

[PD4-9] [04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3]]

The preparation and properties of the liquid membrane electrodes for mefenamic acid

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A liquid membrane electrodes for mefenamic acid, flufenamic acid and niflumic acid were investigated. The electroactive substances of the electrode consists of ternary complex of fenmates and Fe-dipyridyl.

The sensing matrix membrane was plasticized with one of 2-nitrophenyloctyl ether, benzyl 2-nitrophenyl ether, 2-fluorophenyl 2-nitrophenyl ether and 2-nitrodiphenyl ether.

The membrane, plasticized with 2-nitrophenyl ether, exhibited a fast, stable and linear response for 10^{-5} ~ 10^{-3} mol dm⁻³ mefenamic acid, flufenamic acid and niflumic acid with an anionic slope of 54 ± 0.5 mV, 55 ± 0.5 mV and 41 ± 0.5 mV / concentration decade respectively.

The electrode exhibited good selectivity with respect to inorganic ions and aromatic and aliphatic anions. These sensors were successfully applied to the determination of fenmates in pure form and pharmaceuticals.

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Properties and Quantitative Analysis of chrysin 7-0-methacrylate

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The derivative of chrysin 7-0-methacrylate was synthesized by condensing methacrylic acid with chrysin in organic solvent, and its structure was identified by NMR, MS, UV, IR etc. We also investigated the physico-chemical properties and set up the quantitative analytical method of this compound. The correlation coefficient of calibration curve on this compound was approximately 0.9999 by absorption spectrophotometry.

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Studies on Analysis and Stability of Retinol and Retinylpalmitate in Cosmetics

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The reproducible and precise method for quantitative determination of retinol and retinylpalmitate in cosmetics was studied by high performance liquid chromatography, and the stability test was studied. The analysis was performed with NovaPak C18 column, 1.0 μ m and 325nm. As a mobile phase, 90% methanol was used for retinol and 100% methanol for retinylpalmitate. A linearity for retinol and retinylpalmitate was obtained within the concentration range of 20~100 IU/ml. The