



What is Dissolved Oxygen (DO)?

DO is the measure of oxygen that is dissolved in water. Aquatic organisms depend on dissolved oxygen in order to survive in their environment. Oxygen can be dissolved in water through lower temperatures, mixing of water, and other photosynthetic organisms. DO is measured by milligrams per liter (mg/L)

Why we measure dissolved oxygen...

DO levels can indicate how healthy the aquatic environment is and if it can support life.

Most aquatic organisms in the Hudson River and New York Harbor need at least **5 mg/L** of dissolved oxygen to survive.

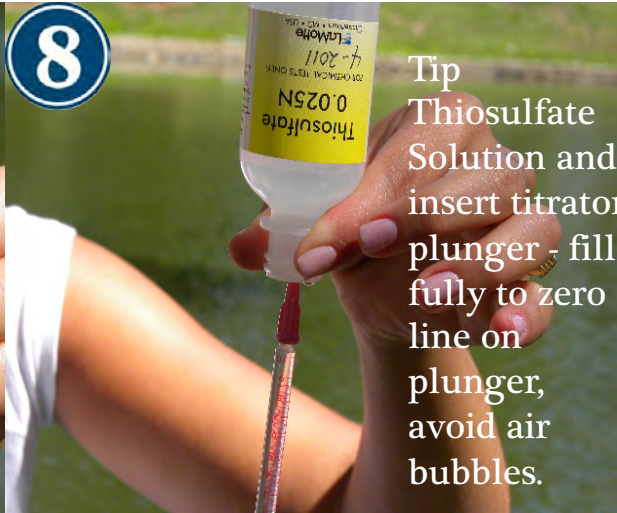
How to use a LaMotte DO testing kit:

*Created by Nadia Trochez, Michelle Arias, and Dwaine Pryce from Dr. Pat Grove's College of Mount St. Vincent Ecology class.

- 1** Collect a water sample directly from Water source
- 2** Cap the bottle under water to avoid air bubbles
- 3** Add 8 drops of Manganous Sulfate Solution
- 4** And add 8 drops of Alkaline Potassium Iodine
- 5** Cap and mix solution. A precipitate will form. Let it settle past the shoulder of the bottle.
- 6** Add 8 drops of Sulfuric Acid to sample, cap and mix until dissolved and solution is clear orange. It is now 'fixed'.



7 Fill titration tube to 20 ml with the fixed sample and cap it



8 Tip Thiosulfate Solution and insert titrator plunger - fill fully to zero line on plunger, avoid air bubbles.



9 Add one drop at a time, swirling, until color of mix lightens to pale yellow



10 Add 8 drops of starch indicator solution to the fixed Sample. Swirl to mix.



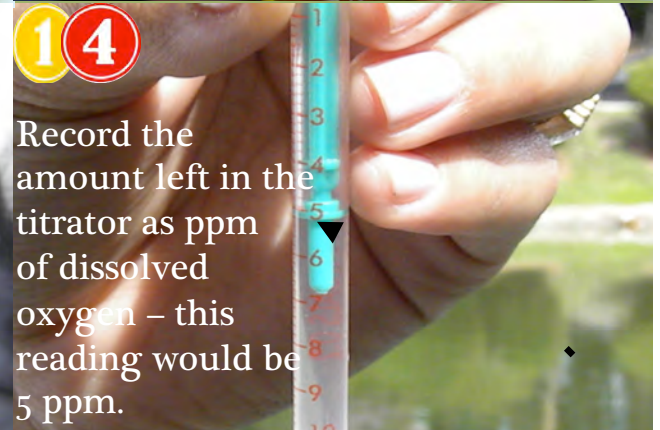
11 Blue color is added with each drop to help you see the next step.



12 Continue to titrate the fixed sample using one drop at a time of the Thiosulfate from the plunger.



13 You will keep titrating and swirling until the blue color completely disappears



14 Record the amount left in the titrator as ppm of dissolved oxygen - this reading would be 5 ppm.