

## **KOMBUCHA – AN INNOVATIVE PROPOSAL FOR RESTAURANT ESTABLISHMENTS**

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Modern restaurant business needs constant development and introduction of new or improvement of existing technologies and methods, bringing them to the conditions of today. Nowadays, many restaurants offer an expanded range of kombucha. Some restaurants even have their own kombucha production and are already starting to think about using kombucha in dishes and mixed drinks.

The global kombucha market accrued earnings worth approximately 2.01 (USD Billion) in 2020 and is predicted to gain revenue of about 12.2 (USD Billion) by 2028, is set to record a CAGR of nearly 25.1 % over the period from 2021 to 2028 [1].

Kombucha is a fermented tea drink produced using symbiotic yeast and bacteria cultures [1, 2, 3]. It has garnered massive interest owing to its beneficial features. Kombucha has rich chemical ingredients and healthy features [1, 2]. Furthermore, it comprises of organic acids [1, 2] (acetic, glucuronic, oxalic, citric, malic, lactic, pyruvic, kojic, phosphoric) [2]; vitamins [1, 2] (ascorbic acid [2], E, B, K [1]); mineral substances (potassium, manganese, fluoride ions) [1]; polyphenols [1]; amino acids (theanine, glutamine) [1]; ethyl alcohol [2]; sugars (monosaccharides, disaccharides) [2]; enzymes (catalase, lipase, protease, zymase, sucrase, carbohydrase, amylase, tryptase) [2]; pigments (chlorophyll, xanthophyll) [2]; lipids (sterols, phosphatides, fatty acids) [2]; purine bases of tea leaves [2].

Reportedly, the product is usually prepared using black tea. However, it can also be prepared through fermenting of other forms of tea such as white tea, green tea, yellow tea, and red tea. Moreover, tea type has prominent influence on parameters associated to anti-oxidant potential pH along with its ingredients such as sugar, acetic acid, and alcohol. For the record, red and green tea is rich anti-oxidant source on 1st and 14th day of fermentation and hence the choice of red tea or green tea form can prove beneficial for kombucha preparation. Nevertheless, black tea is considered as best ingredient conditioning proper kombucha contents & its healthy properties [1].

The peculiarity of kombucha production allows obtaining a very wide range of bases for soups, syrups, sauces, bases for food pairing juices, mixed cocktails and desserts. Also, kombucha by itself is good instead of, or together with a wine food pairing [3].

Anti-bacterial, anti-diabetic, and anti-bacterial features of kombucha are predicted to embellish market trends. Moreover, ability of product in reducing proportion of cholesterol and boosting immune system along with stimulating liver detoxification will expand scope of kombucha industry over years ahead. Moreover, other bioactive compounds are formed during tea fermentation process and they have proved to be beneficial for health. All these aforementioned aspects of product are likely to play a pivotal role in catalyzing and igniting growth of kombucha market over assessment period [1].

Furthermore, growing customer inclination towards functional drinks and rise in awareness pertaining to nutritive benefits of kombucha is set to propel expansion of kombucha market over upcoming years. Rise in product popularity owing to its exceptional taste and fizzy flavor will prompt growth of kombucha market over span of next couple of years [1].

For the restaurant business, the use of tea-herbal compositions from plant materials [4] *Hibiscus sabdariffa* ( $RE_{inf} - 316.0$  mV), *Matricaria chamomilla* ( $RE_{inf} - 220.2$  mV), *Ilex paraguariensis* ( $RE_{inf} - 250.8$  mV), *Rosae fructus* ( $RE_{inf} - 186.4$  mV), *Mentha piperita* ( $RE_{inf} - 214.0$  mV), *Citrus sinensis* ( $RE_{inf} - 295.2$  mV), *Citrus limonum* ( $RE_{inf} - 298.0$  mV), *Calendulae flores* ( $RE_{inf} - 264.0$  mV), which have increased antioxidant properties [4, 5] and can be recommended, according to our research [4], for the production of kombucha.

An obvious use for kombucha is making cocktails. The flexibility and variety of flavor of a fermented beverage can open up endless beverage space and finally take the bar industry to a new level.

**Conclusions.** Kombucha can become an innovative raw material for the modern restaurant business in Ukraine and a great addition to existing dishes that can be developed to the level of independent or unique products.

### References:

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