IDENTIFICATION OF Extended Spectrum ß-Lactamase PRODUCING Escherichia coli FROM RECTAL SWABS OF DOG IN SURABAYA USING VITEK-2 METHOD

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ABSTRACT

This study aimed to identify the presence of Extended-Spectrum ß-Lactamase (ESBL) producing Escherichia coli from rectal swabs of dog in Surabaya using Vitek-2 method. One hundred samples of rectal swabs of dog were taken from five parts in Surabaya covering Central Surabaya, Northern Surabaya, Eastern Surabaya, Southern Surabaya and Western Surabaya. Escherichia coli bacteria were isolated and identified morphologically and biochemically which was subsequently screening test by the Double Disk Synergy Test (DDST) method using the type of disk antibiotic namely Amoxiclyln with Clavulanic acid, Ceftazidine and Cefotaxime and the latter confirmed using the Vitek-2 method. The result showed that all samples totally 100 were positive Escherichia coli. The results of screening using the DDST method showed that 9% (9/100) were suspected as ESBL producers. Furthermore, the confirmation test using the Vitek-2 method and showed that eight isolates 88,9% (8/9) of ESBL producing E. coli are obtained. This research has encouraged the need for public awareness to pay more attention to the role of companion animals because they are found to be potential as a reservoir in the spread of antibiotic resistance in humans and the environment.

Key words : DDST, Dog, ESBL, Escherichia coli, Vitek-2