

**TRAINING ON DETERMINING THE COST OF GOODS SOLD IN THE
MANUFACTURE OF FLOOR CLEANING LIQUID PRODUCTS AS A MEANS
OF CULTIVATING AN ENTREPRENEURIAL SPIRIT IN THE
ADMINISTRATORS OF RPTRA (CHILD-FRIENDLY INTEGRATED PUBLIC
SPACE) SMART AND THE ADMINISTRATORS OF RW (RESIDENTS
ASSOCIATION) OF MERUYA UTARA URBAN VILLAGE, KEMBANGAN
DISTRICT, WEST JAKARTA**

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ABSTRACT

The SMART RPTRA and RW areas of Meruya Utara Village are urban areas, besides being surrounded by households, they are also surrounded by office buildings, where they carry out routine activities every day to clean their homes and offices, especially for the floors because they are passed every day, especially during the rainy season, so the idea arose to make processed floor cleaning fluids which will later be packaged and sold in bottles, both small and large sizes. The results of the sale of processed floor cleaning fluids are expected to provide added value, but this is not easy if it is not accompanied by the right calculations, both in terms of calculating income from the sale of marketed products and calculating the cost of goods sold of the products produced, and from the calculation of the cost of goods sold, the optimal selling price of the product can be determined.

Keywords: Entrepreneurship, Cost of Goods Sold, Selling Price.

1. INTRODUCTION

Among the business of the community, especially housewives, sometimes it is difficult to earn more income. The reason is, a housewife has a lot of responsibilities at home. These responsibilities can be in the form of ensuring that all parts of the house are clean, ensuring that children are well cared for, washing dishes, cooking, taking and picking up children from school, and many more. Almost all who work as housewives do housework from morning to evening.

Although there is time that can be used to rest, that time can be used to do useful activities and can make money between free time. There are so many activities that housewives can do in their free time that can earn income. However, because the business here is emphasized only as a side business, where the main job and concentration of the mother is for the household, it starts with a capital that is not too big.

Empowerment is an effort to improve the ability of a person or group so that they are able to carry out their duties and authorities as required by task performance. Empowerment is a process that can be carried out through various efforts, such as granting authority, increasing participation, providing trust so that each person or group can understand what they will do, which will ultimately have implications for increasing the achievement of goals effectively and efficiently (Mahidin, 2006).

Through the Community Service Program entitled the Community Partnership Program (PKM), lecturers from the Accounting Study Program, Faculty of Economics and Business, Universitas Mercu Buana, Jakarta will provide Training on Determining the Cost of Goods Sold in the Manufacture of Floor Cleaning Liquid Products as a Means of Growing and Developing Entrepreneurial Spirits with partners, namely the Meruya Utara Village.



Gambar 1. Community Service Team Observation with Partners

This Community Service Program is implemented with the target partners from the Meruya Utara Urban Village community, West Jakarta. The area of Meruya Utara Urban Village is +432.88 Ha, which has been organized into 11 Community Units consisting of 126 Neighborhood Units. The Community Service Team of Mercu Buana University Jakarta feels it is important to carry out community service on how to make floor cleaning fluid products. From the results of interviews with, the Management of RPTRA (Child-Friendly Integrated Public Space) SMART and the Management of RW (Resident Units) of Meruya Utara Urban Village, Kembangan District, West Jakarta have high enthusiasm for activities that are beneficial for improving the economy of the region.

The SMART RPTRA and RW areas of Meruya Utara Village are urban areas, besides being surrounded by households, they are also surrounded by office buildings, where they carry out routine activities every day to clean their homes and offices, especially the floors because they are passed every day, especially during the rainy season, so the idea arose to make processed floor cleaning fluids which will later be packaged and sold in bottles, both small and large sizes. The proceeds from the sale of processed floor cleaning fluids are expected to provide added value for community service participants, namely the SMART RPTRA administrators and the North Meruya Village RW administrators as a means of increasing income for their households.

Meruya Utara Village is an urban community that generally the participants of this Community Service are the administrators of RPTRA SMART and the administrators of RW of Meruya Utara Village and most of them are housewives who do not work fully, learning that fosters an entrepreneurial spirit has not been as much as possible, especially forming a forum such as an entrepreneur union to instill an entrepreneurial spirit in mothers, this is considered very necessary to later provide additional income for their families. However, this is not easy if it is not accompanied by the right calculations, both in terms of calculating income from the sale of marketed products and calculating the cost of goods sold of the products produced, and from the calculation of the cost of goods sold can determine the optimal selling price of the product. Therefore, training is needed for community service participants to be able to calculate the cost of goods sold so that later they can determine the optimal selling price, and profit or profit will also be obtained, then the goal of increasing income and income for households can automatically be achieved.

2. METHOD

Training on making and determining the selling price of floor cleaning fluid for the SMART RPTRA (Child-Friendly Integrated Public Space) Managers and RW (Residents Association) Managers of Meruya Utara Urban Village, Kembangan District, West Jakarta will be implemented through several structured stages to ensure the achievement of program objectives. The methods applied include a participatory approach, theory, direct practice, discussion, and activity evaluation. The following are the planned implementation stages:

1. Preliminary Study

At this stage, coordination is carried out with partners such as the Meruya Utara Village, the SMART RPTRA (Child-Friendly Integrated Public Space) Administrators and the RW (Residents' Association) Administrators to determine the needs, time, and place of implementation of the activity. Training materials

are also prepared including technical modules on making floor cleaning fluids, calculating the cost of goods sold, and can be a business opportunity. Equipment and materials needed in the training will be provided to ensure that participants can participate in the activity optimally. At the preliminary study stage, the following activities will be carried out:

- a. Collection of problems faced by the SMART RPTRA (Child-Friendly Integrated Public Space) Administrators and the RW (Residents' Association) Administrators of the Meruya Utara Village, Kembangan District, West Jakarta.
- b. Classification of problems by the SMART RPTRA (Child-Friendly Integrated Public Space) Administrators and the RW (Residents' Association) Administrators of the Meruya Utara Village, Kembangan District, West Jakarta and matching with the potential in the institution.
- c. Preparation of program priority scale based on opportunities for implementation, availability of resources and availability of resources from the mentoring team,
- d. Preparation of work plans and program implementation instruments,
- e. Determination of the implementing team and its work description according to the expertise they have,
- f. Discussion/briefing of the team in terms of technical implementation.

2. Theoretical Material Delivery Session

The activity begins with the delivery of basic materials that include:

- a. The concept of environmentally friendly floor cleaning fluids: Explanation of the types of natural materials used, the benefits of natural floor cleaning fluids, and their impacts on health and the environment.
- b. Production Techniques: Basic principles of saponification, formulation of raw materials, and steps for making effective and efficient natural floor cleaning fluids.
- c. Economic Aspects: Basics of calculating production costs, methods for determining the cost of goods sold, and break-even point analysis.

3. Direct Practice Session

Participants will be invited directly to practice making environmentally friendly floor cleaning fluids by following these steps:

- a. Selection and preparation of natural raw materials such as vegetable oil, natural dyes, and essential oils.
- b. The process of mixing materials, molding, and curing until the floor cleaning fluid is ready to use.

The technology used in this practice is the Soap Mixer Machine: This machine is designed to mix natural ingredients into environmentally friendly cleaners, such as liquid soap for laundry, floor cleaners, and dish cleaners, using natural ingredients such as coconut oil, baking soda, vinegar, and other organic ingredients.



Here are the specifications of the environmentally friendly/green cleaner making machine:

- Capacity: 100 liters Mixer Type: Ribbon, planetary, or twin-screw type mixer depending on the type of material and viscosity of the mixture. Machine Body: Food grade stainless steel (SS304 or SS316) to ensure cleanliness and resistance to natural chemicals.
 - Blade / Stirrer: Stainless steel with a special design to mix materials evenly and effectively. For thick or coarse-textured materials, you can use a specific blade design such as spiral or ribbon.
 - Tank: Cylindrical or elliptical tank to facilitate more even mixing of materials.
 - Drive Motor: Electric motor with power between 1 to 5 HP, depending on the size and capacity of the mixer. Machine Dimensions: 1.5 m (length) x 1 m (width) x 1.5 m (height) for a capacity of 100 liters. • Machine Weight: About 150 - 500 kg,
 - Discharge Valve: Automatic or manual valve to drain the mixture into a container or package.
 - Electric Power: The machine uses 380V 3-phase or 220V electricity depending on the capacity and location of use.
- a. Evaluate the quality of production results with parameters such as texture, aroma, and shape.

1. Workshop on Determining Cost of Goods Sold

After the manufacturing practice, participants are trained in calculating the cost of goods sold by taking into account all cost components, profit margins, and the market value of environmentally friendly products.

2. Discussion and Q&A

This session provides space for participants to discuss the challenges faced in manufacturing and determining the cost of goods sold. Creative solutions and practical suggestions will be provided to help participants develop their products sustainably.

3. Evaluation and Monitoring

The activity ends with an evaluation of the participants' understanding and skills. Questionnaires and interviews are used to measure the success of the training and provide input for future improvements. Post-activity monitoring will also be carried out to see the impact of the training on participants' businesses. This structured implementation method is expected to provide practical knowledge and skills for the SMART RPTRA (Child-Friendly Integrated Public Space) Administrators and RW (Residents' Association) Administrators of Meruya Utara Village, Kembangan District, West Jakarta, so that they are able to produce and sell environmentally friendly soap independently and competitively in the local and digital markets.

4. RESULTS AND DISCUSSION

The implementation of community service activities held at the SMART RPTRA (Child-Friendly Integrated Public Space) in Meruya Utara Village, Kembangan, West Jakarta was on May 23, 2025. The initial step of the community service activities related to training in making floor cleaners for the target community, namely the SMART RPTRA (Child-Friendly Integrated Public Space) Administrators and RW (Residents Association) Administrators, was to convey ideas about knowledge about entrepreneurial opportunities through making floor cleaners. The purpose of this initial stage is to change the mindset of the training participants that making floor cleaners can be a business opportunity because it has market opportunities. And the community at the service location is ready to welcome the arrival of the Community Service team from Mercu Buana University.

The results of the implementation of the training activities for making floor cleaners are as follows:

1. Community service activities carried out on 23 May 2025, attended by around 50 participants consisting of the Management of RPTRA (Child-Friendly Integrated Public Space) SMART and the Management of RW (Rukun Warga) of North Meruya Village. The training participants showed great enthusiasm for the community service program held by Lecturers at Mercu Buana University.

3. The training material was delivered by the resource person consisting of material on how to become an entrepreneur and making floor cleaners. The ability of the training participants in mastering the training material for making floor cleaners was quite good because the participants were very enthusiastic and asked many questions related to making floor cleaners.

4. In this community service activity, the service team, namely from Lecturers at Universitas Mercu Buana University, provided training in making floor cleaners for the target community. The purpose of this community service activity is so that the community or target audience can make their own floor cleaners using simple technology and environmentally friendly materials at a relatively cheaper cost when compared to having to buy floor cleaners. Furthermore, after going through a good and attractive packaging process, this floor cleaning fluid product can also be sold as a business opportunity and can increase income.

Floor cleaner liquid is one of the most commonly used household cleaning products. Even housewives use this cleaning product almost every day. So much so that there are many liquid floor cleaner products circulating and selling well on the market. Floor cleaners often contain formaldehyde as their active ingredient. Formalin acts as a fungicide but is toxic if swallowed. To do this, use floor cleaners carefully. Floor cleaners are often scented for user comfort. This is because of the unpleasant odor of formaldehyde.

The main ingredient in floor cleaners is a disinfectant (bactericide). The first disinfectant used to clean floors was phenol or carbolic acid. Phenol is listed as a toxic substance that can damage the skin. Currently, there are other better disinfectants such as hexylresorcinol and cresol. Floor cleaner liquid is considered good if: a) it has a strong cleaning effect and removes all dirt, stains, crust or oil, b) does not corrode the floor cleaner, c) leaves the floor cleaner, d) does not leave marks or slips, e) is safe for health.

Communities or training participants who want to make floor cleaners must also have chemical knowledge. Training participants must know the labels on chemical packaging bottles, especially materials related to health (Lasia, Gunamantha & Budiada, 2017). The manufacture of floor cleaning soap has been widely developed in the household industry (Kurniasih & Zufahair, 2018). Examples of liquid floor cleaning products containing active ingredients of mangosteen extract that meet the quality requirements, test methods and packaging methods for liquid floor cleaning disinfectants (Humaira, Srikandi, and Indriyanti, 2017).

Chemicals

Chemicals are pure substances or mixtures composed of various chemical elements. Chemical groups are seen based on their origin consisting of natural chemicals (organic) and synthetic/artificial chemicals. Meanwhile, the grouping of chemicals based on their nature and function consists of food chemicals (not harmful to the body and non-food chemicals (potentially harmful to the body) (chemicals that are safe to use if done properly in terms of place, size and use).

Cleaning Chemicals

Cleaning chemicals are found in soap, detergent, shampoo, toothpaste, floor cleaners, and other cleaning products. Detergents are made from LAS (Lauryl Alkyl Sulfonate) or ABS (Alkyl Benzene Sulfonate). LAS (Lauryl Alkyl Sulfonate) is easier to decompose by microorganisms than ABS (Alkyl Benzene Sulfonate). Sodium Laureth Sulfate (SLS) is an anionic detergent and surfactant that is often found in soap, shampoo, toothpaste, and other products. This product is safe to use. Surfactants are Sodium Lauryl Ester Sulfate (SLES), Sodium Dodecyl Sulfate (SDS).

Some components of the requirements for making a floor cleaning product include surfactants, builders, solvents, antimicrobials and other additives (including dyes, fragrances and preservatives) (Gary et al., 1992). Surfactants are chemical compounds that act as surface active agents that function to reduce surface tension. (Oktaviani, 2011). Surfactants play a role in producing foam which is the main function of cleaning fluids. The concentration of surfactants in floor cleaning fluids ranges from 0-12% (Gary et al., 1992). The second ingredient, namely builder, plays a role in maintaining pH and eliminating water hardness so that it can maintain foam stability. The builder concentration ranges from 0-10% (Gary et al., 1992). Solvents are a medium for dissolving oil and fat components in the preparation, while antimicrobials are materials that function to kill bacteria and fungi on the surface. Solvent levels range from 0-5% (Gary et al., 1992). Colorants, fragrances and preservatives are additional ingredients used to enhance the performance of floor cleaning fluids.

Fragrance Chemicals

Fragrance chemicals are found in clothing fresheners, air fresheners, deodorants, perfumes, and others. Fragrances that are sprayed from pressurized bottles generally use a propelling agent called chlorofluorocarbon (CFC) / Freon, to help release the perfume from the bottle. Freon chlorofluorocarbon (CFC) is an organic compound containing carbon, chlorine, and fluorine, produced as a volatile derivative of methane and ethane. A common derivative of hydrochlorofluorocarbons (HCFC), which contains hydrogen. The most common name used is dichloro difluoromethane (R-12 or Freon-12). CFCs have been

widely used as refrigerants, propellants, and solvents. Freon is generally colorless, odorless, non-toxic, non-rusting, non-flammable, and has non-reactive chemical properties.

Non-chemical odor removers consist of baking soda which functions to neutralize unpleasant odors in trash cans, water disposal and carpets; orange slices which function to eliminate unpleasant odors; coffee beans that function as an absorber of unpleasant aromas in the cupboard / refrigerator' fresh and fragrant flowers.

The tools used in making floor cleaner are measuring cups, buckets, stirrers. While the materials used in making floor cleaners are

1. Water as much as 15 liters
2. Cellosize as much as 150 grams
3. Sanisol (BKC) As much as 50 ml
4. Perfume/aroma essence as much as 150 ml
5. NP 10 as much as ½ liter

The materials for making floor cleaners have been provided by the community service team and the results of making floor cleaners will be taken home by the participants.

Packaging

Kotler and Armstrong (2012) define packaging involves designing and producing the container or wrapper for a product, which means that the packaging process involves designing and producing activities, the main function of the packaging itself is to protect the product so that the product quality is maintained. However, now packaging has become a fairly important factor as a marketing tool (Rangkuti, 2010). Well-designed packaging can build brand equity and drive sales.

According to Louw and Kimber (2007), packaging and packaging labeling have several purposes, namely physical protection, namely protecting objects from temperature, vibration, shock, pressure and so on. Then barrier protection, namely protecting from oxygen, water vapor, dust, and so on. Containment or agglomeration, namely small objects are usually grouped together in one package for transportation and handling efficiency. Information transmission, namely information on how to use transportation, recycle, or dispose of product packages that are often found on the packaging. Reducing theft, namely packaging that cannot be resealed or will be physically damaged (showing signs of opening) is very helpful in preventing theft. Convenience is a feature that adds convenience in distribution, handling, selling, displaying, opening, re-closing, using and reusing. Marketing is packaging and labeling can be used by marketers to encourage potential buyers to buy products.

1. In terms of business management, especially in terms of determining the cost of goods sold. Participants are taught about the concept of calculating the cost of goods sold which includes all cost components, such as raw material costs, labor, factory overhead costs, production equipment, to a reasonable profit margin. With this understanding, the SMART RPTRA (Child-Friendly Integrated Public Space) Managers and RW (Residents' Association) Managers are expected to be able to calculate the correct cost of goods sold, so that later they can determine the optimal selling price, and profit or gain will also be obtained, then the goal of increasing income and revenue for households can automatically be achieved.

2. Overall, the Training on Determining the Cost of Goods Sold in Making Floor Cleaning Liquid Products as a Means of Cultivating Entrepreneurial Spirits in the SMART RPTRA (Child-Friendly Integrated Public Space) Managers and RW (Residents' Association) Managers of Meruya Utara Village, Kembangan District, Jakarta was considered successful. This success can be seen from the satisfaction of the participants after participating in the activity. training and during the activity no participants went home, the participants attended the training until it was finished.

5. CONCLUSION

From the results of this community service activity, several things can be concluded, namely: 1. Entrepreneurship is an alternative for mothers in the North Meruya area to increase income with small capital, namely by making floor cleaning fluid. 2. Determining the cost of goods sold of a product produced is very important, where it can determine the decision-making for determining the optimal selling price so that it is hoped that the objectives of implementing this community service can be achieved. This community service activity has provided good knowledge and understanding to 80% of participants, while 20% are still quite good because they have not been able to foster an entrepreneurial spirit so they still need assistance.

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