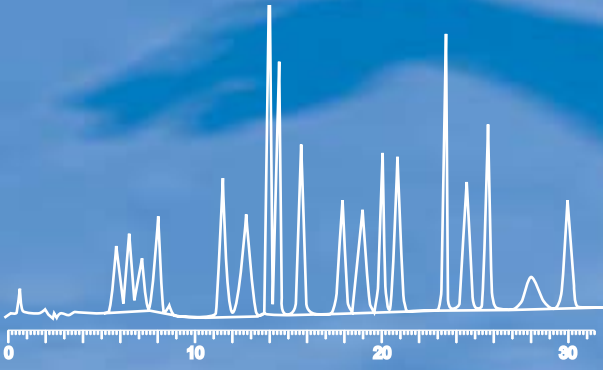




Amino Acid Analyzer



L - 8900

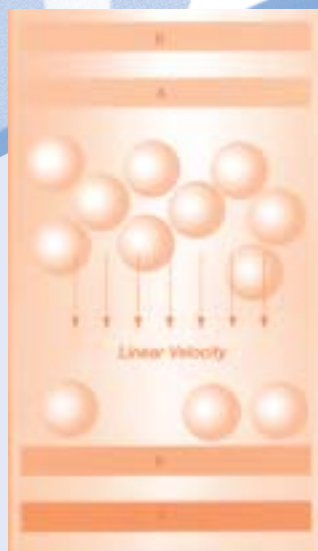


VWR - Hitachi Your Partner in Amino Acid Analysis

Hitachi has manufactured more than 1800 Amino Acid Analysers for over 40 years.

The new Amino Acid Analyser Model L-8900 is the culmination of the technology and expertise earned from the extensive experience in manufacturing of Amino Acid Analysers during that time.

Hitachi offers the best solution to amino acid analysis worldwide.



1.
A high-speed, real-time feedback control system of the pump ensures excellent flow rate stability. The gradient elution capability enables the operator to optimise the application to a shorter runtime.

2.
A built-in degasser for all eluents stabilises the pump flow and improves the injection and peak area precision.

3.
By using a degasser for the washing solution of the autosampler best precision of the injection volume is achieved. Carry-Over is minimised by the free programmable washing procedure.

4.
The ion exchange resin of the separation column is based on 3 µm particles. This guarantees an excellent resolution of sample peaks and enhances the quality of the analysis.



L-8900

The instrument excellently meets all requirements for analyzing physiological and hydrolysed amino acids using post-column derivatisation.

The instrument is designed to be the best on the market in terms of quality, safety, separation performance, robustness, operability and cost per analysis.

The complete system is CFR 21 Part 11 compliant; Pre-Assigned Report Templates for the results are available.

^5.

The L-8900's unique post column delivery design mixes the two ninhydrin reagents just prior to amino acid derivatisation. Therefore the solutions can be stored for over one year without refrigeration.

^6.

The L-8900 features a special reaction column to maintain good separation of the sample zones and yet offering high sensitivity and high-speed analysis. The diamonds-packed reactor has an extremely long life-time without any tendency for blocking.

^7.

An internally programmed shut-off procedure that acts independently on the software control prevents contaminations of the reaction column even in case of software or instrument failure.

^8.

The reference wavelength of the dual beam detector stabilises the baseline, enhances the detection sensitivity and minimises the effect of lamp ageing.

L-B900

1. Autosampler

Variable sample volume: 0.1 - 100 μ l
Cooling option available

1.



2. Pumps

Buffer and Ninhydrin delivery with flow-optimized HPLC pumps

2.



3. Degasser

Degassing of all necessary buffers and reagents

8.



3.



8. Waste Collector

Integrated in the system, with special waste gas absorbing filter



L-8900



4. Column Oven

Very stable with quick response due to Peltier heating

7. Photometer

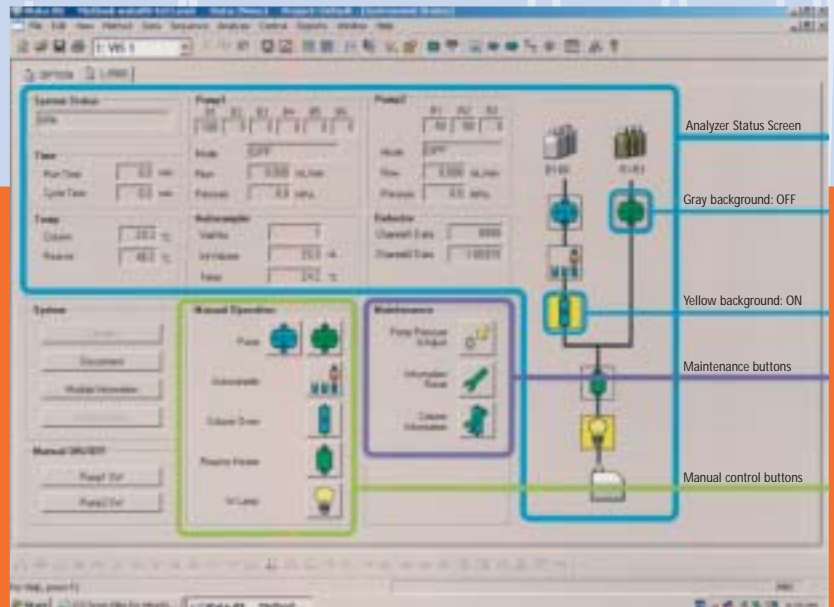
2-channel-detector with a reference wavelength

5. Reactor

Reaction column with special diamond packing

6. Buffer Cabinet

Reagents and buffers are kept under inert gas atmosphere



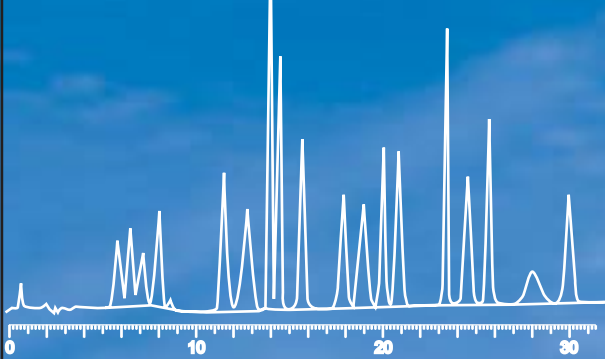
Analyzer Status Screen

Gray background: OFF

Yellow background: ON

Maintenance buttons

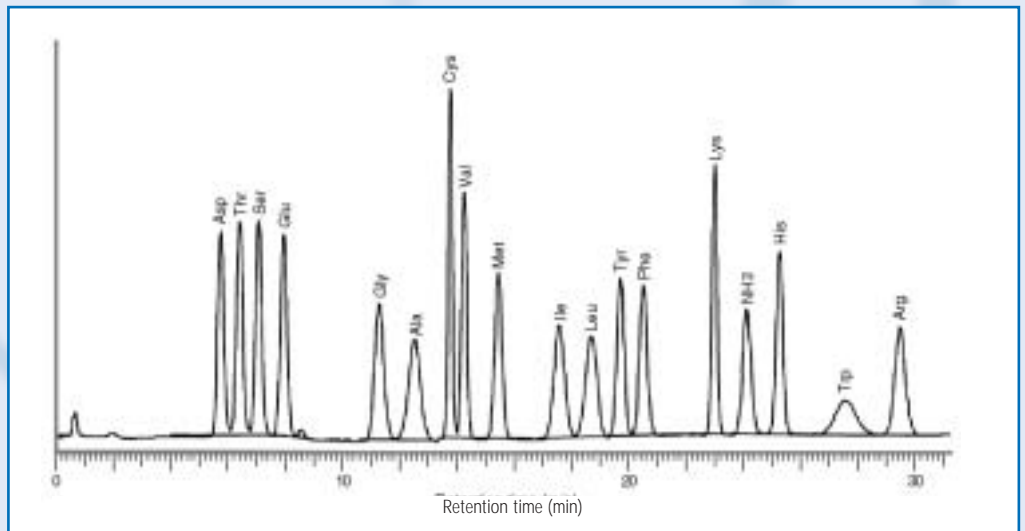
Manual control buttons



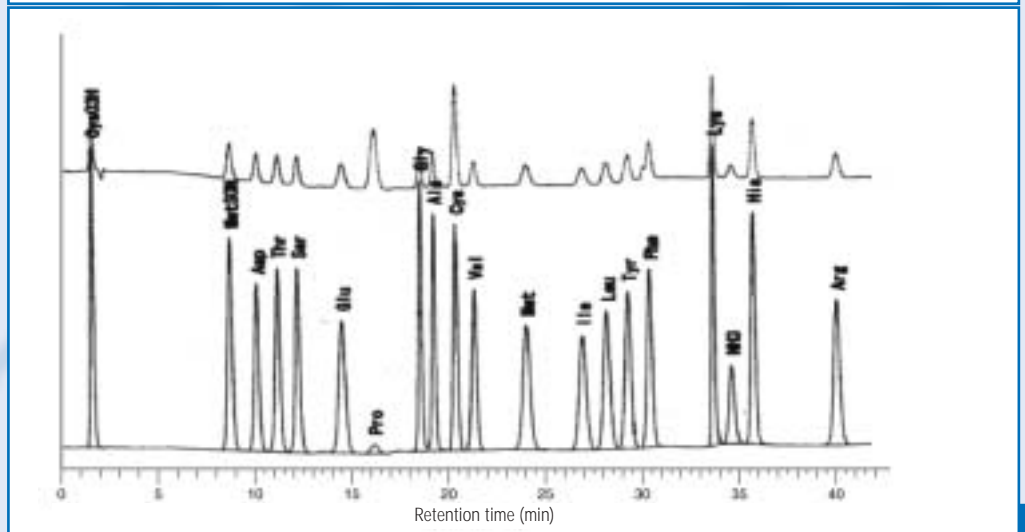
The Amino Acid Analyzer



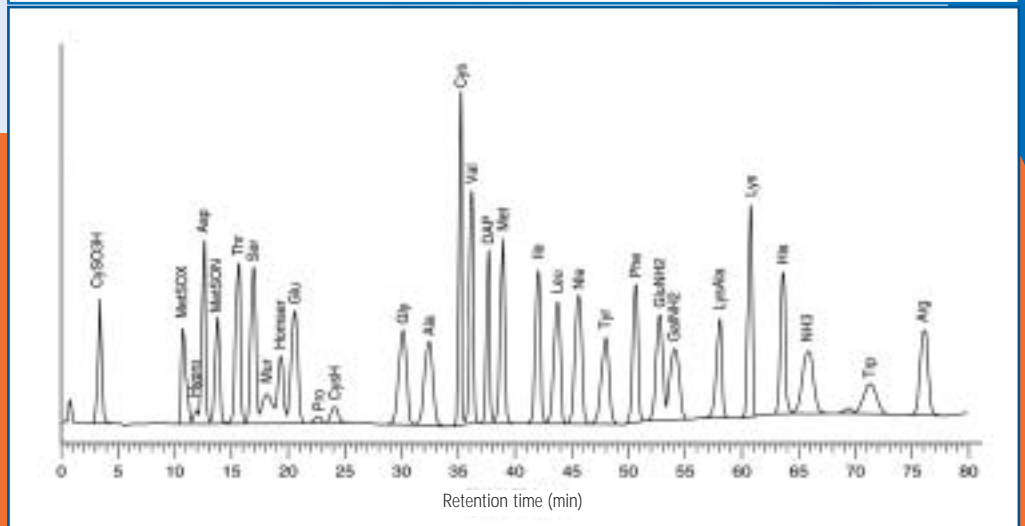
Standard protein hydrolysate,
30 min.
Column size: 4.6 x 60 mm,
cation exchange resin



Fast feedstuff analysis,
40 min.
Column size: 4.6 x 60 mm,
cation exchange resin



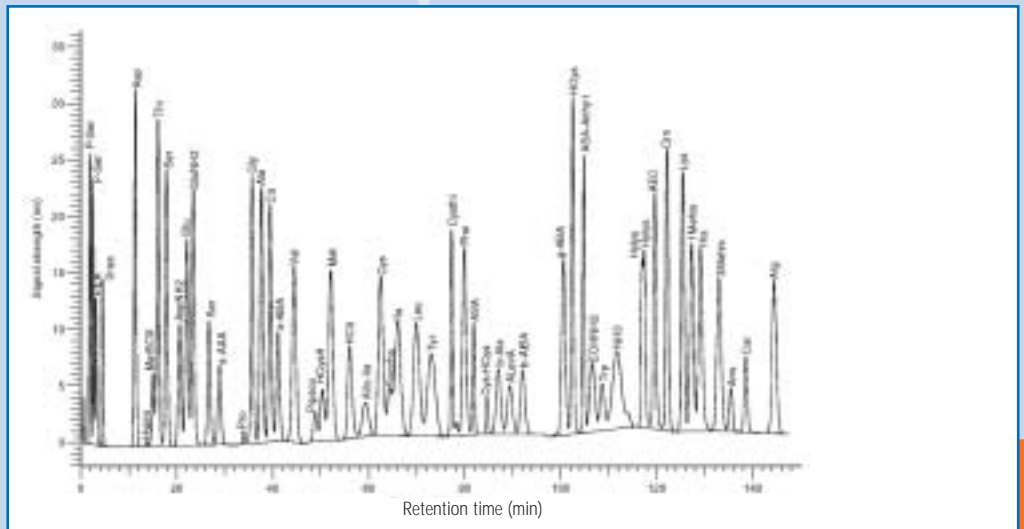
Extended protein hydrolysate
with amino sugars, glucosamine
and galactosamine



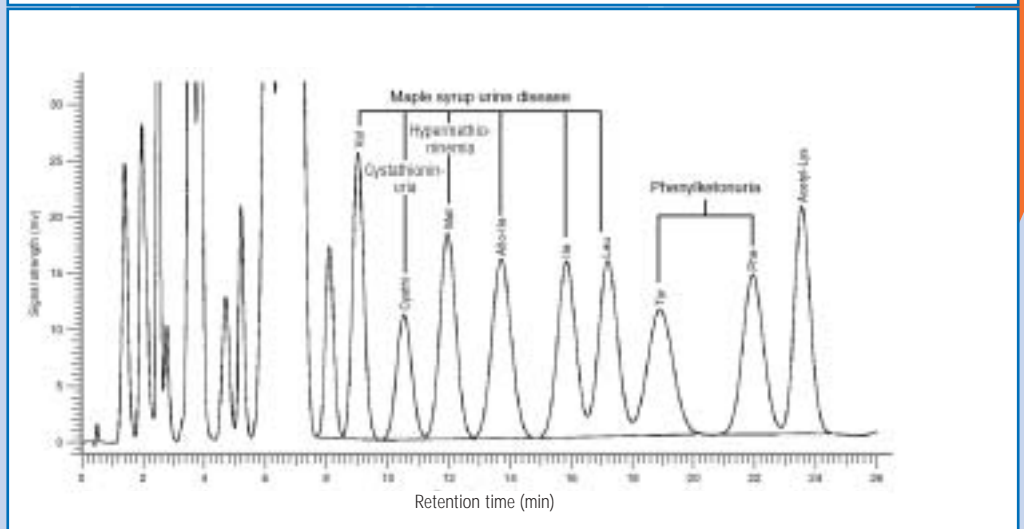
L-8900



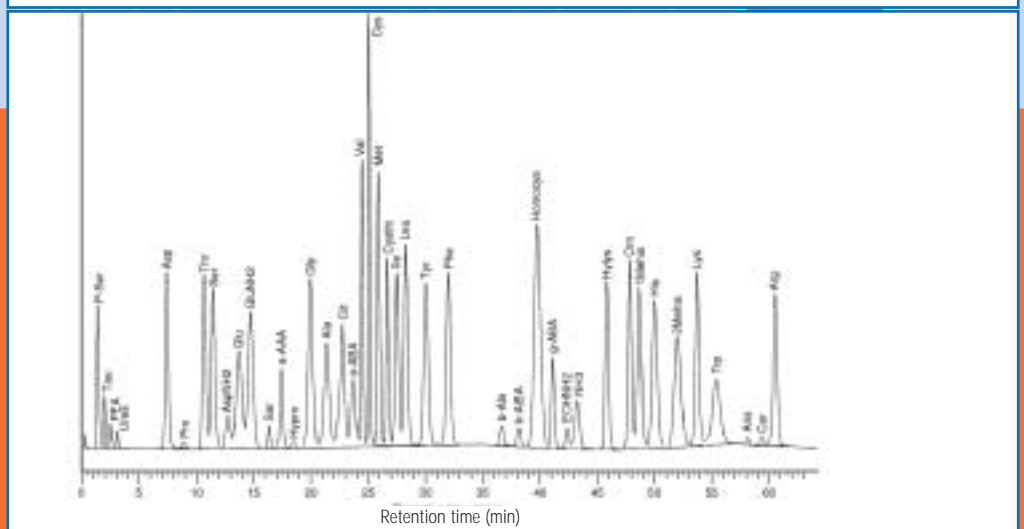
High-resolution physiological fluid analysis
Column size: 4.6 x 60 mm,
cation exchange resin

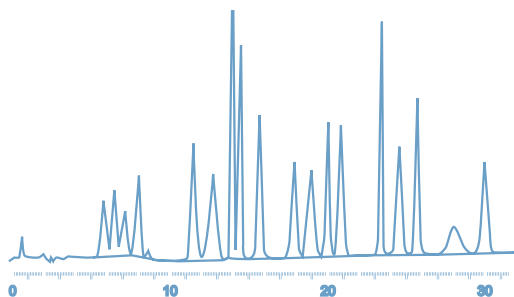


Optimised physiological programm for special amino acids of certain children's metabolism diseases
Column size: 4.6 x 60 mm,
cation exchange resin



High-speed physiological sample analysis
Column size: 5.4 x (25 + 25) mm,
cation exchange resin





The Amino Acid Analyzer L-8900

Technical Specifications

Pumps:

- Dual plunger system with electronic compensation of the solvent compressibility and with elimination of the residual pulsation
- Automatic pump plunger wash function
- Constant pressure mode for column packing
- Leak sensor

Flow rate:

0.05 to 1.00 ml/min.

Max. pressure:

20 MPa

Flow rate precision:

0.075 % RSD or 0.02 min. SD

Flow rate accuracy:

+/- 2 %

Autosampler:

- Direct injection, rack of 200 samples (cooling rack optional)
- Injection volume: 0.1 to 100 µl
- Leak sensor, vial sensor

Injection precision:

RSD 1.0 % (Gly, His)

Carry-Over:

< 0.1 % for Asp

Column oven:

- Peltier-heated
- Temperature range: 20 to 85 degrees (1 degree steps)

Column

- different Types are available

Reactor:

- Heating block
- Temperature range: 50 to 140 degrees (1 degree steps)

Photometer:

- Diffraction grating
- Filter photometer, measures two wavelength: 570 nm and 440 nm, reference: 700 nm
- Cell volume: 8 µl

Performance:

- Analysis time: Approx. 30 min. for hydrolysate (Standards)
Approx. 60 min. for physiological fluids (Standards)
- Precision of peak retention time: RSD 0.3 % (Arg), 0.5 % (Ala)
- Precision of peak area: RSD 1.0 % (Gly, His)
- Detection limit: 3 pmol (S/N = 2, Asp)

Software:

- EZ Chrom Elite™, Control and integration software
- fulfills the requirements of the FDA 21CFR Part 11