

REF NO **DESCRIPTION**
CS600 **ALBUMIN**

PACKAGE SIZE

CS 600-1	1X1000 ML	CS 600-4	6X50 ML	CS 600-7	2X50 ML
CS 600-2	2X500 ML	CS 600-5	1X200 ML	CS 600-8	1X100M
CS 600-3	3X100 ML	CS 600-6	6X20 ML	CS 600-9	1X5L

INTENDED USE

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

INTENDED USER: Professional Use Only

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

Albumin Standard

Albumin standard concentration 4 g/dL

REAGENT PREPARATION

Reagent and standard are ready for use.

REAGENT STORAGE AND STABILITY

The color reagent and standard are 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.

ASSAY

Wavelength : 546nm
Cuvette : 1 cm light path
Temperature : 20-25°C
Measurement : Against reagent blank

PROCEDURE

Pipette in to cuvette	Blank	Standard	Sample
Working reagent	1000 µL	1000 µL	1000 µL
Standard	--	10 µL	--
Sample	--	--	10 µL

Mix and incubate for 5 minutes at 20-25°C. Measure the absorbance of the sample (As) and standard (Astd) against the reagent blank within 30 minutes.

CALCULATION

$$\text{Serum Albumin (g/dL)} = \frac{\Delta A \text{ sample}}{\Delta A \text{ standard}} \times 4 (\text{Std.conc.})$$

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 membrane.

SYMBOL ON LABELS

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

BIBLIOGRAPHY

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- Walsh , R.L.; Clin. Biochem., 16, 178, 1983.



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EC **REP**

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