Pengembangan metode analisis captopril menggunakan screen printed electrode (SPE) termodifikasi tembaga (Cu) dengan sistem alir (flow injection analysis/ FIA) = Development of captopril analysis method using copper (Cu) modified screen printed electrode (SPE) using flow injection analysis (FIA)

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Abstrak

Using enzymatic sensor to determine the level of captopril is an alternative method that is being widely developed. In research , made in captopril sensor using Screen Printed Electrode (SPE), because of its advantage of being practical and simple. Cu electrodeposition on SPE is being done by potential -0,480 V vs Ag½AgCl with variation of time deposition of 5, 30 and 60 second. This research finds that the optimum deposition time is 60 second by taking into loading amount of 6,92 x 10-6 gr.cm-2. Cu/SPE is then applied to the Flow Injection Analysis (FIA) system. The optimum result of sensor appears in the FIA system with at the flow rate of 0,5 mL/minute and KOH Concentration of 1 M. Cu/SPE Sensor in FIA system has LOD of 6,530 x 10-6 M and sensitivity of 308,80 A.mM-1.cm-2. Cu/SPE sensor has good repeatability with value linearity of 0,9113 and %RSD of 1,75%. Selectivity test on the captopril to the glucose and lactose may produce better sensor. The application of Cu/SPE sensor has value %recovery of 96,29%.