take to get a measurement?

After you apply your wine sample, Sentia give you a result in under 1 minute.

### Does Sentia store past results?

Yes. Sentia stores up to 1000 results in its memory and can export those results over WiFi.

### Can I analyse my past results?

You can export your past results from Sentia over WiFi in CSV format (a test file format that is very easy to import into a spreadsheet). Once in a spreadsheet, it is easy to analyse, sort and filter your results.

### Do I need to be connected to WiFi to get a result?

Sentia is able to run tests without a WiFi connection. You will need to have a WiFi connection when you first use Sentia so that we can download calibration data from the internet. After that, you will need to connect once every three months or so to download the latest calibration data for new strips made at our production facility. However, we recommend that you stay connected to WiFi as often as possible so that your software can be upgraded when a new version is available.

### Do I need to provide batteries?

Sentia contains a fully enclosed rechargeable battery and comes with a power adapter.

### How long is the battery life?

Sentia can run up to 100 tests between battery charges.

Charging the battery is as simple as plugging in the power adapter (provided).



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