## More choices in your analytical tool box

Kromasil ClassicShell family of columns is an expansion of the Kromasil analytical columns portfolio to provide scientists with more options for the analysis of laboratory samples.

### Kromasil ClassicShell columns

The Kromasil ClassicShell columns are based on solid core particles and intended for the analysis of sample mixtures in various areas of research as well as quality control in pharmaceutical, environmental, food and beverages and industrial laboratories.

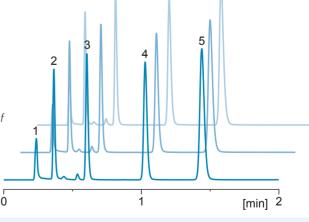
These new columns are packed with  $2.5 \,\mu m$  particles and, similarly to the already adopted Kromasil Classic 1.8 and 2.5  $\mu m$  particle size columns, Kromasil ClassicShell products are intended for fast separations to support effective and efficient laboratory turnaround.



#### **Reproducible results**

QC test with neutral substances.

Test on three columns with different batches of stationary phase.



 Conditions
 Column:
 Kromasil ClassicShell-2.5-C18 2.1 x 50 mm
 Temperature:
 25°C

 Eluent:
 acetonitrile / water (70/30)
 Detection:
 UV @ 254 nm

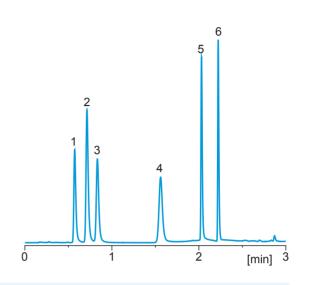
 Flow rate:
 0.42 ml/min

 Substances:
 1 = sodium nitrate, 2 = acetophenone, 3 = toluene, 4 = benzen, 5 = butylbenzen

# **Applications**

Kromasil ClassicShell columns provide an excellent alternative for the analysis of candidate drugs as well as established pharmaceuticals under reversed phase chromatography.

#### Sulfa drugs

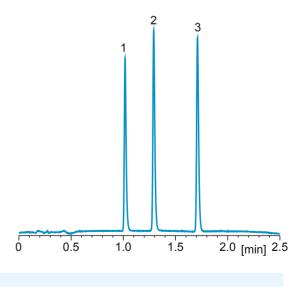


Conditions				
Column:	Kromasil ClassicShell-2.5-C18 2.1 x 50 mm	Temperature:	25°C	
Eluent:	acetonitrile / water / 0.1% formic acid	Flow rate:	0.7 ml/min	
Gradient:	0 min: 10%, 2 min: 90% acetonitrile	Detection:	UV @ 254 nm	
Substances: 1 = sulfadiazine, 2 = sulfathiazole, 3 = sulfamerazine, 4 = sulfamethoxypyridazine, 5 = sulfamethoxazole,				
	6 = sulfaquinoxaline			

#### Analysis of xanthine class compounds

Pharmaceutical drug discovery and development, food quality control and environmental monitoring require efficient sample analysis.

Kromasil ClassicShell columns offer researchers and analysts the possibility of fast runs with complete resolution, as the results illustrated here.



#### Conditions

Conditions	
Column:	Kromasil ClassicShell-2.5-C18 2.1 x 50 mm
Eluent:	acetonitrile / water / 0.1% formic acid
Gradient:	0 min: 3%, 4 min: 30% acetonitrile
Substances:	1 = theobromine, 2 = theophylline, 3 = caffeine

Temperature: Flow rate: Detection:

ambient 0.5 ml/min UV @ 254 nm

#### Separation of capsaicinoids

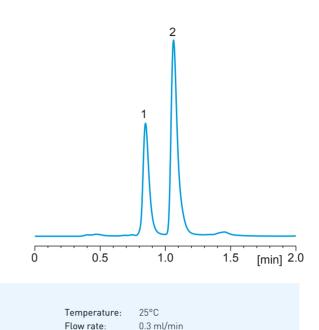
As the natural products industry continues to grow, the analysis of active ingredients to establish product quality and assure safety is becoming more important.

Here is an example of a fast analysis for the separation of capsaicin and dihydrocapsaicin in slightly over a minute.

Kromasil ClassicShell-2.5-C18 2.1 x 50 mm

acetonitrile / water (60/40)

Substances: 1 = capsaicin, 2 = dihydrocapsaicin



UV @ 235 nm

### Availability

Conditions Column:

Eluent:

Kromasil ClassicShell is based on  $2.5\,\mu m$  solid-core particles, and is available with C8 and C18 derivatizations, in 2.1 and 4.6 mm I.D. HPLC columns. Part numbers are shown in the table below.

	Column size (I.D. x length)		
Material	2.1 x 50 mm	2.1 x 100 mm	4.6 x 100 mm
ClassicShell-2.5-C8	NH2CMD05	NH2CMD10	NH2CMA10
ClassicShell-2.5-C18	NH2CLD05	NH2CLD10	NH2CLA10

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 eld of silica products. For the past 70 years, we have 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 Kromasil team. Kromasil is available in bulk and in highpressure slurry-packed columns.

The production of Kromasil is ISO 9001 and ISO 14001 certified.

Kromasil is a brand of Nouryon, a global specialty chemicals leader. Markets and consumers worldwide rely on our essential solutions to manufacture everyday products. The dedication of more than 9700 employees with a shared commitment to our customers, safety, sustainability and innovation has resulted in a consistently strong performance. We operate in over 80 countries around the world with a portfolio of industry-leading brands.



Detection.

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