

# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

BIOTECHNOLOGY LABORATORIES UNIT		
Products Names	Parameters	Standard Operating Procedures (SOP)/ Reference Standard Methods
Water	Total Viable Count	NQTLTD/ MIC/ SOP-1 In accordance with ISO 6222
	Total coliforms	NQTLTD/ MIC/SOP-4 in accordance with ISO 9308-1
	Escherichia coli	NQTLTD/ MIC/ SOP-4 In accordance with ISO 9308-1 NQTLTD/ MIC/ SOP-9 In accordance with ISO 19250
	Salmonella spp	
	Pseudomonas aeruginosa	NQTLTD/ MIC/ SOP-13 In accordance with ISO16266
	Intestinal enterococci/ Enterococcus faecalis	NQTLTD/ MIC/ SOP-15 In accordance with ISO7899
	Spores of Sulfite reducing anaerobes	In accordance with ISO 6461-2
	Clostridium perfringens	NQTLTD/ MIC/ SOP-22 In accordance ISO14189
Food, feed and environmental samples	Total viable counts	NQTLTD/ MIC/SOP-2 in accordance with ISO 4833-1
	Total coliforms	NQTLTD/ MIC/ SOP-SOP-3 in accordance with ISO 4832
	Escherichia coli	NQTLTD/ MIC/ SOP-8 in accordance with ISO 16649-1
	Salmonella spp	NQTLTD/ MIC/ SOP-10 In accordance with ISO 6579
	Coagulase-positive staphylococci (Staphylococcus aureus and other species)	NQTLTD/ MIC/ SOP-12 In accordance with ISO 6888-1
	Enterobacteriaceae	NQTLTD/ MIC/ SOP-14 in accordance with ISO 21528- 2

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	Vibrio parahaemolyticus	NQTLTD/ MIC/ SOP-17 In accordance with 21872-1
	Vibrio cholerae	NQTLTD/ MIC/ SOP-17 In accordance with 21872-1
	Sulfite reducing anaerobes	In accordance with ISO 15213
	Shigella ssp	NQTLTD/ MIC/ SOP-18 In accordance with ISO 21567
	Campylobacter spp	NQTLTD/ MIC/ SOP-19 In accordance with ISO 10272-1
	Listeria Monocytogenes ( enumeration )	NQTLTD/ MIC/ SOP-20 Part 1 In accordance ISO 11290-1
	Listeria Monocytogenes ( detection )	NQTLTD/ MIC/ SOP-20 part 2 in accordance ISO 11290-2
	Clostridium perfringens	NQTLTD/ MIC/ SOP-21 in accordance ISO 7939
	Clostridium perfringens	NQTLTD/ MIC/ SOP-22 In accordance ISO 14189
	Bacillus cereus	NQTLTD/ MIC/ SOP-23 in accordance with ISO 7932
	Mesophilic lactic acid bacteria	NQTLTD/ MIC/ SOP-24 in accordance with ISO 15214
Food, feed and environmental samples with Greater water activity than 0.95	Yeasts & Moulds	NQTLTD/ MIC/ SOP-5 in accordance with ISO 21527-1
Food, feed and environmental samples with water activity Less than 0.95	Yeasts & Moulds	NQTLTD/ MIC/ SOP-6 In accordance with ISO 21527-2



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Milk and milk Products	Yeasts & Moulds	NQTLTD/ MIC/ SOP-7 In accordance with ISO 661
Cosmetic	Pseudomonas aeruginosa	NQTLTD/ MIC/ SOP-16 In accordance with ISO 22717
	Aerobic mesophilic bacteria	NQTLTD/MIC/SOP-28 in accordance with ISO 21149
	Staphylococcus aureus	NQTLTD/MIC/SOP-27 in accordance with ISO 22718

### CHEMICAL LABORATORIES UNIT-FOOD AGRICULTURE AND MYCOTOXINS

Products Names	Parameters	Standard Operating Procedures (SOP)/reference or Standard Methods
Tea and tea products	Moisture content	NQTLTD/FAL/SOP-7
	Dry matter	NQTLTD/FAL/SOP-7
	Total ash content	NQTLTD/FAL/SOP-8
	Acid insoluble ash	NQTLTD/FAL/SOP-10
	Water soluble ash	NQTLTD/FAL/SOP-12
	Alkalinity of water soluble ash	NQTLTD/FAL/SOP-13
	Water extract	NQTLTD/FAL/SOP-11
	Crude fiber	NQTLTD/FAL/SOP-9
	Moisture content	NQTLTD/FAL/SOP-14

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Coffee and coffee products	Total ash	NQTLD/FAL/SOP-15
	Acid insoluble ash	NQTLD/FAL/SOP-16
	Alkalinity of water soluble ash	NQTLD/FAL/SOP-18
	Petroleum ether extract	NQTLD/FAL/SOP-19
	Water soluble matter	NQTLD/FAL/SOP-17
Bread	Moisture content	RS EAS 43
	pH of aqueous extract	RS EAS 43
	Acid insoluble ash	RS EAS 43
	Crude fiber	NQTLD/FAL/SOP-9
	Fat content	NQTLD/FAL/SOP-6
	Aflatoxin (B <sub>1</sub> ,B <sub>2</sub> G <sub>1</sub> &G <sub>2</sub> )	NQTLD/FAL/SOP-1
Rice	Head rice	ISO 7301
	Broken rice	ISO 7301
	Damaged rice	ISO 7301
	Chalky	ISO 7301
	Red or redstreaked	ISO 7301
	Organic matters	ISO 7301
	Inorganic matters	ISO 7301
	Paddy grain	ISO 7301
	Moisture content	NQTLD/FAL/SOP-38
	Live weevils	ISO 7301
	Filth	ISO 7301
	Aflatoxin (B <sub>1</sub> ,B <sub>2</sub> G <sub>1</sub> &G <sub>2</sub> )	NQTLD/FAL/SOP-1
Milk powder	Fat content	GEA Niro A9a
	Protein content	NQTLD/FAL/SOP-5
	Total solid	GEA Niro A 1 b
	Total ash	GEA Niro A 25 a
	Moisture content	GEA Niro A1b
	Insolubility index	GEA Niro A3a

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	Titrateable acidity	GEA Niro A19a
	Aflatoxin M1	NQTLD/FAL/SOP-31_HPTLC
Fresh milk	Fat content	NQTLD/FAL/SOP-24
	Total solid	NQTLD/FAL/SOP-24
	Freezing point depression	NQTLD/FAL/SOP-24
	Lactose	NQTLD/FAL/SOP-24
	Protein content	NQTLD/FAL/SOP-24
	pH	RS 38
	Solid non fat	NQTLD/FAL/SOP-24
	Acidity	NQTLD/FAL/SOP-24
	pH variation	ISO 26323
	Foreign matters	AOAC 952.21
	Aflatoxin M1	AOAC 980.21
	Titrateable acidity	AOAC 970.5
Maize grains	Moisture content	NQTLD/FAL/SOP-38
	Foreign matter	ISO 605
	Inorganic matter	ISO 605
	Broken grains	ISO 605
	Rotten and diseased grains	ISO 605
	Total defective grains	ISO 605
	Live weevils	ISO 605
	filth	ISO 605
Aflatoxin (B <sub>1</sub> ,B <sub>2</sub> G <sub>1</sub> &G <sub>2</sub> )	NQTLD/FAL/SOP-1	
Dry beans	Moisture content	NQTLD/FAL/SOP-38
Cassava flour and ground cassava	Moisture content	NQTLD/FAL/SOP-38
	Crude ash	NQTLD/FAL/SOP-39
	Acid insoluble ash	NQTLD/FAL/SOP-4
	Crude fibers	NQTLD/FAL/SOP-42
	Starch	AOAC 996.11

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	Aflatoxin (B <sub>1</sub> ,B <sub>2</sub> G <sub>1</sub> &G <sub>2</sub> )	NQTLD/FAL/SOP-1
	Hydrogen cyanide(HCN)	NQTLD/ICH/SOP-30
Processed cereals(flour)	Moisture content	NQTLD/FAL/SOP-38
	Total ash	NQTLD/FAL/SOP-8
	Acid insoluble ash	NQTLD/FAL/SOP-4
	Fiber content	NQTLD/FAL/SOP-42
	Fat content	NQTLD/FAL/SOP-41
	protein	NQTLD/FAL/SOP-40
	Granularity	RS 268:2007
	Starch	AOAC 996.11
	Total carbohydrates	AOAC 986.25
	Aflatoxin (B <sub>1</sub> ,B <sub>2</sub> G <sub>1</sub> &G <sub>2</sub> )	NQTLD/FAL/SOP-1
	Animal feeds	Moisture content
Crude ash		NQTLD/FAL/SOP-39
Acid insoluble ash		NQTLD/FAL/SOP-4
Crude fiber		NQTLD/FAL/SOP-42
Crude fat		ISO 12099
Crude protein		ISO 12099
Total carbohydrates		ISO 12099
Aflatoxin (B <sub>1</sub> ,B <sub>2</sub> G <sub>1</sub> &G <sub>2</sub> )		NQTLD/FAL/SOP-1
Biscuits	Moisture content	NQTLD/FAL/SOP-20
	Acid insoluble ash	NQTLD/FAL/SOP-21
Macadamia kernels	Moisture content	NQTLD/FAL/SOP-38
	Total ash	NQTLD/FAL/SOP-38
	Oil content	ISO 659
	Shrunken and shriveled kernels	RS 170
	Mouldy kernels	RS 170
	Rotten and insects damaged	RS 170
	Live insects	ISO 605

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	Foreign matters	ISO 605
	Aflatoxins B1,B2,G1 and G2	NQTLD/FAL/SOP-1
Groundnuts	Moisture content	NQTLD/FAL/SOP-38
	Damaged kernels	ISO 605
	Other defects	ISO 605
	Unshelled kernels	EAS 46
	Total defectives kernels	EAS 46
	Foreign matter	EAS 46
	Oil content	ISO 659
	Aflatoxins B1,B2,G1 and G2	NQTLD/FAL/SOP-1
Tofu	Moisture content	NQTLD/FAL/SOP-38
	Crude fat	ISO 659
	Crude protein	NQTLD/FAL/SOP-5
Urea	Moisture	NQTLD/FAL/SOP-28
	Nitrogen	NQTLD/FAL/SOP-40
	Ash	AOAC 955.03
	pH	RS 71
NPK	Moisture	NQTLD/FAL/SOP-28
	Nitrogen	NQTLD/FAL/SOP-40
	Phosphorus	KS 157:1998
	Potassium	NQTLD/ICH/SOP-16
	pH	RS 71
Fresh fish and beef	Formaldehyde	NQTLD/FAL/SOP-50
Calcium ammonium nitrate	Moisture	NQTLD/FAL/SOP-28
	Nitrogen	NQTLD/FAL/SOP-40
Potassium chloride(MOP)	Moisture	NQTLD/FAL/SOP-28
	Potassium	NQTLD/ICH/SOP-16
	pH	RS 71
DAP/MAP	Moisture	NQTLD/FAL/SOP-28
	Nitrogen	NQTLD/FAL/SOP-40



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	phosphorus	AOAC 969.02
	pH	RS 71
Compost/organic manure	Moisture	NQTLD/FAL/SOP-28
	Nitrogen	NQTLD/FAL/SOP-40
	Phosphorus	AOAC 969.02
	Potassium	NQTLD/ICH/SOP-16
	Organic matters	RS 73:2013
	C/N ratio	RS 73:2013
	PH	RS 71:2007

### CHEMICAL LABORATORIES UNIT-ORGANIC CHEMISTRY

Products Names	Parameters	Standard Operating Procedures (SOP)/reference or Standard Methods
Alcoholic beverages & carbonated soft drinks	Ethyl alcohol content	NQTLD/OCH/SOP-20
	Total acids	
	Volatile acids	
	Total Sulfur dioxide(T-SO <sub>2</sub> )	
	pH	
	Glucose fructose	
	Malic acid	
	Citric acid	
	Tartaric acid	
	Carbon dioxide(CO <sub>2</sub> )	
	Density	
	Folin C index	
	Fructose	
	Free sulfur dioxide(F-SO <sub>2</sub> )	
Glycerol		



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	Reducing sugar	
	pH for cloud beer	
	Sorbic acid	
	Total dissolved solids	AOAC 932-12-1980
	Aldehydes and acetaldehydes	NQTLD/OCH/SOP-32
	Esters as ethyl acetate	
	Methanol	
	1-Propanol	
	2-Propanol or Isopropanol	
	1-Butanol	
	2-Butanol	
	1-Pentanol or n-Pentanol or amyl alcohol	
	Iso-amyl alcohol	
	Total solids	NQTLD/OCH/SOP-6
Skincare creams, lotions ,gel	Thermal stability	NQTLD/OCH/SOP - 16
	PH range	NQTLD/OCH/SOP - 14
	Total fatty substances content	NQTLD/OCH/SOP - 15
	hydroquinone	NQTLD/OCH/SOP - 13
Pomades and solid brilliantine	Sulphate ash	NQTLD/OCH/SOP-18
Hair cream	Thermal stability	NQTLD/OCH/SOP - 16
	pH range	NQTLD/OCH/SOP - 34
	Distillation	ASTM D86
	Viscosity index	ASTM D445-09
	Kinematic viscosity	
	Specific gravity/ Relative density	ASTM D1298
Kerosene	Distillation	ASTM D86
	Viscosity index	ASTM D445-09
	Kinematic viscosity	

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	Specific gravity/ Relative density	ASTM D1298
	API Gravity	
	Distillation	ASTM D86
	Colour	Visual inspection
	Appearance	
	Density	ASTM D4052
Jet A1	Appearance	Visual inspection
	Distillation	ASTM D86
	Density	ASTM D4052
Diesel or gasoil	Flash point	ASTM D93
	Distillation	ASTM D86
	Kinematic viscosity	ASTM D445-09
	Appearance	Visual inspection
	Density	ASTM D4052
Engine oil	Flash point	ASTM D93
	Distillation	ASTM D86
	Kinematic viscosity	ASTM D445-09
	Appearance	Visual inspection
	Density	ASTM D4052
Gasoline	Distillation	ASTM D86
	Density	ASTM D4052
	Color	Visual inspection
Sanitary towels	Absorbency capacity	NQTLD/OCH/SOP - 21
	pH value	NQTLD/OCH/SOP - 23
	Moisture content of filler material	NQTLD/OCH/SOP - 22
Toilet paper	Water absorption	NQTLD/OCH/SOP - 36
	pH value, hot extract	NQTLD/OCH/SOP - 35
	Moisture content	NQTLD/OCH/SOP - 37

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Scouring powder	pH of 1% solution	NQTLD/OCH/SOP -42
	Volatile matter	NQTLD/OCH/SOP -38
	Free alkali content	NQTLD/OCH/SOP -08
	Alkali salts content	NQTLD/OCH/SOP -07
	Matter insoluble in water	NQTLD/OCH/SOP -10
Skin powder	Matter insoluble in boiling water	NQTLD/OCH/SOP - 29
	Moisture and volatile matter	NQTLD/OCH/SOP - 31
	pH of aqueous suspension	NQTLD/OCH/SOP - 30
Laundry bar soap	Total fatty matter	NQTLD/OCH/SOP - 12
	Matter insoluble in water	NQTLD/OCH/SOP - 10
	Matter insoluble in ethanol	NQTLD/OCH/SOP - 11
	Moisture and volatile matter content	NQTLD/OCH/SOP - 38
	Total free alkali as NaOH	NQTLD/OCH/SOP - 08
	Total alkali Content	NQTLD/OCH/SOP - 07
	Free caustic alkali as NaOH	NQTLD/OCH/SOP - 09
Liquid detergent	Solubility in water	NQTLD/OCH/SOP - 33
	Rinsing properties	NQTLD/OCH/SOP -39
	pH at 27 degree Celsius at 1% solution	NQTLD/OCH/SOP - 24
	Matter insoluble in water	NQTLD/OCH/SOP - 10
	pH value range	NQTLD/OCH/SOP - 24
Toilet soap	Total fatty matter	NQTLD/OCH/SOP - 12
	Matter insoluble in ethanol	NQTLD/OCH/SOP - 11
	Free caustic alkali as NaOH	NQTLD/OCH/SOP - 09
Liquid soap	Matter insoluble in ethanol	NQTLD/OCH/SOP - 11
	Free caustic alkali as K <sub>2</sub> O	NQTLD/OCH/SOP - 09
	pH	NQTLD/OCH/SOP - 19
Essential Oil	Chromatographic profile	ISO 11024
	Appearance	Physical inspection
	Color	Physical inspection

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	Odor	Physical inspection
	Relative Density	ISO 279
	Refractive Index	ISO 280
	Optical Rotation	ISO 592
	Miscibility in ethanol	ISO 875
	Flash point	ASTM D93
Cologne	Alcohol content	RS EAS 335:2013 ANNEX A
	Stability of smell	RS EAS 335:2013 ANNEX B
	Cloud temperature	RS EAS 335:2013 ANNEX C
	pH	RS EAS 335:2013 ANNEX D
Perfume	Alcohol content	RS 408:2019 ANNEX A
	Stability of smell	RS 408:2019 ANNEX B
	Cloud temperature	RS 408:2019 ANNEX C
	pH	RS 408:2019 ANNEX D
Bleach	Available Oxygen	ASTM D2180 – 17
	Available Chlorine	EAS 295:2021 ANNEX A
	Sodium Hydroxide	EAS 295:2021 ANNEX B
	pH	RS ISO 4316
Air freshener	Delivery rate	RS EAS 956:2020 ANNEX A
	Spray test	RS EAS 956:2020 ANNEX D
	General leakage	RS EAS 956:2020 ANNEX F
	Stability of smell	RS EAS 956:2020 ANNEX G
	Non Volatile matter	RS EAS 956:2020 ANNEX K
	pH	EAS 847-17



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Glass Cleaner	Water content	RS 283:2017 ANNEX C
	Non-Volatile matter	RS 283:2017 ANNEX D
	Specific gravity	RS 283:2017 ANNEX G
	Flash point	RS 283:2017 ANNEX F
	pH	RS 283:2017 ANNEX E
Wipes	pH	RS ISO 3071
	Moisture content	RS 439:2021 ANNEX C
Shampoo	Total fatty matter	EAS 847-27
	Free Caustic alkali	EAS 847-28
	Matter insoluble in ethanol	EAS 847-3, ISO 673
	pH	EAS 847-17
Diapers	pH	RS ISO 3071
	Absorptive capacity	RS EAS 969:2020 ANNEX A
Hair dye	Aryl diamine	RS EAS 461:2013 ANNEX A
	pH	RS EAS 461:2013 ANNEX A

### CHEMICAL LABORATORIES UNIT-INORGANIC CHEMISTRY

Products Names	Parameters	Standard Operating Procedures (SOP)/reference or Standard Methods

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Physical and chemical parameters in water	pH	NQTLT/ICH/SOP-15
	Total Dissolved Solids TDS	TDS/CONDUCTIVITY METER
	Total Hardness	NQTLT/ICH/SOP-22
	Turbidity	NQTLT/ICH/SOP-29
	Alkalinity	EPA Methods 310.1
	Electrical Conductivity	NQTLT/ICH/SOP-28
	Sulphate as SO <sub>4</sub> <sup>2-</sup>	NQTLT/ICH/SOP-14
	Free Chlorine	ISO 7393
Water (analysis of heavy metals by AAS)	Chloride Cl <sup>-</sup>	NQTLT/ICH/SOP-8
	Sodium as Na	NQTLT/ICH/SOP-13
	Potassium as K	NQTLT/ICH/SOP-13
	Magnesium as Mg	NQTLT/ICH/SOP-13
	Manganese as Mn	NQTLT/ICH/SOP-13
	Zinc as Zn	NQTLT/ICH/SOP-34
	Iron as Fe	NQTLT/ICH/SOP-13
	Cadmium as Cd	NQTLT/ICH/SOP-13
	Chromium as Cr	NQTLT/ICH/SOP-13
	Tin as Sn	NQTLT/ICH/SOP-13
	Aluminium as Al	NQTLT/ICH/SOP-13
Metals analysis in digestible samples by AAS	Barium as Ba	NQTLT/ICH/SOP-13
	Sodium as Na	NQTLT/ICH/SOP-12
	Potassium as K	NQTLT/ICH/SOP-12
	Magnesium as Mg	NQTLT/ICH/SOP-12
	Manganese as Mn	NQTLT/ICH/SOP-12
	Zinc as Zn	NQTLT/ICH/SOP-12
	Iron as Fe	NQTLT/ICH/SOP-12
	Cadmium as Cd	NQTLT/ICH/SOP-12
Chromium as Cr	NQTLT/ICH/SOP-12	

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	Tin as Sn	NQTLD/ICH/SOP-12
	Aluminium as Al	NQTLD/ICH/SOP-12
	Barium as Ba	NQTLD/ICH/SOP-12
	Copper as Cu	NQTLD/ICH/SOP-12
	Nickel as Ni	NQTLD/ICH/SOP-12
	Cobalt as Co	NQTLD/ICH/SOP-12
Analysis of heavy metals by ICP/MS	Lead as Pb	ISO 172924:2016
	Arsenic as As	ISO 172924:2016
	Mercury as Hg	ISO 172924:2016
	Cadmium as Cd	ISO 172924:2016
	Tin as Sn	ISO 172924:2016
	Thallium as Tl	ISO 172924:2016
	Molybdenum as Mo	ISO 172924:2016
	Aluminium as Al	ISO 172924:2016
	Niobium as Nb	ISO 172924:2016
	Cesium as Cs	ISO 172924:2016
	Francium as Fr	ISO 172924:2016
	Strontium as Sr	ISO 172924:2016
	Barium as Ba	ISO 172924:2016
	Radium as Ra	ISO 172924:2016
	Scandium as Sc	ISO 172924:2016
	Yttrium as Y	ISO 172924:2016
	Aluminium as Al	ISO 172924:2016
	Rubidium as Rb	ISO 172924:2016
	Titanium as Ti	ISO 172924:2016
	Vanadium as V	ISO 172924:2016
Chromium as Cr	ISO 172924:2016	
Gallium as Ga	ISO 172924:2016	
Germanium as Ge	ISO 172924:2016	
Arsenic as As	ISO 172924:2016	

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	Zirconium as Zr	ISO 172924:2016
	Thallium as Tl	ISO 172924:2016
	Mercury as Hg	ISO 172924:2016
	Niobium as Nb	ISO 172924:2016
	Molybdenum as Mo	ISO 172924:2016
	Ruthenium as Ru	ISO 172924:2016
	Rhodium as Rh	ISO 172924:2016
	Palladium as Pd	ISO 172924:2016
	Gold as Au	ISO 172924:2016
	Cadmium as Cd	ISO 172924:2016
	Tin as Sn	ISO 172924:2016
	Antimony as Sb	ISO 172924:2016
	Indium as In	ISO 172924:2016
	Platinum as Pt	ISO 172924:2016
	Hafnium as Hf	ISO 172924:2016
	Thorium as Th	ISO 172924:2016
	Bismuth as Bi	ISO 172924:2016
	Tellurium as Te	ISO 172924:2016
	Silicon as Si	ISO 172924:2016
	Selenium as Se	ISO 172924:2016
Digestible samples(Food ,beverage, cosmetics and environmental related matrices) analysis of heavy metals by ICP/MS	Sodium as Na	NQTLD/ICH/SOP-12
	Potassium as K	NQTLD/ICH/SOP-12
	Magnesium as Mg	NQTLD/ICH/SOP-12
	Manganese as Mn	NQTLD/ICH/SOP-12
	Zinc as Zn	NQTLD/ICH/SOP-12
	Iron as Fe	NQTLD/ICH/SOP-12
	Copper as Cu	NQTLD/ICH/SOP-12
	Lead as Pb	NQTLD/ICH/SOP-12
	Arsenic as As	NQTLD/ICH/SOP-12
Mercury as Hg	NQTLD/ICH/SOP-12	



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	Cadmium as Cd	NQTL/ICH/SOP-12
	Tin as Sn	NQTL/ICH/SOP-12
	Thallium as Tl	NQTL/ICH/SOP-12
	Molybdenum as Mo	NQTL/ICH/SOP-12
	Aluminium as Al	NQTL/ICH/SOP-12
	Niobium as Nb	NQTL/ICH/SOP-12
	Cesium as Cs	NQTL/ICH/SOP-12
	Francium as Fr	NQTL/ICH/SOP-12
	Strontium as Sr	NQTL/ICH/SOP-12
	Radium as Ra	NQTL/ICH/SOP-12
	Scandium as Sc	NQTL/ICH/SOP-12
	Yttrium as Y	NQTL/ICH/SOP-12
	Aluminium as Al	NQTL/ICH/SOP-12
	Rubidium as Rb	NQTL/ICH/SOP-12
	Titanium as Ti	NQTL/ICH/SOP-12
	Vanadium as V	NQTL/ICH/SOP-12
	Chromium as Cr	NQTL/ICH/SOP-12
	Gallium as Ga	NQTL/ICH/SOP-12
	Germanium as Ge	NQTL/ICH/SOP-12
	Arsenic as As	NQTL/ICH/SOP-12
	Zirconium as Zr	NQTL/ICH/SOP-12
	Thallium as Tl	NQTL/ICH/SOP-12
	Mercury as Hg	NQTL/ICH/SOP-12
	Niobium as Nb	NQTL/ICH/SOP-12
	Molybdenum as Mo	NQTL/ICH/SOP-12
Tomato paste	pH	ISO 1842-1991
Juices (soft beverages)	pH	AOAC 940.19
	Acidity	ISO 750
	Brix	AOAC 940.27
Honey	Moisture content	NQTL/ICH/SOP-36

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	Total ash	NQTLD/ICH/SOP-23
	Acidity	NQTLD/ICH/SOP-20
	pH	AOAC 945:27
	Fiehe's test	NQTLD/ICH/SOP-38
	Conductivity	RS 164
	Relative density	NQTLD/ICH/SOP-11
Sugar	Polarization	NQTLD/ICH/SOP-21
	Moisture content	NQTLD/ICH/SOP-25
	Sulfur dioxide	KS 05-58:1998
	Conductivity ash	NQTLD/ICH/SOP-26
	Color	KS 05-58:1998
Salts	sulfates	KS 05-2029:1989
	Total chloride as NaCl	NQTLD/ICH/SOP-37
	Iodine	NQTLD/ICH/SOP-17
	Moisture content	KS 05-2029:1989
	Water insoluble matter	ISO-2479-1972
Cooking oil	Refractive index	NQTLD/ICH/SOP-18
	Moisture and volatile matter	NQTLD/ICH/SOP-25
	Peroxide value	NQTLD/ICH/SOP-5
	Saponification value	NQTLD/ICH/SOP-6
	Acid value	NQTLD/ICH/SOP-7
	Relative density	KS 05-2029:1989
	Iodine value	NQTLD/ICH/SOP-19
	Soap content	NQTLD/ICH/SOP-3
Free fatty acid	NQTLD/ICH/SOP-31	

# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

Products Names	Parameters	Standard Operating Procedures (SOP)/reference or Standard Methods
CEMENT	Initial setting time	RS EAS 148-1
	Final setting time of cement	RS EAS 148-1
	Compressive strength of cement (including strength for 2days or 7days and 28 days strength)	RS EAS 148-1
	Lost on ignition	RS EAS 148-2
	Cement soundness	RS EAS 148-1
ROOFING SHEETS	Zinc coating mass and Base Metal thickness of roofing sheets	RS EAS 11
	Tensile strength of roofing sheets (3 pieces)	RS EAS 11
	Bending adhesion of roofing sheets (1piece)	RS EAS 468 RS EAS 410
	Marking of roofing of sheets	RS EAS 11 RS EAS 468 RS EAS 410
	Dimensional test of roofing sheets	RS EAS 11 ;RS EAS 468 ;RS EAS 410
Assembly/ Component	Load test	Product standard
Plastics pipes	Compression test	Product standard
	Heat reversion	Product standard
CEMENT BLOCKS /BRICKS	Water absorption of bricks and Blocks	RS 568
	Compressive strength of Bricks and blocks (price for 10 specimens/batch)	RS 568
	Dimensional test of bricks/ blocks	RS 568

# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

PAVING BLOCKS	Water absorption of Blocks (price for 10 specimens/batch)	RS 415
	Compressive strength of blocks (price for 10 specimens/batch)	RS 415
	Dimensional test of paving blocks	RS 415
BURNT BRICKS	Water absorption of burnt bricks (price for 10 specimens/batch)	RS 359
	Compressive strength of burnt bricks (price for 10 specimens/batch)	RS 359
	Dimensional test of burnt bricks	RS 359
CRAY ROOFING TILES	Flexural strength of roofing Tiles (price for 10 specimens/batch)	RS 358
	Water absorption test of roofing tiles (price for 10 specimens/batch)	RS 358
	Dimensional test roofing tiles	RS 358
CONCRETE	Compressive strength of hardened concrete cubes or cylinders (price for 3 specimens)	RS ISO1920-4
SAND	Particle size distribution by sieve analysis	RS 211-1
Plastic pipes	Resistance to internal hydrostatic pressure (1 to 4hrs)	ISO 1167-1
Plastic pipes	Resistance to internal hydrostatic pressure (100hrs)	ISO 1167-1
Plastics and Composite Materials (BML)	Tensile test	ISO 527-1, ISO 37



# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

MATERIAL TESTING LABORATORIES UNIT-DESTRUCTIVE MECHANICAL TESTS LABORATORY		
Products Names	Parameters	Standard Operating Procedures (SOP)/reference or Standard Methods
Steel bars for reinforcing of concrete (DMT)	Tensile strength/Yield strength/elongation	
	bar diameter 6mm	RS ISO 6892-1
	bar diameter 8mm	RS ISO 6892-1
	bar diameter 10mm	RS ISO 6892-1
	bar diameter 12mm	RS ISO 6892-1
	bar diameter 14mm	RS ISO 6892-1
	bar diameter 16mm	RS ISO 6892-1
	bar diameter 20mm	RS ISO 6892-1
	bar diameter 25mm	RS ISO 6892-1
	bar diameter 32mm	RS ISO 6892-1
	Dimensional test of steel bars	RS ISO 6935-1&2
	Three points Bend test of steel bars for reinforcing of concrete	
	bar diameter 6mm,8mm,10mm,12mm	ISO 15630-1
bar diameter 14mm and 16mm	ISO 15630-1	
Structural steels-Hollow sections (DMT)	Tensile strength(Min 3 strip pieces)	RS ISO 6892-1
	Dimensional test	ISO 4019
Steel plates and sheets	Tensile properties (3 pieces)	product related
	Dimensional test	product related



# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

polyethylene water tanks (BML)	Resistance to deformation	RS 128
	Tensile properties (6 pieces)	RS 128
	Dimensional test	RS 128

### MATERIAL TESTING LABORATORIES UNIT-NON-DESTRUCTIVE MECHANICAL TESTS LABORATORY

Products Names	Parameters	Standard Operating Procedures (SOP)/reference or Standard Methods
Metals (NDT)	Brinell Hardness of metals	RS ISO 6506-1
	Chemical composition (XRF test for up to 44 elements: (Na,Mg,Al,Si,P,S,Cl, K,Ca,Sc,Ti,V,Cr,Mn,Fe,Co,Ni,Cu,Zn,As,Se,Rb,Sr,Zr,Nb,Mo, Ru,Pd,Ag,Cd,Sn,Sb,Te,Cs,Ba, Hf,Ta,W,Au,Hg,Pb,Bi, Th and U)	NQTL/MTL/NDT/SOP-1
SOILS ROCKS & LIQUID SAMPLES	Chemical composition (XRF test for up to 44 elements: (Na,Mg,Al,Si,P,S,Cl, K,Ca,Sc,Ti,V,Cr,Mn,Fe,Co,Ni,Cu,Zn,As,Se,Rb,Sr,Zr,Nb,Mo, Ru,Pd,Ag,Cd,Sn,Sb,Te,Cs,Ba, Hf,Ta,W,Au,Hg,Pb,Bi, Th and U)	NQTL/MTL/NDT/SOP-1
ELECTRICAL CABLES (EEL)	Marking inspection	RS IEC 60227-1
	Chemical composition of cable conductor material	NQTL/MTL/NDT/SOP-1
	Resistance of electrical cables rolls.	RS IEC 60227-2



# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

ELECTRICAL BATTERIES (EEL)	Secondary batteries: Discharge Performance Test, for power storage batteries: Capacity range greater than 100Ah	Product Standard
	Secondary batteries: Charge and Discharge Performance Test, for car starter batteries and power storage batteries: Capacity range [50Ah-100Ah]	Product Standard
	Secondary batteries: Charge and Discharge Performance Test, for phone batteries computers batteries, portable medical devices batteries, CAR Capacity range : [10Ah - 50Ah[	Product Standard
	Secondary batteries: Charge and Discharge Performance Test for rechargeable -phones batteries, cylindrical batteries for small apparatus. Capacity range : below 10Ah	Product Standard
	Discharge _Only Performance Test for primary batteries	Product Standard
	Battery Voltage “as received”, primary and secondary batteries	Product Standard
	Batteries marking inspection	Product Standard
Solar Panel (EEL)	Solar panel performance test at Standard Test Conditions STC (Pmpp at STC, Voc at STC , Vmpp at STC, Isc at STC, Imp at STC)	Product Standard
	Field Service Test by Day: Maximum Power Test at STC and Insulation resistance of PV solar system installation tested on field field	Product Standard



# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

ELECTRIC LAMPS	Energy performance of house hold electric bulbs (Luminous Flux, lm Light efficiency, lm/w Energy Efficiency or Color Rendering Index (CRI), Power Factor (PF), b1Correlated Color Temperature (CCT) in Kelvin (°K), Light Distribution or Beam angle)	Product Standard
	Marking and labeling inspection	Product Standard
School chalk (NDT)	Elemental analysis/chemical composition	NQTL/MTL/NDT/SOP-1
	Moisture content of powder materials	EAS 25
	Product Dimensional test	EAS 25
	Product Marking inspection	EAS 25
Wax matches (NDT)	Burning quality	RS EAS 125
	Inspection of sticks	RS EAS 125

### MATERIAL TESTING LABOLATORIES UNIT-POLYMERS AND TEXTILE LABORATORY

Products Names	Parameters	Standard Operating Procedures (SOP)/reference or Standard Methods
CONDOMS (PTL)	Freedom from holes of condoms	RS ISO 4074
	Condom strength Bursting volume and Bursting pressure of condoms	RS ISO 4074
	Pack seal integrity of condoms	RS ISO 4074
	Condoms dimensions (width and length)	RS ISO 4074



# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

	Design and inspection of labeling requirements	RS ISO 4074
	Thickness of condoms and Quantity of lubricant in condom container	RS ISO 4074
MATRESS (PTL)	Tensile properties	EAS 378-1
	Tear resistance	EAS 378-1
	Density	EAS 378-1
	Dimensions	EAS 378-1
	Compression set (3 pieces)	EAS 378-1
	Marking inspection	EAS 378-1
LEATHER MATERIALS (PTL)	Tensile strength of leather materials and	ISO 3376
	Percentage extension of leather materials	
	Resistance to tearing load of leather materials	ISO 3377-1&2
	Thickness of leather materials	RS ISO 2589
	Flex resistance of leather materials	ISO 5402
	Apparent density	ISO 2420
TOILET PAPER (PTL)	Tensile strength	RS EAS 355

# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

	Tissue paper substance/grammage	RS EAS 355
	Dimensional test	RS EAS 355
	Design and inspection of labeling requirements	RS EAS 355
	Moisture content	ISO 287
base paper for waxed bread wrap (PTL)	Bursting strength	ISO 2758
	Tearing strength	ISO 1924
	Substance/grammage	ISO 536
paper serviettes (napkins) (PTL)	Tensile strength	ISO 12625-4
	Moisture content	ISO 287
	Dimensional test	ISO 22198
	Grammage	ISO 536
	Design and inspection of labeling requirements	RS EAS 861
Facial tissue paper (PTL)	Grammage	ISO 12625-6
	Dimensional test	ISO 22198
	Design and inspection of labeling requirements	RS EAS 862
	Tensile strength	ISO 12625-4
Office papers (PTL)	Grammage	ISO 536
	Moisture content	ISO 287
	Elmendorf Tear index	ISO 1974
	Water absorptiveness	ISO 535
Photocopy paper (PTL)	Grammage	ISO 536
	Moisture content	ISO 287
	Thickness	ISO 534
	Elmendorf Tear index	ISO 1974

# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

Cement bags paper (PTL)	Grammage	ISO 536
	Moisture content	ISO 287
	Tensile strength	ISO 1924-2
	Porosity or Air permeability	ISO 5636
	Elmendorf Tear resistance	ISO 1974
	Water absorptiveness	ISO 535
Waxed paper for bread wrap (PTL)	Heavy metal content	NQTL/MTL/NDT/SOP-1
	Grammage	ISO 536
Sack Kraft paper (PTL)	Grammage	ISO 536
	Moisture content	ISO 287
	Tensile strength	ISO 1924-3
	Water absorptiveness	ISO 535
	Tear index	ISO 1924-3
	Tensile index	ISO 1924-3
	Bursting strength	ISO 2758
Paper bags (PTL)	Grammage	ISO 536
	Bursting strength	ISO 2758
	Elmendorf Tearing resistance	ISO 1974
	Water absorptiveness	ISO 535
Wrapping paper (PTL)	Grammage	ISO 536
	Bursting strength	ISO 2758
	Tearing resistance	ISO 1974
TEXTILE (PTL)	Tensile strength	ISO 13934-1
	Tear strength	ISO 9073-4
	Specific weight(mass per unit area)	ISO 3801
	Dimensional test	ISO 22198
	Resistance to abrasion	ISO7784-1&2

# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

	Resistance to water penetration	ISO 811
	Color Fastness to weathering	ISO105-C06
	Color Fastness to washing	ISO 105-C06
	Color Fastness to Rubbing	ISO 105-X12
	Color measurement	Equipment method
	Color Fastness to light	Equipment method
	Fiber composition	ISO 1833
	Dimensions change after washing	ISO 5077
Paints and Coatings (PTL)	Dry film thickness test	ISO 16809
	Resistance to Abrasion	ISO7784-1&2
	Gloss value	ISO 2813
	Loss of Gloss to weathering	ISO 2813
	Density or Specific Gravity	ISO 2811-4
	Drying Time of paint	ISO 9117-3
	Hardness test	
	pH	RS EAS 851 2016
	Fineness of paint granules	ISO1524
	Non Volatile matter	ISO 3251
Cement (PTL)	Loss on Ignition	EAS 148-2
	Chloride content	EAS 148-2
	Sulphate content	EAS 148-2
Plastics and alternative Products to plastics (PTL)	Biodegradability	ISO 14855-2
	Melt Flow rate	ISO 1133-1
	Degradation End Point Test	ASTM D3826:2018
	Insoluble polymeric residues	ISO 1833
	Bursting strength	ISO 2758
	Porosity or Air Permeability	ISO 5636



# NATIONAL QUALITY TESTING LABORATORIES DIVISION

## TESTING SCOPE 2023-2024

	Grammage	ISO 536
	Dimensions	ISO 22198
	Migration	Product standard
	Heavy Metals	MTL/NDT/SOP-1
Notebook books (PTL)	Tear factor	ISO 1924-2
	Dimension Test	ISO 22198
	Grammage/substance	ISO 536
	Water Absorptiveness	ISO 535
	Design and Inspection of Labeling or Packaging Requirements	RS ISO 4074
Water Resistant materials (Tarpulins, Tents, water bladders, etc) (PTL)	Resistance to water penetration	ISO 811
	Tensile Strength	ISO 13934-1
	Tear Strength	ISO 9073-4
	Specific weight (Mass per unit area)	ISO 3801
Materials resistance to abrasion Textile and polymers materials (PTL)	Resistance to Abrasion	ISO 7784-1,2

MATERIAL TESTING LABORATORIES UNIT-COOK STOVE TESTING LABORATORY		
Products Names	Parameters	Standard Operating Procedures (SOP)/reference or Standard Methods
Cook Stoves	Thermal efficiency and Emission (CO, CO <sub>2</sub> and PM <sub>2.5</sub> )	ISO 19867-1
	Safety and durability	ISO 19867-1



**NATIONAL QUALITY TESTING  
LABORATORIES DIVISION**

**TESTING SCOPE 2023-2024**

	Dimensions	ISO 19867-1
	Marking inspection	ISO 19867-1
Solid fuel	Moisture content	Product standard
	Fuel ash content	Product standard
	Calorific value	Product standard