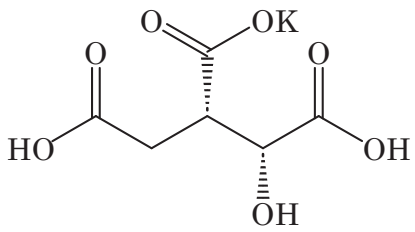
D-Isocitrate-K

D-Isocitrate (monopotassium salt)

prepared enzymatically

Structure



Formula

：$C_6H_8O_7 \cdot K$

Formula Weight

：192.1 (as anhydrous free acid)
：230.2 (as monopotassium anhydrate)

Specification

Appearance	White powder
Solubility	Clear solution
Purity	
Determined by Enzymatic Method (ICDH)	≧ 90%
K Content	17.0 ± 5.0%
Water Content	＜ 5%

Assay Procedure

I Spectrophotometric Method

Wavelength ： 340 nm, Light path length ： 1 cm

Pipette the following reagents into a cuvette

	a	b	c
TEA-NaOH (0.1 mol/L, pH 8.5)	5.0 mL	5.0 mL	5.0 mL
$MgCl_2$ (0.3 mol/L)	0.1 mL	0.1 mL	0.1 mL
$NADP^+$ (20 mmol/L)	0.3 mL	0.3 mL	—
ICDH (P) (200 U/mL)	0.1 mL	—	0.1 mL
D-Isocitrate-K (0.15 mg/mL)	0.5 mL	0.5 mL	—
Distilled water	—	0.1 mL	0.8 mL

II Calculation

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

$\Delta A = Aa - (Ab + Ac)$
V = Total volume of reaction mixture (6.0 mL)
MW = 192.1, anhydrous free acid
6.2×10^3 = Molar extinction coefficient of NADPH at 340 nm ($L \cdot mol^{-1} \cdot cm^{-1}$)
d = Light path length (1 cm)
v = Sample volume (0.5 mL)
s = Sample concentration (0.15 mg/mL)
P = K (%)
W = Water content (%)

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.	Package
45205900	Bulk

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