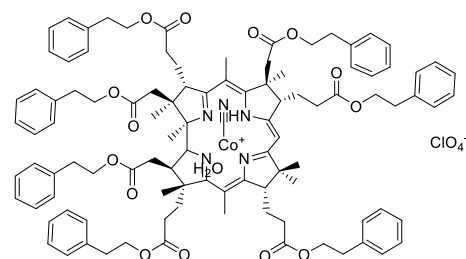


Product Information



72590 Nitrite ionophore I

(Aquo-cyano-cobyrinic acid-heptakis-(2-phenylethylester)
Selectophore®, function tested

Electrochemical Transduction

Ion-Selective Electrodes

Application 1 and Sensor Type^{1,2}

Assay of NO₂⁻ activity with solvent polymeric membrane electrode based on Nitrite ionophore I.

Recommended Membrane Composition

- 1.00 wt% Nitrite ionophore I ([72590](#))
- 0.30 wt% Potassium tetrakis[3,5-bis(trifluoromethyl)phenyl] ([60588](#))
- 65.70 wt% 2-Nitrophenyl octyl ether (NPOE) ([73732](#))
- 33.00 wt% Poly(vinyl chloride) high molecular weight ([81392](#))

Recommended Cell Assembly

Reference || sample solution || liquid membrane | 0.01 M NaNO₂, 0.01 M NaCl | AgCl, Ag

Electrode Characteristics and Function

Selectivity coefficients $\log K_{NO_2^-,X}^{Pot}$ as obtained by the separate solution method in (0.1 M solutions of the sodium salts, pH 7.4 (Tris/H₂SO₄)).

$\log K_{NO_2^-,SCN}^{Pot}$	0.2	$\log K_{NO_2^-,HCO_3}^{Pot}$	-3.7
$\log K_{NO_2^-,ClO_4}^{Pot}$	-2.4	$\log K_{NO_2^-,Cl}^{Pot}$	-3.7
$\log K_{NO_2^-,I}^{Pot}$	-2.2	$\log K_{NO_2^-,F}^{Pot}$	-3.7
$\log K_{NO_2^-,Br}^{Pot}$	-3.3	$\log K_{NO_2^-,OAc}^{Pot}$	-3.8
$\log K_{NO_2^-,NO_3}^{Pot}$	-3.6	$\log K_{NO_2^-,SO_4}^{Pot}$	-4.1

Slope of linear regression: -58±0.6 mV/dec (10⁻⁵ to 10⁻¹ M NaNO₂)
 Slope of linear regression (after 60 s): -55.2±1.6 mV/dec (10⁻⁵ to 10⁻¹ M NaNO₂)
 Detection limit: 5·10⁻⁶ M NO₂⁻
 Resistance: 0.81±0.02 MΩ

¹ Aquocyanocobalt(III)-hepta(2-phenylethyl)-cobyrinate as a cationic carrier for nitrite-selective liquid-membrane electrodes. R. Stepanek, B. Kräutler, P. Schulthess, B. Lindemann, D. Ammann, W. Simon, Anal. Chim. Acta 182, 83 (1986).

² Ionic additives for ion-selective electrodes based on electrically charged carriers. U. Schaller, E. Bakker, U. E. Spichiger, E. Pretsch, Anal. Chem. 66, 391 (1994).

