



CK. 89/14418/23  
**REGEN WATERS**  
 LABORATORY • LABORATORIUM

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 WITBANK 1035  
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### MICROBIOLOGICAL ANALYSIS TEST REPORT

Sample From:

**Nkangala District Municipality  
 Municipal Health Services  
 Emakhazeni Town Council**

Address: **Posbus 437  
 Walter Sisulu  
 Middelburg  
 1050**

Date Received:

6-Sep-18

Date Analyzed:

6-Sep-18

Date Reported:

8-Sep-18

Quantity Analyzed:

22

Ref No: I 344 - 365 / 18 B

LAB REF ID	LAB NO	SAMPLE NAME	STERILIZED BOTTLE		STANDARD LIMITS				
					≤ 10		Nil	Nil	≤ 1000
					TOTAL COLIFORM BACTERIA PER / 100ML		FAECAL COLIFORM PER / 100 ML	ESCHERISCHIA COLIFORM PER 100 ML	HETEROTROPHIC PLATE COUNT PER 1.0 ML
			YES	NO	A / B				
<b>DULLSTROOM</b>									
D	I 344	DS19/9/18: Dullstroom Waterworks Final	X		Nil	B	Nil	Nil	8
D	I 345	DS20/9/18: Sakhelwe Clinic	X		Nil	B	Nil	Nil	6
D	I 346	DS21/9/18: Cosmo General Dealer	X		Nil	B	Nil	Nil	10
D	I 347	DS22/9/18: Sakhelwe Creche'	X		Nil	B	Nil	Nil	26
D	I 348	DS23/9/18: La Bamba Centre	X		Nil	B	Nil	Nil	17
D	I 349	DS24/9/18: Municipal Offices	X		Nil	B	Nil	Nil	9
D	I 350	DS25/9/18: SA Epilepsy Centre	X		Nil	B	Nil	Nil	19
D	I 351	DS26/9/18: Sakhelwe Reservoir	X		Nil	B	Nil	Nil	10
D	I 352	DS27/9/18: Dullstroom Reservoir	X		Nil	B	Nil	Nil	26
METHOD USED					A - SANAS 5221 OR B - COLILERT (MPN)		SANS 5221	COLILERT (MPN)	SANS 5221

#### S.A.N.S. 241-1:2015 MICROBIOLOGICAL REQUIREMENTS Allowable compliance for DRINKING WATER

Determinant	Risk	Unit	Standard limits
Escherichia Coliform / or Faecal Coliform bacteria	Acute Health - 1	Count per 100 ml	Not Detected
Heterotrophic Plate Count	Operational	Count per 1 ml	≤ 1 000
Total Coliform Bacteria	Operational	Count per 100 ml	≤ 10

Results exceeding alert levels will require immediate remedial action and follow-up sampling.

#### EFFLUENT WATER

Regional Standard (Department Water Affairs and Forestry) of 26 March 2004 No.399 for Waste water species : Waste water or Effluent shall not contain more than 1000 Faecal Coliform per 100 ml.

These results relate only to samples tested.

Opinions and interpretations expressed herein are outside the scope of SANAS accreditation.

# - Samples highlighted in grey are not within the limits as specified.

#### REMARKS:

- a.) Samples DS20/9/18: Sakhelwe Clinic, DS21/9/18: Cosmo General Dealer, DS22/9/18: Sakhelwe Creche', DS23/9/18: La Bamba Centre, DS24/9/18: Municipal Offices, DS25/9/18: SA Epilepsy Centre, DS26/9/18: Sakhelwe Reservoir, DS27/9/18: Dullstroom Reservoir complies with the SANS 241:2015 microbiological drinking water standard for the tested parameters. The water is bacteriologically suitable for domestic use.

P.L.G UYS (M.D.)  
 Technical Signatory

SANS  
 241-1  
 Edition 2  
 2015



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Quantity Analyzed: 22

Ref No: I 344 - 365 / 18 B

LAB REF ID	LAB NO	SAMPLE NAME	STERILIZED BOTTLE		STANDARD LIMITS				
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					TOTAL COLIFORM BACTERIA PER / 100ML	FAECAL COLIFORM PER / 100 ML	ESCHERISCHIA COLIFORM PER 100 ML	HETEROTROPHIC PLATE COUNT PER 1.0 ML	
		<b>WATERVALBOVEN</b>	YES	NO		A / B			
D	I 353	WB19/9/18: Stand P118 (602)	X		16	B	Nil	Nil	12
D	I 354	WB20/9/18: Khayalami Service Centre	X		Nil	B	Nil	Nil	21
D	I 355	WB23/9/18: Technical Workshop	X		Nil	B	Nil	Nil	16
D	I 356	WB25/9/18: Watervalboven Reservoir	X		Nil	B	Nil	Nil	30
METHOD USED					A- SANAS 5221 OR B - COLILERT (MPN)	SANS 5221	COLILERT (MPN)	SANS 5221	

#### S.A.N.S. 241-1:2015 MICROBIOLOGICAL REQUIREMENTS Allowable compliance for *DRINKING WATER*

Determinant	Risk	Unit	Standard limits
Escherichia Coliform / or Faecal Coliform bacteria	Acute Health - 1	Count per 100 ml	Not Detected
Heterotrophic Plate Count	Operational	Count per 1 ml	≤ 1 000
Total Coliform Bacteria	Operational	Count per 100 ml	≤ 10

Results exceeding alert levels will require immediate remedial action and follow-up sampling.

#### EFFLUENT WATER

Regional Standard (Department Water Affairs and Forestry) of 26 March 2004 No.399 for Waste water specifies : Waste water or Effluent shall not contain more than 1000 Faecal Coliform per 100 ml.

These results relate only to samples tested.

Opinions and interpretations expressed herein are outside the scope of SANAS accreditation.

# - Samples highlighted in grey are not within the limits as specified.

#### REMARKS:

- a.) Samples WB20/9/18: Khayalami Service Centre, WB23/9/18: Technical Workshop, WB25/9/18: Watervalboven Reservoir complies with the SANS 241:2015 microbiological drinking water standard for the tested parameters. The water is bacteriologically suitable for domestic use.
- b.) Sample WB19/9/18: Stand P118 (602) has a Total Coliform count not within the SANS 241:2015 limit. These bacteria are not pathogenic (disease forming) but it is advised to chlorinate the water for total disinfection.

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**MICROBIOLOGICAL ANALYSIS  
 TEST REPORT**

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**Address: Posbus 437  
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					≤ 10	Nil	Nil	≤ 1000		
					TOTAL COLIFORM BACTERIA PER / 100ML	FAECAL COLIFORM PER / 100 ML	ESCHERICHIA COLIFORM PER 100 ML	HETEROTROPHIC PLATE COUNT PER 1.0 ML		
		<b>MACHADODORP</b>	YES	NO		A / B				
D	I 357	MH23/9/18: Machado Waterworks Final	X		Nil	B	Nil	Nil	17	
D	I 358	MH24/9/18: Emthonjeni Clinic	X		Nil	B	Nil	Nil	23	
D	I 359	MH25/9/18: TPA Offices	X		Nil	B	Nil	Nil	21	
D	I 360	MH26/9/18: Stand 1485	X		Nil	B	Nil	Nil	17	
D	I 361	MH27/9/18: Machado Clinic	X		Nil	B	Nil	Nil	360	
D	I 362	MH28/9/18: Highway Nissan Garage	X		Nil	B	Nil	Nil	91	
D	I 363	MH29/9/18: The Hog Pub	X		Nil	B	Nil	Nil	11	
D	I 364	MH30/9/18: Cement Reservoir	X		9	B	8	7	21	
D	I 365	MH31/9/18: Steeltank	X		8	B	7	5	19	
METHOD USED					A- SANAS 5221 OR B - COLILERT (MPN)		SANS 5221	COLILERT (MPN)	SANS 5221	

**S.A.N.S. 241-1:2015 MICROBIOLOGICAL REQUIREMENTS**  
 Allowable compliance for **DRINKING WATER**

Determinant	Risk	Unit	Standard limits
Escherichia Coliform / or Faecal Coliform bacteria	Acute Health - 1	Count per 100 ml	Not Detected
Heterotrophic Plate Count	Operational	Count per 1 ml	≤ 1 000
Total Coliform Bacteria	Operational	Count per 100 ml	≤ 10

Results exceeding alert levels will require immediate remedial action and follow-up sampling.

**EFFLUENT WATER**

Regional Standard (Department Water Affairs and Forestry) of 26 March 2004 No.399 for Waste water species : Waste water or Effluent shall not contain more than 1000 Faecal Coliform per 100 ml.

These results relate only to samples tested.

Opinions and interpretations expressed herein are outside the scope of SANAS accreditation.

# - Samples highlighted in grey are not within the limits as specified.

## REMARKS:

- a.) Samples MH23/9/18: Machado Waterworks Final, MH24/9/18: Emthonjeni Clinic, MH25/9/18: TPA Offices, MH26/9/18: Stand 1485, MH27/9/18: Machado Clinic, MH28/9/18: Highway Nissan Garage, MH29/9/18: The Hog Pub complies with the SANS 241:2015 microbiological drinking water standard for the tested parameters. The water is bacteriologically suitable for domestic use.
- b.) Samples MH30/9/18: Cement Reservoir and MH31/9/18: Steeltank tested positive for Faecal coliform. These bacteria are pathogenic (disease forming) in nature and the water is not safe for human consumption. It is recommended to investigate the source of contamination and chlorinate the water for total disinfection. **DO NOT DRINK THIS WATER.**
- c.) Samples MH30/9/18: Cement Reservoir and MH31/9/18: Steeltank does not comply with the limit for E.coli in drinking water as set out in the SANS 241:2015 standard. These bacteria are pathogenic (disease forming) in nature and the water is not safe for human consumption. It is recommended to investigate the source of contamination and chlorinate the water for total disinfection. **DO NOT DRINK THIS WATER.**

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