

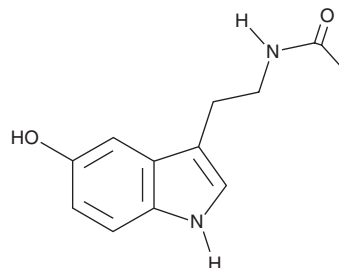
PRODUCT INFORMATION



N-Acetylserotonin

Item No. 14535

CAS Registry No.: 1210-83-9
Formal Name: N-[2-(5-hydroxy-1H-indol-3-yl)ethyl]-acetamide
Synonyms: N-Acetyl-5-hydroxytryptamine, NAS
MF: C₁₂H₁₄N₂O₂
FW: 218.3
Purity: ≥98%
UV/Vis.: λ_{max}: 224, 278 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

N-Acetylserotonin (NAS) is supplied as a crystalline solid. A stock solution may be made by dissolving the NAS in the solvent of choice, which should be purged with an inert gas. NAS is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of NAS in these solvents is approximately 10, 12.5, and 20 mg/ml, respectively.

NAS is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NAS should first be dissolved in DMF and then diluted with the aqueous buffer of choice. NAS has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NAS is the immediate precursor of melatonin (Item No. 14427). It is produced from serotonin by the enzyme aralkylamine N-acetyltransferase and is converted to melatonin by acetylserotonin O-methyltransferase.¹ Like melatonin, NAS is considered to be a neurotransmitter and acts as an agonist at the melatonin receptors MT₁, MT₂, and MT₃.² NAS may also have unique central effects since it is distributed in specific brain areas separate from serotonin and melatonin.²

References

1. Chatteraj, A., Liu, T., Zhang, L.S., *et al.* Melatonin formation in mammals: *In vivo* perspectives. *Rev. Endocr. Metab. Disord.* **10**(4), 237-243 (2009).
2. Jang, S.W., Liu, X., Pradoldej, S., *et al.* N-acetylserotonin activates TrkB receptor in a circadian rhythm. *Proc. Natl. Acad. Sci. USA* **107**(8), 3876-3881 (2010).

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.

Copyright Cayman Chemical Company, 11/08/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM