

HDE-Guidelines for Good Food Hygiene Practice

Temperature monitoring requirements for food products

Guideline for a good practice in accordance with regulation (EC) no. 852/2004 regarding food hygiene

1 Scope of validity

Food companies are obligated, in accordance with regulation (EC) no. 852/2004 regarding food hygiene, to meet the general and specific hygiene regulations of article 4 as well as the specifications regarding hazard analysis and critical control points in accordance with article 5. The adherence to suitable temperatures and temperature control play a decisive role.

This guideline for a good practice in the sense of article 8 of regulation (EC) no. 852/2004 includes temperatures for the storage and filling of specific food products of animal origin in operations in retail trade in the sense of article 3 no. 7 of regulation (EC) no. 178/2002. These include in particular the operation of chain and non-chain foodstuff retail trade as well as gastronomy operations, butcheries and butchers shops.

The scope of validity and extent of this guideline are oriented along the rules of regulation (EC) no. 853/2004. This guideline only applies for operations in retail trade that are not subject to the application area of regulation (EC) no. 853/2004 and thus the general hygiene regulations (EC) no. 852/2004. In addition, the guideline only comprises product groups that are relevant with reference to § 7 in connection with appendix 5 chapter VII of the national Regulation regarding hygiene requirements in the production, processing and distribution of specific food products of animal origin (Lebensmittelhygiene-Verordnung Tierische Lebensmittel, LMHV-Tier).

In consequence, this guideline only applies for

- operations in retail trade that distribute/sell self-processed food products of animal origin to the consumer in loose or self-packaged form;

- retail trade operations that distribute, store and/or transport food products of animal origin to other retail trade operations and where this constitutes a secondary business.

2 Temperatures for food products of animal origin requiring refrigeration

Refrigeration alone can slow down, but not prevent the multiplication of microorganisms. Significant for the absolute bacterial counts are the duration of refrigeration and the refrigeration temperature. The multiplication speed of microorganisms is also dependent on additional internal (e.g. pH- and AW-value) and external factors (e.g. atmosphere).

In the table (see page 72) temperatures for some food groups requiring refrigeration are listed. The listing only comprises the product areas for which there are explicit temperature specifications in appendix III of the regulation (EC) no. 853/2004 or in appendix 5 of the regulation for Food hygiene regulation animal food products and that can be differentiated according to chapter VII of appendix 5.

With regard to fishery products and living shells, reference is made to regulation (EC) no. 853/2004 appendix III section VIII no. 2 and appendix III, section VII no. 3.

Additional temperature recommendations and product groups can possibly be included in the respective guideline for good hygiene practices by the different industry associations.

The temperatures named in the table only apply for food products of animal origin that in retail trade operations

- are transferred to the consumer in loose form; or
- are self-packed and then transferred to the consumer.

Food products requiring refrigeration in finished packs packed by the manufacturer and provided with an expiration date or best before date are to be stored and transported in the original packaging at the temperature in accordance with the manufacturers specifications on the packaging. From the time the original packaging is opened, for example in the case of bulk pack, the temperatures of the guideline apply.

3 Temperature recording

Temperature recording plays an important role in both internal control measures as well as in official monitoring. For internal monitoring, the determination of the storage temperature or ambient temperature of the products is generally deemed to be sufficient; this makes a non-destructive measurement possible.

The following is a list of several aspects of temperature recording:

Measuring devices: liquid thermometer (alcohol, no quicksilver); contact thermometer (electronic); infrared measuring devices (non-contact);

Calibration: physical fixed point (ice water mixture); comparison measurement with calibrated high accuracy temperature measuring devices;

Measurement type: Individual measurement (short time); measurement with registration devices (long-term), fixed location or movable installation;

Measuring location: Product surface / core area (product temperature); ambient atmosphere during storage (ambient temperature);

Temperature probe: Taking into account the specific properties such as temperature range, measuring point on the probe and its chemical and mechanical consistency.

Transport and storage

New according to EC no. 852/2004 is the obligation regarding the separate storage of raw materials and processed products.

The most important measure to avoid risks and quality loss during storage and transport is limiting temperature and storage duration. Temperatures for easily perishable food products are critical parameters, the adherence to which must be monitored and documented. This is where the new EU deep-freeze regulation (EC)no. 37/2005 applies.

According to this regulation, is it mandatory since 1.1.2006 to equip transport equipment and storage installations for deep-frozen food products with temperature recording devices. All measuring devices used for temperature recording must correspond to European EN-standards. All temperature recordings are to be dated and to be stored for one year, in some cases longer. ebro® is ready to help you with practice-tested hardware and software solutions.

European standards for temperature measuring devices

EN 12830 Temperature registration devices for transport, storage and distribution of refrigerated, frozen, deep-frozen food products and ice cream - tests, performances, suitability for use.

EN 13485 Thermometers for the measurement of ambient temperature and internal product temperature for transport, storage and distribution of refrigerated, frozen, deep-frozen food products and ice cream - tests, performances, suitability for use.

EN 13486 Temperature registration devices for transport, storage and distribution of refrigerated, frozen, deep-frozen food products and ice cream - regular tests.