



COSMOGEL

COSMOGEL IEX Type Q

Comparison Data

COSMOGEL IEX Series are available for 3 different applications, for purification, for ultra-fast analysis and for precise analysis. COSMOGEL IEX Type Q is highly suitable for purification of large samples. The followings are comparison data of COSMOGEL IEX Type Q and competitors' columns using a widely used equipment, ÄKTA explorer 10S of GE Healthcare.



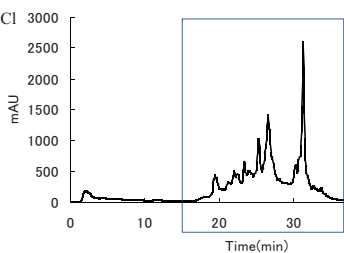
Comparison of Separation Performance

COSMOGEL IEX Type Q shows higher resolution compared to competitors' columns under the same condition. Furthermore COSMOGEL IEX Type Q enables high purity purification for impurity samples.

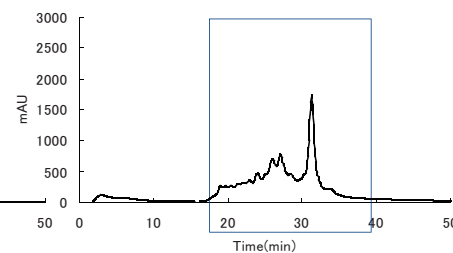
COSMOSIL Application Data

Mobile phase: A: 20mmol/l Tris buffer(pH8.3)
B: 20mmol/l Tris buffer(pH8.3) + 0.5mol/l NaCl
B conc. 0% (0-13min)
0→100% (13-43min)
100% (43-53min)
Flow rate: 0.5 ml/min
Temperature: 8°C
Detection: UV220nm
Equipment: ÄKTAexplorer 10 S
Sample: Trypsin Inhibitor from Soybean (1mg/ml)
Inj.Vol.: 500µl

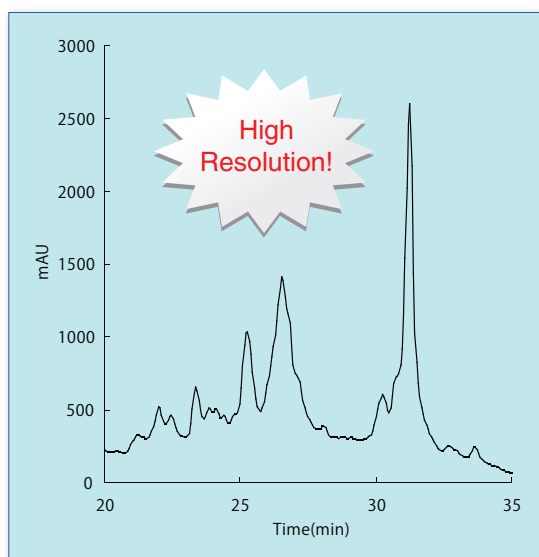
COSMOGEL IEX Type Q
(4.6mmI.D.-50mm)



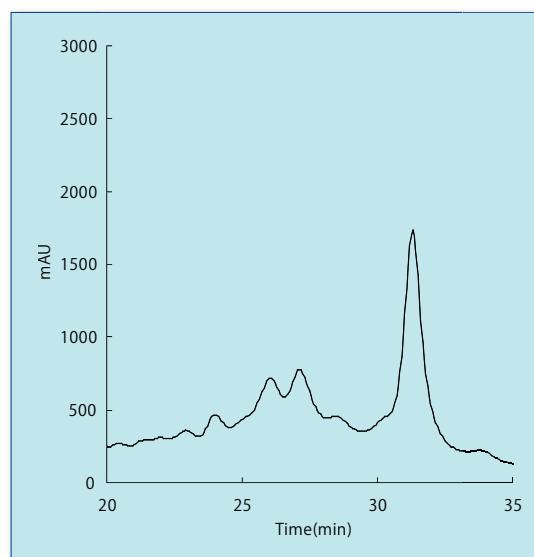
Competitor A-1
(5mmI.D.-50mm)



COSMOGEL IEX Type



Competitor A-1



Data courtesy of Kei WADA, Ph. D., Department of Biological Sciences, Graduate School of Science, Osaka University

Comparison of Pressure

The following table shows pressure comparison of COSMOGEL IEX Type Q and competitors' columns under the same condition using equipment, ÄKTA explorer 10S of GE Healthcare. Although the pressure of COSMOGEL IEX Series is a little higher, COSMOGEL IEX Type Q can be an alternative competitors' columns.

Column Name	Column Size	Pressure under the same condition
COSMOGEL IEX Type Q	4.6 mm I.D. x 50 mm	2.1-2.5 MPa
COSMOGEL IEX Type Q-N	4.6 mm I.D. x 100 mm	5.3-6.8 MPa
Competitor A-1	5.0 mm I.D. x 50 mm	1.6-1.8 MPa
Competitor A-2	1 ml	0.5-0.7 MPa

Mobile Phase: A: 20 mmol/l Tris buffer(pH 8.3)
 B: 20 mmol/l Tris buffer(pH 8.3) + 0.5 mol/l NaCl
 B conc. 0% (0-13 min)
 0 → 100% (13-43 min)
 100% (43-53 min)

Flow Rate: 0.5 ml/min
 Temperature: 8 °C
 Detection: UV220 nm
 Equipment: ÄKTA explorer 10 S
 Sample: Trypsin Inhibitor from Soybean (1 mg/ml)
 Injection Vol.: 500 µl

Data courtesy of Kei WADA, Ph. D., Department of Biological Sciences, Graduate School of Science, Osaka University

Accessories such as sample loop may not suitable if their pressure resistance is lower than the equipment used. Please refer to applicable instructions.

Characteristic of Each Column

Column Name	Column Size	Average Particle Size	Average Pore Size	Maximum Flow Rate	Pressure Limit
COSMOGEL IEX Type Q	4.6 mm I.D. x 50 mm	5 µm	1000 Å	0.8 ml/min or less	approx. 2 MPa ¹
COSMOGEL IEX Type Q-N	4.6 mm I.D. x 100 mm	5 µm	Non-Porous	1.0 ml/min or less	approx. 10 MPa ²
Competitor A-1	5.0 mm I.D. x 50 mm	10 µm	N/A	3.0 ml/min or less	4 MPa
Competitor A-2	1 ml	15 µm	N/A	10.0 ml/min or less	1.5 MPa

¹ Maximum Flow Rate of COSMOGEL IEX Series is specified in the Instruction. When flow rate is 0.8 ml/min, pressure is approx. 2 MPa.

² Maximum Flow Rate of COSMOGEL IEX Series is specified in the Instruction. When flow rate is 1.0 ml/min, pressure is approx. 10 MPa.

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NACALAI TESQUE, INC.
 Nijo Karasuma, Nakagyo-ku, Kyoto 604-0855 JAPAN
 TEL : +81-(0)75-251-1730
 FAX : +81-(0)75-251-1763
 Website : www.nacalai.com
 E-mail : info.intl@nacalai.com