Antimicrobial Agents Produced by Yeasts

Authors : T. Büyüksırıt, H. Kuleaşan

Abstract : Natural antimicrobials are used to preserve foods that can be found in plants, animals, and microorganisms. Antimicrobial substances are natural or artificial agents that produced by microorganisms or obtained semi/total chemical synthesis are used at low concentrations to inhibit the growth of other microorganisms. Food borne pathogens and spoilage microorganisms are inactivated by the use of antagonistic microorganisms and their metabolites. Yeasts can produce toxic proteins or glycoproteins (toxins) that cause inhibition of sensitive bacteria and yeast species. Antimicrobial substance producing phenotypes belonging different yeast genus were isolated from different sources. Toxins secreted by many yeast strains inhibiting the growth of other yeast strains. These strains show antimicrobial activity, inhibiting the growth of mold and bacteria. The effect of antimicrobial agents produced by yeasts can be extremely fast, and therefore may be used in various treatment procedures. Rapid inhibition of microorganisms is possibly caused by microbial cell membrane lipopolysaccharide binding and in activation (neutralization) effect. Antimicrobial agents inhibit the target cells via different mechanisms of action.

Keywords : antimicrobial agents, yeast, toxic protein, glycoprotein
Conference Title : ICFEB 2014 : International Conference on Food Engineering and Biotechnology
Conference Location : Barcelona, Spain
Conference Dates : October 27-28, 2014

Open Science Index, Nutrition and Food Engineering Vol:8, No:10, 2014 publications.waset.org/abstracts/9513/pdf