

EMAKHAZENI LOCAL MUNICIPALITY

P.O. Box 17
BELFAST
1100

CERTIFICATE OF CHEMICAL ANALYSIS

Attention: **MARIANNE JOUBERT**

Date received : 11 March 2019

Date reported : 18 March 2019

Quantity Analyzed : 3

Our Ref : ELM / 31 - 33 / B / 03 / 19

Lab No:

B 31

Analysis Results mg/l	LPM METHOD	SANS Standards -241 - 1: 2015 Ed 2 Domestic Water	EBF 2/3/19
		Standard Limits	Belfast Waterworks Inlet
Total Dissolved Solids	LPM 2	≤ 1 200	142
Suspended Solids	LPM 1		4,0
Nitrate & Nitrite as N	LPM 76		0,11
Nitrate NO ₃ as N	LPM 76	≤ 11	0,11
Nitrite NO ₂ as N	LPM 76	≤ 0.9	<0.1
Chlorides as Cl	LPM 76	≤ 300	34,6
Total Alkalinity as CaCO ₃	LPM 11/81		68
Fluoride as F	LPM 76	≤ 1.5	<0.20
Sulphate as SO ₄	LPM 76	Acute Health ≤ 500 - Aesthetic ≤ 250	19,7
Total Hardness as CaCO ₃	LPM 85		68
Calcium Hardness as CaCO ₃	LPM 85		29
Magnesium Hardness as CaCO ₃	LPM 85		39
Calcium as Ca	LPM 15		11,6
Magnesium as Mg	LPM 15		9,47
Sodium as Na	LPM 15	≤ 200	23,8
Potassium as K	LPM 15		4,46
Iron as Fe	LPM 15/67	Chronic Health ≤ 2.0 - Aesthetic ≤ 0.3	0,02
Manganese as Mn	LPM 15/67	Chronic Health ≤ 0.4 - Aesthetic ≤ 0.1	<0.01
Conductivity at 25° C (mS/m)	LPM 51/82	≤ 170	27,6
pH-Value at 25° C (pH Units)	LPM 51/82	≥ 5.0 to ≤ 9.7	7,31
pHs by 21° Celsius	LPM 85		8,44
Langelier Saturation Index	LPM 85		-1.13
Turbidity as N.T.U.	LPM 23/82	Operational ≤ 1.0 - Aesthetic ≤ 5.0	4,21
Free Residual Chlorine Cl ₂ *	LPM 84		<0.1
Aluminium as Al	LPM 15/67	≤ 0.30	0,01

All heavy metal analyses have been performed on filtered samples.

Tests marked with an asterisk * are not SANAS accredited

These results are related only to the items tested

These results must be read in conjunction 'with the Uncertainty of Measurement' list as provided by Regen Waters Laboratory

VALUES HIGHLIGHTED IN GREY ARE NOT WITHIN THE SANS 241 - 1 : 2015 LIMITS AS SPECIFIED

QUALITY CONTROL CHECKS

Cation Balance	2,51
Anion Balance	2,75
% Difference	-4,6
Measured TDS	142
Calculated TDS	146
Limits > 1.0 - <1.2	1,0
Calcul TDS / E.C. (0.55 - 0.70)	0,5

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P.L.G. UYS / A.KOHR
Technical Signatory