

## INTISARI

Pencarian alternatif gelatin halal dari berbagai sumber perlu dilakukan, mengingat Indonesia adalah negara dengan tingkat keberagaman suku dan agama yang tinggi. Alternatif gelatin halal dapat diaplikasikan dalam permen jelly sehingga produk tersebut dapat dikonsumsi oleh semua kalangan. Pembuatan gelatin kulit kerbau melalui proses perendaman NaOH 0.5M selama 2 jam dan HCl 0.9M. Pencucian hingga pH  $\geq$  5.00 dan ekstraksi selama 5 jam suhu 65°C. Tahap selanjutnya adalah pengujian sifat fungsional gelatin. Yield gelatin kulit kerbau sebesar 25,0-30,2%, *gel strength* 350,25 bloom, viskositas 23,03 cP, tetapi masih menunjukkan daya buih yang rendah.

Gelatin kulit kerbau diaplikasikan dalam produk permen jelly dengan pembandingan gelatin sapi komersial. Konsentrasi gelatin kerbau yang digunakan sebesar 4, 5, 6% sedangkan konsentrasi gelatin sapi komersial sebanyak 7, 8 9%. Hasil pengujian sifat kimia menunjukkan permen jelly dari gelatin kulit kerbau memiliki kadar air dan kadar abu yang lebih tinggi dibanding permen jelly dari gelatin sapi komersial. Kandungan gula reduksi dan gula total kedua sampel tidak berbeda nyata. Ditinjau dari nilai  $L^*$ ,  $a^*$ ,  $b^*$  kenampakan permen jelly dari gelatin kulit kerbau lebih cerah dibanding permen jelly dari gelatin sapi komersial. Hasil pengujian tekstur permen jelly memperlihatkan penambahan gelatin kulit kerbau dengan konsentrasi yang lebih rendah dibanding gelatin sapi komersial mampu menghasilkan nilai *hardness*, *springiness*, *chewiness* yang tidak berbeda nyata. Pengujian organoleptik menggunakan metode *hedonic test*. Sampel yang paling disukai panelis adalah permen jelly dari gelatin sapi komersial konsentrasi 9%, tetapi permen jelly dengan gelatin kulit kerbau 6% masih diterima oleh panelis.

Dilihat dari sifat fungsionalnya, gelatin kulit kerbau dapat diaplikasikan dalam pembuatan produk. Permen jelly dari gelatin kulit kerbau memiliki sifat kimia dan fisik yang bagus, akan tetapi masih memerlukan tahap modifikasi terhadap aspek sensorisnya.

Kata kunci: gelatin, gelatin sapi, kulit kerbau, permen jelly, *gel strength*

## ABSTRACT

Gelatin has many functional properties in food products. Research for alternative sources of halal gelatin needs to be done, considering that Indonesia is a large country with high diversity in many sections. Alternative halal gelatin can be applied in jelly candy so the product can be consumed by all people. One of these sources is from buffalo hide. Production of gelatin started by pre-treatment: skins were soaked in NaOH 0.5M for 2 hours and HCl 0.9M for 5 hours. Washing up until pH  $\geq$  5.00 and extracted on waterbath at 65°C for 5 hours. After that, functional characteristics were tested: yield of buffalo hide gelatin is 25,0-30,2%, viscosity 23,03 cP, gel strength 350,25 bloom, and lower foaming properties.

Buffalo hide gelatin applied in jelly candy with references from commercial bovine gelatin. Buffalo hide gelatin used concentration were 4, 5, 6% whereas commercial bovine gelatin used concentration were 7, 8, 9%. The results of chemical analysis show that buffalo hide gelatin has higher water and ash content than commercial bovine gelatin, whereas both of reducing and total sugar didn't different significantly. From the L\*, a\*, b\* value, jelly candy made from buffalo hide gelatin was brighter than jelly candy from commercial bovine gelatin. The results from texture analysis showed that hardness, springiness and chewiness value of jelly candy made from buffalo hide gelatin with lower concentration could approach jelly candy made from commercial bovine gelatin with higher concentration. Sensory analysis used hedonic test methods. The most preference sampel by panelis was jelly candy made from 9% commercial bovine gelatin, although jelly candy made from buffalo hide gelatin 6% still accepted.

Based on its functional properties, buffalo hide gelatin can be applied in product manufacturing. Jelly candy made from buffalo hide gelatin has well chemical and physical properties, but still require modifications for the sensory aspects.

Key note: gelatin, bovine gelatin , buffalo hide, jelly candy, gel strength