

**GUJARAT UNIVERSITY**  
**B. Sc. SEMESTER IV**  
**CHEMISTRY**  
**ACCORDING TO NEP - 2020**

**Course Structure with respect to credit, hours and marks**

Course Type	Course	Credit	Work Hours/ week	Exam hours	Marks		Total Mark
					Internal	External	
Skill Enhancement course	SEC- CHE - 246 Analysis of Food	2	1+2 = 3	2	25	25	50

**SEC- CHE - 246**  
**Skill Enhancement Course (CHEMISTRY)**  
**ANALYSIS OF FOOD**

**Learning objectives:**

- To know the importance of Nutrition value of different foods.
- To study about various methods of food processing.
- To Know about the food adulteration.
- To learn about the different methods of food preservation.

**Learning outcomes:**

**By the end of the course, the students will be able to:**

- Take healthy diets in their regular life.
- Store different types of foods.
- Preserve the different types of foods.
- Detect adulteration with rapid test in different foods.

**B. Sc. SEMESTER IV  
CHEMISTRY  
SEC – CHE - 246  
SKILL ENHANCEMENT COURSE  
ANALYSIS OF FOOD**

**UNIT I: Analysis of Food**

**[25 Marks]**

**[15 Hours]**

Introduction, Nutrition Value Of Food, Nutrition Value Of Carbohydrate, Nutrition Value Of Protein Foods, Healthy Fats And Dairy Foods, Fruit And Vegetable Benefits, Food Processing, Advantages Of Food Processing, Disadvantages Of Food Processing, Methods Of Food Processing, Food Adulteration, Food Preservative And Colouring Matter, Advantages Of Food Preservation, Disadvantages Of Food Preservation, Some Traditional Preservation Techniques, Some Modern Industrial Techniques.

**UNIT II: PRACTICALS: Food adulteration**

**[25 Marks]**

**[30 Hours]**

- (1) Tests For Adulteration In Milk And Milk Products.
- (2) Tests For Adulteration In Oils And Fats.
- (3) Tests For Adulteration In Sugars And Confectionery.
- (4) Tests For Adulteration In Food Grains And Its Products.
- (5) Tests For Adulteration Salt, Spices And Condiments.
- (6) Tests For Adulteration In Fruits And Vegetables.
- (7) Tests For Adulteration In Coffee And Tea.

## REFERENCE BOOKS

1. **‘Analytical Chemistry’** by Krishna Chattopadhyay, Manas Mandal, CBS Publishers and Distributors Pvt Ltd, NEW Delhi, 2022.
2. **‘Food Science’** by Srilakshmi B, 7<sup>th</sup> Edition, New Age International Ltd, Delhi, 2018.
3. **‘Textbook Nutrition: A lifecycle Approach’** by Chadha R and Mathur P, (Eds.), Orient Black swan, ISBN 978-8125059301, 2015.
4. **‘Detect Adulteration with rapid test (DART)’** by Food Safety and Standards Authority of India (FSSAI), Ministry of Health and Family Welfare, Government of India.