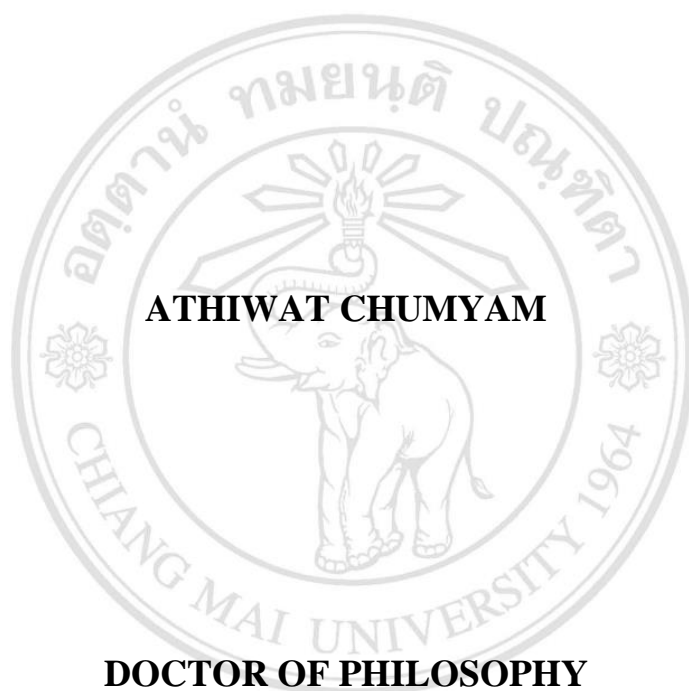


**EFFECTS OF GASEOUS CHLORINE DIOXIDE ON  
REDOX STATUS IN ENERGY PRODUCTION AND  
FREE RADICAL SCAVENGING OF ‘DAW’  
LONGAN PERICARP DURING STORAGE**



**ATHIWAT CHUMYAM**

**DOCTOR OF PHILOSOPHY**

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**GRADUATE SCHOOL  
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**ATHIWAT CHUMYAM**

**A THESIS SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY  
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THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF  
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16 December 2016

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*To*  
*My Family and My Teachers*



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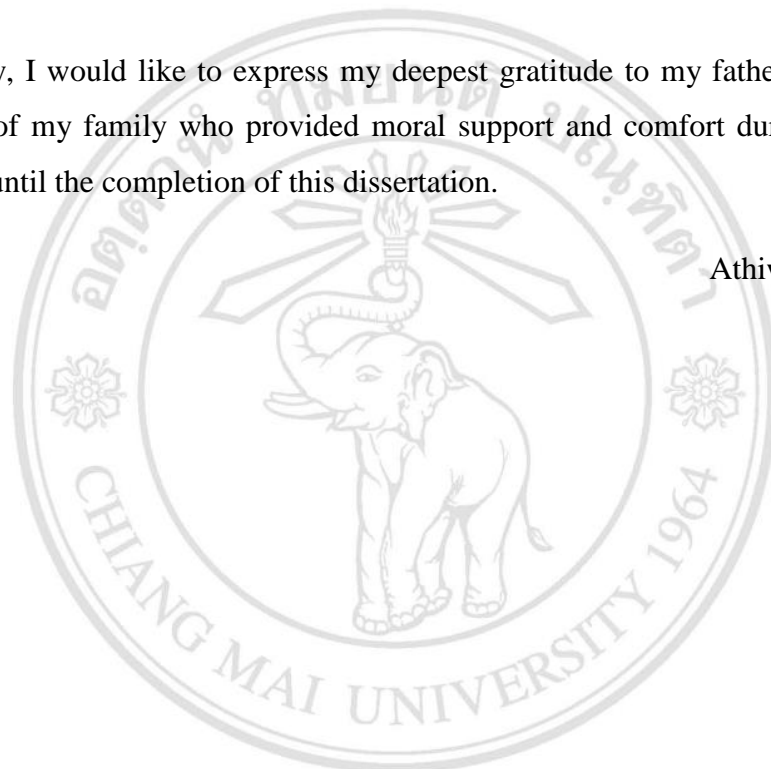
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