



Microbiology Test Report

Customer Details

Report No. WA-R-L-2005-9725

Crystalline Environmental Services



Request No.	: WA-Q-L-2005-1521	Sample No.	: WA-S-L-2005-9513
Sampling Date/time	: 21/5/2020 , 12:31	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: C10A	Sampled By	: Shoukth
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 0825	Sampling Method	: APHA 9060 A & B
Temperature °C	: 29.1	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Water Tank 1
Sampling Point	: 44th Floor	Sample Description	: Water

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= \leq 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.

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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Legionella Test Report

Customer Details

Report No. WA-R-L-2005-9730

Crystalline Environmental Services



Request No. : WA-Q-L-2005-1521 Sample No. : WA-S-L-2005-9518
Sampling Date/time : 21/5/2020 , 12:31 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 Sampled By : Shoukth
Building: C10A
Sample Identification : Not Given Sample Submitted as : Water
Sample Certificate No : 0825 Sampling Method : BS 7592
Temperature °C : 29.1 Site Observation : Clear
Sampling Container : Sterile Plastic Bottle Source of Sample : Water Tank 1
Sampling Point : 44th Floor Sample Description : Water

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

Note : Limit of Detection= \leq 1CFU/L

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

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

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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Microbiology Test Report

Customer Details

Crystalline Environmental Services

Report No. WA-R-L-2005-9726



Request No.	: WA-Q-L-2005-1521	Sample No.	: WA-S-L-2005-9514
Sampling Date/time	: 21/5/2020 , 12:31	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: C10A	Sampled By	: Shoukth
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 0825	Sampling Method	: APHA 9060 A & B
Temperature °C	: 30.41	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Water Tank 2
Sampling Point	: 16th Floor	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= \leq 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.



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Testing - NAL 034

Microbiology Test Report

Report No. : WA-R-L-2005-9726

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Dr. Suresh Murugan Ph.D

Senior Microbiologist

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Legionella Test Report

Customer Details

Crystalline Environmental Services

Report No. WA-R-L-2005-9731



Request No.	: WA-Q-L-2005-1521	Sample No.	: WA-S-L-2005-9519
Sampling Date/time	: 21/5/2020 , 12:31	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: C10A	Sampled By	: Shoukth
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 0825	Sampling Method	: BS 7592
Temperature °C	: 30.41	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Water Tank 2
Sampling Point	: 16th Floor	Sample Description	: Water

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

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

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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CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT.	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 21-05-2020
SITE: OMEGA C10-A	Copy: TAFAWUQ	LOCATION: C10-A, WATER TANK, FLOOR - 16

POTABLE WATER ANALYSIS

PARAMETER	CONTROL LIMITS	DOMASTIC WATER			
pH at 25°C	7.0 - 9.2	8.16			
Conductivity at 25°C, µs/cm	---	228			
Total Dissolved Solids at 180°C (TDS)	1000 Max.	148			
Total Hardness, ppm as CaCO ₃	300 Max.	62			
Calcium Hardness, ppm as CaCO ₃	200 Max.	57			
Chloride, ppm as Cl ⁻	250 Max	49			
Iron, ppm as Fe	0.3 Max.	<0.01			
Sulphate (SO ₄), mg/l	250 Max.	<10			
Nitrates (NO ₃ -N)	50 Max.	< 1			
Fluorides (F)	1.5 Max	<0.01			
Sodium (Na)	150 Max.	<10			

Treatment Residuals

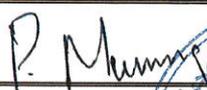
Color, mg/l	Max 15	Clear			
Odor	Unobjectionable	ND			
Turbidity in NTU	5 Max	<2			

*** All test results expressed in parts per million (ppm) as CaCO₃ except pH and conductivity (µmhos).

COMMENTS:	ACTION:
The pH and Conductivity/TDS are found satisfactory. ⇨	No action recommended.
Dissolved iron levels are within control limits ⇨	No action recommended.
Color, odor & turbidity found satisfactory ⇨	No action recommended.

INVENTORY LEVELS

DOSAGE SCHEDULE

Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal SHC			--	
Service Engineer:	MURUGA RAJ		Client:	Mr. TAHA DAKKA
Signature:			Signature:	





Microbiology Test Report

Customer Details

Crystalline Environmental Services

Report No. WA-R-L-2005-9727



Request No.	: WA-Q-L-2005-1521	Sample No.	: WA-S-L-2005-9515
Sampling Date/time	: 21/5/2020 , 12:31	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: C10A	Sampled By	: Shoukth
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 0825	Sampling Method	: APHA 9060 A & B
Temperature °C	: 25.4	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Water Tank 3
Sampling Point	: Basement 3	Sample Description	: Water

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.

Signed for and on behalf of Wimpey Laboratories

Dr. Suresh Murugan Ph.D
Senior Microbiologist



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Legionella Test Report

Customer Details

Crystalline Environmental Services

Report No. WA-R-L-2005-9732



Request No.	: WA-Q-L-2005-1521	Sample No.	: WA-S-L-2005-9520
Sampling Date/time	: 21/5/2020 , 12:31	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: C10A	Sampled By	: Shoukth
Sample Identification	: Not Given	Sample Submitted as	: Water
Sample Certificate No	: 0825	Sampling Method	: BS 7592
Temperature °C	: 25.4	Site Observation	: Clear
Sampling Container	: Sterile Plastic Bottle	Source of Sample	: Water Tank 3
Sampling Point	: Basement 3	Sample Description	: Water

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

Note : Limit of Detection= \leq 1CFU/L

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

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

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.

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Senior Microbiologist

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CONSULTING SERVICE REPORT

CUSTOMER: TAFAWUQ FACILITY MANAGEMENT.	To: MR. TAHA DAKKA ASSISTANT FACILITIES MANAGER	DATE: 21-05-2020
SITE: OMEGA C10-A	Copy: TAFAWUQ	LOCATION: C10-A, BASEMENT TANK -B1

POTABLE WATER ANALYSIS

PARAMETER	CONTROL LIMITS	DOMASTIC WATER			
pH at 25°C	7.0 - 9.2	8.06			
Conductivity at 25°C, µs/cm	---	208			
Total Dissolved Solids at 180°C (TDS)	1000 Max.	135			
Total Hardness, ppm as CaCO ₃	300 Max.	62			
Calcium Hardness, ppm as CaCO ₃	200 Max.	58			
Chloride, ppm as Cl ⁻	250 Max	47			
Iron, ppm as Fe	0.3 Max.	<0.01			
Sulphate (SO ₄), mg/l	250 Max.	<10			
Nitrates (NO ₃ -N)	50 Max.	< 1			
Fluorides (F)	1.5 Max	<0.01			
Sodium (Na)	150 Max.	<10			

Treatment Residuals

Color, mg/l	Max 15	Clear			
Odor	Unobjectionable	ND			
Turbidity in NTU	5 Max	<2			

*** All test results expressed in parts per million (ppm) as CaCO₃ except pH and conductivity (µmhos).

COMMENTS:	ACTION:
The pH and Conductivity/TDS are found satisfactory. ⇨	No action recommended.
Dissolved iron levels are within control limits ⇨	No action recommended.
Color, odor & turbidity found satisfactory ⇨	No action recommended.

INVENTORY LEVELS			DOSAGE SCHEDULE	
Chemical	Quantity	Chemical	Present Dosage	Revised Dosage
Crystal SHC			--	
Service Engineer:	MURUGA RAJ		Client:	Mr. TAHA DAKKA
Signature:			Signature:	

