

Patient Name :  
 DOB/Age/Gender : Bill Date :  
 Patient ID / UHID : Sample Collected :  
 Referred By : Sample Received :  
 Sample Type : Report Date :  
 Barcode No : Report Status :

Test Description	Value(s)	Unit(s)	Reference Range
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## BIOCHEMISTRY REPORT

### Selenium, Serum

Selenium, Serum by ICPMS **71.19** µg/L 74 - 90  
 Method : Serum

#### Interpretation:

Selenium Serum Interpretation	Associated conditions
Selenium is vital trace element with Fish and shellfish making up as most important sources followed by meat & grains. Selenium is an antioxidant building block, which in turn are essential to neutralize free radicals in the body, thereby reducing or preventing cell membranes and DNA damage. Selenium poisoning of water systems may result whenever new agricultural runoff courses through normally dry, undeveloped lands.	<ul style="list-style-type: none"> <li>•Selenium deficiency occurs as a result of sustained Total parental nutrition or restricted diets - affects physiologic systems, including endocrine and reproductive, hepatic, cardiovascular, immunological, gastrointestinal, and musculoskeletal systems.</li> <li>•Selenium toxicity, called selenosis, is rare in humans. Symptoms include garlic breath odour, thick brittle fingernails, dry brittle hair, red swollen skin of the hands and feet, and neurological complaints including numbness, convulsions, or paralysis</li> </ul>

1. Whole Blood / serum metal testing is used for the detection of recent exposure or poisoning with the toxic element. However, blood metal levels in healthy subjects can vary considerably with exposure to the particular metal present in the diet and in the environment.
2. It should be noted that low or within acceptable levels in blood / serum do not always exclude that the element is uninvolved in contributing to the patient's symptoms because certain elements may be sequestered in tissues.
3. Lower metal levels in patients on follow-up imply that the toxic element exposure is reduced in the patient's immediate environment or that the body has efficiently eliminated the toxic element.

#### Reference –

1. Sample collection guidelines for trace elements in blood and urine. International union of pure and applied chemistry clinical chemistry division commission on toxicology working party. Pure & Appl. Chem., Vol. 67, Nos 8/9, pp. 1575-1608, 1995.
2. Nutrient & toxic elements interpretative guide, metamatrix, USA, 2011.



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