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Zinc (Zn) Assay Kit

Catalog No.: BC00073

Size: 50T

If you have any questions or need further help during experiment, please don't hesitate to contact us through the following methods:

✉Email（Sale） order@enkilife.com

✉Email（Techsupport） techsupport@enkilife.com

Tel: 0086-27-87002838

Website: www.enkilife.com

Shelf life: Please refer to the label on the outer package.

Techsupport: In order to provide you with better service, please inform us the lot number on the label of the outer package.

Basic Information

Product Name	Zinc (Zn) Assay Kit
Detection Methods	Colorimetric
Sample type	Serum, plasma
Detection Type	Quantitative
Detection instrument and wavelength	Microplate reader (540-560 nm, the best detection wavelength is 560 nm)

Product Introduction

Zinc is an essential trace element for the body and is involved in a variety of biological functions, such as signal transduction, gene expression, apoptosis regulation, etc. The quantitative determination of zinc ions plays an important role in the diagnosis and monitoring of a variety of diseases.

Features

★ Easy to operate, the test can be completed within 10 minutes .

Detection principle

Zinc in serum reacts with 5-Br-PADAP to form a colored complex. The absorbance of this complex at 560 nm is proportional to the zinc concentration in the sample.

Product Composition

Serial Number	Product Name	Packing Specifications (50T)	Storage
Reagent 1	100mmol/L zinc standard	6mL	Store at -20℃ , store at 2-8 ℃ after opening
Reagent 2	Color developer	0.13mL	Store at -20℃ away from light , store at 2-8 ℃ after opening
Reagent 3	Buffer	13mL	Store at -20℃ , store at 2-8 ℃ after opening
	96-well ELISA plate	1 plate	RT
	96-well membrane	2 pieces	RT

Storage Conditions

The unopened kit can be stored at -20°C for 6 months.

Preparation before the experiment

Sample processing

1. Serum and plasma samples: can be measured directly.

2. Sample processing: The sample cannot be hemolyzed; metal chelators such as EDTA and citrate cannot be used as anticoagulants.

Note: The diluent is reagent IV (carbonate buffer).

· Preparation of the kit

1. Before testing, the reagents in the kit were equilibrated to room temperature.

2. Dilution of different concentrations of standard: dilute reagent 3 with water in half to different concentrations such as 2.5, 1.25, 0.625, 0.3125, 0 (blank well) mmol/L

3. Preparation of working solution: Mix reagent 3 and reagent 4 in a volume ratio of 1:1. After mixing, let it stand for 1 minute to prepare the working solution. Use it immediately after preparation.

Operation process

1. Standard wells: Add 50 μL of zinc standards of different concentrations

Assay wells: Add 50 μL of sample supernatant .

2. Add 200 μL of the colorimetric working solution to each well in step “ 1 ” , vibrate the plate for 30 s, let it stand for 5 min, and measure the OD value at 560 nm using the microplate reader.

Operation table

	Standard wells	Assay wells
Standard solutions of different	50	--
Sample to be tested (μL)	--	50
Working solution (μL)	200	200
Microplate reader vibrating plate 30 s , let stand for 5 min , and measure the OD value with a microplate reader at 560 nm .		

Result calculation

Standard fitting curve: y = ax + b

Normal serum (plasma) sample, zinc ion concentration calculation formula:

Zinc content (mmol/L) = (ΔA560 - b) ÷ a × f

annotation:

y: OD value of standard well - OD value of blank well (OD value when the concentration of standard is 0)

x: concentration corresponding to the absorbance

a: slope of the curve

b: intercept of the curve

ΔA560: Sample OD value - blank OD value (OD value when the standard concentration is 0)

f: dilution factor of the sample before adding it to the detection system

Notes

1. The optimal detection wavelength of the microplate reader is 560 nm, and detection can be performed in the range of 540 nm-560 nm.
2. This product is limited to scientific research by professionals and shall not be used for clinical diagnosis or treatment, shall not be used as food or medicine, and shall not be stored in ordinary residences.