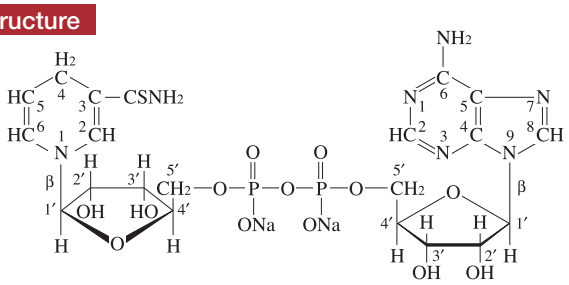
Thio-NADH

Thionicotinamide-adenine dinucleotide, reduced form (disodium salt)

prepared enzymatically

Structure



Formula

：$C_{21}H_{27}N_7O_{13}SP_2 \cdot Na_4$

Formula weight

：725.5

Specification

	Specifications
Purity Determined by Enzymatic Method (ADH)	≧90%
Water Content	＜10%
Na	6.0 ± 3.0%
UV Spectral Analysis Ratio at pH 10	
A_{250}/A_{260}	0.86 ± 0.05
A_{280}/A_{260}	0.39 ± 0.03

Assay Procedure

Ⅰ. Spectrophotometric Method

Wavelength；340 nm, Light path length；1 cm

Pipette the following reagents into a cuvette

2.75 mL	Acetaldehyde buffer*(1)	
0.25 mL	Thio-NADH (0.4 mg/mL)*(2)	
	measure the absorbance at 398 nm	Aa
0.15 mL	ADH (1780 IU/mL)	
	measure the absorbance at 398 nm	Ab
0.15 mL	ADH (1780 IU/mL)	
	measure the absorbance at 398 nm	Ac

*(1) Mix 0.2 mol/L Acetaldehyde and 0.1 mol/L Tris-HCl pH 7.5.

*(2) Dissolve in Tris (10 mmol/L)

Ⅱ. Calculation

$$\frac{\Delta A \cdot V \cdot MW \times 100}{11.9 \times 10^3 \cdot d \cdot v \cdot s} \times \frac{100}{100 - W - S} = \text{Purity of Thio-NADH}$$

$\Delta A = (Aa \times 3.00/3.20 - Ab \times 3.10/3.20) - (Ac - Ab \times 3.10/3.20)$

V = Total volume of reaction mixture (3.20 mL)

MW = 681.5, as of anhydrate

11.9×10^3 = Molar extinction coefficient of Thio-NADH at 398 nm ($L \cdot mol^{-1} \cdot cm^{-1}$)

d = Light path length (1 cm)

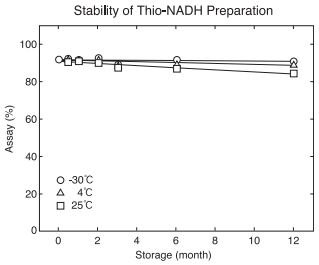
v = Sample volume (0.25 mL)

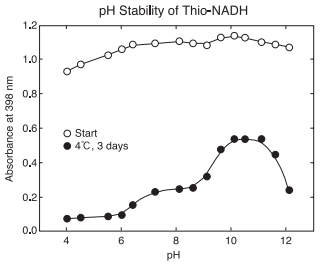
s = Sample concentration (0.4 mg/mL)

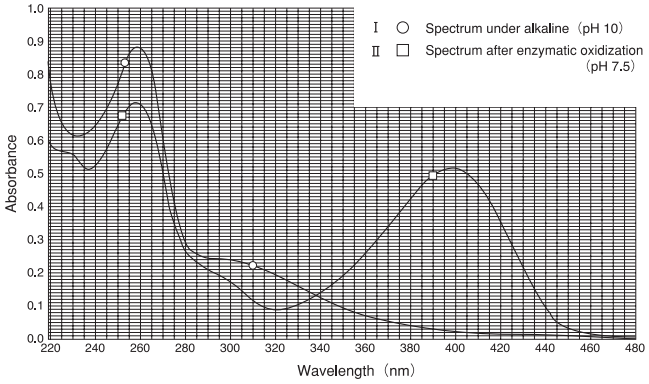
W = Water Content (%)

S = Na (%)

Reference Data







Storage

Keep tightly stoppered in the dark below 5℃.
For prolonged storage keep below −20℃.

OYC No./Package

OYC No.	Package
44317900	Bulk

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