OPS® INSTANT Hand Sanitizer

UP TO 4 HOURS OF PROTECTION

Effectiveness and residual activity— Alcohol-based hand sanitizers stop working the instant they dry. The leading manufacturer of alcohol-based hand sanitizers claims that their product kills 99.99% of most common germs that may cause disease in as little as 15 seconds. Alcohol-based hand sanitizers dry in 8-10 seconds, and fall below the efficacious concentration of alcohol in seconds. "**It has been reported that alcohol-based hand sanitizers offer no residual protection, and that if your hands feel dry after rubbing them together for 15 seconds, an insufficient volume of alcohol gel was likely applied**[1]. "

OPS Instant Hand Sanitizer, a benzalkonium chloride-based sanitizer dries fast, but 10-15 seconds slower than alcohol-based hand sanitizers allowing more than the minimum contact time for complete efficacious coverage, including under fingernails. Additionally, **OPS Instant Hand Sanitizer** **delivers 2 to 4 hours of residual protection.**

EFFECTIVE AFTER REPEATED USE:

Published studies report that benzalkonium chloride-based hand sanitizers demonstrated greater sustained antibacterial activity than gelled alcohol-based hand sanitizers that actually became less effective with repeated use and made the skin dirtier, not cleaner due to removal of protective natural skin oils and entrapment of dead skin cells by the polymer thickeners used in the gelled alcohol-based products.

In the referenced study to simulate repeated usage, an alcohol-based and alcohol-free benzalkonium chloride based hand sanitizer were compared. In the study, subject's hands were repeatedly inoculated with bacteria followed by application of hand sanitizer, then evaluated for antimicrobial effectiveness. The antimicrobial efficacy of the alcohol-based hand sanitizer showed a markedly decreased antimicrobial efficacy with subsequent contamination and decontamination cycles, whereas the alcohol-free benzalkonium chloride-based hand sanitizer showed a steady increase in antibacterial efficacy.

In addition to these objective results, subjects were asked to subjectively evaluate the condition of their hands after the completion of the test protocol. 47% of the subjects who had completed the test protocol with the alcohol-based hand sanitizer reported palmar pain or discomfort, and tended to indicate some discomfort in palmar surfaces for one to several days after the test. In contrast, none of the subjects that used the alcohol-free benzalkonium chloride based formula reported any pain or discomfort of their hands after completing the test protocol[2].

IN SUMMARY:

- Benzalkonium chloride-based hand sanitizers had a greater sustained antibacterial activity than alcohol-based hand sanitizers.
- Alcohol-based hand sanitizers became less effective with repeated use and irritated the hands of subjects.
- Benzalkonium chloride-based hand sanitizers became more effective without irritation after repeated use.

Marples, RR, & Towers, AG (1979).
A laboratory model for the investigation of contact transfer of microorganisms.
The Journal of Hygiene, 82(2), 237-248.

Dyer, DL, Gerenraich, KB, & Wadhams, PS (1998).
Testing a new, alcohol-free sanitizer to combat infection.
Association of Operating Room Nurses Journal, 68(2), 239-251.

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