

COOKING SOUS VIDE

On a September evening in 1985, a privileged group of diners sat down to enjoy the cuisine of Joël Robuchon, a legendary French chef whose Jamin restaurant in Paris had earned three Michelin stars and a reputation as one of the best in the world. It was in many respects a typical Thursday dinner scene, with business executives and politicians on expense accounts settling into *plush leather chairs before tables set with the very best linens, china, and silver*. Michel Cliche, Chef Robuchon's trusted aide of many years, was overseeing the cooking and presentation to ensure that the food met Robuchon's renowned standards.

It did not disappoint, and as the guests ate they were also treated to a remarkable accompaniment to their meal: a view of the French countryside whizzing by in a blur. For this evening they were dining not in Jamin but in the *Nouvelle Premiere* car of an eastbound bullet train streaking from Paris to Strasbourg. Even more amazing, the entire meal had been cooked days before in an experimental kitchen in the depths of the *Gare de*

l'Est train station. Mr. Cliche had been able to reheat the food in the cramped galley of the dining car without diminishing its quality.

All this was possible because Robuchon's crew had prepared the food **sous vide**, a novel way of cooking and preserving food that, among its other benefits, allows cooks to store and later reheat their creations without sacrificing any subtleties of flavor or texture. The essence of the technique is to seal ingredients inside a flexible plastic bag before cooking them in a water bath, a combi oven, or some other system that permits precise regulation of heat. *Sous vide*, a French phrase, is often translated as "under vacuum," and indeed often (but not always) removing the air from the bag before cooking produces better results.

The idea of cooking food in sealed packages is not new. Throughout culinary history, food has been wrapped in leaves, potted in fat, packed in salt, or sealed inside animal bladders before being cooked. People have long known that isolating food from air can arrest the decay of food.

For more on the historical development of sous vide cooking, see *From the Vacuum of Space to Vacuums in the Kitchen*, page 140.



SOUS VIDE COOKING STRATEGIES

| | How soon will the food be served? | How should the food be stored after cooking? |
|---|--|--|
| Immediate service When food will be served and eaten immediately after cooking, chefs have the greatest flexibility in choosing sous vide cooking times and temperatures. This strategy is often the best approach for delicate foods, including fish, crustaceans, and tender meat, which would be ruined if cooked to the extent required for cook-chill or sous vide canning. | within minutes | should not be stored |
| Cook-chill Cook-chill methods were developed for use in large-scale catering, where meals must be precooked, stored in chilled or frozen form, and later reheated and served. This approach is also convenient for some kinds of gastronomic cooking because it allows advance preparation of complicated dishes and the use of foods that require very long cooking times. | within one week within six months | refrigerator (1–5 °C / 34–41 °F) freezer (below 0 °C / 32 °F) |
| Sous vide canning Canning is desirable when you need food to keep for long periods of time without refrigeration. Special equipment is needed to do canning with sous vide, including a pressure cooker or autoclave. Both standard canning jars and retort bags will withstand the high temperatures needed to sterilize the food within. Safety requires strict attention to minimum cooking times when canning—see Canning, page 75. | within six months | room temperature |

Immediate service



Cook-chill

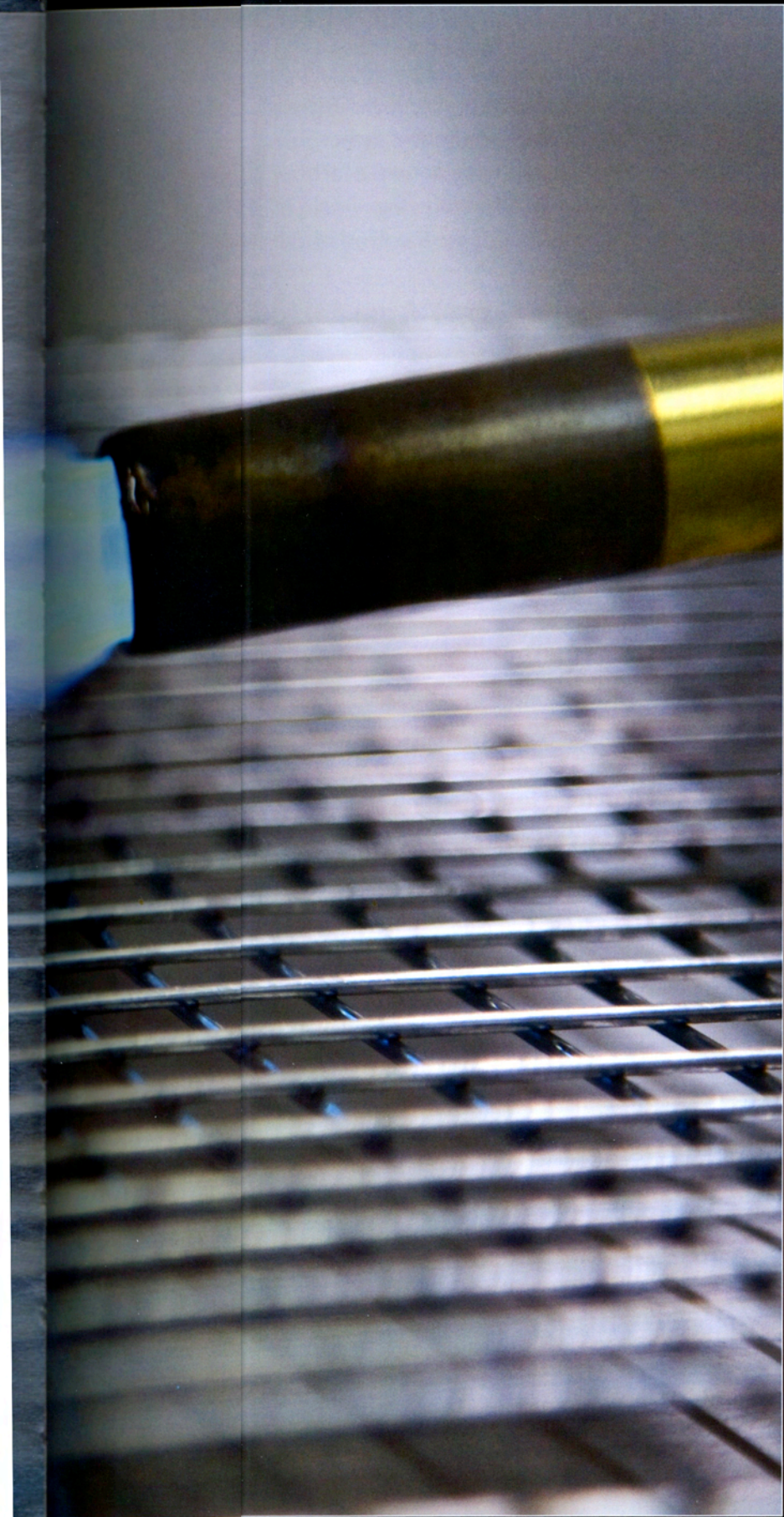




Blow torching

Pros: ultrahigh heat sears faster than any other method and overcooks the least. Torching can brown areas that are difficult to reach with other methods, such as between a chicken leg and a breast

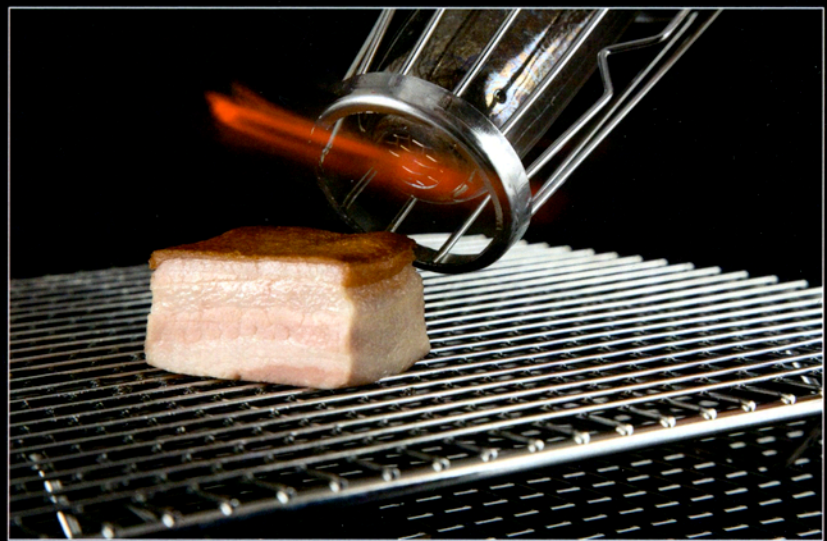
Cons: moderating browning can be tricky; it is easy to burn spots on the food. Torching is not time-efficient for searing large pieces of food. Incomplete combustion by torches can leave food tasting like gas; MAPP gas or oxyacetylene torches work better than propane or butane for producing high temperatures and no gas flavor



Panfrying

Pros: easy to do. Adding juices from the bag can yield an integral pan sauce

Cons: only works well on relatively small and flat foods. Pan searing also tends to be a bit slower than other methods; add a film of oil to the pan to boost heat transfer



Heat-gun browning

Pros: functioning much like a portable broiler, a heat gun produces more diffuse heat than a torch. Good for browning hard-to-reach areas

Cons: lower heat output extends searing times and makes it difficult to achieve deep browning