

ONH - 3300

Oxygen/Nitrogen/Hydrogen Analyzer



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

►► Product Introduction

Analytical is a high-tech enterprise, which was established & Steel Research Institute Group, and it has a strong technical force in production and development.

ONH-3300 Oxygen/Nitrogen/Hydrogen Analyzer is a new product, and it is used for oxygen, nitrogen and hydrogen determination in ferrous and non-ferrous metals, rare earth materials, alloy, and some other inorganic materials.

►► Instrument Principle

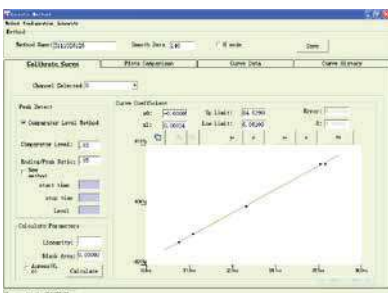
1. Introduction:

Pulse heating inert gas fusion.

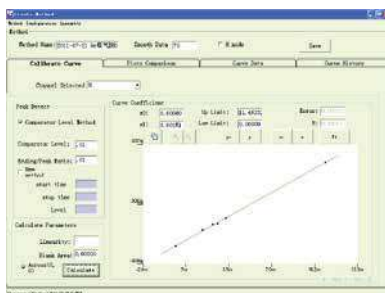
O (Oxygen): NDIR (Non Dispersive Infrared absorption);

N/H (Nitrogen/Hydrogen): TCD (Thermal Conductivity Detection).

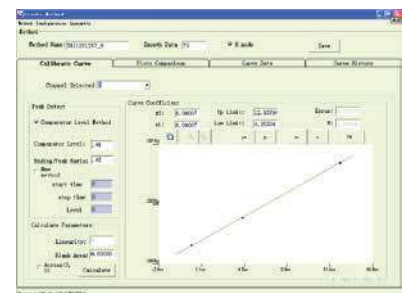
2. Working Curve



Working curve for oxygen

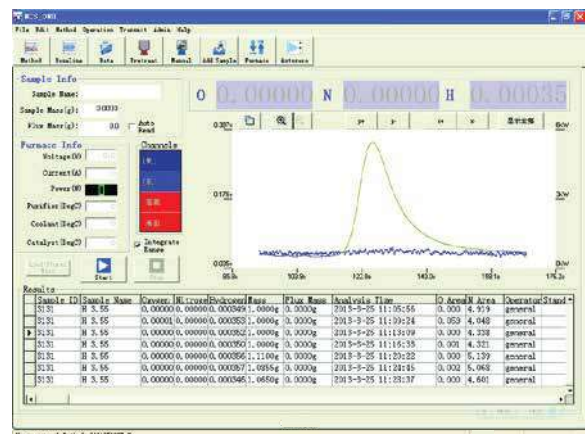
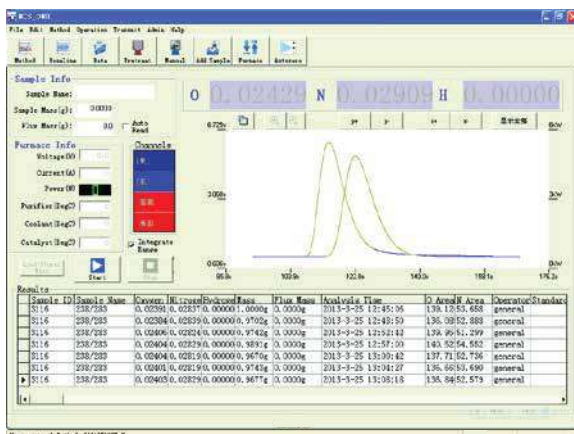


Working curve for nitrogen



Working curve for hydrogen

3. Main Analysis Window



►► Technical features

1. Range: Oxygen: Low Oxygen: 0.1ppm ~ 0.5%*; High Oxygen: 0.5% ~ 20%*
Nitrogen: Low Nitrogen: 0.1ppm ~ 0.5%*; High Nitrogen: 0.5% ~ 50%*
Hydrogen : Low Hydrogen: 0.1ppm ~ 200ppm* ; High Hydrogen: 200ppm ~ 5000ppm*

Note: * the measurement range can be changed by changing the measurement quantity.

2. Sensitivity: Oxygen ,Nitrogen and Hydrogen:0.01ppm
3. Repeatability: Oxygen and Nitrogen:1ppm or 1%; Hydrogen: 0.2ppm or 2%
4. Sample mass: 1g (Sample mass can be changed according to the content)
5. Analysis time: about 3 min
6. Carrier gas: High purity helium for O/N, high purity nitrogen for H
7. Pneumatic gas: Nitrogen or compressed air
8. Structure: Modular Structure, including analyzer, computer, electronic balance*, printer*, water circulate chillers*.

Note: * is optional.

9. Detection system: Solid state Infrared detector is used for Oxygen. Thermo-conductivity detector is used for

Nitrogen & Hydrogen.

Infrared Cells: Two IR cells are installed in the analyzer. The length of each cell can be customized according to the content of samples

Detector: Solid-state pyroelectric detector made in Germany

Motor: Synchronous motor made in Swiss

Source: Anti-oxide, stable IR emitter made in US

Temperature control: Keep constant temperature in the whole infrared unit to make sure the temperature of detected gas to be stable and the results to be accurate

Protecting gas: Infrared emitter and the detector are separated from the ambient by nitrogen, which can improve the stability and the accuracy

Thermo-conductivity (TCD) detecting unit: Anti-oxide NTC thermistor

Signal processing: Small current control technique is developed to make sure the thermistors can be used without carrier gas

Reference gas circuit: Low flow control technique is used

10. Gas flow control: High sensitive and accurate electric flow control technique based on the low pressure difference is applied, and Anti-Overshoot System is applied

11. Pulse heating electrode furnace: Power: Max.7.5KVA, Temperature: Max.3000°C

12. Calibration: 1) Fast calibration 2) Normal calibration

13. Power: 220VAC \pm 10%, 50 \pm 1Hz, current max. 50A (Max.10KW)

►► **Parameters configuration**

1. Parameters of outgassing, analyzing, flux etc can be setup according to the sample characteristic.

2. Analyzing method with parameters and calibration curve can be established separately according to different samples and can be stored into the database.

►► **Diagnostic function**

1) Cooling water temperature feedback and display

2) Voltage and current of the furnace feedback and display

3) Catalyst heaters temperature feedback and display

4) Valves action feedback and display

5) IR baseline and TCD baseline adjustment and display

6) Furnace adjustment

►► **Software**

1) Analyzing results can be display quickly

2) Data can be stored into the disk automatically after analyzing

3) Releasing plot is drawn dynamically

4) Sample mass can be transfer from balance into computer automatically

5) Analyzing results are calculated by the calibration curve either in high content channel or in low content channel according to sample content, the selection will be done by software automatically

►► Data processing

- 1) ACCESS is used as database to manage and store the data.
- 2) Inquiring, statistic, printing can be done.
- 3) Data can be sorted by date or name.
- 4) Releasing plots can be analyzed.

►► Typical data

Content: O:88ppm N: 32ppm H: 5.8ppm			
Sample No.	O content	N content	H content
1	0.00878	0.00315	0.000591
2	0.00882	0.00319	0.000577
3	0.00865	0.00321	0.000592
4	0.00870	0.00316	0.000580
5	0.00900	0.00312	0.000558

►► Instrument configuration

- 1) Electronic balance: Sartorius BSA124S.
- 2) Water circulate chillers: independent development.

HPLC Servicing, Validation, Trainings and Preventive Maintenance :

HPLC Servicing :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

Trainings :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

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Validations :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

Instruments :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 global. Analytical Technologies Limited is an ISO:9001 Certified Company engaged in Designing, Manufacturing, 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



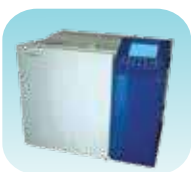
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Spectro 2080+
Double Beam



Infra FTIR



Optima Gas
Chromatograph
3007



Optima Gas
Chromatograph
2979 Plus



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Chromatograph



Atomic Absorption
Spectrophotometer



Liquid Particle
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
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Size Analyzer



Ion Chromatograph



Water purification
system

Regulatory compliances



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Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:



Analytical
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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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