Certificate of Analysis

Product Name: **(±)-PPCC oxalate** **Catalog No.: 3870** **Batch No.: 1**

CAS Number: 932736-91-9

IUPAC Name: (*S**,*R**)-2-[(4-Hydroxy-4-phenyl-1-piperidinyl)methyl]-1-(4-methylphenyl)-cyclopropanecarboxylic acid methyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{24}H_{29}NO_3.C_2H_2O_4$

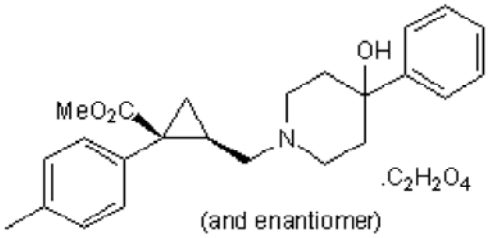
Batch Molecular Weight: 469.53

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 10 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.51	6.65	2.98
Found	66.52	6.59	3.19

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IUPAC Name: (*S**,*R**)-2-[(4-Hydroxy-4-phenyl-1-piperidinyl)methyl]-1-(4-methylphenyl)-cyclopropanecarboxylic acid methyl ester

Description:

Selective sigma (σ) receptor ligand. Displays high affinity for σ_1; also binds at σ_2 sites (K_i = 1.5 nM and 50.8 nM respectively). Selective over a range of receptor types including dopaminergic and muscarinic receptors, DAT and SERT.

Physical and Chemical Properties:

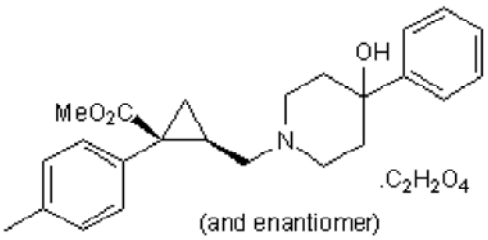
Batch Molecular Formula: $C_{24}H_{29}NO_3.C_2H_2O_4$

Batch Molecular Weight: 469.53

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 10 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:

Antonini *et al* (2009) Anti-amnesic properties of (±)-PPCC, a novel sigma receptor ligand, on cognitive dysfunction induced by selective cholinergic lesion in rats. J.Neurochem. ***109*** 744. PMID: 19245662.

Prezzavento *et al* (2008) A new sigma ligand, (±)-PPCC, antagonizes kappa opioid receptor-mediated antinociceptive effect. Life Sci. ***82*** 549. PMID: 18261749.

Prezzavento *et al* (2007) Novel sigma receptor ligands: synthesis and biological profile. J.Med.Chem. ***50*** 951. PMID: 17328523.