

Application of the Mesoporous Silica Oxidants on Immunochromatography Detections

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Abstract : A mesoporous silica material was prepared to apply to the lateral-flow immunochromatography for detecting a model biosample. The probe antibody is immobilized on the silica surface as the test line to capture its affinity antigen, which laterally flows through the chromatography strips. The antigen is labeled with nano-gold particles, such that the detection can be visually read out from the test line without instrument aids. The result reveals that the mesoporous material provides a vast area for immobilizing the detection probes. Biosensing surfaces corresponding with a positive proportion of detection signals is obtained with the biosample loading.

Keywords : mesoporous silica, immunochromatography, lateral-flow strips, biosensors, nano-gold particles

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