Making the 2 ppm Nitrate Standard

Option 1

Lab Guide

Task

Make the nitrate-nitrogen standard for the quality control procedure using 5 mL stock nitrate-nitrogen solution.

What You Need

- ☐ Standard nitrate-nitrogen solution (1000 ppm)
- ☐ 100-mL beaker (or larger)
- ☐ 100-mL graduated cylinder
- ☐ 500-mL beaker or flask
- ☐ 500-mL graduated cylinder
- ☐ Latex gloves
- ☐ Goggles
- ☐ Pipette
- ☐ Stirring rod (optional)
- ☐ Distilled water
- ☐ 250-mL bottle or jar with lid

In the Lab

1. Put on gloves and goggles
2. Rinse a 100 mL cylinder and 100 mL beaker with distilled water. Dry.
3. Using a pipette (if possible), measure 5 mL of the 1000 stock nitrate solution into the 100-mL graduate cylinder. Dilute with distilled water to 50 mL.
4. Pour into a 100 mL beaker and mix (swirl or use clean stirring rod). Label this *100-ppm nitrate standard*.
5. Rinse 100-mL graduated cylinder with distilled water.
6. Measure out 10 mL of the 100 ppm nitrate standard using the 100-mL graduated cylinder. Pour into 500 mL flask or beaker. Measure out 490 mL of distilled water in the 500 mL graduate cylinder. Add to the 500 mL flask or beaker.
7. Carefully swirl the solution to mix. Pour into a bottle with a lid and label as *2.0 ppm nitrate-nitrogen standard*.