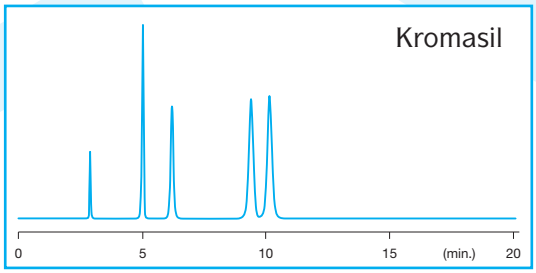
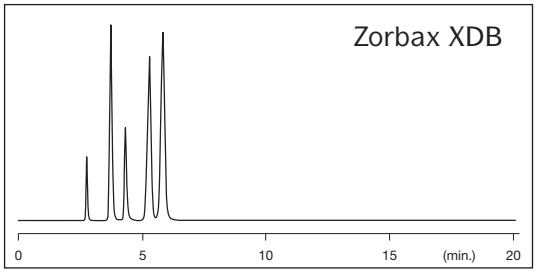
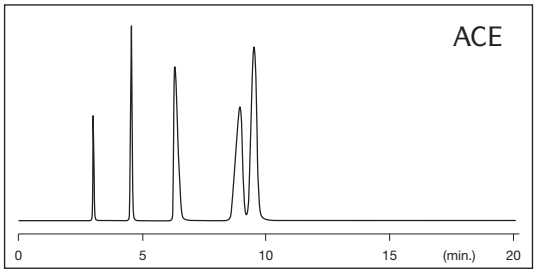
# Kromasil® Phenyl

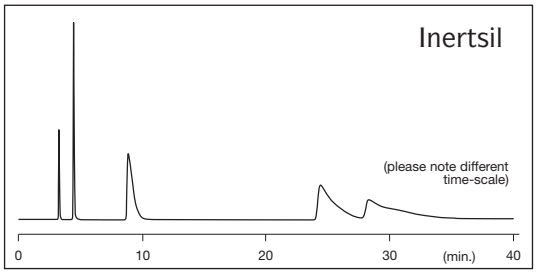
## For wettability and alternative selectivity

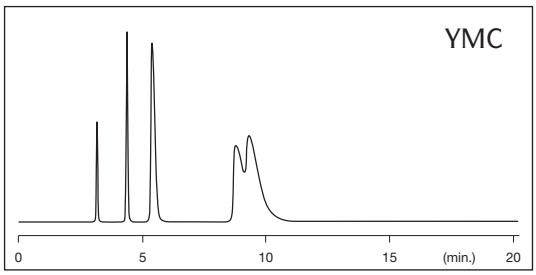
Kromasil Phenyl is developed to be the perfect alternative to present Kromasil RP phases. The phase is completely wettable, and compatible with 100% aqueous mobile phases. Kromasil Phenyl exhibits a unique selectivity for aromatic compounds, due to a possibility for π-π interactions between the phenyl bonded phase and the solute.




*Conditions: Column: 4.6 × 250 mm*
*Mobile phase: methanol/25 mM potassium phosphate pH 6 (80/20)*
*Flow rate: 1ml/min Temperature: 20°C Detection: 215 nm*
*Sample of tricyclic antidepressants, in elution order: uracil, toluene (hydrophobic marker), nortriptyline, imipramine, amitriptyline*

## Low silanol activity

Kromasil Phenyl is derivatized using a mono-functional silane, followed by an extensive end-capping. The result is a stationary phase with high stability, high reproducibility, and symmetrical peaks for basic compounds.

A study of Kromasil Phenyl compared to "standard" phenyl phases was performed using a mix of anti-depressants. The anti-depressant test at pH 6 is a perfect indicator for silanol activity. The symmetrical peaks for Kromasil Phenyl under these conditions illustrate the very low silanol activity for this phase.

Kromasil Phenyl is based on the unique high performing and high purity Kromasil 100 Å Silica. It is available in 5 µm, 10 µm and 16 µm particle sizes, as bulk and in slurry-packed columns from 2.1 mm ID up to 50 mm ID, all with analytical efficiency. Other particle sizes and pore sizes are available upon request!

# High chemical stability

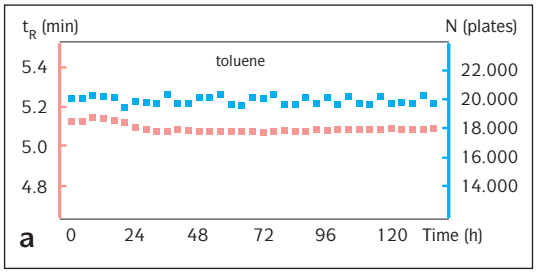
The chemical stability of the bonded phase is one of the most important factors determining the lifetime of the column or packing material. A high stability will also minimize leakage from the column.

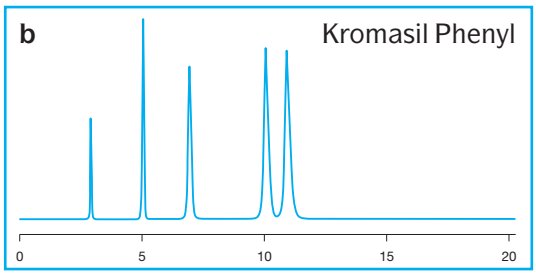
To investigate the chemical stability, Kromasil Phenyl was flushed continuously for 6 days, using a mobile phase of pH 9, and monitored during and after the test.

*Conditions: Column: 4.6 × 250 mm Temperature: 20 °C*

*a) Mobile phase during flushing for 6 days and toluene test: methanol/10 mM ammonium acetate pH 9 (80/20) Flow rate: 0.05 ml/min and 1 ml/min, respectively Detection: 254 nm*

*b) Mobile phase: methanol/25 mM potassium phosphate pH 6 (80/20) Flow rate: 1 ml/min Detection: 215 nm Sample of tricyclic antidepressants, in elution order, after stability test: uracil, toluene (hydrophobic marker), nortryptiline, imipramine, amitriptyline*

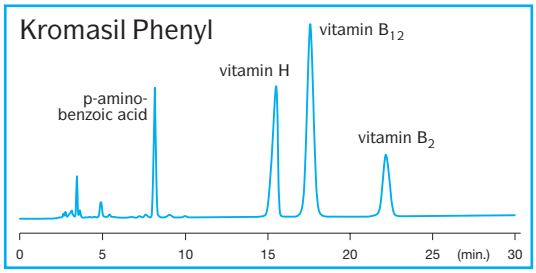


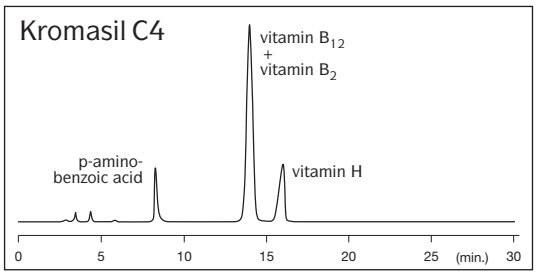




# Enhanced selectivity

Phenyl phases are known to have an enhanced selectivity compared to standard alkyl phases (C4, C8 and C18) for aromatics, due to π-π interactions. When optimizing separations Kromasil Phenyl is therefore an important complementary phase to the regular Kromasil RP phases. This advantage is shown for a mixture of some water-soluble vitamins.

*Conditions: Column: 4.6 × 250 mm*
*Mobile phase: acetonitrile/ 20 mM ammonium phosphate ($NH_4H_2PO_4$) (12/88)*
*Flow rate: 1 ml/min Temperature: 20 °C Detection: 254 nm*



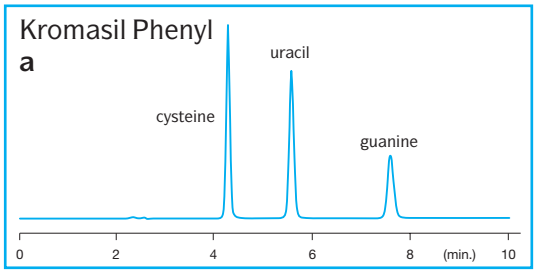

# 100% aqueous conditions

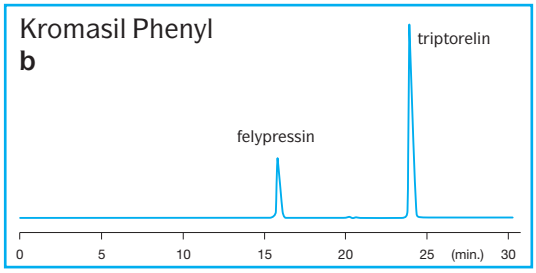
Kromasil Phenyl is completely compatible with 100% aqueous mobile phases, making it possible to retain polar compounds under these conditions. And in preparative chromatography, when large volumes are injected directly from a previous 100% aqueous chromatographic step, this property of Kromasil Phenyl will prove to be a great advantage. Due to the unique selectivity Kromasil Phenyl is a perfect choice for purification and analysis of aromatic-containing peptides.

*Conditions: Column: 4.6 × 250 mm Flow rate: 1 ml/min Temperature: 20 °C*
*Detection: 254 nm*

*a) Mobile phase: methanol/25 mM potassium phosphate pH 7.85 (100% aq)*

*b) Mobile phase: acetonitrile/10 mM ammonium acetate pH 4.9*
*Gradient: 0 – 3 min 100% buffer, 3.1 – 23.1 min 15% – 35% acetonitrile, 23.2 – 30 min 50% acetonitrile*

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