

BioMed-Chloride



REF: CL132120 (2x60)

INTENDED FOR USE:

For the quantitative determination of chloride in serum and urine .

Principle :

Chloride ions react with mercury ions releasing an equivalent quantity of thiocyanate ions , which form with trivalent ions a red colour ion-thiocyanate complex .

The intensity of the colour is proportional to the chloride concentrations in the sample .

SPECIMEN :

Non hemolized fresh serum , plasma (heparin) , CSF . urine 24/h diluted 1:2 with distilled water and acidified with 2/3 drops of HCl 23% .

Notes :

Serum should be separated from the clot as soon as possible chloride in serum are reported stable up to 24 hours at room temperature and up to 3 months if stored in refrigerator at -20°C and protected against evaporation . sweat and saliva contain chloride . Do not pipette by mouth and avoid any hand contact with tubes and droppes .

Shake and bring the samples at room temperature (+15-25°C) before using.

REAGENTS COMPOSITION:

Reagent(A) Cl Liquid	Mercuric thiocyanate Mercuric chloride Iron Ntrate Nitric Acid	< 0.1% < 0.1% 20 mmol/L 25 mmol/L
Standard (B) Cl	Sodium chloride	100 mEq/L (584 mg/dL)

PACKAGE : Collection & Storage .

Store at (+15-25°C).

Stable until the expiration date reported upon the package.

After the unsealing and the taking of the reagent , it is advised to close up the bottle immediately in order to avoid evaporation , direct light exposure and bacteric contamination .

PRECAUTION / DANGER SYMBOLES

Avoid pipette by mouth .

The preparation , according to current regulation . is classified as not dangerous.

The total concentration of non active components (preservatives , detergents ,stabilizers) is below the minimum required for citation .

Anyway handle with care , avoid ingestion , avoid contact with eyes , skin and mucous membranes
The samples must be handle as potentially infected from HIV or Hepatitis .

REAGENT PREPARATION AND STABILITY :

Ready to use liquid reagent , Stable until the date reported on the label .

The Reagent is limp and colourless .

REQUIRED MATERIALS NOT PROVIDED :

General Laboratory Equipment and instrumentations .

PROCEDURE :

Wavelength 480 nm (450-500)
Optical path : 1 cm
Temperature : +25/30/37°C
Reading : Against blank reagent
Assay tipe : End Point
Sample/Reagent/Ratio : 1/100

Pipetting in cuvette :

	BLANK	STANDARD	SAMPLE	
Reagent (A)	1000	1000	1000	µL
Distilled water	10			µL
Standard		10		µL
Sample			10	µL

Mix , incubate for 2 min at 37°C or 6 min at room temperature (+15-25°C) ; Read sample and standard extinction .

Colour is stable at least 15 min at room temperature .
volumes can be proportionally modified .

This methodology describes the manual procedure to use the kit .

For automated procedure, ask for specific application .

Calibration with watery standard may cause a systematic error when using automatic instrumentations .

CALCULATION:

Serum :

$$\text{chloride mEq/L} = \frac{(\text{E}) \text{ Sample}}{(\text{E}) \text{ Standard}} \times 100 (\text{ standard value })$$

urine 24/h :

$$\text{Cl mEq/L} = \frac{(\text{E}) \text{ Sample}}{(\text{E}) \text{ Standard}} \times 100 \times 2(\text{Dil} , \text{Faact.}) \times \text{Vol. Urine 24/h (dL)}$$

conversion factor from mEq/L to mmol/L

EXPECTED VALUES :

Serum :	98-110 mEq/L	573-643 mg/dL
Urine 24/h :	160-250 mEq/L	935-1461 mg/dL
Liquor(CSF) :	119-130 mEq/L	695-760 mg/dL
Sweat :	4-60 mEq/L	23.4-351 mg/dL

the above mentioned values are to be considered as a reference.

It is strongly recommended that each laboratory establish its own normal range

WASTE DISPOSAL :

The disposal of the product must be in accordance with local regulation concerning waste disposal .

QUALITY CONTROL :

It is recommended to execute the quality control at every kit utilization to verify that values are within the reference range indicated by the methodology.

REFERENCES :

Feldikamp C . DS. Et al , : Zklin , Biochem , 12 ,146 ,(1974) .

Fried R et al : Z . K lin , Biochem , 10 , 280 (1972) .

PERFORMANCE :

MEASURE INTERVAL / LINEARITY :	3.25-170 mEq/L
DETECTION(2DS):	3.25 mEq/L
SENSITIVITY :	1 mEq/L = 0.00293A a 492 nm

INTRA-ASSAY PRECISION : n=20

LOW LEVEL	M = 45.77 mEq/L	C.V = 1.86%
MEDIUM LEVEL	M = 82.37 mEq/L	C.V = 1.48%
HIGH LEVEL	M = 110.59 mEq/L	C.V = 3.82%

INTER-ASSAY PRECISION : n=20

LOW LEVEL	M = 45.82 mEq/L	C.V = 0.11%
MEDIUM LEVEL	M = 79.92 mEq/L	C.V = 3.02%
HIGH LEVEL	M = 108.46 mEq/L	C.V = 1.94%
CORELATION	r = 0.991	n= 60
LIN. REGRESSION	y = 1.01 x + 0.11	n= 60

INTERFERENCE:

Interferences are negligible up to :			
Hemoglobin	500 mg/dL	Albumin	150 g/L
Triglycerides	6000 mg/dL	Bilirubin	120 mg/dL

METHOD LIMITATIONS:

For concentration higher than 170 mEq/L, repeat the measure on a sample diluted 1:2 with saline solution e multiply the result x 2 .

Bromides and Fluorides may cause falsely high chloride level.






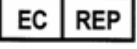

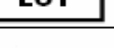

Anticoagulants such as oxalates and EDTA cannot be used .

Lipemic or icteric serums do not interfere with reaction .

Highly hemolyzed serums may cause falsely high chloride level .

Prepare a blank sample with distilled water .

for a thorough evaluation of the interning substances , consult: Young , D . S , et al , Clin , Chem , 21:1D (1975) .

	Consult Instructions for Use
	Caution, consult accompanying Documents
	In Vitro Diagnostic Medical Device
	Temperature limitation
	Manufacturer
	Authorized Representative in the European Community
	Catalogue number
	Batch code
	Use by

 Egy-Chem for lab technology	 
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