

# Measuring electrical conductivity 3

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

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



## CALIBRATION

1. Use the 1413 standard solution to calibrate your meter. Store this in the refrigerator or a cool, dark place.
2. Fill a small container with the standard solution (about 20mL).
3. Switch meter on using **ON/OFF** key. Rinse the probe with the 1413 standard solution.
4. Remove the cap from the top end of the meter and press the **INC** or **DEC** key to enter calibration mode ('CAL' will appear in the upper display).
5. Use the **INC** or **DEC** key to increase or decrease the number displayed on the screen to suite your Standard Solution (i.e. 1413 – it should read between 1410 and 1420).

**Note:** *INC & DEC keys are located inside the battery compartment, Refer figure 1.*

**Note:** *For ECTestr11 & ECTestr11+ models, the caption of HOLD key is 'HOLD/ENT'*

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**Note:** *If you do not press the INC or DEC key within five seconds of entering calibration mode the tester will automatically confirm 'CO' & will return to measuring mode.*

6. Wait for 5 seconds with the probe in the solution to automatically confirm the calibration by displaying the 'CO' and return to measurement mode. You are ready to test your sample!

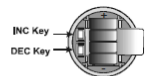


Figure 1: Battery compartment

## MEASUREMENT

1. The probe is automatically set to **test mode**
2. Fill the plastic cup to the 20mL line with the test/water sample.
3. Immerse the probe in the sample, make sure the electrode is covered.
4. Slowly stir the sample with the probe to remove air bubbles.
5. The meter will auto range and the reading will be displayed.
6. Once stable, **record your results** on the *water quality data sheet* or enter them directly into the River Detectives website.
7. Compare your result to the rating chart for your region.
8. Rinse the electrode with clean tap water. Replace the cap.

- *Large number on screen is result. Smaller digits at bottom is temperature.*
- *If the result is a single digit number and a decimal e.g. 4.2 you will need to multiply this by 1000 for your result.*
- *If 'OR' displayed, salinity level is too high for EC meter. Contact coordinator.*