



CUSTOMER INFORMATION

Hamburg, 13.12.2021

Efficacy of HARTMANN disinfectants for hands, skin, surface and instruments against SARS-CoV-2 and variants of concern

Dear Sir or Madam,

SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2), which is responsible for the COVID-19 (Coronavirus Disease 2019) outbreak, belongs to the coronaviruses within the family *Coronaviridae*. These belong to the enveloped viruses and other representatives are SARS-CoV and MERS-CoV (Middle East Respiratory Syndrome Coronavirus).

Required spectrum of activity

For the inactivation of coronaviruses such as SARS-CoV-2, disinfectants should be used with proven efficacy against enveloped viruses. This also includes the inactivation of variants of concern, e.g. B.1.1.7 (first detected in the UK, renamed to **Alpha**), B.1.351 (first detected in South Africa, renamed to **Beta**), B.1.617.1 / B.1.617.2 (first detected in India, renamed to **Kappa** and **Delta**) and B.1.1.529 (first detected in South Africa, renamed to **Omicron**).

The WHO and CDC recommend using alcohol-based hand disinfectants to inactivate SARS-CoV-2 in public as well as clinical settings [1,2].

Kratzel *et al.* investigated the sensitivity of different types of coronaviruses (SARS-CoV, SARS-CoV-2, MERS, BCoV) towards the alcohol-based WHO formulations I (85% ethanol) and II (75% 2-Propanol) as well as of the two commercially available alcohols. Their results showed for all tested formulations that coronaviruses are very susceptible against alcohols and high reduction rates were observed even at a minimum concentration of 30% after 30 seconds contact time [3].

Furthermore, Meister and colleagues recently showed that this is also true for the variants of concern strains B.1.1.7 and B.1.351. They compared the sensitivity of the new variants to wildtype SARS-CoV-2 using 70% ethanol and observed comparable susceptibility of all virus variants tested towards a minimum of 30% ethanol upon 30-seconds contact time, which is indicative of similar disinfection properties [4]. In summary scientific evidence was given that the common coronavirus types as well as the SARS-CoV-2 variations are inactivated by alcohols in a similar way.



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The European Standard EN 14476 specifies test method and requirement for proofing virucidal activity of chemical disinfectants that are used in medical areas and situations where disinfection is medically indicated. According to this standard, proof of virucidal activity against enveloped viruses is given when the product is able to inactivate modified vaccinia virus Ankara (MVA). MVA is well known as the most resistant enveloped virus. Within the meaning of the standard EN 14476 a product is effective against SARS-CoV-2 when the efficacy has been proven against MVA.

BODE disinfectants for hands (Sterillium® range), skin (Cutasept® range), surface (Bacillol® range, Kohrsolin® range, Mikrobac® range, Dismozon® range) and instruments (Bomix® plus, Korsolex® range) do fulfill the European Standard EN 14476 and therefore meet the requirements for virucidal activity against enveloped viruses which is the recommended spectrum of activity to inactivate SARS-CoV-2 and variants of concern.

Best regards,

BODE Chemie GmbH

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References:

1. World Health Organization (WHO) Coronavirus disease (COVID-19) advice for the public. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public> (accessed on 02.08.2021).
2. Centers for Disease Control and Prevention (CDC) Hand Hygiene Recommendations Guidance for Healthcare Providers about Hand Hygiene and COVID-19. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/hand-hygiene.html> (accessed on 02.08.2021).
3. Kratzel A *et al.* (2020) Inactivation of severe acute respiratory syndrome coronavirus 2 by WHO recommended hand rub formulations and alcohols. *Emerg Infect Dis* 26:1592–5.
4. Meister *et al.* (2021) Comparable environmental stability and disinfection profiles of the currently circulating SARS-CoV-2 variants of concern B.1.1.7 and B.1.351. *J Infect Dis* doi: 10.1093/infdis/jiab260.

The statements in the document correspond to the current state of knowledge. Future changes are possible without automatic prior notice.