S/N: 1658

STANDARDS MALAYSIA

Certificate of Accreditation

No: SAMM 391

Accredited since: 10 April 2008

This is to certify that

VETERINARY LABORATORY SERVICES UNIT
FACULTY OF VETERINARY MEDICINE
UNIVERSITI PUTRA MALAYSIA
SERDANG, SELANGOR
MALAYSIA

Scan this QR Code or visit
www.jsm.gov.my/cab-directories
for the current scope of accreditation

has been granted accreditation in respect of the scope of accreditation described in the schedule, subject to the terms and conditions governing the *Skim Akreditasi Makmal Malaysia* (SAMM), the Laboratory Accreditation Scheme of Malaysia.

Laboratories accredited under SAMM meet the requirements of MS ISO/IEC 17025. This Malaysian Standard is identical with ISO/IEC 17025 published by the International Organization for Standardization (ISO).

(SHAHARUL SADRI BIN ALWI)
Director General
Department of Standards Malaysia

Date of issue: 2 September 2020

Issuance of this Certificate is governed by Section 16 Subsections (2) and (3) of Standards of Malaysia Act 1996 (Act 549)

Issue date: 4 April 2023
Valid until: 10 April 2028

NO: SAMM 391

LABORATORY LOCATION: (PERMANENT LABORATORY)

VETERINARY LABORATORY SERVICES UNIT
FACULTY OF VETERINARY MEDICINE
UNIVERSITY PUTRA MALAYSIA
43400 SERDANG
SELANGOR
MALAYSIA

FIELD OF TESTING: **VETERINARY**
FIELD OF CALIBRATION: **VOLUME**

This laboratory has demonstrated its technical competence to operate in accordance with MS ISO/IEC 17025:2017 (ISO/IEC 17025:2017).

This laboratory's fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001 (see Joint ISO-ILAC-IAF Communiqué dated April 2017).

SCOPE OF TESTING: **VETERINARY**

LOCATION: **BACTERIOLOGY LABORATORY**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Bacteriology		
Animal tissues and clinical specimens: swab sample, body fluid, discharges, milk	Isolation of bacteria from clinical specimens and environmental samples	Diagnostic Manual of Veterinary Clinical Bacteriology and Mycology (2008) - TM001
	Identification of *Streptococcus pyogenes*	Diagnostic Manual of Veterinary Clinical Bacteriology and Mycology (2008) - TM002
	Identification of *Staphylococcus aureus*	Diagnostic Manual of Veterinary Clinical Bacteriology and Mycology (2008) - TM003
	Identification of *Pasteurella multocida*	Diagnostic Manual of Veterinary Clinical Bacteriology and Mycology (2008) - TM004
	Identification of *Pseudomonas aeruginosa*	Diagnostic Manual of Veterinary Clinical Bacteriology and Mycology (2008) - TM005
	Identification of *Escherichia coli*	Diagnostic Manual of Veterinary Clinical Bacteriology and Mycology (2008) - TM006
Environmental samples		

Bacteriology (continued) Bacterial isolates	Antibiotic Susceptibility Test	CLSI Vet 01-S2 & Vet 01-A4 (2013) - TM007
Serology Serum (cattle, dogs, rats, pigs)	Microscopic agglutination test for leptospirosis	In-house method - TM008 Based on WOAH (OIE) Terrestrial Manual 2021, Chapter 3.1.12 Leptospirosis

Note:

Diagnostic Manual of Veterinary Clinical Bacteriology and Mycology	:	Diagnostic Manual of Veterinary Clinical Bacteriology and Mycology, S.S. Jang, E.L. Biberstein and D. C. Hirsh, University of California Davis, 2008.
CLSI	:	Clinical and Laboratory Standards Institute - Performance Standards for Antimicrobial Disk and Dilution Susceptibility Tests for Bacteria Isolated from Animals: VET 01-A4, Approved Standards- Fourth Edition, 2013 and VET 01-S2, Second Information Supplement, 2013.
WOAH (OIE)		World Organisation of Animal Health, 2021

Signatories:

1.	**Prof. Dr. Saleha Abdul Aziz**	**MVC Part I No 1194**
2.	**Prof. Dr. Latiffah Hassan**	**MVC Part 1 No 470**
3.	**Assoc. Prof. Dr. Siti Khairani Bejo**	**MVC Part 1 No 407**
4.	**Prof. Dr. Zunita Zakaria**	
5.	**Dr. Nur Indah Ahmad**	**MVC Part 1 No 1154**
6.	**Dr. Sharina binti Omar**	**MVC Part 1 No 1152**

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SCOPE OF TESTING: **VETERINARY**

LOCATION: **HISTOPATHOLOGY LABORATORY**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Histopathology		
Tissue samples from any animal species	Tissue processing	Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology - TM101 3rd Edition 1968
	Harris' Hematoxylin and Eosin Staining	Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology - TM102 3rd Edition 1968
	Fungi (Periodic Acid Schiff) Staining	Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology - TM103 3rd Edition 1968
	Van Gieson's Staining	Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology - TM104 3rd Edition 1968

Signatories:

1. **Prof. Dr. Mohd Hair Bejo** — **MVC Part 1 No 207**
2. **Assoc Prof. Dr. Md. Sabri Mohd Yusoff** — **MVC Part 1 No 527**
3. **Assoc Prof. Dr. Annas Salleh** — **MVC Part 1 No 1407**
4. **Dr. Muhamad Alif Zakaria** — **MVC Part 1 No 1760**
5. **Dr. Mazlina Mazlan** — **MVC Part 1 No 1020**
6. **Dr. Nur Fazila Saulol Hamid** — **MVC Part 1 No 1368**

SCOPE OF TESTING: **VETERINARY**

LOCATION: **PARASITOLOGY LABORATORY**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Parasitology		
Faeces	Modified McMaster Technique	Parasitology Reference Manual I (PRM I): Laboratory Manual in Parasitology. (1999) Parasitology Reference Manual II (PRM IIA): Veterinary Clinical Parasitology. Anne M. Zajac and Gary A. Conboy (7th Ed.) (2006) Parasitology Reference Manual III (PRM IIB): Poster – Investigatio Coprologica animalium domesticorum magnorum/ bos et ovis (Janssen Pharmaceutica, 1973) (in Parasitology Laboratory) Parasitology Reference Manual IV (PRM IIC): Veterinary Parasitology. MA Taylor, Coop & R.L Wall (3rd Ed.) (2007) Parasitology Reference Manual V (PRM IID): The Epidemiology, Diagnosis and Control of Helminth Parasites of Ruminants (Jørgen Hansen & Brian Perry, 1994)

Signatories:

1. **Dr. Reuben Sunil Kumar Sharma** — **MVC Part 1 No 664**
2. **Dr. Nur Mahiza Md. Isa** — **MVC Part 1 No 1144**
3. **Dr. Nor Azlina Abdul Aziz** — **MVC Part 1 No 1222**

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SCOPE OF TESTING: **VETERINARY**

LOCATION: **CLINICAL PATHOLOGY**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Clinical Biochemistry (serum, plasma)	Albumin (ALB) Alanine Aminotransferase (ALT) Alkaline Phosphatase (ALP) Amylase (AMY) Aspartate Aminotransferase (AST) Bilirubin Direct (BIL-D) Bilirubin Total (BIL-T) Calcium (CA) Cholesterol (CHOL) Creatine Kinase (CK) Creatinine (CREA) Gamma-glutamyl transferase GGT Glucose (GLU) Phosphate (PHOS) Total Protein (TP) Urea	Determination of Analytes Concentration using the Automated Chemistry Analyser: Biolis 24i Premium
	Electrolytes: • Sodium (NA) • Potassium (K) • Chloride (CL)	Determination of Electrolyte Concentration using the Clinical Chemistry System: Dimension Xpand Plus

Signatories:

1. **Prof. Dr. Rasadee Abdullah**
2. **Assoc Prof. Dr. Hazilawati binti Hamzah** **MVC Part 1 No 586**
3. **Dr. Azalea Hani Othman** **MVC Part 1 No 1312**
4. **Daarulmuqaamah binti Masaud**
5. **Noraain binti Azman**

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*** The uncertainty covered by the CMC is expressed as the expanded uncertainty corresponding to a coverage probability of approximately 95 % and have a coverage factor of k=2 unless stated otherwise.**

SCOPE OF CALIBRATION: VOLUME

Instrument calibrated/ Measurement parameter	**Range**	**Calibration and Measurement Capability expressed as an uncertainty (±)***	**Remarks ****
Piston – operated Volumetric apparatus including Mirco Pipette	***2 µl to 10 µl** 10 µl to 20 µl 20 µl to 50 µl 50 µl to 100 µl 100 µl to 500 µl 500 µl to 1000 µl	**0.06 µl** 0.06 µl 0.09 µl 0.2 µl 1.2 µl 1.5 µl	Gravimetric Method based on ISO 8655-6:2002

***Temporary inoperative**

Signatories:

1. **Nur Izzati binti Azahari**
2. **Rosmaria binti Othman**