



## ANALYTICAL REPORT

E016678 R0

Default Project

Prepared for

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**First Page**

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Email	mm.kamara@integems.com	SGS Reference	E016678
Project	Default Project	Received	28/11/2017
Order n°	MASL - PFI 0435	Analysis Started	12/09/2017
Matrix/samples	Water(6)	Analysis Completed	13/12/2017
		Approved	13/12/2017
		Date Reported	13/12/2017
		Report n°	E016678 R0

**SIGNATORIES**

Peter Sarpong  
Assistant Laboratory Manager

**COMMENTS**



CALA  
Testing  
Accreditation No. A 3699

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**RESULTS**

Parameter	Sample n°		E016678.001	E016678.002	E016678.003	E016678.004	E016678.005
	Sample Name	Sample Matrix	BEDGIS 001	BEDGIS 002	BEDGIS 003	BEDGIS 004	BEDGIS 005
	Units	RL	Result	Result	Result	Result	Result

**[ ME-AN-305 ]**

* Hardness by Calculation	mg/L	5	5	7	8	12	6
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**[ APHA 4500-H, ]**

* Total Alkalinity as CaCO3	mg/L	2	8	11	12	11	18
* Apparent Color by spec	Pt/Co colour	3	58	55	66	65	36
* True Color by spec	Pt/Co colour	3	24	22	17	18	15

**[ ME-AN-313 ]**

Biochemical Oxygen Demand (BOD5)	mg/L	5	<5	<5	<5	<5	<5
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**[ ME-AN-311 ]**

Chemical Oxygen Demand	mg/L	5	6	<5	17	<5	<5
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**[ ME-AN-301,302,303,304, 318, 322, 334,338, 354, 355 & 356 ]**

Nitrate, NO3 as NO3	mg/L	0.06	0.65	0.68	0.77	0.79	0.61
Nitrite, NO2 as NO2	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphate as PO4	mg/L	0.02	<0.02	<0.02	<0.02	<0.02	0.02

**[ ME-AN-326 ]**

Oil and Grease	mg/L	5	<5	<5	<5	<5	<5
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**[ APHA 9223B 22nd Edition ]**

Total Coliforms	MPN/100 mL	1	2419.6	298.7	866.4	9208	2419.6
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**[ 0 + APHA 9221D 22nd Edition (2005) ]**

Faecal Coliforms	MPN/100 mL	1	33.1	17.3	9.8	920.8	117.8
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**[ ME-AN-351\_Dissolved ]**

Arsenic dissolved	mg/L	0.0005	<0.0005	<0.0005	0.0007	<0.0005	<0.0005
Antimony dissolved	mg/L	0.0001	0.0005	0.0002	0.0004	<0.0001	0.0003
Mercury dissolved	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

**[ ME-AN-348\_Dissolved ]**

Calcium dissolved	mg/L	1	1	2	2	3	1
Magnesium dissolved	mg/L	0.5	0.6	0.7	0.8	1.4	0.5

**[ ME-AN-351\_Total ]**

Arsenic total	mg/L	0.0005	<0.0005	<0.0005	<0.0005	0.0015	<0.0005
Antimony total	mg/L	0.0001	0.0006	0.0002	<0.0001	<0.0001	<0.0001
Selenium total	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury total	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Manganese total	mg/L	0.002	0.016	0.011	0.014	0.021	0.025
Copper total	mg/L	0.001	<0.001	<0.001	<0.001	0.002	<0.001
Zinc total	mg/L	0.005	0.007	0.005	0.007	0.010	0.006
Lead total	mg/L	0.0005	0.0005	0.0006	0.0006	0.0008	0.0008
Chromium total	mg/L	0.001	<0.001	<0.001	<0.001	0.002	<0.001
Nickel total	mg/L	0.001	<0.001	<0.001	<0.001	0.001	<0.001
Cadmium total	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum total	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt total	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

**[ ME-AN-348\_Total ]**

Iron total	mg/L	0.1	1.0	1.1	1.3	1.4	1.3
Aluminium total	mg/L	0.03	0.24	0.18	0.31	0.41	0.17

**RESULTS**

	<b>Sample n°</b>	E016678.006		
	<b>Sample Name</b>	BEDGIS 006		
	<b>Sample Matrix</b>	Water		
<b>Parameter</b>	<b>Units</b>	<b>RL</b>	<b>Result</b>	

**[ ME-AN-305 ]**

* Hardness by Calculation	mg/L	5	9
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**[ APHA 4500-H, ]**

* Total Alkalinity as CaCO3	mg/L	2	11
* Apparent Color by spec	Pt/Co colour	3	48
* True Color by spec	Pt/Co colour	3	13

**[ ME-AN-313 ]**

Biochemical Oxygen Demand (BOD5)	mg/L	5	<5
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**[ ME-AN-311 ]**

Chemical Oxygen Demand	mg/L	5	7
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**[ ME-AN-301,302,303,304, 318, 322, 334,338, 354, 355 & 356 ]**

Nitrate, NO3 as NO3	mg/L	0.06	0.43
Nitrite, NO2 as NO2	mg/L	0.05	<0.05
Phosphate as PO4	mg/L	0.02	<0.02

**[ ME-AN-326 ]**

Oil and Grease	mg/L	5	<5
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**[ APHA 9223B 22nd Edition ]**

Total Coliforms	MPN/100 mL	1	1732.9
-----------------	------------	---	--------

**[ 0 + APHA 9221D 22nd Edition (2005) ]**

Faecal Coliforms	MPN/100 mL	1	46.5
------------------	------------	---	------

**[ ME-AN-351\_Dissolved ]**

Arsenic dissolved	mg/L	0.0005	<0.0005
Antimony dissolved	mg/L	0.0001	<0.0001
Mercury dissolved	mg/L	0.0001	<0.0001

**[ ME-AN-348\_Dissolved ]**

Calcium dissolved	mg/L	1	2
Magnesium dissolved	mg/L	0.5	1.1

**[ ME-AN-351\_Total ]**

Arsenic total	mg/L	0.0005	<0.0005
Antimony total	mg/L	0.0001	<0.0001
Selenium total	mg/L	0.01	<0.01
Mercury total	mg/L	0.0001	<0.0001
Manganese total	mg/L	0.002	0.018
Copper total	mg/L	0.001	<0.001
Zinc total	mg/L	0.005	0.007
Lead total	mg/L	0.0005	0.0005
Chromium total	mg/L	0.001	<0.001
Nickel total	mg/L	0.001	<0.001
Cadmium total	mg/L	0.0001	<0.0001
Molybdenum total	mg/L	0.0005	<0.0005
Cobalt total	mg/L	0.001	<0.001

**[ ME-AN-348\_Total ]**

Iron total	mg/L	0.1	0.8
Aluminium total	mg/L	0.03	0.09



**QC SUMMARY**

MB blank results are compared to the Limit of Reporting. LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample. DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

**LB26834**

**BOD5 [ ME-AN-313 ]**

Parameter	ES	QC Reference	Units	RL	MB	DUP %RPD	LCS %Recovery
Biochemical Oxygen Demand (BOD5)		LB26834	mg/L	5.0	<5	0 - 16%	91%

**LB26841**

**Metals in Water (Tot) by ICP-OES [ ME-AN-348\_Total ]**

Parameter	ES	QC Reference	Units	RL	MB	DUP %RPD	LCS %Recovery
Iron total		LB26841	mg/L	0.10	<0.1	0%	101 - 102%
Aluminium total		LB26841	mg/L	0.030	<0.03	0 - 5%	100 - 103%

**LB26850**

**Metals in Water (Diss) by ICP-OES [ ME-AN-348\_Dissolved ]**

Parameter	ES	QC Reference	Units	RL	MB	DUP %RPD	LCS %Recovery
Calcium dissolved		LB26850	mg/L	1.0	<1	1 - 5%	103 - 105%
Magnesium dissolved		LB26850	mg/L	0.50	<0.5	1 - 5%	111%

**LB26854**



**QC SUMMARY**

MB blank results are compared to the Limit of Reporting. LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample. DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

**COD in Water - Low level [ ME-AN-311 ]**

Parameter	ES	QC Reference	Units	RL	MB	DUP %RPD	LCS %Recovery
Chemical Oxygen Demand		LB26854	mg/L	5.0	<5	0%	NA

**LB26870**

**Anions by Aquakem Discrete Analyser [ ME-AN-301,302,303,304, 318, 322, 334,338, 354, 355 & 356 ]**

Parameter	ES	QC Reference	Units	RL	MB	DUP %RPD	LCS %Recovery
Nitrate, NO3 as NO3		LB26870	mg/L	0.060	<0.06	1 - 8%	113%
Nitrite, NO2 as NO2		LB26870	mg/L	0.050	<0.05	0 - 8%	87%
Phosphate as PO4		LB26870	mg/L	0.020	<0.02	0 - 7%	90%

**LB26903**

**Skalar Robotic Analyser [ APHA 4500-H, ]**

Parameter	ES	QC Reference	Units	RL	DUP %RPD
Total Alkalinity as CaCO3		LB26903	mg/L	2.0	0 - 4%
Apparent Color by spec		LB26903	Pt/Co colou	3.0	2 - 5%
True Color by spec		LB26903	Pt/Co colou	3.0	5%

**LB26944**



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**QC SUMMARY**

MB blank results are compared to the Limit of Reporting. LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample. DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

**Oil and Grease in Water [ ME-AN-326 ]**

Parameter	ES	QC Reference	Units	RL	MB	LCS %Recovery
Oil and Grease		LB26944	mg/L	5.0	<5	99 - 102%





**METHOD SUMMARY**

METHOD	METHODOLOGY SUMMARY
ME-AN-301,302,303,304, 318, 322, 334,338, 354, 355 & 356	Anions in water by Aquakem Discrete Analyzer
ME-AN-305	Hardness determination on water samples by calculation. This method is based on APHA 2340B
ME-AN-311	COD determination in water. This method is based on APHA 5220D
ME-AN-313	BOD determination in water by winkler. This method is based on APHA 5210B
ME-AN-326	Determination of Oil and grease in water. This method is based on APHA 5520B
ME-AN-348_Dissolved	Aqueous samples are filtered through a 0.45 um pore size filter, immediately acidified with HNO <sub>3</sub> and then read on ICP-OES. Solutions are aspirated into an Argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components. This method is based on APHA 3120B.
ME-AN-348_Total	Acidified (nitric acid) aqueous samples are digested with HNO <sub>3</sub> at 95°C +/- 4oC reducing interferences by organic matter and converting metals associated with particulates to the free metal form. This is read on the ICP-OES. Solutions are aspirated into an Argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components. This method is based on APHA 3120B.
ME-AN-351_Dissolved	This method is based on EPA_200.8
ME-AN-351_Total	This method is based on EPA_200.8

## LEGEND

### FOOTNOTES

^	Performed by external SGS laboratory.	IS	Insufficient sample for analysis.
^^	Performed by outside laboratory.	LNR	Sample listed, but not received.
RL	Reporting Limit	NA	The sample was not analysed for this analyte
↑	Raised Limit of Reporting	NVL	Result to be validated
↓	Lowered Limit of Reporting	TBA	Parameter not yet analysed

### ACCREDITATION NOTES

- \* This analysis is not covered by the scope of accreditation.

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The Company's responsibility under this Report is limited to proven negligence and will in no case be more than ten times the amount of the fees or commission. Except by special arrangement, samples, if drawn, will not be retained by the Company for more than one month.

The results contained in the following report refer only to the sample tested.

This Report or a copy thereof will be retained by the Company for a period of 10 years.

Comparison of the results with the respective limits, when present, does not take into account the uncertainty of the estimated extent. Any results out of range are marked in red.

The recovery where provided, is to be understood comprised within the specific acceptability limits.

Unless otherwise stated the result is to be understood not corrected for recovery obtained.

This report must not be reproduced, except in full.

--- End of the analytical report ---



## AMENDMENT ANALYTICAL REPORT

E016678 R1

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**First Page**

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Email	mm.kamara@integems.com	SGS Reference	E016678
Project	Default Project	Received	28/11/2017
Order n°	MASL - PFI 0435	Analysis Started	12/09/2017
Matrix/samples	Water(6)	Analysis Completed	19/12/2017
		Approved	13/12/2017
		Date Reported	19/12/2017
		Report n°	E016678 R1

**SIGNATORIES**

Peter Sarpong  
Assistant Laboratory Manager

**COMMENTS**

This Report/Certificate cancels and supersedes the Report No.:  
E016678 R0



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Accreditation No. A 3699

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## CASE NARRATIVE

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This re-issued final report cancels and supersedes report number E0166781 R0 issued by SGS Maslab on 13/12/17. Report has been updated with TSS results.

**RESULTS**

	Sample n°		E016678.001	E016678.002	E016678.003	E016678.004	E016678.005
	Sample Name		BEDGIS 001	BEDGIS 002	BEDGIS 003	BEDGIS 004	BEDGIS 005
	Sample Matrix		Water	Water	Water	Water	Water
Parameter	Units	RL	Result	Result	Result	Result	Result

[ ME-AN-305 ]

* Hardness by Calculation	mg/L	5	5	7	8	12	6
---------------------------	------	---	---	---	---	----	---

[ APHA 4500-H, ]

* Total Alkalinity as CaCO3	mg/L	2	8	11	12	11	18
* Apparent Color by spec	Pt/Co colour	3	58	55	66	65	36
* True Color by spec	Pt/Co colour	3	24	22	17	18	15

[ ME-AN-313 ]

Biochemical Oxygen Demand (BOD5)	mg/L	5	<5	<5	<5	<5	<5
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[ ME-AN-311 ]

Chemical Oxygen Demand	mg/L	5	6	<5	17	<5	<5
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[ ME-AN-301,302,303,304, 318, 322, 334,338, 354, 355 & 356 ]

Nitrate, NO3 as NO3	mg/L	0.06	0.65	0.68	0.77	0.79	0.61
Nitrite, NO2 as NO2	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphate as PO4	mg/L	0.02	<0.02	<0.02	<0.02	<0.02	0.02

[ ME-AN-326 ]

Oil and Grease	mg/L	5	<5	<5	<5	<5	<5
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[ APHA 9223B 22nd Edition ]

Total Coliforms	MPN/100 mL	1	2419.6	298.7	866.4	9208	2419.6
-----------------	------------	---	--------	-------	-------	------	--------

[ 0 + APHA 9221D 22nd Edition (2005) ]

Faecal Coliforms	MPN/100 mL	1	33.1	17.3	9.8	920.8	117.8
------------------	------------	---	------	------	-----	-------	-------

[ ME-AN-351\_Dissolved ]

Arsenic dissolved	mg/L	0.0005	<0.0005	<0.0005	0.0007	<0.0005	<0.0005
Antimony dissolved	mg/L	0.0001	0.0005	0.0002	0.0004	<0.0001	0.0003
Mercury dissolved	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

[ ME-AN-348\_Dissolved ]

Calcium dissolved	mg/L	1	1	2	2	3	1
Magnesium dissolved	mg/L	0.5	0.6	0.7	0.8	1.4	0.5

[ ME-AN-351\_Total ]

Arsenic total	mg/L	0.0005	<0.0005	<0.0005	<0.0005	0.0015	<0.0005
Antimony total	mg/L	0.0001	0.0006	0.0002	<0.0001	<0.0001	<0.0001
Selenium total	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury total	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Manganese total	mg/L	0.002	0.016	0.011	0.014	0.021	0.025
Copper total	mg/L	0.001	<0.001	<0.001	<0.001	0.002	<0.001
Zinc total	mg/L	0.005	0.007	0.005	0.007	0.010	0.006
Lead total	mg/L	0.0005	0.0005	0.0006	0.0006	0.0008	0.0008
Chromium total	mg/L	0.001	<0.001	<0.001	<0.001	0.002	<0.001
Nickel total	mg/L	0.001	<0.001	<0.001	<0.001	0.001	<0.001
Cadmium total	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum total	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt total	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

[ ME-AN-348\_Total ]

Iron total	mg/L	0.1	1.0	1.1	1.3	1.4	1.3
Aluminium total	mg/L	0.03	0.24	0.18	0.31	0.41	0.17



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**RESULTS**

	<b>Sample n°</b>	E016678.001	E016678.002	E016678.003	E016678.004	E016678.005
	<b>Sample Name</b>	BEDGIS 001	BEDGIS 002	BEDGIS 003	BEDGIS 004	BEDGIS 005
	<b>Sample Matrix</b>	Water	Water	Water	Water	Water
<b>Parameter</b>	<b>Units</b>	<b>RL</b>	<b>Result</b>	<b>Result</b>	<b>Result</b>	<b>Result</b>

[ ME-AN-309 ]

Total Suspended Solids at 103-105°C	mg/L	1	14	8	12	12	7
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**RESULTS**

	<b>Sample n°</b>	E016678.006		
	<b>Sample Name</b>	BEDGIS 006		
	<b>Sample Matrix</b>	Water		
<b>Parameter</b>	<b>Units</b>	<b>RL</b>	<b>Result</b>	

**[ ME-AN-305 ]**

* Hardness by Calculation	mg/L	5	9
---------------------------	------	---	---

**[ APHA 4500-H, ]**

* Total Alkalinity as CaCO3	mg/L	2	11
* Apparent Color by spec	Pt/Co colour	3	48
* True Color by spec	Pt/Co colour	3	13

**[ ME-AN-313 ]**

Biochemical Oxygen Demand (BOD5)	mg/L	5	<5
----------------------------------	------	---	----

**[ ME-AN-311 ]**

Chemical Oxygen Demand	mg/L	5	7
------------------------	------	---	---

**[ ME-AN-301,302,303,304, 318, 322, 334,338, 354, 355 & 356 ]**

Nitrate, NO3 as NO3	mg/L	0.06	0.43
Nitrite, NO2 as NO2	mg/L	0.05	<0.05
Phosphate as PO4	mg/L	0.02	<0.02

**[ ME-AN-326 ]**

Oil and Grease	mg/L	5	<5
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**[ APHA 9223B 22nd Edition ]**

Total Coliforms	MPN/100 mL	1	1732.9
-----------------	------------	---	--------

**[ 0 + APHA 9221D 22nd Edition (2005) ]**

Faecal Coliforms	MPN/100 mL	1	46.5
------------------	------------	---	------

**[ ME-AN-351\_Dissolved ]**

Arsenic dissolved	mg/L	0.0005	<0.0005
Antimony dissolved	mg/L	0.0001	<0.0001
Mercury dissolved	mg/L	0.0001	<0.0001

**[ ME-AN-348\_Dissolved ]**

Calcium dissolved	mg/L	1	2
Magnesium dissolved	mg/L	0.5	1.1

**[ ME-AN-351\_Total ]**

Arsenic total	mg/L	0.0005	<0.0005
Antimony total	mg/L	0.0001	<0.0001
Selenium total	mg/L	0.01	<0.01
Mercury total	mg/L	0.0001	<0.0001
Manganese total	mg/L	0.002	0.018
Copper total	mg/L	0.001	<0.001
Zinc total	mg/L	0.005	0.007
Lead total	mg/L	0.0005	0.0005
Chromium total	mg/L	0.001	<0.001
Nickel total	mg/L	0.001	<0.001
Cadmium total	mg/L	0.0001	<0.0001
Molybdenum total	mg/L	0.0005	<0.0005
Cobalt total	mg/L	0.001	<0.001

**[ ME-AN-348\_Total ]**

Iron total	mg/L	0.1	0.8
Aluminium total	mg/L	0.03	0.09



**CALA**  
 Testing  
 Accreditation No. A 3699

**RESULTS**

	<b>Sample n°</b>	E016678.006		
	<b>Sample Name</b>	BEDGIS 006		
	<b>Sample Matrix</b>	Water		
<b>Parameter</b>	<b>Units</b>	<b>RL</b>	<b>Result</b>	

[ ME-AN-309 ]

Total Suspended Solids at 103-105°C	mg/L	1	7	
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**QC SUMMARY**

MB blank results are compared to the Limit of Reporting. LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared to the amount of analyte spiked into the sample. DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

**LB26834**

**BOD5 [ ME-AN-313 ]**

Parameter	ES	QC Reference	Units	RL	MB	DUP %RPD	LCS %Recovery
Biochemical Oxygen Demand (BOD5)		LB26834	mg/L	5.0	<5	0 - 16%	91%

**LB26841**

**Metals in Water (Tot) by ICP-OES [ ME-AN-348\_Total ]**

Parameter	ES	QC Reference	Units	RL	MB	DUP %RPD	LCS %Recovery
Iron total		LB26841	mg/L	0.10	<0.1	0%	101 - 102%
Aluminium total		LB26841	mg/L	0.030	<0.03	0 - 5%	100 - 103%

**LB26850**

**Metals in Water (Diss) by ICP-OES [ ME-AN-348\_Dissolved ]**

Parameter	ES	QC Reference	Units	RL	MB	DUP %RPD	LCS %Recovery
Calcium dissolved		LB26850	mg/L	1.0	<1	1 - 5%	103 - 105%
Magnesium dissolved		LB26850	mg/L	0.50	<0.5	1 - 5%	111%

**LB26854**

**QC SUMMARY**

MB blank results are compared to the Limit of Reporting. LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample. DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

**COD in Water - Low level [ ME-AN-311 ]**

Parameter	ES	QC Reference	Units	RL	MB	DUP %RPD	LCS %Recovery
Chemical Oxygen Demand		LB26854	mg/L	5.0	<5	0%	NA

**LB26870**

**Anions by Aquakem Discrete Analyser [ ME-AN-301,302,303,304, 318, 322, 334,338, 354, 355 & 356 ]**

Parameter	ES	QC Reference	Units	RL	MB	DUP %RPD	LCS %Recovery
Nitrate, NO3 as NO3		LB26870	mg/L	0.060	<0.06	1 - 8%	113%
Nitrite, NO2 as NO2		LB26870	mg/L	0.050	<0.05	0 - 8%	87%
Phosphate as PO4		LB26870	mg/L	0.020	<0.02	0 - 7%	90%

**LB26903**

**Skalar Robotic Analyser [ APHA 4500-H, ]**

Parameter	ES	QC Reference	Units	RL	DUP %RPD
Total Alkalinity as CaCO3		LB26903	mg/L	2.0	0 - 4%
Apparent Color by spec		LB26903	Pt/Co colou	3.0	2 - 5%
True Color by spec		LB26903	Pt/Co colou	3.0	5%

**LB26944**

**QC SUMMARY**

MB blank results are compared to the Limit of Reporting. LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample. DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

**Oil and Grease in Water [ ME-AN-326 ]**

Parameter	ES	QC Reference	Units	RL	MB	LCS %Recovery
Oil and Grease		LB26944	mg/L	5.0	<5	99 - 102%

**LB27093**

**Total Suspended Solids 103-105°C [ ME-AN-309 ]**

Parameter	ES	QC Reference	Units	RL	MB	DUP %RPD	LCS %Recovery
Total Suspended Solids at 103-105°C		LB27093	mg/L	1.0	NVL	NVL	NVL



**METHOD SUMMARY**

METHOD	METHODOLOGY SUMMARY
ME-AN-301,302,303,304, 318, 322, 334,338, 354, 355 & 356	Anions in water by Aquakem Discrete Analyzer
ME-AN-305	Hardness determination on water samples by calculation. This method is based on APHA 2340B
ME-AN-309	A well-mixed water sample is filtered through a weighed standard glass-fibre filter and residue dried in an oven to a constant weight at 103-105oC. This method is based on APHA 2540B
ME-AN-311	COD determination in water. This method is based on APHA 5220D
ME-AN-313	BOD determination in water by winkler. This method is based on APHA 5210B
ME-AN-326	Determination of Oil and grease in water. This method is based on APHA 5520B
ME-AN-348_Dissolved	Aqueous samples are filtered through a 0.45 um pore size filter, immediately acidified with HNO3 and then read on ICP-OES. Solutions are aspirated into an Argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components. This method is based on APHA 3120B.
ME-AN-348_Total	Acidified (nitric acid) aqueous samples are digested with HNO3 at 95°C +/- 4oC reducing interferences by organic matter and converting metals associated with particulates to the free metal form. This is read on the ICP-OES. Solutions are aspirated into an Argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components. This method is based on APHA 3120B.
ME-AN-351_Dissolved	This method is based on EPA_200.8
ME-AN-351_Total	This method is based on EPA_200.8

**LEGEND**

**FOOTNOTES**

^	Performed by external SGS laboratory.	IS	Insufficient sample for analysis.
^^	Performed by outside laboratory.	LNR	Sample listed, but not received.
RL	Reporting Limit	NA	The sample was not analysed for this analyte
↑	Raised Limit of Reporting	NVL	Result to be validated
↓	Lowered Limit of Reporting	TBA	Parameter not yet analysed

**ACCREDITATION NOTES**

- \* This analysis is not covered by the scope of accreditation.

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--- End of the analytical report ---