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Tech Talk

Monthly Newsletter by Spectro Group

Wish you all a very Happy New Year

We take this opportunity to thank you each one of you for making our Newsletter a success. Your positive response and feedback for our Newsletter has encouraged us to start with a new volume. We are pleased to share with you the new edition of our monthly Newsletter "Tech-Talk" which is designed to be an elemental source for leading information related to developing technologies, ingenious techniques and innovative approaches.



Kuldeep Dhingra
Managing Director



Sushant Gupta
Executive Director

This newsletter is contemplated to underline electrifying forthcoming activities and resources of our organization. We invite you to a new paradigm created by Spectro to examine the resources on our website which includes our amplifying services using science to harness cutting-edge technology and experience the *Spectro difference*.

In this Issue

- Editorial
- Brief About Spectro
- **News:** Overall pollution level this winter is higher than last winter
- **Article:** Specialized Services for Hospitals
- Spectro Group of Companies

Brief about Spectro

Spectro commenced to serve in the year 1995 and during the span of 20 years, Spectro Group of companies has created a globally recognized position in the field of Testing, Calibration, Auditing, Certification, Training, Inspection, R&D, Special Purpose Equipment Designing & Manufacturing and various other activities. Steadily building a reputation for reliability and fast turnaround, the organization grew rapidly and today we feel proud to have our presence all over the country.

Overall pollution level this winter is higher than last winter

This winter has witnessed extremely high level of pollution. Typical winter conditions- cold temperature, lower mixing height of air, calm and no-wind conditions trap air and pollution. As a result, pollution builds up very quickly and peaks. This is why winter months require tougher emergency action to reduce pollution. Weather is an important constraint in pollution management.



The winter months of November and December 2015 show higher number of days in severe category- four times the safe standard - which is the worst category according to the National Air Quality Index. There has not been a single good air quality day this winter. On several consecutive days, the PM2.5 levels have remained in the worst category according to the national air quality index.

The odd and even programme has been implemented as an emergency action to arrest the high emergency peak when the overall pollution levels have gone 5 to 6 times higher than the standards. This is needed to protect public health in a city where every third child has impaired lungs. This is also not the only action that is being taken in the city to arrest runaway air pollution. The Supreme Court has taken firm steps to check heavy commercial vehicles from entering Delhi; it has issued directions on enforcement of construction and road dust as well as garbage burning.

The Delhi government is also bringing action against the Badarpur Thermal Power Plant. The odd-even scheme is designed for immediate relief as it takes off the roads almost half the private cars, which contribute to pollution from their tailpipe and pollution because of congestion.



Spectro offers world class Environmental services like Environment Monitoring, Indoor Air Quality Monitoring and Noise Pollution Survey. We manufacture a wide range of Environmental Equipments, some of which includes; Particle Counter, High Volume Sampler, CO₂ Monitor, Flue Gas Analyzer, Respirable Dust Sampler, VOC Monitor, Sound Level Meter, Ozone Gas Monitor, Stack Sampler, Fine Particulate Sampler, Indoor Air Quality Monitor and various others.

Specialized Services for Hospitals

1) Validation as per National Accreditation Board for Hospitals & Healthcare (NABH) Guidelines

a) Air Particle Count Test

It is used to find out the particle count level at the time of testing within a facility.



b) DOP Test/ HEPA Filter Integrity Test

HEPA/ULPA filter integrity tests assure the filters conform with several standards and/or government agency requirements. Complete documentation & certification is provided which helps predict potential performance and enhances filter life.



c) Air Velocity Measurement

Air Velocity Measurement/ tests are conducted to determine the average filter face uniformity & velocity and the average room airflow velocity and uniformity within a clean room.

d)Temperature/ Humidity

Depending upon the requirement, there are 2 levels for conducting Temperature and Humidity tests. In the first level; general temperature & humidity uniformity are checked which ensures that the clean room's HVAC system is maintaining the specified levels of temperature & humidity desired for comfort. While the second level is a comprehensive level to identify the clean room HVAC systems are maintaining the specified levels of temperature & humidity necessary for both comfort and process temperature control.

e)Air changes per Hour

It determines how many times the air enters and exits a room from the HVAC system in an hour, by which we can design or balance the airflow

$$\text{Air Changes/hr} = \frac{\text{CFM} \times 60\text{min}}{\text{Volume of Room}}$$

f)Pressure Differential Test

This test verifies the pressure differential meet the specified requirements. A clean room may consist of multiple rooms with different cleanliness requirement and thus the facility should be maintained at static pressures higher than atmospheric to prevent infiltration by wind.

2)Medical gas/ Compressed gas Testing

To meet the specification for piping purity (Air, O₂, N₂O, N₂), piping particulate, verifier piping purity, medical gas concentration (O₂, N₂O, N₂) and medical air purity testing.

3)Calibration

Thermal

- Autoclaves
- Cold Rooms
- Incubators
- Ovens
- Refrigerators, Control Rate Freezers and Ultra Low Freezers
- Stability Chambers
- Warehouse Storage Facilities

Mechanical

- Vibration Machine or Objects
- Weighing Machine
- Pressure gauge/Digital pressure gauge

4)Thermal Validation

Thermal validation is the process of validating/ qualifying equipment and storage facilities to prove that they will create and maintain the temperatures they are designed for.

5) Water Testing as per IS 10500

Chemical, Physical & Microbiological testing

6) Endotoxin Testing of Dialysis Water

Water used for dialysis has strict requirements on the levels of chemical and biological contaminants allowed. Our testing method provides you with exact endotoxin levels.

7) ETP/ STP Testing

Hospitals are significant consumers of water and generate a considerable amount of wastewater which consists of harmful pathogens, bacteria & virus, radioactive materials, drugs, clinical discharges, domestic & suspended solids, etc.



Spectro Group of Companies



Spectro Lab Equipments (P) Ltd. is prompted by a team of committed professionals who have years of experience and have not lost any opportunity to prove their ingeniousness. SLE is one of the prominent manufacturers of Environmental and Coal Laboratory Equipments and also deals with their sale and service setups. It also provides support in the field of Testing equipments and instruments

Major Activities

Testing Calibration Training Inspection R&D Automation Reverse Engineering

- ⇒ Metals & Alloys
- ⇒ Non Destructive Testing
- ⇒ Rubber & Polymers
- ⇒ Food and Agro Products
- ⇒ Coal, Solid Fuels & Petroleum
- ⇒ Electrical & Electronics
- ⇒ Pharmaceuticals & Drugs
- ⇒ Building Materials
- ⇒ Minerals & Chemicals
- ⇒ Leather & Textiles
- ⇒ Water & Environment
- ⇒ Paper & Packaging Materials
- ⇒ Hazardous Substances
- ⇒ Clean Room Validation

Our Joint Venture Labs

Spectro Testing & Research Center Pvt. Ltd. (Jaipur)

Spectro Research Lab Ventures (P) Ltd. (Kanpur)

Spectro Testing (P) Ltd. (Jammu)

Spectro SSA Labs (P) Ltd. (Mumbai)

Spectro Global Lab Pvt. Ltd. (Bhubaneswar)

Spectro Shyam Labs (P) Ltd. (Kolkata)

Project Sites

PATA (Uttar Pradesh)

Roorkee (Uttarakhand)

Durgapur (West Bengal)

Jaisalmer (Rajasthan)

Patna (Bihar)



We will be pleased to receive your valuable queries, feedback and suggestions on our email ID: newsletter@spectrogroup.com

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