

# Hepatitis C

## A Case Report

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**Note:** Kindly note that this case report is presented with relevant test reports with permission of the patient. I am thankful to Mr. A.K Rai for providing me all the test reports allowing me to put forward this for the benefit of other doctors/patients.

**Dr. Sahni BS**

### Abstract

Hepatitis is a disease characterized by inflammation of and injury to the liver. Hepatitis has many causes, including misuse of alcohol and drugs, but viruses are the most common cause.

Hepatitis C is a liver disease caused by the hepatitis C virus (HCV), found in the blood of persons who have this disease. A distinct and major characteristic of hepatitis C is its tendency to cause chronic liver disease. At least 75 percent of patients with acute hepatitis C ultimately develop chronic infection, and most of these patients have accompanying chronic liver disease, which can cause cirrhosis, liver failure, and liver cancer.

### Keywords

- **HCV RNA Quantitative:** HCV RNA level has shown to be prognostic marker of clinical disease and is used to predict clinical outcome early in an infection, initiate antiviral therapy and monitor response to treatment.
- **Prothrombin Time:** P.T. is a nonspecific indicator of the extrinsic blood coagulation mechanism. Deficiency of P.T and factor V, VII and X gives rise to a prolonged time as well as the presence of heparin in the blood and hypofibrinogenemia.

### Introduction

Hepatitis C is a liver disease caused by the hepatitis C virus (HCV), which is found in the blood of persons who have this disease. A distinct and major characteristic of hepatitis C is its tendency to cause chronic liver disease. At least 75 percent of patients with acute hepatitis C ultimately develop chronic infection, and most of these patients have accompanying chronic liver disease.

Chronic hepatitis C can cause cirrhosis, liver failure, and liver cancer. About 20 percent of patients develop cirrhosis within 10 to 20 years of the onset of infection. Hepatitis C is the cause of about half of cases of primary liver cancer in the developed world. Men, alcoholics, patients with cirrhosis, people over age 40, and those infected for 20 to 40 years are more likely to develop HCV-related liver cancer.

## Clinical Symptoms of Hepatitis C

Many people with chronic hepatitis C have no symptoms of liver disease. If symptoms are present, they are usually mild, nonspecific, and intermittent. They may include:

- Fatigue
- Mild right-upper-quadrant discomfort or tenderness
- Nausea
- Poor appetite
- Muscle and joint pains

Similarly, the physical examination is likely to be normal or show only mild enlargement of the liver or tenderness. Some patients have vascular spiders or palmar erythema.

## Clinical Features of Cirrhosis

Once a patient develops cirrhosis or if the patient has severe disease, symptoms and signs are more prominent. In addition to fatigue, the patient may complain of muscle weakness, poor appetite, nausea, weight loss, itching, dark urine, fluid retention, and abdominal swelling.

Physical findings of cirrhosis may include:

- Enlarged liver
- Enlarged spleen
- Jaundice
- Muscle wasting
- Excoriations
- Ascites
- Ankle swelling

## Serological Tests for Hepatitis C

1. The best approach to confirm the diagnosis of hepatitis C is to test for HCV RNA using a sensitive polymerase chain reaction (PCR) assay. The presence of HCV RNA in serum indicates an active infection. Testing for HCV RNA is also helpful in patients in whom EIA tests for anti-HCV are unreliable.
2. Western blots
3. PCR Amplification: PCR amplification can detect low levels of HCV RNA in serum. Testing for HCV RNA is a reliable way of demonstrating that hepatitis C infection is present and is the most specific test for infection. Testing for HCV RNA by PCR is particularly useful when aminotransferases are normal or only

slightly elevated, when anti-HCV is not present, or when several causes of liver disease are possible. This method also helps diagnose hepatitis C in people who are immunosuppressed, have recently had an organ transplant, or have chronic renal failure.

## Laboratorial Features

The following are the laboratorial features of Hepatitis C, which will help you better, understand the Clinical Reports presented herein.

The serum aminotransferase AST and ALT (previously designated as SGOT and SGPT) show a variable increase during the prodromal phase of acute viral hepatitis and precedes the rise in bilirubin level. The acute levels of these enzymes, however, do not correlate well with the degree of liver cell damage. Peak levels may vary from 400 to 4000 IU or more; and diminish during the recovery phase. Mild increase in conjugated bilirubin may also be found. The serum bilirubin may continue to rise despite falling serum aminotransferase levels.

Neutropenia and lymphopenia are transient and are followed by a relative lymphocytosis. Measurement of prothrombin time (PT) is important in patients with acute viral hepatitis, for a prolonged value may reflect a severe synthetic defect, signify extensive hepatocellular necrosis, and indicate a worse prognosis. Serum alkaline phosphate may be normal or only mildly elevated. A diffuse but mild elevation of gamma globulin fraction is common during acute hepatitis. Serum IgG and IgM are elevated in about one third of patients during acute phase.

Serological diagnosis of Hep C can be demonstrated by the presence of anti-HCV in serum. Anti-HCV can be detected only in acute Hep C during initial phase, while these are detectible in >90% of chronic Hep C cases. Polymerase chain reaction assay for HCV RNA is the most sensitive test for HCV infection.

## Case Report

**Name of Patient:** A.K. Rai

**Age:** 44 years

**Date of Birth:** 19 January 1960

## Treatment History

As per the records available the patient first visited ONGC Medical Health Center Ahemadabad in the month of May 1998 with the complaint of **fatigue**. The attending doctor recommended blood sugar random, CBC, ESR, Renal Profile and Urine Routine & Microscopic examinations. The results of these reports were found to be within normal limit and henceforth the doctor advised him for simple multivitamin therapy.

The patient consulted different doctors including specialists and undergone their treatment up to 23.9.1999 without any significant improvement. The details of investigation reports are given under in tabular form:

Date	Clinical Investigation	Result *
<b>16.5.1998</b>	Blood Sugar Fasting Urine Sugar Urine Routine & Microscopic  Complete Blood Count (CBC) & ESR  Blood Urea & Serum Creatinine	98 mgs Absent Normal except faint traces of albumin  Within normal limit  Within normal limit
<b>26.8.1998</b>	Urine Routine & Microscopic  Serum Cholesterol Serum Triglycerids Serum Creatinine Sugar Postprandial (PP) Urine Sugar	Normal except faint traces of albumin Within normal limit 238 High 1.4mg Within normal limits Normal
<b>7.9.1998</b>	Serum Bilirubin (Direct) Serum Bilirubin (Indirect) Serum Bilirubin Total SGPT	0.9 mg 0.3mg 1.2 mg 125units/ml
<b>6.10.1998</b>	Serum Creatinine Serum Protein Total Serum Albumin Serum Globulin Albumin : Globulin Serum Bilirubin Direct Serum Bilirubin Indirect Serum Bilirubin Total SGPT Serum Alkaline-phosphate Serum Australian Antigen	1.4mg 7.4g 4.4g 3.0g 1.46 1.26mg 0.66mg 1.92mg 1.06units/ml 81 IU/L Negative
<b>17.10.1998</b>	Serum Alkaline Phosphate Gamma GT Prothrombin Time Antibody to Hep C Virus	82 IU/L 28 IU/L Within normal limits Nil
<b>07.11.1998</b>	Serum Ceruloplasmin Serum Bilirubin Total SGPT ESR First Hour ESR Second Hour CBC	Normal 0.8mg 76 units/ml 4 mms 11 mms Within normal limits
<b>28.11.1998</b>	Urine Routine & Microscopic  Blood Urea Serum Creatinine SGPT	Normal except faint traces of Albumin 31.0 mgs 1.3 mg 60

Date	Clinical Investigation	Result *
<b>23.12.1998</b>	Serum Bilirubin	Normal
<b>17.02.1999</b>	Liver Biopsy	Fatty Changes
<b>01.03.1999</b>	CBC	Normal
	Urine Routine & Microscopic	Normal except faint traces of Albumin
	Total Serum Bilirubin	1.2 mgs
	Serum Bilirubin Direct	0.7 mgs
	Serum Bilirubin Indirect	0.5 mgs
	SGPT	7.0 IU/L
	Alkaline Phosphate	90 IU/L
	PT	Normal
<b>23.9.1999</b>	Urine Routine & Microscopic	Normal except faint traces of Albumin
	ESR First Hour	10 mms
	ESR Second Hour	22 mms
	Serum Bilirubin Direct	0.9 mg
	Serum Bilirubin Indirect	0.7 mg
	Serum Bilirubin Total	1.6 mg
	SGPT	124 units/ml
	Alkaline Phosphate	90 IU/L
	Serum Protein Total	8.4 g
	Serum Albumin	4.9 g
	Serum Globulin	3.5 g
	Serum Albumin: Globulin	1.4
	PT Patient(s)	16 sec
	PT Control	12 sec
	Australian Antigen	Negative
	CBC	Normal

On 28-9-1999, Dr. LN Dalal referred the patient to CMC, Vellore to see Dr. George Professor of Gastroenterology (Hepatology). In the first week of October 99 patient visited CMC, Vellore and the referred doctor opinion was that in view of all normal blood reports there is remote possibility of any serious problem however, still advised more advanced tests: HCV RNA and HBV DNA.

The following are the gist of laboratorial investigations:

Date	Clinical Investigation	Result *
<b>9-02-2000</b>	Hep B (DNA), PCR	Pending
<b>11-03-2000</b>	HCV RNA PCR, QL	1825 (Detected)

In the last week of February 2000 the patient visited homoeopathic Clinic, Mumbai with all clinical reports. On enquiry the patient told that he has only one complaint of WEAKNESS < after exertion and some time complaints of itching in rectum. He also expressed fear of death in view of no known treatment for this viral infection. On the basis of his clinical Diagnosis and mental depression the following medicines was prescribed & was advised to report back after 2 months:

1. Liver 30, 1OZ pills
2. SEP-17, 1 OZ pills
3. Immunity CM, 1OZ pills
4. S.Uplift 200, 1OZ pills

**Dosage:** 3 pills from each, TDS before each meal.

After One-month patient informed on Telephone that the SGPT, which was continuously elevated since 2 years suddenly, became normal for the first time.. The patient contacted Dr. George, CMC Vellore on the phone and informed him about the outcome of the Homoeopathic Treatment.

Dr. George asked the patient to visit him in the mid of March 2000. After consulting Dr. George, advised the patient following treatment:

- Interferon 3 miu 3 times a week for 12 months
- Ribavirin 1 gm OD for 6 months

The patient being more concerned about his disease searched the WWW about the possible treatment HEP C vis-à-vis Interferon. After going through all the relevant information & encouraging results in LFT, decided against the advise of Dr. George & opted to continue the Homoeopathic treatment.

More or less the same homeopathic medicines were continued up to September 2001 except Sulphur 30, 1M, Hepatic Toxin 30, Infection 200, Backup 30, Thuja, Staphisgaria, & Belladonna 30 was prescribed in between the above prescription.

However, the **Hepatitis C RNA, Qt, PCR report never became normal with this treatment.** After going through the reports of this on 8-9-2001 it was decided that the medicines prescribed earlier are not capable of eliminating the virus. As such it was decided to prepare medicine from the blood of the patient itself. Accordingly the patient was informed about this and he agreed to.

Henceforth, the medicine Hepatitis C, 1M was prepared from the blood sample of the patient on 8-11-2001. Liver 30 was replaced with Chelidonium Q and the remaining medicines of first prescription were continued.

The following are the results of investigation performed thereafter:

Date	Clinical Investigation	Result *
<b>30-11-2001</b>	Urine Routine & Microscopic	Normal except faint traces of Albumin
	Blood Urea	27mg
	Serum Creatinine	1.2 mg
	Serum Protein Total	7.2g
	Serum Albumin	5.2 g
	Serum globulin	2.0 g
	Albumin: Globulin	2.6
	Serum Sodium	139.5 M.Eq/L
	Serum Potassium	4.11 M.Eq/L
	Serum Chloride	105 M.Eq/L
	Serum Bilirubin Direct	0.4 mg
	Serum Bilirubin Indirect	0.3 mg
	Total Bilirubin	0.7 mg
	SGPT	24
	Alkaline Phosphate	112
	PT	Normal
	ESR First Hour	3 mms
	ESR Second Hour	5 mms
	CBC	Within normal limit
<b>2-02-2002</b>	Urine Routine & Microscopic	Normal except faint traces of Albumin
	Serum Bilirubin Direct	0.3 mg
	Serum Bilirubin Indirect	0.5 mg
	Total Serum Bilirubin	0.8 mg
	SGPT	25 units
	Alkaline Phosphate	89
	Serum Protein Total	7.8 g
	Serum Albumin	4.8 g
	Serum Globulin	3.0 g
	Serum Albumin: Globulin	1.6
	PT	Normal
	ESR First Hour	4 mms
	ESR Second Hour	11 mms
	CBC	Normal
<b>11-04-2002</b>	Urine Routine & Microscopic	Within Normal Limits
	Serum Bilirubin Direct	0.28 mg
	Serum Bilirubin Indirect	0.49 mg
	Serum Bilirubin Total	0.77 mg
	Alkaline Phosphate	101 IU/L
	Prothrombin Index	78.9%
	Serum Creatinine	1.1mg
	Serum Protein Total	7.2 g

Date	Clinical Investigation	Result *
13-04-2002	Serum Albumin	4.4 g
	Serum Globulin	2.8 g
	Serum Albumin : Globulin	1.57
	Serum Sodium	149.3 M.Eq/L
	Serum Potassium	5.24 M.Eq/L
	Serum Chloride	109.2 M.Eq/L
	Total Lipids	476 mg/dl
	Serum Cholesterol	136 mg/dl
	Serum Triglycerids	165 mg/dl
	HDLC	31 mg/dl
	LDLC	72 mg/dl
	VLDLC	33 mg/dl
	LDLC/HDLC Ratio	2.32
	TC/HDLC Ratio	4.38
	Blood Sugar Fasting	87 mg
	ESR First Hour	7 mms
	ESR Second Hour	16 mms
	CBC	Within normal limits
06-07-2002	Hep C RNA QT, PCR	2067
	Urine Routine & Microscopic	Within Normal Limits
	Blood Urea	24 mg
	Serum Creatinine	0.8 mg
	Serum Protein Total	7.2 g
	Serum Albumin	5.0 g
	Serum Globulin	2.2 g
	Serum Albumin: Globulin	2.27
	Serum Sodium	141.1 M.Eq/L
	Serum Potassium	4.05 M.Eq/L
	Serum Chlorides	101.1 M.Eq/L
	Serum Bilirubin Total	0.8 mg
	SGPT	31 units/ml
	Alkaline Phosphate	87
	PT	Normal
	ESR First Hour	4 mss
	ESR Second Hour	11 mms
	Lipid Profile	Within Normal Limits
	Blood Sugar Fasting	79 mg
	CBC	Normal Except Eosinophils High
19-09-2002	Urine Routine & Microscopic	Within Normal Limits
	Renal Function Test	Normal
	Liver Function Test	Within Normal Limits
	Lipid Profile	Within Normal limit
	ESR	Within Normal limit
	CBC	Within Normal limit

Date	Clinical Investigation	Result *
11-11-2002	HEP C RNA, QT, PCR	<600
	Anti-Nuclear AB-IFA, Hep 2	Negative
	TSH Third Generation	4.57 Slightly High
	PT	Within Normal Limits
	Liver Function Profile	Within Normal Limits
	Total Proteins	Slightly High

## Details of Homeopathic & Vibronic Medicines Used

### Vibronic Remedies:

1. **Liver 30C:** It contains the properties of Cardus Mar, Chellidonium, China, Lycopodium, Mercurious and Phosphorous. It was used to tone up liver and to filter poison from the body.
2. **Sep 17:** It contains Gallbladder, Liver Cells and Liver Tissue. It is mostly indicated in Cirrhosis of Liver, Jaundice and acts as tonic for Liver and Gallbladder.
3. **Immunity CM:** It has the properties of Gun Powder, Interferon, Kali Phos, Thymus and Virus Bacteria. This was used to tone up the immune system.
4. **Uplift 200:** It has the properties of Barley Green, booster, debility, nutrition and multivitamin. It acts as a booster for the system.
5. **Hepatic Toxin 30C:** To eliminate the toxins from Liver
6. **Infection 200:** It is indicated for any infection in the body and is always added with Immunity, Uplift to boost the system while infection is being treated.
7. **Backup 30C:** It is indicated when there is low energy in the body, all debilitating and chronic illnesses and malignancies as a background to hold the patient while treatment is being given.

### Homeopathic Remedies:

8. **Sulphur 30C, 1M:** Given as a constitutional remedy and on the basis of mental symptoms (Delusion: Disease is Incurable)
9. **Belladonna 30C:** This was given during treatment to treat the acute throat infection.
10. **Staphisgaria 1M:** This was used to treat the tension coz of office work (Depression: From Work).
11. **Thuja 1M:** Used as constitutional remedy
12. **Chellidonium Q:** Used as Liver remedy, which covers almost all related symptoms to this organ.
13. **Hepatitis C 1M:** Nosode made from the Hep C infected blood sample on the basis of Similars.

## Conclusion

From the above results one can see that Homeopathic & Vibronic Medicines are able to treat successfully highly infectious diseases like Hepatitis C.

\* The Normal Clinical Values of Results are:

Clinical Investigation	Normal Range
<b>Liver Function Test</b>	
Total Serum Bilirubin	0.3 – 1.0 mgs%
Serum Bilirubin Direct	0.3 – 0.6 mgs%
Serum Bilirubin Indirect	0.2 – 0.4 mgs%
SGPT	Up to 40.0 IU/L
SGOT	Up to 40.0 IU/L
Serum Alkaline Phosphate	60 – 170 IU/L
<b>Renal Function Test</b>	
Blood Urea	15240 mg%
Serum Creatinine	0.1 – 1.4 mg%
NPN	26 – 43 mg%
DUN	8 – 22 mg%
Serum Proteins Total	6.2 – 8.3 g%
Serum Albumin	4.0 – 5.7 g%
Serum Globulin	1.5 – 3.0 g%
Albumin : Globulin	1.3 – 4.0
Serum Sodium	137 – 148 M-Eq/L
Serum Potassium	3.52 – 5.6 M-Eq/L
Serum Chlorides	97 – 107 M-Eq/L
Plasma Bicarbonates	24 – 33 M-Eq/L
ESR Wester Green Method	3 – 7 First Hour
<b>Blood Sugar</b>	
Fasting	72 – 100 mg%
Post Meals/ Dinner	Up to 120 mg%
2 hrs after glucose	Up to 100 mg%
Serum Ceruloplasmin	231 – 291 mg/L (Normal Male)
<b>CBC</b>	
Hemoglobin	16 $\pm$ 2 g%
Total RBC	5.4 $\pm$ 0.8 M/C.mm
Total WBC	5000 – 11000 /C.mm
Polymorphs	60 – 70 %
Lymphocytes	20 – 30 %
Eosinophils	1 – 4 %
Monocytes	2 – 6 %
Basophiles	0 – 1 %
Platelets	1,50, 000 – 5,00,000 /C.mm
<b>Serum Lipid Profile</b>	
Total Lipids	400 – 700 mg/dl
Serum Cholesterol	< 200
Serum Triglycerids	<250
HDLC	35 – 50
LDLC	<100
VLDLC	<35
LDLC/HDLC Ratio	Up to 3.5
TC/HDLC Ration	Up to 5.0

# DR. VANIKAR'S PATHOLOGY LABORATORY

DR. S. V. VANIKAR M. D. (PATH. & BACT.)

Consultant Pathologist

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8-9, Narayan Chambers,

Near Nehrubridge End,

Beside Bhulabhai Colony Bus-Stand,

Ashram Road,

AHMEDABAD-380 009.

T. No. 6578364

Ref. No. 1292/ONGC

Name Mr. A.K.Rai

Age

Sex Male.

Referred by Dr. Avasthi M.B.B.S

Date 16/5/98

Nature of Specimen Urine

Exam. required Routine exam

## URINE REPORT

Specimen : ~~Catheter~~ Catheter/Non Catheter

<b>Physical</b>	: Quantity	-	
	Colour	-	Normal yellow
	Odour	-	Normal
	Deposits	-	Absent
	Clarity	-	Clear
	Reaction	-	Acid
	Sp. Gr.	-	1008
<b>Chemical</b>	: Albmuen	-	Present in faint traces
	Sugar	-	Absent
	Acetone	-	Absent
	Bile Salts	-	Absent
	Bile Pigments	-	Absent
<b>Microscopic</b>	: W.B.C. (Pus Cell)	-	Occasional
	Red Blood Cell	-	Occasional
	Casts	-	Absent
	Type	-	Absent
	Crystals	-	A few uric acid crystals
	Amorphous	-	Absent
	Epithelial Cells	-	A few.
<b>Special Tests</b> : (when indicated)	-	-	

B.T.Patel,  
Dr. S. V. Vanikar  
Pathologist

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Near Nehrubridge End,

Beside Bhulabhai Colony Bus-Stand,

Ashram Road,

AHMEDABAD-380 009.

T. No. 6 5 7 8 3 6 4

Ref. No. 1292/ONGC

Name Mr. A.K.Rai

Age

Sex Male.

Referred by Dr. Avasthi M.B.B.S

Date 16/5/98

Nature of Specimen Blood

Exam. required for Kidney function test (Partial)

<u>Test</u>	<u>Patient's Values</u>		<u>Normal Values</u>	
1. Blood Urea <u>Method :- Berthelot's reaction</u> <u>(Endpoint)</u>	-	30.0	mgs. %	- (20.0 to 40.0 mgs. %)
2. Serum Creatinine <u>Method :- Alkaline Picrate</u> <u>(Initial Rate)</u>	-	1.3	mgs. %	- (0.4 to 1.4 mgs. %)

These tests done on an autoanaylser

B.I.Patel  
Dr. S. V. Vanikar

Pathologist

# **DR. SHAH'S PATHOLOGY LABORATORY**

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FAX NO. : 079-6575541 PHONE : 6575541/6578450

**LABORATORY :**

MEDICARE CENTRE, FIRST FLOOR, BEHIND M. J. LIBRARY  
ELLISBRIDGE, AHMEDABAD-380 006.

**HOURS :**

8-00 A.M. TO 8-00 P.M. (OR BY APPOINTMENT)

CLOSED ON SUNDAY.

**Ref. No. :** 9080/98

**Date :** 7/9/98

**Name :** A.K.Rai

**Age :** 40 Y. **Sex :** M.

**Ref by :** ONGC.

**Investigation required :**

Liver Function Tests :

1) **S. Bilirubin :**

S. Bilirubin (Direct) : 0.9 mg %

S. Bilirubin (Indirect) : 0.3 mg %

S. Bilirubin (Total) : 1.2 mg %

Normals :

0.1 to 0.8 mg %

2) **S. G. P. T. :**

125 Units/ml.

6 to 30 Units/ml.

3) **S. Alk. phosphatase :**

-

151 to 471 lu/L (Children)

60 to 170 lu/L (Adults)

4) **S. Proteins : (Total)**

6.2 to 8.3 g. %

S. albumin : 4.0 to 5.7 g. %

S. globulin : 1.5 to 3.0 g. %

S. albumin : globulin 1.3 to 4.0

5) **Gamma G. T. :**

9 - 52 lu/L (Male)

5 - 32 lu/L (Female)

6) **Prothrombin time :**

Patients'

Control's

Prothrombin index

7) **SERUM AUSTRALIA ANTIGEN (HBsAg) (ELISA)**

**Method :** HBsAg membrane (Elisa) Chromatographic immunoassay.

**Report :**

S. Australia antigen : (HBsAg)

Test is

HBsAg :

Less than 1 ng./ml.

  
Pathologist

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**HOURS :**

8-00 A.M. TO 8-00 P.M. (OR BY APPOINTMENT)

CLOSED ON SUNDAY.

**Ref. No. :** 10,595/98

**Date :** 6-10-98

**Name :** Arunkumar Ray

**Age :** 48 Y. **Sex :** M.

**Ref by :** ONGC.

Investigation required : Renal Function Tests :

**Report :**

**Normals :**

1)	Blood Urea :	-	15 to 40 mg. %
2)	S. Creatinine :	1.4 mg %	0.1 to 1.4 mg. %
3)	Bl. Non-protein nitrogen (NPN) :-		26 to 43 mg. %
4)	Blood urea nitrogen : (BUN) :-	-	8 to 22 mg. %
5)	S. Proteins : (Total)	7 , 4 g %	6.2 to 8.3 g. %
	S. Albumin :	4.4 g %	4.0 to 5.7 g. %
	S. Globulin :	3.0 g %	1.5 to 3.0 g. %
	Albumin : Globulin	1.46	1.3 to 4.0
6)	Serum Electrolytes & Bicarbonates :		
	Serum Sodium :	137 to 148	M. Eq./L
	Serum potassium :	3.5 to 5.6	M. Eq./L
	Serum Chlorides :	97 to 107	M. Eq./L
	Plasma Bicarbonates :	24 to 33	M. Eq./L

Tech : S. Sodium / S. Potassium : Ion Selective Electrodes ECS 2000

7) Any other test

*B. Shing*  
Pathologist

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**Age :** 48 Y. **Sex :** M.

**Ref by :** ONGC.

**Investigation required :**

**Liver Function Tests :**

		<b>Normals :</b>
1)	S. Bilirubin :	
	S. Bilirubin (Direct) :	1.26 mg %
	S. Bilirubin (Indirect) :	0.66 mg %
	S. Bilirubin (Total) :	1.92 mg %
2)	S. G. P. T. :	6 to 30 Units/ml.
3)	S. Alk. phosphatase :	151 to 471 lu/L (Children) 60 to 170 lu/L (Adults)
4)	S. Proteins : (Total)	6.2 to 8.3 g. %
	S. albumin :	4.0 to 5.7 g. %
	S. globulin :	1.5 to 3.0 g. %
	S. albumin : globulin	1.3 to 4.0
5)	Gamma G. T. :	9 - 52 lu/L (Male) 5 - 32 lu/L (Female)
6)	Prothrombin time :  Patients'  Control's  Prothrombin index	
7)	<b>SERUM AUSTRALIA ANTIGEN (HBsAg) (ELISA)</b>	

**Method :** HBsAg membrane (Elisa) Chromatographic immunoassay.

**Report :**

S. Australia antigen : (HBsAg) Not detected.

Test is Negative.

HBsAg : Less than 1 ng/ml.

Less than 1 ng./ml.

B. Shah  
Pathologist

# ENDOCRINE UNIT

Email : jsheth @ ad1.vsnl.net.in

**DR. JAYESH J. SHETH**

M.Sc., Ph. D. (Bom.)  
Phone : 6732802 (R)

Hon. Asst. Prof. of Endocrinology  
Sheth V. S. Hospital & NHL-  
Municipal Medical College  
Visiting Scientist : Bhartiya Vidhya  
Bhavan's SPARC, Bombay.

**DR. SHAH'S  
PATHOLOGY  
LABORATORY**

MEDICARE CENTRE  
FIRST FLOOR,  
BEHIND M. J. LIBRARY  
ELLISBRIDGE,  
AHMEDABAD-380 006

PHONE :  
(079) 6575541 / 6578450  
FAX : 079-6575541

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20/1, Bimanagar Society, Opp. Umiya Vijay,  
Satellite Road, Ahmedabad-380 015. Phone : 6742 802

**DR. BIPIN S. SHAH**

M.D. (Pathology & Bacteriology)  
Phone : 6562296

**DR. NIRANJAN I. SHAH**

M.B.B.S.  
PHONE : (R) 6741213

Ref No. 5586

Date 17/10/98

Name Arun Kumar Raj

Age 40 Y Sex M

Ref. By DR. L. N. Dalal

Blood Collected 17/10/98

Investigation required : ANTIBODY TO HEPATITIS C VIRUS

Method : ELISA

**Reports :**                    **Patient Value :**                    **Normals :**

ANTI HEPATITIS C VIRUS : NEGATIVE  
(HCV)

Remarks : Patients sera is negative for HCV antibodies.



DR. JAYESH SHETH

# ENDOCRINE UNIT

Email : jsheth @ ad1.vsnl.net.in

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M.Sc., Ph. D. (Bom.)  
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Phone : 6562296

**DR. NIRANJAN I. SHAH**

M.B.B.S.  
PHONE : (R) 6741213

Ref No. 5586

Date 17/10/98

Name Arun Kumar Raj

Age 40 Y Sex M

Ref. By Dr. L. N. Dalal

Blood Collected 17/10/98

Investigation required : SERUM CERULOPLASMIN

Method : R I D

**Reports :**

**Patient Value :**

**Normals :**

SERUM CERULOPLASMIN :

259.0 mg/L

231 - 291 mg/L  
(Normal Male)

Remarks : Serum Ceruloplasmin level is normal.

  
DR. JAYESH SHETH

**HISTOPATHOLOGY and CYTOLOGY CLINIC**

302, Abhigam Complex, 3rd Floor, Opp. Doctor House, C. G. Road, Ellisbridge,  
Ahmedabad-380 006.



**DR. UNITA K. SHAH**  
M. D. (Pathology) U. S. A.

**DR. BHARATI N. PARIKH**  
M. D. (Pathology) U. S. A.

Patient's Name : A. K. Rai      Age : 40      Date : 17/02/99  
 Referred by : Dr. Dalal Love N.      HPC No. 3190/99

**HISTOLOGY REPORT**

Specimen : Liver biopsy.  
 Gross : Specimen consists of one pinkish tan  
 Description : cylindrical portion of tissue measuring 2.0 x 0.2  
                   cm.  
                   All taken.  
 Micro. : Sections reveal hepatic architecture with  
 Description : portal triads and central vein. Hepatocytes reveal  
                   fatty change.  
 Diagnosis : Fatty change.

THE SLIDE(S) AND BLOCK(S) ARE ISSUED WITH THIS REPORT.  
 PLEASE PRESERVE CAREFULLY.

Bab  
figs.  
(Dr. U.K.Shah)

Bab  
(Dr. B.N.Parikh)

# **DR. SHAH'S PATHOLOGY LABORATORY**

## **DR. BIPIN S. SHAH**

M.D. (PATHOLOGY & BACTERIOLOGY)

PHONE : (R) 6302296

## **DR. NIRANJAN I. SHAH**

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FAX NO. : 079-6575417 PHONE : 6575541/6578450

## **LABORATORY :**

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ELLISBRIDGE, AHMEDABAD-380 006.

## **HOURS :**

8-00 A.M. TO 8-00 P.M. (OR BY APPOINTMENT)

CLOSED ON SUNDAY.

**Ref. No. :** 8934/99

**Date :** 23/9/99

**Name :** A.K.Rai

**Age :** 40 Y **Sex :** M.

**Ref by :** ONGC

**Investigation required :**

## **Urine Examination**

### **Physical Examination**

Sample : Catheter/Noncatheter/Midstream.

<b>Quantity :</b>	25 cc
<b>Color :</b>	yellow
<b>Sp. gravity :</b>	1.012
<b>Odour :</b>	aromatic
<b>Deposit :</b>	nil
<b>Transparency :</b>	hazy

### **Chemical Examination**

<b>Reaction :</b>	<b>Ph.</b>	alkaline
<b>Proteins :</b>		trace
<b>Glucose :</b>		nil
<b>Acetone : (Ketone) :</b>		nil
<b>Bilirubin :</b>		nil
<b>Urobilinogen :</b>		nil
<b>Blood :</b>		nil

### **Microscopic Examination**

(After Centrifugalization at 1,000 r.p.m. for 10 minutes)

<b>Pus cells :</b>	2 to 4/hpf
<b>RBCs :</b>	nil
<b>Cast :</b>	nil
<b>Crystals :</b>	nil
<b>Epithelial cells :</b>	few

**Anything Special :** -

**Remarks (chemistry) and Sp. gravity Tested by multistix Sg.**

  
Pathologist

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**Ref. No. :** 8934 / '99

**Date :** 23/9/'99

**Name :** A.K.Rai

**Age :** 40 Y **Sex :** M.

**Ref by :** ONGC

Investigation required : Erythrocyte Sedimentation rate

Specimen : Venous bl. collected on fasting stomach/At random.

Method : Westergreen's/Wintrob's.

### **Report :**

**Normals :** (1st Hr.)

Fall at the end of 1st hour., 10 mms. upto 10 (Wintrob's)

Fall at the end of 2nd hour., 22 mms. 3-7 (Westergreen's)



Pathologist



**DR. LOVE N. DALAL**

M. D. (Medicine)

D. M. (Gastroenterology)

Consultant Gastroenterologist &amp;

Gastrointestinal Endoscopist.

Hon. Gastroenterologist :

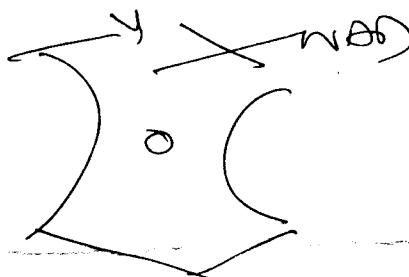
Rajasthan Hospital, Shahibaug

16/10/98 (184)

MR A. K. Rei m/40

90 dyspepsia &amp; w/p abd pain

Incidentally detected to have T.S.E.P.T

Non alcohol, No fat load; blood test  
mpg Sx.\*Adv : -

- 1) anti HCV estimation
- 2) S. Ceruloplasmin
- 3) Proth. Time
- 4) S. alk Phosphatase
- 5) S. Gamma GT.
- 6) Isotope Scan of Liver (TC as Scan) to be done at Cancer Hosp.

- To review c reports
- Liver Bx (SUS)

Rx  
 1) Tab Hepescre  
 $\frac{1}{\text{---}} \frac{1}{\text{---}}$

— (60)  
 Rx

Dr. LOVE N. DALAL

M.D. (Medicine), D.M. (Gastroenterologist)

CONSULTANT GASTROENTEROLOGIST

A-13, Silver Arc, Behind Town Hall, Ahmedabad-380 006.

Phone : Rooms : 657-6864

26/10/18

MR A K Lee

44

X Tab Stepcare — (120)  
1—1

Li Sugel — (5)  
2-2-2  
30 ml at food time  
dep

X 2m

Flu gt 2m.

SGT  
SBP | gt 2m

5/1  
7/3/18

Can take Normal

unrestricted, Home  
cooked Food

**Dr. LOVE N. DALAL**

M.D. (Medicine), D.M. (Gastroenterologist)

**CONSULTANT GASTROENTEROLOGIST**

A-13, Silver Arc, Behind Town Hall, Ahmedabad-380 006.

Phone : Rooms : 657-6864

6403680

MR A.K. Rei

5/1/99.



ડૉ. લવ એન્. દલાલ

એમ.ડી. (મેડિસિન), ડી.એમ. (ગેસ્ટ્રોઅન્ટ્રોલોજી)

\* કન્સલ્ટન્ટ ગેસ્ટ્રોઅન્ટ્રોલોજીસ્ટ \*

એ-૧૩, સીલવર આર્ક,

અહિનેલ પાછળ, અમદાવાદ - ૩૮૦ ૦૦૬. \* ફોન : ૬૫૭૬૮૬૪

3/3/99

MR. A. K. Rei

R

Tab Hepaxine

120

1-1

Hip Singel

6

2-2.

Cef Axcel Plus

60

1 tablet

X2m

Rf SGPT  
in March  
95.

Adv. Dental referral

R

Tab Hepaxine

120

1-1

Hip Singel

6

2-2

Cef. Brovite

60

1 tablet

Adv. PT

# ડૉ. લઘ એન. દલાલ

અમ.ડી. [મરીસીન], ડી.અમ. [ગેસ્ટ્રોઅન્ટ્રોલોજ]

- કન્સલટન્ટ ગેસ્ટ્રોઅન્ટ્રોલોજિસ્ટ

અ-૧૩, સાલવર બાઈ,

દાઉનહોલ પાછળ, અમદાવાદ-૩૮૦૦૦૬. ફોન : ૯૪૭૯૮૬૪

MR A/R Ref:

Re

= Lip Snigel  
2-2

28/9/99

— ④

Gf Ricardia  
1 gft Tech  
X3m.

— 100

— 6

Ref WFC to high centre.

Cmc Hospital, Vellore.

Adv to meet

D George Chandy, M.B.  
of Goshwadly  
(Hafslaley)

# ડૉ. લઘ એન. દલાલ

અમ.ડી. [મરીસીન], ડી.અમ. [ગેસ્ટ્રોઅન્ટ્રોલોજ]

- કન્સલટન્ટ ગેસ્ટ્રોઅન્ટ્રોલોજિસ્ટ

અ-૧૩, સાલવર બાઈ,

દાઉનહોલ પાછળ, અમદાવાદ-૩૮૦૦૦૬. ફોન : ૯૪૭૯૮૬૪

MR A/R Ref:

14/2/2000

Adv = SGPT

= S. Bilirubin

= S. Platelet Agg

= PT

= ~~BG~~ CBC

= Platelet Count

15/2/2000

**LABORATORY REPORT**

CLIENT CODE :

CLIENT'S NAME AND ADDRESS :

RAI ARUN KUMAR - B-14, SHARDA KRIPA SOCIETY  
 JANTA NAGAR,  
 CHANDKHEDA,  
 AHMEDABAD - 382424  
 PHONE # 7500078



**CLINICAL REFERENCE LABORATORIES**  
 Plot 113, MIDC, 15<sup>th</sup> Street, Andheri (East), Mumbai 400 093.  
 Tel. : 835 2375/835 2490. Fax : 835 2495.

REFERRING DOCTOR

DR.M CHANDI

DRAWN	07/02/2000	RECEIVED	07/02/2000	REPORTED	09/02/2000 19:48
PATIENT NAME	RAI ARUN KUMAR				
ACCESSION NO.	00020B003471	AGE	40 Years	SEX	Male
DATE OF BIRTH 19/01/1960					
CLINICAL INFORMATION					

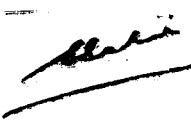
**RESULTS**

TEST REPORT STATUS	PRELIMINARY	IN RANGE	OUT OF RANGE	REFERENCE RANGE	UNITS
HEP B (DNA), PCR	RESULT PENDING				
HCV RNA PCR, QL					
HCV RNA PCR, QL	DETECTED		NOT DETECTED		

## HCV RNA PCR, QL

THIS QUALITATIVE ASSAY IS USEFUL IN DETECTING THE PRESENCE OF HCV GENOME PRIOR TO IMMUNOLOGICAL SEROCONVERSION OR IN THE PRESENCE OF INTERMINATE SEROLOGIES AND AS A MEANS OF DETECTING CHRONIC VIRAL REPLICATION AMONG SEROPOSITIVE INDIVIDUALS.

BESIDES IDENTIFYING PATIENTS WHO COULD BENEFIT FROM INTERFERON THERAPY, DETECTING OF HCV RNA BY PCR ALSO ENABLES THE MONITORING OF ANTIBODY-POSITIVE CHRONIC HCV PATIENTS UNDERGOING THERAPY WITH INTERFERON AS IT HELPS IN DETECTING FLUCTUATIONS IN VIREMIA SINCE PCR IS ABLE TO AMPLIFY HCV RNA DIRECTLY, I.E., INDEPENDENT OF THE PATIENT'S IMMUNOLOGICAL STATUS, A PCR-BASED ASSAY IS VALUABLE IN DETECTING HCV RNA IN IMMUNOCOMPROMISED PATIENTS AS WELL.

  
**Dr. SUMEDHA SAHNI, MD**  
 Director-Central Clinical Lab Operations

**LABORATORY REPORT**

CLIENT CODE :

CLIENT'S NAME AND ADDRESS:  
RAI ARUN KUMAR - B-14, SHARDA KRIPA SOCIETY  
JANATA NAGAR, CHANDKHEDA  
AHMEDABAD - 382424  
TEL : 7500078



CLINICAL REFERENCE LABORATORIES  
Plot 113, MIDC, 15<sup>th</sup> Street, Andheri (East), Mumbai 400 093.  
Tel. : 835 2375/835 2490. Fax : 835 2495.

REFERRING DOCTOR DR.GEORGE M CHANDY

DRAWN 11/03/2000 RECEIVED 11/03/2000 REPORTED 11/03/2000 18:46

PATIENT NAME RAI ARUN KUMAR

ACCESSION NO. 00020C005550 AGE 39 Years SEX Male DATE OF BIRTH 03/12/1960 PATIENT ID

CLINICAL INFORMATION REFER ACC NO: B003471

TEST REPORT STATUS	FINAL	RESULTS			UNITS
		IN RANGE	OUT OF RANGE	REFERENCE RANGE	
HEP C RNA,QT,PCR					
HEP C RNA, QT,CR		1825		H 0-600	copies/ml

HCV RNA

*Bhatia*Dr. SIMI BHATIA, MD  
Pathologist

Page 1 of 1



# DEPARTMENT OF GASTROINTESTINAL SCIENCES

Christian Medical College & Hospital  
Vellore - 632 004, Tamil Nadu, India

Tel : 0416-222121, 222716, 222717 Extn.: 2148/2496  
Fax : (91) 0416 - 232035, 232045, 232103  
e-mail : cmcgastrohepat@hotmail.com

## Gastroenterology and Hepatology

22.03.2000

To

Dr. Love Dalal

Dear Love,

Mrs. Jyoti Kumar Rai has HCV infection with steatosis on histopathology. He should be commenced on treatment with Interferon 3 mIU three times a week for 12 months with Ribavirin 1 gm od for 6 months.

With warm regards and all good wishes

Yours sincerely,

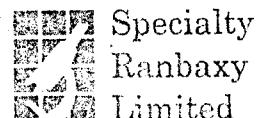
Berge Chandy

# LABORATORY REPORT

CLIENT CODE :

CLIENT'S NAME AND ADDRESS :

RAI ARUN KUMAR - B-14, SHRDA KRIPA SOC.  
JANATA NAGAR, CHANDKHEDA  
AHMEDABAD - 382 424  
TEL : 079 7500078



Specialty  
Ranbaxy  
Limited  
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Tel. : 690 3851 Fax : 690 3865

REFERRING DOCTOR

GHODA MANOJ (DR)

DRAWN

08/12/2000

RECEIVED

08/12/2000

REPORTED

09/12/2000 17:57

PATIENT NAME

RAI ARUN KUMAR

ACCESSION NO.

00020L005770

AGE

40 Years Male

DATE OF BIRTH

19/01/1960

PATIENT ID

CLINICAL INFORMATION

TEST REPORT STATUS

FINAL

## RESULTS

IN RANGE

OUT OF RANGE

REFERENCE RANGE

UNITS

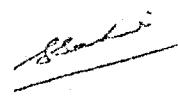
HEP C RNA,QT,PCR

HEP C RNA, QT,CR

1302

H 0-600

copies/lr

  
Dr. SUMEDHA SAHNI, MD  
Director-Central Clinical Lab Operations

# LABORATORY REPORT

CLIENT CODE :

CLIENTS NAME AND ADDRESS :

RAI ARUN KUMAR - B-14, SHARDA KRIPA SOCIETY  
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AHMEDABAD - 382 424  
TEL : 7500078



Specialty

Ranbaxy

Limited

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Plot 113, MIDC, 15<sup>th</sup> Street, Andheri (East), Mumbai 400 093.  
Tel. : 690 3851 Fax : 690 3865

## REFERRING DOCTOR

DRAWN 08/09/2001

RECEIVED 08/09/2001

REPORTED 08/09/2001 16:56

PATIENT NAME RAI ARUN KUMAR

ACCESSION NO. 0002AI008142

AGE 41 Years SEX Male

DATE OF BIRTH 19/01/1960

PATIENT ID

## CLINICAL INFORMATION

TEST REPORT STATUS

FINAL

## RESULTS

IN RANGE OUT OF RANGE REFERENCE RANGE UNITS

HEP C RNA,QT,PCR

HEP C RNA, QT,CR

2477

H 0-600

copy/mL



Dr. SUMEDHA SAHNI, MD  
Director-Central Clinical Laboratories



Page 1 of 1

All investigations have their limitation which are imposed by the limits of sensitivity and specificity of individual assay procedures as well as the quality of the specimen received by the laboratory. Isolated laboratory investigations never confirm the final diagnosis of the disease. They only help in arriving at a diagnosis in conjunction with clinical presentation and other related investigations. (Also refer to "CONDITIONS OF REPORTING" on the reverse.)

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# **DR. SHAH'S PATHOLOGY LABORATORY**

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FAX NO. : 079-6575417 PHONE : 6575541/6578450

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M.B.B.S.

PHONE : (R) 6741213

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CLOSED ON SUNDAY.

20/1, BIMANAGAR SOCIETY, OPP. UMIYA VIJAY, SATELLITE ROAD, AHMEDABAD - 380 015. PHONE : 6742802

**Ref. No. :** 816/01

**Date :** 20/4/01

**Name :** A.K.Rai

**Age :** 41 Y. **Sex :** M.

**Ref by :** ONGC .

**Investigation required :**

**Urine Examination**

**Physical Examination**

Sample : Catheter/Noncatheter/Midstream.

Quantity :

30 cc

Color :

normal yellow

Sp. gravity :

101.0

Odour :

aromatic

Deposit :

nil

Transparency :

clear

**Chemical Examination**

Reaction : Ph. alkaline

Proteins :

nil

Glucose :

nil

Acetone : (Ketone) :

nil

Bilirubin :

nil

Urobilinogen :

nil

Blood :

nil

Nitrite :

nil

**Microscopic Examination**

(After Centrifugalization at 1,000 r.p.m. for 10 minutes)

Pus cells : nil

RBCs : nil

Cast : nil

Crystals : nil

Epithelial cells : few

Anything Special : -

Remarks : sp. gravity, reaction, nitrite, Leucocytes & chemistry by Multisix, 10 sg. on clinitek - autoanalyser.

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CLOSED ON SUNDAY.

**Ref. No. :** 816/01

**Date :** 20/4/01

**Name :** A.K.Rai

**Age :** 41 Y. **Sex :** M.

**Ref by :** ONGC.

**Investigation required :**

Liver Function Tests :

		<u>Normals :</u>
1)	S. Bilirubin :	
	S. Bilirubin (Direct) :	0.78 mg %
	S. Bilirubin (Indirect) :	0.16 mg %
	S. Bilirubin (Total) :	0.94 mg %
		0.1 to 0.8 mg. %
2)	S. G. P. T. :	43 Units/ml.
		6 to 30 Units/ml.
3)	S. Alk. phosphatase :	78 Iu/L.
		151 to 471 Iu/L (Children) 60 to 170 Iu/L (Adults)
4)	S. Proteins : (Total)	6.2 to 8.3 g. %
	S. albumin :	4.0 to 5.7 g. %
	S. globulin :	1.5 to 3.0 g. %
	S. albumin : globulin	1.3 to 4.0
5)	S. Gamma G. T. :	9 - 52 Iu/L (Male) 5 - 32 Iu/L (Female)
6)	Prothrombin time :	
	Patient's	15 Seconds.
	Control's	15 Seconds.
	Prothrombin index	100 %
	INR :	Therapeutic range : 4.5 - 2.5
7)	S. australia antigen	
	HbsAg (Elisa)	Negative.

Pathologist

# **DR. SHAH'S PATHOLOGY LABORATORY**

## **DR. BIPIN S. SHAH**

M.D. (PATHOLOGY & BACTERIOLOGY)

PHONE : (R) 6302296

FAX NO. : 079-6575417 PHONE : 6575541/6578450

### **LABORATORY :**

MEDICARE CENTRE, FIRST FLOOR, BEHIND M. J. LIBRARY  
ELLISBRIDGE, AHMEDABAD-380 006.

## **DR. NIRANJAN I. SHAH**

M.B.B.S.

PHONE : (R) 6741213

### **HOURS :**

8-00 A.M. TO 8-00 P.M. (OR BY APPOINTMENT)

CLOSED ON SUNDAY.

20/1, BIMANAGAR SOCIETY, OPP. UMIYA VIJAY, SATELLITE ROAD, AHMEDABAD - 380 015. PHONE : 6742802

**Ref. No. :** 816/01

**Date :** 20/4/01

**Name :** A.K.Rai

**Age :** 41 Y.    **Sex :** M.

**Ref by :** ONGC.

**Investigation required :**

**Renal Function Tests :**

### **Report :**

### **Normals :**

1)	Blood Urea :	38 mg %	15 to 40 mg. %
2)	S. Creatinine :	1.4 mg %	0.1 to 1.4 mg. %
3)	Bl. Non-protein nitrogen (NPN) :	—	26 to 43 mg. %
4)	Blood urea nitrogen : (BUN) :	—	8 to 22 mg. %
5)	S. Proteins : (Total)	8.0 g %	6.2 to 8.3 g. %
	S. Albumin :	4.8 g %	4.0 to 5.7 g. %
	S. Globulin :	3.2 g %	1.5 to 3.0 g. %
	Albumin : Globulin	1.5	1.3 to 4.0
6)	Serum Electrolytes & Bicarbonates :		
	Serum Sodium :	141.2 M.Eq/L.	137 to 148 M. Eq./L
	Serum potassium :	4.58 M.Eq/L.	3.5 to 5.6 M. Eq./L
	Serum Chlorides :	105 M.Eq/L.	97 to 107 M. Eq./L
	Plasma Bicarbonates :	—	24 to 33 M. Eq./L

Tech : S. Sodium / S. Potassium : Ion Selective Electrodes Easylite MEDICA

7) Any other test :

*R. Shah*  
Pathologist

# **DR. SHAH'S PATHOLOGY LABORATORY**

## **DR. BIPIN S. SHAH**

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20/1, BIMANAGAR SOCIETY, OPP. UMIYA VIJAY, SATELLITE ROAD, AHMEDABAD - 380 015. PHONE : 6742802

**Ref. No. :** 7481/01

**Date :** 15/9/01

**Name :** A.K.Rai

**Age :** **Sex :** M.

**Ref by :** ONGC.

**Investigation required :**

**Liver Function Tests :**

		<b>Normals :</b>
1)	S. Bilirubin :	
	S. Bilirubin (Direct) :	0.3 mg %
	S. Bilirubin (Indirect) :	0.5 mg %
	S. Bilirubin (Total) :	0.8 mg %
		0.1 to 0.8 mg. %
2)	S. G. P. T. :	33 Units/ml.
3)	S. Alk. phosphatase :	82.8 IU/L.
		151 to 471 IU/L (Children)
		60 to 170 IU/L (Adults)
4)	S. Proteins : (Total)	7.0 g %
	S. albumin :	5.0 g %
	S. globulin :	2.0 g %
	S. albumin : globulin	2.5
		1.3 to 4.0
5)	S. Gamma G. T. :	-
		9 - 52 IU/L (Male)
		5 - 32 IU/L (Female)
6)	Prothrombin time :	
	Patient's	15 Seconds.
	Control's	15 Seconds.
	Prothrombin index	100 %
	INR :	1.00 INR.
		Therapeutic range : 4.5 - 2.5
7)	S. australia antigen	
	HbsAg (Elisa)	Negative.

  
Pathologist

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20/1, BIMANAGAR SOCIETY, OPP. UMIYA VIJAY, SATELLITE ROAD, AHMEDABAD - 380 015. PHONE : 6742802

**Ref. No. :** 10,360/01

**Date :** 30/11/01

**Name :** A.K.Rai

**Age :** 41 Y. **Sex :** M.

**Ref by :** ONGC.

**Investigation required :**

**Renal Function Tests :**

### **Report :**

### **Normals :**

1)	Blood Urea :	27 mg %	15 to 40 mg. %
2)	S. Creatinine :	1.2 mg %	0.1 to 1.4 mg. %
3)	Bl. Non-protein nitrogen (NPN) :	-	26 to 43 mg. %
4)	Blood urea nitrogen : (BUN) :		8 to 22 mg. %
5)	S. Proteins : (Total)	7.2 g %	6.2 to 8.3 g. %
	S. Albumin :	5.2 g %	4.0 to 5.7 g. %
	S. Globulin :	2.0 g %	1.5 to 3.0 g. %
	Albumin : Globulin	2.6	1.3 to 4.0
6)	Serum Electrolytes & Bicarbonates :		
	Serum Sodium :	139.5 M.Eq/L.	137 to 148 M. Eq./L
	Serum potassium :	4.11 M.Eq/L.	3.5 to 5.6 M. Eq./L
	Serum Chlorides :	105 M.Eq/L.	97 to 107 M. Eq./L
	Plasma Bicarbonates :	-	24 to 33 M. Eq./L

Tech : S. Sodium / S. Potassium : Ion Selective Electrodes Easylite MEDICA

7) Any other test :

*B. S. Shah* ✓

Pathologist

# DR. VANIKAR'S PATHOLOGY LABORATORY

DR. S. V. VANIKAR M. D. (PATH. & BACT.)

Consultant Pathologist

T. No. Resi. 656 9390

8-9, Narayan Chambers,

Near Nehrubridge End,

Beside Bhulabhai Colony Bus-Stand,

Ashram Road,

AHMEDABAD-380 009.

T. No. 6578364

Ref. No. 3059/ONGC

Name Mr. A.K.Rai

Age

Sex Male.

Referred by Dr. Das M.B.B.S

28/11/98

Date

Nature of Specimen Urine

Exam. required Routine exam

## URINE REPORT

Specimen : ~~Catheter~~ Non Catheter

**Physical** : Quantity -

Colour - Normal yellow  
Odour - Normal  
Deposits - Absent  
Clarity - Clear  
Reaction - Acid  
Sp. Gr. - 1006

**Chemical** : Albmuen - Present in faint traces

Sugar - Absent  
Acetone - Absent  
Bile Salts - Absent  
Bile Pigments - Absent

**Microscopic** : W.B.C. (Pus Cell) - Occosional

Red Blood Cell - Absent  
Casts - Absent  
Type - Absent  
Crystals - A few uric acid crystals  
Amorphous - Absent  
Epithelial Cells - A few.

**Special Tests** : (when indicated) - -

Pathologist

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8-00 A.M. TO 8-00 P.M. (OR BY APPOINTMENT)

CLOSED ON SUNDAY.

**Ref. No. :** 10,360/01

**Date :** 30/11/01

**Name :** A.K.Rai

**Age :** 41 Y **Sex :** M.

**Ref by :** ONGC.

Investigation required :

Liver Function Tests :

		<u>Normals :</u>
1)	S. Bilirubin :	
	S. Bilirubin (Direct) :	0.4 mg %
	S. Bilirubin (Indirect) :	0.3 mg %
	S. Bilirubin (Total) :	0.7 mg %
		0.1 to 0.8 mg. %
2)	S. G. P. T. :	24 Units/ml.
		6 to 30 Units/ml.
3)	S. Alk. phosphatase :	112 Iu/L.
		151 to 471 Iu/L (Children)
		60 to 170 Iu/L (Adults)
4)	S. Proteins : (Total)	-
	S. albumin :	6.2 to 8.3 g. %
	S. globulin :	4.0 to 5.7 g. %
	S. albumin : globulin	1.5 to 3.0 g. %
		1.3 to 4.0
5)	S. Gamma G. T. :	9 - 52 Iu/L (Male)
		5 - 32 Iu/L (Female)
6)	Prothrombin time :	
	Patient's	15 Seconds.
	Control's	15 Seconds.
	Prothrombin index	100 %
	INR :	Therapeutic range : 4.5 - 2.5
7)	S. australia antigen	
	HbsAg (Elisa)	Negative.

Bipin ✓

Pathologist

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20/1, BIMANAGAR SOCIETY, OPP. UMIYA VIJAY, SATELLITE ROAD, AHMEDABAD - 380 015. PHONE : 6742802

**Ref. No. :** 10360 /01

**Date :** 30/11/01

**Name :** A.K.Rai.

**Age :** 41y    **Sex :** M.

**Ref by :** ONGC

**Investigation required :** Erythrocyte Sedimentation rate

**Specimen :** Venous bl. collected on ~~fasting~~ stomach/At random.

**Method :** Westergreen's/Wintrob's.

### **Report :**

**Normals :** (1st Hr.)

Fall at the end of 1st hour.,              3              mms.              3-7 (Westergreen's)

Fall at the end of 2nd hour.,              5              mms.

*B. Shah*  
Pathologist

# Dr. SHAH'S PATHOLOGY LABORATORY

Sabarmati.

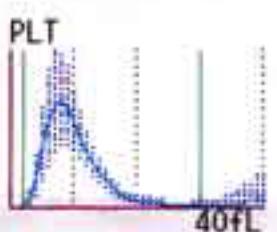
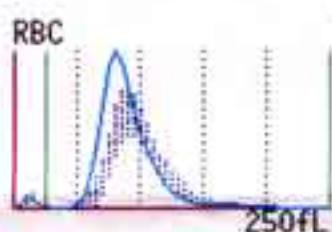
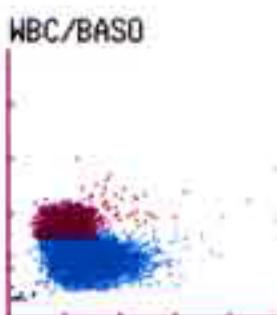
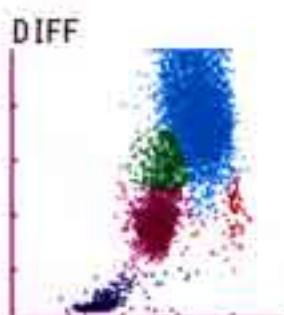
AUTOMATED HEMATOLOGY ANALYSER : SYSMEX SF 3000 JAPAN

## PATIENT REPORT : COMPLETE HAEMOGRAM (Venous Blood)

NEGATIVE

NO. 10360

11/30/2001 16:54 R:0000-00



RBC	9.66	[x10 <sup>9</sup> /µL]	WBC Flag
NEUT	6.78*	70.3*[%]	
LYMPH	2.33*	24.1*[%]	
MONO	0.42*	4.3*[%]	
EO	0.10	1.0 [%]	
BASO	0.03*	0.3*[%]	
RBC	5.23	[x10 <sup>6</sup> /µL]	
HGB	15.4	[g/dL]	RBC Flag
HCT	44.7	[%]	
MCV	85.5-	[fL]	
MCH	29.4	[pg]	
MCHC	34.5	[g/dL]	
RDW-SD	38.2	[fL]	
RDW-CV	13.8	[%]	
PLT	238	[x10 <sup>9</sup> /µL]	PLT Flag
PDW	11.8	[fL]	
MPV	10.0	[fL]	
P-LCR	25.7	[%]	

Name: A.K.Rai

Age: 41y

Sex: M.

Ref. By: ONGC

Comments : 1) Hb: 15.4 g% TRBCs: 5.23 m/c.mm Pcv: 44.7 %  
RBCs morphology normocytic, normochromic.  
2) T.WBC: 9,660 AB.E.Count: 100 /cmm / (Normals upto 400/cmm.) 1.0 %

Comments

3) Parasites: Nil.

pl.Count : 238,000/cmm.

*Bipin S.*

### NORMALS : (FOR Adult) Venous Blood.

Hemoglobin g% : (M : 16 ± 2 F : 14 ± 2 g%)  
Total R.B.C. : (M : 5.4 ± 0.8)  
(F : 4.8 ± 0.6m./c.mm)

### Absolute values of blood :

P.V.C. % M : 47 ± 5 f : 24 ± 5%  
M.C.V. Cuu [fl] 87 ± 5 cuu [fl]  
M.C.H.Y. [pg] 29 ± 2 Y.y. [pg]  
M.C.H. C. % [g/dl] 34 ± 2% [p/dl]

Total W.B.C. : 5000 to 11000/c.mm

Differential W.B.C. :  
Polymorphs : 60 to 70%  
Lymphocytes : 20 to 30%  
Eosinophils : 1 to 4%  
Monocytes : 2 to 6%  
Basophils : 0 to 1%  
undefined : Nil  
Platelets : 1,50,000 to 5,00,000/cmm.

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CLOSED SUNDAY

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PHONE : (R) 6741213

COLLECTION CENTRE :

20/1, BIMANAGAR SOCIETY, OPP. UMIYA VIJAY, SATELLITE ROAD, AHMEDABAD- 380015 PHONE : 6742802

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20/1, BIMANAGAR SOCIETY, OPP. UMIYA VIJAY, SATELLITE ROAD, AHMEDABAD-380 015. PHONE : 6742802

**Ref. No.** 346/02

**Date :** 11/4/02

**Name :** A.K.Rai

**Age :** 41 Y **Sex :** M

**Ref By :** ONGC

**Investigation required :**

## **Urine Examination**

### **Physical Examination**

**Sample :** Catheter/Noncatheter/Midstream.

**Quantity :**

20 cc

**Color :**

normal yellow

**Sp. gravity :**

1015

**Odour :**

aromatic

**Deposit :**

nil

**Transparency :**

clear

### **Chemical Examination**

**Reaction :** Ph. acidic

**Proteins :** nil

**Glucose :** nil

**Acetone : (Ketone) :** nil

**Bilirubin :** nil

**Urobilinogen :** nil

**Blood :** nil

**Nitrite :** nil

### **Microscopic Examination** (After Centrifugation at 1,000 r.p.m. for 10 minutes)

**Pus cells :** nil

**RBCs :** nil

**Cast :** nil

**Crystals :** nil

**Epithelial Cells :** few

**Anything Special :**

Remarks : sp. gravity, reaction, nitrite, Leucocytes & chemistry by Multisix, 10 Sg. on clinitek - autoanalyser.

*B. miny*

Pathologist

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**Ref. No. :** 346/02

**Date :** 11/4/02

**Name :** A.K.Rai

**Age :** 41 Y    **Sex :** M

**Ref by :** ONGC

**Investigation required :**

**Renal Function Tests :**

**Report :**

**Normals :**

1)	Blood Urea :	17 mg %	15 to 40 mg. %
2)	S. Creatinine :	1.1 mg %	0.1 to 1.4 mg. %
3)	Bl. Non-protein nitrogen (NPN) :		26 to 43 mg. %
4)	Blood urea nitrogen : (BUN) :		8 to 22 mg. %
5)	S. Proteins : (Total)	7.2 g %	6.2 to 8.3 g. %
	S. Albumin :	4.4 g %	4.0 to 5.7 g. %
	S. Globulin :	2.8 g %	1.5 to 3.0 g. %
	Albumin : Globulin	1.57	1.3 to 4.0

**6) Serum Electrolytes & Bicarbonates :**

Serum Sodium :	149.2 M.Eq/L	137 to 148	M. Eq./L
Serum potassium :	5.24 M.Eq/L	3.5 to 5.6	M. Eq./L
Serum Chlorides :	109.2 M.Eq/L	97 to 107	M. Eq./L
Plasma Bicarbonates :	-	24 to 33	M. Eq./L

Tech : S. Sodium / S. Potassium : Ion Selective Electrodes Easylyte MEDICA

**7) Any other test :**

*Bipin*  
Pathologist

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**Ref. No. :** 346/02

**Date :** 11/4/02

**Name :** A.K.Rai

**Age :** 41 Y **Sex :** M

**Ref by :** ONGC

Investigation required :

Liver Function Tests :

		<u>Normals :</u>
1)	S. Bilirubin :	
	S. Bilirubin (Direct) :	0.28 mg %
	S. Bilirubin (Indirect) :	0.49 mg %
	S. Bilirubin (Total) :	0.77 mg %
		0.1 to 0.8 mg. %
2)	S. G. P. T. :	20 Units/ml
		6 to 30 Units/ml.
3)	S. Alk. phosphatase :	101 Iu/L
		151 to 471 Iu/L (Children)
		60 to 170 Iu/L (Adults)
4)	S. Proteins : (Total)	-
	S. albumin :	6.2 to 8.3 g. %
	S. globulin :	4.0 to 5.7 g. %
	S. albumin : globulin	1.5 to 3.0 g. %
		1.3 to 4.0
5)	S. Gamma G. T. :	9 - 52 Iu/L (Male)
		5 - 32 Iu/L (Female)
6)	Prothrombin time :	
	Patient's	19 Seconds
	Control's	15 Seconds
	Prothrombin index	78.9 %
	INR :	1.22 INR
		Therapeutic range : 4.5 - 2.5
7)	S. australia antigen	Negative,
	HbsAg (Elisa)	



Pathologist

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**Ref. No. :** 346/02

**Date :** 11/4/02

**Name :** A.K.Rai

**Age :** 41 Y **Sex :** M

**Ref. by** ONGC

Investigation required :

**SERUM LIPIDS PROFILE : WITH RATIOS**

Sample : Fasting / Random

Serum : Clear / Lipemic / Cream layer

## **★ Report**

**Normals (For Adult) mg/dl.**

			Desirable	Boderline High	High / Risk
1)	Total Lipids	476	mg/dl	400 - 700	-
2)	Serum Cholesterol (TC)	136	mg/dl	< 200	200-230 >240
3)	Serum Triglycerids (Tg)	165	mg/dl	≤ 250	250-500 > 500
4)	HDL Cholesterol (HDLC) (High Density Lipoprotein Cholesterol)	31	mg/dl	35 - 50	- < 35
5)	LDL Cholesterol (LDLC) (Low Density Lipoprotein Cholesterol)	72.0	mg/dl	< 100	130-150 > 160
6)	VLDL Cholesterol (VLDLC) (Very Low Density Lipoprotein Cholesterol)	33.0	mg/dl	≤ 35	>35-50 >50
7)	LDLC / HDLC ratio	2.32		upto 3.5	- >3.5 -
8)	TC/HDLC ratio	4.38		upto 5.0	- >5.0 -

N. B.: For those cases who are under treatment for Lipid disorders and CHD the normals are different and should be accodingly taken in consideration.

**★ NEPC summary : For Indian Population.**

*Bipin*  
Pathologist

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**Ref. No.** 346/02

**Date :** 11/4/02

**Name :** A.K.Rai

**Age :** 41 Y    **Sex :** M

ONGC

**Ref By :**

**Investigation required : Blood Sugar Estimation.**

**Method :** Bl. Sugar : God/Pod (True Sugar) (Venous plasma)

Urine Sugar : Ketodiastic

**Report :**

<b>Specimen :</b>	<b>Bl. Sugar mg.%</b>	<b>Urine Sugar g. %</b>	<b>Urine Acetone :</b>
Fasting / Random:	87	nil	nil
Postprandial :	-		
Post dinner :			

(1½ / 2 Hrs. after meals / 2 Hrs. after 50/75/100 g. Glucose orally)

**Normals :**

Fasting :

**True Sugar :**

70 to 100 mg. %

Post meals : Post dinner :

upto 120 mg. %

2 Hrs. after glucose

upto 100 mg. %

N. B. : for conversion of mg% into m. mol / L divide by 18

*B. R. Shah*  
Pathologist

# **DR. SHAH'S PATHOLOGY LABORATORY**

**DR. BIPIN S. SHAH**

M.D. (PATHOLOGY & BACTERIOLOGY)

PHONE : (R) 6302296

**DR. NIRANJAN I. SHAH**

M.B.B.S.

PHONE : (R) 6741213

**COLLECTION CENTRE :**

20/1, BIMANAGAR SOCIETY, OPP. UMIYA VIJAY, SATELLITE ROAD, AHMEDABAD-380 015. PHONE : 6742802

**Ref. No.** 3280/02

**Date :** 6/7/02

**Name :** A.K.Rai

**Age :** 41 y **Sex :** M

**Ref By :** ONGC

Investigation required :

## **Urine Examination**

### **Physical Examination**

Quantity :	35 cc
Color :	pale yellow
Sp. gravity :	1010
Odour :	aromatic
Deposit :	nil
Transparency :	clear

Sample : Catheter/Noncatheter/Midstream.

### **Chemical Examination**

Reaction :	Ph.	acidic
Proteins :		nil
Glucose :		nil
Acetone : (Ketone) :		nil
Bilirubin :		nil
Urobilinogen :		nil
Blood :		nil
Nitrite :		nil

### **Microscopic Examination**

Pus cells :	nil
RBCs :	nil
Cast :	nil
Crystals :	nil
Epithelial Cells :	few

Anything Special :

Remarks : sp. gravity, reaction, nitrite, Leucocytes & chemistry by Multisix, 10 Sg. on clinitek - autoanalyser.

*3 min*

Pathologist

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FAX NO. : 079-6575417 PHONE : 6575541/6578450

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M.B.B.S.

PHONE : (R) 6741213

**LABORATORY :**MEDICARE CENTRE, FIRST FLOOR, BEHIND M. J. LIBRARY  
ELLISBRIDGE, AHMEDABAD-380 006.**COLLECTION CENTRE :**

20/1, BIMANAGAR SOCIETY, OPP. UMIYA VIJAY, SATELLITE ROAD, AHMEDABAD - 380 015. PHONE : 6742802

**HOURS :**

8-00 A.M. TO 8-00 P.M. (OR BY APPOINTMENT)

CLOSED ON SUNDAY.

**Ref. No. :** 5523/01**Date :** 6/8/01**Name :** A.K.Rai**Age :** 41 **y** **Sex :** M.**Ref by :** ONGC

Investigation required :

Liver Function Tests :

		<u>Normals :</u>
1)	S. Bilirubin :	
	S. Bilirubin (Direct) :	0.3 mg %
	S. Bilirubin (Indirect) :	0.5 mg %
	S. Bilirubin (Total) :	0.8 mg %
		0.1 to 0.8 mg. %
2)	S. G. P. T. :	18 Units/ml
3)	S. Alk. phosphatase :	151 to 471 lu/L (Children) 60 to 170 lu/L (Adults)
4)	S. Proteins : (Total)	6.2 to 8.3 g. %
	S. albumin :	4.0 to 5.7 g. %
	S. globulin :	1.5 to 3.0 g. %
	S. albumin : globulin	1.3 to 4.0
5)	S. Gamma G. T. :	9 - 52 lu/L (Male) 5 - 32 lu/L (Female)
6)	Prothrombin time :	
	Patient's	16 Seconds
	Control's	15 Seconds
	Prothrombin index	93.5 %
	INR :	1.1 INR
		Therapeutic range : 4.5 - 2.5
7)	S. australia antigen	
	HbsAg (Elisa)	Negative.

  
 Pathologist

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CLOSED ON SUNDAY.

20/1, BIMANAGAR SOCIETY, OPP. UMIYA VIJAY, SATELLITE ROAD, AHMEDABAD - 380 015. PHONE : 6742802

**Ref. No. :** 5523 /01

**Date :** 6/8/01

**Name :** A.K.Rai

**Age :** 41 y **Sex :** M.

**Ref by :** ONGC

Investigation required :

**Renal Function Tests :**

**Report :**

**Normals :**

1) Blood Urea : 24 mg % 15 to 40 mg. %

2) S. Creatinine : 1.2 mg % 0.1 to 1.4 mg. %

3) BI. Non-protein nitrogen (NPN) : 26 to 43 mg. %

4) Blood urea nitrogen : (BUN) : 8 to 22 mg. %

5) S. Proteins : (Total) 7.7 g % 6.2 to 8.3 g. %

S. Albumin : 5.1 g % 4.0 to 5.7 g. %

S. Globulin : 2.6 g % 1.5 to 3.0 g. %

Albumin : Globulin 1.96 1.3 to 4.0

6) Serum Electrolytes & Bicarbonates :

Serum Sodium : 140.8 M.Eq/L 137 to 148 M. Eq./L

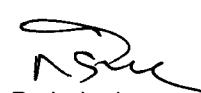
Serum potassium : 4.15 M.Eq/L 3.5 to 5.6 M. Eq./L

Serum Chlorides : 100.8 M.Eq/L 97 to 107 M. Eq./L

Plasma Bicarbonates : 24 to 33 M. Eq./L

Tech : S. Sodium / S. Potassium : Ion Selective Electrodes Easylyte MEDICA

7) Any other test :

  
Pathologist

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**COLLECTION CENTRE :**

20/1, BIMANAGAR SOCIETY, OPP. UMIYA VIJAY, SATELLITE ROAD, AHMEDABAD-380 015. PHONE : 6742802

**Ref. No.** 6009/02

**Date :** 19/9/02

**Name :** A.K.Rai

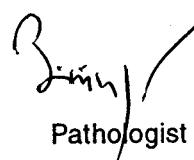
**Age :** 41 y    **Sex :** M.

**Ref By :** ONGC

Investigation required :

Liver Function Tests :

		<u>Normals :</u>
1)	S. Bilirubin :	
	S. Bilirubin (Direct) :	0.34 mg %
	S. Bilirubin (Indirect) :	0.31 mg %
	S. Bilirubin (Total) :	0.65 mg %
		01. to 0.8 mg. %
2)	S.G.P.T. :	6 to 30 Units/ml.
3)	S. Alk. phosphatase :	151 to 471 lu/L (Children) 60 to 170 lu/L (Adults)
4)	S. Proteins : (Total)	6.2 to 8.3 g. %
	S. albumin :	4.0 to 5.7 g. %
	S. globulin :	1.5 to 3.0 g. %
	S. albumin : globulin	1.3 to 4.0
5)	S. Gamma G. T. :	9 - 52 lu/L (Male) 5 - 32 lu/L (Female)
6)	Prothrombin time :	
	Patient's	26 seconds
	Control's	15 seconds
	Prothrombin index	57.6 %
	INR :	1.79 INR
		Therapeutic range : 4.5 - 2.5
7)	S. australia antigen	Negative
	HbsAg(Elisa)	



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**Ref. No.** 6009/02

**Date :** 19/9/02

**Name :** A.K.Rai

**Age :** 41 y **Sex :** M.

**Ref By :** ONGC

**Investigation required :** Renal Function Tests :

**Report :**

1)	Blood Urea :	19 mg %	15 to 40 mg. %
2)	S. Creatinine :	0.7 mg %	0.1 to 1.4 mg. %
3)	Bl. Non-protein nitrogen (NPN) :		26 to 43 mg. %
4)	Blood urea nitrogen : (BUN) :		8 to 22 mg. %
5)	S. Proteins : (Total)	7.6 g %	6.2 to 8.3 g. %
	S. Albumin :	4.9 g %	4.0 to 5.7 g. %
	S. Globulin :	2.7 g %	1.5 to 3.0 g. %
	Albumin : Globulin	1.8	1.3 to 4.0
6)	Serum Electrolytes & Bicarbonates :		
	Serum Sodium :	140.4 M.Eq/L	137 to 148 M. Eq./L
	Serum potassium :	3.75 M.Eq/L	3.5 to 5.6 M. Eq./L
	Serum Chlorides :	100.4 M.Eq/L	97 to 107 M.Eq./L
	Plasma Bicarbonates :	-	24 to 33 M.Eq./L

**Normals :**

Tech : S. Sodium / S. Potassium : Ion Selective Electrodes Easylite MEDICA

7) Any other test :

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Pathologist

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**HOURS :**

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CLOSED ON SUNDAY

**Ref. No.** 6009/02

**Date :** 19/9/02

**Name :** A.K.Rai

**Age :** 41 y    **Sex :** M.

**Ref By :** ONGC

Investigation required :

**Urine Examination**

### **Physical Examination**

Quantity :

30 cc

Color :

pale yellow

Sp. gravity :

1010

Odour :

aromatic

Deposit :

nil

Transparency :

clear

### **Chemical Examination**

Reaction : Ph.

neutral

Proteins :

nil

Glucose :

nil

Acetone : (Ketone) :

nil

Bilirubin :

nil

Urobilinogen :

nil

Blood :

nil

Nitrite :

nil

### **Microscopic Examination**

Pus cells :

nil

RBCs :

nil

Cast :

nil

Crystals :

nil

Epithelial Cells :

few

Anything Special :

Remarks : sp. gravity, reaction, nitrite, Leucocytes & chemistry by Multisix, 10 Sg. on clinitek - autoanalyser.

*Bipin*

Pathologist

## LABORATORY REPORT

CLIENT CODE :

CLIENT'S NAME AND ADDRESS :  
RAJ ARUN KUMAR Ph. No.:

CLINICAL REFERENCE LABORATORIES  
 Plot 113, MIDC, 15<sup>th</sup> Street, Andheri (East), Mumbai 400 093.  
 Tel. : 690 3851 Fax : 690 3865

## REFERRING DOCTOR

DRAWN 13/04/2002

RECEIVED 13/04/2002

REPORTED 13/04/2002 17:40

PATIENT NAME RAJ ARUN KUMAR

ACCESSION NO. 0002BD019921 AGE 42 Years SEX Male DATE OF BIRTH 19/01/1960 PATIENT ID

## CLINICAL INFORMATION

## RESULTS

TEST REPORT STATUS	FINAL	IN RANGE	OUT OF RANGE	REFERENCE RANGE	UNITS
--------------------	-------	----------	--------------	-----------------	-------

## HEP C RNA, QT, PCR

HEP C RNA, QT, CR

2067

H 0 - 600

copy/mL

## HCV RNA QUANTITATIVE

HCV RNA level has shown to be prognostic marker of clinical disease and is used to predict clinical outcome early in infection, initiate antiviral therapy and monitor response to treatment.(1)

## METHOD:

The HCV quantitation procedure is based on four major steps:

- I. Isolation of viral RNA.
- II. Reverse transcription & Polymerase Chain Reaction for amplification of a sequence in the 5' non coding gene that is highly conserved.
- III. 2% agarose gel electrophoresis to visualize a 244 bp amplicon.
- IV. Quantitation of the amplicon in the gel documentation system using a 1-D main software & known standard viral amplicons. The gel is captured on the gel documentation system, resized & image cropped. Normalizing the background correction perfects the intensity of the band. Corresponding copies/ml is shown up on the screen.

## INTERPRETATION:

The viral load provides an accurate estimate of the level of HCV replication (i.e. HCV virion production in the liver). Variation of less than 3-fold of HCV RNA load must not be taken into account because they can be related to the intrinsic variability of the assays. In contrast, variation of more than 3-fold can reliably be considered a reflecting significant changes in HCV load. Viral load directly correlates with the likelihood of a response to antiviral therapy (2).

HCV viral loads are significantly affected by several factors including the conditions of sample collection and processing. There is considerable loss of detectable HCV RNA in serum compared with that in plasma (3). Also high speed and increased time of centrifugation attributes to a considerable loss of virus particles (4). Necessary steps are taken to avoid such problems.

## REFERENCES:

1. Trabaud, M. A., Bally, F., Si-Ahmed, S. N., et al (1997); Comparison of HCV RNA assays for the detection & quantification of hepatitis C virus RNA levels in serum of patients with chronic hepatitis treated with interferon. J. Med Virol 52: 105-12
2. Romeo, R., S. Pol, P. Berthelot, and C. Brechot. (1994); Eradication of hepatitis C RNA after Alpha-Interferon Therapy. Annals of Internal Medicine. 121:276-277
3. Chemello, L., L. Cavallotto, C. Casarin, et al (1996); Persistent Hepatitis C Viremia Predicts Late relapse after Sustained Response to Interferon -a in chronic hepatitis C. Annals of Internal Medicine. 124: 1058-1060.
4. Bukh J et al (1992); Importance of primer selection for the detection of hepatitis C RNA with the PCR assay. Proc. Natl. Acad. Sci. USA. 89: 187-191



*[Signature]*  
**DR. SUMEDHA SAHNI**  
 Director - Operations



Page 1 of 1

All investigations have their limitation which are imposed by the limits of sensitivity and specificity of individual assay procedures as well as the quality of the specimen received by the laboratory. Isolated laboratory investigations never confirm the final diagnosis of the disease. They only help in arriving at a diagnosis in conjunction with clinical presentation and other related investigations. (Also refer to "CONDITIONS OF REPORTING" on the reverse.)

CLIENT CODE :

CLIENT'S NAME AND ADDRESS :

RAI ARUN KUMAR  
 B-14, SHARDA KRIPA SOC, JANATA NAGAR,  
 CHANDKHEDA, AHMEDABAD Ph. No.:



CLINICAL REFERENCE LABORATORIES

113, MIDC 15th Street, Andheri (East), Mumbai - 400 093.  
 Tel.: 690 3851, Fax: 690 3865.

## REFERRING DOCTOR

DR. PARATHA DAS

DRAWN	RECEIVED	REPORTED		
08/11/2002	08/11/2002	11/11/2002 16:41		
PATIENT NAME				
RAI ARUN KUMAR				
ACCESSION NO.	AGE	SEX	DATE OF BIRTH	PATIENT ID
0002BK008334	42 Years	Male	19/01/1960	
CLINICAL INFORMATION				

## RESULTS

TEST REPORT STATUS	FINAL	IN RANGE	OUT OF RANGE	REFERENCE RANGE	UNITS
LIVER FUNCTION PROFILE					
ASPARTATE AMINOTRANSFERASE(SGOT)	36			15 - 37	U/L
ALANINE AMINOTRANSFERASE (SGPT)	55			30 - 65	U/L
ALKALINE PHOSPHATASE	69			50 - 136	U/L
G-GLUTAMYL TRANSFERASE	29			5 - 85	U/L
LACTATE DEHYDROGENASE	160			100 - 190	U/L
TOTAL BILIRUBIN	0.41			0.0 - 1.0	mg/dL
BILIRUBIN,DIRECT	0.06			0.0 - 0.3	mg/dL
TOTAL PROTEIN		8.4	H 6.4 - 8.2	G/DL	
ALBUMIN	4.7			3.4 - 5.0	G/DL
GLOBULIN	3.7			2.0 - 4.1	G/DL
ALBUMIN/GLOBULIN RATIO	1.3			1.0 - 2.1	RATIO
PROTHROMBIN TIME					
PROTHROMBIN TIME	11.9			11.4-13.7	SECONDS
INT'L NORMALIZED RATIO	0.97			< 1.4	RATIO
MEAN CONTROL	12.3			11.0 - 13.7	SECONDS
TSH 3RD GENERATION					
TSH 3RD GENERATION		4.57	H 0.400 - 4.000	μIU/ML	
ANTI-NUCLEAR AB-IFA,HEP2					
ANTINUCLLEAR ANTIBODIES		NEGATIVE		NEGATIVE	
HEP C RNA,QT,PCR					
HEP C RNA, QT,CR	< 600			0 - 600	copy/mL

College of American Pathologists  
Advancing ExcellenceDR. SUMEDHA SAHNI  
Director - Operations

# ENDOCRINE UNIT

Email : jsheth ad1@sancharnet.in

DR. JAYESH J. SHETH  
M.Sc., Ph.D.(Bom.)  
Fellow : ICMCH  
WHO  
Phone : 6921414 (R)

Hon. Assoc. Prof. of Endocrinology  
Sheth V.S. Hospital & NHL-  
Municipal Medical College

## DR. SHAH'S PATHOLOGY LABORATORY

MEDICARE CENTRE  
FIRST FLOOR,  
B/H. M. J. LIBRARY,  
ELLISBRIDGE,  
AHMEDABAD-380 006.

PHONE :  
079-6578450 / 6575541  
Fax : 079-6575417

HOURS : 8-00 A.M.  
TO 8-00 P.M.  
CLOSED ON SUNDAY

### COLLECTION CENTRE :

- 20/1, Bimanagar Society, Opp. Urmia Vijay, Satellite Road, Ahmedabad-380 015. Phone : 6742802, 6763652
- Jalaram Complex, Bhadwatnagar, Maninagar, Ahmedabad-380 008. Phone : 5399142

Ref No. : 5484

Date : 12/02/2003

Name : Mr. A. K. Rai

Age : 41 Y Sex : Male

Ref. By : ONGC

Collection Date : 12/02/2003

Investigation required : SERUM T3, T4, TSH

Method : RIA (IRMA)

### Reports :

### Results :

### Normals :

1. Serum T3

0.76 ng/ml

0.7 - 2.0 ng/ml

1.05-2.8 ng/ml

(Prepubertal 1-5 yrs)

2. Serum T4

9.0 ug/dl

5.5 - 13.5 ug/dl

3. Serum TSH (IRMA)

4.5 uIU/ml

0.4 - 5.0 uIU/ml

Upto 8.0 uIU/ml

(Prepubertal & sick euthyroid)

2.5 - 13.3 uIU/ml

(Infant Baby)

4. Free T4

ng/dl

0.8 - 2.0 ng/dl

5. Free T3

pg/ml

1.5 - 5.0 pg/ml

6. Free T4 Index :

60 - 160

### THYROID ANTIBODY :

<225.0 IU/ml : Negative

225.0-325.0 IU/ml : equivocal

>325.0 IU/ml : Positive

>35.0 IU/ml : Negative

35.0-50.0 IU/ml : equivocal

>50.0 IU/ml : Positive

Remarks : Above findings suggests an euthyroid status.

Dr. Jayesh Sheth

# ENDOCRINE UNIT

Email : jsheth ad1@ sancharnet.in

**DR. JAYESH J. SHETH**  
M.Sc., Ph.D.(Bom.)  
Fellow : ICMCH  
: WHO  
Phone : 6921414 (R)

## DR. SHAH'S PATHOLOGY LABORATORY

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Phone : 6741213 (R)

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- Jalaram Complex, Bhadwatnagar, Maninagar, Ahmedabad-380 008. Phone : 5399142

Ref No. : 681

Date : 03/05/2003

Name : A. K. Rai

Age : 41 Y Sex : Male

Ref. By : ONGC

Collection Date : 03/05/2003

Investigation required : SERUM T3, T4, TSH

Method : RIA (IRMA)

### Reports :

### Results :

### Normals :

1. Serum T3

0.8 ng/ml

0.7 - 2.0 ng/ml

1.05-2.8 ng/ml

(Prepubertal 1-5 yrs)

2. Serum T4

9.0 ug/dl

5.5 - 13.5 ug/dl

3. Serum TSH (IRMA)

4.7 ulu/ml

0.4 - 5.0 ulu/ml

Upto 8.0 ulu/ml

(Prepubertal & sick euthyroid)

2.5 - 13.3 uIu/ml

( Infant Baby )

4. Free T4

ng/dl

0.8 - 2.0 ng/dl

5. Free T3

pg/ml

1.5 - 5.0 pg/ml

6. Free T4 Index :

2.4-13.0 ug/dl

### THYROID ANTIBODY :

### THYROGLOBULIN ANTIBODY :

<225.0 Iu/ml : Negative

225.0-325.0 Iu/ml : equivocal

>325.0 Iu/ml : Positive

### MICROSOMAL ANTIBODY :

>35.0 Iu/ml : Negative

35.0-50.0 Iu/ml : equivocal

>50.0 Iu/ml : Positive

### Remarks :

*J. Sheth*

Dr. Jayesh Sheth

## LABORATORY REPORT

CLIENT CODE :

CLIENT'S NAME AND ADDRESS :

RAI ARUN KUMAR  
 A-44, "KRISHNA BUNGLOWS"  
 GANDHI NAGAR HIGHWAY, NEAR MOTERA VILAGE  
 AHMEDABAD - 382424  
 TEL- 7500078-1079 Ph. No.:



CLINICAL REFERENCE LABORATORIES

113, MIDC 15th Street, Andheri (East), Mumbai - 400 093  
 Tel.: 5690 3851, Fax: 5692 4717  
 Toll Free No.: 1600 222 333

## REFERRING DOCTOR

DRAWN 23/05/2003

RECEIVED 23/05/2003

REPORTED 26/05/2003 18:07

PATIENT NAME RAI ARUN KUMAR

ACCESSION NO. 0002CE042540

AGE 43 Years

SEX Male

DATE OF BIRTH 19/01/1960

PATIENT ID

## CLINICAL INFORMATION

## RESULTS

TEST REPORT STATUS	FINAL	IN RANGE	OUT OF RANGE	REFERENCE RANGE	UNITS
--------------------	-------	----------	--------------	-----------------	-------

**HEP C RNA,QT,PCR**

HEP C RNA, QT,CR

&lt; 600

0 - 600

copy/mL

**HCV RNA QUANTITATIVE**

HCV RNA level has shown to be prognostic marker of clinical disease and is used to predict clinical outcome early in infection, initiate antiviral therapy and monitor response to treatment.(1)

**METHOD:**

The HCV quantitation procedure is based on four major steps:

- I. Isolation of viral RNA.
- II. Reverse transcription & Polymerase Chain Reaction for amplification of a sequence in the 5' non coding gene that is highly conserved.
- III. 2% agarose gel electrophoresis to visualize a 244 bp amplicon.
- IV. Quantitation of the amplicon in the gel documentation system using a 1-D main software & known standard viral amplicons. The gel is captured on the gel documentation system, resized & image cropped. Normalizing the background correction perfects the intensity of the band. Corresponding copies/ml is shown up on the screen.

**INTERPRETATION:**

The viral load provides an accurate estimate of the level of HCV replication (i.e. HCV virion production in the liver). Variation of less than 3-fold of HCV RNA load must not be taken into account because they can be related to the intrinsic variability of the assays. In contrast, variation of more than 3-fold can reliably be considered a reflecting significant changes in HCV load. Viral load directly correlates with the likelihood of a response to antiviral therapy (2).

HCV viral loads are significantly affected by several factors including the conditions of sample collection and processing. There is considerable loss of detectable HCV RNA in serum compared with that in plasma (3). Also high speed and increased time of centrifugation attributes to a considerable loss of virus particles (4). Necessary steps are taken to avoid such problems.

**REFERENCES:**

1. Trabaud, M. A., Bailly, F., Si-Ahmed, S. N., et al (1997); Comparision of HCV RNA assays for the detection & quantification of hepatitis C virus RNA levels in serum of patients with chronic hepatitis treated with interferon. J. Med Virol 52: 105-12
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All investigations have their limitation which are imposed by the limits of sensitivity and specificity of individual assay procedures as well as the quality of the specimen received by the laboratory. Isolated laboratory investigations never confirm the final diagnosis of the disease. They only help in arriving at a diagnosis in conjunction with clinical presentation and other related investigations. (Also refer to "CONDITIONS OF REPORTING" on the reverse.)