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Pramukh Swami Science and H. D. Patel Arts College, Kadi
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PROJECT COMPLETION CERTIFICATE

This is to certify that Mr./Ms. RAVAL VIVEKKUMAR RAJUBHAI
of B.Sc Sem III-IV Biotechnology Roll no. 509 has successfully completed the project
entitled“ SNAKE WINE DRINK ”
during Year 2023-2024 given by Department of Biotechnology Pramukh Swami
Science and H. D. Patel Arts College, Kadi.

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P.S.SCIENCE & H.D.PATEL ARTS COLLEGE, KADI
(AFFILIATED WITH HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY)



Project work on Snake wine drink

Submitted by:-

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SY B.Sc. (Biotechnology)

GUIDED BY

Biotechnology Department

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CERTIFICATE

TO WHOMSOEVER IN MAY CONCERN

This is to that B.Sc.Biotechnology student of class - S.Y.B.Sc. (Biotechnology), Roll no. has satisfactorily completed her project work on Snake wine drink of the subject Biotechnology during the academic year 2023-2024 and submitted report on

Exam No. **2197**

Head of department

staff in charge

Certified that this project work is accepted and assessed on _____.

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Objectives:-

1. Exploration of Traditional Medicine: Investigating the cultural and traditional significance of snake wine in certain regions, and how it's perceived as a medicinal drink.
2. Chemical Analysis: Conducting chemical analysis to understand the composition of snake wine, including its alcohol content, presence of snake venom (if any), and other potential bioactive compounds.
3. Biodiversity Conservation: Examining the ethical implications of using snakes in traditional medicine and the potential impact on local ecosystems and biodiversity.
4. Health Risks: Assessing the potential health risks associated with consuming snake wine, including microbial contamination, toxins, and allergic reactions.
5. Cultural Anthropology: Exploring the cultural and social aspects surrounding the consumption of snake wine, including its history, rituals, and beliefs associated with its consumption.
6. Public Health Awareness: Raising awareness about the safety concerns related to the consumption of traditional medicinal products like snake wine and promoting informed decision-making among consumers.

By addressing these objectives in my science project report,I have provided a comprehensive understanding of snake wine from various perspectives, including scientific, cultural, and public health aspects.

Introduction



Snake wine is a special type of beverage or liquor that is prepared by putting snake inside the any grain liquor or rice wine, and then it is left for several months and sometimes, some spatial herbs or spices are also been added to this beverage. This snake wine is preserved for their essence; it is not always safe for drink. One large snake is required to prepared one bottle of snake wine by wine Maker, to enhance the flavor sometimes wine maker can add lizards, Berries , some roots, small snakes, scorpion, insects, and small birds.

The flavor of snake wine is like a fishy chicken. Experts are required to make a safe snake wine because if the snake has not properly cleaned, it may be a chances parasitic contamination which is harmful for human health or sometimes death may occur.

History of snake wine



It is a very strong alcoholic beverage which is found first time in china, during western zhou dynasty (1040 -770 BC).

It is found a very important curative beverage according to traditional Chinese medicine. It is also found in North Korea , Vietnam, Thailand ,India and south-east-Asia. Shen noug ben caw zing is a medical manual in which medicinal use of snake was noted and it is compiled between 300BC to 200 AD.

Cultural significance

In Vietnam, the common regional name for snake wines is rượu thuốc, while less common ones are referred to as rượu rắn. A similar drink is made with dehydrated geckos or sea horses rather than snakes. Snake wine, due to its high alcohol percentage, is traditionally drunk in shot glasses.

It is illegal to import snake wine to many countries because many of the snakes used for its production are endangered species.

Varieties of snake wine

The main types of snake wine, which use either parts of a live snake, or the entire snake itself are steeped or mixed.

Some of the important snakes which are used to manufacturing snake wine are:

- Copper head snake
- Coral snakes
- Cobras snake
- Rattle snake

Procedure to make snake wine

There are 3 ways to prepare snake wine:-

1. Alive snake fermentation.
- 2.Snake Blood fermentation
- 3.Snake flesh fermentation

1.Alive snake fermentation-

Firstly catches a snake and not feed them for 2 to 3 days, then immersed it alive into the jar containing rice wine. After that the snake consume the rice wine, and due to the presence of ethanol in the wine it oozing out the whole venom which is present inside the snake body, after that take out the snake from the jar and clean the jar properly, the ratio of the alive snake and the rice wine is to be estimated 1: 10 to prepare snake wine. Sometimes herbs,spices, roots, other small snakes, scorpion and insects are also added to increase the flavor or healing property of the snake wine.

2.Blood fermentation-

Generally in this method the snake will be killed and after that the blood will be extracted from its body, and mixing its blood and bile with selected distilled wine or liquor, in this method snake body are not being soaked into the liquor, at the end leftthe wine for two - three months for fermentation.

3.Snake's flesh fermentation-

Generally in this method snake's meat or flesh are soaked inside the rice wine or any other liquor, before soaking snake's flesh it should be properly cleaned with water and then disinfected with white wine for about 5 minutes. The ratio of the snake to wine will be 1:5, and after that leave it for 3 months for proper fermentation process.

Health implications

Health benefits of snake wine:-

- It can cure Rheumatism.
- It can improve health.
- It can cure hair loss.
- Help to cure joint pains.
- Help to cure leprosy.
- Also contain Anti-inflammatory properties.
- Also used as a pain killer.
- Enhance sexual performance.
- Help to cure lumbago.
- Help to prevent from excessive sweating.
- Help to cure from fever, flu, and migraine.
- Help to cure low eye-sight

The risks of ingesting snake wine include systemic en venomation from the contained venom, which may present features differing from direct envenomation by snakebite. A number of health problems of the vascular system may result, including damage to the vascular wall endothelium, abnormal platelet function, and coagulopathy.

Is a snake wine is safe or not?

Studies showed that snake wine is safe to drink because venomous snake is dipped into rice wine and due to the presence of ethanol in rice wine it denatures the snake's venom and make it safe for the consumers.

It is not safe to buy snake wine from unknown venders as well as from home made snake wine.

Rarely snake's may alive after being steeped for 3 months but in 2013 an incident happens to a women in chinaat Heilongjiang she was bitten by snake when she opens the mouth of the bottle and the snake was still alive in the preserved 3 month old wine.

If the snake is not drowned properly it may be alive or become dormant in the wine for many months.

Legal and ethical issues

Importing of snake wine to the U.S prohibited. Snake wine is legal in south- east Asia , China, Korea.

In U.S convention on international trade in endangered spp. protected endangered creatures and banned endangered animals from importation. Cobras are the most popular snake which are used to make snake wines and these are banned from importation.

Snake wine which are manufactured from non- endangered spp. would be allowed after evaluation and reporting at the airports.

The shelf life of this snake wine is longer when it is unopened , after opening the bottle it will be safe to drink upto one year only, when the bottle is opened it might be a chances of contamination and the liquor appears cloudy in color, it means it is unsafe to consume, and immediately it should be discarded.

Conclusion

Snake wine is a special type of liquor, generally it is manufactured by soaking the snakes into the rice wine or other liquor, this snake wine has a more medicinal health benefits.

Generally it is consumed to get more health benefits rather than pleasure to cure different diseases. But sometimes it is harmful to consume as in some cases the soaked snake may go into hibernation and may be alive after 2-3 months of being soaked, it is also harmful if it is not purchased from the reliable source.

The expiry of this wine is much longer, if it sealed or up-opened. After opening the bottle it is safe to drink upto one year only.

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