

Schiff碱型和仲胺型双冠醚II: 用双冠醚作载体的PVC膜钾离子选择性电极

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摘要 用六个含二个苯并-15-冠-5单元的席夫碱型和仲胺型新型双冠醚作载体制备了钾离子选择性PVC膜电极,并研究了它们的电极行为,这些电极对所有的其它碱金属和碱土金属离子展现出显著的钾离子选择性,可期望有一定的应用价值.

关键词 [冠式化合物](#) [离子选择电极](#) [聚氯乙烯](#) [仲胺](#) [膜电极](#) [钾离子](#) [席夫碱](#)

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Schiff bases and secondary amines containing two benzo-15-crown-5 units II: Potassium ion selective PVC membrane electrodes based on bis-crown ethers as carrier

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Abstract K⁺-selective PVC membrane electrodes based on 6 bis-crown ethers (I-VI) were prepared with o-nitrophenyl octyl ether as the plasticizer and Ag/AgCl as the internal ref. electrode. The electrodes were evaluated vs. SCE. The potential responses of the electrodes are linearly proportional to log K⁺ concentration in the range 10⁻⁵-10⁻² mol dm⁻³ K⁺. The electrodes containing II and III exhibit Nernstian response with a slope of 54-56 mV/decade. The selectivity of the electrodes to other alkali and alkaline earth metal ions was examined and the results showed the electrodes with high selectivity to K⁺.

Key words [CROWN ETHER COMPOUNDS](#) [ION SELECTIVE ELECTRODE](#) [POLYVINYL CHLORIDE](#) [SECONDARY AMINE](#) [MEMBRANE ELECTRODES](#) [POTASSIUM ION](#) [SCHIFF BASE](#)

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