

DEVELOPMENT AND PHYSICOCHEMICAL CHARACTERIZATION OF FLOUR FROM MEALWORM BEETLE (*Tenebrio molitor* L.)

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Resumo (Texto Científico) - Máximo 300 palavras | Abstract (Scientific Text) - (Maximum 300 words):

The habit of eating insects or Entomophagy is a very ancient practice and has been practiced in many countries around the world. Viable from the nutritional point of view (they are an important source of protein, carbohydrates, lipids, minerals and vitamins) and from the economic point of view (insects have high rate of food conversion, high fertility and require little space for rearing). The mealworm beetle *Tenebrio molitor* L. (Coleoptera: Tenebrionidae) is ideal for this type of study because it is clean, does not require special equipment and require little space. This insect species has a desirable feature for food processing that is the low amount of moisture. The objective of this study was to develop a flour from mealworm beetle and analyze its physicochemical characteristics. The insects were reared in a climatic room at $28\pm 2^{\circ}\text{C}$ e R.U. $70\pm 10\%$. Insects were removed from the rearing monthly and then subjected to bleaching process followed by drying in an oven at 60°C . After, the dried insects were crushed to obtain the flour. Parameters of moisture, ash, lipid, protein, fiber and carbohydrates were performed in triplicate following the criteria of the Analytical Standards of the Institute Adolfo Lutz. The results showed low humidity ($<6\%$), high protein and lipid content (45% and 35%, respectively). These values are higher than the protein found in beef and lipid content found in chicken meat with skin (21.2% and 17.3%, respectively). Due to the high content of lipids, samples were subjected to a profile analysis of fatty acids. We found that the flour is rich in omegas (3, 6 e 9) and has little saturated fatty acid of 14 carbons responsible for the increase of blood lipids. Thus, the flour obtained from mealworm beetle is a food with high nutritional value and beneficial factors to health.

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