

Certificate of Analysis

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Product Name: Fentanyl citrate

Catalog No.: 3247

Batch No.: 1

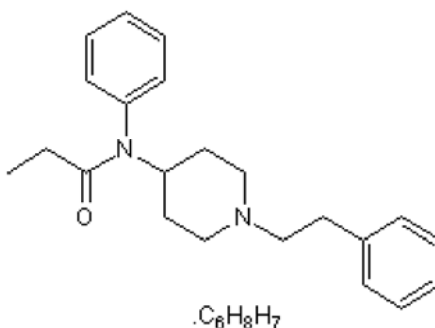
CAS Number: 990-73-8

EC Number: 213-588-0

IUPAC Name: *N*-Phenyl-*N*-[1-(2-phenylethyl)-4-piperidinyl]propanamide citrate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₂₈N₂O.C₆H₈O₇
Batch Molecular Weight: 528.59
Physical Appearance: White crystalline solid
Solubility: water to 40 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.2% purity

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

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

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IUPAC Name: *N*-Phenyl-*N*-[1-(2-phenylethyl)-4-piperidinyl]propanamide citrate

Description:

Potent and selective μ -opioid receptor agonist (K_i values are 7.0, 151 and 470 nM for μ -, δ - and κ -opioid receptors respectively). Displays antinociceptive activity in vivo.

Physical and Chemical Properties:

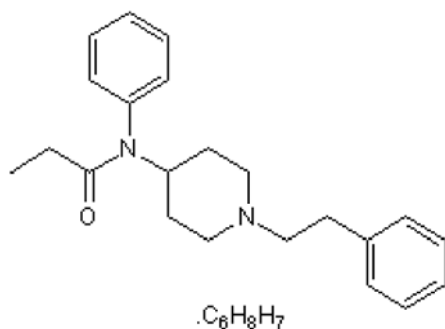
Batch Molecular Formula: $C_{22}H_{28}N_2O \cdot C_6H_8O_7$

Batch Molecular Weight: 528.59

Physical Appearance: White crystalline solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

water to 40 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.

Other Information:

INFORMATION FOR CUSTOMERS IN THE UK ONLY

This product is a Schedule 2 Home Office controlled substance and customers in the UK are required to hold the relevant licence or be exempt from restrictions in order to purchase and possess this material.

INFORMATION FOR CUSTOMERS IN THE USA ONLY

This product is a Schedule I DEA controlled substance and customers in the USA are required to hold a controlled substance registration in order to purchase and possess this material (in accordance with Title 21 code of federal regulations part 1300 to end).

INFORMATION FOR CUSTOMERS IN CANADA ONLY

This product is a Schedule I CDSA controlled substance and customers in Canada require an import permit to purchase this material.

References:

Liu *et al* (2003) Opioid activity of C8813, a novel and potent opioid analgesic. *Life Sci.* **73** 233. PMID: 12738037.

Stevenson *et al* (2003) Opioid interactions in rhesus monkeys: effects of δ + μ and δ + κ agonists on schedule-controlled responding and thermal nociception. *J.Pharmacol.Exp.Ther.* **307** 1054. PMID: 14557380.

Zernig *et al* (1995) Receptor reserve and affinity of μ -opioid agonists in mouse antinociception: correlation with receptor binding. *Life Sci.* **57** 2113. PMID: 7475964.

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