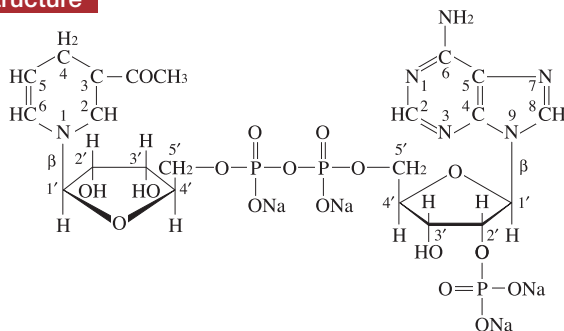


APADPH

3-Acetylpyridine-adenine dinucleotide phosphate, reduced form (tetra sodium salt)

prepared enzymatically

Structure



Formula : $C_{22}H_{28}N_6O_{17}P_3 \cdot Na_4$

Formula weight : 833.4

Specification

Purity

Determined by Enzymatic Method (GIDH)

Water Content

Na

UV Spectral Analysis

Ratio at pH 7.5

A_{250}/A_{260}

A_{280}/A_{260}

Specifications

$\geq 92\%$

$< 8\%$

$10.0 \pm 2.0\%$

0.82 ± 0.04

0.23 ± 0.03

Assay Procedure

I. Spectrophotometric Method

Wavelength ; 363 nm, Light path length ; 1 cm

Pipette the following reagents into a cuvette

2.45 mL	Tris-HCl (0.1 mol/L, pH 7.5)	
0.15 mL	α -Ketoglutarate (0.1 mol/L)	
0.30 mL	Ammonium Acetate (2.0 mol/L)	
0.10 mL	APADPH (1 mg/mL)	
	measure the absorbance at 363 nm	Aa
0.01 mL	GIDH (Y) (30 IU/mL)	
	measure the absorbance at 363 nm	Ab
0.01 mL	GIDH (Y) (30 IU/mL)	
	measure the absorbance at 363 nm	Ac

II. Calculation

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

$\Delta A = (A_b - A_a) - (A_c \times 3.02/3.01 - A_b)$

V = Total volume of reaction mixture (3.01 mL)

MW = 745.4, anhydrate/sodium free

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

d = Light path length (1 cm)

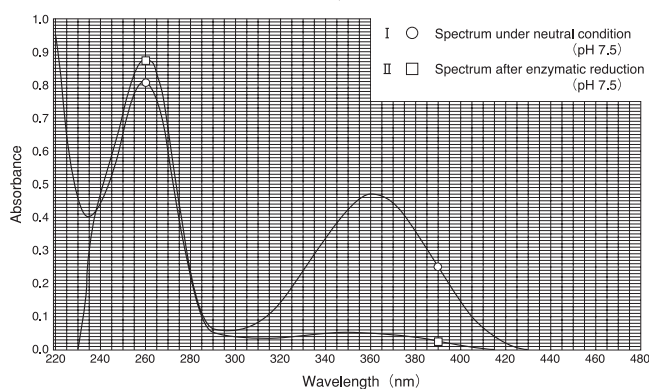
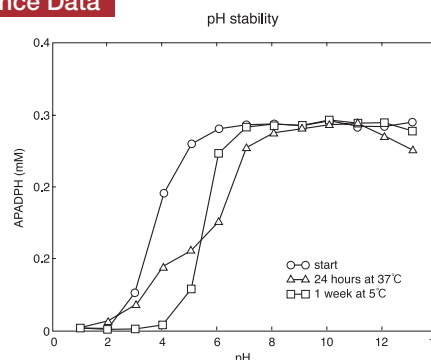
v = Sample volume (0.1 mL)

s = Sample concentration (1 mg/mL)

S = Na (%)

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
44028000	100 mg

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



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