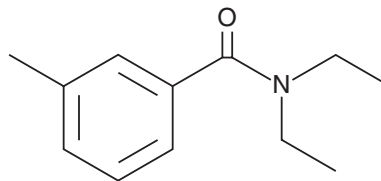


PRODUCT INFORMATION

N,N-Diethyl-*meta*-toluamide

Item No. 16141

CAS Registry No.: 134-62-3
Formal Name: N,N-diethyl-3-methyl-benzamide
Synonyms: DEET, N,N-Diethyl-*m*-toluamide, Diethyltoluamide, NSC 33840
MF: C₁₂H₁₇NO
FW: 191.3
Purity: ≥98%
Supplied as: A liquid
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,N-Diethyl-*meta*-toluamide (DEET) is supplied as a liquid. A stock solution may be made by dissolving the DEET in the solvent of choice, which should be purged with an inert gas. DEET is soluble (≥10 mg/ml) in organic solvents such as ethanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of DEET can be prepared by directly dissolving the liquid in aqueous buffers. DEET is slightly soluble (0.1-1 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

DEET is an insect repellent.¹ It activates octopamine receptors and increases intracellular calcium levels in Sf21 insect cells. DEET blocks the electrically evoked excitatory postsynaptic potential (EPSP) in the body wall musculature of *M. domestica* third instar larvae and blocks sodium and potassium channels in isolated rat cortical neurons (IC₅₀s = 700 and 114 μM, respectively). It is lethal to *A. aegypti* mosquitoes, insecticide-sensitive and -resistant strains of *A. gambiae* mosquitoes, and *M. domestica* houseflies (LD₅₀s = 1,102, 1,175, 1,472, and 8,104 ng/mg, respectively, for topical application). Formulations containing DEET have been used as insect repellents.

Reference

- Swale, D.R., Sun, B., Tong, F., et al. Neurotoxicity and mode of action of N, N-diethyl-*meta*-toluamide. *Plos One* **9**(8), e103713 (2014).

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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