GLI Method Summary

High Performance Liquid Chromatography Analysis

Governing SOP: LC-100 **Analyte:** Varies **Range:** ppm - % depending on analysis

Instrument	Agilent HPLC 1100 Series, or equivalent
Analytical Column	Varies. The optimum available column is chosen for analysis. Other specified columns not available at Galbraith may be obtained at client expense.
Detection	UV – Visible or Refractive Index
Preparation	Dissolution in appropriate solvent. The mass of sample taken is based on the desired quantitation limit.
Determination	Quantitation is performed by comparison to an external linear regression calibration curve. Calibration standards are prepared from standard-grade material dissolved in the same solvent system as the sample.
Limit of Quantitation	The practical limit of quantitation is equal to the concentration of the lowest calibration point.
Quality Control Standard	A reference standard, independent from the calibration standard, is analyzed under the same conditions as the sample. Blanks and calibration verifications are analyzed at appropriate intervals.
Calculations	Where C = analyte concentration in solution in µg/mL, D = dilution factor, and E = final prep volume in mL. $$ppm = \frac{C \times D \times E}{mass\ of\ sample\ (g)}$$ $$\textit{(wt/wt)}\quad \% = \frac{ppm}{10{,}000}$$

References

Practical HPLC Method Development, 2nd Ed. 1997, Snyder, Kirkland, Glajch.

LC Module 1 Book I: User's Manual, Rev. 1, 1992.

USP <621> Chromatography, USP37/NF32 Supplement 2, US Pharmacopoeial Convention, 2015.