

Scavengers for Electrophiles

Which compounds to scavenge?

Carbonyls		PS-TsNHNH₂ PS-Trisamine MP-Trisamine
Alkylating Agents	Alkyl halides, Mesylates, Tosylates, α -bromoesters, α -bromoketones	PS-Thiophenol PS-Triphenylphosphine
Acid Chlorides		PS-Trisamine MP-Trisamine PS-NH ₂
Sulfonyl Chlorides		PS-Trisamine MP-Trisamine PS-DMAP PS-NH ₂
Isocyanates		PS-Trisamine MP-Trisamine PS-NH ₂
Epoxides		PS-Thiophenol
Oxophilic inorganic, organometallic complexes (B, Ti, Sn)		PS-DEAM
Lewis Acids, e.g., Ti(IV), Sn(IV)		PS-DEAM

Scavengers for Nucleophiles

Which compounds to scavenge?

Alcohols		PS-TsCl(HL)
Amines	Primary, Secondary	PS-Isocyanate MP-Isocyanate MP-TsOH MP-TsOH Cartridges PS-TsCl(HL)
	Selective for Primary	PS-Benzaldehyde
	Anilines (Aromatic)	PS-TsCl(HL) MP-TsOH MP-TsOH Cartridges PS-Isocyanate MP-Isocyanate
Hydrazines		PS-Benzaldehyde PS-TsCl(HL)
Enolates		PS-Benzaldehyde
Thiols/Thiolates		PS-Isocyanate MP-Isocyanate PS-Thiophenol
Alkoxides		PS-TsCl(HL) PS-Isocyanate MP-Isocyanate
Organometallics		PS-Benzaldehyde PS-TsCl(HL)
Reducing Agents		PS-Benzaldehyde
Acids/Acidic Phenols	HOBt Pentafluorophenol 4-Nitrophenol Carboxylic Acid Phenol	MP-Carbonate PS-Trisamine MP-Trisamine

**What type of reagent?
What application?**

**Recommended
polymer reagent**

Bases

Basic Quenching, Neutralize Ammonium Salts → **MP-Carbonate**

Strong Tertiary Amine Base (e.g. mesylate formation) → **PS-DIEA**

Tertiary Amine Base (e.g. formation of amides, sulfonamides, carbamates) → **PS-NMM**

Strong Base (e.g. alkylation of phenols, amines, activated methylene compounds; esterification of carboxylic acids) → **PS-TBD**

Acids

Acid Quenching → **MP-TsOH**
PS-DIEA HCl

Amine Purification → **MP-TsOH**
MP-TsOH Cartridges

Coupling Agents

Amide Synthesis → **PS-Carbodiimide**
PS-HOBt(HL)
PS-HOBt(HL)/ACTU
PS-TFP

Activated Ester Formation → **PS-Carbodiimide/HOBt**
PS-HOBt(HL)/ACTU
PS-TFP

Protecting Group Transfer → **PS-HOBt(HL)**

Reductants

Carbonyl Reduction → **MP-BH₄**

Reductive Amination → **MP-CNBH₃**
MP-BH₄ (with Ti(OⁱPr)₄)
MP-BH(OAc)₃

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Electrophilic Activation

Halogenation (Chlorination, bromination, iodination) → **PS-Triphenylphosphine**

Phenylether Formation (i.e. Mitsunobu reaction) → **PS-Triphenylphosphine**

Thioester Active Intermediate → **PS-Thiophenol**

Alcohol Activation → **PS-TsCl**

Acid and Sulfonyl Chloride Activation → **PS-DMAP**

Nucleophilic Activation

Carbon-Carbon Bond (e.g. Wittig reaction) → **PS-Triphenylphosphine**

Sulfonyl Hydrazone Formation (e.g. Hurd-Mori thiadiazole synthesis) → **PS-TsNHNH₂**

Catalysts

Acids → **MP-TsOH**

Acyl Transfer → **PS-DMAP**



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