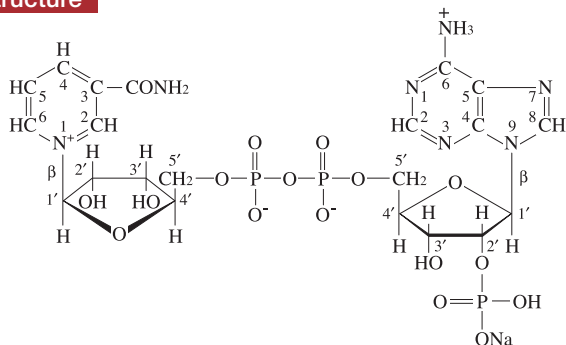


# $\beta$ -NADP<sup>+</sup>

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

## Structure



**Formula** : C<sub>21</sub>H<sub>27</sub>N<sub>7</sub>O<sub>17</sub>P<sub>3</sub> · Na

**Formula weight** : 765.4

## Specification

### Purity

Determined by Enzymatic Method (G-6-PDH)

### Water Content

### Na

### UV Spectral Analysis

$\epsilon$  at 260 nm and pH 7.5

Ratio at pH 7.5

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

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

$\epsilon$  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

≥93%

<8%

3.0 ± 1.5%

(18.0 ± 0.8) × 10<sup>3</sup>

0.83 ± 0.03

0.21 ± 0.02

(6.2 ± 0.3) × 10<sup>3</sup>

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 <sup>+</sup> (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

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

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

V = Total volume of reaction mixture (6.0 mL)

MW = 743.4, anhydrate/sodium free

6.2 × 10<sup>3</sup> = Molar extinction coefficient of NADPH  
 at 340 nm (L · mol<sup>-1</sup> · cm<sup>-1</sup>)

d = Light path length (1 cm)

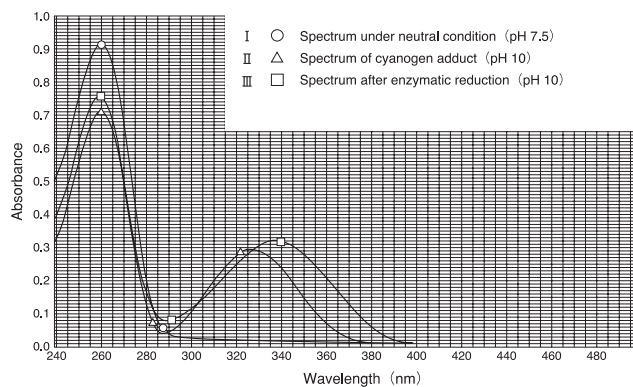
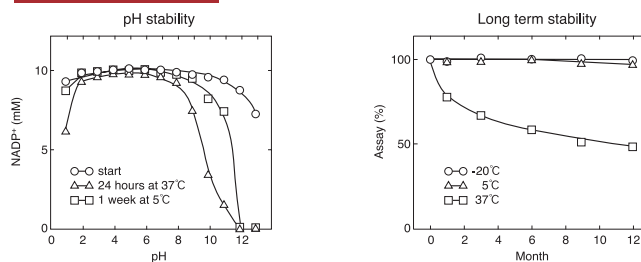
v = Sample volume (0.5 mL)

s = Sample concentration (0.6 mg/mL)

S = Na (%)

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
44290000	100 mg
44292000	1 g
44297000	5 g
44298000	10 g
44292900	Bulk

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



ORIENTAL YEAST CO.,LTD.