

METAL & ORGANIC SCAVENGERS

| Functional Group | ORGANIC SCAVENGERS | | | | | | | | | | | | | | | METAL SCAVENGERS | | | | | | | | | |
|--|--|--------------------------------|----------------------------|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------|--------------------------------|---|--|---|--|--------------------------------|---|--|--|--|---|--|--|--|--|
| | Maleimide (SI-MAL) | Propylsulfonic Acid (SI-SCX-2) | Carbamate (SI-CAR) | Tosyl Chloride (SI-TsCl) | Carboxylic Acid (SI-WCX) | TMA Acetate (SI-SAX-2) | DMAP (SI-DMAP) | Piperazine (SI-PPZ) | Guanidine (SI-GUA) | Carbonate (SI-CO3) | Diol (SI-DioI) | Amine (SI-WAX) | Diamine (SI-DIA) | Triamine (SI-TRI) | Toxic Acid (SI-SCX) | DEAM (SI-DEAM) | AMPA (SI-AMPA) | Cysteine (SI-CYS) | DMT (SI-DMT) | DOTA (SI-DOTA) | Imidazole (SI-IMI) | TAAcOH (SI-TAAcOH) | TAAcONa (SI-TAAcONa) | Thiol (SI-SH) | Thiourea (SI-THU) |
| Structure | | | | | | | | | | | | | | | | | | | | | | | | | |
| Product Number | R71030B | R51230B | R50130B | R44030B | R70030B | R66430B | R75630B | R60030B | R68230B | R66030B | R35030B | R52030B | R49030B | R48030B | R60530B | R54430B | R85130B | R80530B | R79030B | R91030B | R79230B | R69030B | R69230B | R51030B | R69530B |
| Loading | ≥ 0.64 mmol/g | ≥ 0.63 meq/g | ≥ 1.16 mmol/g | ≥ 0.63 mmol/g | ≥ 0.92 mmol/g | ≥ 0.71 mmol/g | ≥ 0.53 mmol/g | ≥ 0.83 mmol/g | ≥ 0.80 mmol/g | ≥ 0.46 mmol/g | ≥ 0.97 mmol/g | ≥ 1.20 mmol/g | ≥ 1.28 mmol/g | ≥ 1.11 mmol/g | ≥ 0.54 meq/g | ≥ 0.85 mmol/g | ≥ 0.80 mmol/g | ≥ 0.30 mmol/g | ≥ 0.50 mmol/g | ≥ 0.96 mmol/g | ≥ 0.41 mmol/g | ≥ 0.41 mmol/g | ≥ 1.20 mmol/g | ≥ 1.07 mmol/g | |
| Typical Density | 0.644 g/mL | 0.728 g/mL | 0.741 g/mL | 0.761 g/mL | 0.687 g/mL | 0.665 g/mL | 0.674 g/mL | 0.671 g/mL | 0.732 g/mL | 0.608 g/mL | 0.687 g/mL | 0.700 g/mL | 0.728 g/mL | 0.736 g/mL | 0.698 g/mL | 0.691 g/mL | 0.707 g/mL | 0.665 g/mL | 0.732 g/mL | 0.681 g/mL | 0.681 g/mL | 0.635 g/mL | 0.712 g/mL | 0.682 g/mL | 0.767 g/mL |
| Solvent Compatibility | Polar solvents (DMF, MeOH, H ₂ O) | All aqueous & organic solvents | Anhydrous aprotic solvents | Anhydrous aprotic solvents, unstable in DMF | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | Anhydrous aprotic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents |
| Metals | | | | | | | | | | | | Cd, Cr, Pd, Pt, Rh & Ru Co, Cu, Fe, Hg, Pb, W & Zn | Cr, Pd, Pt, W & Zn Cd, Co, Cu, Fe, Hg, Ni, Pb, Ru, Se, V & Sc | Cr, Pd, Pt, W & Zn Ag, Cd, Co, Cu, Fe, Hg, Ni, Os, Pb, Rh, Ru & Sc | Fe, Rh & Sn Ag, Cu, Ni, Pd, Pt, Ru & Zn | Ag, Fe, Sn, Ti & Zn Se | Al, Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Mn, Nd, Ni, Pm, Pr, Sb, Sm, Tb, Tm, V & Yb Co, Cu, Fe, Mg & Zn | Cd, Fe, Ir, Os, Pt, Rh, Ru, Sc & Se Ca, Cr, Cs, Cu, La, Mg, Pd, Pt, Rh, Se & Zn | As, Ir, Ni, Os, Pd, Pt, Rh, Ru, Se & Se Cd, Co, Cu, Fe, Sc & Zn | As, Ca, Cu, Gd, La, Ni, Se & Zn Co, Fe, Mg, Pd, Pt & Rh | Cd, Co, Cu, Fe, Ir, Li, Mg, Ni, Os, W & Zn Cr, Pd & Rh | Ca, Co, Ir, Li, Mg, Ni, Os, Ru & Sc Cr, Cs, Fe, Pd, Rh & Sn | Ca, Cd, Cs, Cu, Fe, Ir, La, Li, Mg, Ni, Os, Rh, Sc & Sn Cr, Pd, Ru, Se & Zn | Ag, Hg, Os, Pd & Ru Cu, Ir, Pb, Rh, Se & Sn | Pd & Ru Ag, Cu, Fe, Os, Rh, Sc & Sn |
| Acids & Acidic Phenols | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acyl Chlorides & Sulfonyl Chlorides | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alcohols & Alkoxides | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aldehydes, Anhydrides, Chloroformates, Isocyanates & Ketones | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amines & Anilines | | | | | | | | | | | | | | | | | | | | | | | | | |
| Boronic Acids | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hydrazines | | | | | | | | | | | | | | | | | | | | | | | | | |
| Organometallics, Thiols & Thiolates | | | | | | | | | | | | | | | | | | | | | | | | | |

LEGEND

Endcapping
 RXXX30B Endcapped
 RXX30B NON-endcapped

Functionalization
 ◊ MONOfunctionalized
 ◊◊◊ TRifunctionalized

Storage Conditions
 All functionalized gels should be kept dry
 ☰ Keep cool (≤ 8°C)
 Ⓐ Keep under Argon
 * Light sensitive, store away from light

Organic Molecule
 Electrophile scavenger
 Nucleophile scavenger
 Ionic scavenger

Scavenger
 Metal Best scavenged metal
 Metal Scavenged metal

Type
 Acid
 Base

CHROMATOGRAPHIC PHASES

| Functional Group | REVERSED-PHASES | | | | | | | | | | NORMAL PHASES | | | | | ION EXCHANGE PHASES | | | | | | | | | | | | | | | | | | |
|-----------------------|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--|--------------------------------|--------------------------------|--------------------------------|---------------------------------|--|---|--|--|--|--|--------------------------------|--|---|--|------------------------------------|--|--|--|--|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| | Octadecyl (SI-C18) | Octyl (SI-C8) | Cyclohexyl (SI-C6) | Penta-fluorophenyl (SI-PFP) | Phenyl (SI-PHE) | Butyl (SI-C4) | Tridecafluoro (SI-TDF) | Fluorochrom (SI-FCM) | Si-C1 | Bare Silica (SiO ₂) | Cyano (SI-Cyano) | Diol (SI-DioI) | Silver Nitrate (SI-AgNO ₃) | Amine (SI-WAX) | Triethylamine (SI-WAX-2) | TMA Chloride (SI-SAX) | TMA Acetate (SI-SAX-2) | Toxic Acid (SI-SCX) | Propylsulfonic Acid (SI-SCX-2) | Carboxylic Acid (SI-WCX) | | | | | | | | | | | | | | |
| Structure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Product Number | R30030B | R00230B | R33230B | R33330B | R35330B | R31130B | R31030B | R30830B | R61530B | R67530B | R34030B | R34130B | R32030B | R32130B | R63530B | R63730B | R33030B | R10030B | R38030B | R38130B | R35030B | R23530B | R52030B | R52130B | R76530B | R76630B | R66530B | R66430B | R60530B | R60430B | R51230B | R51430B | R70030B | R70130B |
| Loading | ≥ 23.0 (%) | ≥ 17.0 (%) | ≥ 17.0 (%) | ≥ 15.5 (%) | ≥ 11.0 (%) | ≥ 11.6 (%) | ≥ 11.6 (%) | ≥ 11.0 (%) | ≥ 9.5 (%) | ≥ 9.0 (%) | ≥ 8.0 (%) | ≥ 8.0 (%) | ≥ 8.0 (%) | ≥ 8.0 (%) | ≥ 7.6 (%) | ≥ 7.0 (%) | ≥ 5.0 (%) | N/A | ≥ 1.38 mmol/g | ≥ 0.97 mmol/g | 10 % w/w | ≥ 1.20 mmol/g | ≥ 1.04 mmol/g | ≥ 0.90 meq/g | ≥ 0.71 mmol/g | ≥ 0.54 meq/g | ≥ 0.63 meq/g | ≥ 0.63 meq/g | ≥ 0.92 mmol/g | ≥ 0.92 mmol/g | ≥ 0.92 mmol/g | ≥ 0.92 mmol/g | ≥ 0.92 mmol/g | |
| Typical Density | 0.864 g/mL | 0.735 g/mL | 0.639 g/mL | 0.640 g/mL | 0.619 g/mL | 0.703 g/mL | 0.759 g/mL | 0.586 g/mL | 0.662 g/mL | 0.761 g/mL | 0.637 g/mL | 0.607 g/mL | 0.656 g/mL | 0.692 g/mL | 0.842 g/mL | 0.738 g/mL | 0.559 g/mL | 0.550 g/mL | 0.703 g/mL | 0.687 g/mL | 0.604 g/mL | 0.700 g/mL | 0.761 g/mL | 0.700 g/mL | 0.665 g/mL | 0.698 g/mL | 0.728 g/mL | 0.687 g/mL | 0.687 g/mL | 0.687 g/mL | 0.687 g/mL | 0.687 g/mL | 0.687 g/mL | |
| Solvent Compatibility | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents | All aqueous & organic solvents |
| Typical Applications | Indicated for low to high polarity compounds Provides reproducible purification without complexity & cost of preparative HPLC Peptides, pesticides, PCBs, PAHs, toxins, drugs & metabolites in physiological fluids | | | | | Less retention compared to C18 Highly hydrophobic pesticides, peptides, heavy drugs & metabolites in physiological fluids | | | | | Phenols, chloroanilines & anthelmintics from tissues & water | Alternative selectivity Conjugated compounds (isomers) | Moderately non-polar sorbent for aromatic compounds Aflatoxines, caffeine, phenols from water | Less retention compared to C18 and C8 Molecules with large hydrophobic regions (peptides, proteins) | Separation of fluorine containing molecules from non-fluorous ones | Highly hydrophobic molecules & biomolecules Polar & non-polar pharmaceuticals, natural products | Non-ionic polar organic phase | Polar, organic compounds (basic drugs, it electronics-systems) | Peptides, proteins, malto-oligo-saccharides | Cis/Trans isomers of unsaturated compounds such as alkenes, lipids, steroids, terpenes | Sugars, nucleotides, water-soluble | Catch & release of compounds bearing a permanent negative charge (pK _a = 9.8) | Permanently positively charged silica Used for the extraction of weak cations | Selectively purifies acidic compounds, with easily exchangeable OAc counterion | Permanently negatively charged silicas Strong cation exchangers (pK _a < 1) | Weak cation exchanger (pK _a = 4.8) | | | | | | | | |

REAGENTS & OXIDANTS

| Functional Group | REAGENTS | | | | | | | OXIDANTS | | | | |
|-----------------------|--|--|-----------------------|--|--------------------------------|-------------------|--------------------------------|--------------------------------|--|--|---|--|
| | Aluminum Chloride (SI-AlCl ₃) | Carbodiimide (SI-DCC) | EDC (SI-EDC) | Diphenyl-phosphine (SI-DPP) | DMAP (SI-DMAP) | HOBt (SI-HOBt) | Morpholine (SI-MOR) | Piperidine (SI-PIP) | Potassium Permanganate (SI-KMnO ₄) | Pyridinium Chlorochromate (SI-PCC) | Pyridinium Dichromate (SI-PDC) | |
| Structure | | | | | | | | | | | | |
| Product Number | R74530B | R70530B | R70630B | R39030B | R75630B | R70730B | R68030B | R71530B | R23030B | R24030B | R24530B | |
| Loading | ≥ 1.6 mmol/g | ≥ 0.91 mmol/g | ≥ 0.32 mmol/g | ≥ 0.75 mmol/g | ≥ 0.53 mmol/g | ≥ 0.56 mmol/g | ≥ 0.99 mmol/g | ≥ 1.03 mmol/g | 10 % w/w | 20 % w/w | 20 % w/w | |
| Typical Density | 0.781 g/mL | 0.751 g/mL | 0.770 g/mL | 0.588 g/mL | 0.674 g/mL | 0.766 g/mL | 0.666 g/mL | 0.660 g/mL | 0.593 g/mL | 0.693 g/mL | 0.651 g/mL | |
| Solvent Compatibility | Anhydrous & degassed organic solvents | Aprotic solvents | Aprotic solvents | All aqueous & organic solvents | All aqueous & organic solvents | Aprotic solvents | All aqueous & organic solvents | All aqueous & organic solvents | Anhydrous CH ₂ Cl ₂ | Anhydrous CH ₂ Cl ₂ | Anhydrous CH ₂ Cl ₂ | |
| Typical Applications | Ether formation, Friedel-Crafts alkylation | Amide coupling with acids, acyl chlorides and amines | Sulfonamide synthesis | Source of phosphorus-centered radicals | Acylation/esterification | Peptide synthesis | Generation of enamines | Knoevenagel condensation | Oxidation of alcohols to acids | Oxidation of alcohols to ketones/aldehydes | | |

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