

# TOC Fusion UV-Persulfate TOC Analyzer and Autosampler System

## Specifications

<b>Chemistry:</b>	Photochemical Oxidation via UV-Persulfate	
<b>Detector:</b>	Nondispersive Infrared (NDIR) with Static Pressure Concentration (SPC) – <i>Patent-Pending</i>	
<b>Analytical Modes:</b>	TOC (NPOC), TC-IC, TC,IC, (POC optional)	
<b>Analytical:</b>	Limit of Detection: 0.5 ppb Maximum Measurable Concentration: 4,000 ppm (sample volume and dilution dependent) Carryover: ≤ 1.0% Cross Contamination Sample Size: 20 µl to 20 mL Precision*: ≤ 1.0% RSD, +/- 1ppb or +/- 0.02 ugC, typical of a mid-range standard (whichever is greater over seven replicates).** * Analytical performance affected by laboratory water, reagent and gas purity, as well as sample container cleanliness, sample matrix, gas regulator cleanliness and precision, and operator skill. ** %CV Area, as opposed to %CV and %RSD, calculates precision <u>before</u> blank subtraction. This yields a lower precision measurement, but improves sensitivity and accuracy	
<b>Analysis Time:</b>	18 Minutes for Triplicate TOC Analysis of a Mid Range Standard	
<b>Carrier Gas Handling:</b>	Mass Flow Controller for instant control of carrier gas (0 – 500 ml/min). Auto-Leak Check.	
<b>Liquid Handling:</b>	Syringe pump, 8-port distribution valve Patented self-cleaning sample handling process that cleans reactor chambers on every repetition.	
<b>Sample Introduction:</b>	Integrated Autosampler	
<b>Controller:</b>	PC, Interface through Windows™ 2000 and XP Options: Integrated PC, TouchScreen Monitor Display and Attached Multi-Rotational Arm	
<b>Data Handling:</b>	Reports exportable XML and HTML format Real-time and Historical graphical display of NDIR detector data Ability to view historical results from multiple schedules on one graphical display. Ability to store customized individual test methods Priority samples via schedule interrupt Recalculation of data, outlier deletions, and precision performance criteria controls (21 CFR Part 11 compliant)	
<b>Calibration:</b>	Auto-Calibration from Single Stock Standards or User Calibration Standards. Multi-point (Linear or Quadratic) and auto-blanking Ability to use one calibration curve and blank for entire instruments' analytical range. Auto-Check Standards from Single Stock Standards or User Calibration Standards with pass/fail criteria and decision control upon failure (Halt, Re-Calibrate, or Continue) Auto-System Suitability with Performance Measurements.	
<b>21 CFR Part 11 Software Compliance:</b>	Teklink TOC Software is a 21 CFR Part 11 tool for your laboratory compliance.	
<b>Other Features:</b>	Pre-programmed point and click method setup Automatic shutdown/standby Instrument condition light Built-in PC Standalone Feature with Touchscreen attached to instrument.	Programmable install flow rate and pressure control and monitoring Validation Support Package available Auto-dilution of samples/standards

<b>Principle Applications:</b>	Drinking and Surface Water, Ground Water, Cleaning In Place (CIP) Validation, Water for Injection (WFI), Boiler Feed Water, Cooling Water	
<b>Official Methods:</b>	EPA 415.1- 415.3, 9060A Standard Method 5310C, ASTM D4779 and D4839, prENV 13370, and Cleaning Validation / USP TOC Method <643>/EP 2.2.44/JP	
<b>Certification:</b>	CE, EMC EN 50081-1 and EN 50082-1	
<b>Utility Requirements:</b>	Voltage:	100/120/230 VAC ( $\pm 10\%$ )
	Frequency:	50/60 Hz
	Power:	368 VA
<b>Dimensions:</b>	Fusion dimensions are 18" wide, 24.5" deep, 32" high Typical computer dimensions are 18" wide, 27" deep, 22" high	
<b>Gas Supply</b>	99.99% pure nitrogen cylinder 99.5+% nitrogen (with Piccolo Nitrogen Generator)	
<b>Gas Pressure:</b>	65 to 100 psi	
<b>Autosampler</b>		
<b>Positioning Performance:</b>	Accuracy: $\pm 2.5\text{mm}$ Repeatability: $\pm 0.25\text{mm}$	
<b>Septum Piercing:</b>	Vertical punch strength of 3.8 kg (8.3 lbs.)	
<b>Rinsing:</b>	Auto-rinsing from sample and/or rinse water via built-in rinse station.	
<b>Rack Selection:</b>	<ul style="list-style-type: none"> <li>• 75 position; 40ml VOA vials (28 x 95 mm)</li> <li>• 90 position; 55ml test tubes (25 x 150 mm)*</li> <li>• 120 position; 20ml test tubes (18 x 150 mm)</li> </ul> * Screw cap tube has 50 mL capacity to neck. Disposable tube has approx. overflow capacity of 60 mL.	
<b>Dimensions:</b>	21.1" W x 17.2" D x 14.6" H (53.5cm W x 43.7cm D x 37.1cm H) 39 lbs. (17.7 kg)	
<b>Electrical:</b>	Voltage: 100/120/230 VAC ( $\pm 10\%$ )	Power: 200VA
	Frequency: 50/60 Hz	
<b>Certification:</b>	UL, CSA, and CE; EMC EN50081-1 and EN 50082-1	

Minimum Computer Requirements	
Processor	1Ghz Pentium or equivalent
Memory	512MB
Hard Drive	1GB of free Hard Drive space
Display	VGA or higher resolution
Drive	4X CD-ROM
Input/Output Devices	Mouse, Windows XP SP2 Compatible Speakers and sound system