Comparison of the selectivity of *GROM* SIL C18- and C8-phases

Laboratory experiments demonstrate time and again the wide disparity in retention behavior of superficially comparable ODS-silica phases and the same is true also for other coatings. Thus, in order to provide as wide a palette of selectivities as possible to enable the solution of even the most complex ....

C18

GROM-SIL 100 ODS-0 AB
High-quality phase with special endcapping for the outstanding separation of acids and bases.

GROM-SIL 100 ODS-1 PE
Economical phase with partial endcapping and high selectivity.

GROM-SIL 100 ODS-2 FE
Fully endcapped stationary phase with outstanding selectivity for most applications.

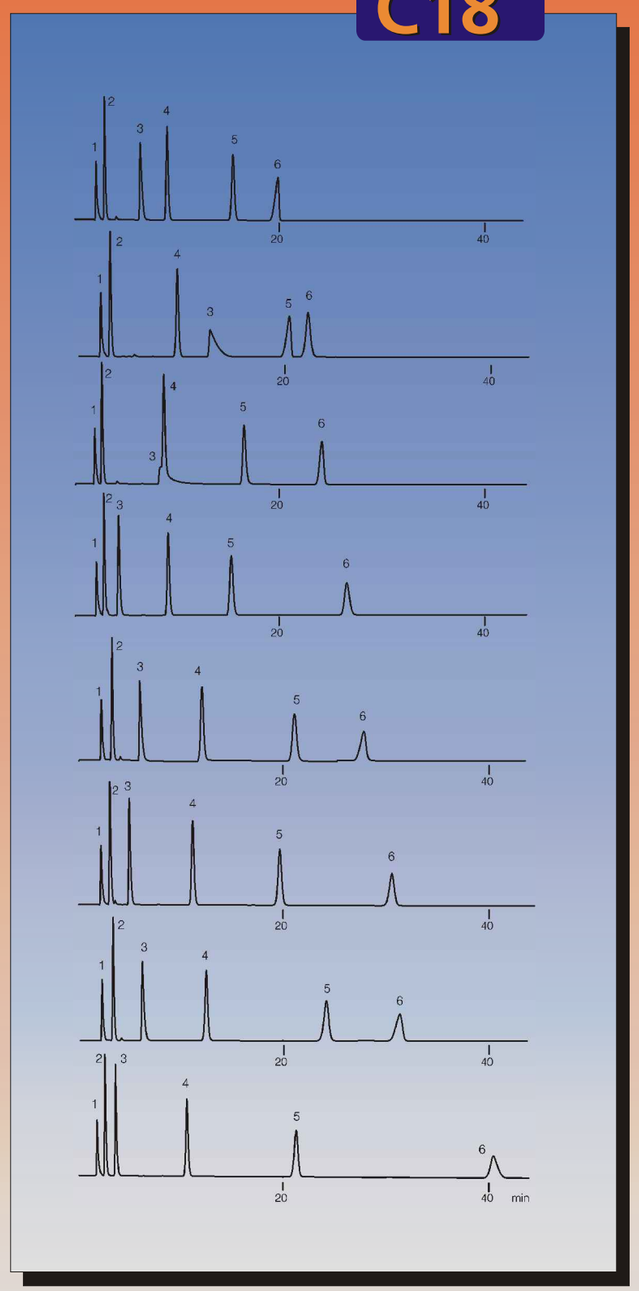
GROM-SIL 120 ODS-3 CP
Encapsulated, chemically stable phase with metal-free silica gel matrix.

GROM-SIL 120 ODS-4 HE
High resolution - a new hydrophylic end-capping makes this phase especially suitable for peptides.

GROM-SIL 120 ODS-5 ST
Standard phase for practically all applications.

GROM-SIL 120 ODS-6 NE
ODS phase for special applications. High hydrophobicity despite the absence of endcapping.

GROM-SIL 80 ODS-7 pH
Polymer-coated, pH-stable phase with extremely high carbon-content.



the most complex analytical problems by HPLC, eight different *GROM* SIL ODS-phases and six different *GROM* SIL octyl phases have been developed. Chromatograms of a test mixture (modified test of T. Daldrup and B. Kardel, Chromatographia 18, 81-83, 1984) run under identical conditions demonstrate the different hydrophobicity, and thus the selectivity, of the various differently prepared stationary phases. This is exemplified by the differing retention times of toluene and in particular of the basic components.

C8

GROM-SIL 100 Octyl-1 B
Base-deactivated phase with enhanced selectivity.

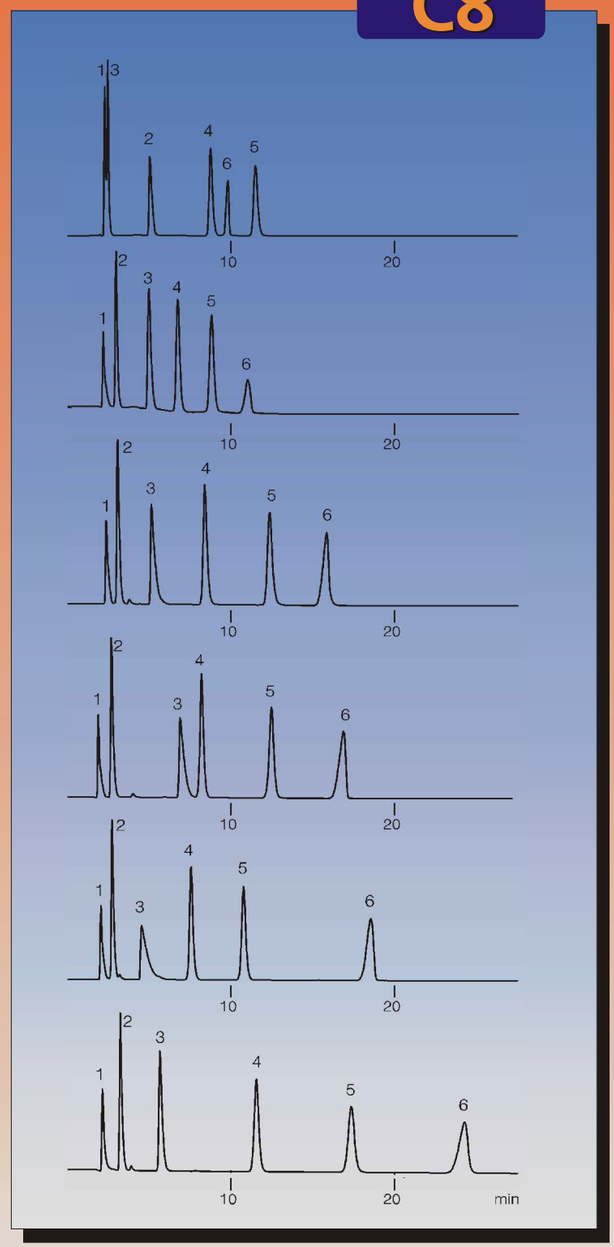
GROM-SIL 100 Octyl-2 AB
Acid- and base-deactivated phase specially suitable for the separation of acids and bases.

GROM-SIL 120 Octyl-3 BA
Tailor-made for the separation of basic molecules, monomeric bonding of alkyl silanes with differing chain lengths.

GROM-SIL 120 Octyl-4 FE
Fully endcapped octyl phase, "monomerically bound" and thus highly versatile.

GROM-SIL 120 Octyl-5 CP
Octyl-phase on silicone-encapsulated particles, particularly long lived.

GROM-SIL 120 Octyl-6 MB
Densely coated C8 phase, endcapped, for acidic and basic compounds.



Test chromatograms: "extended Daldrup test"

Column: NovoGrom 250 mm x 4.0 mm id.
Flow rate: 1.0 ml/min
Eluent: Na-phosphate buffer, 50 mM, pH 2.3 / acetonitrile = 58 /42 + 420 ml acetonitrile
Detection (UV): 230 nm

Compounds injected:

1) uracil
2) 4-hydroxybenzoic acid
3) diphenylhydramine
4) 5-(p-methylphenyl)-5-phenylhydantoin
5) diazepam
6) toluene