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Specialized Section on Standardization of Meat

Revised Standard for Bovine Meat – Carcasses and Cuts

Submitted by the secretariat

Summary

The document is submitted to the Working Party for adoption as the revised United Nations Economic Commission for Europe (UNECE) standard for Bovine Meat – Carcasses and Cuts.

At its session in 2022, the Working Party agreed to initiate a review of the entire Standard for Bovine Meat – Carcasses and Cuts. During the first half of 2023, the standard was discussed in a rapporteur's group which proposed changes to the text on meat quality standards and the addition of two cuts. The revised text was discussed and agreed by the Specialized Section on Standardization of Meat (GE.11) at its thirty-first session on 28 and 29 August 2023 as contained in document ECE/CTCS/WP.7/GE.11/2023/3/Rev.1.

This document is based on document ECE/TRADE/C/WP.7/GE.11/2014/5, and integrates revisions approved by the Working Party in 2015 (addition of a cut) and in 2022 (integration of Harmonized System (HS) codes and modifications to the Russian language terminology in the multilingual table).



United Nations Economic Commission for Europe Standard Bovine Meat – Carcasses and Cuts

1. Introduction

1.1 United Nations Economic Commission for Europe standards for meat products

The purpose of United Nations Economic Commission for Europe (UNECE) standards for meat products is to facilitate trade by recommending an international language for use between buyer and seller. The language describes meat items commonly traded internationally and defines a coding system for communication and electronic trade. As the texts will be updated regularly, meat industry members who believe that additional items are needed or that existing items are inaccurate or no longer being traded are encouraged to contact the UNECE secretariat.

The text of this publication has been developed under the auspices of the UNECE Specialized Section on Standardization of Meat. It is part of a series of standards, which UNECE has developed or is planning to develop.

The following table contains the species for which UNECE standards exist and their code for use in the UNECE meat code (see chapter 4).

For further information please visit the dedicated UNECE web page at: <https://unece.org/trade/wp7/Meat-Standards>.

| <i>Species</i> | <i>Species code (data field 1)</i> |
|-------------------------|------------------------------------|
| Bovine (beef) | 10 |
| Bovine (veal) | 11 |
| Deer meat | 20 |
| Porcine (pork) | 30 |
| Ovine (sheep) | 40 |
| Caprine (goat) | 50 |
| Llama | 60 |
| Alpaca | 61 |
| Chicken | 70 |
| Turkey | 71 |
| Duck | 72 |
| Goose | 73 |
| Rabbit | 74 |
| Equine (horse) | 80 |
| Edible meat co-products | 90 |
| Retail meat cuts | 91 |

1.2 Scope

This standard recommends an international language for raw (unprocessed) beef (bovine) carcasses and cuts marketed as fit for human consumption. It provides purchasers with a variety of options for meat handling, packing and conformity assessment that conform to good commercial practice for meat and meat products intended to be sold in international trade.

To market beef (bovine) carcasses and cuts, the appropriate legislative requirements of food standardization and veterinary control must be complied with. The standard does not attempt to prescribe those aspects, which are covered elsewhere. Throughout the standard, such provisions are left for national or international legislation, or requirements of the importing country.

The standard contains references to other international agreements, standards and codes of practice that have the objective of maintaining the quality after dispatch and of providing guidance to Governments on certain aspects of food hygiene, labelling and other matters that fall outside the scope of this standard. Codex Alimentarius Commission Standards, Guidelines, and Codes of Practice should be consulted as the international reference for health and sanitation requirements.¹

1.3 Application

Contractors are responsible for delivering products that comply with all contractual and specification requirements and are advised to set up a quality control system designed to assure compliance.

For assurance that items comply with these detailed requirements, buyers may choose to use the services of an independent, unbiased third party to ensure product compliance with a purchaser's specified options. The standard includes illustrative photographs of carcasses and selected commercial parts/cuts to make it easier to understand the provisions.

1.4 Adoption and publication history

Following the recommendation of the Specialized Section, the Working Party on Standardization of Perishable Produce and Quality Development (now: Working Party on Agricultural Quality Standards) adopted the text for the first edition of this standard at its fifty-sixth session (TRADE/WP.7/2000/11).

In the second edition (agreed by the Specialized Section in May 2003, document TRADE/WP.7/GE.11/2003/12) a number of editorial changes were made. The standard was revised to be presented in five chapters in order to align it with the other standards. This alignment also included a reordering of the data fields in the bovine code and minor corrections to the carcasses and cuts descriptions.

The document ECE/TRADE/C/WP.7/2007/24 collected amendments and editorial changes to the second edition of the standard. In 2012, the 2007 edition of the standard was revised and updated and adopted by the Working Party at its sixty-eighth session in November 2012 (ECE/TRADE/C/WP.7/2012/7). Document ECE/TRADE/C/WP.7/GE.11/2014/5 contains editorial changes. Following this, partial revisions of the standard were undertaken in 2015 (addition of a cut), in 2022 (integration of the Harmonized System (HS) codes and modifications to the Russian language terminology in the multilingual table), and in 2023 (addition of two cuts and revision and expansion of section 5.7).

¹ <https://www.fao.org/fao-who-codexalimentarius>.

1.5 Alignment of the United Nations Economic Commission for Europe standard and the Harmonized Commodity Description and Coding System

The Harmonized Commodity Description and Coding System, generally referred to as the Harmonized System (HS), of the World Customs Organization (WCO) is an internationally recognized system of product classification that is used to describe trade in goods. It is used as a base for import duties and rules of origin, to describe products in freight documents and for statistical purposes. The Harmonized System is a nomenclature that classifies traded goods under a six-digit code. The first two digits establish the broader chapters, the next two digits constitute the headings and the last two digits the subheadings. The WCO HS codes and associated descriptions are an additional means of classifying meat products to the UNECE standard. However, the two can be aligned, with the WCO HS codes acting as a broader description and the UNECE standard providing a more detailed description.

For beef products WCO HS classifies products at the four-digit level between chilled and frozen and then at the six-digit level between boneless, bone-in and carcass bovine meat. Hence the UNECE refrigeration code can be used to determine the four-digit WCO HS code (see section 3.4 Refrigeration) and the UNECE cut code can be used to determine the six-digit WCO HS code (see section 5.1 Multilingual index of products). Those trading meat products under the UNECE standard can therefore use this document to determine the appropriate WCO HS code.

Beyond WCO HS, many countries extend the six-digit code string to an eight-digit tariff line (used to determine import duties) and beyond that to a ten-digit (or more) code for national statistical collection purposes. Hence, where suitable, those referencing the standard for the appropriate WCO HS code should also assess whether further classification is required.

The bovine WCO HS codes and descriptions are as follows:

| <i>Code</i> | <i>Description</i> |
|-------------|---|
| 02 | Meat and edible meat offal |
| 0201 | Meat of bovine animals, fresh or chilled |
| 020110 | – Carcasses and half-carcasses |
| 020120 | – Other cuts with bone in |
| 020130 | – Boneless |
| 0202 | Meat of bovine animals, frozen |
| 020210 | – Carcasses and half-carcasses |
| 020220 | – Other cuts with bone in |
| 020230 | – Boneless |

2. Minimum requirements

All meat must originate from animals slaughtered in establishments regularly operated under the applicable regulations pertaining to food safety and inspection.

Carcasses/cuts must be:

- Intact, taking into account the presentation
- Free from visible blood clots, or bone dust

- Free from any visible foreign matter (e.g. dirt, wood, metal particles)²
- Free of offensive odours
- Free of obtrusive bloodstains
- Free of unspecified protruding or broken bones
- Free of contusions having a material impact on the product
- Free from freezer-burn³
- Free of spinal cord (except for whole unsplit carcasses).⁴

Cutting, trimming, and boning of cuts shall be done with sufficient care to maintain cut integrity and identity, and avoid scores in the lean. Ragged edges shall be removed close to the lean surfaces. Except for cuts that are separated through natural seams, all cross-sectional surfaces shall form approximate right angles with the skin surface. Minimal amounts of lean, fat, or bone may be included on a cut from an adjacent cut. For boneless cuts, all bones, cartilage, and visible surface lymph glands shall be removed.

3. Purchaser-specified requirements

The following subsections define the requirements that can be specified by the purchaser together with the codes to be used in the UNECE code for purchaser requirements for beef (see chapter 4).

3.1 Additional requirements

Additional purchaser-specified requirements, which are either not accounted for in the UNECE code for purchaser requirements for beef (e.g. if code 9 “other” is used) or that provide additional clarification on the product or packing description shall be agreed between buyer and seller and be documented appropriately.

3.2 Species

The code for bovine (beef) in data field 1 as defined in section 1.1 is 10.

3.3 Product/cut

The four-digit product code in data field 2 is defined in chapter 5.

3.4 Refrigeration

Meat may be presented chilled, frozen or deep-frozen. Depending on the refrigeration method used, tolerances for product weight are to be agreed between buyer and seller. Throughout the supply chain, ambient temperatures should be such as to ensure uniform internal product temperatures as follows:

| <i>Refrigeration code (data field 4)</i> | <i>Category</i> | <i>Description (UNECE)</i> | <i>WCO HS codes</i> |
|--|-----------------|----------------------------|---------------------|
| 0 | Not specified | | |

² When specified by the purchaser, meat items will be subject to metal particle detection.

³ Freezer-burn is localized or widespread areas of irreversible surface dehydration indicated, in part or all, by changes from original colour (usually paler), and/or tactile properties (dry, spongy).

⁴ Removal of other high risk material can be specified under 3.5.6 Post-slaughter system.

| <i>Refrigeration code (data field 4)</i> | <i>Category</i> | <i>Description (UNECE)</i> | <i>WCO HS codes</i> |
|--|-----------------|---|------------------------------|
| 1 | Chilled | Internal product temperature maintained at not less than -1.5°C or more than $+7^{\circ}\text{C}$ at any time following the post-slaughter chilling process | 020130, 020120, 020110 |
| 2 | Frozen | Internal product temperature maintained at not exceeding -12°C at any time after freezing | 020230, 020220, 020210 |
| 3 | Deep-frozen | Internal product temperature maintained at not exceeding -18°C at any time after freezing | 020230, 020220, 020210 |
| 4–8 | Codes not used | | N/A |
| 9 | Other | | N/A |

3.5 Production history

3.5.1 Traceability

The requirements concerning production history that may be specified by the purchaser require traceability systems to be in place. Traceability requires a verifiable method of identification of bovine animals, carcasses, cuts and cartons at all stages of production. Traceability records must be able to substantiate the claims being made and the conformity of the procedures must be certified in accordance with provisions concerning conformity assessment requirements in section 3.12.

3.5.2 Bovine category

| <i>Bovine category code (data field 5)</i> | <i>Category</i> | <i>Description</i> |
|--|--|--|
| 0 | Not specified | |
| 1 | Intact male | Evidence of sex traits, greater than 24 months |
| 2 | Young intact male | Less than 24 months |
| 3 | Steer | Young castrate |
| 4 | Heifer | Young female, uncalved |
| 5 | Steer and/or heifer | Young castrate or young female, uncalved |
| 6 | Cow | Mature female |
| 7 | Young bovine | 6–12 months |
| 8 | Steer and/or heifer older than 24 months | Castrate/female (uncalved) |
| 9 | Other | |

3.5.3 Production system

The purchaser may specify a production system. In any case the production has to be in conformity with the regulations in force in the importing country. If no such regulation exists, the regulation of the exporting country shall be used.

| <i>Production system code (data field 6)</i> | <i>Category</i> | <i>Description</i> |
|--|-----------------|---|
| 0 | Not specified | |
| 1 | Intensive | Production methods that include restricted stocking, housing and feeding regimes developed to promote rapid growth |
| 2 | Extensive | Production methods that include relatively unrestricted access to natural forage for the majority of the animals' lives |
| 3 | Organic | Production methods that are conform to the legislation of the importing country concerning organic production |
| 4–8 | Codes not used | |
| 9 | Other | Can be used to describe any other production system agreed between buyer and seller |

3.5.4 Feeding system

The purchaser may specify a feeding system. In any case the feeding has to be in conformity with the regulations in force in the importing country. If no such regulation exists, the feeding system shall be agreed between buyer and seller.

| <i>Feeding system code (data field 7a)</i> | <i>Category</i> | <i>Description</i> |
|--|------------------------|--|
| 0 | Not specified | |
| 1 | Grain fed | Grain is the predominant component of the diet |
| 2 | Forage fed | Forage is the predominant component of the diet with some grain supplement |
| 3 | Exclusively forage fed | Forage is the only component of the diet |
| 4–8 | Codes not used | |
| 9 | Other | Can be used to describe any other system agreed between buyer and seller feeding |

3.5.5 Slaughter system

| <i>Slaughter system code (data field 8)</i> | <i>Category</i> | <i>Description</i> |
|---|-----------------|--|
| 0 | Not specified | |
| 1 | Conventional | Stunning prior to bleeding |
| 2 | Kosher | Appropriate ritual slaughter procedures used |
| 3 | Halal | Appropriate ritual slaughter procedures used |
| 4–8 | Codes not used | |
| 9 | Other | Any other authorized method of slaughter must be agreed between buyer and seller |

3.5.6 Post-slaughter system

| <i>Post-slaughter processing codes (data field 9)</i> | <i>Category</i> | <i>Description</i> |
|---|-----------------|--|
| 0 | Not specified | |
| 1 | Specified | Post-slaughter system specified as agreed between buyer and seller |
| 2–9 | Codes not used | |

Note 1: Removal of high risk material: Individual market requirements will have specific regulations governing the removal of the spinal cord. Regulations applicable to spinal cord removal will specify at what stage the carcass and/or cut must have the spinal cord removed. If required, there must be total removal.

Note 2: The following list describes some common post-slaughter processes that may be agreed between buyer and seller. These requirements are not included in the bovine specific coding.

- Dressing specification
- Electrical stimulation
- Method of carcass suspension
- Neck stringing
- Chilling regimes/maturation (24 hours)
- Maturation/ageing process (post 24 hours).

3.6 Fat limitations and evaluation of fat thickness in certain cuts

3.6.1 Fat thickness

The purchaser can specify the maximum fat thickness of carcasses, sides and cuts. Allowable fat limitations are as follows:

| <i>Fat thickness code (data field 10)</i> | <i>Category</i> |
|---|--|
| 0 | Not specified |
| 1 | Peeled, denuded, surface membrane removed |
| 2 | Peeled, denuded |
| 3 | Practically free (75 per cent lean/seam surface removed) |
| 4 | 3 mm maximum fat thickness or as specified |
| 5 | 6 mm maximum fat thickness or as specified |
| 6 | 13 mm maximum fat thickness or as specified |
| 7 | 25 mm maximum fat thickness or as specified |
| 8 | Chemical lean specified |
| 9 | Other |

3.6.2 Trimming

Trimming of external fat shall be accomplished by smooth removal along the contour of underlying muscle surfaces. Bevelled fat edges alone do not substitute for complete trimming of external surfaces when required. Fat thickness requirements may apply to surface fat (subcutaneous and/or exterior fat in relation to the item), and seam (intermuscular) fat as specified by the purchaser. Two definitions are used to describe fat trim limitations:

- Maximum fat thickness at any one point. Evaluated by visually determining the area of a cut that has the greatest fat depth, and measuring the thickness of the fat at that point.
- Average (mean) fat thickness. Evaluated by visually determining and taking multiple measurements of the fat depth of areas where surface fat is evident only. Average fat depth is determined by computing the mean depth in those areas.

Actual measurements of fat thickness (depth) are made on the edges of cuts by probing or scoring the overlying surface fat in a manner that reveals the actual thickness and accounts for any natural depression or seam which could affect the measurement. When a natural depression occurs in a muscle, only the fat above the portion of the depression, which is more than 19 mm (0.75 inch) in width is considered (known as bridging; see figure 1). When a seam of fat occurs between adjacent muscles, only the fat above the level of the involved muscles is measured (known as planing; see figure 1).

However, when fat limitations for “Peeled, denuded”⁵ or “Peeled, denuded, surface membrane removed”⁶ are specified, the bridging method shall be used for evaluating fat above a natural depression in a muscle and fat occurring between adjacent muscles.

[Figure 1 – photo of cut with bridging and planning indicated]

3.7 Bovine quality system

Bovine quality system

code

(data field 11)

Category

Description

| <i>code</i> <i>(data field 11)</i> | <i>Category</i> | <i>Description</i> |
|---------------------------------------|--------------------|--|
| 0 | Not specified | |
| 1 | Official standards | Quality classifications based on official standards at the exporting country |
| 2 | Company standards | Quality classifications based on sellers’ standards |
| 3 | Industry standards | Quality classifications based on industry-wide standards |
| 4–8 | Codes not used | |
| 9 | Other | Other quality classifications agreed between buyer and seller |

⁵ Peeled, denuded – the term “peeled” implies surface fat and muscle separation through natural seams so that the resulting cut’s seamed surface (“silver” or “blue tissue”) is exposed with remaining “flake” fat not to exceed 2.5 cm (1.0 inch) in the longest dimension and/or 3 mm (0.125 inch) in depth at any point. The term “denuded” implies all surface fat is removed so that the resulting cuts seamed surface (“silver” or “blue tissue”) is exposed with remaining “flake” fat not to exceed 2.5 cm (1.0 inch) in any dimension and/or 3 mm (0.125 inch) in depth at any point.

⁶ Peeled, denuded, surface membrane removed – when the surface membrane (“silver” or “blue tissue”) is required to be removed (skinned), the resulting cut surface shall expose at least 90 per cent lean with remaining “flake” fat not to exceed 3 mm (0.125 inch) in depth.

3.8 Meat and fat colour and pH

Normally, lean meat and fat, depending on the specific species, demonstrates a characteristic colour and pH. Any specific requirements regarding colour and pH need to be agreed between buyer and seller and are not provided for in the coding system.

3.9 Weight ranging of carcasses and cuts

| <i>Weight range code (data field 12)</i> | <i>Category</i> | <i>Description</i> |
|--|-----------------|--------------------|
| 0 | Not specified | |
| 1 | Specified | Range required |
| 2–9 | Codes not used | |

3.10 Packing, storage, and transport

3.10.1 Description and provisions

The primary packaging is the primary covering of a product and must be of food grade materials. The secondary packaging contains products packaged in their primary packaging. During the storage and transport, the meat must be packaged to the following minimum requirements:

Carcasses and quarters

- Chilled with or without packaging
- Frozen/deep-frozen packed to protect the products.

Cuts – chilled

- Individually wrapped (I.W.)
- Bulk packaged (plastic or wax-lined container)
- Vacuum-packed (VAC)
- Modified atmosphere packaging (MAP)
- Other.

Cuts – frozen/deep-frozen

- Individually wrapped (I.W.)
- Bulk packaged (plastic or wax-lined container)
- Vacuum-packed (VAC)
- Other.

The conditions of storage before dispatch and the equipment used for transportation shall be appropriate to the physical and in particular the thermal condition of the meat (chilled, chilled in a modified atmosphere, frozen, or deep-frozen) and shall be in accordance with the requirements of the importing country. Attention is drawn to the provisions of the UNECE Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be Used for Such Carriage (ATP) (<http://www.unece.org/trans/main/wp11/atp.html>).

3.10.2 Definition of codes

| <i>Packing code (data field 13)</i> | <i>Category</i> |
|---|---|
| 0 | Not specified |
| 1 | Carcases, half carcasses and quarters – without packaging |
| 2 | Carcases, half carcasses and quarters – with packaging |
| 3 | Cuts – individually wrapped (I.W.) |
| 4 | Cuts – bulk packaged (plastic or wax-lined container) |
| 5 | Cuts – vacuum-packed (VAC) |
| 6 | Cuts – modified atmosphere packaging (MAP) |
| 7–8 | Codes not used |
| 9 | Other |

3.11 Labelling information to be mentioned on or fixed to the marketing units of meat

3.11.1 Mandatory information

Without prejudice to national requirements of the importing countries, the following table contains information that must be listed on product labels, as designated by an “X”, for unpackaged carcasses, quarters, and cuts, and for packaged or packed meat items.

| <i>Labelling information</i> | <i>Unpackaged carcasses, quarters and cuts</i> | <i>Packaged or packed meat</i> |
|--|--|------------------------------------|
| Health stamp | X | X |
| Slaughter number or batch number | X | X |
| Slaughter date | X | |
| Packaging date | | X |
| Name of the product | | X |
| Use-by information as required by each country | | X |
| Storage methods: chilled, frozen, deep-frozen | | X |
| Storage conditions | | X |
| Details of packer or retailer | | X ^a |
| Quantity (number of pieces) | | X ^a |
| Net weight | | X ^a |

^a This information can also be provided in accompanying documentation.

3.11.2 Additional information

Additional information may be listed on product labels as required by the importing country’s legislation or at the buyer’s request or as chosen by the processor. If listed, such product claims must be verifiable (see also 3.5.1).

Examples of such product claims include the following:

- Country of birth
- Country(ies) of raising
- Country of slaughter
- Country(ies) of processing/cutting
- Country(ies) of packing
- Country of origin: in this standard the term “country of origin” is reserved to indicate that birth, raising, slaughter, processing/cutting and packing have taken place in the same country
- Production and processing systems
- Characteristics of the livestock, production and feeding systems
- Slaughtering procedures
- Processing/packaging date
- Quality/grade/classification
- pH, lean and fat colour.

3.12 Provisions concerning conformity assessment requirements

The purchaser may request third-party conformity assessment of the product’s quality/grade/classification, purchaser-specified options of the standard, and/or animal identification. Individual conformity assessments or combinations may be selected as follows:

Quality/grade/classification conformity assessment (quality): a third party examines and certifies that the product meets the quality level requested. The name of the third-party certifying authority and quality grade standard to be used must be designated as noted in 3.1.

Trade standard conformity assessment (trade standard): a third party examines and certifies that the product meets the purchaser-specified options as specified in this trade standard, except for quality level. The name of the third-party certifying authority must be designated as noted in 3.1. Optionally, the purchaser may indicate specific purchaser-specified options to be certified after the name of the third-party certifying authority.

Bovine or batch identification conformity assessment (bovine/batch ID): a third party certifies that the product meets specified requirements. The name of the third-party certifying authority and the requirements must be designated as noted in 3.1.

*Conformity assessment code
(data field 14)*

Category

| | |
|---|---|
| 0 | Not specified |
| 1 | Quality/grade/classification (quality) conformity assessment |
| 2 | Trade standard conformity assessment |
| 3 | Bovine/batch identification (bovine/batch ID) conformity assessment |
| 4 | Quality and trade standard conformity assessment |
| 5 | Quality and bovine/batch ID conformity assessment |
| 6 | Trade standard and bovine/batch ID conformity assessment |
| 7 | Quality, trade standard, and bovine/batch ID conformity assessment |

| <i>Conformity assessment code (data field 14)</i> | <i>Category</i> |
|---|-----------------|
| 8 | Code not used |
| 9 | Other |

4. United Nations Economic Commission for Europe code for purchaser requirements for beef

4.1 Definition of the code

The UNECE code for purchaser requirements for beef has 14 fields and 20 digits (3 digits unused) and is a combination of the codes defined in chapter 3.

| <i>Field no.</i> | <i>Name</i> | <i>Section</i> | <i>Code range</i> |
|------------------|-----------------------|----------------|-------------------|
| 1 | Species | 3.2 | 00–99 |
| 2 | Product/cut | 5 | 0000–9999 |
| 3 | Field not used | – | 00–99 |
| 4 | Refrigeration | 3.4 | 0–9 |
| 5 | Category | 3.5.2 | 0–9 |
| 6 | Production system | 3.5.3 | 0–9 |
| 7a | Feeding system | 3.5.4 | 0–9 |
| 7b | Field not used | – | 0–9 |
| 8 | Slaughter system | 3.5.5 | 0–9 |
| 9 | Post-slaughter system | 3.5.6 | 0–9 |
| 10 | Fat thickness | 3.6.1 | 0–9 |
| 11 | Quality | 3.7 | 0–9 |
| 12 | Weight range | 3.9 | 0–9 |
| 13 | Packing | 3.10.2 | 0–9 |
| 14 | Conformity assessment | 3.12 | 0–9 |

4.2 Example

The following example describes a chilled, vacuum-packed, brisket that was trimmed to 3 mm max fat thickness from a steer or heifer raised in an organic production system, forage fed and slaughtered conventionally.

This item has the following code: 10164300153201040050.

| <i>Field no.</i> | <i>Name</i> | <i>Requirement</i> | <i>Value</i> |
|------------------|----------------|--------------------|--------------|
| 1 | Species | Beef | 10 |
| 2 | Product/cut | Brisket | 1643 |
| 3 | Field not used | – | 00 |

| <i>Field no.</i> | <i>Name</i> | <i>Requirement</i> | <i>Value</i> |
|------------------|-----------------------|----------------------------|--------------|
| 4 | Refrigeration | Chilled | 1 |
| 5 | Category | Steer and/or heifer | 5 |
| 6 | Production system | Organic | 3 |
| 7a | Feeding system | Forage fed | 2 |
| 7b | Field not used | – | 0 |
| 8 | Slaughter system | Conventional | 1 |
| 9 | Post-slaughter system | Not specified | 0 |
| 10 | Fat thickness | 3 mm maximum fat thickness | 4 |
| 11 | Quality | Not specified | 0 |
| 12 | Weight range | Not specified | 0 |
| 13 | Packing | Cuts – vacuum-packed (VAC) | 5 |
| 14 | Conformity assessment | Not specified | 0 |

The corresponding WCO HS code for this example would be 020120 (Meat of bovine animals, Fresh or chilled, Cuts with bone in (other than half or whole carcasses)) as it is chilled (UNECE refrigeration value 1/WCO HS heading 0201) and bone-in (UNECE cut value 1643/WCO HS subheading 020120).

5. Carcasses and cuts descriptions

5.1 Multilingual index of products

Codes for bone-in cuts start with 1 and codes for boneless cuts with 2.

| <i>English</i> | <i>Item</i> | <i>WCO HS codes</i> | <i>French</i> | <i>Russian</i> | <i>Spanish</i> | <i>Chinese</i> |
|--------------------------------|---------------|---------------------|--------------------------------|--|-------------------------------|----------------|
| Bone-in | | | Avec os | На кости | Con hueso | 帶骨牛肉 |
| Brisket | 1643 | 020120, 020220 | Poitrine sans plat de côtes | Грудино-реберный отруб на кости | Pecho | 胸肉 |
| Brisket point end (bone-in) | 1650- 1653 | 020120, 020220 | | Передняя часть грудино-реберного отруба (на кости) | Punta de pecho (Con hueso) | |
| Brisket navel end (bone-in) | 1660- 1665 | 020120, 020220 | | Задняя часть грудино- реберного отруба (на кости) | | |
| Brisket point (sternum) | 1674 | 020120, 020220 | Gros bout de poitrine | Грудной отруб (sternum) | Punta de pecho | 前胸肉 |
| Brisket rib plate | 1673 | 020120, 020220 | Poitrine | Реберная часть грудино-реберного отруба | Asado ventral | 胸肋肉 |

| <i>English</i> | <i>Item</i> | <i>WCO HS codes</i> | <i>French</i> | <i>Russian</i> | <i>Spanish</i> | <i>Chinese</i> |
|---|-------------|---------------------|-----------------------------|---|----------------------------|----------------|
| Butt | 1500-1503 | 020120, 020220 | Cuisse entière | Тазобедренный отруб без верхней части | Rueda | 臀腿肉 |
| Butt – shank-off | 1510 | 020120, 020220 | Cuisse sans jarret | Тазобедренный отруб без верхней части и голяшки | Rueda sin garrón | 去腱臀腿肉 |
| Butt and rump | 1502 | 020120, 020220 | Cuisse et Rumsteck | Тазобедренный отруб | Rueda con cuadril | 臀部肉 |
| Butt square cut | 1520 | 020120, 020220 | Cuisse coupe droite | Тазобедренный отруб без верхней части, квадратный | Rueda corte cuadrado | 方切臀腿肉 |
| Carcase | 1001 | 020110, 020210 | Carcasse entière | Цельная туша | Canal | 胴体 |
| Chuck roll – long cut (bone-in) | 1622 | 020120, 020220 | | Подлопаточный отруб длинный (на кости) | | |
| Chuck – square cut | 1617 | 020120, 020220 | Basse-côtes | Подлопаточный отруб квадратный | Aguja | 方切肩肉 |
| Full rib set | 1599 | 020120, 020220 | | Реберный отруб полный | | |
| Forequarter | 1063 | 020110, 020210 | Quartier avant droit | Передняя четвертина | Cuarto delantero | 前四分体 |
| Forequarter and flank (pistola forequarter) | 1050 | 020110, 020210 | Quartier avant CAPA | Передняя четвертина с пашиной (Передняя четвертина — пистолетный отруб) | Cuarto delantero con vacío | 枪形前四分体 |
| Forequarter/hindquarter shin – shank | 1680 | 020120, 020220 | Jarret avant/Jarret arrière | Передняя/задняя рулька-голяшка | Brazuelo/garrón | 前/后腱子肉 |
| Hindquarter | 1010 | 020110, 020210 | Quartier arrière droit | Задняя четвертина | Cuarto trasero | 后四分体 |
| Loin (bone-in) | 1525 | 020120, 020220 | | Спинно-поясничный отруб (на кости) | Bifes con hueso | |
| Neck | 1630 | 020120, 020220 | Collier | Шейный отруб | Cogote | 颈肉 |
| Pistola hindquarter | 1020 | 020110, 020210 | Quartier arrière pistola | Задняя четвертина — пистолетный отруб | Pistola | 枪形后四分体 |
| Ribs | 1597 | 020120, 020220 | | Реберный отруб | Costillas | |

| <i>English</i> | <i>Item</i> | <i>WCO HS codes</i> | <i>French</i> | <i>Russian</i> | <i>Spanish</i> | <i>Chinese</i> |
|----------------------------------|--------------|---------------------|------------------------------------|---|---|----------------|
| Ribs-prepared | 1604 | 020120, 020220 | Milieu de train de côtes | Спинной отруб (на кости) | Espinazo preparado | 脊排 |
| Rump and loin | 1540 | 020120, 020220 | Rumsteck et aloyau | Тазобедренный отруб | Rump and loin (in Argentina) or Espinazo con cuadril (in Uruguay) | 臀腰部肉 |
| Short ribs | 1694 | 020120, 020220 | Plat de côtes | Задняя верхняя часть реберного отруба | Asado corto (Porción de asado) | 肋排 |
| Shortloin | 1550 | 020120, 020220 | Faux-filet | Поясничный отруб | Bifes angostos | 腰脊肉 |
| Loin with full tenderloin | 1556 | 020120, 020220 | | Спинно- поясничный отруб с вырезкой | | |
| Shoulder and foreleg | 1626 | 020120, 020220 | | Лопаточный отруб с голяшкой | Delantero completo | |
| Side | 1000 | 020110, 020210 | Demi-carcasse | Полутуша | Media canal or Media res | 半胴体 |
| Spare ribs | 1695 | 020120, 020220 | Plat de côtes | Реберный отруб зачищенный | Costillar | 仔排 |
| Boneless | | | Sans Os | Бескостные | Sin hueso | 剔骨牛肉 |
| Blade (clod) | 2300 | 020130, 020230 | Macreuse à bifteck + paleron | Лопаточный отруб (бескостный) | Paleta | 肩胛肉 |
| Blade bolar | 2302 | 020130, 020230 | Boule de macreuse | Трехглавая мышца | Centro de carnaza de paleta | 保乐肩肉 |
| Blade oyster | 2303 | 020130, 020230 | Paleron | Заостренная и дельтовидная мышцы | Marucha | 牡蛎肉 |
| Blade undercut | 2304 | 020130, 020230 | Dessus de palette | Подлопаточная мышца | Paleta sin tapa | 肩胛内肉 |
| Bottom sirloin butt, ball tip | 2205 | 020130, 020230 | | Шаровидные мышцы нижнего края верхней части тазобедренного отруба | Cuadril | |
| Brisket | 2323 | 020130, 020230 | Poitrine sans os | Грудино-реберный отруб (бескостный) | Pecho | 胸肉 |
| Brisket point end (boneless) | 2330 2333 | 020130, 020230 | | Передняя часть грудино-реберного отруба (бескостная) | | |

| English | Item | WCO HS codes | French | Russian | Spanish | Chinese |
|------------------------------|--------------|-------------------|--|--|-------------------------|---------|
| Brisket navel end (boneless) | 2340 2345 | 020130, 020230 | | Задняя часть грудино- реберного отруба (бескостная) | | |
| Brisket deckle off | 2358 | 020130, 020230 | Morceau de poitrine sans os épluché | Грудино-реберный отруб бескостный без кромки | Pecho sin tapa | 精修胸肉 |
| Brisket navel plate | 2473 | 020130, 020230 | Flanchet/ tendron sans os | Завиток | Falda | 后胸肉 |
| Brisket point end deckle off | 2353 | 020130, 020230 | Gros bout de poitrine sans os épluché | Передняя часть грудино-реберного отруба бескостная без кромки | Pecho corto sin tapa | 精修前胸肉 |
| Butt set | 2483 | 020130, 020230 | Ensemble cuisse : T de T, semelle et TG | Набор из тазобедренного отруба | Cortes de la rueda | 臀腿肉系列 |
| Chuck crest | 2278 | 020130, 020230 | Bosse du cou | Ромбовидная мышца | Giba | 上脑盖 |
| Chuck eye roll | 2268 | 020130, 020230 | Morceau de basse-côte sans os | Подлопаточный отруб бескостный зачищенный | Aguja sin tapa | 精修上脑 |
| Chuck roll | 2275 | 020130, 020230 | Basse-côte sans os | Подлопаточный отруб бескостный | Aguja | 上脑 |
| Chuck eye | 2264 | 020130, 020230 | | Внутренняя часть подлопаточного отруба | | |
| Chuck roll – long cut | 2289 | 020130, 020230 | Collier basse- côte sans os | Подлопаточный отруб бескостный длинный | Aguja larga | 长切上脑 |
| Chuck tender | 2310 | 020130, 020230 | Jumeau à bifteck | Предостная мышца | Chingolo | 嫩肩肉 |
| Cube roll (rib eye roll) | 2240 | 020130, 020230 | Noix d'entrecôte | Спинной отруб бескостный | Bife ancho sin tapa | 精修眼肉 |
| Cutaneus trunci (rose) | 2196 | 020130, 020230 | Peaucler du tronc | Подкожная мышца туловища (<i>Cutaneus trunci</i>) | Matambre | 皮肤 |
| Eye of rump | 2093 | 020130, 020230 | Coeur de rumsteck | Средняя ягодичная мышца | Corazón de cuadril | 臀腰肉心 |
| Eye round | 2040 | 020130, 020230 | Rond de gîte noix | Полусухожильная мышца | Peceto | 小米龙 |
| Flank steak | 2210 | 020130, 020230 | Bavette de flanchet | Прямая мышца живота | Bife de vacio | 牛腩排 |

| <i>English</i> | <i>Item</i> | <i>WCO HS codes</i> | <i>French</i> | <i>Russian</i> | <i>Spanish</i> | <i>Chinese</i> |
|-------------------------|-------------|---------------------|--|--|--------------------------------------|----------------|
| Shin – shank | 2360 | 020130, 020230 | Jarret avant/jarret arrière sans os | Передняя/задняя рулька-голяшка (бескостные) | Brazuelo/ Garrón | 前后腱子肉 |
| Shin special trim | 2365 | 020130, 020230 | Découpe spéciale du jarret | Рулька особой разделки | | |
| Heel muscle | 2364 | 020130, 020230 | Nerveux de gîte noix | Нижняя часть тазобедренного отруба | Tortuguita | 蹄肉 |
| Inside | 2010 | 020130, 020230 | Tende de tranche | Внутренняя часть тазобедренного отруба | Nalga de adentro | 臀肉 |
| Inside cap | 2012 | 020130, 020230 | Dessus de tranche | Тонкая мышца | Tapa de nalga | 臀肉盖 |
| Inside – cap off | 2011 | 020130, 020230 | Tende de tranche sans dessus de tranche | Внутренняя часть тазобедренного отруба без тонкой мышцы | Nalga de adentro sin tapa | 去盖臀肉 |
| Inside meat | 2035 | 020130, 020230 | Tende de tranche sans dessus de tranche PAD | Жилованное мясо внутренней части тазобедренного отруба | Nalga de adentro sin tapa al rojo | 精修臀肉 |
| Inside skirt | 2205 | 020130, 020230 | Fausse bavette | Поперечная мышца живота | Entraña fina | 内裙肉 |
| Internal flank plate | 2203 | 020130, 020230 | Bavette d'loyau | Внутренняя косая мышца живота | Bife grande de vacío | 内腹肉 |
| Knuckle | 2070 | 020130, 020230 | Tranche grasse | Боковая часть тазобедренного отруба зачищенная | Bola de lomo | 膝圆 |
| Loin (boneless) | 2146 | 020130, 020230 | | Спинно- поясничный отруб (бескостный) | | |
| Neck | 2280 | 020130, 020230 | Collier sans os | Шейный отруб (бескостный) | Cogote | 颈肉 |
| Outside | 2030 | 020130, 020230 | Semelle sans nerveux | Наружная часть тазобедренного отруба | Nalga de afuera | 米龙 |
| Outside flat | 2050 | 020130, 020230 | Gîte noix | Двуглавая мышца | Cuadrada | 大米龙 |
| Outside meat | 2033 | 020130, 020230 | Gîte noix et rond de gîte PAD | Жилованное мясо наружной части тазобедренного отруба | Nalga de afuera al rojo | 米龙肉 |
| Pectoral meat | 2329 | 020130, 020230 | | Грудной отруб (бескостный) | | |

| <i>English</i> | <i>Item</i> | <i>WCO HS codes</i> | <i>French</i> | <i>Russian</i> | <i>Spanish</i> | <i>Chinese</i> |
|------------------------------------|-------------|---------------------|---|--|-----------------------------------|----------------|
| Rump | 2090 | 020130, 020230 | Rumsteck | Верхняя часть тазобедренного отруба | Cuadril con colita | 臀腰肉 |
| D-rump | 2100 | 020130, 020230 | Rumsteck coupe D | D-отруб верхней части тазобедренного отруба | | |
| Rump cap | 2091 | 020130, 020230 | Aiguillette de rumsteck | Ягодично- двуглавая мышца | Tapa de cuadril (Picaña) | 臀腰肉盖 |
| Rib eye cap meat | 2229 | 020130, 020230 | | Мясо верхней части спинного отруба бескостного | | |
| Bottom sirloin butt | 2081 | 020130, 020230 | | Нижний край верхней части тазобедренного отруба | | |
| Silverside | 2020 | 020130, 020230 | Semelle entière | Задняя часть тазобедренного отруба | Nalga de afuera con tortuguita | 粗米龙 |
| Spencer roll | 2230 | 020130, 020230 | Entrecôte sans os avec dessus de côte | Спинной отруб бескостный «спенсер» | Bife ancho | 眼肉 |
| Striploin | 2140 | 020130, 020230 | Faux-filet | Поясничный отруб (бескостный) | Bife angosto | 外脊 (西冷) |
| Shoulder tender | 2306 | 020130, 020230 | | Большая круглая мышца | | |
| Tenderloin | 2150 | 020130, 020230 | Filet avec chaînette | Вырезка | Lomo | 里脊 (牛柳) |
| Tenderloin side strap off | 2160 | 020130, 020230 | Filet sans chaînette | Вырезка без малой поясничной мышцы | Lomo sin cadena | 修清里脊 |
| Thick flank | 2060 | 020130, 020230 | Tranche grasse + aiguillette baronne | Боковая часть тазобедренного отруба | Bola de lomo con colita | 粗膝圆 |
| Thick skirt (hanging tender) | 2180 | 020130, 020230 | Onglet | Толстая диафрагма (мясистая часть диафрагмы) | Entraña gruesa | 厚裙肉 |
| Thin flank | 2200 | 020130, 020230 | Bavettes | Пашина | Vacio | 腹肉 |
| Thin skirt (outside skirt) | 2190 | 020130, 020230 | Hampe | Тонкая диафрагма (наружная диафрагма) | Entraña fina | 薄裙肉 |
| Top sirloin (top butt) | 2120 | 020130, 020230 | Rumsteck et partie | Верхний край верхней части | Cuadril | 上臀腰肉 |

| English | Item | WCO HS codes | French | Russian | Spanish | Chinese |
|--------------------------|------|----------------|------------------------------|----------------------------------|---------------------------|---------|
| | | | d'aiguillette barone | тазобедренного отруба | | |
| Tri-tip | 2131 | 020130, 020230 | Partie d'aiguillette baronne | Мышца-напрягатель широкой фасции | Colita de cuadril | 下臀腰肉 |
| Manufacturing bulk packs | | 020130, 020230 | Minerai de bœuf | Мясной блок | Carne sin hueso en bloque | 加工牛肉 |

5.2 Bovine side skeletal diagram

[Picture: OTHERS: skel_col – but text and lines and gland locations need to be added]

5.3 Standard bovine primal cuts flow chart

[Picture: MEATCUTS b-carcase1, b-carcase2 and assorted meat cuts on white background]

5.4 Bovine meat cuts

Side 1000

The carcass is split into sides down the length dividing the spinal column.

To be specified:

- Diaphragm: retained or removed.
- Kidney retained.
- Kidney fats and channel fats: retained, partial or completely removed.
- Standard carcass trim to be defined.

Note: Item number 1001 for the whole carcass.

HS: 020110, 020210

[Picture B-carcass 1]

Hindquarter 1010

Hindquarter is prepared from a side (1000) by the separation of the hindquarter and forequarter by a cut along the specified rib, at right angles to the vertebral column through to the ventral portion of the flank.

To be specified:

- Rib number required (0 to 10).
- Diaphragm retained or removed.
- Kidney retained or removed.
- Kidney/channel fat retained or removed.

HS: 020110, 020210

[Picture B1010]

Pistola hindquarter 1020

Pistola hindquarter is prepared from a hindquarter (1010) by the removal of the thin flank (2200), lateral portion ribs and portion of the navel end brisket. A cut is made commencing at the superficial inguinal lymph node separating the *M. rectus abdominus* and following the contour of the hip, running parallel to the bodies of the vertebrae approximately 50 mm from the *M. longissimus dorsi* (eye muscle) to the specified rib.

To be specified:

- Rib number required (1 to 10).
- Diaphragm retained or removed.
- Kidney retained or removed.
- Kidney/channel retained or removed.
- Specified rib length from eye muscle.
- Flank steak, inside skirt and internal flank plate retained.

Note: Pistola hindquarter is frequently prepared from a side (1000).

HS: 020110, 020210

[Picture B1020]

Butt and rump 1502

Butt and rump is prepared from a hindquarter (1010) with the removal of the tenderloin (2150) in one piece from the ventral surface of the lumbar vertebrae and the lateral surface of the ilium. The loin is removed by a cut at the junction of the lumbar and sacral vertebrae at a point cranial to the tuber coxae to the ventral portion of the flank.

HS: 020120, 020220

[Picture U1502]

Butt 1500

Butt is prepared from a hindquarter (1010) by a cut commencing at the subiliac lymph node passing just cranial of the hip joint to the ischia lymph node.

To be specified:

- Superficial inguinal and subiliac lymph node retained or removed.
- Portion of aitch bone and overlying fibrous tissue retained or removed.
- Tri-tip (2131) removed.

HS: 020120, 020220

[Picture U1500]

Butt 1503

Butt is prepared from a hindquarter (1010) by a straight cut at the cranial end beginning at the junction of the last sacral and first coccygeal vertebrae, exposing the ball of the femur without severing the protuberance. No more than two vertebrae shall remain on the butt.

To be specified:

- Superficial inguinal and subiliac lymph node retained or removed.
- Portion of aitch bone and overlying fibrous tissue retained or removed.

HS: 020120, 020220

[Picture U1503]

Butt – shank-off 1510

Butt shank off is prepared from a butt (1500–1503) by the removal of the tibia (at the stifle joint), the tarsal bone (excluding the calcaneal tuber) and the extensor group of muscles along the seam, leaving the *M. gastrocnemius* (heel muscle) in situ.

To be specified:

- Superficial inguinal and subiliac lymph node retained or removed.

HS: 020120, 020220

[Picture U1510]

Butt square cut 1520

Butt square cut is prepared from a butt (1500–1503) by a cut through the stifle joint, parallel to the base, removing the tibia, tarsal bones and surrounding meat.

HS: 020120, 020220

[Picture U1520]

Rump and loin 1540

Rump and loin is prepared from a hindquarter (1010) by removing the butt (1500). The thin flank (2200) is removed at a point cranial to the tuber coxae and approximately 75 mm from *M. longissimus dorsi* (eye muscle) and running parallel to the body of the vertebrae to the specified rib.

To be specified:

- Rib number required (0 to 8 ribs).
- Distance from eye muscle.
- Diaphragm retained or removed.
- Kidney and kidney fat retained or removed.

Item number 1538 (6–8 ribs)

Note: This cut can also be prepared from a pistola hindquarter (1020).

HS: 020120, 020220

[Picture U1540]

Loin (bone-in) 1525

Loin is prepared from a pistola hindquarter (1020) by the removal of the tenderloin (2150). The loin is removed from the butt and rump (1502) by a cut at the junction of the lumbar and sacral vertebrae.

To be specified:

- Rib number required.
- Scapular cartilage retained or removed.

HS: 020120, 020220

[Picture U1525]

Shortloin 1550

Shortloin is prepared from a hindquarter (1010) by a straight cut at the junction of the lumbar and sacral vertebrae to a point cranial to the tuber coxae to the ventral portion of the flank. The thin flank (2200) is removed at a point cranial to the tuber coxae and approximately 50 mm to 75 mm from *M. longissimus dorsi* (eye muscle) and running parallel to the body of the vertebrae to the specified rib.

To be specified:

- Rib number required (0 to 3 ribs).
- Distance from eye muscle.
- Diaphragm retained or removed.
- Kidney retained or removed.
- Kidney fat retained or removed.

HS: 020120, 020220

[Picture U1552]

Loin (bone-in) with full tenderloin 1556

Loin is prepared from a pistola hindquarter (1020) including the tenderloin (2150). The loin is removed from the butt and rump (1502) by a cut at the junction of the lumbar and sacral vertebrae.

To be specified:

- Rib number required (maximum – caudal to the 5th rib).
- Scapular cartilage retained or removed.
- Distance from the eye muscle.

HS: 020120, 020220

[Picture – see 2015 ed.]

Forequarter 1063

Forequarter is prepared from a side (1000) by the separation of the forequarter and hindquarter (1010) by a cut along the specified rib and at right angles to the vertebral column through to the ventral portion of the flank.

To be specified:

- Rib number required (5 to 13 ribs).
- Diaphragm retained or removed.

HS: 020110, 020210

[Picture U1060]

*Forequarter and flank 1050
(Pistola forequarter)*

Forequarter and flank is prepared from a side (1000) and consists of a forequarter cut to the specified rib after the removal of a hindquarter pistola trim (1020) from a side. The 13 rib brisket (1643)/full flank remains attached to the forequarter.

To be specified:

- Forequarter rib numbers (5 to 9 ribs).
- Diaphragm retained or removed.
- Rib length distance from eye muscle.
- The flank portion removed along the contour of the 13th rib.

HS: 020110, 020210

[Picture U1050]

Brisket 1643

Brisket is prepared from a 13-rib forequarter (1063) by a straight cut that commences at the junction of the 1st rib and 1st sternal segment to the reflection of the diaphragm at the 11th rib and continuing to the 13th rib.

To be specified:

- Rib number required (10 to 13 ribs).
- Diaphragm retained or removed.
- Specify parallel cutting line and brisket removal point.

Note: Brisket set: see specification details code item numbers 1673, 1674 and 2473.

HS: 020120, 020220

[Picture U1643, U1673_74_2473]

Brisket point end 1650–1653

(1650 – 5 ribs, 1651 – 4 ribs, 1652 – 6 ribs, 1653 – 7 ribs)

Brisket point is prepared from a brisket (item 1643) by the removal of the navel end by following the caudal edge of the specified rib.

To be specified:

- Rib number required.

Brisket point end (boneless) 2330–2333

(2330 – 5 ribs, 2331 – 4 ribs, 2332 – 6 ribs, 2333 – 7 ribs)

HS: 020130, 020230

[Picture U2473]

Brisket navel end (bone-in) 1660–1665

(1660 – 5 ribs, 1661 – 4 ribs, 1662 – 6 ribs, 1663 – 7 ribs, 1664 – 8 ribs, 1665 – 9 ribs)

Navel end is prepared from a brisket (1643) by the removal of the point end by following the caudal edge of the specified rib.

To be specified:

- Rib number required.

Brisket navel end (boneless) 2341–2345

(2342 – 6 ribs, 2340 – 5 ribs, 2341 – 4 ribs, 2343 – 7 ribs, 2344 – 8 ribs, 2345 – 9 ribs)

HS: 020120, 020220

[Picture U1662]

Brisket rib plate 1673

Brisket rib plate is prepared from a 13-rib brisket (1643). The sternum and associated muscles are removed by a cut commencing at the 1st sternal segment cutting through the costal cartilage to and including the cartilage at the 7th rib removing the sternum and associated attached muscle. A cut is made following the ventral contour of the rib cartilage from the 7th rib to the 13th rib of the forequarter removing the boneless ventral portion of the navel (*M. transversus abdominis*) and associated muscles. The brisket rib plate can consist of the following optional rib numbers: (4th to 13th rib – 1st to 10th rib inclusive).

To be specified:

- Rib numbers and rib location.

- Length of rib from dorsal cutting line.
- Diaphragm retained or removed.

HS: 020120, 020220

[Picture U1673]

Brisket point (sternum) 1674

The brisket point (sternum) and associated muscles are removed from a brisket (1643) by a cut commencing at the 1st sternal segment cutting through and along the costal cartilage to and including the cartilage at the 7th rib. The sternum is removed with associated muscle attached. (Major muscles *M. pectoralis superficialis*, *M. pectoralis profundus* and *M. rectus thoracis*).

To be specified:

- *M. transversus thoracis* retained or removed.
- *M. pectoralis profundus* muscle removed.

HS: 020120, 020220

[Picture U1674]

Brisket navel plate 2473

Brisket navel end plate is prepared from a brisket (1643) by a cut following the ventral contour of the costal cartilage from the 7th rib to the 13th rib of the forequarter removing the boneless ventral portion of the navel end. Major muscles are *M. transversus abdominis* and *M. rectus abdominis*. The white fibrous tissue on the ventral edge (*linea alba*) is removed.

To be specified:

- *Peritoneum* removed or retained.

HS: 020130, 020230

[Picture U2473]

Full rib set 1599

Full rib set is prepared from a forequarter (1063). The shoulder and foreleg (1626) is removed. Rib set is removed by a cut commencing at the dorsal end of the 1st rib and cut parallel to the vertical column. The diaphragm skirt is retained.

To be specified:

- Rib number to be agreed between buyer and seller.
- Width of ribs.
- Diaphragm skirt remove.

HS: 020120, 020220

[Picture U1599]

Ribs 1597

Ribs are prepared from the pistola forequarter (1049). To remove the ribs from the pistola forequarter a straight cut is made between and along contour of the 5th and 6th rib to the ventral edge separating the rib portion from the forequarter. The flank is removed by a cut along the contour of the 13th rib to the ventral edge.

To be specified:

- Rib number to be agreed between buyer and seller.
- Width of ribs.

- Diaphragm skirt retained or removed.

HS: 020120, 020220

[Picture U1659]

Chuck roll – long cut (bone-in) 1622

Chuck roll – long cut (bone-in) is prepared from a forequarter (items 1049) after the removal of the shoulder foreleg (1626), full rib set (1599), and the ribs prepared (1604).

The ventral cutting line is approximately 75 mm from the eye muscle (*M. longissimus dorsi*) and cut parallel to the vertebral column and includes 7 cervical vertebrae and 4 to 6 thoracic vertebrae and corresponding rib numbers. The *M. trapezius* and the *M. rhomboideus* are removed and the undercut (*M. subscapularis*) remains firmly attached.

Points requiring specification:

- *M. trapezius* retained.
- Rib number required.
- *Ligamentum nuchae* removed.
- Undercut (*M. subscapularis*) removed.

HS: 020120, 020220**[Picture B1622]**

Chuck – square cut 1617

Chuck – square cut is prepared from a forequarter (1063) after the removal of the brisket (1643) and ribs prepared (1604). Neck (1630) is removed from the forequarter by a straight cut parallel and cranial to the 1st rib and through the junction of the 7th cervical and 1st thoracic vertebrae. The chuck – square cut to consist of 4 to 6 ribs and the ventral cutting line is 75 mm from the eye muscle (*M. longissimus dorsi*) and parallel to the vertebral column to the 1st rib. The fat deposit located at the dorsal edge is removed along with loose muscle tissue.

To be specified:

- Rib number required (4 to 6 ribs).
- Distance from eye muscle.
- *M. subscapularis* retained or removed.
- *Ligamentum nuchae* retained or removed.

HS: 020120, 020220

[Picture U1617_1, U1617_2]

Neck 1630

Neck is removed from the forequarter (1063) by a straight cut parallel and cranial to the 1st rib and through the junction of the 7th cervical and 1st thoracic vertebrae.

To be specified:

- *Ligamentum nuchae* retained or removed.

HS: 020120, 020220

[Picture U1630_1, U1630_2]

Ribs – prepared 1604

Ribs prepared is prepared from a forequarter (1063) after the removal of the brisket (1643) and chuck – square cut (1617). Short ribs portion (1694) is removed at a distance of 75 mm from the *M. longissimus dorsi* (eye muscle) at the loin (caudal) end, parallel with the vertebral column (cranial) to the specified rib.

The body of the vertebrae (chine) on the ribs prepared is removed exposing the lean meat but leaving the spinous processes (feather bones) attached.

To be specified:

- Rib numbers required (4 to 9 ribs).
- Spinous process retained or removed.
- Tip of scapular and associated cartilage retained or removed.
- Rib length distance from eye muscle.
- Cap muscle (*M. trapezius*) retained or removed.
- *Ligamentum nuchae* retained or removed.

Note: Ribs prepared is frequently derived from a pistola hindquarter (1020 to 1028).

HS: 020120, 020220

[Picture U1604_CR, U1604_w]

Short ribs 1694

Short ribs are prepared from a forequarter (1063) after the removal of the brisket (1643)/ribs prepared (1604) and chuck – square cut (1617). Short rib cutting line is approximately 75 mm from the (eye of meat) *M. longissimus dorsi* and parallel to the vertebral column. The *M. cutaneus trunci* is removed unless otherwise specified.

To be specified:

- Rib numbers required (1 to 9 ribs) and rib location.
- *M. cutaneus trunci* retained.
- *M. laterissimus dorsi* muscle retained or removed.
- Fat cover retained or removed.
- Diaphragm retained or removed.
- Sliced portion size requirements.

HS: 020120, 020220

[Picture U 1694_w, U 1694_s, U 1694_5Rb, U 1694_5FR, U 1694_5CO]

Spare ribs 1695

Spare ribs are prepared from a forequarter (1063) and consist of rib bones and intercostals muscles. Spare ribs can be derived from any portion of the rib cage.

To be specified:

- Rib number and rib location.
- Size of rib portion.

HS: 020120, 020220

[Picture U1695_9R]

Forequarter/hindquarter shin – shank 1680

Shin – shank is prepared from either forequarter/hindquarter legs (extensor/flexor group of muscles). The foreleg is removed by a cut following the brisket removal line from the forequarter through the *M. triceps* and *M. biceps brachii* and distal end to the humerus to include the (radius/ulna) and associated muscles.

The hind leg is removed from the hindquarter by a cut through the stifle joint removing the (tibia/tarsal bones) including the surrounding flexor/extensor muscle groups. The hind shank includes the tibia/tarsal bones and surrounding muscle groups of the flexor/extensor.

To be specified:

- Removal of forequarter elbow (olecranon) and carpus joint at meat level.
- Removal of hindquarter trusus and stifle joints at meat level.

Note:

1680 as forequarter/hindquarter shin – shank (packed together).

1682 specifically for forequarter and

1683 specifically for hindquarter.

HS: 020120, 020220

[Picture U 1682, U1683, U 1680a, U 1680b/U 1680b_w]

Inside 2010

Inside is situated caudal and medial to the femur bone and attached to the os coxae (aitchbone), and removed by following the natural seam between the thick flank (2060) and silverside (2020). The pizzle butt, fibrous tissue and inguinal lymph node and surrounding fat are removed.

To be specified:

- Fat cover to be specified.
- Erector muscle retained or removed.
- Connective tissue retained or removed.
- Femoral blood vessels retained or removed.

HS: 020130, 020230

[Picture BP2000]

Inside – cap off 2011

Inside – cap off is prepared from the inside (2010) by the removal of the *M. gracilis* along the natural seam. Fat deposits are removed.

To be specified:

- *M. pectineus* and/or *M. sartorius* retained or removed.

[Picture BP2011] Inside – cap off side muscles removed 2014

Alternative Description: Topside – cap off side muscle removed 2006

Topside cap off is prepared from the topside (item 2000) by the removal of the *M. gracilis* muscle along the natural seam. The following side muscles are removed: *M. pectineus* and *M. sartorius* muscles. Fat deposits are removed.

HS: 020130, 020230

Inside cap 2012

Inside cap consists of the *M. gracilis* muscle removed from the inside (2010) along the natural seam.

To be specified:

- Fibrous tissue and fat deposits retained or removed.
- *M. pectineus* and *M. sartorius* retained or removed.

HS: 020130, 020230

[Picture B2002]

Outside meat 2033

Outside meat is prepared from an outside (2030) and by separating the outside flat (2050) and eye of round (2040) along the natural seam. All subcutaneous fat, connective tissue, membrane and silverskin on the outside flat and eye round are removed. The wedge shape muscle located on the caudal flat portion of the *M. glutobiceps* (outside flat) can be separated to allow fat deposits along the seam to be removed.

To be specified:

- Wedge shape muscle or flat portion of the *M. glutobiceps* retained or removed.

HS: 020130, 020230

[Picture B2033]

Inside meat 2035

Inside meat is prepared from an inside – cap off (2011) with the removal of all the membrane, connective tissue and femoral blood vessels.

To be specified:

- *M. pectineus* and *M. sartorius* retained or removed.

Note: Specified combinations of inside meat (2035) and outside meat (2033) can be described alternatively as read meat and apply either code identification.

HS: 020130, 020230

[Picture B2035]

Silverside 2020

Silverside is situated lateral/caudal to the femur bone and attached to the os coxae (aitchbone) and is removed by following the natural seam between the thick flank (2060) and inside (2010). The leg end of the primal is cut straight at the junction of the achilles tendon and heel muscle (*M. gastrocnemius*). The attached cartilage/gristle (thimble) from the aitch bone is removed.

To be specified:

- Achilles tendon retained or removed.
- Popliteal lymph node retained or removed.

HS: 020130, 020230

[Picture B2020]

Outside 2030

Outside is prepared from the silverside (2020) by the removal of the heel muscle (*M. gastrocnemius*). The popliteal lymph node, surrounding fat and connective tissue are removed.

To be specified:

- Heavy connective tissue (silverskin) on ventral side removed or retained.

HS: 020130, 020230

[Picture B2030]

Eye round 2040

The eye round is prepared from the outside (2030) by following the natural seam between the outside flat *M. gluteobiceps* and the eye round *M. semitendinosus* separating the two muscles.

HS: 020130, 020230

[Picture B2040]*Outside flat 2050*

Outside flat is prepared from the outside (2030) by following the natural seam between the outside flat *M. gluteobiceps* and the eye round *M. semitendinosus* separating the two muscles.

To be specified:

- Heavy connective tissue (silverskin) on ventral side removed or retained.

HS: 020130, 020230

[Picture B2050]*Thick flank 2060*

Thick flank is derived from a butt (1500) and is removed along the natural seams between the inside (2010) and silverside (2020). The patella, joint capsule and surrounding connective tissue are removed.

To be specified:

- Red bark (*M. cutaneus trunci*) retained or removed.
- Specify degree of exposure of ball tip muscles at rump end.

HS: 020130, 020230

[Picture B2060]*Knuckle 2070*

Knuckle is prepared from a thick flank (2060) by removing the cap muscle (*M. tensor fasciae latae*) and associated fat and subiliac lymph node.

To be specified:

- Specify degree of exposure of ball tip muscles at rump end.

HS: 020130, 020230

[Picture B2070]

Major muscles:

- *M. rectus femoris* (eye of knuckle) 2067
- *M. vastus lateralis* (knuckle cover) 2068
- *M. vastus intermedius* (knuckle undercut) 2069

[Picture U 2067, U 2068, U 2069]*Tenderloin 2150*

Tenderloin is prepared from the hindquarter and is removed in one piece from the ventral surface of the lumbar vertebrae and the lateral surface of the ilium. The side strap muscle (*M. psoas minor*), remains attached.

To be specified:

- Fat cover retained or removed.
- Silverskin retained or removed.
- *M. iliacus* (adjacent to side strap) retained or removed.

HS: 020130, 020230

[Picture B2150]

Tenderloin side strap off 2160

Tenderloin (2150) is further trimmed by the removal of the side strap *M. psoas minor*.

HS: 020130, 020230

[Picture B2160]*Loin (boneless) 2146*

Loin is prepared from the bone-in loin (1525) by the removal of all bones and cartilage. Loin consists of the *M. longissimus dorsi* and associated muscles.

To be specified:

- Rib number required.
- Distance from eye muscle.
- *M. multifidus* retained or removed.

HS: 020130, 020230

[Picture B2146]*Striploin 2140*

Striploin is prepared from a hindquarter (1010) by a cut at the lumbo sacral junction to the ventral portion of the flank. The flank is removed at a specified distance from the eye muscle *M. longissimus dorsi* at both cranial and caudal ends.

To be specified:

- Rib numbers required (0 to 3 ribs).
- Distance from eye muscle.
- Intercostals retained or removed.
- Supraspinous ligament retained or removed.
- *M. multifidus* retained or removed.

HS: 020130, 020230

[Picture U2140]*Thin flank 2200*

Thin flank is prepared from a hindquarter (1010) by a cut commencing at the superficial inguinal lymph node, bisecting the *M. rectus abdominus* and following the contour of the hip, and continuing to the 13th rib by following the contour of the rib to the ventral surface. The connective tissue (*linea alba*) on the ventral edge is removed.

To be specified:

- *M. cutaneus trunci* retained or removed.
- Gland and fat deposits under *M. cutaneus trunci* retained or removed.

HS: 020130, 020230

[Picture B2200]*Flank steak 2210*

Flank steak is prepared from a thin flank (2200) and is the flat lean fleshy portion of the *M. rectus abdominis* with the serous membrane and connective tissue stripped from the muscle.

HS: 020130, 020230

[Picture B2210]

Inside skirt 2205

Inside skirt (*M. transversus abdominis*) is located on the inside of the abdominal wall of the hindquarter (1010) and extends to the naval end portion of the brisket (1643). The peritoneum and fat flakes are removed.

To be specified:

- Hindquarter and/or forequarter portion included.
- Membrane covering retained or removed.

HS: 020130, 020230

[Picture B2205]

Internal flank plate 2203

Alternative description: Bottom sirloin butt, flap

Internal flank plate is prepared from the thin flank (2200) and is the thickest portion of the *M. obliquus internus abdominis* muscle. All visual fat is removed.

HS: 020130, 020230

[Picture B2203]

Thin skirt (outside skirt) 2190

Thin skirt is the costal muscle portion of the diaphragm. All white tendinous tissue not covering lean red muscle is removed.

To be specified:

- Fat and membrane covering retained or removed.

HS: 020130, 020230

[Picture B2190]

Thick skirt (hanging tender) 2180

Thick skirt is the lumbar portion of the diaphragm. All connective tissue, membrane and fat are removed.

HS: 020130, 020230

[Picture B2180]

Bottom sirloin butt 2081

Bottom sirloin butt is prepared from a hindquarter (1010–1020) and is removed by a cut cranial to the acetabulum to the ischiatic lymph node and a ventral cut across the quadriceps group of muscles and following along the natural seam to include the *M. tensor fasciae latae* muscle.

The loin is separated by a cut at the lumbo sacral junction in a straight line to the ventral portion of the flank. A portion of the tail (flank) is removed.

To be specified:

- Heavy connective tissue removed.

HS: 020130, 020230

[Picture B2081]

Top sirloin (top butt) 2120

Top sirloin is prepared from a rump (2090) by the removal of the *M. tensor fasciae latae* (tail) by a straight cut at the junction of the *M. gluteus medius* and the *M. tensor fasciae latae*

exposing approximately 25 mm surface of the *M. gluteus medius*, leaving a portion of the *M. tensor fasciae latae* attached to the lateral surface of the top sirloin.

To be specified:

- Heavy connective tissue retained or removed.

HS: 020130, 020230

[Picture B2120]

Rump 2090

Rump is prepared from a hindquarter (1010) by a cut commencing at the caudal tip of the *M. tensor fasciae latae* lying over of the knuckle (2070) and cutting along the natural seam to the base of the quadriceps group of muscles. A straight cut is made to a point cranial of the acetabulum to the ischiatic lymph node at the dorsal edge of the rump. The loin (cranial end) is separated by a cut at the lumbo sacral junction in a straight line cranial to the tuber coxae to the ventral portion of the flank.

To be specified:

- Heavy connective tissue retained or removed.
- Specify length of *M. tensor fasciae latae* (tail) retained.

HS: 020130, 020230

[Picture B2090]

D-rump 2100

D-rump is prepared from a rump (item 2090) by the removal of the tail (flank), by a cut following the natural seam between the *M. gluteus medius* and *M. tensor fascia latae* removing all of the tail from the lateral surface.

To be specified:

- Heavy connective tissue removed.

HS: 020130, 020230

[Picture D-rump 2100]

[Picture D-rump 2100 skeletal]

Eye of rump 2093

Eye of rump is prepared from rump (2090) by the removal of all muscle groups and retaining the portion *M. gluteus medius* muscle only as the eye of rump.

To be specified:

- Heavy connective tissue retained or removed.
- Separation of the dorsal side of the *M. gluteus medius* muscle by a cut following along the natural seam.
- Removal of membrane and silverskin.
- Specification to be agreed between buyer and seller.

HS: 020130, 020230

[Picture BP2110]

Rump cap 2091

Rump cap is prepared from a rump (2090) by removal of the cap muscle (*M. gluteobiceps*) along the natural seam.

To be specified:

- Fat retained or removed.
- Silverskin retained or removed.

HS: 020130, 020230

[Picture B2091]

Bottom sirloin butt, ball tip 2133

Bottom sirloin butt ball tip consists of the muscles *M. vastus lateralis* and the *M. rectus femoris*. The bottom sirloin butt ball tip is separated from the *M. tensor fasciae latae* (tri-tip) and the *M. obliquus internus adbominus* (internal flank plate) through the natural seam. All pieces of bone, cartilage and external skin tissue are excluded.

HS: 020130, 020230

[Picture B2133]

Tri-tip 2131

Bottom sirloin triangle tip (tri-tip) is the portion of the *M. tensor fasciae latae* (triangle shape muscle) separated from the rump (2090) along the natural seam between the *M. tensor fasciae latae* and the *M. gluteus medius* muscles.

To be specified:

- Fat cover retained or removed.
- Connective tissue retained or removed.

HS: 020130, 020230

[Picture U2131/U2131_w]

Brisket 2323

Brisket is prepared from a bone-in brisket (1643) by the removal of all bones and cartilage. The fatty tissue medial to the pectoral muscles is removed. The white fibrous tissue on the ventral edge (*linea alba*) is removed.

To be specified:

- Rib number required (10 to 13 ribs).
- Intercostals retained or removed.
- Diaphragm retained or removed.
- Peritoneum retained or removed.
- Inside skirt (2205) (*M. transversus abdominis*) retained or removed.

HS: 020130, 020230

[Picture B2320]

Brisket deckle off 2358

Brisket deckle off is prepared from a brisket (2323) by the complete removal of the deckle, associated fat and intercostals by following the natural seam. The inside skirt (2205) (*M. transversus abdominis*) and white fibrous tissue (*linea alba*) on the navel end are removed. Red bark (*M. cutaneus trunci*) is removed unless otherwise specified

To be specified:

- Rib number required (10 to 13 ribs).
- Red bark (*M. cutaneus trunci*) retained.

HS: 020130, 020230

[Picture B2355]

Brisket point end deckle off 2353

Brisket point end deckle off is prepared from a brisket (2323) by the removal of the navel end portion following the caudal edge of the specified rib. The deckle is removed from the point end along the natural seam together with associated fat and intercostals. The fatty tissue between the pectoral muscles is completely removed.

To be specified:

- Rib number required (4 to 7 ribs) and rib location.
- *M. cutaneus trunci* retained or removed.

HS: 020130, 020230

[Picture B2350]

Pectoral meat 2329

Alternative description: Chuck – square cut – pectoral meat

Pectoral meat is remaining portion of the (*M. pectoralis profundus*) muscle located in the chuck after the removal of the brisket (1643) along the specified cutting line. The deep pectoral or (*M. pectoralis profundus*) muscle portion remaining in the chuck is removed by following the natural seams.

To be specified:

- Brisket removal cutting line.

HS: 020130, 020230

[Picture B2329]

Spencer roll 2230

The Spencer roll is prepared from a forequarter (1063) after the removal of the brisket (1643) and chuck – square cut (1617), the blade (2300) and the foreshin (1680). The rib ends are removed at a specified distance from the *M. longissimus dorsi* (eye muscle). All bones and intercostals muscles are removed.

To be specified:

- Rib number required and rib location.
- Rib end removal line distance from the eye muscle.
- *Ligamentum nuchae* retained or removed.

Note: Spencer roll is frequently derived from a pistola hindquarter (1020 to 1028).

HS: 020130, 020230

[Picture B2232]

Cube roll (rib eye roll) 2240

Cube roll is prepared from a forequarter (1063) and consists of *M. longissimus dorsi* and associated muscles underlying the dorsal aspects of the ribs (caudal edge of the 4th rib to the 13th rib inclusive).

To be specified:

- Rib number required (4 to 8 ribs) and rib location.
- *M. illocostralis*: Retained or removed

Note: Cube roll is frequently derived from a pistola hindquarter code numbers 1020 to 1028.

HS: 020130, 020230

[Picture B2240]

Rib eye cap meat 2229

Alternative description: Cube roll plate

Rib eye cap meat is derived from the cube roll (rib eye roll) (2240) and consists of the *M. spinalis dorsi* and *M. multifidus dorsi* muscles. The *M. longissimus* and *M. complexus* muscles shall be removed by cutting through the natural seams.

To be specified:

- *M. complexus* included.
- *M. multifidus* removed.

HS: 020130, 020230

[Picture B2229]

Chuck roll 2275

Chuck roll (boneless) is prepared from a bone-in chuck – square cut (1617). The ventral cutting line is approximately 75 mm from the *M. longissimus dorsi* (eye muscle) and parallel to the vertebral column to the 1st rib. The *M. rhomboideus* is removed and the *M. subscapularis* (undercut) remains firmly attached. The *M. trapezius* is removed unless otherwise specified.

To be specified:

- Rib numbers required (4 to 6 ribs).
- Cranial cutting line:
 - Between the 6th and 7th cervical vertebrae.
 - Between the 7th cervical and 1st thoracic vertebrae.
- *M. trapezius* retained.
- *Ligamentum nuchae* retained or removed.
- *M. subscapularis* (undercut) retained or removed.

HS: 020130, 020230

[Picture B2275]

Chuck roll – long cut 2289

Chuck roll – long cut (boneless) is prepared from a forequarter (1063) after the removal of the brisket (1643) and ribs prepared (1604). The ventral cutting line is approximately 75 mm from the *M. longissimus dorsi* (eye muscle) and parallel to the vertebral column. The neck (2280) is removed by a straight cut parallel to the caudal cutting line between the 3rd and 4th cervical vertebrae. The *M. rhomboideus* is removed. The *M. subscapularis* (undercut) remains firmly attached unless otherwise specified. The *M. trapezius* is removed unless otherwise specified.

To be specified:

- *M. trapezius* retained.
- *Ligamentum nuchae* retained or removed.
- *M. subscapularis* (undercut) removed.

HS: 020130, 020230

[Picture B2289]

Chuck eye roll 2268

The chuck eye roll is prepared from the chuck roll (2275) by removing a portion of the *M. serratus ventralis* at approximate distance of 75 mm from the ventral edge and cut parallel to the vertebral column.

To be specified:

- Width: distance of cutting line from ventral edge.
- *Ligamentum nuchae* retained or removed.

HS: 020130, 020230

[Picture B2268a/B2268b]

Chuck eye 2264

Chuck eye is prepared from a chuck eye roll (2268) and is the eye muscle mass remaining after the removal of rib meat at the ventral edge of the eye of meat and parallel to the thoracic vertebrae. The chuck eye consists of the *M. longissimus dorsi*, *M. spinalis dorsi*, *M. complexus* and *M. multifidus dorsi*.

To be specified

- Cranial cutting line as agreed between buyer and seller.

HS: 020130, 020230

[Picture B2264]

Neck 2280

Neck is prepared from a bone-in neck (1630). Bones, cartilage and exposed tendons are removed. The *ligamentum nuchae* is removed unless otherwise specified.

To be specified:

- *Ligamentum nuchae* retained.

HS: 020130, 020230

[Picture B2280]

Cutaneus trunci (rose) 2196

Cutaneus trunci (rose) is the thin red meat cover on the external surface of the carcass and is removed by separation from the underlying fat.

To be specified:

- Thickest portion retained or removed.
- Minimum size of portion.

HS: 020130, 020230

[Picture U2196]

Chuck crest 2278

The chuck crest is derived from a forequarter (1063) and is the predominant portion of the *M. rhomboideus* muscle which is located on the dorsal edge of the chuck and neck.

To be specified:

- Proportion of muscle retained.

HS: 020130, 020230

[Picture B2278]

Chuck tender 2310

Chuck tender is a conical shape muscle lying lateral to the blade bone on the cranial side of the blade ridge. The fat cover is removed.

To be specified:

- Connective tissue cover: retained or removed.

HS: 020130, 020230

[Picture B2310]

Bone-in shoulder 1621

Consisting of:

- Blade (2300)
- Blade bolar (2302)
- Blade oyster (2303)
- Blade undercut (2304)
- Chuck tender (2310)

HS: 020130, 020230

Shoulder and foreleg 1626

Shoulder and foreleg is removed from a forequarter by following the natural seams between the ribs and scapular. The scapular and scapular cartilage is retained. The shoulder and foreleg is removed from the forequarter in one piece by a cut lateral to the *M. serratus ventralis* (deep pectoral muscles) and continues to the scapula ensuring that the *M. subscapularis* (undercut) is retained in situ. The blade and chuck tender will remain in situ and all muscles associated with the humerus, radius ulna are retained.

To be specified:

- *M. pectoralis profundus* muscle removed or retained.
- Scapular cartilage removed or retained.
- Shin removed or retained (muscle pertaining to radius-ulna) separated at the joint or sawn.

HS: 020130, 020230

[Picture U1626]

Blade (clod) 2300

Blade is prepared from a forequarter (1063) by following the natural seam between the ribs and the scapular *M. latissimus dorsi* and *M. trapezius* (overlying muscle) and the *M. serratus ventralis* (underlying muscle). The blade lies caudal to the humerus and below the spine of the scapula and comprises of a large portion of the triceps group of muscles.

To be specified:

- Length of tail from tip of scapular cartilage.
- *M. subscapularis* retained (undercut) or removed.
- Tendons at shoulder joint end retained or removed.

HS: 020130, 020230

[Picture B2300]

Blade bolar 2302

Blade bolar is prepared from the blade (2300) by the removal of the *M. infraspinatus* and *M. trapezius* lying caudal to the humerus, the blade bolar includes a large portion of the triceps group of muscles.

To be specified:

- *M. cutaneous trunci* retained or removed.
- *M. latissimus dorsi* retained or removed.

HS: 020130, 020230

[Picture B2302]

Blade oyster 2303

Blade oyster is prepared from a blade (clod) (2300) by the removal of the blade bolar (2302) (triceps group) along the natural seam from the *M. infraspinatus*.

To be specified:

- *M. trapezius* removed.
- Periosteum removed.

HS: 020130, 020230

[Picture B2303]

Blade undercut 2304

Blade undercut is prepared by removing the *M. subscapularis* from the medial surface of the scapular bone. The muscle consists of 3 parts and is trimmed to the required specification.

To be specified:

- Prepared to specific size requirements.

HS: 020130, 020230

[Picture B2304]

Shoulder tender 2306

Alternative description: *Chuck shoulder tender

Shoulder tender is derived from the blade (clod) (2300) by separating the *M. teres major* from the clod by cutting through the natural seam.

* This individual muscle is sometimes referred to as petite tender.

To be specified:

- Peeled/denuded.
- Surface membrane removed.

HS: 020130, 020230

[Picture B2306]

Shin – shank 2360

Forequarter/hindquarter (2360)

Shin – shank is prepared from the muscles of the fore- and hind legs, namely the extensor and flexor group of muscles. In addition, the shin – shank includes the *M. gastrocnemius* (heel muscle from the silverside).

To be specified:

- Connective tissue and skin retained or removed.

- Fore- or hind shin – shank only.
- Sinews/tendons removed or retained.
- Heel muscle (only).

HS: 020130, 020230

[Picture U 2360a, U2360b, U2364]

Shin special trim 2365

Shin special trim is derived from shin / shank (item 2360) and is prepared into individual muscles or specified muscle groups. The maximum tendon length on all muscles is 15 mm, which may be measured from either end of the muscle. Muscle grouping may be identified in the following manner:

Group A – *M. peroneus tertius* (of extensor group)

Group B – *M. flexor digitorum superficialis* (of heel muscle)

Group C – *M. biceps brachii* (conical muscle)

Individual muscle names can also be used in the product description e.g. conical muscle.

To be specified:

- Skin and connective tissue removed or retained
- Specify muscle group listed as Group A to C.

HS: 020130, 020230

[Picture Shin special trim 2365_a, Shin special trim 2365_b, Shin special trim 2365_c]

[Picture Shin special trim 2365 skeletal]

Heel muscle 2364

Heel muscle is prepared from a silverside (2020) by separation from the *M. gluteo biceps*. The heel muscle consists of the *M. gastrocnemius* and the *M. flexor superficialis*. Both muscles must be retained.

To be specified:

- Connective tissue retained or removed.
- Maximum length of tendon retained.

HS: 020130, 020230

[Picture U2364]

Butt set 2483

Butt set consists of the primal cuts from the butt (1500–1503):

- Inside (2010)
- Silverside (2020) – outside (2030)
- Thick flank (2060) – knuckle (2070)

To be specified:

- Refer each item number for specification details.

HS: 020130, 020230

[Picture Bp2000/BP2020/BP2060]

5.5 Boneless beef manufacturing bulk packs definition

Manufacturing bulk packs are generally made up of the following combinations:

- Primal or portions of primal cuts.
- Residual trimming from primal cut preparation.
- Boneless forequarter or hindquarter.
- Grinding beef.

Manufacturing packs are generally prepared to a specified lean content assessed visually or tested chemically and expressed as a percentage of lean meat of the pack.

HS: 020130, 020230

[Picture Bp 90cl, Bp 80cl, Bp 60cl]

5.6 Standard bovine primal cuts muscle reference

5.6.1 Lateral/medial view carcass structure

[Picture MUSCLE U_Lview, U_Mview]

5.6.2 Alphabetical list of muscle names

- 0001 *M. adductor femoris*
- 0002 *M. anconaeus*
- 0003 *M. articularis genu*
- 0004 *M. biceps brachii*
- 0005 *M. biceps femoris* (syn. *M. gluteobiceps*)
- 0006 *M. brachialis*
- 0007 *M. brachiocephalicus*
- 0008 *M. coracobrachialis*
- 0009 *M. cutaneus omobrachialis*
- 0010 *M. cutaneus trunci*
- 0011 *M. deltoideus*
- 0012 *M. diaphragma*
- 0013 *M. extensor carpi obliquus*
- 0014 *M. extensor carpi radialis*
- 0015 *M. extensor carpi ulnaris*
- 0016 *M. extensor digiti quarti proprius*
- 0017 *M. extensor digiti quarti proprius (pedis)*
- 0018 *M. extensor digiti tertii proprius*
- 0019 *M. extensor digiti tertii proprius (pedis)*
- 0020 *M. extensor digitorum communis*
- 0021 *M. extensor digitorum longus*
- 0022 *M. flexor carpi radialis*
- 0023 *M. flexor carpi ulnaris*
- 0024 *M. flexor digitorum longus*

- 0025 *M. flexor digitorum profundus*
- 0026 *M. flexor digitorum profundus*
- 0027 *M. flexor digitorum sublimis*
- 0028 *M. flexor hallucis longus*
- 0029 *M. gastrocnemius*
- 0030 *M. gluteus accessorius*
- 0031 *M. gluteus medius*
- 0032 *M. gluteus profundus*
- 0033 *M. gracilis*
- 0034 *M. iliacus*
- 0035 *M. iliocostalis*
- 0036 *M. infraspinatus*
- 0037 *Mm. intercostales externus and internus*
- 0038 *Mm. intertransversarii cervicis*
- 0039 *M. intertransversarius longus*
- 0040 *M. ischiocavernosus*
- 0041 *M. latissimus dorsi*
- 0042 *M. levatores costarum*
- 0043 *M. longissimus cervicis*
- 0044 *Mm. longissimus capitis and atlantis*
- 0045 *M. longissimus dorsi (syn. M longissimus thoracis and lumborum)*
- 0046 *M. longus capitis*
- 0047 *M. longus colli*
- 0048 *M. multifidi cervicis*
- 0049 *Mm. multifidi dorsi*
- 0050 *M. obliquus capitis caudalis*
- 0051 *M. obliquus externus abdominis*
- 0052 *M. obliquus internus abdominis*
- 0053 *Mm. obturator externus and internus*
- 0054 *M. omotransversarius*
- 0055 *M. pectineus*
- 0056 *M. pectoralis profundus*
- 0057 *M. pectoralis superficialis*
- 0058 *M. peroneus longus*
- 0059 *M. peroneus tertius*
- 0060 *M. popliteus*
- 0061 *M. protractor praeputii*
- 0062 *M. psoas major*
- 0063 *M. psoas minor*
- 0064 *M. rectus abdominis*

- 0065 *M. rectus capitis dorsalis major*
0066 *M. rectus femoris*
0067 *M. rectus thoracis*
0068 *M. rhomboideus*
0069 *Mm. sacrococcygeus dorsalis and lateralis*
0070 *M. sartorius*
0071 *M. scalenus dorsalis*
0072 *M. scalenus ventralis*
0073 *M. semimembranosus*
0074 *M. semispinalis capitis*
0075 *M. semitendinosus*
0076 *M. serratus dorsalis caudalis*
0077 *M. serratus dorsalis cranialis*
0078 *M. serratus ventralis cervicis*
0079 *M. serratus ventralis thoracis*
0080 *M. soleus*
0081 *M. spinalis dorsi*
0082 *M. splenius*
0083 *M. sternocephalicus*
0084 *M. subscapularis*
0085 *M. supraspinatus*
0086 *M. tensor fasciae antibrachii*
0087 *M. tensor fasciae latae*
0088 *M. teres major*
0089 *M. teres minor*
0090 *M. tibialis anterior*
0091 *M. tibialis posterior*
0092 *M. transversus abdominis*
0093 *M. trapezius cervicalis*
0094 *M. trapezius thoracis*
0095 *M. triceps brachii caput laterale*
0096 *M. triceps brachii caput longum*
0097 *M. triceps brachii caput mediale*
0098 *M. vastus intermedius*
0099 *M. vastus lateralis*
0100 *M. vastus medialis*
- Other structures**
- 0101 atlantal lymph node
0102 ischiatic lymph node
0103 *ligamentum nuchae*

- 0104 periosteum
- 0105 prescapular lymph node
- 0106 scapula
- 0107 scapula cartilage
- 0108 subiliac lymph node

Note: The inclusion of four digit numbers shown in the index is for bar coding requirements. Muscle illustration numbers on the following pages are shown numerically.

5.6.3 Hindquarter primals

Inside/silverside

[Picture MUSCLE Topside B.&A/Silverside A.&B]

Rump/thick flank/thin flank (3 ribs)

[Picture MUSCLE full rump A.&B/thick flankA/thin flankA]

Striploin (3 ribs)/tenderloin

[Picture MUSCLE Striploin A. & B/tenderloin A. & B]

5.6.4 Forequarter primals

Blade/chuck tender

[Picture MUSCLE blade/chuck tender]

Short ribs (5 ribs)/rib set (5 ribs, 6th to 10th rib) **[Picture MUSCLE rib set A/rib set B&C]**

Chuck (5 ribs)/brisket (10 ribs)

[Picture MUSCLE chuck A.&B/brisket A.&B]

Shin – shank (forequarter)/shin – shank (hindquarter)

[Picture MUSCLE shin shankA, foreshinB/hind shankA.&B]

5.7 Meat quality standards

5.7.1 Bovine carcass assessment

The following bovine meat quality standards are a benchmark for the measurement of the saleability and eating quality characteristics of bovine carcasses using a uniform set of standards under controlled conditions. Assessments are to be made by qualified eligible assessors and the results are recorded for each carcass assessed, and provide a means of (carcass) selection according to individual contract specifications prior to packaging.

Assessment results also allow producers to select breeding stock based on performance and to customize feeding regimes to suit particular markets.

These characteristics include the colour of meat and fat, the amount of marbling of the carcass skeletal ossification and pH measurement standards.

[Picture 01_Carcass assessment]

5.7.2 Carcass pre-assessment conditions

Carcass presentation for assessment

Carcasses, sides, or quarters are presented in a manner that will allow sufficient time and space for the assessor to effectively perform the assessment. All sides or quarters must be present at the time of assessment.

Beef carcasses may be ribbed at any site between (caudal) to the 5th and 13th rib except for veal carcasses which may be assessed at any site between (caudal) to the 4th and 13th rib.

The assessment site must be below the assessor's eye level and at a height that allows the assessor to use the recommended viewing angles.

Assessment site presentation

There are two approved ribbing methods for carcass assessment

- (i) Full ribbing method
- (ii) Spencer roll method

The full ribbing method

The *M. longissimus dorsi* must be sufficiently exposed using the full ribbing method to provide an unrestricted view of the assessment site and allow unrestricted use of lighting, marbling, meat colour and fat colour reference standards and the calculation of the eye muscle area (EMA).

[Picture 02_Full ribbing]

The Spencer roll method

The Spencer roll must be sufficiently freed from its rib attachment to provide an unrestricted view of the assessment site and allow effective use of lighting, marbling, meat colour (beef/veal) and fat colour reference standards. The Spencer roll method is unsuitable for measurement of EMA.

[Picture 03_Spencer roll]

Prior to assessment commencing, the assessment site must be inspected to ensure that the site does not have traces of bone dust or any other defects that may affect the accuracy of the assessment.

The assessment site surface must not be twisted or undulating.

Carcass ribbing and assessment time constraints

To ensure carcasses have met their ultimate pH prior to assessment, ribbing and assessment must only proceed after the following period post slaughter has elapsed:

- (i) 8 hours, where carcasses have been effectively electrically stimulated; or
- (ii) 18 hours, where carcasses have not been effectively electrically stimulated
- (iii) Other time periods approved under a controlled pH decline system.

Ultimate pH

Electrical inputs accelerate the rate of pH decline and, therefore, will reduce the time for the ultimate pH to be reached. Carcasses that receive no electrical inputs and are chilled rapidly may take 24 or even 48 hours for the ultimate pH to be achieved; however, in commercial practice, most carcasses will be at, or very close to, their ultimate pH by 18 hours. Chiller assessment cannot be undertaken until the loin muscle has reached its ultimate pH.

Carcasses that have received several electrical inputs may reach their ultimate pH within a few hours of slaughter and, thus, can be assessed at an earlier time than would otherwise be permissible.

Controlled pH decline system

The rate of pH decline can impact on the predictability of eating quality, specifically by falling too slow and therefore increasing the potential for cold shortening or by falling too fast and increasing the probability of heat shortening.

The well documented "cold shortening" effect can be controlled by ensuring that electrical input levels are set so that the pH of the *M. longissimus dorsi* falls to below pH 6.0 before the temperature falls below 15°C.

The potential for “heat shortening” can be controlled by ensuring that electrical input levels are set so that the pH of the *M. longissimus dorsi* does not fall below pH 6.0 with the temperature above 35°C.

To ensure optimal eating quality the pH of the *M. longissimus dorsi* must

- (i) remain at or above pH 6.0 while the temperature of the muscle is at or above 35°C; and
- (ii) be below pH 6.0 prior to the temperature of the muscle falling below 15°C.

[Picture 04_pH window]

Assessment must not commence until 20 minutes has elapsed after ribbing or refacing, or until an additional period has concluded if a greater time lapse is necessary to allow the meat surface to effectively bloom.

Assessment may continue until 3 hours post ribbing or refacing. Assessment may only continue whilst there is no evidence that the colour at the assessment site has progressed past the blooming stage.

Where an oxygen impermeable film has been applied to the exposed *M. longissimus dorsi* immediately after ribbing, the time requirements of these standards apply from the time at which the film is removed.

Where the time post ribbing has exceeded 3 hours without the application of an oxygen impermeable film, the assessment site shall be refaced prior to assessment by removing a minimum of 3 mm of meat and fat tissue. The assessment site will also need to be refaced where there is evidence of assessment site damage.

Temperature of carcass prior to assessment

Assessment may only proceed providing the temperature of the *M. longissimus dorsi* is 12°C or below. The recommended temperature for assessment is between 4°C and 8°C.

The muscle temperature must be taken by inserting the thermometer probe or shaft into the centre of the *M. longissimus dorsi* parallel to and approximately 25 mm cranial to the assessment surface.

[Picture 05_Temperature]

5.7.3 Carcass assessor technique

Assessment position

Measurements conducted at the assessment site must be determined with the assessor standing within the position boundaries. The assessment site must be always below the assessor’s eye level.

It is recommended that the angle from the assessor’s eye to the assessment surface be between 35 and 50 degrees for beef and between 45 and 70 degrees for veal. This should remain constant for all assessments. The assessment standards must be held in a position that eliminates light reflection and shadows.

[Picture 06_Carcass assessor technique]

Lighting requirements

The standard light source must be held at a distance from the assessment site that provides a light intensity at the *M. longissimus dorsi* of between 1,400 lux and 3,000 lux with an even distribution of light.

The light intensity must be determined using a light meter that is held as close as possible to the assessment site and at a similar distance from the torch to the distance between the torch and the assessment site during assessment. The light must be aimed directly at the light meter receptor and the light meter receptor must be at as near as possible to 90 degrees to the direction of the light beam.

5.7.4 Meat quality standard measurements

Meat quality standards are made available to persons who have participated in a certified training course and have the recognised knowledge and skills to be able to perform the duties as described in this chapter.

Meat colour

Meat colour is the predominant colour of the rib eye muscle (*M. longissimus dorsi*). Meat colour (beef and/or veal) is assessed on the chilled carcass at the bloomed surface of the rib eye muscle area (*M. longissimus dorsi*) and is scored against the colour reference standards.

Where the meat colour falls between two of the reference standards, the number corresponding to the darker of the reference standards shall be assigned to the carcass.

If the meat colour matches that of an individual meat colour reference standard the carcass is given the score of that reference standard.

Beef meat colour standards range – (1A) to (7). Veal meat colour standards range – (V1) to (V5).

[Picture 07-1_Meat colour]

[Picture 07-2_Meat colour standards beef]

[Picture 07-3_Meat colour standards veal]

Fat colour

Fat colour is the intermuscular fat lateral to the rib eye muscle. Fat colour is assessed on the chilled carcass and scored against the fat colour reference standards. Fat colour is assessed by comparing the intermuscular fat colour lateral to the *M. longissimus dorsi* muscle and adjacent to the *M. iliocostalis* with reference standards.

Where the fat colour falls between two of the reference standards, the number corresponding to the more yellow of the reference standards shall be assigned to the carcass.

If the colour matches that of one of the standards, the carcass is given the score of the matching standard.

Fat colour standards range – (0) to (9).

[Picture 08-1_Fat colour]

[Picture 08-2_Fat colour standards]

Marbling

Marbling is the intramuscular fat that is deposited between muscle fibres of the *M. longissimus dorsi* muscle.

Marbling is assessed on the chilled carcass and scored by comparing the proportion of marbled fat to meat at the surface of the assessment site which lies within the *M. longissimus dorsi* boundary.

Fat within the *M. longissimus dorsi* that is attached to the edge of the *M. longissimus dorsi* may be included as marbled fat from the point of intrusion at which it narrows to 1 mm in width, in an undisturbed state, for the first time.

Marbling is assessed and scored against marbling reference scores (see image below). The marbling scores can be used to assess

- (i) The amount of marbling: (0) to (9)
- (ii) The amount, fineness and distribution of marbling (100) to (1,190) in increments of 10.

Both scores may be used together to provide more detail about the product.

Marbling scores may be used in the prediction of eating quality.

Where marbling scores are assessed outside of the 10th to the 13th rib, the nominated rib must be recorded.

[Picture 09-1_Marbling]

[Picture 09-2_Marbling standards]

Eye muscle area

Eye muscle area (EMA) is the area of the surface of the *M. longissimus dorsi* at the ribbing site. Calculated in square centimetres, EMA may be measured at the 10th, 11th, 12th or 13th rib.

EMA can be measured manually or by using approved equipment.

When EMA is measured manually a plastic grid is used. The grid is placed over the *M. longissimus dorsi* and the number of square centimetres in the eye muscle boundary are counted. If any part of the centre dot of a grid square falls on or in the eye muscle boundary that square is counted. If a centre dot falls outside the eye muscle boundary the square is not counted.

The *M. longissimus dorsi* must be in situ and its shape must not be distorted.

EMA is not reported where carcasses have been assessed using the Spencer roll ribbing method.

Carcase maturity

Carcase maturity is an assessment of the physiological development of a beef carcass determined by the degree of ossification of the dorsal spinous processes of the vertebrae, the fusing of vertebrae, and the shape and colour of the rib bones.

The score applied to each carcass should be that which most closely represents the descriptions provided in the carcass maturity chart.

The carcass maturity chart represents the ossification and rib characteristics of the average carcass. The rate of ossification of individual spinous processes varies between individual carcasses and therefore, in individual carcasses, not all areas of the spine may correlate with the chart. In these cases, the shaded area of the chart should be treated as the primary evaluation position. The most mature characteristic must be evaluated and is used to complete the maturity score.

Carcass maturity range 100 to 590.

Carcass maturity scores may be used in the prediction of eating quality.

[Picture 10_Carcass maturity chart]

Carcase maturity chart

| Score | Approx. Age in Months | Sacral Vertebral Characteristics | | Lumbar Vertebral Spinous Process (S.P.) Characteristics | 11th–13th Thoracic Spinous Processes (S.P.) Characteristics | 1st–10th Thoracic Vertebral Spinous Process (S.P.) Characteristics | Rib Bone Characteristics |
|------------|--------------------------|---|--|---|---|--|---|
| | | Capping Characteristics | Vertebra Characteristics | | | | |
| 100 | 9 | No Ossification of cartilage. | 1) Distinct separation of vertebra. 2) Red, soft. | No Ossification Red, soft. | No Ossification Red, soft. | No Ossification Very red chine. Soft | Narrow & oval. Lot of blood. |
| 110 | 10 | Cartilage capping has started. 10%–20% | Distinct separation of vertebra. | No Ossification | No Ossification | No Ossification Red chine. | Slightly narrow. Slightly oval. Lot of blood. |
| 120 | 13 | Cartilage capping 30%–40% | Vertebral gaps starting. | No Ossification | No Ossification | No Ossification Red chine. | Slightly wide. Slightly flat. Lot of blood. |
| 130 | 15 | Advanced capping 50%–70% | Vertebral gaps closing, some separation still visible. | No Ossification | No Ossification | No Ossification Red chine. | Slightly wide. Slightly flat. Moderate blood. |
| 140 | 18 | Advanced capping 80%–90% | Vertebral gaps closing, some separation still visible. | No Ossification or minor spots of Ossification in one or 2 S.P. | No Ossification | No Ossification | Slightly wide. Slightly flat. Moderate blood. |
| 150 | 20 | Capping completed but some cartilage visible. | Vertebral gaps closing, some separation still visible. | No Ossification or minor spots of Ossification in some S.P. | No Ossification | No Ossification | Slightly wide. Slightly flat. Moderate amount of blood. |
| 160 | 22 | Capping completed but small amounts of cartilage visible. | Vertebral gaps closing, some separation still visible. | 10%–20% Ossification in some S.P. | No Ossification | No Ossification | Slightly wide. Slightly flat. Moderate amount of blood. |
| 170 | 24 | Capping completed. Almost complete fusing. | Vertebra almost totally fused. | 30%–40% Ossification | No Ossification | No Ossification | Slightly wide. Slightly flat. Small amount of blood. |

| Score | Approx. Age in Months | Sacral Vertebral Characteristics | | Lumbar Vertebral Spinous Process (S.P.) Characteristics | 11th–13th Thoracic Spinous Processes (S.P.) Characteristics | 1st–10th Thoracic Vertebral Spinous Process (S.P.) Characteristics | Rib Bone Characteristics |
|------------|--------------------------|--|-----------------------------------|---|--|--|--|
| | | Capping Characteristics | Vertebra Characteristics | | | | |
| 180 | 27 | Capping completed. Almost complete fusing. | Vertebra almost totally fused. | 50%–70% Ossification in all S.P. | No Ossification or minor spots of Ossification in 1 or 2 S.P. | No Ossification | Slightly wide. Slightly flat. Small amount of blood. |
| 190 | 29 | Capping completed. | Vertebra almost totally fused. | 80%–90% Ossification in all S.P. | Less than 25% Ossification in all 3 S.P., or 100% in any 1 S.P. | No Ossification | Slightly wide. Slightly flat. Small amount of blood. |
| 200 | 30 | Complete fusing. | Vertebra fused. | Almost complete Ossification. | >25% Ossification in all 3 S.P., or 100% in any 1 S.P. | Minor Ossification. Slightly red chine. | Slightly wide. Moderately flat. Traces of blood. |
| 230 | 34 | Complete fusing | Vertebra fused. | Almost complete Ossification. | 30%–40% Ossification in all 3 S.P., or 100% in any 1 S.P. | Minor Ossification in some of the first 6 thoracic vertebrae. 10–20% in 7th–10th | Slightly wide. Moderately flat. Traces of blood. |
| 250 | 36 | Complete fusing. | Vertebra fused. | Almost complete to complete Ossification. | >50% Ossification in all 3 S.P., or 100% in any 1 S.P. | 10%–20% Ossification in some of the first 6 thoracic S.P. 30%–50% in 7th–10th S.P. | Moderately wide. Moderately flat. Traces of blood. |
| 280 | 40 | Complete fusing. | Vertebra fused. | Complete Ossification. | >70% Ossification in all 3 S.P., or 100% in any 1 S.P. | >30% in the 1st–10th vertebrae. | Moderately wide. Moderately flat. Traces of blood. |
| 300 | 42 | Complete fusing. | Vertebra fused. | Complete Ossification. | 80%–90% Ossification in all 3 S.P., or 100% in | > 30% Ossification in some of the first 6 thoracic vertebrae. 50%–70% in 7th–10th S.P. | Moderately wide. Moderately flat. Traces of blood. |

| Score | Approx. Age in Months | Sacral Vertebral Characteristics | | Lumbar Vertebral Spinous Process (S.P.) Characteristics | 11th–13th Thoracic Spinous Processes (S.P.) Characteristics | 1st–10th Thoracic Vertebral Spinous Process (S.P.) Characteristics | Rib Bone Characteristics |
|------------|--------------------------|--|--------------------------|---|---|--|---------------------------|
| | | Capping Characteristics | Vertebra Characteristics | | | | |
| | | | | | any 1 S.P. | | |
| 350 | 57 | Complete fusing. White. | Vertebra fused. | Complete Ossification. | Almost complete to complete Ossification. | 40%–80% Ossification involving all S.P. | Wide & flat. No blood. |
| 400 | 72 | Complete fusing. White, extremely hard. | Vertebra fused. | Complete Ossification. White, hard. | Complete Ossification. Outlines barely visible. | Almost complete Ossification. Outline plainly visible. | Wide & flat. No blood. |
| 500 | 96 | Complete fusing. White, extremely hard. | Vertebra fused. | Complete Ossification. White, extremely hard. | Complete Ossification. White, extremely hard. | Complete Ossification. Outlines barely visible. White, hard. | Wide & flat. No blood. |
| 590 | | Complete fusing. | Vertebra fused. | Complete Ossification. | Complete Ossification. | Complete Ossification, white chine | Wide & flat. No blood. |

Subcutaneous rib fat

Subcutaneous rib fat measurement is a measurement in millimetres (mm) of the thickness of subcutaneous fat at the assessment site. Subcutaneous rib fat is measured at a specific position on the 10th, 11th, 12th, or 13th rib. Where the rib site is damaged, the other side of the carcass may be measured. Where both sides of the carcass have a damaged rib fat site, an estimated depth may be applied.

To determine this position:

- Measure the length of the rib eye
- Starting at the medial border, determine a point three quarters of the way along the rib eye and halfway across
- Take a ruler through this point and at right angles to the specified rib to the interface between the subcutaneous fat and the inter muscular fat
- Measure the subcutaneous fat by placing the ruler at a right angle to the line of the subcutaneous fat, from the interface point above
- Where the rib fat is damaged, the other side of the carcass can be measured.

Subcutaneous rib fat measurement may be used in the prediction of eating quality.

[Picture 11_Subcutaneous rib fat measurement]

Total rib fat

Total rib fat measurement is a measurement in millimetres (mm) of the thickness of subcutaneous and intermuscular fat at the assessment site. Total rib fat is measured at a specific position on the 10th, 11th, 12th, or 13th rib. Where the rib site is damaged, the other side of the carcass may be measured. Where both sides of the carcass have a damaged rib fat site, an estimated depth may be applied.

To determine this position:

- Measure the length of the rib eye
- Starting at the medial border, determine a point three quarters of the way along the rib eye and halfway across
- Take a ruler through this point and at right angles to the specified rib to the interface between the *M. longissimus dorsi* and the intermuscular fat
- Measure the total rib fat by placing the ruler at a right angle to the line of the subcutaneous fat, from the interface point
- Measure all intermuscular fat and subcutaneous fat between the edge of the *M. longissimus dorsi* and the lateral surface of the carcass.

[Picture 12_Total rib fat measurement]

Hump height

Hump height is used to measure the greatest width of the hump muscle (*M. rhomboideus*). Research has shown a strong correlation between hump height and eating quality particularly for the predication of tropically adapted cattle and entire male cattle.

Hump height is measured using a metric ruler in gradients of 5 mm. The ruler is held horizontally to the surface of the sawn chine and parallel to the rib bones. The ruler is moved to the position of the greatest width of the hump and the measurement is taken by viewing from a site that eliminates parallax errors.

The measurement includes all the meat from the ligamentum nuchae (paddywack) and across to the most dorsal edge of the *M. rhomboideus* (hump) muscle. It does not include the subcutaneous fat on the lateral surface of the carcass.

The ligamentum nuchae and cervical vertebrae must remain in situ for hump height to be measured.

[Picture 13_Hump height measurement]

Ultimate pH measurement

The ultimate pH (pHu) of meat will vary from carcass to carcass depending on the amount of glycogen in the live animal prior to slaughter. The ultimate pH is an important determinant of meat eating quality. Prior to carcasses being assessed they must have met their ultimate pH.

Ultimate pH must be measured using an approved device and must be undertaken with a calibrated pH meter and recorded in conjunction with temperature. The approved device must contain the Bendall correction factor for reporting pH.

Ultimate pH is measured in the *M. longissimus dorsi* (assessment site) at the quartered rib site, between the 5th and 13th ribs and is recorded to two decimal places with temperature recorded to one decimal place.

The measurement of ultimate pH may be used in the prediction of eating quality.

[Picture 14_Ultimate pH measurement]

5.7.5 Carcass assessor competence and eligibility

Competence

Each assessor must hold the appropriate knowledge and skills to perform the duties of a carcass assessor.

Maintaining eligibility

To ensure that meat quality assessment standards are accurately and consistently applied it is necessary for carcass assessors to meet the ongoing minimum accuracy standards to maintain their eligibility to collect carcass meat quality information.

In order to maintain currency as a carcass assessor, assessors are required to conduct successful correlations on an (8) eight weekly cycle meeting the minimum accuracy standards for eligibility.

Assessor vision standards

Assessors must meet the following vision standard criteria

- (i) Be able to determine colour in the red and yellow spectrums
- (ii) Must have visual acuity at distances from 300 mm to 1,200 mm
- (iii) Must be able to provide evidence of their ability to comply with the above vision standards.

5.7.6 Feedback and labelling standards

Assessment attribute statements are used to describe meat quality attributes relating to carcass assessment. The use of an assessment attribute statement may be incorporated into feedback and trade description labels after carcass assessment has been performed.

Feedback is defined as the detailed quality information provided at the completion of carcass assessment. Feedback may be used within the livestock and meat supply chains to benchmark carcass performance.

Where quality assessments are used to provide carcass information through feedback sheets, and as part of the trade description on product labels, there are minimum requirements for the use of symbols and the order on the labelling (see below).

Inclusion of assessment attribute statements is optional on both feedback sheets and trade description labels.

Application of symbols

When used in feedback sheets and on trade description labels the following symbols must be used if the product is described using bovine carcass assessment language and must be in the following order:

| <i>Assessment attribute</i> | <i>Symbol</i> |
|---|---------------|
| Marbling (amount) | MB |
| Marbling (amount, fineness, distribution) | MBC |
| Meat colour | MC |
| Veal colour | VC |
| Fat colour | FC |
| Maturity | OM |
| Subcutaneous rib fat | RF |
| Total rib fat | TRF |
| Eye muscle area | EMA |
| Ultimate pH | pHU |

Additional labelling information

Marbling (MB) – may be shown as an individual score or ranges or as a minimum score only (e.g. MB: 2, MB: 2up, MB: 9+).

Beef Meat Colour (MC) – can be shown as individual scores or ranges.

Veal Meat Colour (VC) – can be shown as individual scores or ranges.

Fat Colour (FC) – can be shown as individual scores or ranges.

A colon (:) should follow the symbols e.g. MB: 1-4 MC: 1B-4 FC: 1-3.
