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Methods Collections

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Collection Overview

Microfluidic paper-based analytical devices (μPADs) present great promise for the improved detection of a variety of targets, including proteins, genetic material, pathogens, and specific chemical species, providing powerful sensors for affordable in situ determinations. The use of paper for building the devices contributes to the many advantages of μPADs, including their biocompatibility, flexibility, and light footprint. Furthermore, the sample flow is conducted by capillarity instead of pumps, simplifying the analytical system and making μPADs suitable for field settings. Such characteristics allow μPADs to be extremely versatile for a variety of uses, including health, sports, and environmental monitoring. Furthermore, they are greatly compatible with the development of wearable sensors, a current trend in analytical chemistry. Many different approaches for the construction of μPADs can be found on the literature, including the use of crayons, plotting-machines, and solid-ink printers. The design of these devices can also vary greatly, ranging from unique reaction

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