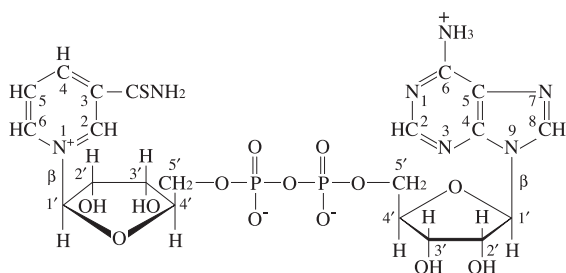


Thio-NAD⁺

Thionicotinamide-adenine dinucleotide, oxidized form

prepared enzymatically

Structure



Formula

: C₂₁H₂₇N₇O₁₃P₂S

Formula Weight

: 679.5 (as anhydrous free acid)
: 697.5 (as monohydrate)

Specification

Purity

Determined by Enzymatic Method (ADH) ≥ 92%

Water Content

< 10%

UV Spectral Analysis

Ratio at pH 7.5

A₂₅₀/A₂₆₀ 0.89 ± 0.03

A₂₈₀/A₂₆₀ 0.36 ± 0.02

Assay Procedure

I Spectrophotometric Method

Wavelength : 398 nm, Light path length : 1 cm

Pipette the following reagents into a cuvette

2.60 mL	Tris-EtOH (0.1 mol/L, 2.4%)	
0.25 mL	Thio-NAD ⁺ (0.45 mg/mL)	Aa
0.15 mL	ADH (2 U/mL)	Ab
0.15 mL	ADH (2 U/mL)	Ac

II Calculation

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

$$\Delta A = (Ab \times 3.00/3.15 - Aa \times 2.85/3.15) - (Ac - Ab \times 3.00/3.15)$$

V = Total volume of reaction mixture (3.15 mL)

MW = 679.5, anhydrous free acid

11.9 × 10³ = Molar extinction coefficient of Thio-NADH at 398 nm (L·mol⁻¹·cm⁻¹)

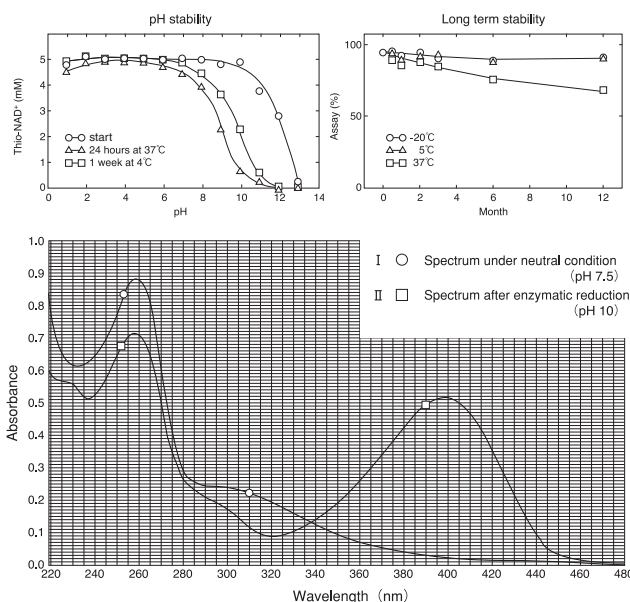
d = Light path length (1 cm)

v = Sample volume (0.25 mL)

s = Sample concentration (0.45 mg/mL)

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
44104001	1 g
44104900	Bulk

For in vitro diagnostic or research use only



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