

**Rayat Shikshan Sanstha's**  
**Rajarshi Chhatrapati Shahu College Kolhapur**  
**Department of Chemistry**

**"CERTIFICATE COURSE IN PREPARATION OF HOUSEHOLD CHEMICALS"**

**Syllabus-**

**Objective:**

1. To make availability of self employment.
2. To develop confidence for doing job.
3. To develop skills required for job.
4. To develop skills of market survey.
5. To develop knowledge of domestic chemicals.
6. To develop skill of subject knowledge on applied basis.

**Course Duration-**03 Months

**Fees-** Rs 300

**Syllabus**

**Paper- I: - Basic concept of household chemicals [30 Marks]**

**Unit I:- Basic Concepts in Domestic chemicals [ 10 Marks ]**

- 1.1 Mole concepts.
- 1.2 Concentration
- 1.3 Units of concentration
- 1.4 Normality
- 1.5 Molarity
- 1.6 Molality
- 1.7 Mole Fraction
- 1.8 Percentage composition by volume
- 1.9 Percentage composition by weight.



## Unit II:- Domestic chemicals

[ 10 Marks ]

- 1.10 Introduction of House chemicals or domestic chemicals and their uses.
- 1.11 Sanitary acids
- 1.12 Phenyl
- 1.13 Liquid soaps; Lysol, Dettol, Savalon.
- 1.14 Acids –bases
- 1.15 General introduction
- 1.16 Theory
- 1.17 Types and Strength of acids
- 1.18 Cleaning action of acids and Handling and precautions
- 1.19 Antiseptic and Disinfectant

## Unit III: - Titration

[ 10 Marks ]

- 3.1 General introduction
- 3.2 Types of titration
- 3.3 Indicators(Artificial and Natural)
- 3.4 Theory and types.

## Paper- II :- Mechanism, precaution and cleaning action of household chemicals [ 30 Marks]

### Unit I: - Soaps and detergents

[ 20 Marks ]

- 1.1 Introduction of Soaps
- 1.2 Theory and types
- 1.3 Raw materials
- 1.4 Types of soaps
- 1.5 Manufacture of soaps, Hot Process
- 1.6 Cleaning action of soaps
- 1.7 Introduction of Detergents
- 1.8 Raw materials
- 1.9 Types of detergents, Cationic, anionic, amphoteric and neutral



- 1.10 Preparation of teepol and deriphath.  
1.11 Comparison between soaps and detergents.

## Unit II: - Phenols

[ 05 Marks ]

- 2.1 Introduction of Phenol  
2.2 Methods of synthesis of Phenols  
2.3 Physical properties  
2.4 Chemical properties  
2.5 Uses

## Unit III: - Phenyl

[ 05 Marks ]

- 3.1 Preparation  
3.2 Ingredients and uses  
3.3 Advantage and drawback of phenyl.

## Paper- III :- Practical's

[ 40 Marks ]

- 1) Volumetric titration
- 2) Conduct metric titration
- 3) Preparation of standard solutions
- 4) Preparation of phenyls
- 5) Preparation of dyes
- 6) Preparation of Soap
- 7) Preparation of Detergent Powder
- 8) Preparation of Liquid Soap
- 9) Preparation of Neel
- 10) Preparation and uses of Natural Indicators



Dr. Kishor Vinayak Gaikwad  
(Course Coordinator)

