



World Organisation
for Animal Health
Founded as OIE



SOPs for submission of samples to KVAFSU



Shrikrishna Isloor
Prof. & Lab. Director



KVAFSU-CVA Rabies Diagnostic Laboratory
WOAH Reference Laboratory for Rabies

Head, Dept. of Veterinary Microbiology, Veterinary College, KVAFSU
Hebbal, Bengaluru, India

Shipping brain samples from South Asian countries to India for

Lab. diagnosis

Identifying sub lineage of RABV

Crucial steps:

Proper handling,

Safety

Compliance with regulations



General SOP

Sample Collection: Collection of Brain Tissue:

By a trained veterinarian or lab. technician.

Sampled immediately PM

Use PPE



Packaging for Transport



Primary

Secondary

Outer / Tertiary

Other samples: Saliva(?), Serum

FTA cards (Flinders Technology Associates cards) specially designed filter paper cards for collection, stabilization, and transport of biological samples, particularly nucleic acids (DNA/RNA).



- ✓ A practical, cost-effective, and safe solution for the shipping of biological samples internationally.
- ✓ Stabilize nucleic acids, simplify logistics, and reduce regulatory challenges.
- ✓ Transporting biological materials like DNA or RNA across borders.
- ✓ Provide significant advantages in terms of convenience, cost, and regulatory compliance.
- ✓ Whatman (Cytiva), Flinders Technologies, Thermo Fisher, LGC Biosearch, and Merck (Millipore Sigma)



Required Documentation

Rabies Testing Request

- ✓ A written request from the referring veterinarian or authority in the sending country
- ✓ Specifying purpose of shipment

Shipping Forms

- ✓ Documentation detailing sample's origin, type, with package.
- ✓ An international air waybill (AWB) or other transport documents.

Customs and Export Documentation

- ✓ A health certificate or permit from the Veterinary authority in sending country.
- ✓ An export permit for sample as per the regulations of both the origin country and India.

Receiving in India

Customs Clearance:

- ✓ Arrival in India
- ✓ Package must go through customs clearance
- ✓ The receiving laboratory need to ensure compliance with Indian regulations.

Documents required as per International Air Transport Association (IATA) guidelines



IATA sets guidelines for transportation of biologicals: **Infectious substances,**
Clinical samples

✓ **Shipper's Declaration for Dangerous Goods (SDDG)** – **Category A** substances.

Rabies virus (UN 2814)

- ✓ **Air Waybill (AWB):** **Category B.**
- ✓ **Dangerous Goods Labels and Markings** -biohazard symbols and **UN numbers.**
- ✓ **Packing Instructions** – as per IATA DGR (PI 620, PI 621, etc.).
- ✓ **Certificate of Non-Infectious Status** – for Category B shipments.
- ✓ **Import/Export Permits** – required by certain countries.
- ✓ **Customs Declarations** – for clearance.
- ✓ **Temperature Control Documentation** – if applicable.
- ✓ **Additional Documentation** – for specific materials (e.g., GMOs, viral samples)
- ✓ **IATA training** helps lab personnel understand **international regulations**, from **WHO, International Civil Aviation Organization (ICAO), and the World Customs Organization (WCO).**



K-11011/9/2022-Cattle Div
Government of India
Ministry of Fisheries, Animal Husbandry & Dairying
Department of Animal Husbandry & Dairying

Krishi Bhawan, New Delhi.
Dated: 18th October 2022

Sub. Permission to receive clinical samples from SAARC Member Countries/OIE Members countries for confirmation/testing for Rabies.

Please refer to your Letter No. VCH/VMC-Rabies Lab/5.7/2022 Dt. 24th June 2022 on the subject cited above. In this connection, I am directed to inform that the Department may not have any objection in allowing KVAFSU--CVA Rabies Diagnostic Laboratory, Department of Veterinary Microbiology, Veterinary College, KVAFSU, Hebbal, Bengaluru (WOAH Reference Laboratory) to receive the clinical / biological / brain samples of animals for confirmation of rabies from the WOAH member countries / neighbouring / SAARC countries subject to the Pre and Post Import conditions as per Annexure I.

Adhiraj Mishra
18/10/2022
(Dr. Adhiraj Mishra)
Assistant Commissioner (AH)

Distribution:

Dean, Veterinary College, Hebbal, Bangalore

Copy to

1. The Registrar, KVAFSU, Bidar, Karnataka.
2. Dr. Sri Krishna Isloor, Professor, Department of Veterinary Microbiology, Veterinary College, Hebbal, Bengaluru
3. PPS to AHC/ PPS to JS (LH)



Annexure-I

Pre-Import and Post-Import conditions for to receive the clinical / biological / brain samples of animals for confirmation of rabies

Pre-Import Conditions:

The official pre-import certificate certified by the Official Veterinary Authority of the country of origin shall accompany the serum samples with following information:


1. Description of the item:
2. Description of animal with identity:
3. Purpose of import:
4. Details of the sender:
5. Name and address of the importing laboratory:
6. Certification:
 - The material is handled in approved laboratory by approved/registered technicians as per the approved protocol of the country of origin in regard to collection and processing
 - Material is transported as per the applicable packaging instruction and follows the standards of the packaging and transport of hazardous substances through air transport.
 - The import is for intended purpose only

Post-Import Conditions:

1. The samples should be handled as per guidelines related to Laboratory biosafety and biosecurity guidelines
2. The disposal if any shall be as per Bio-Medical Waste Management Rules.
3. No material shall be handed over to any other laboratory/agency for any purpose.

Srilankan Example: Brain samples Hand carried



 CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA	PERMIT/CERTIFICATE No. 23SL003044 <input checked="" type="checkbox"/> EXPORT <input type="checkbox"/> RE-EXPORT <input type="checkbox"/> IMPORT <input type="checkbox"/> OTHER :	Original
		2. Valid until 13-07-2023
3. Importer (name and address) Dr. Sri Krishna Isloor, Professor Department of Veterinary Microbiology, Veterinary College, Hebbal, Bengaluru,	4. Exporter(s)-exporter (name, address and country) Public Health Veterinary Services Public Health Complex, 555/5, Elvitigala Mawatha, Colombo 05., LK - Sri Lanka	
3a. Country of import IN - India		
5. Special conditions	6. Name, address, national seal/stamp and country of Management Authority	



A	7/8. S.N.: <i>Canis aureus</i> , C.N.: Common Jackal, Golden Jackal		9. Tissue sample:		10. Appendix: (II) ; Source: W - Specimens taken from the wild		11. Quantity: 250 GRM*		12. Quota: N/A	
	12. Country of origin**	Permit no.	Date	12a. Country of last re-export	Certificate no.	Date	12b. No. of specimens taken or taken of at destination***		N/A	
	N/A	N/A	N/A	N/A	N/A	N/A				
B	7/8. S.N.: <i>Canis lupus</i> , C.N.: Common Wolf, Grey Wolf, Timber Wolf, Wolf		9. Tissue sample:		10. Appendix: (III) ; Source: W - Specimens taken from the wild		11. Quantity: 250 GRAM		12. Quota: N/A	
	12. Country of origin**	Permit no.	Date	12a. Country of last re-export	Certificate no.	Date	12b. No. of specimens taken or taken of at destination***		N/A	
	N/A	N/A	N/A	N/A	N/A	N/A				

* Country in which the specimens were taken from the wild, bred in captivity or artificially propagated solely in case of re-export
 ** Only for specimens of Appendix-I species bred in captivity or artificially propagated for commercial purposes
 *** For pre-Convention specimens

M. S. L. R. P. Marasinghe
 Director (Operations)
 Department of Wildlife Conservation
 811 A, Jayanthipura Road,
 Battaramulla.

13. This permit/certificate is issued by
 Department of Wildlife Conservation
 811A, Jayanthipura,
 Battaramulla, Sri Lanka

13-01-2023

Place Date

Signature stamp: Not before 2023 official seal

1973520

QR Code

Issued by Director (Operations), Dept. of Wildlife Conservation, 811 A, Jayanthipura Road, Battaramulla, Sri Lanka, Dt. 13-01-2023

Dispatch of biological tissue samples to WOAH ref lab., India



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பொது நுகாதார வைத்திய சேவை
Public Health Veterinary Services
සෞඛ්‍ය සහ දේශීය වෛද්‍ය සේවා අමාත්‍යාංශය
சுகாதார மற்றும் கிராமிய மருத்துவப் பராமுகத் துறைமுகம்
Ministry of Healthcare and Indigenous Medical Services

මගේ අංකය }
My No }

ඔබේ අංකය }
Your No }

දිනය } 16.01.2023
Date }

To whom it may concern,

Dispatch of biological tissue samples to the OIE reference laboratory – India for identification of Rabies strain

The Public Health Veterinary Services of the Ministry of Health is the main center for Rabies control in Sri Lanka. Following the Rabies disease outbreak which occurred among jackalls in the recent past, the necessity of identifying the strain (if the disease occurred due to a new strain of Rabies virus or is it a spillover to the wild) arose.

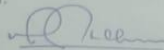
In order to identify the strain of Rabies virus which emerged during this outbreak of Rabies among jackalls, we need to export the tissue samples obtained by these infected animals (Jackalls and dogs) of the area where the outbreak occurred. These samples which are currently at the possession of the Medical Research Institute (MRI) are needed to be sent to the OIE reference laboratory in India.

This is to inform you that the above mentioned biological samples are dispatched to the laboratory mentioned at the above address in India by-hand through Dr Dammika Kumarasingha (Passport no:- N8963458) on 17.01.2023.

The following documents are sent herewith:-

1. Letter of sample details from the Medical Research Institute
2. Permission certificate (CITES) from the Department of Wildlife Conservation for the export of biological sample
3. Form-K from the Department of Wildlife Conservation for the export of biological sample
4. Certified copy of the no objection letter to receive the sample at the Rabies diagnostic laboratory, Department of veterinary microbiology, Veterinary college, KVAFSU, Hebbal, Bengaluru (WOAH Reference Laboratory) & 2 DFA sample receipt forms.

Thank you.


Dr. L. D. Kithsiri
Director,
Public Health Veterinary Services
555/5, Elvitigala Mawatha,
Colombo 05, Sri Lanka

Issued by Director, PH Veterinary Services, Srilanka
on 16-01-2023.

Test report



Ref-2

KARNATAKA VETERINARY, ANIMAL AND FISHERIES SCIENCES UNIVERSITY, BIDAR
KVAFSU-CVA RABIES DIAGNOSTIC LABORATORY
DEPARTMENT OF VETERINARY MICROBIOLOGY
VETERINARY COLLEGE, HEBBAL, BENGALURU - 560 024

Small Reference Laboratory for Rabies
Reference Center World Organization for Animal Health

No. RDL / VCH / VMC 2277 - 2317 / 2022-23 / 287 Date: 16.03.2023

TEST REPORT FOR RABIES

1.	Sample Type	Brain Tissue
2.	Sample received from (Name & Address of sender)	Dr. Kithsiri Lokubalasuriyage Don, Director, Public Health, Veterinary Services, Ministry of Health, Sri Lanka Email: ldkithsiri@yahoo.com Contact: +94112368524 / +94714468153
3.	Date of sample Receipt	18.01.2023
4.	Condition of the sample	FIT
5.	Test performed	PCR
6.	Date of Test performed	09.03.2023 - 15.03.2023
7.	Test Protocol (PCR)	OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, 2019, SOP No. RDL 030, DOI 02.09.2019

TEST RESULT:

SL. NO.	REF NO	SPECIES	LAB ID	RESULTS
1.	411	JACKAL	VMC 2277	POSITIVE
2.	786	JACKAL	VMC 2278	POSITIVE
3.	823	JACKAL	VMC 2279	POSITIVE
4.	848	JACKAL	VMC 2280	POSITIVE
5.	877	JACKAL	VMC 2281	POSITIVE
6.	882	JACKAL	VMC 2282	POSITIVE
7.	918	JACKAL	VMC 2283	POSITIVE
8.	919	JACKAL	VMC 2284	POSITIVE
9.	932	JACKAL	VMC 2285	POSITIVE
10.	936	JACKAL	VMC 2286	POSITIVE
11.	942	JACKAL	VMC 2287	POSITIVE
12.	945	JACKAL	VMC 2288	POSITIVE
13.	958	JACKAL	VMC 2289	POSITIVE

Disclaimer:

- This Laboratory is not responsible for the sampling, the sample is provided by the customer.
- Results relate only to the item tested.
- This report shall not be reproduced except in full without approval of Laboratory Director.

KARNATAKA VETERINARY, ANIMAL AND FISHERIES SCIENCES UNIVERSITY, BIDAR
KVAFSU-CVA RABIES DIAGNOSTIC LABORATORY
DEPARTMENT OF VETERINARY MICROBIOLOGY
VETERINARY COLLEGE, HEBBAL, BENGALURU - 560 024

Small Reference Laboratory for Rabies
Reference Center World Organization for Animal Health

14.	965	JACKAL	VMC 2290	POSITIVE
15.	966	JACKAL	VMC 2291	POSITIVE
16.	968	JACKAL	VMC 2292	POSITIVE
17.	980	JACKAL	VMC 2293	POSITIVE
18.	1003	JACKAL	VMC 2294	POSITIVE
19.	1004	JACKAL	VMC 2295	POSITIVE
20.	176	JACKAL	VMC 2296	POSITIVE
21.	225	JACKAL	VMC 2297	POSITIVE
22.	704	GOAT	VMC 2298	POSITIVE
23.	792	GOAT	VMC 2299	POSITIVE
24.	838	GOAT	VMC 2300	POSITIVE
25.	388	GOAT	VMC 2301	POSITIVE
26.	394	COW	VMC 2302	POSITIVE
27.	865	COW	VMC 2303	POSITIVE
28.	435	COW	VMC 2304	POSITIVE
29.	760	COW	VMC 2305	POSITIVE
30.	50	COW	VMC 2306	POSITIVE
31.	180	COW	VMC 2307	POSITIVE
32.	251	COW	VMC 2308	POSITIVE
33.	366	COW	VMC 2309	POSITIVE
34.	651	COW	VMC 2310	POSITIVE
35.	783	COW	VMC 2311	POSITIVE
36.	691	DEER	VMC 2312	POSITIVE
37.	1096	DOG	VMC 2313	POSITIVE
38.	26	DOG	VMC 2314	POSITIVE
39.	27	DOG	VMC 2315	POSITIVE
40.	35	DOG	VMC 2316	POSITIVE
41.	29	CAT	VMC 2317	POSITIVE

Reviewed by: *(Signature)*
1. (Shrikrishna Isloor) Laboratory Director
2. (Shraddha, R) Quality Manager

Authorized by: *(Signature)*
(D. Rathnamma) Biosafety Officer

PROFESSOR **ASSOCIATE PROFESSOR** **PROFESSOR AND HEAD**
Dept. of Microbiology Dept. of Veterinary Microbiology Department of Veterinary Microbiology
Veterinary College, KVAFSU, Veterinary College, KVAFSU, Veterinary College, KVAFSU,
Hebbal, Bangalore - 560 024 Hebbal, Bangalore-24 Hebbal, Bangalore - 560 024

Disclaimer:

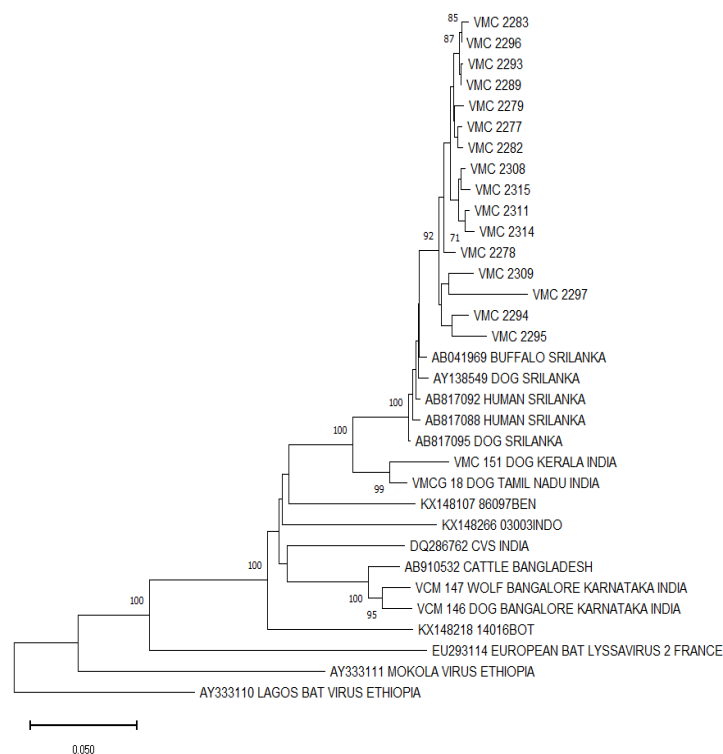
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Molecular characterization of RABV from Sri Lanka

Samples received from: Dept. of rabies and vaccine QC.,
Medical Research Institute
Colombo 8, Sri Lanka on 20/01/2023



Samples list	No. of samples
Jackal	21
Cow	10
Dog	4
Goat	4
Cat	1
Deer	1
Total no.	41



Indian subcontinent lineage

Strategies suggested to employ for the control rabies in dogs and other domestic animals in Srilanka



The following strategies may be employed for control of rabies especially in dogs and other domestic animals:

1. Generation of awareness regarding rabies among the Veterinarians, Medical professionals, animal lovers, animal feeders and general public.
2. Logistics planning arrangement.
3. Capacity building & training of Veterinarians on brain sampling, packing, shipping to laboratory for diagnosis.
4. Strengthening of rabies diagnostic facility
5. Inter-sectoral coordination especially among Veterinarians, Medical professionals, Municipal Corporation authorities and Forest officials.
6. Ensure timely availability of Anti rabies vaccines and Rabies Immunoglobulins in hospitals / pharmaceuticals.
7. Implementation of mass dog vaccination.
8. Undertaking pre-exposure vaccination in cattle and other domestic animals such as Sheep, Goats especially in the endemic areas / hotspots / areas bordering the forest.
9. Initiate oral rabies vaccination programmes exclusively for free roaming dogs / wild carnivores. Pet dogs be administered with regular parenteral vaccinations.

Reviewed by:


1. (Shrikrishna Isloor)
Laboratory Director

PROFESSOR
Department of Veterinary Microbiology
Veterinary College, KVAFSU,
Hobli, Bangalore - 560 024

Authorized by:


2. (Sharada, R)
Quality Manager

ASSOCIATE PROFESSOR
Dept. Of Veterinary Microbiology,
Veterinary College, KVAFSU,
Hobli, Bangalore-24


(D. Rathnamma)
Biosafety Officer
PROFESSOR AND HEAD
Department of Veterinary Microbiology
Veterinary College, KVAFSU,
Hobli, Bangalore - 560 024



THANK YOU



Lets join hands to end human deaths due to dog mediated rabies