

PREPARATION OF ISINGLASS



INTRODUCTION:

- ❖ Fish maw on further refining yields isinglass, which is an excellent raw material for producing good grade gelatin or glue.
- ❖ For the preparation of fish maw and isinglass, the air bladder(sound/swim bladder) of fish consists of several membranous layers rich in collagen.

❖ The air bladder from the following species can be used for production of fish maw/isinglass:

cat fish (*Tachysurus spp.*)

croakers (*Otolithus spp.*)

Lizard fish (**Saurida spp.**)

eel (*Muraenesox talabonoides sp.*)

Jew fish (*Pseudosciaena sp.*)

Threadfin beam (*Polynemus indicus*)

Hake (*Merluccius spp.*)

Carp (*Cyprinus carpio*)

PROCESSING:

- ❖ The fish is taken from ice and immediately a small incision is made in the belly with a fine knife.
- ❖ The belly is cut open longitudinally and the air bladder is gently pulled out.
- ❖ It is transferred to ice water. In this condition the air bladder is usually inflated with gas-oxygen, nitrogen and carbon dioxide.
- ❖ If the bladder bursts open the shape of the dried mass will be disfigured.

- ❖ The air bladder, after washing well in water and scrapping off the outer layer is split open longitudinally and washed well further.
- ❖ It is then dried in sun to a final moisture level of around 15% by hanging or placing in trays.
- ❖ The dried product is called fish maw.
- ❖ Then fish maw(dried air bladder) is immersed in water until it becomes soft.

- ❖ Soaking for several hours may ordinarily be needed.
- ❖ It is then rolled, often after cutting into small pieces, between water cooled iron rollers to convert it into thin strips or sheets 3-6mm thick.
- ❖ They are further compressed by ribbon rollers into ribbons about 0.4mm thick.
- ❖ These ribbons are air dried and rolled into coils.
- ❖ This product is isinglass.

USES:

- ❖ Isinglass swell uniformly in water producing a fibrous structure not present in other gelatins.
- ❖ By virtue of this property, isinglass is used as a clarifying agent for beer, cider, wine, vinegar etc.
- ❖ It is also used as a nutrient and food instead of gelatin.
- ❖ The suspended impurities get enmeshed in the fibrous structure and settles.

- ❖ The clear liquid can be separated by decantation.
- ❖ Isinglass can be used also as an adhesive base.
- ❖ Isinglass dissolved in acetic acid forms a strong cement base useful in glass or pottery.
- ❖ It can be used as a sizing agent in textiles and as an ingredient in Indian ink.

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