

OCTOBER 17TH, 2024

Description of Sample: **BOREHOLE WATER**  
Sample Source: **NAROK**  
Submitted By: **SIKAWA PRIMARY SCHOOL**  
Customer Contact: **Betterline Water Ltd**  
Sampled By: **CLIENT**

Date of Sampling: **08/10/2024**  
Date Sample Received: **14/10/2024**  
Date of Analysis: **14/10/2024**  
Date of Report Issue: **17/10/2024**  
Sample ID: **S0513-30193**

PARAMETERS	METHOD	VALUES	KS EAS 12:2018 NATURAL WATER SPECIFICATION	WHO STANDARD	REMARKS
<b>PHYSIO-CHEMICAL ANALYSIS</b>					
pH (pH Units pH)	AQL/TM/HACH/8156	7.11	5.5 - 9.5	NS	PASS
Colour (Pt. Co. APHA Colour)	AQL/TM/HACH/8025	120	50	NS	FAIL
Turbidity (NTU TUB)	AQL/TM/CHEM/10	18.5	25	NS	PASS
Total Suspended Solids (mg/L TSS)	AQL/TM/HACH/8006	24	ND	NIL	FAIL
Total Dissolved Solids (mg/L TDS)	AQL/TM/HACH/8160	190.8	1500	NS	PASS
Electrical Conductivity (uS/cm EC)	AQL/TM/HACH/8160	386	2500	NS	PASS
P Alkalinity (mg/L CaCO3 PA)	AQL/TM/HACH/ISO/9963-1:1994	ND	NS	NS	-
Total Alkalinity (mg/L CaCO3 TA)	AQL/TM/HACH/ISO/9963-1:1994	148.3	NS	NS	-
Chloride (mg/L Cl)	AQL/TM/HACH/ISO/9297:2000	6.7	250	NS	PASS
Fluoride (mg/L F) ✓	AQL/TM/HACH/8323	0.45	1.5	1.5	PASS
Sulfate (mg/L SO4)	AQL/TM/HACH/8051	< 2	400	NS	PASS
Nitrate (mg/L NO3)	AQL/TM/HACH/8358	1.1	45	50	PASS
Phosphate (mg/L PO4)	AQL/TM/HACH/8114	0.4	2.2	NS	PASS
Sodium (mg/L Na)	AQL/TM/APHA/3111B	112	200	NS	PASS
Calcium (mg/L Ca) ✓	AQL/TM/CHEM/07	60.06	150	NS	PASS
Magnesium (mg/L Mg) ✓	AQL/TM/CHEM/07	12.15	100	NS	PASS
Iron (mg/L Fe)	AQL/TM/APHA/3111B	0.58	0.3	NS	FAIL
Manganese (mg/L Mn)	AQL/TM/APHA/3111B	0.41	0.1	-	FAIL
Ammonia (mg/L NH3)	AQL/TM/HACH/10001	0.05	0.5	NS	PASS
Copper (mg/L Cu)	AQL/TM/APHA/3111B	< 0.04	1.0	2.0	PASS
Zinc (mg/L Zn)	AQL/TM/APHA/3111B	0.05	5.0	NS	PASS
Calcium Hardness (mg/L CH) ✓	AQL/TM/CHEM/07	150	NS	NS	-
Magnesium Hardness (mg/L MH) ✓	AQL/TM/CHEM/07	50	NS	NS	-
Total Hardness (mg/L TH) ✓	AQL/TM/CHEM/07	200	600	NS	PASS
Silica HR (mg/L SiO2)	AQL/TM/HACH/8185	46.8	NS	NS	-

**Notes and Disclaimer**

KS EAS 153:2018 - Packaged Drinking Water —Specification, KS EAS 12:2018 - Potable Water —Specification, ANSI/AAMI/ISO 23500-3:2019 - Preparation and quality management of fluids for haemodialysis and related therapies—Part 3: Water for haemodialysis and related therapies, EMCR 2006 -Environmental Management and Co-ordination (Water Quality) Regulations 2006, WHO 4th EDITION - World Health Organization Guidelines for Drinking - Water Quality, ISE - Ion Selective Electrode, NS - No Set Standard, ND - Not Detected, TN - Too Numerous, Parameters marked with (\*) are Subcontracted while (✓) are Accredited.

The test report shall not be reproduced except in full without written approval from Aqualytic Laboratories Limited. The laboratory will not be held responsible for any sampling error(s) unless sampled by the laboratory personnel. The results relate only to the sample(s) submitted. Statements of conformity (e.g. Pass/Fail) to specifications are made in this report without taking measurement uncertainty into account except when requested by the customer. The Uncertainty of Measurements applied does not take into account the Sampling aspect for this sample.

Where statements of conformity are made in this report, the following decision rules are applied:

PASS - Results within limits/specifications.

FAIL - Results exceed limits/specifications.

**COMMENTS**

Based on the tested parameters only, the water sample was found not to conform to the Borehole Water (KS EAS 12:2018 NATURAL WATER SPECIFICATION){failed analytes} Colour, Total Suspended Solids,

Iron, Manganese does not meet the set standard. Therefore, treatment is recommended.



**LABAN WAWERU MACHARIA**  
ASSISTANT TECHNICAL MANAGER



**MUGUN KIPCHUMBA**  
TECHNICAL MANAGER

