Patient Age/Gender: 20 years Female Printed: 21-Mar-19 10:56:35

| Procedure                   | Result | Units | Ref Interval | Reported/<br>Accession Collected Received Verified                        |
|-----------------------------|--------|-------|--------------|---|
| Ceruloplasmin               | 18     | mg/dL | [17-54]      | 19-080-900021 21-Mar-19 21-Mar-19 21-Mar-19   08:23:00 08:23:00 10:55:50  |
| Copper, Serum/Plasma        | 81.0   | ug/dL | [80.0-155.0] | 19-080-900021 21-Mar-19 21-Mar-19 21-Mar-19<br>08:23:00 08:23:00 10:55:50 |
| Copper, Serum Free (Direct) | 5.0    | ug/dL | [0.0-10.0]   | 19-080-900021 21-Mar-19 21-Mar-19 21-Mar-19<br>08:23:00 08:23:00 10:55:50 |

## Pending Procedures

| Procedure   | Collection Date | Collection Time | Status |
|-------------|-----------------|-----------------|--------|
| Serum Index | 21-Mar-19       | 08:23:00        | In-Lab |

21-Mar-19 08:23:00 Ceruloplasmin: REFERENCE INTERVAL: Ceruloplasmin

Access complete set of age- and/or gender-specific reference intervals for this test in the ARUP Laboratory Test Directory (aruplab.com).

21-Mar-19 08:23:00 Copper, Serum/Plasma: INTERPRETIVE INFORMATION: Copper, Serum or Plasma

Elevated results may be due to skin or collection-related contamination, including the use of a noncertified metal-free collection/transport tube. If contamination concerns exist due to elevated levels of serum/plasma copper, confirmation with a second specimen collected in a certified metal-free tube is recommended.

Serum copper may be elevated with infection, inflammation, stress, and copper supplementation. In females, elevated copper may also be caused by oral contraceptives and pregnancy (concentrations may be elevated up to 3 times normal during the third trimester).

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement B: aruplab.com/CS

21-Mar-19 08:23:00 Copper, Serum Free (Direct): INTERPRETIVE INFORMATION: Copper, Serum Free (Direct)

Free copper (direct) is determined with serum ultra-filtrate. Results may be elevated in Wilson disease or other conditions of copper overload. Other tests used to diagnosis Wilson disease include serum ceruloplasmin, 24-hour urine copper, and hepatic copper. Slit lamp examination for Kayser-Fleischer rings and genetic testing may also be helpful.

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement B: aruplab.com/CS