

# 5. Measuring electrical conductivity

## Calibrating the EC meter (TDSscan20)

1. Remove the protective cap and turn the meter on.
2. Rinse an empty film canister and the end of the electrode with the EC calibration solution, and add some fresh solution to the film canister.
3. Record the EC of the calibration solution (usually 1413 $\mu$ S/cm) and the date prepared onto your Field Data Sheet. These values should be listed on the bottle.
4. Dip the electrode into the calibration solution and record the value shown under 'Result 1' on your Field Data Sheet.
5. Press the 'CAL/CON' button. The reading on the meter will flash.
6. Using the 'HOLD/INC' button, scroll through until the meter reads the correct value (ie the value of the calibration solution - usually 1413 $\mu$ S/cm).
7. Press the 'CAL/CON' button to confirm the results. The meter will quickly flash 'CO' on the display. Record the result after calibration under 'Result 2' on your Field Data Sheet.
8. Rinse the electrode with tap water or remove excess solution with a tissue.
9. Put excess calibration solution into your waste container.

## Measuring EC

10. Rinse an empty film canister and the end of the EC electrode with some sample water, and add some fresh sample water to the canister.
11. Place the electrode into the sample, and allow the reading to stabilise.
12. Record the reading on your Field Data Sheet.
13. Rinse and dry the electrode and replace the cap.

### Hints, suggestions and techniques

- The stainless steel electrodes need to be kept clean and free from dirt. Dry the electrodes with paper towel, otherwise the electrodes will corrode.
- To maintain the meter, clean the electrode periodically. Soak electrode for 15 minutes in methylated spirits and gently wipe the electrodes. When finished, wash thoroughly with distilled water.
- Do not reuse calibration solutions. Discard used portions into a waste container.

### ACT Guidelines

There are currently no legislated guidelines for electrical conductivity in the ACT.

It is considered that EC concentration greater than 1000 $\mu$ S/cm are very high.