## 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 deterioriation. It also inhibits wild yeasts, thereby allowing cultured wine yeasts to dominate the fermentation. Sulfites may be "bound" or "free." Bound SO2 combines with aldehyde compounds, those most responsible for oxidation in wines.

Free  $\mathrm{SO}_2$  results from the dissipation of active  $\mathrm{SO}_2$  and is the only  $\mathrm{SO}_2$  that provides antiseptic and oxidative protection to wines. The most efficient what 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 SO2 is dependent on the pH of the media to which it is added.

### **Easy Steps**

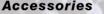
Prepare the sample to be measured with wine and reagent, push the start button and note the reading.



	WII 450
Milwaukee	
	Sulphur Dioxide Titrator
PUMP STIR STARY	
	Will Markers
CAL	
	ANNE LEVEL

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	equivelance 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	





Mi555-001 Calibration standard, SO<sub>2</sub> (500 mL bottle)

Mi555-002 Titrant SO<sub>2</sub> (100 mL bottle)

Alkaline reagent for total SO<sub>2</sub>, (4 x 100 mL bottle)
Acid reagent for total SO<sub>2</sub>, (4 x 100 mL bottle)
Acid reagent for free SO<sub>2</sub>, (4 x 100 mL bottle)
Stabilizer, SO<sub>2</sub>, (80 pp) Mi555-003 Mi555-004 Mi555-005

Mi555-006

ORP Electrode MA924B/1 MA9011

Refilling Electrolyte Solution 3.5M KCI, for ORP electrodes, 230 mL bottle

Mi0009 Small stir bars (5 pcs) 50 mL beaker (4 pcs) 25 mL beaker (4 pcs) Mi0020 Mi0021

### Ordering Information

Mi455 is supplied complete with: Mi455 is supplied complete with: Calibration standard  $SO_2$ , Titrant  $SO_2$ , Alkaline reagent for total  $SO_2$ , Acid reagent for total  $SO_2$ , Acid reagent for free  $SO_2$ , Stabilizer,  $SO_2$ , MA924B/1 ORP electrode, small stir bar, 2 x 50 mL beakers, 2 x 25 mL beakers, Refilling Electolyte Solution 3.5M KCI for ORP electrodes 230 mL bottle, test tube set, O-ring, 1 mL syringe, power cable and instruction manual.

