

Abstract

Fungal attack is one of the main causes of losses at fruit during postharvest storage. To avoid it, fruits are treated with different chemical products before the storage. We try, in this work, to replace synthetic fungicides frequently used today for non-toxic extracts of medicinal plants with antifungal activity against *Alternaria alternata*, *Botrytis cinerea*, *Penicillium expansum* and *Rhizopus stolonifer*, all of them responsible for infections on apples, pears, nectarines and kiwis. Subsequently, a literature search was performed and the principal groups of active components were selected.

First of all, the antifungal activity of the reference products, which included phenols and phenolic acids, flavonoids, coumarins, saponins and naphthoquinones, was tested.

Taking into account the results obtained, medicinal plants containing one or several of these active compounds were chosen. Plants with naphthoquinones (*Lawsonia inermis*, *Juglans regia* y *Drosera intermedia*), triterpenic and steroidal saponins (*Glycyrrhiza glabra*, *Hedera helix*, *Medicago sativa*, *Aesculus hippocastanum*, *Camellia sinensis*, *Saponaria officinalis*, *Calendula officinalis*, *Panax ginseng*, *Centella asiatica*, *Smilax aristolochiaefolia*, *Ruscus aculeatus* y *Trigonella foenum-graecum*), iridoids (*Verbena officinalis*) and chromones (*Gentiana lutea*) were assayed.

Later, different extracts were prepared and analysed by HPLC-UV and in some cases, the content of the main components in the extracts was quantified. Finally, the antifungal activity of those extracts was assayed, compared with the reference products and studied in order to find whether synergy among the components was present.