

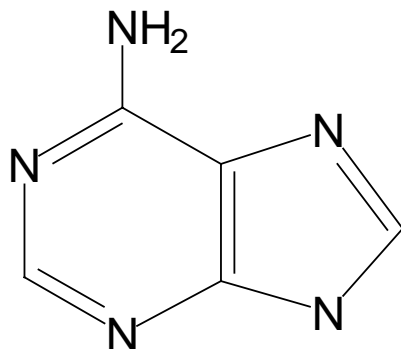


ADENINE FREE BASE
Product Number **A8626**

CAS #: 73-24-5

Synonyms: adenimine; 6-aminopurine;
6-amino-1H-purine; vitamin B₄;
1,6-dihydro-6-iminopurine

Product Description



Appearance: White powder, occasionally with a yellow cast.

Molecular formula: C₅H₅N₅

Molecular weight: 135.1

E^{mM}(263nm) = 13.2 (1.0 M HCl)^{3,1}

This product is synthetic; our supplier considers details proprietary. A method of synthesis of C¹⁴-labeled adenine and 8-azaadenine was developed due to interest as a possible anti-cancer agent.⁶

Adenine is found in every plant and animal tissue; it is one of the four bases in DNA, and is a constituent of numerous coenzymes. Numerous references to its use occur in biochemical literature.

Adenine free base is reagent grade Adenine A8626; A2786 and A5665 have been tested for use in cell culture.

Product Information

Preparation Instructions

Sigma tests adenine in 1 M HCl at 20 mg/mL, obtaining a clear colorless solution. (Note that the hydrochloride salt is directly water-soluble.)

Adenine is soluble in at 1 part to ~2000 parts cold water, 1 part in 40 of boiling water; slightly soluble in hot alcohol; insoluble in chloroform, ether; soluble in hot NH₄OH.^{3,4,5}

Solutions should be stable for months if sterile-filtered and stored at 2-8 °C.

Storage/Stability

When stored at room temperature, adenine has a shelf-life of four years.

Product Profile

Column: Vydac C18 15 cm x 4.6 mm, particle size 5 µm				
Mobile phases:	Time:	0	5	25
A 0.05 M (NH ₄)H ₂ PO ₄		100	100	20%
B Acetonitrile		0	0	80

Pressure: 1270 psi

Flow rate: 1 mL/min

Sample: Dissolved at 0.20 mg/mL in 0.5 M HCl; 30 µL injected

Detection: 265 nm

Retention time: ~9 minutes (lot 043H0583)

References

1. *Spec. & Criteria for Biochem. Compounds*, 3rd ed., p. 157.
2. Sigma quality control data.
3. *Merck Index*, 12th ed., #150 (1996).
4. *Lange's Handbook of Chemistry*, 12th ed., Dean, J.A., ed, Table 7-5 (p. 7-394).
5. *Martindale: The Extra Pharmacopoeia*, 30th ed. (Pharmaceutical Press, 1993), p. 1331.
6. *J. Amer. Chem. Soc.*, 74, 2422 (1952).

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