

*After undergoing the course, students will be able to:*

- CO 1. Develop skills required for biochemical qualitative and quantitative work
- CO 2. Learn methods to proteins, carbohydrates, lipids and NPN substances.
- CO 3. Operate instruments used in biochemistry labs
- CO 4. **Conduct biochemical tests to diagnose some metabolic diseases.**

1. Handling of pipette and understanding accuracy and precision of pipette
2. Qualitative analysis of carbohydrates: monosaccharides, disaccharides and polysaccharides
3. Qualitative tests for the proteins,
4. Qualitative tests for lipids and NPN substances.
5. Preparation of buffers and its pH determination
6. Preparation of normal, molar and percent solutions
7. Understand serial dilutions
8. Estimation of amino acids and nitrogen analysis by Micro-Kjeldahl method
9. Enzyme activity: Effect of temperature, pH, Km determination
10. Spectrophotometric estimation of metabolites: serum protein, sugar, creatinine, urea, uric acid
11. Colorimetric analysis of vitamins, ascorbic acid etc.,
12. Estimation of plant phenolics
13. Tests to measure glycemia, proteinuria etc

**Course Outcomes:**