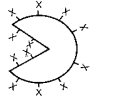


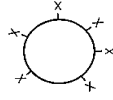
Ultra-Fast Ion Exchange Shodex Solid-Sphere DEAE Columns

10 times faster

Operational with HPLC and UHPLC Instruments



X: diethylaminoethyl

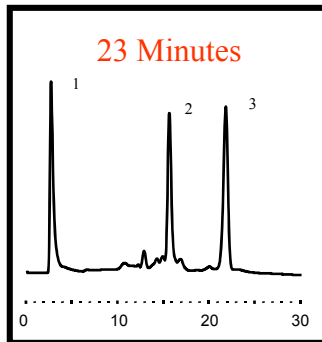


X: diethylaminoethyl

Samples:

1. Conalbumin 0.4 mg / mL
2. Ovalbumin 1.2 mg / mL
3. Trypsin inhibitor 1.0 mg / mL

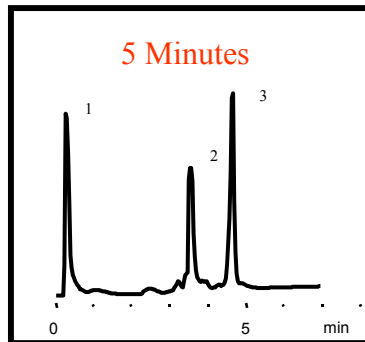
Porous-Particle DEAE



90 psi

Column : **DEAE-825** (8.0 I.D. x 75 mm)
 Gradient : Piperazine-HCl buffer, 0.5 M NaCl
 Flow rate : 1.0 mL / min
 Detector : UV (280 nm)
 Temp. : 25 °C
 Sample vol. : 100 µL

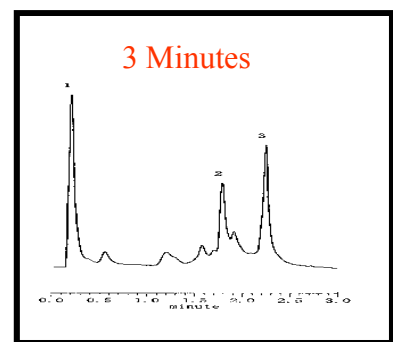
Solid-Sphere DEAE



950 psi

Column : **Solid-Sphere DEAE-4T**
 (4.6 I.D. x 35 mm)
 Gradient : Piperazine-HCl buffer, 0.5 M NaCl
 Flow rate : 1.5 mL / min
 Detector : UV (280 nm)
 Temp. : 25 °C
 Sample vol. : 20 µL

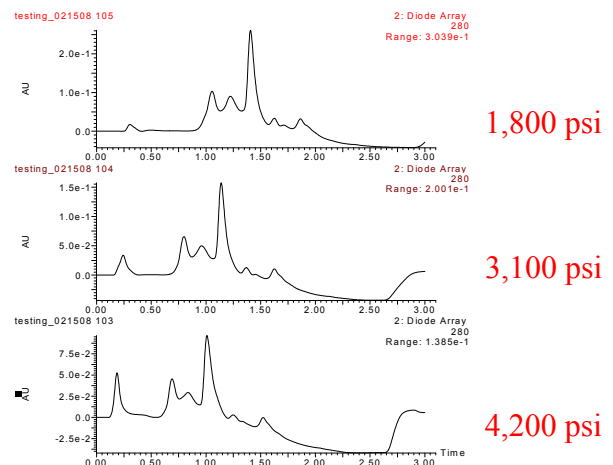
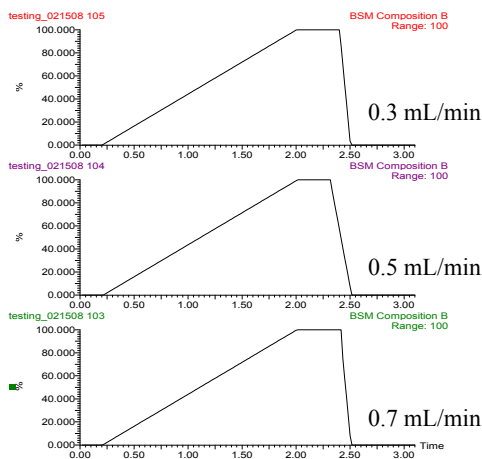
Solid-Sphere DEAE



3,900 psi

Column : **Solid-Sphere DEAE-2B**
 (2.0 I.D. x 50 mm)
 Gradient : Piperazine-HCl buffer, 0.5 M NaCl
 Flow rate : 0.8 mL / min
 Detector : UV (280 nm)
 Temp. : 25 °C
 Sample vol. : 20 µL

UPLC® Serum Analysis



System : Waters Acquity UPLC®
 Column : **Shodex Solid-Sphere DEAE-2B** (2.0 I.D. x 50 mm)
 Eluent : (A), Water (B), 0.5 M NaCl
 Detector : Waters TUV (280 nm)
 Temp. : Room temp.
 Sample : Rat serum 10x dilution
 Injection vol. : 5 µL



Recovery Rate of Proteins

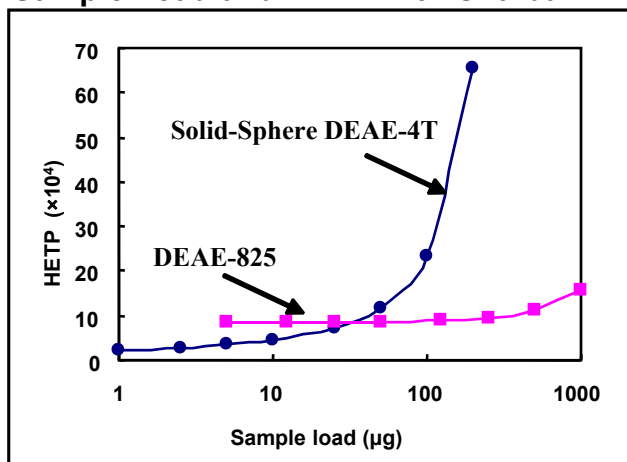
Samples : 0.5 mg/mL each, 10 μ L

Protein	Solid-Sphere DEAE-4T Recovery (%)	DEAE-825 Recovery (%)
Ovalbumin	94	95
Trypsin inhibitor	94	90
BSA	95	92
α -Lactalbumin	99	98
β -Lactoglobulin	97	94

Both columns show high recovery rates and low protein adsorptions

Column : Solid-Sphere DEAE-4T (4.6 I.D. x 35 mm)
DEAE-825 (8.0 I.D. x 75 mm)
Eluent : 20 mM Tris-HCl buffer + 0.5 M NaCl (pH 8.0)
Flow rate : (Solid-Sphere DEAE-4T) 1.5 mL/min
(DEAE-825) 1.0 mL/min
Detector : UV (280 nm)
Temp. : 30 $^{\circ}$ C

Sample Load and HETP with Ovalbumin



Maximum sample load (per column)

Solid-Sphere DEAE-4T	10 μ g
DEAE-825	250 μ g

Porous columns have higher sample loading capacity than solid-sphere columns

HETP = column length / theoretical plate number
The lower HETP generally means sharper peaks and higher separation performance

Column : Solid-Sphere DEAE-4T (4.6 I.D. x 35 mm)
Eluent : (A); 25 mM Piperazine-HCl buffer (pH 6.0)
(B); (A) + 0.5 M NaCl (pH 6.0)
Linear gradient; (A) \rightarrow (B) , 10 min
Flow rate : 1.5 mL/min
Detector : UV (280 nm)
Temp. : 25 $^{\circ}$ C

Column : DEAE-825 (8.0 I.D. x 75 mm)
Eluent : (A); 20 mM Piperazine-HCl buffer (pH 6.0)
(B); (A) + 0.5 M NaCl (pH 6.0)
Linear gradient; (A) \rightarrow (B) , 60 min
Flow rate : 1.0 mL/min
Detector : UV (280 nm)
Temp. : 25 $^{\circ}$ C

Column Specification

Products		Particle (μ m)	Ion Exchange Capacity (meq/g)	I.D. x L* (mm)
F6112100	Solid-Sphere DEAE-4T	2.5	0.4	4.6 x 35
New	Solid-Sphere DEAE-2B	2.5	0.4	2.0 x 50
F5118255	DEAE-825	8.0	0.6	8.0 x 75

Base material : polyhydroxymethacrylate
Functional group : diethylaminoethyl
*Custom dimensions available
** Cationic solid-sphere available

For price quotes and technical information, please contact Shodex or a distributor near you



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