



Biochrom 30+ Series Amino Acid Analyzers Ordering Guide

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Amino Acid Analysis Ordering Guide

Dedicated Chromatographic bench top System for Amino Acid Analysis

- **Convenient:** Load and Go post-column photometric detection of amino acids with no additional derivatization procedures
- **Flexible:** Integrated software enables automatic sample set-up, flexible sample analysis, networking and exporting of data
- **Versatile:** A wide variety of samples, from physiological to food and feedstuff types can be analysed using the available range of programs and columns
- **Compact:** Bench top design requiring minimum lab space with simple serviceability

The Biochrom 30+ has been designed as a workhorse instrument for 24/7 routine analysis in mind:

- Analytical column, pump head and fluidics fittings are manufactured from a combination of inert ceramic or polymer PEEK for maximum longevity.
- Cation exchange resin is extremely robust and can be regenerated to maintain optimum column performance giving an almost infinite lifetime.
- Elution buffer programming is totally flexible with a selection of up to six buffers controlled via the BioSys software allowing any number of steps.
- Automated flush system which cleans the reaction coil and removes any trace of residual chemicals after a series of run minimizing servicing and downtime.
- New automatic piston wash system to improve pump lifetime.
- New in line ninhydrin air trap for extra convenience.

The Biochrom 30+ Series will provide you with the most flexible and reliable AAA systems available today, with the ability to grow as your applications evolve.

The Biochrom 30+ Series uses software operating in the Microsoft™ Windows environment and EZChrom Elite enables you to comply with the FDA regulation CFR 21 part 11.

System Configuration

Due to the flexible set up of the instrument, all customers can build their own system in one step. This enables us to deliver the perfect configuration for your needs directly from the factory.

■ Choose your instrument and application package

Bio30+ Lithium Physiological Systems

80-6000-50	NEW! Bio 30+ main unit with cooled Autosampler, PC, EZChrom Elite software and Ultra Physiological Chemical kit. Optimised for Accelerated analysis (120min).
80-6000-51	NEW! Bio 30+ main unit with cooled Autosampler and Ultra Physiological Chemical kit. Optimised for accelerated analysis (120min).
80-6000-53	Bio 30+ main unit with cooled Autosampler, PC, EZChrom Elite software and Ultra Physiological Chemical kit. Optimised for High Performance analysis (170min)
80-6000-54	Bio 30+ main unit with cooled Autosampler and Ultra Physiological Chemical kit. Optimised for High Performance analysis (170min)

Bio31+ Sodium Protein Hydrolysate Systems

80-6000-60	Bio 30+ main unit with cooled Autosampler, PC, EZChrom Elite software and Ultra Protein Hydrolysate Chemical kit. Optimised for High Performance analysis (60min)
80-6000-61	Bio 30+ main unit with cooled Autosampler and Ultra Protein Hydrolysate Chemical kit. Optimised for High Performance analysis (60min)
80-6000-63	Bio 30+ main unit with non cooled Autosampler and Ultra Protein Hydrolysate Chemical kit. Optimised for High Performance analysis (60min)

Bio32+ Sodium Oxidized Protein Hydrolysate Systems*

80-6000-70	Bio 30+ main unit with cooled Autosampler, PC, EZChrom Elite and Ultra Oxidized Hydrolysate Chemical kit. Optimised for High Performance analysis (90min)
80-6000-71	Bio 30+ main unit with cooled Autosampler and Ultra Oxidized Hydrolysate Chemical kit. Optimised for High Performance analysis (90min)
80-6000-73	Bio 30+ main unit with non cooled Autosampler and Ultra Oxidized Hydrolysate Chemical kit. Optimised for High Performance analysis (90min)
80-6000-78	NEW! Bio 30+ main unit with cooled Autosampler, PC, EZChrom Elite and Ultra Accelerated Buffer Chemical kit. Optimised for Accelerated analysis (60min)
80-6000-79	NEW! Bio 30+ main unit with cooled Autosampler and Ultra Accelerated Buffer Chemical kit. Optimised for Accelerated analysis (60min)
80-6000-81	NEW! Bio 30+ main unit with non cooled Autosampler and Ultra Accelerated Buffer Chemical kit. Optimised for Accelerated analysis (60min)

***These systems are suitable for the analysis of both protein hydrolysates AND oxidised protein hydrolysates samples.**

Please see on the next page for further details on instrument and application package contents.

Other configurations are available. For more details, please contact us or your local distributor.

If you require a specific application to be performed on your instrument before it is shipped, please contact our support team.

Instrument Package

The Instrument package consists of the main operating unit, which includes electronics unit, pumps, detection system and autosampler. Also included in the package are the items listed below:

- Analytical Column and top-up resin
- Prewash Column
- Ninhydrin and buffer bottles
- Instruction Manual (on CD)
- Operating software and interface cables
- Tool Kit
- Chemical Kit, Spare Parts and Consumables Kit
- Calibration Standard
- Signal Lead and Power Cables
- Qualification & Performance Verification Logbook
- Compaq desktop PC, Windows XP Pro, Compaq 22" TFT colour monitor, Hewlett Packard Deskjet Printer
- BioSys control software, latest version.
- EZChrom Elite Data handling Software, latest version.

Further computer and monitor options are available; please contact Biochrom for additional information.

Training courses are arranged at Biochrom for new customers and existing customers wishing to update their skills. Please see page 11 for more details.

Although it is possible to order the instrument without any computer or data handling equipment, we do not advise this as it can lead to set up problems during installation and subsequent running that Biochrom cannot provide warranty and support for.

Application Package

Each instrument package contains the correct elution programme and chemical kit that has been optimized and validated for maximum efficiency.

- Accelerated Systems: Chromatography certified in less than 120min cycle time on Physiological Systems and less than 60min on Protein Hydrolysate Accelerated Buffer Systems.
- High Performance Systems: Chromatography certified in less than 170min cycle time on Physiological Systems, less than 90min on Oxidized Hydrolysate Systems and less than 60min on Protein Hydrolysate Systems.
- High Resolution Systems are also available for greater peak separation with longer time of analysis.

Data Handling System

EZChrom *Elite* is the complete solution to your Chromatography Data System needs. This premier 32-bit product, suited for both stand-alone and Client/Server environments, is the second generation of the popular EZChrom chromatography data system. Attention to quality and careful incorporation of customer-requested features drives the development of EZChrom *Elite*.

EZChrom Elite Specification

- Analogue to Digital Conversion Resolution: 20 bits at all sampling frequencies
- Sampling rate: User selectable, 0.05 to 50Hz maximum per channel.
- Number of channels: 2
- Analogue signal voltage ranges: -0.5 to + 1.1 V
- Number of data points per run: No limit, storage to hard disc (4 bytes per data point)
- Data storage safety: Store to disc every 10 seconds. Data saved even in power loss.
- Number of named peaks: User selectable to 500, within memory constraints

Order Code	EZChrom Elite
80-6000-36	EZChrom Elite for 1 amino acid analyzer system including 35900E A/D converter box

EZChrom Elite Accessories	
80-2110-69	Elite Reprocessing Software
80-2114-43	Elite upgrade to latest version of Elite
80-2114-45	Elite System Suitability software

EZChrom to EZChrom Elite Upgrade*	
80-6002-01	Upgrade* from EZChrom to EZChrom Elite (incl. 35900E A/D box)

*If you order an upgrade, a reprocessing or system suitability software, you need to quote your previously registered EZChrom license number.

Chemicals

Biochrom chemicals are manufactured from high quality materials and subjected to rigorous control procedures, under the ISO 9001 Quality System. Our buffers are guaranteed to give accurate and reproducible results for up to 3 years from the date of manufacture, provided the storage conditions are adhered to. All reagents have been formulated so they do not require cooling, providing stable chemistry with ease of use. Biochrom instruments are supplied with the appropriate chemical kit for the system ordered. These kits contain the chemicals and consumables needed for most routine analyses. Kits or individual buffers and consumables may be purchased to enable continuity of analysis. In use on the instrument, the buffers and detection reagent are stored under an inert atmosphere to ensure stability.

Order Code	Buffers and Reagents	Quantity
80-2037-57	Sodium Regeneration Buffer 6	1L
80-2037-67	Sodium Loading Buffer	2L
80-2037-68	Sodium Hydrolysate Buffer 1	2L
80-2037-69	Lithium Buffer 5	2L
80-2037-71	Borate Buffer (Fluorimetry)	1L
80-2037-72	Orthophtalaldehyde (OPA)	2g
80-2037-74	Polyamine Buffer	2L
80-2037-79	Sodium Oxidized Buffer 3	2L
80-2037-80	Sodium Oxidized Buffer 1	2L
80-2037-88	Sodium Oxidized Buffer 4	2L
80-2038-08	Sodium Hydro/Oxid Buffer 2	2L
80-2038-09	Sodium Hydrolysate Buffer 5	2L
80-2115-21	Sodium Accelerated Buffer 1	2L
80-2115-22	Sodium Accelerated Buffer 2	2L
80-2115-23	Sodium Accelerated Buffer 3	2L
80-2115-24	Sodium Accelerated Buffer 4	2L
80-2038-10	Lithium Loading Buffer	2L
80-2038-15	Lithium Buffer 1	2L
80-2038-16	Lithium Buffer 2	2L
80-2038-20	Lithium Regeneration Buffer 6	1L
80-2097-18	Lithium Buffer 4	2L
80-2099-83	Lithium Buffer 3	2L

Order Code	Chemical Kits
80-2037-61	Protein Hydrolysate Calibration Standard
80-2037-99	Fluorimetry Reagent Kit
80-2117-76	Ultra Ninhydrin Kit, 8L (4x2L)
80-2117-77	Ultra Physiological Fluid Chemical Kit
80-2117-78	Ultra Protein Hydrolysate Chemical Kit
80-2117-79	Ultra Oxidised Hydrolysate Chemical Kit
80-2115-26	Sodium Accelerated Buffers Chemical Kit
80-2118-30	Ultra Ninhydrin Kit, 2L
80-6000-06	Ultra Physiological Fluid Routine Kit
80-6000-32	Physiological Fluid Calibration Standard

Chemical Kit Contents

Order Code **80-2118-30** Ultra Ninhydrin Reagent Kit (2 litres)

Sufficient for up to 90 runs (Protein Hydrolysate System) or 45 runs (Physiological Fluid High Performance System)

1 x Ultrosolve Plus Solution

1 x Ultra Ninhydrin Solution

1 x Ninhydrin reagent filter

Order Code **80-2117-76** Ultra Ninhydrin Reagent Kit (8 litres)

Sufficient for up to 360 runs (Protein Hydrolysate System) or 180 runs (Physiological Fluid High Performance System)

4 x Ultrosolve Plus Solution

4 x Ultra Ninhydrin Solution

4 x Ninhydrin reagent filter

Order Code **80-2037-99** Fluorimeter Reagent Kit

1 x Borate Buffer (Fluorimetry)

1 x Orthophthalaldehyde (OPA)

1 x OPA Solvent, 13ml

Order Code **80-2117-77** Ultra Physiological Fluid Chemical Kit

Sufficient for up to 170 runs (High Performance System)

Part No.	Qty	Description
80-2038-15	2	Lithium Buffer 1
80-2038-16	1	Lithium Buffer 2
80-2099-83	1	Lithium Buffer 3
80-2097-18	1	Lithium Buffer 4
80-2037-69	2	Lithium Buffer 5
80-2038-20	1	Lithium Regeneration Buffer 6
80-2038-10	1	Lithium Loading Buffer
80-2118-30	4	Ultra Ninhydrin Kit (2 litres)

Order Code **80-6000-06** Ultra Physiological Fluid Routine Kit

Sufficient for up to 170 runs (High Performance System)

Part No.	Qty	Description
80-2038-15	3	Lithium Buffer 1
80-2038-16	1	Lithium Buffer 2
80-2099-83	1	Lithium Buffer 3
80-2097-18	1	Lithium Buffer 4
80-2037-69	2	Lithium Buffer 5
80-2038-20	1	Lithium Regeneration Buffer 6
80-2118-30	4	Ultra Ninhydrin Kit (2 litres)

Order Code 80-2115-26	Ultra Protein Hydrolysate Accelerated Buffer Kit *
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Order Code	Qty	Description
80-2037-67	1	Sodium Loading Buffer
80-2115-21	2	Sodium Accelerated Buffer 1
80-2115-22	1	Sodium Accelerated Buffer 2
80-2115-23	2	Sodium Accelerated Buffer 3
80-2115-24	2	Sodium Accelerated Buffer 4
80-2037-57	1	Sodium Regeneration Buffer 6
80-2118-30	4	Ultra Ninhydrin Kit (2 litres)

* This kit is suitable for the analysis of both protein hydrolysates AND oxidised protein hydrolysates and is compatible with any Sodium analytical and Sodium prewash columns.

Order Code 80-2117-78	Ultra Protein Hydrolysate Chemical Kit
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Sufficient for up to 320 runs (High Performance System)

Order Code	Qty	Description
80-2037-68	2	Sodium Hydrolysate Buffer 1
80-2038-08	2	Sodium Hydro/Oxid Buffer 2
80-2038-09	2	Sodium Hydrolysate Buffer 5
80-2037-57	1	Sodium Regeneration Buffer 6
80-2037-67	1	Sodium Loading Buffer
80-2118-30	3	Ultra Ninhydrin Kit (2 litres)

Order Code 80-2117-79	Ultra Oxidised Hydrolysate Chemical Kit
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Sufficient for up to 240 runs (High Performance System)

Part number	Qty	Description
80-2037-80	1	Sodium Oxidized Buffer 1
80-2038-08	1	Sodium Hydro/Oxid Buffer 2
80-2037-79	2	Sodium Oxidized Buffer 3
80-2037-88	2	Sodium Oxidized Buffer 4
80-2037-57	1	Sodium Regeneration Buffer 6
80-2037-67	1	Sodium Loading Buffer
80-2118-30	4	Ultra Ninhydrin Kit (2 litres)

PEEK Columns

Biochrom instruments are supplied complete with the analytical column of your choice. Manufactured from PEEK material, the columns are free from corrosion and metal contamination and are packed with optimally sized, cation-exchange resin. The columns are attached with finger-tight fittings so no special spanners are required to ensure a leak-free seal.

Order Code	Packed Columns
80-6000-76	Lithium Accelerated Analytical Column 20cmx4.6mm I.D
80-2104-12	Lithium High Performance Analytical Column 20cmx4.6mm I.D
80-2104-15	Sodium Analytical Column 20cmx4.6mm I.D (for all sodium systems)
80-2104-13	Lithium Prewash column 10cmx4.6mm I.D
80-2104-16	Sodium Prewash column 10cmx4.6mm I.D

Order Code	Column Parts
80-2114-76	PEEK Column Frits for 'U' labelled columns (pk 6)
80-2114-77	Column end fittings (pk 2)
80-2108-49	Column frits (pk 6) plus 2 end fitting

Column Cleaning Service

Most columns benefit from cleaning but there are certain contaminants which are difficult to remove and therefore we require full details about the column and its use before we agree to carry out any work.

To return a column, Please contact your local sales office for more information on this service or contact Biochrom for their returns authorisation procedure.

Resins

Manufactured from quality materials, our cation exchange resin is guaranteed to give perfect results. Each batch is quality tested and then packaged in accurate quantities for column repacking.

Order Code	Resins
80-2038-45	Ultropac 8 Resin, Sodium form, 6g
80-2038-46	Ultropac 8 Resin, Lithium form, 6g
80-2087-14	Prewash Column Resin, 2g
80-2104-74	*1g Resin, Lithium form
80-2104-75	*1g Resin, Sodium form

* These are special order items only of Ultropac 8 resin to top up columns supplied in 1g pots. They are not standard stock items and can only be supplied while stocks are available. Contact should be with your local sales company before placing an order to check on the availability of the resin, quoting the resin batch number.

Amino Acid Analyzer User Training

The user courses are aimed at analysts who use an amino acid analyzer in their own workplace, following installation and on-site training or as an introduction to the system for new users.

A free training course place is provided with each new analyzer bought.

The courses provide a theoretical introduction to amino acid analysis, daily operating and maintenance procedures. Chemical systems and sample preparation are discussed in detail as are the other parameters which affect the instrument's performance. Simple trouble-shooting and fault-finding are also a valuable part of the course

Training on the system software and current integration software is included and it is assumed that the analyst is competent working within the Windows environment. If this is not the case then it is recommended that the user attend a Windows training course before coming to Biochrom.

The duration of the course is 3 full days (spread over a 4 day period)

Check www.biochrom.co.uk for course dates and further information.

Note: Please book your place well in advance in order to avoid any disappointment.

Analyzer Spare Parts

To ensure maximum efficiency of your analyzer we recommend a small stock of spare parts to be held Biochrom have put together some appropriate spares kits for your convenience.

- 80-6001-92 Preventative Maintenance kit – Biochrom 30+
- 80-6001-84 2 years spares kit – Biochrom 30+
- 80-2116-29 Preventative Maintenance kit – Biochrom 30

80-6001-92 Preventative Maintenance kit for Bio30+

Description	Qty
Filter cartridge for both pump filters	2
Filter cartridge for the Ninhydrin bottle	1
O rings for both pump filter assembly	4
Piston seal kit for pump	2
Coil flush diaphragm	2
Syringe tip for 500µl Autosampler syringe	1
Instruction and check sheets	1

80-2116-29 Preventative Maintenance kit for Bio30

Description	Qty
Filter cartridge for the Ninhydrin bottle	1
O ring viton BS O11	2
Seal and 'o' ring kit	2
Filter cartridge for buffer pump filter	1
Plunger Replacement Tip Midas	1
Coil Flush Diaphragm	2
Instruction and check sheets	1

80-6001-84 2 years spares kit for Bio30+

Description	Qty
Syringe Adaptor	2
Reaction Coil Tubing 15m	2
Tungsten Lamp For AAA	3
Flowcell Assembly	1
Nut and ferrule kit 1/16"	1
Nut and ferrule kit 1/8"	1
O Ring Viton BS O11	10
Piston Seal and O ring Kit	2
Buffer Solenoid Valve	2
Back Pressure Regulator	2
Fingertight Peek Fitting	5
Nut And Ferrule Kit pump inlet 1/8"	1
Frit 2 Micron Peek	4
End Fitting Peek	2
Bottle cap Bio30+	1
Sample Needle Alias	1
Syringe tip 500µL syringe	2

Analyzer Service Contracts

In order to ensure that your Analyzer remains in good working order and to minimise downtime, Biochrom strongly recommends that you take out a service contract on your Instrument.

We have a full range of contracts available designed to meet each customer's specific needs from a fully comprehensive, all inclusive package for the busy hospital laboratory to a simple preventative maintenance contract for the less demanding user. Please contact your local distributor to discuss the most appropriate service contract for your needs.

AAA Support

Our dedicated support team will be happy to assist you whatever your question is.

For further information you can contact us using any of the methods below:

Web : www.biochrom.co.uk

Email us at : support@biochrom.co.uk

Support Hotline: +44 (0)1223 427890

About Biochrom

Biochrom is a world leader in amino acid analysis. The Biochrom Amino Acid Analyzer is recognized as the gold standard used by hospitals, pharmaceutical and industrial labs worldwide. Applications are available both for clinical analysis and screening of metabolic disorders, for drug synthesis, infusion fluids and for industrial applications in food, beverage and feedstuffs.

Biochrom is a leading manufacturer of scientific instruments with over 40 year's experience. The Biochrom Group consists of five well-known instrument brands covering amino acid analysis, UV/Vis spectroscopy, and microplate instrumentation. Hospitals and laboratories worldwide trust our products and we are a valued OEM partner of many of the world's finest scientific instrumentation companies. The Biochrom spectroscopy range includes the Novaspec, Ultrospec, and GeneQuant, plus the Libra and WPA brands. Biochrom also manufactures two major brand names in the microplate instrumentation market - Asys and Anthos.

All our instruments are available through a growing global network of independent distributors, backed by our commitment to customer support. Biochrom is a Harvard Bioscience Company.

EZChrom Elite is a trademark of Agilent Technologies

Windows is a trademark of Microsoft

HP is a trademark of Hewlett Packard

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