

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431090713 A

(19) INDIA

(22) Date of filing of Application :21/11/2024

(43) Publication Date : 13/12/2024

(54) Title of the invention : Automated Sanitization System for Laboratory Environments

(51) International classification :G08B0013190000, A01H0004000000, G16H0040200000, A61L0002100000, A61L0002240000

(86) International Application No :NA  
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA  
Filing Date :NA

(62) Divisional to Application Number :NA  
Filing Date :NA

(71)Name of Applicant :

**1)SWAMI VIVEKANANDA UNIVERSITY**

Address of Applicant :Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat -----

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

**1)DR. TANMOY SARKAR**

Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd Bara Kanthalia West Bengal India 700121 Barasat -----

**2)DR. SUDIP SENGUPTA**

Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd Bara Kanthalia West Bengal India 700121 Barasat -----

**3)R.VIBHOR RAJ**

Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd Bara Kanthalia West Bengal India 700121 Barasat -----

**4)DR. AVISHEK CHATTERJEE**

Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd Bara Kanthalia West Bengal India 700121 Barasat -----

(57) Abstract :

The Automatic Sanitization Machine for Tissue Culture Laboratories is an innovative system designed to automate and optimize hygiene management in controlled scientific environments. The invention integrates advanced sensors, including Passive Infrared (PIR) and Infrared (IR) sensors, to detect individuals and objects, activating a precision sprinkler mechanism for targeted sanitization. Controlled by an Arduino UNO microcontroller, the system features programmable timers for scheduled cycles and a smart plug for remote operation via smartphones. A dedicated floor sanitization mechanism ensures comprehensive cleanliness. By automating critical processes, the system reduces contamination risks, minimizes manual intervention, and upholds stringent hygiene standards, enhancing operational efficiency and reliability in tissue culture laboratories.

No. of Pages : 10 No. of Claims : 10