

AAA-9500

Automatic Analyzer of Amino Acids



Laboratory Instruments since 1995

AAA 9500 is a compact device designed for determination of amino acids and biogenic amines.

Thus, it can be used in the fields of biochemical research, research of human and animal nutrition, medical diagnostics, control of drugs, food and feedstock. The robust and sensitive method of ion exchange chromatography with post-column ninhydrin derivatization provides high accuracy and reproducibility of analyses.

AAA 9500 will provide results with maximum accuracy and reproducibility in continuous operation, saving purchasing, operation and maintenance costs.

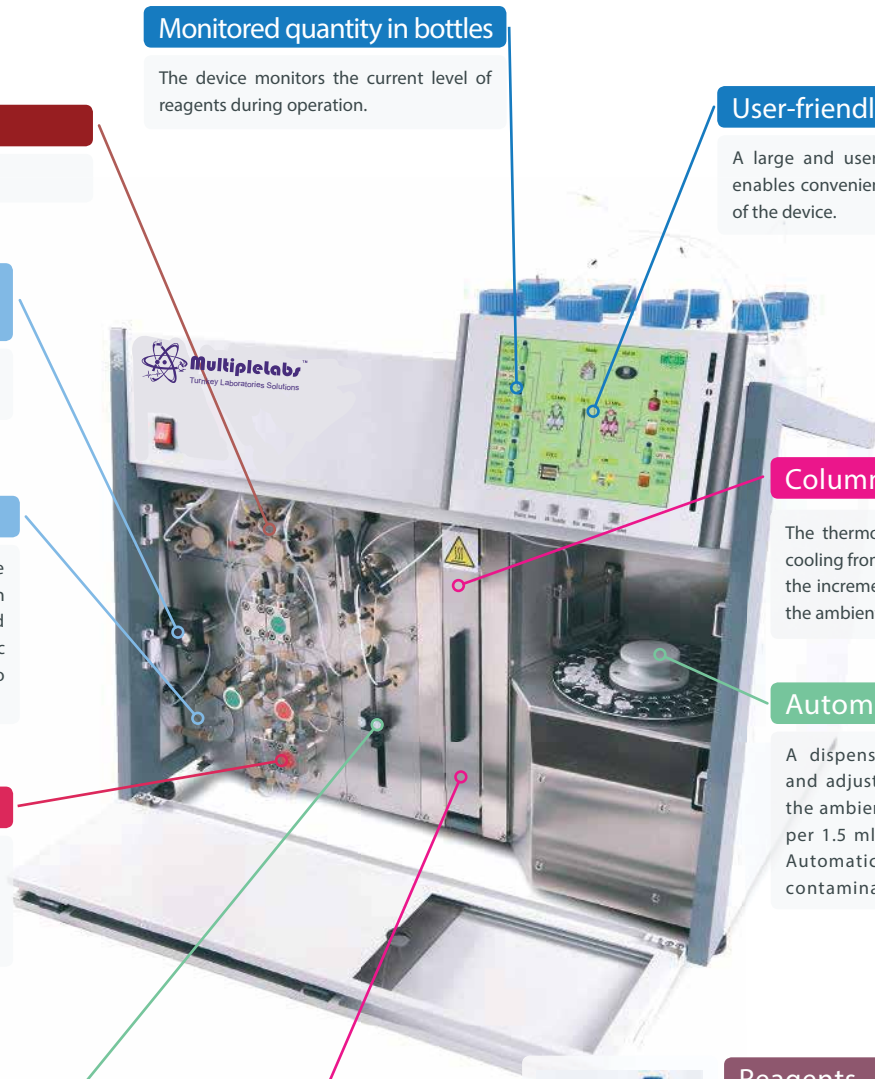
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Compact device

AAA 9500 is a compact device with a unified control panel, which increases user convenience and facilitates control and handling of the device. AAA 9500 is normally controlled by a computer, the user may control the settings of the device with the use of a touch display as well.



Gradient
6 gradient valves.

Monitored quantity in bottles
The device monitors the current level of reagents during operation.

User-friendly touch display
A large and user-friendly touch screen enables convenient control and operation of the device.

Long service life of detector lamps
The used LED lights ensure a very long service life.

Reactor and detector
The reactor with an easily replaceable insert has a programmable temperature in the range of 40 °C - 150 °C and is protected from overheating. The spectrophotometric detector simultaneously works on two wavelengths of 440 and 570 nm.

Column thermostat
The thermostat ensures fast heating and cooling from 25 °C to 90 °C (adjustable with the increment of 0.1 °C), independently of the ambient temperature.

Automatic dispenser
A dispenser with a cooled carousel and adjustable temperature of 3°C to the ambient temperature, 40 positions per 1.5 ml or 80 positions per 0.5 ml. Automatic rinsing prevents cross-contamination of individual samples.

Pumps
A pair of high-pressure double-piston pumps with floating pistons ensures virtually impulse free operation in the range from 0.01 to 8.5 ml/min.

Reagents
Buffers can be prepared simply from cheap and affordable chemicals. The user is not forced to buy costly ready-made buffers from the manufacturer of the AAA 3500 device, which considerably reduces the price of analyses.

Variable dosing
In the range of 1 µl - 100 µl as standard, or 1 µl - 200 µl on request.

Columns
Stainless-steel columns with variable dimensions are able to carry out up to 10.000 analyses per one filling. On request a column made of PEEK or glass may be delivered, which can be overfilled by the user.

Robust and sensitive method

AAA 9500 uses the principle of ion exchange chromatography with post-column NHD derivatization. Using this method you can safely determine amino acids in hydrolysates of proteins, peptides as well as free amino acids in physiological solutions and extracts, biogenic amines and some antibiotics.

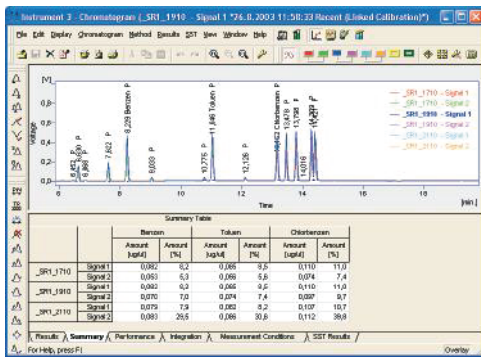
Saves on costs

The user can minimize the operation costs by producing reagents with the use of simple software from cheap and affordable chemicals (there is no need to buy overpriced ready-made buffers). In the Czech Republic maintenance of the devices is carried out directly by the ATL Company, abroad, maintenance services are provided by authorized distributors. Therefore, you can expect professional services at unbeatable prices from us.

Clarity control software

AAA 9500 is controlled by the Clarity software of the DataApex Company. This software ensures convenient and intuitive operation of the devices as well as work with data and their export to various formats. Clarity makes it possible to connect other equipment to AAA 9500, e.g. a fluorescence detector.

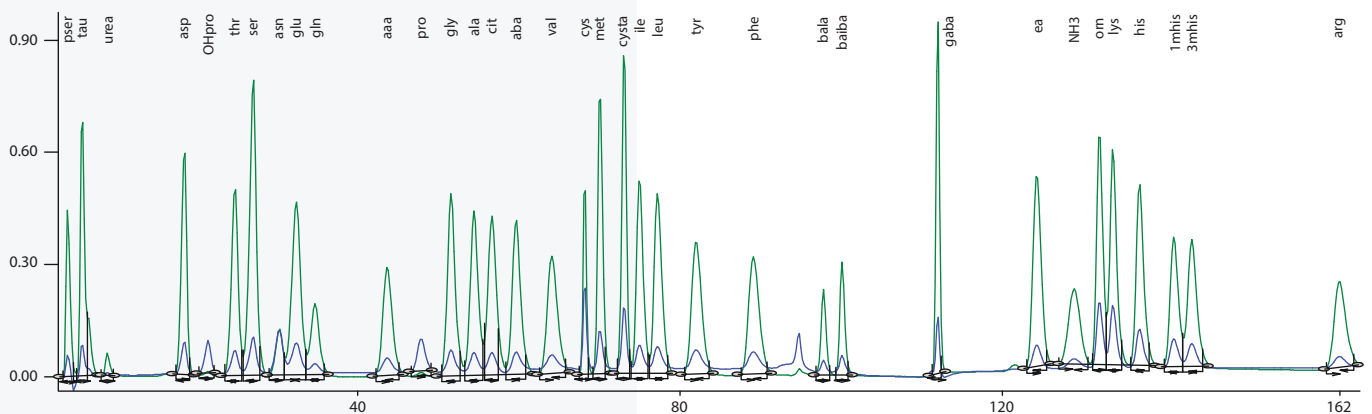
The device can be controlled remotely via the Internet or Maintenance diagnostic activities can also be carried out remotely.



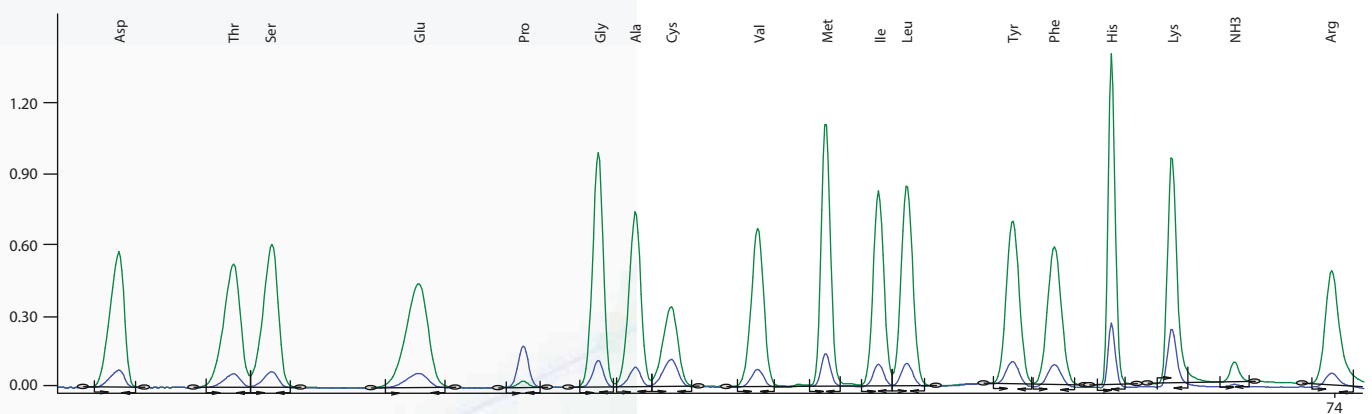
High accuracy and reproducibility of analyses

AAA 9500 provides analyses with a low level of noise and drift. The ATL Company is able to produce a shortened or modified program for virtually all ninhydrin positive substances on the customer's request.

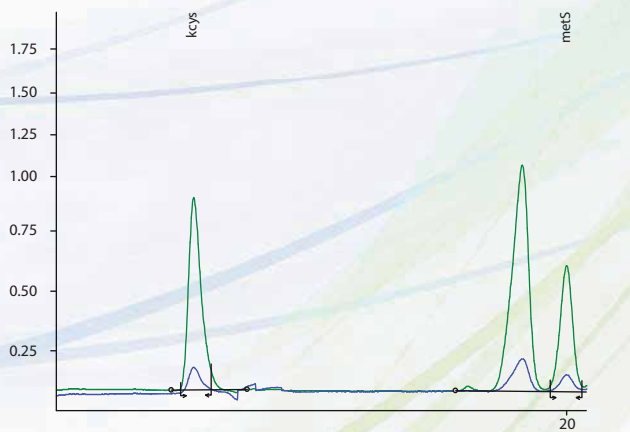
Determination of free amino acids (standard)



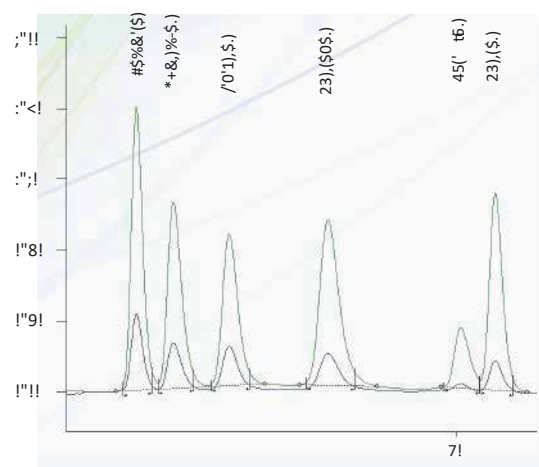
Hydrolysate analysis (standard)



Shortened determination of sulphurous amino acids (cysteine and methionine)



Determination of biogenic amine s



Technical specifications

Automatic Analyzer of Amino Acids 9500			
Drift	2.0 x 10 ⁻⁵ AU/hod	Degasser	6-channel degasser
Reproducibility at 10 nmol	Retention times: 0.3 % (arg) Peak area: 1 % (ser, gly, his)	Double-channel photometer	400 and 600 nm
Pumping system	High pressure impulse-free pumps (pair of floating pistons)	Cuvette volume	5 µl
- flow	0.01 to ≤10 ml/min	Reactor	40 – 150 °C (overheating protection)
- pressure	0 – 25 MPa	PC communication	LAN
Dispenser with cooling		Processing of results	Clarity
- no. of samples, cassette A	40 x 1.5 ml	Colour display	8" diagonal
- no. of samples, cassette B	80 x 0.5 ml	Power input	230V, 50Hz
- variable dosing	1 - 200 µl with 1 µl increment	- start	280 VA
Cooling	Peltier	- operation	120 VA
Temperature	Adjustable 3 °C (ambient temperature)	- standby	70 VA
Columns		Dimensions (W x H x D)	710 x 600 x 560 mm
- dimensions	4 x 250 mm or 4 x 150 mm	Weight without bottles	46 Kg
- material	stainless steel, PEEK, glass	Operation time without the user's intervention	approx. 7 days
Column thermostat		Other applications	Biogenic amines Sugar analysis for reduced sugars
- temperature	25 °C – 90 °C		
- cooling and heating	Peltier		
- setting accuracy	0.1 °C		

The ATL Company offers e.g. these laboratory instruments:

