TRACE C2
On-line Monitoring of Ethanol or Methanol

Continuous Monitoring and Real-time Control of Ethanol and Methanol in Microbial Fermentations

TRACE C2 offers online monitoring of methanol or ethanol and enables real-time control of substrate feeding.
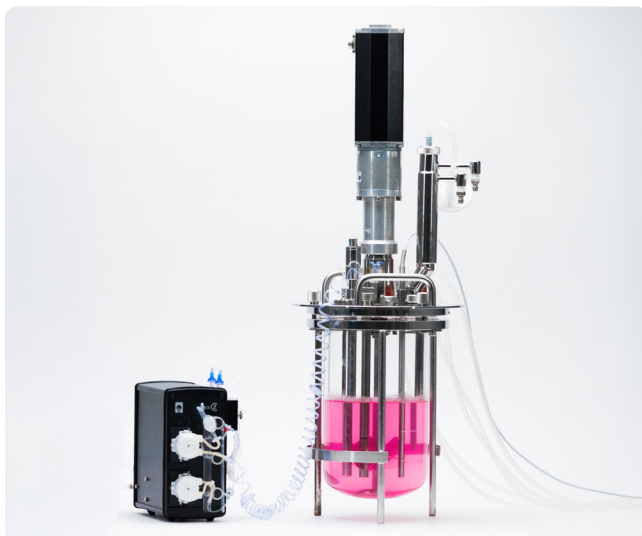
There's no direct sampling, so there's no volume loss. Only real-time insights and real-time control for optimal productivity of your fermentation process.

Ethanol and Methanol are Key Parameters in Fermentation

• Ethanol is a growth-inhibiting byproduct in yeast fermentation of biotherapeutics

• In alcoholic fermentations, ethanol is monitored to assess product yield

• Methanol is a carbon source and inducer for efficient recombinant protein production in yeast fermentations

Accelerate Process Development and Improve Process Robustness with TRACE C2

• Gain reliable monitoring of quickly changing process conditions with up to 30 measurements per hour

• Improve process understanding and develop more optimized feeding and control strategies

• Automate feeding right out of the box with integrated PID controller and dedicated feeding pump

Measured analytes:	Methanol or Ethanol
Measurement frequency:	Up to 30 per hour (every 2 minutes). User-configurable.
Measuring range:	Methanol: 0.5 to 20 g/L Ethanol: 1 to 40 g/L
Measurement precision:	Methanol: <5% at 1.0 g/L Ethanol: <5% at 2.0 g/L
Probe/flow cell connections:	1
On-board peristaltic feed pumps:	1 (4.9 mL/min max flow rate)
Measuring principle:	Selective flow-diffusion analysis with biosensor and enzyme reactor integrated with tube set
Biosensor service life:	5,000 measurements or 15 days
Biosensor storage temperature:	5 °C to 25 °C (41 °F to 77 °F)
Enzyme reactor storage temperature:	4 °C to 10°C (39°F to 50°F)
Enzyme reactor shelf life:	6 months
Physical dimensions (W x H x D):	120 mm x 170 mm x 200 mm
Weight:	1.8 kg
Ambient operating temperature:	15°C - 35°C (59°F - 95°F)
Ambient operating humidity:	10 - 90% RH (non-condensing)
System storage temperature:	5°C - 60°C (41°F - 140°F)
pH range of bioreactor medium:	4.8 to 9.2
Safety/Compliance:	UL/CSA/IEC 61010-1; CE marked
Software:	Installed on PC
Software requirements:	Operating system Windows XP, Windows 7, 8, 10, 11 , Windows Server 2012 R2
Power requirements:	100-120, 220-240 VAC; 50-60 Hz
Device battery:	Lithium (0.09 g, UN test 38.3) Type CR2430 (3V, 270 mAh)
Analog output options:	0 to 10 V; 0 to 20 mA; 4 to 20 mA
Communication interfaces:	RS232, Ethernet
Data exchange modes:	OPC UA, Modbus TCP
Integrated controllers:	PID, On/Off
Included components:	Power adapter, power plug, crossover ethernet cable, user manual and PC-Software

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