

Microbial and Enzyme Kinetics

Enzyme Kinetics Tutorial 4b.

An experiment on the thermal degradation of an enzyme was carried out and some of the results are listed below

Time/ s	% Activity at 65°C	% Activity at 75°C
0	100	100
100	92	85
200	85	72
500	67	45
1000	45	20

- Plot a graph of \log_e Activity vs time and determine the inactivation rate constants at 65°C and 75°C.
- Determine the activation energy, E_D^* for the thermal degradation of the enzyme
- When eggs are pasteurised, α -amylase activity is often used as an indicator that the pasteurisation process has been satisfactorily completed. Suggest a reason why α -amylase activity may be used in this way.