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**Lab Dept:** Chemistry

**Test Name:** THIAMINE (VITAMIN B1)

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***General Information***

**Lab Order Codes:** TDP

**Synonyms:** Thiamin Diphosphate (TDP), Thiamin Pyrophosphate (TPP)  
Thiamine

**CPT Codes:** 84425 - Assay of Vitamin B1

**Test Includes:** Vitamin B1 level reported in nmol/L

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***Logistics***

**Test Indications:** Assessment of thiamine deficiency. Thiamine measurement in patients with behavioral changes, eye signs, gait disturbances, delirium, and encephalopathy; or in patients with questionable nutritional status, especially those who appear at risk and who also are being given insulin for hyperglycemia.

**Lab Testing Sections:** Chemistry - Sendouts

**Referred to:** Mayo Clinical Laboratories (MML Test: TDP)

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

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 2 - 5 days

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

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***Specimen***

**Specimen Type:** Whole blood

**Container:** Lavender top (EDTA) tube

**Draw Volume:** 4 mL (Minimum: 0.5) mL blood

**Processed Volume:** Same as Draw Volume

<b>Collection:</b>	Routine blood collection
<b>Special Processing:</b>	Lab Staff: Invert 8-10 times to mix blood. Do Not centrifuge. Transfer whole blood aliquot to amber vial (Mayo Supply T192) to protect from light. Freeze within 24 hours. Store and ship frozen.
<b>Patient Preparation:</b>	Fasting overnight (12-14 hours). Infants-draw prior to next feeding. Water can be taken as needed.
<b>Sample Rejection:</b>	Gross lipemia; glass vial; clotted specimen; washed erythrocytes not protected from light; mislabeled or unlabeled specimen

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### ***Interpretive***

<b>Reference Range:</b>	70 - 180 nmol/L  Values for thiamine diphosphate of less than 70 nmol/L are suggestive of thiamine deficiency.
<b>Critical Values:</b>	N/A
<b>Limitations:</b>	Vitamin supplementation and nonfasting specimens may result in elevated thiamine diphosphate concentrations.
<b>Methodology:</b>	Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)
<b>References:</b>	<a href="#">Mayo Clinical Laboratories</a> February 2019