



HEALTH CARE AGENCY/PUBLIC HEALTH ENVIRONMENTAL HEALTH INFORMATIONAL BULLETIN

TO: Orange County Retail Food Facility Owners/Operators

SUBJECT: Reduced-Oxygen Packaging & HACCP Requirements

"Reduced-oxygen packaging" (ROP) means the reduction of the amount of oxygen in a package by mechanically evacuating the oxygen, displacing the oxygen with another gas or combination of gases, or otherwise controlling the oxygen content in a package to a level below that normally found in the surrounding atmosphere, which is 21 percent oxygen. Examples of ROP include: *vacuum packaging, modified atmosphere packaging, controlled atmosphere packaging, cook-chill, and sous vide.*

ROP provides an environment that contains little or no oxygen and offers its own unique mix of benefits and drawbacks. Generally, extension of shelf life and food preservation are two of the greatest benefits of ROP. A significant drawback to ROP however, is a marked increase in food safety concerns. In shelf stable ROP products such as beef jerky, there are added preservatives, low available water, high salt content and in some cases low pH that serves as barriers to microbial growth. Not all products have these control factors and thus, ROP provides the potential for growth of several extremely hazardous pathogens such as *Clostridium botulinum*, the bacteria associated with botulism, thereby increasing the risk of foodborne illnesses. Due to the potentially serious risks associated with ROP, food facilities that package food using a ROP method must have an approved Hazard Analysis Critical Control Point (HACCP) plan.

HACCP is a management system that helps assure food safety through the analysis and control of possible biological, chemical and physical hazards that may contaminate food. Prior to using ROP, a food facility must submit a HACCP plan for review and approval to:

Jean-Marie Weathers, Retail Food Program Specialist
California Department of Public Health, Food and Drug Branch
jeanne-marie.weathers@cdph.ca.gov
(916) 650-6500

Please note that all food establishments must maintain the approved HACCP plan at the site for review by their local Environmental Health Specialist.

Although Orange County Environmental Health is not authorized to review and approve your proposed ROP or HACCP plan, we are available to answer any questions you may have. Please contact your area inspector or Environmental Health at 714-433-6000. For further information on ROP and HACCP plans, please refer to The California Retail Food Code which can be viewed on our website at www.ocfoodinfo.com.