## 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 (083-3263887) Telefax (021)448 6342 e-Mail Address : info@alabbott.co.za



Doc.No. 7.8 # 1 Rev.0

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

# To276 Certificate of Analysis

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

**Witzenberg Municipality Reticulation Waters** 

1: Reservoir, Final, Post-Chlorination ex Ceres

DATE SAMPLED: 2019/09/04 REVISED

<u>DATE RECEIVED :</u> 2019/09/05 <u>OUR REF. :</u> 2019/09/04/24841

DATE ANALYSIS
COMMENCED: 2019/09/05 REPORT NO.: 5017

	Sample Number	24841	
Mthd ALA No.	Analyses	Results	SANS 241-1:2015
19	pH (at 25 °C)	5.00	≥5 - ≤ 9.7 Operational
9	Conductivity (mS/m) (at 25 °C)	6.0	≤170 Aesthetic
27	Turbidity (NTU)	0.68	≤1 Operational : ≤5 Aesthetic
97	Colour (mg/l as Pt)	10	≤15 Aesthetic
7	Total Dissolved Solids (mg/l)	36	≤1200 Aesthetic
92	Zinc (mg/l as Zn)	0.005	≤5 Aesthetic
102	Sulphate (mg/l as SO4)	<1.0	≤250 Aesthetic ≤500 Acute Health
92	Sodium (mg/l as Na)	2.6	≤200 Aesthetic
94	Total Alkalinity (mg/l as CaCO3)	<11.0	N/A
96	Chloride (mg/l as Cl)	9.0	≤300 Aesthetic
95	Ammonia Nitrogen (mg/l as N)	<0.10	≤1.5 Aesthetic
99	Nitrite Nitrogen (mg/l as N)	<0.20	≤0.9 Acute Health
98	Fluoride (mg/l as F)	<0.10	≤1.5 Chronic Health
92	Iron (μg/l as Fe)	61	≤300 Aesthetic ≤2000 Chronic Health
92	Manganese (µg/l as Mn)	<19	≤100 Aesthetic ≤400 Chronic Health
92	Mercury (µg/l as Hg)	<5	≤6 Chronic Health
92	Lead (µg/l as Pb)	<7	≤10 Chronic Health
51	Cyanide (µg/l as CN-)	<20	≤200 Acute Health
92	Aluminium (µg/l as Al)	78	≤300 Operational
92	Antimony (µg/l as Sb)	<10	≤20 Chronic Health
92	Arsenic (µg/l as As)	<3	≤10 Chronic Health

Sampler: L. Coetzer (ALA)

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Mthd ALA No.	Sample Number  Analyses	24841 Results	SANS 241-1:2015
92	Copper (µg/l as Cu)	<6	≤2000 Chronic Health
92	Total Chromium (µg/l as Cr)	<7	≤50 Chronic Health
92	Selenium (µg/l as Se)	<10	≤40 Chronic Health
N/A	Total Microcystin (µg/l)	<0.15	≤1
92	Uranium (µg/l as U)	<15	≤30 Chronic Health
66	Free Chlorine (mg/l)	0.85	≤5 Chronic Health
66	Total Chlorine (mg/l)	0.93	N/A
45	Phenols (mg/l)	<0.01	≤0.01 Aesthetic
N/A	Combined Trihalomethanes (µg/l)	0.49	≤1.0
105	Total Organic Carbon (mg/l as C)	0.20	≤10 Chronic Health
92	Nickel (µg/l as Ni)	2	≤70 Chronic Health
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
N/A	Protozoan Parasites (Giardia Species) (count per 10 litres)	<1	Not Detected Acute Health
N/A	Protozoan Parasites (Cryptosporidium Species) (count per 10 litres)	<1	Not Detected Acute Health
N/A	Somatic Coliphages (count per 10 ml)	<1	Not Detected Operational
100	Nitrate & Nitrite Nitrogen (mg/l as N)	<0.20	≤12 Acute Health
N/A	Monochloramine (mg/l)	<0.05	≤3 Chronic Health
Calc	Nitrate Nitrogen (mg/l as N)	<0.20	≤11 Acute Health

Sampler: L. Coetzer (ALA)

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Mthd ALA No.	Analyses	Results	SANS 241-1:2015
N/A	Combined Nitrate plus Nitrite (mg/l as N)	0.22	≤1.0
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)	37.0	≤300 Chronic Health
N/A	Trihalomethane (Dibromochloromethane) (µg/l)	<10.0	≤100 Chronic Health
92	Barium (µg/l as Ba)	5	≤700 Chronic Health
47	Boron (mg/l as B)	<0.10	≤2.4 Chronic Health

N. VAN BINSBERGEN (Pr.Sci.Nat.) DIRECTOR 08 October 2019

TO: WITZENBERG MUNICPALITY P O Box 44 CERES 6835

Att: S. FARMER

Sampler: L. Coetzer (ALA)