

# PolySep™

Polymer-Based Aqueous GFC Columns for the Separation of Polymers, Oligomers, and Oligosaccharides

*Extremely cost-effective*

*High efficiencies*

*Good mechanical strength*

Архангельск (8182)63-90-72  
Астана (7172)727-132  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Новосибирск (383)227-86-73  
Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16

Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13

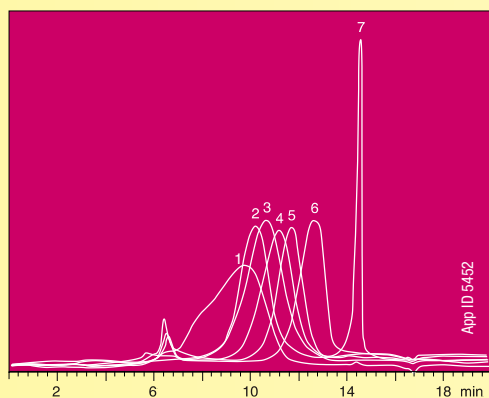
Сургут (3462)77-98-35  
Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93

### Dextran

**Column:** PolySep-GFC-P4000  
**Dimensions:** 300 x 7.8 mm  
**Part No.:** 00H-3144-K0  
**Mobile Phase:** Water  
**Flow Rate:** 0.8 mL/min  
**Detection:** RI

**Sample:** 20 µL injected

1. Dextran	500	kDa
2. Dextran	110	kDa
3. Dextran	70	kDa
4. Dextran	40	kDa
5. Dextran	15	kDa
6. Dextran	6	kDa
7. Ethylene Glycol	62.07	Da

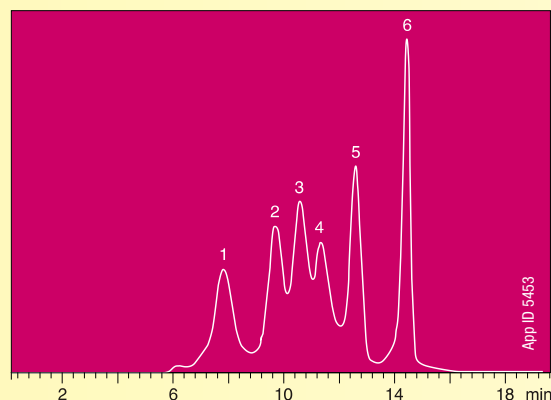


### Polyethylene Standards

**Column:** PolySep-GFC-P4000  
**Dimensions:** 300 x 7.8 mm  
**Part No.:** 00H-3144-K0  
**Mobile Phase:** Water  
**Flow Rate:** 0.8 mL/min  
**Detection:** RI

**Sample:** 20 µL injected

1. Polyethylene Oxide	305.4	kDa
2. Polyethylene Oxide	95.7	kDa
3. Polyethylene Oxide	31.8	kDa
4. Polyethylene Glycol	19.7	kDa
5. Polyethylene Glycol	3.4	kDa
6. Ethylene Glycol	62.07	Da

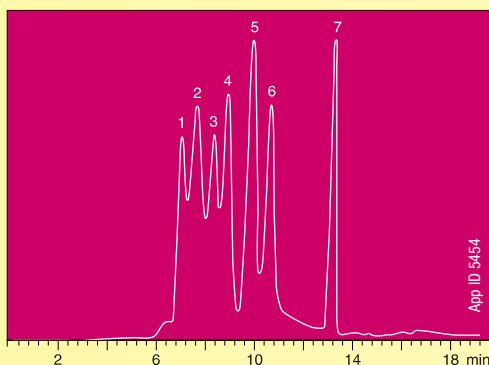


### Polyethylene Oxide/Polyethylene Glycol

**Column:** PolySep-GFC-P3000  
**Dimensions:** 300 x 7.8 mm  
**Part No.:** 00H-3143-K0  
**Mobile Phase:** Water  
**Flow Rate:** 0.8 mL/min  
**Detection:** RI

**Sample:** 10 µL injected

1. Polyethylene Oxide	62.6	kDa
2. Polyethylene Oxide	31.1	kDa
3. Polyethylene Glycol	19.7	kDa
4. Polyethylene Glycol	6.8	kDa
5. Polyethylene Glycol	3.4	kDa
6. Polyethylene Glycol	1.5	kDa
7. Ethylene Glycol	62.07	Da



### Aqueous SEC 2 Standard (Part No. AL0-3043)

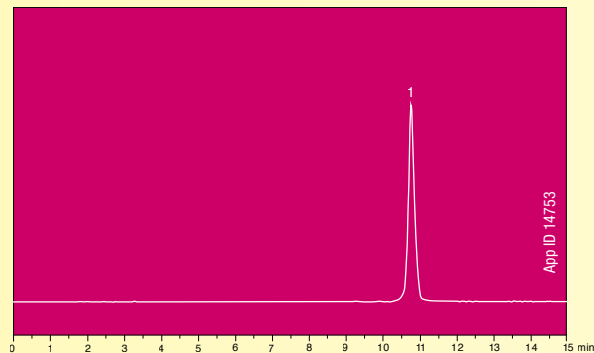
**Column:** PolySep-GFC-P1000  
**Dimensions:** 300 x 7.8 mm  
**Part No.:** 00H-3141-K0  
**Mobile Phase:** Water  
**Flow Rate:** 0.8 mL/min  
**Detection:** RI

**Sample:** 3 µL injected

1. Ethylene Glycol		
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**Analyst Note:** This standard is used to test the following PolySep columns: GFC-P 1000, 2000, 3000, 4000, 5000, 6000, and Linear, as well as other aqueous-soluble GFC columns.

**NOTE:** Separation conditions and results may vary for your column. Contact your Technical Representative.



## Polymer-Based Aqueous GFC Columns for the Separation of Polymers, Oligomers, and Oligosaccharides

The PolySep material undergoes rigorous quality control tests, from the initial stages of testing of the starting monomers to the final product. There are at least 25 steps of quality assurance during the entire procedure. The packed column then undergoes at least five additional tests, including a batch test for the manufactured materials. Each column is then tested for column efficiency and peak symmetry and ships with a QC chromatogram. This ensures long-lasting columns with very high efficiencies.

### PolySep-GFC-P Technical Data and Specifications

Phase:	1000	2000	3000	4000	5000	6000	Linear
Exclusion Limits in Daltons:							
PEG	2 x 10 <sup>3</sup>	9 x 10 <sup>3</sup>	5 x 10 <sup>4</sup>	2 x 10 <sup>5</sup>	2 x 10 <sup>6</sup>	1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>
Pullulans	3.5 x 10 <sup>3</sup>	1 x 10 <sup>4</sup>	1 x 10 <sup>5</sup>	3.5 x 10 <sup>5</sup>	4 x 10 <sup>6</sup>	2 x 10 <sup>7</sup>	2 x 10 <sup>7</sup>
Separation Range (Da)	20 - 3K	100 - 10K	250 - 75 K	3K - 400 K	50 K - 2 M	100 K - 15 M	1 K - 10 M
Typical Efficiency Plates/meter	22,000	50,000	32,000	32,000	32,000	32,000	32,000
Maximum Organic Modifier:							
Methanol	20 %	95 %	70 %	70 %	70 %	70 %	70 %
Acetonitrile	20 %	70 %	70 %	70 %	70 %	70 %	70 %
pH Range	3.0 to 12.0						
Maximum Flow Rate	Depends on backpressure, do not exceed 1000 psi						
Column Hardware	Stainless steel or PEEK (Biocompatible hardware available upon request)						
Temperature	4 to 60 °C						
Maximum Salt	Maximum allowed 0.5 M with a flow rate not to exceed 0.5 mL/min						
Storage	For overnight, pump water at 0.2 mL/min, for longer storage use 0.05 % NaN <sub>3</sub> in water or 10 % methanol in water						
General	A guard column is recommended to improve column life						

### Ordering Information

#### Stainless Steel Columns (mm)

Phases	Analytical	Guards
	300 x 7.8	35 x 7.8
1000	CH0-9226	CH0-9225
2000	CH0-9227	CH0-9225
3000	CH0-9228	CH0-9225
4000	CH0-9229	CH0-9225
5000	CH0-9230	CH0-9225
6000	CH0-9231	CH0-9225
Linear	CH0-9232	CH0-9225

Aqueous SEC 2 (For PolySep GFC-P and other aqueous-soluble analysis columns)	
Part No.: AL0-3043	Price:
Unit quantity: 2 mL	
Contains: Ethylene Glycol	
Diluent: Water	
Test Conditions	
Mobile Phase: Water	
Flow Rate: 0.8 mL/min	
Injection Volume: 15 µL	
Detection: RI	

App ID 14753



#### Economical alternative to

- Tosoh Bioscience® TSKgel® PW & PWxl
- Agilent® PL aquagel-OH™
- Waters® Ultrahydrogel™
- Shodex® OHpak SB-800 HQ series
- PSS SUPREMA®