



# INSTRUMENT

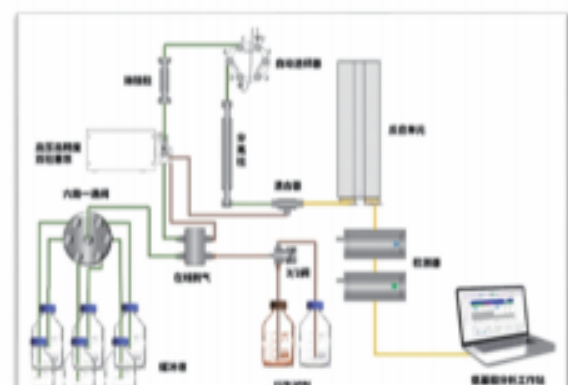
## Amino Acid Analyzer



- 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 with same column and eluents. 56 Amino Acid could be analyzed per request.
- ▶ 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 traditional seals

### High resolution Separation Column

Type: High theoretical number of trays  
Length: 75/125mm  
Resin: 3/5/7  $\mu$  m cation exchange resin  
Specification: typical/high speed/high resolution

### Column oven with temperature gradient

Temp. control: Peltier  
Temp. range: 20 ~ 100  $^{\circ}$ C Precision:  $\pm$ 0.1  $^{\circ}$ C  
Temp. gradient separation control  
Safety: auto-protection when overheat/leakage of liquid

### Maintainace-free detector

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

### Autosampler

Dosing: Full loop / variable dosing  
Number of vials: 120  
Dosing volume: 0 ~ 100  $\mu$ L  
Peltier cooling ( optional )

### Room storage

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

### High-effect reactor

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

### WS for Amino Acid Analysis

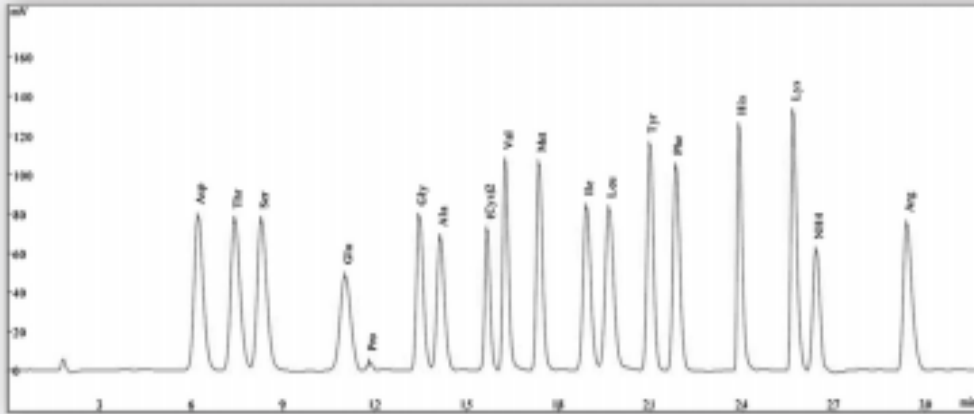
Function: control, data acquisition and processing  
Operation system: Windows  
Language: Chinese/English

## aminoPro - system control software, special for amino acid

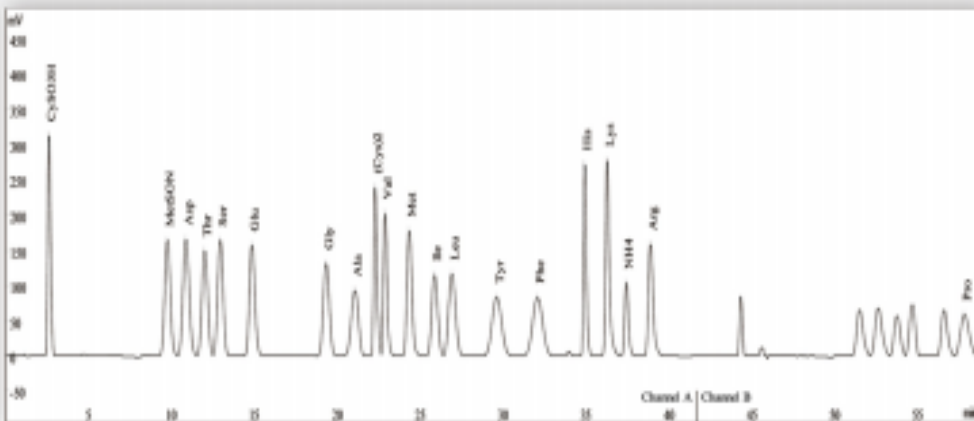
- ▶ 24 positions high precision professional data handling system, resolution 1  $\mu$  V, integral precision 0.05  $\mu$  V, amino acids word bank, double channel (570nm/440nm) merge, auto-identification of peaks and statistic function, data export.
- ▶ 3-grades administration authority
- ▶ Automatically 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



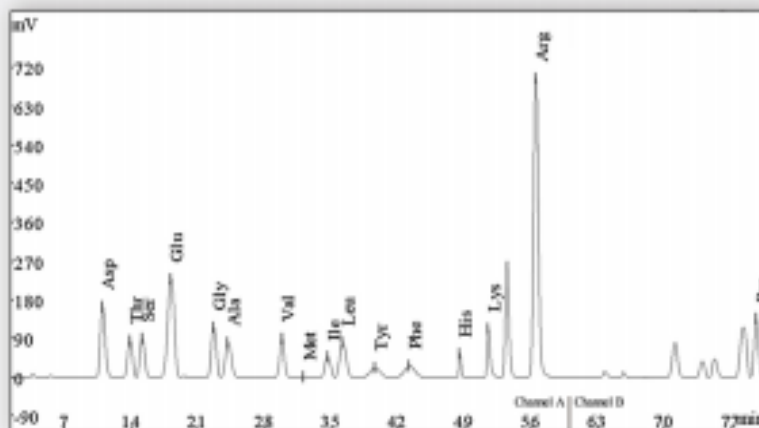
# Applications (Na-System)



Sample :  
Hydrolysate standard  
solution

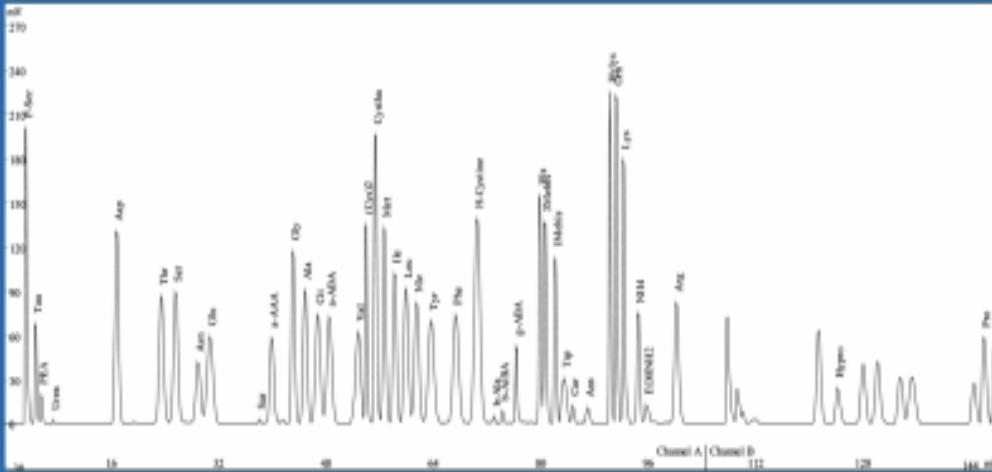


Sample :  
Feedstuff

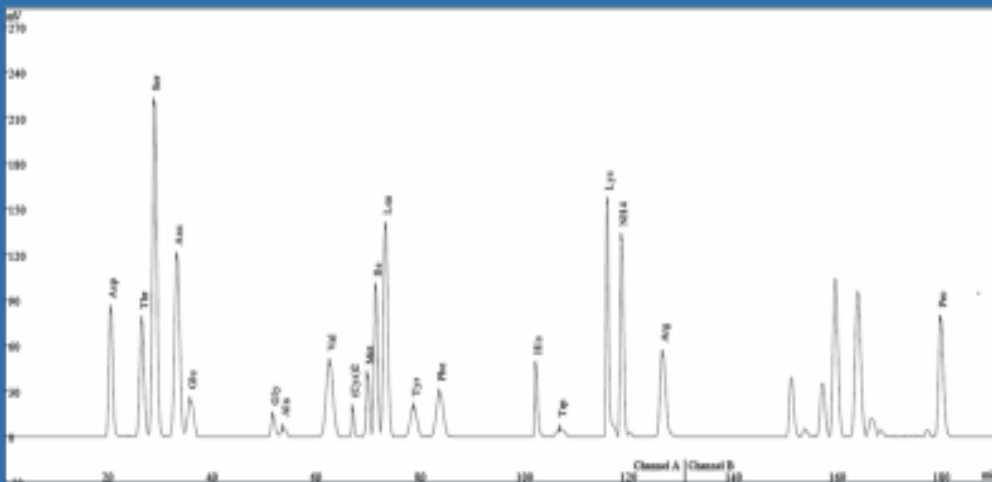


Sample :  
Food

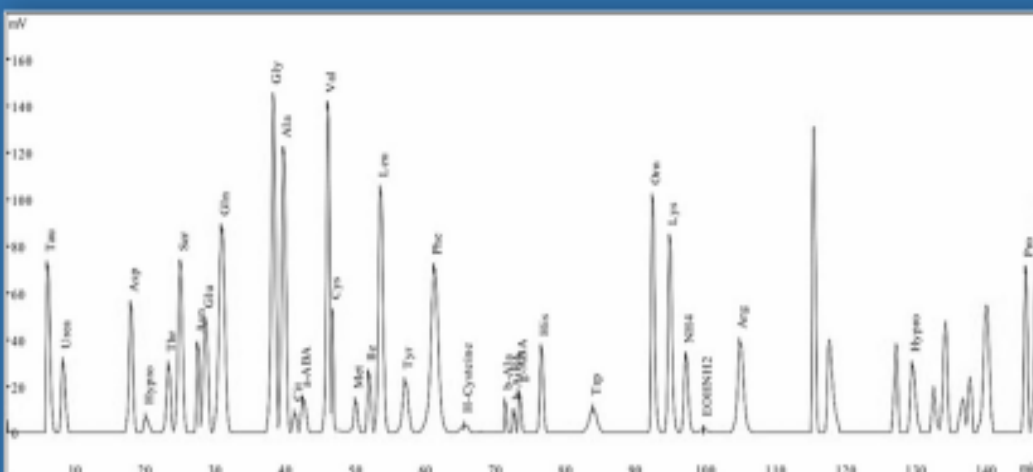
# Applications (Li-System)



Sample :  
Physiological standard  
Solution



Sample :  
Cell Culture Medium



Sample :  
Blood

## » Specification

Environment Temperature requirement: 5–35°C

Relative Humidity: < 90%

Power: AC 110–240V, 50–60 ± 0.5 Hz

Repeatability of retention time: RSD ≤ 0.3% (Asp, Arg)

Repeatability for peak area: RSD ≤ 1.0% (Gly, His)

Detection limit: all ≤ 3 pmol (S/N = 2), Asp ≤ 2.5 pmol, His ≤ 1 pmol

Resolution: Thr–Ser ≥ 95%, Gly–Ala ≥ 94%, Leu–Ile ≥ 95%

Linearity:  $r \geq 0.999$  for Gly;  $r \geq 0.999$  for His

## » Consumables

| 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

We offer following before and after sales services:

