

# Caeruloplasmin

## Synonyms

## Clinical Indication

Low caeruloplasmin is found in approximately 85 to 90% of patients with Wilson disease. Copper accumulation produces clinical features (hepatic disease, neurological signs, Kayser-Fleischer rings) usually in late childhood / early adulthood. Decreased levels also found in severe liver disease, malnutrition, malabsorption and nephrotic syndrome.

Investigation of suspected Wilson's or Menkes' disease or if specifically requested by a Consultant. Investigation will normally only be undertaken if patient less than 40 years of age.

Caeruloplasmin has a low positive predictive value in patients undergoing evaluation for liver disease.

## Part of Profile / See Also

### Request Form

Combined Pathology manual Blood form or ICE request

### Availability / Frequency of Analysis

Referred test: Analysed at King's College Hospital, ([Synnovis 9067](#)) if specific criteria met.

### Turnaround Time

2 weeks

### Patient Preparation

None required

## Sample Requirements

### Specimen Type

Serum

### Volume

2 ml

### Container



Yellow top (SST) tube



Paediatric lithium heparin (Orange top – Sarstedt tube)



Paediatric lithium-heparin (pale green top – BD Microtainer tube)

## Reference Range & Units

0.20 – 0.60 g/L

## Interferences

Levels may be elevated in pregnancy and oestrogen therapy, it is also an acute phase reactant and may be increased above basal levels with inflammatory states.

## Interpretation & Clinical

### Decision Value (if applicable)

85-90% of patients with Wilson's disease have a low caeruloplasmin level. Decreased levels are also found in severe liver disease, malnutrition, malabsorption and nephrotic syndrome. Elevated values are seen in infections, malignancy and trauma, pregnancy and oestrogen therapy.

While a diagnosis of Wilson disease is established in patients with low serum caeruloplasmin, Kayser-Fleischer rings and elevated urinary copper excretion, additional testing is required in patients with indeterminate results. Typically, this involves a liver biopsy to determine the hepatic copper concentration and to look for histologic changes suggestive of Wilson disease.

## References

Up to Date – Wilson disease: Diagnostic tests – searched Sept 2018

<https://www.synnovis.co.uk/our-tests/caeruloplasmin>

## Test code

CAER

## Lab Handling

Aliquot 500ul and store in referrals rack at 4C. Sent daily by courier to King's College, London.



9067  
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ISO 15189:2012