Test Report **No: GZCPCH180200532-4** **Date: 2018-05-09**

Client name:	CHOI FUNG HONG COMPANY LIMITED
Client address:	Flat 713, 7/F, Blk 1, Nam Fung Industrial City, 18 Tin Hau Road, Tuen Mun, N.T., H.K
Sample name:	A-10416-00220 Multi-Purpose Natural Sterilizing Spray
Batch No./Date:	CF034183 EXP:2021/02/08
Manufacturer:	/

Above sample(s) was/were submitted and certified by the client, SGS quoted the information with no responsibility as to the accuracy, adequacy and/or completeness.

SGS job No.:	GZCPCH180200532-4
SGS reference No.:	CANCPCH1803065701
Date of receipt:	2018-02-11
Testing period:	2018-02-11~2018-05-04

TEST(S) REQUESTED:
Selected test(s) as requested by applicant:
Please refer to next page(s).

TEST METHOD(S):
Please refer to next page(s).

TEST RESULT(S):
Please refer to next page(s).

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested, and this document cannot be used for publicity without approval of the Company.
Signed for and on behalf of SGS

.....
Authorized Signature

RAND: **6292610**

TEST METHOD(S):
SGS In-house method, analysis was performed by ICP-MS
With reference to GB/T 30796-2014 The test method of food detergents-Determination of formaldehyde
With reference to GB/T 30795-2014 The test method of food detergents-Determination of methanol
Technical Standard For disinfection (2002)

TEST RESULT(S):
A:

Test item(s)	Unit	Test method(s) (Reference to)	Test result(s)	MDL
Lead (Pb)	mg/kg	SGS In-house method, analysis was performed by ICP-MS	ND	0.1
Arsenic (As)	mg/kg		ND	0.1
Mercury (Hg)	mg/kg		ND	0.1
Cadmium (Cd)	mg/kg		ND	0.1

Test item(s)	Unit	Test method(s) (Reference to)	Test result(s)	MDL
Formaldehyde	mg/kg	GB/T 30796-2014, analysis was performed by UV-Vis.	ND	10
Methanol	mg/kg	GB/T 30795-2014, analysis was performed by GC-FID	ND	5

Remark:
(1) 1 mg/kg = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) The result(s) shown is/are of the total weight of wet sample

B:
Test method: Technical Standard For disinfection (2002)
Test request: Evaluation of virucidal activity of disinfectant(Influenza A virus and Influenza B virus)*

1. Test methods:
Virus: Influenza A virus(A/PR8/34（H1N1)) and Influenza B virus (B/Lee/1940)
Cell: MDCK cell
Neutralizing solution: 3%Tween 80, 5%NaS_2O_3 and 2% Glycine
Contact time Time: 15 minutes

2. Test Method
Verification of Cytotoxic Effect: Cytotoxicity test was done according to Technical Standard For disinfection (2002).

Neutralizing Solution Evaluation Test: According to Technical Standard For disinfection (2002), influenza viruses were used to evaluate the disinfectant-inactivating properties of the candidate neutralizing agent, 1.Test sample + viruses, 2.Test sample + viruses,3.Test sample + neutralizing agent,4.Neutralizing agent,5.PBS+ viruses. The mixtures were maintained at room temperature, followed by the addition of PBS and neutralizing agent into group 1 and group 2, and influenza virus into group 3 and group 4. Group 6 was control. All test groups were repeated three times.

Virucidal Test: Influenza viruses were added to test sample and maintained for 15 mins at ambient temperature. The treated virus in the mixture was titrated on the MDCK cells to calculate virus titer. All test groups were repeated three times.

3. Result
1. The neutralizing agent showed almost no toxicity to MDCK cell. To some extent,the mixture of neutralizing agent and test sample showed toxicity to MDCK cell.

2. The results of neutralizing agent evaluation test complied with Neutralizing agent eligibility criteria of Technical Standard For disinfection (2002) (Table 1 and Table2).

3. The sample reacted with influenza viruses under the defined test condition. The results indicated that sample could inactivate influenza viruses(Table 3 and Table4).

Group	Test 1 Log($TCID_{50}$/ml)	Test 2 Log($TCID_{50}$/ml)	Test 3 Log($TCID_{50}$/ml)	Mean Log($TCID_{50}$/ml)
1	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00
3	7.00	6.50	6.67	6.72
4	7.00	7.00	7.00	7.00
5	7.00	7.00	7.00	7.00
6	Cell of control group grew well			

Table 1. Results of Neutralizing Agent Evaluation Test of Influenza A virus

Group	Test 1 Log($TCID_{50}$/ml)	Test 2 Log($TCID_{50}$/ml)	Test 3 Log($TCID_{50}$/ml)	Mean Log($TCID_{50}$/ml)
1	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00
3	6.50	6.50	6.50	6.50
4	6.00	6.50	6.50	6.33
5	7.00	6.50	6.50	6.67
6	Cell of control group grew well			

Table 2. Results of Neutralizing Agent Evaluation Test of Influenza B virus

Virus	Time (minutes)	Test 1 Log($TCID_{50}$/ml)	Test 2 Log($TCID_{50}$/ml)	Test 3 Log($TCID_{50}$/ml)	Mean Log($TCID_{50}$/ml)	Mean of control group Log($TCID_{50}$/ml)
H1N1	15	0.00	0.00	0.00	0.00	6.78
Lee		0.00	0.00	0.00	0.00	5.44

Table 3. Virucidal effect of test sample to influenza A virus and influenza B virus

Virus Strain	Time (minutes)	Negative Logarithm Means of Virucidal Effect	Mean Virucidal Rate(%)
H1N1	15	6.78	⩾ 99.99
Lee		5.44	⩾ 99.99

Table 4. The negative logarithm means of virucidal effect and mean virucidal rate of test sample to influenza A virus and influenza B virus

Remark: * The test was carried out by external laboratory assessed as competent.

SAMPLE DESCRIPTION: Transparent liquid

Photo Appendix

*** End of Report***