

AAA 400



Automatic amino acid analyser



The AAA 400 is a compact device designed for determining amino acid and biogenic amines. It is used in basic biochemical research, research into human and animal nutrition, in medical diagnostics, medication testing, etc. The robust and sensitive method of changing ion chromatography with post-column ninhydrine derivatization provides high accuracy and reproducibility of analyses.

Just tell us what you want to analyse and we will prepare and tailor the method and program of analysis. If you need a device with excellent performance in nonstop operation which saves initial purchase, operating and service costs, then the AAA 400 is the right choice for you.



Compact device

Integrated control panel: the AAA 400 is a compact device with an integrated control panel for high user comfort and easier working with and handling of the device.

Ninhydrin

Cooled magazine with 2 l volume and steady presence of inert gas ensures a long operating life for the NHD.

Automatic doser

Automatic doser with a cooled carousel, 25 positions with 1.5 ml or upon request 40 (80) with 0.5 ml is the basis for smooth operation. The system performs automatic rinsing to prevent samples from contaminating each other.

Pumps

A pair of high-pressure dual-piston pumps with floating pistons ensures virtually pulseless operation ranging from 0.01 to 20 ml/min (blocked by SW to max. 10 ml/min). The pumps may be packed using an inert material (PEEK).

Column thermoregulator

The column thermoregulator provides fast heat-up and cool-down in the range from 35°C to 100°C (adjustable, in 0.1°C increments), independently of ambient temperature.

Columns

Stainless column with dimensions 4 x 250 mm performs approx. 10.000 analyses per filling. Upon request, we can deliver a glass column with dimensions 3.9 x 450 mm which the user can refill himself.

Reactor and Detector

The Reactor has a temperature programmable between 50°C and 150°C. The UV-VIS Detector works on two wavelengths of 440 and 570 nm.

Reagents

A component the AAA 400 device is simple software for easy mixing of buffers from chemicals that are cheap and widely available. The user is therefore not forced to buy expensive, readymade buffers from the manufacturer of the AAA 400, which reduces significantly the price of analyses.



Robust and sensitive method

The AAA 400 works on the principle of changing ion chromatography with post-column NHD derivatization. This robust and sensitive method enables the user to discover ninhydrin positive substances. By applying this method, you can safely determine amino acids in hydrolysates of proteins and peptides, and also free amino acids in physiological solutions and extracts, biogenic amines and some antibiotics.

Saves on costs

The AAA 400 has been produced in order to reduce the operating and service costs of the user to a minimum. The user minimises operating costs by creating himself or herself reactive agents from chemicals that are cheap and widely available using simple software (no need to buy exorbitantly expensive readymade buffers). The devices are serviced in the Czech Republic directly by INGOS. You can therefore expect from us professional service at unrivalled prices.



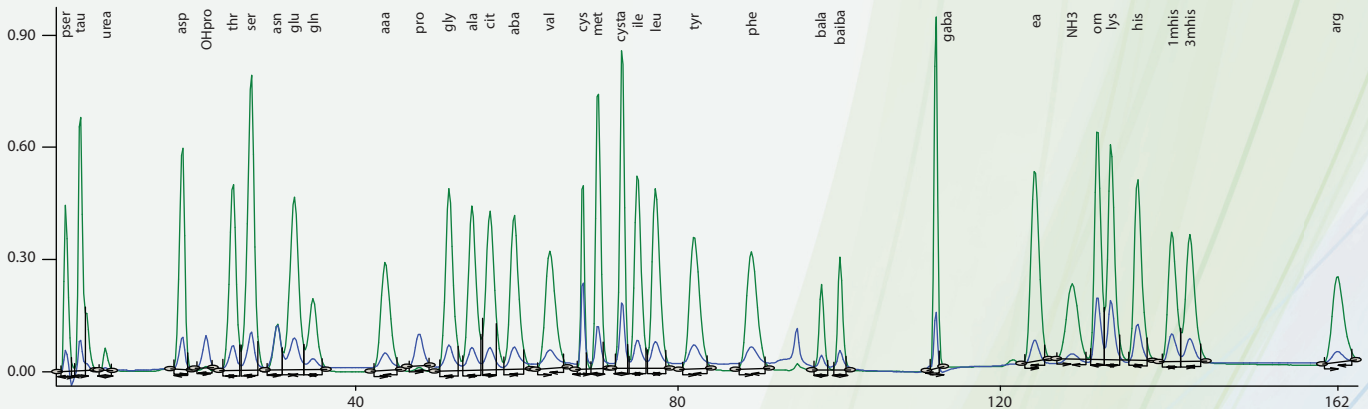
Intuitive control software

The AAA 400 is controlled by the CHROMuLAN program. This software application ensures comfortable and intuitive control of the device and working with data, including data export to different formats. A great advantage is the possibility of working with the results even while the analysis is still running. The CHROMuLAN program is supplied with the AAA 400 free of charge.

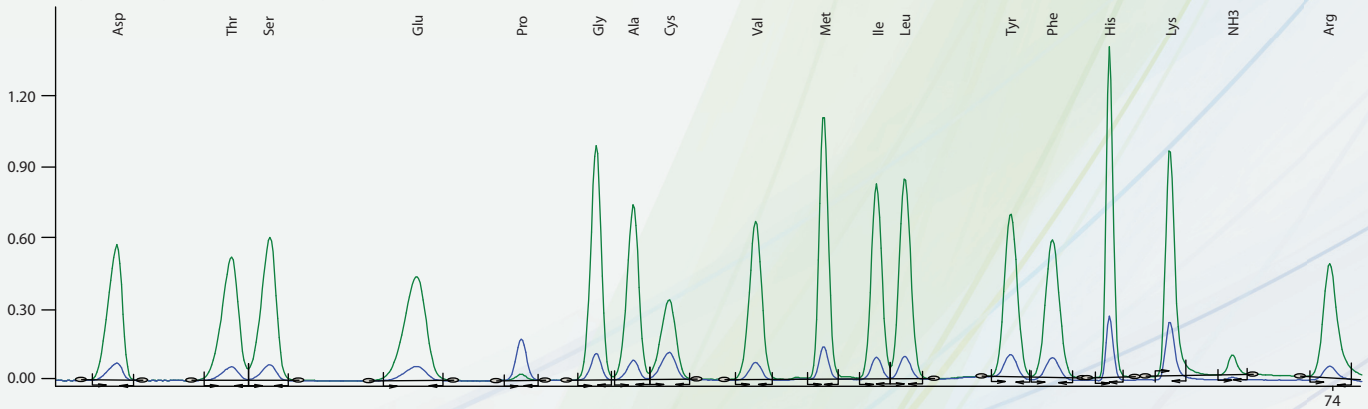
High accuracy and reproducibility of analyses

The AAA 400 performs analyses with low noise and drift levels. At the client's request INGOS can develop a shortened or modified program for virtually all ninhydrin-positive substances.

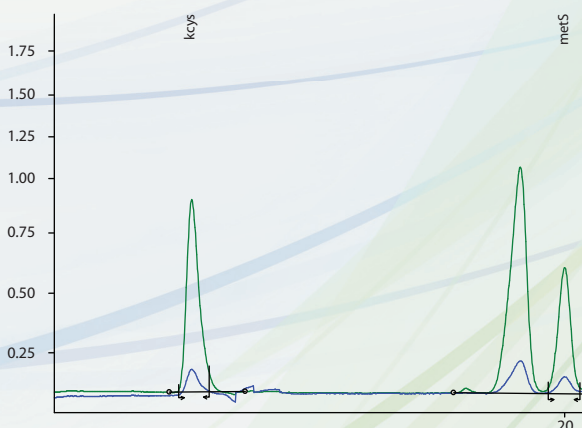
Determination of free amino acids (standard)



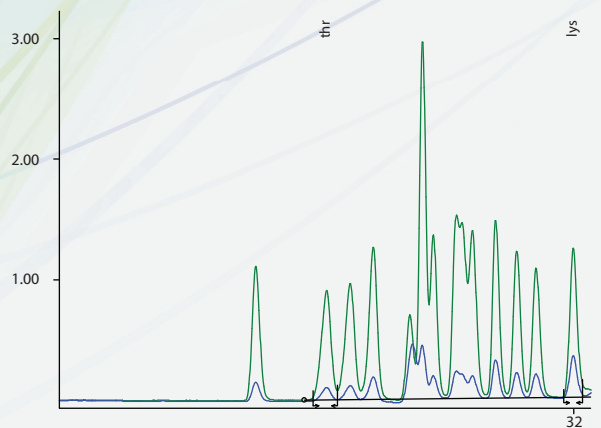
Hydrolysate analysis (standard)



Shortened determination of sulphuric amino acids (cystine and methionine)



Shortened determination of threonine and lysine



Technical specifications

Automatic Amino Acid Analyser 400

Noise	1.7 x 10 ⁻⁵ AU/s
Drift	2.0 x 10 ⁻⁵ AU/hod
Reproducibility at 10 nmol retention times	0.3% (arg), peaks area: 1% (ser, gly, his)
Pumping system	high-pressure pulseless pumps (pair of floating pistons)
- flow rate	0.01 – 20 ml/min (blocked by SW to 10 ml)
- pressure	0 – 40 Mpa (blocked by SW to 20 Mpa)
Doser with cooling	
- sample count in cassette A	25 x 1.5 ml
- sample count in cassette B	40 or 80 x 0.5 ml
Columns	
- stainless (hydrolysates)	4.0 x 250 mm
- stainless (free)	4.0 x 150 mm
- glass (at request)	3.9 x 450 mm
Columns thermoregulator	35°C – 100°C

Dual-channel photometer	440 and 570 nm
Cuvette volume	5 µl
Reactor	50 – 150°C
Communication with PC	RS232 or USB
Results processing	CHROMuLAN
Input	230 V, 50 Hz
- start	380 VA
- operation	230 VA
- standby	150 VA
Dimensions (w x h x d)	700 x 600 x 550 mm
Weight without bottles	54 Kg
Length of operation without user intervention	approx. 7 days
Other applications	Biogenic amines Sugar analysis for reduced sugars

INGOS – Laboratory Devices Division was founded in 1995. This division develops, produces and services laboratory devices. A number of employees gained experience from their longtime employment with the former state enterprise Mikrotechna which developed and produced laboratory devices, the forerunners of those being made today by INGOS. For all the devices that we produce, we provide full user support from installation to training of operators and fast and readily available warranty and post-warranty service.

INGOS also offers these devices:



HPLC Semipreparative and Analytical Systems



Block Heater



Rotary Vacuum Evaporator



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INGOS is the holder of
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OHSAS 18001 certifications.

