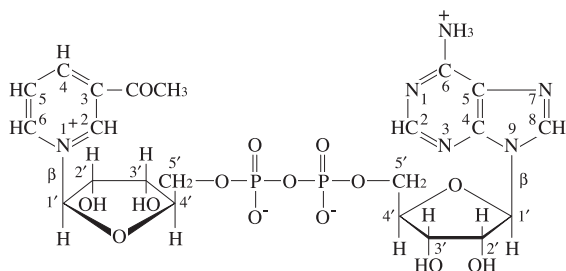


APAD⁺

3-Acetylpyridine-adenine dinucleotide, oxidized form

prepared enzymatically

Structure



Formula : C₂₂H₂₈N₆O₁₄P₂

Formula weight : 662.4

Specification

Purity

Determined by Enzymatic Method (ADH)

Water Content

UV Spectral Analysis

Ratio at pH 7.5

$$A_{250}/A_{260}$$

$$A_{280}/A_{260}$$

Specifications

≥92%

<8%

0.81 ± 0.04

0.24 ± 0.03

Assay Procedure

I. Spectrophotometric Method

Wavelength ; 363 nm, Light path length ; 1 cm

Pipette the following reagents into a cuvette

	a	b	c	d
Tris-EtOH (0.1 mol/L, 2.4%)	5.0 mL	5.0 mL	5.0 mL	5.0 mL
ADH (1 IU/mL)	0.3 mL	—	0.3 mL	—
APAD ⁺ (0.4 mg/mL)	0.5 mL	0.5 mL	—	—
Distilled water	0.2 mL	0.5 mL	0.7 mL	1.0 mL

II. Calculation

$$\frac{\Delta A \cdot V \cdot MW \times 100}{9.1 \times 10^3 \cdot d \cdot v \cdot s} \times \frac{100}{(100 - W)} = \text{Purity of APAD}^+$$

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

V = Total volume of reaction mixture (6.0 mL)

MW = 662.4, as of anhydrate

9.1×10^3 = Molar extinction coefficient of APADH
at 363 nm ($L \cdot \text{mol}^{-1} \cdot \text{cm}^{-1}$)

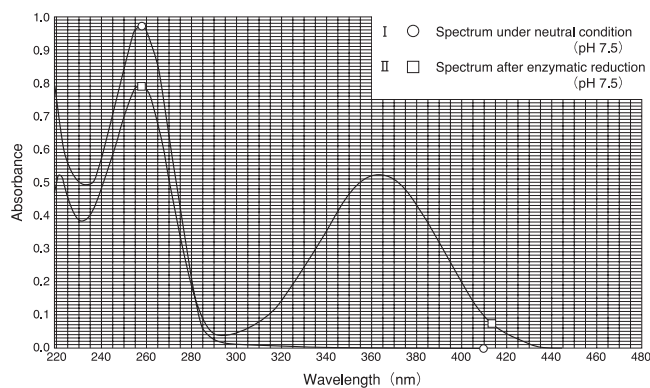
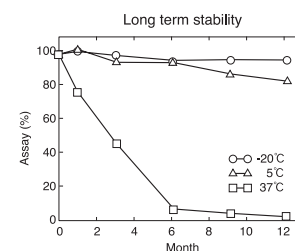
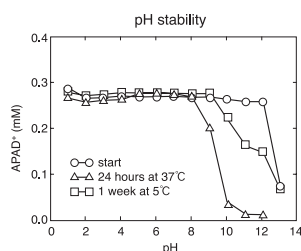
d = Light path length (1 cm)

v = Sample volume (0.5 mL)

s = Sample concentration (0.4 mg/mL)

W = Water Content (%)

Reference Data



Storage

Keep tightly stoppered in the dark below 5°C.
Moisture will accelerate the purity reduction.
For prolonged storage keep below -20°C.

OYC No./Package

OYC No.	Package
44047000	100 mg
44046900	Bulk

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



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