

COSMOSIL C₁₈-MS-II

- Multi-purpose C₁₈ Column
- High reproducibility
- A wide range of applications

Separation Property

The COSMOSIL 5C₁₈-MS-II is a well-balanced column with better basic performance such as sharper peaks of basic compounds and chelating compounds, large hydrophobic interaction, low analytical pressure, and high theoretical plate number. The COSMOSIL 5C₁₈-MS-II is first-choice column for reversed phase chromatography.

Separation Property

Column: 5C₁₈-MS-II
 Column size: 4.6mm I.D.-150mm
 Mobile phase: Methanol/ H₂O = 60/40
 Flow rate: 1.0 ml/min
 Temperature: 30°C
 Detection: UV254nm

Sample: 1; Acetophenone (0.05 μg)
 2; Methyl Benzoate (0.5 μg)
 3; Benzene (2.0 μg)
 4; Toluene (2.0 μg)

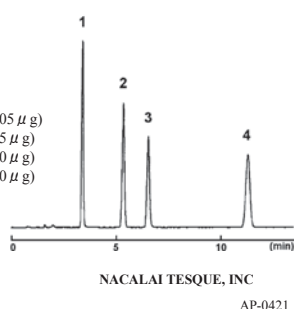


Table. Comparison of hydrophobic interaction, analytical pressure, and theoretical plate number

Column	Hydrophobic Interaction α (Toluene/Benzene)	Pressure (MPa)	Theoretical Plate Number (Toluene)
COSMOSIL 5C ₁₈ -MS-II	1.96	8.3	14300
A Company C ₁₈	1.99	13.0	16800
B Company C ₁₈	1.94	8.0	14000
C Company C ₁₈	1.69	11.2	5600
D Company C ₁₈	1.84	10.5	14200

Analysis of Basic Compounds and Metal Coordination Compounds

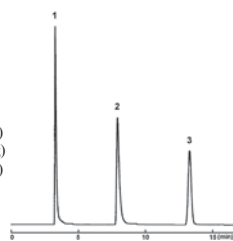
The COSMOSIL 5C₁₈-MS-II column, taking advantage of a new end-capping treatment, can replace the original COSMOSIL C₁₈ (ODS) column. A new end-capping treatment with polar groups for "shield effect" has significantly improved peak shape for basic compounds. Ultra pure silica gel with low trace-metal content is used for COSMOSIL columns; thus the columns provide excellent peak shapes for chelating compounds.

Basic Compounds

Column: 5C₁₈-MS-II
 Column size: 4.6mm I.D.-150mm
 Mobile phase: Methanol/ 20mmol/l Phosphate buffer (pH7) = 20/80

Flow rate: 1.0 ml/min
 Temperature: 30°C
 Detection: UV254nm

Sample: 1; Procainamide (0.38 μg)
 2; N-Acetylprocainamide (0.25 μg)
 3; Benzylalcohol (5.63 μg)

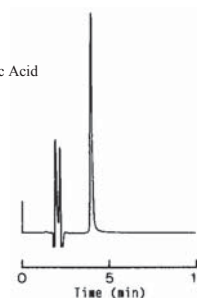


Metal Coordination Compounds

Column: 5C₁₈-MS-II
 Column size: 4.6mm I.D.-150mm
 Mobile phase: Acetonitrile / 20mmol/l Phosphoric Acid = 5/95

Flow rate: 1.0 ml/min
 Temperature: 30°C
 Detection: UV240nm

Sample: Oxine-copper



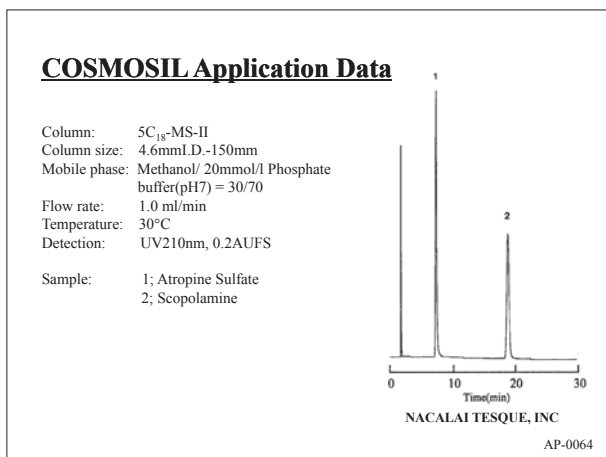
High Reproducibility

The strict quality control system of Nacalai Tesque supports the customers with an individual "Inspection Report" which accompanies each and every COSMOSIL and COSMOGEL Packed Column (except guard columns) and an additional "Certificate of Analysis" for the COSMOSIL 5C₁₈-MS-II (4.6 mm I.D. x 150 mm and 4.6 mm I.D. x 250 mm). For more informations, please refer to page 10.

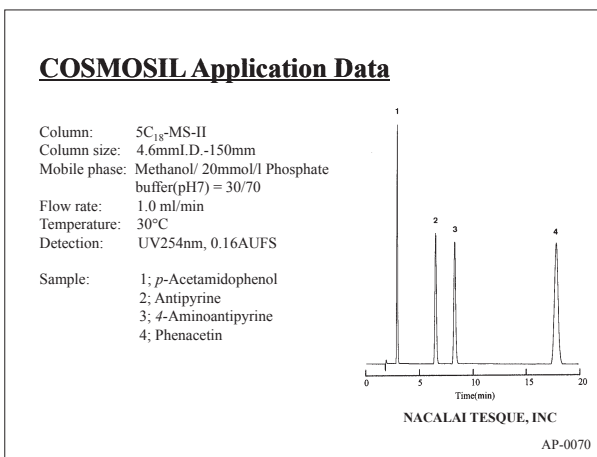
A Wide Range of Applications

A wide selection of applications, e.g. drug molecules, is available to achieve appropriate separation parameters for target samples.

● Parasympatholytic Agents



● Analgesic Antipyretic Drugs



Ordering Information

● Analytical / Preparative Column (Particle Size: 5 μm)

COSMOSIL 5C₁₈-MS-II Packed Column

Column Size I.D. x Length (mm)	Product Number	Column Size I.D. x Length (mm)	Product Number
1.0 x 50	02824-31	4.6 x 100	38018-91
1.0 x 150	02896-01	4.6 x 150	38019-81
2.0 x 30	05876-71	4.6 x 150 3 lots set*	09397-73
2.0 x 50	04355-21	4.6 x 250	38020-41
2.0 x 100	05597-31	6.0 x 150	38021-31
2.0 x 150	38025-91	6.0 x 250	38022-21
2.0 x 250	05761-61	10 x 50	05789-21
3.0 x 100	05458-51	10 x 150	34355-91
3.0 x 150	34245-31	10 x 250	38023-11
3.0 x 250	34254-11	20 x 150	05091-41
4.6 x 30	34341-61	20 x 250	38024-01
4.6 x 50	38017-01	28 x 250	05760-71

COSMOSIL 5C₁₈-MS-II Guard Column

Column Size I.D. x Length (mm)	Product Number
4.6 x 10	38014-31
4.6 x 10 Cartridge**	38015-89
10 x 20	38016-11
20 x 20	05790-81
20 x 50	34371-71
28 x 50	34347-01

* For 4.6 x 150 3 lots set, please refer to page 11.

** 3 cartridges included, needs a holder, refer to page 87.

● Preparative Column (Particle Size: 15 μm)

COSMOSIL 15C₁₈-MS-II Packed Column

Column Size I.D. x Length (mm)	Product Number
28 x 250	34525-61
50 x 250	05886-41
50 x 500	34531-71

COSMOSIL 15C₁₈-MS-II Guard Column

Column Size I.D. x Length (mm)	Product Number
28 x 50	05885-51
50 x 50	34527-41

● Fast LC Column (Particle Size: 3 μm)

COSMOSIL 3C₁₈-MS-II Packed Column

Column Size I.D. x Length (mm)	Product Number
2.0 x 50	05514-01
4.6 x 10	38065-71
4.6 x 50	38066-61
4.6 x 100	38067-51

For more information, please refer to page 33 for 15C₁₈-MS-II (15 μm) and page 62 for 2.5C₁₈-MS-II (2.5 μm).
 For flow rate and equipment of semi-micro columns, or scale up to preparative columns, please refer to page 189.
 For 5C₁₈, 5C₁₈-MS, please refer to page 59.