

WINE  
line



HI 83540

# Alcohol Analyzer for Wine

 **HANNA**<sup>®</sup>  
instruments  
With Great Products, Come Great Results™



# Accurate, Reliable Alcohol Analysis.

SPECIFICATIONS		HI 83540 Alcohol Meter
Range		0.0 to 25.0 %v/v
Resolution		0.1 %v/v
Accuracy	Fixed Sugar compensation	Meets or exceeds TTB allowable limits of 1.5% for wines containing 14% or less alcohol by volume and 1% for wines containing 14% or greater alcohol by volume.
	Type Sugar compensation	
	Sugar Content compensation	
Sample volume		50 mL
Temperature Compensation		5 to 35 °C (41 to 95 °F)
Electrode		HI 76315 Alcohol probe
Stirring speed		1500 rpm
Environment		0 to 50 °C (32 to 122 °F); max 95% RH non-condensing
Power supply		12 Vdc adapter (included)
Dimensions		208 x 214 x 163 mm (8.2 x 8.4 x 6.4") (with beaker)
Weight		2200 g (77.6 oz.)

## ORDERING INFORMATION

**HI 83540-01** (115V) and **HI 83540-02** (230V) is supplied with reagents set for 50 tests, 60 mL plastic syringe, 30 mL plastic syringe, 100 mL beaker, HI 76315 Alcohol probe, stir bar, power adapter and Instruction manual.

## PROBE

**HI 76315** Alcohol probe

## ACCESSORIES

- HI 83540-50** Standard solution, (3) 500 mL
- HI 83540-51** Electrode cleaning solution (230 mL)
- HI 83540-55** Calibration solution, 230 mL
- HI 731316** Stir bar (5 pcs.)
- HI 740035** Beaker 100 mL (10 pcs.)
- HI 740225** 60 mL syringe
- HI 740235** 30 mL syringe bar
- HI 92000** Windows compatible software

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# Alcohol Analyzer for Wine

## Alcohol determination made simple

Until now, the determination of alcohol in wine required wine makers to invest in expensive gas chromatography or HPLC equipment, or to use alternate methods such as ebulliometry or hydrometry which are time consuming and can be extremely laborious.

HANNA's new HI 83540 alcohol determination analyzer uses a patent pending conductimetric known addition procedure that allows wine makers to accurately determine alcohol concentration in minutes. The basis for this invention is that the change of electric conductivity (EC) of a wine after the addition depends on the amount of alcohol.



The complex software of the instrument performs all the necessary calculations and adjustments, providing the user with a direct readout of alcohol in % volume on the graphic LCD.

## Significance of Use

The alcohol content is a critical parameter in the analysis of wine, representing the first and most important criteria for classifying the wine into taxable classes.

From a qualitative point of view, alcohol concentration has an important role in the conservation of a wine over time.

From a sensory point of view, alcohol content influences the power, warmth and sweetness of a wine. Lower alcoholic concentrations tend to taste sweeter.

The alcohol content is also used to classify wines for taxation: Regional governments' regulations use alcohol % as a criteria to classify the wine as table wine or alcoholic beverage.

The HI 83540 meter measures the alcohol content in wine simply and accurately, displaying the results directly in % v/v units.



## About the Measurement

- Exclusive HANNA patent pending conductimetric known addition procedure
- Quick results: tests takes less than 5 minutes
- Priced for all sized wineries
- No sample preparation required
- Can be operated by all levels of experienced winemakers
- Not dependent on barometric pressure
- See chart for accuracy levels

## About the Instrument

- Backlit LCD with user-friendly interface
- Log and recall data
- USB connection - PC compatible
- Good Laboratory Practice (GLP)
- Calibration data reminders
- Built-in magnetic stirrer
- Twist-on electrode holder
- Choice of automatic (ATC), manual (MTC) or no temperature compensation (NoTC)
- Automatic sugar compensation: fixed, by wine type, and by sugar concentration



## What's Included

Reagents, plastic syringes, beaker, alcohol probe, stir bar, power adapter and instructions.

### ■ Measurement of Alcohol in Wine with the HI 83540

The alcohol determination is made using a new, state of the art method. The wine sample is measured before and after the HANNA reagent is added. The difference between measurements is used to calculate the alcohol content.

In addition to the HI 83540's logging, storage and recall features, readings can be transferred to a PC for further analysis and storage via USB.

### ■ Eliminating Sugar Content Interference

Wine samples are measured without a preliminary treatment. However, the sugar content of the wine may interfere with readings.

In order to eliminate the sugar content interference, the meter has a built-in algorithm for sugar content compensation. There are three types of sugar content compensation: Fixed Sugar Compensation (the same compensation for all wine types); Type Sugar Compensation (depending on the selected wine type) and Sugar Content Compensation (compensation made when the sugar content of a wine is known). Users can configure their desired Sugar Compensation in the SETUP menu and the alcohol content measurement will be made using the selected sugar content compensation algorithm.





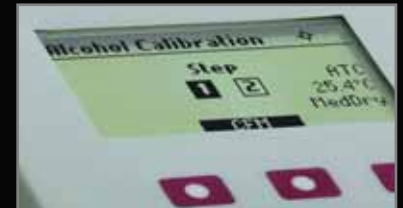
## LCD Display Examples



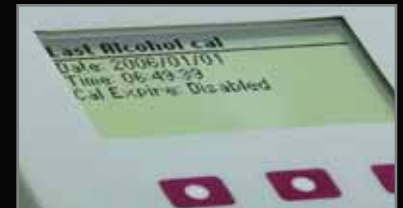
Fast, Easy Measurements



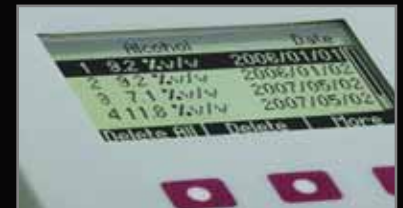
Sample Preparation



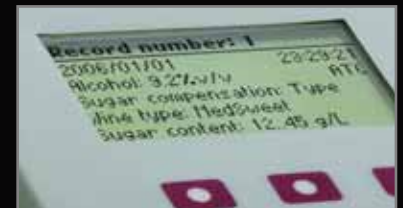
Alcohol Calibration



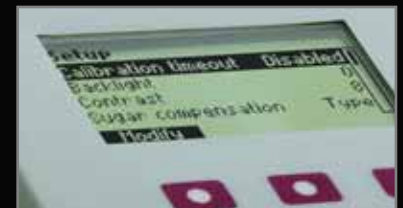
GLP



Recall Menu



Recall Results



Setup Menu

## Accuracy Chart

HANNA HI 83540	Stated Alcohol on Bottle	Ebulliometer
12.7%	13	12.9
13%	13	12.9
13.1%	13	13.1
12.9%	13	13.1

The data above was performed on a 2006 Pinot Grigio with 13% by volume alcohol content on the label.

HANNA's stated accuracy will be benchmarked to the ebulliometer and meets TTB tolerances.



HANNA instruments®  
is dedicated to providing  
the wine producer with  
easy to use, cost effective,  
quality instrumentation  
for wine analysis.



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## Alcohol Analyzer for Wine

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