

## 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	 <b>MA871 Brix</b>	 <b>MA872 Fructose</b>	 <b>MA873 Glucose</b>	 <b>MA881 Invert Sugar</b>
<b>Range</b>	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
<b>Resolution</b>	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
<b>Accuracy</b>	±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
<b>Light source</b>	yellow LED	yellow LED	yellow LED	yellow LED
<b>Measurement Time</b>	approximately 1.5 seconds	approximately 1.5 seconds	approximately 1.5 seconds	approximately 1.5 seconds
<b>Minimum Sample Volume</b>	100 µL (cover prism totally)	100 µL (cover prism totally)	100 µL (cover prism totally)	100 µL (cover prism totally)
<b>Sample Cell</b>	SS ring and flint glass prism	SS ring and flint glass prism	SS ring and flint glass prism	SS ring and flint glass prism
<b>Temperature Compensation</b>	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
<b>Case Material</b>	ABS	ABS	ABS	ABS
<b>Battery Type</b>	1 x 9V AA (included)	1 x 9V AA (included)	1 x 9V AA (included)	1 x 9V AA (included)
<b>Battery Life</b>	5000 reading	5000 reading	5000 reading	5000 reading
<b>Auto-shut off</b>	after 3 minutes of non-use	after 3 minutes of non-use	after 3 minutes of non-use	after 3 minutes of non-use
<b>Packaging dimensions</b>	268 x 122 x 118 mm	268 x 122 x 118 mm	268 x 122 x 118 mm	268 x 122 x 118 mm
<b>Packaging weight</b>	660 g	660 g	660 g	660 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.

