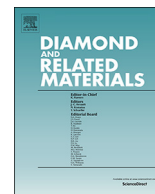




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Boron-doped diamond electrode as efficient sensing platform for simultaneous quantification of mefenamic acid and indomethacin



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ABSTRACT

Mefenamic acid and indomethacin, medicaments belonging to the group of non-steroidal anti-inflammatory agents, were determined separately and simultaneously at anodically prepared BDDE. Differential pulse voltammetry was used to establish simple and fast analytical procedure based on electrooxidation of mefenamic acid at 0.6 V and indomethacin at 1.0 V (and 1.1 V). At optimal conditions, it was suitable for highly sensitive and selective determination of these compounds with LODs comparable to previously reported modified electrodes. Additionally, considering the importance of these compounds, we proposed precise and accurate quantification of these species based on green and simple pre-treatable electrochemical sensor. The effect of interfering agents (tablet ingredients and vitamins) was appeared to be negligibly confirming a favourable selectivity of the method. The proposed method was analytically applied by simultaneously determining mefenamic acid and indomethacin in pharmaceutical formulations.

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