

# Ceruloplasmin (CP) Assay Kit

**Note:** Take two or three different samples for prediction before test.

**Operation Equipment:** Spectrophotometer

**Catalog Number:** BC1300

**Size:** 50T/24S

## Components:

Solution I: Liquid 15 mL×1. Storage at 4°C.

Solution II: Liquid 10 mL×1. Storage at 4°C.

Solution III: Liquid 20 mL×1. Storage at 4°C, avoid light. (37°C preheat before use.)

## Product Description

Ceruloplasmin is copper-containing protein in plasma, which has the function of transporting copper and the activity of oxidase. It is an important antioxidant in extracellular fluid.

Ceruloplasmin catalyzes 3,3',5,5'-tetramethylbenzidine to form blue products with characteristic absorption peaks at 645 nm, and thus the activity of ceruloplasmin can be obtained.

## Reagents and Equipment Required but Not Provided.

Spectrophotometer, balance, 1 mL glass cuvette, distilled water.

## Procedure and Sample list

1. Preheat the spectrophotometer for more than 30 min, adjust the wavelength to 645 nm, and set zero with distilled water.
2. Operation sheet

	Control Tube ( $A_C$ )	Test Tube ( $A_T$ )
Sample (mL)	0.1	0.1
Solution I (mL)	0.3	0.3
Solution II (mL)	0.2	
Mix thoroughly, incubate at 37°C for 5 min.		
Solution III (mL)	0.4	0.4
Mix thoroughly, incubate at 37°C for 30 min.		
Solution II (mL)		0.2
Mix thoroughly, place at room temperature for 5 min, and take 200 $\mu$ L in 1 mL glass cuvette. Measure at 645 nm absorbance value, $\Delta A = A_T - A_C$ .		

## Calculations

Unit definition: One unit of enzyme activity is defined as each minute per milliliter of sample reacts with the substrate resulting in an increase of absorbance of 0.01 at 37°C in 1 mL reaction system.

$$\text{Cp activity (U/mL/min)} = \Delta A \times (V_r \div 1) \div 0.01 \div T \div V_s = \Delta A \div 0.03$$

T: Reaction time, 30 min;

Vs: Sample volume, 0.1 mL;

Vr: Total reaction volume, 1 mL;

1: 1 mL Reaction system conditions.

**Notes:**

Solution II and Solution III have certain toxicity and irritation. Please take protective measures when operating.

**Related products:**

BC1310/BC1315	Total antioxidant capacity (T-AOC) Assay Kit
BC1320/BC1325	Hydroxyl Radical Scavenging Capacity Assay Kit
BC1330/BC1335	Plant Flavonoids Assay Kit
BC1340/BC1345	Plant Total Phenol (TP) Assay Kit