

Lovibond® Water Testing Tintometer® Group



MD 600

All-in-One Solution for Accurate Field Testing



- Pre-programmed with 118 methods for water analysis
- Rugged design for use in the field
- Easy to use, multi-lingual user interface
- Display only the tests you need by setting up a User's Favorite list

Part Number: 214020

Easy Access to new testing parameter and ranges

Never have an outdated instrument again! As additional test methods become available, the new software update is available as a free download on our website.

On-screen access to important test information

Using the correct reagent and sample cell for a preprogrammed calibration curve is essential to achieving accurate results. With the push of a button, it's easy to confirm what is required for the test. The method information will also show which conversion factors can be automatically applied to a method, so results are displayed in the required reporting units.

No Need to memorize method numbers to access a testing method

The scroll-driven menu system allows you to navigate to the test you need without the need to memorize the test method number. In addition, a Users Favorite Menu can be defined so that the instrument displays only the testing methods you want to see,

Data Storage and Transfer Capabilities

Store up to 1,000 readings with location ID, time and date stamp. Test data stored on the instrument can be easily exported using the IRiM accessory, which uses an infrared connection to export data directly to an Excel or .txt file.

Choice of Reagent Platforms

With over 100 pre-programmed testing methods on one instrument, many parameters offer the choice of using Tablet, Powder Pack or Liquid reagents.

Create User-Defined Calibration Curves

Have a proprietary testing method or a requirement to conform to a specific governmental or organizational standard method? Tired of converting ABS or %T values into meaningful values? It's easy to create and store as many as 35 user-defined methods on the MD 600 series. Up to a 25 order polynomial along with test parameters such as wavelength, measuring range, unit type and number of decimals displayed can be defined and implemented.

Accurate, Reproducible Results

The optical system of the MD600 series operates with six unique wavelengths. By utilizing LEDs and interference filters, the instrument quickly gives you results that you can be confident in.

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.

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 | Disinfection Control | Drinking Water Treatment | Food and Beverage | Galvanization |

MD 600

The MD600 Colorimeter is the ideal instrument for testing multiple water quality parameters outside of a laboratory setting. Featuring over 100 testing methods, this instrument provides and "all-in-one" solution for a wide variety of applications and industries.

Designed for use out in the field, the MD600 colorimeter is rugged, and supplied ready-to-use in a carrying case with key accessories.

Measuring Range

| Test Name | Measuring Range | Chemical Method |
|------------------------------------|---|---|
| Alkalinity-m HR T | 5 - 500 mg/L CaCO ₃ | Acid / Indicator |
| Alkalinity-m T | 5 - 200 mg/L CaCO ₃ | Acid / Indicator |
| Alkalinity-p T | 5 - 500 mg/L CaCO ₃ | Acid / Indicator |
| Aluminium PP | 0.01 - 0.25 mg/L Al | Eriochrom Cyanine R |
| Aluminium T | 0.01 - 0.3 mg/L Al | Eriochrom Cyanine R |
| Ammonia HR TT | 1.0 - 50 mg/L N | Salicylate |
| Ammonia LR TT | 0.02 - 2.5 mg/L N | Salicylate |
| Ammonia PP | 0.01 - 0.8 mg/L N | Salicylate |
| Ammonia T | 0.02 - 1 mg/L N | Indophenole Blue |
| Bromine PP | 0.05 - 4.5 mg/L Br ₂ | DPD |
| Bromine T | 0.05 - 13 mg/L Br ₂ | DPD |
| Chloramine (M) PP | 0.02 - 4.5 mg/L NH ₂ Cl as Cl ₂ | Indophenole method |
| Chloride L (B) | 0.5 - 20 mg/L Cl ⁻ | Mercury Thiocyanate / Iron Nitrate |
| Chloride T | 0.5 - 25 mg/L Cl ⁻ | Silver Nitrate / Turbidity |
| Chlorine (free) and Monochloramine | 0.02 - 4.50 mg/L Cl ₂ | Indophenole method |
| Chlorine dioxide PP | 0.04 - 3.8 mg/L ClO ₂ | DPD |
| Chlorine dioxide T | 0.02 - 11 mg/L ClO ₂ | DPD / Glycine |
| Chlorine HR 2 PP | 0.1 - 10 mg/L Cl ₂ | DPD |
| Chlorine HR (KI) T | 5 - 200 mg/L Cl ₂ | KI / Acid |
| Chlorine HR PP | 0.1 - 8 mg/L Cl ₂ ^{a)} | DPD |
| Chlorine HR T | 0.1 - 10 mg/L Cl ₂ ^{a)} | DPD |
| Chlorine L | 0.02 - 4.0 mg/L Cl ₂ ^{a)} | DPD |
| Chlorine MR PP | 0.02 - 3.5 mg/L Cl ₂ ^{a)} | DPD |
| Chlorine PP | 0.02 - 2 mg/L Cl ₂ ^{a)} | DPD |
| Chlorine T | 0.01 - 6.0 mg/L Cl ₂ ^{a)} | DPD |
| Chromium PP | 0.02 - 2 mg/L Cr ^{b)} | Diphenylcarbazide |
| COD HR TT | 200 - 15000 mg/L COD ^{b)} | Dichromate / H ₂ SO ₄ |
| COD LMR TT | 15 - 300 mg/L COD ^{b)} | Dichromate / H ₂ SO ₄ |
| COD LR TT | 3 - 150 mg/L COD ^{b)} | Dichromate / H ₂ SO ₄ |
| COD MR TT | 20 - 1500 mg/L COD ^{b)} | Dichromate / H ₂ SO ₄ |
| Copper L | 0.05 - 4 mg/L Cu ^{a)} | Bicinchoninate |
| 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 |
| CyA HR T | 10 - 200 mg/L CyA | Melamine |
| Cyanide L | 0.01 - 0.5 mg/L CN ⁻ | Pyridine-barbituric Acid |
| CyA T | 10 - 160 mg/L CyA | Melamine |
| DEHA PP | 0.02 - 0.5 mg/L DEHA | PPST |
| DEHA T (L) | 0.02 - 0.5 mg/L DEHA | PPST |
| Fluoride 2 L | 0.1 - 2 mg/L F ⁻ | SPADNS |
| Fluoride L | 0.05 - 2 mg/L F ⁻ | SPADNS |
| H ₂ O ₂ HR L | 40 - 500 mg/L H ₂ O ₂ | Titanium Tetrachloride / Acid |

| Test Name | Measuring Range | Chemical Method |
|------------------------------------|---|--|
| H ₂ O ₂ LR L | 1 - 50 mg/L H ₂ O ₂ | Titanium Tetrachloride / Acid |
| H ₂ O ₂ T | 0.03 - 3 mg/L H ₂ O ₂ | DPD / Catalyst |
| Hardness Ca and Mg L | 0.05 - 4 mg/L CaCO ₃ | Calmagite |
| Hardness Ca and Mg MR TT | 10 - 360 mg/L CaCO ₃ | Calmagite |
| Hardness Calcium (B) T | 20 - 500 mg/L CaCO ₃ | Murexide |
| Hardness Calcium (B) T | 50 - 900 mg/L CaCO ₃ | Murexide |
| Hardness total HR T | 20 - 500 mg/L CaCO ₃ ⁱ⁾ | Metallphthaleine |
| Hardness total T | 2 - 50 mg/L CaCO ₃ | Metallphthaleine |
| Hazen 24 | 10 - 500 mg/L Pt | (APHA) Platinum Cobalt Standard Method |
| Hydrazine L | 0.01 - 0.6 mg/L N ₂ H ₄ | Dimethylaminobenzaldehyde |
| Hydrazine P | 0.05 - 0.5 mg/L N ₂ H ₄ | Dimethylaminobenzaldehyde |
| Hypochlorite T | 0.2 - 16 % NaOCl | Potassium Iodide |
| Iron (TPTZ) PP | 0.02 - 1.8 mg/L Fe | TPTZ |
| Iron HR L | 0.1 - 10 mg/L Fe | Thioglycolate |
| Iron in Mo PP (224) | 0.01 - 1.8 mg/L Fe | TPTZ |
| Iron LR L (A) | 0.03 - 2 mg/L Fe | Ferrozine / Thioglycolate |
| Iron LR L (B) | 0.03 - 2 mg/L Fe | Ferrozine / Thioglycolate |
| Iron PP | 0.02 - 3 mg/L Fe ⁹⁾ | 1,10-Phenanthroline |
| Iron T | 0.02 - 1 mg/L Fe | Ferrozine / Thioglycolate |
| K _{S4.3} T | 0.1 - 4 mmol/L K _{S4.3} | Acid / Indicator |
| Iodine T | 0.05 - 3.6 mg/L I | DPD |
| Manganese HR PP | 0.1 - 18 mg/L Mn | Periodate Oxidation |
| Manganese L | 0.05 - 5 mg/L Mn | Formaloxime |
| Manganese LR PP | 0.01 - 0.7 mg/L Mn | PAN |
| Manganese T | 0.2 - 4 mg/L Mn | Formaloxime |
| Molybdate HR L | 1 - 100 mg/L MoO ₄ | Thioglycolate |
| Molybdate HR PP | 0.3 - 40 mg/L Mo | Mercaptoacetic Acid |
| Molybdate LR PP | 0.03 - 3 mg/L Mo | Ternary Complex |
| Molybdate T | 1 - 50 mg/L MoO ₄ | Thioglycolate |
| Nickel L | 0.2 - 7 mg/L Ni | Dimethylglyoxime |
| Nitrate MR PP | 1 - 30 mg/L NO ₃ -N | Zinc Reduction |
| Nitrate T | 0.08 - 1 mg/L N | Zinc Reduction / NED |
| Nitrate TT | 1 - 30 mg/L N | Chromotropic Acid |
| Nitrite HR PP | 2 - 250 mg/L NO ₂ ⁻ | Ferrous Sulfate Method |
| Nitrite HR TT | 0.3 - 3 mg/L N | Sulfanilic / Naphthylamine |
| Nitrite LR TT | 0.03 - 0.6 mg/L N | Sulfanilic / Naphthylamine |
| Nitrite PP | 0.01 - 0.3 mg/L N | Diazotation |
| Nitrite T | 0.01 - 0.5 mg/L N | N-(1-Naphthyl)-ethylendiamine |
| Nitrite VHR L | 25 - 2500 mg/L NO ₂ ⁻ | Ferrous Sulfate Method |
| Oxygen active T | 0.1 - 10 mg/L O ₂ | DPD |
| Oxygen dissolved C | 10 - 800 µg/L O ₂ ^{c)} | Rhodazine D TM |
| Ozone PP | 0.015 - 1.2 mg/L O ₃ | DPD / Glycine |
| Ozone T | 0.02 - 2 mg/L O ₃ | DPD / Glycine |
| Phenol T | 0.1 - 5 mg/L C ₆ H ₅ OH | 4-Aminoantipyrine |
| PHMB T | 2 - 60 mg/L PHMB | Buffer / Indicator |
| Phosphate h. TT | 0.02 - 1.6 mg/L P ^{b)} | Phosphomolybdenum Blue |
| Phosphate HR C | 1.6 - 13 mg/L P ^{c)} | Vanadomolybdate |
| Phosphate HR L | 5 - 80 mg/L PO ₄ | Vanadomolybdate |
| Phosphate HR T | 0.33 - 26 mg/L P | Vanadomolybdate |
| Phosphate HR TT | 1 - 20 mg/L P | Vanadomolybdate |
| Phosphate LR C | 0.02 - 1.6 mg/L P ^{c)} | Stannous Chloride |
| Phosphate LR L | 0.1 - 10 mg/L PO ₄ | Phosphomolybic Acid / Ascorbic Acid |

| Test Name | Measuring Range | Chemical Method |
|-------------------------------|--|--|
| Phosphate LR T | 0.02 - 1.3 mg/L P | Phosphomolybdenum Blue |
| Phosphate PP | 0.02 - 0.8 mg/L P | Phosphomolybdenum Blue |
| Phosphate t. TT | 0.02 - 1.1 mg/L P ^{b)} | Phosphomolybdenum Blue |
| Phosphate TT | 0.02 - 1.63 mg/L P | Phosphomolybdenum Blue |
| Phosphonate PP | 0.02 - 125 mg/L PO ₄ | Persulfate UV Oxidation Method |
| pH-value HR T | 8.0 - 9.6 pH | Thymol Blue |
| pH value L | 6.5 - 8.4 pH | Phenol Red |
| pH-value LR T | 5.2 - 6.8 pH | Bromocresolpurple |
| pH-value T | 6.5 - 8.4 pH | Phenol Red |
| Polyacrylate L | 1 - 30 mg/L Polyacryl | Turbidity |
| Potassium T | 0.7 - 16 mg/L K | Tetraphenylborat Turbidity |
| Silicate HR PP | 1 - 90 mg/L SiO ₂ | Silicomolybdate |
| Silicate L | 0.1 - 8 mg/L SiO ₂ | Heteropolyblue |
| Silicate LR PP | 0.1 - 1.6 mg/L SiO ₂ | Heteropolyblue |
| Silicate T | 0.05 - 4 mg/L SiO ₂ | Silicomolybdenum Blue |
| Sulphate HR PP | 50 - 1000 | Bariumsulphate Turbidity |
| Sulphate PP | 5 - 100 mg/L SO ₄ ²⁻ | Bariumsulphate Turbidity |
| Sulphate T | 5 - 100 mg/L SO ₄ ²⁻ | Bariumsulphate Turbidity |
| Sulphide L | 15 - 1400 mg/L Tannin | Methylene Blue |
| Sulphide T | 0.04 - 0.5 mg/L S ²⁻ | DPD / Catalyst |
| Sulphite T | 0.1 - 5 mg/L SO ₃ | DTNB |
| Surfactants M. (anion.) TT | 0.05 - 2 mg/L SDSA | Methylene Blue |
| Surfactants M. (cation.) TT | 0.05 - 1.5 mg/L CTAB | Disulphine Blue |
| Surfactants M. (not ionic) TT | 0.1 - 7.5 mg/L Triton X-100 | TBPE |
| Suspended solids 24 | 10 - 750 mg/L TSS | Turbidity / Attenuated Radiation Method |
| Tannin L | 0.5 - 20 mg/L Tannin | |
| TN HR TT | 5 - 150 mg/L N ^{b)} | Persulphate Digestion |
| TN LR TT | 0.5 - 25 mg/L N ^{b)} | Persulphate Digestion |
| TOC HR M. TT | 50 - 800 mg/L TOC ^{b)} | H ₂ SO ₄ / Persulphate / Indicator |
| TOC LR M. TT | 5 - 80 mg/L TOC ^{b)} | H ₂ SO ₄ / Persulphate / Indicator |
| Triazole PP | 1 - 16 mg/L Benzotriazole or Tolyltriazole | Catalyzed UV Digestion |
| Turbidity 24 | 10 - 1000 FAU | Attenuated Radiation Method |
| Urea T | 0.1 - 2.5 mg/L Urea | Indophenol / Urease |
| Zinc L | 0.1 - 2.5 mg/L Zn | Zincon / EDTA |
| Zinc T | 0.02 - 1 mg/L Zn | Zincon |

Technical Data

| | |
|---------------------------------|--|
| Optics | LEDs, interference filters (IF) and photo sensor in transparent sample chamber. Wavelength range: 430 nm IF Δλ = 5 nm 530 nm IF Δλ = 5 nm 560 nm IF Δλ = 5 nm 580 nm IF Δλ = 5 nm 610 nm IF Δλ = 6 nm 660 nm IF Δλ = 5 nm IF = interference filter |
| Wavelength Accuracy | ± 1 nm |
| Suitable Vials | Multi vial 10 mm Round Cuvettes 13 mm Round Cuvettes 16 mm Round Cuvettes 24 mm |
| Display | Graphic-display |
| Interfaces | Infrared |
| Operation | Acid and solvent resistant, touch-sensitive keypad with audible feedback via integrated beeper |
| Updates | Software updates via internet |
| Internal Storage | Approx. 1000 data sets |
| Battery Life Time | approx. 26 h |
| Beeper | existing |
| Portability | Benchtop |
| Compliance | CE |
| Languages User Interface | German, English, French, Spanish, Italian, Portuguese, Polish, Indonesian |
| Dimensions | 3.74 x 1.77 x 8.27" |

Delivery Scope

- In case
- 4 Batteries (AA)
- 3 Vials 24 mm ø
- 3 Vials 16 mm ø
- Tube Adapter, 16 mm
- Tube Adapter, 13 mm
- Plastic stirring rod 13 cm
- Brush 11 cm
- Screw driver
- Quickstart Guide
- Certificate of Conformity
- Warranty information

Please note: Supplied without reagents; please order required reagents separately.

| Title | Part Number |
|---|-------------|
| Water sampler with bottle 250 mL and lid, AF 631 | 170500 |
| Batteries (AA), set of 4 | 1950025 |
| Multy cuvette-3, set of 12 | 197605 |
| 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 |
| Sample cuvettes with lid, Height 95 mm, ø 24 mm, set of 6 | 197646 |
| Round cuvette 16 mm ø, set of 10 | 197665 |
| Adapter for round cuvettes 16 mm ø | 19802190 |
| Adapter for round cuvettes 13 mm Ø | 19802192 |
| Rubber seal cap | 19802223 |
| Mixing cylinder, 25 ml | 19802650 |
| Update cable | 214030 |
| Update cable set with USB/R232 adapter | 214031 |
| Reference Standard Kit Chlorine - 0.2 and 1.0 mg/l (MD/PM 600 series) | 215630 |
| Reference Standard Kit Chlorine - 0.5 and 2.0 mg/l (MD/PM 600 series) | 215635 |
| Reference Standard Kit Chlorine - 1.0 and 4.0 mg/l (MD/PM 600 series) | 215636 |
| Verification Standard Kit MD 600 | 215640 |
| RD125 Thermoreactor, 16mm tubes, 24 slots | 2418940 |
| Standard Solution Ammonia, 1.3 mg/l NH ₄ = 1.0 mg/l N | 2420800 |
| Standard Solution Ammonia, 5.2 mg/l NH ₄ = 4.0 mg/l N | 2420801 |
| Standard Solution Ammonia, 26 mg/l NH ₄ = 20 mg/l N | 2420802 |
| Standard Solution Phosphate, 4.6 mg/l PO ₄ = 1.5 mg/l P | 2420808 |
| Standard Solution Phosphate, 20 mg/l PO ₄ = 6,5 mg/l P | 2420809 |
| 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 |

| Title | Part Number |
|---|-------------|
| Pipette Tips | 365032 |
| Pipette 100 µl | 365041 |
| Pipette, 200 µl | 365042 |
| Pipette, 1000 µl | 365045 |
| Membrane filter set for use when preparing samples, 25 membrane filters 0.45 µm, 2 syringes 20 ml | 366150 |
| 250 mL bottle, AF 631 | 375072 |
| Brush, 11 cm length | 380230 |
| Measuring beaker, 100ml | 384801 |
| Measuring spoon, 1 g | 384930 |
| UV Pen Lamp, 254 nm | 400740 |
| UV protection glasses, orange | 400755 |
| Cuvette stand for 6 round cuvettes Ø 24 mm | 418951 |
| Cuvette stand for 10 round cuvettes Ø 16 mm | 418957 |
| Pipette tips, 1-5 ml (white) 100 pc. | 419066 |
| Pipette tips, 0,1-1 ml (blue), 1000 pc. | 419073 |
| Automatic pipette, 1-5 ml | 419076 |
| Screw caps TOC | 420757 |
| Measuring spoon no. 8, black | 424513 |
| Plastic funnel with handle (white) | 471007 |
| ValidCheck Chlorine 1,5 mg/l | 48105510 |
| Stirring rod and spoon | 56A006601 |

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