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**Conductivity**  
**Written by: Tera Ratliff**  
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**SUMMARY**

This procedure is used for measuring conductivity and total dissolved solids in water samples using a Thermo Scientific Conductivity/TDS/Salinity meter.

**EQUIPMENT AND SUPPLIES**

|                    |                         |
|--------------------|-------------------------|
| Conductivity meter | 180 $\mu$ S/cm standard |
| Stir bars          | kimwipes                |
| Gloves             | Stir plate              |

**NOTES**

- Samples need to be analyzed as soon as possible (within 6 hours of receipt at the lab).
- **Stir bars used in this method are to be cleaned by triple rinsing with DI water. Do not acid wash!**

**STANDARDS**

1. 180 $\mu$ S/cm conductivity standard is purchased from the Hach company (product # 2307542). This solution is poured into a cup for calibration in sampling days. The used standard is disposed of at the end of the day and the stock is replaced on a bi-annual basis. This solution is used to calibrate the conductivity and total dissolved solids at the beginning of each sampling date. **The calibration must be completed before any samples can be run and standard must read within 10% error before proceeding with samples for the day!**

## **SAMPLE PREPARATION AND STORAGE**

Sample are collected in coolers containing ice packs to keep them as cool as possible in the field and should be stored at 4° C immediately upon arrival in the lab. Samples are to be analyzed within 6 hours of arrival at the lab.

## **SAMPLE ANALYSIS**

1. Make sure meter is on and ready to take a measurement. If this is not the case, find a lab manager and inform them of the issue.
2. Rinse electrode with DI water over waste cup. Blot (don't rub) off excess with a Kimwipe.
3. Place the plastic cup containing the stir bar and sample on the stir plate and turn on.
4. Place the electrode in the sample, being sure that the metal prong housed within the electrode opening is submerged. If you are not sure what this means, please see a lab manager for clarification.
5. Press TDS to measure Total Dissolved Solids, and record the value on the data sheet.
6. Press Cond to measure Conductivity, and record the value on the data sheet. The order of these measurements is not important, but make sure that you are placing them in the correct column on the data sheet.
7. Repeat steps 2-6 for the remaining samples.

## **CLEAN UP**

Throw used kimwipes, and alcohol swabs in the trash. Straighten bench space. Dump waste container and turn off all equipment. Place stir bars by the sink to be washed.