

### **BOTTLED WATER INFORMATION**

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#### Introduction:

Here at Emerald, we are proud of the quality of all our products. Mangero Premium Bottled Water meets all the Nigeria Industrial Standard (N.I.S) and World Health Organization (W.H.O) Standard of quality and safety for bottled water. We carry out extensive quality checks on the raw materials, treatment processes and comprehensive on-line monitoring, to ensure our products are wholesome for human consumption. The services of reputable external analysts are also engaged in the confirmation of all the physiochemical and microbiological tests carried out on the finished products to ensure we exceed or are in compliance with all bottled water requirements.

### Mangero Source:

The raw water comes from a 280ft underground water source below the aquifer. It passes through a super hygienic 12 stage treatment process and we bottle in a state of the art filling room equipped with world class processing machines. Our bottles are made on site, so we can be sure they are up to NIS and WHO standards.

Below is the sample analysis of the finished product composition.

#### SPECIFIC ANALYSIS

Analysis Performed	Mangero Purified Water	NIS STANDARD
Aluminum	Nil	0.2mg/L (max)
Chloride	12.14mg/L	100mg/L (max)
Fluoride	Nil	1.0mg/L (max)
Iron	Nil	0.1mg/L (max)
Manganese	Nil	0.5mg/L (max)
Nitrogen (as Nitrate)	1.34mg/L	10.0mg/L (max)
Nitrogen (as Nitrite)	Nil	0.02mg/L (max)
Hydrogen Sulphide	Nil	0.01mg/L(max)
Sulfate	9.65mg/L	100mg/L (max)
Sodium	17.86mg/L	100mg/L (max)
Zinc	Nil	5.0mg/L (max)
Conductivity	64.25μs/cm	1000μs/cm
Turbidity	0.95 NTU	5.0 NTU



# **Organic Constituents**

Analysis Performed	Mangero Purified Water	NIS STANDARD
Substance (Polynuclear aromatic hydrocarbons Which include Fluorathene	Nil	0.02mg/L
3, 4 – Benzfluoroanthene 11, 12 – Benzfluoroanthene 3, 4 – Benzpyrene 11, 12 – Benzpyrene Indeno (1, 2, 4, cd - pyrene)		

## Disinfectants and Disinfectant by-product

District and Distr		
Mangero Purified Water	NIS STANDARD	
Nil	0.2mg/L	
Nil	0.01mg/L	
Nil	0.04mg/L	
Nil	0.02mg/L	
Nil	0.001mg/L	
	Mangero Purified Water  Nil Nil Nil Nil	Mangero Purified Water         NIS STANDARD           Nil         0.2mg/L           Nil         0.01mg/L           Nil         0.04mg/L           Nil         0.02mg/L

## **Toxic Chemical Substances**

Analysis Performed		NIS STANDARD
Lead	Nil	0.01mg/L
Cyanide	Nil	0.01mg/L
Aresenic	Nil	0.01mg/L
Barium	Nil	0.05mg/L
Cadmium	Nil	0.003mg/L
Mercury	Nil	0.001mg/L
Chromium	Nil	0.01mg/L
Nickel	Nil	0.01mg/L

### Contaminants

Analysis Performed		NIS STANDARD
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Pesticides	Nil	0.0005pCi/ <u>L</u>
Mineral Oil	Nil	0.003pCi/L <sup>5</sup>
Ammonia	Nil	0.05pCi/L <sup>5</sup>
Pheniol Compounds (as phenol)	Nil	0.001pCi/L <sup>5</sup>
Detergents (as lauryl sulphate)	Nil	0.01pCi/L <sup>5</sup>
Radionulides (Bq/l for gross) Alpha (Bq/l) emitters (Not during emergend release of Beta emitters activity intenvironment)		0.1pCi/L <sup>5</sup>



# Microbiological

Analysis Performed		NIS STANDARD
Clostridium perfringenes	Nil	Ocfu/ml
E.Coli	Nil	0
Feacal Streptococci	Nil	0
Pseudomonas aeroginose	Nil	0
Coliform	Nil	0
Yeast and mould	Nil	0

## **Physiochemical Quality**

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Analysis Performed		NIS STANDARD
Color (Color units) Odor (Threshold odor number)	0.1TCU Unobjectionable	3.0TCU Unobjectionable
Total Dissolved Solids – TDS (mg/L)	17.81mg/L	500mg/L
Hardness (as CaCO₃)	18.2mg/L	100mg/L
Taste	Unobjectionable	Unobjectionable
Ph	7.9	6.5-8.5

<sup>\*</sup> NIS = Nigeria Industrial Standards Nil = Non existent

