

Prepared for **Priti Kotian**

ACCESSION NO:0002UC131606 AGE: 40 yrs | SEX: Female

SRL MUMBAI - GOREGAON

SRL LIMITEDPRIME SQUARE BUILDING,PLOT NO 1,GAIWADI INDUSTRIAL ESTATE,S.V. ROAD,GOREGAON (W)MUMBAI,

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: 022 - 67801212CIN -

U74899PB1995PLC045956Email: connect@srl.in

ESRL Diagnostics

Personal Health Report

Complete Care Premium with Smart+ Health Report

A comprehensive analysis of your health using **Blood data**



29/03/2021

Date of test

29/03/2021
Report released on



Your Health Summary - Complete Care Premium with Smart+ Health Report

Congratulations for getting a health check done. This is the first step towards taking control of your health. We noticed that you are doing well with the following:

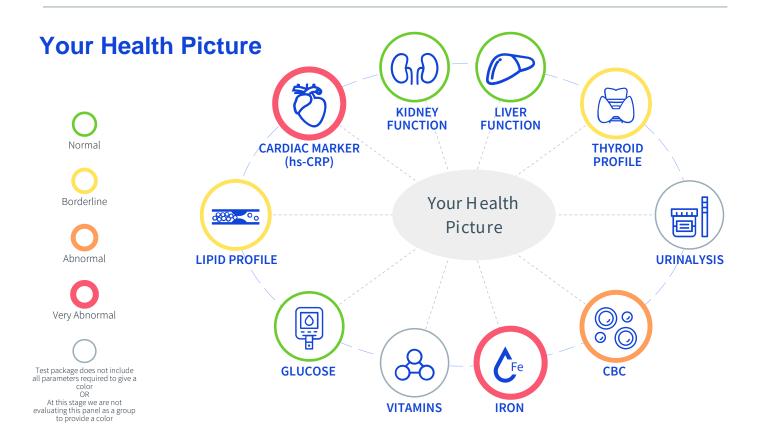


- Sugar values are normal
- Kidney functions have tested normal
- Thyroid function test is normal
- Your folic acid values are normal

Please note! There are a few test results which seem abnormal and need your attention.



- Your cholesterol needs attention
- Your Vit D is low
- Your hemoglobin levels are less
- Liver function tests are out of range
- Vit B12 is tested high
- Iron content in your body



Disclaimer (This report contains two sections: 1. Analysed Smart Report 2. Lab Diagnostic Report)

- If you are pregnant, some of the recommendations in the Smart Report may not directly apply to you. Please consult your doctor.
- The analyzed information in the Smart Report is not ideal for individuals less than 15 years of age.
- Health Vectors will not be liable for any indirect, direct, special, consequential or other damages.
- This report is not intended to replace your doctor. Please make sure you consult your doctor before further actions.
- Please be careful of any food allergies or intolerances that you are
- Analysis uses Blood data only.

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Your Important Parameters at a Glance

Profile

Important parameters in respective profile



HEMOGLOBIN

Value: 9.6 Range: 12-15 RED BLOOD CELL **COUNT**

Value: 3.88

Range: 3.8-4.8

WHITE BLOOD CELL **COUNT**

Value: 8.70 Range: 4-10 Value: 473 Range: 150-410

PLATELET COUNT

HEMATOCRIT

Value: 30.8 Range: 36-46

EOSINOPHILS

Value: 2

Range: 1-6

ABSOLUTE EOSINOPHIL COUNT

Value: 0.17 Range: .02-.5



FERRITIN

Value: 10.0

Range: 13-150

IRON

Value: 26

Range: 37-145



FOLIC ACID HYDROXYVITAMIN D

Value: 27.00

Range: 30-100

Value: 11.70

Range: 4.6-34.8

VITAMIN B12

Value: >2000.0

Range: 197-771



IMMUNOGLOB ULIN

TOTAL IGE

Value: 23.1

Range: 0-113



GLUCOSE

GLUCOSE, FASTING,

PLASMA

Value: 85

Range: 74-99

HbA1c

Value: 5.6

Range: 0-5.7



LIPID PROFILE

CHOLESTEROL

Value: 196

Range: 0-200

TRIGLYCERIDES

Value: 69

Range: 0-150

HDL CHOLESTEROL

Value: 57

Range: 40-60

Value: 132

Range: 100-130

LDL

(i) The overall effect of lipid profile is determined mainly by LDL, HDL and marginally by Triglycerides, age and





Your Important Parameters at a Glance

Profile

Important parameters in respective profile



HIGH SENSITIVITY

Value: 7.52 Range: 0-1

APOLIPOPROTEIN - B

Value: 0.96 Range: .55-1.72



CREATININE

Value: 0.61 Range: .6-1.1

MICROALBUMIN/ CREATININE RATIO

Value: 3.65 Range: 0-30 **URIC ACID**

Value: 4.0 Range: 2.4-5.7 CALCIUM

Value: 8.6 Range: 8.6-10

Kidney function is assessed by Serum Creatinine, Urine Alb/Creat Ratio primarily while Uric Acid, Calcium, Serum Albumin, age and gender also contribute



ASPARTATE **AMINOTRANSFERASE**

Value: 21 Range: 0-32 ALANINE AMINOTRANSFERASE

Value: 20 Range: 0-33 **ALKALINE PHOSPHATASE**

Value: 77 Range: 35-104 BILIRUBIN, TOTAL

Value: 0.26 Range: 0-1.2

GAMMA GLUTAMYL TRANSFERASE (GGT)

Value: 11 Range: 0-40 TOTAL PROTEIN

Value: 6.7 Range: 6-8

ALBUMIN

Value: 3.8 Range: 3.97-4.94

Liver as an organ seems normal even though the individual liver function tests are deranged.



TSH 3RD **GENERATION**

Value: 3.680 Range: .27-4.2 **FREE** TRIIODOTHYRONINE

Value: 2.04 Range: 2.04-4.4 FREE THYROXINE (FT4)

Value: 1.10 Range: .93-1.71

(i) The thyroid function group color is largely dependent on TSH result, Free T3, Free T4 and slightly on age and



KETONES

Value: NOT DETECTED

GLUCOSE

Value: NOT DETECTED

PROTEIN

Value: NOT DETECTED

NITRITE

Value: NOT DETECTED

SPECIFIC GRAVITY

Value: 1.020

Range: 1.003-1.035

RED BLOOD CELLS

Value: NOT DETECTED







Hemoglobin

Result: 9.6

Range: 12-15

Hemoglobin is the red color pigment in the blood which is formed by a combination of iron (heme) and a protein (globin).



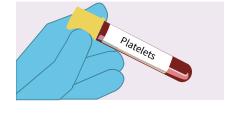
If the hemoglobin is reduced, it is called anemia causing the person to feel:

- Fatigue or weakness
- Loss of appetite & weight loss
- Shortness of breath on exertion
- Light headedness
- Dizziness
- Fast heartbeat etc.

What can you do about it?



Consult your doctor to evaluate the cause of Anemia in you. You maybe given Vitamin or Iron supplements if it is nutritional related anemia. However, there are other causes also.



Platelet Count

Result: 473

Range: 150-410

A platelet count is a lab test to count how many platelets are there in the blood.

Platelets are a component of the blood that help the blood clot when there are cuts/injuries.

Cause / Effect of these parameters



- Anemia (ex iron deficiency, hemolytic etc.)
- Vit B12 Def, Folate deficiency
- Physical activity or exertion
- Inflammatory conditions (Rhematoid arthritis, IBD)
- Spleen surgically removed
- Others (cancer, TB, drugs etc.)

What can you do about it?



Please consult a doctor to evaluate your condition and treat the underlying cause.







Ferritin

Result: **10.0**

Range: 13-150

The body uses some of the iron it gets from food right away to make hemoglobin in the blood. But it also stores iron for times when there is not enough in the diet. Iron is stored in a protein called ferritin. And to see how much is stored in the body, doctors might order a ferritin blood test.

Cause / Effect of these parameters



Low levels of Ferritin usually mean Iron deficiency. The person can have:

- Fatigue or weakness
- Loss of appetite & weight loss
- Shortness of breath on exertion
- Light headedness
- Dizziness
- Fast heartbeat etc.

What can you do about it?



Consult your doctor to help you evaluate low ferritin. Your doctor might suggest iron supplements if required.



Iron

Result: 26

Range: **37-145**

parameters

Iron is an essential mineral, which performs many complex processes and functions in the body. Primarily it is involved in the transfer of oxygen from the lungs to tissue.

A reduced amount of iron in the bloodstream will make it hard to produce enough healthy oxygen rich red blood cells.

Cause / Effect of these



Reduced iron can cause iron deficiency anemia.

When the body doesn't get oxygen that it needs to function, the heart must work harder to make up for the lack of red blood cells. The person may experience

- Severe fatigue
- Dizziness
- Headache
- Pale skin
- Shortness of breath on exertion
- O Coldness in the hands & feet, etc.

What can you do about it?



Consult your doctor to help you evaluate low iron.









Vitamin D

Result: **27.00**

Range: 30-100

Vitamin D is called the "sunshine" vitamin. When the sun's light rays enter bare skin, it sets off a reaction in the body that produces vitamin D.

As many of us spend more time indoors, we're lacking in Vitamin D.

Cause / Effect of these parameters

Vitamin D deficiency causes weak bones which we may feel like bone pains, muscle pains or muscle weakness.

What can you do about it?



You have borderline Vit D. Your doctor can help you with supplements of vitamin D.

Exposure to sunlight will cause vitamin D production in the body. Avoid spending more time indoors.

Limit the use of sunscreen lotions.



Vit B12

Result: **>2000.0**

Range: 197-771

Vit B12 is a vitamin or nutrient which is required by the body's nerves to be healthy and for the production of blood cells. It also is required in making of the DNA (the genetic material) in all the cells of the body.

Vit B12 is found naturally in a variety of non veg foods but veg diet does not contain vit B12 unless they are fortified.

Cause / Effect of these parameters



- Tiredness, fatigue
- Loss of appetite, constipation
- Weight loss
- Anemia

Normal

- Depression, confusion, poor memory
- Numbness, tingling in hands & feet etc

High Vit B12 is usually seen if the blood is tested while consuming Vit B12 supplements.

What can you do about it?



Pg 7 of 13

Consult your doctor to adjust your Vitamin supplements if you were on any. Your doctor will be able to evaluate the cause of high Vit B12 in you.







Immunoglobulin IgE

Result: 23.1

Range: 0-113

Immunoglobulins are special proteins produced by the body in response to foreign substances. IgE is a type of immunoglobulin which mediates allergic and hypersensitivity reactions. When a person is exposed to an allergen (ex. dust, round worm infestation inside the body, etc.), the body produces IgE as a response to counter it. This IgE can be measured and can indicate allergies, infections and parasitic infestations.

Cause / Effect of these parameters



Increased IgE is seen in

- Atopic diseases- Atopic eczema, Hay fever, Exogenous asthma etc.
- Parasitic diseases (ex. infestation with Round worm, hook worm, tape worm etc.)
- Pulmonary Aspergillosis (fungal lung infection)
- Immunodeficiency
- Other causes

What can you do about it?



Good you have normal IgE levels.



LDL

Result: 132

Range: 100-130

Cholesterol is a waxy, fat-like substance that is found in the blood.

LDL-C (Low Density Lipoprotein Cholesterol) is a type of cholesterol and is also called as "bad" cholesterol.

Increased levels of LDL-C in blood causes clogging of blood vessels to the heart and brain over time.

Cause / Effect of these parameters



As a person ages, bad cholesterol in blood can lead to formation of blockages in the blood vessels of the heart or brain which can in old age lead to heart attack or stroke.

What can you do about it?



The elevated LDL-C can be reduced by

- Low cholesterol diet
- Increasing physical activity
- Reducing weight
- Cholesterol lowering medicines if recommended by doctor







hs-CRP

Result: **7.52**

Range: 0-1

Inflammation is a protective response of the body to any injury or infection. During inflammation, a protein called C- reactive protein (CRP) is released. CRP can be measured in blood and if it is detected, then it means there is some injury or infection somewhere in the body. hs-CRP is high sensitive CRP which predicts increased risk of a future heart attack or stroke.

Cause / Effect of these parameters



The commonest reason for elevated CRP could be as simple as a sore throat.

However hs-CRP levels may be raised in the following conditions also:

- Risk of Heart Attack
- Burns injury
- Bacterial infections
- Joint inflammation
- Other immune disorders etc.

What can you do about it?



Your doctor can help you to evaluate the cause of high hs-CRP and address it.

Following a heart friendly lifestyle (healthy diet, regular exercise) is important to reverse the issue.



blood instead of leaking out. It also

carries medicines and hormones

throughout the body.

S. Albumin

Result: 3.8

Range: 3.97-4.94

Serum albumin is a type of protein in the blood. It plays an important role in growth and healing of the body. It helps in keeping the water or fluids within the Cause / Effect of these parameters



O

Reduced serum albumin is seen in several conditions like:

- Malnutrition (not eating enough proteins)
- Kidney disease (proteins lost in urine due to weak kidneys)
- Liver disease etc (not enough proteins produced in weak liver)
- Infections
- Burns

What can you do about it?



Consult your doctor to evaluate the cause for borderline low albumin. Treating the cause is important.





Your Diet Dos & Don'ts

The following are covered in your Diet Dos & Don'ts:

Heart safe | Iron rich | Vitamin D rich | Protein rich | Cholesterol lowering | Immunity improving diet

Fruits and Vegetables

- Have 4-5 servings of fruits and vegetables daily
- Consume butter fruit/avocado as it is known to increase HDL and decrease LDL
- Consume more cooked green vegetables like broccoli and cabbage which are rich in
- Include mushrooms (if you consume) in your diet, as they are rich in vitamin D
- Tomato paste/puree is a good source of iron
- Vitamin C rich fruits and vegetables like capsicum, sweet lime, guava, kiwi, lemons are essential to improve immunity
- Vegetables and fruits like mushroom, beans, grapes, lettuce are rich in B complex vitamins, chromium and selenium which help improve immunity
- Broccoli and spinach are rich in chromium, selenium and B complex vitamins which are essential for immunity
- Consume 1-2 garlic cloves in the morning on empty stomach as it helps increase good cholesterol and reduce bad cholesterol
- Consume high fiber vegetables like okra, eggplant (brinjal), carrots etc. for cholesterol management
- Rather than drinking fresh fruit juices, it is preferable to eat the fruit



Cereals

- Consume millets like ragi, jowar, bajra, etc.
- Have high fiber cereals like brown rice, red rice, whole wheat, oats, quinoa etc.
- Have breakfast cereals (cornflakes, oats, muesli, etc.) fortified with iron
- Bajra is high in iron
- Have a wholesome breakfast cereal high in fibre like broken wheat/oatmeal/quinoa porridge whole wheat chapati/multigrain sandwich
- Whole grains like wheat, barley, oats, brown rice are rich sources of Zinc, Chromium, B complex vitamins that help improve immunity.
- Avoid using refined cereals like maida, corn flour, white rice, etc.





Pulses

- ✓ Consume dal with husk (skin)
- ✓ Consume rajma, green mung
- ✓ Have pulses like (kabuli chana, green and black chana)
- ✓ Have soy/soya in the form beans/ nuggets/ flour/ tofu. Soak beans in warm water overnight
- Consume pulses like lobia, rajma, moong, kabuli channa and dals as they are rich sources of Zinc, selenium and B complex vitamins that help improve immunity





Dairy

- ✓ Have skimmed or low fat milk and its products like curd, paneer etc.
- ✓ Have milk and milk products which are additionally fortified with vitamin D everyday
- Avoid high fat or sweetened dairy products like khoa, cheese, sweetened yogurt, malai paneer (instead have low fat paneer)
- While having milk do not add coffee or tea decoction to it
- Avoid consuming flavoured milk and curd/yogurt as they have added preservatives and plenty of sugar

Nuts and Seeds

- ✓ You can snack on whole nuts like almonds, walnuts, groundnuts, etc. in small quantities between meals.
- Add flaxseeds, chia seeds or sabja seeds (high in omega 3 fatty acids) to your cereals, salads, yogurt, dal
- Consume dry fruits rich in iron like pista, raisins, dates, almonds, anjeer
- ✓ Nuts and seeds like almonds, cashew nuts, sesame seeds, sunflower seeds are rich in nutrients like Zinc, Selenium, B complex vitamins that help to improve immunity
- Avoid consumption of salted or fried nuts





Oils and Fats

- Consume only 1-2 teaspoons of oil in a day. Some of the good oils are sunflower, rice bran, ground nut, olive oil, etc. Use these oils in rotation rather than sticking to one
- ✓ It is better to use cold pressed oils
- ✓ Keep oil consumption to not more than half litre per person per month
- Limit consumption of saturated fats like ghee, butter, etc.
- Avoid fried foods
- Avoid high fat items like peanut butter, mayonnaise, etc.





Meats

- Eat high quality lean proteins which are normally present in egg whites and chicken
- ✓ Include 1-2 portions of fatty fish like salmon, mackerel or tuna in a week
- Consume fatty fish and sea foods like mackerel, sardines, tuna, shrimps, salmon etc. as they are the richest natural food sources of vitamin D
- Lean poultry meat like chicken is rich in nutrients like zinc, selenium and B complex vitamins that are essential to improve immunity
- Fish and shell fish contain zinc, selenium, B complex vitamins that help improve immunity
- Avoid red meat (mutton, lamb, beef, pork, etc.)
- Meat should be properly cooked. Avoid raw/ undercooked meats
- Avoid consumption of cured meats like dry salted fish or meat, sausages, salami, etc. as they are very rich in salts, fats and artificial preservatives
- Avoid egg yolk (yellow)



General Advice

- ✓ Squeeze some lemon (high in vitamin C) on all the iron rich foods like green leafy vegetables, dals, etc. as it enhances iron absorption
- ✓ Consume 4-5 small meals rather than three big meals and avoid skipping meals
- If you feel hungry between meals, it's okay to snack, but just remember to eat healthy snacks like fruit bowl, sprouts salad, nuts, etc.
- Use healthy cooking methods such as steaming, boiling, roasting, stewing and poaching
- Read food labels and choose your foods wisely. Limit consumption of foods that have high quantity of preservatives, salt/sodium, trans fats, added sugars, artificial sweeteners, colors and additives
- ✓ Keep at least a 2 hours gap between your last meal and bedtime
- ✓ Pay attention to the food you eat, stop when you feel full and do not overeat
- ✓ Include in your diet light foods like clear soups, lemon juice (without sugar), seasonings like pepper, mint, garlic, curry leaves
- Avoid sweets (they are high in fats and sugar)
- Avoid alcohol (if you drink)
- Avoid sugar and other refined carbohydrates
- Limit consumption of snacks such as candies, french fries, instant noodles, ice-cream and soft drinks because they contain many calories that not only cause obesity but also affect our appetite and hinder the intake of nutritious food
- Please consult your doctor for your daily fluid intake





ACCESSION NO

Your Next Steps

Doctor Consultation



In view of the reports, please consult:

DOCTOR

CONDITION

Physician

High hs-CRP, low ferritin, low iron, low vit D, high Vit B12, low Hemoglobin, high Platelet count, low albumin, high cholesterol

Other Advice



- Your doctor can help you with supplements of vitamin D. Exposure to sunlight will cause vitamin D production in the body.
- Avoid covering your face, hands & feet when you are out in the sunshine. Limit the use of sunscreen lotions to improve your vitamin D.

Follow Ups

Please check your weight and blood pressure on regular basis. Your doctor knows best - please seek his/her advice for the follow up tests.



After 6 weeks

o hs-CRP

After 3 months

- Fasting Lipid Profile
- Complete Blood Count
- Peripheral Smear
- Vit B12
- Ferritin
- Total Iron

After 6 months

O Vit D



How to improve my immunity?

"Our immune system is our first line of defense."

- Exercise If you exercise at least five times a week, you cut the risk of colds by nearly half compared to people who are largely sedentary. Even if you get sick, you will have less severe symptoms
- Sleep Those who sleep less than five hours per night have 4.5 times more chances of developing a cold than those who sleep more than seven hours
- Diet 70% of the immune system is housed in the gut system. To help this, eat healthy foods like green leafy vegetables, citrus fruits, nuts, berries, fish, whole grains, garlic, foods rich in Zinc, Selenium, vitamins A, D, C and E
- Stress less, practice meditation, avoid smoking, alcohol and other addictive substances



THE END OF SMART HEALTH REPORT

Your laboratory diagnostic report continues...











PRITI KOTIAN

400104

COLUMN CO

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MUMBAI, 400062

MAHARASHTRA, INDIA Tel: 9111591115, Fax: 022 - 67801212

CIN - U74899PB1995PLC045956

Email: connect@srl.in

PATIENTID: PRITF1209802 PATIENT NAME: PRITI KOTIAN

ACCESSION NO: 0002UC131606 AGE: 40 Years SEX: Female DATE OF BIRTH: 12/09/1980

DRAWN: 29/03/2021 08:29 RECEIVED: 29/03/2021 11:24 REPORTED: 29/03/2021 18:11

REFERRING DOCTOR: SELF CLIENT PATIENT ID :

Test Report Status <u>Final</u>	Results		Biological Reference Interval	Units
COMPLETE CARE PREMIUM WITH SMART				
REPORT				
BLOOD COUNTS				
HEMOGLOBIN	9.6	Low	12.0 - 15.0	g/dL
METHOD: PHOTOMETRIC MEASUREMENT, CYANMETHEMOGL	OBIN METHOD			Ü
RED BLOOD CELL COUNT	3.88		3.8 - 4.8	mil/µL
METHOD: COULTER PRINCIPLE				
WHITE BLOOD CELL COUNT	8.70		4.0 - 10.0	thou/µL
METHOD: COULTER PRINCIPLE				
PLATELET COUNT	473	High	150 - 410	thou/µL
METHOD: ELECTRONIC IMPEDENCE & MICROSCOPY				
RBC AND PLATELET INDICES				
HEMATOCRIT	30.8	Low	36.0 - 46.0	%
METHOD: CALCULATED PARAMETER				
MEAN CORPUSCULAR VOL	79.3	Low	83.0 - 101.0	fL
METHOD: DERIVED PARAMETER FROM RBC HISTOGRAM				
MEAN CORPUSCULAR HGB.	24.7	Low	27.0 - 32.0	pg
METHOD: CALCULATED PARAMETER				
MEAN CORPUSCULAR HEMOGLOBIN CONCENTRATION METHOD: CALCULATED PARAMETER	31.1	Low	31.5 - 34.5	g/dL
RED CELL DISTRIBUTION WIDTH	16.6	High	11.6 - 14.0	%
METHOD: DERIVED PARAMETER FROM RBC HISTOGRAM				
MEAN PLATELET VOLUME	7.7		6.8 - 10.9	fL
METHOD : DERIVED PARAMETER FROM PLATELET HISTOGRAI	M			
WBC DIFFERENTIAL COUNT				
SEGMENTED NEUTROPHILS	55		40 - 80	%
METHOD: VCS TECHNOLOGY/ MICROSCOPY				
ABSOLUTE NEUTROPHIL COUNT	4.79		2.0 - 7.0	thou/µL
METHOD: CALCULATED PARAMETER				·
EOSINOPHILS	2		1.0 - 6.0	%
METHOD: VCS TECHNOLOGY/ MICROSCOPY				
ABSOLUTE EOSINOPHIL COUNT	0.17		0.02 - 0.50	thou/µL
METHOD: CALCULATED PARAMETER				
LYMPHOCYTES	35		20 - 40	%
METHOD: VCS TECHNOLOGY/ MICROSCOPY				
ABSOLUTE LYMPHOCYTE COUNT	3.05	High	1.0 - 3.0	thou/µL
METHOD: CALCULATED PARAMETER				
MONOCYTES	8		2.0 - 10.0	%





PRITI KOTIAN

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CIN - U74899PB1995PLC045956

Email: connect@srl.in

PATIENT NAME: PRITI KOTIAN PATIENT ID: PRITF1209802

ACCESSION NO: 0002UC131606 AGE: 40 Years SEX: Female DATE OF BIRTH: 12/09/1980

DRAWN: 29/03/2021 08:29 RECEIVED: 29/03/2021 11:24 REPORTED: 29/03/2021 18:11

REFERRING DOCTOR: SELF CLIENT PATIENT ID:

Test Report Status <u>Final</u>	Results		Biological Reference Interval	Units	
METHOD: VCS TECHNOLOGY/ MICROSCOPY					
ABSOLUTE MONOCYTE COUNT	0.70		0.2 - 1.0	thou/µL	
METHOD: CALCULATED PARAMETER					
BASOPHILS	0		0 - 1	%	
METHOD: VCS TECHNOLOGY/ MICROSCOPY					
ABSOLUTE BASOPHIL COUNT	0	Low	0.02 - 0.10	thou/µL	
METHOD: CALCULATED PARAMETER					
ERYTHRO SEDIMENTATION RATE, BLOOD					
SEDIMENTATION RATE (ESR)	68	High	0 - 20	mm at 1 hr	
METHOD: AUTOMATED (PHOTOMETRICAL CAPILLARY STOPPED FLOW KINETIC ANALYSIS)					

PERIPHERAL SMEAR EXAM, EDTA WHOLE BLOOD

RBC Mild anisopoikilocytosis. Microcytic hypochromic with ovalocytes.

METHOD: MICROSCOPIC EXAMINATION

WBC Normal morphology

METHOD: MICROSCOPIC EXAMINATION

PLATELETS Adequate in smear.

METHOD: ELECTRICAL IMPEDENCE / MICROSCOPIC EXAMINATION

GLUCOSE, FASTING, PLASMA

0

NormalRange

METHOD: SPECTROPHOTOMETRY HEXOKINASE

GLUCOSE, FASTING, PLASMA 85 74 - 99 mg/dL

04-JUL-2019

29-MAR-2021

121 ¬
96.8 88
72.6 48.4 P
24.2 -

Date ----->

FASTING BLOOD GLUCOSE, PLASMA

GLYCOSYLATED HEMOGLOBIN, EDTA WHOLE BLOOD

15-JUN-2017

DIAGNOSTIC REPORT





CLIENT CODE: C000021258
CLIENT'S NAME AND ADDRESS:

PRITI KOTIAN

400104

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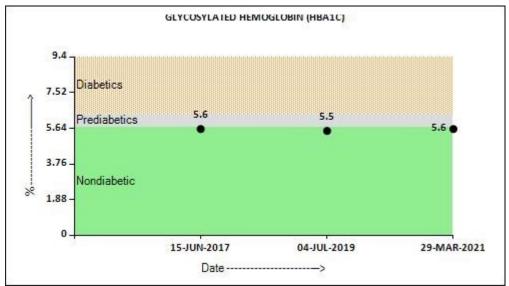
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Test Report Status <u>Final</u>	Results	Biological Reference Interval	Units
GLYCOSYLATED HEMOGLOBIN (HBA1C)	5.6	Non-diabetic: < 5.7 Pre-diabetics: 5.7 - 6.4 Diabetics: > or = 6.5 ADA Target: 7.0 Action suggested: > 8.0	%
METHOD: ION- EXCHANGE HPLC			
MEAN PLASMA GLUCOSE	114.0	< 116.0	mg/dL
METHOD: CALCULATED PARAMETER			



HIGH SENSITIVITY C-REACTIVE PROTEIN, SERUM

HIGH SENSITIVITY CRP 7.52 High Low risk for CAD: mg/L

< 1.00

Average risk for CAD: 1.00 - 3.00

High risk for CAD:

> 3.00

METHOD: NEPHELOMETRY, PARTICLE- ENHANCED IMMUNONEPHELOMETRY

CORTISOL, SERUM

CORTISOL 10.50 Morning 6 - 10 am ug/dL

4.82-19.50 Afternoon 4 - 8 pm

2.47-11.90

METHOD: COMPETITIVE ELECTROCHEMILUMINESCENCE IMMUNOASSAY





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Email: connect@srl.in

PATIENT NAME: PRITI KOTIAN PATIENT ID: PRITF1209802

ACCESSION NO: 0002UC131606 AGE: 40 Years SEX: Female DATE OF BIRTH: 12/09/1980

DRAWN: 29/03/2021 08:29 RECEIVED: 29/03/2021 11:24 REPORTED: 29/03/2021 18:11

REFERRING DOCTOR: SELF CLIENT PATIENT ID:

Test Report Status <u>Final</u> Results Biological Reference Interval Units

Comments

NOTE: THE REFERENCE RANGE APPEARING ON THE REPORT FOR SERUM CORTISOL IS TIME SPECIFIC. THERE IS NO REFERENCE RANGE ESTABLISHED FOR SERUM CORTISOL SPECIMEN COLLECTED BEFORE OR AFTER TIME GIVEN ON THE REPORT. THE 'IN RANGE' & 'OUT OF RANGE' COLUMNS ARE NOT APPLICABLE FOR THIS VALUE OF SERUM CORTISOL.

LIVER FUNCTION PROFILE, SERUM

ETVER TONGTON TROTTEE, SEROW				
BILIRUBIN, TOTAL	0.26		Upto 1.2	mg/dL
METHOD: SPECTROPHOTOMETRY, COLORIMETRIC -DIAZO METHOD				
BILIRUBIN, DIRECT	0.14		0.0 - 0.2	mg/dL
METHOD: SPECTROPHOTOMETRY, JENDRASSIK & GROFF - DIAZOTIZ	ZATION			
BILIRUBIN, INDIRECT	0.12		0.1 - 1.0	mg/dL
METHOD: CALCULATED PARAMETER				
TOTAL PROTEIN	6.7		6.0 - 8.0	g/dL
METHOD: SPECTROPHOTOMETRY, COLORIMETRIC -BIURET, REAGEN	NT BLANK, SERUM BLANK			
ALBUMIN	3.8	Low	3.97 - 4.94	g/dL
METHOD: SPECTROPHOTOMETRY, BROMOCRESOL GREEN(BCG) - DY	YE BINDING			
GLOBULIN	3.0		2.0 - 3.5	g/dL
METHOD: CALCULATED PARAMETER				
ALBUMIN/GLOBULIN RATIO	1.3		1.0 - 2.1	RATIO
METHOD: CALCULATED PARAMETER				
ASPARTATE AMINOTRANSFERASE (AST/SGOT)	21		Upto 32	U/L
METHOD: SPECTROPHOTOMETRY, WITHOUT PYRIDOXAL PHOSPHATE	E ACTIVATION(P5P) - IFCC			
ALANINE AMINOTRANSFERASE (ALT/SGPT)	20		Upto 33	U/L
METHOD: SPECTROPHOTOMETRY, WITHOUT PYRIDOXAL PHOSPHATE	E ACTIVATION(P5P) - IFCC			
ALKALINE PHOSPHATASE	77		35 - 104	U/L
METHOD: SPECTROPHOTOMETRY, PNPP, AMP BUFFER - IFCC				
GAMMA GLUTAMYL TRANSFERASE (GGT)	11		< 40	U/L
METHOD: SPECTROPHOTOMETRY, ENZYMATIC COLORIMETRIC - G-G	SLUTAMYL-CARBOXY-NITROAN	ILIDE -	IFCC	
LACTATE DEHYDROGENASE	193		< 223	U/L
METHOD: SPECTROPHOTOMETRY, LACTATE TO PYRUVATE - UV-IFCC	,			
TOTAL IRON BINDING CAPACITY, SERUM				
IRON	26	Low	37 - 145	μg/dL
METHOD: SPECTROPHOTOMETRY, COLORIMETRIC, FERROZINE MET	HOD WITHOUT DEPROTEINIZ	ATION.		
UIBC	323.7		135 - 392	μg/dL
METHOD: SPECTROPHOTOMETRY, DIRECT DETERMINATION WITH F	ERROZINE			
TOTAL IRON BINDING CAPACITY	349		250 - 400	μg/dL
METHOD: CALCULATED PARAMETER				
% SATURATION	7	Low	15 - 50	%
METHOD: CALCULATED PARAMETER				

FERRITIN, SERUM





PRITI KOTIAN

400104

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ESTATE, S. V. ROAD, GOREGAON (W)

MUMBAI, 400062

MAHARASHTRA, INDIA Tel: 9111591115, Fax: 022 - 67801212

CIN - U74899PB1995PLC045956

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FERRITIN	10.0	Low	13.0 - 150.0	ng/mL
METHOD: SANDWICH ELECTROCHEMILU	UMINESCENCE IMMUNOASSAY			
MICROALBUMIN, URINE				
SPOT URINE MICROALBUMIN	4.2		< 20	mg/L
METHOD: SPECTROPHOTOMETRY, IMMU				
CREATININE, URINE	115		UNDEFINED	mg/dL
METHOD: SPECTROPHOTOMETRY	0.45		N	,
MICROALBUMIN/ CREATININE R	ATIO 3.65		Normal < 30.0 Microalbuminuria 30.0 - 299.0 Clinical Albuminuria = or> 300.0	mg/g creat
METHOD: CALCULATED PARAMETER				
25 - HYDROXYVITAMIN D, SE	ERUM			
25 - HYDROXYVITAMIN D	27.00	Low	Deficiency: < 20.0 Insufficiency: 20.0 - < 30.0 Sufficiency: > 30.0 - 100.0 Excess: > 100.0 -150.0 Toxicity: > 150.0	ng/mL
METHOD: COMPETITIVE ELECTROCHEM	ILUMINESCENCE IMMUNOASSAY		,	
CALCIUM, SERUM				
CALCIUM	8.6		8.6 - 10.0	mg/dL
METHOD: SPECTROPHOTOMETRY, NM -	BAPTA			
VITAMIN B12 LEVEL, SERUM				
VITAMIN B12	> 2000.0	High	197 - 771	pg/mL
METHOD: COMPETITIVE ELECTROCHEM	ILUMINESCENCE IMMUNOASSAY			
CORONARY RISK PROFILE (L	IPID PROFILE), SERUM			
CHOLESTEROL	196		Desirable cholesterol level < 200 Borderline high cholesterol 200 - 239 High cholesterol > / = 240	mg/dL
METHOD: SPECTROPHOTOMETRY, ENZY	MATIC COLORIMETRIC - CHOLETSEROL OXIDASE, ES	TERASE, PEF	ROXIDASE	
TRIGLYCERIDES	69		Normal: < 150 Borderline high: 150 - 199 High: 200 - 499 Very High: >/= 500	mg/dL
	MATIC ENDPOINT WITH GLYCEROL BLANK			
HDL CHOLESTEROL	57		Low HDL cholesterol < 40 High HDL cholesterol > /= 60	mg/dL
METHOD CRECTROPHOTOMETRY HOME	OCENEOUS DIDECT ENTANATIC COLODINETDIC			

METHOD: SPECTROPHOTOMETRY, HOMOGENEOUS DIRECT ENZYMATIC COLORIMETRIC





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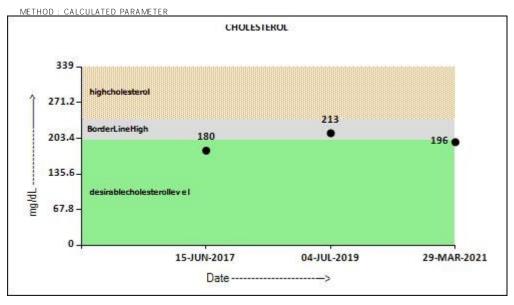
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DIRECT LDL CHOLESTEROL	132	High	Optimal: < 100 Near optimal/above optimal: 10 129 Borderline high: 130 - 159 High: 160 - 189 Very high: > / = 190	mg/dL 00 -
METHOD: SPECTROPHOTOMETRY, HOMOGENEOUS ENZ	YMATIC COLORIMETRIC			
NON HDL CHOLESTEROL	139	High	Desirable: < 130 Above Desirable: 130 -159 Borderline High: 160 - 189 High: 190 - 219 Very high: > / = 220	mg/dL
METHOD: CALCULATED PARAMETER				
CHOL/HDL RATIO	3.4		Low Risk: 3.3 - 4.4 Average Risk: 4.5 - 7.0 Moderate Risk: 7.1 - 11.0 High Risk: > 11.0	
METHOD: CALCULATED PARAMETER			3	
LDL/HDL RATIO	2.3		Desirable/Low Risk: 0.5 - 3.0 Borderline/Moderate Risk: 3.1 - 6.0 High Risk: > 6.0	
METHOD: CALCULATED PARAMETER				
VERY LOW DENSITY LIPOPROTEIN	13.8		< or = 30.0	mg/dL







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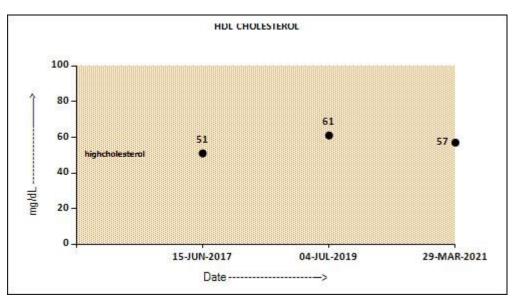
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DIAGNOSTIC REPORT





CLIENT CODE: C000021258 CLIENT'S NAME AND ADDRESS:

PRITI KOTIAN

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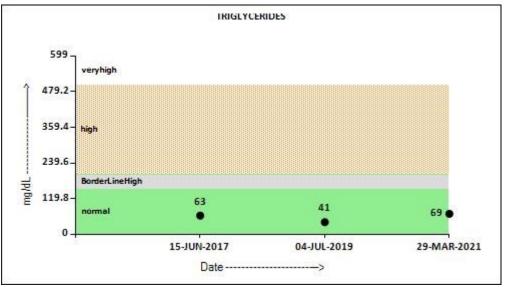
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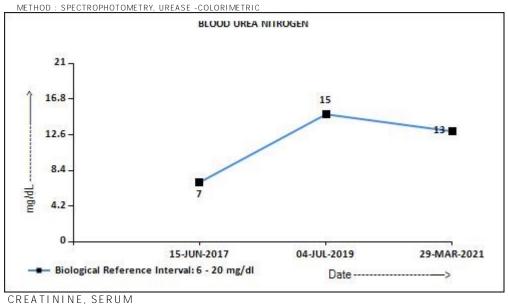
REFERRING DOCTOR: SELF CLIENT PATIENT ID:

Results Biological Reference Interval Units Test Report Status <u>Final</u>



SERUM BLOOD UREA NITROGEN

BLOOD UREA NITROGEN 13 6 - 20 mg/dL



CREATININE 0.61 0.60 - 1.10 mg/dL





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METHOD - SPECTBORHOTON	VETDA IVEEE, S VINVIINE	PICRATE KINETIC - RATE BLANKED - IFCC	TZ 2MOL?	NNA DIZED	
BUN/CREAT RATIO	METRI, JAFFE 3 ALKALINE	PICKATE KINETIC - KATE BLANKED - IFCC	IDIVIS 31 <i>1</i>	ANDARIZED	
BUN/CREAT RATIO		21.31	Hiah	8 - 15	
METHOD : CALCULATED PAR	A METER	21.31	111911	0 - 13	
URIC ACID, SERUM	OTTOLETER				
URIC ACID		4.0		2.4 - 5.7	mg/dL
METHOD : SPECTROPHOTON	METRY, ENZYMATIC COLO			2.4 - 3.7	mg/uL
TOTAL PROTEIN, SER					
TOTAL PROTEIN		6.7		6.0 - 8.0	g/dL
	METRY, COLORIMETRIC -B	IURET, REAGENT BLANK, SERUM BLANK		0.0	9/42
ALBUMIN, SERUM					
ALBUMIN		3.8	Low	3.97 - 4.94	g/dL
METHOD: SPECTROPHOTOM	METRY, BROMOCRESOL GE	REEN(BCG) - DYE BINDING			J
GLOBULIN					
GLOBULIN		2.9		2.0 - 3.5	g/dL
METHOD : CALCULATED PAR	RAMETER				9
ELECTROLYTES (NA/	K/CL), SERUM				
SODIUM		136		136 - 145	m m ol/L
METHOD : ISE INDIRECT					
POTASSIUM		4.20		3.5 - 5.1	m m ol/L
METHOD: ISE INDIRECT					
CHLORIDE		102		98 - 106	m m ol/L
METHOD: ISE INDIRECT					
URINALYSIS					
COLOR		PALE YELLOW			
METHOD: REFLECTANCE SP	ECTROPHOTOMETRY				
APPEARANCE		CLEAR			
METHOD: REFLECTANCE SP	ECTROPHOTOMETRY				
PH		6.0		4.7 - 7.5	
METHOD: REFLECTANCE SP	ECTROPHOTOMETRY- DO	UBLE INDICATOR METHOD			
SPECIFIC GRAVITY		1.020		1.003 - 1.035	
	ECTROPHOTOMETRY- PKA	A CHANGE OF AN IONIC POLYELECTROLYTE			
GLUCOSE		NOT DETECTED		NOT DETECTED	
	ECTROPHOTOMETRY, DO	UBLE SEQUENTIAL ENZYME REACTION-GO	D/POD	NOT DETECTED	
PROTEIN	ECTROPHOTOL STOW	NOT DETECTED		NOT DETECTED	
METHOD: REFLECTANCE SP	ECIKUPHUIOMEIRY - PR	OTEIN-ERROR-OF-INDICATOR PRINCIPLE NOT DETECTED		NOT DETECTED	
KLIUNES		NOT DETECTED		NOT DETECTED	

METHOD: REFLECTANCE SPECTROPHOTOMETRY, ROTHERA'S PRINCIPLE





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BLOOD	NOT DETECTED	NOT DETECTED					
METHOD: REFLECTANCE SPECTROPHOTOMETRY, PEROXIDASE LIKE ACTIVITY OF HAEMOGLOBIN							
BILIRUBIN	NOT DETECTED	NOT DETECTED					
METHOD: REFLECTANCE SPECTROPHOTOMETRY, DIAZOTI	ZATION- COUPLING OF BILIRUBIN WITH	DIAZOTIZED SALT					
UROBILINOGEN	NORMAL	NORMAL					
METHOD: REFLECTANCE SPECTROPHOTOMETRY - EHRLIC	H REACTION						
NITRITE	NOT DETECTED	NOT DETECTED					
METHOD: REFLECTANCE SPECTROPHOTOMETRY, CONVER	SION OF NITRATE TO NITRITE						
WBC	1-2	0-5	/HPF				
METHOD: MICROSCOPIC EXAMINATION							
EPITHELIAL CELLS	0-1	0-5	/HPF				
METHOD: MICROSCOPIC EXAMINATION							
RED BLOOD CELLS	NOT DETECTED	NOT DETECTED	/HPF				
METHOD: MICROSCOPIC EXAMINATION							
CASTS	NOT DETECTED						
METHOD: MICROSCOPIC EXAMINATION							
CRYSTALS	NOT DETECTED						
METHOD: MICROSCOPIC EXAMINATION							
BACTERIA	NOT DETECTED	NOT DETECTED					
METHOD: MICROSCOPIC EXAMINATION							
Comments							
URINALYSIS: MICROSCOPIC EXAMINATION OF URIDAPOLIPOPROTEIN - B, SERUM	NE IS CARRIED OUT ON CENTRIFUC	GED URINARY SEDIMENT.					
APOLIPOPROTEIN - B	0.96	0.55 - 1.72	g/L				
METHOD: NEPHELOMETRY, IMMUNONEPHELOMETRY							
FOLIC ACID, SERUM							
FOLIC ACID	11.70	4.6 - 34.8	ng/mL				
METHOD: COMPETITIVE ELECTROCHEMILUMINESCENCE I	MMUNOASSAY						
TOTAL IGE, SERUM							
TOTAL IGE	23.1	0.0 - 113.0	kU/L				
METHOD: FLUOROENZYME IMMUNOASSAY							
FREE TRIIODOTHYRONINE (FT3), SERUM							
FREE TRIIODOTHYRONINE (FT3)	2.04	Non-Pregnant Women	pg/mL				
(2)		2.04 - 4.40	1. 3.				
		Pregnant Women 1st Trimester: 2.46 - 3.89					
		2nd Trimester: 2.46 - 3.89					
		3rd Trimester: 2.01 - 3.27					
METHOD COMPETITIVE FLECTDOCHEMILIAMINECCENICE I	A 40 ALLALO A C C A V						

METHOD: COMPETITIVE ELECTROCHEMILUMINESCENCE IMMUNOASSAY

DIAGNOSTIC REPORT





μIU/mL

CLIENT CODE: C000021258 CLIENT'S NAME AND ADDRESS:

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FREE THYROXINE (FT4), SERUM

FREE THYROXINE (FT4) 1 10 Non-Pregnant Women ng/dL

0.93 - 1.71 Pregnant Women

1st Trimester: 0.94 -1.52 2nd Trimester: 0.75 - 1.32 3rd Trimester: 0.65 - 1.24

METHOD: COMPETITIVE ELECTROCHEMILUMINESCENCE IMMUNOASSAY TSH 3RD GENERATION ULTRA (TSH3 - UL), SERUM

TSH 3RD GENERATION Non Pregnant Women 3.680

0.27 - 4.20 Pregnant Women

1st Trimester: 0.33 - 4.59 2nd Trimester: 0.35 - 4.10 3rd Trimester: 0.21 - 3.15

METHOD: SANDWICH ELECTROCHEMILUMINESCENCE IMMUNOASSAY

BLOOD COUNTS-The cell morphology is well preserved for 24hrs. However after 24-48 hrs a progressive increase in MCV and HCT is observed leading to a decrease in MCHC. A direct smear is recommended for an accurate differential count and for examination of RBC morphology.

RBC AND PLATELET INDICES-The cell morphology is well preserved for 24hrs. However after 24-48 hrs a progressive increase in MCV and HCT is observed leading to a decrease in MCHC. A direct smear is recommended for an accurate differential count and for examination of RBC morphology.

ERYTHRO SEDIMENTATION RATE, BLOOD-Erythrocyte sedimentation rate (ESR) is a non - specific phenomena and is clinically useful in the diagnosis and monitoring of

disorders associated with an increased production of acute phase reactants. The ESR is increased in pregnancy from about the 3rd month and returns to normal by the 4th week post partum. ESR is influenced by age, sex, menstrual cycle and drugs (eg. corticosteroids, contraceptives). It is especially low (0 -1mm) in polycythaemia, hypofibrinogenemia or congestive cardiac failure and when there are abnormalities of the red cells such as polkilocytosis, spherocytosis or sickle cells.

- Nathan and Oski's Haematology of Infancy and Childhood, 5th edition
 Paediatric reference intervals. AACC Press, 7th edition. Edited by S. Soldin
- 2. Praedath reference intervals. Acc Press, 7th edition. Edited by 5. Solution and Lewis, 10th Edition GLUCOSE, FASTING, PLASMA-ADA 2012 guidelines for adults as follows:

 Pre-diabetics: 100 125 mg/dL

 Diabetic: > or = 126 mg/dL

(Ref: Tietz 4th Edition & ADA 2012 Guidelines)
GLYCOSYLATED HEMOGLOBIN, EDTA WHOLE BLOOD-

Glycosylated hemoglobin (GHb) has been firmly established as an index of long-term blood glucose concentrations and as a measure of the risk for the development of complications in patients with diabetes mellitus. Formation of GHb is essentially irreversible, and the concentration in the blood depends on both the life span of the red blood cell (average 120 days) and the blood glucose concentration. Because the rate of formation of GHb is directly proportional to the concentration of glucose in the blood, the

GHb concentration represents the integrated values for glucose over the preceding 6-8 weeks.

Any condition that alters the life span of the red blood cells has the potential to alter the GHb level. Samples from patients with hemolytic anemias will exhibit decreased glycated hemoglobin values due to the shortened life span of the red cells. This effect will depend upon the severity of the anemia. Samples from patients with polycythemia or post-splenectomy may exhibit increased glycated hemoglobin values due to a somewhat longer life span of the red cells.
Glycosylated hemoglobins results from patients with HbSS, HbCC, and HbSC and HbD must be interpreted with caution, given the pathological processes, including anemia,

increased red cell turnover, transfusion requirements, that adversely impact HbA1c as a marker of long-term glycemic control. In these conditions, alternative forms of testing such as glycated serum protein (fructosamine) should be considered.
"Targets should be individualized More or less stringent glycemic goals may be appropriate for individual patients. Goals should be individualized based on duration of

diabetes, age/life expectancy, comorbid conditions, known CVD or advanced microvascular complications, hypoglycemia unawareness, and individual patient considerations."

Tietz Textbook of Clinical Chemistry and Molecular Diagnostics, edited by Carl A Burtis, Edward R.Ashwood, David E Bruns, 4th Edition, Elsevier publication, 2006.

2. Forsham PH. Diabetes Mellitus: A rational plan for management. Postgrad Med 1982, 71,139-154.
3. Mayer TK, Freedman ZR: Protein glycosylation in Diabetes Mellitus: A review of laboratory measurements and their clinical utility. Clin Chim Acta 1983, 127, 147-184. HIGH SENSITIVITY C-REACTIVE PROTEIN, SERUM-

High sensitivity CRP measurements may be used as an independent risk marker for the identification of individuals at risk for future cardiovascular disease. Measurement of hs-CRP, when used in conjunction with traditional clinical laboratory evaluation of acute coronary syndromes, may be useful as an independent marker of prognosis for recurrent events, in patients with stable coronary disease or acute coronary syndromes





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When using this assay for risk assessment, patients with persistently unexplained, marked elevation of hs- CRP (> 10mg/l) after repeated testing should be evaluated for non cardiovascular etiologies. In Rheumatic and other inflammatory diseases, value of CRP less than 10 mg/l is considered satisfactory. More than 10 mg/l suggests disease activity. Patients with evidence of active infection, systemic inflammatory processes or trauma should not be tested for cardiovascular disease risk assessment until these conditions have abated
Hs- CRP levels should not be substituted for assessment of traditional cardiovascular risk factors.

Turbidity and particles in the sample may interfere with the determination. Patient samples which contain heterophilic antibodies could react in immunoassays to give a falsely elevated or depressed result.

Results of this test should always be interpreted in conjunction with the patient's medical history, clinical presentation and other findings

References:

- 1. Teitz textbook of clinical chemistry and Molecular diagnostics, edited by Carl A Burtis, Edward R. Ashrwood, David E Bruns, 4th edition, Elseiver publication, 2006,962-966
- 2. Parson TA, Mensah GA, et al. Marker of inflammation and cardiovascular disease: application to clinical and public health practice. Circulation 2003,107,499-511
- 3. Rheumatoid arthritis disease activity measures: American College of Rheumatology recommendations for use in clinical practice: Jacyln Anderson, Liron Caplin et al, Wiley

CORTISOL, SERUM-Cortisol is the primary glucocorticoid hormone synthesized and secreted by the adrenal cortex. It is essential for life because it regulates carbohydrate, protein, and lipid metabolism, maintains normal blood pressure, and inhibits allergic and inflammatory reactions. Cortisol is synthesized and secreted by the cortex of the adrenal gland under the direction of adrenocorticotropic hormone. Increased ACTH levels stimulate cortisol secretion. The increased cortisol levels inhibit CRH secretion, which

subsequently inhibits ACTH secretion. This negative feedback mechanism results in decreased cortisol levels.

Circulating cortisol levels follow a diurnal pattern in healthy individuals. Levels are highest in the morning after waking and lowest in the evening. Disorders of the hypothalamic-pituitaryadrenal axis override this diurnal pattern. Decreased cortisol levels are induced by either primary or secondary adrenal insufficiency. Addison's disease is caused by primary adrenal insufficiency due to metabolic errors or destruction of the adrenal cortex. Secondary adrenal insufficiency is caused by pituitary destruction or failure, resulting in loss of ACTH stimulation of the adrenal gland. Cushing's syndrome is caused by increased levels of cortisol due to either primary or secondary adrenal hyperfunction. Causes of primary adrenal hyperfunction are adrenal tumors and nodular adrenal hyperplasia. Secondary adrenal hyperfunction is caused by pituitary overproduction of ACTH or ectopic production of ACTH by a tumor. Increased cortisol levels are induced by pregnancy and by stress due to depression, trauma, surgery

hypoglycemia, alcoholism, uncontrolled diabetes, and starvation.

A 24-hour urinary cortisol measurement is the method of choice in the initial screening for Cushing's syndrome because it provides the best assessment of cortisol production.

Urinary cortisol is not subject to the diurnal pattern of secretion and accurately differentiates healthy persons from patients with Cushing's syndrome. Limitations

Circulating cortisol results from patients receiving Prednisolone or Prednisone therapy may be falsely elevated.

Heterophilic antibodies in human serum can react with reagent immunoglobulins, interfering with in vitro immunoassays. Patients routinely exposed to animals or to animal serum products can be prone to this interference and anomalous values may be observed.

Reference:

- 1. Pudek MR. Adrenal hormones. In: Kaplan LA, Pesce AJ, editors. Clinical chemistry: therapy, analysis, and correlation. St. Louis: CV Mosby, 1989. p. 672–81.

 2. Whitley RJ, Meikle AW, Watts NB. Endocrinology, part VI: adrenocortical steroids. In: Burtis CA, Ashwood ER, editors. Textbook of clinical chemistry, 2nd ed. Philadelphia: WB Saunders, 1994. p.1808-21. 3. Chodosh LA, Daniels GH. Addison's disease. Endocrinologist 1993 3(3):166-81
- 4. Miller J, Crapo L. The biochemical diagnosis of hypercortisolism. Endocrinologist 1994 4(1):7–16.

LIVER FUNCTION PROFILE, SERUM-LIVER FUNCTION PROFILE

Billirubin is a yellowish pigment found in bile and is a breakdown product of normal heme catabolism. Billirubin is excreted in bile and urine, and elevated levels may give yellow discoloration in jaundice. Elevated levels results from increased bilirubin production (eg, hemolysis and ineffective erythropoiesis), decreased bilirubin excretion (eg, obstruction and hepatitis), and abnormal bilirubin metabolism (eg, hereditary and neonatal jaundice). Conjugated (direct) bilirubin is elevated more than unconjugated (indirect) bilirubin in Viral hepatitis, Drug reactions, Alcoholic liver disease Conjugated (direct) bilirubin is 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, tumors &Scarring of the bile ducts. Increased unconjugated (indirect) bilirubin may be a result of Hemolytic or pernicious anemia, Transfusion reaction & a common metabolic condition termed Gilbert syndrome, due to low levels of the enzyme that attaches sugar molecules to bilirubin.

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 is 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 cancer, kidney failure, hemolytic anemia, pancreatitis, hemochromatosis. AST levels may also increase after a heart attack or strenuous activity. 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, heart, muscles, and pancreas. It is commonly measured as a part of a diagnostic evaluation of hepatocellular injury, to determine liver health.AST levels increase during acute hepatitis, sometimes due to a viral infection, ischemia to the liver, chronic hepatitis, obstruction

of bile ducts, cirrhosis.

ALP is a protein found in almost all body tissues. Tissues with higher amounts of ALP include the liver, bile ducts and bone. Elevated ALP 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. 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 activity. Serum GGT has been widely used as an index of liver dysfunction. Elevated serum GGT activity can be found in diseases of the liver, biliary system and pancreas. Conditions that increase serum GGT are obstructive liver disease, high alcohol consumption and use of enzyme-inducing drugs etc. 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 albumin and 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, Nephrotic syndrome, Protein-losing enteropathy etc. Human serum albumin is the most abundant protein in human blood plasma. It is produced in the liver. Albumin constitutes about half of the blood serum protein. Low blood albumin levels (hypoalbuminemia) can be caused by: Liver disease like cirrhosis of the liver, nephrotic syndrome, protein-losing enteropathy,Burns,hemodilution,increased vascular permeability or decreased lymphatic clearance,malnutrition and wasting etc TOTAL IRON BINDING CAPACITY, SERUM-Total iron binding capacity (TIBC) measures the blood's capacity to bind iron with transferrin and thus is an indirect way of assessing transferrin level.





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CIN - U74899PB1995PLC045956

Email: connect@srl.in

PATIENT NAME: PRITI KOTIAN PATIENT ID: PRITF1209802

ACCESSION NO: 0002UC131606 AGF: 40 Years SEX: Female DATE OF BIRTH: 12/09/1980

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Results Biological Reference Interval Units Test Report Status <u>Final</u>

Taken together with serum iron and percent transferrin saturation this test is performed when they is a concern about anemia, iron deficiency or iron deficiency anemia. However, because the liver produces transferrin, alterations in liver function (such as cirrhosis, hepatitis, or liver failure) must be considered when performing this test. Increased in:

- iron deficiency
- acute and chronic blood loss
- acute liver damage
- progesterone birth control pills

Decreased in:

- hemochromatosis
- cirrhosis of the liver
- thalassemia
- anemias of infection and chronic diseases
- nephrosis
- hyperthyroidism

The percent Transferrin saturation = Serum Iron/TIBC x 100

Unsaturated Binding Capacity (UIBC) = TIBC - Serum Iron

Limitations: Estrogens and oral contraceptives increase TIBC and Asparaginase, chloramphenicol, corticotropin, cortisone and testosterone decrease the TIBC level.

1. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics, edited by Carl A Burtis, Edward R. Ashwood, David E Bruns, 4th Edition, Elsevier publication, 2006, 563, 1314-1315.

2. Wallach's Interpretation of Diagnostic tests, 9th Edition, Ed Mary A Williamson and L Michael Snyder. Pub Lippincott Williams and Wilkins, 2011, 234-235. FERRITIN, SERUM-Ferritin is a high-molecular-weight protein that contains approximately 20% iron. It occurs normally in almost all tissues of the body but especially in hepatocytes and reticuloendothelial cells, where it serves as an iron reserve. When needed, the iron molecules are released from the apoferritin shell and bind to transferrin, the circulating plasma protein that transports iron to the erythropoietic cells.

A low serum ferritin value is thought to be the best laboratory indicator of iron depletion. Virtually all patients with low serum iron and low ferritin have iron deficiency. Serum Ferritin concentration, when considered with other factors such as serum iron, iron-binding capacity and tissue iron stores is valuable in the diagnosis of iron deficiency anemia, anemia of chronic infection and conditions such as thalassemia and hemochromatosis that are associated with iron overload. It is particularly useful in distinguishing between iron-deficiency anemia (serum ferritin levels diminished) and "anemia of chronic disease" (serum ferritin levels usually normal or elevated).

Ferritin is an acute phase reactant. It can be found to be elevated in the following conditions and do not reflect actual body iron stores: 1.Inflammation 2.Significant tissue "'s disease 5. Therapy with iron supplements. destruction 3. Liver diseases 4. Malignancies such as acute leukemia and Hodgkin'

Heterophilic antibodies in human serum can react with reagent immunoglobulins, interfering with in vitro immunoassays. Patients routinely exposed to animals or to animal serum products can be prone to this interference and anomalous values may be observed.

Microalbuminuria is defined as an increase in urinary excretion of albumin above the reference interval for healthy nondiabetic subjects but at a concentration that is generally detectable by crude clinical tests such as dipstics designed to measure total protein the diagnosis of microalbuminuria requires demonstartion of increased albumin secretion in atleasy two out of three urine samples collected in the absence of infection or an acute metabolic crisis.

It is now considered a clinically important indicator of detiriorating renal function in diabetic subjects..in.diabetic..patients. Regular screening of urinary albumin secretion is valuable in monitoring both type 1 and type 2 diabetes

Screening should comence 5 years after diagnosis in patients with type 1 diabetes and at diagnosis in patients with type 2 diabetes without proteinuria

Screening is not indicated in patients with established proteinuria. All the patients with diabetes mellitus should be screened on annual basis upto the age of

It is important to consider causes of increased albumin excretion, specially in cases of type 1 diabetes present for less than 5 years. These can include nondiabetic renal disease, menstural contamination, vaginal discharge, uncontrolled hypertension, urinary tract infection, heart failure, and strenous exercise.

Note: Our Vitamin D assays is standardized to be in alignment with the ID-LC/MS/MS 25(OH)vitamin D Reference Method Procedure (RMP), the reference procedure for the Vitamin D Standardization Program (VDSP). The VDSP, a collaboration of the National Institutes of Health Office of Dietary Supplements, National Institute of Technology and Standards, Centers for Disease Control and Ghent University, is an initiative to standardize 25(OH)vitamin D measurement across methods 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 of hypercalcemia.

Values of total calcium is affected by serum proteins, particularly albumin thus, latter's value should be taken into account when interpreting serum calcium 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 first clenching should be avoided before phlebotomy





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CORONARY RISK PROFILE (LIPID PROFILE), SERUM-Serum cholesterol is a blood test that can provide valuable information for the risk of coronary artery disease This test can help determine your risk of the build up of plaques in your arteries that can lead to narrowed or blocked arteries throughout your body (atherosclerosis). High cholesterol levels usually don""""""""t cause any signs or symptoms, so a cholesterol test is an important tool. High cholesterol levels often are a significant risk factor for heart disease and important for diagnosis of hyperlipoproteinemia, atherosclerosis, hepatic and thyroid diseases.

Serum Triglyceride are a type of fat in the blood. When you eat, your body converts any calories it doesn''''''''''''''t need into triglycerides, which are stored in fat cells. High triglyceride levels are associated with several factors, including being overweight, eating too many sweets or drinking too much alcohol, smoking, being sedentary, or having diabetes with elevated blood sugar levels. Analysis has proven useful in the diagnosis and treatment of patients with diabetes mellitus, nephrosis, liver obstruction, other diseases involving lipid metabolism, and various endocrine disorders. In conjunction with high density lipoprotein and total serum cholesterol, a triglyceride determination provides valuable information for the assessment of coronary heart disease risk. It is done in fasting state.

High-density lipoprotein (HDL) cholesterol. This is sometimes called the ""good" cholesterol because it helps carry away LDL cholesterol, thus keeping arteries open and blood flowing more freely. HDL cholesterol is inversely related to the risk for cardiovascular disease. It increases following regular exercise, moderate alcohol consumption and with oral estrogen therapy. Decreased levels are associated with obesity, stress, cigarette smoking and diabetes mellitus

SERUM LDL The small dense LDL test can be used to determine cardiovascular risk in individuals with metabolic syndrome or established/progressing coronary artery disease, individuals with triglyceride levels between 70 and 140 mg/dL, as well as individuals with a diet high in trans-fat or carbohydrates. Elevated sdLDL levels are associated with metabolic syndrome and an 'atherogenic lipoprotein profile', and are a strong, independent predictor of cardiovascular disease. Elevated levels of LDL arise from multiple sources. A major factor is sedentary lifestyle with a diet high in saturated fat. Insulin-resistance and pre-diabetes have also been implicated, as has genetic predisposition. Measurement of sdLDL allows the clinician to get a more comprehensive picture of lipid risk factors and tailor treatment accordingly.

Reducing LDL levels will reduce the risk of CVD and MI.

Results of Lipids should always be interpreted in conjunction with the patient's medical history, clinical presentation and other findings.

NON FASTING LIPID PROFILE includes Total Cholesterol, HDL Cholesterol and calculated non-HDL Cholesterol. It does not include triglycerides and may be best used in patients for whom fasting is difficult.
SERUM BLOOD UREA NITROGEN-Causes of Increased levels

Pre renal

- · High protein diet, Increased protein catabolism, GI haemorrhage, Cortisol, Dehydration, CHF Renal
- Renal Failure

Post Renal

· Malignancy, Nephrolithiasis, Prostatism

Causes of decreased levels

- · Liver disease
- SIADH.

CREATININE, SERUM-Higher than normal level may be due to:

- Blockage in the urinary tract
 Kidney problems, such as kidney damage or failure, infection, or reduced blood flow
 Loss of body fluid (dehydration)
- · Muscle problems, such as breakdown of muscle fibers
- · Problem's during pregnancy, such as seizures (eclampsia)), or high blood pressure caused by pregnancy (preeclampsia)

Lower than normal level may be due to:

- Myasthenia Gravis
- Muscular dystrophy

URIC ACID, SERUM-Causes of Increased levels

- Dietary
 High Protein Intake.
- Prolonged Fasting,
- · Rapid weight loss Gout

Lesch nyhan syndrome Type 2 DM. Metabolic syndrome

- Causes of decreased levels
- · Low Zinc Intake • OCP's
- · Multiple Sclerosis

Nutritional tips to manage increased Uric acid levels

- Drink plenty of fluidsLimit animal proteins
- High Fibre foods
 Vit C Intake

· Antioxidant rich foods





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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 albumin and 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, Nephrotic syndrome, Protein-losing enteropathy etc.

ALBUMIN, SERUM-Human serum albumin is the most abundant protein in human blood plasma. It is produced in the liver. Albumin constitutes about half of the blood serum protein. Low blood albumin levels (hypoalbuminemia) can be caused by: Liver disease like cirrhosis of the liver, nephrotic syndrome, protein-losing enteropathy, Burns, hemodilution, increased vascular permeability or decreased lymphatic clearance, malnutrition and wasting etc. ELECTROLYTES (NA/K/CL), SERUM-ELECTROLYTES (NA/K/CL), SERUM

Sodium levels are Increased in dehydration, cushing """s syndrome, aldosteronism & decreased in Addison""s disease, hypopituitarism, liver disease. 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. Chloride is increased in dehydration, renal tubular acidosis (hyperchloremia metabolic acidosis), acute renal failure, metabolic acidosis associated with prolonged diarrhea and loss of sodium bicarbonate, diabetes insipidus, adrenocortical hyperfuction, salicylate intoxication and with excessive infusion of isotonic saline or extremely high dietary intake of salt. Chloride is decreased in overhydration, chronic respiratory acidosis, salt-losing nephritis, metabolic alkalosis, congestive heart failure, Addisonian crisis, certain types of metabolic acidosis, persistent gastric secretion and prolonged vomiting, URINALYSIS-Routine urine analysis assists in screening and diagnosis of various metabolic, urological, kidney and liver disorders

Protein: Elevated proteins can be an early sign of kidney disease. Urinary protein excretion can also be temporarily elevated by strenuous exercise, orthostatic proteinuria, dehydration, urinary tract infections and acute illness with fever

Glucose: Uncontrolled diabetes mellitus can lead to presence of glucose in urine. Other causes include pregnancy, hormonal disturbances, liver disease and certain medications

Ketones: Uncontrolled diabetes mellitus can lead to presence of ketones in urine. Ketones can also be seen in starvation, frequent vomiting, pregnancy and strenuous

Blood: Occult blood can occur in urine as intact erythrocytes or haemoglobin, which can occur in various urological, nephrological and bleeding disorders.

Leukocytes: An increase in leukocytes is an indication of inflammation in urinary tract or kidneys. Most common cause is bacterial urinary tract infection.

Nitrite: Many bacteria give positive results when their number is high. Nitrite concentration during infection increases with length of time the urine specimen is retained in bladder prior to collection.

pH: The kidneys play an important role in maintaining acid base balance of the body. Conditions of the body producing acidosis/alkalosis or ingestion of certain type of food can affect the pH of urine.

Specific gravity: Specific gravity gives an indication of how concentrated the urine is. Increased specific gravity is seen in conditions like dehydration, glycosuria and proteinurla while decreased specific gravity is seen in excessive fluid intake, renal failure and diabetes insipidus. Bilirubin: In certain liver diseases such as biliary obstruction or hepatitis, bilirubin gets excreted in urine.

Urobilinogen: Positive results are seen in liver diseases like hepatitis and cirrhosis and in cases of hemolytic anemia

APOLIPOPROTEIN - B, SERUM-Apolipoproteins are carrier proteins that combine with lipids to form lipoprotein particles, which have hydrophobic lipids at the core and hydrophilic side chains made of amino acids. There are several classes of lipoproteins ranging in density, from VLDL, or very low density lipoproteins, to VHDL, or very high density lipoproteins. There are nine different apolipoproteins that are found in human body, and they can act as signals, that cause lipoproteins to act on certain tissues or that activate enzymes that act on those lipoproteins

Apolipoprotein B (Apo B) is a major protein component of low-density lipoprotein (LDL) comprising > 90% of the LDL proteins and constituting 20% to 25% of the total weight of LDL. Increased plasma concentration of Apo B-containing lipoproteins is associated with an increased risk of developing atherosclerotic disease.

Abetalipoproteinemia and severe hypobetalipoproteinemia can cause malabsorption of food lipids and polyneuropathy. In patients with hyperapobetalipoproteinemia (HALB), a disorder associated with increased risk of developing CHD and with an estimated prevalence of 30% in patients with premature CHD. Apo B is increased disproportionately in relation to LDL cholesterol. Apo B guantitation is required to identify these patients and is necessary in distinguishing HALB from another common lipoprotein abnormality, familial combined hyperlipidemia. Elevated levels of apolipoprotein B are more powerful indicators of disease than cholesterol or LDL in angiographic coronary artery disease. FOLIC ACID, SERUM-Folates are compounds of pteroylglutamic acid (PGA) that function as coenzymes in metabolic reactions involving the transfer of single-carbon units from a donor to a recipient compound. Folate, with vitamin B12, is essential for DNA synthesis, which is required for normal red blood cell maturation. Human obtain folate from dietary sources including fruits, green and leafy vegetables, yeast, and organ meats. Folate is absorbed through the small intestine and stored in the liver

Low folate intake, malabsorption as result of gastrointestinal diseases, pregnancy, and drugs such as phenytoin are causes of folate deficiency. Folate deficiency is also associated with chronic alcoholism. Folate and vitamin B12 deficiency impair DNA synthesis, causing macrocytic anemias. These anemias are characterized by abnormal maturation of red blood cell precursors in the bone marrow, the presence of megaloblasts, and decreased red blood cell survival.

Since both folate and vitamin B12 deficiency can cause macrocytic anemia, appropriate treatment depends on the differential diagnosis of the deficiency. Serum folate measurement provides an early index of folate status. However, folate is much more concentrated in red blood cells than in serum so the red blood cell folate measurement more closely reflects tissue stores. Red blood cell folate concentration is considered the most reliable indicator of folate status.

Methotrexate and Leucovorin interfere with folate measurement because these drugs cross-react with folate binding proteins. TOTAL IGE, SERUM-Introduction: The ImmunoCAP total IgE measures the total quantity of circulating IgE in human serum samples.

Test Utility

- For allergy testing: IgE antibodies appear as a result of sensitization to allergens, and the measurement of circulating total IgE assists the clinical diagnosis of IgE-mediated allergic disorders. Elevated levels of circulating total IgE are usually seen in atopic eczema ,60% of patients with extrinsic asthma, and about 30% cases of hay fever.

 • Parasitic diseases: Values may be elevated in ascariasis, visceral larva migrans, hookworm disease, schistosomiasis, echinococcus infestation).
- Diagnosis of monoclonal IgE myeloma
- Diagnosis of bronchopulmonary aspergillosis.
 Total IgE may be decreased in hereditary deficiencies, acquired immunodeficiency, ataxia telangiaectasia & non-IgE myeloma

DIAGNOSTIC REPORT





CLIENT CODE: C000021258
CLIENT'S NAME AND ADDRESS:

PRITI KOTIAN

400104

SRL LIMITED
PRIME SQUARE BUILDING, PLOT NO 1, GAIWADI INDUSTRIAL

ESTATE, S.V. ROAD, GOREGAON (W)

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CIN - U74899PB1995PLC045956

Email: connect@ srl.in

PATIENT NAME: PRITI KOTIAN PATIENT ID: PRITF1209802

ACCESSION NO: 0002UC131606 AGE: 40 Years SEX: Female DATE OF BIRTH: 12/09/1980

DRAWN: 29/03/2021 08:29 RECEIVED: 29/03/2021 11:24 REPORTED: 29/03/2021 18:11

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Test Report Status <u>Final</u> Results Biological Reference Interval Units

Limitation: A normal level of IgE does not eliminate the possibility of allergy, hence test is not recommended as a stand-alone screen. Value is influenced by type of allergen, duration of stimulation processes of supporting the processes of supporting t

duration of stimulation, presence of symptoms, hyposensitization treatment.
FREE TRIIODOTHYRONINE (FT3), SERUM-The guidelines for age related reference ranges for FT3.

FREE THYROXINE (FT4), SERUM-The guidlines for age related reference ranges for FT4.

New Born (1-4 days) 2.2 - 5.3 ng/dL Children 0.8 - 2.7 ng/dL

Pregnancy

 1st Trimester
 0.7 - 2.0 ng/dL

 2nd & 3rd Trimester
 0.5 - 1.6 ng/dL

2.10 d 3.0 1.11103.01

TSH 3RD GENERATION ULTRA (TSH3 - UL), SERUM-Comment: The Biological Reference Interval of TSH-3rd Generation Ultra [TSH3-UL] is not established for age less than 2 years

Below mentioned are the guidelines for Pregnancy related reference ranges for TSH.

.....

Levels in TSH Pregnancy (μ I U/mL) First Trimester 0.1 - 2.5

2nd Trimester 0.2 - 3.0 . 3rd Trimester 0.3 - 3.0

.....

BIO CHEMISTRY

GLUCOSE, POST-PRANDIAL, PLASMA

GLUCOSE, POST-PRANDIAL, PLASMA 100 70 - 139 mg/dL

METHOD: SPECTROPHOTOMETRY HEXOKINASE





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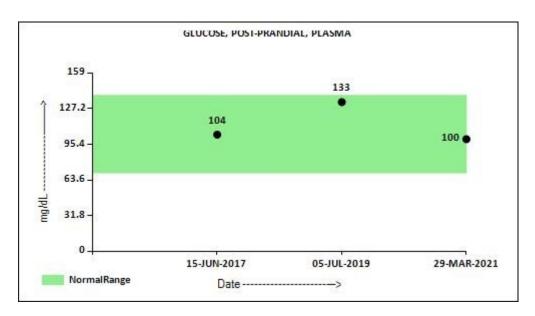
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Interpretation(s)

GLUCOSE, POST-PRANDIAL, PLASMA-ADA Guidelines for 2hr post prandial glucose levels is only after ingestion of 75grams of glucose in 300 ml water, over a period of 5

minutes.

* * End Of Report* *

Please visit www.srlworld.com for related Test Information for this accession

Dr. Kshama P, MD Biochemist

Dr. Ekta Patil,MD Microbiologist Dr. Ravikiran N. Pawar Consultant Hematopathology

DIAGNOSTIC REPORT





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CONDITIONS OF LABORATORY TESTING & REPORTING

- 1. It is presumed that the test sample belongs to the patient named or identified in the test requisition form.
- 2. All Tests are performed and reported as per the turnaround time stated in the SRL Directory of services (DOS).
- 3. SRL confirms that all tests have been performed or assayed with highest quality standards, clinical safety & technical integrity.
- 4. A requested test might not be performed if:
- a. Specimen received is insufficient or inappropriate specimen quality is unsatisfactory
 - b. Incorrect specimen type
- c. Request for testing is withdrawn by the ordering doctor or patient
- d. There is a discrepancy between the label on the specimen container and the name on the test requisition form

- 5. The results of a laboratory test are dependent on the quality of the sample as well as the assay technology.
- 6. Result delays could be because of uncontrolled circumstances. e.g. assay run failure.
- 7. Tests parameters marked by asterisks are excluded from the "scope" of NABL accredited tests. (If laboratory is accredited).
- 8. Laboratory results should be correlated with clinical information to determine Final diagnosis.
- 9. Test results are not valid for Medico- legal purposes. 10. In case of gueries or unexpected test results please call at SRL customer care (91115 91115). Post proper investigation repeat analysis may be carried out.

SRL Limited

Fortis Hospital, Sector 62, Phase VIII, Mohali 160062