THE [illegible] DISTRIBUTIONS AND DNA [illegible] OF *NERITA* [illegible] AMPLIFICATION STUDY

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THE USE OF TWO DIFFERENT PRESERVATIVES AND DNA EXTRACTION METHODS FOR TISSUES OF *NERITA SP* (SNAIL) IN PCR AMPLIFICATION STUDY.

By

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Research Report submitted in partial fulfillment of
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PENGAKUAN DAN PENGESAHAN LAPORAN PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: THE USED OF TWO DIFFERENT PRESERVATIVES AND DNA EXTRACTION METHODS FOR TISSUES OF *NERITA* SP (SNAIL) IN PCR AMPLIFICATION STUDY oleh Mohd Izani Bin Mohamed no. matrik: UK 8041 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains (Sains Biologi) Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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abs	-	absorbance
gm	-	gram
M	-	molar
mmol	-	milimol
nm	-	nanometer
U	-	unit
%	-	Percentage
°C	-	Degree Celsius
1X	-	One Time
A	-	Adenosine
bp	-	Base pair
C	-	Cytosine
cm	-	Centimeter
dH_20	-	Distilled water
DNA	-	Deoxyribonucleic acid
dNTP mix	-	Deoxyribonucleotides mixture
EDTA	-	Ethylenediaminetetracetic acid
g	-	Gram
G	-	Guanocine
M	-	Molarity
µg	-	Microgram
TNES	-	Tris NaCl EDTA-2Na SDS

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ABSTRACT

In this study, the objectives are to measure a quality and quantity of DNA from different preservatives and to determine the best technique to extract DNA from *Nerita sp.* From this study, the result showed the TNES-Urea Buffer is the better preservative than Ethanol 95% because all samples in this preservation get the clear bands of DNA in Genomic Extraction. DNA extraction from the Phenol-Chloroform method is the best extraction because all the samples showed a clear and sharpness banding of DNA but in the Kit Wizard Genomic DNA Purification Kit (Promega), the banding of Ethanol second month and third month showed degraded and not clear bands. In purity and quantity DNA, most of the *Nerita sp* DNA samples had an A260/280 ratio below 1.8 but only two Ethanol samples in second and third month on ratio above 2. In Screening RAPD primer, all the screening bands of the TNES-Urea Buffer and Ethanol 95% are clear and sharpness bands average between 1 to 8 fragments.

PENGGUNAAN DUA JENIS PENGAWET DAN KAEDAH PENGEKSTRAKKAN DNA YANG BERBEZA DARIPADA TISU-TISU *NERITA SP* DALAM KAJIAN AMPLIFIKASI PCR

ABSTRAK

Objektif utama kajian ini dibuat adalah untuk mengira kualiti dan kuantiti DNA daripada pengawetan yang berbeza dan untuk menentukan teknik yang terbaik dalam mengekstrakan DNA *Nerita sp*. Daripada kajian yang dibuat, didapati pengawet TNES-Urea Buffer lebih baik daripada Etanol 95% kerana semua sample dalam pengawetan ini mempunyai jaluran DNA yang jelas semasa melakukan proses pengektrakan Genomic DNA. Pengekstrakan kaedah Phenol-Chloroform pula adalah pengekstrakan terbaik kerana jaluran DNA untuk semua jenis sampel yang terhasil adalah jelas. Bagi kaedah Genomic DNA Purification (Promega) Kit pula, hanya dua sampel yang menghasilkan jaluran DNA yang tidak jelas dan rosak. Dalam kualiti dan kuantiti DNA, semua sampel DNA *Nerita sp* mempunyai nisbah A260/280 di bawah 1.8 tetapi hanya dua sampel Ethanol bulan kedua dan ketiga mempunyai nilai atas daripada 2.0. Dalam RAPD primer Screening, jaluran DNA semua sampel bagi TNES-Urea Buffer and Ethanol 95% adalah jelas antara 1 hingga 8 fragmen.