

National University of Science and Technology Zimbabwe

FACULTY OF APPLIED SCIENCES DEPARTMENT OF APPLIED BIOLOGY AND BIOCHEMISTRY



EVALUATION OF CASSAVA STARCH AS A SUBSTITUTE FOR CORN

STARCH

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Research Project submitted in partial fulfillment of the requirements of the

Bachelor of Science (Honours) Degree in Applied Biology and Biochemistry for the

National University of Science and Technology

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ABSTRACT

Starch is a very important raw material for many industries. It can be obtained from sources like cassava and maize/corn. In this research, starch was extracted from maize (corn) and cassava by the following stages: steeping, grinding, sieving, centrifugation and then drying. The resultant extracts for each sample were then analyzed for the following: % protein, % oil, % fibre, % moisture, pH, colour and smell. The starch content of the samples was determined using centrifugation. Results indicated that starch content of cassava was higher than that of corn. The protein and oil levels of hand processed cassava starch were lower than in hand processed corn starch, an indication of higher purity. A sample of commercially processed corn starch obtained from Food and Industrial Processors Pvt Ltd (F&I) had less protein, oil and fibre content than the two hand processed sample of cassava and corn. From the results, it was concluded that cassava was a better source of starch than corn hence a good substitute. The recommendations made were to use both cassava and maize/corn as raw materials for starch processing in Zimbabwe in order to meet market demand and also when any of the two was in short supply.