



## Molecular Gastronomy Training

# Molecular Gastronomy Training Program

NTHRYS Biotech Labs offers Molecular Gastronomy Training Program under below mentioned protocols. Candidates can opt their interested protocols from the list below. Please click **Join** button to pay the fee for selected protocol. Fees should be paid individually for all the selected protocols separately by clicking the button. Please save the payment proofs and send them as an attachment to

**trainings [ a t ] nthrys [ d o t ] com** to receive payment invoices and slot confirmations.

Please Check Modules as well as individual protocols (if any) under this training program. Module has its fee given in the fee structure table and individual fee in its block. Please communicate with our Help Desk Team via whatsapp on +91-8977624748 for any queries.

### Modules

NTHRYS provides Molecular Gastronomy Training for interested candidates at its Hyderabad facility, Telangana. Please refer below for more details including Fee structures, Eligibility, Protocols and Modules etc.,. Please do call / message / whatsapp for more details on 9014935156 [India - +91]

## Protocols / Techniques Covered

### 1. Spherification

Involves creating spheres that resemble caviar, using sodium alginate and a calcium salt solution to form a gelatinous membrane around a liquid.

### 2. Gelification

Transforms liquids into gels using agents like agar-agar, gelatin, or carrageenan, allowing for new shapes and structures.

### 3. **Emulsification**

Uses techniques to create stable emulsions with ingredients like lecithin to produce airy, stable foams from liquids.

### 4. **Foams and Airs**

Creates light, frothy textures using natural emulsifiers, with equipment like immersion blenders or siphons, often involving soy lecithin or gelatin.

### 5. **Sous-vide**

Employs precise, low-temperature cooking over long periods in a vacuum-sealed bag, enhancing flavor and texture retention.

### 6. **Dehydration**

Removes moisture from food using low heat or specialized equipment like food dehydrators, concentrating flavors and altering textures.

### 7. **Flash Freezing**

Utilizes rapid freezing techniques such as liquid nitrogen to create unique textures and temperatures.

### 8. **Powderization**

Converts high-fat liquids into powders using agents like tapioca maltodextrin. This allows for the creation of new textures and presentation styles.

### 9. **Infusion**

Uses techniques like vacuum sealing or rapid infusion with a cream whipper to infuse flavors into liquids quickly, intensifying the flavor profiles.

### 10. **Reverse Spherification**

Similar to spherification but involves immersing a liquid with calcium lactate into a bath of sodium alginate. This technique is better for creating spheres with high-calcium content or alcoholic bases.

### 11. **Carbonation**

Involves adding bubbles to liquids using carbon dioxide, typically through the use of a soda siphon, to create fizzy textures.

### **Transglutaminase (Meat Glue)**

Utilizes an enzyme known as transglutaminase to bond proteins together, enabling the fusion of different meats or other protein-rich foods into novel combinations.

### **13. Cryofiltration**

A process that involves freezing a liquid and then slowly thawing it, allowing impurities to be filtered out and resulting in a clearer, more concentrated flavor.

### **14. Centrifugation**

Separates components of a mixture by density using a centrifuge, which can clarify liquids or create concentrated flavors and textures.

### **15. Low-Temperature Cooking**

Similar to sous-vide, this technique involves cooking ingredients at lower-than-usual temperatures to enhance texture and flavor retention without overcooking.

### **16. Pressure Cooking**

Utilizes high pressure to cook food faster while preserving nutrients and intensifying flavors, often used in combination with other molecular gastronomy techniques.

### **17. Smoking**

Adds smoky flavors to food using smoke guns or traditional smoking methods, but with precise control over the type and intensity of smoke.

### **18. Rotary Evaporation**

Uses a rotary evaporator to distill liquids at low temperatures, capturing delicate flavors that would otherwise be lost at higher temperatures.

### **19. Pacojet Cooking**

Employs a Pacojet, which processes frozen food into ultra-fine textures, allowing for the creation of mousses, ice creams, and sorbets without needing to thaw the base mixture.

### **20. Liquid Layering**

Involves carefully layering liquids of different densities to create visually striking cocktails or dishes.

### **21. Magnetic Levitation**

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Utilizes strong magnets to create a visual effect where ingredients or small dishes appear

to float in the air, adding an element of spectacle to the dining experience.

**22. Edible Film**

Creates thin, edible films from various ingredients using techniques like drying or gelation, which can encapsulate flavors or be used as innovative garnishes.

**23. Flavor Layering**

Involves building complex flavor profiles by adding ingredients in specific sequences or combinations, often enhanced through controlled cooking methods like sous-vide.

**24. Thermal Shock**

Rapidly changes temperatures to alter texture or firmness, such as quickly freezing then heating food, to create contrasting textures within a single dish.

**25. Ultrasonic Preparation**

Uses ultrasonic waves to alter the texture of foods or to accelerate marination and infusion processes by creating microscopic cavitations.

**26. Syneresis Control**

Manages the expulsion of liquid from gels and other structures to maintain desired textures and moisture levels in dishes.

**27. Enzyme Reactions**

Exploits natural enzymes to transform textures and flavors, such as using protease to tenderize meat or lactase to alter dairy products.

**28. Sonic Preparation**

Uses sound waves to enhance or alter the flavor and texture of food, such as using sonic agers to rapidly mature spirits or enhance meat tenderness.

**29. Nitro-Shattering**

Involves freezing items with liquid nitrogen to extremely low temperatures, then shattering them into fine particles or dramatic presentations.

**30. High-Pressure Homogenization**

Applies extreme pressure to mixtures to create uniform emulsions and break down particles to microscopic sizes, resulting in smoother textures and more homogenous mixtures.

31. **Electrospinning**

Creates very fine fibers from solutions, which can be used to develop new textures or as a method to encapsulate flavors in a novel format.

32. **Laser Cooking**

Employs lasers to precisely cook or char surfaces without heating the surrounding area, allowing for pinpoint accuracy in flavor and texture development.

33. **Chromatic Flavor Matching**

Explores the psychological impact of color on flavor perception, designing dishes that visually communicate taste through color matching.

34. **Algorithmic Cooking**

Uses algorithms to find optimal ingredient combinations and cooking methods based on flavor compounds, creating dishes guided by data analysis.

35. **Ice Filtration**

Uses freezing and slow thawing to filter broths and juices, resulting in exceptionally clear and intense flavors, often used in creating clarified cocktails and consommés.

36. **Vacuum Infusion**

Exploits vacuum technology to infuse flavors into foods more deeply and quickly than traditional methods, enhancing the penetration of marinades and brines.

37. **Microencapsulation**

Encapsulates flavors in tiny, edible packages that burst when eaten, providing intense flavor hits and unexpected sensory experiences.

38. **Aroma Recovery**

Captures and condenses the aromas lost during cooking to reintroduce them to dishes, ensuring flavor depth and complexity.

39. **Structured Fluids**

Develops fluids that have structured properties, such as being able to hold shapes or layers, without solidifying completely, through the use of hydrocolloids and temperature control.

## **Thermoirreversible Gels**

Creates gels that can withstand high temperatures without melting, ideal for hot gel applications and maintaining shape when heated.

### **41. Multi-sensory Pairing**

Designs dishes that stimulate multiple senses simultaneously, such as combining visual elements, aromas, textures, and flavors to enhance the overall dining experience.

### **42. Dynamic Contrast**

Focuses on creating dishes with contrasting textures and temperatures in the same bite to enhance sensory experience and perception of freshness.

### **43. Optical Flavoring**

Uses visual illusions and plating techniques to alter diners perceptions of taste, often leveraging color and arrangement to suggest flavor characteristics.

### **44. Flavor Tripping**

Employs naturally occurring molecules like miraculin, which temporarily alter taste perceptions, making sour foods taste sweet.

### **45. Electrogustometry**

Applies electrical stimulation to the tongue to enhance or alter taste sensations without changing the food itself.

### **46. Thermo-reversible Transformation**

Utilizes ingredients that change state or texture based on temperature, allowing transformations during the course of consumption.

### **47. Photo-Flavoring**

Involves using light (such as UV) to enhance or change the flavor of food and drink, potentially reducing the need for traditional flavorings.

### **48. Sous-vide Aromatization**

A variation of sous-vide that incorporates aromatic substances during the vacuum-sealing process to infuse foods with flavors as they cook at precise temperatures.

## **Note**

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## Molecular Gastronomy Training

Other Trainings under this field >> [Molecular Gastronomy Industrial Training](#), [Molecular Gastronomy Course Finishers Training](#), [Molecular Gastronomy Job Oriented Training](#), & [Molecular Gastronomy Research Training](#)

## Protocols Allocation as per duration

1. 5 Days - Protocol 1 to 10
2. 10 Days - Protocols 1 to 15
3. 20 Days - Protocols 1 to 20
4. 1 Month - Protocols 1 to 30
5. 45 Days - Protocols 1 to 48

## Fee Structures for Molecular Gastronomy Training

Fee details in Rs per student					
Fee	5 Days	10 Days	20 days	1 Month	45 Days
Individual	30000	45000	60000	90000	150000
Group 2 - 4	25000	40000	50000	80000	140000
Group 5 - 7	22000	37000	47000	77000	137000
Group 8 - 10	20000	35000	45000	75000	135000

**Please choose a suitable time slot and inform our team via WhatsApp on +91-8977624748 (located at the top right corner) to receive the payment link for fee payment and slot confirmation.**

## Training based on Individual Protocols

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