

Puspa Shrestha

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EXPERIMENT NO : 1

NAME OF EXPERIMENT: TO DETECT THE FOREIGN ELEMENT PRESENT IN THE GIVEN ORGANIC COMPOUND.

APPARATUS REQUIRED

- | | | |
|----------------------|----------------|--------------|
| 1. Beaker | 2. Funnel | 3. Test tube |
| 4. Test tube holder | 5. Fusion tube | 6. Tong |
| 7. Mortar and Pestle | | |

CHEMICALS REQUIRED

- | | |
|----------------------------|---|
| 1. Sodium extract solution | 2. Dil. NaOH |
| 3. Conc. HNO_3 | 4. AgNO_3 |
| 5. NH_4OH | 6. Conc. HCl or Conc. H_2SO_4 |
| 7. FeCl_3 | |

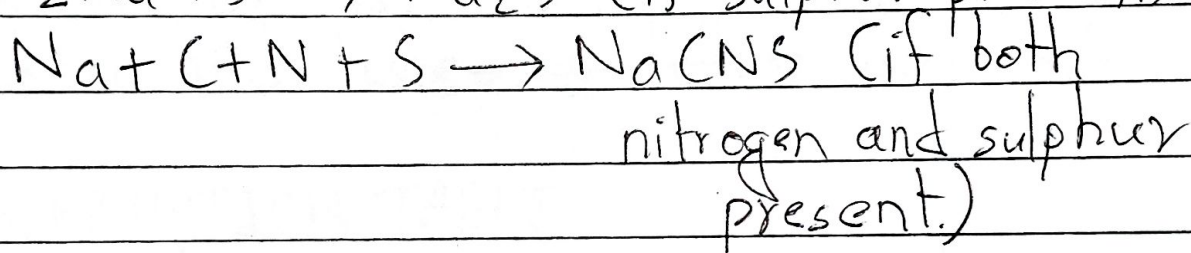
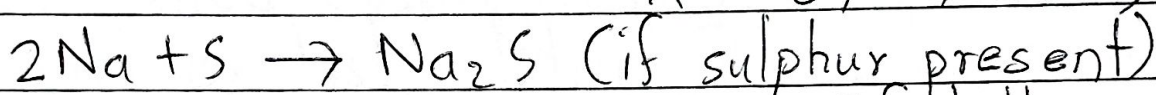
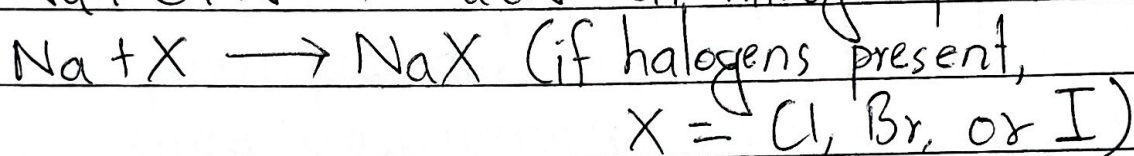
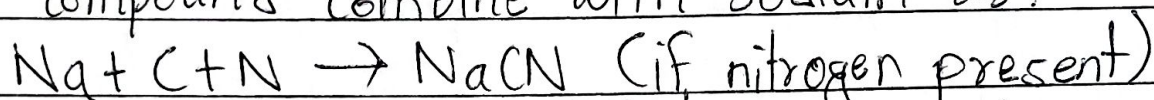
THEORY

Organic compounds are covalent in nature.

Foreign elements present in organic compounds are also bonded covalently. Therefore, the laboratory reagents cannot be used for direction. Hence, first these elements are converted from the covalent to ionic compounds. These compounds undergo ionic reactions with laboratory reagents. This conversion can be done easily and effectively.

by fusing the organic compounds with sodium metal.

When an organic compound is fused with metal sodium, the different elements present in the compound combine with sodium as:



PROCEDURE

Small pea size piece of sodium metal was taken. The kerosene oil was soaked by passing the sodium metal between the folds of either paper and was put it into the clean and dry ignition tube. The ignition tube was held with the help of tong and it was heated gently just to melt the sodium piece. It was cooled and then small amount of organic compound was added. After that, the tube was heated, slowly and then strongly until the entire

lower end of the tube become dull and red hot. The hot tube was plunged into a mortar containing 10 cc of distilled water. The tube was broken into small pieces in the mortar with the help of pestle. In the same way two or three ignition tube was plunged and was grinded with pestle. It was warmed and filtered. The filtrate was called Jassaigne's solution or sodium extract or test solution. This solution was taken and tests as follow were performed:

OBSERVATION TABLE

Experiment	Observation	Inference
i) To study 2ml of extract extract few ml + NaOH was added. Then FeSO ₄ was added and boiled then the solvent was cooled and FeCl ₃ and conc. H ₂ SO ₄ was added.	Presence of bluish green colouration.	Presence of Nitrogen.
ii) Sulphur:		
a) 1ml extract + sodium nitroprusside.	Violet colour is not obtained.	Absence of sulphur.
b) 1ml extract + acetic	No black ppt	

