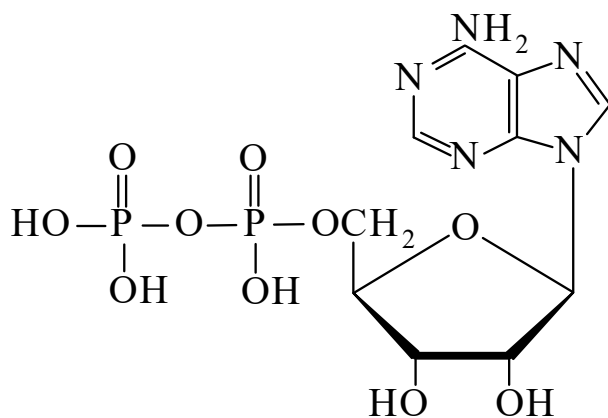




>>Entry Name: Adenosine diphosphate

Synonym(s): Adenosine 5'-(trihydrogen diphosphate), 9Cl. Adenosine 5'-pyrophosphate. ADP. Adenosine-5'-diphosphoric acid



CAS Registry Number: 58-64-0

Related CAS Registry Numbers(s): 1172-42-5 20398-34-9 123333-51-7

Molecular Formula: C₁₀H₁₅N₅O₁₀P₂

Molecular Weight: 427.203

Accurate Mass: 427.029419

Percentage Composition: C 28.12%; H 3.54%; N 16.39%; O 37.45%; P 14.50%

Biological Source: Formed from ATP in the muscle by the enzyme adenosinetriphosphatase. Prod. by various bacteria

pKa Value: pK_{a4} 4; pK_{a5} 6.48 (25°, 0.15M NaCl)

Other Data: λ_{max} 259 nm (ε 15 400) (H₂O)

Fluka: 1905

>>Derivative: Acridine salt

Melting Point: Mp 215 dec.°

>>Derivative: 6N-Benzoyl, tri-Na salt

Other Data: λ_{max} 281 nm (ε 19 400) (H₂O)

References:

Baddiley, J. *et al.*, *J.C.S.*, 1947, 648

Biochem. Prep., 1949, **1**, 1

Chambers, R.W. *et al.*, *J.A.C.S.*, 1960, **82**, 970, (*synth*)

Mitsugi, K. *et al.*, *Agric. Biol. Chem.*, 1964, **28**, 571, (*isol*)

Wieland, T. *et al.*, *Chem. Ber.*, 1968, **107**, 3031, (*synth*)

Sarma, R.H. *et al.*, *Chem. Comm.*, 1973, 140, (*pmr, nmr*)

Hampton, A. *et al.*, *Biochemistry*, 1975, **14**, 5438

Swaminathan, P. *et al.*, *Acta Cryst. B*, 1980, **36**, 2590, (*cryst struct*)

Merck Index, 11th edn., 1989, 144