# Lovibond® Water Testing

## Tintometer® Group

# MD50 Copper, powder reagents

Precise water control with proven and compact measuring system




- High-precision optics to ensure accuracy and reproducibility
- Wired and wireless data transfer option
- Multiple single parameter variants for diverse applications

Part Number: 280205

The MD50 has several key features that make it a favorite among users.

**Robust Design**

The MD50 is built to last. Its rugged industrial design, complete with rubber-protected sides and an IP67 rating, ensures unmatched durability and reliability even in demanding environments.

**Accurate, Reproducible Results**

The innovative optical system of the MD50 delivers exceptional accuracy and speed, ensuring precise readings in record time.

**Factory Programmed Methods**

All MD50 instruments come equipped with a wide range of pre-programmed methods. Simply select the desired test, prepare your sample and start the measurement.

To maximise efficiency in your daily work, frequently used methods can be saved as favourites. This gives you quick access to the most important tests at any time and makes selecting a method much easier.

**User Calibration and User defined Method**

A one-point calibration is possible with the MD50. The instrument automatically saves the calibration protocol in the logs along with the calibration factor. All user-calibrated methods are displayed with a calibration icon on the screen. Can't find the method you need? The MD50 also allows you to program a user-defined method using PC software.

**One-Time-Zero Function**

Save time by zeroing the instrument once for each sample. When testing a new sample, zero the instrument once and all subsequent tests of that sample do not require re-zeroing. You can also activate or deactivate the OTZ function for all methods in the settings.

**Automatic Data Storage**

The MD50 automatically stores the last 100 readings and protocols with a time and date stamp. Results remain in storage even during a battery exchange.

**Data Transfer**

The MD50 offers smooth and effortless data transfer. You can transfer data to the AquaLX® app via NFC or use a USB cable to transfer data to PC software. Data can also be exported in CSV format for programs like Excel.

**Ergonomic Design**

Whether you're using the MD50 in the field or in the lab, its design makes it easy to handle and view the display. In the field, the compact size and side protections ensure a firm grip during use. In the lab, rubber feet on the bottom of the housing eliminate the need for two-handed operation or chasing your instrument around the workbench.

**GLP Compliance**

To ensure data quality and integrity, the MD50 creates and saves a protocol for each change made during operation.

**2-year Warranty**

## Industry

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

## Application

Boiler Water | Cooling Water | Drinking Water Treatment | Galvanization | Pool Water Control | Waste Water Treatment

## MD50 Copper, powder reagents

The MD50 series combines precise single-parameter photometry with maximum user-friendliness, designed to meet the daily challenges of water analysis.
Thanks to the intuitive, language-independent user interface with clear symbols and helpful animations, the instrument can be operated quickly and confidently, regardless of language barriers. The integrated favourites function ensures efficient workflows by making frequently used methods directly available at all times.
Robustly built for demanding outdoor use, the MD50 series delivers reliable performance even under the toughest conditions.

## Measuring Range

| Test Name | Measuring Range | Chemical Method |
|---|---|---|
| Copper PP | 0.05 - 5 mg/L Cu | Bicinchoninate |
| Copper T | 0.05 - 5 mg/L Cu[a)] | Biquinoline |
| Copper VLR PP | 2 - 210 µg/L Cu | Porphyrine Indicator |

## Technical Data

| | |
|---|---|
| **Optics** | LED, spectrometer sensor, interference filter (selected variants only) |
| **Light Source** | LED |
| **Wavelength** | Variant specific (415, 445, 480, 515, 530, 555, 590, 630, 680) |
| **Photometric Range** | 0 - 3 Abs |
| **Photometric Accuracy** | 3 % FS (T = 20 °C – 25 °C) |
| **Suitable Vials** | Round Cuvettes 13 mm<br>Round Cuvettes 16 mm<br>Round Cuvettes 24 mm |
| **Display** | Backlit LCD |
| **Interfaces** | USB-C<br>NFC (Near Field Communication) |
| **Data Transfer Format** | .csv |
| **Operation** | Foil keypad |
| **Auto – OFF** | Yes |
| **Programmability** | yes with PC software |
| **Calibration** | Factory and user adjustment - return to factory adjustment possible at any time |
| **Updates** | Firmware and methods update |
| **Internal Storage** | Internal ring memory for 100 data records |
| **Power Supply** | 2 x AA batteries Alkaline Batteries (LR6) 3V DC / 55mA |
| **Battery Life Time** | approx. 5000 measurements (without backlight) |
| **Portability** | Portable |
| **Degree of Pollution** | 2 |
| **Maximum altitude above sea level** | 3500 m |
| **Environmental Conditions** | 5 - 50 °C at a relative humidity of 30 - 95 % (non-condensing) |
| **IP Rating** | IP 67 |
| **Compliance** | CE |
| **Languages Full User Manual** | English, German, Spanish, French, Portuguese, Italian, Dutch, Turkish, Chinese |
| **Dimensions** | 155 x 76 x 45 mm |
| **Weight** | 247 g |

## Delivery Scope

- 1 Instrument in Carrying case
- 100 VARIO Cu1 Powder Packs
- 2 batteries (AA)
- 3 round cuvettes (glass) with lid and Sealing rings
- 1 Screwdriver
- 3 Stirring rods
- 1 Syringe 10 mL
- 1 Cleaning brush
- 1 USB-C to USB-A cable
- 1 Instruction manual
- 1 Certificate (COC)
- 1 Warranty information

| Title | Part Number |
|---|---|
| Water Sampler & 250 mL Bottle | 170500 |
| Round cuvette 24 mm ø, set of 12 | 197620 |
| Sealing ring for round vials 24 mm ø, set of 12 | 197626 |
| Round cuvette 24 mm ø, set of 5 | 197629 |
| Cleaning cloth | 197635 |
| Mixing cylinder with stopper, 25 mL | 19802650 |
| Fixed price service packages for MD50/MD150 | 19802709 |
| 3 years service plan for MD50/MD150 | 19802809 |
| USB-C cable 1 m, USB-C to A | 19820-081 |
| Verification Standard Kit MD50/MD150 | 215700 |
| Reference Standard Kit Chlorine - 0.2 and 1.0 mg/l (MD50) | 275620 |
| Reference Standard Kit Chlorine - 0.5 and 2.0 mg/l (MD50) | 275621 |
| Reference Standard Kit Chlorine - 1.0 and 4.0 mg/l (MD50) | 275622 |
| Stirring rod, 13 cm length | 364100 |
| Stirring rod, 10 cm length | 364109 |
| Box with 10 plastic stirring rods | 364120 |
| Box with 10 plastic stirring rods | 364130 |
| 250 mL bottle with cap | 375072 |
| Brush, 11 cm length | 380230 |
| Measuring beaker, 100 ml | 384801 |
| Cuvette stand for 6 round cuvettes Ø 24 mm | 418951 |
| Plastic funnel with handle (white) | 471007 |
| Factory Calibration certificate ISO 9001 for method Cl M100 (MD50) | 999720 |
| Factory Calibration certificate ISO 9001 for method Cl M110 (MD50) | 999721 |
| Factory Calibration certificate ISO 9001 for MD50 | 999756 |

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