

# LETZTEST MOBILE WATER LAB BOX

## **TECHNICAL DATASHEET**

A fully equipped box for testing all relevant microbiological and physico-chemical parameters in water. It combines individual LETZTEST kits with general laboratory tools, transforming them into an autonomous, efficient, and professional laboratory.

Designed to offer maximum flexibility and credibility when monitoring off-grid water systems.

A product of LETZTEST Contact: info@letztest.com Web: www.letztest.com

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INDEX



1. 1.1 1.2 1.3 1.4	CONTENT SPECIFICATIONS HARDWARE LABORATORY RELATED TOOLS	3 4 5 6 8
2.	SAMPLING EQUIPMENT	9
3.	MICROBIOLOGICAL TESTING EQUIPMENT	11
3.1		12
3.2	LETZTEST ELECTRICITY-FREE INCUBATOR	15
4.	PHYSICO-CHEMICAL TESTING EQUIPMENT	18
	LETZTEST PHOTOMETER KIT	19
4.2	LETZTEST PROBEBOX KIT	23
5.	CONSUMABLES & ADD-ON EQUIPMENT	26
5.1	FOR MICROBIOLOGICAL TESTING EQUIPMENT	27
5.2	FOR PHYSICO-CHEMICAL TESTING EQUIPMENT	28
6.	GENERAL INFORMATION	36
6.1	SPECIAL ADVANTAGES	37
6.2	SUPPORT	38
6.3	CONTACT	39

# 1. LEZTEST MOBILE WATER LAB BOX

1. MOBILE WATER LAB BOX

# 1.1 CONTENT HARDWARE LABORATORY RELATED TOOLS — SAMPLING EQUIPMENT LETZTEST PROBEBOX KIT LETZTEST PHOTOMETER KIT -LETZTEST ELECTRICITY-FREE INCUBATOR -LETZTEST PORTABLE MEMBRANE FILTRATION KIT -

1. MOBILE WATER LAB BOX

# 1.2 SPECIFICATIONS



The following specifications refer to the product as delivered in the standard starter-set.





PRODUCT NAME	LETZTEST MOBILE WATER LAB BOX
Article Number	1190
Purpose	Complete mobile water quality testing laboratory in a box for microbiological and physico-chemical analysis
Form	Custom-made hard-shell box
Material	Ultra-light, virtually unbreakable special polymer engineered by ThyssenKrupp
Dimensions	$58 \times 58 \times 71 \text{ cm } (L \times W \times H)$
Weight	55 kg
HS Code	38221900
Testing Parameters (incl. in Starter-Set)	27 selected priority parameters:  E. coli (Escherichia coli), TC/OC (Total & Other Coliforms), Alk-M (Alkalinity M), Al (Aluminium), NH <sub>3</sub> (Ammonia), As (Arsenic), Cl <sup>-</sup> (Chloride), Cl <sub>2</sub> (Chlorine – free, combined & total), Col (Colour – Hazen/APHA), Cu (Copper), F <sup>-</sup> (Fluoride – SPADNS method), TH (LR/HR) (Total Hardness – Low/High Range), Fe (Iron), Pb (Lead) - coming soon, Mn (Manganese), NO <sub>3</sub> <sup>-</sup> (Nitrate), NO <sub>2</sub> <sup>-</sup> (Nitrite), PO <sub>4</sub> <sup>3-</sup> (Phosphate – ortho), SO <sub>4</sub> <sup>2-</sup> (Sulphate), SS (Suspended Solids), Turb (Turbidity), EC (Electric Conductivity), pH (Acidity/Alkalinity), TDS (Total Dissolved Solids), Temp (Temperature)
Available Optional Parameters	> 150 possible parameters (found under <b>'Consumables &amp; Add-ons'</b> )
Number of Tests	Standard starter set includes consumables for 300 tests per priority parameter
Data Management	Multiple options for data recording and transfer via Bluetooth, Wi-Fi, USB or by hand
Can be Used	In-house (benchtop) & outdoor (mobile)
Lockable	Yes (lock included)
Carring Options	With multible handles
Transportation Options	Designed for flexible transport in car trunks, pick-ups, trucks, tuk-tuks, and motorcycles
Weather Protection	Yes (protective cover against rain, sun, and dust included)
Branding	Yes (cover can be branded on demand with a logo of your choice)
Country of Origin	Germany

# 1.3 HARDWARE



## **PROTECTIVE COVER**

Heavy-duty tarpaulin with handle access; protects from rain, sun, and dust. Cutomizable with logo of your choise on demand.



## **MATERIAL**

Made of ultra-light, virtually unbreakable special polymer engineered by ThyssenKrupp.



# **DESIGN**

Shock-resistant construction with reinforced corner protection.



# **HANDLES**

Equipped with strong carrying handles.



## **EXTRA SPACE**

Additional compartment for optional equipment (e.g., Bunsen burner, hand sanitizer).



## **ARRANGED EQUIPMENT**

Thoughtfully organized interior layout for easy & quick access to all sampling and testing equipment.



## **INTERIOR LAYOUT**

Costum-made dividers and water-resistant foam panels prevent movement during transport.



## **FEET**

Fitted with non-slip rubber feet for extra stability.

# 1.3 HARDWARE



### **UPPER SECTION**

The top part containing sampling equipment can be detached and used separately.



### LID INTERIOR

Full Velcro wall on the inside of the upper lid for flexible equipment placement.



### **WORK SURFACES**

Two stable, disinfectable work surfaces for testing and note-taking.



## **FRONT FLAP**

Additional dust protection integrated into the front closure.



### **OPTIONAL GPS TRACKER**

The box can be equipped with a GPS transmitter.



### **LOCKABLE**

The box can be securely locked with a padlock.



## **MOTORCYCLE MOUNT**

Custom fiberglass mount produced in Kigali. (on demand)



### **MOUNTING OPTIONS**

Designed for flexible transport in car trunks, pick-ups, trucks, tuk-tuks, and motorcycles.

1. MOBILE WATER LAB BOX

# 1.4 LABORATORY RELATED TOOLS

### **WORLD HEALTH ORGANISATION GUIDELINES**

- · Guidelines for drinking-water quality Small water supplies; 1 pc
- · Sanitary inspection packages; 1 pc

## LABORATORY COAT;

Size M, long-sleeved with button front, inner and outer pockets; 1 pc



## **BIN CARD**

Laminated for easy stock management; 1 pc

## **A4 DOCUMENT POUCHES**

Velcro-attachable and waterproof for your own documents; 2 pcs

# **A4 NOTEBOOK**

To record data, including a digital device holder; 1 pc

- · Ballpoint Pen; 2 pcs
- · Waterproof Laboratory Pen; 2 pcs



# 2. SAMPLING EQUIPMENT

2. SAMPLING EQUIPMENT 10

# 2. SAMPLING EQUIPMENT

## **REUSABLE SAMPLING BOTTLES**; 250 ml

- · microbioligy (autoclavable); 7 pcs
- · physico-chemistry; 7 pcs

# **SINGLE-USE THIO SAMPLING BAGS**; 115 ml:

- · microbioligy; 25 pcs
- · physico-chemistry; 25 pcs





## WASTE CONTAINERS; 4 L each

- · for biohazard waste; 1 pc
- · for chemical waste; 1 pc
- ·autoclavable
- · wide neck



WATER SAMPLE COOLER BAG; 1 pc

 $\cdot$  25 x 20 x 6 cm (L x W x H)



# 3. MICROBIOLOGICAL TESTING EQUIPMENT

# 3.1 LETZTEST PORTABLE MEMBRANE FILTRATION KIT





Quantifies *E. coli* and other coliforms following DIN EN ISO 9308-1. It also allows quantification of other fecal indicator bacteria per 100 mL of water sample.

The presence of fecal bacteria in water is a clear indication of contamination from human or animal excrement, which carries a high risk of pathogenic microorganisms causing severe waterborne diseases (e.g. Cholera). Monitoring fecal indicator bacteria is crucial to ensure safe drinking water and safeguard public health.

According to the World Health Organization (WHO) drinking water guidelines, safe water must not contain any *E. coli* or other fecal indicator bacteria. (Reference: *WHO Guidelines for drinking-water quality*, Fourth Edition, 2017)



# **SPECIFICATIONS**





PRODUCT NAME	LETZTEST PORTABLE MEMBRANE FILTRATION KIT
Article Number	115433 (EN); 118193 (FR); 1155 (AR); 118297 (ES)
Purpose	For microbiological analysis in water, beverage, and pharmaceutical applications
Form	Hard-shell case
Material	Robust polymer
Dimensions	$450 \times 360 \times 175 \text{ mm } (L \times W \times H)$
Weight	8.6 kg
Waterproof Rating	IP68
Testing Equipment Material	Pharmaceutical-grade stainless steel (1.4404)
Filtration Unit	1-branch manifold, stand-alone
Filtration Volume	100 mL graduated
Sterilisation	Flame, autoclave or other
Filter Compatibility	Standard membrane filtration filters for microbiological analysis, Ø 47 mm or 50 mm; pore sizes 0.2 $\mu$ m or 0.45 $\mu$ m (cellulose nitrate or other polymers)
Sealing-Ring	Heat-resistant EPDM clamp seal
Detection Limit	1 CFU / 100 mL (DIN EN ISO 9308-1)
Suggested Culture Media	Compact Dry dehydrated culture plates or other ready-to-use chromogenic media (e.g., Sartorius Stedim Biotech Nutrient Pad Sets, Lauryl Sulphate Broth Sets, and more). Also compatible with reusable or self-prepared Petri dishes for maximum flexibility.
Incubation	Typically 24h at 37°C for chromogenic media plates
Power Source	Not required
Country of Origin	Germany

# **CONTENT**

ITEM	DESCRIPTION / DETAILS	QTY.
Instruction Manual	Easy-to-understand, illustrated, waterproof, and rewritable	1 pc
Membrane Filtration Unit	Stainless steel	1 pc
Portable Laboratory Table	Stainless steel	1 pc
Manual Vacuum Pump	Made of highly robust polymer; 6 mm tubing connector with pharmaceutical-grade silicone vacuum tubing (inner Ø 6 mm). Maintains vacuum via integrated check valve; easy to operate, and any ingressed water can be easily removed.	1 pc
Spray Bottle	250 mL (for sterile water)	1 pc
Bottle (Ethanol)	100 mL (for ethanol > 70%)	1 pc
Multi-Purpose Bottle	Stainless steel (for additional volume after filtration)	1 pc
Laboratory Alcohol Candle	Stainless steel	1 pc
Container for Sterile Water	Stainless steel	1 pc
Ethanol Container	Stainless steel	1 pc
Measuring Spoon	1 mL, stainless steel	1 pc
Tweezers	Flat-headed, stainless steel	1 pc
Waterproof Pen	To write on bin card or Petri Dishes (Compact Dry)	1 pc
Membrane Filters	Standard membranes	100 pcs
Dehydrated Culture Plates (E. coli and other Coliforms)	Compact Dry plates	32 pcs
Thio Sampling Bags	115 mL, pre-sterilised, with thiosulphate tablet	25 pcs
Spare Parts Bag	<ul> <li>Spare valves for manual vacuum pump; 2 pcs</li> <li>EPDM seal ring for membrane filtration unit; 1 pc</li> </ul>	1 pc



# 3.2 LETZTEST ELECTRICITY-FREE INCUBATOR





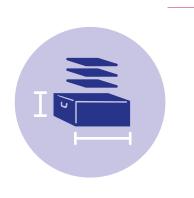
Thermal 37 °C electricity-free incubator for microbiological analysis (patent office protected).

The lightweight, compact incubator operates without batteries or an external power supply, providing a reliable way to test water quality in off-grid locations and areas with unstable power.

Together with the LETZTEST Membrane Filtration Kit and the LETZTEST Water Sampler this incubator forms a complete portable laboratory for microbiological testing.



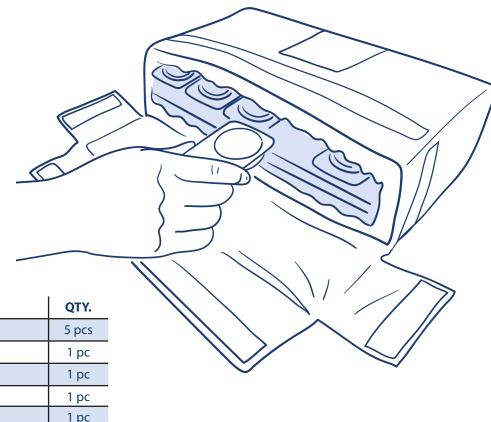
# **SPECIFICATIONS**





PRODUCT NAME	LETZTEST ELECTRICITY-FREE INCUBATOR, SIZE M
Article Number	115178
Purpose	Incubation of microbiological water samples at 37 °C without electricity
Form	Insulated incubation bag with various carrying straps
Material	Made of fibreglass and aluminium
Dimensions	400 x 300 x 130 mm (L x W x H)
Weight	4.5 kg
Function	Use together with LETZETST Portable Membrane Filtration Kit for microbiological analysis in water, beverage, and pharmaceutical applications
Temperature	37°C +/- 0.2°C, > 24 h
Capacity	For example, 25 LETZTEST Tubes or 40 Petri Dishes (CompactDry)
Power Source	No mains power required. Heating plates can be activated using direct sunlight, hot water, an oven, or a 12 V heating mat (attachable to a car battery). After activation, the incubator maintains a stable temperature of 37 °C for up to 30 hours.
Country of Origin	Germany

# **CONTENT**



ITEM	DESCRIPTION / DETAILS	QTY.
Thermal Heating Plates	For thermal incubation	5 pcs
Digital Temperature Logger	With smartphone app for temperature monitoring	1 pc
Analog Thermometer	For manual temperature verification	1 pc
Waterproof Activation Bag	For optional activation using hot water	1 pc
12 V Waterproof Heating Mat	For optional electrical activation via car battery	1 pc
User Manual	Sewn onto the incubator in a waterproof manner	1 pc

# 4. PHYSICO-CHEMICAL TESTING EQUIPMENT

# 4.1 LETZTEST PHOTOMETER KIT



Detect over 140 physico-chemical parameters in water samples with the LETZTEST Photometer Kit combined into one compact, precise device. 18 LEDs ensure exceptional testing precision. The intuitive, smartphone-like device, with multilingual support, ensures convenient and simple operation. Easily mark and find sampling points with QR codes.

Backed by a unique, free cloud software solution for seamless management of your measurement data. Even capture data offline and sync safely once reconnected to Wi-Fi. Use the cloud for advanced analytics, set ranges, visualize results, generate reports, and manage multiple devices. Rely on a USB-rechargeable, longlasting battery.

The LETZTEST Photometer Kit offers the capability to add aditional equipment such as pH and conductivity probes aswell as COD measurement hardware. Transforming your photometer into a COD Analyzer (with Heating Block) or a Multimeter (with ProbeBox). Found under 'Consumables & Add-ons'



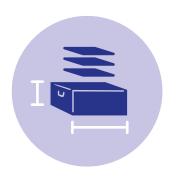
# **SPECIFICATIONS**





_ 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	32 x 381 x 191 mm (L x W x H)
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° & 90° (direct/indirect measurement)
Photometric Accuracy	±2 % FS (at 25 °C)
Testing Parameters	>140 (flexible setup; found under <b>'Consumables &amp; Add-ons'</b> )
Electrode Interface	USB-C connector for ProbeBOX 1.0
Data Management Software	Easy Data Transfer to LabCOM® Software (Windows/Mac), LabCOM® App (Android/iOS), LabCOM® Cloud
Connectivity (Technical)	Bluetooth® 4.2, WiFi, USB-C, 4G*
Offline usability	Yes, including automatic data upload when reconnected
Built-in data logging	Internal Memory >150,000 measurements
Display	5.5" Colour HD Touchscreen
Camera	Integrated QR-Code Scanner for easy sampling site identification
Calibration	Auto-calibration with certificate sent to your e-mail (software); calibrated for LETZTEST reagents
Menu Guidance	4-button intuitive interface with illustrated on-screen instructions
Power Supply	8,400 mAh Li-lon 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 %)

# **SPECIFICATIONS**

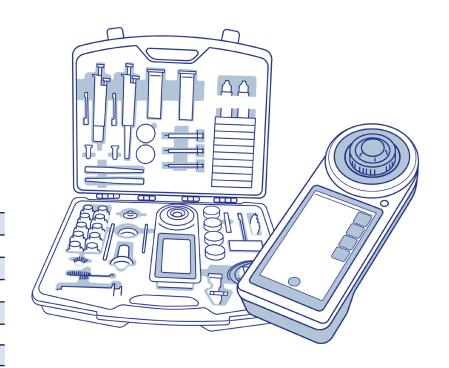




Languages	>15
Operating Conditions	5 °C – 45 °C / 30–90 % RH
Waterproof Rating	Photometer Kit IP68; Photometer itself IP 54 (splash-waterproof)
WiFi Frequency	2.4 GHz & 5 GHz
Transmit Power	Max. 16 dBm
Pre-Activated Parameters (additional parameters can be easily activated for you upon request)	Alkalinity-M / 5 - 200 mg/l / tablet / Resolution 1 Aluminium / 0 - 0.3 mg/l / tablet / Resolution 0.01 Ammonia (LR) / 0 - 1 mg/l / powder / Resolution 0.01 Arsenic (coming soon) Chloride / 0.5 - 25 mg/l / tablet / Resolution 0.1 Chlorine (free-combined-total) / 0.00 - 8.00 mg/l / tablet / Resolution 0.01 Colour (Hazen/APHA) / 15 - 500 mg/l / Resolution 1 Copper / 0 - 5 mg/l / tablet / Resolution 0.01 Fluoride (SPADNS) / 0 - 2 mg/l / liquid / Resolution 0.01 Hardness-Total (LR/HR) / 2(20) - 50(500) mg/l / tablet / Resolution 1 Iron (LR) / 0 - 1 mg/l / tablet / Resolution 0.01 Lead (coming soon) Manganese (LR) / 0.2 - 5 mg/l / powder / Resolution 0.1 Nitrate (HR) / 1 - 100 1 mg/l / powder / Resolution 1 Nitrite (LR) / 0 - 0.5 mg/l / powder / Resolution 0.01 Phosphate-ortho (LR) / 0 - 4 mg/l / tablet + powder / Resolution 0.01 Sulphate / 5 - 100 mg/l / powder / Resolution 1 Suspended Solids / 0 - 750 mg/l / Resolution 1 Turbidity / 0.5 - 1000 mg/l (NTU) / Adapter / Resolution 0.01

# **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	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; raduated	2 pcs
Professional Lab Pipette	Adjustable 1–10 mL, with 2 tips	1 set
Bulb Pipettes	2 mL	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 vials	1 pc
Charger Set	USB Type-C charger, EU type F to UK type G plug. AC Adapter	1 set
	Input 100–240 V AC, 50/60 Hz, 0.3 A	
User Manual	Printed, ring-binder format	1 pc



# 4.2 LETZTEST PROBE BOX KIT





When connected to the LETZTEST Photometer, the ProbeBox enables the integration of various test probes—such as pH, EC, TDS, ORP, and temperature—transforming the photometer into a versatile multimeter.

Connection is established using a USB-Type C cable along with an A/D exchange box link. When the probes are connected to the the photometer, it effectively controls the probe, capturing measurements that can be saved under user-defined sampling points and synchronized with the LabCOM-Cloud of the photometer.

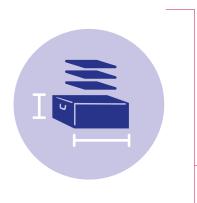
The standard LETZTEST ProbeBox Kit includes a pH electrode and a conductivity electrode, both with durable plastic bodies. Designed for general laboratory and field use, these electrodes provide reliable measurements for pH, conductivity, TDS, and salinity in water solutions. Ideal for research, environmental monitoring, and quality control applications.

The LETZTEST ProbeBox Kit offers the capability to add multible pH, conductivity and ORP probes. Found under 'Consumables & Add-ons'

# **SPECIFICATIONS**



The following specifications refer to the product as delivered in the standard starter-set.



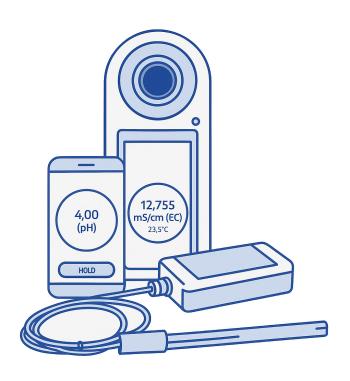


- Product Name	LETZTEST ProbeBox Kit
Article Number	1223
Purpose	Probes can be connected directly to the Photometer to measure pH, conductivity, and temperature.  The measurement data are automatically recorded in the cloud, eliminating the need for an additional multimeter and allowing all physico-chemical parameters to be measured with a single device.
Form	Grey carrying case
Material	Robust polymer with precision foam insert
Dimensions	360 x 300 x 80 mm (L x W x H)
Weight	1.5 kg
Application	Designed for measurement in general aqueous solutions for laboratory and field use in scientific research, environmental monitoring, and quality control
Electrode	• pH Electrode: pH Range: 0 – 14; Temp. Range: 0 – 80 °C; Non-refillable
Specifications	• Conductivity Electrode: Conductivity Range: 0 – 200 mS/cm (K = 1.0); TDS Range: 0 – 100 g/L; Temp. Range: 0 – 50 °C
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 LETZTEST Photometer
Power Source	Powered via USB Type-C connection to Photometer

# **CONTENT**

ITEM	DESCRIPTION / DETAILS	QTY.
pH Electrode	Plastic-body pH electrode for general aqueous solutions;	1 pc
	ideal for laboratory and field applications; 8-pin BNC plug	
	with IC, 1 m cable	
EC Electrode	Plastic-body conductivity electrode, designed for high accu-	1 pc
	racy across a wide range of conductivity measurements (0 to	
	200 mS/cm), with a cell constant of $K = 1.0$ .	
A/D Converter Box	BNC input and USB Type-C output for connection to LETZ-	1 pc
	TEST Photometer	
USB Cable	Type-C to Type-C	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
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

IN SAPARATE CARTON BOX		
Calibration & Maintenance	Includes the following standard items:	1 set
Solution Set	• 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	

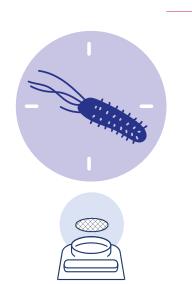


# 5. CONSUMABLES & ADD-ON EQUIPMENT

# 5.1 FOR MICROBIOLOGICAL TESTING EQUIPMENT

These are included in the standard starter-se
These are available as optional extentions

## CONSUMABLES FOR LETZTEST PORTABLE MEMBRANE FILTRATION KIT



ART. NO.	DESCRIPTION	QUANTITY
115177	Compact Dry Plate – E. coli & other coliforms, package of 4 pcs (sterile packed)	for 300 tests
114930	Filtration Membranes, package of 100 pcs	for 300 tests
114928	Thio-Sampling Bags – 100 mL, package of 25 pcs	1 pkg
_	Compact Dry Plate – E. coli only, package of 4 pcs (sterile packed)	
_	Compact Dry Plate – Enterococci, package of 4 pcs (sterile packed)	
_	Compact Dry Plate – Enterobacteriaceae, package of 4 pcs (sterile packed)	
_	Compact Dry Plate – Pseudomonas aeruginosa, package of 4 pcs (sterile packed)	
_	Compact Dry Plate – Heterotrophic bacteria in water, package of 4 pcs (sterile packed)	
_	Compact Dry Plate – Listeria monocytogenes, package of 4 pcs (sterile packed)	
_	Dry ChroMedium Coliform Agar – 500 g (dry powder) to pour your own; for use with reusable Petri Dishes	İ
		<del>-i</del>

# OPTIONAL ADD-ON EQUIPMENT



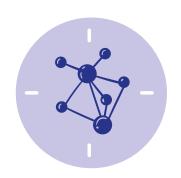
	ART. NO. DESCRIPTION		QUANTITY
	_	LETZTEST Membrane Filtration Unit	
	_	LETZTEST Hand Vacuum Pump	
	_	LETZTEST Tweezers, flat-headed, stainless steel	
	_	LETZTEST Measuring Spoon, 1 mL, stainless steel	
	_	PowerJet2 Laboratory Gas Burner (Mobile Option) – Connect to central gas supply or operate mobile using Camping Gaz CV360 or Express 444 cartridges (with adapters). Made in Germany. Flame temperature: 1350 °C (liquid gas) / 1300 °C (natural gas E). Power: 1.7 kW (liquid gas) / 1.0 kW (natural gas). Dimensions: 150 mm (W) × 210 mm (H). Weight: 500 g. Includes: instruction manual, stainless steel stand, box spanner, wrenches (15 mm & 17 mm), gas connector, nozzles for natural & butane/propane gas, 2 m gas tubing	
•	_	Reusable Glass Petri Dishes (Set of 18) – Size: $60 \times 15$ mm; material: soda-lime glass; autoclavable; sterilizable at 120 °C (oven or pressure cooker)	

# 5.2 FOR PHYSICO-CHEMICAL TESTING EQUIPMENT

These are included in the standard starter-set

These are available as optional extentions

## CONSUMABLES FOR LETZTEST PHOTOMETER KIT



JREMENT RANGE QUANTITY
_
/L for 300 tests
/L —
g/L — —
L for 300 tests
for 300 tests
_
on *
_
L —
L —
mg/L —
/L —
J/L for 300 tests
mg/L for 300 tests
/L —
0 mg/L —
_



<sup>\*</sup> Individual Test Kit "Arsenic Quick II Econo" (300 tests) included until release

These are included in the standard starter-set

These are available as optional extentions



#### ART. NO. **PARAMETER MEASUREMENT RANGE QUANTITY** Chromium (MR) 0 - 2.2 mg/LCOD (HR) 0 - 15000 mg/L COD (LR) $0 - 150 \, mg/L$ COD (MR) $0 - 1500 \, \text{mg/L}$ N/A Colour (Hazen/APHA) 15 - 500 mg/L no reagent required Copper $0.0 - 5.0 \, \text{mg/L}$ for 300 tests 1182 $0.01 - 0.50 \, \text{mg/L}$ Cyanide Cyanuric Acid 2 - 160 mg/L **DBNPA** $0 - 13 \, mg/L$ DEHA $20 - 1000 \mu g/L$ DEWAN-50 0 - 300 mg/L**Dissolved Oxygen** 0 - 10 mg/L**Erythorbic Acid** $0 - 3.5 \, mg/L$ $0 - 500 \, \mu g/L$ Fluorescein Fluoride (SPADNS Test Reagent) 0 - 2 mg/L1219 for 300 tests Hardness-Calcium 0 - 500 mg/LHardness-Calcium (HR) 50 - 1000 mg/L Hardness-Total (HR) $0 - 500 \, \text{mg/L}$ 1181 for 300 tests Hardness-Total (LR) 2-50 mg/LHydrazine $5 - 600 \, \mu g/L$ Hydrocarbons in Methanol yes / no Hydrogen Peroxide (HR) 0 - 200 mg/LHydrogen Peroxide (LR) 0 - 3.8 mg/L



These are included in the standard starter-set

These are available as optional extentions



#### ART. NO. **MEASUREMENT RANGE QUANTITY PARAMETER** Hydroquinone $0 - 2.5 \, mg/L$ lodine $0 - 28 \, mg/L$ Iron (HR) $0 - 30 \, mg/L$ 1170 Iron (LR) 0 – 1 mg/L for 300 tests Iron (MR) 0 - 10 mg/LIron (MR, Ferrous) 0 - 10 mg/LIron (Total) 0 - 3 mg/LIron in Oil 20 - 450 mg/L Isothiazolinone 0.0 – 10.0 mg/L Lead Coming soon Legionella 60 – 10<sup>6</sup> cfu Magnesium $0 - 100 \, mg/L$ Manganese (LR) $0.2 - 5 \, \text{mg/L}$ 1174 for 300 tests Manganese (VLR) $0 - 0.030 \, mg/L$ Methylethylketoxime $0 - 4.1 \, mg/L$ Molybdate 1 – 100 mg/L Molybdate (HR) 0 - 40 mg/LMolybdate (HR) 5 – 200 mg/L Molybdate (LR) 0 - 15 mg/LNickel (HR) 0 - 7 mg/LNickel (HR) 0 - 10 mg/L1169 Nitrate 1 – 100 mg/L for 300 tests 1173 $0 - 0.50 \, \text{mg/L}$ for 300 tests Nitrite



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These are available as optional extentions



#### **QUANTITY** ART. NO. **PARAMETER MEASUREMENT RANGE** Nitrite (HR) $0 - 1500 \, \text{mg/L}$ Nitrite (HR) $0 - 3000 \, mg/L$ Nitrite (HR) 5 - 200 mg/L Nitrogen-Total (HR) $5 - 150 \, mg/L$ Nitrogen-Total (LR) 0.5 - 25 mg/L Ozone $0 - 5.4 \, \text{mg/L}$ Peracetic Acid (HR) 0 - 300 mg/LPeracetic Acid (LR) 0.00 - 10.00 mg/L Permanganate Time Test (Metha-0 - 100 %T nol) pH-Universal 4 – 11 pH pH-Universal 5 – 11 pH pH-Value (LR) 5.2 – 6.8 pH pH-Value (MR) 6.4 – 8.4 pH pH-Value (MR) $6.5 - 8.4 \, \text{pH}$ **PHMB** 2 - 60 mg/L Phenol 0 - 5 mg/LPhosphate (LR) 0.00 - 4.00 mg/L for 300 tests 1188 Phosphate-Ortho (HR) $0 - 100 \, mg/L$ Phosphate-Ortho (HR) $0 - 80 \, \text{mg/L}$ Phosphonate 0 - 20 mg/LPhosphorus–Total (HR) 0 - 52 mg/L

 $0 - 2.6 \, mg/L$ 

Phosphorus-Total (LR)



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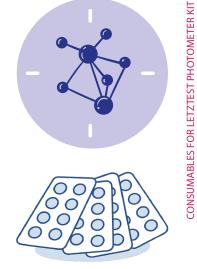
ART. NO.	PARAMETER	MEASUREMENT RANGE	QUANTITY
	Polyacrylate	1 – 30 mg/L	_
_	Potassium	0.7 – 12 mg/L	_
_	PTSA	0 – 1000 μg/L	_
	QAC	25 – 150 mg/L	_
1167	Residual Chlorine	0 – 5.00 mg/L	for 300 tests
	Sanosil	0 – 400 mg/L	_
_	Silica (HR)	0 – 100 mg/L	_
_	Silica (LR)	0 – 5 mg/L	_
_	Sodium Hypochlorite	0.2 – 40 %	_
1226	Sulphate	5 – 100 mg/L	for 300 tests
_	Sulphide	0.04 – 0.5 mg/L	_
_	Sulphide (Alt.)	0 – 0.7 mg/L	_
_	Sulphite (HR)	0 – 200 mg/L	_
_	Sulphite (HR)	0 – 300 mg/L	_
_	Sulphite (LR)	0 – 10 mg/L	_
N/A	Suspended Solids	0 – 750 mg/L	no reagent required
_	Tannic Acid	0 – 150 mg/L	_
1181	Total Hardness	0 – 500 mg/L	for 300 tests
_	Total Oxidant	0 – 4 mg/L	_
	Tracer	0 – 1000 μg/L	
	Transmission / Absorption	0 – 100 %	_
	Turbidity (FAU)	20 – 1000 FAU	_
N/A	Turbidity (NTU)	0.5 – 1100 NTU	no reagent required



These are included in the standard starter-set These are available as optional extentions



ART. NO.	PARAMETER	MEASUREMENT RANGE	QUANTITY
— Urea (LR)		0.1 – 2.5 mg/L	_
— Urea (HR)		0.2 – 5.0 mg/L	_
— Watch Products		0 – 1000 μg/L	_
_	Zinc	0 – 1 mg/L	_



# OPTIONAL ADD-ON EQUIPMENT FOR LETZTEST PHOTOMETER KIT

— ART. NO. PARAMETER		PARAMETER	DESCRIPTION
_		COD	Heat block for 12 × 16 mm vials. Temperatures: 70, 100, 120, 148, 150, 160 °C & user-defined. Heating times: 30, 60, 90, 120 min. 200–240 VAC, 50 Hz. Max 350 W.
		COD	LETZTEST Photometer adapter to use 16 mm glass vials.
	_	COD	Aluminium test-tube rack for holding $12 \times 16$ mm glass cuvettes.

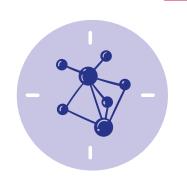


# 5.2 FOR PHYSICO-CHEMICAL TESTING EQUIPMENT

ART NO DESCRIPTION

These are included in the standard starter-set

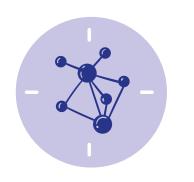
These are available as optional extentions



## CONSUMABLES FOR LETZTEST PROBEBOX KIT

_	ART. NO.	DESCRIPTION	QUANTITY
	1243	ProbeBOX Electrolyte Solution "KCl 3 mol/L" (for pH probe storage)	100 mL
·	_	Electrolyte Solution "KCl 3 mol/L"	500 mL
	_	Electrolyte Solution "KCl 3 mol/L"	1000 mL
	1244	ProbeBOX Buffer "EC 1413 μS/cm" calibration solution (EC/TDS)	100 mL
	_	ProbeBOX Buffer "EC 1413 μS/cm" calibration solution (EC/TDS)	500 mL
	_	ProbeBOX Buffer "EC 1413 μS/cm" calibration solution (EC/TDS)	1000 mL
	1245	ProbeBOX Buffer "EC 12.88 mS/cm" calibration solution (EC/TDS)	100 mL
ľ	_	ProbeBOX Buffer "EC 12.88 mS/cm" calibration solution (EC/TDS)	500 mL
	_	ProbeBOX Buffer "EC 12.88 mS/cm" calibration solution (EC/TDS)	1000 mL
	1246	ProbeBOX Buffer "pH 4.00" calibration solution	100 mL
	_	ProbeBOX Buffer "pH 4.00" calibration solution	500 mL
	_	ProbeBOX Buffer "pH 4.00" calibration solution	1000 mL
	1247	ProbeBOX Buffer "pH 7.00" calibration solution	100 mL
	_	ProbeBOX Buffer "pH 7.00" calibration solution	500 mL
	_	ProbeBOX Buffer "pH 7.00" calibration solution	1000 mL
	1248	ProbeBOX Buffer "pH 10.00" calibration solution	100 mL
		ProbeBOX Buffer "pH 10.00" calibration solution	500 mL
	_	ProbeBOX Buffer "pH 10.00" calibration solution	1000 mL





# OPTIONAL ADD-ON EQUIPMENT FOR LETZTEST PROBEBOX KIT



	ART. NO.	PARAMETER	DESCRIPTION	TEMP. RANGE	RANGE	RESOLUTION
_	_	рН	Plastic Body pH Electrode; general water solutions; non-refillable.	0 – 80 °C ATC	pH 0 – 14	0.01
	_	рН	Routine Sealed Glass Body pH Electrode; general water solutions; non-refillable.	0 – 80 °C ATC	pH 0 – 14	0.01
	_	рН	Refillable Glass pH Electrode; TRIS-buffer compatible; up to 100 °C.	5 – 100 °C ATC	pH 0 – 14	0.01
	_	ORP	Plastic Body ORP Electrode; gel reference; no temperature reading.	0 – 80 °C	±2000 mV	1 mV
Ī	_	EC, TDS	Glass Body – Pure Water Conductivity Electrode ( $K = 0.1$ ); $7 \times 18$ mm platinum.	_	0 – 200 μS/cm; 0 – 100 mg/L (0 – 100 ppm)*	1 μS/cm
-	_	EC, TDS	Glass Body – Conductivity Electrode (K = $1.0$ ); $5\times7$ mm platinum plate / $2$ -pole.	0 – 50 °C ATC	0 – 200 mS/cm; 0 – 100 g/L (0 – 100 ppt)*	1 μS/cm
_	_	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 (0 – 100 ppt)*	1 μS/cm
-	_	EC, TDS	Plastic Body – Conductivity Electrode (K = $10$ ); $5\times5$ mm platinum ring / $2$ -pole.	0 – 50 °C ATC	20 – 2000 mS/cm; 10 – 1000 g/L (10 – 1000 ppt)*	1 μS/cm

# 6. GENERAL INFORMATION

6. GENERAL INFORMATIONS 37

# **6.1 SPECIAL ADVANTAGES**





## **ALL-IN-ONE SOLUTION**

All You need in one Box. Test anywhere, anytime. Eeasy and independent.



## **ROBUSTNESS**

Highest hardware robustness. 100% made in Germany.



## **LONG-TERM**

Designed for long-term operation. Unlike emergency relief field kits.



## **STUDY-PROVEN EFFICIENCY**

70% increase in lab efficiency. Field-proven by independent evaluation.

6. GENERAL INFORMATIONS 38

# **6.2 SUPPORT**



6. GENERAL INFORMATIONS 39

# 6.3 CONTACT



# **LETZTEST**

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