

Single Junction Reference Electrode User Guide



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1. First Use
Take off the
tape
covering
the fill hole.

2.
You may wrap
this tape
around the tube
to give you a
visual
indication of
how the fill
solution level
changes.



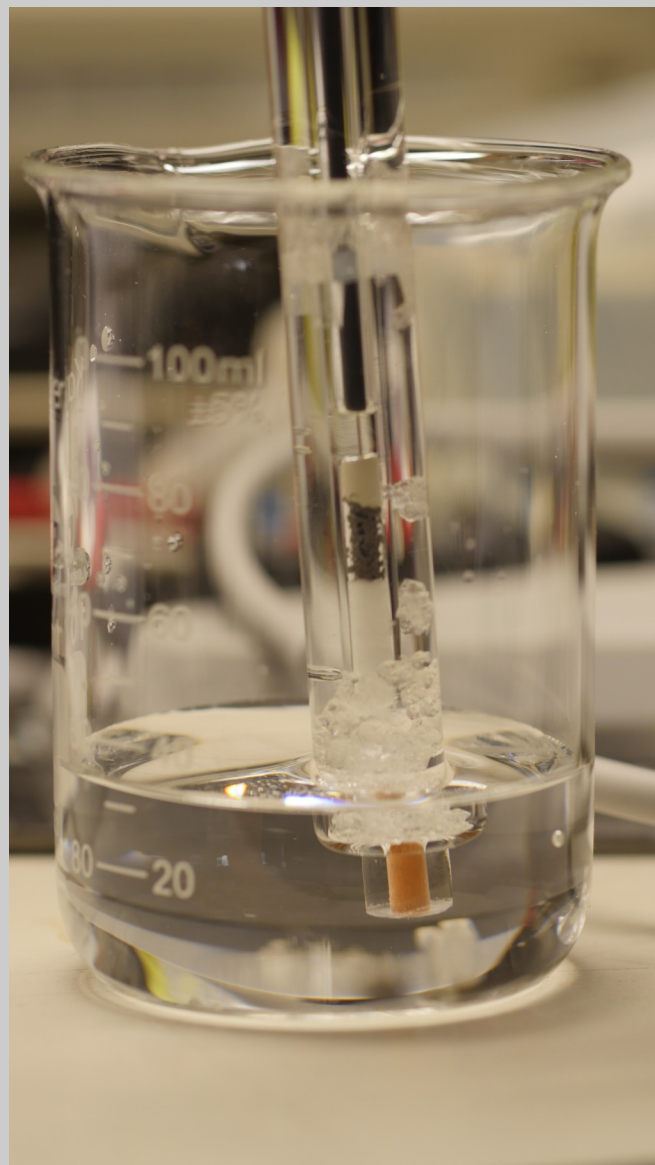
3. Dependent on the rate of water loss and temperature, it is normal for the fill solution to crystallize.

Close the plug hole and shake the electrode to dislodge any crystals that may be blocking the free flow of electrolyte.



4. Preparation for Use

Electrolyte flow through the porous frit is required to provide an electrical circuit. Fill the electrode up to the fill hole with fill solution. Keep the plug hole open and soak the electrode in saturated fill solution for a minimum of 2 hrs.



5. Check Circuit Resistance

Insert a stainless steel rod into the solution and measure the resistance between the rod and the electrode to check if there is an electrical connection across the plug. It should read less than 10 kOhms. If resistance range is correct continue to section 8.

6. Refreshing Electrode Frit

If the ceramic frit is blocked or partially blocked (by precipitates or crystals) this can cause increased reference electrode resistance that can affect operation.

To refresh the electrode frit:

- Replace the internal filling solution with distilled/deionized water and store the electrode in distilled/deionized water instead of filling solution for 24–48 hours. The frit portion of the electrode can be soaked at 80°C distilled/deionized water to expedite de-clogging. Note: Inserting just the the tip of a folded up filter paper into the fill hole can help expedite draining the solution inside.

7.

Drain the water and replace it with fill solution according to the electrode type and repeat section 5. If the frit cannot be de-clogged after a few tries, the electrode must be replaced.

8. Electrode Usage

Ensure that the porous frit is fully submerged in solution. The plug hole must be open to enable flow through the porous frit.

9. Electrode Storage

Aqueous reference electrodes must be stored properly to prevent damage when not in use.

- Close the filling port.**
- Rinse the reference electrode with distilled water.**
- Insert the reference electrode into the storage container so that the frit is safely in contact with solution inside. The porous frit should never be allowed to dry out. The storage container should be filled with 1/2 fill solution + 1/2 distilled water. This is to ensure that there is a flow of fill solution through the porous frit into the storage container due to osmotic pressure during storage and it is kept open.**
- Tighten the threaded cap of the storage container.**
- Always store the reference electrode upright and never in direct sunlight.**



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