



### Microbiology Test Report

#### Customer Details

#### Crystalline Environmental Services

Report No. WA-R-L-2005-9758



Request No.	: WA-Q-L-2005-1525	Sample No.	: WA-S-L-2005-9546
Sampling Date/time	: 21/5/2020 , 10:00	Report Date.	: 26/5/2020
Analysis Start Date.	: 21/5/2020	Analysis End Date.	: 24/5/2020
Sample Location.	: City of Lights - Al Reem Island Building: C2 & C3	Sampled By	: Shoukth
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 0828	Sampling Method	: APHA 9060 A & B
Temperature °C	: 31.4	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Swimming Pool
Sampling Point	: Between C3 + C2	Preservation	: 4-8°C
Sample Description	: Pool Water	Client Reference	: Not Applicable

Parameters	Test Methods	Units	Results	Specification
Escherichia Coli	APHA 9222 B,H& I 23rd Ed. 2017	CFU/100ml	Not Detected	--
Faecal Coliforms	APHA 9222 D 23rd Ed. 2017	CFU/100ml	Not Detected	Zero/100ml
Heterotrophic plate count	APHA 9215 B 23rd Ed. 2017	CFU/ml	Not Detected	1000CFU/ml
Pseudomonas aeruginosa	CCFRA 2.5.2 5th Ed. 2007	CFU/250ml	Not Detected	Zero/100ml
Total Coliforms	APHA 9222 B 23rd Ed. 2017	CFU/100ml	Not Detected	Zero/100ml

Note : Not Detected=<1CFU

Limit based on: Guide to the Executive Regulations of Law No.(2) for the year of 2012 (Swimming Pool),  
Issued by the Head of Urban Planning and Municipalities No.(3) for the year 2018, Page No.3.

**Remarks :The tested results of the sample are found to be satisfactory within the specified limits.**

Analyst	Reviewed By	Method Variation
HS	SM	None

Key Words :CFU-Colony Forming Unit; APHA-American Public Health Association; CCFRA-Campden Chorleywood Food Research Association.



مختبرات ويمبي ذم م  
Wimpey Laboratories LLC

P.O. Box 115086, Musaffah M-34, Abu Dhabi, U.A.E.  
Tel: +971 2 5503324, Fax: +971 2 5503387



Testing - NAL 034

**Microbiology Test Report**

Report No. : WA-R-L-2005-9758

Signed for and on behalf of Wimpey Laboratories



**Dr. Suresh Murugan Ph.D**

Senior Microbiologist

Test results relate only to the samples tested.

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P.O. Box 115086, Musaffah M-34, Abu Dhabi, U.A.E.  
Tel: +971 2 5503324, Fax: +971 2 5503387

## Legionella Test Report

### Customer Details

Report No. WA-R-L-2005-9764

### Crystalline Environmental Services



Request No.	: WA-Q-L-2005-1525	Sample No.	: WA-S-L-2005-9557
Sampling Date/time	: 21/5/2020 , 10:00	Report Date.	: 31/5/2020
Analysis Start Date.	: 21/5/2020	Analysis End Date.	: 31/5/2020
Sample Location.	: City of Lights - Al Reem Island Building: C2 & C3	Sampled By	: Shoukth
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 0828	Sampling Method	: BS 7592
Temperature °C	: 31.4	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Swimming Pool
Sampling Point	: Between C3 + C2	Sample Description	: Pool Water

Parameters	Test Methods	Units	Results	Specification
Legionella	ISO 11731: 2017	CFU/L	Not Detected	<1CFU/L

Note : Not Detected=<1CFU/L

Procedure: WSOP-MB-0051 Direct Placing of Membrane on BCYE+L-Cysteine/Membrane Filter followed by Washing Procedure in Funnel.

Limit based on DM.Rev2.Dated 6/2010 for guidelines for control of legionella in water system. Public Safety Department.

**Remarks :The tested result of the sample is found to be satisfactory within the specified limits.**

Analyst	Reviewed By	Method Variation
HS	SM	None

Key Words :CFU-Colony Forming Unit; BS-British Standard; ISO-International Organization for Standardization.

### Signed for and on behalf of Wimpey Laboratories

**Dr. Suresh Murugan Ph.D**

Senior Microbiologist

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## SWIMMING POOL - WATER ANALYSIS REPORT

<b>Client Name:</b> TAFAWUQ FACILITY MANAGEMENT, ABU DHABI			
<b>Site Name:</b>	Marina Bay C2 & C3	<b>Visit Date:</b>	21-05-2019
<b>Sampled By:</b>	Crystalline Rep.	<b>Sample Point</b>	C2 & C3 Swimming Pool - Level 06
<b>Source of Sample</b>	Swimming Pool		

### TEST RESULT

No	Parameter	Control limits	Test Results
1	pH at 25°C	7.2 - 7.6	7.49
2	Conductivity at 25°C, µs/cm	---	349
3	TDS, ppm	Max 1500	226
4	Alkalinity	80 - 120	88
5	Calcium Hardness	200 - 500	214
6	Residual Chlorine	1.0 - 3.0	1.23
7	Cyanuric Acid	20 - 60	31
8	Dip slide	<10 <sup>3</sup>	ND

\*\*\* All test results expressed in parts per million (ppm) as CaCO<sub>3</sub> except pH and conductivity (µmhos).

### COMMENTS AND RECOMMENDATIONS

- pH levels are satisfactory – No action recommended
- Alkalinity & Cyanuric acid levels are satisfactory – No action recommended

Reported By,

*Murugara*  
Murugara  
Service Engineer





**Microbiology Test Report**

**Customer Details**

**Crystalline Environmental Services**

Report No. WA-R-L-2005-9759



Request No.	: WA-Q-L-2005-1525	Sample No.	: WA-S-L-2005-9547
Sampling Date/time	: 21/5/2020 , 10:00	Report Date.	: 26/5/2020
Analysis Start Date.	: 21/5/2020	Analysis End Date.	: 24/5/2020
Sample Location.	: City of Lights - Al Reem Island Building: C2 & C3	Sampled By	: Shoukth
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 0828	Sampling Method	: APHA 9060 A & B
Temperature °C	: 35.1	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Jacuzzi
Sampling Point	: Between C3 + C2	Preservation	: 4-8°C
Sample Description	: Water	Client Reference	: Not Applicable

Parameters	Test Methods	Units	Results	Specification
Escherichia Coli	APHA 9222 B,H& I 23rd Ed. 2017	CFU/100ml	Not Detected	Zero/100ml
Faecal Coliforms	APHA 9222 D 23rd Ed. 2017	CFU/100ml	Not Detected	Zero/100ml
Heterotrophic plate count	APHA 9215 B 23rd Ed. 2017	CFU/ml	Not Detected	100CFU/ml
Pseudomonas aeruginosa	CCFRA 2.5.2 5th Ed. 2007	CFU/250ml	Not Detected	Zero
Total Coliforms	APHA 9222 B 23rd Ed. 2017	CFU/100ml	Not Detected	Zero/100ml

Note : Not Detected=<1CFU

Limits based on RSB Water Quality Regulation 2014. Schedule 1. Table F For Microbiological Parameters.

**Remarks :The tested results of the sample are found to be satisfactory within the specified limits.**

Analyst	Reviewed By	Method Variation
HS	SM	None

Key Words :CFU-Colony Forming Unit; APHA-American Public Health Association; CCFRA-Campden Chorleywood Food Research Association.



**Microbiology Test Report**

Report No. : WA-R-L-2005-9759

**Signed for and on behalf of Wimpey Laboratories**



**Dr. Suresh Murugan Ph.D**

Senior Microbiologist

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P.O. Box 115086, Musaffah M-34, Abu Dhabi, U.A.E.  
Tel: +971 2 5503324, Fax: +971 2 5503387

## Legionella Test Report

### Customer Details

Report No. WA-R-L-2005-9765

### Crystalline Environmental Services



Request No.	: WA-Q-L-2005-1525	Sample No.	: WA-S-L-2005-9558
Sampling Date/time	: 21/5/2020 , 10:00	Report Date.	: 31/5/2020
Analysis Start Date.	: 21/5/2020	Analysis End Date.	: 31/5/2020
Sample Location.	: City of Lights - Al Reem Island Building: C2 & C3	Sampled By	: Shoukth
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 0828	Sampling Method	: BS 7592
Temperature °C	: 35.1	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Jacuzzi
Sampling Point	: Between C3 + C2	Sample Description	: Water

Parameters	Test Methods	Units	Results	Specification
Legionella	ISO 11731: 2017	CFU/L	Not Detected	<1CFU/L

Note : Limit of Detection=<1CFU/L

Procedure: WSOP-MB-0051 Direct Placing of Membrane on BCYE+L-Cysteine/Membrane Filter Followed by Washing Procedure in Funnel.

Limit based on DM.Rev2.Dated 6/2010 for guidelines for control of legionella in water system. Public Safety Department.

**Remarks :The tested result of the sample is found to be satisfactory within the specified limits.**

Analyst	Reviewed By	Method Variation
HS	SM	None

Key Words :CFU-Colony Forming Unit; BS-British Standard; ISO-International Organization for Standardization.

### Signed for and on behalf of Wimpey Laboratories

**Dr. Suresh Murugan Ph.D**

Senior Microbiologist

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## SWIMMING POOL - WATER ANALYSIS REPORT

<b>Client Name:</b> TAFAWUQ FACILITY MANAGEMENT, ABU DHABI			
<b>Site Name:</b>	Marina Bay C2 & C3	<b>Visit Date:</b>	21-05-2019
<b>Sampled By:</b>	Crystalline Rep.	<b>Sample Point</b>	Jacuzzi -Level 06
<b>Source of Sample</b>	Swimming Pool		

TEST RESULT			
No	Parameter	Control limits	Test Results
1	pH at 25°C	7.2 - 7.6	7.56
2	Conductivity at 25°C, µs/cm	---	298
3	TDS, ppm	Max 1500	193
4	Alkalinity	80 - 120	81
5	Calcium Hardness	200 - 500	206
6	Residual Chlorine	1.0 - 3.0	1.05
7	Cyanuric Acid	20 - 60	21
8	Dip slide	<10 <sup>3</sup>	ND

\*\*\* All test results expressed in parts per million (ppm) as CaCO<sub>3</sub> except pH and conductivity (µmhos).

COMMENTS AND RECOMMENDATIONS
<ul style="list-style-type: none"> <li>pH levels are satisfactory - No action recommended</li> <li>Alkalinity &amp; Cyanuric acid levels are satisfactory - No action recommended</li> </ul>

Reported By,

*Murugara*  
Service Engineer

