

MULTI-CHANNEL FLOW INJECTION ANALYSER

FIA2000 is a multi-use high precision flow injection analyser for the discriminating chemist. Based on colorimetric or UV detection, it has been designed for economy and ease of use essential to the modern laboratory.

FIA2000 comprises 3 separate units:

- Basic Analytical Module
- Automatic Sample Presentation
- Data Capture

You can purchase just what you need. Your analysis can start immediately with the analytical module. You can add a sample changer or the low-cost manual injection timer. You can expand further with full data capture and control. The innovative Windows® based MicroStream introduces a new dimension in advanced laboratory programming. With analysis speeds up to 120 samples per hour and detection limits down to ppb levels flow injection analysis performs well compared with other techniques. Special design features of the FIA2000 produce fast high quality analysis.

FIA2000 will analyse nutrients, ions and metals. Burkard methods combine the latest improvements in performance with low reagent consumption. FIA2000 offers a wide analytical choice using the additional techniques such as fluorescence. Because of this it is suitable for the user with small sample quantities but it is equally at home with routine analysis. Internationally certified methods are used where applicable.

FIA2000 can be fitted with the computer controlled automatic start-up and shut-down. A motorised wash/reagent changeover system ensures that all reagent lines are automatically connected to a water-wash on completion of analysis. The computer returns the valve to reagents for restart. Other computer control options are possible, e.g. reagent level sensing, special functions and interfacing to other instruments.

FEATURES

- 80 or 140 place carousel sample changer (or 300 place XYZ)
- Up to 20 channel pump
- 1 or 2 channel chemistry base offering:
 - Up to 2 simultaneous heated methods
 - Plug-in easy change chemistry manifolds
 - Upright, easy access, small footprint design
- 1 or 2 channels of detection
- MicroStream for Windows data handling
- Optional integrated automatic dilution and sample preparation

APPLICATIONS

There are many established uses for flow injection. Popular applications include

- Waters
- Soil samples
- Landfill samples
- Fertilisers
- Food and drinks
- Chemicals/Pharmaceuticals
- Method development
- Quality control

Please ask for our Applications List or Data Sheet

BENEFITS

- Full range of chemistries including anionic and cationic detergents.
- Choice of detection – colorimetry, flame photometry, fluorescence.
- Optional comprehensive data processing and system control.
- Optional full automatic control, start-up and close-down functions.
- Supplied with convenience components such as a chemical resistant analyser tray with centralising power distribution and reagent racks.

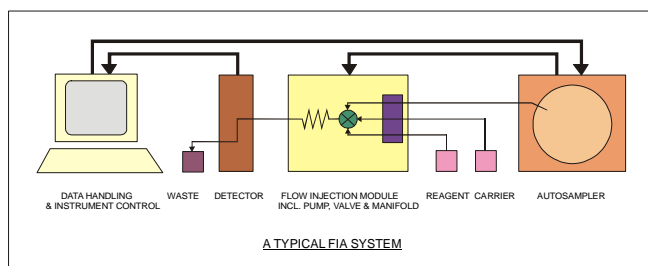
Choice of Instrumentation ...



... Simple Operation

Standard Equipment Includes:

- Choice of autosampler (80 place, 140 place carousel or 300 place XYZ)
- Choice of Detectors - colorimetry, flame photometry, fluorescence.
- Data Acquisition (MicroStream for Windows) or flat-bed recorder



Sampling options

FIA2000 offers you fully automatic sampling with a choice of carousel or XYZ sample changer. Automatic dilution of over-range samples is available as an option on the XYZ. However to alleviate the need for dilution the MicroStream data-processor has an extended concentration range enabling the results to be printed out at up to 10 times the normal calibration standard. When the instrument is not used with a sample changer low-cost manual injection timer is available to ensure precise loop filling. In addition, each valve has a manual injection button as standard to assist you with setting up of the individual chemistries.

The manifold system

Standard components are used to construct the plug-in chemistry manifolds. Ready assembled units are available for the most commonly used methods. Where possible a single manifold can mount two related chemistries. Pump tube and valve connections are conveniently positioned and colour coded for identification. It takes only minutes to make a change of method.

Detectors

The standard high sensitivity colorimetric and UV detectors used with FIA2000 use filter technology and flow through cells with a range of path lengths from 3-50mm. Free standing alternative detectors, such as the Burkard Fluorimeter, interface with the chemistry manifold using the appropriate couplings.

Data capture and processing

FIA2000 comes with MicroStream, a powerful multi-tasking system based on Windows® software. MicroStream will speed up your calculating and reporting. Starting with a low-cost package for single-channel use, this system can be expanded to run up to four independent multi-channel analysers. New quality control software checks the accuracy of analysis and all results can be downloaded to other software packages and LIMS. MicroStream is compatible with Windows® based networks.

Standard chemistry methods

Data sheets are available and supplied with every method. Full information on the make-up of standards, preparation of individual chemicals and wash materials, sampler settings, optical filters and manifold connections is included. Method development is available for specific applications.

Servicing

The design of Series 2000 analysers mean that your servicing routine is minimal. Only the regular change of pump tubes by the user is required for routine operation. Annual and bi-annual service contracts will keep your instrument professionally maintained.

Installation and training

On site installation and training in the use of the systems is available. Contact Burkard Scientific for full details.

Consumables

The company maintains a full range of consumables and spares for continuous flow analysis systems.

For details on flow injection systems, continuous flow analysers, data handling systems and specialised process control equipment please contact Burkard Scientific. Burkard Scientific reserves the right to change specification without notice.

FIA2000 SPECIFICATIONS

Sample Changer	80+, S140 or XYZ
Capacity	Carousel: 8-140 place (sample cups 2ml - 35ml volume), XYZ: 300 place
Sample time	1-999 secs
Wash time	1-999 secs
Sample setting	Keyboard entry
Dimensions	Carousel: 330 x 330 x 200 mm, XYZ: 560 x 480 x 340mm
Supply voltage	110/240V, 50/60Hz (to be specified)
Flow Injection Module	
Injection Valve	Automatic single or multi-valve system
Sample volume	Variable loop (minimum volume 10µl)
Pump capacity	Up to 20 channels
Pump delivery	0.12 - 12 ml/min
Pump tubing	PVC, Viton, Tygon, Silicon
Chemistry	Plug in manifolds with reaction coils, dialysers, 'T' connectors and components
Mixing coil	PTFE: 0.6mm I.D., coil lengths: 15, 20, 30, 50 & 80cm
Heating bath	Temperature variable 30°C-160°C with proportional control and display
Dimensions (LWH)	330mm x 230mm x 430mm 500mm x 230mm x 430mm
Supply voltages	110/240V, 50/60Hz (to be specified)
Detector Colorimeter	
Light sources	Halogen or deuterium (UV)
Flow cells	12mm sq. quartz window (flow through), Burkard non-debubbling flow cells 3, 5, 15 and 50mm path length
Output	Analogue 0-13V with variable gain and damping
Dimensions	410mm x 180mm x 160mm
Supply voltages	110/240V, 50/60Hz (to be specified)
Optional detectors	Fluorescence, Flame Photometer
Flat Bed Recorder	
Input sensitivity	0-1, 2, 5, 10, 20, 50, 100, 200, 500mV, 1, 2, 5, 10, 20, 50V. Full scale deflection 250mm
Chart speeds	1, 2, 3, 6, 10, 15, 30, 60cm/min & hr
Dimensions	376 x 425 x 105mm
Supply voltages	240V, 50/60Hz
Data Analyser MicroStream for Windows™	
Computer	Microsoft Windows™ based PC. (Please call for latest spec.)
Processor	Second analogue processor board (ISA) for peak analysis.
Channels	Up to 16 independent channels. Channels distributed in any combination over systems
Speed	Measures narrow (2-10 seconds) and wide (several minutes) peaks at up to 300 peaks per hour per channel
Resolution	Separate 16 bit ADC on each channel gives 0.025% resolution over normal range with x5 extension for over-range samples
Sampler control	Included as standard, also random access control
System control	Options for automatic start-up and close-down
Results output	Configurable print-out modes and export to spreadsheet or database management software
LIMS interface	Configurable bi-directional link to LIMS for worksheet acquisition and down-loading of results
Internal correction	Full baseline and sensitivity drift correction plus carry-over compensation
Supply voltages	110/240V, 50/60Hz

Manufactured by:

Distributed by:

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