

HI 84185

ISE Ammonia Nitrogen Meter

with Electrode Holder and Built-in Stirrer



- Compact unit designed for wine analysis
- Log up to 50 Samples
- Twist-on electrode holder and built-in 500 rpm stirrer

SPECIFICATIONS

HI 84185

Range	0 to 50 mg/L (ppm) N-NH ₃
Resolution	1 mg/L (ppm) N-NH ₃
Accuracy (@20°C)	±5% of reading
Sample Volume	50 mL
Temp. Compensation	Automatic from 0 to 80 °C
Electrode	HI 61101 Ammonia combination ISE
Temperature Probe	HI 7662-T (included)
Log Feature	50 samples
Stirring Speed	500 rpm
Power	115V/230 Vac; 50-60Hz; 10VA
Environment	0 to 50 °C (32 to 122 °F); max 95% RH non-condensing
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 84185-01 (115V) and **HI 84185-02** (230V) is supplied with reagent set for 20 tests, 1000 µL automatic pipette, plastic tips for 1000 µL automatic pipette (6), 50 mL beakers (2), HI 61101 ammonia electrode, HI 7662-T temperature probe, Stir bars (2), Power cable, HI 4001-40 refilling solution, 30 mL (4), HI 4001-51 replacement membranes (10), HI 4000-47-4 and HI 4000-47-7 pH 4 & 7 powder packets (1 ea.), 1 mL syringe, 1 mL pipette, tweezers, instruction sheet, power cable and instruction manual.

ELECTRODES

- HI 61101** Ammonia electrode
HI 7662-T Temperature probe

SOLUTIONS and REAGENTS

- HI 4001-40** Ammonia filling solution
HI 4001-45 Ammonia conditioning and storage solution

- HI 4000-47** Buffer replacement kit
HI 84185-20 Reagent set (20 tests)
HI 84185-0 ISA for Ammonia electrode, 500 mL
HI 84185-1 Standard No. 1 for Ammonia electrode, 500 mL
HI 85185-2 Standard No. 2 for Ammonia electrode, 500 mL

ACCESSORIES

- HI 61001-51** Membrane (20)
HI 731316 Stir bar (5)
HI 731341 Automatic pipette 1000 µL
HI 731351 Tips for 1000 µL automatic pipette (25)
HI 731355P Capillary pipette (20)
HI 740036P Plastic beaker 50 mL (10)
HI 740143 Syringe 1mL (6)
HI 740144 Syringe tip (6)

Compact, Dedicated Wine Meter with a built-in Stirrer

The HI 84185 is a low cost, easy to use, ammonia nitrogen (N-NH₃) ISE instrument that performs automatic analysis with all the necessary calculations assuring to the user a simple and effective interface.

The instrument comes with a powerful and effective built-in algorithm to analyse the shape of the ISE electrode response and to determine the reaction completion.

By simply pressing the Start key, the instrument performs automatic analysis, all the necessary calculations and verifications. The result is immediately displayed in convenient units, then the instrument is ready for another measurement.

Significance of Use

The nitrogenous compounds of must and wine are deriving from grapes and play important role in fermentation, clarification, and potential microbial instability of wines. They are profoundly modified during the alcoholic fermentation by the physiologic activity of yeast. Thus, yeast assimilates 60-70% of the must nitrogen, ammonium ion completely disappearing during the fermentation and the total nitrogen being slightly reduced.

Ammonia is present in grapes as ammonium ions. In a few milligrams amount it serves as the primary form of available nitrogen for yeast metabolism. So, the content of ammonium ion can drastically decrease during the alcoholic fermentation, increasing again, especially in red wines, at the end of the malolactic fermentation because the lactic bacteria release ammonia nitrogen in wine.

The amount of ammonium ion in must influences the rapidity of fermentation start and evolution. The ammonia concentration ranges from 24 to 209 mg/L (ppm) in grapes and from a few mg/L (ppm) to about 50 mg/L (ppm) in wine.

The HI 84185 ISE Ammonia Nitrogen meter measures the ammonia nitrogen (N-NH₃) content in wine using an ion selective electrode. The used method is double standard addition, a simple and rapid method of analysis, and the result is readily displayed in ammonia nitrogen (N-NH₃) mg/L (ppm).