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Development of an analytical chip for detecting acetone using a reaction between acetone and 2,4-dinitrophenylhydrazine in a porous glass

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Abstract

Acetone is a human biogas and is widely used in industrial manufacturing. Acetone can be detected in the breath of diabetic patients, and the measurement of acetone in human breath provides significant, non-invasive, diagnostic information on a patient's diabetic condition. An analytical chip for detecting acetone was developed herein. The analytical chip was composed from porous glass impregnated with 2,4-dinitrophenylhydrazine (DNPH) and hydrochloric acid. The analytical chip before

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