

BIO SCIENCE
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BIOSCIENCE LABORATORIES, INC EXECUTIVE SUMMARY FOR THE STUDY # 2003154-450

STUDY TITLE: EVALUATION OF THE VIRUCIDAL PROPERTIES OF A TREATED NON-POROUS MATERIAL VERSUS CORONAVIRUS USING ISO 21702

SPONSOR: NANOVEU PTE LTD
Blk 81 Ayer Rajah Crescent, 03-43,
Singapore 139967

TEST MATERIAL: Treated Film
(EPA Registration Number: Not Provided)
Active Ingredient: Monovalent Copper

TEST STRAIN: Coronavirus strain OC43 (Betacoronavirus, #0810024CF)
Source: ZeptoMetrix Corporation

STUDY PURPOSE: The purpose of this study was to determine the virucidal activity of an antimicrobial coated surface when challenged with Coronavirus. Testing was based upon method described in ISO 21702:2019 “Measurement of antiviral activity on plastics and other non-porous surfaces”. Two batches of the treated test material were evaluated as specified in U.S. Environmental Protection Agency, Office of Chemical Safety and Pollution Prevention, OCSPP 810.2200: Disinfectants for Use on Environmental Surfaces (February 2018).


Table presents the summary of testing results for the Test Material, Treated Film.

TABLE

Summary of Results for Treated Film versus Coronavirus OC43

Test Material: Treated Film	Test Conditions			Coronavirus % Reduction	Coronavirus log ₁₀ Reduction	EPA Requirement for Virucidal log ₁₀ Reduction for Hard Surface Disinfectants
	Exposure Time	Exposure Temperature	Relative Humidity			
Batch #1, Lot # March 2020	30 minutes	25 °C ± 1 °C	≥90%	99.97	3.58	≥3.00
Batch #2, Lot # April 2020				99.99	3.92	

STUDY CONCLUSION: Under the conditions of this evaluation, Batch #1 (Lot # March 2020) of the Test Material, Treated Film (Monovalent Copper), reduced the virus infectivity by an average of 3.58 log₁₀ (SE=0.528) on three test carriers, following a 30-minute exposure. Batch #2 (Lot # April 2020) of the Test Material, Treated Film (Monovalent Copper), reduced the virus infectivity by an average of 3.92 log₁₀ (SE=0.688) on three test carriers, following a 30-minute exposure. The Test material, Treated Film (Monovalent Copper) Batch #1 (Lot # March 2020) and Batch #2 (Lot # April 2020) demonstrated > 3 log₁₀ reduction of Coronavirus strain OC43 on each test surface.


Study Director, Volha Teagle, Ph.D.

05-21-2020
Date