Quick Guide

Applications

KNAUER

Established in Germany in 1962, KNAUER was one of the first companies to manufacture HPLC systems and chromatography columns.
With an emphasis on reliability and ease-of-use, we constantly strive to improve our product's performance: making your analyses faster, easier, and more economical.

With this Quick Guide to LC Applications, we aim to provide an overview of some of our most interesting fast LC and UHPLC separations, demonstrating the possibilities of modern LC columns and instrumentation.

Can we help you with your LC application?

Our application specialists are at your service!

applications@knauer.net

Table of Contents

Environmental applications

Food applications

Bioanalytical applications

Clinical applications

Pharmaceutical applications

Chemical applications

Substance index

Substance index

Substance index

Substance index

Environ-
mental

© NiDerLander

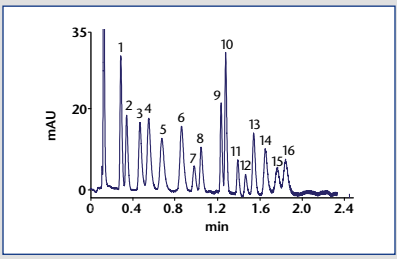
Environmental

Determination of 16 EPA PAH

Separation column
BlueOrchid PAH, 50 x 2 mm

Separation conditions

Eluent:	A: MeOH/H_2O 75:25 B: ACN
Flow rate:	1.0 ml/min
Mode:	RP-Mode, gradient
Injection volume:	1 µl EPA standard
Pressure:	< 500 bar (< 7250 psi)
Detection:	254 nm (100 Hz, 0.01 s) 10 mm, 2 µl flow cell
Temperature:	25 °C



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

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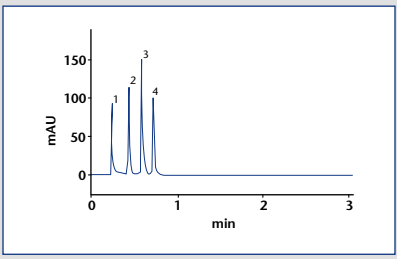
Environmental

Separation of benzene derivatives

Separation column
BlueOrchid C18 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	ACN/H_2O 85:15 (v/v)
Flow rate:	1.0 ml/min
Mode:	RP-Mode, isocratic
Injection volume:	1 µl
Pressure:	750 bar (10150 psi)
Detection:	MW-1, 254 nm (50 Hz, 0.01 s)
Temperature:	35 °C



1	Thiourea
2	Toluene
3	Propylbenzene
4	Butylbenzene

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Environmental

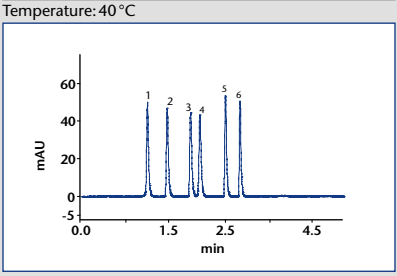
Determination of DNPH carbonyls

Separation column
BlueOrchid C18 A 1.8 µm, 100 x 2 mm

Separation conditions

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 rate:	0.8 ml/min
Mode:	RP-Mode, gradient
Injection volume:	2 µl standard (2 ng/µl)
Pressure:	680 bar (9860 psi)
Detection:	370 nm (50 Hz, 0.1 s) 50 mm flow cell

Temperature: 40 °C



1	Formaldehyde
2	Acetaldehyde
3	Acetone
4	Acrolein
5	Propionaldehyde
6	Crotonaldehyde

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Environmental

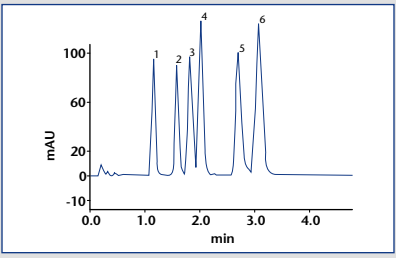
Determination of dispersion dyes


© Adam Borkowski

Separation column
BlueOrchid PFP, 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	H_2O/MeOH 25:75 (v/v)
Gradient:	isocratic
Flow rate:	0.55 ml/min
Mode:	RP-Mode, isocratic
Injection volume:	1 µl
Pressure:	620 bar (8990 psi)
Detection:	PDA-1, (50Hz, 0.01 s) 10mm, 2µl flow cell; 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
Temperature:	30 °C



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

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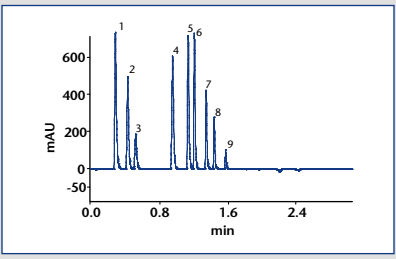
Environmental

Determination of pesticides I

Separation column
BlueOrchid C18 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	A: H_2O B: ACN
Gradient:	0 – 0.5 min 35 % B 0.5 – 1.5 min 35 % – 100 % B 1.5 – 2.0 min 100 % B
Flow rate:	0.6 ml/min
Mode:	RP-Mode, gradient
Injection volume:	1 µl
Pressure:	300 bar (4350 psi)
Detection:	215 nm (50 Hz, 0.05 s) 10 mm, 2 µl flow cell
Temperature:	40 °C



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

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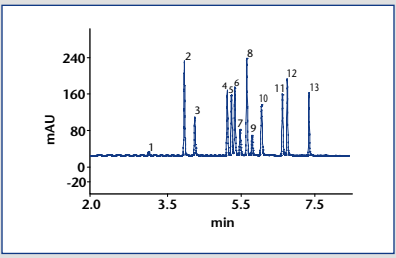
Environmental

Determination of pesticides II

Separation column
BlueOrchid C18 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	A: H_2O B: ACN
Gradient:	0.0 – 0.5 min 5 % B 0.5 – 6.0 min 5 % – 45 % B 6.8 – 8.0 min 45 % – 95 % B
Flow rate:	0.6 ml/min
Mode:	RP-Mode, gradient
Injection volume:	2 µl
Pressure:	520 bar (7540 psi)
Detection:	215 nm (50 Hz, 0.05 s) 10 mm, 2 µl flow cell
Temperature:	40 °C



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

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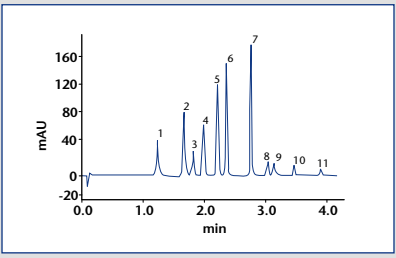
Environmental

Determination of phenols

Separation column
BlueOrchid C18 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	A: H_2O (0.1 % HAc) B: MeOH (0.1 % HAc)
Gradient:	0.0 – 1.0 min 5 % B 1.0 – 4.5 min 5 % – 95 % B 4.5 – 5.0 min 95 % B
Flow rate:	1.0 ml/min
Mode:	RP-Mode, gradient
Injection volume:	5 µl
Pressure:	380 bar (5510 psi)
Detection:	275 nm/320 nm (50 Hz, 0.05 s)
Temperature:	50 °C



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

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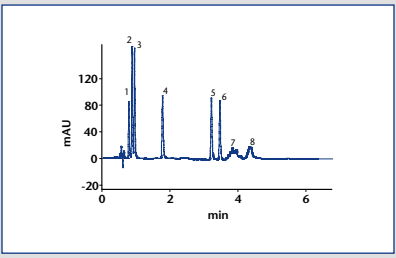
Environmental

Determination of phthalates

Separation column
BlueOrchid C18 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	A: H_2O / ACN 15:85 B: ACN
Gradient:	0.0 – 1.2 min 0 % B 1.2 – 3.2 min 0 % – 100 % B 3.2 – 5.0 min 100 % B
Flow rate:	0.5 ml/min
Mode:	RP-Mode, gradient
Injection volume:	2 µl
Pressure:	350 bar (5080 psi)
Detection:	225 nm (50 Hz, 0.05 s) 10 mm, 2 µl flow cell
Temperature:	30 °C



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

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Food

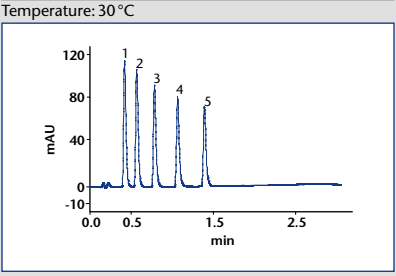
Determination of benzoates

Separation column
BlueOrchid C18 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	A: Water B: Methanol
Gradient:	0–2 min 60 %–90 % B 2–3 min 90 % B 3–3.5 min 60 % B
Flow rate:	0,6 ml/min
Mode:	RP-Mode, gradient
Injection volume:	1 µl
Pressure:	620 bar (8990 psi)
Detection:	PDA-1, 254 nm (100 Hz; 0.005 s) 10 mm, 2 µl flow cell

Temperature: 30 °C



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

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Food

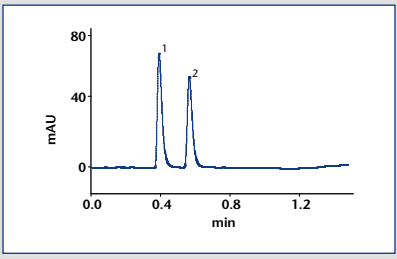
Determination of bisphenols I

© aidanrici

Separation column
BlueOrchid C18 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	H_2O/ACN 55:45, (v/v)
Flow rate:	0.6 ml/min
Mode:	RP-Mode, isocratic
Injection volume:	2 µl
Pressure:	550 bar (7980 psi)
Detection:	PDA-1, 227 nm (50 Hz; 0.01 s) 10 mm, 2 µl flow cell
Temperature:	30 °C



1	Bisphenol F
2	Bisphenol A

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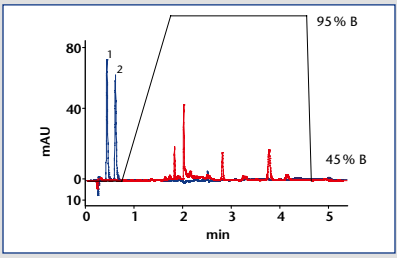
Determination of bisphenols II

© foodlovers

Separation column
BlueOrchid C18 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	A: H_2O B: ACN
Gradient:	0.0 – 0.7 min 45 % B 0.7 – 1.7 min 45 – 95 % B 1.7 – 4.5 min 95 % B 4.5 – 4.6 min 95 – 45 % B
Flow rate:	0.6 ml/min
Mode:	RP-Mode, gradient
Injection volume:	2 µl
Pressure:	550 bar (7690 psi)
Detection:	PDA-1, 227 nm (50 Hz, 0.01 s) 10 mm, 2 µl flow cell
Temperature:	30°C



1	Bisphenol F
2	Bisphenol A

standard = blue
wrapping film extract = red

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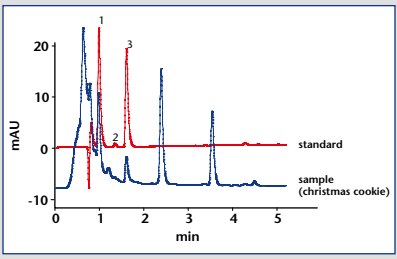
Food

Determination of coumarin

Separation column
BlueOrchid C18 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	A: H_2O B: MeOH
Gradient:	0.0 – 4.6 min 50 – 70 % B 4.6 – 4.7 min 70 – 95 % B 4.7 – 5.95 min 95 % B 5.95 – 6.0 min 95 – 50 % B
Flow rate:	0,3 ml/min
Mode:	RP-Mode, gradient
Injection volume:	2 µl
Pressure:	520 bar (7540 psi)
Detection:	UV, 278 nm (50 Hz, 0,02 s) 10 mm, 2 µl flow cell
Temperature:	30 °C



1	Impurtiy I
2	Impurity II
3	Coumarin

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Food

Determination of organic acids

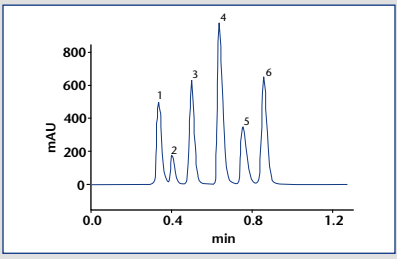
© Carmen Steiner

Separation column

BlueOrchid C18A 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	1.7 mMol NaH_2PO_4 (pH 2.5)
Flow rate:	0.7 ml/min
Mode:	RP-Mode, isocratic
Injection volume:	1 µl
Detection:	210 nm (100 Hz; 0.001 s) 10 mm, 2 µl flow cell
Temperature:	30 °C



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

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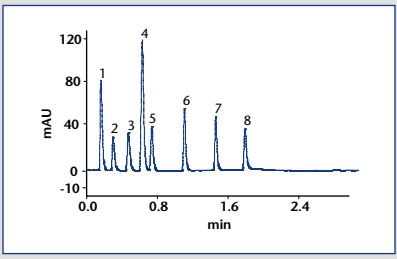
Food

Determination of preservatives

Separation column
BlueOrchid C18 1.8 µm, 50 x 2 mm

Separation conditions

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 rate:	0.85 ml/min
Mode:	RP-Mode
Injection volume:	0.5 µl
Pressure:	–
Detection:	PDA-1, 240 nm (50 Hz, 0.02 s) 10 mm, 2 µl flow cell
Temperature:	40 °C



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

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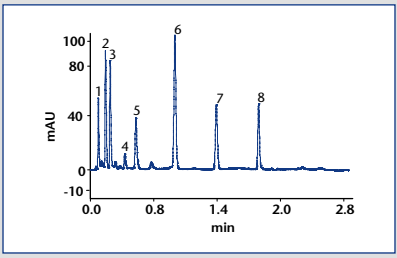
Food

Separation of Sudan dyes

Separation column
BlueOrchid C18 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	A: H_2O (+ 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
Mode:	RP-Mode, gradient
Flow rate:	1.0 ml/min
Injection volume:	1 µl
Pressure:	400 bar (5800 psi)
Detection:	PDA-1, 240 nm (50 Hz, 0.01 s) 10 mm, 2.4 µl flow cell
Temperature:	25 °C



1	Impurity 1
2	4-Phenylazophenol
3	α-Naphthyl red
4	Impurity 2
5	Impurity 3
6	Sudan II
7	Sudan III
8	Sudan IV

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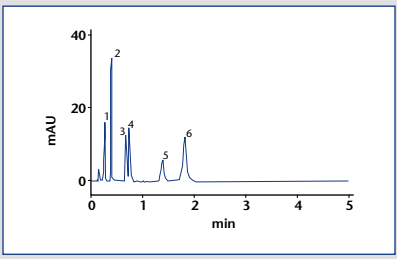
Food

Quick determination of tocopherols

Separation column
BlueOrchid Si 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	Heptane/2-butanol 1000:4 (v/v)
Flow rate:	1.7 ml/min
Mode:	NP-Mode, isocratic
Injection volume:	1 µl
Pressure:	350 bar (5080 psi)
Detection:	MW-1, 280 nm (50 Hz, 0.01 s) 10 mm, 2 µl flow cell
Temperature:	25 °C



1	Trans-retinol
2	Alpha-tocopherol
3	Beta-tocopherol
4	Gamma-tocopherol
5	Delta-tocopherol
6	Vitamin D_2

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Food

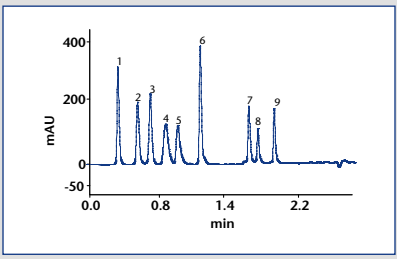
Determination of water soluble vitamins

Separation column

BlueOrchid C18 A 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	A: 50 mM NaH_2PO_4 pH 4 B: MeOH
Mode:	RP-Mode, gradient
Flow rate:	0.7 ml/min
Injection volume:	1 µl
Pressure:	800 bar (11600 psi)
Detection:	PDA-1, 254 nm (50 Hz, 0.01 s) 10 mm, 2.4 µl flow cell
Temperature:	30 °C



1	Ascorbic acid
2	Thiamine
3	Nicotinic acid
4	Pyridoxal
5	Pyridoxin
6	Nicotinamid
7	Folic acid
8	Cyanocobalamine
9	Riboflavin

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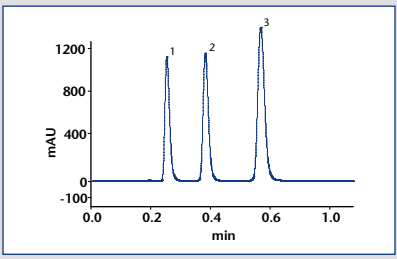
Food

Determination of xanthines

Separation column
BlueOrchid C18 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	A: H_2O B: MeOH 80:20 (v/v)
Flow rate:	0.8 ml/min
Mode:	RP-Mode, isocratic
Injection volume:	1 µl
Detection:	PDA-1, 275 nm (50 Hz; 0.01 s) 10 mm, 2 µl flow cell
Temperature:	30 °C



1	Theobromine
2	Theophyline
3	Caffeine

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Bio analytical

© CandyBox Photography |.

Bioanalytical

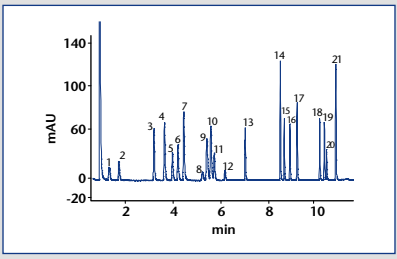
Determination of amino acids

Separation column

BlueOrchid C18 1.8 µm, 100 x 2 mm

Separation conditions

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 rate:	0.6 ml/min, 0.85 ml/min
Mode:	RP-Mode, gradient
Injection volume:	1 µl
Pressure:	590 bar (8560 psi)
Detection:	PDA-1, 254 nm (100 Hz, 0.005 s) 10 mm, 2 µl flow cell
Temperature:	40 °C



1	Aspartic acid	12	NH_1
2	Glutamic acid	13	Proline
3	Serine	14	Tyrosine
4	Glycine	15	Cysteine
5	?	16	Vainel
6	?	17	Methionine
7	Histidine	18	Isoleucine
8	AMQ	19	Leucine
9	Threonine	20	Lysine
10	Alanine	21	Phenylalanine
11	Arginine		

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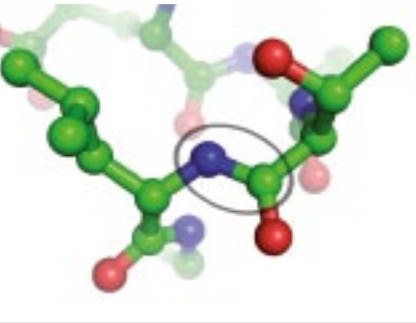
Bioanalytical

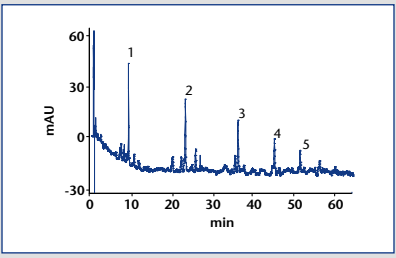
Separation of muropeptides



Separation column
BlueOrchid C18 A 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	A: 100 mM NaH_2PO_4 pH 2.8 B: 100 mM NaH_2PO_4 pH 2.8 + 30 % MeOH (v/v)
Gradient:	0.0–12.5 min 0– 30 % B 12.5–60.0 min 30–100 % B
Flow rate:	0.5 ml/min
Mode:	RP-Mode, gradient
Injection volume:	5 µl
Pressure:	580 bar (8410 psi)
Detection:	PDA-1, 206 nm (10 Hz, 0,1 s) 10 mm, 2 µl flow cell
Temperature:	40 °C



1	Monomers
2	Dimers
3	Trimers
4	Tetramers
5	Oligomers

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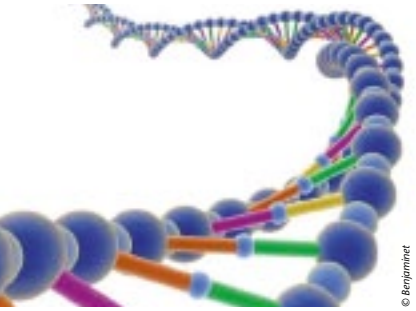
Bioanalytical

Separation of nucleosides and bases

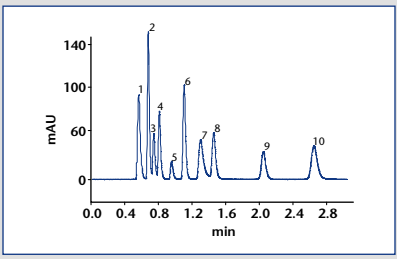


© Benjaminet

Separation column
BlueOrchid PFP 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	20mM NH_4Ac, pH 3.5 10 % A/MeOH 90:10 (v/v)
Flow rate:	0.5 ml/min
Mode:	RP-Mode, isocratic
Injection volume:	1 µl
Pressure:	570 bar (8270 psi)
Detection:	PDA-1, 210 nm (100 Hz, 0.001 s) 10 mm, 2 µl flow cell
Temperature:	30 °C



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

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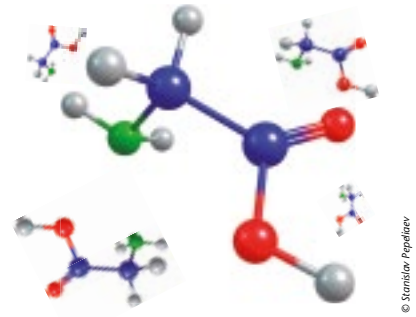
Bioanalytical

Separation of peptides



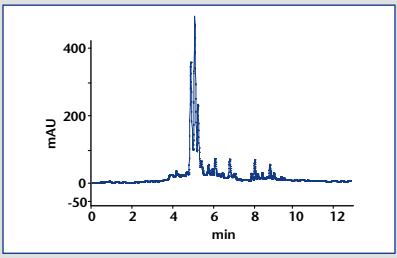
© Stanislav Popelgev

Separation column

BlueOrchid C18 A 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	A: H_2O (0.1 % TFA) B: 60 % ACN (0.1 % TFA)
Flow rate:	0.5 ml/min
Gradient:	0.0 – 10.0 min 0 – 100 % B 10.0 – 13.0 min 100 % B
Mode:	RP-Mode, gradient
Injection volume:	5 µl
Pressure:	540 bar (7830 psi)
Detection:	PDA-1, 210 nm (50 Hz, 0.01 s) 10 mm, 2 µl flow cell
Temperature:	40 °C



Peptide mixture
(customer sample)

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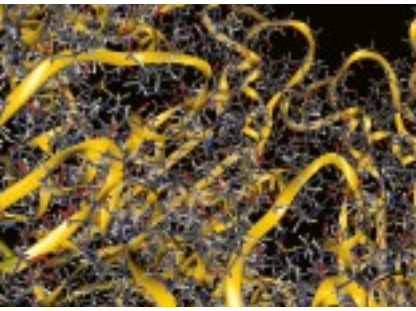
Bioanalytical

Separation of proteins

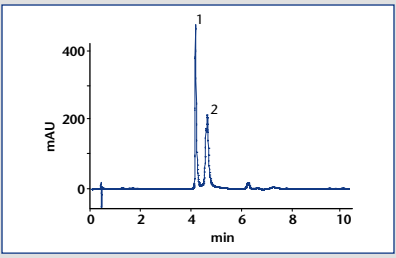


Separation column

BlueOrchid C18 A 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	A: H_2O (0.1 % TFA) B: 60 % ACN (0.1 % TFA)
Gradient:	0.0– 6 min 30–100 % B 6.0– 8.0 min 100 % B 8.0– 8.5 min 100– 30 % B 8.5–12.5 min 30 % B
Flow rate:	0.7 ml/min
Mode:	RP-Mode, gradient
Injection volume:	1 µl/min
Pressure:	630 bar (9140 psi)
Detection:	PDA-1, 210 nm (50 Hz, 0.01 s) 10 mm, 2 µl flow cell
Temperature:	40 °C



1	α-Lactalbumin
2	β-Lactoglobulin

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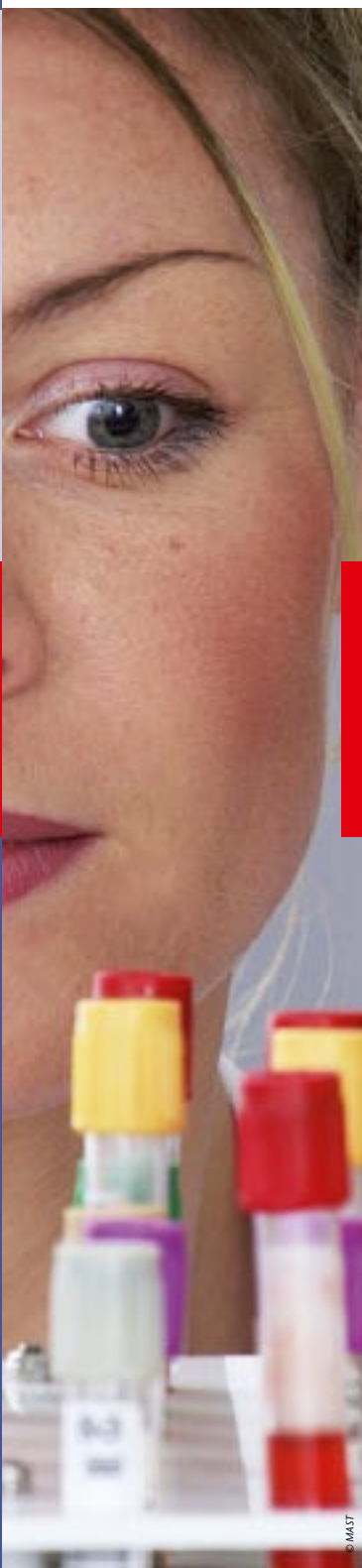
Clinical



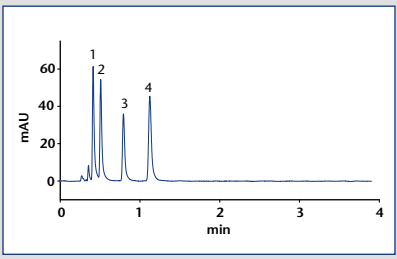
Clinical

Determination of sedatives, e.g. barbiturates

Separation column
BlueOrchid C18 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	MeOH/H_2O 60:40 (v/v)
Flow rate:	0.5 ml/min
Mode:	RP-Mode, isocratic
Injection volume:	1 µl
Pressure:	826 bar (11980 psi)
Detection:	MW-1, 254 nm (80 Hz, 0.005 s)
Temperature:	40 °C



1	Barbital
2	Luminal
3	Prominal
4	Revonal

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Clinical

Separation of tt-muconic acid in urine (I)

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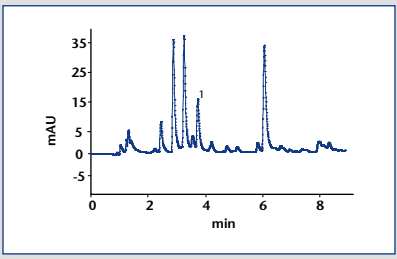
Separation column
BlueOrchid C18 A 1.8 µm, 100 x 2 mm
Phenyl 1.8 µm 100 x 2 mm (column tandem)

Separation conditions

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 rate:	0.4 ml/min
Mode:	RP-Mode, gradient
Injection volume:	10 µl
Pressure:	590 bar (8560 psi)
Detection:	PDA-1, 259 nm (50 Hz) 10 mm, 2 µl flow cell;
Temperature:	40 °C



urine sample

1 tt-Muconic acid

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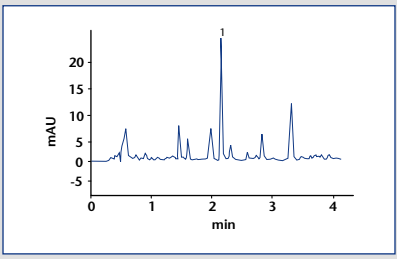
Clinical

Separation of tt-muconic acid in urine (II)

Separation column
Fused Core C18 1.7 µm, 100 x 2 mm

Separation conditions

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 rate:	0.4 ml/min
Mode:	RP-Mode, gradient
Injection volume:	2 µl
Pressure:	570 bar (8270 psi)
Detection:	PDA-1, 259 nm (50 Hz) 10 mm, 2 µl flow cell
Temperature:	30 °C



urine sample

1 tt-Muconic acid

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Pharma-ceutical

© Yuri Arcurs

Pharmaceutical

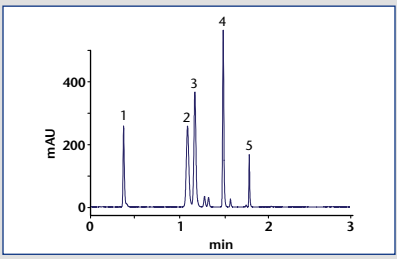
Separation of beta-blockers

Separation column

BlueOrchid C18 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	A: 25 mM NaH_2PO_4 pH 2.7 B: Eluent A / ACN 40:60 (v/v)
Gradient:	0.0 – 0.6 min 11 % B 0.6 – 2.0 min 11 – 75 % B
Flow rate:	1.0 ml/min
Mode:	RP-Mode, gradient
Injection volume:	0.5 µl
Pressure:	650 bar (9430 psi)
Detection:	PDA-1, 254 nm (100 Hz, 0.005 s) 10 mm, 2 µl flow cell
Temperature:	35 °C



1	Atenolol
2	Pindolol
3	Nadolol
4	Metoprolol
5	Alprenolol

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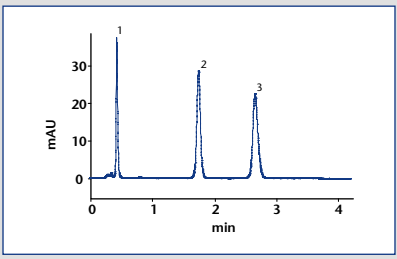
Pharmaceutical

Separation of clindamycin (QC)

Separation column
BlueOrchid C18 A 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	Buffer (13.6 g/l KH_2PO_4) / ACN 80:20 (v/v)
Flow rate:	0.7 ml/min
Mode:	RP-Mode, isocratic
Injection volume:	5 µl
Pressure:	855 bar (12400 psi)
Detection:	PDA-1, 210 nm (50 Hz) 10 mm, 2 µl flow cell
Temperature:	30°C



1	Impurity A
2	Clindamycin phosphate
3	Impurity E

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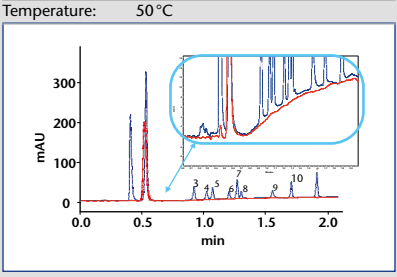
Pharmaceutical

Separation of paracetamol and common synthesis impurities

Separation column
BlueOrchid C18 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	A: 1.7 mM NaH_2PO_4, pH 3.7 B: ACN
Gradient:	0.0 – 0.3 min 13 % B 0.3 – 2 min 13 – 70 % B 2 – 2.5 min 70 % B
Flow rate:	0.85 ml/min
Mode:	RP-Mode, gradient
Injection volume:	1 µl
Pressure:	950 bar (13800 psi)
Detection:	MW-1, 254 nm (100 Hz, 0.005 s) 10 mm, 2 µl flow cell
Temperature:	50 °C



1	4-Aminophenol
2	Paracetamol
3	N-(4-hydroxyphenyl)propanamide
4	N-(2-hydroxyphenyl)acetamide
5	N-(3-chloro-4-hydroxyphenyl)acetamide
6	1-(4-Hydroxyphenyl)ethanoneoxime
7	N-phenylacetamide
8	4-(Acetylamino)phenyl acetate
9	4-Nitrophenol
10	Chloroacetanilide
11	1-(2-Hydroxyphenyl)ethanone

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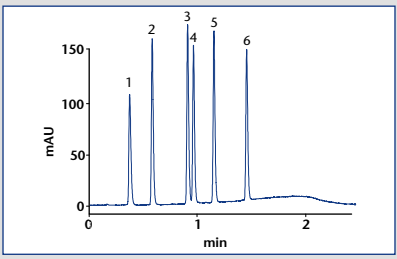
Pharmaceutical

Separation of steroids

Separation column
BlueOrchid C18 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	A: H_2O
	B: ACN
Gradient:	0 – 1,5 min 35 % – 75 % B 1,5 – 2 min 75 % B
Flow rate:	1.0 ml/min
Mode:	RP-Mode, gradient
Injection volume:	0.5 µl
Pressure:	650 bar (9430 psi)
Detection:	PDA-1, 254 nm (100 Hz, 0.005 s) 10 mm, 2 µl flow cell
Temperature:	30 °C



1	Cortisone
2	Corticosterone
3	Testosterone
4	Deoxycorticosterone
5	Norgestrel
6	Progesterone

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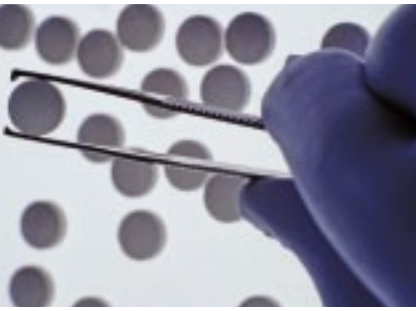
Pharmaceutical

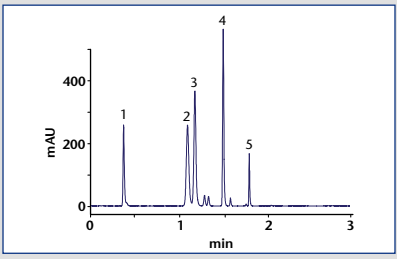
Separation of sulfa drugs



Separation column
BlueOrchid C18 A 1.8 µm, 50 x 2 mm

Separation conditions

Eluent:	A: 1.7 mM NaH_2PO_4, pH 4 B: ACN
Gradient:	0–0,8 min 8 % B 0.8–1.8 min 8 %–40 % B
Flow rate:	1.4 ml/min
Mode:	RP-Mode, gradient
Injection volume:	1 µl
Pressure:	750 bar (10880 psi)
Detection:	PDA-1, 265 nm (100 Hz, 0.005 s) 10 mm, 2 µl flow cell
Temperature:	40 °C



1	Sulfadiazine
2	Sulfamethiazole
3	Sulfamethoxypyridazine
4	Sulfamethoxazole
5	Sulfamethoxine

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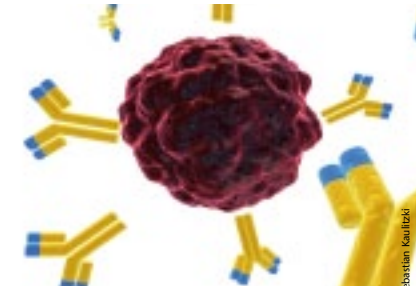
Pharmaceutical

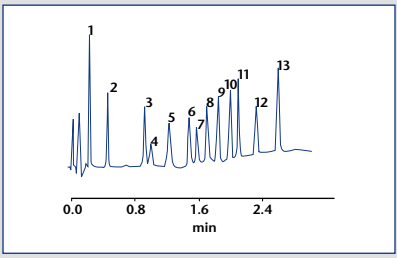
Separation of taxanes (I)



Separation column
BlueOrchid PFP 1.8 µm, 50 x 2 mm

Separation conditions

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 rate:	0.6 ml/min
Mode:	RP-Mode, gradient
Injection volume:	2 µl
Detection:	PDA-1, 220 nm (100 Hz, 0.005 s) 10 mm 2 µl flow cell
Temperature:	30 °C



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	Paclitaxel
12	Taxol C
13	7-Epitaxol

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Chemical

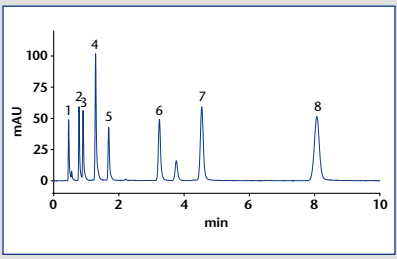
Selectivity test

Engelhardt test (modified) in less than 8 minutes

Separation column
BlueOrchid C18 1.8 µm, 100 x 2 mm

Separation conditions

Eluent:	MeOH/H_2O 55:45 (v/v)
Flow rate:	0.45 ml/min
Mode:	isocratic
Injection volume:	1 µl
Pressure:	890 bar (12900 psi)
Detection:	MW-1, 254 nm (80 Hz, 0.005 s)
Temperature:	40 °C



1	Uracil
2	Aniline
3	Phenol
4	p-Ethylaniline
5	N,N-dimethylaniline
6	Benzoic acid ethyl ester
7	Toluene
8	Ethylbenzene

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BlueOrchid

Efficient

UHPLC columns

BlueOrchid

Our sub-2 µm columns packed with 1.8 µm particles are specifically designed for UHPLC applications. Their exceptional stability in both acidic and alkalic eluents make them universally applicable. BlueOrchid columns are available in 12 phase modifications and a variety of column dimensions.

Economical

BlueOrchid RP UHPLC column kits

Advantages

- up to 10 times faster
- improved resolution
- enhanced sensitivity
- low back pressure
- excellent peak shape
- good value

These RP column kits, available in 50 and 100 mm, provide three different selectivities.

Kit selectivities

- BlueOrchid C18 1.8 µm
- BlueOrchid C18 A 1.8 µm
- BlueOrchid C8 1.8 µm

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HPLC/UHPLC applications support

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