

PRODUCT
CODE CS001

INTENDED USE

This reagent is intended for in vitro quantitative determination of Albumin in human serum.

CLINICAL SIGNIFICANCE

Albumin is the most abundant protein constituent of serum. It is synthesized in the liver and is noted for its ability of configuration changes. This steric affinity allows the albumin molecule to serve as a carrier of many substances such as bilirubin, fatty acids, uric acid, various drugs, and antibiotics. Albumin also functions in the maintenance of proper osmotic pressure.

Elevated serum albumin levels are associated with possible dehydration. Low serum albumin levels are indicative of potential malnutrition, liver disease, kidney disorders, and rheumatoid arthritis.

PRINCIPLE

Serum albumin binds selectively to the dye bromo cresol green at pH 4.2. The absorbance of the blue/green complex at 546 nm is proportional to the albumin concentration.

REAGENT COMPOSITION

Albumin (Liquid)

Reagent Citrate Buffer	7.5 mmol/L
(pH4.2) Bromo Cresol Green	150 µmol/L

REAGENT

PREPARATION Reagent is ready for use.

REAGENT STORAGE AND STABILITY

The color reagent is stable up to the stated expiry date when stored at 2-8° C. Contamination after opening must be avoided. The reagent should be a clear yellow / green solution. If turbidity or precipitation has occurred the reagent should be discarded.

SPECIMEN

Serum, heparinized or EDTA plasma

Stability in serum at 2-8°C for 1 month at 15-25° for 1 week

PRECAUTION

To avoid contamination, use clean laboratory wares. Avoid direct exposure of reagent to light.

PROCEDURE

APPLICATION ON AUTO BIOCHEMISTRY ANALYZERS

BR-160 AUTO BIOCHEMISTRY ANALYZER					
TEST NAME	ALB		SAMPLE VOLUME	3	
FULL NAME	ALBUMIN				
	PRI.	SEC.	REAGENT VOLUME	R1	R2
WAVE LENGTH	546	NONE		300	0
ASSAY /POINT	1 POINT END	START	END		
		1	25		
DECIMAL PLACE	3				
UNIT	g/dl				
	LOW	HIGH			
LINEARITY RANGE	0	7			



BR-120 AUTO BIOCHEMISTRY ANALYZER					
TEST NAME	ALB		SAMPLE VOLUME	3	
FULL NAME	ALBUMIN				
	PRI.	SEC.	REAGENT VOLUME	R1	R2
WAVE LENGTH	546	NONE		300	0
ASSAY / POINT	1 POINT END	START	END		
		6	24		
DECIMAL PLACE	3				
UNIT	g/dl				
LINEARITY RANGE	LOW	HIGH			
	0	7			

LINEARITY

The test is linear up to a concentration of 7g/dL. If a higher albumin concentration is expected, dilute sample 1+1 with physiological saline. Repeat the estimation and multiply the result by 2.

NORMAL RANGE

It is recommended that each laboratory establish its own reference values. The following value may be used as guide line.

Serum Albumin : 3.8-5.1 g/dL

QUALITY CONTROL

All control sera with Albumin value estimated by this method can be used.

NOTES

- The test is not influence by bilirubin values up to 20 mg/dl.
- In case of excessive lipemic a sample blank should be prepared by adding 0.025 ml of serum to 2.5 ml of 0.9 % saline. The absorbance of the sample blank is subtracted from the absorbance of the sample.
- Avoid excessive haemolysis since every 100 mg/dl of haemoglobin corresponds to about 100 mg/dL of Albumin.
- The color reagent and standard contain sodium azide. Do not swallow. Avoid contact with skin and mucous membra

SYMBOL ON LABELS

IVD	in vitro diagnostics		manufacturing date
LOT	lot number		expiry date
REF	catalogue number		manufacturer
	temperature limit		instruction for use

BIBLIOGRAPHY

- Doumas . B. T. et al ; Clin. Chim. Acta.. 31.87, 1971.
- Tietz. N.W. (Ed); Text book of clinical Chemistry , W.B. Saunders, 589, 1986
- Doumas . B. T. et al ; Standard methods of Clinical Chemistry , 7, 175 ; Academic Press of Chocago
1972. Walsh , R.L.; Clin. Biochem., 16, 178, 1983.

