

Chemistry Practical Class 12 Preparation of Potassium Ferric Oxalate Viva Questions with Answers

Q1: What is the aim of the experiment?

Answer:

To produce pure Potassium Ferric Oxalate crystals from oxalic acid dihydrate, potassium monohydrate, and ferric chloride.

Q2: What is Potassium Ferric Oxalate?

Answer:

Potassium Ferric Oxalate crystal is a light green inorganic complex made from ferric sulphate and barium oxalate in the presence of oxalic acid. One example of an Oxidation-Reduction reaction is this.

Potassium ferrioxalate, Potassium Trioxalatoferrate (III), Potassium tris (oxalato) ferrate(III), and Potassium iron(3+) oxalate are all names for potassium ferric oxalate.

Q3: What is the colour of Potassium ferric oxalate and what is its melting point

Answer:

Potassium ferric oxalate has a green colour and a melting point of 230°C.

Q4: Define crystallisation.

Answer:

The process of crystallisation is the formation of a solid form in which the atoms or molecules are strongly arranged into a structure known as a crystal.

Q5: What is called "seeding"?

Answer:

When a crystal of the same substance is put into a saturated solution, crystallisation might not occur in some instances. This is referred to as seeding.

Q6: What are the precautions needed for the experiment?

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Answer:

- Do not overconcentrate the solution.
- To get large crystals, don't disturb the solution during crystallisation.
- To dissolve unwanted salt, wash the crystals with hot water.

Q7: Why is the hot saturated solution not cooled suddenly?

Answer:

Crystals of smaller sizes form when a solution is rapidly cooled. Crystals grow in size as a saturated solution cools slowly.

Q8: What is the formula of potassium ferric oxalate?

Answer:

 $K_{3}[Fe(C_{2}O_{4})_{3}] K_{3}[Fe(C_{2}O_{4})_{3}] \cdot 3H_{2}O$

Q9: What is potassium Ferrioxalate used for?

Answer:

The ferrioxalate anion is relatively stable in the dark, but light and high-energy electromagnetic radiation decompose it. Chemical actinometry, the measurement of luminous flux, and blueprint preparation use this photo-sensitive characteristic.

Q10: What is the geometry of complex potassium ferric oxalate?

Answer:

The chemical compound potassium ferrioxalate has the formula $K_3[Fe(C_2O_4)_3]$, where iron is in the +3 oxidation state. It is an octahedral transition metal complex in which three bidentate oxalate ions are linked to an iron core.

Q11: What is meant by Equilar proportions?

Answer:

The ratio of the substances' molecules to their moles is a 1:1 mole ratio.

Q12: What do you mean by Coordination Compounds?

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Answer:

Coordination compounds contain complex ions and have a central metal atom or ion linked to several ions or neutral molecules by coordinate bonds. $K_4[Fe(CN)_6]$, $[Cu(NH_3)_4]SO_4$, and $Ni(CO)_4$ are other examples.

