

## A sensing probe development for detection of enterovirus 71

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Enterovirus 71 causes number of cases in Taiwan via oral and respiratory infection every year. This infectious disease is highly contagious and is possible to be infectious for days to weeks after the symptoms have resolved. However, conventional detection approaches are time-consuming those cannot be used effectively for point of care. Therefore, a rapid, sensitive detection of enterovirus is required. We have developed a functional palladium nano-thin film sensing probe in the detection of EV71. By electrochemical impedance spectroscopy (EIS) both viruses' sensitively and specifically can be monitored. Our results showed that the sensing probes can be distinguished EV71 from Coxsackievirus A16 (CVA16) in 15 min and the limit of detection is about 10 copy number/50 $\mu$ l.

**Key words:** Palladium nano-thin film probe 、 Electrochemical impedance spectroscopy 、 Enterovirus 71 、 Virus detection