

TABLE OF CONTENTS

TITLE	i
APPROVAL PAGE	ii
AUTHENTICITY STATEMENT	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	vi
FIGURE LIST	viii
ABBREVIATION LIST	x
ABSTRACT	xi
INTISARI	xiii
CHAPTER I	1
I.1. Background	1
I.2. Formulation of Problem	2
I.3. Research Authenticity	2
I.4. Research Benefit	4
I.5. Aim of Research	4
CHAPTER II	5
II.1. Literature Review	5
II.1.1. Free Radical	5
II.1.2. Antioxidant	7
II.1.3. Malondialdehyde	8
II.1.4. Cabernet Sauvignon Red Wine	9
II.1.5. Resveratrol	11
II.1.6. Cigarette Smoking	12
II.1.7. Correlation between Smoking and Free Radicals	12
II.2. Theoretical Framework	14
II.3. Conceptual Framework	15
II.4. Hypothesis	15
CHAPTER III	16
III.1. Research flow	16
III.1.1. Research Design	16
III.1.2. Research Location	16
III.1.3. Research Time	16

III.2. Subject	16
III.2.1. Population	16
III.2.2. Sample	17
III.3. Tools and Materials	18
III.3.1. Tools	18
III.3.2. Materials	18
III.4. Variables	19
III.5. Operational Definition	19
III.6. Type and Data Collection	20
III.6.1. Type of Data	20
III.6.2. Data Collection	21
III.7. Data Management and Analysis	21
III.7.1 Data Management	21
III.7.2. Data Analysis	21
III.8. Procedure	22
III.8.1. Preparation Phase	22
III.8.2. Experimental Phase	23
CHAPTER IV.....	27
IV. 1. Result	27
IV.1.1. Baseline Data	27
IV.1.2. Exclusion Criteria	28
IV.1.3. Result	28
IV. 2. Discussion	31
CHAPTER V.....	40
V.1. Conclusion	41
V.2. Limitation	41
V.3. Suggestion	41
References	43

FIGURE LIST

Figure 1.	Theoretical Framework.....	14
Figure 2.	Conceptual Framework.....	15
Figure 3.	Experimental Flow of The Effects of Antioxidant in Red Wine against Smoke-Induced Oxidative Stress in Rats.....	23
Figure 4.	MDA Level Day-0, Day-3, and Day-7 comparison	28

TABLE LIST

Table 1.	Cabernet Sauvignon Nutrition Content.....	10
Table 2.	Level of MDA at day-0 and its percentage compare to negative control	27
Table 3.	Comparison and percentage of MDA level Day-0 and Day-3	29
Table 4.	Comparison and percentage of MDA level Day-0 and Day-7	30

ABBREVIATION LIST

MDA	: Malondialdehyde		
PUFA	: Poly Unsaturated Fatty Acid		
ROS	: Reactive Oxygen Species		
SOD	: Superoxide Dismutase		
CAT	: Catalase		
GPx	: Glutathione Peroxidase		
GRx	: Glutathione Reductase		
NO	: Nitric Oxide		
LDL	: Low Density Lipid		
Q/QH2	: Quinone / Hydroquinone		
TBARs	: Thiobarbituric acid reactive substances		
RBC	: Red Blood Cells		
O ₂	: Superoxide		
AP-1	: Activator Protein 1		
NF-κB	: Nuclear Factor -κB		
GSH	: Glutathione		
LPS	: Lipopolysaccharide		
RBC	: Red Blood Cells		
CYP2E1	: Cytochrome	P450	2E1