Instruction Sheet

Thermo Scientific Orion Double Junction Frit Electrode, Cat. No. 100031

General Information

This electrode requires reference electrode filling solution, Cat. No. 150071. Do not use other filling solutions with this electrode, as they may contain silver chloride (AgCl), which will clog the electrode's frit junction.

Procedure

1. Unpack the reference electrode and carefully remove the protective silicone end caps from the bottom of the electrode and sidearm fill tube.

2. Through the sidearm, shake out as much of the filling solution as possible into sink or other drain.

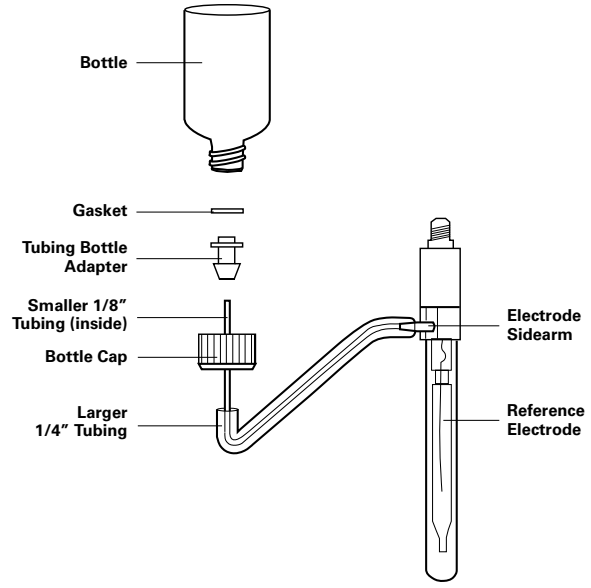
3. Locate the reference electrode tubing assembly.

    a. Cut the 1/4" tubing long enough to reach from the reservoir bottle clip to the sidearm of the reference electrode installed in the flowcell. Cut the 1/8" diameter tubing five inches longer than the 1/4" tubing.

    b. Connect the new, longer length of Tygon 1/4" tubing to the plastic fitting.

    c. Slide the 1/8" polyethylene tubing inside the Tygon tubing and through the fitting, leaving approximately four inches extending past the fitting.

4. While passing the smaller 1/8" polyethylene tubing into the sidearm, slide the larger 1/4" Tygon tubing over the sidearm of the reference electrode. The Tygon tube should extend 3/8" to 1/2" over the glass sidearm.



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5. Locate the bottle of filling solution, Cat. No. 150071, and remove the cap and any fluid seal from the bottle.

6. Holding the bottle upright and ensuring that the rubber gasket is properly aligned, connect the cap end of the tubing assembly to the bottle. Refer to the diagram of assembled electrode. The 1/8" polyethylene tubing should reach near the bottom of the bottle.

7. Squeeze reservoir bottle to ensure there are no leaks around cap or sidearm. A small amount of liquid should appear on the ceramic frit at the best of the electrode, indicating good solution flow.

8. Acrylic standoff for the 1511A and 15112 monitors should be shortened so that rest of reference electrode is within 1/8" of the bottom of the electrode chamber.

9. Install the electrode on the monitor.

   For the 1511A and 15112 monitors, use the red O-ring kit, Cat. No. 150035. For the 1517 monitors with serial numbers less than 10,000, use the red O-ring from the O-ring kit, Cat. No. 151735. Place the O-ring in the groove on the top of the electrode chamber and gently slide the electrode down in place. For the 1517 monitors with serial numbers 10,000 and above, no O-ring is required. The 1518, 1520, and 1564 monitors use existing type stand-off electrode holder supplied with analyzer.

10. Using the blunt end syringe needle supplied with reference electrode (or small nail) punch several holes in top of reservoir bottle to allow proper venting and uniform solution flow. Do not leave needle in vent hole, as corrosion may occur, affecting reference electrode's stability.

11. Attach the electrode connector to proper receptacle on base of electronic housing.

12. Mark the level of solution in reservoir bottle and note the date. The level of solution should be checked monthly and refilled as required. The level of solution should drop at least 1/8" per month or erratic meter readings may result.

Note: Newer 1517 monitors have a yellow retaining clip on the left side of the panel to hold the reference electrode fill tubing flush behind the recorder output of the electronics assembly.

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Environmental Instruments
Water Analysis Instruments

North America
166 Cummings Center
Beverly, MA 01915 USA
Toll Free: 1-800-225-1480
Tel: 1-978-232-6000
Dom. Fax: 1-978-232-6015
Int'l Fax: 978-232-6031

Europe
Denmark House, Angel Drove
Ely, Cambridgeshire
England, CB7 4ET
Tel: 44-1353-666111
Fax: 44-1353-666001

Asia Pacific
Blk 55, Ayer Rajah Crescent
#04-16/24, Singapore 139949
Tel: 65-6778-6876
Fax: 65-6773-0836

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