



ARTEMIS

6000

AMINO ACID ANALYSER



SCION's well known analyzer solutions extended to amino acid analysis!

Key Values



Turn-key solution with reliable performance

- Based on SCION's more than 50 years experience in chromatography, results in unmatched performance
- Configured package for various applications, e.g. protein hydrolysate, physiological fluid, etc.
- Pre-tuned and recommended conditions for 'Inject and Run'
- Excellent sensitivity with a detection limit as low as 8 pMol (Asp 3p Mol), with great separation power: average peak resolution >1.5, all peak resolution >1.2 (hydrolysate AA) or >1.0 (free AA)



Ease of Use

- Fully controlled by 21 CFR part 11 compliance data system with multi-language support
- Powerful data processing and reporting function
- Visualized LCD with directly control and support method creation, editing and saving
- Modular design, ease of maintenance



Productivity & Robust

- Fully automated analysis with protection, e.g. auto washing, leakage protection, etc.
- Rapid analysis:
30 - 50 min for hydrolysate sample
70 - 180 min for physiological sample
- Outstanding repeatability in both retention time and peak area
- Real quaternary gradient to reduce the kinds of buffer used
- Long-term stability with replaced buffer and consumables
- High efficient separation column and ammonia filter column with long lifetime
- Inert and non-metal materials for pipes contact with buffer solutions & samples to avoid interference
- All buffers protected by inert gas, store in reagent organizer with refrigeration

A6400 REAGENT ORGANIZER



A6200 AUTOSAMPLER

A6300 REACTION AND DETECTION MODULE

A6100 QUATERNARY PUMP



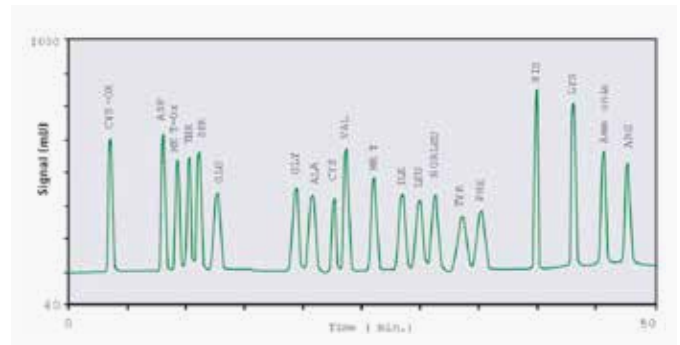
Systems build based on your application



Protein Hydrolysates

Protein hydrolysates system is designed for determination of amino acids which hydrolyzed from protein or peptides in the sample. This system is one of the most widely used configuration, has and hydrolyzed amino acids (except sulfur containing amino acids). Various pre-configured methods are ready for the unusual amino acids and peptides which may appear in the sample.

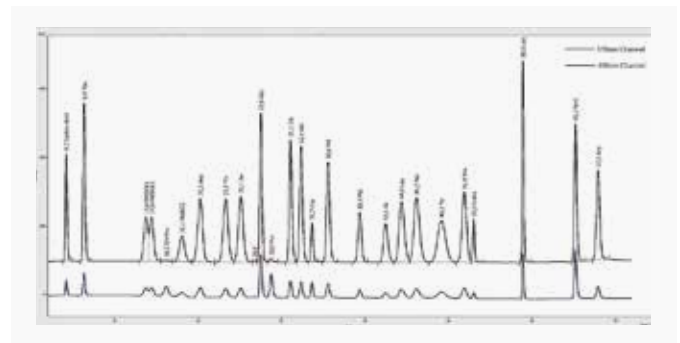
Opp: Protein Hydrolysate Standard



Oxidised Protein Hydrolysates

Oxidised protein hydrolysates system is an important complementation of common protein hydrolysates. Column with a buffer kit specially optimized for sulfur containing amino acids such as lysine, threonine, cystine and methionine can be rapidly eluted and identified. It provides essential information for the adjustments to the formulation of products, e.g. feed stuff and nutrition products.

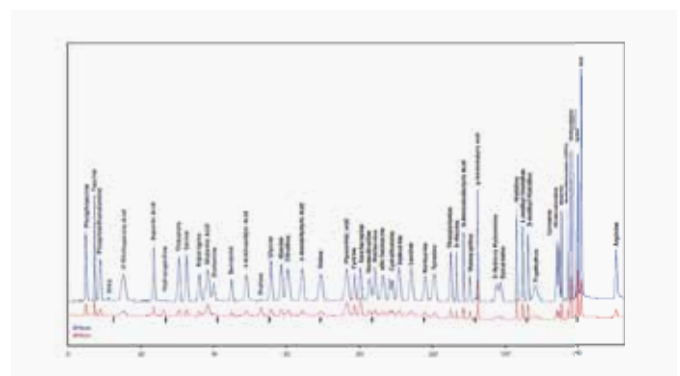
Opp: Oxidised Protein Hydrolysate Standard



Physiological Fluids

The system designed for physiological fluids emphasis on a wider range of 48+ amino acids in one run, including physiologically important amino acids which can be treated as biomarker or indicator for early detection of some diseases like hereditary metabolic disorders, and monitoring the treatment programs. It also can be a powerful tool for monitoring the effectiveness of nutrient absorption.

Opp: Physiological Fluids Standard



48+
Amino acids in one run



SCION Artemis 6000 system features

A6400

Reagent Organizer

- Integrated cooling
- Inert gas (N₂) supply with adjustable pressure to prevent buffer/reagent oxidation and contamination
- Transparent cover, convenient to check the remain level of buffer

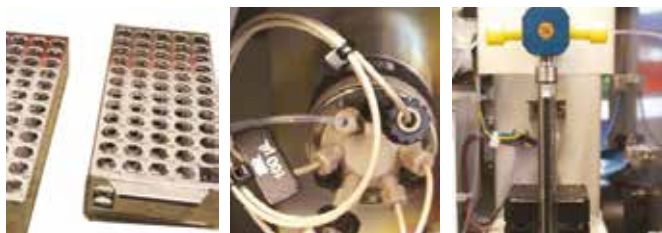


Reagent Organizer Pressure Control

A6200

Autosampler

- Automated tools support up to 120 samples
- Integrated thermostat for constant temperature and sample cooling
- Exchangeable PEEK sample loop
- Fixed and variable volume injection mode
- Optionally with pre-column derivatisation/Dilution mode
- Inert materials contact with buffer solutions & samples to avoid interference



Standard Sample Racks
for up to 120 samples

Exchangeable Sample
Loop made of PEEK

Exchangeable Dosing
Syringe





A6300

Reaction and Detection Module

- Integrated post-column reaction and dual-channel detection (570nm and 440nm) in one module
- Dedicate reagent dosing pump with two independent completely inert dual-piston pumps
- Accurate flow rate from 0.01 to 2.0 ml/min. pulsation reduced solvent and Ninhydrine delivery
- Automatic washing
- Temperature programmable for column oven & reactor
- Leakage sensor
- Inert materials contact with buffer solutions & samples to avoid interference
- Separation column oven with fast heating and cooling capability with a temperature range from +20°C to +99°C
- Up to twelve programmable temperature steps can be used during one separation program

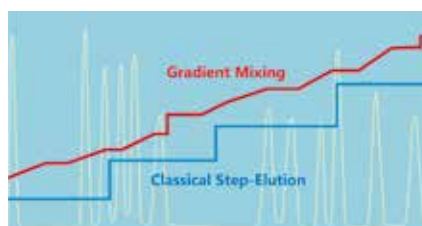


Integrated solid state column oven (side)

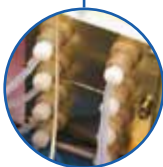
A6100

Quaternary pump

- Integrated with on-line vacuum degasser
- Flow rate 0.01 to 10.0 ml/min
- More than 100 programmable gradient steps with a resolution of 0.1%
- Dual-plunger pump for smooth eluent delivery



With old fashioned step-elution systems, 4 and/or 5 buffer solutions were needed. Now, due to the optimized buffer system, only 2 buffers for hydrolysates and 3 for the physiological sample are necessary. The buffer can be adjusted individually to the samples by varying the mixture of the buffer.



Integrated Vacuum Degasser

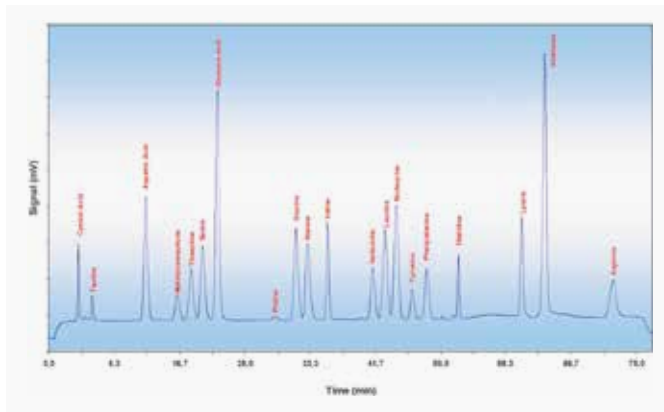


Versatile experts in a wide range of applications

- > Inborn Metabolism Errors
- > Feedstuff
- > Foodstuff
- > Biogenic Amines
- > Pharma Quality Control
- > Pharma Conformity (Pharmacopoea)

Feed stuff

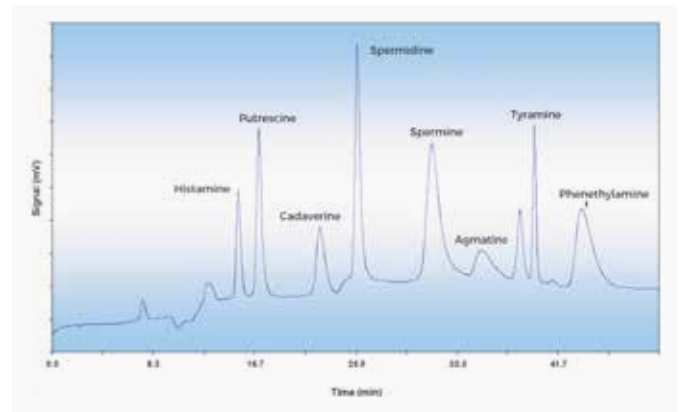
Analysis of feed stuff required both protein hydrolysis and oxidised protein hydrolysis. SCION provides the completely solution for feed stuff samples, including sample preparation suggestions, columns/buffers for relevant sample and requirements.



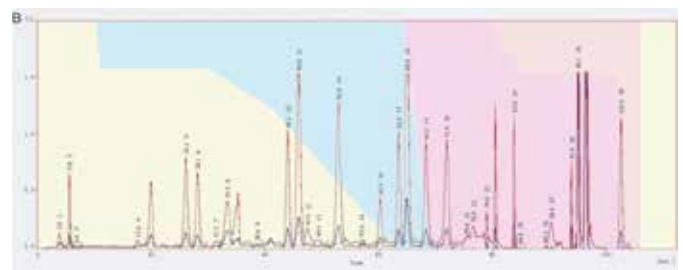
Broiler Grower Feedstuff (using Li⁺ based system)

Simultaneously determination of amino acids and biogenic amines

Biogenic amines can be analyzed via both Li⁺ and K⁺ based systems. Now simultaneously determination of amino acids and biogenic amine becomes possible in SCION Artemis 6000 Amino Acid Analyzer. It provides a powerful tool for researchers who are interested in metabolic and bio-marker related area.



Biogenic amines standard (using K⁺ based system)



34 amino acids and biogenic amines from gastric juice samples from a gastric cancer patient (Using Li⁺ based system)



Trusted consumables by SCION

Columns and Buffers (Kits available)

Columns and buffers are crucial for separation of amino acids. Scion prepared various columns and buffers optimized for several most frequently running applications. Column range covers all ion separation mode (Li^+ , Na^+ and K^+) for numerous application requirements.

- Li^+ , Na^+ , K^+ based separation columns and buffers
- Kits (include columns and buffers) are ready Protein Hydrolysate (PH) and Physiological Fluid (PF) systems and other applications
- Long lifetime for both ammonia filter column and separation columns (normally 6000-8000 injections)
- Ready made Ninhydrine solution

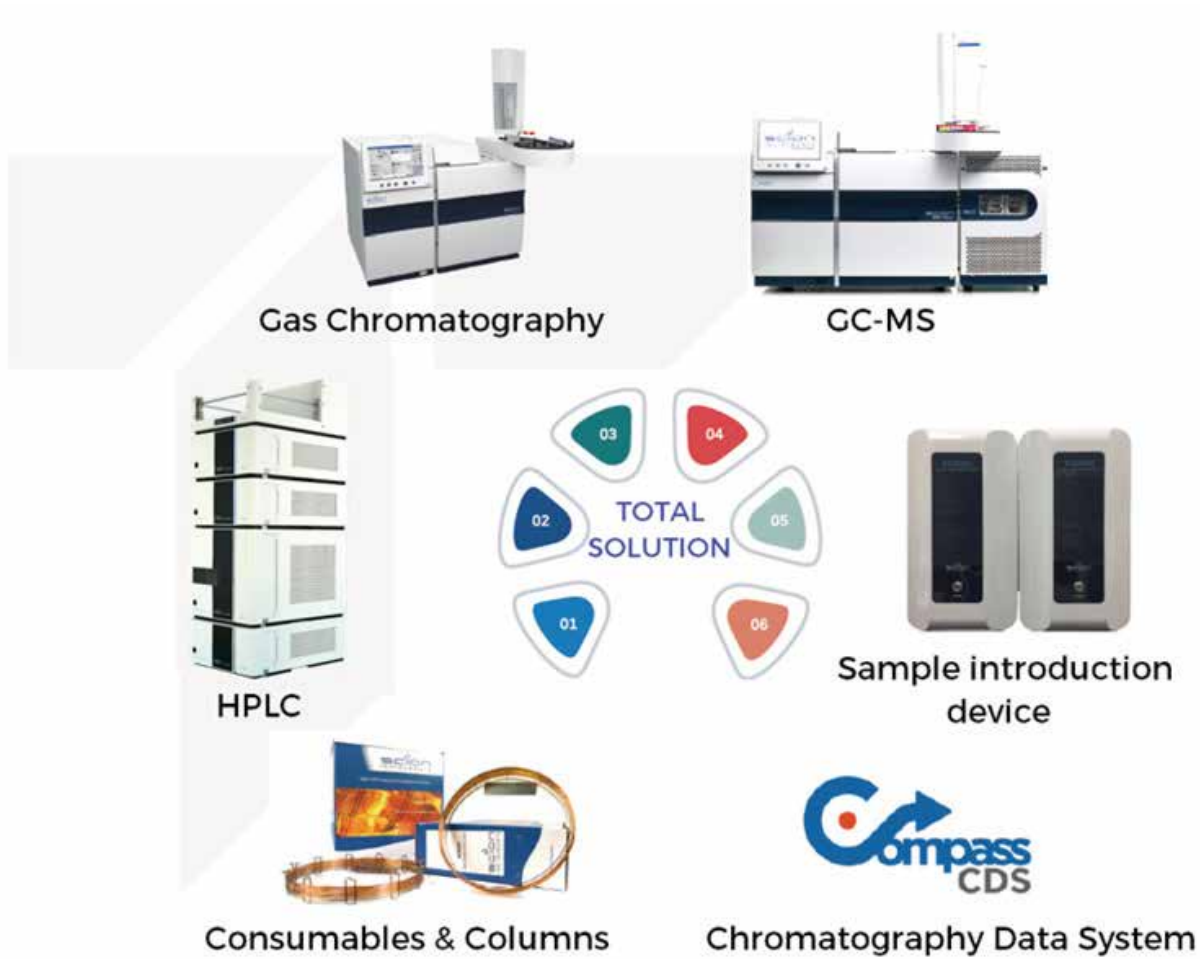


SCION Standard solutions

SCION provided certified standard mixture solutions

- With certificate and detailed information
- Working with a Certified Quality
- Management System according to DIN ISO 9001
- Traceable Lot. Number





SCION's Chromatography Based total solution