

## Reduced Oxygen Packaging for Retail Sale, Cook-Chill, Sous Vide

Reduced Oxygen Packaging (ROP) of food that has the potential to grow *Clostridium botulinum* requires an approval from the health department. *Listeria monocytogenes* is bacteria that must be controlled. Contact the health department if you are packaging food using the Reduced Oxygen Pathogen Method and are unsure if your product can support the growth of *C. botulinum* or *L. monocytogenes*.

### HACCP Overview

Section § 3-502.12 of the Idaho Food Code **requires** the processor to submit a Hazard Analysis Critical Control Point Plan (HACCP) to the health department for their review. The maximum shelf life is 14 days when the product is refrigerated at 41° F or below. Fish is prohibited from being vacuum packaged and held refrigerated.

HACCP plans are to be established and implemented by the food establishment, but are also to be assessed by the health department. The Idaho Food Code § 8-201.14 describes the contents of a HACCP plan. You may develop the HACCP plan or hire a consultant to help you. The health department cannot be your consultant. Hiring a consultant will expedite the process for you. The University of Idaho Food Technology Center in Caldwell is an available resource. A food processing class will help you identify the potential hazards in your process and reduce the risk of selling or serving unsafe packaged food.

The process controls in your HACCP plan for food safety are critical and documentation is required. Standard operating procedures (SOP), sanitation standard operating procedures (SSOP), temperature control, temperature control logs must be developed. Corrective action plans, regular monitoring and verification will be a part of your HACCP plan.

Below is the rule/regulation in the Idaho Food Code concerning Reduced Oxygen Packaging.

### Clostridium Botulinum and Listeria Monocytogenes Controls

#### 3-502.12 Reduced Oxygen Packaging, Without a Variance Criteria

- A. Except for a food establishment which obtains a variance as specified under § 3-502.11, a food establishment which packages time / temperature control for safety food using a reduced oxygen packaging method shall control the growth and toxin formation of *Clostridium botulinum* and the growth of *Listeria monocytogenes*.
- B. Except as specified under (F) of this section, a food establishment which packages time / temperature control for safety food using a reduced oxygen packaging method shall implement a HACCP Plan which contains the information specified under § 8-201.14(B) and (D) and which:
  - a. Identifies the food to be packaged
  - b. Except as specified under (C)-(E) of this section, requires that the packaged food shall be maintained at 5°C (41°F) or less and meet at least one of the following criteria:
    - i. Has an Aw of 0.91 or less
    - ii. Has a pH of 4.6 or less
    - iii. Is a meat or poultry product cured at a food processing plant regulated by the USDA using substances specified in 9 CFR § 424.21. Use of food ingredients and sources of radiation, and is received in an intact package
    - iv. Is a food with a high level of competing organisms such as raw meat, raw poultry, or raw vegetables
- C. Describes how the package shall be prominently and conspicuously labeled on the principal display panel in bold type on a contrasting background, with instructions to:
  - a. Maintain the food at 5°C (41°F) or below
  - b. Discard the food if within 30 calendar days of its packaging if it is not served for on-premises consumption, or consumed if served or sold for off-premises consumption
- D. Limits the refrigerated shelf life to no more than 30 calendar days from packaging to consumption, except the time the product is maintained frozen, or the original manufacturer's "sell by" or "use by" date, whichever occurs first

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E. Includes operational procedures which:

Fish

- a. Prohibit contacting ready-to-eat-food with bare hands as specified under § 3-301.11(B)
  - b. Identify a designated work area and the method by which:
    - i. Physical barriers or methods of separation of raw foods and ready-to-eat foods minimize cross contamination
    - ii. Access to the processing equipment is limited to responsible trained personnel familiar with the potential hazards of the operation
  - c. Delineate cleaning and sanitization procedures for food-contact surfaces
- F. Describes the training program that ensures that the individual responsible for the reduced oxygen packaging operation understands the:
- a. Concepts required for a safe operation
  - b. Equipment and facilities
  - c. Procedures specified under Subparagraph (B)(5) of this section and § 8-201.14 (B) and (D)
- G. Is provided to the regulatory authority prior to implementation as specified under § 8-201.13(B).
- a. Except for fish which is frozen before, during, and after packaging, a food establishment may not package fish using a reduced oxygen packaging method.

**Cook-Chill or Sous Vide**

- H. Except as specified under (C) and (F) of this section, a food establishment which packages time / temperature control for safety food using a cook-chill or sous vide process shall:
- a. Provide to the regulatory authority prior to implementation, a HACCP Plan which contains the information as specified under § 8-201.14 (B) and (D)
  - b. Ensure the food is:
    - i. Prepared and consumed on the premises, or prepared and consumed off the premises but within the same business entity with no distribution or sale of the packaged product to another business entity or the consumer
    - ii. Cooked to heat all parts of the food to a temperature and for a time as specified under § 3-401.11 (A), (B), and (C)
    - iii. Protected from contamination before and after cooking as specified under Parts 3-3 and 3-4
    - iv. Placed in a package with an oxygen barrier and sealed before cooking, or placed in a package and sealed immediately after cooking and before reaching a temperature below 57°C (135°F)
    - v. Cooled to 5°C (41°F) in the sealed package or bag as specified under § 3-501.14
    - vi. Cooled to 1°C (34°F) within 48 hours of reaching 5°C (41°F) and held at that temperature until consumed or discarded within 30 days after the date of packaging
    - vii. Held at 5°C (41°F) or less for no more than 7 days, at which time the food must be consumed or discarded
    - viii. Held frozen with no shelf life restriction while frozen until consumed or used
    - ix. Held in a refrigeration unit that is equipped with an electronic system that continuously monitors time and temperature and is visually examined for proper operation twice daily
    - x. If transported off-site to a satellite location of the same business entity, equipped with verifiable electronic monitoring devices to ensure that times and temperatures are monitored during transportation
    - xi. Labeled with the product name and the date packaged
- I. Maintain the records required to confirm that cooling and cold holding refrigeration time/temperature parameters are required as part of the HACCP Plan and:
- a. Make such records available to the regulatory authority upon request
  - b. Hold such records for at least 6 month
- J. Implement written operational procedures as specified under Subparagraph (B)(5) of this section and a training program as specified under Subparagraph (B)(6) of this section.

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- K. Except as specified under (F) of this section, a food establishment which packages cheese using a reduced oxygen packaging method shall:
- a. Limit the cheeses packaged to those which are commercially manufactured in a food processing plant with no ingredients added in the food establishment and which meet the Standards of Identity as specified in 21 CFR § 133.150 Hard cheeses, 21 CFR § 133.169 Pasteurized process cheese or 21 CFR § 133.187 Semisoft cheeses
  - b. Have a HACCP Plan which contains the information specified under § 8-201.14 (B) and (D) and as specified under (B) (1), (B)(3)(a), (B)(5) and (B)(6) of this section
  - c. Labels the package on the principal display panel with a "use by" date that does not exceed 30 days from its packaging or the original manufacturer's "sell by" or "use by" date, whichever occurs first
  - d. Discards the reduced oxygen packaged cheese if it is not sold for off-premises consumption or consumed within 30 calendar days of its packaging
- L. A HACCP Plan is not required when a food establishment uses a reduced oxygen packaging method to package time / temperature control for safety food which is always:
- a. Labeled with the production time and date
  - b. Held at 5°C (41°F) or less during refrigerated storage
  - c. Removed from its package in the food establishment within 48 hours after packaging.

**Establishment may not package fish using a reduced oxygen packaging method.**

Resource: University of Idaho, Food Technology Center  
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