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NAME	**: Mrs. VEENA RANI**		
AGE/ GENDER	: 38 YRS/FEMALE	**PATIENT ID**	: 1545446
COLLECTED BY	:	**REG. NO./LAB NO.**	**: 012407110034**
REFERRED BY	:	**REGISTRATION DATE**	: 11/Jul/2024 11:41 AM
BARCODE NO.	: 01512930	**COLLECTION DATE**	: 11/Jul/2024 11:46AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 11/Jul/2024 12:04PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

HAEMATOLOGY

COMPLETE BLOOD COUNT (CBC)

Test Name	Value	Unit	Biological Reference interval
RED BLOOD CELLS (RBCS) COUNT AND INDICES			
HAEMOGLOBIN (HB) *by CALORIMETRIC*	**10.2[L]**	**gm/dL**	**12.0 - 16.0**
RED BLOOD CELL (RBC) COUNT *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	4.47	Millions/cmm	3.50 - 5.00
PACKED CELL VOLUME (PCV) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	**33.7[L]**	**%**	**37.0 - 50.0**
MEAN CORPUSCULAR VOLUME (MCV) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	**75.2[L]**	**fL**	**80.0 - 100.0**
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	**22.6[L]**	**pg**	**27.0 - 34.0**
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	**30.1[L]**	**g/dL**	**32.0 - 36.0**
RED CELL DISTRIBUTION WIDTH (RDW-CV) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	**18.7[H]**	**%**	**11.00 - 16.00**
RED CELL DISTRIBUTION WIDTH (RDW-SD) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER*	51.9	fL	35.0 - 56.0
MENTZERS INDEX *by CALCULATED*	16.82	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0
GREEN & KING INDEX *by CALCULATED*	31.16	RATIO	BETA THALASSEMIA TRAIT: < = 65.0 IRON DEFICIENCY ANEMIA: > 65.0
WHITE BLOOD CELLS (WBCS)			
TOTAL LEUCOCYTE COUNT (TLC) *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	9660	/cmm	4000 - 11000
NUCLEATED RED BLOOD CELLS (nRBCS) *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER & MICROSCOPY*	NIL		0.00 - 20.00
NUCLEATED RED BLOOD CELLS (nRBCS) % *by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER & MICROSCOPY*	NIL	%	< 10 %
DIFFERENTIAL LEUCOCYTE COUNT (DLC)			

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Test Name	Value	Unit	Biological Reference interval
NEUTROPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	**72^{H}**	**%**	**50 - 70**
LYMPHOCYTES *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	22	%	20 - 40
EOSINOPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	**1^{L}**	%	1 - 6
MONOCYTES *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	5	%	2 - 12
BASOPHILS *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	0	%	0 - 1
ABSOLUTE LEUKOCYTES (WBC) COUNT			
ABSOLUTE NEUTROPHIL COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	6955	/cmm	2000 - 7500
ABSOLUTE LYMPHOCYTE COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	2125	/cmm	800 - 4900
ABSOLUTE EOSINOPHIL COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	97	/cmm	40 - 440
ABSOLUTE MONOCYTE COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	483	/cmm	80 - 880
ABSOLUTE BASOPHIL COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	0	/cmm	0 - 110
ABSOLUTE IMMATURE GRANULOCYTE COUNT *by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY*	0	/cmm	0.0 - 999.0
PLATELETS AND OTHER PLATELET PREDICTIVE MARKERS.			
PLATELET COUNT (PLT) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	**477000^{H}**	**/cmm**	**150000 - 450000**
PLATELETCRIT (PCT) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	**0.5^{H}**	**%**	**0.10 - 0.36**
MEAN PLATELET VOLUME (MPV) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	10	fL	6.50 - 12.0
PLATELET LARGE CELL COUNT (P-LCC) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	**140000^{H}**	**/cmm**	**30000 - 90000**
PLATELET LARGE CELL RATIO (P-LCR) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	28	%	11.0 - 45.0
PLATELET DISTRIBUTION WIDTH (PDW) *by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE*	16	%	15.0 - 17.0

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Test Name	Value	Unit	Biological Reference interval
ADVICE	**KINDLY CORRELATE CLINICALLY**		

NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD

RECHECKED.

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Test Name	Value	Unit	Biological Reference interval

ERYTHROCYTE SEDIMENTATION RATE (ESR)

ERYTHROCYTE SEDIMENTATION RATE (ESR)	**25^{H}**	**mm/1st hr**	**0 - 20**

by MODIFIED WESTERGREN AUTOMATED METHOD

INTERPRETATION:

1. ESR is a non-specific test because an elevated result often indicates the presence of inflammation associated with infection, cancer and auto-immune disease, but does not tell the health practitioner exactly where the inflammation is in the body or what is causing it.
2. An ESR can be affected by other conditions besides inflammation. For this reason, the ESR is typically used in conjunction with other test such as C-reactive protein
3. This test may also be used to monitor disease activity and response to therapy in both of the above diseases as well as some others, such as systemic lupus erythematosus

CONDITION WITH LOW ESR

A low ESR can be seen with conditions that inhibit the normal sedimentation of red blood cells, such as a high red blood cell count (polycythaemia), significantly high white blood cell count (leucocytosis) , and some protein abnormalities. Some changes in red cell shape (such as sickle cells in sickle cell anaemia) also lower the ESR.

NOTE:

1. ESR and C - reactive protein (C-RP) are both markers of inflammation.
2. Generally, ESR does not change as rapidly as does CRP, either at the start of inflammation or as it resolves.
3. **CRP is not affected by as many other factors as is ESR, making it a better marker of inflammation.**
4. If the ESR is elevated, it is typically a result of two types of proteins, globulins or fibrinogen.
5. Women tend to have a higher ESR, and menstruation and pregnancy can cause temporary elevations.
6. Drugs such as dextran, methyldopa, oral contraceptives, penicillamine procainamide, theophylline, and vitamin A can increase ESR, while aspirin, cortisone, and quinine may decrease it

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HAEMOGLOBIN - HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HB-HPLC)

Test Name	Value	Unit	Biological Reference interval
HAEMOGLOBIN VARIANTS			
HAEMOGLOBIN A0 (ADULT) *by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)*	84.6	%	83.00 - 90.00
HAEMOGLOBIN F (FOETAL) *by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)*	<0.8	%	0.00 - 2.0
HAEMOGLOBIN A2 *by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)*	1.8	%	1.50 - 3.70
PEAK 3 *by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)*	5.5	%	< 10.0
OTHERS-NON SPECIFIC *by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)*	ABSENT	%	ABSENT
HAEMOGLOBIN S *by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)*	NOT DETECTED	%	< 0.02
HAEMOGLOBIN D (PUNJAB) *by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)*	NOT DETECTED	%	< 0.02
HAEMOGLOBIN E *by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)*	NOT DETECTED	%	< 0.02
HAEMOGLOBIN C *by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)*	NOT DETECTED	%	< 0.02
UNKNOWN UNIDENTIFIED VARIANTS *by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)*	NOT DETECTED	%	< 0.02
GLYCOSYLATED HAEMOGLOBIN (HbA1c): WHOLE BLOOD *by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)*	5.7	%	4.0 - 6.4
RED BLOOD CELLS (RBCS) COUNT AND INDICES			
HAEMOGLOBIN (HB) ***by AUTOMATED HEMATOLOGY ANALYZER***	**10.2[L]**	**gm/dL**	**12.0 - 16.0**
RED BLOOD CELL (RBC) COUNT *by AUTOMATED HEMATOLOGY ANALYZER*	4.47	Millions/cmm	3.50 - 5.00
PACKED CELL VOLUME (PCV) ***by AUTOMATED HEMATOLOGY ANALYZER***	**33.7[L]**	**%**	**37.0 - 50.0**
MEAN CORPUSCULAR VOLUME (MCV) ***by AUTOMATED HEMATOLOGY ANALYZER***	**75.2[L]**	**fL**	**80.0 - 100.0**

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Test Name	Value	Unit	Biological Reference interval
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) *by AUTOMATED HEMATOLOGY ANALYZER*	**22.6^{L}**	**pg**	**27.0 - 34.0**
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) *by AUTOMATED HEMATOLOGY ANALYZER*	**30.1^{L}**	**g/dL**	**32.0 - 36.0**
RED CELL DISTRIBUTION WIDTH (RDW-CV) *by AUTOMATED HEMATOLOGY ANALYZER*	**18.7^{H}**	**%**	**11.00 - 16.00**
RED CELL DISTRIBUTION WIDTH (RDW-SD) *by AUTOMATED HEMATOLOGY ANALYZER*	51.9	fL	35.0 - 56.0
OTHERS			
NAKED EYE SINGLE TUBE RED CELL OSMOTIC FRAGILITY TEST *by SINGLE RED CELL OSMOTIC FRAGILITY*	NEGATIVE (-ve)		NEGATIVE (-ve)
MENTZERS INDEX *by CALCULATED*	16.82	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0
INTERPRETATION	THE ABOVE FINDINGS ARE SUGGESTIVE OF NORMAL HAEMOGLOBIN CHROMATOGRAPHIC PATTERN		

INTERPRETATION:

The Thalassemia syndromes, considered the most common genetic disorder worldwide, are a heterogenous group of mandelian disorders, all characterized by a lack of/or decreased synthesis of either the alpha-globin chains (alpha thalassemia) or the beta-globin chains (beta thalassemia) of haemoglobin.

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC):

1.HAEMOGLOBIN VARIANT ANALYSIS, BLOOD- High Performance liquid chromatography (HPLC) is a fast & accurate method for determining the presence and for quatitation of various types of normal haemoglobin and common abnormal hb variants, including but not limited to Hb S, C, E, D and Beta –thalassemia.
2.The diagnosis of these abnormal haemoglobin should be confirmed by DNA analysis.
3.The method use has a limited role in the diagnosis of alpha thalassemia.
4.Slight elevation in haemoglobin A2 may also occur in hyperthyroidism or when there is deficiency of vitamin b12 or folate and this should be istinguished from inherited elevation of HbA2 in Beta- thalassemia trait.

NAKED EYE SINGLE TUBE RED CELL OSMOTIC FRAGILITY TEST (NESTROFT):

1.It is a screening test to distinguish beta thalassemia trait. Also called as Naked Eye Single Tube Red Cell Osmotic Fragility Test.
2.The test showed a sensitivity of 100%, specificity of 85.47%, a positive predictive value of 66% and a negative predictive value of 100%.
3.A high negative predictive value can reasonably rule out beta thalassemia trait cases. So, it should be adopted as a screening test for beta thalassemia trait, as it is not practical or feasible to employ HbA2 in every case of anemia in childhood.

MENTZERS INDEX:

1.The Mentzer index, helpful in differentiating iron deficiency anemia from beta thalassemia. If a CBC indicates microcytic anemia, the Mentzer index is said to be a method of distinguishing between them.
2.If the index is less than 13, thalassemia is said to be more likely. If the result is greater than 13, then iron-deficiency anemia is said to be more likely.
3.The principle involved is as follows: In iron deficiency, the marrow cannot produce as many RBCs and they are small (microcytic), so the RBC

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Test Name	Value	Unit	Biological Reference interval

count and the MCV will both be low, and as a result, the index will be greater than 13. Conversely, in thalassemia, which is a disorder of globin synthesis, the number of RBC's produced is normal, but the cells are smaller and more fragile. Therefore, the RBC count is normal, but the MCV is low, so the index will be less than 13.

NOTE: In practice, the Mentzer index is not a reliable indicator and should not, by itself, be used to differentiate. In addition, it would be possible for a patient with a microcytic anemia to have both iron deficiency and thalassemia, in which case the index would only suggest iron deficiency.

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Test Name	Value	Unit	Biological Reference interval

CLINICAL CHEMISTRY/BIOCHEMISTRY

GLUCOSE RANDOM (R)

GLUCOSE RANDOM (R): PLASMA *by GLUCOSE OXIDASE - PEROXIDASE (GOD-POD)*	116.98	mg/dL	NORMAL: < 140.00 PREDIABETIC: 140.0 - 200.0 DIABETIC: > 0R = 200.0

INTERPRETATION

IN ACCORDANCE WITH AMERICAN DIABETES ASSOCIATION GUIDELINES:

1. A random plasma glucose level below 140 mg/dl is considered normal.
2. A random glucose level between 140 - 200 mg/dl is considered as glucose intolerant or prediabetic. A fasting and post-prnadial blood test (after consumption of 75 gms of glucose) is recommended for all such patients.
3. A random glucose level of above 200 mg/dl is highly suggestive of diabetic state. A repeat post-prandial is strongly recommended for all such patients. A fasting plasma glucose level in excess of 125 mg/dl on both occasions is confirmatory for diabetic state.

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Test Name	Value	Unit	Biological Reference interval

ENDOCRINOLOGY

THYROID STIMULATING HORMONE (TSH)

THYROID STIMULATING HORMONE (TSH): SERUM	3.119	µIU/mL	0.35 - 5.50

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

3rd GENERATION, ULTRASENSITIVE

INTERPRETATION:

AGE	REFFERENCE RANGE (µIU/mL)
0 – 5 DAYS	0.70 – 15.20
6 Days – 2 Months	0.70 – 11.00
3 – 11 Months	0.70 – 8.40
1 – 5 Years	0.70 – 7.00
6 – 10 Years	0.60 – 5.50
11 - 15	0.50 – 5.50
> 20 Years (Adults)	0.27 – 5.50
PREGNANCY	
1st Trimester	0.10 - 3.00
2nd Trimester	0.20 - 3.00
3rd Trimester	0.30 - 4.10

NOTE:-*TSH levels are subjected to circardian variation, reaching peak levels between 2-4 a.m and at a minimum between 6-10 pm. The variation is of the order of 50 %. Hence time of the day has influence on the measured serum TSH concentration.*

USE:- TSH controls biosynthesis and release of thyroid harmones T4 & T3. It is a sensitive measure of thyroid function, especially useful in early or subclinical hypothyroidism, before the patient develops any clinical findings or goitre or any other thyroid function abnormality.

INCREASED LEVELS:

1.Primary or untreated hypothyroidism, may vary from 3 times to more than 100 times normal depending on degree of hypofunction.
2.Hypothyroid patients receiving insufficient thyroid replacement therapy.
3.Hashimotos thyroiditis.
4.DRUGS: Amphetamines, Iodine containing agents and dopamine antagonist.
5.Neonatal period, increase in 1st 2-3 days of life due to post-natal surge.

DECREASED LEVELS:

1.Toxic multi-nodular goitre & Thyroiditis.
2.Over replacement of thyroid harmone in treatment of hypothyroidism.
3.Autonomously functioning Thyroid adenoma
4.Secondary pituatary or hypothalmic hypothyroidism
5.Acute psychiatric illness
6.Severe dehydration.

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Test Name	Value	Unit	Biological Reference interval

7.DRUGS: Glucocorticoids, Dopamine, Levodopa, T4 replacement therapy, Anti-thyroid drugs for thyrotoxicosis.
8.Pregnancy: 1st and 2nd Trimester

LIMITATIONS:

1.TSH may be normal in central hypothyroidism, recent rapid correction of hyperthyroidism or hypothyroidism, pregnancy, phenytoin therapy.
2.Autoimmune disorders may produce spurious results.

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Test Name	Value	Unit	Biological Reference interval

PROLACTIN

PROLACTIN: SERUM	**34.84^{H}**	**ng/mL**	**3 - 25**

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

INTERPRETATION:

1.Prolactin is secreted by the anterior pituitary gland and controlled by the hypothalamus.
2.The major chemical controlling prolactin secretion is dopamine, which inhibits prolactin secretion from the pituitary.
3.Physiological function of prolactin is the stimulation of milk production. In normal individuals, the prolactin level rises in response to physiologic stimuli such as sleep, exercise, nipple stimulation, sexual intercourse, hypoglycemia, postpartum period, and also is elevated in the newborn infant.

INCREASED (HYPERPROLACTEMIA):

1.Prolactin-secreting pituitary adenoma (prolactinoma, which is 5 times more frequent in females than males).
2.Functional and organic disease of the hypothalamus.
3.Primary hypothyroidism.
4.Section compression of the pituitary stalk.
5.Chest wall lesions and renal failure.
6.Ectopic tumors.
7.DRUGS:- Anti-Dopaminergic drugs like antipsychotic drugs, antinausea/antiemetic drugs, Drugs that affect CNS serotonin metabolism, serotonin receptors, or serotonin reuptake (anti-depressants of all classes, ergot derivatives, some illegal drugs such as cannabis), Antihypertensive drugs ,Opiates, High doses of estrogen or progesterone,anticonvulsants (valporic acid), anti-tuberculous medications (Isoniazid).

SIGNIFICANCE:

1.In loss of libido, galactorrhea, oligomHyperprolactinemia often results enorrhea or amenorrhea, and infertility in premenopausal females.
2.Loss of libido, impotence, infertility, and hypogonadism in males. Postmenopausal and premenopausal women, as well as men, can also suffer from decreased muscle mass and osteoporosis.
3. In males, prolactin levels >13 ng/mL are indicative of hyperprolactinemia.
4. In women, prolactin levels >27 ng/mL in the absence of pregnancy and postpartum lactation are indicative of hyperprolactinemia.
5.Clear symptoms and signs of hyperprolactinemia are often absent in patients with serum prolactin levels <100 ng/mL.
4. Mild to moderately increased levels of serum prolactin are not a reliable guide for determining whether a prolactin-producing pituitary adenoma is present, 5.Whereas levels >250 ng/mL are usually associated with a prolactin-secreting tumor.

CAUTION:

Prolactin values that exceed the reference values may be due to macroprolactin (prolactin bound to immunoglobulin). Macroprolactin should be evaluated if signs and symptoms of hyperprolactinemia are absent, or pituitary imaging studies are not informative.

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NAME	**: Mrs. VEENA RANI**		
AGE/ GENDER	: 38 YRS/FEMALE	**PATIENT ID**	: 1545446
COLLECTED BY	:	**REG. NO./LAB NO.**	**: 012407110034**
REFERRED BY	:	**REGISTRATION DATE**	: 11/Jul/2024 11:41 AM
BARCODE NO.	: 01512930	**COLLECTION DATE**	: 11/Jul/2024 11:46AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 11/Jul/2024 02:50PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval

IMMUNOPATHOLOGY/SEROLOGY

HEPATITIS C VIRUS (HCV) ANTIBODY: TOTAL

HEPATITIS C ANTIBODY (HCV) TOTAL: SERUM *by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)*	0.11	S/CO	NEGATIVE: < 1.00 POSITIVE: > 1.00
HEPATITIS C ANTIBODY (HCV) TOTAL RESULT *by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)*	NON - REACTIVE		

INTERPRETATION:-

RESULT (INDEX)	REMARKS
< 1.00	NON - REACTIVE/NOT - DETECTED
> =1.00	REACTIVE/ASYMPTOMATIC/INFECTIVE STATE/CARRIER STATE.

Hepatitis C (HCV) is an RNA virus of Favivirus group transmitted via blood transfusions, transplantation, injection drug abusers, accidental needle punctures in healthcare workers, dialysis patients and rarely from mother to infant. 10 % of new cases show sexual transmission. As compared to HAV & HBV , chronic infection with HCV occurs in 85 % of infected individuals. In high risk population, the predictive value of Anti HCV for HCV infection is > 99% whereas in low risk populations it is only 25 %.

USES:

1. Indicator of past or present infection, but does not differentiate between Acute/ Chronic/Resolved Infection.
2. Routine screening of low and high prevelance population including blood donors.

NOTE:

1. False positive results are seen in Auto-immune disease, Rheumatoid Factor, HYpergammaglobulinemia, Paraproteinemia, Passive antibody transfer, Anti-idiotypes and Anti-superoxide dismutase.
2. False negative results are seen in early Acute infection, Immunosuppression and Immuno—incompetence.
3. *HCV-RNA PCR recommended in all reactive results to differentiate between past and present infection.*

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Test Name	Value	Unit	Biological Reference interval

ANTI HUMAN IMMUNODEFICIENCY VIRUS (HIV) DUO ULTRA WITH (P-24 ANTIGEN DETECTION)

HIV 1/2 AND P24 ANTIGEN: SERUM *by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)*	0.25	S/CO	NEGATIVE: < 1.00 POSITIVE: > 1.00
HIV 1/2 AND P24 ANTIGEN RESULT *by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)*	NON - REACTIVE		

INTERPRETATION:-

RESULT (INDEX)	REMARKS
< 1.00	NON - REACTIVE
> = 1.00	PROVISIONALLY REACTIVE

Non-Reactive result implies that antibodies to HIV 1/ 2 have not been detected in the sample . This menas that patient has either not been exposed to HIV 1/ 2 infection or the sample has been tested during the “window phase” i.e. before the development of detectable levels of antibodies. Hence a Non Reactive result does not exclude the possibility of exposure or infection with HIV 1/ 2.

RECOMMENDATIONS:

1. Results to be clinically correlated
2. Rarely falsenegativity/positivity may occur.

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CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval

HEPATITIS B SURFACE ANTIGEN (HBsAg) ULTRA

HEPATITIS B SURFACE ANTIGEN (HBsAg): SERUM	0.21	S/CO	NEGATIVE: < 1.0 POSITIVE: > 1.0
by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)			
HEPATITIS B SURFACE ANTIGEN (HBsAg) RESULT	NON REACTIVE		
by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)			

INTERPRETATION:

RESULT IN INDEX VALUE	REMARKS
< 1.30	NEGATIVE (-ve)
>=1.30	POSITIVE (+ve)

Hepatitis B Virus (HBV) is a member of the Hepadna virus family causing infection of the liver with extremely variable clinical features. Hepatitis B is transmitted primarily by body fluids especially serum and also spread effectively sexually and from mother to baby. In most individuals HBV hepatitis is self limiting, but 1-2 % normal adolescent and adults develop Chronic Hepatitis. Frequency of chronic HBV infection is 5-10% in immunocompromised patients and 80 % neonates. The initial serological marker of acute infection is HBsAg which typically appears 2-3 months after infection and disappears 12-20 weeks after onset of symtoms. Persistence of HBsAg for more than 6 months indicates carrier state or Chronic Liver disease.

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BARCODE NO.	: 01512930	**COLLECTION DATE**	: 11/Jul/2024 11:46AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 12/Jul/2024 07:33AM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

RUBELLA ANTIBODIES IgG

Test Name	Value	Unit	Biological Reference interval
RUBELLA ANTIBODIES IgG	**11.24^{H}**	**IU/mL**	**NEGATIVE: < 2.0** **POSITIVE: > 2.0**

INTERPRETATION:

Rubella virus, the only member of rubivirus genus, causes rubella (also known as german measles), an acute exanthematous infection of children and adults. The clinical illnss is characterized by rash, fever and lymphadenopathy and can resemble a mild case of measles. The virus also cause arthralgias and occasional encephalitis. Infection is particularly disastrous if contracted during the first 4 months of pregnancy. If not immunologically protected, women infected during pregnancy run a high risk of embryo-foetal damage. Congenital Rubella causes a wide range of severe defects in foetus, including cataract, deafness, hepatosplenomegaly, psychomotor retardation, bone alterations, cardiopathies, neuropathies and diabetes.

TEST UTILITY:

1. IgM antibodies become detectable in a few days after the onset of signs and symptoms and reach peak level in 7 – 10 days. These antibodies persist, but rapidly diminishes in concentration over the next 4 – 5 weeks until the antibody is no longer clinically detectable. While the presence of IgM antibodies suggests current or recent infection, low levels of IgM antibodies may occasionally persist for more than 12 months post-infection or immunization. The presence of IgM antibodies in a new born indicates that the bay was infected during pregnancy because the mother IgM antibodies do not pass to the baby through umbilical cord.
2. Rubella IgG antibody can be formed following rubella infection or after rubella vaccination. A reactive result is consistent with immune status to rubella virus. The presence of IgG antibodies, but not IgM antibodies, in a newborn means that the mothers IgG antibodies have passed to the baby in utero and these antibodies may protect the infant from rubella infection during the initial six months of life.

LIMITATIONS:

1. Rubella IgM test results are intended as an aid to the diagnose of active or recent infection. They should however, be interpreted in conjugation with other clinical findings and diagnostic procedures
2. The antibody titre of a single serum specimen cannot be used to determine recent infection. Specimens obtained too early, or too late, during the course of infection, may not demonstrate detectable levels of IgM antibody. Samples collected too early may not have detectable levels of IgG. Paired samples (acute & convalescent) should be collected and tested concurrently to demonstrate seroconversation.
3. A positive Rubella IgM result may not always indicate a primary acute infection, as IgM has a tendency to persist, even at high levels, after primay infection. *FALSE POSITIVE RESULTS MAY ALSO OCCUR DUE TO RHEUMATOID FACTOR AND ANTI-NUCLEUR ANTIBODIES*. Hence, IgG avidity testing is recommended to differentiate between primay infection, IgM persistence and reactivation. IgG antibody results should be interpreted in conjugation with clinical evaluation and the and the results of other diagnostic procedures.

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Test Name	Value	Unit	Biological Reference interval
VDRL			
VDRL *by IMMUNOCHROMATOGRAPHY*	NON REACTIVE		NON REACTIVE

INTERPRETATION:

1.Does not become positive until 7 - 10 days after appearance ofchancre.
2.***High titer (>1:16) - active disease.***
3.***Low titer (<1:8) - biological falsepositive test in 90% cases or due to late or late latent syphillis.***
4.Treatment of primary syphillis causes progressive decline tonegative VDRL within 2 years.
5.Rising titer (4X) indicates relapse,reinfection, or treatment failure and need for retreatment.
6.May benonreactive in early primary, late latent, and late syphillis (approx. 25% ofcases).
7.Reactive and weakly reactive tests should always be confirmedwith FTA-ABS (fluorescent treponemal antibody absorptiontest).

SHORTTERM FALSE POSITIVE TEST RESULTS (<6 MONTHS DURATION) MAY OCCURIN:

1.Acute viral illnesses (e.g., hepatitis, measles, infectious mononucleosis)
2.M. pneumoniae; Chlamydia; Malaria infection.
3.Some immunizations
4.Pregnancy (rare)

LONGTERM FALSE POSITIVE TEST RESULTS (>6 MONTHS DURATION) MAY OCCUR IN:

1.Serious underlying disease e.g., collagen vascular diseases, leprosy ,malignancy.
2.Intravenous drug users.
3.Rheumatoid arthritis, thyroiditis, AIDS, Sjogren's syndrome.
4.<l0 % of patients older thanage 70 years.
5.Patients taking some anti-hypertensive drugs.

*** End Of Report ***

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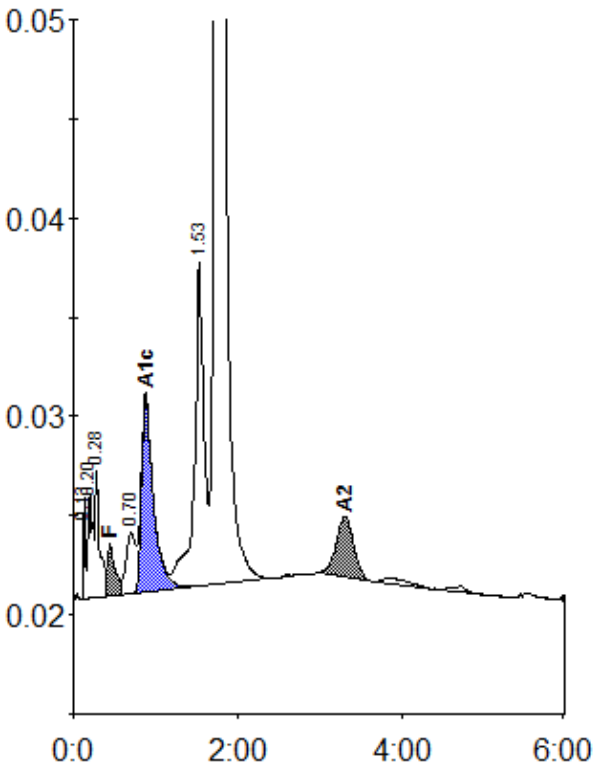
Patient report

Bio-Rad	DATE: 07/11/2024
D-10	TIME: 07:22 PM
S/N: #DJ6F040603	Software version: 4.30-2
Sample ID:	01512930
Injection date	07/11/2024 05:05 PM
Injection #: 10	Method: HbA2/F
Rack #: ---	Rack position: 10



Peak table - ID: 01512930

Peak	R.time	Height	Area	Area %
Unknown	0.13	5148	7269	0.3
A1a	0.20	5341	22271	0.9
A1b	0.28	6611	23544	1.0
F	0.44	2640	17819	< 0.8 *
LA1c/CHb-1	0.70	3064	24597	1.0
A1c	0.88	9828	98031	5.7
P3	1.53	16340	133020	5.5
A0	1.73	456684	2032937	84.6
A2	3.30	3060	44770	1.8
Total Area:	2404258			

Concentration:	%
F	< 0.8 *
A1c	5.7
A2	1.8