

SANSAIRE™

Sous Vide Cooking Guide

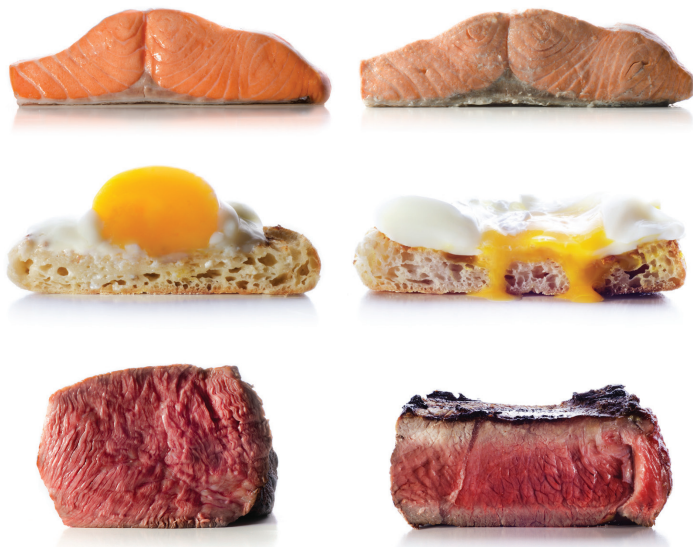


What is sous vide?

Sous vide is a cooking method that uses precise temperature control to achieve perfect, repeatable results that you just can't replicate through any other method. Foods are cooked evenly from edge to edge, to exactly the doneness you want. And because foods won't overcook while they hang out in the water bath, dinner is ready when you are. The world's best chefs rely on sous vide, and now you can too.

**Cooked Sous Vide
with the Sansaire**

**Cooked
Traditionally**



The foods in each row were heated to the same internal temperature.

Why cook sous vide?

FOODIES

The Sansaire is used in some of the world's best restaurants. Professional chefs rely on sous vide for precise, predictable results. Now you can too!

HEALTHY EATERS

Vegetables retain all of their nutrients because the bag is sealed—there's nowhere for nutrients to escape! Also, cooking foods in a sealed environment allows you to coat proteins and vegetables with a fraction of the amount of oil or butter.

FAMILIES

Enjoy the same lifestyle benefits of slow-cooker cooking but without dried-out, overcooked proteins.

HOLIDAY HOSTS

No more dried-out turkey, overcooked prime rib, tough brisket, or lamb. Your proteins will always be perfectly juicy, even if the football game goes into overtime or your guests arrive late.

BBQ & GRILLING ENTHUSIASTS

Smoke for flavor, cook with the Sansaire for texture. The most succulent barbecue on the planet is cooked sous vide.

NEW MOTHERS

Heat milk or formula to precisely 98.6°F for worry-free feeding.

APARTMENT DWELLERS

Make whole meals in the Sansaire with no cookware to clean afterward.



Setting up your Sansaire

1. **Pick a container** large enough to hold your food, and with plenty of room for water to circulate. We recommend a polycarbonate food storage container, or a large metal pot. Avoid plastic containers made with BPA's or PVC materials.
2. **Attach the Sansaire** to the side of the container using the clamp. Add water until the level is above the Minimum Fill line on the Sansaire, but below the Maximum Fill line. Remember that the water level will rise when you add your food.
3. **Plug in the Sansaire.**
4. **Press the power button** on the top of the unit. This turns on the display and makes the circulator heat the water to the set target temperature. Set the target temperature of the water bath by turning the silver temperature ring above the display. The Sansaire automatically keeps the water at the target temperature until you turn it off. Your water bath is now ready for cooking!

Sealing your food

Vacuum sealers aren't required for most foods cooked with the Sansaire. Vegetables, fish, poultry, and other proteins that cook for less than eight hours can be sealed using zip-top bags and the water displacement method. We recommend using name-brand bags made of polyethylene or polypropylene (the material is listed in small print on the box). Always use bags labeled as BPA-free, and that do not contain PVCs. Due to their sturdier construction, freezer bags are a great choice.



- 1 Place your food in a zip-top bag.



- 2 Add a small amount of neutral-tasting oil to the bag to help fill in air gaps.



- 3 While holding the top of the bag open, slowly lower it into a container of water. The pressure of the water will squeeze the air out of the bag.
- 4 Just before the top of the bag reaches the water, zip it closed.

For cooking times longer than eight hours, we recommend sealing foods with a vacuum sealer.

How to cook eggs sous vide

Cooking eggs sous vide is a rite of passage for every owner of the Sansaire. Whereas perfectly poaching an egg is a difficult and noteworthy achievement in traditional cooking, you can perfectly poach a dozen eggs sous vide with your eyes closed. By allowing the eggs to cook slowly over 45 minutes, their texture will become fudgy and silken. You're about to upgrade your brunch game.

TIME TO COMPLETE

45 minutes (5 minutes hands-on)

THINGS YOU'LL NEED

Just your Sansaire

1 SET UP YOUR SANSAIRE (see page 3)

Pick a container that will be large enough to fit the number of eggs you want to cook, with extra room left over for water to circulate. A small pot is a great choice.

2 PICK YOUR PERFECT EGG

This is entirely a matter of personal preference. Do you like your eggs runny and soft, or thick and spreadable? Pick your doneness and set your Sansaire to the listed temperature.



Runny

62°C / 143.6°F



Just Set

65.5°C / 149.9°F



Medium Poached

68°C / 154.4°F



Soft-Boiled

73°C / 163.4°F

3 ADD EGGS TO THE WATER BATH

Nature was kind enough to seal eggs inside their own sous vide packaging (the shell!) so it's not necessary to use bags when cooking whole eggs. Because the water will be hot, and because we don't want the eggs to crack, lower them gently into the water bath using a spoon.

4 COOK FOR 45 MINUTES

Your eggs will be ready in 45 minutes, so you've got some time to finish Sunday's crossword puzzle. Here's a hint: eight letters, a two-word phrase for the perfect way to cook eggs.

5 REMOVE, RINSE & SERVE

Using tongs or a slotted spoon, remove the eggs from the bath. Run the shells under cold water for a few seconds until they're cool enough to handle. Crack the shells gently and decant perfectly cooked sous vide eggs onto the dish of your choice.



Now that you've violated the laws of physics by producing such an amazing egg, it's time to share with others. Post your results to the interwebs with hashtag #sansaire, and we'll brag on your behalf.

How to cook steak sous vide

This is going to be a little different than the way you've cooked steaks in the past, but you're going to love the results. Achieving the right doneness (rare, medium-rare, medium, and so on) doesn't require expert timing or x-ray vision. All you have to do is choose the temperature you prefer.

TIME TO COMPLETE

1 hour (15 minutes hands-on)

THINGS YOU'LL NEED

Your Sansaire
Zip-top bag
Skillet

1 SET UP YOUR SANSAIRE (see page 3)

Pick a container that will be large enough to fit your food, with extra room left over for water to circulate. A large soup pot is a great choice.

2 HOW DO YOU LIKE YOUR STEAK?

Take your time... this could be the most important decision you'll make today. Pick your doneness and set your Sansaire to the listed temperature.



Rare
50°C / 122°F



Medium-Rare
54°C / 129.2°F



Medium
56°C / 132.8°F



Well-Done
60°C / 140°F

3 SEAL YOUR STEAK & COOK FOR 1 HOUR (see page 4)

Your steak will be ready for the next step in an hour. So put your feet up and rest for a while! If that hour of indulgent time turns into two or three or four hours, no worries. Your steak will still be just as perfectly cooked when you return to it.

4 PREHEAT A SKILLET

Just before you're ready to eat, preheat a heavy-bottomed skillet (we love cast-iron) until it is rocket hot.

5 REMOVE YOUR STEAK

Using tongs, remove your bags of steak from the bath, remove the steaks from their bags, and pat them dry.

6 SEAR & SERVE

Add your steaks to the rocket-hot skillet and check them after 30–60 seconds. When you see a golden crust that meets your standards, flip and repeat on the other side. Then plate, serve, and prepare for a hero's welcome.



If this was the best steak you've ever cooked, we want to hear about it. Scratch that, we want to see it! Post your results to the interwebs with hashtag #sansaire, and we'll brag on your behalf.

How to cook fish sous vide

You're about to cook the best fish you've ever eaten. We use salmon in this recipe, but feel free to substitute with whatever is available in your area. It will be indescribably moist and tender in a way that traditional cooking can't replicate. Because fish is so delicate, small differences in cooking temperature have a big impact on the final texture. Good thing we leave nothing to chance.

TIME TO COMPLETE

30 minutes (15 minutes hands-on)

THINGS YOU'LL NEED

Your Sansaire
Zip-top bag

1 SET UP YOUR SANSAIRE (see page 3)

Pick a container that will be large enough to fit your food, with extra room left over for water to circulate. A large soup pot is a great choice.

2 PICK THE DONENESS YOU PREFER

That's right, you get to choose how you want your fish cooked. Pick your doneness and set your Sansaire to the listed temperature.

Very Lightly Cooked

45°C / 113°F



Lightly Cooked

50°C / 122°F



Medium

55°C / 131°F



3 SEAL YOUR FISH & COOK FOR 30 MINUTES. (see page 4)

Your fish will be ready in 30 minutes (see the back cover for cooking times for cuts thicker than a half inch). Nobody has to know that you fell asleep while cooking dinner. If you're a multitasker, this is also a great time to make your side dishes and sauces. Or, if you really want, you're more than welcome to stare at the fish for half an hour. It's your call.

4 REMOVE YOUR FISH

Using tongs, remove your bags of fish from the bath. Handle them gently, as they're pretty delicate. You can turn off the Sansaire now, or keep it running as a Zen water feature in your kitchen.

5 SEASON & SERVE

Grab a pinch of flaky salt and some olive oil. Or reach for your favorite seasoning. Now's the time to get creative and shout "Bam!" Plate, serve, and prepare to share and enjoy. Bravo!



Did you love it? We hoped you would. Now it's time to show off. Post your results to the interwebs with hashtag #sansaire, and we'll brag on your behalf. Anything this awesome deserves to be shared.

How to cook poultry sous vide

Forget the dried out, bland chicken you may have endured in the past. With the Sansaire, poultry remains juicy, succulent, and so flavorful that all you need is a pinch of salt to make it shine. Pro tip: cook your dark meat first, then lower the temperature and add your white meat to the same bath.

TIME TO COMPLETE

1:30 hour (10 minutes hands-on)

THINGS YOU'LL NEED

Your Sansaire
Zip-top bag

1 SET UP YOUR SANSAIRE (see page 3)

Pick a container that will be large enough to fit your food, with extra room left over for water to circulate. A large soup pot is a great choice.

2 WHITE MEAT OR DARK?

To maximize the juiciness of each part of the bird, we prefer to cook our white meat and dark meat at different temperatures. Skin-on or skinless, bone-in or boneless, the times and temperatures depend only on the thickness of the meat. Times given here are based on one-inch thick pieces of chicken.



White Meat

62°C / 144°F

Cook for 1:30 hrs
(including 30 minutes to pasteurize)



Dark Meat

65°C / 149°F

Cook for 1:30 hrs
(including 30 minutes to pasteurize)

3 SEASON & SEAL YOUR POULTRY (see page 4)

If you like, now's a great time to add some flavor to the bag. Your favorite hot sauce, teriyaki sauce or barbeque rub will season the meat as it cooks.

4 COOK UNTIL YOU'RE READY TO EAT

Relax, unwind, and look forward to the incredible meal ahead. As your chicken cooks, it becomes more and more tender. After eight hours in the bath, your poultry will be as delicate as the best confit.

5 SHRED OR SEAR & SERVE

Want to shred your poultry for tacos or salads? Rinse the bag under cool water, then squish the sides of the bag between your fingers and watch how effortlessly the meat shreds!

Or if you prefer to keep things intact, pat your pieces dry and give them a quick sear on the stove, under the broiler, or in the deep fryer before serving.



If this chicken changed your perception of poultry, you're not alone. Post your results to the interwebs with hashtag #sansaire, and we'll brag on your behalf.

How to cook vegetables sous vide

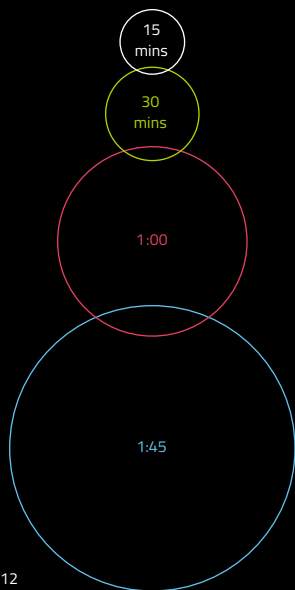
Cooking vegetables sous vide has a number of advantages to the traditional methods of steaming or boiling. **Because the vegetables cook in a sealed bag, they retain all of their nutrients and, more importantly, all of their flavor.** The natural sugars in vegetables are water-soluble, and in a boiling or steaming pot, these sugars will be whisked away into the surrounding water, leaving your vegetables dull and bland. When cooked sous vide, however, those flavors stay where they belong. And, as you'd expect, there's no guesswork or fork probing required to know when your vegetables are properly cooked.

Unlike meats, which typically cook between 50°C / 122°F and 65°C / 149°F, vegetables require much higher heat to soften. With a few specific exceptions, like corn and zucchini, **most vegetables soften at temperatures between 80°C / 176°F and 88°C / 190°F.** As with proteins, the minimum cooking time depends on thickness.

COOKING TEMPERATURES

Vegetable	°C	°F
Asparagus	85	185
Beets	85	185
Carrots	85	185
Cauliflower	85	185
Corn*	60	140
Fennel	85	185
Leeks	85	185
Mushrooms	90	194
Onion	85	185
Potatoes, cubed	85	185
Squash**	85	185
Turnips	85	185

COOKING TIMES



* kernels or whole cob, only 15 of minutes cooking time required

** butternut, acorn, delicata, spaghetti

Temperatures adapted from *Modernist Cuisine*, Vol. 3, Chapter 12



Sous vide asparagus with 65°C egg and pancetta

Ingredient	Volume	Weight
65°C sous vide eggs (make ahead)	2 eggs	110 g
Asparagus, trimmed	1 bunch	250 g
Unsalted butter, cubed	1 Tbsp	15 g
Pancetta, cubed	½ cup	113 g
Hollandaise sauce (make ahead, or store-bought)	¼ cup	24 g
Lemon zest	1 tsp	1 g
Cayenne pepper	¼ tsp	1 g
Flaky sea salt	to taste	

1. Prepare the 65°C egg following the instructions in our Sous Vide Egg guide. Set aside the eggs (still in their shells) in a bowl of hot tap water to keep warm until serving, up to 1 hour.
2. Preheat your water bath to 85°C / 185°F.
3. Using the size of your vacuum sealing or zip-top bag as your guide, cut the asparagus to length.
4. Combine the asparagus and butter in a vacuum sealing bag and seal, ensuring that the asparagus forms a single layer.
5. Cook for 15 minutes.
6. Meanwhile, fry the pancetta until crispy.
7. To serve, carefully remove the asparagus from the vacuum sealing bag onto a warmed platter. Crack the sous vide eggs, and place them on the asparagus. Top with hollandaise sauce, lemon zest, cayenne pepper, and salt, to taste.

Food safety



Cooking sous vide is just as safe as traditional cooking methods. Some people see the relatively low cooking temperatures used in sous vide cooking and worry that this will make their food unsafe to eat. Luckily, that's not the case. Although higher cooking temperatures will pasteurize your food more quickly, those high temperatures also make your food dry and unappetizing.

Not all food needs to be pasteurized in order to be considered safe to eat. The interior of a steak or other intact animal muscle, for example, is considered a sterile environment: if there were pathogens inside the meat, the animal would have appeared sick. However, we do want to destroy any pathogens that may have gotten onto the surface of the meat. Searing after cooking sous vide takes care of this risk, and adds a delicious crust!

Poultry is no different than other meats. To reduce the risk of illness due to surface contamination, we include additional cooking time in all of our poultry recommendations to ensure pasteurization, so searing your poultry is optional.

Fish pose a different set of food-safety considerations. The times and temperatures that we recommend for fish create the best-tasting results, but do not necessarily ensure pasteurization.

As with any lightly cooked food, there is always some risk of foodborne illness, and the amount of risk you're willing to accept is a personal choice. Although food safety is a complex and nuanced topic, the best way to keep your risks as low as possible is to follow good sourcing and safe handling practices.

Consuming raw or undercooked meats, poultry, seafood, shellfish, eggs, or unpasteurized milk may increase your risk of foodborne illness.

Further Reading: *Modernist Cuisine* Vol 1. Chapter 3

Frequently asked questions

Q Is sous vide cooking just for fancy chefs?

A Not at all! Cooking sous vide is easy and practical for home cooks of all levels. The Sansaire cooks foods evenly from edge to edge, to exactly the doneness you want. And because foods won't overcook while they hang out in the water bath, dinner is ready when you are. Whether you're preparing a multicourse dinner party or cooking a weeknight meal, cooking sous vide alleviates the stressful, split-second timing required by traditional cooking.

Q Is sous vide the same as "boil-in-a-bag"?

A If you've endured the dry, bland horror of boiled meat, we can understand why the idea of cooking food in sealed bags may induce a knee-jerk reaction. The key difference is that sous vide cooking uses much lower temperatures to cook your food—temperatures that are precisely chosen to produce the juiciest, most flavorful results. As meat gets hotter, the muscle fibers begin to contract, causing the meat to plump and firm slightly. If the meat gets too hot—as in the boiling scenario, the muscle contraction actually squeezes the juices out of the meat, leaving you with a tough, tasteless mess. Sous vide cooking temperatures are well below this threshold, ensuring that your proteins are always properly cooked.

Q Is it safe to cook in plastic bags?

A Bags made of polyethylene and polypropylene that are labeled BPA-free are perfectly safe for sous vide cooking. Polyethylene and polypropylene have been used in laboratory settings for decades, and if they leached any chemicals, those chemicals would have thrown off the results of sensitive experiments. Always avoid bags containing polyvinyl chloride (PVCs) or those not labeled as BPA-free. Most name-brand zip-top bags, as well as the bags sold for vacuum sealing, will list their ingredients on the box.



USER INTERFACE

During regular operation, the primary user interface is the **power button** to turn the machine on and off and the **temperature ring** to change the target temperature.

The display, by default, shows the current temperature of the water. However, when the temperature ring is turned or the power is turned on, the display turns to showing the target temperature. Typical temperatures range from 40°C / 104°F to 85°C / 185°F. To view the target temperature at any point, press the **target temperature button**.

The display can be set to show temperature in Celsius or Fahrenheit by pressing the **C/F button**.

CLEANING

In the course of normal use, food particles and minerals from the water bath may collect on the Sansaire™ immersion circulator. We recommend regular cleaning of the housing, impeller, and heating coils.

1. Power off, unplug, and remove the Sansaire from the water bath. If the unit is hot, wait for the unit to cool down.
2. Remove the power cord from the back of the unit.
3. Remove the clamp from the back of the unit.
4. Slide the back cover tab to release the back cover, exposing the impeller and heating coils. NOTE: The upper section of the Sansaire contains sensitive electronics and should never come in contact with water.
5. While holding the unit upright, rinse under running water to remove food particles and cool the coils if still warm.
6. If necessary, scrub the unit gently with a sponge or brush and a drop of dish-washing liquid. Rinse the unit thoroughly, ensuring that water does not enter the upper section.
7. Reinstall the back cover and clamp.

REMOVING BACK COVER & GRATE

The circulator has a back cover that detaches for cleaning. It should only be detached when the circulator is off and unplugged; it should never be detached during use.

To open: Detach the clamp, slide the latch left, and pull the back cover down and away. With the cover off, the grate can be detached as well.

To close: Place the grate in the slot running along the bottom of the circulator's front, inner surface. The two grooves on the grate should be aligned toward the left and right side of the casing. The back cover can now be slid back on and latched, followed by the attachment of the clamp.



DECALCIFYING

After some time, the water from the bath deposits calcium on the coils. When the coils become covered by calcium deposits, they need to be cleaned. Add a decalcifying agent, such as CLR, to your water bath, following the dilution instructions provided by the manufacturer. Set the temperature of your water bath to 25°C / 77°F and allow the unit to run for 10 minutes. Power off, unplug, and remove the Sansaire from the water bath and continue cleaning per the instructions above. Discard the water in the bath, and thoroughly clean the container and any other materials in contact with the bath.

WARNING: Do not add food (bagged or otherwise) to the water bath while cleaning, and ensure that the bath water has been replaced with fresh water before cooking.

STORAGE

You may choose to leave the Sansaire clamped to the water bath when not in use, but it should be unplugged from the power source. However, should you need to store your circulator, wipe the unit dry using a cloth or paper towel prior to putting it away.

Sous Vide Quick Reference

PROTEIN	TEMP	TIME
Tender Beef Filet, Strip Steak, Rib Eye, T-Bone	52° C 126° F	To core temperature 1 hr for a 1"-thick steak
Poultry (White Meat) Chicken, Turkey, Duck	62° C 144° F	To core temperature +30 mins to pasteurize 1:30 for a 1"-thick chicken breast
Poultry (Dark Meat) Chicken, Turkey, Duck	65° C 149° F	To core temperature +30 mins to pasteurize 1:30 for a 1"-thick chicken leg
Fish Salmon, Tuna, Cod, Snapper, Tilapia	50° C 122° F	To core temperature 30 minutes for a ½"-thick fillet
Pork Shoulder, Belly	65° C 149° F	36 hrs for a braised texture
Tough Cuts Short Ribs, Brisket	62° C 144° F	72 hrs for a braised texture

FOOD THICKNESS & COOKING TIME

Use the guides at the edge of the page to determine how long it takes for the **core temperature** of your food—the temperature inside the middle of the food—to reach the doneness temperature in the table above.

Some foods, like poultry, require additional cooking time to pasteurize. Other foods, like tough cuts of meat, are best when cooked for much longer amounts of time, to achieve a **braised texture**.

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Consuming raw or undercooked meats, poultry, seafood, or shellfish may increase your risk of foodborne illness. Temperatures adapted from *Modernist Cuisine*.

6 hr
3"
4:15 hr
3 hr
2"
1.5 hr
1 hr
1"
30 mins

6 hr
3 hr
1 hr
25 mins

8 cm
7 cm
6 cm
5 cm
4 cm
3 cm
2 cm
1 cm