

SCHOLAR_{T2O} EXP™



The Ultimate Water Testing Portable Lab for Education



WaterLab SCHOLA EXP™ is an all-inclusive portable water testing laboratory for education. The kit comprises testing equipment and consumables for hundreds of tests for all three attributes of water essential to determine its quality and suitability for drinking: MICROBIOLOGICAL, PHYSICAL AND CHEMICAL.

The WaterLab SCHOLA range of portable field-testing kits has been developed with both students and teachers in mind. It brings an exciting opportunity for students to learn all about the most important factors of the quality of drinking water, while taking part in fun and adventurous activities in a natural outdoor environment.

The test methods and parameters included in our SCHOLA EXP™ kit have been carefully chosen to mirror the testing procedures used by professionals and are approved methods for basic water quality assessment as recommended by the World Health Organisation.

Students will learn about the importance of clean water in our lives, as well as the causes, dangers and consequences of water pollution and the importance of regular systematic monitoring of the quality of natural as well as man-made water sources.

MICROBIOLOGICAL TESTING

The microbiological part of WaterLab SCHOLA EXP™ is designed to provide an introduction into microbiological testing of drinking water as the main parameter essential to assess the hygienic quality of a water supply. Following the simple step-by-step instructions provided, students will be able to examine the basic principles of microbiological testing using the standard membrane filtration method approved by the WHO for microbiological water assessment.

Equipment for microbiological tests supplied in our SCHOLA EXP™ portable laboratory comprises a 12V Mini-Incubator with reusable Petri-dishes, reusable membrane filtration assembly with a hand vacuum pump, a complete MBL accessory kit containing consumables for 200 tests, sampling bottles and beakers, hand lens, stopwatch, forceps, pipettes and other accessories needed for carrying out the tests.



The membrane filtration method involves filtering a water sample using membrane filters of a standard pore size, placing each filter in a Petri-dish on a pad saturated with nutrient medium and incubating at a specific temperature. After incubation, bacterial colonies that have grown on the membrane are counted.

PHYSICAL & CHEMICAL TESTING

Chemical testing is based on the visual colorimetric method and is carried out using a Colour Comparator Kit with interchangeable colour discs with continuous scale for a wide range of the key water quality parameters.

Physical parameters include pH, temperature, conductivity and total dissolved solids, turbidity, odour, colour, taste and general appearance.

The SCHOLA PCH part of our kit comprises a Colour Comparator Kit with colour discs and consumables for 200 tests of each chemical parameter included, turbidity tube for turbidity investigation, digital meter for measuring pH, Temperature, Conductivity and TDS, bottles and beakers for sample collection, and a set of calibration solutions for digital media.



The colorimetric method is a rapid, visual technique for determining the concentration of chemical elements in water by adding a chemical reagent causing a colour reaction. The change in colour of the sample is compared against a colour chart.



WaterLab SCHOLA portable water testing labs for education are supplied with consumables for hundreds of tests in each kit. The long shelf life of the reagents and the reusability of all components included make the kit a valuable investment that will last for several years, bringing fun, adventure and knowledge to students in their school as well as out of school water educational activities.

- Fully portable, instruments housed in a lightweight and comfortable to carry rucksack with separate compartments for each set of parameters
- A foldable work surface
- All components reusable
- A one-off investment that will last for years
- 12 most frequently tested parameters that may affect consumer health and the quality of drinking water
- Consumables for 1600 microbiological and chemical tests and an unlimited number of tests on the physical properties of water
- Easily expandable range of over 30 additional parameters including Dissolved Oxygen, Carbon Monoxide and many others
- Low cost refill reagents with long shelf-life
- 12V Mini-Incubator with set incubating temperatures and adaptors for 110/220V power supplies
- Optional power pack for long-term expeditions with options for mains or solar-power charger
- Comprehensive teacher's manual with a full lesson on basic facts about water and water pollution and suggested class activities
- Water-proof and easy to follow step-by step instructions for students and reproducible report sheets
- All materials in printed and digital format
- Suited for outdoor and indoor student activities
- Flexible and ideal for various science projects and training programmes related to nature and research of water sources
- Simple test methods approved by the WHO for basic water assessment
- Accurate and transferable results when instructions are strictly followed

High turbidity points to the presence of microorganisms and other potential contaminants that could be of health concern. A collected water sample is gradually poured into the turbidity tube until the cross at the bottom of the tube just disappears.

Chlorine	(Free, Combined & Total) 0-2 mg/L
Copper	(Free & Total) 0-5 mg/L
Iron	0-1mg/L
Nitrate	0-50mg/L
Nitrite	0.15-10 mg/L
Phosphate	0-4 mg/L
Total Alkalinity	20-240 mg/L
Conductivity	0-3999µS
pH	0.0-14.0
TDS	0-2000 ppm
Temperature	0-60° (32-140°F)
Turbidity	0-500 NTU

WATERLAB SCHOLA PCH comprises equipment and accessories for physical and chemical properties of water. The range of parameters supplied as standard can be expanded simply by adding additional consumables for parameters like Dissolved Oxygen, Carbon Dioxide, Hardness and more than 30 others that can be tested using the Colour Comparator Kit included.

WATERLAB SCHOLA MBL water testing kit is specifically aimed at microbiological water assessment projects. With the addition of optional accessories like a portable 12V battery and a solar charger it is the perfect piece of equipment for expeditions lasting several days and training programmes in rural areas where electricity supply might be an issue.

PARAMETERS	WaterLab SCHOLA EXP	WaterLab SCHOLA MBL	WaterLab SCHOLA PCH
Microbiological	•	•	
Chemical	•		•
Physical	•		•

ORDERING INFORMATION

WL250-1010	WaterLabs SCHOLA EXP
WL250-1020	WaterLabs SCHOLA MBL
WL250-1030	WaterLabs SCHOLA PCH

ACCESSORIES

Power

WL260-6010	12V Battery with connecting leads to incubator and charger
WL260-6012	Solar Panel with a cable set for connecting leads
WL260-6014	Solar Power Kit comprises 12V battery with a solar panel and connecting cables

SPARES

MBL Kit

WL260-4014	Hand Vacuum Pump with tubing
WL260-3010	30ml Container with spoon, pack of 5
WL260-4010	Membrane Filtration Unit
WL260-4012	Spares for MFU comprising spare bronze disc with rubber O-rings

PCH Kit

WL150-1010	Colour Comparator Kit
WL150-1210	Spare Test Tubes, pk4
WL160-1010	Turbidity Tube, 2 part

The kits are an ideal tool for exploring the condition of natural water sources directly in the field and the activities within the kit can be easily incorporated into various science projects and expeditions aiming to research and assess the quality of water in local water supplies. Although designed specifically for outdoor activities, all the tests can be carried out in a laboratory as well as directly in the field.



CONSUMABLES

MBL Testing

WL260-3210	Sample Bottles, autoclavable, pack of 5
WL260-3220	Sterilised Sampling Bags, pack of 50
WL260-2010	MBL Consumables Pack, comprising consumables for 200 tests
WL260-2412	Disposable Petri Dishes, pack of 10

PCH Testing

WL150-1011	Alkalinity Comparator tablet reagents, pk100
WL150-1813	Chlorine DPD 1&3 Comparator tablet reagents, pk100
WL150-2213	Copper Comparator tablet reagents, pk100
WL150-3011	Iron LR Comparator tablet reagents, pk100
WL150-4213	Nitrachek Comparator tablet reagents, pk100
WL160-1080	Nitrate & Nitrite test strips
WL150-4611	Nitrite LR Comparator tablet reagents, pk100
WL150-6213	Phosphate Comparator tablet reagents, pk100

Additional Parameters

WL150-1210	Aluminium 0-0.3 mg/l Disc & Reagents Set
WL150-1410	Ammonia 0-1mg/l Disc & Reagents Set
WL150-1610	Bromine 0-5mg/l Disc & Reagents Set
WL150-1830	Chlorine 0-4mg/l, DPD 1&3 Disc & Reagents Set
WL150-2810	Fluoride 0.2-2mg/l F Disc & Reagents Set
WL150-3210	Iron HR 1-10 mg/l Fe Disc & Reagents Set
WL150-3410	Manganese 0.1-0.7mg/l Disc & Reagents Set
WL150-5810	pH Universal 4-10 pH Disc & Reagents Set
WL150-6210	Phosphate HR 0-80 mg/l Disc & Reagents Set
WL150-7210	Sulphite LR 0.5-10mg/l Disc & Reagents Set
WL150-7410	Zinc LR 0-1 mg/l Disc & Reagents Set
WL250-5020	Arsenic Test Kit
WL250-5012	Alkalinity Test Kit
WL250-5014	Acidity Test Kit
WL250-5010	Dissolved Oxygen Kit
WL250-5016	Carbon Dioxide Test Kit
WL250-5018	Hardness Test Kit

Please visit our website
www.waterlabs.co.uk for further
 information or contact us
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