Commentary

iMedPub Journals
www.imedpub.com

American Journal of Phytomedicine and Clinical Therapeutics
ISSN 2321-2748

2024
Vol.12 No.3:298

Antimicrobial and Sensory Properties of Probiotic Yogurt with Medicinal Plants

Ceylan Ozer*

Department of Agriculture, Ankara University, Ankara, Turkey

Corresponding author: Ceylan Ozer, Department of Agriculture, Ankara University, Ankara, Turkey , E-mail: ceylan.ozer@gmail.com

Received date: September 17, 2024, Manuscript No. IPAPCT-24-19899; **Editor assigned date:** September 20, 2024, PreQC No. IPAPCT-24-19899 (PQ); **Reviewed date:** October 04, 2024, QC No. IPAPCT-24-19899; **Revised date:** October 11, 2024, Manuscript No. IPAPCT-24-19899 (R); **Published date:** October 18, 2024, DOI: 10.36648/2321-2748.12.3.298

Citation: Ozer C (2024) Antimicrobial and Sensory Properties of Probiotic Yogurt with Medicinal Plants. Am J Phytomed Clin Ther Vol.12 No.3: 298.

Description

One of the most popular fermented foods is yogurt, which has a number of microorganisms with various health advantages. It has a part in controlling the digestive system, reducing inflammation and modifying the human immune system. To improve the useful qualities of yogurt, natural additives such as different plant materials, such as herbs and fruit granules, are frequently added during traditional yogurt production. By adding bioactive molecules like antioxidants and antibacterial substances, these supplements enhance yogurt's prebiotic qualities and health benefits. Examining healthy components has become one of the most important worldwide market trends as a result of growing interest in the relationship between nutrition and health. Extensive research has also been motivated by the growing customer desire for natural and safe products devoid of chemical preservatives. The goal of these research is to improve the products' microbiological quality and safety. At the same time, efforts are made to maintain their advantageous organoleptic and nutritional qualities. Alongside the use of probiotics, there is an increasing amount of research potential regarding the use of aromatic and medicinal plants to improve food nutritional value by utilizing bioactive components that have both product-preserving and health-promoting qualities. Natural components derived from plant sources are being utilized more frequently as a result of growing concerns regarding the safety of synthetic compounds.

Probiotic yogurt with herbs

Many plants contain antimicrobial chemicals. These plants are used as preservatives and flavourings to extend the shelf life of foods. The preservation of the product's sensory qualities throughout storage is a significant element influencing consumer acceptability. We have examined the medicinal and fragrant plants thyme *(Origanum onites L.)*, rosemary *(Rosmarinus officinalis L.)*, basil *(Ocimum basilicum L.)* and mint *(Mentha piperita L.)* because of their abundance of bioactive components. The study's objective was to evaluate the probiotic and antibacterial qualities of strained yogurts made by combining yogurt bacteria with therapeutic herbs. Our research's findings may help improve yogurt's quality over time, especially if bioactive components from medicinal plants are added. Cow milk, cow-sheep, cow-goat and cow-sheep-goat milk blends in equal amounts, along with probiotic bacteria *(Bifidobacterium longum and Lactobacillus casei)*, were used to make strained (Torba) yogurts. Thyme *(Origanum onites L.)*, rosemary *(Rosmarinus officinalis L.)*, basil *(Ocimum basilicum L.)* and mint *(Mentha piperita L.)* were among the aromatic and therapeutic plants used to fortify these yogurts. Over the course of a 30-day storage period, the probiotic-strained yogurts' antibacterial activity and probiotic-enhancing benefits were assessed. These plant-based yogurts had strong antibacterial activity ($p<0.05$) against *Candida albicans*, *Escherichia coli*, *Bacillus cereus* and *Staphylococcus aureus*. Furthermore, the plant-based formulation showed stimulatory and protective effects of probiotics. The addition of medicinal plants negatively impacted the sensory properties of the probiotic-strained yogurt throughout storage. Leaky gut has been reported to be treated with l-glutamine, quercetin, slippery. Investigating how these functional components affect the physico-chemical, microbiological and sensory characteristics of yogurt was the aim of this study.

Functional components in yogurt

Nine pails of milk from the same supplier were evenly distributed and the eight ingredients were assigned at random to the eight pails. There was no component in the control. Yogurt was made from fermented milk. In contrast to coliform counts, yeast and mold counts and rheological features, the yogurts' pH, titratable acidity, color, viscosity, syneresis, *Streptococcus thermophilus* counts and *Lactobacillus delbrueckii* spp. *bulgaricus* counts were measured. D 3 was used for the sensory analysis, and the functional components' (powder form) particle size was also measured. The addition of slippery elm bark to yogurts resulted in less syneresis than the control. l-glutamine decreased titratable acidity values and raised pH and n' values (relaxation exponent obtained from G'). While maitake mushroom produced lower n' values, the addition of N-acetyl-d-glucosamine produced higher n' and lower titratable acidity values. When quercetin was added, *L.bulgaricus* grew more. While quercetin reduced its *S.thermophilus* counts, adding maitake mushrooms increased *S. thermophilus* growth while decreasing apparent viscosity values. There was a decrease in quercetin levels but an increase in maitake mushroom levels. The combination of quercetin and licorice root enhanced thixotropic behavior. While yogurts containing quercetin received the lowest sensory scores, those with slippery elm bark, N-acetyl-d-glucosamine, licorice root, maitake mushrooms and zinc orotate had no effect on the sensory qualities. Overall, the qualities of yogurt were not significantly altered by the majority of these additions.