

ACTIVITY OF SOME ESSENTIAL OILS AGAINST COMMON SPOILAGE FUNGI OF BUILDINGS

— research paper —

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Abstract: In this paper, six concentrated essential oils (common thyme, wild thyme, juniper, pine, silver fir and fennel) were extracted and characterised using GC-MS. Then, they were investigated for their antifungal action against four mould types isolated from surfaces belonging to the genera *Penicillium*, *Alternaria* and *Aureobasidium*. The antifungal activity of essential oils was investigated using the antibiogram method. Results indicated that the action of the essential oils is different due to their composition and is depending on the mould type. The action of wild thyme, common thyme and fennel essential oil appeared the most interesting, with strong fungicidal effect on all mould spores tested, most probably due to their composition in alcohols like borneol, cineol, tymol, cimol, carvacrol, α -terpineol in thyme, tymol and carvacrol in wild thyme and anetol and estragol in fennel. Pine has lesser antifungal activity, depending on the mould type; *Penicillium* sp. and *Aureobasidium* sp. are relatively resistant to this volatile oil, whereas *Alternaria* species are more susceptible. Juniper and silver fir seem to have very small or no inhibitory action on all moulds tested.

Keywords: volatile oil, thyme, juniper, pine, silver fir, fennel, antifungal

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