

DETERMINATION OF THE COMPONENTS AND MAIN PHYSICO-CHEMICAL AS WELL AS BIOLOGICAL PROPERTIES OF THE OIL OF *CORIANDRUM SATIVUM* L. WILLD IN MOC CHAU

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Summary

The purpose of this study is to determine the components and main physico-chemical as well as biological properties of the oil of *Coriandrum sativum* L. Willd in Moc Chau, Lai Chau province. The oil of *Coriandrum sativum* L. Willd in Moc Chau was quantified by steam distillation and dried with Na₂SO₄. By using GC-MS method, we found 37 components in the oil which predicted by comparing their retention times and molecular weights with the standards. In particular, there are 16 hydrocarbons such as monoterpenes (28.15%), sesquiterpenes (17.19%) and 21 oxygenated components like aldehydes (11.42%), alcohols (34.76%) and esters (7.05%). Physico-chemical properties, antioxidant and antimicrobial activities of the oils were also tested and analyzed. The density (at 20°C), acid index and ester index of the oil are 0.87; 0.57 mg KOH/g and 0.73 mg KOH/g, respectively. The antioxidant activity was determined by using 1,1-diphenyl-2-picrylhydrazol (DPPH) radical percentage inhibition and result is of 40.73 ± 0.18%. Agar diffusion method is used to determine antimicrobial activity of the oil. The result showed it sensitively against *Escherichia coli*, *Salmonella typhi*, *Staphylococcus aureus* and *Bacillus cereus* of the oil was.

Keywords: *Constituents, physico-chemical indices, biological activity, the oil of coriandrum sativum L. Willd in Moc Chau.*