



Reduced Oxygen Packaging (ROP) Without a Variance

Benefits of ROP:

1. Flavor enhancement;
2. Fresher food, reduced freezer burn;
3. Extended shelf-life;
4. Cost benefit: portion control, bulk purchasing, same package used during storage and re-heating.

Safety Concerns:

1. Temperature abuse allowing for increased microbial growth;
2. Extended shelf-life increases risk of microbial growth;
3. Sanitation concerns

Things to Know:

1. ROP includes the following packaging methods: vacuum, modified atmosphere, controlled atmosphere, cook-chill, and sous vide.
2. ROP is NOT defined as packaging food items in a zipper/press and seal storage bag.
3. HACCP Plans and variances are NOT required for non-time/temperature control for safety foods.
4. HACCP Plans and variances are NOT required if sealing a product in a bag using ROP method for **less than** 48 hours (after 48 hours product must be removed from package or unsealed).
Note: Contact your inspector if clarification is needed prior to implementing ROP.
5. ROP food items may not be donated to food recovery organizations.
6. When conducting ROP activities that control for botulism and listeria, only a pre-approved HACCP Plan is required. The following are required for botulism and listeria control:
 - a. Packaged food must be held at 41°F or less **and**;
 - b. Have a water activity of .91 or less **or**;
 - c. Have a pH of 4.6 or less **or**;
 - d. Be a cured meat from a USDA regulated facility received in an intact package **or**;
 - e. Have a high level of competing organisms (raw meat, poultry, vegetables).

Be advised of additional limitations for not requiring a variance (refer to §3-502.12 for complete list):

1. ROP is NOT approved for fish unless the fish is frozen before, during and after packaging.
2. Cook-chill and sous vide packaging have additional specific limitations (refer to §3-502.12).
3. ROP is approved for state/federally inspected cheeses (refer to code provisions for limitations), with the exception of soft cheeses, such as brie.

Any deviation for conducting ROP from §3-502.12 would require a variance.

HACCP/Variance Program

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Definition: Reduced Oxygen Packaging (ROP) means the reduction of the amount of oxygen in a package by removing oxygen; displacing oxygen and replacing it with another gas or combination of gases; or otherwise controlling the oxygen content to a level below that normally found in the atmosphere (approximately 21% at sea level).

2013 FDA Code Reference:
3-502.12 Reduced Oxygen Packaging Without a Variance, Criteria.



Establishments seeking approval for a HACCP plan for Reduced Oxygen Packaging must submit the following to the Department for review:

1. Complete application : <https://www.maricopa.gov/DocumentCenter/View/5805/HACCPVariance-Application-PDF>
2. Application Fees
3. Detailed food preparation process
4. Complete Hazard Analysis and Critical Control Point (HACCP) Plan

For guidance please refer to:

<https://www.maricopa.gov/DocumentCenter/View/29747/HACCPVariance-Guidance-PDF>

<https://www.fda.gov/Food/GuidanceRegulation/HACCP/ucm2006801.htm>

5. Standard operating procedures for the following: labeling, date marking, tracking product from preparation to consumption, employee health, staff training, calibration of thermometers, and cleaning and sanitizing
6. Sample log sheets (e.g. cooking, cooling, thermometer calibration, staff training, etc.)
7. Equipment needed for process
8. Provide details on how person in charge will oversee process
9. Provide statements for the following: completed logs will be kept for 180 days and that the product will only be used in-house
10. If operating in a shared kitchen, provide details on how food process will be protected

Please note that if any of the above are not provided or if not complete, then the review process will be delayed.



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