

HACH BIOTECTOR B7000i DAIRY ONLINE TOC ANALYSER

Applications
• Food and Dairy



Maximise your profits by minimising your product loss.

The Hach® BioTector B7000i Dairy Online TOC Analyser is the most innovative, maintenance-free TOC analyser on the market, designed specifically to detect product loss, decrease and conserve water usage and improve production processes.

Industry studies show that lost product can be reduced by over 15% in Dairy Processing Plants by using accurate, reliable and continuous TOC measurement. Further savings of up to 40% can be made in the operating cost of the treatment plant by reducing energy and water consumption.

Reliable measurements, every time

With an innovative Two Stage Advanced Oxidation Technology system, a sample injection unit and a self-cleaning sample reactor, as well as tubing designed specifically for dairy applications, the B7000i Dairy analyser provides you with maximum reliability and uptime so you will be certain to get the measurements you need.

Minimum maintenance, even in the harshest conditions

The B7000i Dairy analyser comes with self-cleaning technology which limits necessary maintenance to only twice a year, with no calibration requirements between services. Even in the harsh dairy environment, it will handle samples with soft particles up to 2 mm in diameter, including samples with fat, oil, greases, sludge and salts.

One instrument for multiple streams

A single B7000i Dairy TOC analyser gives you the ability to monitor up to six streams, eliminating the need for six separate analysers.

Technical Data*

Parameters	TOC, TIC, TC, VOC, after correlation COD, BOD	Ambient temperature	5 - 40 °C Air conditioning and heating options are available.
Measurement method	Infrared measurement of CO ₂ after oxidation	Humidity	5 - 85 % (non-condensing)
Oxidation method	Unique Two-Stage Advanced Oxidation Process using Hydroxyl Radicals	Particle size	Up to 2 mm, soft particulates
Measuring range	0 - 20000 mg/L C	Data storage	Previous 9999 analysis data on screen in the microcontroller memory and storage of data archive for the lifetime of the analyser in the SD/ MMC card.
Range selection	Automatic or Manual Range Selection		Previous 99 fault data on screen in the microcontroller memory and storage of fault data archive for the lifetime of the analyser in the SD/ MMC card.
Multi-Stream	Up to 6 streams	Display	High contrast 40 character x 16 line backlit LCD with CFL backlight
Repeatability	±3 % of reading or ±0.3 mg/L C, whichever is greater, with Automatic Range Selection	Display	High contrast 40 character x 16 line backlit LCD with CFL backlight
Cycle time	From 6.5 minutes, depending on application	Power requirements (Voltage)	115 V AC / 230 V AC
Permissible Chloride range	Up to 30 %	Power requirements (Hz)	50/60 Hz
Communication: digital	Modbus, Profibus, Ethernet industrial interface options are available.	Service interval	6 months service intervals
Enclosure waterproof rating	IP44; optional IP54 with air purge	Dimensions (H x W x D)	1250 mm x 750 mm x 320 mm
EExp / Hazardous Location	Certification options are available to European Standards (ATEX for Zone 1 and Zone 2) and to North American Standards (Class I Division 1 and Class I Division 2). Other options, such as IECEx, are available on request.	Weight	90 - 120 kg Enclosure weight may change depending on system optional features.
Sample inlet temperature	2 - 60 °C		

*Subject to change without notice.

Principle of Operation

TIC

Acid is added to lower the pH so that inorganic carbon is sparged off as CO₂. This is also measured to ensure the Total Inorganic Carbon (TIC) is not carried over into the TOC.

Oxidation

BioTectors's unique oxidation method (TSAO) efficiently oxidises the organic carbon in the sample to CO₂. TSAO utilises hydroxyl radicals generated within the analyser by combining oxygen, which passes through the ozone generator, with sodium hydroxide.

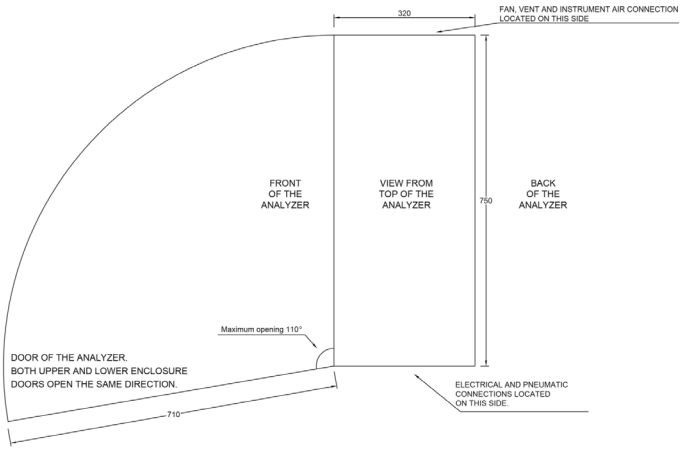
TOC

To remove CO₂ from the oxidised sample, the pH of the sample is lowered again. The CO₂ is sparged and measured by the specially developed NDIR CO₂ analyser. The result is displayed as Total Organic Carbon (TOC).



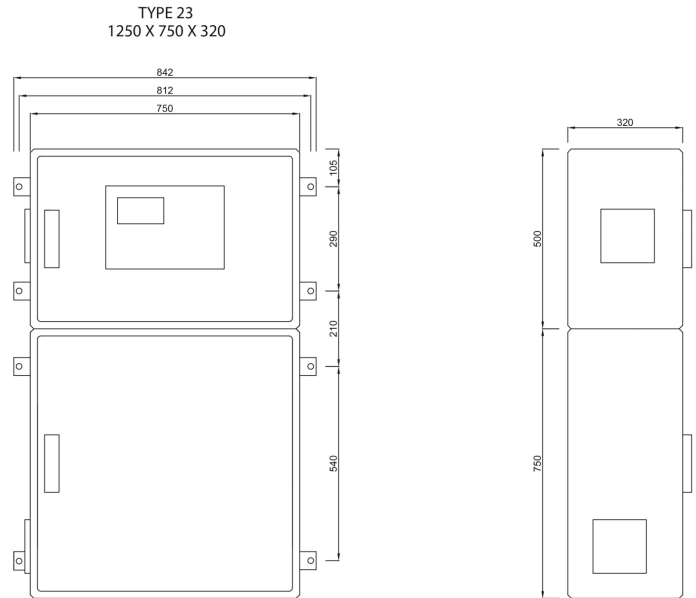
Dimensions

Access requirements

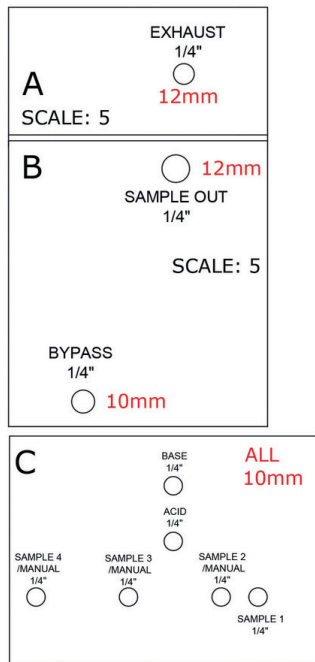


It is recommended that a clear space of 300mm is allowed around the BioTector in all directions. 1500mm should be free in front of the BioTector so that its access doors can easily be opened. Dimensions in mm.

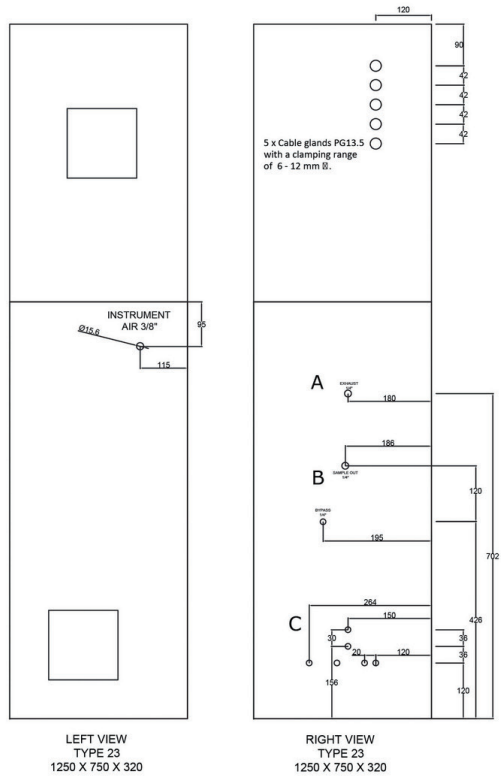
Enclosure



TOC connections



PRODUCTION NOTES:
DIMENSIONS IN RED ARE HOLES SIZES



Order Information

Instruments

BDBAAA052AAAAA4	Hach BioTector B7000i Dairy Online TOC Analyser, 0 - 20000 mg/L C, 1 channel, 230 V AC
BDBAAA052BABAA4	Hach BioTector B7000i Dairy Online TOC Analyser, 0 - 20000 mg/L C, 2 channels, 230 V AC

There are additional options available. Please contact Hach for more details.

Accessories

19-COM-160	BioTector Compressor 115 V / 60 Hz
19-COM-250	BioTector Compressor 230 V / 50 Hz
10-SMC-001	Air supply filter pack
19-KIT-132	B7000i Dairy 6 month service kit

Reagents

2985562	BioTector Base Reagent 1.2 N Sodium Hydroxide
25255061	BioTector Acid Reagent 1.8 N Sulfuric Acid containing 80 mg/L Mn

Be certain in your measurements with a first class Service Partner. Be confident with Hach Service.

By having regular on-site preventative maintenance and calibration, you maximise your measurement reliability and instrument uptime. Hach Service Programs give you full assurance that your instruments stay in compliance, and you stay within your budget.

Start-Up:

Commissioning will ensure you get the best performance from your instrumentation from the first day you use it.

Service Agreements:

Hach offers a wide range of service agreements that can be tailored to you to help maximise your measurement reliability and instrument uptime.

Contact us to get a service offering designed for you.