

ABSTRAK

NAFILATUN NAHDIAH. “Kajian Total Mikroba dan Derajat Keasaman ($^{\circ}$ SH) Susu Sapi yang Ditambahkan Air dengan Persentase yang Berbeda” dilaksanakan di Laboratorium Produksi Ternak Perah Fakultas Peternakan Universitas Jenderal Soedirman bertujuan untuk mengetahui pengaruh penambahan air dengan persentase berbeda terhadap total mikroba dan nilai derajat keasaman pada susu segar. Sampel susu yang digunakan berasal dari Experimental Farm Fakultas Peternakan Universitas Jenderal Soedirman. Pengambilan sampel dilakukan pada pemerahan pagi hari sebanyak 500 ml per perlakuan. Penelitian tersebut menggunakan Rancangan Acak Lengkap (RAL) dengan metode experimental dan terdapat 5 perlakuan dengan 4 ulangan. Perlakuan yang digunakan yaitu penambahan susu segar dengan air pada persentase 5%, 10%, 15%, dan 20%. Analisis yang digunakan yaitu analisis variansi dengan uji lanjut yaitu uji beda nyata Dunnett's. Hasil penelitian menunjukkan bahwa, susu kontrol mempunyai nilai total mikroba sebesar $3,7 \times 10^5$ cfu/ml dan susu segar yang mendapat perlakuan dengan penambahan air yang berasal dari kran pada persentase 5%, 10%, 15%, dan 20% mendapat hasil berturut-turut yaitu $7,0 \times 10^5$ cfu/ml, $5,7 \times 10^5$ cfu/ml, $4,3 \times 10^5$ cfu/ml dan $8,87 \times 10^5$ cfu/ml. Nilai derajat keasaman pada susu kontrol yaitu $6,8^{\circ}$ SH dan susu segar yang mendapat perlakuan dengan penambahan air yang berasal dari kran pada persentase 5%, 10%, 15%, dan 20% mendapat hasil berturut-turut yaitu $6,8^{\circ}$ SH; $6,4^{\circ}$ SH; $5,95^{\circ}$ SH; dan $5,6^{\circ}$ SH. Hasil penelitian tersebut berpengaruh nyata terhadap variabel yang digunakan ($P < 0,05$). Berdasarkan hasil penelitian yang sudah diuji beda nyata Dunnett's menunjukkan bahwa, penambahan air sebanyak 20% dari total volume susu segar yang digunakan berpengaruh nyata terhadap susu kontrol yaitu dengan total mikroba sebesar $8,87 \times 10^6$ cfu/ml dan nilai derajat keasaman sebesar $5,6^{\circ}$ SH. Hal tersebut menunjukkan bahwa, masyarakat atau konsumen dapat lebih berhati-hati dalam membeli susu karena, penambahan susu dengan air akan mengurangi kandungan gizi yang terdapat di dalam susu dan berdampak pada kesehatan masyarakat.

Kata kunci : susu segar, penambahan air, total mikroba, derajat keasaman, kualitas susu

ABSTRACT

NAFILATUN NAHDIAH. "Study of Total Microbial and Acidity ($^{\circ}$ SH) Cow's Milk Added Water with Different Percentages" conducted at the Dairy Production Laboratory of the Faculty of Animal Husbandry, Jenderal Soedirman University, aims to determine the effect of adding different percentages of water to total microbes and the value of acidity in fresh milk. The milk samples used were from the Experimental Farm Faculty of Animal Husbandry, Jenderal Soedirman University. Sampling was carried out milking in the morning as much as 500 ml per treatment. The study used a completely randomized design (CRD) with experimental methods and there were 5 treatments with 4 replications. The treatment used is the addition of fresh milk with water at a percentage of 5%, 10%, 15%, and 20%. The analysis used is the analysis of variance with further testing that is Dunnett's real difference test. Based on these studies indicate that, control milk has a total microbial value of 3.7×10^5 cfu / ml and fresh milk with the addition of water from the faucet at a percentage of 5%, 10%, 15%, and 20% get results respectively 7.0×10^5 cfu / ml, 5.7×10^5 cfu / ml, 4.3×10^5 cfu / ml and 8.87×10^5 cfu / ml. The value of the acidity in control milk is 6.8° SH and fresh milk that is with the addition of water from the faucet at a percentage of 5%, 10%, 15%, and 20% gets a result of 6.8° SH; 6.4° SH; 5.95° SH; and 5.6° SH. The results of these studies have a significant effect on the variables used ($F_{hit} > 0.01$). Based on Dunnett's real difference test results showed that the addition of water as much as 20% of the total volume of fresh milk used significantly affected control milk with a total microbe of 8.87×10^6 cfu / ml and a value of acidity of 5.6° SH. This shows that, the public or consumers can be more careful in buying milk because, the addition of milk with water will reduce the nutritional content contained in milk and have an impact on public health.

Keywords : fresh milk, addition of water, total microbes, acidity, milk quality

