Analytical Laboratory Services
OUR QUALITY IS IN THE DETAIL

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SAMPLE SUBMISSION FORM: WATER CHEMISTRY TESTING

Enquiries: Section Head - Water Chemistry

Customer Contact Information:	
Customer /Company Name	
Primary contact person	
Samples submitted by	
Postal Address & Town	
Tel / Mobile Number	
Email Address	
Accounts contact person	
Tel / Mobile Number	
Email Address	

FOR OFFICIAL USE

Laboratory Reference No:

Sample Condition upon Arrival at the Laboratory

Acceptance criteria:
- Cooler box temperature tolerance: 0 ˚C – 10 ˚C

Sample(s) received & inspected by

First Name_____

Signature: _____

Date: _____ Time: _____

Financial Information:

Charge to

Customer / Company (listed above) ☐

Other ☐ _____

Purchase Order No: _____

Quotation No (if any): _____

Sample container (appropriate/not appropriate)	
Cooler box temp (without CF)	
Cooler box temp (with CF)	
Thermometer number (used)	
Thermometer correction factor (CF)	

Customer Account type (tick the appropriate box)

Credit Account	☐ **Note:** Payment to be done within 30 days
Cash Customer	☐ **Note:** Payment to be done prior to testing

Sample(s) accepted (tick) ☐

Sample(s) accepted with exception (tick) ☐

Sample(s) rejected (tick) ☐

Analytical Instructions

Rush TAT requests must be approved by the laboratory. A surcharge will apply.

Standard Turn-Around-Time ☐ Rush Turn-Around-Time ☐

Test Report

- Test Report(s) will be emailed to primary contact by default
- Additional Test Report(s) will be emailed as specified below:

Excel report required ☐

Email primary contact (tick) ☐

Other email address (tick & specify below) ☐

_____

If rejected, was the customer informed (tick)

☐ Yes ☐ No

Reason for rejection:

.....

.....

.....

Additional information/instructions/known hazards (if any)

.....

.....

.....

.....

.....

.....

Transport from WB ☐

Bottles: Clients ☐ / Lab ☐

Outsourced Form signed ☐

Samples accepted with exception:

I the customer agree that the sample(s) should be tested even though not in compliance with the acceptance criteria.

Customer Signature: _____

Date: _____

Customer Authorisation (compulsory)

By signing below, you agree to Analytical Laboratory Services Terms & Conditions and authorise Analytical Laboratory Services to perform the requested tests to the best of their knowledge and in accordance with specified Test Methods.

Customer Signature: _____

Date: _____

Sample receipt stamp

Note: Complete page 1-2 and all other applicable pages to your request

SAMPLE INFORMATION					FOR OFFICIAL USE
Total Number of samples:					
No.	**Sample Description**	**Sampling Date**	**Sampling Time**	**Sample Type**	**Lab Sample No.**
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

Sample Type Abbreviation Key

Water = W Dust samples = D Salt = S Chemicals = C Instrument = I

Please specify: Water: Potable / Surface / Ground (borehole) / RO
Seawater / Brine / Process solutions
Domestic effluent: Raw sewage / Treated sewage / Final effluent
Industrial effluent: Raw / Treated

Sampling done by: _____

Signature: _____

Reference of the sampling method (if available): _____

Sampling Location/Vessel/Factory name: _____

Special Instructions (when applicable): Sample storage/Disposal, Outsourced tests, Diameter of dust bucket, **Instruction to start analysis even when the submission of the sample exceeds required holding time.**

_____

_____

_____

_____

_____

Note: Complete page 1-2 and all other applicable pages to your request

CHEMICAL TESTING OF WATER SAMPLES			
Note: The laboratory will select the test parameters on behalf of the client, when a signed quotation is attached to this request form.			
No.	**Test Parameters**	**Reference Method**	**Tick**
1.	Absorbed oxygen	WHK METH W 001 based on SANS 5220:2005	☐
2.	Acidity/Carbon Dioxide	WHK METH W 002 based on AWWA 2310 B: 24th Edition, 2023	☐
3.	Alkalinity	WHK METH W 003 based on AWWA 2320 B: 24th Edition, 2023	☐
4.	Ammonium	WHK METH W 004/048 based on AWWA 4500-NH_3 F: 24th Edition, 2023 / modified Berthelot	☐
5.	Bicarbonate & Carbonate	WHK METH W 003 based on AWWA 2320 B: 24th Edition, 2023	☐
6.	Biological oxygen demand, 5-day	WHK METH W 005 based on AWWA 5210 B: 24th Edition, 2023	☐
7.	Biological oxygen demand, carbonaceous	WHK METH W 005 based on AWWA 5210 B: 24th Edition, 2023	☐
8.	Bromide	WHK METH W 006/044 based on P. Höfer/ AWWA 4110 B: 24th Edition, 2023	☐
9.	Chloride	WHK METH W 007/044 based on AWWA 4500-Cl^- B/ AWWA 4110 B: 24th Edition, 2023	☐
10.	Chlorine, Free	WHK METH W 008 based on AWWA 4500-Cl G: 24th Edition, 2023	☐
11.	Chlorine, Total	WHK METH W 008 based on AWWA 4500-Cl G: 24th Edition, 2023	☐
12.	Chlorophyll a	WHK METH W 009 based on ISO 10260:1992 E/ AWWA 10150: 24th Edition, 2023	☐
13.	Chemical oxygen demand	WHK METH W 010/011 based on AWWA 5220 D: 24th Edition, 2023	☐
14.	Colour	WHK METH W 012 based on AWWA Pt-Co-2120 B: 24th Edition, 2023	☐
15.	Cyanide free	WHK METH W 013 based on AWWA 4500-CN E: 24th Edition, 2023	☐
16.	Density	WHK METH W 014	☐
17.	Dissolved oxygen	WHK METH W 015 based on AWWA 4500-O G: 24th Edition, 2023	☐
18.	Electrical conductivity	WHK METH W 016 based on AWWA 2510 B: 24th Edition, 2023	☐
19.	Fat, oil & grease	WHK METH W 017 based on AWWA 5520 B: 24th Edition, 2023	☐
20.	Fixed and volatile solids, ignited at 550°C	WHK METH W 018 based on AWWA 2540 E: 24th Edition, 2023	☐
21.	Fluoride	WHK METH W 019/044 based on AWWA 4500-F C/ AWWA 4110 B: 24th Edition, 2023	☐
22.	Hexavalent chromium	WHK METH W 020 based on AWWA 3500-Cr B: 24th Edition, 2023	☐
23.	Hydrolysable phosphates	WHK METH W 021 based on AWWA 4500-P B.2 + E: 24th Edition, 2023	☐
24.	Iodide	WHK METH W 007 based on P. Höfer	☐
25.	Kjeldahl nitrogen, Calculated **(Total nitrogen Prerequisite)**	WHK METH W 036 based on EN ISO 11905-1: 1997	☐
26.	Molybdosilicate	WHK METH W 022 based on AWWA 4500-Si C: 24th Edition, 2023	☐
27.	Nitrate	WHK METH W 023/024/044/047 based on Spectroquant / AWWA 4500-NO_3 E/ AWWA 4110 B: 24th Edition, 2023	☐
28.	Nitrite	WHK METH W 025/026/044/047 based on AWWA 4500-NO_2 B/ AWWA 4110 B: 24th Edition, 2023	☐
29.	Odour/Smell	WHK METH W 027 based on AWWA 2150 A: 24th Edition, 2023	☐
30.	Oxidation reduction potential (Redox)	WHK METH W 028 based on AWWA 2580 B: 24th Edition, 2023	☐
31.	pH	WHK METH W 029 based on AWWA 4500-H^+ B: 24th Edition, 2023	☐
32.	Phenols	WHK METH W 030 based on ASTM D1783-01, B: 24th Edition, 2023	☐
33.	Salinity	WHK METH W 016 based on AWWA 2520 B: 24th Edition, 2023	☐
34.	Reactive phosphorous (as P or PO_4)	WHK METH W 031/044/049 based on AWWA 4500-P E/ AWWA 4110 B: 24th Edition, 2023	☐
35.	Settleable Solids	WHK METH W 032 based on AWWA 2540 F: 24th Edition, 2023	☐
36.	Sulfide	WHK METH W 033 based on AWWA 4500-S^{2-} D: 24th Edition, 2023	☐
37.	Sulphate	WHK METH W 034/044/050 based on AWWA 4500-SO_4 E/ F/ AWWA 4110 B: 24th Edition, 2023	☐
38.	Total dissolved solids	WHK METH W 035 based on AWWA 2540 C: 24th Edition, 2023	☐
39.	Total hardness (Mg & Ca)	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023 (Calculated)	☐
40.	Total nitrogen **(Nitrite, Ammonium, Nitrate prerequisite)**	WHK METH W 036 based on EN ISO 11905-1:1997	☐
41.	Total phosphorous	WHK METH W 037 based on AWWA 4500-P B + E + I: 24th Edition, 2023	☐
42.	Total solids	WHK METH W 038 based on AWWA 2540 B: 24th Edition, 2023	☐
43.	Total suspended solids	WHK METH W 039 based on AWWA 2540 D: 24th Edition, 2023	☐
44.	Turbidity	WHK METH W 040 based on AWWA 2130 B: 24th Edition, 2023	☐
45.	UV absorbing organic constituents at 254nm	WHK METH W 041 based on AWWA 5910 B: 24th Edition, 2023	☐

Note: Complete page 1-2 and all other applicable pages to your request

CHEMICAL TESTING OF WATER SAMPLES BY ION CHROMATOGRAPHY (IC)			
Anions			
No.	**Test Parameters**	**Reference Method**	**Tick**
1.	Chloride, Fluoride, Sulphate, Nitrate, Nitrite, Phosphate, Bromide	WHK METH W 044 based on AWWA 4110 B: 24th Edition, 2023	☐
Oxyanions			
2.	Chlorate	WHK METH W 045 based on AWWA 4110 B: 24th Edition, 2023	☐
3.	Chlorite	WHK METH W 045 based on AWWA 4110 B: 24th Edition, 2023	☐
4.	Bromate	WHK METH W 045 based on AWWA 4110 B: 24th Edition, 2023	☐

ELEMENTAL ANALYSIS BY ICP-OES (OPTIMA / AVIO)			
ALL ELEMENTAL ANALYSIS REQUIRES ELECTRICAL CONDUCTIVITY (EC)			
No.	**Test Parameters**	**Reference Method**	**Tick**
1.	Aluminum	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
2.	Antimony	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
3.	Arsenic	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
4.	Barium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
5.	Beryllium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
6.	Bismuth	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
7.	Boron	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
8.	Cadmium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
9.	Calcium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
10.	Chromium (total)	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
11.	Cobalt	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
12.	Copper	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
13.	Gold	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
14.	Iron	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
15.	Lead	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
16.	Lithium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
17.	Magnesium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
18.	Manganese	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
19.	Mercury	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
20.	Molybdenum	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
21.	Nickel	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
22.	Phosphorus	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
23.	Potassium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
24.	Rubidium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
25.	Selenium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
26.	Silicon	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
27.	Silver	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
28.	Sodium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
29.	Strontium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
30.	Sulphur	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
31.	Thallium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
32.	Thorium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
33.	Tellurium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
34.	Tin	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
35.	Titanium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
36.	Uranium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
37.	Vanadium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
38.	Zinc	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐

Note: Complete page 1-2 and all other applicable pages to your request

ICP-OES GROUP TESTS:			
1.	**Standard Water:** Na, K, Mg, Ca, Mn, Fe	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
2.	**Toxic Water**: Cr, Cd, Pb, As, Se	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
3.	**Group 5:** U, V, Co, Ni, Li, Rb	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
4.	**Reverse Osmosis:** Al, Si, Ba, Sr, B	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
5.	**Irrigation Water:** Cu, Zn, Mo, B	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
6.	**Method 1**: Be, Sb, Sn, Th, Ti	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐

ELEMENTAL ANALYSIS BY ICP-MS			
No.	**Test Parameters**	**Reference Method**	**Tick**
7.	**ICP-MS: Total Quant Analysis:** Li, Be, B, Al, Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, As, Se, Rb, Sr, Y Zr, Nb, Mo, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb, Te, Cs, Ba, La, Ce, Pr, Nd, Sm, Eu, Gd. Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Ir, Pt, Au, Hg, Tt, Pb, Bi, Th, U.	WHK METH ICP 002 based on AWWA 2125 B: 24th Edition, 2023	☐
8.	**ICP-MS KED (**Kinetic Energy Discrimination**)** **KED METH 1** Hg **KED METH 2** Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sc, Sm, Tb, Th, Tm, Y, Yb **KED METH 3** Ag, As, Ba, Be, Bi, Cd, Co, Cr, Cs, Cu, Ga, In, Li, Mn, Ni, Pb, Rb, Se, Sr, Tl, V, Zn. **KED METH 4** Au, Hf, Ir, Pd, Pt, Rh, Ru, Sb, Sn, Te. **KED METH 5** B, Ge, Mo, Nb, Re, Ta, Ti, W, Zr.	WHK METH ICP 002 based on AWWA 2125 B: 24th Edition, 2023	☐

INSTRUMENT VERIFICATION			
No.	**Test Parameters**	**Reference Method**	**Tick**
1.	pH, meter and probe / pocket meter	Manufacturer calibration guide	☐
2.	EC & TDS, meter and probe / pocket meter	Manufacturer calibration guide	☐
3.	Redox, meter and probe / pocket meter	Manufacturer calibration guide	☐
4.	DO, meter and probe / pocket meter	Manufacturer calibration guide	☐

CHEMICAL TESTING OF SALT SAMPLES			
No.	**Test Parameters**	**Reference Method**	**Tick**
1.	Sample preparation & preparation of aqueous extract	WHK METH W 043 based on ASTM International Designation: E534 − 13	☐
2.	Moisture	WHK METH W 043 based on ASTM International Designation: E534 − 13	☐
3.	Insoluble impurities / Insoluble matter	WHK METH W 039 based on AWWA 2540 D: 24th Edition, 2023	☐
4.	Chloride	WHK METH W 007/044 based on AWWA 4500-Cl^- B/ AWWA 4110 B: 24th Edition, 2023	☐
5.	Sulphate	WHK METH W 034/044/050 based on AWWA 4500-SO_4 E/ F/ AWWA 4110 B: 24th Edition, 2023	☐
6.	Carbonate	WHK METH S 008 based on ISO 10693-95	☐
7.	Iodine as KIO_3	WHK METH W 043 based on inhouse development	☐
8.	Iodine as KI	WHK METH W 043 based on inhouse development	☐
9.	NaCl Assay (Calculated)	WHK METH W 007/ICP 001/003 based on AWWA 4500-Cl^- G/ AWWA 3120 B: 24th Edition, 2023	☐
10.	Sodium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
11.	Potassium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐
12.	Magnesium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐

Note: Complete page 1-2 and all other applicable pages to your request

CHEMICAL TESTING OF SALT SAMPLES			
No.	**Test Parameters**	**Reference Method**	**Tick**
13.	Calcium	WHK METH ICP 001/003 based on AWWA 3120 B: 24th Edition, 2023	☐

TESTING OF REAGENTS AND CHEMICALS			
No.	**Test Parameters**	**Reference Method**	**Tick**
1.	Sodium hypochlorite – assay **(Conductivity, Dissolved Solids, BrO_3, ClO_3, ClO_2, ICP: Cr, Cd, Pb, As, Se, Ni, Sb, Hg)**	WHK METH W 016/035/045 and METH ICP 001/003 based on AWWA 2510 B/ 2540 C/ 4110 B/ 3120 B: 24th Edition, 2023	☐
2.	Scale – qualitative tests of residues from geysers, pipes or kettle **(Bicarbonate, Carbonate, Cl, PO_4, SO_4, Fe, NO_3, NH_4 & NO_2)**		☐

TESTING OF DUST SAMPLES			
No.	**Test Parameters**	**Reference Method**	**Tick**
1.	**Dust monitoring** – quantification of dust fallout	WHK METH W 039/042 based on AWWA 2540 D: 24th Edition, 2023	☐
2.	**Insoluble dust fractions** as Total/general or Silica or both, etc	WHK METH W 039/042 based on AWWA 3030 F/2540 D: 24th Edition, 2023	☐
3.	**Soluble dust fractions** as Total/general or total metals or both, etc	WHK METH W 047/042 based on AWWA 3030 F/3120 B: 24th Edition, 2023	☐

GROUP TESTS			
No.	**Test Parameters**	**Interpretation of results based on:**	**Tick**
1.	**Standard water test** for human & livestock consumption. pH, conductivity, turbidity, total dissolved solids, alkalinity, total-, calcium- and magnesium-hardness, chloride, fluoride, sulphate, nitrate, nitrite, Na, K, Mg, Ca, Mn, Fe, stability index, corrosivity index	Guidelines for the evaluation of drinking water quality for human consumption, DWA Namibia, Water management Act 11 of 2013. and South African Water Quality Guidelines, Volume 5: Agricultural water use: Livestock watering, Second Edition, 1996	☐
2.	**Irrigation water test** for irrigation suitability. pH, conductivity, alkalinity, total-hardness, chloride, fluoride, sulphate, nitrate, Na, K, Mg, Ca, Mn, Fe, Cu, Zn, B, Mo, stability index, corrosivity index, sodium absorption ratio, residual sodium carbonate, magnesium ratio	South African Water Quality Guidelines, Volume 4: Agricultural water use: Irrigation, Second Edition, 1996	☐
3.	**Concrete mixing test** (Fulton) for roads and general constructions. pH, conductivity, TDS, alkalinity, chloride, sulphate.	South African National Standard, SANS 51008:2006	☐
4.	**Corrosion Water test** to assess the suitability of water for use in household systems, including geysers, copper pipes, and kettles. pH, conductivity, TDS, alkalinity, chloride, sulphate, Mg, Ca, Mn, Fe, Cu	Based on SANS 241-1:2015	☐
5.	**Precast Continuous water exposure** pH, Electrical conductivity, Total Dissolved Solids, Total Suspended Solids, Alkalinity, Bicarbonate (calc), Carbonate (calc), Total hardness (calc), Calcium & Magnesium hardness (Calc), Chloride, Sulphate, Chemical Oxygen Demand (COD), Na, K, Mg, Ca, Combined Na & K (calc).	Futon's concrete technology 9th edition, 2009, Precast Cement and Concrete institute, Midrand, South Africa based on SANS 1491.	☐
6.	**Annual water test** (SANS 241) for food industry. Standard water test + colour, cyanide, phenolic compounds, Cu, Zn, As, Se, Cd, Cr, Pb, Hg, Ni, Co, U	Guidelines for the evaluation of drinking water quality for human consumption, DWA Namibia, Water management Act 11 of 2013. and SANS 241-1:2015	☐
7.	**Bottled water test** (SANS 1657) Bottling purposes (with the intent to sell the water) Standard water test + As, Se, Cd, Cr, Pb, Hg, U	Guidelines for the evaluation of drinking water quality for human consumption, DWA Namibia, April 1988 and SANS 1657:2014 (ED 2.03)	☐
8.	**Waste water test** (DWA) for Compliance and disposal purposes. pH, conductivity, oxidation reduction potential, dissolved oxygen, total dissolved solids (det.), total suspended solids, COD, BOD, total nitrogen, nitrate, nitrite, ammonium, o-phosphate, chloride, sulphate, sodium	General standard limits, DWA Namibia, Water management Act 11 of 2013.	☐
9.	**Industrial wastewater test** for Compliance and disposal purposes. pH, conductivity, dissolved oxygen, colour, turbidity, BOD, total dissolved solids (det.), total suspended solids, FOG, COD, free cyanide, hexavalent chromium, sulphide, nitrate, nitrite, free and saline ammonium, total nitrogen, o-phosphate, alkalinity, chloride, fluoride, sulphate, Na, K, Mg, Ca, Mn, Fe, Cu, Zn, B, Cr, Cd, Pb, As, Se, U, Ni, Al, Ba, Sr, Sb, Sn, Ti, Tl, Hg	DWA Namibia. Water management Act 11 of 2013, Annexure 11 (Regulation 75)	☐
10.	**Full Wastewater test** for pollution assessment and contamination profiling Dissolved oxygen, pH, conductivity, total dissolved solids (det.), total suspended solids, COD, BOD, absorbed oxygen, ammonium, free chlorine, sulphide, phenolic compounds, free cyanide, hexavalent chromium, fluoride, FOG, Na, Cu, Zn, B, Cr, Pb, As	General standard limits for DWA Namibia. Water management Act 11 of 2013.	☐

Note: Complete page 1-2 and all other applicable pages to your request

GROUP TESTS			
No.	**Test Parameters**	**Interpretation of results based on:**	**Tick**
11.	**Waste water test** (MunWB) for regulatory for Municipals. pH, conductivity, total dissolved solids (det.), total suspended solids, COD, sulphate, total phosphate, ammonium, free cyanide, sulphide, phenolic compounds, hexavalent chromium, FOG, bromide, Fe, Mn, Cu, Zn, B, Cr, Cd, Pb, Ni, Hg	General standard limits **Municipality of Walvis Bay**, 2016	☐
12.	**Full drinking water analysis** for potable water assessment. pH, conductivity, turbidity, color, total dissolved solids, alkalinity, total-, calcium- and magnesium-hardness, chloride, fluoride, sulphate, nitrate, nitrite, ammonium, free chlorine, free cyanide, sulfide, bromide, iodine, Na, K, Mg, Ca, stability index, corrosivity index ICP-MS: Li, Be, B, Mo, Cd, Sn, Sb, Te, Ba, W, Au, Hg, Tl, Pb, Bi, U, Al, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, As, Se, Ag, Zn	Guidelines for the evaluation of drinking water quality for human consumption, DWA Namibia, Water management Act 11 of 2013.	☐
13.	**Reverse Osmosis (RO) Water Fitness test** for suitability of RO plants & Kidney dialysis. pH, Electrical conductivity, Turbidity, Total Dissolved Solids(calc), Alkalinity, T-hardness, Ca-hardness, Mg-hardness, Chloride, Fluoride, Sulphate, Nitrate, Nitrite, Na, K, Mg, Ca, Mn, Fe, Al, Si, Sr, Ba, B.	Guidelines for the evaluation of drinking water quality for human consumption, DWA Namibia, Water management Act 11 of 2013.	☐
14.	**Swimming pool test** including: pH, Electrical conductivity, Turbidity, Total Dissolved Solids(calc), Alkalinity, Total-hardness, Ca-hardness, Mg-hardness, Free chlorine, Total chlorine, Combined chlorine, Mg, Ca	General standard limits for DWA Namibia. Water management Act 11 of 2013.	☐
15.	**Toilet Hire/Mobile toilets test** including: pH, Electrical conductivity, salinity, Oxygen dissolved, Oxygen Demand Chemical (COD), Total dissolved solids (determined), Total Suspended solids, Free & Saline ammonium, Sulphate, Sulfide, Fat Oil Grease (FOG).	General standard limits for Article 21 permits (effluents), as per regulation R553 of 5 April 1962.	☐
16.	**Complete Salt analysis test** for livestock lick and human consumption. Standard salt test, Sample prep, Moisture, Insoluble impurities, Chloride, Sulphate, Calcium carbonate equivalent, KIO3, Na, K, Mg, Ca	Based on the In-house method	☐
17.	**Detergent salt (Sodium sulphate and Soda ash)** suitability analysis. Moisture, Water Insoluble substances/Insoluble impurities, Chloride, Sulphate, Calcium carbonate equivalent, KIO3, Sodium Sulphate (Na2SO4), Sodium Chloride (NaCl) Na, K, Mg, Ca, Fe,	Purity analysis	☐
18.	**Aqua Culture test** water suitability analysis for fish farming and aqua culture. pH, Electrical conductivity, Total Dissolved Solids, Chloride, Nitrate, Nitrite, Free & saline ammonium, Ortho-phosphate, Total hardness, Mg, Ca, Mn, Fe, Cu, Zn, Cr, Cd, Pb, Se, Hg	Based on South African Water Quality Guidelines Volume 6: Agricultural water use: Aquaculture, Second Edition, 1996.	☐

	OUTSOURCED TESTING	
	INTERNATIONAL	
No.	**Test Parameters**	**Tick**
1.	**ICP-MS scan:** Li, Be, B, Sr, Zr, Mo, Cd, Sn, Sb, Te, Ba, La, W, Ir, Pt, Au, Hg, Tl, Pb, Bi, Th, U, Na, Mg, Al, Si, P, S, Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, K, As, Se, Ru, Rh, Pd, Ag	☐
2.	**PAH, including:** Naphthalene, Acenaphthene, Acenaphthylene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b+k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, Indeno(123-cd)pyrene	☐
3.	**VOC, including:** Mono-Aromatic Hydrocarbons: benzene, toluene, ethylbenzene, m+p-xylene, o-xylene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, n-propylbenzene, tert-butylbenzene, sec-butylbenzene, n-butylbenzene, isopropylbenzene, styrene, 4-isopropyltoluene Bromo/Chlorobenzenes: bromobenzene, chlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,3,5-trichlorobenzene **Polyaromatic compound:** naphthalene Volatile brominated/Chlorinated Hydrocarbons: bromoform, chloroform, carbon tetrachloride, trichloroethene (TCE), dibromomethane, dichloromethane, bromochloromethane, bromodichloromethane, dibromochloromethane, 1,2-dibromoethane, 1,2-dichloroethane, tetrachloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane, hexachlorobutadiene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 2-chlorotoluene, 4-chlorotoluene, 1,1-dichloroethene, 1,1-dichloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, 1,2-dichloropropane, 1,3-dichloropropane, 2,2-dichloropropane, 1,2,3-trichloropropane, 1,1-dichloropropene, cis-1,3-dichloropropene, trans-1,3-dichloropropene	☐

Note: Complete page 1-2 and all other applicable pages to your request

	OUTSOURCED TESTING	
	INTERNATIONAL	
No.	**Test Parameters**	**Tick**
4.	**sVOC, including:** PAH: naphthalene, acenaphthene, acenaphthylene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b + k)fluoranthene, benzo(a)pyrene, benzo(g, h, i)perylene, indeno(123-cd)pyrene **Chlorinated compounds**: 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 2-chloronaphthalene, hexachlorobenzene, hexachloroethane, 1,2,4-trichlorobenzene, 4-chlorophenylphenyl ether, 4-bromophenylphenyl ether **Phthalates:** di-n-buthyl phthalate, buthyl benyl phthalate, bis(2-ethylhexyl) phthalate	☐
5.	**Polar compounds, including:** acetone, methanol, ethanol, acetaldehyde, methyl acetate, ethyl acetate, propyl acetate, butyl acetate, n-propanol, n-butanol, isopropyl alcohol, n-butoxyethanol	☐
6.	**OC Pesticides, including:** alpha-HCH, beta-HCH, gamma-HCH, delta-HCH, alpha-chlordane, gamma-chlordane, aldrin, dieldrin, endrin, heptachlor, heptachlor epoxide isomer B, methoxychlor, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT	☐
7.	**OP Pesticides, including:** alpha-HCH, beta-HCH, gamma-HCH, delta-HCH, alpha-chlordane, gamma-chlordane, aldrin, dieldrin, endrin, heptachlor, heptachlor epoxide Isomer B, methoxychlor, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT	☐
8.	**BTEX-GRO, including:** MTBE, TAME, benzene, toluene, ethylbenzene, m+p-xylene, o-xylene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, naphthalene, GRO C6-C10	☐
9.	**Vinyl Chloride, Monochloramines**	☐
10.	**TPH-GRO, including:** C6-C10, C10-C28, C28-C40	☐
11	**Isotopes Analysis: Total alpha and beta activity; Ra226; Uranium234,235,238; Lead210; Po210**	☐

	OUTSOURCED TESTING	
	LOCAL	
No.	**Test Parameters**	**Tick**
1.	**THM, including:** bromoform, chloroform, bromodichloromethane, dibromochloromethane, trichloroethene	☐
2.	**Dissolved organic carbons (**DOC)	☐
3.	**Total organic carbons** (TOC)	☐

Note: Unless otherwise requested by the client, expression of opinion and interpretation of results will be based on guidelines / standards as per table above.

Note: Price list and quotations are issued to clients upon request.

Note: Sample Volume – Potable = **1000ml**

-- Full Drinking/Wastewater = **2000ml**