

## ABSTRACT

### LC-MS CHROMATOGRAM PROFILE OF ETHANOL EXTRACT OF JAVANESE CHILI (*PIPER RETROFRACTUM VAHL.*) DRIED USING TWO DIFFERENT METHODS

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Javanese Chili (*Piper retrofractum* Vahl.) is a native plant of Indonesia with high medicinal value. All parts of this plant are traditionally used for treating various health issues, including digestive problems, postnatal care, flatulence, fever, and more. In this study, two drying methods for the plant's raw material (simplicia) were employed to compare and determine the best method that yields the highest compound content in Javanese Chili.

The drying methods used in this research were air-drying (Sample A) and sun-drying with a blanching pretreatment (Sample B). To identify the compounds present in the Javanese Chili plant extract, Liquid Chromatography-Mass Spectrometry (LC-MS) method was used. The LC-MS analysis revealed that the Javanese Chili extract contains several compounds, including macamide 1, propafenone, propiverine, fasoterodine, naftidrofuryl, and amorolfine. Some of these compounds have been used in the pharmaceutical field to treat various health conditions, such as urinary incontinence, peripheral circulation disorders, and fungal infections of the nails and skin.

The study showed that both drying methods for the simplicia did not significantly differ in the compound content of the Javanese Chili plant. However, air-drying (Sample A) tended to result in higher levels of certain compounds compared to sun-drying with blanching pre-treatment (Sample B), possibly because the heat treatment could reduce the content of some sensitive compounds.

Overall, this research indicates that the Javanese Chili plant has the potential to be a source of bioactive compounds with high health value, and the appropriate drying method can influence the compound content derived from this plant.

**Keywords:** Javanese Chili, Liquid Chromatography-Mass Spectrometry, drying methods