

Food Code	Recommended Changes	Rationale
1-201.10 (1) Reduced oxygen packaging means:		
a) 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); and		
b) A process as specified in Subparagraph (1) (a) of this definition that involves a FOOD for which the HAZARDS Clostridium botulinum or Listeria monocytogenes require control in the final PACKAGED form:		
1-201.10 (2) Reduced oxygen packaging includes:		
a) Vacuum PACKAGING, in which air is removed from a PACKAGE of FOOD and the PACKAGE is HERMETICALLY SEALED so that a vacuum remains inside the PACKAGE;		
b) Modified atmosphere PACKAGING, in which the atmosphere of a PACKAGE of FOOD is modified so that its composition is different from air but the atmosphere may change over time due to the permeability of the PACKAGING material or the respiration of the FOOD. Modified atmosphere PACKAGING includes reduction in the proportion of oxygen, total replacement of oxygen, or an increase in the proportion of other gases such as carbon dioxide or nitrogen;		
c) Controlled atmosphere PACKAGING, in which the atmosphere of a PACKAGE of FOOD is modified so that until the PACKAGE is opened, its composition is different from air, and continuous control of that atmosphere is maintained, such as by using oxygen scavengers or a combination of total replacement of oxygen, no respiring FOOD, and impermeable PACKAGING material;		
d) Cook chill PACKAGING, in which cooked FOOD is hot filled into impermeable bags which have the air expelled and are then sealed or crimped closed. The bagged FOOD is rapidly chilled and refrigerated at temperatures that inhibit the growth of psychotropic pathogens; or		
e) Sous vide PACKAGING, in which raw or partially cooked FOOD is placed in a hermetically sealed, impermeable bag, cooked in the bag, rapidly chilled, and refrigerated at temperatures that inhibit the growth of psychotropic psychrotrophic pathogens.	Sous vide PACKAGING, in which raw or partially cooked FOOD is placed in a hermetically sealed vacuum packaged in an impermeable bag, cooked in the bag, rapidly chilled and refrigerated at temperatures that inhibit the growth of psychrotropic psychrotrophic pathogens.	Adding the vacuum packaging language brings this in line with the accepted understanding of sous vide and with the process outlined in Annex 6 2 (B) 4b

<p>Annex 6 2 (B) Definitions: The term ROP can be used to describe any packaging procedure that results in a reduced oxygen level in a sealed package. The term is often used because it is an inclusive term and can include packaging options such as:</p>		
<p>1) Cook-chill is a process that uses a plastic bag filled with hot cooked food from which air has been expelled and which is closed with a plastic or metal crimp.</p>	<p>Cook-chill is a process that uses a plastic bag filled with hot cooked food from which air has been expelled and which is closed with a plastic or metal crimp [and are then sealed or crimped closed.] <u>Suggest:</u> Cook-chill is a process that uses a plastic bag filled with hot cooked food from which air has been expelled and which is <u>sealed or</u> closed with a plastic or metal crimp.</p>	<p>Alignment with definitions in 1-201.10</p>
<p>2) Controlled Atmosphere Packaging (CAP) is an active system which continuously maintains the desired atmosphere within a package throughout the shelf-life of a product by the use of agents to bind or scavenge oxygen or a sachet containing compounds to emit a gas. CAP is defined as packaging of a product in a modified atmosphere followed by maintaining subsequent control of that atmosphere.</p>		
<p>3) Modified Atmosphere Packaging (MAP) is a process that employs a gas flushing and sealing process or reduction of oxygen through respiration of vegetables or microbial action. MAP is defined as packaging of a product in an atmosphere which has had a one-time modification of gaseous composition so that it is different from that of air, which normally contains 78.08% nitrogen, 20.96% oxygen, 0.03% carbon dioxide.</p>		
<p>4) Sous Vide is a specialized process of ROP for ingredients that require refrigeration or frozen storage (PHF/TCS food) until the package is thoroughly heated immediately before service. The sous vide process is a pasteurization/cooking step that reduces bacterial load but is not sufficient to make the food shelf-stable. The process involves the following steps:</p>		
<p>a) Preparation of the raw materials (this step may include grilling or broiling for color of some or all ingredients):</p>		
<p>b) Packaging of the product immediately before cooking, application of vacuum, and sealing of the package;</p>		
<p>c) Pasteurization/cooking of the product using required time/temperature parameters;</p>		
<p>d) Rapid and monitored cooling of the product at or below 3°C (38°F) or 1°C (34°F) or frozen; and</p>		
<p>e) Reheating of the packages 74°C (165°F) for hot holding or to any temperature for immediate service before opening and service.</p>		
<p>5) Vacuum Packaging reduces the amount of air from a package and hermetically seals the package so that a near-perfect vacuum remains inside. A common variation of the process is Vacuum Skin Packaging (VSP). A highly flexible plastic barrier is used by this technology that allows the package to mold itself to the contours of the food being packaged.</p>	<p>Vacuum Packaging reduces the amount of air from a package and hermetically seals the package so that a near-perfect vacuum remains inside. A common variation of the process is Vacuum Skin Packaging (VSP). A highly flexible plastic barrier is used by this technology that allows the package to mold itself to the contours of the food being packaged.</p>	<p>The phrase near-perfect is vague and non quantifiable.</p>