

MA871/MA872/MA873/MA881
Digital Refractometers for Brix, Fructose, Glucose
and Invert Sugar Measurements







The digital refractometers are optical instruments that employ the measurement of refractive index to determine the % Brix of sugar (MA871), % Fructose (MA872), % Glucose (MA873) and % Invert Sugar (MA881) in aqueous solutions.

The method is both simple and quick. Samples are measured after a simple user calibration with deionized or distilled water. Within seconds the instruments measure the refractive index of the sample and convert it to % Brix or % by weight concentration units.

The digital refractometers eliminate the uncertainty associated with mechanical refractometers and are easily portable for measurements in the field. The measurement technique and temperature compensation employ methodology recommended in the ICUMSA Methods Book (Internationally recognized body for Sugar Analysis). Temperature (in °C or °F) is displayed simultaneously with the measurement on the large dual level display along with icons for Low Power and other helpful message codes.

Key features include:

- Dual-level LCD
- Automatic Temperature Compensation (ATC)
- Easy setup and storage
- Battery operation with Low Power indicator (BEPS)
- Automatically turns off after 3 minutes of non-use

Specifications	 MA871 Brix	 MA872 Fructose	 MA873 Glucose	 MA881 Invert Sugar
Range	0 to 85% Brix 0 to 80°C / 32 to 176°F	0 to 85% mass 0 to 80°C / 32 to 176°F	0 to 85% mass 0 to 80°C / 32 to 176°F	0 to 85% mass 0 to 80°C / 32 to 176°F
Resolution	0.1% Brix 0.1°C / 0.1°F	0.1% 0.1°C / 0.1°F	0.1% 0.1°C / 0.1°F	0.1% 0.1°C / 0.1°F
Accuracy	±0.2% Brix ±0.3°C / ±0.5°F	±0.2% ±0.3°C / ±0.5°F	±0.2% ±0.3°C / ±0.5°F	±0.2% ±0.3°C / ±0.5°F
Light source	yellow LED	yellow LED	yellow LED	yellow LED
Measurement Time	approximately 1.5 seconds	approximately 1.5 seconds	approximately 1.5 seconds	approximately 1.5 seconds
Minimum Sample Volume	100 µL (cover prism totally)	100 µL (cover prism totally)	100 µL (cover prism totally)	100 µL (cover prism totally)
Sample Cell	SS ring and flint glass prism	SS ring and flint glass prism	SS ring and flint glass prism	SS ring and flint glass prism
Temperature Compensation	automatic between 10 and 40°C / 50 to 104°F	automatic between 10 and 40°C / 50 to 104°F	automatic between 10 and 40°C / 50 to 104°F	automatic between 10 and 40°C / 50 to 104°F
Case Material	ABS	ABS	ABS	ABS
Battery Type	1 x 9V AA (included)	1 x 9V AA (included)	1 x 9V AA (included)	1 x 9V AA (included)
Battery Life	5000 reading	5000 reading	5000 reading	5000 reading
Auto-shut off	after 3 minutes of non-use	after 3 minutes of non-use	after 3 minutes of non-use	after 3 minutes of non-use
Packaging dimensions	268 x 122 x 118 mm	268 x 122 x 118 mm	268 x 122 x 118 mm	268 x 122 x 118 mm
Packaging weight	660 g	663 g	666 g	644 g

Ordering Information

MA871, MA872, MA873 and MA881 are supplied in a carton box, complete with 9V battery, pipette and instruction manual. Optionally you can also order the refractometers in a hard carrying case (MA752).

Stainless Steel Sample Well and Prism

Place a few drops of the sample in the well and press the READ key.

