Making a medicinal value jelly from an Arka mridula

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Abstract—These instructions give you guidelines for preparing papers for the Food and Agriculture Spectrum. Use this document as a template if you are using Microsoft Office Word 6.0 or later. Otherwise, use this document as an instruction set. The electronic file of your paper will be formatted further by Food and Agriculture Spectrum. Define all symbols used in the abstract. Do not cite references in the abstract. Do not delete the blank line immediately above the abstract; it sets the footnote at the bottom of this column.

Index Terms—pectin, medicinal benefits, cancer, diabetes, jelly.

I. INTRODUCTION

Arka mridula (guava) is an edible fruit and their plants are semi-vigorous in nature and in spreading too. Fruits are round in shape and weight is about 180g, where pectin content is 1.041%. Fruit skin is yellow in color and the inner part flesh is yellow in color. TSS (Total soluble solid) is around 12& Brix. Pectin is present in the Arka mridula has high medicinal value because it is good to hypercholesterolemia, high triglycerides and also it is good for cancers like colon cancer and prostate cancer and it good for diabetics and gastroesophageal reflux disease (GERD). Pectin prevent poisoning caused by lead, strontium and other heavy metals. Pectin has ability to reduce the skin flushing associated with taking it with niacin. Consuming this pectin in the from of jelly is a greatest benefit to the health and this jelly is edible for all kind of age people [1].

II. MATERIALS AND METHODS

Take a one kg of Arka mridula and peel its skin and put 333g of peel into three different vessels and add 500 ml of water in each vessel. After boiling for 5 minutes then remove the peel from the boiling bowl and add mango or whatever flavor that wants and add jaggery, cane sugar, white sugar in three different vessels. Temperature should be maintained for 70°C to 80°C for 40 minutes. If we want, we can add small amount of sodium benzoate for expansion of jelly life time.

III. QUALITY ASSAYS

• Sheet test:
In the sheet test, detect the consistency of the product. So, the solution is poured at the back of the spoon and the solution flows slowly due to high viscous. The high viscous is formed due to pectin. It also determines the quality of the product [2].

• Drop test:
Take the drop of jelly and put into glass of water that won’t dissolve that will float in the water. The high of the viscous of jelly it doesn’t get dissolve in water. So, it has better consistency [3].

• Sugar test: (Refractometer)
This test is used to determine the sugar ratio. Its unit is brix. The total brix value is divided by 2 and we can have calculated the total sucrose present in the particular product [4].

• Protein determination:
Lowry’s method is used to determine the protein content in the jelly. It also measures the protein concentration in the sample. Copper is mainly present in the Lowry’s reagent and it can react with the peptide bond present in the protein. Then, the copper is reduced to blue color to indicate the presence of protein in the sample. Reagents involved in Lowry’s method are A-2% sodium carbonate in 0.1N sodium hydroxide, reagent B-0.5% cupric sulphide in 1% potassium tartarate, reagent C-1 ml reagent B is added to 50 ml of reagent A and BSA standard-1mg /ml [5].

• Refrigerator testing:
In refrigeration testing, pour a little amount of boiling sample in a freezer for some times and it can be removed from the plate. So, it confirmed the quality of the product [6].
• Carbohydrates test:
The carbohydrates test is done by DNS method, the alkaline solution of 3,5 dinitro salicylic acid react with reducing sugar and convert into 3-amino-5-nitro salicylic acid. The solution is turn into orange colour that indicates the presence of reducing sugar. Reagents involved in DNS method are glucose working standard-10 mg/ml, DNS reagent (3ml) and 40% potassium sodium tartrate [7].

• Organoleptic test:
i. Taste: The jelly is very sweet and in mango flavour.
ii. Texture: It is not like stiff or syrup it is gelled, lump
iii. Colour: Here we added mango flavour so it’s looks in attractive yellow colour [8].

IV. RESULT & DISCUSSION
The amount of protein, carbohydrates and sugar are mentioned below in table1. This jelly with jaggery is used to reduced blood glucose level, cholesterol content, prevent anemia, controls blood pressure, cure liver disease and improve immune system and it is rich in minerals and vitamins. The normal white sugar gives more taste then the jaggery but it has a low nutritive value and it will cause various disease such as diabetes mellitus, gum disease, obesity, etc

<p>| Quality analysis of food product from Arka mridula tabl.1 |
|-----------------------------|-----------------|</p>
<table>
<thead>
<tr>
<th>S.no</th>
<th>Quality analysis</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sugar test</td>
<td>23.46%</td>
</tr>
<tr>
<td>2.</td>
<td>Protein test</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Carbohydrate test</td>
<td></td>
</tr>
</tbody>
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CONCLUSION
Diabetes mellitus and blood pressure are common in now a day. So, people changing their habits to take tablets and some other drugs .it will affect our health in slow manner and later it will turn into poison. Treat the disease by changing our food habits to lead health lifestyle. In this jelly the pectin content as a high medicinal value that good for health. Diabetic patients are egar to eat sweets. So, this kind of food products is more beneficial for them without causing any diseases. Therefore, it concluded that this jelly is edible for patients too and it has highly medicinal value.

REFERENCES