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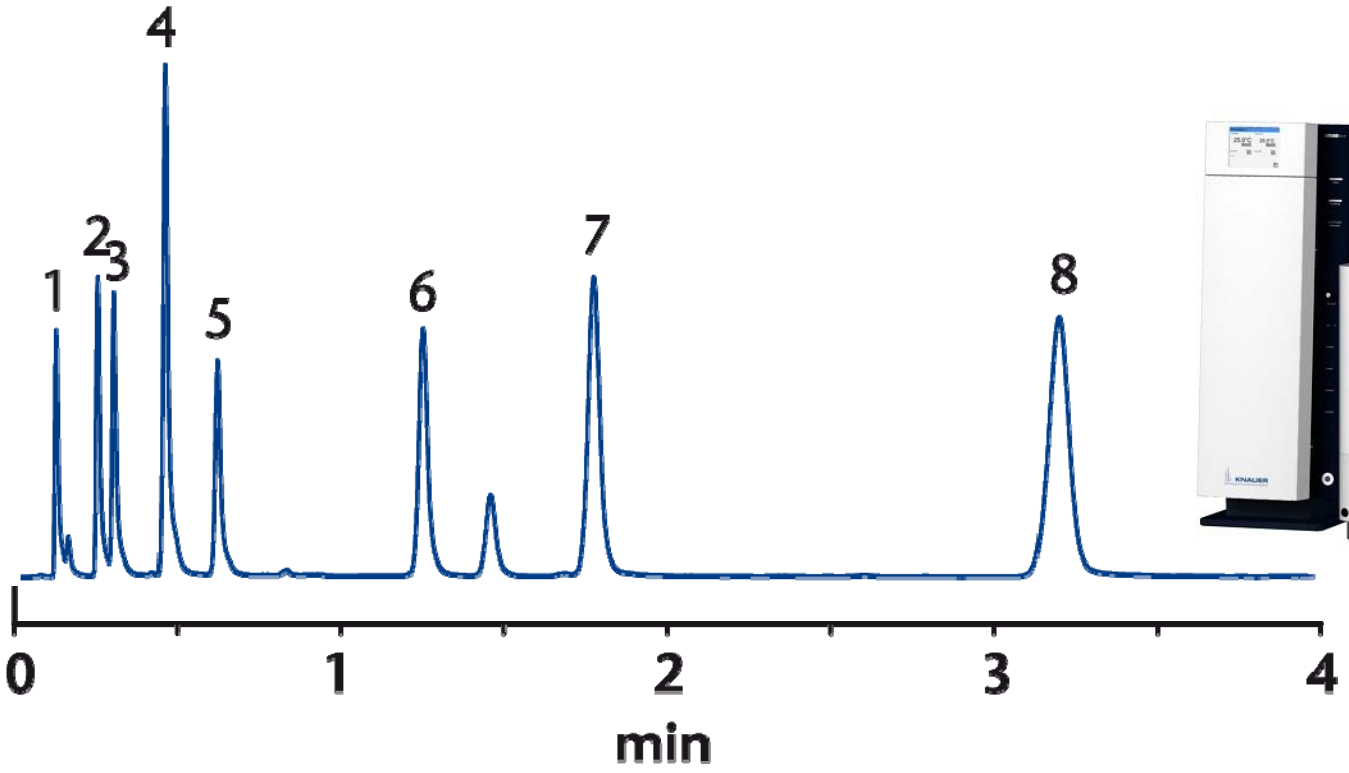
UHPLC Applications Journal



UHPLC Applications Journal

Pharmaceutical/Clinical Applications

- Determination of Morphine with MS Detection VPH0044J
- Separation of Sedatives VPH0037J
- Separation of Paracetamol and industrial side-products VPH0003J
- Separation of Sulfa drugs (I) VPH0040J / (II) VPH0046J / (III) VPH0045J
- Separation of Taxane (I) VPH0041J / (II) VPH0047J
- Separation of ß-Blocker VPH0039J
- Separation of Steroids (I) VCL0003J / (II) VPH0049J / (III) VPH0048J
- Separation of Steroids with MS detection VPH0043J
- Separation of Clindamycin VPH0006J
- Separation of Ginkgo-Extract

UHPLC Applications Journal

Food and beverage Applications

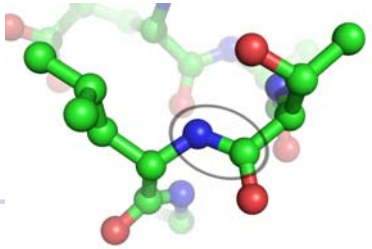
- Determination of Organic acids VFD0074J
- Determination of Cumarin VFD0073J
- Determination of Preservatives VFD0075J
- Determination of Benzoates (I) VFD0071J / (II) VFD0097J / (III) VFD0098J
- Determination of Sudan Dyes (I) VFD0076J / (II) VFD0094J
- Determination of Xanthins VFD0078J
- Determination of water soluble vitamins (I) VFD0012J / (II) VFD0100J
- Determination of Tocopherols (I) VFD0092J / (II) VFD0077J
- Determination of Bisphenols (I) VFD0015J / (II) VFD0072J
- Determination of Catechins
- Determination of Softdrink Additives VFD0099J
- Determination of Polyphenols VFD0081J
- Determination of Polyphenols with MS detection VFD0083J

UHPLC Applications Journal

Environmental Applications

- Determination of Aromatic Compounds VEV0038J
- Engelhardt mixture
- Determination of Dispersion Dyes VEV0036J
- Determination of 16 EPA PAH VEV0001J
- Determination of 15 PAH with Fluorescence detection VEV0054J
- Determination of Lignin building Compounds with MS Detection VEV0042J
- Determination of Phenols (I) VEV0037J / (II) VEV0056J
- Determination of Phthalates (I) VEV0005J / (II) VEV0057J /(III) VEV0053J
- Determination of Pesticides (I) VEV0006J / (II) VEV0007J / (III) VEV0055J
- Determination of Pesticides with MS detection (I) VEV0039J / (II) VEV0040J
- Determination of DNPH Carbonyls (I) VEV0003J / (II) VEV0058J / (III) VEV0052J
- Separation of DNPH Carbonyls with special column VEV0046J
- Separation of Benzene derivatives VEV0035J
- Determination of Primary Aromatic Amines with MS Detection VEV0043J

UHPLC Applications Journal



Bioanalytical Applications

- Determination of AQC-Amino acids with PDA (I) VBS0011J
- Determination of AQC-Amino acids with FLD VBS0011J
- Determination of AQC-Amino acids with PDA (II) VBS0012J
- Determination of AQC-Amino acids with MS detection VBS0013J
- Determination of underivatized Amino acids with MS detection VBS0014J
- Separation of Proteins VBS0019J
- Separation of Peptides VBS0002J
- Separation of Muropeptides VBS0004J
- Separation of Nucleosides and Bases VBS0010J
- Separation of Purines and Pyrimidines VBS0020J

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Pharmaceutical Applications

New

HPLC · SMB · Osmometry

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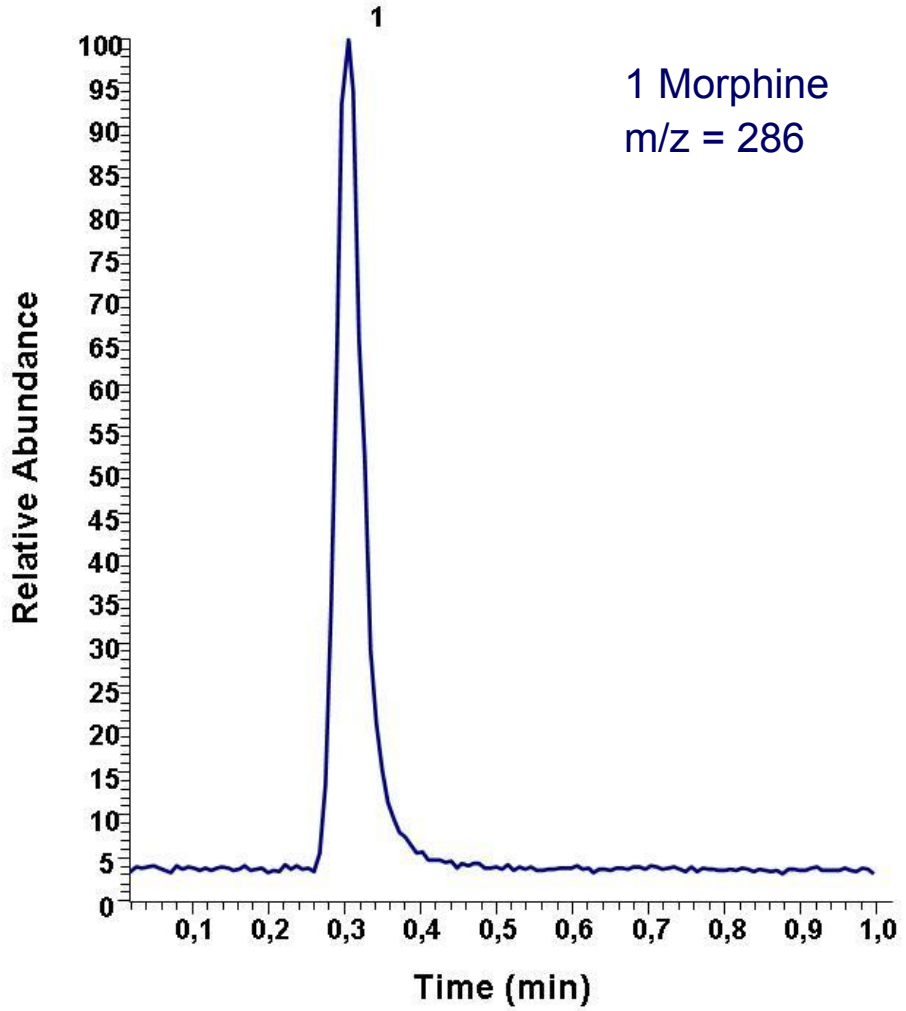
Determination of Morphine with MS Detection

VPH0044J

- Pharmaceutical Application

Column: Bluespher 100-2 C18
50 x 2.0 mm ID
Eluent: A: H2O + 0.1 % FA
B: MeOH + 0.1 % FA
Gradient: isocratic 40 % B
Flow: 0.4 ml/min
Volume: 1 µl
Temp.: 30 °C
Detection: MSQ Plus, ESI pos. mode,
Needle 5 kV, coneV 30 V,
Probe temperature 500 °C,
SIM mode m/z = 286

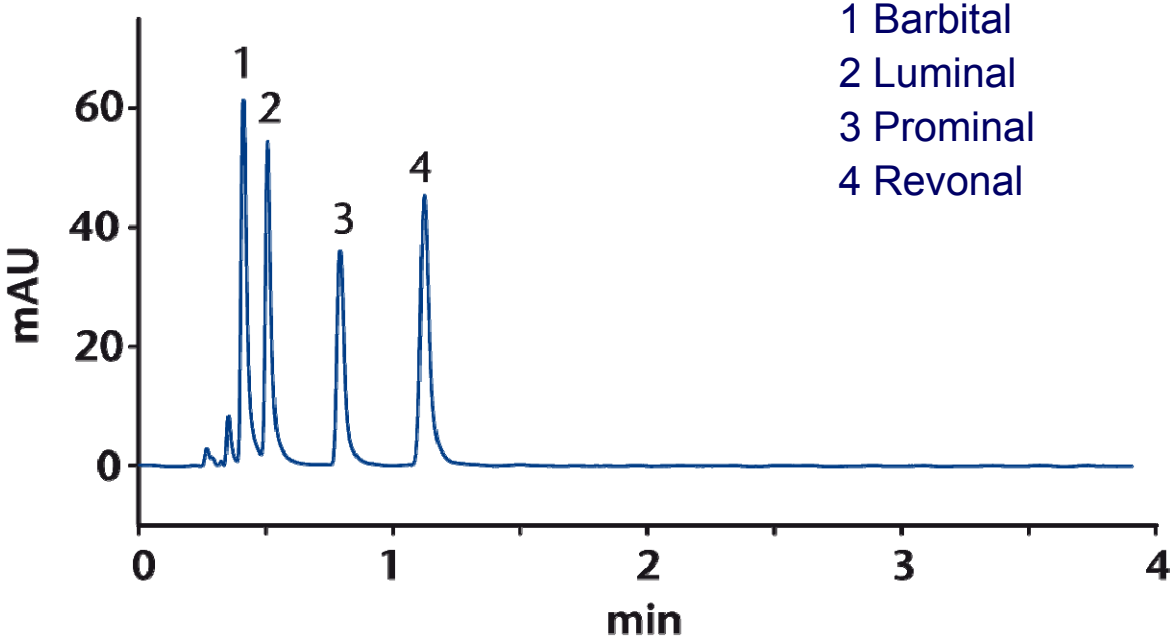


Column Order No. 05BE181BSF

Separation of Sedatives VPH0037J

- Pharmaceutical Application

Column: BlueOrchid 175-1.8 C18
50 x 2 mm ID
Eluent: A: H_2O 40%
B: MeOH 60%
Flow: 0.5 ml/min
Temp.: 40° C
Volume: 1 µl
Detection: UV, 254 nm
(80 Hz; 0.005s)



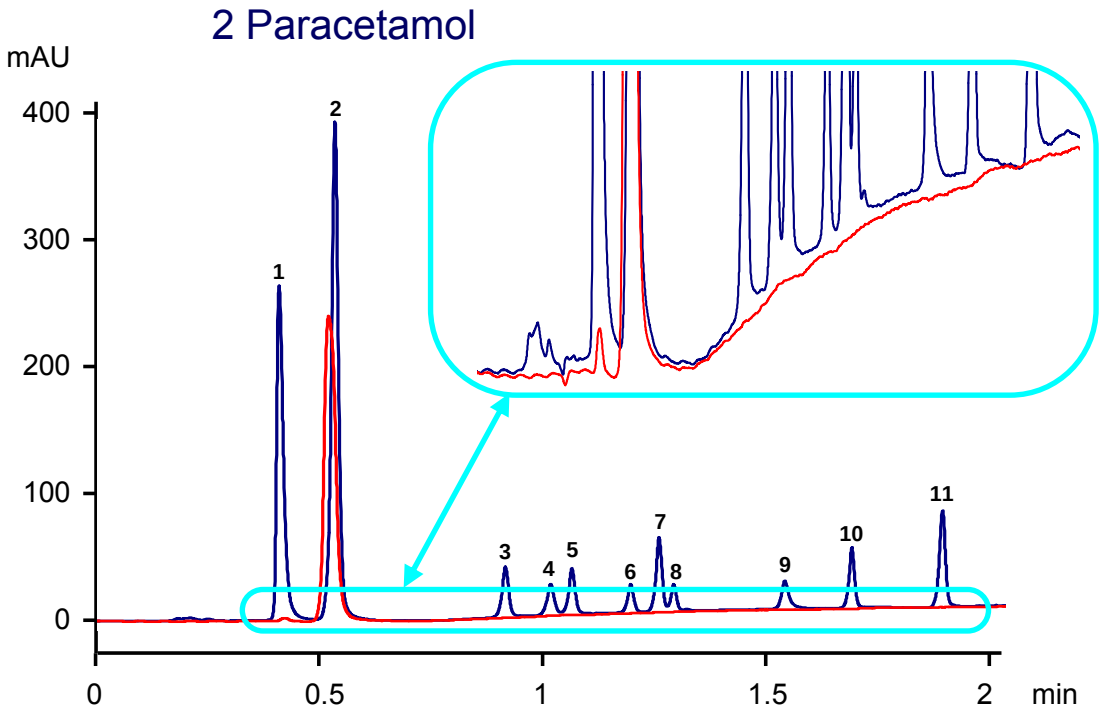
1 Barbital
2 Luminal
3 Prominal
4 Revonal

Column Order No. 05BI181BOE

Separation of Paracetamol and industrial side-products VPH0003J

- Pharmaceutical Application

Column: 100 x 2 mm BO C18 1.8µm
Eluent: A: Phosphat buffer pH 3.7
B: ACN
Flow: 0.85 ml/min
Temp.: 50° C
Volume: 1 µl
Detection: UV, 254 nm
(100 Hz; 0.005s)



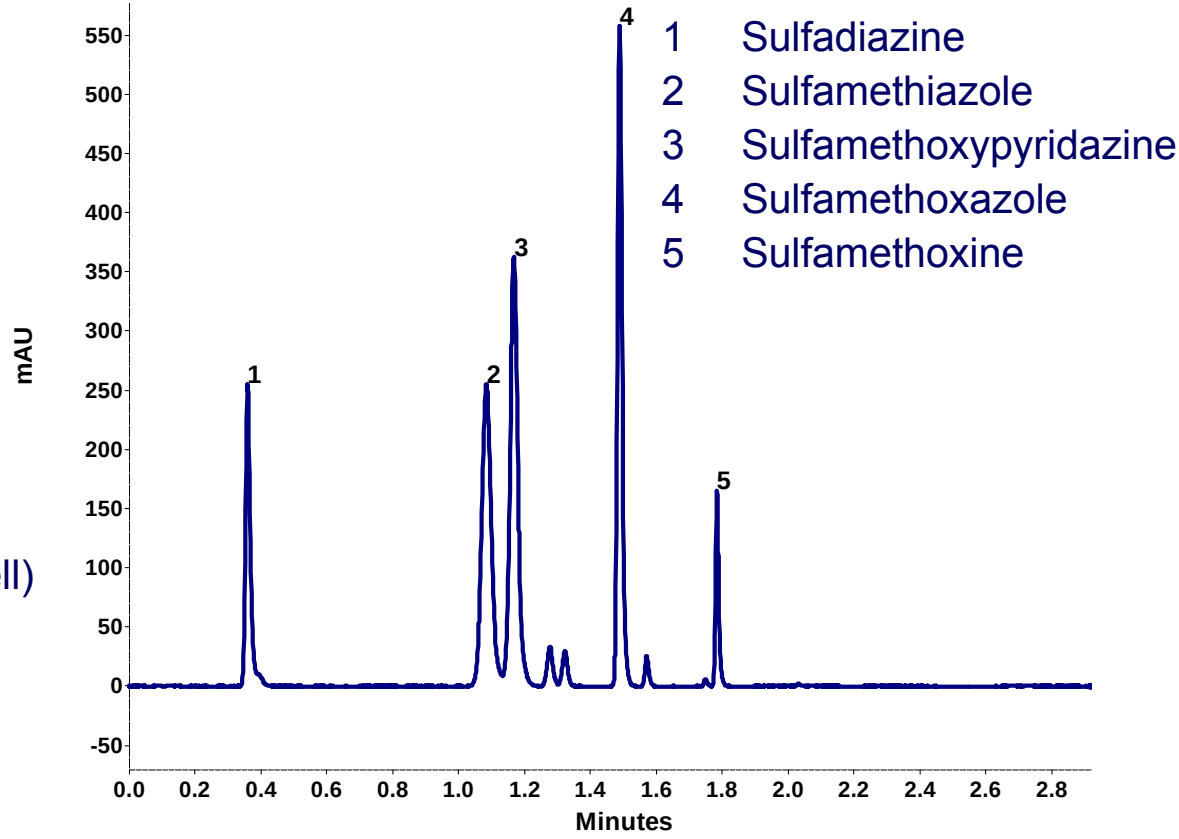
Column Order No. 10BI181BOE

Separation of Sulfa drugs (I)

VPH0040J

- Pharmaceutical Application

Column: 50 x 2 mm BO C18A 1.8µm
Eluent: A: 0.2 g NaH_2PO_4 pH 4
B: ACN
Gradient: 0 – 0.8 min 8% B
0.8 – 1.8 min 8% - 40% B
Flow: 1.4 ml/min
Volume: 1 µl
Temp.: 40° C
Detection: PDA-1, 265 nm (10mm 2 µl Cell)
(100 Hz; 0.005s)



Column Order No. 05BI184BOE

New

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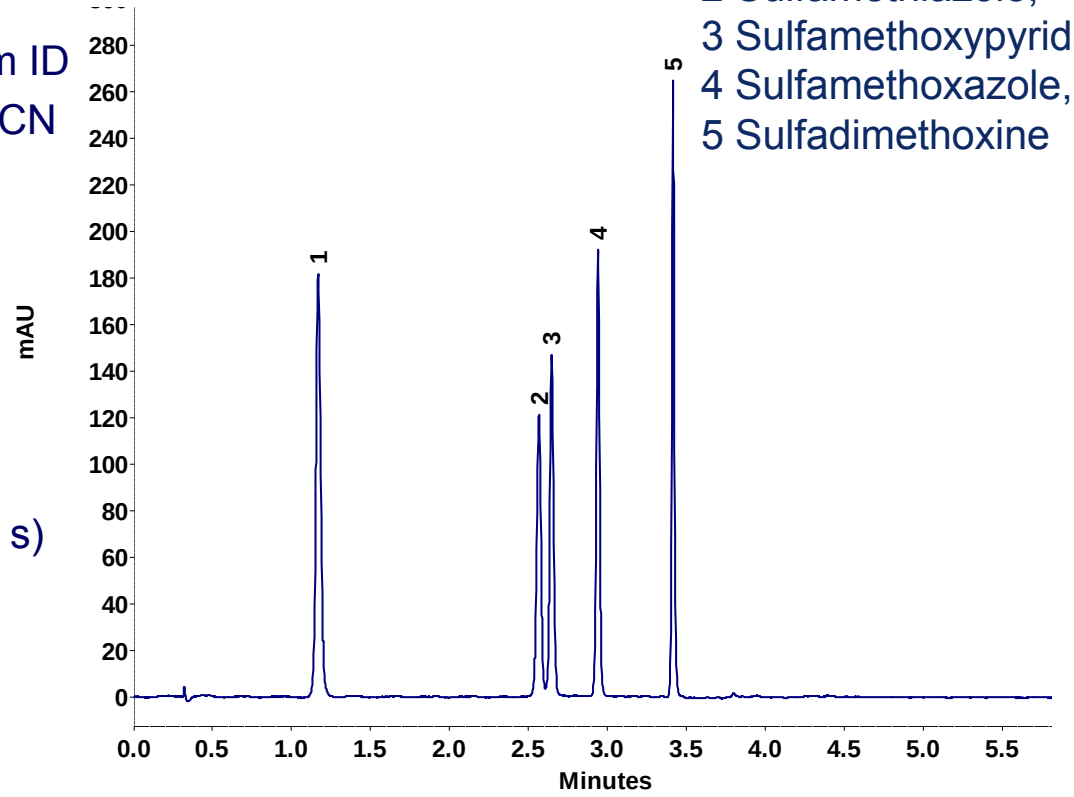
Separation of Sulfa drugs (II)

VPH0046J

- Pharmaceutical Application

Column: BS 100-2 C18A, 100 x 2.0 mm ID
Eluent: A: 0.2 g NaH_2PO_4 pH 4 B: ACN
Gradient: 0 – 1.8 min 8 % B
1.8 – 3.2 min 8 - 40 % B
3.2 – 4 min 40 % B
Flow: 1.0 ml/min
Volume: 10 µl
Temp.: 50 °C
Detection: PDA-1, 265 nm (100 Hz, 0.01 s)

1 Sulfadiazine,
2 Sulfamethiazole,
3 Sulfamethoxypyridazine
4 Sulfamethoxazole,
5 Sulfadimethoxine



Column Order No. 10BE184BSF

New

HPLC · SMB · Osmometry

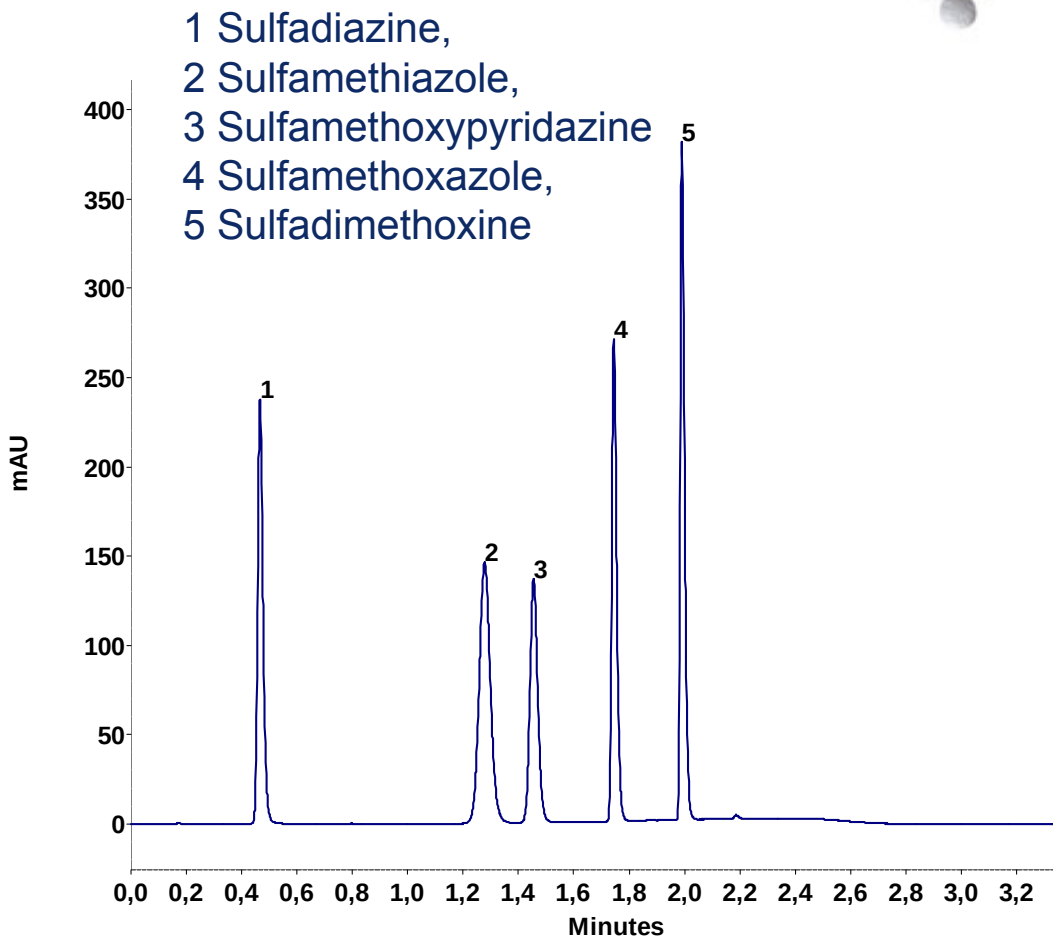
KNAUER

Separation of Sulfa drugs (III)

VPH0045J

- Pharmaceutical Application

Column: BlueShell 80-2.6 C18A core shell, 100 x 2.0 mm ID
Eluent: A: 0.2 g/L NaH_2PO_4 pH 4 B: ACN
Gradient: 0 – 1.1 min 8 % B
1.1 – 1.9 min 8 - 40 % B
1.9 – 2.3 min 40 % B
Flow: 1.7 ml/min
Volume: 1 µl
Temp.: 40 °C
Detection: PDA-1, 265 nm (50 Hz, 0.02 s)



Column Order No. 10BD184SHA

Separation of Taxanes (I)

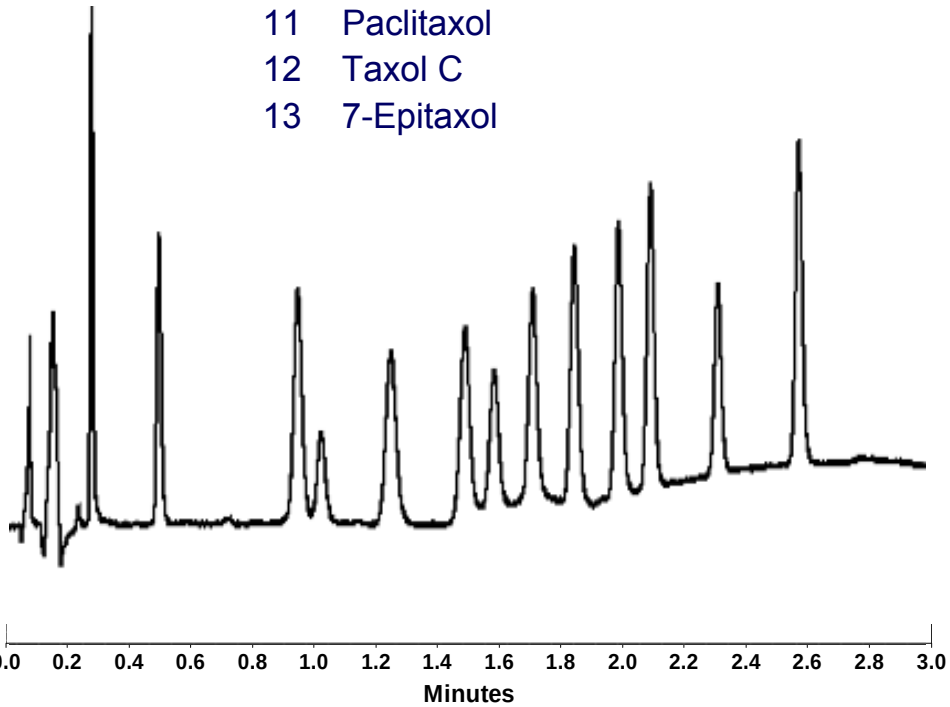
VPH0041J

- Pharmaceutical Application

Column:	50 x 2 mm BO PFP 1.8µm
Eluent:	A: H_2O
	B: MeOH/ACN 7:93 (v/v)
Gradient:	0 – 1.2 min 35% B
	1.2 – 4 min 58% B
	4 – 5 min 58% B (2 min)
Flow:	0.6 ml/min
Volume:	2 µl
Temp.:	30° C
Detection:	PDA-1, 220 nm (10mm 2 µl Cell)
	(100 Hz; 0.005s)

Column Order No. 05BI057BOE

1	10-Deacetyl baccatin
2	Baccatin III
3	10-Deacetyl 7 xylosyl taxol B
4	Taxinine M
5	10-Deacetyl 7 xylosyl taxol
6	10-Deacetyl taxol
7	10-Deacetyl 7 xylosyl taxol C
8	7-Xylosyl taxol
9	Cephalomanine
10	10-Deacetyl 7 epitaxol
11	Paclitaxol
12	Taxol C
13	7-Epitaxol

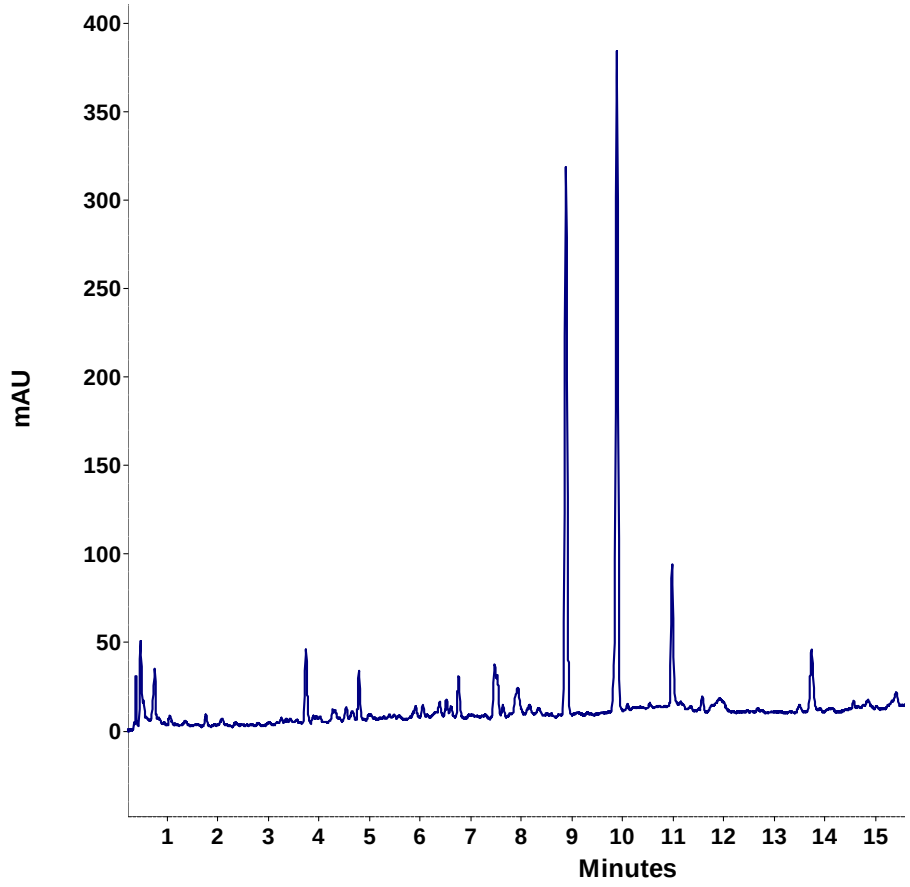


Separation of Taxanes (II) VPH0047J

- Pharmaceutical Application

Column: 100 x 2 mm BO C18A 1.8µm
Eluent: A: H_2O
B: ACN
Gradient: 0 – 12 min 30% B – 45% B
45% B 0.5 min
12.5 – 13 min 45% B – 30% B
13 – 16 min 30% B
Flow: 0.5 ml/min
Volume: 5 µl
Temp.: 40° C
Detection: PDA-1, 232 nm (10mm 2 µl Cell)
(100 Hz; 0.005s)

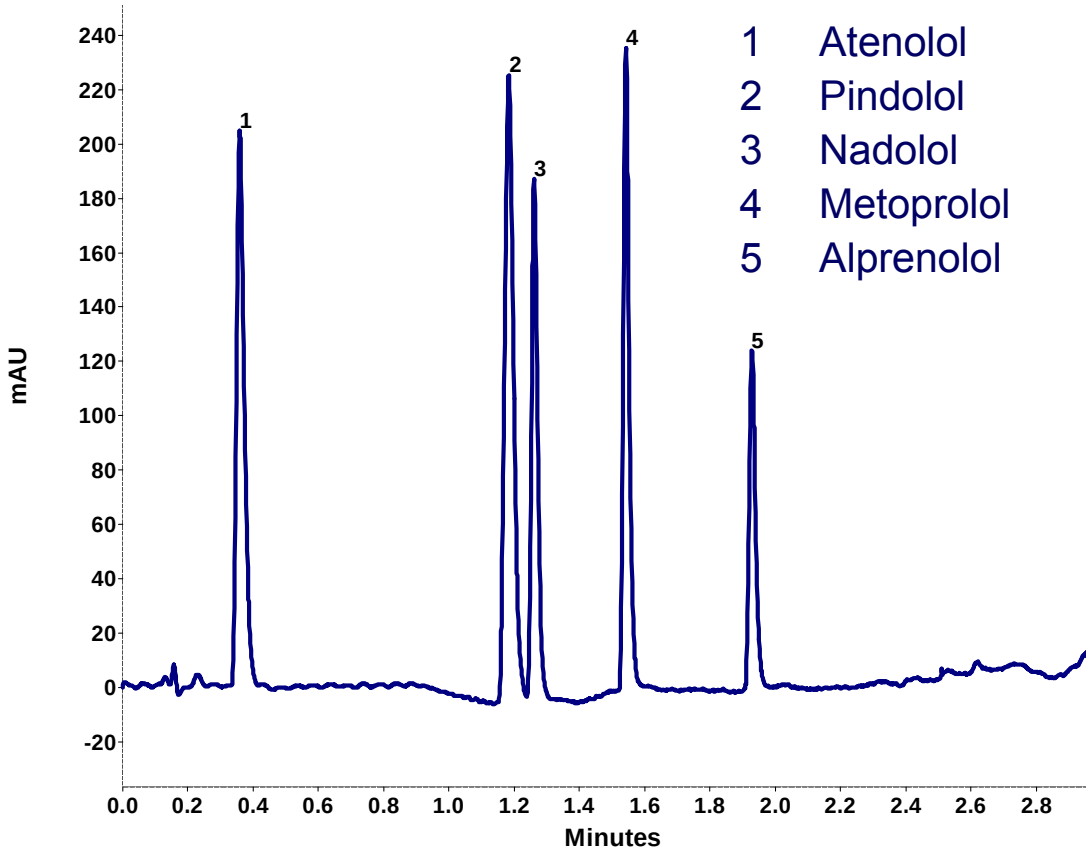
Column Order No. 10BI184BOE



Separation of ß-Blocker VPH0039J

- Pharmaceutical Application

Column: 50 x 2 mm BO C18 1.8µm
Eluent: A: 25 mM NaH_2PO_4 pH 2.7
B: Eluent A / ACN 40:60 (v/v)
Gradient: 0 – 0.6 min 11% B
0.6 – 2 min 11% - 75% B
Flow: 1 ml/min
Volume: 0.5 µl
Temp.: 35° C
Detection: PDA-1, 254 nm (10mm 2 µl Cell)
(100 Hz; 0.005s)
Pressure: 650 bar

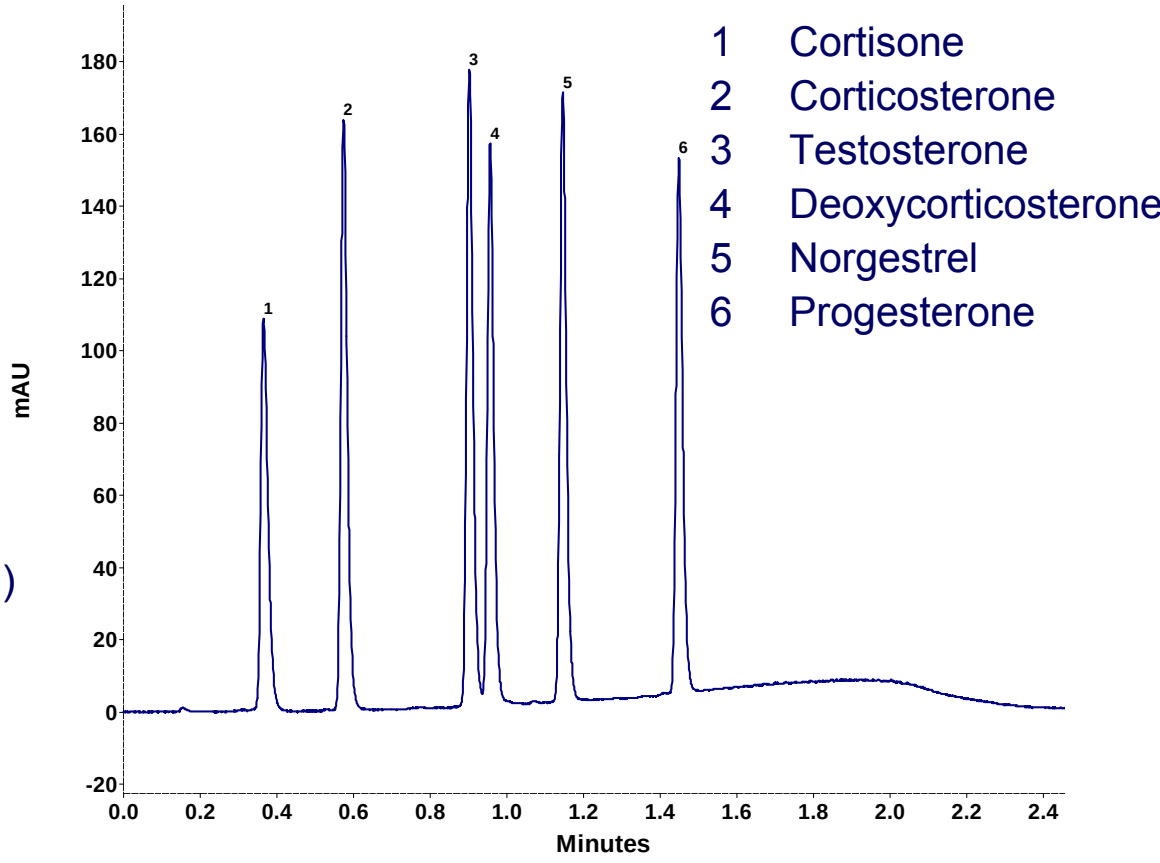


Column Order No. 05BI181BOE

Separation of Steroids (I) VCL0003J

- Pharmaceutical Application

Column: 50 x 2 mm BO C18 1.8µm
Eluent: A: H_2O
B: ACN
Gradient: 0 – 1.5 min 35% - 75 % B
1.5 – 2 min 75% B
Flow: 1 ml/min
Volume: 0.5 µl
Temp.: 30° C
Detection: PDA-1, 254 nm (10mm 2 µl Cell)
(100 Hz; 0.005s)
Pressure: 650 bar



Column Order No. 05BI181BOE

New

HPLC · SMB · Osmometry

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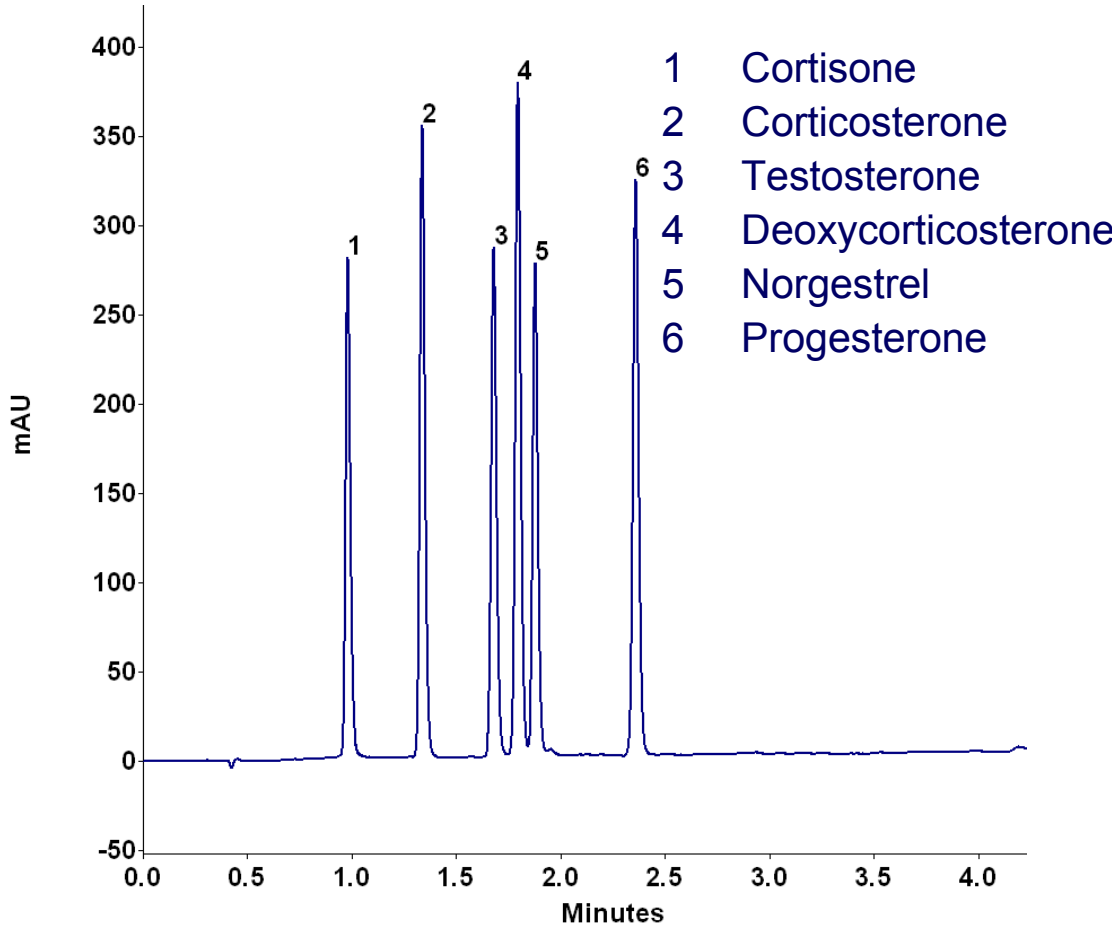
Separation of Steroids (II)

VPH0049J

- Pharmaceutical Application

Column: 100 x 2 mm BS C18 2µm
Eluent: A: H_2O
B: MeOH
Gradient: 0 – 4.40 min 50% - 95 % B
4.40 – 4.60 min 95% B
Flow: 0.8 ml/min
Volume: 2 µl
Temp.: 35° C
Detection: PDA-1, 254 nm (10mm 2 µl Cell)
(50 Hz; 0.02s)
Pressure: 750 bar

Column Order No. 10BE181BSF



New

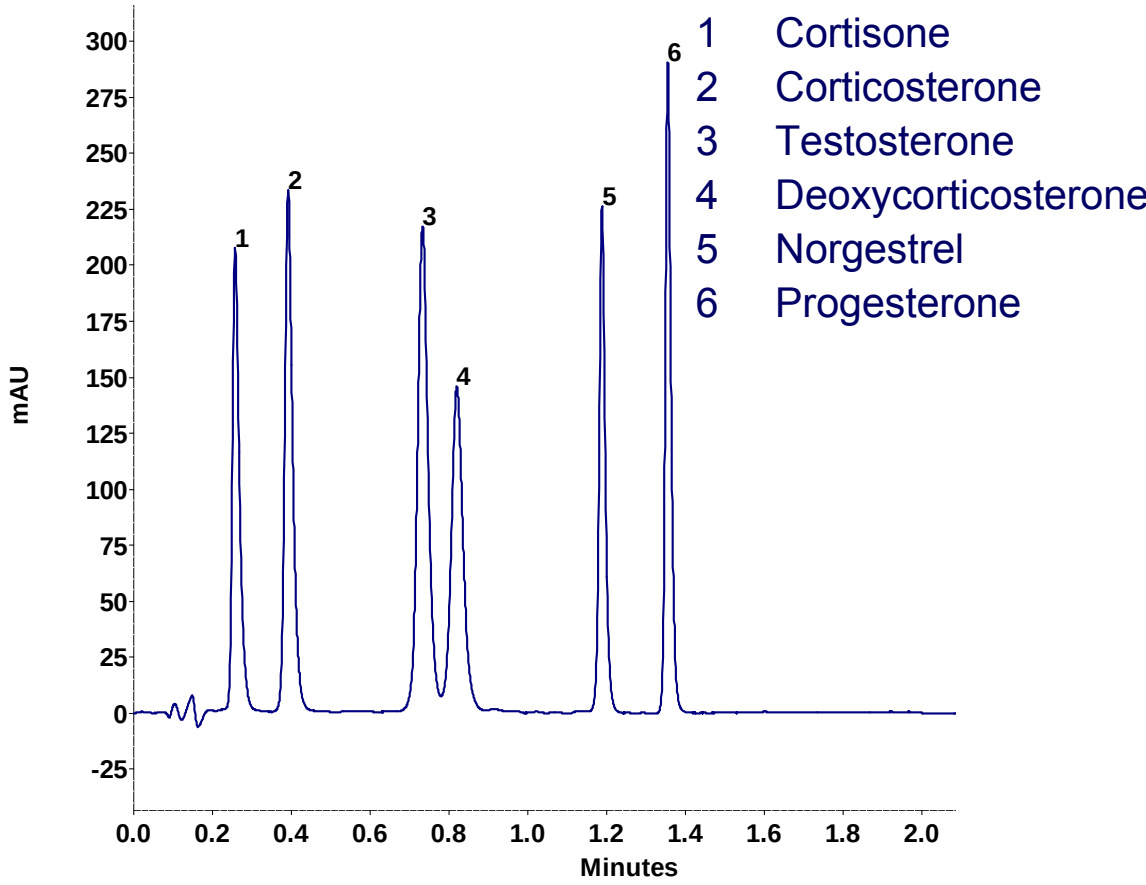
HPLC · SMB · Osmometry

KNAUER

Separation of Steroids (III) VPH0048J

- Pharmaceutical Application

Column: BS 100-2 C18 50 x 2.0 mm ID
Eluent: A: H2O, B: ACN
Gradient: 0 – 0.9 min 50 %
0.9 – 0.95 min 50 - 95 % B
0.95 – 1.3 min 95 % B
Flow: 0.8 ml/min
Volume: 10 µl
Temp.: 25 °C
Detection: PDA-1, 254 nm (50 Hz, 0.02 s)
Pressure: 415 bar



Column Order No. 05BE181BSF

New

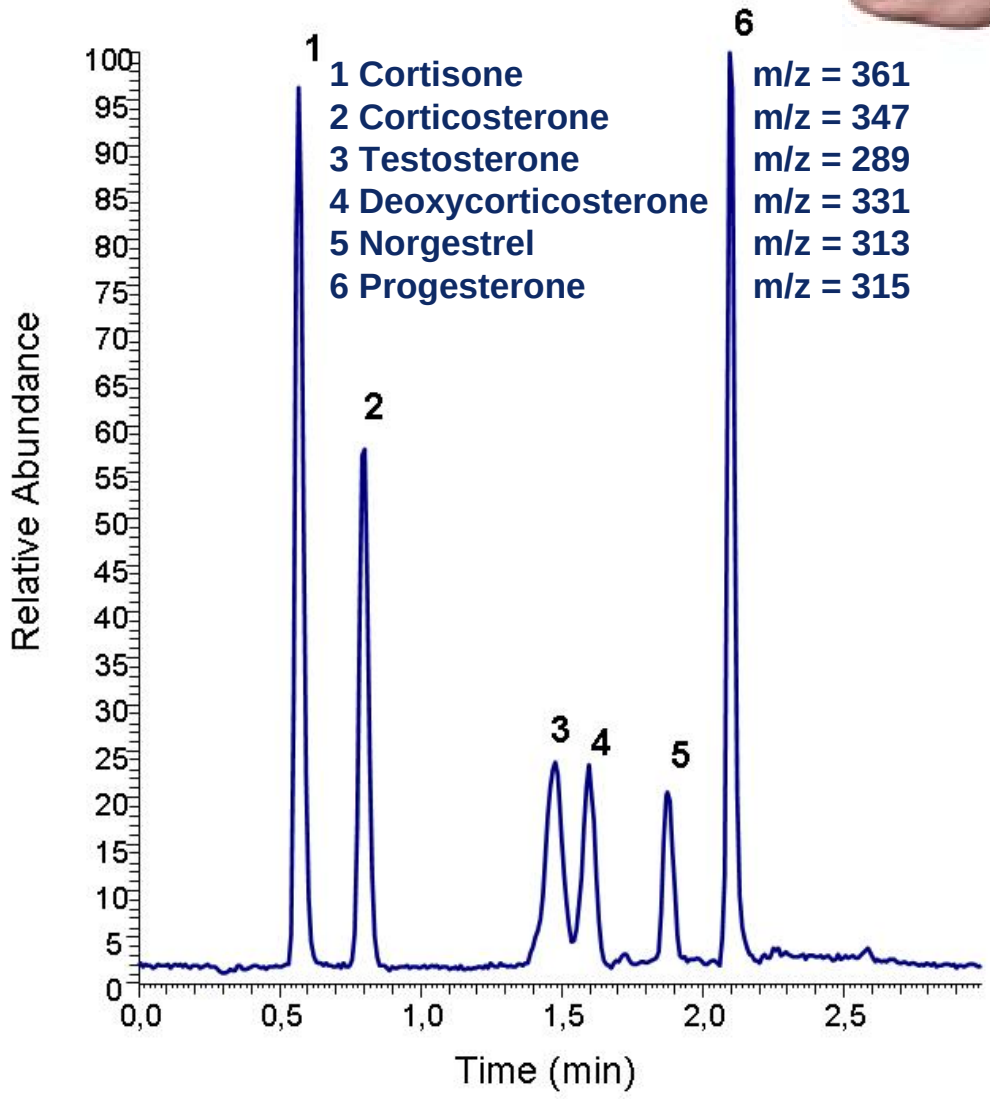
HPLC · SMB · Osmometry

KNAUER

Separation of Steroids with MS detection VPH0043J

Pharmaceutical Application

Column: BlueOrchid C18 50 x 2.0 mm ID
Eluent: A: H2O + 0.1 % FA
B: ACN + 0.1 % FA
Gradient: 0.0 – 1.0 min 40 % B
1.0 – 1.5 min 40 - 90 % B
1.5 – 2.0 min 90 % B
Flow: 0.4 ml/min
Volume: 5 µl
Temp.: 40 °C
Detection: MSQ Plus, ESI pos. mode,
Needle 3.5 kV, coneV 20 V,
Probe temperature 350 °C,
full scan m/z = 270 – 370



Column Order No. 05BI181BOE

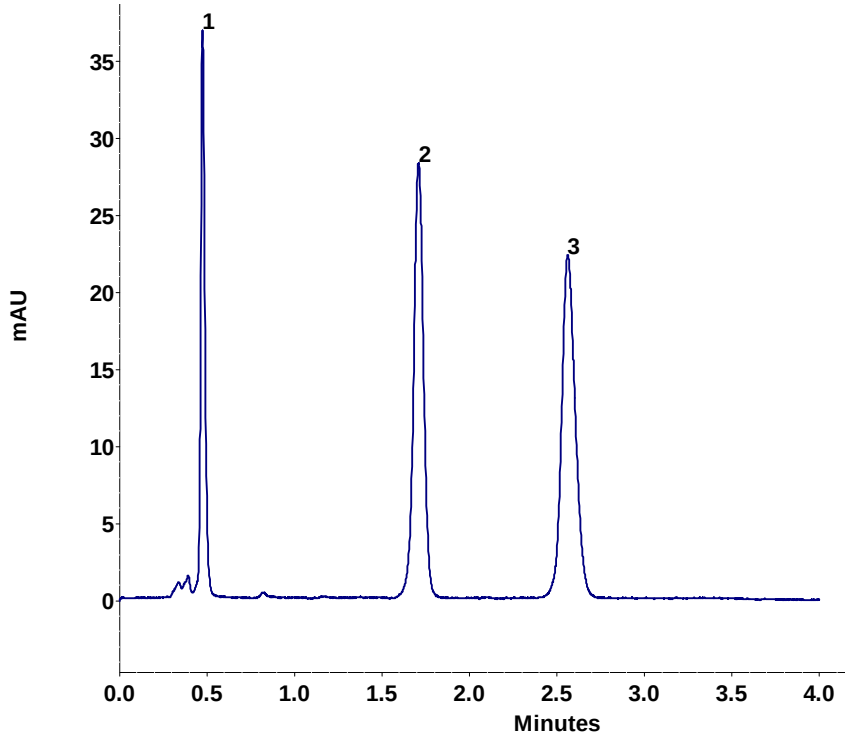
Separation of Clindamycin (QC)

VPH0006J

- Pharmaceutical Application

1 Imp. A
2 Clindamycin Phosphate
3 Imp. E

Column: 100 x 2 mm BO C18 A 1.8µm
Eluent: Buffer (13.6 g/L KH_2PO_4) / ACN 80:20 (v/v)
Flow: 0.7 ml/min
Temp.: 30° C
Volume: 5 µl
Detection: PDA-1, 210 nm (10mm 2 µl Cell; 50 Hz)



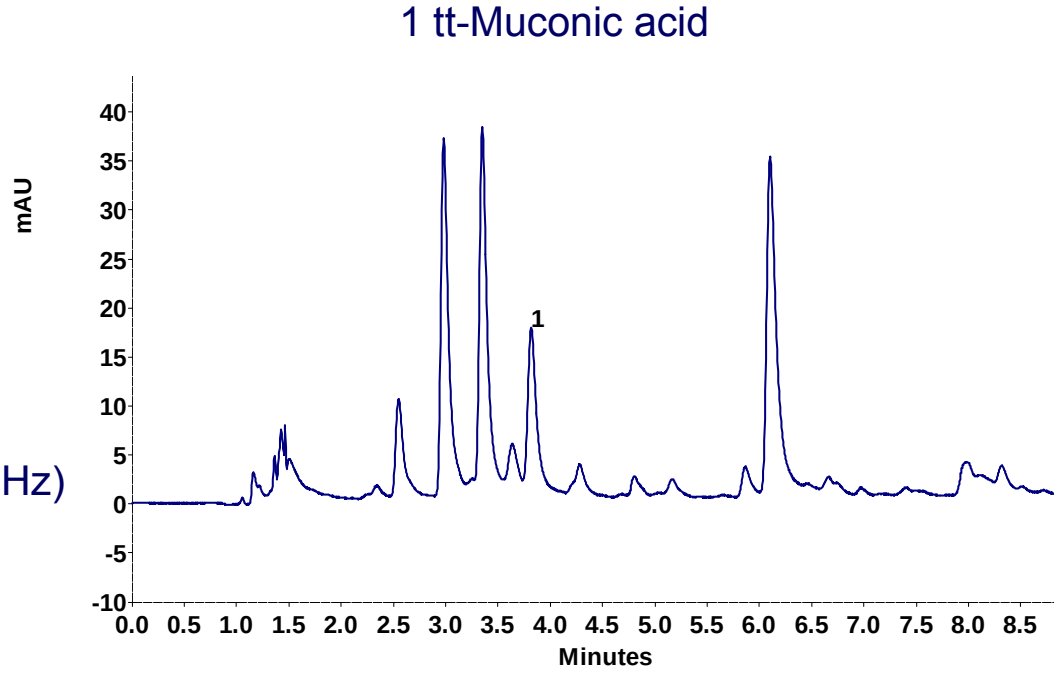
Column Order No. 10BI184BOE

Separation of tt-Muconic acid in urine

- Clinical Application

Column: 100 x 2 mm BO C18 A 1.8µm/ 100 x 2 mm BO Phenyl 1.8µm (column tandem)
Eluent: A: H_2O (1% Hac) B: MeOH
Gradient: 0 – 7.5 min 5% B – 25% B
7.5 – 7.6 min 25% B - 90% B
7.6 – 9.5 min 90 % B
9.5 – 9.6 min 90% B - 5% B
Flow: 0.4 ml/min
Temp.: 40° C
Volume: 10 µl
Detection: PDA-1, 259 nm (10mm 2 µl Cell; 50 Hz)

Column Order No. 10BI184BOE
10BI050BOE

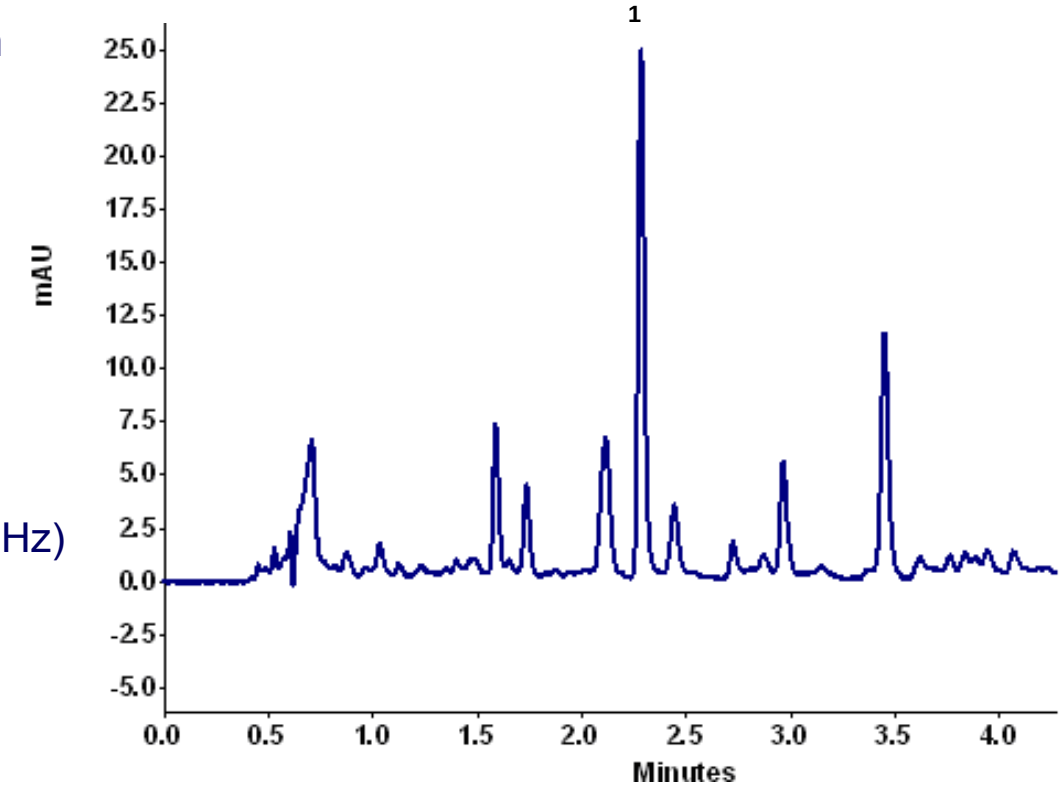


Separation of tt-Muconic Acid in urine (II)

- Clinical Application

Column: 100 x 2 mm fused Core C18 1.7 µm
Eluent: A: H_2O (1% Hac) B: MeOH
Gradient: 0 – 4.17 min 5% B – 25% B
4.17 – 4.19 min 25% B - 90% B
4.19 – 5.21 min 90 % B
5.21 – 5.23 min 90% B - 5% B
Flow: 0.4 ml/min
Temp.: 30° C
Volume: 2 µl
Detection: PDA-1, 259 nm (10mm 2 µl Cell; 50 Hz)

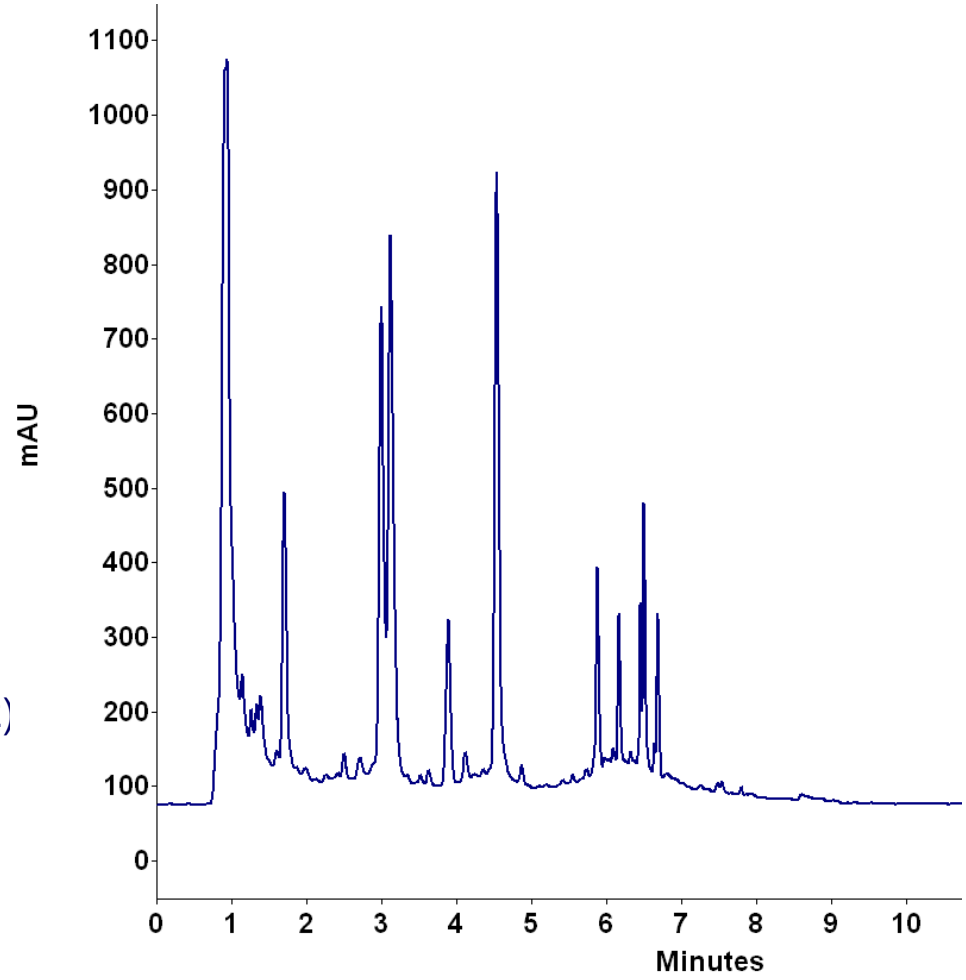
1 tt-Muconic acid



Separation of Ginkgo Extract

- Pharmaceutical Application

Column: 100 x 2 mm BO C8 1.8 µm
Eluent: A: H_2O (0.1% TFA) B: MeOH
Gradient: 0 – 1.30 min 70% B
1.30 – 3.80 min 70% B - 80% B
3.80 – 5.00 min 80 % - 100% B
5.00 – 7.60 min 100% B
Flow: 0.3 ml/min
Temp.: 25° C
Volume: 2 µl
Detection: PDA-1, 270 nm (10mm 2 µl Cell; 50 Hz)



Column Order No. 10BI081BOE

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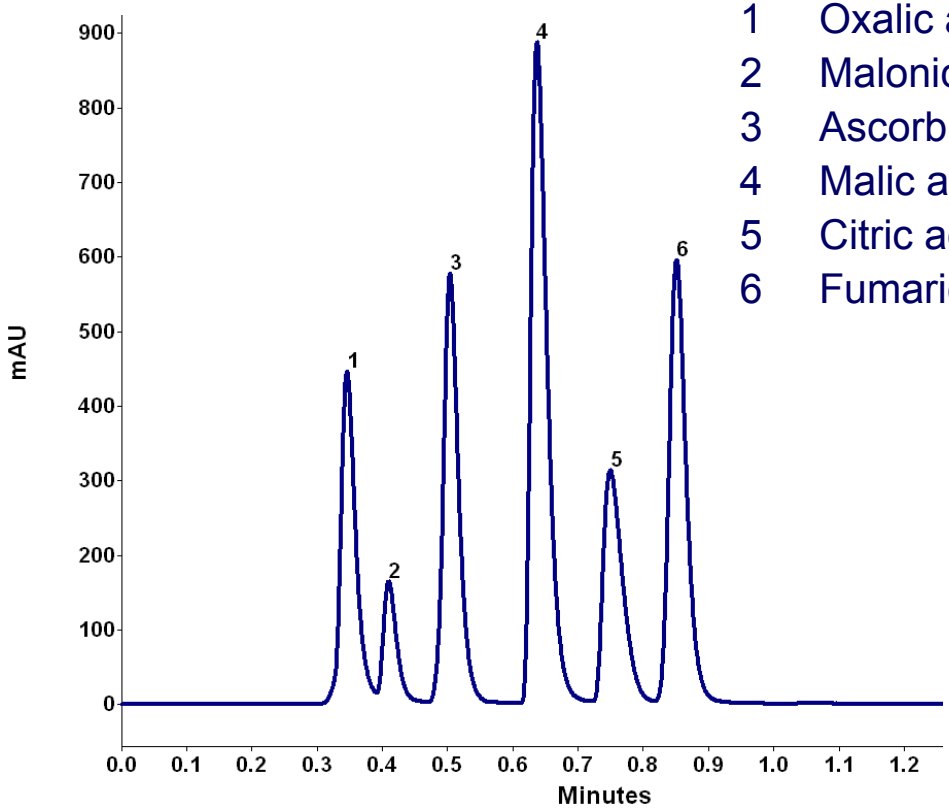
Food and Beverage Applications

Determination of Organic acids

VFD0074J

- Food & Beverage application

Column: 100 x 2 mm BO C18A 1.8 µm
Eluent: 1.7 mMol NaH_2PO_4 (pH 2.5)
Flow: 700 µl/min
Temp.: 30° C
Detection: UV, 210 nm (100 Hz; 0.001s)

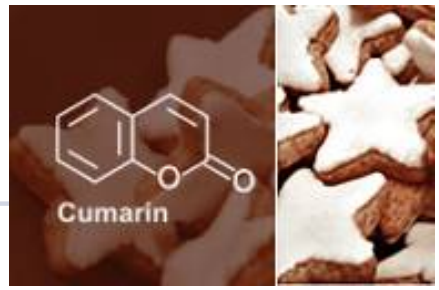


1 Oxalic acid
2 Malonic acid
3 Ascorbic acid
4 Malic acid
5 Citric acid
6 Fumaric acid

Column Order No. 10BI184BOE

Determination of Cumarin

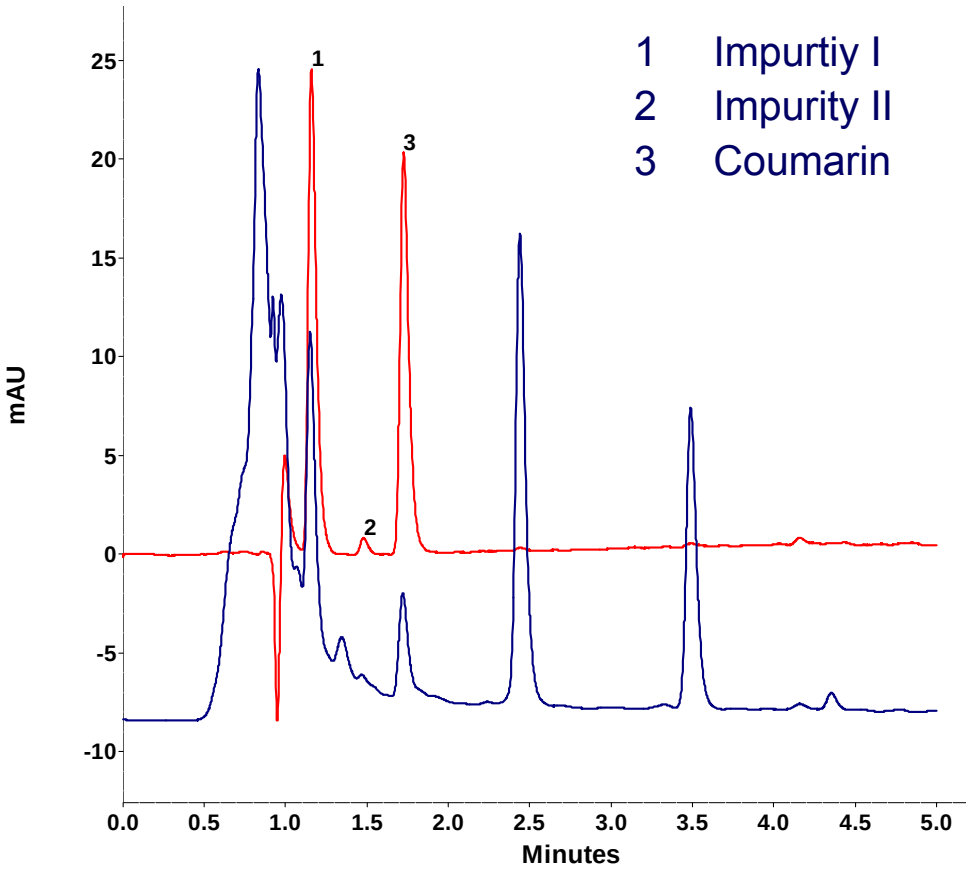
VFD0073J



- Food & Beverage application

standard (red) and sample (blue)

Column: 100 x 2 mm BO C18 1.8 µm
Eluent: A: H_2O / B: MeOH
Gradient: 50% B – 70% in 4.60 min
70% B – 95% B 4.60 – 4.70 min
(1.25 min hold)
95% B – 50% B 5.95 – 6.00 min
(3 min hold)
Flow: 300 µl/min
Temp.: 30° C
Detection: UV, 278 nm (50 Hz; 10mm, 2 µl)



Column Order No. 10BI181BOE

Determination of Preservatives

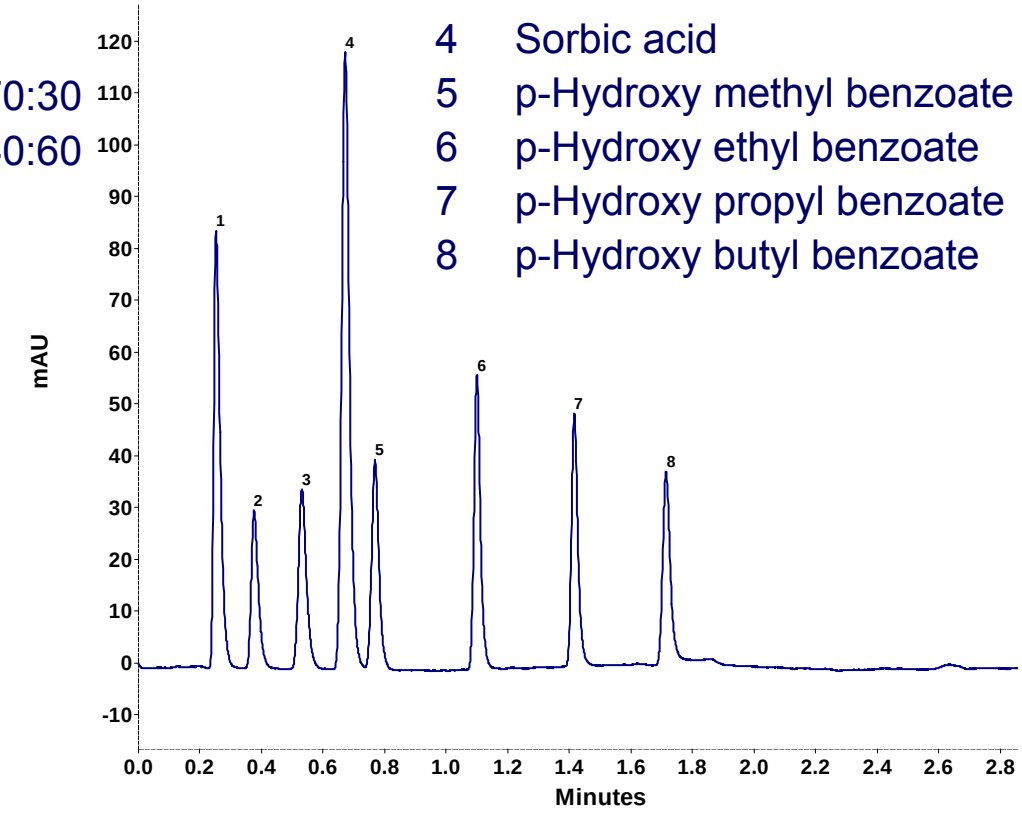
VFD0075J

- Food & Beverage application

Column: 50 x 2 mm BO C18 1.8µm
Eluent: A: Ammonium formiate buffer/MeOH 70:30
B: Ammonium formiate buffer/MeOH 40:60
Gradient: 0 – 0.1 min 100% A
0.1 – 0.5 min 100% - 60% A
0.5 – 1.2 min 60 %A
1.2 – 2 min 0% A
Flow: 850 µl/min
Volume: 0.5 µl
Temp.: 40° C
Detection: PDA-1, 240 nm (10mm 2 µl Cell)
(100 Hz; 0.005s)

Column Order No. 05BI181BOE

1 4-Hydroxy benzoic acid
2 2-Methoxy benzoic acid
3 Benzoic acid
4 Sorbic acid
5 p-Hydroxy methyl benzoate
6 p-Hydroxy ethyl benzoate
7 p-Hydroxy propyl benzoate
8 p-Hydroxy butyl benzoate

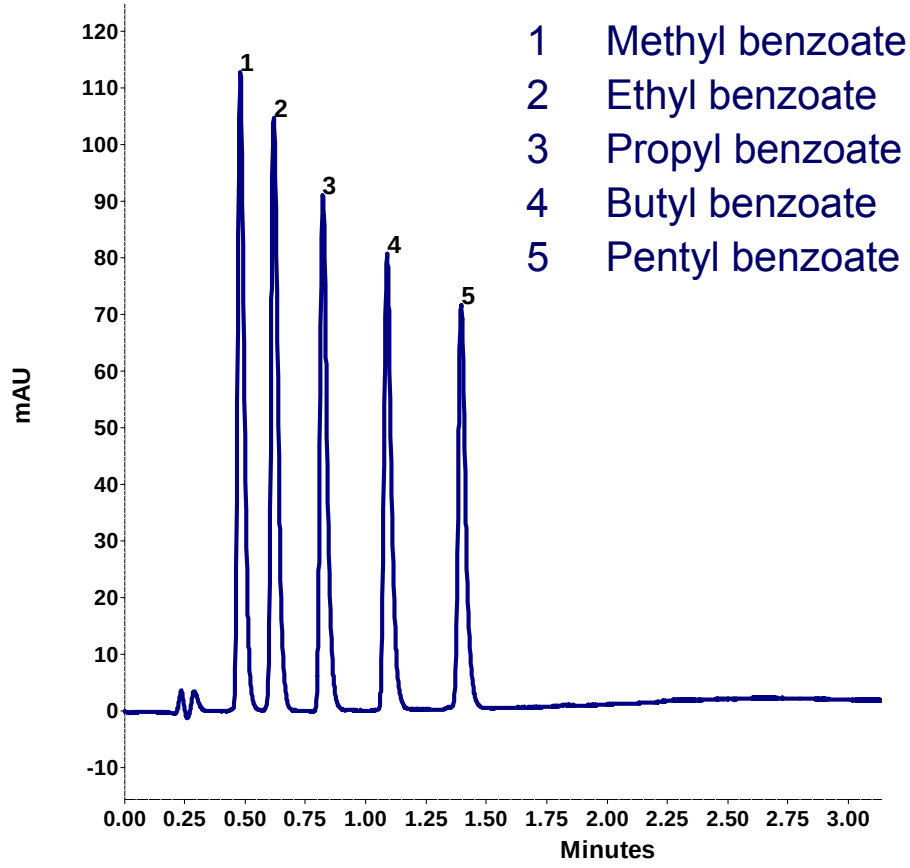


Determination of Benzoates (I)

VFD0071J

- Food & Beverage application

Column: 50 x 2 mm BO C18 1.8µm
Eluent: A: Water
B: Methanol
Gradient: 0 – 2 min 55% - 90% B
2 – 3 min 90% B
3 – 3.5 min 60% B
Flow: 0.6 ml/min
Volume: 1 µl
Temp.: 30° C
Detection: PDA-1, 254 nm



Column Order No. 05BI181BOE

New

HPLC · SMB · Osmometry

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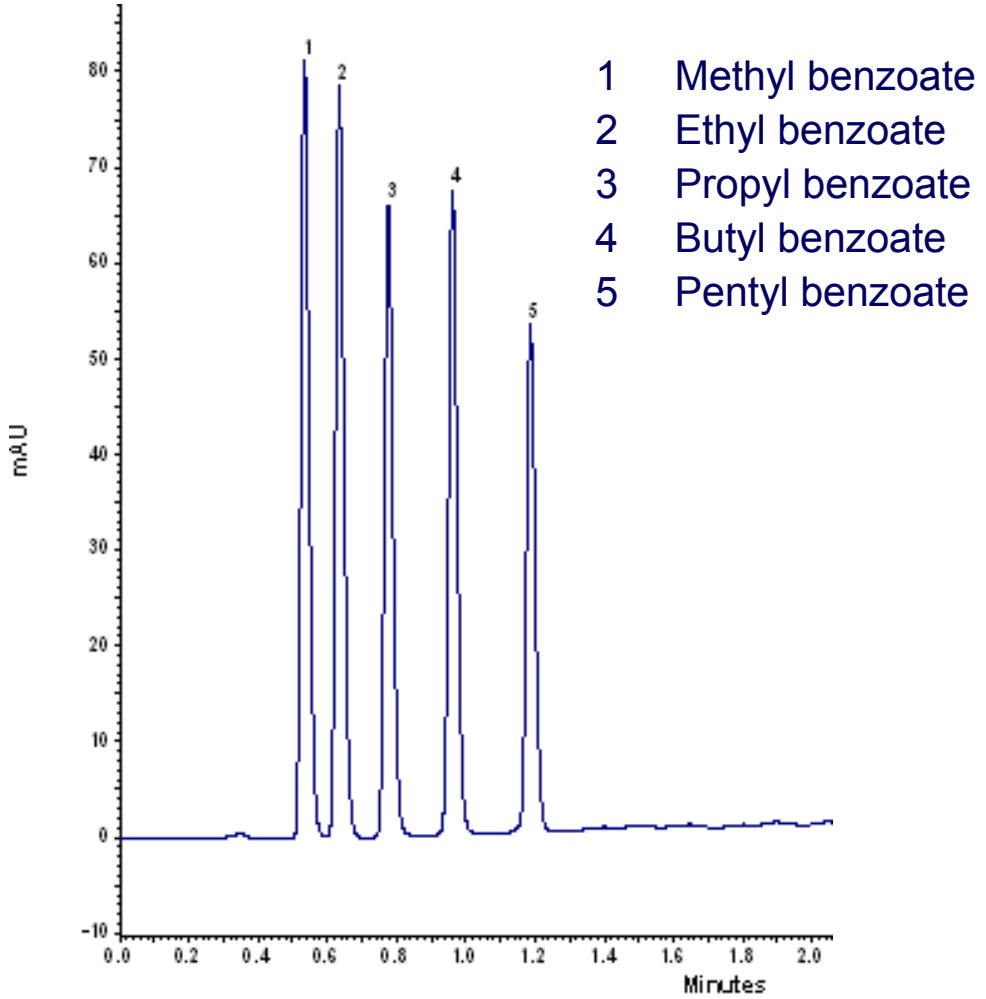
Determination of Benzoates (II)

VFD0097J

- Food & Beverage application

Column: 100 x 2 mm BO C18 1.8µm
Eluent: A: Water
B: ACN
Gradient: 0 – 2 min 65% - 90% B
2 – 3 min 90% B
3 – 3.1 min 65% B
Flow: 0.8 ml/min
Volume: 1 µl
Temp.: 30° C
Detection: PDA-1, 240 nm



1 Methyl benzoate
2 Ethyl benzoate
3 Propyl benzoate
4 Butyl benzoate
5 Pentyl benzoate

Column Order No. 10BI181BOE

New

HPLC · SMB · Osmometry

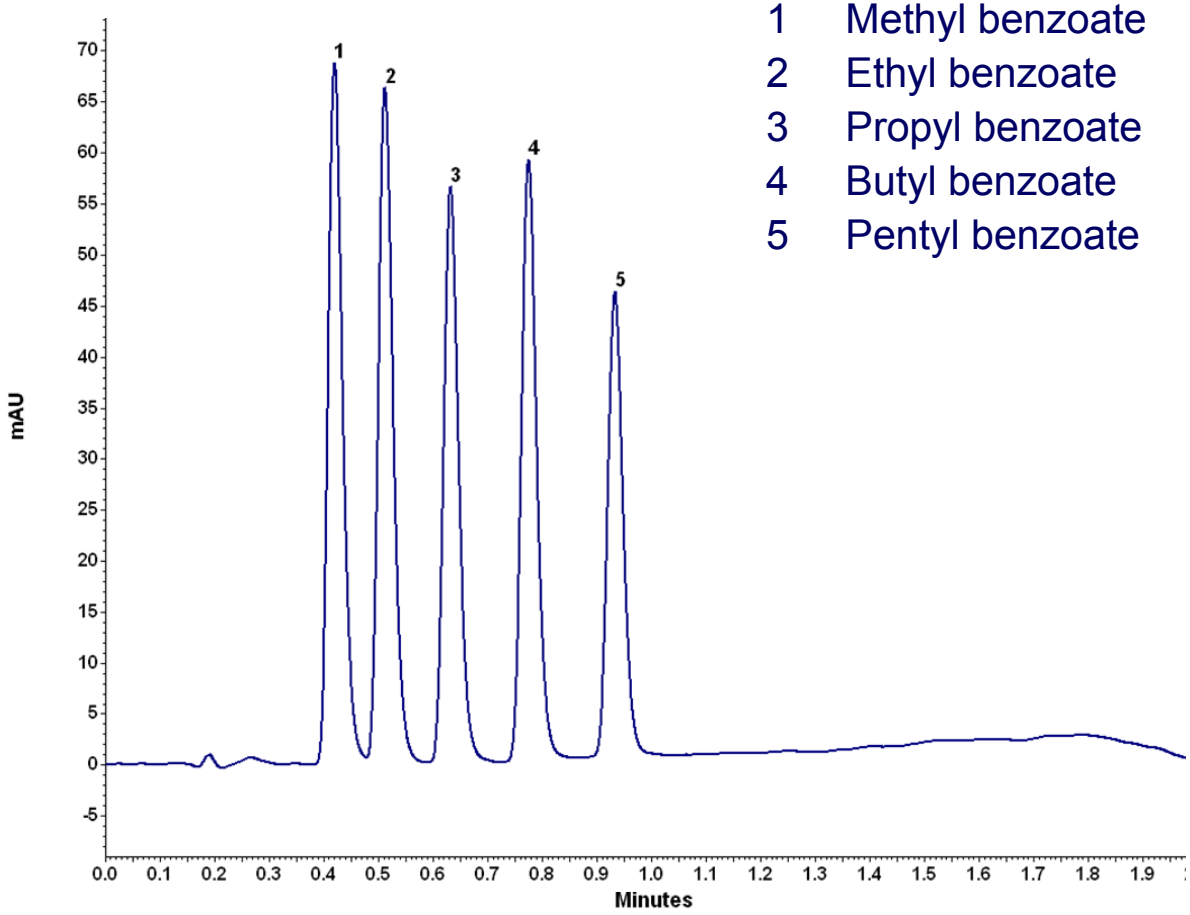
KNAUER

Determination of Benzoates (III)

VFD0098J

- Food & Beverage application

Column: 50 x 2 mm BS C18A
Eluent: A: Water
B: ACN
Gradient: 0 – 1.5 min 55% - 90% B
1.5 – 2 min 90% B
2 – 3 min 55% B
Flow: 0.8 ml/min
Volume: 1 µl
Temp.: 30° C
Detection: PDA-1, 240 nm



1 Methyl benzoate
2 Ethyl benzoate
3 Propyl benzoate
4 Butyl benzoate
5 Pentyl benzoate

Column Order No. 05BE184BSF

New

HPLC · SMB · Osmometry

KNAUER

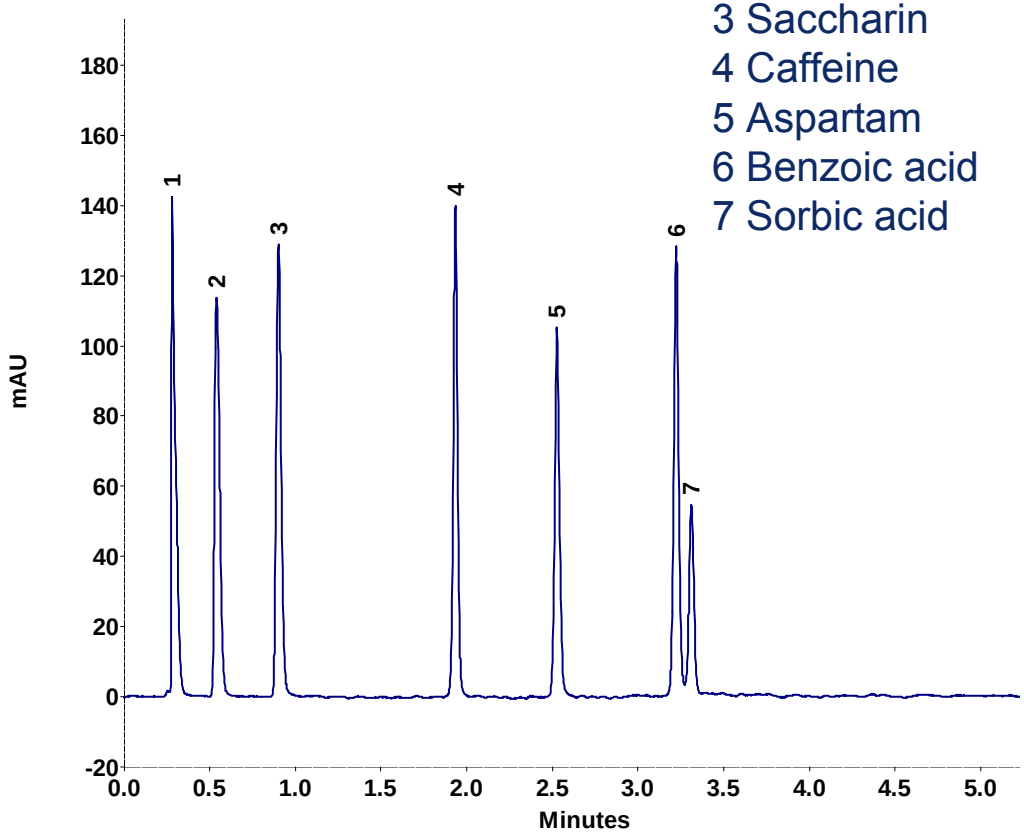
Determination of Softdrink Additives

VFD0099J

- Food & Beverage application

Column: BS 100-2 C18P, 100 x 2.0 mm ID
Eluent: A: 20 mM KH2PO4 pH 3 B: MeOH
Gradient: 0 – 3 min 10 – 40 % B
3 – 4 min 40 % B
4 – 4.1 min 40 - 10 % B
Flow: 0.8 ml/min
Volume: 10 µl
Temp.: 50 °C
Detection: PDA-1, 220 nm (50 Hz, 0.02 s)

1 Ascorbic acid
2 Acesulfam K
3 Saccharin
4 Caffeine
5 Aspartam
6 Benzoic acid
7 Sorbic acid



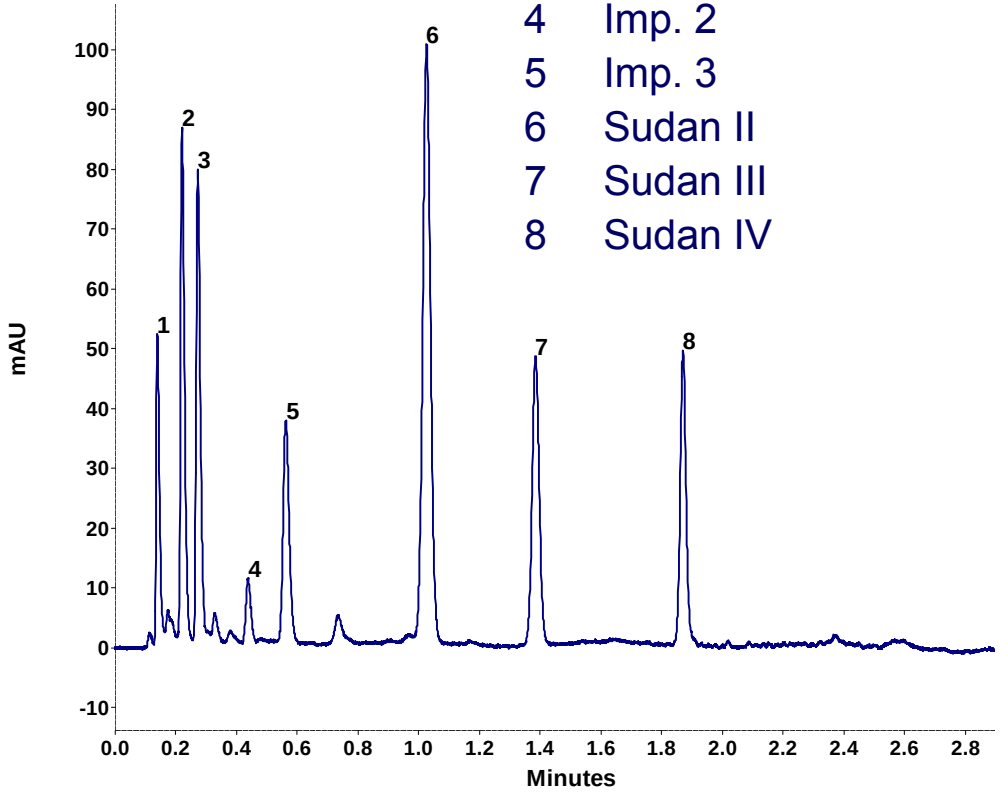
Column Order No. 10BE182BSF

Determination of Sudan Dyes (I)

VFD0076J

- Food & Beverage application

Column: 50 x 2 mm BO C18 1.8µm
Eluent: A: Water (+ 0.1% Formic acid)
B: ACN (+ 0.1% Formic acid)
Gradient: 0 – 0.5 min 70 % B
0.5 – 1.5 min 100 % B
1.5 – 2.0 min 100 % B
Flow: 1 ml/min
Volume: 1 µl
Temp.: 25° C
Detection: PDA-1, 240 nm (10 mm 2 µl Cell)
(50 Hz; 0.01s)



1 Imp. 1
2 4-Phenylazophenol
3 α-Naphthyl Red
4 Imp. 2
5 Imp. 3
6 Sudan II
7 Sudan III
8 Sudan IV

Column Order No. 05BI181BOE

New

HPLC · SMB · Osmometry

KNAUER

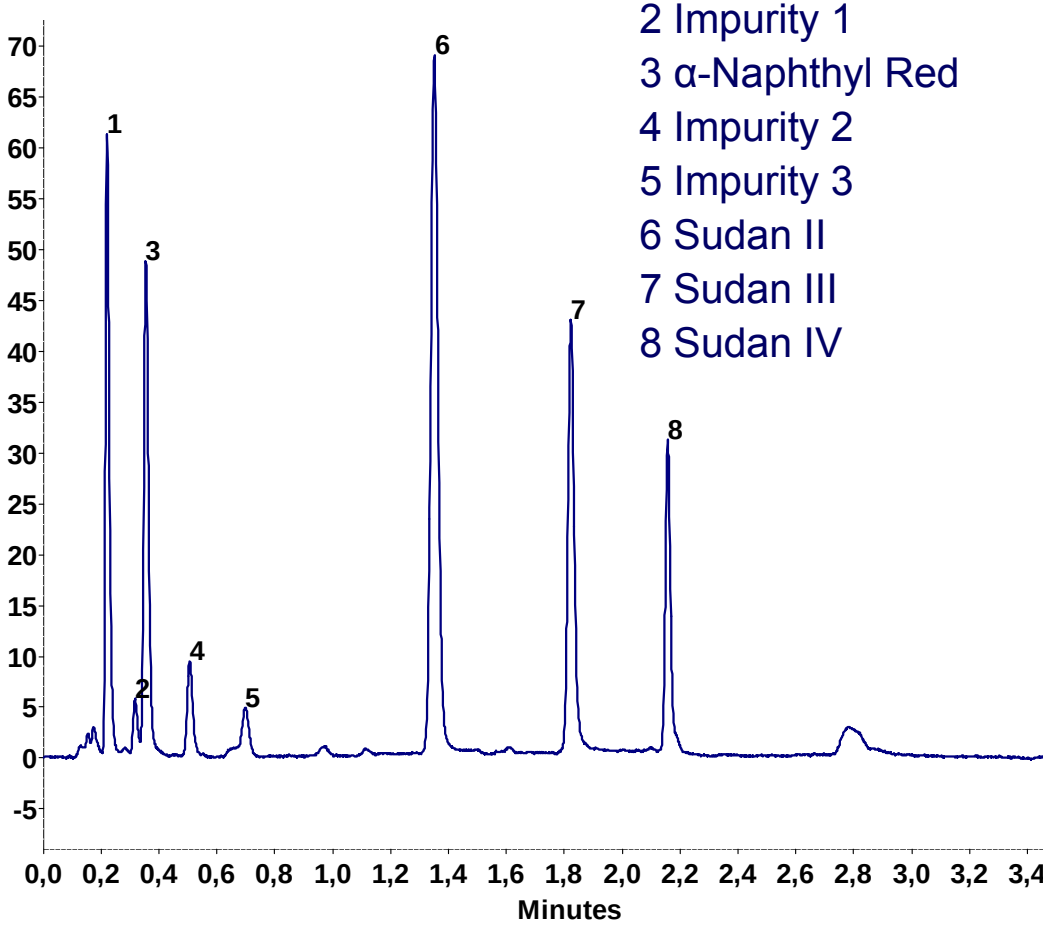
Determination of Sudan Dyes (II)

VFD0094J

- Food & Beverage application

Column: BlueShell 80-2.6 C18 core shell, 100 x 2 mm ID
Eluent: A: Water
B: ACN
Gradient: 0 – 0.6 min 70 % B
0.6 – 1.9 min 70 - 100 % B
1.9 – 2.5 min 100 % B
Flow: 1.6 ml/min
Volume: 1 µl
Temp.: 25° C
Detection: PDA-1, 240 nm (10 mm 2 µl Cell)
(50 Hz; 0.02s)

Column Order No. 10BD181SHA



KNAUER

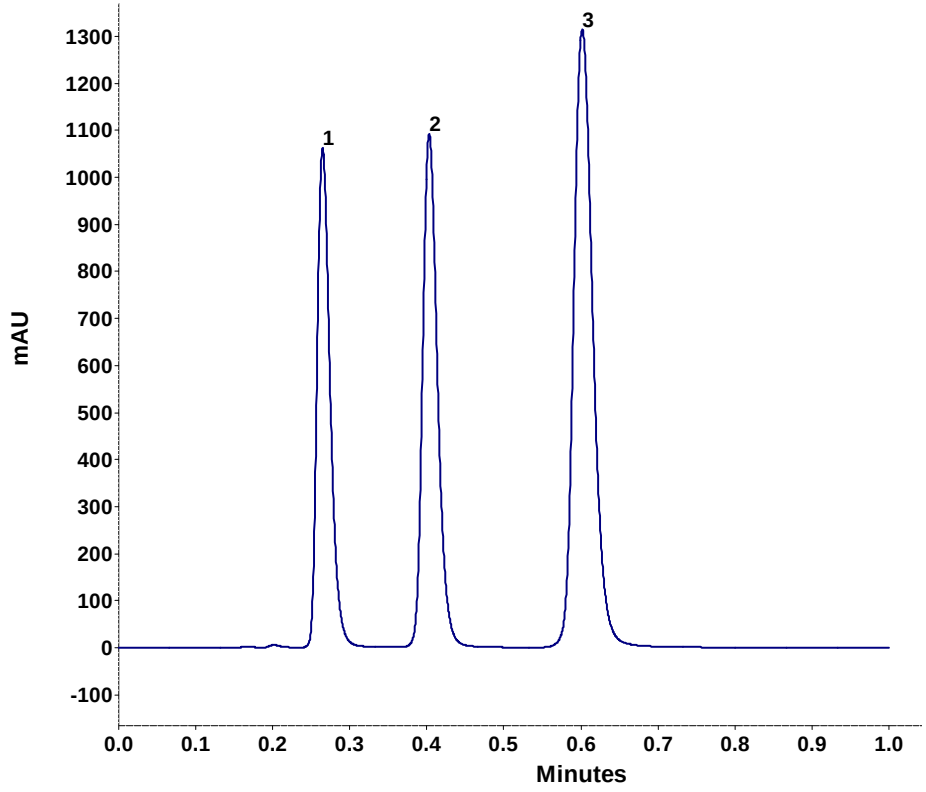
Determination of Xanthins

VFD0078J

- Food & Beverage application

1 Theobromine
2 Theophyline
3 Caffeine

Column: 50 x 2 mm BO C18 1.8µm
Eluent: A: Water
B: MeOH
Gradient: isocratic 80% A 20% B
Flow: 0.8 ml/min
Volume: 1 µl
Temp.: 30° C
Detection: PDA-1, 275 nm (10 mm 2 µl Cell)
(50 Hz; 0.01s)



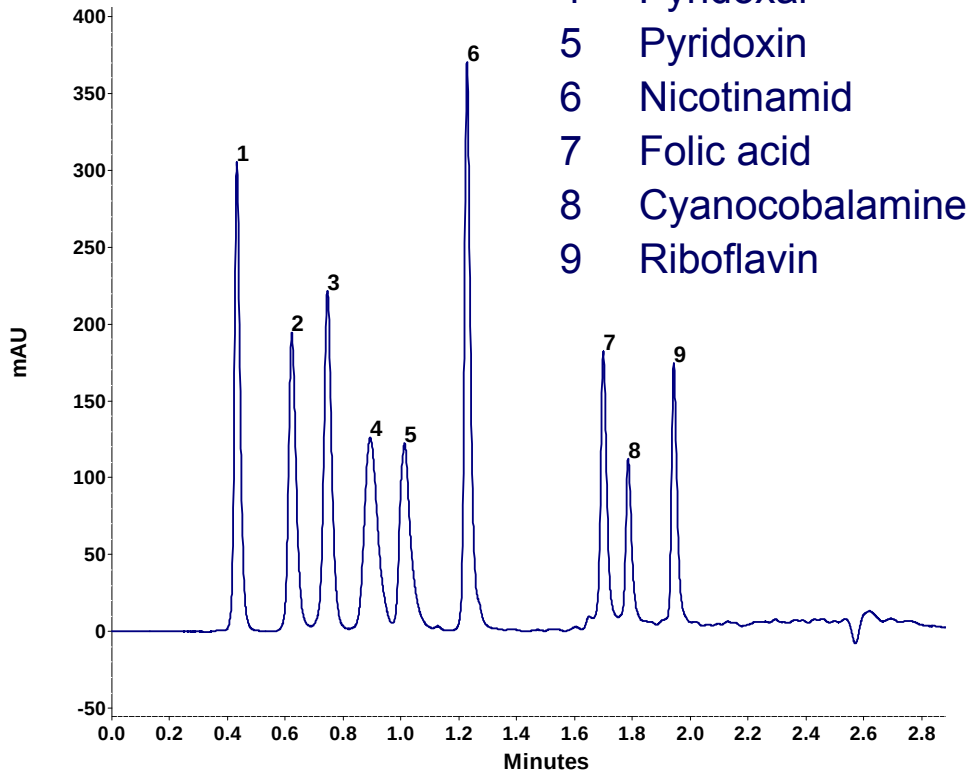
Column Order No. 05BI181BOE

Determination of water soluble Vitamins (I)

VFD0012J

- Food & Beverage application

Column: 100 x 2 mm BO C18 A 1.8µm
Eluent: A: 50 mM NaH_2PO_4 pH 4
B: MeOH
Gradient: 0 – 0.2 min 0 % B
0.2 – 1.5 min 70 % B
1.5 – 2.5 min 70 % B
Flow: 700 µl/min
Volume: 1 µl
Temp.: 30° C
Detection: PDA-1, 254 nm (10 mm 2 µl Cell)
(50 Hz; 0.01s)



Column Order No. 10BI184BOE

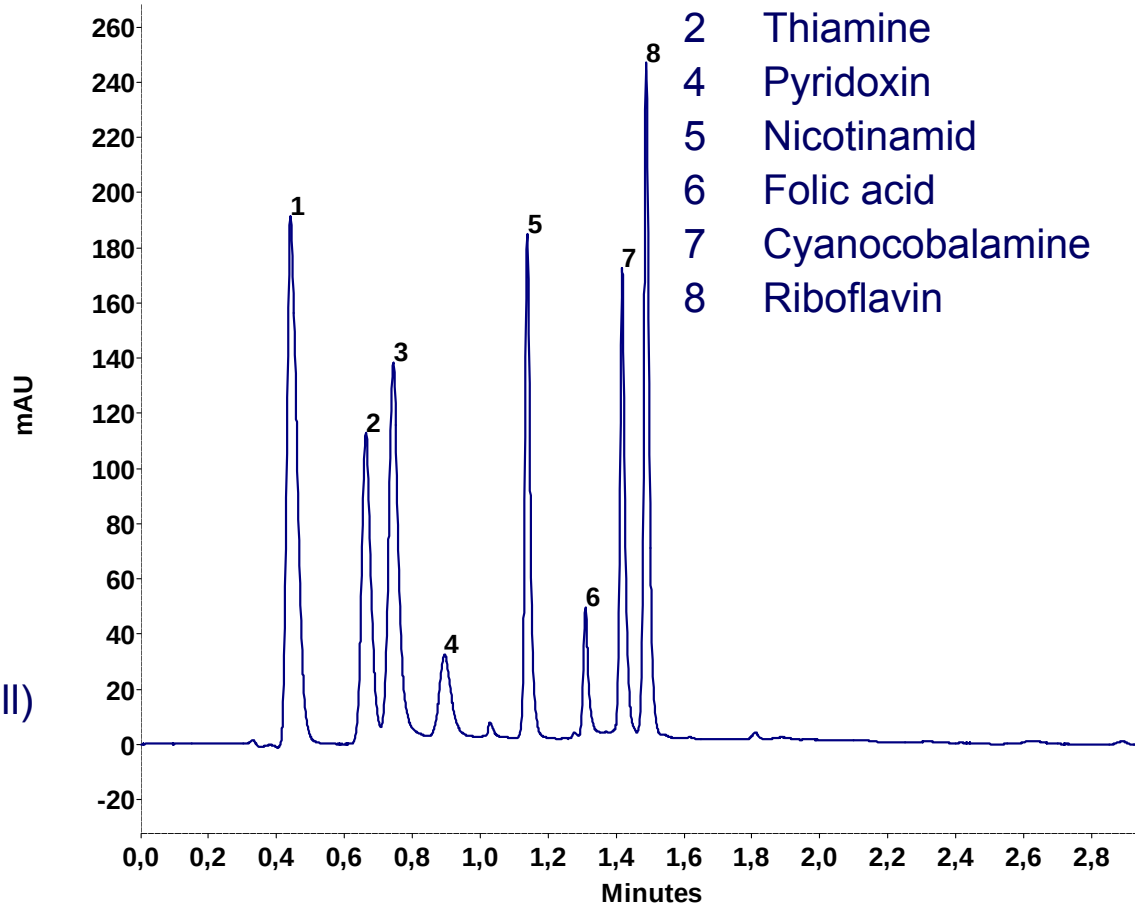
Determination of water soluble Vitamins (II)

VFD0100J

- Food & Beverage application

Column: Bluespher 100-2 C18A
100 x 2 mm ID
Eluent: A: 50 mM KH_2PO_4 pH 4
B: ACN
Gradient: 0 – 0.2 min 0 % B
0.2 – 1.5 min 50 % B
1.5 – 2.5 min 50 % B
Flow: 700 µl/min
Volume: 10 µl
Temp.: 45° C
Detection: PDA-1, 254 nm (10 mm 2 µl Cell)
(50 Hz; 0.02s)

Column Order No. 10BE184BSF



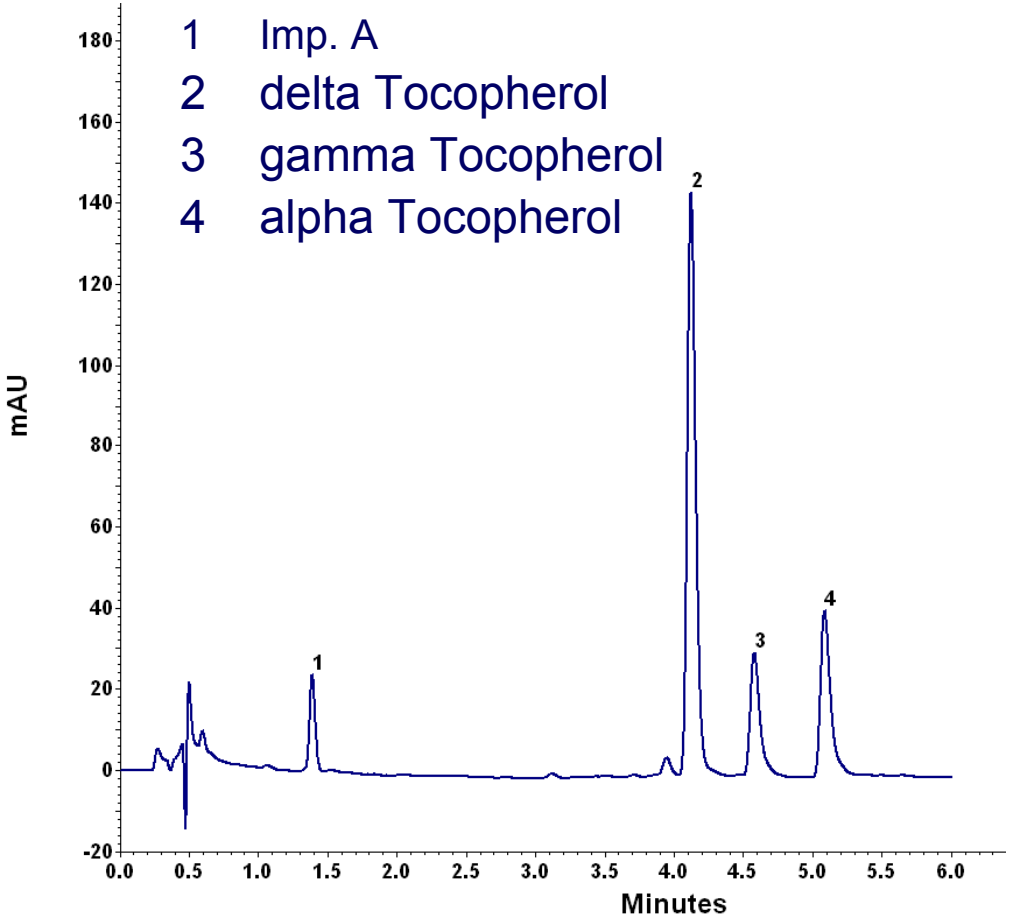
Determination of Tocopherols (I)

VFD0092J

- Food & Beverage application

Column: 100 x 2 mm BS C18 A
Eluent: A: H_2O
B: ACN
Gradient: 0 – 4 min 80 % - 95% B
4 – 6 min 95 % B
6.02 min 80 % B, 3 min hold
Flow: 0.6 ml/min
Volume: 2 µl
Temp.: 30° C
Detection: PDA-1, 215 nm,10 mm 2 µl Cell (50 Hz; 0.01s)

Column Order No. 10BE184BSF



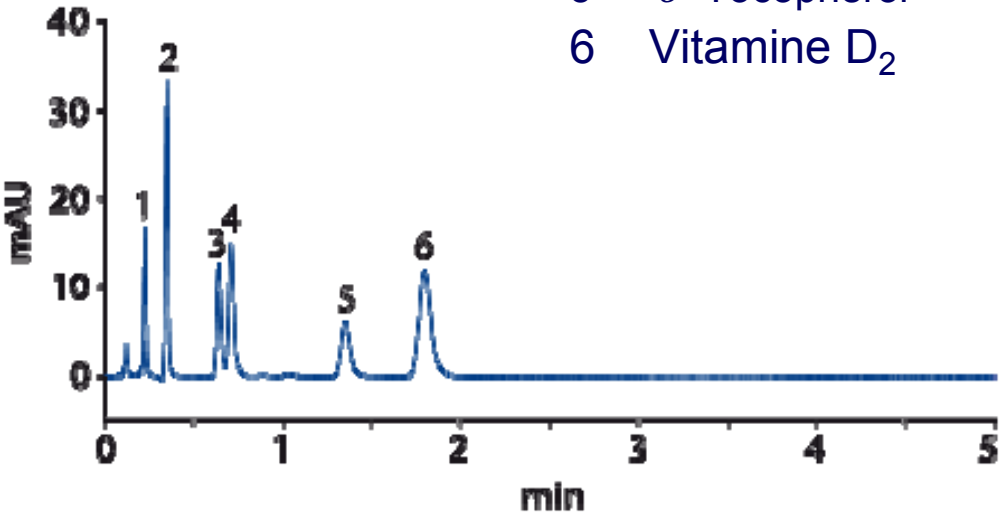
Determination of Tocopherols (II)

VFD0077J

- Food & Beverage application

Column: 50 x 2 mm BO Si 1.8µm
Eluent: Heptane/2-Butanol (1000:4, v/v)
Flow: 1.7 ml/min
Volume: 1 µl
Temp.: 25° C
Detection: MW-1, 280 nm (2 µl Cell)
(50 Hz; 0.01s)
Pressure: 350 bar

1 Trans-Retinol
2 α-Tocopherol
3 ß-Tocopherol
4 γ -Tocopherol
5 δ -Tocopherol
6 Vitamine D_2



Column Order No. 05BI000BOE

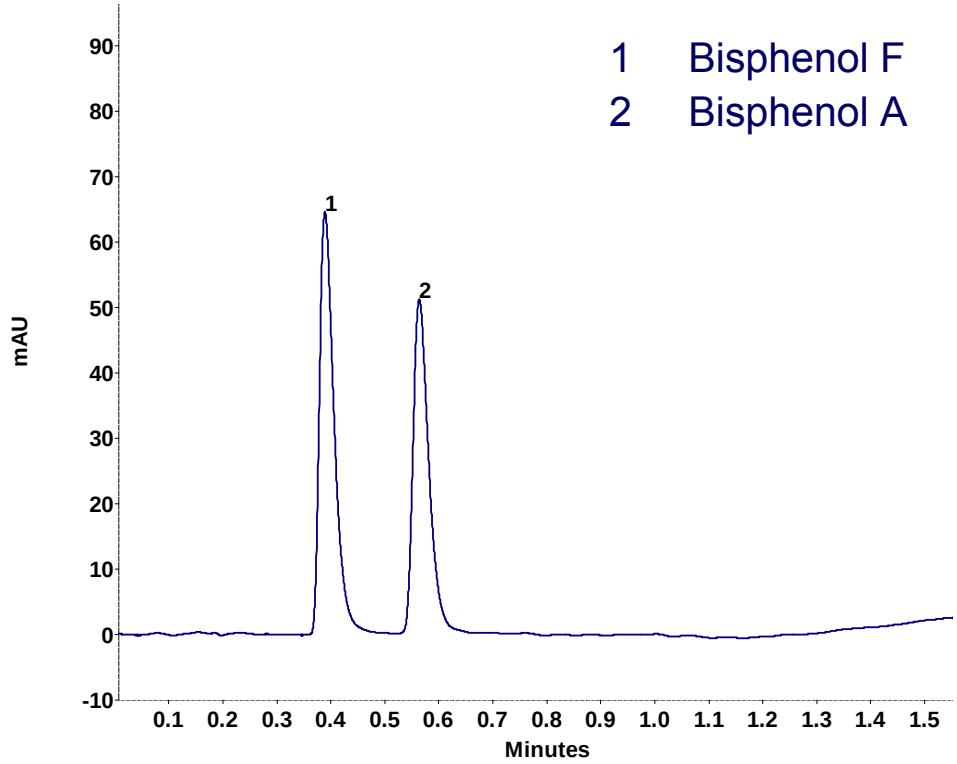
Determination of Bisphenols (I)

VFD0015J

- Food & Beverage application

Isocratic Mode

Column: 50 x 2 mm BO C18 1.8µm
Eluent: H_2O/ACN (55:45, v/v)
Flow: 0.6 ml/min
Volume: 2 µl
Temp.: 30° C
Detection: PDA-1, 227 nm (2 µl Cell)
(50 Hz; 0.01s)



Column Order No. 05BI181BOE

Determination of Bisphenols (II)

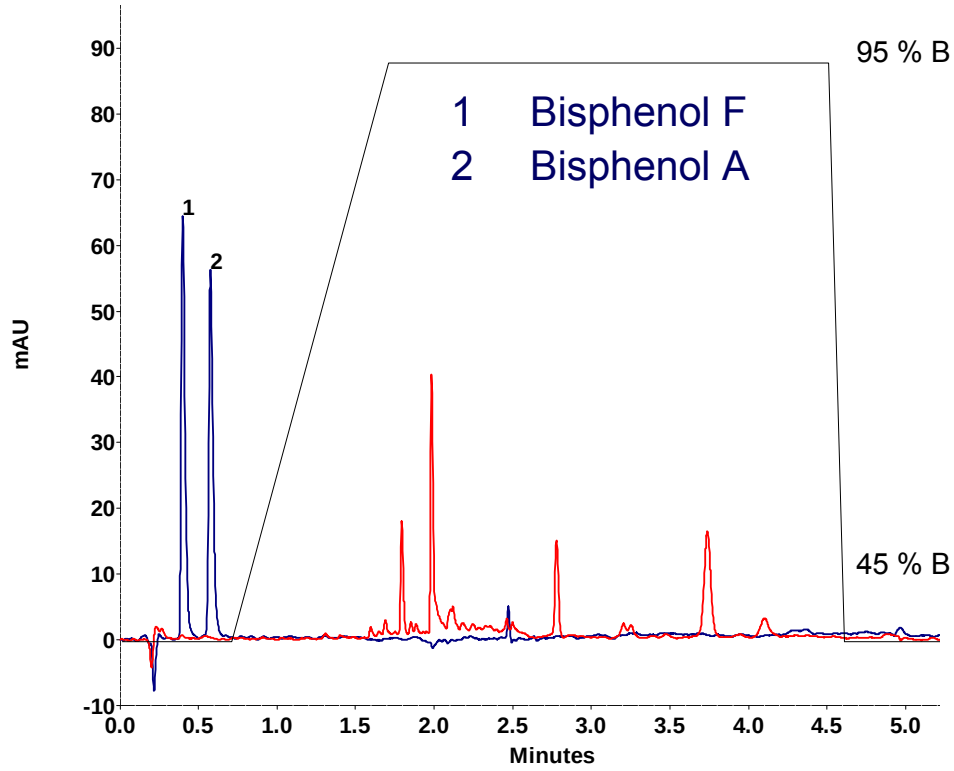
VFD0072J

- Food & Beverage application

Gradient Mode

Column: 50 x 2 mm BO C18 1.8µm
Eluent: A: H_2O, B: ACN
Gradient: 0.0 – 0.7 min 45 % B
0.7 – 1.7 min 95 % B
1.7 – 4.5 min 95 % B
4.5 – 4.6 min 45 % B
4.6 – 6.0 min 45% B
Flow: 0.6 ml/min
Volume: 2 µl
Temp.: 30° C
Detection: PDA-1, 227 nm (10 mm 2 µl Cell)
(50 Hz; 0.01s)

Column Order No. 05BI181BOE



Overlay of Bisphenol standard (10 µg/ml) blue and extract of plastic foil (food) red

Determination of Catechins

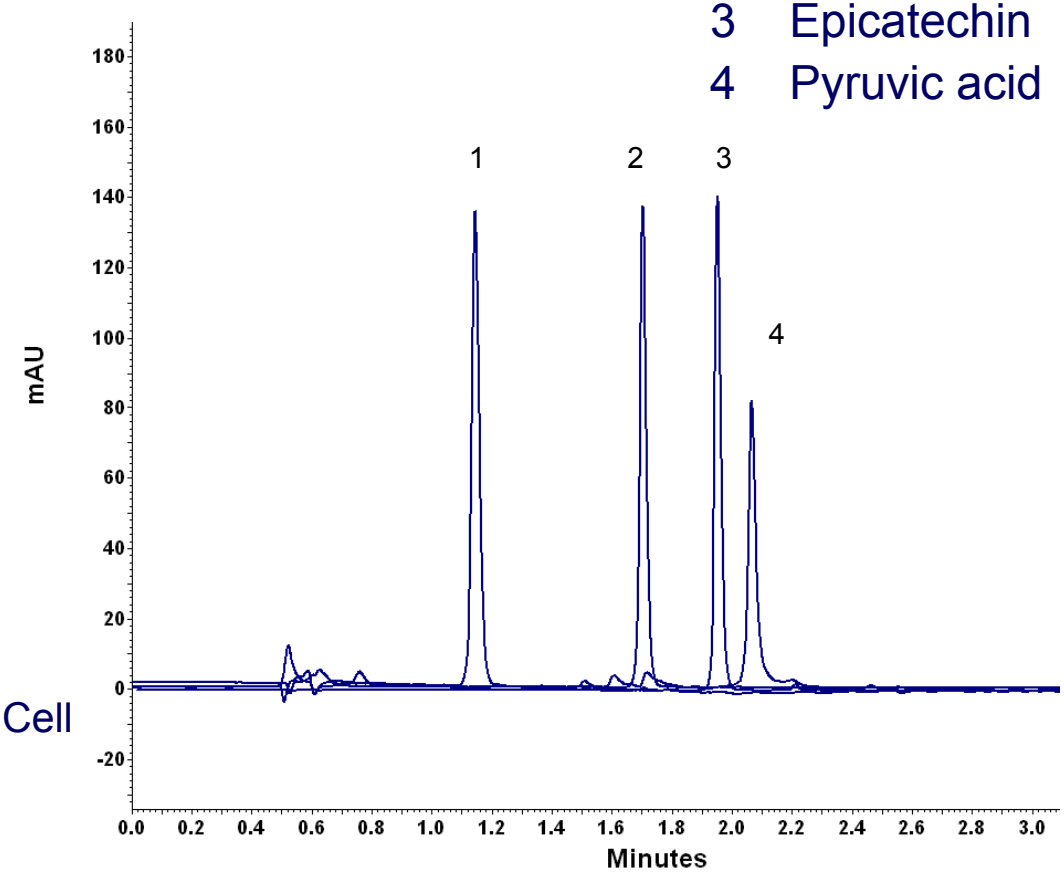
- Food & Beverage application

Gradient Mode

Column: 100 x 2 mm BO C18 1.8µm
Eluent: A: H_2O (0.5% Hac)
B: ACN (0.5% Hac)
Gradient: 0.0 – 2.5 min 5% - 40 % B
2.5 – 2.7 min 40 % - 80 % B
2.7 – 3.5 min 80 % B
3.5 – 3.52 min 80 % - 5 % B
3.52 – 6.0 min 5% B
Flow: 0.5 ml/min
Volume: 2 µl
Temp.: 30° C
Detection: PDA-1, 280 nm, 10 mm 2 µm Cell

Column Order No. 10BI181BOE

1 Callocatechin
2 Catechin-Hydrat
3 Epicatechin
4 Pyruvic acid



New

HPLC · SMB · Osmometry

KNAUER

Determination of Polyphenols

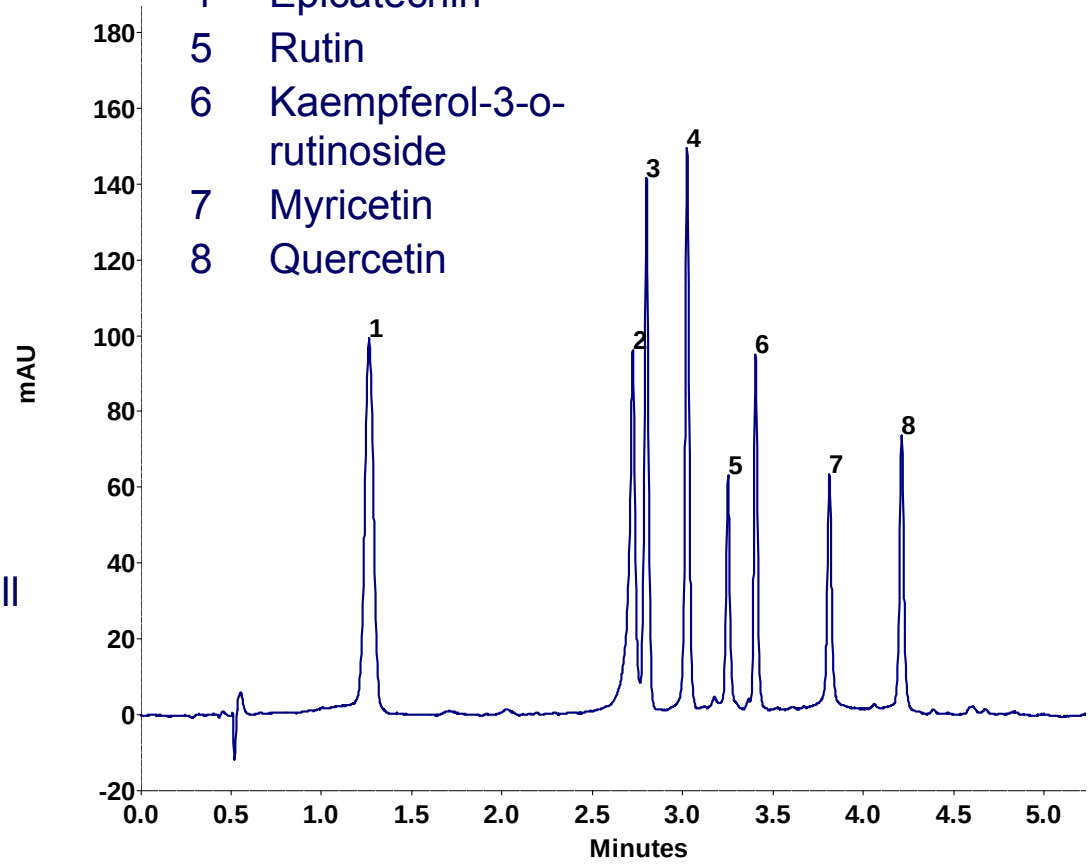
VFD0081J

- Food & Beverage application

Column: 100 x 2 mm BS C18H 1.8µm
Eluent: A: H_2O (0.1% FA)
B: H2O (0.1% FA)/ACN 1:1 v/v
Gradient: 0.0 – 1.0 min 10 % B
1.0 – 4.0 min 10 % - 100 % B
4.0 – 5.0 min 100 % B
Flow: 0.6 ml/min
Volume: 2 µl
Temp.: 30° C
Detection: PDA-1, 280 nm, 10 mm 2 µm cell (50 Hz, 0.02 s)

Column Order No. 10BE185BSF

1 Gallic Acid
2 Chlorogenic Acid
3 Catechin
4 Epicatechin
5 Rutin
6 Kaempferol-3-o-rutinoside
7 Myricetin
8 Quercetin



New

HPLC · SMB · Osmometry

KNAUER

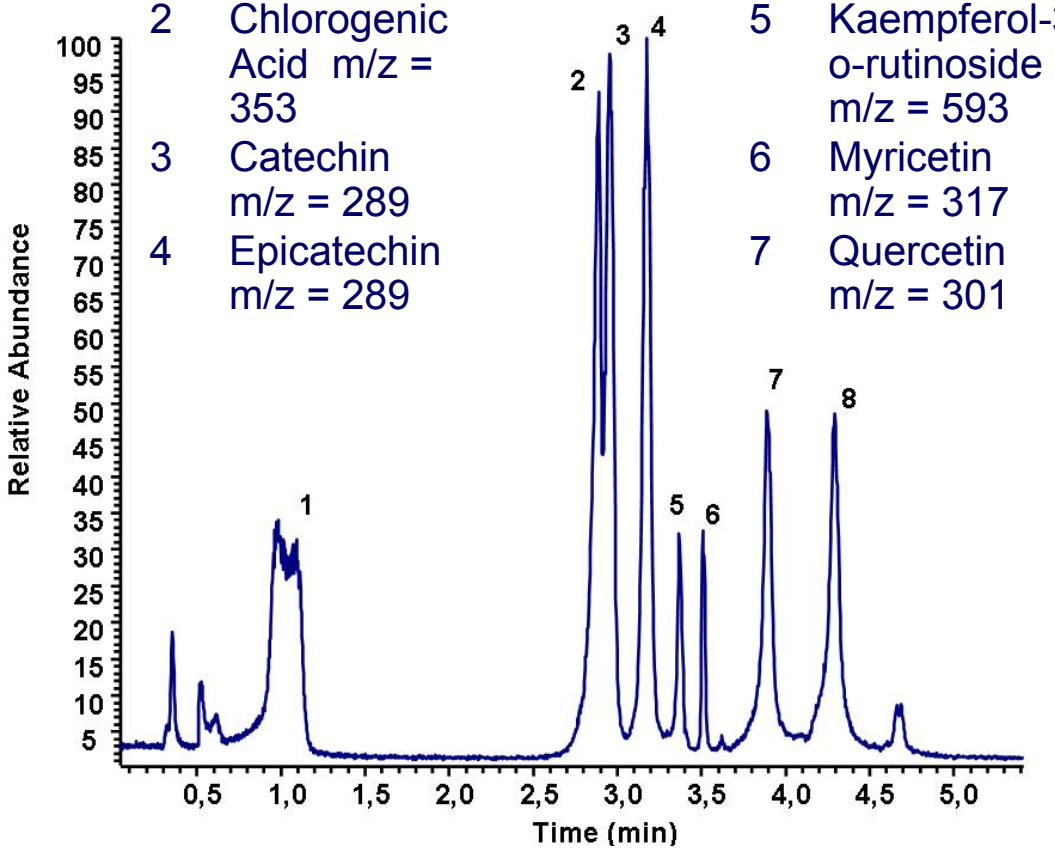
Determination of Polyphenols with MS detection

VFD0083J

- Food & Beverage application

Column: 100 x 2 mm BS C18H 1.8µm
Eluent: A: H_2O (0.1% FA)
B: H2O (0.1% FA)/ACN 1:1 v/v
Gradient: 0.0 – 1.0 min 10 % B
1.0 – 4.0 min 10 % - 100 % B
4.0 – 5.0 min 100 % B
Flow: 0.6 ml/min
Volume: 10 µl
Temp.: 30° C
Detection: MSQ Plus, ESI negative mode, Needle 4.5 kV, coneV 75 V, Probe temperature 350 °C selected SIM Scans (grouped)

1 Gallic Acid m/z = 169
2 Chlorogenic Acid m/z = 353
3 Catechin m/z = 289
4 Epicatechin m/z = 289
4 Rutin m/z = 610
5 Kaempferol-3-o-rutinoside m/z = 593
6 Myricetin m/z = 317
7 Quercetin m/z = 301



Column Order No. 10BE185BSF

New

HPLC · SMB · Osmometry

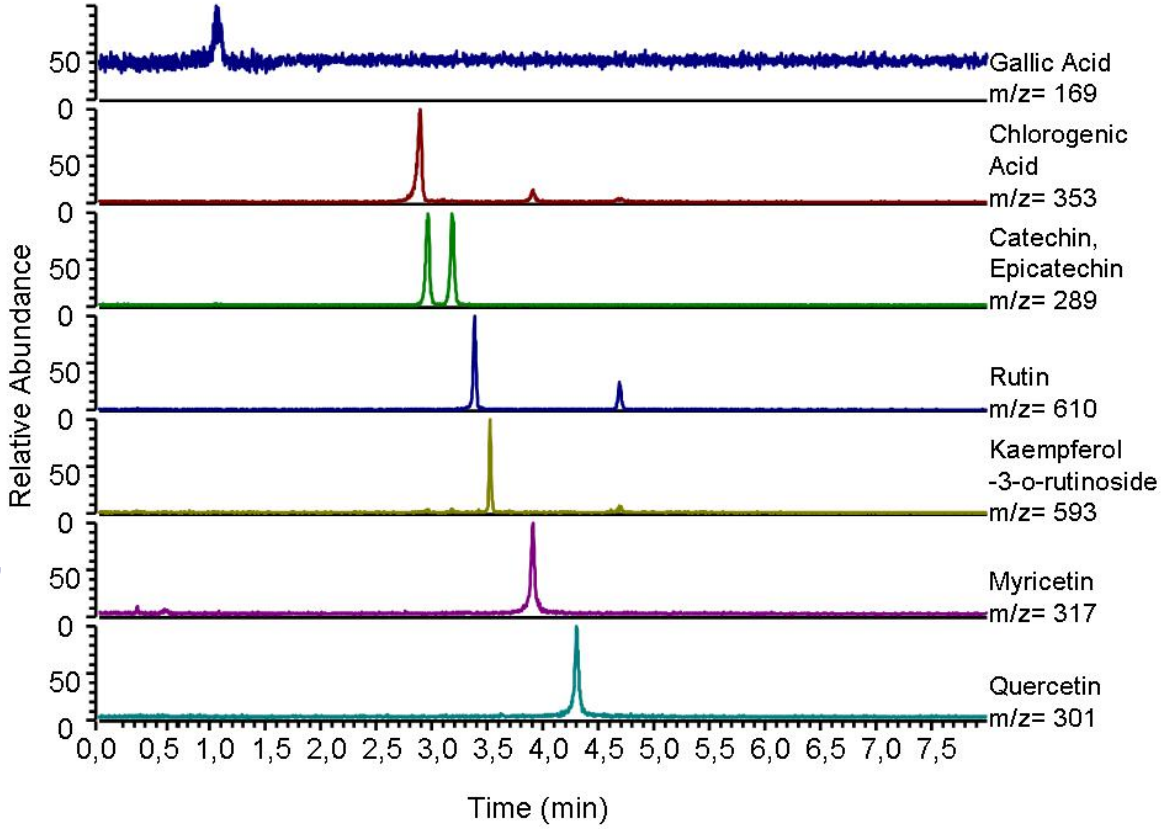
KNAUER

Determination of Polyphenols with MS detection

(continued) VFD0083J

- Food & Beverage application

Column: 100 x 2 mm BS C18H 1.8µm
Eluent: A: H_2O (0.1% FA)
B: H2O (0.1% FA)/ACN 1:1 v/v
Gradient: 0.0 – 1.0 min 10 % B
1.0 – 4.0 min 10 % - 100 % B
4.0 – 5.0 min 100 % B
Flow: 0.6 ml/min
Volume: 10 µl
Temp.: 30° C
Detection: MSQ Plus, ESI negative mode, Needle 4.5 kV, coneV 75 V, Probe temperature 350 °C selected SIM Scans (grouped)



Column Order No. 10BE185BSF

KNAUER

Environmental Applications

New

HPLC · SMB · Osmometry

KNAUER

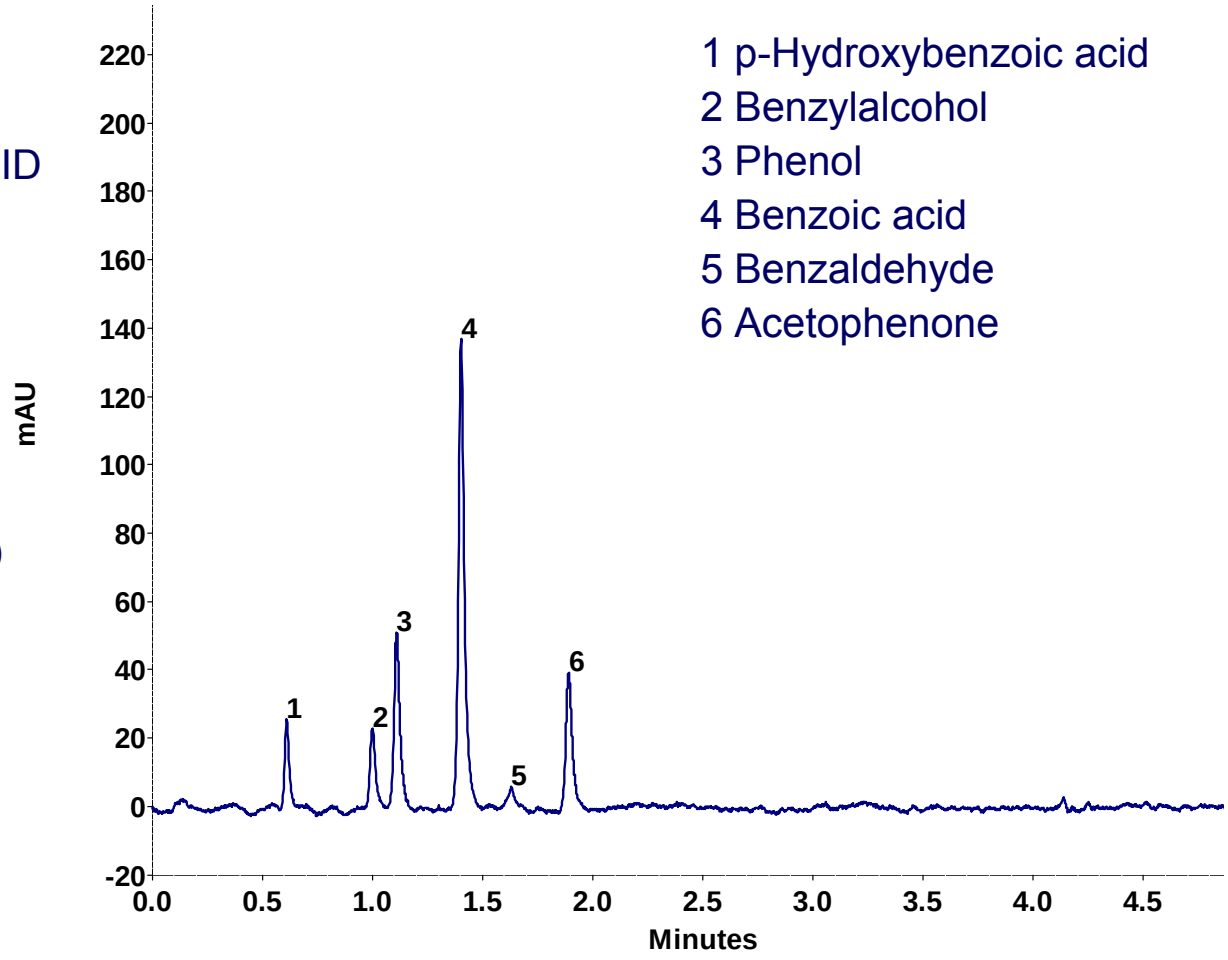
Determination of Aromatic Compounds

VEV0038J

- Environmental application

Column: BS 100-2 C18, 50 x 2 mm ID
Eluent: A: H_2O + 0.1 % FA
B: ACN
Gradient: 0.0 – 5.0 min 10 – 70 % B
Flow: 1.0 ml/min
Temp.: 40° C
Volume: 1 µl
Detection: UV, 254 nm (50 Hz; 0.02s)
50 mm flow cell

Column Order No. 05BE181BSF

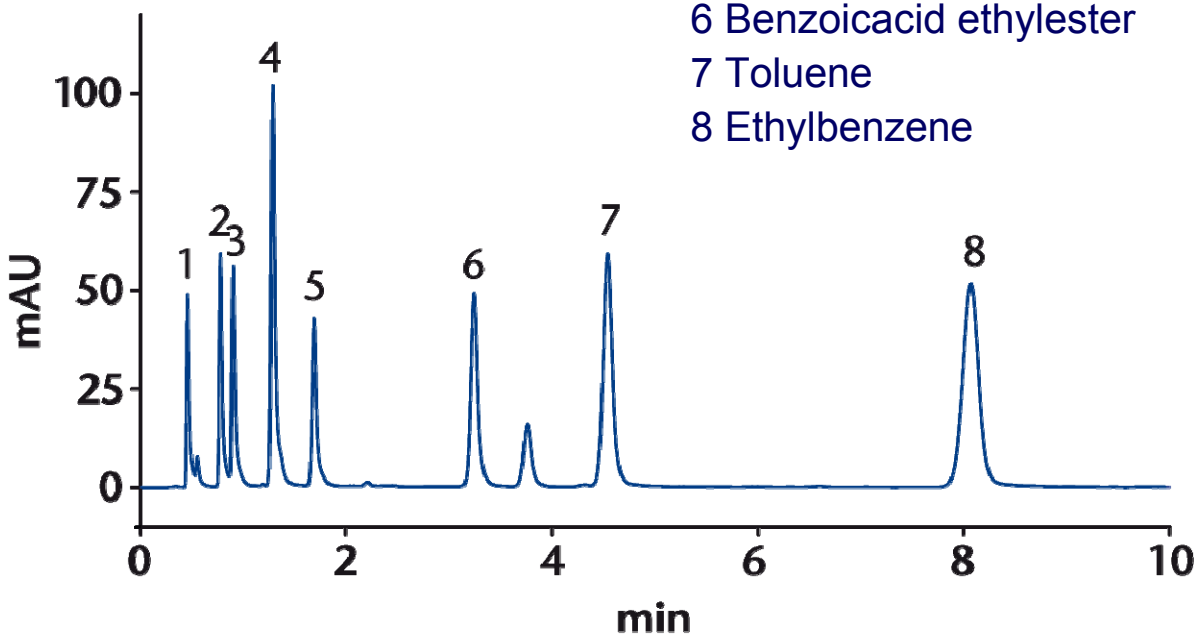


Engelhardt mixture

- Column selectivity

Column: 100 x 2 mm BO C18 1.8µm
Eluent: A: H_2O 45%
B: MeOH 55%
Flow: 0.45 ml/min
Temp.: 40° C
Volume: 1 µl
Detection: UV, 254 nm
(80 Hz; 0.005s)

1 Uracil
2 Aniline
3 Phenol
4 p-Ethylaniline
5 N,N-Dimethylaniline
6 Benzoicacid ethylester
7 Toluene
8 Ethylbenzene



Column Order No. 10BI181BOE

Determination of Dispersion Dyes

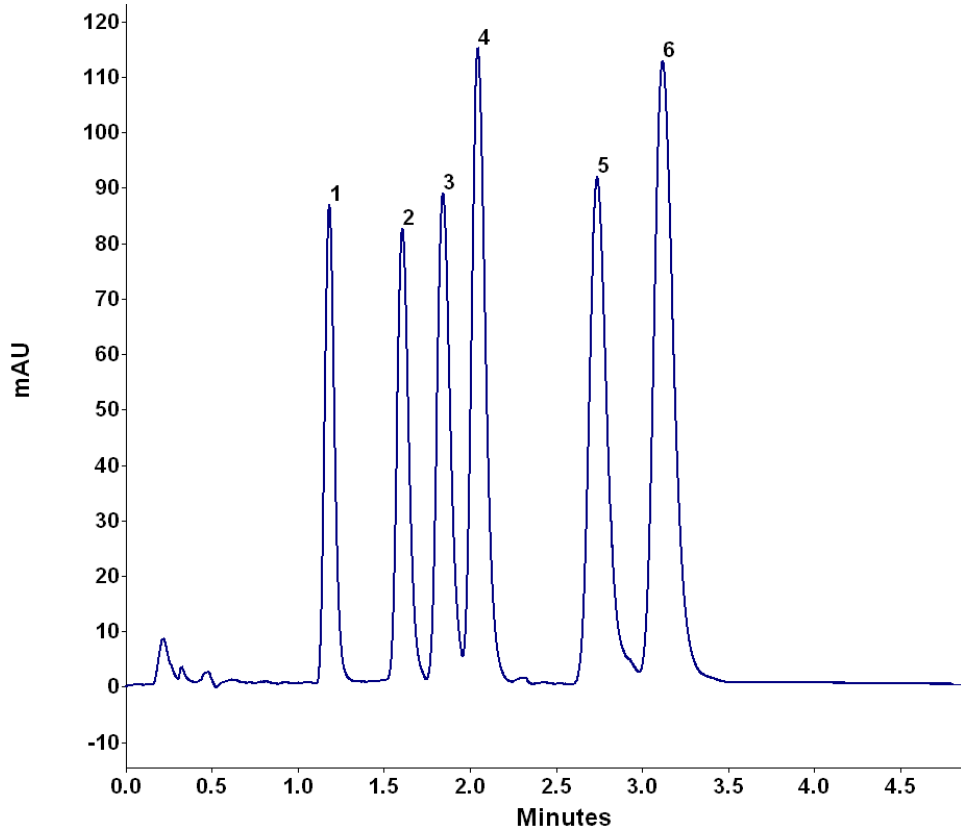
VEV0036J

- Environmental application

Column: 100 x 2 mm BO PFP 1.8µm
Eluent: H_2O/MeOH 25:75 (v/v)
Gradient: isocratic
Flow: 0.55 ml/min
Volume: 1 µl
Temp.: 30° C
Detection: PDA-1, (10mm; 2 µl Cell; 50 Hz; 0.01s)
wavelength program
0.0 -1.30 min 440 nm
1.32 -1.71 min 355 nm
1.73 - 1.93 min 500 nm
1.95 - 2.30 min 615 nm
2.32 - 2.88 min 435 nm
2.90 – 3.50 min 605 nm

Column Order No. 10BI057BOE

1 **Disperse Orange**
2 **Disperse Yellow**
3 **Disperse Red 1**
4 **Disperse Blue 106**
5 **Disperse Orange 37**
6 **Disperse Blue 124**

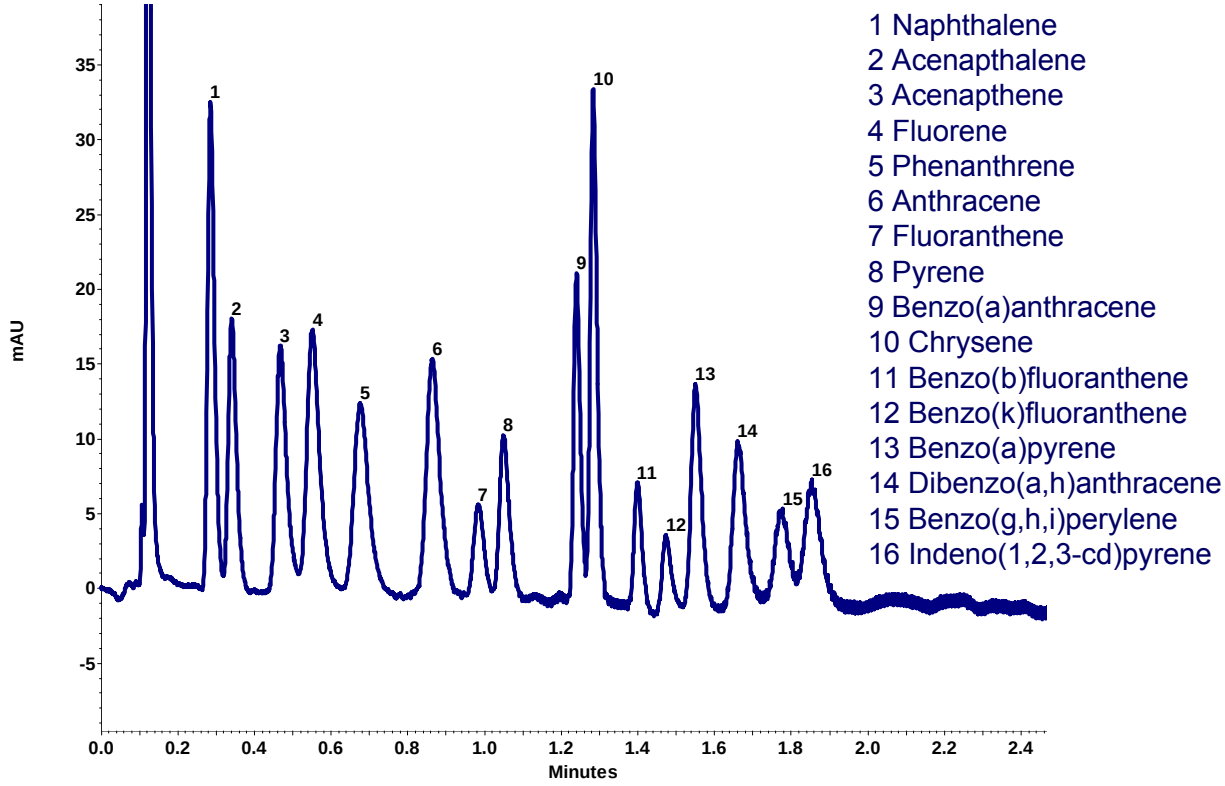


Determination of 16 EPA PAH

VEV0001J

- Environmental application

Column: 50 x 2 mm
BlueOrchid PAH
Eluent: A: MeOH/H2O 75:25
B: ACN
Gradient: HPG
Flow: 1000 µl/min
Temp.: 25° C
Detection: 254 nm (100 Hz, 0.05s)
Volume: 1 µl EPA standard



1 Naphthalene
2 Acenapthalene
3 Acenapthene
4 Fluorene
5 Phenanthrene
6 Anthracene
7 Fluoranthene
8 Pyrene
9 Benzo(a)anthracene
10 Chrysene
11 Benzo(b)fluoranthene
12 Benzo(k)fluoranthene
13 Benzo(a)pyrene
14 Dibenzo(a,h)anthracene
15 Benzo(g,h,i)perylene
16 Indeno(1,2,3-cd)pyrene

Column Order No. 05BF420BOG

New

HPLC · SMB · Osmometry

KNAUER

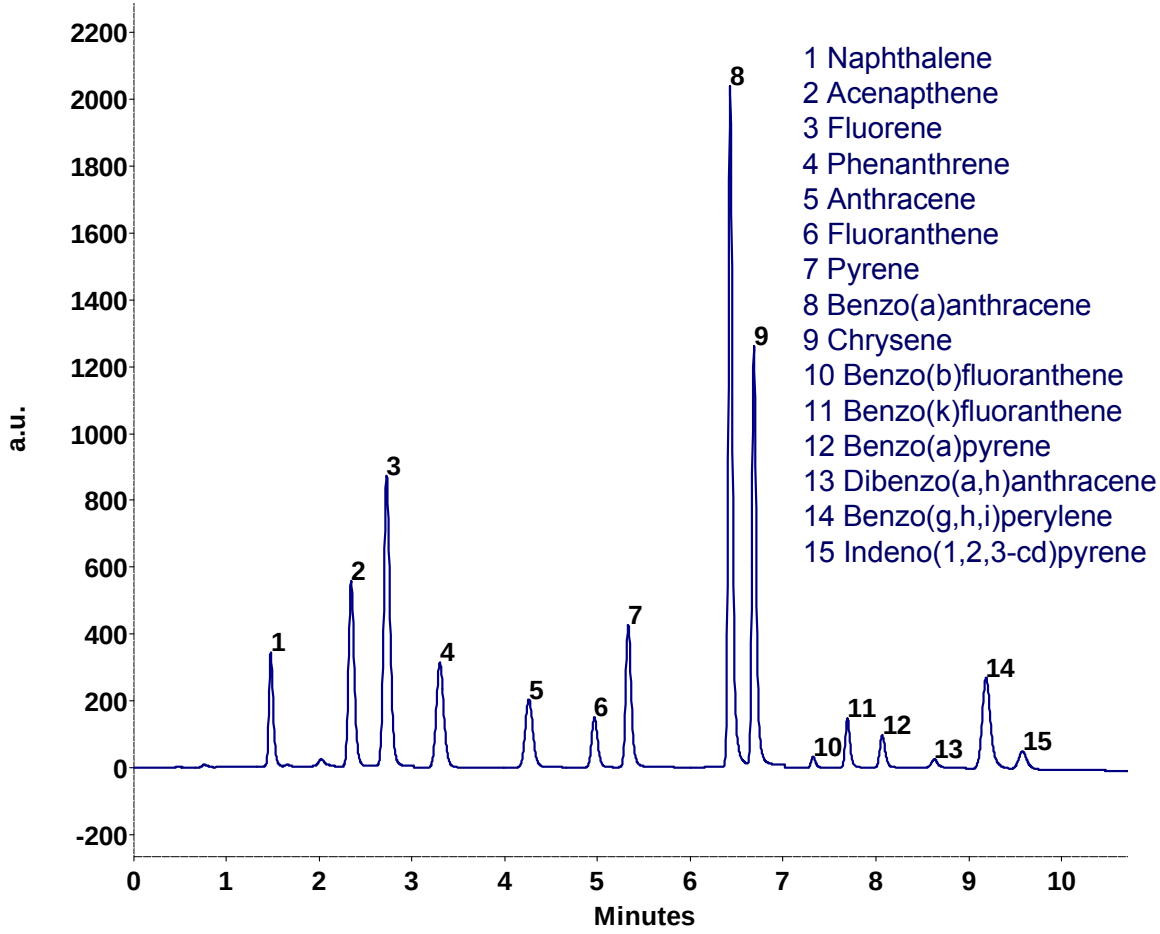
Determination of 15 PAH with Fluorescence detection

VEV0054J

Environmental application

Column: BlueOrchid PAH, 150 x 2 mm
Eluent: A: MeOH/H2O 75:25
B: ACN
Gradient: 0.0 – 2.5 min 10 % B
2.5 – 6.0 min 10 – 100 % B
6.0 – 10.0 min 100 % B
Flow: 0.6 ml/min
Temp.: 25° C
Detection: Fluorescence RF-20A XS
wavelength program:
0.0 – 3.0 min 270 Ex, 330 Em
3.0 – 4.6 min 250 Ex 370 Em
4.6 – 5.8 min 330 Ex 430 Em
5.8 – 7.0 min 270 Ex 390 Em
7.0 – 8.9 min 290 Ex 430 Em
8.9 – 12.0 min 370 Ex 460 Em
12.0 – 15.0 min 270 Ex 330 Em
Volume: 10 µl standard, 10 µg/L

Column Order No. 15BF420BOG



New

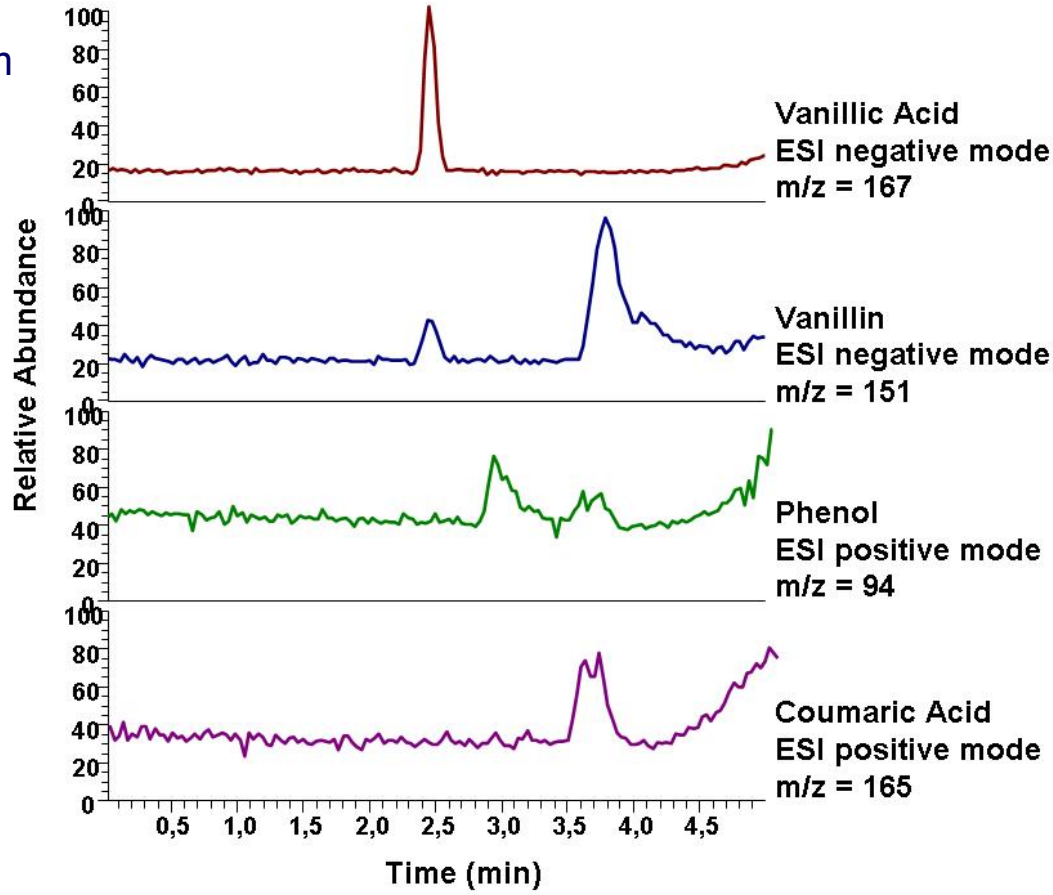
HPLC · SMB · Osmometry

KNAUER

Determination of Lignin building Compounds with MS Detection VEV0042J

- Environmental application

Column: BS 100-2 Phenyl, 100 x 2 mm
Eluent: A: H2O + 0.1 % FA
B: MeOH + 0.1 % FA
Gradient: 0 – 3 min 30 % B
3 – 5 min 30 – 80 % B
Flow: 0.4 ml/min
Temp.: 40° C
Volume: 10 µl
Detection: MSQ Plus, ESI mode,
Needle 3.7 kV, coneV 75 V,
Probe temperature 500 °C
SIM scan mode



Column Order No. 10BE050BSF

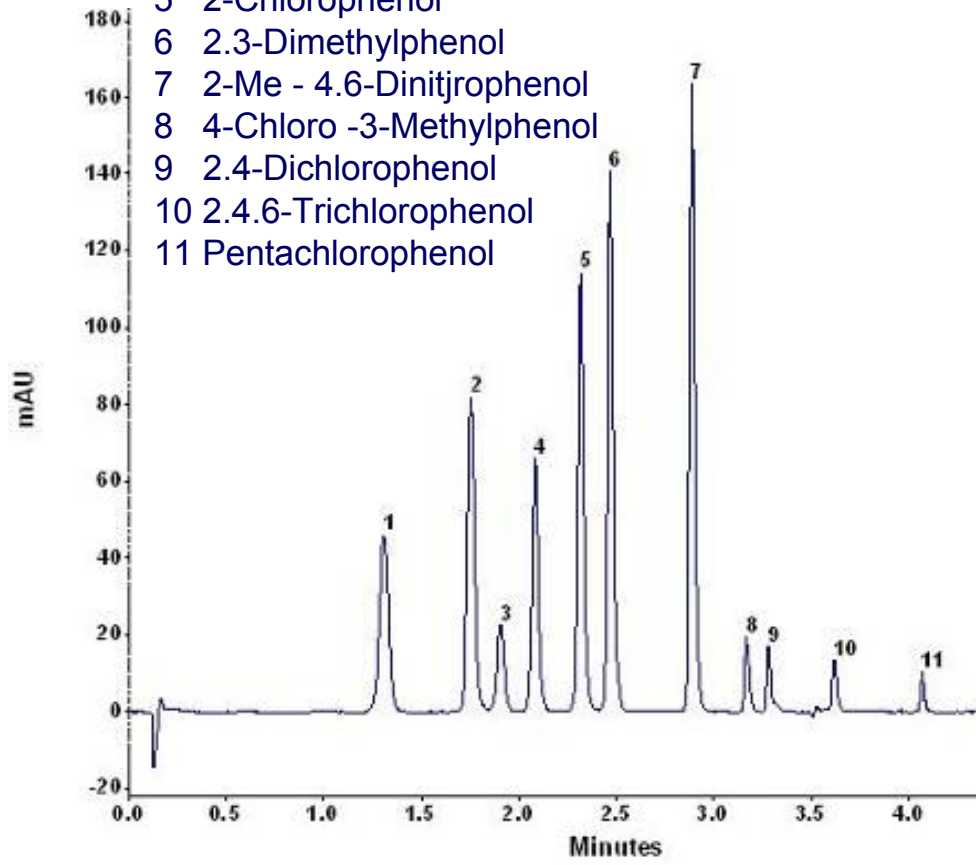
Determination of Phenols (I)

VEV0037J

- Environmental application

Column: 50 x 2 mm BO C18
Eluent: A: H2O (0.1% HAc)
B: MeOH (0.1% HAc)
Gradient: 5% B 0 – 1 min
5%-95% B 1 – 4.5 min
95% B 4.5 – 5 min
Flow: 1 ml/min
Temp.: 50° C
Detection: 275 nm/320 nm (50 Hz, 0.05s)
Volume: 5 µl

1 Phenol
2 4-Nitrophenol
3 2.4-Dinitrophenol
4 2-Nitrophenol
5 2-Chlorophenol
6 2.3-Dimethylphenol
7 2-Me - 4.6-Dinitjrophenol
8 4-Chloro -3-Methylphenol
9 2.4-Dichlorophenol
10 2.4.6-Trichlorophenol
11 Pentachlorophenol



Column Order No. 05BI181BOE

New

HPLC · SMB · Osmometry

KNAUER

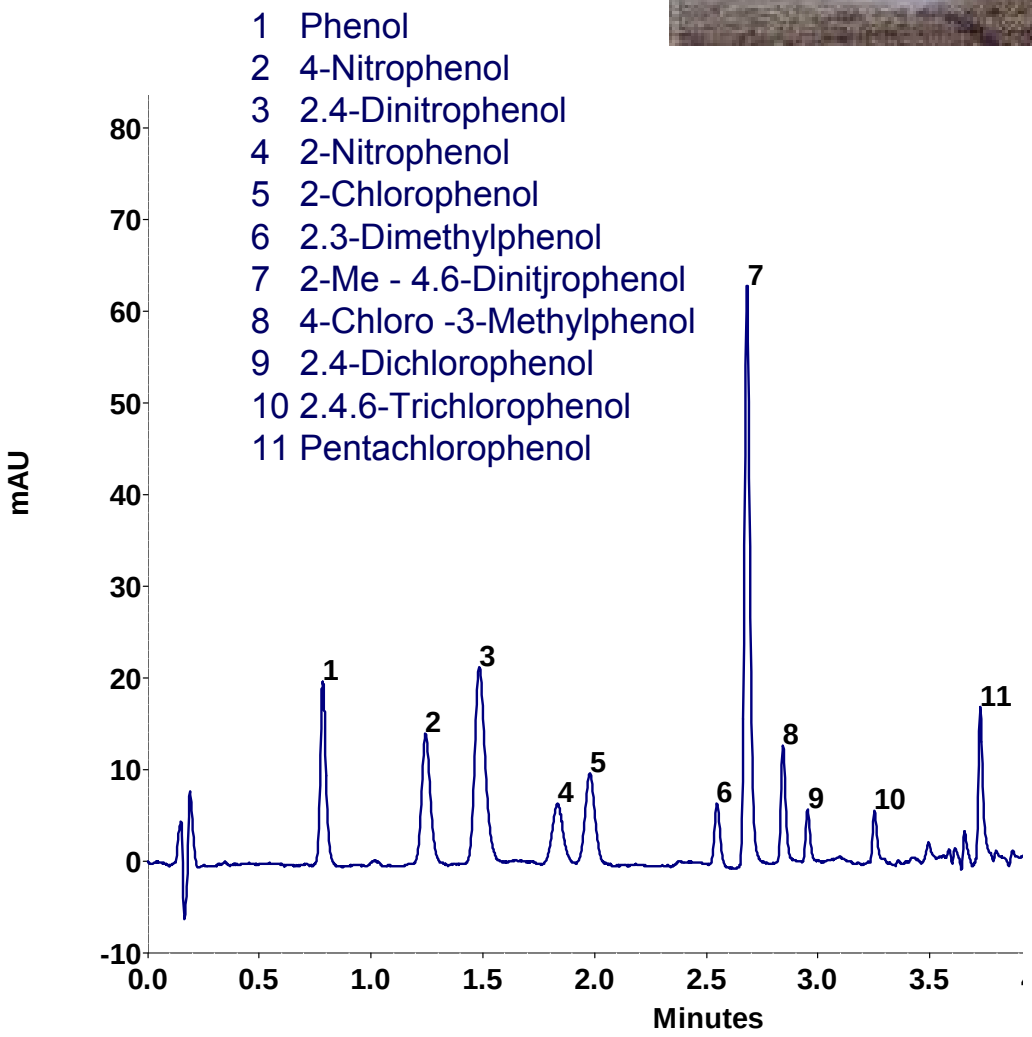
Determination of Phenols (II)

VEV0056J

- Environmental application

Column: BS 100-2 C18H, 50 x 2.0 mm ID
Eluent: A: H2O (0.1 % HAc),
B: MeOH (0.1 % HAc)
Gradient: 0 – 1.5 min 30 % B
1.5 – 3.4 min 30 % B - 90 % B
3.4 – 4.9 min 90 % B
Flow: 0.8 ml/min
Volume: 10 µl
Temp.: 40 °C
Detection: PDA-1, 280 nm (100 Hz, 0.01 s)

Column Order No. 05BE185BSF

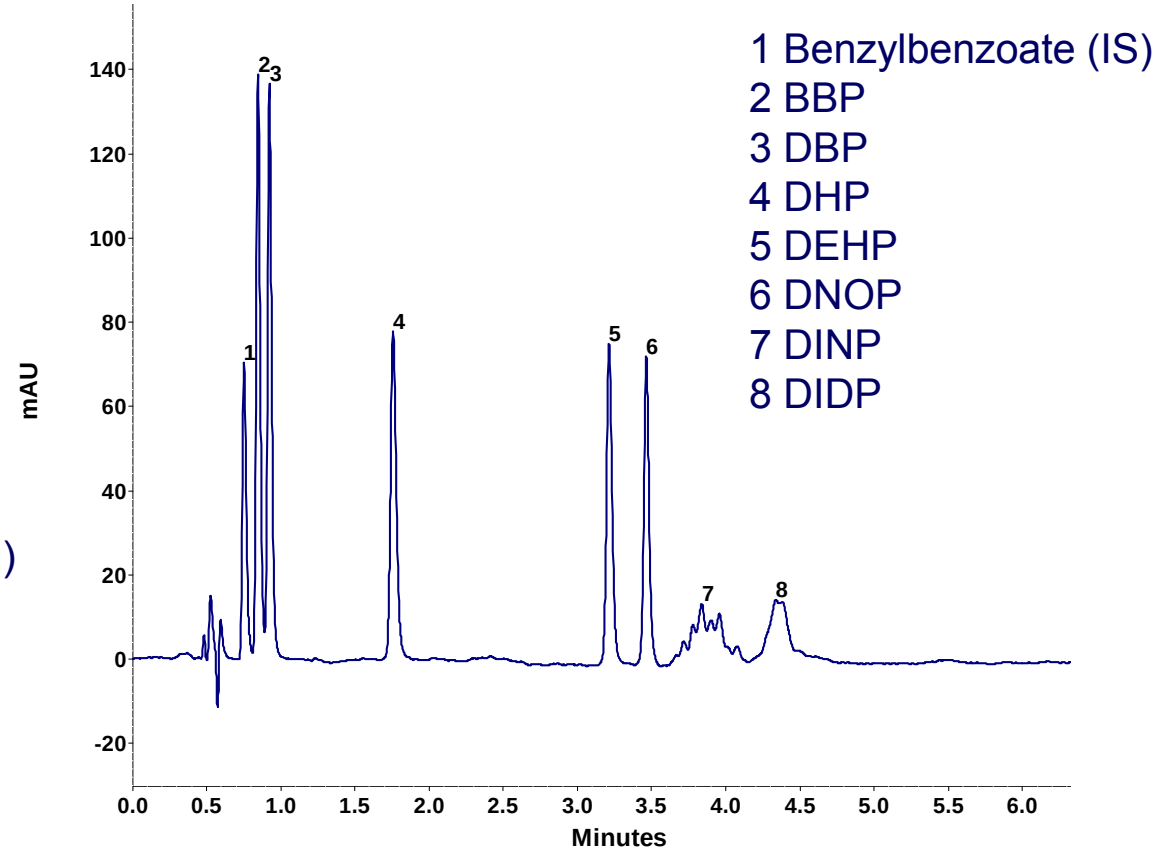


Determination of Phthalate (I)

VEV0005J

- Environmental application

Column: 100 x 2 mm BlueOrchid C18
Eluent: A: H_2O / ACN 15:85
B: ACN
Gradient: 0% B 1.2 min hold
0%-100% B 1.2 – 3.2 min
100% B 1.8 min hold
Flow: 0.5 ml/min
Temp.: 30° C
Detection: 225 nm (50 Hz, 0.05s, 10 mm)
Volume: 2 µl



Column Order No. 10BI181BOE

New

HPLC · SMB · Osmometry

KNAUER

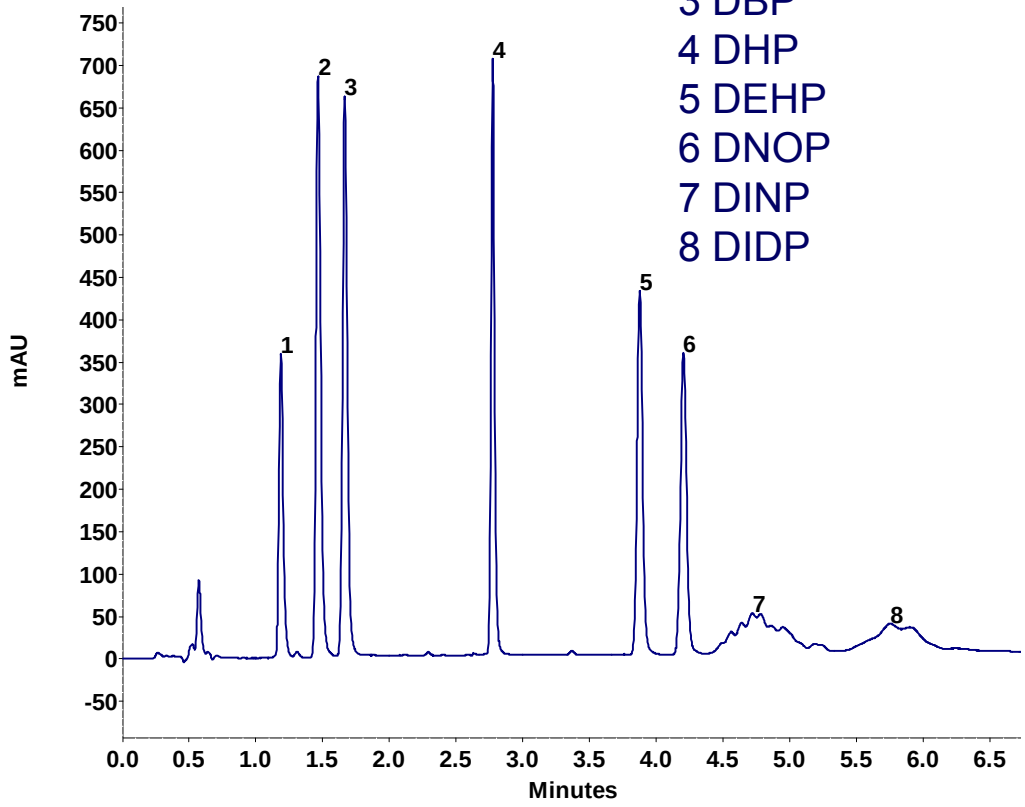
Determination of Phthalate (II)

VEV0057J

- Environmental application

Column: BS 100-2 C18H, 100 x 2.0 mm ID
Eluent: A: H2O/ACN (15:85 v/v), B: ACN
Gradient: 0 – 0.8 min 0 % B
0.8 – 1.7 min 0 % B – 100 % B
1.7 – 6 min 100 % B
Flow: 0.4 ml/min
Volume: 10 µl
Temp.: 30 °C
Detection: PDA-1, 225 nm (50 Hz, 0.02 s)
Pressure: 230 bar

1 Benzylbenzoate (IS)
2 BBP
3 DBP
4 DHP
5 DEHP
6 DNOP
7 DINP
8 DIDP



Column Order No. 10BE185BSF

New

HPLC · SMB · Osmometry

KNAUER

Determination of Phthalate (III)

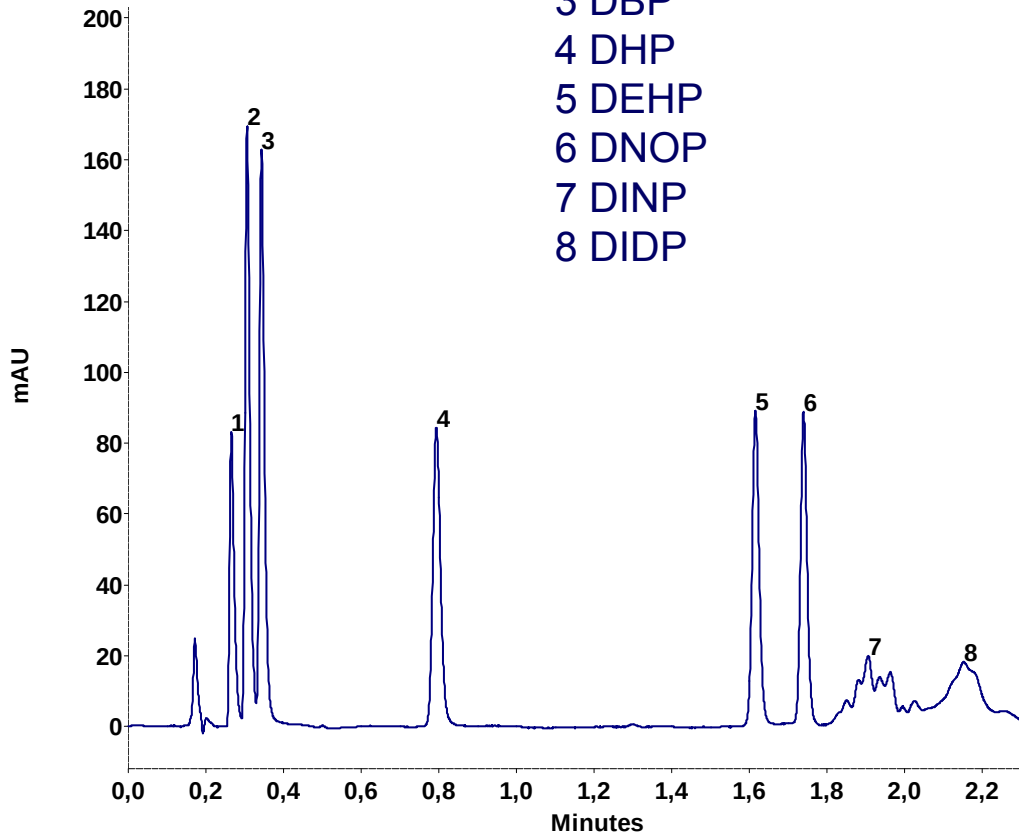
VEV0053J

- Environmental application

Column: BlueShell 80-2.6 C18 core shell, 100 x 2.0 mm ID
Eluent: A: H2O/ACN (15:85 v/v), B: ACN
Gradient: 0.0 – 0.6 min 0 % B
0.6 – 1.6 min 0 % B – 100 % B
1.6 – 2.5 min 100 % B
Flow: 1.0 ml/min
Volume: 1 µl
Temp.: 30 °C
Detection: PDA-1, 225 nm (50 Hz, 0.02 s)
Pressure: 395 bar

Column Order No. 10BD181SHA

1 Benzylbenzoate (IS)
2 BBP
3 DBP
4 DHP
5 DEHP
6 DNOP
7 DINP
8 DIDP



KNAUER

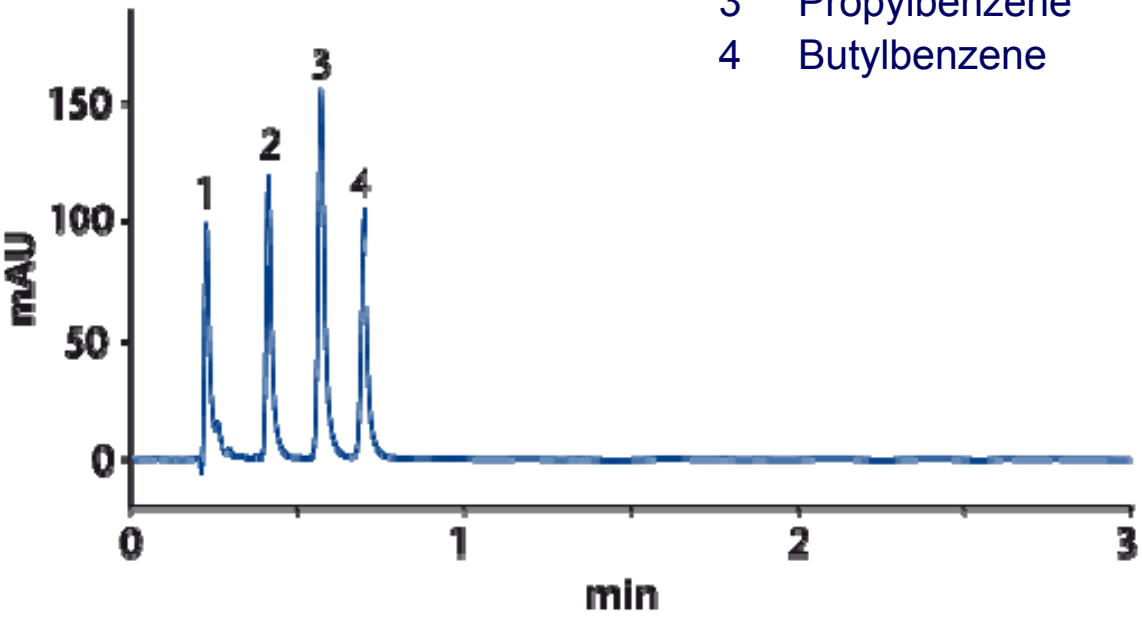
Separation of Benzene derivatives

VEV0035J

- Environmental application

Column: 100 x 2 mm BO C18 1.8 µm
Eluent: ACN/H2O (85:15)
Flow: 1000 µl/min
Temp.: 35° C
Detection: UV, 254 nm
(50 Hz; 0.01s)

1 Thiourea
2 Toluene
3 Propylbenzene
4 Butylbenzene



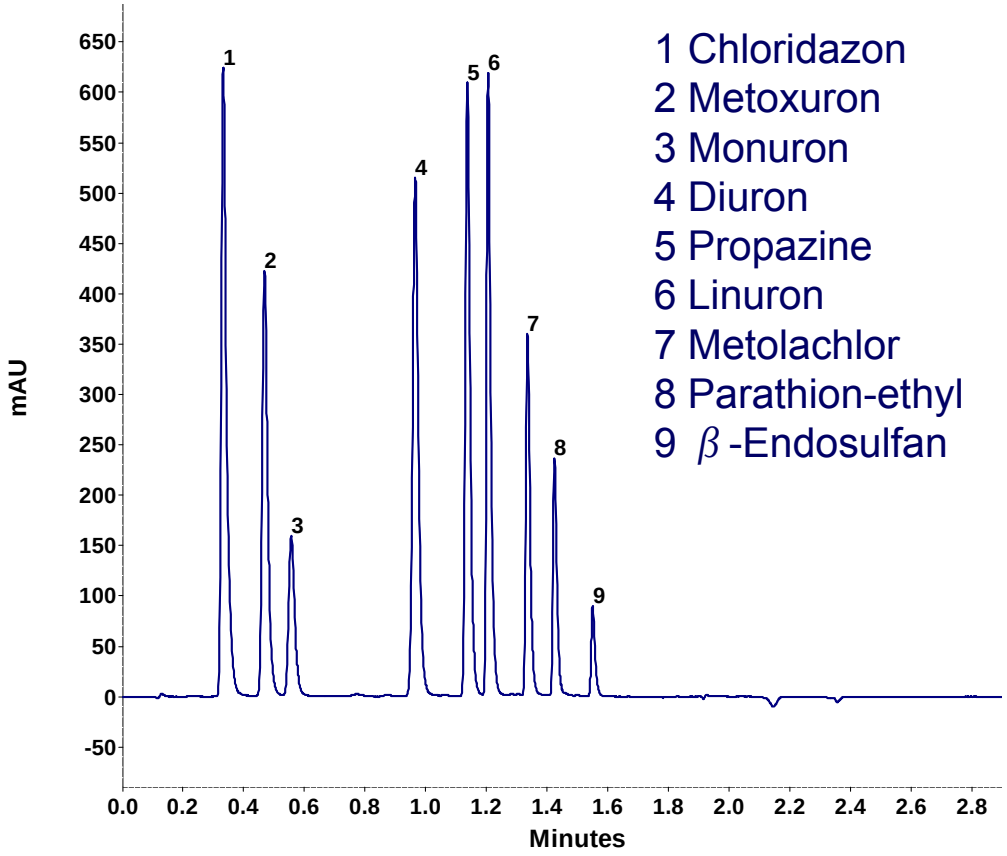
Column Order No. 10BI181BOE

Determination of Pesticides (I)

VEV0006J

- Environmental application

Column: 50 x 2 mm BlueOrchid C18
Eluent: A: H_2O
B: ACN
Gradient: 35% B 0 – 0.5 min
35%-100% B 0.5 – 1.5 min
100% B 1.5 – 2 min
Flow: 0.6 ml/min
Temp.: 40° C
Detection: 215 nm (50 Hz, 0.05s)
Volume: 1 µl



1 Chloridazon
2 Metoxuron
3 Monuron
4 Diuron
5 Propazine
6 Linuron
7 Metolachlor
8 Parathion-ethyl
9 β-Endosulfan

Column Order No. 05BI181BOE

Determination of Pesticides (II)

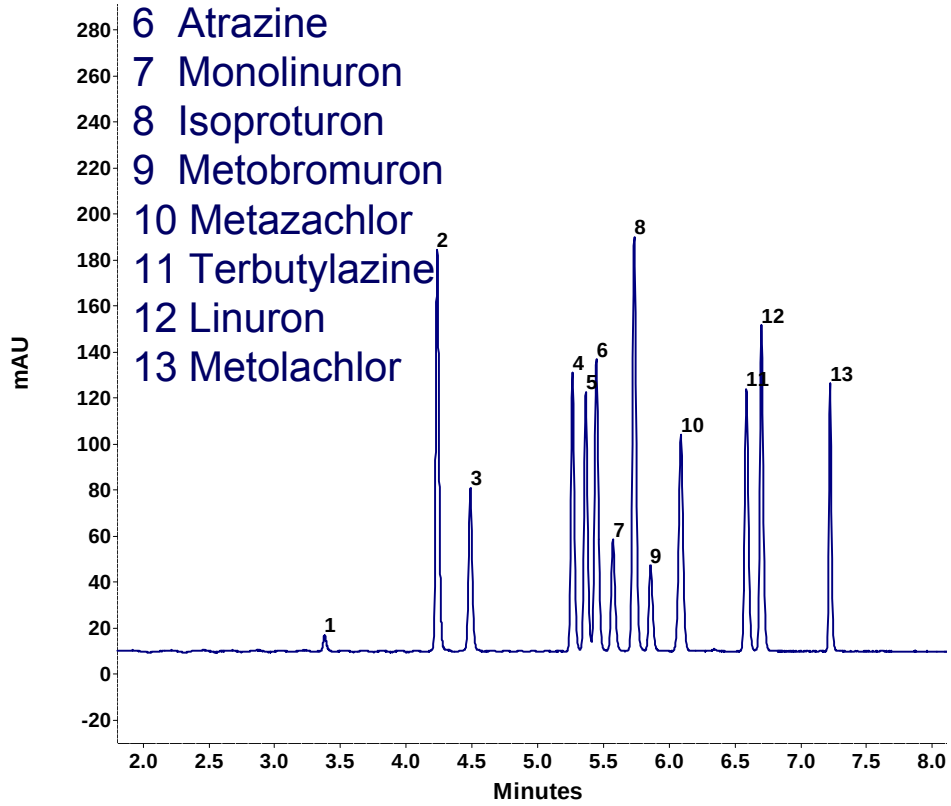
VEV0007J

- Environmental application

Column: 100 x 2 mm BlueOrchid C18 1.8 µm
Eluent: A: H_2O
B: ACN
Gradient: 5% B 0 – 0.5 min
5%-45% B 0.5 – 6 min
45%-95% B 6 – 8 min
Flow: 0.6 ml/min
Temp.: 40° C
Detection: 215 nm (50 Hz, 0.05s)
Volume: 2 µl

Column Order No. 10BI181BOE

1 Desethylatrazine
2 Metoxuron
3 Simazine
4 Methabenzthiazuron
5 Chlortolurone
6 Atrazine
7 Monolinuron
8 Isoproturon
9 Metobromuron
10 Metazachlor
11 Terbutylazine
12 Linuron
13 Metolachlor



New

HPLC · SMB · Osmometry

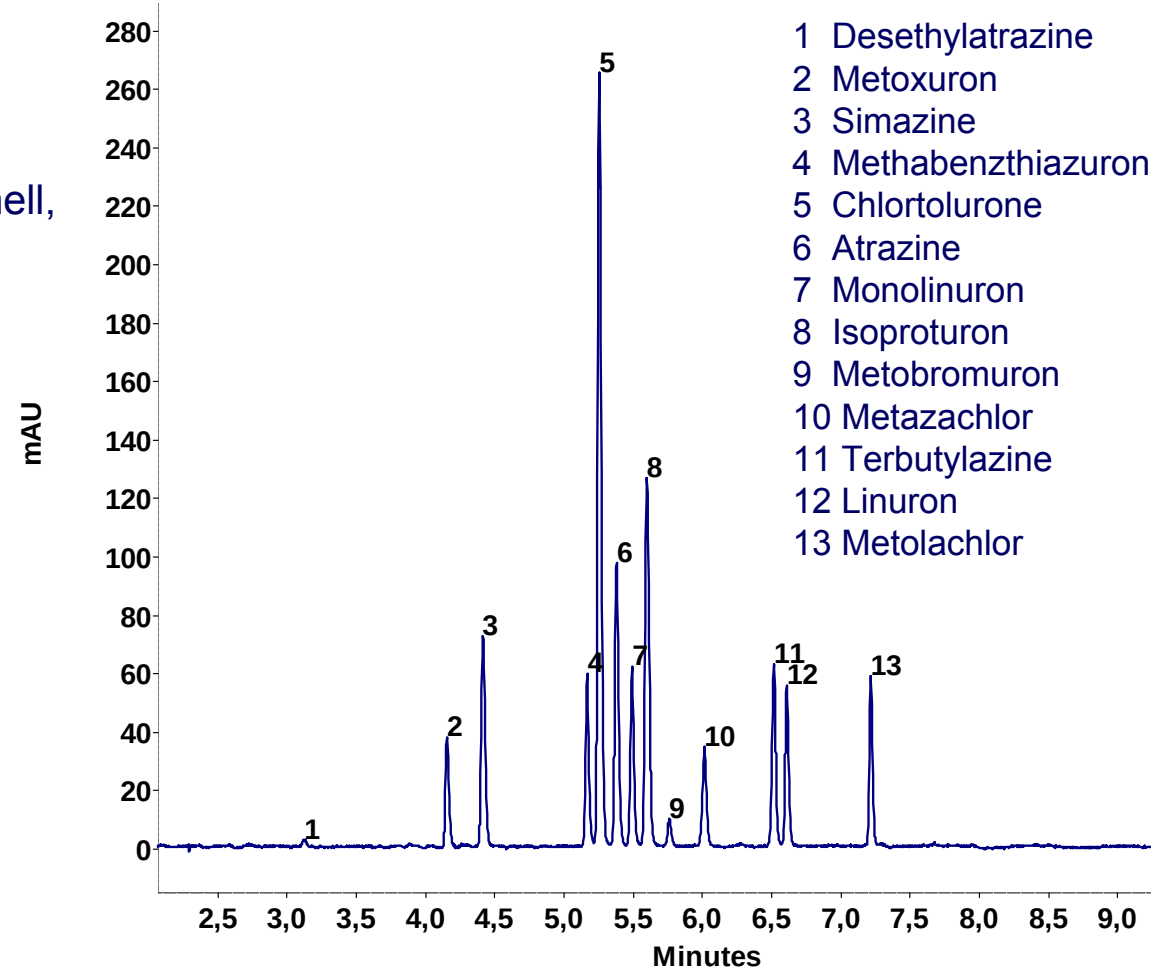
KNAUER

Determination of Pesticides (III)

VEV0055J

- Environmental application

Column: BlueShell 80-2.6 C18 core shell, 100 x 2 mm ID
Eluent: A: H_2O
B: ACN
Gradient: 5% B 0 – 0.5 min
5%-45% B 0.5 – 6 min
45%-95% B 6 – 8 min
Flow: 0.6 ml/min
Temp.: 40° C
Detection: 215 nm (50 Hz, 0.05s)
Volume: 1 µl



1 Desethylatrazine
2 Metoxuron
3 Simazine
4 Methabenzthiazuron
5 Chlortolurone
6 Atrazine
7 Monolinuron
8 Isoproturon
9 Metobromuron
10 Metazachlor
11 Terbutylazine
12 Linuron
13 Metolachlor

Column Order No. 10BD181SHA

New

HPLC · SMB · Osmometry

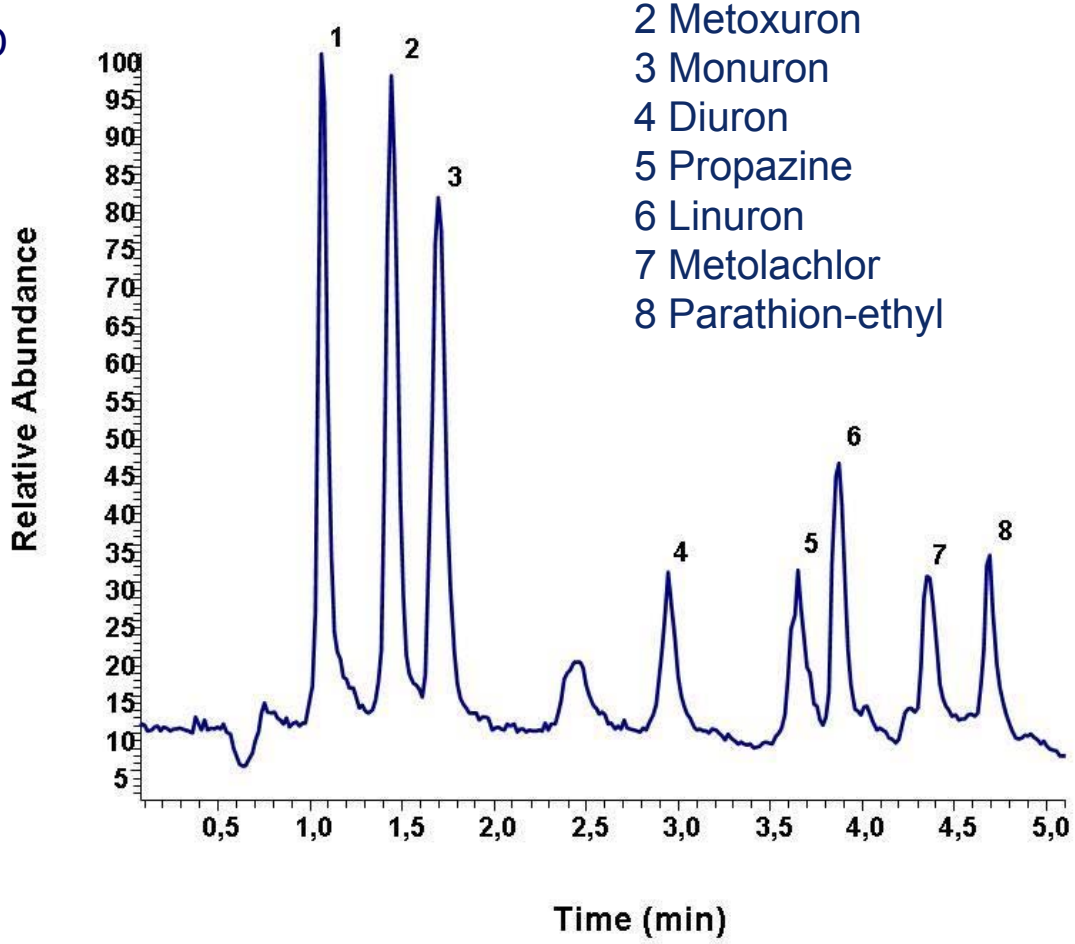
KNAUER

Determination of Pesticides with MS detection (I)

VEV0039J

Environmental application

Column: BlueOrchid C18 50 x 2.0 mm ID
Eluent: A: H2O + 0.5 % FA
B: ACN + 0,5 % FA
Gradient: 0.0 – 1.5 min 35 % B
1.5 – 3.5 min 35 - 40 % B
3.5 – 4.5 min 40 – 100 % B
4.5 – 6.0 min 100% B
Flow: 0.2 ml/min
Volume: 1 µl
Temp.: 40 °C
Detection: MSQ Plus, ESI pos. mode,
Needle 3.5 kV, coneV 75 V,
Probe temperature 200 °C
full scan m/z = 180 – 300



Column Order No. 05BI181BOE

New

HPLC · SMB · Osmometry

KNAUER

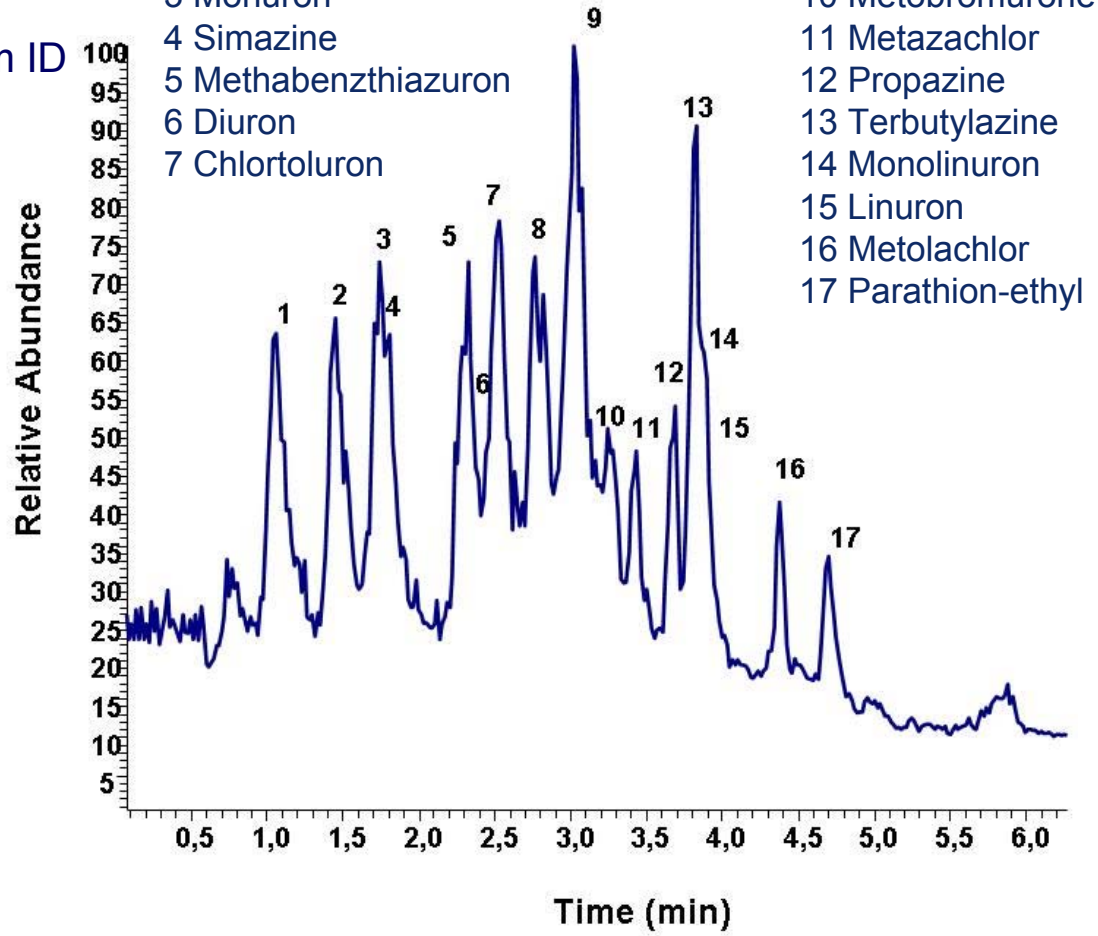
Determination of Pesticides with MS detection (II)

VEV0040J

Environmental application

Column: BlueOrchid C18 50 x 2.0 mm ID
Eluent: A: H2O + 0.5 % FA
B: ACN + 0,5 % FA
Gradient: 0.0 – 1.5 min 35 % B
1.5 – 3.5 min 35 - 40 % B
3.5 – 4.5 min 40 – 100 % B
4.5 – 6.0 min 100% B
Flow: 0.2 ml/min
Volume: 1 µl
Temp.: 40 °C
Detection: MSQ Plus, ESI pos. mode,
Needle 3.5 kV, coneV 75 V,
Probe temperature 200 °C
full scan m/z = 180 – 300

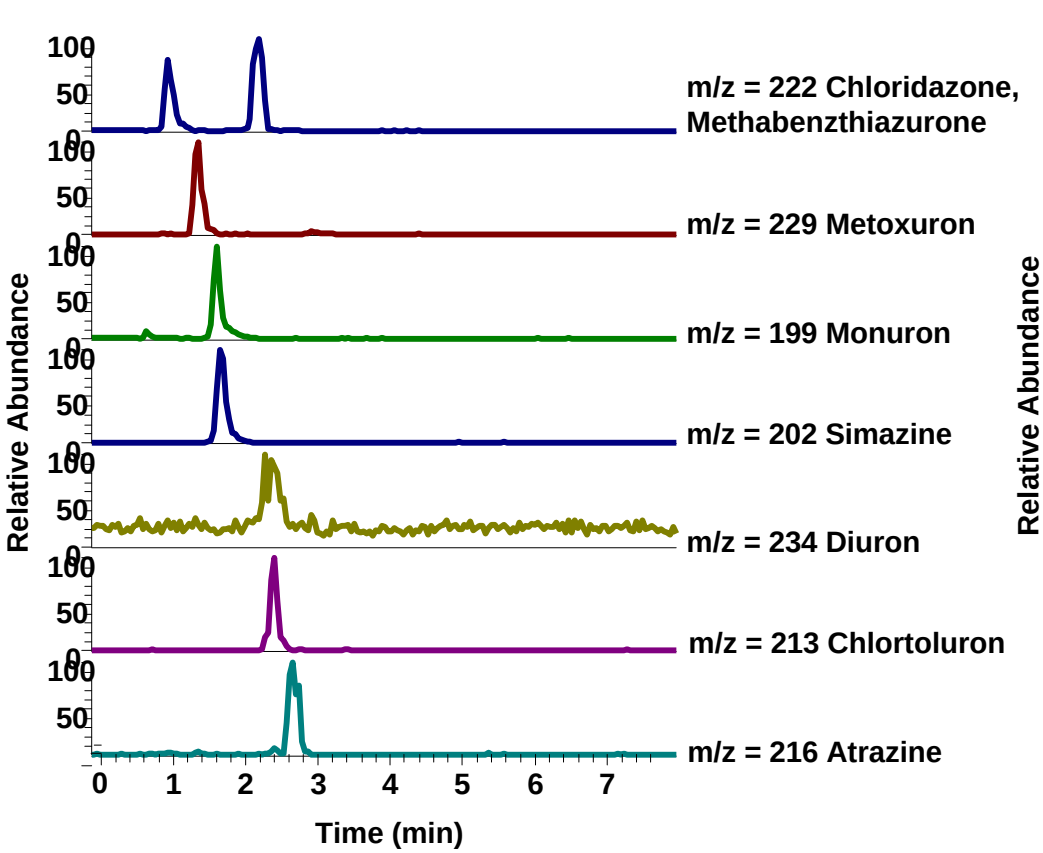
1 Chloridazon
2 Metoxuron
3 Monuron
4 Simazine
5 Methabenzthiazuron
6 Diuron
7 Chlortoluron
8 Atrazine
9 Isoproturon
10 Metobromurone
11 Metazachlor
12 Propazine
13 Terbutylazine
14 Monolinuron
15 Linuron
16 Metolachlor
17 Parathion-ethyl

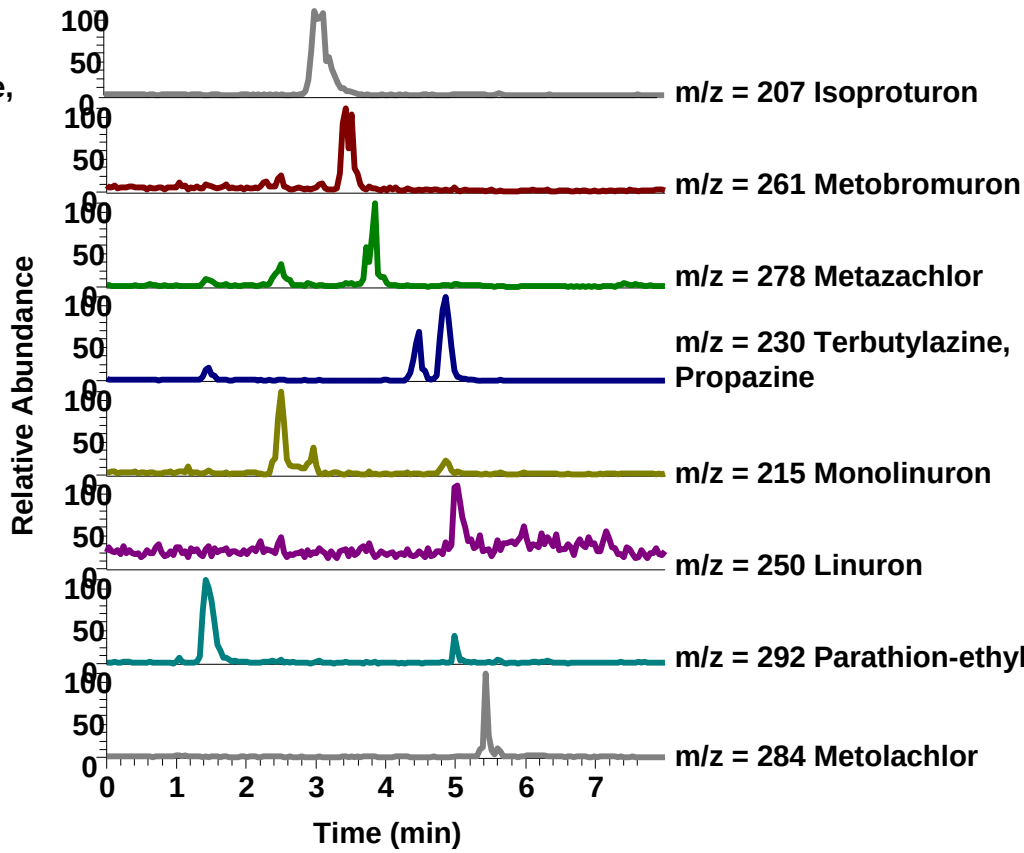


Column Order No. 05BI181BOE

Determination of Pesticides with MS detection (II)

- Environmental application



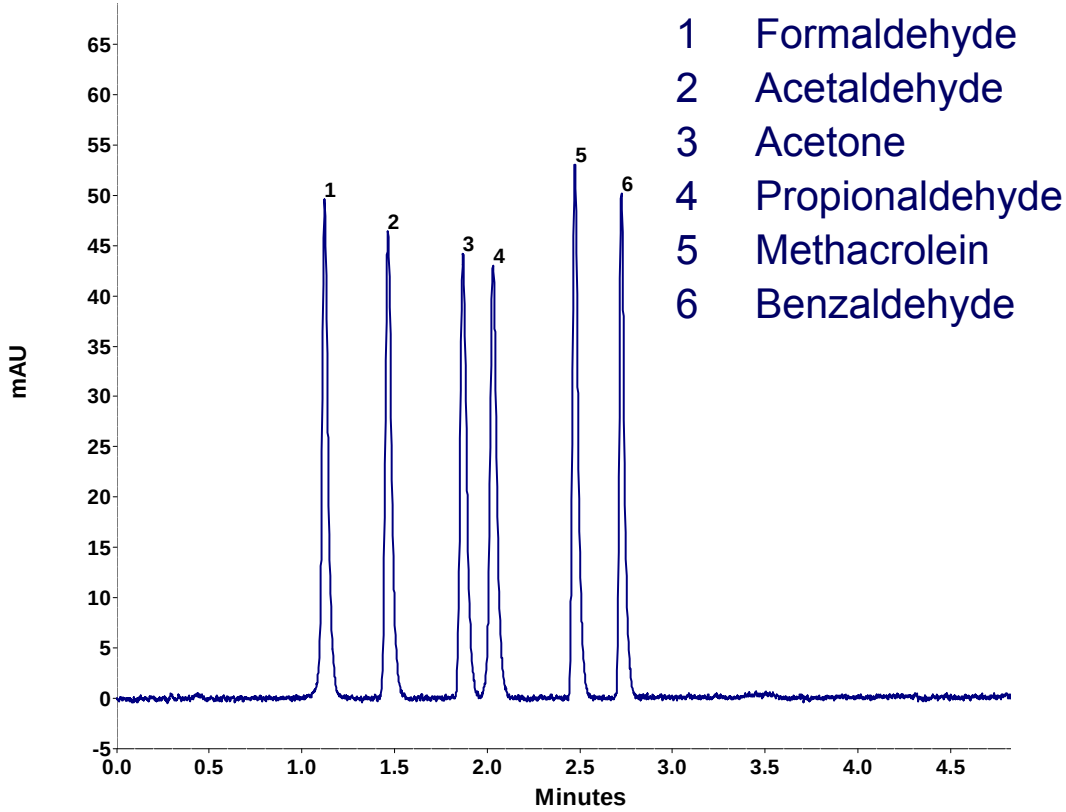


Determination of DNPH Carbonyls (I)

VEV0003J

- Environmental application

Column: BlueOrchid 175-1.8 C18 A
100 x 2 mm
Eluent: A: H_2O
B: ACN
Gradient: 0 – 2 min 40 % - 55% B
2 – 4 min 55 % - 100% B
4 – 4.5 min 100 % B
Flow: 0.8 ml/min
Temp.: 40° C
Detection: 370 nm (50 mm cell, 50 Hz, 0.1s)
Volume: 2 µl standard (2 ng/µl)



Column Order No. 10BI184BOE

New

HPLC · SMB · Osmometry

KNAUER

Determination of DNPH Carbonyls (II)

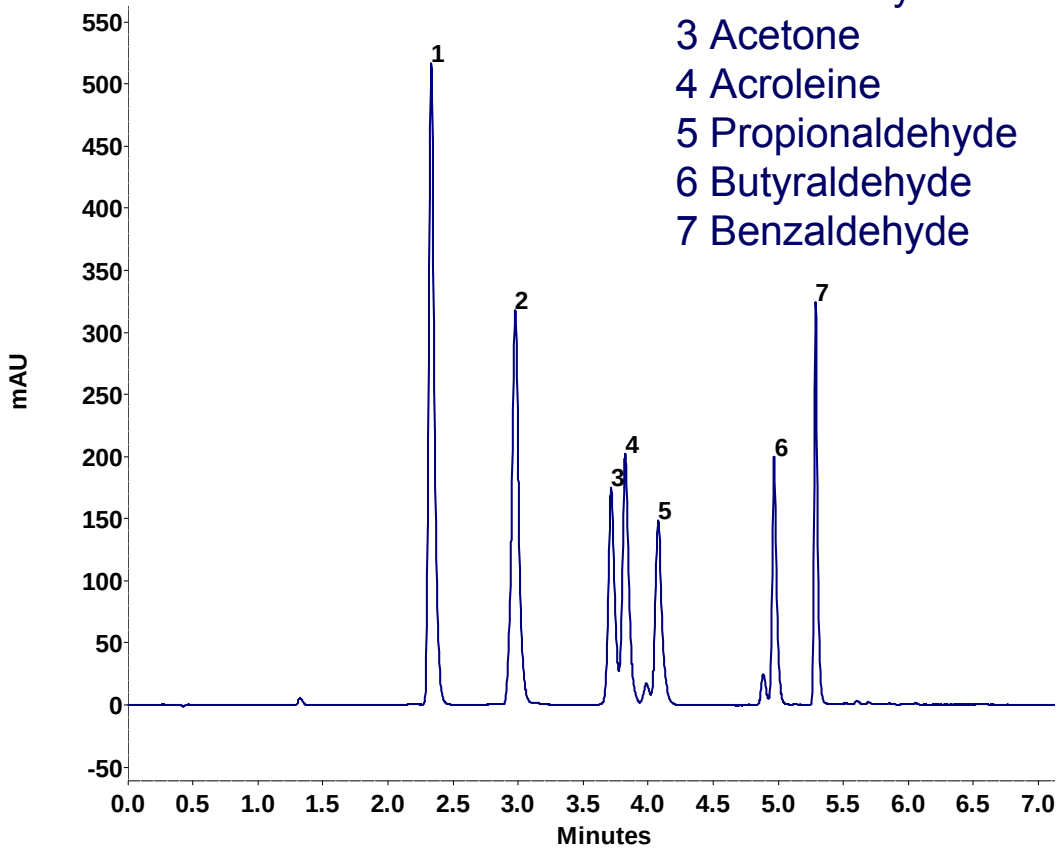
VEV0058J

- Environmental application

Column: Bluespher 100-2 C18A, 100 x 2.0 mm ID
Eluent: A: H2O, B: ACN
Gradient: 0 – 4 min 40 % - 55 % B
4 – 6 min 55 % B - 100 % B
6 – 6.7 min 100 % B
Flow: 0.6 ml/min
Volume: 10 µl
Temp.: 25 °C
Detection: PDA-1, 370 nm (50 Hz, 0.02 s)
Pressure: 600 bar

Column Order No. 10BE184BSF

1 Formaldehyde
2 Acetaldehyde
3 Acetone
4 Acroleine
5 Propionaldehyde
6 Butyraldehyde
7 Benzaldehyde



New

HPLC · SMB · Osmometry

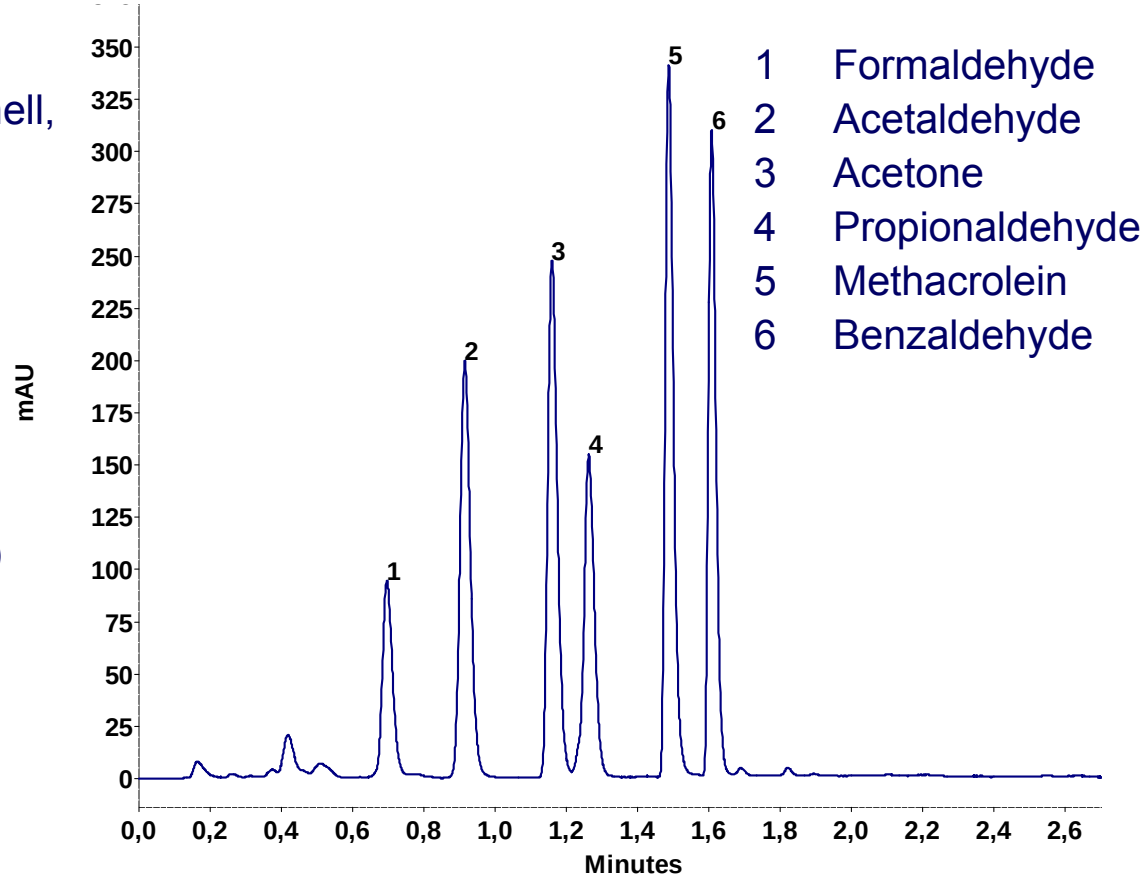
KNAUER

Determination of DNPH Carbonyls (III)

VEV0052J

- Environmental application

Column: BlueShell 80-2.6 C18A core shell, 100 x 2.0 mm ID
Eluent: A: H_2O, B: ACN
Gradient: 0 – 1 min 40 % - 55 % B
1 – 2 min 55 % B - 100 % B
2 – 2.5 min 100 % B
Flow: 1.2 ml/min
Volume: 10 µl
Temp.: 40 °C
Detection: PDA-1, 370 nm (50 Hz, 0.02 s)



Column Order No. 10BD184SHA

New

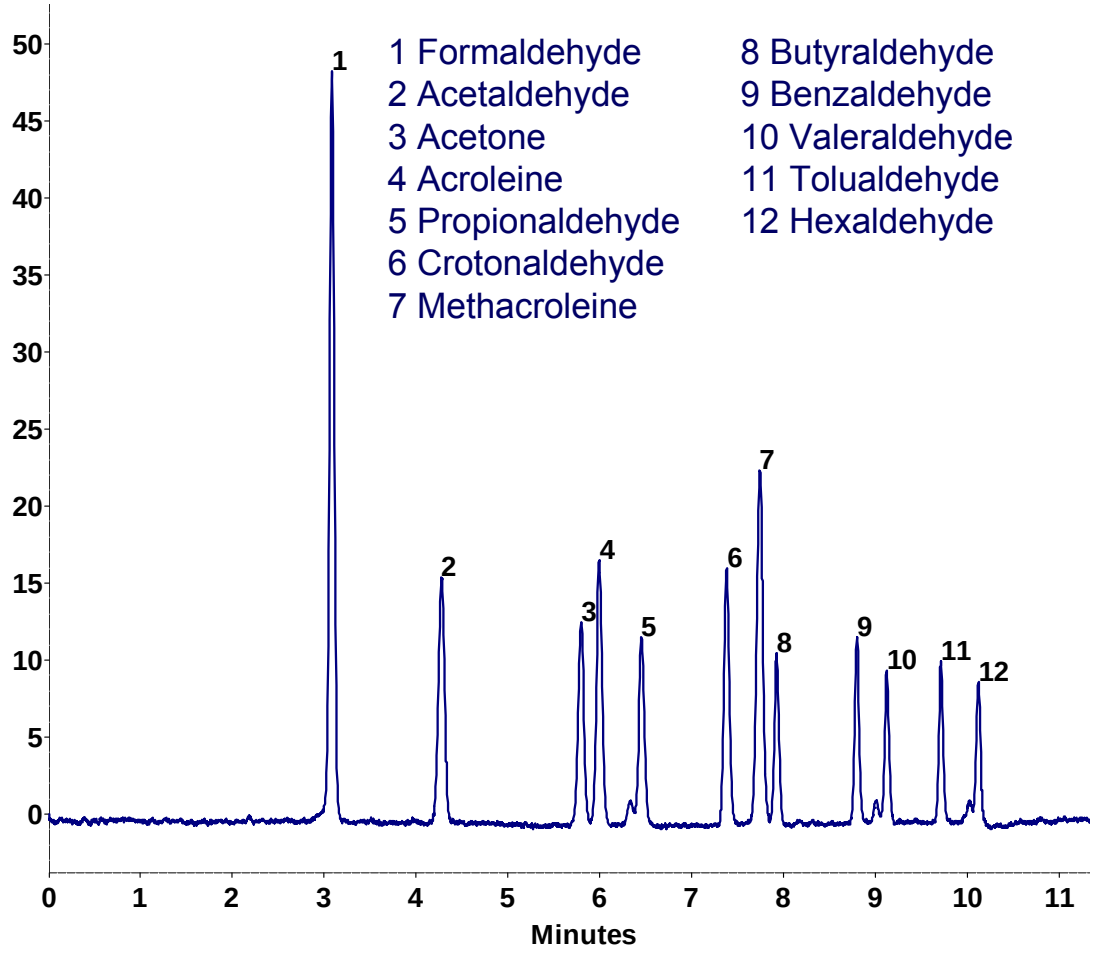
HPLC · SMB · Osmometry

KNAUER

Determination of DNPH Carbonyls with special column VEV0046J

- Environmental application

Column: Bluespher 100-2 DNPH
150 x 2.0 mm ID
Eluent: A: H2O, B: ACN
Gradient: 0 – 4 min 45 % B
4 – 10 min 45 % B - 70 % B
10 – 11 min 70 % B
Flow: 0.7 ml/min
Volume: 1 µl
Temp.: 40 °C
Detection: PDA-1, 370 nm (50 Hz, 0.02 s)
Pressure: 820 bar



Column Order No. 15BE490BSF

New

HPLC · SMB · Osmometry

KNAUER

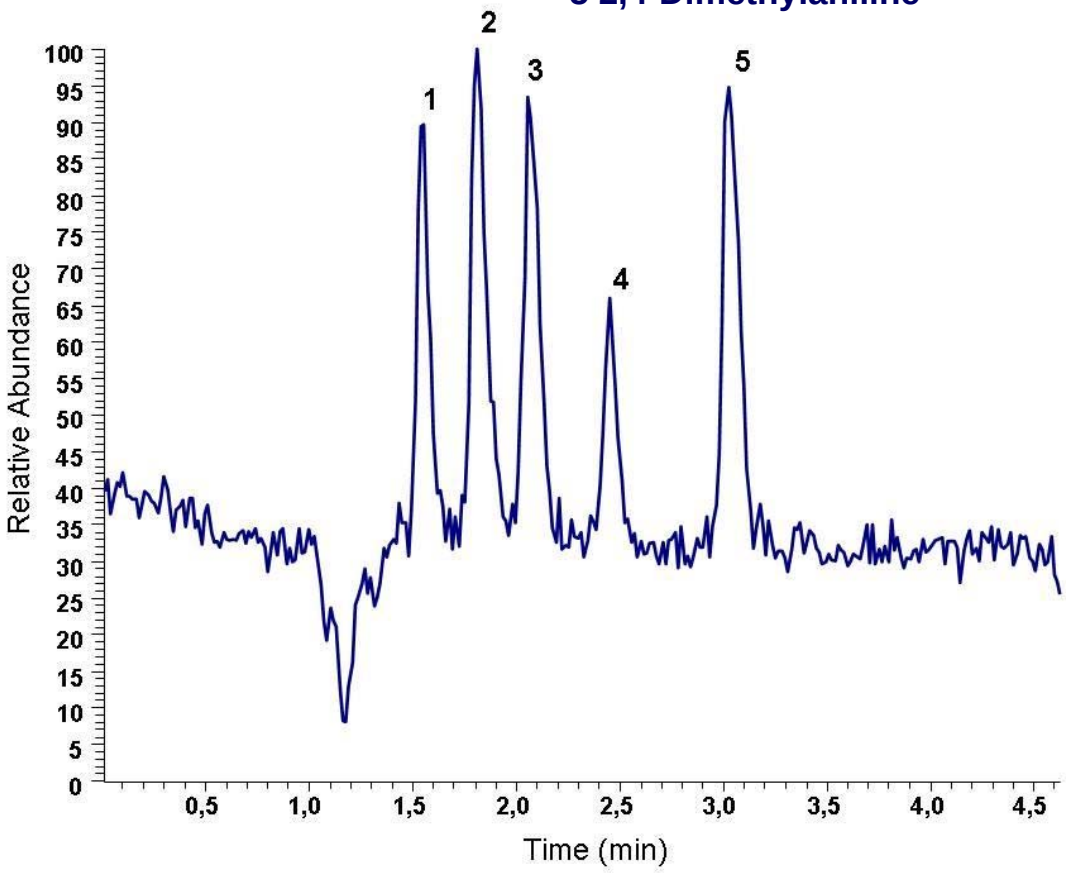
Determination of Primary Aromatic Amines with MS Detection VEV0043J

- Environmental application

Column: BlueOrchid C18 100 x 2.0 mm ID
Eluent: A: H2O + 0.1 % FA
B: MeOH + 0,1 % FA
Gradient: 0.0 – 3.0 min 20 - 40 % B
3.0 – 3.1 min 40 - 100 % B
3.1 – 5.0 min 100 % B
Flow: 0.2 ml/min
Volume: 10 µl
Temp.: 40 °C
Detection: MSQ Plus, ESI pos. mode,
Needle 1 kV, coneV 20 V,
Probe temperature 200 °C
full scan m/z = 80 – 170

Column Order No. 10BI181BOE

1 Aniline
2 2-Anisidine
3 o-Toluidine
4 3-Chloro-4-methoxyaniline
5 2,4-Dimethylaniline



KNAUER

Bioanalytical Applications

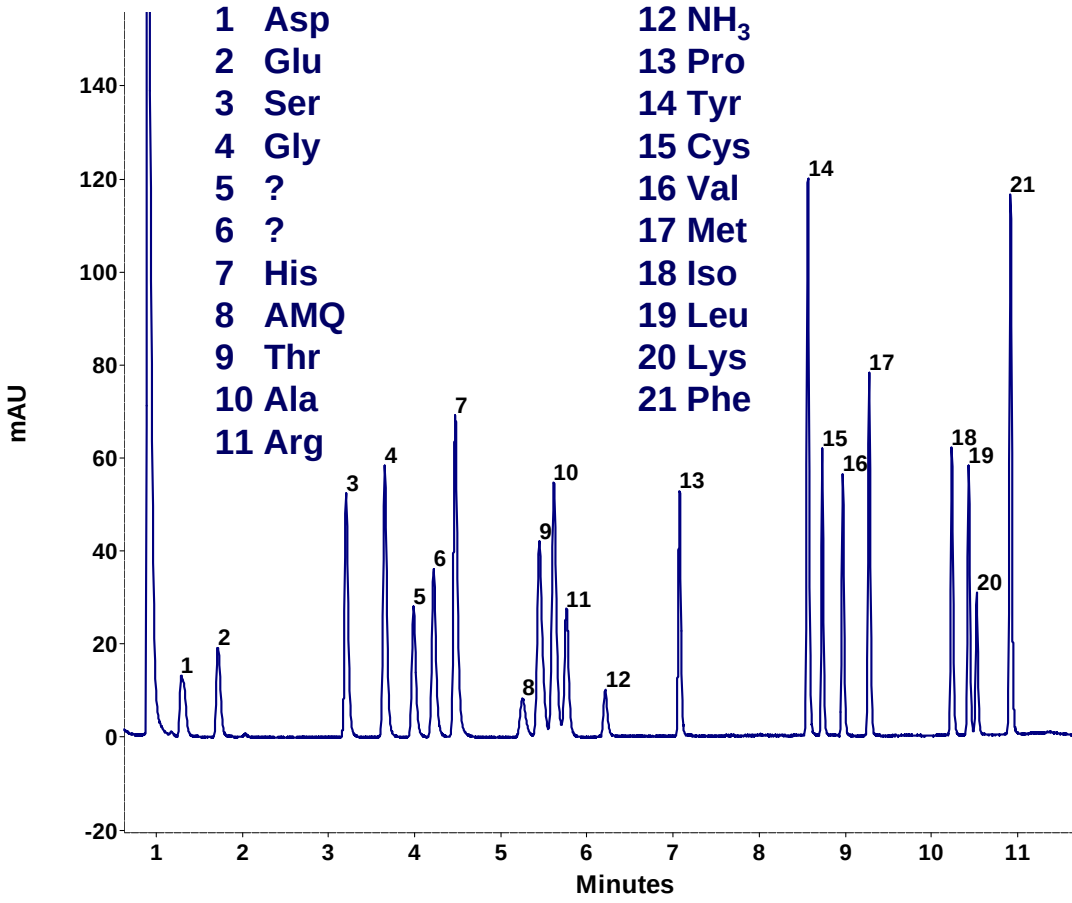
Determination of AQC-Amino acids with PDA (I)

VBS0001J

- Bioanalytical application

Column: 100 x 2 mm BO C18 1.8µm
Eluent: A: Sodium acetate
B: ACN/Sodium acetate 60:40
Gradient: 0 min 92% A (0.6 ml/min)
0.0 – 5.0 min 86% A (0.6 ml/min)
5.0 – 6.0 min 86 %A (0.6 ml/min)
6.0 – 11.0 min 65% A (0.85 ml/min)
11.0 -12.0 min 65% A (0.85 ml/min)
Flow: 0.6 ml/min / 0.850 ml/min
Volume: 1 µl
Temp.: 40° C
Detection: PDA-1, 254 nm (10mm 2 µl Cell)
(100 Hz; 0.005s)

Column Order No. 10BI181BOE



New

HPLC · SMB · Osmometry

KNAUER

Determination of AQC-Amino acids with FLD

VBS0011J

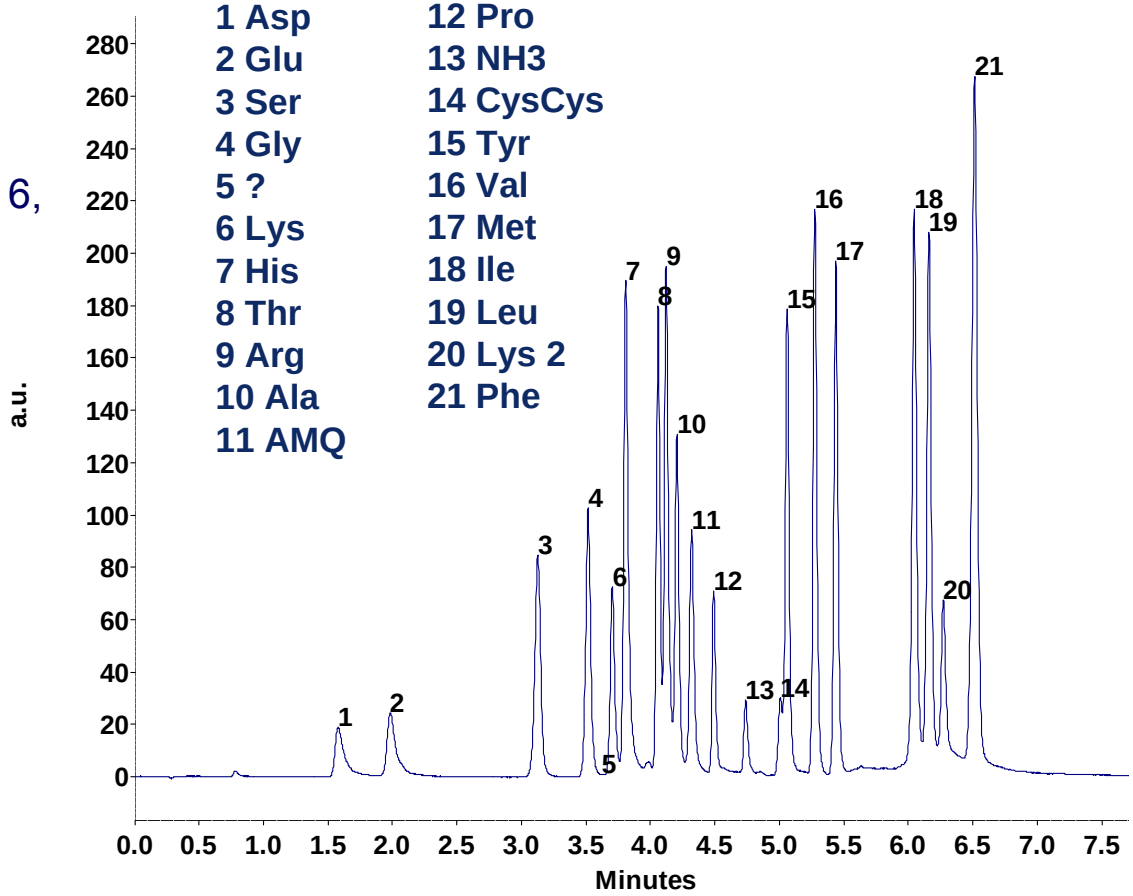
- Bioanalytical application

Column: BS 100-2 C18 100 x 2.0 mm ID
Eluent: A: 50 mM Sodium-Ac. pH 5.75
B: 30 % 50 mM Sodium-Ac. pH 6, 70 % ACN
Gradient: 0 – 3 min 5 - 10 % B
3 – 4.75 min 10 - 25 % B
4.75 – 6.5 min 25 - 32 % B
Flow: 0.8 ml/min
Volume: 1 µl (1.176 pmol/ul)
Temp.: 45 °C
Detection: Fluorescence RF-20A XS
(Ex 250 nm, Em 395 nm)
Pressure: approx. 660 bar

Column Order No. 10BE181BSF

AQC-derivatives of:

1 Asp
2 Glu
3 Ser
4 Gly
5 ?
6 Lys
7 His
8 Thr
9 Arg
10 Ala
11 AMQ
12 Pro
13 NH3
14 CysCys
15 Tyr
16 Val
17 Met
18 Ile
19 Leu
20 Lys 2
21 Phe



New

HPLC · SMB · Osmometry

KNAUER

Determination of AQC-Amino acids with PDA (II)

VBS0012J

- Bioanalytical application

Column: BS 100-2 C18 100 x 2.0 mm ID

Eluent: A: 50 mM Sodium-Ac. pH 5.75

B: 30 % 50 mM Sodium-Ac. pH 6
70 % ACN

Gradient: 0 – 3 min 5 - 10 % B

3 – 4.75 min 10 - 25 % B

4.75 – 6.5 min 25 - 32 % B

Flow: 0.8 ml/min

Volume: 10 µl (11.76 pmol/ul)

Temp.: 45 °C

Detection: PDA-1, 254 nm

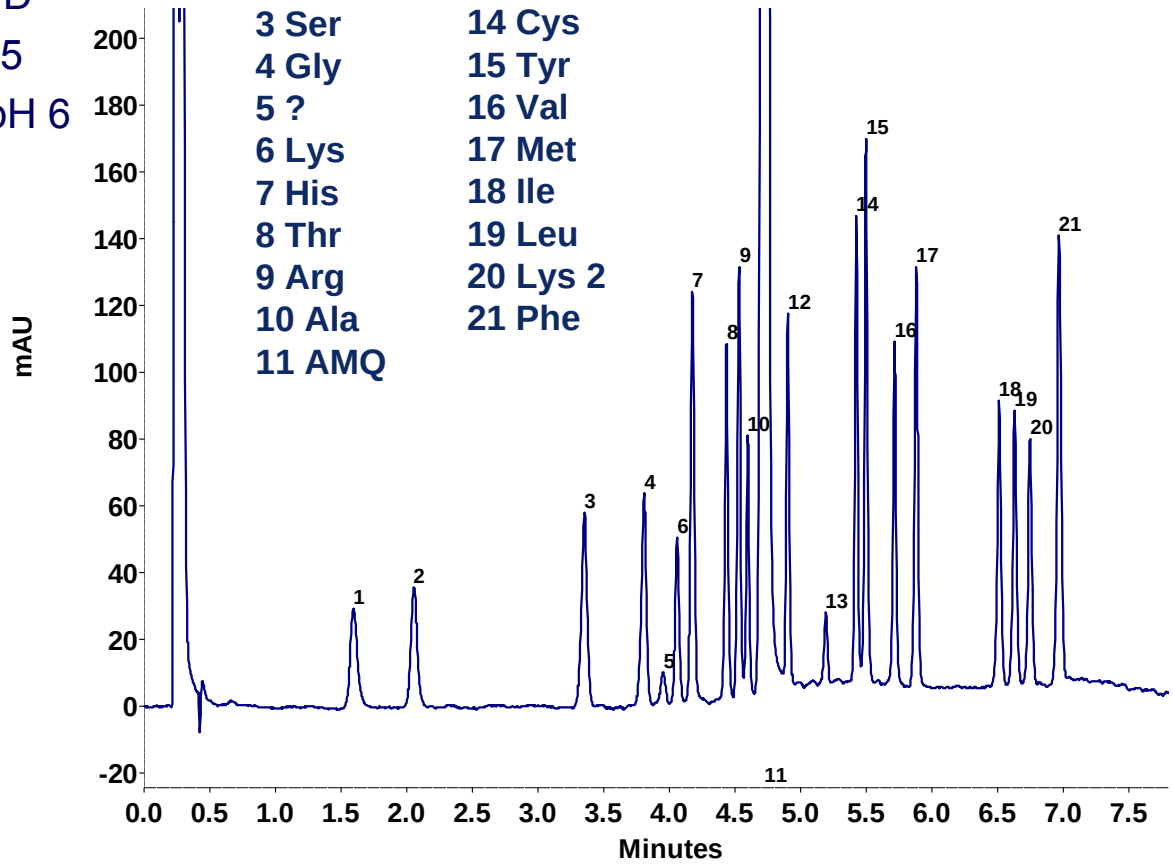
(10 mm cell, 50 Hz, 0.02 s)

Pressure: approx. 660 bar

Column Order No. 10BE181BSF

AQC-derivatives of:

1 Asp	12 Pro
2 Glu	13 NH3
3 Ser	14 Cys
4 Gly	15 Tyr
5 ?	16 Val
6 Lys	17 Met
7 His	18 Ile
8 Thr	19 Leu
9 Arg	20 Lys 2
10 Ala	21 Phe
11 AMQ	



New

HPLC · SMB · Osmometry

KNAUER

Determination of AQC-Amino acids with MS detection

VBS0013J

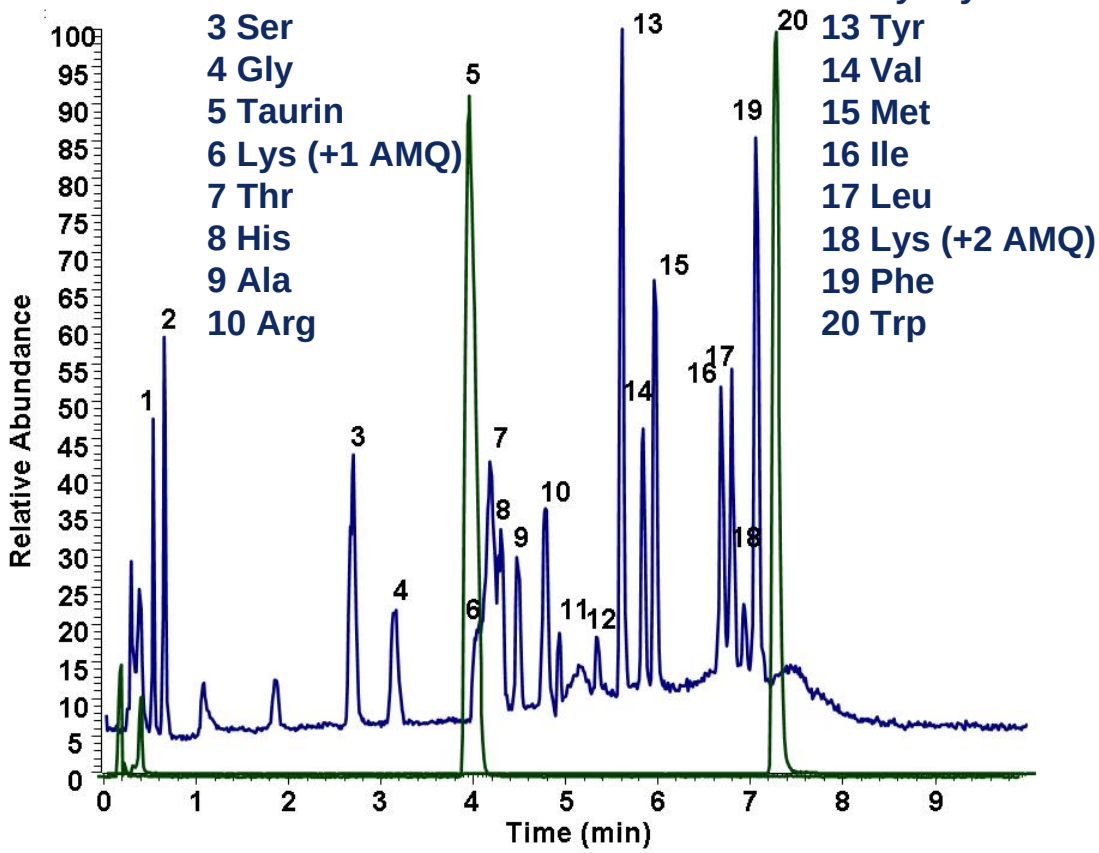
Bioanalytical application

Column: BS 100-2 C18 100 x 2.0 mm ID
Eluent: A: 2.5 mM NH4-Ac. pH 5.75
B: 30 % 2.5 mM NH4-Ac. pH 6
70 % ACN
Gradient: 0 – 3 min 5 - 10 % B
3 – 4.75 min 10 - 25 % B
4.75 – 6.5 min 25 - 32 % B
Flow: 0.8 ml/min
Volume: 10 µl (11.76 pmol/ul)
Temp.: 45 °C
Detection: MSQ Plus, ESI mode,
Needle 3kV, coneV 75 V,
Probe temperature 350 °C
selected SIM Scans,
positive ion mode (blue)
negative ion mode (green)

Column Order No. 10BE181BSF

AQC-derivatives of:

1 Asp
2 Glu
3 Ser
4 Gly
5 Taurin
6 Lys (+1 AMQ)
7 Thr
8 His
9 Ala
10 Arg
11 Pro
12 CysCys
13 Tyr
14 Val
15 Met
16 Ile
17 Leu
18 Lys (+2 AMQ)
19 Phe
20 Trp



New

HPLC · SMB · Osmometry

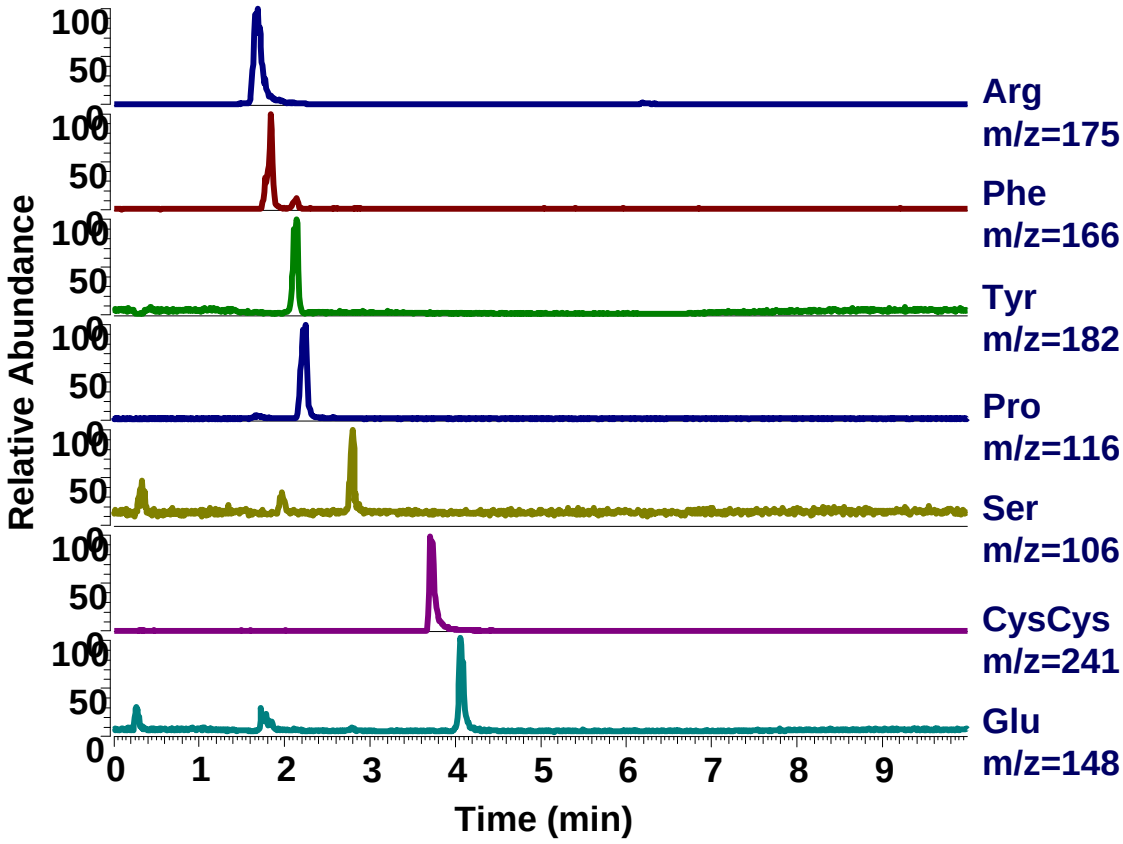
KNAUER

Determination of underivatized Amino acids with MS detection

VBS0014J

Bioanalytical application

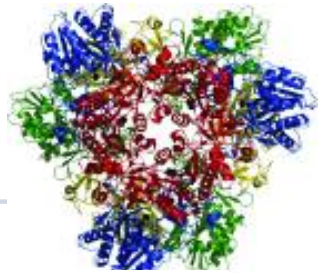
Column: BlueOrchid HILIC 100 x 2.0 mm ID
Eluent: A: ACN + 0.5 % FA
B: H2O + 0.5 % FA
Gradient: 0 – 4.75 min 5 - 60 % B
4.75 – 5.60 min 60 - 95 % B
Flow: 0.6 ml/min
Volume: 10 µl (100 pmol/ul)
Temp.: 25 °C
Detection: MSQ Plus, ESI pos. mode,
Needle 2kV, coneV 75 V,
Probe temperature 350 °C
selected SIM Scans



Column Order No. 10BI120BOE

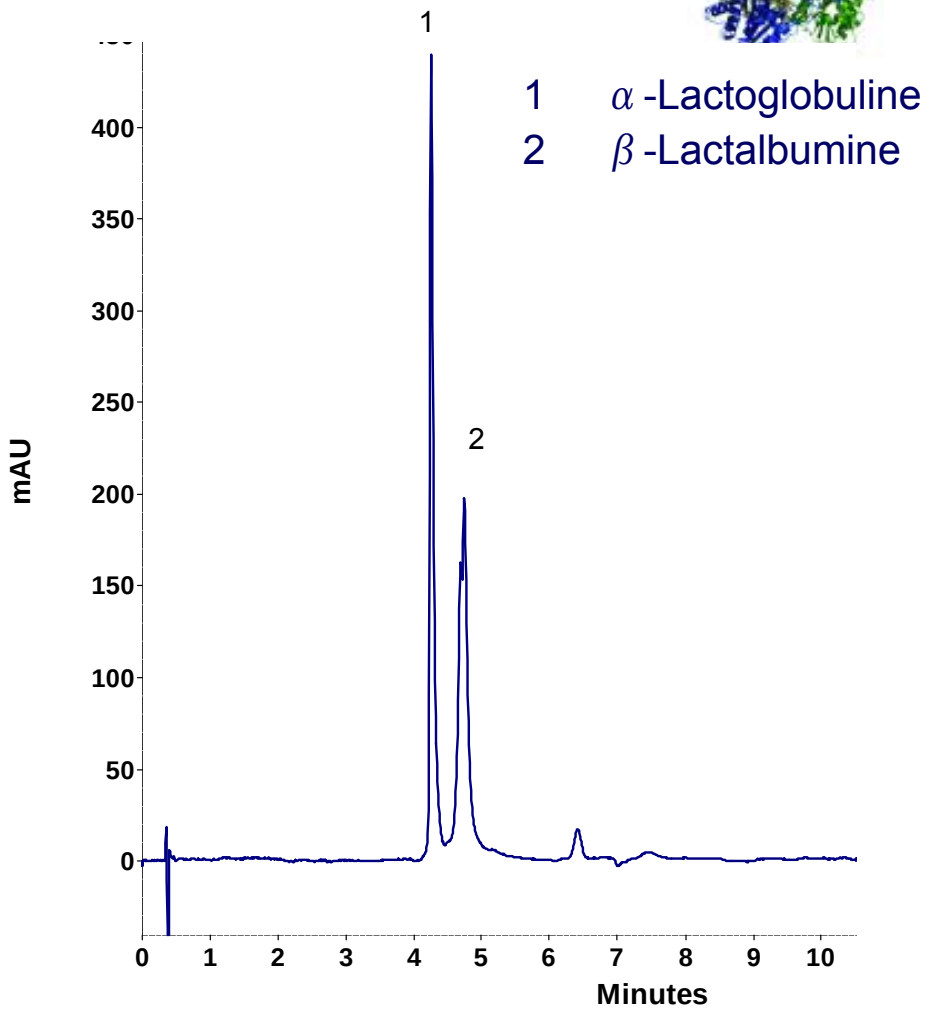
Separation of Proteins

VBS0019J



- Bioanalytical application

Column: 100 x 2 mm BO C18 A 1.8µm
Eluent: A: H_2O (0.1% TFA)
B: 60% ACN (0.1% TFA)
Gradient: 30 -100% B in 6 min (2 min hold)
100 - 30% B in 0.5 min (4 min hold)
Flow: 700 µl/min
Volume: 1 µl
Temp.: 40° C
Detection: PDA-1, 210 nm (10mm 2 µl Cell)
(50 Hz; 0.01s)



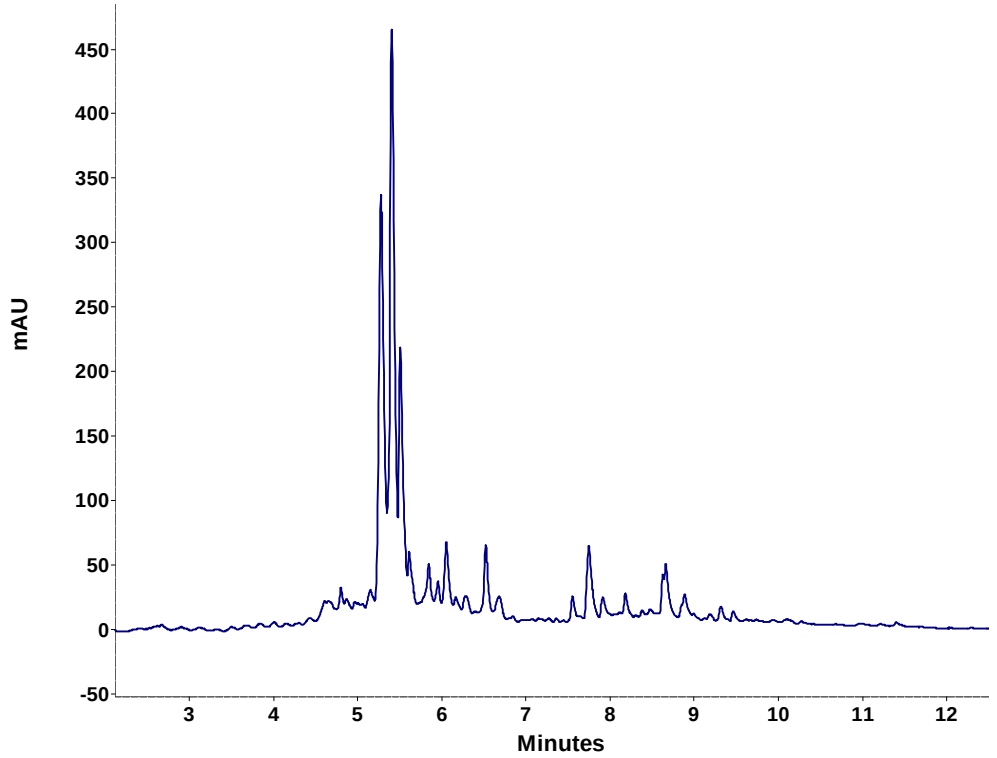
Column Order No. 10BI184BOE

Separation of Peptides

VBS0002J

- Bioanalytical application

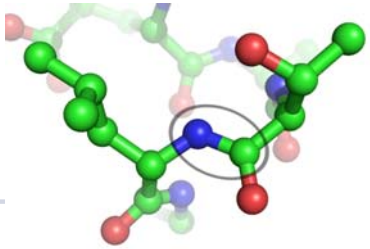
Column: 100 x 2 mm BO C18 A 1.8µm
Eluent: A: H_2O (0.1% TFA)
B: 60% ACN (0.1% TFA)
Gradient: 0 –100% B in 10 min (3 min hold)
Flow: 500 µl/min
Volume: 5 µl
Temp.: 40° C
Detection: PDA-1, 210 nm (10mm 2 µl Cell)
(50 Hz; 0.01s)



Column Order No. 10BI184BOE

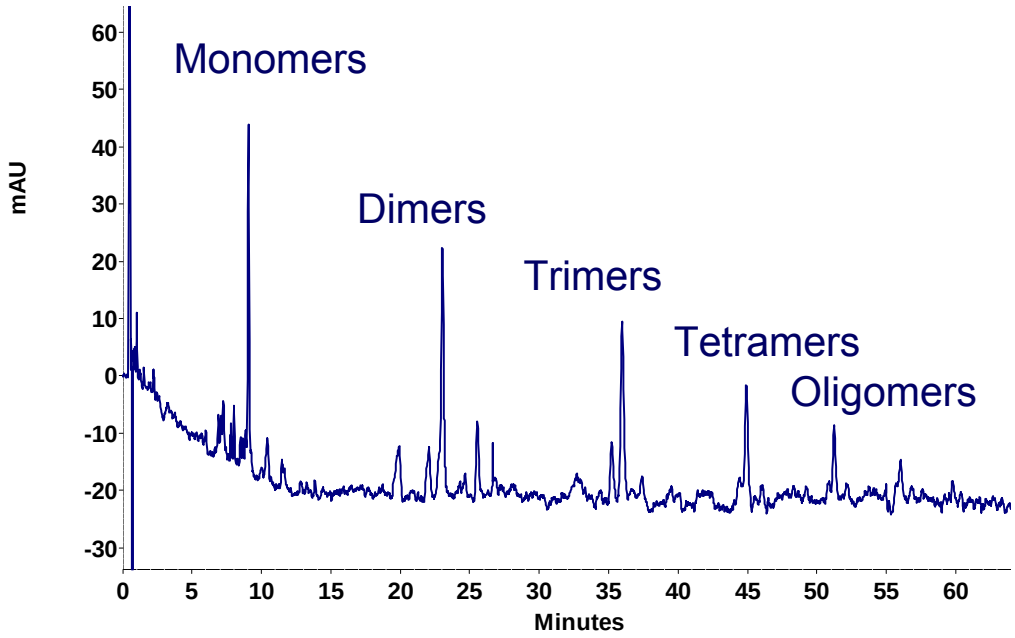
Separation of Muropeptides

VBS0004J



- Bioanalytical Application

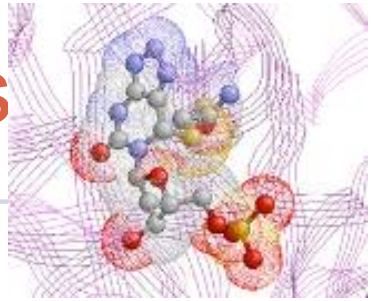
Column: 100 x 2 mm BO C18 A 1.8µm
Eluent: A: 100 mM NaH_2PO_4 pH 2.8
B: 100 mM NaH_2PO_4 pH 2.8
+ 30% MeOH (v/v)
Gradient: 0 – 30% B 0-12.5 min
30 – 100% B 12.5 -60 min
Flow: 500 µl/min
Volume: 5 µl
Temp.: 40° C
Detection: PDA-1, 206 nm (10mm, 2 µl Cell)



Column Order No. 10BI184BOE

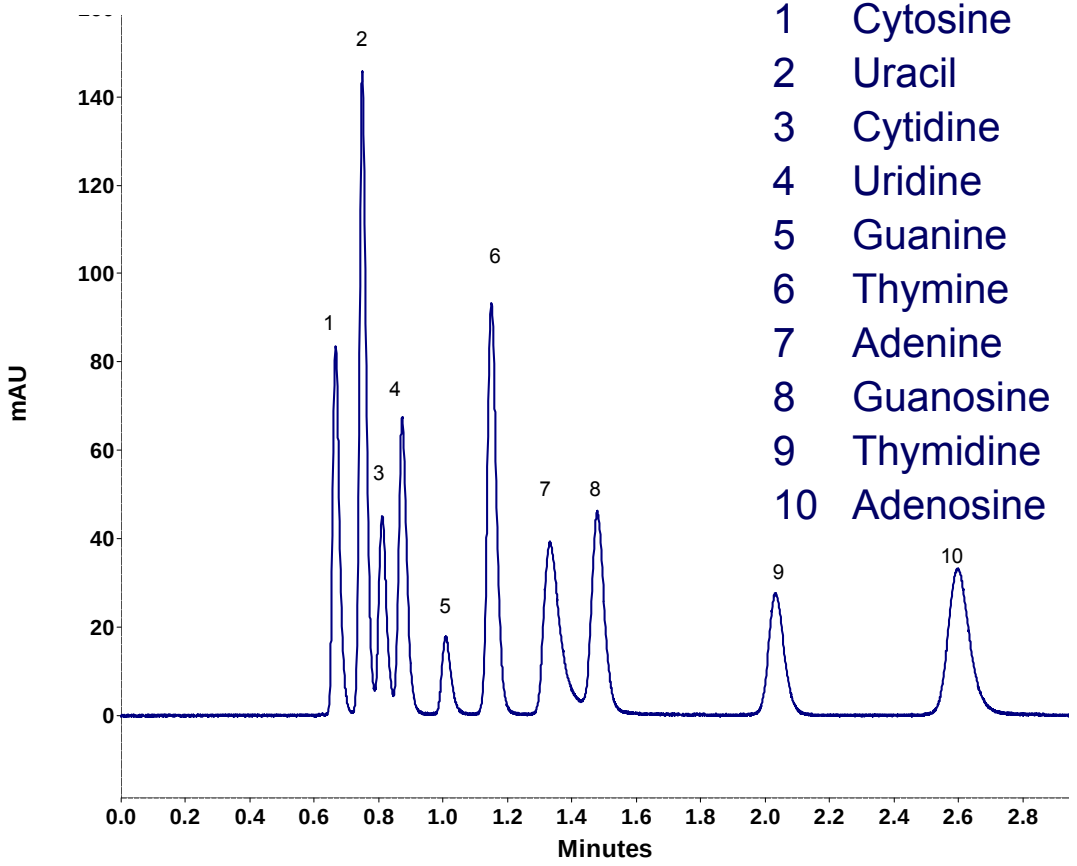
Separation of Nucleosides and Bases

VBS0010J



- Bioanalytical application

Column: 100 x 2 mm BO PFP 1.8µm
Eluent: A: 20 mM NH_4ac pH 3.5
B: A/MeOH 90:10 (v/v)
Gradient: isocratic 90% A / 10% B
Flow: 500 µl/min
Volume: 1 µl
Temp.: 30° C
Detection: PDA-1, 210 nm (10mm 2 µl Cell)
(100 Hz; 0.001s)



1 Cytosine
2 Uracil
3 Cytidine
4 Uridine
5 Guanine
6 Thymine
7 Adenine
8 Guanosine
9 Thymidine
10 Adenosine

Column Order No. 10BI057BOE

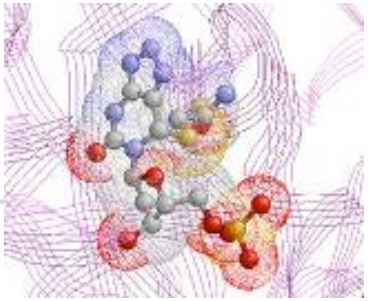
New

HPLC · SMB · Osmometry

KNAUER

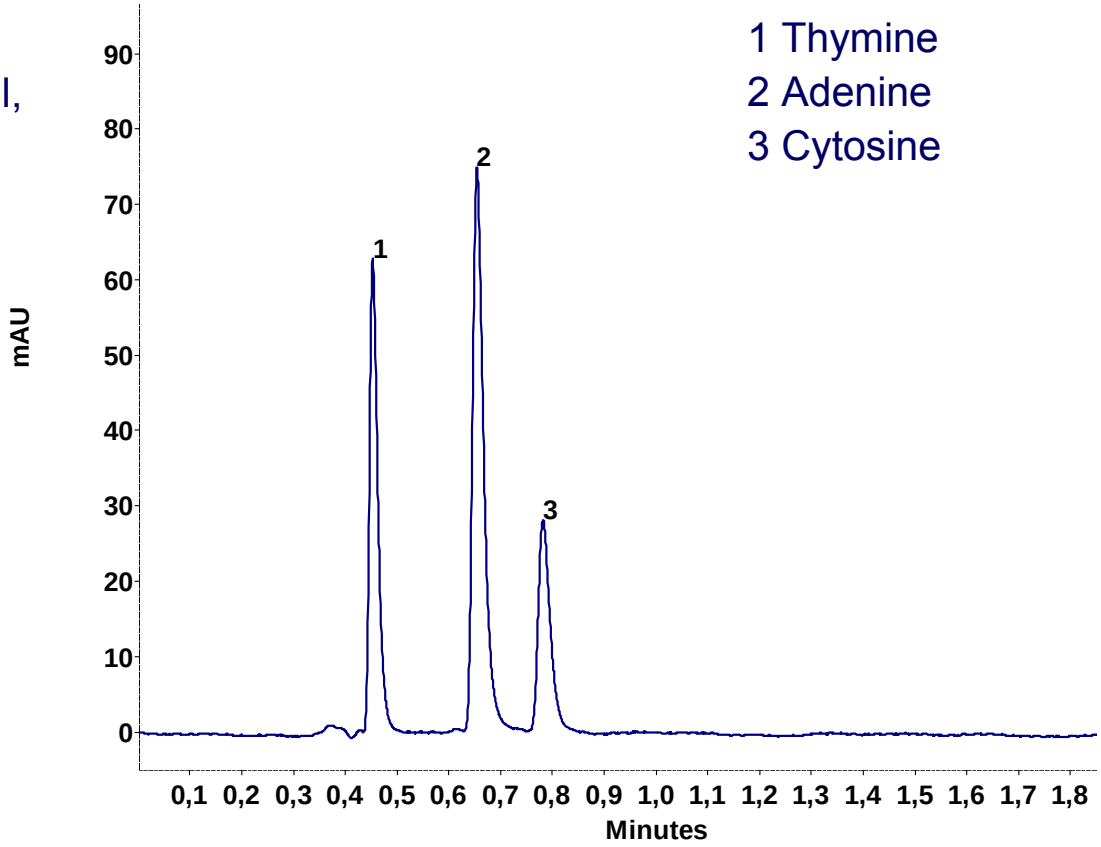
Separation of Purines and Pyrimidines

VBS0020J



- Bioanalytical application

Column: BlueShell 80-2.6 HILIC core shell, 100 x 2 mm ID
Eluent: A: 5 mM NH_4Ac pH 2.9
B: ACN
Gradient: isocratic 20% A / 80% B
Flow: 0.6 ml/min
Volume: 1 µl
Temp.: 30° C
Detection: PDA-1, 254 nm (10mm 2 µl Cell) (50 Hz; 0.02s)



Column Order No. 10BD120SHA

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Contact

- Find out more about KNAUER columns

  www.knauer.net/columns

- HPLC/UHPLC applications support

  applications@knauer.net

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