Copper Ion Assay Kit

(Cat/No.: BC026 Size:R1：45ml R2: 15ml)

1. Reagents composition(The kit is valid for 1 year)

Reagents	Gauge	Composition	Final concentration	Storage
Reagent 1	45ml×1 bottle	Acetic acid buffer（PH5.0）	0.2mmol/L	Store at 2～8℃ and avoid light
		Ascorbic Acid	5×10^{-2}mol/L	
Reagent 2	15ml×1 bottle	3,5-dibromo-PAESA	0.2mmol/L	Store at 2～8℃ and avoid light
The reagents can be stabilized at 2~8°C and kept avoid light for one year				

2. Assay principle

Under acidic conditions, Cu^{2+} is dissociated from coppercyanin and albumin. Ascorbic acid reduced Cu^{2+} to Cu^{+}, which reacted with complexing agent 3, 5-dibromo-paesa. The generated blue complex has the maximum absorption peak at the 600nm wavelength. The absorbance at 600nm was determined to calculate the concentration of Cu^{2+}.

3. Operation procedure

1、Operation of biochemical analyzer and Enzyme-labeled instrument

①、Product performance parameter

Main Wavelength	600nm	**Reaction Temperature**	37℃	**Reaction Method**	End Point method
Auxiliary Wavelength	700nm	**Calibration Type**	Linearity	**Reaction Direction**	Up

②、Operation table

Reagents	Blank	Standard	Assay
Double distilled water	10μl		
Standard		10μl	
Sample			10μl
Reagent 1	150μl	150μl	150μl

Mix well and incubate 5min at 37℃,and measure the absolute A_1			
Reagent 2	50μl	50μl	50μl
Mix well and incubate 5min at 37℃,and measure the absolute A_2, $\Delta A=A_2-A_1$			

2、Operation Procedure of spectrophotometer

Reagents	**Blank**	**Standard**	**Assay**
Double distilled water	50μl		
Standard		50μl	
Sample			50μl
Reagent 1	750μl	750μl	750μl
Mix well and incubate 5min at 37℃,and measure the absolute A_1			
Reagent 2	250μl	250μl	250μl
Mix well and incubate 5min at 37℃,and measure the absolute A_2, $\Delta A=A_2-A_1$			

2、Calculate Formula： $\text{Copper Ion Content}\ (\mu mol/L) = \frac{\Delta A\text{ssay} - \Delta B\text{lank}}{\Delta\text{Standard} - \Delta B\text{lank}} \times \text{Standard Concentration}\ (\mu mol/L)$

4. Reference Range

Normal Human serum and blood plasma: Male: 11～24μmol/L　Female: 12.6～24.4μmol/L

This reference value is for reference only. It is suggested that each laboratory should establish its own reference value range.

5. Product performance parameter

Reagent Blank Absorbance:A_{600nm} (1.0cm) ≤0.5

Linear range:5～79μmol/L,R^2≥0.995

Accuracy:Relative deviation≤15.0%

Degree of precision:Intra-batch difference CV≤4.0%,Inter-batch difference＜6.0%

Sensitivity:Actual detection lower limit≤1.5 μmol/L

6. Points to attention

1、Hemolysis can affect the results

2、The amount of sample and reagent can be adjusted proportionally according to the need.

3、When the sample concentration exceeds the linear range, please dilute the sample with Deionized water, multiply the result by the dilution multiple.

4、If the instrument does not have the wavelength required by the kit, select near wavelength(±10nm)

5、Different batches of reagents should not be used in combination.

6、Serum Copper content is very small, the utensils and reagents used to avoid copper ion pollution, glassware are required to clean strictly

Pure Copper Ion Assay Kit

【Product Name】

Common Name：Pure Copper ion standard

【Packing specification】

1mL×1 vial

【Intended use】

Pure copper ion is only used as the standard solution for the quantitative determination of Copper Ion (Cu) in serum and plasma.

【Major Component】

Major Component	Origin	Concentration	Unit
Cupric sulphate	Chemical Synthesis	28.0	μmol/L

【Storage conditions and expiry date】

The reagents can be stabilized at 2~8°C for one year.

【Applicable Instrument】

Various types of full-automatic biochemical analyzer and semi-automatic biochemical analyzer, Enzyme Mark Instrument and spectrometer.

【Test method】

①、This product is liquid dosage form, it can be used directly.

②、Remove from fridge and leave to room temperature for about 20 minutes before use.

③、 Gently rotate the bottle and mix the reagent well before use. Pay attention to not violent concussion, and avoid bubble generation.

【Points to attention】

①、When using this product, all laboratory reagent handling precautions must be followed

②、Do not use this product beyond its expiry date.

③、Do not store in cold storage.