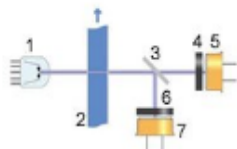


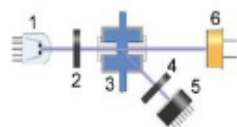
MAIN METHOD : UV-VISIBLE SPECTROSCOPY

- ▶ All the measurements (PAH, H₂S, UV254, NH₄, PO₄, Colour) are based on UV-VIS spectroscopy that brings fast and stable measurements with a simple hydraulic circuit for a high reliability.
- ▶ All the measurements are done within 5 seconds except H₂S, NH₄ and PO₄ that require about 3 minutes.
- ▶ The UV source is a xenon flash lamp specified for 10⁹ flashes that corresponds to more than 10 years of life time with one measurement every minute.
- ▶ Three external turbidity probes (high, medium and low range) are also available if the measurement need to be done in situ, for example before filtering.



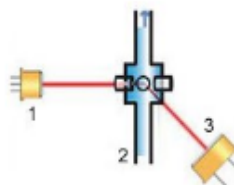
UV ABSORBANCE SPECTROSCOPY

- 1 : xenon lamps,
- 2 : flow cell,
- 3 : beam splitter,
- 4 : peak filter,
- 5 : peak detector,
- 6 : reference filter,
- 7 : reference detector



UV FLUORESCENCE PRINCIPLE

- 1 : xenon lamps,
- 2 : excitation filter,
- 3 : flow cell,
- 4 : emission filter,
- 5 : photomultiplier,
- 6 : reference photo detector



LASER DIODE TURBIDITY PRINCIPAL (NEPHELOMETRIC)

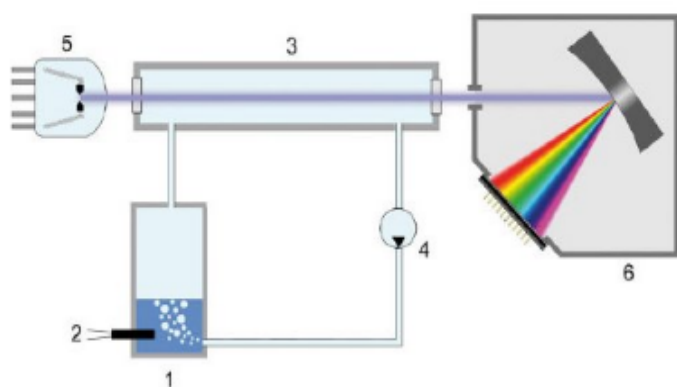
- 1 : Laser diode (650 nm or 850 nm),
- 2 : flow cell,
- 3 : Photo detector



PATENTED FLOW CELL

- 1 : Allows very high level of suspended solid without clogging for all the optical measurements making it suitable for industrial & municipal waste water application. [More...](#)

HYDROGEN SULPHIDE AND AMMONIA : A UNIQUE METHOD



1: stripping pot, 2 : temperature probe, 3 : gas flow cell, 4 : gas pump, 5 : xenon flash lamp, 6 : spectrograph

The hydrogen sulphide and ammonia measurement are based on the UV absorption of the hydrogen sulphide gas or ammonia gas after a stripping phase. Consequently, the turbidity or colour of the sample has absolutely no influence and measurements can even be carried on activated sludge.

The ammonia gas has a typical periodic absorption spectrum that is analysed using a fast Fourier transform (FFT) that brings an exceptional selectivity. No interference has never been reported after years of operation on many different applications. A small quantity of hydrochloric acid is added to the sample for hydrogen sulphide, or NaOH solution for ammonia.

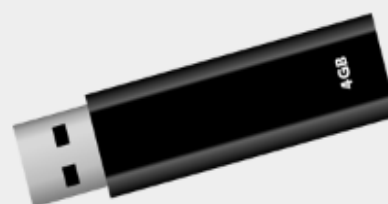
USER-FRIENDLY INTERFACE



Note: Click on image to view it large.

The colour touch screen and intuitive interface available in 8 different languages (Chinese, English, French, German, Italian, Portuguese, Spanish, Turkish) makes very easy to test or configure the analyser. Many test functions allows to test and troubleshoot each element of the analysers (light signal, pumps, solenoid valves, etc...) to setup quickly a maintenance diagnostic.

COMMUNICATION



Additional parameters are available like status code, error code, calibration values and pumps run time. Basic 4-20 mA output modules can be plugged on the main board for each measuring channel, in the limit of 12 modules. A USB port enables to download on any USB key the last 5000 recorded measurements as well as a diagnostic file containing the configuration and useful information for remote troubleshooting. The new web interface makes possible to drive remotely the analyser from any computer, tablet or i-phone with a web browser. For this, an optional Wi-Fi or Ethernet module is added inside the analyser to connect it to an existing network with an internet gateway. The recorded measurements file can be imported to Excel for graphs or other treatments. The software of the analyser can be upgraded by connecting a USB key.

LOW MAINTENANCE AND HIGH RELIABILITY

The design has been specially oriented for low maintenance and high reliability on the measurements. To avoid deposits on the optical windows and tubing, the UV400 ATEX has a built-in automatic cleaning system that injects a 5% sulphuric solution normally once day. An auto-zero is performed at the same time to avoid any drift of the measurement. The patented flow cell limit the risk of clogging inside the flow cell. The level of the cleaning solution as well as reagents for H₂S, NH₄ or PO₄ can be controlled at distance to plan the refill.

UV400 ATEX DIMENSIONAL DRAWING

