

Study of the Antimicrobial Activity of the Extract of the Eucalyptus camaldulensis stemming from the Algerian Northeast

Authors : Meksem Nabila, Bordjiba Ouahiba, Meraghni Messaouda, Meksem Amara Leila, Djebar Mohhamed Reda

Abstract : The problems of protection of the cultures are being more and more important that they interest great number of farmers and scientists because of the excessive use of the organic phytosanitary products of synthesis that causes fatal damages on the environment. To reduce the inconveniences produced by these pesticides, the use of "biopesticides" originated from plants could be an alternative. The aim of this work is the valuation of a botanical species: Eucalyptus camaldulensis from Northeastern Algeria which extracts are supposed to have an antimicrobial activity, similar to pesticides. The extraction of secondary metabolites from the leaves of E. camaldulensis was realized using methanol and water, and measurements of total polyphenols were made by spectrometric method. Determination of the antimicrobial activity of the extracts at issue was realized in vitro on phyto-pathogenic fungal and bacterial stumps. Tests of comparison were included in the essays by using the chemical pesticidal products of synthesis. The obtained results show that the plant contains polyphenols with an efficiency mattering of the order of 22 %. These polyphenols have a strong fungicidal and bactericidal pesticidal activity against various microbial stumps and the values of the zones of inhibition are more important compared with that obtained in the presence of the chemicals of synthesis (fungicide).

Keywords : eucalyptus camaldulensis, biopesticide, polyphenols, antimicrobial activity

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