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ELECTROCHEMICAL BIOSENSOR FOR FOOD BORNE PATHOGENS: AN OVERVIEW

Ghazala Yunus[1], Mohammed Kuddus[2]✉

[1]Department of Basic Sciences, College of Preparatory Year, University of Hail, Hail, KSA
[2]Department of Biochemistry, College of Medicine, University of Hail, Hail, KSA
✉mkuddus@gmail.com

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ABSTRACT

Food safety is very significant for community fitness issue, as at present food borne diseases widespread and increasing public health issue all over the world. The fast and specific detection of food borne pathogens needed to control and avoid human food borne infections. Biosensors are fast and low price method of food borne pathogen detection. It uses the distinctive properties of biological and physical materials to identify a target molecule and effective transduction of an electronic signal. Many biosensors have been discovered, viz., electrochemical biosensor, optical biosensor and mass based biosensor. In this study, we review electrochemical biosensors for detection of food born pathogen. Electrochemical biosensors have many advantages over other biosensor such as the possibility to operate in disorganized media, sensitivity of instrument, and small size. Electrochemical biosensor are of different kinds like potentiometric, amperometric, potentiometric, impedimetric, or conductometric based upon different transducing elements used in it. From last few decade nanotechnology has arisen as a favorable field for solving food safety problems in terms of detecting contaminants. The nanomaterials used into electrical sensors to make them appropriate to reach over low detection limit, high sensitivity, and multi detection abilities.