

USE OF INFUSED WATER HEALTHY DRINKS AS BODY RESISTANCE WITH PKK MANAGERS OF BANGAK SINE VILLAGE SRAGEN

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ABSTRACT

The use of infused water as a healthy drink for endurance needs to be widely disseminated in society after the Covid 19 pandemic. Infused water or spa water is water that is added with pieces of fruit and left for a few hours until the juice comes out, then it is ready to be consumed, thus giving the impression taste and health benefits. Infused water can be used as an alternative for those who don't or don't like fruit and don't have time to consume fruit. The purpose of this community service program is to increase the skills and knowledge of the community in making infused water, as well as the importance of increasing the body's immunity by utilizing health drinks such as infused water. The method used is descriptive, lecture, discussion and hands-on practice of making infused water with PKK administrators in Bangak Sine village, Sragen Regency. The results of this community service activity can be seen from the increased knowledge and ability of the participants in making the correct infused water according to the instructions previously socialized. The conclusion of this community service activity is that participants can make infused water independently and increase public knowledge about the benefits of infused water as an immune booster.

Keywords: Infused water, manufactur, immunity, increased knowledge

ABSTRAK

Pemanfaatan infused water sebagai minuman sehat untuk daya tahan tubuh perlu disebarluaskan di masyarakat pasca pandemic Covid 19. Infused water atau spa water adalah air yang ditambah dengan potongan buah-buahan dan didiamkan selama beberapa jam sampai sari buahnya keluar, lalu siap dikonsumsi, sehingga memberi cita rasa dan manfaat untuk kesehatan. Infused water dapat digunakan sebagai salah satu alternatif bagi mereka yang tidak atau kurang suka buah dan tidak sempat mengonsumsi buah. Tujuan program pengabdian masyarakat ini adalah untuk meningkatkan ketrampilan dan pengetahuan masyarakat dalam pembuatan infused water, serta pentingnya meningkatkan imunitas tubuh dengan memanfaatkan minuman kesehatan seperti infused water. Metode yang digunakan adalah deskriptif, ceramah, diskusi dan praktek langsung pembuatan infused water bersama pengurus PKK desa Prambatan Lor Kabupaten Kudus. Hasil dari kegiatan pengabdian masyarakat ini dilihat dari peningkatan pengetahuan dan kemampuan peserta dalam membuat *infused water* yang benar sesuai petunjuk yang telah disosialisasikan sebelumnya.

Simpulan dari kegiatan pengabdian masyarakat ini adalah peserta dapat membuat *infused water* secara mandiri dan peningkatan pengetahuan masyarakat tentang manfaat dari *infused water* sebagai peningkat daya tahan tubuh.

Kata Kunci: *Infused water*, pemanfaatan, imunitas, peningkatan pengetahuan

INTRODUCTION

The Covid-19 pandemic has had a serious impact on various aspects of life throughout the world, including Indonesia. Apart from having a direct impact on health aspects, especially increasing transmission and death rates, the Covid-19 pandemic also has an impact on other aspects of life such as education, the economy and mental health [1]. Even though the implementation of clean living and health protocols has been implemented well, it is felt that this is not enough because people feel the need to increase their body's resistance to the virus. One way is to use infused water to increase the body's immunity.

Infused water drinks containing a mixture of natural ingredients such as vegetables and fruit soaked in water have become popular among the public and are considered a healthy drink. Infused water can also provide a refreshing sensation when drunk in hot and tired weather. Infused water or spa water is water that is added with pieces of fruit and left for several hours until the juice comes out, then it is ready to be consumed, thus providing taste and health benefits. Water that is given pieces of fruit will taste fresh and have a distinctive aroma, not sweet like juice or fruit juice because there are no added additives [2]. Infused water can be used as an alternative for those who don't or don't like fruit and don't have time to consume fruit. Apart from that, infused water can also encourage a person's appetite to consume more water [3]. One of the infused waters that is known to the public is infused water from lemons.

METHOD

This community service activity is carried out in the form of socializing how to make infused water. The activity was carried out on the 15th of October 2023, at the house of a PKK resident in Bangak Village, Sine District, Sragen Regency. The method used in this service is a presentation and discussion about the ingredients and benefits of lemon in infused water. After that, it was continued with questions and answers and practice in making lemon infused water. Participants in this service were women from PKK administrators in Bangak village, Sine sub-district, Sragen Regency.

The ingredients needed to make infused water are lemon and boiled water. The tools used are infused bottles, refrigerator/cold box, knife, cutting board. Lemons as the main source of infused water must be washed thoroughly first then cut into several pieces. Prepare a water bottle containing mineral water and put lemon slices in it. Store it first in the refrigerator or cooling machine for several hours until the fruit juices are absorbed with water. After that, we can drink and enjoy healthy and fresh lemon infused water.

Softer fruit such as oranges and strawberries can be sliced thick, thin, halved, or quartered. Harder fruit like apples should be sliced very thinly because they take longer to release

their flavor. Mash the fibrous ginger root, rosemary, and lemongrass with a muddler or wooden spoon; tear or crush leafy herbs such as mint, basil, and cilantro to release their oils. Loose herbs and flowers, lavender, rose petals, dried hibiscus, can be tied in a tea infuser or cheesecloth. Infuse water at room temperature for no more than 2 hours. After that, put it in the refrigerator to prevent bacterial growth. Cucumbers, citrus fruits, melons, and mint-flavored water are almost instant. Apples, cinnamon, fresh ginger and rosemary need to soak overnight in the refrigerator. The melon and strawberry slices started to look waterlogged after a few hours; oranges, and whole berries still look fresh even after hours in the refrigerator. After 4 hours, the orange peel can make the water taste bitter.

The data from the pre-test and post-test results were analyzed descriptively, describing how the PKK administrators in Bangak Village, Sine District, Sragen Regency succeeded in answering questions after receiving socialization and succeeded in making infused water independently from the community service team of the Pharmacy Department, Faculty of Health Sciences, Darussalam Gontor University.

RESULT AND DISCUSSION

Infused water is known as natural detox water which is rich in health benefits. Even though infused water is ordinary water that has been soaked with several pieces of fruit or vegetables in it, we also need to pay attention to the types of fruit and vegetables that can be used. As a recommendation, lemon infused water is one of the best choices. Apart from lemons, there are several other types of fruit that are also suitable for infused water, namely oranges, pears, strawberries, kiwi, apples, grapes, melons, blueberries and cucumbers. Meanwhile, other fruits such as watermelon, banana, mango, avocado or papaya with a texture that crumbles easily should not be used when making infused water [4]. With a mixture of fresh natural ingredients, lemon infused water can be drunk at any time. However, never mix lemon infused water with sugar or sweetener because it will eliminate its properties.

Lemon is a fruit that is rich in vitamin C and antioxidants which are beneficial for the human body. Lemon contains 3.7% citric acid and vitamin C 40-50 mg / 100 g [5]. Even though it has many benefits for the body, lemon contains citric acid with a low pH of 2.74 [6]. Apart from that, low pH is also sensitive for human digestion, especially the stomach. Processing lemons as an infused water drink can be an alternative to overcome acidity in lemons. This lemon infused water is rich in vitamins and minerals and has few calories.

The benefits of lemon infused water cannot be separated from the content of the lemon itself. The following is table 1 of the nutritional content of fresh lemon without skin which is good for health.

Table1. Lemon nutritional content per 100 g

Content	Nutritional Value	RDA percentage
Energy	29 Kcal	1,5%
Carbohydrate	9,32 g	7%
Proteins	1,10 g	2%
Total fat	0,30 g	1%
Cholesterol	0 g	0%
Food fiber	2,8 g	7%
Vitamin		
Folat	11 mcg	3%
Niasin	0,100 mg	1%
Asam pantotenat	0,190 mg	4%
Piridoksin	0,080 mg	6%
Riboflavin	0,020 mg	1,5%
Thiamin	0,040 mg	3,5%
Vitamin C	53 mg	88%
Vitamin A	22 IU	1%
Vitamin E	0,15 mg	1%
Vitamin K	0 mg	0%
Elektrolit		
Sodium	2 mg	0%
Calium	138 mg	3%
Mineral		
Calcium	26 mg	3%
Cu	37 mcg	4%
Fe	0,60 mcg	7,5%
Mg	8 mg	2%
Mn	0,030 mg	1%
Zn	0,060	0,5%
Phyto Nutrition		
Carotin-β	3 mcg	-
Carotene	1 mcg	-
Crypto-xanthin-β	20 mcg	-
Lutein-zeaxanthin	11 mcg	-
Licopen	0 mg	-

Source: USDA (United States Department of Agriculture) national nutrient database.

The longer the soaking time, the more material will be dissolved so the level of turbidity will be higher. This is because during soaking the solubility diffusion process will continue until it reaches homogeneity. More fruit juice ingredients will dissolve the longer the ingredients are soaked. Materials dissolved in water such as vitamins, especially vitamin C and other mineral materials that come from fruit. The diffusion process that continues during soaking increases the turbidity of the water because more and more material is dissolved during soaking. According to Rohmah et al. (2008) solid

substances such as salts, minerals, anions, cations that are dissolved in water and excess will increase the turbidity of the water and inhibit the penetration of light into the water.

Vitamin C is a water-soluble vitamin and is stable at acidic pH. The solubility of vitamin C in water occurs by diffusion and spreads until it becomes homogeneous. Vitamin C moves from high concentration to low concentration until both concentrations become the same. Vitamin C is also easily degraded due to heat and oxidation (in contact with air). However, high temperatures can provide kinetic energy to substances, thereby accelerating the rate of diffusion [7].

Infused water can also help you lose weight to achieve your ideal body weight. Some of the other benefits of lemon infused water are: facilitating the digestive process, rich source of vitamin C, helping the detoxification process, making skin healthier, regulating blood pH levels, increasing body energy, maintaining kidney health, and fighting cancer [4].

Resume :

1. Infused lemon water is known as natural detox water which is rich in benefits, including being a good source of vitamin C in maintaining the body's immune system
2. Not only is it delicious and refreshing, lemon infused water can also help you lose weight.
3. Infused lemon water can help facilitate the digestive process and prevent constipation, as well as increase the body's energy, especially when tired.
4. The citric acid content in lemons can help maximize enzymes that support liver function. Very good for the body's detoxification process.
5. Infused lemon water also contains high antioxidants to ward off free radicals that cause and helps maintain healthy skin.cancer

Participants, women from PKK management in Bangak Village, Sine District, Sragen Regency, who took part in the socialization, succeeded in making infused water independently. Participants understand about herbal ingredients that can be used to make infused water and the benefits of infused water for our bodies. After participating in community service activities regarding making infused water, there was an increase in knowledge from not understanding (67%) to understanding (70%) about how to make and the benefits of infused water for health.



Figure 1 Making Lemon Infused Water



Figure 2 Participants who use infused water as a healthy drink for immune system in Bangak Sine Village, Sragen

CONCLUSION

1. Infused water contains herbal ingredients that are beneficial for health as antioxidants and can increase the body's immunity
2. PKK participants/cadres in Bangak Sine village, Sragen Regency, succeeded in making infused water drinks independently.
3. From the results of questions and answers with participants, most questions about the composition and benefits of infused water could be answered well and correctly.

It is recommended to increase community service activities community, especially regarding the use of medicinal plants or herbs so that they can develop household economic potential through marketing traditional drinks as a form of home industry.

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