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(54) **Title**: AMPEROMETRIC SENSOR

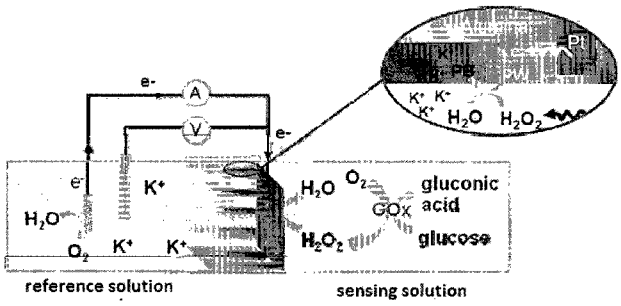


FIG. 1(a)

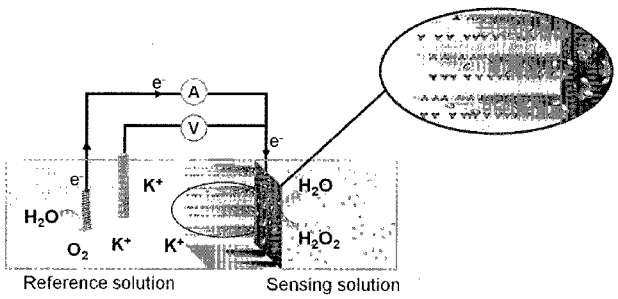


FIG. 1(b)

(57) **Abstract**: The present invention relates to an amperometric sensor for measuring the amount of hydrogen peroxide (H_2O_2) present in a sample, comprising a working electrode in contact with a sensing solution, wherein the working electrode comprises a porous membrane structure, wherein the sensing solution comprises the sample containing H_2O_2 or a precursor of H_2O_2, wherein H_2O_2 is reduced at the working electrode; a counter electrode in contact with a reference solution, wherein the porous membrane structure of the working electrode provides a physical barrier between the sensing solution and the reference solution, wherein a reducer is oxidized at the counter electrode; a connector to electrically connect the working electrode and the counter electrode to allow a current flow therethrough, wherein the current flow is formed by a flow of electrons from the electrode where oxidation has occurred to the electrode where reduction has occurred, with the proviso that the current flow is not induced by an externally applied electrical potential; and a current detector to detect and measure the current flow. A method of using the amperometric sensor for measuring the amount of H_2O_2 present in a sample is also provided.

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