AKTIVITAS ANTIOKSIDAN DAN DAYA TERIMA MINUMAN PROBIOTIK KEDELAI HITAM DENGAN JENIS MIKROBA YANG BERBEDA

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ABSTRAK

Latar belakang: Kedelai merupakan salah satu jenis tanaman polong-polongan sebagai sumber utama protein dan minyak. Kedelai hitam mempunyai kandungan protein 37-41%, lemak 11-21% serta kandungan antioksidan yang lebih tinggi daripada kedelai kuning. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan probiotik terhadap aktivitas antioksidan dan daya terima minuman probiotik kedelai hitam.

Metode: Eksperimental dengan 3 perlakuan,perlakuan A tanpa penambahan probiotik, perlakuan B dengan penambahan probiotik yaitu *Streptoccoccus thermophillus* dan *Lactobacillus bulgaricus*, perlakuan C dengan penambahan *Lactobacillus casei*. Setiap taraf perlakuan dilakukan 4 kali pengulangan, sedangkan pengukuran mutu organoleptik dengan panelis agak terlatih sebanyak 20 panelis. Aktivitas antioksidan diukur dengan menggunakan metode DPPH, daya terima menggunakan uji hedonik. Aktivitas antioksidan daya terima dianalisis menggunakan *Kruskall Wallis*

Hasil: Aktivitas antioksidan tanpa penambahan probiotik 2,4%, dengan penambahan *Streptococcus thermopillus* dan *Lactobacillus bulgaricus* 8,79%, dengan penambahan *Lactobacillus casei* 10,75%, sedangkan hasil untuk uji daya terima untuk warna, aroma dan rasa menunjukan bahwa panelis menyukai perlakuan tanpa penambahan probiotik(susu kedelai hitam).

Simpulan: Penambahan probiotik *Lactobacillus bulgaricus Streptoccoccus thermophillus , Lactobacillus casei* dapat meningkatkan aktivitas antioksidan kedelai hitam. Aktivitas antioksidan minuman probiotik kedelai hitam yang tertinggi yaitu dengan penambahan *Lactobacillus casei sebesar (*10,75%).

Kata kunci: *kedelai hitam, aktivitas antioksidan , probiotik, daya terima*

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ANTIOXIDANT ACTIVITY AND ACCEPTABILITY OF BLACK SOYBEANS PROBIOTIC BEVERAGE WITH DIFFERENT MICROBES

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ABSTRACT

Background : Soybean is a type of legumes and the source of protein and fat. Black soybean contains of protein 37 – 41%, fats 11 – 21%, and higher antioxidant than yellow soybean. This study aims to understand the effect of probiotics addition to the antioxidant activity and acceptability of black soybean probiotic beverage.

Methods : This was an experimental study with three treatments. Without the addition of probiotics treatment A, the B treatment was by the addition of probiotics, *Streptoccoccus thermophillus* and *Lactobacillus bulgarius*, and the C treatment used *Lactobacillus casei* as probiotic addition. There were four repetitions in each level of the treatment, whereas the measurement of organoleptic quality used some half-trained panelists as many as 20 panelists. Antioxidant activity was measured by DPPH method while acceptability was measured by hedonic test. The antioxidant and acceptability were analyzed by *Kruskall Wallis*.

Results : Antioxidant activity in the treatment without probiotic addition (A treatment) as many as 2,4%, with addition of *Streptococcus thermophillus* and *Lactobacillus bulgarius* (B treatment) 8,79%, with addition of *Lactobacillus casei* 10,75%, while the result for acceptability test of colour, flavor, and taste showed that the panelists prefered the one without any probiotic addition (black soybean milk).

Conclusion : The addition of probiotic *Lactobacillus bulgarius, Streptococcus thermophillus, Lactobacillus casei* may increase the antioxidant activity of black soybean. The highest result for antioxidant activity of black soybean probiotic beverage is the one with addition of *Lactobacillus bulgarius* (10,75%), The product that was acceptable by the panelists from organoleptic quality was black soybean probiotic beverage with addition *Lactobacillus bulgarius and Streptococcus thermophillus*

Keywords : *black soybean, antioxidant activity , probiotic, acceptability.*

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