



DEPARTMENT OF
POLYMER CHEMISTRY
N.A.M COLLEGE
KALLIKKANDY

ADD-ON COURSE ON Health Care & Hygiene Products

2021-22



Offered by
Department of Polymer Chemistry
NAM College Kallikkandy

Features

- Diploma in Detergent and Cosmetic science is an add on course of 60 hours duration, offered by the Department of Polymer Chemistry.*
- This course aims at equipping the students in theoretical as well as practical knowledge in the field of detergents, cosmetics and sanitizers.*
- This course also provides hands-on experience in the manufacture of these products.*

Eligibility: Plus two qualification in science stream with Chemistry as one of the compulsory subjects.



**NAM COLLEGE
KALLIKKANDY**

Accredited by NAAC with 'B' Grade
Affiliated to Kannur University

For Details and Registration:

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(Course Co-ordinator & HOD)

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ACPC2101: ADD ON COURSE IN HEALTH AND HYGIENE PRODUCTS

Learning Outcomes

On successful completion of this course, students should be able to

- *Know basic idea of composition of detergents*
- *Obtain distinctive knowledge of cosmetics and shampoos*
- *Realize the components in different hygiene products*
- *Attain practical skill in making soaps, detergents and sanitizers*

COURSE SYLLABUS

Unit 1: Conformation of Detergents (14 hr)

Cleaning action, preparation of different types of detergents. Chemical composition of soaps, fatty acids and oils. Hard and soft soap, saponification and neutralization, calculation of various physicochemical characteristics. Determination of total fatty matter (TFM)

Unit 2: Manufacture of Shampoos & Cosmetics (13 hr)

Chemistry of Sodium alkyl sulphates, surfactants, classification of surfactants, cationic and anionic detergents, biodegradable detergents. Advantages and disadvantages of synthetic detergents over soaps. Technology of production of cosmetics, shavings creams, lotions, hair oils.

Unit 3: Hygiene Products (13 hr)

Composition of sanitizers, function of ethanol and of isopropyl alcohol in sanitizers, hydrogen peroxide, Glycerol and Water. Method of preparation of sanitizers and hand rub (Laboratory and industrial) Production and storage facilities, additives in gelling agents.

Unit 4: Practical (20 hr)

Laboratory scale preparation of soaps, detergents and sanitizers. Determination of iodine value of oil and saponification value, determination of moisture content of fats and oils

Evaluation pattern

Type of questions and marks in the examination

	Total questions	No. Of questions to be answered	Marks of each questions	Total marks	Practical
Very short answer	4	3	1	3	15
Short answer	6	4	2	8	
Short essay/problems	4	2	3	6	
Essay	3	2	4	8	
				25	
					Total 40

References

1. B.K. Sharma industrial chemistry 11th Edition, Goel Publishing House, Meerut, 2000
2. C.N.R.Rao, University General Chemistry, Macmillan, 3rd edn., John Wiley 2001
3. Essentials of environmental studies, S.P. Misra & S.N.Pandey
4. Engineering Chemistry, Dr. B.K. Sharma
5. W. D. Kingery, H. K Bowen, D. R Uhlmann: *Introduction to ceramics*, Wiley Publishers, New Delhi
6. J.A Lee, Scientific Endeavor, Addison Wesley Longman (Appendices 1, 2 and 4)
7. Engineering Chemistry, Jain & Jain, Dhanpat Rai Publishing Company