

5. Extraction methods Different solvents are available to extract bioactive compounds from natural products.[8] Various methods such as sonication, heating under reflux, Soxhlet extraction, maceration, and modern extraction techniques including supercritical fluid extraction are commonly used for plant sample extraction. Alcoholic (methanol or ethanol) solutions frequently provide satisfactory results for the extraction process. It is a common practice when isolating bioactive compounds that a number of different separation techniques such as thin-layer chromatography, column chromatography, flash chromatography, Sephadex chromatography, and high-performance liquid chromatography (LC) are used to obtain pure compounds for the determination of structure and biological activity. Besides that, non-chromatographic techniques such as phytochemical screening assay can also be used to obtain and facilitate the identification of the bioactive compounds. These compounds have been reported to possess biological activities due to the presence of various potentially active groups in their molecular structure.[5] Extraction of air-dried powdered of *Alpinia* rhizomes was done using percolation methods as reported using ethanol (95%). The plant materials were soaked in aqueous alcohol for 2 days and the solvents then filtered on cotton, the marks lifted were re-extracted 7 again till exhaustion. The total alcohol extracts were reduced using a rotatory evaporator at 25°C and kept used for carrying the study[18]. The collected rhizome materials were thoroughly washed under running water, shade dried for a week at 35–40°C, pulverized in an electric grinder and exhaustively extracted successively in a Soxhlet apparatus by using the solvent, ethanol [19]. The extracts were concentrated under reduced pressure and were then powdered. The phytochemical tests below were carried out on the ethanolic extract of *Alpinia galanga* to determine the active constituents according to the procedures and methods outlined in Barnes, J. (1999) and Harborne[20,21]. Summarized by lakhasly.com