

Adding an equation to the EK module

You can add equations to the lists of equations in this module's study type groups. Example: You want to use one of the existing equations, but use modified constraints.

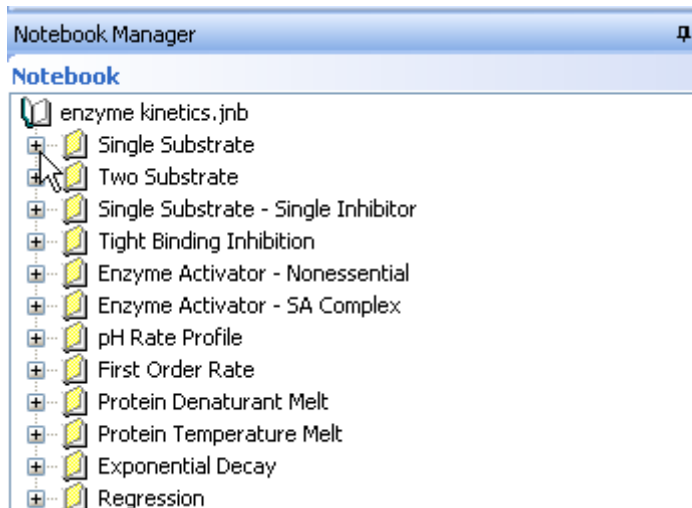
Open the module's enzyme kinetics.JNB file. In the intended section, copy and paste/rename an equation.

Open it, and change it. Save the JNB file, and close it. Now this equation will appear when you run the module.

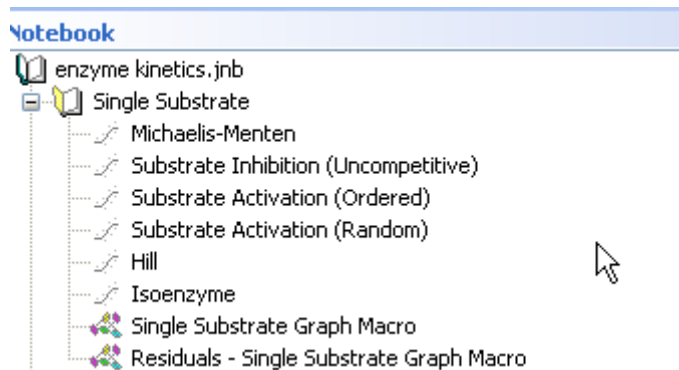
The module's JNB file is in your My Documents\SigmaPlot\SPW12 user folder. See the notes in the first PDF of this TechTipp about the place of your library files.

Steps:

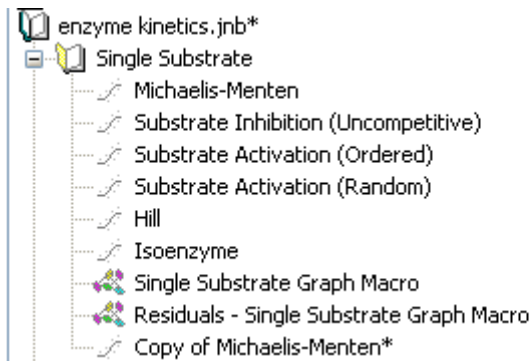
Open My Documents\SigmaPlot\SPW12\enzyme kinetics.jnb. Its sections show the study types which you can select in the module.



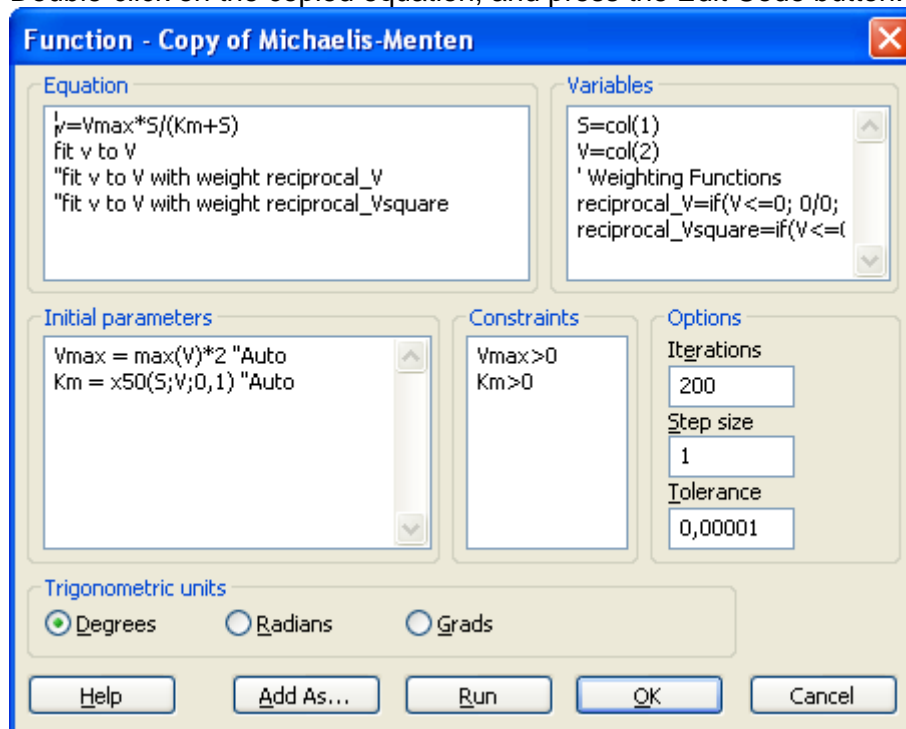
Each study type section shows equations and macros.



Copy and paste an equation.



Double-click on the copied equation, and press the Edit Code button.



Now you can e.g. change constraints.
Click OK, in the next dialog click Save, and Cancel.
Save and close the notebook.

Start the EK module

In the Data Entry Wizard, select the type of study where you have added the equation,

Data Entry Wizard

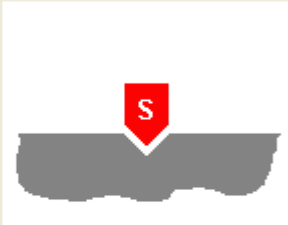
Enzyme Kinetics:
Select the format of your study

Study Format

Number of Substrates: 1

Type of Study: Single Substrate

Maximum Number of Velocity Replicates: 3



Data Entry Method: Sample Data

Help Cancel < Back Next > Finish

and under Equation(s) you will find the modified equation.

Enzyme Kinetics

Select the Analysis to use, the Equation(s) to fit, and Graphs to produce. Click Next to select report options or Finish to produce results and reports using defaults.

Analysis: Fit to Model

Equation(s)

- Substrate Activation (Ordered)
- Substrate Activation (Random)
- Hill
- Isoenzyme
- Copy of Michaelis-Menten

Equation Code

$V_{max} \cdot S / (K_m + S)$

Graphs

- Michaelis-Menten
- Lineweaver-Burk
- Eadie-Hofstee
- Scatchard
- Hanes-Woolf
- Hill
- Residual Graphs

Help Close < Back Next > Finish