

Certificate of Analysis

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Product Name: Melperone hydrochloride

Catalog No.: 2495

Batch No.: 1

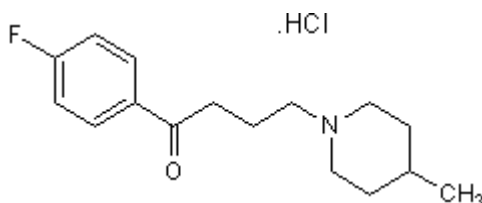
CAS Number: 1622-79-3

EC Number: 216-599-9

IUPAC Name: 1-(4-Fluorophenyl)-4-(4-methyl-1-piperidinyl)-1-butanone hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆H₂₂FNO.HCl
Batch Molecular Weight: 299.81
Physical Appearance: White crystalline solid
Solubility: water to 100 mM
DMSO to 100 mM
ethanol to 100 mM
Storage: Desiccate at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	64.1	7.73	4.67
Found	64.18	7.85	4.72

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Atypical neuroleptic; 5-HT_{2A/D2} receptor antagonist (K_i values are 120 and 180 nM respectively). Causes an increase in dopamine levels in the medial prefrontal cortex (mPFC) and nucleus accumbens and an increase in ACh in the mPFC. Also binds adrenergic α₁ and α₂ receptors (K_i values are 180 and 150 nM respectively).

Physical and Chemical Properties:

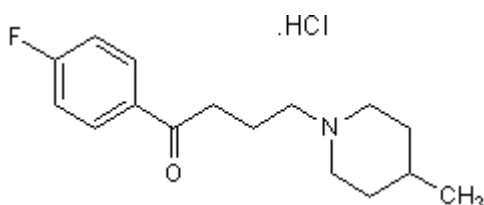
Batch Molecular Formula: C₁₆H₂₂FNO.HCl

Batch Molecular Weight: 299.81

Physical Appearance: White crystalline solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Seeman et al (1997) Atypical neuroleptics have low affinity for dopamine D₂ receptors or are selective for D₄ receptors. *Neuropsychopharmacology*. **16** 93. PMID: 9015795.

Ichikawa et al (2002) Atypical antipsychotic drugs, quetiapine, iloperidone, and melperone, preferentially increase dopamine and acetylcholine release in rat medial prefrontal cortex: role of 5-HT_{1A} receptor agonism. *Brain Res*. **956** 349. PMID: 12445705.

Uhr et al (2005) P-glycoprotein is a factor in the uptake of dextromethorphan, but not of melperone, into mouse brain: evidence for an overlap in substrate specificity between P-gp and CYP2D6. *J.Psychopharmacol*. **18** 509.

Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM
DMSO to 100 mM
ethanol 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.

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