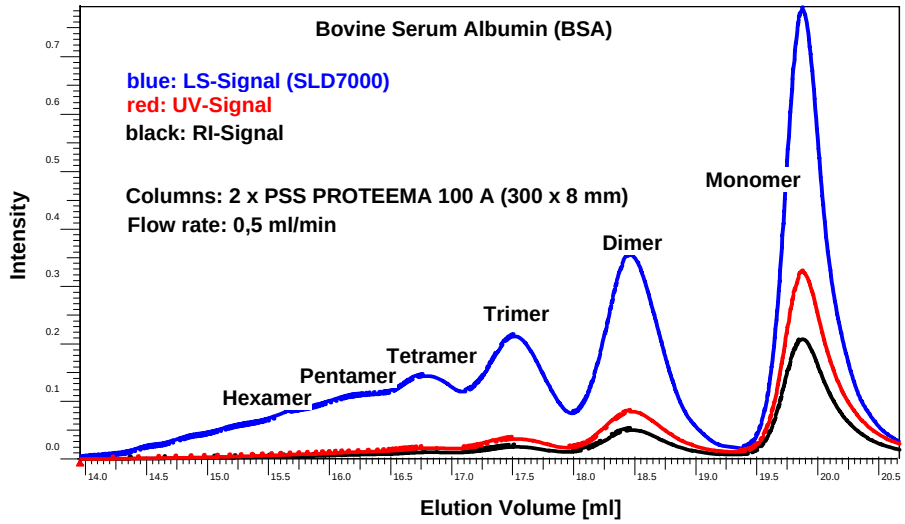
PROTEEMA Columns

Aqueous GPC/SEC of Proteins



Field of Application:

PSS PROTEEMA Columns are designed for GPC/SEC separation and molar mass determination of proteins. Enzymatic proteins produce baseline separated monomer, dimer and trimer peaks. PSS PROTEEMA high resolution is absolutely perfect for synthetic proteins of the Biotech field, including peptides and gelatine.

Visit our www.polymer.de Knowledge bank (Application Database) to see examples of separations: Albumin (egg); Ribonuclease; Ferritin; Tyroglobuline (#10266); Gamma Globuline; Aprotinin; beta Lactoglobuline; Tyroglobuline;(#10267); gelatin #10271 and #10272; human insulin and its aggregates #10279

Eluents: Applicable for all aqueous solutions with pH < 7 with variable Ionic strength and type of salt used. See #10268 for effect of salts on the baseline separation of same protein mix.

The Unique Advantages:

Column performance:
PSS PROTEEMA's exceptional performance is not random, it is due to the highly controlled mismatch-free pore size distribution of a silica phase that has been chemically treated with a perfect supply of functional groups. The tight specification of the material guarantees a consistent quality

Stability:
PSS PROTEEMA columns are filled with an extremely robust phase highly stable for long term use

Separation range:
PSS PROTEEMA columns offer a wide separation range by means of combination of different porosities

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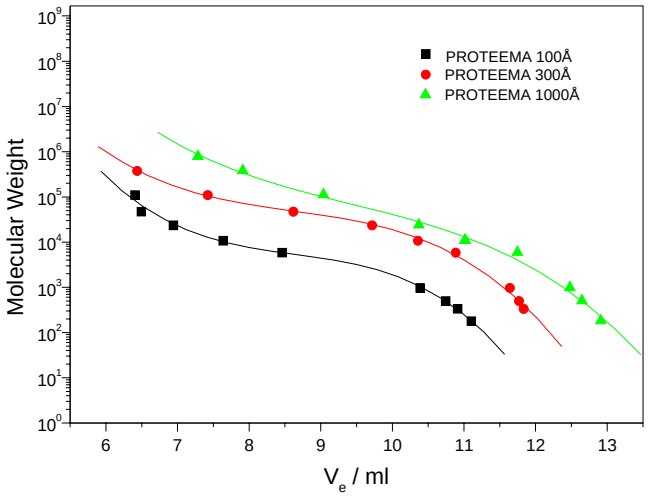
PSS PROTEEMA Calibration Curves



Advantages of all PSS Columns

- 20 years expertise in polymer separations
- Column selection for special applications
- Consultance for separation problems
- Posibility for batch to batch guarantee
- Special column gel for your need
- Comes with optimum column connection, free of charge
- Quality check with a test polymer according certificate
- Refill-Service
- Application database:
  Please visit our homepage where you can find a lot of applications.
  Just enter: www.polymer.de

Specification:			
Molecular weight range		100 - 2,5 x 10^6 D (related to pullulan)	
		300 - 5,5 x 10^6 D (related to protein)	
Pressure range		5 to 200 bar	
Temperature range		Room temperature to 70˚C	
Flow range		0.1 to10 ml/min	
Recommended flow rate:		1ml/min	
Resolution (depending on experimental conditions)		Rsp > 3	
Plate number (depending on experimental conditions)		> 80.000/m	
Particle size		5 µm	
Column types		Analytical (8 x 300 mm)	
Example eluent		All aqueous eluents with pH < 7	
Separation range:			
Order number	**Porosity**	**Related to pullulan**	**Related to protein**
pra0830051e2	100 Å	100 - 5 x 10^4 D	300 - 1,5 x 10^5 D
pra0830053e2	300 Å	1.000 - 4 x 10^5 D	3.000 - 1,5 x 10^6 D
pra0830051e2	1000 Å	1.000 - 2,5 x 10^6 D	1 x 10^4D - 5,5 x 10^6 D
pra080505		Pre column (8 x 50 mm)	
Recommended column combinations*			
Type (Separation range, related to protein)		**Column combination**	
Oligomers (300 - 1,5 x 10^5 D)		2 x 100 Å	
Medium molar masses (300 -1,5 x 10^6 D)		100 Å + 300 Å	
High molar masses (3000 - 5,5 x 10^6 D)		300 Å + 1000 Å	

*carefully selected column combination to prevent mismatch.

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