QuantiChrom™ Copper Assay Kit

Copper is an essential trace element. Copper-containing enzymes play important roles in iron and catecholamine metabolism, free radical scavenging, and in the synthesis of hemoglobin, elastin and collagen. Copper is mainly present in caeruloplasmin in the liver. Low levels of copper have been associated with mental retardation, depigmentation, anaemia, hypotonia and scorbutic changes in bone. Levels of copper are key diagnostic indicator of diseases such as Wilson's disease, microcytic hypochromic anaemia and bone disease due to reduced collagen synthesis.

Simple, direct and automation-ready procedures for measuring copper concentrations find wide applications in research, drug discovery and environmental monitoring. BioAssay Systems' copper assay kit is designed to measure copper directly in serum or plasma without any pretreatment. The improved method utilizes a chromogen that forms a purple colored complex specifically with copper ions. The intensity of the color, measured at 350-360nm, is directly proportional to the copper concentration in the sample. The optimized formulation substantially reduces interference by substances in the raw samples.

APPLICATIONS:

Direct Assays: Cu in biological samples (e.g. serum and plasma).
Drug Discovery/Pharmacology: effects of drugs on Cu metabolism.
Environment and Food: Cu in soil, mineralized samples, beverages etc.

KEY FEATURES:

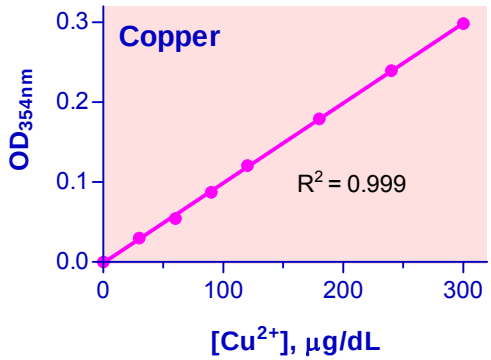
Sensitive and accurate. Linear detection range 8 μg/dL (1.2 μM) to 300 μg/dL (47 μM) copper in 96-well plate assay.
Simple and high-throughput. The procedure involves addition of a single working reagent and incubation for 5 min. Can be readily automated as a high-throughput assay in 96-well plates for thousands of samples per day.
Improved reagent stability and versatility. The optimized formulation has greatly enhanced the reagent and signal stability. Assays can be performed in cuvet or 96-well plate.
Low interference in biological samples. No pretreatments are needed. Assays can be directly performed on serum and plasma samples.

QuantiChrom™ Copper Assay Kit DICU-250

PRODUCT INFORMATION:

Each kit is sufficient for 250 assays in 96-well plate. Kit includes:

- 1 x 35mL Reagent A
- 1 x 12mL Reagent B
- 1 x 6mL Reagent C
- 1 x 1mL 1.5 mg/dL copper standard



Standard Curve in 96-well plate in assay

REFERENCES:

[1]. Stuerenburg HJ, Eggers C (200). Early detection of non-compliance in Wilson's disease by consecutive copper determination in cerebrospinal fluid. J Neurol Neurosurg Psychiatry 69: 701-702.

[2]. Liska SK, Kerkay J, Pearson KH (1985). Determination of zinc and copper in urine using Zeeman effect flame atomic absorption spectroscopy. Clin Chim Acta. 151:231-236.

[3]. Tessman RK, Lakritz J, Tyler JW, Casteel SW, Williams JE, Dew RK. (2001). Sensitivity and specificity of serum copper determination for detection of copper deficiency in feeder calves. J Am Vet Med Assoc. 218:756-760.