

**EVIDENCE GENE ENCODING TETRACYCLINE S (*tetA*) AND
SULFONAMIDES (*sulI*) ANTIBIOTIC RESISTANCE OF
Escherichia coli ISOLATED FROM FRESH MILK
IN SURABAYA**

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ABSTRACT

Escherichia coli is a bacteria that normally grow in the digestive tract, but in certain circumstances may be pathogens that cause gastrointestinal diseases in both humans and animals with clinical symptoms of diarrhea. These bacteria are also capable of contaminating food or beverage in which *Escherichia coli* is a bacteria that often contaminate milk. *Escherichia coli* infection performed an act of treatment with antibiotics, but the use of antibiotics is making a problem of bacterial resistance to antibiotics that may occur in the genetic transfer. Resistances to tetracyclines and sulfonamides among *Escherichia coli* isolates are the most prevalent. In this study explains that the gene coding for tetracycline (*tetA*) and sulfonamide (*sulI*) antibiotic resistance of *Escherichia coli* isolated from fresh milk in Surabaya. 40 samples of milk in the milk can there were 13 positive samples contained *Escherichia coli* that had been planted in the EMBA media and was confirmed by Indol test. These isolates were identified as *Escherichia coli* tested for antibiotic tetracycline and sulfonamide resistance by the *diffuse disc* method. The tetracycline and sulfonamide resistant isolates then conducted confirmatory test by Polymerase Chain Reaction using a primer *tetA* and *sulI*. The result of this research showed lot of 12 positive samples contained bacteria *Escherichia coli* and resistant to tetracyclines there were 11 positive samples showed the presence of bands DNA primer amplification product *tetA* with a length of 178 bp and 11 samples of *Escherichia coli* bacteria that were resistant to sulfonamides there are only five samples positive the band *sulI* DNA primer with a length of 160 bp.

Keyword: *Escherichia coli*, antibiotic resistance, tetracycline, sulfonamide, Polymerase Chain Reaction.