

Title of Project: Development of Nasal Air filter

Objective:

To design and develop a Nasal Air Filter to protect the human from environmental pollutants such as dust, particulate matter (PM) and microbes by inserting snugly fitted disposable Nasal Air filter in to the nostrils .

How to fight Covid 19 :

The Nasal air filter contains viscous drop of oil, glycerin gels, antiseptic/disinfectant solution so as to disinfect the air (inhale/exhale) containing the corona viruses

Summary of the project

Inhalation of microbes and dust in the air always causes health problems, mainly affecting the respiratory system. Using the Nasal Air Filter, inhaled air is filtered thus avoiding inhalation of bad contaminated air. The airborne deceases like flu, H1N1, Covid etc., can be controlled to an extent, using the nasal filter. Nasal Air Filter consists of a pair of filter medium of less than 10 mm thick made up of non-toxic flexible material such as non isocyanate foam, cellulose etc., shaped in the size of a human nostril. Pairs are connected with a clip to hold the filters in position and to handle it hygienically. Filter is impregnated by viscous drop of mixtures of Ayurvedic nasal oils, antiseptic etc., to enhance the filtration of inhale air and increasing antimicrobial activity.

Non isocyanate or inert foam will be developed in the first phase of the project and Nasal air filter will be made using the foam. In the second phase of the project nasal air filter will be tested in the set up identical with human respiratory system with an Artificial ventilator system.

Nasal air filter is simple cost effective product, which will be affordable to the common man and can be widely used. Moreover, as the materials used for fabrication of the filter are biodegradable, such a product will not create any environmental issues.

Dead line of the project : October 2020

Team :

Mr.Arun Kumar V (Incubatee of TBI) - **Inventor**
34/914B Deepam , Civil Station PO
Calicut 673020
Email : arunengr10@gmail.com
Mob: 9349724535

Dr.Sajith V & Dr. Hanas T - **Mentors**
School of Materials Science and Engineering
National Institute of Technology Calicut, Kerala
E mail : sajith@nitc.ac.in; hanas@nitc.ac.in
Mob: 9446361125/ 9446991191