

BREAKING THE MOLD

Once a mere childhood treat, gelatin has become a vehicle for culinary magic and exquisite artistry. Jeffrey Steingarten sizes up the changing shape of "jello." Photographed by Tim Walker.

How lucky we are to live in the Golden Age of jello! I don't mean just Jell-O brand gelatin, though we cannot ignore it, but a wider, more glorious Golden Age, an epoch of jellies and aspics, of gums and hydrocolloids, of gels and gelatins and stabilized gelati (but certainly not gelasins). "Jello" can be a cocktail, a main course, and a dessert. Jello-making can be a craft, perhaps an art. And nowadays there's a new gel born nearly every day.

For five centuries or more, gelatin was made by boiling down animal skins and feet and connective tissue, a long and dirty job that kept jello in the hands of the rich and noble—who could afford servants. The breakthrough in America—which eventually led to the democratization of jello in its powdered, nearly instant, brightly hued, and fruity form—is due to one Peter Cooper. He is best known as the industrialist who built the first steam locomotive and laid the first transatlantic cable. He founded Cooper Union to offer free education to working men and women and their children, and he owned a glue factory in Manhattan near the slaughterhouses on the East Side on Sunfish Pond, where he invented new ways of producing gelatin. He also dumped his toxic waste into Sunfish Pond until there was no pond left; now there are costly condominiums on top of the glue. In 1845, Cooper received the first patent for a gelatin dessert

that required only the addition of hot water. It took another half-century for the product sold as Jell-O, after passing through the hands of several owners, to become established as America's most famous dessert.

Jell-O molds played a minor role in my childhood, but they loomed large in my wife's. Whenever we visited her extended family, predominantly Mormon, there was a great outpouring of Jell-O molds. Some were made in several springform pans, unmolded, and stacked upon one another, often with whipped cream between the layers. And inside each was a cornucopia of delights—miniature marshmallows, canned fruit cocktail, and additional maraschino cherries, my favorite treat even to this day. After a decade of Jell-O molds, I reached the conclusion that serving them is required by the Book of Mormon. I wasn't far off: Jell-O is the official state snack of Utah, and the souvenir pin of the 2002 Winter Olympics shows a yellow bowl filled with huge chunks of green Jell-O. If this was a brainstorm of Mitt Romney, who was in charge of the 2002 Winter Olympics, then maybe he's not such a bad guy after all.

Beyond the borders of Utah, brightly colored jello molds lost their luster in the late fifties and early sixties, but gelatin artists today are capable of exquisite work. You may not comprehend gelatin's potential until you see the work of Ofelia Audry of Mexico City. My wife met her

HOLDING POWER

Gelatin brings color and glow and jiggle to the table. Hat by Emma Roach is worn by model Kirsi Pyrhonen. Christopher Kane top. Hair, Sam McKnight for Premier London; makeup, Val Garland at Streeters. Details, see In This Issue.

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son, a Mexican diplomat, when she was working in Dallas, and he suggested that we visit his mother at the Javits Center in Manhattan, where she was scheduled to compete in the 140th Annual Salon of Culinary Art. When we arrived, Mrs. Audry had already won the prize of honor and a gold medal from the Société Culinaire. Her irresistible piece looked at first like a two-foot-wide platter of brilliant flowers covered by a clear, glistening layer of gelatin. But when you sliced into it, the flowers simply were not there. You could see them as you looked sideways into a slice, but when you tried to grasp them, they vanished, as one of the judges discovered at the competition. (I've read that the technique is extremely popular throughout middle-class Mexico and that it is customary to bring a smaller version of Mrs. Audry's creation as

a gift to a dinner party, but I can't swear to it.) Mrs. Audry gave us her prizewinning creation to take home, and after it had sat proudly and without incident in our refrigerator for several weeks, we sliced it in every direction we could think of. The lovely, delicate flowers were always visible—until we tried to touch them, and then they were gone. Every morsel we tasted was deliciously citrusy, possibly with the flavor of rose hips or hibiscus.

as luck would have it, I'm writing to you from Mexico City, where I'll try to locate Mrs. Audry and report back to you. While I'm at it, let me also recommend a visit to lizhickok.com. Ms. Hickok is most famous for creating astounding Jell-O models of San Francisco; their wobble, she feels, reflects the instability of the city.

And this is the third year of the Jell-O Mold Competition at the Gowanus Studio Space in Brooklyn, with workshops in mold-making hosted this past spring by the Cooper-Hewitt National Design Museum, which was founded by three granddaughters of Peter Cooper, the great jello pioneer: from jello to jello in five generations.

If you've ever made a soup or stock by boiling tough cuts of meat or mature chickens or bony fish, then you've created jello, too, because when the soup cools, it becomes gelatinous and semisolid, and it wobbles. (Wobbliness is,

of course, the hallmark of true jello.) That's also how you make glue; gelatin is a purified form of glue. And one of the purest forms of gelatin is called isinglass, made by boiling the air-bladder of the sturgeon.

Gelatin is made up of long protein molecules that attach to one another and form a mesh that traps water. Most other

gelling agents are complex sugars that behave in a similar way. At the heart of the supermodern style of cooking sometimes called molecular gastronomy is the dramatic use of novel gels, of which there is now an unending profusion. (While we're at it: *Gel* was coined by the eminent Scottish chemist Thomas Graham in the mid-1800s as an abbreviation of the word *gelatin*. Since at least the 1800s, chefs have

gelled without depending on gelatin, using what we now call hydrocolloids. They used agar, extracted from red seaweed and imported from Southeast Asia, where its Malaysian name is agar-agar. Carrageen was found in an Irish seaweed, part of the local diet and brought into English kitchens for gelling around 1830. Arrowroot came from a West Indian plant and was so expensive it was often counterfeited. Locust-bean gum and guar gum are extracted from seeds; Brazil produces tapioca. Gum Arabic and gum acacia are taken from tree saps. And eggs have always been the queen of gels such as custards and quiches and the Japanese chawanmushi (a tender egg custard made with broth instead of milk or cream, as Western custards generally are).

Chefs today also play with newer hydrocolloids, concocted for their special and sometimes weird behavior. Some of them gel and others only thicken; some stay gelled while others can be reversed. Methyl cellulose perversely gels when you heat it but melts when it cools, the opposite of Jell-O. Transglutaminase causes proteins to stick to one another, which is why some call it meat glue; the Japanese have long used it to make the mock crab called surimi (which is nothing to brag about). Fluid gels act like solids until you agitate them—like ketchup stuck in the bottle. At his restaurant WD-50, Wylie Dufresne, a master in this field, is able to tie long foie gras gels into knots, make instant tofu noodles, and in fact make noodles out of pretty much anything edible. The modern genius Ferran Adrià has put mussels into the center of clear gel spheres made from mussel juice. They sometimes look like eyeballs. Some Modernist chefs lose their composure when they discuss hydrocolloids, which they believe have completely revolutionized cooking, enabling them to create their dishes in nearly any shape and any texture.



WOBBLE FACTOR

Jello-making can be a craft, perhaps an art. Dolce & Gabbana blazer. Dries Van Noten shirt.

But gelatin itself is still capable of magic in the kitchen. Its ability to clarify soups, sauces, stocks, and juices has only recently been earning headlines on the blogs. You add a tiny amount of gelatin to your cloudy soup, freeze it, then melt it slowly in the refrigerator in a coffee filter, which will let only the clear liquid through. When my own stocks and soups get cloudy, which happens more frequently than I would wish, it's because I let the soup boil so violently that I've emulsified the fat that was once pooled on the surface. Gelatin clarification will not solve my problem; it only holds back particles of protein like the microscopic flecks of chicken suspended throughout a cloudy chicken soup. But when it does work, gelatin plays an amazing and useful trick: The clarified liquid that first flows through the coffee filter will be *concentrated*, almost as if you had boiled it down, but without dispersing its aroma into the air. Some cooks prefer to use agar for clarification. It doesn't do a good job of concentrating the liquid, but it's much faster than gelatin.

Do you remember the years when Jell-O shots were all the rage? To be perfectly frank, I don't remember them at all. Somehow, that decade must have slipped past me, and not because I was abstaining from alcohol. But I'm told that everybody was getting drunk on Jell-O shots. In essence, you mix a cocktail with gelatin in an attractive and delicious way and chew your cocktail instead of swigging or sipping it.

Then, before I ever knew of their existence, Jell-O shots had fallen into disrepute, associated with grungy fraternity parties and trailer parks. This is a tragic circumstance. I have absolutely no doubt that Jell-O shots are a vital and important and wondrous invention and deserve a thoroughgoing revival. Even as I write, there are hopeful signs. Three of today's top young chefs offer their versions: Wylie Dufresne has his Proud Mary, a sparkling Bloody Mary with horseradish and celery bitters. Grant Achatz is known for his jellied version of the

was a generous portion of the best osetra caviar; over that a layer of lightly jellied lobster consommé; and on top, a cream of cauliflower that hid everything beneath it (and was itself encircled by a rim of 50 green dots of what the menu described as "chlorophyll"). Here, gelatin was used to create nearly liquid layers that stayed separate and lay there, ready to surprise you. Adrià invented a hot version of this dish the same year he introduced several types of hot jelly; as gelatin would have quickly melted, Adrià used agar, which, once solidified, does not melt except at impossibly high temperatures. Years later, a lesser-known Robuchon masterpiece arrived at the table in a tall, unassuming cup that appeared to be holding a cloudy broth or consommé. The waiter asked us to reach our spoons all the way to the bottom, and when we did, we discovered that the intensely flavored chicken or capon broth was lightly gelled and under it was hidden a layer of rich foie-gras custard. A friend of mine wangled the recipe from somebody in Robuchon's kitchen, and I tried it once with only slight success before misplacing it forever. But from memory, I can say that the consommé had been made with chicken feet and bones that contributed their own gelatin, to which egg was added, and the entire thing steamed at about 170° F, to create the most tender and insubstantial gel; the foie gras custard was also made with egg yolks—custards, after all, are gels made without gelatin.

My fondest jello memory is of David Bouley's 24-Hour Tomato Terrine. It was 20 years ago, and my wife and I had planned a celebratory dinner at the restaurant Bouley, then one of the finest restaurants in the country and an early example of the modern French-American style of cooking that pretty much dominated haute cuisine in this country until the arrival of molecular gastronomy. We had been kept waiting in a tiny lounge and were quite grumpy as we were shown to our table—and then the first course arrived, a thick, cool,

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Sazerac cocktail and who knows what else he's created at Aviary, his recently opened Chicago bar. And at Heston Blumenthal's Fat Duck, an hour outside London, gums flavored with various Scotch whiskeys are arranged on a map of Scotland at the location of each of their distilleries.

To recapture my lost decade, I have made plans to follow the recipes in Michele Palm's witty *Jelly Shot Test Kitchen*, beginning with a simple caipirinha and graduating to multihued layers and embedded shapes. The recipe I most look forward to begins with pink champagne, sugar, and orange-flower water, all gelled with gelatin; and as they start to solidify, a natural red dye is added, which creates a marbling effect. This "Jell-O" shot dates back to the 1820s and was the brainchild of Antonin Carême, one of the greatest chefs of all time. Enemies of Jell-O shots have Carême to contend with. And the most serious and systemic jello-shot work today can be found at myscienceproject.org, an unabashedly obsessive and maniacal gem of a Web site.

Back to gelatin as food. Twenty years ago, the great French chef Joël Robuchon created the most elegant layers of textures and flavors, served in a shallow bowl: On the bottom

glistening, bloodred slab that tasted more of tomato than any tomato ever has. One would have guessed that it was made up of slices of the ripest tomato bound together in a tender tomato jelly, but the two had become indistinguishable and seemed to flow into each other. The sour mood instantly and permanently became sweet and paradisiacal.

Recently, after I searched the Internet in vain for David's recipe, he informed me it had never been published except in one out-of-print French book entitled *Tomate*, and the recipe there, which he showed me, would have been of little use.

So David offered to show me how he made it—the terrine hasn't been on the menu for many years—and invited me into the kitchen. Yes, the tomatoes were cooked for hours and gelatin did play a part, but it was only through careful attention to temperatures and to the regulation of salt and sugar that the tomato water and tomato slices interpenetrated. I had wanted to conclude this article with a recipe, but I haven't quite got it right. By the time you read this, however, tomatoes will have come into their full ripeness, and I will have posted David Bouley's 24-Hour Tomato Terrine on Vogue.com. □