



ECKERD COLLEGE

Safe Operating Procedures

(12/03)

Washing Glassware

General Cleaning Procedures:

1. Remove all labels using sponge or acetone.
2. Wash with hot TAP water and a brush to scrub inside the glassware, stopcocks, and other small pieces using a suitable laboratory-grade detergent located in stockroom.

Organics: Liquinox, Alconox or equivalents

Inorganic anions: Liquinox or equivalent

Inorganic cations: Liquinox, Micro or equivalents

3. Rinse thoroughly three times with hot TAP water.
4. Rinse thoroughly three times with deionized water.
5. Set to air dry
6. Clean, dry glassware should be sealed and stored in dust-free environment.
7. Last step (prior to use) should be a rinse with the solvent used in analysis.
8. New glassware must be cleaned before use

Washing Out Common Chemicals:

1. Weak Acids: Rinse with deionized water three times.
2. Weak Bases:
 - A) Rinse with TAP water three or four times.
 - B) Rinse with deionized water three or four times.

**Note the tap water is used first because bases are hard to remove with deionized water.

3. Strong Acids:
 - A) Rinse CAREFULLY in the hood with TAP water.
 - B) Rinse with deionized water three or four times.
4. Strong Bases:
 - A) Rinse CAREFULLY in the hood with TAP water three or four times.
 - B) Rinse with deionized water three or four times.
5. Water Soluble Solutions: Rinse with deionized water three or four times.

6. Insoluble Solutions:

- A) Rinse with ethanol or acetone two or three times
- B) Rinse with deionized water three or four times.

*** Note that the acetone should go in the solvent waste. Sometimes solvents other than acetone are needed. Examples: Hexane and Methonal

Washing Special Glassware:

1. Burets:

- A) Wash with hot soapy water using the buret brush.
- B) Rinse with TAP water three times.
- C) Rinse with deionized water three times.

2. Pipets and Vol. Flasks:

- A) Rinse with soapy water, solvents, water, acetone or deionized water as needed.

3. Glassware used for organic reactions:

- A) If the contents are water soluble, rinse with water.
- B) If the contents are ethanol soluble rinse with acetone and then water.
- C) If the contents are solvent soluble, rinse with the appropriate solvent, then rinse with ethanol and water.
- D) If it needs scrubbing, scrub with hot soapy water and a brush. If more is needed, ask your instructor.

To Dry or Not Dry Glassware

- 1. Not Drying: Normally you do not need to dry glassware. They should be left to air dry on a drying rack. *Do not dry glassware with a paper towel or compressed air because it will be contaminated with paper fiber or grease.*
- 2. Drying: If the glassware must be used immediately, cannot have any solvent of any kind in it and must be dry, rinse it with acetone two or three times. The acetone removes the water and will dry very quickly.