Product sheet

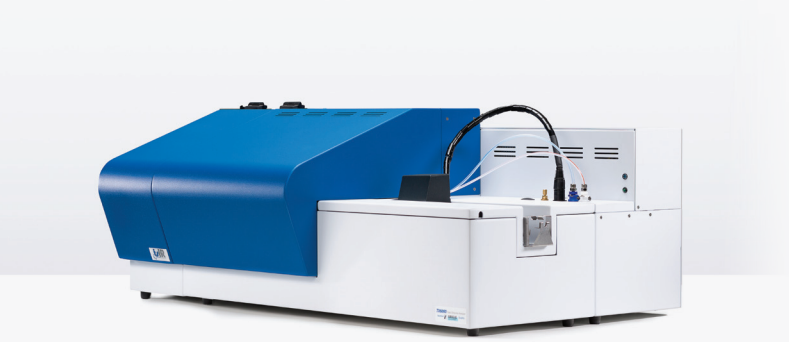
analyzer

TN

6000

Versatile, precise and reliable Total Nitrogen analysis with an extensive application range

The TSHR Total Nitrogen Analyzer, model TN 6000, is able to detect precise and accurate trace level nitrogen concentrations in a wide range of liquids, solids and LPG/Gas sample types. The analyzer is designed to run routine total nitrogen analysis down from low ppb to high ppm levels.



The sample is introduced by a fully integrated automatic boat/syringe driver, into a heated oxygen free environment to ensure a complete vaporization of the sample. The carrier gas ensures that the vaporized sample will transfer into the combustion zone where oxygen will be added to complete the oxidation of the sample. After the dual zone combustion stage, the combustion gasses flow through a perma-pure dryer tube where all moisture and other potential interferences are removed.

The conditioned combustion gasses will flow towards the chemiluminescence detector where supplied ozone will react with NO to form an excitation stage of NO_2*. The emitted light during the decay will be detected by the photomultiplier tube. The light intensity is directly proportional to the total nitrogen concentration present in the sample.

The TN 6000 can be optional extended with a TS-UVF module and/or TX module to have a complete versatile combustion elemental analysis solution.

Key advantages

- Robust and modular design
- Precise, Fast and Reliable Total Nitrogen Data
- Optional HR 7000 Liquid autosampler for high sample throughput
- Boat cooling option for challenging sample matrices

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Analytical specifications

	TN Liquids	TN Solids
Sample introduction	Syringe Liquid module	Boat Solids module
Working range	0,03 – 5000 mg/kg	0,5 – 5000 mg/kg
Sample matrix	Light hydrocarbons	Heavy hydrocarbons, solids
Quantity of Sample	1 – 100 uL	0,1 – 100 mg
Analysis time	3 - 6 minutes	4 – 10 minutes
Relative Standard Deviation*	< 2% (> 1 ppm)	< 5% (> 1 ppm)

Regulatory Compliance	ASTM D4629, ASTM D5762, ASTM D6069, ASTM D7184, UOP 971, UOP 936

*Depend on typical application and sample matrix

Technical specifications

Furnace Voltage	2 x 24 V , 50/60 Hz
Furnace Power	2 x 300 W
Furnace Temperature Sensor	2 x Ni-Cr/Ni
Furnace configuration	Dual temperature controlled
Furnace Temperature	1250 °C Max
Type of Analysis	Total Nitrogen (TN)
Detection Principle	Chemiluminescence (CLD)
Dimensions	960 x 390 x 590 mm (WxHxD)
PC operating system	Windows 7 or higher
Computer	Intel Core i3 / AMD Phenom or better
Software	Athena
Optional Supply	HR 7000 Liquid Autosampler for 2 mL vials, GM 7000 LPG / Gas Module
	Total Sulfur (UV-Fluorescence) detection, Total Chlorine (Microcoulometric) detection

Facility requirements

Voltage	115/230 V , 50/60 Hz
Power	1200 W
Gas connector	1/8" swagelok
Gasses	O_2 (99,6%) medical grade 2.6 or
	O_2 (99,995%) 4.5
	Ar (99,998%) technical grade 4.8
Gas pressure	2 – 3 Bar (30-45 psi)
Ambient temperature	5 – 35 °C (41 – 95 °F)

Contact info

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For more information contact your local dealer:

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