

Chapter 2.4

Post-Mortem, Health and Identification Marking

Section 1	Introduction
Section 2	FSS role
Section 3	FBO responsibility
Section 4	Guidance on conditions at red meat post-mortem inspection
Section 5	<i>Trichinella</i> testing
Section 6	Poultry post-mortem inspection
Section 7	Judgements at poultry post-mortem inspection
Section 8	Wild game post-mortem inspection
Section 9	Health and identification marking
Section 10	Verification of Microbiological Criteria
Section 11	<i>Campylobacter</i> in Broilers Survey
Section 12	Edible co-products
Section 13	Annexes

1. Introduction

1.1 Legislation

1.2 Definition and purpose of post-mortem inspection

1.1 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.

[Regulation \(EU\) 2017/625](#),

[Commission Delegated Regulation \(EU\) 2019/627](#) and

[Commission Delegated Regulation \(EU\) 2019/624](#) detail:

- who can undertake the post-mortem inspection;
- the purpose of post-mortem inspection;
- the post-mortem inspection procedures;
- the decisions to be taken concerning meat;

[Regulation \(EC\) 853/2004](#):

- Details the standards that the Food Business Operator (FBO) should provide and achieve for post-mortem inspection.

[Commission Implementing Regulation \(EU\) No 2015/1375](#)

- Lays down specific rules on official controls for *Trichinella* in meat.

1.2 Definition and purpose of post-mortem inspection

Post-mortem inspection, as defined by Reg (EU) 2017/625, means the “*verification in the slaughterhouse or game-handling establishment of compliance with requirements applicable to:*

- *carcasses [...] and offal [...] for the purpose of deciding if the meat is fit for human consumption,*
- *safe removal of specified risk material (SRM), and*
- *the health and welfare of the animals.”*

The principal purpose of PMI is to supplement ante-mortem inspection and to detect:

- diseases of public health significance,
- diseases of animal health significance,
- residues or contaminants in excess of the levels allowed by legislation,
- the risk of non-visible contamination,
- other factors which might require the meat to be declared unfit for human consumption or restrictions to be placed on its use,
- visible lesions that are relevant to animal welfare.

2. FSS role

- 2.1 Introduction to post-mortem Inspection
- 2.2 FSS duties
- 2.3 Post-mortem inspection Verification
- 2.4 Post-mortem inspection guidelines
- 2.5 Decisions concerning meat
- 2.6 Recording of contamination presented for inspection on cattle, sheep and pig carcasses

2.1 Introduction to post-mortem inspection

2.1.1 Key principles

Post-mortem inspection should:

- take into account FCI or trained hunter's declaration;
- take into account ante-mortem inspection results;
- view all external surfaces;
- include carcasses and accompanying offal.
- pay particular attention to the detection of zoonotic and notifiable diseases;
- take place without delay after slaughter;

2.2 FSS duties

2.2.1 Outline

The following table outlines the duties of the FSS Operations Group with regard to post-mortem inspection.

Manual for Official Controls | Amendment 15

Role	By	Frequency
Carry out post-mortem inspection	<ul style="list-style-type: none"> ➤ OV Only the OV can perform PMI in the cases described in Regulation (EU) 2019/624 Article 8; ➤ OA(Official Auxiliary) appropriately authorised under Article 13 of Regulation (EU) 2019/624 under the supervision or responsibility of the OV – Regulation (EU) 2017/625 Article 18(2)(c) and Regulation (EU) 2019/624 Article 7 (responsibility); ➤ Plant staff appropriately authorised under Article 14 of Regulation (EU) 2019/624 for poultry or farmed lagomorphs under the supervision of the OV or OA in accordance with Regulation (EU) 2017/625 Article 18 (3). <p>See Chapter 2 section 10 on PIA guidance for more information.</p>	<p>All carcasses and accompanying offal without delay after slaughter;</p> <p>Derogation on the timing of PMI in accordance with Reg (EU) 2019/627 Art. 13 – PMI performed only by OV;</p> <p>To Note: this is not implemented in Scotland yet</p> <p>Derogation to perform PMI on a representative sample of each flock of poultry and farmed lagomorphs in accordance with Reg (EU) 2019/627 Articles 25 (2) and 26.</p>
<p>Carry out post-mortem inspection for animals subject to emergency slaughter outside the slaughterhouse.</p> <p>Applicable to domestic solipeds, bovine animals > 8 months old, domestic swine > 5</p>	OV only	All carcasses and offal as soon as possible (Reg (EU) 2019/627 Art. 16).

Manual for Official Controls | Amendment 15

weeks old and large wild game		
Record post-mortem inspection results	OV or OA (or PIA)	At the time of post-mortem inspection At the end of day on FSS-IT system
Apply Health Mark (HM)	<p>➤ OV or OA</p> <p>The Health Mark must be applied under the supervision of the OV.</p> <p>Reference: Reg (EU) 2019/627, Article 48 (1)</p> <p>➤ specifically, trained plant staff in domestic ungulates, farmed game mammals other than lagomorphs and large wild game under the conditions of Reg (EU) 2017/625, Article 18 (3); see Section 9/Annex 8 of this chapter for more details.</p> <p>Reference: Reg (EU) 2017/625, Article 18 (4)</p>	<p>Immediately after PMI (this may be prior to results of any examination for <i>Trichinella</i> being available, if OV satisfied meat will only be placed on market if results are satisfactory);</p> <p>See section 5 of this chapter for health marking <i>Trichinella</i> tested pigs;</p> <p>See chapter 2.6 on 'TSE testing' for health marking BSE tested cattle.</p>
Disease sampling / testing	➤ OV or OA	When disease is suspected.
Monitoring sampling / testing	➤ OV or OA or specifically trained plant staff under conditions of Reg (EU) 2017/625, Article 18 (3)	When monitoring of disease is required (for example TSE, <i>Trichinella</i>).
Verification of post-mortem inspection	➤ OV or FVM	Daily verification of a sample of inspected carcasses and offal of each

		species processed (see section 2.3.1).
Animal Welfare surveillance/ evidence gathering and reporting	➤ OV and OA/PIA	When Animal welfare cases are identified at PMI See sections 1 and 2 of Chapter 2.3 “Animal Welfare” for more information

2.2.2 Post-Mortem inspection requirements

Specific requirements for each species are listed in the Commission Implementing Regulation (EU) 2019/627 Title III Chapter II Section 3 Articles 14-28.

Reference: See Annex 1 for a summary of red meat post-mortem inspection requirements.

Note: Post-mortem procedures described for bovine and ovine animals, domestic swine and poultry are to be applied to the corresponding species of farmed game.

Procedures to be applied to poultry are described in Section 6.

Procedures to be applied to wild game are described in detail in a separate section 8.

2.2.3 Contamination during inspection

During inspection, precautions must be taken to ensure that contamination of the meat by actions such as palpation, cutting or incision is kept to a minimum. Handling of the carcasses and offal should be kept to a minimum.

Regulation: (EU) 2019/627 Article 14 (2).

Note: Whilst still allowing for adequate post-mortem inspection care must be taken not to de-value the carcass or offal when making post-mortem incisions.

Note: see Professional Standard guidance regarding PPE/GHP on My Workplace – Operations on Saltire at the following link:

[Operations Professional Standard](#)

2.2.4 Accuracy

The speed of the slaughter line and the number of inspection staff present must ensure proper inspection is completed and records maintained.

FBO should be instructed to take immediate action, including a reduction in the speed of slaughter, where:

- a contamination is detected on external surfaces or its cavities and the FBO does not take appropriate action to rectify the situation; or
- if good hygiene practices are jeopardised.

FBO to maintain robust system to ensure correlation of carcasses and accompanying offal and OV to follow hierarchy of enforcement when applicable.

Regulation: Reg (EU) 2019/627 Article 12 (4) and Article 46 (1)

Reg (EC) 853/20014, Annex III, Section I, Chapter IV, 13 (a)

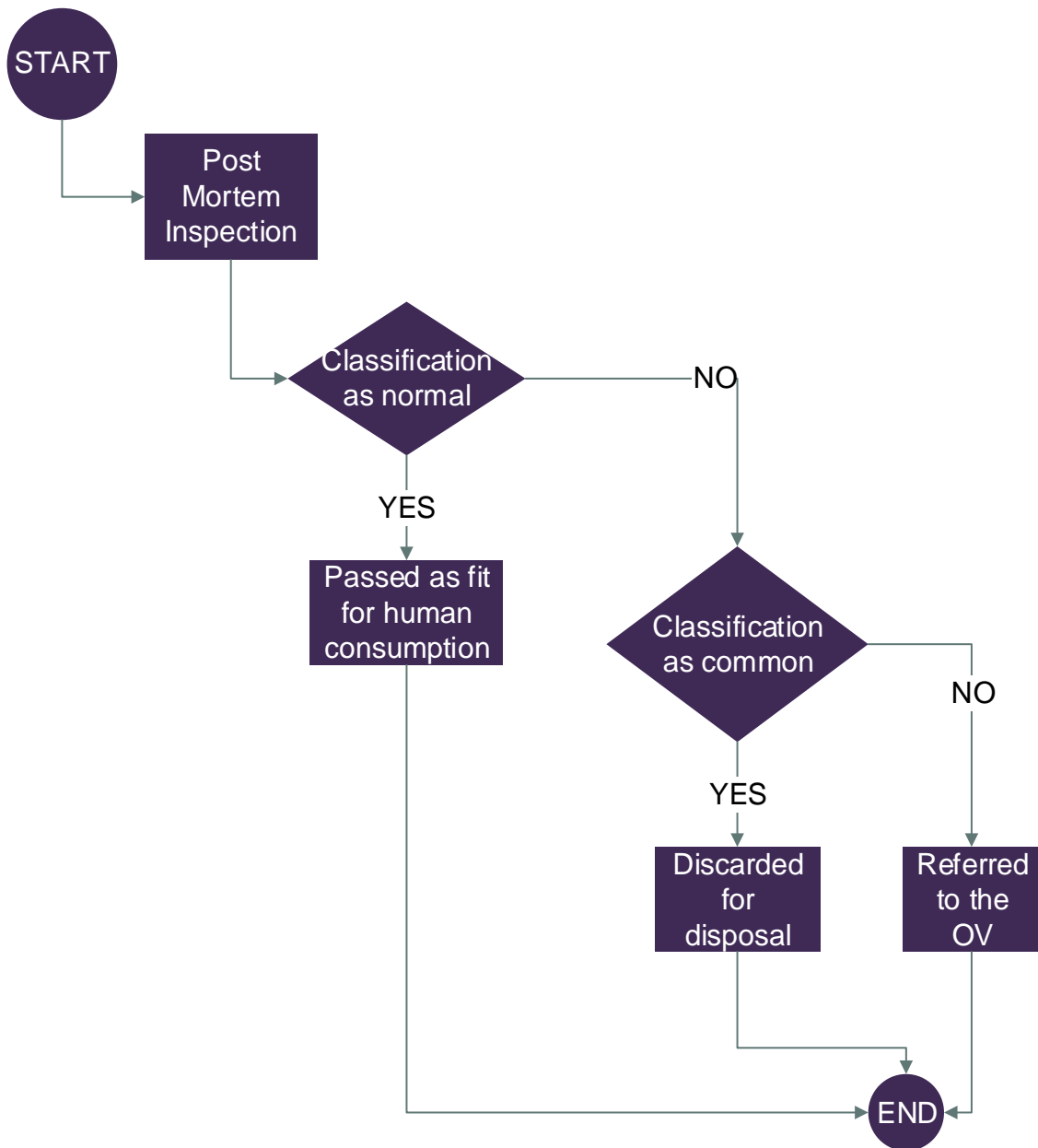
2.2.5 Additional examination requirements for PMI

When there are indications of a possible risk to human health, animal health or animal welfare, additional examinations are to take place such as palpation and incision of the carcass and offal and laboratory tests.

Regulation: (EU) 2019/627:

- Article 14 (1): Additional examination requirements for PMI;
- Article 24: Indications of possible risks to human health, animal health or animal welfare;
- Articles 18-23: Specific additional PMI procedures described for the following species: domestic bovine animals, domestic sheep and goats, domestic solipeds and domestic swine.

2.2.6 OA post-mortem decision tree



2.2.7 Abnormal condition

To consider an abnormal carcase meat/offal as 'uncommon', we could take into consideration different factors such as:

- prevalence of the condition in the area;
- prevalence of the condition in the flock/herd (degree of infection or infestation);
- the possible human health implications of the condition (such as zoonosis);

- the possible animal health implications of the condition (such as lesions which give rise to suspicion of a notifiable disease such as Classical Swine Fever and Foot and Mouth Disease);
- possible animal welfare problems on farm, during transport or in the lairage;
- the need to refer it to the veterinarian to do a differential diagnosis;
- economic importance of the condition for the farming industry (degree of infestation).

Based on all the above, the OA will need to make a judgement and notify the OV of the findings.

2.2.8 Examples of abnormal conditions that can be classified as common or uncommon

The table below outlines abnormal conditions and their classification.

Abnormal condition	Comments	Occurrence
Broilers septicaemia/toxaemia	Very prevalent condition.	Common
Mastitis in older cattle	Common condition in all species, especially in dairy cows. No need to inform the OV. The farmer will receive notification when informed about the post-mortem inspection records.	Common
Sheep caseous lymphadenitis (CLA)	The disease is increasing in prevalence in the UK, resulting in welfare issues and economic losses, so the OV needs to be informed.	Uncommon
Cattle (30 month or younger) fascioliasis	Common in ungulates. The OV does not need to be informed. The disease is of great economic importance because of liver condemnations. The farmer will be informed when he receives notification of the post-mortem inspection findings.	Common
Pigs pleurisy/pneumonia	Inflammation of the pleura is a common lesion in pigs. It requires the stripping of the pleura or removal of the rib cage but carcass condemnation is not normally necessary. There is positive correlation between the number of carcasses requiring lung condemnation and the number of those requiring pleura stripping. The OV does not need to be informed.	Common

Sheep anthrax	Normally identified at ante-mortem inspection if a suspect animal is found dead in the lairage. It is a notifiable disease and it is a zoonosis. The OV must be informed and he/she should immediately inform the APHA Duty Veterinarian.	Uncommon
Broilers mechanical damage	This is normally the result of poor functioning of the poultry plant machinery. The FBO has to be informed by the OA if he/she has not already identified the problem.	Common
Cattle sarcocystis	The incidence is higher in older cattle but is an uncommon condition. Depending on the degree of infestation, the carcass and viscera have to be rejected. The OV should be informed.	Uncommon
Ascariasis in pigs (milk spot)	One of the most recorded conditions at post-mortem in pigs. It is mainly identified in livers ('milk spot') which are unfit for human consumption. The farmer will be informed when he/she receives the post-mortem inspection report. The OV does not need to be informed.	Common

2.3 Post-mortem Inspection Verification

The OV must verify the post-mortem inspection of a sample of carcasses and offal that have been health marked (inspected, in the case of poultry).

The verification checks in both red and white meat establishments should reflect the full range of species and age/ type of animal being processed

PMI verification is a tool to measure our effectiveness as an inspection service.

PMI verification results should be assessed by the OV / FVM to monitor team and individual performance, a prerequisite where OA work under OV supervision/responsibility.

Variables in each establishment should be considered if concerns are raised following PMI findings; for example lighting, available inspection time and space, FBO performance, plant layout.

Manual for Official Controls | Amendment 15

Note: The OV/ FVM should maintain realistic expectations during the checks when assessing team performance from the PM Verification results, as minor incidents of contamination become more evident post-chilling, particularly with pig hair and wool.

Manual for Official Controls | Amendment 15

SPECIES	BY	FREQUENCY	WHERE	SAMPLE SIZE	VERIFICATION CHECKS	
Read meat	OV	<p>3 days/week if SH operates on 4 or 5 days per week;</p> <p>All operating days if SH operates < 4 days per week</p>	<p>Online before chilling;</p> <p>Immediately after inspections points</p>	Weekly TP	Weekly total of carcasses and offal to check	<p>1) Pathology Verify that the meat is free from all pathological conditions that would render it unfit for human consumption;</p> <p>2) Statutory requirements Verify that PMI has been carried out in accordance with the requirements set out in Annex 1 to this chapter;</p> <p>3) Contamination Verify that the meat is free from contamination;</p> <p>4) Health Marking Verify that the meat is correctly and legibly health marked;</p> <p>5) Other Record Any identified deficiency (such as tonsils, stick wounds, SRM).</p> <p>NOTE: Verification checks should include lambs, adult sheep, goats, sows, boars and pigs, horses, calves and adult cattle.</p>
	FVM	<p>In smaller plants where there is OV only attendance, there is no requirement to conduct PMI verification checks.</p> <p>Note: The FVM will identify any issues observed during the course of their scheduled management visits, and will address such</p>		<p>Chiller</p>	<p>>1000</p> <p>60 carcasses and 60 sets of offal (20 carcasses and 20 sets of offal per species per day, 3 days per week)</p>	

Manual for Official Controls | Amendment 15

		issues accordingly			All species processed must be subject to verification.
White meat	OV	<p>Each day of processing</p> <p>Checks spread across each day of production, and should encompass:</p> <ul style="list-style-type: none"> - a daily inspection of the viscera and body cavities of a representative 	<p><u>immediately after the EV (evisceration) inspection point</u>, taking into account that minor contamination instances and trailing entrails might be dealt with by further FBO HACCP</p>	<p>In plants with very low throughput, where 600 carcasses/week is not realistic, as a minimum, 5% of the carcasses should be checked (e.g. if a plant only operates one day/week and slaughters 1500 birds, the OV should ensure that minimum 75 carcasses are verified).</p> <p>the FVM must conduct.</p>	<p>1) Pathology Verify that the meat is free from all pathological conditions that would render it unfit for human consumption;</p> <p>2) Statutory requirements Verify that post-mortem inspection has been carried out in accordance with the requirements set out in Annex 1 to this chapter;</p> <p>3) Contamination Verify that the meat is free from contamination;</p>

Manual for Official Controls | Amendment 15

		sample of birds, and - a detailed inspection of a random sample from each batch of birds having the same origin (if possible), of birds or part of birds which have been declared as unfit	based controls following the actual inspection*.	Weekly TP	Weekly total of carcasses to check	4) Other Record Any identified deficiency NOTE: Carcase checks on free range, organic birds and spent hens as well as broilers should be carried out where applicable
				>250,000	3000	
				100,000 – 250,000	1500	
				50,000 – 100,000	900	
				<50,000	600	
	FVM	for human consumption following post-mortem inspection. quarterly recorded verification visits				
AGHEs	OV	In AGHEs without flexible attendance: the OV will carry out PMI verification similar to the procedure/frequency	online, before the chiller; immediately after	As per red meat establishments		1) Pathology Verify that the meat is free from all pathological conditions that would render it unfit for human consumption; 2) Statutory requirements Verify that post-mortem inspection has been carried out in accordance

Manual for Official Controls | Amendment 15

		described in the white and red meat sections.	inspection points		with the requirements set out in Annex 1 to this chapter;
	OV	AGHEs with flexible attendance: OV to carry out PMI verification at every visit. The OV monthly visits should be scheduled to ensure, in time, all OAs attending a particular plant are verified.	in chiller.	Between 5 and 10% of the throughput inspected by the OA/s in both small and large wild game. For small wild game, there is no requirement to PMI verify every single batch.	3) Contamination Verify that the meat is free from contamination; 4) Health Marking Verify that the meat is correctly and legibly health marked; 5) Other Record Any identified deficiency.
	FVM	where the PMI is carried out by a designated OV, performing solely OAs duties in the game plant, PMI verification will be ensured similarly to OV only plants			

* These small contamination instances should not be added as a failure of the inspection process. OV discretion and knowledge of the plant's HACCP system are required for adequate judgement of these instances. As contamination can be difficult to see on chilled carcasses due to vaporised moisture, it is recommended that the checks should be conducted online before chilling.

Note: Guidance on how to record the post-mortem verification data on OWS can be found on Sharepoint at the following link:

[OWS User Guides - All Documents](#)

2.4 Post-mortem inspection guidelines

2.4.1 Presentation of carcasses for PMI

The OV is to require carcasses of domestic solipeds, bovine animals over eight months old, and domestic swine more than five weeks old to be submitted for post-mortem inspection split lengthways into half carcasses down the spinal column.

Regulation: (EU) 2019/627 Article 15 (2)

Exceptions that OV may authorise before PMI if required:

- 1) Carcasses not split in half – Regulation (EU) 2019/627 Article 15 (3);
- 2) Cutting into quarter carcasses - Regulation (EU) 2019/627 Article 15 (4)

The OV may also require any head or any carcass to be split lengthways if the inspection so necessitates.

Caution: Splitting the head of cattle carries a health and safety risk, and if the animal is required to be sampled for BSE it may only take place after the sample has been taken.

2.4.2 Visual only inspection

Carcasses and offal of pigs of all ages and of domestic solipeds are to undergo visual inspection procedures. Further Inspection Procedures (FIPs) (palpation and/ or incision) can be carried out when one of the following indicates a risk to public health, animal health or animal welfare:

- checks on the FCI;
- checks on any other data from the holding of provenance;
- ante-mortem or post-mortem findings.

Note: Further inspection can also be carried out if gathering of evidence is required for enforcement purposes (for example, welfare investigation).

2.4.3 Examples of conditions found in pigs at ante-mortem that might justify further inspection procedures (FIPs) at post-mortem

For the majority of the conditions listed on the current ante mortem inspection sheet there would be no need for pigs to be marked to undergo FIP at post-mortem.

However, the following may justify FIP:

- mastitis (if associated with general signs);
- moribund / recumbent;
- orchitis (marked to consider brucellosis caused by *Brucella suis*, occupational zoonoses);
- suspect emaciation, poor condition;
- suspect fever;
- Slaughtered in lairage.

Note: the OV is not limited to these conditions and should use their professional judgement.

2.4.4 Examples of conditions found in pigs at post-mortem that might justify FIPs

For localised conditions on pig carcasses, FIPs are not normally justified unless a generalised and-or septic condition is also observed/ suspected.

The following localised conditions may justify detaining the carcass for FIP at post-mortem:

- multiple abscesses;
- TB-like lesions (in cases of enlarged lymph nodes).

When the OV/ OA suspects a generalised condition, in some cases the appropriate decision about the fitness of the meat for human consumption cannot be made without further examinations.

If any of the following conditions is observed/ suspected, this **may** justify detaining the carcass or offal for FIP at post-mortem inspection:

- anaemia (may be part of other generalised condition);
- inadequately bled (may mask some other post-mortem signs);
- contamination derived from gut content (may mask other conditions);

- emaciation / generalised oedema;
- erysipelas;
- generalised TB, tumours, melanosis;
- jaundice;
- machine damage (if may mask other conditions);
- poly-arthritis;
- septic peritonitis;
- septic pleurisy;
- suspect pyaemia / multiple abscesses-tail bite-other;
- suspect uraemia / abnormal odour;
- suspect fever / septicaemia;
- suspect residues.

Note: The OV/ OA are not limited to these conditions and should use their professional judgement.

2.4.5 Protocols and Procedures for VIP (Visual Inspection Procedure) and FIP in Pig Establishments

The OV should, in collaboration with the FSS Team and FBO, establish clear, documented plant specific procedures describing the **who, what and how etc.** with regards to:

- Live animal delivery and lairaging;
- Identification, marking and communication of abnormal animals and segregation if necessary;
- Marking and communication of carcasses that require FIP e.g. Pencils, tags, walkie-talkies, verbal etc.;
- FIP carried out (e.g. on moving line or detention line etc.);
- *Salmonella* testing;
- *Trichinella* testing;
- Any other relevant information considered important

The documented protocols and procedures should be retained in the Plant folder (Plant Administration) in SharePoint and be readily accessible.

The documented protocols and procedures shall be reviewed regularly and in any case, where the production operation, resource or line layout changes.

Note: See Annex 6 for a template Protocol.

2.5 Decisions concerning meat

2.5.1 Animal carcasses for which a 'suspect animal card' was completed

The OV must have a suitable system in place to inform the person(s) performing the post-mortem inspection of any condition that may help in the post-mortem judgement for that carcass. This includes any animals for which a 'Suspect Animal Card' has been completed and also pigs identified at ante mortem inspection as requiring FIPs other than visual inspection.

2.5.2 Possible outcomes

After the inspection, the OV/OA can:

- pass the meat as fit for human consumption,
- declare the meat unfit for human consumption,
- detain the meat for further examination following rectification.

2.5.3 Reasons for declaring meat unfit

Meat may be declared unfit for human consumption if the conditions described in Regulation (EU) 2019/627 Article 45 arise.

2.5.4 Reference link to pathological conditions

Access to the Cornell University photographic library of pathology can be obtained using the following link:

<http://w3.vet.cornell.edu/nst/nst.asp>

For poultry, consult the poultry condition cards found on FSS SharePoint at the following link:

[Condition Cards](#)

2.5.5 Meat declared unfit

Where the OV is not satisfied that the meat is fit for human consumption, the health mark/ identification mark must not be applied. The FBO should be asked to voluntarily surrender meat rejected as unfit for human consumption. Where surrender is not forthcoming, the OV should put in writing the reasons why they are formally declaring the meat unfit for human consumption.

Note: It is inappropriate to detain meat that has been declared unfit for human consumption with a formal food detention notice, as the product becomes an ABP and no provision exists to detain an ABP. Where the FBO continues to refuse to dispose of meat that has been declared unfit, follow the ABP

provisions relating to the treatment of meat declared unfit for human consumption. See chapter 2.8 on 'Animal By-Products'.

2.5.6 Further inspection required

If the OV/ OA consider that the carcass and offal require further inspection, the carcass and the associated offal must be detained and kept under control of the OV pending the inspection.

Note: For details on Food Detention powers please refer to chapter 7 on Enforcement

2.5.7 When partial rejection may be appropriate

Partial rejection of the meat or offal may be appropriate where only part of the carcass or a single organ is affected. Reject only the affected carcass part or offal and the tissue immediately surrounding it as an ABP.

2.5.8 Detention procedure

When detaining a carcass for further inspection it is important to maintain correlation of the detained carcass and all relevant parts until post-mortem inspection has been completed and any additional examinations have taken place.

The detention method and any other examinations that are carried out must be done in a manner that prevents the risk of cross-contamination with meat intended for human consumption, for example, prevention of contact between carcasses.

Detention protocols should be established between the OV and FBO in each plant and made available to the FSS team.

2.5.9 Rectification - FBO responsibility

It is the responsibility of the FBO to present carcasses and offal to the FSS for final inspection free from contamination by faeces, gut content, hair, wool, bile and any other pollutants in accordance with the FBO's procedures based on HACCP principles.

Any visible contamination must be removed without delay by trimming or alternative means having an equivalent effect.

Regulation: (EC) 853/2004 Annex III, Section I, Chapter IV Paragraph 10.

- **Guidance on the use of steam vacuum to remove contamination**

Microbiological tests show that the use of steam vacuum for removal of visible contamination results in lower aerobic bacterial counts and lower numbers of

positive *E. coli* than those achieved by use of knife cutting. The use of vacuum steam appears to be at the very least as effective as traditional trimming. Therefore, provided the conditions described below are followed, it will be an accepted method as an alternative to traditional trimming.

It can therefore be used, in red meat slaughterhouses in Scotland, as a tool to remove minor visible contamination, dirt and hair from relatively smooth carcass surfaces provided that it is used sensibly and:

- Is only used to rectify **accidental** contamination of carcasses and not as a substitute for good hygiene or inadequate dressing practices;
- The food business operator (FBO) maintains the responsibility for rectifying carcasses prior to post-mortem inspection (PMI) - i.e. the FBO should either rectify contaminated carcasses while on the dressing line or divert them onto a rectification rail;
- The steam used for direct contact with meat must be generated from potable water and the potable water outlet used to feed the steam supply must be included in the sampling programme;
- The steam vacuum device in contact with the carcass is sterilized after every use, and;
- Is assessed on a plant-by-plant basis and fully incorporated in the food safety management system.

The vacuuming process will not remove colour tracks (e.g. bile or in depth contamination) which will need to be rectified by traditional knife trimming techniques.

The use of steam vacuum after PMI for cosmetic reasons is not subject to the above requirements. Once the carcasses have passed official inspection, it is the FBO's responsibility to make sure that no further contamination occurs.

2.5.10 FSS Operations group responsibilities

FSS Operations Group staff should have regard to the following:

- FSS no trim policy which includes:
 - No rectification work on any aspect of contamination - FSS staff should only record and detain, it is the responsibility of the FBO to rectify and re-present for inspection;
 - No rectification work for quality reasons, as this is also the responsibility of the FBO;
- carcasses showing signs of pathology or contamination must not be health marked and should be detained for rectification by the FBO;
- where contamination on a series of carcasses is persistent and represents a failure in the FBOs hygienic procedures, the OV should immediately be

informed, to establish the cause and rectify the problem. This may involve the OV stopping the line to resolve the issue;

Note: All line stoppages should be recorded in the day book and in the OWS Enforcement module.

- the OV and OA should continuously monitor the activities of FBOs staff involved in the carcasses rectification;
- the OV must discuss the dressing procedures and HACCP based plan with the FBO where persistent deficiencies are identified.

Note: Deficiencies in carcass dressing should be recorded by the OV using the AUD 9/1 form in red meat and the AUD 9/2 form in poultry that can be found in Chapter 9.

2.5.11 Use of scabbards by FSS staff

Scabbards should only be used to transport knives to and from the post-mortem inspection stations. Once at the post-mortem inspection station, the preferred option for FSS staff would be to use the nearest sterilizer to store knives when not in use.

2.6 Recording of visible contamination presented for inspection on cattle, sheep and pig carcasses

2.6.1 Legislation

Regulation (EC) 852/2004, Chapter 1, Article 2, 1(f) defines contamination as *'the presence or introduction of a hazard'*.

Regulation (EC) 178/2002, Chapter 1, Article 3, 14 defines a hazard as *'a biological, chemical or physical agent in, or condition of, food or feed with the potential to cause an adverse health effect'*.

2.6.2 Background

It is the responsibility of the FBO to present carcasses and offal for inspection free from visible contamination. It is very important that all carcasses and offal presented for post-mortem inspection showing signs of contamination are recorded as such. Recording of visible contamination such as faeces, gut contents, bile or hair can provide the OV with objective information in the form of numbers, percentages, categorisation of incidents and graphs to reveal trends in the effectiveness of the FBO's HACCP based procedures.

Note: Immediate action will be required in any situation indicating that FBO control over contamination has been lost.

2.6.3 Faecal contamination

It is recognised that despite good slaughter practices, contamination of carcasses can nevertheless occur. However, there is a regulatory zero tolerance position on faecal contamination. FSS must therefore maintain a valid control strategy to regulate the FBO's non-compliance in an effective and proportionate fashion. To assist in this process, FSS staff in all red meat slaughterhouses must carry out the procedures detailed below for carcass monitoring.

2.6.4 Online inspection recording

During on-line inspection duties, FSS staff will record the number of carcasses* presented showing visible contamination by faeces/ gut content, bile, hair, wool, or other contaminants such as grease.

*The definition of a carcass for the purposes of this process is 2 beef sides, 2 sheep sides or 2 pig sides.

2.6.5 Actions regarding offal

Offal is not included in the grading process and should be recorded as per the existing recording system. All contamination data is to be recorded daily via the FSS-IT system contamination module.

2.6.6 Contamination already identified by FBO

Contamination issues already identified by the FBO, such as clearly marked carcasses for further rectification, are **not** to be added to the FSS contamination data recording sheet (or equivalent) as this is to be considered as a corrective action within the FBO HACCP system.

However, excessive numbers of carcasses being removed from the processing line is a significant issue and appropriate OV action should be taken regardless of whether the FBO has identified these, as it indicates loss of control of previous process steps. Detention logs and rejected meat records will provide appropriate evidence to utilise.

Reference: See Annex 3 for a template of the contamination data recording sheet.

2.6.7 Categorisation of contamination

In order to achieve consistency, the following categories of contamination are to be used when recording carcass incidents:

- a defect of up to 0.5 cm in any direction is assessed as an instance of minor contamination indicating FBO controls are broadly within control; such defects must be recorded as **'Broadly within Control'**;

Manual for Official Controls | Amendment 15

- a defect exceeding 0.5 cm in any direction should have been clearly visible and managed by the FBO prior to presentation and indicates that FBO controls are inadequate; such defects must be recorded as '**Controls Inadequate**';
- more than one defect incident per carcase is to be counted as one incident, but must be categorised as '**Controls Inadequate**' if the accumulated defects fall within the higher category. In the event that more than one contaminant is found, priority must be given to recording of faecal, hair or wool contaminants before bile and other.

Contamination type	Categorisation	Species		
		Cattle	Sheep	Pigs
Hair	Broadly within control	1-10 hairs	1-10 hairs	1-5 clusters*
	Controls inadequate	>10 hairs	>10 hairs	>5 clusters
Wool	Broadly within control		1-3 clusters	
	Controls inadequate		>3 clusters	
Faeces, gut contents, bile, hide or skin, other	Broadly within control	<0.5cm		
	Controls inadequate	>0.5cm		

*Pig hair clusters should be measured at the root positioning to establish diameter of defect

2.6.8 Defect recording

A carcase contamination data recording sheet or an equivalent system shall be utilised by FSS staff on the production line for all red meat species processed. This will provide the contamination information required to aid completion of the Contamination module on OWS system. A suitable alternative to the manual recording sheet provided in Annex 3 may be utilised at plant level, only if this emulates the information requested on the recording sheet.

Tally counters may be considered to assist in gathering information at the carcase inspection points.

Using the data collected on the line, the number of contamination incidents should be entered on a daily basis on OWS.

Note: Guidance on the recording of contamination data is available at the following link:

[OWS User Guides - All Documents](#)

2.6.9 PMI verification results

Findings from the PMI verification of carcasses **should not** be added to the data recording sheet.

See topic 2.3 on 'Post-mortem inspection Verification' in this chapter.

2.6.10 Results shown by contamination records

Data entered into the OWS contamination module will generate graphs showing whether the FBO controls are inadequate or broadly within control. These results will determine what follow up action is required - see following sub topics.

Contamination graphics will be generated based on daily data entered via the contamination module. It is not a requirement to generate and print out graphics daily. Graphics should be used to verify overall FBO compliance/ trend analysis and be discussed with the FBO whenever necessary.

2.6.11 Contamination Graphics

The graphs generated on the contamination records will automatically calculate a daily percentage for controls. This information will give an indication of confidence in management and level of current compliance within a production method.

The data collection at plant level will **assist the OV in defining reasonable expectations of operating standards**. Contamination levels (highest and lowest) are to be entered on the FBO-FSS monthly meeting form.

Note: FBO Meeting Minutes template can be found in Chapter 9.

Plant trend analysis and professional judgement from the OV is required for appropriate action. The FVM will assist OV decisions by providing the SDP with guidance on levels of contamination. This will assist in compliance decisions and achieve consistency of approach.

The OV should review the graphs on a daily and weekly basis and take the appropriate action, as detailed in the following sub-topics.

2.6.12 Broadly within control

Where FSS monitoring through use of the contamination record system shows that FBO actions fall within the 'Broadly within Control' category, the OV should discuss the findings with the FBO during routine meetings and relate the FSS's findings to the FBO's own records made under their HACCP based procedures.

Cross-referencing to the results of FBO carcass microbiological monitoring may be useful in achieving on-going improvements in production.

Where results show FBO actions are 'Broadly within Control' but the trend indicates an increasing frequency of incidents, the OV should discuss with the FBO remedial actions that will bring the trend back within acceptable limits.

Note: Even where results show that contamination levels are 'Broadly within Control', the aim must always be to further reduce levels - the ultimate goal being zero contamination.

2.6.13 Controls inadequate

Results showing frequent incidents of contamination within the 'Controls Inadequate' category indicate an unacceptable breakdown in the FBO's food safety management systems. The OV must agree corrective action with the FBO to significantly reduce instances of contamination – whilst simultaneously proceeding through the enforcement hierarchy as outlined in chapter 7 on 'Enforcement'.

2.6.14 Controls inadequate: Authorised Officer actions

Where an establishment's contamination levels fall within the 'Controls Inadequate' category, the OV and FVM will agree an action plan with the FBO while the team and operational colleagues work towards gathering sufficient evidence to support escalation of action, following the hierarchy of enforcement.

The data and graphs should be discussed with the FBO during routine meetings, or at a specific meeting where serious deficiencies indicating inadequate FBO controls are highlighted and urgent action is required.

The data should be related to the effectiveness of the FBO's HACCP based systems, and during the meeting, changing trends in hygiene levels during production over a period of time should be examined.

2.6.15 FBO to monitor own standards

The emphasis of this recording system is to ensure the responsibility for HACCP controls stays firmly with the FBO to continually monitor their own standards and not rely on the regulatory body to do this for them.

Carcasses contamination that is being rectified by the FBO prior to FSS inspection is not always being recorded in their monitoring systems in line with their HACCP based plan.

Under the Hygiene Regulations, FBOs have a duty to identify and monitor hazards for their prevention, elimination or reduction to acceptable levels.

Regulation: (EC) 852/2004 Chapter 2 Article 5.

2.6.16 Short term use of additional local systems

This system of carcase recording will not identify specific areas of the carcase which would direct the FBO to problem line positions. The establishing of local systems to provide further detailed information to the FBO may therefore be appropriate.

Any such local system must be established in conjunction with the FVM, as a **short term** solution to resolve specific issues, such as production process steps out of control, but should not be utilised for longer than necessary.

3. FBO responsibility

3.1 Presentation for post-mortem inspection

3.2 Washing of carcasses after PMI

3.1 Presentation for post-mortem inspection

3.1.1 Responsibility

It is the responsibility of the FBO to produce safe meat. FSS Operations inspectors confirm FBO actions and identify any specific risks.

3.1.2 Timelines

Stunning, bleeding, skinning, evisceration and further dressing are carried out without undue delay and in a manner that avoids contaminating the meat.

3.1.3 FSS facilities

The FBO follows the instructions of the OV to ensure that post-mortem inspection of all slaughtered animals is carried out under suitable conditions.

Regulation: (EC) 853/2004, Annex III, Section I, Chapter IV, 12

(EC) 853/2004, Annex III, Section II, Chapter IV, 6

3.1.4 FBO facilities

Until post-mortem inspection is completed all parts of a slaughtered animal:

- must remain identifiable as belonging to a given carcase;
- must not come into contact with any other carcase, offal or viscera;
- must not be washed.

The FBO must ensure that:

- slaughtered animals are dressed and treated in such a manner as not to prevent or hinder inspection;
- no carcasses are cut up;
- no action is taken to destroy or alter evidence of disease;
- no part, except the hide or skin, is removed from the establishment until post-mortem inspection is completed and any required samples are taken.

Exceptions:

- **for all species:** the penis, if not intended for human consumption;
- **for sheep and goats:** the head, if no part of it is intended for human consumption.

Regulation: CIR (EU) 2019/627 Articles 19, 21 and 23.

- Any visible contamination must be removed without delay.

Regulation: (EC) 853/2004 Annex III, Section I, Chapter IV.

3.1.5 Skinning

All carcasses and other parts of the body intended for human consumption must undergo complete skinning, except for:

- porcine animals;
- feet of sheep, goats and bovines;
- heads of ovine and caprine animals and calves not intended for human consumption;
- the muzzle and lips of bovine animals.

Un-skinned parts must be handled so as to avoid contamination of other meat.

Note: When destined for further handling, and before leaving the slaughtering establishment, heads and feet of all species mentioned above must be skinned or scalded and depilated. However when authorised by the competent authority, visibly clean feet may be transported to and skinned or scalded and depilated in an approved establishment further handling the feet for processing into food.

Regulation: (EC) 853/2004 Annex III, Section I, Chapter IV, points 8 and 18.

3.1.6 Spleens

Spleens must be removed completely and, wherever possible, whole. The operator must present spleens correlated to carcasses for inspection.

3.1.7 Delayed uteri removal

For the grading and classification of female bovines as heifers or cows the uteri may be left attached to the carcass until the grading is completed.

Meat and Livestock Commercial Services Ltd (MLCSL) officers are being advised to speak to the FBO where they have a need for the uteri to be retained for grading purposes. The OV must be satisfied that a suitable system can be adopted before the procedure can start.

FBO responsibility - In order to facilitate the process the FBO must have a suitable system in place. The procedure must:

- be agreed between the FBO and the OV;
- ensure that post-mortem inspection is completed and that no carcass is released for human consumption until the uterus has been completely removed and the carcass found fit for human consumption;
- in addition, the uteri should be hygienically removed as soon as is practical following classification / grading.

The OV must be satisfied that:

- suitable procedures can be adopted to ensure that hygienic production is maintained, for example, correlation is maintained between the uteri and carcasses without a risk of cross contamination;
- health marks are not applied until the carcasses have had the uteri removed and have passed post-mortem inspection.

3.1.8 Storage facilities

There must be lockable facilities for the refrigerated storage of detained meat and separate lockable facilities for the storage of meat declared unfit for human consumption.

3.1.9 After post-mortem inspection

Regulation (EC) 853/2004, Annex III, Section I, Chapter IV, 16 states:

- the tonsils of bovine animals, porcine animals and solipeds must be removed hygienically;
- meat declared unfit for human consumption must be removed as soon as possible from the clean sector of the establishment;
- meat detained or declared unfit for human consumption and inedible by-products must not come into contact with meat and offal declared fit for human consumption.

3.2 Washing of carcasses after PMI

3.2.1 Background

FBOs wishing to use potable water to wash carcasses after the final inspection and health marking position should have robust HACCP controls and protocols in place in the Food Safety Management System (FSMS), to reduce the requirement to do so. The FBO should also seek to mitigate the risks and disadvantages associated with this, and both validate and carry out regular verification such as swabbing for microbiological culture.

If an FBO takes the decision to implement this practice, a protocol will be required to be put in place with associated training and review of current dressing practices. The validation should also demonstrate equivalence of this method with trimming.

Regulation: (EC) 853/2004 Chapter II, Article 3, Paragraph 2

3.2.2 Procedure

Washing of carcasses after the official inspection point is not expressly prohibited by the Hygiene regulations, however contamination should be removed by trimming or alternative means having an equivalent effect. This may include washing, however the rationale for using this process should be clearly articulated in the FSMS, and the procedure would require ongoing microbiological verification as part of the assurance process.

3.2.3 Disadvantages and risks associated with washing of carcasses

- Spreading of contamination.
- Increasing surface water activity and therefore risk of microbiological growth.
- Non-uniform reduction in contamination dependent on carcass region, temperature of the water, pressure, spraying pattern/nozzle, duration of application, quantity of water applied
- Cross-contamination.
- Attached bacteria not removed from the surface of the carcase.
- Carcase discolouration (reversible or irreversible).

3.2.4 **Considerations**

If the FBO indicates an intention to wash carcasses the following should be taken into account in the protocol, (the list below is not exclusive):

- The FBO should ensure carcass dressing practices continue to minimise contamination and cross contamination.
- The FBO should carry out a robust review of the hazard analysis and CCP determination before including in the FSMS.
- Only carcasses which do not have any visible contamination should be washed. If any such contamination is detected at the washing point, these carcasses must be presented to the FSS staff for recording of contamination, rectification by the FBO and the OV informed. The FBO should also carry out a review of pre-inspection controls.
- Carcasses already detained for removal of contamination or pathology will not be permitted to be washed without supervision of FSS staff.
- A separated dedicated area for washing carcasses will be required to avoid cross contamination.
- The exact area/areas of the carcass that will be washed should be clearly defined.
- The intended parameters for washing carcasses (temperature, pressure, nozzle type, quantity of water used, exposure time, angle), should be clear and monitored.
- Validation of the method must take into account the defined parameters which will be used and the FBO must demonstrate equivalence to trimming.
- The microbiological sampling schedule (carcasses and water) must include clear definition of carcass areas that will be sampled.
- Validation of the shelf life of the final product if using this method is required.
- Ongoing microbiological verification plan, including trend analysis and action on unacceptable results is required.

3.2.5 **FSS responsibilities**

If the FBO indicates their intention is to wash carcasses after post mortem inspection, the OV is to discuss this matter with the FBO and ensure all the above points have been considered before implementation.

Manual for Official Controls | Amendment 15

OV is required to verify that the FBO's procedure in relation to the washing of carcasses after the official inspection point is clearly articulated in the FBO's FSMS, including the ongoing microbiological verification.

4. Guidance on conditions at Red meat Post-Mortem Inspection

- 4.1 Judgements at red meat post-mortem inspection
- 4.2 Transmissible Spongiform Encephalopathies (TSEs)
- 4.3 Glanders
- 4.4 Brucellosis
- 4.5 *Cysticercus bovis*
- 4.6 *Cysticercus ovis*
- 4.7 Tuberculosis
- 4.8 Arthritis
- 4.9 Tumours in bovines

4.1 Judgements at red meat post-mortem inspection

4.1.1 Introduction

It is the duty of the OV, or the OA acting under their authority, during post-mortem inspection to make a judgement based on the specific case presented and the requirements of Regulation (EU) 2019/627 Articles 29-36.

4.1.2 Legislation

Regulation (EU) 2019/627 lays down eight specific hazards:

- TSE (art. 29);
- Cysticercosis in domestic bovine animals and *Suidae* (art. 30);
- *Trichinella* (art. 31);
- Glanders in solipeds (art. 32);
- Tuberculosis (art. 33);

- Brucellosis (art. 34);
- *Salmonella* (art. 35);
- *Campylobacter* (art. 36)

4.1.3 Guidance

There follows guidance on the following specific topics:

- TSEs
- Brucellosis
- *Cysticercus bovis*
- *Cysticercus ovis*
- Arthritis
- Tumours in bovines
- Aujeszky's Disease
- *Trichinella* (see section 5 of this chapter).

4.2 Guidance on Transmissible Spongiform Encephalopathies (TSEs)

Official controls carried out in relation to TSEs are to take account of the requirements of Regulation (EC) No 999/2001, Regulation (EC) No 1069/2009 and other relevant community legislation.

Reference: See chapter 2.6 on 'TSE testing' for additional information.

4.3 Guidance on Glanders

Practical arrangements for OCs for glanders can be found in Regulation (EU) 2019/627 Article 32.

4.4 Guidance on Brucellosis

Practical arrangements for OCs for brucellosis can be found in Regulation (EU) 2019/627 Article 34.

Note: All FSS staff should be aware that, when dealing with brucellosis suspects, they must always wear eye protection, disposable masks and gloves.

Further information on the slaughter and sampling of bovine brucellosis cases can be found in Chapter 6

4.5 Guidance on *Cysticercus bovis*

Practical arrangements for OCs for cysticercosis in domestic bovine animals and *Suidae* (domestic swine, farmed and wild game) can be found in Regulation (EU) 2019/627 Article 30.

Cysticercus bovis (*C. bovis*, the intermediate larval stage of the human tapeworm, *Taenia saginata*) can cause cystic lesions in skeletal and cardiac muscles of bovine animals and swine.

Use the table below as a guide to judgement when cases of *C. bovis* are detected.

Post-mortem findings			Judgement
Number	Location	Status	
One cyst	Localised*	Viable	Reject the affected organ or carcass part
		Non-viable (caseous/ calcified)	Require cold storage for remainder
More than one cyst	Localised*	Viable	Reject the affected organ or carcass part
		Non-viable (caseous/ calcified)	Require cold storage for remainder
	Generalised**	Viable	Reject the carcass and offal
		Non-viable (caseous/ calcified)	Reject the affected organ(s) or carcass(s) part Require cold storage for remainder

* only one area or part affected (such as heart **or** diaphragm)

** more than one area or part affected (such as heart **and** diaphragm)

Manual for Official Controls | Amendment 15

After rejection of the relevant carcase part or offal, the remainder of the carcase and offal must undergo a 'cold treatment' as follows:

Temperature	Minimum time (weeks)
not exceeding -7°C	not less than 3 weeks
not exceeding -10°C	not less than 2 weeks

It is acceptable for the carcase to be boned-out prior to the commencement of the cold treatment, provided boning takes place under supervision of the AO and that the identity of the meat can be maintained throughout boning, packaging and storage.

If cold storage facilities are not available at the slaughterhouse, the meat can be transported to a suitably equipped approved establishment for cold treatment. This arrangement should be done by the FBO with agreement from the OV.

Where the meat is to be consigned to another approved establishment with cold storage facilities:

- the packaged meat should be labelled with *C. bovis* detention labels, or if part carcasses use talisman seals
- part 1 of the transfer permit must be completed at the slaughterhouse, the original to go with the consignment and a copy to be retained at the slaughterhouse
- part 2 of the transfer permit should be completed at the receiving establishment by the FBO

Reference: See chapter 9 on 'Forms', for sample copies of the PMI 4/15 *C. bovis* detention label and the Transfer Permit PMI 4/16.

An AO should visit the destination cold store to check and release the meat. A charge will normally be made for this.

If the AO is satisfied the treatment of the meat has been done satisfactorily and has no cause for concern then the meat can be ID marked at the cold store and released.

The AO should complete part 3 of the transfer permit and send it back to the FSS office at the originating slaughterhouse.

Once the transfer permit is returned to the originating slaughterhouse it should be kept on file for a minimum of 12 months.

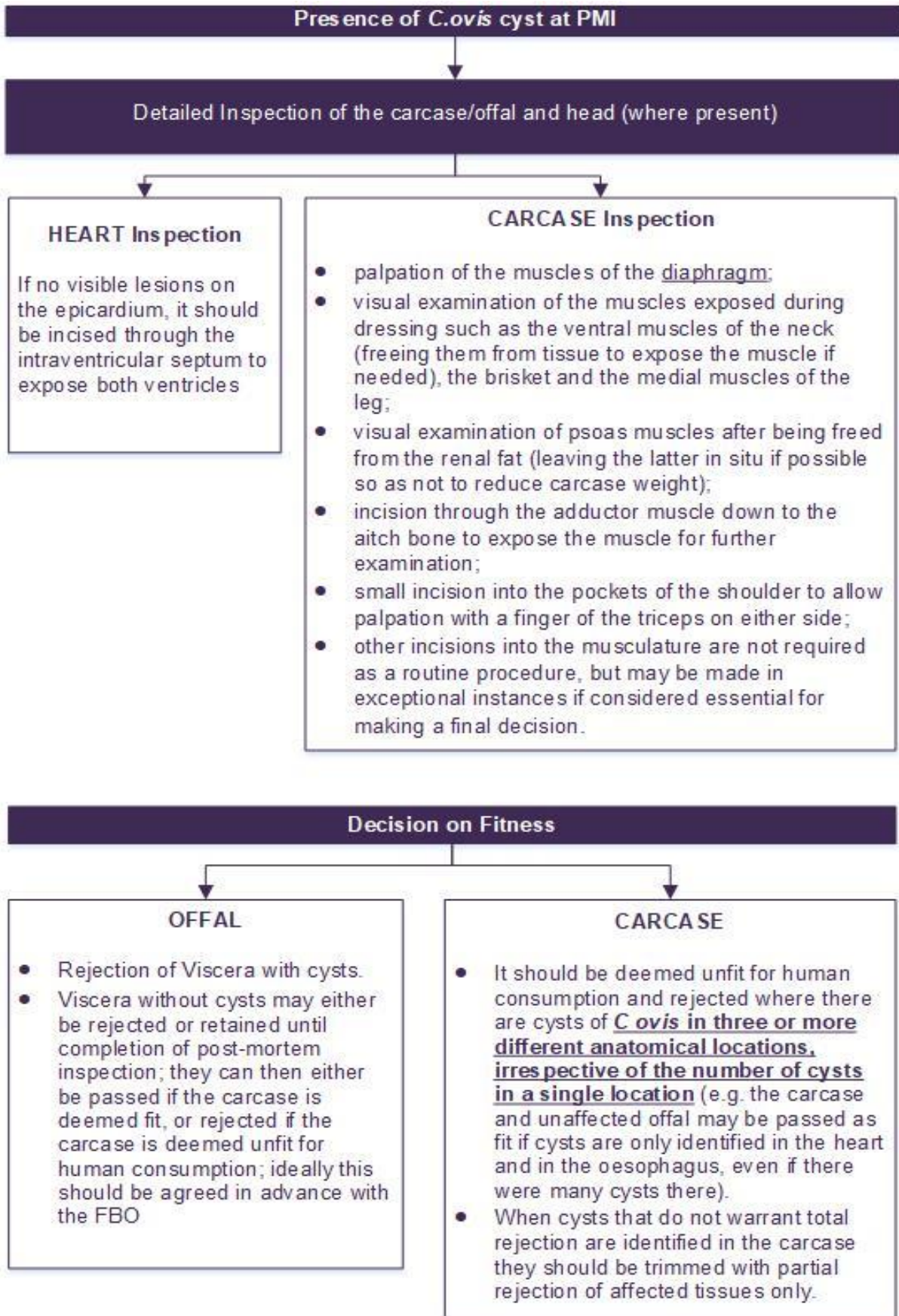
Note: The AO can be an OV, OA or LA Inspector.

4.6 Guidance on *Cysticercus ovis*

Cysticercus ovis (*C. ovis*, the intermediate larval stage of the canid tapeworm, *Taenia ovis*) can cause cystic lesions in skeletal and cardiac muscles in sheep.

In the EU regulations there are no specific provisions for this parasite (unlike requirements for *C. bovis* which is zoonotic) even though there is a general requirement for meat which exhibits parasitic infestation to be declared unfit (**Regulation** (EU) 2019/627 Article 45 (h)). Since cysticercosis caused by *C. ovis* is not a zoonosis, countries can adopt their own policies in dealing with this.

FSS has adopted an inspection procedure and decision process as follows:



Reference: Further guidance with photographs can be found on TEC Files issue 86 at the following link:

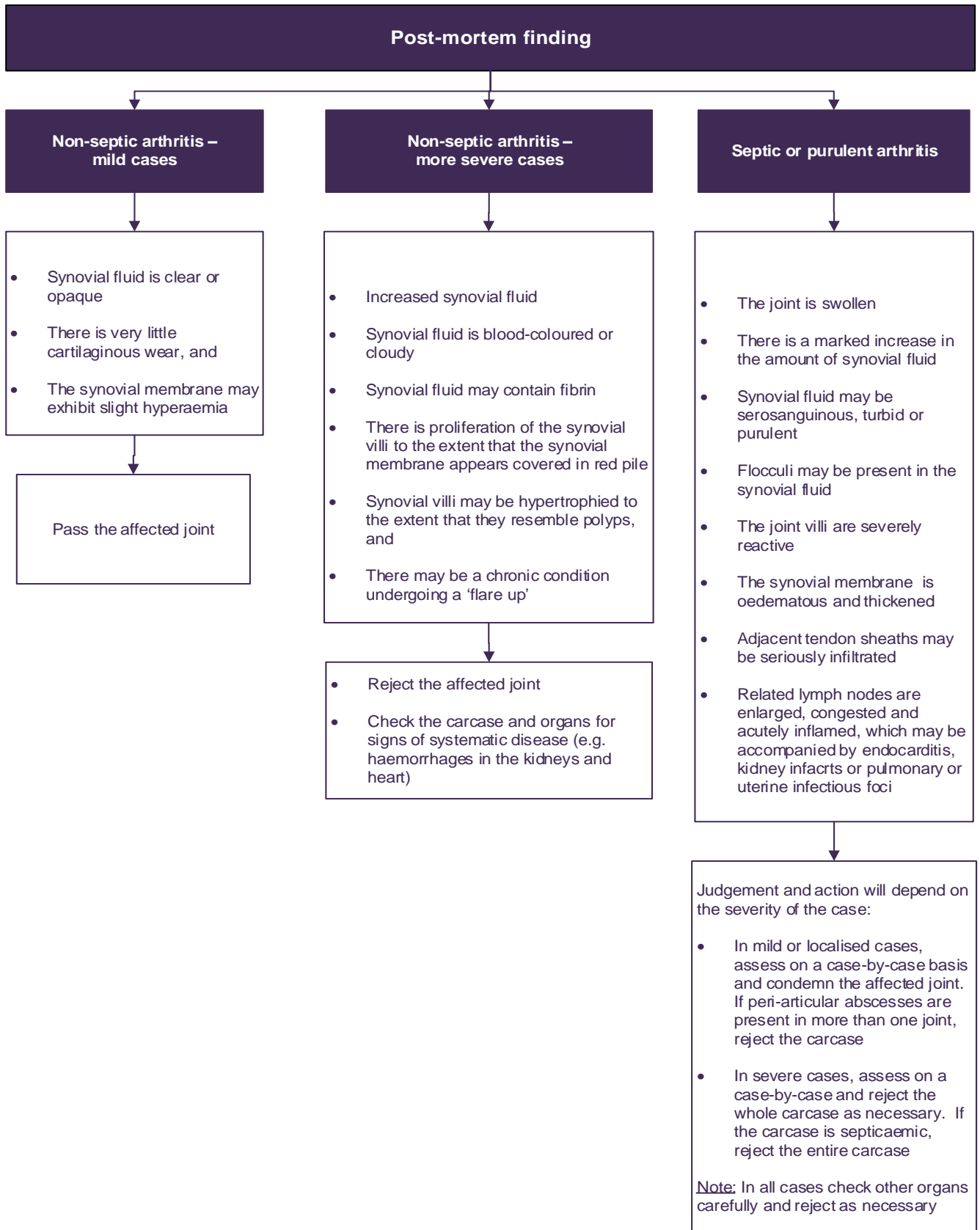
[TEC Files 86](#)

4.7 **Guidance on Tuberculosis**

Full instructions on Tuberculosis are contained within chapter 6 on 'Notifiable diseases', section 7.

4.8 Guidance on arthritis

Arthritis is an inflammatory condition of the joint, synovial membrane and articular surfaces. It is a routine and common cause of partial and total rejection of carcasses. The flowchart below lists the post-mortem findings and guidance on the judgement of arthritic conditions:



4.9 Guidance on tumours in bovine animals

Where tumours are encountered in the carcasses or offal of bovine animals, Enzootic Bovine Leukosis (EBL) must be taken into consideration.

The OV must inform APHA.

Samples from the carcass may be required.

Before contacting APHA, the OV should gather all possible information about the animal, including date of birth and number of permanent incisors erupted.

Reference: See chapter 6 'Notifiable Diseases,' Section 5 on EBL for additional information.

5. Trichinella

1. Introduction
2. Cold treatment methods
3. Collecting samples
4. Packaging and despatch of samples
5. Courier collection services and procedures
6. Consumables
7. Use of on-site labs
8. Test results

5.1 Introduction

5.1.1 Background

Trichinellosis is a zoonotic disease caused by the consumption of raw or undercooked meat from domestic or game animals containing the larvae of nematodes of the genus *Trichinella*.

Meat from animals infected with Trichinae is declared unfit for human consumption.

5.1.2 Legislation

Regulation (EU) No 2019/627 Article 31, requires the carcasses of *Suidae* (domestic, farmed game and wild game), solipeds and other susceptible species to be examined for *Trichinella* in accordance with the following:

Regulation: Commission Implementing Regulation (EU) No 2015/1375 laying down specific rules on official controls for *Trichinella* in meat, and sets out requirements for *Trichinella* testing, derogations and conditions for controlled housing.

5.1.3 FSS role

Trichinella testing is an official control. The OV is to ensure that sampling takes place and samples are appropriately identified, handled and sent for testing to an accredited laboratory.

Regulation: (EU) 2019/627 Article 37 (2).

Sampling and preparation of samples can be carried out by the OV or an OA.

Moreover, slaughterhouse staff that have received training can, under the supervision of the OV, carry out sampling and testing tasks.

Regulation: (EU) 2019/624 Article 14.

5.1.4 Sampling of carcasses (including exemptions)

Under Regulation (EU) 2015/1375, samples must be collected from carcasses of the following animals:

- breeding domestic swine (sows and boars);
- wild boar (any age, whether wild or farmed);
- solipeds (any age);
- all pigs that have not been reared in controlled housing conditions (this information will be captured on the FCI accompanying the pigs to the slaughterhouse).

Meat from domestic swine that has been subject to a freezing treatment under official control is exempt from testing. See Section 5.2 for guidance.

5.1.5 Retention of parts for human consumption

Carcasses, and parts from carcasses sampled for *Trichinella* testing must not leave the establishment before the examination has been found negative.

Similarly, other parts of the animal intended for human consumption containing striated muscle must be retained until a negative result is received.

Parts of the animal not containing striated muscle are not subject to any restrictions and can leave the slaughterhouse. In that case, care must be taken to prevent pieces of striated muscle, such as diaphragm or sphincters being left attached.

5.1.6 Controlled housing conditions

‘Controlled housing conditions’ are defined in Regulation (EU) 2015/1375, Annex IV, Chapter I and include a range of measures that reduce the risk of the pigs being infected with *Trichinella*. Importantly, the definition does not exclude pigs that have outdoor access, provided that the outdoor access does not present a risk of introducing *Trichinella* into the holding.

Republic of Ireland (RoI) has, to date, not put in place a mechanism whereby housing can be deemed to meet the conditions specified in Article 3 of Commission Implementing Regulation (EU) No 2015/1375. Therefore, all pigs born and reared in RoI, which are slaughtered in slaughterhouses in Scotland, shall be tested for *Trichinella*, regardless of the housing system recorded on the FCI.

5.1.7 Retention of animal by-products

Animal by-products containing striated muscle and intended for animal consumption (Category 3 by-products) must not leave the establishment before the examination has been found negative.

There is no need to retain:

- animal by-products that do not contain striated muscle;
- animal by products that contain striated muscle but that are not intended for animal consumption (Category 2 by-products).

5.1.8 Health marking carcasses

Where a procedure is in place in the slaughterhouse to ensure that no part of carcasses examined leaves the establishment until the result of the *Trichinella* examination is found to be negative and the procedure is formally approved by the OV, the health mark may be applied before the results of the *Trichinella* examination are available. This also applies to the use of cold treatments, where the health mark may be applied prior to freezing where approved procedures are in place.

The FBO must have in place a written procedure agreed with the OV.

Where such system is not in place, the health mark must not be applied until a negative test result has been received.

5.1.9 Cutting of carcasses

Pending the results of the *Trichinella* examination, such carcasses may be cut up into a maximum of six parts in a slaughterhouse or in a co-located cutting plant.

If the test result is positive and correlation between carcass parts lost, the whole batch of cuts must be disposed of as an ABP.

5.2 Cold treatment methods

5.2.1 Cold treatment for pig meat

Cold treatment may be used as an alternative to *Trichinella* testing for domestic pig meat. The storage temperatures specified for cold treatment are significantly lower than those for the normal storage of frozen meat.

The following conditions must be followed when the cold treatment method is used:

- meat brought in already frozen must be kept in this condition;
- the technical equipment and energy supply of the refrigerating room must be such as to ensure that the required temperature is reached very rapidly and maintained in all parts of the room and of the meat;
- insulated packaging should be removed before freezing, except for meat which has already reached throughout the required temperature when it is brought into the refrigeration room;
- consignments in the refrigeration room must be kept separately and under lock;
- the date and time when each consignment is brought into the refrigeration room must be recorded.

5.2.2 Time and temperature for cold treatment

The time/ temperature combination for cold treatment is dependent upon the thickness of the pieces of meat. These combinations are summarized in the table below:

Method	Maximum thickness of the pieces of meat	Maximum temperature of the storage room	Minimum consecutive time for cold treatment
1	Up to 25 cm (10 ")	- 25°C	10 days

Manual for Official Controls | Amendment 15

	25 - 50 cm (10" - 20")	-25°C	20 days
2	Up to 15 cm (6 ")	-15°C	20 days
		-23°C	10 days
		-29°C	6 days
	15 - 50 cm (6" - 20")	-15°C	30 days
		-25°C	20 days
		-29°C	12 days

5.2.3 Specified times when core temperature is monitored

The following time/ temperature combinations are permissible providing the core temperature of the meat is monitored:

Maximum core temperature of the meat	Minimum consecutive time period for the cold treatment
-18°C	106 hours
-21°C	82 hours
-23½°C	63 hours
-26°C	48 hours
-29°C	35 hours
-32°C	22 hours
-35°C	8 hours
-37°C	½ hour

5.2.4 Cold treatment in other species

Cold treatment is not an alternative for the testing of wild boar or solipeds.

5.3 Collecting samples

5.3.1 Sampling responsibility

The OV must ensure that sampling takes place and samples are correctly identified and handled, and sent for testing to:

Biobest Laboratories Ltd
6 Charles Darwin House
The Edinburgh Technopole
Milton Bridge
Nr. Penicuik
Midlothian
EH26 0PY

Telephone: 0131 440 2628

Fax: 0131 440 9587

Email: enquiry@biobest.co.uk

Website: www.biobest.co.uk

Collection and handling of samples and testing tasks may be carried out by an OA or delegated to plant staff if they have received specific training and the OV is satisfied that the sampling procedure is carried out correctly. For self-testing abattoirs see topic 5.7 on 'Use of on-site labs'.

The sample must be collected using a clean knife and disposable forceps.

5.3.2 Sample description

A sample of the size specified below must be collected from the described sampling site.

Note: Take samples as a single piece of meat.

If this preferred sample site is not available then the alternative sample must be collected.

The weight of meat specimens refers to a meat sample free of all fat and fascia. Particular attention should be made collecting muscle samples from the tongue to avoid sample contamination with the superficial layer of the tongue, which is indigestible and can prevent reading of the sediment.

Animal Categories	Sample size	Sampling site	Alternative sample
Boars and Sows (Domestic breeding swine)	2-4 g	Pillar of the diaphragm at the transition to the sinewy part	4g, to be taken from the rib part or the breastbone part of the diaphragm, from the jaw muscle, tongue or the abdominal muscles
Non-Controlled housed domestic pigs			
Solipeds	10-11.5 g	Lingual or jaw muscle	Larger size specimen from the diaphragm pillar at the transition to the sinewy part
Wild Boar/Wild boar cross (whether wild or farmed)	10-11.5 g	Foreleg, tongue or diaphragm	None

5.3.3 Sample size guide

Use the scales provided to ensure the correct weight.

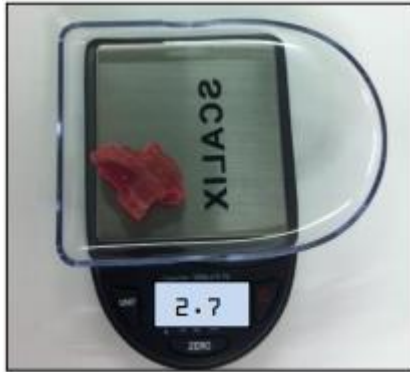
Each specimen must consist of a single piece of meat free of fat or fascia and be of the correct weight.

Picture of the sample to be taken showing the weight on the scales (as shown below).

Large samples reduce the pooling ability in the lab and result in increased cost to the FSS.

Underweight samples will be rejected by the lab and not tested.

Note: New plants must request scales from FSS Operations (access contact details in chapter 1 'Introduction').



| 2-4g boars and sows



10-11.5g wild boars and solipeds

5.3.4 Sampling point

Samples may be collected at any point during dressing or chilling providing the identity of the carcass can be ascertained.

5.3.5 Pooling of samples

Up to 100g of samples from different animals can be pooled as a single batch for testing. The number of samples in a batch will depend on the animal category, as the sample size is different, for example, 50 sows and boars, 10 solipeds.

You can pool samples from different producers.

Reference: See sub-topic 5.3.2 on 'Sample description' for additional information.

However, samples from different animal categories, such as domestic pigs and wild boars, must not be pooled in the same batch as digestion times may be different.

5.3.6 Sampling procedure

The following procedure must be followed when collecting samples for testing:

Step	Action
1	Open the small sealable Liquitite Pathoseal bag
2	Collect the samples of meat as appropriate for the species and category of animal sampled.
3	Pool the samples up to 100g in the small Liquitite Pathoseal bag

4	Close the small Liquitite Pathoseal bag. Stick barcode label to the bag and insert into the larger Pathoseal bag with the absorbent pad
5	Place two squares of Techni-Ice into the large Pathoseal bag
6	Stick the corresponding barcode to the PMI 4/18 form
7	Complete the PMI 4/17 form

5.3.7 Completion of PMI 4/17 form

Carcases must be identifiable to their farm of origin until a test result has been received so a farm investigation can be carried out if the result is positive.

PMI 4/17 (*Trichinella* Sampling form) must be completed when the samples are collected. The identity of each sampled carcase must be recorded in a way that allows the farm of origin to be identified, for example, by recording the slap number or the County Parish Holding number (CPH) obtained from the Animal Movement Licence.

Individual carcase identification when a farm supplies several animals is not required, as in the event of a positive all carcases in the batch will be re-tested.

To keep correlation with the sample and PMI 4/18, (*Trichinella* Testing Submission Form), the serial number of the barcode label used to identify those must be inserted in the Reference Number box.

5.3.8 Completion of PMI 4/18 form

PMI 4/18 (*Trichinella* Testing Submission Form) must be completed by FSS staff and accompany the sample to the lab.

The animal category that should be selected for any wild boar cross samples is 'Wild Boar'.

One form with **one** barcode must be completed for **every batch** of up to 100g of samples. Make sure the number of samples correlates with the number of animals entered on the form so Biobest Laboratories do not report incorrect number of samples supplied.

Note: An email address must be supplied to the lab for notification of the test result and a mobile phone number for text notification that results are available.

Affix the barcode label correlated to the sample bag to the PMI 4/18.

Send the original to the lab in a clean sealed A4 bag and keep a photocopy on file.

5.4 Packaging and despatch of samples

5.4.1 Transport containers

Samples are transported in Pathoshield packaging. The courier Topspeed collects for next day delivery to Biobest Laboratories.

5.4.2 Chilling

Samples are kept chilled by two squares of Techni Ice. The Techni ice squares must be held frozen until use.

5.4.3 Pathoshield packaging procedure

The table below lists the steps that must be followed using a Pathoshield box to despatch samples:

Step	Action
1	Attach the Biobest Laboratories barcode to the small pathoseal bag and attach the corresponding barcode onto a <i>Trichinella</i> testing submission form (PMI 4/18).
2	Place the small bag into the larger pathoseal bag, placing 2 Techni Ice squares between the bags
3	Complete form PMI 4/17 to record the samples and which barcodes they were submitted with.
4	Place sample into the Pathoshield outer box. Affix the peel-off barcode sticker onto the duplicate copy of the page.
5	Put completed forms PMI 4/17 and PMI 4/18 in a plastic bag before placing them in the box ready for despatch to the laboratory.
6	<p>If sending a single box: affix pre-printed Biobest Laboratories address label to box and seal the box using the blue security seal provided.</p> <p>If sending multiple boxes: Re-package into a larger box and attach address label and consignment note to outer box.</p>
7	Place the Pathoshield 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.
9	Remove from the plastic bag prior to despatch.

5.4.4 Storage pending despatch

On completion of sampling, place the Pathoshield box in the detained chiller until transferring them to the collection point. Topspeed will collect at the agreed collection time for delivery to Biobest Laboratories.

5.4.5 Notify lab of Saturday testing

If testing is required on a Saturday, FSS staff needs to telephone Biobest Laboratories on the Thursday beforehand to advise them that *Trichinella* samples are being sent for Saturday morning delivery:

Biobest Laboratories – 0131 440 2628

Topspeed need to be informed that the sample needs to arrive before 9am on Saturday in order to be tested.

No notification is required for samples dispatched for Monday to Friday testing.

5.4.6 Despatch from base plants

When, for practical reasons, samples cannot be despatched from the plant where the animals are slaughtered, they can be taken to a different plant to be despatched from there.

However, when completing the PMI forms, the sampling plant details must be entered.

In that case all the original documentation must be filed in the plant where the sample was taken as soon as practical.

5.4.7 Sample recording

A record of samples submitted for *Trichinella* testing should be entered into the OWS Sample Request module – choose “*Trichinella*” from drop-down menu.

The number of samples entered into the OWS module is a true reflection of actual samples collected.

If there is a difference on the number of *Trichinella* samples between the OWS AMI module and the Sample Request module, reasoning should be inserted within comments section on the Sample module.

The *Trichinella* barcode reference number should be inserted within the comments section.

5.5 Courier collection services and procedures

5.5.1 Next day before noon service

Trichinella samples should be despatched using the Topspeed 'Next Day Service'.

Note: Topspeed will only collect samples between 09:00 – 17:00 unless out of hours arrangements have been agreed.

5.5.2 Saturday service

In addition to the standard service, Topspeed provide a 'Saturday Service'. This service may only be requested if prior permission is obtained from the SLA and Contracts team as it incurs increased costs and Biobest must be informed on the preceding Thursday that samples will be arriving at the lab for testing.

This service is only to be used for samples that need to be tested on a Saturday.

Test results for Saturday testing will be received on the same day.

5.5.3 Booking sample collection

The following steps should be taken when booking sample collection:

Step	Action
1	Go to http://www.topspeedcouriers.co.uk/ and complete the online booking form. See Annex 5 for information on completing the online booking form.
2	Provide Topspeed with the following information: <ul style="list-style-type: none">• number of items (boxes) in consignment• kill date and time• the name of person making the booking
3	Write the barcode numbers as reference for the collection; Topspeed to collect as arranged

5.5.4 Sample collection point

Immediately prior to the agreed collection time the Pathoshield box containing the sample(s) should be removed from the plastic refuse bag and placed at the agreed collection point.

5.5.5 Despatch failure

Should Topspeed fail to collect samples within the agreed timeframe, contact Topspeed to arrange collection immediately and inform the SLA and Contracts team.

5.6 Consumables

5.6.1 Ordering consumables

To request stocks of consumables contact FSS Operations at operations@fss.scot.

The minimum order is 1 box of the following options:

- **Pathoshield P7 kit x 12 for *Trichinella* testing - recommended for plants processing small number of animals for testing**
 - bespoke Pathoshield 7 comprising
 - A5 Pathoseal
 - 200ml Absorbent
 - A6 Liquitite
 - Techni Ice x 24 squares
 - Forceps
 - Security Seal
 - Outer compliant box
- **Pathoshield P3 kit x 10 for *Trichinella* testing - recommended for plants processing larger number of animals for testing**
 - bespoke Pathoshield 3 comprising
 - A4 Pathoseal
 - 200ml Absorbent
 - A5 Liquitite
 - Techni Ice x 20 squares
 - Forceps
 - Security Seal
 - Outer compliant box

Note: Allow 5 days lead time for delivery of the consumables.

Reference: The *Trichinella* Sampling Kit Order Request Form can be found on Annex 4 of this chapter.

5.6.2 Barcodes

The barcodes can be obtained from FSS Operations.

5.7 Use of on-site labs

5.7.1 Background

Slaughterhouses that have facilities and trained staff available for the collection and testing of *Trichinella* samples may use their own arrangements instead of having the samples dispatched to Biobest Laboratories.

Where these arrangements are in place, the lab will operate as a supplier providing a service to the FSS Operations.

5.7.2 Requirements for on-site labs

Any plant that wishes to start *Trichinella* testing in an 'on site' laboratory must be assessed by the UK National Reference Laboratory (UKNRL) and be permitted by FSS to undertake testing.

The NRL will arrange for an on-site inspection and produce a report which will either recommend approval for self-testing or highlight areas that need to be addressed prior to recommendation for approval being issued.

The NRL offer training to staff under the VetQAS scheme to ensure Sampling Officers have the relevant skills and knowledge to undertake testing.

FSS Operations will issue a designated lab status letter once the above criteria have been satisfied to ensure compliance with Regulation (EU) No 2015/1375.

5.7.3 Responsibilities of the lab operator

Once contracted by the FSS Operations Group to carry out *Trichinella* testing, the lab operator is responsible for:

- the collection and identification of the samples;
- the identification and correlation of sampled carcasses;
- the supply of equipment and disposables;
- the operation of the lab;
- the examination of the digested samples;
- the maintenance of all records;

- the training of staff.

5.7.4 Quality assurance

All laboratories undertaking testing must take part in the quarterly QA scheme organised by the UKNRL. All laboratories must take action to rectify any deficiencies noted either in the assessment or following a QA test. Failure to do so will result in the removal of designated lab status.

The OV will receive a copy of the QA report and will be responsible for ensuring the results are returned within the specified timescale and that any deficiencies identified are addressed.

5.7.5 Non-compliance with SOP

Where the OV/VM is not satisfied that the lab operator is complying with the Standard Operating Procedure (SOP) agreed with FSS Operations, advice must be given to rectify the breach.

Failure to comply with the SOP is a breach of the terms of the contract and if the deficiency is not rectified, the OV must inform the SLA and Contracts team. FSS Operations can then suspend the SOP.

When the SOP is suspended, FSS Operations will collect the samples and dispatch them to Biobest Laboratories.

The health mark must not be applied to any carcass when there are no guarantees that the result of the testing is reliable.

5.8 Test results

5.8.1 Receipt of test results

Trichinella testing is an official control and FSS Operations are responsible for obtaining the test result.

By default, a laboratory report containing results will be sent by e-mail to the address specified on the submission form.

Biobest Laboratories currently offer SMS reporting of results for other tests and aims to add this option for *Trichinella*. To register interest in this service, contact Biobest Laboratories on 0131 440 2628.

5.8.2 Negative results

On receipt of a negative result, the health mark and identification mark can be applied.

Animal by-products containing striated muscle that were being retained can be released.

5.8.3 Positive or doubtful results

If the initial result received from the laboratory is positive or doubtful, Biobest Laboratories will contact the SLA and Contracts team, who will immediately contact the OV to advise on the procedure for despatching samples to APHA Bury St Edmunds for re-test. The OV must also advise the local APHA office.

Commission Regulation (EU) No 2015/1375 requires positive or doubtful results to be confirmed, collecting samples from the suspect carcasses and digesting them in smaller pools.

5.8.4 Re-sampling carcasses with positive or doubtful results

The SLA and Contracts team will contact the OV/ FVM to request samples for re-testing.

These samples must be of the correct weight and from the correct sample site for the species concerned. A PMI 4-18 must be completed per pool and be sent to APHA Bury St Edmunds.

The SLA and Contracts team will confirm which courier service should be used.

Samples for re-test should be sent to:

National Reference Laboratory for Trichinella & Echinococcus
Animal and Plant Health Agency
Sand Hutton
York
YO41 1LZ
Email: NRL.Parasitology@apha.gov.uk

The carcasses and all body parts must remain detained, pending the outcome of the re-testing.

5.8.5 Traceability report

Pending the result of the re-test, the OV should obtain the FCI to create a traceability report for the detained carcasses, to identify the farm of origin should a positive result be confirmed.

5.8.6 Notification of positive results

The SLA and Contracts team will notify the OV/ FVM and APHA if a positive result is confirmed.

Manual for Official Controls | Amendment 15

On receiving confirmation of a positive result, the OV should email their traceability report to the SLA and Contracts team on Operations@fss.scot.

If the positive result has been confirmed by APHA Bury St Edmunds, the positive carcase and all body parts must be disposed of as a Category 2 animal by-product and confirmation of action emailed to the SLA and Contracts team.

For pigs from RoI, positive results shall be reported by FSS to the Department of Agriculture, Food and the Marine (DAFM), the RoI competent authority. This will activate the RoI contingency plan with regard to the investigation of the source of infestation and any associated spread among other pigs or other susceptible species.

6. Poultry post-mortem inspection

- 6.1. Correlation and Inspection
- 6.2. Poultry feet for human consumption
- 6.3. General contamination
- 6.4. Guidelines on trimming poultry

6.1 Correlation and inspection

6.1.1 Inspection requirements

Practical arrangements for post-mortem inspection of poultry can be found in Regulation (EU) 2019/627 Article 25.

Poultry slaughterhouses can adopt PMI of only a representative sample of birds from each flock, providing that the conditions of Regulation (EU) 2019/627, Article 25, Paragraph 2 are met and documented in clear protocols, which have been drafted and agreed between the plant OV and the FBO.

Note: 'flock' means all poultry of the same health status kept on the same premises or in the same enclosure and constituting a single epidemiological unit. In the case of housed poultry, this includes all birds sharing the same airspace (Regulation (EU) 2160/2003, Article 2(3) (b)).

If the FBO has intention to adopt this change, a written protocol for carrying out PMI on a representative sample of birds should be drawn up by the lead OV in conjunction with the FBO and forwarded to the FVM for approval before implementation. The protocol must include the frequency of monitoring by the FBO (if a PIA system is in place) or by the OV (if OAs perform PMI) and be reviewed on a monthly basis with the FBO, to ensure any flocks/ farms with increased levels of pathology or welfare issues are identified and subjected to increased PMI, if necessary.

Daily monitoring by the OV will continue to take place and, if there are any concerns, the FVM should be informed immediately. Public health, animal health and welfare concerns may lead to the reduced PMI protocol to be withdrawn.

6.1.2 Whole bird inspection point

Inspection of the whole bodies of birds is recommended so that diseased birds can be identified and removed early in the process and this should be included in the HACCP plan. In most plants front surfaces of carcasses are inspected at that stage and back surfaces at the EV inspection point. It is acceptable in small plants that there may be no whole bird inspection point but such decision should be always consulted with the FVM.

6.1.3 Evisceration line inspection

Correlated carcasses and offal either attached or detached are inspected.

6.1.4 Carcase presented for post-mortem inspection without offal

If poultry carcasses are presented without offal at the post-mortem inspection point as a result of the accidental removal of all or part of the offal they do not need to be rejected. They should be inspected and if the carcasses pass post-mortem inspection, they can be considered fit for human consumption. However, such cases should be judged according to the merits of each case.

This scenario is not intended to cover inadequate presentation/ correlation of offal due to malfunctioning evisceration equipment or inadequate manual evisceration practices.

Offal and viscera that have not undergone PMI should be disposed of as Category 2 ABP.

6.1.5 Delayed evisceration

Regulation (EC) 853/2004 Annex III, Section II, Chapter IV, 7 (c) states 'viscera or parts of viscera remaining in the carcass, except for the kidneys, must be removed entirely, if possible, and as soon as possible, unless otherwise authorised by the competent authority.'

Requests for authorisation of delayed evisceration at the place of production may be granted if requested by the FBO. The OV will need to consider the FBO's proposed method of operation and if this is considered acceptable can recommend to the FVM that authorisation be given.

If authorisation is granted, the Approvals and Certification team should inform the FBO in writing and send confirmation to the OV and FVM.

6.2 Poultry feet for human consumption

6.2.1 Inspection requirements

Feet harvested for human consumption must be inspected.

Feet that are not separately identifiable, such as feet belonging to carcasses rejected at evisceration, must not be released for human consumption.

6.3 General contamination

6.3.1 Meat that is unfit for human consumption

Meat, carcasses and/ or offal affected with general contamination by faecal material, bile, grease, crop content or disinfectants should be considered unfit for human consumption.

6.3.2 Contamination from the alimentary tract and faecal material

A hygienic trimming system must be in place if the FBO decides to trim contaminated carcasses.

Any part of the carcass or offal affected with bile staining should be trimmed. Where plucking machines break the skin of poultry the underlying musculature should be considered to be contaminated and trimmed from the carcass.

6.3.3 Meat falling from the line/ conveyor

The FBO should have a system in place to deal with carcasses or offal that fall on the floor. This could include the provision of a meat tray off the floor at 'weak points' in the line and trimming affected parts. The OV/ OA should verify that the FBO has a system in place to ensure meat contaminated after post-mortem inspection is not released for human consumption.

6.4 Guidelines on trimming poultry

6.4.1 Trimming supervision

Rectification resulting from post-mortem findings must be carried out under the responsibility of the FSS team (supervision of trimming may be carried out by a PIA). Plant operatives should carry out removal of unfit meat identified at post-mortem inspection. Identification of unfit meat for trimming must not be delegated to untrained individuals.

6.4.2 Location of trimming point

Trimming of minor blemishes such as bruising is at the discretion of the FBO - preferably completed following evisceration, to minimise the risk of contamination of exposed meat.

Removal of more significant quantities of meat is usually impracticable with high line speeds, and in these cases an adjacent trimming area should be provided.

6.4.3 Trimming after chilling

Trimming of carcasses may be delayed until after chilling, providing that:

- there is no risk of contamination to other carcasses;
- for example, faecal contamination has to be trimmed before chilling;
- arrangements are in place for the trimming to be done under the supervision of the OV/ OA at regular times.

Note: The OV and the FBO should agree recognised methods (marking and identification of parts to be trimmed) to ensure that trimming is effectively completed by plant staff.

7. Judgements at poultry post-mortem inspection

- 7.1 Introduction
- 7.2 Poultry condition cards

7.1 Introduction

7.1.1 Post-mortem judgements in poultry

Twenty six poultry condition cards have been developed to achieve standardisation of post-mortem findings in poultry slaughterhouses in the UK.

These condition cards are to be used as a guidance which inspection teams must follow.

Notwithstanding, the professional expertise of the OV, based on local knowledge and the FCI received for each flock, may result in judgements differing from the advice provided in the condition cards for specific flocks of birds.

7.1.2 Trimming

Where the OV considers the entire carcass is not unfit, the affected parts of the carcass may be removed and the rest of the carcass may be allowed to enter the food chain. This is to be carried out by plant operatives.

The OV must be content that the FBO has developed a system and trimming is carried out in such a manner that all affected parts are removed to the OV's entire satisfaction.

7.2 Poultry condition cards

These provide guidance on the following conditions, and can be accessed on [Sharepoint - Operational Delivery - Training and Guidance - Condition Cards](#)

Abnormal colour (septicaemia – toxemia)

AM rejects (cull / runts)
Ascites – oedema
Breast blisters
Bruising – fractures
Cellulitis
Contamination
DOA / DIL
Dead other than slaughter (uncut–badly bled)
Dermatitis
Emaciation
Erysipelas
Footpad dermatitis (see Chapter 2.3 Annex 3)
Hepatitis
Joint lesions
Machine damage
Overscald
Pericarditis
Perihepatitis / peritonitis
Respiratory disease (airsacculitis)
Salpingitis
Tumours
Tuberculosis
Other factory (processing)
Other farm (for example, jaundice, oregon, white muscle)
Wooden breast (see Tec Files 98.pdf)

8. Wild game post-mortem inspection

- 8.1 Introduction
- 8.2 Trained hunters
- 8.3 Carcase handling
- 8.4 FSS role
- 8.5 Inspection of deer
- 8.6 Processing of in fur/in feather (IFIF) carcasses
- 8.7 Recording of inspection results

8.1 Introduction

8.1.1 Purpose

This section provides guidance on how to carry out official controls at approved game-handling establishments (AGHEs).

Regulation: Regulation (EU) 2019/627 Article 28.

8.1.2 Attendance

Detailed information on FSS attendance in AGHEs can be found in Chapter 2.10.

8.1.3 Chilling

Carcasses have to be collected and transferred to the AGHE, which may be remote from the hunting area; therefore some delay in chilling may occur.

However, the chilling must begin within a reasonable period of time after killing and achieve a temperature throughout the meat of not more than 7°C in the case of large wild game and 4°C in the case of small wild game. This does not preclude completion of dressing in the AGHE before these temperatures have been achieved.

Regulation: (EC) 853/2004, Annex III, Section IV, Chapter II, Point 5 and Annex III, Section IV, Chapter III, Point 4.

8.1.4 Separation of different types of game

In establishments that are approved for the handling of wild game, precautions are to be taken to prevent cross-contamination between species by separation either in time or in space of operations carried out on the different species.

In premises that are approved for the processing of both wild and farmed game, separate facilities for the reception and storage of carcasses of farmed game slaughtered at the farm, and for wild game, must be available.

In-fur and in-feather (IFIF) wild game may be stored in separate parts of the same larder/ chiller, although separate larder/ chillers are preferable.

8.1.5 Farmed Game

Farmed game, like other farmed animals, must undergo both AMI and PMI and be processed in a licensed slaughterhouse. Farmed game must not be consigned to an AGHE. The hunter's declaration must be queried where the origin appears to be a farm.

Be aware that Park game, i.e. mammals living in enclosed territory under conditions of freedom similar to those of wild game, can be considered to be wild game.

Regulation (EC) 853/2004, Annex I, 1.5

8.2 Trained hunters

8.2.1 Trained hunter's examination

A trained person must carry out an examination of the body and, in the case of large wild game, of any viscera removed, to identify any characteristics which may indicate that the meat presents a health risk. The examination must take place as soon as possible after killing.

More information, including training requirements, is available at the following link:

https://www.foodstandards.gov.scot/downloads/The_Wild_Game_Guide_1.pdf

Reference: Regulation (EC) No 853/2004 Annex III, Section IV, Chapter II (Large Wild Game) and Chapter III (Small Wild Game).

8.2.2 Trained hunter's declaration: large wild game

Following the examination referred to above, large wild game carcasses eviscerated in the field require a declaration from a trained person. This must bear the date, time and place of killing and carry a declaration that based on an examination of the carcass and viscera:

- there is no suspicion of environmental contamination
- no abnormal behaviour was observed before killing
- no abnormal characteristics were found during the examination

The declaration must be numbered and should be attached to the carcass, unless it covers more than one animal body. The declaration may cover more than one animal body, provided that a clear link between the animal bodies and the declaration is established and guaranteed. In these circumstances, the declaration would make reference to a group of numbered carcasses and each carcass would be clearly identified with numbered tags or firmly attached labels.

Note: If abnormal characteristics are found during the examination, abnormal behaviour was observed before killing, or environmental contamination is suspected, the trained person must inform the relevant competent authority (APHA for notifiable disease, FSS in AGHE, or LA in case of environmental contamination).

8.2.3 Head and viscera

Where the trained hunter's declaration is provided stating that no abnormalities were found, the head and the viscera need not accompany the body, except in the case of species susceptible to trichinosis, whose head (except for tusks) and diaphragm must accompany the body.

The exception to this is that if the head is required for further use as a trophy, it may be sent to an ABP processing plant that has been approved for the production of trophies. In these circumstances, the head may be dispatched pending a satisfactory *Trichinella* test, provided that the identification of the head is maintained throughout the process.

Regulation: (EC) 853/2004, Annex III, Section IV, Chapter II, 4 (a).

8.2.4 Acceptance in AGHE

Carcasses not accompanied by the head and viscera must be the subject of a declaration signed by the trained hunter.

If there is no signed declaration, such carcasses must not be accepted in AGHEs, and are not eligible for human consumption.

Reference: Regulation (EC) No 853/2004, Annex III, Section IV, Chapter II, 4 (c).

8.2.5 Trained person unexpectedly unavailable

In the event that the trained person is unexpectedly unavailable, carcasses accompanied by the head and all the viscera (with the exception of the stomach and intestines) may be accepted into an AGHE without the declaration from a trained person.

8.2.6 Offal

In the case of carcase and offal presented without the trained hunter's declaration, (as in the circumstances detailed above), they cannot be accepted unless clear identification and correlation marks between carcase and offal are present.

Where the carcase has a hunter's declaration stating no abnormalities were identified, in most cases the offal will not be present. In the event that the offal is present, it must be clearly correlated to the carcase; if it is not, then the offal cannot be used for human consumption.

Where the carcase has a hunter's declaration stating that abnormalities were found, then the offal must accompany the carcase and must be correlated to it.

(As an example of correlation, the hunter's declaration is often made on a tie-on label attached to the hock of the carcase; a duplicate label can be tied to the offal where present.)

Reference: Regulation (EC) No 853/2004, Annex III, Section IV, Chapter II, 3.

8.2.7 Specimen trained hunter's declarations

Specimen declarations for wild game animals may be found in the 'Wild Game Guide' at:

<https://www.foodstandards.gov.scot/publications-and-research/publications/wild-game-guides-and-haccp>

8.2.8 Small wild game

In the case of small wild game, a trained hunter's declaration is not a legal requirement. However, if abnormal characteristics are found during the examination, abnormal behaviour was observed before killing, or environmental contamination is suspected, the trained person must inform the competent authority. The declaration may be attached to trays or cartons to

inform the competent authority of any abnormal characteristics, behaviour or environmental contamination.

In general, if small game exhibits abnormal behaviour, they should not be considered to be fit for human consumption.

Regulation: (EC) No 853/2004 Annex III, Section IV, Chapter III, 2.

8.3 Carcase handling

8.3.1 Transport of carcases with hunter's declarations

There are no provisions under (EC) 853/2004 which permit this information to be conveyed on behalf of the trained person instead of a declaration being provided.

Declarations attached to carcases (of large wild game) must not be removed before delivery to the AGHE where it will be processed, as otherwise the carcase may be disposed as ABP. Similarly, if identification marks which link to a declaration covering several animals are removed or destroyed, those unidentified carcases will be disposed of as ABP.

8.3.2 Skinning

Unskinned large wild game:

- may be skinned and placed on the market only if:
 - before skinning, it is stored and handled separately from other food and not frozen, and
 - after skinning, it undergoes a final inspection in accordance with Regulation (EU) 2019/627.
- Appropriate declarations/identification must accompany unskinned wild game to the AGHE where skinning and final inspection takes place.
- There is currently no agreement for trade in unskinned large wild game to EU Member States or Northern Ireland.
- **Regulation:** (EC) 853/2004, Annex III, Section IV, Chapter II, 8.

8.4 FSS role

8.4.1 Receipt of carcasses and timing of inspection

The inspector (OA or OV) shall perform the post-mortem inspection activities. It is not essential that there is inspection of carcasses prior to the beginning of processing (that is, before skinning), but it is good practice.

Where applicable or practical the FBO may segregate unprocessed carcasses that they intend to reject and present them to the inspector prior to disposing of them, for example:

- carcasses show signs consistent with death other than by hunting (for example, by road accident)
- carcasses are so contaminated that entry would jeopardise operational hygiene or that show evidence of advanced or generalised decomposition

If the FBO decides to proceed with skinning and/ or dressing the inspection needs to take place soon after skinning/ dressing and/ or evisceration.

FBO rejection of carcasses before presentation for inspection is often part of the plant HACCP. Inspectors should be aware of this control and audit it in the same way as other plant controls, particularly the evidence, and extent, of corrective action. Discrepancies in intake records and controls should be noted in the plant day book for future reference.

8.4.2 Read declaration

The inspector is to take account of the declaration or information that the trained person involved in hunting the animal has provided in accordance with (EC) 853/2004 (see section 8.2.2 for details). If the correct documentation is not received the carcass must be disposed of as an animal by product.

Operators may wish to see proof of training, such as a copy of certificate with the trained person's signature, to ensure they are receiving carcasses from an identified trained person. OV/OAs may also wish to verify that the trained person is suitably qualified.

Where the declaration makes reference to tuberculosis (TB), the carcass and offal lymph nodes should be examined in detail and appropriate records made, using form TB50 as a template. The suspicion of TB in deer is notifiable and must be reported to APHA, who will advise on further action to take. The incidence and significance of TB varies in different parts of the UK. Scotland is Officially TB Free, but a low incidence remains.

8.4.3 Inspections

During post-mortem inspection, the inspector is to carry out a visual examination of the carcass, its cavities and, where appropriate, organs with a view to:

- detecting any abnormalities not resulting from the hunting process; for this purpose, the diagnosis must take account of any information that the trained person has provided concerning the behaviour of the animal before killing
- checking that death was not caused by reasons other than hunting, for example, road traffic accident, disease, injury

The inspection of large game should pay particular attention to contamination associated with gralloching (green offal removal), around the pelvis sternum and cut flanks. In carcasses that have not been head shot, contamination may be extensive and may result in rejection of the whole carcass – although pre inspection checks by the FBO should normally identify such carcasses.

If an assessment cannot be made on the basis of visual examination alone, further palpation and cuts of relevant parts of body may be undertaken and, if necessary, a more extensive inspection must be carried out in a laboratory.

Regulation: (EU) 2019/627 Article 27

8.4.4 Small wild game contamination

The carcasses of small wild game may be contaminated during plucking and evisceration. Where exposed meat, breasts or carcasses are contaminated with feathers, down or gut contents they must be rejected.

The use of cloths or paper towels to wipe contamination from carcasses is not acceptable. Clean paper towels may be used **once** to remove feather debris and blood from the vent after evisceration.

Breast meat can only be removed from plucked carcasses or in circumstances when the plucked breast has been protected from contamination from other feathers. The removal of breast meat without associated plucking is not acceptable.

It has been recognised that in some plants in order to meet customer requirements, small wild game, such as grouse and duck, is being dispatched from the premises to the customers partially plucked (i.e. wings or legs still in feather) for identification purposes. Such partial plucking is not prohibited in AGHEs. With regard to cross contamination concerns, it is not considered there is an increased risk of contamination for the product but this may potentially arise if the skin has been damaged in the plucking process,

however if the skin remains intact the risk of cross contamination should be low.

The FBO has a legal obligation to ensure that primary products are protected against contamination, having regard to any processing that primary products will subsequently undergo and, at all stages of production, the FBO is to ensure that food is to be protected against any contamination.

FSS staff must be satisfied there are robust controls in place to avoid contamination such as good hygiene practices, adequate separation and storage both in the plant and during transport.

8.4.5 Sample inspection of small wild game

Setting the size of the sample is a decision for the inspector taking into account:

- information supplied by the trained hunter (if available);
- species of animal/ bird presented for inspection;
- general impression gained of the wild game presented for inspection (including uniformity of the sample and signs of decomposition);
- previous history of the source, such as the pattern of disease and proportion of decomposed and contaminated carcasses in previous batches;
- prevailing climatic conditions;
- FBO's procedures based on HACCP principles and acceptance of birds from hunters.

Provided the batch of carcasses is relatively uniform, is made up of the same species and came from the same source on the same day, **a minimum of 5% of the (in fur/ in feather) carcasses must be examined**. Batches of less than 20 carcasses should be subject to 100% inspection.

The source/batch to be considered is the small game which arrives at an AGHE from either one hunter or one estate per species per day.

Should issues be suspected following the initial inspection then:

1. The rest of the batch should also be inspected in fur or in feather.
2. The Authorised Officer should consider further post mortem examination of cavities and viscera (if present) using professional judgement to ascertain what is reasonably required using existing SMOC guidance in this regard.

8.4.6 No FSS daily attendance

Where there is no daily FSS attendance, the OV may arrange with the FBO a day for the inspection of 5% of each batch present and due to be processed. If they pass inspection, the FBO may proceed to the processing of those batches without the need for several FSS visits. Similarly if 5% of a batch is retained for inspection, the remainder could be processed and held pending a satisfactory inspection of the 5%, with rejection of the whole batch if the inspection is unsatisfactory.

Please Note that this section, 8.4.5 above and 8.4.7 below is subject to change once full OCR compliance is achieved

8.4.7 Other checks and factors to determine the proportion of inspection

In agreeing to inspect a proportion of carcasses from a batch, the inspector is making an assessment of the FBO's competence to recognise unfit or contaminated meat and to take appropriate corrective action. The proportion of a batch to be inspected should reflect the competence of the FBO and evidence of effective processing and hygiene management during uninspected and unattended processing periods.

As with conventional red meat and poultry inspection, decisions must be based on overall hygiene during the dressing process and particularly evidence of cross contamination or contamination associated with dressing procedures.

To this regard, small game processing must be witnessed on a regular basis by Authorised Officers and OVs/auditors should liaise with FBOs to ensure that processing can be seen during visits. This should include all activities completed at each GHE, for example, the hygiene of waxing, de-breasting, preparation of oven ready birds or lagomorphs.

Where GHEs are approved for meat preparations and meat products activities, they should be assessed and arrangements made to verify the hygiene of these operations. In addition, targeted, intelligence led UAI will be made to verify hygiene of small game operations.

When birds/ animals are presented for FSS inspection **after** the other part of the batch has been processed, the AO should consider if the levels of rejection are comparable with those for the previously processed birds/ animals from that batch. Poor dressing and sanitising procedures noticed during FSS inspections will provide little confidence in the FBO FSMS and in that the remainder of the batch was dressed hygienically or that appropriate corrective action and rejections were made during dressing.

The proportion of a batch to be inspected may therefore be larger than 5%, but it must never be less than this.

8.4.8 FBO records

The inspector's checks should address the following aspects of the FBO records:

- Are there accurate intake records showing numbers of rejections and reasons for rejections?
- Are there records of rejections during processing and are they categorised?
- Can these records be reconciled with ABP records?
- Are there appropriate records of corrective actions?

8.4.9 Wild boar

Wild boar are susceptible to the same diseases as domestic pigs and thus it can be expected that a range of lesions similar to that found in farmed pigs will be encountered.

Note: *Trichinella* testing is required in wild boar. If the head is required for further use as a trophy, it may be sent to an ABP processing plant that has been approved for the production of trophies. The head may be dispatched pending a satisfactory *Trichinella* test, provided that the identification of the head is maintained throughout the process.

For further information regarding post mortem inspection conditions in red meat please refer to section 4 of this chapter

8.5 Inspection of deer

8.5.1 When to inspect

The carcasses of deer should be inspected after skinning in conjunction with the available correlated red offal, where available.

Note: Red offal will only be presented for inspection where the trained person has noted an abnormality or where they are unexpectedly unavailable.

Regulation: (EC) 853/2004, Annex III, Section IV, Chapter II, Paragraph 4 (a)-(c).

8.5.2 Minimum post-mortem requirements

Post-mortem inspection must consist of a visual examination of the carcass, its cavities and any accompanying offal. In most cases, offal will not be presented.

If a declaration from a trained person is not attached to the carcass, or it is not identified to a declaration, then the head (except for antlers) and all the viscera (i.e. the organs of the thoracic, abdominal and pelvic cavities except for the stomach and the intestines) must be presented for inspection. The accompanying viscera must be identified as belonging to a given animal. If no declaration or offal is presented the carcass must be disposed of as ABP.

8.5.3 Bullet wounds

Carcasses with damage caused by the entry of the bullet will require trimming of any bruised or contaminated meat.

Carcasses where the bullet entered through the shoulder or the anterior thorax may have shattered bones and muscle damage requiring extensive trimming and rejection of the shoulder or quarter.

Where the bullet has entered through the abdomen, bruising, bone damage and contamination can be extensive and may warrant rejection of the entire carcass.

8.5.4 Contamination

Some damage to the heart, liver and lungs may occur as a result of shooting. Decomposition and contamination are common findings. As a consequence of rupture of the abdominal organs following shooting, or as a consequence of poor gutting, leakage of gut contents into the abdominal cavity may occur.

The carcass may also become contaminated as a result of poor handling in the field or during transportation to the processing establishment. Any part of the carcass with visible contamination must be trimmed and rejected.

The retention of heavily contaminated meat in close proximity to potentially fit carcasses should be avoided. In those circumstances, where trimming precedes inspection, and to minimise potential contamination, trimmed meat should be hygienically retained so that a decision can be made based on the condition of the whole of the carcass. It may not be possible to make a decision if all parts of the carcass have not been retained and identified.

8.5.5 Total rejection

When carcasses have been stored under unacceptable conditions (such as high ambient temperatures or exposed to pests) conditions such as generalised decomposition or blowfly infestation will be encountered, and total rejection is necessary.

8.6 Processing in fur/ in feather (IFIF) carcasses

8.6.1 IFIF trade

Approved premises, such as red or white meat cutting plants, cannot be regarded as a local retailer and therefore cannot receive exempt game or game meat directly from local producers or hunters.

If game is not supplied under any of the exemptions listed in the wild game guide, it must ultimately be processed and inspected in an AGHE.

AGHEs can sell on unprocessed game that has not been subject to an inspection but only to another AGHE either in GB, or in some cases NI and the EU. An identification mark should be applied to small wild game if it has been handled in some way in an AGHE before it is sent on to another AGHE.

Temperature requirements apply (4°C small wild game and 7°C large wild game)

8.6.2 Trade of unplucked / unskinned and uneviscerated small wild game

FSS staff shall be aware that where small wild game is to be traded unskinned / unplucked and uneviscerated they:

- may be frozen or deep frozen
- should be stored separately from fresh meat, poultry meat, and other wild game already skinned and plucked
- can be traded only to another AGHE where PMI will take place;
- FSS staff must monitor and verify this activity as part of the establishment audit;
- sealed boxes and uneviscerated wild game cannot be factored by approved cutting plants even though the packaging is not opened.

Note: Smithfield Market is not an AGHE.

Regulation: (EC) 853/2004, Annex III, Section II, Chapter V 1 (c).

8.6.3 FBO duties

Where the FBO intends to trade small game un-skinned/ un-plucked and un-eviscerated they must inform FSS staff for monitoring and verification of this activity during the plant audit.

They should have procedures in place to ensure that there is no undue extra food risk in transporting the uneviscerated animals, for example, FBO presented procedures in place to ensure that chill chain is maintained when the viscera are still within the body cavity.

8.6.4 Inspection of small wild game to be traded

Where the FBO intends to trade small wild game which is un-skinned/ unplucked and un-eviscerated, the FSS staff must monitor and verify this activity as part of the establishment audit. Post-mortem inspection will take place at the receiving AGHE.

8.6.5 ID marking of small wild game to be traded

An identification mark should be applied to un-skinned/ un-plucked and un-eviscerated small wild game, if it has been handled or graded in some way in a AGHE before it is sent on to another AGHE.

8.6.6 Trading to EU

All game intended for export or import must have been examined by a trained person (where applicable) immediately after shooting and the game must be handled and transported hygienically in refrigerated transport.

In-skin, in-feather and processed small wild game can be consigned to and received from a Member States, subject to any animal health restrictions, and subject to the appropriate export/ import certification being in place. If you are unclear as to whether exports or imports may take place during outbreaks of notifiable disease, contact APHA.

Please note that currently no certification is available for export of un-skinned large wild game to another Member State. Potential exporters should be referred to APHA.

8.7 Recording of inspection results

8.7.1 Duty of FSS Operations

If inspections reveal the presence of any disease or condition that might affect public or animal health or indicate that animal welfare has been compromised the OV is to inform the FBO.

Where lesions suggestive of tuberculosis (TB) are recorded on the trained person's declaration, the OV or OA should confirm that this information has been passed to APHA. APHA should also be contacted if potential TB lesions are found during the inspection of large wild game carcasses.

Where the OV is not present the OA shall contact the OV as soon as possible and discuss necessary action. In certain cases this may require attendance of the OV at the AGHE.

Where the problem arose during primary production, the OV shall gather all the information and cascade it to APHA where appropriate.

8.7.2 FBO's trained hunter's declaration and inspection record

The FBO must have a system in place to file the trained person's declarations (including trained person's inspection records) in such a way that the declarations can be identified clearly to the individual carcasses or batch of carcasses.

For large game, the declaration or a number repeated on and relating to the declaration must be attached to the carcass when it is presented for inspection. Carcasses without an attached hunter's declaration label or link to a declaration must be disposed of as ABP (unless presented with the head and all the viscera except for the stomach and intestines).

8.7.3 Post-mortem inspection results and recording of data

Results of post-mortem inspection should be recorded in the OWS PMI module.

The FSS and FBO must have a system in place to ensure that the results of post-mortem inspections are recorded accurately and can be identified clearly to the batch of animals, or in some cases to the individual animal. The OV must be satisfied with the system for collecting the data at all points.

9. Health and identification marking

9.1 Health marking

9.2 Identification marking

9.3 FSS Guidance on Health & Identification Marks on POAOs placed on the market after Brexit

9.1 Health marking

9.1.1. Overview

The health mark indicates that the animals and the resulting carcase have undergone ante and post-mortem inspection in accordance with Regulations (EU) 2019/624 and (EU) 2019/627 and there are no grounds for declaring the meat unfit for human consumption.

9.1.2 Responsibility and health marking

The OV is responsible for ensuring the correct application of the health mark. The actual application of the health mark may be delegated to an OA or to an FBO member of staff, but only under the effective supervision of the OV. Please see Annex 8 for Delegation of Application of Health Mark to specially authorised FBO staff - Risk Assessment.

The health mark shall be applied when official controls have not identified any deficiencies that would make the meat unfit for human consumption and, where appropriate, TSE or *Trichinella* testing has been carried out with negative results.

9.1.3 Meat that should be health marked

The health mark is only applied to carcasses and wholesale cuts of:

- domestic ungulates;
- farmed game mammals other than lagomorphs;
- large wild game

Regulation: (EU) 2019/627 article 48 (2).

9.1.4 Application

Health marks should be applied in the slaughterhouse or game-handling establishment so that if carcasses are cut into half or quarters or half carcasses are cut into 3 pieces each bears such a health mark. The FBO should inform

the AO how many pieces the carcass will be cut into if they wish the minimum number of marks to be applied.

9.1.5 Wild game

Meat from wild game can only bear a health mark if it is skinned in a game handling establishment, has undergone post-mortem inspection and been found fit for human consumption.

Regulation: (EU) 2019/627 article 48 (4).

9.1.6 Application at inspection

A system should be in place so that the line speed and inspection facilities allow the health mark to be applied to the carcass at the time of post-mortem inspection.

9.1.7 Blurring

Blurred health marks are unacceptable and, if this is a problem, a system should be arranged so that:

- one health mark is applied if the carcass is fit at the time of inspection;
- health marking is completed once the carcass has dried (in the chiller).

9.1.8 Health mark and trichinosis

Where a procedure is in place in the slaughterhouse to ensure that no part of carcasses examined leaves the premises until the result of the *Trichinella* examination is found to be negative and the procedure is formally approved by the OV, the health mark may be applied before the results of the *Trichinella* examination are available.

The operator must have a written procedure agreed with the OV in place.

Where such system is not in place, the health mark must not be applied until a negative test result has been received.

9.1.9 Withheld health mark

The health mark can only be applied to the carcass of animals which have undergone ante and post-mortem inspections and there are no grounds for declaring the meat unfit for human consumption. Examples of where the health mark should be withheld are:

- failure of ante-mortem and / or post-mortem inspection;
- presence of SRM (except Vertebral Column of over 30 month bovines);

- carcasses presented for inspection with evidence of visible contamination or gross pathology;
- where residues or contaminants are suspected;
- carcasses produced in a slaughterhouse or AGHE where the water supply is found to have been contaminated and a risk to public health exists;
- where adequate facilities for inspection are not available and there is a risk that carcasses with visible contamination or gross pathology could be inadvertently health marked (that is it has not been possible to perform adequate inspection);
- carcasses from animals suffering from a notifiable disease;
- meat declared by the OV to be unfit for human consumption.

9.1.10 Recording marks used

To prevent fraudulent use of health marks and other stamps all members of the FSS team must record in the daybook:

- the time of issue;
- the number of the health mark;
- the time stamps are returned to secure storage.

9.1.11 Security of the health mark

The security of the health mark is the responsibility of the officer to whom it was issued.

- The health mark must be kept in secure lockable facilities when not in use.
- The OV must be able to demonstrate the security of health marking equipment.
- Anyone possessing or using health marking equipment, without the authority of the OV is committing an offence.

9.1.12 Reporting missing stamps

If a health mark stamp is stolen or lost, there is potential that it can be used for fraudulent activities and used for illegally killed animals. Missing stamps whether lost or stolen must be reported immediately by completing the 'Missing Stamp Investigation Report' and emailing it to the Approvals Team at Approvals@fss.scot

This report should also be used for damaged stamps in plants to register them as no longer in use.

Reference: Template Investigation report can be found in Annex 7.

9.1.13 Meat not health marked

Unmarked meat that is required to be health marked cannot be sold for human consumption. The FBO is responsible for disposing of the meat in compliance with the animal by-products regulations.

Reference: Regulation (EC) 853/2004, Article 5.

9.1.14 Health Marking lambs kids and piglets

The dimensions and characters of the health mark may be reduced for health marking of lamb, kids, and piglets. For the health marking of lamb, kid and piglet carcasses the hygiene regulations no longer permit the use of health marks in the form of a label or tag instead of ink / hot branding as was permitted under the previous legislation.

9.2 Identification marking

9.2.1 Requirements

Carcases and wholesale cuts of red meat species, farmed game mammals (other than lagomorphs) and large wild game that have passed official controls at a game handling establishment should all be health marked. Other products of animal origin only require an identification mark.

9.2.2 Application

Identification marks are applied by the FBO. FSS is required to verify compliance with the application of identification marks.

9.3 FSS Guidance on Health & Identification Marks on POAOs placed on the market after Brexit

FSS has produced a guidance that outlines the health and identification mark requirements that allow POAO produced by Scottish businesses to be placed on Great Britain, Northern Ireland, EU and non-EU markets at the end of the Transition Period.

<https://www.foodstandards.gov.scot/business-and-industry/safety-and-regulation/eu-exit-health-and-identification-marks>

10. Verification of Microbiological Criteria

10.1 Introduction

10.2 FSS Role

10.1 Introduction

CIR (EU) 2019/627, Articles 35 & 36, introduced additional official controls for *Salmonella* & *Campylobacter*. The OV is required to verify the correct implementation of the microbiological requirements for all species established in Regulation 2073/2005.

10.2 FFS role

10.2.1 Salmonella

The OV must verify the correct implementation of the microbiological requirements laid down in Annex I of Regulation 2073/2005 by carrying out official sampling or by collecting information of the *Salmonella* positive samples taken by the FBOs.

10.2.3 Campylobacter

The OV must verify the FBOs implementation of *Campylobacter* Process Hygiene Criteria (PHC) as established in Regulation 2073/2005 by carrying out official sampling (see Section 11) or by collecting information on the total number and the number of *Campylobacter* samples with more than 1000 cfu/g taken by the FBO.

If the FBO fails on several occasions to comply with the PHC, the Lead OV shall request submission of an action plan by the FBO and submit it to their FVM. OVs shall strictly supervise its outcome.

In case of the FBO's failure to comply with the PHC, the lead OV is to request an action plan from the FBO.

10.2.4 Recording of results

The total number and the number of *Salmonella* positive samples and *Campylobacter* samples above 1,000 cfu/g shall be reported to the Commission once a year.

Manual for Official Controls | Amendment 15

In order to collect this data, FSS has developed a spread sheet and placed it on SharePoint, at link below:

<http://sgsharepoint16/sites/FSS/ops/Shared%20Documents/Salmonella%20and%20Campylobacter%20data%20in%20SH%202020-2021.xlsx>

Lead OVs must verify the results of SH FBOs' micro test results for *Salmonella* and *Campylobacter* and populate the spread sheet on a monthly basis, i.e. within the first 2 weeks of the current month for previous month, to ensure all data is available from the FBO.

The server will open the workbook "read-only". The OV should click on "edit workbook" at the top of the document; once the results have been entered, the OV should exit the Excel spread sheet and, when prompted, click "save" data.

The "Action" column in the spread sheet will be populated with N/A, Yes or No, as applicable.

The spread sheet also contains an "Information" tab, with more details with regard to the EC Regulation 2073/2005 for Micro testing requirements.

11. FSS *Campylobacter* monitoring programme in broilers

- 11.1 Introduction
- 11.2 FSS role
- 11.3 Sampling programme
- 11.4 Sampling equipment
- 11.5 Collecting samples
- 11.6 Minimising the risk of sample contamination
- 11.7 Storage, packing and despatch of samples

11.1 Introduction

11.1.1 Survey overview

FSS is working in partnership with the FSA on the UK strategy to reduce *Campylobacter* contamination of broiler carcasses at slaughter, in order to support work to reduce the number of human *Campylobacter* cases as part of the UK Acting on *Campylobacter* (ACT) Strategy. This includes a survey of *Campylobacter* on broiler carcasses which supplements and verifies FBO sampling required by Regulation (EU) 2073/2005

The FSS Strategy to 2021 “Shaping Scotland’s Food Future” includes the outcome that ‘Food is safe’. A main priority for this is to reduce foodborne disease using a targeted approach, and tackling *Campylobacter* in chicken as a priority.

FSS is developing a Foodborne Illness Strategy for Scotland and is generating programmes to reduce the risks of *Campylobacter* in Scottish produced chicken, and monitoring the impact on the profile of *Campylobacter* infection in Scotland, supporting the FSA *Campylobacter* reduction programme. This has reduced the percentage of the most heavily contaminated chickens at the end of the slaughter process from 27% in 2008 to <10%.

Information can be located at:

https://www.foodstandards.gov.scot/downloads/Campylobacter_.pdf

11.1.2 Target population

Broiler chickens, including conventionally reared, free-range and organic broilers. Spent hens and broiler breeders are excluded from the survey.

11.1.3 Survey requirements

FSS are required to sample a whole chilled carcass and, when specified, full and intact caeca from the same slaughter batch and despatch to APHA Weybridge for testing.

11.1.4 Relevant establishments

These instructions apply to FSS staff at plants participating in the *Campylobacter* monitoring programme. A list of participating establishments is held by SLA team.

11.1.5 Co-ordination and collection

APHA is responsible for the co-ordination and management of this UK monitoring project and for the operation of the scheme in GB, under contract with FSS.

The total number of samples required from selected slaughterhouses is determined by FSS. APHA will then send sampling kits and request samples from participating establishments.

FSS Operations staff will undertake the collection of samples from approved slaughterhouses participating in the monitoring programme.

11.2 FSS role

11.2.1 FSS requirements

The OV must ensure:

- that only authorised FSS staff carry out the sampling;
- the correct number of samples are collected per slaughter batch sampled;
- continuity of evidence when samples are collected, prepared, labelled, stored and despatched;
- evidence of the origin of the broilers sampled is obtained;

- the data collection form, APHA1 is fully completed, and two copies are taken; see Annex 2 for an example of the form;
- one copy of the APHA1 form is sent with the samples, the second copy is given to the named FBO contact (which will be supplied by SLA team) and the third copy is retained.

Note: Samples to be recorded in the OWS Sample Request module under “*Campylobacter*”.

11.2.2 Time coding

All work undertaken as part of this survey in the collection, storage, packaging and despatch of samples is to be coded on the online system as Corporate activity, sub-activity Campylobacter.

Comments to be added if necessary.

11.3 Sampling programme

11.3.1 Sampling requests

FSS staff in plant will receive a sampling schedule prepared by APHA, from the FSS SLA team, which will list the number of batches that need to be sampled during the sampling period (a reminder of the schedule will be sent in advance either monthly or quarterly, as appropriate). The schedule will provide details on the date of sampling, the number of batches that need to be sampled on a given day and the ID of the batch to sample.

As the sampling schedule is weighted according to plant throughput, larger processing plants will sample more regularly than smaller processing plants.

Note: The ID batch number refers to the sequence of slaughter batches going through the abattoir on the day of sampling. For example, ID batch 2 would be the second batch slaughtered on the given sampling day.

Example:

Allocated sampling days	ID of batch to sample	ID batch (1 st reserve)	ID batch (2 nd reserve)
08/11/12	5	7	15
13/11/12	2	6	24
13/11/12	3	9	17
05/12/12	7	2	5

11.3.2 Monitoring definitions

A 'slaughter batch' is defined as a quantity of broilers which has been raised on the same farm premises, in the same house, and delivered to the abattoir in the same vehicle.

11.3.3 Exclusion criteria

Slaughter batches from more than one house or from more than one farm are to be excluded from the monitoring programme.

11.3.4 Selection of slaughter batches

To avoid bias, slaughter batches must be randomly selected for sampling. Therefore, beside each allocated sampling day on the schedule there are three numbers per sampling batch labelled 'ID of batch to sample', 'ID batch (1st reserve)' and 'ID batch (2nd reserve)'. These are random numbers generated using the average number of batches processed during the abattoir's working day, and represent the particular batch that must be identified and sampled.

Batches from mixed houses or from more than one farm must be excluded. Therefore, if the selected batch is from a mixed house or from more than one farm, then the reserve batch should be sampled if that is not a mixed batch. The ID of the batch sampled should be marked clearly on the data collection form, APHA1.

Sampling for the monitoring programme will only be carried out Monday to Thursday. If you do not slaughter broilers on the specified sampling day, please sample the same ID batch number allocated but on the next processing day. For example, if the plant only slaughters broilers on Monday-Wednesday and the schedule includes a Thursday, please sample on the following Monday. If the plant operates on Tuesday, Wednesday and Friday and the scheduled sampling date is a Thursday, please sample on the following Tuesday.

The revised sampling date and the ID of the batch sampled should be marked clearly on the data collection form, APHA1.

If you are unable to collect a sample from a requested ID batch (es) or from the first or second reserve, please contact operations@fss.scot who will then notify APHA and a new sampling ID and date for collection will be generated.

If you collect the samples and you cannot despatch them on the same day, please contact the SLA team.

Reference: See Annex 2 for a sample copy of the APHA1 form.

Note: If you have any questions on the sampling schedule, contact the SLA and Contracts team.

11.3.5 Selection process

The following table outlines the slaughter batch selection process:

Step	Description
1	If the batch identified for sampling is not eligible, it is not from a single house or cannot be sampled, sample the 1 st reserve batch
2	If the 1 st reserve batch is not eligible or cannot be sampled, sample the 2 nd reserve batch
3	If the 2 nd reserve batch is not eligible or cannot be sampled, sample the next available eligible batch on the same processing day (and mark the batch number clearly on the APHA 1 form)
4	If there are no more eligible batches processed on the same day, sample the first available eligible batch on the next processing day (and mark the date and batch number clearly on the APHA 1 form).

11.3.6 Sample size per batch

There are 2 levels of sampling within this monitoring programme; **carcass only** and **carcass and caeca** sampling. The information on which to carry out will be provided by APHA in advance, on the sampling schedule:

Carcass sampling:

A single chilled broiler carcass from the selected slaughter batch will be collected and placed into one of the large labelled self-seal bags, sealed and then placed into the second large labelled bag and sealed. The carcass will be packed into the sample box and sent to APHA for testing.

Carcass and caeca sampling:

10 pairs of full and intact caeca will be sampled at the evisceration point from within the same slaughter batch from which the carcass is to be collected and each pair put into a separate screw-cap pot.

A single chilled broiler carcass from within the same slaughter batch from which the caeca was sampled is also to be collected and then placed into one of the large labelled self-seal bags, sealed and then placed into the second large labelled bag and sealed. Both caeca and carcass are to be packed into the sample box and sent to APHA for testing.

11.4 Sampling equipment

11.4.1 Introduction

APHA will provide the relevant establishments with sampling kits and the data collection form (APHA1). The SLA team will contact FSS staff at the establishments to inform them of delivery arrangements for sampling kits.

Note: please ensure the kit used bears the same unique code as the sampling form.

Note: APHA1 form - to be completed in block letters in BLACK ink. Any errors to be single crossed, corrected and initials inserted.

11.4.2 Non-delivery of sample kits

Sampling kits and form APHA1 should be received at least four days before sampling commences. If you do not receive the kit and form, or if any of the equipment listed below is missing, contact operations@fss.scot

11.4.3 Sampling kit contents

Carcase sampling kit – for sampling a whole chilled carcase includes:

- 1 x Biotherm 25 insulated shipping box
- 1 x document pouch
- 1 x data collection form
- gel freezer pack system (these must be kept away from direct contact with the samples using the polystyrene divider)
- 2 x large, labelled, sealable Pathoseal Liquitite bags for the whole chilled carcase
- 2 pair of gloves –for collection of the carcase (one spare pair provided)
- bubble wrap to stabilise the sample pots around the carcase.

Carcase and caeca kit– for sampling 10 caeca per slaughter batch and 1 whole chilled carcase includes:

- 1 x Biotherm 25 insulated shipping box
- a carcase sampling kit as described above plus
- 10 x 80ml screw-cap pots
- 5 x small Pathoseal absorbent bags for sample pots.

Note: Gel freezer packs **must** be completely frozen when packed in the sampling box; therefore, ensure that they are placed in a freezer at least 48 hours before sampling.

11.5 Collecting samples

11.5.1 Carcass samples

One whole carcass per slaughter batch should be collected immediately after chilling but before further processing such as freezing, cutting or packaging.

If this is not possible, then a carcass should be collected as close as possible to chilling and chilled separately to below 5°C.

In the carcass + caeca sampling, the carcass **must** be from the same slaughter batch that was sampled for caeca.

For all samples, please avoid sampling from the first part of the batch and select a carcass with a neck skin flap still attached.

11.5.2 Caeca samples

Sampling is to be carried out at the time of evisceration. Birds are to be sampled at random during the selected batch avoiding the first part of the batch. Consecutive birds must not be sampled.

Depending on the line speed, and facilities available in each establishment, the paired caeca taken from each bird can be separated from the eviscerated intestines either on the slaughter line, or alternatively the whole offal can be removed and carried in a tray or similar receptacle to a separate area before removing the caeca.

Note: It is important that full and intact caeca are collected.

11.5.3 Sample handling

Samples must:

- be packaged according to the instructions in this topic
- be despatched separately from other samples, on the same day of collection
- arrive at APHA Weybridge no later than 24 hours after they have been collected

Reference: See topic 10.7 on 'Sampling, packing and despatch of samples' in this section for additional information.

11.6 Minimising the risk of sample contamination

11.6.1 Carcase sample contamination

Gloves supplied in the kit should be used to collect the carcase. Immediately after collection, the carcase should be placed into one of the large labelled self-seal bags from the kit, sealed and then placed into the second large labelled bag and sealed. Cross contamination with other chicken carcasses, caeca and abattoir surfaces should be avoided at all times.

11.6.2 Caeca sample contamination

The main objective is to collect the caeca whilst minimising any external contamination from caecal or intestinal content.

This is best achieved by careful manual traction to the portion of intestine either side of the caeca so that both caeca are removed intact with a short length of intestine. The sampler needs to verify that the caeca are intact and full. If they are not, the paired caeca should be disregarded and a new bird selected instead.

Each pair of caeca should be taken per broiler and put into a labelled pot. Each pot should then be sealed securely and placed into a small Pathoseal absorbent bag (two pots per bag).

Note: Caeca from different broilers should not be placed in the same pot.

11.7 Storage, packaging and despatch of samples

11.7.1 Chilling

Samples must be kept chilled (not frozen) from the time of sampling until delivery to APHA. Please place the closed sampling kit in a cool area (or refrigerator if available in the FSS office) and away from direct heat until the courier arrives. If a cool room is available the entire sampling kit can be stored here until despatch to APHA Weybridge

Note: Samples must be kept cool by storing them inside the insulated shipping box containing the frozen gel packs.

11.7.2 Specimen collection and handling

Campylobacter analysis can be affected by the growth of other bacteria. Therefore, care must be taken to ensure that samples are taken appropriately, chilled as described and transported to APHA Weybridge as quickly as possible.

Extreme temperatures must be avoided.

11.7.3 Packing

Step	Action
1	Pack the double bagged chilled carcase in the box and use the bubble wrap to secure the carcase in the box.
2	For 'Carcase + Caeca sampling kit', pack the bagged sample pots around the carcase and secure using the bubble wrap provided.
3	Ensure that the APHA reference number at the top of the data collection form APHA1 matches the number on the sample pots and carcase bag.
4	Place polystyrene divider on top of the carcase and samples.
5	Freezer gel packs should be removed from the freezer and placed on top of the polystyrene divider. All 3 freezer packs provided in the sampling kit should be used; however, if the lid cannot be closed, 1 freezer pack is to be discarded ensuring the lid is fitting tightly). Care must be taken not to place these in direct contact with the specimen pots or the bagged carcase.
6	Slide the completed form, copies of the FCI and transport ticket into the plastic document pouch to protect from any leakages that may occur and place into the sampling kit.
7	The sample box must be closed securely without delay. It is important that the pack should not be left open (or closed without freezer packs) for any length of time as this may damage the samples and the carcase.

11.7.4 Labelling cardboard outer cartons

Apply the adhesive address label provided by the carrier to the outer carton across the box flaps.

Seal the edge of the box with seal label provided.

Apply the Topspeed unique bar code to the outer box.

11.7.5 Despatching samples

Samples are to be despatched to APHA using the Topspeed next day service.

Step	Action
1	Go to http://www.topspeedcouriers.co.uk/ and complete the online booking form - courier is to be pre-booked prior to taking the sample. See Annex 5 for information on completing the online booking form.
2	Provide Topspeed with the following information: <ul style="list-style-type: none">• number of items (boxes) in consignment• kill date and time• name of person making the booking
3	Write the barcode nos. as reference for the collection. Topspeed to collect as arranged.

11.7.6 Despatch of all samples

Carcases and caeca samples are to be sent to:

FS241051 *Campylobacter* Monitoring Research Project
Bacteriology (*Campylobacter* Laboratory) Building 17
Animal Plant and Health Authority
Woodham Lane
New Haw
Addlestone
Surrey
KT15 3NB

11.7.7 Despatch failure

Should despatch fail, you must contact Topspeed and make an attempt to rearrange despatch, and then notify APHA Weybridge by email to advise them of the despatch failure: campymonitoring@apha.gsi.gov.uk

11.7.8 Complaints procedure

Should Topspeed fail to collect samples within the agreed timeframe, contact the SLA and Contracts team on operations@fss.scot, which will escalate the failure to Topspeed headquarters.

12. Edible co-products

- 12.1 Definition
- 12.2 Feet for human consumption
- 12.3 FBO responsibility
- 12.4 FSS responsibility

12.1 Definition

Edible co-products are parts of slaughtered animals unsuitable for human consumption at the time of production in the slaughter house, but which can later be processed for use in human food.

Examples of edible co-products include:

- rendered animal fat and greaves
- treated stomachs, bladders and intestines
- gelatine
- collagen

Regulation: (EC) 853/2004, Annex III, Sections XII, XIII, XIV and XV.

Detailed guidance is contained in the Industry Guide on Edible Co-products and Animal By-products. This document can be found in Volume 2 of the SMOC and at:

https://www.foodstandards.gov.scot/downloads/Industry_Guide_1.pdf

12.2 Feet for human consumption

Feet intended for human consumption are treated as edible offal. All feet intended for human consumption must be inspected.

12.2.1 Feet processed on site:

PMI can be done before or after further treatment (such as de-hairing) on an individual basis or in batches. If PMI takes place before treatment, a further spot check will be needed to ensure that these feet are free from any pathology and contamination.

12.2.2 Feet processed at a different approved site:

PMI can be done before or after cleaning (washing) on an individual basis or in batches. If PMI takes place before cleaning, a further spot check will be needed to ensure that these feet are visibly clean before shipping for further processing.

In both cases a full correlation system must be implemented by the FBO to ensure that if a carcass is condemned, the correlated feet of the entire batch are disposed of as unfit for human consumption. FBOs may assist the inspection process and set aside feet with identified abnormalities.

Feet which have not been inspected, are not visibly clean or have not been processed cannot be despatched from the establishment as intended for human consumption.

12.3 FBO & FSS responsibilities

FSS Responsibilities	FBO Responsibilities
Ensure that FBO handles the co-products in accordance with the FSS guidance having due regard to hygienic processing, separation, storage and temperature requirements	FBO should identify handle, process, store and despatch edible co-products in accordance with the guidance contained in the meat industry guide
Verify that edible co-products are consigned to appropriate premises	Co-products should be stored and despatched to appropriate destinations separate from animal by-products, in accordance with the guidance.
Ensure adequate separation from ABP's is maintained, such as cattle hides intended for the production of gelatine for human consumption are stored and despatched with adequate separation from all other hides	Co-products should be despatched with the correct documentation, containing the information outlined in the specimen documents in the co-products guidance.
Ensure a control system is in place for hides from bovines that require BSE testing, pending a negative test result	

13. Annexes

Annex 1	Post-mortem inspection requirements summary
Annex 2	Sample: APHA1 data collection form
Annex 3	Contamination data recording sheet
Annex 4	Trichinella sampling kit order request form
Annex 5	Topspeed sample dispatch process
Annex 6	VIP Establishment specific protocols
Annex 7	Missing Health Mark reporting template
Annex 8	Delegation of Health Mark Risk Assessment