

**Product Name:** Methyllycaconitine citrate

**Catalog No.:** 1029

**Batch No.:** 25

CAS Number: 351344-10-0

IUPAC Name: [1 $\alpha$ ,4(S),6 $\beta$ ,14 $\alpha$ ,16 $\beta$ ]-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<sub>37</sub>H<sub>50</sub>N<sub>2</sub>O<sub>10</sub>·C<sub>6</sub>H<sub>8</sub>O<sub>7</sub>· $\frac{3}{4}$ H<sub>2</sub>O

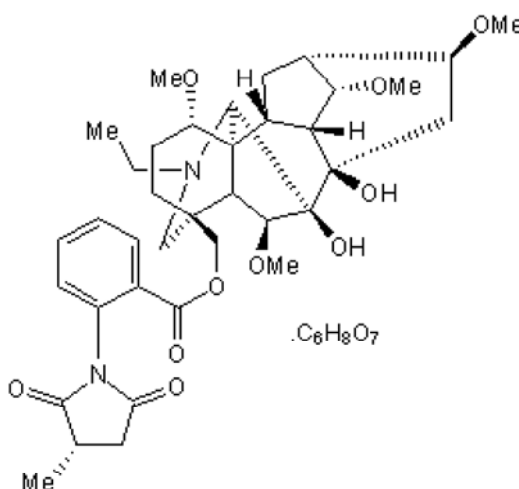
**Batch Molecular Weight:** 888.44

**Physical Appearance:** Off-white solid

**Solubility:** water to 100 mM  
DMSO to 100 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 96.4% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	58.13	6.75	3.15
Found	57.98	6.81	3.22

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**Description:**

Methyllycaconitine citrate is a potent antagonist for  $\alpha 7$ -containing neuronal nicotinic receptors ( $K_i = 1.4$  nM). Interacts with  $\alpha 4\beta 2$  and  $\alpha 6\beta 2$  receptors at concentrations  $> 40$  nM. Attenuates METH-induced neurotoxicity in mouse striatum in vivo.

**Physical and Chemical Properties:**

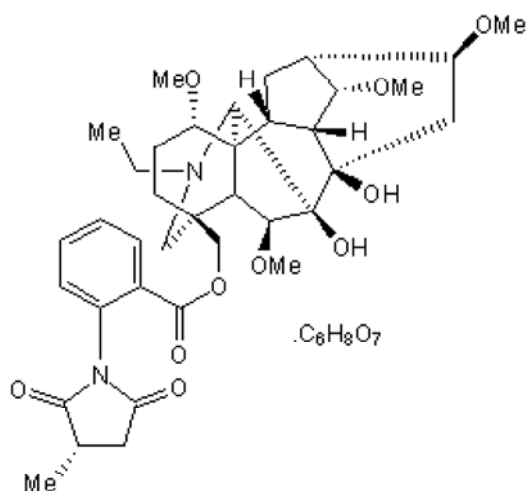
Batch Molecular Formula:  $C_{37}H_{50}N_2O_{10} \cdot C_6H_8O_7 \cdot \frac{3}{4}H_2O$

Batch Molecular Weight: 888.44

Physical Appearance: Off-white solid

**Minimum Purity:**  $\geq 95\%$

**Batch Molecular Structure:**



**Storage:** Store at  $-20^{\circ}C$

**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  $45-60^{\circ}C$  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  $-20^{\circ}C$  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  $\alpha 7$  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  $\alpha$ -bungarotoxin binding sites. *FEBS Lett.* **270** 45. PMID: 2226787.

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