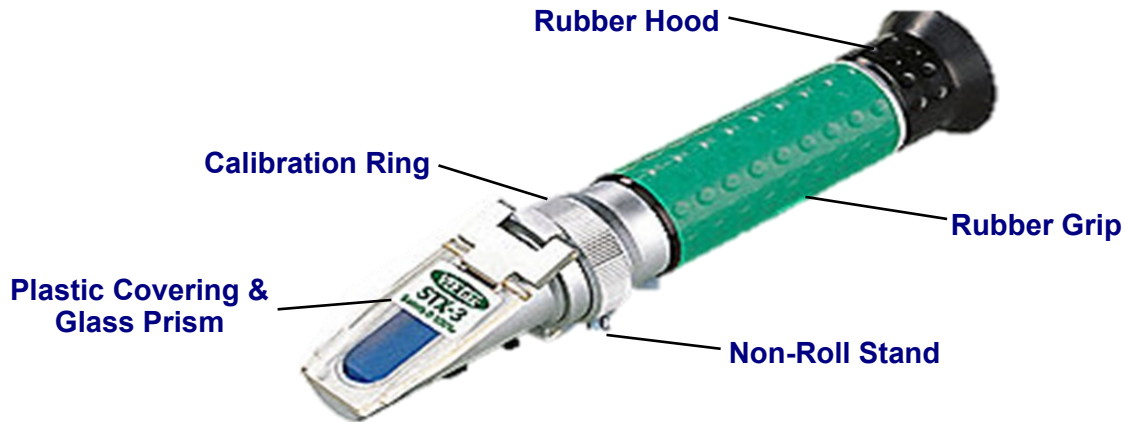


# Measuring Salinity

## Handheld Salinity Refractometer



## Calibration

1. Refractometer calibration should only be conducted when the previous calibration setting has shifted and is noticeably affecting measurements. **DO NOT PERFORM CALIBRATIONS IN THE FIELD.**

2. Holding the refractometer parallel with the floor, lift the plastic covering on the refractometer and add two drops of distilled water on the glass prism.

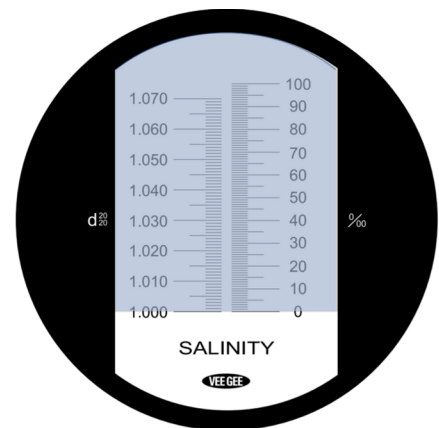
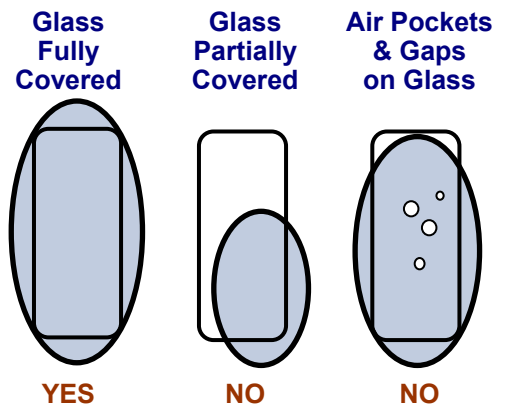
3. Close the plastic covering of the refractometer. The distilled water should appear as a thin, even layer in between the glass prism and plastic covering. If there are bubbles and gaps or if the distilled water does not cover the entire glass, reapply the distilled water.

4. Hold the refractometer up to your eye, so you are looking through the eyepiece into the light to read the numbers. If the numbers on the scale are not in focus, adjust it by gently turning the eyepiece (rubber hood) either clockwise or counterclockwise.

5. When the refractometer scale is viewed through the eyepiece, the upper field of view will be seen as blue and the lower field will be seen as white. Confirm that the boundary line crosses the scale at "0‰".

6. If the boundary line falls above or below zero, gently loosen the set screw on the calibration ring with the screwdriver. While looking through the eyepiece, gently turn the calibration ring clockwise or counterclockwise until the boundary line is at zero. Once calibrated to "0" gently tighten down the set screw with the screwdriver. (NOTE: Do not over-tighten)

7. When calibration is complete, gently wipe the glass using tissue paper.



# Measuring Salinity (continued)

## General Use

1. Holding the refractometer parallel with the floor, lift the plastic covering on the refractometer and add two drops of your sample water on the glass prism.
2. Close the plastic covering of the refractometer. The sample water should appear as a thin, even layer in between the glass prism and plastic covering. If there are bubbles and gaps or if the sample water does not cover the entire glass, reapply the solution.
3. Hold the refractometer up to your eye, so you are looking through the eyepiece into the light to read the numbers.
4. Notice where the upper field of view (blue) and lower field of view (white) meet. Read the numbers on the boundary line on the parts per thousand side (0-100‰).
5. Record your salinity on the data sheet.
6. When finished, gently wipe the glass using tissue paper.

## Reference:

VEE GEE Refractometer Operation Manual – Model STX-3

[https://cdn.shopify.com/s/files/1/0050/6907/8621/files/VEE\\_GEE\\_Model\\_STX-3\\_Manual.pdf?v=1583444019](https://cdn.shopify.com/s/files/1/0050/6907/8621/files/VEE_GEE_Model_STX-3_Manual.pdf?v=1583444019)