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<b>Abstract</b>	:	<p>Analysis of environmental, food and pharmaceutical compounds is crucial in determining the compounds content in the food products, drinking water and medicines. These compounds correspond to the health of human, thus presence of forbidden additives in the products of food, liquid samples and medicines may be harmful toward humans. Due to that, there is a high demand for analytical strategies to analyze food products and to detect harmful compounds in materials. Various studies have been done to develop low-cost, stable, high selectivity and sensitivity analytical methods. Among the analytical methods proposed, electrochemical methods show fast and selective analysis, ease of operation, portability, and they are inexpensive. On the other hand, electrochemical biosensors, which directly convert biological activities into electrical impulses, offer a different technique in analyzing the content of biological samples for the biochemical processes or biological quantification. Traditional techniques such as chronoamperometry, amperometry and potentiometry have been developed and will be further discussed in this review. Some of the challenges faced with electrochemical biosensors are instability, low signal response and selectivity affected by the presence of fouling agent and interference induced by chemicals present in the sample matrix. This shortcoming can be overcome through modification of the electrochemical electrode to improve the performance of the sensor.</p>