

ISOLATION AND *Mannheimia haemolytica* FROM  
LOCAL AND IMPORTED GOATS IN COMMERCIAL  
FARM IN TERENGGANU

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**ISOLATION OF *Mannheimia haemolytica* FROM LOCAL AND IMPORTED  
GOATS IN COMMERCIAL FARM IN TERENGGANU**

By  
Norsyuhada Binti Ismail

A research report submitted in partial fulfillment of  
the requirements for the award of the degree of  
Bachelor of Science (Biological Sciences)

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PENGAKUAN DAN PENGESAHAN LAPORAN  
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: **ISOLATION OF *Mannheimia haemolytica* FROM LOCAL AND IMPORTED GOATS IN COMMERCIAL FARM IN TERENGGANU** oleh **NORSYUHADA BINTI ISMAIL**, no. matrik: **UK12004** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperoleh ijazah **SARJANA MUDA SAINS (SAINS BIOLOGI)**, Fakulti Sains dan Teknologi, Universiti Malaysia Terengganu.

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## DECLARATION

I hereby declare that this thesis entitled Isolation of *Mannheimia haemolytica* from local and imported goats in commercial farm in Terengganu is the result of my own research except as cited in the references.

Signature :   
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## ABSTRACT

*Mannheimia haemolytica* is one of the most important respiratory pathogens of domestic ruminants and causes serious outbreaks of acute pneumonia. The importance of this study is to know the prevalence of *Mannheimia haemolytica* and the factors associated with this prevalence in Ladang Rakyat Terengganu, Cheneh. In this study of isolation, nasal swab were collected from 120 clinically healthy local and imported goats and were divided into three groups that were pre-weaning, weaning and adult group. Collection of samples was done in six times, three times before monsoon season and another three times during monsoon season. The swabs were inoculated onto blood agar with 5% sheep blood and Mac Conkey agar. Further confirmation of bacterial isolation was done by using API 20E. As a result, no *Mannheimia haemolytica* was isolated before monsoon season but 0.97% of the organisms were isolated during monsoon season. Therefore, it was concluded that the prevalence of *Mannheimia haemolytica* in Ladang Rakyat Terengganu, Cheneh was higher in local adult goats and can be isolated during monsoon season. The small percentage of the isolated *Mannheimia haemolytica* may be probably due to the quite efficiently vaccination in this farm.



## ABSTRAK

*Mannheimia haemolytica* adalah salah satu daripada patogen yang penting di dalam sistem pernafasan haiwan ruminan dan boleh menyebabkan sindrom akut paru-paru yang serius. Kepentingan kajian ini adalah untuk mengkaji peratusan sebenar kehadiran *Mannheimia haemolytica* dan faktor-faktor yang menyebabkan kewujudan patogen ini di Ladang Rakyat Terengganu, Cheneh. Untuk kajian pemencilan ini, spesimen daripada rembesan hidung 120 ekor kambing tempatan dan import yang sihat secara klinikal diambil dan dibahagikan kepada tiga kumpulan iaitu kumpulan sebelum cerai susu, selepas cerai susu dan dewasa. Kutipan sampel dilakukan sebanyak enam kali, tiga kali sebelum musim monsun dan tiga kali semasa musim monsun. Spesimen itu kemudiannya diinokulasi di atas agar darah yang mengandungi 5% darah kambing dan juga agar Mac Conkey. Pengesahan lanjutan untuk pemencilan bakteria dilakukan menggunakan API 20E. Sebagai keputusannya, tiada *Mannheimia haemolytica* yang dipencilkan sebelum musim monsun dan sebanyak 0.97% organisma ini berjaya dipencilkan semasa musim monsun. Oleh itu, dapat disimpulkan bahawa kehadiran *Mannheimia haemolytica* di Ladang Rakyat Terengganu, Cheneh adalah tinggi di dalam kambing tempatan yang dewasa dan dapat dipencilkan ketika musim monsun berlangsung. Peratusan yang kecil daripada pemencilan *Mannheimia haemolytica* mungkin kerana kesan daripada keberkesanan vaksin yang diaplikasikan di ladang ini.