

**BIOCHEMISTRY (BS-ADP 5<sup>th</sup> Semester)**

<b>Module Code:</b>	<b>Chem-318</b>
<b>Module title:</b>	<b>Bio Chemistry Lab</b>
<b>Name of Scheme:</b>	<b>BS-ADP 5<sup>th</sup> Semester</b>
<b>Department:</b>	<b>School of Chemistry</b>
<b>Faculty:</b>	<b>Science</b>
<b>Module Type:</b>	<b>Optional</b>
<b>Module Rating:</b>	<b>1 credit</b>

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**OBJECTIVES**

This course will provide the grounds for distinction between various carbohydrates. In addition, it will help students to apply these practical methods on sugar level determination of human's blood and urine.

**SYLLABUS OUTLINES**

- Awareness about the preparation of the laboratory solution and pH determination.
- Qualitative and Quantitative tests of various Carbohydrates; Distinction between pentoses and hexoses, aldoses and Ketoses, reducing and non-reducing sugars, mono and polysaccharides.
- Qualitative tests for polysaccharides; starch, glycogen and cellulose.
- Extraction of starch from plant source and its confirmatory tests.
- Acid and enzymatic hydrolysis of polysaccharide.
- Analysis of organic constituents in human urine.
- Determination of sugar level in blood and urine.
- Estimation of glucose in urine.

**RECOMMENDED BOOKS**

1. Practical clinical Biochemistry by Varley. Pub: C B S Publishers An
2. Introduction to Practical Biochemistry by D. T. Plummer Pub: McGrawHill
3. Varleys Practical Clinical Biochemistry 6th Edition (English, Hardcover, Alan H. Gowenlock)
4. A biologist's guide to Principles and Techniques of Practical Biochemistry by Bryan L Williams and Keith Wilson Pub: Edward Arnold Ltd.