

## How can sample concentration have an effect on peak shape in HPLC – FAQ $\,$

Injecting a very high concentration sample can result in lower retention and distortion in peak shape in Aqueous Normal Phase ANP or Reversed Phase RP HPLC.

The following study examined three concentrations (3mg/mL, 0.3mg/mL, and 0.06mg/mL) of venlafaxine using the same ANP method. The effects of "overloading" the column are clearly observed in the 3mg/mL injection. The 0.3mg/mL injection is better but still displays slightly lower retention than the 0.06mg/mL injection.



Injection volume is important and should be considered in the method as well.



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