

SUMMARY OF 3rd PARTY TESTING

THE PHARMA ROOM: SURFACE WASH



The following test results confirm that The Pharma Room: Surface Wash both meets & exceeds all requirements established by the EPA and Health Canada to be classified as both a:

- Hospital (Medical) Grade Disinfectant
- Covid-19 (Equivalency/Indirect Claim) Killer

The product meets all 3rd party testing requirements for both a:

- EPA registration #
- Health Canada DIN #

“In order to qualify for a DIN for a hard surface disinfectant, disinfection efficacy must first be demonstrated against *Pseudomonas aeruginosa* (ATCC 15442) and *Staphylococcus aureus* (ATCC 6538) for a hospital disinfectant. The provided efficacy studies seems to be more than appropriate for review by Health Canada for a General/Broad Spectrum/Hospital Disinfectant with a specific claim against adenovirus type 5 and an indirect claim against SARS-CoV-2.”

-Representative, Health Canada, 2020-11-05
In response to criteria being met for DIN# approval & medical grade / Covid19 claims

Study Title

AOAC Germicidal Spray Products as Disinfectants Test

Product Identity

Pharma Room: Surface Wash

Lots: 06120-1 /LCL, 06120-2/LCL, 06120-3/LCL

Test Microorganism

Pseudomonas aeruginosa ATCC 15442

Data Requirements

U.S. EPA OCSPP 810.2200

Study Conclusion:

Test substance Pharma Room: Surface Wash {Lots: 06120-1 /LCL, 06120-2/LCL, 06120-3/LCL) was tested against *Pseudomonas aeruginosa* ATCC 15442. A total of 60 contaminated carriers were exposed to each lot of the test substance for a contact time of 10 minutes at a test temperature of {25.3°C-26.4°C} and then chemically neutralized.

Following a 10 minute contact time, Surface Wash, Lot: 06120-1 /LCL disinfected 60 out of 60 carriers; Lot: 06120-2/LCL disinfected 60 out of 60 carriers; and Lot: 06120-3/LCL disinfected 60 out of 60 carriers.

Under the conditions of this assay, Surface Wash Lots: 06120-1 /LCL, 06120-2/LCL, 06120-3/LCL met the requirements stated in the U.S. EPA Product Performance Test Guidelines - Disinfectants for Use on Environmental Surfaces as outlined in OCSPP 810.2200 and the success criteria detailed in the approved protocol.

STUDY # 2

Study Title

AOAC Germicidal Spray Products as Disinfectants Test

Product Identity

The Pharma Room: Surface Wash 500 ppm

Lots: 06120-1 /LCL, 06120-2/LCL, 06120-3/LCL

Test Microorganism

Staphylococcus aureus ATCC 6538

Data Requirements

U.S. EPA OCSPP 810.2200

Test substance The Pharma Room: Surface Wash (Lots: 06120-1 /LCL, 06120-2/LCL, and 06120-3/LCL) was tested against *Staphylococcus aureus* ATCC 6538. A total of 60

contaminated carriers were exposed to each lot of the test substance for a contact time of 10 minutes at a test temperature of (23.3°C-23.8°C) and then chemically neutralized.

Following a 10 minute contact time, The Pharma Room: Surface Wash, Lot: 06120-1 /LCL disinfected 60 out of 60 carriers; Lot: 06120-2/LCL disinfected 60 out of 60 carriers; and Lot: 06120-3/LCL disinfected 59 out of 60 carriers.

Under the conditions of this assay, The Pharma Room: Surface Wash (Lots: 06120-1 /LCL, 06120-2/LCL, and 06120-3/LCL) met the requirements stated in the U.S. EPA Product Performance Test Guidelines -Disinfectants for Use on Environmental Surfaces as outlined in OCSPP 810.2200 and the success criteria detailed in the approved protocol.

STUDY # 3

Study Title

Virucidal Efficacy of a Test Substance for Use on Inanimate, Nonporous Surfaces

Test Substance

Pharma Room:Surface Wash 500ppm

Lot Numbers: 06120-1/LCL, 06120-2/LCL

Test Microorganism

Adenovirus 5, Adenoid 75 strain, ATCC VR-5

Data Requirements

U.S. EPA OCSPP 810.2200

Study Conclusion:

The purpose of the study was to determine the virucidal efficacy of Pharma Room: Surface Wash (Lots: 06120-1/LCL and 06120-2/LCL) against Adenovirus 5, Adenoid 75 strain, ATCC VR-5 with no additional soil load incorporated into the inoculum, at a contact time of 10 minutes and an exposure temperature of room temperature.

The Plate Recovery Control demonstrated a viral titer of 6.00 log₁₀ TCID₅₀ per 0.1 ml and 6.30 log₁₀ TCID₅₀ per carrier, thereby satisfying U.S. EPA study acceptance criteria of a minimum of 4.80 log₁₀ infective units per control carrier.

Taking the cytotoxicity and neutralization control results into consideration, the evaluated test substance demonstrated a ≥ 5.50 log₁₀ reduction in viral titer for both lots assayed. No test substance cytotoxic effects to the host monolayer were observed in any dilution assayed for either lot of test substance (≤ 0.80 log₁₀ TCD₅₀ per carrier).

The test substance and control substance demonstrated comparable levels of infective

units recovered in the Neutralization Control. No microbial contamination of any host cell cultures was observed during the course of the study.

Pharma Room: Surface Wash (Lots: 06120-1/LCL and 06120-2/LCL) met the U.S. EPA Product Performance Guidelines for Disinfectants for Use on Hard Surfaces outlined in U.S. EPA OCSPP 810.2200 and the success criteria detailed in the approved protocol when tested against Adenovirus 5, Adenoid 75 strain, ATCC VR-5 at a contact time of 10 minutes.

STUDY # 4

Study Title

Antibacterial Activity and Efficacy of Weatherskin's Test Substance Using a Suspension Time-Kill Procedure.

Test Method

ASTM International Method E2315

Assessment of Antimicrobial Activity using a Suspension Time-Kill Procedure

Test Substance Received: Surface Wash 500ppm

Test substance was diluted to 200ppm with sterile deionized water prior to testing.

Test Microorganism Information

The test microorganism(s) selected for this test:

Clostridium sporogenes 3584, Enterococcus faecium 6569, Escherichia coli 11229, Listeria monocytogenes 15313

Study Conclusion:

Test Organism: **C. sporogenes**

Test Substance: The Pharma Room: Surface Wash 200 ppm

Average Plate Count: 160

Percent of Control: 93.84%

Neutralization Verified?: Yes

Contact Time: 10 minutes

CFU/ml: 1.95E+05

Percent Reduction Compared to Control @ Time Zero: 98.07%

Log₁₀ Reduction Compared to Control @ Time Zero: 1.71

Test Organism: **E.faecium**

Test Substance: The Pharma Room: Surface Wash 200 ppm

Average Plate Count: 516

Percent of Control: 101.98%

Neutralization Verified?: Yes

Contact Time: 10 minutes
CFU/ml: <1.00E+00
Percent Reduction Compared to Control @ Time Zero: >99.999992%
Log₁₀ Reduction Compared to Control @ Time Zero: >7.10

Test Organism: **E.coli**
Test Substance: The Pharma Room: Surface Wash 200 ppm
Average Plate Count: 384
Percent of Control: 80.67%
Neutralization Verified?: Yes

Contact Time: 10 minutes
CFU/ml: 9.00E+00
Percent Reduction Compared to Control @ Time Zero: 99.99991%
Log₁₀ Reduction Compared to Control @ Time Zero: 6.04

Test Organism: **L.monocytogenes**
Test Substance: The Pharma Room: Surface Wash 200 ppm
Average Plate Count: 71.5
Percent of Control: 99.31%
Neutralization Verified?: Yes

Contact Time: 10 minutes
CFU/ml: 2.00E+00
Percent Reduction Compared to Control @ Time Zero: 99.9998%
Log₁₀ Reduction Compared to Control @ Time Zero: 5.80

STUDY # 5

Study Title

Quantitative Antibacterial Activity and Efficacy of Stephen Kong Consulting Test Substance

Test Method

ASTM International Method E2197

Test Method for Determining Bactericidal, Virucidal, Fungicidal, Mycobactericidal, and Sporocidal Activities of Chemicals

Test Substance Received: Surface Wash 500ppm

Test substance was diluted to 300ppm with sterile deionized water prior to testing.

Test Microorganism Information

The test microorganism(s) selected for this test:

Clostridium difficile 43598 (Endospores)

Study Conclusion:

Test Microorganism: **C.difficile 43598 (endospores)**

Contact Time: 10 minutes

Test Substance: The Pharma Room: Surface Wash – 748 ppm chlorine dioxide

Geometric Average CFU/Carrier: 8.37E+02

Percent Reduction Compared to Control After Contact Time: 99.989%

Log₁₀ Reduction Compared to Control After Contact Time: 3.98

Test Microorganism: **C.difficile 43598 (endospores)**

Contact Time: 10 minutes

Test Substance: The Pharma Room: Surface Wash – 562 ppm chlorine dioxide

Geometric Average CFU/Carrier: 7.28E+03

Percent Reduction Compared to Control After Contact Time: 99.91%

Log₁₀ Reduction Compared to Control After Contact Time: 3.04

Test Microorganism: **C.difficile 43598 (endospores)**

Contact Time: 10 minutes

Test Substance: The Pharma Room: Surface Wash – 750 ppm chlorine dioxide

Geometric Average CFU/Carrier: 1.05E+03

Percent Reduction Compared to Control After Contact Time: 99.987%

Log₁₀ Reduction Compared to Control After Contact Time: 3.88

STUDY # 6

Study Title

Antibacterial Activity and Efficacy of Stephen Kong Consulting Test Substance Using a Suspension Time-Kill Procedure

Test Method

ASTM International Method E2315

Assessment of Antimicrobial Activity using a Time-Kill Procedure

Test Substance Received: Surface Wash 500ppm

Test substance was diluted to 300ppm with sterile deionized water prior to testing.

Test Microorganism Information

The test microorganism(s) selected for this test:

Page 5 of 12

Staphylococcus aureus 6538

Study Conclusion:

(Reduction results matched for all test samples at all tested contact times)

Contact Time(s): 10 minutes, 3 minutes, 1 minute

Test Microorganism: **S.aureus ATCC 6538**
ATL Control: 535 ClO₂ + 0.3%
CFU/ml: <5.00E + 00
Percent Reduction Compared to Control at Time Zero: >99.999986%
Log₁₀ Reduction Compared to Control at Time Zero: >6.85

STUDY # 7

Study Title

Antibacterial Activity and Efficacy of Stephen Kong Consulting Liquid Disinfectant

Test Method

AOAC International Test Method 955.15

Testing Disinfectants Against S. aureus ATCC 6538: Use-Dilution Method

Test Substances Received: 535 ClO₂ + 0.3% Surfactant

Test Microorganism Information

The test microorganism(s) selected for this test:

Staphylococcus aureus 6538

Study Conclusion:

Test Substance: 500 ppm Chlorine Dioxide Surface Wash

Test Microorganism: **S.aureus**

Soil Load: 5% Fetal Bovine Serum

Contact Time: 1 minute

Average CFU/Carrier: (Pre-test carriers) 2.65E + 06 (Post-test carriers) 2.45E + 06

Carriers Positive: 0

Carriers Negative: 10

STUDY # 8

Study Title

Antibacterial Activity and Efficacy of Stephen Kong Consulting Liquid Disinfectants

Test Method

AOAC International Test Method 955.15

Testing Disinfectants Against S. aureus ATCC 6538: Use-Dilution Method

Test Substance Received: 309 PPM ClO₂ + 0.3% Surfactant, 358 PPM ClO₂ + 0.3% Surfactant, 405 PPM ClO₂ + 0.3% Surfactant, and 462 PPM ClO₂ + 0.3% Surfactant

Test Microorganism Information

The test microorganism(s) selected for this test:
Staphylococcus aureus 6538

Study Conclusion:

Test Substance: 309 ClO₂ + 0.3% Surface Wash
Test Microorganism: **S.aureus 6538**
Soil Load: 5% Fetal Bovine Serum
Contact Time: 1 minute
Average CFU/Carrier: (Pre-test carriers) 7.55E + 06 (Post-test carriers) 1.30E + 06
Carriers Positive: 4
Carriers Negative: 6

Test Substance: 358 ClO₂ + 0.3% Surface Wash
Test Microorganism: **S.aureus 6538**
Soil Load: 5% Fetal Bovine Serum
Contact Time: 1 minute
Average CFU/Carrier: (Pre-test carriers) 7.55E + 06 (Post-test carriers) 1.30E + 06
Carriers Positive: 1
Carriers Negative: 9

Test Substance: 405 ClO₂ + 0.3% Surface Wash
Test Microorganism: **S.aureus 6538**
Soil Load: 5% Fetal Bovine Serum
Contact Time: 1 minute
Average CFU/Carrier: (Pre-test carriers) 7.55E + 06 (Post-test carriers) 1.30E + 06
Carriers Positive: 1
Carriers Negative: 9

Test Substance: 462 ClO₂ + 0.3% Surface Wash
Test Microorganism: **S.aureus 6538**
Soil Load: 5% Fetal Bovine Serum
Contact Time: 1 minute
Average CFU/Carrier: (Pre-test carriers) 7.55E + 06 (Post-test carriers) 1.30E + 06
Carriers Positive: 1
Carriers Negative: 9

STUDY # 10

Study Title

Antibacterial Activity and Efficacy of Stephen Kong Consulting Liquid Disinfectants

Test Method

AOAC International Test Method 955.15

Testing Disinfectants Against *S. aureus* ATCC 6538: Use-Dilution Method

Test Substance Received: 771 PPM ClO₂ + 0.15% Surfactant and 578 PPM ClO₂ + 0.15% Surfactant

Test Microorganism Information

The test microorganism(s) selected for this test:

Staphylococcus aureus 6538

Study Conclusion:

RESULTS FOR TEST SUBSTANCES 771 PPM ClO₂ + 0.1% SURFACE WASH:

Test Microorganism: ***S.aureus* ATCC 6538**

Contact Time: 1 Minute

Test Substance: 771 ppm ClO₂ + 0.1% Surface Wash

CFU/Carrier Pre Treatment: 2.55E+06

CFU/Carrier Post Treatment: 2.59E+06

Log₁₀ Density Pre Treatment: 6.41

Log₁₀ Density Post Treatment: 6.41

Mean Log₁₀ Density: 6.41

Number of Carriers Tested: 30

Number of Positive Subculture/Neutralizer Test Tubes: 2

Number of Confirmed Positive Subculture/Neutralizer Test Tubes: 2/30

Test Microorganism: ***S.aureus* ATCC 6538**

Contact Time: 2 Minutes

Test Substance: 771 ppm ClO₂ + 0.1% Surface Wash

CFU/Carrier Pre Treatment: 3.05E+06

CFU/Carrier Post Treatment: 5.18E+06

Log₁₀ Density Pre Treatment: 6.48

Log₁₀ Density Post Treatment: 6.71

Mean Log₁₀ Density: 6.60

Number of Carriers Tested: 30

Number of Positive Subculture/Neutralizer Test Tubes: 3

Number of Confirmed Positive Subculture/Neutralizer Test Tubes: 3/30

Test Microorganism: ***S.aureus* ATCC 6538**

Contact Time: 5 Minutes

Test Substance: 771 ppm ClO₂ + 0.1% Surface Wash

CFU/Carrier Pre Treatment: 3.50E + 06

CFU/Carrier Post Treatment: 3.77E + 06

Log₁₀ Density Pre Treatment: 6.54

Log₁₀ Density Post Treatment: 6.58

Mean Log₁₀ Density: 6.56

Number of Carriers Tested: 30

Number of Positive Subculture/Neutralizer Test Tubes: 0

Number of Confirmed Positive Subculture/Neutralizer Test Tubes: 0/30

RESULTS FOR TEST SUBSTANCES 578 PPM ClO₂ + 0.1% SURFACE WASH:

Test Microorganism: **S.aureus ATCC 6538**

Contact Time: 1 Minute

Test Substance: 578 ppm ClO₂ + 0.1% Surface Wash

CFU/Carrier Pre Treatment: 3.27E + 06

CFU/Carrier Post Treatment: 4.18E + 06

Log₁₀ Density Pre Treatment: 6.51

Log₁₀ Density Post Treatment: 6.62

Mean Log₁₀ Density: 6.57

Number of Carriers Tested: 30

Number of Positive Subculture/Neutralizer Test Tubes: 4

Number of Confirmed Positive Subculture/Neutralizer Test Tubes: 4/30

Test Microorganism: **S.aureus ATCC 6538**

Contact Time: 2 Minutes

Test Substance: 578 ppm ClO₂ + 0.1% Surface Wash

CFU/Carrier Pre Treatment: 5.09E + 06

CFU/Carrier Post Treatment: 6.55E + 06

Log₁₀ Density Pre Treatment: 6.71

Log₁₀ Density Post Treatment: 6.82

Mean Log₁₀ Density: 6.77

Number of Carriers Tested: 30

Number of Positive Subculture/Neutralizer Test Tubes: 2

Number of Confirmed Positive Subculture/Neutralizer Test Tubes: 2/30

Test Microorganism: **S.aureus ATCC 6538**

Contact Time: 5 Minutes

Test Substance: 578 ppm ClO₂ + 0.1% Surface Wash

CFU/Carrier Pre Treatment: 5.86E + 06

CFU/Carrier Post Treatment: 4.82E + 06

Log₁₀ Density Pre Treatment: 6.77

Log₁₀ Density Post Treatment: 6.68

Mean Log₁₀ Density: 6.73

Number of Carriers Tested: 30

Number of Positive Subculture/Neutralizer Test Tubes: 1

Number of Confirmed Positive Subculture/Neutralizer Test Tubes: 1/30

SUMMARY RESULTS:

Test Microorganism: **S.aureus ATCC 6538**

Test Substance: 771 ppm ClO₂ + 0.1% Surface Wash

Average Inoculum Concentration: 18

Neutralization Validation Result: Positive Growth

Test Microorganism: **S.aureus ATCC 6538**

Test Substance: 578 ppm ClO₂ + 0.1% Surface Wash

Average Inoculum Concentration: 34

Neutralization Validation Result: Positive Growth

Study Controls

Carrier Sterility Control Tube
Viability Control Tube
Neutralization Media Control Tube
Growth Media Control Plate
Soil Sterility Control Plate
PBS Sterility Control Plate
Microorganism Purity Plate

Result

No Growth Observed
Growth-Target Microorganism
No Growth Observed
No Growth Observed
No Growth Observed
No Growth Observed
Pure-Target Microorganism

STUDY # 11

Study Title

Quantitative Antibacterial Activity and Efficacy of Stephen Kong Consulting Test Substances

Test Method

ASTM International Method E2197

Test Method for Determining Bactericidal, Virucidal, Fungicidal, Mycobactericidal, and Sporocidal Activities of Chemicals

Test Substance Received: 2-Part ClO₂ Product with Surfactant Yield 1023 PPM ClO₂ and 2-Part ClO₂

Product with Surfactant Yields 1300 PP ClO₂

Test Microorganism Information

The test microorganism(s) selected for this test:

Clostridium difficile 43598 (Endospores)

Study Conclusion:

Test Microorganism: **C.difficile 43598 (endospores)**

Contact Time: 10 minutes

Test Substance: The Pharma Room: Surface Wash – 1023 ppm chlorine dioxide

Geometric Average CFU/Carrier: <4.52E+02

Percent Reduction Compared to Control After Contact Time: 99.98%

Log₁₀ Reduction Compared to Control After Contact Time: 3.79

Test Microorganism: **C.difficile 43598 (endospores)**

Contact Time: 10 minutes

Test Substance: The Pharma Room: Surface Wash – 1300 ppm chlorine dioxide

Geometric Average CFU/Carrier: 1.00E+02

Percent Reduction Compared to Control After Contact Time: 99.99996%

Log₁₀ Reduction Compared to Control After Contact Time: 6.44

STUDY # 12

ANALYTICAL TESTING REPORT

Customer sample Id.: 1.Chlorine Dioxide/500 ppm
Label / Product Name Id.: The Pharma Room: Surface Wash
ECA Sample Number(s): 1. 20102a
Date Received: 04-04-20
Method Reference: 1. Odor/OPPTS: 830.6304
2. Oxidation/Reduction/Chemical Incompatibility/
OPPTS 830.6314
3. Impurities: OPPTS/830.1670
4. Physical State/OPPTS 830.6303
5. Preliminary Analysis/OPPTS 830.6303/Assay

Test Sample: The Pharma Room Surface Wash (500 ppm Chlorine Dioxide)

Odor/ OPPTS: 830.6304
Odor: Characteristic
of chlorine containing
compounds

**Oxidation/Reduction/
Chemical Incompatibility:**
OPPTS 830.6314

Addition of potassium
permanganate to
liquid, no obvious
reaction/ addition of
30% hydrogen peroxide:
no obvious
reaction.

Impurities:
OPPTS/830.1670

Impurities Analysis:
chloride: 992.67 ppm
sodium: 367 ppm
potassium: 0.3 ppm
phosphorus: 0.1 ppm

**Physical State/
OPPTS** 830.6303

Physical State:
Liquid

**Preliminary Analysis/
OPPTS** 830.6303/Assay

Active Ingredient:
Chlorine Dioxide: 392 ppm