Tohoku Univ. Technology

Pathogen & pest control device and reaction vessel

Significant time savings by environmentally friendly plasma sterilization system!

Overview

In order to realize pesticide-free agriculture that is safe for human body, research on pathogen and pest control using plasma effluent gases are actively conducted. The use of plasma can sterilize vegetables without leaving any harmful residue, which makes it possible to provide pesticide-free vegetables that are safe for human health. Conventional pathogen and pest control devices are designed to generate OH radicals in the reaction vessel. In order to use this pathogen and pest control device for agriculture, it is preferable to generate as many OH radicals as possible to exterminate pathogens and pests quickly and efficiently.

This invention is able to provide a pathogen and pest control device and a reaction vessel that can efficiently exterminate pathogens and pests in a short time. Since this invention has a **shape that reduces the water flow velocity**, the water evaporation rate can be increased and the **OH radicals can be generated efficiently**. Pathogens and pests can be exterminated by irradiating the OH radicals and short-lived reactive species derived from the OH radicals.

Product Application

Pesticide-free agriculture

- Pathogen control
- Pest extermination
- Agriculture / horticulture, hygiene, medical care, fisheries / livestock farming, pet field, etc.

IP Data

 IP No.
 :
 JP 2018-537290, US 10925285, CN 201780052437.1

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 Admin No.
 :
 T16-059

Germination rate of colletotrichum gloeosporioide conidia is reduced to almost zero in about 10 sec



Related Works

[1] Shimada K, et al, Plasma Process Polym.2020;17:e1900004.

Contact

