

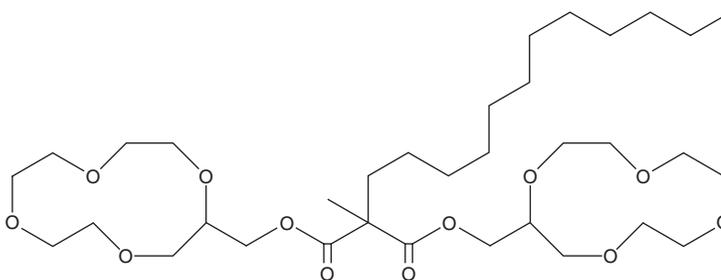
PRODUCT INFORMATION



Sodium Ionophore VI

Item No. 27754

CAS Registry No.: 80403-59-4
Formal Name: 2-dodecyl-2-methyl-propanedioic acid, 1,3-bis(1,4,7,10-tetraoxacyclododec-2-ylmethyl) ester
MF: C₃₄H₆₂O₁₂
FW: 662.9
Purity: ≥95%
Supplied as: A liquid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Sodium ionophore VI is supplied as a liquid. A stock solution may be made by dissolving the sodium ionophore VI in the solvent of choice, which should be purged with an inert gas. Sodium ionophore VI is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of sodium ionophore VI in these solvents is approximately 20, 25, and 10 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of sodium ionophore VI can be prepared by directly dissolving the liquid in aqueous buffers. The solubility of sodium ionophore VI in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Sodium ionophore VI is a sodium-selective ionophore that can be used in ion-selective electrodes to monitor sodium levels in aqueous solutions.¹ It is selective for sodium over calcium, magnesium, lithium, ammonium, and potassium ions. Sodium ionophore VI has been used in electrodes to determine the levels of sodium ions in human urine and serum, as well as in *X. laevis* oocytes.^{2,3}

References

1. Tamura, H., Kimura, K., and Shono, T. Coated wire sodium- and potassium-selective electrodes based on bis(crown ether) compounds. *Anal. Chem.* **54(7)**, 1224-1227 (1982).
2. Tamura, H., Kumami, K., Kimura, K., *et al.* Simultaneous determination of sodium and potassium in human urine or serum using coated-wire ion-selective electrodes based on bis(crown ether)s. *Microchim. Acta.* **80(3-4)**, 287-296 (1983).
3. Becker, H.M. and Deitmer, J.W. Voltage dependence of H⁺ buffering mediated by sodium bicarbonate cotransport expressed in *Xenopus* oocytes. *J. Biol. Chem.* **279(27)**, 28057-28062 (2004).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 09/24/2019

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM