



# Mi455 - Mini-titrator

for the determination of FREE & TOTAL SULPHUR DIOXIDE in wine analysis



Mi455 is a user-friendly microprocessor-based mini-titrator for the determination of free and total sulphur dioxide in the process of wine making. This mini-titrator will give you direct readings with a range of 0 to 400 ppm. The instrument comes with a pre-programmed analysis method for free and total sulphur dioxide measurements on wine sample.

Technically, sulphite is a salt or ester of sulfurous acid, but more commonly, sulfur dioxide (SO<sub>2</sub>). Sulfite is the most effective and widely used preservative in winemaking. It preserves by safeguarding musts and wines against premature oxidation and microscopic life forms that could otherwise spoil wine. It preserves a wine's freshness, helps maintain its color, and is essential for aging wines beyond their first year without deterioration. It also inhibits wild yeasts, thereby allowing cultured wine yeasts to dominate the fermentation. Sulfites may be "bound" or "free." Bound SO<sub>2</sub> combines with aldehyde compounds, those most responsible for oxidation in wines.

Free SO<sub>2</sub> results from the dissipation of active SO<sub>2</sub> and is the only SO<sub>2</sub> that provides antiseptic and oxidative protection to wines. The most efficient way to add free SO<sub>2</sub> to a must, juice or wine is by adding dissolved potassium metabisulfite to it. The effectiveness of free SO<sub>2</sub> is dependent on the pH of the media to which it is added.

### Easy Steps

Prepare the sample to be measured with wine and reagent, push the start button and note the reading.



Mi455	Solphur Dioxide Titrator
Range	0 to 400 ppm of SO <sub>2</sub>
Resolution	1 ppm
Accuracy	5% of reading
Method	ripper titrimetric method
Principle	equivalence point redox titration
Sample Volume	50 mL
ORP electrode	MA924B/1 (included)
Pump Volume	0.5 mL/min
Stirring Speed	1500 rpm
Environment	0 to 50°C; max RH 95%
Power Supply	220V/50 Hz; 10VA
Dimensions	208 x 214 x 163 mm
Weight	2.2 Kg

### Accessories

Mi555-001	Calibration standard, SO <sub>2</sub> (500 mL bottle)
Mi555-002	Titant SO <sub>2</sub> (100 mL bottle)
Mi555-003	Alkaline reagent for total SO <sub>2</sub> , (4 x 100 mL bottle)
Mi555-004	Acid reagent for total SO <sub>2</sub> , (4 x 100 mL bottle)
Mi555-005	Acid reagent for free SO <sub>2</sub> , (4 x 100 mL bottle)
Mi555-006	Stabilizer, SO <sub>2</sub> , (80 pp)
MA924B/1	ORP Electrode
MA9011	Refilling Electrolyte Solution 3.5M KCl, for ORP electrodes, 230 mL bottle
Mi0009	Small stir bars (5 pcs)
Mi0020	50 mL beaker (4 pcs)
Mi0021	25 mL beaker (4 pcs)

### Ordering Information

Mi455 is supplied complete with: Calibration standard SO<sub>2</sub>, Titant SO<sub>2</sub>, Alkaline reagent for total SO<sub>2</sub>, Acid reagent for total SO<sub>2</sub>, Acid reagent for free SO<sub>2</sub>, Stabilizer, SO<sub>2</sub>, MA924B/1 ORP electrode, small stir bar, 2 x 50 mL beakers, 2 x 25 mL beakers, Refilling Electrolyte Solution 3.5M KCl for ORP electrodes 230 mL bottle, test tube set, O-ring, 1 mL syringe, power cable and instruction manual.

