

Column Selection Guide by Sample Type

Sample	Category	Separation Mode	Recommended Column	Remark
Low-MW drugs	—	Reversed phase	C ₁₈ -EB	Near-perfect end capping treatment
			COSMOCORE C ₁₈	
		Hydrophilic interaction	HILIC	Retains highly polar compounds that would not be retained in C ₁₈ column
		Normal phase	SL-II	Standard for normal phase
Vitamins	Water-soluble vitamins	Reversed phase	C ₁₈ -PAQ	Compatible with 100% water based mobile phase
		Hydrophilic interaction	HILIC	Retains highly polar compounds that would not be retained in C ₁₈ column
	Fat-soluble vitamins	Reversed phase	C ₁₈ -MS-II	Standard for reversed phase
			Cholester	Different selectivity from C ₁₈
		Normal phase	SL-II	Standard for normal phase
Natural products	—	Reversed phase	C ₁₈ -MS-II	Utilize various interactions for versatile separations. See each product page for details.
			Cholester	
			PBr	
			πNAP	
		Normal phase	SL-II	Suitable for preparative separation
		Hydrophilic interaction	HILIC	Retains highly polar compounds that would not be retained in C ₁₈ column
Organic acids	—	Reversed phase	C ₁₈ -PAQ	Compatible with 100% water based mobile phase
		Hydrophilic interaction	HILIC	Retains highly polar compounds that would not be retained in C ₁₈ column
Fatty acids	—	Reversed phase	C ₁₈ -AR-II	Features strong acid resistance
			Cholester	Different selectivity from C ₁₈
Phospholipids	Molecular species	Reversed phase	C ₁₈ -MS-II	Standard for reversed phase
	Class species	Normal phase	SL-II	Standard for normal phase
Agricultural chemicals	—	Reversed phase	C ₁₈ -MS-II	Standard for reversed phase
			Cholester	Different selectivity from C ₁₈
		Normal phase	SL-II	Standard for normal phase
		Hydrophilic interaction	HILIC	Retains highly polar compounds that would not be retained in C ₁₈ column
Metabolites	—	Reversed phase	C ₁₈ -MS-II	Standard for reversed phase
			Cholester	Different selectivity from C ₁₈
		Normal phase	SL-II	Standard for normal phase
		Hydrophilic interaction	HILIC	Retains highly polar compounds that would not be retained in C ₁₈ column
Food additives	—	Reversed phase	C ₁₈ -MS-II	Standard for reversed phase
			Cholester	Different selectivity from C ₁₈
		Normal phase	SL-II	Standard for normal phase
		Hydrophilic interaction	HILIC	Retains highly polar compounds that would not be retained in C ₁₈ column
Other low-MW compounds	—	Reversed phase	C ₁₈ -MS-II	Standard for reversed phase
			Cholester	Different selectivity from C ₁₈
		Normal phase	SL-II	Standard for normal phase
		Hydrophilic interaction	HILIC	Retains highly polar compounds that would not be retained in C ₁₈ column
Structural isomers Structural analogs	—	Reversed phase	C ₁₈ -MS-II	Utilize various interactions for versatile separations. See each product page for details.
			C ₁₈ -AR-II	
			Cholester	
			πNAP	
			PYE	
			NPE	
			PBr	
			PFP	
			Normal phase	

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Sample	Category	Separation Mode	Recommended Column	Remark	
Optical isomers	—	Normal phase Reversed phase	CHIRAL A Type, B Type, C Type	3 chiral selectors with high overall hit rate	
Amino acids	Free amino acids	Reversed phase	PBr	Retains aromatic amino acids	
		Hydrophilic interaction	HILIC	For amino acids not retained in reversed-phase mode	
	Labeled amino acids	Reversed phase	C ₁₈ -AR-II	Features strong acid resistance	
Peptides Proteins	M. W. 3,000 or less	Reversed phase	C ₁₈ -AR-II	Features strong acid resistance	
		Hydrophilic interaction	HILIC	Separation for oligopeptides	
	M. W. 3,000 or more	Reversed phase	Protein-R C ₁₈ -AR-300 C ₄ -AR-300	Wide pore columns	
		Size exclusion	Diol-II		Separation utilizing molecular size
Nucleic acids	Nucleic acid bases	Reversed phase	PBr	Separate under reversed-phase condition	
		Hydrophilic interaction	HILIC	Different selectivity from reversed phase	
	Nucleosides Nucleotides	Reversed phase	C ₁₈ -PAQ PBr	Compatible with 100% water based mobile phase	
		Hydrophilic interaction	HILIC	Strong retain than C ₁₈	
	Oligonucleotides	Reversed phase	RNA-RP1	High resolution with standard C ₁₈ phase	
		Size exclusion	RNA-SEC-1000	Analyze a wide range of molecular weights	
	Size exclusion	RNA-SEC-2000	Analyze a wide range of molecular weights		
Sugars	Monosaccharides	Hydrophilic interaction	Sugar-D NH ₂ -MS	Separation in non-derivatized form	
	Labeled saccharides	Reversed phase	C ₁₈ -PAQ	For pyridylaminated sugars	
		Hydrophilic interaction	Sugar-D NH ₂ -MS	For two-dimensional separations with reversed-phase	
	Oligosaccharides	Reversed phase	PBr	Retained in reversed-phase mode	
		Hydrophilic interaction	Sugar-D NH ₂ -MS	Separation in non-derivatized form	
Polysaccharides	Size exclusion	Diol-II	Separation utilizing molecular size		
Fullerenes	Fullerenes	—	Buckyprep	Standard for fullerene separation	
	Metallofullerenes	—	Buckyprep Buckyprep-M	Different selectivity for metallofullerenes	
		Derivatized fullerenes	—		Buckyprep Buckyprep-D
Carbon nanotubes	—	Size exclusion	CNT	Separation of soluble carbon nanotubes	
Water-soluble polymer	—	Size exclusion	Diol-II	Separation utilizing molecular size	