

Date ..... Name ..... Group .....

## **Lab report from the practical lesson on biochemistry**

*Topic:* Examination of urine

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### **Task 1: Qualitative estimation of pathological components of urine**

**Protein in urine – principles of test-tube reaction and diagnostic strips:**

**Blood in urine – principles of test-tube reactions and diagnostic strips:**

**Sugar in urine – principles of test-tube reaction and diagnostic strips:**

**Ketone bodies – principles of test-tube reactions and diagnostic strips:**

**Leukocytes and nitrite in urine – principles of diagnostic strip tests:**

**Results:**

1) Test tube reactions with known samples:

<b>Sample</b>	<b>Observed result</b>
<b>Test with sulfosalicylic acid</b>	
Urine with protein	
Physiological urine	
<b>“Benzidine” test</b>	
Urine with blood	
Physiological urine	
<b>Heitz-Boyer’s test</b>	
Urine with blood	
Physiological urine	
<b>Fehling’s test</b>	
Urine with glucose	
Physiological urine	
<b>Lestradet’s test</b>	
Urine with ketone bodies	
Physiological urine	
<b>Legal’s test</b>	
Urine with ketone bodies	
Physiological urine	

2) Examination of the unknown samples of urine with test tube reactions and the polyfunctional diagnostic strips:

	Sample 1		Sample 2		Sample 3		Sample 4	
	Test tube reactions	Dg. strip	Test tube reactions	Dg. strip	Test tube reactions	Dg. strip	Test tube reactions	Dg. strip
<b>pH</b>	×		×		×		×	
<b>Protein</b>								
<b>Hemoglobin</b>								
<b>Glucose</b>								
<b>Ketone bodies</b>								
<b>Leukocytes</b>	×		×		×		×	
<b>Nitrite</b>	×		×		×		×	
<b>Bilirubin</b>	×		×		×		×	
<b>Urobilinogen</b>	×		×		×		×	

**Evaluation and conclusion:**

## **Task 2: Demonstration of semiautomatic reflectance photometer for objective semi-quantitative analysis of urine with diagnostic strips**

**Principle:**

**Result:**

## **Task 3: Measurement of the relative specific gravity of urine with urinometer**

**Principle:**

**Result:**

## **Task 4: Examination of urinary sediment in phase contrast**

### **Results:**

Draw and/or describe the findings in the provided preparation of urinary sediment.