

Novapharm Research (Australia) Pty Ltd
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 AU

Client Account Number: A00672814G0N
 Eurofins Quote Number: AGW3PH19006107

Eurofins Sample Number NJ20AA1449-1	
Original Received Date:	07-Feb-2020
Description:	Aeris Active/Evocide Extra 500mL; Expiry Date: 02/2023
Lot Number:	B002001
Containers Submitted:	1 Bottle(s)
General Method Reference: TMCV 006	

Analysis	Result
006 Testing of virucidal activity of disinfectants by surface carrier technique	See Attached Report for Result
Refer to Attachment # 1	----
Analysis Date: 04-Mar-2020	
006 Testing of virucidal activity of disinfectants by surface carrier technique	See Attached Report for Result
Refer to Attachment # 2	----
Analysis Date: 04-Mar-2020	

Supplemental Information

Murine hepatitis virus ATCC ® VR-261™ is a member of the Coronavirus family and has been used as a surrogate for the SARS coronavirus in published disinfectant studies*.

***The antiviral action of common household disinfectants and antiseptics against murine hepatitis virus, a potential surrogate for SARS coronavirus.**

<https://www.ncbi.nlm.nih.gov/pubmed/19692148>

***Murine hepatitis virus strain 1 produces a clinically relevant model of severe acute respiratory syndrome in A/J mice.**

<https://www.ncbi.nlm.nih.gov/pubmed/17041219>

The American Type Culture Collection (ATCC) also lists VR-261 under its SARS Research Material.

Samples were tested as received.

Specifications (if) reported are as provided by the client.

Contracted Company: Eurofins ams Laboratories Sydney

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TGA Licence No: MI-15112007-LI-002191-11 APVMA Licence No: 6139

Questions about this report should be directed to your project manager or the general email listed above.

EXAMINATION:	Virucidal activity of Aeris Active/Evocide Extra (Exp: 02/2023) by Carrier test method
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CONDITIONS	
Virus Strain	Murine hepatitis virus (MHV) -1 ATCC/VR-261
Cell Substrate	A9 cells ATCC/CCL- 1.4
Test Concentration	Neat
Contact Time	1 minute
Test Temperature	Room temperature
Test Condition	Dirty 5% FBS (Fetal Bovine Serum)
Neutraliser	1% Catalase and 4 cc Sephadex Gel in PBS (Phosphate Buffer Saline)

RESULTS: TABLE 1: MHV-1 virus test/control results for 1 min contact

Virus Dilution	Number of Inoculated Wells	Virus Control	Cytotoxicity	Neutralisation	Test Sample
10 ⁻¹	4	4 ⁺ /4	C	C	C
10 ⁻²	4	4 ⁺ /4	C	C	C
10 ⁻³	4	4 ⁺ /4	0 ⁺ /4	4 ⁺ /4	1 ⁺ /4
10 ⁻⁴	4	3 ⁺ /4	N/A	N/A	0 ⁺ /4
10 ⁻⁵	4	3 ⁺ /4	N/A	N/A	0 ⁺ /4
10 ⁻⁶	4	3 ⁺ /4	N/A	N/A	N/A
10 ⁻⁷	4	2 ⁺ /4	N/A	N/A	N/A
10 ⁻⁸	4	2 ⁺ /4	N/A	N/A	N/A
Log ₁₀	-	6.78	2.5	2.5	2.67
Log ₁₀ Reduction of Virus after Treatment				4.11	

Note: Presence of virus in each response is recorded as “+”
 Absence of virus in each response is recorded as “0”
 Cytotoxic response is recorded as “C”
 Calculated virus titre = 10^{6.78}TCID_{50/0.1ml} (6.78 log₁₀)
 Cell control - 4 wells with healthy cell monolayer

* The Reed & Muench LD50 Method was used for determining the virus titre endpoint.

CONCLUSIONS:

Considering the cytotoxicity and neutralisation test results, the sample “Aeris Active/Evocide Extra (Exp: 02/2023)” has shown virucidal efficacy against MHV-1 by achieving 4.11 log reduction in virus concentration after 1 minute exposure period at room temperature.

EXAMINATION:	Virucidal activity of Aeris Active/Evocide Extra (Exp: 02/2023) by Carrier test method
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CONDITIONS	
Virus Strain	Murine hepatitis virus (MHV) -1 ATCC/VR-261
Cell Substrate	A9 cells ATCC/CCL- 1.4
Test Concentration	Neat
Contact Time	5 minutes
Test Temperature	Room temperature
Test Condition	Dirty 5% FBS (Fetal Bovine Serum)
Neutraliser	1% Catalase and 4 cc Sephadex Gel in PBS (Phosphate Buffer Saline)

RESULTS: TABLE 1: MHV-1 virus test/control results for 5 mins contact

Virus Dilution	Number of Inoculated Wells	Virus Control	Cytotoxicity	Neutralisation	Test Sample
10 ⁻¹	4	4 ⁺ /4	C	C	C
10 ⁻²	4	4 ⁺ /4	C	C	C
10 ⁻³	4	4 ⁺ /4	0 ⁺ /4	4 ⁺ /4	0 ⁺ /4
10 ⁻⁴	4	3 ⁺ /4	N/A	N/A	0 ⁺ /4
10 ⁻⁵	4	3 ⁺ /4	N/A	N/A	0 ⁺ /4
10 ⁻⁶	4	3 ⁺ /4	N/A	N/A	N/A
10 ⁻⁷	4	2 ⁺ /4	N/A	N/A	N/A
10 ⁻⁸	4	2 ⁺ /4	N/A	N/A	N/A
Log ₁₀	-	6.78	2.5	2.5	2.5
Log ₁₀ Reduction of Virus after Treatment				4.28	

Note: Presence of virus in each response is recorded as “+”
 Absence of virus in each response is recorded as “0”
 Cytotoxic response is recorded as “C”
 Calculated virus titre = 10^{6.78}TCID_{50/0.1ml} (6.78 log₁₀)
 Cell control - 4 wells with healthy cell monolayer

* The Reed & Muench LD50 Method was used for determining the virus titre endpoint.

CONCLUSIONS:

Considering the cytotoxicity and neutralisation test results, the sample “Aeris Active/Evocide Extra (Exp: 02/2023)” has shown virucidal efficacy against MHV-1 by achieving 4.28 log reduction in virus concentration after 5 minutes exposure period at room temperature.