



Sous Vide in Health Care

CULINARY CONNECTION



Explore the benefits of adding sous vide to your kitchen arsenal

With the ongoing challenge to reduce operational costs, combined with the labor shortage plaguing healthcare operators, the quest is on for more efficient methods of food production. The French term *sous vide* means “under vacuum” and refers to a method of cooking that has gained traction in non-commercial foodservice operations and even in home kitchens.

The 2017 FDA Food Code describes sous vide packaging as a cooking method in which “raw or partially cooked food is vacuum packaged in an impermeable bag, cooked in the bag, rapidly chilled, and refrigerated at temperatures that inhibit the growth of psychrotrophic pathogens.”

Professional chefs vary on their opinions of sous vide. However,

as foodservice managers, we must be open to alternate cooking practices that could ease operational challenges. The healthcare kitchen is an ideal setting for using sous vide. From cooks that are working in a commercial kitchen for the first time, to experienced chefs, this method provides a viable solution to deliver consistency in food.

The benefits of using sous vide include better-tasting food, improved food safety, and savings of money and time. Sous vide does not replace any cooking techniques, but instead adds another method to the healthcare kitchen arsenal.

Those who believe sous vide is new to the foodservice industry may be surprised to learn that this technique has been utilized in industrial food preparation since the 1960s. In the 1970s, it



was being used as a cooking method in some restaurants in France. The typical application of this method was to prepare a large volume of food for use in hotels and sporting venues.

One of the driving forces for using sous vide cooking today is the need to reduce labor in kitchens due to the continued low unemployment rate. In December 2019, unemployment was the lowest on record since 1969, making it difficult to attract and retain kitchen staff.

Sous vide as a cooking method requires taking food to be cooked, combined with spices and marinades, and putting it in vacuum-packed bags. A water bath held at a consistent temperature is what cooks the contents of the vacuum-packed bags. The water temperature is typically under 200°F, and cooking time will vary depending on the item. Vegetables and fruits that are delicate can be cooked in as little as 15 minutes. More voluminous food and tougher meats can require 48 hours of cooking at low temperatures.

Sous vide can be particularly helpful to the healthcare kitchen. The process ensures that the proper minimum required temperature and heating time will be met for food safety standards. While meeting these standards, it also prohibits under- or over-cooking of the food. Slowly cooking food at low

temperatures enables staff to cook items precisely.

With sous vide, the flavors, quality, and rich colors of food are preserved, thus ensuring a product that customers will find pleasing. Simmering food at low temperatures is much more forgiving than grilling on an open flame or sautéing at high heat in a pan. The sealed bag ensures that all flavors remain in the food product instead of possibly being lost during the cooking process. The ability to place the vacuum-packed food in a water bath, set the

Besides, a vacuum sealer is imperative to successful outcomes, and a 'must-have' in the start-up sous vide kitchen.

When cooking sous vide, it is best to use a high-quality plastic square (NSF listed) food container. With square food bags, square containers provide optimum space. Clear containers are ideal because the food products inside are visible. Plastic pans are strongly encouraged instead of metal food pans. Plastic is preferred because it's a better insulator than metal. The plastic pan equates to a more



temperature, and walk away, frees up staff to accomplish other tasks.

For long-term success in sous vide cooking, it is best to start with the right equipment. Experts advise not to cut corners with items such as food bags that are not made for use with a vacuum sealer. A less expensive, inferior bag can be costly if it cannot withstand the cooking process.

effective way of retaining heat in the food container.

Another critical factor in cooking sous vide is using a cover. Putting a cover over the container prevents water and heat from escaping. Not covering can result in water volume reducing to a level that the immersion circulator can turn off. To provide a cover,

FOR LONG-TERM SUCCESS IN SOUS VIDE COOKING it is best to start with the right equipment. Experts advise using bags that are specifically made for use with a vacuum sealer, as inferior bags may not withstand the cooking process.

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many people use the lid for the square container and cut out an area for the immersion circulator. Plastic lids for square food containers are available for use with immersion circulators.

Searing food before vacuum sealing helps keep natural moisture in the product and allows the flavors from caramelization to blend while in the vacuum seal. Pre-searing also improves the appearance of the food item. Additionally, it reduces surface bacteria on the food. Searing food *after* sous vide cooking can ensure a crispy texture if desired. A brief searing on a flat top or in a pan can achieve a product that appears as if it was executed solely on the grill.

Another significant benefit of sous vide is the ability to save on prep time by preparing food in advance. Sous vide also simplifies the batch cooking needed in healthcare kitchens. By cooking vacuum-bagged food in the water bath, operators can utilize the method as advanced meal preparation. Once cooked, the food should be chilled quickly in an ice bath and placed in

enough consistent temperature. This process can provide an added layer of food safety protection. Sous vide is referred to as a Reduced Oxygen Packaging (ROP) food and must be approved by the local regulatory agency before implementing it. Not preparing ROP food correctly can result in dangerous bacteria such as Clostridium botulinum and Listeria monocytogenes, which can grow well in reduced oxygen environments. These bacteria can proliferate in the vacuum-packaged food and make people ill. For ROP foods to be safe, appropriate precautions and training is imperative. Be prepared to provide the local health inspector with a Hazard Analysis Critical Control Point (HACCP) plan. The plan will be required to outline necessary food safety practices such as time

the cooler. Reheat the meal when ready to serve.

Besides saving money by enabling batch cooking to eliminate food waste, another significant savings in raw food comes from being able to utilize less expensive cuts of meat. By using less costly meats that have more connective tissue, operators can save money yet experience superior outcomes.

So what kinds of foods can be cooked using the sous vide method? You can successfully cook almost all foods by using sous vide, from meat to fruit. A good rule of thumb is to be mindful of delicate foods that have a harder time staying intact through a long cooking process, no matter how tender that process can be.

Due to the length of time it takes to cook food sous vide, it essentially pasteurizes the item from the water being at a high

WHAT YOU NEED FOR SOUS VIDE COOKING

- Foods ranging from meat to fruit (avoid very delicate foods)
- Impermeable bags for cooking
- A vacuum sealer
- Plastic food containers (preferred over metal)
- Immersion circulator unit to cook the bagged food evenly in the water bath

and temperature monitoring, proper cooling, and organized food labeling.

SUMMING IT UP

Sous vide is gaining popularity in both non-commercial foodservice operations and home kitchens. Benefits include better taste, as juices are locked in, improved food safety, convenience, reduced labor, and less waste. **E**

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CE Questions | CULINARY CONNECTION



This Level II article assumes that the reader has a foundation of basic concepts of the topic. The desired outcome is to enhance knowledge and facilitate application of knowledge to practice.



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1. *Sous vide* is a French term meaning:
 - A. Fast cooking
 - B. Under vacuum
 - C. Pressure cooked
2. What items can be cooked using the sous vide method?
 - A. Pork and chicken
 - B. Beef and ribs
 - C. Vegetables, meat, seafood, fruit, and grains
3. Which cooking method is replaced by sous vide cooking?
 - A. Steaming
 - B. It does not replace a cooking method
 - C. Boiling
4. How can sous vide cooking be beneficial to kitchen operators?
 - A. Saves money and time with food production
 - B. Makes batch cooking simple and can make food more consistently cooked
 - C. All of the above
5. What is the best type of container to cook sous vide?
 - A. Square plastic containers
 - B. Any container that holds water
 - C. Metal pan
6. When can searing of food occur in the sous vide process?
 - A. Prior to placing in vacuum bag
 - B. Only after removing from vacuum bag
 - C. Both, prior to placing in and after removing from vacuum bag
7. What is the best way of cooling product after being cooked in the sous vide method?
 - A. Walk-in cooler
 - B. Ice bath
 - C. Walk-in freezer

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