



Reduced Oxygen Packaging

Guidance for Food Service Operators

*This guidance is for food service operators who want to use Reduced Oxygen Packaging (ROP) at their food service establishments and **do not** already have an approved Hazard Analysis Critical Control Point (HACCP) plan.*

Background Information

ROP is the process of placing food into a package, removing the oxygen from the package and sealing it, to keep food fresher for a longer time. ROP techniques include:

- **Vacuum Packaging.** Food is placed in a bag or packaging and the oxygen (air) is removed using a special vacuum packaging machine. The package is heat sealed or crimped closed.
- **Cook-Chill.** Cooked food is portioned into bags while hot. The bags are sealed or crimped closed, rapidly chilled and refrigerated. The cooking and cooling process removes oxygen from the package.
- **Sous Vide.** Raw or partially cooked food is sealed in a bag then cooked, usually at or near the desired final cooking temperature. The cooked food can be removed from the bag and served, hot held for service or rapidly chilled and held under refrigeration until reheated for service.

Certain dangerous bacteria such as *Clostridium botulinum* and *Listeria monocytogenes* grow well in reduced oxygen environments. When ROP is not done correctly, these bacteria can grow in the packaged food, making people seriously ill. Proper precautions must be taken for ROP to be carried out safely.

How to Obtain a Waiver to Use ROP

A food service establishment must have a New York State Department of Health approved plan before they can practice ROP. The plan must identify basic food safety practices such as time and temperature monitoring, proper cooling and organized food labeling.

The information below and associated forms provide the complete set of requirements that food service operators need to apply for a permit waiver to use ROP in their establishments.

The form required for ROP depends on the type of foods being packaged and length of time they will be held. If you are unsure of which form to use, your local health department or state district office (health.ny.gov/EnvironmentalContacts) can help.

Use Form 5254EZ (health.ny.gov/forms/doh-5254_ez.pdf) for:

- ✓ Vacuum packaging Non-Time/Temperature Control for Safety Food for **any amount of time**
- ✓ Vacuum packaging, cook chill or sous vide methods for Time/Temperature Control for Safety Food (TCS) food where food will be in packaging for **LESS than 48 hours**.

Use Form 5254 (health.ny.gov/forms/doh-5254.pdf) for:

- ✓ ROP foods using vacuum packaging, cook chill or sous vide methods for TCS food where food will be in packaging for **LONGER than 48 hours**.

All ROP permit waiver applications must be submitted to the local health department or state district office (health.ny.gov/EnvironmentalContacts) with jurisdiction in the county where the food service is located.

Special Requirements for ROP

Some pathogens can grow in ROP foods even when stored at normal refrigerated temperatures, so these foods are required to be held at lower temperatures than most other foods. Follow these special precautions for ROP foods to ensure the safety of the food being packaged and served:

Labeling

- 1) Each individual package of food must be labeled with a permanent marker or other approved method with:
 - a) Product name.
 - b) Temperature to maintain food at (e.g. 41°F or 34°F).
 - c) Date item was sealed.
 - d) Date item must be used by or discarded.
 - e) If frozen for any length of time after packaging, mark the date packaged, date frozen, date thawed, and discard date.

Cooking

- 2) When using cook-chill, foods must reach the internal cooking temperature required by Part 14-1.82 of the NYS Sanitary Code. Foods must be placed in the package and sealed immediately after cooking and before the food cools to less than 135°F.
- 3) When using sous vide, foods must be placed in the package and sealed prior to cooking. Foods must reach the minimum cooking temperature required by Part 14-1.82 of the NYS Sanitary Code and may be immediately served after cooking, hot held or cooled for storage.

Cooling/Holding

- 4) Raw foods may be held at **41°F for up to 30 days** from the date the package is sealed. Raw foods may also be held frozen indefinitely. If a product was sealed and held at 41°F before it was frozen, subtract the number of days it was held prior to freezing from the 30-day limit, if you intend to store it.
- 5) All ROP foods must be cooled from 135°F to 70°F within 2 hours and from 70°F to 41°F within an additional 4 hours. If the facility would like to hold at 34°F, foods must be cooled to 34°F within an additional 48 hours.
- 6) Once properly cooled, cooked foods may be held:
 - a) At 34°F or below for up to 30 days from the date the package is sealed.

- b) Between 41°F and 34°F for 7 days from the date the package is sealed.
 - c) Frozen indefinitely.
- 7) Except where food will be held in ROP for less than 48 hours, sous vide and cook-chill foods are to be held in a refrigeration unit that is equipped with an electronic system that continuously monitors time and temperature. That unit must also be visually examined for proper operation twice daily. Electronic alarms that alert operators when a unit's internal temperature rises above a set parameter will satisfy this time and temperature requirement.

Off-Site Use

- 8) If sous vide and cook chill foods are transported off-site to a satellite location of the same business, verifiable electronic monitoring devices must be used to ensure that time and temperatures are monitored during transportation.
- 9) A food service establishment cannot sell ROP-packaged foods to consumers (e.g. vacuum packed foods to bring home) without a full HACCP plan, as described in the **Special Process** section below.

Other

- 10) Fish that is vacuum packaged must be frozen throughout the packaging process (before, during and after packaging), and the bag must be opened prior to thawing.
- 11) Only unaltered, commercially manufactured hard cheese, pasteurized process cheese, or semi-soft cheese from a food processing plant with no ingredients added by the food service establishment may be used in ROP when ROP storage is greater than 48 hours.
- 12) Records that are required as part of the ROP plan must be held on site for at least 6 months and be made available to the local health department upon request. Examples of records that may be needed are included on the back of Form 5254 (health.ny.gov/forms/doh-5254.pdf).

Special Processes Requiring a Full HACCP Plan

Any waiver request that does not meet the above requirements requires a full HACCP plan, reviewed and approved by a process authority. A list of process authorities is maintained by the New York State Department of Agriculture and Markets, and can be found on their website (https://www.agriculture.ny.gov/FS/general/Recognized_Food_Proc_Auth.pdf). Examples of processes requiring process authority approval include:

- a. Cooking foods for extended periods to a final cooking temperature less than that required by NYS Code.
- b. Sous vide or cook chill of foods containing fish or seafood.
- c. Vacuum packaging of previously cooked and cooled foods, except where foods are packaged for less than 48 hours.
- d. Modified or controlled atmosphere packaging.
- e. Retail sale of ROP packaged foods.

More information: health.ny.gov/FoodOperators