

Name	: Ms. KUSUM	Patient UID.	: 355
Age/Gender	: 30 Yrs/Female	Visit No.	: 00452102010001
Referred Client	: LDPL024- JIVAASHA HEALTH CAR	Collected on	: 01-Feb-2021 10:00AM
Referred By	: NA	Received on	: 01-Feb-2021 02:38PM
Doctor Name	: Dr. SHRI MITTAL	Reported on	: 01-Feb-2021 03:51PM
Sample Type	: Serum - 837603		

### IMMUNOLOGY

Test Name	Results	Unit	Bio. Ref. Interval
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#### THYROID PROFILE : T3, T4 & TSH(TFT)

**TRIODOTHYRONINE TOTAL (T3)** 1.18 ng/mL 0.70-2.04

Methodology: ECLIA

**THYROXINE TOTAL (T4)** 9.55 ug/dl 5.1-14.1

Methodology: ECLIA

**THYROID STIMULATING HORMONE (TSH)** 3.89 µIU/ml 0.35-5.50

Methodology: ECLIA

Ultra Sensitive 4th generation assay, *Reference ranges vary between laboratories.*

**PREGNANCY - REFERENCE RANGE for TSH IN uIU/mL (As per American Thyroid Association)**

1st Trimester : 0.10-2.50 uIU/mL

2nd Trimester : 0.20-3.00 uIU/mL

3rd Trimester : 0.30-3.00 uIU/mL

The production, circulation, and disintegration of thyroid hormones are altered throughout the stages of pregnancy.

**NOTE**-TSH levels are subject to circadian variation, reaching peak levels between 2-4 AM and min between 6-10 PM. The variation is the order of 50% hence time of the day has influence on the measures serum TSH concentration. Dose and time of drug intake also influence the test result.

#### INTERPRETATION-

1. Primary hyperthyroidism is accompanied by ↑ serum T3 & T4 values along with ↓ TSH level.
2. Primary hypothyroidism is accompanied by ↓ serum T3 and T4 values & ↑ serum TSH levels
3. Normal T4 levels accompanied by ↑ T3 levels and low TSH are seen in patients with T3 Thyrotoxicosis
4. Normal or ↓ T3 & ↑ T4 levels indicate T4 Thyrotoxicosis (problem is conversion of T4 to T3)
5. Normal T3 & T4 along with ↓ TSH indicate mild / Subclinical Hyperthyroidism .
6. Normal T3 & ↓ T4 along with ↑ TSH is seen in Hypothyroidism .
7. Normal T3 & T4 levels with ↑ TSH indicate Mild / Subclinical Hypothyroidism .
8. Slightly ↑ T3 levels may be found in pregnancy and in estrogen therapy while ↓ levels may be encountered in severe illness , malnutrition , renal failure and during therapy with drugs like propranolol.
9. Although ↑ TSH levels are nearly always indicative of Primary Hypothyroidism , rarely they can result from TSH secreting pituitary tumours.

**COMMENTS:** Assay results should be interpreted in context to the clinical condition and associated results of other investigations. Previous treatment with corticosteroid therapy may result in lower TSH levels while thyroid hormone levels are normal. Results are invalidated if the client has undergone a radionuclide scan within 7-14 days before the test. Abnormal thyroid test findings often found in critically ill patients should be repeated after the critical nature of the condition is resolved.

**Disclaimer**-TSH is an important marker for the diagnosis of thyroid dysfunction. Recent studies have shown that the TSH distribution progressively shifts to a higher concentration with age, and it is debatable whether this is due to a real change with age or an increasing proportion of unrecognized thyroid disease in the elderly.

**Reference ranges are from Teitz fundamental of clinical chemistry 8th ed (2018)**

*Reference ranges may vary between laboratories. Test processed on Roche cobas 8000 series.*

\*Not in NABL Scope.

\*\*\* End Of Report \*\*\*

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