

# 氨基酸分析仪

## Amino Acid Analyzer

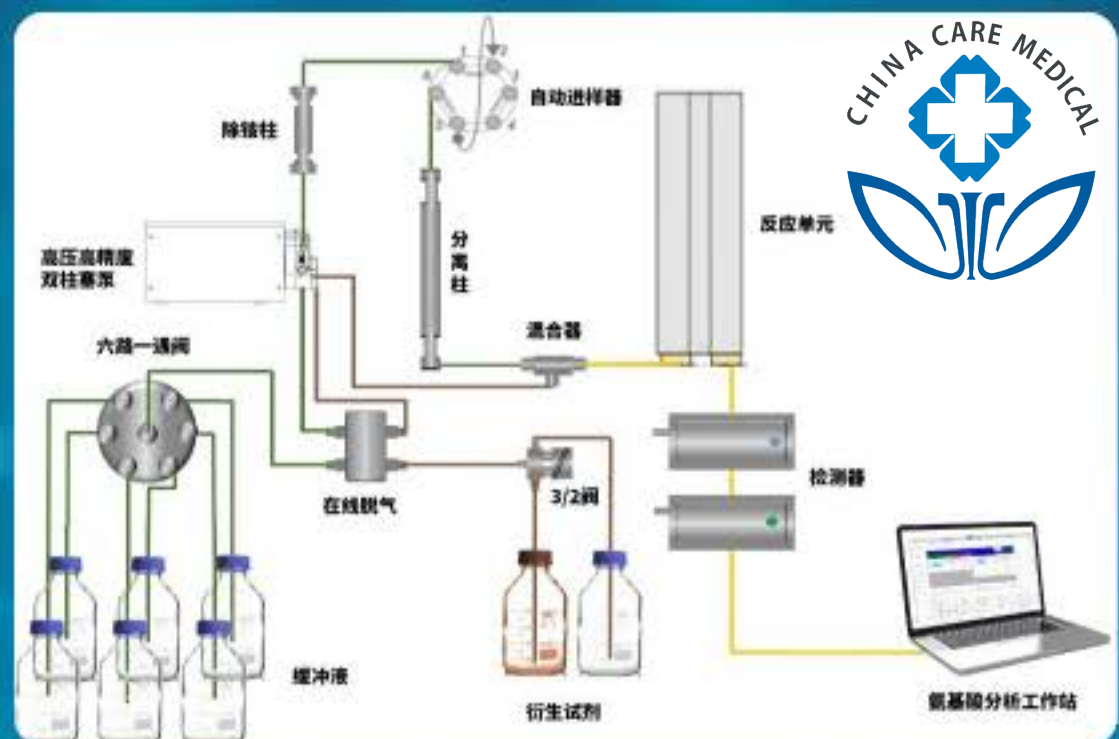


## Amino Acid Analyzer

- ▶ Self-R&D, manufactured in China
- ▶ Self-owned System control software
- ▶ In comply with GLP/21CFR, traceable data
- ▶ All automatically operation, including dosing, separation, reaction, detection, cleaning, degassing, etc.

- ▶ In comply with all current national and International standards. Able to analyze all current amino acids
- ▶ Two modules for Na-system: Regular/High-Speed analysis for 18-25 hydrolysis amino acid.
- ▶ Li-system is able to analyze 21 hydrolysis amino acids or 43 free amino acids without changing column and eluents.
- ▶ Advanced temperature gradient plus traditional concentration gradient and pH gradient, is able to separate some amino acids which are difficult to be separated by traditional method.
- ▶ Eluents consumption: cost 20%-30% of that of competitors'.
- ▶ Spare parts: no consumption.
- ▶ Detector: LED light source with life of more than 100,000 hours, no need to exchange of light source.
- ▶ Built-in all-channel vacuum degaser, online degassing.
- ▶ Ninhydrin and eluents are excluded of oxygen by nitrogen. Pressured nitrogen protection

### Flow Chart of Amino Acid Analysis



### High pressure/Precision dual piston Pump

Flow rate: 0.000 ~ 9.999ml/min  
Deviation of Flow rate: 0.1%(0.1ml/min)  
Pressure range: 0 ~ 40MPa  
Seal: No need traditional seal  
Cleaning of pump head: automatically, no clogging

### Injector

Dosing volume : 20 $\mu$ L

### High-effect reactor

Heating method: electronic, safety  
Temp. range: Ambient~ 150°C  
Precision:  $\pm 0.1$  °C  
High efficiency reaction, small dead volume, no diffusion.  
Safety: auto-protection due to power shut off, auto-reset protection due to overheating.

### Maintainance-free detector

Type: High precision micro-diode photometer  
Wavelength : 570nm/440nm  
High sensitivity, no splitting on line, no consumables

### High resolution Separation Column

Type: High theoretical number of trays  
Length: 125mm  
Resin:  $\leq 5\mu$ m cation exchange resin  
Specification: typical/high speed/high resolution

### Room storage eluents

Eluents: 5 (Na-system), 6 (Li-system)  
Storage condition: Ambient temperature  
Shelf life: 2Years (eluents), 1Year (ninhydrin)

### Column oven with temperature gradient

Temp. control: Peltier  
Temp. range: 20 ~ 100 °C  
Precision:  $\pm 0.1$  °C  
Temp. gradient separation control  
Safety: auto-protection due to overheat/leakage of liquid

### WS for Amino Acid Analysis

Function: control, data collection and handling  
Operation system: Windows  
Language: Chinese/English

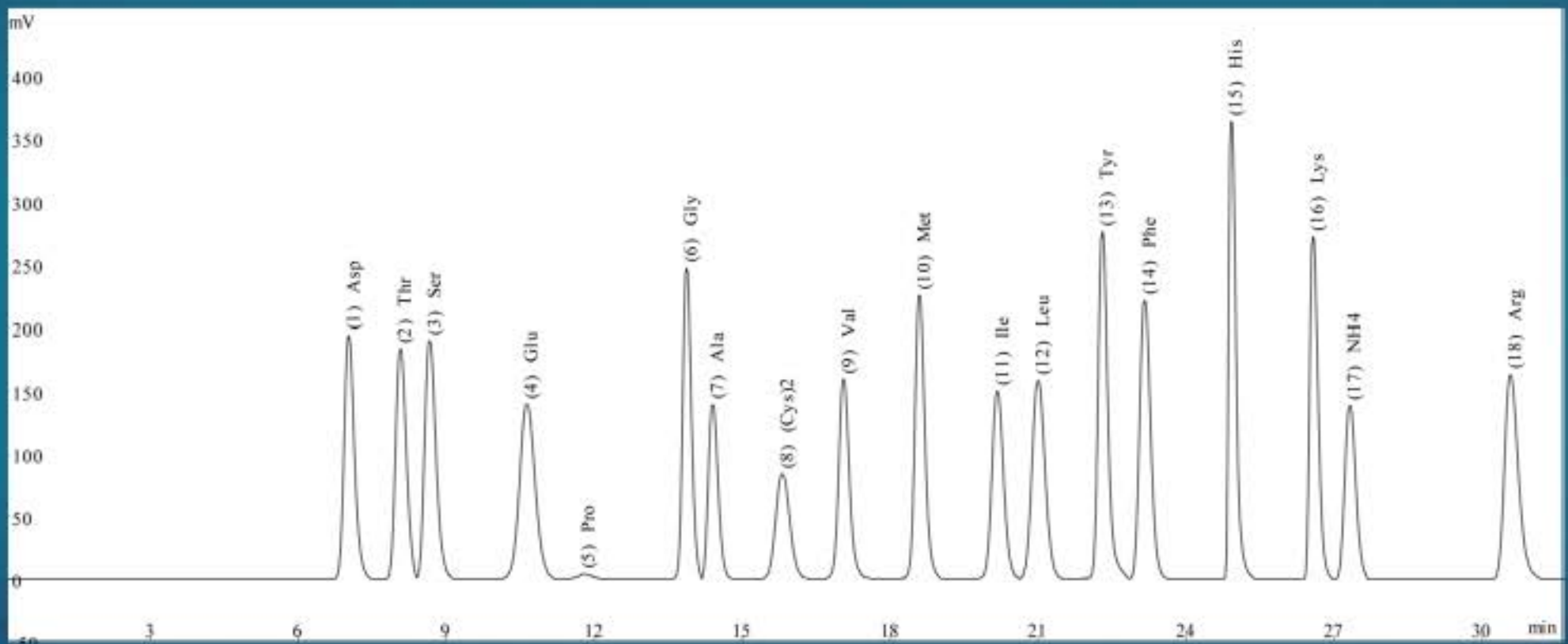
## aminoPro – system control software, special for amino acid analysis

- ▶ 24 positions high precision professional data handling system, resolution 1 $\mu$ V, integral precision 0.05 $\mu$ V, amino acids word bank, double channel (570nm/440nm) merge, auto-identification of peaks and statistic function, data export.
- ▶ 3-grades administration authority
- ▶ Automatically recording 12 parameters of system condition per second.
- ▶ Remote control, automatically stop system due to emergency
- ▶ To avoid clogging of tubing, aminoPro can automatically clean the system due to power off by accident.
- ▶ Per requirement of user, pre-set up different program. Making different data report. Offering electronic signature.

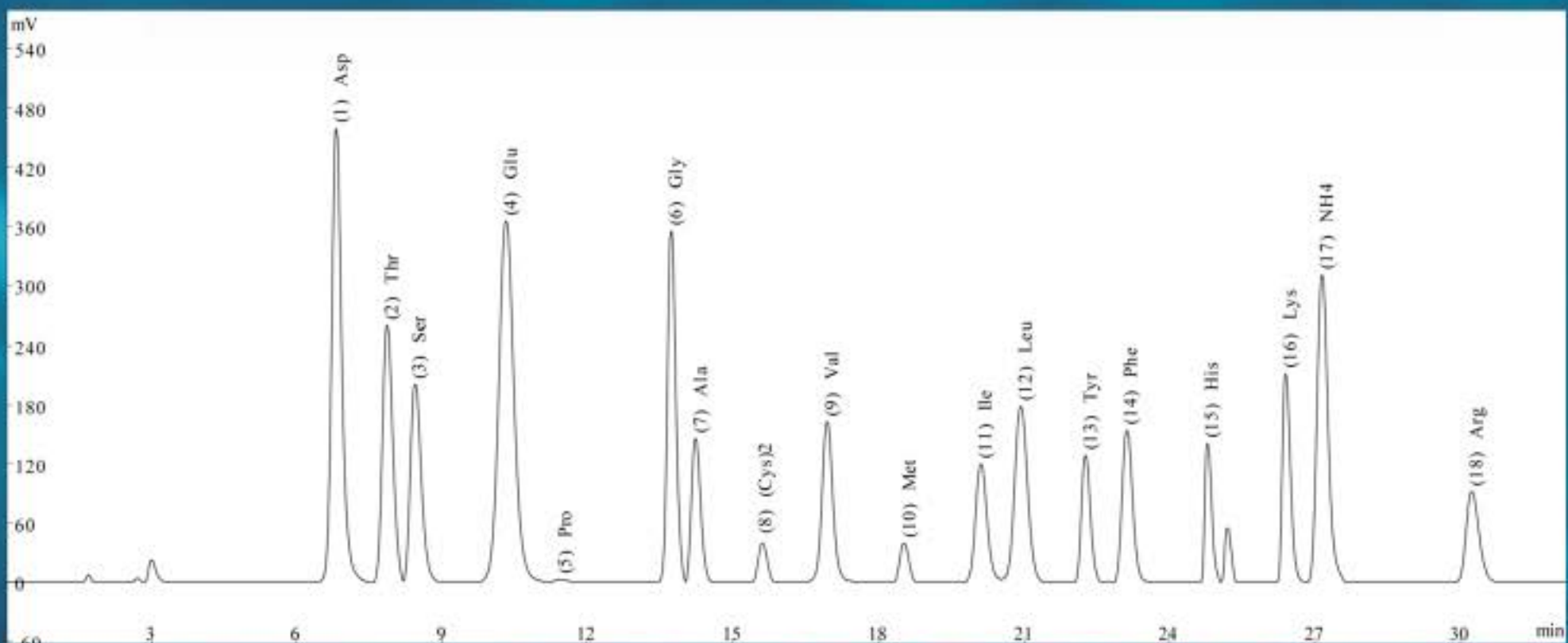


## Applications (Na-System)

### Standards of Na-system

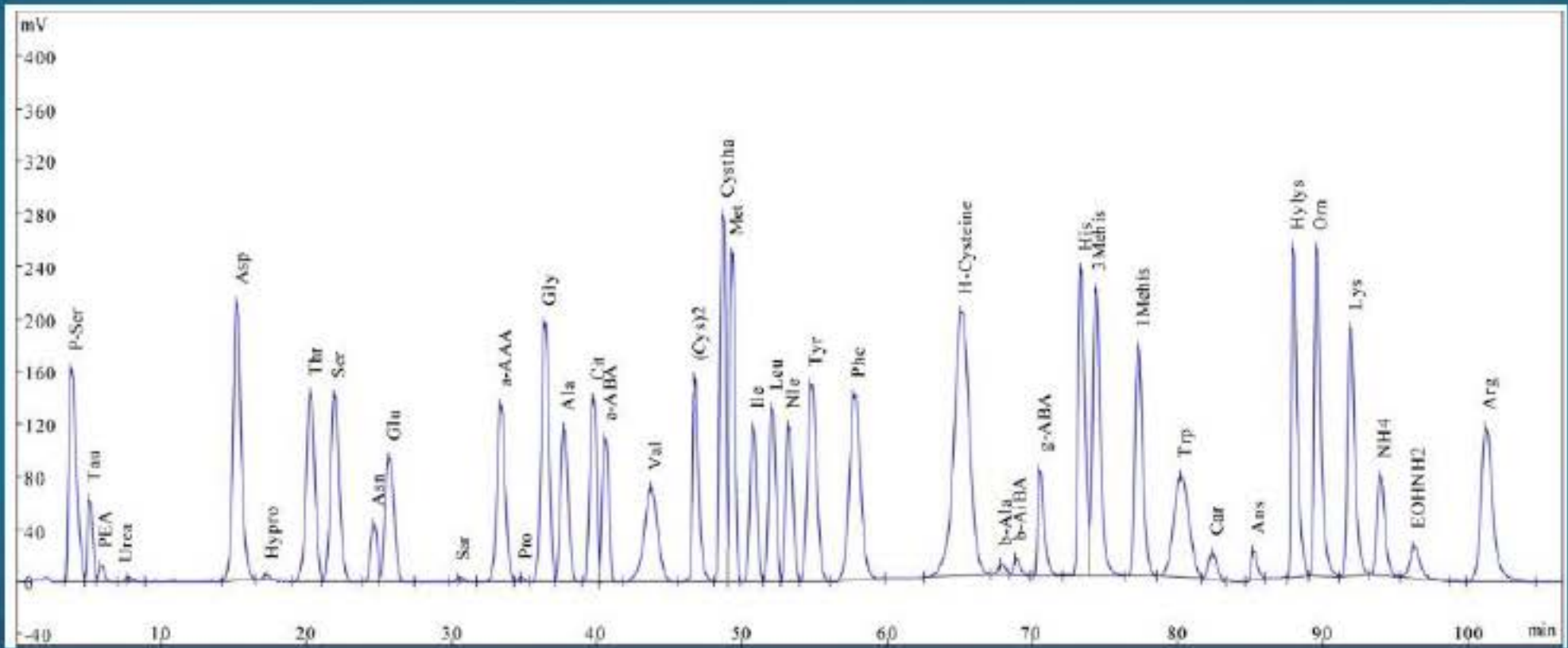


### Feed separation based on Na-system

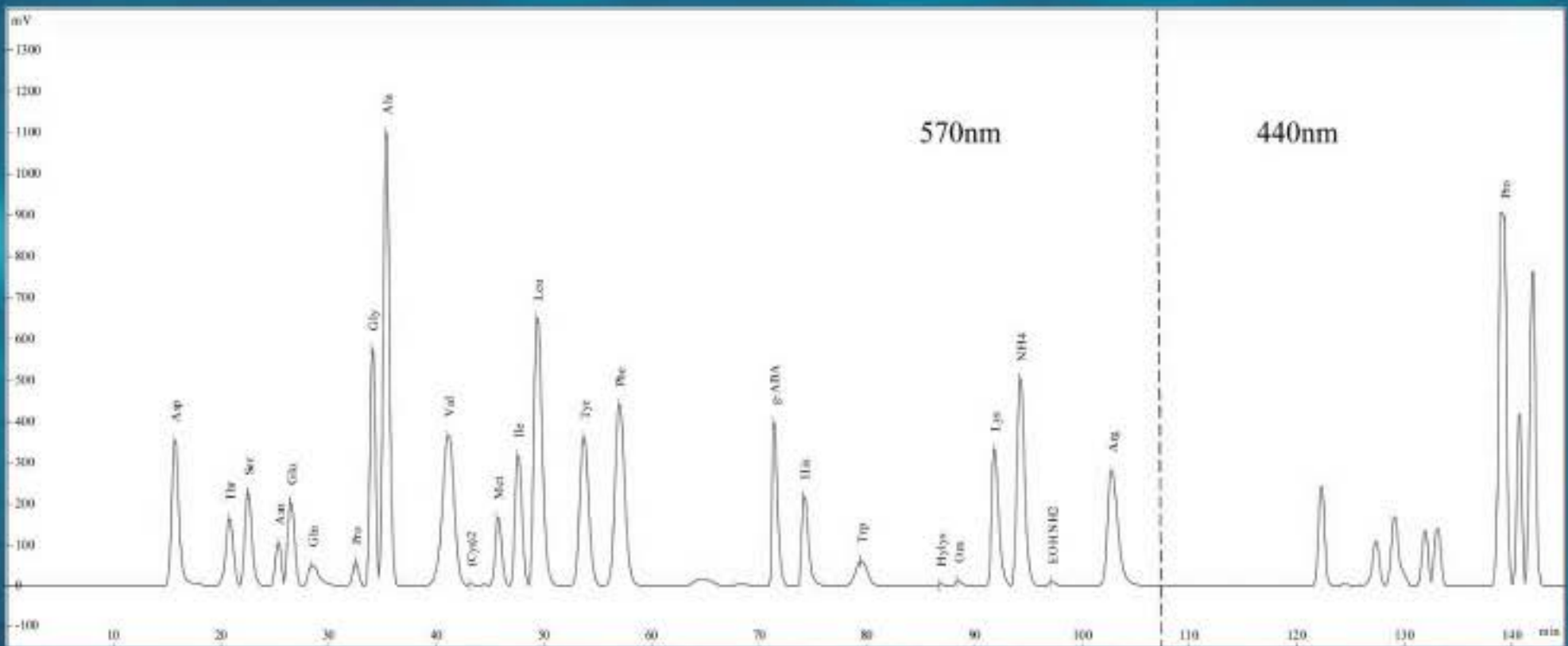


## Applications(Li-System)

### Standards of Li system



### Sample separation based on Li-system



## Specification

- ▶ Environment Temperature requirement: 5 ~ 35°C
- ▶ Relative Humidity: < 90%
- ▶ Power: AC 110 ~ 240V, 50 ~ 60±0.5 Hz
- ▶ Repeatability of retention time: RSD≤0.1% for all amino acids
- ▶ Repeatability for peak area: RSD≤0.5% for all amino acids
- ▶ Detection limit: all < 3pmol (S/N = 2), Asp≤2.5pmol, His≤1pmol
- ▶ Resolution: all hydrolyzed amino acids ≥1.4, average ≥4.0
- ▶ Linearity: r≥0.999 for Gly; r≥0.999 for His

## Consumbles

Cat. No.	Product	Cat. No.	Product	Cat. No.	Product
100-0018	18 AA Standards	200-0018	Try Standard	300-0002	Supplement kit for Li System
100-0020	20 AA Standards	200-0008	Gln Standard	400-0001	Column Kit for Na System
100-0041	41 AA Standards	300-0001	Supplement kit for Na system	400-0002	Column Kit for Li System

## Service offer

We offer following before and after sales services:

- ✓ On site installation and training.
- ✓ Sample analysis, establishing analysis method
- ✓ Telephone visit and on site inspection.
- ✓ Supplement kit for Na-system and Li-system
- ✓ Standards
- ✓ Special training.