

Testing Aide Memoire

- Location (name), co-ordinates (longitude / latitude), Date & Time
- EC & water temperature, (only immerse to line, the meter is not water-tight)

EC meter: turn on, immerse, and wait 10 seconds, press HOLD button to view reading (if the displays a 'flashing x10'; multiply figure by 10)

Water Temp: press temp button immerse wait 30 seconds, press HOLD button to view reading.

- Nitrate / Nitrite (not recorded) *Level*: dip strip for 1 second, hold (pad side up) for 30 seconds.

Compare NITRATE test pad (top pad is the one we record).

- Phosphate reagent (take care when using - avoid skin contact and inhaling);

Phosphate: 2 water samples, reagent being one (shake to dissolve)

Press on/off; when C1 is flashing 'press' insert plain water sample.

Press on/off; when C2 is flashing 'press', the checker is zeroed remove plain water sample.

Insert sample with reagent, press and hold on/off button until 3-minute count down starts.

The reading is in ppm and available for 2 minutes.

Over Range: maximum concentration value displayed (2.50) blinking indicates the measure value if outside the limits.

Retest a second sample to confirm reading; if no change enter 2.50

The test can be undertaken at home (within an hour of obtaining the water sample), this will help reduce reagent spill and as the reagent is temperature sensitive in dissolving, it may be best to do this in ambient temperature conditions to get correct reading (I use a thermos to take the sample home).

(Please read the manufacturer's instructions, for full information)

Electrical Conductivity (EC): Conductivity is the ability of water to conduct electricity, which depends on the impurities in the water and is affected by temperature. Electricity is conducted by the available ions, or electrolytes, dissolved in the water. When an increase or decrease is detected on a conductivity meter, it can indicate pollutants, affecting the quality of the water. When a sewage leak or agricultural runoff occurs, it increases the EC because of additional ions such as chloride, phosphate, and nitrate. Whereas events such as an oil spill decrease the EC, however, both have a negative impact on water quality.

- **Nitrates:** High levels of nitrate in water can be a result of **runoff or leakage from fertilized soil, wastewater / sewage, landfills, septic systems, or urban drainage**. In river water it often ranges from **0.01-3.0 mg/L (ppm)**, a nitrate-nitrogen reading less than 1.0 mg/L is considered excellent.
- **Phosphate:** Excessive phosphorus in surface water can cause explosive growth of aquatic plants and algae. This leads to a variety of water-quality problems, including low dissolved oxygen concentrations, which can cause fish to die & harm other aquatic life. It is a good measure of sewage pollution.

The Phosphate Colorimeter **upper limit is 2.5 ppm**, the lower test limit is 0.00 ppm with an accuracy of ± 0.04 ppm. So, a 0.00 ppm reading does not mean there is no phosphate present, it will be between 0.00 and 0.04 ppm. A 2.5 ppm reading does not mean that is the total phosphate, it means that it is in excess of 2.5 ppm.

(Please review the risk assessment before going out to take sample)

- **Taking immediate action if necessary**, if you see any of the following:
 - Pollution to water or land
 - Damage or danger to the natural environment,
 - Dead fish or fish gasping for air
 - Collapsed or badly damaged riverbanks
 - Poaching or illegal fishing

Environment Agency 24-hour Incident Hotline 0800 80 70 60