

## ABSTRAK

SOMAHILDA INDHU ADNYANI. 2019. Pemanfaatan Tepung Kecambah Kedelai (*Glycine max*) dan Tepung Brokoli (*Brassica oleracea L*) sebagai Susu Sereal untuk Diabetes Mellitus Tipe 2. Pembimbing: Theresia Puspita dan Sulistiasutik.

Diabetes mellitus adalah penyakit atau gangguan metabolisme yang timbul pada seseorang yang ditandai dengan adanya peningkatan kadar glukosa darah di atas nilai normal. Menurut *International Diabetes Federation* (IDF) pada tahun 2012 lebih dari 371 juta orang di seluruh dunia mengalami Diabetes Mellitus, prevalensi Diabetes Mellitus semakin meningkat yaitu sebanyak 415 juta orang pada tahun 2015. Dalam mengelola diabetes mellitus langkah pertama yang harus dilakukan adalah pengelolaan non farmakologis, berupa perencanaan makanan. Dalam perencanaan menu diet diabetes mellitus, perlu diberikan penekanan mengenai pentingnya keteraturan jadwal, jenis dan jumlah kandungan kalori. Tujuan penelitian ini untuk menganalisis pengaruh formulasi susu sereal dengan penambahan tepung kecambah kedelai dan tepung brokoli terhadap mutu kimia (kadar air dan kadar abu), mutu gizi (protein, lemak, karbohidrat), nilai energi, mutu fungsional (kadar serat), mutu organoleptik dan taraf perlakuan terbaik. Jenis penelitian yang digunakan yaitu eksperimen desain Rancangan Acak Lengkap (RAL). Formulasi susu sereal disusun berdasarkan standar diet DM B Prof. Askandar (2012) menggunakan 3 taraf perlakuan dan setiap taraf perlakuan dilakukan replikasi sebanyak 3 kali, sehingga terdapat 9 unit percobaan. Hasil penelitian menunjukkan bahwa proporsi tepung kecambah kedelai dan brokoli memberikan pengaruh yang signifikan terhadap kadar air ( $p=0.000$ ), kadar abu ( $p=0.000$ ), kadar protein ( $p=0.000$ ), kadar lemak ( $p=0.000$ ), kadar karbohidrat ( $p=0.000$ ), nilai energi ( $p=0.000$ ), kadar serat ( $p=0.000$ ), rasa ( $p=0.000$ ) dan tidak signifikan terhadap warna ( $p=0.424$ ), aroma ( $p=0.375$ ), *mouthfeel* ( $p=0.741$ ). Pada penelitian ini taraf perlakuan 1 (P1) dengan proporsi tepung kecambah kedelai dan tepung brokoli (7:19) merupakan taraf perlakuan terbaik formula susu sereal untuk diabetes mellitus tipe 2.

**Kata Kunci:** Diabetes Mellitus Tipe 2, Susu Sereal, Tepung Kecambah Kedelai, Tepung Brokoli

## ABSTRAK

SOMAHILDA INDHU ADNYANI. 2019. Utilization of Soybean Sprout Flour (*Glycine max*) and Broccoli Flour (*Brassica oleracea L*) as Cereal Milk for Type 2 Diabetes Mellitus.

Advisor: Theresia Puspita dan Sulistiastutik.

Diabetes mellitus is a metabolic disorder or disorder that arises in a person that is characterized by an increase in blood glucose levels above normal values. According to the International Diabetes Federation (IDF) in 2012 more than 371 million people worldwide experienced diabetes mellitus, the prevalence of diabetes mellitus increased by as many as 415 million people in 2015. In managing diabetes mellitus the first step that must be taken is non-pharmacological management, in the form of food planning. In planning the diet for diabetes mellitus, emphasis needs to be given to the importance of regularity of the schedule, type and amount of calorie content. The purpose of this study was to analyze the effect of cereal milk formulations with the addition of soybean sprout flour and broccoli flour on chemical quality (moisture content and ash content), nutritional quality (protein, fat, carbohydrate), energy value, functional quality (fiber content), organoleptic quality and the best level of treatment. The type of research used is an experimental design of Completely Randomized Design (CRD). Formulations of cereal milk are prepared based on the dietary standards of DM B Prof. Askandar (2012) uses 3 levels of treatment and each level of treatment is replicated 3 times, so there are 9 experimental units. The results showed that the proportion of soybean sprouts and broccoli flour had a significant effect on water content ( $p= 0,000$ ), ash content ( $p= 0,000$ ), protein content ( $p= 0,000$ ), fat content ( $p=0,000$ ), carbohydrate levels ( $p= 0.000$ ), energy value ( $p= 0,000$ ), fiber content ( $p= 0,000$ ), taste ( $p= 0,000$ ) and not significant color ( $p= 0.424$ ), aroma ( $p= 0.375$ ), mouthfeel ( $p= 0.741$ ) In this study treatment level 1 (P1) with the proportion of soybean sprout flour and broccoli flour (7:19) is the best level of treatment of cereal milk formula for type 2 diabetes mellitus.

**Keywords:** Type 2 Diabetes Mellitus, Cereal Milk, Soybean Sprout Flour, Broccoli Flour