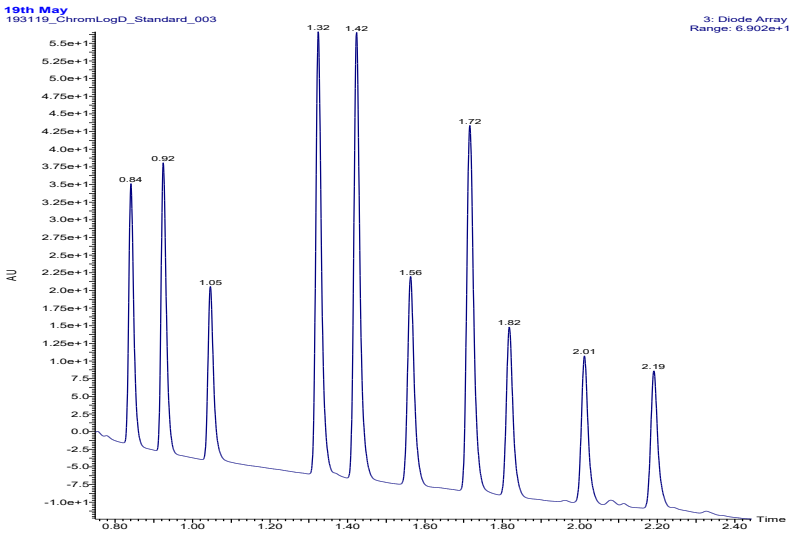
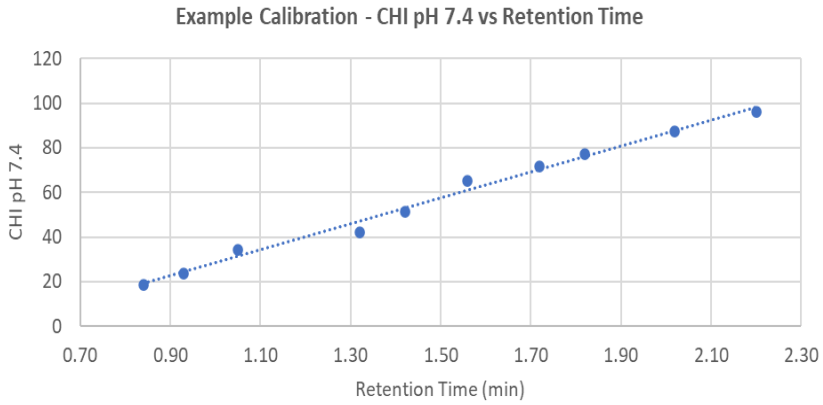
Chromatographic LogD

A compound's lipophilicity provides some indication of how it may behave in the body. The traditional "shake flask" method is time consuming and not suitable for high throughput and reversed phase HPLC is acknowledged to be a useful alternative method to determine lipophilicity.

Compound in DMSO is analysed by LC-UV-MS on a linear gradient with 10 calibration compounds of known chromatographic hydrophobicity index (CHI) value. A calibration curve is created relating CHI value to UV peak retention time and the CHI value of the compound of interest determined. CHI LogD and chromatographic LogD values are then calculated.

UV Chromatogram of the 10 Calibrants





Example calibration: CHI pH 7.4 plotted against retention time for the 10 compounds used as calibrants for the chromatographic LogD assay, chromatogram presented above.

Standard Assay Conditions

- 0.5 mM compound in DMSO
- Analysis by LC-UV-MS

Compound Requirements

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

Deliverables

Chromatographic LogD and CHI LogD

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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