

Table 1

Chemicals that are unsuitable for use in K-12 schools

DOH–OSPI list of chemicals deemed unsuitable for use in K–12 schools due to excessive risk that exceeds educational utility	
Chemical Name	Hazards
Acetic Anhydride	Explosive potential, corrosive
Acetyl Chloride	Corrosive, dangerous fire risk, reacts violently w/ water and
Alcohol	
Acrylamide	Toxic by absorption, suspected carcinogen
Acrylonitrile	Flammable, poison
Adipoyl Chloride	Corrosive; absorbs through skin, lachrymator (causes tears)
Ammonia, gas	Corrosive lachrymator
Ammonium Bifluoride	Reacts with water, forms hydrofluoric acid
Ammonium Bichromate	May explode on contact with organics, suspected carcinogen
Ammonium Chromate	Oxidizer, poison; may explode when heated
Ammonium Dichromate	Reactive, may cause fire and explosion
Aniline	Carcinogen, toxic, absorbs through skin
Aniline Hydrochloride	Poison
Anthracene	extremely toxic
Antimony Oxide	Health and contact hazard
Antimony Powder	Flammable as dust, health hazard
Antimony Trichloride	Corrosive, emits hydrogen chloride gas if moistened
Arsenic compounds	Poison, carcinogen
Asbestos	Friable Inhalation health hazard, carcinogen
Ascarite	carcinogen, toxic
Azide Compounds	Explosive in contact with metals, extremely reactive, highly toxic
Barium Chromate	Poison, carcinogen
Benzene	Flammable, carcinogen
Benzoyl Peroxide Organic	peroxide, flammable, explosive oxidizer
Beryllium and its compounds	Poison, dust is highly toxic, carcinogen
Cadmium compounds	Toxic heavy metal, carcinogen
Calcium Fluoride(Fluorspar)	Teratogen, emits toxic fumes when heated
Carbon Disulfide	Flammable, toxic
Carbon Tetrachloride	Toxic, carcinogen
Chloral Hydrate	Hypnotic drug, controlled substance
Chlorine	Poison gas, corrosive
Chlorobenzene	Explosive limits 1.8% to 9.6%, toxic inhalation and contact hazard
Chloroform	Carcinogen, if old forms deadly Phosgene gas
Chlorosulfonic Acid	Toxic also known as sulfuric chlorohydrin

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Chemical Name	Hazards
Chromic Acid	Strong oxidizer, poison
cobalt	environmental hazard, toxic
Colchicine	extremely toxic – developmental, organs
Collodion	Flammable, explosive when dry, nitrocellulose compound
Cuprous Cyanide	extremely Toxic
Cyanide compounds	Extremely toxic
Cyanogen Bromide	Poison, strong irritant to skin and eyes
Cyclohexene	Flammable, peroxide former
Dichloroethane	Flammable, toxic
Dinitro Phenol	Explosive
Dinitrophenyl Hydrazine	Severe explosion and fire risk
Dioxane	Flammable, peroxide former
Ether, Anhydrous	Flammable, peroxide former
Ether, Isopropyl	Flammable, peroxide former
Ethylene Dichloride	Toxic, contact hazard, dangerous fire risk, explosive in air 6-16%
ethylene oxide	extremely toxic, carcinogen
Ethyl Nitrate Explosive	
Ethyleneimine	Flammable, toxic, P-listed
Ferrous Sulfide	Spontaneously ignites with air if wet
Formaldehyde (Formalin)	Toxic, carcinogen, sensitizer
gasoline	
Gunpowder	Explosive
hexachlorophene	extremely toxic
Hydrazine	Flammable, absorbed through skin, carcinogen, corrosive
hydrobromic acid	Corrosive, toxic
hydrofluoric acid	Corrosive, toxic
hydrogen gas	toxic
Hydriodic Acid	Corrosive, toxic
Hydrogen Sulfide, gas	Poison, stench, very toxic
indigo carmine	Decomposition releases toxic fumes, respiratory irritant
Isopropyl Ether	Flammable, highest-risk peroxide former
lead arsenate	Carcinogen, toxin
lead chromate	Toxin, carcinogen
Lithium Aluminum Hydride	Flammable, reacts with air, water, and organics
Lithium Metal	Reacts with water and nitrogen in air
Lithium nitrate	Explosive when shocked
Magnesium powder	Flammable, tissue irritant
Mercaptoethanol	Flammable, corrosive, intense stench
Mercury compounds	Poisonous heavy metal
Methylene Chloride	Toxic, carcinogen, narcotic
Methyl Ethyl Ketone	Flammable, dangerous fire risk, toxic

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Chemical Name	Hazards
Methyl Iodide (Iodomethane)	May be a narcotic, carcinogen, lachrymator
Methyl Isocyanate	Flammable, dangerous fire risk, toxic
Methyl Isopropyl Ketone	Toxic
Methyl Methacrylate	Flammable, vapor causes explosive mix with air
Naphthylamine,	Combustible, toxic, carcinogen
Nickel Oxide	Flammable as dust, toxic, carcinogen
Nicotine	Poison
Nitrilotriacetic Acid	Corrosive
Nitrobenzene	Highly toxic
Nitrocellulose	Flammable, explosive
Nitrogen Triiodide	Explosive
Nitroglycerin	Explosive
Osmium Tetraoxide (Osmic Acid)	Highly toxic
Pentachlorophenol	Extremely toxic
Perchloric Acid	Powerful oxidizer, reactive
phenol	extremely toxic
Phosphorus Pentasulfide	Water reactive, toxic, incompatible with air and moisture
Phosphorus Pentoxide	Oxidizer, toxic
Phosphorus, Yellow or White	Air reactive, poison
Phthlic anhydride	extremely toxic
Picric Acid, Trinitrophenol	Explosive when dry
Potassium Chromate	Oxidizer, toxic
Potassium Dichromate	Powerful oxidizer, carcinogen
Potassium Cyanide	Poison
Potassium Sulfide	Flammable, may ignite spontaneously
Potassium, metal	Water reactive, peroxide former (orange fog/crystals)
Pyridine	Flammable, toxic, vapor forms explosive mixture with air
Saccharin	developmental toxin
Selenium	Toxic
Silver Cyanide	Extremely toxic
Sodium Arsenate	Toxic
Sodium Arsenite	Toxic
Sodium Azide	Poison, explosive reaction with metals
Sodium Borohydride	Flammable solid, water reactive
Sodium Chromate	Oxidizer, carcinogen
Sodium Cyanide	Poison
Sodium Fluoride(Bifluoride)	Highly toxic by ingestion or inhalation, strong skin irritation
Sodium Fluoroacetate	Toxic, deadly poison
stains – safranin, fuchsin, carmine, sudan IV, methyl	toxic, poisonous

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Chemical Name	Hazards
red, methyl iodine, paris green	
Strontium	Flammable, store under naphtha, reacts with water
Sulfuric acid, fuming	extremely corrosive
Tetrahydrofuran	Flammable, peroxide former
Thioacetamide	Toxic, carcinogen, combustible
Thionyl Chloride	Corrosive
Thiourea	Carcinogen
Titanium Trichloride	Flammable, fire risk
Triethylamine	Flammable, toxic, irritant
1,2,3-Trihydroxybenzene	can be fatal if inhaled
Trinitrobenzene	Explosive
Trinitrotoluene	Explosive
Uranium and its compounds	extremely toxic, cumulative effects
Urethane	extremely toxic, carcinogen
Wood's Metal	poison
vinylite	
Xylene	toxic, flammable