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## A new polymeric membrane Fe (III) ion-selective sensor based on Fe (III)-Morin (3, 5, 7, 2', 4'-Pentahydroxyflavone) schiff base

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Fe (III)-morin (3,5,7,2',4'-pentahydroxyflavone) complex was synthesized and utilized as an ionophore for PVC-based polymeric membrane (PME) for detection of Fe<sup>3+</sup> ions. The sensor exhibited over Nernstian response for Fe<sup>3+</sup> ions with a slope of 58±2 mV per decade over a wide concentration range 1.0 x10<sup>-1</sup> -1.0x10<sup>-6</sup> M and relatively low detection limit (3x10<sup>-6</sup> M). It had a short response time, less than 15 s, particularly high selectivity towards iron (III) ions among various heavy metal ions and displayed stable and reproducible potential over a period of 120 days. It was concluded that the potential response of the proposed sensor was independent of the pH of the test solutions within the pH working range from 6.5 to 11.0. The sensor was used successfully as an indicator electrode for direct determination of Fe<sup>3+</sup> in several synthetic samples. The analytical applicability of the sensor was also approved by employing in potentiometric titration of Fe<sup>+3</sup> with EDTA.

### Biography

Tugba Ozer has completed her MSc in Marmara University. She is a PhD student in Yildiz Technical University, Department of Bioengineering. Her areas of specialization are: electrochemistry, environmental chemistry, analytical chemistry, heavy metals, sensors, crop science, biopolymer, bioinformatics, systems biology.

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