Scavengers for Electrophiles

Which compounds to scavenge?		Recommended scavengers:
Carbonyls		PS-$TsNHNH_2$ PS-Trisamine MP-Trisamine Si-Tosyl Hydrazine Si-Triamine Si-Trisamine
Alkylating Agents	Alkyl halides, Mesylates, Tosylates, α-bromoesters, α-bromoketones	PS-Thiophenol PS-Triphenylphosphine Si-Thiol
Acid Chlorides		PS-Trisamine MP-Trisamine PS-NH_2 Si-Tosyl Hydrazine Si-Triamine Si-Trisamine
Sulfonyl Chlorides		PS-Trisamine MP-Trisamine PS-DMAP PS-NH_2 PS-$TsNHNH_2$ Si-Tosyl Hydrazine Si-Triamine Si-Trisamine
Isocyanates		PS-Triamine MP-Trisamine PS-NH_2 Si-Tosyl Hydrazine Si-Triamine Si-Trisamine
Epoxides		PS-Thiophenol Si-Thiol
Oxophilic inorganic, organometallic complexes Lewis Acids, e.g., Ti(IV), Sn(IV)		PS-DEAM
Pd(II), Pd(0), Pt, Cu		MP-TMT PS-TBD Si-Thiol Si-Trisamine Si-Triamine

Scavengers for Nucleophiles

Which compounds to scavenge?		Recommended scavengers:
Alcohols		PS-TsCl(HL)
Amines	Primary, Secondary	PS-Isocyanate MP-Isocyanate MP-TsOH(65) PS-TsCl(HL) Si-TsOH (SCX-3) Si-Propylsulfonic Acid (SCX-2)
	Selective for Primary	PS-Benzaldehyde
	Anilines (Aromatic)	PS-TsCl(HL) MP-TsOH(65) PS-Isocyanate MP-Isocyanate Si-TsOH (SCX-3) Si-Propylsulfonic Acid (SCX-2)
Hydrazines		PS-Benzaldehyde PS-TsCl(HL)
Enolates		PS-Benzaldehyde
Thiols/Thiolates		PS-Isocyanate MP-Isocyanate PS-Thiophenol Si-Thiol
Alkoxides		PS-TsCl(HL) PS-Isocyanate MP-Isocyanate
Reducing Agents		PS-Benzaldehyde
Acids/Acidic Phenols	HOBt Pentafluorophenol 4-Nitrophenol Carboxylic Acid Phenol Boronic acid	MP-Carbonate PS-Trisamine MP-Trisamine PS-$TsNHNH_2$ Si-Carbonate Si-Tosyl Hydrazine Si-Triamine Si-Trisamine

Solid-Supported Reagents

What type of reagent? What application?	Recommended solid-supported reagent
Acids and Bases	
Basic Quenching, Neutralize Ammonium Salts	MP-Carbonate Si-Carbonate
Acid Quenching	PS-DIEA PS-DMAP
Strong Tertiary Amine Base (e.g. mesylate formation)	PS-DIEA
Tertiary Amine Base (e.g. formation of amides, sulonamides, carbamates)	PS-NMM
Strong Base (e.g. alkylation of phenols, amines, activated methylene compounds; esterification of carboxylic acids)	PS-TBD
Amine Purification	MP-TsOH(65) Si-TsOH (SCX-3) Si-Propylsulfonic acid (SCX-2)
Coupling Agents	
Amide Synthesis	PS-Carbodiimide PS-HOBt(HL) PS-HOBt(HL)/ACTU PS-DIEA PS-DMAP
Activated Ester Formation	PS-HOBt(HL)/ACTU
Protecting Group Cleavage	
BOC cleavage	Si-TsOH (SCX-3) Si-Propylsulfonic acid (SCX-2) MP-TsOH(65)
BSMOC, FMOC	PS-Trisamine MP-Trisamine Si-Trisamine Si-Triamine
Reducing Agents	
Carbonyl Reduction	MP-BH_4
Reductive Amination	MP-$CNBH_3$ MP-$BH(OAc)_3$ MP-BH_4 (with $Ti(OiPr)_4$)

What type of reagent? What application?	Recommended solid-supported reagent
Oxidizing Agents	
Alcohols to Aldehydes	MP-TsO-TEMPO
Electrophilic Activation	
Halogenation (Chlorination, bromination, iodination)	PS-Triphenylphosphine
Phenylether Formation (i.e. Mitsunobu reaction)	PS-Triphenylphosphine
Thioester Active Intermediate	PS-Thiophenol
Alcohol Activation (tosylation)	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-$TsNHNH_2$ Si-Tosyl-Hydrazine
Catalysts	
Acids	MP-TsOH(65) Si-TsOH (SCX-3) Si-Propylsulfonic acid (SCX-2)
Acyl Transfer	PS-DMAP
C-C Coupling	PS-PPh_3-Pd

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