

GOVT DEGREE COLLEGE FOR WOMEN WANAPARTHY

DEPARTMENT OF ZOOLOGY

Jignasa student study project

TOPIC

ESTIMATION OF HAEMOGLOBIN LEVELS IN COLLEGE STUDENTS

BY

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Aim : To estimate the levels of Hb content in our college students & identifying how many members are suffering from anemia.

Objectives:

1. To know the basic structure of Hb .
2. To know about the function of Hb .
3. To know the diseases related to blood.

INTRODUCTION:

Hemoglobin is a respiratory pigment present in RBC and imparts red colour to the blood. It is a conjugate protein , madeup of 4 polypeptide chains .

The main function is to deliver oxygen to the tissue and carbondioxide from tissue to the lungs.

Materials and methods

CHEMICALS

- | | |
|------------------------------|-----------------------|
| 1. N/10 HCL | 6. Comparater |
| 2. Distill water | 7. Stirrer |
| 3. Spirit | 8. Hemoglobin pippete |
| 4. Cotton | 9. Dropping pippete |
| 5. Graduated Hemoglobin tube | 10. Cleaning brush |

METHOD : Sahlis method

PRINCIPLE: N/10 HCL converts haemoglobin into soluble and unstable acid hematin. The colour intensity of the acid hematin after dilution is compared with standed brown glass in the comparater.

NORMAL HAEMOGLOBIN CONCENTRATION:

❖ Men	-	13 to 18 g/dl
❖ Women	-	12 to 16 g/dl
❖ New born	-	16 to 22 g/dl
❖ Children	-	12 to 14g/dl



PROCEDURE :

- Place N/10 HCL into Hb tube upto 2gms.
- Blood sample in sahlis Hb pipette upto 20 micro lt.
- Add blood sample to acid solution.
- Mix with a stirrer.
- Allow to stand for 10 min.
- Add distilled water drop by drop till the colour of the solution matches to brown glass standard.
- Take the reading of the lower meniscus from the graduated tube in grams.



ANALYSIS OF DATA:

We estimated the Hb levels in 100 pupils of GDC (W) WNP, in this 85% of the students having Hb levels ranging between 9 to 11.5 gm/dl, and they are suffering from Anemia, 10% of the students having Hb levels ranging between 12 to 14 gm/dl, and they are no anemic. Remaining 5% of students suffering from severe Anemia, and they have Hb levels ranging between less than 7gm/dl.

RESULT:

S.NO	Percentage of the student	Hb level	Condition
1	85%	9 to 11.5 gm/dl	Anaemic
2	10%	12 to 14 gm/dl	No Anaemic
3	5%	Less than 7gm	Severe Anaemic

CONCLUSION: Through this study project we estimated most of the college students suffering from Anemia, because of lack of proper nutrient diet.

SUGGESTIONS: The students those who are suffering from severe Anemia are suggested as

- ❖ Eat plenty of Iron – rich foods such as Green and leafy vegetables , lean red meat , lentils , beans and iron – fortified cereals and breads
- ❖ Eat and drink vitamin C – rich foods and drinks
- ❖ Avoid drinking Tea (or) Coffee with your meals , as they can effect Iron absorption
- ❖ To increase the amount of vit B 12 and folic acid, take eggs, low fat milk, legumes, Brussels sprouts, beets, citrus fruits.