



TOC
DETECTOR



Equipements Scientifiques et
Consommables de Laboratoire

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miniTOC

*online/offline control
for pure and ultra pure water*



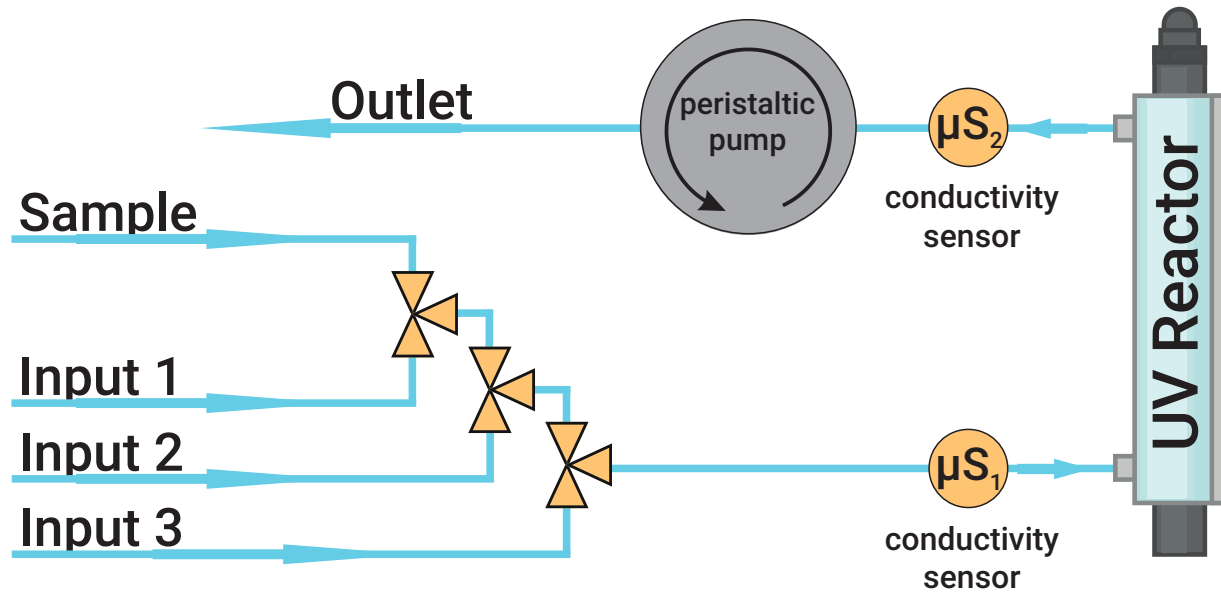
The miniTOC system is designed for total organic carbon (TOC) online/offline monitoring of pure and ultrapure water.

The miniTOC instrument uses the high speed flow through concept and the efficient „direct surface“ UV oxidation. In combination with conductivity detection the miniTOC guarantees the fast monitoring of values.

By measuring the conductivity before and after the UV oxidation the TOC value can be calculated.



Principle of miniTOC



Technical Specifications

method & detection	UV oxidation (partial) & conductivity
sample volume flow	approx.14 mL/min
period of measurement	2 sec (online mode) 1 min (offline mode)
measurement range	0.5 to 1000 ppb
detection accuracy	± 0.5 ppb or 1 % (whatever is greater)
ports	1 for sample, 1 for SST (basic) 1 for sample, 3 for SST (pro)
related norms	USP <643>, EP 2.2.44, DIN EN 1484
ambient parameters	relative humidity: 10 to 95 %, temperature: 10 to 45 °C
interface ports	analog, according to Namur NE43
dimensions, weight, power	300 x 200 x 500 mm, 14 kg, 110 - 230 V, 50 Hz, 60 Watt

Medium Requirements

type of sample medium	pure or ultra pure water
medium conductivity	< 2 μS/cm (upgradable to < 10 μS/cm)
inlet pressure	< 1 bar
sample temperature	< 50 °C

miniTOC

99,7 % test passed ok

cont.

SST

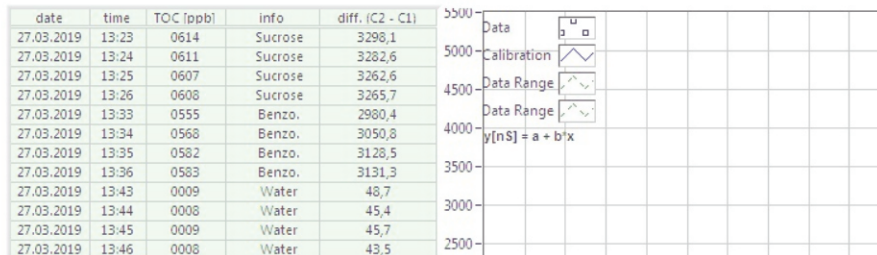
SST

$$\text{resp. eff. } \frac{99,7}{601,5} = \frac{(572,0 - 8,8)}{(810,0 - 8,8)} \times 100 [\%]$$

Cal

$$a = 0,0000 \quad R^2 = 0,0000$$

$$b = 0,0000$$



Options

configuration miniTOC pro

The miniTOC can be ordered as configuration with 4 inputs. This and an additional software upgrade option allows the user to measure up to 3 loops sequentially and configure the duration of the interval.



check of sample flow

Initiates alarm in case of inlet flow is zero.

pressure regulator

If the medium pressure is higher than 1 bar a pressure transducer is required.

heat exchanger

If the medium temperature is higher than 50 °C a heat exchanger is required.

miniTOC viewer

The viewer software can be used on external PC for report and print of measured data.

21 CFR part 11 software

Software with 21 CFR part11 conformity for pharma applications.



IP54

The housing protects the miniTOC from dust deposits and water jets.

offline version & autosampler

An offline configuration is available for the miniTOC. By using the offline mode of the miniTOC pro the system is also upgradable with an autosampler with 15 positions for 100 mL vials.



Consumables

Description	Cat. No.
UV reactor	921-0040
tube for peristaltic pump	825-0196
calibration solution for miniTOC, USP traceable	275-0041
SST Kit miniTOC, USP traceable	275-0042
documents for IQ/OQ validation	915-0052
documents for IQ/OQ validation (CFR conform)	915-0067
100 mL vials for autosampler	275-0046
septa for 100 mL vials	275-0060



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Made in Germany, more than 25 years...



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