

## Detection of Sugars Using Lipid/Polymer Membranes

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Lipid/polymer membranes were modified with a phenolic compound, gallic acid, to obtain a high sensitivity to sugars, such as sucrose, glucose and fructose. Electric responses to sugars were measured with surface-modified membranes composed of tetradodecylammonium bromide, di-n-octylphenylphosphonate and polyvinyl chloride. The spectroscopic properties of gallic acid in an aqueous solution and in the presence of amphiphilic molecules in a buffer solution were studied. The obtained results show that the change in the absorption spectrum of gallic acid is pH- and time-dependent, and is susceptible to electric responses to sugars.

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