

## Thyroid Function Cascade, Monitor (without Thyroid Peroxidase Antibody), Serum

**Test ID:** THCSM; performed at Mayo Clinic Laboratories Florida.

### Useful for:

Monitoring patients diagnosed with thyroid disease that have a prior TPO Antibody result. Repeat Thyroperoxidase (TPO) Antibody testing is rarely clinically indicated. For patients that do not have a prior TPO Antibody result, recommend screening thyroid function with Thyroid Function Cascade, Serum (THCSD).

### Cascade Information:

Test ID	Reporting Name	Available Separately	Always Performed
STSHM	TSH, Sensitive, S	Yes	Yes

### Reflex Tests:

Test ID	Reporting Name	Available Separately	Always Performed
FRT4C	T4 (Thyroxine), Free, S	Yes	No
T3C	T3 (Triiodothyronine, Total, S	Yes	No

### Testing Algorithm:

If thyrotropin (TSH, formerly thyroid-stimulating hormone) is less than 0.3 mIU/L, then free T4 (FT4, thyroxine) will be performed at an additional charge.

If free T4 is normal and the TSH is less than 0.1 mIU/L, then T3 (triiodothyronine) will be performed at an additional charge.

If TSH is greater than 4.2 mIU/L, then free T4 will be performed at an additional charge.

### Methods:

Electrochemiluminescent Immunoassay (ECLIA)

**Reference Values:**

0-5 days: 0.7-15.2 mIU/L

6 days-2 months: 0.7-11.0 mIU/L

3-11 months: 0.7-8.4 mIU/L

1-5 years: 0.7-6.0 mIU/L

6-10 years: 0.6-4.8 mIU/L

11-19 years: 0.5-4.3 mIU/L

> or =20 years: 0.3-4.2 mIU/L

**Specimen Requirements:**

**Supplies:** Sarstedt Aliquot Tube, 5 mL (T914)

**Collection Container/Tube:**

**Preferred:** Serum gel

**Acceptable:** Red top

**Submission Container/Tube:** Plastic vial

**Specimen Volume:** 1.5 mL

**Collection Instructions:** Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

**Minimum Volume:** 1 mL

**Specimen Stability Information:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Ambient	72 hours
	Frozen	30 days

**Cautions:**

Serum biotin concentrations up to 1200 ng/mL do not interfere with this assay. Concentrations up to 1200 ng/mL may be present in specimens collected from patients taking extremely high doses of biotin up to 300 mg/d. In a study among 54 healthy volunteers, supplementation with 20 mg/d biotin resulted in a maximum serum biotin concentration of 355 ng/mL 1-hour postdose.

For assays employing antibodies, the possibility exists for interference by human anti-animal antibodies (ie, heterophile antibodies) in the patient specimen. Patients who have been regularly exposed to animals or have received immunotherapy or diagnostic procedures utilizing immunoglobulins or immunoglobulin fragments may produce antibodies (eg, human antimouse antibodies [HAMA]) that interfere with immunoassays. This may falsely elevate or falsely decrease the results. Interference due to extremely high titers of antibodies to analyte-specific antibodies, streptavidin, or ruthenium can occur.

For diagnostic purposes, the results should always be assessed in conjunction with the patient's medical history, clinical examination, and other findings.

**CPT Code:**

84443

84439- (if appropriate)

84480- (if appropriate)

**Day(s) Performed:** Monday through Saturday **Report Available:** Same day/1 to 2 days

**Questions**

Contact Bonnie Meyers, Laboratory Resource Coordinator at 800-533-1710.