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**SCREENING OF *Escherichia coli*, *Salmonella* sp. AND *Vibrio* sp. OF
PROCESSED CHICKEN FROM WET MARKETS IN KUALA
TERENGGANU**

By

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**Research Report submitted in partial fulfilment of
the requirements for the degree of
Bachelor of Applied Science (Biodiversity Conservation and Management)**

**Department of Biological Sciences
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JABATAN SAINS BIOLOGI
 FAKULTI SAINS DAN TEKNOLOGI
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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

SCREENING OF Escherichia coli, Salmonella sp. AND Vibrio sp.
OF PROCESSED CHICKEN FROM WET MARKETS IN KUALA TERENGGANU

oleh RUHIL HAYATI BINTI HAMDAN....., No. Matrik UK 5343.....

telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini
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LIST OF SYMBOLS

%	Percentage
°C	Degree Celsius
µg	Microgram
EMB	Eosine Methylene Blue
g	Gram
H ₂ S	Hydrogen sulphide
mL	Milimetre
TSI	Triple Sugar Iron
TCBS	Thiosulfate Citrate Bile Salt
CO ₂	Carbon Dioxide
H ₂ O	Water
H ₂ O ₂	Hydrogen Peroxide
KCN	Kalium Cyanide

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ABSTRACT

The objectives of this research were i) to isolate and identify *Escherichia coli*, *Salmonella sp.* and *Vibrio sp.* from processed chickens and ii) to determine the sensitivity of *Escherichia coli*, *Salmonella sp.* and *Vibrio sp.* towards commonly used antimicrobial agents. Sixty individuals of processed chickens were sampled. EMB, MacConkey, TCBS and Salmonella agar were used to isolate and identify the bacteria. A series of biochemical tests were performed including indole, methyl red, Voges – Proskauer, citrate, urease, hydrogen sulphide production and oxidase test. Antibiotic susceptibility pattern of isolates were studied by using the Kirby – Bauer method. *Escherichia coli*, *Salmonella. sp* and *Vibrio sp.* were isolated from sixty processed chickens from three wet markets in Kuala Terengganu ; Pasar Payang, Pasar Chabang Tiga and Pasar Batu Enam. *Escherichia coli* showed high sensitivity to ampicilin, chloramphenicol, gentamicin and polymycin B. *Salmonella sp.* were susceptible to ampicilin, chloramphenicol , gentamicin, kanamycin and polymycin B. *Vibrio sp.* were susceptible to, gentamicin, kanamycin, neomycin and tetracycline.

PENGESANAN *Escherichia coli*, *Salmonella sp.* DAN *Vibrio sp.* DARI AYAM YANG TELAH DIPROSES DARIPADA PASAR DI KUALA TERENGGANU

ABSTRAK

Objektif kajian ini adalah i) untuk pemencilan dan pengecaman terhadap *Escherichia coli*, *Salmonella sp.* dan *Vibrio sp.* daripada ayam yang telah diproses dan ii) untuk pengesanan sensitiviti *Escherichia coli*, *Salmonella sp.* dan *Vibrio sp.* terhadap beberapa antimikrob yang biasa digunakan. Enam puluh sampel ayam yang telah diproses telah diambil daripada tiga buah pasar tersebut. Jenis agar yang digunakan untuk pemencilan bakteria adalah EMB, MacConkey, TCBS and Salmonella agar. Ujian biokimia dijalankan untuk pengecaman isolat iaitu indole, methyl – red, Voges – Proskauer, sitrat, urease, oksidase dan penghasilan hidrogen sulfida. Kerintangan isolat terhadap antibiotik yang dikaji menggunakan teknik Kirby – Bauer. *Escherichia coli*, *Salmonella sp.* dan *Vibrio sp.* telah dipencilkan dari sampel ayam yang telah diproses daripada tiga buah pasar di Kuala Terengganu iaitu Pasar Payang, Pasar Chabang Tiga dan Pasar Batu Enam. *Escherichia coli* sensitif terhadap ampisilin, kloramfenicol, gentamisin dan polimisin B. *Salmonella sp.* pula sensitif terhadap ampisilin, kloramfenicol, gentamisin, kanamicin and polimisin B. *Vibrio sp.* sensitif terhadap kloramfenicol, gentamisin, kanamicin, neomicin and tetrasiklin.