



## Results Summary - Coronavirus Type

Virus Used: Murine hepatitis virus ATCC  
(Australian TGA approved as a surrogate for Covid 19 - see below)  
Efficacy: Citran 1 Sanitiser kills Coronavirus at 99.99%  
Rate Used: 150ml Citran 1 Sanitiser (per litre water)  
Duration: 10 mins in dirty conditions

Analysis	Testing of viricidal activity of Citran 1 Sanitiser by suspension technique
	Murine hepatitis virus (MHV-1) is a member of the Coronavirus family and has been used as a surrogate for the SARS coronavirus in published disinfectant studies (TGA has approved as a surrogate for Covid 19) <a href="https://www.tga.gov.au/surrogate-viruses-use-disinfectant-efficacy-tests-justify-claims-against-covid-19">https://www.tga.gov.au/surrogate-viruses-use-disinfectant-efficacy-tests-justify-claims-against-covid-19</a>
Date	Sample received Eurofins 20/02/20; Results 20/03/20. TGA and APVMA approved laboratory

RESULTS: MHV-1 virus test/control results for 10 mins contact		
Virus Dilution	Virus Control	Test Sample
Log <sub>10</sub>	6.33	2.23
<b>Log<sub>10</sub> Reduction of virus after treatment</b>		<b>4.10</b>

Virus Strain	Murine hepatitis virus (MHV) -1 ATCC/VR-261
Cell Substrate	A9 cells ATCC/CCL- 1.4
Test Concentration *	15% (in hard water)
Contact Time	10 minutes
Test Temperature	Room temperature
Test Condition	Dirty 3% FBS (Fetal Bovine Serum) with 3% erythrocytes (EN14476)
Neutraliser	2% FBS in MM

Conclusion from Results	The sample has shown viricidal efficacy against MHV-1 by achieving 4.10 log reduction in virus concentration after 10 minutes exposure period at room temperature.
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*Note: Citran 1 active components tested; rate adjusted for final product.*