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Print Date: Nov 23rd 2021

Certificate of Analysis

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Product Name: **Methyllycaconitine citrate** **Catalog No.: 1029** **Batch No.: 22**

CAS Number: 351344-10-0

IUPAC Name: [1α,4(*S*),6β,14α,16β]-20-Ethyl-1,6,14,16-tetramethoxy-4-[[[2-(3-methyl-2,5-dioxo-1-pyrrolidinyl)benzoyl]oxy]methyl] aconitane-7,8-diol citrate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{37}H_{50}N_2O_{10}.C_6H_8O_7.1½H_2O$

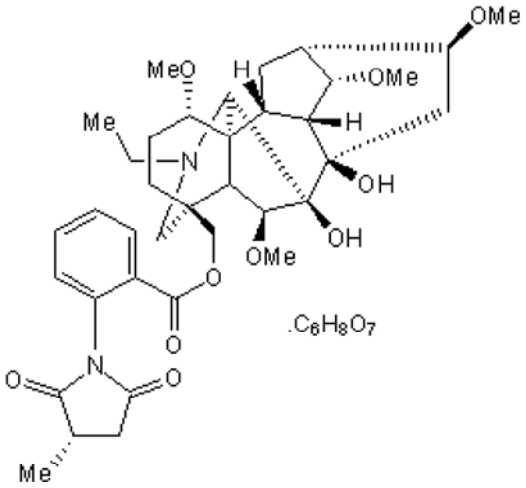
Batch Molecular Weight: 901.95

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	57.26	6.82	3.11
Found	57.51	6.8	3.28

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Product Information

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Description:

Methyllycaconitine citrate is a potent antagonist for α7-containing neuronal nicotinic receptors (K_i = 1.4 nM). Interacts with α4β2 and α6β2 receptors at concentrations > 40 nM. Attenuates METH-induced neurotoxicity in mouse striatum in vivo.

Physical and Chemical Properties:

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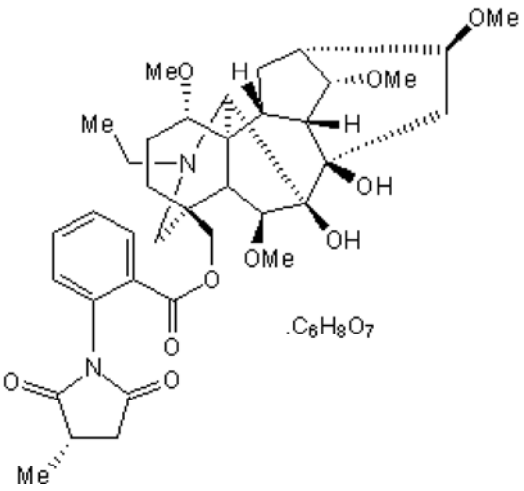

Storage: Store at -20°C

Solubility & Usage Info:

water to 100 mM
DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Escubedo *et al* (2005) Methyllycaconitine prevents methamphetamine-induced effects in mouse striatum: involvement of α7 nicotinic receptors. J.Pharmacol.Exp.Ther. ***315*** 658. PMID: 16076935.

Dobelis *et al* (1999) Effects of delphinium alkaloids on neuromuscular transmission. J.Pharmacol.Exp.Ther. ***291*** 538. PMID: 10525069.

Ward *et al* (1990) Methyllycaconitine: a selective probe for neuronal a-bungarotoxin binding sites. FEBS Lett. ***270*** 45. PMID: 2226787.

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