



Semen and Embryos from Sheep (*Ovis aries*) and Goats (*Capra hircus*)

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Title

Guidance Document: Semen and Embryos from Sheep (*Ovis aries*) and Goats (*Capra hircus*)

About this document

This guidance document contains information about acceptable ways of ensuring compliance with the requirements in the *Import Health Standard (IHS): Semen and Embryos from Sheep (Ovis aries) and Goats (Capra hircus)*.

Any guidance on how to comply with the applicable requirements may not be the only way to achieve compliance. Stakeholders are encouraged to discuss departures from the approaches outlined in this guidance document with the Ministry for Primary Industries (MPI) to avoid expending resources on the development of alternative approaches which may later be considered unsuitable.

The term “must” is not typically used in guidance. In this particular document if the term “must” is used, it is used in the context of quoting or paraphrasing the requirements set out in the *IHS: Semen and Embryos from Sheep (Ovis aries) and Goats (Capra hircus)*.

Related requirements

Import Health Standard: Semen and Embryos from Sheep (Ovis aries) and Goats (Capra hircus).

Document history

Refer to Appendix 1.

Contact details

For further information and questions about this guidance document, please contact:

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Disclaimer

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1 Purpose

- (1) This guidance document has been issued to accompany the *IHS: Semen and Embryos from Sheep (Ovis aries) and Goats (Capra hircus)*. This guidance document should be read in conjunction with that IHS.
- (2) This document includes:
 - a) A table listing countries with MPI approved export systems to import semen and embryos from sheep (*Ovis aries*) and goats (*Capra hircus*) into New Zealand
 - b) Model semen and embryo veterinary certificates
 - c) Negotiated country specific veterinary certificates

2 Background

- (1) The *IHS: Semen and Embryos from Sheep (Ovis aries) and Goats (Capra hircus)* which this Guidance Document accompanies, contains generic import requirements. These are the rules to manage the biosecurity risk of importing semen and embryos from sheep and goats from countries that can meet the requirements of the IHS and in doing so meet New Zealand's appropriate level of protection. The generic IHS serves as the basis for country-to-country (bilateral) negotiations. This guidance document contains a model veterinary certificate and links to the bilaterally-agreed veterinary certificates for trade in semen and embryos from sheep (*Ovis aries*) and goats (*Capra hircus*). The country-specific veterinary certificates represent what will be certified prior to exporting consignments of semen and embryos from sheep and goats from the countries specified.

3 Definitions

- (1) Refer to Schedule 2 of the *IHS: Semen and Embryos from Sheep (Ovis aries) and Goats (Capra hircus)*.

4 Importer Responsibilities

- (1) The costs to MPI in performing functions relating to the importation of semen and embryos from sheep and goats will be recovered in accordance with the Biosecurity Act 1993 (the Act) and any regulations made under that Act. All costs involved with documentation, transport, storage and obtaining a biosecurity clearance will be covered by the importer or agent.
- (2) Consignments that do not comply with the requirements of the IHS may be re-shipped, or destroyed using an MPI-approved destruction method.

5 Guidance

5.1 Equivalence

- (1) MPI may accept an alternative method, system or process that can be shown to achieve the biosecurity requirements of the IHS (i.e. equivalence).
- (2) MPI's preference is that the exporting country's Competent Authority makes equivalence requests. Equivalence requests can be lodged with animalimports@mpi.govt.nz.
- (3) A permit may be required where specific equivalence measures are approved by MPI as per the equivalence clause in the IHS. A permit to import serves as evidence of equivalence decisions which will be written as specific notes in the special conditions section of the permit.

- (4) Permit to import application forms can be found on the MPI website at: <http://www.biosecurity.govt.nz/regs/imports/animals/forms>.
- (5) Completed applications are lodged with animal imports: animalimports@mpi.govt.nz.

5.2 Incorporation of material by reference

- (1) Incorporation by reference means that standards, guidelines or lists are incorporated into the IHS and they form part of the requirements. This is done because technical documents are too large or impractical to include in the IHS.
- (2) For international standards, importers need to refer to the most recent version of the standards that are incorporated by reference in the IHS.

5.3 Inspection and verification

- (1) On arrival, all documentation accompanying the consignment will be verified by an inspector. The inspector may also inspect the consignment, or a sample of the consignment on arrival.
- (2) Inspectors are able to inspect and verify due to their authorised powers under the Act.
- (3) These requirements are independent of the IHS requirements.

5.4 Exporting country systems and certification

- (1) MPI recommends Competent Authorities that request the approval of their exporting systems refer to Section 3 of the *Code* titled *Quality of Veterinary Services*, to prepare evidence for MPI regarding capabilities and preferences of the exporting country's Competent Authority.
- (2) The table below lists those exporting countries that meet the requirements set out in the *IHS: Semen and Embryos from Sheep (Ovis aries) and Goat (Capra hircus)*

Countries with approved exporting systems	Date agreed
Australia	Trade ongoing

5.4.1 Agreed country specific veterinary certificates

- (1) Requests from exporting countries to negotiate veterinary certification for the import of semen and embryos from sheep (*Ovis aries*) and goat (*Capra hircus*) into New Zealand will be prioritised according to MPI resources available at the time of application.
- (2) Model veterinary certificates are provided in this guidance document and can be used by the Competent Authority as a reference for country-specific veterinary certificate negotiation.
- (3) All country-specific veterinary certificates agreed between an exporting country's Competent Authority and MPI are included in the table below:

For semen:

Country	Link to certificate	S27 CTO direction #	Date agreed (transition begins)	End of transition

For embryos:

Country	Link to certificate	S27 CTO direction #	Date agreed (transition begins)	End of transition

- (4) Country-specific veterinary certificates with equivalent measures will be recorded with a number relevant to a Chief Technical Officer (CTO) direction under section 27(1)d(iii) of the Act, to enable border staff to clear the goods and record the number in the MPI database.
- (5) When a newly negotiated country-specific veterinary certificate replaces one which is currently in use, the application of new import conditions will apply according to the dates listed in the table. At that time previous veterinary certificates for that country can no longer be used.

5.5 Diagnostic tests and vaccines for international trade

- (1) MPI lists all approved diagnostic tests and vaccines in the MPI document: *Approved Diagnostic Tests, Vaccines, Treatments and Post-Arrival Testing Laboratories for Animal Import Health Standards (MPI-STD-TVTL)* found on the MPI website: <http://www.mpi.govt.nz/document-vault/2040>.
- (2) More information about OIE recommended diagnostic tests and vaccines can be found in the *OIE Manual of Diagnostic Tests and Vaccines (the Manual)* found on the OIE website: <http://www.oie.int/en/international-standard-setting/terrestrial-manual/access-online/>
- (3) The OIE *Terrestrial Animal Health Code* chapter listing the prescribed and alternative diagnostic tests for OIE listed diseases is found on the OIE website: http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre_1.1.3.htm

5.6 Semen collection and processing

- (1) Semen can be contained in various types of receptacles, such as a vial, goblet, ampoule, or straw, as long as they are tamper-evident and separate semen from individual donors.

6 Specified Requirements for Identified Risk Organisms

- (1) The risk management requirements for identified risk organisms are outlined in Part 2 of the IHS.

6.1 Antibiotics effective against leptospirosis

- (1) Refer to the MPI document, *Approved Diagnostic Tests, Vaccines, Treatments and Post-Arrival Testing Laboratories for Animal Import Health Standards (MPI-STD-TVTL)* for a complete list of approved antibiotics.

Part 2: Detail of donors	Donor information																					
	Name	Donor identification			Breed			Date of birth			Country of birth			Name of owner			Address of owner					
	Semen information																					
	Donor identification	Date/s of collection		Straw/pellet container identification			Number of straws/pellet containers		Date of entry into semen collection facility			Name of semen collection facility		Address of semen collection facility		Semen collection facility approval number		Date of last inspection of semen facility				
	Test information (Note that this information is to be amended as appropriate to the exporting country)																					
		<Disease name>			<Disease name>			<Disease name>			<Disease name>			<Disease name>			<Disease name>					
	Donor identification	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result
Other information																						
<disease name> Vaccine										Scrapie												
Name of the vaccine	Inactivated or modified live virus	Virus types and strains		Genotype	Identifying laboratory																	

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Part 3: Specific Requirements

Country:

Certificate reference number:

I,....., a veterinarian authorised by the veterinary authority certify, after due enquiry that the semen described above satisfy(ies) the following requirements:

Eligibility

- (1) The semen is from *Ovis aries* and/or *Capra hircus* (delete as appropriate and initial).
- (2) The semen is frozen and non-genetically modified.

Diagnostic testing, vaccination, and treatment

- (3) All required laboratory testing was conducted at a laboratory approved to conduct export testing by the Competent Authority of a country approved to export to New Zealand.
- (4) Tests used must be listed in and carried out in accordance with *MPI-STD-TVTL*.
- (5) Copies of laboratory reports, or an endorsed, tabulated summary, including test date, type, and results for each donor, are attached to this veterinary certificate.
- (6) All products and vaccinations administered to meet specific disease requirements were administered according to the manufacturer's instruction in a country approved to export to New Zealand. Vaccinations were either the final dose of a primary course or the recommended booster to complement the primary.
 - (a) Product name, manufacturer, active ingredient (where applicable) _____
Dose and date of treatment _____
 - (b) Vaccine name and virus type and strain: _____
Inactivated or modified live virus (circle or delete as appropriate and initial)

Semen collection facility requirements

- (7) The semen collection facility met the conditions specified in the Code Chapter on general hygiene in semen collection and processing centres.
- (8) The semen collection facility was:
 - (a) approved for export by the Competent Authority.
 - (b) subject to regular inspection by an Official Veterinarian at least every 12 months.
 - (c) under the supervision of a semen collection facility veterinarian approved by the Competent Authority.
- (9) The names and approval numbers of these semen collection facilities are recorded in this veterinary certificate.
- (10) When donors were transferred from one approved semen collection facility to another of equal health status without isolation or testing, the following conditions were applied:
 - (a) Donors were examined, by the approved semen collection facility veterinarian, and showed no clinical sign of disease on the day of entry into the facility.
 - (b) Transfer was direct.
 - (c) Transfer was not through a bluetongue or Rift Valley fever infected zone or donors were protected from insect attack during transit.
 - (d) Donors were not in direct or indirect contact with animals of a lower health status.
 - (e) The means of transport used was disinfected before use.

Donor and semen collection facility health status

- (11) Prior to admission to the semen collection facility, the donors were isolated for at least 28 days at a place specifically approved for this purpose by the Competent Authority. During this time they were not used for natural mating and were isolated from animals not of equivalent health status.
- (12) The approved semen collection facility veterinarian ensured that, on the day(s) of collection of the semen, the health status of each donor was monitored and recorded, and the donor did not show any clinical evidence of infectious diseases transmissible in semen.

Semen collection, processing, storage and transport

- (13) Semen was collected and processed in accordance with the current recommendations of the *Code*, unless indicated otherwise in this IHS.
- (14) Antibiotics, as listed in *MPI-STD-TVTL* or recommended in the *Code*, were added to semen diluent to manage *Leptospira* serovars.
Name and concentration of antibiotics:

- (15) None of the cryogenic or cooling agents have been previously used in association with any other product of animal origin.
- (16) Dry ice and associated equipment to process semen pellets have been managed to prevent contamination with semen donors not of equivalent tested health status (*delete as appropriate and initial*).
- (17) Semen is in straws or sanitised containers which are sealed and tamper-evident, and clearly and permanently marked to identify the donor and the date(s) of collection. A code is used for this information and its decipher accompanies the consignment (*delete as appropriate and initial*). The marking is in accordance with the *Code* and conforms to the international standards of the International Committee for Animal Recording (ICAR; www.icar.org).
- (18) Semen was only stored with semen and embryos that were collected and processed in accordance with the *Code*. Containers were held until export in storage place approved by the Competent Authority of the exporting country.
- (19) Semen was placed in a container which is sanitised and free of contamination.
Disinfectant (active chemical) and date (*delete and initial if the container was new*):

- (20) Semen was transferred from one transport container to another for further processing (*delete if semen was not transferred*).
Transfer date, facility, and reason:

- (21) The transport container in which the semen is transported to New Zealand was sealed by either the semen collection facility veterinarian or an official veterinarian, using tamper-evident seals.
Seal number _____
- (22) The semen in this consignment originates from a different country than the country of export: <insert name of country of origin> (*delete as appropriate and initial*). The country of origin is currently approved to export to New Zealand and the semen is accompanied by:
- a) a declaration from the Competent Authority of the third country linking the semen from the country of origin to the semen being exported to New Zealand and confirming that the semen has been stored as required by the IHS, at a facility approved by the Competent Authority; and either
 - (i) the veterinary certificate, certified by the country of origin to export to New Zealand requirements; or
 - (ii) a letter from the country of origin's Competent Authority indicating that the semen meets New Zealand's current import requirements.

SPECIFIC REQUIREMENTS FOR IDENTIFIED RISK ORGANISMS:

Note: The disease name or acronym appears in parentheses after the risk organism.

- (23) **Bluetongue virus (bluetongue)**
- (a) Donors were:
 - (i) resident in a bluetongue virus (BTV) free country or zone in accordance with the requirements of the *Code*, for at least the 60 days prior to and during collection; or
 - (ii) resident during the seasonally free period in a BTV seasonally free zone in accordance with the requirements of the *Code*, for at least the 60 days prior to collection; or
 - (iii) resident in a vector-proof facility for at least the 60 days prior to collection and the facility was regularly inspected and certified as being free from *Culicoides* spp. throughout the period when the donors were resident; or
 - (iv) subjected to a test in accordance with the *Code* and *MPI-STD-TVTL*, with negative results, on blood samples taken at commencement and conclusion of, and at least every 7 days (virus isolation test) or at least every 28 days (PCR test) during, semen collection for this consignment.
- (24) **Crimean Congo haemorrhagic fever virus (CCHF)**
- (a) Donors were resident in a country:
 - (i) where CCHF has not been recognised by the Competent Authority for the 21 days before collection; and
 - (ii) where CCHF is officially notifiable; or

- (b) Donors must be:
 - (i) inspected for ticks (shearing where necessary and inspection must include the head and lower legs) and treated with an effective acaricide under Official Veterinarian supervision to ensure they are free from ticks before entering an approved vector-proof facility; and
 - (ii) held for at least 21 days before the first semen or embryo collection in a facility that is regularly inspected and certified as tick-free throughout the period when the donors are resident; or
- (c) Donors were tested with a serological test for CCHF listed in *MPI-STD-TVTL*. Testing was within 7 days prior to semen collection and every 21 to 120 days thereafter, until 21 to 120 days after conclusion of semen collection and serological results indicate that any donor:
 - (i) seronegative at the start of testing has maintained a seronegative status; and
 - (ii) seropositive at the start of testing did not have a rise in titre over consecutive tests.

(25) **Foot and mouth disease virus (FMD)**

- (a) Donors were resident for the 3 months before semen collection in the exporting country or another country approved to export sheep and goat semen to New Zealand.
- (b) Neither the donors nor any other animal in the collection facility:
 - (i) Showed clinical signs of FMD on the day of the semen collection for New Zealand and for the following 30 days; and
 - (ii) Were vaccinated within the month prior to semen collection for New Zealand; and donors have either
 1. never been vaccinated and were subjected, not less than 21 days after semen collection, to a test for antibodies against FMD virus described in *MPI-STD-TVTL*; or
 2. been vaccinated at least twice, with the most recent vaccination not more than 12 months before collection for New Zealand.

(26) **Jaagsiekte sheep retrovirus (ovine pulmonary adenomatosis)**

- (a) Donors were resident since birth in countries where ovine pulmonary adenomatosis has not been recognised by the Competent Authority; or
- (b) Donors have only lived in herds/flocks that include animals older than 5 years; and
 - (i) The herds/flocks have remained free from ovine pulmonary adenomatosis based on the absence of clinical signs for at least the 5 years prior to collection and no sheep/goat from a flock/herd of inferior health status has been introduced during that period.
- (c) Donors were older than 5 years when subjected to a post-mortem examination of the respiratory system and associated lymphatics. All pathology was JSRV negative based upon either histopathology or a validated immunohistochemistry or PCR test in accordance with *MPI-STD-TVTL*.

(27) **Maedi-visna virus (MV)**

- (a) Donors were resident since birth in countries where MV has not been recognised by the Competent Authority; or
- (b) Donors:
 - (i) only resided with herds/flocks, during the 3 years before collection for New Zealand, where MV was neither clinically nor serologically diagnosed and animals of inferior health status were not introduced, and
 - (ii) over one year of age, were subject to a serological test for MV listed in *MPI-STD-TVTL*, with negative results, during the 30 days prior to entering the isolation facility, and
 - (iii) were subjected to a serological test for MV listed in *MPI-STD-TVTL*, with negative results, at least 21 days after entering isolation and at least annually thereafter while in the collection facility.

(28) **Peste des petits ruminants virus (PPR)**

- (a) Donors were resident in a PPR free country or zone in accordance with the *Code* for at least 21 days prior to and during collection; or
- (b) Donors:
 - (i) were resident in an establishment not located in a PPR infected zone in accordance with the *Code*; and
 - (ii) showed no clinical signs of PPR on the day of collection and during the following 21 days and during that period no case of PPR was officially reported in that establishment; and donors were either
 1. vaccinated against PPR between 21 and 120 days prior to semen collection; or
 2. unvaccinated and subjected to a test listed in *MPI-STD-TVTL* at least 21 days after semen collection, with negative results

(29) **Rift Valley fever virus (RVF)**

- (a) Donors were resident in a RVF free country or zone in accordance with the *Code* for at least the 30 days prior to collection; or
- (b) Donors were held in a vector-proof facility for at least 30 days prior to and during collection and never showed clinical signs of RVF. The facility was inspected regularly and mosquito-free throughout the period when donors were resident; or
- (c) For at least the 14 days prior to and after semen collection, the donors showed no clinical sign of RVF; and donors were either
 - (i) serologically tested for RVF, using a test listed in *MPI-STD-TVTL*, on the day of semen collection, and at least 14 days later, and showed no significant rise in titre; or
 - (ii) vaccinated against RVF in accordance with the *Manual*, at least 14 days prior to semen collection with a modified live vaccine.

(30) **Capripox virus (sheep and goat pox)**

- (a) Donors were resident in a sheep and goat pox free country in accordance with the *Code* for at least the 21 days prior to collection; or
- (b) Donors showed no clinical signs of sheep or goat pox on the day of semen collection and for the following 21 days; and
 - (i) For at least the 21 days prior to collection, the donors:
 - 1. resided in an establishment where no case of sheep or goat pox was reported during that period;
 - 2. were not in a zone infected with sheep and goat pox in accordance with the *Code*; and
 - (ii) Vaccinated donors were vaccinated in accordance with the *Manual*.

(31) **Wesselsbron disease virus (Wesselsbron disease)**

- (a) Donors were resident in a country recognised by the Competent Authority as free from circulating Wesselsbron disease virus for at least the 21 days prior to collection; or
- (b) Donors were resident in an establishment where Wesselsbron disease has not been recognised for at least the 21 days prior to collection; or
- (c) Donors were tested with a serological test for Wesselsbron disease listed in *MPI-STD-TVTL*. Samples were tested 7 days prior to semen collection and every 21 to 120 days thereafter, until 21 to 120 days after the conclusion of semen collection, and serological results indicate that any:
 - (i) seronegative donor has maintained a seronegative status; and
 - (ii) seropositive donor did not have a rise in titre over consecutive tests.

(32) ***Brucella melitensis* (caprine and ovine brucellosis)**

- (a) Donors were resident in a country, zone, or flock/herd that is officially free from caprine and ovine brucellosis in accordance with the *Code*; or
- (b) Donors were resident in a flock/herd that is free from caprine and ovine brucellosis, in accordance with the *Code*, and were subjected to two different tests for caprine and ovine brucellosis listed in *MPI-STD-TVTL* on the same blood sample, taken within 30 days prior to semen collection, with negative results.

(33) ***Mycoplasma capricolum* subsp. *Capripneumoniae* (contagious caprine pleuropneumonia - CCPP)**

For goats only:

- (a) Donors were resident in a country that is free from CCPP in accordance with the *Code*; or
- (b) For at least the 45 days prior to collection, donors did not reside in a CCPP infected zone, in accordance with the *Code*, and were not resident in a herd where CCPP has been officially reported during that time; and
 - (i) Aliquots of semen from each collection were subjected to a test in accordance with the *Code* and listed in *MPI-STD-TVTL*, with negative results; or
 - (ii) Donors were subjected to a CCPP complement fixation test, in accordance with the *Manual*, on two occasions, with an interval of 21 to 30 days between tests and the second test being within the 14 days prior to pre-entry isolation, with negative results; and
 - 1. Donors were isolated from other domestic goats from the first test until the last date of collection.

(34) ***Mycoplasma agalactiae* (contagious agalactia)**

- (a) Donors were resident in a country that has been recognised by the Competent Authority as free from contagious agalactia for at least the 6 months prior to collection; or
- (b) Donors were:

- (i) resident for at least the 6 months prior to collection only at premises where no case of contagious agalactia had been officially reported during that time; and
- (ii) tested for *Mycoplasma agalactiae* in accordance with the *Manual* or *MPI-STD-TVTL*.

(35) ***Mycobacterium caprae* and *Mycobacterium bovis* (tuberculosis)**

For goats only:

- (a) Donors were resident in a country recognised by the Competent Authority as free from tuberculosis in goats; or
- (b) Donors were subjected to a single comparative tuberculin test for tuberculosis prior to entry to the collection facility, with negative results; and
 - (i) All animals in the collection facility were tested prior to entry and at least annually, with negative results.

(36) ***Chlamydia abortus* (enzootic abortion of ewes - EAE)**

- (a) Donors were resident in a country recognised by the Competent Authority as free from EAE for at least the 2 years prior to collection; or
- (b) Donors were:
 - (i) resident in a herd/flock that is free from EAE in accordance with the *Code* for at least the past 2 years;
 - (ii) not in contact with any animal of lower health status during that period of time; and either
 1. subjected to a test for EAE listed in *MPI-STD-TVTL*, with negative results; or
 2. semen samples for each collection were subjected to a test for EAE listed in *MPI-STD-TVTL*, with negative results.

(37) ***Coxiella burnetii* (Q fever)**

- (a) Donors have never been confirmed positive for Q fever; and either
 - (i) Donors were subjected to a Q fever test in accordance with *MPI-STD-TVTL*, with negative results; or
 - (ii) Semen from each collection was subjected to a Q fever test in accordance with *MPI-STD-TVTL*, with negative results.

(38) **Scrapie**

For goats only:

- (a) Donors were resident in a scrapie free country in accordance with the *Code*; or
- (b) Donors were resident in an establishment that has been maintained free from scrapie from commencement until conclusion of collection, in accordance with the *Code* recommendations for a scrapie free establishment.

For sheep only:

- (a) Donors were resident in a scrapie free country in accordance with the *Code*; or
- (b) Donors were resident in an establishment that has been maintained free from scrapie from commencement until conclusion of collection, in accordance with the *Code* recommendations for a scrapie free establishment; or
- (c) Donors have the scrapie resistant genotypes – ARR/ARR, ARR/AHQ, ARR/ARH or ARR/ARQ. Laboratory evidence of the genotype is required.

Semen Facility Veterinarian:

Name

Address:

Date:

Signature:

Official Veterinarian:

Name

Address:

Date:

Signature:



Part 2:	Female donor information																						
	Name			Donor identification			Breed			Date of birth			Country of birth			Name of owner			Address of owner				
	Embryo information																						
	Female donor identification		Date/s of collection		Straw identification			Number of straws			Number of embryos /straws			Name and address of embryo collection flock/herd			Male donor identification			Date of semen collection or date of natural mating			
	Test information (Note that this information is to be amended as appropriate to the exporting country)																						
			<Disease name>			<Disease name>			<Disease name>			<Disease name>			<Disease name>			<Disease name>					
	Donor identification		Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result	Test sampling date	Test type	Result
Other information																							
		<disease name> Vaccine			Scrapie																		
Name of the vaccine		Inactivated or modified live virus	Virus types and strains	Genotype	Identifying laboratory																		
Details of donors																							

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Part 3: Specific Requirements

Country:

Certificate reference number:

I,....., a veterinarian authorised by the veterinary authority certify, after due enquiry that the semen described above satisfy(ies) the following requirements:

Eligibility

- (1) The embryos are from *Ovis aries* or *Capra hircus* (delete as appropriate and initial).
- (2) The embryos are *in vivo* derived, frozen, non-cloned, and non-genetically modified.

Diagnostic testing, vaccination, and treatment

- (3) All required laboratory testing was conducted at a laboratory approved to conduct export testing by the Competent Authority of a country approved to export to New Zealand.
- (4) Tests used must be listed in and carried out in accordance with *MPI-STD-TVTL*.
- (5) Copies of laboratory reports, or an endorsed, tabulated summary, including test date, type, and results for each donor, are attached to this veterinary certificate.
- (6) All products and vaccinations administered to meet specific disease requirements were administered according to the manufacturer's instruction in a country approved to export to New Zealand. Vaccinations were either the final dose of a primary course or the recommended booster to complement the primary.
 - (a) Product name, manufacturer, active ingredient (where applicable) _____
Dose and date of treatment _____
 - (b) Vaccine name and virus type and strain: _____
Inactivated or modified live virus (circle or delete as appropriate and initial)

Embryo collection team and flock/herd approval requirements

- (7) At the time of collection of embryos for export to New Zealand, the embryo collection team was approved by and registered with the Competent Authority of the exporting country.
- (8) The Competent Authority has knowledge of and authority over the embryo collection flock/herd until completion of collection and testing specified in this IHS.

Donor and flock/herd health status

- (9) Embryo donors were not situated in a herd/flock subject to veterinary restrictions for the identified risk organisms, for at least 28 days before the first embryo collection until completion of the testing of the donors as required by this standard.
- (10) Where a specific requirement for a risk organism is met by pre-collection testing, donors were isolated from other sheep or goats not of an equivalent tested health status, from the time of the pre-collection test until completion of collection of embryos for export to New Zealand.
- (11) On the day(s) of embryo collection, the approved embryo collection team veterinarian was responsible for monitoring the health status of each donor and recording that the donor was free from clinical evidence of infectious diseases transmissible in embryos.

Embryo collection, processing, storage and transport

- (12) Embryos were collected and processed under the supervision of an approved embryo collection team veterinarian and in accordance with the recommendations in the *Code* chapters on collection and processing of *in vivo* derived embryos of livestock.
- (13) Embryos had an intact zona pellucida and were free of adherent material after the final wash when examined over its entire surface at not less than 50X magnification. Any micro-manipulation that caused a breach of the zona pellucida, was performed according to the procedures described in the *Code* and *IETS Manual*.
- (14) All biological products of animal origin used in the media and solutions for collection, processing, washing or storage of embryos was free from pathogenic organisms including pestiviruses.
- (15) Media and solutions were either sterilised by approved methods according to the *IETS Manual* or commercially prepared sterile media were used. These were handled in such a manner as to ensure that sterility was maintained.
- (16) Antibiotics, as listed in *MPI-STD-TVTL*, were added to collection, processing, washing and storage media to manage *Leptospira* serovars.

Name and concentration of antibiotics:

- (17) None of the cryogenic or cooling agent has been previously used in association with any other product of animal origin.
- (18) Embryos are sealed in straws, which are clearly and permanently marked to identify the donor and the date(s) of collection. A code is used for this information and its decipher accompanies the consignment (*delete as appropriate and initial*). The marking is in accordance with the *Code* and conforms to the international standards of the International Committee for Animal Recording (ICAR; www.icar.org).
- (19) Embryos were only stored with semen or embryos that were collected and processed according to the *Code*. Containers were held until export in a storage place approved by the Competent Authority of the exporting country.
- (20) Embryos were transferred from one transport container to another for further processing (*delete if embryos were not transferred*). Transfer date, location, and reason:
- _____
- (21) Embryos were placed in a container which is sanitised and free of contamination. Disinfectant (active chemical) and date (*delete and initial if container was new*):
- _____
- (22) The transport container in which the embryos are transported to New Zealand was sealed by either the embryo collection team veterinarian or an official veterinarian, using tamper evident seals. Seal number _____
- (23) The embryos in this consignment originate from a different country than the country of origin: <insert name of country of origin> (*delete as appropriate and initial*). The country of origin is currently approved to export to New Zealand and the embryos are accompanied by:
- a) a declaration from the Competent Authority of the third country linking the embryos from the country of origin to the embryos being exported to New Zealand and confirming that the embryos have been stored as required by the IHS, at a facility approved by the Competent Authority; and either
 - (i) the veterinary certificate, certified by the country of origin to export to New Zealand requirements; or
 - (ii) a letter from the country of origin's Competent Authority indicating that the embryos meet New Zealand's current import requirements

SPECIFIC REQUIREMENTS FOR IDENTIFIED RISK ORGANISMS:

Note: The disease name or acronym appears in parentheses after the risk organism.

- (24) **Bluetongue virus (bluetongue)**
- (a) Donors were:
 - (i) resident in a BTV free country or zone in accordance with the requirements of the *Code*, for at least the 60 days prior to and during collection; or
 - (ii) resident during the seasonally free period in a BTV seasonally free zone in accordance with the requirements of the *Code*, for at least the 60 days prior to collection; or
 - (iii) resident in a vector-proof facility for at least the 60 days prior to collection and the facility was regularly inspected and certified as being free from *Culicoides spp.* throughout the period when the donors were resident; or
 - (iv) subjected to a test in accordance with the *Code* and *MPI-STD-TVTL*, with negative results, on blood samples taken on the day of collection for this consignment.
- (25) **Crimean Congo haemorrhagic fever virus (CCHF)**
- (a) Donors were resident in a country:
 - (i) where CCHF has not been recognised by the Competent Authority for the 21 days before collection; and
 - (ii) where CCHF is officially notifiable; or
 - (b) Donors must be:
 - (i) inspected for ticks (shearing where necessary and inspection must include the head and lower legs) and treated with an effective acaricide under Official Veterinarian supervision to ensure they are free from ticks before entering an approved vector-proof facility; and
 - (ii) held for at least 21 days before the first semen or embryo collection in a facility that is regularly inspected and certified as tick-free throughout the period when the donors are resident; or
 - (c) Donors were tested with a serological test for CCHF listed in *MPI-STD-TVTL*. Testing was within 7 days prior to embryo collection until 21 to 120 days after conclusion of embryo collection and serological results indicate that any donor:
 - (i) seronegative at the start of testing has maintained a seronegative status; and

- (ii) seropositive at the start of testing did not have a rise in titre over consecutive tests.

(26) **Foot and mouth disease virus (FMD)**

- (a) Donors were resident for the 3 months before embryo collection in the exporting country or another country approved to export sheep and goat embryos to New Zealand.
- (b) Neither the donors nor any other animal at the collection herd/flock:
 - (i) showed clinical signs of FMD on the day of the embryo collection for New Zealand and for the following 30 days; and
 - (ii) were vaccinated within the month prior to embryo collection for New Zealand; and donors have either
 1. never been vaccinated and were subjected, not less than 21 days after embryo collection, to a test for antibodies against FMD virus described in *MPI-STD-TVTL*; or
 2. been vaccinated at least twice, with the most recent vaccination not more than 12 months before collection for New Zealand.

(27) **Maedi-visna virus (MV)**

- (a) Donors were resident since birth in countries where MV has not been recognised by the Competent Authority; or
- (b) Donors:
 - (i) only resided with herds/flocks, during the 3 years before collection for New Zealand, where MV was neither clinically nor serologically diagnosed and animals of inferior health status were not introduced; and
 - (ii) were subjected to a serological test for MV listed in *MPI-STD-TVTL*, with negative results, at least 21 days after entering the collection herd/flock and at least annually thereafter while in the collection herd/flock.

(28) **Peste des petits ruminants virus (PPR)**

- (a) Donors were resident in a PPR free country or zone in accordance with the *Code* for at least 21 days prior to and during embryo collection; or
- (b) Donors:
 - (i) were resident in an establishment not located in a PPR infected zone in accordance with the *Code*.
 - (ii) showed no clinical signs of PPR on the day of embryo collection and during the following 21 days and during that period no case of PPR was officially reported in that establishment; and donors were either
 1. vaccinated against PPR between 21 and 120 days prior to embryo collection; or
 2. unvaccinated and subjected to a test listed in *MPI-STD-TVTL* at least 21 days after embryo collection, with negative results.

(29) **Rift Valley fever virus (RVF)**

- (a) Donors were resident for at least the 30 days prior to embryo collection in a country or zone that is free from RVF in accordance with the *Code*; or
- (b) Donors were held in an MPI approved vector-proof collection facility for at least 30 days prior to and during collection and never showed clinical signs of RVF. The facility was inspected regularly and mosquito-free throughout the period when donors were resident; or
- (c) For at least the 14 days prior to and after embryo collection, the donors showed no clinical sign of RVF; and either
 - (i) Donors were serologically tested for RVF, using a test listed in *MPI-STD-TVTL*, on the day of embryo collection, and at least 14 days later, and showed no significant rise in titre; or
 - (ii) Donors were vaccinated against RVF in accordance with the *Manual*, at least 14 days prior to embryo collection with a modified live vaccine.

(30) **Capripox virus (sheep and goat pox)**

- (a) Donors were resident in a sheep and goat pox free country in accordance with the *Code* for at least the 21 days prior to collection; or
- (b) Donors showed no clinical signs of sheep or goat pox on the day of embryo collection and for the following 21 days; and
 - (i) For at least the 21 days prior to collection, the donors:
 1. resided in an establishment where no case of sheep or goat pox was reported during that period; and
 2. were not in a zone infected with sheep and goat pox in accordance with the *Code*; and
 - (ii) Vaccinated donors were vaccinated in accordance with the *Manual*.

(31) **Wesselsbron disease virus (Wesselsbron disease)**

- (a) Donors were resident in a country recognised by the Competent Authority as free from circulating Wesselsbron disease virus for at least the 21 days prior to collection; or
- (b) Donors were resident in an establishment where Wesselsbron disease has not been recognised for at least the 21 days prior to collection; or
- (c) Donors were tested with a serological test for Wesselsbron disease listed in *MPI-STD-TVTL*. Samples were tested within 7 days prior to embryo collection and again 21 to 120 days later, and serological results indicate that any:
- seronegative donor has maintained a seronegative status; and
 - seropositive donor did not have a rise in titre over consecutive tests.
- (32) ***Brucella melitensis* (caprine and ovine brucellosis)**
- (a) Donors were resident in a country, zone, or flock/herd that is officially free from caprine and ovine brucellosis in accordance with the *Code*; or
- (b) Donors were resident in a flock/herd that is free from caprine and ovine brucellosis, in accordance with the *Code*, and were subjected to two different tests for caprine and ovine brucellosis listed in *MPI-STD-TVTL* on the same blood sample, taken within 30 days prior to embryo collection, with negative results.
- (33) ***Mycoplasma capricolum* subsp. *Capripneumoniae* (contagious caprine pleuropneumonia - CAPP)**
For goats only:
- (a) Donors were resident in a country that is free from CAPP in accordance with the *Code*; or
- (b) For at least the 45 days prior to collection, donors did not reside in a CAPP infected zone, in accordance with the *Code*, and were not resident in a herd where CAPP has been officially reported during that time; and
- Aliquots of embryos/oocytes or collection/washing fluids from each collection were subjected to a test in accordance with the *Code* and listed in *MPI-STD-TVTL*, with negative results; or
 - Donors were subjected to a CAPP complement fixation test, in accordance with the *Manual*, on two occasions, with an interval of 21 to 30 days between tests and the second test being within the 14 days prior to pre-entry isolation, with negative results; and
 - Donors were isolated from other domestic goats from the first test until the last date of collection.
- (34) ***Mycoplasma agalactiae* (contagious agalactia)**
- (a) Donors were resident in a country that has been recognised by the Competent Authority as free from contagious agalactia for at least the 6 months prior to collection; or
- (b) Donors were:
- resident for at least the 6 months prior to collection only at premises where no case of contagious agalactia had been officially reported during that time.
 - tested for *Mycoplasma agalactiae* in accordance with the *Manual* or *MPI-STD-TVTL*.
- (35) ***Mycobacterium caprae* and *Mycobacterium bovis* (tuberculosis)**
For goats only:
- (a) Donors were resident in a country recognised by MPI as being free from tuberculosis in goats; or
- (b) Donors were subjected to a single comparative tuberculin test for tuberculosis prior to entry to the collection flock/herd, with negative results; and
- All animals in the embryo collection flock/herd were tested prior to entry and at least annually, with negative results.
- (36) ***Chlamydia abortus* (enzootic abortion of ewes - EAE)**
- (a) Donors were resident in a country recognised by the Competent Authority as free from EAE for at least the 2 years prior to collection; or
- (b) Donors were:
- resident in a herd/flock that is free from EAE in accordance with the *Code* for at least the past 2 years.
 - not in contact with any animal of lower health status during that period of time; and either
 - subjected to a test for EAE listed in *MPI-STD-TVTL*, with negative results; or
 - samples of embryos/oocytes or collection/washing fluids from each embryo collection were subjected to a test for EAE listed in *MPI-STD-TVTL*, with negative results.

(37) ***Coxiella burnetii* (Q fever)**

- (a) Donors have never been confirmed positive for Q fever; and either
 - (i) Donors were subjected to a Q fever test in accordance with *MPI-STD-TVTL*, with negative results; or
 - (ii) Embryos/oocytes or collection/washing fluids from each collection were subjected to a Q fever test in accordance with *MPI-STD-TVTL*, with negative results.

(38) **Scrapie**

For goats only:

- (a) Donors were resident in a country that is free from scrapie in accordance with the *Code*; or
- (b) Donors were resident in a collection herd/flock that has been maintained free from scrapie from commencement until conclusion of collection, through compliance with the *Code* recommendations for a scrapie free establishment; or
- (c) Donors were permanently identified to enable trace back to their establishment of origin and were kept in establishments since birth in which no case of scrapie was confirmed during their residency.

Embryo Collection Veterinarian:

Name:

Address:

Date:

Signature:

Official Veterinarian:

Name:

Address:

Date:

Signature:

Official Veterinarian signature

Final
Draft

Appendix 1 – Document History

Date First Issued	Title	Shortcode
12 May 2015	Guidance Document: Semen and Embryos from Sheep (<i>Ovis aries</i>) and Goats (<i>Capra hircus</i>)	Ovcagerm.gen
Date of Issued Amendments	Title	Shortcode

Final
Draft