Pembuatan keju rendah lemak berbahan dasar protein hewani susu unta dengan proses koagulasi enzim papain = The making of low fat cheese made from camel milk animal protein with papain enzyme coagulation process

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Abstrak

Dalam penelitian ini, penulis mencoba untuk mengembangkan keju yang dibuat dari susu unta karena potensi dari susu unta sendiri berdasarkan literatur yang ada sangatlah bagus. Untuk menggantikan enzim rennet sebagai koagulan, digunakan enzim papain sebagai alternatif. Enzim papain terdapat dalam getah papaya yang dibuat dengan cara menyadap getah papaya kemudian diproses lebih lanjut untuk diperoleh enzim papain.

Penelitian dilakukan di laboratorium, dimulai dari proses pembuatan enzim papain, proses koagulasi, dan di akhir, keju hasil dari masingmasing penggumpalan dengan koagulan berbeda dianalisa dengan analisis proksimat untuk diketahui kadar protein, kadar lemak, karbohidrat, air dan abu, analisis potensial zeta untuk mengamati kestabilan larutan, uji pH dan uji organoleptik untuk memastikan hasil keju yang dihasilkan berkualitas baik dan dapat diterima oleh masyarakat.

Berdasarkan hasil penelitian, keju terbaik dihasilkan dari hasil ekstraksi enzim papain dengan pencampuran getah 3 ml dengan aquadest hingga 10 ml ketika suhu susu 70oC, yang menghasilkan keju dengan yield 13,22 gram; pH 5; kadar protein 25,00%; kadar air 56,40%; kadar abu 0,59%; kadar lemak 0,78%; kadar karbohidrat 17,20%; dan nilai potensial zeta -11,59 mV. Dari segi organoleptik, aspek yang paling menonjol adalah aroma dan yang dianggap kurang adalah warna dari keju.

<hr><i>In this research, writer is trying to develop a cheese made from cow milk because the potential of camel milk itself according to existing literature is very good. To replace rennet enzyme as the coagulant, papain enzyme is used as the alternative. Papain enzyme exists in papaya latex which can be made by extracting papaya latex then processed further to obtain the enzyme.

The research is done in a laboratory, from the making of enzyme, coagulation process, and in the end, cheese obtained from each coagulation process with different coagulant will be analyzed with proximate analysis to know the amount of protein, fat, carbohydrate, water and ash, zeta potential analysis to know the stability of the colloid, pH analysis and organoleptic analysis to ensure that the quality of the cheese made in this research and can be accepted in the society.

Based on the research, the best cheese resulted from mixing papain enzyme extracted from papaya with 3 ml of sap, diluted by aquadest until 10 ml that was added on 70oC, which resulted cheese with 13,22 gram of yield; pH 5; 25,00% of protein; 56,40% of water; 0,59% of ash; 0,78% of fat; 17,20% of carbohydrate and it has -11,59 mV on its zeta potential value. From organoleptic analysis, the best aspect from the cheese was the aroma while the color of the cheese is considered as the least best.</i>