

Division of Laboratory Medicine

Biochemistry

Chloride, Cl (blood and urine)

For chloride in sweat see 'Sweat Tests'

Chloride is the most abundant anion in extracellular physiological fluids. Common causes of decreased blood chloride include reduced dietary intake, prolonged vomiting and reduced renal reabsorption as well as some forms of acidosis and alkalosis. Increased chloride values are found in dehydration, kidney failure, some forms of acidosis, high dietary or parenteral chloride intake, and salicylate poisoning.

Urine chloride is sometimes useful in diagnosing renal tubular disorders.

General information

Collection container: Adults: 4.9mL Serum (Sarstedt brown top, gel tube) / LiHep Plasma (Sarstedt orange top) Paediatrics: 1.2mL Serum (Sarstedt brown top, gel tube) / LiHep Plasma (Sarstedt orange top)

Urine: plain collection container

Type and volume of sample: Serum or Lithium Heparin Plasma. 1.0mL whole blood required (minimum 150uL separated serum/plasma).

24 hour urine collection or random collection (minimum 5.0 mL)

Specimen transport/special precautions: No special precautions required

Laboratory information

Method principle: Serum/plasma: Roche Autoanalyser Indirect ISE

Urine: Inductively coupled plasma mass spectrometry (ICP-MS)

Biological reference range or cut off:

Serum/plasma:

95 - 108 mmol/L

Urine:

No reference range available: The level of chloride in urine is related to intake but will give an indication of whether losses are via a renal route

Turnaround times:

Serum

Urgent 2 hours

Routine 4 hours

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Urine
Routine 8 days

Clinical information

Factors known to significantly affect the results:

Plasma samples collected into EDTA, oxalate and citrate tubes are not suitable for analysis

Clinical decision points: Refer to reference range information above

(Last updated March 2021)