

DEPARTMENT OF CHEMISTRY			Certificate Course				
Course Type	Course Code	Course Title	Credits	Total Contact Hours	CIA	Ext	Total
Certificate Course		Certificate course in analysis of adulterant and preparation of household product	2	30	50	50	100

Objectives:

The Objective of the course is to

- To learn the principle of food chemistry*
- To detect the adulterant milk products*
- The awareness of contaminant food*
- The gaining awareness of household products*
- To learn the manufacturing process of household products*

Unit-I –ADULTRATION

Adulterations: definition, classification, adulterants, types of adulterants- intentional, incidental, Filth – deleterious- economical – objectionable- microbial adulterant- injurious adulterants/contaminants in foods and their health effects, prevention of food adulterants.

Unit-II- Detection of Adulterant in Milk and Milk Product, oil & fats, sugar & confectionaries

Detection of water in milk- detergent milk and milk product- detection of starch in khoya, chenna, paneer- detection of mashed potatoes, sweet potatoes, and other starches in ghee and butter. Detection of other oils in coconut oil based on solidification. Detection of sugar solution honey (using water, burning)- Detection of chalk powder in sugar, pithi sugar-jaggery.

Unit-III- Detection of Adulterant in food grain, spice and contaminant

Detection of extraneous matters- dust, pebble, stone, straw, weed seed, damaged grain, insect, rodent hair, and excreta. Detection of dhatura- bran-khesri dhal- added colour- iron filling in atta, maida, suji- turmeric in rice- rhodamine B in ragi- filth resin, soap stone in asafoetida- papaya seed in pepper- dye in chilli – cassia bark in cinnamon- charcoal in cumin- argemone in mustard.

Unit-IV-Preparation of following household products

Preparation of white phenol, soap oil, cleaning powder, shampoo

Unit-V- Preparation of following household products

Preparation of the candle, ink, sattu neelam and washing powder

Books for study:

1. A.K. Jain, Environmental Engineering, 2018, Krishna Publishing
2. S.H.H. Shinawy, A.M.E. Mohamed, Detection of adulteration in milk and some dairy products, 2018, DOI:10.21608/avmj.2018.166615.
3. H.D. Belitz, W. Grosch, P. Schieberle, Food Chemistry, 4th Revised and extended edition, Springer, 2009, ISBN: 978-3-540-69934-7.

Books for study:

1. R.J. Krisztal, Nursing home litigation; Pretrial practice and trials, Second Edition, ISBN-13: 978-1930056480.
2. P.J. Carter, Workbook to accompany Lippincott's Text book for nursing assistance, 7th edition.