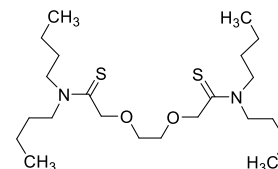


Product Information



20909 Cadmium ionophore III

(ETH 1062; *N,N,N',N'*-Tetrabutyl-3,6-dioxaoctanedi(thioamide))

Selectophore®, function tested

Electrochemical Transduction

Ion-Selective Electrodes

Application 1 and Sensor Type^{1,2}

Assay of Cd^{2+} activity with solvent polymeric membrane electrodes based on Cadmium ionophore I.

Recommended Membrane Composition

- 1.00 wt% Cadmium ionophore I ([20909](#))
- 65.00 wt% (10-Hydroxydecyl)butyrate (ETH 264) ([19355](#))
- 34.00 wt% Poly(vinyl chloride) high molecular weight ([81392](#))

Recommended Cell Assembly

Reference || sample solution || ion-selective membrane | 0.01 M CdCl_2 or $\text{Cd}(\text{NO}_3)_2$ | AgCl, Ag

Electrode Characteristics and Function

Selectivity coefficients $\log K_{\text{Cd},M}^{\text{Pot}}$ as obtained by the separate solution method (0.01 M solutions of the chloride salts).

$\log K_{\text{Cd},M}^{\text{Pot}} < -3.0$

M: alkali and alkaline earth metal ions: NH_4^+ , Mn^{2+} , Co^{2+} , Ni^{2+} , Zn^{2+} , Al^{3+} , Fe^{3+}
Nernstian electrode response: 10^{-5} to 10^{-2} M $\text{Cd}(\text{NO}_3)_2$
Detection limit: ~ -5.0

¹ *N,N,N',N'*-Tetrabutyl-3,6-dioxaoctan-dithioamid, Ionophor mit Selektivität für Cd^{2+} . K. Schneider, P. Hofstetter, E. Pretsch, D. Ammann, W. Simon, Helv. Chim. Acta 63, 217 (1980).

² *N,N,N',N'*-Tetrabutyl-3,6-dioxaoctan-dithioamid, ein Ionophor mit Cd^{2+} -Selektivität, Röntgenstrukturanalyse des Cd^{2+} -Komplexes. H. Sauter, M. Dobler, Helv. Chim. Acta 65, 1297 (1982).

