

# Lovibond® Water Testing Tintometer® Group



## MD 100 Manganese LR, powder reagents

Precise water control with proven and compact measuring system



- High-precision optics
- High accuracy and reproducibility through precision interference filter (5 nm)
- Industry specific parameter combinations available

Part Number: 276105

The MD 100 has several key features that make it a favorite among users.

### Waterproof Design

The IP 68 design of this instrument ensures that the MD 100 remains water tight for up to 1 hour at 0.1 meter. Don't worry about dropping the instrument into a body of water - it floats!

### Accurate, Reproducible Results

The optical system of the MD 100 utilizes LEDs and interference filters which quickly gives you results that you can be confident in. You always measure in the spectral peak.

### User Calibration Mode

A one-point calibration is possible. Additionally, all MD 100 instruments have the ability to display readings directly in ABS or %T units.

### One-time-Zero Function

Don't waste time waiting for your instrument to Zero after each test. When testing a new sample, zero the instrument once and all subsequent tests of that sample do not require you to re-zero the instrument.

### Automatic Data Storage with Transfer Capabilities

The MD 100 automatically stores the last 16 readings with time and date stamp. These results can be transferred to a spreadsheet using the IRiM accessory.

### Ergonomic Design

Whether you're using the MD 100 out in the field or in the lab, the design of the instrument makes it easy to handle and view the display. If you're using the instrument in the lab, the rubber feet on the bottom of the housing eliminates the need for two hand operation or to chase your instrument around the workbench.

### Factory Programmed

All MD 100 instruments are supplied ready to use with up to 14 calibration curves. All you need to do is select the test you need, prepare your sample and test!

### Scroll Driven Menu System

The simple interface allows you to quickly reach the test you need. When the instrument is turned on, it will automatically display the last test used.

### 2-Year Warranty

## Industry

Chemical Industry | Food and Beverage Industry | Industries Others | Municipalities | NGO | Oil and Gas | Pharmaceutical Industry

## Application

Drinking Water Treatment | Galvanization | Raw Water Treatment

## MD 100 Manganese LR, powder reagents

The MD 100 is a single parameter colorimeter for water quality analysis. The rugged design makes this instrument completely portable and ideal for field use.

This instrument is pre-programmed with three testing ranges and methods for Manganese, making it ideal for a variety of applications and industries. Choose between using Lovibond® Tablet reagents or VARIO Powder Pack Reagents, depending on the range selected.

## Measuring Range

Test Name	Measuring Range	Chemical Method
Manganese HR PP	0.1 - 18 mg/L Mn	Periodate Oxidation
Manganese LR PP	0.01 - 0.7 mg/L Mn	PAN
Manganese T	0.2 - 4 mg/L Mn	Formaloxime

## Technical Data

<b>Optics</b>	LEDs, interference filters (IF) and photo sensor in transparent sample chamber. Depending on the version, up to 3 different interference filters are used. Wavelength specifications of interference filters: 430 nm $\Delta\lambda = 5$ nm 530 nm $\Delta\lambda = 5$ nm 560 nm $\Delta\lambda = 5$ nm 580 nm $\Delta\lambda = 5$ nm 610 nm $\Delta\lambda = 6$ nm 660 nm $\Delta\lambda = 5$ nm
<b>Wavelength Accuracy</b>	$\pm 1$
<b>Photometric Range</b>	-2500 - 2500 mAbs
<b>Photometric Accuracy</b>	3 % FS (T = 20 °C – 25 °C)
<b>Display</b>	backlit LCD (on keypress)
<b>Interfaces</b>	Infrared
<b>Operation</b>	Foil keypad
<b>Auto – OFF</b>	Yes
<b>Calibration</b>	factory calibration and user calibration. Reset to factory calibration possible
<b>Internal Storage</b>	internal ring memory for 16 data sets
<b>Power Supply</b>	4 micro batteries (AAA)
<b>Battery Life Time</b>	approx. 17 hours
<b>Clock</b>	Real Time Clock and Date
<b>Portability</b>	Portable
<b>Environmental Conditions</b>	Temperature: 5 - 40 °C rel. humidity: 30 - 90 % (non condensing)
<b>Protection Class</b>	IP 68
<b>Compliance</b>	CE
<b>Dimensions</b>	155 x 75 x 35 mm
<b>Weight</b>	260 g

## Delivery Scope

- Instrument in plastic case
- VARIO Alkaline Cyanide Reagent Solution
- VARIO Ascorbic Acid Powder Packs
- VARIO PAN Indicator Solution
- 4 micro batteries (AAA)
- 3 round cuvettes (glass) with lid
- Sealing rings
- Stirring rod
- Brush
- Instruction manual
- Quick Start Guide
- Certificate (COC)
- Warranty information

Title	Part Number
Water sampler with bottle 250 mL and lid, AF 631	170500
Micro batteries (AAA), set of 4	1950026
Multy cuvette-2, set of 12	197600
Round cuvette 24 mm $\varnothing$ , set of 12	197620
Sealing ring for round vials 24 mm $\varnothing$ , set of 12	197626
Round cuvette 24 mm $\varnothing$ , set of 5	197629
Cleaning cloth	197635
Round cuvette 16 mm $\varnothing$ , set of 10	197665
Adapter for round cuvettes 16 mm $\varnothing$	19802190
Mixing cylinder, 25 ml	19802650
Fixed price service package for MD100/MD110/MD200	19802701
Service plan - 3 years for MD100/MD110/MD200	19802801
Verification Standard Kit MD 100 / 200	215670
Stirring rod, 13 cm length	364100
Stirring rod, 10 cm length	364109
Stirring rod, 13 cm length, set of 10	364120
Stirring rod, 10 cm length, set of 10	364130
Membrane filter set for use when preparing samples, 25 membrane filters 0.45 $\mu$ m, 2 syringes 20 ml	366150
250 mL bottle, AF 631	375072
Brush, 11 cm length	380230
Measuring beaker, 100 ml	384801
Cuvette stand for 6 round cuvettes $\varnothing$ 24 mm	418951
Cuvette stand for 10 round cuvettes $\varnothing$ 16 mm	418957
Plastic funnel with handle (white)	471007
Factory calibration certificate ISO 9001 for MD100/MD110/MD200	999750
Additionally for each method	999855

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