# CHEMICAL RESISTANCE

## Tubes

Information presented in the following table is to serve as a guide for the use of Seton tubes. The chemical resistance data has been generated in tests at 27 deg. C and below. Seton tubes may be frozen but should be warmed to at least -5 deg. C before centrifugation is begun. For chemicals not listed in this table, please test your solutions before spinning your valuable samples. The data presented here is to be used as a general guideline only and is not meant to imply or express a guarantee of safety for use of tubes in the ultracentrifuge.

| Reagent | PA | PC | PCB | Reagent | PA | PC | PCB | Reagent | PA | PC | PCB |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Acetic Acid, 5% | S | M | S | Ethylene Glycol | S | | M | Potassium Chlorate | S | S | S |
| Acetic Acid, 60% | S | U | U | Ferric Chloride | S | | | Potassium Chloride | S | S | S |
| Acetic Acid, glacial | S | U | U | Formaldehyde, 40% | S | U | S | Potassium Hydroxide, 5% | S | | U |
| Acetone | M | U | U | Formic Acid, 100% | S | | M | Potassium Hydroxide, conc. | S | U | U |
| Alconox | S | M | M | Gallic Acid | S | S | S | Potassium Permanganate | S | | S |
| Allyl Alcohol | S | | S | Glycerol | S | U | M | Rubidium Bromide | S | S | S |
| Aluminum Chloride | S | S | S | Guanidine Hydrochloride | S | S | S | Rubidium Chloride | S | S | S |
| Aluminum Fluoride | S | | U | Guanidine Thiocyanate | S | S | S | Silicone Fluids | M | U | |
| Ammonium Acetate | S | S | S | Hexane | U | U | U | Silver Cyanide | S | | |
| Ammonium Carbonate | S | S | U | Hydrochloric Acid, 10% | S | U | S | Silver Nitrate | S | S | S |
| Ammonium Hydroxide, 10% | S | | U | Hydrochloric Acid, 50% | M | U | M | Sodium Bromide | S | S | S |
| Ammonium Hydroxide, conc. | S | U | U | Hydrofluoric Acid, 10% | S | | M | Sodium Carbonate | S | S | U |
| Ammonium Sulfate | S | S | S | Hydrofluoric Acid, 100% | S | U | U | Sodium Chloride, 10% | S | S | S |
| Ammonium Sulfide | S | | U | Hydrogen Peroxide, 3% | S | S | S | Sodium Chloride, sat'd | S | S | S |
| Amyl Alcohol | M | | S | Hydrogen Peroxide, 100% | S | S | S | Sodium Dichromate | S | | |
| Aniline | U | U | U | Isobutyl Alcohol | S | U | U | Sodium Hydroxide, 1% | S | | U |
| Aqua Regia | U | U | U | Isopropyl Alcohol | S | U | U | Sodium Hydroxide, 10% | S | U | U |
| Barium Salts | S | S | S | Kerosene | U | U | U | Sodium Hydroxide, conc. | M | U | U |
| Benzene | U | U | U | Lactic Acid, 20% | S | | S | Sodium Hypochlorite | S | | S |
| Benzyl Alcohol | U | U | U | Lauryl Alcohol | S | | | Sodium Iodide | S | | S |
| Boric Acid | S | S | S | Lead Acetate | S | S | | Sodium Metaborate | S | | |
| n-Butyl Alcohol | S | U | M | Linseed Oil | S | U | U | Sodium Nitrate, 10% | S | S | U |
| n-Butyl Phthalate | M | U | U | Magnesium Chloride | S | S | S | Sodium Sulfate | S | S | S |
| Calcium Chloride | S | S | S | Magnesium Hydroxide | S | | U | Sodium Thiosulfate | S | | S |
| Calcium Hypochlorite | S | | M | Maleic Acid | S | | | Sucrose | S | S | S |
| Carbon Tetrachloride | U | U | U | *B*-Mercaptoethanol | S | U | U | Sucrose, alkaline | S | U | U |
| Cesium Acetate | S | | S | Mercury | S | | U | Sulfuric Acid, 10% | S | S | U |
| Cesium Bromide | S | S | S | Methanol | S | U | U | Sulfuric Acid, 50% | S | U | U |
| Cesium Chloride | S | S | S | Methylethylketone | S | U | U | Sulfuric Acid, 75% | S | U | U |
| Cesium Formate | S | S | S | Methylene Chloride | S | U | U | Sulfuric Acid, conc. | S | U | U |
| Cesium Iodide | S | S | S | Mineral Oil | S | U | M | Tannic Acid | S | | |
| Cesium Sulfate | S | S | S | Nickel Salts | S | S | S | Tetrahydrofuran | U | U | U |
| Chlorobenzene | U | U | U | Nitric Acid, 10% | S | | S | Toluene | U | U | U |
| Chloroform | M | U | U | Nitric Acid, 50% | S | U | M | Trichloroacetic Acid | S | U | M |
| Chromic Acid, 10% | S | S | M | Nitric Acid, 95% | M | U | U | Trichloroethane | U | U | U |
| Chromic Acid, 50% | S | U | U | Oleic Acid | S | U | S | Trichloroethylene | U | U | U |
| Citric Acid, 10% | S | S | S | Oxalic Acid | S | U | S | Tris Buffer | S | S | S |
| Cresol Mixture | M | U | U | Paraffin Oil | S | U | M | Trisodium Phosphate | S | | |
| Cyclohexanol | S | U | M | Petroleum Oils | S | | M | Turpentine | M | U | U |
| Dextran Sulfate | S | S | S | Phenol, 5% | S | U | U | Urea | S | S | S |
| Dimethylformamide | S | U | U | Phenol, 50% | U | U | U | Urine | S | S | S |
| Dioxane | M | U | U | Phosphoric Acid, 10% | S | | S | Water, distilled | S | S | S |
| Ethyl Acetate | M | U | U | Phosphoric Acid, conc. | M | U | U | Xylene | U | U | U |
| Ethyl Alcohol, 50% | S | U | U | Phosphorous Trichloride | S | S | U | Zinc Chloride | S | S | S |
| Ethyl Alcohol, 95% | S | U | U | Potassium Acetate | S | S | M | | | | |
| Ethylene Dichloride | M | U | U | Potassium Bromide | S | S | S | | | | |
| Ethyl Ether | M | U | U | Potassium Carbonate | S | S | S | | | | |

**Compatibility Key:**

S = Satisfactory
M = Marginal; performance depends on temperature, run time, speed and rotor type.
U = Unsatisfactory; not recommended.
PA = Polyallomer; PC = Polyclear; PCB = Polycarbonate