
Allylsulfide constituents of garlic volatile oil as antimicrobial agents.

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Abstract

Six different mixtures of garlic distilled oils containing diallyl disulfide (DDS) and diallyl trisulfide (DTS), ranging from 1 to 51% and 88 to 38% respectively, have been assayed against a number of yeasts (C. albicans, C. tropicalis and B. capitatus), gram-positive bacteria (S. aureus and B. subtilis) and gram-negative bacteria (P. aeruginosa and E. coli). Results obtained support a specific antifungal more than an antibacterial activity and implicate DDS as the active constituent. Incubation of garlic extracts made up of 1% DDS and 88% DTS resulted, in fact, in the absence of growth inhibition against all the tested microorganisms, whereas garlic oils with higher quantities of DDS showed significant inhibitory activity, increasing with the increase of DDS amount.

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