

The Facts

Traces of the novel coronavirus were found in the cabins on the Diamond Princess Cruise ship up to 17 days after passengers left, a study published by the CDC Monday found.

“Coronaviruses are enveloped viruses, meaning they are one of the easiest types of viruses to kill with the appropriate disinfectant product.”

Pharmaceutical Research Laboratories, INC. Novel Coronavirus COVID-19

PURTEQ Touch Point:

1. **Organosilane:** “Virucidal activity of immobilized quaternary ammonium compounds (IQACs) coated onto glass and plastic surfaces was tested against enveloped influenza A (H1N1) **virus** ...” “...IQACs tested were **virucidal** against the influenza **virus** within 2 min” “...no infective influenza **viruses** could be retrieved from the coated surfaces...”

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2. **Hydrogen Peroxide:** “Hydrogen peroxide does kill germs and viruses” “Hydrogen peroxide works as a disinfectant by destroying essential components of germ cells, and can deactivate a wide range of microorganisms, including bacteria, **viruses**, fungi, and spores...” “As a household cleaner, it’s also an effective disinfectant **that will kill viruses**, bacteria, and other germs, according to the **Centers for Disease Control and Prevention (CDC).**”

INSIDER Global Updates CORONAVIRUS LIVE COVERAGE

PURTEQ PREVNT:

1. **Chlorine Dioxide:** “As a Non-Toxic Antimicrobial Agent for **Virus**”... “The release of ClO_2 results in the oxidation of the guanine residue with the formation of 8-oxoguanine; thereby disallowing the replication of the **viral** nucleic acid by base pairing. Although the replication of the protein coat may continue; **the formation of a complete functional virus has been blocked by ClO_2 oxidation.**”

Universal Medical Imaging Group, USA Correspondence: Robert O Young, pH Miracle Inc., 16390 Dia del Sol, Valley Center, California, 92082, USA, Tel 760 751 8321 Received: December 26, 2016 | Published: October 8, 2016 Citation: Young RO (2016) Chlorine Dioxide (ClO_2) As a Non-Toxic Antimicrobial Agent for Virus, Bacteria and Yeast (Candida Albicans). Int J Vaccines Vaccin 2(6): 00052. DOI: [10.15406/ijvv.2016.02.00052](https://doi.org/10.15406/ijvv.2016.02.00052)

2. **Titanium dioxide:** “Photocatalytically active titanium dioxide (TiO_2) is widely used as a self-cleaning and self-disinfecting material in many applications to keep environments biologically clean [19–21]. Photocatalysis mainly uses a semiconductor such as TiO_2 which can absorb UV light ($\lambda < 400 \text{ nm}$) and can photo-stimulate redox reactions on its surface producing Reactive Oxygen Species (ROS) such as hydroxyl radical ($\cdot\text{OH}$),”... “We have demonstrated broad-spectrum biocide efficacy of photocatalysis against both bacteria (GPC and GNR, including drug-resistant bacteria) and viruses (enveloped and non-enveloped virus).”

Broad Spectrum Microbicidal Activity of Photocatalysis by TiO_2 Ryuichi Nakano 1,2,†, Masayuki Hara 2,†,, Hitoshi Ishiguro 2,3, Yanyan Yao 2,3, Tsuyoshi Ochiai 2,4, Kazuya Nakata 2,4, Taketoshi Murakami 2, Jitsuo Kajioaka 2, Kayano Sunada 2,5, Kazuhito Hashimoto 5,6, Akira Fujishima 2,4 and Yoshinobu Kubota 2,*