

NEW

SMALL
ANALYZER

**BIG
IMPACT!**



BioTector System-C

Online TOC Analyzer for Clean Water Applications

BioTector

SMALL ANALYZER

BIG IMPACT!



The NEW BioTector System-C Online TOC Analyzer is designed to meet the needs of Condensate Return, Cooling Water, Potable Water and Pharmaceutical Water (WFI) applications. It is the low cost option for low range clean TOC analysis with the high performance that you expect with a BioTector.

The System-C analyzer has the same proven technology that has given BioTector the reputation of being the most accurate and reliable online liquid analyzer on the market.

The BioTector System-C analyzer was developed to ensure safeguarding of sensitive processes in a clean water application. Process “break-through” in condensate return and cooling water systems can lead to severe costs and implications including lost product or damage to expensive industrial boilers. The BioTector System-C analyzer has the capability to detect an incident and notify personnel immediately of a break-through, resulting in quick action and resolution. Continuous and trustworthy monitoring of the water quality will greatly reduce operating costs and reactive or emergency maintenance.



David Horan, CEO
Martin Horan, Chairman
BioTector Analytical Systems Limited

CONSISTENCY



The BioTector System-C Online TOC analyzer gives you everything you would expect from BioTector:

- Accuracy of +/-3% of reading
- Uptime of 99.86%
- Less maintenance requirements than competitors*
- Low cost of ownership**
- Rapid payback on investment
- Patented Two-Stage Advanced Oxidation Technology (TSAO)
- Hazardous and non-hazardous area options

*A recent independent field trial has shown BioTector to have the least maintenance requirements of 5 leading brand analyzers. This trial showed BioTector to have fewer maintenance items than the other 4 analyzers, ranging from 36% to 79% fewer.

** Low reagent consumption, 19L per six months, typically changed at service intervals.

CONFIDENCE



This System-C Analyzer detected an unknown leak within 1 week of installation.

Chemical Plant, Texas, USA

BioTector System-C measurement data carries our unparalleled accuracy of +/- 3% of reading combined with our exceptional reliability with a typical uptime of 99.86%.

This means that operators and management can use the BioTector measurement data with total confidence.

BioTector analyzers have proven themselves over the years as a management tool to gain greater process efficiency. Our clients have reported that BioTector analyzers have given them greater process insights, process incident alerts, environmental monitoring, energy optimisation, product loss prevention and waste treatment plant protection.

COMPACT

The NEW BioTector System-C Online TOC analyzer has all the technology but in a new, smaller box. It's half the weight and one third of the size of the BioTector Series 4.

This analyzer for clean applications is portable and versatile - it can be wall-mounted or free standing, it can be moved easily around your site, fits in the back of a car and takes up less space in an analyzer house.

COST

We've taken the original BioTector Online TOC analyzer, created a customised solution for clean applications, reduced the size and we've reduced the price too - by more than 30%!

Talk to your local BioTector representative for a pleasant surprise...

CLEANING & MAINTENANCE

BioTector System-C is 100% self-cleaning after each cycle. Sample tubes are flushed after each sample is taken to ensure that you don't get a build-up of material causing increased maintenance problems and costs.

BioTector System-C Online TOC analyzers require a simple service, calibration and reagent change only twice each year – that's one routine maintenance event every 6 months!

Customer feedback has given us various maintenance costs saved when switching to the BioTector analyzers. Some plants previously employed 1 engineer to service just 6 TOC analyzers, others told us they spent \$50,000 per year to maintain one analyzer.

BioTector analyzers are designed to be simple to use, cost effective to run and they require minimal maintenance. So you can focus your resources on your plant.

CLEAN & CONDENSATE APPLICATIONS

The BioTector System-C Online TOC analyzer was developed as a result of client feedback and market demand. It works in condensate return monitoring, cooling water monitoring, pharmaceutical water (WFI) and other clean water applications such as potable water. Analysis range details are on page 5.



For TOC Measurement in Petrochem and Chemical industries, the inclusion of volatiles is extremely important, particularly for Condensate return applications. A unique feature of the BioTector System-C analyzer is that it allows you to capture and quantify the volatile component in the TOC measurement while, at the same time, excluding and quantifying the inorganic carbon content of the stream. This is essential for accuracy, boiler protection and ultimately for plant safety.

BioTector has strong success in clean water applications including Power Plants, Refineries, Chemical Plants, Dairy Processing Plants, Food Processing Plants and Corn Milling & Processing Plants.

For low range dirty and high range dirty applications see www.biotector.com

COMPARISONS



With more than 1,000 applications in 40 countries worldwide, BioTector inspires confidence in the Liquid Analysis Industry.

BioTector is now the market leading Online TOC analyzer in the USA. Our industry experience spans 30 years, our client base is growing rapidly and our unique technology gives winning performances in independent field trials and tests.

Clients who installed their first BioTector analyzer in the 1990's have come back to BioTector repeatedly to purchase more analyzers for different sites and their original equipment has never needed to be replaced. These clients have reported significant savings through increased accuracy and reliability of TOC measurement, subsequent process optimisation, product loss prevention and reduced waste treatment costs.

For absolute confidence in your TOC measurements, there's really no comparison...

COMPLIANCE

Biotector TOC analysis complies with the following standards:

- DIN-EN1484
- US EPA 415.1
- ASTM D5173: 97(2007) Standard Test Method for On-Line Monitoring of Carbon Compounds in Water by Chemical Oxidation, by UV Light Oxidation, by both, or by High Temperature Combustion followed by Gas Phase NDIR or by Electrolytic Conductivity.
- DIN 38409-H3
- ISO 8245

BioTector TSAO Technology has MCert accreditation. Awaiting MCert approval for System-C.



SYSTEM-C FOR HAZARDOUS AREAS

TECHNICAL DETAILS

Enclosure	Fibreglass Reinforced Polyester
Dimensions (HxWxD)	750 x 500 x 320mm
Weight	46kg typically
Power Consumption	100 W (VA)
Mains Connection	230V or 115V AC (other options also available)
Display	High contrast 40 character x 16 line backlit LCD with LED backlight
Data Storage	Previous 9,999 analysis data on screen and more than 2 years analysis data archive in flash memory card
SD/MMC Card	Data transfer, easy software and configuration updates
Operation	Microcontroller with membrane keyboard
Language Options	Multiple languages available
Standard Output	1 programmable 4-20mA output signal (typically for TOC) per sample input channel
Digital Output	2 freely programmable volt free contacts

CONSUMABLES

Acid & Base	Replacement typically 6 months per 19 litre container Stored external to analyzer
Instrument Air	2.1 bar, -20°C dew point (free of water, oil and dust)
Service	6 month intervals

RANGES

Standard Range	0 – 2mgC/l (0-2000ppb) 0 – 5mgC/l (0-5000ppb) 0 – 25mgC/l (0-25000ppb)
Repeatability	+/- 3% of reading or +/- 0.03mgC/l (30ppb), whichever is greater
Detection Limit	0.06mgC/l (60ppb)
Extension Range (Optional for exceedance tracking)	0-100mgC/l (+/-5% of reading or +/- 0.5mgC/l)
Range Selection	Automatic or Manual Range Selection

OPTIONAL FEATURES

Additional Output	TIC, TC, VOC, after correlation COD, BOD
4-20mA Outputs	As individual signal up to maximum of 4 or as multiplex signals up to maximum of 35
Multi-Stream, Manual & Calibration	Up to 2 additional sample input ports, which can be used for online streams, manual grab samples or automatic calibration
Remote Control	Input for remote start / standby Input for remote stream and range selection Input for remote manual grab sample analysis
Industrial Interface	Modbus, Profibus, Ethernet
EExp/Z purge	Certification options are available to European Standards (ATEX, Zone 2) and to North American Standards (Class 1, Div 2)
Accessories	Sampling systems, flow through sand trap, air compressor, cooling and heating options, analyzer cabinet etc.

ANALYSIS PARAMETERS

Oxidation Method	Patented Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals
Measurement	Infrared Measurement of CO ₂ after Oxidation
Measured Components	TOC, TIC, TC, VOC, after correlation COD, BOD
Cycle Time	Typically 5.5 minutes
Sample Volume	Up to 12ml
Sample Temperature	2 - 60°C (36°F - 140°F)
Particle Size	Up to 100 microns
Calibration	Calibration typically not required between 6 month service intervals
Ambient Temperature	5 - 45°C (41°F - 113°F)
Humidity	5 - 85%, non-condensing
Ingress Protection	IP44 as standard, IP65 version also available

12 MONTH WARRANTY
WITH ALL BIOTECTOR ANALYZERS



DISTRIBUTOR DETAILS



To find out more about us or any of our products, please visit www.biotector.com or contact us at:
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BioTector Analytical Systems has a continuous Research & Development programme therefore specifications may occasionally be changed without notice. For specification updates, please contact BioTector Analytical Systems or your local BioTector representative.

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