

ISOLATION OF *Escherichia coli* FROM RAW MILK AND DETECTION OF *flicH7* GENE USING POLYMERASE CHAIN REACTION TECHNIQUE

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ABSTRACT

Escherichia coli O157:H7 is the serotype from *Enterohemorrhagic Escherichia coli* (EHEC) is an important human pathogen causing Haemorrhagic Colitis, Hemolytic Uremic Syndrome, and Trombocytopenic Purpura. The main aim of this research was to identify the presence of gene *flicH7* by using Polymerase Chain Reaction (PCR) assay, *flicH7* is a specific gene for O157:H7. This study used Purposive Sampling. The samples taken from four dairy farms in Surabaya. Sixty individual milk samples were used in this study, which were taken about 10 ml of each cattle. First, the samples were inoculated in enrichment Brilliant Green Bile Broth (BGBB) followed with plating on Eosin Methylene Blue Agar (EMBA), each were incubated aerobically at 37°C for 24-48 hours. The suspect *Escherichia coli* colony on EMBA which showed metallic green colored were confirm by Indol test. The positive Indol samples continued by PCR test using primer *flicH7* (to detect flagellar H7 gene). The result showed that 24 of 60 samples were Indol positif meant 40% were *Escherichia coli*. By PCR assay one sample of *Escherichia coli* positif probability confirmed as gene coding flagellar H7.

Keyword : *Escherichia coli*, EHEC, *flicH7*, PCR.