

PRODUCT INFORMATION



Azadirachtin

Item No. 21893

CAS Registry No.: 11141-17-6
Formal Name: (2aR,3S,4S,4aR,5S,7aS,8S,10R,10aS,10bR)-10-(acetyloxy)octahydro-3,5-dihydroxy-4-methyl-8-[[[(2E)-2-methyl-1-oxo-2-buten-1-yl]oxy]-4-[[[(1aR,2S,3aS,6aS,7S,7aS)-3a,6a,7,7a-tetrahydro-6a-hydroxy-7a-methyl-2,7-methanofuro[2,3-b]oxireno[e]oxepin-1a(2H)-yl]-1H,7H-naphtho[1,8-bc:4,4a-c']difuran-5,10a(8H)-dicarboxylic acid, 5,10a-dimethyl ester

MF: C₃₅H₄₄O₁₆

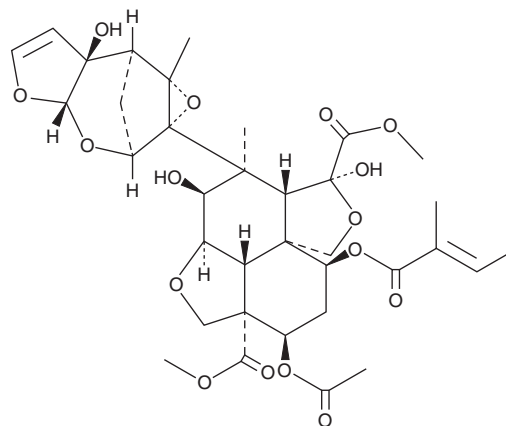
FW: 720.7

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥2 years



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

Laboratory Procedures

Azadirachtin is supplied as a solid. A stock solution may be made by dissolving the azadirachtin in the solvent of choice, which should be purged with an inert gas. Azadirachtin is slightly soluble in chloroform and methanol.

Description

Azadirachtin is a naturally-occurring insecticide originally isolated from the seeds of *A. indica*.¹ It inhibits feeding behavior, molting, and/or ovarian development in a species-dependent manner in insects.² Azadirachtin inhibits feeding on *G. barbadense* leaves and cotyledon disks by third instar *H. zea* larvae with protection concentrations (PC₉₅s) of 6.2 and 6.8 µg/disk, respectively.³ It inhibits ecdysis and growth of *H. zea*, *H. virescens*, *S. frugiperda*, and *P. gossypiella* with ecdysis inhibition values (EI₉₅s) ranging from 1 to 10 ppm and ED₅₀ values ranging from 0.4 to 0.7 ppm. Azadirachtin inhibits the growth of freshly molted fourth instar *E. varivestis* larva (LC₅₀ = 1.66 ppm).² It is lethal to *A. stephensi* first, second, third, and fourth instar larva, pupa, and adults at a concentration of 0.1 ppm.⁴

References

1. Butterworth, J.H. and Morgan, E.D. Isolation of a substance that suppresses feeding in locusts. *Chem. Commun. (Lond.)* **1**, 23-24 (1968).
2. Rembold, H. Azadirachtins. Their structure and mode of action. In *Insecticides of Plant Origin*. 150-163, Washington, DC, US: American Chemical Society (1989).
3. Kubo, I. and Kocke, J.A. Azadirachtin, insect ecdysis inhibitor. *Agr. Biol. Chem.* **46(7)**, 1951-1953 (1982).
4. Nathan, S.S., Kalaivani, K., and Murugan, K. Effects of neem limonoids on the malaria vector *Anopheles stephensi* Liston (Diptera: Culicidae). *Acta. Trop.* **96(1)**, 47-55 (2005).

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.

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