Are the Natural Products Vitamin E Oil, Lemon Juice, Rosemary Extract, Bay Leaves, Birch Bark and Cinnamon, Successful in Delaying Mould Growth on Bread and Brie Cheese?

Gibbs, Benedicta

Thanks to the well-developed food industry and the common use of preservatives, food products are available to us from all over the world due to their extended shelf life. However, I chose to test 'Kneippbread' and 'Kerncelle Brie', not only because the period of microbial inhibition of these products is similar (between 4 and 6 days at RTP), but also due to the minimal use of synthesized chemical preservatives already present. I then started researching natural and easily obtainable products I could use to delay the onset of mould growth on common household products. This addresses the current issue of major global food-waste, and how this then threatens the support of a fast-growing population by testing the limits of global resources. I drew 6 materials from the findings of my research, the active ingredients of which I tried to expose to the bread and cheese as effectively as possible. Each material had five samples of bread and brie cheese, sealed off from further air exposure, and the amount (area) of mould growth was recorded over a period of 10 days. In conclusion, vitamin E oil and rosemary extract was most successful in delaying the onset of mould growth on both samples. As predicted, there was a separation of the butterfat from curd residue in the cheese samples, however I doubt this natural occurrence altered the molecular interference of the materials added. The bread however dried out rather than grew mould – a preserving technique that is adopted globally today. With the long-term effects of GMO's unknown, allowing old methods of preserving foods to resurface makes way for a healthier and a more environmentally friendly approach to how we prolong the shelf life of foods we buy today.

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