


Hitachi High-Speed  
Amino Acid Analyzer

L-8900



 CAUTION: For proper operation, follow the instruction manual when using the instrument.

Specifications in this catalog are subject to change with or without notice, as Hitachi High-Technologies Corporation continues to develop the latest technologies and products for our customers.

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**HITACHI**



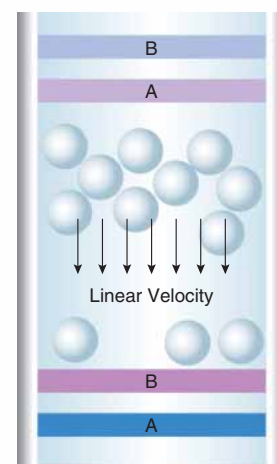
Hitachi's New Amino Acid Analyzer, Model L-8900, is the culmination of the technology and expertise earned from our extensive experience in manufacturing amino acid analyzers during the past 40 years.

### High Sensitivity Realized by the Reaction Column System

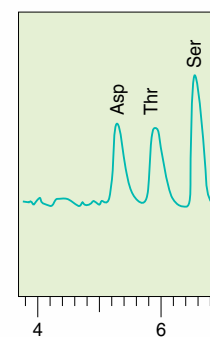
The "reaction column" system\*1 was first introduced in Model L-8800, the predecessor of the L-8900 launched in 1997. With the reaction column system, the highest detection limit ever of 3 pmol (Asp., S/N: 2, standard method of analysis) has been achieved, far exceeding the 10 pmol limit achievable with the conventional "reaction coil" system (Asp., S/N: 3, standard method of analysis). The L-8800 also uses the reaction column system to provide the highest sensitivity among the amino acid analyzers using the ninhydrin reaction method.

\*1 To achieve enhanced sensitivity, the reaction column is filled with special particles, which are used to suppress peak dispersion for better separation. In addition, the loading pressure has been reduced to improve the reaction efficiency.

Reaction column



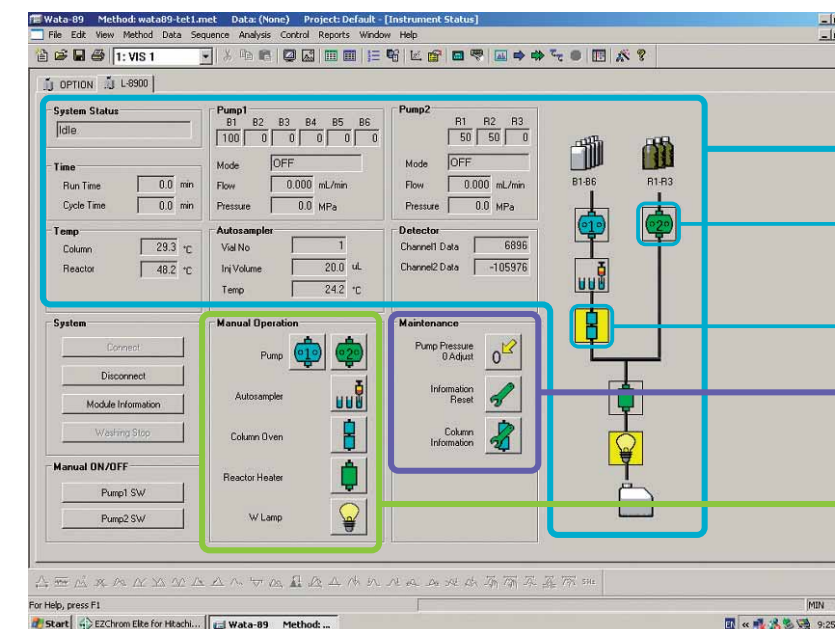
3 pmol (Asp., S/N: 2, standard method of analysis)



**EZChrom Elite Software for Easy Operation**  
The L-8900 is controlled by EZChrom Elite™ chromatography data system, which supports chromatography systems from various manufacturers (the software has over 30,000 users worldwide).

### Analyzer Status Screen (L-8900 Tab)

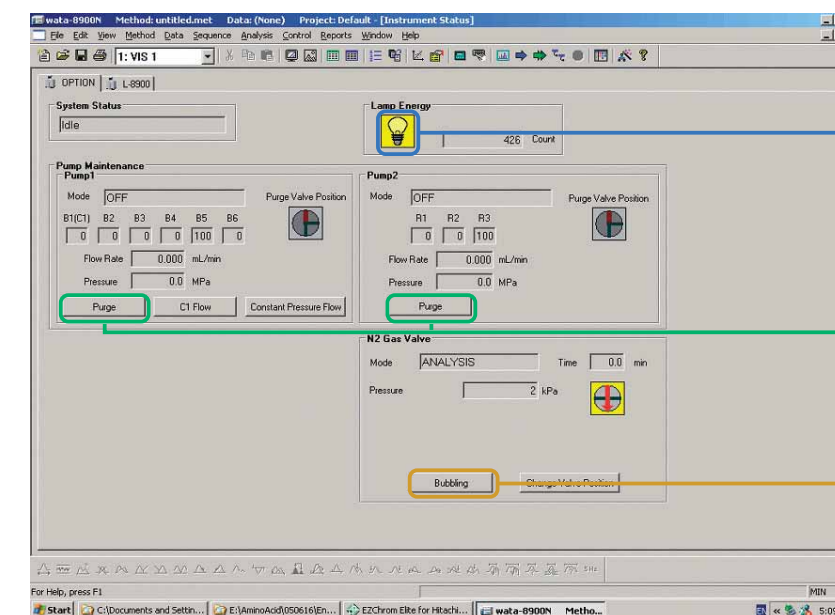
You can monitor and perform manual control while viewing the status data



- Analyzer Status Screen
- Gray background: OFF
- Yellow background: ON
- Maintenance buttons
- Manual control buttons

### Analyzer Status Screen (Option Tab)

You can monitor and perform manual control while viewing the status data.



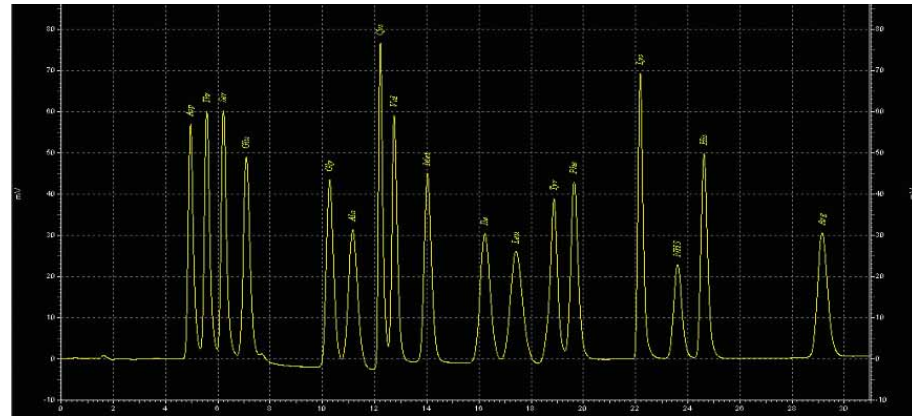
- Lamp energy icon
- Pump purge button
- N<sub>2</sub> gas automatic purge button  
Automatic operation of solenoid valve (new function)

# Improved Hardware - New applications made possible by the new and improved hardware

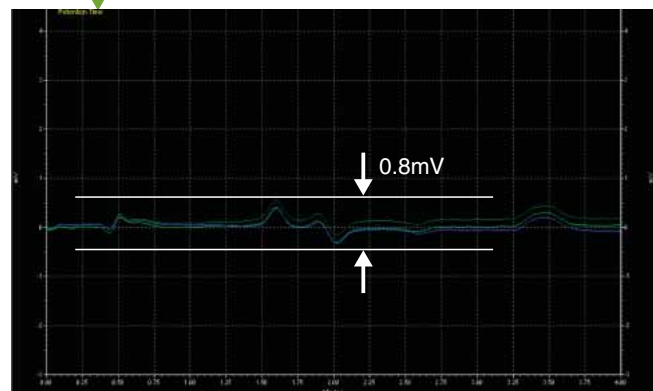


- N<sub>2</sub> gas automatic purge \*<sup>2</sup>
- Leak sensor
- Degasser
- Accommodates up to 6 buffers \*<sup>3</sup>
- Max. temp: 140 °C (Reaction unit) \*<sup>4</sup>
- Max. temp: 80 °C (Column oven) \*<sup>5</sup>
- New and improved pump
- New, direct injection autosampler \*<sup>6</sup>

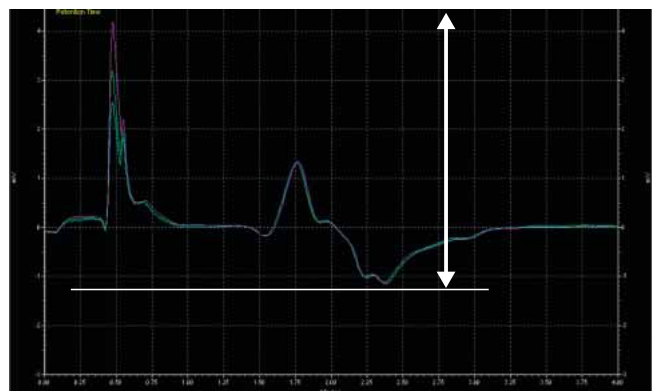
\*<sup>2</sup>: Automatic operation of solenoid valve  
 \*<sup>3</sup>, \*<sup>4</sup> & \*<sup>5</sup>: Together the new hardware features support new applications.  
 \*<sup>6</sup>: The new autosampler reduces the impact on the injection selector valve produced when the sample is injected to about 1/7 of that with the existing autosamplers. As a result, it provides improved accuracy in determination of the peak that appears within 5 minutes after the start of separation.



Impact reduced to approx. 1/7

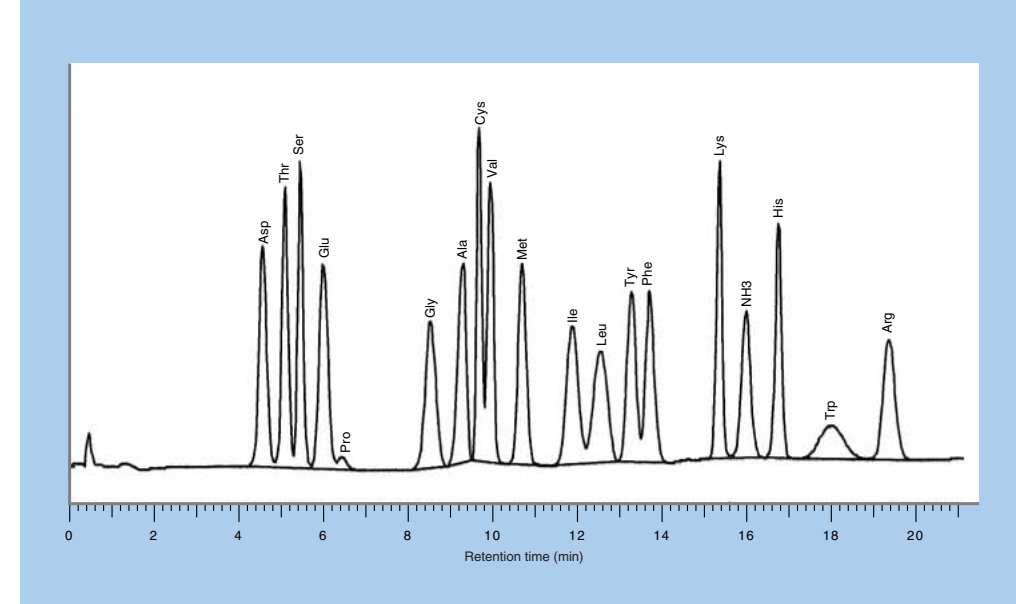


Data acquired using an existing autosampler



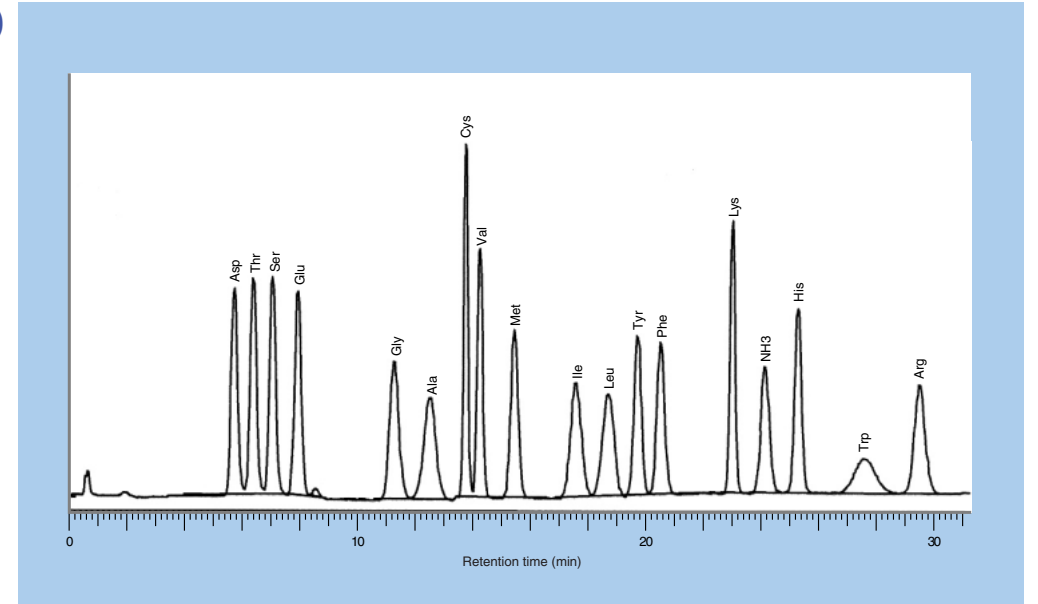
## PH (Protein Hydrolysate)

High-speed standard analysis, 20 minutes  
 Column size: 4.6 mm ID x 40 mm  
 Resin: #2622



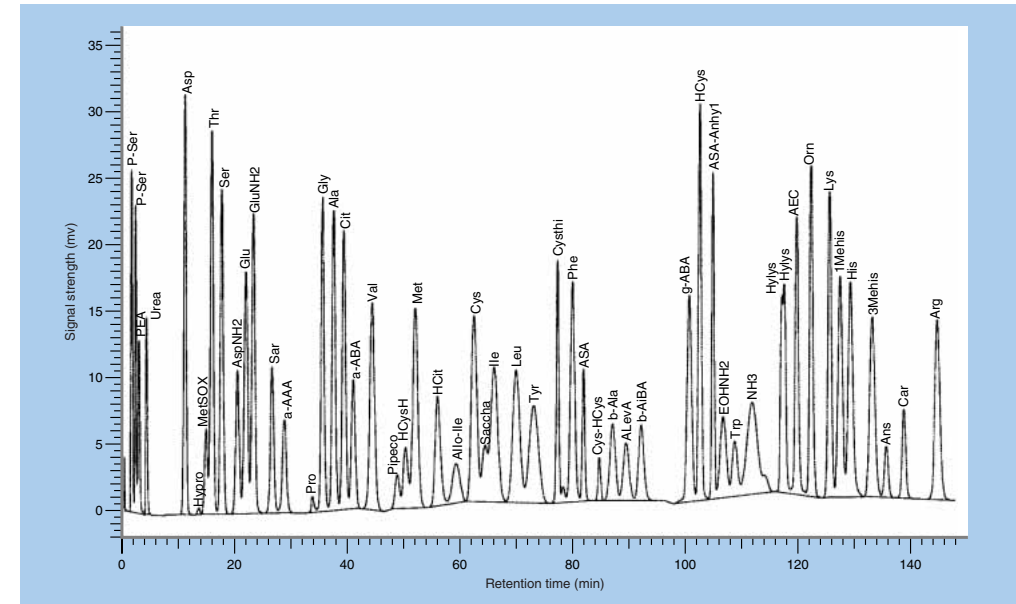
## PH (Protein Hydrolysate)

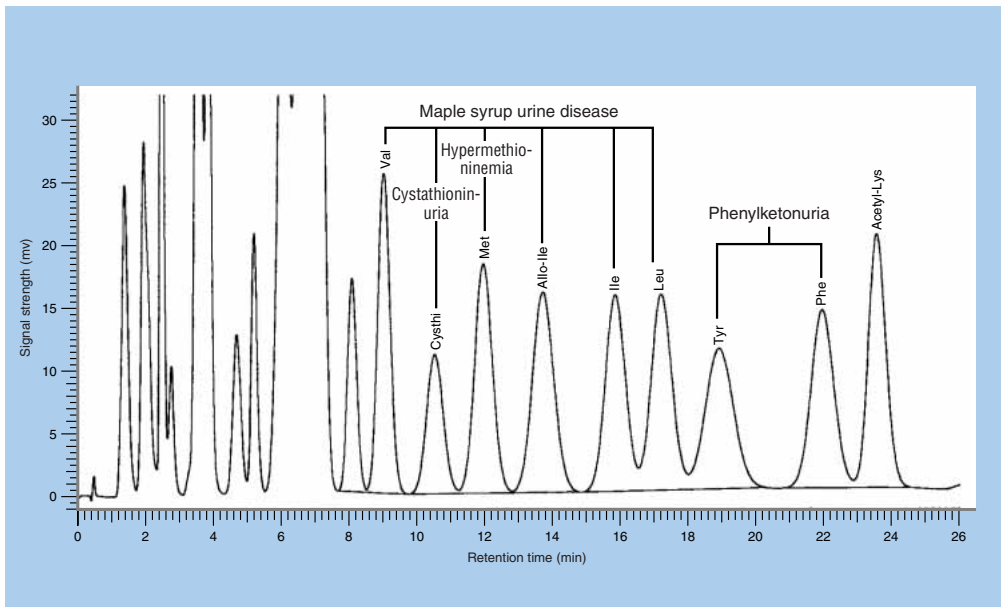
Standard analysis, 30 minutes  
 Column size: 4.6 mmID x 60 mm  
 Resin: #2622



## High-speed physiological fluid analysis, 120minutes

Column size: 4.6 mmID x 60 mm  
 Resin: #2622





**Biological sample partial analysis, 26 minutes**

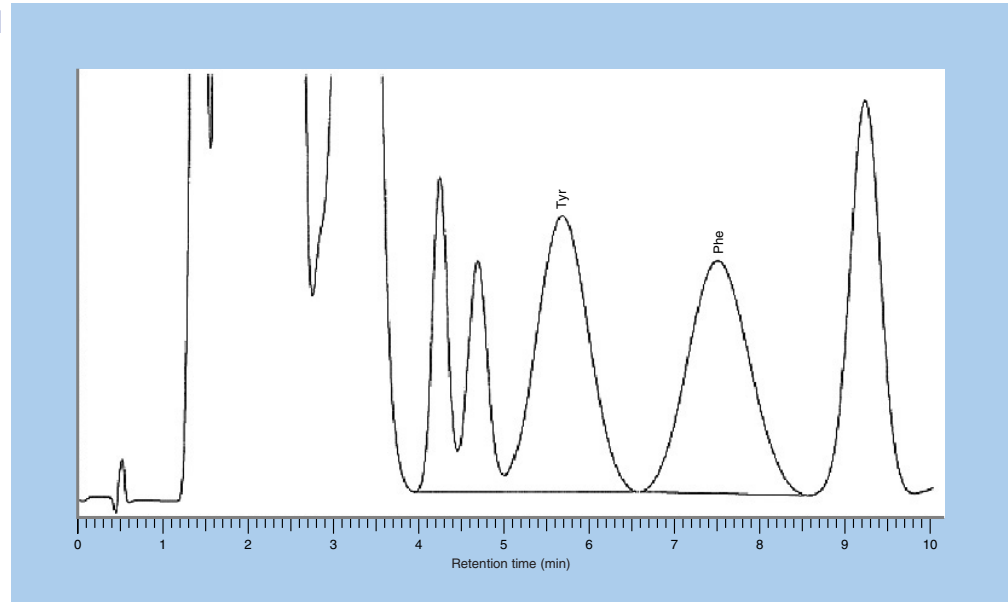
Column size: 4.6 mmID x 60 mm  
Resin: #2622

**Biological sample partial analysis, 26 minutes**

Column size: 4.6 mmID x 60 mm  
Resin: #2622

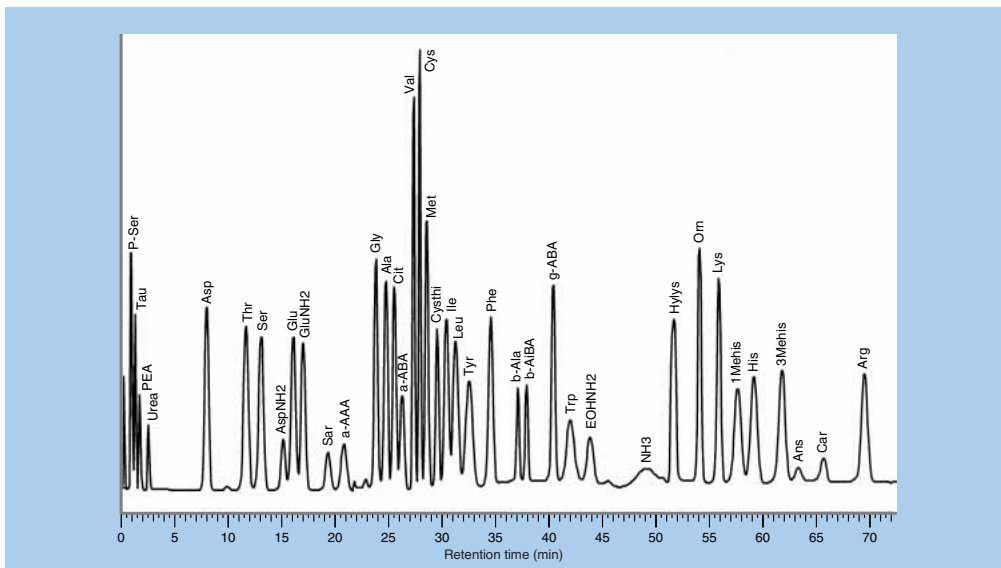
**Biological sample partial analysis, 10 minutes**

Column size: 4.6 mmID x 60 mm  
Resin: #2622



**High-speed biological sample analysis, 70 minutes**

Column size: 4.6 mmID x 80 mm  
Resin: #2622



**Standard Specifications**

Performance (results of measuring 5 samples by protein hydrolyzate assay (standard) method)	
Analysis time	Approx. 30 minutes (net)
Reproducibility of peak retention time	CV0.3% (Arg), 0.5% (Ala)
Reproducibility of peak area	CV1.0% (Gly, His)
Detection limit	3 pmol (S/N = 2, Asp)
Analyzer	
Column	4.6 mm ID ' 60 mm L *1 Packed with Hitachi custom ion exchange resin
Pump	Delivery pressure; 0 to 20 MPa (0 to 306 kgf/cm <sup>2</sup> ) Flow rate range; 0.000 to 0.999 mL/min
Autosampler	Injection methods; Direct injection method Sample vial capacity; 1500 μL No. of vials accommodated; 200 (200 when optional cooler installed) Sample injection volume; 0.1 to 100 μL
Column oven	System; Peltier Temperature setting range; 20 to 85 °C (in 1 °C steps)
Reaction unit	System; Electronic heating (reaction column) Temperature setting; 50 to 140 °C (in 1 °C steps)
Photometer	Spectrophotometer; Aplanatic concave diffraction grating Wavelength; 570 nm, 440 nm
EZChrom Elite for HITACHI Amino Acid Analyzer	
CPU	32 bit OS, Windows XP® *2
CRT	43.2 cm color display
Dimensions (excluding PC)	900(W) ' 650(D) ' 1050(H) mm
Weight (excluding PC)	Approx. 250 kg
Operating temperature range	15 to 35 °C
Power supply	100~115 V AC / 220~240 V AC, 800 VA and over, w/in 50/60 Hz ± 0.5 Hz
N <sub>2</sub> gas	N <sub>2</sub> gas source must be prepared.

\*1 1/8 inch (unify) thread applicable  
\*2 Windows is a registered trademark of Microsoft Corp. in the U.S. and other countries.

**Set Layout**

