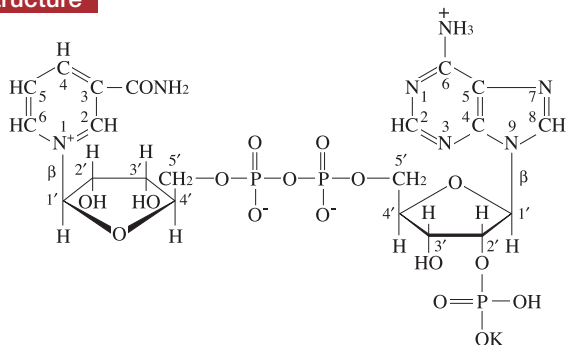


β -NADP⁺ - K

Nicotinamide-adenine dinucleotide phosphate (=NADP), oxidized form (monopotassium salt)
 Triphosphopyridine nucleotide (=TPN), oxidized form (monopotassium salt)
 Coenzyme-II, oxidized form (monopotassium salt)
prepared enzymatically

Structure



Formula : C₂₁H₂₇N₇O₁₇P₃ · K

Formula weight : 743.4

Specification

Purity

Determined by Enzymatic Method (G-6-PDH)

Water Content

K

UV Spectral Analysis

ϵ at 260 nm and pH 7.5

Ratio at pH 7.5

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

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

ϵ when reduced with G-6-PDH at 340 nm and pH 7.5

Ratio when reduced with G-6-PDH at pH 7.5

$$A_{340}/A_{260}$$

Specifications

≥ 95%

< 8%

5.0 ± 1.5%

(18.0 ± 0.8) × 10³

0.83 ± 0.03

0.21 ± 0.02

(6.2 ± 0.3) × 10³

0.43 ± 0.02

Assay Procedure

I. Spectrophotometric Method

Wavelength ; 340 nm, Light path length ; 1 cm

Pipette the following reagents into a cuvette

	a	b	c
Tris-HCl (0.1 mol/L, pH 7.5)	5.0 mL	5.0 mL	5.0 mL
G-6-P (20 mmol/L)	0.2 mL	0.2 mL	—
NADP ⁺ (0.6 mg/mL)	0.5 mL	0.5 mL	—
G-6-PDH (yeast) (50 IU/mL)	0.1 mL	—	0.1 mL
Distilled water	0.2 mL	0.3 mL	0.9 mL

II. Calculation

$$\frac{\Delta A \cdot V \cdot MW \times 100}{6.2 \times 10^3 \cdot d \cdot v \cdot s} \times \frac{100}{(100 - P - W)} = \text{Purity of NADP}^+$$

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

V = Total volume of reaction mixture (6.0 mL)

MW = 743.4, anhydrate/sodium free

6.2 × 10³ = Molar extinction coefficient of NADPH at 340 nm (L · mol⁻¹ · cm⁻¹)

d = Light path length (1 cm)

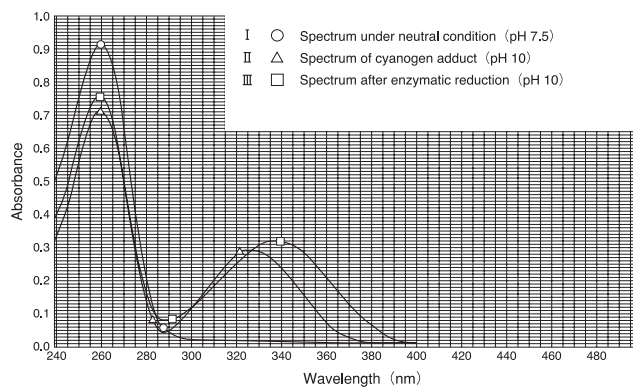
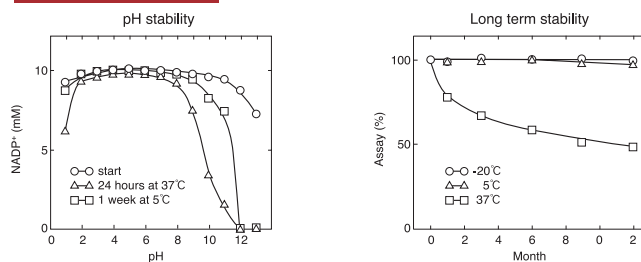
v = Sample volume (0.5 mL)

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
44310000	1 g
44311000	5 g
44310900	Bulk

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

