

WATER QUALITY TEST RESULTS – MOPANI DISTRICT MUNICIPALITY

1. Siyandane

A. Chemical Test results

Results

Parameter	Unit	Method ID	SANS 2411:2015 Limits	Sample ID
				Siyandani Village (2021/05/439)
pH @ 25°C	pH value	CH01	≥5 - ≤9.7	7.32
Conductivity	mS/m	CH02	≤170	354.00
Total Dissolved Solids	* mg/l	CH02	≤1200	2301.00
Turbidity	NTU	CH03	< 1	2.42
Total Alkalinity	mg/l	CH04	-	535.00
Fluoride as F	mg/l	CH017	≤ 1.5	0.93
Sulphate as SO ₄	mg/l	CH017	≤ 500	109.31
Nitrate as N	mg/l	CH017	≤ 11	12.06
Chloride as Cl	mg/l	CH017	≤ 300	114.01
Nitrite as N	* mg/l	CH016	≤ 0.9	0.16
Ammonia as N	mg/l	CH09	≤ 1.5	0.14
Total Hardness	* mg/l	CH05	-	864.25
Calcium Hardness	* mg/l	CH06	-	227.60
Magnesium hardness	* mg/l	CH07	-	636.64
Potassium as K	* mg/l	CH013	-	22.10
Calcium as Ca	* mg/l	CH06	-	91.04
Magnesium as Mg	* mg/l	CH07	-	155.28
Sodium as Na	* mg/l	CH013	≤200	368.12
Zinc as Zn	* mg/l	CH013	≤ 5	0.04
Iron as Fe	* mg/l	CH013	≤ 2	ND
Manganese as Mn	* mg/l	CH013	≤ 0.4	0.12
Copper as Cu	* mg/l	CH013	≤ 2	ND

Key:

ND: Not detected

* Not accredited

B. Microbiology Test results

Parameter	Unit	Method ID	SANS 241-1:2015 Limits	Sample ID
				Siyandani Village (2021/05/438)
E coli	Count/100ml	MI01	Not detected	23
Total coliform	Count/100ml	MI01	≤10	65
Heterotrophic plate count	* Count/1ml	MI03	≤1000	>200

Key:

ND: Not detected

* Not accredited

2. Mninginisi and Mahlathi

A. Chemical Test results

Results

Parameter	Unit	Method ID	SANS 2411:2015 Limits	Sample ID	Sample ID
				Mninginisi Block 3 (2021/05/405/1)	Mahlathi Village (2021/05/405/2)
pH @ 25°C	pH value	CH01	≥5 - ≤9.7	6.32	6.91
Conductivity	mS/m	CH02	≤170	304.00	313.00
Total Dissolved Solids *	mg/l	CH02	≤1200	1976.00	2034.50
Turbidity	NTU	CH03	≤ 1	0.44	0.62
Total Alkalinity	mg/l	CH04	-	445.00	680.00
Fluoride as F	mg/l	CH017	≤ 1.5	0.44	ND
Sulphate as SO ₄	mg/l	CH017	≤ 500	41.91	31.59
Nitrate as N	mg/l	CH017	≤ 11	30.43	15.75
Chloride as Cl	mg/l	CH017	≤ 300	583.99	026.05
Nitrite as N *	mg/l	CH016	≤ 0.9	0.05	0.01
Ammonia as N	mg/l	CH09	≤ 1.5	0.03	0.06
Total Hardness *	mg/l	CH05	-	1039.39	1212.87
Calcium Hardness *	mg/l	CH06	-	454.03	157.45
Magnesium hardness *	mg/l	CH07	-	585.36	1055.42
Potassium as K *	mg/l	CH013	-	9.65	6.62
Calcium as Ca *	mg/l	CH06	-	181.61	62.98
Magnesium as Mg *	mg/l	CH07	-	142.77	257.42
Sodium as Na *	mg/l	CH013	≤200	211.84	188.99
Zinc as Zn *	mg/l	CH013	≤ 5	0.12	0.04
Iron as Fe *	mg/l	CH013	≤ 2	ND	ND
Manganese as Mn *	mg/l	CH013	≤ 0.4	ND	0.02
Copper as Cu *	mg/l	CH013	≤ 2	ND	ND

B. Microbiology Test results

Parameter	Unit	Method ID	SANS 241-1:2015 Limits	Sample ID	Sample ID
				Mninginisi Block 3 (2021/05/404/1)	Mahlathi Village (2021/05/404/2)
E.coli	Count/100ml	MI01	Not detected	ND	ND
Total coliform	Count/100ml	MI01	≤10	8	ND
Heterotrophic plate count *	Count/1ml	MI03	≤1000	>200	155

3. Mavalani

Chemical Test results

Parameter		Unit	Method ID	Sample ID
				Mavalani (2021/02/193)
pH @ 25°C		pH value	CH01	6.67
Conductivity		mS/m	CH02	196.10
Total Dissolved Solids	*	mg/l	CH02	1274.65
Turbidity		NTU	CH03	15.40
Total Alkalinity		mg/l	CH04	545.00
Fluoride as F		mg/l	CH017	0.48
Sulphate as SO ₄		mg/l	CH017	20.79
Nitrate as N		mg/l	CH017	6.62
Chloride as Cl		mg/l	CH017	315.44
Nitrite as N		mg/l	CH016	0.02
Ammonia as N		mg/l	CH09	0.15
Total Hardness	*	mg/l	CH05	610.22
Calcium Hardness	*	mg/l	CH06	236.30
Magnesium hardness	*	mg/l	CH07	373.92
Calcium as Ca	*	mg/l	CH06	94.52
Magnesium as Mg	*	mg/l	CH07	91.20
Potassium as K	*	mg/l	CH013	6.91
Sodium as Na	*	mg/l	CH013	177.62
Zinc as Zn	*	mg/l	CH013	0.24
Iron as Fe	*	mg/l	CH013	ND
Manganese as Mn	*	mg/l	CH013	ND
Copper as Cu	*	mg/l	CH013	ND

Microbiology test results

Parameter		Unit	Method ID	Sample ID
				Mavalani (2021/02/192)
E.coli		Count/100ml	MI01	21
Total coliform		Count/100ml	MI01	>200
Heterotrophic plate count	*	Count/1ml	MI03	25

4. Jimmy Nghalalumi

A. Chemistry Test results

Parameter		Unit	Method ID	Sample ID
				Jim Nghalalume (2021/02/191)
pH @ 25°C		pH value	CH01	7.19
Conductivity		mS/m	CH02	149.20
Total Dissolved Solids	*	mg/l	CH02	969.80
Turbidity		NTU	CH03	4.96
Total Alkalinity		mg/l	CH04	505.00
Fluoride as F		mg/l	CH017	0.11
Sulphate as SO ₄		mg/l	CH017	8.49
Nitrate as N		mg/l	CH017	5.69
Chloride as Cl		mg/l	CH017	151.41
Nitrite as N		mg/l	CH016	0.01
Ammonia as N		mg/l	CH09	ND
Total Hardness	*	mg/l	CH05	591.40
Calcium Hardness	*	mg/l	CH06	154.20
Magnesium hardness	*	mg/l	CH07	437.20
Calcium as Ca	*	mg/l	CH06	61.68
Magnesium as Mg	*	mg/l	CH07	106.63
Potassium as K	*	mg/l	CH013	9.84
Sodium as Na	*	mg/l	CH013	95.76
Zinc as Zn	*	mg/l	CH013	0.06
Iron as Fe	*	mg/l	CH013	ND
Manganese as Mn	*	mg/l	CH013	ND
Copper as Cu	*	mg/l	CH013	0.72

B. Microbiology test results

Parameter		Unit	Method ID	Sample ID
				Jim Nghalalume (2021/02/190)
E.coli		Count/100ml	MI01	ND
Total coliform		Count/100ml	MI01	>200
Heterotrophic plate count	*	Count/1ml	MI03	170