

COPPER SERUM
(ICPMS)

ug/dL

Interpretation

REFERENCE GROUP	REFERENCE RANGE IN ug/dL
< 6 months	20-70
6 months – 18 years	90-190
Adults	
• Males	70-140
• Females	80-155

Note: 1. Inductively Coupled Plasma Mass Spectrometry (ICPMS) is used to determine the level of heavy / trace metals in biological tissues

2. There is a diurnal variation with highest levels in the morning

Comments

Copper is the third most abundant trace element in the human body required for enzymatic reactions. Dietary sources of copper are liver, shell fish, chocolate, nuts and seeds. Copper pipes or vessels do not increase the copper content of water unless exposed to acids. Smoking, strenuous exercise, infections and injuries increase the body's need for copper. Ceruloplasmin, a copper containing protein is a useful indicator of copper status.

Decreased Levels

Wilson's disease (stage of the disease), malnutrition, excessive consumption of zinc, GI disease (Sprue & Celiac disease), Menke's syndrome, burns, Chronic Ischemic heart disease

Increased Levels

Wilson's disease (stage of the disease), Infections, Biliary cirrhosis, Leukemia, Typhoid, Hodgkins disease, Thalassemia major, anemia, collagen diseases, spondyloarthropathies.