

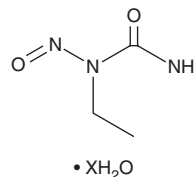
PRODUCT INFORMATION



1-Ethyl-1-nitrosourea (hydrate)

Item No. 36264

Formal Name: N-ethyl-N-nitroso-urea, hydrate
Synonyms: ENU, Ethylnitrosourea, N-Ethyl-N-nitrosourea, N-Nitroso-N-ethylurea
MF: $C_3H_7N_3O_2 \cdot XH_2O$
FW: 117.1
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 240 nm
Supplied as: A solid
Storage: $-20^\circ C$
Stability: ≥ 4 years



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

Laboratory Procedures

1-Ethyl-1-nitrosourea (ENU) (hydrate) is supplied as a solid. A stock solution may be made by dissolving the ENU (hydrate) in the solvent of choice, which should be purged with an inert gas. ENU (hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ENU (hydrate) in ethanol and DMSO is approximately 20 mg/ml and approximately 15 mg/ml in DMF.

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 ENU (hydrate) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of ENU (hydrate) in PBS (pH 7.2) is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

ENU is a DNA alkylating agent.¹ It increases the concentrations of O⁶-ethylguanine, N⁷-ethylguanine, N⁷-ethyladenine, and N³-ethyladenine in rat brain. ENU (80 mg/kg) is teratogenic *in vivo*, inducing tumor formation and paw malformations in rat pups when administered to pregnant rats.²

References

1. Goth, R. and Rajewsky, M.F. Persistence of O⁶-ethylguanine in rat-brain DNA: Correlation with nervous system-specific carcinogenesis by ethylnitrosourea. *Proc. Natl. Acad. Sci. USA* **71**(3), 639-643 (1974).
2. Druckrey, H., Ivanković, S., and Preussmann, R. Teratogenic and carcinogenic effects in the offspring after single injection of ethylnitrosourea to pregnant rats. *Nature* **210**(5043), 1378-1379 (1966).

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, 11/09/2022

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