

Benedict's Test

- **Reducing Sugar**
- Procedure
 1. Pour **2cm³** of **sample solution** into test tube and an **equal amount** of **Benedict's solution**
 2. **Shake** the mixture and **heat** it in a **boiling water bath** for **3 minutes**
 3. Record observations after 3 minutes
- Results

Observations	Conclusion
The mixture remains blue	No reducing sugar is present
A green precipitate was obtained	A trace of reducing sugar is present
A yellow precipitate was obtained	A low amount of reducing sugar is present
An orange precipitate was obtained	A moderate amount of reducing sugar is present
A brick-red precipitate was obtained	A large amount of reducing sugar is present

Biuret's Test

- **Proteins**
- Procedure
 1. Add **2cm³** of **sample solution** into a test tube and add **2cm²** of **dilute sodium hydroxide** solution.
 2. **Shake** the mixture
 3. Add **1% copper (II) sulphate solution, drop by drop, shake** the tube **after addition of each drop** and observe colour change
- Results

Observations	Conclusion
The mixture remains blue	No protein is present
The mixture turn purple/violet	Protein is present

Iodine Test

- **Starch**
- Procedure
 1. Add **2cm³** of **sample solution** into a test tube and **a few drops** of **iodine solution**
 2. Observe colour change
- Results

Observations	Conclusion
The mixture remains brown	No starch is present
The mixture turns blue black	Starch is present

Ethanol Emulsion Test

- **Fats**
- Procedure
 1. Add **2cm³** of **sample solution** into a **dry test tube** and add **2cm³** of **ethanol**
 2. Shake thoroughly
 3. Add **2cm³** of **water** to the test tube and **shake**
 4. Record observations
- Results

Observations	Conclusion
The mixture remains clear	No lipid is present
A white emulsion was obtained	Lipid is present