

# Salinity:

What is it?

Measurement Techniques ?

# Salinity

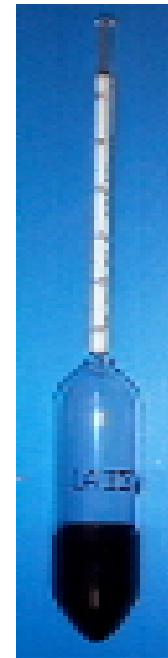
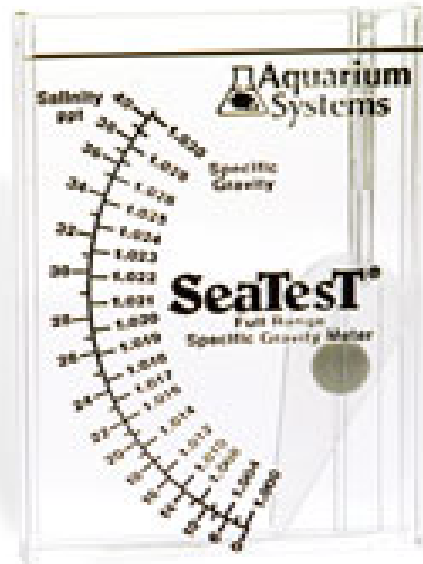
- The measure of dissolved salts in water express usually as PPM (Parts Per Million) or PPT (Part Per Thousand).
- Natural seawater has a range of 33,000 PPM to 37,000 PPM or about 3.3% 3.7% dissolved salt.
- Fresh water usually has less then 1000 PPM.
- Factor affecting Salinity of natural seawater are
  - » depth (pressure)
  - » temperature
  - » location.

# Measurement Techniques

- Evaporate the water away to leave dissolved solids
- Titrate for each of the major ions then add them up
- Hydrometers
- Measure the refraction of light (Refractometers)
- Measure the conductivity of the water and then convert to salinity (electronic measuring device)

# Hydrometers

Measures the specific gravity (density) of the salt water thus indicating the amount of salt contained with the water.



# Refractometers

Uses the principle of light refraction to determine the amount of dissolved salt contain within the water.



# Electronic salinity meter

Use the principal of electrical conductivity, a measurement the conductance, the amount of electrical current that can be conducted to determine the amount of dissolved salts with the water



# Density

Is the weight divided by the amount of space it occupies, usually expressed in kg per cubic meter. Natural seawater weighs 1025 kg per cubic meter