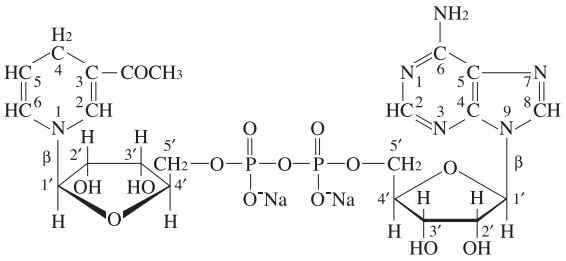
A P A D H

3-Acetylpyridine-adenine dinucleotide, reduced form (disodium salt)

prepared enzymatically

Structure



Formula

：$C_{22}H_{28}N_6O_{14}P_2 \cdot Na_2$

Formula weight

：708.4

Specification

	Specifications
Purity	
Determined by Enzymatic Method (ADH)	≧92%
Water Content	＜8%
Na	6.0 ± 2%
UV Spectral Analysis	
Ratio at pH 7.5	
A_{250}/A_{260}	0.82 ± 0.04
A_{280}/A_{260}	0.23 ± 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
Acetaldehyde buffer*	5.0 mL	5.0 mL	5.0 mL	5.0 mL
ADH (1 IU/mL)	0.2 mL	—	0.2 mL	—
APADH (0.4 mg/mL)	0.5 mL	0.5 mL	—	—
Distilled water	0.3 mL	0.5 mL	0.8 mL	1.0 mL

＊83.3 mmol/L Tris-HCl, pH 7.5 containing 34 mmol/L acetoaldehyde

Ⅱ. Calculation

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

$\Delta A = Ab - (Aa + Ac)$

V = Total volume of reaction mixture (6.0 mL)

MW = 664.4, as of anhydrate

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

d = Light path length (1 cm)

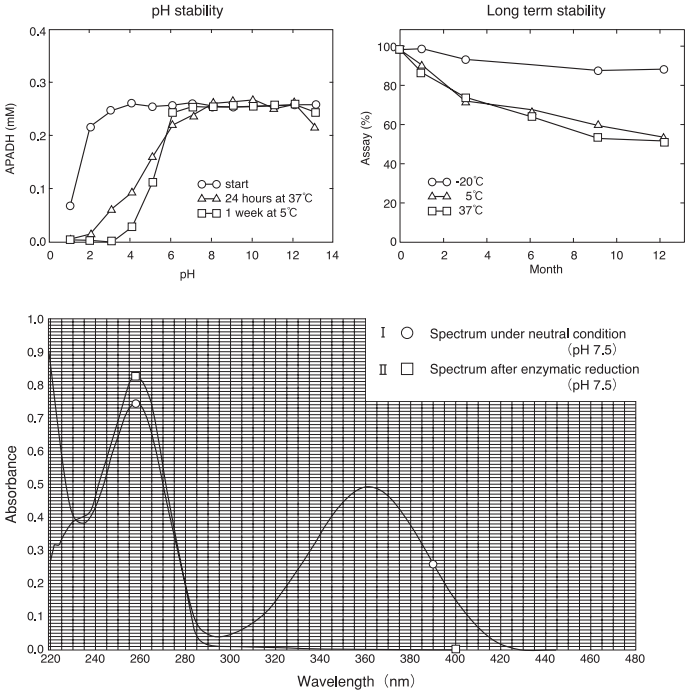
v = Sample volume (0.5 mL)

s = Sample concentration (0.4 mg/mL)

S = Na (%)

W = Water Content (%)

Reference Data



Storage

Keep tightly stoppered in the dark below 5℃.
Moisture will accelerate the purity reduction.
For prolonged storage keep below −20℃.

OYC No./Package

OYC No.	Package
44049000	100 mg
44048900	Bulk

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