

Clinical Pathology Laboratories

T-Uptake and Total T4 Change in Instrumentation

Offering our clients state-of-the-art testing is part of CPL's ongoing commitment to excellence.

Effective April 2, 2018, Clinical Pathology Laboratories is pleased to announce a change in methodology and reference range for Thyroxine Binding Capacity (TBC) and a change in reference range for total thyroxine (T4) with transition to the Roche Cobas electrochemiluminescence immunoassay (ECLIA) method. Traditionally, the excess TBC of serum was indirectly assayed with a T3-resin uptake (T3RU). The Roche ECLIA method is a direct measure of TBC which will also allow a calculated T-Uptake in percentage. Free thyroxine index (FTI), an estimate of the free fraction of T4, is calculated using the TBC and Total T4.

T-Uptake:

- Increased in hyperthyroidism or with decreased unsaturated Thyroid Binding Globulin (TBG)
- Decreased in hypothyroidism or with increased unsaturated TBG

TBC:

- Decreased in hyperthyroidism or with decreased unsaturated TBG
- Increased in hypothyroidism or with increased unsaturated TBG

FTI:

- Historically, FTI was the product of total T4 and T3RU divided by 100
- Using Roche, FTI is the ratio: T4/TBC

Changes in reporting:

Assay		Test Code	Prior Reference Range	New Reference Range	Notes
Thyroxine	T4	2819	4.5-12.0 ug/dL	4.5-10.5 ug/dL	
T-Uptake	%	2817	24.3-39.0 %	24.3-39.0%	Mathematically derived from TBC
Thyroxine Binding Capacity	TBC	28171	New	0.8-1.3 (no units)	Directly proportional to unsaturated thyroxine binding capacity.
Corrected T4	FTI	2820	1.5-3.80 (no units)	4.2-11.6 ug/dL	Ratio of T4/TBC. Thyroid I and II Profiles (profile codes 117 and 119) contain Thyroxine (T4), T-Uptake, Corrected T4 (FTI)

Order Unit Codes and Test Names:	2817 T-Uptake / 2819 Thyroxine (T4)
Specimen Requirements:	2 mL serum. Allow SST to clot in an upright position for at least 30 minutes, then centrifuge sample within 2 hours of collection. Refrigerate. <i>Note: Do not collect samples from patients receiving therapy with high biotin doses (>5 mg/day) until at least 8 hours following the last biotin administration.</i>
Transport Temperature:	Refrigerated
Stability (collection to initiation of testing):	Ambient, 15-25°C: 1 day Refrigerated, 2-8°C: 7 days Frozen, (-15)- (-25)°C: 1 month
Performed:	Monday through Friday / PM Shift
Analytic Time:	1 day
CPT Code:	T-Uptake: 84479 / Thyroxine (T4): 84436

Thank you for supporting



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