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**INSTRUMENTATION**

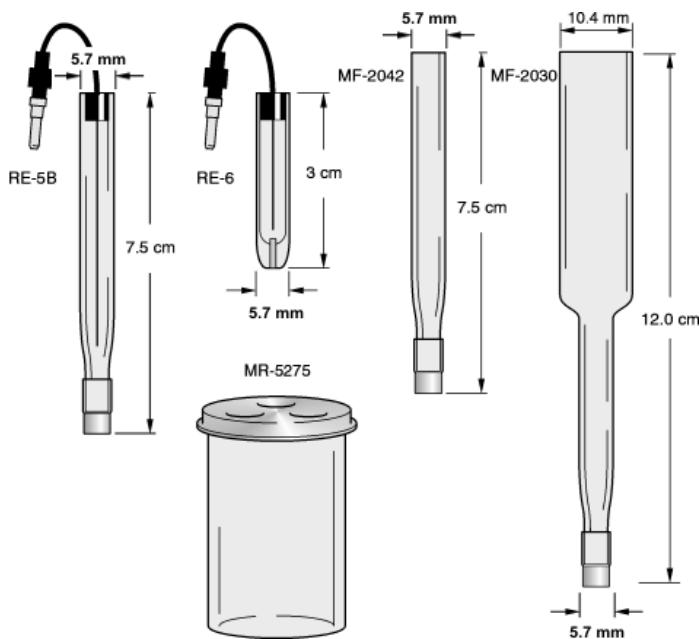
- Sampling
  - Culex
  - Culex ABC
  - ABST
- Analytical
- Vetronics
- Support
- Ordering
- Prices
- Distributors



**BASi Reference Electrodes**



**Silver/Silver Chloride (Ag/AgCl) Reference Electrodes**



These compact, glass-bodied reference electrodes are available in two styles. The 7.5 cm long RE-5B reference electrode is used for voltammetry and polarography experiments using the C-2 and C-3 Cell Stands, the CGME Controlled Growth Mercury Electrode, the RDE-1 and RDE-2 Rotating Disk Electrodes, and the LCM Low Current Module. The shorter (3 cm) RE-6 reference electrode is used with the CC-5 Cross-Flow Thin-Layer Flow Cell. Both electrodes have a 6 mm OD glass body, and use a porous junction (frit) made from either ceramic (RE-6) or Vycor (RE-5B). (Note that, due to the high resistance of the ceramic frit, the RE-6 electrode is only recommended for aqueous electrolytes.) Both electrodes can be used to suspend three reference electrodes in the salt solution while protecting the connecting pins and wires from corrosion.

A double junction reference electrode can be set up using an RE-5B reference electrode with the glass chamber MF-2030. This chamber also has a Vycor frit, which must be maintained as described in the previous paragraph.

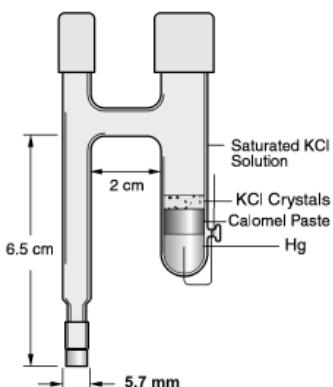
**Ordering Information** [Get Prices](#)

<b>MF-2052</b>	RE-5B Ag/AgCl Reference Electrode with Flexible Connector
<b>MF-2079</b>	RE-5B Ag/AgCl Reference Electrode with Flexible Connector (3/pkg)
<b>MF-2078</b>	RE-6 Reference Electrodes (3/pkg)

<b>MR-5275</b>	Storage vial for Ag/AgCl reference electrodes (Aqueous only)
<b>MF-2042</b>	Glass tube with porous Vycor tip
<b>MF-2030</b>	Double-junction reference electrode chamber
<b>MF-2064</b>	Porous Vycor Tips 1/8" long (5/pkg.) with 1/2" lengths of Teflon heat shrink (6/pkg.)
<b>MF-1080</b>	Porous Vycor Rod 1/8" dia, 10cm long
<b>MF-2027</b>	Teflon heat shrink tubing, ~4mm OD x 30cm
<b>MF-2044</b>	O-ring, 1/4", 12/pkg
<b>MF-2017</b>	Silver Wire, 0.5mm dia., 12" (30cm) long

Note: The RE-1 (MF-2020 and MF-2024) reference electrode has been discontinued: please order the RE-5B reference electrode instead.

#### Saturated Calomel Reference Electrode (SCE) Kit

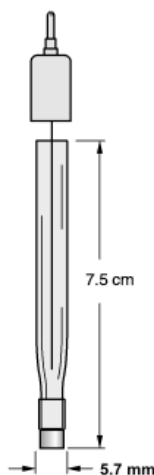


This reference electrode comes in kit form and requires user preparation. The kit includes a glass electrode body in the "H" design with a porous Vycor frit and a platinum wire electrode lead. Vials containing saturated KCl solution and calomel paste are provided (please note that mercury is NOT provided, and must be obtained from an alternative source). An instruction sheet illustrates assembly. The user will need glass pipettes, a pipette bulb, and clean mercury for assembly. Once assembled, the electrode must be maintained in a stable, upright position, with the Vycor tip continuously wetted. The electrode should be stored with the tip immersed in a saturated KCl solution.

#### Ordering Information [Get Prices](#)

<b>MF-2055</b>	Calomel Reference Electrode Kit
<b>MF-2057</b>	Glass "H" Cell with Vycor tip and platinum wire
<b>MF-2064</b>	Porous Vycor Tips 1/8" long (5/pkg.) with 1/2" lengths of Teflon heat shrink (6/pkg.)

#### Non-aqueous Silver/Silver Ion (Ag/Ag<sup>+</sup>) Reference Electrode Kit



This kit contains the parts required for construction of a non-aqueous silver/silver ion reference electrode. The glass electrode body has a porous Vycor tip attached with heat shrink tubing. The removable Teflon top contains a silver wire and 0.060 " gold-plated connecting pin for the cell lead. The kit also contains solid silver nitrate, extra heat shrink tubing, and extra porous Vycor tips. Non-aqueous solvents must be supplied by the user. An instruction sheet illustrates easy assembly.

**Ordering Information**[Get Prices](#)

<b>MF-2062</b>	Non-aqueous Reference Electrode Kit
<b>MF-2042</b>	Glass tube with porous Vycor tip, 6mm OD 7.5cm long
<b>MF-2064</b>	Porous Vycor Tips 1/8" long (5/pkg.) with 1/2" lengths of Teflon heat shrink (6/pkg.)

What properties are required for a reference electrode?

What are the differences between the silver/silver chloride reference electrode and the saturated calomel reference electrode?

What are liquid junction potentials, and how do they affect measured potentials?

What factors can affect the potential of a reference electrode?

How do I store reference electrodes?

Can I use aqueous reference electrodes for non-aqueous solutions?

I need to use anhydrous electrolyte, so an aqueous reference electrode is not suitable. What are the alternatives?

"Practical Problems in Voltammetry 3: Reference Electrodes for Voltammetry", A.W. Bott, Current Separations, 14 (1995) 64.

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