



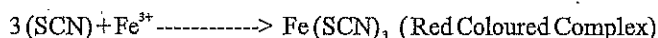
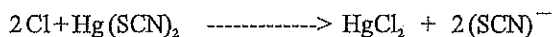
CHLORIDE KIT (MTC method)

INTRODUCTION

Chloride, a major anion, is important in the maintenance of the cation/anion balance between intra and extra-cellular fluids. This electrolyte is therefore essential to the control proper hydration, osmotic pressure and acid/base equilibrium. Elevated serum chloride values may be seen in dehydration, hyperventilation, congestive heart value and prostatic or other types of urinary obstruction. Low serum chloride values are found with extensive burns, excessive vomiting, intestinal obstruction, nephritis, metabolic acidosis, and in Addisonian crisis.

METHOD PRINCIPLE

The chloride ions react with mercuric thiocyanate to release thiocyanate ions, which in turn react with ferric ions to form a red coloured complex of ferric thiocyanate. The intensity of the colour is proportional to the chloride concentration.



Reagent Name	Pack Size	Pack Size
R1 - Chloride Reagent	2 X 50 ml	25 X 1 ml
R2 - Chloride standard	2 ml	2 ml

WORKING REAGENT PREPARATION AND STABILITY

The reagents are upto the expiry date printed on the package at R.T. Do not freeze the reagents.

Concentrations in the test

Mercuric (II) thiocyanate	2 mmol/L
Iron (III) Nitrate	18 mmol/L
Nitric acid	40 mmol/L

WARNINGS AND NOTES

Product for in vitro diagnostic use only

ADDITIONAL EQUIPMENT

Automatic analyzer or photometer able to read at 505nm, Hg (505-546 nm); Thermostat at 37°C; General laboratory equipment.

SPECIMEN

Serum, heparinised plasma, urine and CSF.

PROCEDURE

These reagents may be used for manual assay and in several automatic analyzers. Programme Sheets are available on request.

Wavelength	505 nm (505-546 nm)
Temperature	20-25°C / 37°C
Cuvette	1 cm

Pipette into the cuvettes

Reagent	Blank (B)	Standard (S)	Test (T)
R1 Chloride Reagent	1000 µl	1000 µl	1000 µl
Bring up the temperature of determination. Then add,			
Distilled water	10 µl		
R2 - Chloride standard		10 µl	
Sample			10 µl

Mix well, incubate for 3 min. at R.T Read the absorbance against reagent blank (RB).

CALCULATION

Chloride concentration [mmol/L] = $A(T) / A(S) \times \text{Standard concentration [mmol/L]}$

REFERENCE VALUES

Serum	98 to 107 mmol/l
Urine	110 to 250 mmol/l
CSF	170 to 250 mg/ day

It is recommended for each laboratory to establish its own reference ranges for local population.

QUALITY CONTROL

To Ensure adequate quality control, each run should include assayed normal and abnormal controls. If commercial controls are not available it is recommended that known value samples be aliquoted, frozen and used as controls.

PERFORMANCE CHARACTERISTICS

Linearity: up to 150 mmol/l

WASTE MANAGEMENT

Please refer to local legal requirements.

LITERATURE

Schoenfeld RG, Lerveller CV. Clin Chem 10,533 (1964)

Levinson, S.S. (1976) Clin Chem, 22, 273

SYSTEM PARAMETERS

Method	End Point
Wavelength	505 nm
Zero Setting	Reagent blank
Temperature Setting	25° C / 37° C
Incubation Temperature	R.T
Incubation Time	3 mins
Delay Time	-----
Read Time	-----
No. of Reading	-----
Interval Time	-----
Sample Volume	0.01 ml (10 µl)
Reagent Volume	1.0 ml (1000 µl)
Standard Concentration	Refer standard vial
Units	mmol / l
Factor	-----
Reaction Slope	Increasing
Linearity	150 mmol / l



