PHYTOCHEMICAL STUDIES, THIN LAYER CHROMATOGRAPY AND GC-MS PORFILING OF *SALVADORA PERSICA* TWIG EXTRACT

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ABSTRACT

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Oral hygiene is one of the most important daily routine practices and keeps the mouth and teeth clean while prevents many health problems. Bad and improper care of oral hygiene can cause many mouth diseases. The suitability of miswak chewing sticks as a dental care tool is achieve mechanically by the ability of its fibres to reach in between teeth and chemically by the richness of its phyto constituents, which are unique in their complexity and biological activity. Previous studies have demonstrated the richness of *Salvadora persica* for the minerals and phytochemical components related to dental care. This study was carried out to investigate the phytochemical analysis and determine the compounds of twig of *Salvadora persica.* The method use is phytochemical screening, GC-MS analysis by using hydrodistillation and TLC analysis.The compound perform was found out to be alkaloids, flavonoids, tannins and saponins by using screening process of the ethanol extract, while the compounds presence was terpenoids by using TLC process in ethyl acetate extract. For determine the compounds in twig of *Salvadora persica* using GC-MS, two solvent were used namely hexane and petroleum ether. For the result indicated that petroleum ether extracts show more compounds presence than hexane extracts. In future study, the research can be done with take the sample of extract and test it with the mouth bacteria to determine how much they inhibit. Future study also can continue the research by using the FTIR instrument to determine what really the functional group of *Salvadora persica* shown.

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