

## Cobalt Assay Kit

### Product Information

**Cat.No.**

Kit-0236

**Product Overview**

Cobalt Assay Kit is used for quantitating Co<sup>+2</sup> in a variety of samples.

**Description**

Cobalt is a hard, lustrous, grey metal, a chemical element (symbol Co, atomic number 27 and atomic mass 58.9). Cobalt is an essential trace-element for all multicellular organisms as the active center of coenzymes called cobalamins. These include vitamin B-12 which is essential for plants and animals. Cobalt is also an active nutrient for bacteria, algae, and fungi, and may be a necessary nutrient for all life. Cobalt, particularly the Co<sup>+2</sup> species, forms complexes with a large number of organic and inorganic molecules with a range of extinction coefficients in the visible range. The Cobalt Assay kit takes advantage of the reaction of Co<sup>+2</sup> with mercaptoethanol in basic media. Under the condition, Cobalt forms a complex with a strong absorbance band at 475 nm. The metal ions Fe<sup>+2</sup>, Cu<sup>+2</sup>, Ni<sup>+2</sup>, Zn<sup>+2</sup>, Mn<sup>+2</sup>, exhibit less than 10% interference at this wavelength. The kit provides a quick simple accurate method of quantitating Co<sup>+2</sup> in a variety of samples. The assay is linear in the range 3 to 50 nmol (0.18-3 µg) Cobalt, with a detection limit of ~ 3 nmol (or ~15 µM, 0.18 µg).

**Target Species**

Mammals

**Usage**

For research use only (RUO)

**Storage**

Store kit at room temperature, keep tightly capped.

**Kit Components**

Cobalt Reagent 1 ml Cobalt Chloride Standard (1.0 µmol): lyophilized 1 vial

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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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