

Home &gt; Business &gt; Amrita Vishwa Vidyapeetham launches 'N96 Nano Masks'

Business

# Amrita Vishwa Vidyapeetham launches 'N96 Nano Masks'

By Srinivas Vadde - March 26, 2021

0



Scientists of the Centre for Nanosciences & Molecular Medicine at Amrita Vishwa Vidyapeetham have launched a unique three-ply N96 Nano Mask based on cutting-edge nanotechnology. It is cost-effective and offers far superior filtration and breathability than conventional N95 and surgical masks.

The Amrita N96 Nano Mask, costing less than Rs200, can be washed up to 30 times for reuse. It is long-lasting, skin-friendly and odour-free, and provides very comfortable wear even for long durations. The fabric makes it effortless for the wearer to breathe in and out even while providing almost 100% protection against harmful microbes. Hardly any other mask in the world offers such high breathability (level 2) with maximum protection (99.9%). Amrita Vishwa Vidyapeetham is offering the technology for licensing to others for volume production and bring the cost of the mask further down.

The Amrita N96 Nano Mask with nano-layered filter is lab tested to provide 99.9% bacterial and virus aerosol filtration as well as 96% particle filtration of more than 3 microns. It has also been tested by the South India Textile Research Association (SITRA), the premier laboratory supported by the Ministry of Textiles, Government of India, to test masks and PPEs in the country.

The Dean Research with Centre for Nanosciences & Molecular Medicine, Amrita Vishwa Vidyapeetham Dr Shantikumar Nair said: "The Amrita N96 Nano Mask uses a one-of-its-kind nano-engineered filter fabricated with electrospun biofriendly polymer nanofibers. The nano-sized channels and interconnected pores in the nano-filter cause an enhanced 'slip effect' which ensures low air resistance for better breathability on one hand and high filtration efficiency on the other. The specific design of the mask also offers antifogging property. It is an ideal safety gear for healthcare workers and anyone else against infections caused by inhaling harmful bacteria and viruses."

He added: "Some years ago, our Center at Amrita Vishwa Vidyapeetham received a grant from the Government of India to develop nanomaterials for medical applications. As part of that process, we developed a unique nano-fibre-based membrane, textile and coating. Because of this experience, we were able to incorporate the textile with nano-fibre coating into a polypropylene textile that we have used to develop this nano mask."