Consequence Study on Toxicity of Engineered Nanomaterial

by

Yanisa Klinsamorn
12937

Dissertation submitted in partial fulfilment of
the requirements for the
Bachelor of Engineering (Hons)
(Chemical Engineering)

JANUARY 2014

Universiti Teknologi PETRONAS
Bandar Seri Iskandar
31750 Tronoh
Perak Darul Ridzuan

CERTIFICATION OF APPROVAL

Consequence Study on Toxicity of Engineered Nanomaterial

by

Yanisa Klinsamorn

A project dissertation submitted to the
Chemical Engineering Programme
Universiti Teknologi PETRONAS
In partial fulfilment of the requirement for the
BACHELOR OF ENGINEERING (Hons)
(CHEMICAL ENGINEERING)

Approved by,

_____

(Dr. Risza Bt Rusli)

UNIVERSITI TEKNOLOGI PETRONAS

TRONOH, PERAK

January 2014

CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contain here in have not been undertaken or done by unspecified sources or persons.

_____

(YANISA KLINSAMORN)

ABSTRACT

The introduction, literature review and the methodology are covered in this Final Year project under the title “Consequence study on toxicity of engineered nanomaterial”. The production and the use of Engineered Nanomaterials have begun to increase in large volume, in which this material may cause new or increased risks to the worker in the ENMs industry as they need to expose themselves to ENMs every day. The main aim for this research is to develop the existing risk assessment tool for ENMs. Occupational exposure limit for nanomaterial has been added to the calculation of the tool. Microsoft Excel and Microsoft Visual Basic is used to develop the risk assessment tool for ENMs industry. However, the develop tool still need further validation by compute the result from the tool in the real ENM industry under the recommendation of Industrial Hygiene. The modification of the points and parameters can be adjust accordingly when more research is available.

ACKNOWLEDGEMENTS

I would never have been able to finish my dissertation without the guidance of my supervisor, help from friends, and support from my family.

I would like to express my deepest gratitude to my supervisor, Dr. Risza Bt Rusli, for her excellent guidance, caring, patience, and providing me with an excellent environment for doing research.

I would like to thank Vanessa Eija Anak Enjob, who as a good friend, was always willing to help and give her best suggestion.

I would like to thank my parents for their supporting and encouragement to me toward this research.

TABLE OF CONTENT

LIST OF FIGURES

LIST OF TABLES