

FDE 418
FOOD QUALITY CONTROL
LESSON-1

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Course Catalogue Contents

- ✓ Quality concept and quality criteria in foods, basic concepts of quality assurance and related definitions (ISO, GMP, HACCP, GAP), quality assurance organization and its function, quality control cards and their interpretation, color, textural and rheological properties of foods, sensorial properties of foods and evaluation techniques, national and international standards and legislation concerning food quality, quality changes in foods, defect types and their determination in foods

Learning Objectives

- ✓ An ability to understand food quality components, measurement methods and food quality control systems
- ✓ An ability to understand the role of a quality assurance process
- ✓ An ability to evolve appropriate quality assurance plan
- ✓ An ability to understand the principles of quality assurance as a function of total quality management and the methodology necessary to establish and implement a quality assurance program for a food manufacturing plant



Course Outline

- ✓ WEEK 1- Quality Concept and Quality Criteria in Foods
- ✓ WEEK 2- Basic concepts of quality assurance and related definitions (ISO, GMP, HACCP, GAP)
- ✓ WEEK 3- Quality assurance organization and its function
- ✓ WEEK 4- Quality control cards and their interpretation
- ✓ WEEK 5- Color and color measurement system
- ✓ WEEK 6- Kinesthetic ve textural characteristics
- ✓ WEEK 7- Viscosity and consistency



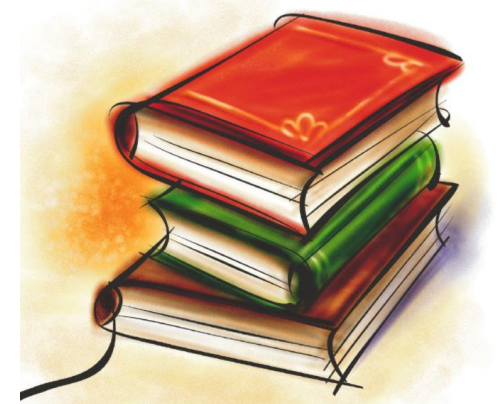
Course Outline

- ✓ WEEK 8- Food quality defects and measurement methods
- ✓ WEEK 9- Sensory properties of foods
- ✓ WEEK 10- Sensory evaluation techniques for foods
- ✓ WEEK 11- National standards related to food quality
- ✓ WEEK 12- International standards and legislation concerning food quality (EU and CAC standards)
- ✓ WEEK 13- Food safety, risk analysis and risk assessment
- ✓ WEEK 14- Quality changes in foods, food shelf-life



Reference Books

- ✓ Early, R. 1995. Guide to Quality Management Systems for the Food Industry. 308p. Springer.
- ✓ Topal, Ş. 1996. Gıda Güvenliği ve Kalite Yönetim Sistemleri. TÜBİTAK-MAM Matbaası. Gebze/Kocaeli 225s.
- ✓ Vasconcellos, J. A. 2003. Quality Assurance for the Food Industry: A Practical Approach. 448p. CRC Press.
- ✓ Goetsch, D.L., Davis, S. 2003. Quality Management: Introduction to Total Quality Management for production, Processing and Services. 858 p. Prentice Hall.
- ✓ Clute, M. 2008. Food Industry Quality Control Systems. 536 p. CRC Press.



Quality-Quality Control

- ✓ Dictionary definition for quality:
 - ✓ An important character, a degree of excellence or a necessary attribute
- ✓ Quality control: A group of activities designed to assure a standard of excellence

Food Industry

✓ deals with highly sensitive products

✓ Food products require routine inspection and quality control

from raw materials



to the distribution of finished goods

✓ Quality control in the food industry:

➤ directly affects *consumer satisfaction*, *reputation of the brand*, and *the company's bottom line*.

✓ Preventing and correcting quality problems can result in;

➤ *product excellence*, *increased brand reputation*, and *a stronger customer base*

Why is quality important?

✓ *What is a good quality product?*

- ❖ conformance to specifications (production)
- ❖ fitness for use (consumption)
- ❖ customer satisfaction
- ❖ exceeding consumer expectations

Quality in the Food Industry

- ✓ A requirement for consumer acceptance
- ✓ Total quality or integral quality
 - all industrial operations, manufacturing and the final product should be subjected to ***acceptable processing*** and ***conformance with requirements***

Quality in the Food Industry

Food quality control is an essential component for the food industry.

□ WHY?

- ✓ To protect the consumers from dangers and to ensure they are eating and handling safe food items.
- ✓ To protect the business from unreliable suppliers, damage to equipment and false accusations from middlemen, customers or suppliers.
- ✓ To ensure that food law operating in a country are complied with.

Dimensions of Quality

- ✓ The definition of quality must take into consideration its dimensions
- ✓ These dimensions include strategic as well as operational aspects that play an important role in characterizing the product presented to customers
- ✓ In this context, there are two types of quality:
 - ✓ *Design*
 - ✓ *Conformance*

Quality Concept for Food

- ✓ *All of the intrinsic quality factors are influenced by:*
 - the quality of raw materials
 - the composition of the food
 - processing methods
 - storage method & conditions

Standards of Quality

- ✓ Legal Standards
- ✓ Company or Voluntary Label Standards
- ✓ Industry Standards
- ✓ Consumer or Grade Standards