

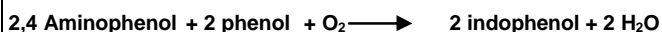
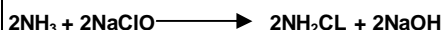
AMMONIA

Colorimetric Method

50 Tests

PRINCIPLE :

Serum or plasma of heparin (sodium salt) freshly prepared transferred immediately to trichloroacetic acid , centrifuged and the ammonia concentration determined in the supernatant using the Berthelot reaction



The blue dye indophenol produced in the Berthelot reaction absorbs light between 630 nm and 640 nm proportional to the ammonia concentration.

SAMPLE :

Serum or plasma of heparin (sodium salt). Ammonia assay should be carried out immediately.

NORMAL VALUES :

Up to 50 $\mu\text{mol/L}$ (85 $\mu\text{g/dl}$)

REAGENTS :

1-	Standard	50 $\mu\text{ mol /L}$ (85 $\mu\text{g/dl}$)
2-	Precipitating Reagent Trichloroacetic acid	1 mol / L
3-	Buffer	1 mol / L
4-	Color Reagent : Phenol	100 mmol / L
5-	Alkaline Reagent : Sodium hypochlorite	15 mmol / L

STABILITY :

The reagents are stable up to the expiry date specified when stored at +4 to +8 °C

PROCEDURE :

Deproteinization :

Pipette into centrifuge tube :

Reagent 2	0.5 ml
Serum	0.5 ml

Mix well. Wait for 5 min . Centrifuge for 10 min., then carefully pour the clear supernatant into dry test tube . The supernatant can be stored to 14 days at -20 ° C without significant increase in ammonia concentration.

	Blank (ml)	Standard (ml)	Sample (ml)
Supernatant	-	-	0.5
Standard (R1)	-	0.5	-
Dis. Water	0.25	-	-
Reagent 2	0.25	-	-
Reagent 3	0.5	0.5	0.5
Reagent 4	0.5	0.5	0.5
Reagent 5	0.5	0.5	0.5

Mix. Incubate for 30 min, at 37 ° C . Measure the absorbances of the sample (A_{sample}) and of the standard (A_{standard}) against the blank at 635 nm. (630 - 640 nm). Color is stable for 2 hrs. The method is linear up to 1000 $\mu\text{mol / L}$ (1700 $\mu\text{g/dl}$) .

CALCULATION :

Ammonia Concentration

$$= \frac{A_{\text{Sample}}}{A_{\text{Standard}}} \times \text{Standard Conc.} \times 2 \text{ (dil. factor)}$$

QUALITY CONTROL

For accuracy and reproducibility control :
Assayed Multi - Sera Normal and Elevated

Note :

Poor precision and accuracy are attributed to :

- 1) Pollution of the laboratory atmosphere or glassware by detergents containing ammonia.
- 2) Smoking by patients or staff.
- 3) Delay in the analysis.
- 4) Allowing the Serum or plasma temperature to rise.
- 5) In case of plasma avoid the use of ammonium salt of heparin .

REFERENCE :

Konitzer , K. and Voigt , S (1963) Clin .
Chim. Acta,8,5.

AMMONIA

Colorimetric Method
+ 4 to +8 °C 50 Tests
In vitro diagnostic use

CAT NO. AM 1040

REAGENTS

R1	Standard	25 ml
R2	TCA	50 ml
R3	Buffer	25 ml
R4	Color Reagent	25 ml
R5	Alkaline Reagent	25 ml

CONTACTS

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