

LIST OF FIGURES

Figure 1.1: Premature Annual Death from Household Pollution and other Diseases	2
Figure 2.1: Biomass contributor in Malaysia	4
Figure 2.2: Renewable cycle of biomass	5
Figure 2.3: Three types of gasifier	7
Figure 2.4: Conversion of biomass into producer gas	7
Figure 2.5: Diagram of gasifier cookstove	10
Figure 3.1: Process flow of project	12
Figure 3.2: Gantt Chart for FYP 1	13
Figure 3.3: Gantt Chart for FYP 2	13
Figure 3.4: Chemaco biomass cookstove	14
Figure 3.5: Schematic diagram of Chemaco biomass cookstove	14
Figure 3.6: Diagrams of components inside the Chemaco cookstove	15
Figure 3.7: Dry Leaves	16
Figure 3.8: Oil Palm Frond	16
Figure 3.9: Pressed Sugarcane	16
Figure 3.10: Fuels drying time	16
Figure 3.11: Oven used for drying process, CARBOLITE 450	17
Figure 4.1: Time required to boil 2.5 kg of water	21
Figure 4.2: Weight of fuel consumed to boil 2.5 kg of water	22
Figure 4.3: Stove efficiency with different types of fuel	22
Figure 4.4: Stove ignition time	23
Figure 4.5: Operating Chemaco biomass cookstove	24
Figure 4.6: Processes inside fuel chamber	24

Figure 4.7: Fuel chamber with gas vents	25
---	----

LIST OF TABLES

Table 1.1: People relying on traditional biomass (in million)	1
Table 3.1: Experiment's Apparatus	18
Table 4.1: Experimental Result from WBT	20
Table 4.2: Simmering Phase Data for WBT	20