

S/N

SULFUR & NITROGEN ANALYZER "SULUM"



Standards:

- ASTM D 5453
- ASTM D 4629
- ASTM D 5176
- ASTM D 5762

 **Eraly**
& Associés
The Elemental Analysis

SIMULTANEOUS ANALYSIS OF SULFUR AND NITROGEN:

Measure Sulfur and Nitrogen simultaneously, quickly and accurately in your solid, liquid and gaseous samples. The SULUM is an analyzer equipped with 2 detectors that can be used to measure Sulfur and / or Nitrogen on the same sample of petroleum product, solvent, oil, synthetic product, water, LPG, plastics etcThis equipment is the combination of 2 devices, without any alteration of their individual performances. Robust and reliable like all our products, it requires only minimal maintenance

THE ULTRA PERFORMANT DETECTOR:

Equipped with a soft adjustment and a high-performance optical module, it is the only device capable of dosing with excellent sensitivity and signal stability, the very low contents up to 20 ppb of Sulfur and at the same time the high contents up to 10% of Sulfur.

With its Liquid Crystal Display (LCD), it allows the operator **to display in real time:**

*Real-time synoptic flow diagram display;
Intensity of the UV Lamp signal;
Intensity of the PM signal;
The pressure of the measurement chamber;*

The detector has a linear response (1% of the point). A single point of calibration is enough.

THE HIGHLY SENSITIVE DETECTOR:

the use of an optical filter separating the reaction chamber and the detector to eliminate interferences due to hydrocarbons,

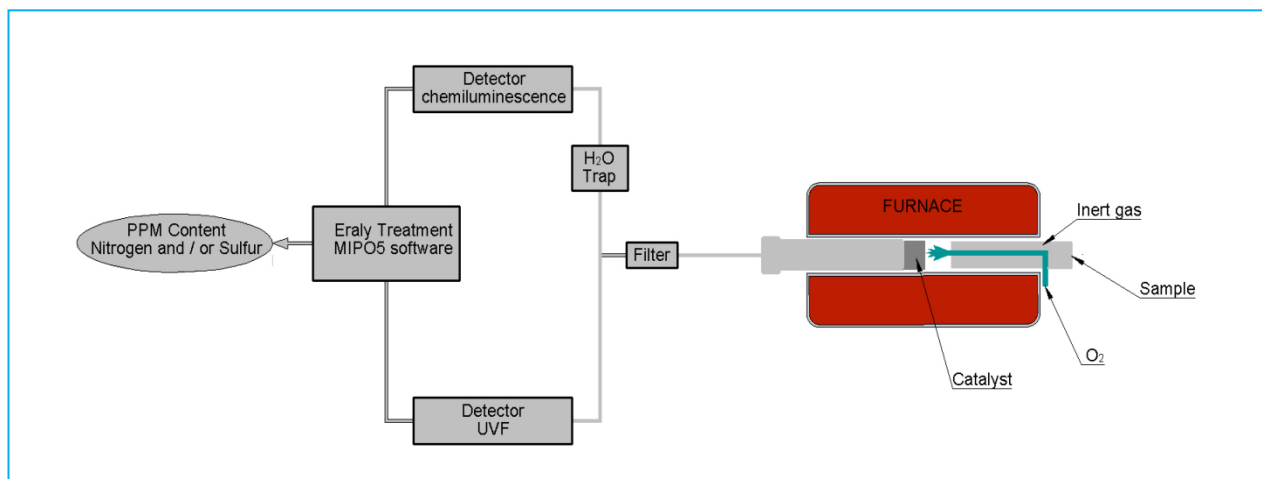
the improvement of the luminous efficiency by the optimization of the pressure inside the chamber,

filtering and drying of the combustion gases upstream from the reaction chamber,

Are factors that increase the sensitivity of the detector. This makes it possible to measure the very low nitrogen contents up to 30 ppb as well as the high contents up to 10% of nitrogen.

PRINCIPLE OF OPERATION:

After introduction of the sample into the combustion tube, it undergoes pyrolysis followed by oxidation. A part of the gas resulting from this combustion is directed to the sulfur detector where UV fluorescence takes place. The other part is directed to the nitrogen detector where the chemiluminescence takes place.



THE ADVANTAGES OF THE SIMULTANEOUS ANALYZER:

- ✓ Acquisition of the benefits of two devices at a price comparable to that of a single device.
- ✓ Reduced costs for consumables. Commons parts: furnaces and electrical interfaces.
- ✓ Save time during your measurements, dosing of two elements in one injection.
- ✓ Reduction of operator manipulations, preparation of a single sample.
- ✓ Saving space in your laboratory, two detectors in the same frame.
- ✓ Reduced maintenance costs, reduced maintenance time.
- ✓ Perform Sulfur and Nitrogen measurements simultaneously or separately.

STANDARDS:

SULFUR:

ASTM D5453
 ASTM D6667
 ASTM D7183
 ASTM D7551
 ISO 20 846

NITROGEN:

ASTM D4629
 ASTM D6069
 ASTM D5176
 ASTM D7184
 ASTM D5762
 NF EN 12260

Principle	Combustion – UV Fluorescence / Chemiluminescence		
SULFUR			
Detection Limit	10 ppb to 10%		
Quantification	20 ppb to 10%.		
Accuracy	At 0.1 ppm	At 1 ppm	At 100 ppm
RSD	0.61 %	0.48 %	1.04 %.
NITROGEN			
Detection Limit	20 ppb to 10%		
Quantification	30 ppb to 10%.		
Accuracy	At 0.3 ppm	At 1 ppm	At 100 ppm
RSD	0.97 %	0.78 %	1.10 %.
Injections	20 to 80 µl liquids	1 to 25 ml gas	10µL LPG
Supply : Gas	Oxygen 99.998% - 3 bar		Argon 99.995 % - 3 bar.
Electric	110 V / 230 V 60Hz – 50 Hz 1200 W		
Temperature	Furnace F2 25 to 1050°C / Furnace F1 programmable 25 to 980 °C.		

DIMENSIONS	Length	Height	Depth
VERTICAL CONFIGURATION	46 cm	65 cm	56 cm
HORIZONTAL CONFIGURATION	84 cm	48 cm	55 cm

ACCESSORIES

GAS AND LPG AUTO SAMPLER:

- Composed of a 6 ways 2 positions valve with sampling loop, for Gas / the same for LPG.
- LPG expansion volume, 15 ml.
- Temperature of LPG expansion volume adjustable between 50 and 150°C (nominal 80°C).
- Compatible with standard: ASTM D6667.
- Handle by our Software MIPO5.
- Standard ASTM D6667



Used for sampling and injecting gases and LPG.

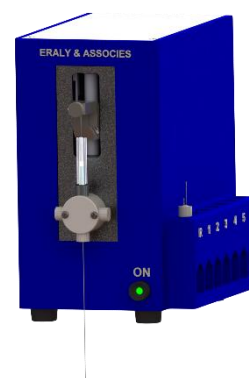
AUTOMATIC LIQUID SAMPLER:

- Tray of 25 to 50 positions for vials between 2 to 8 ml.
- 3 axes system for sampling / injecting / rinsing.
- Sampling volume adjustable between 10 µl and 100 µl.
- Sampling speed adjustable.
- Handle by our Software MIPO5.
- Tray and number of positions customizable according your need.

Used for sampling and injecting Liquids

MINI AUTOMATIC LIQUID SAMPLER:

- Equipped of a tray with 5 to 7 positions, plus trash and rinsing vials.
- System with a multiway valve for sampling / injecting and rinsing.
- Sampling volume adjustable between 10 µl and 80 µl.
- Sampling speed adjustable.
- Handle by our Software MIPO5



Used for sampling and injecting Liquids