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Knowledge Analysis Regarding the Presence and Hazards of Household Hazardous Waste for Teenagers

Mini Ambarwati Kusuma Dewi^{a*}, Muhammad Fadhil Ramadhan^a, Muthi'ah Dzakiyyatul Fauziyyah^a, Satria Aji Prambudi^a, and Sisca Indriyani^a

^a*Environmental Science, Faculty of Mathematics and Natural Science, Sebelas Maret University, Indonesia*

ABSTRACT. The waste problem is an important issue for the government to protect its people. Types of domestic solid waste that are harmful to the environment and toxic to humans are categorized in Hazardous and Toxic Household Waste. Hazardous and toxic material waste is all forms of waste from anthropogenic activities in the form of waste containing hazardous and toxic materials so that directly or indirectly can damage the environment, interfere with health, and threaten the survival of humans and organisms. In household activities in every urban area, people in Indonesia generally dispose of hazardous and toxic waste (B3) mixed with their household waste. Therefore, this research was conducted with the aim of increasing public awareness, especially the younger generation, in managing domestic B3 waste effectively and efficiently. The research method used in this study is descriptive and qualitative analysis methods. The data needed are secondary data and primary data. Secondary data is obtained from literature studies on B3 waste which are available online. While the primary data obtained through interviews and questionnaires. The qualitative descriptive method used in this study serves to translate questionnaire data from respondents to obtain information related to knowledge about the dangers of B3 waste. Based on the results of the study, it is known that there are 12 respondents aged 18 years, 29 people aged 19 years, 20 years old there are 14 people, and respondents with an age range of 22-24 years as many as 5 people. The results of the questionnaire showed that there were more girls than boys with a ratio of 4:1, with 48 girls and 12 boys. Overall, from 60 adolescent respondents, the results obtained from questionnaire data, that most of them only know the dangers of B3 waste but do not have the effort to handle it properly. This is due to the lack of socialization, lack of awareness of environmental damage, and the widespread dissemination of education about the dangers of B3 waste.

Keywords: hazardous, household, teenagers, waste.

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1. Introduction

The problem of waste is an important issue for the government to protect its people. Types of domestic solid waste that are harmful to the environment and toxic to humans are categorized in Household Hazardous and Toxic Waste (SB3-RT) (Iswanto et al, 2016). People in general still have low awareness and knowledge about hazardous and toxic waste materials found in households. Various regulations have been made to regulate and control B3 waste originating from industry and households. Every day, households produce residues or waste from anthropogenic activities from products containing toxic and hazardous materials where the products usually do not include the active ingredients used in them (Ichtiakhiri and Sudarmaji, 2015). In household activities in every urban area, people in Indonesia generally dispose of hazardous and toxic materials (B3) in a mixed manner with garbage his house. The presence of this domestic or household B3 waste in the landfill municipal waste is relatively very small, not more than 2%, but with a disposal pattern end of the current waste in Indonesia, namely by the method of final disposal in a field allow the accumulation of B3 waste which

when it reaches a certain concentration will pose a threat to the environment around landfills. Danger what it causes is the entry of materials classified as B3 into the underground water flow or direct contact with humans and other living things. The greatest level of danger is of course accepted by recyclers and officers garbage generally used to work without protective equipment. B3 waste management at the community level, from sorting techniques, collection to disposal is not optimal. There is still a lot of unknown domestic B3 waste management at the household scale. Lack of socialization regarding the handling of B3 waste. This domestic situation can be seen from the fact that there is still a lot of garbage piled up at the TPS locations close to housing. Should be the correct handling of waste in the household must be known together about the grouping of waste. Because it takes effort to raise public awareness in managing domestic B3 waste effectively and efficient.

Hazardous and toxic waste is all forms of waste from anthropogenic activities in the form of waste containing hazardous and toxic materials so that it can directly or indirectly damage the environment, interfere with health, and threaten the survival of humans and other organisms so that special management is needed in order to minimize impact

*Corresponding author: ambarkusumaaa@gmail.com

(Anggraini et al., 2015). B3 waste has explosive properties, is easily oxidized, contains toxins, is corrosive, and causes health symptoms such as carcinogenic. Examples of items containing B3 waste are batteries, laundry detergent, hair spray, and insect repellent (Putra et al., 2019). The effects of B3 waste on health include breathing, this is because high concentrations of vapor will be dangerous if inhaled. High concentrations can irritate the respiratory tract (nose, throat and lungs). Causes nausea, vomiting, headache, dizziness, loss of coordination, taste and other nervous disorders. Exposure to acute concentrations can cause nervous depression, fainting, coma and/or death. The effects of B3 waste can also cause irritation to the eyes and skin. Effects on the skin due to B3 waste causing dermatitis or seeping into the skin and causing effects such as breathing, in addition to other health effects, namely digestion due to the concentration of hazardous and toxic waste or B3 in the digestive tract which is dangerous if swallowed, causes nausea, vomiting and other nervous disorders. . If the product is swallowed it can cause lung cancer or death. Medical conditions aggravated by exposure such as disorders of the heart, liver, kidneys, respiratory tract (nose, throat, lungs), central nervous system, eyes, skin if exposure concentrations are high. The health effects of hazardous waste such as heavy metals containing lead can cause lead poisoning, neurotoxicity, mental disorders, brain, kidney and liver damage.

According to Government Regulation Number 85 of 1999, Waste is the remainder of a business or activity. This waste can be in the form of solid, liquid or gas, including B3 or B3 which is not. The thing that is of concern to waste is that the impact of the waste is good which directly or indirectly. So that the waste is grouped into several types based on their impact or nature, one of which is the so-called Hazardous and Toxic Waste. Management of hazardous and toxic waste is regulated in Government Regulation Number 101 of 2014 concerning Management of Hazardous and Toxic Waste. Waste concern is an important concern government as a form of protection for the people. Various regulations both at the level international to sub-national organizations were created to regulate and control B3 waste from all walks of life in society. Not much people who realize that household waste also contains many types of B3 waste, of course, this household waste has an amount that is no less large as well industrial waste. Every day, the household produces residual waste from the work household activities from products containing toxic and hazardous materials and sometimes manufacturers do not list the active ingredients used in their products. Insecticide or pesticide products, porcelain, glass, floor and anti-corrosion cleaners are some examples of household products that contain B3. This household B3 waste it is easier to harm humans in the house itself, such as materials included. Types of B3 that are dumped on the ground in the yard of the house can contaminate underground water or plants growing near the house. The problem of B3 waste environmental pollution has been in the spotlight of all countries, including Indonesia. Indonesia's participation in the 1989 Basel convention is about supervision international movement of B-3 waste, and Indonesia's participation in the Earth Summit in Rio de Janeiro, shows their concern for environmental problems. In implement the contents of the Basel convention and the Earth Summit, a legal instrument is made in Indonesia specifically regulates waste problems in Indonesia, the law is Regulation President Number 101 of 2014 and Presidential Regulation Number 85 of 1999. In Indonesia, there are about 43 types of B3 waste, most of which consist of chemical waste (Tangim et al., 2021). The amount of hazardous and toxic waste in the

household is relatively small, but the cumulative impact of B3 waste in the long term will affect public health. The greatest potential hazard arising from household B3 waste is received by garbage collectors and recyclers who work without personal protective equipment. Hazardous waste that can damage the environment or reduce environmental quality if thrown to the ground will damage the soil and water in it, soil fertility is damaged so it cannot be planted, threatens agricultural production and if thrown into water (river or lake) will polluted water cannot be used and living water creatures die.

Sources and types of household B3 waste are grouped by households based on the following activities:

- a) Repair and transformation of waste, including adhesives, glues, cement, glossy coatings on roof tiles, solvents as paint base materials, thinners and paint removers.
- b) Dirt cleaning agents, including oven cleaners, cleaners related to infectious agents, polishing agents (shoe polishes, polishes), chimney cleaners and cleaning solutions.
- c) Materials classified as pesticides, including insecticides, fungicides, rodenticides, wood preservatives, moss removal chemicals, herbicides and fertilizers containing pesticides.
- d) Related waste. with automotive, including: batteries (batteries), solvents, gasoline, and materials. diesel fuel.
- e) Waste from hobbies and recreational activities, including paint, thinner, photo chemical solvents, swimming pool chemicals, glue (adhesive), cement, ink, dyes, and household batteries.
- f) Other household waste, such as ammunition, incandescent lamps and items identified as having moderate risk.

The socialization program regarding the introduction of B3 waste can be carried out as an initial step to increase household B3 waste knowledge so that it can minimize the impact or risk of harm caused by household B3 waste. The socialization should be aimed at the community, especially the younger generation who have a critical and creative mindset so that they can produce good output and can increase public awareness so as not to dispose of B3 waste carelessly and manage household B3 waste.

Based on research conducted by Yenni (2018), the results obtained that the percentage of public knowledge about household B3 waste is still low due to the lack of socialization about household B3 waste. From the results of the questionnaire data obtained, it was stated that none of the respondents received socialization regarding household B3 waste. Research from Muljani (2021), stated that the socialization of the introduction of household B3 waste can increase public understanding and knowledge regarding the categories of types of B3 waste and how to properly handle and dispose of B3 waste so that the risk of harm can be minimized. According to Sidik's research (2018), it is important to protect the environment by managing household B3 waste to prevent direct harmful impacts on the community. Based on the socialization carried out in the study, the public understands basic knowledge about B3 waste that exists in everyday life. Socialization regarding the introduction and management of hazardous and toxic waste materials or stated that it is important to protect the environment by managing household B3 waste to prevent direct harmful impacts on the community. Based on the socialization carried out in the study, the public understands basic knowledge about B3 waste that exists in

everyday life. Socialization regarding the introduction and management of hazardous and toxic waste materials or stated that it is important to protect the environment by managing household B3 waste to prevent direct harmful impacts on the community. Based on the socialization carried out in the study, the public understands basic knowledge about B3 waste that exists in everyday life.

Socialization regarding the introduction and management of hazardous and toxic waste materials or B3 is currently very much needed considering the risk of danger that can arise from hazardous and toxic waste if it is disposed of carelessly and not managed with proper procedures. Therefore, this study aims to increase the knowledge of adolescents about the existence and dangers of household B3 waste.

2. Materials and Methods

A. Data retrieval

In this study, the data used are primary data and secondary data. Primary data or raw data is data obtained from the data collection process in the field at that time.

1. Primary data

The primary data in this study came from the results of the distribution of questionnaires or questionnaires, and some came from the results of interviews with people aged around 17-21 years. The target speakers are not specific to a particular area, only teenagers. The data taken were the knowledge of the youth regarding the understanding of B3 waste, household waste disposal systems, how to treat B3 waste, the dangers of B3 waste, the types of B3 waste in the home, the importance of understanding B3 waste in adolescents, dissemination of B3 waste socialization, and understanding related to B3 waste management. Then the questionnaire data or questionnaire on the knowledge of the dangers of household B3 waste was obtained through the distribution of online questionnaires or questionnaires through social media such as WhatsApp and Twitter.

2. Secondary Data

For secondary data, it is taken from various data or information that already exists and is used to complement the primary data. The secondary data in this study were obtained from studies or literature studies on B3 waste that are available online.

B. Data processing

The preparation of the data was selected based on important and unbiased data. Then for interviews and observations with questionnaires, the respondent's information and personal impressions were separated. For data that has been taken previously, grouped according to the problem of research objectives and hypotheses. Finally, the conclusion data is taken from the results of the inductive thinking process from all the results of the study.

C. Data analysis

The data analysis method used is descriptive and qualitative analysis methods. This research was conducted

by counting the number of respondents who knew the dangers of B3 waste in their homes, as well as the causes of these conditions. A survey was conducted using a questionnaire/deep interview to determine the level of knowledge on the dangers of B3 waste.

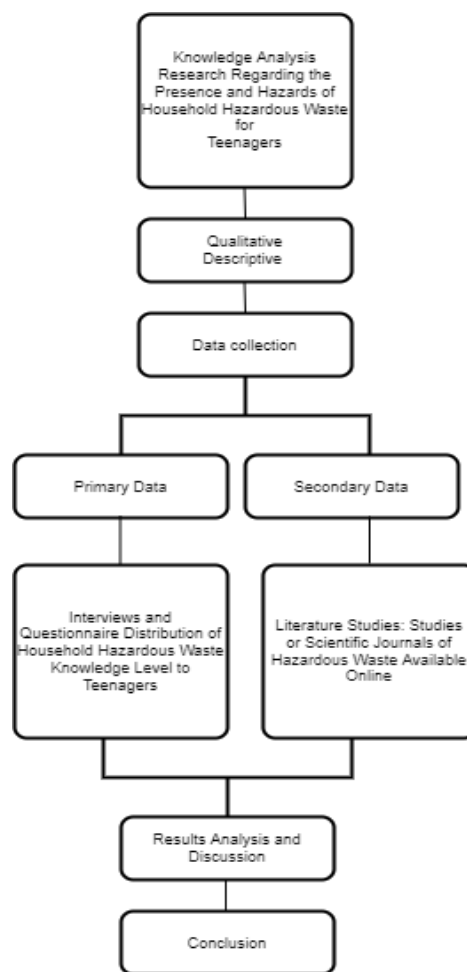


Fig.1 Flowchart

3. Result and Discussion

Table 1. Respondents Identity

Criteria	Information	Amount	Percentage
Age	18 years	12	20%
	19 years old	29	48.3%
	20 years	14	23.3%
	22-24 years old	5	8.3%
Gender	Man	12	20%
	Woman	48	80%
Residence	Central Java	48	80%
	Banten	7	11.7%
	West Java	1	1.7%
	East Kalimantan	1	1.7%
	East Java	3	5%

To find out how far the youth's knowledge of B3 waste is, the author distributed questionnaires to 60 teenagers with an age limit of 18-24 years. In this study, it is known that there are 12 respondents aged 18 years, 29 people aged 19 years, 20 years old there are 14 people, and respondents with an age range of 22-24 years are 5 people. The results of the questionnaire showed that there were more female adolescents than male adolescents with a ratio of 4:1, with 48 female adolescents and 12 male adolescents. The criteria for respondents are not limited by region so that there are respondents outside the Central Java region, even outside Java. Although not limited to domicile, most of the respondents still live in Central Java.

Table 2. Identification of B3 waste

No.	Question	Information	Amount	Percentage
1	Knowing B3 waste	Knowing	41	68%
		Do not know	19	32%
2	Knowing the source of B3 waste	Knowing	60	100%
		Do not know	0	0%
3	Knowing examples of B3 waste	Knowing	53	88%
		Do not know	7	12%

Of the 60 respondents, 41 of them know what B3 waste is and the rest do not know of B3 waste. Teenagers who did not know about the existence of B3 waste all came from the Central Java area, namely Surakarta City and Sukoharjo Regency. One of the factors of ignorance is the absence of socialization carried out. Some of those who don't know what B3 waste is, know the source of B3 waste at a glance from social media and the internet. Social media can be used as a means of socializing to the general public because of its large reach. This can be seen from the research conducted by Widarini who uses social media Instagram to disseminate information about improving reproductive health. Instagram was chosen because it is one of the social media that is widely used by the Indonesian people in addition to Youtube, Facebook, and WhatsApp (Widarini, 2019). The internet is one of the technologies that can make it easier for humans to access various references regarding information in various fields so that it can be used as another means of learning (Sasmita, 2020).

Table 3. Source of B3 Waste

Information	Amount	Percentage
Industry	45	34%
Household	31	23%
Tourist	26	19%
Hospital	32	24%

However, people who do not know what B3 waste is, know where the source of B3 waste is coming from. This is obtained through various media, such as social media, internet, schools, and webinars. Most of them know that industrial activities produce B3 waste, followed by hospitals, households, and tourism. As is known, industrial activities use chemicals in production activities since the industrial revolution and are increasing until now (Kurniawan, 2019). Because of this, industrial activities are closely related to the presence of B3

waste. From various cases, it has also been seen that industrial activities throw a lot of waste into the environment which causes environmental pollution, especially rivers.

Of all respondents who know the source of B3 waste, not all know what are examples of B3 waste. This can be seen from 7 teenagers who do not know what examples are included in B3 waste. Some teenagers think that B3 waste can only damage the environment. whereas, B3 waste is also capable of damaging human health, so that some examples of B3 waste are not considered as B3 waste, such as perfume, glass and floor cleaners, and clothes bleach. Without realizing it, these materials will more easily harm the occupants of the house because they do not know how to dispose and process them. When these materials are disposed of carelessly, they can cause underground water or plants around the house to become contaminated and there is a risk of human health and safety problems (Prasetyaningrum et al., 2017).

Table 4. Identification of Household B3 Waste Management

No	Question	Information	Amount	Percentage
1	Knowing examples of household B3 waste	Knowing	48	80%
		Do not know	12	20%
2	Knowing how to dispose of household B3 waste	Knowing	43	72%
		Do not know	17	28%
3	Knowing how to manage B3 waste	Knowing	22	37%
		Do not know	38	63%
4	Knowing how to manage household B3 waste	Knowing	23	38%
		Do not know	37	62%

It is not uncommon for people to hear things like B3 waste or toxic waste, but B3 waste is not only sourced from factories or hospitals but also from households, which can also produce B3 waste. Of the 60 respondents, 48 people understand and know examples of B3 waste, examples of B3 waste or waste generated in households include waste from batteries, electric lights, electronics, pesticide packaging, clothes bleach, floor cleaners, paint, pressurized cans. (aerosols), fuel packaging, residual drugs (pharmaceuticals), mercury thermometers and syringes (Iswanto et al., 2016). Meanwhile, the remaining 12 people did not know what examples of B3 waste were in the household.

To maintain the health of both the environment and living creatures, hazardous waste in the household needs to be disposed of in accordance with existing regulations. Because B3 waste is different from other wastes, where B3 waste is more dangerous than ordinary waste. Of the 60 people, 43 of them can know how to properly dispose of B3 waste or waste, the remaining 17 people still don't understand how to properly dispose of household B3 waste so they still like to mix B3 waste with garbage or other waste.

Hazardous waste is the result of waste containing substances, energy, and/or other components which due to their nature, concentration or amount, either directly or

indirectly, can pollute or damage the environment, or endanger the environment, health and human survival. and other living things (Sitompul., 2021). Because B3 waste can harm living things and the environment, it is necessary to manage the B3 waste. However, not everyone understands how to properly and correctly manage B3 waste. Of the 60 respondents, only 22 people know how to manage B3 waste while the remaining 38 people don't know the process of how to manage B3 waste properly and correctly.

Data previously explained that there are 22 people out of 60 people who know the process of managing B3 waste and the rest don't know it, but there is an increase when asked how to manage B3 waste originating from households, even though there is only an increase of 1 person that can affect in moving public awareness of The importance of managing household B3 waste, because with the management of household B3 waste, it can build human health and the surrounding environment (Prihartanto., 2020). From the results of the respondents, 23 people know how to manage B3 waste and 37 others still don't know how to manage B3 waste.

To carry out socialization activities regarding household B3 waste to the community, it can be done by applying several methods, namely:

- a) Lectures and Q&A
This method is used to provide material debriefing regarding the importance of environmental sustainability and waste segregation, starting with the objectives, benefits, and several important related issues, followed by a question and answer session. This activity aims to provide motivation and encourage public awareness of the management of household waste.
- b) Focus Discussion Group (FDG)
This method can be done through brainstorming the problems faced by the community related to waste management, especially B3 waste, sharing solution ideas, and discussing them so that solutions can be formulated.
- c) Workshop (Independent waste sorting management practice)
The workshop method is used as the final stage of independent waste sorting training, namely in the form of direct practice with the assistance of instructors to sort waste, especially B3 waste independently by the community to further improve community skills in independent waste sorting. The training participants are divided into groups of five to ten people. Each group was asked to practice how to sort organic and non-organic waste. To solve the problems that have been formulated above, the alternative problem solving chosen is in the form of counseling and training on independent waste sorting.

The training and materials provided to the community include:

- a) The importance of concern for environmental sustainability.
- b) Awareness of household waste management.
- c) The dangers of littering, and types of waste and training on sorting.

To find out the initial understanding of the participants in the socialization of household B3 waste, this was done through a question and answer method. Before provision of counseling materials, first held question and answer with the community related to some counseling and training materials such as the importance of caring for environmental sustainability,

awareness household waste management and the dangers of disposing littering, household waste management, as well as the types of waste and how to sort it. Thing this is done to find out the initial understanding household B3 waste socialization participants.

According to Putra et.al. (2013) education level has a positive effect on family attitudes towards household waste management. The higher the level of education, the better the attitude towards waste management and the higher the family income, the higher the attitude towards managing household waste. The factor of the condition of the community in the level of education is very influential on a person's participation in managing waste. A person's level of education affects his level of participation in an activity. The higher a person's education, the easier it is to provide information and coaching. Supervision of B3 waste management is increasingly difficult because the community has minimal knowledge related to B3 waste. People are not able recognize the appearance of B3 and waste negative impact. If there is a violation in the management of B3 waste in the environment closest, they didn't even notice. There are even people who don't realized that they had done violation. They hoard B3 waste just like that on the road, rice fields, side rivers and for house foundations.

B3 waste that is transported from residents' homes must be provided with a storage area so that it is managed properly so that the purpose of B3 waste management runs according to its purpose, namely not polluting the surrounding environment. Determination of the size of the container in B3 storage is known from the generation of B3 waste, the number of residents, and the frequency of B3 waste collection. The containers in the TPST are distinguished according to the type of waste, including plastic waste (recyclable and not), metal cans, others (infectious and glass), battery waste, and lamp waste. The design of the container is a container with a capacity of 7 units of 2000 liters and 11 units of 6000 liters with different types including plastic, glass, lamp, battery, infectious, and flammable metal cans).

Household B3 waste that has been collected in the B3 Waste Storage will then go to the process of reducing waste generation that is safe for the environment, namely the recycling process. The recycling process in this plan is carried out by third party services. The third party in this case has 2 roles, namely as a beneficiary and a third party as a collector. B3 waste that is handed over to third-party users includes B3 waste with plastic characteristics, metal cans, and lamps. B3 waste that cannot be recycled will be mixed with B3 waste with biologically infectious characteristics and glass waste from used medicine bottles to go through a collection process by a third party collector as a waste reduction process activity.

Domestic B3 waste management requires the development of an integrated system. An important factor is the active participation of the community. In the management of domestic B3 waste, strategic groups that require an active role are producers of B3 goods and/or materials, the consumer community as waste generators, municipal waste managers, and recyclers. The active role of higher education institutions is needed as a strategic institution that is capable of carrying out system support functions. Support is needed, especially in efforts to disseminate knowledge and information as well as in the development of studies and or research on appropriate technology in efforts to manage domestic B3 waste.

Domestic B3 waste management is basically aimed at managing domestic B3 waste that enters municipal solid waste generation, therefore in its operation it requires

sorting/containing, collecting, transporting, temporary storage and processing.

- a) Sorting and storage is the activity of sorting B3 waste from organic and inorganic waste by the community in their homes, then putting it into plastic bags or other different containers, before being transported by collecting officers.
- b) Collection is the activity of collecting domestic B3 waste from homes to domestic B3 waste storage containers in special shelters.
- c) Transportation is the activity of transporting waste from a special shelter to a temporary storage place.
- d) Temporary storage is the activity of storing B3 waste classified based on its type for a while before being further managed by the authorized agency or producer of B3 waste.

The participation of the entire community in the planning area for the household B3 waste management system will determine the success of the system. If government support, in this case DKP and district or city BLH, is not supported by the surrounding community, the system will not run optimally. Aspects of community participation in handling domestic B3 waste

- e) The consumer community, as the use of materials and or goods, creates the presence of domestic B3 waste in the landfill.
- f) Manufacturers, manufacturers of products containing toxic hazardous materials.
- g) City sanitation management agency, which has been functioning as urban waste manager.
- h) Community recyclers, ranging from scavengers to the city level or even factories.

The participation of the entire community in the planning area for the household B3 waste management system will determine the success of the system. If government support, in this case DKP and district or city BLH, is not supported by the surrounding community, the system will not run optimally. The following are some of the roles of the community in waste management:

- a) Community Participation in Operations
- b) Household B3 waste
- c) Community Participation in Institutions
- d) Community Participation in Legal Aspect

B3 waste management consists of storage, collection, transportation, utilization, processing and landfilling. B3 waste generated in households includes: batteries, electric lights, electronics, pesticide packaging, clothes bleach, floor cleaners, paint, pressurized cans (aerosol), fuel packaging, drug residue (pharmaceuticals), mercury thermometers and needles inject.

- a) Household products packaged in cans or spray. Packaging in the form of canned tubes generally has a propellant when pressed there are chemicals that are harmful to the body. If exposed to heat, the can can explode and injure anyone in the vicinity. Examples are mosquito repellent packaging, hairspray, aerosol and so on. It is strongly advised not to mix it with general garbage, or put it in the dropbox.
- b) Battery Batteries contain several types of heavy metals such as mercury, nickel, lead, cadmium, and lithium which are very harmful to humans. For safety, used batteries should be separated from other waste and covered with clear tape at both ends. Store in a special bag that is not conductive and put in a special dropbox B3.

- c) Bulbs and neon

Used bulbs contain at least 5 milligrams of mercury. These compounds are very dangerous and can be fatal if accumulated in the body. In addition to lights, thermometers that measure body temperature also contain around 500 milligrams of mercury. It needs to be separated from other trash. Packed in bags and put in a dropbox for B3 waste.

Wardana et al. (2015) has carried out a household B3 waste management plan in the Semarang area through 2 scenarios. In the first scenario, it focuses on separating the types of waste at the household level into 3, namely non-B3 organic, non-B3 inorganic, and B3 organic and inorganic B3. After the separation, the community is obliged to take the waste to a waste management site for further separation. B3 waste that can still be used will be recycled, while waste that cannot be used is then handed over to a third party for further delivery to the B3 waste processing industry. In the second scenario, the separation of waste types is carried out in an integrated waste management site, so that at the household level there is no need to separate waste. After the separation is carried out at the integrated waste processing site, further separation is carried out at the integrated B3 waste processing site in the sub-district sector. B3 waste that can still be used will be recycled, while waste that cannot be utilized is sent to the B3 waste processing industry through a service company from a third party. Example of Household B3 waste.



Fig.2 Mosquito Repellent Container



Fig.3 Used Battery



Fig.4 Perfume Container



Fig.5 Soap Containers



Fig.6 Cosmetic Containers



Fig.7 Perfume Container

4. Conclusion

Most teenagers know the dangers of B3 waste but do not have the effort to handle it properly. They tend to only know the meaning of B3 waste but do not know how to manage it, and also do not know the correct disposal site. This is due to the lack of socialization that they get, lack of awareness of environmental damage, and the spread of knowledge about the dangers of B3 waste that is not yet widespread. Of all respondents who know the source of B3 waste, not all know what examples of B3 waste are, some are even unaware of the B3 waste in their homes. Through the questions that have been asked, respondents and resource persons become more aware of B3 waste.

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