



ProFoldin

10 Technology Drive, Suite 40, Number 188

Hudson, MA 01749-2791 USA

Phone: (508) 735-2539

FAX: (508) 845-9258

www.profoldin.com

info@profoldin.com

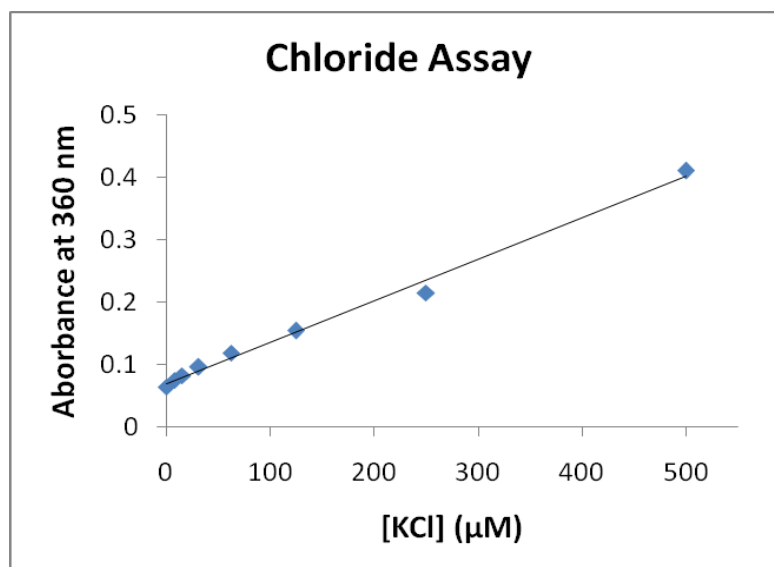
INSTRUCTIONS

ProFoldin MicroMolar Chloride Assay Kit

CATALOG NUMBER **CLA100**

INTRODUCTION

Chloride plays a variety of important physiological roles in the cells. Chloride channels are responsible for cell membrane potential and regulating cell volume. The chloride level in neurons is related to the actions of neurotransmitters glycine and GABA . The chloride level in blood is directly related to the kidney functions. Chlorides are the most common reagents and buffers used in research and the most abundant anion in nature. The MicroMolar Chloride Assay Kit (Catalog number CLA100) provides a quick and simple method for quantification of chloride in a variety of samples. The kit does not contain toxic mercury component. It is based on measurement of optical density at 360 nm (OD_{360}) that correlates the chloride concentration in the presence of Reagent CLA. The assay linear range is 0.01 mM – 1 mM. Samples with higher chloride concentrations are diluted. The assay is compatible with a HEPES buffer.



The MicroMolar Chloride Assay Kit (catalog number CLA100) includes 3 ml of Reagent CLA and 0.1 ml of 10 mM KCl solution. It is for measurement of 100 samples using 96-well plates. Cuvettes may also be used for measurements.



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ASSAY PROTOCOL

The following assay protocol is based on using a 96-well plate for the measurement. The sample volume is 150 μ l and the final assay volume is 180 μ l. Please adjust the sample volume and reagent volume proportionally if a 384-well plate or a cuvette is used for the measurement.

STANDARD CURVE

- Sample preparation:** Prepare 150 μ l of potassium chloride solutions in the wells of a clear 96-well plate (Corning 3641) with a two-fold serial dilution from 1 mM to zero in water.
- Detection:** Mix 30 μ l of Reagent CLA with 150 μ l of the Chloride solutions for 20 min. Shake the plate and read the optical density at 360 nm (**OD₃₆₀**).
- Data Analysis:** Plot the **OD₃₆₀** and the chloride concentration [**Chloride**] to generate the linear standard curve.

$$\text{OD}_{360} = a [\text{Chloride}] + b$$

Where the **OD₃₆₀** values are from experimental data, the **a** and **b** values are from the linear fitting between the **OD₃₆₀** values and the chloride concentrations.

UNKNOWN SAMPLES

Follow the same procedure to measure the **OD₃₆₀** values from the unknown samples. Calculate the chloride concentrations in the unknown samples using the **OD₃₆₀** values from the unknown samples and the **a** and **b** values from the standard curve.

$$[\text{Chloride}] = (\text{OD}_{360} - b) / a$$

RELATED PRODUCTS

NPA1000	NanoMolar Phosphate Assay Kit
PPD1000	MicroMolar Polyphosphate Assay Kit
HIS200	MicroMolar Histidine Assay Kit
CYS200	MicroMolar Cysteine Assay kit
PEP200	Peptide Assay Kit
PAA100K	MicroMolar Primary Amine Assay Kit
EDTA200	MicroMolar EDTA Assay kit
DTT200	MicroMolar DTT Assay kit
DAK1000	Detergent assay kit
SDS200	NanoGram SDS Assay Kit
CMC1000	Detergent Critical Micelle Concentration (CMC) Assay Kit
LIP1000	MicroGram Lipid Assay Kit
MAD100K	MicroMolar ADP Assay kit
MCA1000	MicroMolar Copper Assay Kit
NZA1000	NanoMolar Zinc Assay Kit
MSA200	MicroMolar Sulfate Assay Kit

For more information of concentration assays and enzyme essays, please visit www.profoldin.com.