

Agar-agar: benefits and applications



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Agar-agar is a gelatinous substance, derived from the plant source of some types of seaweed or red algae, it is a family of gelidiacees, such as gracilaria and gelidium. It is a traditional gelatin that contain high in fiber, calcium, and iron, but low in fat, carbohydrate, sugar. It is suitable to consume by all people, include vegetarian, vegan and other diet restrictions.

The term of ‘ agar-agar’ is the Malay name for red algae, when the jelly is formed. Besides, it also can be called as kanten, Japanese isinglass, China grass, Jaffna moss, and also Ceylon moss.

Agar-agar was done by the process that is called sun-drying and snow chilling. However, the freeze-dried process is completed in factories nowadays and it becomes white and semi-translucent, and sold in package as dried strips, powdered form and flakes.

Nowadays, agar-agar is easily made at home or at factories, and it is simple step to prepare agar-agar. Agar-agar can be seen and sell everywhere such as market, shopping center, night market (pasar malam) and others.

It has a lot of benefits when we consume agar-agar in moderation, such as calm the liver, bring relief to the lungs, mild laxative, ability to reduce inflammation, help digestive disorder, weight loss and others.

HISTORY

Freezing is the condition that remove the impurities of the agar-agar. It is happened in the Japan, an innkeeper put some leftover jelly during the winter time. Then the innkeeper came across and observed the white

substance few days later. He realized that the jelly produced a whiter jelly when he boiled it. So, the production of agar-agar was discovered accidentally.

Agar-agar was being well-known in China and Japan for centuries, a flavoured gel was called as 'kanten' in Japan and 'dongfen' in China. 'Kanten' means cold weather and is referring to the fact that agar is cropped in the winter months. It is told that Chinese migrants is then broght agar-agar to South East Asia. Agar-agar is Malay name, means 'jelly', even Chinese in South East Asia also used it. 'Agar' is used in Europe when Europeans brought it to their country. Thus a agar-agar, which is a Japanese product, came to have a Malay name. In 1882, the agar was used as a medium to culture bacteria by experiment on the tuberculosis bacteria.

POPULARITY

In Japan, they used in anmitsu and mizuyokan, which are famous Japanese food that contain agar. Anmitsu is a dessert that made up with small agar jelly.

In Philippines, it is used to make gulaman refreshments and desserts. For example, buko pandan, sago gulaman, halo-halo, agar flan.

In Vietnam, thach is a popular dessert that made of flavoured layer of agar.

In India, agar also called as 'China grass' and used it in desserts. It is also used in Burma and in Russia as jelly and replacement to pectin respectively.

This is shown that many country ware being used agar in their foods. The popularity of agar was well-known in all over the world.

SAFETY

No calories

Agar-agar is a slightly sweet dessert but it contains no calories in its food. People will not easily gain weight when eating this type of dessert. That is why Japan used agar-agar served as dessert.

Preservative free

Besides that, home-made agar-agar is not added preservative to make it can store in longer time. So, it is safe to consume by people. It is because preservative is a chemical that will harm to people health if consume large amount of preservative.

Ingredients is made of natural

Many other food may be made or add in some chemical substance in food such as carbohydrates, fats, emulsifier or other things to make the food taste nicer and delicious. However, the ingredient of agar-agar such as agar-agar powder is made of red algae or seaweed. It is found in nature and health to our body compared with chemical substances. Besides, coconut milk also being extracted from the coconut.

Control of adding sugar

If you want to prepare a perfect agar-agar, you should try this. You can put a small amount of cooked gel in a plate and put in the refrigerator. If it is too hard after cold it, it should add in more water. If it is not very sweet, you can add in some sugar to make it sweet. The advantage of testing the agar is the cooked gel can be boiled and re-melted.

QUALITY CHARACTERISTIC

The agar-agar powder usually in fine powder, it is because fine powder will easily dissolve in water compare to coarse powder, it need longer time to dissolve. Besides, the color of the powder is pale yellow or white in color, so if the color appeared other than this two color, it maybe cause some disease to us. The agar-agar powder also have the characteristic of high gel strength to prevent separation. It also have high solidification because it is easily extracted from algae. The characteristics of added sugar is to increase the strength and elasticity of the gel.

CULINARY USES

Other than playing a part in most of the dessert like jellies, puddings, and custards, it also involved in another culinary. For example, agar-agar can act as stabilizer, which keeping whipped cream topping hard and prevent separation. The other culinary uses for agar-agar is it canbe used as appetite suppressant, laxative, vegetarian gelatin substitute, filler in paper sizing fabrics, a thickener for soups, in ice cream, fruit preserves, and other desserts. Some country like Russia used to replace or add the pectin in the jams and marmalades, as a gelling properties and strengthening ingredients that are found in soufflés and custards. In addition, agar-agar also used as a chocolate-glazed or cake filling as individual sweets. It also being used in gel clarification, culinary used to clarify sauces, stocks, and other liquids.

REASON OF CHOOSING

Refreshing

Agar-agar is very suitable to be consumed in hot weather because it served cold and can lower the body temperature when we consume it. This dessert is rather soothing and more preferable than other kind of desserts where most of them include high amount of preservatives or salt.

Low calories and low fats

Agar-agar is fiber, calcium, and iron, but low in fat, carbohydrate, and sugar. So, it contain low calories when we consume it. Besides, it is not a food that need to use oil to cooking. So, it is not oily and easy to digest. By consuming this food, it will tend to loss weight.

Low cost

The ingredients of making agar-agar such as agar-agar powder, sugar, coconut milk are inexpensive compare to other desserts such as cake and cookies. People can save money or can make more quantity of agar-agar because of lower cost of buying the ingredients. It is affordable for people who in a low income salary. Low cost of the ingredients do not mean that the ingredient is not in a good quality.

Ingredients are easily available

The ingredients such as agar-agar powder, sugar, coconut milk can be easily bought in the market. For example, food store, shop, supermarket, shopping center, or even pasar. These ingredients are common and easy to be found.

Age and Religion

It is suitable for all age like kids, childhood, adolescence, adulthood, elderly and also pregnant women. Besides, all religion can consume it because agar-agar not a types of food restriction.

Health Beneficial

By consuming agar-agar, it provide a lot of benefits on health such as calm the liver, bring relief to the lungs, mild laxative, ability to reduce inflammation, help digestive disorder, and it is beneficial to thyroid patient.

RECIPE**Ingredients**

It is prepared in 13 serving.

- 50 gram agar-agar powder
- 900 gram coarse grain sugar
- 300 gram coconut milk
- Artificial fortuna (red colour and green colour)
- Few blades of pandan leaves

Method

Heat the water until it boil with putting several piece of pandan leaves.

While waiting it boil, mix the 50 gram of agar-agar powder with some water into a small bowl. Stir until the mixture is uniformly.

After the pandan leaves can be smell, pour the mixture of agar-agar powder into the boiled water and stir it until uniform.

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Add approximately 900 gram of coarse grain sugar and stir until the sugar dissolved completely into the mixture. Make it until slightly over-sweetened.

Once the mixture is done, separate the mixture into two pot and heat the mixture and low heat.

Add santan milk into two separate pot equally and stir it.

Add several artificial fortuna with red color and green color into two pot respectively.

Pour agar-agar mixture into the mould. Let it medium dry before pouring the second layer of agar-agar mixture.

Step 8 is repeated to making the layer of agar-agar until the mould is third-quarter filled.

BENEFITS OF CONSUMPTION

Digestion and weight loss

Agar-agar contain high in fiber, calcium, and also iron, but low in fat, carbohydrate, and sugar. So, it contain low calories when we consume it and it can increase the ability of digestion when people have problem of digestive disorder. It also tend to weight loss because it is very low calories food and it can carry toxic products out of the body.

Beneficial to thyroid patient

Monolauric acid is found in the coconut milk, which is contain a strong antiviral property and is soothing fuel for the glandular system. (Edward

Bauman, PH. D.). Besides that, coconut milk has a function of thyroid-promoting effects because it contains butyric acid, which can help thyroid hormone move into the brain. It function as modulate blood sugar, is protect motichondria against stress injuries and anti-allergic as it is presence of short and medium chain of fatty acid. (Dr. Ray Peat)

Intestinal regulator

It also can serve as intestinal regulator. When we consume agar-agar, it will triple in size and absorb water from the body. Then it will make consumers feel full.