



## Nickel Assay Kit

### Product Information

#### Cat.No.

Kit-0624

#### Product Overview

Nickel Assay Kit is used for quantifying Ni<sup>+2</sup>.

#### Description

Nickel is one of four ferromagnetic elements (symbol Ni, at. Num. 28). Several enzymes depend on nickel for activity, including some ureases, carbon monoxide dehydrogenases (methane forming enzymes which reduce CO<sub>2</sub> to CH<sub>4</sub>) and some hydrogenases which allow the production or removal of H<sub>2</sub>. Most of these activities are found in the archaeobacteria. Nickel forms complexes with sulfhydryl compounds with significant absorbance in the UV/visible region in the presence of other ions. The Nickel Assay Kit provides a simple method of quantifying Ni<sup>+2</sup> in a variety of samples. The assay takes advantage of reaction of Ni<sup>+2</sup> with mercaptoethanol in borate buffer to form a complex with strong absorbance bands from ~300 to 600 nm. Fe<sup>+2</sup> and Co<sup>+2</sup> interfere with the assay, therefore extra steps (as described below) must be taken to subtract the interference in order to determine the correct Nickel concentration in mixed samples. Other ions tested (Mn<sup>+2</sup>, Cu<sup>+2</sup>, Zn<sup>+2</sup>) do not interfere with the assay, presumably no other ionic species are present in high enough concentration to interfere with the reaction. The assay is a simple method of quantifying Ni<sup>+2</sup> in a variety of samples, which gives a linear range of 2 to 50 nmol Nickel containing less than 25 nmol Cobalt.

#### Target Species

Mammals

#### Usage

For research use only (RUO)

#### Storage

Store the kit at room temperature.



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Assay Kit

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### Kit Components

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1. Nickel Assay Buffer: 20 ml. 2. Nickel Reagent: 1 ml. 3. Nickel Chloride Standard (1.0  $\mu$ mol): lyophilized.

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**Detection method** Colorimetric

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### Compatible Sample Types

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Biological Fluid, Cell Culture Supernatant, Plasma, Serum, Tissue Culture Supernatant, Urine

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