

APPLIED CHEMISTRY (BS-ADP 5th Semester)

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| Module Code: | Chem-315 |
| Module Title: | Applied Chemistry Lab |
| Name of Scheme: | BS-ADP 5th Semester |
| Department: | School of Chemistry |
| Faculty: | Science |
| Module type: | Optional |
| Module Rating: | 1 credit |

OBJECTIVES

This course content will increase the working skills of students regarding water testing labs and cosmetic industries.

SYLLABUS OUTLINE:

1. Preparations:

Detergent and cosmetics (Cold cream, shampoo and vanishing cream)

2. Titrimetry:

Estimation of water hardness by complexometry

Estimation of TSS and TDS in water

Determination of acidity, alkalinity, Free CO₂ in water

Determine the %age purity of the Commercial sample of sodium chloride.

3. Spectrophotometry:

Determination of the of KMnO₄, K₂Cr₂O₇ and CoCl₂ (λ_{\max} and Beer's law verification)

RECOMMENDED BOOKS:

1. Applied Chemistry, Haq Nawaz Bhatti and Muhammad Salman, 2017, Caravan Book Publisher, Pakistan.
2. Unit operations in Chemical Engineering, Chattopadhyay, Khanna Publishers, Delhi-6.(1993).
3. Hand Book of Industrial Chemicals, By SIRI Board of Consultants and Engineers,
4. Small Industries Research Institute, New Delhi (1995)
5. Small Medium and large Scale Industries, A.K. Sirivastawa, Small Industries Research Institute, New Delhi (1996).
6. The Chemistry of Cement, H.F.W. Taylor, Academic Press, London, 1964.
7. Shereve's Chemical Process Industries, 5th Ed.1975 by G.T.Austin McGraw Hill Book Co. New York.
8. Industrial chemistry, B. K. Sharma Krishna Prakashan Media (P) Ltd., Ed-15 (2006)