

LABORATORY TEST REPORT

Name	: Miss. MEENA RISHIKA		
Sample ID	: A0787643		
Age/Gender	: 22 Years/Female	Reg. No	: 0312410110008
Referred by	: Dr. T PAVANI REDDY	SPP Code	: SPL-CV-172
Referring Customer	: V CARE MEDICAL DIAGNOSTICS	Collected On	: 11-Oct-2024 10:04 AM
Primary Sample	: Whole Blood	Received On	: 11-Oct-2024 12:27 PM
Sample Tested In	: Plasma-NaF(F)	Reported On	: 11-Oct-2024 01:58 PM
Client Address	: Kimtee colony ,Gokul Nagar,Tarnaka	Report Status	: Final Report



CLINICAL BIOCHEMISTRY

GLUCOSE FASTING

Test Name	Results	Units	Biological Reference Interval
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Glucose Fasting (F) 72 mg/dL 70-100
(Method: Hexokinase)

Interpretation of Plasma Glucose based on ADA guidelines 2018

Diagnosis	Fasting Plasma Glucose(mg/dL)	2hrs Plasma Glucose(mg/dL)	HbA1c(%)	RBS(mg/dL)
Prediabetes	100-125	140-199	5.7-6.4	NA
Diabetes	> = 126	> = 200	> = 6.5	>=200(with symptoms)

Reference: Diabetes care 2018;41(suppl.1):S13-S27

*** End Of Report ***



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Page 1 of 5

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CLINICAL BIOCHEMISTRY

Test Name	Results	Units	Biological Reference Interval
Glycated Hemoglobin (HbA1c) <small>(Method: HPLC)</small>	5.3	%	Non Diabetic:< 5.7 Pre diabetic: 5.7-6.4 Diabetic:>= 6.5
Mean Plasma Glucose <small>(Method: Calculated)</small>	105.41	mg/dL	

Glycated hemoglobins (GHb), also called glycohemoglobins, are substances formed when glucose binds to hemoglobin, and occur in amounts proportional to the concentration of serum glucose. Since red blood cells survive an average of 120 days, the measurement of GHb provides an index of a person's average blood glucose concentration (glycemia) during the preceding 2-3 months. Normally, only 4% to 6% of hemoglobin is bound to glucose, while elevated glycohemoglobin levels are seen in diabetes and other hyperglycemic states Mean Plasma Glucose(MPG):This Is Mathematical Calculations Where Glycated Hb Can Be Correlated With Daily Mean Plasma Glucose Level

NOTE: The above Given Risk Level Interpretation is not age specific and is an information resource only and is not to be used or relied on for any diagnostic or treatment purposes and should not be used as a substitute for professional diagnosis and treatment. Kindly Correlate clinically.

INTERPRETATION

Method: Analyzer Fully automated HPLC platform.

Average Blood Glucose(eAG) (mg/dL)	Level of Control	Hemoglobin A1c (%)
421		14%
386		13%
350		12%
314		11%
279		10%
243		9%
208		8%
172	POOR	7%
136	GOOD	6%
101	EXCELLENT	5%

HbA1c values of 5.0- 6.5 percent indicate good control or an increased risk for developing diabetes mellitus. HbA1c values greater than 6.5 percent are diagnostic of diabetes mellitus. Diagnosis should be confirmed by repeating the HbA1c test.

NOTE: Hb F higher than 10 percent of total Hb may yield falsely low results. Conditions that shorten red cell survival, such as the presence of unstable hemoglobins like Hb SS, Hb CC, and Hb SC, or other causes of hemolytic anemia may yield falsely low results. Iron deficiency anemia may yield falsely high results.

Insulin - Fasting <small>(Method: CLIA)</small>	11.40	mIU/L	Random Insulin:2.6-37.6 Fasting Insulin :3.0-25.0 PP Insulin: 5.0-55.0
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CLINICAL BIOCHEMISTRY

Test Name	Results	Units	Biological Reference Interval
25 - Hydroxy Vitamin D (Method: CLIA)	21.89	ng/mL	<20.0-Deficiency 20.0-30.0-Insufficiency 30.0-100.0-Sufficiency >100.0-Potential Intoxication

Interpretation:

1.Vitamin D helps your body absorb calcium and maintain strong bones throughout your entire life. Your body produces vitamin D when the sun's UV rays contact your skin. Other good sources of the vitamin include fish, eggs, and fortified dairy products. It's also available as a dietary supplement.
2.Vitamin D must go through several processes in your body before your body can use it. The first transformation occurs in the liver. Here, your body converts vitamin D to a chemical known as 25-hydroxyvitamin D, also called calcidiol.
3.The 25-hydroxy vitamin D test is the best way to monitor vitamin D levels. The amount of 25-hydroxyvitamin D in your blood is a good indication of how much vitamin D your body has. The test can determine if your vitamin D levels are too high or too low.
4.The test is also known as the 25-OH vitamin D test and the calcidiol 25-hydroxycholecalciferol test. It can be an important indicator of osteoporosis (bone weakness) and rickets (bone malformation).
Those who are at high risk of having low levels of vitamin D include:
1.people who don't get much exposure to the sun
2.older adults
3.people with obesity.
4.dietary deficiency
Increased Levels: Vitamin D Intoxication

Method : CLIA

PRL(Prolactin) (Method: CLIA)	32.08	ng/mL	Refer Table
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Interpretation:

Age	Reference Range: Male (ng/mL)	Reference Range: Female(ng/mL)
Puberty Tanner Stage		
1	< 10.0	3.6-12.0
2-3	< 6.1	2.6-18.0
4-5	2.8-11.0	3.2-20.0
Adult	2.1-17.7	Nonpregnant :2.8-29.2 Pregnant :9.7-208.5 Postmenopausal :1.8-20.3

- Prolactin is a 23kD sized hormone produced by the lactotroph cells of the pituitary gland, a grape-sized organ found at the base of the brain. Normally present in low amounts in men and non-pregnant women, prolactin's main role is to promote lactation (breast milk production).
- Breast milk production that is not related to childbirth (galactorrhea)
- Erection problems in men
- Irregular or no menstrual periods (amenorrhea)



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CLINICAL BIOCHEMISTRY

Test Name	Results	Units	Biological Reference Interval
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Anti Mullerian Hormone (AMH) 3.99 ng/mL Refer Table

(Method: CLIA)

Age Ranges in Females:

18-25 Years: 0.96-13.34 ng/mL

31-35 Years: 0.07-7.35 ng/mL

41-45 Years: < 3.27 ng/mL

Male Reference Range: 0.73-16.05 ng/mL

26-30 Years: 0.17-7.37 ng/mL

36-40 Years: 0.03-7.15 ng/mL

> 46 Years: < 1.15 ng/mL

Fertility Ranges:

Optimal Fertility: 4.0-6.8 ng/mL

Satisfactory Fertility: 2.2-4.0 ng/mL

Low Fertility: 0.3-2.2 ng/mL

OVER VIEW:

Antimullerian hormone (AMH), also called müllerian inhibiting substance, is a glycoprotein that regulates reproductive duct development. Its presence in the fetal male causes regression of the müllerian (female) ducts which then allows for the wolffian (male) ducts to develop. AMH is produced by the Sertoli cells of the testis beginning around 6 weeks gestation; levels remain elevated until puberty. In the female fetus, the absence of AMH allows the müllerian ducts to develop into the fallopian tubes, uterus, and upper 2/3 of the vagina. The hormone is secreted by the granulosa cells of preantral and small antral follicles of the ovaries and begins to be detected around 36 weeks gestational age. AMH levels are low in female children until puberty. They typically remain constant during the reproductive years and then decline steadily with age as the number of follicles decrease. AMH is undetectable at menopause.

Clinical Significance:

- Assess gonadal function in children
- Evaluation of infants with ambiguous genitalia and other intersex conditions.
- Evaluating testicular function in infants and children including cryptorchidism and anorchidism.
- Aid in the assessment of infrequent or absent menses, including premature ovarian insufficiency, polycystic ovarian syndrome and menopause.
- Assessing ovarian status including follicle development, ovarian reserve, and ovarian responsiveness, as part of an evaluation for infertility and assisted reproduction protocols such as in vitro fertilization (IVF).
- Assessing ovarian function prior to, during, and following gonadotoxic cancer treatment in premenopausal women.
- Diagnosing and monitoring patients with AMH-secreting ovarian granulosa cell tumors.

Thyroxine Free (FT4) 1.20 ng/dL 0.89-1.76

(Method: CLIA)

Interpretation:

- This test measures the amount of free thyroxine, or FT4, in your blood. Thyroid stimulating hormone is the preferred initial test in the assessment of thyroid function. Free thyroxine (FT4) measured in response to an abnormal TSH test result. High free thyroxine results may indicate an overactive thyroid gland (hyperthyroidism). Low free thyroxine results may indicate an underactive thyroid gland (hypothyroidism).

TSH -Thyroid Stimulating Hormone 3.40 µIU/mL 0.35-5.5

(Method: CLIA)

Pregnancy & Cord Blood

TSH (Thyroid Stimulating Hormone (µIU/mL))	
First Trimester	: 0.24-2.99
Second Trimester	: 0.46-2.95
Third Trimester	: 0.43-2.78
Cord Blood	: 2.3-13.2

- TSH is synthesized and secreted by the anterior pituitary in response to a negative feedback mechanism involving concentrations of FT3 (free T3) and FT4 (free T4). Additionally, the hypothalamic tripeptide, thyrotropin-releasing hormone (TRH), directly stimulates TSH production.
- TSH interacts with specific cell receptors on the thyroid cell surface and exerts two main actions. The first action is to stimulate cell reproduction and hypertrophy. Secondly, TSH stimulates the thyroid gland to synthesize and secrete T3 and T4
- The ability to quantitate circulating levels of TSH is important in evaluating thyroid function. It is especially useful in the differential diagnosis of primary (thyroid) from secondary (pituitary) and tertiary (hypothalamus) hypothyroidism. In primary hypothyroidism, TSH levels are significantly elevated, while in secondary and tertiary hypothyroidism, TSH levels are low
- TRH stimulation differentiates secondary and tertiary hypothyroidism by observing the change in patient TSH levels. Typically, the TSH response to TRH stimulation is absent in cases of secondary hypothyroidism, and normal to exaggerated in tertiary hypothyroidism
- Historically, TRH stimulation has been used to confirm primary hyperthyroidism, indicated by elevated T3 and T4 levels and low or undetectable TSH levels. TSH assays with increased sensitivity and specificity provide a primary diagnostic tool to differentiate hyperthyroid from euthyroid patients.



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CLINICAL BIOCHEMISTRY

Test Name	Results	Units	Biological Reference Interval
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FSH (Follicle Stimulating Hormone) <small>(Method: CLIA)</small>	4.99	mIU/mL	Refer Table
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Interpretation:

Age	Reference Range: Male (mIU/mL)	Reference Range: Female(mIU/mL)
Pre Puberty Child		
2-11 Months	0.19-11.3	0.10-11.3
1-10 Years	0.3-4.6	0.68-6.7
Puberty Tanner Stage		
1-2	0.30-4.6	0.68-6.7
3-4	1.24-15.4	1.0-7.4
5	1.53-6.8	1.0-9.2
Adult	1.42-18.4	
Follicular Phase	----	2.5-10.2
Midcycle Peak	----	3.4-33.4
Luteal Phase	----	1.5-9.1
Postmenopausal	----	23.0-116.3
Pregnant	----	< 0.3

The follicle stimulating hormone (FSH) blood test measures the level of FSH in blood. FSH is a hormone released by the pituitary gland, located on the underside of the brain.

Low FSH levels in women may be present due to:

- Being very underweight or having had recent rapid weight loss
- Not producing eggs (not ovulating)
- Parts of the brain (the pituitary gland or hypothalamus) not producing normal amounts of some or all of its hormones
- Pregnancy

High FSH levels in men may mean the testicles are not functioning correctly due to:

- Advancing age (male menopause)
- Damage to testicles caused by alcohol abuse, chemotherapy, or radiation
- Certain tumors in the pituitary gland

*** End Of Report ***



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Page 5 of 5