



MicroMac C

Single or Multiparameter Colorimetric Analyser

PRODUCT DATASHEET

APPLICATIONS

Wastewater
Process Water
Drinking Water
Surface Water
Seawater

MEASUREMENTS

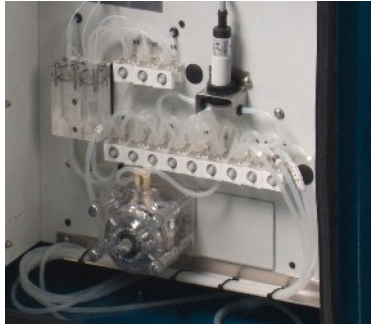
Aluminium
Ammonia
Iron (Soluble and Total)
Manganese
Nickel
Nitrate
Nitrite
Phosphate (Ortho and Total)
TON

FEATURES

Flexible Loop Flow Analysis (LFA)*
Multi-Parameter Options
*Patented by Systea, Italy

INSTALLATION OPTIONS

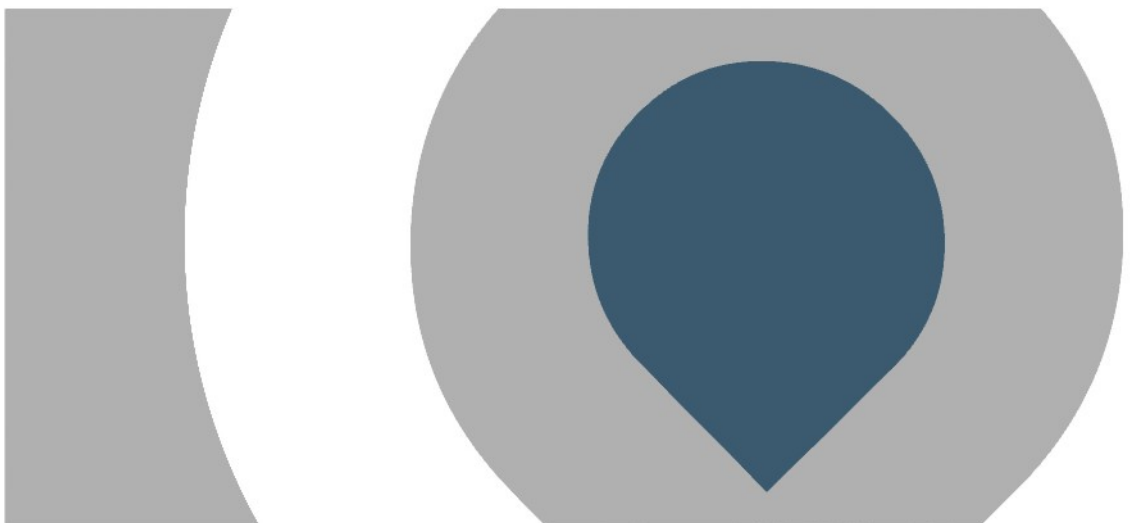
Fully Integrated Sample Preparation
Package
Installation and Commissioning Service



The MicroMac C is designed to operate in an industrial or treatment works environment with minimal routine intervention and uses wherever possible industry standard chemistry methods. The robust nature of the MicroMac C with its separate electronic and chemistry compartments the latter including reagent storage provides a highly reliable on-line analyser.

The chemistry module employs the patented Loop Flow Analysis System which results in a very flexible analysis system which can incorporate high temperature digestion or heating, UV digestion, acid digestion, and temperature controlled end point reactions all utilising either a visible light colorimeter or a fluorimeter.

Partech are the exclusive UK distributor for Systea Srl who are based in Rome, Italy. Partech have experienced fully trained sales and service personnel.



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Loop Flow Analysis

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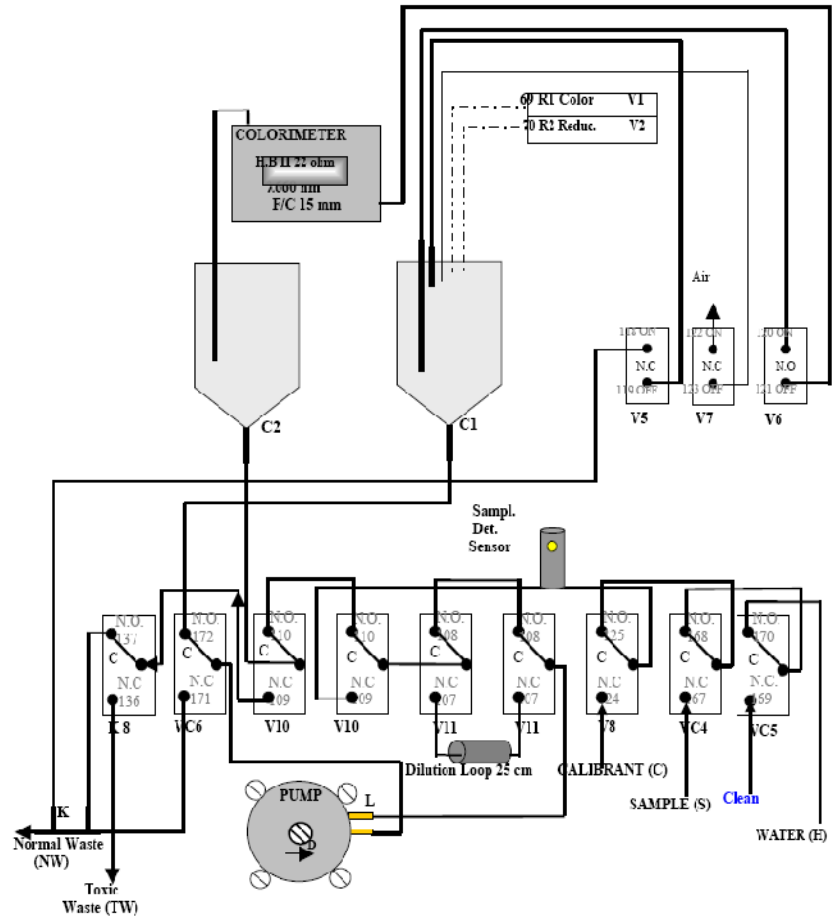
The analytical methods used in the MicroMac C are based on the Standard Methods that are used in laboratories throughout the world. Many of these methods have their basis in the “Methods for the Examination of Waters and Associated Materials” as published by HMSO – Standing Committee of Analysts.

The Loop Flow Analysis system can be configured as a single or multiple chemistry module. The multiple chemistry module can have up to 4 chemistries or 7 reagent additions.

The chemistry module shown shows the a typical analysis loop, this can include a high temperature heating bath for hot acid digestion and high pressure valves and PTFE tubing in all areas in contact with the acid or high temperatures when required.

Up to seven reagent valves allow the analyser to be configured for multiple chemistries, typical combinations include:

- ⊗ Orthophosphate and Soluble Iron
- ⊗ Orthophosphate and Ammonia
- ⊗ Nutrient Suite – Orthophosphate, Ammonia, Nitrate and Nitrite
- ⊗ Total Phosphorus and Total Iron



STANDARD METHODS (others available on request)

Aluminium	0-500 µg/l to 0-5 mg/l	Orthophosphate	0-500 µg/l as P to 0-50 mg/l as P
Ammonia	0-2 to 0-50 mg/l as N	Soluble Iron	0-500 µg/l to 0-10 mg/l
Manganese	0-300 µg/l to 0-5 mg/l	Total Iron	0-5 mg/l
Nitrate (TON)	0-1 to 0-20 mg/l as N	Total Nitrogen	0-10 mg/l
Nitrite	0-1 to 0-20 mg/l as N	Total Phosphorus	0-500 µg/l as P to 0-5 mg/l as P

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Sample Preparation

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The most critical part of any monitor is the sampling system, which must be able to get the sample to the monitor in a condition fit for analysis, Partech have developed a range of sampling systems that perform this task in a way that reduces maintenance time to a minimum. In addition to providing the sampling system Partech provide a full installation and commissioning service. This service ensures that the analyser works from day one and provides the user with full documentation and training on the system.

Each site needs to be reviewed on it's own merits and Partech will work with you to ensure that the most cost effective solution will be offered.

Crude Sewage or Process Monitoring

The system developed and fully implemented by Partech incorporates a macerating submersible pump, air compressor, controller and standard filter unit with 20 micron filter element. This combination makes this arduous application possible and gives the option of feed-forward control when carrying out chemically assisted Phosphate removal.

Final Effluent or Surface Water Monitoring

Monitoring in these applications allows the use of either a basic system with a simple peristaltic pump or a full sampling system incorporating a submersible pump, air compressor, controller and standard filter unit with 400 micron filter element. The full system is required for locations that have a level change from the sample to the analyser installation or where fouling is believed to be an issue.

Potable Water Treatment

Most potable water installations have relatively simple sample requirements and it is normally possible to connect the analyser and it's sample pot to the site pipework without the need for additional sample conditioning.



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Analyser

Measuring Principle
Colorimeter
Fluorimeter
Number of Parameters
Measurement Frequency
Measurement Time
Number of Sample Points
Sample Requirements
Waste
Reagent Cooler

Physical

Mounting
Protection Rating
Weight
Dimensions
Environmental Temperature

Electrical

Power Supply
Power Use
Hardware
Communication Port
Output Signals
Input Signals
Alarm Signals

Alarm Messages

Sample Preparation

Sample Delivery
Filtration (typical)

Colorimetric or Fluorimetric
Dual Beam, Silicon Detector
Excitation at 370 nm, emission 420 – 470 nm
1 standard, upto 4 depending on combination
Programmable
Method Specific
1 standard, upto 6 optional
10 to 30 C
Toxic and Non Toxic fed to separate drain
optional Pelter Cell

Wall Mounting normally in building or kiosk
IP55
25 kg without reagents
800 x 450 x 300 mm (hwxwd)
10 to 30 C

12VDC or 115/230VAC
Typically 4W on standby, 10W during analysis
PC104 industrial standard, integrated keyboard and display
RS232, RS485, USB
4-20mA per parameter, 400 ohm maximum load
Remote analysis and calibration request
1x High Alarm, SPDT, 24VDC, 0.5A per parameter
1x General Alarm, SPDT, 24VDC, 0.5A
1x Calibration Alarm, SPDT, 24VDC, 0.5 A per parameter
On display

Sample delivered to sample pot by peristaltic or submersible pump, system designed to suit the sit requirements
Sewage Treatment Inlet stage: 20 micron
Sewage Treatment Final Effluent stage, 400 micron
Potable Water, typically not required
Surface Water, 400 micron

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The company reserves the right to alter the specification without prior notice. E&OE

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