Patient Ref. No. 810000002057313

Cert. No. MC-2284

Diagnostics

CLIENT CODE : C000027810

CLIENT'S NAME AND ADDRESS :
FHSL BG ROAD - OPD
SURVEY NO. 154/9, OPP. IIM-B,
BANNERGHATTA ROAD,
BANGALORE 560020
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SRL Ltd
154/9, BANNERGHATTA ROAD, OPP. IIM-B,
BANGALORE, 560076
KARNATAKA, INDIA
Tel : 80-66214444, Fax :
CIN - U74899PB1995PLC045956

PATIENT NAME : T NAGARANI PATIENT ID : **FH.11530439**

ACCESSION NO : **0081VB008228** AGE : 59 Years SEX : Female

DRAWN : 10/02/2022 12:09 RECEIVED : 10/02/2022 12:08 REPORTED : 10/02/2022 14:36

REFERRING DOCTOR : DR. Suresh Babu CLIENT PATIENT ID : UID:11530439

CLINICAL INFORMATION :

UID:11530439 REQNO-4142607
OPD-OPD
BILLNO-111322OPCS031271
BILLNO-111322OPCS031271

Test Report Status **Final**	Results	Biological Reference Interval	Units
LIVER FUNCTION TEST			
*** ASPARTATE AMINOTRANSFERASE, SERUM**			
ASPARTATE AMINOTRANSFERASE (AST/SGOT)	15	Upto 32	U/L
ALANINE AMINOTRANSFERASE, SERUM			
ALANINE AMINOTRANSFERASE (ALT/SGPT)	17	Upto 33	U/L
*** GAMMA GLUTAMYL TRANSFERASE, SERUM**			
GAMMA GLUTAMYL TRANSFERASE (GGT)	16	< 40	U/L
BILIRUBIN, TOTAL, SERUM			
BILIRUBIN, TOTAL	0.24	Upto 1.2	mg/dL
BILIRUBIN, DIRECT, SERUM			
BILIRUBIN, DIRECT	0.10	0.0 - 0.2	mg/dL
ALKALINE PHOSPHATASE, SERUM			
ALKALINE PHOSPHATASE	96	35 - 104	U/L
*** TOTAL PROTEIN, SERUM**			
TOTAL PROTEIN	7.2	6.0 - 8.0	g/dL
*** ALBUMIN+GLOBULIN+A/G RATIO, SERUM**			
ALBUMIN	4.1	3.97 - 4.94	g/dL
GLOBULIN	3.1	2.0 - 4.0	g/dL
METHOD : CALCULATED PARAMETER			
ALBUMIN/GLOBULIN RATIO	1.3		RATIO
METHOD : CALCULATED PARAMETER			

Interpretation(s)
ASPARTATE AMINOTRANSFERASE, SERUM-
Aminotransferase (AST) is an enzyme found in various parts of the body .AST is found in the liver, heart, skeletal muscle, kidneys, brain, and red blood cells, and it
commonly measured clinically as a marker for liver health. AST levels increase during chronic viral hepatitis, blockage of the bile duct, cirrhosis of the liver, liver can
kidney failure, hemolytic anemia, pancreatitis, hemochromatosis. AST levels may also increase after a heart attack or strenuous activity.
ALANINE AMINOTRANSFERASE, SERUM-
Alanine aminotransferase (ALT) test measures the amount of this enzyme in the blood. ALT is found mainly in the liver, but also in smaller amounts in the kidneys, h
muscles, and pancreas. It is commonly measured as a part of a diagnostic evaluation of hepatocellular injury, to determine liver health. . AST levels increase durin
hepatitis, sometimes due to a viral infection, ischemia to the liver, chronic hepatitis, obstruction of bile ducts, cirrhosis.
GAMMA GLUTAMYL TRANSFERASE, SERUM-
Gamma glutamyl transferase (GGT) is an enzyme found in cell membranes of many tissues mainly in the liver, kidney, and pancreas. It is also found in other tissues
including intestine, spleen, heart, brain, and seminal vesicles. The highest concentration is in the kidney, but the liver is considered the source of normal enzyme ac

Patient Ref. No. B10000020257313

Cert. No. MC-2284

CLIENT CODE : C00002781O

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Tel : 80-66214444, Fax :
CIN - U74899PB1995PLC045956

PATIENT NAME : T NAGARANI PATIENT ID : **FH.1153**

ACCESSION NO : **0081VB008228** AGE : 59 Years SEX : Female

DRAWN : 10/02/2022 12:09 RECEIVED : 10/02/2022 12:08 REPORTED : 10/02/2022 14:36

REFERRING DOCTOR : DR. Suresh Babu CLIENT PATIENT ID : UID:115304

CLINICAL INFORMATION :

UID:11530439 REQNO-4142607
OPD-OPD
BILLNO-111322OPCS031271
BILLNO-111322OPCS031271

Test Report Status **Final**	Results	Biological Reference Interval	Uni

Serum gamma-glutamyl transferase (GGT) has been widely used as an index of liver dysfunction. Elevated serum GGT activity can be found in diseases of the liv system, and pancreas .Conditions that increase serum GGT are obstructive liver disease, high alcohol consumption, and use of enzyme-inducing drugs etc.
BILIRUBIN, TOTAL, SERUM-
Bilirubin is a yellowish pigment found in bile and is a breakdown product of normal heme catabolism. Bilirubin is excreted in bile and urine, and elevated levels m yellow discoloration in jaundice.Elevated levels results from increased bilirubin production (eg, hemolysis and ineffective erythropoiesis), decreased bilirubin excr obstruction and hepatitis), and abnormal bilirubin metabolism (eg, hereditary and neonatal jaundice).

An elevated bilirubin level in a newborn may be temporary and resolve itself within a few days to two weeks. However, if the bilirubin level is above a critical thre rapidly increases, an investigation of the cause is needed so appropriate treatment can be initiated.

Source: Wallach"s Interpretation of Diagnostic tests, 9th ed2) Wallach"s interpretation of diagnostic tests, 9th ed
BILIRUBIN, DIRECT, SERUM-
Conjugated (direct) bilirubin is elevated more than unconjugated (indirect) bilirubin in Viral hepatitis, Drug reactions, Alcoholic liver disease Conjugated (direct) also elevated more than unconjugated (indirect) bilirubin when there is some kind of blockage of the bile ducts like in Gallstones getting into the bile ducts, tum Scarring of the bile ducts.

Source: Tietz Text book of Clinical Chemistry & Molecular Diagnostics, 4th ed
ALKALINE PHOSPHATASE, SERUM-
Alkaline phosphatase (ALP) is a protein found in almost all body tissues. Tissues with higher amounts of ALP include the liver, bile ducts, and bone. Elevated Alk Phosphaqtase levels are seen in Biliary obstruction,Osteoblastic bone tumors, osteomalacia, hepatitis, Hyperparathyroidism,Leukemia, Lymphoma,Paget's disease,Rickets,Sarcoidosis etc. Lower-than-normal ALP levels seen in Hypophosphatasia, Malnutrition, Protein deficiency,Wilson's disease .
TOTAL PROTEIN, SERUM-
Serum total protein,also known as total protein, is a biochemical test for measuring the total amount of protein in serum..Protein in the plasma is made up of a globulin

Higher-than-normal levels may be due to: Chronic inflammation or infection, including HIV and hepatitis B or C, Multiple myeloma, Waldenstrom's disease
Lower-than-normal levels may be due to: Agammaglobulinemia, Bleeding (hemorrhage),Burns,Glomerulonephritis, Liver disease, Malabsorption, Malnutrition, syndrome,Protein-losing enteropathy etc.
ALBUMIN+GLOBULIN+A/G RATIO, SERUM-
ALBUMIN+GLOBULIN+A/G RATIO, SERUM

Serum total protein,also known as total protein, is a biochemical test for measuring the total amount of protein in serum..Protein in the plasma is made up of globuli.

Higher-than-normal levels may be due to: Chronic inflammation or infection, including HIV and hepatitis B or C, Multiple myeloma, Waldenstrom's disease

Lower-than-normal levels may be due to: Agammaglobulinemia, Bleeding (hemorrhage),Burns ,Glomerulonephritis, Liver disease, Malabsorption,Malnutrition, syndrome,Protein-losing enteropathy etc.Human serum albumin is the most abundant protein in human blood plasma. It is produced in the liver. Albumin con half of the blood serum protein. Low blood albumin levels (hypoalbuminemia) can be caused by:Liver disease like cirrhosis of the liver, nephrotic syndrome, p enteropathy,Burns,,hemodilution, increased vascular permeability or decreased lymphatic clearance,malnutrition and wasting etc.

BIO CHEMISTRY

CALCIUM, SERUM

CALCIUM	9.3	8.6 - 10.0	mg

*** POTASSIUM, SERUM**

POTASSIUM	4.12	3.5 - 5.1	mn

*** SODIUM, SERUM**

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Tel : 80-66214444, Fax :
CIN - U74899PB1995PLC045956

PATIENT NAME : T NAGARANI

PATIENT ID : **FH.115**

ACCESSION NO : **0081VB008228** AGE : 59 Years SEX : Female

DRAWN : 10/02/2022 12:09 RECEIVED : 10/02/2022 12:08 REPORTED : 10/02/2022 14:36

REFERRING DOCTOR : DR. Suresh Babu

CLIENT PATIENT ID : UID:115304

CLINICAL INFORMATION :

UID:11530439 REQNO-4142607
OPD-OPD
BILLNO-111322OPCS031271
BILLNO-111322OPCS031271

Test Report Status **Final**	Results	Biological Reference Interval	Units
SODIUM	141	136 - 145	mmol/L

Interpretation(s)
CALCIUM, SERUM-
Commom causes of decreased value of calcium (hypocalcemia) are chronic renal failure, hypomagnesemia and hypoalbuminemia.

Hypercalcemia (increased value of calcium) can be caused by increased intestinal absorbtion (vitamin d intoxication), increased skeletal reasorption (immobilization), or a combination of mechanisms (primary hyperparathyroidism). Primary hyperparathyroidism and malignancy accounts for 90-95% of all cases o hypercalcemia.

Values of total calcium is affected by serum proteins, particularly albumin thus, latter's value should be taken into account when interpreting serum calciun levels. The following regression equation may be helpful.
Corrected total calcium (mg/dl)= total calcium (mg/dl) + 0.8 (4- albumin [g/dl])*
because regression equations vary among group of patients in different physiological and pathological conditions, mathematical corrections are only approximations. The possible mathematical corrections should be replaced by direct determination of free calcium by ISE (available with srl) a common and important source of preanalytical error in the measurement of calcium is prolonged torniquet application during sampling. Thus, this along with fist clench should be avoided before phlebotomy.
POTASSIUM, SERUM-
Hypokalemia (low K) is common in vomiting, diarrhea, alcoholism, folic acid deficiency and primary aldosteronism. Hyperkalemia may be seen in end-stage renal failure, hemolysis, trauma, Addison's disease, metabolic acidosis, acute starvation, dehydration, and with rapid K infusion.
SODIUM, SERUM-
Increased in dehydration, cushing's syndrome, aldosteronism; Decreased in Addison's disease, hypopituitarism,liver disease.

EIA - INFECTIOUS SECTION

*** HEPATITIS C ANTIBODIES, SERUM**

HEPATITIS C ANTIBODIES	NON REACTIVE	NON REACTIVE	
PATIENT VALUE	0.07	< 1.00 (Non Reactive) > or = 1.00 (Reactive)	S/CO

*** HIV 4TH GEN ASSAY (P24AG + HIV AB), SERUM**

HIV 4TH GEN ASSAY (P24AG + HIV AB)	NON REACTIVE	NON REACTIVE	

METHOD : CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY (CMIA)

*** HEPATITIS B SURFACE ANTIGEN, SERUM**

HEPATITIS B SURFACE ANTIGEN	NON REACTIVE	NON REACTIVE	
PATIENT VALUE	0.22	< 1.00 Non-Reactive > or = 1.00 Reactive	S/CO

METHOD : CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY (CMIA)

Patient Ref. No. 81000002057313

Fortis
Cert. No. MC-2284

SR Diagnos

CLIENT CODE : C0000027810

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CIN - U74899PB1995PLC045956

PATIENT NAME : T NAGARANI PATIENT ID : **FH.115304**

ACCESSION NO : **0081VB008228** AGE : 59 Years SEX : Female

DRAWN : 10/02/2022 12:09 RECEIVED : 10/02/2022 12:08 REPORTED : 10/02/2022 14:36

REFERRING DOCTOR : DR. Suresh Babu CLIENT PATIENT ID : UID:11530439

CLINICAL INFORMATION :

UID:11530439 REQNO-4142607
OPD-OPD
BILLNO-111322OPCS031271
BILLNO-111322OPCS031271

Test Report Status **Final**	Results	Biological Reference Interval	Units

Interpretation(s)
HEPATITIS C ANTIBODIES, SERUM-Hepatitis C Virus (HCV) is a blood borne flavivirus. It is one of the most important causes of post-blood transfusion as well as comm acquired non-A non-B hepatitis and chronic liver failure. Although the majority of infected individuals may be asymptomatic, HCV infection may develop into chronic hepatitis, cirrhosis and/or increased risk of hepatocellular carcinoma.

Notes & Limitations:
- HCV antibody is typically not detected until approximately 14 weeks after infection (or 5 weeks after appearance of the first biochemical marker of illness) and is almo always detectable by the late convalescent stage of infection. - A negative result may also be observed due to loss of HCV antigen, years following resolution of infection. Infants born to hepatitis C infected mothers may have delayed seroconversion to anti-HCV. Hence a negative result should be evaluated cautiously with respe clinical findings. It is to be noted that absence of HCV antibodies after 14 weeks of exposure is strong evidence against HCV infection.
- Presence of HCV antibodies does not imply an active Hepatitis C infection but is indicative of both past and/or recent infection .It has been reported that as many as 9 of individuals receiving intravenous commercial immunoglobulin test falsely positive for HCV antibody. Also,patients with autoimmune liver disease may show a false po HCV antibody result. Hence it is advisable to confirm a positive antibody result with a supplemental test. A positive result when followed by a positive supplemental test HCV-RNA-PCR) suggests active hepatitis C infection.
HIV 4TH GEN ASSAY (P24AG + HIV AB), SERUM-
Acquired immunodeficiency syndrome (AIDS) is caused by 2 types of human immunodeficiency viruses, collectively designated HIV. HIV is transmitted by sexual contac exposure to blood or blood products, and prenatal infection of a fetus or perinatal infection of a newborn.
Phylogenetic analysis classifies HIV-1 into groups M (major), N (non-M, non-O), and O (outlier).HIV-2 is similar to HIV-1 in its structural morphology, genomic organiza cell tropism, in vitro cytopathogenicity, transmission routes, and ability to cause AIDS. However, HIV-2 is less pathogenic than HIV-1.HIV-2 infections have a longer lat period with slower progression to disease, lower viral titers, and lower rates of vertical and horizontal transmission. HIV-2 is endemic to West Africa but HIV-2 infection a low frequency compared to HIV-1, have been identified in the USA, Europe, Asia, and other regions of Africa. India predominantly has HIV-1M subtype C.

Test Utility;
The test used is the 4th generation assay that detects HIV 1 P24 antigen and HIV 1/ 2 antibodies. This leads to improved sensitivity and, therefore, a shorter diagnosti window as compared to 3rd generation anti-HIV assays.

If HIV reactive result is obtained, confirmation of HIV antibody status is done using 2 more antibody tests (as per NACO guidelines-Strategy III algorithm). If indicated serostatus may be confirmed by repeating antibody test on fresh specimen or HIV-1 Western Blot (Immunoblot) Assay (SRL test code #3012) and HIV DNA detector (test code #9885B).
In case of HIV reactive by one method and non reactive by other two methods, results need to be correlated with the clinical history of the patient. As per NACO guide result may be interpreted as "Negative" for low risk individuals and "Indeterminate" in case of high risk individuals.
For tests reported/interpreted as 'Indeterminate, testing should be repeated on a second fresh specimen after 14-28 days. In case the serological results continue to b indeterminate, HIV Western blot /PCR is recommended.

Limitations:
• Antibody tests may give false negative results during the window period, an interval of 3 weeks to 6 months between the time of HIV infection and the production of measurable antibodies to HIV seroconversion. Most people develop detectable antibodies approximately 30 days after infection, although some seroconvert later. The majority of people (97%) have detectable antibodies by three months after HIV infection; a 6-month window is extremely rare with modern antibody testing
• False negative results can occur in patients with X-linked agammaglobulinemia. False positive results can occur in autoimmune disorders, alcoholic hepatitis , multipl pregnancies.
- Early antiretroviral therapy during the window period may alter antibody responses. This does not apply to individuals undergoing treatment with post-exposure prophylaxis (PEP).
• A positive HIV result in an infant <18 months of age may not reflect the infant's HIV infection status.HIV antibodies persist in the sera of infants upto 18 months of a due to transplacentally acquired maternal antibodies. HIV PCR testing is recommended in this age group for diagnosis.
• The presence of HIV antigen or antibodies to HIV is not a diagnosis of AIDS.
• For diagnostic purposes, the results should always be assessed in conjunction with the patient's medical history, clinical examination and other findings.
HEPATITIS B SURFACE ANTIGEN, SERUM-
Hepatitis B is caused by infection with HBV, a enveloped DNA agent that is classified as hepadnavirus.This test detects the presence of viral surface antigen (HbsAg) i serum sample and is indicative of an active HBV infection, either acute or chronic.

Test Utility:
HbsAg is the first serologic marker appearing in the serum 6-16 weeks following hepatitis B viral infection. In typical HBV infection, HBsAg will be detected 2-4 weeks the liver enzyme levels (ALT) become abnormal and 3-5 weeks before patient develops clinical symptoms

Patient Ref. No. 81000002057313

Cert. No. MC-2284

CLIENT CODE : C000027810

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PATIENT NAME : T NAGARANI

PATIENT ID : FH.11

ACCESSION NO : **0081VB008228** AGE : 59 Years SEX : Female

DRAWN : 10/02/2022 12:09 RECEIVED : 10/02/2022 12:08 REPORTED : 10/02/2022 14:36

REFERRING DOCTOR : DR. Suresh Babu

CLIENT PATIENT ID : UID:1153

CLINICAL INFORMATION :

UID:11530439 REQNO-4142607
OPD-OPD
BILLNO-111322OPCS031271
BILLNO-111322OPCS031271

Test Report Status **Final**	Results	Biological Reference Interval	Unit

- For diagnostic purposes, results should be used in conjunction with patient history and other hepatitis markers for diagnosis of acute or chronic infection. If the an results are inconsistent with clinical evidence, additional testing is suggested to confirm the result.
- HBsAg detection will only indicate the presence of surface antigens in the serum and should not be used as the sole criteria for diagnosis, staging or monitoring of infection This test may be negative during ""window period"" i.e. after disappearance of anti-HBs.
- The current assay being a highly sensitive test , may yield a small percentage of false positive reports. Hence all HbsAg positive specimens should be confirmed wit assay based upon Neutralisation of Human anti Hepatitis B Surface antibody.

SPECIALISED CHEMISTRY - HORMONE

* TSH 3RD GENERATION ULTRA(TSH3 - UL), SERUM

TSH 3RD GENERATION	3.010	Non Pregnant Women 0.27 - 4.20 Pregnant Women 1st Trimester: 0.33 - 4.59 2nd Trimester: 0.35 - 4.10 3rd Trimester: 0.21 - 3.15	µIU/mL

Interpretation(s)
TSH 3RD GENERATION ULTRA(TSH3 - UL), SERUM-
Below mentioned are the guidelines for Pregnancy related reference ranges for TSH.

Levels in Pregnancy	TSH (µIU/mL)
First Trimester	0.1 - 2.5
2nd Trimester	0.2 – 3.0
3rd Trimester	0.3 – 3.0

NOTE: TSH concentrations in apparently normal euthyroid subjects are known to be highly skewed, with a strong tailed distribution towards higher TSH values. This is w documented in the pediatric population including the infant age group.

****End Of Report****

Please visit www.srlworld.com for related Test Information for this accession
TEST MARKED WITH '*' ARE OUTSIDE THE NABL ACCREDITED SCOPE OF THE LABORATORY.

Dr. Uma Ramesh, MD

Dr. Latha T

Dr. Prajwal A, MD