

UTILIZATION OF COOKING OIL INTO AROMATHERAPY CANDLES AS AN ALTERNATIVE TO HOUSEHOLD WASTE MANAGEMENT AND CREATIVE ECONOMIC DEVELOPMENT IN PRIPIH HAMLET

Abdul Aziz Zain^{1*}, Ahmad Azka Izzudin¹, Banafsya Anggraini¹, Elvina Sri
Wijayanti¹, Esti Damayanti¹, Febiansyah Zakaria¹, Filda Alifatul Farahiyah¹,
Ica Agustin¹, Muhamad Rifai¹, Muhammad Farhan Ali¹

¹ UIN Sunan Kalijaga, Yogyakarta

[*kknpripihhargomulyo@gmail.com](mailto:kknpripihhargomulyo@gmail.com)

Abstract - *oil is a frying waste oil. Cooking oil or used cooking oil is a household waste that has considerable potential to be utilized and developed. This community service aims to provide training and counseling to PKK women in Pripih Hamlet, Hargomulyo, Kokap district, Kulon Progo by using socialization, training, and counseling methods of cooking oil innovation which is expected to be one way of economic development and increasing awareness of environmental cleanliness, as well as in waste management. Based on the results of this activity, there was an increase in participants ' insight about the dangers of cooking oil, how to process cooking oil, and the benefits of processing cooking oil, as well as adding skills in the use of cooking oil into aromatherapy candle products that can be used as one way of creative economic development in Pripih Hamlet.*

Keywords: *Used Cooking Oil, Aromatherapy Candles, Household Waste Management*

1. INTRODUCTION

Cooking oil is the result of frying residual oil. Used Cooking Oil (UCO) is a household waste that contains compounds that have carcinogenic properties, namely compounds that can trigger the development of cancer cell diseases in the body of living beings (Ramli, 2022). So, it is clear that the use of cooking oil that is done more than three times or periodically will damage the health of the human body, can even cause cancer, high blood pressure, and other consequences are able to damage the level of intelligence of the next generation (Rukmini, 2007). In the consumption of fried foods with cooking oil can also cause itching in the throat (Ketaren, 2005). Therefore, this is a very important discussion to find solutions in proper handling so that this cooking oil waste can be useful and does not cause harm both from human and environmental health aspects.

The difference in the content of cooking oil with new oil can be seen from the content of saturated and unsaturated fatty acids, where cooking oil has a greater content of saturated fatty acids. It is obtained from a frying process that makes changes in unsaturated chains to saturated chains in the constituent compounds. If in percentage terms, the unsaturated fatty acid content in cooking oil is 30% and saturated fatty acids are 70% (Ramli, 2022).

The use of cooking oil repeatedly or continue to make the quality of cooking oil to fall. Waste cooking oil produced from households has been translucent at 305 thousand tons. While the food processing industry amounted to 2 million tons and the amount of waste cooking oil produced from hotels and restaurants amounted to 1.5 million tons. Then it can be obtained that the total waste of cooking oil produced from various parties is 3.8 million tons per year (Nafiah, 2020).

Cooking oil has considerable potential to be developed and utilized. This happens if it goes through proper processing. But it is very unfortunate, until now, cooking oil has not been used properly and only disposed of as household or industrial waste. Currently, public awareness of the dangers of throwing waste cooking oil is lacking. Because usually people throw waste cooking oil into drains, trash, or into the ground. In fact, the danger of throwing waste cooking oil into the ground is very real. If the waste of cooking oil is thrown to the ground, it will cause clumping and closure of the soil pores so that the soil will change its structure to become hard and infertile and reduce soil absorption. Then this will be a danger when the rainy season comes can cause flooding. Cooking oil has not been widely used by people in Pripih Hamlet. To minimize waste cooking oil and reduce environmental pollution, it is necessary to make efforts to use cooking oil into something

useful (Sundoro, Kusuma, and Auwalani 2020). As an effort to improve the living standards of people in Pripih Hamlet in terms of Environmental Health by utilizing cooking oil as the basic ingredient of aromatherapy candles. This effort is an easy step to do and also has economic value so that it has the potential to be developed into a source of income for the people of Pripih Hamlet.

Aromatherapy candles are candles that are modified from existing candles by utilizing available and easily available ingredients as the main ingredients and additional ingredients of aromatherapy to provide a soothing aroma. The purpose of this community empowerment activity is to increase public knowledge about the impact of the use and disposal of cooking oil on body and environmental health, increase public knowledge about products produced by aromatherapy candles, and provide counseling on making aromatherapy candles using cooking oil as the basic ingredient (Wardani, 2021).

It is hoped that through the use of cooking oil into aromatherapy candles, it can increase public awareness in maintaining environmental cleanliness and a healthy lifestyle of the potential for Disease due to the use of cooking oil that is used many times.

2. METHOD

Community service methods used are socialization, training, and extension of used cooking oil or cooking oil innovation to PKK members in Pripih, Hargomulyo, Kokap, Kulon Progo which is expected to be one way of economic development and increase awareness of environmental cleanliness, as well as in waste management.

No.	Tools	Ingredients
1.	Stove	Used cooking oil
2.	Pan	Stearin
3.	Wick (hemp rope)	Crayon
4.	Small glass	Aromatherapy
5.	Toothpick	Charcoal

Making aromatherapy candles from cooking oil using a simple way, with the following steps:

1. Prepare the necessary tools and materials
2. Heating cooking oil soaked with charcoal for 24 hours
3. Adding stearin as a substance helps the wax Harden faster. The more stearin used, the faster the cooking oil solidifies into wax

4. Mix crayons that have been cut into small pieces as wax coloring
5. Pour aromatherapy as a candle fragrance additive
6. Stir until all ingredients are combined and dissolved
7. Pour into a glass that has been linked to the wick with a toothpick as a buffer.

3. RESULT AND DISCUSSION

The socialization, training, and innovation counseling activities held on August 3, 2023 at the Pripih Hamlet head's House, Hargomulyo, Kokap, Kulon Progo have the main goal of increasing public awareness about waste management, and providing interventions for processing waste cooking oil into aromatherapy candles. The target of the activity is aimed at members of the PKK consisting of 63 people.

This activity began with the provision of information on the understanding of what is household waste, then the urgency of household waste management, then continued What about the understanding of cooking oil, the dangers of waste cooking oil, how to process cooking oil, the benefits of processing cooking oil and continued the delivery of procedures for making candles from cooking oil.

In the implementation of this activity, the participants were very enthusiastic. seen from the number of participants who attended exceeded 50% of the total number of PKK members. In addition, this can be seen from the attention of the participants during the socialization, and the participation of participants in conducting questions and answers.



Picture.1 Presentation of information regarding used cooking *oil*

The following is a series of aromatherapy candle making process. In the process of making aromatherapy candles from cooking oil, what is needed first is to prepare all the tools and materials for making, such as stoves, pans, stirring spoons, cutters, shot glasses, charcoal, cooking oil, toothpicks, hemp rope, crayons, stearin, and essential oil. The first step is to heat the cooking oil that has previously been through the process of soaking using charcoal for 24 hours, this soaking process aims to eliminate unpleasant odors from cooking oil, the process of making this candle using medium heat. After the oil starts to heat input stearin into cooking oil with a ratio of 150 ml cooking oil : 5 tbsp stearin, with this dose can produce 3 glasses of wax, the addition of stearin aims to harden cooking oil to become wax, in this process the more stearin used the faster the cooking oil can harden. After the stearin dissolves add crayons or pastel dyes that have been cut into small parts, then stir until the crayons dissolve into one with oil, the addition of these crayons so that the wax is colored and attractive. Then the next step is to add enough essential oil to the cooking oil, the use of essential oil can also be replaced with eucalyptus oil, the purpose of adding this essential oil so that when the candle is used it can emit a fragrant smell. And the last step is to pour the cooking oil wax mixture into a shot glass that has been given a hemp rope associated with a toothpick. After that, wait for the cooking oil wax mixture to harden and the wax is ready for use.



Basically, awareness and knowledge of Household Waste Management in this case cooking oil is very important to know. Considering that cooking oil is a waste that must be produced by every household level and tends to be discarded because it is considered to have no use value. However, the disposal of cooking oil that is not managed properly will cause many losses and adverse effects on the environment both on land and in water.

Throwing cooking oil carelessly on the ground will cause pollution on the ground because throwing cooking oil on the ground can make the soil hard and damage the existing ecosystem. While disposing of cooking oil in water will make the quality and function of water decrease, potentially causing problems in providing clean water for the community (Rumaisa, Christy, & Hermanto, 2019).

Cooking oil that is thrown carelessly without management and measured processing will cause pollution that requires difficult repairs and requires large costs (Vanessa and Bouta, 2017). In addition to the pollution that can be caused from throwing cooking oil carelessly, repeated use of cooking oil is also very dangerous for health. Its use can trigger the risk of dangerous diseases such as cancer, obesity, bacterial infections, and the risk of degenerative diseases such *Parkinson* or *Alzheimer's*.

Based on the results of an interview with Buk Dukuh Dusun Pripih Sri Ekowati, the author found that in terms of household waste management such as cooking oil, Pripih villagers have knowledge and awareness that is still very lacking. In addition to the need for good and correct management education, the people of Pripih hamlet also need solutions that have more value that are intended to attract more attention and interest from the community. Basically, the facts and data in the field are the background behind the implementation of this socialization and workshop. In addition to the declaration to educate the public about the management and impact of cooking oil pollution which aims to control the management of cooking oil and avoid the impact of environmental pollution. The processing of cooking oil into aromatherapy candles can be an alternative way to the above problems because it has economic value and has the potential to open business opportunities for the community.

The results of the socialization of aromatherapy candle making can be observed directly after the practical activities are completed. The participants seemed to have a sense of enthusiasm and a positive response during the socialization. Daily waste generated from household activities can be processed into innovative and varied products and can be used for daily activities. The work that has been made when the practice of making can be taken home and can be re-practiced in their homes using materials available at home. Aromatherapy candles made from waste cooking oil can also be converted into a product that can be a potential additional income for the people of Dukuh Pripih.

With the socialization of the use of cooking oil as an ingredient to make aromatherapy candles, is expected to encourage public awareness in

maintaining cleanliness and environmental health. In addition, it is also expected to improve public understanding of the risks associated with repeated use of cooking oil. In addition to these benefits, the use of aromatherapy candles made from cooking oil can also be an alternative to improve the community's economy and support the development of the creative economy in Pripih Hamlet.

4. CONCLUSION

Used cooking oil is household waste from frying oil. use of cooking oil repeatedly makes the quality of cooking oil to fall. In addition, repeated use is also very dangerous for health can trigger the risk of dangerous diseases. Plus the problem of disposal of cooking oil that is not managed properly will cause a lot of losses and adverse effects on the environment. The problem of waste management of household products such as cooking oil is also still a problem encountered in Pripih Hamlet. Therefore, socialization and workshop on the use of cooking oil into aromatherapy candles conducted by kkn 170 Pripih group is an alternative way to manage and control household waste in this case cooking oil. In addition, this activity is also an alternative in providing business opportunities and improving the creative economy in Pripih Hamlet.

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