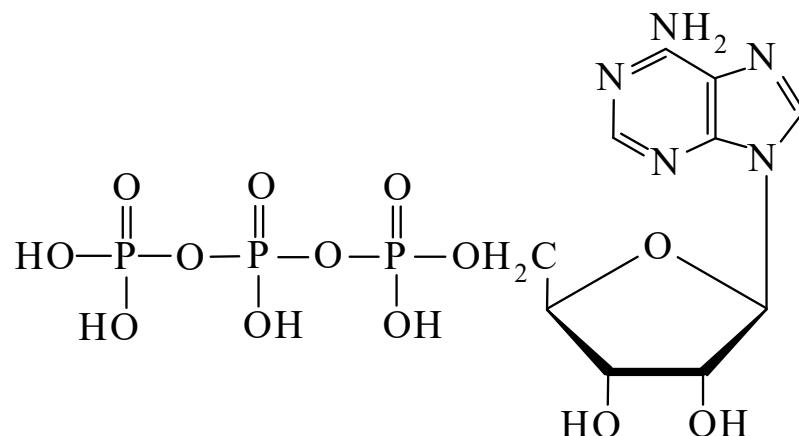




>>Entry Name: Adenosine triphosphate

Synonym(s): Adenosine 5'-(tetrahydrogen triphosphate), 9Cl, 8Cl. ATP. Adenosine 5'-triphosphoric acid. Adenylpyrophosphoric acid. Atriphos. Cardenosine. Fosfobion. Striadyne



CAS Registry Number: 56-65-5

Related CAS Registry Numbers(s): 1476-84-2 2964-07-0 22887-44-1 37866-02-7 56842-80-9

Molecular Formula: C₁₀H₁₆N₅O₁₃P₃

Molecular Weight: 507.183

Accurate Mass: 506.995751

Percentage Composition: C 23.68%; H 3.18%; N 13.81%; O 41.01%; P 18.32%

Biological Source: Isol. from muscle extracts. Mammalian skeletal muscle at rest contains 0.3-0.4 g of ATP/100 g. Isol. from various plant sources

Use/Importance: Important metabolic coenzyme; fundamental role in biological energy transformations. Used in the treatment of supraventricular tachycardia

Melting Point: Mp 143-145 dec.°

Optical Rotation: $[\alpha]_D^{22} -26.7$ (c, 3.1 in H₂O)

Solubility: BERDY SOL: Sol. H₂O

pKa Value: pK_{a4} 4.06; pK_{a5} 6.53 (25°)

UV: [neutral] $\lambda_{\max}$ 259 () (H₂O) (Berdy)

Other Data: $\lambda_{\max}$ 259 nm (ϵ 15 400) (H₂O). Component of numerous preparations

Hazard & Toxicity: LD₅₀ (rat, ipr) 200mg/kg

>>Derivative: Di-Na salt

Synonym(s): Adenosine triphosphate disodium, JAN. Adetphos. Trinosin

CAS Registry Number: 987-65-5

Extra CAS Registry Numbers(s): 51963-61-2

Use/Importance: Inhibits enzymatic browning of apples, potatoes etc.

Melting Point: Mp 188-190 dec.° (hydrate)

Fluka: 2060

>>Derivative: Ca salt

CAS Registry Number: 15866-84-9

Extra CAS Registry Numbers(s): 71937-66-1

Physical Description: Solid

>>Derivative: Triacridine salt

Melting Point: Mp 208-209 dec.°

>>Derivative: 6N-Benzoyl

Molecular Formula: C₁₇H₂₀N₅O₁₄P₃

Molecular Weight: 611.292

Accurate Mass: 611.021966

Percentage Composition: C 33.40%; H 3.30%; N 11.46%; O 36.64%; P 15.20%

UV: [neutral] $\lambda_{\max}$ 259 (ϵ 19400) (H₂O) (as Na salt)

References: