

Electrical Conductivity

using LAQUA Twin Compact Conductivity Meter EC 11



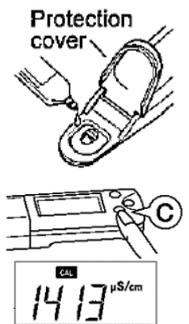
Electrical Conductivity (EC) is used to measure the salinity of a solution – or how salty the water is. EC is a useful measure of salinity because the more salt that is dissolved in water, the more electricity it will conduct (or the higher the EC reading).

Aquatic species of plants and animals can only survive within certain salinity ranges so changes in salinity/conductivity levels result in changes in the variety and types of species found. Conductivity varies naturally with the depth of the water. Variations in conductivity may also result from the geology of the area (e.g. a stream flowing over old marine sediments will have a high conductivity due to the remnant salts in the soil).

Changes in salinity can also be due to seepage of ground water into the stream, industrial and agricultural effluent, stormwater runoff, sewage effluent, landuse change and the removal of vegetation.

Multi-point Calibration

1. Open the protective cover and rinse the sensor with a few drops of the lower standard solution (1.41 mS/cm). Shake off and then place drops of the lower standard solution into the measurement cell until the sensor is totally covered.
2. Press and hold the ON/OFF switch to turn on.
3. Close the protective cover and press the CAL switch. **CAL** and 😊 blink, and the calibration value is displayed.



After the calibration is complete, **CAL** and 😊 stop blinking and the measured value is displayed.

4. After the 1.41 mS calibration, open the protection cover and empty the drops out. Remove the moisture on the sensor by blotting gently with a tissue. Rinse the sensor with a few drops of the second, higher standard solution (12.9 mS/cm).
5. Place drops of the higher standard solution (12.9 mS/cm) into the measurement cell until the sensor is totally covered.
6. Close the protective cover and press the CAL switch. **CAL** and 😊 blink, and the calibration value is displayed. After the calibration is complete, **CAL** and 😊 stop blinking and the measured value is displayed. The calibration value at 25°C is displayed for 1s and then the instrument automatically moves into measurement mode.
7. Clean the sensor with distilled water and remove moisture by gently blotting with a tissue.
8. The instrument is now ready to measure in Auto stable mode.

Measurement

1. After calibrating the meter and rinsing the sensor with water sample, place drops of water sample into the measurement cell and ensure the cell is fully covered in liquid.
2. Close the protective cover and hit **M** button.
3. When the reading has stabilised, the 😊 appears and the reading is locked.
4. Record the value displayed.
5. Empty the measurement cell and rinse with distilled/deionised water. Blot dry with tissue. Close cover.
6. Press and hold the ON/OFF switch to turn off. Calibration will hold for the day of testing.