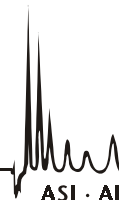


Amino Acid Analyzer A200

Certified quality management DIN EN ISO 9001:2000

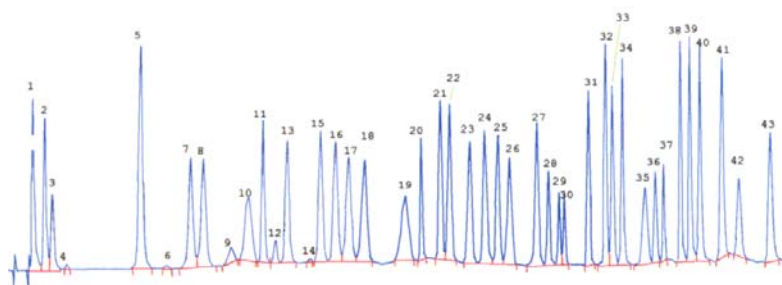


KNAUER

ASI · ADVANCED SCIENTIFIC INSTRUMENTS



Separate 43 physiological amino acids in less than 95 minutes!



1 α -phosphoserine	16 alanine	30 β -aminoisobutyric acid
2 taurine	17 citrulline	31 γ -amino-n-butyric acid
3 α -phosphoethanolamine	18 α -amino-n-butyric acid	32 histidine
4 urea	19 valine	33 3-methyl histidine
5 aspartic acid	20 cystine	34 1-methyl histidine
6 hydroxyproline	21 cystathionine	35 tryptophan
7 threonine	22 methionine	36 carnosine
8 serine	23 isoleucine	37 anserine
9 asparagine	24 leucine	38 hydroxylysine
10 glutamic acid	25 norleucine	39 ornithine
11 glutamine	26 tyrosine	40 lysine
12 sarcosine	27 phenylalanine	41 ammonium chloride
13 α -aminoadipic acid	28 homocystine	42 ethanolamine
14 proline	29 alanine	43 arginine
15 glycine		

The Amino Acid Analyzer A200 is a result of over 20 years of experience in amino acid analysis



The **Amino Acid Analyzer A200** is a dedicated, compact, and complete analysis system, developed exclusively for the routine analysis of amino acids by post column derivatization with ninhydrin. It represents a significant advancement in facilitating the determination of amino acids:

- The buffer system and separation column are compatible for both hydrolysis and physiological analyses
- Innovative narrow-bore design results in shorter run times and less eluent and ninhydrin reagent consumption
- Sensitivity is approximately four times greater than the previous generation of postcolumn ninhydrin analyzers
- All components are easily exchanged for faster service turnaround time
- Delivers outstanding results at an exceptional price

The widely known and extensively used ion exchange postcolumn ninhydrin procedure allows detection of both primary and secondary amino acids with the highest resolution and accuracy. Sample preparation is kept to a minimum and the step-wise elution permits an optimal separation while assuring excellent reproducibility.

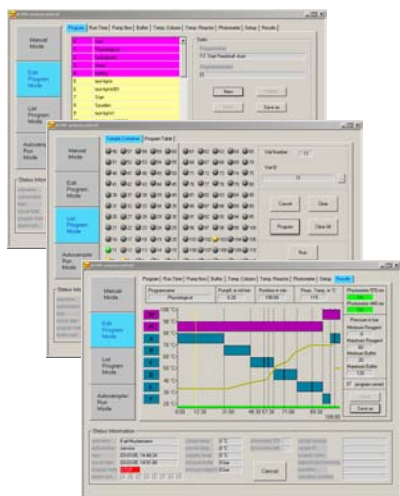
Complete instrument control is achieved through aminoControl™ software running under Microsoft™ Windows 2000. The aminoControl™ software's user-friendly interface and graphical displays of program parameters make routine analysis with the A200 simple and fast. A status information screen is always visible and gives an instant report on the current instrument operation. Five prewritten analysis programs and space for 49 additional custom programs makes it easy to optimize the running parameters for complicated analyses.

- Three password-protected access levels provide for GLP compliance
- An automatically generated log file maintains a record of all user actions

Clinical, research, or routine analysis

The A200 was developed primarily for the routine analysis of feedstuffs, agricultural products, or quality control (pharmaceuticals, food products, etc.). Clinical and biomedical laboratories can also use the A200 with physiological samples to detect and diagnose metabolic diseases or to quantitate amino sugars, peptides, or any other ninhydrin-reactive compounds. Applications are available upon request.

Technical Data and Ordering Information



Complete instrument control through aminoControl™ software.

Eluent kits and columns for the Amino Acid Analyzer A200

- Ready-made buffers and ninhydrin reagent kits are trouble-free, cost-effective, and more reliable than self-made buffers
- Certificate of analysis for all eluents and columns is your assurance of strict quality control adhering to DIN EN ISO 9001:2000 standards
- Eluent Kits are available for 500 and 1000 hydrolysis or physiological analyses, with or without columns

Elution Buffer System

Eluent carousel for eight 500 ml non-toxic, ready-made buffers:

- Five lithium acetate buffers (Eluents A, B, C, D, and E)
- Column regenerant, lithium hydroxide (Eluent F)
- Potassium acetate ninhydrin reagent
- Reactor wash solution

One eluent system for both hydrolysis and physiological analyses! Ninhydrin reagent and eluents have 1 year shelf-life

Automated Sample Injection System

Integrated XYZ-mechanism with stationary rack design
2 sample racks accommodate 120 standard, 1.5 ml vials
Injection volume in 1 µl increments from 1–40 µl
Sample cooling to 5°C ± 2°C; Five priority sample positions

Detectors

2 microphotometer detectors at 570 nm and 440 nm
Measurement cell with 10 µl volume, 10 mm pathlength
Measurement range in 2 sensitivity options, normal and high (10x)
Analog output 0-4 V; Noise < 0.02 mAU; Drift < 0.01 mAU/hr
Linearity error < 0.3% at 1 AU; < 2% up to 4 AU

Peltier Column Oven

New design provides for longer lifetime than A100 column oven
Programmable from 20–80°C; accurate to 0.3°C
Rapid temperature ramping up to 5°C/min

Postcolumn Reactor

PEEK 0.25 mm ID reactor coil inside reactor oven unit
Programmable from 20–150°C; accurate to 0.5°C

Pump for delivery of eluent and ninhydrin reagent

Double piston pump with 10 ml pumphead, inert titanium inlays
Flow rate 0.01–1.50 ml/min (typical flow rate = 0.20 ml/min)
Reproducibility of flow is better than 1% at 100 µl/min
Pulse dampener reduces baseline noise to < 0.3 mV/min (570 nm)

Instrument Control and Data Management

Total instrument control from 32-bit aminoControl™ software under Microsoft™ Windows 2000 environment
Data acquisition with ChromGate® or EuroChrom® software
GLP features and 21CFR11 compliant (log file, data audit trail, etc)
Analog signal output and RS-232 connector

Reproducibility, detection limit

Retention times ≤ 2% RSD; peak areas ≤ 5% RSD
15 pmol detection limit (sensitivity varies for diff. amino acids)

Ordering Information

Order No. Article

A0991.28 Amino Acid Analyzer A200* with ChromGate® 32-bit data acquisition software

A0991.29 Amino Acid Analyzer A200*, with EuroChrom® 16-bit data acquisition software

A0992-22 Eluent Kit for 500 analyses of hydrolysis samples, includes separation column and precolumn

A0992 Eluent Kit for 500 analyses of physiological samples, includes separation column and precolumn

*Includes aminoControl™ software, Knauer interface box, and accessory kit. External PC, eluent kits, and columns are sold separately. A complete list of eluent kits and spare parts is available upon request. Technical specifications are subject to change without notice.

Information on applications, accessories, and amino acid analysis methods is available upon request.

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