

## **Copper in the Kitchen**

**This metal shines when it comes to cooking, cleanliness and class.**

While studying at [Le Cordon Bleu](#), the world's premiere culinary school, and later working at some of the finest restaurants in France, Eric Eisenberg learned to appreciate the copper cookware top chefs use to prepare exquisite gourmet dishes.

"I used a lot of copper during my training in France," said Eisenberg, now executive chef at the Swedish Medical Center in Seattle, WA. "And we used a lot of copper cookware at the different restaurants I worked at, including Michel Rostang in Paris and Chateau D'Artigny in the Loire Valley. I later bought a huge set of copper cookware for my own restaurant." That establishment, Relais, was a French restaurant with a Northwest flair in Bothell, WA.

While many American cooks and kitchens have [copper cookware](#), it is often hung on the wall and used for display rather than for cooking. Eisenberg's training taught him a valuable lesson about this cookware's unique attributes beyond its elegance and durability. The copper cookware he used played an important role in how meals were prepared.

"Those pots were pretty old but they held up very well," Eisenberg recalled. "They didn't warp or bend and they kept a nice, flat even bottom. What's more, the copper conducted heat well and distributed it evenly throughout the pot."

Copper's [superior heat-conducting ability](#) is a vital component of high-quality food preparation. Used as an exterior base for pots and pans, copper is preferred by professional and knowledgeable amateur chefs alike who understand and value its thermal performance. Quick, uniform heat diffusion across the bottom and sides of a pot or pan can mean the difference between a heavenly sauce and a lumpy paste.

Copper pots are excellent for sautéing and stir-frying, as well as for preparing difficult dishes such as crepes, and for making delicate sauces like Béarnaise and hollandaise, which require even heat distribution. With many sauces, if some parts of the pot are hot, other parts cool, continual stirring is needed to spread the heat evenly, otherwise the sauces separate or lose flavor. Because of copper's thermal conductivity, chefs can be confident that this won't happen.

Damon Wise, executive chef of Craft restaurant in Manhattan, said copper cookware is a signature concept of his and other Craft restaurants located throughout the United States.

"We use all-copper cookware for the meat because it heats up fast and offers even heat distribution," Wise explained. "You get a better sear on the meat and it cooks faster."

Wise added that, aside from being a great conductor of heat, copper products are also beneficial as serving dishes. "We use platters for large meats, and covered pots for sides and smaller dishes. They keep things warm and are attractive on the table."

Chefs also prefer copper products because of their durability and longevity. Cookware manufacturers typically use copper for the exterior, where heat is applied, then line the interiors with tin and use non-rusting brass for handles.

Copper cookware is so highly valued that it is frequently reconditioned rather than scrapped or recycled. One manufacturer, [Hammersmith Corporation](#) of Brooklyn, NY, still hand-makes copper cooking utensils from molten metal. The company will reline the tin surface of its cookware when it wears down, typically in about 15 years.

Copper is usually lined with another metal—often tin or stainless steel—because copper reacts with acidic foods such as tomato-based “red” sauces and citrus juice, which can discolor food and cause intestinal discomfort. Tin is a better heat conductor than stainless steel, but tin wears out over time and will actually melt away when subjected to high temperatures.

On the other hand, unlined copper is perfect for whipping up cream and egg whites and for the candy and confectionary industries that use sugary, nonacidic ingredients. Chocolate, caramels, jams and jellies that need to be cooked at precisely controlled temperatures are traditionally made in copper kettles.

Some copper manufacturers apply a genuine silver lining for “preferential chefs” who insist on the highest quality materials for mixing bowls used to make delicate desserts like Italian pastries and zabaglione.

One of the best known, and highest quality, U.S. cookware manufacturers is All-Clad Metal Crafters, which offers two versions of copper cookware. The Cop-R-Chef line of pots, pans and skillets is clad with a copper exterior, lined with aluminum and has a stainless steel heating surface. A second version, Copper-Core, sandwiches a solid copper insert between interior and exterior layers of stainless steel to improve heat dispersion.

Today, high-volume cooking operations such as those found in hotels and institutional cafeterias, along with many budget-conscious homeowners, may choose aluminum or stainless steel cookware because it is less costly and easy to maintain. But copper has an even greater value that other cookware can’t match—it is naturally antimicrobial. Research has demonstrated that microbes—bacteria or germs—that come into direct contact with uncoated copper or certain copper alloys quickly die, often within hours.

Earlier this year, the U.S. Environmental Protection Agency (EPA) formally acknowledged that copper and some 275 brass and bronze alloys are capable of [killing potentially deadly bacteria](#), including methicillin-resistant *Staphylococcus aureus*—the so-called “superbug” MRSA.

Although these antimicrobial properties have less to do with cooking itself, they matter enormously when it comes to food preparation and kitchen cleanliness. Studies are underway to determine just how effective copper surfaces can be in reducing bacteria, and their findings could determine how kitchen environments are designed in the future. Companies like Frigo Design already offer germ-repelling copper facades for refrigerators, dishwashers and other appliances, as well as copper sheeting for countertops and sink backsplashes.

Modern science may have only rediscovered what people have long known. In primitive cultures dating back to the ancient Egyptians, copper was reputed to have healing qualities. Even today, copper is used to ward off sickness. Villagers in rural India treat various ailments by drinking water from copper vessels. And many people in modern societies believe copper amulets and bracelets are an antidote to arthritis and joint discomfort.

So it is not inconceivable that cooks and kitchens everywhere may someday go “back to the future”—and return to using copper in the kitchen for health as well as culinary benefits.