

**LABORATORY REPORT**

Name : **Mr. UMESH TRILOKCHAND SUTHAR** Sex/Age : **Male / 25 Years** Case ID : **30403609414**
Ref. By : Dis. At : Pt. ID : **2677793**
Bill. Loc. : Spectra Diagnostic Laboratory Service Provider Pt. Loc. :

Reg Date and Time : 14-Apr-2023 10:13	Sample Type : Serum	Mobile No. :
Sample Date and Time : 14-Apr-2023 10:16	Sample Coll. By : non NACL	Ref Id1 :
Report Date and Time : 14-Apr-2023 11:34	Acc. Remarks :	Ref Id2 :

TEST	RESULTS	UNIT	BIOLOGICAL REF RANGE	REMARKS
Thyroid Function Test				
Triiodothyronine (T3) <i>CMIA</i>	108.51	ng/dL	70 - 204	
Thyroxine (T4) <i>CMIA</i>	7.9	µg/dL	4.6 - 10.5	
TSH <i>CMIA</i>	1.466	µIU/mL	0.4 - 4.94	

INTERPRETATIONS

- Circulating TSH measurement has been used for screening for euthyroidism, screening and diagnosis for hyperthyroidism & hypothyroidism. Suppressed TSH (<0.01 µIU/mL) suggests a diagnosis of hyperthyroidism and elevated concentration (>7 µIU/mL) suggest hypothyroidism. TSH levels may be affected by acute illness and several medications including dopamine and glucocorticoids. Decreased (low or undetectable) in Graves disease. Increased in TSH secreting pituitary adenoma (secondary hyperthyroidism), PRTN and in hypothalamic disease thyrotropin (tertiary hyperthyroidism). Elevated in hypothyroidism (along with decreased T4) except for pituitary & hypothalamic disease.
- Mild to modest elevations in patient with normal T3 & T4 levels indicates impaired thyroid hormone reserves & incipient hypothyroidism (subclinical hypothyroidism).
- Mild to modest decrease with normal T3 & T4 indicates subclinical hyperthyroidism.
- Degree of TSH suppression does not reflect the severity of hyperthyroidism, therefore, measurement of free thyroid hormone levels is required in patient with a suppressed TSH level.

CAUTIONS

Sick, hospitalized patients may have falsely low or transiently elevated thyroid stimulating hormone. Some patients who have been exposed to animal antigens, either in the environment or as part of treatment or imaging procedure, may have circulating antianimal antibodies present. These antibodies may interfere with the assay reagents to produce unreliable results.

TSH ref range in pregnancy

First trimester
Second trimester
Third trimester

Reference range (microIU/ml)

0.24 - 2.00
0.43-2.2
0.8-2.5

Note:(LL-VeryLow,L-Low,H-High,HH-VeryHigh ,A-Abnormal)



Dr. Nima Kapadia
M.D.(Path)

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Page 1 of 2

Printed On : 14-Apr-2023 11:39

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Interpretation Note:

Ultra sensitive-thyroid-stimulating hormone (TSH) is a highly effective screening assay for thyroid disorders. In patients with an intact pituitary-thyroid axis, s-TSH provides a physiologic indicator of the functional level of thyroid hormone activity. Increased s-TSH indicates inadequate thyroid hormone, and suppressed s-TSH indicates excess thyroid hormone. Transient s-TSH abnormalities may be found in seriously ill, hospitalized patients, so this is not the ideal setting to assess thyroid function. However, even in these patients, s-TSH works better than total thyroxine (an alternative screening test). When the s-TSH result is abnormal, appropriate follow-up tests T4 & free T3 levels should be performed. If TSH is between 5.0 to 10.0 & free T4 & free T3 level are normal then it is considered as subclinical hypothyroidism which should be followed up after 4 weeks & If TSH is > 10 & free T4 & free T3 level are normal then it is considered as overt hypothyroidism.

Serum triiodothyronine (T3) levels often are depressed in sick and hospitalized patients, caused in part by the biochemical shift to the production of reverse T3. Therefore, T3 generally is not a reliable predictor of hypothyroidism. However, in a small subset of hyperthyroid patients, hyperthyroidism may be caused by overproduction of T3 (T3 toxicosis). To help diagnose and monitor this subgroup, T3 is measured on all specimens with suppressed s-TSH and normal FT4 concentrations.

Normal ranges of TSH & thyroid hormones vary according trimester in pregnancy.

TSH ref range in Pregnancy	Reference range (microIU/ml)
First trimester	0.24 - 2.00
Second trimester	0.43-2.2
Third trimester	0.8-2.5

	T3	T4	TSH
Normal Thyroid function	N	N	N
Primary Hyperthyroidism	↑	↑	↓
Secondary Hyperthyroidism	↑	↑	↑
Grave's Thyroiditis	↑	↑	↑
T3 Thyrotoxicosis	↑	N	N/↓
Primary Hypothyroidism	↓	↓	↑
Secondary Hypothyroidism	↓	↓	↓
Subclinical Hypothyroidism	N	N	↑
Patient on treatment	N	N/↑	↓

----- End Of Report -----

For test performed on specimens received or collected from non-NSRL locations, it is presumed that the specimen belongs to the patient named or identified as labeled on the container/test request and such verification has been carried out at the point generation of the said specimen by the sender. NSRL will be responsible Only for the analytical part of test carried out. All other responsibility will be of referring Laboratory.

Note:(LL-VeryLow,L-Low,H-High,HH-VeryHigh ,A-Abnormal)

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Page 2 of 2

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Name: UMESH TRILOKCHAND SUTHAR	Ward: OPD
Lab ID: 00000105	Registration on: 14/04/2023 09:37:00
Age & Sex: 25 Year Male	Reported on: 13:05:27
Reference: VELOCITY HOSPITAL	Sample Type: BLOOD & URINE

CBC ESR

Test	Observed Value	Unit	Biological Reference Interval
Haemoglobin	15.8	g/dL	13.5 - 17.5
Total RBC	5.29	mill./cm	4.50 - 5.90
Total WBC	6700	/cmm	4000 - 11000
Platelet Count	267000	/cmm	150000 - 450000
HCT	47.8	%	36.0 - 48.0
MCV	90.4	fL	80.0 - 100.0
MCH	29.9	pg	27.0 - 32.0
MCHC	33.1	g/dL	31.5 - 36.0
DIFFERENTIAL COUNT			
Neutrophils	51	%	40 - 70
Lymphocytes	41 H	%	20 - 40
Eosinophils	04	%	02-05
Monocytes	04	%	01-07
Basophils	00	%	00 - 02
Band Cells	00	%	0.0 - 6.0
ABSOLUTE DIFFERENTIAL COUNT			
Neutrophils	3417	/cumm	2000 - 7000
Lymphocytes	2747	/cumm	1000 - 3000
Eosinophils	268	/cumm	20 - 500
Monocytes	268	/cumm	200 - 1000
Basophils	0	/cumm	0 - 100
GLR / NLR (Neutrophil/Lymphocyte Ratio)	1.2		
M ENTZER INDEX			
RDW-CV	12.5	%	11.1 - 14.1
RDW-SD	45.2	fl	
MPV	6.8	fl	
PCT	0.18	%	

DR. TEJAL BHATT
MD. PATHOLOGIST



Name: **UMESH TRILOKCHAND SUTHAR**

Ward: OPD

Lab ID **00000105**

Registration on: 14/04/2023 09:37:00

Age & Sex: **25 Year | Male**

Reported on: 13:05:27

Reference: **VELOCITY HOSPITAL**Sample Type: **BLOOD & URINE**

PDW 16.8 %

PERIPHERAL SM EAR EXAMINATION

RBC Morphology

Normochromic and normocytic.

WBC Morphology

Appear normal, Immature cells are not seen .

Platelets in Smear

Adequate.

Malarial Parasites

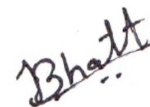
Not Detected.

ESR

AFTER 1 HOUR

12 mm/hr

0.0 - 15.0

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Reference: VELOCITY HOSPITAL	Sample Type: BLOOD & URINE

BLOOD GROUP

<u>Test</u>	<u>Observed Value</u>	<u>Unit</u>	<u>Biological Reference Interval</u>
Blood Group	"A"		
Rh Factor	POSITIVE		

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BLOOD GLUCOSE TEST

<u>Test</u>	<u>Observed Value</u>	<u>Unit</u>	<u>Biological Reference Interval</u>
Sample	RANDOM PLASMA		
<u>RANDOM (RBS)</u>			
Blood Sugar-R	80.4	mg/dL	70.0 - 140.0
Urine Sugar-R	Absent		

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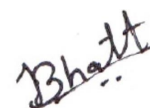
Reference: **VELOCITY HOSPITAL**Sample Type: **BLOOD & URINE**

HEMOGLOBIN A1c TEST

Test	Observed Value	Unit	Biological Reference Interval
HbA1c	5.6	%	> 8 : Action Suggested 7-8 : Good control < 7 : Goal 6.2-7 : Near Normal Glycemia < 6.2 : Non-diabetic Level
Mean Blood Glucose	114.0	mg/dL	70.0 - 140.0

Importance of HbA1c - Glycated Hb. in Diabetes Mellitus

- HbA1c, also known as Glycated Hemoglobin is the most important test for the assessment of long term blood glucose control (also called glycemic control)
- HbA1c reflects mean blood glucose concentration over past 6-8 weeks and provides a much better indication of long term glycemic control than blood glucose determination
- HbA1c is formed by non-enzymatic reaction between glucose and Hb. , this reaction is irreversible and therefore remains unaffected by short term fluctuations in blood glucose levels.
- Long term complications of diabetes such as retinopathy-eye complications, nephropathy-kidney complications and neuropathy-nerve complications, are potentially serious and can lead to blindness, kidney failure etc.
- Glycemic control monitored by HbA1c measurement using HPLC method-(Gold Standard) is considered most important. (Ref. National Glycohemoglobin Standardization Program -NGSP).



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Reference: **VELOCITY HOSPITAL**Sample Type: **BLOOD & URINE**

LIPID PROFILE

Test	Observed Value	Unit	Biological Reference Interval
Sample	Fasting Blood Serum		
Cholesterol	154.5	mg/dL	<200 Desirable 200-29 Borderline >240 High
Triglyceride	72.6	mg/dL	<150 Normal 150-199 Borderline 200-499 High >=500 Very High
HDL Cholesterol	36.5	mg/dL	40-60
VLDL	14.52	mg/dL	0.00 - 30.00
LDL Cholesterol	103.48	mg/dL	< 130 : Optimal 130 - 159 : Borderline High 160 - 189 : High >= 190 : Very High
LDL Chol. / HDL Chol. Ratio	2.84		1.0 - 3.4
Cholesterol / HDL Chol. Ratio	4.2 H		0 - 3.5
Total Lipid	485.6	mg/dl	400.0 - 1000.0

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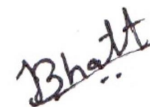
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RENAL FUNCTION TEST

<u>Test</u>		<u>Unit</u>	
S. Creatinine	0.89	mg/dL	0.5-1.30
Bl. Urea	22.5	mg/dL	10.0 - 40.0
BUN	10.5	mg/dl	6.0 - 22.0
Uric Acid	5.4	mg/dL	3.5 - 7.2

PROTEINS

Total Protein	7.1	g/dL	6.0 - 8.0
Albumin	4.6	g/dL	3.50 - 5.50
Globulin	2.5	g/dL	2.0 - 4.0
A/G Ratio	1.8		



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Reference: **VELOCITY HOSPITAL**Sample Type: **BLOOD & URINE**

LIVER FUNCTION TEST

Test	Observed Value	Unit	Biological Reference Interval
<u>BILIRUBIN</u>			
Total Bilirubin	0.4	mg/dL	0.00 - 1.20
Direct Bilirubin	0.2	mg/dL	0.00 - 0.40
Indirect Bilirubin	0.20	mg/dL	0.00 - 1.00
SGPT(ALT)	30.4	U/L	0.0 - 40.0
SGOT (AST)	32.5	U/L	0.00-46.00
Alkaline Phosphatase	105.5	U/L	40-129
<u>PROTEINS</u>			
Total Protein	7.1	g/dL	6.0 - 8.0
Albumin	4.6	g/dL	3.50 - 5.50
Globulin	2.5	g/dL	2.0 - 4.0
A/G Ratio	1.8		

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URINE ANALYSIS

<u>Test</u>	<u>Observed Value</u>	<u>Unit</u>	<u>Biological Reference Interval</u>
Sample	Fresh Urine		
<u>PHYSICAL EXAMINATION</u>			
Quantity	10.0	mL	
Colour	Pale-Yellow		
Appearance	Clear		Clear
pH	6.5		
Specific Gravity	1.010		
Sediments	Absent		Absent
<u>CHEMICAL EXAMINATION</u>			
Protein (Albumin)	Absent		Absent
Sugar	Absent		Absent
Bile Salts	Absent		Absent
Bile Pigment	Absent		Absent
Ketone	Absent		Absent
Occult Blood	Absent		Absent
Nitrite	Absent		Absent
Leukocyte Esterase	Absent		Absent
Urobilinogen	Normal		Normal
<u>MICROSCOPIC EXAMINATION</u>			
Pus Cells	Absent	/hpf	Absent
Red Blood Cells	Absent	/hpf	Absent
Epithelial Cells	Absent	/hpf	Absent
Crystals	Absent		Absent
Amorphous material	Absent		Absent
Casts	Absent		Absent
Yeast	Absent		Absent
Bacteria	Absent		Absent

--- End of Report ---

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