

# SMALL but MIGHTY

- KINETEX®
- LUNA® OMEGA
- GEMINI®
- SYNERGI™
- JUPITER®
- LUNA

## Recommended Phase Selectivity

### General Screening and Popular Applications

General Purpose C18	Kinetex C18 Luna C18(2)
Polar Bases	Kinetex C18 Synergi RP Polar
Polar Acids	Luna Omega Polar C18 Kinetex XB-C18
HILIC Conditions	Luna HILIC Luna NH <sub>2</sub>

Very Hydrophobic Compounds	Luna C8(2) Jupiter C4
*Aromatic Compounds	Kinetex Biphenyl Luna Phenyl-Hexyl
*Isomers & Closely Related Compounds	Kinetex F5 Kinetex Biphenyl
Alkaline Mobile Phase	Gemini C18 Kinetex EVO C18

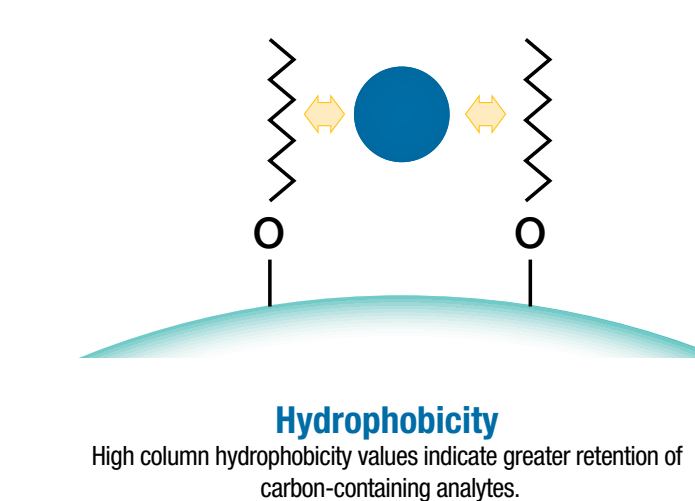
Intact Proteins	Jupiter C4 Jupiter C18
Peptide Quantitation	Luna Omega Polar C18 Luna C18(2)
Peptide Mapping	Luna Omega Polar C18 Kinetex XB-C18
Metabolomics Screening	Kinetex F5 Luna NH <sub>2</sub>

\*Phenyl based phases are generally recommended for both Aromatic and Closely Related Compounds

# The Guide to Micro LC Reversed Phase Selectivity!

## Hydrocarbon Compounds

### Hydrophobicity Ranking Continues



Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Synergi Hydro-RP	High	Low	Low	Low	Low	Low
Luna C18(2)	High	Low	Low	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Synergi Max-RP	High	Low	Low	Low	Low	Low
Luna Omega C18	High	Low	Low	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Gemini C18	High	Low	Low	Low	Low	Low
Synergi Fusion-RP	High	Low	Low	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Luna C8(2)	High	Low	Low	Low	Low	Low
Synergi Max-RP	High	Low	Low	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Luna Omega PS C18	High	Low	Low	Low	Low	Low
Luna Phenyl-Hexyl	High	Low	Low	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Kinetex EVO C18	High	Low	Low	Low	Low	Low
Kinetex C18	High	Low	Low	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Kinetex XB-C18	High	Low	Low	Low	High	High
Synergi Polar-RP	High	Low	Low	Low	High	High

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Kinetex Biphenyl	High	Low	Low	Low	Low	Low
Kinetex F5	High	Low	Low	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Luna Omega Polar C18	High	Low	Low	Low	Low	Low
Luna Omega PS C18	High	Low	Low	Low	Low	Low

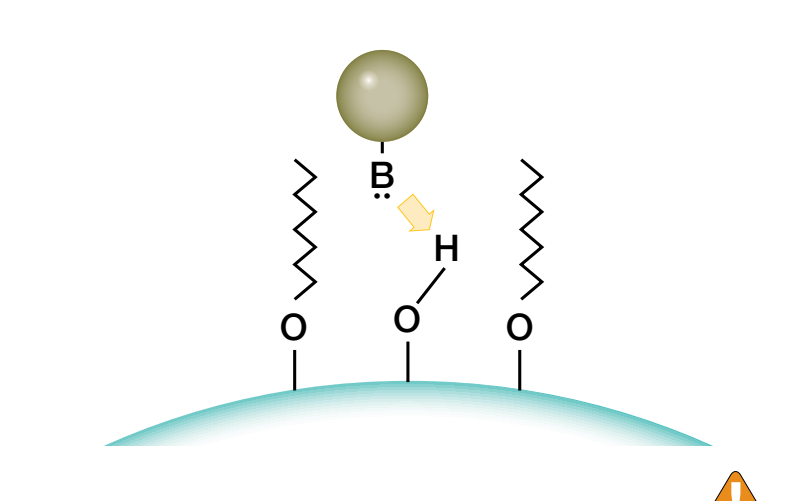
Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Luna Phenyl-Hexyl	High	Low	Low	Low	Low	Low
Kinetex EVO C18	High	Low	Low	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Kinetex C18	High	Low	Low	Low	Low	Low
Kinetex EVO C18	High	Low	Low	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Kinetex C18	High	Low	Low	Low	Low	Low
Kinetex EVO C18	High	Low	Low	Low	Low	Low

### Hydrophobicity Ranking Continues

## Non-ionized Bases and Oxygen- or Halogen-containing Compounds



Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Synergi Hydro-RP	High	Low	High	Low	Low	Low
Gemini C18	High	Low	High	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Synergi Max-RP	High	Low	High	Low	Low	Low
Luna C18(2)	High	Low	High	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Synergi Fusion-RP	High	Low	High	Low	Low	Low
Luna Omega PS C18	High	Low	High	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Luna Omega Polar C18	High	Low	High	Low	Low	Low
Luna C18(2)	High	Low	High	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Synergi Max-RP	High	Low	High	Low	Low	Low
Luna Omega PS C18	High	Low	High	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Luna Omega PS C18	High	Low	High	Low	Low	Low
Luna C18(2)	High	Low	High	Low	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Synergi Max-RP	High	Low	High	Low	Low	Low
Luna Omega PS C18	High	Low	High	Low	Low	Low

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Luna Omega PS C18	High	Low	High	Low	Low	Low
Luna C18(2)	High	Low	High	Low	Low	Low

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Synergi Max-RP	High	Low	High	Low	Low	Low
Luna Omega PS C18	High	Low	High	Low	Low	Low

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Synergi Max-RP	High	Low	High	Low	Low	Low
Luna Omega PS C18	High	Low	High	Low	Low	Low

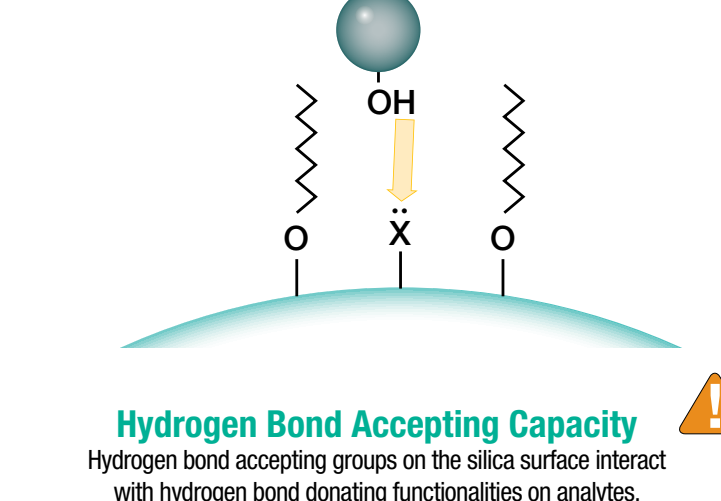
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Synergi Max-RP	High	Low	High	Low	Low	Low
Luna Omega PS C18	High	Low	High	Low	Low	Low

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Synergi Max-RP	High	Low	High	Low	Low	Low
Luna Omega PS C18	High	Low	High	Low	Low	Low

## Important!

Only column selectivity parameters of the same class (i.e. Steric Interactions) may be compared between the columns featured here. Hydrophobic selectivity is the main mechanism of retention under reversed phase conditions. Within the column profiles the 5 different selectivity parameter classes are not on the same scale.

## Hydroxyl- or Amine-containing Functionalities



Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Kinetex Biphenyl	High	Low	Low	High	Low	Low
Kinetex XB-C18	High	Low	Low	High	High	High

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Luna Omega Polar C18	High	Low	Low	High	Low	Low
Gemini C18	High	Low	Low	High	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Synergi Fusion-RP	High	Low	Low	High	Low	Low
Luna Omega PS C18	High	Low	Low	High	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Luna Omega PS C18	High	Low	Low	High	Low	Low
Luna C18(2)	High	Low	Low	High	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Synergi Fusion-RP	High	Low	Low	High	Low	Low
Luna Omega PS C18	High	Low	Low	High	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Luna Omega PS C18	High	Low	Low	High	Low	Low
Luna C18(2)	High	Low	Low	High	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Synergi Fusion-RP	High	Low	Low	High	Low	Low
Luna Omega PS C18	High	Low	Low	High	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
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Luna Omega PS C18	High	Low	Low	High	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
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Luna Omega PS C18	High	Low	Low	High	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
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Luna Omega PS C18	High	Low	Low	High	Low	Low

Phase	Hydrophobicity	Steric Interaction	Hydrogen Bond Donating Capacity	Hydrogen Bond Accepting Capacity	Cation Selectivity at pH 2.5	Cation Selectivity at pH 7.0
Synergi Fusion-RP	High	Low	Low	High	Low	Low
Luna Omega PS C18	High	Low	Low	High	Low	Low

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## Tip!

It's recommended that you vary the phase selectivity between your Micro LC trap and column configurations to maximize your separation performance!

### Micro LC Traps

Phase	Part No.		Unit
	10 x 0.3 mm	10 x 0.5 mm	
MicroTrap C18	05N-4252-AC	05N-4252-AF	3/pk
MicroTrap Polar	05N-4754-AC	05N-4754-AF	3/pk
MicroTrap PS	05N-4753-AC	05N-4753-AF	3/pk
MicroTrap WP C4	05N-4167-AC	05N-4167-AF	3/pk

### Micro LC Trap Fittings

Part No.	Description	Unit
A00-7602	PEEKlok™ fittings with 6-40 thread for 1/32" OD tubing (2 x ferrules, 6 x ferrules and 1 x tightening tool)	ea
A00-7603	PEEKlok fittings with 6-32 thread for 1/32" OD tubing (2 x ferrules, 6 x ferrules and 1 x tightening tool)	ea
A00-7600	PEEKlok fittings with 10-32 thread for 1/32" OD tubing with lowprofile hex head (2 x ferrules and 1 x wrench)	ea

## Micro LC Column Ordering Information

2.6 µm Micro LC Columns (mm)	30 x 0.3	50 x 0.3	100 x 0.3	150 x 0.3	50 x 0.5	150 x 0.5
Kinetex® Biphenyl 100 Å	—	00B-4622-AC	—	00F-4622-AC	00B-4622-AF	—
Kinetex C18 100 Å	—	00B-4462-AC	—	00F-4462-AC	00B-4462-AF	—
Kinetex EVO C18 100 Å	—	00B-4725-AC	—	00F-4725-AC	00B-4725-AF	—
Kinetex F5 100 Å	—	00B-4723-AC	00D-4723-AC	00F-4723-AC		