



Enzyme Kinetics Example

Equations:

$$y = \frac{BL \max x}{Kd + x}$$

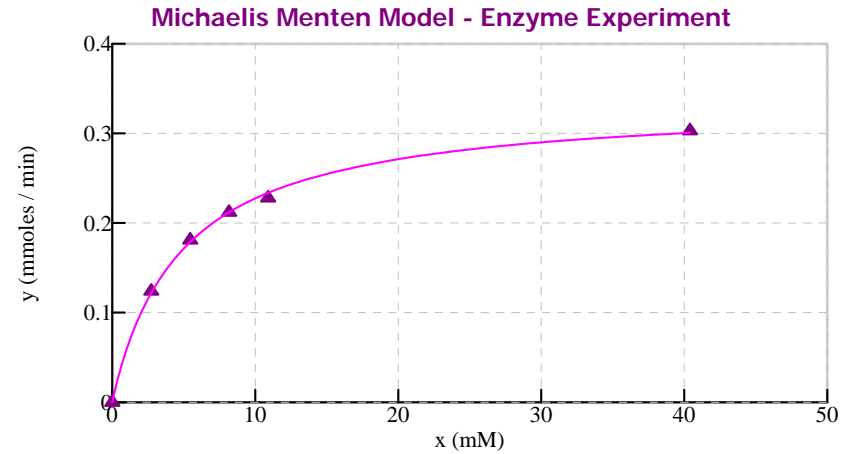
$$y = Ax + B$$

Data:

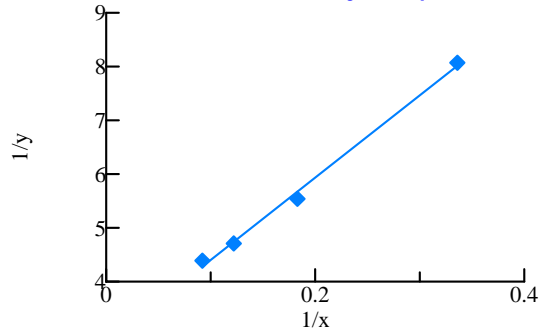
Substrate x (mM)	Reaction Velocity y (mmoles / min)	1/x	1/y	y/x	x/y
0	0				
2.73	0.124	0.336	8.07	0.0454	22.02
5.45	0.181	0.183	5.54	0.0332	30.11
8.17	0.212	0.122	4.71	0.0259	38.54
10.9	0.228	0.092	4.39	0.0209	47.81
40.4	0.303				

Description:

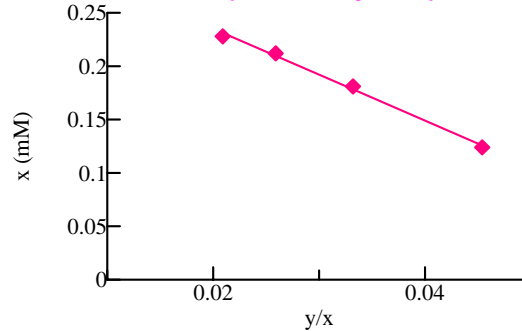
In this example a set of data has been plotted using the Michaelis Menten Model. Further plots used to analyze enzyme kinetics have also been created from the data. The results of these further plots have then been displayed and formatted.



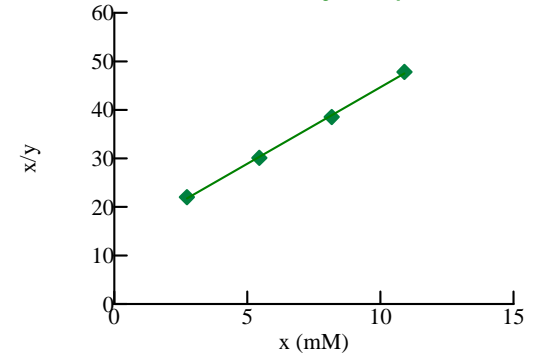
Lineweaver Burke Plot - Enzyme Experiment



Eadie-Hofstee Equation - Enzyme Experiment



Hanes- Woolf Plot - Enzyme Experiment



Michaelis Menten Parameters				Lineweaver Burke Parameters				Eadie-Hofstee Parameters				Hanes-Woolf Parameters		
Name	Value	Confidence Intervals	Standard Error	Name	Value	Confidence Intervals	Standard Error	Value	Confidence Intervals	Standard Error	Value	Confidence Interval	Standard Error	
BLmax	0.336356	0.013036184	4.695E-03	A	15.31265223	2.966155433	0.689377445	-4.30032673	0.844701501	0.19632085213	3.151020232	0.291672325	6.7789E-02	
Kd	4.7940269	0.568316081	0.2046912522	B	2.871456479	0.611008221	0.142007152106	0.321065243	0.027601906	6.4151E-03	13.15367467	2.176402818	0.5058275087	
Michaelis Menten Fit Statistics				Lineweaver Burke Fit Statistics				Eadie-Hofstee Fit Statistics				Hanes-Woolf Fit Statistics		
Name	Value			Name	Value			Name	Value			Name	Value	
Chi²	4.49158E-05			Chi²	0.033657			Chi²	2.62E-05			Chi²	0.340732	
F-Test	-0.102342258			F-Test	4.36E-11			F-Test	1.88E-14			F-Test	0	
F-Test Significance	0.9969796807			F-Test Significance	0.99797728842			F-Test Significance	0.99792017996			F-Test Significance	0.99953739168	
T-Test	1.004035223			T-Test	1.004168			T-Test	1.004168			T-Test	1.000926	
T-Test Significance	0.9234103355			T-Test Significance	1			T-Test Significance	1			T-Test Significance	1	
Iterations	4			Iterations	2			Iterations	0			Iterations	0	
DOF	6			DOF	4			DOF	4			DOF	4	