

Reagent for quantitative estimation of Protein in Urine and Cerebrospinal Fluid.

DIAGNOSTIC SIGNIFICANCE:

The presence of protein in urine is a sensitive indicator of renal disorders. There are four ways in which increased amounts of protein in the urine can occur: Increased glomerular permeability; defective tubular reabsorption; increased concentration in the plasma of an abnormal, low molecular weight protein; and abnormal secretion of protein into the urinary tract. Albuminuria increased levels of albumin in urine has been recognized as an early indicator of renal damage in diabetes that can be reversed if detected and treated early.

PRINCIPLE:

Protein in urine and spinal fluid reacts with a Pyrogallol red and molybdate complex to form a violet-colored complex. The increase in absorbance is directly proportional to sample at 578 nm (570 – 600 nm).

SPECIMEN COLLECTION:

Urine 24 hrs: Stability 8 days at 2-8°C.

Cerebrospinal fluid (CSF): Stable 4 days at 2-8°C.

KIT PRESENTATION:

Pack Size	25 Test	2 X 25 ml	2 X 50 ml
Microprotein Reagent	25 X 1 ml	2 X 25 ml	2 X 50 ml
Microprotein Standard	1 X 1 ml	1 X 02 ml	1 X 02 ml

REAGENT STORAGE & STABILITY:

Microprotein reagent and standard are stable at 2-8°C until the expiry date indicated on the label.

Reagent should be protected from light as the reagent is photosensitive.

ASSAY PARAMETER:

Reaction : End point	Sample Vol. : 50 µl
Wavelength : 578 nm (570-600)	Reagent Vol. : 1000 µl
Zero Setting : Reagent Blank	Std Conc. : 50 mg/dl
Incubation : 5 minutes at R.T.	Linearity : 250 mg/dl

PROCEDURE:

Pipette into TT	Blank	STD	Test
Microprotein Reagent	1000 µl	1000 µl	1000 µl
Microprotein Standard	--	50 µl	--
Sample (Test)	--	---	50 µl

Mix and incubate for 5 minutes at R.T. Read absorbance of Standard (S) and Test (T) at 578 nm (570-600nm) against reagent blank.

Note: For higher concentration of samples follow the below procedure.

FOR HIGHER LINEARITY:

Pipette into TT	Blank	STD	Test
Microprotein Reagent	1000 µl	1000 µl	1000 µl
Microprotein Standard	--	25 µl	--
Sample (Test)	---	---	25 µl

Mix and incubate for 5 minutes at R.T. Read absorbance of Standard (S) and Test (T) at 578 nm (570-600nm) against reagent blank.

The color of final reaction mixture is stable for 30 minutes.

CALCULATION:

Microprotein conc. **A** (mg/dl) = Abs T ÷ Abs S X 50

24 hrs Urine conc = **A** X 10 X 24 hrs Urine volume in liters

NORMAL VALUES:

CSF : 10 – 50 mg/dl

Urine : 24 – 141 mg/24 hrs.

Each laboratory establishes its own reference range.

LINEARITY:

The method is linear up to 250 mg/dl. For values above 250 mg/dl, dilute the sample suitably with 0.9 % saline, and repeat the assay. Apply correction due to dilution to arrive at a final result.

REFERENCES:

1. Watanabe N. and al., Clin. Chem., 32, (1986), 1 551.
2. Tietz, N.W., Textbook of Clinical Chemistry, 2nd ed., W. B. Saunders, Philadelphia, 1994, p. 73-74, 717-727, 2205.

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 Expiry Date

 IVD
Invitro Diagnostics use

 Storage

 Mfg. Date

 LOT
Batch Number

 REF
Catalogue number

 See Package insert