

**EMAKHAZENI LOCAL MUNICIPALITY**

 P.O. Box 17  
 BELFAST  
 1100

**CERTIFICATE OF CHEMICAL ANALYSIS**

 Attention: **MARIANNE JOUBERT**

Date received : 20 August 2018

Date reported : 23 August 2018

Quantity Analyzed : 1

Our Ref : ELM / 16 / H / 08 / 18

Lab No:

H 16

Analysis Results mg/l	LPM METHOD	SANS Standards -241 - 1: 2015 Ed 2 Domestic Water	BF4/8/18
		Standard Limits	Belfast Waterworks Final
Total Dissolved Solids	LPM 2	≤ 1 200	194
Suspended Solids	LPM 1		1,2
Nitrate & Nitrite as N	LPM 32/76		0,10
Nitrate NO <sub>3</sub> as N	LPM 32/76	≤ 11	0,10
Nitrite NO <sub>2</sub> as N	LPM 32/76	≤ 0.9	<0.1
Chlorides as Cl	LPM 30/76	≤ 300	53,0
Total Alkalinity as CaCO <sub>3</sub>	LPM 11/81		67
Fluoride as F	LPM 27/76	≤ 1.5	0,20
Sulphate as SO <sub>4</sub>	LPM 28/76	Acute Health ≤ 500 - Aesthetic ≤ 250	28,1
Total Hardness as CaCO <sub>3</sub>	LPM 85		78
Calcium Hardness as CaCO <sub>3</sub>	LPM 85		35
Magnesium Hardness as CaCO <sub>3</sub>	LPM 85		42
Calcium as Ca	LPM 15		14,1
Magnesium as Mg	LPM 15		10,3
Sodium as Na	LPM 15	≤ 200	32,9
Potassium as K	LPM 15		5,13
Iron as Fe	LPM 15	Chronic Health ≤ 2.0 - Aesthetic ≤ 0.3	0,07
Manganese as Mn	LPM 15	Chronic Health ≤ 0.4 - Aesthetic ≤ 0.1	0,02
Conductivity at 25° C in mS/m	LPM 51/82	≤ 170	38,6
pH-Value at 25 ° C	LPM 51/82	≥ 5.0 to ≤ 9.7	7,81
pHs by 21° Celsius	LPM 85		8,39
Langelier Saturation Index	LPM 85		-0.58
Turbidity as N.T.U.	LPM 23/82	Operational ≤ 1.0 - Aesthetic ≤ 5.0	3,93
Free Residual Chlorine Cl <sub>2</sub> *	LPM 84		<0.1
Aluminium as Al	LPM 15	≤ 0.30	0,13

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

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

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

Cation Balance	3,13
Anion Balance	3,44
% Difference	-4,7
Measured TDS	194
Calculated TDS	185
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 (M.D.)  
 Technical Signatory