

Potalab 1 is a portable microbiological and physico-chemical testing laboratory designed to assess the suitability of drinking water on-site. It provides bacteriological testing using the accepted method of membrane filtration and incubation of faecal and total coliforms as an indicator of the presence of other harmful bacteria and viruses. The physico-chemical instruments are used in combination to quickly examine a supply to determine if a more detailed microbiological examination is required. All equipment is easily packed within the aluminium case for complete portability.

Potalab 2 provides the same equipment and facilities as Potalab 1, but without the physico-chemical instrumentation. The purpose of this unit is for microbiological testing only.

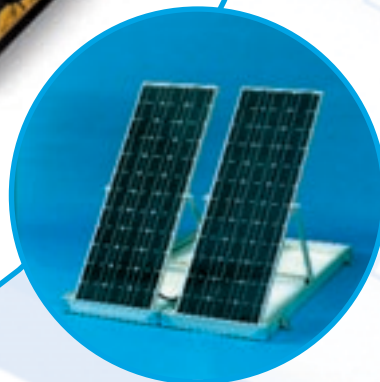
- For Microbiological, physico-chemical testing in the lab or field.
- Wide range of physico-chemical parameters can be measured using highly accurate digital instruments.
- More cost effective than central laboratory testing.
- Simple technique - Dual incubator allows analysis of both faecal & total coliforms simultaneously.
- Results incubated in just 14 hours.
- Completely portable - even runs off solar power.
- Uses low cost, long-life consumables, and equipment is easily sterilised in the field.
- Supplied with reagents for Ammonia, Arsenic, Chlorine, Fluorides, Nitrites and Nitrates as standard. Other parameters available on request.
- Conforms to WHO Guidelines.



Individual components are detailed on the following pages...



Twin Incubator
with digital readout &
automatic timer



Solar Power Unit
(optional accessory)



Membrane Filtration Unit,
pistol grip vacuum pump

The bacteriological filtration unit:

is supplied with a pistol grip vacuum pump, sampling cup and line, alongside 200 pads, gridded membranes and 38.1g membrane lauryl sulphate broth.

Digital Dual Incubator

Microbiological Testing is carried out using Twin Incubators for the simultaneous incubation of Faecal and Total Coliforms. The temperature is digitally controlled and preset to 37°C and 44°C with an accuracy of $\pm 0.1^\circ\text{C}$.

- Holds 2 racks of 25 Petri-Dishes allowing for up to 50 test's at any one time.
- Features digital automatic timer facility for logging the incubation period in case of power failure.
- Fully portable can be powered by mains, internal battery, vehicle battery (cigarette lighter lead supplied) or even solar power.

Specifications

Dual Incubator

Temperature Range	20°C to 50°C with preset levels at 37°C or 44°C, automatic timer
Display	Clear digital LCD, 0.1°C resolution
Capacity	2 X 25 aluminium dishes 2 X 8 plastic/glass dishes
Accuracy	$\pm 0.1^\circ\text{C}$
Mains Power (AC)	220-240 V, 50Hz, 1 ph/110 V, 60 Hz, 1 ph
Battery Power (DC)	Integral 12 V re-chargeable battery through lead with crocodile clips and vehicle cigarette lighter socket plug
Dimensions	200 X 180 X 220 mm
Weight	6kg

POTALAB®

physico-chemical analysis

The following instruments are supplied as standard in the Potalab

Turbidity Meter



pH/temp/mV Meter



Conductivity/TDS Meter



Digital Arsenator



portable water testing...

Specifications

Turbidity Meter	See also page 38
Range	0 to 1000 NTU
Resolution	0.01, 0.1, 1 NTU (dependent on measurement & range)
Accuracy	±2%/±3% of reading
Calibration	Push button at 0.02, 20.0, 100 & 800 NTU
Dimensions	68(W) x 155(L) x 46(H) (mm)
Weight	200g
	Supplied with calibration kit.

pH/temp/mV Meter	See also page 39
pH Range	-2.00 to 16.00
Resolution & Accuracy	0.01 & ±0.01 pH
mV Range	±199.9 mV & ±1999 mV (Extended)
Resolution & Accuracy	0.1 mV & ±0.2 mV (within ±199.9 mV); 1 mV & ±2 mV (beyond ±199.9 mV)
Temperature Range	-10 to 110 °C
Resolution & Accuracy	0.1 °C & ±0.5 °C
No. of Calibration Points	Up to 5 points
ph Buffer Options	pH 1.68, 4.01, 7.00, 10.01, 12.45
Temperature Compensation	Automatic / Manual (0 to 100 °C)
Special Functions	Averaging/Stability; Self-diagnostic; Hold & Auto-Power Off after 20 minutes
Power	4 'AAA' x 1.4V batteries or 9VDC power adaptor Supplied with electrodes and buffer solutions.

Conductivity/TDS Meter	See also page 38
Conductivity Range	0 to 19.99, 199.9, 1999 µS/cm; 2.00 to 19.99, 199.9 mS/cm
TDS Range	0 to 9.9, 99.9, 999 ppm; 1.00 to 9.99, 99.9ppt
Resolution	0.01, 0.1, 1µS; 0.01, 0.1mS (Conductivity) 0.01, 0.1, 1ppm; 0.01, 0.1ppt (TDS)
Accuracy	±0.2, 2, 20µS/cm; ±0.2, 2mS/cm (Cond) ±0.1, 1, 10ppm; ±0.1, 1ppt (TDS)
Temperature Range	-10 to 110.0 °C
Resolution & Accuracy	0.1 °C & ±0.5 °C
TDS Factor	Adjustable 0.40 to 1.00
No. of Calibration Points	5 points (1 per range)
Temperature Compensation	Automatic / Manual (0 to 100 °C)
Special Functions	Auto-ranging; Averaging/Stability; Self-diagnostic; Hold & Auto-Power Off

Power	4 x 1.4V batteries or 9VDC power adaptor Supplied with calibration standards.
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Digital Arsenator	(see also page 16)
Range	2-100 µg/l/ppb
Timing Facility	Up to 40 minutes
Resolution	LCD digital display
Power	PP3 9v Battery (included)
Consumables	Supplied with sufficient reagents and filters for 200 tests.

Specifications

Microbiological Testing

Potalab 1 Comprises the following components

Twin incubator with digital temperature display and automatic timer facility.

50 re-usable aluminium petri dishes. (inc: petri dish rack)

Electrical leads for AC110/220V operation, DC operation via vehicle cigarette lighter and crocodile leads along with separate re-chargeable battery. (external to incubator, but internal to carrying case)

Membrane filtration unit including collection flask, sampling cup, land line plus bronze disk, gaskets, O-rings, and pistol grip vacuum pump.

200 pads and membranes with pad dispenser, 38.1g membrane lauryl sulphate broth for 200 tests, 5 unique media measuring devices (mmd) for measuring precise amounts of lauryl sulphate broth. (i.e, 10 tests only)

Tweezers, 5 dropping pipettes, 4 autoclavable plastic bottles, hand lens, lighter, pen, clippers, screwdriver and a tube of lubrication grease.

Physico-Chemical-Testing

Conductivity/TDS Meter, pH/Temp/mV meter and a digital Turbidity Meter.

Wagtech Photometer with reagents for chlorine, nitrates, nitrites, ammonia and fluorides.

Wagtech Digital Arsenator inc: filters, tablets and filter holders, sufficient for 200 Arsenic tests.

Purchase details

Potalab 1:

Portable water testing laboratory for microbiological and physico-chemical testing, for use in lab/field. (weight 20Kg)

[Wag-WE10010](#)

Potalab 2:

For microbiological testing only. (weight 18Kg)

[Wag-WE10020](#)

For a full range of spares and consumables please refer to pages 11 & 12.



5000 Photometer



Reagents for use with 5000 Photometer

Test	Range mg/l	250/200* Test Packs
Alkalinity, total (Alkaphot)	0 – 500	Wag-WE10100
Alkalinity M (Alkaphot M)	0 – 500	Wag-WE10102
Alkalinity P (Alkaphot P)	0 – 500	Wag-WE10104
Aluminium	0 – 0.5	Wag-WE10106
Ammonia	0 – 1.0 (N)	Wag-WE10108
* Boron	0 – 2.5	Wag-WE10110
Bromine	0 – 6.0	Wag-WE10112
Calcium Hardness (Calcicol)	0 – 0.5 (N)	Wag-WE10114
Chlorine DPD (free)	0 – 5.0	Wag-WE10116
Chlorine DPD (Free, Mono & Di chloroamine)	0 – 5.0	Wag-WE10118
Chlorine DPD (Free, Combined & Total)	0 – 5.0	Wag-WE10120
Chlorine HR	0 – 250	Wag-WE10122
Copper (Coppercol)	0 – 5.0	Wag-WE10124
Cyanuric Acid	0 – 200	Wag-WE10126
* Fluoride	0 – 1.5	Wag-WE10128
Hardness (Hardicol)	0 – 500	Wag-WE10130
Hydrogen Peroxide LR	0 – 2.0	Wag-WE10132
Hydrogen Peroxide HR	0 – 100	Wag-WE10134
Iron LR	0 – 1.0	Wag-WE10136
Iron MR	0 – 5	Wag-WE10137
Iron HR	0 – 10	Wag-WE10138
Magnesium (Magnecol)	0 – 100	Wag-WE10140
Manganese	0 – 0.03	Wag-WE10142
Molybdate LR	0 – 15	Wag-WE10144
* Molybdate HR	0 – 100	Wag-WE10146
Nitrate (Nitratest)	0 – 20 (N)	Wag-WE10148
Nitrite (Nitricol)	0 – 0.5 (N)	Wag-WE10150
Nitrite (Nitriphot)	0 – 1500	Wag-WE10152
Organophosphate	0 – 20	Wag-WE10154
Ozone	0 – 2.0	Wag-WE10156
* pH (Phenol Red)	6.8 – 8.4	Wag-WE10158
Phosphate LR	0 – 4.0	Wag-WE10160
Phosphate HR	0 – 100	Wag-WE10162
* Potassium	0 – 12	Wag-WE10164
Silica	0 – 4.0	Wag-WE10166
* Sulphate	0 – 200	Wag-WE10168
Sulphide	0 – 0.5	Wag-WE10170
Sulphite (Sulphitest)	0 – 500	Wag-WE10172
Zinc	0 – 4.0	Wag-WE10174

The Potalab Photometer 5000 offers a precise, accurate means of water analysis using an integral colorimeter with built-in colour filters. Used with the specially formulated reagents, the Photometer accurately assesses the colour formed in the test sample and displays the reading as a digital transmittance readout. This ensures accurate and repeatable results with no reliance on matching colour by eye.

Readings are compared against a calibration chart for each test. This way the instrument is universally applicable to a wide range tests without the need of manual re-calibration or for expensive plug-in calibration modules.

The Photometer is supplied with six glass test tubes and a dilution tube. Reagents for testing Free Chlorine, Arsenic, Fluorides Nitrites, Nitrates, and Ammonia are included with the Potalab in quantities for 200 tests of each type. A total of 38 different parameters can be tested using this instrument, all of which are listed on this page.

Specifications

Wavelength Range	390-660nm
Operating Wavelengths	410nm, 490nm, 520nm, 570nm, 640nm, built-in filters
Filter Bandpass	±20nm
Display	10mm LCD
Range	0-100% transmittance
Resolution	1% transmittance
Test Chamber	Takes 10ml round glass test tube, 20mm OD, 18mm path length and 122°F to 158°F)
Battery	9 Volt
Battery Life	Lithium – 8000 readings Alkaline 2000 readings
Dimensions	170(W) X 130(L) X 45(H) (mm)
Weight	320g

A datasheet showing a full range of reagents is available on request.