

## CONDUCTIVITY CALIBRATION INSTRUCTIONS

**GENERAL INFORMATION.** Temperature has a significant effect on conductivity. To control temperature, calibration should be performed as near as possible to 25.00°C, preferably with a water bath. Be aware that Certified Reference Material picks up contaminants from the air in a very short time. Contaminates and evaporation have a significant effect on conductivity. This effect may be minimized by using a narrow-necked container for all measurements. Keep the cap on the bottle as much as possible. Slight stray electrical signals can effect readings. For greater precision, consider shielding the measuring container. Do not insert anything into this bottle. Do not return used solution to this bottle. Select a Standard as near as possible to that of the unknown. Do not standardize at 10000 and then measure unknowns at 100.

**INSTRUCTIONS FOR DIP CELL TYPE PROBES.** Clean the conductivity probe with distilled/deionized water. Rinse the probe in a small amount of the standard, after rinsing, dispose of the rinse. Select a glass or plastic container several inches taller than the working part of the probe and with a diameter of at least 1¼ inches. Clean and dry the container, fill with a small amount of the Certified Reference Material, swirl it around the sides of the container to thoroughly rinse the container. Dispose of the rinse. Then fill the container with the Certified Reference Material using at least 100mL. Immerse the probe in the Certified Reference Material. For approximately one minute stir the solution with the probe and move the probe up and down in the center of the solution. Adjust the conductivity instrument to the correct reading while stirring. Heavily platinized probes or probes of complex geometry may require more than two minutes to achieve stable readings. Probes stored dry may also require additional time to achieve stable readings.

**INSTRUCTIONS FOR FLOW CELLS.** Rinse the cell with the Certified Reference Material by filling the cell ten to twenty times. Micro cells may give progressively higher readings if the solution is completely stagnant. Maintain some flow of solution through the cell during calibration, preferably at the same rate of flow as used to measure an unknown solution.

Copyright 2008