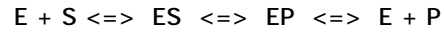


Kinetics of Enzymes Following the Michaelis-Menten Model

Determination of Parameters K_M and v_{max}

Michealis-Menten Mechanism



Michealis-Menten Equation

$$v_0/v_{max} = \frac{[S]_0}{(K_M + [S]_0)}$$

Lineweaver-Burk Equation

$$1/v_0 = (K_M/v_{max})(1/[S]_0) + 1/v_{max}$$

Eadie-Hofstee Equation

$$v_0 = -K_M(v_0/[S]_0) + v_{max}$$

Hanes-Woolf Equation

$$[S]_0/v_0 = (1/v_{max})([S]_0) + K_M/v_{max}$$

Table 1. Data from Michaelis-Menten Kinetic Experiments on Enzyme

$[S]_0$ (mM)	v_0 (μ moles/min)	$1/[S]_0$	$1/v_0$	$v_0/[S]_0$	$[S]_0/v_0$
0.00	0.000				
2.70	0.123	0.370	8.13	0.0456	22.0
5.40	0.179	0.185	5.59	0.0331	30.2
8.09	0.210	0.124	4.76	0.0260	38.5
10.80	0.226	0.093	4.42	0.0209	47.8
40.00	0.300				

