

CHEMICAL SUBSTITUTION TIPS

Original Chemical	Less Hazardous Substitute	Comments
Acetamide	Stearic Acid	In-phase change and freezing point depression
Benzene	Alcohol	
Benzoyl peroxide	Lauryl peroxide	When used as a polymer catalyst
Chloroform	1,1,1-trichlorethane	
Carbon tetrachloride	Cyclohexane	In test for halide ions
Carbon tetrachloride	1,1,1-trichloroethane	
	1,1,2-trichloroethane	
	trifluoroethane	
Formaldehyde	Peracetic Acid	In cleaning of kidney dialysis machines
Formaldehyde	Ethanol	For storage of biological specimens
Formalin	See Formaldehyde	
Halogenated Solvent	Non-halogenated solvents	In parts washers or other solvent processes
Sodium dichromate	Sodium hypochlorite	
Sulfide ion	Hydroxide ion	In analysis of heavy metals
Toluene	Simple alcohols and ketones	
Wood's metal	Onion's Fusible alloy	
Xylenes	Simple alcohols and ketones	
Artist paints containing heavy metals	Paints without heavy metals such as Gamblin oil paints	Undergraduate and graduate paint classes
Turpentine, paint thinner, mineral spirits	Gamsol	Undergraduate and graduate paint classes; other painters at Yale