



# Wine Refractometers

Accurate Analysis for Wine Professionals



4  
models

ISO 9001:2000 CERTIFIED



**B.E.P.S. ±**  
Battery Error  
Prevention System

**2** YEAR  
WARRANTY



**HANNA**<sup>®</sup>  
instruments  
www.hannainst.com



## Refractometers Dedicated to Wine Analysis

### Designed for You

**HANNA** offers four wine refractometers to meet the requirements of cultural differences found throughout the wine industry. The HI 96811, HI 96812, HI 96813 and HI 96814 Digital Wine Refractometers are rugged, lightweight and waterproof for measurements in the lab or field. Each instrument offers a different but valid way to measure the density of grape must and other sugar based liquids.

These optical instruments employ the measurement of the refractive index to determine parameters pertinent to the wine industry.

The actual measurement of the refractive index is simple and quick and provides the vintner a standard accepted method for sugar content analysis. Samples are measured after a simple user calibration with deionized or distilled water. Within seconds, the instrument measures the refractive index of the grape. These digital refractometers eliminate the uncertainty associated with mechanical refractometers and are ideal for measurements in the field.

These four instruments utilize internationally recognized references for unit conversion and temperature compensation. For example, the HI 96811 employs methodology recommended in the ICUMSA Methods Book (Internationally recognized body for Sugar Analysis) for % Brix and the HI 96812 utilizes relationships published in Official Methods of Analysis AOAC International, 18th edition for °Baumé conversions.

Temperature (in °C or °F) is displayed simultaneously with the measurement on its large dual level display along with icons for low power and other helpful messages.



### HI 96811

Measures the refractive index and then displays the sugar content in grape samples from field samples or composite must samples at the winery.

### HI 96812

Measures the refractive index and displays in °Baumé. The °Baumé scale is based upon the density of liquids and is used to measure the sugar levels in winemaking.

### HI 96813

Measures the refractive index and displays both % brix and potential alcohol in units of % V/V.

### HI 96814

Measures the refractive index and displays % brix, Oechsle (°Oe) or KMW (°Babo) measurements.

## Professional Features

### Dual Level LCD

The dual-level LCD displays the measurement as well as temperature readings simultaneously.

### Automatic Temperature Compensation

### Easy Measurement

Place a few drops of the sample in the well and press the READ key.

### B.E.P.S

B.E.P.S. (Battery Error Protection System) alerts the users in the event that low battery power could adversely affect readings.

### IP 65 Waterproof Protection

### Quick, Precise Results

Readings are displayed in approximately 1.5 seconds.

### Single Point Calibration

With distilled or deionized water.

### Small Sample Size

Sample size can be as small as 2 metric drops.

### Automatic Shut-off

### Stainless Steel Sample Well

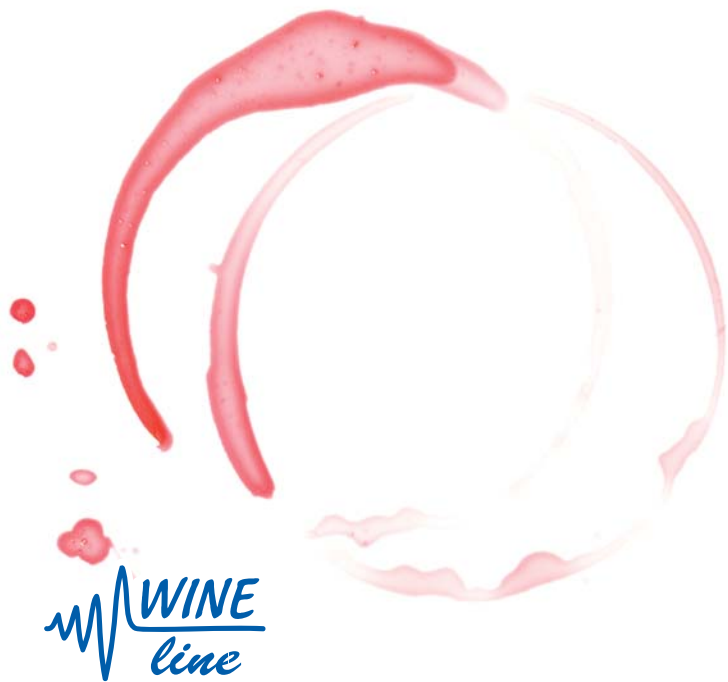


# Technical, Ordering and Accessory Information

SPECIFICATIONS		HI 96811	HI 96812	HI 96813	HI 96814
Range	Sugar Content	0 to 50 % Brix	0 to 27 °Baumé	0 to 50 % Brix; 0.0-25.0 % V/V Potential Alcohol	0 to 50 % Brix; 0-230° Oechsle; 0-42° KMW
	Temperature	0 to 80°C (32 to 176°F)			
Resolution	Sugar Content	±0.1 % Brix	±0.1 °Baumé	±0.1 % Brix; ±0.1 % V/V Potential Alcohol	±0.1 % Brix; ±1° Oechsle ±0.1° KMW
	Temperature	±0.1°C (0.1°F)			
Accuracy (@20°C)	Sugar Content	±0.2 % Brix	±0.1 °Baumé	±0.1 °Baumé; ±0.2 V/V Potential Alcohol	±0.2 % Brix; ±1° Oechsle ±0.1° KMW
	Temperature	±0.3°C (0.5°F)			
Temperature Compensation		Automatic between 10 and 40°C (50 to 104°F)			
Measurement Time		Approximately 1.5 seconds			
Minimum Sample Volume		100 µL (to cover prism totally)			
Light Source		Yellow LED			
Sample Cell		SS ring and flint glass prism			
Auto-off		After 3 minutes of non-use			
Enclosure Rating		IP 65			
Battery Type / Battery Life		(1) 9V / Approx 5000 readings			
Dimensions / Weight		192 x 102 x 67 mm (7.6 x 4 x 2.6") / 420g (14.8 oz.)			

## ORDERING INFORMATION

HI 96811, HI 96812, HI 96813 and HI 96814 are supplied with battery and instruction manual.



P/L HI96811-14\_INC 1.0 PRINTED IN USA