Abbe Refractometer - Visual Laboratory Refractometer - 1.3000-1.7000 nD - 0-95% Brix

Model **MSRFT-A2SWISS, MSRFT-A1SWISS** | Brand **Master Science**







The Master Science Abbe Refractometer is a classic visual benchtop refractometer for measuring refractive index (nD), mean dispersion (nF-nC) and sucrose Brix of transparent and translucent liquids and solids. The operator aligns the borderline in the eyepiece and reads the value from an optical index plate, giving dependable results without electronics in the optical path.

KEY HIGHLIGHTS

- Tiny sample need
- Durable prism
- Accurate at set temperatures
- Simple and robust
- Teaching friendly

AT A GLANCE

1.3000 to 1.7000 nD
REFRACTIVE INDEX RANGE

0 to 95 %
BRIX RANGE

bath connection holds the prism at constant temperature.
TEMPERATURE-DEPENDENT RESULTS

Request a Quotation
Contact us for pricing, configuration options and delivery details.

support@themsci.com
www.themsci.com

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Overview

Only one or two drops of sample are required, and a built-in flow cell can be connected to a circulating bath for constant-temperature measurement, monitored by a digital thermometer.

Labs wanting automatic readings can upgrade to the Master Science automatic digital refractometer.

Key Benefits

Tiny sample need
one or two drops are enough, ideal for valuable or trace samples.

Durable prism
the hard glass surface resists scratches and chemical attack.

Accurate at set temperatures
the Master Science Abbe Refractometer connects to a water bath for controlled-temperature work.

Simple and robust
visual reading means no software, batteries or complex maintenance.

Teaching friendly
students learn the optical principle directly through the eyepiece.

Technical Specifications

GENERAL	
Brand	Master Science
Model Number	MSRFT-A2SWISS, MSRFT-A1SWISS
SKU	MSRFT-A2SWISS, MSRFT-A1SWISS
Models	MSRFT-A2SWISS, MSRFT-A1SWISS
Refractive Index Range	**1.3000 to 1.7000 nD**
Resolution	0.0001 nD
Accuracy	**±0.0003 nD (MSRFT-A2SWISS); ±0.0002 nD (MSRFT-A1SWISS), estimated reading**
Brix Range	**0 to 95 %**
Temperature	Digital thermometer; controlled by external circulating bath
Minimum Sample Volume	0.1 mL
Prism	Hard glass
Reading	Visual aiming with optical index plate

DIMENSIONS & WEIGHT	
Dimensions (L × W × H)	160 × 140 × 100 mm (A2); 130 × 90 × 240 mm (A1)
Net / Gross Weight	3 / 4 kg (A2); 2 / 3 kg (A1)

EVERYDAY ISSUES THE MASTER SCIENCE ABBE REFRACTOMETER HELPS WITH	
Limited sample available	measurements need only 0.1 mL.
Temperature-dependent results	bath connection holds the prism at constant temperature.
Fragile instruments in student labs	simple optical design withstands frequent use.
Prism scratches	hard glass resists wear.
Budget limits	a visual instrument offers reliable data at low cost.

The Master Science Abbe Refractometer is widely used in

- **Sugar and beverage production**
- **Pharmaceutical raw material identification**
- **Petroleum and oil testing**
- **Food and chemical quality control**
- **Research institutes and teaching laboratories**

Optics

- Visual borderline aiming
- Optical index plate reading
- Hard glass measuring prism

Temperature

- Digital thermometer display
- Built-in flow cell for circulating bath connection

Measurement

- Refractive index nD
- Mean dispersion nF-nC
- Sucrose Brix 0 to 95 %