
Biomedical applications of smartphone-based lateral flow detection systems as a diagnosis tool NLP



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Issue	Microchemical Journal
	Volume 193, October 2023, 109159
Article Number	109159
Number of page(s)	15
Section	Information technology, biomedical engineering
DOI	https://doi.org/10.1016/j.microc.2023.109159
Published online	October 2023

Abstract Smartphone-based devices show the capability to be the main biomedical diagnosis device, enabling persons to perform for self-screening tests. In the healthcare, smartphone-based devices are reforming patient care and management. However, there are some important issues relating to the reliability of the fabricated probes which must be improved to be utilized as the main detection probes. This review discussed the applications smartphone-based lateral flow assay (LFA) devices in the detection of biomolecules, focusing on the analytical performance and probe signal transducing techniques. Also, this review discloses the technology gaps of the smartphone-based LFA system such as the need to fabricate more sensitive light image lens and better interface to transduce the signal intensity to the digits in the completed whole blood media to obtain reliable results. Addressing the benefits and limitations motivates investors to prioritize the development of potent smartphone-LFAs for personalized medicine.