



# **Better Training for Safer Food** *Initiative*

- **Regulation (EC) N°999/2001: a general overview and EU provisions on SRM removal**
- **Ivan Ambrozic/Cecil Alexander**



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# ***Regulation (EC) N°999/2001: a general overview***

## Regulation (EC) No 999/2001

- In reaction to the BSE epidemic in the EU, **Regulation (EC) No 999/2001** of the European Parliament and of the Council of 22 May 2001 laying down rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies (TSEs) was adopted (this is known as "**the TSE Regulation**")
- TSE Regulation represents **a uniform legal basis for the control, prevention and eradication of TSEs and BSE.**

It has been amended **50 times since** its introduction.

# Preventive and control measures regarding BSE in EU

- **TSE Monitoring**
  - Testing of sick and suspected animals (passive surveillance)
  - Testing of cattle over 30/24 months (active surveillance)
- **Feed ban**
- **Removal of SRM**
- **Rules for intra-community trade**
- **Import restrictions**
- **Eradication measures after confirmation of BSE/TSE.**

Identification & Registration system for bovine animals

## Regulation (EC) No 999/2001 – latest amendments

### ▶ M48

– ***Commission Regulation (EU) No 56/2013 of 16 January 2013***

### ▶ M49

– ***Council Regulation (EU) No 517/2013 of 13 May 2013***

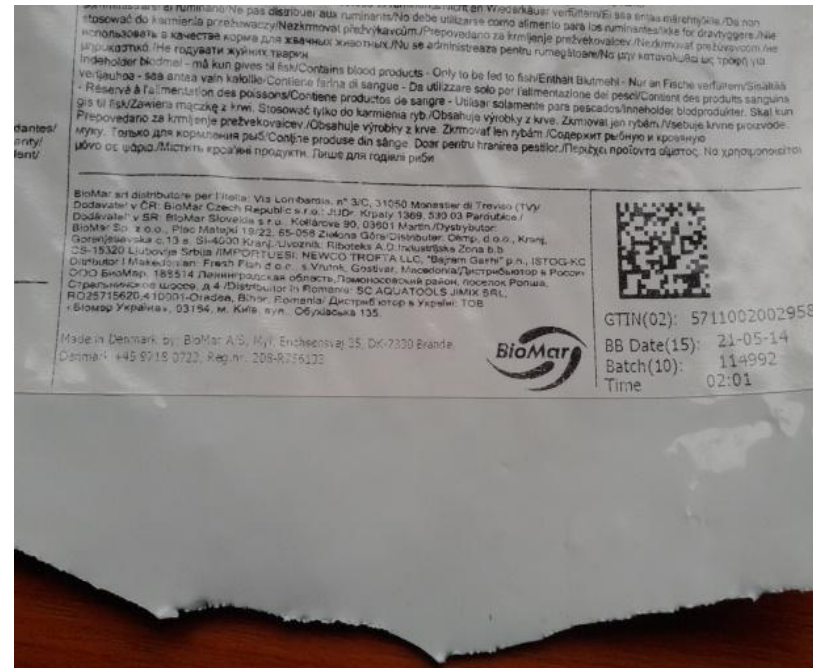
### ▶ M50

– ***Commission Regulation (EU) No 630/2013 of 28 June 2013***

# Commission Regulation (EU) No 56/2013 of 16 January 2013

## Annexes I and IV to Regulation (EC) No 999/2001 were amended:

- Annex I: cross references to the definitions in some other legal acts were added;
- Annex IV: PAP from non-ruminant animals and feeding stuffs containing such PAP were reauthorised for feeding aquaculture animals – **see presentation on feed ban**



## Commission Regulation (EU) No 630/2013 of 28 June 2013

- **Annexes I, III, VII, VIII, IX and x to Regulation (EC) No 999/2001 were amended:**
  - Annex I: some new definitions: index case, BSE case, classical BSE case, atypical BSE case...
  - Annex III: cross-reference for emergency slaughter and “sick ante mortem” to Regulation (EU) No 852/2004;
  - Annex VII: several new options for eradication of TSE in small ruminants were given – **see presentation on eradication of TSEs**

# Commission Regulation (EU) No 630/2013 of 28 June 2013

## Annex VIII - main amendments:

- the rules relating to intra-Union trade in ovine and caprine animals and their semen and embryos were aligned with the OIE standards,
- Member States may establish an official scheme for the **recognition of holdings** with a negligible risk of classical scrapie and holdings with a controlled risk of classical scrapie
- Member States may maintain a list of holdings of ovine and caprine animals with a negligible risk and holdings with a controlled risk of classical scrapie.



# Commission Regulation (EU) No 630/2013 of 28 June 2013

## Annex VIII – main amendments:

- the **negligible risk status for classical scrapie of the Member State** or of the zone of the Member State may be approved
- **national scrapie control programmes** of Member States may be approved
- **new conditions for Intra-Union trade in ovine and caprine animals and semen and embryos** thereof were implemented.

# Commission Regulation (EU) No 630/2013 of 28 June 2013

## Annex VIII - main amendments:

New conditions for Intra-Union trade in ovine and caprine animals and semen and embryos thereof were implemented.

Different conditions for Intra-Union trade for:

- **ovine and caprine animals for breeding** intended for Member States other than those with a negligible risk of classical scrapie or with an approved national scrapie control programme
- **ovine and caprine animals for all intended use except immediate slaughter** intended for the Member States with a negligible risk of classical scrapie or with an approved national scrapie control programme
- semen and embryos of ovine and caprine animals

# Commission Regulation (EU) No 630/2013 of 28 June 2013

- **Annex IX – main amendments:**

- **import conditions for collagen** to be used for food or feed were aligned with those laid down for gelatine intended for the same usage.
- **rules for the importation in the Union of ovine and caprine animals, and ovine and caprine semen and embryos were updated** to reflect the new conditions for intra-Union trade laid down in Annex VIII to Regulation (EC) No 999/2001.

# Commission Regulation (EU) No 630/2013 of 28 June 2013

## Annex X - amendments:

- **material from all future cases of BSE confirmed in the Union shall be submitted to discriminatory tests** that allow the precise identification of the agent, namely classical BSE, L-type atypical BSE and H-type atypical BSE.
- **two rapid test kits** for the monitoring of BSE in bovine animals were **deleted from the list** of rapid tests



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# **Regulation (EC) N°999/2001: *removal of SRM***

## **Specified risk material (SRM) removal = *most important measure in terms of protection of public health against BSE***



**SRM in bovine animals**

In BSE-infected animals these **tissues have been demonstrated to present a higher potential for infectivity**. The precautionary measure of SRM removal from the **food and feed chain** represents an effective **preventive measure to protect public health by reducing the exposure** of the consumers to possibly present BSE agent.



**SRM in ovine and caprine animals**



## Legal framework

### EU legislation:

- **Article 8 and Annex V to Regulation (EC) N° 999/2001**
- *Regulation 1069/2009/EC, as amended,*
- *Regulation 142/2011/EC, as amended*

### National legislation

## Some general prohibitions in regard to SRM - Article 8 and Annex V to Regulation (EC) No 999/2001

- **Laceration of CNT after stunning** (by rod-shaped instrument or gas) prohibited in bovine, ovine and caprine animals
- Use of bones or bone-in cuts of bovine, ovine and caprine animals for the **production of MSM is prohibited**
- General **ban on import of SRM** to the EU
- Exports outside the Community of heads and of fresh meat of bovine, ovine or caprine animals containing SRM is prohibited.



## Definition of SRM – Article 3(g) and Annex V of TSE Regulation

<b>SRM - BOVINE ANIMALS</b>	<b>Age of animals</b>
<b><i>The tonsils, the intestines from the duodenum to the rectum and the mesentery</i></b>	<b><i>Bovine animals of all ages</i></b>
<b><i>The skull excluding the mandible and including the brain and eyes, and the spinal cord</i></b>	<b><i>Bovine animals aged over 12 months</i></b>
<b><i>The vertebral column <u>excluding</u> the vertebrae of the tail, the spinous and transverse processes of the cervical, thoracic and lumbar vertebrae and the median sacral crest and wings of the sacrum, <u>but including</u> the dorsal root ganglia</i></b>	<b><i>Bovine animals aged over 30 months</i></b>

## Definition of SRM – Article 3(g) and Annex V of TSE Regulation

<b>SRM - OVINE AND CAPRINE ANIMALS</b>	<b>Age of animals</b>
<i>The skull including the brain and eyes, the tonsils and the spinal cord</i>	<i>Ovine and caprine animals aged <b>over 12</b> months or which have a permanent incisor erupted through the gum</i>
<i>The spleen and the ileum</i>	<i>Ovine and caprine animals of <b>all ages</b></i>

- **Derogation – EU MS with negligible risk for BSE still having SRM list.**

## SRM removal: „Why are we doing it?“

- ❑ It is the most important human health protective measure against BSE.
- ❑ **SRM removal eliminates 99% of BSE-infective tissues** from the animal carcass.
- ❑ Excluding SRM from the food and feed chain considerably **reduces the exposure of the consumers to possibly present BSE agent.**

## SRM removal: „Where it shall be done?“

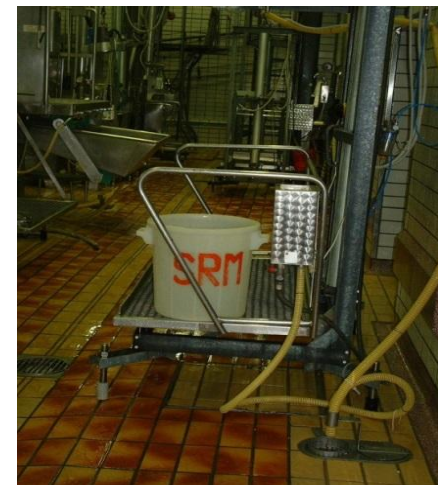
- In slaughterhouses and other slaughter places - all SRM
- In cutting plants, in case of bovine vertebral columns
- In cutting plants - in case of ovine and caprine spinal cords, and in case of harvesting of head meat of bovines (CAs specific authorisation needed)
- In butcher shops – removal of the vertebral column (CAs specific authorisation needed)

## SRM removal: „Where it shall be done?“

- On-farm slaughter for own household consumption (sheep and goats, bovine ??) – all SRM
- In plants carrying out intermediate activities in accordance with ABP Regulation (EC) No 1069/2009

## Collection, marking and disposal of SRM

- ✓ Establishments providing for SRM removal shall include segregated areas intended for SRM collection.
- ✓ “SRM” or “Category 1” - marked containers shall be positioned in every area within the establishment, which is intended for SRM removal.
- ✓ These containers shall be positioned in an appropriate distance from other containers intended for storage of edible parts of animals or category 3 animal by-products, so as to prevent cross-contamination.

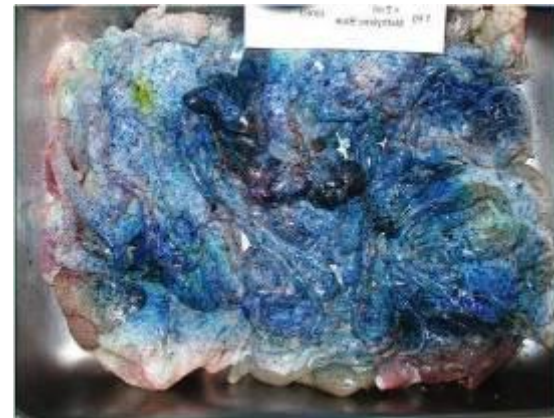






## Collection, marking and disposal of SRM

- ✓ SRM shall be stained with a dye or, as appropriate, otherwise marked, immediately on removal (usage of food colorants: Brilliant blue – E 133 or Patent blue V - E 131)
- ✓ SRM shall be disposed of as category 1 material in accordance with ABP Regulation (Regulation 1069/2009/EC)







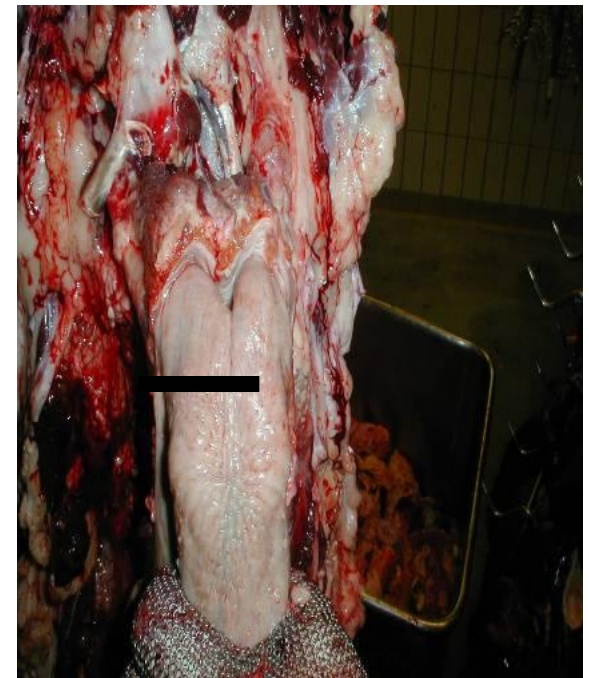
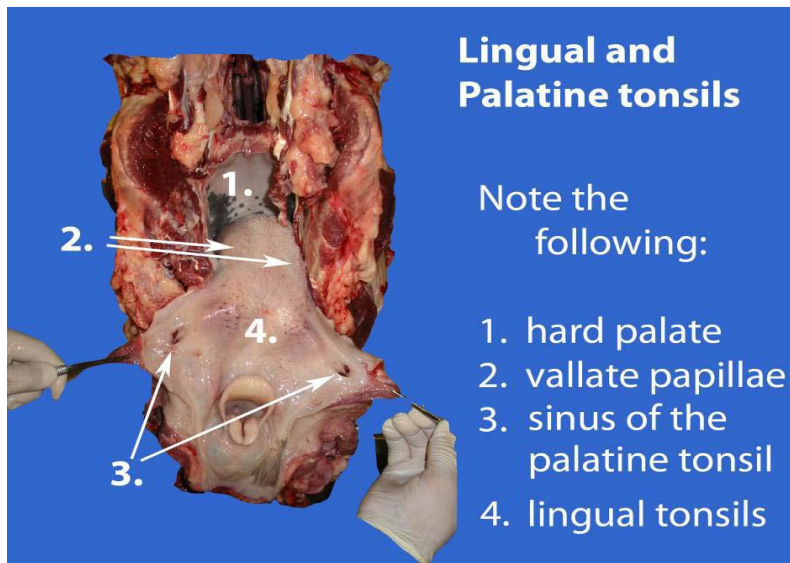
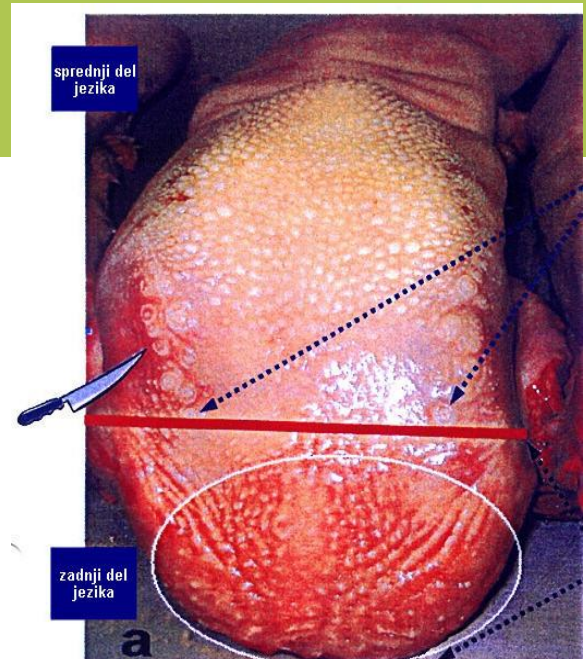
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## Skull - after the removal of the mandible (cattle over 12 months)



## Harvesting of bovine tongue

Tongues of bovine animals of all ages intended for human or animal consumption shall be harvested in the slaughterhouse by a transverse cut - rostral to the lingual process of the basihyoid bone!







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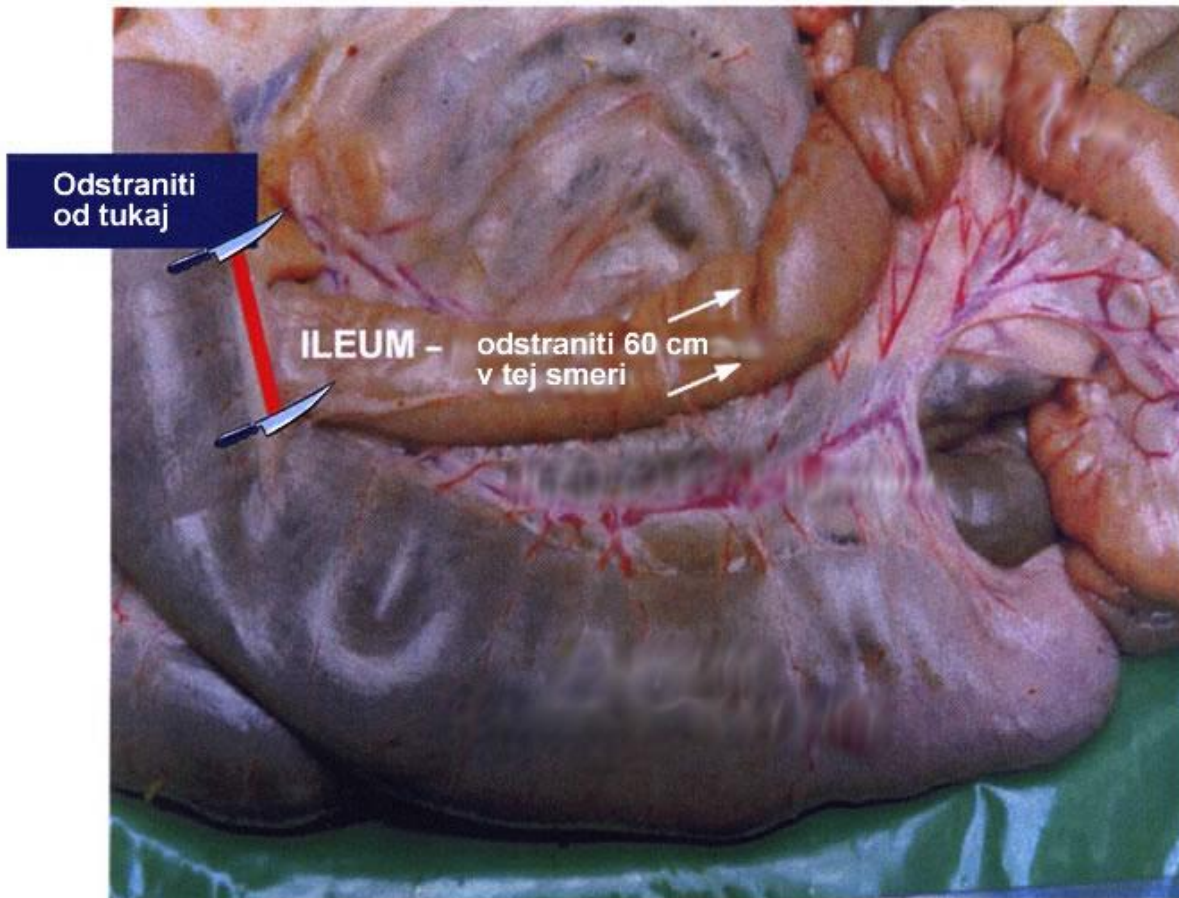
## Bovine spinal cord removal





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## Removal of ileum in sheep and goats







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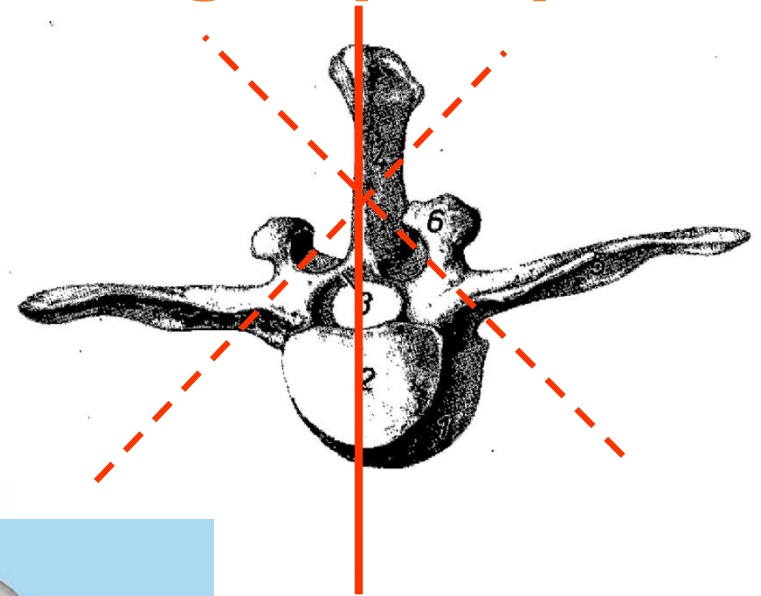
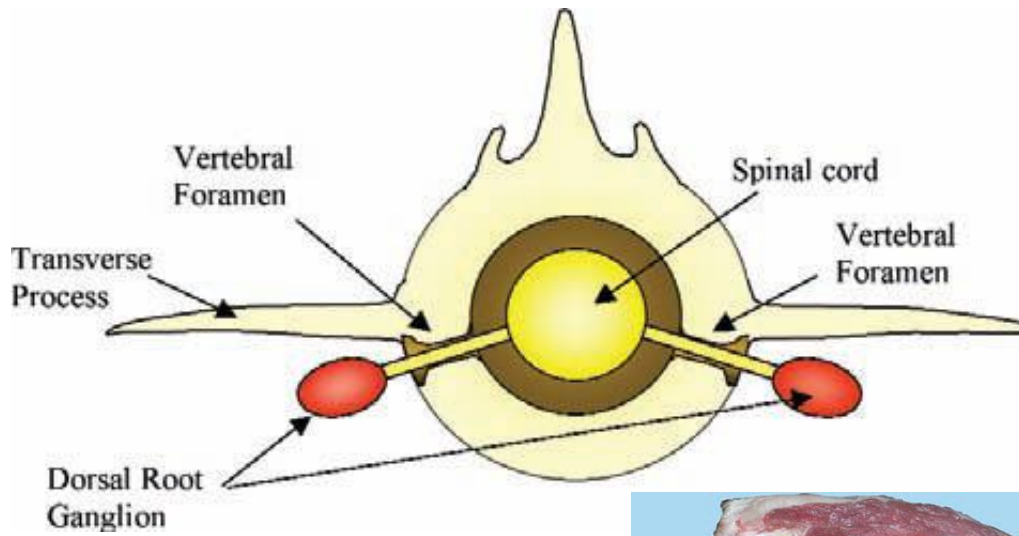
## Vertebral column removal





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## Removal of dorsal Root Ganglia (DRG)





## Labelling and traceability

**Identification of carcasses as referred to in Regulation (EC) No 1760/2000, as amended + blue stripe (removal of the vertebral column is not required)**



## Labelling and traceability requirements with regard to vertebral column removal

- Identification of carcasses or parts of carcasses of bovine animals aged less than 30 months (**removal of the vertebral column is not required**) by a **blue stripe** on the label as referred to in Regulation (EC) No 1760/2000
- Commercial document shall indicate specific information on the number of bovine carcasses or wholesale cuts of carcasses, from which removal of the vertebral column **is required** as well as on the number of bovine carcasses or wholesale cuts of carcasses, from which removal of the vertebral column **is not required**,
- **Butcher shops** shall keep the above mentioned commercial documents for a period of at **least 1 year**



## Main objectives of official control on BSE in slaughterhouses, cutting plants...

1. **Control of proper removal, handling and disposal of SRM**
2. **Control of other measures for prevention of cross-contamination with SRM**
3. Active and passive BSE surveillance
4. Measures in case of suspected or confirmed BSE

## Official control of SRM removal compliance (1/3)



### Official controls of SRM removal compliance should be focused on the following:

- ✓ Are all SRM properly and completely removed in the dedicated areas of the establishment?
- ✓ Are all SRM properly collected in a separate manner so as to avoid cross-contamination or mix-up with edible parts of the animals or with category 3 ABPs.
- ✓ Are all SRM stained with a dye immediately on removal? Cross-check if quantity of purchased dye fits with amount of SRM stained?

## Official control of SRM removal compliance (2/3)



Are all SRM dispatched to an approved ABP establishment for their disposal as category 1 material in accordance with ABP legislation?

Do the **removed quantities of SRM** (category 1 material), collected and dispatched to an approved category 1 ABP establishment, **correspond to the „input quantities“** – the number of animals slaughtered, or the quantities of received bovine heads intended for harvesting of head meat, or the quantities of received bovine meat containing vertebral column that needs to be removed as SRM?

## Official control of SRM removal compliance (3/3)

Are **bovine carcasses** or wholesale cuts of carcasses of bovine animals **containing vertebral column** identified by a clearly visible **blue stripe on the label** when removal of the vertebral column is not required?



**Is the specific information** on the number of bovine carcasses or wholesale cuts of carcasses, from which removal of the vertebral column is required as well as the number where removal of the vertebral column is not required, **added on the commercial documents** relating to consignments of bovine meat?

Do FBOs keep the required documents and records with respect to SRM removal?

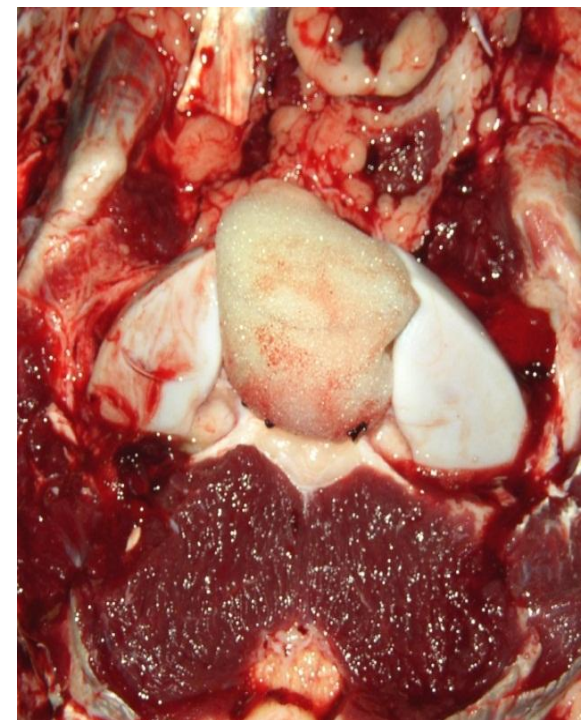
## Preventing cross-contamination at harvesting of bovine head meat – slaughterhouses (1/3)

Head meat of bovine animals **above 12 months** of age shall be harvested **at slaughterhouses, in accordance with a control system**, recognized by the competent authority,

The **system shall include:**

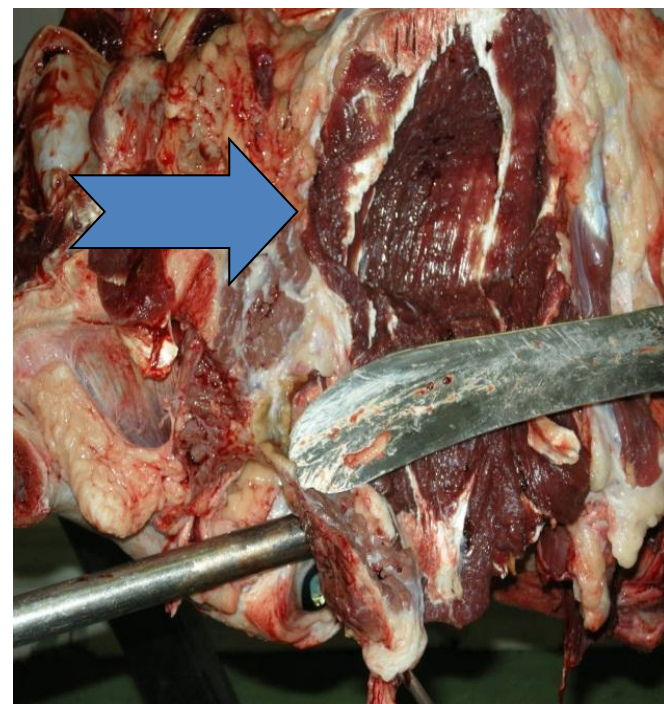
✓harvesting shall take place in a dedicated area, physically separated from the other parts of the slaughter line;

✓where the **heads are removed from the conveyor or hooks before harvesting** the head meat, **the frontal shot hole and foramen magnum shall be sealed with an impermeable and durable stopper**. Where the brainstem is sampled for laboratory testing for BSE, the foramen magnum shall be sealed immediately after that sampling;



## Preventing cross-contamination at harvesting of bovine head meat – slaughterhouses (2/3)

- ✓ head meat **shall not be harvested** from heads which have not been properly sealed
- ✓ **specific working instructions** shall be in place to prevent contamination of the head meat during the harvesting, in particular in the case when the seal (stopper) is lost or the eyes get damaged during the activity
- ✓ **sampling plan** using an appropriate laboratory test to detect central nervous system tissue shall be in place to verify that the measures to reduce contamination are properly implemented.





## Preventing cross-contamination at harvesting of bovine head meat (3/3)

- ✓ if the harvesting is performed **without removing** the bovine head **from the conveyor or hooks**, no sealing of heads or CN tissue sampling plan is required.

## Preventing cross-contamination at harvesting of bovine head meat - authorised cutting plants 1/4

**Member States may decide** to allow the harvesting of head meat from bovine in **cutting plants specifically authorised** for this purpose.

Conditions are:

✓the heads intended for **transport** to the cutting plant shall be **suspended on a rack** during the storing period and the transport from the slaughterhouse to the cutting plant;

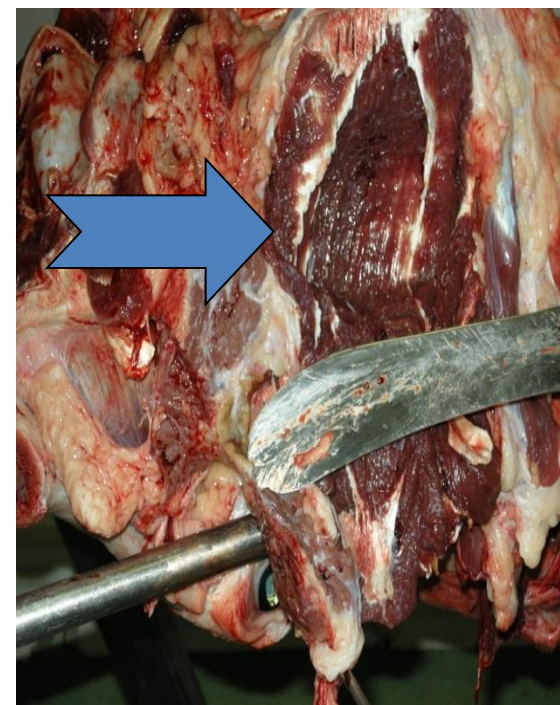
✓the frontal shot hole and the foramen magnum shall be properly sealed with an impermeable and durable stopper before being moved from the conveyor or hooks to the racks. Where the brainstem is sampled for laboratory testing for BSE, the foramen magnum shall be sealed immediately after that sampling;





## Preventing cross-contamination at harvesting of bovine head meat - authorised cutting plants 2/4

- ✓ the heads which have not been properly sealed or where the eyes are damaged or lost immediately prior to or after slaughter or which were otherwise damaged in a way which might result in contamination of the head meat with central nervous tissue **shall be excluded** from transport to the specifically authorised cutting plants;
- ✓ a **sampling plan for the slaughterhouse** using an appropriate laboratory test to detect central nervous system tissue
- ✓ a **sampling plan for the cutting plant** using an appropriate laboratory test to detect central nervous system tissue shall be in place to verify that the measures to reduce contamination are properly implemented.



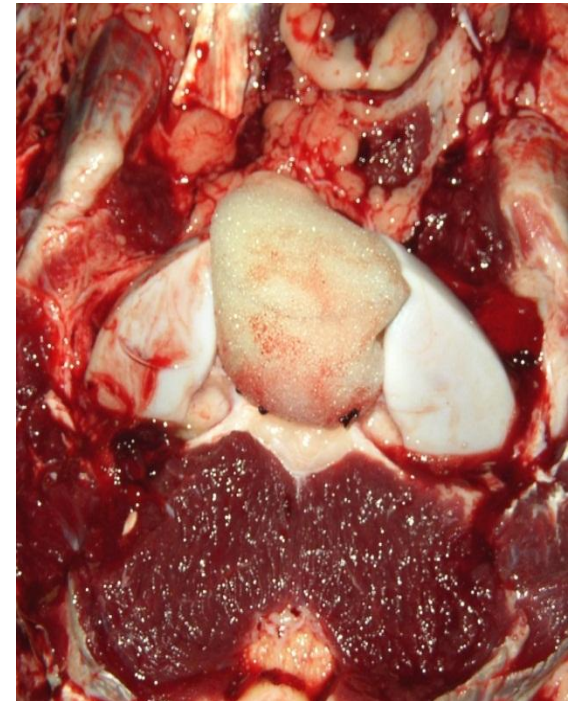
## Preventing cross-contamination at harvesting of bovine head meat - authorised cutting plants 3/4

- ✓ the harvesting of head meat shall be carried out in accordance with a **control system**, recognized by the competent authority, to ensure the prevention of possible contamination of head meat. The **system** shall include at least that:
  - all **heads shall be visually checked** for signs of contamination or damage and proper sealing before the harvesting of the head meat begins;
  - **head meat shall not be harvested from heads** which have not been **properly sealed**, where the **eyes are damaged** or which were otherwise damaged in a way which might result in **contamination of the head meat with central nervous tissue**. Head meat shall also not be harvested from any head where contamination from such heads is suspected;



## Preventing cross-contamination at harvesting of bovine head meat - authorised cutting plants 4/4

- **specific working instructions** shall be in place to prevent contamination of the head meat during transport and harvesting, in particular where the seal is lost or the eyes get damaged during the activity.



## Official control of harvesting of bovine head meat - critical points for official control 1/3



The person carrying out official control shall check that:

- ✓ the FBO has specific **working instructions** in place to prevent contamination of the head meat during transport and harvesting
- ✓ head meat is not harvested from the heads with **damaged eyes**.
- ✓ the frontal shot hole and foramen magnum is properly sealed with a stopper, where the heads are removed from the conveyor or hooks before harvesting the head meat;



## Official control of harvesting of bovine head meat - critical points for official control 2/3



- ✓ head meat is not harvested from the heads, which **are improperly sealed** with a stopper.
- ✓ if the harvesting of head meat is conducted in the slaughterhouse, then it has to be done in a dedicated area, physically separated from the other parts of the slaughter line.
- ✓ the heads intended for **transport to the cutting plant** are **suspended on a rack** during the storing period and the transport from the slaughterhouse to the authorised cutting plant.

# Official control of harvesting of bovine head meat - critical points for official control 3/3



- ✓ the FBO has prepared and has in place a **sampling plan** for the laboratory investigation of **contamination of the head meat** with the **central nervous system tissue**, whereby the appropriate implementation of measures for the minimization of contamination of head meat with the central nervous system tissue during head manipulation is inspected - respective laboratory results should be checked regularly.
- ✓ **the quantities of heads** of bovines, aged over 12 months (SRM) submitted to the category 1 processing plant correspond to the quantities of bovine heads accepted by the cutting plant on a particular day or in a particular period of time.
- ✓ **the FBO's commercial documents** are showing quantities of bovine heads that have been accepted into the cutting plant for harvesting and the quantities of bovine heads dispatched to the category 1 processing plant.

## Slaughtering procedures - measures concerning laceration of tissues

- ✗ **laceration of central nervous tissue** by means of an **elongated rod-shaped instrument** introduced into the cranial cavity **after stunning** or by means of **gas injection** into the cranial cavity in **connection with stunning** are **prohibited in bovine, ovine or caprine animals** whose **meat is intended for human or animal consumption**.
- ✓ these provisions are applicable to **all Member States**, regardless of their BSE risk status.



## Measures concerning mechanically separated meat (MSM)



- ✓ **Definition:** mechanically separated meat or 'MSM' is the product obtained by removing meat from flesh-bearing bones after boning, using mechanical means resulting in the loss or modification of the muscle fibre structure.
- ✓ **Mechanically separated meat derived from ruminants may contain certain SRM** (parts of the bones (vertebral column) and the periosteum (bone skin), bits of the spinal cord and dorsal root ganglia).
- ✗ So therefore **the use of bones or bone-in cuts of bovine, ovine and caprine animals for the production of mechanically separated meat (MSM) is prohibited in the EU.**



## Official control of other measures for prevention of cross-contamination with SRM



**The person carrying out official control shall check that:**

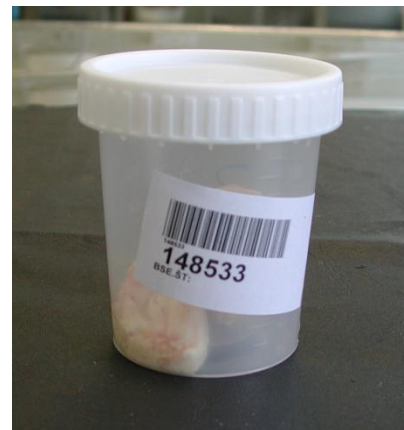
- ✓ the slaughtering procedures in slaughterhouse do not involve laceration of CNS tissues
- ✓ the bones or bone-in cuts of bovine, ovine and caprine animals are **not used** for the production of mechanically separated meat.

# Prevention of contamination at BSE sampling

***Protective glasses and gloves obligatory at sampling***

***Gloves and sampling equipment (specialized „spoons“) need to be replaced after each sample taken (if no BSE positives -„spoons“ can be re-used after proper cleaning)***

***Foramen magnum and frontal shot hole are to be sealed with stopper immediately after the sample collection***





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## Traceability is very important when applying BSE preventive measures in slaughterhouse...







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## Prevention of environmental contamination with SRM - wastewater treatment in slaughterhouses and other food establishments – ABP legislation requirement

- ✓ Slaughterhouses and other premises where SRM is removed shall have **pre-treatment process** for the retention and collection of animal material as an initial step in the treatment of wastewater.
- ✓ The equipment used in the pre-treatment process shall consist of drain traps or screens with apertures with a filter pore or a mesh size of no more than 6 mm in the downstream end of the process or equivalent systems that ensure that the **solid particles in the wastewater** passing through them are **no more than 6 mm**.

## Prevention of environmental contamination with SRM - wastewater treatment in slaughterhouses and other food establishments – ABP legislation requirement

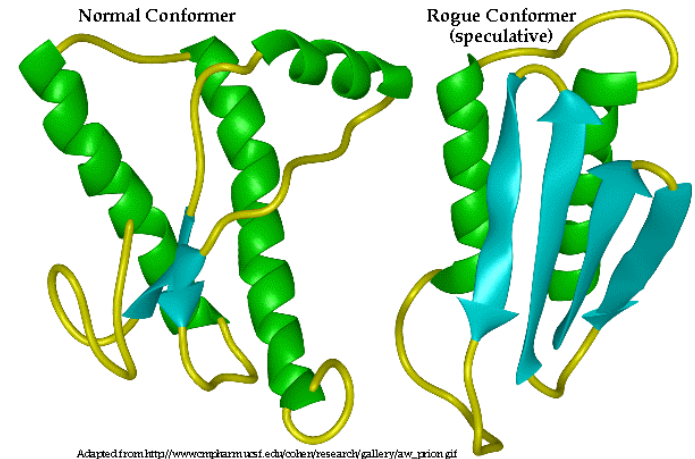
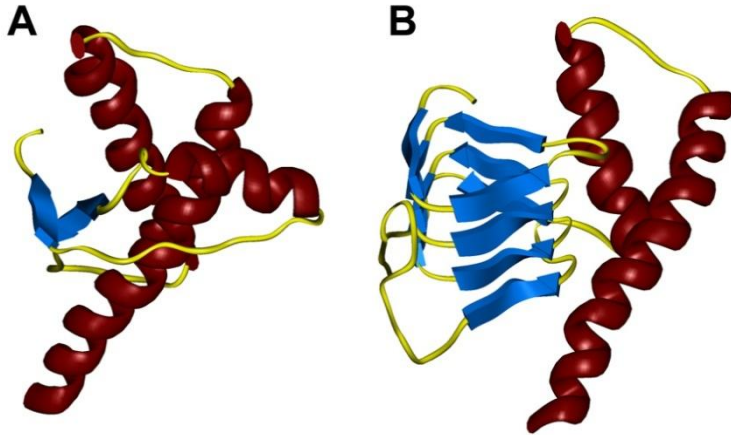
- ✓ Wastewater from the premises must enter a pre-treatment process which shall ensure that all wastewater has been filtered through the process before being drained off the premises. No grinding, maceration or any other processing or application of pressure shall be carried out which could facilitate the passage of solid animal material through the pre-treatment process.
- ✓ All **animal material retained in the pre-treatment process** in premises shall be collected and transported as **Category 1** and disposed of in accordance with ABP Regulation

## Trade and export of meat containing SRM

- **dispatch of bovine heads to another Member State** is allowed only after that Member State has agreed to receive the material and has approved the conditions of dispatch and transport.
- **carcasses, half carcasses or half carcasses cut into no more than three wholesale cuts, and quarters** containing no specified risk material *other than the vertebral column, including dorsal root ganglia*, may be dispatched from one Member State to another without the prior agreement.
- **exports outside the Community of heads and of fresh meat of bovine, ovine or caprine animals containing SRM is prohibited.**



# Thank you!



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# Any questions?





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## **Better Training for Safer Food BTSF**

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