UREA BERTHELOT KIT

PRINCIPLE:

Urea is hydrolysed by urease into carbondioxide and ammonia. Ammonia reacts with salicylate and hypochlorite in an alkaline medium to form a green coloured compound. The colour intensity of this compound is proportional to the amount of urea present in the sample.

REAGENT:

1. Reagent R1 : Buffer reagent
2. Reagent R2 : Enzyme Reagent
3. Reagent R3 : Chromogen Reagent
4. Standard : 50 mg/dl Ready To Use

REAGENT PREPARATION AND STABILITY:

All the reagents are stable liquid reagents and is stable till expiry.

SAMPLE:

Serum, Plasma or Urine. They can be stored at 2-8^0 C for 5 days.

If urine sample is to be assayed, it should be previously diluted 1/100 with deionized water. Multiply the final result by 100.

PROCEDURE:

METHOD	: End Point
WAVE LENGTH	: 578 nm
TEMPERATURE	: 37^0 C
CUVETTE	: 10 mm path length
STANDARD	: 50 mg/dl
INCUBATION	: 5 mins at

Pipette into uvettes	Blank	Standard	Test
Reagent R1	500 ul	500 ul	500 ul
Reagent R2	50 ul	50 ul	50 ul
Sample/ Standard	-	10 ul	10 ul
Reagent R3	500 ul	500 ul	500 ul

Mix & incubate at 37^0 C for 5 minutes or 10 minutes at room temperature. Measure the abosorbance at 578 nm, against blank.

CALCULATIONS:

(Abs. = Absorbance)

$$\frac{\text{Abs. of Sample}}{\text{Abs. of Standard}} \times \text{Concentration of Standard} = \text{mg/dl}$$

EXPECTED VALUES **SERUM :** 10 – 50 mg/dl
URINE : 20 – 35 g/24 h

Urea Nitrogen in mg/dl = Urea in mg/dl×0.467.

LINEARITY : upto 300 mg/dl

REFERENCES:

1. Fawcett J.K., Scott J.E – J. Clin. Path 13, 156 (1960)
2. Tabacco A. et. al. Clin. Chem. 25, 336 (1979)

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