

## **Uji Sifat Fisik Dan Kimia *Synbiotic Milkshake* Instan Dengan Variasi Pengental Glukomanan Dan Gelatin**

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### **INTISARI**

**Latar Belakang :** Pada kondisi saat ini, makanan fungsional sudah menjadi gaya hidup sehat masyarakat modern. Makanan fungsional yang sering dijumpai yaitu produk olahan susu fermentasi. Namun sayangnya, kurang disukai konsumen karena rasa asam yang dimilikinya. Untuk itu dikembangkan produk pangan fungsional berupa *synbiotic milkshake* instan. Tekstur kental yang menjadi karakteristik *milkshake* menjadikan bahan pengental sebagai bahan dasar pembuatan *milkshake*. Gelatin dan glukomanan merupakan bahan pengental yang sering digunakan pada industri pangan dan memiliki karakteristik pembentuk gel yang berbeda pada kedua bahan pengental tersebut. Untuk itu, diperlukan penelitian mengenai pengaruh penambahan gelatin dan glukomanan terhadap sifat fisik dan kimia *synbiotic milkshake* instan.

**Tujuan Penelitian:** Mengetahui pengaruh variasi bahan pengental gelatin dan glukomanan terhadap sifat fisik dan kimia pada *synbiotic milkshake* instan.

**Metode Penelitian :** Penelitian yang akan dilakukan merupakan penelitian eksperimental dengan desain Rancangan Acak Lengkap (RAL). Terdapat 4 formula dalam penelitian ini yaitu kontrol tanpa bahan pengental, F1 menggunakan pengental gelatin, F2 menggunakan 50% gelatin dan 50% glukomanan, dan F3 menggunakan pengental berupa glukomanan. Uji yang dilakukan meliputi uji sifat fisik (pH dan viskositas) dan sifat kimia ( kadar air, abu, lemak, protein, karbohidrat, dan serat pangan). Hasil analisis diuji statistik menggunakan One Way Anova dengan uji *Pos hoc Duncan* .

**Hasil :** Berdasarkan sifat fisik, terdapat perbedaan signifikan ( $p < 0,05$ ) pada viskositas *synbiotic milkshake* instan namun pada pH menunjukkan perbedaan yang tidak signifikan ( $p > 0,05$ ). Berdasarkan sifat kimia, kadar air, protein, karbohidrat, dan serat pangan menunjukkan perubahan yang signifikan ( $p < 0,05$ ). Sedangkan kadar abu dan kadar lemak tidak terdapat perubahan yang signifikan ( $p > 0,05$ ).

**Kesimpulan :** Penambahan gelatin dan glukomanan memengaruhi viskositas, kadar air, protein, karbohidrat, dan serat pangan *synbiotic milkshake* instan. Namun tidak memengaruhi pH, kadar abu, dan lemak *synbiotic milkshake* instan. Produk *synbiotic milkshake* instan yang dihasilkan merupakan produk tinggi protein, tinggi serat, dan rendah lemak.

**Kata Kunci :** *synbiotic milkshake instan, sifat kimia, sifat fisik, glukomanan, gelatin*

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## **Test of Physical and Chemical Properties of Instant *Synbiotic Milkshake* with Variation of Glucomannan and Gelatin Thickener**

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### **ABSTRACT**

**Background** : In the current condition, functional food has become a healthy lifestyle in modern society. Functional foods that are often found are processed fermented milk products. But unfortunately less favored by consumers because of its sour taste. For this purpose, functional food products such as instant synbiotic milkshake were developed. The thick texture that characterizes the milkshake makes the thickening material the base for making milkshakes. Gelatin and glucomannan are thickening agents that are often used in the food industry and have different gel forming characteristics in the two thickening agents. For this reason, research is needed on the effect of adding gelatin and glucomannan to the physical and chemical properties of instant synbiotic milkshakes

**Objective** : To determine the effect of variations in gelatin and glucomannan thickening agents on physical and chemical properties in instant synbiotic milkshake.

**Method** : The research to be conducted is experimental research with a completely randomized design (CRD) design. There are 4 formulas in this study, namely control without thickener, F1 uses gelatin thickener, F2 uses 50% gelatin and 50% glucomannan, and F3 uses thickener in the form of glucomannan. The tests include physical properties (pH and viscosity) and chemical properties (water content, ash, fat, protein, carbohydrates, and food fiber). The results of the analysis were tested statistically using One Way Anova with the Post hoc Duncan test.

**Result:** Based on physical properties, there was a significant difference ( $p < 0.05$ ) on the viscosity of instant synbiotic milkshake but at pH showed no significant difference ( $p > 0.05$ ). Based on chemical properties, water content, protein, carbohydrates, and food fiber showed significant changes ( $p < 0.05$ ). While ash content and fat content there were no significant changes ( $p > 0.05$ ).

**Conclusions:** The addition of gelatin and glucomannan affects viscosity, water content, protein, carbohydrates, and food fiber instant synbiotic milkshakes. But it does not affect the pH, ash content, and fat of instant synbiotic milkshake. The instant synbiotic milkshake product produced is high in protein, high in fiber, and low in fat.

**Keyword:** *Instant Synbiotic Milkshake, physical properties, chemical properties, glucomannan, gelatin*

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