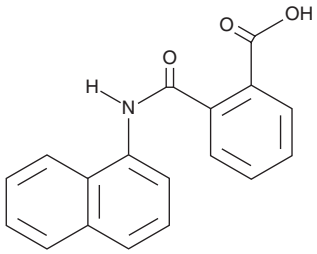
PRODUCT INFORMATION

Naptalam

Item No. 34285

CAS Registry No.:	132-66-1
Formal Name:	2-[(1-naphthalenylamino)carbonyl]-benzoic acid
Synonyms:	Napthalam, N-1-Napthylphthalamic Acid, NPA, NSC 204421
MF:	$C_{18}H_{13}NO_3$
FW:	291.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 224 nm
Supplied as:	A 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

Naptalam is supplied as a solid. A stock solution may be made by dissolving the naptalam in the solvent of choice, which should be purged with an inert gas. Naptalam is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of naptalam in these solvents is approximately 15 and 25 mg/ml, respectively.

Naptalam is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, naptalam should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Naptalam has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Naptalam is an auxin inhibitor and herbicide.[1,2] It reduces coleoptile accumulation of the polar auxin indole- 3-acetic acid (Item No. 16954) in maize when used at a concentration of 50 µM.[1] Naptalam inhibits various auxin-dependent processes, such as embryo development, lateral root development, leaf vein patterning, apical dominance, and adventitious root formation, in monocotyledons.[3]

References

1. Nishimura, T. and Koshiba, T. Auxin biosynthesis site and polar transport in maize coleoptiles. *Plant Signal. Behav.* **5(5)**, 573-575 (2010).
2. Wolfe, M.F. and Seiber, J.N. A method for the trace analysis of naptalam (N-1-naphthylphthalamic acid) in water. *Arch. Environ. Contam. Toxicol.* **23(1)**, 137-141 (1992).
3. Teale, W. and Palme, K. Naphthylphthalamic acid and the mechanism of polar auxin transport. *J. Exp. Bot.* **69(2)**, 303-312 (2018).

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