MOLECULAR CHARACTERIZATION OF *Escherichia coli* ISOLATED FROM SPROUTS (*Brassica oleracea*)

SOH HWEE LING

FACULTY OF AGRO-BASED INDUSTRY AND FOOD SCIENCE
UNIVERSITI SAINS ISLAM TEKNOLOGI MALAYSIA

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MOLECULAR CHARACTERIZATION OF *Escherichia coli* ISOLATED FROM OYSTERS (*Crassostrea iredalei*)

SOH HWEE LING

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FACULTY OF AGROTECNOLOGY AND FOOD SCIENCE
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA

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ABSTRACT

Bivalve shellfish particularly oyster features highly in statistic of food borne disease. The transmission disease from oyster to man is because oyster is a filter feeder and it normally eaten raw or lightly cooked. The bacteria infection cause by the consumption of raw oyster is a serious international debate. In this study, the oyster *Crassostrea iredalei* was collected from Sg. Merchang, Kuala Terengganu. The isolates were identified by using morphological, physiological and biochemical test. All the isolates were susceptible to Kanamycin, Nalidixic acid, Oxytetracycline and Furazolidone. Genei Spin Mini Prep Kit was used for plasmid extraction. 3 out of 16 isolates were harbor plasmid, 35.3Mda. Lastly, the genetic diversity of *E. coli* was generated by RAPD-PCR and two strains of *E. coli* were obtained.

ABSTRAK

Tiram biasa menyebabkan keracunan makanan berlaku dalam statistik yang agak tinggi. Jangkitan bakteria berlaku melalui tiram kepada manusia kerana tiram berfungsi sebagai penapis dan biasanya dimakan secara mentah atau separuh masak. Jangkitan bakteria melalui pemakanan tiram mentah merupakan masalah kesihatan yang menjadi isu antarabangsa. Dalam kajian ini, tiram *Crassostrea iredalei* dari Sg, Merchang, Kuala Terengganu telah dikaji. Kajian tentang morfologi, biokimia dan fisiologi dilakukan untuk mengenalpasti ciri-ciri *Escherichia coli*. *E. coli* didapati sensitif terhadap Kanamycin, Oxytetracycline, Nalidixic acid dan Furazolidone. Genei Spin Mini Prep Kit telah digunakan untuk ekstrak plasmid. 3 daripada 16 isolat mengandungi plasmid dengan size 35.3Mda. Amplifikasi secara rawak DNA polimorfik (RAPD) digunakan untuk menganalisis kepelbagaian genetik *E. coli*. Dua strain *E. coli* telah diperolehi.