

most ways but sufficiently different( because it is similler but not identical to the chemical sample being tested so that the two signals are readily distinguishable by the instrument (Guomin Shan, 2011).

In chromatography, internal standards are used to determine the concentration of other analytes by calculating response factor

The internal standard selected should be again with certien chractarastic similar to the analyte and have a similar retention time and similar derivitization. It must be stable and must not interfere with the sample components.( Skoog, Douglas A. 1998).

**Accourding to ICH and USP guidelines, Ideal Internal standard must be with in these criteria:**

- Never found in sample
- Well-resolved (stable), The chromatographic system needs to be able to independently measure the size of the analyte and IS peaks.
- Ideally is eluted after the analyte, If the IS is eluted after the analyte, it can offer additional information on the quality of the separation.
- Stable, At a minimum, the IS must be sufficiently stable so that it does not degrade during the sample preparation and chromatographic analysis processes.
- Available in pure form, in other word any impurities present will not be coeluted with the analyte or otherwise interfere with the process.
- Compatible with detector response, Adequate detector response certainly is necessary. However, the response does not have to be the same as the analyte