

# TEST REPORT



Your Ref:

Date: 31 May 2006

Our Ref: 57S062446-01-SLE

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DID: 6885 1345 / 6885 1346

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## SUBJECT

Cytotoxicity Test

## CLIENT

MacGyver Corporation  
19 Woodlands Industrial Park E1  
#01-06  
Singapore 757719

Attn : Mr James Tan

## SAMPLE SUBMISSION DATE

15 May 2006

## DESCRIPTION OF SAMPLE

CONCAIRE™ Chemical Wash for Air-Conditioners (2000ml)

As requested, 0.1% sample solution was prepared for the cytotoxicity test.



**METHOD OF TEST**

- (a) ISO 10993-5 : 1999(E)  
Biological evaluation of medical devices - Part 5 : Tests for in vitro cytotoxicity.
- Cell culture used : Monkey Kidney Cell Line (Vero ATCC CCL81)
- b) The degree of biological reactivity (cell degeneration and malformations) were classified as below in accordance to ISO 3826-1 : 2003(E) - Plastics collapsible containers for human blood and blood components - Part 1 : Conventional containers.

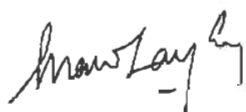
Degree	Reactivity	Description of Reactivity Zone
0	Noncytotoxic	Discrete intracytoplasmic granules; no cell lysis.
1	Very slightly cytotoxic	Not more than 20% of the cells are round, loosely attached, and without intracytoplasmic granules; occasional lysed cells are present.
2	Slightly cytotoxic	Not more than 50% of the cells are round and without intracytoplasmic granules; no extensive cell lysis and empty areas between cells.
3	Clearly cytotoxic	Not more than 70% of the cell are round and / or lysed.
4	Strongly cytotoxic	Practically complete destruction of the cell layers.

**RESULTS**

Sample	Description	Degree	Reactivity
<u>Sample Extract</u>			
# 1	Practically complete destruction of the cell layers.	0	Noncytotoxic
# 2	Practically complete destruction of the cell layers.	0	Noncytotoxic
# 3	Practically complete destruction of the cell layers.	0	Noncytotoxic
Negative Control	Discrete intracytoplasmic granules; no cell lysis.	0	Noncytotoxic
Positive Control	Practically complete destruction of the cell layers.	4	Strongly cytotoxic

**Remarks :**

The results of analysis showed that the 0.1% sample solution tested was noncytotoxic.



**CHENG-SHAW LAY ENG (MRS)**  
TECHNICAL EXECUTIVE



**KAM-LEONG YIN PHENG (MRS)**  
MICROBIOLOGIST  
MICROBIOLOGY  
TESTING GROUP

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May 2005



## STC Test Report

Date : 2006-08-23  
No. : HC185077

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**Applicant(Code:REG002)** : Rexcom Group Ltd  
Suite 802 8/F On Hong Comm'l Bldg  
145 Hennessy Rd  
Wanchai HK

**Description of Samples** : One submitted sample said to be Concaire Aircon Solution Wash.  
Country of Origin: Singapore

Sample(s) Received Condition(s): In original package

Sample Original Storage Condition: Ambient temperature

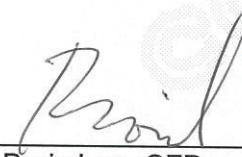
Sample Delivery Condition: Ambient temperature

**Date Samples Received** : 2006-07-28

**Date Tested** : 2006-08-16 to 2006-08-23

**Investigation Requested** : Antibacterial Effectiveness against  
- *Legionella pneumophila* 嗜肺軍團菌 (ATCC 33152)

**Conclusions** : From the test results, the submitted sample Concaire Aircon Solution Wash was able to eliminate 99.99% of the inoculated *Legionella pneumophila* within 5 minutes and 15 minutes.  
根據測試結果，所提供之樣品 Concaire Aircon Solution Wash 能於 5 分鐘及 15 分鐘內殺除百分之九十九點九九接種的嗜肺軍團菌。



Boris Lee, CFD

For and on behalf of

The Hong Kong Standards and Testing Centre Ltd.



**The Hong Kong Standards and Testing Centre Ltd.**

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### Method(s) Used:

1. A bacterial suspension with known concentration was prepared
2. 5 mL of suspension was added into each of four sterile test tubes
3. 5 mL of sample was added into three of the four test tubes and mixed thoroughly
4. 5 mL of sterile water was added into the remaining tube as a control
5. The sample mixtures and control were let stand for 5 minutes & 15 minutes
6. 1 mL of neutralizer was added into each of the four tubes
7. Total bacteria count of sample mixtures and control were conducted using pour plate method and the plates were incubated at 35°C for 48 hours
8. The number of colonies on plates was counted

### Test Result(s):

Test Trial	<i>Legionella pneumophila</i> 嗜肺軍團菌(CFU/ml) (5 minutes)
Control	140,000
Sample mixture (trial 1)	<1
Sample mixture (trial 2)	<1
Sample mixture (trial 3)	<1
Average of three trials	<1
<b>Bacteria Reduction Rate</b>	99.99%

Test Trial	<i>Legionella pneumophila</i> 嗜肺軍團菌(CFU/ml) (15 minutes)
Control	140,000
Sample mixture (trial 1)	<1
Sample mixture (trial 2)	<1
Sample mixture (trial 3)	<1
Average of three trials	<1
<b>Bacteria Reduction Rate</b>	99.99%

Notes: < denotes less than

CFU/ml denotes Colony Forming Unit per milliliter

Bacteria Reduction Rate =  $\frac{\text{Control Average} - \text{Trial Average}}{\text{Control Average}} \times 100$

\*\*\*\*\* End of Test Report \*\*\*\*\*

**The Hong Kong Standards and Testing Centre Ltd.**

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