Abstract Template

Abstract Title: Antimicrobial Activities of Pomegranate (Punica granatum L.) Fruit Peel Extracts

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Abstract (not more than 300 words)
Methanol and water extracts of peels from two Egyptian pomegranate varieties (*Punica granatum* L.); Manfalouty and Wardey were screened for antimicrobial activities using the plate diluting method. Antimicrobial activity against four species of common food contamination microorganisms (*Staphylococcus aureus* ATTCC 25923, *Escherichia coli* ATCC 69337 and *B. cereus* ATCC 6633, and yeast strain *Candida utilis*) were assessed. A broth micro-dilution susceptibility assay used for the determination of the Minimal inhibitory concentration of pomegranate extracts and the reference. The results showed that the diameters of inhibition zone were different according to the variety and concentrations peel extracts and tested strains. The marked inhibition was associated with methanol extract of each variety. The highest inhibition zone average reached 26 mm for *Staphylococcus aureus* by methanol peel extract, while the lowest detected value was 10 mm for *B. subtilis* by water peel extract. The minimal inhibitory concentration values of the methanol extract of Wardey and Manfalouty peels accounted to 1.0 and 2.0 mg/ml for *Bacillus subtilis* and *Candida utilis* respectively, while it ranged from 0.3 - 0.5 and 1.5 - >1.5 mg/ml for *Staphylococcus aureus* and E.Coli, in respective order. However, these values for water extracts of Wardey and Manfalouty pomegranate peels were 0.3 - 0.5, 1 mg/ml for *Staphylococcus aureus, E.Coli* and *Bacillus subtilis,* respectively but reached 2.0 mg/ml for *Candida utilis.*

Keywords— *antimicrobial activities, food contamination microorganisms, Pomegranate peels extracts, minimal inhibitory concentration*

Professional Biography (100-150 words)

Dr. Shafika Zaki has completed her Ph.D. from Alma Ata Institute, Alma Ata, Kazakhstan. She is emeritus professor at Faculty of agriculture, Cairo University, Giza, Egypt. Her interests include Research field of Food Functionality, Food Processing and Food Microbiology. She was a member of promotion committees for professors and associate professors. She was the principle investigator of project “Cultivation of mushroom on agricultural byproducts” Grant FRCU University Linkage with Penn State University and vice principle investigator of project “Rural and Bedouin women development in food preparation, processing and storage” Grant FRCU, University Linkage with the University of Maryland. She was also a member of the research team of research project “Formulation and preparation of low cost high nutritive values diets in UAR funded by the Academy of Scientific Research”. She has published more than 50 papers in reputed journals and has been serving as an editorial board member of repute.



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