EXTRACTION AND DETERMINATION OF MAJOR VOLATILE COMPOUNDS AND ORGANIC ACIDS IN FERMENTED DURIAN FLESH (TEMPOYAK)

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APPROVAL SHEET

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ABSTRACT

EXTRACTION AND DETERMINATION OF MAJOR VOLATILE COMPOUNDS AND ORGANIC ACIDS IN FERMENTED DURIAN FLESH (TEMPOYAK)

Fermented durian flesh (tempoyak) is a famous side dish, especially in Malaysia and Indonesia. It have strong odour, soft texture and contain organic acids. Tempoyak is one of the examples of famous Malaysian traditional fermented foods. However, until now, there is no study has been reported in Malaysia on compounds and organic acids constituent in tempoyak. Therefore, this study was undertaken to determine major volatile compounds and organic acids in tempoyak. In this study, Solid Phase Extraction (SPE) method was used to isolate these organic acids from tempoyak. The isolated organic acids were analysed by using High Performance Liquid Chromatography (HPLC). The determination of major volatile compounds were extracted by headspace Solid Phase Micro Extraction (SPME) and were analysed by using Gas Chromatography-Mass Spectrometry. HPLC analysis showed that the presence of oxalic, tartaric, lactic and ascorbic acids. The major volatile compounds that were found by GC-MS analysis are stearic acid, oleic acid and 2-Acetylamino-3-hydroxy-propionic.acid, glycerol 1,2-dipalmitate, 2,3-Butanediol and gylcidyl oleate.