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(54) **ELECTROCHEMICAL-BASED ANALYTICAL TEST STRIP WITH HYDROPHILICITY ENHANCED METAL ELECTRODES**

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(57) **ABSTRACT**

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An electrochemical-based analytical test strip includes an electrically-insulating substrate and a metal electrode (e.g., a gold metal electrode) disposed on a surface of the electrically-insulating substrate. The metal electrode has an upper surface with hydrophilicity-enhancing chemical moieties thereon. In addition, the electrochemical-based analytical test strip also includes an enzymatic reagent layer disposed on the upper surface of the metal electrode.

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