INTISARI

Setia, YK. 2020. Deteksi *Escherichia coli* dengan metode *Polimerase Chain Reaction*. Program Studi D4 Analis Kesehatan, Fakultas Ilmu Kesehatan, Universitas Setia Budi.

Escherichia coli adalah Bakteri patogen yang dapat menyebabkan diare dan termasuk dalam kelompok enterohemoragic yang dapat menimbulkan penyakit hemorrhagic colitis ditandai dengan diare berdarah. Bakteri *Escherichia coli* memiliki beberapa subtipe penyebab diare diantaranya *Escherichia coli* enteropatogenik (EPEC), *Escherichia coli* enterohemorrhagic (EHEC), *Escherichia coli* enterotoksigenik (ETEC), *Escherichia coli* enteroaggregatif (EAEC), *Escherichia coli* enteroinvasive (EIEC) dan *Diffusely adherent Escherichia coli* (DAEC). *Polimerase Chain Reaction* (PCR) adalah metode amplifikasi DNA secara in vitro.

Tujuan penelitian ini adalah untuk mengetahui *Escherichia coli* dapat dideteksi menggunakan *Polimerase Chain Reaction* (PCR) dan unruk mengetahui jenis *Escherichia coli* yang dapat terdeteksi menggunakan *Polimerase Chain Reaction* (PCR). Penelitian ini menggunakan pendekatan literatur review yang berfokus pada evaluasi beberapa hasil penelitian sebelumnya yang berkaitan dengan sumber literatur yang digunakan. Proses pencarian literatur dengan menyebutkan kata kunci "Deteksi *Escherichia coli* dengan metode *Polimerase Chain Reaction* (PCR).

Hasil dari literatur review menunjukan bahwa bakteri *Escherichia coli* dan bakteri *Escherichia coli* O157:H7 *Escherichia coli* enteropatogenik (EPEC), *Escherichia coli* enterohemorrhagic (EHEC), *Escherichia coli* enterotoksigenik (ETEC), *Escherichia coli* enteroaggregatif (EAEC), *Escherichia coli* enteroinvasive (EIEC) dan *Diffusely adherent Escherichia coli* (DAEC) dapat dideteksi menggunakan *Polimerase Chain Reaction* (PCR).

Kata kunci : *Escherichia coli, Polimerase Chain Reaction* (PCR)

ABSTRAK

Setia, YK. 2020. Detection of *Escherichia coli* with Polymerase Chain Reaction. Bachelor of Applied Science in Medical Laboratory Technology, Faculty of Health Sciences, Setia Budi University.

Escherichia coli is a pathogenic bacteria that can cause diarrhea and belongs to the Enterohemorrhagic group that can cause disease hemorrhagic colitis characterized by bloody diarrhea. *Escherichia coli* has some subtypes as the etiology, sort of them are *Enteropathogenic Escherichia coli* (EPEC), *Enterohemorrhagic Escherichia coli* (EHEC), *Enterotoxigenic Escherichia coli* (ETEC), *Enteroaggreative Escherichia coli* (EAEC), *Enteroinvasive Escherichia coli* (EIEC) dan *Diffusely adherent Escherichia coli* (DAEC). *Polymerase Chain Reaction (PCR)* is an in vitro method of DNA amplification.

The Purpose in this research is to determine *Escherichia coli* can be detected using *Polimerase Chain Reaction* (PCR) and to determine the type of *Escherichia coli* can be detected using *Polimerase Chain Reaction* (PCR). These research uses a review-literature approach that focuses on the evaluation of some previous research results that relating to the literary resources used. The process of searching the literature by mentioning the keyword "detection *Escherichia coli* with *polymerase Chain Reaction (PCR)* method*."*

The result of the review literature indicates that the bacteria Escherichia coli and some types of bacteria *Escherichia coli* can be detected using *polymerase Chain Reaction (PCR). Enteropathogenic Escherichia coli* (EPEC), *Enterotoxigenic Escherichia coli* (ETEC), *Enteroaggreative Escherichia coli* (EAEC), *Enteroinvasive Escherichia coli* (EIEC) dan *Diffusely adherent Escherichia coli* (DAEC) can be detected using *Polimerase Chain Reaction* (PCR).

Keywords*: Escherichia coli, Polimerase Chain Reaction (PCR)*