

APPLICATION OF POLY(FOLIC ACID) FOR PH DETECTION

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Many chemical processes are pH dependent and because of that its monitoring is very important. When glass electrodes for pH measurement cannot be used other methods are required. One of such methods to determinate hydrogen ions is use pH-sensitive conductive polymer modified electrodes [1].

Conducting polymers belong to polyenes or polyaromatic classes. Some have unique conduction mechanisms and are stable in air [2]. Using the electrochemical synthesis these polymers can be directly deposited as a film on electrode substrate [3]. To develop sensors, conductive polymers used most often are poly(1,5-diaminonaphthalene), terthiophene carboxylic acid, polyaniline, polypyrrole, etc. [3].

The aim of this work is to create a sensor to monitor pH in washing systems of food industry. In order to achieve this aim, chitosan drop coated pyrolytic graphite electrode was further modified with electrochemically polymerized folic acid [4]. Resulted sensor stability was tested in buffer solutions of pH 7 and 8 using cyclic voltammetry and chronoamperometry.

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References

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