Pesticide Detection: Methyl Iodide and Methyl Bromide

Tech ID: 23321 / UC Case 2013-757-0

ABSTRACT

Paper based sensors for detection of low concentrations of methyl iodide and methyl bromide, dibromo ethylene and other alkylating agents in air.

FULL DESCRIPTION

Researchers at the University of California, Davis have developed paper-based colorimetric sensors that can rapidly detect very low concentrations of methyl iodide and methyl bromide in air. The detection limit for methyl iodide and methyl bromide is 200 and 800 ppb, respectively. These sensors can be employed in agricultural fields and other aerosol applications to detect human exposure levels of either chemical.

APPLICATIONS

- Detection of low level of fumigants in agricultural fields
- Other aerosol applications
- Organic or other certified agricultural practice verification

FEATURES/BENEFITS

- Rapid detection at very low concentration of both pesticides
- Extremely sensitive
- No chemical analysis or laboratory required
- Easy to use
- Color indicates results
- Inexpensive

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,054,570	08/21/2018	2013-757

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Fumigant Detoxification via Reusable Cotton Material
- Non-melting, Sustainable, Reusable, Plastic-Free and Biodegradable Food Coolant Cubes
- Photo-Rechargeable Antibacterial/Antiviral Materials
- Environmentally Friendly Manufacturing of Nano, Micro and Sub-micro Fibers with Hybrid CAB System

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OTHER INFORMATION

KEYWORDS

Colorimetric sensors, Fumigant detector, Methyl iodide, Methyl bromide, Paper sensor, Pesticide test, Farm worker exposure

CATEGORIZED AS

- **Agriculture & Animal Science**
  - Devices
- **Materials & Chemicals**
  - Pesticides and Insecticides
- **Sensors & Instrumentation**
  - Environmental Sensors

RELATED CASES

2013-757-0

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