



Effects of storage conditions on the fatty acid composition of the butter of tallow tree (*Pentadesma butyracea*)

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ABSTRACT

Objective: In this study, the effect of various storage conditions of the kernel of *P. butyracea* on the fatty acid profile of the derived butter was evaluated.

Methodology and results: An experimental design was set up to assess the effects of kernel boiling, the packaging material and the storage duration on the kernel butter yield and water activity; and on the fatty acid composition of derived butter. The fatty acid composition of the butter varied significantly according to the storage conditions of the kernels. The palmitic, stearic and linoleic acids content of the butter tend to increase because of the storage duration while the oleic acid decreases during storage.

Conclusions and Application of results The kernels dried without boiling, stored in jute bag for a duration of less than 6 months provided a butter with optimum yield and less modifications in its fatty acid composition. *Pentadesma butyracea* butter from kernels stored in jute bags maintains its physicochemical quality, thus these packaging materials should be recommended.

Key words: *Pentadesma butyracea*, oil seed, storage, butter, fatty acid