

HI847492

# Haze Meter

for Beer Quality Analysis

- Can report measurements in FTU, EBC, ASBC and HELM
- PC compatible via USB
- GLP Features
- Log-on-demand
- Large, backlit LCD

The HI847492 is auto-diagnostic meter designed to measure the haze in beer. Each instrument features a different measuring unit or light source to comply with different standard requirements.

HI847492 is designed according to the ASBC (American Society of Brewing Chemists) standard for haze in beer measurements.

This instrument compensates beer color to guarantee accurate readings during the brew process. The optical system consists of an LED and multiple detectors. A two, three or four-point calibration can be easily performed at any time using the supplied or user-prepared standards.

HI847492 has all the necessary GLP (Good Laboratory Practice) features to allow maximum traceability of data. Features include a real time clock, log on demand (up to 200 measurements), and Fast Tracker™ –Tag Identification System.

This meter also incorporates a continuous measurement mode to measure the settling rate of suspended matter, and a signal average (AVG) mode to accumulate multiple readings, giving a final average value. The average mode is particularly useful to measure samples with suspended particles with different dimensions.

This meter also features a user-friendly interface, with a large backlit LCD. Acoustic signals and display codes to guide the user step-by-step through routine operations.

No more judging  
by eye!



**FastTracker™**  
location traceability

The HI847492 is equipped with Fast Tracker™ Tag Identification System (T.I.S.) that makes data collecting and management simpler than ever. Fast Tracker™ allows users to record the time and location of a specific measurement or series of measurements using iButton® tags near sampling points for quick and easy readings. Each iButton® tag contains a computer chip with a unique identification code encased in stainless steel.



## Why this instrument is so important...

Beer haze may be defined as an insoluble or semi-soluble particulate matter which is small enough to form a colloidal suspension in beer. These particles scatter transmitted light and are observed as a degradation in the transparency of the beer.

The beer clarity is a parameter constantly controlled in a brewery, and to assure a consistent product quality, the brewmaster needs more than visual inspection.

Several substances can cause haze in beer, but the most frequently encountered problem is due to a cross-linking of polyphenol and protein.

A range of stabilization treatments are available for avoiding haze problems. The products have to be controlled on several steps during the brewing process, in particular after filtration and before the beer enters the single tanks.

## Methods

Many methods were used to measure turbidity over the years. The Jackson Candle Turbidimeter was used to measure turbidity as Jackson turbidity units (JTU). The method is visual and is not considered very accurate. To obtain more accurate readings, a nephelometer should be used as a turbidity reading instrument.

HI847492 can report the measurements in FTU (Formazin Turbidity Units), EBC (European Brewing Convention), ASBC (American Society of Brewing Chemists) and HELM. FTU units are equal to NTU units (Nephelometric Turbidity Units). A conversion table between these measurement units is shown below.

	NTU/FNU/FTU	EBC	ASBC	HELM
1 NTU/1 FNU/1 FTU	1	0.25	17.25	10
1 EBC	4	1	69	40
1 ASBC	0.058	0.014	1	0.579
1 HELM	0.1	0.025	1.725	1

## Beer Haze Table

Grade	EBC	ASBC
Brilliant	0.0 to 0.5	0.0 to 34.5
Almost Brilliant	0.5 to 1.0	34.5 to 69
Very Slightly Hazy	1.0 to 2.0	69 to 138
Slightly Hazy	2.0 to 4.0	138 to 276
Hazy	4.0 to 8.0	276 to 552
Very Hazy	> 8.0	> 552

Specifications	HI847492
Range	0.00 to 9.99; 10.0 to 99.9; 100 to 1000 FTU; 0.00 to 9.99; 10.0 to 99.9; 100 to 250 EBC; 0.00 to 9.99; 10.0 to 99.9; 100 to 17250 ASBC; 0.00 to 9.99; 10.0 to 99.9; 100 to 10000 HELM
Range Selection	automatic
Resolution	0.01, 0.1, 1 FTU,EBC,ASBC, HELM
Accuracy	±2% of reading plus 0.05 FTU (0.01 EBC, 0.86 ASBC, 0.5 HELM)
Repeatability	±1% of reading or 0.02 FTU, 0.01 EBC, 0.035 ASBC, 0.2 HELM; whichever is greater
Stray Light	<0.1 FTU, 0.03 EBC, 1.73 ASBC, 1 HELM
Light Source	LED @ 580 nm
Light Detector	silicon photocell
Method	ratio nephelometric method.
Display	60 x 90 mm backlit LCD
Calibration	two, three or four-point calibration
Log Memory	200 records
Serial Interface	USB
Environment	0 to 50°C (32 to 122°F); RH max 95% non-condensing
Power Supply	1.5V AA alkaline batteries (4) or AC adapter
Auto-off	after 15 minutes of non-use
Dimensions	224 x 87 x 77 mm (8.8 x 3.4 x 3.0")
Weight	512 g (18 oz.)
Ordering Information	<b>HI847492-01</b> (115V) and <b>HI847492-02</b> (230V) is supplied with iButton® tags with tag holders (5), sample cuvettes and caps (6), calibration cuvettes (4), silicone oil (HI98703-58), 25 mL glass vials with caps (4), cuvette cleaning cloth, batteries, AC adapter, HI98501 thermometer, instrument quality certificate, instructions and rugged carrying case.
Accessories	<b>HI847492-11</b> Calibration standard cuvette

