

## Literature Review: Alcohol Content in Traditional Drinks in Indonesia

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Informasi Artikel	Abstract
E-ISSN : 3026-6874, Vol: 2 No: 2 Februari 2024 Halaman : 193-197	<i>Traditional Indonesian alcoholic drinks are drinks that contain alcohol and have a cultural role in Indonesian society. Not only in Indonesia but various countries around the world also make alcoholic drinks a part of their culture. As in China, alcohol or arak is used as medicine, cooking spices, and also in ceremonial events. Meanwhile, Japan uses arak as a dish at formal meetings or celebrations. Several regions in Indonesia have traditional drinks that contain alcohol and these drinks are always present at every celebration, traditional ceremony, thanksgiving event, death ceremony, or welcoming guests. In this article, we will discuss the impact of alcohol use and the alcohol (ethanol) content in various traditional alcoholic drinks in Indonesia.</i>
Keywords: Alcohol Traditional drink Alcohol's Effect	

### Abstrak

Minuman beralkohol tradisional Indonesia merupakan minuman yang mengandung alkohol dan mempunyai peranan budaya dalam masyarakat Indonesia. Tidak hanya di Indonesia, berbagai negara di dunia pun menjadikan minuman beralkohol sebagai bagian dari budayanya. Seperti di Tiongkok, alkohol atau arak digunakan sebagai obat, bumbu masakan, dan juga dalam acara-acara seremonial. Sedangkan Jepang menggunakan arak sebagai sajian pada pertemuan atau perayaan formal. Beberapa daerah di Indonesia mempunyai minuman tradisional yang mengandung alkohol dan minuman tersebut selalu hadir pada setiap perayaan, upacara adat, acara syukuran, upacara kematian, atau penyambutan tamu. Pada artikel kali ini kita akan membahas tentang dampak penggunaan alkohol dan kandungan alkohol (etanol) pada berbagai minuman beralkohol tradisional di Indonesia.

Kata Kunci : Alkohol, Minuman Tradisional, Efek Alkohol

### INTRODUCTION

Indonesia is a country that has many kinds of traditions and customs. In cultures in various regions in Indonesia, traditional alcoholic drinks are well known and have a cultural role in society. This fermented drink has a strong interaction with the community, especially at traditional celebrations or when welcoming party guests. This traditional alcoholic drink is increasingly in demand because many people believe that this drink can have a positive impact on the body or as medicine and also provide a sense of enthusiasm in working for farmers. In some areas, this traditional drink is also considered a social symbol.

The activity of drinking alcoholic beverages has become a tradition that is rooted in various groups of society. This drink is the result of the fermentation of various ingredients such as fruit, sap, rice, and others. The names of alcoholic drinks in each region are different, such as palm wine from Lombok, Bali arak from Bali, ballo' from South Sulawesi, sopi from Flores and Maluku, lapen from Yogyakarta, ciu from Central Java, swansrai from Papua, jowo arak or liquor. and others (Wulan, 2017).

Chemically, alcohol is an organic compound that has a hydroxyl group bonded to a carbon atom. Methanol and ethanol are the simplest types of alcohol. According to John Wiley (2011), the functional formula for alcohol is -OH with the general formula for R-OH, where R is an alkyl or a substitute for an alkyl group. Judging from its solubility, liquid alcohol can mix with other alcohols, and alcohols with less than 4 carbon atoms dissolve in water. Physically, alcohols with 1-10 carbon atoms are liquid at room temperature, for example, methanol and ethanol. If more than 10, it is a colorless and odorless solid substance. Monovalent alcohols have high boiling points.

Alcohol has many uses in everyday life. In various parts of the world, alcohol is used in liquor. Apart from that, alcohol is also used in laboratories and industry, this compound is used as a solvent and reagent. Alcohol is also used as an antiseptic, cough medicine mixture, and medicinal wine (Koes, 2013).

## METHOD

This research is a literature review on the alcohol content of traditional drinks in Indonesia and the effects of alcohol on health. Hannah Snyder (2019, p. 333) considers that, "a literature review can be broadly described as a more or less systematic way of collecting and synthesizing previous research". A literature review section or theoretical framework in an Empirical research has various functions, especially: understanding the corpus knowledge; provide a theoretical basis and framework for research methods, approach, aims, and research questions; substantiate the research problem; and/or justify the range and contribution of the research (Paré, Trudel, Jaana, & Kitsiou, 2014, p. 183). The literature review section is the basis of all activities academic research because it connects a study with existing knowledge already available.

## RESULTS AND DISCUSSION

The impact of consuming alcohol on health is that it can disrupt the structure and function of the digestive organs of the stomach (Pratama, 2019), high blood pressure, stroke, arrhythmia, liver, and mental retardation (Putra, 2012); cardiovascular disease (Whitman, 2020); and disorders of fetal development (Sebastiani, 2018). Continuous use of alcohol will gradually damage all the organs of the consumer's body, such as sex hormones, the immune system, and brain disorders. Research results show that alcohol can cause inflammation of the pancreas organ, resulting in changes in the pancreas organ such as atrophy, fibrosis, and calcification (Apte, 1997).

The effects that occur in alcohol drinkers depend on the level of alcohol in the blood. Blood alcohol levels of 10-19 mg/dl do not have much of an effect on the body, the person is still like a normal person in general. At higher levels, namely 110-129 mg/dl, it will cause a person to be disturbed in speaking, such as a person with a lisp, difficulty moving or managing movements, difficulty judging things or perceiving things, and being easily angry and acting more aggressively than usual. Meanwhile, much higher alcohol levels in the blood, namely 300-400 mg/dl, can have the effect of poisoning, coma, and even death.

The dangers caused by alcohol will get worse if alcoholic drinks are added with certain substances or mixed. Apart from the health aspect, the impact of drinking alcoholic beverages can also occur from a social perspective, namely destroying social order, being involved in crime, causing accidents, disrupting security order, and failing in various fields (Baleg, 2014)

The government has classified alcoholic drinks as stated in the Presidential Decree of the Republic of Indonesia RI NO 3 of 1997, concerning the supervision and control of alcoholic drinks. Alcoholic drinks are divided into 3 groups, namely A, B, and C.

1. Class A alcoholic drinks

Alcoholic drinks with an ethanol content ( $C_2H_5OH$ ) of 1%-5%, which can cause emotional drunkenness and unclear speech.

2. Class B alcoholic drinks

Alcoholic drinks with an ethanol content of more than 5%-20% and can cause ataxia, visual and sensory disturbances, and slow reactions.

3. Class C alcoholic drinks

Alcoholic drinks with ethanol ( $C_2H_5OH$ ) levels of more than 20%-55% can cause blurred vision, severe ataxia, fainting, and even convulsions. Convulsions are a condition where uncontrollable movements occur due to the body's muscles experiencing very rapid fluctuations in contraction and stretching.

Alcoholic drinks are drinks containing ethanol or ethyl alcohol ( $C_2H_5OH$ ) which are processed from agricultural products containing carbohydrates by fermentation and distillation or fermentation without distillation (Astri, 2011). Drinks containing alcohol can not only be found in nightclubs or certain stores. Many regions in Indonesia provide traditional drinks containing alcohol which can be found at every traditional event, party, or when entertaining guests. This drink is considered normal, not harmful, and is even considered medicine. At low alcohol levels, this traditional drink may have no effect, but at high ethanol levels, it will have a bad impact on a person's health and social life. This traditional alcoholic drink is produced traditionally, and the alcohol content contained in it is not controlled.

The results of the literature review showed that traditional alcoholic drinks in the regions have different names and different ethanol levels. Ethanol levels in traditional drinks can be seen in Table 1.

Table 1. Ethanol levels of traditional drinks in various regions in Indonesia

Tradisional Drinks	Name	Region	Ethanol content	Group
	Sagoer	Manado	5 %	A
	Tuak Aren	Bali	4-5 %	A
	Cuka	Padang	5%	A
	Ballo'	Sulawesi Selatan	19-20%	B
	Congyang	Semarang	19,5%	B
	Arak jowo	Jawa	17-30 %	C
	Arak bali	Bali	37-50 %	C
	Ciu/Cukrik	Banyumas	50-90 %	C
	Swansrai/Milo	Papua	25-30 %	C
	Sopi	Maluku	50 %	C

Based on Table 1, it can be seen that of the 10 types of traditional alcoholic drinks, three of them are group A with an ethanol content of less than 5%. Group A consists of sagoer from Manado, palm wine from Bali, and vinegar or palm wine from Padang.

Sagoer or saguer is made from a mixture of fresh sap from sugar palm trees. Fermentation is carried out in bamboo with a coconut fiber filter at the end. The fermentation process is carried out over several days, and a sweet and sour-tasting drink is produced. Minahasan people usually drink saguer on big holidays and use bamboo cups or coconut shells. They believe that drinking this way can connect them with their ancestors.

Vinegar comes from this field and also comes from the sap of the sugar palm plant. In the fields, many palm trees grow wild, so it is very easy to find them. In making it, sap water will be processed by mixing it with a type of dried tree bark (raru). This soak is left for 6-8 hours so that the fermentation process occurs and vinegar is produced. The vinegar produced is cloudy yellow in color and contains alcohol which slightly intoxicates the drinker. In some areas in Padang, vinegar is required to be served at wedding banquets. Vinegar that is stored until the second day has an ethanol content of 5.076% (Wyan, 2019).

Traditional drinks with group B, namely ethanol content of more than 5% to 20%, are found in ballo' and congyang. Ballo' is an alcoholic drink resulting from fermentation from a drink or fruit containing sugar (Pradnyandari, 2017). Ballo' is a traditional drink that can be found in the South Sulawesi area. The raw materials for ballo' can be obtained from three types of trees, namely Aren, Lontar, and Nipa. People believe that ballo can provide good benefits for the body, and also warm the body. However, consuming excessive amounts of ballo can cause vomiting, dizziness, nausea, drunkenness, damage to the heart, nervous disorders, or impaired liver function (Siahaan, 2019).

Congyang is a traditional alcoholic drink resulting from the acculturation of Javanese and Chinese culture in the city of Semarang. The process of making congyang consists of fermenting white

rice mixed with spirits, sugar, and aroma. This drink is believed to cure colds, aches, and pain. Drinking more than the dose of Pyongyang will cause drunkenness and memory loss.

Group C is a group of drinks with an ethanol content of more than 20% to 55%. The highest groups in this study were found in Jowo arak, Balinese arak, ciu, swansrai, and sopi drinks. Aziz's research results (2019) stated that testing the ethanol content in Jowo arak circulating in Ponorogo using the gas chromatography method yielded results of 35-42%. According to Ernawaningtyas (2017), many Jowo arak drinkers experience health problems and even cause unrest in society because of their behavior and actions that are out of bounds. The way to make Jowo arak is that the leftover product from sugar making is soaked for 7 days, then distilled by placing it in a barrel. The raw material for Jowo arak is sugar cane molasses or molasses.

Balinese Arak is one of the worship media in religious ceremonies in Bali. Balinese people consider arak as a means of drumming in religious rituals carried out at home or in temples. Apart from that, arak is also often found as part of offerings during death ceremonies (ngaben), paired with various kinds of flowers, fruit, and cakes. Farmers believe that arak production should not be stopped because if it is stopped it will invite the anger of Dewa Ida Ratu Betara Arak Api, and cause disaster (Bali, 2018).

The traditional Papuan drink Swansrai is usually served using split coconut shells. This fermented drink has a strong and slightly bitter taste. Swansrai is the result of fermented coconut water from very old coconut trees. This drink is considered a friendly drink and is served to honored guests or guests who are considered important (Wulan, 2017).

In the Maluku area, Sopi drinks are a must-have dish at parties, birth events, thanksgiving events, and death events (Jannah, 2018). The name of this drink "sopi" uses the Dutch word Zoopje, which means colorless liquid alcohol with a distinctive smell. This traditional drink is the result of fermented sap that has been distilled. Sopi or moke has varying alcohol levels depending on the fermentation method and the duration of distillation. Based on research results from the Ambon Industrial Research and Standardization Center (2015), it is known that sopi on the market contains 40-70% alcohol.

## CONCLUSION

Traditional Indonesian alcoholic drinks are traditional drinks that have cultural value and have a cultural role in Indonesian society. This alcoholic drink is often served at traditional celebrations or when welcoming guests, at Thanksgiving events and funerals. Because it is an alcoholic drink, this traditional drink contains ethyl alcohol or ethanol in it. The ethanol content in this traditional drink depends on the fermentation method and the length of the distillation process. The impact of excessive or continuous use of alcoholic beverages at high levels will damage health and social order that sopi on the market contains 40-70% alcohol.

## REFERENCES

- Apte M V, Wilson JS, Korsten MA. (1997) Alcohol-related pancreatic damage: mechanisms and treatment. *Alcohol Helath Res W*; 21:13-20
- Astri, Herlina. (2011) Resolving social conflicts through strengthening local wisdom. *Jurnal Aspirasi* 2, no. 2: 151-162
- Aziz, Y. S. (2019). Determination of Ethanol Content in Jowo Arak Circulating in the Ponorogo Area in January-March 2019 Using the Gas Chromatography Method. *Medfarm: Jurnal Farmasi Dan Kesehatan*, 8(1), 15-20.
- Badan Legislasi. (2014). Academic Manuscript of the Bill on the Prohibition of Alcoholic Drinks. Jakarta: DPR RI
- Balai Riset dan Standarisasi Industri Ambon. (2015) Sopi Processing. 11(1):17-25.
- Bali, A. (2018). Political and Legal Study of Efforts to Legalize Balinese Arak. *Life Sciences*, 181, 188.
- Ernawaningtyas, E., & Yudhayanti, D. (2018). Determination of alcohol content in Jowo Arak circulating in Ponorogo using the distillation method. *Jurnal EDUNursing*, 1(2), 57-63.

- Decree of the President of the Republic of Indonesia No. 3 Th 1997 about Supervision and Control of Alcoholic Drinks.
- Koes Irianto. (2013) Prevention and Management of Poisoning by Dangerous Chemicals., Bandung: Yrama Widya
- Pradnyandari, A. T. et al. (2017). Study of Objective and Subjective Characteristics of Sugar Palm Tuak (Arenga Pinnata) Based on Storage Time. *Ejournal. Poltekkes-Denpasar*.5–1(2), 10.
- Pratama, M. R., & Muhartono, M. (2019). The Impact of Consuming Alcohol on StomachHealth. *Jurnal Majority*, 8(2), 254-258.
- Sebastiani, G., et al. (2018). The effects of alcohol and drugs of abuse on maternal nutritional profile during pregnancy. *Nutrients*, 10(8), 1008.
- Siahaan, M. A., & Gultom, E. (2019). Determination of alcohol content in palm wine sold in Nagori Dolok, Silau Kahean District, Simalungun Regency, North Sumatra. *Jurnal Kimia Saintek Dan Pendidikan*, 3(2), 41-44.
- Wayan Tanjung Aryasa, et al (2019). Alcohol Content in Tuak Drinks in Sanda Village, Pupuan District, Tabanan Regency, Bali Using the Gas Chromatography Method. *Jurnal Ilmiah Medicamento*. Vol. 5 No. 1. Issn-e: 2356-4818
- Wulan. (2017). Swansrai. Retrieved from [ttps://budayaindonesia.org](https://budayaindonesia.org): <https://budaya-indonesia.org/Swansrai>