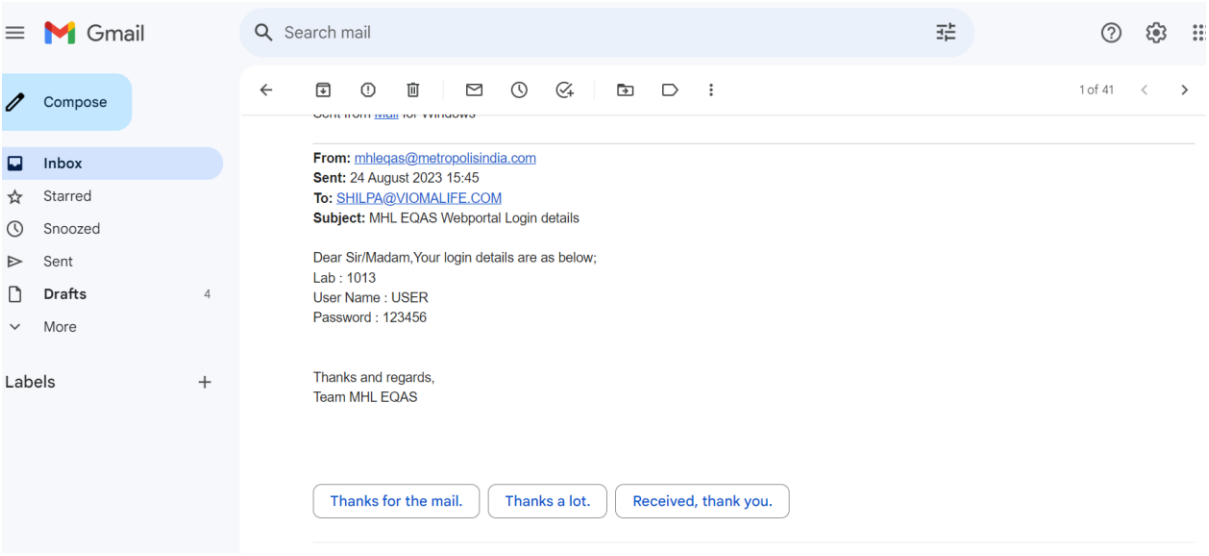
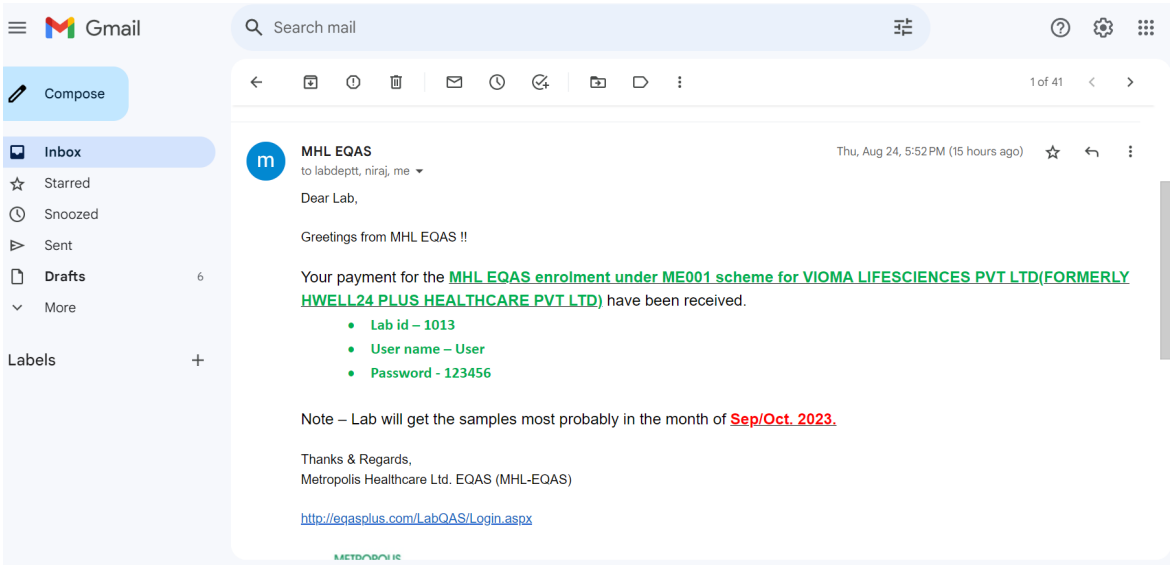
PT Participation - Enrollment from Metropolis, Mumbai





Register office: Off swami vivekanand road, Anand nagar, Sandoz Baugh, Thane MH 400607 India.
Website: www.viomalife.com CIN no: U74999MH2017PTC295120

Patient	: **JAIKEE MAURYA**	**Reg. No.**	: **00032**
Age	: **23 Years**	**Reg. Date**	: **17 Jul 2023 4:06 PM**
Sex	: **Male**	**Report Date**	: **17 Jul 2023 6:37 PM**
Ref. by	: **Self**	**Mobile No.**	: **8542046772**

Widal S. Typhi Antigen

TEST	RESULT
WIDAL IGM	NON REACTIVE
WIDAL IGG	NON RREACTIVE

Note: Kindly Co-relate Clinically

Dr. Supriya Lad Chincholkar
M.D. (Pathology)
Reg.No.: MMC REG 076789

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Website: www.viomalife.com CIN no: U74999MH2017PTC295120

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WIDAL SLIDE TEST

TEST	RESULT
Method	Widal - Slide
Salmonella Typhi 'O'	No Agglutination
Salmonella Typhi 'H'	No Agglutination
Salmonella Typhi 'AH'	No Agglutination
Salmonella Typhi 'BH'	No Agglutination
Note	Titres above 1:80 suggest positive reaction
Note	All positive serology tests for antibody detection should be repeated after 2 weeks to demonstrate rise or fall in titres.

Note: Kindly Co-relate Clinically

Dr. Supriya Lad Chincholkar
M.D. (Pathology)
Reg.No.: MMC REG 076789

JAIKEE MAURYA

PID NO: P112301521722/
ILC SAMPLE
Age: 23.0 Year(s) Sex: Male

Reference:
Sample Collected At:
Hwell24 Plus Healthcare Pvt. Ltd
C-211 Eastern Business District, Lbs Road, Bhandup West - 400078.
Processing Location:- Metropolis Healthcare Ltd,Unit No409-416,4th Floor,Commercial Building-1,Kohinoor Mall,Mumbai-70

VID: 230011001517034
Registered On:
18/07/2023 04:18 PM
Collected On:
18/07/2023 4:22PM
Reported On:
19/07/2023 08:42 AM

Investigation	Observed Value	Unit	Biological Reference Interval

Interpretation : C-Reactive Protein (CRP) is an acute phase reactant which is a protein released during inflammation by cytokines.

Increased CRP: Seen in various inflammatory conditions such as infection (bacterial/ viral/ fungal), autoimmune diseases, Cardiovascular disease, Inflammatory bowel disease, injuries etc

Decreased CRP: Seen in Patients on carboxypenicillins, Liver failure etc.

Limitations:
- Elevated CRP values are non-specific and should not be interpreted without a complete history.
- Heterophile antibodies may give falsely high levels.
- Elevated CRP can also be genetic, age related and sedentary lifestyle, exposure to environmental toxins, diet that includes refined, processed manufactured foods.

Note :
If the test has been ordered for COVID-19 purpose, you may take one of the following profiles for further investigation under your clinician's advice.
- Covid Monitor Initial profile (C0374) from Day 1 to Day 5
- Covid Monitor maintenance profile (C0375) from Day 5 to Day 10
- Covid Monitor Recovery profile (C0376) after discharge.

Associated Tests: Interleukin -6 CLIA Plasma (I0279)

Reference:

- Package insert
- Wallach's interpretation of diagnostic tests, Ed11, 2020
- Henry's Clinical Diagnosis and Management by Laboratory Methods. 23rd ed; 2017.
- Khera a, Mcguire DK, Murphy, et al. Race and gender differences in C- reactive protein levels. J Am Coll Cardiol. 2005;46:464-469.
- Tietz fundamentals of clinical chemistry 6th edition. Burtis CA, Ashwood ER, Bruns DE, 2008.

ASO titre Quantitative (Serum,Nephelometry)	122	IU/mL	< 408

Dr. ALAP CHRISTY
MBBS, MD, PGDM-HC Head - Clinical Chemistry
Reg No.2020/12/6991

JAIKEE MAURYA

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Age: 23.0 Year(s) Sex: Male

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Investigation	Observed Value	Unit	Biological Reference Interval

Interpretation:

- Antistreptolysin O (ASO) provides information regarding past Group A Streptococcal infection.
- High levels are seen in Acute rheumatic fever, kidney diseases like glomerulonephritis, acute bacterial endocarditis, and neurological disorders.
- ASO titres peak at 3-5 weeks post infection.
- Serial measurement of ASO helps in checking successful antibiotic treatment or persisting infection.

Note:

- ASO levels are age dependent and change with geographic location and with the local frequency of streptococcal infections
- In the case of monoclonal gammopathies, the measurements yield false high ASO concentrations in some patients. Such samples should be assayed by another method.

Associated test: Anti DNAse B enzymatic Serum (A0455), Rheumatic Fever Panel (R0021)

Reference:

- Kotby AA, Habeeb NM, Ezz El Elarab S. Antistreptolysin O titer in health and disease: levels and significance. Pediatr Rep. 2012 Jan 2;4(1):e8. doi: 10.4081/pr.2012.e8. Epub 2012 Feb 9.
- Pack Insert

RA-Rheumatoid Arthritis Serum (Serum,Immunoturbidimetry)	Below 10	IU/mL	Non-reactive: < 14

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Investigation	Observed Value	Unit	Biological Reference Interval
HBsAg Screening (Serum,CMIA)	Non Reactive,0.02	IU/mL	Non Reactive: < 0.05 Reactive: >= 0.05

All Reactive results must be confirmed by Neutralizing confirmatory test or by HBV DNA detection assay.

Interpretation note : Patients on Biotin supplement may have interference in some immunoassays. With individuals taking high dose Biotin (more than 5mg per day) supplements, at least 8-hour wait time before blood draw is recommended.
Ref: Arch Pathol Lab Med—Vol 141, November 2017

Anti HCV-Ab to Hepatitic C Virus (Serum,CMIA)	Non Reactive,0.08	S/CO	Non Reactive: < 1.0 Reactive: >= 1.0

Interpretation :

This is a screening test detecting anti-HCV antibody. The CDC recommendation on anti-HCV testing includes the use of method specific optimal signal-to-cut-off ratio in interpretation & reporting positive results. For ECLIA - s/co ratio - between 1 to 5- further supplemental tests are suggested for confirmation, while s/co ratio > or = 5 associated with 95% or more high probability of being true positive. Supplemental testing includes more specific assays like immunoblot or HCV RNA PCR for all positive results for confirmation or to further differentiate past(resolved) and chronic infections.

HIV-DUO (IV th Generation test) (Serum,CMIA)	Non Reactive,0.19	S/CO	Non Reactive: < 1.0 Reactive: >= 1.0

Test Description : The HIV Ag/Ab Combo(HIV DUO) assay is a Screening test for simultaneous qualitative detection of HIV p24 antigen and antibodies to HIV type 1 and/or 2 in human serum or plasma. However, the HIV Ag/Ab Combo result does not distinguish between the detection of HIV p24 antigen, HIV-1 antibody, or HIV-2 antibody separately.

Test Interpretation :

- All reactive samples are tested by 3 different methods as per NACO guidelines, 2015 (Strategy) /algorithm III).
- A single test result is not always indicative of a disease and diagnosis of HIV infection must be based on results of supplemental, confirmatory tests performed on repeat sample & with clinical correlation for the patient's immune status and history.
- The test results obtained relate only to the sample given or received and tested
- Non Reactive results may not rule-out acute or early HIV infection in the window period. If acute HIV-1 infection is suspected, detection of HIV-1 RNA or HIV proviral is recommended.
- Reactive results suggest possibility of preliminary infection with HIV-1 and/or HIV-2. All reactive samples should be verified by submitting a second serum specimen for repeat testing with screening & supplemental or confirmatory HIV tests (by serology-HIV 1 & 2 western blot or molecular- HIV 1 & 2 PCR).
- For the received samples, it is presumed that patient counselling is done at referring centre or by referring physician.

Dr. BHAVYA SAXENA
M.B.B.S., M.D. (Pathology)
Consultant Pathologist,
Reg No.2014/08/3484

230011001517034

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ILC SAMPLE
Age: 23.0 Year(s) Sex: Male

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Investigation	Observed Value	Unit	Biological Reference Interval
Widal Test for Typhoid Serum (Serum,Tube Agglutination)			
Salmonella Typhi - 'O' Antigen	No Agglutination		No Agglutination
Salmonella Typhi - 'H' Antigen	No Agglutination		No Agglutination
Salmonella Paratyphi - A - H Antigen	No Agglutination		No Agglutination
Salmonella Paratyphi B - H Antigen	No Agglutination		No Agglutination

Dr. NIRANJAN PATIL
MD(Micro)
HOD - Microbiology & Molecular Biology
Reg No. 2006/02/0697

JAIKEE MAURYA

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Age: 23.0 Year(s) Sex: Male

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Investigation	Observed Value	Unit	Biological Reference Interval

Interpretation :

O antigen Agglutination titre	H antigen Agglutination titre	Interpretation
No agglutination	Low titres <160	Anamnestic reaction/cross reacting antibodies.
Low titres <80	No agglutination	Anamnestic reaction/cross reacting antibodies.
Low titres <80	Low titres <160	Confirm rise in titres with repeat specimen after 2-3 weeks.
>/= 80	No agglutination	Suggestive of Enteric fever.
No agglutination	>/= 160, any one of either SH, STA or STB antigen.	Suggestive of Enteric fever
>/= 160	>/= 160, any one of either SH, STA or STB antigen.	Strongly indicate Enteric fever.
Agglutination present(any titre)	Agglutination (any titre), more than one of SH, STA or STB antigen types.	Seen generally post immunization.

- For O antigen, titres of 80 or above can be significant.
- For H antigen, titres of 160 or above are considered significant.
- Demonstration of rising titres in paired sera is confirmatory.
- SH=S.typhi, STA=S.paratyphi A, STB=S.paratyphi B.

Disclaimer:
A careful consideration to combination of epidemiological factors, stage of infection, clinical history, examination, other relevant investigation findings and treatment history should be done when interpreting test results.

Test Limitations:
- The results of the Widal test can be falsely positive in the case of past vaccination or S. Typhi infection.
- A widal test cannot distinguish between a patient's past infection, current infection, or a S. Typhi vaccination.
- The test results can be falsely positive in typhus, acute falciparum malaria, chronic liver disease, rheumatoid arthritis, nephrotic syndrome and myelomatosis or from some anamnestic reactions.
- It is preferable to do culture test for confirmation of Salmonella infections.
- Result of tests should be correlated with patient's medical history, physical examination, results of other tests, imaging studies etc.

Associated Test:
- "Fever Panel by Multiplex PCR" for early diagnosis of Dengue virus, Chikungunya virus, Salmonella spp., West Nile virus,Plasmodium spp., Rickettsia spp. and Leptospira spp. (Test code: F0099)
- Typhi Dot IgM (Test code: T0135)
- Blood Culture & sensitivity (Test code: C0182)
-

Clinical references:

Dutta S, Sur D, Manna B, Sen B, Deb AK, Deen JL, Wain J, von Seidlein L, Ochiai RL, Clemens JD, Bhattacharya JK. Evaluation of a new-generation serologic test for the diagnosis of typhoid fever: data from community - based surveillance in Calcutta, India. Diagnostic Microbiology and Infectious Disease. 2006;56:359–365. doi: 10.1016/j.diagmicrobio.2006.06.024.

Dr. NIRANJAN PATIL
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HOD - Microbiology & Molecular Biology
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Investigation	Observed Value	Unit	Biological Reference Interval
Typhi Dot IgM (Serum,Immunochromatography)	Negative		Negative

Test indication:
- Typhidot is a dot enzyme immunoassay for the rapid diagnosis of IgM antibodies against Salmonella typhi.
- A positive Typhi Dot IgM is suggestive of recent infection with Salmonella typhi which causes typhoid fever.
- Typhidot test becomes positive within 2-3 days after infection.
- Sensitivity of the test is 95%, as compared to Widal 75%.
- Negative predictive value for the test is 96.1%.

Disclaimer:
A careful consideration to combination of epidemiological factors, stage of infection, clinical history, examination, other relevant investigation findings and treatment history should be done when interpreting test results.

Test Limitations:
- Low titre IgM antibodies to S. typhi may persist for about 4 months post infection. Therefore, in endemic area, samples weak positive should be interpreted with caution, preferably in light of patient history.
- A negative result, i.e., the absence of detectable IgM antibody does not rule out recent or current infection, as the positivity is influenced by the time elapsed from the onset of fever and immunocompetence of the patient. However, if S.typhi infection is still suspected, obtain a second specimen 5-7 days later and repeat the test.
- Specific IgG may compete with the IgM for sites and may result in a false negative. Conversely, high titre Rheumatoid factor may result in a false positive reaction.

d) A low extent of cross reactivity may be observed with S. paratyphi infection.

Associated Test:
- "Fever Panel by Multiplex PCR" for early diagnosis of Dengue virus, Chikungunya virus, Salmonella spp., West Nile virus, Plasmodium spp., Rickettsia spp. and Leptospira spp. (Test code: F0099)
- Widal tube agglutination test (Test code: W0011)
- Blood Culture & sensitivity (Test code: C0182)

Clinical references:

- Agarwal PK et al., Typhoid Fever. JIACM 2004; 5(1):60-4.
- Hatta M et al., Simple dipstick assay for the detection of Salmonella typhi-specific IgM antibodies and the evolution of the immune response in patients with typhoid fever. Am. J. Trop. Med. Hyg., 66(4), 2002, pp. 416-421.

RPR (Serum,Flocculation)	Non Reactive		Non Reactive Diagnostic titre - 1:8

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MD MICROBIOLOGY
Reg No.2016/08/3042

JAIKEE MAURYA

PID NO: P112301521722/
ILC SAMPLE
Age: 23.0 Year(s) Sex: Male

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Investigation	Observed Value	Unit	Biological Reference Interval

Interpretation :

Comparison of RPR, TPHA tests

Test	Use	Limitations
RPR	Screening test. Follow-up titres for monitoring response to treatment.	Biological false positives possible. Repeat testing should be done with a specific test like TPHAfor low titres such as 1:1, 1:2 and 1:4.
TPHA	More specific than RPR	Less sensitive in early syphilis.

RPR : Rising titres are found in active disease and levels subside after successful treatment.

RPR is a simplified alternative to the conventional VDRL test. It has modified VDRL antigen which contains carbon particles. Due to ease of visualisation, the test is sensitive and the test of choice for serum samples

Disclaimer:
A careful consideration to combination of epidemiological factors, stage of infection, clinical history, examination, other relevant investigation findings and treatment history should be done when interpreting test results.

Test Limitations:

- The RPR card test cannot be used in spinal fluids.
- A prozone reaction may be encountered occasionally. In a prozone reaction, complete or partial inhibition of reactivity occurs with undiluted serum (maximum reactivity is obtained only with diluted serum). The prozone phenomenon may be so pronounced that only a rough reading is produced in the qualitative test by a serum that will be strongly reactive when diluted and tested in higher titres. In addition, a specimen should be tested for the prozone phenomenon when the clinician suspects syphilis, even if qualitative RPR test is non-reactive.
- Biological false positive reaction occurs as cardiolipin antigen mainly in specimen from persons with autoimmune disease (SLE, rheumatic disorder), leprosy, and malaria & in intravenous drug addiction, liver failure etc .
- The RPR test may be positive (Reactive) in persons from areas where yaws, pinta or non-venerable syphilis in endemic.
- Non treponemal test titres of persons who have been treated in latent or late stages of syphilis or who have become re-infected do not decreases as rapidly as do those of the persons in the early stages of their first infection.

Associated Tests:

- TPHA (Test code T0097)
- Syphilis Total Abs (Test code V0031)

Clinical Reference:

- Egglestone SI, Turner AJ. Serological diagnosis of syphilis. PHLS Syphilis Serology Working Group. Commun Dis Public Health. 2000;3:158–62
- Augenbraun MH, DeHovitz JA, Feldman J, Clarke L, Landesman S, Minkoff HM. Biological false-positive syphilis test results for women infected with human immunodeficiency virus. Clin Infect Dis. 1994;19:1040–4.
- Naidu NK, Bharucha ZS, Sonawane V, Ahmed I. Comparative study of Treponemal and non-Treponemal test for screening of blood donated at a blood center. Asian J Transfus Sci. 2012;6:32–5.

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MD MICROBIOLOGY
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Investigation	Observed Value	Unit	Biological Reference Interval

Interpretation:

- Lactate dehydrogenase (LDH) is an enzyme that is present in heart, liver, muscle and kidney tissues.
- Very high levels of LDH are seen in patients with megaloblastic anaemia, carcinoma and shock.
- Moderate increase seen in muscular disorders, nephrotic syndrome, and cirrhosis.
- Mild increases in LDH activity are seen in cases of myocardial or pulmonary infarction, leukemia, hemolytic anemia and non-viral hepatitis
- Many cancers cause a general increase in LDH levels or an increase in one of its isozymes.

Clinical Utility:

- It is used to screen for tissue damage along with other related tests like LDH isoenzymes.
- It is also used to monitor severe infections or conditions like hemolytic or megaloblastic anemias, kidney disease, and liver disease

Associated Test : CPK Total Serum (C0165), SGPT ALT Serum (S0019), Troponin-I, Serum(T0128), Troponin-T, Serum (T0129) , LDH Isoenzymes (L0016)

Reference :

- Package Insert
- Klein R, Nagy O, Tóthová C, Chovanová F. Clinical and Diagnostic Significance of Lactate Dehydrogenase and Its Isoenzymes in Animals. Vet Med Int. 2020 Jun 15;2020:5346483.

CRP - C Reactive Protein (Serum,Particle enhanced immunoturbidimetric assay)	0.306	mg/L	< 5.0

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