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REVERSE SPHERIFICATION TECHNIQUE

WRITTEN BY
FARHAN FAAT &
MOHAMAD FARHAN AZMI

Living in this modern era and with the advancement of technology today, there is nothing seems to be impossible in culinary world. What we see today might never be realized in the old days. It all started when two physicists Nicholas Kurti and Herve in 1988 coined a new approach known as molecular gastronomy.

This knowledge has created a new scientific study to investigate culinary transformation, specifically the chemistry and physics behind food preparation. Collaboration between scientist and talented chefs has created a new exhilarating phenomenon in culinary world. Starting from a basic need to understand molecular level of a product, they found a new approach and ways to enjoy and experience foods.

This knowledge has been widely used in the early of 2000 by prominent chefs like Heston Bluementhal, Ferran Andria, Pierre Gagniere and Grant Achatz. Restaurants which applied molecular knowledge in cooking were listed and won The World's 50 Best Restaurant.

Throughout the molecular gastronomy movement, variety of food additives and equipment have been developed and used by numerous chefs. This include the usage of algin and calcic in spherification and reverse spherification, soy lecithin to stabilize the air in foam, sous vide 'under vacuum' cooking technique, liquid nitrogen in reducing the crystallization and the usage of espuma 'whipped cream' in creating splendid dishes. These additives and equipment can be found in most kitchens that apply molecular gastronomy in preparing food with surprise elements.

There are several techniques in molecular cuisine preparation. For instance, spherification, reverse spherefication, emulsification, suspension, gelification, siphon whipping, sous vide, powdering and so forth. However, this article focuses on reverse spherification technique only.

This technique is easy to prepare yet provide amazing feeling to the customers. The idea of reverse spherification is to shape a liquid into spheres, where the sphere is held by a very thin gel membrane while the inner layer remains liquid.

The burst effects of reverse spherification provides an immediate effect of taste as the sphere explode in their mouth. This technique is applicable if there is a contact between sodium and calcium ions which creates a product, resembles egg yolk texture and appearance. To prepare a product using reverse Spherification technique, we must firstly create a sodium alginate 'bath' by mixing sodium alginate and distilled water. Then, keep the liquid inside a chiller for three (3) hours to ensure the sodium is well dissolved and clear 'bath' is obtained.

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The next step is to mix the puree with calcium lactate powder and let it set aside for 8-10 minutes or until the puree is well incorporated with the calcium. Then, take a spoonful of puree into the sodium alginate 'bath' and let it set in the sodium water for 3-4 minutes. Finally, it is time to rinse the sphere with distilled water and it is ready to be served.

To conclude, the application of molecular information in preparing modern cuisine for western or developed countries are no longer peculiar. However, in Malaysia it is still in introductory stage. Therefore, further study on how to incorporate molecular gastronomy knowledge with our food or culture is required.