



UTILIZING WASTE COOKING OIL INTO AROMATHERAPY CANDLES AS AN EFFORT TO REDUCE HOUSEHOLD WASTE

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Abstract— Used cooking oil is a common environmental problem in households, especially in urban areas like Cimahi City. In this program, our community service activity is themed "Utilizing Used Cooking Oil Waste into Aromatherapy Candles as an Effort to Reduce Household Waste." This activity aims to analyze the use of used cooking oil as aromatherapy candles as a solution to reduce household waste while creating economic value. The method used is a direct experiment/practice method on how to make aromatherapy candles using used cooking oil. The resulting product has a high sales value and can be an alternative home business for the community.

Keywords— *Used cooking oil, aromatherapy candles, and waste reduction.*

I. INTRODUCTION

Used cooking oil, also known as used cooking oil, is a type of waste that is often overlooked by the public. Careless disposal of used cooking oil can cause environmental pollution, especially water and soil pollution. Many people consider used cooking oil to be the same as water, so they throw it carelessly into the gutters [1]. Based on field data, most people still throw used cooking oil into drains or directly into the ground, which can cause blockages and environmental pollution. Utilizing used cooking oil to create economically valuable products, such as aromatherapy candles, is an alternative solution that can be implemented. In addition to reducing negative impacts on the environment, this utilization can also create business opportunities for the wider community, especially in Cimahi City.

II. METHOD

The implementation of this community service was carried out in Setiamanah Village, Cimahi City. The method of activity carried out using a trial method / direct practice of how to make aromatherapy candles using used cooking oil. The approach method in this activity is divided into two activities, namely the explanation of understanding and application, as follows: Providing knowledge and information about recycled used cooking oil products, such as aromatherapy candles, by utilizing natural materials in the form of local potential. As well as the application of knowledge through training in making recycled used cooking oil products into aromatherapy candles as an alternative solution to reduce household waste.

III. RESULTS AND DISCUSSION

A. Used Cooking Oil

Used cooking oil is cooking oil that has undergone oxidation and polymerization due to repeated heating. According to use, cooking oil is produced from the process of processing food ingredients with cooking oil [2]. And research conducted by [3] used cooking oil, which contains dangerous compounds such as aldehydes, ketones, and free fatty acids, which can cause environmental pollution if not processed properly. The negative impacts of disposing of used cooking oil include: Water pollution because oil can form a layer on the surface of the water, Blockage of drainage channels, Soil and groundwater pollution, and disturbance to aquatic ecosystems. In addition, used cooking oil contains dangerous compounds that pose a serious threat to human health and the environment [4]. Thus, to reduce the risk of environmental pollution and improve health and good environmental quality, it is important to process used cooking oil waste properly so as not to endanger local health and/or the environment. The purpose of this activity is to increase public knowledge about the impact of the use and disposal of used cooking oil on the environment, as well as increase public knowledge about recycled products from used cooking oil, so that they can provide examples of how to process used cooking oil into environmentally friendly household products, namely aromatherapy candles, and foster an entrepreneurial spirit and open up business opportunities for the community.

B. Utilization of Used Cooking Oil for Aromatherapy Candles

Several previous studies have shown that used cooking oil can be used as a base material for candle making. The process generally involves filtering, adding stearin, and mixing with fragrance. Research results [5] indicate that candles made from used cooking oil are of good quality and burn well.

The purpose of making aromatherapy candles is to raise public awareness of the risks posed by using used cooking oil and to reduce environmental pollution by utilizing it as an aromatherapy candle [5]. Aromatherapy candles are wax products mixed with essential oils or artificial fragrances to produce a specific aroma. According to Inayati & Dhanti (2021), aromatherapy candles have a dual function, namely as lighting and aromatherapy, which can provide a relaxing effect. The basic ingredients used during candle-making



services generally include: used cooking oil, charcoal, essential oil, stearic acid, candle dye, wax, and glass or container. The results of research conducted by [5] are almost the same, namely, the first step begins by heating approximately 30 ml of used cooking oil over low heat. Add 3 tablespoons of stearic acid as a wax hardener and stir until dissolved. After all the stearic acid has dissolved in the oil, add crayons in the desired color. The addition of crayons is indicated as an aesthetic coloring so that the candle has an attractive color. After all the ingredients are mixed and removed from the heat, let it cool slightly, then add the desired amount of essential oil (we used rose essential oil here), stirring constantly. The final step is to place the candle wick on a stick and then pour the wax mixture into a clear glass and let it sit for 2-3 hours until the wax hardens.



Figure 1: How to make aromatherapy candle



Figure 2: Aromatherapy candles

V. CONCLUSION AND SUGGESTION

Community service activities were successfully implemented through the production of aromatherapy candles from used cooking oil in Cimahi, particularly in the neighborhood associations (RTs) in Setiamanah sub-district. This activity began with door-to-door education (DTDE) and door-to-door collection (DTDC), followed by outreach and demonstrations on how to make or reuse used cooking oil as a raw material for aromatherapy candles. Furthermore, aromatherapy candles have a market value, providing additional income for the community.

C. Suggestions

Community service activities can be implemented and continue successfully with the support of all parties, to disseminate ideas that benefit the wider community. This can then be translated into a scientific paper that can be read by the wider community.

VI. ACKNOWLEDGMENT

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