

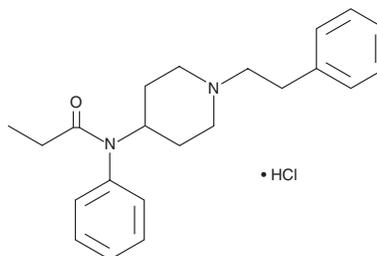
# PRODUCT INFORMATION



## Fentanyl (hydrochloride)

Item No. 14719

**CAS Registry No.:** 1443-54-5  
**Formal Name:** N-phenyl-N-[1-(2-phenylethyl)-4-piperidiny]-propanamide, monohydrochloride  
**MF:** C<sub>22</sub>H<sub>28</sub>N<sub>2</sub>O • HCl  
**FW:** 372.9  
**Purity:** ≥98%  
**Supplied as:** A neat solid  
**Storage:** -20°C  
**Stability:** ≥5 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Description

Fentanyl (hydrochloride) (Item No. 14719) is an analytical reference material categorized as an opioid.<sup>1,2</sup> It is more effective than morphine (Item No. ISO60147) at reducing pain but is also more lethal.<sup>2</sup> Fentanyl is highly abused and is associated with many fatal overdoses.<sup>3</sup> Fentanyl is regulated as a Schedule II compound in the United States. This product is intended for research and forensic applications.

This product is qualified as a Reference Material that has been manufactured and tested to ISO/IEC 17025 and ISO 17034 international standards for reference materials.

### References

1. Burns, S.M., Cunningham, C.W., and Mercer, S.L. DARK classics in chemical neuroscience: Fentanyl. *ACS Chem. Neurosci.* **9(10)**, 2428-2437 (2018).
2. Raynor, K., Kong, H., Chen, Y., et al. Pharmacological characterization of the cloned  $\kappa$ -,  $\delta$ -, and  $\mu$ -opioid receptors. *Mol. Pharmacol.* **45(2)**, 330-334 (1994).
2. Higashikawa, Y. and Suzuki, S. Studies on 1-(2-phenethyl)-4-(N-propionylanilino)piperidine (fentanyl) and its related compounds. VI. Structure-analgesic activity relationship for fentanyl, methyl-substituted fentanyls and other analogues. *Forensic Toxicol.* **26(1)**, 1-5 (2008).
3. Armenian, P., Vo, K.T., Barr-Walker, J., et al. Fentanyl, fentanyl analogs and novel synthetic opioids: A comprehensive review. *Neuropharmacology* **3908(17)**, 30484-30487 (2017)

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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