[Document Name] CLAIMS

[Claim 1]

A decontamination device for sterilizing an inside of a facility or an inside of a device installed in the facility in which cells, tissues, culture media, sterile reagents, microorganisms or the like are handled or cultured, comprising:

a dry fog generating machine, installed in a decontamination area, for converting a peracetic acid mixed solution containing low-concentration peracetic acid into dry fog, the dry fog comprising peracetic acid mixed agent as a mist of fine particles of 30 μm or smaller, and spraying the dry fog into the decontamination area;

a humidity sensor, installed in the above decontamination area, for measuring a humidity in the decontamination area;

a dehumidifier , installed in the above decontamination area, for dehumidifying the decontamination area; and

a control device for controlling spraying from the above dry fog generating machine and dehumidifying operation by the dehumidifier based on information from the above humidity sensor, the control device further configured to control an operation of a cycle consisting a start and stop of the dry fog generating machine and a start and stop of the dehumidifier;

wherein a main control and monitoring device, installed outside the above decontamination area, for controlling the control devices of one or more of the above decontamination devices is provided.

[Claim 2]

A decontamination method for sterilizing an inside of a facility or an inside of a device installed in the facility in which cells, tissues, culture media, sterile reagents, microorganisms or the like are handled or cultured, comprising:

setting in advance a set humidity in a decontamination area;

converting a peracetic acid mixed solution containing a low-concentration peracetic acid into dry fog and spraying the dry fog into the decontamination area with a dry fog generating machine;

measuring a humidity in the above decontamination area with a humidity sensor; and

controlling, with a control device, an operation in which a cycle consisting of start and stop of spraying from the dry fog generating machine and start and stop of a dehumidifying operation in the decontamination area by a dehumidifier is repeated according to a measured humidity from the above humidity sensor so that the above set humidity can be maintained.

[Claim 3]

The decontamination method according to Claim 2,

wherein, in the above control device, a spraying ratio, which is the ratio of the period for which the peracetic acid mixed solution is sprayed by the above dry fog generating machine to a decontamination period from a time when the measured humidity in the decontamination area reaches the above set humidity to a time the cycle is ended, is controlled at an equal value or higher than 10 percent.

[Claim 4]

The decontamination method according to Claim 2 or 3, wherein the operation of the above dry fog generating machine or the dehumidifier is controlled by the above control device such that the above dry fog generating machine is stopped and the above dehumidifier is started when the measured humidity from the above humidity sensor exceeds the above set humidity, and the above dehumidifier is stopped and the dry fog generating machine is started when the measured humidity from the above humidity sensor falls below the set humidity.

[Claim 5]

The decontamination method according to Claim 2 or 3, wherein the

operation of the above dry fog generating machine or the dehumidifier is controlled by the above control device such that the dry fog generating machine is stopped when the measured humidity from the above humidity sensor exceeds the above set humidity and the dehumidifier is started when a period calculated to increase the spraying ratio to an equal value or higher than 10 percent elapses after the measured humidity exceeds the above set humidity, and the dehumidifier is stopped and the dry fog generating machine is started when the measured humidity from the above humidity sensor falls below the set humidity.