About the Course

Diploma in Detergent and Cosmetic science is an add on course of 60 hour 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 qualifications in science stream with Chemistry as one of the compulsory subjects.

Course starts: July of every Academic Year

For Details and Registration

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N.A.M. COLLEGE KALLIKKANDY

قل رب زدني علما

DEPARTMENT OF POLYMER CHEMISTRY
N.A.M COLLEGE KALLIKKANDY

ADD ON COURSE

2020-21

Diploma
In Detergent And Cosmetic Science

Offered by
Department of Polymer Chemistry
NAM College Kallikkandy

N A M COLLEGE KALLIKKANDY, DEPT. OF POLYMER CHEMISTRY

ADD ON COURSE (Duration 60 hr)

VACPC01: DIPLOMA IN DETERGENT AND COSMETIC SCIENCE

2020-21

Learning Outcomes

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

- *Understand basic idea of composition of soaps*
- *Acquire distinctive knowledge of detergents and cosmetics*
- *Familiarize the components and production of sanitizers*
- *Acquire practical skill in making soaps, detergents and sanitizers*

COURSE SYLLABUS

Unit 1: Composition of Soaps (12 hr)

History of soaps, chemical composition of soaps, faty acids and oils, hard and soft soap, saponification and neutralization, cleaning action, preparation of different types of soaps. evaluation of various physicochemical characteristics. Determination of total fatty matter (TFM), total alkali, percent (%) of chloride and pH, Analysis of moisture content. WHO standards.

Unit 2: Production of Detergents (7 hr)

Composition of detergents, Sodium alkyl sulphates, biodegradable detergents, surfactants, classification of surfactants, cationic and anionic detergents. Advantages and disadvantages of synthetic detergents over soaps, Essential Oils and Cosmetics: Petrochemicals and oleochemicals.

Unit 3: Composition of Cosmetics (7 hr)

Technology of production of cosmetics, shavings creams, lotions, hair oils, tooth paste, tooth powder, lipstick, face powders, herbal cosmetics. Preparation of creams, hair oils, shampoos and toothpaste.

Unit 4: Sanitizers (14 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 gelling agents, Colorants, fragrance etc. WHO-recommended formulations of Sanitizers and hand rub.

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