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**Lab Dept:** Chemistry

**Test Name:** VITAMIN E

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***General Information***

**Lab Order Codes:** VE

**Synonyms:** Alpha Tocopherol

**CPT Codes:** 84446 – Tocopherol alpha (Vitamin E)

**Test Includes:** Specific quantitation of alpha-tocopherol reported in mg/L.

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***Logistics***

**Test Indications:** Useful for diagnosis of (or evaluation of) individuals with motor and sensory neuropathies, monitoring vitamin E status of premature infants requiring oxygenation, and evaluation of persons with intestinal malabsorption of lipids.

**Lab Testing Sections:** Chemistry - Sendouts

**Referred to:** Mayo Medical Laboratories (Test: VITE/60297)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 2 – 5 days, test set up Monday – Friday

**Special Instructions:** See [Patient Preparation](#)

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***Specimen***

**Specimen Type:** Blood

**Container:** SST (Gold, marble or red) tube

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

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

**Collection:** Routine venipuncture

**Special Processing:** Lab Staff: Centrifuge specimen immediately, remove serum aliquot into a screw-topped plastic vial. Store and ship at refrigerated temperatures. Forward promptly.

**Patient Preparation:** Patient must be fasting for 12 – 14 hours (overnight fast) and not have ingested alcohol or vitamin supplements for at least 24 hours before specimen is collected. Newborns and premature infants should be drawn just before feeding.

**Sample Rejection:** Mislabeled or unlabeled specimens; gross hemolysis; gross lipemia

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***Interpretive***

**Reference Range:**

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| 0 - 17 years:                                                                                                                                                                                                                                                            | 3.8 - 18.4 mg/L |
| ≥18 years:                                                                                                                                                                                                                                                               | 5.5 – 17.0 mg/L |
| Significant deficiency:                                                                                                                                                                                                                                                  | <3.0 mg/L       |
| Significant excess:                                                                                                                                                                                                                                                      | >40 mg/L        |
| Interpretation:<br>Values that indicate the need for supplementation:<br>Premature: <2.0 mg/L<br>Neonate: <2.0 mg/L<br>Child (3 months): <3.0 mg/L<br>Child (2 years): <4.0 mg/L<br>Adult: <4.0 mg/L<br><br>Values that indicate significant excess:<br>Adults: >40 mg/L |                 |

**Critical Values:** N/A

**Limitations:** 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 alpha-tocopherol.

**References:** [Mayo Medical Laboratories Web Page](#) December 2017

**Updates:**  
6/5/2007: Pediatric ranges added.  
9/4/2007: Lipemic specimens will be rejected. MML notification due to issues with fat solubility.  
9/28/2010: Test code update (now performed only at Mayo New England), specimen volume requirements decreased.