

Cleaning glassware:

| Chemical | Suitable for | Comments |
|------------------------------|--------------|---|
| Water/soap/ brush/acetone | Normal use | <ul style="list-style-type: none"> ◦ If simple rinse is not sufficient, try: ◦ Degrease your glassware's ground glass joints by wiping them with a paper towel soaked in a small amount of ether, acetone or other solvent ◦ Place the glassware in a warm concentrated aqueous solution of Alconox, or other detergent, and let sit for several minutes. ◦ Scrub. ◦ Rinse w/ tap water followed by DI water rinse. ◦ Acetone if needed. Air dry. |
| HCl | Intensive | <ul style="list-style-type: none"> ◦ Start with 1M, go up to 6M if needed. ◦ Great for metal-containing compound (ie. White powder coating flask) ◦ Rinse many times with tap water. ◦ DI water rinse, acetone, air dry. |
| Base bath | Intensive | <ul style="list-style-type: none"> ◦ Great for organic residue. ◦ No metal-containing compounds. ◦ No fritted funnels, cuvettes, volumetric glassware ◦ Remember to retrieve it in a timely manner (~ 1 wk) ◦ Rinse many times with tap water. ◦ DI water rinse, acetone, air dry. |
| Aqua Regia | Aggressive | <ul style="list-style-type: none"> ◦ 1:3 HNO₃: HCl. 1:3:1 HNO₃:HCl:H₂O if for storage. ◦ Will dissolve gold and oxidize everything else. ◦ Fumes, releases toxic Cl₂, NOCl or NO. ◦ Cannot be store for long term. ◦ Rinse with lots of water afterwards. |
| Acidic peroxide solution | Aggressive | <ul style="list-style-type: none"> ◦ 1:1 H₂SO₄: 3% H₂O₂ (don't exceed 10%). ◦ Add peroxide into acid. ◦ Strong oxidant and reductant. ◦ Rinse with lots of water afterwards. |
| Chromic acid | Aggressive | <ul style="list-style-type: none"> ◦ Dissolve 140g of sodium dichromate dehydrate in 100ml of water. Slowly add to 2 L of sulfuric acid while stirring. Keep cool. ◦ Can be stored for years. ◦ Wash with lots and lots of water afterwards. ◦ Toxic, carcinogenic, tetratogenic & can cause environmental damage. Avoid use. |
| Hydrofluoric acid | Aggressive | <ul style="list-style-type: none"> ◦ Concentrated HF can remove everything. ◦ Can etch surface of glass ◦ Can cause severe burn. Avoid. |

Source: <http://chem.chem.rochester.edu/~nvd/cleaningglassware.html>