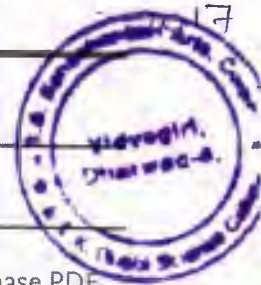


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## Multimode Fiber Optic Sensor for Adulterant traces in Edible Oil using Nanotechnology Technique

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### Abstract

Fiber optic sensors for detection and determination of adulterant traces in edible oil is designed in the laboratory. The fundamental principle of detection is the sensitive dependence of the wavelength shift due to the refractive index changes of the surrounding medium of multimode fiber cladding. Building up of this low cost multimode fiber optic sensor is helpful in detection and determination of adulteration in oils. Fiber optic sensor coupled with gold-nanoparticles shows an enhancement in the sensitivity of designed sensor in the determination of concentration of adulteration in coconut oil.

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