

Biochrom 20 Amino Acid Analyzer

Data Handling

EZChrom is a PC-based system that provides powerful features in a package designed for chromatographers to use with the minimum of effort. Create methods, design custom reports, view calibration curves, acquire and process data, create and run batch sequences from a single window.

Real time monitoring of chromatograms is available. Operation under the Windows environment allows for simultaneous data acquisition and processing even while you develop methods or run other programs. You can integrate partial runs and display or print the results.

A full range of graphic capabilities include split-screen chromatogram views, zooming, multiple parameter annotation, integration tool bar, and color selection as well as selection of tiled or cascaded windows. Data handling was designed to provide powerful features without sacrificing ease of use. A helpful installation program ensures the software is quickly and properly installed.

The system can handle simple or complex calibrations with calibration up to 16 levels and curve fitting including point-to-point, linear regression, weighted linear regression, quadratic and cubic. You can create peak tables graphically by clicking around the peaks you wish to calibrate. The retention times are entered and peak identification windows are calculated for you. Then just type the peak names, and indicate reference peaks, internal standards, calibration amounts, and other information you may need. Data can be exported to other programs as ASCII files or direct into other Windows applications.

Specification

Run Time Injection to Arginine:

Protein Hydrolysate	Typically 35 mins
Physiological Fluid	Typically 115 mins or better on specific applics.
Detection Limit Ninhydrin	15 pmole
Reproducibility Area % CV	1.5 (10 nmoles)
Retention Time % CV	0.5
Buffers	5 + Hydroxide
Analytical ColumnMaterial	PEEK
Resin	Polymeric cation exchange
Column Heating	Peltier
Temperature Range	20° to 99°C
Reaction Coil	PTFE 40° to 145°C
Temperature Range	
Autosampler Option:	
Sample Injection	96 samples
Sample Loading Volume	5 to 5000 µl
Control	PC Control
Autoloader Option:	
Sample Injector	50 samples
Sample Loading Volume	5 to 100 µl

APPLICATIONS

Analysis of Complex Hydrolysates

The Biochrom 20 can perform the analysis of complex hydrolysates such as food and feedstuffs. Nutritionists need to know the composition of food and amino acid analysis is essential for ensuring nutritional quality. It provides manufacturers with the means of identifying raw materials for:

- Origin and type of protein source in products such as sausages
- Indication of spoilage, e.g. by analysis of amines in fish products
- Microbial contamination by identification of toxins and presence of mould

In the animal-feed and petfood industries the optimization of the most economic formulation of feeds and diets is required for the manufacture of:

- Farm-animal feeds
- Pet foods
- Aquaculture diets

The analysis of complex hydrolysates such as oxidized food or feedstuff samples is easily accomplished using the High Performance Oxidized Feedstuff PEEK column and the buffer kit specially formulated for this application. Limiting amino acids such as lysine, threonine, cystine and methionine can be rapidly identified to enable for-

mulation to be adjusted. Alternative supplements and protein sources can be identified.

Quality Control in Drug Synthesis

Pharmaceutical companies, governmental watchdog institutions and hospital pharmacies require a fast and reliable method of routinely checking the quality and authenticity of generic drugs and infusion fluids. Legislation dictates the quality of these synthetic drugs. Biochrom 20 offers full automation with stepwise elution. Our long-life columns can tolerate various matrices and a high salt content in analysis of:

- Infusion liquids
- Recombinant or synthetic peptides

Research and Metabolic Disorder Screening

For routine analysis of physiological fluids, use of the Lithium High Performance column can perform a full analysis in less than two hours (or three hours using the High Resolution column). Use of a carefully formulated range of lithium citrate buffers, available in kit form, ensures excellent chromatography of up to 40 different amino acids, including those physiologically important amino acids for:

- Early detection of inborn errors of metabolism
- Effectiveness of absorption of drugs

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With Autosampler Option	With Autoloader Option	Application
CGS 8308.39	CGS-8315.39	Oxidized Feedstuff High Performance
CGS 8309.39	CGS-8316.39	Oxidized Feedstuff High Resolution
CGS 8310.39	CGS-8317.39	Lithium High Performance
CGS 8311.39	CGS-8318.39	Lithium High Resolution
CGS 8312.39	CGS-8319.39	Sodium High Performance
CGS 8313.39	CGS-8320.39	Sodium High Resolution
CGS 8314.39	CGS-8321.39	Polyamine

Catalog No. Biochrom 20 Application Data Sheets

CGS 8322.39	Drug Synthesis
CGS 8323.39	Nutritional Quality
CGS 8324.39	Conformity and Authenticity
CGS 8325.39	Process Control
CGS 8326.39	Metabolic Disorders
CGS 8327.39	Dietary Protein Formulation
CGS 8328.39	Dietary Feeds
CGS 8329.39	Amino Acid Analysis Product Catalogue
CGS 8330.39	EZChrom Chromatography Data System Brochure