



Albumin Assay Kit

(Cat/No.:BC131 Size:96T)

1. Measurement principle (Microplate method)

Albumin has the property of binding with anionic dyes. At around pH 4.0, bromocresol green changes from yellow to green after binding with albumin, and the intensity of the color is directly proportional to the albumin concentration.

2. Composition (The kit is valid for 6 months)

	Specification	Composition	Storage
Reagent 1	5ml×1 bottle	Colorimetric reagent stock solution	4°C avoid light preservation
	Preparation of reagent 1 application solution: Prepare according to the ratio of colorimetric reagent stock solution: distilled water = 1:4.		
Reagent 2	0.3ml×1 vial	Standard solution (27.5g/L)	-20°C

3. Required instruments and reagents

An adjustable 628/630nm wavelength microplate reader and a 96-well plate (one plate is included), and distilled water.

4. Operation table

	Blank well	Standard well	Sample well
Distilled water (μl)	2.5		
standard solution (μl)		2.5	
Sample (μl)			2.5
Reagent 1 Application Solution (μl)	250	250	250

Gently shake to mix, let stand at room temperature (18-25°C) for 10 minutes, measure the absorbance A of each well using a microplate reader at wavelengths of 628nm/630nm.

Note: When adding reagent 1 to the well plate, try to avoid generating air



bubbles, otherwise it will directly affect the colorimetric results.

5. Calculation formula

$$\text{Albumin content (g/L)} = \frac{A_{\text{Assay}} - A_{\text{Blank}}}{A_{\text{Standard}} - A_{\text{Blank}}} \times C_{\text{Standard}} \times N$$

C Standard: Standard solution concentration, 27.5 g/L (This value may vary; please refer to the standard label for the exact value).

N: Dilution factor before sample testing.

6. Calculation example

2.5 μL of mouse serum was analyzed according to the table above. The absorbance of the blank well was 0.0706, the absorbance of the standard well was 0.3422, and the absorbance of the test well was 0.3556. The calculated results are as follows:

$$\begin{aligned} \text{Serum Albumin Content (g/L)} &= \frac{0.3556 - 0.0706}{0.3422 - 0.0706} \times 27.5 \\ &= 28.92 \text{ g/L} \end{aligned}$$

7. Detection range

Linear range: 0.04~32 g/L. (For values above this range, please dilute the sample before testing and multiply the result by the dilution factor.)

8. Applicable samples

This method is applicable to serum (plasma) samples. It can sometimes be detected in high-protein urine, but its use is not recommended.



Appendix I: Preparation of standard curve

- 1. Pretreatment:** The 27.5 g/L standard solution was diluted with double-distilled water to different concentrations: 22 g/L, 16.5 g/L, 11 g/L, 5.5 g/L, and 2.75 g/L.

- 2. Operation procedure:**

	Blank well	Standard well
Double distilled water (μ l)	2.5	
Different concentration Standard solution (μ l)		2.5
Bromocresol green working solution (μ l))	250	250
Gently shake the plate and let it stand at room temperature for 10 minutes. Then, measure the color using a microplate reader at wavelengths of 628nm/630nm.		

- 3. Results**

Standard concentration (g/L)	Assay OD	Absolute OD
0	0.0706	0
2.75	0.0987	0.0281
5.5	0.1266	0.0560
11	0.1835	0.1129
16.5	0.2321	0.1615
22	0.2912	0.2206
27.5	0.3290	0.2584

- 4. Standard curve**

