

## **Chemical properties and fatty acid composition of *Mangifera pajang* and *Mangifera indica* kernel fats**

### **ABSTRACT**

**Introduction:** This study aimed to determine chemical properties and fatty acid composition of kernel fats of *Mangifera pajang* (MP) and *Mangifera indica* (MI), and compare the results with that of cocoa butter from literature. **Methods:** Chemical properties of the extracted crude fats were determined for iodine value, peroxide value and saponification value using AOAC methods, whereas acid value of the mango kernels was determined based on AOCS method. Saturated fatty acid (SFA), monounsaturated fatty acid (MUFA) and polyunsaturated fatty acid (PUFA) were also determined using gas chromatography-flame ionisation detection method. **Results:** The results showed that kernel fats of MI and MP had low chemical values. The fatty acid compositions of MP kernel fat comprised 55.4%, 39.3% and 5.3% of SFA, MUFA and PUFA, respectively. The total PUFA of MP kernel fat (5.3%) was lower than the total PUFA of MI kernel fat (6.1%). **Conclusion:** Due to the similarity of the fatty acid composition between mango kernel fat and cocoa butter, it is suggested that the kernel fat of MP has potential as a substitute for cocoa butter or hydrogenated fat in confectionary products.

**Keyword:** Chemical characteristics; Cocoa butter; Fatty acid; Kernel fat; *Mangifera indica*; *Mangifera pajang*