

RINGKASAN

Keju selain dapat menggunakan susu dari hewani seperti susu sapi, keju oles juga dapat dibuat dengan menggunakan bahan lain yang berasal dari nabati (keju analog) salah satunya yaitu dengan menggunakan susu jagung. Susu jagung memiliki kandungan yang baik untuk tubuh seperti lemak dan protein namun dalam jumlah yang tidak terlalu tinggi sehingga diperlukan bahan tambahan lain berupa *Whey Protein Concentrate* (WPC), *Virgin Coconut Oil* (VCO) dan asam laktat untuk meningkatkan mutu produk. Tujuan dari penelitian ini adalah: 1) Menentukan proporsi formula optimum terbaik antara *Virgin Coconut Oil*, *Whey Protein Concentrate*, dan Asam Laktat Pada Pembuatan Keju Oles Analog Berbasis Jagung; 2) Mengetahui karakteristik fisikokimia dan sensori keju oles analog berbasis jagung.

Penelitian ini dilakukan dengan menggunakan metode *Response Surface Methodology* (RSM) atau metode permukaan respon menggunakan aplikasi perangkat lunak *Design Expert 10*. Faktor yang diteliti yaitu konsentrasi *Whey Protein Concentrate* (WPC), *Virgin Coconut Oil* (VCO), dan asam laktat. Berdasarkan faktor tersebut diperoleh 20 formula keju oles analog. Variabel yang diuji diantaranya berupa variabel fisiko kimia meliputi rendemen, kadar air, nilai pH, total asam tertitrasi, total padatan terlarut, kadar lemak, dan kadar protein terlarut, serta variabel sensori meliputi aroma, rasa, daya oles, tekstur, warna, dan kesukaan.

Hasil penelitian menunjukkan bahwa proporsi formula optimum terbaik keju oles analog adalah konsentrasi WPC 14.9777%, konsentrasi VCO 12.7204%, dan konsentrasi asam laktat 0.850338%. Karakteristik fisikokimia pada keju oles analog berdasarkan formula optimum terbaik yaitu rendemen 69.04%, nilai pH 4.55, kadar air 66.73%, kadar protein terlarut 4.09%, kadar lemak 9.66%, total padatan terlarut 23.5%, total asam tertitrasi 1.35%, serta karakteristik sensori yang dihasilkan yaitu mudah dioles, tekstur halus, rasa agak asam, warna kuning keputihan, aroma sedang khas keju, dan agak disukai.

SUMMARY

Besides using animal milk such as cow's milk, cheese can also be made by using other ingredients from vegetable (analog cheese), such as corn milk. Corn milk has a good content like fat and protein but it's not too high amounts, so they need to be added from other ingredients such as Whey Protein Concentrate (WPC), Virgin Coconut Oil (VCO) and lactic acid to improve product quality. The purpose of this research are: 1) to determine the best optimum formula proportion between Virgin Coconut Oil, Whey Protein Concentrate, and Lactic Acid to produce analogue spread cheese; 2) to know the physicochemical characteristics and sensory of analogue spread cheese.

This research was conducted using the Response Surface Methodology (RSM) method or response surface method using Design Expert 10 software applications. The factors studied were the concentration of Whey Protein Concentrate (WPC), Virgin Coconut Oil (VCO), and lactic acid. Based on these factor, there are 20 obtained analogue spread cheese formulas. The physicochemical variables that have been studied are yield, water content, pH value, titrated acid total, total dissolved solids, fat content, and dissolved protein content, and sensory variables are aroma, taste, spreading ability, texture, color, and preference.

The results showed that the best optimum proportion of analogue spread cheese formula was WPC concentration 14.9777%, VCO concentration 12.7204%, and lactic acid concentration 0.850338%. The physicochemical characteristics of analogue spread cheese based on the best optimum formula had a yield 69.04%, pH 4.55, water content 66.73%, dissolved protein content 4.09%, fat content 9.66%, total dissolved solids 23.5%, total acid titrated 1.35%, and sensory characteristics the results are easy to smear, soft texture, a slight taste of acid, whitish yellow color, a bit distinctive aroma of cheese, and rather preferred.