Technical Data Sheet

LETZTEST Photometer Kit and Add-Ons

Revolutionizing Photometry: 18 Wavelengths, 140+ Parameters, 5.5" Color HD touch Display, Unparalleled Accuracy, and Spectrophotometer-Level Performance. Seamlessly Mobile and Robust, Connecting Effortlessly to Smartphones, Tablets, Computers, for Advanced Data Management

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LETZTEST

Overview

The LETZTEST Photometer Kit measures more than 140 physico-chemical parameters in water — all with one compact, high-precision device. Developed in Germany and equipped with 18 advanced LEDs, it delivers reliable and accurate results. The intuitive touchscreen interface, designed like a smartphone and available in multiple languages, makes operation simple and efficient. Sampling points can be quickly identified and tracked via QR-code scanning.

A free cloud platform ensures smooth data management: record results offline, then sync automatically once Wi-Fi is available. Use the cloud to analyze, visualize, and report results, or manage several devices at once. The USB-rechargeable long-life battery guarantees dependable use in both field and laboratory settings.

The system can be upgraded with optional add-ons such as pH and conductivity probes or COD measurement equipment, transforming the Photometer into a multi-parameter meter (with ProbeBox) or a COD analyzer (with Heating Block). (See Add-ons.)

Technical Specifications

Specification	Description
Product Name	LETZTEST Photometer Kit
Article Number	1166
Purpose	Photometric analysis of physico-chemical water parameters
Form	Hard-shell carrying case
Material	Robust polymer
Dimensions (L × W × H)	382 × 191 × 132 mm
Weight	2.5 kg
Spectral Range	390 – 950 nm (parallel reading)
Wavelengths (18 peaks)	410, 435, 460, 485, 510, 535, 560, 585, 610, 645, 680, 705, 730, 760, 810, 860, 900, 940 nm
Optical Setup	180° and 90° direct/indirect measurement
Photometric Accuracy	±2 % FS (at 25 °C)
Testing Parameters	>140 parameters (flexible setup; see “Consumables & Add-ons”)
Electrode Interface	USB-C connector for ProbeBox 1.0 (for pH, EC, TDS, ORP, temperature)
Data Management Software	Digital platform – compatible with LabCOM® Software (Windows/Mac), LabCOM® App (Android/iOS), and LabCOM® Cloud
Connectivity (Technical)	Bluetooth® 4.2, Wi-Fi (2.4 GHz & 5 GHz), USB-C, 4G*
Offline Usability	Yes – full offline operation with automatic cloud upload upon reconnection
Built-in Data Logging	Internal memory for >150,000 measurements
Display	5.5" colour HD touchscreen
Camera	Integrated QR-code scanner for sampling site identification
Calibration	Auto-calibration (software-based) with certificate sent by e-mail; calibrated for LETZTEST reagents
Menu Guidance	4-button intuitive interface with on-screen illustrations

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Power Supply	8,400 mAh Li-Ion rechargeable battery
Charging Method	Via AC adapter / USB-C
AC Adapter Input	100–240 V AC, 50/60 Hz, 0.3 A
Charging Time	4–8 hours (0–100 %)
Languages	>15
Operating Conditions	5 °C – 45 °C / 30–90 % RH
Waterproof Rating	Photometer IP54 (splash-waterproof); Photometer Kit IP68
Wi-Fi Frequency / Power	2.4 GHz & 5 GHz / max. 16 dBm
Pre-activated Parameters	Alkalinity-M (5–200 mg/L); Aluminium (0–0.3 mg/L); Ammonia (LR, 0–1 mg/L); Chloride (0.5–25 mg/L); Chlorine (free/combined/total 0–8 mg/L); Colour (15–500 mg/L); Copper (0–5 mg/L); Fluoride (SPADNS, 0–2 mg/L); Hardness (2–500 mg/L); Iron (0–1 mg/L); Manganese (0.2–5 mg/L); Nitrate (1–100 mg/L); Nitrite (0–0.5 mg/L); Phosphate (0–4 mg/L); Sulphate (5–100 mg/L); Suspended Solids (0–750 mg/L); Turbidity (0.5–1000 NTU) — additional parameters available on request

Content

Item	Description / Details	Qty.
Photometer	Digital photometer for benchtop and mobile applications	1 pc
Glass Vials	24 mm / 10 mL glass vials with integrated light-shield lids	10 pcs
Light Shield	For 16 mm and 1 mL vials, and check standards	1 pc
24 mm Vial Adapter	Built-in, exchangeable adapter	1 pc
Stirring Rods	10.5 cm	2 pcs
Shaker	25 mL capacity	1 pc
Plastic Syringe (10 mL)	Graduated	1 pc
Plastic Syringe (3 mL)	Graduated	2 pcs
Professional Lab Pipette	Adjustable 1–10 mL pipette with 2 tips	1 set
Bulb Pipettes (2 mL)	Glass pipettes	2 pcs
Pipetting Balls	For 2 mL bulb pipettes	2 pcs
NTU Turbidity Calibration Kit	Sealed glass vials (0.5 / 10 / 1000 NTU)	1 set
Vial Cleaning Brushes	—	3 pcs
Microfibre Cleaning Cloth	For cleaning vials	1 pc
Charger Set	USB Type-C charger (EU Type F to UK Type G plug); AC Adapter Input 100–240 V AC, 50/60 Hz, 0.3 A	1 set
User Manual	Printed, ring-binder format	1 pc

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Total Possible Parameters

Photometer Method-ID	Parameter	Measurement Range	Resolution	Reagent
PLPar1	Active Oxygen	0.0 – 40.0 mg/l MPS	0.1	T
PLPar5	Alkalinity-M	5 – 200 mg/l CaCO3	1	T
PLPar193	Alkalinity-M	5 – 200 mg/l CaCO3	1	L
PLPar121	Alkalinity-M (HR)	0 – 500 mg/l CaCO3	1	T
PLPar6	Alkalinity-P	25 – 300 mg/l CaCO3	1	T
PLPar4	Aluminium	0.00 – 0.30 mg/l Al^{3+}	0.01	T
PLPar2	Ammonia (LR)	0.00 – 1.00 mg/l N	0.01	PP
PLPar155	Ammonia (HR)	1.0 – 50.0 mg/l N	0.1	TT + PP
Coming soon	Arsenic	Coming soon	Coming soon	Coming soon
PLPar7	Boron	0.00 – 2.00 mg/l B^{3+}	0.01	T
PLPar8	Bromine	0.00 – 18.00 mg/l Br_2	0.01	T
PLPar63	Bromine	0.00 – 9.00 mg/l Br_2	0.01	L + P
PLPar128	Bromine	0.00 – 18.00 mg/l Br_2	0.01	PP
PLPar71	Carbohydrazide	0.00 – 1.30 mg/l C.Hyd.	0.01	L
PLPar95	Chloramines	0.00 – 8.00 mg/l fCl_2 / NH_2Cl / $NHCl_2$	0.01	T
PLPar10	Chloride	0.5 – 25.0 mg/l Cl^-	0.1	T
PLPar124	Chloride	0.0 – 100.0 mg/l Cl^-	0.1	L
PLPar167	Chloride in Methanol	0.0 – 20.0 mg/l Cl^-	0.1	L
PLPar11	Chlorine (free–combined–total)	0.00 – 8.00 mg/l Cl_2	0.01	T
PLPar12	Chlorine (free–combined–total)	0.00 – 4.00 mg/l Cl_2	0.01	L
PLPar129	Chlorine (free–combined–total)	0.00 – 8.00 mg/l Cl_2	0.01	PP
PLPar122	Chlorine (MR)	0.00 – 10.00 mg/l Cl_2	0.01	T
PLPar14	Chlorine (HR)	5 – 200 mg/l Cl_2	1	PP
PLPar15	Chlorine (HR)	0 – 200 mg/l Cl_2	1	L
PLPar16	Chlorine Dioxide	0.00 – 15.00 mg/l ClO_2	0.01	T
PLPar64	Chlorine Dioxide	0.00 – 7.60 mg/l ClO_2	0.01	L
PLPar130	Chlorine Dioxide	0.00 – 15.00 mg/l ClO_2	0.01	PP + T
PLPar106	Chlorite	0.00 – 8.00 mg/l ClO_2	0.01	L
PLPar94	Chromium	0.00 – 2.20 mg/l Cr^{3+}	0.01	T + PP
PLPar103	Chromium	0.00 – 1.00 mg/l Cr^{6+}	0.01	P + L
PLPar79	COD (LR)	0 – 150 mg/l O_2	1	TT
PLPar80	COD (MR)	0 – 1500 mg/l O_2	1	TT
PLPar17	COD (HR)	0 – 15000 mg/l O_2	1	TT
PLPar107	Colour (Hazen/APHA)	15 – 500 mg/l Pt-Co	1	-
PLPar18	Copper	0.00 – 5.00 mg/l Cu^{2+}	1	-
PLPar19	Copper	0.00 – 5.00 mg/l Cu^{2+}	0.01	P
PLPar158	Cyanide	0.01 – 0.50 mg/l CN^-	0.01	P + L
PLPar20	Cyanuric Acid	0 – 160 mg/l Cya	1	T
LPar65	DBNPA	0.00 – 13.00 mg/l DBNPA	0.01	L
PLPar82	DBNPA	0.00 – 13.00 mg/l DBNPA	0.01	T
PLPar109	DEHA	20 – 1000 µg/l DEHA	1	L
PLPar163	Dissolved Oxygen	0.0 – 10.0 mg/l O_2	0.1	L
PLPar70	Erythorbic Acid	0.00 – 3.50 mg/l Ery. Acid	0.01	L
PLPar113	Fluorescein	0 – 500 µg/l Fluoresc.	1	-
PLPar180	Fluoride (SPADNS)	0.00 – 2.00 mg/l F–	0.01	L
PLPar78	Hardness-Calcium	0 – 500 mg/l $CaCO_3$	1	T
PLPar166	Hardness-Calcium	0 – 500 mg/l $CaCO_3$	1	L
PLPar9	Hardness-Calcium (HR)	50 – 1000 mg/l $CaCO_3$	1	T
PLPar56	Hardness-Total (LR)	2.0 – 50.0 mg/l $CaCO_3$	0.1	T
PLPar148	Hardness-Total (HR)	0 – 500 mg/l $CaCO_3$	1	L
PLPar57	Hardness-Total (HR)	20 – 500 mg/l $CaCO_3$	1	T

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Photometer Method-ID	Parameter	Measurement Range	Resolution	Reagent
PLPar23	Hydrazine	5 – 600 µg/l N_2H_4	1	L
PLPar160	Hydrocarbons in Methanol (tank wash)	0 / 1	—	—
PLPar66	Hydrogen Peroxide (LR)	0.00 – 1.90 mg/l H_2O_2	0.01	L
PLPar24	Hydrogen Peroxide (LR)	0.00 – 3.80 mg/l H_2O_2	0.01	T
PLPar25	Hydrogen Peroxide (HR)	0 – 200 mg/l H_2O_2	1	L
PLPar162	Hydrogen Peroxide (HR)	0 – 200 mg/l H_2O_2	1	T
PLPar26	Hydroquinone	0.00 – 2.50 mg/l $C_6H_6O_2$	0.01	L
PLPar27	Iodine	0.00 – 28.00 mg/l I_2	0.01	T
PLPar67	Iodine	0.00 – 14.00 mg/l I_2	0.01	L
PLPar28	Iron (LR)	0.00 – 1.00 mg/l $Fe^{2+/3+}$	0.01	T
PLPar199	Iron (LR)	0.00 – 1.00 mg/l $Fe^{2+/3+}$	0.01	T
PLPar29	Iron (MR)	0.0 – 10.0 mg/l $Fe^{2+/3+}$	0.1	P
PLPar127	Iron (MR) Ferrous	0.0 – 10.0 mg/l $Fe^{2+/3+}$	0.1	P
PLPar30	Iron (HR)	0.0 – 20.0 mg/l $Fe^{2+/3+}$	0.1	L
PLPar149	Iron in Oil	0 – 450 mg/l $Fe^{2+/3+}$	1	L + T
PLPar132	Iron total	0.00 – 3.00 mg/l $Fe^{2+/3+}$	0.01	PP
PLPar88	Isothiazolinone	0.0 – 10.0 mg/l Isothia.	0.1	L
PLPar147	Legionella	60 – 10^6 CFU/l	1	O
PLPar93	Magnesium	0 – 100 mg/l Mg^{2+}	1	T
PLPar31	Manganese	0.20 – 5.00 mg/l Mn^{2+}	0.01	PP
PLPar161	Manganese VLR	0.000 – 0.030 mg/l Mn^{2+}	0.001	T
PLPar69	Methylethylketoxime	0.00 – 4.10 mg/l C_4H_9NO	0.01	L
PLPar32	Molybdate	1.0 – 100.0 mg/l MoO_4^{2-}	0.1	T
PLPar96	Molybdate (LR)	0.0 – 15.0 mg/l MoO_4^{2-}	0.1	T
PLPar33	Molybdate (HR)	5.0 – 200.0 mg/l MoO_4^{2-}	0.1	L
PLPar134	Molybdate (HR)	0.0 – 40.0 mg/l MoO_4^{2-}	0.1	PP
PLPar90	Nickel (HR)	0.0 – 7.0 mg/l Ni^{2+}	0.1	T
PLPar100	Nickel (HR)	0.0 – 7.0 mg/l Ni^{2+}	0.1	L
PLPar34	Nitrate	0.00 – 11.00 mg/l N	0.01	P + L
PLPar169	Nitrate (HR)	1 – 100 mg/l NO_3^-	1	PP
PLPar190	Nitrate TubeTest	1.0 – 30.0 mg/l N	0.1	L + PP
PLPar35	Nitrite (LR)	0.00 – 0.50 mg/l N	0.01	PP
PLPar36	Nitrite (HR)	5 – 200 mg/l $NaNO_2$	1	P
PLPar97	Nitrite (HR)	0 – 1500 mg/l $NaNO_2$	1	T
PLPar101	Nitrite (HR)	0 – 3000 mg/l NO_2^-	1	L
PLPar151	Nitrogen-Total (LR)	0.5 – 25.0 mg/l N	0.1	TT + PP
PLPar152	Nitrogen-Total (HR)	5 – 150 mg/l N	1	TT + PP
PLPar37	Ozone	0.00 – 5.40 mg/l O_3	0.01	T
PLPar92	Ozone	0.00 – 2.70 mg/l O_3	0.01	L
PLPar164	Peracetic Acid (LR)	0.00 – 10.00 mg/l PAA	0.01	T
PLPar165	Peracetic Acid (HR)	0.0 – 300.0 mg/l PAA	0.1	T + PP
PLPar159	Permanganate Time Test in Methanol (tank wash)	0 – 100 % T	—	L
PLPar41	pH-Universal	pH 5.0 – 11.0	0.1	T
PLPar42	pH-Universal	pH 4.0 – 11.0	0.1	L
PLPar40	pH-value (LR)	pH 5.20 – 6.80	0.01	T
PLPar38	pH-value (MR)	pH 6.40 – 8.40	0.01	T
PLPar39	pH-value (MR)	pH 6.40 – 8.40	0.01	L
PLPar98	Phenol	0.00 – 5.00 mg/l Phenol	0.01	T
PLPar43	PHMB	2 – 60 mg/l PHMB	1	T
PLPar44	Phosphate (LR)	0.00 – 4.00 mg/l PO_4^{3-}	0.01	PP + T
PLPar45	Phosphate (LR)	0.00 – 4.00 mg/l PO_4^{3-}	0.01	L + P
PLPar46	Phosphate (HR)	0.0 – 80.0 mg/l PO_4^{3-}	0.1	PP + T
PLPar47	Phosphate (HR)	0.0 – 100.0 mg/l PO_4^{3-}	0.1	L
PLPar87	Phosphonate	0.0 – 20.0 mg/l PO_4^{3-}	0.1	P + L
PLPar110	Phosphonate	0.0 – 20.0 mg/l PO_4^{3-}	0.1	T

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Photometer Method-ID	Parameter	Measurement Range	Resolution	Reagent
PLPar153	Phosphorus-Total (LR)	0.00 – 2.60 mg/l P	0.01	TT + PP + T + P + L
PLPar154	Phosphorus-Total (HR)	0.0 – 52.0 mg/l P	0.1	TT + PP + T + P + L
PLPar85	Polyacrylate	1.0 – 30.0 mg/l Polyacr.	0.1	L
PLPar48	Potassium	0.7 – 12.0 mg/l K+	0.1	T
PLPar111	PTSA	0 – 1000 µg/l PTSA	1	-
PLPar173	Sanosil	0 – 400 mg/l Sanosil	1	L
PLPar49	Silica (LR)	0.00 – 5.00 mg/l SiO_2	0.01	L + P
PLPar50	Silica (HR)	0 – 100 mg/l SiO_2	1	P
PLPar51	Sodium Hypochlorite	0.2 – 40.0 % NaOCl	0.1	PP
PLPar68	Sodium Hypochlorite	0.2 – 40.0 % NaOCl	0.1	L
PLPar54	Sulphate	5 – 100 mg/l SO_4^{2-}	1	PP
PLPar55	Sulphate	5 – 100 mg/l SO_4^{2-}	1	P
PLPar52	Sulphide	0.04 – 0.50 mg/l S^{2-}	0.01	T
PLPar140	Sulfide	0.00 – 0.70 mg/l S^{2-}	0.01	L
PLPar53	Sulphite (LR)	0.0 – 5.0 mg/l SO_3^{2-}	0.1	T
PLPar105	Sulphite (HR)	0 – 300 mg/l Na_2SO_3	1	T
PLPar174	Sulphite (HR)	0 – 200 mg/l SO_3^{2-}	1	L
PLPar81	Suspended solids	0 – 750 mg/l Sus. Sol.	1	—
PLPar91	Tannic acid	0 – 200 mg/l Ta. Acid	1	L
PLPar108	Total Oxidant	0.03 – 4.00 mg/l Cl_2	0.01	L
PLPar191	Total Residual Oxidant	0.00 – 4.00 mg/l Cl_2	0.01	L
PLPar197	TOC LR	5.0 – 80.0 mg/l TOC	0.1	L + P
PLPar198	TOC HR	50 – 800 mg/l TOC	1	L + P
PLPar170	Transmission / Absorption (all wavelenghts). Wavelenghts [nm]: 410, 435, 460, 485, 510, 535, 560, 585, 610, 645, 680, 705, 730, 760, 810, 860, 900, 940	0 – 100 % T	—	—
PLPar59	Turbidity (FAU)	20 – 1000 FAU	1	—
PLPar112	Turbidity (NTU)	0.5 – 1000.0 NTU	0.1	—
PLPar120	Urea	0.1 – 2.5 mg/l CH_4N_2O	0.1	L + PP
PLPar150	Urea HR	0.2 – 5.0 mg/l CH_4N_2O	0.1	L + PP
PLPar62	Zinc	0.00 – 1.00 mg/l Zn^{2+}	0.01	T

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Add-Ons

With optional and in-built add-ons, the system easily expands into a e.g. bench-top multi-parameter pH/Conductivity meter (ProbeBox), Turbidity meter or a bench-top COD analyzer (Thermo Reactor) — providing a flexible, scalable, and future-proof solution.

LETZTEST Photometer Kit and ProbeBox Kit

The LETZTEST Photometer Kit, when combined with the ProbeBox Kit, forms a complete Multi-Parameter Bench-top pH/Conductivity Meter.

With the ProbeBox, the Photometer can be easily transformed into a bench-top electrochemical meter, enabling precise measurement of pH, conductivity (EC), total dissolved solids (TDS), oxidation-reduction potential (ORP), and temperature.

The ProbeBox connects directly to the Photometer or to an Android device via USB, allowing instant recognition of the connected electrodes. Once connected, users can perform multi-point calibration or start direct measurements immediately.

Measurement results are automatically stored and organized with the corresponding sampling source and, when desired, synchronized in real time via the cloud.

This ensures full data accessibility and traceability through the digital platform—accessible from any connected device for analysis, visualization, and reporting.

Figure 1 LETZTEST Photometer with ProbeBox

This configuration allows users to combine photometric and electrochemical testing in a single compact system, replacing the need for separate instruments and offering complete laboratory-grade functionality in a portable, durable design.

Figure 2 - LETZTEST Photometer Kit and ProbeBox Kit with Electrode-holder for 3 electrodes (16 mm)

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Technical Specification

Specification	Description
Product Name	LETZTEST ProbeBox Kit
Article Number	1223
Purpose	Enables direct connection of probes to the LETZTEST Photometer for measurement of pH, conductivity (EC), and temperature. All measurement data are automatically recorded in the cloud, eliminating the need for an additional multimeter and allowing all physico-chemical parameters to be measured with a single device.
Form	Grey carrying case
Material	Robust polymer housing with precision-cut foam insert
Dimensions (L × W × H)	360 × 300 × 80 mm
Weight	1.5 kg
Application	Suitable for Bench-top and field use in scientific research, environmental monitoring, and water quality control. Designed for general aqueous solution measurements.
Connector Type	8-pin BNC plug with integrated IC
Cable Length	1 m
Interface	A/D converter box with BNC input and USB Type-C output
Compatibility	Fully compatible with the LETZTEST Photometer
Power Source	Powered via USB Type-C connection to the Photometer
Electrode Specifications	

Parameter	Description	Temp. Range	Range	Resolution
pH	Plastic-body pH electrode for general water solutions; non-refillable.	0 – 80 °C (ATC)	pH 0 – 14	0.01 pH
EC, TDS	Plastic-body conductivity electrode (K = 1.0); wide-range, high-accuracy.	0 – 50 °C (ATC)	0 – 200 mS/cm; 0 – 100 g/L	1 µS/cm

Connector Type	8-pin BNC plug with integrated IC
Cable Length	1 m
Interface	A/D converter box with BNC input and USB Type-C output
Compatibility	Fully compatible with the LETZTEST Photometer
Power Source	Powered via USB Type-C connection to the Photometer

Content of LETZTEST ProbeBox Kit

Item	Description / Details	Qty.
pH Electrode	Plastic-body pH electrode for general aqueous solutions; ideal for laboratory and field applications; 8-pin BNC plug with integrated IC; 1 m cable	1 pc
EC Electrode	Plastic-body conductivity electrode designed for high accuracy across a wide range of conductivity measurements (0–200 mS/cm), with a cell constant of K = 1.0	1 pc
A/D Converter Box	BNC input and USB Type-C output for connection to the LETZTEST Photometer	1 pc
USB Cable	Type-C to Type-C connection cable	1 pc
Electrode-holder (optional)	For 3 electrodes (16 mm)	1 pc
KCl Protection Solution	10 mL dropper bottle; 3 mol/L KCl electrode storage solution	1 pc
Calibration Solution – pH 4.01	20 mL sachet	1 pc

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Calibration Solution – pH 7.00	20 mL sachet	1 pc
Calibration Solution – pH 10.01	20 mL sachet	1 pc
User Manual	Printed instructions	1 pc
Calibration & Maintenance Solution Set (separate carton box)	Includes the following standard items: • Electrolyte Solution “KCl 3 mol/L”, 100 mL bottle • “EC 1413 µS/cm” calibration solution, 100 mL bottle • “EC 12.88 mS/cm” calibration solution, 100 mL bottle • “pH 4.00” calibration solution, 100 mL bottle • “pH 7.00” calibration solution, 100 mL bottle • “pH 10.00” calibration solution, 100 mL bottle	1 set

Measuring Turbidity with the LETZTEST Photometer Kit

The LETZTEST Photometer Kit measures turbidity (NTU) based on the 90° nephelometric detection principle, fully compliant with international water quality testing standards.

The optical system combines 180° (transmission) and 90° (scattered light) configurations. For turbidity measurement, the 90° sensor board is software-activated, enabling precise detection of light scattered by suspended particles in the sample. This configuration ensures accurate and reproducible turbidity readings within a range of 0.5 to 1000 NTU, displayed directly in Nephelometric Turbidity Units (NTU).

The 90° module is digitally enabled for the proposed LETZTEST Photometer Kit starter set, which also includes an NTU Turbidity Calibration Kit consisting of sealed glass vials (0.5 / 10 / 1000 NTU) for reliable calibration and quality assurance.

Figure 3 - The LETZTEST Photometer Kit measures turbidity (NTU) based on the 90° nephelometric detection principle

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Technical Specifications (Turbidity)

Specification	Description
Product Name	LETZTEST Photometer, integrated Turbidity (NTU) Measurement System – Method ID 112
Measurement Principle	Nephelometric method (scattered light at 90°)
Measurement Range	0.5 – 1000 NTU (extendable range possible)
Accuracy	±0.1 NTU
Resolution	0.1 NTU
Standards Compliance	The turbidity measurement method ID 112 uses, is based on the nephelometric principle, which is described in DIN EN ISO 7027
Sample Volume	10 mL (standard cuvette)
Cuvette Type	10 mL glass cuvette with light-shield lid (specific to turbidity measurement)
Measurement Procedure	Fill 10 mL of sample water, insert cuvette into photometer, and start test.
Calibration	Use provided NTU Turbidity Calibration Kit / Sealed glass vials (0.5 / 10 / 1000 NTU)
Data Display	Digital display showing real-time turbidity value in NTU; convertible to FNU/FTU
Data Logging	Integrated data storage; results transferable via USB or cloud platform
Power Supply	Rechargeable lithium-ion battery (USB-powered) or AC operation (depending on configuration)
Accuracy Factors	Clean and scratch-free cuvettes; avoidance of fingerprints, bubbles, and temperature extremes
Accessories Included	Calibration standards, cuvettes, light shield, cleaning cloths, and carrying case
Operating Conditions	5 – 45 °C; up to 90% RH (non-condensing)
Storage of Standards	Calibration standards should be stored at 5 – 25 °C
Equipment Type	Suitable for laboratory and portable use in drinking water and wastewater analysis

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LETZTEST Photometer Kit and Thermo Reactor

The LETZTEST Photometer, when paired with a thermo reactor Bench-top laboratory instrument for e.g. routine COD digestion and general water analysis enables e.g. efficient COD measurement by heating up to 12 glass vials (16mm each) for precise sample digestion. The thermo reactor features an intuitive touchscreen, allowing users to set specific temperatures and times, with six pre-set temperatures (70/100/120/148/150/160 °C) and customizable options. Heating times can also be selected from four pre-set durations or adjusted manually, ensuring accurate and adaptable testing.

Figure 4 - Test for COD with the LETZTEST Photometer and the thermo reactor

Technical Specifications

Specification	Description
Product Name	Thermo Reactor
Article Number	1200
Application	Designed for Chemical Oxygen Demand (COD) digestion and other thermally assisted analyses using 16 mm glass vials (closed reflux method). Suitable for laboratory use in drinking water and wastewater analysis.
Number of Sample Positions	12 sample wells (insert for 12 × 16 mm cuvettes)
Temperature Range	70 °C / 100 °C / 120 °C / 148 °C / 150 °C / 160 °C and user-defined setting
Temperature Control	Digital PID controller with high-precision regulation (±1 °C at 150 °C)
Warm-up Time	From 20 °C to 160 °C within 15 minutes
Timer Range	Pre-set: 30, 60, 90, 120 minutes + user-defined; automatic shut-off/alarm at end of cycle
Display	3.5" colour touchscreen, 480 × 320 resolution
Operation	Icon-based touch menu for intuitive control
Heating Block Material	Anodized aluminium for uniform heat distribution and corrosion resistance
Overheat Protection	Integrated safety thermostat with over-temperature alarm and power cut-off
Lid / Cover	Heat-resistant protective cover included
Sample Tube Compatibility	Compatible with all standard 16 mm sealed COD vials (closed reflux method)

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Compliance	Designed for use with methods equivalent to EPA 410.4 and ISO 15705:2002
Ambient Conditions	10 °C – 40 °C; max 80 % RH (non-condensing)
Power Supply	200 – 240 V AC, 50 Hz
Power Consumption	Max. 350 W
Dimensions (H × W × D)	15 × 27 × 12 cm
Accessories Included	COD vial Adapter, COD vial holder rack, safety shield, instruction manual

Content of Thermo Reactor Set

Item	Description / Details	Qty.
Thermo Reactor	For 12 × 16 mm vials. Temperature settings: 70, 100, 120, 148, 150, 160 °C and user-defined. Heating times: 30, 60, 90, 120 min. Power supply: 200–240 V AC, 50 Hz. Max 350 W.	1 pc
Photometer Adapter	Adapter for 16 mm glass vials, enabling e.g. COD measurement compatibility with the LETZTEST Photometer.	1 pc
Aluminium Test-tube Rack	Durable rack for securely holding 12 × 16 mm glass cuvettes	1 pc
Accessories Included	safety shield, and printed instruction manual	1 pc

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Data Management App/Software/Cloud

The LETZTEST Photometer, in conjunction with the LabCOM App and Software, allows you to:

- Create unlimited accounts (water sites or locations).
- Generate and print location-specific QR codes, which can be scanned by the Photometer camera for quick and easy identification of sampling points.
- Define individual upper and lower limits for testing with an integrated alarm system
- Enter microbiological water testing results produced by the portable microbiological water laboratory from LETZTEST.
- Add photos of sampling site locations.
- Calculate and manage the addition of water treatment chemicals. **And much more**

Additionally, reports can be created, printed, or sent, dose recommendations can be generated, and statistics can be analyzed. This version clarifies the structure, breaks up ideas for better readability, and improves the overall flow.

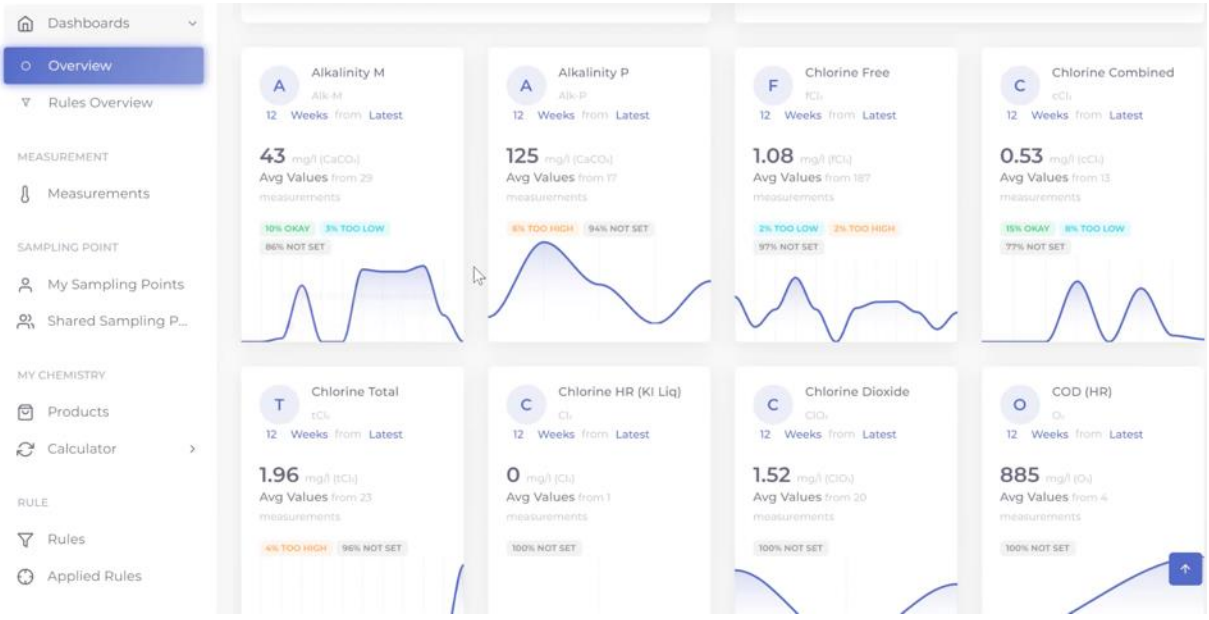

Figure 5 - LETZTEST Photometer, in conjunction with the LabCOM App and Software

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Photos

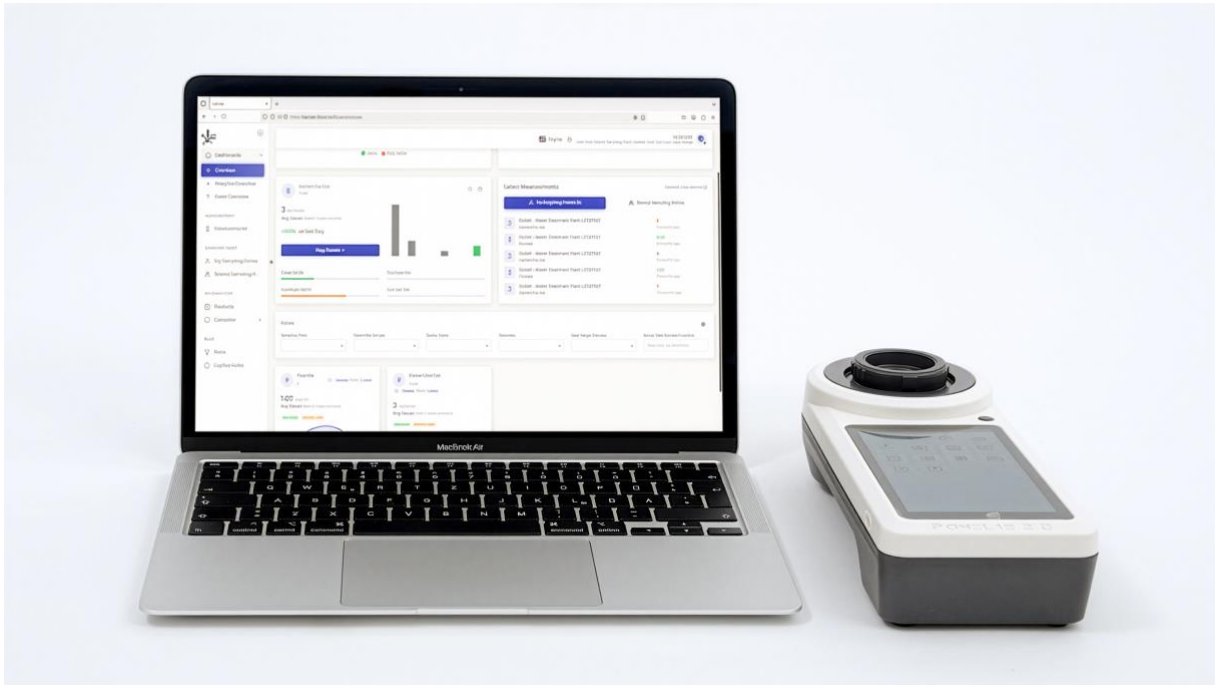

Figure 6 - LETZTEST Photometer

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