Ambonese Arrack (Sopi): Processing and Its Functions in Moluccan Culture

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Abstract
Sopi is a beverage used in various traditional and religious ceremonies in Moluccas. The raw materials and processing techniques of this fermented product are very diverse. The processing of sopi has been done by the ancestors of Moluccan for a long time, but information about processing this product is very limited. This research aimed to describe the techniques of sopi processing and its functions in Moluccan culture. This study was descriptive qualitative research design. Data was collected from direct observations in five villages in difference islands, i.e. Mahia (Ambon island), Ouw (Saparua island), Sifluru (Ceram island), Wangel (Aru islands), and Yawuru (Kisar island). The processing of sopi were diverse in Moluccas. The raw materials used in the processing of sopi were saps from coconut, palm sugar, and coli trees, while the equipment of distillation were made of bamboo, plastic and pipe. Sopi was used in various traditional and religious ceremonies such as cuci negeri, panas pela, sumpah sopi and siram sopi. In general this traditional beverage is a symbol of solidarity in the Moluccans tradition. This research was expected to conserve of sopi processing culture to support the tourism in Moluccas.

Keywords
Ambonese arrack; distillation, palm sap; pela relationship; sopi processing

INTRODUCTION
Ambonese Arak (locally named sopi) is a traditional fermented beverage of the people in Moluccas. The term of sopi comes from Dutch language, Zoopje which means liquid alcohol. Sopi processing is the local wisdom of the Moluccas people. Local wisdom is the whole knowledge, belief, understanding and practice of traditional ethics in society (Sumarmi, 2015).

In social perspective, sopi is a unifying drink for community groups who are experiencing social conflict. Social conflict is a conflict between community members that is comprehensive in life. The social conflict can also be interpreted as social interaction where one party tries to get rid of or destroy the other party (Aisya 2014). People who are in conflict are usually reconciled by drinking sopi together. Many studies have been conducted on sopi, but most of them only examine the role of this traditional drink in socio-cultural life, the economy, and its impact on human health (Wenno and Akihary 2010; Wael and Mahulette 2013; Ririhena et al. 2015). Research on sopi processing and
its function in several areas that represent Moluccas area has never been done. This is considered a novelty of this study.

*Sopi* has a specific aroma and colorless. This beverage is a symbol of solidarity in the traditions of the Moluccans. *Sopi* is used in various traditional and religious rituals (Radiena and Leha 2015). The consumption of *sopi* is done by people almost every day without social barriers and it’s always available in the market. The sale of *sopi* can significantly increase family income. Producers of *sopi* can build permanent houses and finance their children’s education to college (Riri et al. 2015). This beverage is also known in East Nusa Tenggara (Mulu et al. 2020).

In some villages in Moluccas, *sopi* is often added by certain animals or plants that have health benefits. The animal that added in *sopi* is deer fetus. The addition of animals in beverage is also found in *cap tikus*, a fermented beverage from Minahasa, Celebes. This beverage is believed to cure various diseases, including colds and impotence (Bartels 2017). *Sopi* is also buried in the ground to produce a specific taste. The government of Indonesia through Ministry of Education and Cultural establishes *sopi* as an intangible cultural heritage for the traditional crafts category from Moluccas to preserve these fermented beverage since 2016.

Processing of *sopi* uses sap (locally named *sageru*) from the palmae trees, such as coconut (*Cocos nucifera* L), sugar palm (*Arenga pinnata* Merr), and koli palm (*Barassus sundaicus* Becc) (Bartels 2017). Processing *sopi* using the sap from *koli* palm was only done by the people in Kisar island, Southwest Moluccas (Jesaja and Tumiwa 2013). Sap is a sweet liquid, oyster-white and translucent. This liquid is tapped from unopened spandix of palm tree. Tapping of sap usually takes place in the morning and evening called *tifar* (Watuseka 1992). The tapped sap was then put in a closed container, so that it can undergo fermentation. The fermentation of sap is usually no more than a day. During fermentation the yeast and bacteria convert the sap into alcohol and acid. The dominant yeast in *sopi* fermentation are *Pichia* and *Kloeckera* (Mahulette and Astuti 2020). If fermentation occur more than a day, the sap will be converted to vinegar called *cuka sageru* (vinegar). *Sopi* processing was done by fractional distillation. *Sopi* produced at the beginning of distillation has a high alcohol content, so it is called *sopi kepala* (the best *sopi*) (Nailoa 2004).

The Moluccas Islands, which are consist of more than a thousand islands in eastern Indonesia. These islands have a lot of local wisdoms that must be preserved for the next generation. One of the well-known local wisdom is *sopi* processing. Large areas and separated from one another cause this tradition is very diverse in Moluccas. The difference of *sopi* processing includes the raw materials and devices used to distill this traditional beverage. The processing of *sopi* has been done by the ancestors of the community for a long time, but information about processing this fermented product is very limited. This study aims to describe the processing techniques of *sopi* by people and its functions in Moluccans culture. The results of this research were expected to make *sopi* as a culinary to support tourism in the Moluccas Province.

**METHODS**

This study used the descriptive qualitative research design to describe the methods of processing and functions of *sopi* in Moluccas. Data was collected from direct observations by volunteers in several villages only in Moluccas Province, i.e. Mahia (Ambon island), Ouw (Saparua island), Sifluru (Ceram island), Wangel (Aru islands), and Yawuru (Kisar island) (Figure 1). The information was also collected from informants through interviews using a questionnaire. Determination of informants purposively who was considered to know the most about the processing of *sopi*. Three informants were interviewed in each village so that the total number of informants was 15 people. The questionnaire contains questions about the processing and benefits of *sopi*, including raw materials, distillation equipment, additives, storage containers and utilizati-
The answers of informants were supported by documentation of the processing of the *sopi*. The results of interviews and documentation from each village were collected for analysis. The results of the analysis were then compared with the geographical and cultural differences of each village and supported by a literature review.

The use of these leaves aims to prevent the *sopi* vapor coming out from the pipe and make *sopi* clearer. Spear grass leaves are also function to produce a special taste in *sopi*. The upright pipe was then connected by a sloping pipe as cooling channel (condenser). The end of sloping pipe also was clogged with spear grass leaves and small bamboo to flow *sopi* to a bottle as a container. At the end of the bamboo was placed a small stick, so that the *sopi* drips right in the mouth of jerry can. The heating device used to boil sap is a stove. *Sopi* is usually sold in the market using jerry can (Figure 2).

**RESULTS AND DISCUSSION**

**Ambon Island**

The mountainous villages are the centers of *sopi* processing in Ambon island. In the Mahia village, the people generally processes *sopi* using coconut sap. The sap was tapped and collected in a jerry can (previously use the skin of calabash fruit (*Aegle marmelos* L.). In the jerry can was added *husor* root (locally named *obat sageru*), a kind of shrub plant, so that the sap has bitter and does not thicken. People called this liquid as *sage-ru manis-pahit* (sweet- bitterness sap) and it’s can be consumed immediately. If the sap has sweet and thickness, when cooked it will be coconut sugar. Distillation of *sopi* was done every two or three days depending on the number of sap that was obtained. In the rainy season, the sap is rather little, so that people wait more from 3 days to distilling *sopi*.

In distillation process, the sap has been tapped was then collected in a gas cylinder as container. The container was connected by an upright plastic pipe as an evaporation channel whose end was clogged with spear grass (*Imperata cylindrica* Raeusch) leaves. Distillation of *sopi* using plastic pipes seen in the last few years in Mahia. The close distance of this village from the Ambon city causes the people choose to use more practical equipment. Previously the people used bamboo as a distillation channel. *Sopi* distilled using bamboo has a specific taste and it’s safer to consume than using plastic pipes. The content of polyphenyl chloride in a pipe can trigger cancer disease causes some people do not like consume *sopi* that is processed with this equipment.

*Sopi* is rarely used in traditional rituals in Mahia. This beverage is more widely used as a special drinks in family or friends gat-
herings. In Hukurila village (another village in Ambon island), sopi is used as a beverage in cucu negeri (village wash) ritual that is cleaning up all buildings, especially meeting house (locally named beileo) to avoid catastrophe, crop failure, and disease outbreaks. Sopi is a symbol of relationship between the people and ancestors. The people believe that the ancestors also participated in the ritual. They are required to drink sopi as traditional beverage (Wattimena 2014).

Ceram Island
The center of sopi processing in Ceram island is located on Waipia district. The community of Waipia are the people who have been relocated from the Teon, Nila and Serua (TNS) islands in the Southwest Moluccas by the Moluccas Government in 1978 (Engelenhoven 2013). Before they were relocated, the TNS people had processed sopi as a drink for traditional ceremonies. Sopi is also function as spirited drink to work and cure stomach diseases (Wattimena 2014).

After they were being relocated to Ceram island, the government provides hybrid coconut seeds, so that later the crop can be processed into copra. The hybrid coconut planted was less productive, so people tend to process the sap of this plant into sopi (Pannell 1999). Sopi contributes significantly to people’s income because the sale of this distilled beverage can finance the family needs. The sap is also processed into cuka sageru which is used for daily kitchen needs. Coconut plants that have been taken sap are usually no fruitful (Kakisina et al. 2013).

In Mesa village (from Teon island), distillation of sopi uses iron drum as a container. This container can be used repeatedly. The thickness of the iron drum is determines the duration of use of this equipment. The channel for flowing distilled sopi is roll plastic (no use condenser). The use of roll plastic in distillation aims to produce clearer sopi (Kakisina et al. 2013). Distilled sopi using plastic has a clear color but lack specific taste. The same distillation device was also found in the Sifluru, Layeni, and Wotai (from Nila island) villages that located in west of Mesa village. The firewood used to boil coconut sap in the Sifluru from the guest tree (Kleinhovia hospita L). After the sopi (locally named arka) flow through the roll plastic, it’s collected in a jerry can and then packed in plastic bottles for sale (Figure 3). The distillation process usually takes place from morning to evening. In Wotai, the sopi producer can produce this distilled drink as much as 60 liters per week (Pannell 1999).

In Layeni, sopi is used when the people works together to build village house. This beverage is also used various family events, such as child baptism, sidi gereja (celebrate after learning catechism), birthdays and wedding parties. The family presents 1-2 sloki (small glasses) containing sopi to the guests, so that the party become more exciting. Sopi mixed with the eggplant roots plants and snakeweed (Stachytarpheta jamaicensis L) leaves can cure toothache and lumbago, respectively (Wattimena 2014).

Saparua Island
Generally, the people of Saparua are process sopi from palm sugar sap. In Ouw village, sap is mixed with lansium (Lansiun
domesticum Corr) root to prevent foaming before sopi distillation. Distillation of sopi still uses bamboo as an evaporation channel. Bamboo is also contributes to the specific taste of sopi. The container used to hold the sap is a tube made from iron. Distillation process takes place in a traditional fireplace using firewood. The connection between iron tube and bamboo is wrapped with clay, so that sopi vapor does not come out from the bamboo. After sopi flowing through the bamboo, this liquid was then collected in a jerry can. The sopi was then put into tempayang (a kind of wide-mouthed pitcher from clay) and storage for several days to produce a specific taste (Figure 4). Earthenware is a well-known industry in Ouw village, so these tools are used to store of sopi. After storage, the sopi was packed in jerry cans then sold in the market. Some village in Saparua island, the people consume sopi by adding some clove grains and nutmeg seed powder as a medicine to expel wind before eating (Rahman et al. 2013).

In the Nolloth, sopi is use as a beverage in the king inauguration, marriage and after the funeral of the someone died ceremonies. After the funeral, sopi was given to the people who help in the funeral process called dulang tarbai (bad tray). This ritual aims to establish bonds between mourning family and the people who have served the corpse (Pattipeiluhu, 2013). This tradition is also found in Ullath village called masolio (Laurenz and Nikijuluw 2020).

Sopi has a very important role in the culture of the Ullath community. Besides used as beverage in the king inauguration ceremony, the guests who come to this village were often given sopi to drink that was taken by traditional leader from tempayang (pitcher) called sopi goyang (shook sopi). He gives sopi uses a cup made from bamboo. Interestingly, this fermented beverage does not run out even though it has been served to hundreds of people. Sopi goyang can only be given by certain clan elders. The ritual of sopi goyang drinking was usually done in baileo (traditional house of the people in Central Moluccas). When the ritual takes place, the elders shake pitcher, so that sopi does not run out until the ritual was finished.

Figure 4. Processing of sopi in Ouw, Saparua Island

Sopi is also played an important role in binding villages with pela relationship. Pela is a union between two or more villages in other regions based on brotherhood relations in Central Moluccas. These countries usually carry out ceremonies to recall the agreement of the ancestors to the younger generation called panas pela (heating pela) (Pattiselano 1999). In this ritual, blood was dropped from fingers of the war leaders of the two villages (locally named kapitan) in a coconut shell then mixed with sopi. This mixture was then drunk by each war leaders followed by the children. After the panas pela celebrations, the two villages were considered as brothers and were not allowed to marry. The two villages must help each other (Titaley 2018). The mixture of blood and sopi are symbolizes the relationship of eternal brotherhood (Wenno and Akihary 2010).

Aru Islands
The Aru islands include Dobo and surroundings. Processing of sopi in this area uses coconut sap as raw material. The sap has been tapped for several days is collected in
an iron drum. The equipment of distillation uses two pieces of long bamboo as an evaporation channel. The ends of the two bamboo are placed in a jerry can to hold the sopi (Figure 5). Like other regions, sopi is consumed daily to warm the stomach. This beverage is also used as a beverage in traditional rituals. One of the important rituals in this area is the sumpah sopi (sopi oath). This ritual is used as a symbol of the presence of God and the ancestors as witnesses to solve the problem in society. In this ritual, both parties who have problems must swear and drink sopi. There is usually a party who sick or dies and it’s considered as the wrong party after the sumpah sopi ritual (Noor et al. 2015)

**Kisar Island**

Sopi is one of the local wisdoms in Southwest Moluccas. This beverage is the main drink in every traditional event. Processing of sopi in this area uses the sap from koli trees. The tapping of sap was done by tapper in the morning and evening. The sap was collected in bamboo. Previously the ancestors had collected the sap used a woven made from koli leaves. In the distillation process, the sap was poured into large cans and then cooked in traditional fireplace. The evaporation channel is made from bamboo which ends directly attached to the bottle. The bottle was placed in a burrow of the ground, so that it does not to flip over and spill the sopi (Figure 6). Processing of sopi is carried out by fractional distillation. The cooking of sap at temperatures is not too high will produce high alcohol content of sopi. Sopi with high alcohol content has a higher quality because it is preferred by the public.

**Figure 5.** Processing of sopi in Wangel, Aru Islands

**Figure 6.** Processing of sopi in Yawurul, Kisar Island

* Sopi has an important role in the cultural of the people in Southwest Moluccas. In the tradition of siram sopi (sopi flush), this distillation beverage is used as a binding symbol of two people or groups who make a deal. If the agreement is not obeyed, then the disobedied person or group will be undergo disaster. The people believes that this tradition was also attended by ancestors, so that it has a sacred value. Siram sopi tradition is also carried out in traditional ceremonies to unite the people in a unified (Pakniaiani 2019).
CONCLUSION

Sopi is a traditional beverage of the people in Moluccas. Processing of this fermented beverage use sap as a raw materials that is obtained from coconut trees, sugar palm and koli palm. Fermented sap is then distilled in stages to produce sopi. Distillation was done on a traditional fireplace or using a stove. The device of sopi distillation is made from bamboo, roll plastic and pipes. Sopi was used in various traditional and religious ceremonies such as cucci negeri, panas pela, sumpah sopi, and siram sopi. Generally, this traditional beverage is a symbol of solidarity in the Moluccans tradition.

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