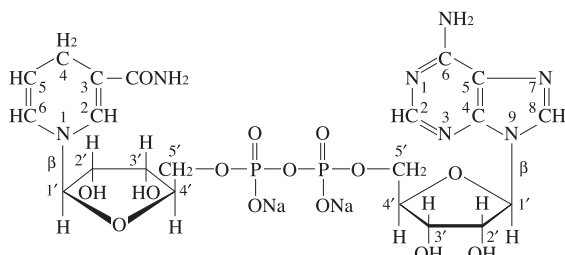


# β-NADH

β-Nicotinamide-adenine dinucleotide, reduced form (disodium salt)

*reduced enzymatically*

## Structure



## Formula

: C<sub>21</sub>H<sub>27</sub>N<sub>7</sub>O<sub>14</sub>P<sub>2</sub>·Na<sub>2</sub>

## Formula Weight

: 665.4 (as anhydrous free acid)  
: 709.4 (as disodium anhydrate)  
: 763.5 (as disodium trihydrate)

## Specification

### Purity

Determined by Enzymatic Method (ADH) ≥ 95%

### Water Content

< 8%

### Na Content

6.5 ± 1.5%

### UV Spectral Analysis

ε at 260 nm and pH 10 (14.4 ± 0.5) × 10<sup>3</sup>

ε at 340 nm and pH 10 (6.3 ± 0.2) × 10<sup>3</sup>

Ratio at pH 10

A<sub>250</sub>/A<sub>260</sub> 0.82 ± 0.03

A<sub>280</sub>/A<sub>260</sub> 0.23 ± 0.02

A<sub>340</sub>/A<sub>260</sub> 0.43 ± 0.01

## Assay Procedure

### I Spectrophotometric Method

Wavelength : 340 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 (50 U/mL)	0.2 mL	—	0.2 mL
NADH (0.50 mg/mL)	0.5 mL	0.5 mL	—
Distilled water	0.3 mL	0.5 mL	0.8 mL

\*Mix 8 mL of acetaldehyde (1 mol/L) and 20 mL of Tris buffer (1 mol/L, pH 7.5) and then make up to 240 mL with distilled water.

## II Calculation

$$\frac{\Delta A \cdot V \cdot MW \times 100}{6.3 \times 10^3 \cdot d \cdot v \cdot s} \times \frac{100}{(100 - S - W)} = \text{Purity of NADH}$$

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

V = Total volume of reaction mixture (6.0 mL)

MW = 665.4, anhydrous free acid

6.3 × 10<sup>3</sup> = Molar extinction coefficient of NADH  
at 340 nm (L · mol<sup>-1</sup> · cm<sup>-1</sup>)

d = Light path length (1 cm)

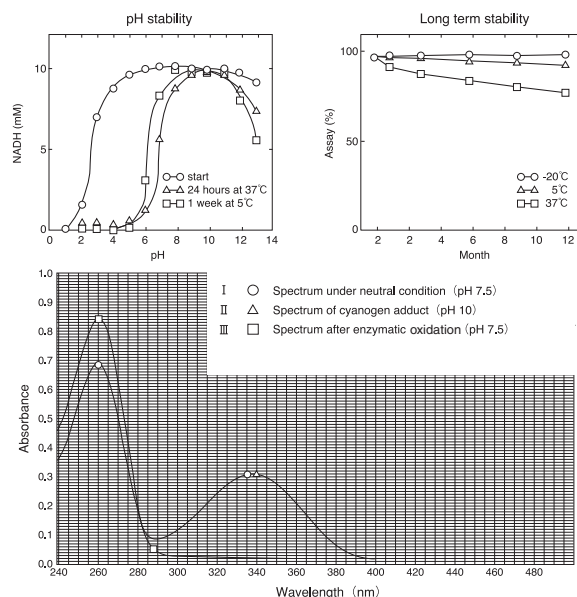
v = Sample volume (0.5 mL)

s = Sample concentration (0.5 mg/mL)

S = Na (%)

W = Water content (%)

## Reference Data



## Storage

Store below -20°C. Handling during short term such as transportation is allowed at 1 - 10°C.

Store in the dark. Keep off humidity.

## Cat. No./Package

Cat. No.	Package	Cat. No.	Package
44326000	5 g	44320900	Bulk
44327000	10 g		

For in vitro diagnostic or research use only



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