NUTRITION CONTENT ANALYSIS OF MUSHROOM

(*Auricularia sp.*)

NURUL SYUHADA MOHD. NOOR

FAKULTI SAINS DAN TEKNOLOGI

KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA

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NUTRITION CONTENT ANALYSIS OF MANJAKANI (*Quercus infectoria oliv)*

By

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PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: **Nutrition Content Analysis Of Manjakani (*Quercus infectoria oliv)*** oleh **Wafa' binti Mohd. Ujang** No. Matrik **UK 6915** 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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LIST OF ABBREVIATIONS

P	Phosphorous
ATP	Adenosine triphosphate
DNA	Deoxyribonucleic acid
RNA	Ribose nucleic acid
Ca	Calcium
Mn	Manganese
Cu	Copper
Co	Cobalt
Zn	Zinc
Cr	Chromium
Va	Vanadium
µg	Microgram
Pb	Lead
Ni	Nickel
Al	Aluminium
mol/L	Mol per liter
mg/L	Miligram per liter
µg/ml	Microgram per mililiter

mL	Mililitre
nm	Nanometer
µg	Microgram
ppm	Part per million
abs	Absorbance
ICP-AES	Inductive Couple Plasma-Atomic Emission Spectrometer
AAS	Atomic Absorption Spectrophotometer

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ABSTRACT

Study was conducted to analyze the nutrition content of Manjakani (*Quercus infectoria oliv).* The phosphorous content was analyzed using Yellow Vanado Molybdate Method. Other nutrients (calcium, manganese, copper, cobalt, zinc, chromium, vanadium, lead, nickel and aluminium) were determined using ICP-AES and AAS machine. The result showed that Manjakani has two macronutrient, calcium and phosphorous with calcium is the highest value for overall nutrient in Manjakani with 1208 mg/kg and phosphorus 347 mg/kg. For micronutrients, aluminium have the highest value with 77.07 mg/kg, followed by nickel (6.2738 mg/kg), vanadium (5.732 mg/kg), copper (4.983 mg/kg), zinc (4.362 mg/kg), manganese (2.0 mg/kg), lead (1.62 mg/kg), chromium (0.5732 mg/kg) and cobalt (0.26 mg/kg). This study showed that nutrition value in Manjakani is adequate and does not bring nutrition toxic.

ANALISIS KANDUNGAN NUTRISI DALAM MANJAKANI
(*Quercus infectoria oliv*)

ABSTRAK

Kajian ini dijalankan adalah bagi menganalisis kandungan nutrisi dalam buah Manjakani (*Quercus infectoria Oliv).* Kandungan fosforus ditentukan melalui kaedah Yellow Vanado Molybdate, manakala bagi nutrien yang lain (kalsium, mangan, kuprum, kobalt, zink, kromium, vanadium, plumbum, nikel dan aluminium) ditentukan menggunakan mesin ICP-AES dan juga mesin AAS. Keputusan analisis mendapati manjakani mengandungi dua makronutrien, iaitu kalsium dan fosforus, dangan kalsium merupakan kandungan nutrisi yang terbanyak dalam manjakani iaitu sebanyak 1208 mg/kg, manakala fosforus sebanyak 347 mg/kg, bagi mikronutrien pula, aluminium merupakan kandungan tertinggi dengan 77.07 mg/kg, diikuti dengan nikel (6.2738 mg/kg), vanadium (5.732 mg/kg), kuprum (4.983 mg/kg), zink (4.362 mg/kg), mangan (2.0 mg/kg), plumbum (1.62 mg/kg), kromium(0.5732 mg/kg) dan kobalt merupakan nilai yang terendah dengan hanya (0.26 mg/kg). Hasil daripada analisis ini, didapati kandungan nutrisi di dalam Manjakani adalah lengkap dan tidak akan membawa keracunan nutrisi.