Snapshot Day Recording Sheet  -  SALINITY

When we measure salinity we are measuring the amount of salt present in water. Much of this salt is sodium chloride, just like table salt. The main source of salt in the Hudson is seawater pushing in from the ocean. There are only very small amounts of salt in the fresh water entering the river.

* Expected Hudson Range: ~40 ppm in the freshwater section to ~29,000 ppm in harbor*

Put a checkmark in the box next to the measuring method you are using. Follow the instructions for completing the test and then record your results below.

☐ TITRATOR STRIPS measure chloride by color change (to white) along a scale.

On strip’s scale, white color ends at ______. Find this number on the conversion table.

Read the chloride concentration that goes with this number. Write it here:________mg/L Cl⁻

☐ DROP COUNT TEST KITS usually measure chloride using color change as a liquid chemical is added to the sample drop by drop.

How many drops were needed for the sample to change color? ______ drops

Number of drops times conversion factor (from instructions) equals chloride concentration.

______ X ____________ = ________ mg/L Cl⁻

☐ HYDROMETERS measure water’s density (its specific gravity) using a floating object. As salinity increases, density increases, and the object floats higher.

If using a hydrometer with a pointer, record salinity here: __________ parts per thousand (ppt)

If using a glass hydrometer floating in a water sample:
1. Record the temperature of the water sample __________ °C
2. Record the specific gravity (to the fourth decimal place) from the hydrometer scale where the stem breaks the water’s surface. Read at water level, not at the top of the meniscus. __________
3. Record salinity from the specific gravity conversion table: __________ parts per thousand (ppt)

☐ REFRACTOMETERS measure how light is bent—refracted—as it enters water. Refraction varies with density, which in turn varies with salinity (density increases with salinity).

Read salinity where the shadowline crosses the display scale: __________ parts per thousand (ppt)

☐ METERS measure how well water conducts electricity (better as salinity increases). They may show conductivity, salinity, or chloride concentration; be sure to specify units.

Reading __________ Units of measurement __________