

NONRADIOACTIVE IODIDE ASSAY KIT #D05076

KEY INFORMATION

- Easy to use assay kit
- Non radioactive waste
- Less than 1 hour bench time



GENERAL INFORMATION

Iodide is essential in the metabolism as it allows temperature regulation, intellectual development for children, muscular development, normal heart function and skeleton growth. **Iodide transport** is the basis for an emerging approach of selective cancer cell destruction.

Iodide uptake from blood into thyroid follicular cells is the first step in the biosynthesis of thyroid hormones T3 and T4, known to regulate many essential biological processes.

Thyroid hormones are indispensable for body development. This transport is mediated by **NIS** (sodium iodide symporter **SLC5A5**), which is an intrinsic membrane glycoprotein located in the basolateral membrane of thyrocytes. Since the NIS discovery, thorough biochemical analysis has elucidated the mechanism of basolateral iodide transport and revealed the key role of NIS in **thyroid diseases** such as thyroid cancer, autoimmune diseases and congenital hypothyroidism.

If the rate is not in normal proportions, some diseases may develop as an underactive thyroid if the rate is too low, or an overactive thyroid if the rate is too high. Other diseases exist such as chronic thyroiditis of Hashimoto, or cancer of the thyroid gland.

Iodide deficiency causes many thyroid metabolism disorders, thus it is important to control iodide rates to prevent all of these diseases.

Endocrine disruptors may affect iodide uptake, leading to **thyroid hormone dysregulations**.

FOCUS ON THE ASSAY

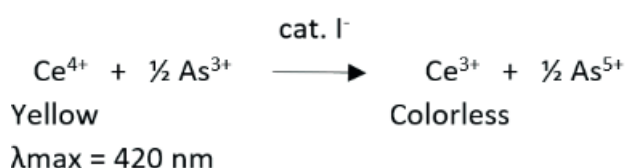
The present assay is a nonradioactive method for the measurement of Iodide.

This Iodide assay is based on the oxido-reduction reaction:

Cerium(IV) is reduced by arsenic(III). The reduction of yellow (420 nm) cerium(IV) to colorless cerium(III) by arsenic(III) proceeds very slowly but traces of Iodide strongly accelerate this reaction with the rate being directly proportional to Iodide concentration.

For a given time, the decay is inversely proportional to Iodide concentration in the well.

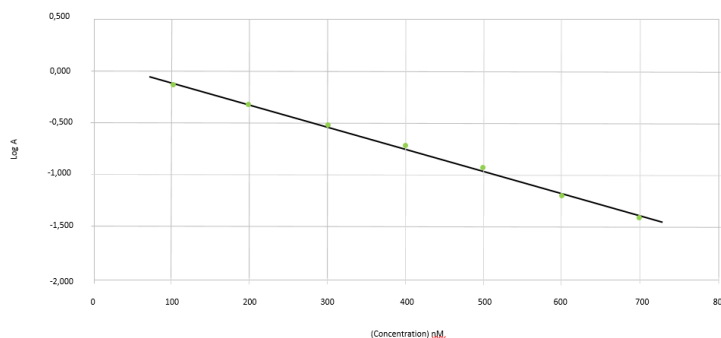
This method is simple and nonradioactive, and as such it can be used widely.



TECHNICAL DATA

- **Size:** 96 wells
- **Shipping:** wet ice
- **Stability:** store at +4°C
- **Shelf life:** 1 year maximum after production
- **Application(s):** Iodide quantification
- **Application Media:** it is the user's responsibility to check the compatibility of the assay with the study matrix
- **Sample volume:** 100 µL
- **Standard Curve Range:** 100-700 nmol/L

Typical standard curve



RELATED PRODUCTS

20 Hydroxyecdysone ELISA kit

cat# A05120

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