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News AT A GLANCE



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2024 edition of analytica Anacon India, India Lab expo & Pharma Pro&Pack expo set to take technology and industry convergence to new heights

OUR BUREAU, MUMBAI

THE 2024 edition of Analytica Anacon India, India Lab expo, and Pharma Pro&Pack expo, which are all synonymous with beacons of innovation, is set to provide attendees with a unique opportunity to explore integrated solutions,

engage in innovative technologies, and enhance their strategic outlook.

This year's event, set to kick off in Hyderabad from September 26-28, will be the largest edition to date, featuring over 500 technology suppliers from 14+ countries. Following a highly successful edition in 2023, the triad event is set to create a transformative

experience for the pharmaceutical, analytical, biotechnology, and R&D sectors.

analytica Anacon India, India Lab Expo, and Pharma Pro&Pack Expo have firmly established themselves as product launch platforms for exhibitors, where cutting-edge innovations

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Because of its highly flexible configurations, the ability to work in a variety of solubility conditions, different flow-through cell types, and enhanced control over the hydrodynamic environment, SOTAX CE7 Smart continues to evolve to meet the changing needs of today's *in vitro* release testing.



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The software is an integrated dissolution package that controls the CE7 smart and all connected components. WinSOTAX8plus operates and has been validated on Windows. It is fully networkable and LIMS compatible.

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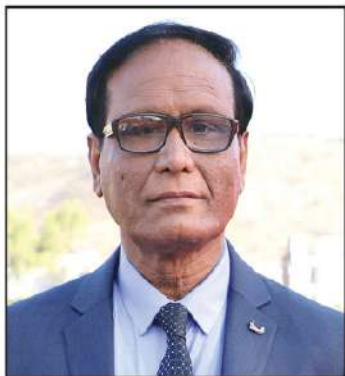
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How India is moving towards Green Formulation?



DR. SANJAY AGRAWAL

INDIA'S pharmaceutical industry, known for its global footprint and significant contributions to healthcare, is increasingly turning its focus towards sustainability. As the world faces growing environmental challenges, the concept of "green formulation" has emerged as a vital part of the pharmaceutical sector's commitment to reducing its ecological impact. This shift is not just about compliance with regulations; it reflects a deeper understanding of the need for environmentally friendly practices in drug development and manufacturing.

Understanding Green Formulation

Green formulation refers to the development of pharmaceutical products using processes that minimize environmental harm. This includes reducing the use of hazardous chemicals, optimizing energy efficiency, lowering carbon emissions, and ensuring that waste is managed in an eco-friendly manner. The goal is to create products that are not only effective for patients but also sustainable for the planet.

Drivers of Green Formulation in India

Several factors are driving the shift towards green formulation in India:

1. Regulatory Pressure: The Indian government, along with international bodies, has been tightening regulations around environmental impact. The introduction of stricter guidelines on emissions, waste disposal, and the use of hazardous substances is pushing pharmaceutical companies to adopt greener practices.

2. Global Market Demand: As global awareness of environmental issues grows, there is increas-

ing demand from international markets for sustainably produced pharmaceuticals. Indian companies aiming to maintain or expand their presence in these markets must adhere to higher environmental standards.

3. Corporate Responsibility: Many Indian pharmaceutical companies are recognizing the importance of corporate social responsibility (CSR). By adopting green formulation practices, these companies are not only contributing to environmental conservation but also enhancing their brand reputation and stakeholder trust.

4. Technological Advancements: Advances in technology are enabling more sustainable pharmaceutical practices. Innovations in green chemistry, energy-efficient manufacturing, and waste reduction technologies are making it easier for companies to transition to greener processes.



Key Strategies in Green Formulation

Indian pharmaceutical companies are adopting various strategies to move towards green formulation:

1. Green Chemistry: This involves designing chemical processes that reduce or eliminate the use of hazardous substances. By focusing on the atom economy, reducing by-products, and using renewable feedstocks, companies are minimizing their environmental footprint.

2. Process Optimization: Companies are optimizing manufacturing processes to improve energy efficiency and reduce waste. This includes adopting continuous manufacturing techniques, which are more efficient than traditional batch processes.

3. Waste Management: Proper

management of pharmaceutical waste is crucial. Companies are investing in technologies that allow for the safe disposal or recycling of waste products, thereby reducing environmental contamination.

4. Sustainable Sourcing: Indian pharmaceutical companies are increasingly sourcing raw materials from sustainable and ethical suppliers. This not only ensures the sustainability of the supply chain but also reduces the environmental impact associated with raw material extraction and transportation.

5. Renewable Energy: To reduce their carbon footprint, many pharmaceutical companies in India are investing in renewable energy sources such as solar and wind power. This shift towards clean energy is helping to lower greenhouse gas emissions associated with drug manufacturing.

Some Case Studies: Leading the Way

Several Indian pharmaceutical companies are leading the charge in green formulation:

1. Cipla: Cipla has implemented a green chemistry program focused on reducing the use of hazardous chemicals and improving energy efficiency in its manufacturing processes. The company has also invested in renewable energy to power its facilities.

2. Dr. Reddy's Laboratories: Dr. Reddy's has adopted sustainable sourcing practices and is working towards zero waste to landfill by improving waste segregation and recycling. The company has also committed to reducing its carbon emissions through energy-efficient technologies.

3. Sun Pharmaceutical Indus-

tries: Sun Pharma has focused on process optimization and waste management, implementing technologies that minimize waste generation and promote recycling. The company is also exploring the use of biodegradable materials in its packaging.

Challenges and the Road Ahead

While India is making significant strides towards green formulation, several challenges remain. These include the high cost of adopting green technologies, the need for skilled personnel to implement sustainable practices, and the challenge of balancing environmental goals with profitability.

However, the commitment of the Indian pharmaceutical industry to sustainability is evident. As more companies recognize the long-term benefits of green formulation- not just for the environment but also for their business- India is poised

to become a leader in sustainable pharmaceutical manufacturing.

India's journey towards green formulation is a testament to the growing importance of sustainability in the pharmaceutical industry. By embracing green chemistry, optimizing processes, managing waste responsibly, and investing in renewable energy, Indian pharmaceutical companies are not only reducing their environmental impact but also positioning themselves as global leaders in sustainable healthcare. As this trend continues, the future of the Indian pharmaceutical industry looks greener and healthier- for all.

(Author is the Leading Pharmaceutical Consultant and Editor-in-Chief of IJMToday)