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Electrochemical sensing towards food safety: rapid and economic tool

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Abstract

Biosensor Research Group Members have developed a portable and rapid electrochemical device that is able to detect food contaminants at varying concentrations. In this talk, I would like to highlight the current achievements on the developed devices for detecting melamine in dairy milk products and formalin in fish. These devices are able to detect the presence of melamine and formalin required only 30 s and 5 s, respectively. The detection limits were respectively 0.1 ppm and 10^{-14} mM for formalin and melamine, which are considerably much lower compared to other detectors. Economically and technically, these devices are more feasible for further application since it requires a simple preparation procedure, faster, high selectivity, wider linear range and eco-friendly. Thus, it can enter the global market for monitoring in the food system due to the high efficiency and reducing the cost of the management.

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