

# TOTAL PROTEINS (BIURET)

## Colorimetric determination of proteins in serum and plasma

### TEST SUMMARY

Proteins react with copper ions forming a red compound measurable spectrophotometrically.

### SAMPLES

Serum or plasma.

Stability: 1 month at 2-8°C.

### REAGENTS

Sole Reagent: Copper sulphate 12 mM;  
Potassium ioduro 30mM;  
Sodium potassium tartrato 18 mM;  
Sodium hydroxide 20 mM.

Standard: Proteins 5 g/dl; stabilizers and preservatives.

### MATERIAL REQUIRED BUT NOT SUPPLIED

Normal laboratory equipment. Spectrophotometer UV/VIS with thermostatisation. Automatic Micropipette. Cuvette in optical glass or monouse in optical polystyrene. Physiologic solution.

### PRECAUTIONS

Reagent may contain not reactive and conservative components. It is opportune to avoid contacts with the skin and do not swallow.

Perform the test according to the general "Good Laboratory Practice" (GLP) guidelines.

### REAGENTS PREPARATION

Reagents are ready to use, and are stable until expiration date on label and are stable until expiration date on label

Sole Reagent is stored at room temperature, while the standard at 2-8°C.

Pay attention, do not contaminate reagents when vials are open.

### PROCEDURE

Kind of analysis: End Point  
Reading time: 5 minutes  
Colour stability: 60 minutes  
Wavelength: 546 nm (520-570)  
Temperature: 37°C  
Lightpath: 1 cm  
Zero: Blank Reagent

### NOTES

- If the results are incompatible with clinical presentation, they have to be evaluated within a total clinical study.
- Only for IVD use.

### CALIBRATION/ QUALITY CONTROL

It is suggested to perform an internal quality control. For this purpose the following control sera on human base are available on request:

**QN 0050 CH** 10 x 5 ml

Control Sera normal values

**QP 0050 CH** 10 x 5 ml

Control Sera pathological values

### TEST PERFORMANCE

#### Precision

Intra-assay (n = 20)	Mean (g/dl)	SD (g/dl)	CV%
Sample 1	6.2	0.032	0.52
Sample 2	6.8	0.032	0.48

Inter-assay (n = 20)	Mean (g/dl)	SD (g/dl)	CV%
Sample 1	6.195	0.039	0.64
Sample 2	6.81	0.044	0.66

#### Methods comparison

A comparison with a commercial available product gave the following results in a comparison on 50 samples:

Total proteins LTA = x  
Total proteins competitor = y  
n = 50

$$y = 0,96976x + 0,20025 \quad r = 0,99128$$

#### WASTE DISPOSAL

Product is intended for professional laboratories. Waste products must be handled as per relevant security cards and local regulations.

#### PACKAGING

**CODE CC02100 (600 TESTS)**  
Sole Reagent 6 x 100 ml (liquid)  
Standard 1 x 3 ml (liquid)









#### REFERENCES

Dumas B.T. e coll. - Clin. Chem. 27,; 16472 (1981).

#### MANUFACTURER

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### SYMBOLS

-  Only for IVD use  
 Lot of manufacturing  
 Code number  
 Storage temperature interval  
 Expiration date  
 Warning, read enclosed documents  
 Read the directions  
 Biological risk

Mod. 01.06 (ver. 4.2 - 04/03/2006)



REAGENTS	BLANK	STANDARD	SAMPLE
Sole Reagent	1 ml	1 ml	1 ml
Distilled Water	10 µl	--	--
Standard	--	10 µl	--
Sample	--	--	10 µl

Mix and incubate at 37°C at least for 5 minutes.  
Read the absorbance against Blank at 546 nm.  
Colour is stable 60 minutes

### CALCULATION

$$\text{Proteins g/dl} = \frac{A(\text{sample})}{A(\text{standard})} \times 5$$

### EXPECTED VALUES

6.3 - 8.2 g/dl

Every laboratory should establish own reference intervals in accordance with own population.