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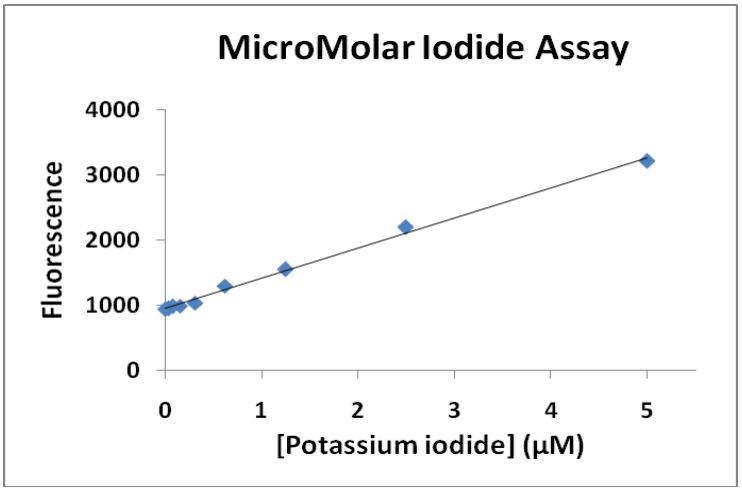
INSTRUCTIONS

ProFoldin
MicroMolar Iodide Assay Kit

CATALOG NUMBER **MIA200**

INTRODUCTION

Iodide is an important ingredient of various products. The MicroMolar Iodide Assay Kit (Catalog number MIA200) provides a quick and simple method for quantification of iodide in solutions. The assay is based on measurement of fluorescence intensity at 535 nm (excitation 485 nm). The assay linear range is 0.1 µM – 5 µM. Samples with higher iodide concentrations can be diluted to be in the linear range. The assay is compatible with a 10 mM HEPES buffer. It is not compatible with solutions containing heavy metal ions or thiol compounds.



The MicroMolar Iodide Assay Kit (catalog number MIA200) includes 40 µl of 100 x Reagent A, 40 µl of 100 x Reagent B, 200 µl of 100 x fluorescence dye and 50 µl of 10 mM potassium iodide solution. It is for measurement of 200 samples using 96-well plates. Cuvettes may also be used for measurements.

ASSAY PROTOCOL

The following assay protocol is based on using a 96-well plate for the measurement. The sample volume is 150 µl and the final assay volume is 290 µl. Please adjust the sample volume and reagent volume proportionally if a 384-well plate or a cuvette is used for the measurement.

STANDARD CURVE

1. **Sample preparation:** Prepare 150 µl of potassium iodide solutions in a 96-well black plate with a two-fold serial dilution from 10 µM to zero in water or a 10 mM HEPES, pH 7.4 buffer. Freshly make the 1 x reagents by 10-fold dilution of the 100 x Reagents with water.

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2. **Detection:** Mix 20 µl of 1 x Reagent A with 150 µl of the iodide solutions and incubate the mixture for 5 min. Then add 20 µl of 1 x Reagent B and mix the solution and incubate the mixture for 5 min. Finally mix 100 µl of 1 x fluorescence dye with the sample and read the fluorescence at 535 nm with excitation at 485 nm in 5 min.

Note: a longer incubation after addition of the dye will yield a higher assay sensitivity but compromise the assay linearity.

3. **Data Analysis**: Plot the fluorescence intensity **Fc** and the cysteine concentration **[Iodide]** to generate the linear standard curve.

$$\mathbf{Fc = a\ [Iodide] + b}$$

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

UNKNOWN SAMPLES

Follow the same procedure to measure the fluorescence intensity **Fc** values from the unknown samples. Calculate the Iodide concentrations in the unknown samples using the **Fc** values from the unknown samples and the **a** and **b** values from the standard curve.

$$\mathbf{[Iodide] = (Fc - b) / a}$$

RELATED PRODUCTS

CLA100	MicroMolar Chloride Assay Kit
MSA200	MicroMolar Sulfate Assay Kit
MPA3000	MicroMolar Phosphate Assay Reagent
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
OG100K	Beta Octyl Glucoside 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

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