QUANTON BIOLIFE SCIENCES

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Hemoglobin Test Kit
(Cyanmethaemoglobin Method)

QBL/PDS/HGB_029

Quantitative determination of Hemoglobin in human blood.
Only for *In Vitro* Diagnostic use

ORDER INFORMATION

REF	Pack Size
HGB 1000	1 X 1000 ml
HGB 5000	1 X 5000 ml

CLINICAL SIGNIFICANCE

Haemoglobin is the major source of oxygen for various tissue cells and its deficiency leads to the destruction of tissue cells. Increased levels are found in polycythaemia vera, congenital cyanotic heart disease, heat stroke and dehydration. Decreased levels are found in all varieties of anemias, resulting from deficiency of iron or folic acid, red blood hemolysis, defective globin synthesis and structural abnormalities.

Method

Cyanmethaemoglobin Method.

PRINCIPLE

Potassium ferricyanide converts haemoglobin to methaemoglobin. The methaemoglobin further reacts with potassium cyanide to produce a stable cyanmethaemoglobin complex. Intensity of the complex formed is directly proportional to the amount of haemoglobin present in the sample.

REAGENT

Reagent : Hemoglobin Reagent

REAGENT PREPARATION

Reagent are ready to use

REAGENT STORAGE AND STABILITY

Hemoglobin Reagent is stable at R.T. till the expiry date mentioned on the label.

WARNING AND PRECAUTIONS

Do not pipette the reagent with mouth as it is poisonous.

WASTE MANAGEMENT

Please refer to local legal requirements.

MATERIALS REQUIRED BUT NOT PROVIDED

- NaCl solution 9 g/L
- General laboratory equipment

SAMPLE COLLECTION AND PRESERVATION

Whole Blood. Preferably fresh and collected in EDTA

ASSAY PROCEDURE

AUTOMATED PARAMETERS	
Wavelength	546 nm
Reaction Temperature	RT
Reaction	End Point
Sample Volume	20 µl
Reagent Volume	5000 µl
Delay	5 Sec.
Incubation	5 minuts
Low normal	10.0 g/dl
High Normal	18.0 g/dl
Linearity	20 g/dl

MANUAL ASSAY PROCEDURE

Pipette into Test Tubes

	Blank	TEST SAMPLE
Reagent 1	5000 µl	5000 µl
Sample	-	20 µl

Mix well and incubate at R.T. (25°C) for atleast 5 min. Measure the absorbance of the Test Sample (Abs.T) against the Blank. The final colour is very stable.

SAMPLE DILUTIONS

This procedure is linear upto 20 g/dl. If the value exceeds this limit, dilute the whole blood 1+ 1 with normal saline (NaCl 0.9%) and repeat the assay. Results x 2.

CALCULATION

Haemoglobin in g/dl = Abs.T x 37.5

LINEARITY

The method is linear upto a concentration of 20 g/dl. Dilute samples above this concentration 1:1 with 0.9% saline solution and repeat assay. Multiply the result by 2.

REFERENCE VALUES

Adult Males	13.0 - 18.0 g/dl
Adult Females	11.0 - 16.0 g/dl
Children	10.0 - 14.0 g/dl
Newborns	14.0 - 23.0 g/dl

The reference values are to be considered as indicative only. Every laboratory should establish its own normal range.

LIMITATION OF THE PROCEDURE

For diagnostic purposes, the results should always be assessed in conjunction with the patient's medical history, clinical examination and other findings.

BIBLIOGRAPHY

Eilers R.J., Am. J. Clin. Path ., 47 :212 (1967). Tietz N.W., Fundamentals of Clinical Chemistry. 2nd ed. W.B. saunders Co., Philadelphia p 411 (1976)

GLOSSARY OF SYMBOL

	Consult Instruction for Use
	Catalog Number
	Store between
	Manufacturer
	Keep away from sunlight

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