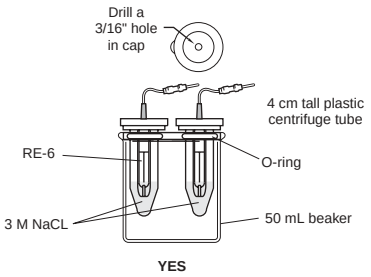
Reference Electrode Storage

MR-9230 11/07/04

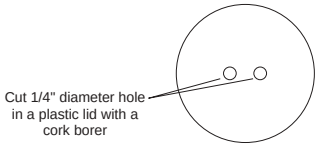
Order No. MF-2079 = RE-5B Reference Electrode, 3/pkg.
(7 cm x 6 mm OD), 3/pkg.

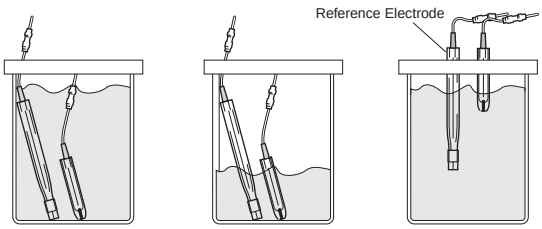
Order No. MF-2078 = RE-6 Reference Electrode
(3.1 cm x 6 mm OD), 3/pkg.

Order No. MR-5275 = Storage Vial



YES





NO **NO** **YES**

PREPARATION OF A NEW ELECTRODE

Immediately upon receipt of your new reference electrode, remove yellow plastic coating and store in 3M NaCl. If using an RE-5B please see instructions in electrode box for removing plastic coating. For an RE-6 electrode use your fingernail to scrape and pull away the yellow plastic coating at the tip of the electrode. It should come off as one large piece. If you are using the short RE-6 electrode in an LC-44 electrochemical detector, your next task is to add an O-ring and bushing as illustrated in the user's manual.

SHORT TERM STORAGE OF AN ELECTROCHEMICAL DETECTOR

If you plan to shut down your LCEC system for a few days, the most critical element is the REFERENCE ELECTRODE. Since the mobile phase does not contain chloride ions, and the reference electrode filling solution does, a concentration gradient exists and diffusion of chloride through the junction will occur. This will change the reference potential of the Ag/AgCl electrode.

To avoid this change, the TIP of the reference electrode should be soaked continuously in 3 M NaCl. As simple as this sounds, there is a right way and a wrong way to do this. The goal is to keep the frit at the bottom of the electrode wetted with NaCl solution at all times, while keeping the pin of the electrode dry and clean. If you seal the entire electrode in a vial or bottle, solution will creep up the edge of the glass and start corroding the pin. If you immerse the electrode, the products of corrosion will leach into the NaCl solution and then diffuse INTO your electrode. It won't be a silver/silver chloride electrode anymore (it may be a silver/silver chloride-ferrous electrode, which won't work well).