

Certificate of Analysis

Product Name: Iron Assay Kit

Catalog No.: Z5030022

Shipping Condition: Room Temperature

Storage Condition: Store Reagent A at room temperature and other reagents at 4 °C.

Shelf Life: 12 months from the date of receipt under proper storage conditions

Description

Iron level in blood is a reliable diagnostic indicator of various disease states. Increased levels of iron concentration in blood are associated with blood loss, increased destruction of red blood cells (e.g. hemorrhage) or decreased blood cell survival, acute hepatitis, certain sideroachrestic anemias, ingestion of iron-rich diets, defects in iron storage (e.g. pernicious anemia). Decreased levels of blood iron may result from insufficient iron ingestion from diets, chronic blood loss pathologies, or increased demand on iron storage as during normal pregnancy.

Simple, direct and automation-ready procedures for measuring iron concentrations find wide applications in research, drug discovery and environmental monitoring. BioChain' iron assay kit is designed to measure total iron directly in serum without any pretreatment. The improved method utilizes a chromogen that forms a blue colored complex specifically with Fe^{2+} . Fe^{3+} in the sample is reduced to Fe^{2+} , thus allowing the assay for total iron concentration. The intensity of the color, measured at 590nm, is directly proportional to the iron concentration in the sample. The optimized formulation substantially reduces interference by substances in the raw samples.

Testing Data:

Mice serum, fetal bovine serum (Invitrogen), and goat serum (Invitrogen) were assayed using the 96-well plate assay protocol. The iron concentrations were 173 ± 2 (n = 4), 149 ± 1 (n = 4), 88 ± 2 $\mu\text{g/dL}$ (n = 4), respectively. Coefficient of variance < 2%.

Components

1. One Kit
2. User Manual
3. Certificate of Analysis
4. MSDS

FOR IN VITRO RESEARCH USE ONLY

APPROVED BY: 