PATHOZYME DIAGNOSTICS

HEMOGLOBIN

(Sodium Lauryl Sulphate Method)
CAT NO.: HBR

Reagent kit for quantitative estimation of Hemoglobin in Whole Blood.

DIAGNOSTIC SIGNIFICANCE:

Hemoglobin is red pigment which serves to transport oxygen from the lungs to body tissues. It gives blood the characteristic red color. Insufficient hemoglobin concentration leads to anoxia followed by destruction of tissue cells. Decreased levels of hemoglobin are observed in all varieties of anemia resulting from iron, folic acid, and vitamin B12 deficiency. In anemia, hemoglobin levels are abnormally low and this condition suggests an underlying disease. Increased hemoglobin levels are observed in Polycythemia vera, congenital cyanotic heart disease and in several other clinical conditions such as heat stroke and dehydration.

PRINCIPLE:

Hemoglobin is oxidized with Potassium Ferricyanide to methemoglobin. Methemoglobin reacts with Sodium Lauryl Sulphate, The concentration of hemoglobin in the sample is directly proportional to the intensity of the coloured complex which is measured at 540 nm (520-560 nm or with GREEN filter).

Hemoglobin $\xrightarrow{\text{Potassium Ferricyanide}}$ Methemoglobin

Methemoglobin $\xrightarrow{\text{Sodium Lauryl Sulphate}}$ Coloured Complex

SAMPLE COLLECTION & STORAGE:

The specimen required is whole blood either fresh capillary blood or venous blood collected with anticoagulant.

KIT PRESENTATION:

Pack Size	1000 ml	5000 ml
Hemoglobin Reagent	1000 ml	5000 ml

STORAGE & STABILITY OF THE REAGENTS:

The reagent is stable at Room Temperature until expiry date stated on the labels **when protected from light.**

PRECAUTION:

Hemoglobin is TOXIC. Avoid contact of reagent with skin and eyes. Use automated pipettes. **Do not pipette by mouth**. Avoid ingestion.

ASSAY PARAMETERS:

Reaction	: End point	Sample Vol.	: 20 µl
Wavelength	: 540 nm (520-560)	Reagent Vol.	: 5.0 ml
Zero Setting	: Dist. Water	Factor **	: 36.8
Incub.Temp.	: RT	Linearity	: 25 gm/dl
ncub Time	: 5 min.	Linearity	: gm/dl

PROCEDURE:

Pipette into TT	Test
Hemoglobin reagent	5000 µl (5.0 ml)
Blood Sample	20 µl (0.02 ml)
Mix & Incubate for 5 minutes at RT & read the absorbance at 540 nm (520-560 nm or with GREEN filter).	

CALCULATION WITH FACTOR

Hemoglobin Conc. (gm/dl) = Absorbance of Test X **Factor**

Where **Factor** is different as given below;

Factor for Semi Auto or Standard Instrument = 36.8

NORMAL VALUES:

New Born	**: 14.0 - 20.5 gm/dl**
Infants (up to 1 year)	**: 09.5 - 14.0 gm/dl**
Children (1 - 10 years)	**: 10.5 - 14.0 gm/dl**
Adult Female	**: 11.5 - 16.4 gm/dl**
Adult Male	**: 13.5 - 18.0 gm/dl**

[It is recommended that each laboratory should establish its own normal range]

LINEARITY:

This method is linear up to **25 gm/dl**.

REFERENCES:

1. Br.J.Haematology 13 (Suppl) 17, (1967).
2. Clinical Chemistry Principles and Techniques. Harper and Row, 2nd Edition, 1974.

IFU No.: 024/00 | Rev. No.: 00/120723

Expiry Date | IVD In-Vitro Diagnostics Use | Storage | Mfg. Date | LOT Batch Number | REF Catalogue Number | See Package Insert

PATHOZYME DIAGNOSTICS
An ISO 9001:2015, ISO 13485:2016, CE & GMP Certified Company
A-115, Kagal Five Star MIDC, Kagal, Dist. Kolhapur-416 216.
Tel: 0231-2305072, Cell: +91 88058 67810, E-mail: contactus@pathozyme.com, Website: www.pathozyme.com