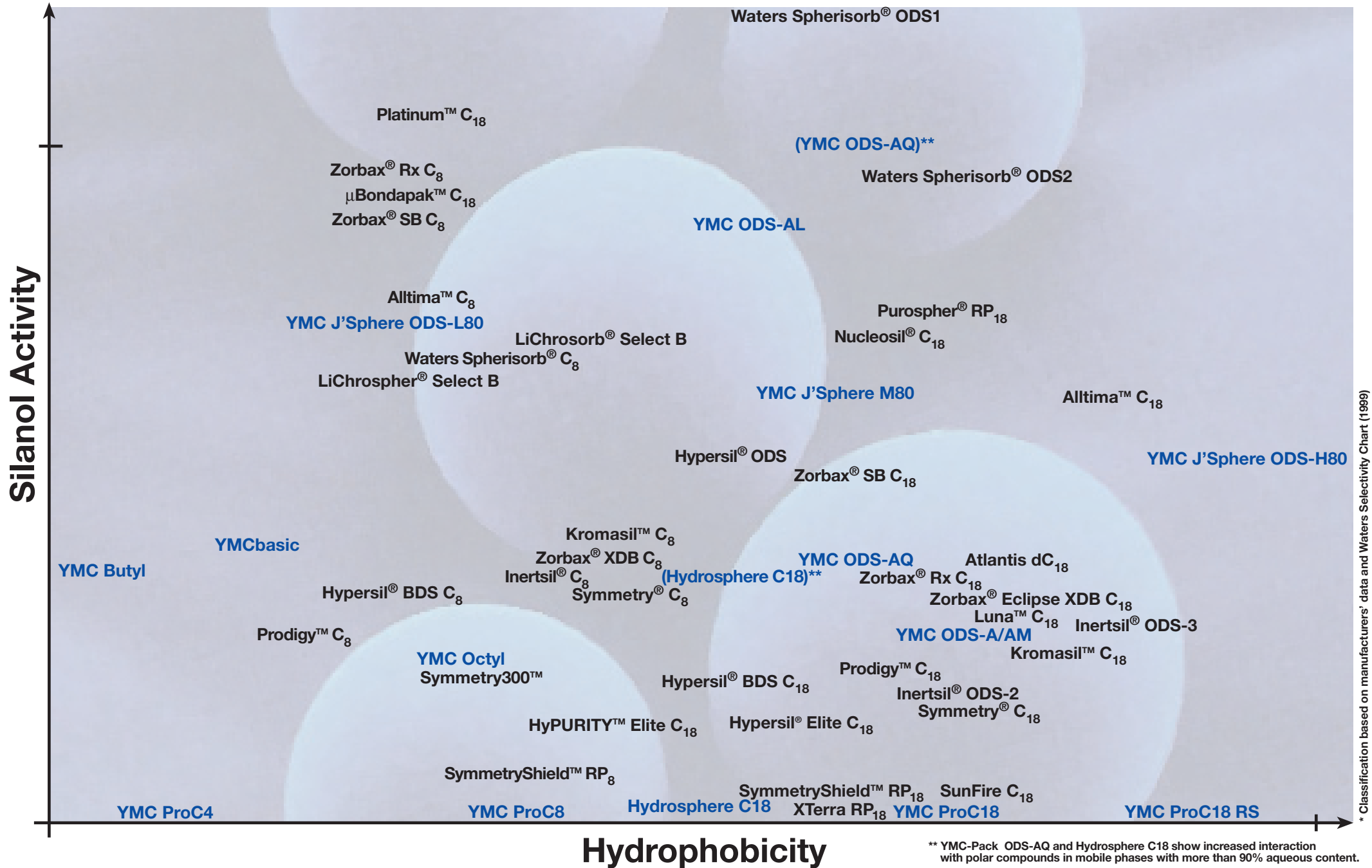


# Analytical Stationary Phases routinely available from YMC

PRODUCT	CODE	PHASE (silica-based unless noted)	END-CAPPED	USP CLASS NO.	PARTICLE SIZE (µm spherical)	PORE SIZE (nm)	CARBON LOAD (%C)	pH	TYPICAL APPLICATIONS
C30	CT	proprietary polymeric bonding chemistry	—	—	3, 5	proprietary	—	2.0-6.0	isomeric carotenes, retinols, steroids, fat-soluble vitamins
<i>Pro</i> C18	AS	latest generation C18 using ultrapure silica base (99.999%), with very low residual non-specific interactions	yes	L1	3, 5	12	16	2.0-8.0	fat-soluble vitamins, antioxidants, metabolites, acidic, neutral, basic and chelating compounds
UltraHT		2 µm <i>Pro</i> C18 for fast and ultra fast separations			2				
<i>Pro</i> C18 RS	RS	high carbon load with polymeric bonding C18, ultrapure silica base (99.999%)	yes	L1	3, 5	8	22	1.0-10.0	suitable for a wide range of samples including acidic and basic compounds
Hydrosphere C18	HS	based on the same ultrapure silica base as <i>Pro</i> Family, can be used in 100% aqueous eluent	yes	L1	3, 5	12	12	2.0-8.0	strong polar compounds, antibiotics, nucleic acids, water-soluble vitamins, acidic, neutral, basic and chelating compounds
UltraHT		2 µm Hydrosphere C18 for fast and ultra fast separations			2				
ODS-A	AA	one of the YMC's international bestsellers, traditional high performance C18 column	yes	L1	3, 5	12, 20, 30	17, 12, 7	2.0-7.5	pharmaceuticals, vitamins, amino acids, peptides, general purpose phase
ODS-AM	AM	strict QC controlled production provides a high performance C18 column for validated methods operation	yes	L1	3, 5	12	17	2.0-7.5	purines, phenols, PTC-amino acids, angiotensins, alkaloids
ODS-AQ	AQ	„hydrophilic“ endcapping, for 100% aqueous eluent systems, substantially increased retention of polar compounds	yes	L1	3, 5	12, 20	14, 10	2.0-7.5	strong polar compounds, pharmaceuticals, antibiotics, peptides and proteins, nucleic acids
J'sphere	JH, JM, JL	C18-family with differently controlled hydrophobicity for method development	yes	L1	4	8	22, 14, 9 (JH, JM, JL)	1.0-9.0 (JH) 2.0-7.5 (JM+JL)	positional isomers, complexing agents, pharmaceuticals
ODS-AL	AL	traditional C18 for „mixed mode“ separations	no	L1	3, 5	12	17	2.0-7.5	tocopherols, fat-soluble vitamins, disinfectants
Polymer C18	PC	polymethacrylate-matrix, stable towards shrinking and swelling, wide pH applicability	—	—	6, 10	proprietary	C18 equivalent 10%	2.0-13.0	phenols, anilins, peptides in high pH, pharmaceuticals, quaternary amines
<i>Pro</i> C8	OS	latest generation C8 using ultrapure silica base (99.999%), with very low residual non-specific interactions	yes	L7	3, 5	12	10	2.0-7.5	acidic, neutral, basic and chelating compounds, drugs and metabolites
C8 (Octyl)	OC	traditional C8, high coverage monomeric bonding chemistry	yes	L7	3, 5	12, 20, 30	10, 7, 4	2.0-7.5	proteins and peptides, estrogens, general purpose phase
YMCbasic	BA	monomeric bonded chains of C8 and smaller to give greater surface coverage and lower non-specific interactions	—	L7	3, 5	proprietary	8	2.0-7.5	basic molecules w/o modifiers, anilines, alkaloids, antidepressants
Ph (Phenyl)	PH	monomeric bonded phenyl	yes	L11	3, 5	12, 30	9, 3	2.0-7.5	phenols, fullerenes, sweeteners
<i>Pro</i> C4	BS	latest generation C4 using ultrapure silica base (99.999%), with very low residual non-specific interactions	yes	L26	3, 5	12	7	2.0-7.5	polar acidic, neutral, basic and chelating compounds, polar peptides
C4 (Butyl)	BU	traditional C4, high coverage monomeric bonding chemistry	yes	L26	3, 5	12, 20, 30	7, 5, 3	2.0-7.5	biological separations, polar compounds
Protein RP	PR	specifically designed to withstand exposure to TFA, good recovery rates	yes	L26	5	proprietary	—	1.5-7.5	proteins, peptides
TMS (C1)	TM	trimethyl silane, excellent hydrolytic stability	—	L13	3, 5	12, 30	4, 3	2.0-7.5	water-soluble vitamins
PVA-SIL	PV	polyvinyl alcohol bonded on silica support, suitable for normal or reversed phase applications	—	L24	5	12	—	2.0-9.5	proteins, phospholipids, retinoids, lipids
Polyamin II (PBMN)	PB	mixed secondary and tertiary amino derivative gives improved hydrolytic stability and alternative selectivity compared to conventional NH-phases	—	—	5	12	—	2.0-9.0	malto-oligosaccharides, tocopherols, nucleotides, sugars
NH, (Amino)	NH	primary amino derivate, high coverage monomeric bonding chemistry	—	L8	3, 5	12	3	2.0-7.5	sugars, nucleotides, water-soluble vitamins
CN (Cyano)	CN	traditional cyano derivative, useful also for SFC applications	yes	L10	3, 5	12, 30	7, 2.5	2.0-7.5	proteins, steroids, catechols
Diol	DL	for aqueous GPC, separations of biomolecules and pharmaceuticals	—	L20	5	6, 12, 20, 30	—	5.0-7.5 (RP)	peptides, proteins, malto-oligosaccharides
	DN	versatile alternative to silica for normal phase separations				6, 12		2.0-7.5 (NP)	
SIL (Silica)	SL	ultra high purity, high mechanical stability	—	L3	3, 5	6, 12, 20, 30	—	2.0-7.5	small organic molecules, fat-soluble vitamins, tocopherols
BioPro QA / SP	QA / SP	high ion exchange capacity, porous hydrophilic polymer with low nonspecific adsorption	—	—	5	10	—	2.0-12.0	proteins, peptides, nucleotides
BioPro QA-F / SP-F	QF / SF	high ion exchange capacity, non-porous hydrophilic polymer with low nonspecific adsorption	—	—	5	—	—	2.0-12.0	proteins, peptides, nucleotides

# YMC Phase Selection Guide\*



\* Classification based on manufacturers' data and Waters Selectivity Chart (1999)

\*\* YMC-Pack ODS-AQ and Hydrosphere C18 show increased interaction with polar compounds in mobile phases with more than 90% aqueous content.