

Name of Customer:Udemezue Onyedikachi

Sample:Water

Test Required:Physiochemical Analysis



Sir

1, hereby certify that I received 1 litre of water sample from you for analysis. The above sample in the same condition was submitted to us and states hereby our findings and comments:

Lab Reference No: SPL/20/190

PHYSICAL/ORGANOLEPTIC REQUIREMENT

S/N	Colour	Concentration	Tolerance Value	Reference Test Method	Remark
1	Temperature °C	29.7	Ambient	APHA 2550 22 ND Edition 2012	
2	Turbidity NTU ^b	41.7	5.0	APHA 2130 22 ND Edition 2012	fail
3	pH	6.3	6.5 - 8.5	APHA 4500 – H ⁺ B 22 ND Edition 2012	fail
4	Conductivity	233	1000µS/cm	APHA 251B 22 nd Edition 2012 or AOAC 973.40	pass

CHEMICAL REQUIREMENT

S/N	Parameter	Concentration	Tolerance level	Reference Test Method	Remark
1	Chloride mg/l	1,520	100	APHA 4110B 22 nd Edition 2012 by ion chromatography or APHA 4500 – CID 22 nd Edition 2012 by Potentiometric method or AOAC 993.30, AOAC 973.54	fail
2	Copper mg/l	0.00	1.0	APHA 3500-Cu C 22 nd Edition 2012 & APHA 3120-B 22 nd Edition 2012 by ICP-OES or AOAC 993.14 AOAC 974.27	pass
3	Nitrate mg/l	4.30	10	APHA 4110-B 22 nd Edition 2012 by ion Chromatograph or AOAC 993.30, AOAC 973.50	pass
4	Nitrite mg/l	0.05	0.02	APHA 4500-NO ₂ 22 nd Edition 2012 or AOAC 993.30	fail
5	Magnesium mg/l	1.476	2.0	APHA 3120-B 22 nd Edition 2012 by AAS or AOAC 974.27, AOAC 993.14	pass
6	Zinc mg/l	0.036	5.0	APHA 3111B 22 nd Edition 2012 by AAS or AOAC 974.27	
7	TDS mg/l	375	500	APHA 2540D 22 nd Edition 2012	pass
8	Hardness mg/l	800	100	APHA 2340C 22 nd Edition 2012 or AOAC 973.52B	fail
9	Sulphate mg/l	92.836	100	APHA 4110B 22 nd Edition 2012 by ion chromatography or AOAC 993.30, AOAC 925.54	pass
10	Phosphate mg/l	0.336	100	APHA 3120B by ICP-OES 22 nd Edition 2012, or AOAC 973.54	pass
11	Alkalinity mg/l	52.5	200	APHA 3120B 22 nd Edition 2012 by ICP – OES or AOAC 993.14	pass
12	Acidity mg/l	42.5	100	APHA 3111B 22 nd Edition 2012 by AAS or AOAC 974.27	pass

13	BOD mg/l	117	100	APHA 3120B by ICP-OES 22 nd Edition 2012, or AOAC 973.54	Fail
14	OD mg/l	13.2	100	APHA 3120B by ICP-OES 22 nd Edition 2012, or AOAC 973.54	pass
15	COD mg/l	146	200	APHA 3120B by ICP-OES 22 nd Edition 2012, or AOAC 973.54	pass
16	TSS mg/l	15.86	100	APHA 3120B by ICP-OES 22 nd Edition 2012, or AOAC 973.54	pass
17	TS mg/l	390.86	100	APHA 3120B by ICP-OES 22 nd Edition 2012, or AOAC 973.54	fail
18	Bicarbonate mg/l	72.493	100	APHA 3120B by ICP-OES 22 nd Edition 2012, or AOAC 973.54	pass
19	Ammonia mg/l	0.010	100	APHA 3120B by ICP-OES 22 nd Edition 2012, or AOAC 973.54	pass

TOXIC CHEMICAL SUBSTANCES

S/N	Parameter	Concentration	Tolerance Level	Reference Test Method	Remark
1	Lead mg/l	0.464	0.01	APHA 3125B 22 nd Edition 2012 by ICP – MS or AOAC 993.14, AOAC 974.27	fail
2	Cadmium mg/l	0.030	0.003	APHA 3120 – B 22 nd 2012 by ICP - OES or AOAC 974.27	pass
3	Mercury mg/l	0.049	0.001	APHA 3030 E – K 22 nd Edition 2012 & APHA 3112 22 nd Edition 2012 or AOAC 977.22	fail
4	Chromium mg/l	0.00	0.01	APHA 3125B 22 nd Edition 2012 by ICP-MS or AOAC 993.14, AOAC 974.27	pass
5	Iron mg/l	0.079	0.3	APHA 3500-Fe B 22 nd 2012 & APHA 3120 – B 22 nd Edition 2012 by ICP –OES or AOAC 974.27	pass
6	Molybdenum mg/l	0.04	0.05	APHA 3125B 22 nd Edition 2012 by ICP- MS or AOAC 993.14	pass
7	Manganese mg/l	0.062	0.3	APHA 3500-Fe B 22 nd 2012 & APHA 3120 – B 22 nd Edition 2012 by ICP –OES or AOAC 974.27	pass
8	Arsenic mg/l	0.235	0.00	APHA 3500-Fe B 22 nd 2012 & APHA 3120 – B 22 nd Edition 2012 by ICP –OES or AOAC 974.27	fail
9	Cobalt mg/l	0.00	0.050	APHA 3500-Fe B 22 nd 2012 & APHA 3120 – B 22 nd Edition 2012 by ICP –OES or AOAC 974.27	pass
10	Nickel mg/l	0.004	0.05	APHA 3500-Fe B 22 nd 2012 & APHA 3120 – B 22 nd Edition 2012 by ICP –OES or AOAC 974.27	pass
11	Silver mg/l	0.2	0.3	APHA 3500-Fe B 22 nd 2012 & APHA 3120 – B 22 nd Edition 2012 by ICP –OES or AOAC 974.27	pass
12	Calcium mg/l	6.687	10.00	APHA 3500-Fe B 22 nd 2012 & APHA 3120 – B 22 nd Edition 2012 by ICP –OES or AOAC 974.27	pass
13	Aluminium mg/l	0.052	0.02	APHA 3500-Fe B 22 nd 2012 & APHA 3120 – B 22 nd Edition 2012 by ICP –OES or AOAC 974.27	fail
14	Selenium mg/l	0.005	0.05	APHA 3500-Fe B 22 nd 2012 & APHA 3120 – B 22 nd Edition 2012 by ICP –OES or AOAC 974.27	Pass
15	Silicone	0.00	0.5	APHA 3500-Fe B 22 nd 2012 & APHA 3120 – B 22 nd Edition 2012 by ICP –OES or AOAC 974.27	pass

Remark: Failed Treatment Required

Okeke David Okechukwu
(B.Sc, M.Sc, MIPAN)
Public Analyst

O.D.O
Signature of analyst