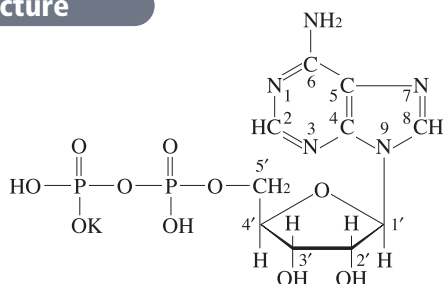


ADP-K

Adenosine 5'-diphosphate (monopotassium salt) Crystalline *prepared enzymatically*

Structure



Formula

: $C_{10}H_{14}N_5O_{12}P_2 \cdot K$

Formula Weight

: 427.2 (as anhydrous free acid)
: 465.3 (as monopotassium anhydrate)
: 483.3 (as monolithium monohydrate)

Specification

Purity

Determined by Enzymatic Method (PK, LDH) $\geq 95\%$

Water Content

< 8%

K Content

$9.0 \pm 2\%$

UV Spectral Analysis

ϵ at 260 nm and pH 7.5

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

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) | 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 U/mL) | 0.1 mL | 0.1 mL | — |
| PK (50 U/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, anhydrous free acid

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)

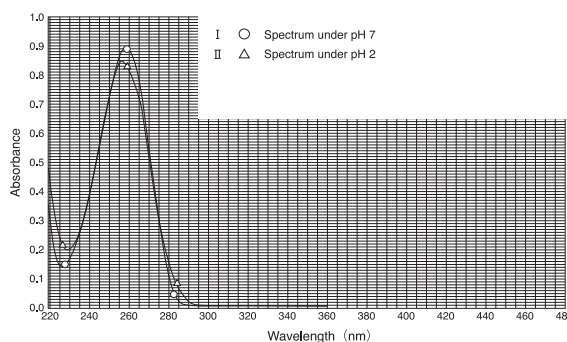
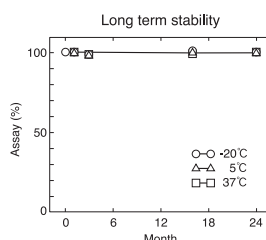
v = Sample volume (0.5 mL)

s = Sample concentration (0.5 mg/mL)

P = K (%)

W = Water content (%)

Reference Data



Storage

Store below -20°C. Handling during short term such as transportation is allowed at 1 - 10°C.

Store in the dark. Keep off humidity.

Cat. No./Package

Cat. No. Package
45130900 Bulk

For in vitro diagnostic or research use only



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