

In a kinetic assay for enzyme activity the substrate is measured to have a change of 0.12 absorbance units per minute at 414 nm. The assay is conducted in a 0.4 cm pathlength cell. Given that  $\epsilon(414 \text{ nm}) = 37,500 \text{ M}^{-1}\text{cm}^{-1}$  for the product, what is the rate in units of molar concentration per minute. It is customary in biological catalysis to write the initial rate as  $v_0$ .

Solution:

$$v_0 = \frac{c}{\text{min}} = \frac{A}{\epsilon \ell \text{ min}} = \frac{0.12}{(37,500)(0.4) \text{ min}} = 8 \times 10^{-6} \text{ min}^{-1}$$

$v_0 =$  \_\_\_\_\_.