

APPENDIX 1 : SPECIFIC METHODS USED FOR THE ANALYSES OF PARAMETERS INDICATED IN THIS REPORT

ALA Method No.	Parameter	Method	Limit of Detection
45	Acidity (mg/l)	STD Method 2310 B (1992)	-
94	Alkalinity (mg/l as CaCO ₃) *	Discrete Analyzer using the Gallery	11
92	Aluminium (µg/l as Al) *	Based on SANS 11885:2008 (ICP)	12
3	Ammonia (mg/l as N) *	STD Method 4500-NH ₃ :C (1992)	0.15
95	Ammonia (mg/l as N) *	Discrete Analyzer using the Gallery	0.10
92	Antimony (µg/l as Sb) *	Based on SANS 11885:2008 (ICP)	10
92	Arsenic (µg/l as As) *	Based on SANS 11885:2008 (ICP)	10
92	Barium (µg/l) *	Based on SANS 11885:2008 (ICP)	1
92	Beryllium µg/l as Be) *	Based on SANS 11885:2008 (ICP)	1
Calc	Bicarbonate (mg/l)	Calculation	-
47	Boron (mg/l as B)	Discrete Analyzer using the Gallery	0.10
N/A	Bromine (mg/l as Br)	<i>(Outsourced)</i>	1.0
92	Cadmium (µg/l as Cd) *	Based on SANS 11885:2008 (ICP)	1
92	Calcium (mg/l as Ca) *	Based on SANS 11885:2008 (ICP)	0.32
Calc	Calcium Carbonate Precipitation Potential	Calculation	0.01
Calc	Calcium Hardness	Calculation	-
2	Chemical Oxygen Demand (mg/l) *	SANS 6048 (2005)	8
25	Chloride (mg/l as Cl) *	SABS 202 (2 nd Revision)	1
96	Chloride (mg/l as Cl) *	Discrete Analyzer using the Gallery	1.0
69	Chlorine Demand (mg/l)	STD Method 2350 B (1992)	-
92	Cobalt (µg/l as Co) *	Based on SANS 11885:2008 (ICP)	14
97	Colour (mg/l as Pt) *	Discrete Analyzer using the Gallery	4
9	Conductivity (mS/m) (at 25 °C) *	STD Method 2501 A (1992)	0.10
92	Copper (µg/l as Cu) *	Based on SANS 11885:2008 (ICP)	6
5	Cyanide (µg/l as CN)	SABS 204	50
N/A	Cytopathic Viruses (count per 10 litres)	Membrane / Culture	-
105	Dissolved Organic Carbon (mg/l as C)	Hach 10128	1.0
68	Dissolved Oxygen (mg/l)	STD Method 4500 O-G	1
78	Dissolved Solids (mg/l)	STD Method 2501 A (1992)	-
84	E.coli (count per 100 ml) *	SABS 221 (2002) / Colilert	1
87	Enterococci (count per 100 ml) *	Enterolert-24 / Quanti-Tray	1
86	Faecal Coliforms (count per 100 ml) *	SABS SM 221 (2002) / Colilert	1
87	Faecal Streptococcus (count per 100 ml) *	Colilert	1
29	Fluoride (mg/l as F) *	Hach 8029	0.10
98	Fluoride (mg/l as F) *	Discrete Analyzer using the Gallery	0.10
66	Free Chlorine (mg/l)	Lovibond Method 3	0.05
88	Heterotrophic Plate Count (count per ml) *	Petrifilm™ Aqua	1
N/A	Hexavalent Chromium (mg/l)	<i>(Outsourced)</i>	1.0
46	Hydrogen Sulphide (mg/l)	Hach 8051	1.0
92	Iron (µg/l as Fe) *	Based on SANS 11885:2008 (ICP)	24
92	Lead (µg/l as Pb) *	Based on SANS 11885:2008 (ICP)	7
92	Lithium (mg/l as Li)	<i>(Outsourced)</i>	-
92	Manganese (µg/l as Mn) *	Based on SANS 11885:2008 (ICP)	19
92	Magnesium (mg/l as Mg) *	Based on SANS 11885:2008 (ICP)	1.1
Calc	Magnesium Hardness	Calculation	-
92	Mercury (µg/l as Hg)	Based on SANS 11885:2008 (ICP)	1
N/A	Monochloramine (mg/l)	Lovibond Method	-
92	Molybdenum (µg/l as Mo) *	Based on SANS 11885:2008 (ICP)	91
N/A	Microcystin (µg/l as LR)	<i>(Outsourced)</i>	-
92	Nickel (µg/l as Ni) *	Based on SANS 11885:2008 (ICP)	1
4A	Nitrate Nitrogen (mg/l as N) *	Hach 8150 (<i>Applicable to Sewage Analysis</i>)	0.20
4B	Nitrate & Nitrite Nitrogen (mg/l as N) *	Lovibond Method using Brucine (<i>Applicable to Water Analysis</i>)	0.05
100	Nitrate Nitrogen (mg/l as N) *	Discrete Analyzer using the Gallery	0.02
5	Nitrite Nitrogen (mg/l as N) *	Lovibond Method	0.08
99	Nitrite Nitrogen (mg/l as N) *	Discrete Analyzer using the Gallery	0.01
Calc	Nitrate Nitrogen (mg/l as N) *	Calculation	-
18	Oil & Grease (mg/l)	SABS 1051 (Nov. 1982)	1

ALA Method No.	Parameter	Method	Limit of Detection
76	Odour (Threshold Odour Number)	STD Method 2150 (B)	1
10	Ortho Phosphate (mg/l as P) *	Hach 8114	0.20
101	Ortho Phosphate (mg/l as P) *	Discrete Analyzer using the Gallery	0.10
1	Oxygen Absorbed (mg/l as O) *	SANS 5220 : 2005	-
N/A	Pesticides	(Outsourced)	-
19	pH (at 25 °C) – Lab *	SABS 11 : (1990 – 3 rd Revision)	2.00
19	pH (at 25 °C) – Field	SABS 11 : (1990 – 3 rd Revision)	-
52	Phenols (mg/l)	SABS 211 (1992)	0.01
92	Potassium (mg/l as K) *	Based on SANS 11885:2008 (ICP)	0.32
92	Selenium (µg/l as Se) *	Based on SANS 11885:2008 (ICP)	10
67	Settleable Solids (ml/l)	STD Method 2540 F (1992)	0.10
92	Silica (mg/l) *	Based on SANS 11885:2008 (ICP)	-
32	Sodium (mg/l as Na) *	Based on SANS 11885:2008 (ICP)	0.36
N/A	Somatic Coliphages (count per 10 ml)	(Outsourced)	-
92	Strontium (mg/l) *	Based on SANS 11885:2008 (ICP)	4
24	Sulphate (mg/l as SO ₄) *	Hach 8051	4
102	Sulphate (mg/l as SO ₄) *	Discrete Analyzer using the Gallery	1.0
46	Sulphide (mg/l as S ²⁻)	STD Method 4500-S ²⁻ D (1992)	-
92	Tin (µg/l as Sn) *	Based on SANS 11885:2008 (ICP)	10
92	Titanium (mg/l as Ti)	(Outsourced)	-
28	Total Alkalinity (mg/l as CaCO ₃)	STD Methods 2320 (1992)	1
66	Total Chlorine	Lovibond Method 3	0.05
92	Total Chromium (µg/l as Cr) *	Based on SANS 11885:2008 (ICP)	7
85	Total Coliforms Bacteria (count per 100 ml) *	SABS 221 (2002) / Colilert	-
7	Total Dissolved Solids	STD Method 2501 A (1992)	1
Calc	Total Hardness (mg/l as CaCO ₃)	Calculation	1
15	Total Kjeldahl Nitrogen (mg/l)	Hach 8075	0.15
105	Total Organic Carbon (mg/l as C)	Hach 10128	1.0
11	Total Phosphate (mg/l as P)	STD Method 4500-PB (1992) / Hach 8114	0.20
13	Total Plate Count (count per ml) *	Petrifilm™	1
N/A	Total Trihalomethanese (µg/l)	(Outsourced)	-
N/A	Trihalomethane (Chloroform)	(Outsourced)	-
N/A	Trihalomethane (Bromodichloromethane)	(Outsourced)	-
N/A	Trihalomethane (Dibromochloromethane)	(Outsourced)	-
N/A	Trihalomethane (Bromoform)	(Outsourced)	-
28	Turbidity (NTU) *	Hach 8237	0.01
6A	Suspended Solids (mg/l) *	STD Method 2540 D (1992)	4
N/A	TOX (mg/l)	(Outsourced)	-
92	Uranium (µg/l as U)	Based on SANS 11885:2008 (ICP)	-
92	Vanadium (µg/l as V) *	Based on SANS 11885:2008 (ICP)	139
17	Volatile Fatty Acids (mg/l)	STD Method 5560 C (1992)	-
68	Volatile Suspended Solids (mg/l)	STD Method 2540 E (1992)	4
92	Zinc (mg/l as Zn) *	Based on SANS 11885:2008 (ICP)	1

NOTE : *Tests marked “SANAS Accredited” in this report and are included in the SANAS Schedule of Accreditation for this laboratory. Schedule of Accreditation excludes Sampling
All bacteriological analyses carried out by Colilert Method unless otherwise indicated on the Certificate of Analysis.
Uncertainty of Measurement and Method Descriptions will be provided upon request.

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