

**OFFICE OF THE CHIEF DISTRICT MEDICAL AND PUBLIC HEALTH OFFICER: GANJAM  
CENTRAL STORE, BRAHMAPUR**

Letter No. 8720 / CS/ 2021

*Brahmapur*

Dated. 9/6/21

**CORRIGENDUM**

A small modification in the specification of Haemoglobin Meter (Digital) (Sl. No. 5 of Instruments & Equipment's for NBCC) (enclosed) of Tender Notice vide Letter No. 8088/CS/2021, Dt. 25.05.2021 as published in the Odia News Paper The Samaj and English News Paper The Times of India on Dt. 26.05.2021 has been made which may be downloaded from the District website [www.ganjam.nic.in](http://www.ganjam.nic.in).

All other Terms & Conditions of the published Tender will be remained unchanged.

CHIEF DISTRICT MEDICAL &  
PUBLIC HEALTH OFFICER  
GANJAM, BRAHMAPUR

## Draft Technical Specifications for Invasive Digital Hemoglobinometers

S. No.	Technical specification	Comments	
1	Name	Digital Hemoglobinometer	
2	Clinical purpose	Direct hand held battery operated device used for hemoglobin testing in clinical setting/population-based screening. The device is intended to be used for quantitative measurement of haemoglobin in capillary, venous or arterial whole blood samples taken from forearm, upper arm, hand thigh, calf, or fingers.	
3	Should be used by	Medical officer/ Laboratory Technician/Staff Nurse/ ANMs/, Mid-level health providers at HWCs.	
<b>Technical Characteristics</b>			
1.	Working principle	Reflectance Photometry/ Absorbance Photometry	
2.	Parameter	Blood Haemoglobin level	
3.	Range of Hb estimation	0-20gm/dl	
4.	On-screen patients result display	Yes (LCD Display)	
5.	Maximum volume of sample required	Not more than 50µl (One full blood drop)	
6.	Sample material	Capillary, venous or arterial whole blood.	
7.	Measuring time	Less than one minute	
8.	Auto-calibration	Auto/Self calibration	
9.	Sensitivity	More than 80%	Findings should be published in two peer reviewed indexed journals. The studies should be done in two different Indian settings by two independent teams of investigators.
10.	Specificity	More than 80%	
11.	Bias (Limits of agreement)	0.5 gm/dl ( $\pm 1$ gm/dl)	
<b>Users Interface</b>			
1.	Memory to store data	Desirable - up to 500 tests with date and time	

2.	Bluetooth connectivity	Desirable
3	Data transfer	Desirable – provision for data transfer to printer and PC
<b>Physical Characteristics</b>		
1.	Dimensions (metric)	Not more than 15 cm X 10 cm X 20 cm
2.	Weight (grams)	Should not be more than 500 grams
3.	Mobility/ Portability	Should be mobile and portable
<b>Energy Source</b>		
1.	Power requirements	Preferably battery operated.  Should also be able to work on direct connection with electricity source (AC). The manufacturer must provide the charger and the cable for electricity power connection, wherever required by the equipment
2.	Battery	3.7 volt Lithium-polymer rechargeable battery/ 1.5 volt 4 AA batteries/ etc. Should be able to perform up to 500 tests when full charged.
3	Automatic shut down	On battery power the device should turn off after approximately of 5 minutes of no use.
<b>Environmental Consideration</b>		
1.	Working temperature	Should be able to perform in the temperature range of 10-40°C
2.	Working Humidity	5-95%
3.	User's care/ Cleaning	The part of the equipment which comes in contact with blood should be easily cleanable.  The factors which affect the hemoglobin estimation (ex. Haziness of lens) after repeated use should be clearly mentioned in the manual.  The cleaning material for the lens and cuvette /strip should be easily available.
<b>Accessories</b>		
1.	Cuvette/ Strip (Working environment)	Disposable and stable at specified environmental(Working temperature- 10-40°C, Working humidity – 5-95%) condition.
2.	Cuvette/ Strip (Storage environment)	Should be stable at temperature of 25-30°C and humidity of 5-95%. Shelf life for storage should be at least one year.

### Quality Control

1.	Intra-sample variation (Accuracy)	Should be less than 5%
2.	Control solution to check quality	Should be available for low, normal and high haemoglobin values. Calibration facility should be available.
3.	Certification	USA FDA/ European CE/Any other equivalent certification Preferable: ISO 9001:2008 certification

### Service Support

1.	Service support contact details	Contact details of manufacturer, supplier and local service agent to be provided
2.	Training	Free onsite training should be provided for the doctors, ANM and ASHA. At least, two trainings (one training at the time of installation and another training after six months, i.e., refresher training)
3.	Warranty and on-site AMC	Should be 3 years each