Selamectin
Item No. 21529

CAS Registry No.: 220119-17-5
Formal Name: (5Z)-25-cyclohexyl-4'-O-de(2,6-dideoxy-3-O-methyl-a-L-arabino-hexopyranosyl)-5-demethoxy-25-de(1-methylpropyl)-22,23-dihydro-5-(hydroxyimino)-avermectin A\textsubscript{1a}

MF: C\textsubscript{43}H\textsubscript{63}NO\textsubscript{11}
FW: 770.0
Purity: \( \geq 98\% \)
UV/Vis.: \( \lambda_{\text{max}} \): 246 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

**Laboratory Procedures**

Selamectin is supplied as a crystalline solid. A stock solution may be made by dissolving the selamectin in the solvent of choice. Selamectin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of selamectin in these solvents is approximately 15 mg/ml.

Selamectin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, selamectin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Selamectin has a solubility of approximately 0.33 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

**Description**

Selamectin is a macrocyclic lactone derivative of ivermectin, an anthelmintic that potentiates glutamate- and GABA-gated chloride channel opening in nematodes.\textsuperscript{1,2} At 0.1 \( \mu \)g/ml, selamectin is reported to inhibit growth in an \textit{H. contortus} larval development assay.\textsuperscript{2}

**References**