



BARRELWISE

FS1 System

FOR FREE SO₂ ANALYSIS | SPECIFICATION SHEET



The BarrelWise FS1 is a cloud-connected free SO₂ analyzer that automates sample acquisition, analysis and data collection.

FS1 Performance Specifications and Features

Measurement method	Gas-phase optical absorption
Total analysis time	70 sec. with 50-ft hose
Sample volume	70 mL
Measurement range	5 mg/L to 100 mg/L Free SO ₂
Precision	±2.5 mg/L or 5% ¹
Reactant	5 mL of 25% Phosphoric Acid
Sample temp. range	4°C to 25°C
Sample preparation	None (direct from barrel or other vessels)
Calibration procedure	Factory to AO, or customizable ²
Data collection	Automatic upload to secure cloud
Interference issues	None (including turbidity, color, acids, or phenolics)

¹ In-cellar working repeatability, greater of the two i.e. ±2.5 mg/L < 50 mg/L and 5% span > 50 mg/L, 95% confidence interval.

² Customized calibration can be used to align with other lab equipment. Standard calibration is to AO method and is stable.



Winery Requirements for FS1 installation

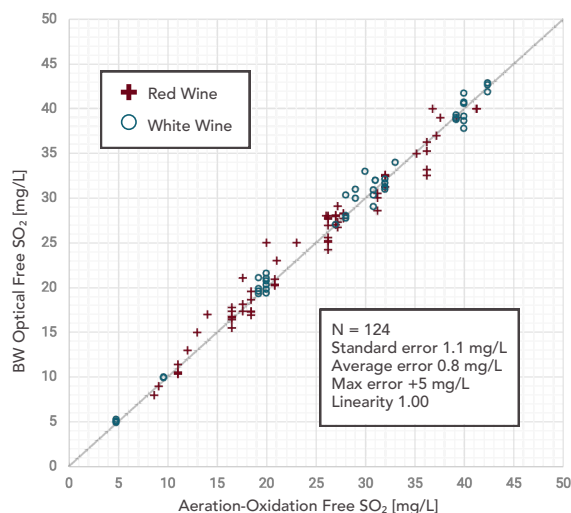
Power input	110V AC
Pneumatic input	60-120 PSI Air or Nitrogen
Connectivity	Wifi connectivity to the Internet
Mobile device	Android 10 or iOS 13 and above



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Produce accurate results

The FS1 produces highly repeatable measurements, the accuracy of which is on par with the aeration-oxidation method regardless of the wine's color, turbidity, or varietal. BarrelWise has also designed the FS1 System to safeguard the results from potential errors during the process and promptly alert both the winery and the BarrelWise support team.

Custom calibrations are also available to match other common lab instruments.

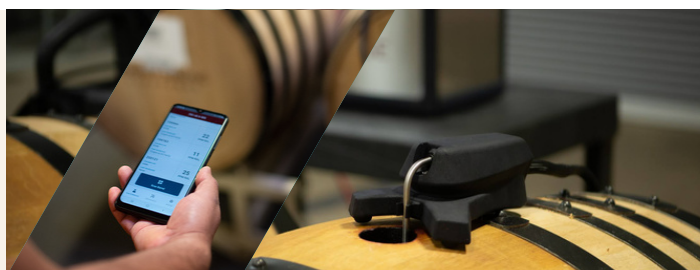
Enable seamless workflow

The FS1 was developed to streamline the free SO₂ management workflow at wineries.

It frees up resources, increases testing capacity tremendously, and is integrated easily into existing winery processes and systems.

HIGH MOBILITY & EASE OF USE

The FS1 enables a single worker to access the barrels, measure free SO₂ quickly and act on the results if predefined by the winemakers. The analyzer is controlled through a mobile device and has a 50-ft hose that allows easy access to most stacked and unstacked barrels. The entire process is automated, from sample collection to data recording.



SINGLE SOURCE OF TRUTH, INSTANTLY

All measurements are instantly available in a cloud database to everyone - cellar crews, winemakers, and BarrelWise technical support team. This means all activities and decisions will happen based on reliable data at any given time.

REAL-TIME MONITORING & SUPPORT

BarrelWise has a team of experts monitoring our deployed instruments in real-time to ensure a trouble-free operation for the winery teams. Our support team is responsive and has all data needed for troubleshooting, allowing us to rapidly address any technical challenges and even preempt many problems before they arise.

