



Certificate of Accreditation

This is to certify that

BATO CHEMICAL LABORATORIES LTD

PLOT A, BLOCK 11A, LASUN OLAITAN AVENUE, RIVERVIEW ESTATE, ISHERI NORTH, OPIC ESTATE, OGUN STATE.

Has been assessed by the Nigeria National Accreditation System and meets the requirements of the International Standard

ISO/IEC 17025:2017

with demonstrated technical competence in the field of

Testing

for the specific services listed on the approved Scope of Accreditation.

On behalf of the Nigeria National Accreditation System:



Issue date: JANUARY 16, 2025
Valid through: JANUARY 15, 2027

Scope of Accreditation

Chemical Testing Laboratory BATO CHEMICAL LABORATORIES LTD

PLOT A, BLOCK 11A, LASUN OLAITAN AVENUE, RIVERVIEW ESTATE, ISHERI NORTH, OPIC ESTATE, OGUN STATE.

Schedule NO.: T 0003C

Issue No. 4: 16 01, 2025

Valid to : 15 01, 2027

Materials/ Products Tested	Types of Tests/ Properties Measured / Range of Measurements	Standard Specifications/Equipment / Techniques Used	EQUIPMENT/MEDIA
MICRO-NUTRIENTS			
FOOD GRADE SALT/SEASONING AGENTS	Monosodium Glutamate	AOAC 970.37 Titrimetric Method	21ST EDITION, 2019
	Iodine	AOAC 925.56 Titrimetric Method	21ST EDITION, 2019
MICROBIOLOGICAL PARAMETERS			
FOODS / FOOD PRODUCTS	Coliforms	AOAC 966.24	21ST EDITION, 2019
	E.coli	AOAC 966.24	21ST EDITION, 2019
	Faecal Streptococci	AOAC 966.24	21ST EDITION, 2019
	Staphylococcus	AOAC 987.09	21ST EDITION, 2019
	Yeast /Moulds	AOAC 940.37	21ST EDITION, 2019
	Listeria	AOAC 993.12	21ST EDITION, 2019
	Enterobacteriaceae	AOAC 2003.01	21ST EDITION, 2019
	Bacillus Cereus	AOAC 966.23	21ST EDITION, 2019
	Camphylobacter	APHA 9260G	21ST EDITION, 2019
	Moisture content	AOAC 990.20	Dry oven
	Total Ash content	AOAC 923.03	Muffle furnace

Materials/ Products Tested	Types of Tests/ Properties Measured / Range of Measurements	Standard Specifications/Equipment / Techniques Used	EQUIPMENT/MEDIA
FLOUR/FLOUR BASED PRODUCTS	Protein	AOAC 930.25	Kjeldhal
	Carbohydrate	AOAC 930.25	Calculation
	Total Fat Content	AOAC 963.15	Extraction
	Copper	AOAC 999.11	AAS
	Iron	AOAC 999.11	AAS
	Zinc	AOAC 999.11	AAS
	Sodium	AOAC 966.16	Flame photometer
	Potassium	AOAC 965.30	Flame Photometer
FLOUR AND FLOUR PRODUCTS/FOODS AND FOOD PRODUCTS	ENERGY VALUE	AOAC 930.25	CALCULATED
	PH	AOAC 930.25	pH METER
	REFRACTIVE INDEX	AOAC 945.02	REFRACTOMETER
	ACID VALUE	AOAC 940.28	TITRIMETRY
	FREE FATTY ACID	AOAC 940.28	TITRIMETRY
	PEROXIDE VALUE	AOAC 965.33	TITRIMETRY
	SAPONIFICATION VALUE	AOAC 920.160	TITRIMETRY
	SPECIFIC GRAVITY	AOAC 920.212	REFRACTOMETER
	UNSAPONIFIABLE MATTER	AOAC 933.08	GRAVIMETRY

Materials/ Products Tested	Types of Tests/ Properties Measured / Range of Measurements	Standard Specifications/Equipment / Techniques Used	EQUIPMENT/MEDIA
FLOUR AND FLOUR PRODUCTS/FOODS AND FOOD PRODUCTS	ACID INSOLUBLE ASH	AOAC 975.12	GRAVIMETRY
	REDUCING SUGAR	AOAC 930.183	TITRIMETRY
	TITRATABLE ACIDITY	AOAC 942.15	TITRIMETRY
TRACE MEALS ANALYSIS IN FOODS/WATER/SOIL/ CHEMICALS /PACKAGING MATERIALS/MEDICAL DEVICES AND OTHER FINISHED PRODUCTS	ARSENIC	AOAC 986.15F	AAS
	CADMIUM	AOAC 999.11	AAS
	CALCIUM	AOAC 999.11	AAS
	SODIUM	AOAC 999.11	AAS
	CHROMIUM (Hexavalent)	AOAC 999.11	AAS
	LEAD	AOAC 999.11	AAS
	MAGNESSIUM	AOAC 999.11	AAS
	MANGANESE	AOAC 999.11	AAS
	COBALT	AOAC 999.11	AAS
	COPPER	AOAC 999.11	AAS
	TIN	AOAC 999.11	AAS
	ALUMINIUM	AOAC 999.11	AAS
	LISTERIA	AOAC 993.12	POUR PLATE/AUTO COLONY COUNTER
	SALMONELLA	AOAC 967.27	POUR PLATE/AUTO COLONY COUNTER
	SHIGELLA	AOAC 967.27	POUR PLATE/AUTO COLONY COUNTER
CAMPYLOBACTER	APHA 9260G	POUR PLATE/AUTO COLONY COUNTER	

Materials/ Products Tested	Types of Tests/ Properties Measured / Range of Measurements	Standard Specifications/Equipment / Techniques Used	EQUIPMENT/MEDIA
TRACE MEALS ANALYSIS IN FOODS/WATER/SOIL/ CHEMICALS /PACKAGING MATERIALS/MEDICAL DEVICES AND OTHER FINISHED PRODUCTS	BACILLUS CEREUS	AOAC 966.23	POUR PLATE/AUTO COLONY COUNTER
	VIBRIO	AOAC 988.20	POUR PLATE/AUTO COLONY COUNTER
	CHOLEREA	AOAC 988.20	POUR PLATE/AUTO COLONY COUNTER
	CLOSTRIDIA	APHA 9221D	POUR PLATE/AUTO COLONY COUNTER
	PSEDOMONAS	APHA 9215B	POUR PLATE/AUTO COLONY COUNTER
	LEGIONELLA	APHA 926.	POUR PLATE/AUTO COLONY COUNTER
	AEROBIC PLATE COUNT	AOAC 966.23c	POUR PLATE/AUTO COLONY COUNTER
FOODS/FOOD PRODUCTS AGRICULTURAL PRODUCTS	AFLATOXIN B1	AOAC 994.08	HPLC /FLD
	AFLATOXIN B2		
	AFLATOXIN G1		
	AFLATOXIN G2		
	TOTAL AFLATOXIN		
FOODS/FOOD PRODUCTS AGRICULTURAL PRODUCTS / WATER	PESTICIDES RESIDUE	QUECHER'S	GC/MS
MEDICAL DEVICES	STERILITY	USP CHAPTER 71 & ISO 11737	MPN (Most Probable Number)
	BIO BURDEN	USP CHAPTER 71 & ISO 11737	Membrane Filtration

Materials/ Products Tested	Types of Tests/ Properties Measured / Range of Measurements	Standard Specifications/Equipment / Techniques Used	EQUIPMENT/MEDIA
MEDICAL DEVICES	ENDOTOXIN	USP CHAPTER 71 & ISO 11737	KIT
	BIOLOGICAL INDICATOR	USP CHAPTER 71 & ISO 11737	MPN (Most Probable Number)
FOODS/FOOD PRODUCTS/ OIL/FATS AND VITAMIN PREMIX CONCENTRATE SAMPLES	Vitamin A	AOAC 2002.06, AOAC 960.45	HPLC/UV DETECTOR
	Vitamin B1	AOAC 2002.06, AOAC 960.45	HPLC/UV DETECTOR
	VITAMIN B2	AOAC 2002.06, AOAC 960.45	HPLC/UV DETECTOR
	VITAMIN B3	AOAC 2002.06, AOAC 960.45	HPLC/UV DETECTOR
	VITAMIN B6	AOAC 2002.06, AOAC 960.45	HPLC/UV DETECTOR
	VITAMIN C	AOAC 2002.06, AOAC 960.45	HPLC/UV DETECTOR
WATER / WASTE WATER /SOIL	ELECTRICAL CONDUCTIVITY, umhos/cm,	ASTM D1175	CONDUCTIVITY METER
	TURBIDITY	ASTM D6855-03	TURBIDIMETRY
	pH	ASTM D1293	pH METER
	TOTAL DISSOLVED SOLIDS	ASTM D5907-03	OVEN/ANALYICAL BALANCE
	TOTAL SOLIDS	ASTM D5907-03	OVEN/ANALYICAL BALANCE
	TOTAL HARDNESS-EDTA	APHA 2340C	TITRIMETRY
	TOTAL ALKALINITY	ASTM D1067	TITRIMETRY
	TOTAL ACIDITY	ASTM D1067	TITRIMETRY
	RESIDUAL CHLORINE	ASTM D1253	TITRIMETRY
	FREE CARBONDIOXIDE	APHA 4500C	TITRIMETRY
	AMMONIACAL NITROGEN	APHA 4500 - NH ₃ C	TITRIMETRY

Materials/ Products Tested	Types of Tests/ Properties Measured / Range of Measurements	Standard Specifications/Equipment / Techniques Used	EQUIPMENT/MEDIA
WATER / WASTE WATER /SOIL	CHLORIDE	ASTM D512B	AGENTOMETRIC TITRIMETRY
	NITRATE	ASTM D992	UV/VISIBLE SPECTROPHOTOMETER
	NITRITE	APHA 4500A	UV/VISIBLE SPECTROPHOTOMETER
	PHOSPHATE (Total)	ASTM D515	UV/VISIBLE SPECTROPHOTOMETER
	SULPHATE	ASTM D516	TURBIDIMETRY
	SILICA	ASTM D859-00	UV/VISIBLE SPEC
	DISSOLVED OXYGEN, mg/L	ASTM D888-03	DO METER
	COD, mg/L	ASTM D1252-00	TITRIMETRY
	PHENOL, mg/L	ASTM D1783	UV/VISIBLE SPECTRPPHOTOMETER
	DETERGENT, mg/L	ASTM D2330-02	UV/VISIBLE SPECTRPPHOTOMETER
	OIL/GREASE, mg/L	ASTM D4281-01	GRAVIMETRY
	BICARBONATES, mg/L	ASTM D1691A	TITRIMETRY
	CARBONATES, mg/L	ASTM D1067	TITRIMETRY
	TOTAL PETROLEUM HYDROCARBON (TPH)	USEPA 8015D/2024	GC/FID
	BTEX	USEPA 8260D/2006	GC/FID
POLY AROMATIC HYDROCARBON (PAH)	USEPA 8270E/2014	GC/FID	

Materials/ Products Tested	Types of Tests/ Properties Measured / Range of Measurements	Standard Specifications/Equipment / Techniques Used	EQUIPMENT/MEDIA
FOOD/DRINKS/VITAMIN CONCENTRATES & PREMIXES	VITAMIN A	AOAC 960.45, AOAC 2002.06	HPLC/UV DETECTOR
	VITAMIN B1	AOAC 960.45, AOAC 2002.06	HPLC/UV DETECTOR
	VITAMIN B2	AOAC 960.45, AOAC 2002.06	HPLC/UV DETECTOR
	VITAMIN B3	AOAC 960.45, AOAC 2002.06	HPLC/UV DETECTOR
	VITAMIN B6	AOAC 960.45, AOAC 2002.06	HPLC/UV DETECTOR
	VITAMIN C	AOAC 960.45, AOAC 2002.06	HPLC/UV DETECTOR