# Laboratory Turbidity Measurement TB 300 IR

## with infrared light source

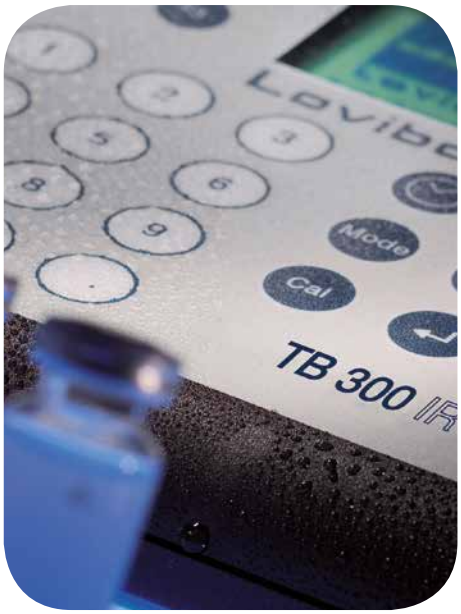



Turbidity is measured according to EN ISO 7027 by nephelometric means (90° scattered light). The infrared light-source permits measurement of coloured and colour-free samples.

The automatic measurement range detection facility (Autorange) enables direct turbidity measurement from 0.01 to 1100 NTU with an accuracy of ± 2 % up to 500 NTU and ± 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 – Off** | automatic switch off |
| **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<br>0.1 NTU from 10.0 - 99.9<br>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 RS 232-Cable inlcuded) | 198077 |

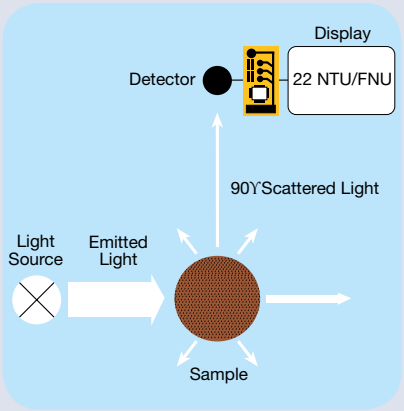
## Delivery Content

- 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)






## 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.