

双酰胺双(3'-正十五烷基-苯并-15-冠-5)PVC膜钾离子选择电极的研究

石正金,胡卫东,曾凡,汪玉庭,黄载福

武汉大学环科系

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摘要 本文合成了十个双酰胺型双(3'-正十五烷基-苯并-15-冠-5)化合物,制成的PVC膜钾离子选择电极,性能优良.

关键词 [酰胺](#) [冠式化合物](#) [离子选择电极](#) [聚氯乙烯](#) [苯 P](#) [膜电极](#) [十五碳化合物](#)

分类号 [0646](#) [0651](#)

Study of bisamides-bis-3'-n-pentadecyl benzo-15-c-5 type PVC membrane potassium electrode

SHI ZHENGJIN,HU WEIDONG,ZENG FAN,WANG YUTING,HUANG ZAIFU

Abstract Ten potassium ion selective PVC membrane electrodes based on 10 biscrown ethers [I, R1 = o-C6H4; m-C6H4; p-C6H4; 2,6-C5H3N; 1-(CH3O)C6H3-2,6-; -(CH2)2-; -(CH2)4-; -(CH2)6-; -(CH2)8-; -(CH2OCH2)-; R2 = n-C15H31] were prepared and their electrode behaviors were evaluated. Seven of these electrodes exhibited a linear response to the potassium ions within the concentration range 10⁻⁶-10⁻¹M KCl. The low limits of linear response were 10⁻⁷-10⁻⁶M. The slopes of their calibration plots ranged from 51.6 to 60.5 mV per activity decade. These electrodes exhibited remarkable potassium ion selectivity with respect to all other alkali and alkaline earth metal cations.

Key words [AMIDES](#) [CROWN ETHER COMPOUNDS](#) [ION SELECTIVE ELECTRODE](#) [POLYVINYL CHLORIDE](#) [BENZENE P](#) [MEMBRANE ELECTRODES](#) [C15 COMPOUNDS](#)

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