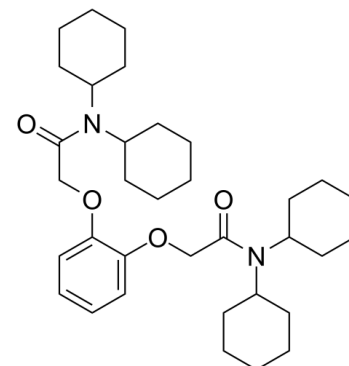


## Data Sheet

<b>Product Name:</b>	Sodium ionophore III
<b>Cat. No.:</b>	CS-6256
<b>CAS No.:</b>	81686-22-8
<b>Molecular Formula:</b>	C <sub>34</sub> H <sub>52</sub> N <sub>2</sub> O <sub>4</sub>
<b>Molecular Weight:</b>	552.79
<b>Target:</b>	Sodium Channel
<b>Pathway:</b>	Membrane Transporter/Ion Channel
<b>Solubility:</b>	DMSO : 1 mg/mL (1.81 mM; Need ultrasonic)



### BIOLOGICAL ACTIVITY:

Sodium ionophore III (ETH2120) is a  $\text{Na}^+$  ionophore suitable for the assay of sodium activity in blood, plasma, serum, etc. **In Vitro:** Preincubation of the cells with the  $\text{Na}^+$  ionophore sodium ionophore III not only stimulated caffeine reduction, but completely abolished ATP synthesis. Addition of sodium ionophore III to cells in the steady state of caffeine reduction immediately dissipated the intracellular ATP level<sup>[1]</sup>. Lactate-sulfate grown cells are insensitive to the  $\text{Na}^+$  ionophore, ETH2120<sup>[2]</sup>. Sodium ionophore III ligand is a very effective receptor for the  $\text{Eu}^{3+}$  and  $\text{Am}^{3+}$  cations and can be considered as a potential extraction agent for nuclear waste treatment<sup>[3]</sup>.

### References:

- [1]. Imkamp F, et al. Chemiosmotic energy conservation with  $\text{Na}^+$  as the coupling ion during hydrogen-dependent caffeine reduction by *Acetobacterium woodii*. *J Bacteriol.* 2002 Apr;184(7):1947-51.
- [2]. Wang L, et al. The role of Rnf in ion gradient formation in *Desulfovibrio alaskensis*. *PeerJ.* 2016 Apr 14;4:e1919.
- [3]. Makrlík, E, et al. Sodium Ionophore III as Very Effective Receptor for Trivalent Europium and Americium. *J Solution Chem* (2016) 45: 463.

### CAIndexNames:

Acetamide, 2,2'-[1,2-phenylenebis(oxy)]bis[N,N-dicyclohexyl-

### SMILES:

O=C(N(C1CCCCC1)C2CCCC2)COC3=CC=CC=C3OCC(N(C4CCCCC4)C5CCCCC5)=O

**Caution: Product has not been fully validated for medical applications. For research use only.**

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