

SULFUR & NITROGEN

DIESEL

GAS OILS

GASOLINE

KEROSENE

LPG

NAPHTHA

NATURAL GAS

WATER

FUEL OIL

POLYOLEFINS

AND OTHER GASES, SOLIDS AND LIQUIDS



9000NS Series Analyzers

ADVANTAGES

- *One injection — two results*
- *Fast, precise measurement*
- *Sensitivity from low ppb to percent levels*
- *Superior to wet chemistry and other instrumental methods*
- *No environmentally hazardous catalysts or reagents*
- *No need for protective clothing, fume hoods, or other cumbersome safety devices*
- *No radioactive license required*

TOTAL SULFUR ANALYSIS

Our Pyro-fluorescent™ sulfur analysis technology is a fast, accurate quantitation method. It provides determinations for an analytical range of low ppb to 40% within minutes. This clean, interference-free instrumental method is more stable than coulometric methods and more sensitive than x-ray, without their matrix sensitivity problems.

TOTAL NITROGEN ANALYSIS

Utilizing accuracy and precision of our Pyro-chemiluminescent™ technology, the 9000 Series delivers total nitrogen determinations from low ppb levels to 17%. These results are obtained within one minute for gas and liquid samples and one to fifteen minutes for solid samples. Chemiluminescence is the clean, fast, interference-free method for determining total bound nitrogen in a variety of matrices.

METHODS

ASTM D 4629
ASTM D 5176
ASTM D 5453
ASTM D 5762
ASTM D 6667
ASTM D 6069
DIN 38409
EN 20846

ANTEK 9000 TOTAL SULFUR AND NITROGEN ANALYZERS

Fast, precise; one injection – two results



Model 734

Gas/Liquefied Gas Sampling Inlet System ensures reproducible injection of gases and liquefied petroleum gases (LPG).

Model 735

Controlled Rate Sample Drive provides reproducible, controlled rate of sample introduction into analyzers by syringe or sample boat.

Model 737

Temperature Programmable Inlet enables analysis of solid materials and viscous liquids up to 500 mg; ideal for additives in polyolefins (slip, antioxidants, etc.), thermoplastics, resins and coal.

Model 740

Multi-Matrix Sampler boat inlet system allows introduction of solids and liquids; thermoelectrically cooled chamber speeds time between sample runs.

Model 748

Robotic Liquid Autosampler robotically operated, syringe-based, vertical injection sampler for use with 9000 and Multi-Matrix or Boat Inlet; handles 105 (optional 200) samples.

PRODUCT SPECIFICATIONS

Detection Method

9000N Nitrogen Analyzer: Pyro-chemiluminescence™
9000S Sulfur Analyzer: Pyro-fluorescence™

Analytical Range*

9000N Nitrogen Analyzer: ppb to 17%
9000S Sulfur Analyzer: ppb to 40%

Precision

±40 ppb or ±2% RSD, whichever is greater

Typical Sample Size*

Gas 10 cc
LPG 15 µl
Liquid to 20 µl
Solid: up to 500 mg

*Analytical range and sample size may be a function of sample matrix and method of introduction

Typical Analysis Time

Gases / Liquids: less than one minute
Solids: 2 - 15 minutes (dependant upon sample type/weight)

Temperatures

Combustion zone: ambient to 1100°C in 1°C increments

Power

115 vac 50/60 Hz 12 Amp
230 vac 50/60 Hz 6 Amp

Gases

Dry oxygen: 300-600 cc/min 99.75%, 3 bar (40 psig), >5 ppm moisture
Dry carrier (argon or helium): 50-200 cc/min 99.99%, 3 bar (40 psig), > 5 ppm moisture

Dimensions & Weight

51.5 cm h (20.276") x 47.0 cm w (18.504") x 60.0 cm d (23.622")
39.5 kg (87 lb)

ORDERING SPECIFICATIONS

Model 9000S Sulfur Analyzer designed for rapid analysis of solid, liquid and gas samples for total chemically bound sulfur. Accessories include a pyrolysis tube, 10ml syringe, operation/service manual, fittings and gas line tubing required for system operation. Desktop or laptop computer included. Complies with ASTM D5453 and D6667.

Model 9000N Nitrogen Analyzer designed for rapid analysis of solid, liquid and gas samples for total chemically bound nitrogen. Accessories include a pyrolysis tube, 10ml syringe, operation/service manual, fittings and gas line tubing required for system operation. Desktop or laptop computer included. Complies with ASTM D4629, D5176, D5762 and D6069.

Model 9000NS Nitrogen/Sulfur Analyzer designed for rapid analysis of solid, liquid and gas samples for simultaneous detection of total chemically bound nitrogen and sulfur. Accessories include a pyrolysis tube, 10ml syringe, operation/service manual, fittings and gas line tubing required for system operation. Desktop or laptop computer included. Complies with ASTM D4629, D5176, D5453, D5762, D6069, and D6667.

Nitrogen Detector Kit for addition to Model 9000S Sulfur Analyzer.

Sulfur Detector Kit for addition to Model 9000N Nitrogen Analyzer.

Technology used in ANTEK's laboratory instrumentation is also available for process/on-line applications.

U.S. Patents: #4018562, #4066409, #4351801, #4352779, #4678756, #4778764, #4843016; U.K. Patent: #1578281; F.R.G. Patent: #P3116049.2

Due to continuing product development, specifications subject to change at any time without notice.

FOR ADDITIONAL INFORMATION

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