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(57) Abstract :
Paper-based biosensor for rapid detection of urinary tract infection A paper-based biosensor for rapid detection of urinary tract infection is described herein. The biosensor consisting of cellulose-based paper substrate (10) having a first reaction zone (20) configured for nitrite detection and a second reaction zone (30) configured for leukocyte esterase detection. The paper substrate (10) is secured to a plastic backing sheet (40) using an adhesive layer (50). The biosensor produces visually distinguishable pink and purple/violet colour responses within approximately 1–2 minutes, thereby enabling rapid and convenient visual interpretation without requiring complex instrumentation.

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