





- B.Sc.Chemistry Salahaddin University 01.07. 1996.Rank 1
- B.Sc.Chemistry Science Bagdad University in 2002.
- Director Vice president at Salahaddin University for **Six** years 14.06.1998- 12.04.2003.
- Director Dean of the Faculty of Science and Faculty of Physical Education Office for three years.
  - M.Sc. in Bio Chemistry, 11.02.2013-05.03.2015  
University of Near East-Cyprus  
(Thesis: Role Of Leptin In Menopausal Women).  
Supervisor: Prof.Dr. Guldal Mehmetcik  
PhD student at chemistry dep./college of Education-  
Salahaddin University  
Supervisor: Prof.Dr.Parween Abdusamad

	<p><b>Teaching Experience:</b>  Assistant lecture, University of Salahaddin Chemistry Department, 16 years  Biochemistry Lab., 2014 – Present  Laboratory instructor for undergraduate chemistry and Biology Dept.  Biochemistry preparation for 3<sup>rd</sup> stage of chemistry.</p> <p>No. of Presentations: (20).  Conference Paper:(1)  DNA Replication &amp; Gen cancer  International Scientific Conference Of Near East University- Cyprus, May 20-22.3, 2014.  Number of scientific research published:5  Number of scientific papers registered for publication :3</p>
<p><b>9. Keywords</b></p>	<p>Carbohydrate,Lipid,Protein,Enzyme,Vitaminic and Hormons</p>
<p><b>10. Course overview: Practical Biochemistry</b></p> <p>Biochemistry can defined as the science concerned with the chemical with the chemical basis of life. The cell is the structural unit of living system ,thus biochemistry can also described as the science concerned with the chemical constituents of living cells and with the reactions and processes they undergo. By this definition, biochemistry encompasses large areas of cell biology, of molecular biology, and molecular genetics.</p> <p>Instruction in the laboratory methods of Biochemistry has a purpose beyond the obvious one of providing practical training essential to the prospective chemist. In affording an opportunity for the student to become acquainted with a number of representative Bio compounds, to observe their special properties and characteristic behaviours, and to have some experience with the methods of handling them, such work forms a supplement to a lecture course which is essential to a full understanding and appreciation of the subject. With thought and study much information regarding the general theory of the bio compounds can be gained in the biochemistry laboratory, Bio compounds present such an interesting array of properties and reactions, , that work in the bio laboratory is usually found to be a stimulating experience. For those who become particularly interested and who develop suitable proficiency there is a wide field even in an elementary course for special experimentation.</p> <p>Preparation for laboratory work:</p> <p>In order to work efficiently it is quite essential to study the experiments in advance and to lay definite plans for the utilization of the time available. Certain operations, such as the heating of a reaction mixture, often require definite,</p>	

stated periods of time and it is obviously necessary to arrange for this. It often happens that there are periods in an experiment during which the operator's full attention is not required, and the intelligent worker makes good use of these periods by working on other experiments, cleaning apparatus, obtaining supplies for future operations or otherwise busying himself.

**11. Course objective:**

**During this course, the students will have the opportunity to become conversant with and knowledgeable about biochemistry of the human body so that she/he may be able to:**

1. Understanding the structure of Carbohydrate, Lipid, Protein, Enzymes and Nucleic acids.
2. The function of each macromolecule will be studied. The site of synthesis and the actions of each one will be studied.
3. Determine the structure of organic compounds.
4. Name bio compounds based on their structure.
5. A number of metabolic pathways will be studied and how the energy are produce
6. The majority of lecture information will come from power point presentation with using whit board also.
7. Most of the information from each lecture will be from the reading assignment .However, additional material will be covered in class.
8. A solid background in cell biology will be important for understanding the lectures. The material in the course will be very current and you will be responsible for doing some independent research to answer question.
9. By the end of the semester you should have a very good understanding of general biochemistry.

**The specific objectives of the study were:**

1. To evaluate the types of objectives of the selected activities
  2. To assess the inquiry levels assigned to the laboratory tasks
  3. To measure the relevance of the activities in terms of the recent concern, students
- In order to achieve these objectives, the study posed the following research questions:
1. What types of objectives are served by the activities included in the course material?
  2. What types of laboratory activities dominate the course Practical Bio Chemistry?
  3. How do students and laboratory instructors react to what should be the Objectives of the laboratory tasks?
  4. What levels of inquiry are assigned to the laboratory tasks?



**15. Student learning outcome:**

- The structure and composition of biomolecules.
- The major property of protein, Carbohydrate ,Lipid and Enzymes.
- Role of co-enzyme cofactor in enzyme catalyzed reaction
- Data and estimate important parameter (Km,Vmax,Kcat ....etc.)to define. - Increased efficiency by division of labor.
- Have a good knowledge about biochemistry and how it related to cell biology.
- Opportunity to compare results and to interpret data within the group.

**Course Reading List and References:**

- 1- David Nelson and Micheal cox,Lenger Principle of Biochemistry ,Fifth edition W.H Freeman &Co.,Newyork(2010).
- 2- U.Satyanarayana &U.Chakrapani,Biochemistry,(NTR University of Health Science)Vijayawada,A.P.,India(1999-2007).
- 3- Pamela C.Champe&Richard A.Harvey, Biochemistry, 2nd edition J.B.Lippincott Company Philadelphia(1994).
- 4- Biochemistry in the Lab A Manual for Undergraduates By :Benjamin F. Lassetter , 2020
- 5- PRACTICAL HANDBOOK OF BIOCHEMISTRY: LAB MANUAL Paperback – 17 April 2020
- 6-Biochemistry (Lippincott Illustrated Reviews Series) 7th Edition 2008

Authors: Richard H Langley, John T. Moore  
Genre: Dissertation

17. The Topics:	Lecturer's name
Course programmed	Pshtiwan A.Yousif
18. Practical Topics	
Libratory Roles and safety ..... 1 <sup>st</sup> week Qualitative tests for carbohydrates .....2 <sup>nd</sup> week <b>Exp.1:</b> 1.Molisch’s Test 2.Benedict’s test 3.Barfoed’s Test 4.Seliwanoffs Test 5.Bial’s Test	Pshtiwan A.Yousif (2 hrs)  19/9/2022





## **19. Examinations: Course 1**

### **Definitions:**

1. Trioses sugar, tetroses sugar, pentose sugar, hexose sugar, monosaccharide , disaccharide , oligosaccharide, reducing sugar , non reducing sugar, Aldose sugar and ketose sugar.
2. Trioses, and tetroses, give negative result with Molish's Test.
3. **What are roles of Copper sulphate, sodium carbonate and sodium citrate in Benedict 's test**
4. **Write the mechanism of Benedict's test**
5. **Maltose and Sucrose are disaccharide. Maltose is a reducing sugar but Sucrose is non-reducing sugar. Why**
6. **All Polysaccharides are non-reducing sugars. Explain.**
7. **What are roles of copper acetate and glacial acetic acid in Barfoed's test**
8. **In Barfoed's test, Do not boil the solution for longer period**
9. **Sucrose will give positive result Seliwanoff's test but with Benedicts test will be negative.**

10. Explain Mucic acid test then write types of oxidation agent.
11. Glucose, fructose and mannose are same osazon product. Why.
12. How glucose, fructose and mannose are distinguished by Osazon test
13. Why non-reducing sugar cannot form osazon product
14. Draw the structure of Glucose , fructose , mannose , galactose
15. Draw the structure of maltosazone, Glucosazone and lactosazone
16. Sucrose, a non-reducing sugar, would not be expected to produce an osazone when treated with phenylhydrazine but osazone does form after 30 min. Explain.
18. Draw the structure of gluconic acid, glucouronic acid and saccharic acid
19. Explain role temperature , acid concentration and type of acid on hydrolysis of Disaccharides
20. Definition: Glycosidic bond
21. Write type of glycosidic bond in maltose, lactose and sucrose.
22. Draw the structure of maltose, lactose and sucrose.
23. How can the iodine test be used to distinguish between amylose and glycogen?
24. How do the results of the iodine test indicate that hydrolysis of starch occurred?
25. Design the Experiment which iodine test are used as indicator
26. After hydrolysis polysaccharides, sodium carbonate should add before Benedict's test.
27. Methionine does not answer this test.
28. Make the comparison between the followings:-
29. Write one detection equation for the following:-
30. Write an example for each of the following (just by equation):-
31. Detect true & false for each of the following:-
32. Choose the correct answer for each of the following:-

**20. Extra notes:.**

**21. Peer review**



*Dr. parween Abdulsamad*