Chemical Storage Guidelines

CABINET TYPE	GENERAL	FLAMMABLE	VENTILATED	ACID	BASE	SECURITY
HAZARD CLASS	**General Chemicals**	**Flammable Liquids, Organic Acids, and Organic Bases**	**Volatile Poisons, Smelly Chemicals and Lecture Bottles of Toxic Gases**	**Oxidizing and Inorganic Acids**	**Inorganic Bases**	**Non-Volatile Poisons and Shock Sensitive Chemicals**
CABINET LABELS	Include hazard class specific information.	"Flammable" "Keep Fire Away!"	"Volatile Poisons and Smelly Chemicals"	"Acid - Corrosive"	"Base - Corrosive"	Include information useful only to users.
INSTRUCTIONS	Store each hazard class in a separate cabinet. Label cabinet clearly with contents.	If large amount, store in rated flammable liquid storage cabinets.	Regularly check vented cabinets to ensure they are negative to the room.	Cabinet should be constructed of acid resistant materials, and vented if possible.	No special cabinet requirements.	Do not draw attention to the cabinet. Label discreetly according to user needs. Store incompatibles separately.
EXAMPLES OF CHEMICAL HAZARDS	**METAL HYDRIDES, PYROPHORIC & WATER REACTIVE MATERIALS (label "Keep Water Away!"):** Sodium Borohydride, Sodium Hydride, Calcium Hydride, Ethyl Magnesium Bromide, Sodium & Lithium Aluminum Hydride, Boranes, Methyl Lithium, tert-butyl Lithium, Gallium, Calcium carbide, Phosphoropous pentachloride, Sodium metal, & Lithium metal **ALLERGENS & SENSITIZERS (label as such):** Penicillin, Sulfonamides	**FLAMMABLE LIQUIDS:** Alcohols, Acetone, Acetaldehyde, Acetonitrile, Amyl Acetate, Benzene, Cyclohexane, Dioxane, Ether, Ethyl Acetate, Hexane, Hydrazine, Methyl Butane, Picolene, Piperidine, Propanol, Pyridine, Some Scintillation Liquids, All Silanes, Tetrahydrofuran, Toluene, & Xylene **FLAMMABLE ORGANIC ACIDS:** Trifluoroacetic Acid, Trichloroacetic Acid, Acetic Acid, Butyric, Formic, Glacial Acetic, Isobutyric, Mercaptoprorionic, & Propionic Acids **FLAMMABLE ORGANIC BASES:** Diethylamine, Triethylamine, & Hydrazine **PROPANE, BUTANE CYLINDERS (low pressure)**	**VOLATILE POISONS & SMELLY CHEMICALS:** Acrolein, Carbon Tetrachloride, Capsaicin, Chloroform, Dimethylformamide, Dimethyl Sulfate, Formamide, Formaldehyde, Halothane, Mercaptoethanol, Methylene Chloride, Thionyl Chloride, & Phenol **LECTURE BOTTLES OF TOXIC GASES:** Hydrogen Chloride, Hydrogen Sulfide, Chlorine, Phosgene, Bromine, Arsine, & Phosphines	**OXIDIZING & INORGANIC ACIDS:** Chromic, Nitric, Periodic, Phosphoric & Sulfuric **Hydrofluoric acid,** Perchloric Acid, Gallium Perchlorate, etc. Each should be stored separately and in secondary containment.	**INORGANIC BASES:** Ammonium Hydroxide, Calcium Hydroxide, Potassium Hydroxide, & Sodium Hydroxide	**NON-VOLATILE POISONS:** Arsenic Compounds, Cacodylic Acid, Cyanide Salts, Gallium Arsenate, Other Highly Toxic Metals **SHOCK SENSITIVE CHEMICALS:** Picric acid, Poly-nitrated aromatic compounds.

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