**Lab. classes notes**

**LC 1.** Features of conducting an experiment in a biochemical laboratory.

1. Safety rules in a biochemical laboratory
2. Reagents and equipment used in the biochemical laboratory

**LC 2.** Protein hydrolysis. Separation of amino acid mixture by partition chromatography on paper

1. Reaction of amino acids with formaldehyde
2. Protein hydrolysis
3. Separation of a mixture of amino acids by partition chromatography on paper

**LC 3.** Release of deoxyribonucleotides from the liver or spleen

1. Allocation of DNP
2. Deoxyribose determination

**LC 4.** Сolor reactions to antibiotics

1. Interaction of chloramphenicol with freshly precipitated Cu(OH)2
2. Alkaline cleavage of chloramphenicol
3. Interaction of tetracycline with concentrated sulfuric acid
4. Reaction of tetracycline with iron(III) chloride
5. Interaction of ampicillin with freshly precipitated Cu(OH)2

**LC 5.** Quantitative determination of rutin, vitamin C

1. Quantitative determination of rutin
2. Quantitative determination of vitamin C

**LC 6.** Determination of iron in food products

**LC 7.** Determination of chlorides, nitrates and nitrides in plants

1. Determination of chlorides in plants
2. Determination of nitrates and nitrides in plants

**LC 8.** Enzyme inhibitors. Inhibition of trypsin activity by trasylol

1. Saliva amilase inhibition
2. Inhibitory effect of ions on the dehydrogenase complex of potato
3. Inhibition of trypsin activity by trasylol
4. Heavy metals - enzyme inhibitors
5. Competitive inhibition of muscle succinate dehydrogenase activity

**LC 9.** Influence of temperature on the efficiency of enzyme catalysis. Influence of temperature on pepsin activity. Study of thermolability of invertase

1. Influence of temperature on the efficiency of enzyme catalysis
2. Influence of temperature on pepsin activity
3. Study of thermolability of invertase

**LC 10.** Influence of medium on the efficiency of enzyme catalysis. Influence of pH on trypsin activity. Influence of medium on catalase activity.

1. Influence of medium on the efficiency of enzyme catalysis
2. Influence of pH on trypsin activity
3. Influence of medium on catalase activity

**LC 11.** Determination of salivary amylase enzyme activity under the influence of medicinal preparations

**LC 12.** Influence of drugs on enzyme activity. Determination of amylase activity in cholensim tablets.

1. Determination of amylase activity in cholensim tablets

**LC 13.** Influence of drugs on enzyme activity. Study of the dynamics of triacylglycerol hydrolisys under the influence of drugs containing pancreatic lipase.

1. Study of the dynamics of triacylglycerol hydrolisys under the influence of drugs containing pancreatic lipase

**LC 14.** BLAST. Alignment of the six major drug metabolizing CYPs

**LC 15.** Structural Features of CYPs. Search for PDB structures and files. View structures using the JMol service

1. Structural Features of CYPs
2. Search for PDB structures and files
3. View structures using the JMol service