NIGERIAN INSTITUTE OF MEDICAL RESEARCH

HUMAN VIROLOGY LABORATORY

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Client Information Handbill

(MOPP2 03 72 V4)

We wish to intimate you of the laboratory support services available at the Human Virology Laboratory (HVL).

HVL is the only clinical diagnostic laboratory that is certified in Nigeria as it was adjudged to conform to the requirements of NIS ISO 9001:2008. In an effort to satisfy our customers and provide reliable results for better patient management, the laboratory is also ASLM certified by African Society of Laboratory medicine and is currently in the process of obtaining the ISO 15189 accreditation.

HVL provides support services for monitoring HIV patients, some other molecular diagnostic assaysconducted in HVL include viral load, for hepatitis B and C virus and human papilloma virus. This laboratory operates only during working days from 8.00am to 4.00pm as such; our doors are closed during the weekends and public holidays. Our pricelist which contains our test menu is shown below. Also included is our requirement for samples collection, storage, transportation and turnaround time.

HVL COMPREHENSIVE PRICE LIST

S/N	TESTS	PRICE (N)	S/N	TESTS	PRICE (N)
1	HBsAg	2,500.00	17	Electrolyte	2,500.00
2	HBcIgm	5,500.00	18	Total Cholesterol	1000.00
3	HBeAg	5,500.00	19	HDL-Cholesterol	1000.00
4	HBeAb	5,500.00	20	LDL-Cholesterol	1000.00
5	HCV Ab	2,500.00	21	Triglyceride	1000.00
6	HIV-1 Viral Load	30,000.00	22	HIV DNA PCR	25,000.00
7	Hepatitis B Viral Load	40,000.00	23	HIV Confirmation *EIA *WB	7,000.00 20,000.00
8	Hepatitis C Viral Load	50,000.00			
9	HCV Genotyping	25,000.00	24	CD4 Count	6,000.00
10	ALT	600.00	25	Provision of panel for HIV proficiency testing	6,000.00
11	AST	600.00			
12	Bilirubin-Direct	600.00	26	Human Papiloma Virus (HPV) Screening & Genotyping	20,000.00
13	Bilirubin-Total	800.00			
14	Alkaline Phosphatase	600.00	27	Quality Management System Training	150,000.00
15	Albumin	600.00			
16	Protein	600.00	28	Resistance Testing	45,000.00

NB: Emergency/urgent laboratory investigation will attract a different price.
Training on CD4 Count and HIV-1 Viral Load is available upon request.

TYPES	TESTS INVOLVED	PRICE (₦)
Baseline	*Viral load, * CD4, Haematology, Chemistry(ALT, Creatinine, BUN, Total cholesterol, Glucose), HBsAg, HCV -ab	8,900.00
Follow up	*Viral load, * CD4, Haematology, Chemistry(ALT, Creatinine)	2,900.00

Note: Asterisked tests are free for NIMR clinic patients for now.

SAMPLE COLLECTION SPECIFICATION AND TEST TURN AROUND TIME FOR HVL PATIENTS

S/N	Test required	Sample type	Condition and time to reach the Lab	Volume	Container	TAT
1	Viral load (HIV)	Plasma Whole blood	Store at 2-8°C, arrive lab in cold chain Within 4hrs	3ml 10-6ml	Plain bottle EDTA bottle	7 working days
2	CD4 Count	Whole blood	Within 4hrs	4ml	EDTA bottle	24 hours
3	HIV Confirmation	Plasma/Serum Whole blood	Store at 2-8°C, arrive lab in cold chain Within 4hrs	3ml 4ml	Plain bottle EDTA bottle	48 hours
4	Haematology	Whole blood	Bled in the lab	4ml	EDTA bottle	96 hours
5	Chemistry	Serum	Bled in the lab	6ml	Plain bottle	96 hours
6	RBS, FBS&24hrs PP (Sample to be taken before meal)	Plasma	Bled in the lab	3ml	Fluoride oxalate bottle	96 hours
7	HBV	Plasma Whole blood	Store at 2-8°C, arrive lab in cold chain Within 4hrs	3ml 6-10ml	Plain bottle EDTA bottle	1 week
8	HCV Viral load & HCV Genotyping	Plasma Whole blood	Store at 2-8°C, arrive lab in cold chain Within 4hrs	3ml 6-10ml	Plain bottle EDTA bottle	2 weeks
9	HBsAg HCVAb	Plasma/Serum Whole blood	Store at 2-8°C, arrive lab in cold chain Within 4hrs	3ml 4ml	Plain bottle EDTA bottle	96 hours
10	HBeAg/HBeAb HBcIgM	Plasma/Serum Whole blood	Store at 2-8°C, arrive lab in cold chain Within 4hrs	3ml 4ml	Plain bottle EDTA bottle	1 week
11	HIV-1 DNA PCR	Whole blood Dry blood spot	Within 4hrs Cards arrive dry	3-5ml. Spot on DBS card.	EDTA bottle. DBS card.	2 weeks
12	Human Papiloma Virus (HPV) Screening and Genotyping	Endo cervical swab	Room Temperature	NA	HPV transport medium	1 month
13	HIV-1 Resistance Testing	Plasma Whole blood	Store at 2-8°C, arrive lab in cold chain Within 4hrs	3ml 6-10ml	Plain bottle EDTA bottle	1 month

INSTRUCTION FOR COLLECTION OF PEADIATRIC VIRAL LOAD SAMPLE

Samples for HIV-1 viral load from peadiatric patients should be collected in 6ml EDTA bottle.

INSTRUCTION FOR COLLECTION OF 24HR URINE CREATININE CLEARANCE

1. The first early morning urine is passed out.
2. Subsequent urine is passed into a new 5L plastic keg from 9. 00 am – 9.00 am the next day
3. The urine sample should be brought to the lab before the expiration (9.00 am)

COLLECTION, STORAGE AND TRANSPORTATION REQUIREMENT FOR SAMPLES SHIPPED TO HVL

Every sample should be accompanied with a request form which should contain the following Information:

- Patient name, gender, date of birth,
- The name of clinician/healthcare provider, address, phone number and e-mail
- Type of sample, date and time of collection
- Clinical diagnosis
- Test requested

*** You may wish to download the HVL request form from our website for use. Samples shipped without these information may have delayed results.**

HBV VIRAL LOAD

- SAMPLE COLLECTION: Whole blood in EDTA as anticoagulant must be collected and separate plasma from whole blood within 1 day by centrifugation (800-1600g) for 15mins. Label the tube with date of collection, name and test required. Specimens in heparin are unsuitable for the assay.
- STORAGE: The specimens may be stored at 2-8C for up to 7 days or preferably frozen at -20C.
- TRANSPORT: The specimens should be in a cooler containing enough ICE PACKS to enable it get to the lab in a cold state.

HCV VIRAL LOAD

- SAMPLE COLLECTION: Collect whole blood in EDTA bottle and separate plasma within 4hrs of collection by centrifugation at 800-1600g for 15mins. Label the tube with date of collection, name and test required. Specimens in heparin are unsuitable for the assay.
- STORAGE: The specimens may be stored at 2-8C for up to 72 hours or frozen at -20C.
- TRANSPORT: The specimens should be in a cooler containing enough ICE PACKS to enable it get to the laboratory in a cold state.

HIV-1 VIRAL LOAD

- SAMPLE COLLECTION:Whole blood in EDTA bottle must be collected. Separate plasma from whole blood within 4 hours by centrifugation at 800-1600g for 15mins. Label the tube with date of collection, name and test required. Specimens in heparin are unsuitable for the assay.
- STORAGE: The specimens may be stored at 2-8C for up to 5 days or frozen at -20C.
- TRANSPORT: The specimens should be in a cooler containing enough ICE PACKS to enable it get to the laboratory in a cold state.

HPV

- SAMPLE COLLECTION:

1. Obtain an adequate sampling from the cervix using the Cervex-Brush®. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix.
2. Push gently and rotate the broom in a clockwise direction five times.
3. Rinse the broom into the cobas® PCR Cell Collection Media vial by pushing the broom into the bottom of the vial 10 times, forcing the bristles apart.

4. Swirl the broom vigorously to further release material. Discard the collection device. Do not leave the broom head in the vial.
5. Tighten the cap. Record the patient's name and ID number on the vial. Record patient's information on requisition form.

- STORAGE: Cervical cell specimens should be collected in cobas® PCR Cell CollectionMedia or PreservCyt Solution and may be stored at room temperature for up to 6 months or at 2-8°C for longer.
- TRANSPORT: Transport at 2-30°C, (room temperature) bearing in mind country regulations for the transport of human samples.

Note

- Treat all samples as potentially infectious.
- All samples should be properly labeled with date and time of collection.
- Whole blood should get to the lab within 4 hours of collection.
- Each sample should be transported in a sterile container free from blood spillage and accompanied with a test request form.
- Samples should be well sealed before transportation. Preferably, triple packaging system should be used.

It is important to note that results of viral load testing can be significantly affected if samples are not stored and transported as described above.

CRITERIA FOR SAMPLE REJECTION IN HUMAN VIROLOGY LABORATORY

Proper specimen collection and handling are an essential part of obtaining accurate and timely laboratory results. All specimens delivered to the laboratory must meet defined acceptance criteria for identification, collection, volume, and preservation in appropriate container type in order to be processed. If any criterion is not met, such sample shall be rejected and the customer notified immediately so that corrective action can be taken.

Sample is rejected by the laboratory if:

It is not appropriate for the test being requested.
It is collected in a syringe.
It is unlabeled or the identity on the form does not match that on the sample.
If the sample is collected in a wrong container.
If container is leaking.
Haemolysed/lipaemic/clotted
Volume is inadequate.
Inappropriately transported.

Rejection forms are completed and returned to the client for their information. However, the rejected sample is kept in the laboratory for proper disposal. Proper sample should be collected and resubmitted immediately.

Note on Serology sample transportation

Plasma or serum collected for serology (HIV confirmation, hepatitis B and C markers) can be stored at 2-8°C within 7 days or may be frozen at -20°C before shipment to the laboratory.

Confidentiality of our clients' information

HVL business and customer information are not revealed or discussed with anyone who does not have a medical or business reason to know the information. It is the responsibility of all HVL workforce members to preserve and protect confidential patient, employee and business information. A confidential information agreement policy is endorsed by HVL workforce to show acceptance and willingness to abide by it.

HVL does not require consent from the clients if there is a need to test your samples in our referral laboratory. Should you have any complaint, feel free to complete our customer complaint form if you are physically around the laboratory or call our information desk to register your complaints. All complaints are handled and resolution communicated back to complainant. HVL is available to provide clinical advice if requested from our experienced laboratory professionals.

Reference Intervals in HVL

CD4 COUNT	
CHEMISTRY	365 - 1,571cells/μl
ALT	10-50U/L
AST	10-50 U/L
ALP	28 - 100 U/L
BIL - Direct	$\leq$ 5 μmol/L
BIL - Total	$\leq$ 21 μmol/L
Protein	60-85g/L
Alburin	38-51g/L
Serum Sodium	135 - 155mmol/L
Potassium	3.4 - 5.3mmol/L
Chloride	96 - 100mmol/L
Bicarbonates	21 - 30mmol/L
Creatinine	44 - 115 μmol/L
Glucose (Fasting)	2.8 - 5.6mmol/L
Glucose (Random)	3.3 - 7.4mmol/L
Urea (BUN) Adult	2.14 - 7.14 mmol/L
Cholesterol (Total)	< 5.18 mmol/L
Triglyceride	< 2.26 mmol/L
HDL-Cholesterol	M: 0.78 - 1.55mmol/L F: 1.03 - 1.81mmol/L
LDL - Cholesterol	1.73 - 4.61 mmol/L
24 Hour Urine Creatinine Clearance	M:72 - 141ml/min F: 74 - 130ml/min

HEAMATOLOGY	
Haemaglobin (Hb)	7.4 – 111.6mmol/L
Haematocrit (PCV)	0.37-0.52L/L
WBC Total	4.5-11*10^9 cells/L
Platelet	150-400*10^9/cells/L
MCHC	352 – 406 g/L
MCH	28.3-31.7 pg/cell
MCV	75.1-83.1/FL
RBC	4.1-5.9*10^{12} cell/L
RDW	11.6-14.0%
PDW	9.4-18.1 FL
Neutrophil (Poly)	40-70%
Lymphocytes	20-50%
Mixed Field Differential	2-20%
MPV	8.4-9.8 FL
P-LCR	8-20.6%
Lymp#	2.3-x10^3 cells/L
Mid#	0.3x10^3/cells/L
Gran#	0.6x103/cells/L