



C/10-20/0109



## CONTINUOUS MEASUREMENT of SULPHUR in GASES



Measure by UV FLUORESCENCE

From **5 ppb** to **10 ppm**

In **alimentary CO<sub>2</sub>**

### PRINCIPLE

Combustion under oxygen of sulphured compounds with formation of SO<sub>2</sub> measured continuously by a specific UV fluorescent detector.

### APPLICATION FIELD

Mainly control of alimentary CO<sub>2</sub>, and also any other gas compatible with the method requirements.

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Quotation on request

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## EQUIPMENT

It is composed with :

A RACK «FURNACE AND GAS CONTROL» (19'' X 6 U X DEPTH. 600) WITH :

- 1000°C combustion furnace with temperature regulator
- quartz combustion tube
- circuits for adjustment and control of pressure and flow for pure O<sub>2</sub> and CO<sub>2</sub>
- mass flowmeter for control of CO<sub>2</sub> calibration flow
- 3 ways manual valve for direct measure of lone SO<sub>2</sub> (R4)

A RACK «MEASURE SO<sub>2</sub> BY UV FLUORESCENCE» AF 21 M (19'' X 4 U X DEPTH 650) WITH :

- continuous display of total S on LCD graphic screen
- interactive menu driven software
- programmable measurement ranges
- integrated permeation bench with certified COS tube
- zero ref. and auto calibration functions programmable or tele-controlled

PRESENTATION : the equipment can be provided :

- independent racks for integration in 19'' standard construction
- in rack height 12 U (≈ 0.80 m) to set on laboratory bench
- en rack height 36 U (≈ 1.80 m) to put on floor with small wheels (24 U available for integration other equipments)

OPTION : the furnace rack may be equipped with a 2<sup>nd</sup> furnace with temperature regulator, 2<sup>nd</sup> combustion tube, electrovalves and command circuits for differentiation of sulphured species according to the combustion temperature.

## TECHNICAL CHARACTERISTICS

- measure range : from 5 ppb to 10 ppm
- Zero drift : 2 to 3 ppb / 24 hours
- Calibration drift < 2 % / 7 days
- Linearity UV detector ± 1 % full scale
- Digital output RS 232 / RS 422
- Selectable analog output 0-1V / 0-10 V / 0-20 mA / 4-20 mA
- Certified COS permeation tube ± 5 % at 40°C
- Mass flowmeter calibrated for flow of calibration CO<sub>2</sub>
  - stability < ± 0.5 % / an
- 1000°C combustion furnace controlled by PID temperature regulator with digital display – accuracy ± 0.2 % FS
- No H<sub>2</sub>O interference (optical filter UV wavelength selection)
- No hydrocarbon interference (permeation filter)
- **Power :**  
220 V – 50 / 60 Hz (115 V on request) ≈ 500 VA
- **Gases :**  
pure O<sub>2</sub> et CO<sub>2</sub> regulated at 800 mb (input pressure between 1 and 3 bars)
- **Consumption :** O<sub>2</sub> ≈ 100 cc/mn  
pure CO<sub>2</sub> calibration mode ≈ 400 cc/mn  
sweeping (no calibration) ≈ 150 cc/mn  
CO<sub>2</sub> sample measure ≈ 400 cc/mn  
Requested minimum pressure 200 mb regulated

Calibration is rigorous and metrologically detectable with the following elements :

- Permeation bench regulated at 40°C temperature
- Certified permeation tube ± 5 %
- Calibrated mass flowmeter

Application is rapid and utilisation easy.

Maintenance is limited : the main consumption components (UV lamp, permeation tube, zero filter, quartz tube) have a lifetime of 1 to 2 years.

### UV Flu

SO<sub>2</sub> + h

SO<sub>2</sub>\* -

