

DO Troubleshooting and Maintenance Tips

operator notes

Common problems:

- Reading continuously drops or is low.
- Reading will not stabilize.
- Meter will not calibrate.

Check the following things:

- Your meter's batteries are not low.
- You are using fresh electrolyte solution.
- You are installing the membrane properly—there are no air bubbles, wrinkles or tears in the membrane.
- You are allowing the meter time to warm up—15 to 30 minutes (required with polarographic probes only).
- You are getting movement across the probe—polarographic probes consume oxygen during measurement so if there is no flow, your reading will continue to drop as oxygen is consumed in that immediate area.
- You are following the proper calibration procedure—
 - 1) Use zero oxygen solution (stock # 29892) and/or
 - 2) Use “saturated air” which means simulating a humid environment. Most probes are supplied with a calibration bottle or chamber, while others require you simulate your own. To do this, place the probe into a BOD bottle with a small amount of water on the bottom or wrap the probe with a damp rag. Simply holding in the air does not constitute a “saturated air” environment.

Your membrane and fill solution may need to be changed every 2 to 4 weeks if you are testing wastewater.

If you have checked everything above and are still having problems, your probe may require cleaning. However, it is important that you avoid cleaning it too often. A properly conditioned probe (membrane removed) should look silver-like and the gold tip should have a matte finish. If the probe appears to be a dull gray or tan color you will need to remove the buildup that has collected. That buildup is a result of oxidation on the surface of the anode. **Always consult your meter or probe manual for the cleaning procedure the manufacturer recommends.**

To clean the probe chemically, soak in ammonium hydroxide:

1. Remove the membrane.
2. Turn the meter off or disconnect the probe.
3. Soak overnight in 3% ammonium hydroxide (stock # 29468).
4. Rinse the probe under tap water for several minutes.
5. You may need to use fine (400 grit wet/dry) sandpaper to remove excess buildup—a couple of twists will do. Do it carefully or you might sand off the gold plating.
6. Rinse again.
7. Install a new membrane cap using fresh electrolyte solution.
8. Store the probe in a moist atmosphere and rinse between tests.



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thermo scientific



35572



35576 & 35589



35577

Replacement Probes for Thermo Scientific Orion Star Series DO Meters

CABLE LENGTH	FOR MODELS	STOCK #	EACH
3 m (10')	All Star Series DO Meters	35577	\$
1.5 m (5')	All Star Series DO Meters	35589	
3 m (10')	All Star Series DO Meters	35576	
2 m (6')	3, 4 & 5-Star Benchtop DO Meters	35572	



Thermo Scientific Orion 97-08 BOD Probes

- Save money—use with your current pH meter!

If you already have a pH meter, this probe is a good option. Just hook it up to your pH meter's BNC connector, calibrate, and take readings. It's accurate and simple to use. Bonded membrane caps last 3 to 6 months each.

Includes: 2 membrane/electrolyte modules, overflow funnel with built-in stirring bar and batteries. Probe must be used with a stir plate (order separately) for accurate readings.



DESCRIPTION	STOCK #	EACH
BOD Probe	68884	\$
USABlueBook Stir Plate	87114	
Prefilled Membrane Module	68887	
Repl. Overflow Funnel	68888	

Thermo Scientific Orion Polarographic DO Maintenance Kits and Accessories

Membrane Kit 68872



MFR #	INCLUDES	FOR MODELS	STOCK #	EACH
MEMBRANE KITS				
080113	Electrolyte, 2 Membrane Caps & Polishing Disk	080510, 081010, 081010MD	68872	\$
080513	Electrolyte, 2 Membrane Caps & Polishing Disk	081010F, 081030F, 083005A, 083005D, 083005MD, 083010A, 083010F, 083010MD, 083025A, 083060A, 083150A, 083300A, 086020A, 086030MD	68846	
MEMBRANE CAPS				
080515	1 Membrane Cap	081010F, 081030F, 083005A, 083005D, 083005MD, 083010A, 083010F, 083010MD, 083025A, 083060A, 083150A, 083300A, 086020A, 086030MD	68847	\$
970801	1 Prefilled Membrane Cap	970800, 970899	68887	
ELECTROLYTE SOLUTION				
080514	1 60-mL Bottle	081010F, 081030F, 083005A, 083005D, 083005MD, 083010A, 083010F, 083010MD, 083025A, 083060A, 083150A, 083300A, 086020A, 086030MD	68848	\$