



QuantiChrom™ Chloride Assay Kit

Chloride is the major extracellular anion in human body fluids. Chloride plays a key role in maintaining proper water distribution, osmotic pressure and electrolyte balance in the human body. Low chloride concentrations may be found with prolonged vomiting, extensive burns, metabolic acidosis, Addisonia crisis and renal diseases. Elevated chloride concentrations are associated with dehydration, congestive heart failure, hyperventilation and urinary obstructions. Determination of chloride in sweat is useful in diagnosing cystic fibrosis.

Simple, direct and automation-ready procedures for measuring chloride concentration in biological samples are becoming popular in research and drug discovery. BioAssay Systems' Chloride Assay Kit is designed to measure chloride directly in biological samples without any pretreatment. The improved Fried method utilizes mercuric 2,4,6-tripyridyl-s-triazine, which forms a colored complex specifically with chloride. The intensity of the color, measured at 610nm, is directly proportional to the chloride concentration in the sample. The optimized formulation substantially reduces interference by substances present in raw samples.

APPLICATIONS:

Direct Assays: Cl⁻ in serum, plasma, urine, saliva, sweat, milk etc.

Drug Discovery/Pharmacology: effects of drugs on chloride metabolism.

Food and Beverages: chloride determination.

Environment: chloride determination in water and soil.

KEY FEATURES:

Sensitive and accurate: use as little as 5 µL samples. Linear detection range 0.7 mg/dL (0.2mM) to 35 mg/dL (10mM) chloride in 96-well plate assay.

Simple and high-throughput: the procedure involves addition of a single working reagent and incubation for 5 min. Can be readily automated as a high-throughput assay in 96-well plates for thousands of samples per day.

Improved stability: the optimized formulation has greatly enhanced the reagent and signal stability.

Low interference: no pretreatments are needed. Assays can be directly performed on raw biological samples i.e., in the presence of lipid, protein and minerals such as magnesium, iron and zinc.

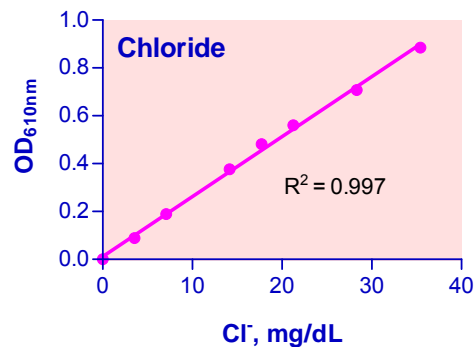
Versatility: assays can be executed in a cuvet or 96-well plate with a spectrophotometer or microplate reader.

PRODUCT INFORMATION:

QuantiChrom™ Chloride Assay Kit DICL-250

Each kit is sufficient for 250 assays in 96-well plate. Kit includes:

- 1 x 50mL Chloride Reagent
- 1 x 1mL 35 mg/mL Chloride Standard



Standard Curve in 96-well plate in assay

REFERENCES:

- [1]. De Jong EB, Goldschmidt HM, van Alphen AC, Loog JA (1980). An improved automated method for serum chloride. Clin Chem. 26(8):1233-1234.
- [2]. Yokoi K (2002). Colorimetric determination of chloride in biological samples by using mercuric nitrate and diphenylcarbazone. Biol Trace Elem Res. 85(1):87-94.
- [3]. Feldkamp et al (1974). J. Clin. Chem. Clin. Biochem. 12, 146-150.

