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(Premiere mondiale) Nouveau coronavirus (COVID-19) Inactivation par l'Ozone Confirmé

(Première mondiale) Conditions pour l'inactivation de nouveau coronavirus (COVID-19) par l'Ozone Clarifiées

Aperçu

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Contexte

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Experiment Procedure

New coronavirus cell lines are cultured, and stainless -steel plates are placed in an ozone-proof airtight box (acrylic) installed in a safety cabinet, and the new coronavirus to be tested is applied.

The ozone generator (PMDA -certified medical device: ozone generator) installed in the ozone-proof airtight box (acrylic) is used to control and maintain the ozone concentration in the ozone-proof box from 1.0 to 6.0 ppm.

The amount of ozone exposure is set by CT value. (The CT value of 330, which is the experimental value for medical device certification by the PMDA of the Ministry of Health, Labor and Welfare, and the CT value of 60, which is the operational value for ozone decontamination of ambulance units by the Fire Department of the Ministry of Internal Affairs and Communications.)

After exposure, the virus is inoculated into the cells to determine if the virus has infected the cells and the amount of virus is calculated. This experiment was made possible because the University has a Biosafety Level 3 laboratory and virus culture technology.

Research Results

1. Inactivation rates ranged from 1/1,000 to 1/10,000 at a CT value of 330 (55 minutes of exposure at 6 ppm ozone concentration).
2. Inactivation rates ranged from 1/10 to 1/100 at a CT value of 60 (60 minutes of exposure at 1 ppm ozone concentration).



Experimental Equipment

Conclusion

Through the study, we confirmed that the inactivation rate could be up to 1/10,000 by ozone. This shows that the new coronavirus can be inactivated under practical conditions of ozone.

Nara Medical University (Kashihara City)

Founded in April, 1945, incorporated as a local independent administrative corporation in April, 2007.
(Number of Students: 1,020, Chairman and President: Hosei Yuji)

MBT Consortium (Kashihara City)

Founded in April, 2016, working on MBT activities with Nara Medical University.
(With 104 member companies, Chairman: Hosei Yuji)

QOL Corporation (Minato Ward, Tokyo City)

Founded in April, 2017, develops dispensaries and undertakes business process from R&D to sales.
(Capital: JPY 300 million-yen, President and Representative Director: Araki Isao)

Sanyu Shoji Corporation (Chuo Ward, Osaka City)

Founded in March, 1972, planning and wholesale of health-related products and housing-related products.
(Capital: JPY 10 million-yen, Representative Director: Daimon Masayoshi)

Tamurateko Corporation (East Osaka City)

Founded in April, 2003, develop, design, produce and sell products related to ozone, UV and oxygen.
(Capital: JPY 20 million-yen, Representative Director: Tamura Kozo)

Contact Information

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