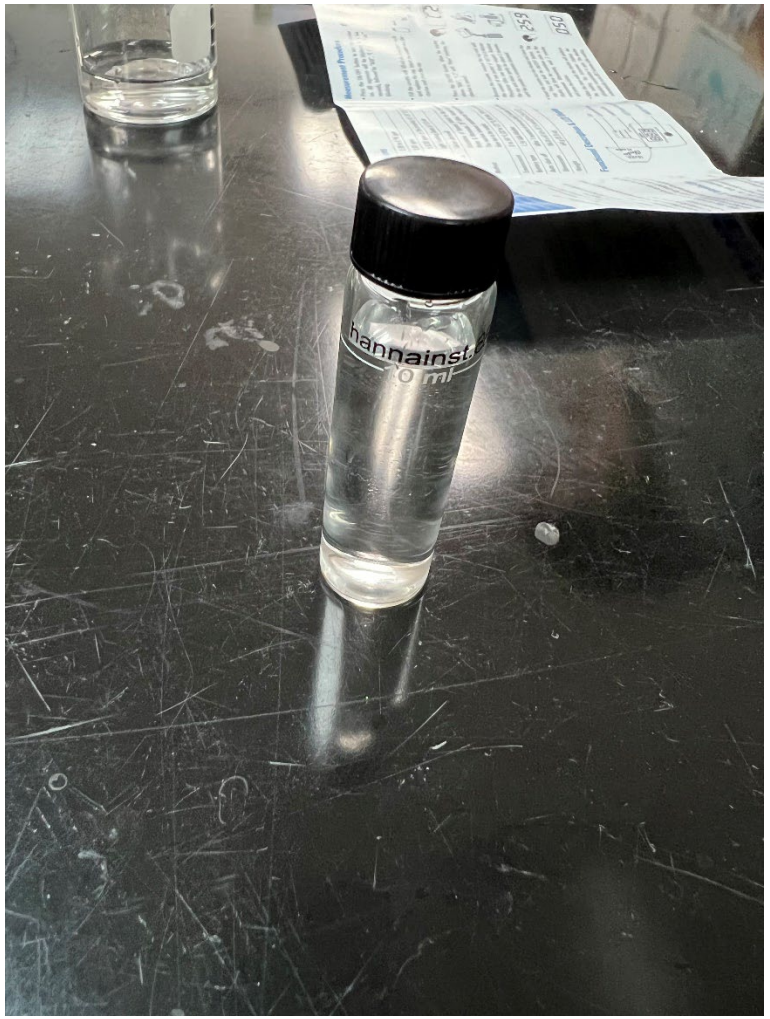
How to use the **Phosphate** Hanna Meter

Step 1: **Press** (**tap)** the on/off button to turn the checker on

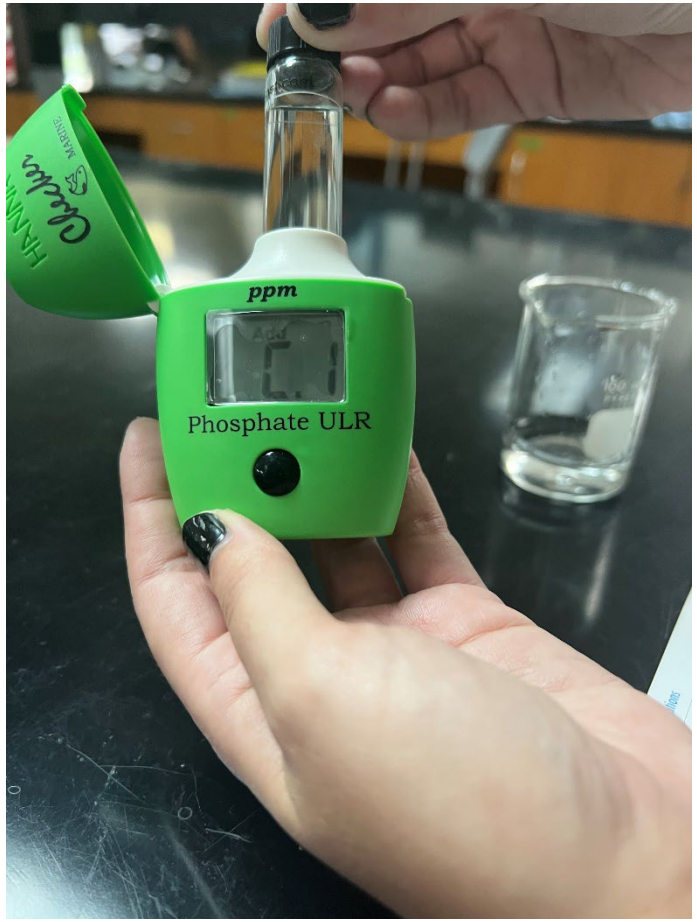
- Note: All segments will be displayed for a few seconds, followed by “ADD”, “C1”, with “Press” blinking

Step 2: Fill the cuvette with 10 ml of sample and replace the cap

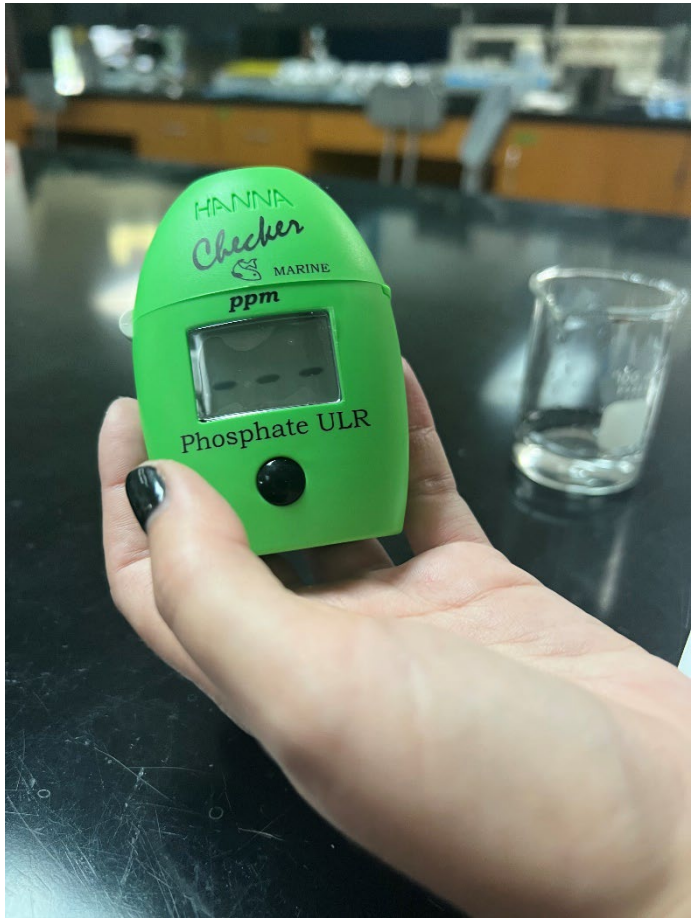


Step 3: **Wipe off the cuvette**. Make sure there are no droplets on the outside of the cuvette

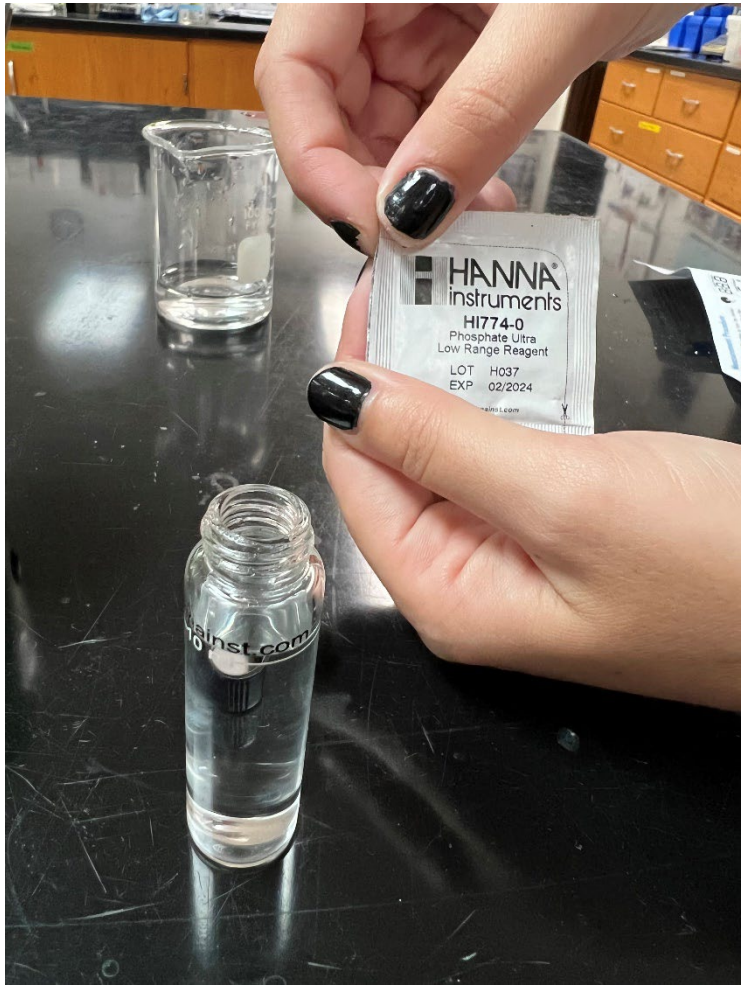
Step 4: Place cuvette into the checker



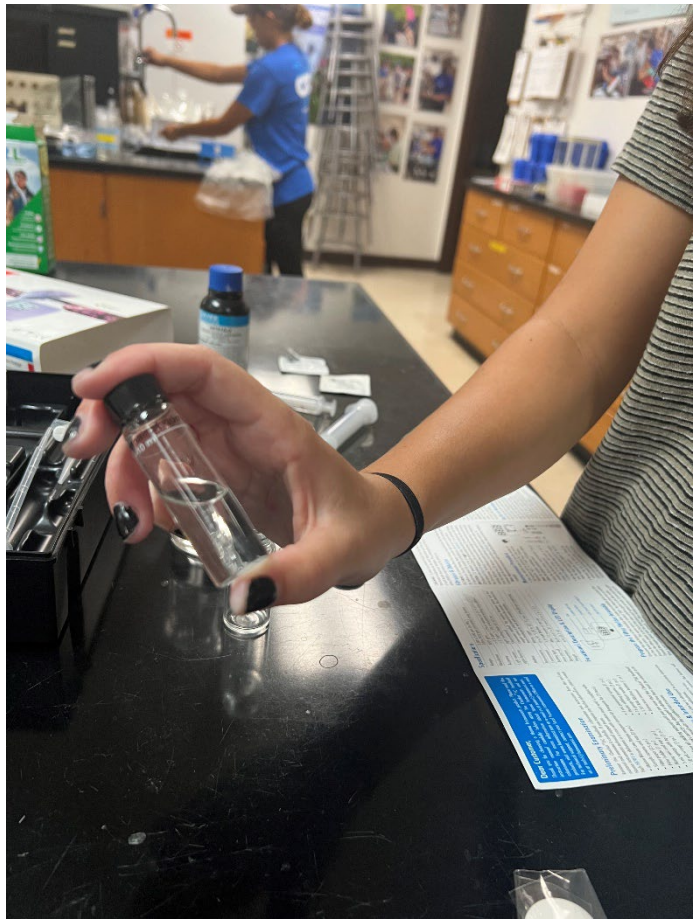
Step 5: **Press (tap)** the on/off button. When the display shows “ADD”, “C.2”, with “Press” blinking, the checker is zeroed



Step 6: Remove the cuvette, unscrew the cap and add the content of one packet of **HI774-0**



Step 7: Replace the cap and shake **GENTLY** for about 2 minutes until the powder is completely dissolved.



Step 8: Insert the cuvette back into the checker and close cap

- Note: Please make sure there is no droplets on the outside of the cuvette before placing in the checker

Step 9: **Press** and **HOLD** (for about 3 seconds) the on/off button. Release when the display shows a countdown. This countdown represents the checker reading the sample.

Step 10: When the timer ends the checker will perform the reading

- **Note:** The instrument displays the phosphate concentration in ppm. The checker automatically turns off 2 minutes after reading

Phosphorus is one of the primary nutrients that regulates the growth of algae and larger aquatic plants, particularly in fresh water. Phosphate, the form in which almost all phosphorus is found in water, can enter the aquatic environment in a number of ways. Natural processes transport phosphate to water through atmospheric deposition, ground water percolation, and terrestrial runoff. Municipal treatment plants, industries, agriculture, and domestic activities also contribute to phosphate loading through direct discharge and natural transport mechanisms. The very high levels of phosphorus in some of Florida's streams and estuaries are usually caused by phosphate mining and fertilizer processing activities. High phosphorus concentrations are frequently responsible for accelerating the process of eutrophication (or accelerated aging) of a waterbody. Once phosphorus and other important nutrients enter the ecosystem, they are extremely difficult to remove because they are taken up by plants or deposited in sediments. Nutrients, particularly phosphates, deposited in sediments generally are redistributed into the water. This type of cycling compounds the difficulty of halting the eutrophication process.

Measured in mg/l

Percentile	Blackwater	Coastal	Estuary
10	0.02	0.01	0.01
20	0.04	0.01	0.02
30	0.06	0.01	0.05
40	0.09	0.01	0.07
50	0.11	0.02	0.10
60	0.14	0.03	0.12
70	0.18	0.04	0.16
80	0.24	0.06	0.22
90	0.38	0.12	0.33

Typical Values for Water Quality Parameters in the State of Florida

1mg/l = 1ppm A reading of 0.1ppm is a median reading in a Florida estuary.