



Culinary Trends and Breakthroughs

CULINARY CONNECTION



WE EXPLORE A FEW CURRENT CULINARY TRENDS, AND SOME UNIQUE PRODUCTS DESIGNED FOR EASE OF USE AND GREAT RESULTS.

Trends and innovative new gadgets often emerge parallel to each other. This makes perfect sense when you think about it, because they create a market and necessity for each other. This concept is really nothing more than basic supply and demand. When a culinary trend demands certain ingredients, businesses respond by developing more efficient, cost-effective ways to supply that demand and the newest innovation emerges. As time passes, these once cutting-edge products become increasingly available and affordable.

Let's look at the can opener, for example. In the early 1800s in France, the Napoleonic Wars demanded that there be a way to preserve food for long periods of time

and in varying climates. This demand caused the French government to offer a hefty prize for any inventor that could develop such means in an efficient manner. In 1809, Nicolas Appert—a French brewer—noticed that food cooked inside a jar did not spoil unless the seal of the jar was broken and leaked. His method of preserving in jars is what led to the eventual use of similar preservation methods in modern aluminum cans. The issue with cans was, and still is, that cans are sealed so well they cannot easily be opened by hand, unlike their more crude glass jar counterparts. Thus, the can opener was invented. Of course the can opener seems far from innovative by today's standards, but in 1855—when it was patented—it was truly a unique invention. As the can opener became



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more available, it also became more affordable. This parallel development has continued through the years as more items are being canned, and companies have developed better, less expensive can opener options.

So what kind of trends and innovations are emerging today that can or will follow a similar pattern? Let's examine three modern trends and the inventions that are on a parallel track of convenience and novelty.

SOUS VIDE AND IMMERSION CIRCULATORS

Sous vide (which means "under vacuum") is a cooking method where food items are packaged in plastic bags and vacuum sealed, and then the sealed package is submerged in temperature controlled water to heat evenly. Sous vide as a food preservation method can be traced back to the mid-1960s, but it had much earlier roots. Georges Pralus adopted the method in 1974 after experimenting with foie gras. He noticed that the foie gras maintained its appearance, did not lose excess amounts of the precious fats, and had better texture. He began using the method on various other products in

Restaurant Troisgros.

Like any trend, when something works well, it becomes very popular. Other chefs, and even scientists, began to notice this practice and wanted to adopt similar techniques in their operations.

Before long, widespread use of sous-vide cookery became synonymous with producing an extremely flavorful product with minimal moisture loss, allowing for tender meats, perfectly cooked vegetables, etc.

Chefs began to develop parameters internally that, when applied correctly in terms of time and temperature, would deliver consistent results. Like many innovations and trends though, early sous-vide cookery had some drawbacks. For instance, most restaurants operate gas ranges as the preferred heat source. In sous vide, it's important to keep the temperature of the water consistent to the parameter of the item being cooked to result in successful preparation. On a gas range, this can prove nearly impossible, especially over the extended periods of time required. Also, to achieve perfect uniformity in the cooking, you must circulate

the water itself. We know that at 212°F water boils, which circulates the water naturally via the escaping air bubble agitation. But what if we want to cook in water that's only 185°F? This water will, by nature, remain still. There must be a 'supply' to the 'demand' that's growing in the industry's establishments that are practicing sous-vide cookery.

Enter the immersion circulator! This invention, born out of necessity for sous-vide cooking, electronically heats and circulates water for this exact purpose. Early immersion circulators were bulky and very expensive. These pieces were only feasible for high-end restaurants and high-profit manufacturers, and were simply irrational for use in smaller operations. However, as the demand increased, the supply companies began to develop better and less expensive versions for appropriately sized operations. Today, an immersion circulator can be purchased from companies like TUCS that develop all-inclusive tanks in the thousands of gallons size (\$100,000+), all the way down to the at-home

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versions by companies like Anova Culinary (\$100) that have smartphone apps to control effortlessly. Now the trending sous-vide preparation methods can be utilized by literally anyone, thanks to such innovative inventions.

SMOKING AND PRESERVING ARE TRENDING

Smoking and preserving, like sous vide, have become increasingly popular the past few years. Unlike sous vide, these practices have been around for centuries. The most primitive versions of smoking were actually dehydrating via smoke to preserve meats for long excursions for nomads in early caveman days. More recently we've begun to use this method for purpose of flavor instead of preservation, although it's still used in specialty charcuterie for preserved and cured meats. This trending style of cookery has also forced manufacturing companies to provide innovative equipment and tools necessary for execution.

Smokers (smoking equipment) can be found in literally hundreds of varieties—from upright electric versions, to water smokers that incorporate moisture, to more basic

wood offset smoker box versions. This trend has diversified many dishes and cuisines across America in the past, and is projected to be even more creative in 2017.

One invention that can be attributed to this widespread popularity is The Smoking Gun by Polyscience (\$99). This gun is operated much like the large offset wood-smoking equipment that BBQ pitmasters have used for decades. A small cage holds wood chips or shavings. This cage is attached to a motor-operated fan designed to pull smoke (when you light the wood with a small lighter or torch) and blow it through a directed hose, allowing you to smoke single servings of anything! This hand-held smoking apparatus has inspired trends in preparing unconventional smoked foods like vegetables, soups, and garnishes to other indulgences like ice cream and even cocktails.

The American Culinary Federation predicts that the smoked foods trend will not only continue, but also evolve drastically through 2017.



IN SOUS VIDE, IT'S IMPORTANT TO KEEP THE

temperature of the water consistent to the parameter of the item being cooked to result in successful preparation.



PUREES/SAUCES AND MOLECULAR GASTRONOMY

Another interesting trend on today's menus is the use of unconventional items in sauce and/or puree form. For example, one of the hottest fall/winter trends this season is the use of butternut squash and pumpkin puree. Not that this is "new" or really even that inventive by itself, but what chefs are doing with these items is quite impressive.

I recently dined at Imperial Taproom in Canyon, Texas, where Chef Ethan Williams produced a version of butternut squash puree that had notes of chicken stock, and acidic hints of balsamic vinegar (all while maintaining a vibrant orange appearance that I'd expect from a butternut squash puree) that he paired with duck. While I mention this particular experience, many chefs across the country are doing the very same thing with personal or regional twists.

How do we achieve such a creamy, smooth, yet thick texture when using products like this that are not that textured on their own? Essentially what we are doing is taking a substance with loads of developed flavor, but nappe consistency, and transforming them to a pudding-like consistency known as "puree" or "demi glace." There are several methods that have been around for ages like the basic reduction, or using thickening agents like roux and slurry. The problem is reductions take loads of time and constant surveillance, and the traditional thickening agents impart flavor that disrupts the delicate balance of ingredients like butternut squash. So, to parallel this trend, science brings us molecular gastronomy.

Molecular gastronomy refers to the physical and chemical processes that happen when cooking. Even relatively inexperienced cooks are combining physics and chemistry principles to change the taste and texture of foods. Items like agar-agar (<\$20), a substance derived from algae, allow us to quickly thicken items like the previously mentioned butternut squash puree without disrupting the intended flavor profile and without fully setting the liquid-based substance like gelatin would.

Other molecular gastronomy techniques, like the use of liquid nitrogen for "freezing" quickly, or the use of maltodextrin to create a powder version of any fat or

fat-based substance, has created a fun and inventive new trend on menus everywhere. This advance in science has allowed us all to experience the same transformations in cuisine that were previously reserved for food scientists and large corporate manufacturing operations.

MORE TRENDS, MORE GADGETS

These examples are merely a few of the many advances in innovative technology that emerge with and around the newest budding trends. These are vastly popular today and are projected to trend in the next few years as the availability of product and means become more widespread. The more we explore the options that items like the Immersion Circulator, The Smoking Gun, and agar-agar give us access to, the more the trends will likewise develop. Who knows? Maybe this time next year the newest trend and innovation will have started from a necessity in your kitchen. **E**

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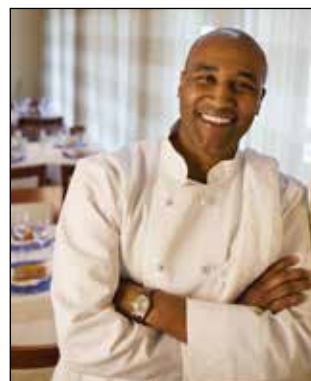
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- What does molecular gastronomy mean?
 - The variety of supermarket products available is as large as the cosmos
 - The physical and chemical processes that happen when cooking
 - That DNA determines what people like to eat
- Who was one of the first people credited with using sous-vide cookery?
 - Bobby Flay
 - Georges Pralus
 - Benjamin Franklin
- What does sous vide mean?
 - Volunteer cook
 - Cooked yesterday
 - Under vacuum
- How many types of smoking equipment is/are there?
 - One
 - Many
 - Three
- What's the main reason for the smoked foods trend today?
 - Preserving meat
 - Imparting flavor
 - Health and fitness
- What is agar-agar?
 - A substance used to agitate soup
 - A chemical compound similar to plastic
 - A substance derived from algae
- How do trends and innovations relate?
 - They parallel each other
 - They don't relate
 - They are opposites

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