

Atago® Abbe Refractometers

Get uncompromising precision at an economical cost

- High refractive index model 02940-06 reads up to 1.8700 RI
- Meet ASTM D 1416-89, Section 38-46 requirements

These Abbe refractometers provide highly accurate Brix and refractive index measurements of liquids and solids. Place your sample on the main prism, which is rimmed with stainless steel to prevent corrosion, look through the eyepiece, and line up the shadowline in the crosshairs. The built-in 589 nm illuminator light source provides stable, monochromatic light (02939-00, -02 include an LED light source), making it easy to read the black lines on the green field. The frosted secondary prism directs light to the main prism evenly, and lifts up for easy placement of solids and viscous liquids on the main prism. The color compensator knob allows you to adjust the boundary line for higher clarity and fine tuning capability for greater resolution. Use the color compensation knob and a conversion table to measure dispersion (variance of RI with different wavelengths of light).

In order to maintain constant temperature at both prisms, these refractometers include four 9-mm OD ports (using 6 to 7-mm ID tubing) for connections to a constant-temperature bath. A thermistor thermometer for measuring temperature is built into the main prism. The temperature of the main prism is indicated on the LCD from 0 to 50°C with $\pm 0.2^\circ\text{C}$ accuracy; a digital temperature display unit is included. The built-in desiccant chamber removes moisture from internal optics ensuring an unobstructed view of scales.

Model 02939-00 is designed for measuring only liquid samples at temperatures below 50°C. Unit features dual scales (Brix and RI) allowing you to view both scales simultaneously. Model will not measure solid samples or calculate dispersion values.

Model 02939-02 measures solid samples only. Unit provides dual scales (Brix and RI) and is ideal for applications that require the calculation of dispersion values or Abbe numbers.

Model 02940-04 is a high-precision Abbe that measures both Brix and refractive index of liquids, solids, and semisolids. Unit features an accuracy of $\pm 0.05\%$ Brix and ± 0.0001 RI—perfect for meeting your precision quality requirements.

Model 02940-06 is designed to measure only refractive index in both liquid and solid samples. Expanded refractive index range (1.4700 to 1.8700) accommodates a wide variety of samples including polymers, films, resins, glass, adhesives, chemicals, and more.

What's included: a digital temperature display unit, standard solution (4 mL of monobromonaphthalene), a screwdriver for scale adjustment (model 02940-04 includes an L-wrench), and a 5-ft (1.5-m) cord with three-prong plug.



Standard Abbe refractometer 02939-00

Temperature readings at the prism are shown on digital display unit (included)



High-precision Abbe refractometer 02940-04

View % Brix and RI simultaneously using models 02939-00, -02, or 02940-04

Specifications

Sample volume: 0.2 mL



Range	Resolution	Accuracy	ATC	Power	Catalog number	Price
0.0 to 95.0% Brix, 1.3000 to 1.7000 RI	0.5% Brix, 0.001 RI	± 0.1 Brix, ± 0.0002 RI	No	115 VAC, 50/60 Hz	GH-02939-00 (liquids)	
					GH-02939-02 (solids)	
0.0 to 95.0% Brix, 1.3000 to 1.7100 RI	0.1% Brix, 0.0002 RI	$\pm 0.05\%$ Brix, ± 0.0001 RI			GH-02940-04	
					GH-02940-06	
1.4700 to 1.8700 RI	0.001 RI	± 0.0002 RI				

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[GH-17105-00](#) NIST-traceable calibration with data for refractometers

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