Columns for Silica-based Reversed Phase Chromatography (Other Columns)

Please refer to “Comparison of the Features Among Shodex Reverse Phase Chromatography (RPC) Columns” on page 6 and 7 for features.

Standard columns

Product Code	Product Name	Plate Number (TP/column)	Functional Group	Particle Size (µm)	Carbon Load (%)	Pore Size (Å)	Column Size (mm) I.D. x Length	Shipping Solvent
F6650052	**Silica 5C8 4D**	≥ 9,000	Octyl	5	10	100	**4.6 × 150**	H_2O/CH_3OH=34/66
F6650053	**Silica 5C8 4E**	≥ 15,000	Octyl	5	10	100	**4.6 × 250**	H_2O/CH_3OH=34/66
F6650054	**Silica 5C4 4D**	≥ 9,000	Butyl	5	7	100	**4.6 × 150**	H_2O/CH_3OH=45/55
F6650055	**Silica 5C4 4E**	≥ 15,000	Butyl	5	7	100	**4.6 × 250**	H_2O/CH_3OH=45/55
F6650058	**Silica 5CN 4D**	≥ 7,000	Cyanopropyl	5	–	100	**4.6 × 150**	H_2O/CH_3OH=60/40
F6650059	**Silica 5CN 4E**	≥ 12,000	Cyanopropyl	5	–	100	**4.6 × 250**	H_2O/CH_3OH=60/40
F6650062	**Silica 5NPE 4D**	≥ 8,000	Nitrophenylethyl	5	–	100	**4.6 × 150**	H_2O/CH_3OH=45/55
F6650063	**Silica 5PYE 4D**	≥ 7,000	Pyrenylethyl	5	–	100	**4.6 × 150**	H_2O/CH_3OH=30/70

Base Material : Silica

Preparative columns * Preparative columns are made to order.

Product Code	Product Name	Plate Number (TP/column)	Particle Size (µm)	Column Size (mm) I.D. x Length	Standard Column
F7560062	**Silica 5C8 10E**	≥ 15,000	5	**10.0 × 250**	5C8
F7560063	**Silica 5C8 20E**	≥ 15,000	5	**20.0 × 250**	5C8
F7560054	**Silica 5C4 10E**	≥ 15,000	5	**10.0 × 250**	5C4
F7560055	**Silica 5C4 20E**	≥ 15,000	5	**20.0 × 250**	5C4

Columns for Silica-based HILIC and Normal Phase Chromatography

Features

5SIL
- Uses high purity silica (99.99% or higher)
- Suitable for normal phase analysis using a nonpolar organic solvent
- Corresponds to USP L3

5NH
- Suitable for saccharides analysis by hydrophilic interaction chromatography (HILIC)
- Corresponds to USP L8

Standard columns

Product Code	Product Name	Plate Number (TP/column)	Functional Group	Particle Size (µm)	Carbon Load (%)	Pore Size (Å)	Column Size (mm) I.D. x Length	Shipping Solvent
F6650050	**Silica 5SIL 4D**	≥ 9,000	–	5	–	100	**4.6 × 150**	C_6H_{14}/C_2H_5OH=95/5
F6650051	**Silica 5SIL 4E**	≥ 15,000	–	5	–	100	**4.6 × 250**	C_6H_{14}/C_2H_5OH=95/5
F6650060	**Silica 5NH 4D**	≥ 5,000	Aminopropyl	5	–	100	**4.6 × 150**	H_2O/CH_3CN=5/95
F6650061	**Silica 5NH 4E**	≥ 8,000	Aminopropyl	5	–	100	**4.6 × 250**	H_2O/CH_3CN=5/95

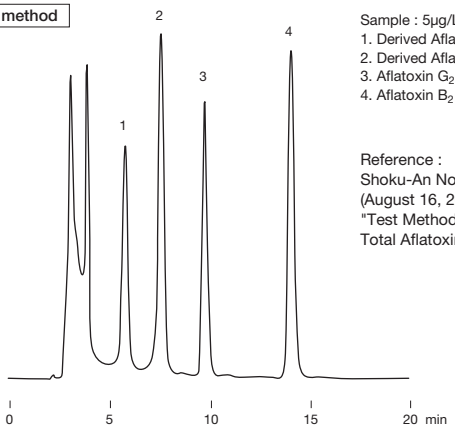
Base Material : Silica

Preparative columns * Preparative columns are made to order.

Product Code	Product Name	Plate Number (TP/column)	Particle Size (µm)	Column Size (mm) I.D. x Length	Standard Column
F7560050	**Silica 5SIL 10E**	≥ 15,000	5	**10.0 × 250**	5SIL
F7560051	**Silica 5SIL 20E**	≥ 15,000	5	**20.0 × 250**	5SIL
F7560060	**Silica 5NH 10E**	≥ 8,000	5	**10.0 × 250**	5NH
F7560061	**Silica 5NH 20E**	≥ 8,000	5	**20.0 × 250**	5NH

Aflatoxins

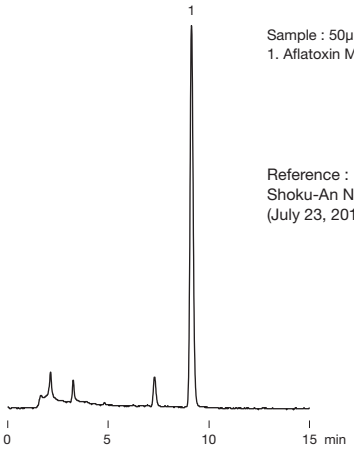
TFA method



Sample : 5μg/L each, 20μL
1. Derived Aflatoxin G_1
2. Derived Aflatoxin B_1
3. Aflatoxin G_2
4. Aflatoxin B_2

Reference :
Shoku-An No. 0816-1
(August 16, 2011, Japan)
"Test Methods Related to Total Aflatoxin" in Notice

Column : Shodex Silica C18M 4E
Eluent : $H_2O/CH_3CN/CH_3OH$=60/10/30
Flow rate : 1.0mL/min
Detector : Fluorescence (Ex. : 365nm, Em. : 450nm)
Column temp. : 40°C

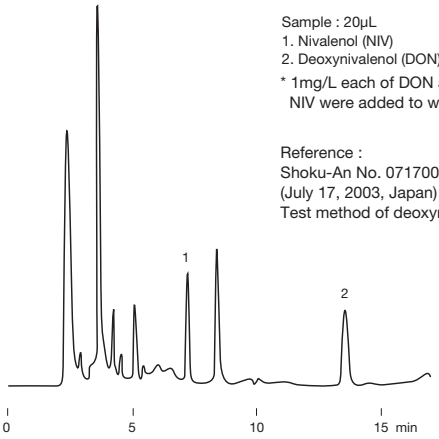


Sample : 50μL
1. Aflatoxin M_1 1μg/L

Reference :
Shoku-An No. 0723-5
(July 23, 2015, Japan)

Column : Shodex Silica C18M 4E
Eluent : H_2O/CH_3CN=75/25
Flow rate : 1.0mL/min
Detector : Fluorescence (Ex. : 365nm, Em. : 435nm)
Column temp. : 40°C

Trichothecene mycotoxins

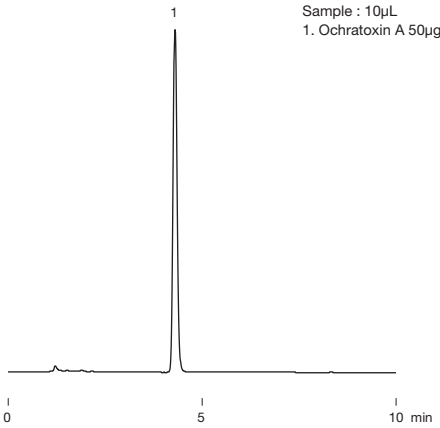


Sample : 20μL
1. Nivalenol (NIV)
2. Deoxynivalenol (DON)
* 1mg/L each of DON and NIV were added to wheat sample

Reference :
Shoku-An No. 0717001
(July 17, 2003, Japan)
Test method of deoxynivalenol

Column : Shodex Silica C18M 4E
Eluent : $H_2O/CH_3CN/CH_3OH$=90/5/5
Flow rate : 1.0mL/min
Detector : UV (220nm)
Column temp. : 40°C

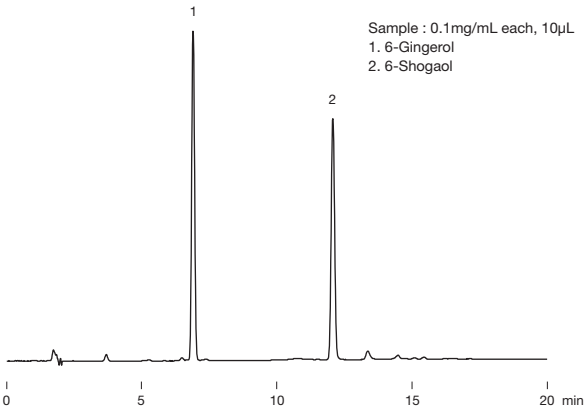
Ochratoxin



Sample : 10μL
1. Ochratoxin A 50μg/L

Column : Shodex Silica C18M 4D
Eluent : $H_2O/CH_3COOH/CH_3CN$=43/2/55
Flow rate : 1.0mL/min
Detector : Fluorescence (Ex. : 333nm, Em. : 460nm)
Column temp. : 40°C

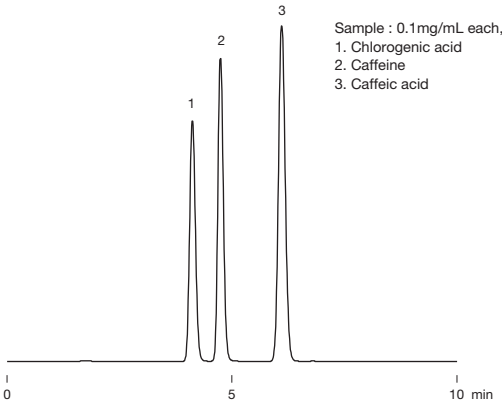
Gingerol and shogaol



Sample : 0.1mg/mL each, 10μL
1. 6-Gingerol
2. 6-Shogaol

Column : Shodex Silica C18M 4D
Eluent : (A) ; H_2O (B) ; CH_3CN
Linear gradient : (B%) 40% to 70% (15min)
Flow rate : 1.0mL/min
Detector : UV (280nm)
Column temp. : 40°C

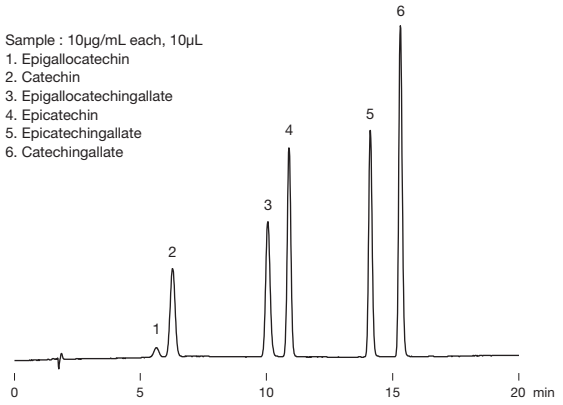
Chlorogenic acid



Sample : 0.1mg/mL each, 10μL
1. Chlorogenic acid
2. Caffeine
3. Caffeic acid

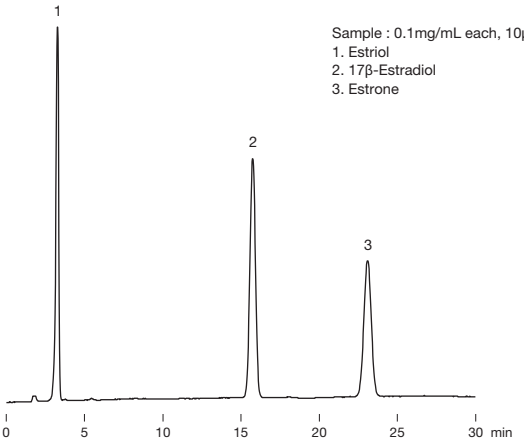
Column : Shodex Silica C18M 4D
Eluent : 20mM H_3PO_4 aq. /CH_3OH=70/30
Flow rate : 1.0mL/min
Detector : UV (280nm)
Column temp. : 30°C

Catechins



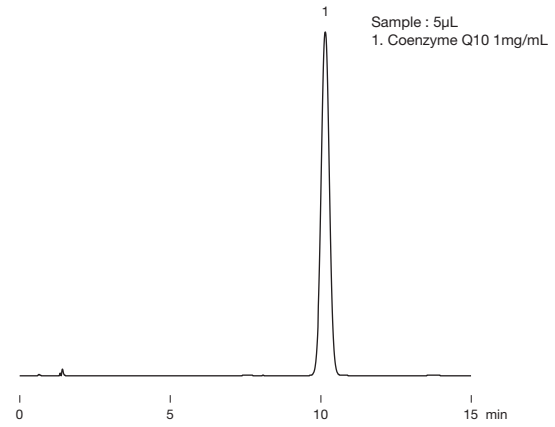
Column : Shodex Silica C18P 4D
Eluent : (A) ; 20mM H_3PO_4 aq. (B) ; CH_3CN
Linear gradient:
(B%) 20% (0 to 5min), 20 to 40% (5 to 15min),
40% (15 to 20min)
Flow rate : 1.0mL/min
Detector : UV (280nm)
Column temp. : 30℃

Estradiols



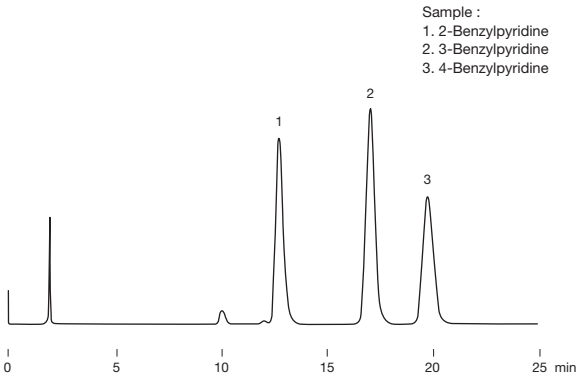
Column : Shodex Silica C18P 4D
Eluent : H_2O/CH_3CN=65/35
Flow rate : 1.0mL/min
Detector : UV (280nm)
Column temp. : 30℃

Coenzyme Q10



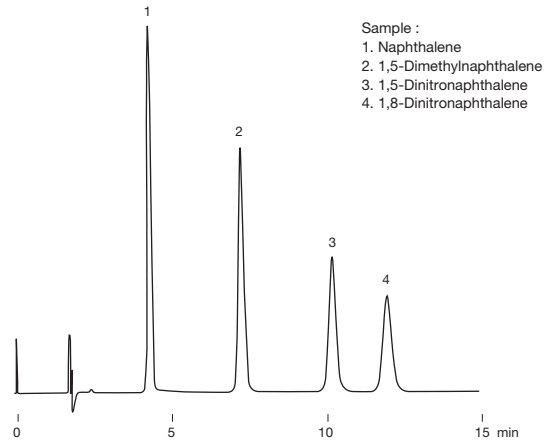
Column : Shodex Silica C18P 4D
Eluent : CH_3OH/C_2H_5OH=13/7
Flow rate : 1.2mL/min
Detector : UV (275nm)
Column temp. : 35℃

Benzylpyridine isomers



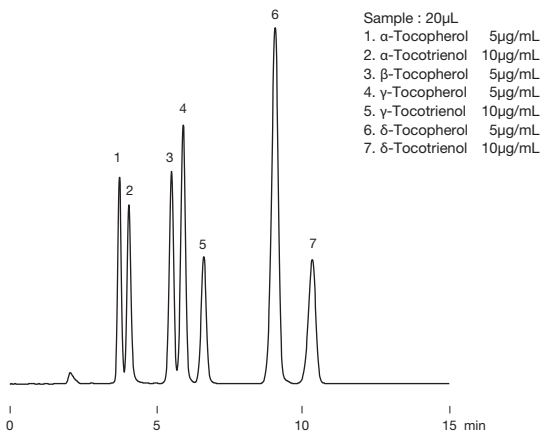
Column : Shodex Silica 5PYE 4D
Eluent : 20mM KH_2PO_4 aq./CH_3OH=40/60
Flow rate : 1.0mL/min
Detector : UV (254nm)
Column temp. : 30℃

Dinitronaphthalene isomers



Column : Shodex Silica 5NPE 4D
Eluent : H_2O/CH_3OH=30/70
Flow rate : 1.0mL/min
Detector : UV (254nm)
Column temp. : 30℃

Simultaneous analysis of vitamin E homologs



Column : Shodex Silica 5SIL 4D
Eluent : n-Hexane/Isopropanol/Acetic acid=1000/6/5
Flow rate : 1.0mL/min
Detector : Fluorescence (Ex. : 298nm, Em. : 325nm)
Column temp. : 30℃