



Report on virucidal efficacy of treated textile fabric against human coronavirus OC43 (CoV-OC43).

Report reference	HASB/001/2020
Applicant	Honsin Apparel Sdn Bhd (Subsidiary of Prolexus Berhad) 531, Batu 2 1/2, Jalan Kluang, 83000 Batu Pahat, Johor, Malaysia
Testing Laboratory	Institute of Health & Community Medicine, Universiti Malaysia Sarawak Jalan Datuk Mohd Musa 94300 Kota Samarahan Sarawak Malaysia
Test Date	6 August 2020
Report Date	17 August 2020
Test product	1. ProX™ Technology-Anti Virus 2. ProX™ Technology-Anti Virus (After 60 washes)
Test material	1. Treated fabric 2. Untreated fabric 3. Treated fabric with 60 washes
Test method reference	Modified ISO 21702:2019
Test indicator	Virucidal efficacy
Test virus	Human coronavirus OC43
Cell line	LLC-MK2



## **TEST RESULTS**

**Table 1. Experiment Controls**

Sample ID	Virus Titer of Replicates	Mean Virus Titer	Log Reduction	Percent Reduction (%)
Positive control	8.7E+06	8.7E+06	N.A.	N.A.
	8.6E+06			
	8.8E+06			
Negative control <sup>a</sup>	No plaques	N.A.	N.A.	N.A.
	No plaques			
	No plaques			

<sup>a</sup>Untreated fabric was used as the negative control

**Table 2. Evaluation of ProX™ Technology-AntiVirus fabric**

Sample ID	Contact Time	Virus Titer of Replicates	Mean Virus Titer	Log Reduction	Percent Reduction (%)
ProX™ Technology-Anti Virus	60 minutes	8.6E+03	8.57E+03	3.01	99.90
		8.7E+03			
		8.4E+03			
ProX™ Technology-Anti Virus (after 60 washes)	60 minutes	2.8E+04	2.93E+04	2.47	99.66
		3.1E+04			
		2.9E+04			



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### ASSAY METHODS

1. Test materials were provided by the applicant. The material/s was cut into 3cm X 3cm pieces and placed in individual sterile disposable petri dishes.
2. An aliquot of 0.1 ml stock virus (CoV-OC43) was spread uniformly over a 3cm X 3cm of the test material (treated fabric, treated fabric after 60 washes and untreated fabric) for 60 minutes exposure time.
3. Post-exposure time, sterile culture media was used to recover remaining virus from the test material. A 10-fold serial dilution in cell culture media, of the recovered virus was prepared ( $10^0$  to  $10^{-5}$ ). The serial dilutions were layered onto an 80-90% confluent monolayer of cultured LLC-MK2 cells in a 24-well plate and incubated at 37°C supplemented with 5% CO<sub>2</sub> for 5-7 days. Plates were observed daily for virus-specific cytopathic effects (CPE) produced by replicating infectious virus.
4. Upon observing CPE (approximately 5-7 days post-infection), cells were fixed with a solution of 4% formaldehyde in PBS and stained with a 0.2% crystal violet solution. Virus plaques were counted from the serial dilution wells to determine the virus titer.

### CONCLUSION

Under laboratory conditions, the ProX™ Technology-Anti Virus treated fabric and ProX™ Technology-Anti Virus (after 60 washes) both showed virucidal efficacy >99% after exposure for 60 minutes.

No toxic effects were observed on the host cell monolayer of the untreated fabric (negative control).

Report prepared by:

A handwritten signature in black ink, appearing to read "David".

Prof. Dr. David Perera, Ph.D.

