

Technical Data Sheet

LETZTEST Portable MIBI Water Lab

Quantifies *E. coli* and total coliforms per 100 mL in water samples according to DIN EN ISO 9308-1, including the world's first and patent office protected Electricity-Free Incubator. The equipment can also detect many other fecal indicator bacteria using the same hardware setup.



Description

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).

Together, the LETZTEST Membrane Filtration Kit, the LETZTEST Electricity-Free Incubator and the LETZTEST Water Sampler form a complete portable water laboratory for microbiological testing according to DIN EN ISO 9308-1 - perfectly suited to the requirements of a water testing laboratory under limited conditions: (i) robust, (ii) independent of electricity, (iii) easy to transport, (iv) easy to use, (v) independent of inappropriate consumables and flexible for consumables, (vi) less prone to human error.

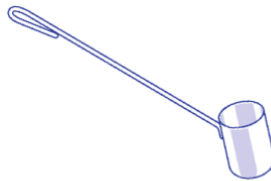
Everything you need is packed into one compact system. Easy to carry and to set up. Perfect, when tables are out of reach. if needed with direct technical support for endusers.



Figure 1 –LETZTEST Portable MIBI Water Lab - according to DIN EN ISO 9308-1

Technical Specifications and Content

The Portable MIBI Water Lab consists of the following three (3) pieces of equipment:

LETZTEST Membrane Filtration Kit	LETZTEST Electricity-Free incubator	LETZTEST Water Sampler
		
1	2	3

1. Specifications LETZTEST Membrane Filtration Kit

Specification	Description
Article Number	1258 (instructional handbook available in different languages: English, French, Arabic, Spanish)
Purpose	For microbiological analysis in water, beverage, and pharmaceutical applications
Form	Hard-shell case
Material	Robust polymer
Dimensions	450 × 360 × 175 mm (L × W × 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 µm or 0.45 µm (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 24 h at 37 °C for chromogenic media plates
Power Source	Not required
Country of Origin	Germany

1. Content of LETZTEST Membrane Filtration Kit

Item	Description / Details	Qty.
Instruction Manual	Easy-to-understand, illustrated, waterproof, and rewritable	1 pc
Membrane Filtration Unit	Pharmaceutical grade stainless steel	1 pc
Portable Laboratory Table	Pharmaceutical grade 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	Pharmaceutical grade stainless steel (for additional volume after filtration)	1 pc
Laboratory Alcohol Candle	Pharmaceutical grade stainless steel	1 pc
Container for Sterile Water	Pharmaceutical grade stainless steel	1 pc
Ethanol Container	Pharmaceutical grade stainless steel	1 pc
Measuring Spoon	1 mL, pharmaceutical grade stainless steel	1 pc
Tweezers	Flat-headed, pharmaceutical grade 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	Spare valves for manual vacuum pump (2 pcs) • EPDM seal ring for membrane filtration unit (1 pc)	1 pc

2. Specifications of LETZTEST Electricity-Free Incubator

Specification	Description
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 × 300 × 130 mm (L × W × H)
Weight	4.5 kg
Function	Use together with LETZTEST 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

2. Content of LETZTEST Electricity-Free Incubator

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

3. Specifications of LETZTEST Water Sampler

Specification	Description
Article Number	117952
Purpose	Liquid Sampler made of pharmaceutical quality stainless steel to collect water samples for microbial analysis.
Form	Liquid Sampler
Material	Pharmaceutical grade stainless steel (1.4404)
Dimensions	173 x 109 x 100 mm (L x W x H)
Weight	0,280 kg
Function	Use together with LETZTEST Portable Membrane Filtration Kit for microbiological analysis in water, beverage, and pharmaceutical applications
Capacity	300 mL
Country of Origin	Germany

Consumables

Reorder consumables via info@letztest.com. Please note that you can purchase all consumables independently from LETZTEST and use multiple suppliers. However, LETZTEST offers you the best possible price and guarantees a very fast and economical delivery.



Art. No.	Description
115177	Compact Dry Plate – <i>E. coli</i> & 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
116379	Compact Dry Plate – <i>E. coli</i> only, package of 4 pcs (sterile packed)
115406	Compact Dry Plate – <i>Enterococci</i> , package of 4 pcs (sterile packed)
1023	Compact Dry Plate – <i>Enterobacteriaceae</i> , package of 4 pcs (sterile packed)
1228	Compact Dry Plate – <i>Pseudomonas aeruginosa</i> , package of 4 pcs (sterile packed)
1229	Compact Dry Plate – Heterotrophic bacteria in water, package of 4 pcs (sterile packed)
1230	Compact Dry Plate – <i>Listeria monocytogenes</i> , package of 4 pcs (sterile packed)
114924	Dry ChroMedium Coliform Agar – 500 g (dry powder) Chromogenic selective agar for preparing petri dishes for quantifying <i>E. coli</i> and coliform bacteria in water with low accompanying flora (per standard DIN EN ISO 9308-1:2012). Used after membrane filtration. Compatible with LETZTEST Membrane Filtration Kits.

Optional Add-On Equipment

Order optional add-on equipment via info@letztest.com to make your testing activities even more time saving, cost efficient and reliable. LETZTEST offers you the best possible price and guarantees a very fast and economical delivery.



Art. No.	Description
1400	LETZTEST Membrane Filtration Unit
1401	LETZTEST Hand Vacuum Pump
1402	LETZTEST Tweezers, flat-headed, stainless steel
1403	LETZTEST Measuring Spoon, 1 mL, stainless steel
1404	Reusable Glass Petri Dishes (Set of 18) – Size: 60 × 15 mm; material: soda-lime glass; autoclavable; sterilizable at 120 °C (oven or pressure cooker)

1405	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.
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Production

100% made in Germany. Originating from [Letzner Pharmawasseraufbereitung GmbH](#) (now EnviroFALK PharmaWaterSystems), LETZTEST is a company that places great importance on the quality of its equipment. Intermediate production steps and finished products are checked against specified release criteria.



HIGH QUALITY
MADE IN GERMANY

Additional Support

The **waterproof and (re)writable illustrated instruction manual** helps you to carry out water analysis from A to Z in a simple way and in accordance with international standards. It helps you to ensure the validity of your results.



Figure 2 - The illustrated instruction manual - waterproof and (re)writable



Figure 3 – Easy and direct end-user support

Data Management

The **BactLAB App** allows you to read the results of your tests in one second using the camera of your smartphone, for free!



Figure 4 - The BactLAB App allows you to read your result in one second

Photos



