



NIH

National Institutes of Health • Office of Research Services • Division of Occupational Health and Safety

## Control Banded Standard Operating Procedure (SOP) Templates for Particularly Hazardous Substances (PHS)

DOHS has developed SOP templates for particularly hazardous substances (PHS) using the concept of control banding. "Control Banding" assigns generic protection strategies to chemicals with similar hazards that are grouped into "bands". Chemicals that cannot be grouped with other chemicals based on the hazardous characteristics will have chemical specific SOPs. Please contact DOHS for assistance in identifying the right SOP template for your chemical.

## SOP templates for Particularly Hazardous Substances (PHSs)

Control bands/Pictograms	Hazards	Example	SOP#
	Carcinogen/ reproductive toxin	Boric acid, Cadmium, beryllium and its compounds, estrogen, nickel compounds, silica, tamoxifen, formamide, dexamethasone etc.	<a href="#">SOP-1</a>
	Acutely toxic	Acetaldehyde, copper cyanide, epinephrine, phenyl thiourea, sodium fluoride	<a href="#">SOP-2</a>
	Acutely toxic and carcinogen/reproductive toxin	Carbon tetrachloride, Dichloromethane, Chloroform, 1,1-Dichloroethane, Ethylene dichloride, Vinylidene chloride, <i>cis</i> and <i>trans</i> -1,2-Dichloroethene, 1,2-Dichloropropane, Methyl chloroform, 1,1,2-Trichloroethane,	<a href="#">SOP-3</a>
	Acutely toxic and carcinogen/reproductive toxin	chromium, arsenic, sodium azide, sodium cyanide, diazomethane, nickel carbonyl, chloroaniline, vanadium oxide, thallium salts, ethidium bromide, amino pyridine etc.	<a href="#">SOP-4</a>
	Acutely toxic and Corrosive	Bromine, ammonia, acrolein etc. <b>HF requires chemical specific SOP</b>	<a href="#">SOP-5</a>
	Carcinogen/reproductive toxin and flammable	Carbon disulfide, dimethylformamide (DMF), Diethylene glycol dimethyl ether (diglyme), heptane, hexane, toluene, xylene etc.	<a href="#">SOP-6</a>
	Acutely toxic and flammable	Allyl alcohol, bromoacetone etc.,	<a href="#">SOP-7</a>
	Acutely toxic and oxidizer	Nitrogen oxides, chlorine trifluoride, chlorine dioxide, sodium nitrite etc.	<a href="#">SOP-8</a>
	Acutely toxic, corrosive and carcinogen/reproductive toxins	chromic acid, phenol, arsenic oxide, cobalt chloride, imidazole etc.	<a href="#">SOP-9</a>
	Acutely toxic, carcinogen/reproductive toxin and flammable	Cyclohexane, benzene, dioxin, methanol, ethanol, thiophenol, benzenethiol, ethoxyethanol (Ethylene glycol ethyl ether) etc.	<a href="#">SOP-10</a>

	Corrosive and flammable PHSs	Hydrazine, cyclohexylamine, formaldehyde, acrolein, sodium borohydride, isopropyl amine etc.	<a href="#">SOP-11</a>
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