

Water Project, Bottle Washing Procedure

The main thing to remember is that lead, copper, and zinc contaminants are everywhere: in the air, on your skin, on paper towels, and so on. Maybe not much, but potentially enough to ruin results. As you clean these bottles, do everything you can to keep contaminants out. That includes drips from the outside surface of the bottle, and counter and sink surfaces. Keep caps on the bottles unless you are actually doing something with them.

1. Test that the DI water tap at the sink yields water with an electrical conductivity $<10 \mu\text{S}$.
2. Pour the old samples into a properly labeled waste container.
3. At the sink, rinse the bottles and caps twice.
4. Fill the bottles with 2% Citranox solution. Note that you will soon run out of Citranox solution. However, you keep re-using the same Citranox solution from previously filled bottles in a first-in, first-out sequence. Citranox will coat the inside of the bottle and continue to dissolve adsorbed contaminants.
5. Rinse the bottles and caps, outside first, then insides and threads three times with DI water at the sink.
6. Rinse the bottles and caps, outside first, then insides and threads three times with DI water in the ICP-MS hood.
7. After each bottle and cap has their last rinse, shake the remaining drops out, say, onto the floor. We don't want to dilute our next water samples.
8. Put the caps on reasonably tight, and put in the clean bottle storage box. Do not dry the insides.