Maagstukken deel II: enzymologie

p106 ④ eiwitconc = 2 mg/mL
↳ $20 \cdot 10^{-3}$ mL in $100 \cdot 10^{-6}$ L
1,6 nmol/min

$$\text{spec. activiteit} = \frac{1{,}6 \text{ nmol}}{1 \text{ min} \quad 0{,}48 \text{ mg}} = 3{,}33 \text{ nmol/(min . mg)}$$

② $\Delta T = 20$ min
* Verwt = 0,3 mL ; eiwitgehalte : 2 mg/mL
↳ 0,6 mg eiwit
* gevormd product

Zie oef 13/12
$\varepsilon = 3000 (M^{-1} cm^{-1})$

$A = \varepsilon . c . \ell = 0{,}560$

$$\Leftrightarrow c = \frac{A}{\varepsilon . \ell} = \frac{0{,}560}{3000} = 1{,}867 \cdot 10^{-4} \text{ M}, \ 5 \text{ mL}$$

$9{,}333 \cdot 10^{-4}$ M — 1 mL $\Rightarrow 9{,}333 \cdot 10^{-7}$ mol

$$\text{spec. activiteit} = \frac{9{,}333 \cdot 10^{-7} \text{ mol}}{20 \text{ min} . \ 0{,}6 \text{ mg}} = 78 \text{ nmol/(min . mg)}$$

④
a) $\Delta T = 20$ min
0,4 mL in 5 mL

$$\text{enzymactiviteit} = \frac{\#\text{ mol}}{\Delta T . \text{ volume}} = 76 \text{ nmol}$$

fout?

product F:
$\varepsilon = 7000 \ M^{-1} cm^{-1}$
0,5 mL in 3 mL
A = 1,410

$A = \varepsilon . c . \ell \Rightarrow c = 2{,}014 \cdot 10^{-4}$ M
$\Rightarrow n = 6{,}043 \cdot 10^{-7}$ mol

b) $30 \cdot 10^{-6}$ L — 1:10 verdunning

volstid.opl : x
absorptie : y
$a = \Sigma xy / \Sigma x^2 = 0{,}00852$

$y = ax \rightarrow x = \frac{y}{a} = \frac{0{,}215}{0{,}00852} = 25.235 \ \mu L$

eiwitopl 1 mg/mL
↳ $25{,}23 \cdot 10^{-6}$ mL . 1 mg/mL = 25,23 µg
↳ in 50 µL
$\Rightarrow$ ÷ 0,5 mg/µL