ALBUMIN

Colorimetric Method (BCG)
Liquid Reagent ready to use

REF. 0027/50 4x 50 ml
REF. 0027 4x100 ml
REF. 0028 4x250 ml

CE
IVD

Azienda certificata DNV

GIESSE DIAGNOSTICS

INTENDED USE

Quantitative determination of Albumin in serum and plasma.

PRINCIPLE

In a pH 3.8 buffered solution the albumin present inthe sample reacts with bromocresol green (BCG) and causes a color change. The color intensity is proportional to the albumin concentration present in the serum or plasma.

SAMPLE

Serum, plasma eparinate. Do not use hemolyzed samples.
Albumin in the sample is stable 1 week at 15-25°C and over 1month at 2-8°C avoiding bacterial contamination.
The samples with presence of fibrin should be centrifuged.

KIT COMPONENTS

Reagent (A) ALB Volume = 50/100/250 ml	Buffer pH 3.8 BCG	100 mmol/l 7 mmol/l
Calibrator Volume = 5 ml	Bovine Albumin	3 g/dl

The reagents are stable until the expiration date indicated on the label if stored at 2-8°C and protected from light. Do not freeze. Once opened reagents are stable for 2 months at 2-8°C if contamination is avoided.
Keep bottles closed when not in use.

REAGENT PREPARATION

Liquid reagent to be brought to room temperature (15-25°C) before use.

PRECAUTIONS AND WARNINGS

Reagent may contain some non-reactive and preservative components. It is suggested to handle carefully it, avoiding contact with skin and swallow.
Use the normal precautions required in the laboratory.
Dispose of waste according to local laws.

PROCEDURE

Wavelength:	628 nm (620 – 640)
Lightpath :	1 cm
Temperature:	25, 30, 37°C
Reading:	against blank reagent
Method:	Increasing End Point
Sample/Reagent:	1/150

pipette:	blank	sample	calibrator
Reagent (A)	1500 µl	1500 µl	1500 µl
water	10 µl		
sample		10 µl	
calibrator			10 µl

Mix, incubate for 1 minute at room temperature (15-25°C), read absorbances of sample (Ax) and calibrator (Ac) against blank.

Reaction volumes can be proportionally varied.
This method describes the manual procedure to use the kit.
For automated procedure, ask for specific applications.

RESULTS CALCULATION

Albumin g/dl = Ax/Ac x 3 (calibrator value)

Conversion Factor: g/dl x 144.9 = µmol/l

EXPECTED VALUES

Serum/plasma: 3.5 – 5.5 g/dl

Each laboratory should establish appropriate reference intervals related to its population.

QUALITY CONTROL

You must perform the controls at each kit's use and verify that the values obtained are within the reference range reported in the operating instructions. For this purpose we recommend the use of control sera: PRECISENORM (REF.6000) and PRECISEPATH (REF.6001).

PERFORMANCE

Sensitivity: the sensitivity of the method is: 0.1 g/dl.

Linearity: the method is linear up to 6 g/dl. For higher values, dilute the sample 1:2 and multiply the result by 2.

Precision intra-assay:

	Level 1	Level 2	Level 3
Mean (g/dl)	1.65	3.76	5.86
DS	0.014	0.037	0.045
CV %	0.83	0.99	0.77

Precision inter-assay:

	Level 1	Level 2	Level 3
Mean (g/dl)	1.66	3.90	6.00
DS	0.007	0.021	0.030
CV %	0.40	0.53	0.50

Interferences: bilirubin does not interfere up to 20 mg/dl.
A triglyceride concentration exceed 300 mg/dl causes overestimated values; for lipemic sera, prepare a blank sample with saline.
The presence of hemoglobin (hemolysis) results in overestimated values.
Samples containing ampicillin cause false results.

Correlation against a reference method: Y = 0.9342x + 0.1617 r = 0.9948

REFERENCES

1. Friedman R. and Young D.S., Effects of Disease on Clinical Laboratory,AACC Press.
2. Westgard J. O. et al., Chim. Chem., 18, 647 (1972).
3. Metz A. and Schutre A., Clin. Chem. 13, 423 (1975).
4. Rodkey F. L., Clin. Chem. 10, 643 (1964).
5. Doumas B. T., Watson W.A., Biggs H. G., Clin. Chim. Acta 31,87 (1971).

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