EVALUASI KUALITAS FISIKO-KIMIA DAN MIKROBIOLOGIS PRODUK SUSU PASTEURISASI DI KEDAI SUSU KAKI LIMA KOTA SURAKARTA

INTISARI

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Kedai susu sapi pasteurisasi dengan konsep kaki lima menjadi salah satu destinasi wisata kuliner di Kota Surakarta. Upaya *higiene* sanitasi terkadang sulit dilakukan oleh pelaku usaha mikro kecil dan menengah (UMKM) seperti pedagang kaki lima (PKL) serta upaya pemalsuan susu besar kemungkinan terjadi. Jaminan keamanan susu telah menjadi tuntutan masyarakat seiring dengan meningkatnya kesadaran akan kesehatan bahan pangan. Penelitian ini bertujuan untuk mengevaluasi kualitas fisiko-kimia dan mikrobiologis susu sapi pasteurisasi yang diperjualbelikan di kedai susu kaki lima Kota Surakarta. Sampel diperoleh dari 30 titik kedai susu yang tersebar di lima kecamatan di Kota Surakarta, masing-masing kedai susu diambil sebanyak 500 ml dengan 2 kali ulangan. Parameter yang diamati meliputi sifat fisik (alkohol, pH, keasaman, dan berat jenis), komposisi kimia (kadar air, berat kering, lemak, berat kering tanpa lemak, dan protein) dan mikrobiologis (*Total Plate Count* dan *Enterobacteriaceae*). Analisis hasil pengujian kualitas fisiko-kimia dan mikrobiologis dilakukan menggunakan *analysis of variance* (ANOVA) pola searah, dilanjutkan dengan *Duncan's new Multiple Range Test* (DMRT) untuk melihat perbedaan kualitas antar kedai. Hasil penelitian menunjukkan rerata dari setiap parameter fisik yaitu alkohol negatif; pH 6,67; keasaman 0,12%; dan berat jenis 1,0219 kg/l. Rerata komposisi kimia susu pasteurisasi adalah sebagai berikut: kadar air 91,83%; berat kering 8,15%; lemak 1,88%; berat kering tanpa lemak 6,30%; dan protein 2,05%. Sementara itu pada parameter mikrobiologis, rerata TPC 4,46 log CFU/ml dan *Enterobacteriaceae* 0,41 CFU/ml. Hasil menunjukkan bahwa susu pasteurisasi antara kedai menunjukkan perbedaan sangat nyata ($P<0,01$) terhadap seluruh parameter fisiko-kimia dan mikrobiologis yang diuji kecuali parameter alkohol yang menunjukkan berbeda tidak nyata ($P>0,05$). Kesimpulan dari penelitian ini adalah susu pasteurisasi yang dijual pedagang kaki lima Surakarta aman untuk dikonsumsi karena nilai mikrobiologis yang memenuhi standar SNI, namun belum memenuhi syarat nutrisi sesuai SNI karena mengalami penurunan kualitas nutrisi fisiko-kimia dan mikrobiologis paling baik diantara 30 kedai susu kaki lima adalah pada sampel 5, sampel 10 dan sampel 22 meskipun kandungan lemak masih dibawah syarat SNI.

Kata kunci: Susu pasteurisasi, Pedagang kaki lima, Kontrol kualitas, Keamanan pangan

EVALUATION OF PHYSICO-CHEMICAL AND MICROBIOLOGICAL QUALITIES OF PASTEURISED MILK PRODUCTS IN STREET MILK STALLS IN SURAKARTA CITY

ABSTRACT

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Pasteurized cow's milk stalls with the concept of street vendors become one of the culinary tourism destinations in Surakarta City. Sanitary and hygiene efforts are sometimes difficult to be handled for micro, small and medium enterprises (MSMEs) such as street vendors, and milk adulteration is likely to occur. Milk safety assurance becomes a public demand along with increasing awareness of food health. This study aimed to evaluate the physico-chemical and microbiological quality of pasteurized cow's milk sold at street milk stalls in Surakarta City. Samples were obtained from 30 milk stalls across five sub-districts in Surakarta City, each milk stall was taken as much as 500 ml with 2 replicates. Parameters observed included physical properties (alcohol, pH, acidity, and specific gravity), chemical composition (moisture content, dry weight, fat, lean dry weight, and protein) and microbiological quality (Total Plate Count and Enterobacteriaceae). Analysis of data of physico-chemical and microbiological quality was carried out using analysis of variance (ANOVA) unidirectional pattern, followed by Duncan's new Multiple Range Test (DMRT) to evaluate differences in quality between shops. The results showed the mean of each physical parameter were alcohol negative; pH 6.67; acidity 0.12%; and specific gravity 1.0219 kg/l. The average chemical composition of pasteurized milk was : 91.83% moisture content; 8.15% dry weight; 1.88% fat; 6.30% lean dry weight; and 2.05% protein. Meanwhile, on microbiological parameters, the average TPC was 4.46 log CFU/ml and Enterobacteriaceae was 0.41 CFU/ml. The results showed that the pasteurized milk between the stalls showed a very significant difference ($P<0.01$) on all physico-chemical and microbiological parameters tested except the alcohol parameter which showed no significant difference ($P>0.05$). The conclusion of this study was that pasteurized milk sold by Surakarta street vendors was safe for consumption due to low microbiological values, but was not within the standard of nutritional requirements according to SNI and the best physico-chemical and microbiological quality among 30 street milk stalls was in sample 5, sample 10 and sample 22 even though the fat content is still below SNI requirements.

Keywords : Pasteurised milk, street vendors, quality control, food safety