

# Salt Analysis

## Question1

The group reagent  $\text{NH}_4\text{Cl}(\text{s})$  and aqueous  $\text{NH}_3$  will precipitate which of the following ion?

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**Options:**

A.  $\text{NH}_4^+$

B.  $\text{Al}^{3+}$

C.  $\text{Ba}^{2+}$

D.  $\text{Ca}^{2+}$

**Answer: B**

**Solution:**

Nylon in presence of  $\text{NaCl}$  is used for detection of group III cations which are  $\text{Al}^{3+}$ ,  $\text{Fe}^{3+}$ ,  $\text{Cr}^{3+}$

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## Question2

The sodium fusion extract is boiled with concentrated nitric acid while testing for halogens. By doing so, it

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**Options:**

- A. helps in precipitation of AgCl
- B. increases the solubility of AgCl
- C. increases the concentration of  $\text{NO}_3^-$  ion
- D. decomposes  $\text{Na}_2\text{S}$  and  $\text{NaCN}$ , if formed

**Answer: D**

**Solution:**

It is done so that if there is any  $\text{Na}_2\text{S}$  or  $\text{NaCN}$ , it can be decomposed.

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### Question3

**In the analysis of III group basic radicals of salts, the purpose of adding  $\text{NH}_4\text{Cl}(s)$  to  $\text{NH}_4\text{OH}$  is**

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**Options:**

- A. to increase the concentration of  $\text{OH}^-$  ions
- B. to precipitate the radicals of group IV and V
- C. to suppress the dissociation of  $\text{NH}_4\text{OH}$
- D. to introduce  $\text{Cl}^-$  ions

**Answer: C**

**Solution:**

In the analysis of III group basic radicals of salts, the purpose of adding  $\text{NH}_4\text{Cl}(s)$  to  $\text{NH}_4\text{OH}$  is, to suppress the dissociation of  $\text{NH}_4\text{OH}$  due to the common ion effect.

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