

GUIDELINES FOR BIOLOGICAL MATERIAL PACKAGING AND DISPATCH TO THE EU FMD REFERENCE LABORATORY -ANSES MAISONS-ALFORT-

This guideline is applicable to the transport of diagnostic specimens internationally in the context of a clinical suspicion of foot-and-mouth disease infection. It is applicable to all biological specimen sampled from an animal susceptible and/or suspected to be infected by foot-and-mouth virus and ensures that the biological samples arrive in a timely manner and in the appropriate condition for proper virological and serological analysis.

1. DOCUMENTATION REQUIREMENTS

The shipment details must be agreed with the FMD EURL before dispatch and the following documentation must be provided beforehand :

- An official sample submission request (Annex 4) sent by e-mail or by regular mail.
- A sample manifest summarizing, for each animal, the nature of the samples and the clinical signs observed. This sheet shall comply with the model presented in Annex 3 and a paper version must be attached to the sample shipment.

2. CONDITIONS OF DISPATCH TO THE LABORATORY

Given the level-3 classification of the samples, whenever a suspicion of foot-and-mouth disease is reported, compliance with biosafety and traceability rules is essential at all levels of transport. The shipment and dispatch of samples must therefore adhere to the requirements given in the manual of the World Organisation for Animal Health (OIE) and all samples must be sent under category A classification and assigned to 'UN 2900 Infectious substance, affecting animals 'in order to comply with the regulations in force on the transport of biological materials.

As a reminder:

- Collect the sample in a tight primary container (sampling jar or tube, blood-collection tube).
- Then place this primary container in a tight secondary container with an absorbent material (e.g. a paper towel).
- Place this secondary container in a polystyrene box. Add a cold source if necessary. Seal the polystyrene box with adhesive tape.
- Put the polystyrene box in an expedition container made of a resistant material (cardboard).
- Tape the envelope with the supporting documents to the outside of the expedition container. The statement "**CAUTION: FOOT-AND-MOUTH DISEASE. CAN ONLY BE OPENED BY THE RECEIVING LABORATORY**" must be included.
- The shipping address is:
 - ANSES Maisons Alfort
 - LABORATOIRE DE SANTE ANIMALE
 - LNR Fièvre aphteuse et maladies vésiculo-aphteuses
 - UMR 1161 Virologie
 - 22 rue Pierre et Marie Curie
 - 94706 Maisons-Alfort Cedex
 - France
- Sending laboratory notifies the FMD EURL when the package is en route, along with the name of courier, date of shipment and waybill number.
- FMD EURL notifies the sending laboratory when the package arrives.
- Upon arrival, FMD EURL checks the contents against the provided sample manifest to ensure that each sample has arrived intact.
- Please ensure you retain any shipping receipts to facilitate the tracking process.

3. DAGNOSTIC SPECIMEN SPECIFICITIES OF SAMPLING AND SHIPPING FOR EACH REQUESTED TEST

Viral agent	Requested test	Sample type	Shipping temperature	Minimum quantity	Specific shipping conditions
FMD/SVD	ELISA Sero ^b	Serum/plasma	Ambient temperature or refrigerated	1 to 2 ml	Sterile preparation, decanted, non-haemolysed
		Whole blood		5 ml	In a dry tube, sterile preparation, non-haemolysed
FMD/SVD	ELISA Viro ^b	Whole blood	Ambient temperature or refrigerated	2 ml	In an anticoagulant tube
		Vesicular fluid		300 to 500 µl	-
		Epithelial flaps		1 gram, i.e. around 1 cm ²	(In a dry atmosphere if dispatched quickly) In PBS, pH 7.2-7.6, 50% glycerol, sterile.
SVD		Faeces		1 gram	-
FMD/SVD/VS	Seroneutralisation	Serum/plasma	Ambient temperature or refrigerated	2 ml	Sterile preparation, decanted, non-haemolysed
		Whole blood		5 ml	In a dry tube, sterile preparation, non-haemolysed
FMD/SVD/VS	RT-PCR	Whole blood	Refrigerated	2 ml	In an EDTA tube
		Serum/plasma		2 ml (5 ml if whole blood in a dry tube)	-
		Vesicular fluid		300 to 500 µl	-
		Epithelial flaps		1 gram, i.e. around 1 cm ²	(In a dry atmosphere if dispatched quickly) In PBS, pH 7.2-7.6, 50% glycerol, sterile.
SVD		Faeces		1 gram	-
FMD/SVD/VS	Isolation ^b	Vesicular fluid	Refrigerated	300 to 500 µl	-
		Epithelial flaps		1 gram, i.e. around 1 cm ²	(In a dry atmosphere if dispatched quickly) In PBS, pH 7.2-7.6, 50% glycerol, sterile.
SVD		Faeces		1 gram	-

4. INSTRUCTIONS REGARDING LESION SAMPLING

Matrix	Special condition	Temperature		Required quantity
		For shipment	For storage upon receipt	
Vesicle fluid	-	Refrigerated	+ 5°C ± 3°C	300 to 400 microlitres in total
Wall flaps	In a dry atmosphere if dispatched quickly <i>In a transport medium* if very long dispatch time (more than one day)</i>	Refrigerated	+ 5°C ± 3°C	1 gram, i.e. around 1 cm ² of total tissues

* Contact the EURL for more information

These samples undergo the following analyses:

- detection and serotyping of foot-and-mouth disease virus by sandwich ELISA
- isolation of foot-and-mouth disease virus for two cell types (cell lines IB-RS-2 and ZZ-R127)
- real-time detection of the foot-and-mouth disease virus genome by real-time PCR (RT-PCR)

If sample quantity is insufficient, the following analyses should be given priority, in this order:

- isolation of foot-and-mouth disease virus for two cell types (cell lines IB-RS-2 and ZZ-R127)
- detection and serotyping of foot-and-mouth disease virus by sandwich ELISA

5. INSTRUCTIONS REGARDING BLOOD SAMPLING

Matrix	Special condition	Temperature		Required quantity
		For shipment	For storage upon receipt	
Blood	In a dry tube to obtain serum	Refrigerated	+ 5°C ± 3°C	At least one 5 ml-tube

The obtained serum undergoes the following analyses:

- real-time detection of the foot-and-mouth disease virus genome by real-time RT-PCR
- detection of antibodies against the non-structural proteins of foot-and-mouth disease virus by ELISA, supplemented in the event of positive results by determination of the responsible serotype via other ELISA assays

EU Foot-and-mouth disease Reference laboratory

Analysis request form

Date of request : __ / __ / ____

Reference of shipment :

Submitter

Name in BLOCK LETTERS:

Institute :

Address for return of results:

Country :

Tel :

Email :

Number of samples : (1) : Epi = epithelium ; Liq = vesicular fluid ; Ser = sera ; LFD = penside-test ; Pr/EC= Probang/Swab. (2) : Bv = bovin ; Ov = ovin ; Cp = caprin ; Pc = porcin.

Analysis report recipient :

Name, Surname

Signature

EU Foot-and-mouth disease Reference laboratory

Analysis request form

Date of request: __ / __ / ____

Shipment reference :

Expéditeur

Name :

Institute :

Address :

Country :

:

Tel :

Email :

Samples : (1) : Epi = epithelium ; Liq = Vesicular liquid ; Ser = serum ; LFD = penside-test ; Pr/EC= Probang/Swab. (2) : Bv = bovine ; Ov = ovine ; Cp = caprine ; Pc = porcine.

Sample name	Nature ⁽¹⁾	Species ⁽²⁾	Containment	Sampling date	Storage temperature	Sampling site	Vaccination
.....	<input type="checkbox"/> Epi <input type="checkbox"/> Liq <input type="checkbox"/> Ser <input type="checkbox"/> LFD <input type="checkbox"/> <input type="checkbox"/> Pr/Ec	<input type="checkbox"/> Bv <input type="checkbox"/> Ov <input type="checkbox"/> Cp <input type="checkbox"/> Pc <input type="checkbox"/>	__ / __ / __	<input type="checkbox"/> Yes <input type="checkbox"/> No Date : Serotype(s) :
.....	<input type="checkbox"/> Epi <input type="checkbox"/> Liq <input type="checkbox"/> Ser <input type="checkbox"/> LFD <input type="checkbox"/> <input type="checkbox"/> Pr/Ec	<input type="checkbox"/> Bv <input type="checkbox"/> Ov <input type="checkbox"/> Cp <input type="checkbox"/> Pc <input type="checkbox"/>	__ / __ / __	<input type="checkbox"/> Yes <input type="checkbox"/> No Date : Serotype(s) :
.....	<input type="checkbox"/> Epi <input type="checkbox"/> Liq <input type="checkbox"/> Ser <input type="checkbox"/> LFD <input type="checkbox"/> <input type="checkbox"/> Pr/Ec	<input type="checkbox"/> Bv <input type="checkbox"/> Ov <input type="checkbox"/> Cp <input type="checkbox"/> Pc <input type="checkbox"/>	__ / __ / __	<input type="checkbox"/> Yes <input type="checkbox"/> No Date : Serotype(s) :
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.....	<input type="checkbox"/> Epi <input type="checkbox"/> Liq <input type="checkbox"/> Ser <input type="checkbox"/> LFD <input type="checkbox"/> <input type="checkbox"/> Pr/Ec	<input type="checkbox"/> Bv <input type="checkbox"/> Ov <input type="checkbox"/> Cp <input type="checkbox"/> Pc <input type="checkbox"/>	__ / __ / __	<input type="checkbox"/> Yes <input type="checkbox"/> No Date : Serotype(s) :

Analysis report recipient :

Name, Surname, Signature