

Puspa Shrestha

Best Quality Resource Site for Class 11 And 12
Students (Based on Updated Curriculum 2077)



PDF Collections

Notes

Books

Model Questions

This PDF was downloaded
from **puspas.com.np**

Visit our website for more
materials.



puspas.com.np

Follow us on:



AR Dinesh



puspas.com.np



Puspa Shrestha

Date:.....

Page:.....

S.N	Name of Experiment	Page	Date	Remarks
1.	TO DETERMINE BLOOD PRESSURE OF HUMAN	1-4	2078/09/21	11/11 11/11
2.	TO DETECT THE PRESENCE OF STARCH IN GIVEN SOLUTION.	5-6	2078/11/18	/
3.	TO DETECT THE PRESENCE OF SUGAR IN GIVEN SAMPE	7-8	2078/11/18	2078/11/18
4.	TO DETECT THE PRESENCE OF PROTEIN IN GIVEN SAMPE	9-10	2078/11/18	/

EXPERIMENT NO. 1

NAME OF EXPERIMENT: TO DETERMINE BLOOD PRESSURE OF HUMAN

APPARATUS REQUIRED

1. Sphygmomanometer
2. Stethoscope

THEORY

Blood pressure is a pressure exerted by the blood on the wall of the blood vessels through which it flows. It is expressed in terms of the systolic pressure (maximum blood pressure during contraction of heart) over diastolic pressure (maximum blood pressure during relaxation of heart) in the cardiac cycle. It is measured in millimeters of mercury (mmHg). Blood pressure is one of the vital signs together with respiratory rate, heart rate, oxygen saturation and body temperature.

During ~~heart~~ each heartbeat, the arterial blood pressure arises to about 120 mmHg in systolic and falls to about 80 mmHg in diastolic phase. The difference between the systolic and diastolic pressure is called pulse pressure which is 40 mmHg.

The blood pressure is influenced by age, body size, obesity, tension, fear, exercises, food, etc. The two main problems related to blood pressure are:

- i) Hypertension - It is the condition in which a person has persistent high blood pressure which is 150/90 mmHg.
- ii) Hypotension - It is a condition in which a person has persistent low blood pressure which is 100/50 mmHg.

The blood pressure is measured by an auscultatory method with the help of an instrument called sphygmomanometer.

PROCEDURE

1. Sphygmomanometer was taken and it was tied around the upper arm because heart and branchial arteries are located at the same level.
2. The chest-piece of ~~sth~~ stethoscope was placed over the branchial artery to hear sound.
3. Sphygmomanometer's rubber hand pump was pressed to raise pressure upto 160 mmHg.
4. Then, the air pressure in cuff was released

gradually with the help of screw fitted in the hand pump.

As the air pressure was released, three types of sound were heard through stethoscope.

- Taping sound - It was first sound that indicated systolic pressure.
- Murmur sound - It was next sound just over disappearance of first sound.
- Muffled sound - It was heard after disappearance of second sound that indicates diastolic blood pressure.

OBSERVATION TABLE

S.N	Name	Systolic pressure (Sp)	Diastolic pressure (Dp)	Pulse pressure (Pp) = Sp - Dp	Mean pressure = $Dp + \frac{1}{3} \times Pp$
1.	Anish	110	70	40	83.33
2.	Apeksha	115	65	50	81.67
3.	Aadina	110	85	25	93.33
4.	Mahesh	113	70	43	86.33
5.	Asmin	112	75	37	87.33
6.	Binisha	120	80	40	93.33
7.	Manish	125	65	60	85
8.	Dinesh	120	60	60	80

9.	Binay	125	80	45	95
10.	Pooja	115	60	55	78.33

RESULT

Hence, the blood pressure was measured and the highest systolic blood pressure was of Manish and Binaya i.e. 125 mmHg and the lowest systolic blood pressure ~~was~~ was of Aadina and Anish i.e. 110 mmHg. The highest diastolic blood pressure was of Aadina ^{i.e.} 85 mmHg and lowest was of Pooja i.e. 60 mmHg.

PRECAUTION

1. Device should be used carefully.
2. Observation must be taken properly.

EXPERIMENT NO. 2

NAME OF EXPERIMENT: TO DETECT THE PRESENCE OF STARCH IN GIVEN SOLUTION.

APPARATUS REQUIRED

1. Test tubes
2. Beakers
3. Droppers
4. Test tube stand

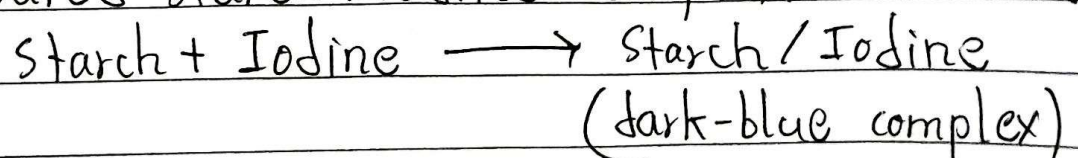
CHEMICALS REQUIRED

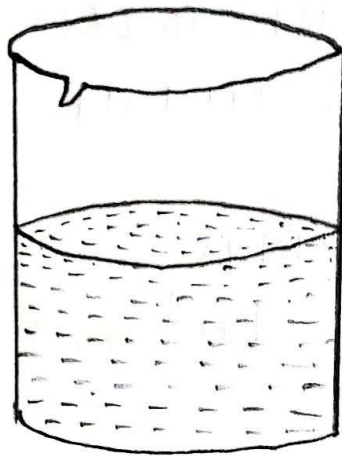
1. Starch solution (1%)
2. Iodine solution
3. Distilled water

THEORY

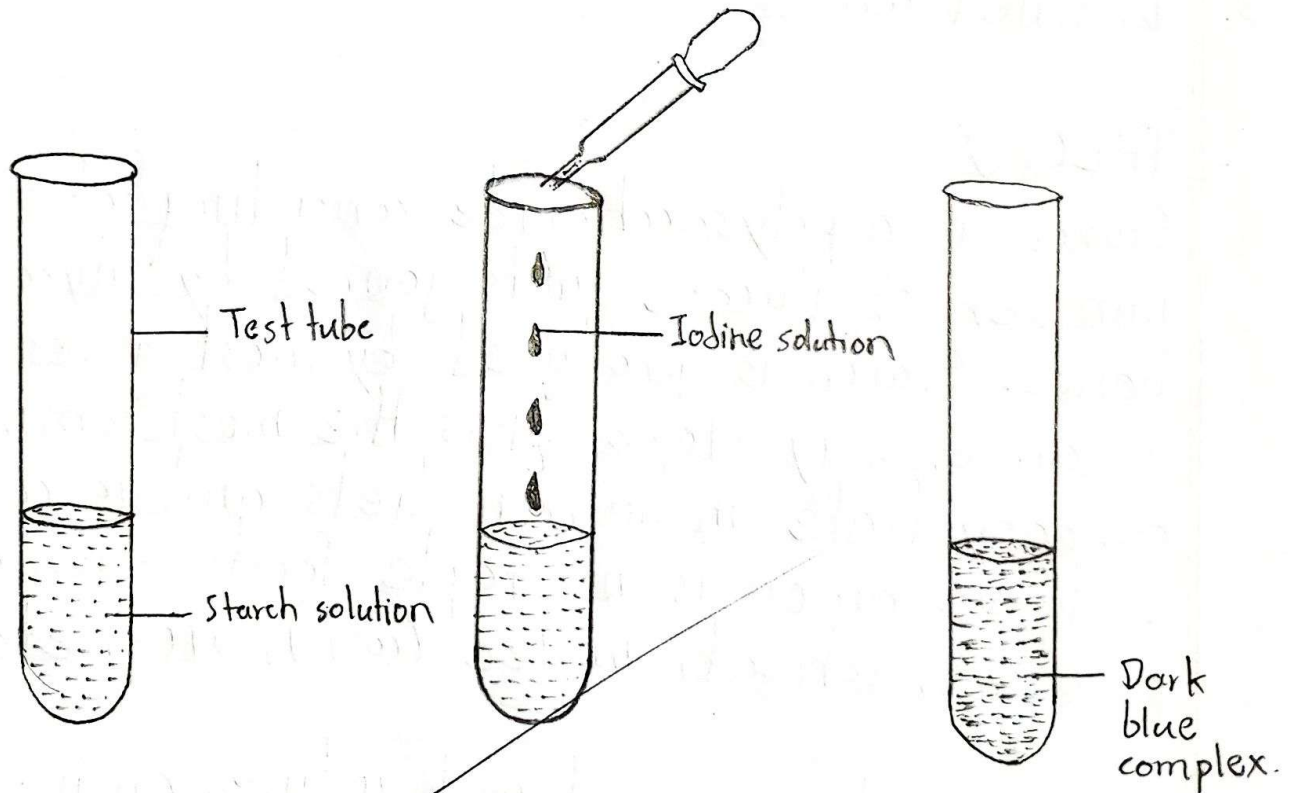
Starch is a polysaccharide consisting of a large number of glucose units joined by glycosidic bonds. Starch is produced by most green plants as an energy store. It is the most common carbohydrate in human diets and is contained in large amounts in staple foods such as potatoes, wheat, maize (corn), rice, etc.

When starch is mixed with iodine, an intensely blue coloured starch / iodine complex is formed.





A Beaker containing 1% starch solution



Experiment to Detect the Presence of starch in a Given Solution

PROCEDURE AND OBSERVATION

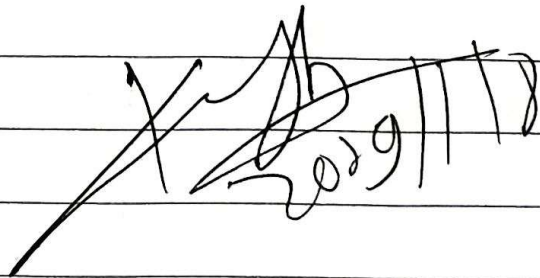
Experiment	Observation	Inference
Taken 3-5ml of the given solution in a test tube and added 3-5 drops of iodine solution.	Dark-blue complex appears.	Presence of starch.

RESULT

The given solution contains starch.

PRECAUTIONS

1. Glassware should be clean.
2. Experiment should be performed carefully.
3. Starch solution should be freshly prepared.

 20/9/18

EXPERIMENT NO. 3

NAME OF EXPERIMENT: TO DETECT THE PRESENCE OF
~~PROTEIN~~ IN GIVEN SAMPE
SUGAR

APPARATUS REQUIRED

1. Test tube
2. Test tube holder
3. Beaker.

CHEMICALS REQUIRED

1. Benedict solution
2. Fehling solution

PRINCIPLE

Sugar has a free aldehyde group that can reduce the cupric (Cu^{++}) to cuprous (Cu^+) from, hence it is called a reducing sugar. Being reducing sugar it can reduce the copper sulphate of benedict reagent or fehling solution to produce an orange red precipitate of cuprous oxide.

OBSERVATION

Experiment	Observation	Inference
① Benedict Test		
2ml of sample solution of 1ml of benedict solution was taken and the sol ⁿ	Blue colour changed to dirty green, orange and finally	Presence of glucose.

was heated and boiled.	to brick red.	
② Fehling's Test		
2 ml of sample solution of 2 ml of Fehling A and heated and boiled.	Blue colour changed to dirty green, orange and finally bricked.	Presence of glucose.

CONCLUSION

Glucose was detected from the given sample.

PRECAUTIONS

1. Test tube holder should be used while heating.
2. Limited chemical should be used.

 20/9/11/8

EXPERIMENT NO. 4

NAME OF EXPERIMENT: TO DETECT THE PRESENCE OF PROTEIN IN GIVEN SAMPLE

APPARATUS REQUIRED

1. Test tube
2. Beaker
3. Egg albumen
4. Test tube holder
5. Pipette.

CHEMICALS REQUIRED

1. Dil. NaOH
2. CuSO_4 solution

PRINCIPLE

Proteins are the large, complex, organic compounds composed of any amino acids linked by the peptide bonds. Proteins are the major structural components of the muscles, skins, bones, leaves and roots. For this experiment albumen protein which is white of an egg situated around the yolk is used. Albumen is soluble in water.

OBSERVATION

Experiment	Observation	Inference
2ml of sample sol ⁿ was taken and 1-2 drops of NaOH was added. to the solution. Then 2-3 drops of CuSO ₄ was added, heated and boiled.	Sol ⁿ change into purple colour.	Presence of protein

CONCLUSION

In this experiment, protein was detected from the given sample.

PRECAUTION

1. Test tube should be completely dry.
2. Good quality reagents should be used.
3. The test tube holder should be used while heating.

~~X~~ ~~20/11/18~~