

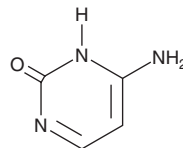
PRODUCT INFORMATION



Cytosine

Item No. 36219

CAS Registry No.: 71-30-7
Formal Name: 6-amino-2(1H)-pyrimidinone
Synonyms: 4-Aminouracil, NSC 27787
MF: C₄H₅N₃O
FW: 111.1
Purity: ≥95%
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 is supplied as a solid. A stock solution may be made by dissolving the cytosine in the solvent of choice, which should be purged with an inert gas. Cytosine is slightly soluble in DMSO, dimethyl formamide, and acetonitrile. Cytosine is also slightly soluble in water.

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 cytosine can be prepared by directly dissolving the solid in aqueous buffers. Cytosine is slightly soluble in PBS (pH >10.2). We do not recommend storing the aqueous solution for more than one day.

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.

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