

Cell chip based on polyaniline film coated indium-tin oxide electrode to detect anticancer drug effect

Waleed Ahmed El-Said¹, 예철현², 최정우^{2,1,*}

¹Interdisciplinary Program of Integrated Biotechnology;

²서강대학교 화공생명공학과

(jwchoi@sogang.ac.kr*)

Polyaniline Emeraldine (EB) base coated Indium-Tin Oxide (ITO) electrode was prepared for the construction of a cell-based chip. Ultrathin polyaniline PANI film on an ITO was electroactive at neutral pH without co-deposition of an acidic counterion. HeLa cells were cultured on a PANI/ITO substrate and utilized to assess the biological toxicity of anticancer drugs. Cell growth, cell viability and drug-related cell toxicity were evaluated by a cyclic voltammetry (CV) method under a neutral pH. We demonstrated the functionality of a PANI coated ITO electrode for use as a cell chip and found that PANI was a good surface for the HeLa cells to grow without any significant morphological changes.

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