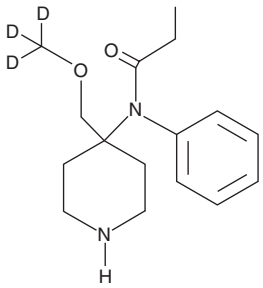
PRODUCT INFORMATION

Norsufentanil-d_3

Item No. 9001143

CAS Registry No.:	1204688-16-3
Formal Name:	N-[4-(methoxy-d_3-methyl)-4-piperidinyl]-N-phenyl-propanamide
Synonym:	R 30451-d_3
MF:	$C_{16}H_{21}D_3N_2O_2$
FW:	279.4
Chemical Purity:	≥95% (Norsufentanil)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_3); ≤1% d_0
Supplied as:	A solution in methyl acetate
Storage:	-20°C
Stability:	≥4 years



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

Description

Norsufentanil-d_3 (Item No. 9001143) is intended for use as an internal standard for the quantification of norsufentanil by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Sufentanil is a powerful synthetic opioid analgesic that is used in anesthesia and palliative care.[1-3] Norsufentanil is a metabolite of sufentanil, produced by oxidative N-dealkylation in the liver by cytochrome P450 isoforms.[4] The physiological and toxicological properties of this compound are unknown. This product is intended for forensic applications.

References

1. Bovill, J.G., Sebel, P.S., and Stanley, T.H. Opioid analgesics in anesthesia: With special reference to their use in cardiovascular anesthesia. *Anesthesiology* **61(6)**, 731-755 (1984).
2. Hodgson, P.S., Neal, J.M., Pollock, J.E., *et al.* The neurotoxicity of drugs given intrathecally (spinal). *Anesth. Analg.* **88(4)**, 797-809 (1999).
3. King, S., Forbes, K., Hanks, G.W., *et al.* A systematic review of the use of opioid medication for those with moderate to severe cancer pain and renal impirment: A European Palliative Care Research Collaborative opioid guidelines project. *Palliat. Med.* **25(5)**, 525-552 (2011).
4. Tateishi, T., Krivoruk, Y., Ueng, Y.F., *et al.* Identification of human liver cytochrome P-450 3A4 as the enzyme responsible for fentanyl and sufentanil N-dealkylation. *Anesth. Analg.* **82(1)**, 167-172 (1996).

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