

# STANFORD COMPATIBLE STORAGE GROUP GUIDE

Effective segregation in chemical storage reduces the risk of dangerous chemical reactions.

This guide must be used in conjunction with information from the manufacturer's safety data sheets and chemical-specific expert knowledge.

This storage group system is intended to be used in research settings to store laboratory-scale quantities of chemicals.

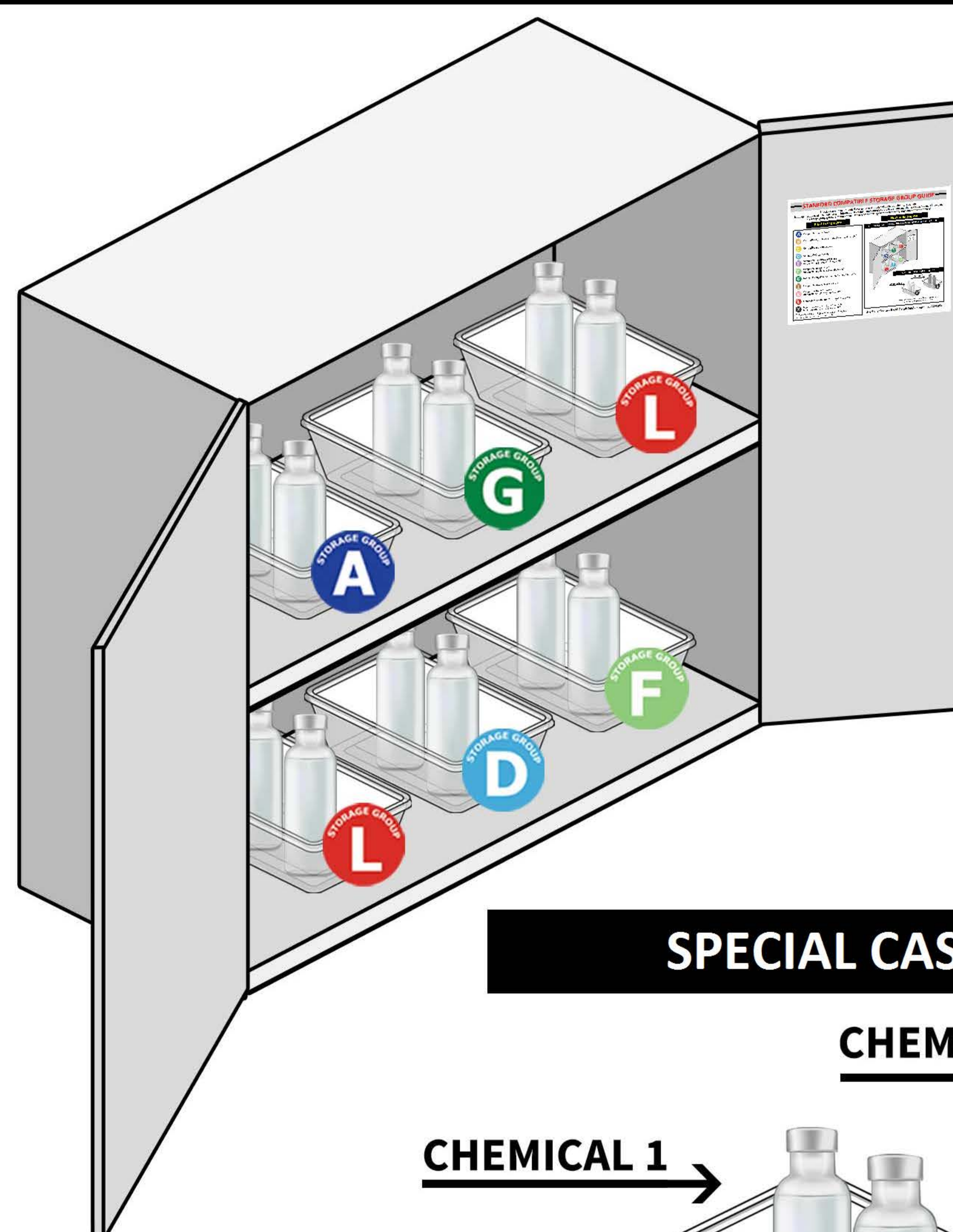
## What to Segregate

-  **A** Compatible Organic Bases
-  **B** Compatible Pyrophoric & Water-Reactive Materials\*
-  **C** Compatible Inorganic Bases
-  **D** Compatible Organic Acids
-  **E** Compatible Oxidizers & Peroxides (not including Strong, Oxidizing Acids)\*
-  **F** Compatible Inorganic Acids (not including Oxidizers or Combustibles)
-  **G** Not Intrinsically Reactive, Flammable, or Combustible
-  **I** Compatible Strong, Oxidizing Acids
-  **K** Compatible Stable Explosives (not including Oxidizing Explosives)\*
-  **L** Flammables, Combustibles, & Organic Solvents
-  **X** Incompatible with ALL Other Chemicals (including other chemicals within X)\*

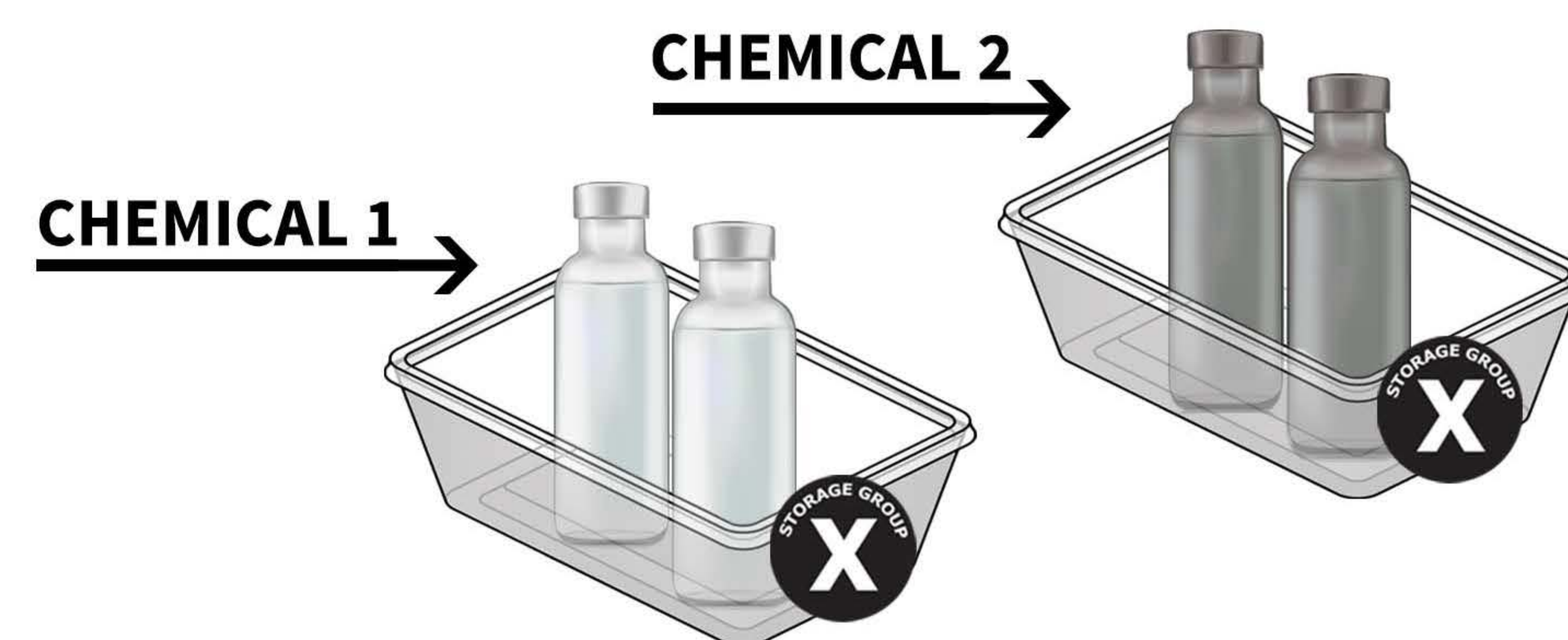
\* These materials are likely to require special handling & storage conditions. Use extreme caution.

## How to Segregate

USE SEPARATE SECONDARY CONTAINERS FOR EACH GROUP



SPECIAL CASE FOR GROUP X



NOTE: Different chemicals within Storage Group X must be segregated from each other.

Questions? Contact the EH&S Lab Safety Program at 723-0448  
Use ChemTracker to find a chemical's Storage Group - [stanford.chemtracker.org](http://stanford.chemtracker.org)



## Recommended Storage Groups for Common Chemicals

| CHEMICAL   | Group | Ethers                          | L | (K <sub>3</sub> PO <sub>4</sub> )             |
|--|-------|---------------------------------|---|---|
| 1-Butanol or 2-butanol   | L     | Ethidium bromide                | G | Propionic acid                                |
| 1-Propanol   | L     | Ethyl acetate                   | L | Propylene oxide                               |
| 2-Mercaptoethanol  | L     | Ethylene glycol                 | L | Pump oil                                      |
| Acetic acid, glacial (flammable)   | D     | Ficoll                          | G | Pyridine                                      |
| Acetic anhydride (in THF or acetone: L)  | X     | Formaldehyde                    | L | SDS (Sodium dodecyl sulfate) (in solution: G) |
| Acetone  | L     | Formamide                       | L | Sigmatocote                                   |
| Acetonitrile   | L     | Formic Acid (≥85%)              | D | Sodium acetate                                |
| Acetaldehyde   | L     | Glutaraldehyde                  | G | Sodium azide                                  |
| Acrolein   | X     | Glycerol                        | L | Sodium bicarbonate                            |
| Acrylamide   | G     | Glycine                         | G | Sodium bisulfate                              |
| Agarose  | G     | Guanidine hydrochloride         | G | Sodium bisulfite                              |
| Ammonium acetate   | G     | Guanidinium thiocyanate         | C | Sodium borate                                 |
| Ammonium chloride  | G     | Halothane, isoflurane           | G | Sodium borohydride                            |
| Ammonium formate   | G     | HEPES                           | G | Sodium carbonate                              |
| Ammonium hydroxide   | C     | Hexanes                         | L | Sodium chlorate                               |
| Ammonium nitrate   | E     | Hydrochloric acid               | F | Sodium chloride (NaCl)                        |
| Ammonium persulfate  | E     | Hydrogen peroxide, > 5%         | E | Sodium citrate dihydrate                      |
| Ammonium sulfate   | G     | Hydrogen peroxide, < 5%         | G | Sodium dichromate                             |
| Ammonium sulfide   | L     | Imidazole                       | A | Sodium dichromate dihydrate                   |
| Benzene  | L     | Isobutyl alcohol                | L | Sodium hydroxide (NaOH)                       |
| Benzyl chloride  | B     | Isopentane                      | L | Sodium hypochlorite                           |
| Benzoic acid   | D     | Isopropanol                     | L | Sodium hypochlorite solution (i.e. bleach)    |
| BIS/Bis-acrylamide   | G     | Lithium hydroxide               | C | Sodium phosphate                              |
| BIS-TRIS   | A     | Magnesium chloride              | G | Sodium sulfide, anhydrous                     |
| BIS-TRIS-HCl   | G     | Magnesium sulfate               | G | Succinic acid                                 |
| Borax  | G     | Maleic acid                     | D | Sucrose                                       |
| Boric acid   | G     | Methanol                        | L | Sulfuric acid                                 |
| Calcium chloride   | G     | <i>N</i> -Methyl-2-pyrrolidone  | L | Tannic acid                                   |
| Chloroform   | G     | <i>N,N</i> -Dimethylformamide   | L | TEMED   |
| Chromic acid   | I     | Nitric acid                     | I | TES free acid                                 |
| Citric acid  | D     | <i>p</i> -Dioxane               | L | Tetracycline                                  |
| Coomassie Blue   | G     | Paraformaldehyde                | L | Tetrahydrofuran                               |
| Dextrose   | G     | Perchloric acid                 | I | Trichloroacetic acid                          |
| Dichloromethane  | L     | Periodic acid                   | I | Trifluoroacetic acid                          |
| Diethylamine (flammable)   | A     | Permout                         | L | Toluene                                       |
| Diethyl pyrocarbonate (DEPC)   | L     | Phenol (solid)                  | G | Triethanolamine                               |
| Dimethyl sulfoxide (DMSO)  | L     | Phenol (liquid, ≤ 89% phenol)   | L | TRIS  |
| Drierite   | G     | Phosphoric acid                 | F | Triton X-100                                  |
| Econo-Safe, UniverSOL, BetaMax, CytoScint, Scintisafe, EcoLume, Ecoscint, Opti-fluor | L     | Picric acid (any concentration) | X | Trizol  |
| EDTA (in solution: G)  | D     | Piperidine                      | A | TWEEN 20                                      |
| Ethanol  | L     | PIPES, free acid                | G | Urea  |
| Ethanolamine   | A     | Potassium acetate               | G | WD-40   |
|  |       | Potassium chloride              | G | Xylenes                                       |
|  |       | Potassium cyanide               | C | Zinc chloride                                 |
|  |       | Potassium hydroxide (KOH)       | C |   |
|  |       | Potassium phosphate             | G |   |