

Organic Elemental Analyzer

CHNS-O 3802



EPC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

CHNS-O 3802 is a C-H-N-S-O Elemental Analyzer Model based on the Dumas combustion method.

CHNS-O 3802 is a state-of-the-art system for the elemental analysis based on sample combustion and separation of gases with a chromatographic column.

The combustion products, i.e. CO₂, H₂O, N₂ and SO₂, are separated and quantified by a high resolution TCD detector.

CHNS-O 3802 is fully automatic, from the available samplers to the oxygen dosage, from the monitoring of consumables status to the automatic leak test.

►► **CHNS-O 3802 is composed by:**

- ✓ Dual furnace combustion system (for a better combustion and optimization of catalysts)
- ✓ Customized GC column
- ✓ Detection system
- ✓ Data acquisition and handling

Several configurations may be set for the determination of the target element.

Typical configurations are for CHNS, CHN, CN, CNS and O analysis.

The versatility of CHNS-O 3802 can be expressed into terms of sample type and size: actually a wide range of samples - liquids or solids, into various sizes, from micrograms to grams of organic materials - can be analyzed.

Three different samplers are available and various types of reactors ensure an optimized application.

Automatisms make it particularly user-friendly: the automatic oxygen dosage system allows a better consumption of oxygen and consumable status monitoring function optimizes the catalysts use.

An exclusively designed TCD -Thermal Conductivity Detector- is self-calibrating so that no reference gas is required.

The CHNS-O 3802 is particularly suitable for linking to other units for determination of the isotopic ratios of stable isotopes into elements.

►► FEATURES AND BENEFITS

- Fully automated analysis system
- High sensitivity, accuracy and precision
- Flexibility and versatility of applications
- Detector does not require reference gas
- Powerful software for viewing results from a computer
- Touch-screen display for an easy settings management
- Consumables status monitoring for an optimization of catalysts usage
- Three types of samplers available :electronic / pneumatic / manual.
- Easy connection to Mass Spectrometers and other detectors for stable isotopes analysis
- Low operation and management costs
- Safety Quick-Fit
- Standby Mode

►► Analytical And Technical Features

CHNS-O 3802 Features		
Type	CHNS-O	5 min
Analysis Time	CN	8 min
	CHN	10/25 min.
	CHNS	4 min
Analytical Range	C	0.002-20 mg
	H	0.002-5 mg
	N	0.002-20 mg
	S	0.002-6 mg
	O	0.002-2 mg
Accuracy*	<0,2% (certified standard; purity >99.9%)	
Precision*	<0,1% (certified standard; purity >99.9%)	
Sampler	Pneumatic	
	autosampler	147 positions
	Electronic	
	autosampler	32, 50 100 positions
	Manual sampler	

Physical Specifications	
Dimensions	81x50x37cm
Weight	68kg
Power Supply	230V, 50/60Hz
Power Absorption	5A, 1100W.
Gas Requirements	Helium (99.999% purity), 3-5bars
	Oxygen (99.999% purity), 3-5bars
	Air (oil free compressed air)

Analytical Conditions	
Gas Carrier	Helium
Leak Test	Automatic
Furnace Temperature	Left Furnace : max 1100°C
	Right Furnace : max 1100°C
Oven Temperature	Max. 110°C
Oxygen volume need	Automatically calculated by the oxygen doser
Flow Rate	Electronic Flow Rate
Gas Separation	0.8-4 m GC Column
Detector	High Sensitivity TCD
Software Data analysis	EAS Clarity
Calibrations	Linear, Quadratic, Cubic
Active Calibration	As Needed

Sample	
Sample Size	0,1-500mg (depending on sample nature)
	up to 1 g for soil samples
Sample Type	Liquid
	Solid
Capsule	High purity tin and/or silver capsules

Accessories	
Kit	
Microbalance	
Consumables	Proprietary Analytical Technologies Limited
Technical assistance	by phone call or email within 24 hours

►► Servicing, Validation, Trainings and Preventive Maintenance :

- Servicing** : We have team of service engineers who can attend to any make of instrument promptly @the most affordable cost.
- Trainings** :We also take up preventive maintenance to reduce downtime of instrument's Trainings.
- AMC's/CMC** : We offer user training both in-House and at customer sites on instrument principles, operations, troubleshooting.
- Validations** : We have protocols for carrying out periodic Validations as per GLP/ GMP/USFDA norms.
- Instruments** : We offer instruments/Renting Services Modules like pumps, detector etc. on Rent.



►► About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the globe. Analytical Technologies Limited is an ISO :9001 Certified Company engaged in Designing, Manufaturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

►► Our Products & Technologies



UV/VIS
Spectro 2080+
Double Beam



Infra FTIR



Optima Gas
Chromatograph
3007



Optima Gas
Chromatograph
2979 Plus



Flash
Chromatograph



Atomic Absorption
Spectrophotometer



Liquid Partical
Counter



Optical Emission
Spectrophotometer



DSC/TGA



Semi Auto Bio
Chemistry Analyzer



HEMA 2062
Hematology
Analyzer



Micro Plate
Reader/Washer



URINOVA 2800
Urine Analyzer



Total Organic
Carbon 3800



Fully Automated
CLIA



NOVA-2100
Chemistry Analyzer



PCR/Gradient PCR/
RTPCR



TOC
Analyzer



Laser Particle
Size Analyzer



Ion Chromatograph



Water purification
system

►► Regulatory compliances



►► Corporate Social Responsibility

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Analytical Foundation

1. Research & Innovation Scientist's awards / QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at info@analyticalfoundation.org

2. Improving quality of life by offering YOGA Training courses, Work shops / Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

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