



Younglin Application Note

REF No. : YL-APP-989001AAA

Subject : Amino Acid Analysis using HPLC/UV Detector

Key Word

: Aminoic acid
AccQ Tag Method



1 Introduction

As there is no fluorescent or UV-absorbent functional group in amino acids, the derivatization is required to be detected by a fluorescence or UV/VIS absorbance detector. Recently, AQC(Aminoquinolyl Succinimidyl Carbamate) as a derivative agent is widely used to derivative amino acids. This derivatization method recommends to use a fluorescence detector but a UV/VIS absorbance detector can be used as alternative. This note shows amino acid analysis using UV/VIS absorbance detector.

2 Instrument

- Younglin 9600 HPLC 9600(High Pressure Gradient)
- Younglin Autochro-WIN
- SAT/IN module

3 Analytical Conditions

- Column : Waters Nova-pak C18 3.9; 150mm
- Mobile Phase :
 Eluent A: Accq-Tag eluent A concentrate 100ml
 + Ultra-pure water 900ml pH 5.02
 Eluent B: 60% Acetonitrile + 0.02% Acetone
- Flow rate : 1 ml/min
- Detector : UV 248nm
- Temp. : 37; ̊C

- Gradient Condition

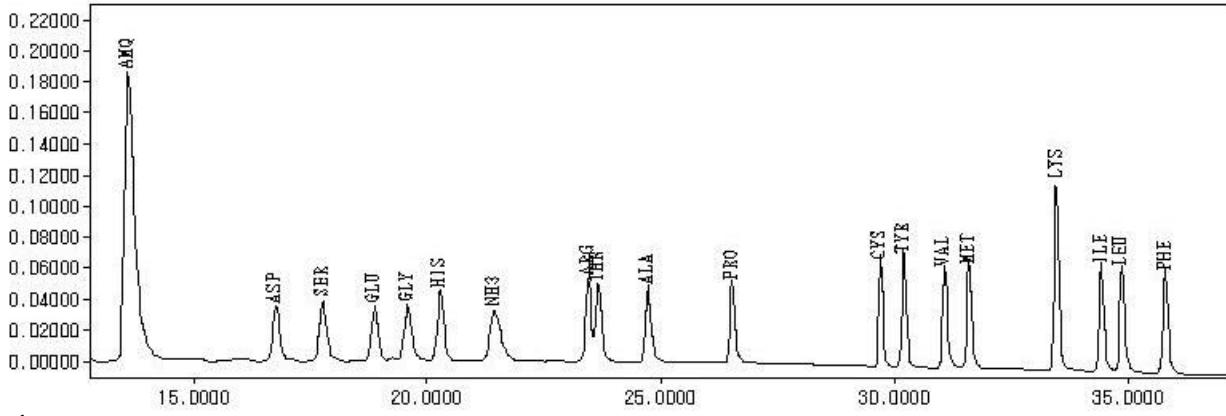
Time(min)	Solvent A	Solvent B
0	100	0
17	93	7
21	90	10
32	66	34
33	66	34
36	0	100
37	0	100
40	100	0

4 Sample

Aminoic Acid Standard (following 17 amino acids)
 Ala(Alanine), His(Histidine), Pro(Prolnine),
 Arg(Arginine), Ile(Isoleucine), Ser(Serine)
 Asp(Asparagine), Leu(Leucine), Thr(Threonine)
 Cys(Cystine), Lys(Lysine), Tyr(Tyrocine)
 Glu(Glutamine), Met(Methionine), Val(Valine)
 Gly(Glycine), Phe(Phenylalanine)



i **Chromatogram**



i **Discussion**

Using Younglin M720 UV/VIS Absorbance detector, 17 amino acids was analyzer with good resolution as shown above chromatogram.