2 MCI GEL™

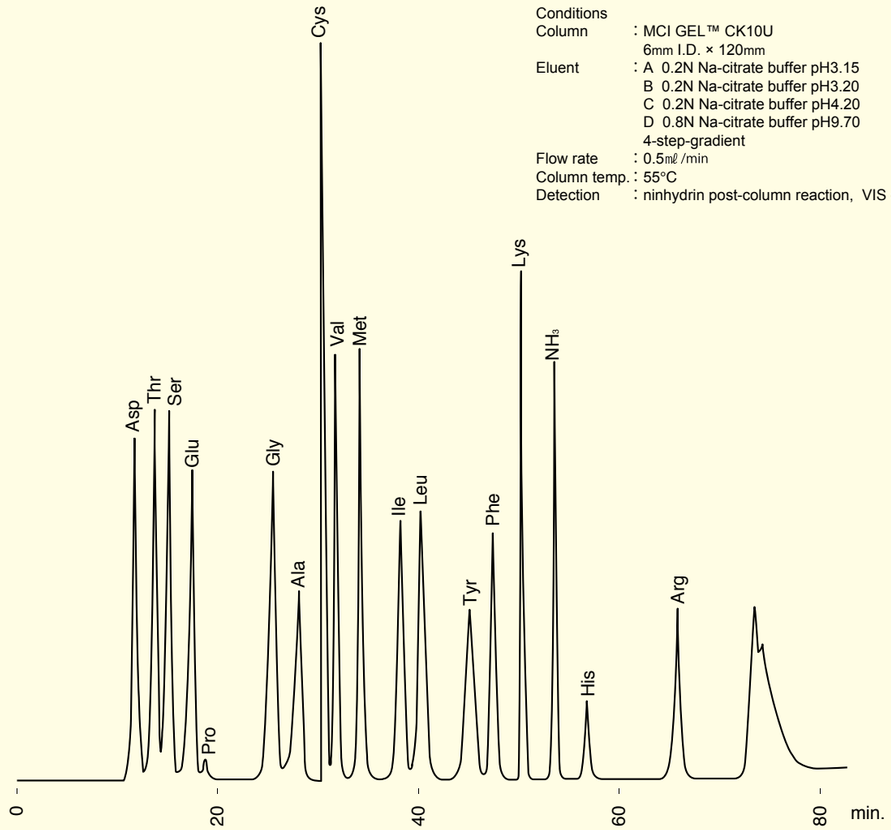
CK10U

High cross linkage cation exchange column
applications; amino acids, amines, etc

CK10U 6×120

Separation of amino acids

Fig. 2-32 Protein hydrolyzates amino acids

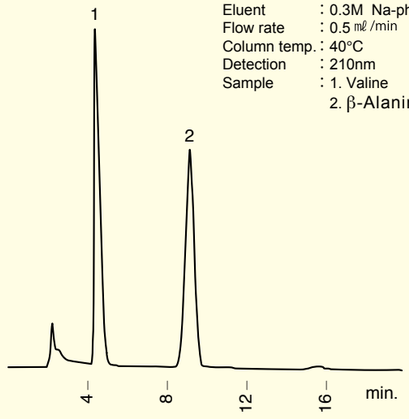


Conditions
Column : MCI GEL™ CK10U
6mm I.D. × 120mm
Eluent : A 0.2N Na-citrate buffer pH3.15
B 0.2N Na-citrate buffer pH3.20
C 0.2N Na-citrate buffer pH4.20
D 0.8N Na-citrate buffer pH9.70
4-step-gradient
Flow rate : 0.5mℓ/min
Column temp. : 55°C
Detection : ninhydrin post-column reaction, VIS detector

As for analysis of amino acids by a cation exchange column such as MCI GEL™ CK10U, MCI GEL™ AFR2-PC is recommended as a pre-column. The AFR2-PC column is very effective to stabilize base line because ammonium in eluent is trapped in this column. The ammonium ion may disturb base line stability. The AFR2-PC should be installed between an outlet of HPLC pump and an inlet of sample injector. A gradient elution, commonly used for amino acid analysis, is influenced by HPLC instrument. So to obtain a satisfactory chromatogram, gradient conditions should be optimized in accordance with the HPLC equipment.

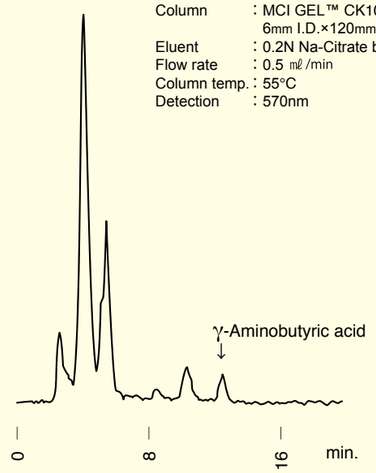
Separation of amino acids

Fig. 2-33 Valine, β-Alanine



Conditions
Column : MCI GEL™ CK10U
6mm I.D.×120mm
Eluent : 0.3M Na-phosphate pH5.0
Flow rate : 0.5 mℓ/min
Column temp. : 40°C
Detection : 210nm
Sample : 1. Valine
2. β-Alanine

Fig. 2-34 γ-Aminobutyric acid

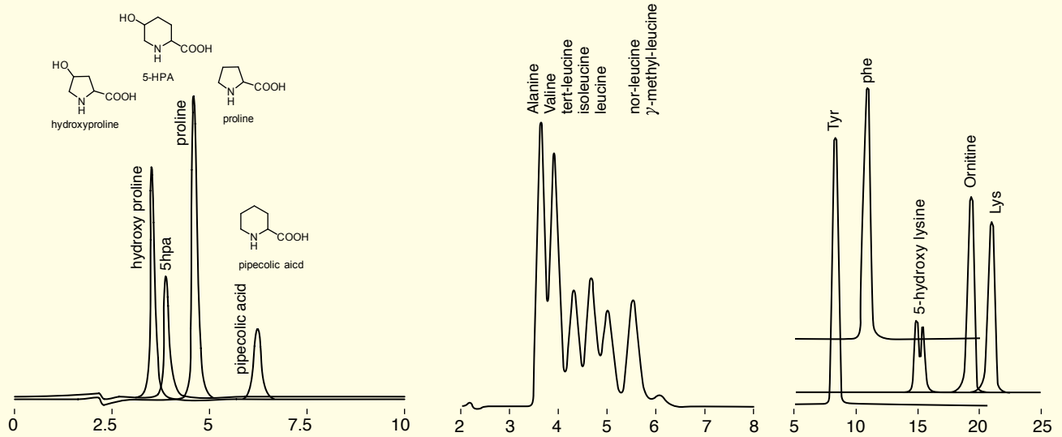


Conditions
Column : MCI GEL™ CK10U
6mm I.D.×120mm
Eluent : 0.2N Na-Citrate buffer pH5.2
Flow rate : 0.5 mℓ/min
Column temp. : 55°C
Detection : 570nm

Fig. 2-35 cyclic amino acids

Fig. 2-36 alkyl amino acid

Fig. 2-37 basic amino acid and aromatic amino acids



Conditions
Column : MCI GEL™ CK10U
6mm I.D.×120mm
Eluent : 0.3M $NaSO_4$ (pH5.7)
Flow : 0.5 mℓ/min
Temp. : 60 degree
UV : 210nm