# 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.

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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 %