

# A Comprehensive Review: Extraction, Isolation and Separation Techniques of Zingerberene from Zingiber Officinale by using Soxhlet Distillation

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**Abstract:** *One of the most sought-after natural items on the domestic or global market is essential oils. Numerous plant components can be used to extract essential oils. Collectively, essential oils lack any particular chemical or medicinal properties. Rather, what defines them is what they communicate distinctive scents. Consequently, the widespread propensity to discuss crucial oils as a group, as though that suggested something specific regarding their health, medicinal or culinary qualities are quite erratic and frequently genuinely hazardous. Ginger is a very helpful herb plant that has been utilized extensively in both traditional and modern natural medicine up until recently. Research on this product should be conducted to determine how to meet the nation's need for ginger oil and the most effective method and the least expensive way to increase the product's yield. One of the traditional techniques for extracting essential oils is Soxhlet Distillation. The purpose of Soxhlet distillation is to producing effective ginger oil in a large amount This is because some components cannot be extracted using a particular approach, yet they could be effectively removed with the Soxhlet Extarctor.*

**Keywords:** Zingerberene, Ginger (Zingiber officinale), Soxhlet extraction, Essential oils, Volatile compounds, GC-MS (GasChromatography-Mass Spectrometry)