



Calcium Colorimetric Detection Kit

Product Information

Cat.No.

Kit-0140

Product Overview

Calcium Detection Kit (Colorimetric) provides a simple assay to determine calcium concentration within the physiological range of 0.4-100 mg/dL (0.1-25 mM). A chromogenic complex is formed between calcium ions and 0-cresolphthalein and measured at OD575 nm. This product detects free calcium ions only.

Size

250 tests

Description

Calcium is essential for all living organisms, where Ca^{2+} sequestration and release into and out of the cytoplasm functions as a signal for many cellular processes. 99% of calcium is found in bones and teeth with the remaining 1% found in the blood and soft tissue. Serum calcium levels are tightly controlled (8.4-11.4 mg/dL) and any variation outside this range can have serious effects. Calcium plays a role in mediating the constriction and relaxation of blood vessels, nerve impulse transmission, muscle contraction, and hormone secretion. Calcium ion channels control the migration of calcium ions across cell membranes, permitting the activation and inhibition of a wide variety of enzymes. Causes of low calcium levels include chronic kidney failure, vitamin D deficiency, and low blood magnesium levels that can occur in severe alcoholism.

Applications

Functional Studies more details

Target Species

Reacts with: Cat, Human; Predicted to work with: all Mammals

Storage

Store at +4°C.



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Kit Components

Components: Identifier; Calcium Assay Buffer: NM; Calcium Standard: Yellow; Chromogenic Reagent: NM

Compatible Sample Types

Urine, Serum, Plasma, Other biological fluids, Tissue Extracts, Cell Lysate, Cell culture media

Assay time

0h 20m

Sensitivity

>0.1 mM