Edible Coatings and Films for Food Preservation Training Course

Professional Development Training Course Outline

Category	Food processing and Technology	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

The demand for innovative, sustainable, and cost-effective food preservation technologies is rapidly growing in the global food industry. Edible coatings and films have emerged as a cutting-edge solution that extends shelf life, enhances food safety, reduces packaging waste, and meets consumer demands for eco-friendly alternatives. Edible Coatings and Films for Food Preservation Training Course is designed to provide participants with comprehensive knowledge on the development, application, and commercialization of edible coatings and films for food preservation, focusing on real-world challenges and sustainable practices.

This course highlights practical applications, advanced formulation techniques, regulatory aspects, and industrial-scale implementation. Participants will gain insights into bio-based materials, nanotechnology integration, antimicrobial agents, and smart coatings. By combining scientific principles with case studies, this training will equip participants with the skills to innovate, develop, and apply edible coating solutions that meet global food safety standards, support sustainability, and improve market competitiveness.

Programme Curriculum

Edible Coatings and Films for Food Preservation Training Course

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Course Objectives

1. Understand the fundamentals of edible coatings and films in food preservation.
2. Explore the latest innovations in sustainable food packaging technologies.
3. Evaluate materials used for edible coatings, including polysaccharides, proteins, and lipids.
4. Learn formulation strategies for functional coatings with antimicrobial and antioxidant properties.
5. Examine nanotechnology applications in edible films for food safety enhancement.
6. Analyze regulatory standards and compliance for edible packaging materials.
7. Apply coating technologies to fresh produce, dairy, meat, and bakery products.
8. Develop strategies for commercial-scale production and cost optimization.
9. Investigate smart coatings with indicators for freshness and spoilage detection.
10. Conduct case studies on successful edible coating applications in the food industry.
11. Enhance research and development skills for sustainable food innovations.
12. Build capacity for integrating edible coatings into supply chain logistics.
13. Strengthen technical knowledge for advancing eco-friendly packaging alternatives.

Organizational Benefits

- Enhanced food product quality and safety.
- Extended shelf life and reduced food waste.
- Compliance with global food safety and packaging standards.
- Competitive advantage through eco-innovation.
- Improved customer satisfaction with sustainable solutions.
- Cost savings from reduced conventional packaging use.
- Development of in-house expertise in food preservation technologies.
- Increased market opportunities in export and retail sectors.
- Strengthened organizational commitment to sustainability goals.
- Better collaboration between R&D, production, and quality teams.

Target Audiences

- Food scientists and technologists
- Packaging engineers and technologists
- Quality assurance and quality control professionals
- Research and development teams in food industry
- Regulatory and compliance officers
- Entrepreneurs in food packaging and processing
- Academic researchers and students in food science
- Sustainability and supply chain managers

Course Duration: 5 days

Course Modules

Module 1: Introduction to Edible Coatings and Films

- Definition and concepts in edible packaging
- History and evolution of food coatings
- Importance in modern food preservation
- Key raw materials for edible coatings
- Case study: Early adoption of edible films in bakery products
- Applications in perishable food categories

Module 2: Materials for Edible Films

- Polysaccharide-based films and coatings
- Protein-based edible materials
- Lipid-based coatings and barriers
- Composite materials for functional coatings
- Case study: Protein-lipid composite coatings for meat preservation
- Material selection for industry application

Module 3: Functional Additives in Edible Coatings

- Antimicrobial agents integration
- Antioxidants for extended shelf life
- Natural extracts in food coatings
- Nutrient enrichment and fortification
- Case study: Antioxidant-enriched edible coatings for fresh-cut fruits
- Role of additives in food quality retention

Module 4: Application Techniques

- Dipping and spraying methods
- Layer-by-layer application
- Drying techniques and challenges
- Industrial-scale application equipment
- Case study: Spray coating in commercial fruit packaging
- Evaluation of coating performance

Module 5: Nanotechnology in Edible Films

- Nanoparticles in food packaging
- Nano-emulsions for functional coatings
- Improved barrier properties with nanomaterials
- Safety concerns of nanotechnology
- Case study: Nano-silver in antimicrobial edible films
- Future prospects of nano-based coatings

Module 6: Smart and Active Coatings

- Intelligent packaging and freshness indicators
- Active coatings for spoilage detection
- Oxygen scavengers in edible films
- Smart color-changing indicators
- Case study: Smart coatings in dairy product packaging

- Consumer acceptance of smart edible packaging

Module 7: Regulatory and Safety Aspects

- Global regulations on edible packaging
- Food contact material safety standards
- Labeling and consumer information
- Risk assessment and safety evaluation
- Case study: Regulatory approval of edible coatings in the EU
- Compliance strategies for global markets

Module 8: Case Studies and Commercial Applications

- Fresh produce edible coatings success stories
- Dairy and meat industry applications
- Bakery and confectionery applications
- Large-scale commercial adoption challenges
- Case study: Edible coatings in extending avocado shelf life
- Market-driven innovations and consumer trends

Training Methodology

- Instructor-led interactive sessions
- Case study analysis and group discussions
- Practical demonstrations of coating applications
- Problem-solving and project-based learning
- Multimedia presentations and real-world examples

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

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