

Electrical Conductivity TDScan 20 Meter

Equipment

Distilled or Deionized Water

KCl Standard Solutions (1413 EC's).

Method

1. Remove cap from tester.
2. Turn on tester by pressing ON/OFF button and wait for the reading to show zero.
3. Immerse probes into water sample to be tested (2 cm is sufficient).
4. Note number on screen once the display stabilises. Notice that reading changes from micro siemens to milli siemens at 2,000 EC. ($1,000\mu\text{S}/\text{cm} = 1 \text{ mS}/\text{cm}$)
5. Press hold to freeze the reading.
6. Press again to release it. Record EC value on result sheet.
7. Press the ON/OFF button to shut the meter off.

Calibration

1. Immerse TDScan 20 probes into the standard solution (1413 EC's).
2. Turn meter on and allow to stabilize.
3. Press CAL/CON button to enter calibration mode. Press HOLD/INC button to increment the display up or down so that the display shows the calibration value of the standard.
4. Press the CAL/CON button again and notice the CO on the display confirming the calibration entry into the memory.
5. Rinse the electrode in tap or distilled water and recheck reading in calibration standard.
6. Do not return calibration solutions to the stock bottle

Note: Do not forget to turn off meter as batteries are very expensive.

Checklist

- Sea water is approximately 50,000 EC's
- Taste salt in water at 1,500 to 2,000 EC's
- Be attentive to the units that your meter reads. As the conductivity of the solution rises past 2,000 EC's, the meter automatically changes to reading milli-siemens per cm rather than micro-siemens (Electroconductivity units or EC's).
- One milli siemens per cm equals 1,000 micro siemens or EC's.
- Normal reporting of conductivity is in EC's so to be consistent, you should encourage reporting by monitors in micro-siemens per cm or EC's.
- Normally, conductivity meters will stay calibrated for some time. Calibrate weekly until you are sure that the meter is stable. Recalibrate more often if your meter is heavily used.
- Rinse the electrode well with clean water after each test.
- Use a standard solution that is close to the level of conductivity in the sample solution being tested.

