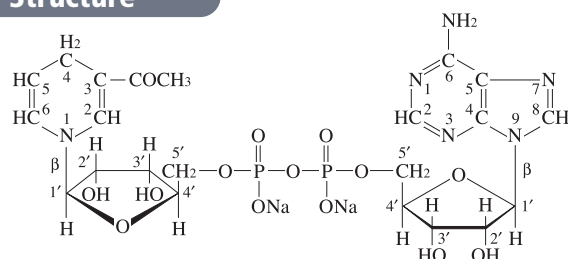


APADH

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

: 664.5 (as anhydrous free acid)
: 708.4 (as disodium anhydrate)
: 744.5 (as disodium dihydrate)

Specification

Purity

Determined by Enzymatic Method (ADH) $\geq 92\%$

Water Content

< 8%

Na Content

$6.0 \pm 2\%$

UV Spectral Analysis

Ratio at pH 10

$A_{250}/A_{260} = 0.82 \pm 0.04$

$A_{280}/A_{260} = 0.23 \pm 0.03$

Assay Procedure

I Spectrophotometric Method

Wavelength : 363 nm, Light path length : 1 cm

Pipette the following reagents into a cuvette

	a	b	c
Acetaldehyde buffer*	5.0 mL	5.0 mL	5.0 mL
ADH (1 U/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

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

II Calculation

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

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

V = Total volume of reaction mixture (6.0 mL)

MW = 664.5, 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)

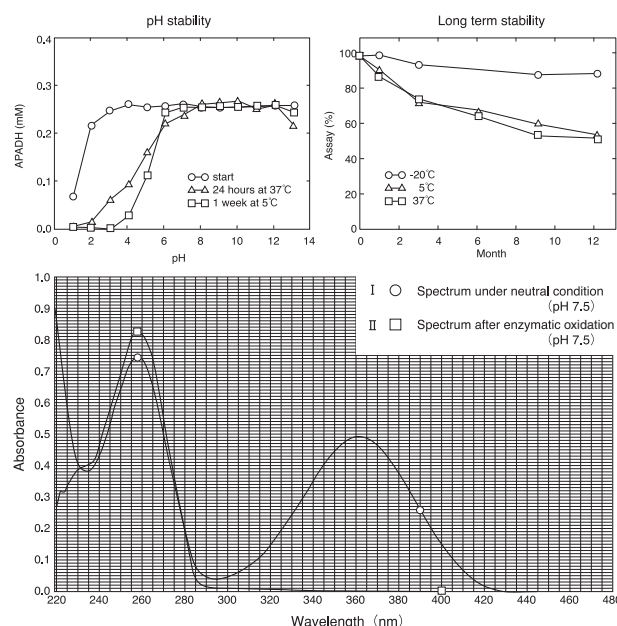
v = Sample volume (0.5 mL)

s = Sample concentration (0.4 mg/mL)

S = Na (%)

W = Water content (%)

Reference Data



Storage

Store below $-20^\circ C$. Handling during short term such as transportation is allowed at $1 - 10^\circ C$.

Store in the dark. Keep off humidity.

Cat. No./Package

Cat. No. Package
44048900 Bulk

For in vitro diagnostic or research use only



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