



OptiLIS 201 & 301

**Online multi-parameter
continuous water analyzers**



**These two analyzers enable you to control
both water quality and effluents**

ADVANTAGES

- × **No re-agent or prior filtration**
- × **Self-cleaning measurement cell**
- × **Ultra-low running costs**
- × **100% autonomy**
- × **Flash lamp (product life > 5 years)**
- × **Integrated sampling system**
- × **Multi-channel option (1)**
- × **Dilution option (2)**

(1) The MULTI-CHANNEL option means that you will be able to analyze effluent from 3 different sampling locations with one single device.

(2) The DILUTION SYSTEM will enable you to increase the measurement range of the **OptiLIS** thus guaranteeing that the parameters will be accurately measured even with highly polluted water.

PARAMETERS MEASURED

COD
BOD
TOC
SS
TURBIDITY (*)
NITRATES (*)
COLOURS (*)
DISSOLVED OXYGEN
TEMPERATURE
CONDUCTIVITY
PH
REDOX

(*) 301 only



MEASUREMENT PRINCIPLE

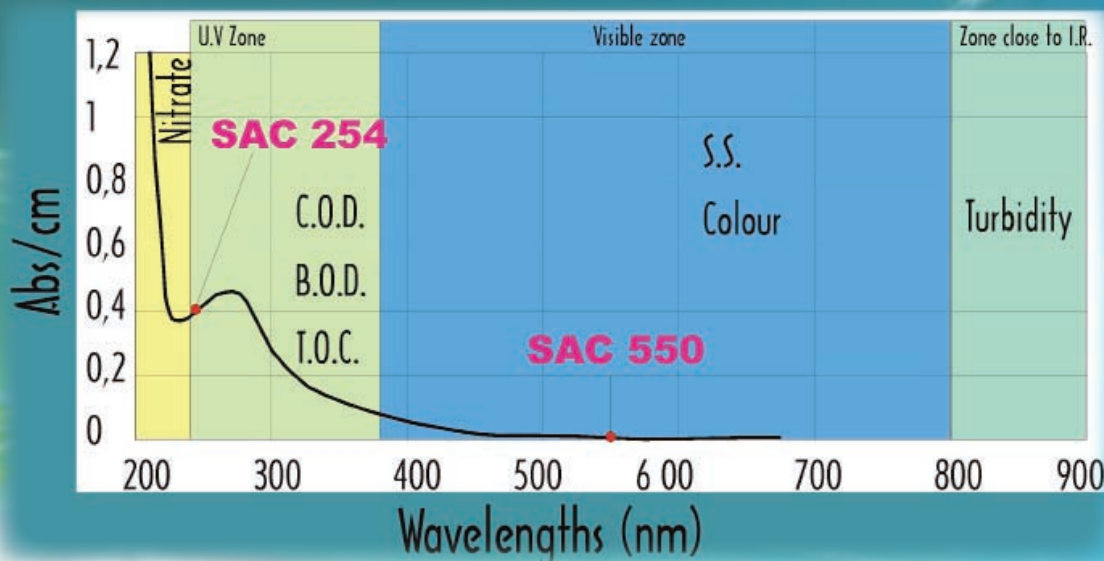
The **OptiLIS** water analyzers obtain their measurements by means of **absorption spectrophotometry both visible and in UV.**

Organic matter has the property of absorbing light in the UV (the absorption spectrum), in the same manner as certain mineral substances such as ion nitrate. Other particles, such as suspended solids, also absorb visible light.

A beam of light containing wavelengths going from the ultra-violet to the visible crosses a transparent cell containing the sample and undergoes a quantifiable attenuation.

A mathematical calculation (based on Beer Lambert's law) enables the concentrations of the different parameters required for the sample to be calculated based on the absorption measured with the different wavelengths.

ABSORPTION SPECTRUM OF RESIDUAL WATER



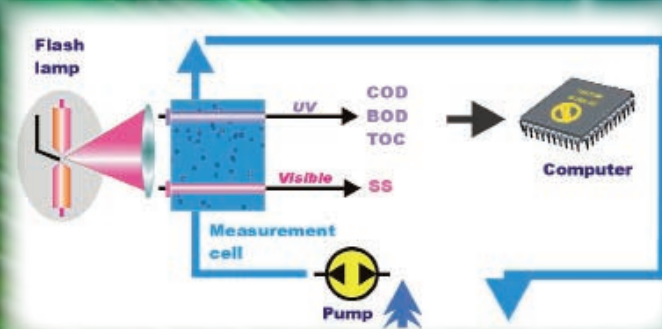
CAS254 : absorption coefficient at 254nm
CAS550 : absorption coefficient at 550nm

THE MODELS

OptiLIS 201

This is the basic version of the UV-visible analyzers.

It uses the « bi-lambda » measurement method. The device measures absorption at 2 distinct wavelengths - 254nm (UV) and 550nm (visible). The term frequently used for the absorption of a measured sample at 254nm is SAC254 (Spectral Absorption Coefficient at 254nm).

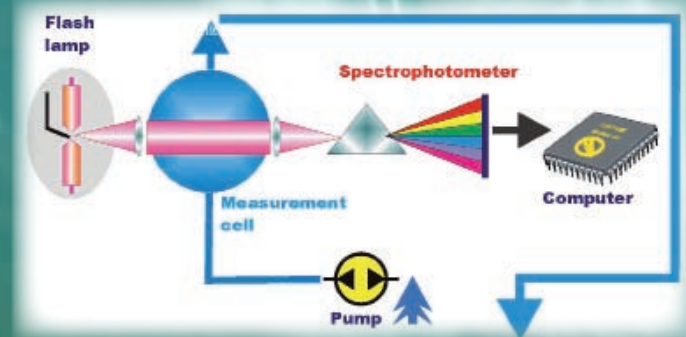


These two wavelengths enable the **OptiLIS 201** to determine the concentrations of COD, BOD, COT and SS in the effluent. The calibration is performed automatically by the device which determines the regression line between the SAC values and the values measured in a laboratory of the different samples.

OptiLIS 301

This is the top-of-the-range version of the UV-visible analyzers.

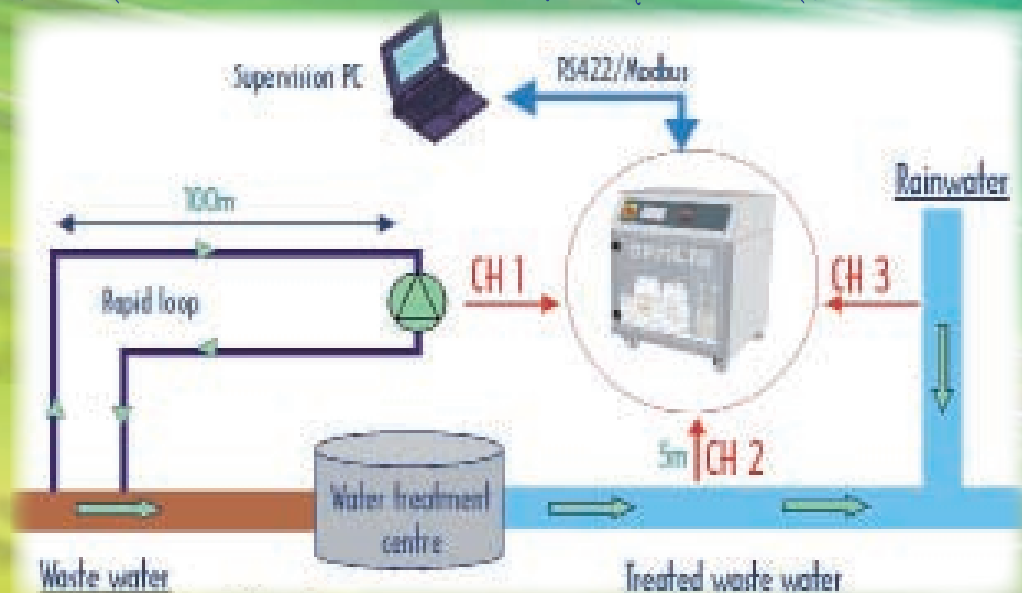
This analyzer works on the principle of spectral recognition. The **OptiLIS 301** not only acquires the SAC254 and SAC550 but also provides the complete absorption spectrum of the sample between 190nm and 720nm.



The information contained in the spectrum enables the device to determine more parameters than the OptiLIS 201 (nitrates, colours, turbidity) as well as providing more precise measurements for effluents whose pollution matrix is complex and variable over time.

EXAMPLE OF THE ANALYSIS PROCESS

Example of the analysis process with an **OptiLIS 301** complete with a Multi-Channel system.





MEASUREMENT RANGES

The dilution unit increases the range of each parameter by a factor of 30

	201 (*) without dilution unit	301 (*) with dilution unit
COD	0 - 1000 mg/l	0 - 12000 mg / l
TOC	0 - 400 mgC/l	0 - 4800 mgC / l
BOD	0 - 500 mgO ₂ /l	0 - 6000 mgO ₂ / l
SS	0 - 1000 mg/l	0 - 30000 mg / l
TURBIDITY	x	0 - 30000 FTU
NITRATE	x	0 - 2100 mgNO ₃ / l
COLOUR 436	x	6000 UA / m
COLOUR 525	x	6000 UA / m
COLOUR 620	x	6000 UA / m
DISSOLVED OXYGEN	0 - 20 mg/l	0 - 20 mg/l
TEMPERATURE	0 - 55°C	0 - 55°C
CONDUCTIVITY	10 - 12000 µs/cm	10 - 12000 µs/cm
PH	2 - 12 u. pH	2 - 12 u. pH
REDOX	-800 - +800 mV	-800 - +800 mV

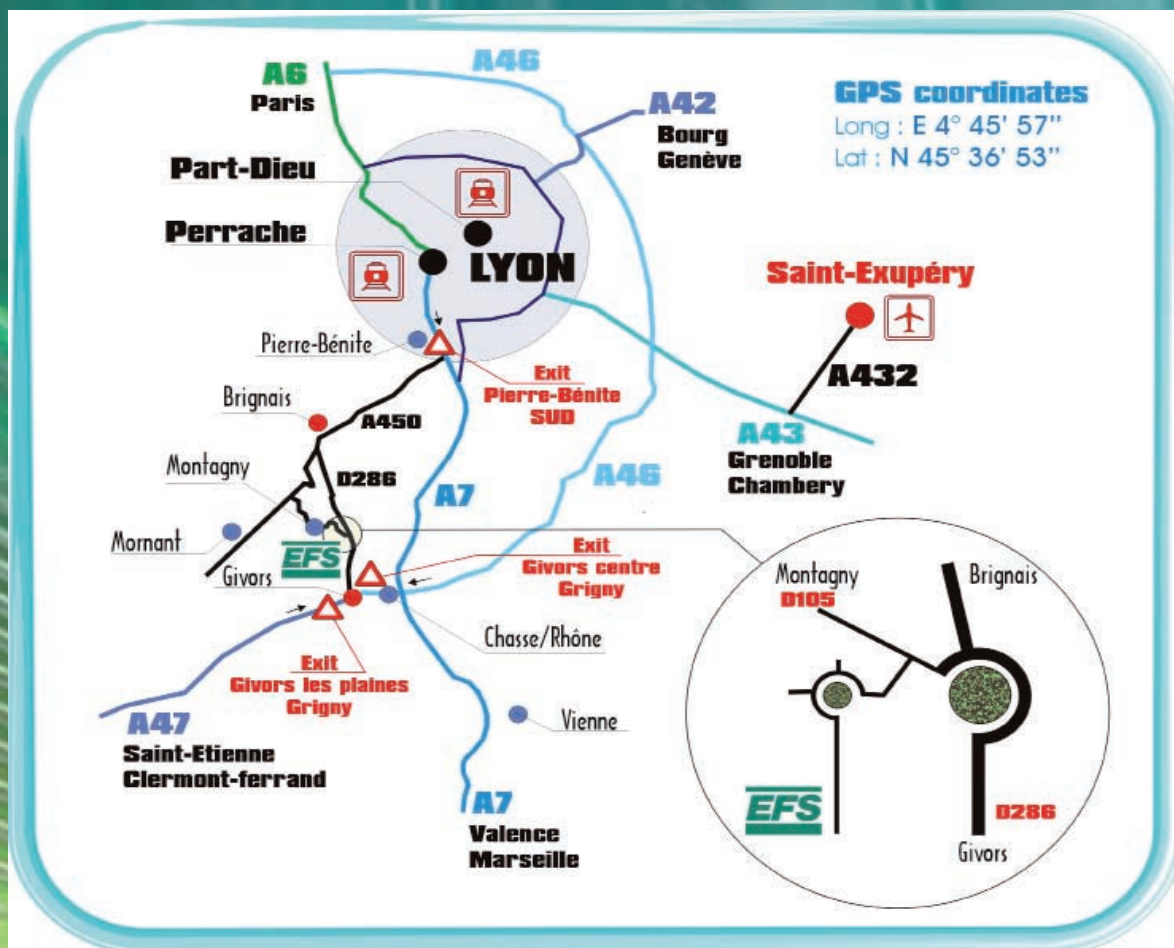
TECHNICAL SPECIFICATIONS

	201/301
Inputs	4 x 4-20mA current inputs 4 x 0-10V voltage inputs 4 dry contact inputs
Outputs	4 current outputs (4-20 mA) 4 relay outputs
Interface	Keypad and screen
Data recovery	USB Port, diskette reader
Remote communication	RS 232-422-485 (Modbus)
Sampling	Tube diameter 100mm, flow rate 130 l/ h
Dimensions	650 x 600 x 500 mm
Weight	60 kg
Ambiant operating temperature	5 - 45°C
Power supply	230 V - 50 Hz
Humidity	95% non condensed

SITE ADDRESS

Parc d'activité du Baconnet
192 Allée des Chênes
69700 MONTAGNY, FRANCE

ACCESS MAP



SUBSIDIARIES IN CHINA & THE USA

to handle technical support (installation, training, maintenance and calibration)

TELEPHONE & E-MAIL

Tel. : +33 (0)4 72 49 27 72

Fax : +33 (0)4 72 49 27 77

e-mail: sales_env@efs.fr



Brochure OPTILUS V1.0
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