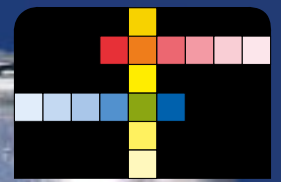


Turbidity



Lovibond®

since 1885



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TB 300 IR
Page 122



TB 211 IR
Page 124



TB 250 WL
Page 125



Laboratory Turbidity Measurement TB 300 IR

with infrared light source



Meets EN ISO 7027 standard

High accuracy

Autoranging

Automatic overall range adjustment with Standard-Set T-Cal

Turbidity is measured according to EN ISO 7027 by nephelometric means (90° scattered light). The infrared light-source permits measurement of coloured and colour-free samples.

The automatic measurement range detection facility (Autorange) enables direct turbidity measurement from 0.01 to 1100 NTU with an accuracy of $\pm 2\%$ up to 500 NTU and $\pm 5\%$ thereafter.

A large graphic display, a choice of several different languages and user-friendly operating instructions make the instrument extremely easy to use.

Software updates (for example: languages) can be downloaded free of charge.



Technical data

Principle	nephelometric (90° scattered light)
Light source	IR-LED(860 nm)
Keypad	acid and solvent resistant; membrane keypad
Auto – Of	automatic switch of
Display	Graphic-Display
Update	Software update via Internet
Clock	real time clock
Memory	1000 data sets
Sample vol.	approx. 12 ml
Range	0.01 – 1100 NTU(Auto range)
Resolution (NTU)	0.01 from 0.01 - 9.99 0.1 NTU from 10.0 - 99.9 1 NTU from 100 - 1100
Accuracy (NTU)	± 2 % of reading or 0.01 (0 - 500) ± 5 % of reading (500 - 1100), whichever is greater
Ambient conditions	temperature: 5-40 °C at 30-90 % relative humidity (non condensing)
Interface	RS232 for printer and PC connection
Power supply	7 NiCd rechargeable batteries (Type AA) ; mains adapter (Input: 100-230V) ; and lithium battery for data storage
Weight (instrument)	approx. 1000 g including batteries and power pack
Dimensions	265 x 195 x 70 mm (L x W x H)
CE-Conformity	

Accessories

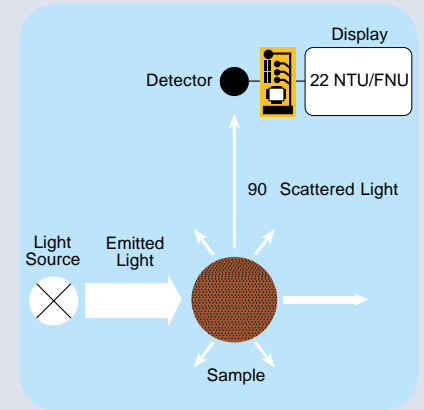
Set of 12 sample vials with black lid, height 55 mm, ø 24 mm	19 76 55
Cleaning cloth for vials	19 76 35
Rubber seal cap, black for interface and power plug-in	19 80 17 16
Sample chamber lid, black	19 80 11 19
Mains charger, 100-240 V, 50-60 Hz, with international adapters	19 30 10
Connection cable connection to PC, serial 9-pins	19 81 98
AA Battery Mignon, 1100 mAh (7 pc.)	19 50 02 0
Lithium battery	19 50 01 7
Formazin Stock Solution (4000 NTU), 125 ml	19 41 41
Formazin Stock Solution (4000 NTU), 250 ml	19 41 42
Set Turbidity Standards T-CAL (<0.1, 20, 200, 800 NTU)	19 41 50
Paper Printer (Adapter and RS232-Cable included)	198077

Delivery Content

- Instrument in plastic case
 - 1 set of turbidity standards T-CAL
 - 7 rechargeable batteries (AA)
 - 1 lithium battery
 - Mains charger, 100-240 V
 - PC connection cable
 - 4 cells (ø 24 mm) with lids
 - Warranty information
 - Certificate of Compliance
 - Instruction Manual
- Order code: 19 40 00-B
Order code: 19 40 00
(without lithium battery)



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Turbidity measurement

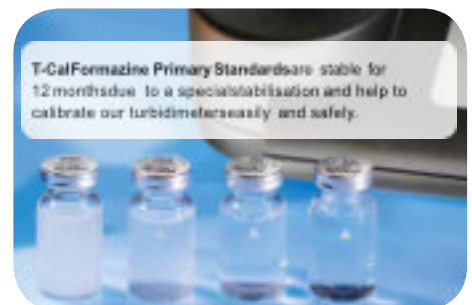
In pool water, turbidity is an indication for the effectiveness of the filter system and cleaning agents. In drinking water it indicates the possible bacterial growth. In sewage treatment plants the turbidity is an indicator of quality in the cleaning procedures. In industries, turbidity is a quality criterion for products.

The cause of turbidity is usually tiny small particles or droplets that do not dissolve in the surrounding liquids.

The light is distracted by these substances and is partly absorbed and scattered. This scattered light is measured for turbidity levels.

The measurement is made at a 90° angle with infrared or white light.

Formazine solutions are used for calibration.





Mobile turbidity measurement

TB211 IR with infrared light source (ENISO7027) & USB-Interface



Technical data

Measurement cycle	approx. 8 seconds
Display	backlit LCD (on keypress)
Optics	temperature-compensated LED (λ = 860 nm) and photosensor amplifier in water proof sample chamber, infrared light
Keypad	polycarbonate membrane, splash proof
Power supply	9 V power pack battery
Auto - OFF	automatic switch-off
Interface	Micro-USB
Storage	internal ring memory for 125 data sets
Additional feature	real time clock and date
Range (Auto-range)	0,01 - 1100 NTU
Resolution	0.01 - 9.99 NTU = 0.01 NTU 10.0 - 99.9 NTU = 0.1 NTU 100 - 1100 NTU = 1 NTU
Accuracy	± 2.5 % of reading or ± 0.01 NTU whichever is bigger 500 - 1100 NTU: ± 5 % of reading
Housing	ABS
Dimensions (L x W x H)	190 x 110 x 55 mm
Weight	approx. 0.4 kg (basic unit)
Ambient conditions	Temperature: 5 – 40 °C rel. humidity: 30 – 90 %
CE-Conformity	

Accessories

Article	Code
Turbidity standard set T-CAL (< 0.1, 20, 200, 800 NTU)	19 41 50
Set empty vials, 24 mm ø (12 pc.)	19 76 55
Cleaning cloth for vials	19 76 35
Sample chamber lid	19 80 11 00
Battery, 9 V	19 50 012
Formazin Stock Solution (4000 NTU), 125 ml	19 41 41
Formazin Stock Solution (4000 NTU), 250 ml	19 41 42
USB-Cable 1.5 m	19 80 25 09

The compact Lovibond® infrared turbidity measuring instrument TB211 IR for fast and accurate on-site analysis. It is measured as provided in EN ISO7027, the scattered light at an angle of 90°.

The wide measuring range from 0.01 to 1100 TE/F = NTU = FNU with a detection limit of 0.01 NTU allows the use of the instrument in different areas, from drinking water to wastewater.

Since the measurements are made by means of infrared light, both coloured and colourless water samples can be measured. A direct transfer of the measurement results to a PC is easy to set up via the USB interface. The required USB cable is a standard part of the scope of the delivery.

Delivery Content

- Instrument in plastic case
- 4 turbidity standards (< 0.1, 20, 200 and 800 NTU)
- 9 V battery
- 2 cells (ø 24 mm) with lids
- USB cable 1.5 m
- Warranty information
- Certificate of Compliance
- Instruction Manual

Code: 26 60 30

Mobile turbidity measurement

TB 250 WL with white light source (EPA 180.1)



The TB250 WL allows easy turbidity measurement either in the field or in the laboratory. Using a „white light“ source and 90° detection, the TB250 WL meets the specifications for EPA turbidity measurement (EPA Standard 180.1). A power efficient micro-circuit design allows the instrument to yield 5000 tests on 4-AA alkaline batteries with an estimated 7-10 year bulb life. Integrated diagnostics confirm proper operation and accuracy. The instrument features an Auto-Ranging feature that automatically selects the correct turbidity range for your sample. Calibration is simple with the included calibration standards. The instrument comes with all the required items for testing including the TB250 WL Turbidimeter, sample, cuvettes, batteries, calibration set, operators manual and carrying case.

Technical data

Display	large LCD display
Keypad	5 key polycarbonate membrane, splash proof
Power supply	4 AA Alkaline batteries for approx. 20 h continuous operation or 3500 tests
Range	0.01 to 1100 NTU
Accuracy	± 2 % of reading or ± 0.01 NTU whichever is greater 500 - 1100 NTU: ± 3 % of reading
Resolution	0.01 NTU to 99.99 NTU 0.1 NTU from 100.0 to 999.9 NTU 1.0 NTU from 1000 to 1100 NTU
Housing	ABS
Dimensions	210 x 95 x 45 mm
Weight	approx. 0.45 kg (base unit)
Ambient conditions	Temperature: 0 – 50 °C rel. humidity: 0 – 90 %
CE-Conformity	

Accessories

Set of secondary standards
0.02, 10, 1000 NTU
Order code: 19 42 80

Set of 3 vials
with black lids
Order code: 19 42 90

Delivery content

- Instrument in a sturdy handy case
 - 2 sample cells
 - 3 turbidity standards
 - 4 batteries
 - Instruction manual
 - Warranty information
- Order code: 19 42 00



Floc-Tester



Floctesters with continuously variable stirring speed for laboratory and field use

Applications

- Flocculant Manufacturer
- Waste Water Treatment Plants
- Laboratories
- Research Centres
- Universities



ET740 (laboratory)

Stirring places	four
Stirring speed control	10 - 300 revolutions per minute
Resolution	1 revolution
Timer	1 - 999 minutes or 0 - 99 hours (continuous)
Power supply	100 – 240 V, 50 - 60 Hz
Weight	approx. 13 kg
Dimensions (mm)	645 L x 347 W x 260 H
EC-conformity	CE
Order code	2 41 91 55

ET750 (laboratory)

Stirring places	six
Stirring speed control	10 - 300 revolutions per minute
Resolution	1 revolution
Timer	1 - 999 minutes or 0 - 99 hours (continuous)
Power supply	100 – 240 V, 50 - 60 Hz
Weight	approx. 17 kg
Dimensions (mm)	935 L x 347 W x 260 H
EC-conformity	CE
Order code	2 41 91 60

ET730 (portable/field)

Stirring places	four
Stirring speed control	20 - 40 - 50 - 100 - 200 revolutions per minute
Timer	1 - 30 minutes (continuous)
Power supply	100 – 240 V, 50 - 60 Hz (including adapter for connection in the car)
Weight	approx. 4.8 kg
Dimensions (mm)	250 L x 320 W x 250 H
EC-conformity	CE
Order code	2 41 91 50

Measuring beaker, glass, low form, 1000 ml	41 91 65
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Measuring beaker, PP, low form, 1000 ml	41 91 66
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Bag for transport of ET730	41 91 51
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Flocculators are designed for a range of applications – such as testing the efficiency of flocculation or precipitation agents.

The ET740 model with 4 stirring places and the ET750 model with 6 stirring places are fitted with an illuminated back panel for glare-free observation of the samples and are suitable for laboratory use.

The flocculator ET730 with 4 stirring places is primarily designed for field use. The 4 stirring points are arranged in a circle around a lamp making it easier to observe the flocculation process.

State-of-the-art technology ensures maximum operating convenience and makes the unit maintenance-free. The main features of the laboratory flocculators are the continuously variable stirring speed, the digital display of stirring rpm, the timer function, the illuminated back panel, and the height adjustment option for the stirring blades during operation.

For model ET730 beakers with 1000 ml volume, low form can be used.

For models ET740 and ET750 beakers with 1000 ml - 1500 ml volume, low or high form can be used.

The beakers are **not** included, they have to be ordered separately.

