Reliable, fast and accurate Total Sulfur analysis with enhanced application versatility

analyzer

TS

6000

The TSHR Total Sulfur Analyzer, model TS 6000, is the ideal solution for both research and routine applications with excellent modularity and delivers accurate total sulfur data. The TS 6000 incorporates a high-end pulsed UV-Fluorescence detector which provides superior stability, low detection limits and exceptional linearity in compliance with stringent regulatory methods.
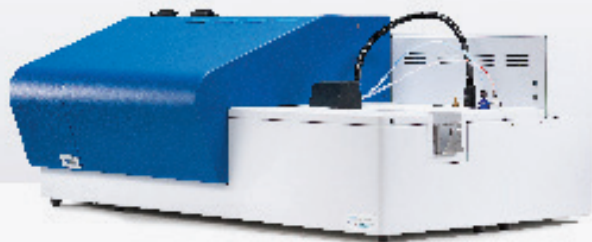
The sample is introduced by a fully integrated automatic boat/syringe driver, into a heated oxygen free environment to ensure a complete vaporization of the sample. The carrier gas ensures that the vaporized sample will transfer into the combustion zone where oxygen will be added to complete the oxidation of the sample. After the dual zone combustion stage, the gasses go through a permapure dryer tube where all moisture and other potential interferences are removed.

The conditioned combustion gasses will flow towards the UV-Fluorescence detector where a Xenon flashlamp pulsates UV light which excites the SO_2 molecules. During decay to lower energy states, UV light is emitted, and detected by the photomultiplier tube. The UV light emission intensity is directly proportional to the concentration of total sulfur present in the sample.

The TS 6000 can analyze low and high boiling liquids, solids and LPG/Gas samples and fully complies with ASTM, DIN, ISO, IP and CEN regulatory methods.

Key advantages

High performance pulsed UV-Fluorescence detector

Robust and modular design

Boat cooling option for challenging sample matrices

Optional HR 7000 Liquid autosampler for high sample throughput

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Analytical specifications

	TS Liquids	TS Solids
Sample introduction	Syringe Liquid module	Boat Solids module
Working range	0,05 – 10.000 mg/kg	0,5 – 10.000 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 D5453, ASTM D6667, ASTM D7183	

*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 Sulfur (TS)
Detection Principle	UV-Fluorescence
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 Nitrogen (Chemiluminescence) 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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