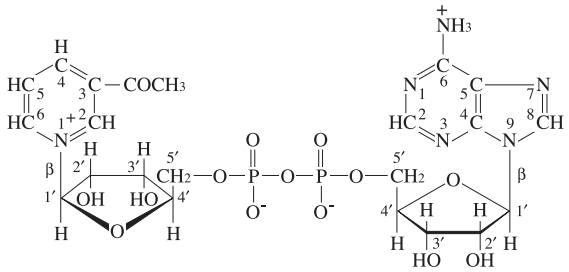
APAD+

3-Acetylpyridine-adenine dinucleotide, oxidized form

prepared enzymatically

Structure



Formula

: $C_{22}H_{28}N_6O_{14}P_2$

Formula Weight

: 662.4 (as anhydrous free acid)
: 680.5 (as monohydrate)

Specification

Purity

Determined by Enzymatic Method (ADH) ≧ 92%

Water Content < 8%

UV Spectral Analysis

Ratio at pH 7.5

A_{250}/A_{260} 0.81 ± 0.04

A_{280}/A_{260} 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
Tris-EtOH (0.1 mol/L, 2.4%)	5.0 mL	5.0 mL	5.0 mL
ADH (1 U/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

II Calculation

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

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

V = Total volume of reaction mixture (6.0 mL)

MW = 662.4, anhydrous free acid

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

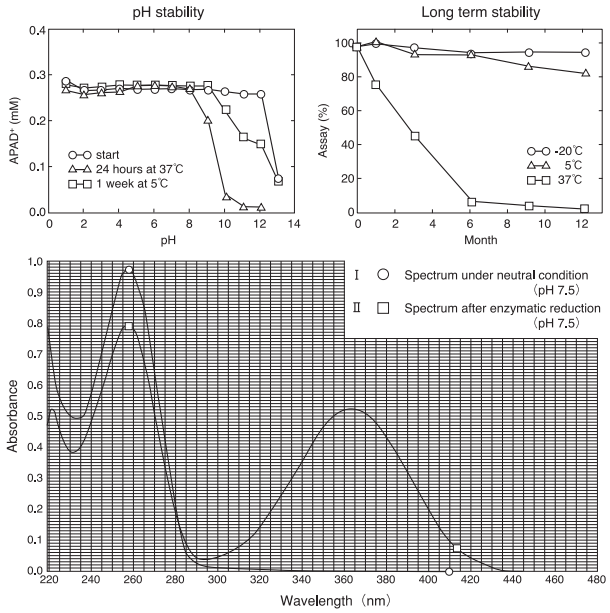
d = Light path length (1 cm)

v = Sample volume (0.5 mL)

s = Sample concentration (0.4 mg/mL)

W = Water content (%)

Reference Data



Storage

Store below -20 ℃. Handling during short term such as transportation is allowed at 1 - 10 ℃.
Store in the dark. Keep off humidity.

Cat. No./Package

Cat. No.	Package
44047000	100 mg
44046900	Bulk

For in vitro diagnostic or research use only