

Antimicrobial activity of olive oil

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Olives and its derived products, olive oil and table olives, possess compounds with reported antimicrobial activity. Among them, the phenolic compounds and oleosidic substances are the most active inhibitors of microorganisms growth.

The antimicrobial activity of different virgin olive oils, olive oils, pomace olive oils and other edible vegetable oils against several foodborne pathogens (*Clostridium prefringens*, *Escherichia coli*, *Listeria monocytogenes*, *Salmonella enterica*, *Staphylococcus aureus* and others) was tested *in vitro*. Oils obtained from olive fruits showed a marked bactericidal activity, which was higher for virgin olive oils, followed by olive oils and pomace olive oils. The antimicrobial activity was statistically correlated with certain phenolic compounds, and it was confirmed doing the assays with HPLC isolated substances.

Similarly, the antimicrobial activity of olive oil and other foodstuffs (tea, coffee, fruits juices, wine, vinegar and others) against *E. coli*, *L. monocytogenes*, *Shigella sonnei* and others was also tested. Results revealed that the antimicrobial activity exerted by certain phenolic compounds present in olive oil was higher than found for other foodstuffs. These findings are relevant taking into consideration the high antimicrobial activity reported in the literature for tea, wine and other foodstuffs.

Also, the bactericidal effect of virgin olive oil was confirmed on mayonnaises inoculated with *S. enterica* and *L. monocytogenes*.