Abstract of the Disclosure

A medical diagnostic device has a non-absorbent substrate that has a hydrophilic target area on which a reagent is deposited by non-impact printing of microdroplets. During deposition, the device is moved relative to the stream of microdroplets to form a substantially uniform reagent layer on the substrate. The device is particularly well adapted for measuring blood coagulation times. In a preferred embodiment, coagulation times are determined by monitoring the optical transmission of light through the target area as an applied blood sample interacts with the reagent.