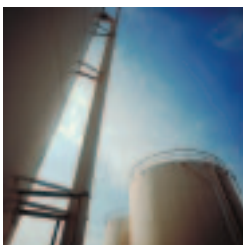


Thermo Electron Corporation's trace level Total Nitrogen Analyzer; model TN 3000 is designed to offer fast and accurate analysis of liquid, solid and gas samples in a broad range of applications from low to percentage level.

TN 3000 Total Nitrogen Analyzer



Advantages:

The TN 3000 is matrix independent and complies with ASTM, DIN, CEN, IP, NEN standards. This trace level Total Nitrogen Analyzer offers:

- Low detection limit
- Low maintenance requirements
- Analysis of liquids, solids and gas samples
- 7/24 operation connected to liquids or solids auto sampler;
- Easy upgradeable to Sulfur and Chlorine modules
- Low investment cost due to 3 in 1 analysis

Sample Introduction

For automatic sample introduction of solid, liquid and gas samples, the Total Nitrogen Analyzer can be connected to:

- ELS 3000; liquids auto sampler for fully automated introduction of light hydrocarbon samples
- ESA 2000; solids auto sampler for the automatic introduction of solids and highly viscous liquid samples into the TN 3000
- Gas module; EGM 1700 for fast and easy introduction of gas and LPG samples into the Thermo Electron Elemental analyzers

Technical Specifications

TN 3000 analyzer

Dimensions	960 (W) x 390 (H) x 590 (D) mm 37,7 (W) x 15,4 (H) x 23,2(D) inches
Furnace voltage	2 x 42 V, 50/60 Hz
Furnace power	2 x 300 W
Furnace temperature sensor	2 x Ni-Cr/Ni
Furnace temperature	1250°C max.
Type of Analyses	Total Nitrogen
Type of Detector	Chemiluminescence
Software	Windows™ based ThEuS analytical software
Output	RS 232
Computer	Minimum Pentium IV processor
Compliance	ASTM D4629, D5762, D6069
Optional	ELS 3000, Liquids Auto sampler ESA 2000, Solids Auto sampler EGM 1700, Gas & LPG introduction module Total Sulfur UVF module, Total Chlorine module

Facility Requirements

Voltage	115/230 V, 50/60 Hz
Power	1200 W max.
Gas connector	1/8" Swagelok
Gasses	O ₂ (99,6%) medical grade Ar or He (99,998%) technical grade
Gas pressure	1-3 Bar (14-45 psig)
Ambient temperature	15 – 35 °C

Analytical Specifications

	TN liquids	TN solids
Module	Liquids organic	Solids
Sample matrix	Light hydrocarbons	Heavy hydrocarbons solids
Quantity of sample	1-250 µl	0,1 - 100 mg
Analysis time*	3-6 min.	4-10 min.
Working range*	0,03 - 5000 mg/kg	0,5 - 5000 mg/kg
Inaccuracy	< 5%	< 5%
Legislation/protocols	ASTM, IP, UOP	ASTM, IP, UOP
	Total Sulfur P-UVF	Total Chlorine (MCT)
Sample matrix	light/heavy hydrocarbons	light/heavy hydrocarbons
Working range*	0,02 - 5000 mg/kg	0,05 - 5000 mg/kg
Inaccuracy	< 5%	< 5%
Legislation/protocols	ASTM, IP, UOP	ASTM, IP, UOP

* Depends on typical applications