

# Measuring electrical conductivity



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

**EQUIPMENT:** Electrical Conductivity (EC) meter

1. Turn meter on and lift the lid from the sensor. Avoid touching the probe with your fingers.
2. Calibrate your meter each time. Use the 1.41 solution to do this (this is a solution of  $1413 \mu\text{S}/\text{cm}$ ). Pour the solution onto the sensor making sure you completely cover it and there are no bubbles.
3. Hold the CAL button and let go when the smiley face starts flashing. When the 😊 icon stops flashing your calibration value will display. It should read  $1413 (+/- 5)$ .



**NOTE:** This value will only stay on the screen momentarily and then it will change. As long as you see it when the smiley face is static you have successfully calibrated.

If it does not calibrate, rinse the thoroughly with 1413 solution, cover the probe and repeat above calibration process.

4. Rinse the sensor with sample water after calibration.
5. Use the pipette or pour sample solution on the sensor (cover it) and press the MEAS button.
6. The 😊 icon will flash until the result is stable then it will stop flashing and your result will appear.

**IMPORTANT:** If a decimal number such as 3.50 is shown this is NOT a low reading. The meter has converted a very high reading to something that can be displayed on the screen. **You must multiply decimal numbers by 1000** to calculate your result. Eg 3500

7. Record your result on the *water quality data sheet* or enter directly into the River Detectives website.
8. Compare your result to the rating chart for your region.
9. After measurement wash your sensor with tap water and turn off.

**Notes:**

- 'Or' means the salinity level is too high and 'Ur' the level is too low for the EC meter. Contact your coordinator for help
- Do not wipe or push the sensor with force. It may damage the sensor.
- If you have any problems with your meter contact your coordinator for help.