Lab Dept: Chemistry

Test Name: VITAMIN A ASSAY

**General Information**

Lab Order Codes: VAS

Synonyms: Retinol

CPT Codes: 84590 – Vitamin A

Test Includes: Vitamin A (Retinol) level reported in mcg/dL.

**Logistics**

Test Indications: Useful for diagnosis of Vitamin A deficiency and elevated Vitamin A levels. Monitoring Vitamin A therapy.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Medical Laboratories (Mayo Test: VITA)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 2 – 5 days, testing set up Monday - Friday

Special Instructions: See Patient Preparation and Collection below

**Specimen**

Specimen Type: Blood

Container: SST (gold or marble top tube)

Draw Volume: 1.5 mL (Minimum: 1 mL) blood

Processed Volume: 0.5 mL (Minimum: 0.25 mL) serum

Collection: Routine venipuncture. Protect from light by wrapping specimen in foil.
Special Processing: Lab Staff: Centrifuge specimen, remove serum aliquot into an amber light resistant vial (Mayo Supply T192). Store and ship at refrigerated temperatures. Forward promptly.

Patient Preparation: Patient must be fasting 12 - 14 hours (overnight fast) before specimen is collected. Infants should be drawn prior to next feeding.

Sample Rejection: Improper patient preparation may yield useless results. Exposure of the specimen to light may result in falsely decreased values. Serum separator tubes are not acceptable, warm specimens, mislabeled or unlabeled specimens.

Interpretive

<table>
<thead>
<tr>
<th>Reference Range:</th>
<th>Retinol (Vitamin A):</th>
<th>Reference Value (mcg/dL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 6 years:</td>
<td>11.3 – 64.7 mcg/dL</td>
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</tr>
<tr>
<td>7 - 12 years:</td>
<td>12.8 – 81.2 mcg/dL</td>
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<tr>
<td>13 - 17 years:</td>
<td>14.4 – 97.7 mcg/dL</td>
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<tr>
<td>≥18 years:</td>
<td>32.5 – 78.0 mcg/dL</td>
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</tbody>
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Critical Values: N/A

Limitations: Acute ethanol ingestion may result in increased serum vitamin A levels. Testing of nonfasting specimens or the use of vitamin supplementation can result in elevated plasma vitamin concentrations. Reference values were established in patients who were fasting.

Methodology: Liquid Chromatography – Tandem Mass Spectrometry (LC-MS/MS), specific quantitation of retinol

References: Mayo Medical Laboratories Web Page October 2014

9/28/2010: Change in Mayo order number (now only performed at Mayo New England), reference range and units update, specimen volume requirement decrease.
3/30/2016: SST tubes are acceptable.