

## Appendix A. Supplementary data

Bio-oil production from eight selected green landscaping wastes through  
hydrothermal liquefaction

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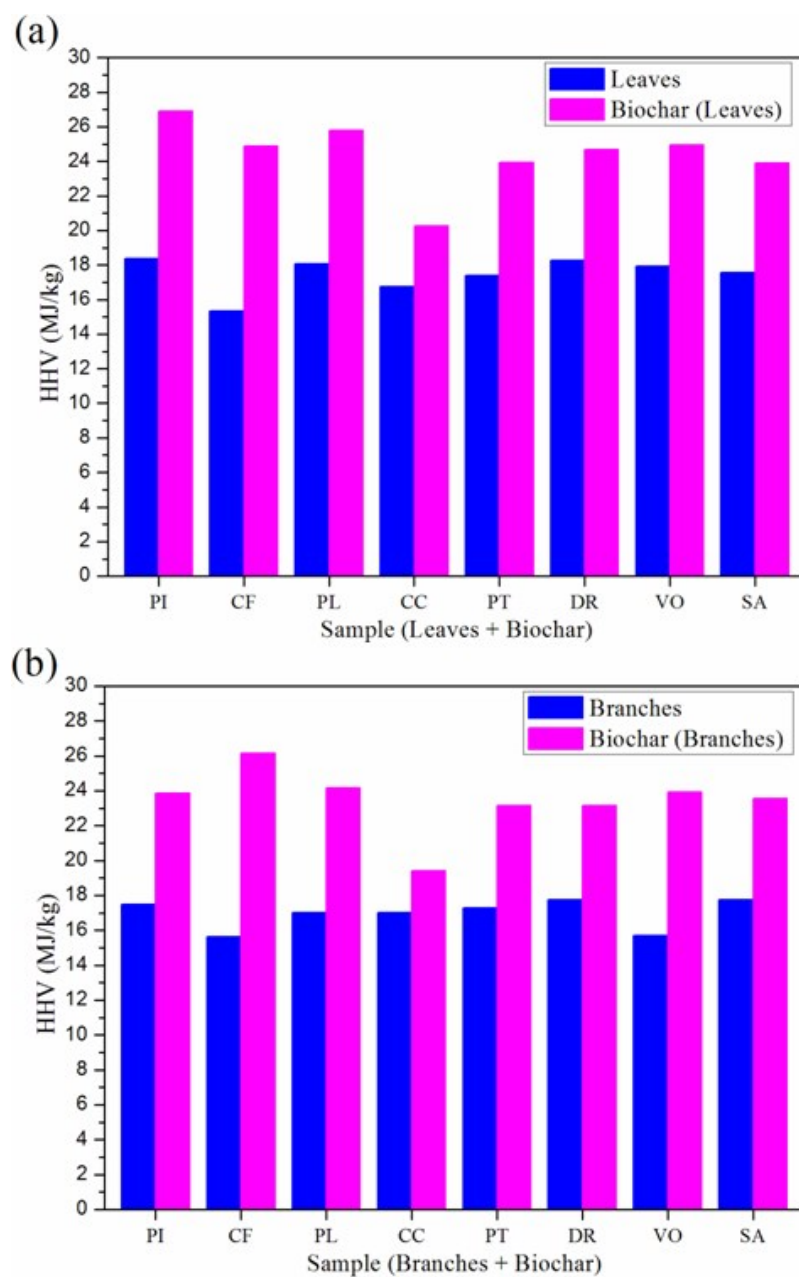
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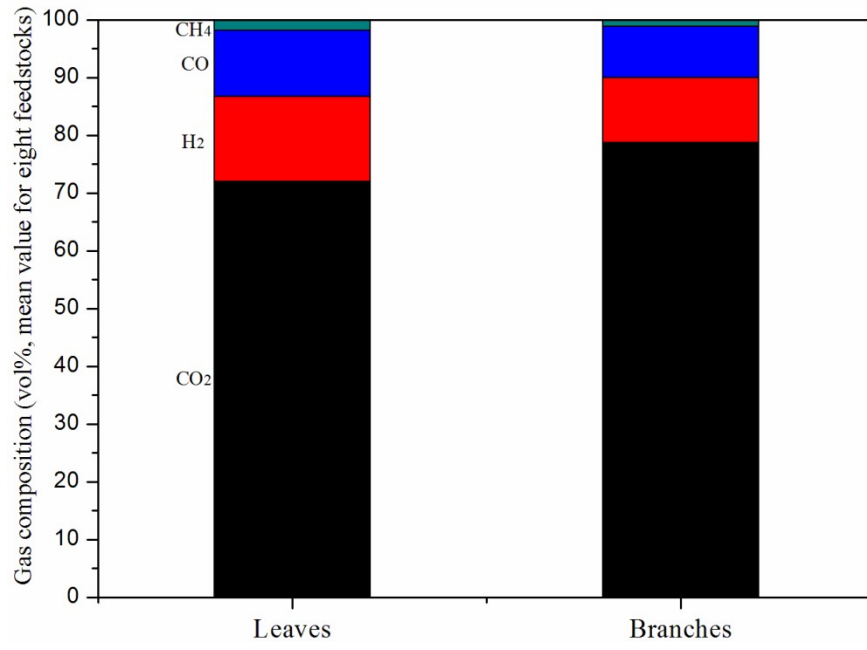
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**Fig. S1** Comparing the HHVs of biochars and feedstocks. (a) leaves, (b) branches. Temperature, 300 °C; solid/liquid = 15g/150ml; reaction time, 30min; initial air pressure, 0.1 MPa; reaction pressure, 8.2-8.5 MPa.



**Fig. S2** Composition of the gaseous products

**Table S1.** The information on the eight green landscaping plants

Name of green landscaping plants	State of leaves		Morphology		Growth habit		Wood type		Botanical classification	
	Evergreen	Deciduous	Trees	Shrubs	Ombrophyte	Heliophyte	Soft wood	Hard wood	Gymnosperm	Angiosperm
<i>Pinus</i>	☆	----	----	☆	----	☆	☆	----	☆	----
<i>Cupressus funebris</i>	☆	----	----	☆	----	☆	☆	----	☆	----
<i>Platanus</i>	----	☆	----	☆	----	☆	----	☆	----	☆
<i>Cinnamomum camphora</i>	☆	----	----	☆	----	☆	----	☆	----	☆
<i>Pittosporum tobira</i>	☆	----	☆	----	☆	----	----	☆	----	☆
<i>Distylium racemosum</i>	☆	----	☆	----	☆	----	----	☆	----	☆
<i>Viburnum odoratissimum</i>	☆	----	☆	----	----	☆	----	☆	----	☆
<i>Salix babylonica</i>	----	☆	----	☆	----	☆	----	☆	----	☆

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**Table S2.** Element composition and high heating value of biochar derived from leaves (wt.%)

Biochar from leaves	<i>Pinus</i>	<i>Cupressus funebris</i>	<i>Platanus</i>	<i>Cinnamomum camphora</i>	<i>Pittosporum tobira</i>	<i>Distylium racemosum</i>	<i>Viburnum odoratissimum</i>	<i>Salix babylonica</i>	<b>Mean value</b>
Ultimate:									
C	65.8	58.8	62.0	56.1	59.8	60.9	61.3	59.9	<b>60.6</b>
H	6.6	7.6	7.1	5.5	6.7	6.8	6.8	6.6	<b>6.7</b>
O <sup>a</sup>	27.0	33.1	30.1	36.7	32.7	31.4	31.3	32.3	<b>31.8</b>
N	0.6	0.5	0.9	1.8	0.8	1.0	0.6	1.2	<b>0.9</b>
S <sup>b</sup>	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<b>&lt;0.1</b>
Atom ratios:									
H/C	1.2	1.6	1.4	1.2	1.3	1.3	1.3	1.3	<b>1.3</b>
H/O	3.9	3.7	3.8	2.4	3.3	3.4	3.5	3.3	<b>3.4</b>
HHV/(MJ/kg)	26.9	24.9	25.8	20.3	24.0	24.7	24.9	23.9	<b>24.4</b>

<sup>a</sup> Calculated by difference; <sup>b</sup> determined by ICP-AES

**Table S3.** Element composition and high heating value of biochar derived from branches (wt.%)

Biochar from branches	<i>Pinus</i>	<i>Cupressus funebris</i>	<i>Platanus</i>	<i>Cinnamomum camphora</i>	<i>Pittosporum tobira</i>	<i>Distylium racemosum</i>	<i>Viburnum odoratissimum</i>	<i>Salix babylonica</i>	<b>Mean value</b>
Ultimate:									
C	59.7	63.2	60.3	51.2	60.2	60.9	60.3	57.8	<b>59.2</b>
H	6.7	6.9	6.6	6.5	6.1	5.8	6.5	7.1	<b>6.5</b>
O <sup>a</sup>	33.4	28.6	31.7	40.8	33.0	32.6	32.7	34.5	<b>33.4</b>
N	0.2	1.3	1.4	1.4	0.7	0.7	0.5	0.6	<b>0.8</b>
S <sup>b</sup>	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<b>&lt;0.1</b>
Atom ratios:									
H/C	1.4	1.3	1.3	1.5	1.2	1.2	1.3	1.5	<b>1.3</b>
H/O	3.2	3.9	3.3	2.6	2.9	2.9	3.2	3.3	<b>3.2</b>
HHV/(MJ/kg)	23.9	26.2	24.2	19.4	23.2	23.1	23.9	23.6	<b>23.4</b>

<sup>a</sup> Calculated by difference; <sup>b</sup> determined by ICP-AES

**Table S4.** Composition of the gaseous products of each sample (vol.%)

Biochar from branches	<i>Pinus</i>	<i>Cupressus funebris</i>	<i>Platanus</i>	<i>Cinnamomum camphora</i>	<i>Pittosporum tobira</i>	<i>Distylium racemosum</i>	<i>Viburnum odoratissimum</i>	<i>Salix babylonica</i>	<b>Mean value</b>
Leaves:									
CO <sub>2</sub>	71.6	72.3	71.9	74.8	71.0	72.1	70.7	71.2	<b>72.0</b>
H <sub>2</sub>	14.6	14.6	14.7	14.2	14.9	14.7	15.0	14.9	<b>14.7</b>
CO	12.4	11.2	11.5	10.6	11.7	11.5	11.7	11.8	<b>11.5</b>
CH <sub>4</sub>	1.4	1.9	1.9	0.4	2.4	1.7	2.6	2.1	<b>1.8</b>
Branches:									
CO <sub>2</sub>	76.9	78.9	79.3	80.3	80.8	79.9	77.2	75.9	<b>78.7</b>
H <sub>2</sub>	12.5	10.3	11.2	11.1	10.9	11.0	11.4	12.3	<b>11.3</b>
CO	8.8	9.7	8.8	7.7	7.7	7.8	9.7	10.7	<b>8.9</b>
CH <sub>4</sub>	1.8	1.1	0.7	0.9	0.6	1.3	1.7	1.1	<b>1.2</b>

**Table S5.** HHVs comparison of some reported bio-oils and the heavy oils from leaves in the present work

Feedstock	Reaction condition	HHV of bio-oil (MJ/kg)	References
Leaves	300 °C, 30 min, water, air	31.27 (mean value)	Present work
<i>Pinus ponderosa</i>	250 °C, 120 min, water, air	27.19	[13]
Culture algal	300 °C, 60 min, water, N <sub>2</sub>	25.80	[42]
Barley straw	300 °C, 0 min, water, N <sub>2</sub>	23.18	[44]
Russian olive seeds	280 °C, 5 min, water, N <sub>2</sub>	22.89	[19]
Boron-treated wood	350°C, 60 min, tetralin , H <sub>2</sub>	19.98	[43]
Corncob	280 °C, 12 min, water, N <sub>2</sub>	18.32	[45]



**Table S6.** Absorption bands of obtained bio-oils

Position of the bands (cm <sup>-1</sup> )	Functional group	Possible compounds present
3383, 3377	-OH	Alcohol, aldehydes, carboxylic acids
2938, 2927; 2883, 2874	-CH, -CH <sub>2</sub> , -CH <sub>3</sub>	Aliphatic groups
1721, 1700	-C=O	Carboxylic acid, ketone, aldehydes, and esters
1513	C=C, C=N	Unsaturated aliphatics, aromatics, amino acids, amides, etc.
1236	C-O-C, C-OH	Ethers, alcohols, sugars
1044, 1042	=C-H, -NH	Ethers, alcohols, polysaccharide-like substances
813, 752	C-halogen, Aromatic rings	Halogen compounds, aromatic compounds
628	C-CO-C	Aliphatic ketones

**Table S7. Detailed chemicals of light oil from leaves**

Light Oil-Leaves									
Compound Name	RT <sup>a</sup>	Plant Name / Area (%)							
		Cinnamomum	Viburnum	Distylium	Pittosporum	Pinus	Cupressus	Salix	Platanus
<b>Ester and Acid</b>		<b>2.385</b>	<b>3.491</b>	<b>26.613</b>	<b>7.465</b>	<b>9.516</b>	<b>3.237</b>	<b>0.569</b>	<b>3.751</b>
2(3H)-Furanone, dihydro-	4.17	-	-	0.330	-	0.635	-	-	-
gamma-Valerolactone	4.57	-	-	-	-	-	-	-	0.496
Crotonic acid, 2-methyl-	4.70	-	-	-	0.549	-	-	-	-
Pentanoic acid, 4-methyl-	4.75	0.650	-	-	1.066	-	-	-	-
Pentanoic acid, 4-oxo-	6.03	-	-	-	-	0.829	-	-	-
1-Cyclopentene-1-carboxylic acid	6.15	-	-	-	0.634	-	-	-	-
Benzoic Acid	7.17	-	-	1.216	-	0.585	-	-	0.607
Benzoic acid, 4-hydroxy-3-methoxy-	9.67	0.656	-	-	-	-	-	-	-
Benzoic acid, 3-ethoxy-	10.05	-	0.698	-	-	-	-	-	-
Benzoic acid, 3-hydroxy-	10.06	-	-	8.519	4.783	6.943	-	-	-
2-(5-tert-Butyl-4-hydroxy-2-methylphenyl)benzoic acid	10.53	-	-	0.162	-	-	-	-	-
Benzeneacetic acid, .alpha.-hydroxy-2-methoxy-	11.38	0.669	-	-	-	-	-	-	-
Benzeneacetic acid, 4-hydroxy-3-methoxy-	11.38	-	0.857	-	-	-	3.237	-	-
Dibutyl phthalate	13.75	-	1.668	16.147	0.435	0.525	-	-	-
n-Hexadecanoic acid	14.51	0.410	-	0.238	-	-	-	0.569	2.305
Octadecanoic acid	15.31	-	-	-	-	-	-	-	0.343
Hexadecanoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester	17.77	-	0.269	-	-	-	-	-	-
<b>Ketone and Alcohol</b>		<b>7.173</b>	<b>1.754</b>	<b>3.469</b>	<b>3.211</b>	<b>5.524</b>	<b>10.552</b>	<b>9.374</b>	<b>9.245</b>
2,5-Hexanedione	4.34	-	-	0.429	-	0.517	-	-	-

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2(3H)-Furanone, dihydro-5-methyl-	4.67	-	-	-	-	0.301	0.523	-	-
Benzenemethanol	5.62	0.594	0.336	0.252	0.898	-	0.461	1.761	0.406
cis-1,2-Cyclohexanediol	5.91	-	-	-	-	-	-	1.467	-
Benzeneethanol	6.50	2.385	0.920	-	1.723	-	0.833	0.782	0.635
Benzeneethanol, 2-methoxy-	8.17	-	-	0.990	-	4.706	-	1.729	-
Acetophenone, 4-methoxy-	8.97	-	-	-	-	-	0.562	-	-
Ethanone, 1-(2-hydroxyphenyl)-	9.31	-	-	-	-	-	-	1.659	-
Ethanone, 1-(3-hydroxyphenyl)-	9.22	-	-	-	-	-	-	-	0.724
Ethanone, 1-(4-hydroxyphenyl)-	9.45	-	-	-	-	-	3.158	-	-
Benzeneethanol, 4-hydroxy-	9.51	3.429	-	1.270	-	-	-	-	-
Ethanone, 1-(4-hydroxy-3-methoxyphenyl)-	9.58	-	-	-	-	-	-	1.977	1.205
9,10-dimethoxy-2,3-dihydroanthracene-1,4-dione	9.77	-	-	-	0.590	-	-	-	0.522
Cyclonon-4-ynone	9.80	-	-	-	-	-	-	-	0.603
Vanillyl methyl ketone	9.85	-	-	-	-	-	2.744	-	3.014
Rhododendrol	9.97	-	-	-	-	-	1.330	-	-
2H-1-Benzopyran-2-one, 8-methoxy-	11.51	-	-	-	-	-	0.940	-	-
tricyclo[4.3.2.0(1,4)]undeca-2,4(5),8,10-tetraen-7-one	12.19	-	0.499	-	-	-	-	-	-
8,8-Dimethyl-1,9-diazabicyclo[5.3.0]decane-5,10-dione	12.27	0.766	-	-	-	-	-	-	-
3,9-DIAZATRICYCLO[7.3.0.0(3,7)]DODECAN-2,8-DIONE	14.41	-	-	0.528	-	-	-	-	-
Ethanone, 1-(4-hydroxy-3,5-dimethoxyphenyl)-	15.01	-	-	-	-	-	-	-	2.136
<b>Cyclopentenone</b>		<b>14.250</b>	<b>11.107</b>	<b>6.810</b>	<b>15.604</b>	<b>7.761</b>	<b>11.447</b>	<b>5.662</b>	<b>8.535</b>
Cyclohexanone	3.92	-	0.549	0.217	-	-	-	-	-
2-Cyclopenten-1-one.	3.93	0.201	3.678	0.199	-	-	-	-	-
2-Cyclopenten-1-one.2-methyl-	4.07	4.387	-	2.191	5.532	2.739	-	-	-
Bicyclo[3.1.0]hexan-3-one	4.39	-	S12	-	-	-	-	-	-
2,5-Dimethyl-2-cyclopentenone	4.55	0.267	-	-	-	-	-	0.128	-
3-Ethylcyclopentanone	4.69	0.237	-	-	-	-	-	-	-

2-Cyclopenten-1-one.3-methyl-	4.78	2.664	1.877	1.059	3.578	1.564	2.877	1.348	2.226
2-Cyclopenten-1-one, 3,4-dimethyl-	5.13	1.370	0.503	-	-	-	0.588	0.469	0.494
2,3-Dimethyl-2-cyclopenten-1-one	5.19	1.668	-	1.811	-	-	-	-	-
2,5-Cyclohexadiene-1,4-dione, 2-methyl-	5.37	1.134	0.287	-	-	-	-	-	-
Bicyclo[4.1.0]hept-3-ene-2,5-dione	5.40	-	-	-	-	0.397	-	-	-
2-Cyclopenten-1-one, 2-hydroxy-3-methyl-	5.54	0.461	0.603	0.657	1.369	1.230	1.865	-	2.632
2-Cyclopenten-1-one.2,3-dimethyl-	5.67	1.862	3.321	-	4.513	0.880	3.009	2.641	1.703
3,5-DIMETHYL CYCLOPENTENOLONE	5.89	-	-	-	0.618	-	1.102	-	0.676
1,4-Cyclohexanedione	6.13	-	-	-	-	-	0.152	-	-
2-Cyclopenten-1-one, 3-ethyl-2-hydroxy-	6.56	-	-	0.677	-	-	-	-	-
2-Hydroxy-5,5-dimethylcyclopent-2-en-1-one	6.61	-	-	-	-	-	1.854	-	-
2-(2-Oxopropyl)-1-cyclopentanone	7.25	-	-	-	-	-	-	-	0.804
2H-Benzocyclohepten-2-one, 3,4,4a,5,6,7,8,9-octahydro-	9.43	-	-	-	-	-	-	1.076	-
Pyrrolo[1,2-a]pyrazine-1,4-dione, hexahydro-3-(2-methylpropyl)-	14.43	-	-	-	-	0.953	-	-	-
<b>Phenolics</b>		<b>53.654</b>	<b>69.647</b>	<b>57.616</b>	<b>46.715</b>	<b>68.771</b>	<b>53.054</b>	<b>49.108</b>	<b>62.554</b>
Phenol	5.03	10.713	27.695	24.861	17.623	41.447	18.544	11.144	13.062
Phenol.2-methyl-	5.86	1.122	1.022	0.563	0.871	0.751	-	0.951	0.399
Phenol.3-methyl-	6.08	-	2.823	1.507	-	-	-	-	-
Phenol.4-methyl-	6.08	2.492	-	-	-	1.710	-	1.303	1.438
Phenol.2-methoxy-	6.24	8.077	3.743	2.901	4.471	7.085	11.480	11.443	10.364
Phenol, 2-ethyl-	7.05	-	-	0.920	-	-	-	-	-
Phenol.4-ethyl-	7.05	2.975	1.603	-	0.845	1.207	0.775	1.103	-
Phenol.4-methoxy-2-methyl-	7.23	-	-	-	-	-	-	1.731	-
Phenol.2-methoxy-4-methyl-	7.32	1.174	S13	0.478	1.035	1.121	-	-	1.159
1,2-Benzenediol	7.40	10.329	-	9.017	4.966	9.228	11.681	11.510	6.788
1,2-Benzenediol.3-methoxy-	8.02	5.060	-	-	-	-	-	1.549	4.125
Hydroquinone	8.14	-	6.865	2.405	3.698	-	1.829	2.676	-
Phenol, 4-ethyl-2-methoxy-	8.23	-	-	-	-	-	3.276	-	4.630

1,2-Benzenediol, 4-methyl-	8.30	1.855	2.122	0.676	-	-	1.773	-	0.911
1,4-Benzenediol.2-methyl-	8.78	0.801	2.099	1.463	3.216	0.779	2.978	-	-
Phenol.2,6-dimethoxy-	8.84	5.937	3.550	3.396	4.717	2.473	-	5.697	18.945
1,2,3-Benzenetriol	9.10	-	-	6.225	-	1.136	-	-	-
4-Ethylcatechol	9.13	1.198	-	-	-	-	-	-	-
3,7-Di-tert-butyl-1-naphthol	9.39	-	-	-	-	0.736	-	-	-
1,3-Benzenediol, 4-ethyl-	9.48	-	-	0.598	2.297	-	-	-	-
3,4,5-Trihydroxytoluene	9.61	-	-	1.345	-	-	-	-	-
1,4-Benzenediol, 2,6-dimethyl-	9.73	-	-	-	1.313	-	-	-	-
Phenol, 2,6-dimethoxy-4-(2-propenyl)-	14.46	-	-	-	-	-	-	-	0.569
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	17.30	1.921	2.854	1.261	1.665	1.097	0.721	-	-
Phenol, 4,4'-methylenebis[2,6-dimethoxy-	18.32	-	-	-	-	-	-	-	0.165
<b>Furan&amp;Aldehydes</b>		<b>0.861</b>	<b>0.000</b>	<b>0.426</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
Ethanone, 1-(2-furanyl)-	4.13	-	-	0.426	-	-	-	-	-
2,4-Dimethyl-3-(methoxycarbonyl)-5-ethylfuran	10.34	0.861	-	-	-	-	-	-	-
<b>Alkane &amp; Alkene &amp; Alkyne</b>		<b>1.854</b>	<b>2.810</b>	<b>0.155</b>	<b>6.796</b>	<b>0.487</b>	<b>8.688</b>	<b>13.317</b>	<b>6.198</b>
1,4-Hexadiene	4.47	-	-	-	0.352	-	-	-	0.145
trans-1,4-Hexadiene	5.05	-	-	-	-	-	0.269	-	-
2,4-Hexadiene, 3,4-dimethyl-, (Z,Z)-	5.15	-	-	-	1.284	-	-	-	-
1-Methylbicyclo[4.1.0]heptane (1-Methylnorcarane)	5.49	-	-	-	1.161	-	-	-	-
4-acetyl-1-methyl-1-cyclohexene	6.69	1.457	-	-	-	-	-	-	-
Benzocycloheptatriene	8.51	0.397	S14	-	-	-	-	-	-
(Trimethyl-[3-(3-phenylcyclopentylidene)-1-propynyl]silane	8.74	-	-	-	2.003	0.217	-	-	-
1-[2-(Trimethylsilyl)ethynyl]-3-phenylcyclohexene	8.80	-	-	-	-	-	2.639	-	-
1-Tetradecene	9.03	-	-	-	-	-	-	0.982	-
2-(2-Naphthyl)-1-propene	9.67	-	0.394	-	-	0.270	-	-	-

3,5,7-Trioxatetracyclo[7.2.1.0(4,11).0(6,10)]dodecane	9.68	-	-	-	0.866	-	-	-	-
7,8-dimethylbenzocyclooctene	9.71	-	-	-	-	-	-	1.081	-
1-Hexadecene	10.06	-	-	-	-	-	1.352	1.770	1.480
1,4-diaza-2,5-dioxo-3-isobutyl bicyclo[4.3.0]nonane	14.31	-	2.185	-	-	-	-	-	-
1-Octadecene	16.13	-	0.233	-	-	-	3.149	3.697	2.079
1-Nonadecene	17.33	-	-	-	-	-	1.280	1.505	1.568
3-Eicosene, (E)-	17.63	-	-	-	-	-	-	1.319	-
3-benzyl-1,4-diaza-2,5-dioxobicyclo[4.3.0]nonane	16.87	-	-	0.155	1.132	-	-	2.641	-
Cyclotetracosane	17.12	-	-	-	-	-	-	0.325	0.685
1-Heptadecene	18.47	-	-	-	-	-	-	-	0.243
<b>Others</b>		<b>19.822</b>	<b>11.190</b>	<b>4.909</b>	<b>20.204</b>	<b>7.940</b>	<b>13.020</b>	<b>21.969</b>	<b>9.716</b>

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**Table S8. Detailed chemicals of heavy oil from leaves**

		Heavy Oil-Leaves							
Compound Name	RT <sup>a</sup>	Plant Name / Area (%)							
		Cinnamomum	Viburnum	Distylium	Pittosporum	Pinus	Cupressus	Salix	Platanus
<b>Ester and Acid</b>		<b>18.102</b>	<b>38.031</b>	<b>27.156</b>	<b>62.025</b>	<b>21.028</b>	<b>4.610</b>	<b>1.487</b>	<b>4.442</b>
Dodecanoic acid	10.58	-	-	-	-	3.771	-	-	-
Tridecanoic acid	12.22	-	-	-	-	-	-	-	4.442
Tetradecanoic acid	12.48	-	2.209	-	-	0.000	-	-	-
Linoleic acid ethyl ester	12.71	-	-	-	-	-	1.927	-	-
12-Hydroxydodecanoic acid	13.42	-	-	-	-	4.473	-	-	-
Dibutyl phthalate	13.75	-	2.877	-	-	-	2.683	-	-
1,2-Benzenedicarboxylic acid, bis(2-methylpropyl) ester	13.75	2.884	-	2.306	4.183	4.483	-	1.487	-
l-Proline, N-butoxycarbonyl-, isohexyl ester	14.29	-	-	-	-	-	-	-	-
n-Hexadecanoic acid	14.51	10.126	18.679	10.465	14.803	6.154	-	-	-
9,12-Octadecadienoic acid (Z,Z)-	15.70	5.093	14.266	3.452	43.038	2.149	-	-	-
9-Octadecenoic acid, (E)-	15.74	-	-	8.138	-	-	-	-	-
Octadecanoic acid	15.87	-	-	1.401	-	-	-	-	-
Benzeneacetic acid, 4-hydroxy-3-methoxy-, methyl ester	16.85	-	-	1.394	-	-	-	-	-
<b>Ketone and Alcohol</b>		<b>12.260</b>	<b>1.257</b>	<b>4.259</b>	<b>1.533</b>	<b>4.910</b>	<b>7.283</b>	<b>4.171</b>	<b>13.360</b>
Benzeneethanol, 2-methoxy-	8.17	4.662	1.257	1.403	1.533	4.910	2.436	4.171	5.282
(3S)-2-chloro-1-phenyl-1-penten-3-ol	11.01	-	-	1.190	-	-	-	-	3.485
1-Butanone, 1-(2,4,6-trihydroxy-3-methylphenyl)-	12.01	-	-	-	-	-	-	-	1.492

5,6-Dimethyl-4-phenyl-3-cyanopyridine-2(1H)-thione (2R(*),3aR(*),6aR(*))-Hexahydro-2-phenyl-4H-cyclopenta[b]furan-4-one	12.31	-	-	-	-	-	1.840	-	-
(Z)6,(Z)9-Pentadecadien-1-ol	13.71	-	-	1.667	-	-	-	-	-
1-Phenanthrenemethanol	15.74	7.597	-	-	-	-	-	-	-
17.17	-	-	-	-	-	-	3.007	-	-
Androst-16-en-3-one, (5.alpha.)-	21.01	-	-	-	-	-	-	-	3.102
<b>Cyclopentenone</b>		<b>11.904</b>	<b>4.155</b>	<b>8.367</b>	<b>1.410</b>	<b>4.535</b>	<b>2.897</b>	<b>2.785</b>	<b>0.000</b>
2-Cyclopenten-1-one.	3.93	-	1.330	-	-	-	-	-	-
2-Cyclopenten-1-one, 2-methyl-	4.07	1.124	-	1.642	1.410	1.671	-	-	-
2-Cyclopenten-1-one,2,3-dimethyl-	5.67	-	2.825	2.383	-	-	-	-	-
4-Cycloocten-1-one, 6,6-dimethyl-, (E)-	11.63	-	-	-	-	-	-	1.516	-
Oxacyclohexadecan-2-one	12.74	-	-	-	-	2.864	-	-	-
1,2,4-TRIAZOLO(3,4-C)(1,2,4)-BENZOTRIAZIN-1(5H)-ONE	14.81	-	-	-	-	-	2.897	-	-
Oxacycloheptadec-8-en-2-one	16.23	10.780	-	4.343	-	-	-	-	-
4-(3',4'-Dimethoxyphenyl)-2-hydroxy-7-methoxycyclohepta-2,4,6-trien-1-one	18.23	-	-	-	-	-	-	1.270	-
<b>Phenolics</b>		<b>43.209</b>	<b>45.535</b>	<b>49.168</b>	<b>27.067</b>	<b>60.739</b>	<b>24.894</b>	<b>27.032</b>	<b>40.399</b>
Phenol	5.03	8.411	17.350	24.833	12.396	37.625	4.303	7.377	7.050
Phenol,2-methyl-	5.86	-	-	-	-	-	-	1.357	-
Phenol,4-methyl-	6.08	2.077	-	1.541	2.338	-	-	-	-
Phenol,2-methoxy-	6.24	5.291	3.117	3.386	3.136	7.067	3.240	7.319	5.955
Phenol,4-ethyl-	7.05	7.291	3.698	2.979	1.929	2.372	-	2.232	-
Phenol,2-methoxy-4-methyl-	7.32	-	-	-	-	1.838	-	0.928	1.115
Phenol,2,6-dimethoxy-	8.84	2.816	0.926	S17	-	-	-	2.784	13.132
Phenol, 2-methoxy-4-propyl-	8.99	-	-	-	-	1.386	-	2.872	2.079



Phenol, 2-methoxy-4-(2-propenyl)-	9.69	-	-	-	-	-	-	2.164	2.152
Totarol	13.81	-	-	-	-	-	12.570	-	-
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	17.30	17.324	20.444	13.809	7.267	10.453	4.781	-	-
2-Phenanthrenol,									
4b,5,6,7,8,8a,9,10-octahydro-	19.97								
4b,8,8-trimethyl-1-(1-methylethyl)-									4.997
, (4bS-trans)-									
Gigantol	20.03	-	-	-	-	-	-	-	3.918
<b>Furan&amp;Aldehydes</b>		<b>1.216</b>	<b>0.000</b>	<b>1.453</b>	<b>0.000</b>	<b>0.000</b>	<b>4.283</b>	<b>8.800</b>	<b>8.719</b>
2-tert-Butyl-4-(hydroxymethyl)-5-formylfuran	10.33	-	-	1.453	-	-	-	-	-
2,4-Dimethyl-3-(methoxycarbonyl)-5-ethylfuran	10.34	1.216	-	-	-	-	-	-	-
E-15-Heptadecenal	10.96	-	-	-	-	-	4.283	8.800	6.196
3,6-Dimethoxy-2-ethylbenzaldehyde	11.41	-	-	-	-	-	-	-	1.013
Benzaldehyde, 3-hydroxy-, (2,4-dinitrophenyl)hydrazone	22.03	-	-	-	-	-	-	-	1.510
<b>Indole</b>	-	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>5.940</b>	<b>0.000</b>
Indole	8.23	-	-	-	-	-	-	1.820	-
1H-Indole, 2-methyl-	9.09	-	-	-	-	-	-	2.081	-
1H-Indole, 2,3-dimethyl-	9.79	-	-	-	-	-	-	1.294	-
1H-Indole, 2,3,7-trimethyl-	10.39	-	-	-	-	-	-	0.747	-
<b>Alkane &amp; Alkene &amp; Alkyne</b>		<b>9.426</b>	<b>5.075</b>	<b>7.095</b>	<b>6.210</b>	<b>7.106</b>	<b>56.032</b>	<b>42.076</b>	<b>33.082</b>
4-Acetyl-1-methylcyclohexene	6.69	2.967	-		-	-	-	-	-
1-Tetradecene	9.03	-	-	S18	-	-	0.936	2.995	2.274
2-(2-Naphthyl)-1-propene	9.53	-	-	-	-	-	-	-	1.375
1-Hexadecene	10.06	-	-	-	-	-	2.318	5.170	4.506
3-(2-naphthyl)-1-butene	10.11	-	-	-	-	-	-	-	3.807

4,6,6-Trimethyl-2-(3-methylbuta-1,3-dienyl)-3-oxatricyclo[5.1.0.0(2,4)]octane	10.57	2.212	-	-	-	-	-	-	-
4-n-Hexylthiane, S,S-dioxide	11.26	-	-	-	-	-	1.140	-	-
1H-Benzo[b]fluorene	11.42	-	-	2.222	-	-	-	-	-
2-Hexadecene, 3,7,11,15-tetramethyl-, [R-[R@,R@-(E)]]-	11.33	-	-	-	-	-	-	4.108	-
Oxirane, tridecyl-	11.86	-	-	-	-	-	20.979	-	-
Cyclohexadecane, 1,2-diethyl-	12.01	-	-	-	-	-	6.211	-	-
11-Dodecenol	12.46	-	-	-	-	7.106	-	-	-
1-Eicosene	13.21	-	-	-	-	-	9.607	-	-
1-Phenyl-1-(1'-naphthyl)-1,2-hexadiene	13.71	-	-	-	-	-	6.047	-	-
Cyclohexane, hexaethylidene-	15.07	-	-	1.521	-	-	-	-	-
1,4,9-Decatriene, (Z)-	15.81	2.786	-	-	-	-	-	-	-
Cyclooctene, 3-ethenyl-	15.81	-	-	2.328	6.210	-	-	-	-
4-Hexadecen-6-yne, (E)-	15.82	-	3.243	-	-	-	-	-	-
Cyclopentadecane	16.13	-	-	1.025	-	-	-	-	-
1-Octadecene	16.13	1.461	1.832	-	-	-	-	-	-
Cyclotetracosane	17.12	-	-	-	-	-	4.884	10.327	5.164
3-Eicosene, (E)-	17.63	-	-	-	-	-	-	7.860	-
1-Docosene	17.92	-	-	-	-	-	3.911	2.158	-
1-Nonadecene	17.33	-	-	-	-	-	-	-	6.418
1-Heptadecene	18.47	-	-	S19	-	-	-	9.461	9.537
<b>Others</b>		<b>3.881</b>	<b>5.946</b>	<b>2.501</b>	<b>1.756</b>	<b>1.681</b>	<b>0.000</b>	<b>7.706</b>	<b>0.000</b>

**Table S9. Detailed chemicals of light oil from branches**

**Light Oil-Branches**

Compound Name	RT <sup>a</sup>	Plant Name / Area (%)							
		Cinnamomum	Viburnum	Distylium	Pittosporum	Pinus	Cupressus	Salix	Platanus
<b>Ester and Acid</b>		<b>2.795</b>	<b>5.069</b>	<b>7.579</b>	<b>5.797</b>	<b>7.532</b>	<b>2.339</b>	<b>12.461</b>	<b>1.653</b>
2-Butenoic acid, 2-methyl-, (E)-	4.57	-	-	-	1.140	-	-	-	-
Pentanoic acid, 4-oxo-	6.03	-	-	0.554	-	-	-	-	-
4-Acetylbutyric acid	6.99	0.927	0.723	0.628	-	0.603	0.545	-	-

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Benzenepropanoic acid	8.73	-	-	-	-	-	0.431	-	-
Benzoic acid, 3-hydroxy-	10.06	-	-	4.208	3.743	0.761	-	-	-
Benzenoacetic acid, 4-hydroxy-3-methoxy-	11.38	0.787	2.168	1.012	-	4.994	-	9.116	-
.beta.-(4-Hydroxy-3-methoxyphenyl)propionic acid	12.30	-	-	-	-	0.619	-	1.073	-
Dibutyl phthalate	13.75	0.640	1.728	0.709	0.535	0.554	0.617	1.979	-
n-Hexadecanoic acid	14.51	0.441	0.449	0.468	0.378	-	0.465	0.293	1.101
Octadecanoic acid	15.31	-	-	-	-	-	-	-	0.140
8-METHOXY-5,6-DIHYDROBENZO(1,2-B:5,4-B')DIFURAN-2-CARBOXYLIC ACID	16.22	-	-	-	-	-	0.282	-	-
Hexadecanoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester	17.77	-	-	-	-	-	-	-	0.412
<b>Ketone and Alcohol</b>		<b>14.541</b>	<b>11.129</b>	<b>11.216</b>	<b>10.503</b>	<b>9.259</b>	<b>12.319</b>	<b>11.056</b>	<b>13.917</b>
2(3H)-Furanone, dihydro-	4.18	-	-	-	0.916	-	-	-	-
2,5-Hexanedione	4.34	2.092	2.129	2.233	2.254	3.051	3.057	-	-
2(3H)-Furanone, dihydro-5-methyl-	4.67	-	-	-	0.556	0.619	0.722	-	-
2(3H)-Furanone, 5-ethyl-dihydro-5-methyl-	5.50	1.652	0.828	-	-	-	-	-	-
Benzenemethanol	5.62	-	-	-	-	-	-	-	0.433
Ethanone, 1-(3-methyl-1H-pyrazol-4-yl)-	5.97	-	-	-	-	-	-	-	0.809
Benzenethanol	6.50	-	-	-	-	-	-	-	0.753
3-Penten-2-one, 4-methyl-	6.83	-	-	-	0.831	-	-	-	-
Benzenethanol, 2-methoxy-	8.17	2.296	2.411	2.055	-	5.590	-	5.825	4.171
Ethanone, 1-(3-hydroxyphenyl)-	9.22	-	-	-	-	-	-	1.159	-
4-Methoxy-4-methyl-2,5-cyclohexadienone	9.30	-	-	-	-	-	-	-	0.885

Ethanone, 1-(4-hydroxy-3-methoxyphenyl)-	9.58	-	-	-	-	-	-	3.408	1.713
2H-Pyran-2,4(3H)-dione, 3-acetyl-6-methyl-	9.67	1.695	2.070	1.639	2.324	-	3.124	-	-
2-Propanone, 1-(4-hydroxy-3-methoxyphenyl)-	9.88	-	-	-	-	-	-	-	3.120
1,2,3,6,7,7a-Hexahydro-4,7a-dimethyl-5H-inden-5-one	10.31	0.229	-	-	-	-	-	-	-
Homovanillyl alcohol	10.40	2.578	-	1.986	-	-	-	-	-
2,4-Dimethoxybenzyl alcohol	10.94	-	-	0.396	-	-	-	-	-
(3S)-2-chloro-1-phenyl-1-penten-3-ol	11.01	1.026	-	-	-	-	-	-	-
2-Pentanone, 1-(2,4,6-trihydroxyphenyl)	12.75	2.972	3.692	2.908	3.401	-	5.055	-	-
Ethanone, 1-(4-hydroxy-3,5-dimethoxyphenyl)-	15.01	-	-	-	-	-	-	-	1.781
1-[2,4,6-Tris(1-methylethyl)phenyl]1,2-butadione	15.41	-	-	-	-	-	-	0.319	-
9H-Xanthen-9-one, 1-hydroxy-3,5,6-trimethoxy-	15.61	-	-	-	-	-	-	0.345	-
2-Methyl-6-oxo-7-(phenylthio)heptan-3-ol	16.21	-	-	-	0.223	-	-	-	-
Podocarp-12-en-14a-ol	16.31	-	-	-	-	-	0.362	-	-
Pyrrolo[1,2-a]pyrazine-1,4-dione, hexahydro-3-(phenylmethyl)-	18.13	-	-	-	-	-	-	-	0.253
<b>Cyclopentenone</b>		<b>15.950</b>	<b>14.936</b>	<b>13.844</b>	<b>18.970</b>	<b>15.589</b>	<b>16.664</b>	<b>9.605</b>	<b>8.112</b>
2-Cyclopenten-1-one.2-methyl-	4.07	3.197	3.480	3.260	4.375	3.500	3.060	-	-
2-Cyclopenten-1-one.3-methyl-	4.78	1.920	1.900	1.788	2.447	2.101	2.330	2.085	1.819
2-Cyclopenten-1-one, 3,4-dimethyl-	5.13	1.218	0.754	0.644	0.786	-	0.627	-	-

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2-Cyclopenten-1-one, 2-hydroxy-3-methyl-	5.54	2.662	2.325	2.572	2.373	3.769	3.307	3.095	2.049
2-Cyclopenten-1-one,2,3-dimethyl-	5.67	2.515	2.071	1.801	2.229	1.835	1.624	1.720	1.742
3,5-DIMETHYL CYCLOPENTENOLONE	5.89	1.268	1.293	1.250	0.854	1.035	1.313	0.991	0.643
2-Cyclopenten-1-one, 3-ethyl-2-hydroxy-	6.56	1.229	1.195	0.695	-	-	-	-	-
2,5-Cyclohexadiene-1,4-dione, 2-hydroxy-5-methyl-	6.61	-	-	0.745	-	1.024	-	-	-
2-Acetylcyclopentanone	7.24	0.927	1.020	-	0.879	0.722	-	0.526	0.689
2-Hydroxy-3-propyl-2-cyclopenten-1-one	7.51	-	-	-	-	-	0.253	-	-
2-Cyclohexen-1-one, 4-(1-methylethyl)-	7.89	1.016	0.897	1.089	-	1.603	-	-	-
7,7-dimethylbicyclo[3.3.0]octan-2-one	8.17	-	-	-	3.858	-	-	-	-
2-Cyclopenten-1-one, 2,3,4,5-tetramethyl-	9.47	-	-	-	-	-	-	1.189	-
(E)-4-[2-Methyl-4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-2-butenyl]-3-cyclohexen-1-one	10.03	-	-	-	-	-	-	-	0.369
2,5-Cyclohexadiene-1,4-dione, 2,3-dimethoxy-5-methyl-	10.40	-	-	-	-	-	2.313	-	-
5-(3'-Methyliden-2'-oxa-butyliden)-3,3-dimethyl-cyclohexanone	11.60	-	-	-	-	-	0.274	-	-
Bicyclo[4.3.0]nonan-2-one, 8-isopropylidene-	11.66	-	-	-	-	-	-	-	0.798
8,8-Dimethyl-1,9-diazabicyclo[5.3.0]decane-5,10-dione	12.30	-	-	-	1.169	-	1.563	-	-
<b>Phenolics</b>		<b>50.347</b>	<b>55.026</b>	<b>55.525</b>	<b>52.981</b>	<b>50.775</b>	<b>49.158</b>	<b>55.742</b>	<b>62.303</b>

Phenol	5.03	4.682	5.630	11.037	6.842	8.533	2.918	4.174	13.476
Phenol.2-methyl-	5.86	-	-	-	0.646	0.709	-	0.417	0.369
Phenol.3-methyl-	6.08	-	-	-	-	-	-	3.872	-
Phenol.4-methyl-	6.08	1.718	1.824	1.585	2.294	3.466	-	-	-
Phenol.2-methoxy-	6.24	7.610	9.062	6.856	5.490	14.456	6.552	22.608	9.583
Phenol.4-ethyl-	7.05	0.902	-	-	-	0.745	0.384	1.315	-
Phenol.2-methoxy-4-methyl-	7.32	1.457	1.550	1.229	2.680	2.901	1.033	-	1.057
1,2-Benzenediol	7.40	6.819	6.094	5.405	6.033	6.907	4.957	11.609	6.485
Phenol, 3-methoxy-	7.68	-	-	-	-	0.596	7.985	-	-
1,2-Benzenediol.3-methoxy-	8.02	5.793	7.137	6.124	7.623	-	-	-	9.356
Hydroquinone	8.14	1.294	1.364	2.049	-	-	-	1.741	-
1,2-Benzenediol, 4-methyl-	8.30	0.978	1.025	0.970	1.219	1.707	0.928	2.035	0.910
1,4-Benzenediol.2-methyl-	8.78	2.360	2.485	3.312	3.564	3.811	2.756	3.925	2.107
Phenol.2,6-dimethoxy-	8.84	12.701	14.934	13.129	14.589	4.296	19.040	-	18.470
CIS-ISOEUGENOL	8.89	-	-	-	-	-	-	0.695	-
Phenol.3,4-dimethoxy-	8.94	0.647	0.621	0.503	0.604	-	0.921	-	-
Phenol, 2-methoxy-4-propyl-	8.99	0.343	0.561	-	-	0.994	-	1.180	-
1,2,3-Benzenetriol	9.10	-	-	1.474	-	-	-	-	-
1,4-Benzenediol, 2-methoxy-	9.26	0.172	-	-	-	-	-	-	-
3,7-Di-tert-butyl-1-naphthol	9.39	0.547	-	-	-	-	-	-	-
1,3-Benzenediol, 4-ethyl-	9.48	-	0.705	-	-	-	-	-	-
Phenol, 4-(3-hydroxy-1-propenyl)-2-methoxy-	10.76	-	-	-	-	0.784	-	-	-
Phenol, 2,6-dimethoxy-4-(2-propenyl)-	10.96	0.357	0.390	-	-	-	-	-	0.491
Phenol, 2,6-dimethyl-4-nitro-	12.40	-	-	-	-	-	-	1.158	-
Phenol, 2,2'-methylenebis[6-(1,1-dimethylethyl)-4-methyl-	17.30	1.969	S25	1.857	1.399	0.869	1.683	0.707	-
Gigantol	20.03	-	-	-	-	-	-	0.305	-

<b>Furan&amp;Aldehydes</b>		<b>2.421</b>	<b>2.294</b>	<b>2.439</b>	<b>2.600</b>	<b>0.517</b>	<b>3.090</b>	<b>4.696</b>	<b>3.433</b>
2-Acetyl-5-methylfuran	5.64	0.371	0.228	0.412	0.346	0.517	0.422	0.359	-
Cyclopentanecarboxaldehyde, 2-methyl-3-methylene-	6.33	-	-	-	-	-	-	-	0.148
5-Ethyl-2-furaldehyde	6.36	-	-	-	0.229	-	-	-	-
Vanillin	9.14	-	-	-	-	-	-	-	1.111
Benzaldehyde, 4-hydroxy-3-methoxy-	9.32	-	-	-	-	-	-	4.338	-
2,4-Dimethyl-3-(methoxycarbonyl)-5-ethylfuran	10.34	2.051	2.066	2.028	2.026	-	2.668	-	-
E-15-Heptadecenal	10.96	-	-	-	-	-	-	-	1.328
Syringaldehyde	11.36	-	-	-	-	-	-	-	0.845
<b>Alkane &amp; Alkene &amp; Alkyne</b>		<b>0.158</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>1.952</b>	<b>0.185</b>	<b>3.918</b>	<b>4.804</b>
Cyclobutene, 1,2,3,4-tetramethyl-, cis-	5.13	-	-	-	-	1.178	0.185	-	-
2,4-Hexadiene, 3,4-dimethyl-, (Z,Z)-	5.15	-	-	-	-	-	-	0.622	-
1,5-Hexadiyne	7.71	-	-	-	-	-	-	-	0.494
Silacyclohexadiene-2,5	7.90	-	-	-	-	-	-	1.101	-
1-[2-(Trimethylsilyl)ethynyl]-3-phenylcyclohexene	8.80	-	-	-	-	-	-	1.744	-
1-Hexadecene	10.06	-	-	-	-	-	-	-	1.610
1,2-Dimethylenecyclohexane	10.08	-	-	-	-	-	-	0.451	-
3-(2-naphthyl)-1-butene	10.34	-	-	-	-	0.774	-	-	-
Cyclohexadecane, 1,2-diethyl-	15.66	-	-	-	-	-	-	-	1.208
1-Octadecene	16.13	0.158	-	-	-	-	-	-	-
Cyclotetracosane	17.12	-	S26	-	-	-	-	-	0.551
1-Nonadecene	17.33	-	-	-	-	-	-	-	0.772
1-Docosene	17.92	-	-	-	-	-	-	-	0.169



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<b>Others</b>	<b>13.784</b>	<b>11.546</b>	<b>9.395</b>	<b>9.148</b>	<b>14.376</b>	<b>16.244</b>	<b>2.522</b>	<b>5.778</b>
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**Table S10. Detailed chemicals of heavy oil from branches**

Heavy Oil-Branches									
Compound Name	RT <sup>a</sup>	Plant Name / Area (%)							
		Cinnamomum	Viburnum	Distylium	Pittosporum	Pinus	Cupressus	Salix	Platanus
<b>Ester and Acid</b>		<b>13.156</b>	<b>24.637</b>	<b>19.082</b>	<b>28.738</b>	<b>19.101</b>	<b>13.551</b>	<b>10.876</b>	<b>3.623</b>
3-Hydroxy-4-methoxybenzoic acid	9.67	-	3.862	-	-	-	-	-	-
Benzeneacetic acid, 4-hydroxy-3-methoxy-	10.40	-	-	-	-	3.181	-	9.612	-
1,2-Benzenedicarboxylic acid, dibutyl ester	13.45	-	-	-	-	-	-	1.264	-
Dibutyl phthalate	13.75	4.458	4.371	5.234	5.741	5.378	3.987	-	-
n-Hexadecanoic acid	14.51	7.456	10.636	9.147	9.365	6.436	7.452	-	-
9,12-Octadecadienoic acid (Z,Z)-	15.70	1.240	-	-	5.687	-	-	-	-
9-Octadecenoic acid, (E)-	15.74	-	2.916	4.702	3.589	-	-	-	-
Octadecanoic acid	15.87	-	-	-	-	-	2.114	-	-
Benzeneacetic acid, 4-hydroxy-3-methoxy-, methyl ester	16.85	-	-	-	4.357	-	-	-	-
DEHYDROABIETIC ACID	16.92	-	-	-	-	4.107	-	-	-
Hexadecanoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester	17.78	-	2.852	-	-	-	-	-	3.623
<b>Ketone and Alcohol</b>		<b>7.325</b>	<b>9.843</b>	<b>4.787</b>	<b>3.032</b>	<b>13.762</b>	<b>3.024</b>	<b>15.980</b>	<b>13.860</b>
Benzeneethanol, 2-methoxy-	8.17	5.202	4.927	4.787	3.032	13.762	3.024	12.746	5.225
Ethanone, 1-(4-hydroxy-3-methoxyphenyl)-	9.58	-	-	-	-	-	-	0.581	-
2-Propanone, 1-(4-hydroxy-3-methoxyphenyl)-	9.88	-	-	-	-	-	-	2.651	-

Homovanillyl alcohol	10.40	-	1.812	-	-	-	-	-	-
(3S)-2-chloro-1-phenyl-1-penten-3-ol	11.01	-	-	-	-	-	-	-	3.643
2-Pentanone, 1-(2,4,6-trihydroxyphenyl)	12.75	-	-	-	-	-	-	-	1.634
1,6-Dimethylthieno[2',3':3,4]bicyclo[3.3.0]oct-6(7)-en-2-one	13.65	2.122	-	-	-	-	-	-	-
Androst-16-en-3-one, (5.alpha.)-	18.48	-	-	-	-	-	-	-	3.359
Androst-5,16-diene-3.beta.-ol	18.89	-	3.104	-	-	-	-	-	-
<b>Cyclopentenone</b>		<b>6.347</b>	<b>5.986</b>	<b>2.576</b>	<b>2.808</b>	<b>2.870</b>	<b>34.449</b>	<b>0.000</b>	<b>0.000</b>
2-Cyclopenten-1-one, 2-methyl-	4.07	2.494	2.439	2.576	2.808	2.870	21.664	-	-
2,5-Hexanedione	4.36	-	-	-	-	-	2.588	-	-
2-Cyclopenten-1-one, 3-methyl-	4.81	-	-	-	-	-	4.118	-	-
2-Cyclopenten-1-one.2,3-dimethyl-	5.67	-	1.351	-	-	-	6.079	-	-
3,5-Cyclohexadiene-1,2-dione, 3,4,5,6-tetrachloro-	14.60	1.725	2.196	-	-	-	-	-	-
2-Methoxy-5-(2',3'-dimethoxyphenyl)cyclohepta-2,4,6-trien-1-one	18.88	2.128	-	-	-	-	-	-	-
<b>Phenolics</b>		<b>60.579</b>	<b>49.943</b>	<b>60.614</b>	<b>57.914</b>	<b>53.907</b>	<b>40.381</b>	<b>40.199</b>	<b>41.438</b>
Phenol	5.03	3.024	3.801	10.485	6.419	6.533	5.169	-	10.248
Phenol.4-methyl-	6.08	2.316	1.811	-	2.591	-	-	-	-
Phenol.2-methoxy-	6.24	9.157	9.573	8.693	7.000	17.988	7.917	15.557	8.415
Phenol.4-ethyl-	7.05	2.498	-	-	-	-	-	-	-
Phenol.4-methoxy-2-methyl-	7.23	-	-	-	-	-	-	-	1.479
Phenol.2-methoxy-4-methyl-	7.32	2.347	2.698	2.352	2.392	5.400	-	-	-
2-Methoxy-5-methylphenol	7.41	-	-	-	-	-	-	3.865	-
1,2-Benzenediol.3-methoxy-	8.02	2.245	-	-	-	-	-	-	-
Phenol.2,6-dimethoxy-	2.050	2.572	S24	-	5.052	-	3.548	1.970	2.050
Phenol, 2-methoxy-4-propyl-	1.608	1.867	-	-	-	-	4.095	-	1.608
Phenol, 2-methoxy-4-(2-propenyl)-	-	-	-	-	3.020	-	-	-	-
CIS-ISOEUGENOL	-	-	-	-	-	-	-	1.652	-
Phenol, 2,6-dimethoxy-4-(2-propenyl)-	20.676	12.595	19.193	21.964	13.251	13.505	-	-	20.676



1-Heptadecene	18.47	-	-	-	-	-	-	-	15.504
6-nitroindole[2,3-a]cyclodec-1-ene	21.28	-	-	-	-	-	-	12.417	-
<b>Others</b>		<b>5.623</b>	<b>3.208</b>	<b>6.011</b>	<b>0.000</b>	<b>10.359</b>	<b>4.611</b>	<b>0.000</b>	<b>0.000</b>