



## ELECTROCHEMICAL BIOSENSORS A TRENDING ANALYTICAL AND BIOANALYTICAL TECHNIQUE

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### ABSTRACT:

Electrochemical Biosensors consist of a biocomponent that performs the molecular recognition of an element, a transducer and an electronic signal processor. The main goal of biochemical sensors is the selective molecular recognition of the analyte which can be accomplished using enzymes and antibodies, nucleic acids, cells and tissues. Electrochemical biosensors provide an attractive means to analyze the content of a biological event to an electronic signal. A biosensor is generally defined as an analytical device which converts a biological response into a quantifiable and processable signal. Biosensors constitute an interdisciplinary field that is currently one of the most active areas of research in analytical chemistry. Using biosensors typically eliminates the need for sample preparation. Electrochemical Biosensors combine the sensitivity of electroanalytical methods with the inherent bioselectivity of the biological component. The biological component in the sensor recognizes the analyte resulting in a catalytic or binding event that ultimately produces an electrical signal monitored by a transducer that is proportional to the analyte concentration. Electrochemical biosensors represent a challenging alternative in the chemical analysis as well as in the chemical synthesis offering analytical methods as well as important analytical tools complementary to other analytical techniques applied in the studies of drug interactions with important biomolecules.

**KEYWORDS:** Biocomponent, Molecular recognition, Transducer, Inherent, Bioselectivity.

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