Blood Zinc Content Assay Kit

Note: It is necessary to predict 2-3 large difference samples before the formal determination.

Operation Equipment: Spectrophotometer

Cat Number: BC2810

Size: 50T/48S

Components:

Reagent I: Liquid 30 mL×1. Storage at 2-8℃.

Reagent II: Liquid 60 mL×1. Storage at 2-8℃.

Reagent III: Powder×3. Storage at 2-8℃. Add 20 mL of Reagent II to one Reagent III before use. Shock to dissolve at least 30 minutes. It can be preserved for one week at 2-8℃.

Standard Solution: Liquid 1 mL×1, 10 mmol/L Zn^{2+} standard solution. Storage at 2-8℃. Dilute 50 times with distilled water to form a standard solution of 0.2 mmol/L before use. (Add 20μL of standard solution to 980μL of distilled water).

Product Description:

Zinc is one of the essential trace elements, which also plays an important role in insulin and porphyrin metabolism. In the solution of pH 8.5~9.5, the complex produced by Zn^{2+} and zinc reagent has a maximum absorption peak at 620 nm.

Reagents and Equipment Required but Not Provided.

Spectrophotometer, centrifuge, pipette, 1 mL glass cuvette, vortex mixer/magnetic stirrer, distilled water.

Procedure:

I. Determination

1. Preheat spectrophotometer for 30 minutes, adjust wavelength to 620 nm, set zero with distilled water.
2. Add reagents with the following list:

Reagent (μL)	Blank tube (A_B)	Test tube (A_T)	Standard tube (A_S)
Distilled water	250	-	-
Standard solution (0.2 mmol/L)	-	-	250
Serum(plasma)	-	250	-
Reagent I	500	500	500
Mix thoroughly and centrifuge at 10000 rpm for 10 minutes at room temperature.			
Supernatant	500	500	500
Reagent III	1000	1000	1000
Mix thoroughly and react for 10 minutes at room temperature. Take 1 mL of the mixture to 1 mL glass cuvette. Measure absorbance at 620 nm. Recorded as A_B, A_T, A_S. Blank tubes and standard tubes only need to be done 1-2 times.			

II. Calculation

Tel: 86-010-50973105 https://www.solarbio.net E-mail: info@solarbio.com

Blood zinc content (mmol/dL) =[Cs×(A_T-A_B)÷(As-A_B)]×0.1= 0.02×(A_T-A_B)÷(As-A_B)

Cs: Content of Zn^{2+} standard solution, 0.2 mmol/L;

0.1: 1 dL=0.1 L.

Note:

1. Reagent III need shock to dissolve at least 30 minutes. If some little particles remain insoluble, it will not affect the experiment.
2. After the Reagent III is added and mixed, the tube shall be tested within 30 minutes.
3. When the absorbance value is greater than 1.5, it is recommended to dilute the sample with distilled water and measure it. If the measured absorbance value is lower than or close to the blank, it is recommended to increase the sample size for measurement and pay attention to modify the calculation formula at the same time.

Related Products:

BC0720/BC0725	Blood Calcium Content Assay Kit
BC2770/BC2775	Blood Potassium Content Assay Kit
BC2790/BC2795	Blood Magnesium Content Assay Kit
BC1730/BC1735	Serum Ferri Ion Content Assay Kit

Technical Specifications:

The detection limit: 0.00948 mmol/L

Linear range: 0.0125-1 mmol/L

Tel: 86-010-50973105 https://www.solarbio.net E-mail: info@solarbio.com