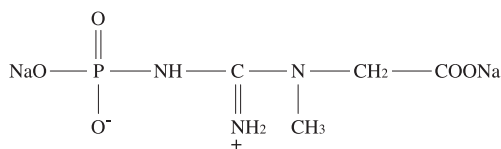


CP

Creatine phosphate (disodium salt)

N-[Imino (phosphonoamino) methyl] -N-methylglycine (disodium salt)

Structure



Formula : C₄ H₈ N₃ O₅ P · Na₂

Formula weight : 255.1

Specification

Purity

Determined by Enzymatic Method
(CK, HK, G-6-PDH)
Creatine content

Water Content

Na

Specifications

≥95%

<1%

<30%

14.0 ± 2%

Assay Procedure

I . Spectrophotometric Method

Wavelength ; 340 nm, Light path length ; 1 cm

Pipette the following reagents into a cuvette

	a	b	c
Imidazole/Glucose, Mg ²⁺ & N-Acetyl-L-cystein (0.1 mol/L, pH 7.0/1.5 mg/mL, 1.0 mmol/L & 30 mmol/L)	5.0 mL	5.0 mL	5.0 mL
ADP & NADP ⁺ (2.5 mg/mL & 20 mmol/L)	0.2 mL	0.2 mL	—
CP (0.3 mg/mL)	0.5 mL	0.5 mL	—
Distilled water	0.1 mL	0.2 mL	0.9 mL
G-6-PDH (yeast) & HK (50 IU/mL & 50 IU/mL)	0.1 mL	0.1 mL	—
CK (600 IU/mL)	0.1 mL	—	0.1 mL

II . Calculation

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

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

V = Total volume of reaction mixture (6.0 mL)

MW = 211.1, 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)

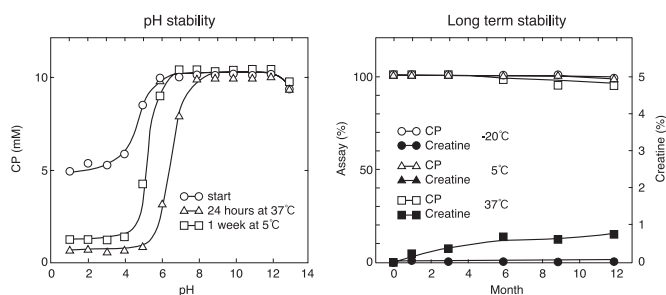
v = Sample volume (0.5 mL)

s = Sample concentration (0.3 mg/mL)

S = Na (%)

W = Water Content (%)

Reference Data



Storage

Keep tightly stoppered in the dark below 5°C.
For prolonged storage keep below -20°C.

OYC No./Package

OYC No.	Package
45180000	1 g
45182000	10 g
45180900	Bulk

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



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