CofixRX Test Results 2022

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Efficacy Report

CofixRX assay results against SARS-CoV-2 Variant Viral Killing

Summary of variant testing:

CofixRX nasal spray was evaluated against two SARS-CoV-2 (Covid) variants of concern: Delta and Omicron. Virus killing tests were performed by the Institute for Antiviral Research at Utah State University with conditions that would mimic a standard dosage of CofixRX applied per manufacturer's instructions. The procedure and results are detailed below.

Procedure:

Viral samples of SARS-CoV-2 B.1.1.529 (omicron) and B.1.617.2 (delta) viruses were produced under routine laboratory conditions. CofixRX solution was applied to each test sample of virus. Control experiment tests were performed with 70% ethanol as the positive killing control (full virus destruction) and pure water as the negative killing control (no virus destruction). The test samples were applied to the virus for 45 seconds to mimic a standard dose of CofixRX. At the end of each test, the sample was diluted 1/10 to stop the treatment. The efficacy of treatment was measured by applying each treated sample to human cells to test for infectivity. After 6 days of incubation, the cells were tested for viral infection using the Reed-Muench method. Virus titer, the amount of active virus, was detected before/after treatment in logarithmic scale, giving the difference between treated and untreated samples as a log reduction value (LRV) for virus killing.

Results:

Virus survival was quantified and the resulting data is displayed in Table 1. CofixRX treatment was tested against the delta variant for immediate virus killing (0 h incubation). CofixRX was also tested against the omicron variant at 0 h, 6 h, and 24 h timepoints following treatment. All samples were compared against 70% ethanol as the positive control, which indicated 100% killing by log reduction value (LRV) of 3.8. CofixRX treatment produced LRV of 2.8 for delta (99.84% killing) immediately

following treatment. Against omicron, three time points were evaluated. Immediately following treatment, CofixRX vs. omicron had LRV of 2.3 (99.5% killing); after 6 h LRV was 1.8 (98.4% killing); and after 24 h LRV was 2.1 (99.2% killing). These results indicated the CofixRX spray destroys the SARS-CoV-2 delta variant with 99.84% immediate virus killing efficacy and the omicron variant with 99.5% efficacy immediately following the standard treatment time.

Conclusions:

CofixRX Nasal Spray is >99.5% effective against SARS-CoV-2 variants of concern in this laboratory analysis. These new results add to previous test data that revealed CofixRX is also 100% effective against the viruses Influenza B ("flu") and RSV ("respiratory syncytial virus") and 94% effective against HRV-14 ("human rhinovirus B14"). The combination of ingredients, including povidone-iodine, in CofixRX is therefore highly virucidal against four distinct viruses tested, including two major variants of concern for SARS-CoV-2: delta and omicron.

References:

Scientific studies proving efficacy and safety of active ingredient Povidone-Iodine in nasal spray:

Table 1. Virucidal activity against SARS-CoV-2 after incubation with virus at 22 ± 2°C.

Compound	Conc	Inc time on plates	Variant	Contact Time	Tox[a]	Neut. Ctrl[b]	Virus Titer[c]	VC Titer[c]	LRV[d]
Nasal Spray	100%	0 hr	Delta	45-sec	1/10	None	1.7 ± 0.0	4.5 ± 0.4	2.8
Ethanol	70%	0 hr	Delta	45-sec	None	None	<0.7	4.5 ± 0.4	>3.8
Nasal Spray	100%	0 hr	Omicron	45-sec	1/10	None	1.7 ± 0.0	4.0 ± 0.3	2.3
Ethanol	70%	0 hr	Omicron	45-sec	None	None	<0.7	4.0 ± 0.3	>3.3
Nasal Spray	100%	6 hr	Omicron	45-sec	1/10	None	2.0 ± 0.5	3.8 ± 0.4	1.8
Ethanol	70%	6 hr	Omicron	45-sec	None	None	<0.7	3.8 ± 0.4	>3.1
Nasal Spray	100%	24 hr	Omicron	45-sec	1/10	None	1.7 ± 0.0	3.8 ± 0.2	2.1
Ethanol	70%	24 hr	Omicron	45-sec	None	None	<0.7	3.8 ± 0.2	>3.1

[a] Cytotoxicity indicates the highest dilution of the endpoint titer where full (80-100%) cytotoxicity was observed
[b] Neutralization control indicates the highest dilution of the endpoint titer where compound inhibited virus CPE in wells after neutralization (ignored for calculation of virus titer and LRV)
[c] Virus titer of test sample or virus control (VC) in $\log_{10}$ $CCID_{50}$ of virus per 0.1 mL
[d] LRV (log reduction value) is the reduction of virus in test sample compared to the virus control