

PHYSICAL & CHEMICAL EVALUATION OF ACACIA

Practical - 31

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

PHYSICAL AND CHEMICAL EVALUATION OF ACACIA

Aim: To perform the physical and chemical tests for evaluation of Acacia.

Reference:.....
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Requirements:.....

Synonym: Acacia gum, Indian Gum and Gum Arabic.

Biological Source: It is found as dried gummy exudation obtained from the stems and branches of **Acacia arabica**.

Family: Leguminosae

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.	Lead Acetate Test: An aqueous solution of acacia when treated with lead-acetate solution.	
2.	Borax Test: An aqueous solution of acacia on treatment with borax.	
3.	Blue Colouration due to Enzyme: When the aqueous solution of acacia is treated with benzidine in alcohol together with a few drops	

	of hydrogen peroxide (H ₂ O ₂).	
4.	Reducing Sugars Test: Hydrolysis of an aqueous solution of acacia with dilute HCl yields reducing sugars whose presence are ascertained by boiling with Fehling's solution.	

Precautions:

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

Uses:

- The mucilage of acacia is employed as a demulcent.
- It is used extensively as a vital pharmaceutical aid for emulsification and to serve as a thickening agent.
- It is used in combination with gelatin to form conservates for micro-encapsulation of drugs.
- It is employed as colloidal stabilizer.

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

_____.

Questions Bank

1. What is the solubility of Acacia?
2. Write the botanical name of Acacia.
3. What are the uses of Acacia?
4. Write the name of chemical constituent of Acacia.
5. What happen when aqueous solution of acacia treated with lead-acetate solution.
6. Write a note on physical characters of Acacia.
7. Write the borax test for Acacia.
8. What is the micro-encapsulation?
9. Acacia used as a demulcent, explain it.
10. Paste the one marketed preparation of Acacia.