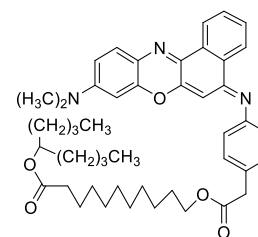


Product Information



27087 Chromoionophore II

(ETH 2439; 9-Dimethylamino-5-[4-(16-butyl-2,14-dioxo-3,15-dioxaeicosyl)phenylimino]benzo[a]phen-oxazine)

Selectophore®

Optical Transduction

Application 1 and Sensor Type^{1,2,3}

Assay of Na⁺ activity in aqueous solutions and diluted blood plasma with solvent polymeric optode membranes based on Chromoionophore II (ETH 2439) and Sodium Ionophore V (ETH 4120).

Recommended Membrane Composition

0.56 wt%	Chromoionophore II (27087)
12.04 wt%	Sodium Ionophore V (71738)
0.72 wt%	Sodium tetrakis[3,5-bis(trifluoromethyl)phenyl]borate (72017)
57.78 wt%	Bis(1-butylpentyl) adipate (02150)
28.89 wt%	Poly(vinyl chloride) high molecular weight (81392)

Recommended pH Buffer

0.05 M Magnesium acetate, adjusted to pH 4.9 with acetic acid for recording the calibration curve and for diluting blood plasma samples.

Absorbance Maxima of Chromoionophore II in Polymeric Optode Membranes¹

$\lambda_{deprot.}^{max}$: 512 nm $\lambda_{prot.}^{max}$: 656 nm

Optode Characteristics and Function

Selectivity coefficients $\log K_{Na,M}^{Opt}$ as obtained by the fixed interference method (0.01 M solutions of the acetates, buffered to pH 5.5).

$\log K_{Na,K}^{Opt}$	-1.2	$\log K_{Na,Ca}^{Opt}$	-1.2
$\log K_{Na,Li}^{Opt}$	-1.1	$\log K_{Na,Mg}^{Opt}$	-2.5

Detection range: 10^{-4} M to 10^{-1} NaCl (pH 4.9)

¹ K. Seiler, Ion-selective Optode Membranes, monograph, describing theory, preparation and application of ion-selective optode membranes as well as recent developments in this field. With 237 references. published by Fluka Chemie GmbH, Buchs, Switzerland (1993); Seiler, Ionenselektive Optodenmembranen, dt. Monographie, herausgegeben von Fluka Chemie GmbH, Buchs, Switzerland (1993).

² Characterization of sodium-selective optode membranes based on neutral ionophores and assay of sodium in plasma K. Seiler, K. Wang, E. Bakker, W. E. Morf, B. Rusterholz, U. E. Spichiger, W. Simon, Clin. Chem. 37, 1350 (1991).

³ Optodes in clinical chemistry: potential and limitations. U. E. Spichiger, D. Freiner, E. Bakker, T. Rosatzin, W. Simon, Sens. Actuators B11, 263 (1993).

