



TOC
DETECTOR



uniTOC

*total organic carbon analyzer
from water to ultra pure water*



The uniTOC system is designed for total organic carbon (TOC) online/ offline monitoring from water to ultra pure water.

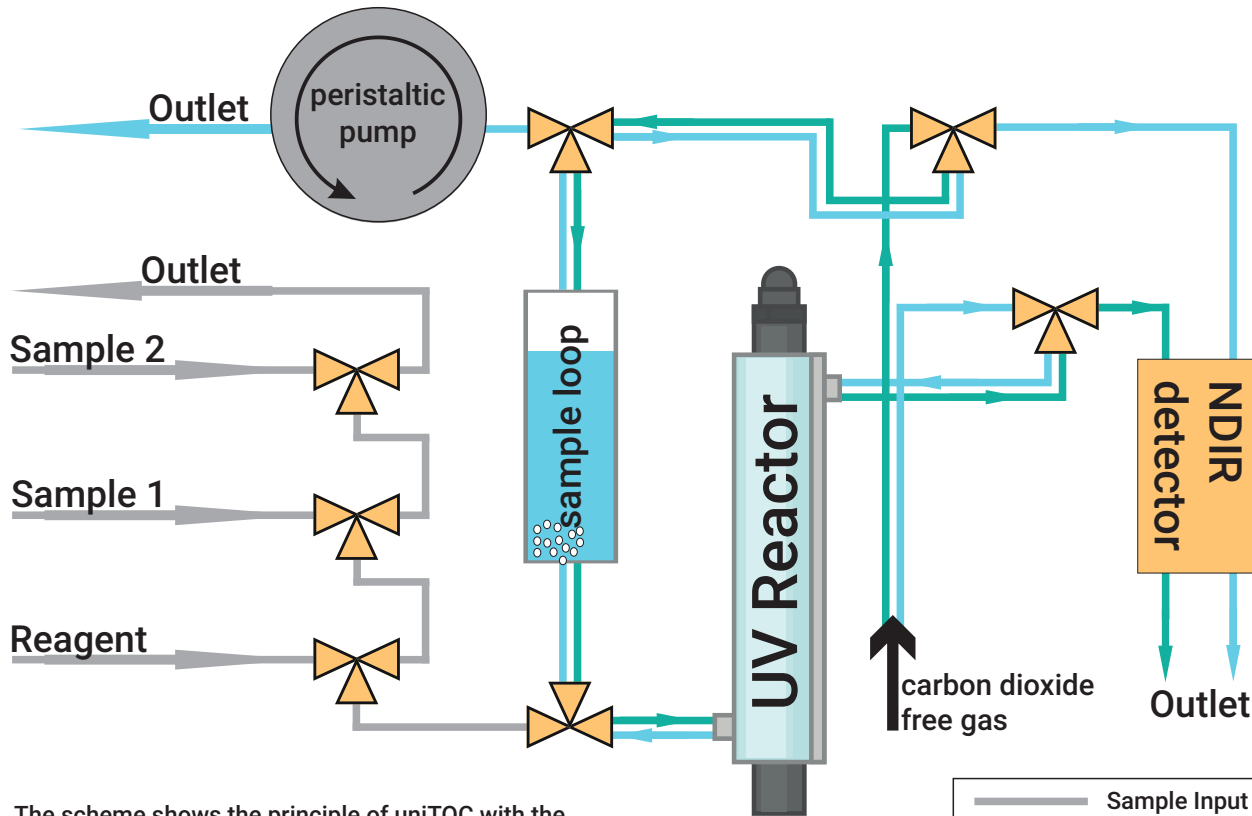
The uniTOC instrument uses the full oxidation by UV. The oxidation process can be enhanced with additional dosage of reagent.

The NDIR detector (non dispersive infrared) is absolutely selective to carbon dioxide and therefore independent from conductivity and sample temperature.

In a first step the TIC (total inorganic carbon) is removed with carbon dioxide free stripped gas and after that the TOC value is measured.



Principle of uniTOC



The scheme shows the principle of uniTOC with the two different pathways for TIC and TOC and the principle of measuring the TOC value.

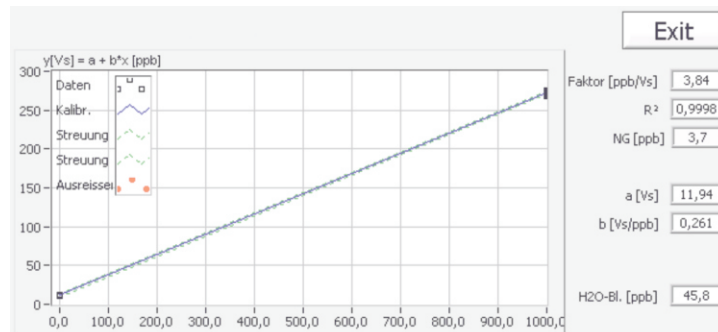
Technical Specifications



method & detection	UV oxidation & NDIR (enhanced oxidation; configurable with reagent)
sample volume	20 mL loop (low range), 5 mL loop (high range)
period of measurement	5 to 15 min
measurement range	2 to 5000 ppb (low range), 15 ppb to 20000 ppb (high range)
detection accuracy	± 3 ppb or 2 % (whatever is greater)
ports	2 for samples 1 for reagent
related norms	USP <643>, DIN 32645, EP 2.2.44, DIN EN 1484, 21 CFR part 11, IP 45
ambient parameters	relative humidity: 10 to 95 %, temperature: 10 to 45 °C
interface ports	analog (4 - 20 mA)
dimensions, weight, power	400 x 300 x 600 mm, 24 kg, 110 - 230 V, 50 Hz, 70 to 105 Watt

Sample Requirements

type of sample	from water to ultra pure water
size of particles in sample	< 200 μm
sample temperature	10 to 50 $^{\circ}\text{C}$
inlet pressure	< 1.5 bar
compressed gas	air, oxygen, nitrogen free of carbon dioxide
inlet pressure of gas	nitrogen/oxygen: 1 to 1.5 bar air: 3.5 to 5 bar



Options



pressure regulator for sample inlet flow

If the feed pressure is higher than 1.5 bar a pressure reducer is required.

offline version

An offline configuration is available for the uniTOC.

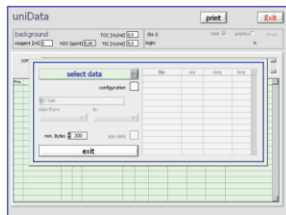
heat exchanger

keeps the temperature below 50 °C degrees.



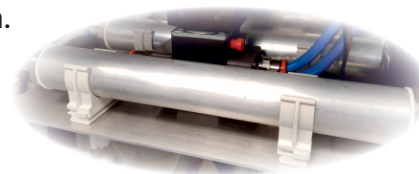
unidata software for additional PC

enables the user to evaluate the results at an external computer.



air filtration unit

to use compressed air instead of oxygen or nitrogen.



Consumables

Description	Cat. No.
UV reactor for low range	921-0002
UV reactor for high range	921-0567
silicon tube for uniTOC	921-0331
calibration solution for uniTOC, USP traceable	275-0041
SST Kit uniTOC, USP traceable	275-0042
documents IQ/OQ	915-0068
documents PQ	915-0075



TOC
DETECTOR

Made in Germany, more than 25 years...



membraPure GmbH

Wolfgang-Küntschers-Str. 14,
16761 Hennigsdorf/Berlin, Germany
Tel.: +49 3302 - 201 20 0



info@membrapure.de
www.membrapure.de