STUDY OF CORRELATION SOME ANTIMALARIAL ALKALOID COMPOUNDS ACTIVITY WITH ELECTROCHEMICAL PROPERTIES BY CYCLIC VOLTAMMETRY

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Abstract :
Research on antimalarial activity to the electrochemical properties of some alkaloid compound by cyclic voltammetry methode has been done. This method was carried out using three kinds of working electrodes: gold, carbon, and gold coated with polypyrrole-polythiophene film. The antimalarial compound investigated were cinchona base, quinine dihydrochloride, and quinine hydrochloride with variated concentration 2, 4, 6, 8, and 10 ppm. Gold electrode is the most sensitive electrode for this assay. The assay of standard xanthone compound result that the IC$_{50}$ has been known using gold electrode gives correlation between IC50 and oxidation current peak. This correlation, furthermore, can be used to calculate the IC50 of unknown antimalarial compound.

Keywords : antimalaria, cinchona base, quinine hydrochloride, quinine dihydrochloride, cyclic voltammetry