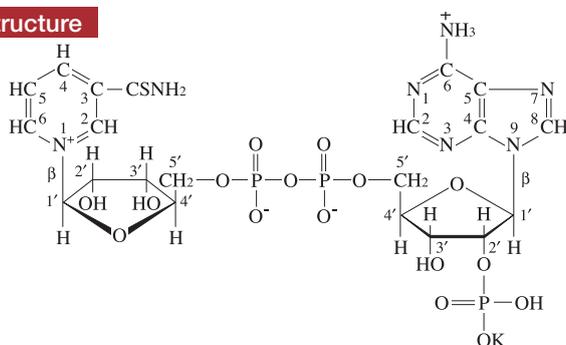


Thio-NADP⁺

Thionicotinamide-adenine dinucleotide phosphate, oxidized form (monopotassium salt)

prepared enzymatically

Structure



Formula : C₂₁H₂₇N₇O₁₆SP₃ · K

Formula weight : 797.6

Specification

Purity

Determined by Enzymatic Method (G-6-PDH)

Water Content

K

UV Spectral Analysis

Ratio at pH 7.5

$$A_{250}/A_{260}$$

$$A_{280}/A_{260}$$

Specifications

≥ 93%

< 8%

4.0 ± 2.0%

0.89 ± 0.03

0.36 ± 0.02

Assay Procedure

I. Spectrophotometric Method

Wavelength ; 398 nm, Light path length ; 1 cm,

Temperature ; 25°C

Pipette the following reagents into a cuvette

2.65 mL	Tris-HCl (0.1 mol/L, pH 7.5)
0.10 mL	G-6-P (20 mmol/L)
0.25 mL	Thio-NADP ⁺ (0.6 mg/mL)
	measure the absorbance at 398 nm Aa
0.05 mL	G6PDH (Y) (50 IU/mL)
	measure the absorbance at 398 nm Ab
0.05 mL	G6PDH (Y) (50 IU/mL)
	measure the absorbance at 398 nm Ac

II. Calculation

$$\frac{\Delta A \cdot V \cdot MW \times 100}{11.7 \times 10^3 \cdot d \cdot v \cdot s} \times \frac{100}{(100 - P - W)} = \text{Purity of Thio-NADP}^+$$

$$\Delta A = (Ab \times 3.05/3.10 - Aa \times 3.00/3.10) - (Ac - Ab \times 3.05/3.10)$$

V = Total volume of reaction mixture (3.10 mL)

MW = 759.5, anhydrate/sodium free

11.7 × 10³ = Molar extinction coefficient of Thio-NADPH at 398 nm (L · mol⁻¹ · cm⁻¹)

d = Light path length (1 cm)

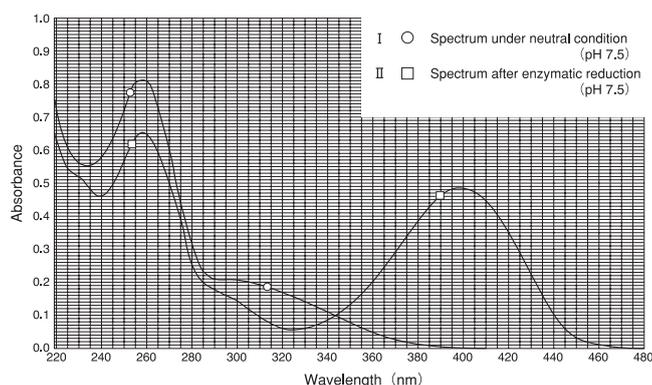
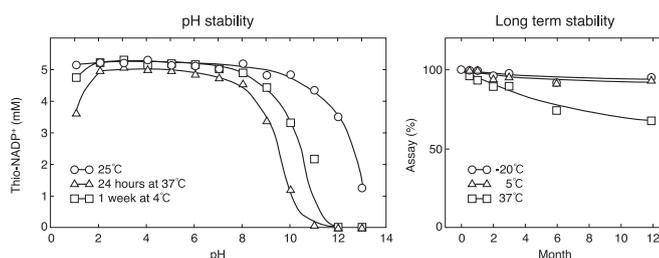
v = Sample volume (0.25 mL)

s = Sample concentration (0.6 mg/mL)

P = K (%)

W = Water Content (%)

Reference Data



Storage

Keep tightly stoppered in the dark below 5°C.
Moisture will accelerate the purity reduction.
For prolonged storage keep below -20°C.

OYC No./Package

OYC No.	Package
44403000	100 mg
44315900	Bulk

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

