

## ANTIMICROBIAL EFFECT OF SOME TYPES OF SPICES

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Nowadays, the importance of spices are increasing and while human beings want to keep their health, they also care their nutrition. In addition, consumption of foods minimally treated and no usage of chemical additives and the extension of the shelf life naturally of the rapid perishable foods are getting important. Antimicrobial properties of plants, usually originate from volatile oil which also give aroma and flavor characteristics to the plant. Volatile oil is usually obtained from plants' leaves, fruit, crust and root by steam distillation method. Most of the volatile oils which has antimicrobial effect are compounds with hydroxyl group in the phenol structure and usually the antimicrobial effect arises from terpenoid and phenolic compounds. These phenolic compounds cause sensitivity of phospholipid layer and increase in the permeability of cell membrane. Thus, intracellular components leak out of the cell and enzyme system of bacteria is destroyed. At this point, the concentration of volatile oils, microbial load, types of plants and microorganisms, process and storage conditions are significant for the effectivity of antimicrobial action. Considering all this information, many researchers said that volatile oil of spices can be used as food preservative. In contrast to this, toxic properties of volatile oil and safety for health should be taken into consideration. As a result, in recent years the use of spices are industrially spreading both with consumer interest for foods which are non-health threatening and include natural ingredients instead of chemical additives; and with fragrance and flavor release from spice.

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