Industriestrasse 25
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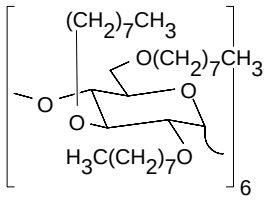
(-)-(1R,2S)-Ephedrine



Hexakis-(2,3,6-*tri*-O-octyl)-α-cyclodextrin

(2,3,6-Tri-O-octyl-α-cyclodextrin)

$C_{180}H_{348}O_{30}$ M_r 2992.67 [140395-31-9]

52584	**Selectophore®,**	≥99.0% (TLC)	100 mg

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Electrochemical Transduction

Ion-Selective Electrodes

Application and Sensor Type [1]

Determination of the enantiomeric purity of ephredrine in the presence of serum cations with solvent polymeric membrane electrode based on Hexakis-(2,3,6-*tri*-O-octyl)-α-cyclodextrin.

Recommended Membrane Composition

2.00	wt%	Hexakis-(2,3,6-tri-O-octyl)-α-cyclodextrin (52584)
65.60	wt%	Bis(1-butylpentyl)adipate (02150)
0.40	wt%	Potassium tetrakis(4-chlorophenyl)borate (60591)
32.00	wt%	Poly(vinyl chloride) high molecular weight (81392)

Recommended Cell Assembly

Reference ‖ sample solution ‖ liquid membrane ∣ 0.001 M NH_4Cl ∣ AgCl, Ag

Electrode Characteristics and Function

Selectivity coefficients $\log K^{Pot}_{Eph\text{ - }HCl\,,\,M}$ as obtained by the fixed interference method.

$\log K^{Pot}_{(+)\text{ - Eph - HCl}\,,\,(Na,\,K,\,Ca)}$ [1)]	-3.9
$\log K^{Pot}_{(-)\text{ - Eph - HCl}\,,\,(Na,\,K,\,Ca)}$ [1)]	-3.5

[1)] Ion background of serum levels

Slope of linear regression: 59 mV at 25°C (ion background of serum levels: 150mM NaCl, 4.3 mM KCl, 1.26 mM $CaCl_2$)

Enantioselectivity: $\log K^{Pot}_{+\,/\,-}$ -2.7

Detection limit:

$\log a_{(+)\text{-Eph-HCl}}$	-4.7
$\log a_{(-)\text{-Eph-HCl}}$	-4.4

Lifetime: ~3 months

[1] R. Kataky, P.S. Bates, D. Parker, Functionalized α-cyclodextrins as potentiometric chiral sensors. **Analyst *117***, 1313 (1992).