Tetras Environmental & Scientific Services Limited

Public Analyst

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CERTIFICATE OF ANALYSIS

{Institute of Public Analysts of Nigeria, IPAN ACT.1.16 LFN 2004 (formerly Decree 100 Of 1992)}

Sample Identification: 10030/MH1/05//061 **Certificate No.:** 20943 **Version No.:** 01

INDIAN LANGUAGE SCHOOL (SENIOR SCHOOL). 14/16, OBANLE ARO STREET, ILUPEJU, LAGOS.

I, Morphy Ugar Ifu, the undersigned Public Analyst (No. 00728) of Tetras Environmental and Scientific Services, IPAN Registration No. 0021, do certify that on the **16/05/2025**, a sample (**TESS/QMS/SAMPLI//012**) labeled **R.O Water** measuring 150cl was received by me for physicochemical and microbiological analysis. The said sample was examined by me, or under my direction while in the same condition as received by me. The outcome is as follows:

Name of Sample	R.O Water		
Sample Matrix	Colourless, odourless liquid in plastic bottle and cover		
Sample Identification Number	10030/MH1/05//061	**Production Date**	Not Stated
Batch/Code Number	Not Stated	**Best Before/Expiry Date**	Not Stated
Packaging	Plastic bottle and cover	**Environmental Condition**	Hum. (51%), Temp. (26.9°C)
Date of Completion of Analysis	23/05/2025	**Manufacturer**	Not Stated

PHYSICOCHEMICAL ANALYSIS

Test Performed/Unit	Result	Standard NIS977:2017	Test Method
Temperature, °C	25.6	Ambient	2550B APHA
Colour, TCU	ND	3.0	2120C APHA
Odour	Unobj.	Unobj.	Organoleptic
Taste	Unobj.	Unobj.	Organoleptic
Electrical Conductivity, µS/cm	201.00	1000	2510B APHA
Turbidity, NTU	ND.	5.0	2130B APHA
pH @ 25°C	6.50	6.5-8.5	4500-H$^+$B APHA
Total Dissolved Solids, mg/l (max)	130.65	500	2540C APHA
Total Solids, mg/l	136.65	NS	2540B APHA
Suspended Solids, mg/l	6.00	NS	2540D APHA
Total Hardness EDTA, mg$CaCO_3$/l (max)	12.42	100	2340C APHA
Calcium Hardness EDTA, mg$CaCO_3$/l	11.96	NS	3500-CaB APHA
Magnesium Hardness EDTA, mg$CaCO_3$/l	1.26	NS	3500-MgB APHA
Phenolphthalein Alkalinity, mg$CaCO_3$/l	ND	NS	2320B APHA
Total Alkalinity, mg$CaCO_3$/l	4.68	NS	2320B APHA
Total Acidity, mg$CaCO_3$/l	21.70	NS	2310B APHA
Cyanide, mg/l (max)	ND	0.01	4500-CN$^-$D APHA
Free Residual Chlorine, mg/l (max)	ND	0.2	2120C APHA
Free Carbon Dioxide, mg/l	20.46	NS	4500-CO_2C APHA
Ammoniacal Nitrogen, mg/l	ND	NS	4500-NH_3C APHA
Chloride, mg/l (max)	20.63	100	4500-Cl$^-$B APHA
Nitrate, mg/l (max)	7.02	10	4500-NO_3^-B APHA
Nitrite, mg/l (max)	ND	0.02	4500-NO_2^-B APHA
Phosphate, mg/l	1.76	NS	4500-PC APHA
Sulphate, mg/l (max)	5.00	100	4500-SO_4^{2-}D APHA
Silica, mg/l	0.90	NS	4500-SiO_2C APHA
Zinc, mg/l (max)	0.06	5.0	AOAC 985.16
Cadmium, mg/l (max)	ND	0.003	AOAC 974.27
Copper, mg/l (max)	0.05	1.0	AOAC 974.27
Iron, mg/l (max)	0.11	0.3	3500-FeB APHA
Lead, mg/l (max)	ND	0.01	AOAC 986.15
Chromium(Hexavalent), mg/l (max)	ND	0.01	AOAC 977.22
Manganese, mg/l (max)	ND	0.1	AOAC 977.22

MICROBIOLOGICAL ANALYSIS

Microbial Group/Unit	Result	Standard NIS977:2017	Test Method
Aerobic Plate Count, cfu/ml	7	NS	AOAC 966.23
Coliform, cfu/ml	0	0	9221B APHA
E. coli, cfu/ml	0	0	9221B APHA
Faecal Streptococci, cfu/ml	0	0	IDM
Mould and Yeast, cfu/ml	0	0	AOAC 995.21
Staphylococcus aeurus, cfu/ml	0	NS	AOAC 975.55
Clostridium perfringenes, cfu/ml	0	0	AOAC 976.30
Salmonella spp., cfu/ml	0	NS	AOAC 967.26
Shigella spp., cfu/ml	0	NS	ISO 21567
Vibrio spp., cfu/ml	0	NS	9260H APHA
Pseudomonas aeroginosa, cfu/ml	0	0	9213E APHA

NOTES ON ABBREVIATIONS

NIS	=	Nigerian Industrial Standard
Unobj.	=	Unobjectionable
ND	=	Not Detected
0 Count	=	No Growth
NS	=	Not Specified
Cfu/ml	=	Colony forming unit per millilitre
IDM	=	In-house Developed Method

COMMENT

The physicochemical and microbiological quality of the R.O water sample is satisfactory.
Hence, the R.O water sample is certified fit for use.

As witness my hand this 27th May, 2025.

THE INSTITUTE OF PUBLIC ANALYSTS OF NIGERIA (IPAN) Act Cap 1. 16 LFN 2004 (Formally Decree No. 100 of 1992)

INSTITUTE OF PUBLIC ANALYSTS (Established by Decree No. 100 of 1992) IPAN REGISTERED LABORATORY

Practice Licence NO 00728

Signature .....

Date 27-05-2025

INSTITUTE OF PUBLIC ANALYSTS OF NIGERIA
Morphy Ugar-Ifu
P/L No.: 00728
No 000330
Valid till Dec. 31st, 2025

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CERTIFICATE OF ANALYSIS

{Institute of Public Analysts of Nigeria, IPAN ACT.1.16 LFN 2004 (formerly Decree 100 Of 1992)}

Sample Identification: 10030/MH1/05//060 **Certificate No.:** 20942 **Version No.:** 01

INDIAN LANGUAGE SCHOOL (JUNIOR SCHOOL). 8, OREMEJI STREET, ILUPEJU, LAGOS.

I, Morphy Ugar Ifu, the undersigned Public Analyst (No. 00728) of Tetras Environmental and Scientific Services, IPAN Registration No. 0021, do certify that on the **16/05/2025**, a sample (**TESS/QMS/SAMPLI//012**) labeled **R.O Water** measuring 150cl was received by me for physicochemical and microbiological analysis. The said sample was examined by me, or under my direction while in the same condition as received by me. The outcome is as follows:

Name of Sample	R.O Water		
Sample Matrix	Colourless, odourless liquid in plastic bottle and cover		
Sample Identification Number	10030/MH1/05//060	**Production Date**	Not Stated
Batch/Code Number	Not Stated	**Best Before/Expiry Date**	Not Stated
Packaging	Plastic bottle and cover	**Environmental Condition**	Hum. (51%), Temp. (26.9°C)
Date of Completion of Analysis	23/05/2025	**Manufacturer**	Not Stated

PHYSICOCHEMICAL ANALYSIS

Test Performed/Unit	Result	Standard NIS977:2017	Test Method
Temperature, °C	25.3	Ambient	2550B APHA
Colour, TCU	ND	3.0	2120C APHA
Odour	Unobj.	Unobj.	Organoleptic
Taste	Unobj.	Unobj.	Organoleptic
Electrical Conductivity, µS/cm	38.00	1000	2510B APHA
Turbidity, NTU	ND	5.0	2130B APHA
pH @ 25°C	6.57	6.5-8.5	4500-H⁺B APHA
Total Dissolved Solids, mg/l (max)	25.84	500	2540C APHA
Total Solids, mg/l	29.94	NS	2540B APHA
Suspended Solids, mg/l	4.10	NS	2540D APHA
Total Hardness EDTA, $mgCaCO_3/l$ (max)	2.30	100	2340C APHA
Calcium Hardness EDTA, $mgCaCO_3/l$	1.84	NS	3500-CaB APHA
Magnesium Hardness EDTA, $mgCaCO_3/l$	0.46	NS	3500-MgB APHA
Phenolphthalein Alkalinity, $mgCaCO_3/l$	ND	NS	2320B APHA
Total Alkalinity, $mgCaCO_3/l$	5.85	NS	2320B APHA
Total Acidity, $mgCaCO_3/l$	18.33	NS	2310B APHA
Cyanide, mg/l (max)	ND	0.01	4500-CN⁻D APHA
Free Residual Chlorine, mg/l (max)	3.96	0.2	2120C APHA
Free Carbon Dioxide, mg/l	3.96	NS	4500-CO_2C APHA
Ammoniacal Nitrogen, mg/l	ND	NS	4500-NH_3C APHA
Chloride, mg/l (max)	6.88	100	4500-Cl⁻B APHA
Nitrate, mg/l (max)	5.27	10	4500-NO_3 B APHA
Nitrite, mg/l (max)	ND	0.02	4500-NO_2 B APHA
Phosphate, mg/l	0.70	NS	4500-PC APHA
Sulphate, mg/l (max)	3.50	100	4500-SO_4^{2-}D APHA
Silica, mg/l	0.62	NS	4500-SiO_2C APHA
Zinc, mg/l (max)	0.04	5.0	AOAC 985.16
Cadmium, mg/l (max)	ND	0.003	AOAC 974.27
Copper, mg/l (max)	0.02	1.0	AOAC 974.27
Iron, mg/l (max)	ND	0.3	3500-FeB APHA
Lead, mg/l (max)	ND	0.01	AOAC 986.15
Chromium(Hexavalent), mg/l (max)	ND	0.01	AOAC 977.22
Manganese, mg/l (max)	ND	0.1	AOAC 977.22

MICROBIOLOGICAL ANALYSIS

Microbial Group/Unit	Result	Standard NIS977:2017	Test Method
Aerobic Plate Count, cfu/ml	4	NS	AOAC 966.23
Coliform, cfu/ml	0	0	9221B APHA
E. coli, cfu/ml	0	0	9221B APHA
Faecal Streptococci, cfu/ml	0	0	IDM
Mould and Yeast, cfu/ml	0	0	AOAC 995.21
Staphylococcus aeurus, cfu/ml	0	NS	AOAC 975.55
Clostridium perfringenes, cfu/ml	0	0	AOAC 976.30
Salmonella spp., cfu/ml	0	NS	AOAC 967.26
Shigella spp., cfu/ml	0	NS	ISO 21567
Vibrio spp., cfu/ml	0	NS	9260H APHA
Pseudomonas aeroginosa, cfu/ml	0	0	9213E APHA

NOTES ON ABBREVIATIONS

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COMMENT

The physicochemical and microbiological quality of the R.O water sample is satisfactory.
Hence, the R.O water sample is certified fit for use.

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IPAN REGISTERED LABORATORY
Practice Licence No. 18175
Signature
Date 27-05-2025

INSTITUTE OF PUBLIC ANALYSTS OF NIGERIA
Morphy Ugar-Ifu
F/L No.: 00728
No 000338
Valid till Dec. 31st, 2025