SPECTROPHOTOMETRY

Name: .....

Group:.....

Date: .....

1. Goal of the experiment:.....

   .....

2. Estimation of spectrum of the substance under study - finding out the wavelength sufficient for carrying out spectrophotometric analysis:

Wavelength λ, nm	460	470	480	490	500	510	520	530	540	550
Absorbance										

   Make a graph of the spectrum of the substance under study $A = f(\lambda)$

   The analytical wavelength:

   λ_{max} = ...

3. Results of measurements of the absorbance *A* and the transmittance *T* versus concentration:

	Concentration *c*	Δ*c*	Absorbance *A*	Δ*A*	Transmittance *T*	Δ*T*
1						
2						
3						
4						
5						
c_x						

4. Make graphs of the dependencies:

   a) $A = f(c)$,

   b) $T = f(c)$.

5. The slope *a* of the best-fit straight line of the dependence $A = f(c)$:

   $a \pm \Delta a$ = ...

   Value of the correlation coefficient *r* = ... (optional)

6. The unknown concentration c_x of the solution:

   a) from the graph $A = f(c)$ $c_x \pm \Delta c_x$ = ...

   b) calculated: Δc_x: .....
   formula and value

   $c_x \pm \Delta c_x$ = ...

   c) from the graph $T = f(c)$: $c_x \pm \Delta c_x$ = ...

Conclusions: .....
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