TEST REPORT



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Food and Water Chemistry

PO Number: RU723938 Contract: 46052

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Report No: 17951
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Final Report

Date received: 2020-07-31 Date commenced: 2020-08-14

Sample Details: CFWC-W-200805-0005 (778959)

Sample Condition: Suitable for testing

Sample Description: Tap Water

Analytical Results

Method Used	Test performed	SANS 241:2015 – Drinking Water Partial	Results
	Odour, TON		Inoffensive
DPD Comparator	Monochloramine as CI2, mg/L	≤3	<0.1
FWC-5.4-01 R	Colour, Pt-Co mg/l	≤15	<10
FWC-5.4-01B	Conductivity at 25°C, mS/m pH at 25°C	≤170 ≥5 to ≤9.7	27.7 7.4
SANS 2160(B)	Taste, FTN	Inoffensive	Inoffensive
SANS 375 : 2005	Turbidity, NTU	≤5	<0.5
SANS 5213 : 2013	Total Dissolved Solids 180°C, mg/L	≤1200	197
FWC-5.4-01 K	Sulphate as SO4, mg/L	≤500	30.78
FWC-5.4-01 N	Cyanide (Recoverable) as CN, µg/L	≤70	0.37
FWC-5.4-01-01 U	Free Chlorine as Cl2, mg/L	≤5	<0.1
FWC-5.4-01-T	Antimony as Sb, µg/L	≤20	0.3660
	Arsenic as As, μg/L	≤10	0.8070
	Dissolved Mercury as Hg, µg/L	≤6	<0.1000
	Selenium as Se, µg/L	≤10	< 0.3000
	Uranium as U, μg/L	≤15	0.1050
SANS 11885:2008	Barium as Ba, mg/L	≤700	0.027
	Boron as B, mg/L	≤2400	0.029
	Iron as Fe, μg/L	≤300	0.05
	Lead as Pb, μg/L	≤10	<0.004

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SANS 11885:2008	Manganese as Mn, μg/L	≤500	<0.004
	Nickel as Ni, µg/L	≤70	<0.005
SANS 11885:2008 & FWC-5. 4-01 A	Aluminium as Al, μg/L	≤300	0.01
	Cadmium as Cd, µg/L	≤3	<0.003
	Total Chromium as Cr, μg/L	≤50	<0.01
	Cobalt as Co, µg/L	≤500	<0.004
	Copper as Cu, µg/L	≤2000	0.08
SANS 11885:2008 & FWC-5. 4-01A	Vanadium as V, μg/L	≤200	0.007
	Calculated Nitrate as N, mg/L	≤11	2.37
Colorimetric	TON Hyd as N, mg/L		2.38
FWC-5.4-01 A	Sodium as Na, mg/L	≤200	23.93
	Zinc as Zn, mg/L	≤5	0.01
FWC-5.4-01 G	Ammonia as N, mg/L	≤1.5	<0.09
FWC-5.4-01 H	Chloride as Cl2, mg/L	≤300	23.70
FWC-5.4-01 I	Fluoride as F, mg/L	≤1.5	0.27
FWC-5.4-01 J	Nitrite as N, mg/L	≤0.9	<0.01
FWC-5.4-01 C	Phenolic Compounds, μg/L	≤10	0.140
FWC-5.4-01 M	Total Organic Carbon as C, mg/L	≤10	3.80
FWC-5.5-01 E	Trihalomethane, mg/L	Not Specified	0.000
	Dibromochloromethane, mg/L	≤0.1	0.000
	Bromodichloromethane, mg/L	≤0.06	0.000
	Chloroform, mg/L	≤0.3	0.000
	Bromoform, mg/L	≤0.1	0.000
SANS 5221 Subcontracted T 0269	E-coli Bacteria, count/100ml	Not Detected	Not Detected
	Heterotropic Plate Count, count/ml	≤1000	0
	Total Coliform Bacteria, count/100ml	≤10	0

Sample Details: CFWC-W-200812-0020 (779213)

Sample Condition: Suitable for testing

Sample Description: Tap Water Plus 0.1ml/L C+Complex

Analytical Results Method Used Test performed Results SANS 241:2015 -**Drinking Water** Partial Odour, TON Inoffensive **DPD** Comparator Monochloramine as Cl2, mg/L≤3 < 0.1 FWC-5.4-01 R Colour, Pt-Co mg/l <10 ≤15 FWC-5.4-01B Conductivity at 25°C, mS/m 31.1 ≤170

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FWC-5.4-01B	pH at 25°C	≥5 to ≤9.7	6.8
SANS 2160(B)	Taste, FTN	Inoffensive	Inoffensive
SANS 375 : 2005	Turbidity, NTU	≤5	<0.5
SANS 5213 : 2013	Total Dissolved Solids 180°C, mg/L	≤1200	204
FWC-5.4-01 K	Sulphate as SO4, mg/L	≤500	33.00
FWC-5.4-01 N	Cyanide (Recoverable) as CN, µg/L	≤70	< 0.005
FWC-5.4-01-01 U	Free Chlorine as Cl2, mg/L	≤5	<0.1
FWC-5.4-01-T	Antimony as Sb, μg/L	≤20	0.437
	Arsenic as As, µg/L		0.819
		≤10	
	Dissolved Mercury as Hg, µg/L	≤6	<0.1
	Selenium as Se, µg/L	≤10	<0.30
	Uranium as U, μg/L	≤15	<0.30
SANS 11885:2008	Barium as Ba, mg/L	≤700	0.031
	Boron as B, mg/L	≤2400	0.028
	Iron as Fe, μg/L	≤300	38
	Lead as Pb, µg/L	≤10	<4
	Manganese as Mn, µg/L	≤500	<4
	Nickel as Ni, µg/L		
	Nickei as Ni, µg/L	≤70	<5
SANS 11885:2008 & FWC-5. 4-01 A	Aluminium as Al, µg/L	≤300	11.00
	Cadmium as Cd, µg/L	≤3	<3
	Total Chromium as Cr, µg/L	≤50	9.00
	Cobalt as Co, µg/L	≤500	<4
	Copper as Cu, µg/L	≤2000	176
SANS 11885:2008 & FWC-5. 4-01A	Vanadium as V, μg/L	≤200	7
	Calculated Nitrate as N, mg/L	≤11	7.00
Colorimetric	TON Hyd as N, mg/L		7
FWC-5.4-01 A	Sodium as Na, mg/L	≤200	24.51
	Zinc as Zn, mg/L	≤5	0.53
FWC-5.4-01 G	Ammonia as N, mg/L	≤1.5	<0.09
FWC-5.4-01 H	Chloride as CI2, mg/L	≤300	25.79
FWC-5.4-01 I	Fluoride as F, mg/L	≤1.5	0.36
FWC-5.4-01 J	Nitrite as N, mg/L	≤0.9	<0.01
FWC-5.4-01 C	Phenolic Compounds, μg/L	≤10	<0.025
FWC-5.4-01 M	Total Organic Carbon as C, mg/L	≤10	3.80
FWC-5.5-01 E	Trihalomethane, mg/L	Not Specified	0.000
	Dibromochloromethane, mg/L	≤0.1	0.000
	Bromodichloromethane, mg/L	≤0.06	0.000
	Chloroform, mg/L		
		≤0.3	0.000
	Bromoform, mg/L	≤0.1	0.000
SANS 5221 Subcontracted T 0269	E-coli Bacteria, count/100ml	Not Detected	Not Detected

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SANS 5221 Subcontracted T 0269	Heterotropic Plate Count, count/ml	≤1000	0
	Total Coliform Bacteria, count/100ml	≤10	0

Sample Details: CFWC-W-200812-0021 (779214)

Sample Condition: Suitable for testing

Sample Description: Tap Water Plus 0.2ml/L C+Complex

Analytical Results

Method Used	Test performed	SANS 241:2015 - Drinking Water Partial	Results
	Odour, TON		Inoffensive
DPD Comparator	Monochloramine as Cl2, mg/L	≤3	<0.1
FWC-5.4-01 R	Colour, Pt-Co mg/l	≤15	<10
FWC-5.4-01B	Conductivity at 25°C, mS/m	≤170	30.5
	pH at 25°C	≥5 to ≤9.7	6.6
SANS 2160(B)	Taste, FTN	Inoffensive	Inoffensive
SANS 375 : 2005	Turbidity, NTU	≤5	<0.5
SANS 5213 : 2013	Total Dissolved Solids 180°C, mg/L	≤1200	197
FWC-5.4-01 K	Sulphate as SO4, mg/L	≤500	31.67
FWC-5.4-01 N	Cyanide (Recoverable) as CN, μg/L	≤70	<0.005
FWC-5.4-01-01 U	Free Chlorine as Cl2, mg/L	≤5	<0.1
FWC-5.4-01-T	Antimony as Sb, µg/L	≤20	0.466
	Arsenic as As, µg/L	≤10	0.746
	Dissolved Mercury as Hg, µg/L	≤6	<0.1
	Selenium as Se, µg/L	≤10	<0.30
	Uranium as U, µg/L	≤15	<0.30
SANS 11885:2008	Barium as Ba, mg/L	≤700	0.035
	Boron as B, mg/L	≤2400	0.030
	Iron as Fe, μg/L	≤300	43
	Lead as Pb, μg/L	≤10	<4
	Manganese as Mn, μg/L	≤500	<4
	Nickel as Ni, μg/L	≤70	<5
SANS 11885:2008 & FWC-5. 4-01 A	Aluminium as Al, µg/L	≤300	11.00
	Cadmium as Cd, µg/L	≤3	<3
	Total Chromium as Cr, µg/L	≤50	9.00
	Cobalt as Co, µg/L	≤500	<4
	Copper as Cu, µg/L	≤2000	407
SANS 11885:2008 & FWC-5. 4-01A	Vanadium as V, μg/L	≤200	8
	Calculated Nitrate as N, mg/L	≤11	10.00

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Colorimetric	TON Hyd as N, mg/L		10
FWC-5.4-01 A	Sodium as Na, mg/L	≤200	24.31
	Zinc as Zn, mg/L	≤5	1.52
FWC-5.4-01 G	Ammonia as N, mg/L	≤1.5	<0.09
FWC-5.4-01 H	Chloride as Cl2, mg/L	≤300	23.68
FWC-5.4-01 I	Fluoride as F, mg/L	≤1.5	0.50
FWC-5.4-01 J	Nitrite as N, mg/L	≤0.9	<0.01
FWC-5.4-01 C	Phenolic Compounds, μg/L	≤10	<0.025
FWC-5.4-01 M	Total Organic Carbon as C, mg/L	≤10	3.70
FWC-5.5-01 E	Bromoform, mg/L	≤0.1	0.000
	Chloroform, mg/L	≤0.3	0.000
	Bromodichloromethane, mg/L	≤0.06	0.000
	Dibromochloromethane, mg/L	≤0.1	0.000
	Trihalomethane, mg/L	Not Specified	0.000
SANS 5221 Subcontracted T 0269	E-coli Bacteria, count/100ml	Not Detected	Not Detected
	Heterotropic Plate Count, count/ml	≤1000	0
	Total Coliform Bacteria, count/100ml	≤10	0

NOTE:

- 1) Tap water sample tested complies to the requirements of SANS 241:2015"Drinking Water".
- 2) Tap water+0.1ml/L C+Complex sample tested complies to the requirement of SANS 241:2015" Drinking Water".
- 3) Tap water+0.2ml/L C+Complex sample tested complies to the requirements of SANS 241:2015" Drinking Water".

Sannie Mabe (Senior Test Officer)

Kgabo Bethuel Mashamaite (Test-Officer)