BIOLOGICAL CONSULTING SERVICES
OF NORTH FLORIDA, INC.

June 26, 2020

Nelson McIlveen
Celtic Plastic, LLC.
329 S. Rockford Dr. Ste 103
Tempe, AZ 85281
480-560-5404

Robert Papalos
Watch Water® USA
9171 128th Ave Largo
Florida 33773, USA
866-961-1366

Client ID: Virol-oxy Powder; reconstituted to 1% aqueous solution

BCS ID: 2005012

Project Name: Residual virucidal efficacy of Virol-Oxy against Human Coronavirus OC43

Dear Nelson McIlveen,

We have completed the disinfection efficacy study on the submitted units/materials as outlined in the report notes. The contaminant species, study conditions, and parameters utilized were based on client's request and adaptation of the guidance documents and protocols listed below:

Validation of virucidal efficacy of supplied material: Performance determination as per laboratory protocol; BCS SOP-D1 (ISO17025:2017 Accredited) and ASTM E1053.

Following, you will find our report of the study conducted on the referenced samples. Should you have any questions, please do not hesitate to contact me.

Sincerely,

George Lukasik, Ph.D.
Laboratory Director

BCS LABORATORIES, INC. – GAINESVILLE
4609 NW 6TH STREET, STE. A, GAINESVILLE, FLORIDA 32609
TEL. (352) 377-9272, FAX. (352) 377-5630
WWW.MICROBIOSERVICES.COM
FL DOH E82924, ISO 17025:2017 L2422 (ANAB/ANSI), EPA FL01147

Analysis: *Coronavirus OC43 (ATCC VR 1558) Virus Reduction Efficacy* Test Carrier: Glass 100mm petri plate

Application Method: Saturation by spray of carrier and virus challenge following 2 weeks Temp.: 20.9

Conformance of Study Control Data: Negative Control: Yes Positive Control: Yes Neutralizer Control Yes

Start Conc.*: 4.1E+06 MPN I.U. Contact Time: 10 minutes

Analyst: Jessica Weglarz, B.S. Challenge Start Date: 06/12/2020

BCS Sample ID: 2005012 Client ID: Virol-oxy Powder (1% Solution) Qualifier: U

End Conc.**: <2.0E+01 MPN I.U. % Reduct.: >99.9995 Log10 Reduct.: >5.3

Sample Analyst: Jessica Weglarz, B.S. Sample Analysis Date: 06/12/2020

Sample Notes: Viable virus was not recovered (none detected)

BCS Sample ID: 2005012 Client ID: Virol-oxy Powder (1% Solution) Qualifier: U

End Conc.**: <2.0E+01 MPN I.U. % Reduct.: >99.9995 Log10 Reduct.: >5.3

Sample Analyst: Jessica Weglarz, B.S. Sample Analysis Date: 06/12/2020

Sample Notes: Viable virus was not recovered (none detected)

BCS Sample ID: 2005012 Client ID: Virol-oxy Powder (1% Solution) Qualifier: U

End Conc.**: <2.0E+01 MPN I.U. % Reduct.: >99.9995 Log10 Reduct.: > 5.3

Sample Analyst: Jessica Weglarz, B.S. Sample Analysis Date: 06/12/2020

Sample Notes: Viable virus was not recovered (none detected)

Qualifier U denotes that infectious virus was not detected in the sample analyzed; value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units.
*Start Conc. is the average recovery from two control inoculated carriers not subjected to treatment and allowed the indicated contact time (recovery controls).
**End Conc. is the recovery from carrier subjected to treatment and allowed indicated contact time.

BCS LABORATORIES, INC. – GAINESVILLE
4609 NW 6TH STREET, STE. A, GAINESVILLE, FLORIDA 32609
TEL. (352) 377-9272, FAX. (352) 377-5630
WWW.MICROBIOSERVICES.COM
FL DOH E82924, ISO 17025:2017 L2422 (ANAB/ANSI), EPA FL01147

Project: Residual virucidal efficacy of Virol-Oxy against Human Coronavirus OC43

Date Received: April 15, 2020

Test Start Date: May 28, 2020 Test End Date: June 26, 2020

Report Notes:

The test substance was received from the study sponsor and was assigned the referenced BCS identifier number. The substance consisted of pictured (Page 6) container that was labeled and sealed. On the day of the study, 10 grams test substance was placed into 1-L reagent water and homogenized; the solution was then transfered to a fine mist sprayer. The study was performed to evaluate the solution's residual Human Coronavirus strain OC43 (ATCC VR-1558) virucidal efficacy as per clients request. The study protocol was adapted from ASTM E1053: Standard Practice to Assess Virucidal Activity of Chemicals Intended for Disinfection of Inanimate, Nonporous Environmental Surfaces. Briefly, 100 mm sterile glass petri dish bottoms were each sprayed five times with a fine mist of freshly prepared 1% solution until saturated. The plates were allowed to dry, covered, and left undisturbed at room temperature (20-22 degrees C) for 14 days. For the challenge, one hundred micro-liters of virus suspension containing a 5% protein soil load was added and spread onto to each of triplicate treated carriers and allowed a contact time of 10 minutes. Clean sterile glass petri dishes were inoculated similarly with virus and used as positive recovery controls. Following the contact time, 10mL of D/E Neutralizing Broth (Criterion) was added to each of the carriers and homogenized. Neutralization and cytotoxicity controls were performed on uninoculated carriers previously sprayed with test substance as described. The recovered solutions from the carriers were analyzed on the day of the study. Analysis was conducted in replicates of five on undiluted samples and on serial ten-fold dilutions . Positive, negative, and neutralization controls were performed along with test subjects to provide quality control and reference data as per laboratory accredited ISO17025:2017 methodology. Viable virus was enumerated using HRT-18G cell infectivity assay. Cell monolayers were monitored for cytopathic effect development over a 14-day period. Viruses were enumerated as Infectious Units (I.U.) using the Most Probably Number (MPN) assay from the cell culture results. Analysis was conducted as per method EPA/600/R-95/178 and reported as Most Probable Number of Infectious Units (MPN I.U.). All equipment and supplies were validated to or were calibrated to NIST traceable standards. All QC were within method acceptance limit. No general environmental conditions are specified in the standard or have been identified that could affect the test results or measurements. End of Report Notes.

BCS Laboratories, Inc. – Gainesville

4609 NW 6th Street, Ste. A, Gainesville, Florida 32609

Tel. (352) 377-9272, Fax. (352) 377-5630

www.microbioservices.com

FL DOH E82924, ISO 17025:2017 L2422 (ANAB/ANSI), EPA FL01147

*I certify that I have examined and I am familiar with the information submitted herein. The results pertain only to the sample(s) analyzed and associated identifier #(s). Based on my inquiry of the individuals responsible for the analysis, I believe the data to be true, accurate, and complete. Unit descriptions and names were obtained from the submitted documents. The analysis was authorized and commissioned by the client or client's representative. The resulting data are representative of the analysis conducted on the collected samples and its/their condition at the time of analysis. The data provided is strictly representative of the study conducted under laboratory conditions using the material/samples/articles provided by the client (or client's representative) and its (their) condition at the time of test. The data obtained may not be representative or indicative of a real-life process and/or application. The sample(s) were analyzed in accordance with the appropriate method, however due to the inherent limitations of methods, microorganisms may avoid detection. BCS Laboratories offers no express or implied warranties concerning the quality, safety, and/or purity of any sample, batch, source, or the process they are derived from. Quality assurance controls were performed as outlined in the method and as per Good Laboratory Practices. Analyses were performed in accordance with laboratory practices and procedures set-forth by ISO 17025-2017 and NELAP/TNI accreditation standards unless otherwise noted. BCS makes no express or implied warranty regarding the ownership, merchantability, safety or fitness for a particular purpose of any such property or product.

Signature of Laboratory Director/Authorized Rep. _____ Date: June 26, 2020

BCS Laboratories, Inc. – Gainesville
4609 NW 6th Street, Ste. A, Gainesville, Florida 32609
Tel. (352) 377-9272, Fax. (352) 377-5630
www.microbioservices.com
FL DOH E82924, ISO 17025:2017 L2422 (ANAB/ANSI), EPA FL01147

DATA QUALIFIER CODES	
SYMBOL	MEANING
D	Measurement was made in the field.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J1	The sample matrix interfered with the ability to make any accurate determination.
J2	No Quality Control criteria exist for the component.
^	analysis conducted outside the Laboratory's scope of accreditation
L	Off scale high. Actual value is known to be greater than value given.
O	Sampled, but analysis not performed.
Q	Sample held beyond the accepted holding time.
U	Indicates that the compound was analyzed for but not detected. The reported value is the method detection limit.
V	Analyte was detected in both sample and associated method blank. Data may not be accurate.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies present (TNTC); the numeric value given represents the upper end of the value that can be determined based on the volume.
?	Data are rejected and should not be used. QC data did not meet acceptance criteria.
**	Analysis of analyte submitted to an accredited sub-contract laboratory.
!	Data deviate from historically established concentration range.
#	BCS Lab specific qualifier. See laboratory analysis notes.

BCS Laboratories, Inc. – Gainesville
4609 NW 6th Street, Ste. A, Gainesville, Florida 32609
Tel. (352) 377-9272, Fax. (352) 377-5630
www.microbioservices.com
FL DOH E82924, ISO 17025:2017 L2422 (ANAB/ANSI), EPA FL01147

Test Substance Images:

BCS Laboratories, Inc. – Gainesville
4609 NW 6th Street, Ste. A, Gainesville, Florida 32609
Tel. (352) 377-9272, Fax. (352) 377-5630
www.microbioservices.com
FL DOH E82924, ISO 17025:2017 L2422 (ANAB/ANSI), EPA FL01147