

Zinc Assay Kit

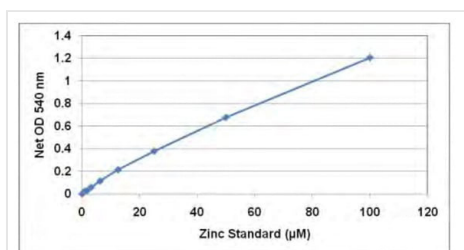
Zinc Assay Kit (Colorimetric)

CATALOG #
AAA44687

PRODUCT SYNONYMS

Zinc; Zinc Assay Kit (Colorimetric); Zinc assay kit

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Zinc assay kit

Background: Zinc is an essential trace metal involved in a multitude of biological pathways including cell growth and differentiation, nucleic acid metabolism, signal transduction, and neurological functions. It binds a variety of proteins and acts as a cofactor in many enzymes such as the carbon dioxide regulator, carbonic anhydrase, and the peptide hydrolyzing enzyme, carboxypeptidase. Zinc is important to many enzymatic reactions, transcription factors, and structural proteins. Over 300 known enzymes contain zinc in their catalytic domains. The "zinc finger" motif is prevalent in more than 20 classes of distinct modules that interact with lipids, proteins, and nucleic acids. The Lewis acid properties of zinc allow it to stabilize negative charges in catalytic processes. Extracellular release of zinc functions as a signaling mediator in endocrine, paracrine, and autocrine systems. Zinc is the second most prevalent trace element in the body and exists at ~2-3 grams. Total normal cellular zinc concentrations range between tens to hundreds of micromoles per liter. Zinc deficiency results in many clinical manifestations including loss of appetite, impaired immunity, growth retardation, weight loss, poor wound healing, diarrhea, and mental fatigue. Disease states associated with zinc malabsorption include chronic liver disease, chronic kidney disease, sickle cell disease, diabetes, and gastrointestinal disorders. The Zinc Assay Kit is a simple colorimetric assay that measures the total amount of zinc present in biological samples in a 96-well microtiter plate format. Samples are deproteinized to release bound zinc. Free zinc forms a complex with the color reagent to produce a bright red color, which is then measured with a standard 96-well spectrophotometric microtiter plate reader. Each kit provides sufficient reagents to perform up to 100 assays, including blanks, zinc standards, and unknown samples. Sample zinc concentrations are determined by comparison with a known zinc standard. The kit has a detection sensitivity limit of ~0.4 µM zinc.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/assay-kits/zinc/44687>