

Date Name Group

Lab report form for the practical lesson on biochemistry

Topic: Basic organic reactions

Task 1: Oxidation of alcohols

Objectives:

Three “unknown“ samples of alcohols are provided. Based on the oxidation reaction decide which one is methanol, 2-propanol or *tert*-butanol.

Principle:

(Write structural formulas of all three alcohols and the scheme of their oxidation.)

Results:

	A	B	C	W
Final color after reaction with KMnO ₄				
Schiff's test (pos./neg.)				

Conclusion:

Task 2: Coupling reactions of diazonium salts

Principle:

Results:

Conclusion:

Task 3: Reactions of carbonyl group

Principle:

(Provide a detailed description of chemistry of each of the used test.)

Write down results (pos./neg., record also the resulting color) of all tests for individual samples in the table provided. Conclude whether the obtained results meet your expectations.

Results:

	Acetone	Formaldehyde	Acetic acid	Water
Legal's test				
Fehling's test				
Tollens' test				
Schiff's test				

Perform the Tollens' test also with formic acid. Explain your observation.

Tollens+formic acid:

Conclusion:

Task 4: Esterification

Objectives:

Prepare either ethyl benzoate or methyl salicylate (salicylic acid methyl ester).

Principle:

(Using structural formulas write down the equation of esterification you performed.)

Observation:

Conclusion: