Haemoglobin Colour Scale

COPACK GmbH
Manufacturer (Germany)

New Scientific Mart
Exclusive Distributor (India)

How to screen anaemia in the absence of laboratory-based haemoglobinometry?

COPACK HB Colour Scale is the simple, reliable and inexpensive answer!

Anaemia: Information, Detection, Management

Anaemia is the most serious complication of iron deficiency and a significant cause of death. More than half of the pregnant women in developing countries suffer from anaemia. The accurate estimation of Haemoglobin levels is an essential prerequisite in a variety of other health issues, such as trauma care, selection of blood donors, epidemiological studies, and general primary health care.
The measurement of Haemoglobin has long been recognised as fundamental in routine health checks, for the diagnosis and treatment of disease and, given the global incidence of anaemia, in public health care The measurement of Haemoglobin in blood as an indicator of anaemia has traditionally relied on the services of a well-equipped clinical laboratory.
Simple techniques do of course exist, but even these are relatively expensive and require commercial reagents, a good degree of technical skill and are not readily available in peripheral health clinics or at point of care for clinicians and midwives.
In primary health care centers, when laboratory facilities are not available, anaemia is usually diagnosed from clinical signs (pallor of the conjunctiva, tongue, palms and nail beds, using anaemia recognition cards if available), although accurate interpretation of these signs depends a great deal on effective training. However, in rural areas where anaemia is common and where appropriate prevention and treatment strategies may be most beneficial, an alternative method is needed to screen for anaemia easy and economically.

After several years of development and field trials directed by the World Health Organisation, the Haemoglobin Colour Scale has been commercially available since end of 2001 – primarily to assist developing countries in the detection and management of anaemia**.** The device is not intended to compete with existing laboratory-based haemoglobinometry, but rather to increase access to health technology for peripheral health services in resource-poor settings. The clinical use of the Scale has been demonstrated in the screening of blood donors for anaemia; malaria management; women, pregnancy and child health programmes; iron therapy control; in hookworm infection and in decisions to refer patients with severe anaemia for hospital treatment. It is also an extremely useful tool for point of care anaemia checks anywhere, mainly for women and children suspected of being anaemic.Use of this medical device requires no specialized training. It does not depend on electricity or batteries and needs no maintenance. It is portable and the results are immediate.

Why use COPACK HB Colour Scale

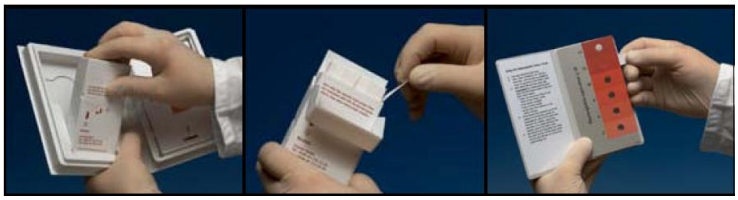
- Blood Transfusion
- Integrated Management of Child Illnesses (IMCI)
- Nutrition
- Malaria
- Clinical Procedures / Surgeries
- HIV/AIDS
- Making Pregnancy Safer / Detection of level of Anaemia in Pregnant women

Training

In a validation study, most results were accurate to within 1–1.5 g/dl. Further analysis showed that the discrepancies in the results of the original study were largely due to a lack of training and thus incorrect technique, e.g. not waiting for 30 seconds, reading in a shadow or not having an adequate sized drop of blood. As a result, it was shown that a half-hour training session was sufficient for health workers to estimate Haemoglobin to within 1g/dl, and assess levels of anaemia much more effectively than by traditional clinical diagnosis.

Validation in the field

Since the early series of studies carried out by WHO in 1995 and the first published data describing the device in the same year, extensive testing and field trials have been carried out on the performance of the Scale. An international validation study and recent published papers have confirmed its reliability when used in general health centres and antenatal clinics, and in blood transfusion centres for donor selection.



Sensitivity and specificity of the Scale to screen for anaemia

For severe anaemia, the Scale shows a sensitivity of 95% and a specificity of 99.6%. To distinguish normal from mild anaemia, the sensitivity and specificity are 98% and 86% respectively, results that are well above the reliability of any clinical measurement. Using a photometer (HemoCue®) as a reference, the Scale was compared with the copper sulphate specific gravity method that is traditionally used to screen blood donors for anaemia. The scale was accurate to 98% in distinguishing among 2,800 volunteer blood donors those with normal Hb from those rejected because of anaemia. **The Scale was more reliable than copper sulphate**, the tests giving 2.4% and 5.4% false readings respectively. Moreover the copper sulphate presents a potential environmental hazard in the disposal of used solutions.

The New Way to Diagnose Anemia

According to the World Health Organization (WHO), anemia is one of the most dangerously neglected health problems in the developing world. Anemia is the world's second most common cause of disability and has been known to lead to stillbirths, low-birth-weight and mental or physical impairment in children. The WHO advises that neglecting anemia by not encouraging development of preventative strategies or easier ways to diagnose it can have long-term negative health effects.

The Haemoglobin Color Scale (HbCS), developed by the German Copack manufacturing company called in conjunction with the WHO, is a kit that allows a rapid and cheap way of estimating haemoglobin in a person's blood. By comparing the color of the blood (usually taken by a small prick on the finger by a needle) on a chromatography paper to a standard scale of colors displayed in increments on the HbCS, one can easily determine whether the patient is anemic.

The HbCS is noted for its extreme cost-efficiency; it is the lowest cost hemoglobinometer on the market. In theory, the HbCS only costs about $0.01 per test. However, since its commercial release in 2001, it has been found to cost approximately$0.12 per test in Malawi due to distribution and freight costs. However, this method remains significantly cheaper than previous ways of measuring haemoglobin in the blood, such as colorimetric methods ($0.35/test) and the HemoCue method ($0.75/test). A recent study demonstrated that, even with the lower cost, the HbCS demonstrates sensitivity and accuracy for measuring anemia.

Company Authority letter for COPACK HB Colour Scale

COPACK FRITZ HEINEMANN & CO. GMBH
VERPACKUNGSSERVICE

New Scientific Mart
Mr. Apurba Deb
87-B, Chittaranjan Avenue
IN-700073 Kolkata - West Bengal

INDIA

Letter of Authorization

Dear Sir,

This is to inform that New Scientific Mart, 87-B, Chittaranjan Avenue, IN-700073 Kolkata - West Bengal has been appointed as our exclusive Distributor for the supply of all our products in India.

New Scientific Mart is hereby authorized, to do the marketing and promotion for our product Haemoglobin Colour Scale in India.

Yours faithfully,
COPACK GmbH

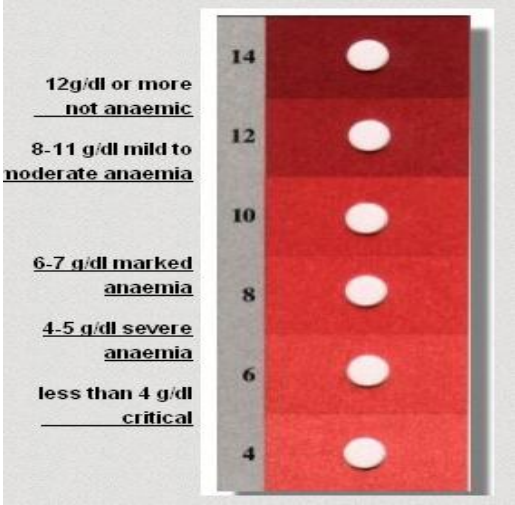
CHARACTERISTICS OF REPRESENTATIVE PRODUCT (COPACK COLOR SCALE)

	TECHNOLOGY CHARACTERISTICS	OPERATIONAL PARAMETERS	POTENTIAL OPPORTUNITIES FOR IMPROVEMENT
SKILLS REQUIRED	Intended end user	Physician, Skilled birth attendant	Size and thickness of blood spot can vary results. A standardized dropper could help. Additionally, lighting conditions and high humidity can affect results.
	Training required	Hours	
	Time required per use	Minutes	
ENVIRONMENT / INFRASTRUCTURE	Power required	None	A laminated card may prove more durable, and a UV stable laminate could protect color integrity over time.
	Waste collection	Biohazard	
	Complementary technologies required	Sterilizing wipe and lancet	
	Temperature and storage	Store away from high humidity and direct sunlight	
	Maintenance	Replacement as reference card fades	
OTHER	Portability	<100g	Given the relatively low sensitivity and specificity of the device, it may be best suited to identify only the most severe anemia. A secondary test would be required to identify less severe cases.
	Regulatory		
	Efficacy	Sensitivity and specificity 60% at 10 g/dl, but better with more severe anemia	

"In India the cost of Haemoglobin test by COPACK HB colour scale sits between

7.00 - 8.50 INR *(considering Euro market rate fluctuations) "*

How COPACK HBCS works



It is a simple and effective medical device for the accurate estimation of Haemoglobin levels in blood. It comprises a small card with six shades of red that represent Haemoglobin levels at 4, 6, 8, 10, 12 & 14 g/dl respectively.

The device is simple to use:

- place a drop of blood on the test strip provided
- wait about 30 seconds
- Match immediately the colour of the blood spot against one of the hues on the scale.

This will indicate whether the patient is anaemic and, if so, the severity of anaemia in clinical terms. It will not identify minor changes in Haemoglobin during treatment, but rather assist in the management of any patient with suspected anaemia, e.g. to decide whether a patient may require a blood transfusion a blood count, be referred for laboratory tests or to a hospital or clinic for treatment.

COPACK available for procurement in main three different variations

		
Starter Kit Basic (Art.No. 2020E, 2020F) containing: - 1 Cover Box with Colour Scale in a booklet, instruction manual and 1 dispenser box with 200 test-strips	Starter Kit (Art.No. 2022E, 2022F) containing : - 1 Cover Box with Colour Scale in a booklet, instruction manual and 1 dispenser box with 200 test-strips, + 4 dispenser boxes with each 200 test-strips = total 1000 test-strips packed in one carton box	Refill Kit (Art.No. 2024E, 2024F) containing: -10 Refill dispenser boses with each 200 test-strips = total 2000 test-strips, packed in one carton box

ATTENTION! ATTENTION! ATTENTION! 06. August 2009

COPACK has become aware of a **counterfeit copy of the "Haemoglobin Colour Scale"** in the Indian market. The cover design of the counterfeit product is identical to the original, except for the name. The counterfeit product is entitled: "Colour Scale for Haemoglobin". There are no validation studies and no tests that confirm the reliability and accuracy of the "Colour Scale for Haemoglobin". This product is an Indian product which is not CE certified or tested in any way. The counterfeit product from India is not comparable with the proven "Haemoglobin Colour Scale" and we hereby disclaim any correlations to our original "Haemoglobin Colour Scale" which is suggested for use by the WHO. For further information, kindly contact us.

New Scientific Mart also dealing with

Scientific Instruments	Laboratory Instruments	Surgical Instruments
PH Meter	Advanced Semi Automatic Biochemistry Analyser	Portable Patient Monitor
Calorimeter	Euger-4000	Oxygen Concentrator
Hygrometer	Micro Plate Reader	Air Bed
Hydrometer	Automated Bio Chemistry Analyzer	Diathermy Equipment Manufacturers
Microscope	Automated Urine Analyzer	Glucometer
Spectro - Photometer	Autoclave	Pulse Oximeter Distributors
Refracrometer	Blood Cell Counter	ECG Machine
Thermometer	Hot Air Owen	Laproscopic Machine
Sphygmomanometer	Incubator	USG Machine
Stethoscope	Laminar Air Flow System Manufacturers	Syringe Pump
Hospital Furniture	**Veterinary Instruments**	**Medical Equipment**
Revolving Hydraulic O.T. Table	Digital Ultrasound Diagnostic Device	Pulmo-Mist II Nebuliser
Side End Control O.T Table	3 Channel ECG Recorder With Measurements	Single Parameter Monitors
Surgical Instruments Cabinet	AI Gun	Ultrasound Diagnostic Device
Major Head End Control Hydraulic O.T Table	Castrator	ISE Electrolyte And Blood Gas Analyzer
C Arm Provision Hydraulic O.T Table	Cryo Surgery Set	Digital Ultrasonic Diagnostic Imaging System
Remote Control Electric O.T Table	Small Animal Operation Table	3 Channel ECG Recorder With Measurements
Ophthalmic Table	Shadow Less Spot Lamp Overhead	Instrument Cabinet
Manually Operated Pantograph Hydraulic Chair	Boyel's Apparatus	Sterilizer
Operation Table Manufacturers / Operation Theatre Light Manufacturers	ECG Machine	Bed Side Cardiac Monitor
Hospital Furniture Manufacturers	Ultrasonic Scaling Machine with 3 Tips	ECG Machine
Orthopedic Appliances & Fracture Aids		
BODY BELTS & BRACES		
CERVICAL AIDS / FRACTURE AIDS		
KNEES & ANKLE SUPPORTS		
WRIST & FORE ARM PRODUCTS		
FINGER SPLINTS		
TRACTION KITS - Cervical & Pelvic		
PHYSIOTHERAPY AIDS		
NEOPRENE PRODUCTS		
FOOT CARE PRODUCTS		
WALKING AIDS - Walking Sticks / Walkers / Wheel Chairs		

Vipin Gupta
+91-8334922217 / vipin.gupta@newscientificmart.in

Apurba Deb
+91-9830031624 / nestimart@yahoo.co.in

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New Scientific Mart - 87-B Chittaranjan Avenue Kolkata – 70073, West Bengal, India

Phone: 91-33-22369247 / **Fax:** 91-33-22155138

Website: www.newscientificmart.com Alternate Email Id: sapangupta.17@gmail.com