QuantiChrom™ Calcium Assay Kit

Calcium is measured to monitor diseases of the bone or calcium regulation disorders. Increased calcium levels in serum are reported in hyperparathyroidism, metastatic bone lesions and hypervitaminosis, while decreased levels are observed in hypoparathyroidism, nephrosis, rickets, steatorrhea, nephritis and calcium-losing syndromes. Urinary calcium levels aid the clinician in understanding how the kidneys handle calcium in certain diseases of the parathyroid gland. Urinary calcium levels are also essential in the medical evaluation of kidney stones.

Simple, direct and automation-ready procedures for measuring calcium concentration in biological samples are becoming popular in research and drug discovery. BioAssay Systems' Calcium Assay Kit is designed to measure calcium directly in biological samples without any pretreatment. A phenolsulphonephthalein dye in the kit forms a very stable blue colored complex specifically with free calcium. The intensity of the color, measured at 612 nm, is directly proportional to the calcium concentration in the sample. The optimized formulation minimizes any interference by substances such as magnesium, lipid, protein and bilirubin.

APPLICATIONS:

Direct Assays: Ca^{2+} in serum, urine, saliva, milk etc.
Drug discovery/Pharmacology: effects of drugs on calcium metabolism.
Food and beverages: calcium determination.
Environment: calcium determination in water and soil.

KEY FEATURES:

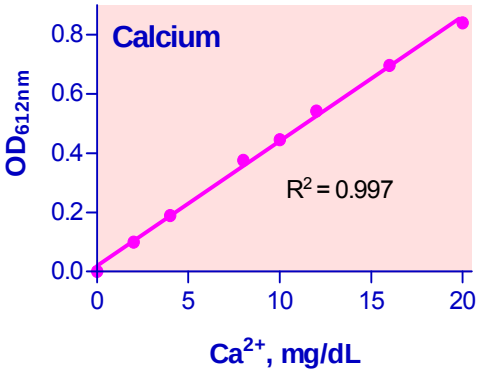
Sensitive and accurate: use as little as 5 μL samples. Linear detection range 0.08 mg/dL (0.02mM) to 20 mg/dL (5mM) calcium in 96-well plate assay.
Simple and high-throughput: the procedure involves addition of a single working reagent and incubation for 3 min. Can be readily automated as a high-throughput assay in 96-well plates for thousands of samples per day.
Improved stability: the optimized formulation has greatly enhanced the reagent and signal stability.
Low interference: no pretreatments are needed. Assays can be directly performed on raw biological samples i.e., in the presence of lipid, protein and minerals such as magnesium, iron and zinc.
Versatility: assays can be executed in a cuvet or 96-well plate with a spectrophotometer or microplate reader.

PRODUCT INFORMATION:

QuantiChrom™ Calcium Assay Kit	DICA-500

Each kit is sufficient for 500 assays in 96-well plate. Kit includes:

- 1 x 50mL Calcium Reagent A
- 1 x 50mL Calcium Reagent B
- 1 x 1mL 20 mg/mL Calcium Standard



Standard Curve in 96-well plate in assay

REFERENCES:

[1]. Woo J, Cannon DC: Metabolic Intermediates and Inorganic Ions. "Clinical Diagnosis and Management by Laboratory Methods", 17th ed. JB Henry, RA McPherson, Philadelphia, 1984, p 133.

[2]. Ladenson JH: Clinical Chemistry of Disorders of Mineral Homeostasis. "Clinical Laboratory Methods and Diagnosis", 8th ed. AC Sonnenwirth, L Jarrett, Editors, St. Louis (MO), 1980, p 337.

[3]. Bradley M, Schumann GB: Examination of Urine. "Clinical Diagnosis and Management by Laboratory Methods", 17th ed. JB Henry, Editor, Philadelphia, 1984, p 380.