Selenium in Serum- Selenium is measured in serum by atomic absorption spectrometry in a procedure based on the methods described by Lewis et al. (1) and by Paschal and Kimberly (2). Quantification is based on the measurements of light absorbed at 196.0 nm by ground state atoms of selenium from a selenium electrodeless discharge lamp source. Serum samples, human serum quality control pools, and serum calibration standards are diluted with a matrix modifier (Triton X-100, nickel nitrate, and magnesium nitrate). The selenium content is determined by using a Perkin-Elmer model 5100 graphite furnace atomic absorption spectrophotometer with Zeeman background correction. The Zeeman system offers improved background correction over deuterium arc-corrected systems; use of the latter often results in overcorrection caused by spectral interference from iron or phosphate in the serum (3,4).

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