

# CERTIFICATE OF ACCREDITATION

## BOTSWANA NATIONAL VETERINARY LABORATORY

*Disease of Animals' Act: 1966, 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, HISTOPATHOLOGY, VIROLOGY/  
SEROLOGY, CHEMISTRY (BNVL)  
VIROLOGY AND MOLECULAR BIOLOGY (BVI)**

*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 subsidiarity 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*

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**Eve Christine Gadzikwa**  
**SADCAS Chief Executive Officer**

**Date of Renewal of Accreditation: 20 September 2023**  
**Effective Date (Issue No: 1): 20 September 2023**  
**Certificate Expires: 19 September 2028**

## ANNEXURE A

### SCHEDULE OF ACCREDITATION

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

<p><b><u>Permanent Address of Laboratory</u></b> Botswana National Veterinary Laboratory (BNVL) Sebele Content Farm Off Gaborone-Francistown A1 Road Sebele Botswana</p> <p><b><u>Site Laboratory</u></b> Botswana Vaccine Institute (BVI) Broadhurst Industrial Estate Plot 6385/50, Lejara Road, Gaborone Botswana</p> <p><b><u>Postal Address</u></b> Private Bag 0035 Gaborone</p> <p><b><u>Virology (BVI Site)</u></b> Broadhurst Industrial Estate Plot 6385/50, Lejara Road, Gaborone</p> <p><b>Tel</b> : +267 392 8816 <b>Fax</b> : +267 392 8956 <b>Cell</b> : +267 7588 2846 <b>Email</b> : <a href="mailto:rmackenzie@gov.bw">rmackenzie@gov.bw</a></p>	<p><b><u>Technical Signatories</u></b> 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. Ikgopoleng (Bacteriology - Bacillus anthracis method) Mr J. Thoromo (All Bacteriology methods) 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 1057</i>, Salmonella and coliforms E.coli) (MPN) Dr J N Golekanye (<i>E. coli 0157</i> &amp; Salmonella spp., TVC, Salmonella BAX) Ms G Modise (Histopathology - Feed microscopy) Ms. D Mokhukhu (Histopathology - Feed microscopy) Mr R Tshepho (Residues –Aflatoxins, Avermectins) Mr P Kolanyane (Residues - Carbamates) Ms S Lentswe (Residues –Carbamates) Mr E Sewane (Residues - Aflatoxins) Mr K Thitoyamore (Residues – Aflatoxins) Ms J Kapo (Residues - Avermectins) Dr S Letsholo (Serology – New Castle Disease Virus, Avian Influenza Virus) 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) Ms P Made (FMD- ELISA)</p> <p><b><u>Nominated Representative</u></b> : Mr R Mackenzie</p> <p><b><u>Issue No</u></b> : 01 <b><u>Date of Issue</u></b> : 20 September 2023 <b><u>Expiry Date</u></b> : 19 September 2028</p>
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## ANNEXURE A

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

Issue No: 01

Date of Issue: 20 September 2023

Date of Expiry: 19 September 2028

MATERIALS/PRODUCTS TESTED	TYPES OF TESTS/PROPERTIES MEASURED, RANGE OF MEASUREMENT	STANDARD SPECIFICATIONS, EQUIPMENT/TECHNIQUES USED
<p><b><u>MICROBIOLOGY</u></b>  <b>Dairy Hygiene</b>  Milk and Milk products</p> <p><b>Food Hygiene</b>  Meat, Meat Products and animal feeding stuffs</p> <p><b>Water</b>  Treated Water</p>	<p>Enumeration of Total Viable Microorganisms by Pour plate method</p> <p>Enumeration of Yeasts by Colony count technique</p> <p>Detection and enumeration of presumptive <i>Escherichia coli</i> by Most Probable Number</p> <p>Enumeration of Total Coliform organisms by Pour plate</p> <p>Enumeration of Total Viable Microorganisms by Pour plate method</p> <p>Detection and enumeration of Coliforms and <i>Escherichia coli</i> by Most Probable Number method</p> <p>Detection of <i>Escherichia coli</i> 0157</p> <p>Detection of Salmonella spp</p> <p>Detection and enumeration of Lactic acid bacteria by Colony count technique</p> <p>Detection and enumeration of Enterobacteriaceae by Colony count technique</p> <p>Detection and enumeration of Enterococcus (Fecal streptococcus) by Colony count technique</p> <p>Detection and enumeration of <i>Clostridium perfringens</i> by Colony count technique</p> <p>Screening of Salmonella spp using BAX System</p> <p>Detection and enumeration of <i>Clostridium perfringens</i> by Membrane Filtration method</p> <p>Detection and enumeration of <i>Escherichia coli</i> and Coliform bacteria by Membrane filtration method</p> <p>Detection and enumeration of Intestinal enterococci by Membrane filtration method</p> <p>Enumeration of Culturable Microorganisms by Colony Count using pour plate</p>	<p>BNVL/MS. WI 0035 DHp0 (ISO 4833-1:2013)</p> <p>BNVL/MS. WI 0424 DH (ISO 6611:2004)</p> <p>BNVL/MS. WI 0315 DH (ISO 7251:2005)</p> <p>BNVL/MS. WI 0283 DH (ISO 4832:2006)</p> <p>BNVL/MS. WI 0006 FHS (ISO 4833:2003)</p> <p>BNVL/MS. WI 0008 FHS (ISO 4831:2006)</p> <p>BNVL/MS. WI 0015 FHS (ISO 16654:2001)</p> <p>BNVL/MS. WI 0016 FHS (ISO 6579:2002)</p> <p>BNVL/MS. WI 0472 FHS (ISO 15214:1998)</p> <p>BNVL/MS. WI 0450 FHS (ISO 21528-2:2004)</p> <p>BNVL/MS. WI 0471 FHS (Oxoid Manual- 1998)</p> <p>BNVL/MS. WI 0292 FHS (ISO 7937:2004)</p> <p>BNVL/MS. WI 0049 FHS</p> <p>BNVL/MS. WI 0220 FHS (ISO 14189:2013)</p> <p>BNVL/MS. WI 0219 FHS (ISO 9308-1:2000)</p> <p>BNVL/MS. WI 0218 FHS (ISO 7899-2:2000)</p> <p>BNVL/MS. WI 0286 FHS (ISO 6222: 1999)</p>

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<b><u>BACTERIOLOGY</u></b> Clinical Samples, Animal Tissue, Faeces, Blood	Culture, isolation and identification of Salmonella spp from clinical samples Microscopic identification of <i>Bacillus anthracis</i>	BNVL/MS. WI 0550 BACT (OIE) BNVL/MS. WI 0212 BACT (OIE)
<b><u>HISTOPATHOLOGY</u></b> Animal Feed	Determination of constituents of animal origin for the official control of feed by Microscopy method	BNVL/MS. WI 0003 BIO
<b><u>VIROLOGY/SEROLOGY</u></b> Bovine Serum	Detection of Brucella antibodies by Complement Fixation Test Detection of Brucella antibodies by Rose Bengal Precipitate Test	BNVL/MS. WI 0512 BACT-SERO BNVL/MS. WI 0510 BACT-SERO
Avian and Ostrich Serum	Newcastle Disease (NDV) Virus, antibody screening and titration by HI test Avian Influenza Virus, antibody screening and titration by HI test	BNVL/MS. WI 0210 VIRO BNVL/MS. WI 0282 VIRO
Bovine Serum	Detection of Contagious Bovine Pleuro-pneumonia (CBPP) antibodies by Compliment Fixation Test	BNVL/MS. WI 0165 BACT-SERO
Bovine and Caprine Serum	Detection of Antibodies against non-structural Prio-protein of Foot and Mouth Disease (FMD) Virus using Check Kits	BNVL/MS. WI 0720 SERO
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 by competitive ELISA (ID Screen PPR Competition)	BNVL/MS. WI 0171 SERO
<b><u>CHEMISTRY (Residues)</u></b> Bovine liver tissue, Bovine muscle and milk, Bovine Kidney	Multi-residue analysis of Avermectins by HPLC-FLD	BNVL/MS. WI 0060 RES
Feeds	Multi-residue analysis of Aflatoxins (B1, B2, G1, G2) HPLC-FLD	BNVL/MS. WI 0076 RES

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<u><b>CHEMISTRY (Residues)</b></u> Bovine liver tissue	Multi-residue analysis of Carbamates pesticides by LC-ESI-MS/MS)	BNVL/MS. WI 0025 RES
<u><b>BVI SITE VIROLOGY</b></u> Lamb kidney	Foot and Mouth Disease (FMD) virus isolation in primary cells and identification (serotyping) by antigen ELISA	BNVL/MS. WI 0097 VIR-BVI
<u><b>MOLECULAR BIOLOGY</b></u> Lamb kidney	Foot and Mouth Disease (FMD) virus isolation in primary cells by RT-PCR and nucleotide sequencing	BNVL/MS. WI 0121 VIR-BVI
Probang swabs and tissue samples	Foot and Mouth Disease (FMD) Virus genome detection by RT-PCR and nucleotide sequencing	BNVL/MS. WI 0100 VIR-BVI

Original Date of Accreditation: 20 March 2018

Page 4 of 4

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**Pinkie J Malebe**  
SADCAS Technical Manager