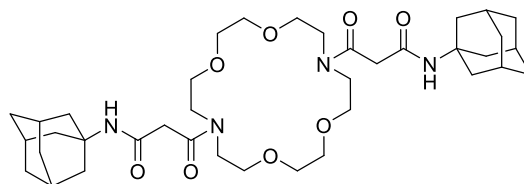


Product Information



00744 Magnesium ionophore VII

(K22B5; 4,13-[Bis(N-adamantylcarbamoyl)acetyl]-1,7,10,16,tetraoxa-4,13-diazacycloocta-decane)

Selectophore®, function tested

Electrochemical Transduction

Ion-Selective Electrodes

Application 1 and Sensor Type^{1,2}

Assay of Mg²⁺ activity in extracellular fluid with solvent polymeric membrane electrodes based on Magnesium Ionophore VI.

Recommended Membrane Composition

- 1.00 wt% Magnesium Ionophore VII ([00744](#))
- 0.71 wt% Potassium tetrakis(4-chlorophenyl)borate ([60591](#))
- 32.00 wt% Poly(vinyl chloride) high molecular weight ([81392](#))
- 66.29 wt% 2-Nitrophenyl octyl ether ([73732](#))

Recommended Cell Assembly

Ag, AgCl, 3M KCl | 0.3 M NH₄NO₃ || sample solution || liquid membrane | 0.1 M MgCl₂ | AgCl, Ag

Electrode Characteristics and Function

Selectivity coefficients $\log K_{Mg,M}^{Pot}$ determined by the mixed solution method.

$\log K_{Mg,Na}^{Pot}$	-3.0	$\log K_{Mg,Li}^{Pot}$	-3.8
$\log K_{Mg,K}^{Pot}$	-2.1	$\log K_{Mg,Ca}^{Pot}$	-2.6

Lifetime: $\log p_{TLC}$ ionophore: 4.0 ± 0.6^2

¹ Design and Synthesis of Calcium and Magnesium Ionophores Based on Double-Armed Diazacrown Ether Compounds and Their Application to an Ion-Sensing Component for an Ion-Selective Electrode. Suzuki, K. Watanabe, Y. Matsumoto, M. Kobayashi, S. Sato, D. Siswanta, H. Hisamoto, Anal. Chem. 67, 324, (1995).

² A Comparison of Neutral Mg²⁺-Selective Ionophores in Solvent Polymeric Membranes: Complex Stoichiometry and Lipophilicity. W. Zhang, L. Jenny, U. E. Spichiger, Anal. Sci. 16, 11 (2000).

