

Thermo Scientific Orion Metallic Electrodes

Cat. No.	Temperature Range (°C)	Electrode Type
977900	-5 to 105	Double Platinum Electrode
9780SC	-5 to 105	Silver Billet Combination Electrode
9781SC	-5 to 105	Silver Billet Half-Cell Electrode

The Thermo Scientific Orion double platinum electrode, Cat. No. 977900, is specially designed for use with Orion instruments that perform amperometric titrations using constant-current polarized electrode measurements. The electrode may also be used with other instruments using amperometric techniques, as long as the instrument and application are compatible with the overall electrode specifications, double pin connector, glass body, and temperature range of -5 to 105 °C. The silver billet electrodes, Cat. No. 9780SC and 9781SC, are designed for potentiometric halide determinations.

977900 Electrode Setup

977900 Double Platinum Electrode

Note: Thermo Scientific Orion 290A, 520A, 525A, 710A, 720A and 920A meters require the Karl Fisher (KF) adapter and jumper, Cat. No. 090048. The Thermo Scientific Orion EA940 meter only requires the KF adapter. Refer to the KF adapter instruction sheet for installation procedures.

1. Remove the protective shipping cap from the electrode.
2. For non-Thermo Scientific Orion instruments, refer to the instrument user guide for electrode connection procedures. For Thermo Scientific Orion instruments, follow the instructions below for electrode connection.
3. Connect the BNC connector of the KF adapter to the BNC meter input. For meters with two inputs, either input may be used.
4. Connect the pin tip connector of the KF adapter to the KF input of the meter.
5. Connect one electrode pin tip connector to the KF adapter and the other to the reference input corresponding to the BNC input.
6. Set the meter to the millivolt (mV) mode.
7. The electrode is ready for titrations. Refer to analytical chemistry texts or other procedural method books for specific techniques.

9780SC Electrode Setup

9780SC Silver Billet Combination Electrode

1. Fill the electrode with electrode filling solution, Cat. No. 900011.
2. Connect the electrode to the BNC connection on the meter using the proper adapter cable, Cat. No. 91CBNC. If the meter has a different connection, select the appropriate adapter cable. Visit www.thermo.com/water for details. For meters with two inputs, either input may be used.
3. The electrode is ready for titrations. Refer to analytical chemistry texts or other procedural method books for specific techniques.

9781SC Electrode Setup

9781SC Silver Billet Half-Cell Electrode

The double junction reference electrode, Cat. No. 900200, is required for use with the 9781SC silver billet half-cell electrode. The inner chamber should be filled with Cat. No. 900002 filling solution and the outer chamber should be filled with Cat. No. 900003 filling solution. Refer to the double junction reference electrode user guide for details on the reference electrode.

Electrode Maintenance

1. Inspect the electrode for scratches, cracks or salt crystals.
2. Rinse off any salt buildup with distilled water.

Electrode Cleaning

General Cleaning— Soak the electrode in a liquid detergent solution and vigorously stir the solution for 15 minutes. If using the 9780SC, drain and refill the electrode after cleaning.

For a more vigorous cleaning, soak the electrode in a 0.1 M HNO₃ solution for 15 minutes. If using the 9780SC, drain and refill the electrode after cleaning.

Electrode Storage

Thoroughly rinse the electrode with distilled water and then blot it dry. Cover the sensing element with the protective cap. If using the 9780SC, drain and refill the electrode after cleaning.

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