<table>
<thead>
<tr>
<th><strong>Lab Dept:</strong></th>
<th>Chemistry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test Name:</strong></td>
<td>CRYOGLOBULIN, PLASMA AND SERUM</td>
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### General Information

<table>
<thead>
<tr>
<th><strong>Lab Order Codes:</strong></th>
<th>CRGL</th>
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<tbody>
<tr>
<td><strong>Synonyms:</strong></td>
<td>Cryofibrinogen; Cryoprecipitates; Cryoprotein</td>
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</table>
| **CPT Codes:** | 82595 – Cryoglobulin, qualitative or semi quantitative  
82585 – Cryofibrinogen  
86334 - Immunofixation (if appropriate) |
| **Test Includes:** | Quantitation and qualitative typing, precipitation at 1 degree centigrade. Includes cryofibrinogen. If cryoglobulin has a result other than negative, Immunofixation will be performed at an additional charge. Positive cryoglobulins of ≥0.1 mL of precipitate will be typed once. |

### Logistics

<table>
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<tr>
<th><strong>Test Indications:</strong></th>
<th>Useful for evaluating patients with vasculitis, glomerulonephritis, lymphoproliferative disease. Cases of macroglobulinemia or myeloma in whom symptoms occur with cold exposure.</th>
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<tbody>
<tr>
<td><strong>Lab Testing Sections:</strong></td>
<td>Chemistry - Sendouts</td>
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<tr>
<td><strong>Referred to:</strong></td>
<td>Mayo Medical Laboratories (MML Test:CRGSP)</td>
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</tbody>
</table>
| **Phone Numbers:** | MIN Lab: 612-813-6280  
STP Lab: 651-220-6550 |
| **Test Availability:** | Daily, 24 hours |
| **Turnaround Time:** | 2 – 10 days, test set-up Monday – Friday. |
| **Special Instructions:** | See Container and Collection. Requires both EDTA plasma and serum. |

### Specimen

<table>
<thead>
<tr>
<th><strong>Specimen Type:</strong></th>
<th>Blood</th>
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<tr>
<td><strong>Container:</strong></td>
<td>Red top (no gel) tube and Lavender top (EDTA, no gel) tubes</td>
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**Note:** Both tubes are required. Serum is used for cryoglobulin and plasma is used for cryofibrinogen.
**Draw Volume:**

- Red top: 15 mL (Minimum: 9 mL) blood
- Lavender top: 3 mL (Minimum: 1.5 mL) blood

**Processed Volume:**

- Serum: 5 mL (Minimum: 3 mL)
- Plasma: 1 mL (Minimum: 0.5 mL)

**Collection:**

Routine venipuncture. Keep both specimens warm (37°C Water Bath or Heel Warmer) and deliver to laboratory immediately. Mix lavender top tube by gentle inversion. The serum tube must clot at 37°C for 30 to 60 minutes before processing.

**Special Processing:**

- Lab Staff:
  - **Red top NO GEL** - Maintain the specimen at 37°C in a water bath until clotted. Allow specimen to clot for 30 to 60 minutes. If the specimen has not been maintained at 37°C from the time of collection, allow the specimen to clot in 37°C water bath for 3 hours. Centrifuge at 37°C. Remove serum and aliquot into a plastic tube and store in refrigerator. Label specimen as serum sample. Ship at refrigerated temperatures.
  - **Lavender top NO GEL** - Maintain the specimen at 37°C including centrifugation. Remove plasma aliquot into a screw-capped round bottom plastic vial. Label as plasma sample. Store and ship at refrigerated temperatures.

**Patient Preparation:**

None

**Sample Rejection:**

Not maintained at 37°C prior to processing or gross hemolysis; mislabeled or unlabeled specimens; specimens collected in gel tubes; gross hemolysis; gross lipemia; grossly icteric; less than the amount of serum/plasma specified above

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### Interpretive

**Reference Range:**

- Cryoglobulin: Negative

**Note:** Positives will be reported as a percent. If positive after 1 or 7 days, immunotyping of the cryoprecipitate is performed at an additional charge.

- Cyrofibrinogen: Negative

**Note:** Reported as positive or negative. Quantitation and immunotyping will not be performed on positive cyrofibrinogen.

An interpretive report will be provided.

**Critical Values:**

None
Limitations: Failure to follow specimen handling instructions may cause false-negative results. Not useful for general screening of a population without a clinical suspicion of cryoglobulinemia.

Methodology: Quantitation and Qualitative Typing, Precipitation at 1 degree C. When indicated may include Immunofixation,

References: Mayo Medical Laboratory December 2017

Updates: 3/4/2004: Test moved from Fairview Diagnostic Laboratory to MML. Test now includes both cryofibrinogen and cryoglobulin.
1/31/2007: MML has split out Immunofixation from this test and will only perform and charge for it with a positive cryoglobulin. Order code previously listed as 9052.
8/29/2007: Positive cryoglobulins of ≥0.1 mL of precipitate will be typed once every 6 months.
12/20/17: Updated specimen volumes.