

Sodium Colorimetric Assay Kit

Cat. No. Kit-0794 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Sodium Assay Kit (Colorimetric) is used to measure sodium.

Description

Sodium (Na) is one of the most important electrolytes along with chloride, calcium and potassium. Na plays vital roles in the maintenance of plasma volume, pH balance, transmission of nerve impulses, and normal cell functions. Healthy individuals can absorb sodium ingested in food, and kidneys maintain proper sodium balance by excreting its excess in urine. Sodium sources include table salt, milk, meat, shellfish, bread, snack food, etc. Normal Sodium intake has been defined to be between 200-500 mg/day. Patients suffering high blood pressure, hypertension, chronic kidney disease, and people suffering salt sensitivity require restricted low-sodium diets due to those conditions. Hyponatremia (low sodium concentration in blood) can occur in patients with nephrotic syndrome, excessive vomiting and diarrhea, while Hypernatremia (high sodium concentration in blood) is developed in patients suffering from liver diseases, burns, and pregnancy. Traditionally, sodium concentration in clinical settings is determined by potentiometric, gravimetry, photometry, titrimetry and flame atomic emission spectroscopy, but these methods require expensive and complex protocols that need to be performed by trained personnel. The Sodium Assay Kit (Colorimetric) offers a simple, two-step colorimetric assay that is based on the requirement of sodium ion as a cofactor for the enzymatic activity of β -Galactosidase (β G). Endogenous mono-, di-, and trivalent ions, ascorbic acid, creatinine, glucose, urea, and bilirubin do not interfere with the assay.

Applications

Estimation of sodium in biological samples

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Target Species	Mammals
Usage	For research use only (RUO)
Storage	Store kit at -20°C, protected from light.
Kit Components	Na Assay Buffer 25 mLSubstrate 5 mLβG 15 μLDTT (1 M) 0.25 mLNa Developer 10 mLNa Standard (1.5 M) 1 mL
Detection method	Colorimetric
Compatible Sample Types	Biological fluids: Serum, Saliva, Urine, etc

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