Multiplelabs™
Turnkey Laboratories Solutions

Analytical® Technologies Limited

Optical Emission Spectrometer

Description:

Desktop emission spectrometer is designed for industrial analytical laboratories of mechanical engineering, metallurgical and metalworking facilitis.

Spectrometer is capable to replace a whole laboratory for indentification of metal and alloy chemistry, having drastic effects on final product quality.

Represents the best solution for our clients striving for express results, high technical characteristics reliability and high precision of complete element composition of metal products versus minimum costs for procurement, introduction and performance of the instrument.

Emission spectrometer embodies a number of technical solutions having certain advantages versus known analogs:

(1) Spark-gap oscillator is a new development, which maximum power and stability of discharge parameters exceed other arc oscillators. This feature allows deteemining concentration of higher number of chemical elements with high sensitivity and lower value of root-meam-square deviation.

(2) Application dry vacuum pump provides for rarefaction to a value below 1 mbar, which allow improving convergence and sensitivity drastically during determination of sulfur and phosphorus.

(3) Algorithm of random measurement error sutomatic minimization is used within one “Spot” of sparking which drastically improves convergence of analysis results.

(4) Optical unit implements layout of CCD matrix strips produced by TOSIBA (japan), guarantying complete absence of “ dead zones” in received spectrum.

(5) Software is perfectly suitable for both manual and automatic selection of analytical couples, as well as automatic adjustament of drift directly during investigation process, thus excluding “human factor” during analysis of results.

(6) Instrument design implements a unique technical solution, which allows achieving high temperature stability of spectrometer without application of active thermal stabilization system.

Brief technical characteristics:

Optical circuit:

- Paschen-Runge Circuit
- Rowland circle diameter: 330mm
- Reverse diapersion: 1.4nm/mm
- Diffraction grating: 2100 line marks/mm
- System of 7 multi-element CCD detectors with a total number of channels over 25 000 and channel size about 8 μm
- Spectral range: 176-457 nm (non-vacuum option: 190-457 nm);
- Automatic profiling and drift recording.

Vacuum system:

- Dry type pre-evacuation pump (Germany):
- Computer-aided control:
- Computer-aided vacuum control.

Spectrum excitation system:

- Low-voltage-unipolar spark in argon atmosphere;
- Computer-aided control of discharge frequency, pulse voltage and energy;
- Automatic change of discharge parameters during transition from sparking to analysis;
- Opened desk desing;
- Tungsten electrode;
- Accessories for analysis of wire and bar chemistry

Control & processing system:

- Built-in PC;
- Windows XP operating system;
- Output to monitor and printer;
- Optional connection to in-company network and Internet;
- Transfer of analysis results using USB-Drive.

Software:

- Graphical spectrum presentation;
- Database of spectrum lines for quality analysis;
- Automatic profiling and drift recording;
- Control of sparking process;
- Individual recording of spectrum backgroung for eack line
- Using of several spectrum lines and lines of comparison for each element;
- Automatic selection of the best comparison lines;
- Unique algorithm of result processing based on application of correlation analysis methods to reduce random and systematic errors;
- Automatic recording of inter-element additive and multiplication effects;
- Recording of base material dilution;
- One and two point recalibration.

Spectrometer overall dimensions, weight:

- Length x Width x Height, max. mm 670 x 500 x 400;
- Weight, max, Kg 65

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Spectrometer operating environment:

Spectrometer operates in premises satisfying requirements to laboratory conditions:

- Amibient air temperature: 10-35°C
- Atmospheric pressure: 84-106, 7 Kpa (630-800 mm pt. ct.)
- Relative humidity (at T=25°C): max. 80%
- Electricity supply: (220+20-33)B, (50±2) Hz

For normal spectrometer performance, the desk with spectrometer has to be mounted on a rigid floor inside premises with low vibration levels.

Avoid direct sun rays on spectrometer surface.

Do not place electric heaters nearby and avoid draught.

Support & Services

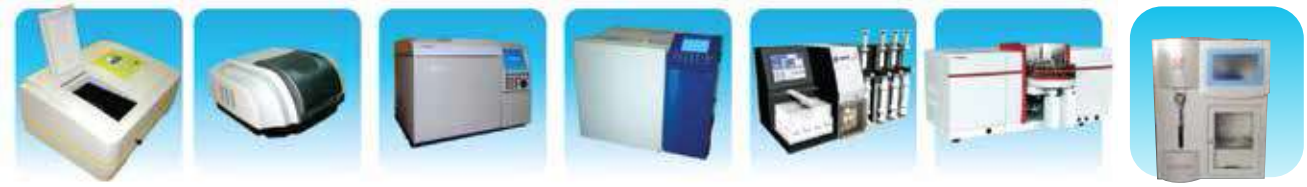
HPLC Servicing, Validation, Trainings and Preventive Maintenance :

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 Maintenace to reduce downtime of HPLC's
AMC's/CMC	:We offer user training both in-House and at customer sites on HPLC 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.

About Analytical Technologies



UV/VIS Spectro 2060+ Double Beam | PTIR | Gas Chromatograph 3000 | Gas Chromatograph 2979 Plus | Flash Chromatograph | Atomic Absorption Spectrophotometer | Liquid Partical Counter

Optical Emission Spectrophotometer | DSC/TGA | NOVA 2020 plus Automated Bio Chemistry Analyzer | HEMA 2020 Hematology Analyzer | Micro Plate Reader/Washer | Water purification system | Total Organic Carbon

Fully Automated CLIA | NOVA Basic Semi -Auto Chemistry Analyzer | PCR/Gradient PCR/ RTPCR | Blood Gas Analyzer | Random access Analyzer for immunoassay Proteins & clinical chemistry | Semen Analyzer | Water purification System

Regulatory compliances

Corporate Social Responsibility

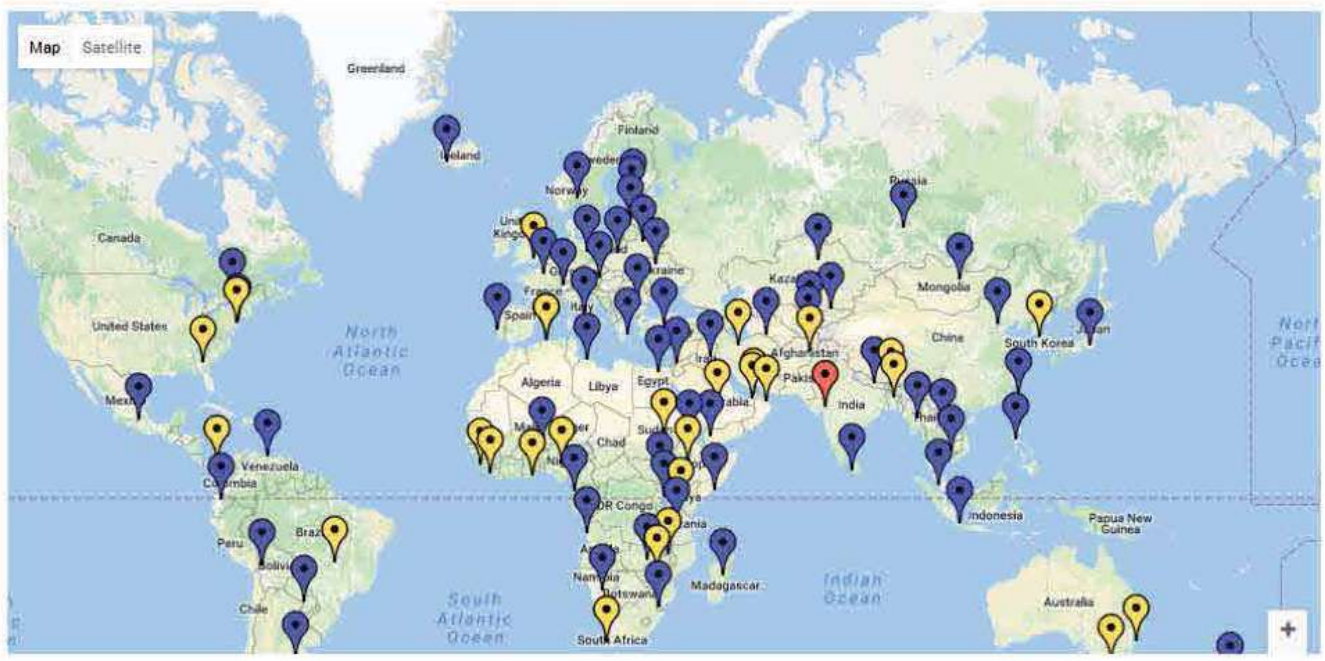
Analytical Foundation is a Nonprofit Organization (NGO) found for the purpose of:

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 personallities 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 DETOXIFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

Reach us @



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