

EFFICACY OF HAND HYGIENE PRODUCTS AGAINST SARS COV-2



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INTRODUCTION

The SARS-CoV-2 virus, which can cause COVID-19, has spread rapidly around the world and has resulted in the declaration of a pandemic by the World Health Organisation.

Hand hygiene is the primary measure proven to be effective in preventing transmission of pathogenic microorganisms to patients and healthcare workers^[1] and with more than 200 million reported cases worldwide^[2] of which around 20% require hospital care^[3] it is vital that essential hand hygiene products are sufficiently efficacious against SARS-CoV-2.

Transmission of SARS-CoV-2 can occur through direct contact with an infected individual, through infected secretions such as saliva and respiratory droplets, or indirectly through contact with a contaminated object or surface^[4]. Human coronaviruses such as SARS-CoV-2 can remain infectious on inanimate surfaces for up to 9 days meaning contamination of frequent touch surfaces is a potential source of viral transmission^[4]

OBJECTIVE

The objective of this study is to demonstrate viricidal activity of a range of formulated skin care products against SARS-CoV-2 specifically.

METHOD

Testing was conducted using ASTM E1052-20 and EN14476:2013+A2:2019 test methods. The test product was challenged with an aliquot of viral inoculum as well as an interference substance (for EN14476) then held for an exposure (contact) time.

Immediately after the contact time, the reaction mixture was neutralized. The neutralized sample was assayed for infectious virus via a cell culture-based viral infectivity assay (TCID50 assay).

The results were compared to a mock-treated Virus Recovery Control to determine the virucidal activity (Log₁₀ reduction) by the test product.

Table 1

Product Name	Active (%)	Method	Contact time	Log ₁₀ reduction
SC Johnson Professional Instant FOAM Complete / Alcare Extra	80% w/w Ethanol	EN14476	30s	≥4.36
SC Johnson Professional Microsan Encore / Alcare Enhanced	65% w/w Ethanol + 10% w/w n-Propanol	EN14476	30s	≥4.38
SC Johnson Professional Instant GEL Complete	80% w/w Ethanol	EN14476	30s	≥4.38
SC Johnson Professional Instant FOAM Non-Alcohol Sanitiser (formula sold only in USA)	0.13% Benzalkonium Chloride	ASTM E1052	60s	≥3.10
SC Johnson Professional OxyBAC Foam Wash	2% Hydrogen Peroxide + 5% Phenoxyethanol	EN14476	30s	≥4.10

CONCLUSION

The data from this study provides evidence that...

- Alcohol-based sanitizers are effective against SARS-CoV-2 and that this effectiveness is not strongly affected either by product format or by alcohol composition as long as a sufficient concentration is applied and the suggested contacts times are adhered to.
- SCJ Professional 0.13% BZK based hand sanitizer and Hydrogen Peroxide/Phenoxyethanol based antimicrobial foam soap are also both effective against SARS-CoV-2.

As a result, we would recommend the use of product formulations meeting those specifications in health care, community, and home environments as part of hand hygiene practices to help control the transmission of SARS CoV-2.

SC Johnson Professional hand sanitiser and foam soap products are marketed for human hygiene purposes only and whilst they are one of many effective tools in the battle against the transmission of the SARS-CoV-2 virus, their use does not prevent or treat COVID-19 disease or provide any medicinal effects or benefits to the user.

REFERENCES

- ^[1] CDC website Hand Hygiene in Healthcare settings: <https://www.cdc.gov/handhygiene/providers/index.html>
- ^[2] European Centre for Disease Prevention and Control. COVID-19 situation update worldwide, week 32, updated 19 August 2021, <https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases; 2021>
- ^[3] World Health Organization. Transmission of SARS-CoV-2: implications for infection prevention precautions, <https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions>.
- ^[4] G. Kampf, et al: Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents. J Hosp Infect 2020; 104: 246-251.

CONFLICT OF INTEREST

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