

## The use of purple yam (*Dioscorea trifida*) as a health-promoting ingredient in bread making

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### ABSTRACT:

The use of purple yam (*Dioscorea trifida*) was evaluated as possible health-promoting ingredient in bread making in the state of Amazonas, Brazil. The centesimal composition, energy, and antioxidant activity of purple yam and its incorporated bread formulations (0%, 10%, 15% and 20%) were determined. An acceptance test and microbiological analysis of the formulations 10%, 15% and 20% were also performed. Except for lipids, the centesimal composition and caloric values revealed no statistically significant differences. An addition of purple yam in natura up to 20%, instead of wheat flour in ordinary bread (0%), can be made with no effect on the diet's energy. The free radical scavenging, 2,2-diphenyl-1-picryl-hydrazyl (DPPH) and lipid per oxidation (LPO) methods revealed that the greater the percentage of purple yam being added into the breads the higher the antioxidant activity detected. The acceptance test applied to compare the three formulations of purple yam breads revealed a significant difference only in the attribute colour. Purple yam breads showed no preferable differences. Results highlight the feasibility of purple yam bread as a health-promoting food in the Amazon region.

### Keywords:

Purple yam (*Dioscorea trifida*); antioxidant activity; health-promoting food; Amazon region.