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Polyphenol oxidase activity and inhibition in white yam (*Dioscorea rotundata* var. Laasirin) chips as African fries for human consumption

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The activity of polyphenol oxidase (PPO) in *Dioscorea rotundata* var. Laasirin and the adequacy of heat and chemical treatment in inhibiting this enzyme were investigated in this study. PPO was inhibited by hot water blanching at 95oC for 7 minutes and coded as BOX. Chemical treatment using 0.1% Food grade sodium meta-bisulphite was also carried out and coded as XOX while a combination of both the physical method involving heat treatment and chemical methods was used and coded as BXX. The activity of polyphenol oxidase was determined using spectrophotometric method. A significant difference was evidenced in polyphenol oxidase activity amongst the various inhibition methods. The BXX method showed the highest level of inhibition followed by the BOX method and the XOX method. The yam chips produced using the BXX method can therefore be adopted for its commercial production by different categories of food processors for industrial utilization of white yam.

Biography

Oluwatoyin Oluwole is currently a Director (Ag), at the Food Technology Department in Federal Institute of Industrial Research Oshodi, Lagos, Nigeria.

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