

Sandwich Type Enzyme Amplified  
Amperometric DNA Sensing - Y.  
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A 38-base DNA sequence has been detected below 20 pM concentration in 15  $\mu$ L droplet by means of an electrochemical enzyme-amplified sandwich-type assay on a carbon electrode. The electrode was activated by co-electrodeposition of a redox polymer and a DNA-capturing sequence. Next, the activated electrode was exposed to the droplet of the tested solution, to capture the suspect DNA, if present. The electrode was then probed with a droplet of containing the horseradish peroxidase labeled detection sequence. Formation of the sandwich brought the horseradish peroxidase-label of the detection sequence into electrical contact with the pre-electrodeposited redox polymer, making the sandwich an electrocatalyst for the reduction of hydrogen peroxide to water at +0.2 V (Ag/AgCl).