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Improving the Antioxidant Activity, Yield, and Hydrocarbon Content of Bio-Oil from the Pyrolysis of Açaí Seeds by Chemical Activation: Effect of Temperature and Molarity

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Table S1. Classes of compounds, summation of peak areas, CAS number, and retention times of chemical compounds identified by CG-MS in bio-oil by pyrolysis of Açaí seeds (*Euterpe Oleracea*, Mart), activated with 2.0 M KOH solution, at 350 °C, 1.0 atmosphere, in laboratory scale.

Class of Compounds: Chemical Compounds	RT [min]	CAS	i% (Area)
Alcohol			
2-Furanmethanol	8.251	98-00-0	1.576
5-tert-Butylpyrogallol	28.208	20481-17-8	2.627
∑ (Area.%) =			**4.203**
Aromatic			
Naphthalene, 1,2-dihydro-6-methyl-	21.820	2717-47-7	1.387
Toluene	6.147	108-88-3	2.08
Bicyclo[4.2.0]octa-1,3,5-triene	9.714	694-87-1	1.701
∑ (Area.%) =			**5.168**
Cresol			
p-Cresol	14.651	106-44-5	3.266
p-Cresol	15.304	106-44-5	3.349
∑ (Area.%) =			**6.615**
Cycloalkene			
Cyclooctene, 1,2-dimethyl-	19.063	54299-96-6	3.163
∑ (Area.%) =			**3.163**
Ester			
10-Octadecenoic acid, methyl ester	42.716	13481-95-3	2.103
Pentadecanoic acid, 13-methyl-, methyl ester	37.015	5487-50-3	1.733
Tridecanoic acid, 12-methyl-, methyl ester	32.819	5129-58-8	1.576
∑ (Area.%) =			**5.412**
Hetrocyclic organic compound			
5H-1-Pyrindine	22.420	270-91-7	2.222
∑ (Area.%) =			**2.222**
Hydrocarbon			
Cyclohexene, 3,3,5-trimethyl-	16.265	503-45-7	1.855
∑ (Area.%) =			**1.855**
Ketone			
2-Cyclopenten-1-one, 2,3-dimethyl-	12.943	1121-05-7	1.933
2-Cyclopenten-1-one, 2,3-dimethyl-	14.255	1121-05-7	1.632
2-Cyclopenten-1-one, 2-methyl-	10.000	1120-73-6	1.726
2-Cyclopenten-1-one, 3,4,4-trimethyl-	14.995	30434-65-2	2.199
2-Pentanone, 4-hydroxy-4-methyl-	7.901	123-42-2	3.034
5H-Inden-5-one, 1,2,3,6,7,7a-hexahydro-7a-methyl-	17.682	17299-55-7	1.685
∑ (Area.%) =			**12.209**
Lactonas			
Butyrolactone	10.105	96-48-0	4.454
∑ (Area.%) =			**4.454**
Phenol			
2,3-Dimethoxybenzyl alcohol	26.227	5653-67-8	2.244
Benzenemethanol, α-methyl-α-propyl-	22.869	4383-18-0	1.64
1,3-Benzenediol, 4-ethyl-	19.151	2896-60-8	4.524
Phenol	12.168	108-95-2	15.640
Phenol, 2,6-dimethoxy-	23.679	91-10-1	4.014
Phenol, 2-methoxy-	15.933	90-05-1	8.476

Phenol, 2-methoxy-4-propyl-	24.187	2785-87-7	1.846
Phenol, 2-methoxy-5-(1-propenyl)-, (E)-	26.524	19784-98-6	1.816
Phenol, 3-ethyl-	17.280	620-17-7	3.031
Phenol, 3-ethyl-	18.201	620-17-7	3.840
Phenol, 3-ethyl-5-methyl-	20.410	698-71-5	1.672
Phenol, 4-ethyl-2-methoxy-	21.680	2785-89-9	3.127
∑ (Area.%) =			**51.870**
Sequiterpenes			
Cedran-diol, 8S,13-	27.999	88588-48-1	2.828
∑ (Area.%) =			**2.828**
Total			**100.000**

Table S2. Classes of compounds, summation of peak areas, CAS number, and retention times of chemical compounds identified by CG-MS in bio-oil by pyrolysis of Açaí seeds (*Euterpe Oleracea*, Mart), activated with 2.0 M KOH solution, at 400 °C, 1.0 atmosphere, in laboratory scale.

Class of Compounds: Chemical Compounds	RT [min]	CAS	wi% (Area)
Alcohol			
1,1-Cyclopropanedimethanol, 2-methyl-α-phenyl-	22.176	108546-96-9	1.814
2-Furanmethanol	8.251	98-00-0	4.166
∑ (Area.%) =			**5.980**
Alkane			
Decane	12.885	124-18-5	1.809
Tridecane	22.076	629-50-5	2.433
Undecane	16.079	1120-21-4	1.907
∑ (Area.%) =			**6.149**
Amine			
4-(2,5-Dihydro-3-methoxyphenyl)butylamine	22.438	77515-67-4	2.888
Phenethylamine, 2,4,5-trimethoxy-α-methyl-	28.208	1083-09-6	1.974
2-Pentanone, 4-amino-4-methyl-	8.542	625-04-7	1.935
∑ (Area.%) =			**6.797**
Aromatic			
Mesitylene	13.036	108-67-8	1.559
Bicyclo[4.2.0]octa-1,3,5-triene	9.714	694-87-1	2.712
∑ (Area.%) =			**4.271**
Carboxylic acid			
Butanoic acid, 4-hydroxy-	10.104	591-81-1	2.144
E-9-Tetradecenoic acid	21.843	50286-30-1	3.189
∑ (Area.%) =			**5.333**
Cresol			
p-Cresol	15.309	106-44-5	3.87
∑ (Area.%) =			**3.870**
Cyclic alkene			
1,3-Dimethyl-1-cyclohexene	11.002	2808-76-6	0.902
1,5,5-Trimethyl-6-methylene-cyclohexene	18.981	514-95-4	1.862
Cyclobutene, 2-propenylidene-	6.147	52097-85-5	2.140
Cyclohexane	4.031	110-82-7	3.743
∑ (Area.%) =			**8.647**
Ester			
Acetic acid, 7-hydroxy-1,3,4,5,6,7-hexahydro-2H-naphthalen-4a-ylmethyl ester	26.232	-	1.824
∑ (Area.%) =			**1.824**
Fatty Alcohol			
1-Hexadecanol, 2-methyl-	32.399	2490-48-4	1.708
∑ (Area.%) =			**1.708**
Ketone			
2-Cyclopenten-1-one, 2,3-dimethyl-	14.260	1121-05-7	2.845
2-Cyclopenten-1-one, 3,4,4-trimethyl-	14.995	30434-65-2	1.814
2-Pentanone, 4-hydroxy-4-methyl-	7.901	123-42-2	2.883
Cyclopentanone, 2-ethyl-	11.154	4971-18-0	1.291
∑ (Area.%) =			**8.833**
Phenol			

Phenol	12.168	108-95-2	9.050
Phenol, 2,3,5-trimethyl-	19.623	697-82-5	1.829
Phenol, 2,4,6-trimethyl-	20.526	527-60-6	2.023
Phenol, 2,4-dimethyl-	17.699	105-67-9	5.675
Phenol, 2,6-dimethoxy-	23.679	91-10-1	2.919
Phenol, 2-methoxy-	15.933	90-05-1	6.092
Phenol, 2-methyl-	14.657	95-48-7	3.743
Phenol, 3-ethyl-	17.280	620-17-7	3.115
Phenol, 3-ethyl-	18.200	620-17-7	3.193
Phenol, 4-ethyl-2-methoxy-	21.686	2785-89-9	3.612
∑ (Area.%) =			**41.251**
Sequiterpenes			
Tetradecane, 2,6,10-trimethyl-	27.433	14905-56-7	1.990
1,4-Dihydrothujopsene-(I1)	19.156	159087-74-8	3.346
∑ (Area.%) =			**5.336**
Total			**100.000**

Table S3. Classes of compounds, summation of peak areas, CAS number, and retention times of chemical compounds identified by CG-MS in bio-oil by pyrolysis of Açaí seeds (*Euterpe Oleracea*, Mart), activated with 2.0 M KOH solution, at 450 °C, 1.0 atmosphere, in laboratory scale.

Class of Compounds: Chemical Compounds	RT [min]	CAS	wi% (Area)
Alcohol			
2,3,4,5,6-Pentamethyl benzyl alcohol	26.279	-	1.738
2-Furanmethanol	8.257	98-00-0	1.578
Benzenemethanol, α-ethyl-4-methoxy-	24.181	5349-60-0	1.805
Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1α,2α,5β)-	19.156	491-01-0	3.798
∑ (Area.%) =			**8.919**
Alkane			
Decane	12.891	124-18-5	1.234
Nonadecane	27.433	629-92-5	1.518
Tetradecane	24.833	629-59-4	2.332
Tridecane	22.071	629-50-5	2.595
Undecane	16.085	1120-21-4	1.590
∑ (Area.%) =			**9.269**
Alkene			
7-Tetradecene	21.849	10374-74-0	2.863
∑ (Area.%) =			**2.863**
Amine			
4-(2,5-Dihydro-3-methoxyphenyl)butylamine	22.438	77515-67-4	2.445
∑ (Area.%) =			**2.445**
Armoatic			
Bicyclo[4.2.0]octa-1,3,5-triene	9.714	694-87-1	3.126
Ethylbenzene	8.764	100-41-4	2.214
Toluene	6.147	108-88-3	1.946
∑ (Area.%) =			**7.286**
Carboxylic acid			
Butanoic acid, 4-hydroxy-	10.105	591-81-1	0.973
∑ (Area.%) =			**0.973**
Cresol			
p-Cresol	15.304	106-44-5	3.004
∑ (Area.%) =			**3.004**
Cyclic hydrocarbon			
1,2,4,4-Tetramethylcyclopentene	14.995	65378-76-9	1.302
1,3-Cyclopentadiene, 5-(1-methylpropylidene)-	13.025	04.02.3141	0.891
Cyclohexane	4.025	110-82-7	3.245
Cyclohexane, 1,2,4-tris(methylene)-	11.894	14296-81-2	0.856
∑ (Area.%) =			**6.294**
Ester			
Acetic acid, 7-hydroxy-1,3,4,5,6,7-hexahydro-2H-naphthalen-4a-ylmethyl ester	25.778	-	1.287
∑ (Area.%) =			**1.287**
Fatty Alcohol			
1-Hexadecanol, 2-methyl-	32.405	2490-48-4	1.508
∑ (Area.%) =			**1.508**
Ketone			
2-Cyclopenten-1-one, 2,3-dimethyl-	14.260	1121-05-7	1.855

2-Cyclopenten-1-one, 2-methyl-	10.000	1120-73-6	0.904
4-(3,7,7-Trimethyl-2-oxabicyclo[3.2.0]hept-3-en-1-yl)but-3-en-2-one	22.176	54686-00-9	1.449
4-(3,7,7-Trimethyl-2-oxabicyclo[3.2.0]hept-3-en-1-yl)but-3-en-2-one	24.041	54686-00-9	1.567
Spiro[2.3]hexan-5-one, 4,4-diethyl-	16.265	-	1.293
∑ (Area.%) =			**7.068**
Nitrile			
Tricyclo[3.1.0.0(2,4)]hex-3-ene-3-carbonitrile	12.681	103495-51-8	1.94
∑ (Area.%) =			**1.94**
Phenol			
Phenol	12.168	108-95-2	5.731
Phenol, 2,3,5-trimethyl-	20.514	697-82-5	1.967
	16.586	526-75-0	1.369
Phenol, 2,3-dimethyl-	17.693	526-75-0	4.757
Phenol, 2,4,5-trimethyl-	21.406	496-78-6	1.684
Phenol, 2,4,6-trimethyl-	19.617	527-60-6	1.752
Phenol, 2,4,6-trimethyl-	21.523	527-60-6	1.504
Phenol, 2,5-dimethyl-	18.643	95-87-4	1.234
Phenol, 2,5-dimethyl-	18.982	95-87-4	1.964
Phenol, 2,6-dimethoxy-	23.685	91-10-1	2.896
Phenol, 2-ethyl-4-methyl-	21.004	3855-26-3	1.580
Phenol, 2-methyl-	14.657	95-48-7	2.594
Phenol, 3,5-dimethyl-	18.305	108-68-9	1.785
Phenol, 3-ethyl-	18.206	620-17-7	2.602
Phenol, 3-ethyl-5-methyl-	20.071	698-71-5	1.580
Phenol, 4-ethyl-	17.285	123-07-9	1.714
Phenol, 4-ethyl-2-methoxy-	21.680	2785-89-9	2.935
Phenol, 4-ethyl-2-methyl-	20.415	2219-73-0	1.683
∑ (Area.%) =			**41.331**
Terpenoid			
Ascaridole epoxide	22.863	135760-25-7	2.28
∑ (Area.%) =			**2.28**
Non identified fraction			
Mequinol	15.933	150-76-5	3.532
∑ (Area.%) =			**3.532**
Total			**100.000**

Table S4. Classes of compounds, summation of peak areas, CAS number, and retention times of chemical compounds identified by CG-MS in aqueous phase by pyrolysis of Açaí seeds (*Euterpe Oleracea*, Mart), activated with 2.0 M KOH solution, at 350 °C, 1.0 atmosphere, in laboratory scale.

Class of Compounds: Chemical Compounds	RT [min]	CAS	$_i$% (Area)
Alcohol			
2-Furanmethanol	8.251	98-00-0	2.336
∑ (Area.%) =			**2.336**
Amine			
N-Isopropylcyclohexylamine	18.422	1195-42-2	29.124
∑ (Area.%) =			**29.124**
Carboxylic acid			
Acetic acid, hydrazide	3.851	1068-57-1	4.046
∑ (Area.%) =			**4.046**
Ketone			
2-Pentanone, 4-amino-4-methyl-	8.543	625-04-7	15.919
2-Propanone, (1-methylethylidene)hydrazone	8.700	627-70-3	15.122
Butyrolactone	10.111	96-48-0	3.132
1,2,3-Trimethylpiperidin-4-one	15.420	-	14.578
4-Piperidinone, 2,2,6,6-tetramethyl-	16.907	826-36-8	4.06
∑ (Area.%) =			**52.811**
Oxazole			
Oxazole, 4,5-dihydro-2,4,4-trimethyl-	6.369	1772-43-6	3.524
∑ (Area.%) =			**3.524**
Phenol			
Phenol	12.191	108-95-2	4.452
∑ (Area.%) =			**4.452**
Silane			
(N-Methylcarbamoyloxymethyl)trivinylsilane	7.319	120491-41-0	3.706
∑ (Area.%) =			**3.706**
Total			**100.000**

Table S5: Classes of compounds, summation of peak areas, CAS number, and retention times of chemical compounds identified by CG-MS in aqueous phase by pyrolysis of Açaí seeds (*Euterpe Oleracea*, Mart), activated with 2.0 M KOH solution, at 400 °C, 1.0 atmosphere, in laboratory scale.

Class of Compounds: Chemical Compounds	RT [min]	CAS	wi% (Area)
Alcohol			
2-Furanmethanol	8,257	98-00-0	15.587
Cyclopropyl carbinol	16.184	2516-33-8	5.148
∑ (Area.%) =			**20.735**
Amine			
2-Propen-1-amine, N,N-bis(1-methylethyl)-	15.420	44898-60-4	5.300
∑ (Area.%) =			**5.300**
Aziridin			
Aziridine, 1,2-diisopropyl-3-methyl-, trans-	18.422	6124-84-1	3.490
∑ (Area.%) =			**3.490**
Carboxylic acid			
Butanoic acid, 4-hydroxy-	10.110	591-81-1	15.020
∑ (Area.%) =			**15.020**
Ketone			
2-Pentanone, 4-amino-4-methyl-	8.543	625-04-7	11.560
2-Propanone, (1-methylethylidene)hydrazone	8.694	627-70-3	3.550
4-Piperidinone, 2,2,6,6-tetramethyl-	16.895	826-36-8	4.585
∑ (Area.%) =			**19.695**
Oxazole			
Oxazole, 4,5-dihydro-2,4,4-trimethyl-	6.374	1772-43-6	32.78
5-Amino-3,4-dimethyl-isoxazole	7.319	19947-75-2	2.980
∑ (Area.%) =			**35.76**
Total			**100.000**

Table S6: Classes of compounds, summation of peak areas, CAS number, and retention times of chemical compounds identified by CG-MS in aqueous phase by pyrolysis of Açaí seeds (*Euterpe Oleracea*, Mart), activated with 2.0 M KOH solution, at 450 °C, 1.0 atmosphere, in laboratory scale.

Class of Compounds: Chemical Compounds	RT [min]	CAS	wi% (Area)
Alcohol			
2,4-Dimethyl-2-oxazoline-4-methanol	6.368	39986-37-3	17.670
3-Furanmethanol	8.257	4412-91-3	8.948
∑ (Area.%) =			**26.618**
Alkene			
2-Pentene, 2,4-dimethyl-	6.735	625-65-0	3.394
∑ (Area.%) =			**3.394**
Amine			
N-Tert.-butyl-N-(2-propenyl)amine	13.030	16486-68-3	6.054
2-Propen-1-amine, N,N-bis(1-methylethyl)-	15.426	44898-60-4	3.620
∑ (Area.%) =			**9.674**
Aziridine			
Aziridine, 2-(1,1-dimethylethyl)-1-ethyl-3-methyl-, trans-	18.416	55669-79-9	3.381
∑ (Area.%) =			**3.381**
Carboxylic acid			
Butanedioic acid, methylene-	7.313	97-65-4	2.487
Butanoic acid, 4-hydroxy-	10.104	591-81-1	6.743
∑ (Area.%) =			**9.230**
Ester			
Carbamic acid, phenyl ester	12.191	622-46-8	3.316
∑ (Area.%) =			**3.316**
Ketone			
2-Pentanone, 4-amino-4-methyl-	8.531	625-04-7	32.541
2-Propanone, (1-methylethylidene)hydrazone	8.700	627-70-3	2.292
4-Piperidinone, 2,2,6,6-tetramethyl-	16.901	826-36-8	9.553
∑ (Area.%) =			**44.386**
Total			**100.000**

Table S7. Classes of compounds, summation of peak areas, CAS number, and retention times of chemical compounds identified by CG-MS in bio-oil by pyrolysis of Açaí seeds (*Euterpe Oleracea*, Mart), activated with 0.5 M KOH solution, at 450 °C, 1.0 atmosphere, in laboratory scale.

Class of Compounds: Chemical Compounds	RT [min]	CAS	wi% (Area)
Alcohol			
2-Furanmethanol	8.251	98-00-0	9.136
2-Furanmethanol, acetate	12.570	623-17-6	1.110
Maltol	16.662	118-71-8	1.577
4-Methoxybenzene-1,2-diol	21.249	3934-97-2	1.169
Resorcinol, 2-acetyl-	21.890	699-83-2	1.978
5-tert-Butylpyrogallol	28.208	20481-17-8	1.788
∑ (Area.%) =			**16.758**
Aldehyde			
1-Cyclohexene-1-carboxaldehyde, 4-(1-methylethyl)-	14.989	21391-98-0	1.719
Dodecanal	16.143	112-54-9	1.118
∑ (Area.%) =			**2.837**
Aromatic hydrocarbon			
Ethylbenzene	8.764	100-41-4	1.176
Styrene	9.720	100-42-5	1.087
Toluene	6.147	108-88-3	1.703
∑ (Area.%) =			**3.966**
Azole			
Oxazole, 4,5-dihydro-2,4,4-trimethyl-	6.374	1772-43-6	0.951
∑ (Area.%) =			**0.951**
Carboxylic acid			
9-Hexadecenoic acid	38.391	2091-29-4	2.180
Benzoic acid	17.973	65-85-0	2.058
cis-2-Methoxycinnamic acid	25.720	14737-91-8	1.672
Dodecanoic acid	28.838	143-07-7	5.043
Tetradecanoic acid	33.431	544-63-8	1.540
∑ (Area.%) =			**12.493**
Coumarin			
Comarin, 3,4,4a,5,6,8a-hexahydro-6,8a-epidioxy-4a,6-dimethyl-	27.439	-	1.454
∑ (Area.%) =			**1.454**
Cyclic hydrocarbon			
Cyclohexane	4.025	110-82-7	1.700
∑ (Area.%) =			**1.700**
Ester			
Benzoic acid, methyl ester	16.242	93-58-3	1.422
Methyl tetradecanoate	32.813	124-10-7	0.969
∑ (Area.%) =			**2.391**
Furan			
Furan, 2-(2-furanylmethyl)-5-methyl-	18.579	13678-51-8	1.294
∑ (Area.%) =			**1.294**
Ketone			
1H-Inden-1-one, 2,3-dihydro-	22.164	83-33-0	0.951
2-Cyclopenten-1-one	7.779	930-30-3	0.971
2-Cyclopenten-1-one, 2,3-dimethyl-	14.260	1121-05-7	1.319

2-Cyclopenten-1-one, 2-methyl-	10.000	1120-73-6	1.155
2-Cyclopenten-1-one, 2-methyl-	11.894	1120-73-6	0.970
2-Cyclopenten-1-one, 3-ethyl-2-hydroxy-	16.790	21835-01-8	1.503
3H-Cyclodeca[b]furan-2-one, 4,9-dihydroxy-6-methyl-3,10di-methylene-3a,4,7,8,9,10,11,11a-octahydro-	37.977	-	1.140
3-Methylcyclopentane-1,2-dione	13.800	-	2.273
Ethanone, 1-(2-furanyl)-	10.105	1192-62-7	3.283
∑ (Area.%) =			**10.673**
Nitrile			
Benzonitrile	12.675	100-47-0	1.264
∑ (Area.%) =			**1.264**
Phenol			
(E)-2,6-Dimethoxy-4-(prop-1-en-1-yl)phenol	32.638	20675-95-0	1.928
2-Methoxy-4-vinylphenol	22.770	7786-61-0	2.220
Benzenemethanol, 4-hydroxy-	23.411	623-05-2	1.013
Creosol	19.157	93-51-6	1.936
Phenol	12.162	108-95-2	9.484
Phenol, 2,5-dimethyl-	17.699	95-87-4	1.069
Phenol, 2,6-dimethoxy-	23.680	91-10-1	3.618
Phenol, 2-methoxy-	15.933	90-05-1	4.298
Phenol, 2-methoxy-4-(1-propenyl)-	26.512	97-54-1	2.293
Phenol, 2-methyl-	14.657	95-48-7	1.774
Phenol, 3-ethoxy-	19.022	621-34-1	1.620
Phenol, 3-ethyl-	17.291	620-17-7	0.996
Phenol, 3-ethyl-	18.206	620-17-7	1.867
Phenol, 3-methyl-	15.310	108-39-4	1.336
Phenol, 4-ethyl-2-methoxy-	21.675	2785-89-9	2.717
Phenol, 4-methoxy-3-(methoxymethyl)-	26.215	59907-65-2	1.336
∑ (Area.%) =			**40.335**
Non-identified Fraction			**3.884**
Total			**100.000**

Table S8. Classes of compounds, summation of peak areas, CAS number, and retention times of chemical compounds identified by CG-MS in bio-oil by pyrolysis of Açaí seeds (*Euterpe Oleracea*, Mart), activated with 1.0 M KOH solution, at 450 °C, 1.0 atmosphere, in laboratory scale.

Class of Compounds: Chemical Compounds	RT [min]	CAS	wi% (Area)
Alcohol			
2-Furanmethanol	8.251	98-00-0	4.571
p-Cresol	15.309	106-44-5	3.681
1,3-Benzenediol, 4-ethyl-	19.156	2896-60-8	2.872
6-Methyl-cyclodec-5-enol	19.588	-	1.240
1,1-Cyclopropanedimethanol, 2-methyl-α-phenyl-	22.164	108546-96-9	1.308
5-tert-Butylpyrogallol	28.202	20481-17-8	1.487
Octahydro-anthracen-2,3,4a,6,7,8a,9a,10a-octaol	28.844	-	1.064
Estra-1,3,5(10)-trien-17β-ol	33.437	2529-64-8	3.928
∑ (Area.%) =			**20.151**
Aldehyde			
Cyclopentanecarboxaldehyde, 2-methyl-3-methylene-	16.254	-	1.278
∑ (Area.%) =			**1.278**
Alkane			
Cyclohexane	4.025	110-82-7	2.588
Tridecane	22.071	629-50-5	1.047
∑ (Area.%) =			**3.635**
Alkene			
Bicyclo[4.2.0]octa-1,3,5-triene	9.720	694-87-	2.261
∑ (Area.%) =			**2.261**
Aromatic hydrocarbon			
Toluene	6.147	108-88-3	1.675
Benzene, 1,3-dimethyl-	8.764	108-38-3	1.752
∑ (Area.%) =			**3.427**
Carboxylic acid			
Palmitoleic acid	21.849	373-49-9	1.583
Oxiraneoctanoic acid, 3-octyl-, cis-	27.241	24560-98-3	1.025
9-Hexadecenoic acid	38.391	2091-29-4	0.937
∑ (Area.%) =			**3.545**
Ester			
Butyrolactone	10.110	96-48-0	2.459
Methyl 4,6-tetradecadiynoate	25.084	-	0.895
Geranyl isovalerate	27.433	109-20-6	0.988
Methyl tetradecanoate	32.819	124-10-7	1.249
Pentadecanoic acid, 13-methyl-, methyl ester	37.021	5487-50-3	1.331
10-Octadecenoic acid, methyl ester	42,71	-	1.046
∑ (Area.%) =			**8.830**
Furan			
2,4-Dimethylfuran	11.888	3710-43-8	1.139
∑ (Area.%) =			**1.139**
Ketone			
2-Cyclopenten-1-one, 2-methyl-	9.994	1120-73-6	1.028
2-Furanmethanol, acetate	12.570	623-17-6	0.984
2-Cyclopenten-1-one, 2,3-dimethyl-	12.943	1121-05-7	0.909

2-Cyclopenten-1-one, 2-hydroxy-3-methyl-	13.800	80-71-7	1.133
2-Cyclopenten-1-one, 2,3-dimethyl-	14.260	1121-05-7	1.712
2-Cyclopenten-1-one, 3,4,4-trimethyl-	14.989	30434-65-2	1.058
2-Cyclopenten-1-one, 3-ethyl-2-hydroxy-	16.796	21835-01-8	1.549
Cyclohexanone, 2-(2-butynyl)-	22.508	54166-48-2	1.861
Cyclopenta[1,3]cyclopropa[1,2]cyclohepten-3(3aH)-one, 1,2,3b,6,7,8hexahydro-6,6-dimethyl-	25.772	91531-58-7	1.045
∑ (Area.%) =			**11.279**
Phenol			
Phenol	12.168	108-95-2	8.939
Phenol, 2-methyl-	14.651	95-48-7	2.971
Phenol, 2-methoxy-	15.933	90-05-1	5.262
Phenol, 2,5-dimethyl-	16.592	95-87-4	1.292
Phenol, 3-ethyl-	17.285	620-17-7	2.110
Phenol, 2,5-dimethyl-	17.693	95-87-4	3.871
Phenol, 3-ethyl-	18.200	620-17-7	2.298
Phenol, 2-ethyl-6-methyl-	18.981	1687-64-5	1.298
Phenol, 3-ethyl-5-methyl-	20.066	698-71-5	1.027
Phenol, 2-ethyl-4-methyl-	20.998	3855-26-3	1.324
Phenol, 2,4,6-trimethyl-	21.412	527-60-6	0.947
Phenol, 2,4,6-trimethyl-	21.523	527-60-6	1.046
Phenol, 4-ethyl-2-methoxy-	21.680	2785-89-9	2.349
2-Methoxy-4-vinylphenol	22.770	7786-61-0	1.369
Phenol, 2,6-dimethoxy-	23.679	91-10-1	3.089
Benzenemethanol, α-ethyl-4-methoxy-	24.181	5349-60-0	1.122
2,3-Dimethoxybenzyl alcohol	26.221	5653-67-8	1.831
3-Allyl-6-methoxyphenol	26.512	501-19-9	1.143
(E)-2,6-Dimethoxy-4-(prop-1-en-1-yl)phenol	32.638	20675-95-0	1.167
∑ (Area.%) =			**44.455**
Total			**100.000**