

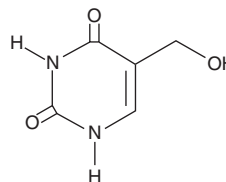
PRODUCT INFORMATION



Hydroxymethyl Uracil

Item No. 89360

CAS Registry No.: 4433-40-3
Formal Name: 5-(hydroxymethyl)-2,4(1H,3H)-pyrimidinedione
MF: C₅H₆N₂O₃
FW: 142.1
Purity: ≥98%
UV/Vis.: λ_{max}: 263 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

Hydroxymethyl uracil is supplied as a crystalline solid. A stock solution may be made by dissolving the hydroxymethyl uracil in the solvent of choice, which should be purged with an inert gas. Hydroxymethyl uracil is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of hydroxymethyl uracil in these solvents is approximately 0.8, 53, and 60 mg/ml, respectively.

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 hydroxymethyl uracil can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of hydroxymethyl uracil in PBS (pH 7.2) is approximately 8 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Hydroxymethyl uracil is a product of oxidative damage to DNA, predominantly by hydroxyl radical via the Fenton reaction.¹⁻³

References

1. Zastawny, T.H., Altman, S.A., Randers-Eichhorn, L., *et al.* DNA base modifications and membrane damage in cultured mammalian cells treated with iron ions. *Free Radic. Biol. Med.* **18**, 1013-1022 (1995).
2. Spencer, J.P.E., Jenner, A., Chimel, K., *et al.* DNA strand breakage and base modification induced by hydrogen peroxide treatment of human respiratory tract epithelial cells. *FEBS Lett.* **374**, 233-236 (1995).
3. Jaruga, P., Zastawny, T.H., Skokowski, J., *et al.* Oxidative DNA base damage and antioxidant enzyme activities in human lung cancer. *FEBS Lett.* **341**, 59-64 (1994).

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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