

Title Antimicrobial activity of crude extracts from pomegranate (*Punica granatum* L.)
Author L. Salgado, P. Melgarejo, I. Meseguer and M. Sánchez
Citation ISHS Acta Horticulturae 818:257-264. 2009.
Keyword plant extract; pomegranate; antimicrobial

Abstract

In the vegetable kingdom there are many substances showing antimicrobial properties. Though these secondary compounds are not indispensable for vegetables, they increase plant survival possibilities. Those can be used as therapeutic agents, additives, alimentary preservatives or biological agents for agricultural diseases. In fact, pomegranate (*Punica granatum* L.) is a fruit tree species that shows very low bacterial disease incidence. The current study analyses and evaluates the antimicrobial effectiveness of pomegranate fruit raw extracts over the following bacterial species: *Pseudomonas aeruginosa*, *Escherichia coli*, *Enterococcus faecalis*, *Enterobacter aerogenes*, *Staphylococcus aureus*, *Micrococcus luteus* and *Bacillus* sp. Our results shows that all the crude extracts from *P. granatum* fruit posses antimicrobial activity although, at the concentrations tested, none was more effective than a solution containing 1% phenol. According to the data obtained, the most powerful extract resulted to be the one from the pomegranate juice. The antimicrobial effectiveness of the extracts also depends on the species of bacteria evaluated, the more sensitive being the Gram-positive species *Staphylococcus aureus* and *Bacillus* sp. Our next aim will be the identification and purification of the juice substances that shows this antimicrobial activity.