

ASSIGNMENTCHEMICAL TEST FOR NITRATE ION

1. What are nitrate ions?
2. Discuss the structure of nitrate ion.
3. What is formal charge on nitrate ion?
4. Write examples of some common salts containing nitrate ions.
5. Write the name of two natural source of nitrate.
6. Write down the name of preliminary and confirmatory test for nitrate ions.
7. Write the materials required and procedure of following test for nitrate ions.
 - a) Dry heating test
 - b) Concentrated sulphuric acid test.
 - c) Diphenylamine Test
 - d) Copper chips test
 - e) Brown Ring test
8. Complete the following reactions
 - i) $2\text{Pb}(\text{NO}_3)_2 (\text{s}) \longrightarrow 2\text{PbO}(\text{s}) + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$.
 - ii) $\text{KNO}_3 + \text{H}_2\text{SO}_4 \longrightarrow \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$.
 - iii) $4\text{HNO}_3 + \text{C} \longrightarrow \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$
 - iv) $4\text{HNO}_3 + \text{Cu} \longrightarrow \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$
 - v) $6\text{FeSO}_4 + 3\text{H}_2\text{SO}_4 + 2\text{HNO}_3 \longrightarrow \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$
 - vi) $\text{FeSO}_4 + \text{NO} + 5\text{H}_2\text{O} \longrightarrow \underline{\hspace{2cm}}$
- 9) what are the precautions we have to take during experiment.

10. What is the colour of nitrate salt?
11. What is the colour of NO_2 gas?
12. What is the smell of NO_2 gas?
13. What is the colour of salt soln when FeSO_4 reacts with NO_2 ?
14. What is the formula and structure of diphenylamine?
15. What is colour of diphenylamine in presence of nitrate?
16. Write the formula of Brown ring complex and also write its name.