

# Personal hygiene, sanitation markets set to boom in India

Shardul Nautiyal, Mumbai

COVID-19 has brought in increasing levels of awareness and acceptance about the importance of surface disinfection and hand hygiene in day today life. Before the onslaught of the pandemic, the public awareness about personal hygiene was much less. These behavioural changes will reset habits in the long-run as everyone is now more concerned about personal hygiene and good sanitation practices. Besides this, there is also an increasing regulatory oversight and control for good quality products like sanitizers and disinfectants in the market, according to experts.

Offering regulatory perspective as to how the sanitation industry has evolved in the context of the pandemic, Dr R. B. Smarta, Managing Director, Interlink said, "The Drugs Controller General of India (DCGI) has directed the state drug controllers (SDCs) to expedite the licensing of manufacturers of sanitizers. A few relaxation measures are also advised by the central government like permission on account of licensing and storage of ethyl alcohol which is one of the major components in the manufacturing of sanitizer may be granted to the existing sanitizer industry without any quota restriction on supply."

## Sanitation practices

Offering clarity to the subject of sanitation practices adopted by the Indian population today, the Ahmedabad based pharmaceutical consultant Dr. Sanjay Agrawal said, "In general sanitizers aren't as effective as hand washing. Hand sanitizer is a disinfectant and therefore kills germs but does not remove germs physically from your skin. Soaps work by dissolving both water and oil, so it simply washes the microbes off your hands. Hand sanitizer is a practical backup if you don't have access to soap and running wa-

ter but nothing beats a thorough hand wash with regular soap and water."

According to pharmaceutical consultant Anshu Yadav, "Amid COVID-19 pandemic, hand sanitizer is efficient in killing the virus so it is recommended but it cannot substitute hand washing. Besides, there are some germs that it can't protect against like Cryptosporidium, Norovirus or Clostridium difficile."

"Hand sanitizers are more relevant and in demand in India



than ever before. In order to fulfil the excessive demand for sanitizers, the Government has introduced relaxations for the sanitizer industry for easy procurement of ethyl alcohol. However, manufacturers and marketers of sanitizers have taken this relaxation for granted and kept quality and safety at stake," Anshu Yadav further added.

Change in behavioural patterns

Chiming in, Rajiv Sanghavi, Founder, Quinn Hygiene said, "COVID-19 has truly brought a massive change in the behaviour of the citizens and made them understand the importance of hygiene. Cleanliness and hygiene have become a routine practice followed with priority. Most of the viruses are spread through surfaces and this has brought us the idea of introducing an effective surface cleaning solution in India."

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**Pharma  
Manufacturing**

**Hygiene & Sanitation**

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January 28, 2021

A SPECIAL FEATURE

## Tremendous surge in demand for sanitizers, masks

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Quinn Hygiene recently launched Liquid Guard in the Indian market, which assures protection from over 200 plus viruses. This is a German based technology and a permanent anti-microbial solution used in 55 other countries across the globe which kills viruses settled on any surface.

A surge in demand for essential commodities like sanitizers and masks is very much evident going by the fact that the Gujarat Food and Drug Control Administration (FDCA) is today supplying hand sanitizers to neighbouring states like Rajasthan, Goa, Madhya Pradesh and Maharashtra due to surplus production through its

624 manufacturers to address the growing demand. It is today producing two crore litre per day of hand sanitizer from the earlier five lakh sanitiser dated March 21, 2020.

"Due to the tremendous surge in demand, the Gujarat government has made the provision of approving licenses for hand sanitizers production and distribution under the emergency use authorization to ensure its consistent supply," explained Gujarat FDCA commissioner Dr HG Koshia.

The Gujarat government has also exempted sale and distribution of ethanol for production of hand sanitizers in order to tide over its shortage in the state. The exemption which

was notified by the state government was done because the cost of isopropyl alcohol (IPA) which was Rs. 80 per litre earlier before the COVID-19 pandemic outbreak was being sold illegally at the arbitrary price of Rs. 300 per litre.

Even as there is increased focus on sanitation and hygiene, ayurvedic and cosmetic hand sanitizers have also flooded the market with false claims of prevention from infections. According to state drug controllers, the reason for such rampant sale of inferior products is because India lacks in testing standards when it comes to ayurvedic and cosmetic hand sanitizers.

State drug control depart-

ments have also reported that some small players have also resorted to sourcing low quality ingredients for manufacturing sanitizers with harmful impurities like benzene and toluene among others which can damage skin and do more harm than relief.

"It is shocking to see thousands of fake hand sanitizer bottles being sold at shops. According to World Health Organization (WHO), the hand sanitizer to be effective, it should contain a minimum 60 per cent alcohol. Yet there are many of these counterfeit products available in the market with substandard quality. I recommend buying hand sanitizers only from reputable companies with a proven track record," Dr Agrawal cautioned.

"I do not believe much in herbal sanitizers. Most herbal sanitizers have alcohol in it. And it is the alcohol which is killing germs and not the herbal component," Dr Agrawal opined.

"Ayurvedic and cosmetic sanitizers are perceived more as hand-washes. They are not considered as highly effective surface sanitizers. When a particular sanitizer is marketed as a cosmetic, it is not considered as a necessity but as a luxury. Today, customers are not experimenting with flashy brands, rather they are showing preference for purpose driven brands. However, ayurvedic sanitizers are considered safe and something that can be used repeatedly without causing harm to the skin. They use natural ingredients. On the other hand, sanitizers containing alcohol, peroxides and quaternary ammonium compounds may be corrosive," Dr Smarta explained.

### Experts caution buyers

Since everyone is trying to cash in on the current pandemic, experts have warned the buyers to be vigilant. Helpline numbers must be provided to wholesalers, retailers, traders and consumers for reporting counterfeit articles in the market. On e-commerce platforms, many fake suppliers' guise themselves as official suppliers. Amazon had introduced 'project zero' in 2019, which enabled brands to call out counterfeit products being sold on their platform. People must buy products from reliable e-commerce platforms and reliable retailers/



Air disinfection units

wholesalers

"Alcohol-based sanitizers and disinfectants are very common. They are effective and are less expensive than other options available in the market. However, they may not be suitable for use in certain industries, especially where food is prepared because alcohol catches fire. They may not be appropriate in schools or manufacturing facility. Being toxin and chemical-free, plastic-positive and cruelty-free are all factors that will be shaping consumer choices," Dr Smarta opines.

"Though the current market scenario highlights the importance of sanitizer, unknowingly a human being can come in contact with virus from any surface. Be it a shopping mall or buying electronics, the cleanliness of the products and surfaces is truly important and a good quality product can help them have a safer life," Sanghavi emphasized.

Sanghavi further cautioned that when the pandemic started, many local companies had introduced silver peroxide to treat the silver nano technology to treat the fabrics in the textile industry and the same is being used in many corporates in their premises across India. Silver nano-based technology is harmful to human skin and eyes. These products also damage the surface.

### Rising quality awareness

According to Malay Dikshit, CEO, Piscium Health Sciences Pvt Ltd, "As personal hygiene and sanitation were taught at schools as 'good habit' practices, it was always known to all. However, the pandemic has made everyone fall in line and fear laxity in sanitation. While things are returning back to normal, the pressure to keep oneself and one's surroundings repeatedly well sanitized is here to stay. Sanitation product manufacturers have a big responsibility in this context to offer genuine and quality products.

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# Pharma Manufacturing

# Hygiene & Sanitation

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A SPECIAL FEATURE

## Production areas should be effectively ventilated

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Where quarantine status is ensured by storage in separate areas, these areas must be clearly marked and their access restricted to authorized personnel. Any system replacing the physical quarantine should give equivalent security.

### Production areas

In order to minimize the risk of a serious medical hazard due to cross contamination, dedicated and self-contained facilities must be available for the production of particular pharmaceutical products, such as highly sensitizing materials (e.g. penicillins) or biological preparations (e.g. live micro-organisms).

Drains should be of adequate size and designed and equipped to prevent backflow. Open channels should be avoided where possible, but if they are necessary, they should be shallow to facilitate cleaning and disinfection.

Production areas should be effectively ventilated, with air-control facilities (including filtration of air to a sufficient level to prevent contamination and cross-contamination, as well as control of temperature and, where necessary, humidity) appropriate to the products handled, to the operations undertaken and to the external environment.

Quality control laboratories should be separated from production areas. Areas where

biological, microbiological or radioisotope test methods are employed should be separated from each other.

### Equipment

Equipment must be located, designed, constructed, adapted, and maintained to suit the operations to be carried out. The



layout and design of equipment must aim to minimize the risk of errors and permit effective cleaning and maintenance in order to avoid cross-contamination, build-up of dust or dirt, and, in general, any adverse effect on the quality of products.

Equipment should be installed in such a way as to minimize any risk of error or of contamination. Fixed pipework should be clearly labelled to indicate the contents and, where applicable, the direction of flow.

Laboratory equipment and instruments should be suited to the testing procedures undertaken.

### Materials

The main objective of a pharmaceutical plant is to produce

finished products for patients' use from a combination of materials (starting and packaging).

Materials include starting materials, packaging materials, gases, solvents, process aids, reagents and labelling materials.

### General

No materials used for operations such as cleaning, lubrication of equipment and pest control, should come into direct contact with the product. Where possible, such materials should be of a suitable grade (e.g., food grade) to minimize health risks.

All incoming materials and finished products should be quarantined immediately after receipt or processing, until they are released for use or distribution.

### Starting materials

Starting materials should be purchased only from approved suppliers and, where possible, directly from the producer. It is also recommended that the specifications established by the manufacturer for the start-

ing materials be discussed with the suppliers.

For each consignment, the containers should be checked for at least integrity of package and seal and for correspondence between the order, the delivery note, and the supplier's labels.

All incoming materials should be checked to ensure that the consignment corresponds to the order. Containers should be cleaned where necessary and labelled, if required, with the prescribed information. Where additional labels are attached to containers, the original information should not be lost.

### Intermediate and bulk products

Intermediate and bulk products should be kept under appropriate conditions.

Intermediate and bulk products purchased as such should be handled on receipt as though they were starting materials.

### Finished products

Finished products should be held in quarantine until their final release, after which they should be stored as usable stock under conditions established by the manufacturer.

### Balancing workforce, optimization and controls during Covid

During COVID-19, Pharma manufacturing companies made many adjustments to modus operandi. That includes accommodating remote workforce, social distancing when in person, wear-

ing masks and gloves, and avoiding any possibility of spreading the coronavirus. Mainly while dealing with organic material within the raw material ingredients, additional testing is needed before the drug passes Quality and is deemed 'in spec'. The extra impetus has led to newer Standard Operating Procedures in operations and quality when it involves batch production through batch records.

While these changes and concerns are bound to affect the pharmaceutical industry's workings, proper management, technology, and software to navigate these challenging times has enabled the pharmaceutical sector to rise to the occasion.

Hence Although Covid-19 brought various said and unsaid challenges for every sector. Pharmaceutical industry geared up rigorously to cope up and emerge as winner by implementing changes in hygiene and sanitation procedures keeping operations unaffected. Be it China's pressure, be it producing Covid-19 vaccine, be it financial and humanitarian losses, Pharmaceutical industry revamped the technical procedures thus taking care of hygiene and sanitation to maintain quality of vaccines/ medicines going in the global market.

(The author is head of department, Department of Cosmetics and Perfumery, Maratha Vidya Prasarak)

## Consumers are now more aware of sanitizers quality

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After the initial rush of all sorts of sanitizers in the market, there is now a sense of stability. Consumers now have a good idea of quality."

Piscium Health Sciences is an R&D based dental product manufacturer. The company developed a sanitizer formulation during the lockdown and got a very capable third party to manufacture the same for it. Its sanitizer is an iso propyl alcohol-based FDA approved formulation.

According to Dr Akshat Singhal, Head, Technical, RoliCare, "As a lot of the pathogens including SARS-CoV-2 virus are airborne or could spread through air by the aerosolized (trapped in tiny water droplets), in confined and crowded spaces, air disinfection has become as important as wearing a mask or using a sanitizer. One solution which many have

explored are traditional filter-based air purifiers. However, their performance against the aerosolized coronavirus is not scientifically well documented. Moreover, microbes captured in the filters may further reproduce, causing these devices a source of contamination. It is also unknown how long the microbe is captured when an aerosol dries up."

Ferroplast Clean Air+, a 253.7nm UV-C based air disinfectant, is designed by Ferroplast Medical LLC to destroy various bacteria and viruses, including coronavirus SARS-CoV-2, using UV-C rays, without causing harm to humans, animals, and plants in a room. It overcomes some of the gap in the current protocols by disinfecting the air using Ultraviolet which destroys the DNA/RNA of the airborne pathogens, making them incapable of reproduction and hence not

causing any infection.

RoliCare is an associate company of Ferroplast Medical LLC. Ferroplast Medical LLC is a leading Russian company that focuses on the development and production of household and medical devices intended for air and surface disinfection, maintaining sterility of instruments and materials in medical practice and cosmetology.

"The air in our room, potentially riddled with virus, bacteria and a lot else, is sucked in by the Ferroplast UV Air Disinfection Unit. The air then touches the two UV-C germicidal lights inside the chamber. The chamber itself is completely sealed off and there is no chance of any exposure to direct UV-C in the room. Some models come equipped with dust filters for dual hybrid protection. The devices are designed for air to be exposed for enough time to en-

sure sufficient dosage to neutralise pathogen is provided, because due to lack of sufficient dosage the pathogen may not be neutralised and still multiply," Dr Singhal explained.

Unlike options like fogging machines, chemical spray, open UV devices (which can cause cancer when exposed to skin or eyes), these devices are not harmful to the people, animals, food and furniture around and give significantly extra layers of safety from cross infections.

These devices are tested from different labs including NABL accredited labs. Disinfectology Research and Development Institute, Ministry of Health of the Russian Federation have confirmed the safety and efficacy of the device, being capable of disinfecting 99.99 per cent microbes in a few minutes without generating ozone. They have approved for use in operation rooms, maternity

rooms, neonatal rooms etc. Independent tests have been carried out independently by NABL accredited lab in the Ministry of Home Affairs and Ministry of Railways that showed effective results in the air quality of semi-open rooms where the devices were placed.

"So far, these devices have been installed at the Ministry of Home Affairs, Embassy of the Russian Federation, New Delhi, India and various clinics, hospitals, especially ENT and dentist clinics, hotels and corporate offices. We foresee a future where closed UV-C type devices are norm in ambient air hygiene in the same trajectory as it has been used in the medical industry of instrument sanitisation for half a century and the way people have adopted UV based water purifiers. Soon, the UV-C based air disinfectant will be the norm," Dr Singhal concluded.