

DHIR Green





WATER QUALITY

VALIDATED OVER THE YEARS IN A LARGE FIELD OF **APPLICATION**

Solvay

Rhodia

Ineos

FPG Taïwan

Ciba Geigy

Sanofi

Aventis

PPG

Arkema

Asahi Glass

De Nora

Total

Samsung

Coca Cola

Lafarge

Mitsubishi

Petro Bras

Alstom...

Drinking water

Quality control at all stages: treatment, storage, distribution

Surface water

Study and design of surface water monitoring stations

Waste water

Monitoring of industrial or urban waste water

Process water

Quality control of process water

Oil & Water

Oil in Water Detection & Water in Oil storage tanks

PARAMETERS

TOTAL CHLORINE **FREE CHLORINE MORPHOLINE PHOSPHATES** AMMONIA **HYDRAZINE** COLOUR **PHENOLS**

SILICA...

TA **CHROMIUM VI MANGANESE ALUMINIUM**

COPPER NICKEL

IRON LEAD

ZINC...

HARDNESS

THT

TAC ...

CHLORIDES CYANIDES FLUORIDES SULFIDES ARSENIC SULFATES ...

CERTIFICATIONS















PROCESS CONTROL

Manufacturing industries

Drinking water

ONLINE water quality monitoring solutions for upstream and downstream purification processes.

Ensure the optimal quality all along the manufacturing and distribution network

Process water

Integrated solutions for realtime water quality measurements suited to industrial processes.

ENVIRONMENT

Environmental protection and pollution control.

Surface water

REALTIME Monitoring stations or mobile laboratories, for the protection of surface water, spring water, rivers and groundwater.

Sea water

Prevention of sea water by hydrocarbon wastes: Oil tankers, Oil Rigs, Refinery



WATER QUALITY

Environment Organizations, Water production & treatment, Oil & Gas, Petrochemical industry, Refineries, Power stations, Paper mills, Metal, food and other industries, Oil rigs, Tankers, Etc ...































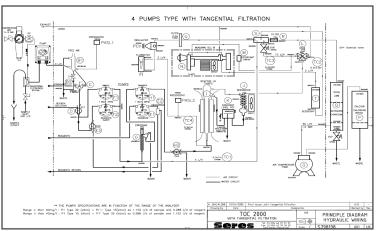




AquaGas Scope of supply

From a stand alone analyser to a complete monitoring station (stationary or mobile), AquaGas supplies turnkey systems fully integrated meeting the Australian standards and matching the exact project requirements.

Our system are delivered with a full set of documentation and a minimum warranty of one year which includes 24h/7 days email and phone support.









DHIR GREEN ONLINE WATER QUALITY ANALYSER

TOTAL HYDROCARBONS

Description

The DHIR Green analyser is an Infra-Red absorption spectrometer designed for suspended and dissolved Total Hydrocarbons continuous monitoring in water and industrial effluents. A Regeneration unit allows reducing the reagent's consumption and limiting the final waste. Self check and automatic calibration cycles ensure an optimal reliability and accuracy of the TH measurements.

Applications

Oil & Gas refineries, oil exploration

Control of industrial process Boiler cooling water / Process water

Drinking and Surface water Alert stations and environmental monitoring

Urban & industrial effluents

Water treatment



High performance Hydrocarbon ONLINE analysis



Key FEATURES

- PROGRAMMABLE MEASURING RANGE FROM 0-10 TO 0-100MG/L.
- ONLINE MONITORING WITH 15 MINUTES MEASURING CYCLES
- TOTAL HYDROCARBONS (SUSPENDED AND DISSOLVED)
- MINIMAL REAGENT'S CONSUMPTION
- LIMITED WASTE BY THE USE OF A REGENERATION UNIT



Regeneration Unit

- Online installation
- Reduced solvent consumption
- Saturation Warning and Alarm
- Wall mounting housing

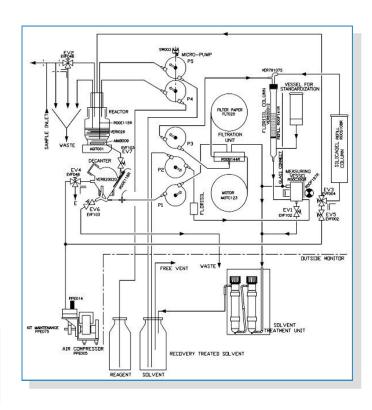
Fully automated online analyser

ANALYSIS METHOD

The standard method for measuring hydrocarbon in water using infra-red absorption spectrophotometry can be broken down in 4 successive steps:

- 1 **Sampling**: This stage of operation is most important as the sample should be truly representative and handled in a precisely defined way to avoid any risk of alteration
- 2 Extraction: The hydrocarbon oils in sample water are extracted into the solvent. Hydrochloric acid and Hyamine are used to yield solvent/water separation.
- 3 Separation: Oil loaded solvent is led to separate from the aqueous layer under gravity, desiccated through a paper filter tape and percolated in a florisil column to remove organic compounds.
- 4 Reading: Concentration of total hydrocarbons present in solvent is calculated from infra-red absorbance at 3420 nm, a wavelength specific to the most intense vibration of the C-H bond.

Once a measurement cycle is completed, the solvent is circulated through the regeneration unit and recycled for the next analyses.



DHIR Green Specifications

CONSTRUCTION & ENVIRONMENT

Dimensions Analyser: 60 x 80 x 40 cm

Regeneration cabinet: 26 x 40 x 26 cm

Weight Analyser: 90kg / Regeneration unit: 15 kg

Material Analyser: Steel Epoxy finish

Regeneration unit: Fibreglass Polyester

Environment & Installation in safe and sheltered area

Protection IP55

Ambient T° 5 to 40°C (depend method)

Relative humidity 10 to 80%

ELECTRICAL UTILITIES

Power supply 110 - 240 VAC 50 / 60 Hz

Consumption 500W

ANALYSIS

Solvent

Consumption

Parameters Total Hydrocarbons (dissolved and suspended) Ranae 0-10mg/l, 0-30mg/l, 0-100mg/l other on request Solvent AquaGas solvent in full compliance to international regulations

> DHIR without regeneration unit: 5L or 8.5 kg / month DHIR Green (with regeneration unit): 2,5 kg/month

Response time Measurement cycle: 15 minutes

Response: 20 minutes

Method IR absorption Spectrometry

Cycle duration 15 min on average

Detection Min detection limit 0.3 mg/l on 0-10mg/l range

± 1 to 3% end of range Accuracy Repeatability ± 1 to 2% end of range

CONNECTIVITY, ALARMS & COMMUNICATION

User interface Alpha-numeric monochromatic backlighted 4 lines 40

> characters Keyboards

Output signal RS232 / RS485 / JBus protocol

0-20mA or 4 - 20 mA / 500 ohms galvanic insulation

Programmable Concentration alarms (high and High-Alarms

> High). Microprocessor & analyser failure. Regeneration unit saturation: warning & Alarm

SAMPLING

Filtration if needed at 100 um Preparation

Flow: 0.5 to 1 m3/h Sample inlet

Pressure: 3 bar Temperature: 40°C

Hydraulic Sample: Inlet 1/4"BSP F

connections Outlet soft tubing 25x28mm

Volume of vessel 25 ml for potentiometry, otherwise 8 to 10 ml

OPERATION

Programmable frequency, maximum interval 12h, on Automatic Zero

Check current solvent (same bottle)

Zero reference Upon renewal of analyser tubing (every 3 months) or dismantlement of the measurement cell

Semi-automatic (injections with pre-conditioned syringcalibration

es) - Every 3 months - using standard prepared at 75% of

the Full Range

Upon renewal of tubing and columns.

HCI 0.2N + Hyamine - 2 year storage **HCI Acid &**

Hyamine

Acid consumption 5l/week

50 years of EXPERTISE in ONLINE MONITORING



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WATER QUALITY















AquaGas Products and Services



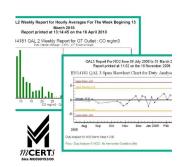
CEMS

System INTEGRATION & Innovative SAMPLING solutions



STACK TESTING

Portable equipment for short term measurement



DATA ACQUISITION

States EPA approved Data Acquisition and Handling Software



ONSITE

Maintenance commissioning Training



AQUAGAS SYSTEM INTEGRATION

More than 14 years of experience in **environmental monitoring**, AquaGas commitment in implementing innovative, reliable and cost effective solutions is undeniable. Our main focus is to meet your application requirements in due time while maintaining high quality service and relationship.

We have the **skills**, **products** and **services** in house with a full dedication to your monitoring needs, so please contact us when it comes to **environmental monitoring and industrial analysis**.

SERES Environnement analysers

SERES Environnement (FRANCE) is one of the major actors in the field of online analysis dedicated to Water Quality Monitoring in the industry and the environment. Outstanding experience, attentiveness, innovative and effective solutions are the strengths of SERES while meeting everyday challenges.

The ideal partner for Australian water quality monitoring.

Contact Us

Give us a call for more information about our services and products

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