



ProFoldin

10 Technology Drive, Suite 40, Number 188
Hudson, MA 01749-2791 USA
Tel: (508) 735-2539 FAX: (508) 845-9258
www.profoldin.com
info@profoldin.com

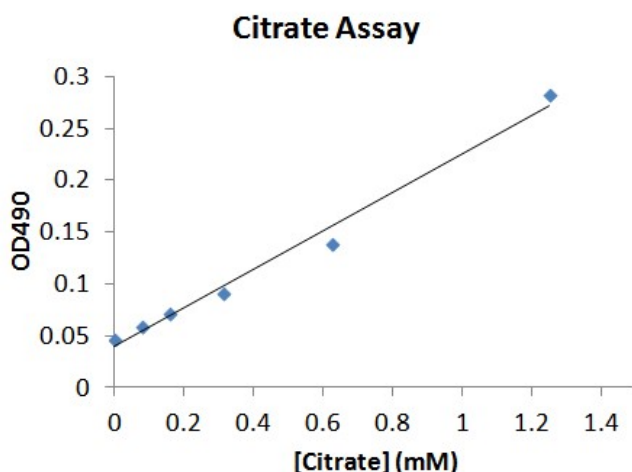
INSTRUCTIONS

ProFoldin Citrate Assay Kit

CATALOG NUMBER CIT100

INTRODUCTION

Citrate is an important biomolecule and popular additive in pharmaceutical products. The Citrate Assay Kit is for measurement of sub-millimolar to low millimolar concentrations of citrate. The assay is based on increase of the optical density at 490 nm (OD_{490}) of the kit reagent upon binding to citrate. The assay is compatible with Tris-HCl buffers. It is not compatible with phosphate buffers, polycarboxylic acids or other poly acids.



The Citrate Assay kit (catalog number CIT100) includes 1.5 ml of Reagent A, 1.5 ml of 10 x Reagent B and 0.2 ml of 100 mM ammonium citrate. It is for 100 assays using 96-well plates. Cuvettes may also be used for measurements.

PROTOCOL

Standard curve

1. Prepare 150 μ l of citrate solution in water or 10 mM Tris-HCl, pH 7, at a series of concentrations ranging from 5 mM to zero.
 2. Add 15 μ l of Reagent A.
 3. Prepare 1 x Reagent B by dilution of 10 x Reagent B 10 -fold with ethanol. Each assay well uses 150 μ l of 1 x Reagent B.
 4. Add 150 μ l of 1 x Reagent B and mix the solutions evenly by pipetting up-and-down a few times.
 5. Read the optical density (OD_{490}) in 10 min.
-



ProFoldin

10 Technology Drive, Suite 40, Number 188
Hudson, MA 01749-2791 USA
Tel: (508) 735-2539 FAX: (508) 845-9258
www.profoldin.com
info@profoldin.com

INSTRUCTIONS

Data Analysis

Plot the **OD₄₉₀** values and the citrate concentrations [**Citrate**] to generate the linear standard curve.

$$\text{OD}_{490} = a [\text{Citrate}] + b$$

Where the **OD₄₉₀** values are from experimental data, the **a** and **b** values are from the linear fitting between the **OD₄₉₀** values and the citrate concentrations.

UNKNOWN SAMPLES

Follow the same procedure to measure the **A₆₅₀** values from the unknown samples. Calculate the citrate concentrations in the unknown samples using the **OD₄₉₀** values from the unknown samples and the **a** and **b** values from the standard curve.

$$[\text{Citrate}] = (\text{OD}_{490} - b) / a$$

RELATED PRODUCTS

TAR100	Tartrate Assay Kit
MPA3000	MicroMolar Phosphate Assay Kit
NPA1000	NanoMolar Phosphate Assay Kit
PPD1000	MicroMolar Polyphosphate Assay Kit
HIS200	MicroMolar Histidine Assay Kit
CYS200	MicroMolar Cysteine Assay kit
AAK1000	Amino acid assay kit
PEP200	Peptide Assay Kit
PAA100K	MicroMolar Primary Amine Assay Kit
CAK1000	Coenzyme A 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
MUD100K	MicroMolar UDP assay kit
MGD100K	MicroMolar GDP assay kit
MCA1000	MicroMolar Copper Assay Kit
NZA1000	NanoMolar Zinc Assay Kit
NMA1000	NanoMolar Nickel / Cobalt Assay Kit
CLA100	MicroMolar Chloride Assay Kit
MSA200	MicroMolar Sulfate Assay Kit
PST100	Penicillin Drug Stability Test Kit
PMX200	MicroGram Polymyxin Assay Kit
CPT200K	MicroMolar Cisplatin Assay Kit
OPT200	MicroMolar Oxaliplatin Assay Kit

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