

Table 5-2: Tentative Identifications of Components Extracted from a Bleached Softwood Pulp Sample.

(Q is the quality of match as determined by the GC/MS software.)

Reported identifications for components with quality of match greater than 40.

Table 5-2								
Retention Time, min	SOXHLET Methylene chloride	Q	SFE-Step 1 100% CO2	Q	SFE-Step 2 90%CO2/10% MeOH	Q	SFE-Step 3 80%CO2/20%MeOH	Q
4.10	1-Methyl-2-cyclopenten-1-ol	83						
4.66	1,3-Pentadiene, 2-methyl	72						
5.46	2-Cyclohexen-1-one	91						
6.14			1-Heptanol	80	1-Heptanol	80	1-Heptanol	72
6.27			Phenol	92	Phenol	94	Phenol	95
6.85	Heptanal	43						
7.22	Butanal, 3-hydroxy	43						
7.31	Cyclohexanol, 4-chloro-, trans	50						
7.78			Pentane, 1-(ethenyloxy)-	59				
7.90	1,2-Cyclohexanediol	87						
7.96			1-Octanol	52				
8.03	Cyclohexane, 1,2-dichloro-	72						
8.46					2(1H)-Pyridinone	87	2(1H)-Pyridinone	93
8.57	Nonanal	80			Nonanal	87	Nonanal	47
8.66			Nonanal	91				
8.82	Butyric acid, 2,3-dichloro-	43						
9.36					Acetaldehyde	40	Acetaldehyde	50
9.57			Octanoic acid	80				
9.83							3,5-Hexadien-2-ol, 2-methyl	43
10.20	Decanal	87	Decanal	87	Decanal	43		
10.47					2-Furancarboxaldehyde, 5-(hydroxym	64		
10.79			4-Hexen-2-one	46	3-Octanone	38	3-Octanone	43
11.83	cis-anti-cis-Tricyclo[7.3.0.0.2,6]	47						
12.16			Piperidine, 2-methyl-	43	Piperidine, 2-methyl	41	Cyclopentanone, 2-(1-methylpropyl)	43
12.31	Propanoic acid, 2-methyl, 2,2-dim	64	Pentadecane, 2,6,10-trimethyl-	59	2-Pentanone, 3,3,4,4-tetramethyl-	38		
12.45			2-Hexene, 1-methoxy-3-methyl-, (E)	60				

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Retention Time, min	SOXHLET Methylene chloride	Q	SFE-Step 1 100% CO2	Q	SFE-Step 2 90%CO2/10% MeOH	Q	SFE-Step 3 80%CO2/20%MeOH	Q
12.49			2-Undecanal	87				
12.50					2-Decenal, (E)-	43		
12.62	Propanoic acid, 2-methyl-, 3-hydro	90	Propanoic acid, 2-methyl-, 3-hydro-	90				
12.88					Methyl 11-(2,3-dideuterocyclopenta	43	Butanoic acid, 3-hydroxy-, methyl	40
13.09			Dodecanal	91				
13.38			Methyl lignocerate	43	Decanoic acid, methyl ester	43	Butanoic acid, 3-methyl methyl es	37
13.65					Benzoic acid, 4-hydroxy- methyl ester	90	Benzoic acid, 4-hydroxy-, methyl es	94
13.92			1-Dodecanol	83	1-Dodecanol	74	1-Dodecene	64
14.32			Phenol, 2,6-bis(1,1-dimethylethyl)	98	Phenol, 2,6-bis(1,1-dimethylethyl)	93	Phenol, 2,6-bis(1,1 dimethylethyl)	95
14.39			Octadecanal	50	(2-Tetradecyloxy)-ethanol	53		
14.52			Dodecanoic acid, methyl ester	96	Undecanoic acid, 10-methyl-,methy	90	Dodecanoic acid, methyl ester	80
14.57			Benzofuran, 2-ethenyl-	91	Benzofuran, 2-ethenyl	91	2-Naphthalenol	91
15.06			4-Di-cis-1,2-cyclohexanediol	50	1,4-Butanediol	47		
15.16			Cyclopropane, nonyl-	50	Cyclotetradecane	74		
15.32	Propanoic acid, 2-methyl-, 1-(1,1-	49						
15.33			2-Methoxyallyl bromide	43				
15.62			1-Hexadecanol	87				
16.35			Cyclododecane	93	Cyclotetradecane	70	1-Octadecanol	58
16.60			Dotriacontane	80				
16.86			Tetradecanoic acid, methyl ester	97	Tetradecanoic acid, methyl ester	96	Undecanoic acid, 10-methyl-, meth	83
17.47					Bis-(3,5,5-trimethylhexyl) ether	43		
17.69			Docosane	53				
17.89			Oxirane.[(hexadecyloxy)methyl]-	53				
17.90					(2-Tetradecyloxy)-ethanol	59		
18.53			1-Hexacosanol	68				
18.98			Hexadecanoic acid, methyl ester	97	Hexadecanoic acid, methyl ester	97	Hexadecanoic acid, methyl ester	99
19.29	Phthalic acid, butyl ester, ester	90	9-Octadecenoic acid (Z)-	74	1,2-Benzenedicarboxylic acid, buty	64	1,2-Benzenedicarboxylic acid, bis(72
19.47	Bicyclo [4.4.0]Dec-1-en, 2-isopropy	52						
19.51	Bicyclo[3.2.0]heptan-2-one, 1,4,4-	46						
19.65					Oxirane, 2-butyl-3-methyl-, cis	53		
19.72			Hexadecane	58				
19.78	Benzene, 1,2,3,4-tetramethyl-5-(1-	47						
19.93	Hexadecanoic acid	43	1-Dotriacontanol	27				
20.15			Benzoic acid, 2-hydroxy-phenyl ester	87	Benzoic acid 4-hydroxy-, ethyl ester	83	Benzoic acid, 4-hydroxy- ethyl es	83
20.52	5-Eicosene, (E)-	62						
20.53			1-Hexadecanol	91	Azocine, 1,2,3,4,7,8-hexahydro	35		
20.66	Heptadecane	94	11-Octadecenoic acid, methyl ester	99	10-Octadecenoic acid, methyl ester	99	9-Octadecenoic acid(Z)-, methyl es	95

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Retention Time, min	SOXHLET Methylene chloride	Q	SFE-Step 1 100% CO2	Q	SFE-Step 2 90%CO2/10% MeOH	Q	SFE-Step 3 80%CO2/20%MeOH	Q
20.72			1,3,2-Oxazaborolane, 2-butyl	46	6,8-Dioxabicyclo(3.2.1) octan-4. bet	32	2-Methyl-10-undecenal	38
20.80			Triclosan	99	Benzene, 1,4-dichloro	90		
20.90			Heptadecanoic acid, 16-methyl-,	97	Octadecanoic acid, methyl ester	98	Octadecanoic acid, methyl ester	97
21.02			5-Hydroxydodecanoic acid, lactone	49				
21.57	Dotriacontane	91	Dotriacontane	91				
22.27			Oxiraneoctanoic acid, 3-octyl-,me	47	Methyl 16-acetylhydroxypalmitate	43		
22.40	1-Hexacosanol	76	Decanedioic acid	35	Decanedioic acid	35	Decanedioic acid	22
22.44	Dotriacontane	64	Octadecane, 1-chloro-	68				
23.18	Hexadecanoic acid, dioctyl ester	87						
23.27	Pentatriacontane	80	Heptacosane	91	Dotriacontane	91	Heptacosane	91
24.17			Hexadecanoic acid, 2-hydroxy-1-(hy	91	Hexadecanoic acid, 2-hydroxy-1-(hy	91	2-Propenamide, N-(1-methylethyl)-	27
24.33	1,2-Benzenedicarboxylic acid, bis(90	1,2-Benzenedicarboxylic acid, 3-ni	87	1,2-Benzenedicarboxylic acid, 3-ni	91	1,2-Benzenedicarboxylic acid, bis(72
25.57			1-Dotriacontanol	93	Decanal	32		
25.68			1,4-Dioxaspiro[4.5]decane, 8-(methy	42				
26.43	2,6,10,14,18,22,-Tetracosahexaene	87						
28.81	Cholest-5-en-3-ol (3.beta.)-	64	Cholest-5-en-3-ol(3.beta.)-	94	Cholest-5-en-3-ol (3.beta)	92	Cholest-5-en-3-ol (3.beta.)-	72