Valorification Potential of Wormwood (Artemisia absinthium L.) for the Preparation of the Broad-Spectrum "HOPE" Spray

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Research and detection of antiviral remedies, even alternative ones during the pandemic, is a current and global problem. In this context, we set out to investigate the antiviral potential of the native wormwood Artemisia Absinthium, already relying on studies in the literature that provide scientific results on the broad spectrum of action of Artemisia Annua. The aim of the project is to capitalize on the antiviral potential of the perennial plant Artemisia absinthium for the preparation of the broad-spectrum spray. Wormwood oil obtained by apolar extraction was used to collect data used in the research. Wormwood oil was subjected to GC-MS chromatographic analysis. Thus, the presence of the α-thujone oxygenated monoterpenic compound mentioned in the Journal of Chemistry, 2015 as a substance with antiviral activity was identified. Also of particular scientific interest is the active ingredient hotrienol, which has the potential for antibacterial and antiviral action. The scientific problem solved is the elaboration of the formula for the preparation of the spray with a wide spectrum of action and high bioavailability. The spray includes a synergy of two phases: lipophilic which represents an olfactory pyramid containing wormwood oil - 5%, incense oil - 3% and cinnamon oil - 2% and the hydrophilic phase 15 ml of ethyl alcohol of 60% and 10 ml of glycerin. The spray obtained is a natural protection product with antiviral potential for topical and external use. The solution obtained is clear, with a shade of yellow, with a faint smell of wormwood, pH = 7 and corresponds to the reference organoleptic indices. The action time of the spray is 22 seconds. The developed product "HOPE" is efficient in application and cost-effective in preparation.