

Density Meter Calibration log

[illegible]

Anton PAAR USA DMA45 Calibration

*Calibration for this instrument will be done semi-annually

-Record the date and operator initials.

-Turn the density meter and water bath on and make sure they are set to 25°C. Allow time for temperatures to equilibrate. Place a thermometer in the water bath and measure its temperature. Record this value on the calibration log.

-If necessary, clean the measuring cell with a solvent appropriate for your samples.

-Rinse the cell out with clean solvent. Then flush the cell with a syringe full of acetone or some other solvent that evaporates quickly.

-Blow the cell dry using the built in air pump.

-Turn off the air pump. Remove the lid from the top of the density meter and turn the display selector to the "T" position. Wait for 3 minutes. Record this value as T_{air} on the calibration log.

-Take a clean syringe and fill it with freshly boiled water. Inject the water into the density meter. Turn the light on and make sure there are no bubbles present in the measuring cell. Turn the light off and wait 5 minutes. Record this value as T_{water} on the calibration log.

-Run "calib4.exe" program and enter the values for temperature, T_{air} , and T_{water} . Values for A and B are calculated by the program. A print out should be made and filed in the calibration folder. Also record A and B values on the calibration log.

-Leave the water in the cell. Dial the A and B values that were calculated into the appropriate slots on the memory board on the top of the density meter. Turn the display selector to "D". The display should show the density of water at 25°C. If the value is 0.9970 +/- 0.0002 the calibration is correct. Record this density value on the print out from the calibration computer program that is filed in the calibration folder.

REFERENCE - Anton PAAR USA DMA45 Instructions Air and Water Calibration Document