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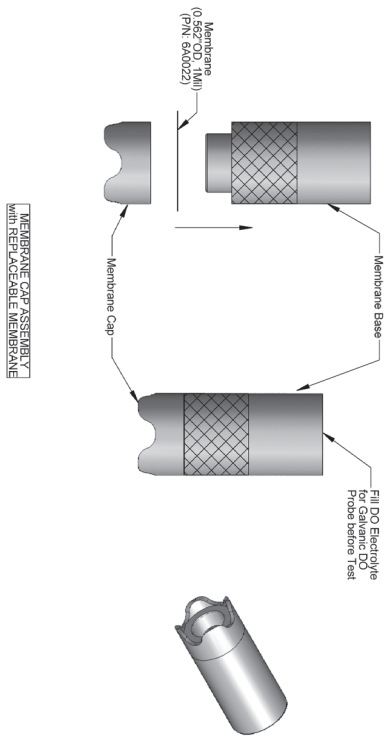

DO2 Electrode Quick Help Guide

Required Equipment

- Data logger with DO2 input
- Wash bottle with distilled or deionized water
- Several clean beakers

Required Solutions

- Deionized (DI) water saturated with oxygen
- DO Electrolyte for Galvanic DO Probes

Electrode Preparation

1. Unscrew Membrane Module, which is at the bottom of the electrode.
2. Rinse the Membrane Module with DI water, blot dry.
3. Fill Membrane Module with DO Electrolyte solution for Galvanic DO Probes. It should be completely filled.
4. Rinse the internal anode/cathode element with DI water, blot dry.
5. Screw the Membrane Module filled in Step 3. Finger-tighten until snug. Excess electrolyte solution should spill out. Do not over tighten. Rinse the assembled electrode with DI water.

Checking Electrode Operation and Calibration

1. Connect electrode to the data logger.
2. Place 100 ml DI water into a 150 mL beaker. Bubble air through the water while stirring for 20 minutes. This will saturate the water with air/oxygen and create a 100% DO calibration standard. To prevent air entrapment (from the bubbles) on the DO electrode membrane surface use an electrode holder that keeps the electrode at a 20° angle.
3. To calibrate the reading for 100% saturated oxygen - press and hold the data logger DO2 key for 3 seconds till you hear a long beep sound. The data logger should show 8.25 mg/l which represents water saturated oxygen in room temperature of 25°C.
4. If the water temperature is not 25°C, then use the data logger temperature sensor probe placed in the water near the DO electrode. Pressing and holding the data logger DO2 key will show the mg/l value correlated with the water's actual temperature at 100% oxygen saturation.

For Oxygen level in air

1. Connect electrode to the data logger.
2. Place the electrode in open air. Press and hold the data logger O2 key for 3 seconds till you hear a long beep sound.
3. The data logger should show 21% which represents free air oxygen level.

Troubleshooting

If the electrode reading is not at (or very close to) zero in oxygen-free DI water, then polish the tip (cathode) of the electrode. If the electrode readings are not within the normal ranges given above, or the electrode reading drifts, inspect the Membrane Module. If it is visibly torn, punctured, or fouled, replace the Membrane Module. Then follow the Electrode Preparation procedure.

If the electrode response is still outside the normal range after this procedure, please contact the manufacturer's technical service department.

DO Reading Accuracy Improvements

Some considerations to get accurate measurements with your DO electrode include:

- DO measurements are very dependent on barometric pressure, temperature and salinity factors. If your meter allows for inputs on these factors, make sure you use them correctly and accurately.
- Stirring, when feasible, will increase accuracy since this electrode is consumptive of DO in your sample. Use a stir bar at slow to moderate speed and use as large of a sample as possible.
- Replace the DO electrolyte and calibrate the DO electrode when your measurements seem to be drifting, or inaccurate. Use one of the calibration solutions mentioned in "Checking Electrode Operation and Calibration" section to check electrode results.
- Replace the Membrane Module if it becomes fouled by the sample, or if it gets torn or punctured.
- Follow the Electrode Storage procedure to get the best life from your DO2 electrode.

Electrode Storage

Short Term (over night or the weekend):

The assembled electrode should be stored in DI water to prevent electrolyte evaporation. It is preferable to disconnect the galvanic DO electrode from the data logger at all times when not in use. The galvanic DO electrode (UNLIKE polarographic DO electrodes) does not require any polarization or startup time.

Long Term:

Completely disassemble the electrode. Rinse the anode/ cathode element and Membrane Module with DI water. Blot dry all of the parts. The Membrane Module may be placed on the electrode but it should be stored WITHOUT electrolyte to prevent the galvanic depletion of the electrode's anode. Store all parts securely in the original box. Follow the procedures in "Electrode Preparation" and "Checking Electrode Operation and Calibration" before using the electrode again.

Laboratory Products Warranty

Products designed and sold for use in laboratory applications are warranted to be free from defects in materials and workmanship for a period of six (6) months, provided that the product is used in accordance with the instructions provided and that the product has not been subjected to breakage, alteration, misuse, abuse or used in an application not normally intended for the product. In the event of a warranted failure within the warranty period, contact your supplier.

Please be prepared to discuss the details of the difficulty. If necessary, your supplier will issue a Return Authorization Number (RAN). Materials or goods returned without an RAN will not be accepted. Return the product to your supplier freight prepaid.

The warranty described above is exclusive and in lieu of all other warranties whether statutory, express or implied including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose and all warranties arising from the course of dealing or usage of trade. The buyer's sole and exclusive remedy is for repair or replacement of the non-conforming product or part thereof, but in no event shall the supplier, the dealers or agents of any tier be liable to the buyer or any person (or any special, indirect, incidental or consequential damages whether the claims are based in contract in tort (including negligence) or otherwise with respect to or arising out of the product furnished hereunder.

Specification

Concentration Range:	0 to 20 mg/L (0% to 30% in air)
Temperature Range:	0 to 60°C
Response Time:	98% of full response in 90 seconds at 25°C
Accuracy:	±0.2 mg/L
Pressure:	0-50 PSI
Flow condition:	0.3 mL/s
Output:	4uA ±1.5 uA in air saturated DI water at 25C; and =< 0.15 uA in NO Oxygen at 25C.
Minimum Sample Size:	3 mL in a 50 mL beaker
Size:	Electrode length—150 mm Body Diameter—12 mm Cap Diameter—16 mm Cable Length—3'