Kromasil Eternity
Designed for long life

Presenting

Eternity PhenylHexyl
For your HPLC and UHPLC
"– The long-lasting phase when alternative selectivity is required"

Eternity PhenylHexyl is our latest product for separation and purification of compounds for reversed phase HPLC and UHPLC. The product is based on a patent pending grafting technology, the Eternity platform, which was recently introduced as the Eternity C18 phase. Starting from the Eternity platform it is functionalized with a monofunctional PhenylHexyl group followed by a proprietary end-capping process.

The Eternity PhenylHexyl phase provides you with an alternative selectivity compared to a traditional alkyl chain phase or a polar embedded phase, especially when the analytes of interest contain an aromatic ring. Including excellent peak shapes for compounds under both low and high pH conditions (stable between pH 2 to pH 12) the Eternity PhenylHexyl offers minimum bleed for LC/MS applications.

This fully wettable phase offers greater flexibility in developing orthogonal methods for challenging separations. It is an excellent choice to try when a C18 phase fails to provide an adequate separation.

This folder gives an overview of how you benefit. To learn more, visit www.kromasil.com or contact us directly!

Product assortment

<table>
<thead>
<tr>
<th>2.5 µm</th>
<th>5 µm</th>
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<tbody>
<tr>
<td>2.1 x 50 mm</td>
<td>Eternity-2.5-PhenylHexyl 2.1 x 50 mm</td>
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<tr>
<td>2.1 x 100 mm</td>
<td>Eternity-2.5-PhenylHexyl 2.1 x 100 mm</td>
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<td>2.1 x 150 mm</td>
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<tr>
<td>4.6 x 50 mm</td>
<td>Eternity-2.5-PhenylHexyl 4.6 x 50 mm</td>
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<td>30 x 250 mm</td>
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Analytical scale

- 2.5 µm particle size
- UHPLC and HPLC
- Easy to scale up to 5 µm

Semi preparative scale

- 5 µm particle size
- HPLC
- Easy to scale down to 2.5 µm

Product characteristics

- Ligand: 6-phenylhexyl
- Pore size: 100 Å
- Surface area: 330 m²/g
- Carbon load: 12%
- End-capping: Proprietary
- pH range: 2 - 12
- USP: L11

1: bare silica data
pH variation – the perfect tool for method development

**Chromatographic conditions**

- **Column:** Kromasil Eternity-2.5-PhenylHexyl 2.1 × 50 mm
- **Sample:**
  - Antidepressants: 1 = toluene, 2 = nortriptyline, 3 = imipramine, 4 = amitriptyline
- **Mobile Phase:** methanol/potassium phosphate buffer, 20 mM, pH 2.5, 7.0 and 10.5 respectively (80/20)
- **Flow rate:** 0.35 ml/min
- **Temperature:** 25°C
- **Detection:** UV @ 215 nm

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**Alternative selectivity**

**Kromasil Eternity-2.5-C18**

- **Sample:**
  - Vitamins: 1 = p-aminobenzoic acid, 2 = biotin, 3 = vitamin B12, 4 = vitamin B2
- **Mobile Phase:** methanol/potassium phosphate buffer, 20 mM, pH 2.5
- **Flow rate:** 0.35 ml/min
- **Temperature:** 25°C
- **Detection:** UV @ 210 nm

**Kromasil Eternity-2.5-PhenylHexyl**

- **Sample:**
  - Aromatics: 1 = benzene, 2 = naphthalene, 3 = biphenyl, 4 = phenanthrene, 5 = anthracene
- **Mobile Phase:** acetonitrile/water (50/50)
- **Flow rate:** 1.2 ml/min
- **Temperature:** 30°C
- **Detection:** UV @ 254 nm

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**Common chromatographic conditions**

- **Column size:** 2.1 × 50 mm
- **Sample:**
  - Vitamins: 1 = p-aminobenzoic acid, 2 = biotin, 3 = vitamin B12, 4 = vitamin B2
- **Mobile Phase:** methanol/potassium phosphate buffer, 20 mM, pH 2.5
- **Flow rate:** 0.35 ml/min
- **Temperature:** 25°C
- **Detection:** UV @ 210 nm

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**Separation of aromatics**

**Chromatographic conditions**

- **Column:** Kromasil Eternity-2.5-PhenylHexyl 4.6 × 50 mm
- **Sample:**
  - Aromatics: 1 = benzene, 2 = naphthalene, 3 = biphenyl, 4 = phenanthrene, 5 = anthracene
- **Mobile Phase:** acetonitrile/water (50/50)
- **Flow rate:** 1.2 ml/min
- **Temperature:** 30°C
- **Detection:** UV @ 254 nm

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**Separation of nucleobases**

**Chromatographic conditions**

- **Column:** Kromasil Eternity-2.5-PhenylHexyl 4.6 × 50 mm
- **Sample:**
  - Nucleobases: 1 = cytosine, 2 = uracil, 3 = thymine, 4 = adenine
- **Mobile Phase:** potassium phosphate buffer, 25 mM, pH 7.85
- **Flow rate:** 1.2 ml/min
- **Temperature:** 30°C
- **Detection:** UV @ 254 nm
Scale up or scale down

Common chromatographic conditions
Sample: 1 = 4-nitroaniline, 2 = 3-nitroaniline, 3 = 2-nitroaniline, 4 = 2,4-dinitroaniline
Mobile Phase: methanol/water (50/50)
Flow rate: 0.35 ml/min, 1.7 ml/min and 36 ml/min, respectively
Temperature: 20°C
Detection: UV @ 280 nm

Kromasil Eternity PhenylHexyl, 5 µm, 21.2 x 50 mm
Kromasil Eternity PhenylHexyl, 5 µm, 4.6 x 50 mm
Kromasil Eternity PhenylHexyl, 2.5 µm, 2.1 x 50 mm

Preparative HPLC
Separation of capsaicin from dihydrocapsaicin

Analytical injection
Common chromatographic conditions
Columns: Analytical and fraction analysis:
Kromasil Eternity-2.5-PhenylHexyl 2.1 × 50 mm
Prep injections:
Kromasil Eternity-5-PhenylHexyl 4.6 × 250 mm
Kromasil Eternity-5-PhenylHexyl 21.2 × 250 mm
Mobile Phase: methanol/water (70/30)
Flow rates: 0.4 ml/min, 1 ml/min and 21.2 ml/min, respectively
Temperature: 20°C
Detection: UV @ 230 nm

Column id Prep injection Fraction analysis
4.6 mm
load: 40 mg purity: 99.9% Yield: 99.0%
21.2 mm
load: 848 mg purity: 100% Yield: 99.9%

1: Capsaicin is the active component in chili peppers and has analgesic properties.

The moment you adopt our Kromasil High Performance Concept, you join thousands of chromatographers who share a common goal: to achieve better separations when analyzing or isolating pharmaceuticals or other substances.

Not only will you benefit from our patented silica technology, but you gain a strong partner with a reliable track record in the field of silica products. For the past 60 years, Eka Chemicals has pioneered new types of silica. Our long experience in the field of silica chemistry is the secret behind the development of Kromasil, and the success of our Separation Products Group.

Kromasil is available in bulk, or in high-pressure slurry-packed columns. The development, production and marketing of Kromasil are ISO 9001 certified.

Eka Chemicals is a global company with 2 900 people in 18 countries. It is a business unit within AkzoNobel, one of the world’s largest chemical groups, with more than 60 000 employees in 80 countries.

www.kromasil.com