DETERMINATION OF CHLORPYRIFOS IN ORGANICALLY GROWN AND CONVENTIONALLY GROWN VEGETABLES USING SOLID PHASE EXTRACTION (SPE) COUPLED TO GAS CHROMATOGRAPHY ELECTRON CAPTURE DETECTOR (GC-ECD)

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JANUARY 2017

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

JANUARY 2017

ACKNOWLEDGEMENTS

Upon completion of this project, I would like to express my gratitude to my supervisor Assoc. Prof. Madya Zuraidah Abdullah Munir for her contribution in finishing this project. Not only she provides me with a workable idea for my project, but also provides supportive instructive comments and evaluation at every stage of the thesis process and allows me to complete this thesis as scheduled. A very special credit also should be given to Encik Dzahir Dzaidanee bin Nasaruddin and Puan Noor Haida binti Kamalul Khudzi in their contribution to provide ceaseless technical assistance and support regarding the operation of instrument and laboratory appliances. Last but not least, I would like to thank my family and friends for their full guidance and full support in carrying out this thesis. Finally, I would like to express my greatest appreciations to everyone involved in helping me to complete this final year project report.

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ABSTRACT

DETERMINATION OF CHLORPYRIFOS IN ORGANICALLY GROWN AND CONVENTIONALLY GROWN VEGETABLES USING SOLID PHASE EXTRACTION (SPE) COUPLED TO GAS CHROMATOGRAPHY ELECTRON CAPTURE DETECTOR (GC-ECD)

Chlorpyrifos in different farming method of vegetables was determined by using solid phase extraction (SPE) and gas chromatography electron capture detector (GC-ECD). SPE sorbent packed with C_{18} was used in this study. The injector port and detector temperature for GC-ECD analysis were 280 °C and 300 °C respectively with 20.0 mL min^{-1} carrier gas flow, while the flow rate for C_{18} SPE sorbent in exraction of chlorpyrifos was ~ 6 ml per min. The concentration of chlorpyrifos in different samples were determined and compared between home grown, organically grown and conventionally grown. It was found that, the conventionally grown mustard sample (M3) and conventionally grown spinach (S3) have the highest chlorpyrifos concentration, 0.0821 ppm and 0.0922 ppm respectively compared to other vegetable samples.