

Intended Use

This reagent is intended for *in vitro* quantitative determination of Albumin in serum or plasma.

- Bromocresol green methodology
- Linear up to 6 g/dL

Clinical Significance

Albumin which is synthesized in the liver constitute a major part of the total proteins in the body, the other part being globulin; form the major portion of the dissolved substances in the plasma. Functions of Albumin includes distribution of extracellular fluid, regulation of osmotic pressure, acts as transport agent for a wide variety of substance such as hormones, lipids, vitamins etc.

Increased levels are seen in dehydration.

Decreased levels are seen in liver disease (Hepatitis, Cirrhosis), malnutrition, kidney disorders and increased fluid loss during extensive burn & malabsorption.

Principle

The reaction between albumin from serum or plasma and the dye bromocresol-green produces a change in colour that is proportional to the albumin concentration.

Kit Components

Reagent/Component	Product Code 12022001	Description
Albumin Reagent	4 x 30 mL	Succinate Buffer (pH 4.20) 75 mmol/L Bromocresol green 0.14 g/L

Risk & Safety

Material Safety data sheets (MSDS) will be provided on request

Reagent Preparation

Albumin reagent is ready to use.

Reagent Storage and Stability

The sealed reagents are stable upto the expiry date stated on the label, when stored at room temperature.

Open Vial Stability

Once opened the reagents are stable up to 30 days if contamination is avoided.

On-board Calibration Stability

Calibration is stable for 10 days.

Reagent Deterioration

Turbidity or precipitation in any kit component indicates deterioration and the component must be discarded. Values outside the recommended acceptable range for the Agappe Qualichek Norm & Path control may also be an indication of reagent instability and associated results are invalid. Sample should be retested using fresh vial of reagent.

Precaution

To avoid contamination, use clean laboratory wares. Close reagent bottles immediately after use. Avoid direct exposure of reagent to light. Do not blow into the reagent bottles.

This reagent is only for IVD use and follow the normal precautions required for handling all laboratory reagents.

Waste Management

Reagents must be disposed off in accordance with local regulations.

Sample

Fresh serum / plasma (Do not use lipemic or hemolysed sample)

Interferences

No interference for

- Ascorbic acid up to 50 mg/dL
- Bilirubin up to 20 mg/dL
- Haemoglobin up to 1000 mg/dL

Materials provided

Albumin reagent

Reagents required but not provided

Multicalibrator (Product Code: 11610001), Qualichek Norm (Product Code: 11601003), Qualichek Path (Product Code: 11601002)

Unit Conversion

Traditional Unit	SI Unit	Conversion from Traditional to SI
g/dL	g/L	x 10

Calibration

Agappe Multicalibrator (Product Code: 11610001) is recommended for calibration of the assay.

Quality Control

It is recommended to use Qualichek Norm (Product Code: 11601003) or Qualichek Path (Product Code: 11601002) to verify the performance of the measurement procedure.

Each Laboratory has to establish its own internal quality control scheme and procedures for corrective action if controls do not recover within the acceptable tolerance.

Reference Range

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

Serum / Plasma : 0-4 days	:2.8 - 4.4 g/dL
4 days-14 years	:3.8 - 5.4 g/dL
14-18 Years	:3.2 - 4.5 g/dL
Adult (20-60 years)	:3.5 - 5.2 g/dL
60-90 Years	:3.2 - 4.6 g/dL
>90 Years	:2.9 - 4.5 g/dL

Results obtained for patient samples are to be correlated with clinical findings of patient for interpretation and diagnosis.

Performance

1. Linearity

The reagent is linear up to 6 g/dL. If the concentration is greater than linearity (6 g/dL), dilute the sample with normal saline and repeat the assay. Multiply the result with dilution factor.

2. Comparison

A comparison study has been performed between Agappe reagent and another internationally available reagent yielded a correlation coefficient of $r^2 = 0.968$ and a regression equation of $y = 1.0124x$.

3. Precision

	Intra Run		Inter Run	
Control	Norm	Path	Norm	Path
n	20	20	20	20
Mean (g/dL)	3.46	4.2	3.51	4.36
SD	0.02	0.03	0.07	0.07
CV(%)	0.76	0.70	1.91	1.55

Accuracy (g/dL)		
Control	Expected Value	Measured Value
Qualichek Norm	3.4 ± 0.6	3.4
Qualichek Path	4.5 ± 0.7	4.3
Control Level 1	3.90 ± 0.6	3.99
Control Level 2	3.40 ± 0.6	3.23

4. Sensitivity

Lower detection Limit is 0.1 g/dL

Bibliography

1. Doumas B.T. *et al*: Clin. Chim Acta 31, 87 pp (1971)
2. Weis, W.A. :Klin. Wochenschr. 43, S.273 (1965)
3. Burtis, Ashwood, Bruns & Saunders : Tietz Text Book of Clinical Chemistry 4th Edition -2006.

SYMBOLS USED ON THE LABELS

IVD IN VITRO DIAGNOSTIC USE SEE PACKAGE INSERT FOR PROCEDURE LOT LOT NUMBER MANUFACTURER'S ADDRESS MANUFACTURING DATE EXPIRY DATE TEMPERATURE LIMIT



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