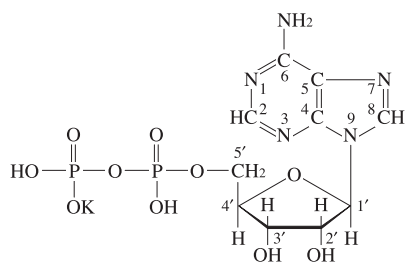


ADP - K

Adenosine 5'-diphosphate (monopotassium salt)
Adenosine 5'-pyrophosphate (monopotassium salt)
Crystalline

prepared enzymatically

Structure



Formula : $C_{10}H_{14}N_5O_{10}P_2 \cdot K$

Formula weight : 465.3

Specification

Purity

Determined by Enzymatic Method (PK, LDH)

Water Content

Na

UV Spectral Analysis

ϵ at 260 nm and pH 7.5

Ratio at pH 7.5

A_{250}/A_{260}

A_{280}/A_{260}

Specifications

$\geq 95\%$

$< 8\%$

$9.0 \pm 2\%$

$(15.4 \pm 0.5) \times 10^3$

0.78 ± 0.03

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	0.1 mL	—
PK (50 IU/mL)	0.1 mL	—	0.1 mL

*⁽¹⁾ PEP monocyclohexyl ammonium salt

II. Calculation

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

$$\Delta A = (A_b + A_c) - A_a$$

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)

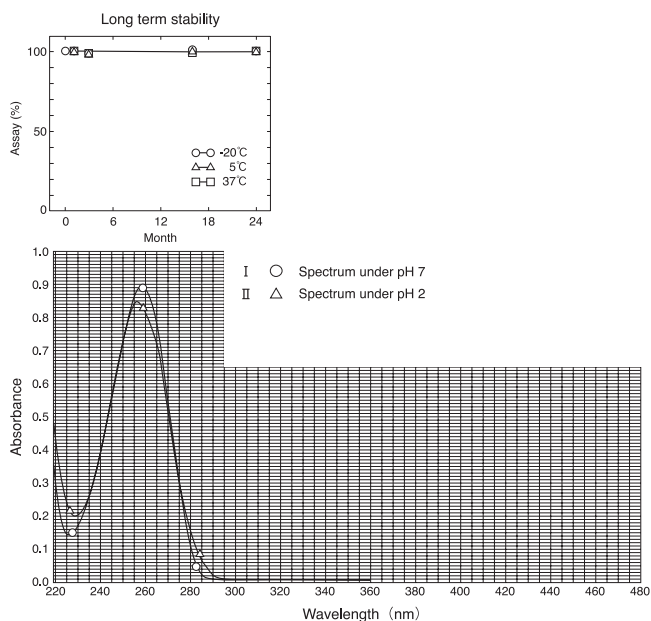
v = Sample volume (0.5 mL)

s = Sample concentration (0.5 mg/mL)

P = K (%)

W = Water Content (%)

Reference Data



Storage

Keep tightly stoppered in the dark below 5°C. 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°C. Solution is most stable at pH 2~13.

OYC No./Package

OYC No.	Package
45130000	1 g
45130900	Bulk

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



ORIENTAL YEAST CO.,LTD.