



ARACUS advanced  
HIGHEST ACCURACY FOR CLINICS AND PHARMA



# THE AMINO ACID ANALYSER ARACUS ADVANCED WITH ITS MODULAR CONCEPT IS THE IDEAL INSTRUMENT FOR THE ANALYSIS OF AMINO ACIDS IN CLINICAL LABORATORY, RESEARCH, PHARMA BUT ALSO IN QUALITY CONTROL.

It combines innovative technologies with the classical routine analysis of amino acids by the post-column derivatisation with ninhydrine. This guarantees on the day by day use results with the highest precision, reproducibility and accuracy.

We also own the patent EP 0823973 B1 for a special application which can be used with our Amino Acid Analyser.

The setup of the instrument allows the continuous analysis of 96 samples (2 x 48 vials). They are stored in the cooled autosampler and are injected without sample loss. A washing routine of the injection valve and syringe pump guarantees zero cross-contamination.

The eluent rack contains the glass bottles. The fluid volume of each bottle is actively monitored during operation. Eluents, ninhydrine and washing reagent are selectively chosen through buffer selection valves and degassed in micro vacuum chambers. The second independent reagent pump allows the switch from Ninhydrine to Orthophthalaldehyde (OPA) as reagent. Reagent volume can be adapted individually for each method. Both methods are fully supported by software and preinstalled analysing programs.

The maintenance free LED-photometers detect the separated amino acids at 570 nm and 440 nm and the signals are registered by the software Clarity.



## INNOVATIVE CHEMISTRY

Besides the normal kits a special chemical eluent kit is available with the **ARACUS advanced**. Each kit is produced under standardized procedures, tested and certified before shipping.

Depending on the application, the eluent and reagent kit contains the necessary amount for 500 or 1000 analysis runs. No inert gas necessary for the eluents due to our innovative formulation.

## DATA ACQUISITION AND HANDLING

The data acquisition and analysis software aminoPeak records two analogue channels simultaneously (570 nm, 440 nm). Chromatograms are shown online. Internal databases allow fast peak identification. Quantitative calculations are performed with internal or external standards, dilution and/or multiplication factors.

Several analysis runs can be compared using compiler programmes. The results of each analysis are documented in an individual report. As an option, Clarity can be used if 21 CFR Part 11 conformity is required.

## OPERATION CONTROL

**ARACUS advanced** is operated with the user friendly, self-explanatory software iControl. Implemented, optimised separation programmes are correlated with each sample for the analysis. Data analysis, reintegration and chromatogram view of previous samples can be done while the instrument is analysing a sample.

The current status of important instrument parameters is shown as well as the fluid volumes of each eluent and reagent bottle. Different alarm levels inform the operator as soon as a minimum value is reached. All operational parameters and events of each analysis are documented in a log file.





# ARACUS

INNOVATIVE TECHNOLOGY COMBINED  
WITH CLASSICAL METHOD



[membraPure.de](http://membraPure.de)

# AMINO

## ACID ANALYSIS

### TECHNICAL SPECIFICATIONS

#### PUMP

- independent 2 pump system for reagent and eluent line
- Pump head made of biocompatible ceramic
- Max. pressure: 400 bar Flow rate: 0,01 - 10,00 mL/min  
Reproducibility of flow rate: 0,1 % (RSD) at 100 µL/min
- Leakage sensor (eluent resistant gold pins)

#### TUBINGS

- PEEK and FEP

#### MICROPHOTOMETER

- Wave length: 570 nm, 440 nm | Measuring range: high, low  
| Analog signal: 0 - 5 V | Base line adjustment: free programmable
- Auto-Zero function: free programmable
- Flow cell: 10 µL volume maintenance, free 3 years warranty

#### SEPARATION COLUMN

- Cation exchange resin: 5-7µm
- Stainless steel
- Temperature adjustment by peltier elements temperature range:  
20 - 100°C Temperature accuracy: 0,1° C

#### AUTOSAMPLER

- sample cooling as low as 4°C possible by peltier elements,
- Syringe pump,
- Motor- injection valve,
- Sample rack: 2 x 48 Vials (1,5 mL Standard)

- Dosage in 3 different modes: full loop (100 µL), microliter pickup (1 - 35 µL) or partial loop

## **REACTOR**

- Highly inert heating elements temperature range 50 - 150 °C
- Auto-Shut-down safety routine in case of failure alarm

## **CONTROL- SOFTWARE**

- 32 bit software iControl including optimized separation programs
- comfortable creation & modification of separation programs automatic
- log-file generation of analysis parameters

## **DATA-ACQUISITION/ HANDLING SOFTWARE - OPTIONS**

- 21 CFR Part 11 conform data-acquisition and data-analysis by Clarity software to work in regulated environments
- Data-acquisition and data-analysis
- fast and user-friendly

## **READY TO USE REAGENT KITS**

- Kits including eluents, reagent and additional dilutions buffers, separation and ammonia absorber column for 500 or 1000 analytical runs
- Reproducibility of retention time: <0,1%, RSD Reproducibility of peak area: <1,5%, RSD

## **OPTIONS**

- Additional fluorescence detector for OPA-Method
- Special eluent kits for OPA-Method
- Easy connect inert gas supply





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