

Course Title	Experimental techniques in Biochemistry (2)	
Course Code	BC5106	
Academic Year	2016/2017	
Coordinator	Prof. Ehab M. M. Ali	
Other Staff	Dr Kareem Samy	
Semester	Semester 2	
Level	Level one	
Pre-Requisite	BC5105	
Course Delivery	Lecture	14 x 1h lectures 12 x 3 h practical
Parent Department	Chemistry Department	

Contents

	Experimental techniques in Biochemistry (2)
Lecture 1	Introduction of immunochemistry
Lecture 2	Purification and fragmentation of immunoglobulins
Lecture 3	Immuno-precipitation
Lecture 4	Labelling antibodies
Lecture 5	Immunoblotting
Lecture 6	Immunoassays
Lecture 7	Immunohisto/cytochemistry
Lecture 8	Mid term
Lecture 9	The cell culture laboratory and equipment
Lecture 10	Safety considerations in cell culture
Lecture 11	Aseptic techniques and good cell culture practice
Lecture 12	Types of animal cell and their characteristics in culture
Lecture 13	Bacterial cell culture
Lecture 14	Revision
Part	2
Practical	
Week 1	Extraction and estimation of chlorophyll and Carotenoids in different sources in plants
Week 2	Extraction and estimation of Poly phenolic compounds and antioxidants from different sources of plants
Week 3	Estimation of Thiobarbituric reactive substance and antioxidants by using ox-brain
Week 4	Isolation and estimation of glycogen from liver; Estimation of fructose and cellulose in plants
Week 5	Isolation and estimation of casein, lactose and fat from dried milk
Week 6	Isolation and estimation of lipids, cholesterol, lecithin (phospholipid) and fatty acid from egg
Week 7	Separation of amino acids by paper chromatography
Week 8	Extraction and estimation of plant DNA
Week 9	Synthesis of acetyl salicylate (aspirin) and methyl acetate (oil of wintergreen)
Week 10	Extraction and estimation of caffeine from tea; estimation of Tannins
Week 11	Isolation of cinamaldehyde from cinnamon
Week 12	Isolation of red pigment from Paprika and estimation of capsaicin