

Topic 2: Cleaning Glassware

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Health and Safety Considerations

Even a task that seems as simple as washing glassware can potentially be hazardous. Wear eye protection and gloves at all times.

Tips & Tricks

- Clean glassware as quickly as possible. If dirty glassware sits for a long period of time, it will become more difficult to clean.
- Disassemble any apparatuses that you are using as soon as possible. Remove stopcocks and stoppers from addition funnels, separatory funnels, etc. Ground glass stopcocks and stoppers can get stuck, particularly with certain reactants.
- Remove any grease by wiping it off with a paper towel and then rinsing with hexane.
- Graduated cylinders, beakers, and Erlenmeyer flasks that were only used for holding solvent generally only need to be air dried on a drying rack or in your drawer. (In some cases you may need to be more thorough.)
- Büchner funnels, etc. should be rinsed with an appropriate solvent to remove substances that are clinging to them. Running solvent through them under vacuum or backwards using gravity can help remove contamination from the inside of the funnel and from the surface of fritted funnels. Follow this with deionized (DI) water rinses, an acetone rinse, and then air dry.

General Cleaning Procedure

The following steps should be followed for glassware for which the above rinsing procedures are not sufficient.

1. Dispose of any excess reagents in the proper waste container and rinse the vessel in which it was contained three times, typically with acetone, into the waste container.
2. Place the glassware in a warm concentrated aqueous solution of Alconox, or other detergent, and let it sit for several minutes.
3. Scrub. Be sure that your brush is in good shape before scrubbing (not rusty, bristles are not matted down); replace it if necessary.
4. Rinse thoroughly with tap water and then once with DI water.
5. For faster drying, conduct a final rinse with acetone or methanol.

References & Additional Resources

1. Frontier, A. How To: Clean Glassware. http://chem.chem.rochester.edu/~nvd/pages/how-to.php?page=clean_glassware (accessed Aug 8, 2015).
2. Lehman, J. W. *The Student's Lab Companion: Laboratory Techniques for Organic Chemistry*, 2nd ed.; Prentice Hall: Upper Saddle River, NJ, 2008; pp 36-37.