

The target of this baccalary work was to validate the method for determination of adrenaline and noradrenaline in plasma by high performance liquid chromatography with electrochemical (coulometric) detection. The method was first necessary to optimize for the coulometric detection because it was used the Bio-Rad kit, which was designed to determine with amperometric detection. The principle of this method is the chromatographic separation of substances with subsequent oxidation of the determined analyte passes through the analytic cell with coulometric detection. The part of the analytical procedure is the solid phase extraction.

The part of this work was the optimization of the method for the coulometric detector. For the analysis were selected following potentials: channel 1 - 350 mV with range 100 nA, channel 2 - 0 mV with range 50 nA, guard channel 0 mV with range 50 nA. Furthermore, the chromatographic method was fully validated (accuracy, precision, limit of detection, robustness). In the conclusion was made interlaboratory comparison of results of 42 patients samples with those obtained in the hospital Šternberk.