MoldSense

Easy and reliable detection of mold in indoor air

Technology

We develop a novel device for detecting mold in room air by directly probing the spore contamination from the air sample. The device consists of a carrier with a nutrient-covered surface accessible to the room air. At defined sampling intervals, the carrier surface is illuminated with a suitable light source and a reflection and/or transmission measurement carried out. The sensor data is converted directly into information about possible mold contamination and provided to the end user, e.g. via an app on a mobile device. After the measurement, the carrier is conveyed a predetermined distance automatically within the sensor device, thereby enabling a quasi-continuous detection of mold in the ambient air. The sensor device can be implemented in public or private buildings/rooms cost-effectively, and provides immediate information about the current mold infestation and, in particular, opens up the possibility of ensuring the longest possible measuring operation, from several weeks, months to years, in a measuring operation that is as self-sufficient as possible, without requiring any maintenance measures of the device itself.

Innovation

- Direct sampling of mold spores in indoor air
- Easy use - can be employed by end users
- Cost- and energy efficient
- Very compact setup
- Real-time data

Application

- Monitoring of mold infestation in public buildings
- Mold testing in private rooms
- Monitoring of critical areas, e.g. hospitals
- Protection of cultural assets
- General indoor air monitoring

Developmental Status

- first laboratory tests
- acquisition of project funding

Responsible Scientist

Dr. Katrin Schmitt

Albert-Ludwigs University, Freiburg, Department of Microsystems Engineering

Branch

Mold Monitoring, Environment monitoring, sensor

Patent Status

DE 10 2020133992 A1

UP 4016041

Filed (PRD) Dec 17th 2020

Reference Number

ZEE2020032600

Status: Oct-24

CTF – The R&D Company of the Freiburg University and the Freiburg University Medical Center

Contact
Dr. Kathrin Lauckner
Campus Technologies Freiburg GmbH
Stefan-Meier-Str. 8 | D-79104 Freiburg
Email: kathrin.lauckner@campus-technologies.de
Tel: +49 (0)761 203-5017
Fax:+49 (0)761 203-5021