



Guidance Document

Classes of Incompatible Chemicals

In the table below, the chemicals in column A are incompatible with the corresponding chemicals in

Column B.

Certain combinations of chemicals are explosive, poisonous or hazardous in some way. Experiments which require the mingling of incompatibles must be designed carefully. Always use minimum quantities. Store incompatibles away from one another.

Column A

Alkali and alkaline earth

Carbides

Hydrides

Hydroxides

Metals

Oxides

Peroxides

Azides, inorganic

Cyanides, inorganic

Nitrates, inorganic

Nitrites, inorganic

Organic compounds

Organic acyl halides

Column B

Water

Acids

Halogenated organic compounds

Halogenating agents

Oxidizing agents

Acids

Heavy metals and their salts

Oxidizing agents

Acids

Strong bases

Acids

Reducing agents

Acids

Oxidizing agents

Oxidizing agents

Bases

Organic hydroxy and amino compounds

Organic anhydrides	Bases Organic hydroxy and amino compounds
Organic halogen compounds	Group IA and IIA metals Aluminum
Organic nitro compounds	Strong bases
Oxidizing agents ^a	Reducing agents ^a
Chlorates	Ammonia, anhydrous and aqueous
Chromates	Carbon
Chromium trioxide	Metals
Dichromates	Metal hydrides
Halogens	Nitrites
Halogenating agents	Organic compounds
Hydrogen peroxide	Phosphorus
Nitric acid	Silicon
Nitrates	Sulfur
Perchlorates	
Peroxides	
Permanganates	
Persulfates	
Reducing agents ^a	Oxidizing agents ^a
	Arsenates
	Arsenites
	Phosphorus
	Selenites
	Selenates
	Tellurium salts and oxides
Sulfides, inorganic	Acids

^a examples of oxidizing and reducing agents are illustrative of common laboratory chemicals; they are not intended to be exhaustive.

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