

ABSTRACT

Milk is the result of milking cows or other mammals, which can be eaten or used as a food ingredient that is safe, healthy without deduction plus parts, or other materials. The cause of decline in milk production is a bacterium that is characterized by inflammation of the udder or mastitis. Coliform mastitis is a form of mastitis can be caused by the bacterium *Escherichia coli*. During this handling is done by using the antibiotic mastitis. The inappropriate use of antibiotic may cause bacterial resistance towards particular antibiotic. This research aims to identification and know the antibiotics that are sensitive or resistant to *E. coli* from cow's milk with subclinical mastitis on cooperative UPP Kaliurang in Sleman, Yogyakarta.

Total of 20 samples of cow's milk were cultured on blood agar plate media (PAD) and *MacConkey Agar* (MCA) and then incubated at 37°C for 24 hours. Colonies that grow are grouped according to colony morphology and biochemical tests were followed by using the test sugars, *Sulphide Indole Motility* (SIM), Indol, *Triple Soy Agar* (TSA) and *Simon Citrate*. To find out the sensitivity of the antibiotic *chloramphenicol* and streptomycin bacteria have been cultured on isolation medium *Brain Heart Infussion* (BHI) and then cultured on *Muller Hinton Agar* (MHA) and the inhibitory zones were measured after incubation at 37 °C for 24 hours.

Of the 20 samples obtained 11 samples of cow's milk contaminated with the bacterium *Escherichia coli*. The results showed that 11 isolates of *Escherichia coli* sensitive to *chloramphenicol* (90.90%) and streptomycin (54.54%); intermediates *chloramphenicol* (0%) and streptomycin (9.09%), *chloramphenicol*-resistant (9.09%) and streptomisin (36.36%).

Keywords: dairy cows, mastitis, subclinical, *Escherichia coli*, antibiotic