

**REPORT ON
DETERMINATION OF TOTAL BACTERIA AND FUNGAL LEVELS
IN A CLASSROOM**

FOR

OPTIWAY (ASIA) CO, Ltd

(Project No. : 10006081-020)



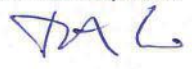


Hong Kong
Productivity Council
香港生產力促進局

Environmental Management Division
Hong Kong Productivity Council

30 July 2018

Quality Index

Date	Reference No.	Prepared by	Checked by	Endorsed by
30 July 2018	10006081-020\180730yc2	Pang Yu Chung 	Poon Ka Wo 	LO Chi Wai, David 

1. BACKGROUND

Hong Kong Productivity Council (HKPC) was commissioned by the client (Optiway (Asia) Co, Ltd) to carry out Total Bacteria and Total Fungal Level Test in a classroom before and after applying a disinfectant “NICE-CRYSTAL SANITIZER” which is containing Hypochlorous acid (HCIO) solution (Photo 1) (as claimed by the client).



Photo 1: Hypochlorous acid disinfectant

2. OBJECTIVE

The objective of this study was to measure the airborne Total Bacteria and Total Fungal levels in a classroom before and after applying a disinfectant “NICE-CRYSTAL SANITIZER” by using an automatic disinfectant spraying cleaner (Photo 2).

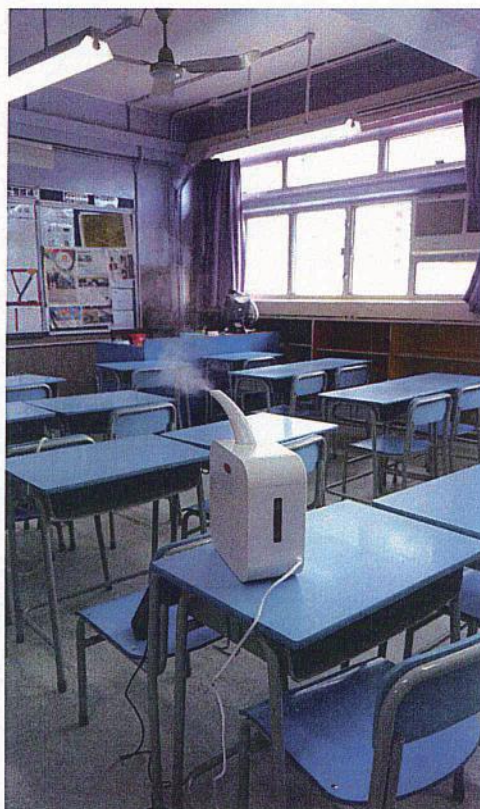


Photo 2: Applying the disinfectant in the classroom

3. SAMPLING LOCATION, DATE AND TIME OF COLLECTION OF AIR SAMPLES

Sampling Date : 26 June 2018
Sampling Time : 12:00 – 15:00
Sampling location : A classroom in a primary school at Tai Po

4. METHODOLOGY OF MEASUREMENT

The measurement of airborne bacteria and fungi levels were carried out in accordance with US ACGIH approved sampling method for measurement of airborne microbials by using cascade impactor and agar plate incubation. The sampling time for both total bacteria count (TBC) and total fungi count (TFC) was 10 minutes and the sample volume was 0.2432 m³.

The samples were then sent to the Environment and Product Innovation Laboratory of HKPC for incubation. The TBC samples were incubated at 37 deg.C for 48 hours while TFC samples were incubated at 25 deg.C for 7 days. After incubation, the number of colony formed on the agar plates was counted.

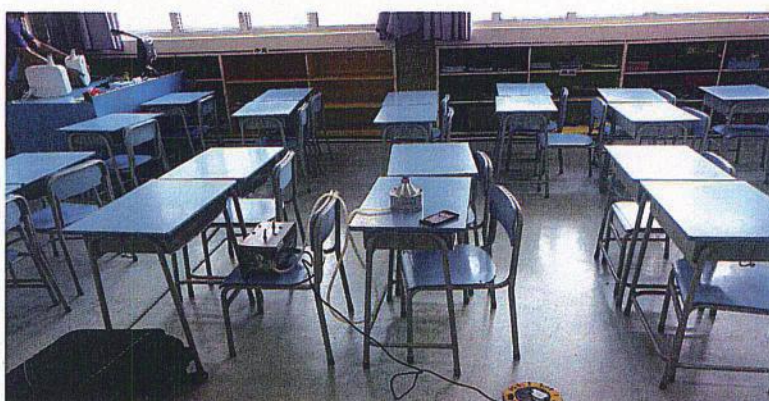


Photo 3: TBC & TFC measurement

5. RESULTS OF THE MEASUREMENT

The test results of TBC and TFC measurement are summarized in Table 1.

Table 1 Total Bacterial and Total Fungi Level at the classroom

	Before applying disinfectant		After applying disinfectant	
	Average Bacteria Concentration (cfu/m ³)	Average Fungi Concentration (cfu/m ³)	Average Bacteria Concentration (cfu/m ³)	Average Fungi Concentration (cfu/m ³)
Sample	1673	221	819	96
Blank	<1	<1	<1	<1

6. LIMITATION OF MEASUREMENT

The results obtained in this test are only representative of the pollutant concentration at the specific sampling time and location. The result should not be extrapolated to other conditions without caution.

7. CONDITIONS

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Environmental Management Division
Hong Kong Productivity Council

30 July 2018

APPENDIX

Laboratory Report



Hong Kong
Productivity Council
香港生產力促進局

Environment and Product Innovation Laboratory

TEST REPORT

Test Report No : A0002107
Folder No : 1807938
Page No : Page 1 of 1
Date of Issue : 07/07/2018

Client : Optiway (Asia) Co Ltd
Address :

Sample Description : 6 TFC samples were collected by HKPC.

Sample Received Date : 27/06/2018

Test Completed Date : 06/07/2018

Remarks : Requested by: Y C Pang

Analytical Results:

Sample Name	Sample No	Parameter	Total Fungal
		Unit	Count
		Method Code	ATM-TFC-I
		Analysis Date	27/06/2018
TFC-BF1	AC-1806-0001		57
TFC-BF2	AC-1806-0002		5
TFC-AF1	AC-1806-0003		4
TFC-AF2	AC-1806-0004		23
TFC-BK1	AC-1806-0005		<1
TFC-BK2	AC-1806-0006		<1

-- End of Report --

TESTING METHODS

Parameter
Total Fungal Count

Method
ATM-TFC-I

Reference
In house method

Approved Signatory:

FUNG Kam Wing (Lab. Manager)

Notes: (1) This report may not be reproduced except with prior written approval from the issuing laboratory.
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Environment and Product Innovation Laboratory

TEST REPORT

Test Report No : A0002108

Folder No : 1807939

Page No : Page 1 of 1

Date of Issue : 07/07/2018

Client : Optiway (Asia) Co Ltd

Address :

Sample Description : 6 TBC samples were collected by HKPC.

Sample Received Date : 27/06/2018

Test Completed Date : 03/07/2018

Remarks : Requested by: Y C Pang

Analytical Results:

Sample Name	Sample No	Parameter	Heterotrophic
		Unit	Plate Count
		Method Code	cfu
		Analysis Date	ATM-HPC-1
			27/06/2018
TBC-BF1	AC-1806-0007		260
TBC-BF2	AC-1806-0008		210
TBC-AF1	AC-1806-0009		120
TBC-AF2	AC-1806-0010		110
TBC-BK1	AC-1806-0011		<1
TBC-BK2	AC-1806-0012		<1

-- End of Report --

TESTING METHODS

Parameter	Method	Reference
Heterotrophic Plate Count	ATM-HPC-1	In-house method

Approved Signatory:

FUNG Kam Wing (Lab Manager)

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