

## matrixFlu UV

35S10XXXX



Our high-end matrixFlu UV fluorometer combines multiple excitation and detection wavelengths for fluorescence measurements in a single device with a highly compact design. The special optical arrangement of excitation and detection channels enables not only single values to be determined, but also a 3x4 matrix of wavelength combinations. This allows quasi synchronous in-situ detection of EEMs (Excitation Emission Matrices).

MatrixFlu UV is primarily designed for the detection of PAH's (polycyclic aromatic hydrocarbons), BTX (Benzene, Toluene, Xylene), CDOM (colored dissolved organic matter), and TRP (Tryptophan) concentration.

### Benefits

- Without sampling and preparation of test samples
- Real-time sensor
- Without reagents
- Optical window with nano coating

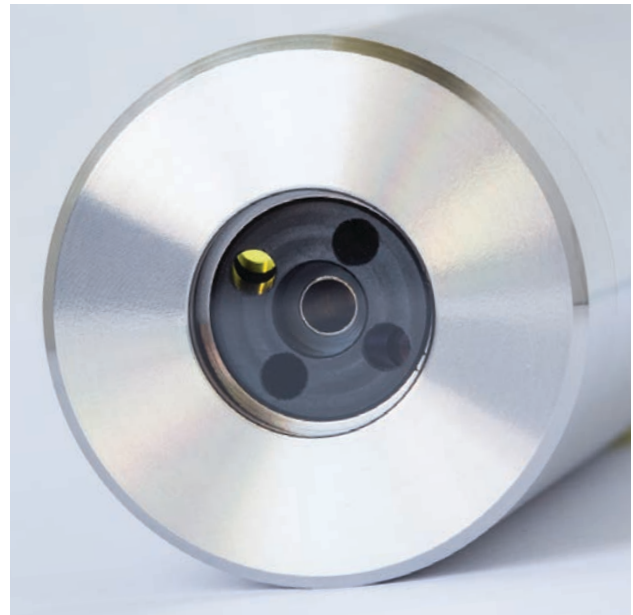
### Applications

- Surface water
- Bathing lakes
- Drinking water production and treatment
- Raw water treatment
- Environmental monitoring

State-of-the-art, specially selected LEDs are used for fluorescence excitation. The stability of measured values is increased by an internal temperature correction.

Equipped with our innovative G2 interface with web browser configuration, internal data logger, flexible protocols and data outputs, matrixFlu UV offers extensive features that go significantly beyond what's available on the market today.

The state-of-the-art G2 interface not only ensures quick integration into third-party systems, but also use of the wide range of accessories for our devices.



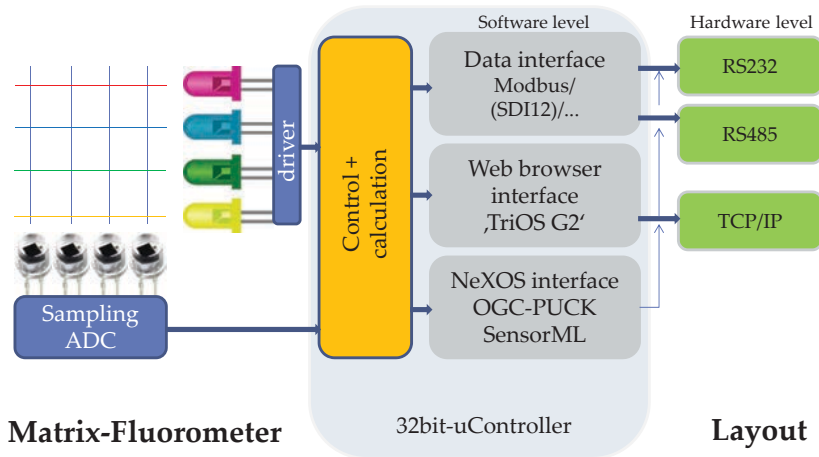
Detail of design for 3x4 wavelengths



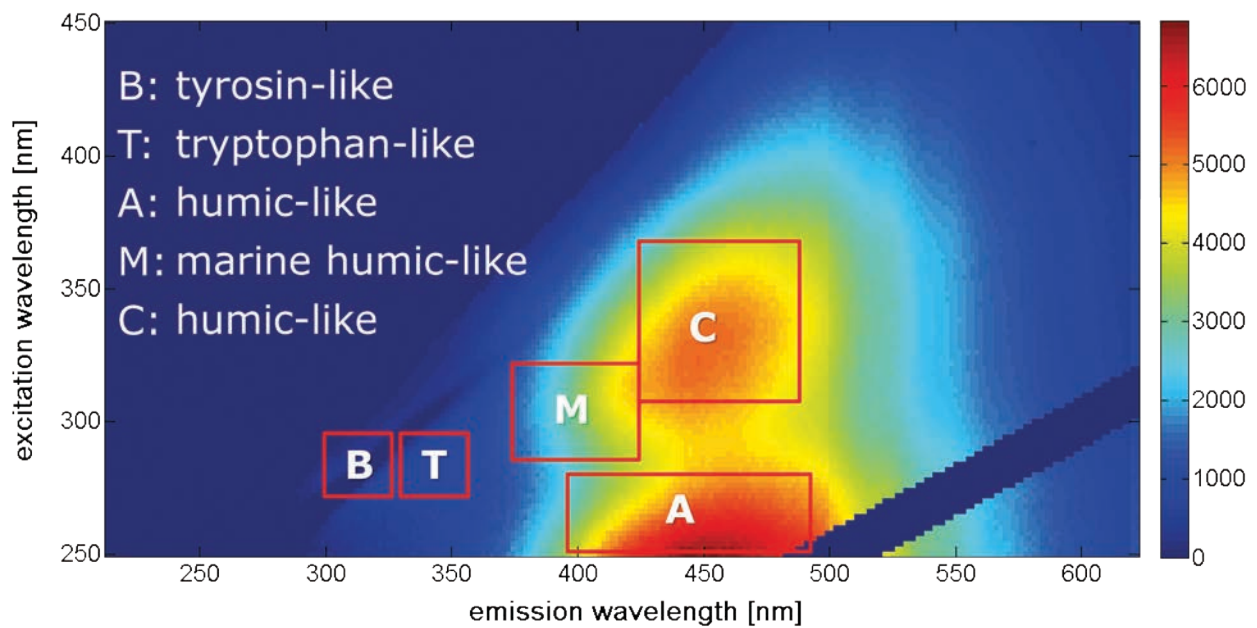
The development was part of the NEXOS project and was funded by the European Union.

		Em			
Ex		289	360	460	540
254	BTX	PAH	CDOM 1	CDOM 4	
280	scat 280	TRP	CDOM 2	CDOM 5	
320	XX1	XX2	CDOM 3	CDOM 6	

## matrixFlu Interface



NeXOS 5<sup>th</sup> Project Meeting – 28&29 October 2015 – UPC, Vilanova i la Geltrú



## Technical Specifications

<b>Measurement technology</b>	light source	LED (254 nm/280 nm/320 nm)
	detector	4 photo diodes with filter
<b>Measurement principle</b>		Fluorescence
<b>Parameter</b>	PAH [ $\mu\text{g/L}$ ]	
	BTX [ $\mu\text{g/L}$ ]	
	CDOM [ $\mu\text{g/L}$ ]	
	TRP [ $\mu\text{g/L}$ ]	
<b>Measuring range</b>		0...500 $\mu\text{g/L}$ PAH · 0...1000 $\mu\text{g/L}$ BTX · 0...200 $\mu\text{g/L}$ CDOM
<b>Measurement accuracy</b>		5 %
<b>Turbidity compensation</b>		No
<b>Data logger</b>		~ 10 MB
<b>T100 response time</b>		12 s
<b>Measurement interval</b>		6 s
<b>Housing material</b>		Stainless steel (1.4571/1.4404) or titanium (3.7035)
<b>Dimensions (L x Ø)</b>		155 mm x 36 mm
<b>Weight</b>	stainless steel	~ 0.6 kg
	titanium	~ 0,5 kg
<b>Interface</b>	digital	Ethernet (TCP/IP) RS-232 oder RS-485 (Modbus RTU, OGC PUCK)
	analog	-
<b>Power consumption</b>		$\leq 1.8 \text{ W}$
<b>Power supply</b>		12...24 VDC ( $\pm 10 \%$ )
<b>Maintenance effort</b>		$\leq 0.5 \text{ h/month}$ (typical)
<b>Calibration/maintenance interval</b>		24 months
<b>System compatibility</b>		Modbus RTU, OGC PUCK
<b>Warranty</b>		1 year (EU: 2 years)
<b>INSTALLATION</b>		
<b>Max. pressure</b>	with SubConn	30 bar
	with fixed cable	3 bar
	in FlowCell	1 bar, 2...4 L/min
<b>Protection type</b>		IP68
<b>Sample temperature</b>		+2...+40 °C
<b>Ambient temperature</b>		+2...+40 °C
<b>Storage temperature</b>		-20...+80 °C
<b>Inflow velocity</b>		0.1...5m/s