

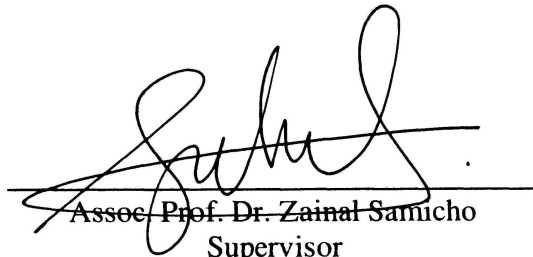
**OPTIMISATION OF FAT REDUCTION IN JELAWAT
(*LEPTO BARBUS HOEVENII*) BY GARLIC
EXTRACT USING RESRONSE SURFACE
METHODOLOGY (RSM)**

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**Final Year Project Report Submitted in
Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons.) Applied Chemistry
in the Faculty of Applied Sciences
Universiti Teknologi MARA**

NOVEMBER 2008

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ACKNOWLEDGEMENTS

First, thanks to ALLAH SWT finally I could finish my final project thesis with the given time. I would like to express my deep and sincere gratitude to my supervisor, Associate Professor Dr. Zainal Samicho, Food Technology lecturer, Universiti Teknologi MARA Malaysia, Shah Alam. Also thank you so much to other lecturers that gave support and advices to me in directly or indirectly. I would like to thanks to all Food Technology laboratory staff whose gave me a cooperation by teaching me how to operate the instrument especially soxhlet extraction as. And most important I would like to thanks to my belove parents, Che Mohamad bin Long and Robiah binti Haji Besar with their pray and mostly gave me a great moral support and financial to finish this project. At last, thanks also to my friends and thanks to all that was involved in this project. Thanks a lot.

Nor Addawiyah binti Che Mohamad

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ABSTRACT

OPTIMISATION OF FAT REDUCTION IN JELAWAT (*Leptobarbus hoevenii*) BY GARLIC BY USING RESRONSE SURFACE METHODOLOGY (RSM)

Garlic-rich organosulfur compounds and their precursors (allicin, diallyl sulfide and diallyl trisulfide) are believed to play a key role in these biological effects. Garlic may decrease triglyceride and cholesterol levels in patients with decrease levels of lipids. Allicin reduces serum cholesterol and triglyceride levels as well as atherosclerotic plaque formation, prevents platelet aggregation and decreases blood pressure. The antimicrobial, antitumor, antifungal, and inhibitory immunomodulatory activities of allicin have been reported. The jelawat (*Leptobarbus hoevenii*) was chosen as a sample because Jelawat contains 16.7% fat. It was categories as high fat fish. Optimisation of various parameters using response surface methodology (RSM) was performed to reduce the fat content in jelawat. MINITAB software version 14 was used to identify the significant effect of various parameters such as concentration of garlic extract, temperature and time immersion. Among the three variables tested, concentration of garlic and temperature immersion were found to have significant reduce fat. The fat content in jelawat was optimally reduced by 90.50% when it was treated with garlic at the optimum condition at concentration of garlic extract 14.56% at the temperature 56.8⁰C for 46.8 minutes.