MCI-Gel® ProtEx, CQA and CQK ion-exchange columns

Chromatograms illustrating the performance of the MCI-Gel ProtEx ion-exchange columns, followed by some chromatograms of the MCI-Gel CQA and CQK columns.Type of column and sample are shown in each graph.

Conditions

Column : MCI GEL® ProtEx-DEAE 4.6mm I.D.×50mm

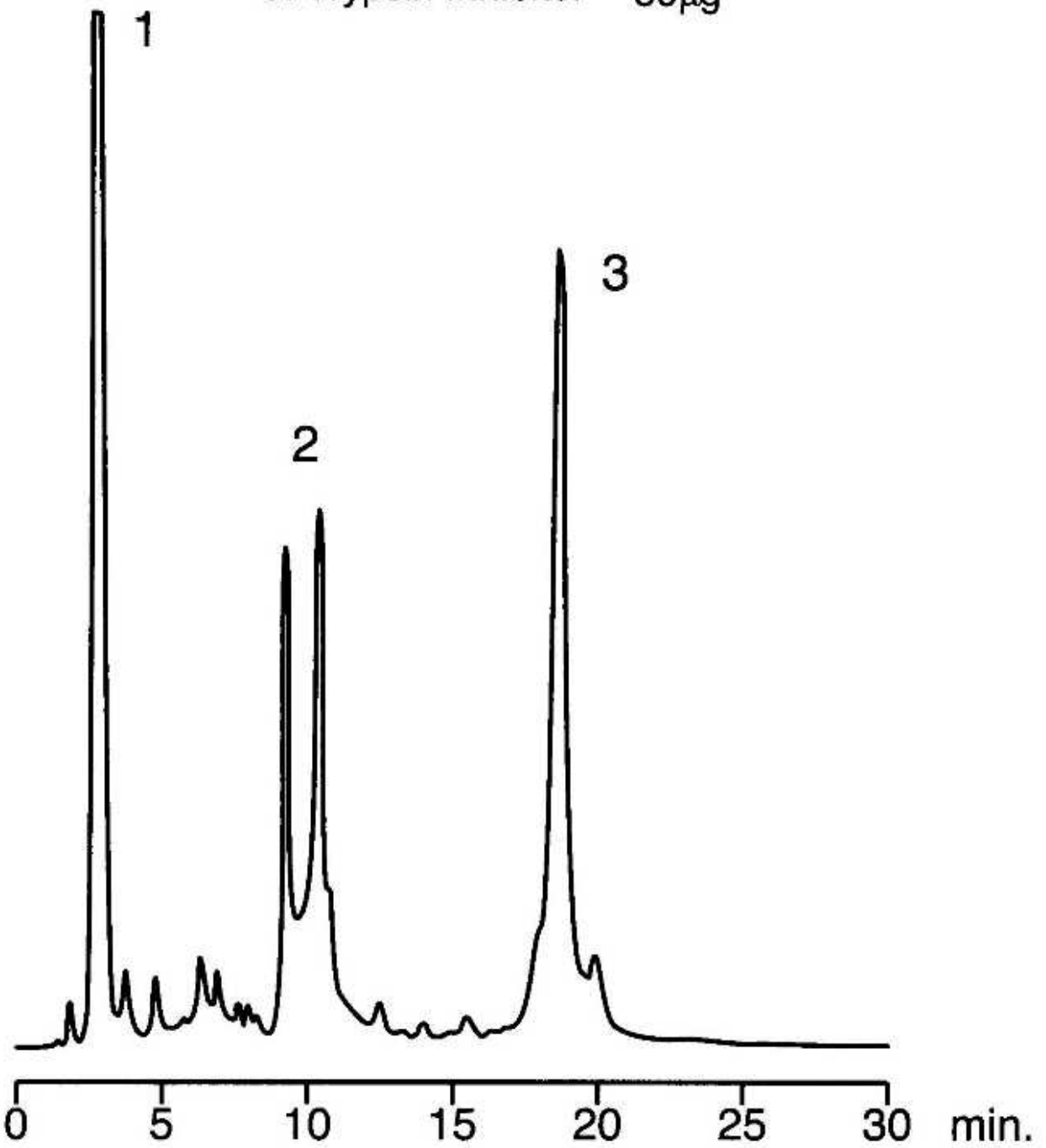
Eluent : A 20mM Tris-HCl pH8.0
B A+0.5M NaCl
A → B 30min linear gradient

Flow rate : 0.5 mℓ/min

Column temp. : ambient

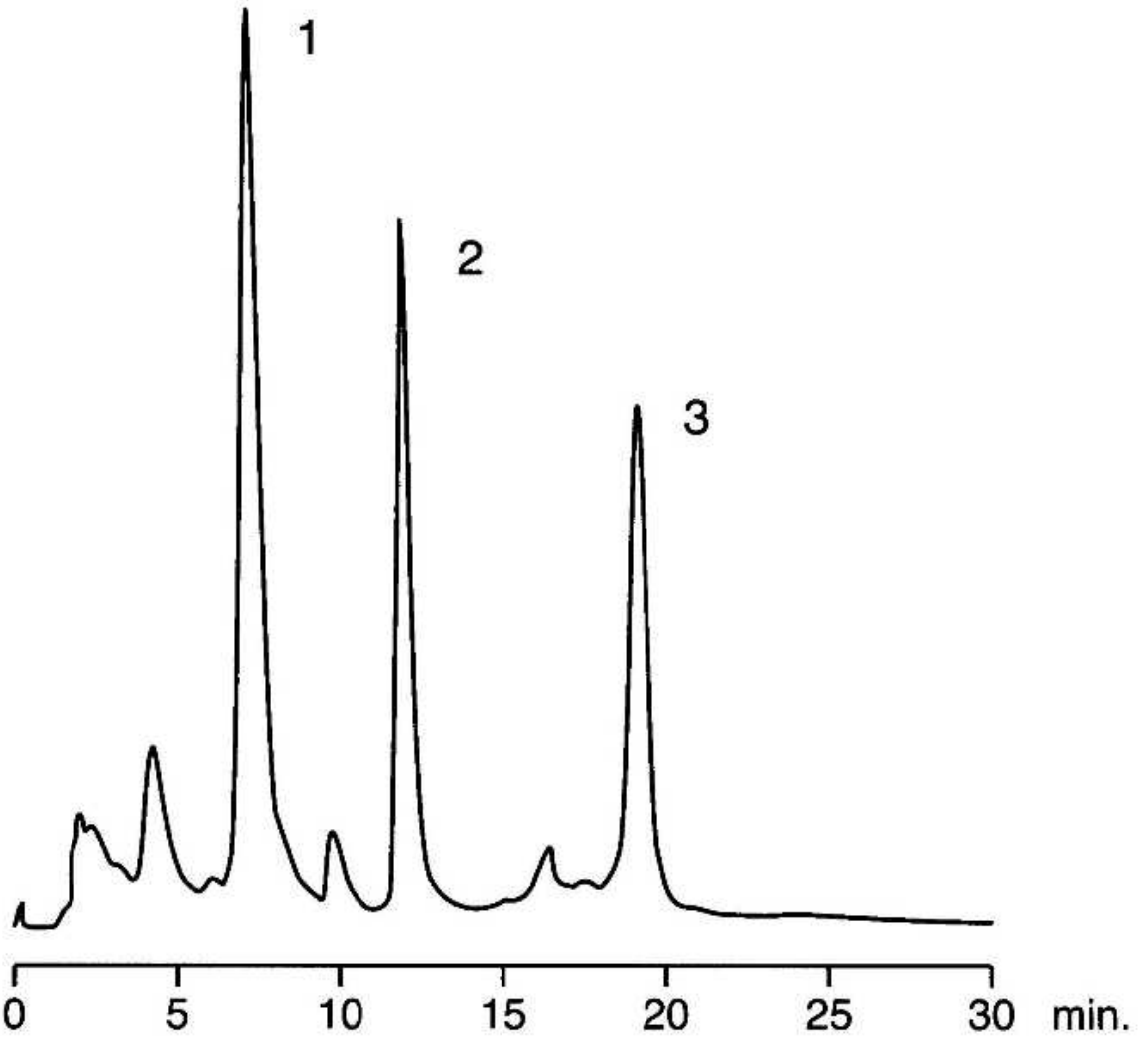
Detection : 280nm

Sample : 1. Myoglobin 25μg
2. Conalbumin 25μg
3. Trypsin Inhibitor 50μg



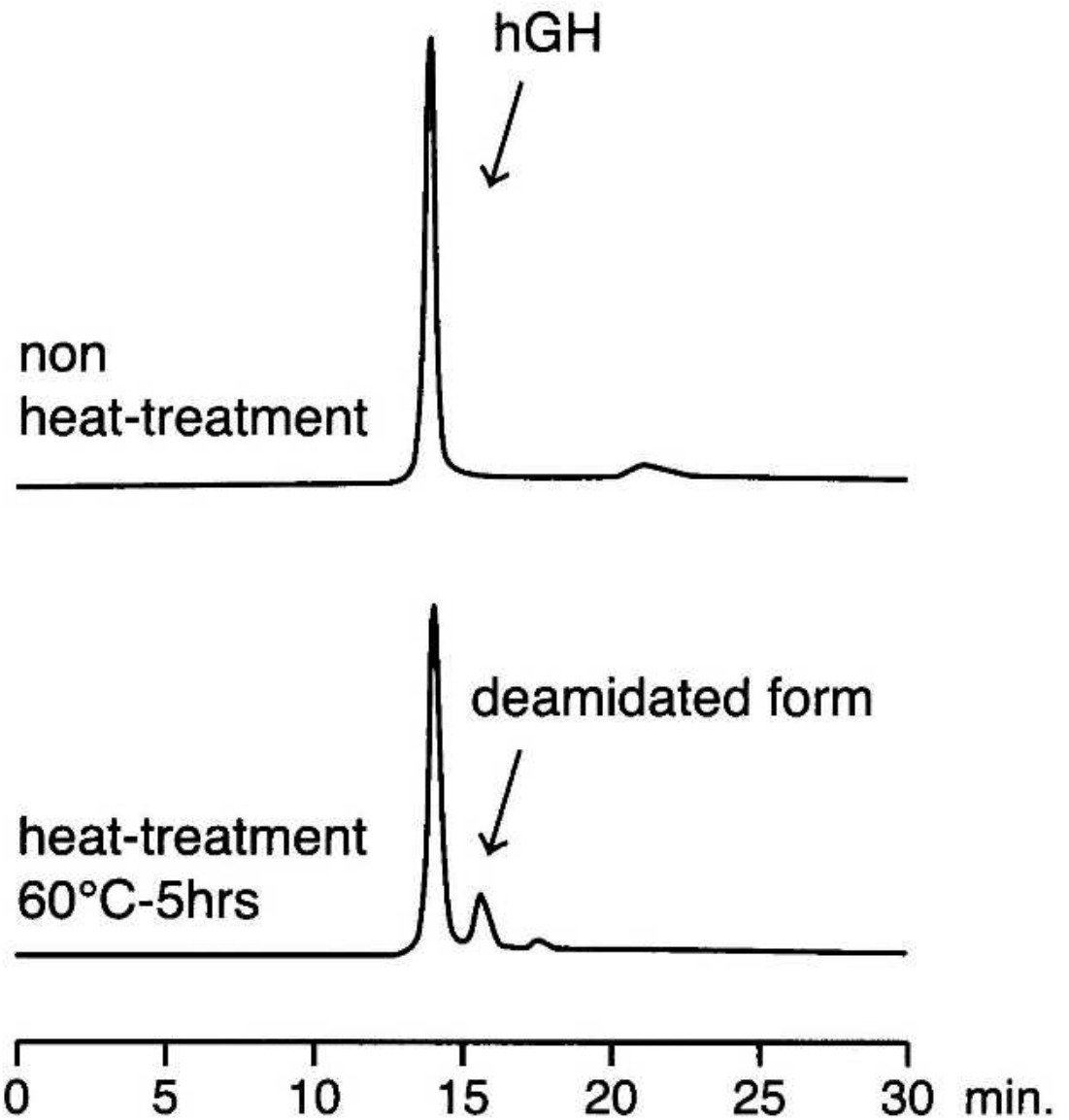
Conditions

Column	: MCI GEL® ProtEx-DEAE 4.6mm I.D.×50mm
Eluent	: A 20mM Tris-HCl pH8.0
	B A+0.5M NaCl
	A → 10% B 30min linear gradient
Flow rate	: 0.5 mℓ/min
Column temp.	: ambient
Detection	: 280nm
Sample	: 1. Hb A_2 100μg
	2. Hb S 100μg
	3. Hb A0 100μg



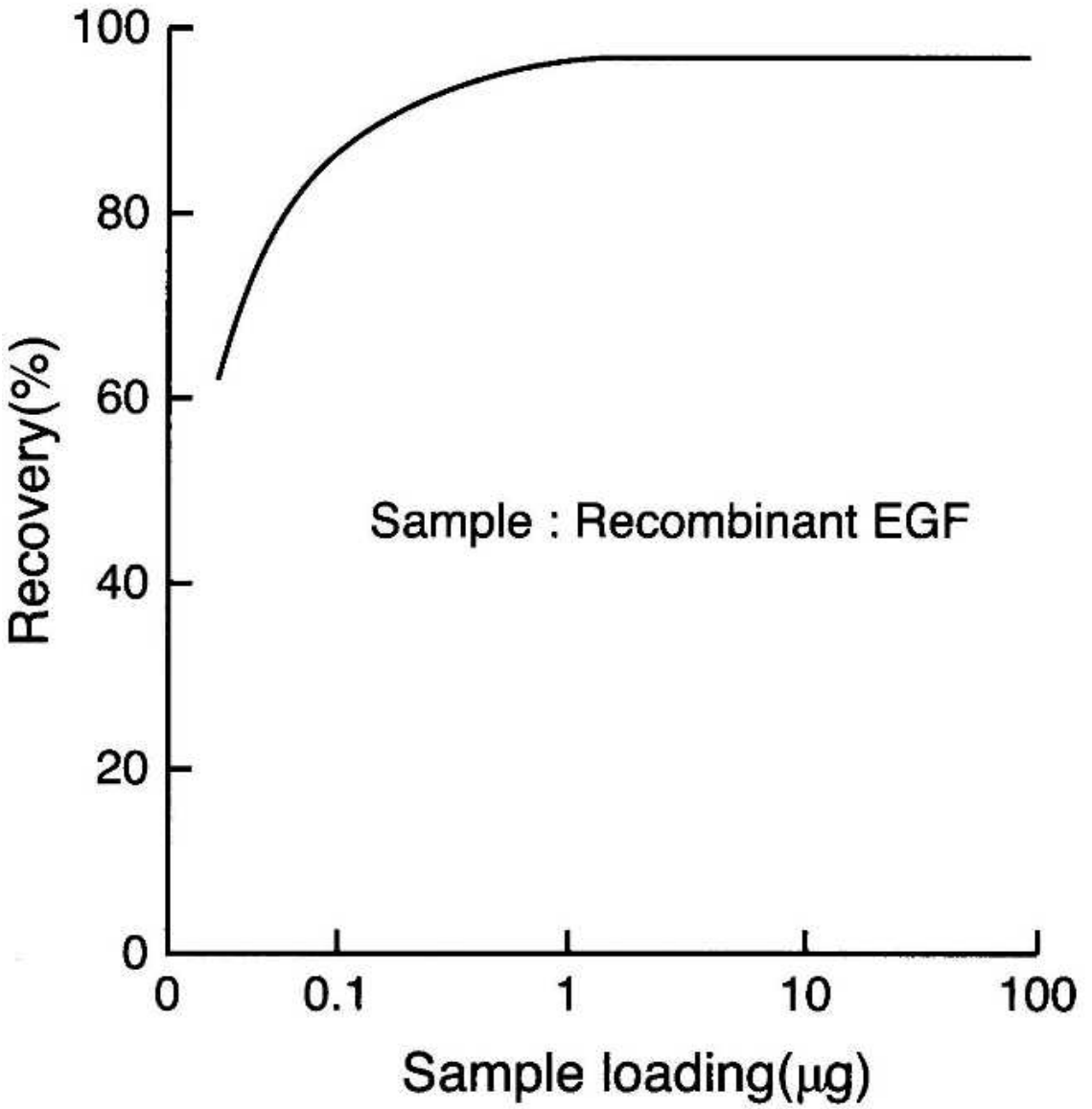
Conditions

Column	: MCI GEL® ProtEx-DEAE 4.6mm I.D.×50mm
Eluent	: A 20mM Tris-HCl pH8.0
	B A+0.5M NaCl
	: 5% B → 70% B 30min linear gradient
Flow rate	: 0.5 mℓ/min
Column temp.	: ambient
Detection	: 280nm
Sample	: recombinant hGH 10μg

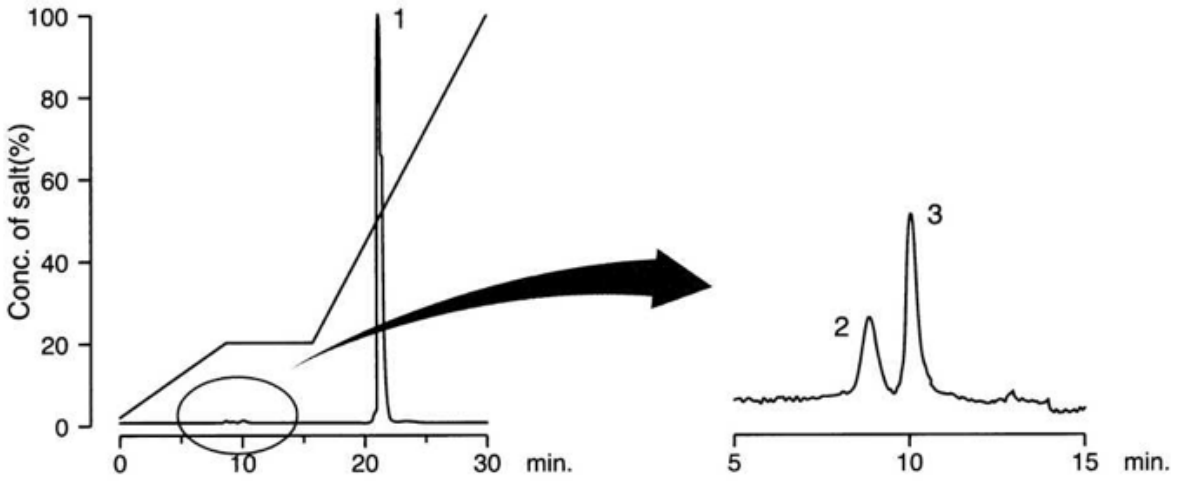


Conditions

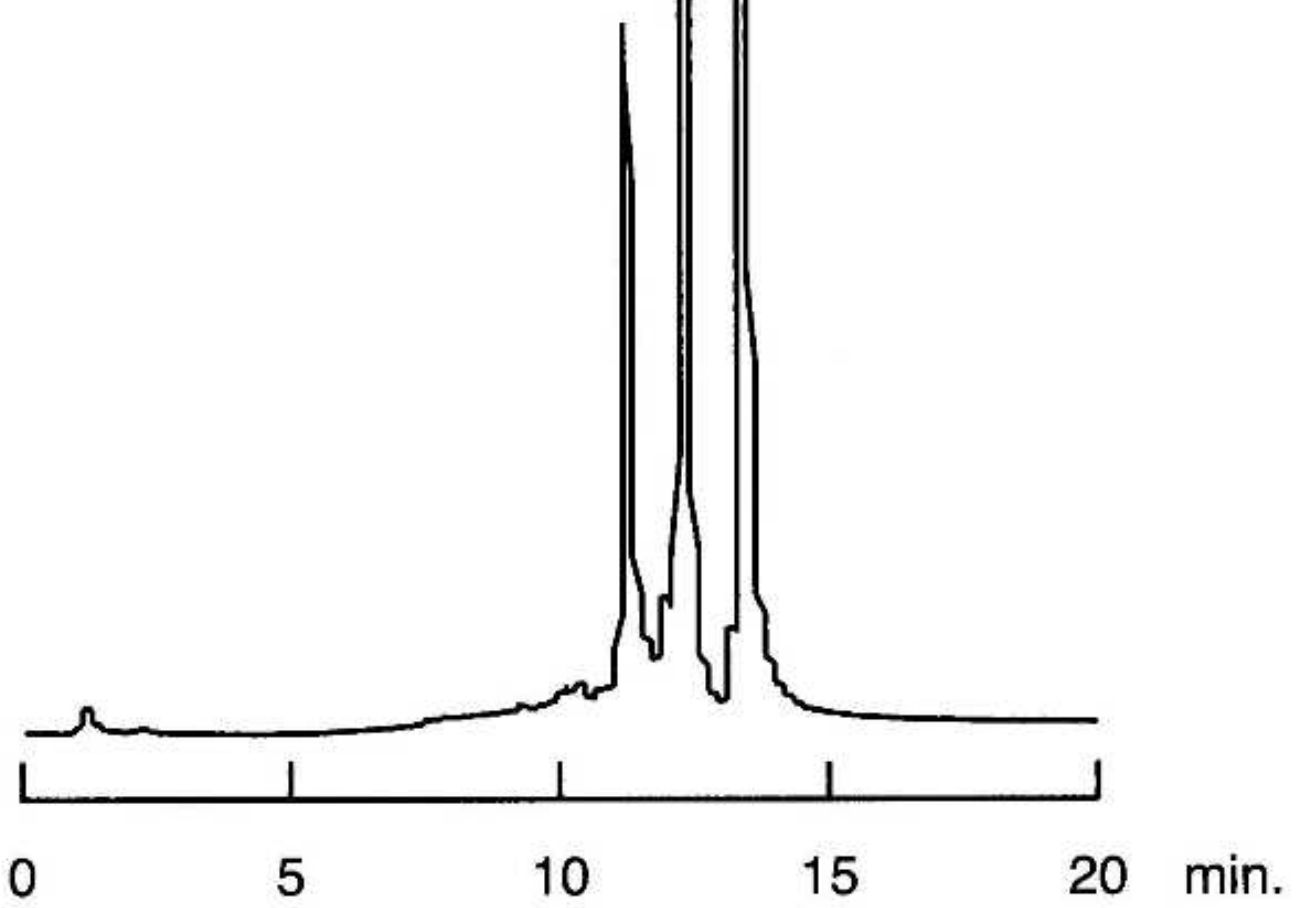
Column	: MCI GEL® ProtEx-DEAE 4.6mm I.D.×50mm
Eluent	: A 20mM Tris-HCl pH8.15
	B A+0.5M NaCl
	A → 50% B 30min linear gradient
Flow rate	: 0.5 mℓ/min
Column temp.	: ambient
Detection	: 280nm
Sample	: recombinant epidermal growth factor (EGF)



Conditions
Column : MCI GEL® ProtEx-DEAE 4.6mm I.D.×50mm
Eluent : A 20mM Trimethylenediamine-HCl pH9.75
B A+0.5M NaCl
Flow rate : 0.5 mℓ/min
Column temp. : ambient
Detection : 280nm
Sample : recombinant IL-2 1.5μg
1. BSA (stabilizer) 400μg
2. IL-2 (Met-ox)
3. IL-2

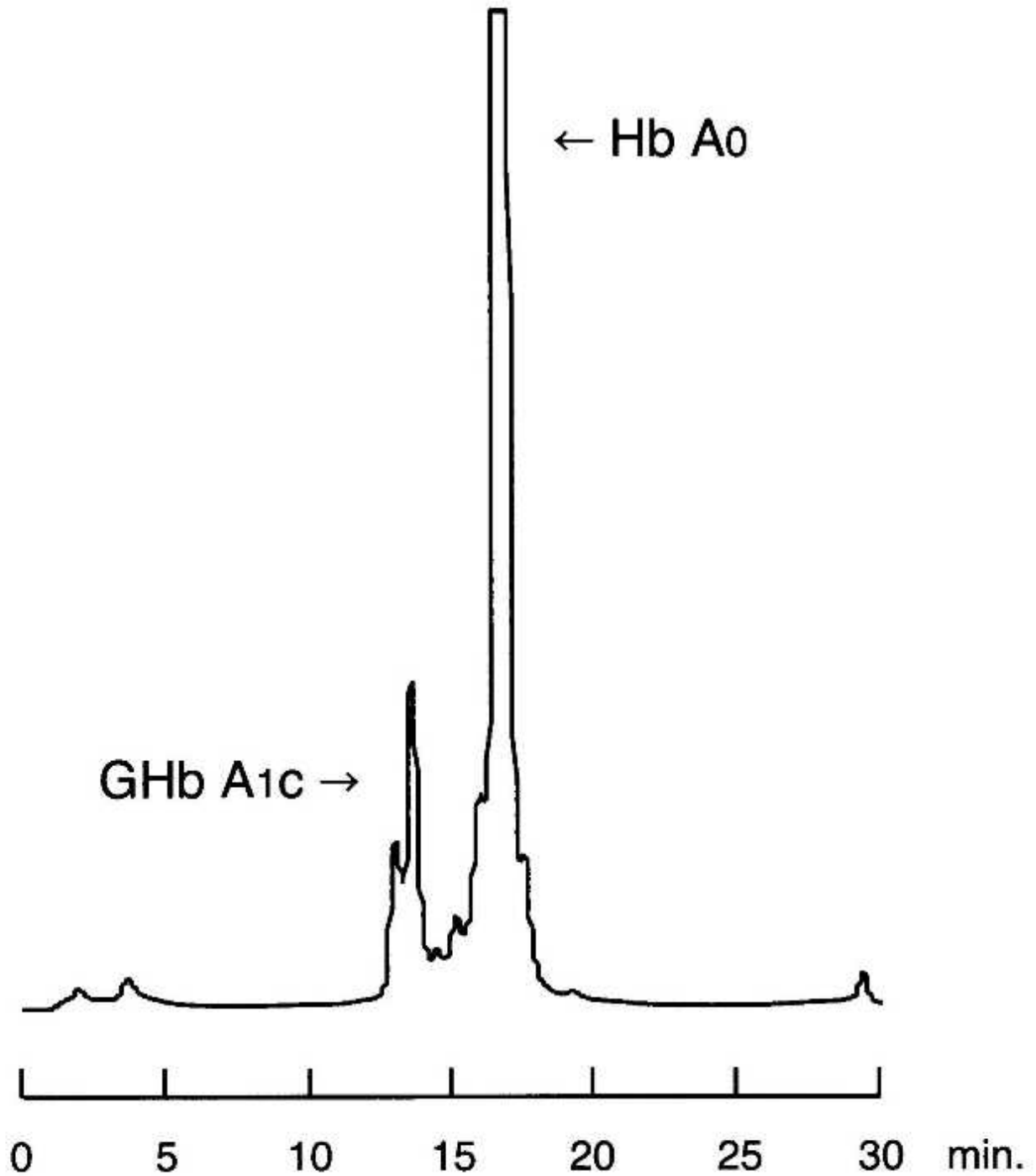


Conditions
Column : MCI GEL® ProtEx-SP 4.6mm I.D.×50mm
Eluent : A 20mM Phosphate buffer pH6.0
B A+0.5M NaCl
A → B 20min linear gradient
Flow rate : 0.5 mℓ/min
Column temp. : ambient
Detection : 280nm
Sample : 1. Ribonuclease A 10μg
2. α-Chymotrypshinogen A 5μg
3. Cytochrome C 5μg


0
5
10
15
20
min.

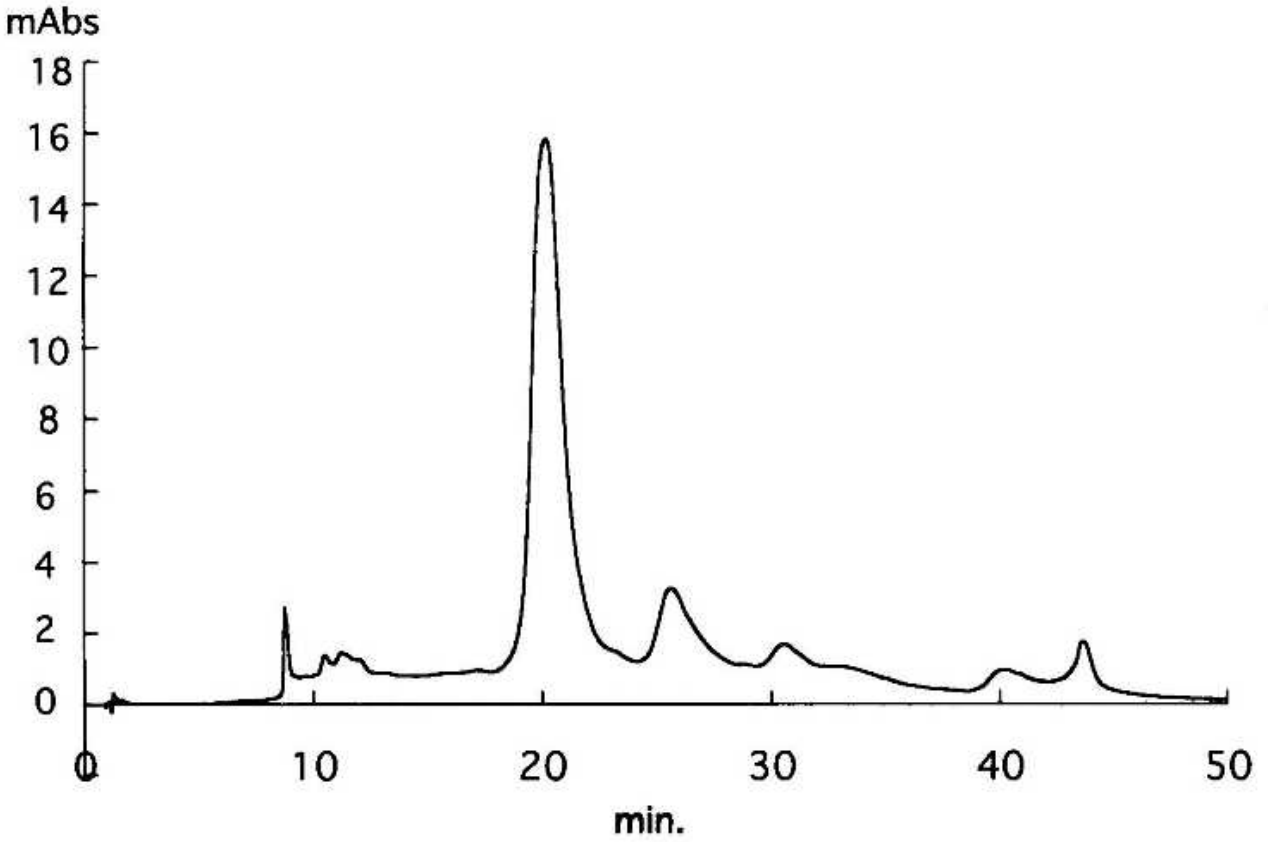
Conditions

Column	: MCI GEL® ProtEx-SP 4.6mm I.D.×50mm
Eluent	: A 20mM Bis-Tris HCl buffer pH6.0
	B A+0.5M NaCl
	7% B → 40% B 20min linear gradient
Flow rate	: 0.5 mℓ/min
Column temp.	: ambient
Detection	: 415nm
Sample	: GHb
	1. GHb A1c
	2. Hb A0



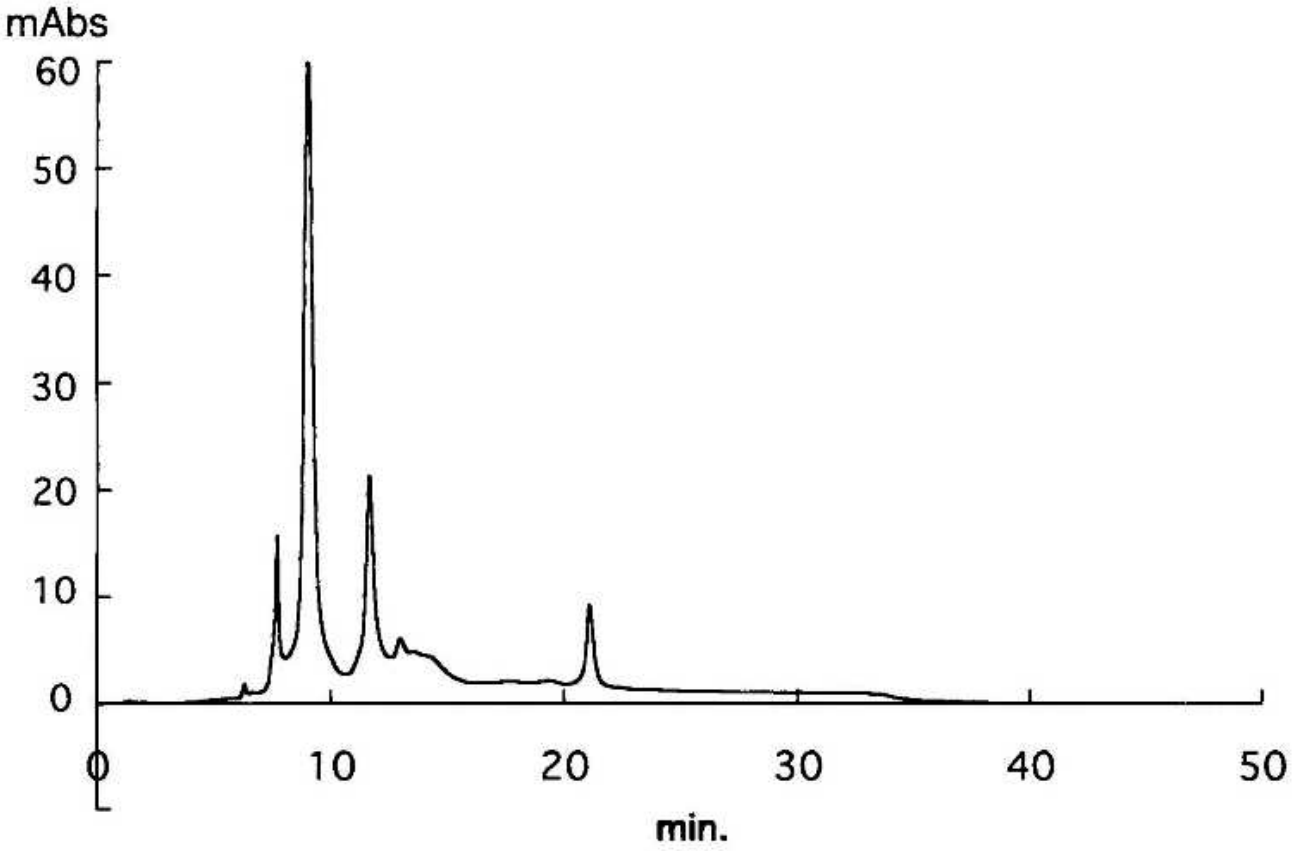
Conditions

Column	: MCI GEL® ProtEx-DEAE 4.6mm I.D.×50mm
Eluent	: A 20mM HEPES buffer pH7.6
	B A+0.5M NaCl
	A100% → B45% in 30min. B45% for 5min
	B45% → B100% in 5min. B100% for 10min
Flow rate	: 0.5 mℓ/min
Column temp.	: 25°C
Detection	: 280nm
Sample	: IgG2b, κ(mouse) 10μg

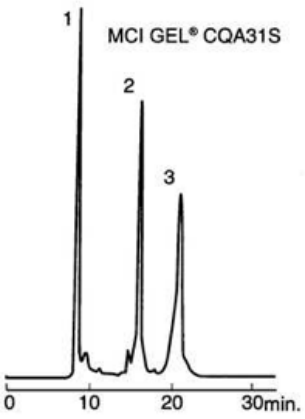


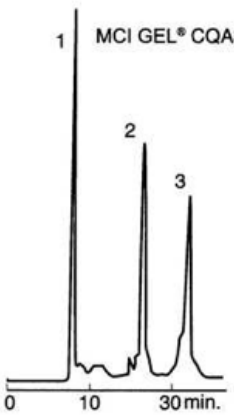
Conditions

Column	: MCI GEL® ProtEx-DEAE 4.6mm I.D.×50mm
Eluent	: A 10mM HEPES buffer pH8.0
	B A+0.5M NaCl
	A100% → B100% in 30min. linear gradient
Flow rate	: 0.5 mℓ/min
Column temp.	: 25°C
Detection	: 280nm
Sample	: IgG1 MOPC21 (mouse) 10μg

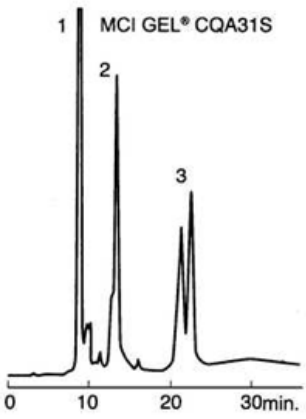


Conditions
Column : MCI GEL® CQA31S 7.5mm I.D.×75mm
MCI GEL® CQA35S 7.5mm I.D.×75mm
Eluent : A 14mM Tris-HCl buffer pH8.2
B A +0.5M NaCl
A → B 30min linear gradient
Flow rate : 1.0 mℓ/min
Column temp. : ambient
Detection : 280nm
Sample : 1. Myoglobin 60μg
2. Ovalbumin 200μg
3. Trypsin Inhibitor 200μg





Conditions
Column : MCI GEL® CQA31S 7.5mm I.D.×75mm
MCI GEL® CQA35S 7.5mm I.D.×75mm
Eluent : A 14mM Tris-HCl buffer pH8.2
B A +0.5M NaCl
A → B 30min linear gradient
Flow rate : 1.0 mℓ/min
Column temp. : ambient
Detection : 280nm
Sample : 1. Myoglobin 120μg
2. Transferrin 160μg
3. β -Lactoglobulin 400μg



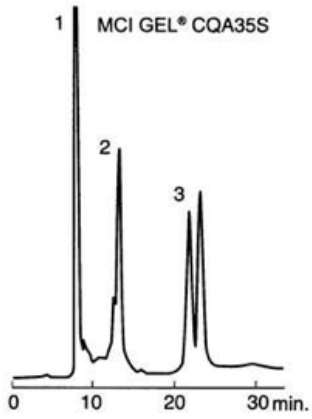
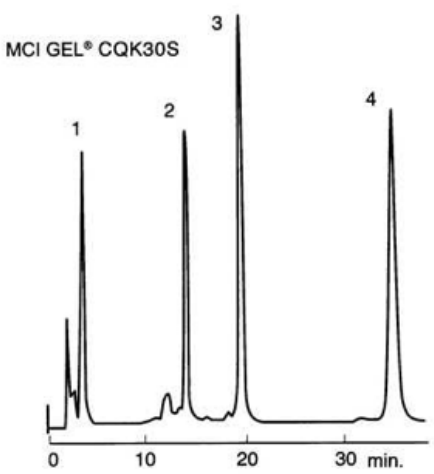
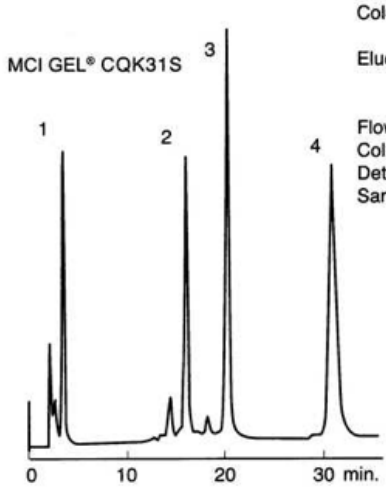
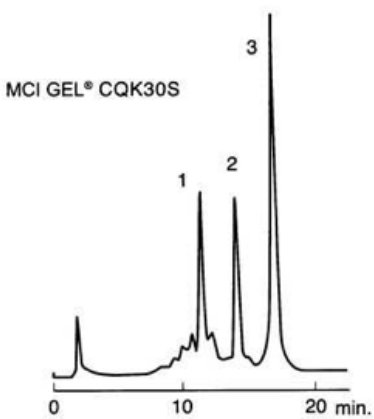


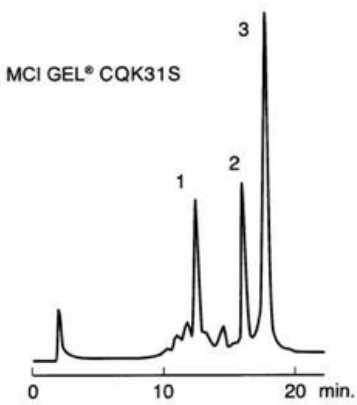
Fig. 4-20 Separation of protein mixture





Conditions
Column : MCI GEL® CQK30S 7.5mm I.D.×75mm
MCI GEL® CQK31S 7.5mm I.D.×75mm
Eluent : A 20mM Phosphate buffer pH6.8
B A +0.5M NaCl
A → B 30min linear gradient
Flow rate : 1.0 mℓ/min
Column temp. : ambient
Detection : 280nm
Sample : 1. Myoglobin 50μg
2. Ribonuclease A 200μg
3. Cytochrome C 60μg
4. Lysozyme 80μg



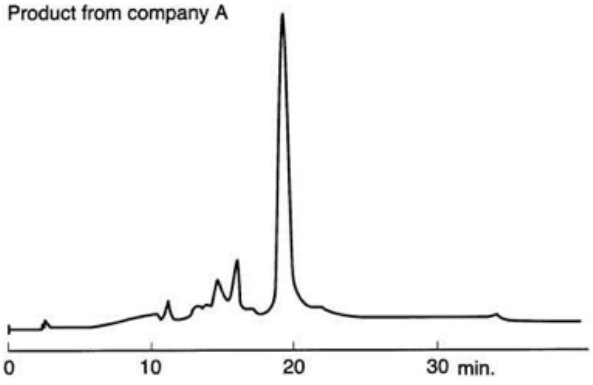


Conditions
Column : MCI GEL® CQK30S 7.5mm I.D.×75mm
MCI GEL® CQK31S 7.5mm I.D.×75mm
Eluent : A 20mM Phosphate buffer pH6.8
B A +0.5M NaCl
A → B 30min linear gradient
Flow rate : 1.0 mℓ/min
Column temp. : ambient
Detection : 280nm
Sample : 1. Trypsinogen 80μg
2. Ribonuclease A 90μg
3. α -Chymotrypshinogen A 60μg

Fig. 4-22 Separation of lipoxidase

Conditions
Column : MCI GEL® CQA31S 7.5mm I.D.×75mm
Eluent : A 14mM Tris-HCl buffer pH8.2
B A +0.5M NaCl
A → B 30min linear gradient
Flow rate : 1.0 mℓ/min
Column temp. : ambient
Detection : 280nm
Sample : Lipoxidase

Product from company A



Product from company B