



The wicking study of food color based on electrophoresis cotton-based device

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In the currently, there is a rising requirement about platform for sensitive point of care testing. Platform should be low cost, easy to use and portability. Fabric is an interesting platform for point of care testing because it is low cost, scalability and specification. This work presents a cotton-based electrophoretic platform for separation. We investigated the electrophoresis separation of food coloring on cotton-based device. Separation resolution depends on applied voltage, buffer solution and wicking of components. The food color is separated in 50-200 mM phosphate buffer saline, pH in the range 7-9 and applied voltage between 1.5-12 volts. The optimal condition is 150 mM phosphate buffer pH 7 and 12 Voltages for applied voltage. Separation resolution between Brilliant Blue FCF and Tartrazine Yellow color was found to be 0.95 at the optimal condition.

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