
Lab Dept: Chemistry

Test Name: THIAMINE (VITAMIN B1)

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

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](#)

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

Collection:	Routine blood collection
Special Processing:	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.
Patient Preparation:	Fasting overnight (12-14 hours). Infants-draw prior to next feeding. Water can be taken as needed.
Sample Rejection:	Gross lipemia; glass vial; clotted specimen; washed erythrocytes not protected from light; mislabeled or unlabeled specimen

Interpretive

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