



**NATIONAL UNIVERSITY OF SCIENCE AND
TECHNOLOGY**

**DETERMINATION OF NUTRIENT CONTENT IN LEAVES,
FLOWERS AND FRUITS OF THE PLANT,
Eureiandra fasciculata USED AS A FOOD SOURCE IN THE
NYAHUKU AREA IN MUDZI DISTRICT, MASHONALAND EAST**

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Abstract

The study focused on the plant *Eureiandra fasciculata*, a member of the *Cucurbitaceae* family. *E. fasciculata* is a wild plant used as a food source in the Nyahuku area in Mudzi district, Mashonaland East. The main thrust of the study was to determine the major nutrients in leaves, flowers and fruits of the plant. Samples of leaves, flowers and fruits of the plant, *E. fasciculata* were collected from the Nyahuku area of Mudzi district in Mashonaland East. The samples were sun-dried over a period of three weeks then ground to powder using pestle and mortar. Protein content was determined using the Kjeldahl method while the Soxhlet extractor with petroleum ether as solvent was used for fat extraction. Moisture content was obtained from the difference between mass of sample before and after drying. The difference between mass of dry sample and mass after ashing in the muffle furnace was used to determine ash content of the sample. Fibre content was determined by treating the sample from which fat had been extracted with sulphuric acid, hot water, sodium hydroxide, hydrochloric acid then alcohol to digest any carbonaceous material. The sample was then oven-dried then ashed in the muffle furnace at 550 °C. All nutrient contents were then expressed as percentages. Results showed that there was no significant difference in fat content between leaves, flowers and fruits. Leaves and fruits showed no significant difference in their protein contents while they both showed a significant difference in protein content from flowers. Fibre content showed a similar distribution to that of proteins. Fruits and flowers showed no significant difference in moisture content and they both had a significant difference from leaves. There was no significant difference in ash content between leaves and flowers whereas fruits showed significant difference from both leaves and flowers in ash content. Student t-test was used as the tool for the analysis of the results. It was concluded from the results that nutrient contents of leaves, flowers and fruits of *E. fasciculata* are different, with the exception of fats which showed no significant difference between the three plant parts.