

Formulation of Smoothies from Plantains and Sweet Oranges as a Snack of Potassium Source to Prevent Hypertension

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ABSTRACT

The results of the 2018 Basic Health Research study showed that the prevalence of hypertension reached 34.11% at the age of over 18 years. Hypertension is usually not recognized by sufferers, this is caused by symptoms that resemble complaints of pain in general and do not have specific symptoms. Hypertension can be controlled by administering pharmacological therapy and non-pharmacological therapy. Pharmacological therapy is carried out by administering drugs with types of antihypertensive medication, while non-pharmacological therapy is carried out by changing lifestyles, one of which is regulating diet, regular exercise and reducing stress. Diet arrangements can be made by maintaining good nutritional intake. This study aims to determine the characteristics of smoothies formulations from plantains and sweet oranges as a source of potassium to prevent hypertension. The design used was RAL (Completely Randomized Design) with 6 formulations namely 9:1, 8:2, 7:3, 6:4, 5:5, and 4:6 with 4 repetitions. Based on the results of the study, the highest potassium levels were found in P1 with a ratio of 90% plantains: 10% sweet oranges. Smoothies with P4 treatment (60% plantains : 40% sweet oranges) were the best treatment in determining the effectiveness index. The chemical test results for smoothies with the best treatment had an energy content of 85.24 kcal, 2.03 grams of protein, 2.52 grams of fat, 13.62 grams of carbohydrates, and 168.9 mg of potassium.

Keywords : Hypertension, Plantains, Smoothies, Sweet Oranges