# For General Medicine

## Topic of section: Electromagnetic waves. Light polarization

## Topic of lab work: Determination of the concentration of the optically active substance by polarizer

***Aim:*** determine the concentration of the optically active substance by polarizer.

***Theory:***

1. What is the optical activity?
2. How to determine a concentration of optically active substance by polarizer?

***Practical part:***

Table 1. Results of measurement

| Number of measurements, n | Cuvette length L, cm | Concentration C, % | Initial angle | Angle of rotation $\alpha_n=\varphi_n - \varphi_0$ | Calculations | |
|---|---|---|---|---|---|---|
| | | | | | Rotation constant $\alpha_0$ | Unknown concentration $C_x$ |
| Initial count | – | – | $\varphi_0=$ | – | – | – |
| 1 | 10 | 20 | $\varphi_1=$ | $\alpha_1=$ | $\alpha_0 =$ | – |
| 2 | 10 | $X_1$ | $\varphi_2=$ | $\alpha_2 =$ | – | $C_1 =$ |
| 3 | 10 | $X_2$ | $\varphi_3=$ | $\alpha_3 =$ | – | $C_2 =$ |

**Literature:**

1. Medical and biological physics for medical students (pages 171-172)