

HOCER

Environmental Engineering and Instrumentation

Presents the range of online analysers monitoring the quality of water

AQUAPOD SPE 250



RESULTS

AquaPod SPE 50 detects and raises the alarm in case of organic pollutions in water :

Pesticides

Triazines/ substituted urea/ Organophosphates/ Amids

Hydrocarbons

Diesel oil/ kerosene/ unleaded petrol 95 and 98

Industrial products

PAH/ Phenols/ BTX

Complex products

Liquid manure/ urban pollutants

Specific products

Microcystines

Anomaly of the UV spectrum

The analysis is based on the SPE/UV method

Detection levels are in the order of ppb levels:

From 0.06 ppb/l in purified water

From 0.25 ppb/l in raw water

APPLICATIONS

Online monitoring of natural water

Alert in case of accidental, chronic or malicious pollution

Free-standing analyser- Self-monitoring

Decision making support

Process control

Produced water quality control

THE SPE/UV METHOD

By using **the SPE** (Solid Phase Extraction) technique, we concentrate and extract organic pollutants during a solid phase. Hocer developed and patented a method which enables to use this principle but online and entirely automated and suited to the in-situ analysis.

The UV analysis: from the UV spectrum of the sample, the deconvolution analysis of this signal enables to separate the main UV absorbing components. Thus, it is possible to quantify the main products.

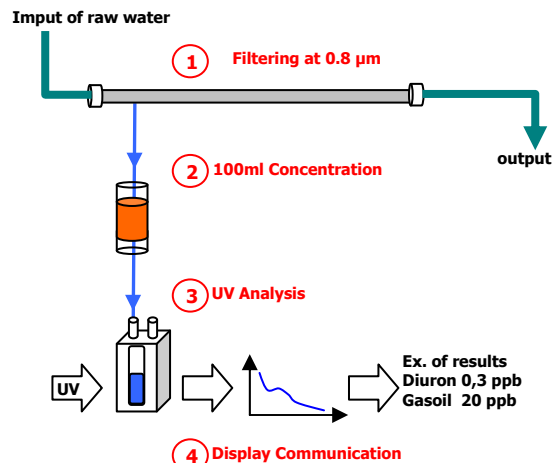
The combination of these two techniques enables to reach detection levels in the order of ppb in natural waters with values which can vary depending on the quality of water.

So low detectable levels enable to detect organic micropollutants in water.

Detectable levels might vary from 0.2 ppb for some molecules (Atrazine, Diuron) to a few ppb for some hydrocarbons.

The detection levels can be lower if the rate of dissolved organic matter is low (drinking water, some natural waters, etc.)

Generally speaking, if there is a pollution event by a pollutant which has not been recorded in AquaPod reference list, the analyser will raise the alarm, thus indicating an anomaly.



CUSTOM SERVICES

Turnkey installation – Installation of the analyser in a system already in place – installation of the hydraulic system, from the strainer to the analyser – monitoring network – data processing – Teletransmission – Supervision –Telemonitoring - Telemaintenance

OPTIONS

Concentrated fraction sampler : enables to store up to 5 samples for further laboratory analyses.

Prefiltration device: useful if the water entering into the analyser does not correspond to the technical requirements.

Remote control of the analyser: enables a remote technical assistance.

EXTENDING THE RANGE OF FEATURES

Names	UV Direct measurements	Physicochemical measurements Integration and running of sensors
Detected parameters	COD DOB TOC Nitrates SS	PH Temperature/conductivity Turbidity Dissolved Oxygen Ammonium
Raw water detectable levels	From 1 mg/l	Depends on each parameter
Drinking water detectable levels	From 1 mg/l	Depends on each parameter
Analysis frequency	Programmable	
Telemonitoring	Possible	
Maintenance	Maintenance support is possible with or without a maintenance contract	

* AquaPod can test the analysis of other pollutants as well as the integration of other sensors such as biological sensors, radioactivity measurement, and so on.

FEATURES

Hydraulic supply: prefiltered water at 1 mm, minimum flow 300l/h, pressure 1 to 3 bars.

Power supply: 220 V mains supply

Measurement range: from 0.10 to 500µg/l

Independent operation: 250 analyses, i.e. several weeks to several months depending on the analysis frequency

Analysis frequency: programmable –45 min cycles in natural waters and 90 min in drinking waters

Detection: UV-visible spectrometry/ visible with diodes

IT: PC Windows

Open-loop control and Communication: Modbus output / Profibus /Can open

Should the analyser not be equipped with a numerical input, you can buy an analogue digital card

AquaPod dimensions: H 170cm/ W 70 cm/ D 40 cm

State temperature: air: 5 to 30°C , water: 0 to 35°C and humidity : 0 to 99°C

Consumables: halogen lamp and D2 for the spectrophotometer, solvents (water, acetonitrile and methanol) and concentration cartridges

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