

IIT MADRAS Technology Transfer Office TTO - IPM Cell



Industrial Consultancy & Sponsored Research (IC&SR)

AROMATIC FUMIGATION DEVICE IITM Technology Available for Licensing

Problem Statement

Indian Institute of Technology Madras

- The prior art fumigation devices unable to provide a comprehensive & cost effective solution for home/office fumigation application.
- Furthermore, the prior art fumigation devices are **unable to provide** an effective solution sanitizing & eliminating infectious for pathogens home/office environment.
- Based on the foregoing a need therefore exists for fumigation device for **sanitizing &** controlling infectious pathogens in home/office environment.
- Present invention addresses above issues by providing solutions efficiently.

Technology Category/Market

Technology: Fumigation device

Industry: Home Appliance, Commercial & Industrial;

Applications: Commercial & Industrial, Residential.

Market: The global fumigation products market is projected to grow USD 7.66B by 2030 at a CAGR of 5.89% during forecast period (2024-2030).

Technology

- Present invention describes an aromatic fumigation device.
- Said device comprises :
- 1. rectangular housing;
- 2. a fan with motor unit;
- 3. a perforated circular plate;

4. a plurality of perforated tray boxes having perforations on alternate sides of the tray boxes;

5. at least one heating element, wherein one of the heating elements is located in the first perforated tray box & configured to heat air entering the fumigation device;

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6. cotton pads configured to hold a fumigation material; and

7. a convergent cone at the outlet of the device.

• The operation of claimed device is illustrated in the smart chart:



Hot air is configured to travel in a serpentine passage via the perforated tray boxes; and

vaporize a fumigation material, thereby driving aromatic fumes through the outlet of the device;

Further, said fumigation material comprises a liquid or a solid or a gas material.

Intellectual Property

IITM IDF Ref. 2050; IN Patent No. 534284 (Granted)

TRL (Technology Readiness Level)

TRL- 4, Proof of Concept ready, tested & validated in Laboratory

Research Lab

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Key Features / Value Proposition

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* <u>Technical Perspective:</u>

- Claimed aromatic fumigation device is used for aromatic fumigation and thereby disinfects home/office environments from pathogens including, such as, virus, bacteria and other fungus.
- The device can use any type of **ayurvedic powders** & **liquids as fumigation material**, easy to replace the ayurvedic materials.
- The fumigation device is a **versatile piece of equipment** that uses a **fine spray** to apply the materials, such as, **ayurvedic powders/liquid solution for pest or odor control**.

* Industrial Perspective:

- The fumigation device is **portable**, **easy to handle**, **cost-effective & less maintenance**.
- Provides cost effective solution for **sanitizing**, and **eliminating** infectious pathogens at home or office environment, and further to **spread fragrance**.



FIG.1: : Illustrates schematic view of an aromatic fumigation device for aromatic fumigation and thereby disinfects home/office environments from pathogens including, such as, virus, bacteria and other fungus.

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