

Measuring electrical conductivity 2

UNIT: Micro-Siemens per centimetre ($\mu\text{S}/\text{cm}$)

EQUIPMENT: Electrical Conductivity (EC) meter which measures electricity flow between two electrodes

CALIBRATION

1. Switch meter on using **POWER** button and rinse the sensor with tap water.
2. Shake, then open, the standard solution **1413**
3. Remove the cap from the bottom of the meter and place sensor in the solution, swirl gently and press **CAL**. CAL displays briefly and blinks default reading (should be 1.4)
4. To adjust the value to match the calibration standard, press the **HOLD /ENT** key to increase the number displayed on the screen to suit your Standard Solution (i.e. 1413 – with this tester it should read 1.4). If your number is lower, hold the HOLD/ENT key until it reaches its maximum and then continues to lowest value.
5. Release the **HOLD/ENT** key when 1.4 is displayed to accept the calibration value. After a few seconds (ENT) is shown. Your meter is now ready to test your sample.



MEASUREMENT

1. Turn **meter on** (POWER button). The probe is automatically in **test mode**.
2. Fill the plastic container with a small amount of sample water.
3. Insert the tip of the sensor in the sample, making sure electrode covered. Slowly stir the sample with the probe to remove air bubbles.
4. The meter will auto range and the reading will be displayed.
5. Once stable, **record your results** on the *water quality data sheet* or enter them directly into the River Detectives website.
6. Compare your result to the rating chart for your region.
7. Switch meter off. Rinse sensor with clean water. Replace cap.

NOTE: This meter will show a reading in single digits e.g. 4.2, this is shown in milli-siemens per centimetre (mS/cm). Multiply this by 1000 as your result should be recorded in micro-siemens per centimetre ($\mu\text{S}/\text{cm}$).