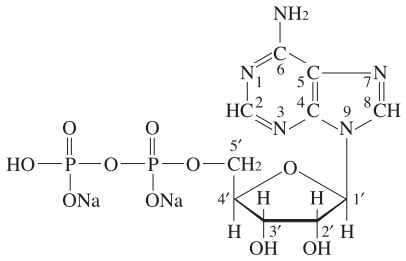
A D P

Adenosine 5'-diphosphate (disodium salt)
Adenosine 5'-pyrophosphate (disodium salt)
prepared enzymatically

Structure



Formula

：$C_{10}H_{13}N_5O_{10}P_2 \cdot Na_2$

Formula weight

：471.2

Specification

	Specifications
Purity	
Determined by Enzymatic Method (PK, LDH)	≧93%
Water Content	＜8%
Na	10.0 ± 2%
UV Spectral Analysis	
ε at 260 nm and pH 7.5	(15.4 ± 0.5) × 10^3
Ratio at pH 7.5	
A_{250}/A_{260}	0.78 ± 0.03
A_{280}/A_{260}	0.16 ± 0.02

Assay Procedure

Ⅰ. Spectrophotometric Method

Wavelength；340 nm, Light path length；1 cm

Pipette the following reagents into a cuvette

	a	b	c
Tris-HCl/K^+ & Mg^{2+} (0.1 mol/L, pH 7.5/0.12 mol/L & 0.012 mol/L)	5.0 mL	5.0 mL	5.0 mL
PEP* (1) (14 mg/mL)	0.1 mL	0.1 mL	—
NADH (5 mg/mL) dissolved in Tris (50 mmol/L)	0.2 mL	0.2 mL	—
ADP (0.5 mg/mL)	0.5 mL	0.5 mL	—
Distilled water	—	0.1 mL	0.9 mL
LDH (50 IU/mL)	0.1 mL	0.1mL	—
PK (50 IU/mL)	0.1 mL	—	0.1 mL

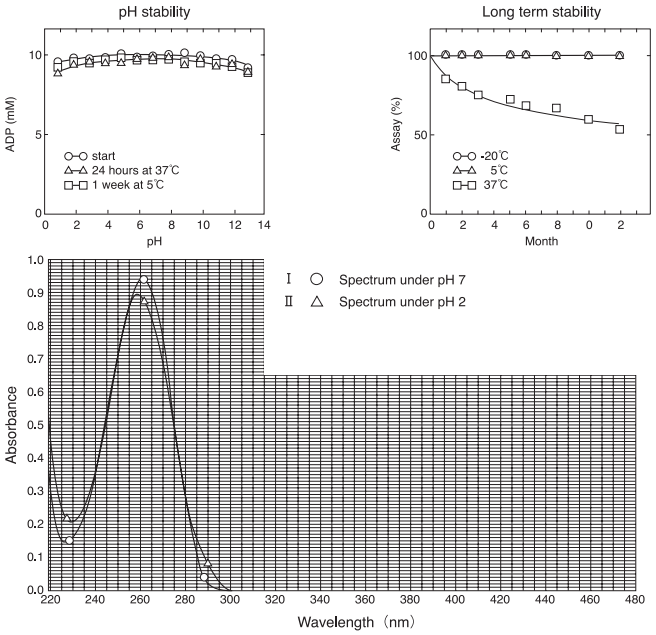
* (1) PEP monocyclohexyl ammonium salt

Ⅱ. Calculation

$$\frac{\Delta A \cdot V \cdot MW \times 100}{6.3 \times 10^3 \cdot d \cdot v \cdot s} \times \frac{100}{(100 - S - W)} = \text{Purity of ADP}$$

ΔA = (Ab + Ac) − Aa
V = Total volume of reaction mixture (6.0 mL)
MW = 427.2, anhydrate/sodium free
6.3×10^3 = Molar extinction coefficient of NADH at 340 nm ($L \cdot mol^{-1} \cdot cm^{-1}$)
d = Light path length (1 cm)
v = Sample volume (0.5 mL)
s = Sample concentration (0.5 mg/mL)
S = Na (%)
W = Water Content (%)

Reference Data



Storage

Keep tightly stoppered in the dark below 5℃. If you leave at room temperature, it will produce ATP and degradate ADP. Moisture will produce the speed of ATP. For prolonged storage keep below − 20℃. Solution is most stable at pH 2～13.

OYC No./Package

OYC No.	Package
45120000	1 g
45120900	Bulk

(Research reagent use only, not for medical use.)