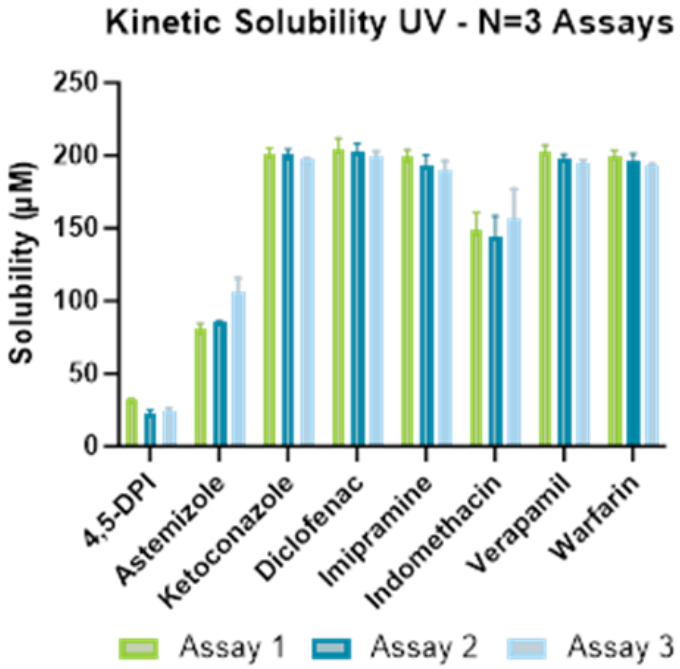
Kinetic Solubility

Aqueous solubility, the phenomenon of dissolution of a solute in a solvent, is one of the most important physicochemical parameters for any new compound. Low solubility can cause problems in many different *in vitro* testing techniques leading to unreliable results and/or reproducibility problems.

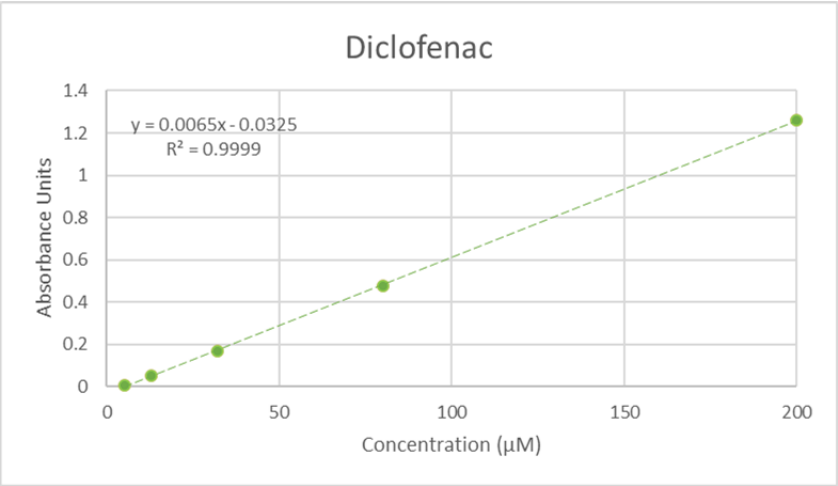
Kinetic solubility is measured with a high throughput assay using a stock solution of compound already dissolved in an organic solvent (typically DMSO). This stock is added to buffer, mixed and any resultant precipitate post-incubation separated from the buffer by filtration using MultiScreen® Solubility filter plates with the filtered sample analysed against a standard curve.

Standard Assay Conditions

- 90 minute solubilisation
- 2% DMSO final in solubilisation mixture
- Buffer: PBS pH 7.4
- N=2 replicates
- Low, medium and high solubility controls included
- Analysis by UV absorption
  - Analysis by LC-MS is also available if no chromophore is present
- 5-200 µM reportable range



Example Standard Curve



Compound Requirements

100 µL of a 10 mM stock or 1 mg of solid (accurately weighed to 2 decimal places)

Deliverables

Kinetic Solubility in µM

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All our assays can be customised to answer specific project questions

Contact us for more information on standard or customised assay formats