

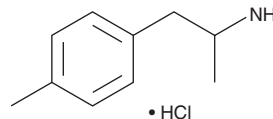
# PRODUCT INFORMATION



## 4-Methylamphetamine (hydrochloride)

Item No. 14215

**CAS Registry No.:** 41632-56-8  
**Formal Name:**  $\alpha$ ,4-dimethyl-benzenethanamine, monohydrochloride  
**Synonyms:** 4-MA, *p*-Methylamphetamine, *para*-Methylamphetamine  
**MF:** C<sub>10</sub>H<sub>15</sub>N • HCl  
**FW:** 185.7  
**Purity:** ≥98%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 213 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥5 years



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

### Description

4-Methylamphetamine (4-MA) (hydrochloride) (Item No. 14215) is an analytical reference standard categorized as an amphetamine. 4-MA acts on norepinephrine (NE), dopamine (DA), and serotonin (5-HT) transporters to increase extracellular levels of these neurotransmitters. *In vitro*, the potencies of 4-MA for NE and DA release are similar to those of D-amphetamine with EC<sub>50</sub> values of 22.2 and 7.2 nM for NE and 44.1 and 8.0 nM for DA, respectively.<sup>1</sup> 4-MA is more potent than D-amphetamine at releasing serotonin (EC<sub>50</sub>s = 53.4 and 1,756 nM, respectively). In rats, 4-MA acts as an agonist at 5-HT<sub>1A</sub> receptors and induces hypothermia.<sup>2</sup> It is found as a contaminant in amphetamine, and ingestion has been associated with severe intoxication and fatalities.<sup>3</sup> This product is intended for research and forensic applications.

### References

1. Wee, S., Anderson, K.G., Baumann, M.H., *et al.* Relationship between the serotonergic activity and reinforcing effects of a series of amphetamine analogs. *J. Pharmacol. Exp. Ther.* **313**(2), 848-854 (2005).
2. Rubio, M., López-Arnau, R., Pubill, D., *et al.* Serotonin is involved in the psychostimulant and hypothermic effect of 4-methylamphetamine in rats. *Neurosci. Lett.* **590**, 68-73 (2015).
3. Blanckaert, P., van Amsterdam, J.G.C., Brunt, T.M., *et al.* 4-Methyl-amphetamine: A health threat for recreational amphetamine users. *J. Psychopharmacol.* **27**(9), 817-822 (2013).

#### 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

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