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Evaluating the Functional Properties of Flours Varying Percentage Blend of Malted Acha, Aya and Ede flours as Potentials for Weaning Food Formulation

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Abstract : Traditional weaning foods are dense or thick paste, which are then diluted with large volume of water to produce thin drinkable consistency for infants. This work was aimed at evaluating the functional properties of six varying percentage blends of locally abundant, underutilized crops; malted acha (Digitaria exiles), aya (Cyperus esculentus) and ede (Colocasia esculentum) flours as weaning foods. The results of bulk density and starch digestibility showed a decrease with increasing percentage addition of malted acha with values from 5.889±0.98 to 7.953±0.103; -5.45 to -13.6 respectively. While water absorption capacity, measure of dispersibility, wettability, swelling power, % solubility increased with increase in percentage addition of malted acha with values from 6.6±0.712 to 8.1±0.1; 2.12 to 37.225; 3.21±0.04 to 3.6±0.03; 20.64 to 24.46 respectively. There was no significant difference between all the formula and the control. Results of pasting properties showed that the peak viscosity, break down, final viscosity, setback values from -0.42±0.085 to -3.67±0.085; 5.63±0.045 to 1.79±0.04;-3.88±0.045 to -1.475±0.275; 2.17±0.045 to 2.93±0.045 respectively. There was no significant different between some of the weaning formula and the control for peak viscosity, break down, final viscosity and temperatures required to form paste. The formula compared favorably with the control- a commercially sold formula.

Keywords : weaning food, functional properties, under-utilized crops, blends
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