

Loknete Dr. Balasaheb Vikhe Patil (Padma Bhushan Awardee) Pravara Rural Education
Society's

ARTS, COMMERCE & SCIENCE COLLEGE, SATRAL

Tal- Rahuri, Dist- Ahmednagar-413 711

NAAC Accredited B⁺⁺ Grade

DEPARTMENT OF CHEMISTRY

Certificate Course

Name of certificate course – Household Chemicals

Total Duration – 30 Hrs. (2 credits)

Venue – Arts, Commerce and Science College, Satral

Student Age Group – 21 Yrs

Time – Theory: 2 Hrs / Week

Practical: 1 / Week

Objectives:

- To enhance practical knowledge.
- To develop application aspect of chemistry in carriers.
- To motivate self-employment ability.
- To create self-efficiency.

Outcome:

Students will gain and understanding of:

- Chemical changes and strategies to maintain the condition for the preparation.
- Students will capable to apply aspects of chemistry in carriers.
- The course will useful for self employability.

Course Syllabus:

Sr. no.	<u>Contents</u>	Total
1.	Introduction to soap and detergent; Soap and fatty acids, manufacturing technology, raw materials, functional properties of soap, manufacturing process, saponification reactor, soap separator, soap extraction, Detergents; characteristics of surfactants, raw material for surfactant production production of synthetic detergents, washing actions of soap and detergents.	05
2.	Preservatives-Introductions, types of preservatives, functions of preservatives, ingredients in preservatives	02
3.	Chemistry of sanitary chemicals-Introduction, chemicals used in sanitation,	04
4.	Manufacturing and marketing-Introduction, difference between manufacturing and marketing, importance of marketing in manufacturing	04
<u>Practical's</u>		
1.	Preparation of sanitary acids	03
2.	Preparation of liquid soap	03
3.	Solid soap manufacture	03
4.	Preparation of shampoo	03
5.	Preparation of vinegar	03


- **Evaluation – 50 Marks**


- **Evaluation Process- Theory: 25 Marks**

Practical: **25 Marks**

- **Reference Books:**

- Industrial chemistry, B.K .Sharma, Goel Publishing house, 18th edition (2014).
- Preservatives for cosmetics, Third Edition by David C. Steinberg.
- Text book of sanitary and Applied Chemistry by E.H.S Bailey.
- Marketing for Manufacturers by Carl Jarvis.


Dr. B. K. Salalkar
Subject Expert


Dr. A. S. Waghmare
Subject Teacher