

**PROCEDURE IN LABORATORY BALAI BESAR VETERINER
WATES YOGYAKARTA: ISOLATION AND
IDENTIFICATION OF *Clostridium sp.***

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ABSTRACT

Clostridium is a rod-shaped anaerobic bacteria which has a large shape, Gram-positive and has spores. It can live in water, soil, and digestive tract of animals as well. The spread of *Clostridium* can through concentrate feed and processed food products. *Clostridium* has several species, such as *Clostridium perfringens*, *Clostridium chauvoei*, *Clostridium tetani*, *Clostridium difficile*, and *Clostridium botulinum*. The procedure of isolation and identification of *Clostridium sp.* are used *Clostridium* culture test and Gram staining. The result of Gram staining shows purple, and bacil shape. Then, it can be identified that the bacteria is *Clostridium sp.* Retrieval of data obtained in the Balai Besar Veteriner Wates, Yogyakarta in 2013 were six samples tested positive and in 2016, three samples tested positive. *Clostridium sp.* is not zoonotic, but *Clostridium tetani* is zoonotic that can lead to death. *Clostridium sp.* is able to contaminate the processed products for human consumption and concentrate feed which is consumed by animals. Therefore, the cleanliness needs to be crucial in regard to *Clostridium sp.*

Key words: *Clostridium*, anaerobic, toxin, culture test, staining Gram.

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INTISARI

Clostridium merupakan bakteri anaerob yang berbentuk basil, Gram positif, memiliki spora, dapat hidup di air, tanah, dan di dalam saluran pencernaan hewan. Penyebaran *Clostridium* dapat melalui konsentrat pakan dan produk olahan pangan. *Clostridium* mempunyai beberapa spesies seperti *Clostridium perfringens*, *Clostridium chauvoei*, *Clostridium tetani*, *Clostridium difficile*, dan *Clostridium botulinum*. Prosedur isolasi dan identifikasi *Clostridium sp.* menggunakan uji kultur *Clostridium* dan pewarnaan Gram. Hasil pengecatan Gram menunjukkan warna ungu dan berbentuk basil. Hal ini dapat diidentifikasi bahwa bakteri tersebut adalah *Clostridium sp.* Pengambilan data diperoleh di Balai Besar Veteriner Wates, Yogyakarta adalah pada tahun 2013 enam sampel dinyatakan positif dan pada tahun 2016 tiga sampel dinyatakan positif. *Clostridium sp.* tidak bersifat zoonosis, tetapi *Clostridium tetani* dapat mengakibatkan kematian. *Clostridium sp.* mampu mencemari produk olahan yang dikonsumsi manusia dan konsentrat pakan yang dikonsumsi oleh hewan sehingga perlu diperhatikan kebersihan.

Kata kunci: *Clostridium*, anaerob, toksin, uji kultur, pewarnaan Gram

