# Albumin

## BCG Monoreagent

| Cat.No | Package Size |
|---|---|
| 103 016 | 9 x 10 mL/ Standard |
| 103 005 | 2 x 50 mL/ Standard |
| 103 000 | 4 x 100 mL/ Standard |
| 103 004 | 2 x500 mL/ Standard |
| 103 002 | (Hit I) 4 x 50 mL |
| 103 003 | Hit II) 4 x 100 mL |
| 103 009 | Hit II 6 x 100 mL |
| 103 006 | (AU) 8 x 70 mL |

### METHOD / TESTPRINCIPLE

Colorimetric determination of serum albumin by the photometric measurement of the bromocresol green (BCG) reaction with albumin

### REAGENT

**Composition (concentrations in the test)**

**Reagent :**

| | | |
|---|---|---|
| Succinate buffer (pH 4.20) | 140 | mmol/L |
| Bromocresol green | 0.26 | mmol/L |
| Detergent | 2.0 | g/L |

**Standard : Std**

| | | |
|---|---|---|
| Bovine albumin | 4,0 | g/dL |
| | 40,0 | g/L |

**Stability and Storage**
When stored at 2-25° C and protected from light, the reagents are stable until the expiry date printed on the labels.

**Preparation and Stability**
The reagent is ready for use.

### PRECAUTIONS

- For *in vitro* diagnostic use only.
- The standard contains < 0,95 g/L sodium azide. Avoid contact with skin and/or mucous membranes.

### SAMPLES

Serum / Plasma

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### REFERENCE VALUES

| Ambulatory patients | Patients at rest |
|---|---|
| 3.8 - 5.5 g/dL | 3.5 - 5.2 g/dL |
| 38 - 55 g/L | 35 - 52 g/L |

*Note: It is recommended for each laboratory to establish and maintain its own reference values. The given data here are only an indication.*

### ASSAY PROCEDURE

This reagent can be used manually (see method below) and on most analyzers. Applications are available on request.

Wavelength : 578 / 623 nm
Temperature : 37°C
Cuvette : 1 cm light path

Read against Reagent Blank (RB)

| | RB | Standard | Sample |
|---|---|---|---|
| **Reagent** | 1 mL | 1 mL | 1 mL |
| **Standard** | - | 10 µL | - |
| **Sample** | - | - | 10 µL |

Mix and read the absorbance (A) after 5 minutes incubation.
The final color is stable for at least 15 minutes.

### CALCULATION

$$\frac{A\ Sample}{A\ Standard} \times C$$

g/dL => C = 4.0
g/L => C = 40

C = standard concentration.

### CALIBRATORS & CONTROLS

For the calibration of automated analyzers Greiner Multicalibrator is recommended, for quality control use Greiner normal and abnormal controls Unitrol I and Unitrol II.



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## PERFORMANCE DATA

- **Analytical range**
The reagent is linear up to 6 g/dL (60 g/L).

- **Detection limit**
Determined according to SFBC protocol (Vassault and Coll.) protocol , the detection limit is 0.03 g/dL (0,3 g/L).

- **Precision**
Within-run reproducibility
N=11

| | Mean | SD | CV | Unit |
|---|---|---|---|---|
| Control 1 | 3,43 | 0,029 | 0,85% | g/dL |
| Control 2 | 3,41 | 0,030 | 0,88% | g/dL |
| Patient | 3,84 | 0,027 | 0,70% | g/dL |

Between-run reproducibility
N=11

| | Mean | SD | CV | Unit |
|---|---|---|---|---|
| Control 1 | 3,50 | 0,025 | 0,71% | g/dL |
| Control 2 | 3,38 | 0,033 | 0,98% | g/dL |
| Patient | 3,79 | 0,039 | 1,03% | g/dL |

- **Correlation**
A comparative study has been performed between the Greiner method and another commercial reagent on 34 human serum samples. The parameters of linear regression are as follows:

y = 1.008 x + 0.077 mg/dL r = 0.991

## INTERFERENCES

- Ascorbic Acid: no interference until 50 mg/dL
- Bilirubin: no interference until 40 mg/dL,
- Hemoglobin: no interference until 500 mg/dL
- Triglycerides: no interference until 1000 mg/dL

## BIBLIOGRAPHY


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5. Johnson, A. M., Rohlfs, E. M., Silverman, L. M. Proteins, in Tietz Fundamentals of Clinical Chemistry, 5th edition, Burtis, C.A. et Ashwood, E.R. (W.B. Saunders eds.Philadelphia USA). 2001, 325.


## SYMBOLS USED

For *in vitro* diagnostic medical use

Batch Code


Use by


Temperature limitation




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