

- 2** A double-slit interference experiment is used to determine the wavelength of light from a monochromatic source. The following measurements are used.

$$\text{slit separation } a = 0.50 \text{ mm} \pm 4\%$$

$$\text{fringe separation } x = 1.7 \pm 0.1 \text{ mm}$$

$$\text{distance between slits and screen } D = 2.000 \pm 0.002 \text{ m}$$

What is the percentage uncertainty in the calculated wavelength?

- A** 0.1% **B** 1% **C** 6% **D** 10%