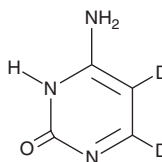


PRODUCT INFORMATION



Cytosine-d₂ Item No. 36319

CAS Registry No.: 106391-24-6
Formal Name: 6-amino-2(1H)-pyrimidinone-4,5-d₂
MF: C₄H₃D₂N₃O
FW: 113.1
Chemical Purity: ≥98% (Cytosine)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₂); ≤1% d₀
Purity: ≥98%
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

Cytosine-d₂ is intended for use as an internal standard for the quantification of cytosine by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Cytosine-d₂ is supplied as a solid. A stock solution may be made by dissolving the cytosine-d₂ in the solvent of choice, which should be purged with an inert gas. Cytosine-d₂ is soluble in the solvent 0.5 M hydrochloric acid at a concentration of approximately 50 mg/ml.

Description

Cytosine is a pyrimidine base.¹ It forms complementary base pairs with the purine guanine (Item No. 34248) in DNA and RNA and is a precursor of uracil (Item No. 26088). Methylation of cytosine is a key epigenetic mark that plays a role in gene regulation.²

References

1. Berg, J.M., Tymoczko, J.L., and Stryer, L. Nucleotide Biosynthesis. *Biochemistry*. 5th edition, W.H. Freeman (2002).
2. Breiling, A. and Lyko, F. Epigenetic regulatory functions of DNA modifications: 5-methylcytosine and beyond. *Epigenetics Chromatin* 8, 24 (2015).

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

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