

TINKER & RASOR

-Instructions for

Portable Reference Electrodes (CuCu/SO₄) and W-7 Waterproof Adapter

IMPORTANT NOTE: Do not use this instrument in an explosive environment. Half-Cell Electrodes are shipped dry. However, they do contain the initial charge of high purity copper sulfate crystals.

1. PREPARATION

1. Remove either end of the electrode and fill with water. (Distilled water preferred.)
2. Replace the end piece, making sure both ends are on firmly to affect proper sealing.
3. Shake electrode to obtain proper solution saturation.

Note: All Tinker & Rasor Half Cell ceramic tips are pretreated with Copper Sulfate solution to affect rapid wetting on initial preparation for first time usage.

Replacing Copper Sulfate Crystals:

- Using the Tinker & Rasor replacement Copper Sulfate Crystals, remove the tip end and fill half cell 2/3 full.
- Fill with water, leaving enough room at the top to screw the tip assembly back on.
- Store half cell horizontally, or vertically with tip assembly down, for approximately one (1) hour to saturate tip.

2. OPERATION

1. Remove the vinyl protective cap from the ceramic porous plug.
2. Place ceramic plug in contact with moist soil or water and connect top copper terminal of the electrode to appropriate voltmeter.
3. Make connection from the voltmeter to structure under test.
4. Observe polarity and voltage that is usually below two-volt range.
5. Always replace the vinyl cover on the electrode after each usage to prevent moisture loss in the ceramic plug.

3. SERVICE

1. Observe the drawing supplied with each Half-Cell and screw the adapter onto the Half-Cell electrode leaving approximately 1/2 turn before compressing the large "O" ring seal.
2. Strip 1/4" of insulation from end of #18 Ga. stranded test lead wire and insert stripped end into the brass hex fitting, making sure small "O" ring is in place over the insulated part of test lead. Push test lead into the brass fitting as far as possible. Tighten hex nut firmly.
3. After hex nut is secured, hand tighten adapter to Half Cell firmly to affect the "O" ring seal between adapter and electrode.
4. Test lead wire should have no discontinuities in the portion that will be submerged and the Half Cell should be filled completely so pressure will not force water into the electrode and contaminate the copper sulfate solution.
5. The Model W-7 can be used with most reference electrodes utilizing 1/4-20 threads.

4. SHIPPING INSTRUCTIONS

All instruments being returned for repair should be sent PREPAID to either address below:

Ship Via Courier (UPS, FedEx, DHL, etc)

Tinker & Rasor
ATTN: Repairs
791 S. Waterman Ave.
San Bernardino, CA 92408

Ship Via US Postal Mail

Tinker & Rasor
ATTN: Repairs
PO BOX 6890
San Bernardino, CA 92412-6890

Include with shipment information the nature of the problem, purchase order, serial number and return delivery address, phone and fax numbers. Immediate service is guaranteed!