

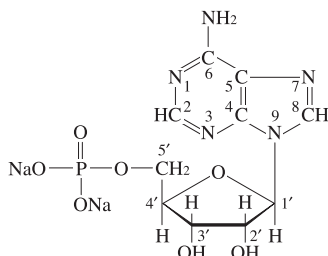
# AMP - Na

Adenosine 5'-monophosphate (disodium salt)

5'-Adenylate (disodium salt)

from Yeast

## Structure



**Formula** : C<sub>10</sub> H<sub>12</sub> N<sub>5</sub> O<sub>7</sub> P · Na<sub>2</sub>

**Formula weight** : 391.2

## Specification

### Purity

Determined by Enzymatic Method  
(PK, LDH, MK)

### Water Content

### Na

### UV Spectral Analysis

ε at 260 nm and pH 7.5

Ratio at pH 7.5

A<sub>250</sub>/A<sub>260</sub>

A<sub>280</sub>/A<sub>260</sub>

### Specifications

≥95%

<12%

10.0 ± 2%

(15.4 ± 0.5) × 10<sup>3</sup>

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	d
Tris-HCl/K <sup>+</sup> & Mg <sup>2+</sup> (0.1 mol/L, pH 7.5/0.12 mol/L & 0.012 mol/L)	5.0 mL	5.0 mL	5.0 mL	5.0 mL
Substrate mixture* <sup>(1)</sup>	0.3 mL	0.3 mL	0.3 mL	0.3 mL
AMP (0.2 mg/ml)	0.5 mL	0.5 mL	—	—
Distilled water	—	0.1 mL	0.5 mL	0.6 mL
LDH & PK (200 IU/mL & 150 IU/mL)	0.1 mL	0.1 mL	0.1 mL	0.1 mL
MK (100 IU/mL)	0.1 mL	—	0.1 mL	—

\*<sup>(1)</sup> PEP monocyclohexyl ammonium salt (14 mg/mL) :

ATP (3 mg/mL) : NADH (8 mg/mL)\*<sup>(2)</sup> = 1 : 1 : 1

\*<sup>(2)</sup> Dissolved in Tris (50 mmol/L)

## II. Calculation

$$\frac{\Delta A \cdot V \cdot MW \times 100}{2^{* (3)} \cdot 6.3 \times 10^3 \cdot d \cdot v \cdot s} \times \frac{100}{(100 - S - W)} = \text{Purity of AMP}$$

ΔA = (Ab - Aa) - (Ad - Ac)

V = Total volume of reaction mixture (6.0 mL)

MW = 347.2, anhydrate/sodium free

6.3 × 10<sup>3</sup> = Molar extinction coefficient of NADH at  
340 nm (L · mol<sup>-1</sup> · cm<sup>-1</sup>)

d = Light path length (1 cm)

v = Sample volume (0.5 mL)

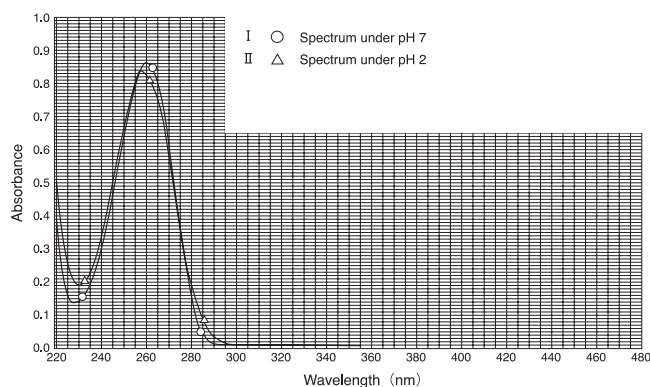
s = Sample concentration (0.2 mg/mL)

S = Na (%)

W = Water Content (%)

\*<sup>(3)</sup> AMP + ATP = 2 ADP

## Reference Data



## Storage

Stable for more than 12 months if kept dry in the dark.  
Solution is most stable at pH 2~13

## OYC No./Package

OYC No.	Package
45110000	1 g
45112000	10 g
45110900	Bulk

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



ORIENTAL YEAST CO.,LTD.