

PHYSICAL & CHEMICAL EVALUATION OF AGAR

Practical - 33

Date: .../.../.....

PHYSICAL AND CHEMICAL EVALUATION OF AGAR**Aim:** To perform the physical and chemical tests for evaluation of Agar.**Reference:**.....
.....**Requirements:**.....**Synonym:** Agaragar, Japanese Isinglass, Vegetable gelatin.**Botanical Source:** It is the dried gelatinous substance obtained by extraction with water from **Gelidium amansii**.**Family:** Gelidaceae**Physical Characteristics:**

S. No.	Physical Character	Observation
1.	Colour	
2.	Odour	
3.	Taste	
4.	Shape	
5.	Size	
6.	Solubility	

Chemical tests/Identification tests:

S. No	Test	Observations
1.	Agar responds with Fehling's solution.	
2.	Agar with Molisch reagent.	
3.	Aqueous solution of agar (1%) is hydrolysed with concentrated HCl by heating for 5–10 min. On addition of barium chloride solution to the reaction mixture.	

4.	Agar powder with a solution of ruthenium red.	
5.	Agar is warmed in a solution of KOH.	
6.	To agar solution an N/20 solution of iodine is added.	

Precautions:

1. Avoid direct contact with any hazardous chemical.
2. Do not mouth pipette.

Uses:

- Agar is used to treat chronic constipation, as a laxative, suspending agent and an emulsifier.
- Agar is used as a gelating agent for suppositories, as surgical lubricant, as a tablet excipient and ointment and as dental impression mold base.
- It is extensively used as a gel in nutrient media for bacterial cultures, as a substitute for gelatin, in making emulsions including photographic, gel in cosmetic, as thickening agent in food especially confectionaries and dairy products.
- Agar also used in dyeing and printing of fabrics and textiles; and in adhesive.

Report: From the above Physical characters and chemical test the given crude drug was identified as

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Questions Bank

1. What is the solubility of Agar?
2. Write the botanical name of Agar.
3. What are the uses of Agar?
4. Write the name of chemical constituent of Agar.
5. What happen when a solution of Agar is warmed with the solution of KOH?
6. Write a note on physical characters of Agar.
7. Agar is used as a gelating agent for suppositories, explain it.
8. What is the gelating agent?
9. What happen when Agar react with Molisch reagent?
10. Paste the one marketed preparation of Agar.