A method for direct selenium determination in human blood serum by electrothermal atomic absorption spectrometry (ETAAS) was developed. Total selenium was measured by ETAAS employing 10 μg of palladium as matrix modifier in a graphite atomizer with pyrolytically coated tubes and Zeeman background correction. Blood serum was diluted 1+2 with 0.1 % v/v nitric acid and 0.1 % Triton X-100. Pyrolysis and atomization temperatures for palladium modifier are 1100 ºC and 2600 ºC, respectively. The measurements were confirmed by the analyses of standard reference material and by the method of standard additions. Reference serum material Seronorm, Trace elements, Serum level 1 (lot JL 4409) was analyzed and the results are in argument with the certified value. The limit of detection of the direct ETAAS based on 3σ of the blank signal is 0.60 μg L⁻¹ Se in blood serum samples. The precision of the method ranges from 2.06 % to 5.95 %. The obtained data from the selenium analysis in serum samples from 40 patients show that the content of selenium is relatively low, ranging from 48.26 ± 4.23 μg L⁻¹ for female to 56.02 ± 3.48 μg L⁻¹ for male.