1885
SVERIGES
BRYGGERIER
Kungsgatan 35
111 56 Stockholm
www.sverigesbryggerier.se

INDUSTRY GUIDELINES FOR BREWERIES

Recommended routines for compliance
with food law requirements for beer breweries

Industry guidelines developed by the Swedish Brewers Association together with E-sia AB 2017
Translated to English by Darren Packman and Andrés Furukawa

These industry guidelines have been assessed
by the Swedish National Food Agency 2019-02-05

Swedish Brewers Association's national industry guidelines for beer breweries.

HACCP and basic standards.

Content

Swedish Brewers Association's national industry guidelines for beer breweries. HACCP and basic standards. 2

Content 2
ABOUT NATIONAL GUIDELINES 4
Reading instructions 4
REQUIREMENTS FOR FOOD BUSINESS OPERATORS 5
Risk Analysis and HACCP 6
Food risks in beer 9
Food hygiene risks to consider in risk analysis 10
Risk Analysis 14
Training 26
Personal hygiene 27
Requirements for food premises 30
The role of water 33
Waste 35
Equipment 36
Maintenance 37
Cleaning 39
Pests 41
Intake of goods 43
Storage 45
Packaging and wrapping 47
Delivery and transportation 49
Traceability 52
Recall 54
Microbiological criteria 56
Food information and labeling 57
Mandatory information 67
Description 68

Ingredients 69
Allergens should be emphasized 73
Net quantity 75
Shelf life 78
Storage instructions and use 80
Name and address of responsible food business operator 80
Country of origin or place of origin 80
Directions for use 80
Alcohol content 81
Nutrition declaration 82
Foods that are not prepackaged 83

ABOUT NATIONAL GUIDELINES

These guidelines concern beer for the Swedish market. Organic production and labelling have specific rules that are not addressed in these industry guidelines.

Food legislation states that guidelines for good practice are a valuable aid for food business operators to comply with hygiene rules and HACCP guidelines.

Food business operators may apply these guidelines but are not legally required to do so. In all cases national legislation always applies.

The Swedish National Food Agency assessed these guidelines to meet the requirements for national guidelines in December 2017.

The Swedish Brewers Association will review these guidelines at least every three years to ensure they are current and update content as needed. Comments on these guidelines and how they are used are always welcome. Please send comments to info@sverigesbryggerier.se. The Swedish Brewers Association will review all comments before every new review of these guidelines.

Legislation can change over time and it is important to track and update developments. For example changes may occur that means a raw material supplier no longer has to enforce a particular requirement, thus creating new conditions that could impact, either negatively or positively, on the importance of a specific food risk. A good way to follow developments is to be a member of the Swedish Brewers Association and take part in activities and receive the information available to its members.

Reading instructions

Each chapter begins with summary text and is followed by recommendations from the Swedish Breweries. In conclusion, in each chapter, excerpts from food law are considered relevant for the chapter's content. The excerpts from the legislation are intended to inform the reader of the legal background to the requirements that must be fulfilled. It is always the latest version of the legislation that applies, therefore it is important to check against current legislation, for example via the National Food Administration's website: www.livsmedelsverket.se.

Legal requirements regarding guidelines

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene

Article 1
1. This Regulation lays down general rules for food business operators on the hygiene of foodstuffs, taking particular account of the following principles:
e) Guides to good practice are a valuable instrument to aid food business operators at all levels of the food chain with compliance with food hygiene rules and with the application of the HACCP principles.

Article 4
6. Food business operators may use the guides provided for in Articles 7, 8 and 9 as an aid to compliance with their obligations under this Regulation.

Article 7
Development, dissemination and use of guides
Member States shall encourage the development of national guides to good practice for hygiene and for the application of HACCP principles in accordance with Article 8. Community guides shall be developed in accordance with Article 9.
The dissemination and use of both national and Community guides shall be encouraged. Nevertheless, food business operators may use these guides on a voluntary basis.

Article 8
National guidelines
1. When national guides to good practice are developed, they shall be developed and disseminated by food business sectors:

(a) in consultation with representatives of parties whose interests may be substantially affected, such as competent authorities and consumer groups;
(b) having regard to relevant codes of practice of the Codex Alimentarius.
3. Member States shall assess national guidelines to ensure that:

(a) the guidelines have been prepared in accordance with point 1.
(b) the content of the guidelines is feasible to apply in practise for the relevant sectors; and
(c) the guidelines provide adequate support to ensure compliance with Articles 3, 4 and 5 for the sectors and foods covered.

REQUIREMENTS FOR FOOD BUSINESS OPERATORS

Det är livsmedelsföretagaren som har ansvar för att livsmedelslagstiftningens krav uppfylls. I ett aktiebolag är det i första hand bolagets styrelse och VD. För att det ska fungera måste de delegera uppgifter till andra personer och sedan följa upp att lagkraven uppfylls. När företaget tar fram eller uppdaterar sina rutiner kan de ta hjälp av innehållet i dessa frivilliga branschriktlinjer för att hitta rutiner som uppfyller lagstiftningens krav.

EUROPAPARLAMENTETS OCH RÅDETS FÖRORDNING (EG) nr 178/2002

Artikel 17
1. Livsmedels-och foderföretagare på alla stadier i produktions-, bearbetnings-och distributionskedjan skall i de företag de har ansvar för se till att livsmedel och foder uppfyller de krav i livsmedelslagstiftningen som är tillämpliga för deras verksamhet och skall kontrollera att dessa krav uppfylls.

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene

Article 1
1. This Regulation lays down general rules for food business operators on the hygiene of foodstuffs, taking particular account of the following principles:
(a) primary responsibility for food safety rests with the food business operator;
This Regulation shall apply to all stages of production, processing and distribution of food and to exports, and without prejudice to more specific requirements relating to food hygiene.

Article 2
3. In the annexes to this regulation the terms "when necessary", "where appropriate", "adequate" and "sufficient" mean that something was necessary, appropriate, adequate and/or sufficient to achieve the objectives of this regulation.

Article 3
Food business operators shall ensure that all stages of production, processing and distribution of food under their control satisfy the relevant hygiene requirements laid down in this Regulation.

Article 4
2. Food business operators carrying out any stage of production, processing and distribution of food after those stages to which paragraph 1 applies shall comply with the general hygiene requirements laid down in Annex II and any specific requirements provided for in Regulation (EC) No.../2004

3. Food business operators shall, as appropriate, adopt the following specific hygiene measures:
(b) procedures necessary to achieve the objectives set for the purposes of this regulation; // The aim is to implement a high level of protection for people's lives and health. The main purpose is to achieve a high level of consumer protection with regard to food safety. Free movement of goods and services within the Union is also an objective. (ed. note) //

4. Food business operators shall:
(a) demonstrate to the competent authority that they comply with the requirements of paragraph 1, as required by the competent authority, taking into account the size and nature of the food business,
(b) ensure that all documentation describing the procedures drawn up under this article is always applicable, and
c) keep all other documentation and all other records for a reasonable length of time.

Article 6
Public inspection, registration and approval
1. Food business operators shall cooperate with the competent authorities in accordance with other applicable Community legislation or, in the absence of such, national law.
2. In particular, every food business operator shall notify the appropriate competent authority, in the manner that the latter requires, of each establishment under its control that carries out any of the stages of production, processing and distribution of food, with a view to the registration of each such establishment.
Food business operators shall also ensure that the competent authority always has up-to-date information on establishments, including by notifying any significant change in activities and any closure of an existing establishment.

REGULATION (EU) No 1169/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Article 8
1. The food business operator responsible for the food information shall be the operator under whose name or business name the food is marketed or, if that operator is not established in the Union, the importer into the Union market.
2. The food business operator responsible for the food information shall ensure the presence and accuracy of the food information in accordance with the applicable food information law and requirements of relevant national provisions.

Risk Analysis and HACCP

The work on risk analysis and critical control points complies with the requirements of food legislation for the following Codex alimentarius principles (GENERAL PRINCIPLES OF FOOD HYGIENE CAC / RCP 1-1969)

HACCP includes seven principles:

- Risk analysis including risk assessment and preventative measures
- Critical control points
- Critical limits
- Monitoring of critical control points
- Corrective measures
- Documentation
- Verification

In order to maximise usefulness to the food business operator an individual risk analysis should be conducted for each process, from the purchase of raw materials and packaging materials to when the product reaches the consumer. Going through this process means the business can come to other conclusions than those we have included in these industry guidelines.

Risk analysis

Using risk analysis you review each raw material and process systematically to discover what potential risks can be present, added, evolve or survive. To find out what risks may be relevant to you use the tables in these industry guidelines. All dangers contained in these industry guidelines should be considered. However the consequence of a single process may be different from the consequence in these industry guidelines. It is always the food business operator's responsibility for its own risk analysis. These industry guidelines should only be considered as an aid.

NOTE! Risk in this context does not include health hazards due to the consumer's dietary habits or relation to, for example, alcohol consumption.

Risk assessment

Each business needs to conduct its own risk assessment. They can then use the information in these industry guidelines to check that the risk is a function of consistency and probability. For example, figures can be referred to in order to conduct an assessment with the help of mathematical calculations.

Risk = Probability x Severity

In this way we can assess which risks are greatest and establish the right priorities for preventive work.

The probability of each process step gives us different values as shown below:

1: **Low probability**: The danger occurs sporadically. If control does not occur in this step the danger would only occur in parts of a batch.

3: **Moderate probability**: The danger occurs sporadically. If control does not occur in this step the danger would occur throughout the whole batch.

5: **High probability**: Danger occurs frequently or always. If control does not occur in this step it would affect multiple batches of the product.

The severity is assessed as follows:

1: **Marginal**: nausea, discomfort.

2. **Less critical**: shorter illness (stomach pain, nausea, diarrhea), dental injury, wound injury, and lighter allergic symptoms.

3. **Critical**: Illness and injuries requiring hospitalization, e.g. paralysis, long-term illness, severe allergic reaction, shortness of breath, poisoning.

4. **Disastrous**: Death, miscarriage, life-changing effects, for example arthritis or damage to vital organs such as the brain.

Preventative measures

When a risk assessment is made, determine which preventative measures should be used to minimize every significant risk. There must be at least one preventive measure for every risk.

Critical control points

Once the preventative measure is established determine whether it is critical (=crucial) to minimize the current risk. Then it is important to examine the preventive measure and how it affects the risk.

If you are in any doubt you should ask yourself two questions to determine if the preventative measure in this step is a critical control point or not:

Examine the preventative action that eliminates, reduces or maintains the danger at an acceptable level in the current process step

Question 1: Is it necessary to set critical limits for control in this step?

YES: Continue with the next question.

NO: The risk is checked against a benchmark.

Question 2: Is it necessary to monitor control so that action can be taken immediately if control is lost?

YES: - The risk is checked against a critical control point.

NO: - The risk is checked against a benchmark.

Critical limits

Any threshold should be able to be monitored to determine the acceptable from unacceptable, or approved from unauthorized. If we operate beyond critical limit values we do not control the risk and this could possibly lead to unacceptable harm to our consumers.

The critical limit value is based on the preventative action and risk characteristics. There should be evidence of limit values. For example you can reference research on the death of microorganisms at a certain temperature or other known data. Table 2 contains recommended limit values for various risks that may be relevant in the beer brewing process.

Monitoring

When we know what our critical points are and what limit values we should operate within we can then establish procedures for monitoring. Since this is important to the safety of the product, monitoring should be done in a deliberate and defined way and include all permitted measures.

Monitoring means we will measure or observe. There should be absolutely no confusion over what is or is not acceptable for a limit value.

Monitoring also helps us to spot trends. If we measure values that are constantly approaching the limit we can act before the limit value is reached. This could, for example, point to equipment that requires maintenance or better staff education.

Corrective measures

When monitoring shows that the critical limit value is not met there must be clear steps on what to do next. These steps should be decided as far as possible in advance. It is good practise to take new measurements immediately, as we do when monitoring, to ensure the situation is not due to measurement error.

- What should be done with the products that have passed beyond a critical point since we last had control?
- What should we do with our process to get below the threshold again?
- What should we do to prevent the situation from happening again?

The measures should include investigating what caused us to pass the critical limit. It may be necessary to conduct several different investigations to arrive at the root cause.

Corrective measures for the process may affect other parts of production and we may need to review other parts of our HACCP plan.

Critical control points with their limit values and monitoring and corrective measure are conveniently compiled in a so-called 'control card'. See an example in Table 5

Documentation

Documentation is important for any system to work.

Monitoring critical control points is crucial for ensuring our products are safe. We also need to know what actions were taken on those occasions when limit values were exceeded and the corrective measures that were actually performed.

We need to provide the foundation and procedures for documentation. If we want the system to work it must be simple and adapted to those who will use it to document their daily work. It must be clear who registered what and when it was done.

Food risks in beer

Beer is a hygienically safe food product. Historically it was preferable to drink beer instead of water because the water was not safe to drink.

Based on reported events in the EU's Rapid Alert System for Food and Feed (RASFF), which is triggered when a problem occurs with foods, beer is mentioned seven times during the past five years. The incidents recorded were glass fragments, broken or sharp bottles and detergents that found their way into the beer itself. On another occasion gluten was detected at high levels in a beer described as gluten-free.

Table 1: All occurrences of the word 'beer' returned in a search for 'alcoholic beverages' in RASFF over a five-year period (2012-06-01 to 2017-05-31) - a total of seven reports.

1. 2016-07-11 Glass fragments in a stout from the Faroe Islands
2. 2016-04-05 Risk of beer bottles breaking - beer from Belgium
3. 2015-09-18 Risk of mouth injury when consuming beer from the Czech Republic
4. 2014-07-18 Gluten in gluten-free beer from Germany
5. 2013-07-29 Risk of bottles exploding due to high yeast activity in beer from Belgium
6. 2013-05-14 Detergents (diluted with rinse water with low contamination of acid) in beer kegs from Germany
7. 2012-09-07 Glass fragments in beer from France

Food hygiene risks to consider in risk analysis

Microorganisms or their toxins (poisons) may occur naturally or contaminate the products and raw materials during the production process. The most common pathogenic microorganisms have a limited ability to grow and form toxins in beer. However, for the sake of safety these microorganisms should be included in any risk analysis in order to be able to evaluate them in different process steps such as pasteurization.

Contaminating chemicals (such as cleaning products, pesticides etc) may end up in the products during the process if an error occurs or they can be formed by the process itself.

Physical dangers, such as foreign objects, may be found in raw materials, from the surrounding environment or fall into the product from personnel (e.g. pens or tools).

Allergens occur in common ingredients, especially cereals that can contain gluten. To prevent allergic and other hypersensitive reactions it is important to include all allergenic substances/ingredients in the risk analysis.

Table 2. The following risks need to be considered in the risk analysis for beer production. This is based on The Brewers of Europe's (EBC) document "Managing Food Safety in the European Brewing Industry through the Application of HACCP Principles", that has been translated and referenced in these industry guidelines for the Swedish brewing industry. The 'reference' column can be used to more easily identify any risks in relation to processes in Tables 3 and 4: 1 to 4:11.

Reference	**Possible rIsk**	**Reason/Source**	**Severity Grade***	**Recommended limit value (or legal limit where applicable)**
A	Allergen (Gluten)	Gluten from cereals that can contain gluten.	2	Mandatory consumer information whenever cereals that can contain gluten are included in production.
B	Allergen (Sulphite)	Sulphite resulting from the fermentation process and/or from additives and/or raw materials.	3	At levels of 10mg /liter or more in the finished product it is mandatory to inform the consumer that sulphite is present.
C	Allergens (Ingredients) (*Any allergenic ingredient or process materials/substances should be included in the risk analysis and assessed in context*)	All ingredients and process materials/substances that are allergens.	3	Mandatory consumer information detailing all allergens and process materials/substances included in production.
D	Allergens (Contamination)	Contamination from other raw materials or processes other than established raw materials/processes.	3	An analysis should not show any allergen is detected.

Reference	**Possible rIsk**	**Reason/Source**	**Severity Grade***	**Recommended limit value (or legal limit where applicable)**
E	Disease-causing bacteria, viruses and parasites due to fecal contamination in water (Risks are specified only with EHEC, *Salmonella, Calicivirus, Cryptosporidium*)	Fecal contamination in drinking or irrigation water.	2	Coliform bacteria should be undetected in 100ml of water.
F	Mycotoxins (Ochratoxin, Trichothecenes, Aflatoxin and Zearalenone)	Can be present in moldy cereals, spices and additives, for example aspergillus, penicillium, fusarium.	3	The annex to Regulation (EC) No 1881/2006 contains limit values for products placed on the market. Mycotoxins in Section 2.
G	Polycyclic aromatic hydrocarbons	Generated as a result of incomplete combustion (unregulated production of smoked malt can give high values).	3	Limit value 0.10 µg/l in drinking water (specifically for benzene (a) pyrene is 0.01 µg/l in drinking water.
H	Nitrosamines	Treated water and malt. (unregulated production of smoked malt can give high values).	3	Recommended limit value for NDMA and other volatile nitrosamines: 5 ppb in malt.
I	(Heavy) metals (lead, cadmium, copper, aluminum)	Derived from soil in the local environment, found in water, raw materials and packaging materials. (Lead can be discharged from brass valves, copper can be dissolved from copper pipes, aluminum is present in kegs/cans, where damage to the lacquering can cause contamination).	3	Limit values for drinking water: Lead: 10 µg/l Copper: 2.0 mg/l Cadmium: 5 µg/l Aluminum: 0.1mg/l

Reference	**Possible rIsk**	**Reason/Source**	**Severity Grade***	**Recommended limit value (or legal limit where applicable)**
J	Pesticide residues	Water and raw materials	3	EU limit values 0.5 µg/l for total pesticides in water. 0.1 µg/l for individual substances. Regulation (EC) No 396/2005 has limit values for specific pesticides in cereals and hops.
K	Trihalomethanes	Reaction product from byproducts of chlorination of water and organic substances.	3	Limit value for water is 50 µg/l
L	Chlorinated solvents	Contaminated drinking water	3	Trichlorethylene and Tetrachloroethylene 10 µg/l (total)
M	Coolants (Propylene glycol, ammonia)	Leakage in cooling system	3	Propylene glycol accepted as food additive but not in beer. Limit value when propylene glycol is used as additive to 1g/kg.
N	Carcinogens	Dark malt and malt extract contains 3-MCPD that is formed between chloride ions and fats in the products.	3	Must be avoided as far as technically possible. One way is to control the amount of dark malt and malt extract in the mash. See specifications of raw materials.
O	Detergent (lye, acid)	Residues or spillage of detergents	3	Limit value for pH in drinking water: EU pH: 7.5 - 9.0. (pH down to 4.5 applies to packaged still water).
P	Lubricant	Used in pumps and moving parts. Leakage.	1	No established limit values. Must be of food grade quality.
Q	Hard foreign matter	Glass, metal, hard plastic	3	Hard objects between 7-25 mm can be hazardous to the average consumer according to the FDA. (U.S Food and Drug Administration)
R	Soft foreign objects	Rubber, plastic, wood, hair	1	

* Severity rating has been assessed as follows:
1: **Marginal**: nausea, discomfort
2. **Less critical**: shorter cases of illness (stomach ache, nausea, diarrhea), dental injury, wound injury, mild allergic symptoms
3. **Critical**: Illness and injuries requiring hospitalization, e.g. paralysis, long-term illness, severe allergic reaction, shortness of breath, poisoning
4. **Disastrous**: Death, miscarriage, life-altering conditions such as arthritis or damage to vital organs such as the brain

Risk Analysis

The content is based on The Brewers of Europe's (EBC) document 'Managing Food Safety in the European Brewing Industry through the Application of HACCP Principles', translated and applied to Swedish conditions. PLEASE NOTE! The order can vary and will sometimes not include all process steps for a specific production process.

Risks are specified, where possible, in Table 2. Follow the reference letter in parenthesis for each risk.

An assessment of CS (core standards) or CCP (critical control point) is based on whether it is necessary and possible to completely control the risk with the preventative action in the current process step. Relationships may differ between different activities; so highlighted CCPs in this summary are not always the CCPs applicable in each business.

The relationship can also prove to be the complete opposite, and other preventative measures may be CCPs in another process.

Risk analysis for standard raw materials

Hazards in raw materials are often prevented in some part of the process from receipt to delivery. Such preventative measures are assessed for the process and not for the raw materials.

Table 3 Risks and preventative measures for raw materials in beer production.

Raw material	**Risks and causes**	**Preventative measures**	**CS/CCP**
Cereals	Allergens (Gluten) from cereals that may contain gluten (A). Mycotoxins from moldy cereals (F) Pesticide residues in cereals (J) Heavy metals in cereals (I) Presence of microorganisms (E).	Mandatory consumer information when grain which may contain gluten is included in production. Supplier responsibility - purchase as specified from approved supplier.	In the production process. In the production process.
Malt	Allergens (Gluten) from cereals that can contain gluten (A). Mycotoxins from moldy cereals (F) Pesticide residues in cereals (J) Heavy metals in cereals (I) Presence of microorganisms (E) Polycyclic aromatic hydrocarbons due to improper production of smoked malt (G) Nitrosamines due to improper production of smoke malt (H) Chloropropanols (3-MCPD) in dark malt and malt extract (N).	Mandatory consumer information when cereals that can contain gluten are included in production. Supplier responsibility - purchase as specified from approved supplier.	In the production process. In the production process.

Raw material	**Risks and causes**	**Preventative measures**	**CS/CCP**
Hops	Mycotoxins from moldy hop cones/pellets (F) Pesticide residues from cultivation (J) Presence of microorganisms (E).	Supplier responsibility - purchase as specified from approved supplier.	In the production process.
Yeast	No risks identified.	-	-
Drinking water	Contamination due to contaminated drinking water (E, I, J, K, L).	Drinking water must comply with drinking water regulations.	In the production process.

Risk analysis for standard processes

Relationships may differ between different industries, so designated CCPs in Table 4: 1-11 are not always CCPs in every business. The relationship can also prove to be the complete opposite, and other preventative measures may be CCPs in another process.

Intake and storage of materials

Table 4: 1

Process	**Risks and Causes**	**Preventative Measures**	**CS/CCP**
Intake of materials (All products)	Pesticide residues in cereals (F) Heavy metals in cereals (I) Presence of microorganisms (E).	Supplier responsibility - purchase as specified from approved supplier.	CCP
Intake of goods (unloading from supplier vehicles)	Contamination via unspecified chemicals due to fuel leakage/oil leakage from delivery vehicles.	Elevated unloading to help prevent vehicles passing through affected areas. Vehicles should reverse in to unload.	CS CS
Storage of materials	Contamination via harmful chemicals stored nearby. Chemical, physical or microbiological contamination.	Separate storage area for harmful chemicals. Goods intake areas should be clearly marked and kept closed and locked when not in use. Storage indoors, clean packaging, first in-first out.	CS CS CS
Drinking Water source	Contamination due to contaminated drinking water (E, I, J, K, L).	Drinking water must comply with drinking water regulations.	CS

Cleaning of processing equipment

Table 4: 2

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Startup CIP (Cleaning in place)	Contamination with CIP detergent in vessels containing wort or beer (O).	Functioning system that prevents CIP from starting if there is wort or beer in the tank.	CS
CIP-cycle	Product is contaminated with CIP detergents due to insufficient rinsing (O).	Careful final rinsing (check levels of detergents against set limit values or with conductivity meters before use).	CS
Manual cleaning	Product is contaminated with detergents due to insufficient rinsing (O).	Clear cleaning instructions with specified rinsing volumes.	CS

Brewing

Table 4:3

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Transfer of malt from storage to production	Contamination with lubricating oil from moving parts, drive motors and spillage when lubricating them (P).	Cover conveyor belt Use quality food grade lubricant. Waste plates under drive motors.	CS CS
Sifting of malt	Insects, stones, metal pieces can be present (Q, R).	Filtration of beer at later stages removes any physical contaminants.	CS
Milling malt	No risks identified.	-	
Possible addition of production materials or food additives	Accidental addition of hazardous chemicals due to use of incorrect product. Addition of too much restricted additives.	Separate storage area for all hazardous chemicals. Careful dosage that follows recommended guidelines and calibrated measuring instruments.	CS CCP
Heating	Contamination via chemicals from heating system (only if direct steam injection is used).	Only use products that are adapted for use in the food industry.	CS
Mashing	Nitrosamines produced due to bacterial growth in uneven/pitted surfaces and/or damage in the mash tun and poor cleaning under the filter (H) plates.	Thorough cleaning of the mash tun.	CS
Lautering	Nitrosamines produced due to bacterial growth as a result of poor cleaning under the filter (H) plates.	Careful cleaning of the area around and below the filter plate.	CS
Wort boiling	Contamination with chemicals from the heating system (if direct steam injection is used).	Only use products that are adapted for use in the food industry.	CS
Additions to the kettle /wort boil (hops and any other raw materials and food additives)	Accidental addition of hazardous chemicals due to use of incorrect product. Addition of too much restricted additives.	Separate storage area for all hazardous chemicals. Careful dosage that follows recommended guidelines and calibrated measuring instruments.	CS CCP
Separation of solids	Formation of nitrosamines due to microbiological growth (H).	Keep temperature above 60°C for a maximum of 72 hours.	CS

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Cooling Wort	Contamination from refrigerant due to leakage in the heat exchanger (M).	Higher pressure on the hot side of the production process. Use dual plate heat exchanger or tertiary cooling system. Maintenance and regular pressure testing of heat exchanger.	CS CS CS
Addition of yeast nutrients	Accidental addition of hazardous chemicals due to use of incorrect product. Addition of too much restricted additives.	Separate storage area for all hazardous chemicals. Careful dosage that follows recommended guidelines and calibrated measuring instruments.	CS CCP
Spent grain (temporary storage and disposal for animal feed)	No risk is identified for the beer brewing process. **(Note, however, microbiological risk can arise in the feed due to possible mash infection).**		
Fermentation	Addition of excessive antifoam. Contamination with detergents (O). Contamination with refrigerant from the mantle cooler due to damage to the vessel (M).	Careful dosage. Routines that prevent cleaning when there is beer in the vessel. Ensure vessel is undamaged.	CS CS CS
Additions to primary fermentation vessels (e.g. dry hops)	Accidental addition of hazardous chemicals due to use of incorrect product. Addition of too much restricted additives.	Separate storage area for all hazardous chemicals. Careful dosage that follows recommended guidelines and calibrated measuring instruments.	CS CCP
Cooling	Contamination from refrigerant due to leakage in the heat exchanger (M).	Higher pressure on the hot side of the production process. Use dual plate heat exchanger or tertiary cooling system. Maintenance and regular pressure testing of heat exchanger.	CS CS CS
Filtering	Existence of foreign objects from previous process steps (Q, R).	Filtering.	CS

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Filling of conditioning tanks	Contamination with detergents (O). Contamination from previous contents due to improper filling or poor cleaning. Physical contamination from connection hoses due to broken hoses or malfunction (Q, R).	Careful final rinse after cleaning. Tanks used only for food and thorough cleaning between every filling cycle. Proper maintenance of connection hoses. Use caps/valves on all openings when hoses are not in use and ensure hoses are not left on the floor.	CS CS CS CS

From conditioning tanks to filling line
Table 4:4

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Connect buffer tank to filling line	Contamination with foreign objects via removable connections (Q, R).	Store removable connections suspended without contact with the floor. Hoses kept closed with lids on all openings. Filtration of beer before filling.	CS CS CS
Pumping beer to filling line	Contamination with detergent due to valve failure between product flow and adjacent active CIP flow (O).	Double valves at CIP/product interface.	CS
Beer cooling (after buffer tank - before filling)	Contamination from refrigerant due to leakage in the heat exchanger (M).	Always higher pressure on the hot side of production (compared to the cold side). Tertiary cooling system or air gap between refrigerant and beer.	CS CS
Filtration of beer before filling	Contamination with foreign objects via removable connections (Q, R).	Pore size maximum 1000µ.	CS

Pasteurization of beer
Table 4:5

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Pasteurization before filling	Contamination from refrigerant due to leakage in the heat exchanger (M).	Higher pressure on the beer side throughout the process.	CS
	Inadequate inactivation of yeast that could cause bottles to explode (Q).	Sufficient heating (time and temperature).	CCP
	Inadequate removal of harmful microorganisms due to low heat (E).	Sufficient heating (time and temperature).	CCP
Or			
Pasteurization after filling	Inadequate inactivation of yeast that could cause bottles to explode (Q).	Sufficient heating (time and temperature).	CCP
	Inadequate removal of harmful microorganisms due to low heat (E).	Sufficient heating (time and temperature).	CCP

Beer kegs/casks
Table 4:6

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Intake and storage of empty kegs	Foreign objects or substances in new or returned kegs (Q, R).	All kegs should be cleaned inside.	CS
	Aluminum is transferred from the keg to the beer due to poor coating on the inside (I).	Correct coating on inside of kegs.	CS
Internal cleaning of kegs	Contamination with foreign objects or chemicals due to improper use of kegs and inadequate cleaning (E, Q, R).	Thorough cleaning.	CS
Filling, labelling and transport to warehouse	Incorrect information about contents of the product (e.g. allergens, alcohol content) due to wrong label being applied or old label not being removed (A, B, C, D).	Be careful to remove old labels and apply correct label.	CS CCP
Storage until order placed	Contamination from insects and other pests on outside of the keg due to the presence of insects and pests.	Preventative pest control program.	CS

Filling of cans
Table 4:7

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Intake of cans	Contamination of foreign objects (insects, glass fragments, jewelry) from the supplier or from unpacking and relocation to rinsing station (Q, R).	Supplier Responsibility. Transport using protective outer packaging. Pest control procedures. Rinse cans thoroughly.	CCP CS CS CS
Air rinsing of cans	Foreign objects in the cans (Q, R). Pollution and foreign objects or oil from compressed air (P).	Check air filter in the compressed air system.	CS
Rinsing of cans with water	Foreign objects in cans due to lack of water (insufficient pressure) when rinsing (Q, R).	Be careful to rinse with correct water pressure (can be monitored by pressure sensors and alarms or manual routines for monitoring water pressure and flushing).	CS
Conveyor belt after rinsing	Foreign objects get into cans (Q, R).	Use covered conveyor belt.	CS
Transport to filling line	Foreign objects fall into cans (Q, R).	On-site protection over and around the filling line. Lighting near the filling line should be shatterproof.	CS CS
Rinsing of cans with carbon dioxide	Pollutants that become mixed with the gas (Q, R).	Ensure food grade filter on the gas pipe (<0.2 µm).	CS
Filling of beer	The filler head falls into the can (Q).	Ensure proper attachment of filler heads.	CS
Foaming	With Gas: Contaminants that come mixed with the gas (Q). With water: Pollution from the water or from improperly cleaned nozzles (E).	 Ensure food grade filter on the gas pipe (<0.2 µm) Ensure water is of drinking water quality. Ensure proper cleaning of nozzles.	 CS CS CS
Filled cans when transported to seamer	Foreign objects can fall into the beer (Q, R).	Ensure adequate protection over the conveyor belt.	CS
Seaming of cans	Foreign objects can fall into the beer (Q, R). Contamination with lubricant from seaming equipment (P).	Ensure adequate protection over the conveyor belt. Use food grade lubricant.	CS CS

Disposable bottles
Table 4:8

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Intake of bottles	Contamination with foreign objects (insects, glass fragments, metal pieces, jewelry) or damaged bottles (cracks, chips at mouth of bottle) (Q, R).	Continuous inspection of each bottle or certificate of inspection carried out by the supplier. Supplier's protective transport packaging. Only use bottles from unaffected pallets. Pest control program. Rinse bottles before filling.	CCP CS CS CS CS
Removing bottles from palettes	Contamination with foreign objects from surrounding environment or from broken bottles (Q, R).	Use palletizer for gentle handling of bottles. Rinse bottles before filling.	CS CS
Conveyor belt to bottle rinsing	Contamination with glass fragments from bottles due to improper handling (Q).	Use conveyor belt for gentle handling of bottles. Ensure lubrication and maintenance of conveyor belts. Rinse bottles before filling.	CS CS CS
Bottle rinsing	Foreign objects in bottles due to lack of water (insufficient pressure) when rinsing (Q, R).	Carefully rinse with correct water pressure (can be monitored by pressure sensors and alarms or manual routines for monitoring water pressure and rinsing).	CS
Inspection of empty bottles	Foreign objects from damaged bottles (fragments) (Q).	Careful inspection (verified with sample bottles in inspection machine at least once every shift).	CS
Conveyor belt to filling line	Contamination with foreign objects (glass fragments, insects) (Q, R).	Ensure adequate protection over the conveyor belt.	CS

Returnable bottles
Table 4:9

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Storage of returnable bottles	Contamination with foreign objects (glass fragments, insects) (Q, R).	Pest control program. Rinsing of bottles before filling.	CS CS
Unpacking of returnable bottles	Contamination with foreign objects from surrounding environment or from bottle fragments due to improper handling (Q, R).	Unpacking to take place indoors or under roof cover. Rinsing of bottles before filling.	CS CS

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Sorting of returnable bottles	Contamination with fragments from broken bottles due to mistakes in the sorting procedure (Q, R).	Rinsing of bottles before filling. Inspection of empty bottles.	CS CS
Rinsing of returnable bottles	Detergent remains in bottles due to poor rinsing or congestion in the bottleneck. (O). Foreign objects remain in bottles (Q, R).	Careful rinsing with clean water. Inspection of empty bottles.	CS CS
Inspection of empty bottles	Broken bottles, foreign objects or liquid in rinsed bottles (O, Q, R).	Careful inspection of empty bottles (verified with sample bottles in inspection machine at least once every shift).	CS
Conveyor belt to filling line	Contamination with foreign objects (glass fragments, insects) (Q, R).	Ensure adequate protection over the conveyor belt.	CS

Bottle filling
Table 4:10

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Rinsing of bottle with carbon dioxide	Contaminants that come mixed with the gas (Q, R).	Ensure food grade filter on the gas pipe (<0.2 µm).	CS
Filling with beer	Glass fragments from bottles if damaged in the filling process (Q).	Ensure correct filling speed and distance to the next bottle.	CS
Filling with beer	Filling head falls into the bottle (Q).	Ensure proper attachment of filler heads.	CS
Conveyor belt to capping machine	Contamination with foreign objects, such as bottle fragments due to accumulation or adhesion inside the protective cover (Q, R).	Hygienic design, easily accessible for inspection and cleaning. Regular cleaning.	CS CS
Foaming	With Gas: Contaminants that come mixed with the gas (P). With water: Contaminants from the water or from improperly cleaned nozzles (E).	Ensure food grade filter on the gas pipe (<0.2 µm). Water of drinking water quality. Adequate cleaning of nozzles. Sufficiently high temperature of water jets.	CS CS CS
Storage of bottle caps	Contamination with foreign objects due to opened packages of caps (Q, R).	Reseal opened packages before storing.	CS
Cap feeder	Contamination with foreign objects that end up in the cap feeder (Q, R).	Protective lid on cap feeder.	CS

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Capping of bottles	Glass fragments occur due to excessive force during capping (Q, R).	Ensure cap application is within specified limits. (Can be verified with a guage, at least one bottle from each shift and crown head).	CS
Removal of underfilled bottles	Glass fragments break off and spread over empty bottles or fillers due to improper handling that causes bottle breakages (Q).	Careful handling. Place broken/defective bottles in sealed container	CS CS

Bottle labelling
Table 4:11

Process	**Risks and causes**	**Preventative measures**	**CS/CCP**
Labelling machine	Allergen content not correctly displayed due to wrong label (A, B, C, D).	Routines for the correct label in case of product change, label change or stock management.	CCP

CCP control card

For every critical control point, critical limit values, monitoring, verification and documentation routines should be established. This is usually recorded on a control card, see Table 5.

Table 5: Suggestions for CCP control cards, what to include and an example of a critical control point.

Process step	**Risk**	**CCP**	**Critical limit**	**Monitoring**	**Corrective action**
What should be included?					
The relevant process step	The current risks	Preventative measures	Limits that determine safe products from potentially harmful products	A monitoring method that ensures each product passing a critical control point is within critical limits.	How are products that fail to meet limit values handled? How is the process constructed to ensure limit values are met again?
An example of what a CCP might look like:					
Labelling machine	Allergen content not correctly displayed due to wrong label (A, B, C, D).	Routines for applying correct label in case of product change, label change or stock management.	Correct label.	For each product change and for each label change the label ID should be compared to the product ID of the product being filled. The first label after each product and after every change of label roll should be inserted into a 'bottling logbook'	If product ID and label ID do not match: Ensure the last filled bottle on the filling line has the correct label. If not retrieve all packaging for inspection. Eliminate any uncertainty about compliance. Change label roll to label with correct ID. Replace label roll to labels with correct ID.

Legislative text regarding HACCP

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene

Article 4
General and special hygiene requirements
3. Food business operators shall, as appropriate, adopt the following specific hygiene measures:
a) compliance with microbiological criteria for foodstuffs; (there are no current microbiological food safety criteria or process hygiene criteria for beer or raw materials).
e) Sampling and analysis.

Article 5
Risk analysis and critical control points
1. Food business operators shall establish, implement and maintain one or more permanent procedures, based on HACCP principles.
2. The HACCP principles referred to in paragraph 1 consist of the following:

a) Identifying the risks that must be prevented, eliminated or reduced to an acceptable level.
b) Identifying critical control points in the step or steps where control is necessary to prevent or eliminate a risk or to reduce it to an acceptable level.
c) To establish critical limits that define what is acceptable from non-acceptable in critical control points to prevent, eliminate or reduce identified risks.
d) To establish and implement effective procedures for monitoring critical control points.
(e) To determine the corrective measures to be taken when monitoring shows that a critical control point is not under control.
(f) To establish procedures, which are to be carried out on a regular basis, to verify that the actions referred to in points (a) to (e) are effective.
(g) To compile documentation and records adapted to the size and nature of the food business to demonstrate that measures referred to in points (a) to (f) are applied effectively.

When a change occurs in a product, process or in any management step, food business operators will review the procedure and make all necessary changes.

Training

All personnel, even temporary staff, shall be given individual instructions regarding their duties and monitored until it is certain that tasks are performed correctly.

Routines for education

Överväg följande punkter för rutinerna i företaget:

- ☐ List the special skills necessary for staff whose activities affect food safety, especially for the following personnel categories:
  - Quality assurance
  - Purchasing
  - Maintenance staff/workshop staff
  - Production staff (different categories?)
- ☐ Introduce education or other measures to ensure staff acquire suitable skills for their duties.
- ☐ Make sure staff know the business's basic standards and conditions.
- ☐ Make sure staff understand that food safety is affected by personal behavior.
- ☐ Ensure that staff responsible for monitoring, rectifications and corrective actions at CCPs are trained to handle tasks properly.

Legislative text regarding education

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene
Annex II
CHAPTER XII
TRAINING
Food business operators are to ensure:
1. That food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity;

2. That those responsible for the development and maintenance of the procedure referred to in Article 5 (1) of this Regulation or for the operation of relevant guides have received adequate training in the application of the HACCP principles.

Personal hygiene

Requirements for personnel hygiene and behavior, in proportion to the risks for products and production sites, should exist and be documented in large businesses with a high number of staff and high staff turnover. All staff, visitors and others who can enter the production facilities should be invited to follow the documented routines.

Routines for personal hygiene

Consider the following points when implementing routines for a business:

Work clothes and protective clothing.

Work clothes and protective clothing is the outer layer of clothing that protects raw materials, foods, materials and equipment that can come into contact with food, from direct or indirect contamination with skin, hair and private clothing. These may include, for example, hats, hair nets, coats, t-shirts, trousers and shoes.

- ☐ Employees working in or entering spaces where there are open foodstuffs or materials that may come into contact where foodstuffs are handled should wear appropriate and clean work clothes that are adapted for the purpose.
- ☐ Work clothes should not have buttons that can be loosened or break.
- ☐ Pockets above waist height should be avoided as items from such pockets may fall out and accidentally end up in the products.
- ☐ Work clothes should be washed routinely and properly adjusted for the intended use.
- ☐ Work clothes should be sufficiently protective so that hair or sweat cannot contaminate products.
- ☐ Hair, beards and mustaches must be covered (fully covered) with protection unless the risk analysis determines it is not necessary.
- ☐ When gloves are used in contact with products they should be clean and well cared for. Latex gloves should be avoided where possible due to potential allergy risks - some people are hypersensitive to latex.
- ☐ Shoes worn in the production area should provide full coverage to the feet and be made of non-absorbent material.
- ☐ Required protective equipment (for personnel) must be designed to prevent contamination of products and should be stored hygienically.

Disease and injury

- ☐ People with contagious conditions, and those suspected of having contagious conditions, should not work with food or materials that may come into contact with food.
- ☐ Employees are asked to report the following conditions to the food business in order to receive customized tasks, hygiene routines or possibly to be removed from work and food production premises:
    - jaundice
    - diarrhea
    - vomiting
    - sore throat with fever
    - visible skin injuries (blemishes, cuts or other sores)
    - discharge of fluids from ears, eyes or nose.

  Staff with these conditions should not work in premises where food, material or equipment which comes in contact with food is handled. Only when it is completely assured that infection via food cannot be caused by the condition should the affected person be able to work.

Hand hygiene

- ☐ Production staff should wash their hands:
    - before they handle food;
    - after toilet visits.
    - after they have blown their nose.
    - after handling materials that may be contaminated - especially allergens.
- ☐ Staff should not sneeze or cough over materials and products.
- ☐ Fingernails should be kept clean and well maintained.
- ☐ When gloves are used in contact with food or equipment that may come into contact with food, hands should still be kept clean and gloves should be replaced frequently to prevent harmful bacteria (staphylococcus aureus) growing on the inside of the gloves and contaminating food if/when the gloves break.

Personal hygiene standards

- ☐ Jewelry, nail polish, false nails or false eyelashes are not to be used if they present a risk to personal hygiene or if they can accidentally come loose and contaminate food.
- ☐ Clarification on which personal items (mobile phone, keys, wallets, etc.) may be brought into production and storage facilities and under what conditions so that they do not risk causing contamination of foodstuff.
- ☐ If pens are allowed in facilities with open food/packaging materials they should be of a type that is not easily broken.
- ☐ Care of staff lockers so that they are kept free from rubbish and dirty clothes.
- ☐ The staff's own food should be stored and eaten in a designated location, especially with regard to allergies.
- ☐ Storage and administration of personal medicines so that there is no risk of contamination to foodstuff.
- ☐ The use of cigarettes, snuff, chewing gum as well as eating food should only take place in designated areas.

Legislative text regarding personal hygiene

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene

Annex II
CHAPTER VIII
Personal hygiene
1. All persons working in places where food is handled shall observe good personal cleanliness and wear appropriate, clean and, when necessary, protective clothing.

2. Persons suffering from or who have a disease that can be transmitted via food or, for example, have infected wounds, skin infections, other wounds or diarrhea may not be allowed to handle food or stay in a place where food is handled if there is a risk of direct or indirect contamination.
Any person who has such a condition and who is employed in a food business who is likely to come into contact with food must immediately report the disease or symptoms, and if possible their causes, to the food business owner.

Requirements for food premises

Breweries do not always have ideal premises that are immediately fit for purpose and easy to maintain. For example, they may occupy premises built, fitted and decorated a long time ago. In most cases defects in the building's design can be compensated for with routines for maintenance, management and cleaning. But because every room is unique it is important to take into account the actual conditions on a case-by-case basis. Here we present what we consider important to take into account in order for breweries to comply with legislative requirements.

Recommendations for food premises

Consider the following points for your business premises:

- ☐ Logical workflows for materials, products and people.
- ☐ Separation between raw materials, semi-finished products and finished products (closed containers/tanks, walls, sufficient distances and hygiene zones are good examples of separation measures).
- ☐ Packaging should be conducted in a clean space, separate from all contact, which may pose a risk of contamination of the beer.
- ☐ Equipment is positioned so that easy cleaning and monitoring is possible (inspection hatches between walls and equipment).
- ☐ Doors, windows, openings, ceiling ventilation covers and wall-mounted ventilation grills should be designed to prevent exposure to foreign objects and pests (e.g. insect nests).
- ☐ Walls and floors should be cleanable in relation to the process and product. Areas where there is exposure to unprotected foods, such as the filling line, should be built from materials that are easy to clean with the cleaning methods available.
- ☐ Rounded corners/skirting boards to help facilitate cleaning in manufacturing areas.
- ☐ In wet manufacturing areas the floor must be watertight and fitted with floor drains.
- ☐ Prevent build-up of dirt.
- ☐ Prevent build-up of condensation. Ensure sufficient insulation against cold spaces/external walls and adequate ventilation.
- ☐ Closed external doors.
- ☐ Storage and storage facilities for ingredients, additives and packaging materials protect against contamination (dust, condensation, sewage, waste, etc). Keep dry and ventilated. Nothing should be kept on the floor. Inspection hatches between walls and objects.
- ☐ Space for cleaning equipment, chemicals and other hazardous substances. Seperated from storage of food, packaging materials and equipment that may come into contact with food.

- ☐ Space should be well ventilated so that cleaning equipment dries between uses so that smells or substances do not spread unintentionally.
- ☐ Ventilation airflow should travel from clean to unclean areas.
- ☐ Ventilation installations should be accessible for inspection, maintenance and replacement of filters.
- ☐ Ensure adequate lighting, which should be shatterproof in spaces with open raw materials, open production or unprotected packaging materials that may come into contact with food.
- ☐ Drainage with sufficient capacity for expected drainage volume, with no possible flow from unclean to clean areas.
- ☐ Adequate number of washbasins, equipped with liquid soap and dryer fan/hand towels.
    - It is an advantage (but not a regulatory requirement) if the taps are so-called "'hands-free' and operate by sensor rather than touch.
- ☐ Adequate number of hygienic toilets equipped with washbasins.
    - The toilets should not open directly into production, packaging or storage spaces.
- ☐ Changing rooms should be located so that staff working with foodstuffs can easily move to production areas without affecting the cleanliness of their work clothes.
- ☐ Staff dining areas and areas where the storage and consumption of staff food is permitted should be located so as to minimize the possibility of contamination of production facilities, especially with regard to allergens.

Legislative text regarding food premises

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene
Annex II
CHAPTER I
General rules for food premises
1. Food premises are to be kept clean and maintained in good repair and condition.
2. The layout, design, construction, siting and size of food premises are to:
(a) permit adequate maintenance, cleaning and/or disinfection, avoid or minimise air-borne contamination, and provide adequate working space to allow for the hygienic performance of all operations;
(b) be such as to protect against the accumulation of dirt, contact with toxic materials, the shedding of particles into food and the formation of condensation or undesirable mould on surfaces;
(c) permit good food hygiene practices, including protection against contamination and, in particular, pest control; and
(d) where necessary, provide suitable temperature-controlled handling and storage conditions of sufficient capacity for maintaining foodstuffs at appropriate temperatures and designed to allow those temperatures to be monitored and, where necessary, recorded.
3. An adequate number of flush lavatories are to be available and connected to an effective drainage system. Lavatories are not to open directly into rooms in which food is handled.
4. An adequate number of washbasins is to be available, suitably located and designated for cleaning hands. Washbasins for cleaning hands are to be provided with hot and cold running water, materials for cleaning hands and for hygienic drying. Where necessary, the facilities for washing food are to be separate from the hand-washing facility.

5. There is to be suitable and sufficient means of natural or mechanical ventilation. Mechanical airflow from a contaminated area to a clean area is to be avoided. Ventilation systems are to be so constructed as to enable filters and other parts requiring cleaning or replacement to be readily accessible.
6. Sanitary conveniences are to have adequate natural or mechanical ventilation.
7. Food premises are to have adequate natural and/or artificial lighting.
8. Drainage facilities are to be adequate for the purpose intended. They are to be designed and constructed to avoid the risk of contamination. Where drainage channels are fully or partially open, they are to be so designed as to ensure that waste does not flow from a contaminated area towards or into a clean area, in particular an area where foods likely to present a high risk to the final consumer are handled.
9. Where necessary, adequate changing facilities for personnel are to be provided.
10. Cleaning agents and disinfectants are not to be stored in areas where food is handled.

Legislative text regarding food preparation areas

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene
Annex II
CHAPTER II
Special rules for premises where food is prepared, handled or processed:
1. In rooms where food is prepared, treated or processed (excluding dining areas and those premises specified in Chapter III, but including rooms contained in means of transport) the design and layout are to permit good food hygiene practices, including protection against contamination between and during operations. In particular:
(a) floor surfaces are to be maintained in a sound condition and be easy to clean and, where necessary, to disinfect. This will require the use of impervious, non-absorbent, washable and non-toxic materials unless food business operators can satisfy the competent authority that other materials used are appropriate. Where appropriate, floors are to allow adequate surface drainage;
(b) wall surfaces are to be maintained in a sound condition and be easy to clean and, where necessary, to disinfect. This will require the use of impervious, non-absorbent, washable and non-toxic materials and require a smooth surface up to a height appropriate for the operations unless food business operators can satisfy the competent authority that other materials used are appropriate;
(c) ceilings (or, where there are no ceilings, the interior surface of the roof) and overhead fixtures are to be constructed and finished so as to prevent the accumulation of dirt and to reduce condensation, the growth of undesirable mould and the shedding of particles;
(d) windows and other openings are to be constructed to prevent the accumulation of dirt. Those that can be opened to the outside environment are, where necessary, to be fitted with insect-proof screens which can be easily removed for cleaning. Where open windows would result in contamination, windows are to remain closed and fixed during production;
(e) doors are to be easy to clean and, where necessary, to disinfect. This will require the use of smooth and non-absorbent surfaces unless food business operators can satisfy the competent authority that other materials used are appropriate; and
(f) surfaces (including surfaces of equipment) in areas where foods are handled and in particular those in contact with food are to be maintained in a sound condition and be easy to clean and, where necessary, to disinfect. This will require the use of smooth, washable corrosion-resistant and non-toxic materials, unless food business operators can satisfy the competent authority that other materials used are appropriate.
2. Adequate facilities are to be provided, where necessary, for the cleaning, disinfecting and storage of working utensils and equipment. These facilities are to be constructed of corrosion-resistant materials, be easy to clean and have an adequate supply of hot and cold water.
3. Adequate provision is to be made, where necessary, for washing food. Every sink or other such facility provided for the washing of food is to have an adequate supply of hot and/or cold potable water consistent with the requirements of Chapter VII and be kept clean and, where necessary, disinfected.

The role of water

Water is an important ingredient in any brewery's products and we use water when we wash our hands, clean the premises and equipment. Water used in the brewery must be of drinking water quality. Hoses and nozzles should be kept clean to prevent the transmission of pathogenic microorganisms or chemical pollutants to our products via water. Water quality needs to be checked at all points where water is used in the business to ensure that the internal plumbing, taps, hoses and other equipment do not adversely affect water quality.

Drinking water from one's own well/own water supply is subject to special legislation according to the Swedish National Food Agency's regulations (SLV FS 2001: 30) regarding drinking water. This can include, among other things, requirements for general hygiene, HACCP-based drinking water production, limit values for microbiological and chemical parameters and compliance with an inspection program to be determined by the inspection authority. The specific details of a brewery's own drinking water production are not covered by the brewery's industry guidelines for beer.

Routines for water

Consideration should be given to the following points when formulating routines for the business:

- ☐ There should be enough drinking water for all production processes.
- ☐ If water is taken from an own well/own water supply, it must be registered with the inspection authority and the established inspection program must be followed.
- ☐ Water used as an ingredient in the product, including ice and steam, or which comes in contact with the product or product contact surfaces, must meet all chemical and microbiological requirements for drinking water at the point of use. These requirements are contained in the Swedish National Food Agency's regulations (SLV FS 2001: 30) regarding drinking water.
- ☐ If the water is chlorinated check that the residual chlorine content is within the specified limits at the point of use.
- ☐ Water for cleaning or applications where there is a risk of indirect contact with the product (tanks, heat exchanger) must meet all relevant quality and microbiological requirements.
- ☐ There should be a plan for action with products and processes for quality water issues. The plan should ensure that products that reach consumers are safe, especially at times when:
    - The water supplier has issued recommendations to boil the drinking water.
    - An inspection of drinking water in the business reveals possible risks to health.

Legislative text regarding water

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene

Annex II

CHAPTER VII

Water supply

1.(a) There is to be an adequate supply of potable water, which is to be used whenever necessary to ensure that foodstuffs are not contaminated;

(b) Clean water may be used with whole fishery products. Clean seawater may be used with live bivalve molluscs, echinoderms, tunicates and marine gastropods; clean water may also be used for external washing. When such water is used, adequate facilities are to be available for its supply.

2. Where non-potable water is used, for example for fire control, steam production, refrigeration and other similar purposes, it is to circulate in a separate duly identified system. Non-potable water is not to connect with, or allow reflux into, potable water systems.

3. Recycled water used in processing or as an ingredient is not to present a risk of contamination. It is to be of the same standard as potable water, unless the competent authority is satisfied that the quality of the water cannot affect the wholesomeness of the foodstuff in its finished form.

4. Ice which comes into contact with food or which may contaminate food is to be made from potable water or, when used to chill whole fishery products, clean water. It is to be made, handled and stored under conditions that protect it from contamination.

5. Steam used directly in contact with food is not to contain any substance that presents a hazard to health or is likely to contaminate the food.

The Swedish National Food Agency's regulations (SLVFS 2001: 30) regarding drinking water

Quality requirements:

7 § Drinking water shall be healthy and clean. It shall be considered healthy and clean if it:

- does not contain microorganisms, parasites or substances in such numbers or levels that they may endanger human health, and
- meets the limits set out in Annex 2, sections A and B.

8 §

The values given in Annex 2 should be followed.

...

(d) for drinking water used in a food business: at the location in the business in which it is used,

Waste

There shall be routines for identifying, collecting and disposing of waste in a way that prevents contamination of products and manufacturing areas.

Routines for waste.

Consider the following points when formulating routines for a business:

- ☐ Containers for waste, inedible or dangerous substances should be;
  - clearly intended for waste so that no confusion can occur,
  - be located in designated places.
  - be made of materials that can be cleaned and disinfected if necessary.
  - be closed when not in use.

- ☐ Waste should be removed from production sites at least daily.

- ☐ Storage of waste should only be allowed in areas where foodstuffs and clean packaging materials for foodstuffs are not handled or stored.

Legislative text regarding waste

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene
Annex II
CHAPTER VI
Food waste
1. Food waste, inedible by-products and other waste must be removed from food premises as soon as possible to avoid accumulation.
2. Food waste, inedible by-products and other waste should be placed in containers that can be closed unless food business operators can demonstrate to the competent authority that other types of containers or evacuation systems are appropriate. These containers should be of suitable design, kept in good condition, be easy to clean and, if necessary, easy to disinfect.
3. There should be adequate facilities for the storage and disposal of food waste, inedible by-products and other waste. Waste storage spaces should be designed and operated in such a way so that it is possible to keep them clean and, when necessary, free from animals and pests.
4. All waste must be disposed of hygienically and environmentally in accordance with applicable community legislation, and should not constitute a direct or indirect source of contamination.

Equipment

Equipment that come into contact with food should be designed to facilitate easy cleaning, disinfection and maintenance. Any contact surfaces should not affect or be affected by the products or by cleaning products or methods.

Routines for equipment

Consider the following points for equipment.

- ☐ Hygienic Design:
  - smooth, accessible, cleanable surfaces, self-priming.
  - made of materials that are compatible with the intended products and cleaning products.
  - designed without cavities, screws and nuts that can make cleaning difficult.

- ☐ Pipelines and ducts shall be easy to clean and designed to ensure adequate run-off without dead ends.

- ☐ The equipment shall be designed to minimize contact between the staff and the product.

- ☐ Product contact surfaces shall be made of materials suitable for contact with foodstuffs. They shall be impervious and be rust and corrosion resistant.

- ☐ Equipment used in heat processes shall be able to withstand temperatures and maintain them for the periods specified for the product.

- ☐ Heat treatment or cooling equipment shall be equipped with temperature control and temperature monitoring.

Legislative text regarding equipment

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene
Annex II
CHAPTER V
Equipment requirements
1. All articles, fittings and equipment with which food comes into contact are to:
(a) be effectively cleaned and, where necessary, disinfected. Cleaning and disinfection are to take place at a frequency sufficient to avoid any risk of contamination;
(b) be so constructed, be of such materials and be kept in such good order, repair and condition as to minimise any risk of contamination;
(c) with the exception of non-returnable containers and packaging, be so constructed, be of such materials and be kept in such good order, repair and condition as to enable them to be kept clean and, where necessary, to be disinfected; and
(d) be installed in such a manner as to allow adequate cleaning of the equipment and the surrounding area.
2. Where necessary, equipment is to be fitted with any appropriate control device to guarantee fulfilment of this Regulation's objectives.
3. Where chemical additives have to be used to prevent corrosion of equipment and containers, they are to be used in accordance with good practice.

Maintenance

The premises and equipment in a business needs to be properly maintained in order for everything to work as intended and to maintain production and product safety. From the point of view of food law it is always the food business operator who is responsible for foodstuffs not becoming contaminated due to a lack of maintenance. In the worst case if the food business operator is unable to fix any maintenance defects that could lead to a contamination of a product, then that particular part of production should be shut down until maintenance is conducted.

Changes that take place gradually can be difficult to detect. Maintenance therefore needs need to be checked on special occasions when deciding what issues needs to be addressed. A review of the premises and equipment should then be made according to a planned system so that all information is recorded. Cleaning should be simple to carry out so that everything works as planned.

Much of the equipment requires regular service and maintenance. All such maintenance work needs to be planned so that it does not cause major disturbances in production than is necessary.

Maintenance routines

Consider the following points when formulating routines for a business:

To encourage effective implementation parts of the maintenance routines should be in writing where necessary.

- ☐ Maintenance work should be noted and addressed immediately. Maintenance work that cannot be implemented directly should be scheduled. Maintenance work that affects product safety should be prioritized. Emergency measures may be necessary and can include production stoppages and the withdrawal of products.
- ☐ Maintenance checks should be carried out encompassing all premises and all equipment over time, and at least annually.
- ☐ There should be routines for planned maintenance of all equipment used to control or monitor foodborne health hazards.
    - CIP systems
    - Control and monitoring equipment
    - Valves
    - Pumps
    - Scales and dosing equipment
    - Filters, sieves and screens
    - Thermometers and temperature sensors
    - Heat exchanger
    - Flowmeter
    - Ventilation
    - Cooling equipment
    - Water hoses, taps and nozzles
    - Capping machines

- ☐ Maintenance staff should follow the hygiene routines that apply in the hygiene zone where work is performed.
- ☐ All maintenance work must be carried out in a manner that does not endanger product safety. For example, foodstuffs must not be contaminated directly or indirectly via equipment that is contaminated.
- ☐ All replacement parts and all replacement materials that may come into contact with food must comply with the requirements of food law for such contact.
- ☐ All substances that are not completely rinsed away, such as lubricants, which are used where they could potentially contaminate foods, must be of food grade.
- ☐ After maintenance is carried out equipment and the surrounding area must be properly cleaned so that food cannot be contaminated as a result of the work.

Legislative text regarding maintenance

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene Annex II CHAPTER I General rules for food premises 1. Food premises are to be kept clean and maintained in good repair and condition.	2. The layout, design, construction, siting and size of food premises are to: (b) be such as to protect against the accumulation of dirt, contact with toxic materials, the shedding of particles into food and the formation of condensation or undesirable mould on surfaces.

Cleaning

Cleaning and disinfection routines shall be devised to ensure that food processing equipment and surroundings are kept hygienically clean. These routines shall be monitored to ensure that they are effective and that the results are acceptable.

Cleaning equipment and detergents used can also present dangers in themselves. These dangers shall be prevented with routines, such as how to handle an accidental spillage of detergents.

The routines shall describe what to clean (including drainage), who is responsible for cleaning, how to clean, what equipment to use, disassembly techniques and how to determine that cleaning has been properly carried out.

Routines for cleaning:

Businesses should consider the following points:

Cleaning equipment and cleaning products:

- ☐ Cleaning agents, disinfectants and chemicals shall be clearly labeled and stored so that they cannot be confused with food.
- ☐ All usage shall follow the manufacturer's instructions.
- ☐ Cleaning tools and equipment shall be hygienically designed. They shall be kept clean and in a condition that does not constitute a possible source of contamination from microorganisms or physical objects.

Cleaning and/or disinfection instructions must contain:

- ☐ A list of the items to be cleaned and/or disinfected.
- ☐ Those responsible for cleaning.
- ☐ The cleaning method.
- ☐ Frequency of cleaning.
- ☐ Monitoring and verification measures.
- ☐ Inspection after cleaning.
- ☐ Inspection before use.

Legislative text regarding cleaning

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene
Annex II
CHAPTER I
General rules for food premises
1. Food premises are to be kept clean and maintained in good repair and condition.

2. The layout, design, construction, siting and size of food premises are to:
(a) permit adequate maintenance, cleaning and/or disinfection, avoid or minimise air-borne contamination, and provide adequate working space to allow for the hygienic performance of all operations;
10. Cleaning agents and disinfectants are not to be stored in areas where food is handled.

Pests

Pest infestation can lead to uncontrollable contamination of raw materials or products and should be minimized by introducing preventative monitoring and controls.

Materials and products used for pest control should be designed and handled so that they do not in themselves present any risk of contamination. Specially qualified personnel should carry out pest control, either internally or by hiring a pest control specialist.

It is primarily in the malt intake area and possibly the returnable glass storage area where there is a higher risk of insects causing issues. Steps later in the production process should ensure all insects are removed and do not pose any danger.

Routines for pest control

Businesses should consider the following points:

Preventing pests

- ☐ Ensure adequate hygiene and cleaning routines are in place to avoid creating an environment where pests can flourish.
- ☐ Cavities, drains and other possible entry points for pests should be sealed.
- ☐ Properly designed external doors, windows or ventilation grills should be installed to minimize the potential for pests to get in.
- ☐ Implement storage routines that minimize access to food and water for pests
- ☐ Materials contaminated by pests are handled in such a way as to prevent contamination of other materials or areas.
- ☐ Avoid likely "habitats" for pests (cavities, vegetation around buildings, objects that are hard to clean/move).
- ☐ Storage outdoors? Protect from pests (including birds).

Monitoring

- ☐ Encourage all staff to be observant and report all sightings of pests.
- ☐ Checks when goods are being received can be a good opportunity to detect pests.
- ☐ Use external pest control companies or have internal designated personnel with special expertise responsible for pest control.

- ☐ Display lists of the indicators and substances that should be used in different areas of the business.
- ☐ Indicators and traps should be deployed to detect pests. Make a sketch of the locations of the indicators and the traps. Prevent contamination of materials, products and tools used in the food premises.
- ☐ Indicators and traps should be adapted for the pests in question.
- ☐ Indicators and traps should be inspected regularly in order to detect pest activity at an early stage.

Prevention

- ☐ Action should be taken immediately after a pest attack has been reported.
- ☐ Pesticides should be used solely by trained personnel and controlled so as to avoid food hygiene risks. NOTE! Chemical legislation has special requirements for pesticide use.
- ☐ A journal of used pesticides should be kept showing the type, amount and concentration used as well as where, when and how it is is used and against which kind(s) of pests.

Legislative text regarding pests.

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene Annex II CHAPTER I General requirements for food premises:	2. The layout, design, construction, siting and size of food premises are to: (c) permit good food hygiene practices, including protection against contamination and, in particular, pest control.

Intake of goods

The way goods are received is important for any business. When a product is accepted at the reception point it becomes the responsibility of the business that it is acceptable and can be used in manufacturing. The goods must meet all quality requirements that the business has placed on it when it was ordered, so when goods are taken in we need to judge if they meet our expected requirements. If they do not we need to judge if they are safe to use or if the goods must be returned or destroyed.

Routines for goods receipt

Businesses should consider the following points:

- ☐ Delivery vehicles before and during unloading
  - Ensure that quality and safety have been maintained throughout the transfer (unbroken seals, no pest infestations).
- ☐ Raw materials, additives and packaging materials should be inspected, tested or covered by certificates that show that they meet specified requirements before being approved for use.
  - Seals should be checked to ensure they are complete without signs of manipulation.
  - The inspection frequency and scope should be based on the hazards associated with the product in question according to the risk analysis and previous experience of the supplier.
- ☐ Raw materials, additives and packaging materials that are not approved should be handled so that they are not used inadvertently in the business.
- ☐ Bulk receipts - special checks should be made before the raw material is taken into the silo(s).

Legislative text regarding receipt of goods

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene
Annex II
CHAPTER IX
Regulations on food products
1. A food business operator is not to accept raw materials or ingredients, other than live animals, or any other material used in processing products, if they are known to be, or might reasonably be expected to be, contaminated with parasites, pathogenic microorganisms or toxic, decomposed or foreign substances to such an extent that, even after the food business operator had hygienically applied normal sorting and/or preparatory or processing procedures, the final product would be unfit for human consumption.
2. Raw materials and all ingredients stored in a food business are to be kept in appropriate conditions designed to prevent harmful deterioration and protect them from contamination.
3. At all stages of production, processing and distribution, food is to be protected against any contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state.
4. Adequate procedures are to be in place to control pests. Adequate procedures are also to be in place to prevent domestic animals from having access to places

where food is prepared, handled or stored (or, where the competent authority so permits in special cases, to prevent such access from resulting in contamination).
5. Raw materials, ingredients, intermediate products and finished products likely to support the reproduction of pathogenic micro-organisms or the formation of toxins are not to be kept at temperatures that might result in a risk to health. The cold chain is not to be interrupted. However, limited periods outside temperature control are permitted, to accommodate the practicalities of handling during preparation, transport, storage, display and service of food, provided that it does not result in a risk to health. Food businesses manufacturing, handling and wrapping processed foodstuffs are to have suitable rooms, large enough for the separate storage of raw materials from processed material and sufficient separate refrigerated storage.
6. Where foodstuffs are to be held or served at chilled temperatures they are to be cooled as quickly as possible following the heat-processing stage, or final preparation stage if no heat process is applied, to a temperature which does not result in a risk to health.
7. The thawing of foodstuffs is to be undertaken in such a way as to minimise the risk of growth of pathogenic microorganisms or the formation of toxins in the foods. During thawing, foods are to be subjected to temperatures that would not result in a risk to health. Where run-off liquid from the thawing process may present a risk to health it is to be adequately drained. Following thawing, food is to be handled in such a manner as to minimise the risk of growth of pathogenic microorganisms or the formation of toxins.
8. Hazardous and/or inedible substances, including animal feed, are to be adequately labelled and stored in separate and secure containers.

Storage

During storage we need to protect dry raw materials from moisture and all contaminants. Some items age during storage and it is good to have clear procedures that ensure products with the shortest shelf life are used first.

Routines for storage

Businesses should consider the following points:

- ☐ Create clean, dry, well-ventilated spaces.
- ☐ Protect from:
  - allergens (pay attention to goods with different allergens),
  - dust
  - condensation
  - smoke
  - odors
  - exhaust fumes (Petrol or diesel-powered trucks should not be used in spaces where ingredients or products are stored).
- ☐ If necessary
  - Regulate temperature.
  - Control humidity.
- ☐ Bulk containers should be intended for food only.
- ☐ Waste and chemicals (detergents, workshop chemicals) should be kept separately from food.
- ☐ Special location/delimitation areas (or use of warning tape if necessary) provided for non-compliant products (including raw materials not approved for receipt of goods, recalled products, or goods contaminated by pests).
- ☐ Stock Transfer System (FIFO / FEFO) / First In First Out - First Expired First Out.

Legislative text regarding storage

General rules for food premises (Chapter I of Annex II to Regulation (EC) No 852/2002)

2. The layout, design, construction, siting and size of food premises are to:

(d) where necessary, provide suitable temperature-controlled handling and storage conditions of sufficient capacity for maintaining foodstuffs at appropriate temperatures and designed to allow those temperatures to be monitored and, where necessary, recorded.

10. Cleaning agents and disinfectants are not to be stored in areas where food is handled.

Regulations for food products (Chapter IX of Annex II to Regulation EC No 852/2002)

2. Raw materials and all ingredients stored in a food business are to be kept in appropriate conditions designed to prevent harmful deterioration and protect them from contamination.

3. At all stages of production, processing and distribution, food is to be protected against any

contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state.

5. Raw materials, ingredients, intermediate products and finished products likely to support the reproduction of pathogenic micro-organisms or the formation of toxins are not to be kept at temperatures that might result in a risk to health. The cold chain is not to be interrupted. However, limited periods outside temperature control are permitted, to accommodate the practicalities of handling during preparation, transport, storage, display and service of food, provided that it does not result in a risk to health. Food businesses manufacturing, handling and wrapping processed foodstuffs are to have suitable rooms, large enough for the separate storage of raw materials from processed material and sufficient separate refrigerated storage.

8. Hazardous and/or inedible substances, including animal feed, are to be adequately labelled and stored in separate and secure containers.

Packaging and wrapping

Dishes, glass bottles, capsules, aluminum cans and PET bottles are examples of packages that come in direct contact with food. They should protect the drink from contamination and should obviously not transfer substances to the food itself.

There are provisions in food law that specify specific requirements for plastic materials. The manufacturer should provide a Declaration of Compliance (DoC), which should specify how the product/material is used. For breweries it is important to ensure such documentation exists and that the instructions are strictly followed.

Routines for packaging materials that come into contact with food

Businesses should consider the following points:

- ☐ Ensure that incoming kegs, bottles, corks, capsules and cans are clean or cleaned before filling.
- ☐ Ensure proper lacquering on the inside of aluminum kegs (manufacturer's certificate).
- ☐ Request "Declaration of Compliance" for plastic materials.
- ☐ Verify that specified conditions in any "Declaration of Compliance" can be followed by the business.
- ☐ Storage of material ensures it is not contaminated.
- ☐ Handling the material is done in such a way that the material is not damaged.

Legislative text regarding packaging and wrapping.

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene
Annex II
CHAPTER X
Regulations regarding wrapping and packaging of foodstuffs
1. Material used for wrapping and packaging are not to be a source of contamination.
2. Wrapping materials are to be stored in such a manner that they are not exposed to a risk of contamination.
3. Wrapping and packaging operations are to be carried out so as to avoid contamination of the products. Where appropriate and in particular in the case of cans and glass jars, the integrity of the container's construction and its cleanliness is to be assured.
4. Wrapping and packaging material re-used for foodstuffs is to be easy to clean and, where necessary, to disinfect.

REGULATION (EC) No 1935/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 October 2004 concerning materials and products intended to come into contact with food
Article 3
General requirements
1. Materials and articles, including active and intelligent materials and articles, shall be manufactured in compliance with good manufacturing practice so that, under normal or foreseeable conditions of use, they do not transfer their constituents to food in quantities which could:
(a) endanger human health; or
(b) bring about an unacceptable change in the composition of the food; or
(c) bring about a deterioration in the organoleptic characteristics thereof.
2. The labelling, advertising and presentation of a material or article shall not mislead the consumers.

Article 5
Specific measures for groups of materials and articles
1. For the groups of materials and articles listed in Annex I and, where appropriate, combinations of those materials and articles or recycled materials and articles used in the manufacture of those materials and articles, specific measures may be adopted or amended in accordance with the procedure referred to in Article 23(2).
...

Article 16
Declaration of compliance
1. The specific measures referred to in Article 5 shall require that materials and articles covered by those measures be accompanied by a written declaration stating that they comply with the rules applicable to them.
Appropriate documentation shall be available to demonstrate such compliance. That documentation shall be made available to the competent authorities on demand.

Annex I
List of groups of materials and products that may be covered
by special measures:
1. Active and intelligent materials and products
2. Glue and adhesive
3. Ceramics
4. Cork
5. Rubber
6. Glass
7. Ion-exchange resins
8. Metals and alloys
9. Paper and cardboard
10. Plastic
11. Printing ink
12. Regenerated cellulose
13. Silicones
14. Textiles
15. Lacquer and surface layers
16. Plants
17. Wood

COMMISSION REGULATION (EU) No 10/2011 of 14 January 2011 regarding plastic materials and products intended to come into contact with foodstuffs.
Article 1
Subject matter
1. This Regulation is a specific measure within the meaning of Article 5 of Regulation (EC) No 1935/2004.
Article 15
Declaration of Compliance
Declaration of compliance
1. At the marketing stages other than at the retail stage, a written declaration in accordance with Article 16 of Regulation (EC) No 1935/2004 shall be available for plastic materials and articles, products from intermediate stages of their manufacturing as well as for the substances intended for the manufacturing of those materials and articles.

ANNEX IV
Declaration of Compliance
The written declaration referred to in Article 15 shall contain the following information:
(1) the identity and address of the business operator issuing the declaration of compliance;
(2) the identity and address of the business operator which manufactures or imports the plastic materials or articles or products from intermediate stages of their manufacturing or the substances intended for the manufacturing of those materials and articles;
(3) the identity of the materials, the articles, products from intermediate stages of manufacture or the substances intended for the manufacturing of those materials and articles;
(4) the date of the declaration;
(5) confirmation that the plastic materials or articles, products from intermediate stages of manufacture or the substances meet relevant requirements laid down in this Regulation and Regulation (EC) No 1935/2004;
(6) adequate information relative to the substances used or products of degradation thereof for which restrictions and/or specifications are set out in Annexes I and II to this Regulation to allow the downstream business operators to ensure compliance with those restrictions;
(7) adequate information relative to the substances which are subject to a restriction in food, obtained by experimental data or theoretical calculation about the level of their specific migration and, where appropriate, purity criteria in accordance with Directives 2008/60/EC, 95/45/EC and 2008/84/EC to enable the user of these materials or articles to comply with the relevant EU provisions or, in their absence, with national provisions applicable to food;
(8) specifications on the use of the material or article, such as:
(i) type or types of food with which it is intended to be put in contact;
(ii) time and temperature of treatment and storage in contact with the food;
(iii) ratio of food contact surface area to volume used to establish the compliance of the material or article;
(9) when a functional barrier is used in a multi-layer material or article, the confirmation that the material or article complies with the requirements of Article 13(2), (3) and (4) or Article 14(2) and (3) of this Regulation.

Delivery and transportation

When products are approved for distribution businesses should be certain they comply with all requirements for safety and that all mandatory food information is included. It is also important to know where the products are sent for traceability purposes. See the section on traceability for more details.

Proper hygiene and cleanliness is important even if the products are completely enclosed in packaging. The package should arrive and the drink be able to be consumed without the need for the bottle or can being cleaned during transportation.

It is important to handle products so that the packaging is not damaged during distribution and transportation.

Procedures for delivery and transportation.

Businesses should consider the following points:

Approve products before distribution.

- ☐ Ensure production of the goods in question is operating properly.
- ☐ Ensure all mandatory food information is included.

Vehicles

- ☐ Usage
- ☐ Maintenance
- ☐ Cleaning

Containers / tanks

- ☐ Usage
- ☐ Maintenance
- ☐ Ensure proper cleaning of tanks before refilling.
- ☐ Check log for previous contents in the tank before refilling.
- ☐ Cleaning and disinfection of valves, hoses and connections on tankers.

Legislative text regarding delivery and transportation

REGULATION (EC) No 178/2002 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL.
SECTION 4. GENERAL REQUIREMENTS OF FOOD LEGISLATION.

Article 14
Food safety requirements
1. Food shall not be placed on the market if it is unsafe.
2. Food shall be deemed to be unsafe if it is considered to be:
(a) injurious to health;
(b) unfit for human consumption.
3. In determining **whether any food is unsafe**, regard shall be had:
(a) to the normal conditions of use of the food by the consumer and at each stage of production, processing and distribution, and
(b) to the information provided to the consumer, including information on the label, or other information generally available to the consumer concerning the avoidance of specific adverse health effects from a particular food or category of foods.
4. In determining **whether any food is injurious to health**, regard shall be had:
(a) not only to the probable immediate and/or short-term and/or long-term effects of that food on the health of a person consuming it, but also on subsequent generations;
(b) to the probable cumulative toxic effects;
(c) to the particular health sensitivities of a specific category of consumers where the food is intended for that category of consumers.
5. In determining whether any food is unfit for human consumption, regard shall be had to **whether the food is unacceptable for human consumption** according to its intended use, for reasons of contamination, whether by extraneous matter or otherwise, or through putrefaction, deterioration or decay.
6. Where any food which is unsafe is part of a batch, lot or consignment of food of the same class or description, it shall be presumed that all the food in that batch, lot or consignment is also unsafe, unless following a detailed assessment there is no evidence that the rest of the batch, lot or consignment is unsafe.
7. Food that complies with specific Community provisions governing food safety shall be deemed to be safe insofar as the aspects covered by the specific Community provisions are concerned.
8. Conformity of a food with specific provisions applicable to that food shall not bar the competent authorities from taking appropriate measures to impose restrictions on it being placed on the market or to require its withdrawal from the market where there are reasons to suspect that, despite such conformity, the food is unsafe.
9. Where there are no specific Community provisions, food shall be deemed to be safe when it conforms to the specific provisions of national food law of the Member State in whose territory the food is marketed, such provisions being drawn up and applied without prejudice to the Treaty, in particular Articles 28 and 30 thereof.

REGULATION (EC) No 178/2002 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Article 18
Traceability
1. The traceability of food, feed, food-producing animals, and any other substance intended to be, or expected to be, incorporated into a food or feed shall be established at all stages of production, processing and distribution.
2. Food and feed business operators shall be able to identify any person from whom they have been supplied with a food, a feed, a food-producing animal, or any substance intended to be, or expected to be, incorporated into a food or feed.
To this end, such operators shall have in place systems and procedures which allow for this information to be made available to the competent authorities on demand.
3. Food and feed business operators shall have in place systems and procedures to identify the other businesses to which their products have been supplied. This information shall be made available to the competent authorities on demand.
4. Food or feed which is placed on the market or is likely to be placed on the market in the Community shall be adequately labelled or identified to facilitate its traceability, through relevant documentation or information in accordance with the relevant requirements of more specific provisions.

Article 19
Responsibilities for food: food business operators
1. If a food business operator considers or has reason to believe that a food which it has imported, produced, processed, manufactured or distributed is not in compliance with the food safety requirements, it shall immediately initiate procedures to withdraw the food in question from the market where the food has left the immediate control of that initial food business operator and inform the competent authorities thereof. Where the product may have reached the consumer, the operator shall effectively and accurately inform the consumers of the reason for its withdrawal, and if necessary, recall from consumers products already

supplied to them when other measures are not sufficient to achieve a high level of health protection.
2. A food business operator responsible for retail or distribution activities which do not affect the packaging, labelling, safety or integrity of the food shall, within the limits of its respective activities, initiate procedures to withdraw from the market products not in compliance with the food-safety requirements and shall participate in contributing to the safety of the food by passing on relevant information necessary to trace a food, cooperating in the action taken by producers, processors, manufacturers and/or the competent authorities.
3. A food business operator shall immediately inform the competent authorities if it considers or has reason to believe that a food which it has placed on the market may be injurious to human health. Operators shall inform the competent authorities of the action taken to prevent risks to the final consumer and shall not prevent or discourage any person from cooperating, in accordance with national law and legal practice, with the competent authorities, where this may prevent, reduce or eliminate a risk arising from a food.
4. Food business operators shall collaborate with the competent authorities on action taken to avoid or reduce risks posed by a food which they supply or have supplied.

REGULATION (EC) No 852/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 regarding food hygiene

Annex II
CHAPTER IV
Transport
1. Conveyances and/or containers used for transporting foodstuffs are to be kept clean and maintained in good repair and condition to protect foodstuffs from contamination and are, where necessary, to be designed and constructed to permit adequate cleaning and/or disinfection.
2. Receptacles in vehicles and/or containers are not to be used for transporting anything other than foodstuffs where this may result in contamination.
3. Where conveyances and/or containers are used for transporting anything in addition to foodstuffs or for transporting different foodstuffs at the same time, there is, where necessary, to be effective separation of products.
4. Bulk foodstuffs in liquid, granulate or powder form are to be transported in receptacles and/or containers/tankers reserved for the transport of foodstuffs. Such containers are to be marked in a clearly visible and indelible fashion, in one or more Community languages, to show that they are used for the transport of foodstuffs, or are to be marked "for foodstuffs only".
5. Where conveyances and/or containers have been used for transporting anything other than foodstuffs or for transporting different foodstuffs, there is to be effective cleaning between loads to avoid the risk of contamination.
6. Foodstuffs in conveyances and/or containers are to be so placed and protected as to minimise the risk of contamination.
7. Where necessary, conveyances and/or containers used for transporting foodstuffs are to be capable of maintaining foodstuffs at appropriate temperatures and allow those temperatures to be monitored.

Traceability

Traceability is a legislative requirement as well as a requirement from our customers. As a business we should be able to track our food, ingredients and packaging materials. That means we should have a system for that:

- records from which companies we have received foodstuffs, bottles and caps.

- shows which companies we have delivered food and/or ingredients to.

- is able to inform the relevant authorities about this information.

We must be able to provide information to the authorities when the authorities request it; not only when there is a problem with the product but also when the authorities want to check if and how our system works. This means we may need immediate access to the information.

Internal traceability is not a legal requirement but is an industry requirement. 'Internal traceability' means that you can follow raw materials and ingredients throughout the entire production process of your own company and therefore have control over which raw materials, etc. were used as part of a particular production cycle. Food law does not require internal traceability.

Recommended traceability procedures

Consider the following points for good practices within the company:

Goods we receive (raw materials and packaging materials that come into contact with food)

Routines designed so that we can specify:

- ☐ the name and address of our suppliers' facilities.
- ☐ what type of product we have received.
- ☐ when we received the delivery (date) or any other information identifying the delivery.

Goods we deliver

Routines designed so that we can specify:

- ☐ the name and address of our recipient's facilities.
- ☐ what kind of product has been delivered.
- ☐ delivery date and quantity or other equivalent details of the delivery.

Save documentation

- ☐ Bestäm hur länge informationen sparas.

- ☐ Determine how long information is saved for.
    - The entire shelf life plus an additional six months at a minimum.

Internal Tracking Annex:

- ☐ Suppliers ensure their deliveries have unique identifiers (Lot No, Batch No.)
- ☐ We have unique brewing references and batch numbers.
- ☐ By combining a registration of the suppliers' LOT No and our own brewing references and batch numbers we can satisfy legislative requirements and the demands of the retail industry.

LOT No. in a silo?

In a silo the problem arises of completely separating one delivery from the next. In most cases there is usually some malt from the last delivery still in the silo when the next delivery arrives. On the delivery note is a "blend number" that uniquely identifies this consignment.

Legislative text regarding traceability

REGULATION (EC) No 178/2002 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL Article 18

Traceability

1. The traceability of food, feed, food-producing animals, and any other substance intended to be, or expected to be, incorporated into a food or feed shall be established at all stages of production, processing and distribution.

2. Food and feed business operators shall be able to identify any person from whom they have been supplied with a food, a feed, a food-producing animal, or any substance intended to be, or expected to be, incorporated into a food or feed.

To this end, such operators shall have in place systems and procedures which allow for this information to be made available to the competent authorities on demand.

3. Food and feed business operators shall have in place systems and procedures to identify the other businesses to which their products have been supplied. This information shall be made available to the competent authorities on demand.

4. Food or feed which is placed on the market or is likely to be placed on the market in the Community shall be adequately labelled or identified to facilitate its traceability, through relevant documentation or information in accordance with the relevant requirements of more specific provisions.

Recall

Despite all efforts to manufacture and sell perfect products sometimes things can go wrong. If it is suspected that there are harmful products for sale or that have already been purchased by consumers it is vital to withdraw these products.

Recall procedures:

Consider the following points for good practices within the company:

- ☐ A description of the LOT No / Brew Number / Best Before Date so that it can be safely determined which goods need to be recalled.
- ☐ Details of deliveries, products and recipients should be kept at least until the shelf life of the product has expired plus an additional six months. This data should be readily available so that the right recipient and the right products can be located if a recall is necessary. (See section on traceability procedures).
- ☐ All complaints relating to product safety must be documented and all actions taken should be documented. When products are recalled as a result of immediate food safety issues other products produced under the same conditions should also be evaluated.
- ☐ A recall group should be appointed at the company. Everyone's role should be clearly defined.
- ☐ Detailed routines should be written down and include different types of recall scenarios; for example from wholesalers, from other food companies (shops/restaurants) and from consumers.
- ☐ Communication channels should be identified to reach wholesalers, stores, restaurants and consumers. A list of important recall contacts should be maintained.
- ☐ Methods created to take care of recalled products.

Legislative text regarding recalls

REGULATION (EC) No 178/2002 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL Article 19

Responsibilities for food: food business operators

1. If a food business operator considers or has reason to believe that a food which it has imported, produced, processed, manufactured or distributed is not in compliance with the food safety requirements, it shall immediately initiate procedures to withdraw the food in question from the market where the food has left the immediate control of that initial food business operator and inform the competent authorities thereof. Where the product may have reached the consumer, the operator shall effectively and accurately inform the consumers of the reason for its withdrawal, and if necessary, recall from consumers products already supplied to them when other measures are not sufficient to achieve a high level of health protection.

2. A food business operator responsible for retail or distribution activities which do not affect the packaging, labelling, safety or integrity of the food shall, within the limits of its respective activities, initiate procedures to withdraw from the market products not in compliance with the food-safety requirements and shall participate in contributing to the safety of the food by passing on relevant information necessary to trace a food,

cooperating in the action taken by producers, processors, manufacturers and/or the competent authorities.

3. A food business operator shall immediately inform the competent authorities if it considers or has reason to believe that a food which it has placed on the market may be injurious to human health. Operators shall inform the competent authorities of the action taken to prevent risks to the final consumer and shall not prevent or discourage any person from cooperating, in accordance with national law and legal practice, with the competent authorities, where this may prevent, reduce or eliminate a risk arising from a food.

4. Food business operators shall collaborate with the competent authorities on action taken to avoid or reduce risks posed by a food which they supply or have supplied.

Microbiological criteria

Regulation (EU) No 2073/2005 on microbiological criteria for foodstuffs 2073/2005 does not contain any relevant criteria for beer or raw materials for beer.

Food information and labeling

All information about a food item should be accurate. This applies to all of the packaging but also claims, imagery and advertising. Regulation (EU) No 1169/2011 'Information Regulation' contains detailed regulations and exceptions that apply to all foods. Additional rules apply to Sweden, which are contained in the Swedish National Food Agency's regulations LIVSFS 2014: 4 on food information. Table 5 summarizes the mandatory requirements for labeling. The legal texts associated with the respective requirements are presented according to recommended checklists for labelling of three different types of 'beer deliveries'; consumer packaging, beer kegs and bulk.

Table 5. Food information required with examples as well as exceptions and comments for beer sold in Sweden.

Requirement	**Example**	**Exceptions**	**Comments**
a. Description (a, e and k should be in the same field of view)	Beer	No exceptions	If the name of the product is in another language, such as "X-Ale" or "Y-beer" then there must be a supplementary term in Swedish containing the word "öl".
b. Ingredients list	Ingredients: Water, BARLEY MALT, Hops, Yeast.	Not mandatory for beverages that contain more than 1.2% alcohol by volume.	Ingredients should be listed in order of weight at the time of preparation. Ingredients which make up less than 2% by weight may be listed in another order after the other ingredients.
c. Allergens	Highlighted in the ingredients list (See BARLEY MALT/KORNMALT in the list of ingredients above). If ingredients list is not available: Contains: barley malt/Kornmalt.	There are **no exceptions**. It is always mandatory to include allergen information.	Only allergens included in Annex II to Regulation (EU) No 1169/2011 are required to be highlighted.
d. Amount of specific ingredients			This requirement is not considered applicable to beer.

Requirement	**Example**	**Exceptions**	**Comments**
e. Net quantity (a, e and k should be in the same field of view). Swedac's regulations (STAFS 2017: 1) on prepackaged goods contain rules on how to determine the volume.	00.33 l or 3.3 dl (only in Sweden) or 33 cl or 330 ml. PLEASE NOTE! Requirements for minimum font sizes when displaying number values at different volumes: Over 100 cl - 6 mm high 20 cl - 100 cl - 4 mm high 5 cl - 20 cl - 3 mm high.	Multi-packs, containing at least two smaller packages: for example 6x33 cl However, if the number of smaller packages is easy to determine from the outside and at least one indication of the volume in the smaller packages is visible then the net quantity is not required.	For volumes from 5 ml up to 10 liters (according to STAFS 2017: 1) the following applies: The volume should be correct at 20°C. Either the content of each individual package is measured or statistical sample checks are performed that should comply with the legislation's reference methods. When measuring, ensure that the actual content of each package is at least equal to the nominal volume indicated on the packaging. Unless the actual content of each package is measured there must be a system of statistical sampling
f. Best Before Date (different alternatives).	Best before August 1, 2018.		The words "Best before" must be included when the date is given. The order should always be day, followed by month then year.
	Best before 1 August.		With a best before date shorter than 3 months the year can be omitted.
	Best before the end of July 2018.		For a best before date longer than three months but no more than 18 months an actual day is not required. In such cases the wording "Best before the end of" must be used.
	Best before: see cap		If the date is displayed in a place where the words "Best before" do not fit or are not included for technical reasons, a reference to its location may be made.

Requirement	Example	Exceptions	Comments
g. Storage			This information is only needed if it is important for sustainability and if the conditions for sustainability change after the packaging has been opened. We have judged that it is not necessary for beer.
h. Food company (name and address).	Company name and postal address.	For the Swedish market the mailing address can be replaced by a phone number or website address (provided that the mailing address appears on the website).	Information about the food company's mailing address is not an indication of origin (see requirement below).
i. Origin/Place of Origin.	Sweden or Roslagen	Only mandatory if the absence of such information could mislead the consumer about the origin or place of origin of the beer.	If, for example, names or pictures give the consumer reason to believe that the beer comes from a particular country, region or place, then you must specify the true origin. Note: The food company's mailing address (requirement above) is not an indication of origin.
j. Terms of Use	-	-	The requirement is not applicable to beer and packaging types for beer on the market today.
k. Alcohol content (a, e and k should be in the same field of view).	Alcohol: 2,2% vol or Alk. 2.2 vol.%.	Not mandatory for beverages with less than 1.2% alcohol by volume.	The alcohol content should be given as a decimal. The alcohol content should be determined at +20°C. The deviation may be a maximum of ± 0,5% by volume for beer with an alcoholic strength of less than 5,5% and a maximum of ± 1% by volume for higher alcohol beverages.

Requirement	Example	Exceptions	Comments
l. Nutrition declaration.	Nutrition declaration per 100 ml: Energy 80 kJ / 20 kcal Fat 0.5 g -of saturated fat 0.5 g Carbohydrate 3.8 g - of which sugars 0.5 g Protein 0.5 g Salt 0.1 g.	Not mandatory for beverages containing more than 1.2% alcohol by volume.	
	Nutrition declaration per 100 ml: Energy ... .176 kJ/42 kcal	Not mandatory for beverages containing more than 1.2% alcohol by volume.	If you voluntarily include a nutrition declaration for beer containing more than 1.2% by volume of alcohol, it is permitted to only include the energy content.

Food information procedures

Consider the following points for good practises within the company:

Ensure that every consumer packaging has the correct information.

- ☐ Description
- ☐ Ingredient list (If alcohol content is less than 1.2% by volume)
- ☐ Allergens are listed in the list of ingredients (if the list of ingredients is not available - state "Contains:" followed by the allergen).
- ☐ Net quantity in units of liters, deciliters, centiliters or milliliters. The actual volume is ensured by measurement of each package or by a statistical sample control system.
- ☐ Best before date and the text "Best before"
- ☐ The name and address of the food company (a telephone number or website address is acceptable as the address for beer in the Swedish market).
- ☐ Indication of origin or place of origin (if the absence of this information could be misleading to the consumer).
- ☐ Alcohol content (for beer with at least 1.2 vol.%) displayed with not more than one decimal place.
- ☐ Nutrition declaration (for beer with less than 1.2 vol.%).
- ☐ Description, net quantity and alcohol content in the same field of view.
- ☐ Minimum font size of 1.2 mm high for lowercase letters.

Ensure each beer keg has the correct information displayed on the keg:

- ☐ Description.
- ☐ Best before date and the text "Best before".
- ☐ The name and address of the food company (a telephone number or website is acceptable as the address for beer in the Swedish market).

In addition provide the following information as commercial documents that either accompany a delivery or are sent in advance (unless indicated on the beer).

- ☐ Ingredient list (If alcohol content is less than 1.2% by volume)
- ☐ Allergens are listed in the list of ingredients (if the list of ingredients is not available - state "Contains:" followed by the allergen).
- ☐ Net quantity in units of liters, deciliters, centiliters or milliliters. If the volume is no more than 10 liters the actual volume should be ensured by measurement of each package or by a statistical sample control system.
- ☐ The name and address of the food company (a telephone number or website address is acceptable as the address for beer in the Swedish market.)
- ☐ Indication of origin or place of origin (if the absence of this information could be misleading to the consumer).
- ☐ Alcohol content (for beer with at least 1.2 vol.%) displayed with not more than one decimal place.
- ☐ Nutrition declaration (for beer with less than 1.2 vol.%).

Ensure that every bulk delivery of beer has the correct information with commercial documents accompanying deliveries or sent in advance.

- ☐ Description
- ☐ Ingredient list (If alcohol content is less than 1.2% by volume)
- ☐ Allergens are listed in the list of ingredients (If the list of ingredients is not available - state "Contains:" followed by the allergen).
- ☐ Net quantity in units of liters, deciliters, centiliters or milliliters.
- ☐ Best before date and the text "Best before"

- ☐ The name and address of the food company (a telephone number or website address is acceptable as the address for beer in the Swedish market.)
- ☐ Indication of origin or place of origin (if the absence of this information could be misleading to the consumer).
- ☐ Alcohol content (for beer with at least 1.2 vol.%) displayed with not more than one decimal place.
- ☐ Nutrition declaration (for beer with less than 1.2 vol.%).
- ☐ Description, net quantity and best before date in the same field of view.
- ☐ Minimum font size of 1.2 mm high for lowercase letters.

Legislative text regarding food information

The legal information regarding food information is extensive and there are many references surrounding articles and attachments. Here we have summarized the article text (always displayed on a colored background) with the text from references so that you can get a complete picture of the regulations for each element.

Some definitions from the legislative text

It is required to know what the legislation means regarding different concepts in order to be able to inform and label correctly. In the introduction to the information regulations there are a number of definitions. We have chosen some of particular importance in connection to food information for beer. See Table 5.

Table 5. Some concepts that are defined in the legislative text.

Concept	**Example**	**Comments**
Ready-made food	Closed can or bottle of beer.	
Ingredients	Water, malt, hops, yeast.	Processing materials are not counted as ingredients.
Origin Location	Roslagen.	The definition clarifies that the food company's name and address details do not represent the place of origin.
Labelling	All information on the packaging that can be perceived to apply to the food.	Even images and illustrations that can be perceived as applying to the food are included in the label.

Concept	Example	Comments
Visibility	Everything you can see at the same time on the packaging. Description, net quantity and alcohol content should be in the same field of view; "ÖL alk. 2.2 vol% 33 cl ".	Circular packaging like bottles and cans are allowed to be twisted slightly and as long as it is in the same 'semicircle' it should be considered as being in the same field of view.
Standard description	Öl (beer).	A description that consumers know without further explanation required.

Regulation (EC) No 178/2002
Article 16
Presentation
Without prejudice to more specific provisions of food law, the labelling, advertising and presentation of food or feed, including their shape, appearance or packaging, the packaging materials used, the manner in which they are arranged and the setting in which they are displayed, and the information which is made available about them through whatever medium, shall not mislead consumers.

REGULATION (EU) No 1169/2011
CHAPTER I
GENERAL REGULATIONS
Article 1
Definitions
(e) "prepacked food" means an individual product which is intended for sale to end consumers and catering consisting of a foodstuff and the packaging in which it was placed before being offered for sale, whether or not the packaging encloses the food in whole or in part but in each case so that the package encloses the food in such a way that the contents cannot be changed without opening or changing the package. Foods packaged at the point of sale at the consumer's request or prepackaged for direct sale shall not be considered as prepackaged.
(f) "ingredients" means any substance or product, including flavorings, food additives and food enzymes, and any constituent of a compound ingredient used in the manufacture or preparation of a foodstuff and remaining in the finished product, albeit in any other form. By-products shall not be considered as ingredients.
(g) "place of origin" means a place where a food is declared to originate from and which is not the country of origin established in accordance with Articles 23 to 26 of Regulation (EEC) No 2913/92; The name of the food business operator, business name or address on the label does not indicate the country of origin or place of origin of the food in accordance with this regulation.
h) Compound ingredient: an ingredient which in itself is a product of more than one ingredient.
(i) 'label' means any text, brand, illustration or other description reproduced in writing, print, stencil, embossing, relief or stamp on a package or container containing foodstuffs or attached thereto.
j) labeling: words, information, trademarks, brand names, illustrations or symbols relating to a foodstuff and placed on packaging, documents, messages, labels, rings or collars accompanying or relating to such foodstuffs.
(k) field of view: all surfaces of a package which can be read from a single point of view.
(l) "main field of vision" means the field of view of a packaging which the consumer most likely sees immediately at the time of purchase and which enables the consumer to directly identify the type or nature of a product and, where applicable, the brand name. If a package has several identical main fields of vision, the main field of vision shall be decided by the food business operator.
(o) "recognized description" means a name that is accepted as the food name by the consumer in the Member State in which the food is marketed without the name needing further explanation.
(r) minimum best before date for a foodstuff: the date on which foodstuffs retain their particular characteristics when stored properly.

Design

REGULATION (EU) No 1169/2011
CHAPTER II
GENERAL PRINCIPLES FOR FOOD INFORMATION

Article 3
General objectives
1. The provision of food information shall pursue a high level of protection of consumers' health and interests by providing a basis for final consumers to make informed choices and to make safe use of food, with particular regard to health, economic, environmental, social and ethical considerations.

CHAPTER III
GENERAL REQUIREMENTS REGARDING FOOD INFORMATION AND THE RESPONSIBILITIES OF FOOD BUSINESS OPERATORS
Article 6
Basic requirement
Any food intended for supply to the final consumer or to mass caterers shall be accompanied by food information in accordance with this Regulation.
Article 7
Fair information practices
1. Food information shall not be misleading, particularly:
(a) as to the characteristics of the food and, in particular, as to its nature, identity, properties, composition, quantity, durability, country of origin or place of provenance, method of manufacture or production;
(b) by attributing to the food effects or properties which it does not possess;
(c) by suggesting that the food possesses special characteristics when in fact all similar foods possess such characteristics, in particular by specifically emphasising the presence or absence of certain ingredients and/or nutrients;
(d) by suggesting, by means of the appearance, the description or pictorial representations, the presence of a particular food or an ingredient, while in reality a component naturally present or an ingredient normally used in that food has been substituted with a different component or a different ingredient.
2. Food information shall be accurate, clear and easy to understand for the consumer.
3. Subject to derogations provided for by Union law applicable to natural mineral waters and foods for particular nutritional uses, food information shall not attribute to any food the property of preventing, treating or curing a human disease, nor refer to such properties.
4. Paragraphs 1, 2 and 3 shall also apply to:
(a) advertising;
(b) the presentation of foods, in particular their shape, appearance or packaging, the packaging materials used, the way in which they are arranged and the setting in which they are displayed.

Regulation 1169/2011 Article 8
Responsibilities
1. The food business operator responsible for the food information shall be the operator under whose name or business name the food is marketed or, if that operator is not established in the Union, the importer into the Union market.
2. The food business operator responsible for the food information shall ensure the presence and accuracy of the food information in accordance with the applicable food information law and requirements of relevant national provisions.
3. Food business operators which do not affect food information shall not supply food which they know or presume, on the basis of the information in their possession as professionals, to be non-compliant with the applicable food information law and requirements of relevant national provisions.
4. Food business operators, within the businesses under their control, shall not modify the information accompanying a food if such modification would mislead the final consumer or otherwise reduce the level of consumer protection and the possibilities for the final consumer to make informed choices. Food business operators are responsible for any changes they make to food information accompanying a food.
5. Without prejudice to paragraphs 2 to 4, food business operators, within the businesses under their control, shall ensure compliance with the requirements of food information law and relevant national provisions which are relevant to their activities and shall verify that such requirements are met.
6. Food business operators, within the businesses under their control, shall ensure that information relating to non-prepacked food intended for the final consumer or for supply to mass caterers shall be transmitted to the food business operator receiving the food in order to enable, when required, the provision of mandatory food information to the final consumer.
7. In the following cases, food business operators, within the businesses under their control, shall ensure that the mandatory particulars required under Articles 9 and 10 shall appear on the prepackaging or on a label attached thereto, or on the commercial documents referring to the foods where it can be guaranteed that such documents either accompany the food to which they refer or were sent before or at the same time as delivery:

(a) where prepacked food is intended for the final consumer but marketed at a stage prior to sale to the final consumer and where sale to a mass caterer is not involved at that stage;
(b) where prepacked food is intended for supply to mass caterers for preparation, processing, splitting or cutting up.
Notwithstanding the first subparagraph, food business operators shall ensure that the particulars referred to in points (a), (f), (g) and (h) of Article 9(1) also appear on the external packaging in which the prepacked foods are presented for marketing.
8. Food business operators that supply to other food business operators food not intended for the final consumer or to mass caterers shall ensure that those other food business operators are provided with sufficient information to enable them, where appropriate, to meet their obligations under paragraph 2.

Article 12
Availability and placement of mandatory food information
1. Mandatory food information shall be available and shall be easily accessible, in accordance with this Regulation, for all foods.
2. In the case of prepacked food, mandatory food information shall appear directly on the package or on a label attached thereto.
5. In the case of non-prepacked food, the provisions of Article 44 shall apply.

Article 13
Presentation of mandatory particulars
1. Without prejudice to the national measures adopted under Article 44(2), mandatory food information shall be marked in a conspicuous place in such a way as to be easily visible, clearly legible and, where appropriate, indelible. It shall not in any way be hidden, obscured, detracted from or interrupted by any other written or pictorial matter or any other intervening material.
2. Without prejudice to specific Union provisions applicable to particular foods, when appearing on the package or on the label attached thereto, the mandatory particulars listed in Article 9(1) shall be printed on the package or on the label in such a way as to ensure clear legibility, in characters using a font size where the x-height, as defined in Annex IV, is equal to or greater than 1,2 mm.
3. In case of packaging or containers the largest surface of which has an area of less than 80 cm2, the x-height of the font size referred to in paragraph 2 shall be equal to or greater than 0,9 mm.
5. The particulars listed in points (a), (e) and (k) of Article 9(1) shall appear in the same field of vision. //This information is; description, net quantity and alcohol content. (Ed. note) //

Article 15
Language requirements
1. Without prejudice to Article 9 (3), mandatory food information should be provided in a language easily understood by consumers in the Member States where a foodstuff is marketed.
2. The Member States in which a foodstuff is marketed may stipulate that the information in their territory is presented in one or more of the official languages of the Union.
The Swedish National Food Agency's regulations on food information:
3. The provisions of paragraphs 1 and 2 should not prevent the information from being presented in several languages.
Article 9.2.
The mandatory information in section 9.1 should be displayed in words and numbers. In addition they may also be expressed by pictograms or symbols, without prejudice to Article 35.

LIVSFS 2014: 4;
5 § Mandatory food information and the food information provided in accordance with the Swedish National Food Agency's regulations must be stated in Swedish. Other languages may be used if the language differs only marginally from Swedish.
The food information can be presented simultaneously in several languages.

Voluntary food information

If food information contained in Articles 9 and 10 is given voluntarily the same requirements as for mandatory information apply. So, if you voluntarily state, for example, a nutrition declaration on beer, with an alcohol content of more than 1.2% by volume, you have to present it in the same way as for other foods. However, there is an exception for the nutrition declaration, which in this case may be presented with just the information regarding energy content.

REGULATION (EU) No 1169/2011
CHAPTER V
VOLUNTARY FOOD INFORMATION

Article 36

Applicable requirements
1. Where food information referred to in Articles 9 and 10 is provided on a voluntary basis, such information shall comply with the requirements laid down in Sections 2 and 3 of Chapter IV.
2. Food information provided on a voluntary basis shall meet the following requirements:
(a) it shall not mislead the consumer, as referred to in Article 7;
(b) it shall not be ambiguous or confusing for the consumer; and
(c) it shall, where appropriate, be based on the relevant scientific data.
4. In order to ensure that consumers are appropriately informed, where voluntary food information is provided by food business operators on a divergent basis which might mislead or confuse the consumer, the Commission may, by means of delegated acts, in accordance with Article 51, provide for additional cases of provision of voluntary food information to the ones referred to in paragraph 3 of this Article.

Article 37
Presentation
Voluntary food information shall not be displayed to the detriment of the space available for mandatory food information.

Mandatory information

REGULATION (EU) No 1169/2011
Article 16
Omission of certain mandatory particulars
3. Without prejudice to other Union provisions requiring a mandatory nutrition declaration, the declaration referred to in point (l) of Article 9(1) shall not be mandatory for the foods listed in Annex V.
4. Without prejudice to other Union provisions requiring a list of ingredients or a mandatory nutrition declaration, the particulars referred to in points (b) and (l) of Article 9(1) shall not be mandatory for beverages containing more than 1,2 % by volume of alcohol.

CHAPTER IV
MANDATORY FOOD INFORMATION
EPISODE 1
Contents and presentation
List of mandatory particulars
1. In accordance with Articles 10 to 35 and subject to the exceptions contained in this Chapter, indication of the following particulars shall be mandatory:
(a) the name of the food;
(b) the list of ingredients;
(c) any ingredient or processing aid listed in Annex II or derived from a substance or product listed in Annex II causing allergies or intolerances used in the manufacture or preparation of a food and still present in the finished product, even if in an altered form;
(d) the quantity of certain ingredients or categories of ingredients;
(e) the net quantity of the food;
(f) the date of minimum durability or the 'use by' date;
(g) any special storage conditions and/or conditions of use;
(h) the name or business name and address of the food business operator referred to in Article 8(1);
(i) the country of origin or place of provenance where provided for in Article 26;
(j) instructions for use where it would be difficult to make appropriate use of the food in the absence of such instructions;
(k) with respect to beverages containing more than 1,2 % by volume of alcohol, the actual alcoholic strength by volume;
(l) a nutrition declaration.

ANNEX V (to Regulation (EU) No 1169/2011) FOODS EXCLUDED FROM THE REQUIREMENTS FOR MANDATORY NUTRITION DECLARATION

3. Water intended as a foodstuff, including water which only adds carbon dioxide and/or flavorings.

Description

REGULATION (EU) No 1169/2011
Article 9 (1) (a) The name of the foodstuff.
Article 17
Name of the food
1. The name of the food shall be its legal name. In the absence of such a name, the name of the food shall be its customary name, or, if there is no customary name or the customary name is not used, a descriptive name of the food shall be provided.
2. The use in the Member State of marketing of the name of the food under which the product is legally manufactured and marketed in the Member State of production shall be allowed. However, where the application of the other provisions of this Regulation, in particular those set out in Article 9, would not enable consumers in the Member State of marketing to know the true nature of the food and to distinguish it from foods with which they could confuse it, the name of the food shall be accompanied by other descriptive information which shall appear in proximity to the name of the food.
3. In exceptional cases, the name of the food in the Member State of production shall not be used in the Member State of marketing when the food which it designates in the Member State of production is so different, as regards its composition or manufacture, from the food known under that name in the Member State of marketing that paragraph 2 is not sufficient to ensure, in the Member State of marketing, correct information for consumers.
4. The name of the food shall not be replaced with a name protected as intellectual property, brand name or fancy name.

ANNEX VI (to Regulation (EU) No 1169/2011) FOOD NAMES AND SPECIFIC ACCOMPANYING INFORMATION

PART A — MANDATORY PARTICULARS ACCOMPANYING THE NAME OF THE FOOD

1. The name of the food shall include or be accompanied by particulars as to the physical condition of the food or the specific treatment which it has undergone (for example, powdered, refrozen, freeze-dried, quick-frozen, concentrated, smoked) in all cases where omission of such information could mislead the purchaser.

4. In the case of foods in which a component or ingredient that consumers expect to be normally used or naturally present has been substituted with a different component or ingredient, the labelling shall bear — in addition to the list of ingredients — a clear indication of the component or the ingredient that has been used for the partial or whole substitution:

(a) in close proximity to the name of the product; and
(b) using a font size which has an x-height of at least 75 % of the x-height of the name of the product and which is not smaller than the minimum font size required in Article 13(2) of this Regulation

Ingredients

Ingredients (not mandatory for alcoholic beverages of more than 1.2% alcohol by volume).

REGULATION (EU) No 1169/2011
Article 9 (1) (b) Ingredients list.
Article 18
List of ingredients
1. The list of ingredients shall be headed or preceded by a suitable heading which consists of or includes the word 'ingredients'. It shall include all the ingredients of the food, in descending order of weight, as recorded at the time of their use in the manufacture of the food.
2. Ingredients shall be designated by their specific name, where applicable, in accordance with the rules laid down in Article 17 and in Annex VI.
Article 19
Omission of the list of ingredients
1. The following foods shall not be required to bear a list of ingredients:
(b) carbonated water, the description of which indicates that it has been carbonated.
Article 20
Omission of constituents of food from the list of ingredients
Without prejudice to Article 21, the following constituents of a food shall not be required to be included in the list of ingredients:
(a) the constituents of an ingredient which have been temporarily separated during the manufacturing process and later reintroduced but not in excess of their original proportions;
(b) food additives and food enzymes:
(i) whose presence in a given food is solely due to the fact that they were contained in one or more ingredients of that food, in accordance with the carry-over principle referred to in points (a) and (b) of Article 18(1) of Regulation (EC) No 1333/2008, provided that they serve no technological function in the finished product; or
(ii) which are used as processing aids;
(c) carriers and substances which are not food additives but are used in the same way and with the same purpose as carriers, and which are used in the quantities strictly necessary;
(d) substances which are not food additives but are used in the same way and with the same purpose as processing aids and are still present in the finished product, even if in an altered form;
(e) water:
(i) where the water is used during the manufacturing process solely for the reconstitution of an ingredient used in concentrated or dehydrated form.

ANNEX VII (to Regulation (EU) No 1169/2011) INDICATION AND DESIGNATION OF INGREDIENTS

PART A — SPECIFIC PROVISIONS CONCERNING THE INDICATION OF INGREDIENTS BY DESCENDING ORDER OF WEIGHT

Category of ingredient	**Provision concerning indication by weight**
1. Added water and volatile products	Shall be listed in order of their weight in the finished product. The amount of water added as an ingredient in a food shall be calculated by deducting from the total amount of the finished product the total amount of the other ingredients used. This amount shall not be required to be taken into consideration if it does not exceed 5 % by weight of the finished product. This derogation does not apply to meat, meat preparations, unprocessed fishery products and unprocessed bivalve molluscs.
2. Ingredients used in concentrated or dehydrated form and reconstituted at the time of manufacture	May be listed in order of weight as recorded before their concentration or dehydration.
4. Fruit, vegetables or mushrooms, none of which significantly predominates in terms of weight and which are used in proportions that	May be grouped together in the list of ingredients under the designation 'fruit', 'vegetables' or 'mushrooms' followed by the phrase 'in varying proportions', immediately

are likely to vary, used in a mixture as ingredients of a food	followed by a list of the fruit, vegetables or mushrooms present. In such cases, the mixture shall be included in the list of ingredients in accordance with Article 18(1), on the basis of the total weight of the fruit, vegetables or mushrooms present.
6. Ingredients constituting less than 2 % of the finished product:	May be listed in a different order after the other ingredients.
7. Ingredients, which are similar or mutually substitutable, likely to be used in the manufacture or preparation of a food without altering its composition, its nature or its perceived value, and in so far as they constitute less than 2 % of the finished product:	May be referred to in the list of ingredients by means of the statement 'contains … and/or …', where at least one of no more than two ingredients is present in the finished product. This provision shall not apply to food additives or to ingredients listed in Part C of this Annex, and to substances or products listed in Annex II causing allergies or intolerances.

PART B — DESIGNATION OF CERTAIN INGREDIENTS BY THE NAME OF A CATEGORY RATHER THAN A SPECIFIC NAME

Without prejudice to Article 21, ingredients which belong to one of the categories of foods listed below and are constituents of another food may be designated by the name of that category rather than the specific name.

Definition of category of food	Name
4. Starches, and starches modified by physical means or by enzymes.	'Starch'
7. All spices not exceeding 2% of the weight of the food.	'Spice(s)' or 'mixed spices'
8. All herbs or parts of herbs not exceeding 2 % by weight of the food.	'Herb(s)' or 'mixed herbs'
11. All types of sucrose.	'Sugar'
12. Anhydrous dextrose or dextrose monohydrate.	'Dextrose'
13. Glucose syrup and anhydrous glucose syrup.	'Glucose syrup'

PART C — DESIGNATION OF CERTAIN INGREDIENTS BY THE NAME OF THEIR CATEGORY FOLLOWED BY THEIR SPECIFIC NAME OR E NUMBER

Without prejudice to Article 21, food additives and food enzymes other than those specified in point (b) of Article 20 belonging to one of the categories listed in this Part must be designated by the name of that category, followed by their specific name or, if appropriate, E number. If an ingredient belongs to more than one of the categories, the category appropriate to the principal function in the case of the food in question shall be indicated.

Acid

Acidity regulator

Anti-caking agent

Anti-foaming agent

Antioxidant

Bulking agent

Colouring agent

Emulsifer

Emulsifying salts

Firming agent

Flavour enhancer

Flour treatment agent

Foaming agent

Gelling agent

Glazing agent

Humectant

Modified starch

Preservative

Propellent gas

Raising agent

Sequestrant

Stabiliser

Sweetner

Thickener

PART D — DESIGNATION OF FLAVOURINGS IN THE LIST OF INGREDIENTS

1. Flavourings shall be designated either by the terms:
   — 'flavouring(s)' or by a more specific name or description of the flavouring if the flavouring component contains flavourings as defined in points (b), (c), (d), (e), (f), (g) and (h) of Article 3(2) of Regulation (EC) No 1334/2008,
   — 'smoke flavouring(s)', or 'smoke flavouring(s) produced from food(s) or food category or source(s)' (e.g. 'smoke flavouring produced from beech'), if the flavouring component contains flavourings as defined in point (f) of Article 3(2) of Regulation (EC) No 1334/2008 and imparts a smoky flavour to the food.
2. The term 'natural' for the description of flavourings shall be used in accordance with Article 16 of Regulation (EC) No 1334/2008.

> Article 16
>
> Specific requirements for use of the term 'natural'
>
> 1. If the term 'natural' is used to describe a flavouring in the sales description referred to in Article 15(1)(a) the provisions of paragraphs 2 to 6 of this Article shall apply.
>
> 2. The term 'natural' for the description of a flavouring may only be used if the flavouring component comprises only flavouring preparations and/or natural flavouring substances.
>
> 3. The term 'natural flavouring substance(s)' may only be used for flavourings in which the flavouring component contains exclusively natural flavouring substances.

4. The term 'natural' may only be used in combination with a reference to a food, food category or a vegetable or animal flavouring source if the flavouring component has been obtained exclusively or by at least 95 % by w/w from the source material referred to.

The description shall read 'natural "food(s) or food category or source(s)" flavouring'.

5. The term 'natural "food(s) or food category or source(s)" flavouring with other natural flavourings' may only be used if the flavouring component is partially derived from the source material referred to, the flavour of which can easily be recognised.

6. The term 'natural flavouring' may only be used if the flavouring component is derived from different source materials and where a reference to the source materials would not reflect their flavour or taste.

3. Quinine and/or caffeine used as aromas in the manufacture or preparation of a foodstuff should be entered in the list of ingredients with its name immediately after the word "aroma".

PART E — DESIGNATION OF COMPOUND INGREDIENTS

1. A compound ingredient may be included in the list of ingredients, under its own designation in so far as this is laid down by law or established by custom, in terms of its overall weight, and immediately followed by a list of its ingredients.
2. Without prejudice to Article 21, the list of ingredients for compound ingredients shall not be compulsory:
   (a) where the composition of the compound ingredient is defined in current Union provisions, and in so far as the compound ingredient constitutes less than 2 % of the finished product; however, this provision shall not apply to food additives, subject to points (a) to (d) of Article 20;
   (b) for compound ingredients consisting of mixtures of spices and/or herbs that constitute less than 2 % of the finished product, with the exception of food additives, subject to points (a) to (d) of Article 20; or
   (c) where the compound ingredient is a food for which a list of ingredients is not required under Union provisions.

c) om den sammansatta ingrediensen är ett livsmedel för vilket det inte krävs någon ingrediensförteckning enligt unionslagstiftningen.

Allergens should be emphasized

Allergens are written in CAPITAL LETTERS in the Ingredient list.

REGULATION (EU) No 1169/2011
Article 9 (1) (c) any ingredient or processing aid listed in Annex II or derived from a substance or product listed in Annex II causing allergies or intolerances used in the manufacture or preparation of a food and still present in the finished product, even if in an altered form.
Article 21
Labelling of certain substances or products causing allergies or intolerances
1. Without prejudice to the rules adopted under Article 44(2), the particulars referred to in point (c) of Article 9(1) shall meet the following requirements:
(a) they shall be indicated in the list of ingredients in accordance with the rules laid down in Article 18(1), with a clear reference to the name of the substance or product as listed in Annex II; and
(b) the name of the substance or product as listed in Annex II shall be emphasised through a typeset that clearly distinguishes it from the rest of the list of ingredients, for example by means of the font, style or background colour.
In the absence of a list of ingredients, the indication of the particulars referred to in point (c) of Article 9(1) shall comprise the word 'contains' followed by the name of the substance or product as listed in Annex II.
Where several ingredients or processing aids of a food originate from a single substance or product listed in Annex II, the labelling shall make it clear for each ingredient or processing aid concerned.
The indication of the particulars referred to in point (c) of Article 9(1) shall not be required in cases where the name of the food clearly refers to the substance or product concerned.

ANNEX II (to Regulation (EU) No 1169/2011) SUBSTANCES OR PRODUCTS CAUSING ALLERGIES OR INTOLERANCES

1. Cereals containing gluten, namely: wheat, rye, barley, oats, spelt, kamut or their hybridised strains, and products thereof, except:

    a) wheat based glucose syrups including dextrose.

    b) wheat based maltodextrins (Also applies to products made therefrom, provided that the processing process is not supposed to have increased the allergenicity that the authority has established for the product from which they originate).

    c) glucose syrups based on barley.

    d) cereals used for making alcoholic distillates including ethyl alcohol of agricultural origin.

2. Crustaceans and products thereof.

3. Eggs and products thereof.

4. Fish and products thereof, except:

    a) fish gelatine used as carrier for vitamin or carotenoid preparations.

    b) fish gelatine or Isinglass used as fining agent in beer and wine.

5. Peanuts and products thereof.

6. Soybeans and products thereof, except:

a) fully refined soybean oil and fat (Also applies to products made thereof, provided that the processing process is not supposed to have increased the allergenicity that the authority has established for the product from which they originate).

b) natural mixed tocopherols (E306), natural D-alpha tocopherol, natural D-alpha tocopherol acetate, and natural D-alpha tocopherol succinate from soybean sources.

c) vegetable oils derived phytosterols and phytosterol esters from soybean sources.

d) plant stanol ester produced from vegetable oil sterols from soybean sources.

7. Milk and products thereof (including lactose), except:

a) whey used for making alcoholic distillates including ethyl alcohol of agricultural origin.

b) lactitol.

8. Nuts, namely: almonds (*Amygdalus communis* L.), hazelnuts (*Corylus avellana*), walnuts (*Juglans regia*), cashews (*Anacardium occidentale*), pecan nuts (*Carya illinoinensis* (Wangenh.) K. Koch), Brazil nuts (*Bertholletia excelsa*), pistachio nuts (*Pistacia vera*), macadamia or Queensland nuts (*Macadamia ternifolia*), and products thereof, except for nuts used for making alcoholic distillates including ethyl alcohol of agricultural origin.

9. Celery and products thereof.

10. Mustard and products thereof.

11. Sesame seeds and products thereof.

12. Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg or 10 mg/litre in terms of the total SO_2 which are to be calculated for products as proposed ready for consumption or as reconstituted according to the instructions of the manufacturers.

13. Lupin and products thereof.

14. Molluscs and products thereof.

Quantities of certain ingredients

REGULATION (EU) No 1169/2011 Article 9.1 (d) The amount of certain ingredients or categories of ingredients. Article 22 Quantitative indication of ingredients 1. The indication of the quantity of an ingredient or category of ingredients used in the manufacture or preparation of a food shall be required where the ingredient or category of ingredients concerned:	(a) appears in the name of the food or is usually associated with that name by the consumer; (b) is emphasised on the labelling in words, pictures or graphics; or (c) is essential to characterise a food and to distinguish it from products with which it might be confused because of its name or appearance. 2. Technical rules for applying paragraph 1, including specific cases where the quantitative indication shall not be required in respect of certain ingredients, are laid down in Annex VIII.

ANNEX (to Regulation (EU) No. 1169/2011)

VIII QUANTITATIVE INDICATION OF INGREDIENTS

1. The quantitative indication shall not be required:

a) in respect of an ingredient or category of ingredients:

iii) which is used in small quantities for the purposes of flavouring.

iv) which, while appearing in the name of the food, is not such as to govern the choice of the consumer in the country of marketing because the variation in quantity is not essential to characterise the food or does not distinguish it from similar foods,

b) where specific Union provisions stipulate precisely the quantity of an ingredient or of a category of ingredients without providing for the indication thereof on the labelling.

3. The indication of quantity of an ingredient or category of ingredients shall:

a) be expressed as a percentage, which shall correspond to the quantity of the ingredient or ingredients at the time of its/their use; and

b) appear either in or immediately next to the name of the food or in the list of ingredients in connection with the ingredient or category of ingredients in question.

c) the quantity of ingredients used in concentrated or dehydrated form and reconstituted during manufacture may be indicated on the basis of their proportion by weight as recorded before their concentration or dehydration.

Net quantity

In liters, deciliters, centiliters or milliliters

REGULATION (EU) No 1169/2011 Article 9 (1) (e) Net quantity of food. Article 23 Net quantity	1. The net quantity of a food shall be expressed using litres, centilitres, millilitres, kilograms or grams, as appropriate: (a) in units of volume in the case of liquid products.

3. Technical rules for applying paragraph 1, including specific cases where the indication of the net quantity shall not be required, are laid down in Annex IX.

ANNEX IX (to Regulation (EU) No 1169/2011) NET QUANTITY DECLARATION

2. Where the indication of a certain type of quantity (such as the nominal quantity, minimum quantity, or average quantity) is required by Union provisions or, where there are none, by national provisions, this quantity shall be regarded as the net quantity for the purposes of this Regulation.

. // see Swedac's regulations on prepackaged goods STAFS 2017: 1. (Ed. note) //

3. Where a prepacked item consists of two or more individual prepacked items containing the same quantity of the same product, the net quantity shall be indicated by mentioning the net quantity contained in each individual package and the total number of such packages. The indication of those particulars shall not, however, be mandatory where the total number of individual packages can be clearly seen and easily counted from the outside and where at least one indication of the net quantity contained in each individual package can be clearly seen from the outside.

Swedac's regulations on prepackaged goods STAFS 2017: 1

1 § These regulations apply to prepackaged goods intended to be sold in consistently equal nominal quantities which:

• are equal to the predetermined values of the package.

• are expressed in weight or volume units.

• contain at least 5 g or 5 ml and no more than 10 kg or 10 l.

4 § All prepackaged goods should display the following markings affixed to the packaging in such a way that they are indelible, easily visible and legible when the prepackaged goods are available for sale under normal conditions.

The nominal amount (nominal weight or nominal volume) expressed in kilograms, grams, liters, centiliter or milliliter shall be displayed in numbers that are at least:

6 mm high if the nominal amount exceeds 1000g or 100 cl.

4 mm high between 1000g or 100 cl to 200g or 20cl.

3 mm high between 200g or 20cl to 50g or 5cl.

2 mm high if it does not exceed 50g or 5cl,

followed by the denomination of the unit of measure used ...

The net quantity of liquid foods intended for sale within Sweden may also be stated in deciliters (dl).

7 § The actual contents of a prepackaged food should be measured or checked by weight or volume, and this task is the responsibility of the packer or importer.

In all control procedures regarding quantity of goods expressed in volume units, the value of the actual content should be determined at (or corrected to) a temperature of 20°C, regardless of the temperature at which it was packed or checked.

If scales are used for measurement or control, the scales should meet the requirements of Swedac's regulations for non-automatic or automatic scales. If the measurement or control is not performed by means of scales the contents should be measured or controlled by means of a measuring device suitable for the task.

Measurement of the actual contents

8 § A packer who measures the actual contents of each prepackaged item should ensure that the contents of the prepackaged item are at least equal to the nominal amount. No negative deviations are allowed.

Checking the actual content

9 § If a packer does not measure the actual contents of each individual prepackaged item then the total amount in all prepackaged items must be determined in another way. In these cases, the packer or importer should check the total amount of prepackaged items, in a defined batch, by means of a statistical sample control system.

11 § prepackaged items in a batch should, as regards to quantity, meet the following requirements:

• The actual content of a prepackaged item must not be less than the average nominal amount.

• The proportion of prepackaged items in a batch with negative deviations greater than the allowed negative deviations (as shown in the table below) should be small enough for a batch of prepackaged items to meet the requirements for statistical verification (see Annex 1).

• No prepackaged items can have a negative deviation that is more than twice the permitted negative deviation.

The permitted negative deviation in the contents of a prepackaged item is shown in the table below.

Nominal amount (Qn) in grams or milliliters				Permitted negative deviations	
				As % of Qn	g or ml
over	5	less than	50	9	
from	50	to	100		4.5
from	100	to	200	4.5	
from	200	to	300		9
from	300	to	500	3	
from	500	to	1000		15
from	1000	to	10000	1,5	

Shelf life

The order of the best before date should be day, month, year.

REGULATION (EU) No 1169/2011
Article 9.1 (f) Minimum Best Before Date or expiry date.
Article 24
Minimum Best Before Date, 'use by' date and freezing date

2. The date in question should be displayed in accordance with Annex X.

ANNEX X (to Regulation (EU) No 1169/2011) MINIMUM BEST BEFORE DATE, 'USE BY'

1. Datum för minsta hållbarhet ska anges enligt följande:

a) Datumet ska föregås av orden

— ”Bäst före …” när datumet omfattar uppgift om dagen,

— ”Bäst före utgången av …” i övriga fall.

b) De ord som anges i punkt a ska åtföljas av

— antingen själva datumet, eller

— en hänvisning till var på märkningen datumet finns angivet.

Om det behövs, ska dessa uppgifter åtföljas av de förvaringsanvisningar som måste iakttas för att varan ska hålla sig under den angivna perioden.

c) Datumet ska bestå av dag, månad och eventuellt år i denna ordning och i okodad form.

Dock är det i fråga om livsmedel

— med kortare hållbarhetstid än 3 månader tillräckligt att ange dag och månad,

— med längre hållbarhetstid än 3 månader men inte längre än 18 månader tillräckligt att ange månad och år,

— med längre hållbarhetstid än 18 månader tillräckligt att ange året.

d) Om inte annat följer av unionsbestämmelser som föreskriver andra typer av datummärkning, ska uppgift om datum för minsta hållbarhet inte krävas för

— drycker som innehåller minst 10 volymprocent alkohol,

2. Datumet för sista förbrukningsdag ska anges enligt följande:

a) Det ska föregås av orden ”sista förbrukningsdag …”.

b) De ord som anges i led a ska åtföljas av

— antingen själva datumet, eller

— en hänvisning till var på märkningen datumet finns angivet.

Dessa uppgifter ska följas av en beskrivning av de förvaringsanvisningar som man måste rätta sig efter.

c) Datumet ska bestå av dag, månad och, eventuellt, år, i denna ordning och i okodad form.

d) Sista förbrukningsdag ska anges på varje enskild färdigförpackad portion.

Storage instructions and use

REGULATION (EU) No 1169/2011
Article 9.1 g) Special conditions for storage and/or use.
Article 25
Storage conditions or conditions of use
1. In cases where foods require special storage conditions and/or conditions of use, those conditions shall be indicated.

2. To enable appropriate storage or use of the food after opening the package, the storage conditions and/or time limit for consumption shall be indicated, where appropriate.

Name and address of responsible food business operator

REGULATION (EU) No 1169/2011
Article 9 (1) (h) Name or business name and address of the food business operator referred to in Article 8 (1).

REGULATION (EU) No 1169/2011
Article 8.1. The food business operator responsible for the food information shall be the business in whose name or business name the food is marketed or, if that business is not established in the Union, the importer of the food to the Union market. "

Country of origin or place of origin

REGULATION (EU) No 1169/2011
Article 9 (1) (i) Indication of the country of origin or place of origin where required by Article 26.
Article 26
Country of origin or place of provenance
2. Indication of the country of origin or place of provenance shall be mandatory:
(a) where failure to indicate this might mislead the consumer as to the true country of origin or place of provenance of the food, in particular if the information accompanying the food or the label as a whole would otherwise imply that the food has a different country of origin or place of provenance;
(b) for meat falling within the Combined Nomenclature ('CN') codes listed in Annex XI. The application of this point shall be subject to the adoption of implementing acts referred to in paragraph 8.
3. Where the country of origin or the place of provenance of a food is given and where it is not the same as that of its primary ingredient:
(a) the country of origin or place of provenance of the primary ingredient in question shall also be given; or
(b) the country of origin or place of provenance of the primary ingredient shall be indicated as being different to that of the food.
The application of this paragraph shall be subject to the adoption of the implementing acts referred to in paragraph 8.

8. By 13 december 2013, following impact assessments, the Commission shall adopt implementing acts concerning the application of point (b) of paragraph 2 of this Article and the application of paragraph 3 of this Article. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 48(2).

Directions for use

REGULATION (EU) No 1169/2011
Article 9.1
(j) instructions for use where it would be difficult to make appropriate use of the food in the absence of such instructions;

Alcohol content

REGULATION (EU) No 1169/2011
Article 9 (1)
(k) with respect to beverages containing more than 1,2 % by volume of alcohol, the actual alcoholic strength by volume.
Article 28
Alcohol content

2. The actual alcoholic strength by volume of beverages containing more than 1,2 % by volume of alcohol other than those referred to in paragraph 1 shall be indicated in accordance with Annex XII. // = wine and grape must // should be indicated in accordance with Annex XII.

ANNEX XII (to Regulation (EU) No 1169/2011) ALCOHOLIC STRENGTH

The actual alcoholic strength by volume of beverages containing more than 1,2 % by volume of alcohol shall be indicated by a figure to not more than one decimal place. It shall be followed by the symbol '% vol.' and may be preceded by the word 'alcohol' or the abbreviation 'alc'.

The alcoholic strength shall be determined at 20 °C.

Positive and negative allowed tolerances in respect of the indication of the alcoholic strength by volume and expressed in absolute values shall be as listed in the following table. They shall apply without prejudice to the tolerances deriving from the method of analysis used for determining the alcoholic strength.

Description of beverage	Positive or negative tolerance
1. Beer with CN code 2203 00 // = malt beverages (Ed. note) // and an alcoholic strength not exceeding 5,5% vol; non-carbonated beverages with CN code 2206 00 produced from grapes.	0,5 volume percentage
2. Beers having an alcoholic strength exceeding 5,5 % vol.; sparkling beverages falling within CN code 2206 00 obtained from grapes, ciders, perries, fruit wines and the like, obtained from fruit other than grapes, whether or not semi-sparkling or sparkling; mead.	1 volume percentage
3. Beverages containing macerated fruit or parts of plants.	1,5 volume percentage
4. Any other beverages containing more than 1,2 % by volume of alcohol.	0,3 volume percentage

Nutrition declaration

Mandatory from 13 Dec 2016. (Not mandatory for alcoholic beverages with more than 1.2% alcohol by volume).

REGULATION (EU) No 1169/2011
Article 9.1 (l) A nutrition declaration.

SECTION 3
Nutrition declaration
Article 29
Relationship with other legislation
1. This Section shall not apply to foods falling within the scope of the following legislation:
(a) Directive 2002/46/EC of the European Parliament and of the Council of 10 June 2002 on the approximation of the laws of the Member States relating to food supplements;
(b) Directive 2009/54/EC of the European Parliament and of the Council of 18 June 2009 on the exploitation and marketing of natural mineral waters.
2. This Section shall apply without prejudice to Directive 2009/39/EC of the European Parliament and of the Council of 6 May 2009 on foodstuffs intended for particular nutritional uses and specific Directives as referred to in Article 4(1) of that Directive.
Article 30
Content
1. The mandatory nutrition declaration shall include the following:
(a) energy value; and
(b) the amounts of fat, saturates, carbohydrate, sugars, protein and salt.
Where appropriate, a statement indicating that the salt content is exclusively due to the presence of naturally occurring sodium may appear in close proximity to the nutrition declaration.
2. The content of the mandatory nutrition declaration referred to in paragraph 1 may be supplemented with an indication of the amounts of one or more of the following:
(a) mono-unsaturates;
(b) polyunsaturates;
(c) polyols;
(d) starch;
(e) fibre;
(f) any of the vitamins or minerals listed in point 1 of Part A of Annex XIII, and present in significant amounts as defined in point 2 of Part A of Annex XIII.
3. Where the labelling of a prepacked food provides the mandatory nutrition declaration referred to in paragraph 1, the following information may be repeated thereon:
(a) the energy value; or
(b) the energy value together with the amounts of fat, saturates, sugars, and salt.
4. If the labelling of the products referred to in Article 16 (4) // = beverages with more than 1,2% alcohol // // contains a nutrition declaration, the content of the declaration may, by way of exemption from Article 36 (1), be limited to energy value.
5. If the labelling of the products referred to in Article 44.1 // = unpacked products, e.g a glass of beer in a restaurant // // includes a nutrition declaration, the contents of the declaration are without prejudice to Article 44 and by way of exemption from Article 36.1 // = food information indicated voluntarily shall be given in the same way as that indicated mandatorily (Ed. Note) // limited to only include:
a) energy value, or
b) energy value along with the amount of fat, saturated fat, sugars and salt.

Foods that are not prepackaged

When, for example, a beer is sold in a bar --- information must be provided so that they can respond to ... according to.

REGULATION (EU) No 1169/2011
CHAPTER VI
NATIONAL MEASURES
Article 44
National measures for non-prepacked food
1. Where foods are offered for sale to the final consumer or to mass caterers without pre-packaging, or where foods are packed on the sales premises at the consumer's request or pre-packed for direct sale:
Article 44.1. For foods offered for sale to final consumers or large-scale households without being pre-packaged or for foods packaged at the point of sale at the consumer's request or prepackaged for direct sale
(a) the provision of the information referred to in Article 9 (1) (c) is mandatory.

LIVSFS 2014: 4
10 § Information submitted under Article 44 (1) (a) of Regulation (EU) No 1169/2011 of the European Parliament and of the Council may be provided by:
1. written poster or similar in the immediate vicinity of the food.
2. written material presenting or accompanying the food.
3. verbal communication.
4. the name of the food, provided that the name of the substance or product constitutes an ingredient or process material, or,
5. Other methods, provided that the information can also be provided verbally if necessary.

If the food business operator chooses to submit the information in accordance with the first paragraph after a request from the consumer, it should ensure that it is clear how the consumer can access the information. A specific instruction as to how to access the information can be given in writing, for example a poster or menu, or verbally. Such instructions need not be given if an investigation has been made in which the consumer's allergies and hypersensitivity have been noted in advance and the food is supplied to the consumer based on this information.

Article 44.1. For food offered for sale to end consumers or caterers without being prepackaged or for foodstuffs packaged at the place of sale at the consumer's request or prepackaged for direct sale:
(b) the provision of other particulars referred to in Articles 9 and 10 is not mandatory unless Member States adopt national measures requiring the provision of some or all of those particulars or elements of those particulars.

LIVSFS 2014: 4
8 § For foods offered for sale and not prepackaged food, the name of the food must be provided upon request. The information shall be provided in accordance with Article 17 of Regulation (EU) No 1169/2011 of the European Parliament and of the Council.
Section 9 Information in Article 9.1b and e-k of Regulation (EU) No 1169/2011 of the European Parliament and of the Council shall be given upon request for food offered for sale which is:
1. packaged at the place of sale at the consumer's request, or
2. is prepackaged for direct sale.
Information on ingredients may be given in a different order from that provided for in Article 18 of Regulation (EU) No 1169/2011 of the European Parliament and of the Council.

11 § Information to be supplied under sections 8 and 9 may be provided by the methods specified in the first paragraph of section 10.

Sveriges Bryggerier is the Swedish Brewers Association. Our members produce beer, cider, water and soda

The Swedish Brewers Association was founded in 1885 and is Sweden's oldest trade association

info@sverigesbryggerier.se
www.sverigesbryggerier.se