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# EXPERIMENT 8 PREPARATION OF ISINGLASS

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## 8.1 INTRODUCTION

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Air bladder (fish maws) usually in the dried form serves as the raw material for making isinglass. Isinglass is probably the most important product from bladder and is chiefly used as a clarifying agent for liquors.

### Objectives

After performing this experiment, you will be able to:

- prepare isinglass from air bladder; and
- identify some of its properties.

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## 8.2 EXPERIMENT

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### 8.2.1 Principle

The hard dried bladder must first be softened by soaking in water. The treatments given either for drying bladders or for converting to isinglass should not adversely affect the quality of the protein, collagen, contained in it. It's this collagen that is responsible for the special properties of isinglass. Air bladder in the softened form is flattened to a low thickness, followed by drying.

### 8.2.2 Requirements

- Dried fish maws
- Knife, scissors, vessels, polyethylene bags, etc.
- Balance
- Rollers (or roller press with cooling facility, if available)
- Drier

### 8.2.3 Procedure

- 1) Weigh the dry fish maws.
- 2) Soak in chilled water for several hours until it become soft.

- 3) Cut into small pieces or strips.
- 4) Press the material on a hard surface using rollers. Reduce the thickness in stages down to less than 1/16 inch. Prevent any temperature rise by dipping the material in chilled water in between pressings.
- 5) Place in drier at 40–45°C. Dry slowly to a moisture content of less than 10%. The material becomes hard dried as 'leaves'.
- 6) Weigh and pack in plastic bag.
- 7) ***Test for the ability to form gel:*** Put a sample of isinglass in hot water (above 80°C). After dissolution, keep the solution in fridge (chilled). Observe for formation of jelly.

### 8.2.4 Observations

Weight of dry fish maws (x) =  
 Weight of isinglass (y) =  
 Yield of isinglass ( $y/x \times 100$ ) = .....%  
 Solubility in hot water : soluble/insoluble  
 Gel formation upon chilling : gel formed/remains as liquid

### 8.2.5 Results

The yield of isinglass from fish maws is ..... %  
 The isinglass prepared is capable of ..... in hot water and forming a ..... upon chilling.

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## 8.3 PRECAUTIONS

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- Take care to keep the temperature low throughout processing.