ABSTRACT

COMPARATIVE STUDY OF GLYCEMIC INDEX BETWEEN AGAR AND JELLY

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Indonesia is a fourth country with a largest number of people with Diabetes Mellitus in the world. Diabetes mellitus (DM) is a chronic disease characterized by high blood sugar levels. The disease is difficult to cure, but high blood sugar levels can be controlled. The diet is very important in order to avoid a rise in blood sugar levels that can be harmful to the patient's condition. The concept of a low glycemic index foods can be used as a reference in the selection of diet food that is safe for consumption by patients with diabetes. In this study the use of agar and jelly as one of the alternatives that are expected to have a low glycemic index foods, so it can be recommended for patients with diabetes mellitus and the prevention. This study aimed to determine the reducing sugar, resistant starch content, and the glycemic index of agar and jelly.

In this study, the method used in the determination of reducing sugar is Luff Schoorl titration, gravimetric for the resistant starch content, and using rabbit as the object to determining the glycemic index. Results showed that agar contains 9.89% w/w reducing sugar, 0.06% resistant starch and the glycemic index value is 10.3 in rabbit. Whereas jelly contains 14.71% w/w reducing sugar, 0.05% resistant starch, and the glycemic index value is 24.2 in rabit. Therefore, agar and jelly classified as food with low glycemic index, and could be used as alternative food for diet control in the management and prevention of diabetes mellitus.

Keywords: agar, jelly, glycemic index, diabetes mellitus.