A.L. ABBOTT AND ASSOCIATES (PTY) LTD

(Reg. No. 1982/004379/07)

Consulting Analytical & Industrial Chemists Specialists in Water & Waste Water Treatment Telephone (021)448 6340/1 After Hours (0833263887) Telefax (021)448 6342 e-Mail Address : info@alabbott.co.za



Doc.No. 5.10/1 Rev.4

No. 1, Vine Park Vine Road 7925 P.O. Box 483 WOODSTOCK, CAPE 7915

T0276 Certificate of Analysis

WITZENBERG MUNICIPALITY : BID 08/2/12/30&32

Witzenberg Municipality Reticulation Waters

1: Reservoir, Final, Post-Chlorination ex Ceres

DATE SAMPLED : 2019/02/06 DATE RECEIVED : 2019/02/07 DATE ANALYSIS 2019/02/07 COMMENCED : 2019/02/07

OUR REF.: 2019/02/06/3513

REPORT NO .: 722

	Sample Number	3513	
Mthd ALA No.	Analyses	Results	SANS 241-1:2015
19	pH (at 25 °C)	5.31	≥5 - ≤ 9.7 Operational
9	Conductivity (mS/m) (at 25 °C)	5.5	≤170 Aesthetic
27	Turbidity (NTU)	0.38	≤1 Operational : ≤5 Aesthetic
97	Colour (mg/l as Pt)	5	≤15 Aesthetic
98	Fluoride (mg/l as F)	<0.10	≤1.5 Chronic Health
7	Total Dissolved Solids (mg/l)	29	≤1200 Aesthetic
96	Chloride (mg/l as Cl)	6.7	≤300 Aesthetic
99	Nitrite Nitrogen (mg/l as N)	<0.20	≤0.9 Acute Health
95	Ammonia Nitrogen (mg/l as N)	<0.10	≤1.5 Aesthetic
100	Nitrate & Nitrite Nitrogen (mg/l as N)	0.45	≤12 Acute Health
92	Manganese (µg/l as Mn)	<19	≤100 Aesthetic ≤400 Chronic Health
92	Copper (µg/l as Cu)	18	≤2000 Chronic Health
92	Aluminium (µg/l as Al)	51	≤300 Operational
66	Free Chlorine (mg/l)	0.70	≤5 Chronic Health
66	Total Chlorine (mg/l)	1.7	N/A
85	Total Coliform Bacteria (count per 100 ml)	<1	≤10 Operational
84	E.coli (count per 100 ml)	<1	Not Detected
88	Heterotrophic Plate Count (count per ml)	1	≤1000 Operational
105	Total Organic Carbon (mg/l as C)	0.50	≤10 Chronic Health
N/A	Combined Trihalomethanes (µg/l)	0.45	≤1.0
92	Iron (µg/l as Fe)	88	≤300 Aesthetic ≤2000 Chronic Health

Sampler: V. Opperman (ALA)

Refer to attached Appendix 1 : Indicating * Tests marked "SANAS Accredited", Tests Methods and Detection Limits. This report relates only to the samples tested and is issued subject to the company's standard terms and conditions of business.

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REPORT NO .: 722

	Sample Number	3513	
Mthd ALA No.	Analyses	Results	SANS 241-1:2015
N/A	Trihalomethane (Bromodichloromethane) (µg/l)	<10.0	≤60 Chronic Health
N/A	Trihalomethane (Bromoform) (μg/l)	<10.0	≤100 Chronic Health
N/A	Trihalomethane (Chloroform) (μg/l)	24.5	≤300 Chronic Health
N/A	Trihalomethane (Dibromochloromethane) (µg/l)	<10.0	≤100 Chronic Health
N/A	Combined Nitrate plus Nitrite (mg/l as N)	0.24	≤1.0
Calc	Nitrate Nitrogen (mg/l as N)	0.25	≤11 Acute Health

JOSE DA SILVA (Cert.Sci.Nat.) TECHNICAL MANAGER 11 February 2019

TO: WITZENBERG MUNICPALITY P O Box 44 CERES 6835

Att: S. FARMER

Sampler : V. Opperman (ALA)

Refer to attached Appendix 1 : Indicating * Tests marked "SANAS Accredited", Tests Methods and Detection Limits. This report relates only to the samples tested and is issued subject to the company's standard terms and conditions of business.