



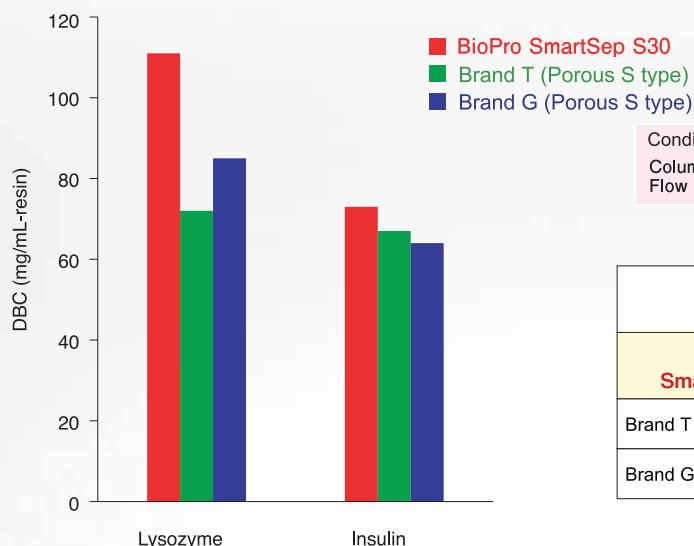
# BioPro SmartSep Q/S

## Features

- High-Throughput Purification by Utilizing a High Mechanical Strength Polymer Bead
- High Binding Capacity and High Resolution over a Wide Range of Flow Rates
- Suitable for Intermediate Purification Step and Polishing Step
- Available in Strong Ion Exchangers (Q and S Chemistries)
- Particle Size 30  $\mu\text{m}$  for Industrial Processes and 10  $\mu\text{m}$  for High Resolution Purification

## High Sample Loadability

### [High Dynamic Binding Capacity (DBC) for Various Samples]



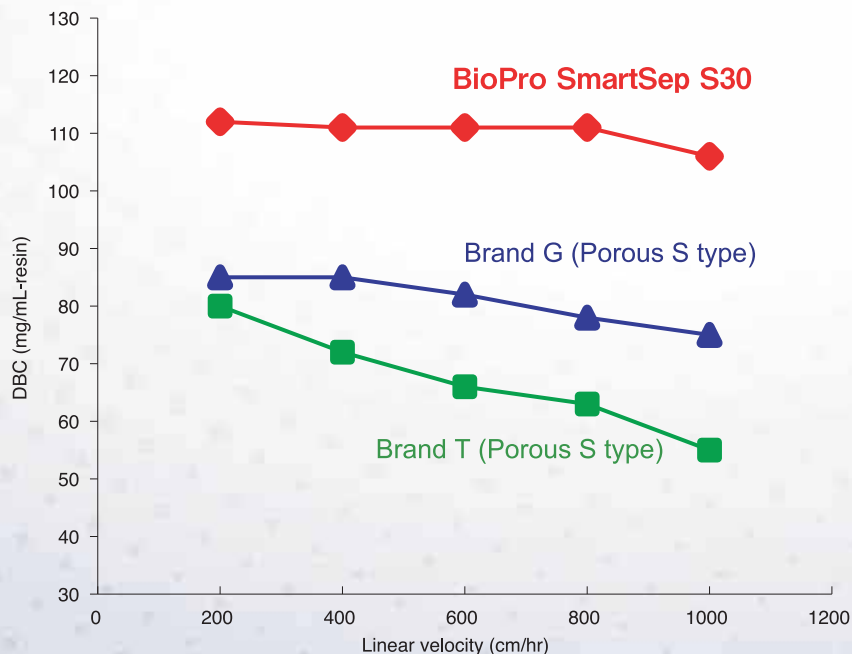
Conditions of DBC measurement\*

Column : 50 X 5.0 mmI.D.  
Flow rate : 400 cm/hr (1.32 mL/min)

\*Please inquire for details.

	Particle size ( $\mu\text{m}$ )	DBC (mg/mL-resin, 10% breakthrough)	
		Lysozyme	Insulin
<b>BioPro SmartSep S30</b>	<b>30</b>	<b>111</b>	<b>73</b>
Brand T (Porous S type)	30	72	67
Brand G (Porous S type)	30	85	64

### [High DBC over a Wide Range of Flow Rate]



Conditions of DBC measurement\*

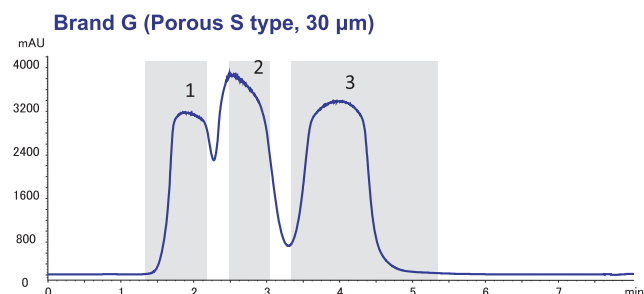
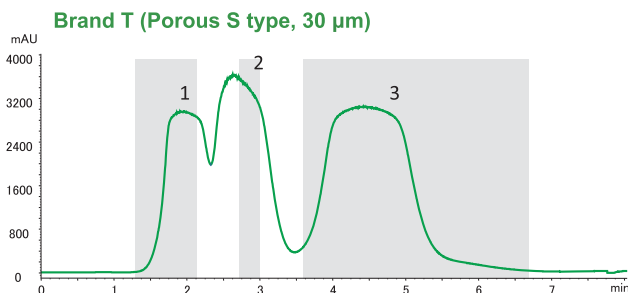
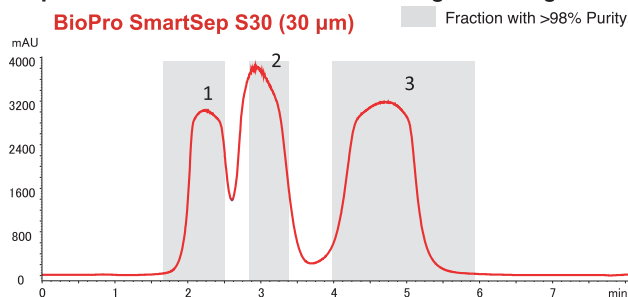
Column : 50 X 5.0 mmI.D.  
Sample : Lysozyme

\*Please inquire for details.

BioPro SmartSep ion exchange media have 1.1 to 1.5 times higher DBC compared to conventional ion exchange media. High DBC maintained even at a higher flow rate. This feature offers significant improvement in productivity.

# High Resolution and Excellent Recovery

## [Separation at a Fast Flow Rate and High Loading Condition] [Comparison of Recovery of Proteins]



	Recovery (>98% Purity)			
	Ribonuclease A	Cytochrome c	Lysozyme	Total
<b>BioPro SmartSep S30</b>	<b>90.5 %</b>	<b>81.5 %</b>	<b>99.3 %</b>	<b>90.7 %</b>
Brand T (Porous S type)	74.2 %	54.4 %	99.5 %	76.9 %
Brand G (Porous S type)	87.2 %	76.0 %	99.5 %	87.8 %

Column : 50 X 5.0 mm I.D.  
 Eluent : A) 20 mM NaH<sub>2</sub>PO<sub>4</sub>-Na<sub>2</sub>HPO<sub>4</sub> (pH 6.8)  
 B) 20 mM NaH<sub>2</sub>PO<sub>4</sub>-Na<sub>2</sub>HPO<sub>4</sub> (pH 6.8) containing 0.5 M NaCl  
 0-100%B, 30 column volumes  
 Flow rate : 1600 cm/hr (5.23 mL/min)  
 Temperature : 25°C  
 Detection : UV at 220 nm  
 Injection : 20 mL (30mg Proteins)  
 Sample : 1. Ribonuclease A (0.5 mg/mL)  
 2. Cytochrome c (0.5 mg/mL)  
 3. Lysozyme (0.5 mg/mL)

BioPro SmartSep ion exchange media show high resolution and recovery even at a fast flow rate and high loading condition. BioPro SmartSep ion exchange media offer high efficiency in intermediate purification step and polishing step requiring high resolution and recovery.

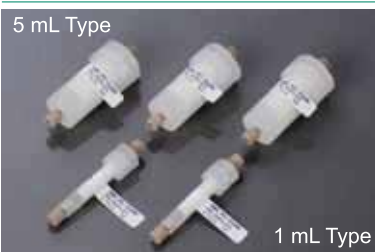
## Lineup

	Strong Anion Exchanger BioPro SmartSep Q	Strong Cation Exchanger BioPro SmartSep S
Matrix	Hydrophilic porous polymer	
Particle size (μm)	10, 30	
Ion exchanger	-R-N <sup>+</sup> (CH <sub>3</sub> ) <sub>3</sub>	-R-SO <sub>3</sub> <sup>-</sup>
pH range	2 - 12	



BioPro SmartSep (30 μm)

Please inquire regarding special requirements.



## Screening kit for resin selection and method development

BioPro Ion Exchange Screening Kit is a kit of screening columns that are packed with BioPro ion exchange resins designed for separation of Proteins, Nucleotides and other biomolecules. Ideal for resin screening and purification method development.

### Worldwide Availability

**YMC Co., Ltd.**  
www.ymc.co.jp

**YMC Europe GmbH**  
www.ymc-europe.com

**YMC India Pvt.Ltd.**  
www.ymcindia.com

**YMC Korea Co., Ltd.**  
www.ymckorea.com

**YMC Shanghai Rep. Office**  
www.ymchina.com

**YMC Singapore Tradelinks Pte. Ltd.**  
www.ymc.sg

**YMC Taiwan Co.,Ltd.**  
www.ymctaiwan.com



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