
Lab Dept: Chemistry

Test Name: T4 (THYROXINE) TOTAL, SERUM

General Information

Lab Order Codes: T4

Synonyms: T4 Total, Thyroxine

CPT Codes: 84436 – Thyroxine; total

Test Includes: Thyroxine concentration reported in ug/dL.

Logistics

Test Indications: Thyroxine (T4) is a hormone synthesized and secreted by the thyroid gland in response to the pituitary hormone, TSH. T4 is carried bound to Thyroxine Binding Globulin, and converted in the tissue to triiodothyronine (T3), the active hormone. The usefulness of the total T4 test has waned and Free T4 and TSH are recommended instead.

Lab Testing Sections: Chemistry

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 1 day

Special Instructions: N/A

Specimen

Specimen Type: Blood

Container: Preferred: Green top (Li Hep) tube
Alternate: Red, marble or gold top tube

Draw Volume: 1.5 mL (Minimum: 0.6 mL) blood

Processed Volume: 0.5 mL (Minimum: 0.2 mL) plasma/serum

Collection: Routine venipuncture

Special Processing: Lab Staff: Centrifuge specimen, remove plasma/serum aliquot into a plastic sample cup. Store at 2-8 degrees Centigrade for up to 7 days.

Patient Preparation: None

Sample Rejection: Mislabeled or unlabeled specimen

Interpretive

Reference Range:

Age:	Range (ug/dL):
0 days:	8.3 – 19.0 ug/dL
1 – 6 days:	10.0 – 20.0 ug/dL
7 – 30 days:	7.5 – 15.4 ug/dL
1 month – 1 year:	5.2 – 15.9 ug/dL
> 1 year:	4.6 – 11.2 ug/dL

Critical Values: N/A

Limitations: Heterophile antibodies may interfere with immunoassay testing. Use of this T4 method for hypothyroidism screening in neonates has not been tested by Siemens.

Methodology: EMIT Enzyme Immunoassay

References: DPC End User Procedure Manual Disk #0408111 (2005)

Siemens Dimension Vista Directions For Use (8/6/2013)

National Committee for Clinical Laboratory Standards (NCCLS) (2002) Clinical Laboratory Technical Procedure Manuals; Approved Guideline-Fourth Edition GP2-A4

Biorad Immunoassay Plus Control Product Insert

Burtis, CA, Ashwood, ER, Bruns, DE, editors (2006) Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. 4th Edition, Philadelphia: W.B. Saunders, 2006.

Jacobs and DeMott Laboratory Test handbook (2001) 5th Edition, Lexi-comp Inc

Updates:

7/22/2014: Method update, previously listed as Competitive Immunoassay/Chemiluminescent.

2/9/2016: Update alt tube type