RINGKASAN

ANITA DWI WULANDARI. Viskositas, Warna dan Tekstur Yogurt Rendah Lemak yang Ditambahkan Susu Skim Bubuk, Karaginan dan *Whey Protein Concentrate*. Penelitian bertujuan untuk mengetahui pengaruh penambahan susu skim bubuk, karaginan dan *Whey Protein Concentrate* (WPC) terhadap viskositas, warna dan tekstur yogurt rendah lemak. Penelitian dilaksanakan tanggal 18 Maret – 5 April 2019 di Laboratorium Teknologi Hasil Ternak, Fakultas Peternakan dan Laboratorium Teknologi Pangan, Fakultas Pertanian, Universitas Jenderal Soedirman. Penelitian menggunakan susu UHT rendah lemak komersial 12 liter, *starter* yogurt kering 1 *sachet*, susu skim rekonstitusi 1 liter, susu skim bubuk 300 g, karaginan 60 g dan WPC 300 g. Penelitian menggunakan metode eksperimen, dengan rancangan acak lengkap (RAL) untuk uji viskositas dan warna, rancangan acak kelompok (RAK) untuk uji tekstur menggunakan uji organoleptik oleh 25 panelis semi terlatih. Perlakuan terdiri dari T0 : yogurt yang dibuat dari susu rendah lemak, T1 : yogurt yang dibuat dari susu rendah lemak + susu skim bubuk 10%, T2 : yogurt yang dibuat dari susu rendah lemak + karaginan 2%, T3 : yogurt yang dibuat dari susu rendah lemak + WPC 10% dan setiap perlakuan diulang sebanyak 6 kali. Data dianalisis menggunakan Analisis Variansi (ANAVA) dan dilanjutkan menggunakan uji Beda Nyata Jujur (BNJ). Hasil penelitian menunjukkan bahwa penambahan bahan pengental pada yogurt rendah lemak berpengaruh sangat nyata ($P<0,01$) terhadap viskositas. Viskositas tertingi ditemukan pada perlakuan penambahan susu skim bubuk (4094,90 cP ± 128,00). Penambahan bahan pengental pada yogurt rendah lemak berpengaruh sangat nyata ($P<0,01$) terhadap tekstur. Tekstur terlembut pada perlakuan penambahan susu skim bubuk (0,51 ± 0,82). Penambahan bahan pengental pada yogurt rendah lemak berpengaruh tidak nyata ($P>0,05$) terhadap kecerahan (L*). Kesimpulannya, penambahan susu skim bubuk pada yogurt rendah lemak menghasilkan nilai viskositas paling tinggi dan tekstur paling lembut, sedangkan penambahan susu skim bubuk, karaginan dan WPC pada yogurt rendah lemak menghasilkan kecerahan yang relatif sama

SUMMARY

ANITA DWI WULANDARI. Viscosity, Color and Texture of Low-Fat Yogurt Added by Skimmed Milk Powder, Carrageenan and Whey Protein Concentrate. The purpose of this researche was to determine the effect of the adding skimmed milk powder, carrageenan and whey protein concentrate (WPC) on color, texture and viscosity of low-fat yogurt. The researche was held on March 18th – April 5th 2019 at the Laboratory of Animal Product Technology, Faculty of Animal Science and Laboratory of Food Technology, Faculty of Agriculture, Jenderal Soedirman University. The researche used 12 liter low-fat UHT milk, 1 sachet dried yogurt starter, 1 liter reconstituted skimmed milk, 300 g skimmed milk powder, 60 g carrageenan and 300 g WPC. The researche used an experimental method, with a Completely Randomized Design (CRD) for viscosity and color test, Randomized Block Design (RBD) for the texture test using an organoleptic test by 25 semi-trained panelists. The treatment consisted of T0 : yogurt made from low-fat milk, T1: yogurt made from low-fat milk + 10% skimmed milk powder, T2 : yogurt made from low-fat milk + carrageenan 2%, T3: yogurt made from low-fat milk + WPC 10% and all treatment was repeated 6 times. Data were analyzed using Variance Analysis and followed by Honestly Significant Difference (HSD) test. The variables measured are viscosity, color and texture. The researche showed that the addition of thickeners into low-fat yogurt had a high significant effect ($P < 0.01$) on viscosity. The highest viscosity are found on yogurt with skimmed milk powder (4094.90 cP ± 128.00). The addition of thickener in low-fat yogurt had a high significant effect ($P < 0.01$) on texture. The highest texture are found on yogurt with skimmed milk powder (0.51 ± 0.82). Addition of thickener in low fat yogurt has no significant effect ($P > 0.05$) on lightness (L*). In conclusion, the addition of skimmed milk powder in low-fat yogurt produced the highest viscosity and softest texture, while the addition of skimmed milk powder, carrageenan and WPC in low-fat yogurt produced relatively the same lightness.