Specialized Packaging for Modified Atmosphere (MAP) Training

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

Modified Atmosphere Packaging (MAP) has emerged as a revolutionary solution in food preservation, extending shelf life, maintaining product quality, and minimizing waste. Specialized Packaging for Modified Atmosphere (MAP) Training provides participants with a comprehensive understanding of MAP technologies, materials, and operational protocols. Emphasizing practical applications and industry standards, the program ensures that professionals are equipped to implement MAP solutions effectively in diverse sectors such as fresh produce, meat, bakery, and ready-to-eat foods.

Through interactive learning, participants will explore the principles of gas composition, packaging materials, machinery, and process optimization. The course combines theoretical knowledge with real-world case studies, enabling participants to identify critical control points and troubleshoot challenges in MAP operations. By the end of the training, attendees will be capable of making data-driven decisions to enhance product quality, efficiency, and sustainability within their organizations.

Programme Curriculum

Specialized Packaging for Modified Atmosphere (MAP) Training

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Course Objectives

1. Understand the fundamentals of Modified Atmosphere Packaging and its benefits in food preservation
2. Identify the ideal gas compositions for various food products
3. Explore MAP packaging materials, including films and trays, for optimal performance
4. Learn to operate and maintain MAP machinery effectively
5. Apply quality control measures to monitor product freshness and safety
6. Analyze the impact of temperature, humidity, and storage on packaged foods
7. Design cost-efficient MAP solutions to reduce product losses
8. Incorporate regulatory standards and food safety protocols in MAP operations
9. Evaluate the environmental impact of packaging materials and solutions
10. Integrate automation and IoT technologies in MAP processes
11. Understand shelf-life testing and predictive modeling for packaged foods
12. Identify common packaging defects and troubleshooting methods
13. Examine global trends in sustainable and smart MAP technologies

Organizational Benefits

- Reduction in product spoilage and waste
- Increased shelf life of perishable foods
- Improved brand reputation for quality and safety
- Enhanced operational efficiency and cost savings
- Better compliance with food safety regulations
- Streamlined packaging processes through automation
- Data-driven monitoring of product quality
- Optimization of logistics and supply chain management
- Reduced environmental impact with sustainable packaging
- Improved customer satisfaction and market competitiveness

Target Audiences

1. Food packaging engineers
2. Quality assurance managers
3. Production supervisors
4. Food technologists
5. Supply chain professionals
6. Regulatory compliance officers
7. Research and development specialists
8. Plant operations managers

Course Duration: 5 days

Course Modules

Module 1: Introduction to Modified Atmosphere Packaging

- Principles of MAP and food preservation
- Advantages over traditional packaging
- Common gases and their roles
- Industry case study: Fresh produce MAP application
- Key trends in MAP technology
- Hands-on demonstration of MAP packaging setup

Module 2: Packaging Materials for MAP

- Types of films, trays, and containers
- Material properties affecting gas exchange
- Compatibility with different food products
- Case study: MAP packaging of bakery products
- Sustainable material options
- Material selection checklist

Module 3: MAP Machinery and Equipment

- Types of MAP machines
- Machine operation and safety protocols
- Maintenance and troubleshooting
- Case study: Meat processing plant MAP line
- Automation in MAP machinery
- Equipment calibration procedures

Module 4: Gas Composition and Control

- Optimal gas ratios for various foods
- Impact of oxygen, carbon dioxide, and nitrogen levels
- Gas monitoring technologies
- Case study: Ready-to-eat meals MAP implementation
- Adjusting gases for seasonal variations
- Gas leak detection methods

Module 5: Quality Control and Safety in MAP

- Key quality parameters in MAP
- Microbiological considerations
- Monitoring and testing procedures
- Case study: MAP of fresh seafood
- Documentation and compliance
- Shelf-life testing methodologies

Module 6: Environmental and Sustainability Considerations

- Eco-friendly packaging solutions
- Reducing carbon footprint
- Recycling and disposal strategies
- Case study: Sustainable MAP in fruits and vegetables
- Lifecycle analysis of packaging
- Green certification standards

Module 7: Troubleshooting and Optimization

- Common packaging defects and causes
- Process improvement techniques
- Real-time problem-solving exercises
- Case study: MAP defect analysis in dairy products
- Lean practices in MAP operations
- Continuous improvement strategies

Module 8: Industry Trends and Future Innovations

- Smart packaging and IoT integration
- Predictive modeling for shelf life
- Emerging global trends in MAP
- Case study: High-tech MAP implementation in logistics
- Market opportunities and challenges
- Strategic planning for MAP adoption

Training Methodology

- Interactive lectures and multimedia presentations
- Hands-on practical sessions with MAP machinery
- Real-life case studies for applied learning
- Group discussions and problem-solving exercises
- Quizzes and knowledge checks to reinforce learning
- Expert guidance and mentoring

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

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com