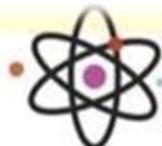
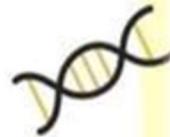


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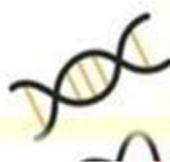
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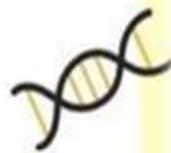
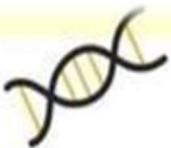


**CHEMISTRY
INVESTIGATORY
PROJECT**



CLASS-XII E

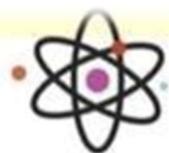




AIM

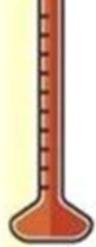
To Detect the Essential Nutrients,
Present In Biscuit And Write The
Observations

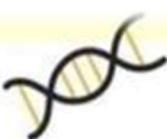




APPARATUS REQUIRED

1. Biscuits
2. Test tubes
3. Benedict's solution
4. Fehling's solution
5. Dil. HCl
6. Conc. Nitric acid
7. Ammonium Oxalate
8. Ammonium Hydroxide
9. Potassium Sulphocyanide
10. Nessler's Reagent
11. Bunsen Burner
12. Test tube holder





THEORY

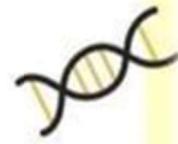
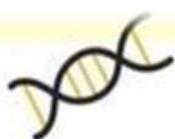


A Biscuit is baked in edible oil and commonly flour-based product generally biscuit contain wheat flour hydrogenated oil and glucose.

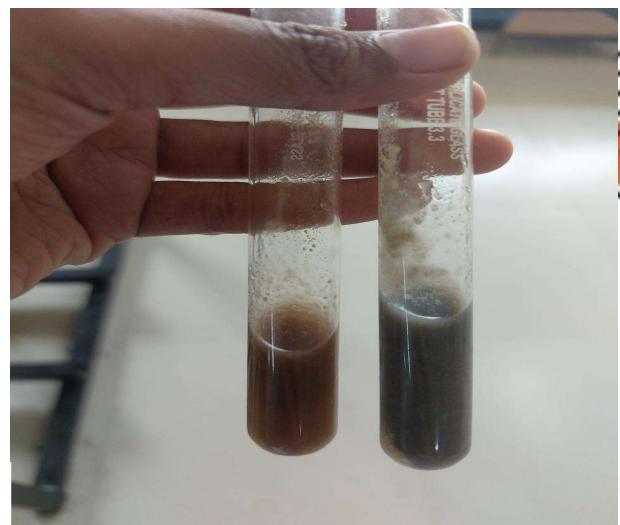
To check the nutrients, present in the biscuit we need to perform some test for the particular nutrient to check its presence. Like:

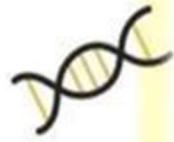
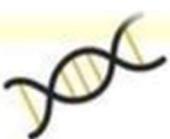
- i. For carbohydrates: Benedict's test.
- ii. For Bicarbonates: Dil. HCl
- iii. For Fats: solubility test
- iv. For Proteins: xanthoproteic test
- v. For Calcium: Ammonium oxalate test.
- vi. For Iron: Potassium sulphocyanide test.
- vii. For Ammonia: Nessler's Reagent





PHOTOGRAPHS





PROCEDURE



1. TEST FOR CARBOHYDRATES:

Take about 1ml of aq. Solution of biscuit in test tube add around 2ml of Benedicts reagent. Boil the allow it to cool. Formation of red PPT indicates presence of carbohydrates.



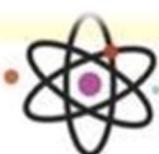
2. TEST FOR BICARBONATES:

To a pinch of the aq. Solution of biscuit add dilute HCl. Brisk effervescence indicates the presence of carbonates.



3. TEST FOR FATS:





Take some amount of biscuit powder in test tube and add water to it shake well a large no of droplets indicate the presence of fats.

4. TEST FOR PROTEINS:

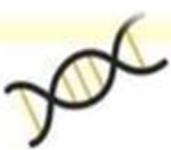
Take some amount of biscuit powder in the test tube and add 2ml of conc. HNO_3 to it and heat. Formation of yellow precipitate indicates presence of proteins.



5. TEST FOR CALCIUM:

Take 2ml of aq. Solution of the biscuit in a test tube and add 1-2ml of Ammonium Oxalate. Then add little amount of NH_4OH to it. Formation of white PPT indicates presence of calcium.



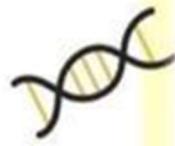
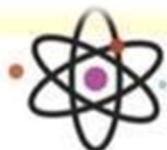


6. TEST FOR IRON:

Take 2ml of aq. Solution of biscuit in a test tube and add potassium sulphocyanide solution. Formation of blood red colour indicates the presence of Iron.

7. TEST FOR AMMONIA:

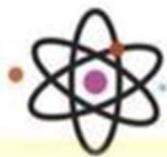
Take about 2ml of the aq. Solution of the biscuit and add 1-2ml of Nessler's Reagent. Formation of brown ppt indicates the presence ammonium ions.

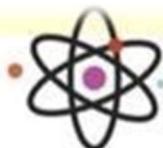


OBSERVATION

FOR HIDE & SEEK BISCUIT:

S.NO	NUTRIENTS	OBSERVATION
1.	Carbohydrate	Present
2.	Bicarbonates	Present
3.	Proteins	Present
4.	Calcium	Absent
5.	Iron	Absent
6.	Fats	Present
7.	Ammonia	Absent





FOR PARLE-G BISCUIT:

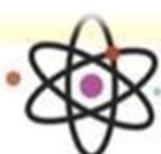
S.NO	NUTRIENT	OBSERVATION
1.	Carbohydrate	Present
2.	Bicarbonates	Present
3.	Proteins	Present
4.	Calcium	Present
5.	Iron	Absent
6.	Fats	Present
7.	Ammonia	Absent



PRECAUTIONS

1. Always take the test tube holder when treating the conc. Acids.
2. Handle Bunsen burner with care.
3. Use safety data sheet while handling the chemicals for safety instructions.
4. Use reagents in small quantity.





BIBLIOGRAPHY

1. Chemistry lab manual class 12
2. Chemistry NCERT class 12
3. www.byjus.com
4. Learncbse.com

