

INTISARI

ISOLASI DAN KARAKTERISASI BAKTERI *Escherichia coli* PADA FESES KUDA PENDERITA KOLIK DI DAERAH ISTIMEWA YOGYAKARTA

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Gangguan gastrointestinal menjadi kendala utama dalam usaha peningkatan populasi atau produktivitas kuda. Pada laporan PORDASI Daerah Istimewa Yogyakarta tahun 2017 dinyatakan bahwa kejadian penyakit pada kuda sebanyak 335 kasus/tahun, dari total kejadian, penyakit gastrointestinal menempati angka 16,9%. *Escherichia coli* adalah bakteri oportunistis yang merupakan salah satu penyebab gangguan gastrointestinal pada kuda. Penelitian ini bertujuan untuk mengetahui hasil isolasi dan karakteristik bakteri *Escherichia coli* dalam feses kuda penderita kolik di Daerah Istimewa Yogyakarta.

Penelitian ini dilakukan menggunakan 9 sampel feses dari kuda penderita kolik di Daerah Istimewa Yogyakarta. Metode penelitian ini dilakukan menggunakan media selektif untuk isolasi bakteri. Media isolasi menggunakan *MacConkey Agar* (MCA), uji-biokimia *Triple Sugar Iron Agar* (TSIA), IMViC dan uji gula-gula (glukosa, maltosa, dan laktosa).

. Bakteri *Escherichia coli* yang ditemukan pada 7 sampel feses kuda penderita kolik di Daerah Istimewa Yogyakarta memiliki karakteristik koloni berwarna merah, *smooth*, dengan tepi koloni sedikit cembung dan kering, bentuk sel batang berukuran sedang, dapat bergerak dan termasuk golongan bakteri Gram negatif, dan hasil uji bioikimia TSIA ^{A/A} H₂S -, Gas +, indole +, MR +, VP -, citrat -, dan pada uji gula-gula mampu memfermentasi glukosa laktosa dan maltosa. Berdasarkan hasil isolasi dan karakterisasi dari feses kuda penderita kolik di Daerah Istimewa Yogyakarta dapat disimpulkan bahwa terdapat 77,8 % positif bakteri *Escherichia coli*.

Kata kunci: *Escherichia coli*, feses, kolik, kuda

ABSTRACT

ISOLATION AND CHARACTERIZATION OF *Escherichia coli* BACTERIA IN COLIC HORSE FECES IN SPECIAL REGION OF YOGYAKARTA

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Gastrointestinal disorders are a major obstacle in the efforts to increase population or productivity of horses. In 2017, PORDASI reported that the incidence of disease in horses was 335 cases / year, from all of the total incidence, gastrointestinal disease was 16.9%. *Escherichia coli* is an opportunist bacterium which is one of the causes of gastrointestinal disorders in horses. This study aims to determine the nature and characteristics of *Escherichia coli* bacteria in feces taken from the horse's caudal rectum in the Special Region of Yogyakarta.

This study was conducted using nine samples in the form of feces from horses with colic patients in the Special Region of Yogyakarta. The method of this study was carried out using selective media for bacterial isolation. Isolation media using MacConkey Agar (MCA), biochemical tests such as Triple Sugar Iron Agar (TSIA), IMViC and sugar tests (glucose, maltose, and lactose).

Escherichia coli found in 7 samples in the form of feces from horses with colic patients in the Special Region of Yogyakarta have colonies characteristic that are red, smooth, with a slightly convex and dry colony edge, bacil-shaped cell with medium size, motile, and belongs to the group of Gram negative bacteria, and the results of the biochemical test of TSIA A/A H₂S -, Gas +, indole +, MR +, VP -, citrate -, and in the sugar test are able to ferment glucose lactose and maltose. Based on the results of isolation and characterization of horse feces with colic sufferers in the Special Region of Yogyakarta it can be concluded that there were 77.8% positive *Escherichia coli* bacteria.

Keywords: *Escherichia coli*, feces, colic, horse