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

Lab report from the practical lesson on biochemistry

Topic: **Bile pigments, porphyrins**

Task 1: Diazotation and azo coupling
Principle:
(use structural formulas!)

Observation/Conclusion:

Task 2: Estimation of total bilirubin in serum
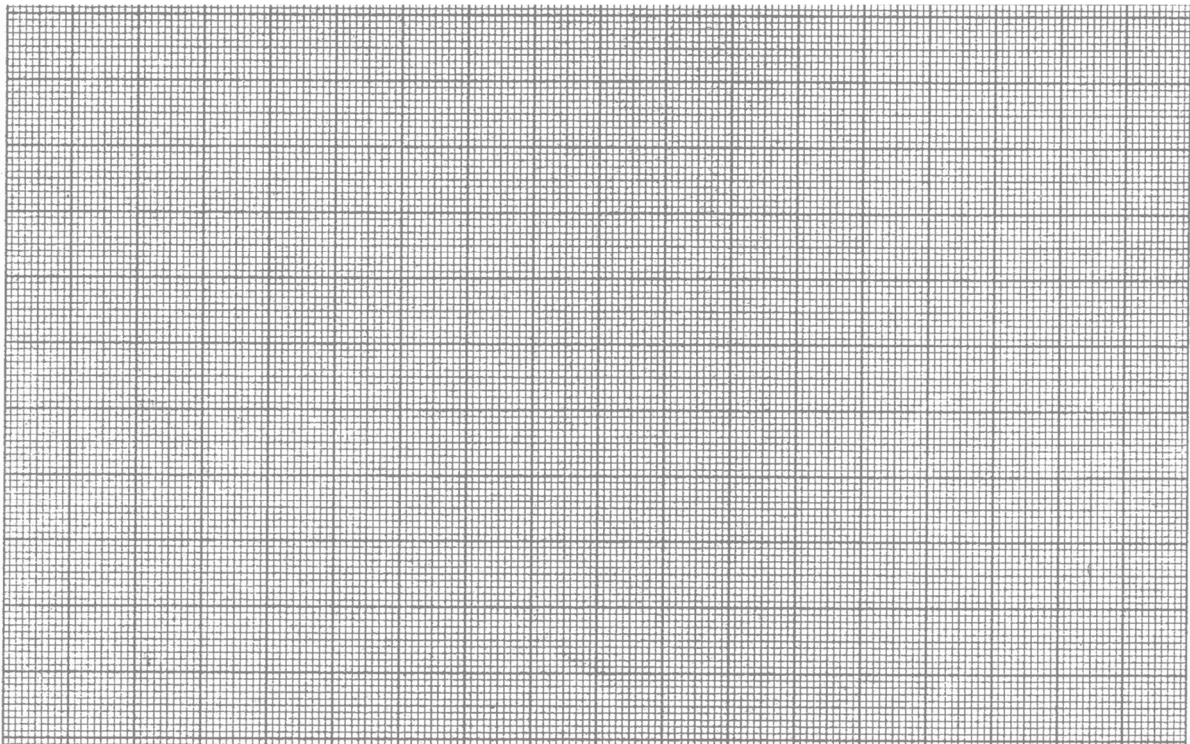**Principle:**
(use structural formulas!)

Results:

	Test tube No 1 Blank 1	Test tube No 2 Blank 2	Test tube No 3 Serum sample
Absorbance 540 nm	0		

Absorbance of the sample after subtraction of Blank 2: ……………………

Calculation:

a) **Reading from calibration graph**

Concentration of total bilirubin read from the calibration curve is...............................

b) **Using calibration factor**

	Standard no.				
	1	2	3	4	5
Bilirubin concentration (µmol/l)					
Absorbance (A540)					
Calibration factor f1-f5 (concentration/absorbance)					

$$\text{Average calibration factor} = \frac{f1 + f2 + f3 + f4 + f5}{5} = \text{…………………………}$$

S-Total bilirubin (µmol/l) = $A_{sample} \times$ average factor = ……………………………..

Conclusion:
(Is the measured values of total bilirubin within reference limits?)

Task 3: Estimation of direct bilirubin in serum
Principle:

Results:

	Test tube No 1 Blank 1	Test tube No 2 Blank 2	Test tube No 3 Serum sample
Absorbance 540 nm	0		

Absorbance of the sample after subtraction of Blank 2: ………………………

Calculation:

    a) **Reading from calibration graph**

Use the graph in the previous task

Concentration of direct bilirubin read from the calibration curve is.................................

    b) **Using calibration factor**

Use the factor calculated in the previous task

S-Direct bilirubin (μmol/l) = A_{sample} × average factor = ……………………………………..

Conclusion:
Is the measured value of direct bilirubin within the reference limits? If taken together with the value of total bilirubin, what type of icterus (pre-hepatic, post-hepatic or hepatocellular) is found?

Task 4: Fluorescence of hematoporphyrin
Principle:

Results/Observations: