

Lewa Educational Union's
Dr. Annasaheb G. D. Bendale Mahila Mahavidyalaya, Jalgaon.

Certificate Course
(Self Finance)

Food Adulteration and Analysis Techniques

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Dr. Annasaheb G. D. Bendale Mahila Mahavidyalaya, Jalgaon.

Introduction:

Dr. Annasaheb G. D. Bendale Mahila Mahavidyalaya, Jalgaon is a well known institute for women's education in Jalgaon district which provides education in Arts, Commerce and Science stream at U.G. and P. G. level to educationally, economically, socially backward students. Since 1992 many students graduated with B.Sc. in Botany, Zoology, Chemistry, Mathematics, Physics and Computer Science.

The college has decided to introduce new certificate course in Food Adulteration from the academic year 2021-22. The duration of course is minimum 3 months with student intake capacity up to 20.

Objectives of the Course:-

1. To develop basic understanding regarding food adulteration.
2. To create awareness regarding food adulteration practices.
3. To identify the adulterants present in the sample and compare it with standard products.
4. To protect the public from poisonous and harmful foods.
5. To teach the students to determine quality of food in day to day life.
6. To protect the interest of consumers by eliminating fraudulent practices.

Instructional Design:-

This course is of 3 month duration which includes theory classes, practicals and assignments.

Course Structure and Examination Scheme:-

Course Name: **Food Adulteration and Analysis Techniques**

	Theory	Practical	Evaluation
External	40	20	60
Internal	20	20	40
Total	60	40	100

Theory

Unit I: Food Additives and Adulteration

Unit II: Food laws and Standards

Practical Course: Experimentation Techniques of adulterations

Eligibility: Any student having passed 10+2 pattern in any stream

Intake capacity: 20 Students

Duration: 30 hours

Fees: 500 Rs/-

Syllabus

Food Adulteration and Analysis technique

Theory:

Unit I: Food Additives and Adulteration

10 Hours, 20 M

- A. Food adulteration: definition, incidental and intentional adulteration, common adulterants in food, health hazards and risks.
- B. Introduction to quality aspects related to food and food products.
- C. Food Additives: Antioxidants, preservatives, nutrient supplements, emulsifiers, thickening agents, sweeteners, colouring and flavoring agents.

Unit II: Food laws and Standards

10 Hours, 20 M

- A. Food laws: voluntary and mandatory- national and international.
- B. Role of voluntary agencies and legal aspects of consumer protection, Good Manufacturing Practices (GMP), Hazard Analysis and Critical Control Points (HACCP).
- C. Food standards: PFA, FPO, AGMARK, ISI, Role of Food and Drugs Administration (FDA), Food inspector and others.

Practicals: (Any Five)

10 Hours, 20 M

- 1. Determination of Adulterants in Spices.
- 2. Determination of Adulteration in grains/pulses/cereals.
- 3. Detection of mashed potatoes, other starches and presence of other oils in ghee/ butter, coconut oil and edible oil.
- 4. Determination of fat content from Milk sample.
- 5. Detection of washing soda, chalk powder and water insoluble substances in sugar.
- 6. Detection of clay, chicory powder and iron fillings in Coffee and tea.

References:

- 1. Warner, J.M. 1976. Principles of Dairy Processing. Wiley Eastern Ltd. New Delhi
- 2. Srilakshmi. Food science. New Age International Pvt. Ltd. New Delhi, 1997.
- 3. Manay. Food, facts and principles. New Age International Pvt. Ltd. New Delhi 2000
- 4. Frazier. Food microbiology. McGraw Hill, New York, 1998.
- 5. Egan, Kiv, Sawyer. Pearson's chemical analysis of foods. Addison Wesley England, 1991.
- 6. Joslyn. Methods in food analysis.
- 7. Jacob. Chemical methods in food analysis. CBS Publications and Distributors, Delhi, 1999
- 8. ISI publications.
- 9. PFA Act, 1954.