

Photometer and Fluorometer MD 640

Water Chemistry and Fluorescence
Measurement in one



Highlights

- Inbuilt PTSA & Fluorescein measurement - no adapter required
- High quality results due to interference filters and long-life LEDs
- Automatic wavelength selection
- **Bluetooth®** data transmittance to Lovibond® AquaLX® App
- Covers more than 120 important methods for water analysis such as aluminium, chlorine, COD, bromine, chlorine dioxide, copper, iron, molybdate and phosphate
- Advanced data management via AquaLX® App
- Portable and easy handling
- One time zero
- Data storage for 500 data sets
- Robust, water proof design
- Backlit display

Introduction

The Lovibond® Photometer MD 640 is an enhanced version of the MD 610 photometer, offering additional fluorescence capability for the determination of PTSA and fluorescein in water systems.

PTSA (1,3,6,8 pyrenetetrasulfonic acid, sodium salt) and fluorescein are fluorescent materials that are increasingly being added to speciality water treatment products to enable real time product dose analysis. Both materials are detectable at ppb levels, are non-toxic and chemically stable, all of which make them ideal tracer additives throughout complex water systems. Accurately measuring product dose levels helps the water treatment specialist to control water chemistry; prevent corrosion, scale and biological fouling; increase system efficiency and, ultimately, save energy and costs.

Delivery Content

- Instrument in carrying case
- 4 batteries
- 3 round vials each 24 and 16 mm ø (black lid)
- 1 adapter each for 16 mm and 13 mm vials
- Plastic stirring rod 13 cm, Brush 11 cm, syringe 5 ml, screw driver
- Warranty information
- Certificate of Compliance
- Instruction Manual

Order codes (without reagents)

MD 640: 21 41 40

Please specify the reagents or parameters required at time of order.

You can find updated information on parameters and measuring ranges at www.lovibond.com

Applications

- Industrial Process Water & Waste Water
- Drinking Water
- Science & Research
- Governmental and Private Laboratories
- Mobile Applications

Technical Data

Display	Backlit graphic-display
Interfaces	Bluetooth® 4.0 RJ45 socket for Internet updates ¹
Optics	LEDs, interference filters (IF) and photo sensor in transparent sample chamber Wavelength range: 430 nm IF $\Delta\lambda = 5$ nm 530 nm IF $\Delta\lambda = 5$ nm 560 nm IF $\Delta\lambda = 5$ nm 580 nm IF $\Delta\lambda = 5$ nm 610 nm IF $\Delta\lambda = 6$ nm 660 nm IF $\Delta\lambda = 5$ nm IF = interference filter
UV excitation	375 nm
Measurement Ranges	PTSA 10 - 1000 ppb Fluorescein 10 - 400 ppb
Calibration Check	Monthly (user) (using calibration sets)
Calibration	Factory set & user adjustable (using calibration Standard Set)
Wavelength Accuracy	± 1 nm
Photometric Accuracy*	2 % FS (T = 20 °C – 25 °C)
Photometric Resolution	0.005 A
Operation	Acid and solvent resistant, touch-sensitive keypad with audible feedback via integrated beeper
Power Supply	4 batteries (Mignon AA/LR6); Operation time: approx. 26 h continuous operation or 3500 tests
Auto-Off	Approx. 20 minutes after last keypress with audible signal
Dimensions	Approx. 210 x 95 x 45 mm (unit) approx. 395 x 295 x 106 mm (case)
Weight (unit)	Approx. 450 g
Ambient Conditions	5–40 °C at max. 30–90 % rel. humidity (non condensing)
Language Selection	German, English, French, Spanish, Italian, Portuguese, Polish, Indonesian ; additional languages via Internet update
Memory Capacity	Approx. 500 data sets
CE-Conformity	

¹ optional available: connection cable with integrated electronics (RS 232 / RJ-45 plug)

* tested with standard solutions

Accessories

Item	Code
Set of 12 round vials with lid Height 48 mm, Ø 24 mm	19 76 20
Set of 12 round vials with black lid for PTSA / Fluorescein Height 48 mm, Ø 24 mm	19 76 57
Set of 10 round vials with lid Height 90 mm, Ø 16 mm	19 76 65
Adapter for round vials ø 16 mm	19 80 21 90
Adapter for round vials ø 13 mm	19 80 21 92
Set of multi vials-3 with lids path length 10 mm, 10 ml volume Height 48 mm, Ø 24 mm (12 pc.)	19 76 05
Vial stand for 6 round vials Ø 24 mm, acrylic glass	41 89 51
Vial stand for 10 vials (Ø 16 mm or □ 13,5 mm), acrylic glass	41 89 57
Sealing ring for vial ø 24 mm (12 pc.)	19 76 26
Battery, 1.5 V, AA-Alkali-Mangan (4 pc.)	19 50 025
Cleaning cloth for vials	19 76 35
Plastic funnel with handle	47 10 07
Plastic stirring rod, 13 cm length	36 41 00
Plastic stirring rod, 13 cm length, (10 pc.)	36 41 20
Plastic stirring rod, 10 cm length	36 41 09
Plastic stirring rod, 10 cm length, (10 pc.)	36 41 30
Cleaning brush, 10 cm	38 02 30
Verification Standard Kit	21 56 40
Cable for update for connection to a PC	21 40 30
PTSA standard addition solution, 1000 ppb, 50ml	46 12 10
PTSA calibration set (0, 200, 1000 ppb)	46 12 45
Fluorescein standard addition solution, 400 ppb, 50ml	46 12 30
Fluorescein calibration set (0, 75, 400 ppb)	46 12 40