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## Abstract

A new Membrane Film Sensor (MFS) has been developed to measure pH of fluids. MFS comprises a polyelectrolyte multilayer film with uniformly distributed compartments (microchambers) where a fluorescent sensing dye is encapsulated. Fabricated film is sealed onto a polyethylene film for a future use. MFS was applied to report changes in golden pomfret fillet upon its storage at 5 °C. MFS pH readings were correlated to bacteriological analysis of fish samples. A hike in pH of fish juices happens after 10 days of storage signaling bacterial spoilage of fish. The design of developed MFS allows easy integration

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