STEROGLASS®

oenological division

CrioSmall

Instrument for wine tartaric stability evaluation

CRIOSMALL is an instrument for measuring the tartaric stability in wines which is characterized by its extreme compactness. In fact, thanks to its reduced size, this bench instrument does not need any auxiliary equipment to be operated, except for running water for cooling.

The measurement of the tartaric stability in wines is not a direct measurement, as it cannot be done by means of a chemical-physical phenomenon which directly measures it. In fact, the problem not only consists in determining the acid potassium bitartrate concentration present in wines, but also the concentration that wine can dissolve in normal preservation conditions without precipitation in the bottle. Some components slow down or almost completely inhibit the salt precipitation, therefore simple traditional examinations, such as the presence of the precipitates after a certain time period in the refrigerator, cannot give reliable results in many cases.

In these cases, wine is in metastability conditions, that is, theoretically it cannot dissolve said quantity of salts, but various auxiliary phenomena prevent the precipitation. Therefore CRIOSMALL fundamental principle is to favour KHT precipitations by adding an exceeding quantity of it in the shape of finely micronized powders.

Said crystalline powders, added to wine and kept in suspension by stirring, form crystallization nuclei to which the ions in the solution can adhere, thus overcoming the inhibiting phenomena.

On the basis of this fundamental principle, the evaluation of the stability is carried out in an indirect way, that is by determining wine electrical conductivity in different thermal conditions.

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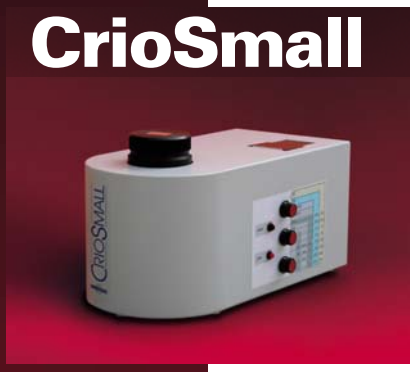


CRIOSMALL system includes:

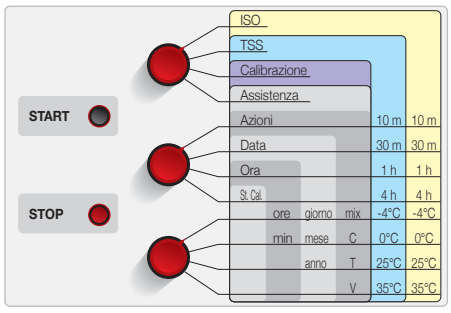
- CRIOSMALL instrument with a print paper roll inserted, analysis chamber full of deionized water with the stirring rod inserted
- Cooling water intake with an adaptor for 3/4 inches faucet and an adaptor from 3/4 to 3/4 inches
- One instruction manual
- Fittings bag containing:
  - ¥ a cleaning brush for the chamber s cap hole
  - ¥ plastic tweezers for extracting the stirring rod from the analysis chamber
  - ¥ a 50ml syringe to facilitate the chamber emptying and cleaning
  - ¥ a bag containing 5 KHT dispensers

¥ serial RS232 interface cable
¥ power supply cable
¥ thermal paper roll
¥ cooling water silicone exhaust pipe
¥ conductivity calibration solution 1413 S/cm
¥ computer connection software

Technical features:

Conductivity meter	
Conversion	D/A at 16 bit
Sensitivity	± 2 S/cm² in isotherm
Measuring range	0 4000 S/cm
Thermometer	
Thermal sensor	with semiconductor
Sensitivity	0.01¡C
Accuracy	0.1¡C
Measuring range	-30¡C +50¡C
Thermal control	
Type	PID linear thermal control algorithm
Conversion	D/A at 16 bit
Thermal oscillation	isotherm control – 0.02¡C
Control range	-4¡C, 0¡C, 25¡C, 35¡C
Analysis chambe	
Volume	20ml
Agitator	magnetic
Access	from top, with screw-cap
Analytic speed	
Isotherm	test at 0¡C in 20 min
TSS	complete test in 35 min
Power supply	
Voltage	220V alternate
Frequency	50Hz
Absorbed power	100W
Dimensions	
Width	26,5cm
Height	26,0cm
Depth	51,0cm
Weight	about 5kg

Control Panel



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SISTEMA QUALITÀ CERTIFICATO UNI EN ISO 9001 SINCERT DNV