

Chemical compositions and volatile compounds of Sabah indigenous durian (*Durio dulcis* Becc.)

ABSTRACT

The objective of this present work is to determine the chemical compositions and volatile compounds of Sabah indigenous durian (*Durio dulcis* Becc.). The results obtained showed that durian had 56.1% moisture, 3.5% protein, 2.8% fat, 1.4% ash, 36.26% carbohydrate, 6.6% dietary fiber and 7.0 µg of vitamin A. The mineral analysis results indicated that *Durio dulcis* is a good source of potassium, magnesium and phosphorus. Protein analysis found a total of sixteen major amino acids present in durian namely aspartame, serine, glutamin acid, glycine, histidine, arginine, threonine, alanine, proline, thyrosine, valine, methionine, lysine, isoleusine, leusine and phenylalaine. A total of thirty-three individual fatty acids components were analysed. Among those, palmitic acid was a predominant saturated fatty acid while oleic acid was the most abundant unsaturated fatty acid. The composition of fatty acids showed that total of monounsaturated fatty acids, polyunsaturated fatty acids and saturated fatty acids were 56.7%, 6.7% and 36.6% respectively. A total of thirty-one volatile compounds were identified, among which alcohols, esters, sulphur-containing compounds and ketones were found to be the major constituents.