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SAMPLE: Magnesium sulphate **$MgSO_4$**

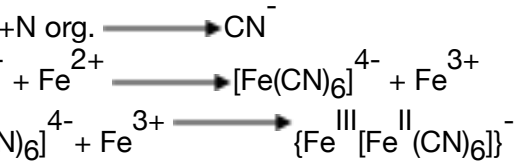
BEHAVIOUR OF COMPOUND DURING HEATING AND BURNING *(describe what you should see during the heating of your sample in burner and choose one of possibility)***:**

The sample it's an inorganic compound so possible changes during heating and burning are: no changes, melting to colourless liquid, which acquires the original colour after cooling down, change of the colour, releasing vapours, sublimation. But it never becomes carbonized and it won't be burnt.

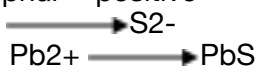
ORGANIC/INORGANIC/ORGANIC-INORGANIC COMPOUND

ELEMENTARY ANALYSIS *(write down the reactions of tests you should do and mark which of them should be positive)***:**

1. Nitrogen =negative

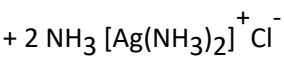


2. Sulphur = positive



3. Halogens =negative
Add silver nitrate.

4. Chlorine, bromide, iodine = negative



SOLUBILITY *(decide according to the information in Ph. Eur.)*: freely soluble in water, very soluble in boiling water , practically insoluble in ethanol 96%

pH of solution/suspension *(decide according to nature of your sample)***: neutral**

REACTIONS FROM THE FLOWCHARTS *(write down your "flowcharts pathway"; describe results of your hypothetical analysis – reactions from the flowcharts you can find in material called "Identification of an unknown drug")***:**

Unknown compound - inorganic compound - solubility in water : yes - Flowchart 1

Inorganic compound soluble in water: no react with sodium hydroxide solution, not react with amonium oxalate solution I, react with titan yellow I = + Magnesium sulphate

IDENTIFICATION REACTIONS *(from your monography choose the tests necessary for identification of your substance and describe them)*:

Reaction of sulpfates:

To the cold filtrate (5 mL) add a few drops of lead acetate solution.
Production of a black solution or a black precipitate indicates that the original substance contains sulphur. It's positive

Sorg. ⟶ S2-

S2- + Pb2+ ⟶ PbS

Reaction of magnesium

Reaction with titan yellow solution I
Dissolve about 0.1 g of the compound in 10 mL of distilled water. Take 3 mL of this solution, add 1 mL of titan yellow solution and 1 mL of dilute sodium hydroxide. A red precipitate forms => evidence of Mg 2+ .