

# EARLY ALERT TEST KIT

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Always keep Alert Kit in cool location. Do not leave in direct sunlight or warm car.



# **MEASURING PRINCIPLE**

Dissolved oxygen (DO) is the concentration of molecular oxygen dissolved in water. It can be measured in mg/L (ppm) or % saturation. This is equivalent to the percentage of dissolved oxygen in 1L of water.

Oxygen solubility will be affected by temperature, atmospheric pressure and salinity. The DO9100 is equipped with temperature compensation. It is not suitable for use at high altitudes.

# **DISSOLVED OXYGEN PROBE**



## STRUCTURE

1. Probe3.Sealing ring5. Gold electrode7. Electrode line2.Temperature sensor4.Silver electrode6. DO membrane set8. Electrode interface



# **PROBE MAINTENANCE**

 Ensure the electrode cap is full of the electrolyte solution. Look closely down through clear membrane to ensure no air bubbles are present if an air bubble is present gently unscrew membrane by only holding where vertical grip lines are present. Slowly, drop by drop fill with electrolyte solution ensuring no air bubbles are caught on inside of the membrane. Immersing the electrode, accurately position the DO Membrane Set (6). Screw and gently tighten allowing electrolyte solution to overflow.

Note: Any deposits on the outer membrane surface act as a barrier to oxygen diffusing through the membrane. To avoid any hardening of deposits, after use the clear membrane must be rinsed with clean water and wiped with soft wet cloth

Avoid damaging the membrane, don't knock or tap the bottom of the membrane.

# OPERATION

- 1. Press the ON/OFF button.
- 2. Press the MODE/CAL button to select mg/L.
- 3. Press the HOLD/TEMP button to store a reading. If necessary, hold down the HOLD/TEMP button to alternate between °C and °F.

## CALIBRATION

To calibrate probe, hold upwards in the air then press and hold the MODE/CAL button. Release after 5 seconds. **Only when releasing MODE/CAL button will the screen flash 100%.** Calibration will be complete when the100% flashing stops.

# MEASUREMENT

Immerse the probe in the solution and read the value after the value has stabilised. This may take between 10 and 90 seconds. The screen will display the reading and the temperature. If necessary, press MODE to alternate to mg/L. Pressing again will select % saturation.



# ELECTRICAL CONDUCTIVITY TOTAL DISSOLVED SOLIDS METER



## OPERATION

Press the power button to turn the meter on. Make sure the meter has been calibrated before taking a measurement. Place the electrode into your test solution, taking care not to allow the water level to rise above the collar of the meter. Wait for the reading to stabilise before taking your measurement. See below diagram for instructions on mode conversions.





# CALIBRATION

To calibrate, use the supplied calibration standard of  $500\mu$ S/mS. Place and hold the electrode into the standard solution. Turn on, the meter should automatically recognise the solution.

If adjustment is needed, press and hold the MODE/CAL button. Release after 6 seconds. **Only when** releasing MODE/CAL button will the screen flash. Before the screen stops flashing press (up) or (down) button.

**Note**: Whilst screen is flashing press button 2-3 times then hold down, screen will then scroll rapidly. Stop pressing at 500. If you missed 500 adjust by pressing up/down with individual presses. **Screen must be flashing to scroll**. If screen is not flashing, repeat calibration. **When screen is flashing 500 leave probe in solution until screen stops flashing 500**. The calibration is then complete.

#### TROUBLESHOOTING

- 1. Do not calibrate the tracer in air.
- 2. If the tracer has not been used for a long time, calibrate before use.
- 3. Once you have completed measurements, clean the electrode with distilled water.



# **PH FIX TEST STRIPS**

Test strips for the determination of pH value in the range of pH 0-14

## PARTS

Test strips (100/pk)

#### INSTRUCTIONS

- 1. Use dry hands to remove a test strip from the vial, being careful not to touch the other test strips.
- 2. Dip test strip into sample for 1 second with all test fields in the sample solution. Shake off excess sample solution.
- 3. Compare with colour scale and read off the corresponding pH value.

Note: If sample solution is weakly buffered, leave test strip in solution until colour no longer changes.

#### STORAGE

Avoid exposure to sunlight and moisture. Store the container below 30°C in a dry place.

#### DISPOSAL

Dispose of used test strips in domestic waste.





# **INSTA-TEST PHOSPHATE STRIPS**

Test strips for the determination of phosphate in water.

## PARTS

Test strips (50/pk) Test tube

## INSTRUCTIONS

- 1. Fill test tube to 10 mL line with sample water. Use dry hands to remove one test strip from the vial.
- 2. Gently bend strip in half (do not fold) with pads facing inward. Do not touch the test pads with your fingers. Place strip inside test tube cap. Cap test tube and invert slowly five times. Remove cap and test strip.
- 3. Place bottom of test tube on the white boxed area of the colour chart. Look down through OPEN test tube and compare to colour chart.





# **QUANTOFIX NITRATE 100TEST STRIPS**

Test strips for the determination of nitrate in solution.

## PARTS

Test strips (100/pk)

## INSTRUCTIONS

- 1. Use dry hands to remove a test strip from the vial. Dip test strip into the test solution for 1 second.
- 2. Shake off excess liquid. Wait 60 seconds.
- 3. Compare with colour scale.
- 4. Test strips for the determination of nitrate in solution.

## STORAGE

Avoid exposure to sunlight and moisture. Store in a cool, dry place.







# TURBIDITY TUBE

Turbidity is a measure of the cloudiness of water. The higher the turbidity, the harder it is to see through the water. This tube measures turbidity by absorption of light rather than scattering of light as used by a laboratory turbidimeter.

# ASSEMBLY

The supplied turbidity tube is in two pieces. To assemble, push together with a slight twisting action until fully sealed.

# **MEASURING RANGE**

Measurements are reported in nephelometric turbidity units (NTU). This turbidity tube has a range of 10-400 NTU. Note that a turbidity tube overestimates turbidity when the water is significantly coloured. The second scale on the side of the tube is arbitrary and is intended to enable users to compare the relative turbidity of water samples from the same area on different days, or from different samples on the same day.

# **INSTRUCTIONS FOR USE**

- 1. Collect water sample using a clean bucket or container. Be careful not to disturb sediments at the bottom of the body of water. Shake or swirl the water sample vigorously until it is homogenous.
- 2. Hold the tube vertically and make sure it is out of direct sunlight.
- 3. Place your head 10-20 cm directly over the tube so that you can see the black and white disc.
- 4. Slowly pour water sample into the tube.
- 5. When the disc pattern becomes hard to see, add water even more slowly.
- 6. Stop pouring as soon as the pattern disappears.
- 7. Read the turbidity from the scale on the side of the tube.
- If you can still see the disc pattern when the tube is full, record the turbidity value as <10 NTU.</li>

## MAINTENANCE

Always rinse out tube with clean water when testing is complete. If the tube appears dirty inside, wash with warm water and a mild detergent.





# **ARMOURED THERMOMETER**

The accuracy of this thermometer, with an upper limit of  $50^{\circ}$ C, is  $\pm 1.5$  scale divisions. This instrument contains a non-hazardous, biodegradable liquid and green dye.

#### STORAGE

Keep away from open flames.

#### IN CASE OF CONTACT

Flush with water if liquid makes contact with the skin, eyes or body.

