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## Bis(12-crown-4)

Item #	Unit Size
B021-10	100 mg
B021-12	500 mg

**Chemical Name:** Bis[(12-crown-4)methyl]-2-dodecyl-2-methylmalonate

**CAS:** 80403-59-4

**Appearance:** pale yellow liquid

**Purity:**  $\geq 95.0\%$  (HPLC; RI) **MW:**

662.85,  $C_{34}H_{62}O_{12}$

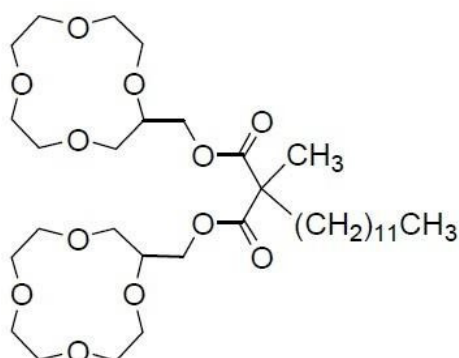
**Storage Condition:**  $-20^{\circ}\text{C}$ , protect from light

**Shipping Condition:** ambient temperature

## Product Description

The NAS11-8 glass electrode is utilized as a selective sodium ion sensor. However, it is easily spoiled by biomaterials in sample solutions. Bis(12-crown-4), a sodium ionophore, is 100 times more selective for sodium than potassium in the PVC electrode using NPOE as a plasticizer. The same selectivity for sodium over potassium is reported when Bis(12-crown-4) is used on a coated wire electrode. It can be used in either a liquid membrane or a PVC membrane. TFPB, a lipophilic anion, can help improve detection sensitivity.

## Chemical Structure



**Ion selectivity:**  $\text{LogKpot}(\text{Na}/\text{Li})$ :-3.0,  $\text{LogKpot}(\text{Na}/\text{K})$ :-2.0,  $\text{LogKpot}(\text{Na}/\text{Cs})$ :-2.0,  $\text{LogKpot}(\text{Na}/\text{Rb})$ :-2.4,  $\text{LogKpot}(\text{Na}/\text{NH}_4)$ :-3.0,  $\text{LogKpot}(\text{Na}/\text{Mg})$ :-4.0,  $\text{LogKpot}(\text{Na}/\text{Ca})$ :-4.0,  $\text{LogKpot}(\text{Na}/\text{Ba})$ :-3.7,  $\text{LogKpot}(\text{Na}/\text{Sr})$ :-3.7  
**Formulation:** Ionophore: 6%, NPOE: 70%, TFPB: 50 mol% of ionophore



CERTIFICATE NO. 32423

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