

## 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.



- Years warranty 2
- ATC
- Dual Display
- Self diagnostics
- CE

### 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                  | <br><b>MA871<br/>Brix</b> | <br><b>MA872<br/>Fructose</b> | <br><b>MA873<br/>Glucose</b> | <br><b>MA881<br/>Invert Sugar</b> |
|---------------------------------|--|--|--|--|
| <b>Range</b>                    | 0 to 85% Brix<br>0 to 80°C / 32 to 176°F   | 0 to 85% mass<br>0 to 80°C / 32 to 176°F   | 0 to 85% mass<br>0 to 80°C / 32 to 176°F   | 0 to 85% mass<br>0 to 80°C / 32 to 176°F   |
| <b>Resolution</b>               | 0.1% Brix<br>0.1°C / 0.1°F   | 0.1%<br>0.1°C / 0.1°F  | 0.1%<br>0.1°C / 0.1°F  | 0.1%<br>0.1°C / 0.1°F  |
| <b>Accuracy</b>                 | ±0.2% Brix<br>±0.3°C / ±0.5°F  | ±0.2%<br>±0.3°C / ±0.5°F   | ±0.2%<br>±0.3°C / ±0.5°F   | ±0.2%<br>±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<br>10 and 40°C / 50 to 104°F   | automatic between<br>10 and 40°C / 50 to 104°F   | automatic between<br>10 and 40°C / 50 to 104°F   | automatic between<br>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.

