Patient Name : **MISS. VAISHALI SONI**	Age / Gender : 23 years/Female	Sample Registered : Aug 22, 2025, 07:46 p.m.
Ref Doctor : Dr. SELF	Client Patient ID : 9598	Sample Received : Aug 22, 2025, 07:46 p.m.
Client Name: IDR000009-Al-India Pathology	Status : **Final Report**	Reported : Aug 23, 2025, 12:55 p.m.

Test Description	Value(s)	Units	Biological Ref Range	Method

IMMUNOLOGY

21252340068

LUTEINIZING HORMONE , SERUM

Sample Type : Serum

LUTEINIZING HORMONE	11.29	mIU/mL	**Adult females (> 18 years):** • **Postmenopausal: 11.3 - 9.8 mIU/mL** • **Oral Contraceptives: ND - 8.0 mIU/mL** • **Perimenstrual (+/- 8 days): ND - 12.0 mIU/mL** **Ovulatory cycles:** • **Follicular plase: 1.1 - 11.6 mIU/mL** • **Mid-cycle peak: 17 - 77 mIU/mL** • **Luteal Phase : ND - 14.7 mIU/mL**	CLIA

Interpretation

Luteinizing Hormone (LH) stimulates ovulation in females and production of testosterone in males.

Use:

Determination is useful in the diagnosis of gonadal, pituitary and hypothalamic disorders, for the prediction of ovulation and in the evaluation of infertility.

Increased in:

Females:

- Elevated concentrations of LH can indicate primary amenorrhea,
- Menopause,
- Premature ovarian failure,
- Polycystic ovarian syndrome,
- Hypergonadotropic hypogonadism or ovulation.

Jyoti..

Dr. Jyoti Chouhan
Consultant Pathologist

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Males:

- Elevated concentrations of LH can result from
- Primary testicular failure,
- Seminiferous tubule dysgenesis (Klinefelter's syndrome),
- Sertoli cell failure,
- Anorchia,
- Hypergonadotropic hypogonadism.

Decreased in:

- Hypogonadism,
- Gonadotropin deficiency and
- Pituitary LH deficiency.

Limitation: Secretion of LH is episodic, circadian and cyclic in nature.

Test Performed on ROCHE e411

Remarks: Kindly correlate clinically.

END OF IMMUNOLOGY

Dr. Jyoti Chouhan
Consultant Pathologist

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IMMUNOLOGY

21252340068

FSH, SERUM (FOLLICLE STIMULATING HORMONE)

Sample Type : Serum

FSH	8.58	mIU/mL	**Before puberty: 0 - 4.0 mIU/mL** **During puberty: 0.3 - 10.0 mIU/mL** **Normally Menstruating Females :** • **Follicular Phase : 1.4 - 9.9 mIU/mL** • **Ovulatory Peak : 6.2 - 21.5 mIU/mL** • **Luteal Phase : 1.1 - 9.2 mIU/mL** **Post-menopausal Females : 25.8 - 134.8 mIU/mL**	CLIA

Interpretation

FSH promotes follicular development in the ovary and gametogenesis in the testis.

FSH in mature females acts to stimulate development of the ovarian follicles.

Circulating FSH levels vary throughout the menstrual cycle in response to estradiol and progesterone.

A small, but significant increase in circulating FSH accompanies the mid-cycle LH surge. Circulating levels of FSH decline in the luteal phase in response to estradiol and progesterone production by the developing corpus luteum.

Use:

- Differential Diagnosis of gonadal disorders
- Diagnosis and management of infertility

Increased In:

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Test Description	Value(s)	Units	Biological Ref Range	Method

- Primary hypogonadism (anorchia, testicular failure, menopause),
- Gonadotropin secreting pituitary tumours,
- Precocious puberty (secondary to a CNS lesion or idiopathic),
- Complete testicular feminization syndrome,
- Luteal phase of menstrual cycle

Decreased in:

- Secondary Hypogonadism,
- Pituitary LH or FSH deficiency,
- Gonadotropin deficiency

Limitation:

Secretion of FSH is episodic, circadian and cyclic in nature.

Clinical evaluations may require determinations in pooled multiple serial specimens.

Test Performed on ROCHE e411

Remarks: Kindly correlate clinically.

END OF IMMUNOLOGY

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Test Description	Value(s)	Units	Biological Ref Range	Method

IMMUNOLOGY

21252340068

TESTOSTERONE TOTAL (2ND GENERATION), SERUM

Sample Type : Serum

TESTOSTERONE-TOTAL	29.95	ng/dl	Refer Table	CLIA

Interpretation

Age	Reference Range Male(ng/dL)	Reference Range Female(ng/dL)
Newborn(1-15days)	75-400	20-64
1-5 Months	1-177	1-5
6-11 Months	2-7	2-5
Children:		
1-5 Year	2-25	2-10
6-9 Year	3-30	2-20
Puberty Tanner Stage :		
1	2-23	2-10
2	5-70	5-30
3	15-280	10-30
4	105-545	15-40
5	265-800	10-40
Adult	241-827	14-76

Testosterone is the major androgenic hormone. It is responsible for the development of the male external genitalia and secondary sexual characteristics.

In females, its main role is as an estrogen precursor.

In both genders, it also exerts anabolic effects and influences behavior.

Testing is useful in males for:

Evaluation of symptoms or signs of possible hypogonadism, delayed or precocious puberty,

Monitoring testosterone replacement or anti-androgen therapy.

Testing is useful in females for:

Evaluation of symptoms or signs of hirsutism, virilization, and oligo-amenorrhea, possible testosterone deficiency, diagnosis of androgen-secreting tumors, evaluation of infants with ambiguous genitalia or virilization.

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Test Description	Value(s)	Units	Biological Ref Range	Method

Remarks: Kindly correlate clinically.

Correlate Clinically.

END OF IMMUNOLOGY

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IMMUNOLOGY				
21252340068				
ESTRADIOL (E2) , SERUM				
Sample Type : Serum				
ESTRADIOL	47.2	pg/mL	Menstruating females : Follicular phase:- 19.5 - 144.2 Midcycle :- 63.9 - 356.7 Luteal Phase :- 55.8 - 214.2 Post-menopausal females (untreated):- 0 - 32.2	CLIA

Test Performed on Roche e411

Interpretation

Uses for Estradiol (E2) assay:

- Evaluating menstrual and fertility problems in women.
- In the evaluation of Gynecomastia or feminization states due to Estrogen producing Tumours.
- Menstrual cycle irregularities, and sexual maturity in female patients.
- Monitoring of Human Menopausal Gonadotropin (Pergonal) therapy.

Increased In:

- Feminization in children
- Estrogen producing Tumours
- Gynecomastia
- Hepatic Cirrhosis
- Hyperthyroidism

Decreased In: Primary and Secondary Hypogonadism

Limitation: Oral contraceptives inhibit physiologic increase

Remarks: Kindly correlate clinically.

END OF IMMUNOLOGY

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