Innovational technologies in the preparation of food

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Cocktails in ice spheres. Caviar made of olive oil. Disappearing transparent raviolis. Sound cool? Well these are all examples of Molecular Gastronomy. Molecular Gastronomy blends physics and chemistry to transform the tastes and textures of food. The result?New and innovative dining experiences. Molecular cuisine, it - molecular gastronomy , appeared in 1992 , with the filing of a chemist Hervé Tisza and physics Nicholas Kurti. The term Molecular Gastronomy is commonly used to describe a style of cuisine in which chefs explore culinary possibilities by borrowing tools from the science lab and ingredients from the food industry. Formally, the term molecular gastronomy refers to the scientific discipline that studies the physical and chemical processes that occur while cooking. Molecular gastronomy seeks to investigate and explain the chemical reasons behind the transformation of ingredients, as well as the social, artistic and technical components of culinary and gastronomic phenomena.

Since the beginning of the XXI century chef molecular cuisine began to gain the top position of restaurant rating. A visit marked the tabloids space has become fashionable and even necessary. But what does it offer to customers ?A bit of everything . And - it is not clearing fact , such a cooking - show for the jaded . Moreover , the food and drinks will hide their true nature in crystals , gels , foams , and other atypical forms. The portions are minimal, sometimes - not more than a teaspoon. A visitor can not understand what he's going to eat until you try outlandish dish. And how , indeed, to guess the "before" that ice cream - herring ? Or what to look completely raw piece of salmon in fact perfectly frizzled , foam, similar to the one that stays on the bottom of the glass with drunk natural juice - nothing like meat ... By the way , this foam - one of the trademarks of molecular cuisine . It's called Espuma , and make it possible out of anything , we just have to know how .

Many modern chefs do not accept the term molecular gastronomy to describe their style of cooking and prefer other terms like "modern cuisine", "modernist cuisine", "experimental cuisine" or "avant-garde cuisine". The famous chef Heston Blumenthal says molecular gastronomy makes cuisine sound elitist and inaccessible, as though you need a degree in rocket science to enjoy it. In the end, molecular gastronomy or molecular cuisine - or whatever you want to call this cooking style - refers to experimental restaurant cooking driven by the desire of modern cooks to explore the world's wide variety of ingredients, tools and techniques. Molecular gastronomy research starts in the kitchen where chefs study how food tastes and behaves under different temperatures, pressures and other scientific conditions.

When people hear the words molecular gastronomy or molecular cuisine for the first time they often mistakenly view it as unhealthy, synthetic, chemical, dehumanizing and unnatural. This is not surprising given that molecular gastronomy often relies on fuming

flasks of liquid nitrogen, led-blinking water baths, syringesand tabletop distilleries.These additives have been approved by EU standards and are used in very, very small amounts. The science lab equipment used just helps modern gastronomy cooks to do simple things like maintaining the temperature of the cooking water constant (water bath) , cooling food at extremely low temperatures fast (liquid nitrogen) or extract flavor from food (evaporator). There is still some debate out there about the healthiness of molecular gastronomy but I personally believe there are far bigger health issues in the everyday food we consume.

Molecular gastronomy cooking requires a good balance of left and right brain thinking. Most of the molecular cuisine recipes need to be followed precisely. Steps need to be followed in a very specific sequence or the whole dish may be a disaster. Quantities are measured in fractions of a gram or fractions of a percentage. Slight variations in food acidity levels could be disastrous for some dishes. At the same time, molecular gastronomy is about experimenting, being curious, using intuition, playing with emotions and creating a multi-sensory dinning experience with artistic dish presentations, textures, aromas, flavors and even sounds. The plate is your canvas!If you are not a professional chef with a fully equipped kitchen you can still enjoy molecular gastronomy at home without spending too much money. Many molecular cuisine recipes don't require special equipment or "chemicals".

Molecular gastronomy experiments have resulted in new innovative dishes like hot gelatins, airs, faux caviar, spherical ravioli, crab ice cream and olive oil spiral. The potential of molecular gastronomy is enormous. It is revolutionizing traditional cooking and transforming dining into a surprising emotional and sensory experience.

If you want to taste the best of molecular gastronomy you need to visit one of these restaurants: 1. Fat Duck, London; 2. Atelier Crenn, San Francisco; 3. Noma, Copenhagen; 4. Haven, Miami Beach; 5. Alinea, Chicago.

References:

1.http://roman-trusov.ru/fr/blog/molekulyarnaya-kuhnya.html

2. http://en.wikipedia.org/wiki/Molecular_gastronomy#People