

CERTIFICATE OF ACCREDITATION

BOTSWANA NATIONAL VETERINARY LABORATORY

Disease of Animals' Act: 1977, Cap 37: 01

Facility Accreditation Number: VET 003

is a SADCAS accredited Testing Laboratory
provided that all SADCAS conditions are complied with

This certificate is valid as per the scope stated in the accompanying schedule of accreditation,
Annexure "A", bearing the above accreditation number for

**MICROBIOLOGY, BACTERIOLOGY, MOLECULAR BIOLOGY
HISTOPATHOLOGY, VIROLOGY AND SEROLOGY**

The facility is accredited in accordance with the recognized International Standard

ISO/IEC 17025:2017

*The accreditation demonstrates technical competency for a defined scope and the operation
of a laboratory quality management system*

*SADCAS is a subsidiary organization of SADC. A memorandum of understanding between SADC and SADCAS
serves as the basis for the recognition of SADCAS by SADC Member States
as a multi-economy accreditation body*

Eve Christine Gadzikwa
SADCAS Chief Executive Officer

Effective Date (Issue No: 3): 29 April 2025
Certificate Expires: 19 September 2028

ANNEXURE A

SCHEDULE OF ACCREDITATION

Laboratory Accreditation Number: **VET 003 (ISO/IEC 17025:2017)**

<p><u>Permanent Address of Laboratory</u> Botswana National Veterinary Laboratory (BNVL) Sebele Content Farm Off Gaborone-Francistown A1 Road Sebele Botswana</p>	<p><u>Technical Signatories</u> Ms B. Bogatsu (All Dairy Hygiene methods) Mr O. Moeng (All Dairy Hygiene methods) Mr T. Kootshegetse (All Dairy Hygiene methods) Ms O. Sekaba (All Bacteriology methods) Ms M. Bagali (All Bacteriology Methods) Mr J. Thoromo (All Bacteriology methods & Molecular Biology) Ms D. Tladi (All Food Hygiene methods) Ms P. Dinoge (All Food Hygiene methods except Salmonella BAX and Culturable Micro-organisms) Ms K. Kemoabe (All Food Hygiene methods except Salmonella BAX and Culturable Micro-organisms) Ms L. Gasebonwe (All Food Hygiene methods) Ms G. Seadimo (All Water methods except Culturable Micro-organisms and Food Hygiene methods: Total viable count, <i>E. coli</i> 1057, Salmonella and coliforms <i>E. coli</i>) (MPN) Dr J N Golekanye (<i>E. coli</i> 0157 & Salmonella spp., TVC, Salmonella BAX) Ms G Modise (Histopathology - Feed microscopy) Ms. D Mokhukhu (Histopathology - Feed microscopy) Mr K Dipuo (Serology – CBPP-CFT, Brucellosis – CFT, Brucellosis-RBPT) Mr E Dihoro (Serology – PPR, FMD Prior Check kits) Dr G J Raletobana (Serology – FMD Prior Check kits) Mr M Palai (Serology – FMD Prior Check kits) Mr K Mogwera (Serology – Dourine CFT) Ms A Lubinda-Makgasa (Serology – New Castle Disease Virus, Avian Influenza Virus) Mr K Monyame (Serology – New Castle Disease Virus, Avian Influenza Virus) Mr M Phologolo (Serology – FMD Prior Check kits) Mr K Kgwabi (Serology – FMD Prior Check kits and PPR) Mr A Makgwa- (Serology – FMD Prior Check kits and PPR) Ms L Mafoko (Serology - Dourine CFT, Brucellosis-CFT, Brucellosis-RBPT and CBPP-CFT)</p> <p>Ms K Masoba (FMD- ELISA, FMD-RT-PCR, FMD genome detection – RT-PCR) Mr E Fana (FMD- ELISA, FMD-RT-PCR, FMD genome detection – RT-PCR)</p>
<p><u>Site Laboratory</u> Botswana Vaccine Institute (BVI) Broadhurst Industrial Estate Plot 6385/50, Lejara Road, Gaborone Botswana</p>	
<p><u>Postal Address</u> Private Bag 0035 Gaborone Botswana</p>	
<p><u>Virology (BVI Site)</u> Broadhurst Industrial Estate Plot 6385/50, Lejara Road, Gaborone Botswana</p>	
<p>Tel : +267 392 8816 Fax : +267 392 8956 Cell : +267 74951015 Email : rmackenzie@nardi.org.bw</p>	<p><u>Nominated Representative</u> : Mr R Mackenzie</p> <p><u>Issue No</u> : 03 <u>Date of Issue</u> : 29 April 2025 <u>Expiry Date</u> : 19 September 2028</p>

ANNEXURE A

Laboratory Accreditation No: VET 003 (ISO/IEC 17025:2017)

Issue No: 03

Date of Issue: 29 April 2025

Date of Expiry: 19 September 2028

MATERIALS/PRODUCTS TESTED	TYPES OF TESTS/PROPERTIES MEASURED, RANGE OF MEASUREMENT	STANDARD SPECIFICATIONS, EQUIPMENT/TECHNIQUES USED
MICROBIOLOGY Dairy Hygiene Milk and Milk products Food Hygiene Meat, Meat Products and animal feeding stuffs	Enumeration of Total Viable Microorganisms	BNVL/MS. WI 0035 DH (ISO 4833-1:2013) by Pour plate method
	Enumeration of Yeasts	BNVL/MS. WI 0424 DH (ISO 6611:2004) by Colony count technique
	Detection and enumeration of presumptive <i>Escherichia coli</i>	BNVL/MS. WI 0315 DH (ISO 7251:2005) by Most Probable Number
	Enumeration of Total Coliform organisms	BNVL/MS. WI 0283 DH (ISO 4832:2006) by Pour plate
	Enumeration of Total Viable Microorganisms	BNVL/MS. WI 0006 FHS (ISO 4833:2003) by Pour plate method
	Detection and enumeration of Coliforms and <i>Escherichia coli</i>	BNVL/MS. WI 0008 FHS (ISO 4831:2006) by Most Probable Number method
	Detection of <i>Escherichia coli</i> 0157	BNVL/MS. WI 0015 FHS (ISO 16654:2001)
	Detection of Salmonella spp	BNVL/MS. WI 0016 FHS (ISO 6579:2002)
	Detection and enumeration of Lactic Acid Bacteria	BNVL/MS. WI 0472 FHS (ISO 15214:1998) by Colony count technique
	Detection and enumeration of Enterobacteriaceae	BNVL/MS. WI 0450 FHS (ISO 21528-2:2004) by Colony count technique
	Detection and enumeration of Enterococcus (Fecal Streptococcus)	BNVL/MS. WI 0471 FHS (Oxoid Manual-1998) by Colony count technique
	Detection and enumeration of <i>Clostridium perfringens</i>	BNVL/MS. WI 0292 FHS (ISO 7937:2004) by Colony count technique
	Screening of Salmonella spp using BAX System	BNVL/MS. WI 0049 FHS

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Water Treated Water	Detection and enumeration of <i>Clostridium perfringens</i>	BNVL/MS. WI 0220 FHS (ISO 14189:2013) by Membrane Filtration method
	Detection of enumeration of <i>Escherichia coli</i> and Coliform bacteria	BNVL/MS. WI 0219 FHS (ISO 9308-1:2000) by Membrane filtration method
	Detection and enumeration of Intestinal enterococci	BNVL/MS. WI 0218 FHS (ISO 7899-2:2000) by Membrane filtration method
	Enumeration of Culturable Microorganisms	BNVL/MS. WI 0286 FHS (ISO 6222: 1999) by Colony Count using pour plate
<u>BACTERIOLOGY</u> Clinical Samples, Animal Tissue, Faeces, Blood	Culture, isolation and identification of Salmonella spp from clinical samples	BNVL/MS. WI 0550 BACT (OIE)
	Microscopic identification of <i>Bacillus anthracis</i>	BNVL/MS. WI 0212 BACT (OIE)
<u>MOLECULAR BIOLOGY</u> Lamb kidney	Polymerase Chain Reaction (PCR) for Trichomonas foetus	BNVL/MS. WI 0529 BACT (OIE)
<u>HISTOPATHOLOGY</u> Animal Feed	Determination of constituents of animal origin for the official control of feed	BNVL/MS. WI 0003 BIO by Microscopy method
<u>VIROLOGY/SEROLOGY</u> Bovine Serum	Detection of Brucella antibodies	BNVL/MS. WI 0512 BACT-SERO by Complement Fixation Test
	Detection of Brucella antibodies	BNVL/MS. WI 0510 BACT-SERO by Rose Bengal Precipitate Test
Avian and Ostrich Serum	New Castle Disease (NDV) Virus, antibody screening and titration	BNVL/MS. WI 0210 VIRO by HI test
	Avian Influenza Virus, antibody screening and titration	BNVL/MS. WI 0282 VIRO by HI test
Bovine Serum	Detection of Contagious Bovine Pleuro-pneumonia (CBPP) antibodies	BNVL/MS. WI 0165 BACT-SERO by Compliment Fixation Test

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<u>VIROLOGY/SEROLOGY</u> Bovine and Caprine Serum	Detection of Antibodies against non-structural Prio-protein of Foot and Mouth Disease (FMD) Virus	BNVL/MS. WI 0720 SERO using Check Kits
Equine Serum	Complement Fixation Test – Dourine	BNVL/MS. WI 0395 BACT-SERO
Sheep and Goat serum	Detection of antibodies against Peste des Petits Ruminants (PPR) virus in sheep and goat serum and plasma	BNVL/MS. WI 0171 SERO by competitive ELISA (ID Screen PPR Competition)
BVI SITE		
<u>VIROLOGY</u> Lamb kidney	Foot and Mouth Disease (FMD) virus isolation in primary cells and identification (serotyping)	BNVL/MS. WI 0097 VIR-BVI by antigen ELISA
<u>MOLECULAR BIOLOGY</u> Lamb kidney	Foot and Mouth Disease (FMD) virus isolation in primary cells	BNVL/MS. WI 0121 VIR-BVI by RT-PCR and nucleotide sequencing
Probang swabs and tissue samples	Foot and Mouth Disease (FMD) Virus genome detection	BNVL/MS. WI 0100 VIR-BVI by RT-PCR and nucleotide sequencing

Original Date of Accreditation: 20 March 2018

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Pinkie J Malebe
SADCAS Technical Manager