



UGANDA NATIONAL BUREAU OF STANDARDS

CERTIFICATE OF LABORATORY RECOGNITION

Certificate No: UNBS/LRS/0047

This certificate is valid as per the scope stated in the accompanying schedule of recognition, Annex "A" which is an integral part of the present certificate bearing the above recognition number for

Chemistry & Microbiology Testing of Food Products and Feed

In accordance with the recognised International Standard **ISO/IEC 17025:2017**

Being supplied to

**MAKERERE UNIVERSITY – DEPARTMENT OF FOOD TECHNOLOGY AND
NUTRITION LABORATORIES**

School of food technology, nutrition and bioengineering, Makerere university
P. O. Box 7062, Kampala Uganda.

The recognition demonstrates technical competence and the operation of a laboratory quality management system to perform the tests as described in the Annex. While this certificate remains valid, the recognised laboratory above is authorised to use the relevant UNBS recognition number to issue facility reports and /or certificates.

Recognition Decision Date: 2026-03-24

Date of original issue: 2026-03-24

Certificate Issue No: 01

Effective Date: 2026-03-24

Expiry date: 2029-03-23

Certificate Issue date: 2026-03-24

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Management Signatory
UGANDA NATIONAL BUREAU OF STANDARDS



ANNEX A

SCHEDULE OF RECOGNITION – TESTING LABORATORIES

Facility Number	UNBS/LRS/0047	S/N	Technical Signatories	Method
<p>MAKERERE UNIVERSITY DEPARTEMENT OF FOOD TECHNOLOGY AND NUTRITION LABORATIES</p> <p>Physical Address</p> <p>School of Food Technology, Nutrition and Bioengineering, College of Agricultural and Environmental Sciences – Makerere University.</p>		1.	<p>Dr. Stellah Byakika</p> <p>(Technical Signatory)</p>	<p>Food Microbiology Testing</p> <ul style="list-style-type: none"> • DFTNL/TM-M-F/01, Pour-plate; ISO 4833-1: 2013 • DFTNL/TM-M-F/02, Pour-plate; ISO 4832: 2006 • DFTNL/TM-M-F/02, Pour-plate; ISO 16649-1: 2018 • DFTNL/TM-M-F/03, Spread plate; ISO 6888-1: 2021 • DFTNL/TM-M-F/04, Pour-plate; ISO 21528-2: 2017 • DFTNL/TM-M-F/05, ISO 6579-1: 2017 • DFTNL/TM-M-F/06, Spread plate, ISO 21527-2:2009 <p>Water microbiology testing</p> <ul style="list-style-type: none"> • DFTNL/TM-M-W/01, Pour-plate, ISO 6222: 1999 • DFTNL/TM-M-W/02, Membrane filtration, ISO 9308-1: 2015 • DFTNL/TM-M-W/02, Membrane filtration, ISO 9308-1: 2015 • DFTNL/TM-M-W/03, Membrane filtration; ISO 7899-2: 2000 • DFTNL/TM-M-W/04, Membrane filtration; ISO 6888-1: 2021 • DFTNL/TM-M-W/05, Membrane filtration; ISO 16266: 2006 • DFTNL/TM-M-W/06, Membrane filtration; ISO 19250: 2010 <p>Food chemistry testing</p> <ul style="list-style-type: none"> • DFTNL/TM-C/01 • DFTNL/TM-C/02 • DFTNL/TM-C/13
		2.	<p>Mr. Atwine Ambrose</p> <p>(Analyst Microbiology & Result reviewer Chemistry)</p>	<p>Food Microbiology Testing</p> <ul style="list-style-type: none"> • DFTNL/TM-M-F/01, Pour-plate; ISO 4833-1: 2013 • DFTNL/TM-M-F/02, Pour-plate; ISO 4832: 2006 • DFTNL/TM-M-F/02, Pour-plate; ISO 16649-1: 2018 • DFTNL/TM-M-F/03, Spread plate; ISO 6888-1: 2021 • DFTNL/TM-M-F/04, Pour-plate; ISO 21528-2: 2017

		<ul style="list-style-type: none"> • DFTNL/TM-M-F/05, ISO 6579-1: 2017 • DFTNL/TM-M-F/06, Spread plate, ISO 21527-2:2009 <p>Water microbiology testing</p> <ul style="list-style-type: none"> • DFTNL/TM-M-W/01, Pour-plate, ISO 6222: 1999 • DFTNL/TM-M-W/02, Membrane filtration, ISO 9308-1: 2015 • DFTNL/TM-M-W/02, Membrane filtration, ISO 9308-1: 2015 • DFTNL/TM-M-W/03, Membrane filtration; ISO 7899-2: 2000 • DFTNL/TM-M-W/04, Membrane filtration; ISO 6888-1: 2021 • DFTNL/TM-M-W/05, Membrane filtration; ISO 16266: 2006 • DFTNL/TM-M-W/06, Membrane filtration; ISO 19250: 2010 <p>Food chemistry testing</p> <ul style="list-style-type: none"> • DFTNL/TM-C/01 • DFTNL/TM-C/02 • DFTNL/TM-C/13
	<p>3.</p> <p>Ms. Shamim Tezikya Bulyaba (Analyst Microbiology)</p>	<p>Food Microbiology Testing</p> <ul style="list-style-type: none"> • DFTNL/TM-M-F/01, Pour-plate; ISO 4833-1: 2013 • DFTNL/TM-M-F/02, Pour-plate; ISO 4832: 2006 • DFTNL/TM-M-F/02, Pour-plate; ISO 16649-1: 2018 • DFTNL/TM-M-F/03, Spread plate; ISO 6888-1: 2021 • DFTNL/TM-M-F/04, Pour-plate; ISO 21528-2: 2017 • DFTNL/TM-M-F/05, ISO 6579-1: 2017 • DFTNL/TM-M-F/06, Spread plate, ISO 21527-2:2009 <p>Water microbiology testing</p> <ul style="list-style-type: none"> • DFTNL/TM-M-W/01, Pour-plate, ISO 6222: 1999 • DFTNL/TM-M-W/02, Membrane filtration, ISO 9308-1: 2015 • DFTNL/TM-M-W/02, Membrane filtration, ISO 9308-1: 2015 • DFTNL/TM-M-W/03, Membrane filtration; ISO 7899-2: 2000 • DFTNL/TM-M-W/04, Membrane filtration; ISO 6888-1: 2021 • DFTNL/TM-M-W/05, Membrane

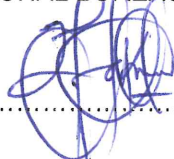
			filtration; ISO 16266: 2006 • DFTNL/TM-M-W/06, Membrane filtration; ISO 19250: 2010
	4.	Mr. Emmanuel Okalany (Analyst chemistry)	Food chemistry testing • DFTNL/TM-C/01 • DFTNL/TM-C/02 • DFTNL/TM-C/13
Material or products tested	Type of tests/property measured, Range of Measurement	Standard specifications, Techniques/Equipment used	
TESTING FIELD - MICROBIOLOGY			
Water (packaged drinking water, packaged natural mineral water, potable water)	Total Viable Count at 22°C and 37°C	DFTNL/TM-M-W/01, Pour-plate, ISO 6222: 1999, plate count agar, diluents, Incubator, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter	
	Enumeration of Total Coliforms	DFTNL/TM-M-W/02, Membrane filtration, ISO 9308-1: 2015, E. coli Coliforms Chromogenic agar, diluents, membrane filtration unit, membrane filters, Incubator, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter	
	<i>Escherichia coli</i> enumeration	DFTNL/TM-M-W/02, Membrane filtration; ISO 9308-1: 2015, E. coli Coliforms Chromogenic agar, diluents, membrane filtration unit, membrane filters, Incubator, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter	
	<i>Salmonella</i> detection	DFTNL/TM-M-W/06, Membrane filtration; ISO 19250: 2010, buffered peptone water, Rappaport Vassiliadis Soy broth, Muller Kauffman tetrathionate novobiocin broth, Xylose lysine desoxycholate agar, brilliant green agar, triple sugar iron agar, peptone water, Kovac's reagent, Simmons citrate agar, urease broth, diluents, membrane filtration unit, membrane filters, Incubator, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter, wire loop	
	<i>Pseudomonas aeruginosa</i>	DFTNL/TM-M-W/05, Membrane filtration; ISO 16266: 2006, Pseudomonas Agar base (PCN), glycerol, CFC supplement, acetamide broth, king's B agar, UV lamp, diluents, membrane filtration unit, membrane filters, Incubator, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter	
	<i>Staphylococcus aureus</i>	DFTNL/TM-M-W/04, Membrane filtration; ISO 6888-1: 2021, Baird Parker agar, egg York tellurite, rabbit plasma, brain heart infusion broth, diluents, membrane filtration unit, membrane filters, Incubator, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter	
	<i>Streptococcus faecalis</i>	DFTNL/TM-M-W/03, Membrane filtration; ISO 7899-2: 2000, Slanetz and Bartley agar, bile azide aesculine agar,	

		enterococcosel agar, diluents, membrane filtration unit, membrane filters, Incubator, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter
<p><u>Milk and milk products</u> (UHT milk, Dried whole milk and skimmed milk powder, Raw milk, Pasteurized milk, Fermented milks, Soya milk, Dairy ices and dairy ice creams Milk fat products (e.g. ghee and cheeses), Sanitary/environmental swabs in dairy</p> <p><u>Cereals</u> Cereal flours, cereal grains and Processed cereal-based foods, sanitary/ environmental swabs</p> <p><u>Beverages</u> fruit and vegetable juices Alcoholic beverages Malted cereal beverages Fermented (non-alcoholic) cereal beverages Alcoholic beverages - Ready to Drink (RTD) Fermented beverages Dairy based beverages Carbonated and non-carbonated soft drinks, sanitary/ environmental swabs</p> <p><u>Animal Feeds</u> (Poultry feeds, Rabbit feeds, Fish feeds, compounded animal feeds, Poultry feed premix, Sanitary/environmental swabs in poultry farms.</p>	Total plate Count	DFTNL/TM-M-F/01, Pour-plate; ISO 4833-1: 2013; plate count agar, diluent, Incubator, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter
	Enumeration of Total Coliforms	DFTNL/TM-M-F/02, Pour-plate; ISO 4832: 2006; culture media, Incubator, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter
	Enumeration of <i>Escherichia coli</i>	DFTNL/TM-M-F/02, Pour-plate; ISO 16649-2: 2018; culture media, Incubator, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter
	Enumeration of <i>Staphylococcus aureus</i>	DFTNL/TM-M-F/03, Spread plate; ISO 6888-1: 2021; Incubator, culture media, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter
	Enumeration of <i>Enterobacteriaceae</i>	DFTNL/TM-M-F/04, Pour-plate; ISO 21528-2: 2017; Incubator, culture media, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter
	<i>Salmonella</i> Detection	DFTNL/TM-M-F/05, ISO 6579-1: 2017; Incubator, culture media, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter
	Yeasts and Moulds Count	DFTNL/TM-M-F/06, Spread plate, ISO 21527: 2009; culture media, Incubator, autoclave, Lamina air flow bench, water baths, pipettes/pipette tips, weighing scale, pH meter
TESTING FIELD - CHEMISTRY		

<p>Cereal Products Cereal flours, cereal grains and Processed cereal-based foods</p> <p>Milk Products -Dried whole milk and skimmed milk powder,</p> <p>Animal Feeds (Poultry feeds, Rabbit feeds, Fish feeds, compounded animal feeds, Poultry feed premix,</p>	Moisture content	DFTNL/TM-C/13, EAS 82 (cereals), EAS 81(milk powder) EAS ISO 712 (composite flour) ISO 711(infant cereal foods) EAS 781:2012-Annex A (biscuits) ISO 24557(full fat soya flour) AOAC 969.38 b (honey) Oven(100±05°C), desiccator with desiccant, weighing scale ISO 1573 (black tea)
	Total ash content	DFTNL/TM-C/01, EAS 82 (cereals), EAS ISO 2171(Composite flour) AOAC 942.05 (infant cereal-based foods), AOAC 920.181 (honey); ISO 1575 (black tea) Muffle furnace (550-600) °C, dessicator with dessicant, weighing balance, crucibles, oven.
	Acid insoluble ash	DFTNL/TM-C/02, EAS 82 (cereal products), EAS 781:2012(Annex B) (for biscuits), US ISO 763 (fruit juice) ISO 1577 (black tea) Muffle furnace (550-600)°C, dessicator with dessicant, weighing balance, crucibles, ash free filter papers, HCl, filter funnel, distilled water, pH indicator, oven

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MANAGER CERTIFICATION DEPARTMENT