

Question 21 (8 marks)

Describe a first-hand investigation used to estimate the size of red blood cells on a prepared microscope slide.

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In your description include:

- a list of equipment used;
- a safety precaution needed;
- the step-by-step method used;
- a scaled diagram of a red blood cell.

- Equipment used: light microscope, prepared blood slide, ruler.

- Safety precaution: Place the microscope on a stable table because if a table broke or tipped over, the microscope could fall and injure someone's feet.

- Method: 1. Set up light microscope ^{on low power} and ^{place a} ruler with millimeter measurements ~~under the microscope~~ ^{under the microscope}. ~~Slide ~~blood~~ on the microscope to it~~ ^{measure} the field of view and convert into microns.

2. Calculate high power field of view:
 $\text{low power field of view} \times \text{low power magnification} \div \text{high power magnification} = \text{high power field of view}$

3. ~~Estimate~~ Place a prepared blood slide under the microscope and identify red blood cells by using a text book or visual aid.

4. Estimate how many fit across the high power field of view and divide high power field of view by number that fit across high power field of view = size of red blood cell.

- Diagram of red blood cell

