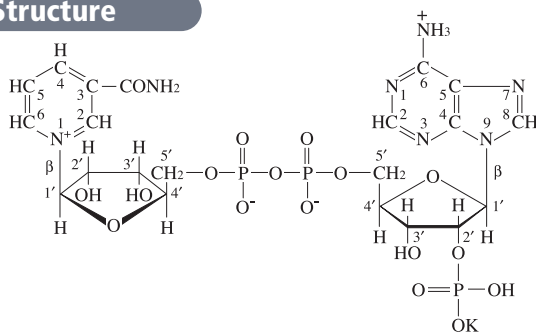


# β-NADP<sup>+</sup>-K

β-Nicotinamide-adenine dinucleotide phosphate, oxidized form (monopotassium 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>·K

## Formula Weight

: 743.4 (as anhydrous free acid)  
: 781.5 (as monopotassium anhydrate)  
: 817.5 (as monopotassium dihydrate)

## Specification

### Purity

Determined by Enzymatic Method (G6PDH) ≥ 95%

### Water Content

< 8%

### K Content

5.0 ± 1.5%

### UV Spectral Analysis

ε at 260 nm and pH 7.5

(18.0 ± 0.8) × 10<sup>3</sup>

Ratio at pH 7.5

A<sub>250</sub>/A<sub>260</sub>

0.83 ± 0.03

A<sub>280</sub>/A<sub>260</sub>

0.21 ± 0.02

ε when reduced with G6PDH

at 340 nm and pH 7.5

(6.2 ± 0.3) × 10<sup>3</sup>

Ratio when reduced with G6PDH at pH 7.5

A<sub>340</sub>/A<sub>260</sub>

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
G6P (20 mmol/L)	0.2 mL	0.2 mL	—
NADP <sup>+</sup> (0.6 mg/mL)	0.5 mL	0.5 mL	—
G6PDH (yeast) (50 U/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, anhydrous free acid

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)

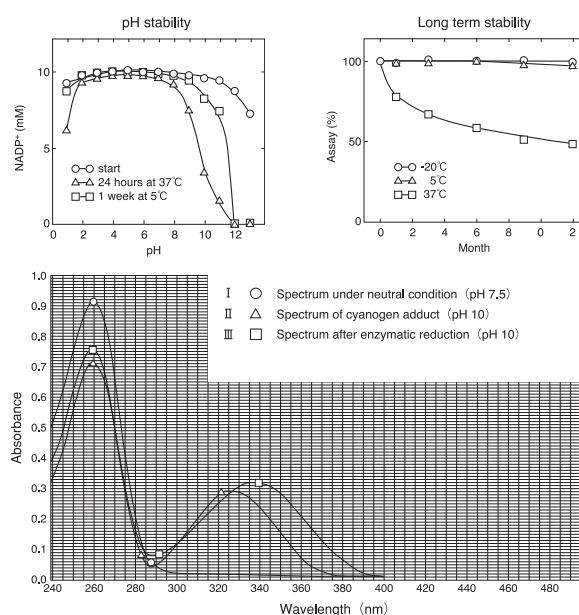
v = Sample volume (0.5 mL)

s = Sample concentration (0.6 mg/mL)

P = K (%)

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. 44310900  
Package Bulk

For in vitro diagnostic or research use only



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