

# QWIKLITE™ TECHNICAL APPLICATION NOTE



## ***How to Measure and Adjust Salinity in Reference Samples for the QwikLite™ 200 Testing System***

**Measure the salinity of reference sample(s) using a refractometer-hydrometer.**

Add a few drops of reference sample onto the refractometer-hydrometer window and read salinity. Standard seawater is 32 parts per thousand (ppt), and for reference testing the salinity of the reference sample also needs to be in the range of 30 to 34 ppt.

The standard ratio is 34.75 grams of sea salt to 1.0 L (or 1000 mL) of freshwater sample.

If salinity needs to be increased, sea salt is added. Use the following formula:

$$\text{Sea Salt to be added} = 34.75 \text{ g} \times \text{Volume of Reference Sample [L]}$$

For example, if the salinity of the reference sample is zero parts per thousand (0 ppt), measure 34.75 grams of sea salt on a balance and add it to 1.0 L (or 1000 mL) of reference sample. Measure salinity again using a refractometer-hydrometer to make sure it reads between 30 ppt and 34 ppt.

If the volume of the reference sample is less than 1.0 L, then appropriate dilutions need to be made.

For example, if the volume of the reference sample is 500 mL, add 17.38 grams of sea salt. If the volume is 250 mL of reference sample, add 8.69 grams of sea salt.

If the salinity of the reference sample is higher than zero, add sea salt little by little and measure the reference sample every time salt is added, until the refractometer-hydrometer reads between 30 and 34 ppt.

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