MICHAELIS MENTEN DEMO

suMMARY:

**E+S ↔ ES 🡪 E+P**

Classes:

* Compounds
* Reactions
  + Catalysis:

Where Vmax is the maximum observable rate (Vo 🡪 Vmax when [S] is high).

Where Km is the rate of breakdown of ES/rate of formation of ES, and equals the substrate concentration that results in exactly one half the maximum possible reaction velocity

* + Inhibition [[1]](http://www1.lsbu.ac.uk/water/enztech/inhibition.html) [[2]](http://ocw.mit.edu/courses/chemical-engineering/10-492-2-integrated-chemical-engineering-topics-i-introduction-to-biocatalysis-fall-2004/lecture-notes/lecture4.pdf)
    - Competitive (binds in EI+S)
      * Increases km (no effect at high [S]).

Where Ki is the actual EI complex dissociation constant.

* + - Un-competitive (binds in ESI)
      * Decreases Vmax (no effect at low [S]).
    - Non-competitive (mixed, binds to both)
      * Increases km and decreases Vmax (effect at all [S]).

Implementation: