Chapter 2.6

Transmissible Spongiform Encephalopathy (TSE) Testing

1. Introduction

1.1 Purpose

1.1.1 Background

Cattle, sheep and goats can be susceptible to a group of brain diseases known as transmissible spongiform encephalopathies (TSEs). The best known of these diseases is the bovine spongiform encephalopathy (BSE) in cattle, also called “mad cow disease”. BSE has been linked to the human TSE disease, called variant Creutzfeldt-Jakob disease (vCJD).

Since 1990 the European Community (EC) has adopted a series of measures to protect human and animal health from the risk of TSE.

It is appropriate in the view of the magnitude of the risk posed to human and animal health by certain TSEs to adopt specific rules for their prevention, control and eradication.

United Kingdom and EC Member States must carry out an annual programme for monitoring BSE and scrapie (a similar disease affecting sheep and goats).

In order to ensure that the rules concerning the prevention, control and eradication of TSEs are observed, samples for laboratory testing must be taken on the basis of an established protocol which would give a full epidemiological picture of the situation as regards TSE.

The TSE disease surveillance statistics for UK are published online.

1.1.2 TSE suspects

These instructions are not intended to apply to animals suspected of suffering from a TSE which must be dealt with in accordance with chapter 6 on ‘Notifiable diseases’.

1.1.3 Health and safety

When following these instructions all FSS staff must adhere to the FSS Operational Health and Safety guidelines.

Reference: See guidelines in the Health and Safety Manual located on FSS SharePoint.

1.2 Legislation

EU legislation which applied directly or indirectly to the UK before leaving the EU on 31 December 2020 has been retained in UK law as a form of domestic legislation known as 'retained EU legislation'. This is set out in sections 2 and 3 of the European Union (Withdrawal) Act 2018 (c. 16). Section 4 of the 2018 Act ensures that any remaining EU rights and obligations, including directly effective rights within EU treaties, continue to be recognised and available in domestic law after exit.

1.2.1 Relevant legislation

- **Regulation (EC) 999/2001**, which lays down rules for the prevention, control and eradication of certain TSEs, as amended.
- **The Transmissible Spongiform Encephalopathies (Scotland) Regulations 2010 (SSI No. 177),** as amended, which implement Regulation(EC) 999/2001 in Scotland.
- **Commission Implementing Regulation 2019/627**, Article 29, which sets up practical arrangements for official controls (OCs) for TSEs.
- **Regulation (EC) 1069/2009** which sets out specific rules for the handling and disposing of animal by-products.
- **Commission Decision 2009/719/EC** which authorises the appropriate authority (in Scotland, the Scottish Ministers) to revise their annual BSE monitoring programme
- **The Bovine Products (Restriction on Placing on the Market) (No 2) (Scotland) Regulations 2005 (SSI No. 586).**

1.2.2 Monitoring programmes

Regulation (EC) 999/2001 requires that Great Britain monitors and tests for TSE in certain animals from different categories, including:

- bovine animals slaughtered for human consumption
- bovine animals not slaughtered for human consumption
- ovine and caprine animals slaughtered for human consumption
- ovine and caprine animals not slaughtered for human consumption
- monitoring in infected flocks

1.3 Disposal

When the text refers to material being disposed of as Category 1 Animal By-Product (ABP) Specified Risk Material (SRM), this material must be destroyed by incineration or rendering and then incineration at approved premises (as opposed to other Category 1 ABP, which can be rendered and land filled).

The OV must verify that this material is consigned to approved premises and obtain confirmation that it has been incinerated.

Regulations: (EC) 999/2001 and (EC) 1069/2009, Chapter II, Article 12 (a).

Reference: See chapter 2.7 on 'SRM' and chapter 2.8 on 'ABP' for additional information.

Note: List of ABP approved premises can be accessed at the Animal and Plant Health Agency (APHA) website.

2. BSE testing in cattle

2.1 BSE testing requirements

2.1.1 Bovines born in UK or certain EU Member States - testing requirements from 1 March 2013

The BSE testing requirements outlined in this paragraph apply from 1 March 2013 and relate only to cattle born in UK or in one of the EU Member States listed in the table below (EU25):

- All 'at risk cattle' aged over forty eight months (birth date + four years and 1 day) (O48M).

Note: See the sub topic 2.1.3 on 'Animals that require testing' for definition of 'at risk cattle'.

Country	Eartag ID prefix
Austria	AT
Belgium	BE
Croatia	HR
Cyprus	CY
Czech Republic	CZ
Denmark	DK
Estonia	EE
Finland	FI
France	FR
Germany	DE
Greece	EL
Hungary	HU
Ireland	IE
Italy	IT
Latvia	LV
Lithuania	LT

Luxembourg	LU
Malta	MT
Netherlands	NL
Poland	PL
Portugal	PT
Slovak Republic	SK
Slovenia	SI
Spain	ES
Sweden	SE

2.1.2 Bovines born elsewhere - testing requirements

Cattle with ear tags that do not have the prefixes listed above must be BSE tested if: over thirty months of age (OTM) if healthy at slaughter, or over 24 months of age (O24M) in cases of emergency slaughter or where identified as sick at ante mortem inspection.

Note: See sub topic 2.1.3 on 'Animals that require testing' for definition of 'at risk cattle'.

Note: Cattle born in a Third Country different than one of the EU Member States and imported into the UK will be re-tagged with a tag showing the UK prefix (unless slaughtered within 20 days). The import information should be available in the passport.

2.1.3 Animals that require testing

The following animals require testing:

- all animals over 48 months old if born in UK or EU25, over 24 months when born in non EU25; that have undergone:
  - emergency slaughter in accordance with point 1 of Chapter VI of Section I of Annex III to Regulation (EC) No 853/2004, or;
  - an ante-mortem inspection with observations concerning accidents, or serious physiological and functional problems, or signs in accordance with Article 43 (4) of Regulation (EU) 2019/627:
    - that welfare has been compromised; or
    - of any condition which might adversely affect human or animal health, paying particular attention to the detection of zoonotic diseases and animal diseases for which animal health rules are laid down in the legislation.
- all animals over 30 months born in non EU25 countries.

2.1.4 Exceptions

Some casualty animals or animals with abnormalities may be exempted from the testing requirement. These animals are:

- TB reactors and TB inconclusive reactors – unless suffering from a concurrent disease or abnormality as outlined in this instruction; and
- cattle with localised lesions or conditions with no systemic affects. Examples could include minor foot lameness, ringworm, superficial tumours, minor hernias, minor abscesses, localised mastitis or mild conjunctivitis. In such cases, the OV must be content that there are no signs of concurrent disease.

  Note: The above examples are intended as a guide and the list of conditions is not exhaustive. It is for the OV to make a professional judgement in each situation as it arises, in line with these instructions.

The following table illustrates the BSE testing requirements for all cattle:

Country of birth	Ear tag country codes	BSE testing age from 1 March 2013		
		Healthy slaughter cattle	Emergency slaughter and sick at ante mortem (fit for human consumption)	Fallen stock (not fit for human consumption)
Austria	AT	**No Testing Required**	**Over 48 Months**	**Over 48 Months**
Belgium	BE			
Croatia	HR			
Cyprus	CY			
Czech Republic	CZ			
Denmark	DK			
Estonia	EE			
Finland	FI			
France	FR			
Germany	DE			
Greece	EL			
Hungary	HU			
Ireland (ROI)	IE			
Italy	IT			
Latvia	LV			
Lithuania	LT			
Luxemburg	LU			
Malta	MT			
Netherlands	NL			
Poland	PL			
Portugal	PT			
Slovakia	SK			
Slovenia	SI			
Spain	ES			
Sweden	SE			
UK (including Channel Islands and Isle of Man)	UK			

Bulgaria	BG	**Over 30 months**	**Over 24 months**	**Over 24 months**
Romania	RO			
All other countries	UK (if not slaughtered within 20 days of import; import information is shown on the passport)			

2.2 Approval to slaughter BSE testing bovines

2.2.1 Introduction

FBOs wishing to process bovines that require BSE testing must comply with the specific legal requirements for the testing and agree a Standard Operating Procedure (SOP) with FSS for ensuring their correct implementation. Following successful assessment, the approval document will be amended to indicate authorisation to test bovines for BSE.

An approved Required Method of Operating Procedure (RMOP) is no longer required. This requirement has been removed by Regulation 6 of The Transmissible Spongiform Encephalopathies (Scotland) Amendment Regulations 2019 (SSI No. 118).

When premises are not authorised for BSE testing, cattle that require BSE testing will not be allowed to enter the food chain and must be disposed of via approved BSE sampling site. A list of premises approved to test fallen cattle is published by APHA. Scottish Islands (except Skye and Bute) are exempt from TSE surveillance, which derogates from disposal via an approved BSE sampling site; any site approved or registered to accept Category 1 material will suffice, such as registered landfill sites. A map has been prepared highlighting the Scottish islands which are exempt from the surveillance requirements, as per link below:

Areas of Scotland exempt from TSE surveillance: map - gov.scot (www.gov.scot)

Irrespective of whether or not the establishment holds authorisation for BSE testing, the identification and control of SRM, for example vertebral column in cattle aged over 30 months (OTM), should be included in the HACCP-based procedures for the establishment.

2.2.2 Applying for authorisation

FBOs wishing to apply for authorisation to slaughter bovines that require BSE testing should contact the FSS Approvals Team at Approvals@fss.scot.

2.3 Standard Operating Procedure (SOP)

2.3.1 SOP agreement

FBO must produce a detailed SOP describing all controls that will apply while processing cattle requiring BSE testing.

The SOP should be agreed first with the OV, OVs must ensure that the SOP contains all the steps of production with detailed procedures for each step.

OVs must only accept an SOP when they are satisfied that the controls are robust enough to provide confidence in the security of the entire system. Once they are content, they should send the SOP to their Veterinary Advisor (VA) for final verification, who will inform FSS Approvals once authorisation can be granted.

Once authorisation is granted, further amendments to the SOP are possible provided that the FBO request them in advance to the OV. OV should review the proposed changes and consult with the VA on any significant change to the procedure; minor amendments to keep the SOP up to date should not require consultation with the VA. Once the OV is content with the proposed changes, they should keep records of the new agreement.

Reference: See Annex 1 for a sample SOP, which contains guidance useful during drafting and verification of the SOP.

2.3.2 Hazard identification and control plan

FBOs must review their HACCP when intending to slaughter cattle requiring BSE testing, to ensure any new hazards are identified and controlled. The control measure for BSE related hazards should include the SOP for BSE sampling and testing.

Reference: See Annex 2 on 'Hazard identification and control plan' for an example.

2.4 Identification of cattle to be tested

2.4.1 Identification procedure

There must be a system to ensure that all bovines requiring BSE testing are identified prior to slaughter. Lairage facilities must allow ear tags and passport checks before slaughter and segregation of cattle requiring BSE testing from cattle that do not require BSE testing. The table below details both FBO and FSS responsibilities.

FBO responsibility	FSS responsibility
-Identify and segregate any bovine requiring BSE testing as per requirements described in	-OV to inform FBO of animals with observations concerning

point 2.1.3 above, including those animals identified by the OV. -Implement in the lairage a positive release system for cattle that require BSE testing. -Ensure bovines born in or imported into the UK before 1 August 1996 are rejected for slaughter for human consumption. -Bovines for BSE testing must be marked by a suitable, robust and reliable method prior to slaughter (for example, spray marking, tagging).	accidents, or serious physiological and functional problems, or signs in accordance with article 43 (4) of Regulation (EC) 2019/627, when they become eligible for BSE testing due to origin and/or age. -FSS staff must verify: • the identification checks carried out by FBO staff in the lairage • the segregation of test and non-test animals • the marking of the animals that need to be tested -Enforcement action should be taken when failures on FBO controls are identified (see point 2.22 below). In addition, the OV must ensure that a **form TSE 6/4** is completed and issued to the FBO for all animals requiring BSE testing intended for human consumption and not identified by the FBO.

2.4.2 Bovines not eligible for human consumption

Animals born in or imported into the UK before 1 August 1996 are prohibited from entering the food chain.

Animals identified by the FBO as being born prior to 1st August 1996 (or having the default birthdate 11/11/1111 on their identity documents) must be notified to the OV, who must inform their VA.

These cattle must be destroyed as fallen stock and be BSE tested when they are culled or die.

If the premises are already approved for BSE testing of bovines, the abattoir may submit a sample for BSE testing using BSE test code FSCA2 and arrange for the body to be disposed of as Category 1 ABP for incineration.

OVs must be vigilant that these cattle are not slaughtered for human consumption unless they were imported into the UK on or after 1 August 1996.

Regulations: The TSE (Scotland) Regulations 2010.

2.4.3 Issue of form to test animals not for human consumption

The OV is to issue to the FBO **form TSE 6/5** for animals identified as requiring BSE testing, but that are not eligible for human consumption.

Reference: See chapter 9 on 'Forms' for a copy of TSE 6/5.

2.5 Slaughtering schedule

2.5.1 Batch animals requiring testing

All eligible animals requiring BSE testing must be identified following the means of identification detailed in the SOP (for example, spray marking, tagging) and slaughtered in one batch (preferably as the last down the line) clearly identifiable from other batches, in line with the SOP.

2.5.2 Exceptions

Slaughtering schedule may need to be amended when receiving animals emergency slaughtered on farm or for welfare reasons when an animal requiring BSE testing may need to be slaughtered immediately.

SOP must describe how the above cases will be dealt with.

2.5.3 "1 before 2 after" rule

Where an animal slaughtered for human consumption is found positive or inconclusive to the test, at least the carcase immediately preceding and the two carcases immediately following the animal tested positive or inconclusive on the same slaughter line shall be destroyed. FSS can decide not to destroy those carcases mentioned when a system is in place which prevents contamination between carcases.

Batch slaughtering at the end of production after leaving a gap will ensure only animals tested are affected by the rule. When FBOs need to process a carcase requiring testing during normal production, leaving gaps in the line for cleaning and sterilization could prevent contamination. Any exception to the rule should be agreed with the OV and the VA) and described in the SOP.

2.6 Sampling procedure

2.6.1 Sampling technique

The collection of the brain stem sample could be carried out either:

- when the head is still attached to the carcase;

OR

- after separating the head from the carcase and placing it on a dedicated table or on a line.

The low pressure water/hose and the low pressure compressed air methods may be used only once the head has been separated from the carcase. More information below in 2.7.

The FBO must ensure that they have sufficient stock of consumable equipment required for sampling (including labels where used) before commencing processing.

The SOP must describe the sampling technique to be used, detailing where and how sampling will take place, packaging to be used, and details of the dispatch to the laboratory.

2.6.2 Cross contamination controls

Independently of what method for sampling is used, adequate cross contamination controls should be in place. Distance from the line to the sampling point should not be excessive and there should not be risk of SRM or sampling material cross contaminating fresh meat before and during sampling. Consideration should be given to the sterilization and/or disposal of sampling equipment.

2.6.3 Operatives undertaking sampling

Brain stem samples must be taken by trained plant operatives only.

The FBO:

- is responsible for ensuring there are sufficient staff trained and competent in taking brain stem samples
- must keep a record of all trained operatives
- must notify FSS staff if any training is to be undertaken using heads of bovines that don't require BSE testing.

Details of how training has been delivered should be included in the SOP and the location of the training records should be cross referenced.

2.6.4 FSS supervision

FSS staff must not undertake any sampling but must carry out the following supervision:

Check	Frequency	Records

• Check that all samples taken for training purposes are handled and treated as SRM	• When FBO carries out BSE sampling training	Day Book
• Verify sampling, especially correlation, is carried out in accordance with the SOP	• Every animal that requires BSE testing	TSE 6/9
• Check that the number of samples matches the number of cattle that require testing since the last batch of samples were despatched; any samples kept in the plant awaiting dispatch must be kept in a sealed bag • Carry out 100% checks at the point of sampling on the sealing of bags that contain the trays, making a note of the serial number of each bag • Check form TSE 6/11 has been completed and signed by the FBO's representative; the original is to go with the whole consignment, and a copy kept on file	• Every day sampling takes place	TSE 6/11

2.6.5 Loss of correlation

If correlation or sample identity has been lost, carcases and offal after the last correctly correlated brain stem sample must be disposed of as Category 1 SRM by incineration. All samples must still be sent for testing.

Reference: See also sub-topic 2.9.7 on 'FSS action: loss of correlation' in this chapter.

2.6.6 Brain stem sample quality

The FBO is responsible for ensuring that the brain stem sample submitted for analysis is of adequate quality to enable the lab to carry out the test and provide a result.

Note: All parts of all tested cattle for which results are not yet available must either be detained under official controls or destroyed as Category 1 (SRM) by-product by incineration.

2.6.7 Disposal of sampling equipment

Following sampling, all testing equipment (for example, plastic spoon, plastic forceps and gloves) must be disposed of by the FBO as clinical waste in accordance with legal requirements.

The FBO must be aware that if the sampling material is not disposed of after each use there is a potential risk of cross contamination from a possible positive brain stem sample to other brain stem samples.

2.7 Alternative sampling techniques

2.7.1 Sampling with low pressure water/hose method

The following pre-requisites must be met before the extraction of the brain stem sample with low water pressure/ hose method is carried out:

- the tongue has been removed
- any harvesting of head meat has been carried out
- the risk of cross- contamination with brain exudate of other meat is minimised or avoided.

To minimise or avoid the risk of cross-contamination the following procedures should be carried out before and during the removal of the brain stem sample:

Step 1	Minimise or avoid the risk of cross contamination
Before the brain stem is removed	After the head is removed from the carcase: • it can be placed on a hook or an offal line (to be used exclusively for heads or to be cleaned and disinfected before the line is used for other offal intended for human consumption) • flayed (if this had not already been done by the hide puller) • post-mortem inspection is conducted • the tongue removed if this has not already been done At this point head meat could be harvested with no requirement to bung the bolt hole as the above system keeps handling of the head to a minimum.
Step 2	**Minimise or avoid the risk of cross contamination**
During the removal of the brain stem	Once the above procedures are complete the use of the low pressure water / hose method in obtaining the brain stem sample can be applied. The primary measures to be used to ensure that cross-contamination of any other meat nearby with brain exudate is minimised or avoided are: (i) Ensuring adequate space between the head and any other meat intended for human consumption so as to

	minimise cross-contamination dependent on direct contact, splash or possibly aerosol spray. This can be done in a number of ways such as: • adequate separation on the line from other meat intended for human consumption • use purpose built / modified cabinet to enclose the head and control run-off or splash • remove the head to an area separated from production of meat intended for human consumption for application of the hose and brain stem sample extraction (ii) Minimising cross-contamination from personnel by: • allocating a trained individual to undertake removal of the head from the line (where applicable) and applying the method and removing the brain stem sample, or • where the above is not an option, personnel must pay particular attention in maintaining adequate hygiene measures such as the cleanliness of their hands, gloves, aprons and any other personal equipment so as to minimise cross-contamination Given that each abattoir will be different, it will be for the FBO to agree with the OV and the VA the most effective combination of methods required minimising cross-contamination.

2.7.2 Sampling using low pressure air compression

The following pre-requisites must be met before the extraction of the brain stem sample by means of the low pressure compressed air method is carried out:

- the tongue has been removed
- harvesting of head meat has been carried out
- the risk of cross-contamination with brain exudate of other meat is minimised or avoided
- the head complies with the following criteria:
    - the bolt hole is not too large, obstructed or wrongly orientated and multiple bolt holes are absent; good stunning practices will be required to ensure these criteria

- aside from the bolt hole there are no other entry points into the cranial cavity/sinuses; in effect, if horns are removed care should be taken not to breach the cranial cavity.

If the above criteria are not complied with, samplers must be competent in resorting to use of the spoon method in extracting the sample.

To minimise or avoid the risk of cross-contamination the following procedures should be carried out before and during the removal of the brain stem sample:

Step 1	Minimise or avoid the risk of cross-contamination
Before the brain stem is removed	After the head is removed from the carcase: • it should be placed on a hook or an offal line (to be used exclusively for heads or to be cleaned and disinfected before the line is used for other offal intended for human consumption) • flayed (if this had not already been done by the hide puller) • post-mortem inspection should be conducted • the tongue should be removed if this has not already been carried out. At this point, head meat could be harvested with no requirement to bung the bolt hole as the above system keeps handling of the head to a minimum.

Step 2	Minimise or avoid the risk of cross-contamination
During the removal of the brain stem	Once the above procedures are complete, the use of the low pressure compressed air method in obtaining the brain stem sample can be applied. The primary measures to be used to ensure that cross-contamination of any other meat nearby with brain exudate is minimised or avoided are as follows: (i) A plastic bag – ideally 100 gauge, clear polythene, 250 x 400mm – should be placed over the head and lightly knotted at the top (the muzzle area of the head). Then: • the bag should then be pierced at the site of the captive bolt hole to allow access with the trigger nozzle • the nozzle should be fitted with a small modified cone to act as a spray guard • firm pressure should be applied between the nozzle and the head followed by a short burst of air (approx. 2 seconds) • the brain stem should be expelled into the bag. (ii) The optimum air pressure of 6 and 8 Bar is used – lower or higher pressures can result in increased spray. (iii) There should be adequate space between the head and any other meat intended for human consumption so as to minimise cross-contamination dependent on direct contact, splash or possibly aerosol spray which may escape beyond the plastic bag. This can be done in a number of ways such as: • adequate separation on the line from other meat intended for human consumption, or • use purpose built / modified cabinet to enclose the head and control run-off or splash, or • remove the head to an area separated from production of meat intended for human consumption for application of the hose and brain stem sample extraction. (iv) Minimising cross-contamination from personnel by: • allocating a trained individual to undertake removal of the head from the line (where applicable) and applying this method and collecting the brain stem sample, or • where the above is not an option, personnel must pay particular attention in maintaining adequate hygiene measures such as the cleanliness of their hands, gloves,

	aprons and any other personal equipment so as to minimise cross-contamination. Given that each abattoir will be different, it will be for the FBO to agree with the OV and the VA the most effective combination of methods required minimising cross-contamination. In all cases it should be ensured that personnel undertaking sampling using the low pressure air extraction method are adequately trained in both the method itself and the precautions required when doing so.

2.8 Traceability of sample to carcase

2.8.1 Maintenance of traceability

The FBO must maintain traceability from the slaughtered animal to its brainstem sample and to its carcase and all body parts throughout the entire process and the SOP must describe how this is achieved.

Sample pots must be properly identified and correlated to the head, the carcase and retained body parts of the animal that has been sampled, pending receipt of the test result

2.8.2 Sample identification

FBOs have two options for identification and submission of samples to the laboratory: either an electronic or a manual system. If using a manual system FBOs are responsible for sourcing their own supplies of barcode labels.

FBOs must ensure that all sample pots are identified with the vertical application of a barcode label. Pot lids can also be identified with the kill number as an additional precaution.

Barcode labels take the following formats:

- 9999DDD000001 for ‘dummy run’ or trial samples
- 9999MMM000001 manually submitted data
- 9999EEE000001 for electronically submitted data.

Where 9999 is the establishment approval number and 000001 is the serial number of the sample. Barcode labels must not be reused.

Manual system	Electronic system
Apply a label to the sample pot when the sample is taken.	If using the electronic system no hard copy of the passport will be necessary.

Apply label to the movement card taken from the animal's passport. Submit movement card with the sample for animal's ID in barcode form. On the blue/green passports (CCP 01), or where no movement card is available, the FBO must photocopy the front cover of the passport and apply label.	The details of the barcode must meet the requirements of the testing laboratory and contain sufficient information to allow subsequent tracing of individual carcases and related body parts. It is recommended that the FBO thoroughly tests their bar code system by sending 'dummy' labels to the testing laboratory for scanning and reading, before the system is used on actual samples from bovine animals requiring BSE testing. Any failure to read the bar code labels by the testing laboratory will result in a 'no test' result and the subsequent disposal of affected carcases and body parts by incineration.

2.8.3 FSS action - loss of correlation

If FSS checks show correlation has been lost, the OV must:

- notify the FBO
- stop processing
- check all animals to the point that correlation has been lost
- instruct the FBO to dispose of all non-correlated carcases/offal as Category 1 SRM by incineration.

Note: If the OV is satisfied that all animals that require BSE testing have been sampled, even if individual correlation is lost, carcases may be passed fit for human consumption if all of the submitted sample tests return a negative test result.

This does not affect any enforcement actions to be taken as a non-compliance with the TSE Regulations.

2.9 Samples packaging and delivery

2.9.1 Same day delivery

The FBO is responsible for ensuring that samples are despatched as soon as possible on the same day of the sampling.

2.9.2 Storage

If samples cannot be despatched the same day of sampling, they can be chilled in a fridge (samples can be stored for up to 4 days at 4ºC).

The FBO must ensure that any storage arrangements for brain stem sample pots do not allow cross contamination with food/ meat intended for human consumption.

2.9.3 Packaging and delivery

The FBO is responsible for the labelling and packaging of samples, and arranging their delivery to the approved testing laboratory specified in the SOP. A list of approved laboratories can be accessed online.

FBOs must arrange for the samples to be delivered to an approved testing laboratory under the TSE Regulations 2010 Schedule 2, part 1, paragraph 10 (3). The laboratory must be approved by the appropriate Authority in the UK..

The FBO is responsible for ensuring that there are sufficient slaughterhouse staffs trained and competent in the labelling, packaging and despatch of brain stem samples.

2.9.4 FBO verification of number of samples despatched

The FBO must:

- reconcile the number of samples with the number of bovines slaughtered that require BSE testing before the samples are despatched
- notify the number of samples being delivered to the testing laboratory in advance of their despatch by fax or by e-mail.

2.9.5 FSS controls

FSS staff must:

Check	Frequency	Records
• check that the number of samples matches the number of cattle that require testing since the last batch of samples were despatched; any samples kept in the plant awaiting despatch must be kept in a sealed bag; • carry out 100% checks at the point of sampling on the sealing of bags that contain the trays, making a note of the serial number of each bag; • check form TSE 6/11 has been completed and signed by the FBO's	Every day sampling takes place	TSE 6/11

representative; the original is to go with the whole consignment, and a copy kept on file.		

Note: For sample copy of TSE 6-11 see chapter 9 on 'Forms'.

2.10 Traceability of all parts: tested animal to carcase

2.10.1 FBO traceability system

The FBO traceability system must allow carcase and all retained body parts to be traced to the brain stem sample, with the system having to be described in the agreed SOP.

Individual identification of carcase and brain stem is required, but other body parts (offal, hides, blood, trimmings, feet, udders, fat, other by-products) when retained, can be batch identified.

All material in the batch must be disposed of as SRM by incineration if a positive, insufficient or 'no test' result is obtained.

Traceability must include the carcase before and the two after when slaughtering schedule doesn't prevent this, please see point 2.5.3 for more information.

2.10.2 Health marking of carcases and offal awaiting BSE test results

Carcases of animals that require BSE testing must only be health marked after satisfactory Post-Mortem inspection. All health marked carcases must be kept under FSS secure controls until a negative test result has been verified.

Identification mark can also be applied to the offal prior to the receipt of a BSE test result, however the offal must be kept under FSS secure controls until a negative test result has been verified.

2.11 Retention of carcases

2.11.1 FBO retention facilities

The FBO must have sufficient and suitable facilities for holding all the carcase(s) (and the one before and two after as appropriate) and all body parts of animals requiring BSE testing until results are received.

Hides, however, may be sent to an approved hide premises before the test result is received, provided that the hides are kept under official control until the BSE test results are received.

All carcases and body parts must be stored as per agreed SOP.

2.11.2 FBO retention of carcases

Carcases retained pending a test result must be held by the FBO in accordance with one of the following options:

Retention area	Action
In a detained chiller:	Carcases awaiting test results must not come into contact with detained carcases awaiting further examination by an inspector or OV.
In a chiller other than a detained chiller:	Carcases awaiting test results (including the one before and two after, if appropriate) must be identified, batched and stored together and must not come in to contact with any other carcases.

2.11.3 Storage in non-sequential kill order in chillers

Carcases awaiting BSE test results must be stored in chillers in kill order unless the criteria below are applied:

- a draft protocol is drawn up by the FBO outlining the procedures to be followed and is agreed with the OV and the VA for the premises
- the OV and VA for premises that rely primarily on IT systems for traceability of animals/ carcases within the premises should be satisfied that such IT systems demonstrate traceability and also, that there are manual back-up procedures in place in the event of IT systems failing
- the OV and VA for premises which do not rely primarily on IT systems for traceability of animals/ carcases within the premises should be satisfied that their manual traceability systems are such that they provide the necessary assurances with regards to traceability
- in the event that the traceability systems fail to identify the relevant carcases (the positive, insufficient or the ‘no test’ carcase and the 1B2A from the kill line) the OV must consult the VA as there may be a need to destroy the whole batch.

This may be necessary when carcases awaiting BSE test result require also further rectification, for example because contamination or pathologies were identified.

2.11.4 FSS security of the retention facilities

FSS staff must ensure that at the end of each day the holding area is secure and that all parts of tested animal(s) (and one before and two after, if appropriate) are retained under official controls until the results are provided by the FBO to FSS staff.

Chillers must be secured by FSS either sealing the chillers or the rails that contain carcases pending test results.

Seals may not be broken, except by FSS staff.

All procedures relating to chiller controls must be recorded by FSS staff on form TSE 6/10.

Reference: See chapter 9 'Forms' for a sample copy of TSE 6/10.

2.11.5 Test carcases or its parts not fit for human consumption

Test carcases or parts of test carcases (pending a test result) found unfit for human consumption must not be stored with other carcases or part carcases that have been passed fit for human consumption.

These carcases or part carcases may be dealt with differently depending on the following situations:

If	Action
the FBO does not wait for the test result	dispose of as SRM by incineration
a negative test result is received	retain hygienically and once the negative test result is received dispose of as required depending on the by-product category of the material
a positive, insufficient or 'no test' result is received	retain hygienically and once the positive, insufficient or 'no test' result is received dispose of the positive and the 1B2A carcases by incineration if applicable

2.12 Retention of all body parts

2.12.1 Identification and retention of body parts

After slaughter, all parts of the animal under test which have been retained must be traceable to the carcase held during retention and must be treated as below.

Part of the carcase	Action
Offal intended for human consumption	Must be retained under official control: • if retained in a chiller where carcases and offal from non-tested animals are also stored, the FBO must ensure a secure system for retention of offal of eligible animals (for example, labelling/ tagging each piece of offal or batching offal so that it can be correlated with the carcase(s)) • if retained in a chiller exclusively used for animals pending BSE test results, only the chiller needs to be sealed.

Blood	All blood must be retained separately or batched pending a test result, unless disposed of as SRM by incineration before test results are received. FSS controls must be as follows: • blood tank outlet must be sealed until test result is received • collection tank checked daily. If deficiencies in the retention of blood are observed, dispose of blood and in-contact blood as SRM by incineration.
Green offal	Parts of green offal not classified as SRM (such as stomachs) must be: • destroyed as SRM by incineration if a negative result has not been received, or • securely retained avoiding any risk of cross contamination until a negative result is confirmed, then disposed of as category 2 or 3 animal by-products. The parts of green offal classified as SRM (such as intestines) must be stained and disposed of as SRM by incineration if not held until a negative result is available.
Offal not intended for human consumption	Offal not intended for human consumption must be retained before the test results are received or disposed of as SRM by incineration before a test result is obtained.
Hides	**Reference**: See topic 2.13 on 'Retention of hides' in this section for additional information.

2.12.2 SRM

Specified risk material (SRM) removed from carcases must be stained and disposed of by incineration if not held until a negative result is available.

2.12.3 Rumen and gut contents

Rumen contents and gut contents must be disposed of in accordance with existing procedures.

2.13 Retention of hides

2.13.1 Retention at the premises

Hides must be held in the hide room either batched or individually identified.

If batched without individual identification, they must be clearly labelled ‘pending test result’, including the number of hides in the batch and the date of slaughter.

2.13.2 Despatch of hides to a hide premises

Hides may be despatched to a hide market or tannery before a test result is received.

If any of the carcases subsequently test positive or there is no negative test result, the hide must be identified by Animal and Plant Health Agency (APHA) staff at the hide market or tannery and destroyed by incineration. If batched, the entire batch will need to be destroyed by incineration.

FBOs must agree a hide protocol with APHA to allow hides to be despatched prior to receipt of test results. The OV must be aware of the hide protocol.

2.13.3 Official controls

Hides must be detained under official control until the test results are received.

Hides	FSS control
retained at slaughterhouse pending test result	FSS AOs are to do: • One check/ day in low throughput slaughterhouses • Two checks/ day in medium throughput slaughterhouses • Three checks/ day in large throughput slaughterhouse.
removed to an approved hide market before test result obtained	**Note**: At hide premises APHA checks disposal if a positive result is received.

2.13.4 Hides from positive, insufficient or 'no test' result

If hides are individually identified then any positives must be disposed of as SRM by incineration.

If they are batched, the entire batch must be incinerated in the event of a positive or 'insufficient' test result.

2.14 Test results

2.14.1 FBO responsibility

The FBO is responsible for:

- having facilities in place to receive tests results, and;
- giving FSS staff in plant copies of the test results.

Copies of the test results must be kept by the FBO for 24 months.

2.14.2 FSS responsibility

FSS staff is to read the test results and take all necessary actions. Form TSE 6/7 must be completed and, together with copies of the test results (provided by FBO), kept on file in the FSS office for 12 months.

2.15 Positive test result

2.15.1 Notification of positive test result

When a positive BSE test is identified, the approved laboratory will inform:

- the FBO

- the FSS staff at plant
- APHA.

APHA will be responsible for DNA testing of samples collected by FSS.

2.15.2 DNA sampling kits

APHA will deliver the sampling kits to the plant.

The sampling kit will include:

- an outer box
- sample pots
- labels
- tamper-evident bag
- freezer pack.

2.15.3 FSS responsibility for DNA sampling

FSS staff is to take samples for DNA testing from the positive carcase and the one before and one after.

Samples, approximately the size of a 50p, are to be taken from the diaphragm of each carcase ensuring there is no cross contamination between carcases. These must be sealed into separate sample pots and placed into the pot tray and sealed into the tamperproof bag and then frozen for 24 hours under FSS control.

Once the samples are frozen, FSS staff should contact APHA by email at: sequencing.facility@apha.gov.uk to inform them of the plant number and the samples to expect for the Cattle Microsatellite Identification test (DNA test).

FSS staff should then contact TopSpeed Courier on 01565 631 840 or 0800 8562464 using the ‘TSE’ account, to organise collection of the samples, which are to be sent to:

Central Sequencing Unit
APHA Weybridge, Woodham Lane
New Haw, Addlestone
KT15 3NB

Once the collection time has been arranged place the samples in the box with the freezer packs for collection.

2.15.4 Carcase and body parts

If a positive test result is received, the carcase and all parts of the positive animal, or the whole batch if a batching system is in operation, together with all parts of the animal

slaughtered before and the two animals slaughtered afterwards ("1B2A rule") must be destroyed by incineration unless there have been effective arrangements put in place for preventing cross contamination between carcases during processing and storage (see point 2.5.3 for more information).

Note: The 1B2A rule applies to carcases and all body parts (including hides) unless an exception was agreed in the SOP.

Note: The FBO is responsible for identification and disposal by incineration of the relevant carcases and parts.

Note: The OV must confirm the identity of the positive carcase (and the one before and two after ('1B2A') during the process), offal (which may have been batched), hide and blood and will verify that this material is delivered to be destructed by incineration.

Note: AOs must check 100% of carcases and body parts for full traceability and disposal and should verify the slashing and staining of positive carcases.

2.15.5 Hides

If the hides are stored in the slaughterhouse hide room until the test result is received and there is a positive result the individual hide and 1B2A (if not exempt) or the entire batch (if not individually identified) must be identified under FSS supervision and destroyed by incineration.

Note: For the action to be taken for hides delivered to a hide premises refer to the 'Hide protocol' agreed with APHA (see point 2.13).

2.15.6 SRM records

The FBO is responsible for maintaining accurate records of the weight disposed of as SRM by incineration.

2.16 'No test' result

2.16.1 Carcase and body parts

If a 'no test' report is received, for example, due to the target area of the obex being unavailable, the carcase and all parts of the 'no test' animal must be destroyed by incineration.

Note: The 1B2A rule does not apply. However, the whole batch must be destroyed if a batching system is in operation.

Note: If the target area of the obex is not available, the testing laboratory will carry out three further tests. Only when these further tests return negative, will the sample be reported as a 'no test'. If the laboratory cannot assign negative results to the three

additional tests or there is insufficient material to test, then an “insufficient test result” will be received (see 2.17 below).

The FBO is responsible for identification and disposal by incineration of the relevant carcases and parts.

2.16.2 Hides

If the hides are stored in the slaughterhouse hide room until the test result is received and there is a ‘no test’, the individual hide or the entire batch (if not individually identified) must be identified and despatched for destruction by incineration.

2.16.3 FSS responsibility

The OV must confirm the identity of the ‘no test’ carcase, offal (which may have been batched), hide and blood and will verify that this material is delivered to be destructed by incineration.

Note: AOs must check 100% of carcases and body parts for full traceability and disposal.

2.16.4 SRM records

The FBO is responsible for maintaining accurate records of the weight disposed of as SRM by incineration.

2.17 ‘Insufficient’ test result

2.17.1 Carcase and body parts

If an ‘insufficient’ test result is received indicating that the approved testing laboratory has not been able to carry out the three further tests on the submitted sample because of a shortage (or complete absence) of suitable brain stem material, the FBO must immediately dispose of as SRM the carcase and all parts of the “insufficient” test animal, or the whole batch if a batching system is in operation, together with all parts of the animal slaughtered before and the two animals slaughtered afterwards (“1B2A rule”).

Note: The 1B2A rule applies to carcases and all body parts (including hides) unless an exception was agreed in the SOP.

2.17.2 Hides

If the hides are stored in the slaughterhouse hide room until the test result is received and there is an ‘insufficient test’ result, the individual hide or the entire batch (if not individually identified) must be identified and despatched for destruction by incineration.

Note: The 1B2A rule does not apply to individually identified hides.

2.17.3 FSS responsibility

The OV must confirm the identity of the 'insufficient test' carcase, offal (which may have been batched), hide and blood and verify that this material is delivered to be destroyed by incineration.

Note: AOs must check 100% of carcases and body parts for full traceability and disposal.

2.17.4 SRM records

The FBO is responsible for maintaining accurate records of the weight disposed of as SRM by incineration.

2.18 'Inconclusive' test result

2.18.1 Carcase and body parts

An 'inconclusive test' should be treated as a 'positive'.

Note: The TSE Regulations set out what action should be taken in the event of an 'inconclusive test' result. However, this category is not recognised in the TSE SSI because in practice, the BSE tests used by approved laboratories provide either positive or negative results.

2.19 'Outstanding' test result

2.19.1 Carcase and body parts

If an 'outstanding' test result is received, indicating that some of the paperwork is missing or incomplete, the approved testing laboratory has not been able to correlate the sample to the animal details and further information is required from the FBO. In this case, the FBO must immediately submit any information required.

Meanwhile:

- the carcase and all parts of the body (including the blood) of the 'outstanding' test result animal, must remain under official control until the laboratory receives the information from the FBO and is able to release the test result;
- the carcase and all parts of the body (including the blood) of the animal slaughtered immediately before the 'outstanding' test result animal and the two animals immediately following it (1B2A), must remain under official control until the

laboratory receives the information from the FBO and is able to release the test result;

- if a batching system is in operation, the whole batch must remain under official control until the laboratory receives the information from the FBO and is able to release the test result.

2.19.2 Hides

If the hides are stored in the slaughterhouse hide room until the test result is received and there is an ‘outstanding’ test result, the individual hide or the entire batch (if not individually identified) must be identified and kept under official control or despatched for destruction by incineration.

Note: The 1B2A rule applies.

2.19.3 FSS responsibility

The OV must confirm the identity of the ‘outstanding’ test carcase (and the one before and two after (1B2A) during the process), offal (which may have been batched), hide and blood and will verify that these remain under official control until the test result is obtained from the laboratory.

Note: AOs must check 100% of carcases and body parts for full traceability and disposal.

2.20 Negative test result

2.20.1 Carcase release

When a negative result is received, the carcase and offal may be released as fit for human consumption unless they need to be destroyed under the 1B2A requirements.

2.20.2 Vertebral column removal

The vertebral column of OTM cattle slaughtered for human consumption must be removed in an approved cutting plant additionally authorised for vertebral column removal, then disposed of as SRM.

Reference: See instructions on the removal of the vertebral column in authorised cutting plants in chapter 2.7 on ‘Specified risk material’.

2.21 Enforcement

2.21.1 Enforcement responsibility

FSS is responsible for enforcement within authorised premises, acting on behalf of the Scottish Government.

The Local Authority (LA) is responsible for enforcement outside FSS-authorised premises, including the consignment of cattle born or reared in the UK before 1st August 1996 to slaughterhouses.

Reference: See chapter 2.6 on ‘Animal identification’ for additional information on eligibility of cattle for slaughter.

3. Sheep and goats TSE sampling and submission

3.1 Scrapie Surveillance in sheep and goats

3.1.1 Regulations

Regulation (EC) 999/2001 requires the UK to have surveys in place to monitor the presence of Transmissible Spongiform Encephalopathies (TSEs) in sheep.

The above regulation is enacted in Scotland by The Transmissible Spongiform Encephalopathies (Scotland) Regulations 2010 as amended. FBOs and their employees are required to comply with such reasonable requirements as the AO considers necessary to facilitate sampling.

3.1.2 Human consumption sheep survey (Sheep survey)

To help determine the prevalence of TSEs in the UK sheep flock, the UK is required to test an agreed number of healthy sheep aged over 18 months at identified abattoirs.

Slaughterhouses participating in the Sheep TSE Survey will test a percentage of the eligible animals communicated by the SLA team. APHA assesses the sampling survey throughout the year, which means that sampling percentages may be adjusted during the year to achieve the required target.

3.1.3 Dead on arrival (DOA) and dead in the lairage (DIL) sheep and goats survey

Regulation (EC) 999/2001 requires a number of sheep and goats over 18 months of age that have died other than by being slaughtered for human consumption to be tested for TSE. This is known as the fallen stock survey.

Participating slaughterhouses will test any sheep or goat DOA or DIL when 2 or more permanent incisors are present.

3.1.4 Compulsory Scrapie Flock Scheme (sheep and goats)

Disease control measures require sheep flocks and goat herds to join the Compulsory Scrapie Flocks Scheme (CSFS) when a case of scrapie is confirmed. Testing helps determine the level off TSEs in flocks in which action has been taken and meets the UK requirement to test certain number of annual cull animals aged over 18 months in CSFS flocks.

FSS teams on designated slaughterhouses will be notified in advance of the arrival of animals requiring testing.

Animals tested under the CSFS can’t be used as part of the Sheep survey percentage.

3.2 Eligible animals

3.2.1 Sheep survey

Establishments participating in the survey must sample a given percentage of their weekly throughput of ewes and rams aged over 18 months (eligible animals).

Sheep are selected by either the OV or OA (Official Auxiliary) (the ultimate responsibility rests with the OV), only sheep with a flock-mark or individual ear tag are to be selected.

Selection within the pen should be at random, avoiding over-representation with regards to:

- origin

- age (confirmed by a post-slaughter dentition check)
- production system
- any other characteristic.

Eligible sheep can only be sampled Monday to Thursday and when the following day is not a public holiday.

Sheep born and raised in Great Britain (GB) are preferred for sampling. If there are no GB sheep available, sheep born and raised overseas may be selected.

3.2.2 DOA and DIL survey

In participating establishments, adult sheep found DOA or DIL must be tested for TSE as part of the fallen stock survey. Adult sheep or goats are those with more than two permanent incisors erupted through the gum.

The animal(s) may have to be moved by the FBO to a suitable place, for example, the isolation pen in the lairage.

Sheep without an ear tag must still be sampled. Place a red tag in the ear and record this number in the 'other ear tags' field on the TSE 6/3 form.

Brain stem samples are collected from DOA and DIL animals and are to be identified with 'DOA/DIL' on the pot lids.

3.2.3 Compulsory Scrapie Flock Scheme (CSFS)

The SLA team will be notified in advance by APHA of the number of CSFS animals to be slaughtered and sampled to ensure that enough sampling equipment and resources are available.

The SLA Team will contact the OV and/ or Operations Manager (OM) / Veterinary Advisor (VA) upon receipt of the details. Animals will be normally scheduled for slaughter between Monday to Thursday, should any CSFS animals be slaughtered on a Friday, weekend or Public Holiday, samples must be taken and stored in a refrigerator until they can be despatched.

Animals will be accompanied by forms NSP 61 and NSP 61A, which will already have been partially completed.

The NSP 61A will show the details of every animal selected to be culled. Some will be identified with an orange ear tag and these are the animals to be sampled (''selected animals''). This tag can be used to uniquely identify the animal during processing.

Animals not identified with an orange ear tag must not be sampled.

CSFS animals selected for testing (with an orange ear tag) that are found DOA or DIL must be sampled. The relevant sections in form NSP 61 and NSP 61A must be completed. There is no need to complete a TSE 6/3 form.

CSFS animals must not be included in the percentage of sheep required to be tested under the normal sampling plan.

3.3 Sheep survey sample size

Whenever eligible sheep are killed, the minimum number of samples to collect is one, never zero.

Calculate the number of samples required by:

a. divide the number of eligible sheep by 100 (for example, 256 / 100 = 2.56)

b. multiply the result by the given percentage (for example, 2.56 x 1.0 = 2.56 or 2.56 x 0.5 = 1.28)

c. round the result to the nearest whole number (for example, 2.56 = 3 or 1.28 = 1)

The daily percentage number should only be used as a guide.

The total number of samples collected during the week should reflect the given percentage of the weekly throughput of eligible sheep. Any shortfall should be made up the following week.

Worked example:

	Sampling days							
	Mon	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**	**Sun**	**Total**
Eligible throughput	256	301	124	0	13	104	0	**798**
Samples required *(1%)*	3	3	1	0	1	1	0	**9**
Samples collected	4	0	3	0	0	0	0	**7**
+/-	+1	-3	+2	0	-1	-1	0	**-2**
Eligible throughput	256	301	124	0	13	104	0	**798**
Samples required *(0.5%)*	1	2	1	0	1	1	0	**6**
Samples collected	4	0	3	0	0	0	0	**7**
+/-	+3	-2	+2	0	-1	-1	0	**+1**

Note: Animals should not be selected and then held overnight for slaughter the following day. However, in exceptional circumstances animals may need to be held overnight. In this case, the lab must be informed, so they can expect the samples the following day.

3.4 Slaughter arrangements

3.4.1 Slaughter protocol

The OV should ask the FBO to produce and agree a written protocol for identification, slaughter, sample collection, traceability and retention of split carcases, offal and waste and cleaning of equipment and premises. The FBO, OV and VA must sign these and retain copies.

Traceability must ensure robust identification and correlation of all retained carcases and body parts (including organs, tissues, blood and fleece/skin).

3.4.2 Identifying selected sheep

After OV or OA selects the sheep to be sampled (Sheep survey), animals can be identified following one of the options below:

Option	Method
1	The fleece of all eligible animals must be marked in the lairage using the green colour identifier spray. Mark each animal with a number starting at one (1) each day. This will allow sheep to be presented for slaughter in number order and facilitate correlation. Sprays are ordered by FSS staff from TSE Testing Laboratory using the TSE Testing Laboratory consumable order form (Annex 3).
2	The lairage staff should handle and tag each selected animal with the red ear tag under FSS supervision, post-slaughter but before head removal. This is an FBO requirement and the FSS officer can direct the FBO to do so. If local conditions do not permit this then the lairage staff should restrain the sheep for the OV to insert the tag, although this should be avoided.

At the point of selection, the AO should begin completion of the Daily Record Sheet (TSE 6/6) and the Rapid Testing form (TSE 6/2).

3.4.3 Dentition checks

A dentition check must be made by FSS staff post slaughter. Only sheep that have more than two permanent incisors erupted may be sampled. Enter the number of incisors for the animal's TSE 6/2 at this point.

Otherwise, do not take the sample and discard the TSE 6/2 that was completed in the lairage. The carcase can be processed as normal and does not need to be detained.

Older animals that have lost some or all of their permanent teeth ('broken mouthed') are still eligible for testing.

3.4.4 Batch slaughter

The most efficient way to collect samples is to slaughter the selected animals in one batch. This may also minimise the time between slaughter and despatch of samples.

3.5 Correlation

3.5.1 Requirement for correlation

The carcase and all body parts of the sampled animal must be identifiable and retained under the control of the FSS until a test result has been obtained, unless they are immediately disposed of as Cat 1 ABP (SRM) by incineration.

It is essential that:

- each half of the carcase and any retained body parts are correlated with the number on the red ear tag (Sheep survey) or orange ear tag (CSFS);
- all body parts of the carcase are identifiable to the sample animal during retention;
- each half carcase is identified using matching numbered detention tags.

3.5.2 Numbered tags

After the fleece has been removed, attach to the carcase a detention tag numbered (colour of the day) with the spray number on the fleece. This correlates the carcase with the red or orange ear tag number.

The same number must be used to identify retained red and green offal. FBO may decide to dispose of all offal as Cat 1 ABP (SRM) by incineration or, alternatively, to batch retain all offal without individual correlation pending results.

3.5.3 Blood correlation

Blood must be collected either:

- in containers used for individual animals, using same numbers as on the numbered tags, the dimensions of which must be such that the splashing of blood into the surrounding area is avoided;
- in a blood tank or container separate to that used for collection of blood from non-test animals;
- in a blood tank or container used for collection of blood from test and non-test animals.

Blood collected from test animals can only be mixed with blood from non-test animals if in the case of a positive test result all blood is disposed of as Cat 1 ABP (SRM) by incineration.

3.6 Sampling arrangements and preparation

3.6.1 Sampling table

Only the stainless steel sampling table provided by APHA must be used for sampling; the table is the property of APHA and not the FBO.

Table must be located where no risk cross-contamination exist, near to a functional hand basin with soap and hand drying facilities, and where no aspects of the hygiene and SRM rules are breached.

3.6.2 Sampling equipment

TSE Testing Laboratory will supply all sampling equipment directly to FSS staff at the slaughterhouse. If supplies are running short re-order direct from TSE Testing Laboratory stores using the TSE Testing Laboratory consumables order form. It takes on average five working days from the placement of an order to the receipt of equipment at the slaughterhouse. Place the order before supplies run out. It is recommended that plants hold sufficient supplies for at least two weeks if possible.

See Annex 3 for a sample copy of the order form.

One set of disposable equipment must be used to collect both brain stem and cerebellum from one head. Sufficient equipment to undertake testing of the day's quota is to be laid out in preparation for undertaking brain stem and cerebellum removal, and is as follows:

- head tray
- instrument tray
- tag cutting scissors

- heavy duty under gloves and disposable latex gloves
- Bioshield box and inner frames for pots or Biobottle with packing box
- Benchkote dispenser and sheets
- forceps
- scalpels
- sampling spoons
- sample pots
- small snap lock plastic bags
- document bag
- sharps box and clinical waste unit
- SRM label
- disposable apron
- plastic refuse bag and paper towels.

To prevent contamination between samples, new instruments and latex gloves for each head sampled should be used, while keeping all parts of the sampling workstation clean and neat, and pots, containers and packaging clean and dry.

3.6.3 Packaging

To prevent contamination of the Bioshield box by water or blood during sampling, the Bioshield box and inserts should be stored separately in a dry area. Completed sample pots can first be placed on a tray on the table and then packaged in the Bioshield box on completion of the sampling.

Prior to filling with completed sample pots the Bioshield box or bottle should be made ready by placing a sheet of frozen Techni-Ice at the base of the box or an ice-brix in the bottom of the bottle.

3.6.4 Head removal

The OV must check that the FBO removes the head ensuring that the brain stem and cerebellum remain intact within the skull. Cross-contamination between heads must be prevented.

3.6.5 Transfer of heads

Heads should be transferred either individually or collectively to the sampling site in the slaughterhouse. Brain stem and cerebellum samples are easier to remove without causing damage if they are left to cool for at least five minutes.

3.6.6 Procedure

For each head to be sampled the FSS officer must follow the steps in the table below:

Step	Action
1	Ensure that the safety helmet, visor (or goggles / face mask supplied as an alternative) and under gloves are worn to comply with health and safety risk assessments. **Note**: The under gloves may be household rubber gloves or latex gloves.
2	Put on a pair of latex gloves over the under gloves.
3	Place a new piece of Benchkote on the instrument board.
4	Place new forceps, scissors and sampling spoon on the Benchkote.
5	Open a pot and place pot and lid on Benchkote.
6	Open one small plastic bag, open out and insert into the open pot.

3.6.7 Training

Removal of the brain stem and cerebellum must only be undertaken by FSS staff trained in this process. Training module named “TSE Sheep Sampling” needs to be completed, and a sample must be sent to the laboratory to confirm it was taken adequately as part of the training. Once all this is satisfactorily completed, staff is deemed competent for the sampling.

3.7 Brain stem removal

See diagrams 1 and 2 below for anatomy and outline of the dissection method.

Diagram 1: Anatomy and sampling steps

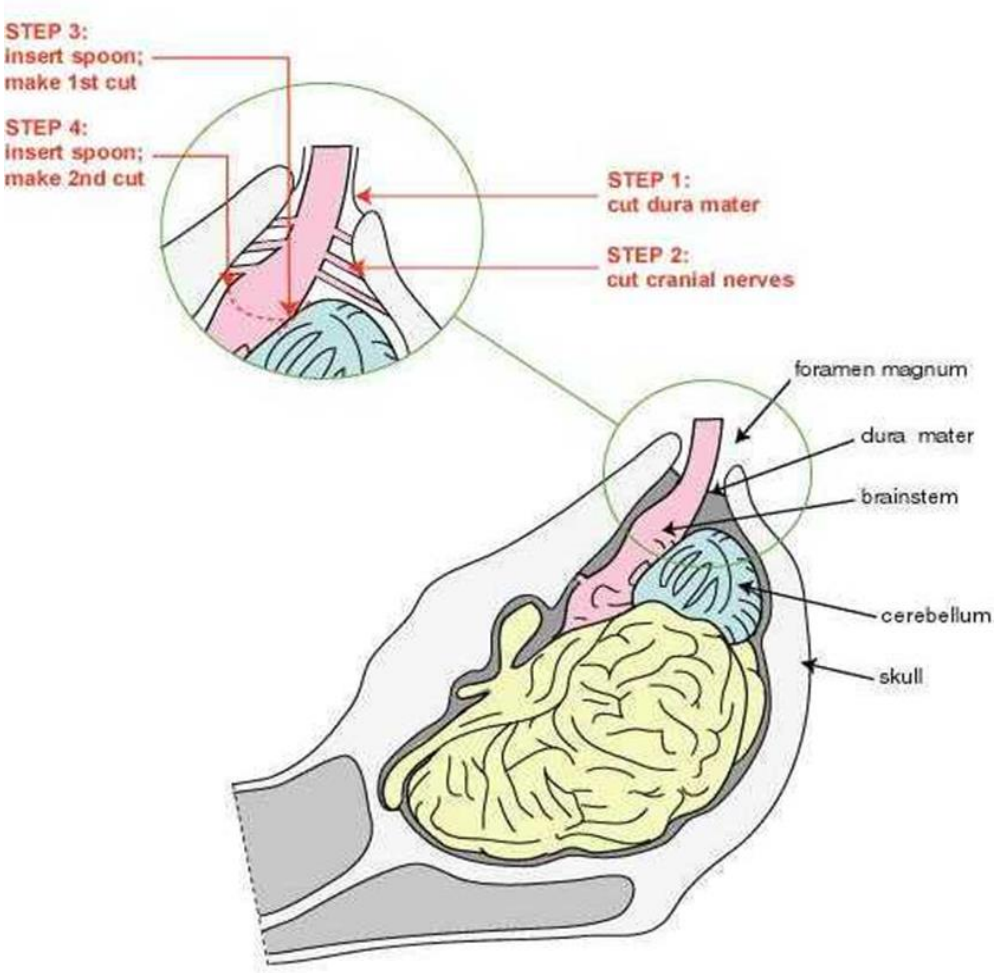
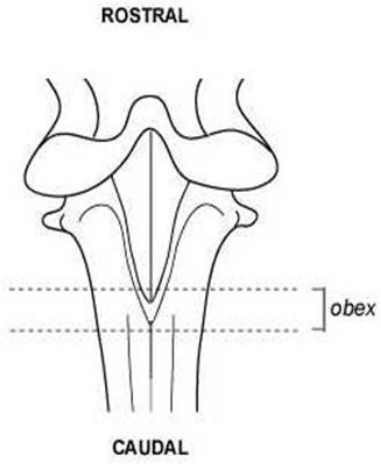


Diagram 2: the area of tissue (obex) to be targeted



3.7.1 Removal procedure

Place head upside down in the head tray with foramen magnum facing the sampling officer.

Follow the steps in the table below to remove each brain stem sample.

Step	Action
1	Firstly, remove any blood clots (using scissors and forceps) obscuring the view of the brain stem and identify the dura mater. Using a fresh pair of scissors cut free the dura mater from the brain stem and its attachment to the skull. Gently hold the brain stem as close to the end as possible with the forceps. If possible hold any remaining dura mater on the surface of the brain stem as this will provide a better grip of the brain stem.
2	Identify the position of the cranial nerves within the skull. Holding the brain stem with the forceps, move the brain stem to the side and insert the scissors into the foramen magnum and cut through the cranial nerves (VII –XI) that originate from the brain stem at three and nine o'clock positions. Take care not to cut the brain stem. Do this on both sides of the brain stem.
3	Using the forceps, very gently pull the brain stem until it is straight and insert the spoon underneath it with the cutting edge of the blade facing down. Keep the blade and the spoon against the bone as it is inserted. Insert to the level of the notch of the spoon – approximately 8-10 cm. When in position, point the cutting edge of the blade downward by lifting the handle upwards. Cut through the cerebellar peduncles by moving the handle from side to side.
4	After completing the cutting, carefully withdraw the spoon and insert it with the blade pointing downwards on top of the brain stem until it enters to a depth of 8-10 cm. Gently move the blade side to side and downwards, and

	cut through the rostral medulla. Avoid rotating or excessive side to side movements of the spoon, as this will damage the obex.
5	Gently pull with the forceps, and using the spoon as a scoop or lever, remove as much brain stem as possible from the skull. If resistance is encountered, check that the cranial nerves and dura mater have been freed from the brain stem. If not, repeat step 1. However, if this area is free, reinsert the spoon and continue to cut through the brain stem with a gentle side to side and downward motion of the handle.
6	Place the brain stem in the snap-lock plastic bag in the pot. **Note**: This same bag will be used to put both the brain stem and cerebellum from the animal.

3.8 Cerebellum removal

To meet the increased EU requirement (Commission Regulation 36/2005) for TSE testing and increase the analytical sensitivity of the testing program, it is required that the cerebellum is included in the sample along with the brain stem. This allows classical scrapie to be differentiated from atypical scrapie should the sample test positive.

3.8.1 Cerebellum removal procedure

After removing the brain stem, follow the procedure set out below for removing the cerebellum.

Step	Action
1	With the ventral aspect of the head uppermost, look downwards through the foramen magnum and identify the cerebellum. Insert the spoon underneath the cerebellum and lever it upwards into the centre of the space vacated by the brain stem.
2	If the cerebellum is not moving freely, loosen it by moving the spoon gently around and underneath it.
3	Lift the cerebellum towards the foramen magnum using the spoon to support and guide, and gently take hold of the cerebellum with the forceps. Remove the cerebellum through the foramen magnum.
4	Place the cerebellum in the same bag with the brainstem sample. Close the bag.

3.8.2 Equipment/ hygiene procedures

After removing the cerebellum the steps in the table below must be followed.

Step	Action
1	Remove the numbered section of all ear tags using the tag cutting scissors, and place them in the pot on top of the snap-lock plastic bag. Ears must **not** be placed with the ear tag in the pot. However, to avoid injury from sharp edges when removing metal ear tags, a small piece of ear is allowed to remain on the tag. Seal the pot.
2	Put the head and any pooled blood from the head tray in the SRM bin. Wipe down the tray with disposable paper as necessary.
3	Place the disposable scissors in the sharps box.
4	Put the forceps, spoon, used Benchkote, paper towels and apron in the clinical waste container, then remove the latex gloves and put them in the clinical waste container. See topic 3.14 on 'Collection and disposal of sharps boxes and clinical waste units' in this chapter.
5	Place the lid on the pot, seal and write sample number on the lid. Samples collected from DOA and DIL animals and are to be identified with 'DOA/DIL' on the pot lids.
6	Place in the box or Biobottle.
7	Repeat the process until sampling is complete and then go to Packaging and Storage of Samples on the following page.

3.9 Packaging and storage of samples

3.9.1 Bioshield box procedure

The table below lists the steps that must be followed if using a Bioshield box to despatch samples. A box can hold up to 40 samples.

Step	Action
1	Ensure a pre-frozen Techni-Ice sheet is in the bottom of the box.
2	Fill lower frame with sample pots before using a second frame.
3	Place a second sheet of Techni-Ice on top of the samples. If there are no pots, still place the Techni-Ice sheet in the box.

Step	Action
4	Place all the TSE 6/2 / NSP 61/61A / TSE 6/3 forms in the large plastic document bag. On the outside of the bag record: • the number of TSE 6/2 / NSP 61/61A / TSE 6/3 forms and the number of pots (which should be the same) • the time the first sample animal was slaughtered (from the daybook)
5	Place plastic bag containing TSE 6/2 / NSP 61/61A / TSE 6/3 forms on top of Techni-Ice.
6	Apply the SRM label to the outside of the bioshield box.
7	Place the Bioshield box in a plastic refuse bag to protect the surface of the box from contamination while carrying it through the slaughterhouse and during storage.
8	Close the plastic refuse bag with a cable tie or other secure means. Ensure that all blood and any other contamination is washed off the temporary plastic refuse bag or use a new one. The plastic refuse bag must be labelled with the pre-printed temporary packaging label to prevent accidental disposal as waste.
9	Place samples in a detained chiller prior to despatch.

3.9.2 Bioshield bottle procedure

The table below lists the steps that must be followed if using a Bioshield bottle to despatch samples. A bottle can hold up to seven samples.

Step	Action
1	Ensure a pre-frozen ice-brix is in the bottom of the Biobottle.
2	Place a maximum of 7 pots in the Biobottle.
3	Place the second ice-brix on top of the pots in the Biobottle.
4	Place the bottle in its cardboard box.
5	Place all the TSE 6/2 / NSP 61/61A / TSE 6/3 forms in the large plastic document bag. On the outside of the bag record: • the number of TSE 6/2 / NSP 61/61A / TSE 6/3 forms and the number of pots (which should be the same); and • the time the first sample animal was slaughtered (from the daybook).
6	Insert plastic bag containing the TSE 6/2 / NSP 61/61A / TSE 6/3 forms round the bottle in the Biobottle box.
7	Apply the SRM label to the outside of the Biobottle box.

Step	Action
8	Place the Biobottle box in a plastic refuse bag to protect the surface of the box from contamination while carrying it through the slaughterhouse and during storage.
9	Close the plastic refuse bag with a cable tie or other secure means. Ensure that all blood and any other contamination is washed off the temporary plastic refuse bag or use a new one. The plastic refuse bag must be labelled with the pre-printed temporary packaging label to prevent accidental disposal as waste.
10	Place samples in a detained chiller prior to despatch.

3.10 Problems with sampling

3.10.1 Problems that may be encountered

If problems arise during sampling the following action is to be taken.

Sheep TSE Survey	
Problem	**Action**
No ear tags present in the ear (it may have fallen out)	The sample procedure for this animal should be abandoned and the carcase processed as normal
No brain stem present in the head (it has been pulled out during separation of the head)	The sample procedure for this animal should be abandoned and the carcase processed as normal
No cerebellum collected	Do not send sample; deselect brain stem and carcase
CSFS	
Lost Orange Tag OR No brain stem	Do not sample; inform APHA Worcester team at csconehealthtse@apha.gov.uk, record as 'Not Sampled' in NSP 61A and process carcase as normal
No cerebellum collected	Send brain stem only

3.11 Cleaning workstation and disposal of equipment

After sampling, the sampling workstation and surrounding area must be cleaned in accordance with local protocols. Cleaning is to be supervised by FSS staff.

All sheep TSE sampling consumables (except sharps), including gloves, must be disposed in the clinical waste units. The consumable must first be put into a 'Bio-Hazard' polythene bag (DIF 0011).

At the end of each day the bag must be sealed and placed into the clinical waste unit. A new bag must be used each day of sampling. The unit's sealable lid must not be 'clicked shut' until prepared for collection.

Sharps are to be disposed into the sharps box, close but do not seal the sharps box at the end of sampling and store it in a dry area until re-use.

3.11.1 Sharps box and clinical waste unit

SRCL provides a sharps and clinical waste collection and disposal service on behalf of FSS and Defra for slaughterhouses participating in the TSE Sampling Surveys.

Sharps Box

Capacity: 12 litre

Clinical Waste Unit

Capacity: 60 litre

The exchange of sharps boxes and clinical waste units will be on an agreed frequency basis, at an agreed collection time and day.

Collection will take place regardless of whether the box is full or not.

Replacement containers will be left by SRCL after each collection.

Contact the FSS Operations Manager (OM), to arrange a new service or to change the frequency of collections and numbers of sharps boxes or waste units.

SRCL will confirm by email the date of installation or acceptance of service frequency to the OM and plant staff and confirm delivery arrangements.

FSS staff in plant must contact the OM within 5 working days to confirm delivery or amendment to service.

3.11.2 Responsibilities of the OM

The OM is responsible for providing sharps boxes and the clinical waste units, and must ensure the following are complied with:

- boxes and units must be sealed according to instructions on the box before collection;
- boxes and units must be left in the agreed collection point where the replacement box will be left;
- the outside of the box and unit must be clean and free of blood;
- the slaughterhouse licence number must be marked on the box and unit lid in indelible ink.

3.12 Storage and retention pending results

3.12.1 Retention options

Carcases and offal retained pending a test result should be held in accordance with one of the following options:

Option 1: In a detained chiller/area

Carcases awaiting test results must not come into contact with other detained carcases awaiting further examination by an inspector or OV.

Option 2: In a chiller other than the detention chiller

Carcases should be retained in a single batch that can be easily identified in a specified part of the chiller and must not come into contact with other meat.

3.12.2 Chiller control

Areas where carcases are retained must be under the control of the OV. They should be sealed, in which case the seals may not be broken except by the OV or OA.

3.12.3 Form completion

At this point you should return to the completion of the Daily Record Sheet (TSE 6/6).

All procedures relating to chiller controls should be recorded on the TSE 6/6 including:

- date and time of sealing and person responsible
- seal number
- date and time of unsealing and person responsible.

3.12.4 Body parts

Unfit material must not be stored with any other carcases or body parts that have been passed fit for human consumption. The table below details the specific requirements for various body parts of the animal.

Part	Action
Any offal passed fit for human consumption	Must be retained and identifiable, unless disposed of at Cat 1 ABP (SRM) by incineration
Fleece	Must be retained in the hide/ skin room but separately from other hides/ fleeces/ skins; must be appropriately marked or tagged and clearly labelled 'pending test result, retain until test result is available'
Blood	Must be retained separately and identified pending a test result, unless disposed of as Cat 1 ABP (SRM) by incineration
SRM	Must be disposed of by incineration
Rumen contents and gut contents	Should be disposed of in the normal way
Sampled carcase or body parts of sampled	Must be held as an animal by-product until a test result is received; if a FBO does not wish to hold this material until

carcases that are not passed fit for human consumption at post-mortem inspection	test results are obtained it must be disposed of as Cat 1 ABP (SRM) by incineration

3.13 Despatch of samples

3.13.1 Labelling

Both Bioshield and Biobottle boxes are pre-printed with a diagnostic specimen label and a black UN3373 label. In addition to these labels, an SRM label should be applied to each box.

3.13.2 Collection of samples

Predict the following weeks sampling days and times that the samples will be ready for collection.

To book a collection, use the Topspeed online booking system.

Under exceptional circumstances, ad-hoc changes and collections can be made on the same day of sampling.

3.13.3 Transport containers

Topspeed collects the Bioshield box or Biobottle at a pre-notified collection time for overnight delivery to:

TSE Laboratory
Eurofins Forensic Services
Darwin House
Faraday Street
Birchwood Park
Risley
WA3 6FW

Telephone: 0844 057 0110

3.13.4 Ensure sample despatch

All samples are to be despatched to the laboratory. Any sheep samples lost prior to despatch due to an error on behalf of the FSS or an issue with the FBO will have to be made up as part of the week's deviation.

If, for any reason, Topspeed does not collect samples, DO NOT dispose of these samples at the slaughterhouse. Samples are to be despatched to the TSE Testing Laboratory irrespective of time between harvesting and eventual despatch.

3.13.5 Notify laboratory

FSS staff should advise the TSE Testing Laboratory that samples have been taken and the courier has collected the brain stem and cerebellum samples by completing a Notification of TSE Samples Sent form and faxing to 01925 248876.

If you require the results to be sent to a single email address rather than by fax, this should be detailed in the comments section at the bottom of the form.

See Annex 4 for a copy of the form.

3.13.6 Arrival time of sheep samples at laboratory

Topspeed provides a same day direct delivery service to ensure that the samples arrive at the TSE Testing Laboratory in time for the results to be provided by 4pm the following day of sampling.

3.13.7 Top Speed collection problems

The TSE Testing Laboratory require samples within 24 hours of slaughter and the OV must try to ensure that samples are despatched. If a delay in the delivery occurs, the results will be issued late. The OV must ascertain whether the abattoir is willing to detain the carcases for an extended period.

Any delays in the collection or delivery of samples must be reported immediately to the SLA Team on Operations@fss.scot. Delays in the provision of test results caused by the courier must not impact on the FBO. Samples not picked up are not to be held over for collection the following day unless FBO is content with the delay.

If the samples cannot be sent to the TSE Testing Laboratory, then an ovine animal can be deselected for testing and the samples must be disposed of as Cat 1 ABP (SRM) by incineration. Such deselection and application of the Health Mark must await confirmation from SLA team. Samples that have been taken but then are deselected cannot be counted towards the totals on the TSE 6/1 form and these numbers must be made up.

If the TSE Testing Laboratory has started a test then an animal cannot be deselected, health marked or released **until a test result has been received**.

3.14 Test result and health marking

3.14.1 Test result

The test result should be received at the slaughterhouse by 4 pm on the day after sampling.

Test results will either be faxed to the plant fax number or (if requested in the comments section of the Notification of TSE Samples Sent Form) to the single email address provided.

3.14.2 Negative result

Any sheep selected for testing must not have the Health Mark applied until a negative result has been obtained from the testing laboratory. Carcases yielding a negative result must have the Health Mark stamp applied before being released for human consumption. Any remaining material, whether or not for human consumption, may be released. The FBO must apply the identification mark to the offal.

3.14.3 Positive result

In the event of a positive result from the testing laboratory, the OV should ensure that all body parts of an animal found to be positive which have been retained, including the fleece, are disposed of as Cat 1 ABP (SRM) by incineration. The TSE laboratory will directly inform APHA. The OV should inform the VA and SLA team.

On occasion, retesting of a positive sample and its associated negative samples may delay release of results until 9:00 am the day following testing at the laboratory. The laboratory will inform FSS officers and the FBO of delays.

3.14.4 Unsuitable test result

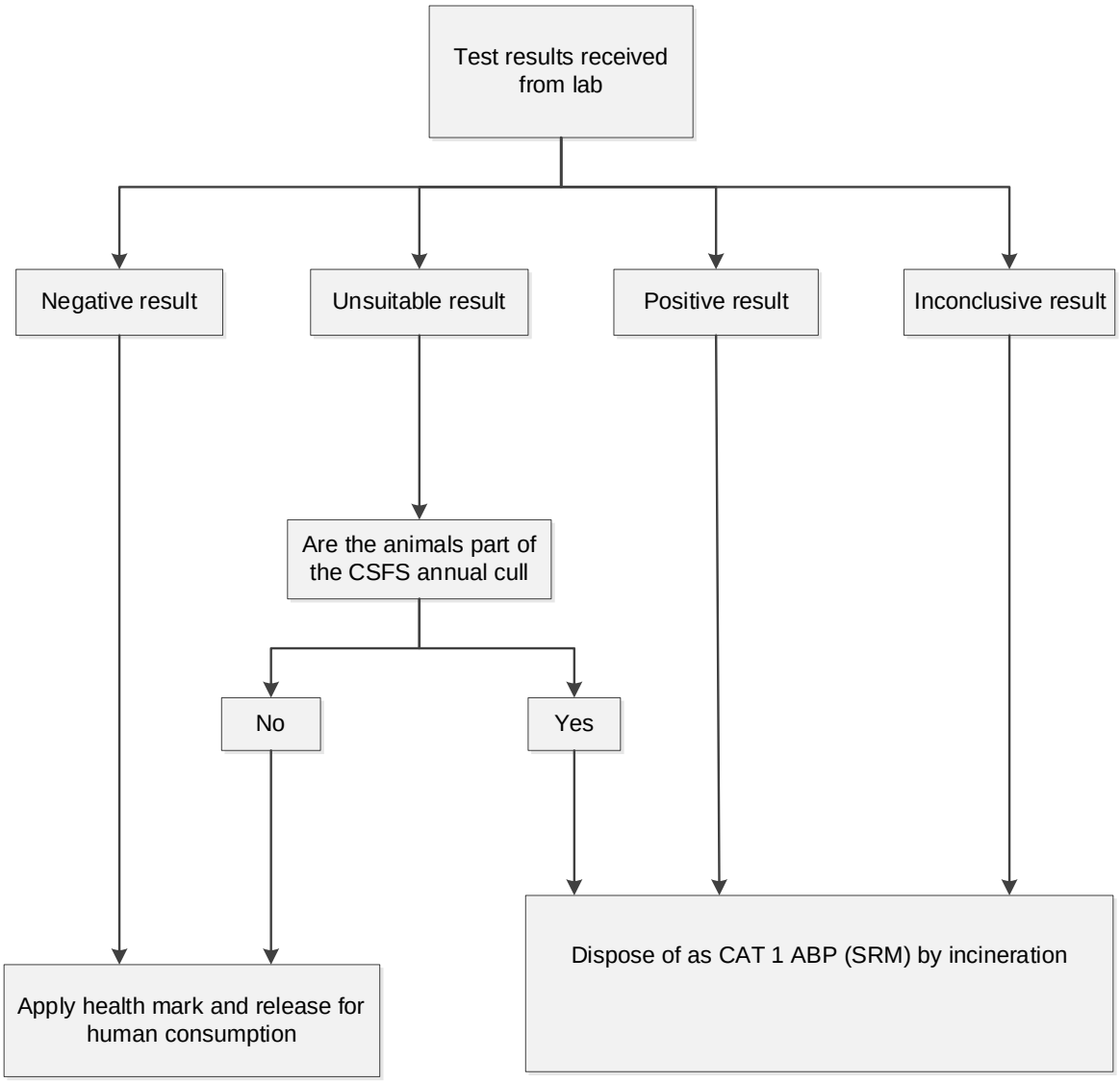
In the event that the sample is unsuitable the OV will receive a notification from the laboratory.

Carcases can be health marked and all retained body parts released unless the animals tested were part of the CSFS annual cull. Carcases and body parts must be disposed as Cat 1 ABP (SRM) by incineration when tested as part of the CSFS annual cull.

3.14.5 Inconclusive result

In the event of an inconclusive test result, the OV should treat all of the animal body parts in the same way as for a positive result.

3.14.6 Test result flow chart



3.14.7 Non co-operation

If selected animals are not sampled and/or tested because the FBO fails to co-operate, the selected animals must not be health marked. The OV must inform the VA and SLA team.

See chapter 7 on ‘Enforcement’ when considering any enforcement action.

4. Sheep TSE testing: form completion

4.1 TSE 6/6: Daily record sheet (Sheep survey and CSFS)

4.1.1 When and by whom?

The first section of the form (first kill and ear tag numbers) should be filled in by an FSS Authorised Officer (AO) at the dentition point. The orange tag number must be recorded in the TSE 6/6 and provides the only record that will ensure correlation between orange tag and carcase/skin.

Details of the seal should be recorded after sealing all retained carcases and body parts.

Details of the results should be recorded next day after receiving the results from the laboratory.

AO removing the seal will complete the last part of the form.

Always protect forms against contamination (such as blood and tissue).

4.1.2 Form completion

To ensure correlation, enter the ear tag number on Daily Record Sheet (TSE 6/6) next to the spray (the kill number sprayed on the fleece) and detention (red ear tag) number with an indelible marker.

This correlates the fleece with the red tag number and ensures the ear tag number can be correctly recorded on the Rapid Testing Form (TSE 6/2) post slaughter.

Once the fleece is removed, a detention tag (colour of the day) must be applied to the carcase with the spray number written on with indelible marker.

Offal can be correlated individually or by batch, or disposed of as Cat 1 ABP SRM.

4.1.3 Filing

Retain the completed TSE 6/6 in the FSS office with a photocopy of the TSE 6/2 for matching against the test results.

4.2 TSE 6/2: Rapid testing form (Sheep survey and DOA / DIL survey)

4.2.1 When and by whom?

A TSE 6/2 form must be completed for each sample taken from selected sheep intended for human consumption or from DOA/DIL eligible sheep in participant slaughterhouses

The FSS section of the form should be filled in prior to slaughter (at the point of animal selection) in the case of sheep intended for slaughter and when identified in the case of DOA/DIL by an FSS AO except for the insertion of the number of permanent incisors erupted which must be done after the dentition check.

Always protect forms against contamination (such as blood and tissue).

4.2.2 Form completion

The following points should be noted when completing the TSE 6/2 form:

- it is critical that only one of the options is clearly marked (slaughter for human consumption or DIL/DOA); this allows the laboratory to assign the sample and the result in the correct sampling category;
- the farmer/vendor/owner name and address are the name of the dealer or farmer (not the slaughterhouse) that owned the animal prior to the slaughter;
- sheep intended for slaughter that do not have a flock-mark or individual tag should not be sampled; any information missing must be recorded as ‘‘Not Known’’;
- If the DIL/DOA sheep does not have a farmer’s mark, lot number, tattoo number or other mark, the relevant data box should be left blank;
- if breed cannot be reliably identified then the relevant data box should be annotated ‘‘Not Known’’;
- it is important that boxes relating to teeth are completed as they confirm the age of the animal;
- other identification present should be recorded.

4.2.3 Ear tag number

Take care when recording the number of the red ear tag as this is the link between the sample and the sample details which will be recorded on databases.

4.2.4 Form distribution and filing

A photocopy to be retained in the FSS office in plant for 12 months. The original TSE 6/2 should be despatched with the sample.

Photocopies of each TSE 6/2 with the completed TSE 6/6 should be retained in the FSS office for matching against the test results.

4.3 NSP 61 (CSFS)

4.3.1 When and by whom?

An FSS officer must complete Section 2 of the NSP 61 form prior to despatch of CSFS samples.

Always protect forms against contamination (such as blood and tissue).

Note: The NSP 61 form is initially completed by APHA Worcester colleagues when an annual cull is planned. The abattoir will be informed of the cull well in advance and a date arranged to suite all. The forms will follow the animals to the plant and will require further completion.

4.3.2 Form distribution and filing

Record if there is one or more DOA or DIL (details will be recorded in Section 2 of NSP 61 under the DIT/DIL samples column). If one, the pink copy of the NSP 61 will accompany the head. If more than one, a photocopy of the form will accompany the head for each DOA or DIL.

Protect forms against contamination (such as blood and tissue).

The separate copies of the form are to be sent as follows:

- yellow copy – to be retained by FSS in plant for 12 months;
- blue copy – despatched with samples; this is for the TSE Testing Laboratory to send to APHA;
- white copy – despatched with samples to the TSE Testing Laboratory;
- pink copy – despatched with DOA/DIL head(s) (if applicable);
- green copy – send in pre-printed envelope to ‘SSC, Membership Admin’.

4.4 NSP 61A (CSFS)

4.4.1 When and by whom?

An FSS officer must complete columns 1 and 2 of the NSP 61A form prior to despatch of CSFS samples.

Always protect forms against contamination (such as blood and tissue).

Note: The NSP 61A form is initially completed by APHA Worcester colleagues when an annual cull is planned. The abattoir will be informed of the cull well in advance and a date arranged to suite all. The forms will follow the animals to the plant and will require further completion.

4.4.2 Form completion

Form NSP 61A is not self-carbonated. Keep a photocopy of the original before sending it with the samples. There is no need to complete a TSE 6/2 for these animals.

Once the sample has been taken, record the sample number in column 1.

If any animal with an orange tag is found DOA or DIL, a tick is to be entered in column 2 (DIT/DIL) next to the animal's details.

When the form has been completed, verify that every animal requiring testing has been sampled. If any animal is submitted for slaughter with an orange tag but is not included in the NSP 61A, record the details in the form.

4.4.3 Form distribution

Once completed make a second photocopy to be sent in the pre-printed envelope to ''SSC Membership Admin''.

4.4.4 Reporting discrepancies

Any discrepancy found between the information recorded on the NSP 61A and the animals presented must be reported to APHA Worcester team at csconehealthtse@apha.gov.uk.

4.5 TSE 6/1: Weekly summary and deviation report (Sheep and goats surveys / CSFS)

4.5.1 When and by whom?

An FSS officer should complete at the end of each week (Monday to Sunday).

Always protect forms against contamination (such as blood and tissue).

4.5.2 Weekly summary and deviations report: sheep survey

Complete Part 1 on the TSE 6/1, recording daily throughput and both daily and weekly surpluses and shortfalls.

Throughput information will be correlated against Defra's statistical information.

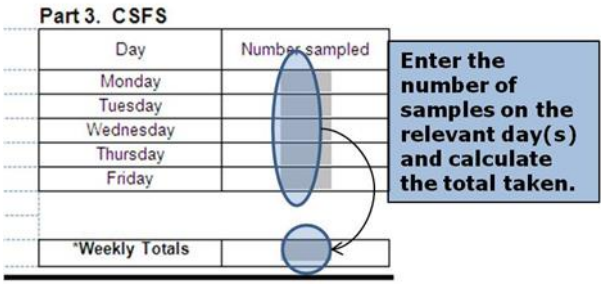
Any weekly shortfall of samples must be carried forward to the following week and must be made up. The deviation should remain as close to zero as possible.

4.5.3 Weekly summary and deviations report: goat survey

We are currently not sampling goats so Part 2 of the form is not required to be completed.

4.5.4 Weekly summary and deviations report: CSFS

Complete Part 3 of the TSE 6/1 form, recording the number of samples collected on the relevant day(s).



Note: CSFS samples must not be included with any normal samples recorded in Part 1 of the form.

4.5.5 Weekly summary and deviations report: general

Once completed, email a copy to Operations@fss.scot.

The deadline for submission is (except in exceptional circumstances agreed by SLA) 10 a.m. on the following Monday.

5. Annexes

Annex 1 Sample SOP

Annex 2 Hazard identification and control plan

Annex 3 Sheep & Goat Scrapie Survey consumables order form

Annex 4 Notification of TSE samples sent to Eurofins for testing