



Tel. direct: +41 22 791 3642  
Fax direct: +41 22 791  
E-mail : ballera@who.int

In reply please  
refer to:

Your reference:

Dr Hiko Tamashiro  
Professor Emeritus  
and Nitobe College Fellow  
Hokkaido University  
Kita 17 Jo Nishi 8 Chome  
Kita-ku, Sapporo 060-0817  
Japan

27 November 2020

Dear Dr Tamashiro,

Thank you for your letter requesting clarification on the definition of hypochlorite-based products in reference to “*WHO’s Cleaning and Disinfection Guidance*” (attached). Also, for sharing results in the attached study which show an effective reduction in SARS-CoV-2 viral titers at low concentrations of chlorine 40-50 ppm; chlorine displays a spectrum of antimicrobial activity and is effective against several common pathogens at various concentrations.

The hypochlorite-based products referred to in the WHO’s cleaning and disinfection guidance does not include hypochlorous acid solution (HAS). In the context of COVID-19, in health-care settings the recommendation of 0.1% hypochlorite (1000 ppm) OR 70–90% alcohol AND 1 minute contact time was chosen as a conservative concentration that will inactivate most other pathogens that may be present. In community settings, WHO provided similar guidance to ensure consistency, as these are commonly available disinfectant solutions worldwide at various concentrations.

Also specified within the guidance is that the selection of disinfectants should meet local authorities’ requirements for market approval, referencing as an example the U.S. Environmental Protection Agency (EPA) approved list of disinfectants for use against the COVID-19 virus, which includes HAS at various contact times.

Given the above, WHO will include HAS as a type of disinfection product in future evidence review to inform the update of the “*Cleaning and Disinfection*” interim guidance (<https://www.who.int/publications/i/item/cleaning-and-disinfection-of-environmental-surfaces-in-the-context-of-covid-19>).

In all settings, WHO recommends that surface disinfection starts with manual cleaning methods (brushing/scrubbing) with detergent and water to remove physical debris followed by the application of a disinfectant using a cloth or wipe. WHO does not recommend the use of spray or fogging disinfectants in most environments, as this does not facilitate the physical removal of debris before disinfection, recommended contact time, or ability to reach shielded surfaces effectively. WHO advise that spraying people with disinfectants or disinfectant solutions should not be considered a measure to reduce transmission of SARS-CoV-2.

Yours sincerely,

Dr April Baller  
Lead, Infection Prevention and Control  
WHO Emergency Preparedness

ENCL: (1)