









TABLE V  
CHEMICAL COMPOSITION OF THE CINNAMON WOOD AT EACH STAGE OF PYROLYSIS.

No	Retention time (min)	Compound	Concentration (%)				
			30 min	60 min	90 min	120 min	150 min
1	1.142	Methanol	16.48	13.75	13.46	22.4	20.91
2	1.215	Acetic Acid	33.22	40.50	39.85	11.09	14.65
3	1.421	1-penten-3-ol	-	-	-	5.78	5.26
4	1.475	Hex-3-ene	-	-	-	-	4.51
5	1.269	Acetol	13.15	12.36	12.2	-	-
6	1.411	Erythrol	3.38	3.07	3.05	-	-
7	1.475	Dumasin	3.00	2.70	-	3.79	-
8	1.569	Furfural	6.01	5.79	5.59	9.55	8.16
9	1.629	1-cyclohexanol	-	-	-	5.22	-
10	1.634	5-methyl-5-hexen-2-one	3.77	-	-	-	5.66
11	1.801	Butyrolactone	1.30	1.29	1.37	2.62	2.44
12	1.861	2-Methyl-2-cyclopentenone	2.88	-	-	-	-
13	1.993	2-cyclohexenone	0.25	0.27	0.29	-	0.58
14	2.072	1-Acetoxy-2-butanone	1.18	-	1.11	-	1.44
15	2.156	5-Methyl-2-Furfural	1.28	1.13	1.22	2.29	2.11
16	2.230	Methyl-2-Furoate	0.44	-	0.43	-	0.8
17	2,272	Benzenesulfonic acid	0.72	0.76	0.78	-	-
18	2,451	2-Furanmethanol	1.83	5.33	5.2	3.75	3.67
19	2,592	Cyclooctene	0.23	-	0.2	-	-
20	2,661	Corylon	-	0.33	0.4	1.05	1.06
21	2,760	2,3-Dimethyl-2-cyclopenten-1-one	0.96	0.87	0.94	1.88	1.78
22	2,916	Phenol	2.13	2.07	2.03	8.70	8.24
23	3,015	2,3,4-Trimethylcyclopenten	-	0.23	0.22	0.58	-
24	3,021	Cyclopentan-1-Al	0.23	-	-	-	0.58
25	3,228	4-Hexen-3-one	-	0.21	0.23	-	-
26	3,231	4,5-Dimethyl-4-hexen-3-one	0.27	-	-	-	0.47
27	3,304	Guaiacol	2.61	2.82	3.00	4.95	4.19
28	3,781	Cyclohexanone	0.15	-	-	0.83	0.77
29	3,883	Veratrol	-	-	-	0.47	0.47
30	4,45	2-Methoxy-4-methylphenol	1.02	0.07	0.65	1.65	1.45
31	9,594	Toluene	0.08	-	-	0.14	0.12

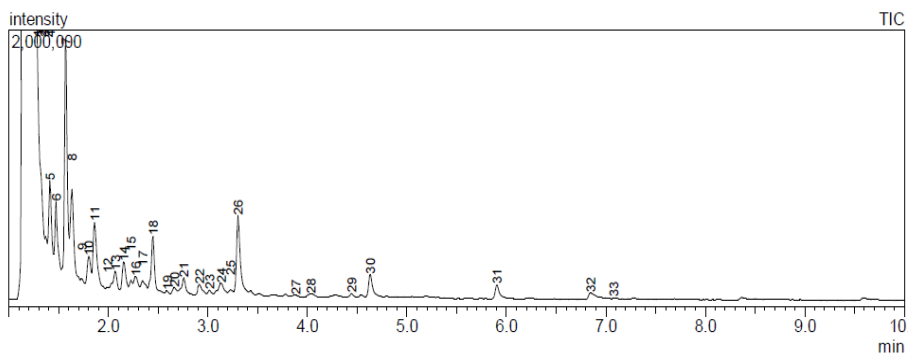


Fig. 4 GC-MS chromatograms of cinnamon liquid smoke after 60 minutes.

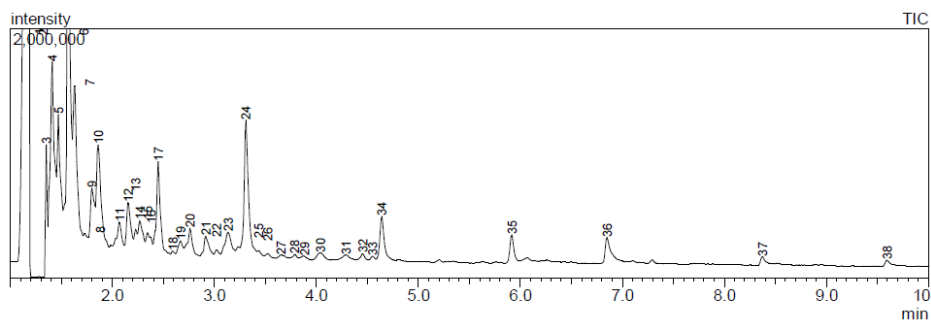


Fig. 5 GC-MS chromatograms of cinnamon liquid smoke after 120 minutes.

TABLE VI  
CONVERSION OF LIQUID SMOKE COMPOUND PERCENTAGES INTO VOLUMES  
AT VARIOUS DURATION

Pyrolysis time (min)	Compound Formed (ml)				
	Methanol	Acetic Acid	Furfural	Phenol	Guai acol
30	36,83	74,25	13,43	4,76	5,83
60	48,47	142,76	20,41	7,30	9,94
90	59,43	175,94	24,68	8,96	13,25
120	120,74	59,78	51,47	46,89	26,68
150	121,80	85,33	47,53	47,99	24,41

#### IV. CONCLUSION

Cinnamon wood is a waste product in cinnamon-producing areas (Casiavera) that could be converted into useful products such as liquid smoke, charcoal, tar using pyrolysis. 28.94% of the wood was converted into liquid smoke after 150 mins of the pyrolysis process. Chromatography yielded ten peaks corresponding to compounds that were present in each stage of the process after 30 mins of pyrolysis up to 150 mins. The highest composition of chemical compounds using GC-MS analysis was acetic acid at 40.50% after 60 minutes and acetic acid was found in each sample of cinnamon liquid smoke. This study suggests investigating a potential source of commercially viable compounds of cinnamon wood's pyrolyzed. The subjects include liquid smoke, coagulant of latex, garbage deodorizer, organic fertilizer, and vegetable pesticides.

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