

TOC/TN_b Analyzers

multi N/C[®] series



multi N/C[®] series

Device models

multi N/C[®] 2100

- Thermocatalytic oxidation up to 950 °C
- Focus Radiation NDIR Detection for TOC analysis
- Sample feed by direct injection
- Auto-protection and SCS
- Upgradeable for TN_b analysis either with electrochemical detector (ChD)
- Upgradeable with autosampler for liquid samples with 60 or 112 places
- Upgradeable with Double Furnace or HT 1300 for solid analysis
- Suitable for simple TOC/TN_b applications
- Available with PC software

multi N/C[®] 2100 S

- Thermocatalytic oxidation up to 950 °C
- Focus Radiation NDIR Detection for TOC analysis
- Sample feed by direct injection
- VITA[®] Flow Management System
- Easy Cal, Auto-protection and SCS
- Upgradeable for TN_b analysis either with electrochemical detector (ChD) or Chemiluminescence (CLD)
- Upgradeable with autosampler for liquid samples with 60 or 112 places
- Upgradeable with Double Furnace or HT 1300 for solid analysis
- Suitable for all TOC/TN_b applications for environmental monitoring
- Available with PC software or operation via touch screen

multi N/C[®] 3100

- Thermocatalytic oxidation up to 950 °C
- Focus Radiation NDIR Detection for TOC analysis
- Sample feed by flow injection
- VITA[®] Flow Management System
- Easy Cal, Auto-protection and SCS
- Upgradeable for TN_b analysis either with electrochemical detector (ChD) or Chemiluminescence (CLD)
- Upgradeable with different autosamplers for liquid samples with 146, 100, 72, 64, 52, 47, 21 or 10 places
- Upgradeable with HT 1300 for solid analysis
- Suitable for all TOC/TN_b applications
- Available with PC software or operation via touch screen

multi N/C® UV HS

- Wet chemical UV/persulfate digestion
 - Focus Radiation NDIR Detection for TOC analysis
 - Sample feed by flow injection
 - VITA® Flow Management System
 - Easy Cal, Auto-protection and SCS
 - Upgradeable with different autosamplers for liquid samples with 146, 100, 72, 64, 52, 21 or 10 places
 - Upgradeable with HT 1300 for solid analysis,
 - Suitable for diverse TOC applications, especially also for aggressive matrices
 - Available with PC software
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multi N/C® pharma UV

- Wet chemical UV/persulfate digestion
 - Focus Radiation NDIR Detection for TOC analysis
 - Sample feed by flow injection
 - VITA® Flow Management System
 - Easy Cal, Auto-protection and SCS
 - Upgradeable with different autosamplers for liquid samples with 72, 64, 52, 21, 20 or 10 places
 - Suitable especially for TOC applications in pharmaceutical industry (e.g. purified water, water for injection, final rinse water or extracted swabs from cleaning validation procedures)
 - Available with pharma PC software
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multi N/C® pharma HT

- Thermocatalytic oxidation up to 950 °C
 - Focus Radiation NDIR Detection for TOC analysis
 - Sample feed by flow injection
 - VITA® Flow Management System
 - Easy Cal, Auto-protection and SCS
 - Upgradeable for TN analysis with Chemiluminescence detector (CLD)
 - Upgradeable with different autosamplers for liquid samples with 72, 64, 52, 21, 20 or 10 places
 - Upgradeable with swab test module for direct combustion of swabs (cleaning validation)
 - Suitable especially for TOC/TN applications in pharmaceutical industry (e.g. purified water, water for injection, final rinse water or extracted swabs from cleaning validation procedures)
 - Available with pharma PC software
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Dimension of basic device 513 mm x 464 mm x 550 mm

Weight of basic device ca. 30 kg

Power requirements 115/230 V; 50/60 Hz; 10 A/6.3 A; 1000 VA

Model	multi N/C® 2100	multi N/C® 2100S	multi N/C® 3100	multi N/C® UV HS	multi N/C® pharma UV	multi N/C® pharma HT
Digestion mode	High temperature combustion up to 950 °C			Wet chemical oxidation by UV (254nm+185 nm)/persulfate		High temperature combustion up to 950 °C
Detection of CO₂	Focus Radiation NDIR detector					
Control by	PC	PC or stand alone option		PC	PC	PC
Parameters	TC, TIC, TOC, NPOC, NPOC plus, POC (indirect measurement)					
Optional parameters	TN (ChD)	TN (ChD oder CLD)	TN (ChD or CLD), POC direct	-	-	TN (CLD)
Measurement range	0–30,000 mg/l C			0–10,000 mg/l C		
Limit of Detection	200 µg/l C	50 µg/l C	4 µg/l C	2 µg/l C		4 µg/l C
Measurement accuracy (reproducibility)	CV 2–3%	CV 1–2%				
Measuring time	approx. 3–5 min for each parameter					
Sample injection	direct injection	Septum-free direct injection	Automatic flow injection with intelligent rinsing	Automatic flow injection		
Injection volume	50–500 µl variable		100–1,000 µl variable	50–20,000 µl variable		50–3,000 µl variable
Special features	Auto-protection, Self Check System	VITA® Flow Management System, Auto-protection, Self Check System (SCS), Easy Cal				
TIC elimination for NPOC mode	acidification and purging + TIC control measurement					
Automatic system tightness control	no	yes				
Automatic dilution	-	-	Dilution factor 5–100	-	-	-
Required gas	synthetic air or oxygen			nitrogen		oxygen
Gas consumption	approx. 1800 l/month		approx. 2200 l/month	approx. 1600 l/month		approx. 1400 l/month
	(calculated for 8 hours/day x 5 days/week operation)					
Power supply	110 V or 230 V AC as ordered, 50/60 Hz, 1000 VA					
Dimensions (W x H x D)	513 mm x 464 mm x 550 mm					
Weight	Approx. 30 kg					
Upgrade for solid samples	Double furnace solid module or HT 1300		HT 1300	-	Swab test module	
Sampler options	AS 60		AS 10, AS 21, AS vario, EPA sampler			
Included Software	PC software multiWin®				Pharma PC software multiWin®	
Software Options	-	Stand alone software (included in SA-Option)		-	-	-