

## TRENDS FOOD & BEVERAGE

# Chemistry joins Culinary Art

21st century diners are fed up with standard, academic gastronomy cuisine classified by star ratings. Today's customers crave the unconventional - they like to be surprised during their meal and introduced to an original dining experience

The first culinary breakthrough started in the 1970s, when Paul Bocuse and Michel Guerard pioneered "Nouvelle Cuisine", encouraging innovations, lighter menus, fresh and quality produce, and a continuous search for new cooking techniques. Back then, it was a serious split from the "Cuisine Classique" and the works of Auguste Escoffier.

"Fooding", a new French word created by Emmanuel Rubin and Alexandre Cammas, two food critics who believe that dining should go beyond its traditional ritual, stands for "eating with feeling". It is based on the principle that not only the food, but the style of the restaurant, the personnel, the ambiance and the music matter in your dining experience. The goal of "fooding" is to liberate chefs from traditional guidelines that used to stifle their creativity in exploring how far culinary art can go. Just like any other type of art, gastronomy should become the result of personal feelings, free thinking and innovative visions.

Today's new culinary jargon, such as bistronomy, street food, and fusion food, aims at innovating recipes and distorting the rigid "gastronomy" concept. Pioneered by hospitality rebels, all of them affirm a revolution in the dining industry.

### Scientific approach to culinary art

It wasn't until the 1990s that the term "molecular gastronomy" emerged, raised by the Hungarian physicist Nicholas Kurti and the French chemist Hervé This. Their goal was to apply modern scientific analysis and techniques to cooking and mixing. Their approach would help gastronomists in understanding the process of cooking and the traditional methods used by their ancestors, which will eventually enable them to find solutions to a number of culinary problems.

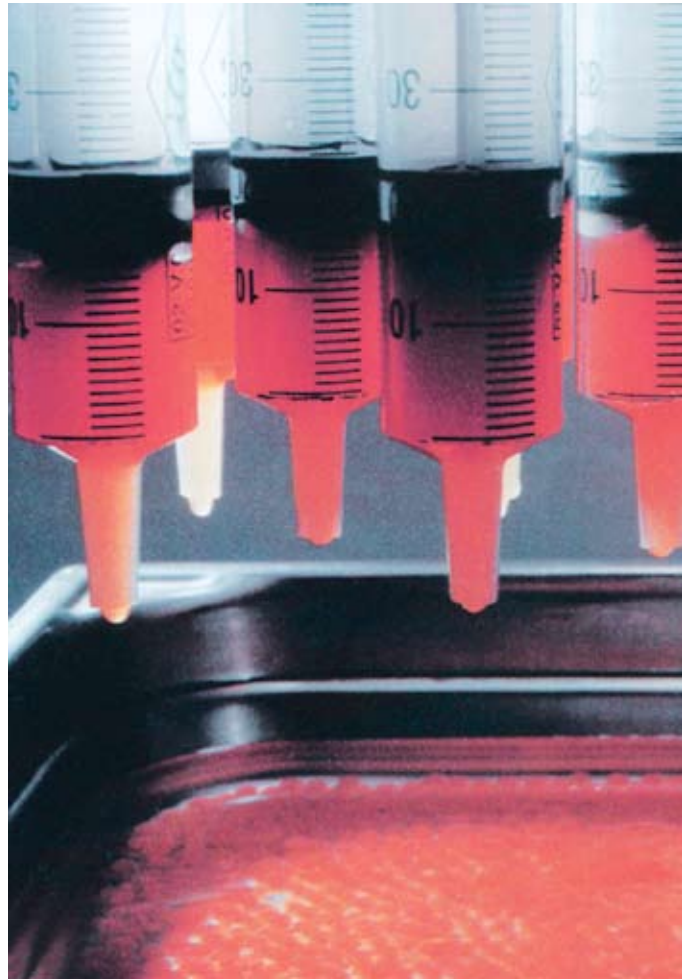
Molecular gastronomy promoted an innovative cuisine that combines classical French style with a scientific approach to techniques and flavors. But since then, a new generation of chefs has pushed the bar higher, using the latest technology and scientific research to take culinary art to the next level. They started experimenting in cooking, using ingredi-

ents in unusual ways, innovating recipes and fooling around with textures, temperatures and tastes. Meals in their restaurants can be compared to a rollercoaster ride of sensations. A tasting menu is often composed of an average of 15 tasting courses. Heston Blumenthal at the Fat Duck, a Michelin three star restaurant, combines oysters and passion-fruit jelly as one dish, and spice bread ice cream with crab syrup in another dish. Ferran Adria at El Bulli, winner of Best Restaurant of the Year 2006 by Restaurant magazine, was made famous with his melon caviar and the use of a foamer to create Parmesan spaghetti. But

## Alcoholic drinks go molecular too

The "molecular" trend has also extended to reach bars where traditional liquid cocktails can be consumed in the form of a jelly cube or small granules. At Moto in Chicago, barmen use a laser to tease the smoke out of a vanilla bean in order to flavor the red wine.

The principles of molecular mixology are being developed and today it is mostly based on working with foams and gels to create unique drink textures and flavors.



## The Middle East's standpoint

At the level of the Middle East, we find that molecular gastronomy remains underexploited. Food and Beverage concepts in the region remain much anchored on design. They tend to innovate by introducing bold designs and concepts, but little has been done in the matter of food. However, there is a growing interest in culinary art, especially in Dubai and Beirut where Food and Beverage markets are maturing faster. Only one chef promotes his works under the label of molecular gastronomy in the Middle East. Stephane Buchholzer, chef de cuisine at Tang in Le Méridien Mina Seyahi Beach Resort & Marina, pioneered molecular gastronomy in Dubai and also recently introduced molecular cocktails to his beverage selection. Tobacco ice cream, chocolate and cauliflower soufflé and Mojito gel are just a few of his creations. Soon, Pierre Gagnaire who was famous for being one of the most daring actors in the development of molecular gastronomy, will be headlining Reflects at the InterContinental Dubai Festival City.

Overall in the region, consumers are being exposed to new concepts and innovative ideas by experiencing an increasing number of outlets that promote culinary sophistication.

Lebanese cuisine remains the culinary benchmark in the region. Some chefs believe that it could benefit from an extreme makeover, which may open the way for molecular gastronomy researches and practices in this field, and even molecular mixology. However, the Lebanese socioeconomic context cannot provide a sound environment for the development of bold culinary concepts. A few chefs are exploring the possibilities of their cuisine such as Charles Azar in the InterContinental Le Vendome, and Maroun Chedid in La Posta, but molecular gastronomy executions remain very limited.

meals in these "post modern" molecular gastronomy restaurants remain very exclusive and expensive.

Another leader in molecular gastronomy is Thomas Keller with his Michelin three star restaurants; French Landry in Napa Valley and Per Se in New York. His inventions include savory oyster pearl tapioca custard with oyster and caviar and a Surf Turf dish that combines lobster tail with foie gras.

The list of "chemical" ingredients used in molecular gastronomy just keeps increasing as chefs make new discoveries. Techniques such as creating "fuzz" by mixing acid and baking soda, or making spheres by using a calcium chloride solution, or creating a foam effect with the means of a CO2 cartridge, are common techniques used by leading molecular gastronomy chefs. Only the end result and the food ingredients that come into the combination vary.

Just as our music culture has evolved over the years, with the emerging pop, rock, or electronic music marking our decades, molecular gastronomy is another trend of our epoch. Many might describe it as an avant-garde fashion in the dining experience, when in fact it's an ingenious reflection of today's evolving customer expectations. Its success in France, the U.K. and the U.S.A. validates its legitimacy as a radical culinary shift.

### Natural versus synthetic

This scientific approach to cooking may be perceived by many people as unnatural or even synthetic, especially as chemical ingredients are often used to create specific textures, such as the use of liquid nitrogen to freeze

goat cheese into "snow" pellets.

Nevertheless, using physics and chemistry in understanding what is going on when you cook, so that the pairing of ingredients can be done on a molecular level as opposed to historical or traditional level, is perfectly natural. Molecular gastronomists research the scientific advantages or disadvantages of cooking techniques. This eventually enables them to try new combinations by exploring their molecular meaning.

From an atomic point of view, molecular gastronomists are not creating something new; they are simply using natural ingredients in unusual ways. However, not all natural ingredients are healthy and harmless; this requires high ethics on behalf of gastronomists not to favor the success of their innovation over the health benefits of the food.

Molecular gastronomy and innovative cuisine constitute today a competitive edge for new generation chefs, pushing culinary boundaries. But gastronomists who decide to venture in the molecular current should be careful not to fall in excess, by creating shocking combinations that drift away from the delightful aspect of cuisine. The true area where molecular gastronomy and mixology will shine is in applied techniques and methods.



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## Blueberry Caviar Recipe

### Ingredients

2g sodium alginate  
200g water  
50g blueberry syrup  
2,5g calcium chloride  
500g water

### Method of production

Mix vigorously the sodium alginate and 200g of water in a blender, and then leave the mixture to rest for some hours in order to eliminate air bubbles. Add the blueberry syrup to your solution. Mix the calcium chloride with 500g of water. Using a syringe drip the blueberry solution in the calcium chloride solution. After 1-3 minutes remove the pearls and rinse them with water.

*All types of plastic bags*

**Packaging Film in bags**

- Boutique bags (Long, Reinforced pincl)
- Shopping / T-shirt
- Supermarket bags
- Laundry bags
- Multi-layer bags (food preservation)
- Vacuum bags
- Freezer bags
- Self-adhesive bags
- Newsprint, newspaper bags
- Chicken bags
- Egg bags

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- Laundry rolls
- Food wrapping
- Agriculture (greenhouse / mulch)
- Industrial wrapping
- Shrinkwrapping
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