Qualitätssicherung. **Vom Landwirt bis zur Ladentheke.**

# Guideline
# **Processing Meat and Meat Products**

QS. Ihr Prüfsystem für Lebensmittel.

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## Contents

# 1 Fundamentals

You can find basic information on the QS scheme such as organisation, participation conditions, use of the QS certification mark and sanction procedures in the **Guideline "General Regulations"**.

## 1.1 Scope

The following requirements apply to meat processing plants and refer to all processes that take place at the production site. In the audit it can be selected between processing, cutting as well as processing and cutting.

The scope of this guide covers all products that are listed in the guidelines for meat and meat products. If a product contains other ingredients which do not fall within the meaning of the guidelines for meat and meat products under the definition of meat or meat product, the requirements in this guide apply only for the portion of meat and/ or meat products.

If companies with an approval for the stage Processing Meat and Meat Products also process fruit, vegetables or potatoes, they need to be certified as well according to the guideline "Preparation/Processing Fruit, Vegetables, Potatoes". A certification for the preparation/processing of fruit, vegetables or potatoes is not necessary if raw materials will only be portioned and therefore directly used as ingredients.

Products that are not listed in the guidelines for meat and meat products but include a value-determining portion of meat for the end user, can also be produced and marketed by QS requirements if the requirements of the **Annex 7.2 Use of the QS certification mark for composite products** are followed.

Processing companies are entitled to trade and store QS meat and meat products. A separate certification for the production scope meat wholesale is not required.

## 1.2 Responsibilities

The **scheme participant** is responsible for ensuring:

- The compliance with the requirements,
- The complete and correct documentation,
- The self-assessment,
- The adequate and timely implementation of corrective actions,
- The correct use of the QS certification mark and product labelling.

The scheme participant must always comply with the requirements of the QS scheme and always be in a position to demonstrate compliance with said QS requirements. They must ensure compliance not only with the requirements of this guideline and all related documents (Guideline "General Requirements", Guideline "Certification" and "Paper of incident") but also with the applicable legal provisions both within the country in which the QS products are produced as well as the country in which they will be marketed by the scheme participant.

# 2 General requirements

## 2.1 General scheme requirements

### 2.1.1 Company data

The following master data must be entered in the database by the scheme participants and always be kept up to date:

- Address of main company and all production sites with EU approval numbers
- Company name
- Phone number, e-mail address, legal representative, contact
- Crisis manager
- Details on the type of company and on the production (e. g. slaughtering of red meat, deboning of white meat, etc.)

In addition, a business overview must be drawn up (existing documentation may be used, e. g. QM or HACCP), which as well as the information listed above also includes the following data:

- All production and storage sites with EU approval numbers (this includes external companies, e. g. frozen storage; where the rooms are shared by several companies, all rooms belonging to the company must be identified in a business plan.)
- Information on existing quality management and audit systems (e. g. ISO 9001, IFS, BRC)
- Commissioned laboratories (current address, phone number, e-mail address) and their fields of analysis

Company overview

### 2.1.2 Use of QS certification mark

Scheme participants are entitled to use the QS certification mark once they have been permitted to do so by an explicit agreement with the coordinator (QS).

The QS certification mark may only be used in accordance with the style guide for the **QS certification mark (Annex 5.3 in the Guideline General Regulations)**.

Scheme participants may only sell their goods to resellers as goods from QS certified companies or describe their goods as such in the accompanying documents, if the reseller is also a QS scheme participant. Goods labelled with the QS certification mark may be marketed to non-QS scheme participants, if it can be expected that the reseller will no longer actively advertise said products as QS goods in its own business transactions and customer contacts. Then, in the accompanying papers the products must not be described as QS or it must be clearly ascertainable from the accompanying documents that the reseller no longer actively advertises the goods as QS goods in the course of his business and in contact with his customers.

**Marketing of final consumer packaging:**

Scheme participants are allowed to market goods that are already packaged for sale to the final consumer and are marked with the QS certification mark only to QS scheme participants. Marketing to non-QS scheme participants is not allowed.

### 2.1.3 Incident and crisis management

QS has developed a comprehensive crisis management system that ensures the provision of active support to scheme participants in the event of an incident or crisis. The scheme participants must inform QS immediately and – where a legal obligation exists – also the competent authorities about critical incidents and public product recalls where these are of relevance for the QS scheme.

Critical incidents are occurrences that pose or could pose a risk to humans, animals, assets or the QS scheme as a whole.

In particular, in cases in which:

- Nonconformities occur in the procurement of goods, or in production or marketing that might pose a risk to food or feed safety
- Preliminary proceedings are initiated due to violation of regulations to secure food safety
- Investigations are carried out by the media, there are critical reports in the media, or public protests are held on issues of food safety

the scheme participants must inform QS.
All scheme participants must have access to a paper of incident so that they can pass on all necessary information in a targeted manner in the event of an incident. Moreover, all scheme participants must name a crisis officer, and this officer must be reachable at all times. The name of the crisis officer must be entered in the QS database.

A procedure of conduct in the event of incidents or crises must be defined and implemented, as well as verified at regular intervals, but at least once a year (approx. every 12 months). It must include the following points:

- Creation of a crisis team
- Emergency call list
- Procedure for product recall and return
- Communication plan
- Customer information

Paper of incident, procedure for conduct in the event of incidents or crises

### 2.1.4 Document handling

A procedure for archiving the documentation must be in place and must be applied in the company. All relevant records are to be kept in a detailed and seamless manner. The documents and records of internal inspections must be retained for a period of at least two years – provided that no longer retention periods are stipulated by law.

Specifications must be prepared for all raw materials and final products. Updates and possible amendments of the specifications must be documented.

### 2.1.5 Company Premises and Access Regulations

All buildings and operating facilities must be protected from unauthorized access and be kept closed. For this reason an access regulation must be defined. Operating sites in which food is produced or stored may not be accessible to unauthorized persons. Outside persons may only have access to the operating areas accompanied by authorization or by permission. All external personnel with the exception of drivers loading their transport vehicles, must receive instructions prior to entering production areas. If external vehicles, e. g. disposal vehicles, enter the business premises, the potential risks involved must be considered.

Access regulations

### 2.1.6 Commissioning of service providers

When service providers are commissioned for the external storage of QS meat and QS meat products, the owner of the goods must ensure that he commissions companies whose approval includes the QS requirements for the storage of meat and meat products.

## 2.2 Self-assessment

### 2.2.1 [K.O.] Implementation and documentation of self-assessment

**Testing methods – limit and reference values**

The specifications of the currently valid version **REG (EC) No. 2073/2005** (or equivalent inspection methods according to the cascade model) are used for testing. The adequate analytical reference methods are:

- Testing for salmonella — **ISO 6579** or PCR
- Total bacterial count — **ISO 4833** prior to cooling
- Enterobacteria — **ISO 21528-2** prior to cooling
- E.coli — **ISO 1649-1 or 2**

The company is required to adhere to sampling plans (see Tab. 1 and Tab. 2) and to document the microbiological status. The analysis must be done accordingly to the standard procedure. A trend analysis is required if the results are unsatisfying.

Tab. 1: Process hygiene criteria[1] for meat and meat products upon completion of a manufacturing process (from **REG (EC) No. 2073/2005**)

| Food category | Microorganisms | Samplingplan[2]/Limit values |
|---|---|---|
| Minced meat/ ground meat | Aerobic colony count[3] | n=5 and c=2<br>m=5x10$^5$ and M=5x10$^6$ CFU/g |
| | E.coli [4] | n=5 and c=2<br>m=50 and M=500 CFU/g |
| Meat preparation | E.coli [4] | n=5 and c=2<br>m=500 and M=5.000 CFU/g or cm$^2$ |

**(1)** "Process hygiene criterion": A criterion that specifies the acceptable functionality of the manufacturing process. Such a criterion does not apply to goods already in the trading process. It is used to define a reference value for the level of contamination that calls for corrective actions to be implemented when this value has been exceeded in order to maintain process hygiene in compliance with food law.
**(2)** n = The Number of units comprising the sample; c = number of sample units giving values between m and M.
**(3)** This criterion shall not apply to minced produced at retail level when the shelf-life of the product is less than 24 hours.
**(4)** *E.coli* is used here as an indicator of faecal contamination.

Tab. 2: Food safety criterion[1] for meat and eat products marketed during the shelf-life (from **REG (EC) No. 2073/2005**)

| **Food category** | **microorganisms** | **Sampling plan[2]/Limit values** |
|---|---|---|
| Minced meat /<br>Ground meat and meat preparations intended for raw consumption[3] | Salmonella | n=5 and c=0<br>not detected in 25 g |
| Minced meat and meat preparation, made of poultry meat, intended for consumption in a heated condition[3] | Salmonella | n=5 and c=0<br>not detected in 25 g |
| Minced meat /Ground meat and meat preparation from meat other than poultry intended for consumption in a heated condition.[3] | Salmonella | n=5 and c=0<br>not detected in 10 g |
| Meat products that are intended for raw consumption, exception products for which the risk of salmonella is ruled out through manufacturing process or combination of products[3] | Salmonella | n=5 and c=0<br>not detected in 25 g |
| Meat product made of poultry meat, intended for consumption in a heated condition[3] | Salmonella | n=5 and c=0<br>not detected in 25 g |
| Fresh poultry meat[3][4] | Salmonella typhimurium[5]<br>Salmonella enteritidis | n=5 and c=0<br>not detected in 25 g |

[1] "Food security criteria": Á criterion which determines the acceptability of a product or a lot of food and which applies on products in the market.
[2] n = The number of units comprising the sample; c = number of sample units giving values between m and M
[4] This criterion shall apply to fresh meat from breeding flocks of Gallus gallus flocks, laying hens, broilers and breeding and fattening flocks of turkeys.
[5] As regards monophasic Salmonella typhimurium only 1,4[5],12:i- is included

In case that other products are made than the ones in the food categories mentioned above, the product hygiene can also be determined with the following guidance and warning values.

A risk-oriented sample preparation plan must be developed and the samples must be analysed and evaluated at least once a year based on the product categories specified. Countermeasures must be initiated if the warning values are exceeded.

Tab. 3: Guidance and critical values for the assessment of boiled sausage, cooked sausage and cured goods (P = pieces goods, whole uncut pieces, C = cuts, slices and pieces with the first slice)

| | **goods** | **guidance value (Cfu/g)** | **critical value (Cfu/g)** |
|---|---|---|---|
| Aerobic mesophilic total viable count[(1)] | P<br>C | $5x10^4$<br>$5x10^6$ | --- |
| Enterobacteria | P<br>C | $1x10^2$<br>$1x10^3$ | $1x10^3$<br>$1x10^4$ |
| Escherichia coli | P<br>C | $1x10^1$ | $1x10^2$ |
| Yeasts | C | $1x10^4$ | --- |
| Coagulase-positive Staphylococcus | P<br>C | $1x10^1$ | $1x10^2$ |
| Listeria monocytogenes[(2)] | P<br>C | --- | $1x10^2$ |
| Lactic acid bacteria[(3)] | P<br>C | $5x10^4$<br>$5x10^6$ | --- |
| Salmonella | P<br>C | --- | Not detected in 25 g |
| Clostridium perfringens | P<br>C | $1x10^2$ | $1x10^3$ |

(1) If living microorganisms are added as a protective culture, this must be taken into account during assessment
(2) The requirements **of REG (EC) No. 2073/2005** are to be observed for the verification and valuation of L. monocytogenes.
(3) In case of exceeded reference values by spoilage organisms with no designated critical values the assessment should be amended by other criteria such as sensory deviations.

Tab. 4: Guidance and critical values for the assessment of raw sausage and raw cured meat products

| | | guidance value (Cfu/g) | critical value (Cfu/g) |
|---|---|---|---|
| Enterobacteria(1) | matured and curable<br>Spreadable | 1x10²<br>1x10³ | 1x10³<br>1x10⁴ |
| Enterobacteria(2) | | 1x10² | 1x10³ |
| Escherichia coli | | 1x10¹ | 1x10² |
| Coagulase-positive Staphylococcus | | 1x10³ | 1x10⁴ |
| Listeria monocytogenes(3) | | --- | 1x10² |
| Salmonella | | --- | not detected in 25 g |

(1) Values only apply to raw sausages and raw cured meat products on the production level
(2) Values only apply to raw cured meat products on the trading level
(3) For detection and assessment of L. monocytogenes the requirements of **REG (EC) No. 2073/2005** must be observed.

Tab. 5: Guidance and critical values for the assessment of unseasoned and seasoned minced meat for orientation

| | | guidance value (Cfu/g) | critical value (Cfu/g) |
|---|---|---|---|
| Aerobic colony count | | 5x10⁶ | --- |
| Enterobacteria | | 1x10⁴ | 1x10⁵ |
| Escherichia coli | unseasoned<br>seasoned | 1x10²<br>5x10² | 1x10³<br>5x10³- |
| Coagulase-positive Staphylococcus | | 5x10² | 5x10³ |
| Listeria monocytogenes(1) | | --- | 1x10² |
| Pseudomonas | | 1x10⁶ | --- |
| Salmonella | | | not detected in 25 g |
| STEC/EHEC(2) | | | not detected in 25 g |
| Thermophilic Campylobacter(3) | | | not detected in 25 g |

(1) For detection and assessment of L. monocytogenes the requirements of **REG (EC) No. 2073/2005** must be observed
(2) Beef for raw consumption
(3) Pork for raw consumption

Status results residue analysis, documentation microbiological status, sampling plans

**Measures in the event of negative trends or values exceeding the reference values**

In line with **REG (EC) No. 2073/2005**, suitable measures must be implemented in the event of unsatisfactory results or negative trends:

- Determination of causes
- Corrective measures to reduce the bacterial count

Sampling plans for surfaces, test results, temperature recorders, temperature monitoring, measuring logs

## 2.3 HACCP

### 2.3.1 [K.O.] HACCP-concept

The company must develop, apply and maintain a system for hazard control in line with HACCP principles (**REG (EC) No 852/2004**) in order to ensure food safety that is comprehensible for third parties.

The process from the incoming goods stage to the outgoing goods stage must be such that contamination of raw materials, partially processed products, finished products, packaging materials, machines and all other substances coming into contact with the foods is avoided. It must be ensured that effective measures are taken to minimise physical and/or microbiological and/or chemical contamination.

If changes that are HACCP-related are made to a product, a manufacturing process or a production, processing, storage or sales stage, the company must review and if applicable modify the HACCP concept. The thawing and tempering of goods must be considered process-specifically in the HACCP concept.

Self-assessment records, checklists

### 2.3.2 HACCP team

To develop an efficient HACCP concept and the requisite knowledge must be available. The HACCP-Team must be documented in a written form. If required, the HACCP-Team must be trained. In this case records of the training have to be kept.

### 2.3.3 Product description

A complete description of the product/the article group must be compiled, and the intended purpose must be defined. This must include:

- Composition of the product/the article group
- Physical and chemical structure
- Antimicrobial/Static treatment
- Packaging
- Shelf life
- Storage conditions
- Distribution channels (e. g. foreign countries/inland, status, loose goods/prepacked, etc.)

### 2.3.4 Flow diagrams

A schematic flow diagram must be prepared. The flow diagram must include all operating processes and product groups.

### 2.3.5 Hazard analysis

The HACCP concept is based on the determination of hazards that must be avoided, eliminated or reduced to an acceptable level.

### 2.3.6 Critical control points (CCP)

Critical control points must be defined if control is required, in order to avoid, eliminate or reduce any hazards to an acceptable level.

### 2.3.7 Limit values for CCP/CP

Limit values for the critical control points and the control points must be defined with regard to the avoidance, elimination or reduction of identified hazards.

### 2.3.8 Monitoring and verification of limit values for CCP/CP

Procedures for monitoring and verifying critical control points and control points must be defined and implemented. These procedures must be applied regularly.

### 2.3.9 Corrective actions for CCP/CP

Corrective measures must be defined if monitoring shows that a critical control point or a control point exceeds the set limit values.

### 2.3.10 Responsibilities

Responsibilities must be clearly defined in an organigram.

### 2.3.11 Documentation

Records suited to the type and size of the abattoir in order to verify that the actions outlined in 2.2.1 to 2.3.10 must be implemented.

### 2.3.12 HACCP verification

The HACCP concept and its implementation must be verified once a year (approx. every 12 month).

### 2.3.13 Control points (CP)

Control points must be determined at which measures for monitoring of certain quality and/or hygiene criteria of goods are required.

## 2.4 Good manufacturing and hygiene practice

### 2.4.1 Tapping point

Irrespective of origin and aggregation state, water that is used for the manufacture, treatment, conservation or marketing of food as well as the cleaning of objects and facilities that come into contact with food must comply with the current version of the **Drinking Water Ordinance**. Drinking water must be provided in suitable quantities and may not pose any risk of contamination.

A tapping point plan must be present within the company. Risk-oriented sampling of the tapping points must effected in line with the current version of the **Drinking Water Ordinance**.

Tapping point plan

### 2.4.2 Cleaning and disinfection

Based on a risk analysis, cleaning and disinfection plans must be drawn up that detail the following:

- Responsibilities
- Used products and their instructions for use
- Areas requiring cleaning or disinfection
- Cleaning intervals
- Recording obligations
- Hazard symbols (if required)

Implementation of the cleaning and disinfection plans must be documented.

Proof of cleaning and disinfection

**Training**

Cleaning personnel must undergo training that includes first aid and labelling practices.

**Requirements for the monitoring of cleaning and disinfection measures**

The frequency of sampling should be defined according to the size of the company as well as the results of previous analyses. Samples must, however, be taken from at least 10 (up to 30 in large production rooms) different places in the company and spread across the year. Monitoring and assessment of the cleaning and disinfection measures is to be carried out in line with other approved procedures (e. g. CEN, ISO).

**Sampling**

Sampling should be carried out before the start of production in areas that have a direct influence on product hygiene (e. g. knives, knife sterilizers). Once selected, sample extraction points should be used on an alternating basis. Sampling must be performed in line with a recognised procedure and defined in a sampling plan.

**Assessment**

In order to determine the hygienic status of a company, the samples must be tested for aerobic mesophilic bacterial count as well as enterobacteria. The assessment should be repeated within 4 weeks. The assessment can be conducted according to the assessment schedule (see Tab. 6).

Tab. 6: Assessment schedule for monitoring the success of cleaning and disinfection

| **Area** | **Bacteria type** | **Limit** |
|---|---|---|
| Surfaces that get in contact with food: immediately after cleaning and disinfection | aerobic mesophilic bacterial count | <100 cfu/100 cm² |
| | Enterobacteria | 0 cfu/100 cm² |
| | Listeria spp.(1) | 0 cfu/100 cm² |
| Surfaces that get into contact with food: immediately before production | aerobic mesophilic bacterial count | <10 cfu/cm² |
| | Enterobacteria | < 1 cfu/cm² |
| | Listeria spp.(1) | risk based depending on the product |

(1)According to **REG (EC) No. 2073/2005** food manufacturer that produce ready to eat foods which may put public health at risk because of *Listeria monocytogenes* must analyse samples of the working areas and work equipment in regard to Listeria monocytogenes.

**Feedback**

The results are to be reported to the responsible cleaning staff as quickly as possible and corresponding measures implemented (e. g. training/instruction, checking the cleaning equipment and agents, maintenance of cleaning equipment, monitoring of the cleaning process), particularly if the results are unsatisfactory. The implemented measures must be documented.

Cleaning and disinfection plans, sampling logs, measures

### 2.4.3 Pest monitoring/control

It must be ensured that a high level of cleanliness and hygiene is maintained in all work/storage areas in order to prevent the attraction of pests and vermin. In the operating rooms, precautionary measures must be taken to repel pests that adversely affect food. Appropriate measures for pest monitoring or, if necessary, for pest control must be introduced.

Within the implementation of pest monitoring and control, measures and qualifications of the user must comply with the legal requirements of the country as well as the particular product specifications. Monitoring and bait points need to be controlled at least every month as long as no other control interval is determined on the basis of a risk assessment. In order to guarantee the safety of the food as well as that of the employees, suitable pest control methods and pesticides must be used. This pest control treatment must not jeopardise the safety of the produced or stored products.

A permanent baiting (without infestation) with rodenticides is only permissible in exceptional cases if the implementation takes place via a professional and qualified pest controller who meets the legal requirements of the appropriate country. The exceptional case needs to be proven and documented by an annual risk assessment of the pest controller. Only baits that are approved for this purpose may be used.

The documentation must contain at least the following information:

- Information on used products for pest prevention and control
- Date of treatment as well as the specification of the applied quantities
- Proof that the employees involved in pest control are suitably qualified
- Checkpoint plans showing the positioning of monitor- and bait stations
- Records of pests found (findings)
- Measure plans in case of pest infestation

Documentation of pest control

### 2.4.4 Handling deviating products

The handling of non-conforming products, auxiliary materials and packaging materials must be defined and the relevant processes must function properly. Especially the handling of dropped unpacked products or products that do not comply with the specification due to production defects must be observed. The decision as to their further use (release, blocking, rejection/disposal) must be made by a designated member of staff.

Proof of use/disposal of deviating products

### 2.4.5 Monitoring of Test Equipment

When calibrating and monitoring the functionality of the instruments and devices used as test equipment (e. g. thermometers), the intervals stipulated by the manufacturers must be complied. If a manufacturer has not made any stipulations in this regard, the test equipment must be calibrated or checked in line with the perceived estimation of the risk but at least once a year (approx. every 12 months). The measuring methods of the various test devices must be taken into consideration. The calibration or check procedure is described for each test device. The results must be documented for, and clearly traceable to, each piece of test equipment (incl. deviations, corrective actions). The measuring precision, reliability and functionality of operational test equipment must be guaranteed.

Proof of calibration and surveillance of measuring equipment

### 2.4.6 Foreign matter management

The entrance of foreign matter into food must be avoided. Risk analyses must be performed to identify and assess potential entry sources. Measures are to be taken and procedures defined in order to minimise this risk. The staff must be familiar with and observe the detection limits and application provisions of the detection equipment that is used.

Regular internal inspections must be performed. The success of the taken measures must be assessed e. g. by means of findings.

Documentation of foreign matter management

### 2.4.7 Production permission

Before production begins each day, a site inspection must take place for the production area to be approved. An optical check of successful cleaning as well as damages must be performed. This approval must be documented in a corresponding form.

In case of deviations corrective measures must be defined. Implementation of the corrective actions is documented.

Documentation of the production permission, Implementation of corrective measures

### 2.4.8 [K.O.] Recipes

Recipes must be created for all self-produced products. Specifications/ingredient lists that at least fulfil all legal requirements must be present for all purchased products. All ingredients must be listed in the recipes. The recipes must be known and accessible to the responsible member of staff. A procedure for the modification of recipes must be defined and applied.

The use of separator meat must be ruled out when producing QS goods. The processing of spinal marrow of pigs is prohibited. Furthermore, the usage of foreign protein as a substitute ingredient that might up the results of an analytical value for meat protein (BEFFE) is not allowed when producing QS goods.

The product must meet the respective requirements/market practices of the country of destination. In Germany, the German Guidelines on Meat and Meat Products apply.

Specifications, recipes, procedure for changing recipes

### 2.4.9 Further processing of intermediate and end products

Intermediate and end products that remain in the plant due to technological procedures, may only be returned to the production process following a detailed specialist inspection by a trained member of staff (see **German Food Code**).

### 2.4.10 Maintenance and repair

To guarantee that all processes can be performed in a hygienic and safe fashion, a maintenance plan including planned maintenance measures must be compiled and implemented for all business premises, facilities and equipment (e. g. stunning equipment) that serve to ensure or have a direct influence on product safety. Maintenance work must not compromise food safety. Maintenance and repairment work must be documented.

The maintenance plan must include the following elements:

- (Business) areas and operations rooms
- Facilities and (internal) transport systems
- Conformity of the used excipients and lubricants
- Responsible employees (own staff or from external companies)
- Frequency

Maintenance plan, documentation of maintenance and repairment work

### 2.4.11 Room, equipment and plant hygiene

All rooms, plant and machines in which foods are stored, prepared, treated or processed must be in a clean, hygienic and dirt-free condition. Pooling of water in "dead areas" and larger patches of corrosion on the equipment and machines must be avoided. Equipment (knives, saws etc.) are to be kept functional and clean.

### 2.4.12 Clear floor area

Products may not come into direct contact with the floor. The goods must be stored and transported in such a way that there is no risk of contamination. Containers approved for the transport of foods may not stand directly on the ground but must be kept on pallets or mobile plates, as a potential risk of contamination via a contaminated floor cannot be ruled out if the containers are restacked (not applicable to hanging goods).

This does not apply to industrial containers (e. g. BIG Boxes), whose runners and legs are concepted to be standing on the floor. In case these containers are stacked, internal rules must be followed so that a contamination is prevented.

## 2.5 Staff hygiene

### 2.5.1 Rules of conduct

Documented guidelines must be in place for staff hygiene and communicated to staff during training sessions. The staff hygiene guidelines must be followed and observed by all persons (employees, service providers, etc.). The guidelines must at least cover the following points:

- Cleaning and disinfection of hands
- Eating, drinking, smoking and chewing gum
- Steps to be taken in the event of any injuries
- Fingernails, jewellery, piercings and watches
- Hair and beards

Each member of staff must be provided with adequate protective clothing as well as headgear (eventually beard protection). There must be sufficient options to ensure hand hygiene and instruction signs on use of the disinfectant. Hand hygiene facilities in the production facilities must at least fulfil the following requirements:

- Running hot and cold water from hands-free fixtures (sensor/knee switches)
- Liquid soap and disinfectant from dispensers
- Disposable towels or alternative methods (e. g. hand dryers)

If coat hooks are present, they must be mounted in a suitable and appropriate location.

A process must be in place for the regular monitoring of systematic implementation of staff hygiene in the company. The findings must be evaluated and optimisation measures taken where necessary. All persons whose activities directly affect product safety must have the necessary experience/training.

Procedure for implementation and monitoring of staff hygiene

### 2.5.2 Staff rooms and sanitary facilities

Staff and external persons must have access to suitable changing rooms. Outdoor and protective clothing must be stored separately. The sanitary facilities and staff rooms, must be in a clean condition. If showers are available, they must be intact and properly maintained.

### 2.5.3 [K.O.] Hygiene sluice

All individuals may only enter the production area through an inevitable hygiene sluice (exceptions are only allowed in the event of an emergency). Shoes and hands must be cleaned and disinfected thoroughly.

## 2.6 Staff training

### 2.6.1 [K.O.] Hygiene training/Infection Protection Act

Based on **REG (EC) No. 852/2004**, hygiene training courses are to be held in the company every year (approx. every 12 month). Documented training programmes must be defined for employees in line with the product requirements. This training plan must contain the following points:

- Contents
- Training intervals
- Participants and trainer
- Languages

Staff are to be trained in line with the provisions of the **Infection Protection Act** and this training must be documented. Such training courses are to be staged at least once a year (approx. every 12 month).

Training plan and training proof, Instruction/certificate from the health authorities

### 2.6.2 Information on the QS scheme

All responsible employees must be informed on the requirements of the QS scheme manual. This includes not only the basic principles of the QS scheme but also the specific requirements in the area of activity of the employees.

### 2.6.3 Manufacturing and work instructions

Manufacturing and work instructions must be prepared for all relevant processes related to product safety. The employees must be made aware of the up-to-date instructions.

## 2.7 Cold storage

### 2.7.1 Technical/structural condition

In line with **REG (EC) No. 852/2004** Annex II, facilities involved in the handling of food and rooms in which food products are stored, prepared, treated or processed must be well maintained and clean. They must be designed and built in such a way that they permit sufficient cleaning and/or disinfection, avoid airborne contamination or reduce it to a minimum level and ensure that sufficient work surface is available to permit proper and hygienic work steps.

Rooms in which food is prepared, treated or processed must be designed and built in a way that ensures proper food hygiene and prevents contamination between and during work steps.

The following requirements must be fulfilled:

- All floor and wall coverings must be kept in a flawless condition and must be easy to clean and, if required, easy to disinfect. They must be water-proof, water-repellent and abrasion-resistant and consist of non-toxic material. Where applicable, floor surfaces must be fitted with a suitable drainage system. Wall areas must have a smooth surface up to the height that is appropriate for the work processes that are performed.
- Ceilings (or if there are no ceilings, interior roofs) and ceiling structures must be built and treated in such a way that any accumulation of dirt is avoided and that condensate, undesired mould and the peeling away of material particles is reduced to an absolute minimum.
- Windows and other openings must be designed in a manner that avoids the accumulation of dirt. Openings extending outward require insect mesh that can be easily removed for cleaning. If opened windows promote contamination, they must remain closed and sealed during the entire manufacturing process.
- Doors must be easily cleaned, and if required, disinfected. They must have water-repellent and smooth surfaces.

Surfaces (including equipment surfaces) in areas in which food materials are handled, and in particular surfaces that come into contact with food, must be kept in a flawless condition and must be easy to clean and, if required, to disinfect. They must be made of smooth, abrasion-proof, corrosion-proof and non-toxic material.

### 2.7.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

Cold storage rooms must be in a clean and hygienically sound condition. Mould accumulation must be prevented in the cold storage rooms and steps taken to remove mould if necessary. Care should also be taken to ensure that icing is reduced to a minimum.

Transport containers and vehicles are to be in a hygienically flawless condition.

### 2.7.3 Clear floor area

⇒ 2.4.12 Clear floor area

### 2.7.4 Storage management

A logical storage management system must be in place, based on which it is possible to recognise rapidly and clearly which goods have been entered into storage and when. It must be possible to uniquely identify each product or packaging unit. The first-in-first-out principle is to be followed. Storage conditions should not have any negative effects on the product properties (packaged/unpackaged).

A procedure must also be specified and known to the responsible members of staff that specifies the measures and steps in the event of a breakdown or malfunction. Here as well, the top priority must always be food safety – as with all other deviations in production or storage.

In cold storage rooms compliance with the shelf life date (best-before date/Use-by date) is to be respected. Therefore, a regular checking of the best-before-date and the Use-by date must be guaranteed. Products with expired Use-by date are not allowed to be sold or shipped. Products with expired best-before date must be dealt with according to internal Guidelines.

### 2.7.5 [K.O.] Temperature recording and monitoring

The temperature must be recorded and documented. Procedures in the event of a technical malfunction must also be described and known.

The following temperatures must be complied with in deep-freeze, defrost and meat cooling rooms (see Tab. 7, Tab. 8).

Tab. 7: Temperature requirements for foods of animal origin requiring refrigeration which are sold unpacked or self-packed

| Products | Maximum temperature [°C] |
|---|---|
| Meat, fresh (except poultry) | +7 |
| Slaughtering by-products, fresh (also ground) | +3(1) |
| Meat preparations from EU-approved companies (SB-packed) | +4 |
| Poultry meat (incl. poultry offal)(2) | +4 |
| Minced meat from poultry/Meat preparations from minced meat from poultry | +4 |
| Meat preparations from poultry meat | +4 |

(1) If accepted by law, the temperature of 4 °C listed in the "Guideline for Good Hygiene Practice in Non-Industrial Butcheries" for by-products of the slaughtering process can also apply.
(2) Poultry meat processed in fresh poultry preparations must be stored at a temperature between -2 °C and +4 °C at all times in accordance with **REG (EC) No. 1308/2013**.

Tab. 8: Temperatures in cold storage and defrosting rooms

| Room | Optimum room temperature [°C] | Relative humidity [%] |
|---|---|---|
| Cold storage | -1 - +2 | 85 – 95 |
| Defrosting rooms (with ventilation) | <10 (2-15) | ca. 90 |

Proof of temperature recording and monitoring, procedures in the event of a technical malfunction

### 2.7.6 Species-specific product separation

Species-specific product separation must be ensured to prevent any negative reciprocal effects. Companies that, due to a lack of space, separate species based on time schedules must ensure interim cleaning procedures. From the deboning stage, the goal of reducing salmonella calls for the following sequence - first cattle, then pork, then poultry.

## 2.8 Deep-frozen storage

### 2.8.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

### 2.8.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

Cold storage rooms must be in a clean and hygienically sound condition. Mould accumulation must be prevented in the cold storage rooms and steps taken to remove mould if necessary. Care should also be taken to ensure that icing is reduced to a minimum. The cooling units must be serviced on a regular basis and kept in a hygienically sound condition. A documented cleaning plan must be in place for the cooling systems complete with proof of performed cleaning.

Transport containers and vehicles are to be in a hygienically flawless condition.

Cleaning and disinfection plan

### 2.8.3 Clear floor area

⇒ 2.4.12 Clear floor area

### 2.8.4 Storage management

⇒ 2.7.4 Storage management

### 2.8.5 [K.O.] Temperature recording and monitoring

Rooms or equipment in which products, raw materials, additives or auxiliary materials are stored must adhere to specific climatic conditions such as temperature, humidity, etc., as per the specifications of the products to be stored and in line with the **regulations on deep-frozen food**.

The temperature must be recorded, documented and supervised (Tab. 9). Procedures in the event of a technical malfunction must also be described and known.

Maximum temperature that must be observed at all points for food requiring cooling is -18 °C for deep-frozen food. Variation of temperature of these products up to 3 °C is acceptable in accordance with the **regulations on deep-frozen food**.

Tab. 9: Temperature requirements freezer rooms

| Room | Optimum room temperature [°C] | Relative humidity [%] |
|---|---|---|
| Freezer room | Min. - 18 | 95 – 98 |

Temperature recording and documentation, Methods at technical defaults

# 3 Requirements for the production process

## 3.1 Deboning

### 3.1.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

### 3.1.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

### 3.1.3 Clear floor area

⇒ 2.4.12 Clear floor area

### 3.1.4 [K.O.] Structure and organisation

The deboning process must follow structured workflows. The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks to food safety (e. g. clear demarcation of hygiene areas).

### 3.1.5 [K.O.] Temperature recording and monitoring

The legally required temperatures (**REG (EC) No. 853/2004,** see Tab. 7) during deboning, storage and the transport of meat must be adhered to. The cold chain may not be interrupted and the health of the consumer may not be jeopardised by an increase in temperature. A room temperature of 12 °C must be maintained during deboning or it must be ensured that the meat temperature does not exceed the specified temperatures, e. g. by using an actively refrigerated worktable.

Meat may, however, be cut and deboned during the cooling period without having achieved the above-mentioned temperatures if the deboning room is at the same location as the slaughtering facility. In this case, the meat must either be brought directly to the deboning room from slaughtering or first be placed in cold storage. Once deboning and, if applicable, packaging has been completed, the meat must be cooled to the aforementioned temperatures.

Documentation of temperature

## 3.2 Batch processing

### 3.2.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

### 3.2.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

### 3.2.3 Clear floor area

⇒ 2.4.12 Clear floor area

### 3.2.4 Structure and organisation

The batching process must follow structured workflows. The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks to food safety. Batches must be structured, labelled and documented uniquely.

## 3.3 Mincing

### 3.3.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

#### 3.3.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

#### 3.3.3 Clear floor area

⇒ 2.4.12 Clear floor area

#### 3.3.4 Structure and organisation

The mincing process must follow structured workflows. The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks to food safety. Unique batch processing must take place.

#### 3.3.5 Cross-contamination

During the manufacture of products, care must be taken to ensure that cross-contamination with other products does not take place. Contamination with other products must be ruled out when processing products containing allergen materials in particular. The company has respective requirements and instructions in place for this purpose. The employees must have received sufficient training for this purpose.

#### 3.3.6 [K.O.] Temperature recording and monitoring

The cold chain while grinding or bowl cutting (for example when producing minced meat) is adhered to. The ice, e. g. added while grinding, is drinking water. The standing time of the raw material is kept as low as possible and the ground or minced meat is processed directly without any unnecessary standing times.

A system for temperature registration and documentation is in place. Procedures in the event of a technical malfunction must also be described and known.

Documentation of temperature

### 3.4 Filling

#### 3.4.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

#### 3.4.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

#### 3.4.3 Clear floor area

⇒ 2.4.12 Clear floor area

#### 3.4.4 Structure and organisation

The filling process must follow structured workflows. The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks to food safety.

#### 3.4.5 Cross-contamination

During the manufacture of products, care must be taken to ensure that cross-contamination with other products does not take place. Contamination with other products must be ruled out when processing products containing allergen materials in particular. The company has respective requirements and instructions in place for this purpose. The employees must have received sufficient training for this purpose.

## 3.5 Heating, cooking, boiling

### 3.5.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

### 3.5.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

### 3.5.3 Structure and organisation

The heating, cooking and boiling process must follow structured workflows. The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks. The entire area makes an orderly impression.

### 3.5.4 [K.O.] Registration of heating and cooking temperatures

There must be product-specific heating programs that also be adhered to. The cooking programs regulate the core temperature as well as the duration of the heating procedure. Temperature/time management must be defined and documented. The responsible employees must regular control temperature and time specifications and intervene in the events of discrepancies and implement the defined corrective measures. The F values possibly stated in the specifications must be adhered to.

Documentation of temperature/time management

### 3.5.5 Cooling

After heating meat products, they must be cooled down as quickly as possible. Manufacturers must define the appropriate conditions in a risk-oriented manner.

## 3.6 Canning

### 3.6.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

### 3.6.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

### 3.6.3 Structure and organisation

The canning process must follow structured workflows. The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks to food safety. The entire area makes an orderly impression.

At the end of the manufacturing process a random control test concerning the leak tightness (seam check) of the produced cans must be performed.

### 3.6.4 Container cleaning

The containers (jars/glasses) must be cleaned with a suitable method directory prior to filling. Damaged containers have to be removed from the start of the process.

### 3.6.5 [K.O.] Registration of sterilization temperature and time control

The F and D values must be adhered to during the sterilization process. There have to be specific heating and cooling programs available for each product group. The determined temperature/time management must be maintained and documented for each sterilization. The thermometers used must be functioning, suitable for their purpose and must be calibrated regularly.

Documentation of temperature/time management

#### 3.6.6 Cooling

After heating meat products, they must be cooled down as quickly as possible. Manufacturers must define the appropriate conditions in a risk-oriented manner.

## 3.7 Smoking

#### 3.7.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

#### 3.7.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

#### 3.7.3 Structure and organisation

The smoking process must follow structured workflows. The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks to food safety. The entire area makes an orderly impression.

## 3.8 Curing

#### 3.8.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

#### 3.8.2 Room, equipment and plant hygiene

Work equipment and curing containers must function properly and be hygienically sound. Special attention should be paid to injectors, brine container and the condition of the brine, tumblers, ham press and forms.

#### 3.8.3 Clear floor area

⇒ 2.4.12 Clear floor area

#### 3.8.4 Structure and organisation

The smoking process must follow structured workflows. The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks to food safety. The entire area makes an orderly impression.

#### 3.8.5 Temperature control

When producing cured goods a favourable temperature/time relation for the product must be maintained. Undesired microbial growth must be prevented.

#### 3.8.6 Use of additives

The maximum quantities of additives stipulated in **REG (EC) No. 1333/2008** must be adhered to and identified respectively when issuing the product to the final consumer.

## 3.9 Drying and maturing

#### 3.9.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

#### 3.9.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

#### 3.9.3 Clear floor area

⇒ 2.4.12 Clear floor area

#### 3.9.4 Structure and organisation

The drying and maturing process must follow structured workflows.

The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks to food safety. The entire area makes an orderly impression.

#### 3.9.5 Temperature control

When producing raw sausage a favourable temperature/time relation for the product must be maintained. Undesired microbial growth must be prevented.

#### 3.9.6 [K.O.] Drying and maturing monitoring

Manufacturers of raw sausages and raw cured products must set product-specific target values (e. g. pH value, $a_W$ value and/or weight loss) for the maturing that must be maintained and monitored. These parameters must be observed for products susceptible to microbial growth. Before further use of the product or the delivery, these values must be complied with. The company integrates these values in its HACCP system.

Documentation of maturing parameters

### 3.10 Cutting, disarticulation, casing

#### 3.10.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

#### 3.10.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

#### 3.10.3 Clear floor area

⇒ 2.4.12 Clear floor area

#### 3.10.4 Structure and organisation

The process of cutting, disarticulation and casing must follow structured workflows. The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks to food safety. The entire area makes an orderly impression.

The casing material must be stored separately and be transported hygienically without transport packaging to the work area.

#### 3.10.5 Cross-contamination

When cutting, disarticulating and encasing products, it must be seen that no cross-contamination can occur with other products. Contamination with other products must be ruled out when processing products containing allergen materials in particular. The company has respective requirements and instructions in place for this purpose. The employees must have received sufficient training for this purpose.

## 4 Packaging and other business sections

### 4.1 Packaging

#### 4.1.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

### 4.1.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

Cleaning must take place spatially and temporally separate from the packing processes.

### 4.1.3 [K.O.] Packaging material

Packaging material is to be stored in a separate storage area. Packaging material and any supplementary material must be stored and transported in such a way that the risk of contamination is kept to a minimum. Damage to packaging material must be prevented. Packaging material and any supplementary material must be suitable for the purpose and correspond to legal requirements.

Updated conformity certification must be present for the packaging material. A declaration of compliance must be present for all used packaging material in direct contact with food for which no conformity declaration is present.

⇒ Annex 7.1: Declaration of conformity with the food laws for food packaging made of plastic (specimen)

Declaration of conformity/ Declaration of compliance

### 4.1.4 [K.O.] Product labelling

All beef products must be marked/labelled in accordance with **REG (EC) No. 1760/2000** with observance of **REG (EU) No. 1308/2013** Annex 7. With pigs and poultry, the provisions of **REG (EU) No. 1337/2013** must be complied with. Compliance with these regulations can be verified by the traceability and labelling system for meat from ORGAINVENT. The origin of the primary ingredient must be marked as of 1st of April 2020 if this is required according **REG (EC) No. 775/2018**.

The following information must be listed on the product packaging of food intended for final consumers:

- Designation of the food
- List of ingredients (QUID if necessary)
- Reference to allergenic substances (also applies to bulk goods in line with LMIV)
- Total net quantity of the food
- Best-before date/Use-by date
- If necessary, special instructions for storage and/or use
- Name and address of the food company
- Nutrition declaration (not for primary products and for food regarding Annex V of the Reg. (**EG) No. 1169/2011**)
- EU license/registration number
- Formed from pieces of meat
- Added water
- Date of freezing
- Indication of origin, if legally required
- Note regarding oxygen pressure treatment where necessary: $\ddot{U}_2$

⇒ Annex 7.2 Use of the QS certification mark for composite products

### 4.1.5 Clear floor area

⇒ 2.4.12 Clear floor area

## 4.2 Other business sections and areas

### 4.2.1 Packaging material storage

Packaging material is to be stored separately from other goods. The room must be clean and in proper condition and cleaned in accordance with the cleaning and disinfection plan. Packaging material may only be used in production areas if the outer packaging has already been removed. Packaging material and any packaging material must be stored and transported in a way that minimises the risk of contamination.

### 4.2.2 Cleaning and disinfection agent storage

The rooms or facilities in which cleaning agents and cleaning equipment are stored must be clean and in proper condition. They ensure hygienic storage of devices and, if necessary, permit clear separation of equipment for the clean/non-clean areas. The equipment is serviced and maintained on a regular basis. A procedure for cleaning and disinfecting rooms and equipment must be in place and staff must be familiar with this procedure.

All containers used to store cleaning agents must be labelled accordingly. Potential environmentally hazardous substances must receive special treatment (e. g. protective tubs):

Updated safety data sheets and instructions for use must be present for cleaning chemicals and cleaning agents. The responsible members of staff must be familiar with the instructions for use, which are to be stored on site. Cleaning equipment and chemicals must be clearly labelled and stored separately from food.

Safety data sheets, instructions

### 4.2.3 Disposal logistics and area

Suitable measures must be taken for the storage and disposal of food waste, inedible by-products and other waste products.

These products must be removed from locations in which food is handled as quickly as possible. They must be collected in lockable containers if they are located outside the buildings/rooms. These containers must be suitable for maintaining and be easy to clean and disinfect if necessary.

All waste must be disposed of in line with the hygiene regulations and in an environmentally sound manner and may not affect any food directly or indirectly.

The area of room where waste is collected and temporarily stored as well as the containers therein must be in a clean and hygienically flawless condition.

### 4.2.4 [K.O.] By-products

On site, the handling of slaughter waste and risk materials must be defined and implemented in line with **REG (EC) No. 1069/2009** and its **implementing regulation 142/2011**.

The company must present verifications which provides quantitative information concerning the utilisation of risk material, bones, contaminated products and returned items.

Moreover, negative effects on the produced foods must be ruled out.

Commercial documents

#### 4.2.5 [K.O.] Spice storage

A specification must be present for used spices. The products have to be stored in a clean and orderly manner and furnished with a best-before date. If spices are removed from their original packing, marking and the best-before date must be transferred along to the new storage container. The spice container must be entirely emptied, cleaned and disinfected before new goods can be put into the container.

The contamination with allergens must be ruled out in spice storage. A special area must be designated for the storage of spices containing allergens.

#### 4.2.6 Cleaning rooms

The cleaning of containers wherein meat and meat products are stored and transported (E2-crates and charging carts) must be performed in an effective and proper manner. It must be ensured that the crates are sufficiently dried and that no moisture remains in the crates.

# 5 Incoming and outgoing goods, labelling, use of the certification mark, traceability and transport

## 5.1 Incoming goods

#### 5.1.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

#### 5.1.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

Furthermore, the area must be secured from pest infestation through closable doors and gates. Delivered goods have also to be inspected for infestation and resp. measures are implemented if necessary.

#### 5.1.3 Clear floor area

⇒ 2.4.12 Clear floor area

#### 5.1.4 Structure and organisation

Goods reception must follow structured workflows. The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks to food safety. The path of the goods is designed so that no cross-contamination between packed and unpacked goods may occur. Goods requiring cooling are brought directly to cold storage (if they are not to be directly processed) or respective measures are taken to ensure the cold chain is not interrupted.

#### 5.1.5 Transport vehicles delivery

Delivery vehicles are in a clean and hygienically sound condition and display no signs of old soiling. Neither the clothing of the driver or and the possible accompaniment nor the handling of the goods effect each other negatively.

The transported goods are hygienically sound and display no signs of major soiling. The temperature of the goods comply with legal requirements resp. specifications. All refrigerated transport vehicles must be fitted with a functional temperature registering unit. The registered temperature must be checked and documented at on a random sample base in regular intervals.

🗐 Check of registered temperature

#### 5.1.6 [K.O.] Incoming goods inspection

Inspection of incoming goods (purchase reception) must be defined and documented. This includes all products relevant. If necessary, incoming goods inspection must be adapted to any changed

manufacturing, storage or transport conditions. Issues of relevance in terms of food safety must be recorded during the inspection of incoming goods (e. g. temperatures).

It must be possible to trace which goods are purchased from which supplier.

Procedure for acceptance checks on purchased goods, supplier list

#### 5.1.7 [K.O.] Labelling of purchased QS goods

QS goods must be clearly marked/labelled as such. In addition, the distinct marking of the accompanying paperwork (usually bills of delivery or dispatch notes sent per EDI) must be guaranteed so that at any time an unequivocal link can be established between goods produced under the QS scheme and the corresponding bills of delivery, invoices, etc.

#### 5.1.8 [K.O.] Product temperature

The product temperature may not exceed the values specified in table 7. If lower temperatures are defined in the company and it was agreed with the supplier, this must be fulfilled and observed when receiving goods. The temperatures of goods that are subject to mandatory cooling regulations must be recorded and documented during the incoming goods inspection.

Temperature documentation

### 5.2 Outgoing goods and returns management

#### 5.2.1 Technical/structural condition

⇒ 2.7.1 Technical/structural condition

#### 5.2.2 Room, equipment and plant hygiene

⇒ 2.4.11 Room, equipment and plant hygiene

#### 5.2.3 Clear floor area

⇒ 2.4.12 Clear floor area

#### 5.2.4 [K.O.] Outgoing goods inspection

In the area of shipping, clear procedures and processes must be defined which cover at least the following points and which ensure compliance with regard to these points:

- Identity of the product
- Temperature
- Damage/Contamination
- Packaging

A structured and retraceable goods issue control must be implemented. The manner in which deviations are handled must be specified. The responsible employees are trained in dealing with deviant products. Transport must take place as per product requirements. Respective verifications must be submitted for this.

Goods issue, QS customer list

It must be possible to trace which goods are delivered to which customer.

#### 5.2.5 [K.O.] Labelling of marketed QS goods

Goods marketed as QS goods must be provided with clear labels at the outgoing goods stage (e. g. stamp on the carcass halves showing the QS certification mark, the labelling of E2 crates with the QS certification mark, tracing with the slaughter number, etc.). In addition, the produced goods must be clearly labelled as QS goods on the delivery note.

**Marketing of loose goods**

If QS-certified and not-QS-certified loose goods are transported in one container (e. g. for the service counter) the labelling with the QS certification mark on the container is not allowed. If possible, every QS-good should be labelled as such (e. g. with a banderole). In this case a labelling with the QS certification mark must be made on the delivery note. The addressee of the goods has to get the information which products of the delivery are QS-goods and so are allowed to be traded with the QS certification mark. In the retail branch there should be a list for the employees that clearly indicates the QS-goods. This method is only allowed if the system is comprehensible for third (e. g. unmixed separation of QS-goods and not-QS-goods).

QS goods must be uniquely and traceably labelled as such throughout all process stages. In addition, the transport documents must also be labelled uniquely (delivery note) so that a unique reference can be made from the goods produced in line with QS and the corresponding delivery notes or invoices etc. at any time. The requirements for the transport of QS-goods and not-QS-goods in one transport container have to be considered.

Scheme participants may only label QS goods as such in the accompanying documents if the reseller is also a QS scheme participant. If at a business customer level QS products are marketed to non-QS scheme participants, these goods may not be identified as such in the accompanying documents, unless it is to be expected that the reseller will no longer actively advertise the goods as QS products in his business dealings and in contact with his customers.

Incoming and outgoing goods documents

### 5.2.6 [K.O.] Final product inspection

Test procedures must be specified for final product control that ensure the flawless nature of the products. This includes:

- Seal tightness check
- Filling weight check: scales used must be calibrated and subject to regular testing device inspections. Filling weight checks are to be performed on a regular basis; they must be documented and must comply with the legal regulations. Quantity and content (less tolerance) must correspond to the information on the packaging or the specifications.
- Cover gas concentration
- Temperature monitoring
- Labelling (labels, packing slips, QS-certification marks, Best-before date/Use-by date/Storage notes)

There must be a procedure for establishing best-before dates/use-by dates in the company. These dates must be defined for each product group.

procedure for final product control, establishing best-before dates/use-by dates

### 5.2.7 Complaints management

A system for managing product claims and product complaints must be in place.

All claims/complaints must be assessed and where necessary appropriate steps taken.

Claims = made by authorities

Complaints = made by costumers and end-users

#### 5.2.8 [K.O.] Returns management

A system to process returns must be implemented. Measures must be implemented to prevent the reoccurrence of the deviation. The separation of QS goods and non-QS goods must be observed.

Documentation of returns management

#### 5.2.9 Structure and organisation

The process of outgoing goods and returns management must follow structured workflows. The division of work among staff must be clearly structured and in line with the work process in order to avoid potential risks to food safety.

The batches must be formed, identified and documented uniquely.

### 5.3 Traceability and origin

#### 5.3.1 [K.O.] Traceability method

Produced batch sizes must be defined to secure traceability. Traceability should be ensured to at least the daily production of a single article or a group of articles. The systems and procedures for traceability must be traceable by third parties and allow a distinct identification of the QS goods as well as a traceable and plausible commodity flow. System partners must set up traceability systems and procedures in accordance with **REG (EC) No 178/2002**.

When forming beef batches, the provisions of **REG (EC) No. 1825/2000** Article 4 must be compulsory fulfilled. For pork and poultry, Articles 4 and 5.3 of **REG (EC) No. 1337/2013** must be complied with. Furthermore, national regulations must also be complied with.

Scheme participants must implement systems and procedures for traceability that ensure that traceability data is submitted to QS within 24 hours of contact with the scheme participants.

Internal traceability processes should be structured so that the corresponding information can be collated within four hours.

The following customer and supplier information are relevant in accordance **REG (EC) No. 931/2011** and within the context of the QS scheme:

- Name, address and telephone number of the food business operator from whom the food was dispatched
- Name and address of the consignor (goods owner), if this is not the food business operator from whom the food was dispatched
- Name and address of the food business operator to whom the food is dispatched
- Name and address of the consignee (owner), if this is not the food business operator to whom the food is sent
- QS ID or location number (if this identification number has been assigned within the framework of the QS scheme)
- Type and quantity of delivered products
- Dispatch date, delivery data and/or slaughtering data (slaughtering date only relevant for the stage slaughtering/deboning)
- Batch or lot number (if created during the production process)

Batch creation, traceability system

#### 5.3.2 [K.O.] Traceability test

The labelling and registration system implemented within the company must allow unique identification of QS goods and product traceability on the basis of a sample from production or outgoing goods at any given time according to **REG (EC) No 178/2002**. This also applies to packaging and spices.

The labelling and registration system used in the company is tested at least once a year (approx. every 12 months). All relevant flows of goods should be considered. The test must be documented and the findings presented in a plausible manner.

Products that are known to contain QS goods, but are not marked as QS goods, must also be considered for the traceability test.

- Traceability test

#### 5.3.3 [K.O.] Reconciliation incoming goods with outgoing goods

Besides the traceability described in chapter 5.3, the company must see to that there is a plausible relation between the quantity of the purchased goods and the quantity of the produced or stored goods.

- Incoming goods receipts (e. g. delivery notes, incoming goods inspection) and outgoing goods receipts as well as quantity of goods in cold/frozen storage

#### 5.3.4 [K.O.] Check of the QS eligibility of delivery

Companies that deliver QS goods must be identified as scheme participants in the QS database with eligibility to deliver at the time of delivery. The approval of the customer in the QS scheme must also be reviewed in the QS database when the goods are handed over.

- Documented procedure for requesting information on eligibility of delivery in the QS database

#### 5.3.5 [K.O.] Separation and identification of QS goods/non-QS goods

A logical system for separating, marking and (batch) separating QS goods from non-QS goods must be present in the company. If no QS goods are yet present in the company, the procedure for goods separation must be demonstrated in a suitable manner.

Mix-ups of QS goods and non-QS goods must be avoided. All employees working with these products must work in such a way that ensures that no mix-ups occur.

- System for the separation of QS goods and non-QS-goods

### 5.4 Transport

#### 5.4.1 Washing options for transport vehicles

Suitable washing and disinfection options must be present in sufficient number for the transport/delivery vehicles.

#### 5.4.2 Cleaning and disinfection

Cleaning and disinfection of transport vehicles and refrigerated vehicles for food must take place at different times or in different places. Care must be taken to ensure that there are no mutual negative effects (aerosols!). A procedure to monitor successful cleaning and disinfection of the refrigerated vehicles must be defined, regularly applied and documented.

If no suitable measures are taken to clean and disinfect trucks during winter (carwash), then a disinfectant that also works at temperatures below zero must be available during the colder months of the year.

- Monitoring of cleaning and disinfection

#### 5.4.3 System for temperature control

The prescribed product temperature must be guaranteed at all times. The correct temperature must be verified at all times using a suitable procedure, such as temperature measurement on the product, or a functional temperature recorder.

# 6 Definitions

## 6.1 Explanation of symbols

K.O. criteria are marked **[K.O.]**.

Reference to related documents are highlighted with **bold text**.

This sign means: A written proof must be given. Next to this sign documents are listed that can be used as proof. All (including digital) control and documentation systems that prove that the requirements are fulfilled, can be used.

References to other sections of the Guideline are indicated by ⇒.

Notes are identified by ***Note*** *in italics*.

## 6.2 Abbreviations

| | |
|---|---|
| K.O. | Knock out |

## 6.3 Terms and definitions

- CP (Control Point)
  A point, process, procedure or work step at which health hazards could occur or at which the inspection of hygiene measures are necessary.
- CCP (Critical Control Point)
  A point, process, procedure or work step at which inspection can be performed and is necessary to prevent or remove a food safety hazard or to reduce it to an acceptable level.
- HACCP (Hazard Analysis and Critical Control Point)
  A system that identifies, assesses and monitors hazards that are significant in terms of food safety.
- HACCP concept
  Documentation in compliance with HACCP principles to ensure the monitoring of hazards relevant to food safety.
- QS goods
  QS goods means goods that are produced and/or marketed in a QS-certified company in line with the requirements of the QS scheme.
- Red meat
  The term red meat applies to beef and veal as well as pork.
- White meat
  The term white meat applies to chicken, turkey and duck.

You can find a list of general terms and definitions in the **Guideline "General Requirements" (Annex 5.1 to the Guideline "General Requirements").**

# 7 Annexes

## 7.1 Declaration of conformity with the food laws for food packaging made of plastic (sample form)

Annex 7.1 is published as an excerpt.

## 7.2 Use of the QS certification mark for composite products

Annex 7.2 is published as an excerpt.

# Revision Information Version 01.01.2020

| Criterion/Requirement | Changes | Date of change |
|---|---|---|
| 2.2.1 [K.O.] Implementation and documentation of self-assessment | **New:** Guidance and critical values for the assessment of raw cured goods at the trading level have been included. | 01.01.2020 |
| 2.3.12 HACCP verification | **Cancellation:** Illustration of a HACCP study | 01.01.2020 |
| 2.4.2 Cleaning and disinfection | **Cancellation:** The requirements for the storage of detergents and equipment have been moved to criterion 4.2.2.<br>**New:** The evaluation scheme for checking the success of cleaning and disinfection has been adapted. The timing of the control and "listeria" as parameters are considered. | 01.01.2020 |
| 2.4.8 [K.O.] Recipes | **New:** In the production of QS goods, the use of foreign protein in the sense of a meat substitute or meat substitute suitable for increasing the analytical meat protein value is prohibited. | 01.01.2020 |
| 2.4.12 Clear floor area | **Clarification:** Requirements for industrial containers designed to stand on the ground with runners or legs have been included. | 01.01.2020 |
| 2.6.2 Information on the QS scheme | **Renaming:** Previously „Information/ training for the QS scheme“ | 01.01.2020 |
| 2.7.4 Storage management | **New:** The best-before-date and the Use-by-date of the stored final packaging must be taken into account. | 01.01.2020 |
| 4.1.4 [K.O.] Product labelling | **New:** The origin of the primary ingredient must be indicated from 01.04.2020 on, if this is required in accordance with **REG (EC) 775/2018**. | 01.01.2020 |
| 4.2.2 Cleaning and disinfection agent storage | **New:** All containers for cleaning agents must be clearly marked so that it is clear to the responsible staff what they are. Further precautions (e. g. protective tubs) must be taken for potential environmentally hazardous substances. | 01.01.2020 |

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