C/1-10/0403

ORGANIC NITROGEN ANALYZER

by CHEMILUMINESCENCE

(Picture without associated computer)

TOTAL License

"LUMAZOTE"

Standards ASTM D 4629
D 5176 / D 5762
NF EN 12260
NF M 07 058

PRINCIPLE

mineralisation in gaseous phase of nitrogen compounds forming NO molecules detected by chemiluminescence (photomultiplier tube measures the luminous radiation emitted by reaction between NO and Ozone).

APPLICATIONS

Liquid, solid or gaseous products, essentially petroleum products, but also organic compounds compatible with the method (industrial chemical products, rubber, synthetics, and so on).

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Detailed literature and / or quotation on request

Catalogue quotation: of / /

EQUIPMENT

MINERALIZATION PART :

- a quartz tube
- a combustion and / or pyrolysis furnace (F1) whose temperature is programmable up to 1000°C to suit type of analysis
- a combustion furnace at a constant controlled temperature of 1000°C (F2) for oxidation N ➔ NO

GAS CONTROL PART :

Two gas circuits for Inert Gas and Oxygen, with gas pressure and flow regulators, pressure controllers and flowmeters.

SO_2 MEASUREMENT PART :

A specific detector of gaseous NO by chemiluminescence.

SIGNAL / CALCULATION / STORAGE PROCESSING PART

An associated computer which manages
- NO peaks integration
- calculation of calibration coefficients
- display of analysis results
- storage on hard disk
- automation and alarms.

ACCESSORIES PART :

- a syringe-pusher for automatic injection of liquid specimens at controlled speed,
- a colour printer for analysis and calibration results.

TECHNICAL CHARACTERISTICS

- Measurement range : from 0.2 ppm to within approximately 10 % (depending on the used products and mode) in three main ranges

- Accuracy : at 0.5 ppm level : about ± 0.05 ppm
  at 1000 ppm level°: about ± 15 ppm

In some particular conditions of using, obtained performances may be notably better than those given.

- Minimum maintenance and easy to operate

- Video monitor displays NO peak as soon as the test starts

- Results (calibration or analysis) are automatically calculated at the end of the test and then printed

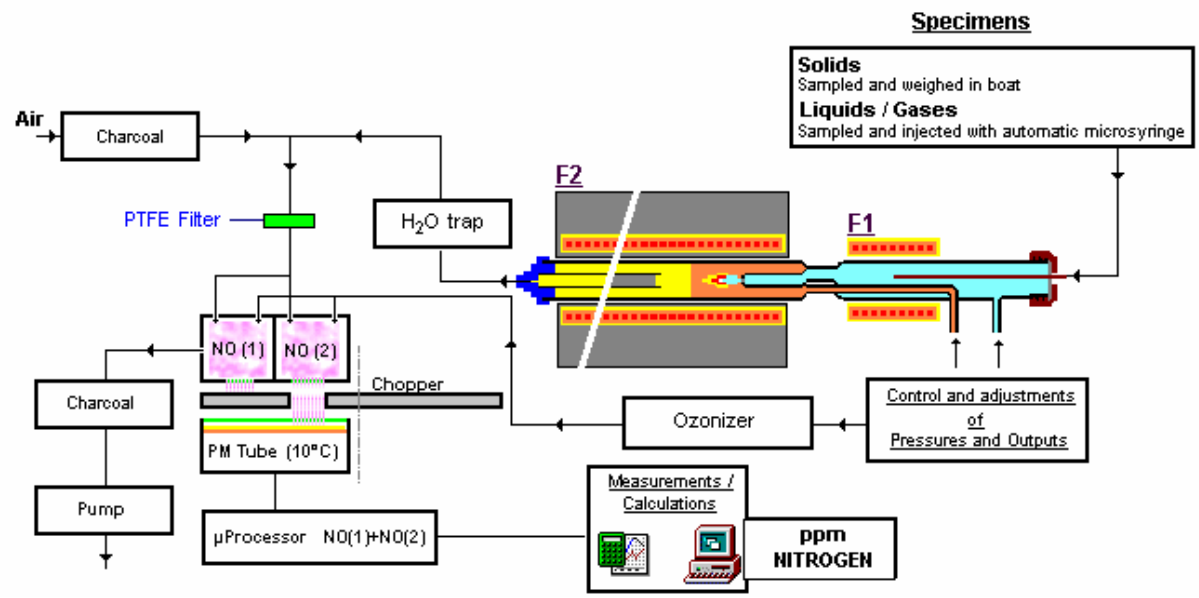
- Supply :
  . Gases : Helium or Argon (N55) and Oxygen (N48)
  . Electricity : 220 V - 50 Hz – 1200 W

- Dimensions : breadth 93 cm, height 61 cm, depth 55 cm, weight ≈ 75 kg (without computer)

- Sample size : liquids : 20 to 100 µl (syringe)
  gas : 1 to 25 ml (syringe)
  solids : 0.5 à 100 mg (porcelain boat)

- Switch from solid to liquid mode in a few minutes

- Mean analysis time :
  . about 5 minutes for liquid or gaseous samples
  . from 5 to 15 minutes for solid samples (depending on the selected programming temperature)



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