MEASUREMENTS OF DIMENSIONS OF SMALL OBJECTS BY MICROSCOPE:
(Determination of the diameter of erythrocytes)

Name: .....

Group:.....

Date: .....

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

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2. Smallest dimension of a structure that can be observed by the microscope:
   - numerical aperture A =.....
   - wavelength of light used for observation λ =….....
   - Resolving power of the microscope RP =.....
   - length of the smallest structure: .....

3. Determination of the numerical factor k (the calibration procedure):

	unit	numerical value	error of measurement
smallest division b			
number of divisions N_2			
reading r_1			
reading r_2			
number of divisions N_1 $N_1 = r_2 - r_1$			
numerical factor k			

4. Determination of the mean value of erythrocytes' diameter D:

	r_1	r_2	$N_1 = r_2 - r_1$	$D = k \cdot N_1$
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Mean value $\overline{D} =$ ..…….....

Standard deviation of the mean $s_{\overline{D}} =$.....

Maximal error of the mean $\Delta\overline{D} = \pm 3s_{\overline{D}} =$.....

$\overline{D} \pm \Delta\overline{D} =$ ..…….....

Conclusions: .....

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