

Determining the precision of an HPLC method - Tips & Suggestions

The precision is determined by using different levels of analyte concentrations (the same concentration levels taken in the accuracy study), prepared from independent stock solutions and analyzed (n=10). Inter-day, intra-day and inter-instrument variation should be studied to determine the intermediate precision of the proposed analytical methods.

Different levels of analyte concentrations in triplicates should be prepared three different times in a day and studied for intra-day variation. The same procedure should be followed for three different days in order to study the inter-day variation (n=10). One set of different levels of the concentrations should be reanalyzed using another HPLC system, by proposed methods to study inter-instrument variation (n=10).

The percent relative standard deviation (RSD %) of the predicted concentrations from the regression equation is taken as precision.