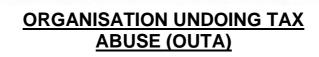




LEADERS IN ENVIRONMENTAL MONITORING







BATCH 77645 - NOVEMBER WEEK 1

HAMAANSKRAAL

WATER QUALITY REPORT





leaders in enuironmental monitoring

address: 89 Regency drive, R21 Corporate Park, Centurion postal: P.O. Box 905008, Garsfontein, 0042 web: www.aquatico.co.za office: 012 450 3800 • fax: 012 450 3851

10TH FLOOR OKEEFFE AND SWARTZ BUILDING 318 OAK AVENUE

ATTENTION: ORGANISATION UNDOING TAX ABUSE 18 NOVEMBER 2019

CONCISE WATER QUALITY EVALUATION (TEST REPORT 77645)

WATER QUALITY RESULTS

A water sample was submitted to Aquatico Laboratories on **12 November 2019** for testing the quality for intended use as domestic water. The water quality test results are displayed on the attached Test Report. Water quality is compared to the SANS 241-1:2015 Drinking Water Standard (SABS, 2015).

Table 1. Sampling Register

SAMPLING REGISTER: WEEKLY	(
PROJECT NAME: Ha				anskraal Potable water				
SAMPLER NAME: Er				Emmanuel Mathebula				
Hammanskraal Potable w ater								
Locality	Description	Coord	rdinates Sample Time		Status	Remarks	Lab no	
		Latitude	Longitude	Sample fille	Status	Reliaiks	Labilio	
Monitoring Localities								
Hammanskraal Tshw ane Water	Tshw ane Water supply in Hammanskraal	S25.40363	E28.28801	2019-11-11 11:24	Yes	CLEAR - WARD 75	60620	

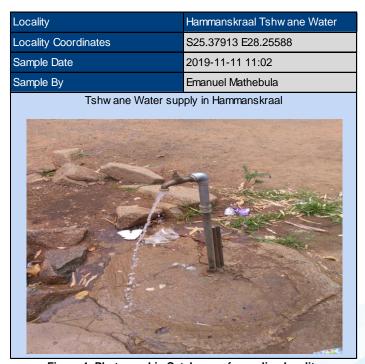


Figure 1. Photographic Catalogue of sampling locality





DATA TABLE						
CLIENT NAME	Organisation Undoing Tax Abuse	DATE COMPILED	2019-11-18			
ASSESSMENT SET	SANS 241-1:2015 Drinking Water Standard (SABS, 2015)	COMPILED BY	lan Belford			

*Value exceeds the assessment set

				value exceeds the assessment set	
VARIABLE	UNITS	ASSESSMENT SET	SAMPLE NAME : Hammanskraal Tshwane Water	POSSIBLE HEALTH EFFECTS	
pH @ 25°C	рН	Range 5.0 - 9.7	8.42	No health effects	
Electrical conductivity (EC) @ 25°C	mS/m	170	87.2	Insignificant effect on sensitive users	
Total Dissolved solids @ 180°C	mg/l	1200	440		
Chloride (CI)	mg/l	300	78.6	No health effects	
Sulphate (SO ₄)	mg/l	500	41.7	No effects	
Nitrate (NO ₃) as N	mg/l	11	3.16	Negligible effects	
Nitrite (NO ₂) as N	mg/l	0.9	0.209		
Ammonium (NH ₄) as N	mg/l	-	14.8		
Ammonia (NH ₃) as N	mg/l	1.5	1.62		
Fluoride (F)	mg/l	1.5	<0.466		
Acid Soluble Sodium (Na)	mg/l	-	91.6	Negligible effects	
Acid Soluble Aluminium (AI)	mg/l	0.3	0.063		
Acid Soluble Iron (Fe)	mg/l	0.3	0.072	No effects	
Acid Soluble Manganese (Mn)	mg/l	0.1	0.141	Insignificant effects	
Acid Soluble Chromium (Cr)	mg/l	0.05	<0.007		
Acid Soluble Copper (Cu)	mg/l	2	0.009	No health effects	
Acid Soluble Nickel (Ni)	mg/l	0.07	<0.005		
Acid Soluble Zinc (Zn)	mg/l	5	0.016	No effects	
Acid Soluble Cadmium (Cd)	mg/l	0.003	<0.005		
E.coli	CFU/100ml	0	0		
Total coliform	CFU/100ml	10	0		
TotalViableCount	CFU/ml	1000	1940		
Turbidity	NTU	1	2.48	Possibility of secondary health effects	
Free chlorine (Cl ₂)	mg/l	5	<0.1		
Total organic carbon (TOC)	mg/l	10	10.3		
Temperature	°C	-	23.2		
Total oxidised nitrogen	mg/l	-	3.37		
Monochloramine	mg/l	3	4.41		

The water quality of the sample called 'Hammanskraal Tshwane Water' can be described as neutral (pH 6.0 - 8.5), non-saline (TDS < 450 mg/l) and moderately hard (total hardness 150 - 200 CaCO₃) with no E.coli and no total coliforms detected.

Compliance with the 'SANS 241-1:2015 Drinking Water Standard (SABS, 2015)' guidelines is as follows:

Chronic health Risk: TOC 10.3 mg/l (> 10.0 mg/l), Monochloramine 4.41 mg/l (> 3.00 mg/l)

Acute health Risk: All compliant

Operational (non-health): TVC Spiral 1940 CFU/ml (> 1000 CFU/ml), Turbidity 2.48 NTU (> 1.00

NTU)

Aesthetic (non-health): NH₃ 1.62 mg/l (> 1.5 mg/l) ASM Mn 0.141 mg/l (> 0.100 mg/l)

In terms of the classification system of the 'Quality of Domestic water supplies' (WRC,1998) the quality is classified as follows:

Drinking: Class 2 - Marginal due to Turbidity

Bathing: Class 1 - Good Washing: Class 1 - Good

Food Preparation: Class 2 - Marginal due to Turbidity

Aesthetic: Class 2 - Marginal due to ASM Mn, Turbidity

Based on the assessment of variables analysed in comparison to 'SANS 241-1:2015 Drinking Water Standard (SABS, 2015)' and 'Quality of Domestic water supplies' (WRC, 1998), the tested water sample is **Not Fit** for use as potable water and domestic use.

Treatment for intended use: Optional, Recommended, Essential

Variables requiring treatment: Turbidity, NH₃, ASM Mn, TVC Spiral, TOC, Monochloramine

Please contact us for any further enquiries Electronically generated report Ian Belford







Test Report Page 1 of 2

Client: Organisation Undoing Tax Abuse

Address: 10th Floor, Okeeffe and Swartz Building, 318 Oak Avenue, Ferndale, Randburg

Report no: 77645

Project: Hammanskraal Potable water

Date of certificate: 18 November 2019
 Date accepted: 12 November 2019
 Date completed: 18 November 2019
 Date received: 11 November 2019

Lab no:					
Date sampled:					
Aquatico sampled:					
Sample type:			Water		
Locality description: Analyses					
	Unit	Method			
A pH @ 25°C	рН	ALM 20	8.42		
A Electrical conductivity (EC) @ 25°C	mS/m	ALM 20	87.2		
A Total Dissolved solids @ 180°C	mg/l	ALM 24	440		
A Chloride (CI)	mg/l	ALM 02	78.6		
A Sulphate (SO ₄)	mg/l	ALM 03	41.7		
A Nitrate (NO₃) as N	mg/l	ALM 06	3.16		
A Nitrite (NO ₂) as N	mg/l	ALM 07	0.209		
A Ammonium (NH ₄) as N	mg/l	ALM 05	14.8		
N Ammonia (NH₃) as N	mg/l	ALM 26	1.62		
A Fluoride (F)	mg/l	ALM 08	0.400		
A Acid Soluble Sodium (Na)	mg/l	ALM 30	91.6		
A Acid Soluble Aluminium (AI)	mg/l	ALM 31	0.063		
A Acid Soluble Iron (Fe)	mg/l	ALM 31	0.072		
A Acid Soluble Manganese (Mn)	mg/l	ALM 31	0.141		
A Acid Soluble Chromium (Cr)	mg/l	ALM 31	<0.003		
A Acid Soluble Copper (Cu)	mg/l	ALM 31	0.009		
A Acid Soluble Nickel (Ni)	mg/l	ALM 31	<0.002		
A Acid Soluble Zinc (Zn)	mg/l	ALM 31	0.016		
A Acid Soluble Cadmium (Cd)	mg/l	ALM 31	<0.002		
A E.coli	CFU/100ml	ALM 40	<1		
A Total coliform	CFU/100ml	ALM 40	<1		
A TotalViableCount	CFU/ml	ALM 43	1940		
A Turbidity	NTU	ALM 21	2.48		
N Free chlorine (Cl ₂)	mg/l	ALM 23	<0.10		
A Total organic carbon (TOC)	mg/l	ALM 63	10.3		
N Temperature	°C	ALM 20	23.2		
N Total oxidised nitrogen	mg/l	ALM 26	3.37		
N Monochloramine	mg/l	ALM 67	4.41		

A = Accredited N = Non accredited Out = Outsourced Sub = Sub-contracted NR = Not requested RTF = Results to follow NATD = Not able to determine ATR = Alternative test report; The results relates only to the test item tested; Results reported against the limit of detection; Results marked 'Non SANAS Accredited' in this report are not included in the SANAS Schedule of Accreditation for this laboratory; Uncertainty of measurement available on request for all methods included in the SANAS Schedule of Accreditation; The report shall not be reproduced except in full without approval of the laboratory







Test Report Page 2 of 2

Client: Organisation Undoing Tax Abuse

Address: 10th Floor, Okeeffe and Swartz Building, 318 Oak Avenue, Ferndale, Randburg

Report no: 77645

Project: Hammanskraal Potable water

Date of certificate: 18 November 2019

Date accepted: 12 November 2019

Date completed: 18 November 2019 **Date received:** 11 November 2019

		60620	
		11-Nov-19	
		Yes	
		Water	
Locality description: Analyses			
Unit	Method		
ratio	ALM 26	<1.0	

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