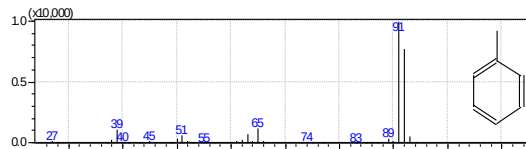
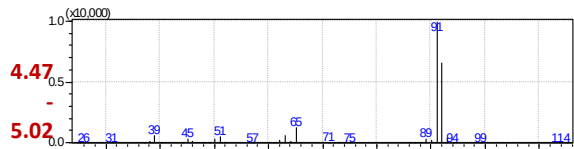
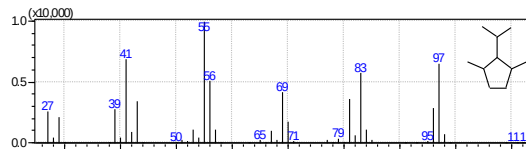
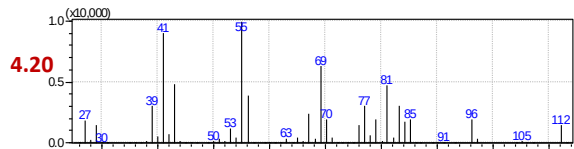
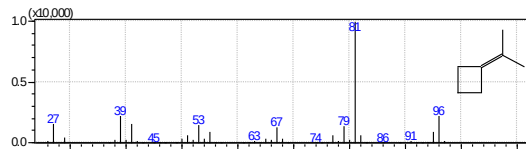
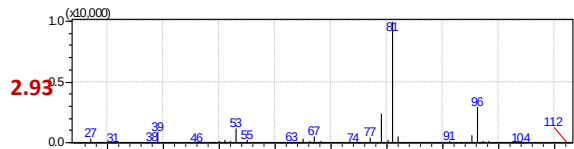
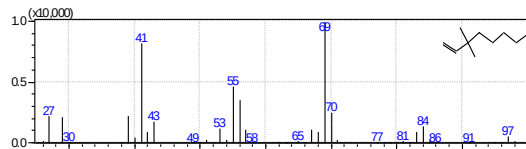
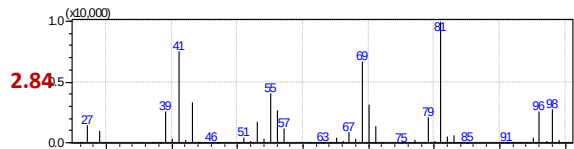
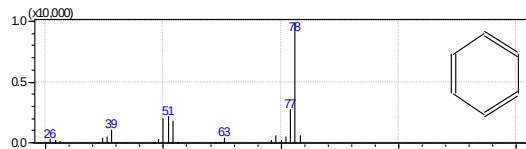
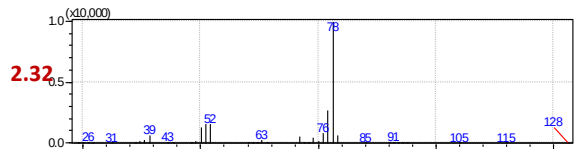
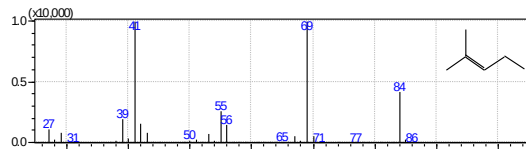
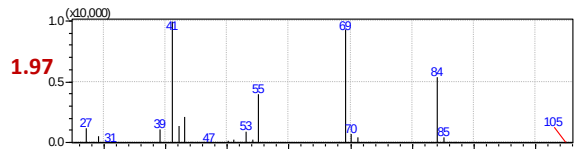
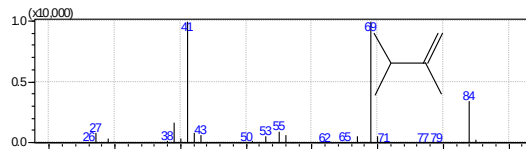
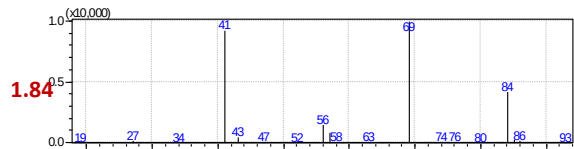
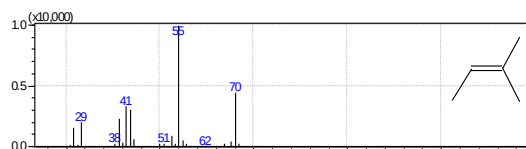
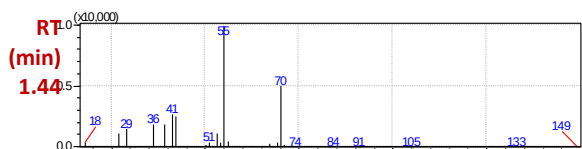


Table 3. Thermal history of the reactor: Continuation of pyrolysis and sampling (third time)

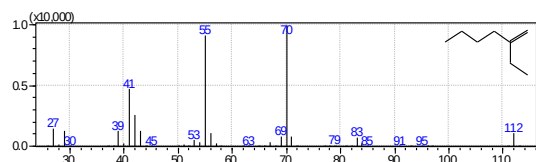
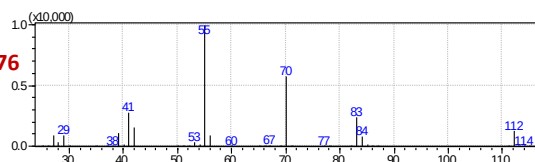
Time (Min)	T1 (°C)	T2(°C)	T3(°C)	Observations
0	23	23	23	Initial temperature, room temperature
10	42	23	23	Dark steam filled the 5L flask
14	89	51	23	Steam condensation
15	120	59	23	First drop of liquid
16.5	153	73	23	Sample 3 (6.87g)
23	244	107	23.6	Sample 3 (g)
32	328	112	37	Sample 4 (12.4g)
35	350	117	34	Sample 5(19.82g)
39		123	34	Sample 6 (14g)
42	388	140	32	Sample 7(10.97g)
51	402	130	28	Sample 8(12.77g)
56	395	134	28	Sample 9(16.92g)
65	396	147	27	Sample 10 (11.64g)
72		143	28	Sample 11 (12.5g)
90	385	86	28	Liquids in third flask was collected, Volatile Sample (13.26 g)
107	385	54	24	Sample 13 (9.75g)
155	414	71	23.9	Sample 14 (13.5g)
260	410	66	23.1	Sample 15 (16.67g)
297	435	175	23.9	Sample 16 (5 g)

Table 4. Thermal history of the reactor: Continuation of pyrolysis and sampling (fourth time)

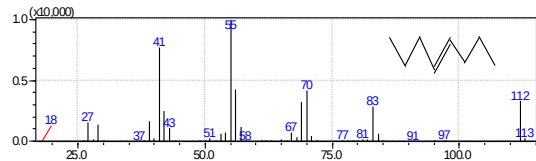
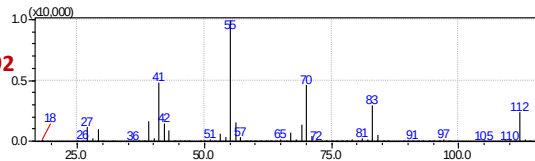
Time	T1	T2	T3	Observations
0:00	25.7	27.8	27.7	Initial temperatures
0:14	82.7	31.3	28.1	Condensation began to appear around the neck of reaction flask
0:18	105.1	51.8	28.1	H ₂ O droplets appeared in the condenser.
0:22	117.9	86.3	28.2	First drops of H ₂ O began to condense in the graduated funnel
0:28	121.3	97.1	28.9	H ₂ O droplets appeared by T3
0:42	121.6	97.1	39.4	50 mL of H ₂ O was collected (Sample A)
1:00	121.8	96.8	30.1	45ml of H ₂ O was collected and some organics were visible in the beaker as well. The heat intensity was increased from 6 to 8
1:14	123.3	109.2	51.7	Over 75 mL of H ₂ O and organics were collected. Sample B was placed
1:36	181.5	114.5	41.4	Sample B's container was collected (20.09 g) and Sample C was placed
1:50	299.9	106.2	31.4	Yellow like crystalline solids were forming around the condenser
1:56	353.9	97.8	30.8	Sample C's container was collected (16.54 g) and Sample D was placed
2:00	388.3	87.9	29.7	Sample B and C's composition and color was noted to be similar. Both being a clouded light yellow solid like substance, with a light reddish brown liquid settling on the top. Sample C had slight solid formation around the container.
2:18	459.8	60.8	29.0	No liquid appeared to be coming out, solid formations was observed around the neck of flasks and condenser.
2:26	466.3	71.6	28.9	The solid precipitated around condenser appeared to be bright yellow in color
2:36	482.7	69.7	28.9	Sample D's flask was filled with ¼ liquid similar to that of Sample B and C
2:40	488.1	73.1	28.7	Heat intensity was increased from 8 to the maximum 10
2:44	490.5	192.9	28.7	Vigorous clouds of vapor began to rise from the 3 necked round bottom flask and travel down the condenser. Sample D's flask was collected (8.21 g) and Sample E was placed
2:48	495.0	277.0	32.2	The solid formation began to change color from a yellow to a vibrant red orange as the vapors continued to emit from the reaction flask. The vapors continued to emit from the flask vigorously. Sample E's flask was collected (16.66 g) and Sample F was placed
2:50	498.1	277.4	35.6	The heat intensity was decreased from the maximum to 9
2:52	506.1	271.8	36.6	Solid condensate and vapors continued to form as described previously
2:58	525.1	236.2	32.1	Sample F's flask was collected (17.93) and Sample G was placed
3:06	548.4	221.6	30.5	Sample G's flask was collected (18.02 g) and Sample H was placed
3:14	570.5	184.9	30.5	The formation of the crystalline solids were seen throughout the distillation system
3:28	614.4	135.8	35.3	An aliquot of Sample E (Sample 44) was taken for GC-MS analyzes
3:32	616.3	130.0	29.9	Sample H's flask was collected (14.52 g) and Sample I was placed
3:38	618.2	115.0	30.0	Sample I was collected (1.50 g) and the system was turned off due to the observation that no more liquid was coming from the system



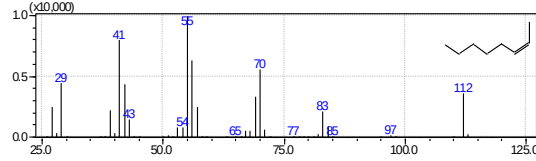
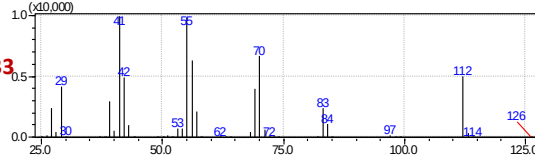
6.47-6.76



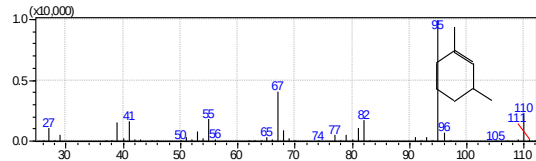
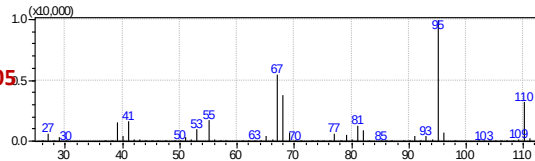
6.92



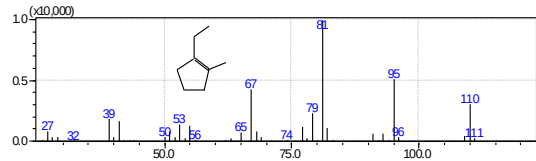
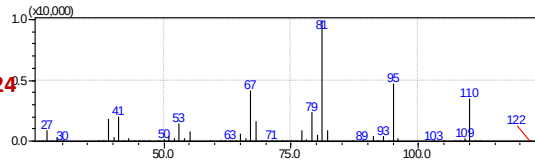
7.33



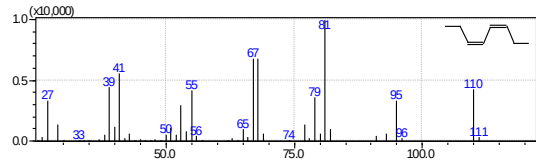
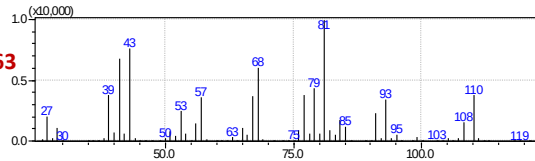
8.05



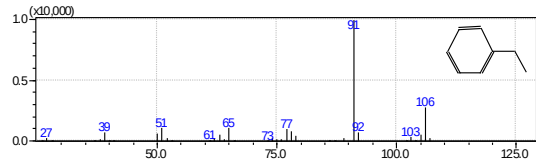
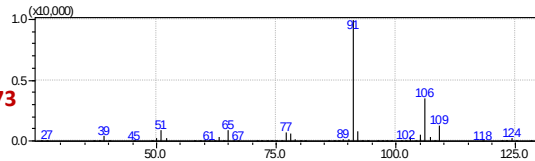
8.24



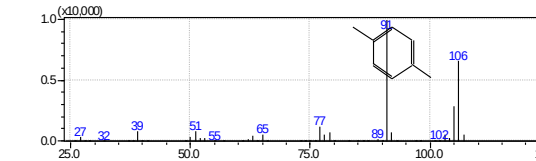
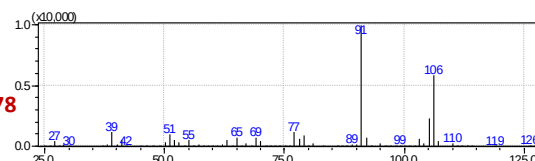
8.63

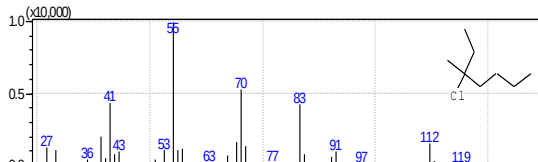
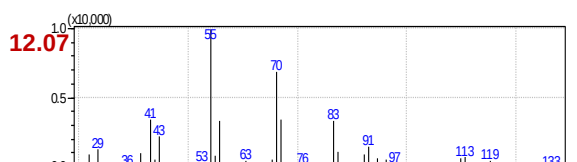
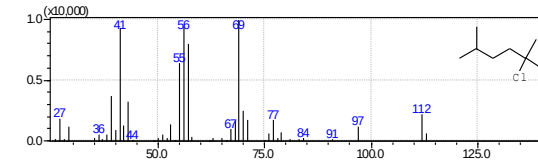
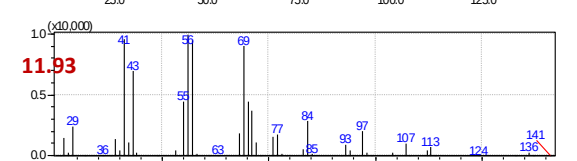
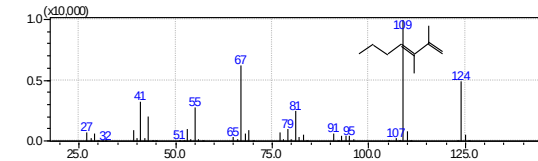
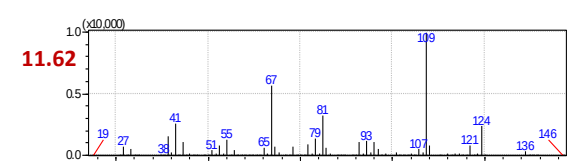
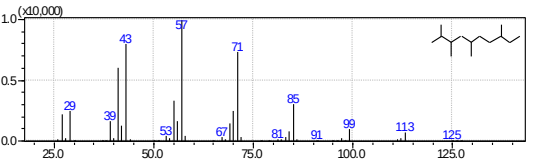
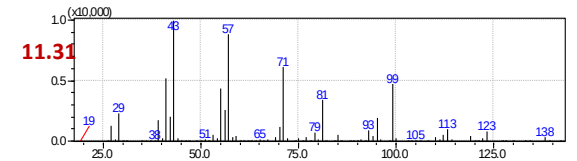
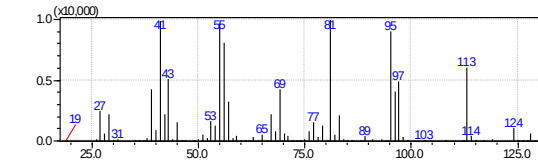
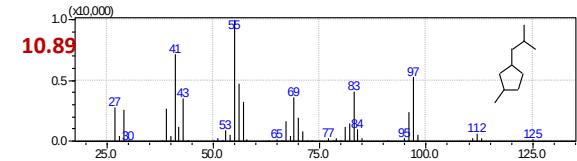
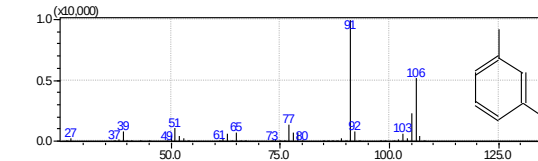
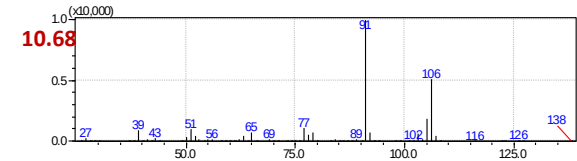
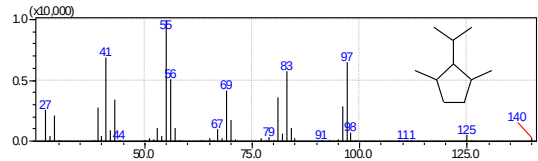
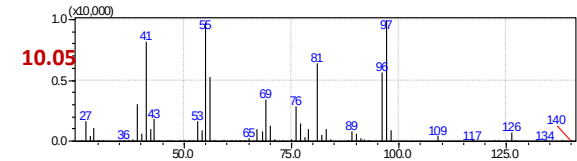
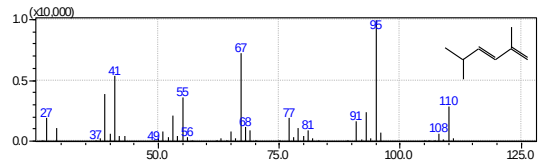
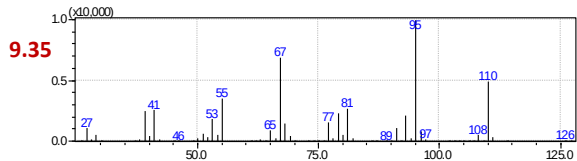
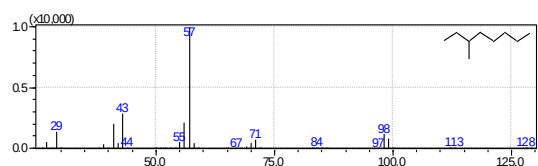
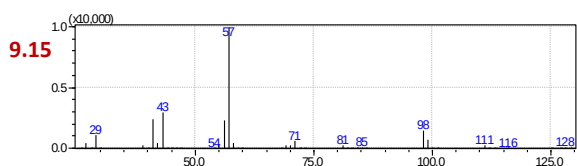


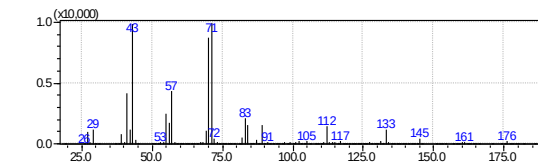
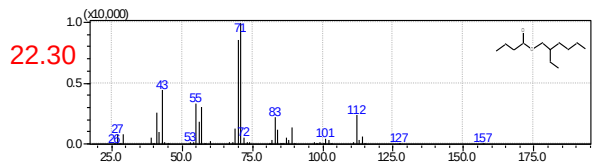
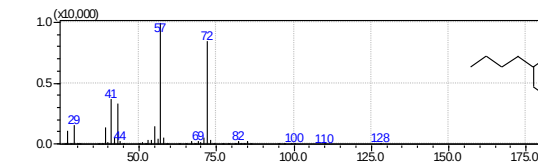
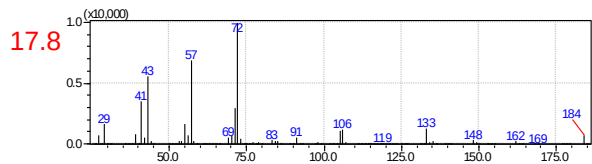
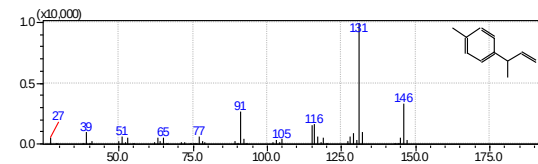
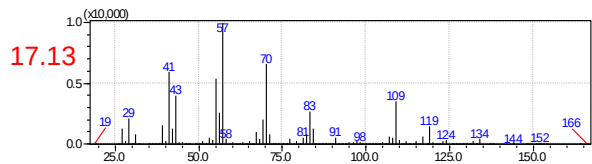
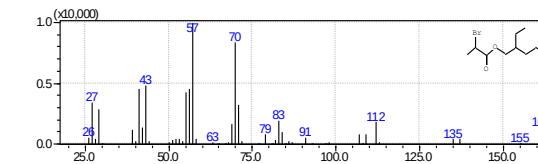
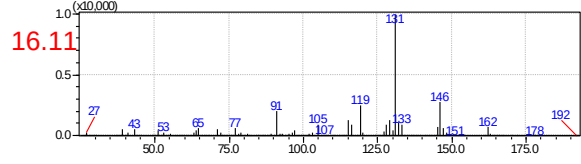
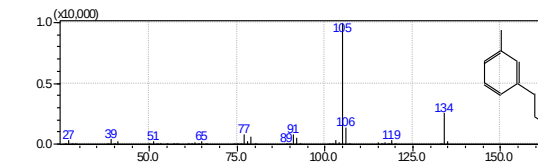
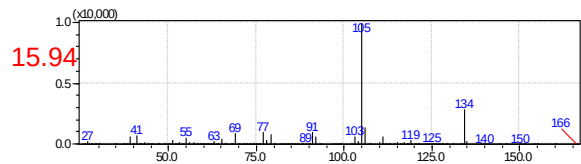
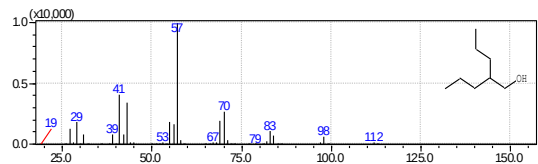
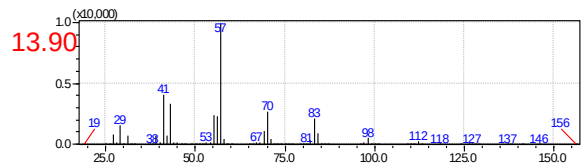
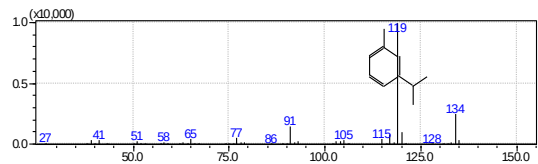
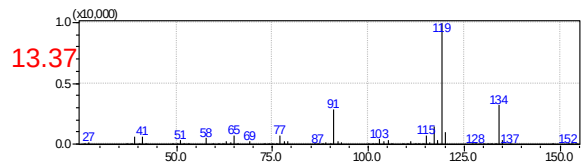
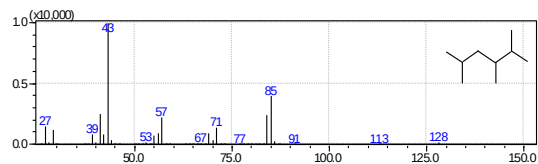
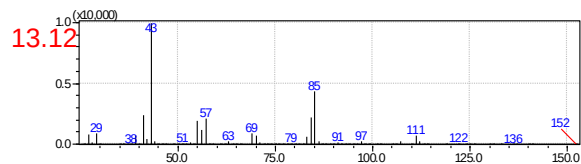
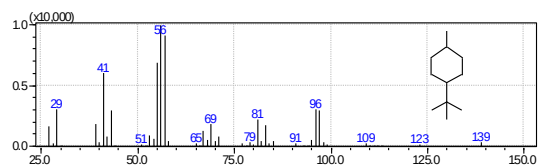
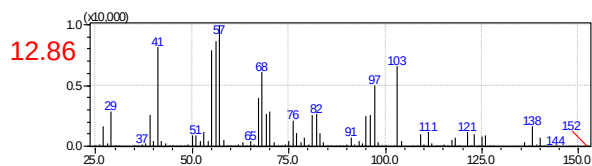
8.73



8.78







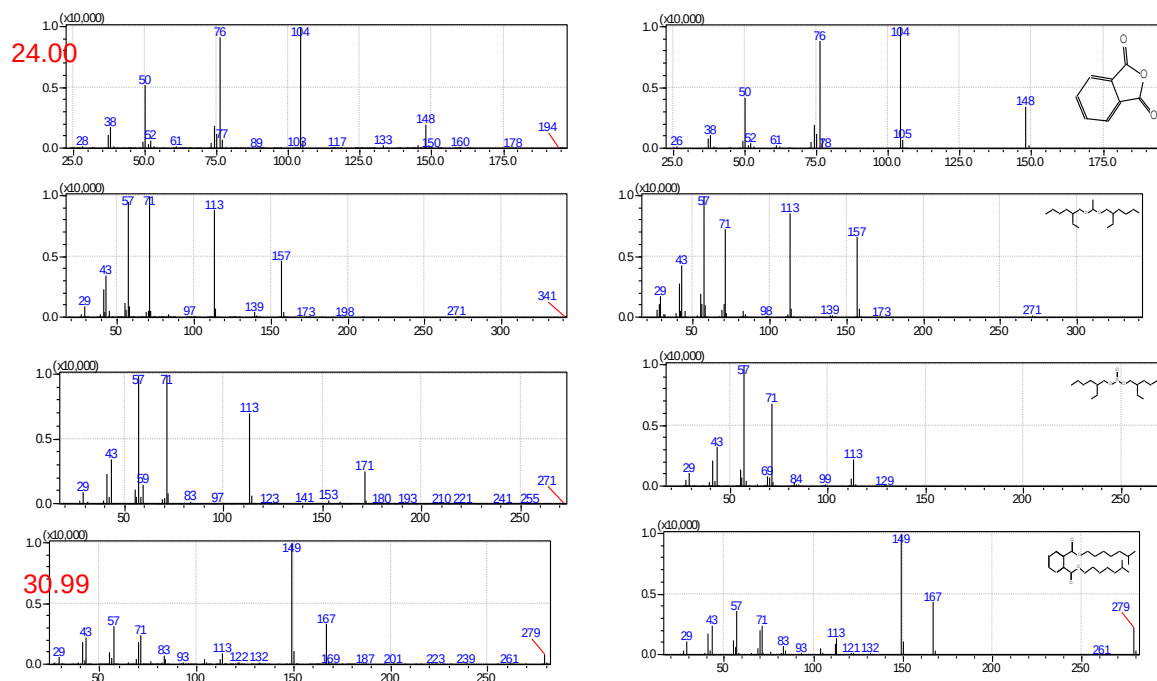


Fig 9. The MS of some picks of the most volatile sample (identified with their retention time, min) and the MS of most similar **compounds** to the MS from NIST library

Table 5. The major chemical compositions of the most volatile sample of the pyrolysis process.

Retention Time	Start Time	End Time	Area %	Name
0.46	0.41	0.59	0.48	pentene
1.36	1.14	1.38	6.29	Hydrogen chloride
1.84	1.82	2.01	5.13	2,3-dimethyl-butene
2.32	2.01	2.38	4.68	benzene
4.05	3.72	4.13	0.72	heptene
4.51	4.25	4.55	0.95	Toluene
4.62	4.55	4.75	0.68	Heptane, 3-methyl-
5.33	4.75	5.37	8.42	4-Hexen-3-one, 4-methyl-
5.58	5.37	5.69	9.40	3-Heptene, 3-methyl-
6.09	6.03	6.23	0.90	2-Octene, (Z)-
8.43	8.23	8.55	0.57	o-Xylene
9.23	9.11	9.39	0.14	o-Xylene
9.61	9.42	9.71	0.15	3-Tridecene
9.80	9.71	9.93	0.07	1-Octene, 3-methyl-
10.11	9.95	10.21	0.24	2-Ethyl-4,6-dimethyltetrahydropyran
10.50	10.38	10.57	0.33	Furan, tetrahydro-2,2-dimethyl-5-(1-methylethyl)-
10.62	10.57	10.70	0.23	Furan, 2,5-diethyltetrahydro-
10.81	10.70	10.96	0.29	1,3-Hexadiene, 2,3,5-trimethyl-
11.46	11.38	11.66	1.22	Heptane, 3-chloro-3-methyl-
11.81	11.77	11.88	0.21	Bicyclo[4.1.0]heptane, 3,7,7-trimethyl-, (1.alpha.,3.alpha.,6.alpha.)-
12.04	11.88	12.12	0.52	2-Cyclohexene-1-carboxaldehyde, 2,6,6-trimethyl-
12.55	12.43	12.58	2.60	Pentane, 3,3-diethyl-
12.76	12.65	12.82	1.07	Benzene, 1-methyl-3-(1-methylethyl)-
12.98	12.82	13.33	3.42	2-Propyl-1-pentanol
13.87	13.75	13.92	0.36	Chloroacetic acid, 2-ethylhexyl ester
14.04	14.00	14.13	0.20	Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, 2-methyl-4-oxo-3-(2,4-pentadienyl)-2-cyclopenten-1-yl ester
14.21	14.13	14.28	0.15	2,6,10-Trimethylundeca-1,3-diene
15.23	15.18	15.25	0.07	Benzene, pentyl-
15.59	15.54	15.62	0.09	3-Phenyl-4,5-dimethyl-2,1-oxaborolane
15.75	15.62	15.78	0.41	2-Benzoyl-4,4-dimethyl-5-phenyl-4H-1,3-diazol-1-ium-1-olate
15.83	15.78	15.87	0.14	1,7,7-Trimethyl-2-vinylbicyclo[2.2.1]hept-2-ene
15.89	15.87	15.95	0.19	1-Iodo-2-methylnonane

17.11	17.08	17.15	0.28	n-Butyric acid 2-ethylhexyl ester
17.53	17.49	17.56	0.08	Naphthalene, 5-butyl-1,2,3,4-tetrahydro-
17.76	17.56	17.85	0.88	1,2-Benzenedicarboxylic acid
17.88	17.85	17.92	0.11	Naphthalene, 1,2,3,4-tetrahydro-1,5-dimethyl-
19.50	19.40	19.61	0.39	4-Methylnonanoic acid
19.72	19.61	19.74	0.31	Dodecane, 1-chloro-
20.10	20.08	20.20	0.16	Hexadecane, 1,16-dichloro-
20.27	20.20	20.31	0.17	2-Bromotetradecane
20.38	20.31	20.43	0.10	1,3,2-Dioxaborinane, 2,4-diethyl-5-methyl-6-propyl-
20.51	20.43	20.57	0.09	Naphthalene, 2-butyl-3-hexyl-1,2,3,4-tetrahydro-
20.60	20.57	20.65	0.07	Azulene, 4,6,8-trimethyl-
21.30	21.19	21.38	0.19	2,2,4-Trimethyl-1,3-pentanediol diisobutyrate
22.01	21.88	22.05	0.09	Benzene, 1,1'-(1,3-propanediyl)bis-
22.33	22.23	22.38	0.05	2-Methyl-cis-7,8-epoxyoctadecane
22.41	22.38	22.43	0.03	Hexadecane
22.51	22.43	22.55	0.03	Octanoic acid, 2-ethylhexyl ester
26.83	26.78	26.93	0.16	Dodecanoic acid, isooctyl ester
30.60	30.28	30.73	1.04	1,2-Benzenedicarboxylic acid, diisooctyl ester

Table 6. Major chemicals identified in the sample 1 by GC-MS.

Retention Time	Start Time	End Time	Area %	Name
1.14	1.11	2.22	52.00	Hydrogen chloride
2.27	2.23	2.56	1.23	2-Chloroethanol
2.68	2.65	2.79	0.48	1-Chloro-2-Propanol
2.86	2.79	2.95	0.61	1,4-Dioxane
2.98	2.95	3.07	0.24	2-Chloro-1-propanol
3.47	3.45	3.60	0.43	1,2-Ethenediol
3.69	3.60	3.78	0.10	2-ethoxy-ethanol
4.80	4.77	4.97	0.38	Cyclopentanone
6.03	5.97	6.13	0.10	Cyclotrisiloxane, hexamethyl-
6.69	6.63	6.81	0.23	Thiophene, tetrahydro-2-methyl-
8.41	8.38	8.45	0.08	2-Cyclopenten-1-one, 2-methyl-
8.61	8.45	8.68	0.27	3-Nitropropanoic acid
8.71	8.68	8.78	0.06	2-Ethyl-4,6-dimethyltetrahydropyran
9.05	9.02	9.12	0.15	Furan, 2,5-diethyltetrahydro-
9.15	9.12	9.22	0.11	Furan, 2,5-diethyltetrahydro-
9.56	9.53	9.68	0.06	Formamide, N,N-diethyl-
9.89	9.83	9.94	0.24	2-Nonanol, 5-ethyl-
9.99	9.94	10.02	0.15	Fumaric acid, 3-fluorophenyl hexadecyl ester
10.06	10.02	10.13	1.42	Ethanol, 2-(2-chloroethoxy)-
10.18	10.13	10.24	0.38	Propanoic acid, 3-chloro-
10.76	10.66	10.79	0.05	1,2-Epoxyundecane
10.89	10.79	10.99	0.10	Ethanol, 2-(2-ethoxyethoxy)-
11.26	11.21	11.39	2.11	2-Propyl-1-pentanol
11.79	11.73	11.89	0.32	2(3H)-Furanone, 5-ethylidihydro-
13.18	13.12	13.25	0.05	2,5-Pyrrolidinedione
13.92	13.76	13.99	0.16	Benzoic acid
14.88	14.83	14.93	0.08	2-Heptanol, 6-methyl-
15.03	14.98	15.05	0.05	Cyclohexane, 1-methyl-2-propyl-
15.25	15.10	15.36	0.82	3-Nitro-2-butanol
16.45	16.08	16.58	21.78	Phthalic anhydride
16.80	16.73	16.83	0.13	1(3H)-Isobenzofuranone
16.92	16.83	16.97	0.27	Hexanedioic acid
18.46	18.28	18.60	3.43	Phthalimide

19.19	19.13	19.24	0.15	Ethanol, 2-[2-(2-chloroethoxy)ethoxy]-
19.51	19.45	19.53	0.12	Bis(2-(2-chloroethoxy)ethyl)ether
19.57	19.53	19.62	0.19	Phthalic acid, di-(1-hexen-5-yl) ester
19.79	19.62	19.84	0.41	Phthalimidine
20.35	20.26	20.45	0.30	Phthalic acid, di-(1-hexen-5-yl) ester
21.43	21.38	21.52	0.07	2-Acetylbenzoic acid
22.55	22.50	22.62	0.06	Ethanol, 2-[2-(2-chloroethoxy)ethoxy]-
22.83	22.78	22.88	0.06	Bis(2-(2-chloroethoxy)ethyl)ether
24.87	24.79	24.99	0.12	Heneicosane
26.36	26.24	26.48	0.24	Benzenemethanamine, N-hydroxy-N-(phenylmethyl)-
26.87	26.63	27.11	1.46	1,2-Propanediol, 3-benzyloxy-1,2-diacetyl-
29.87	29.73	29.98	0.07	Heneicosane

Table 7. 50 Major chemicals identified in the sample 2 by GC-MS.

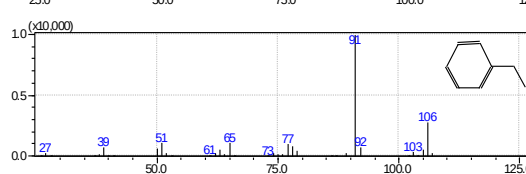
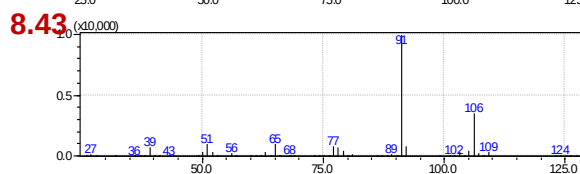
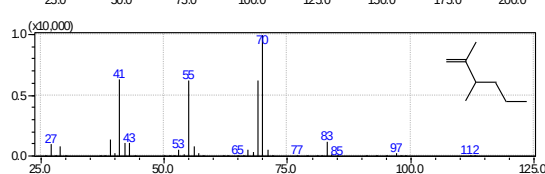
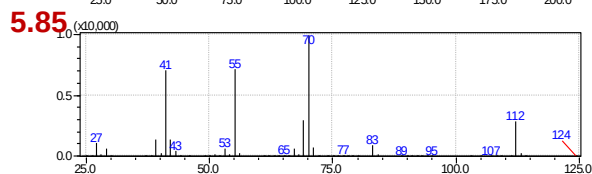
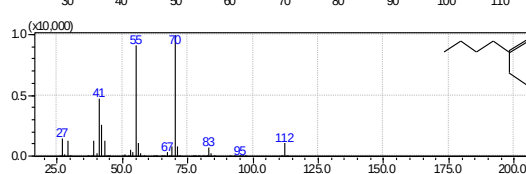
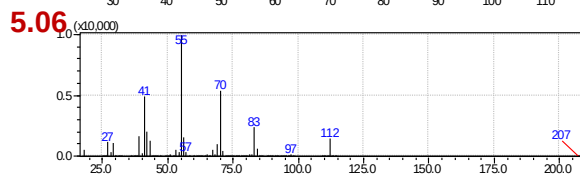
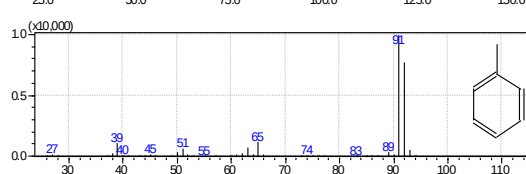
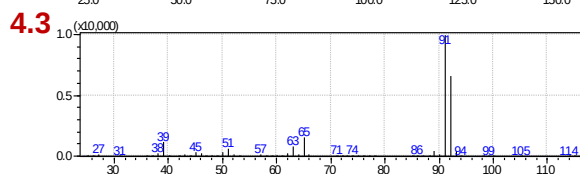
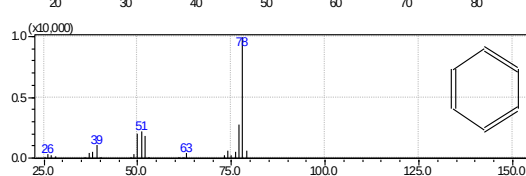
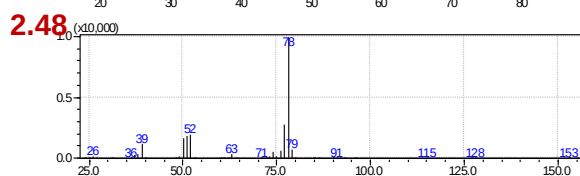
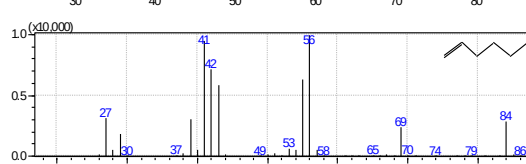
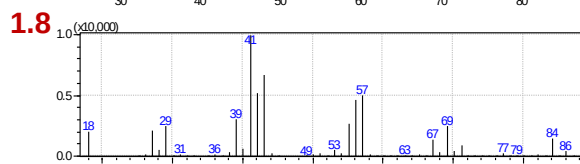
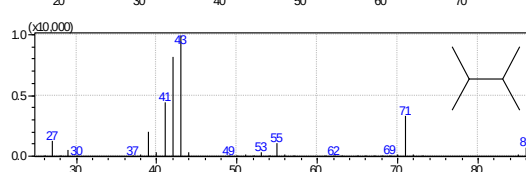
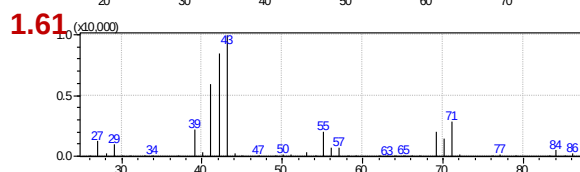
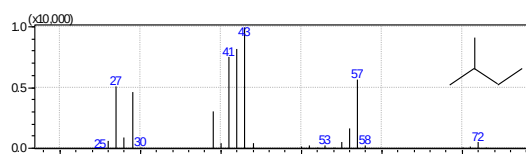
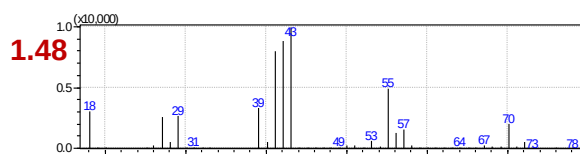
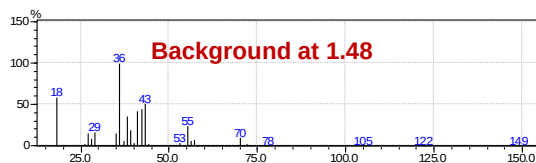
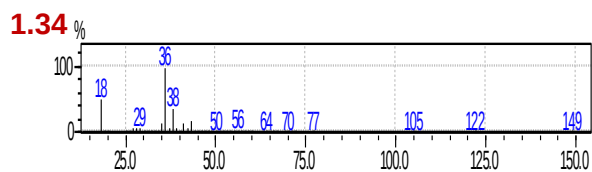
Retention Time	Start Time	End Time	Area %	Name
1.15	1.12	1.19	1.23	Hydrogen chloride
1.38	1.37	1.40	0.24	1,3-Butadiene, 2-methyl-
2.27	2.23	2.34	2.16	Benzene
2.71	2.65	2.75	0.51	Heptane
4.31	4.21	4.38	2.28	Heptane, 3-methyl-
4.94	4.84	5.07	3.69	3-Ethyl-3-hexene
5.36	5.13	5.44	11.54	4-Octene, (E)-
5.68	5.60	5.71	4.90	2-Heptene, 3-methyl-
5.81	5.71	5.83	2.91	2-Octene
6.97	6.86	7.03	1.31	Cyclohexane, 1,2-bis(methylene)-
7.41	7.33	7.45	2.69	p-Xylene
7.54	7.45	7.62	1.06	2,4-Hexadiene, 2,3-dimethyl-
7.90	7.85	7.94	0.85	Dichloroacetic acid, 1-cyclopentylethyl ester
8.04	7.94	8.10	1.58	p-Xylene
9.37	9.32	9.59	1.57	1,5,5-Trimethyl-6-methylene-cyclohexene
9.71	9.59	9.80	4.36	trans-2-Undecen-1-ol
10.01	9.80	10.16	15.89	Heptane, 3-chloro-3-methyl-
10.18	10.16	10.22	0.52	Bicyclo[2.2.1]heptane-2,3-dione, 1,7,7-trimethyl-, (1S)-
10.27	10.22	10.29	0.85	Benzene, 1-ethyl-3-methyl-
10.33	10.29	10.38	0.73	Bicyclo[4.1.0]heptane, 3,7,7-trimethyl-, (1.alpha.,3.alpha.,6.alpha.)-
10.49	10.48	10.52	0.50	1,1,4-Trimethylcyclohexane
10.54	10.52	10.61	1.05	Benzene, 1,3,5-trimethyl-
11.00	10.90	11.08	6.97	Heptane, 3-(chloromethyl)-
11.11	11.08	11.13	1.44	Bicyclo[4.1.0]hept-2-ene, 3,7,7-trimethyl-
11.21	11.14	11.23	1.86	Benzene, 1-ethyl-4-methyl-
11.26	11.23	11.28	1.37	Benzene, 1-methyl-2-(1-methylethyl)-
11.67	11.18	11.83	12.24	Unknown
11.76	11.73	11.81	0.43	Bicyclo[3.1.1]hept-2-ene-2-ethanol, 6,6-dimethyl-
11.93	11.89	12.01	1.49	1,4-Cyclohexadiene, 1-methyl-4-(1-methylethyl)-
12.13	12.10	12.20	0.68	Cyclohexene, 4-methyl-1-(1-methylethenyl)-
12.32	12.27	12.38	1.27	2-Bromopropionic acid, 2-ethylhexyl ester
12.45	12.38	12.47	1.93	1,3-Cyclohexadiene, 1-methyl-4-(1-methylethyl)-
12.50	12.47	12.58	1.67	Benzene, 1-ethenyl-3,5-dimethyl-
12.64	12.60	12.68	0.60	Tridecane
13.39	13.37	13.43	0.44	Benzene, 1-methyl-2-(2-propenyl)-

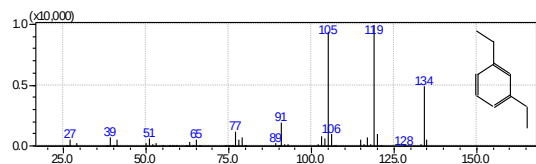
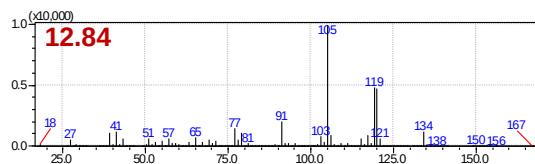
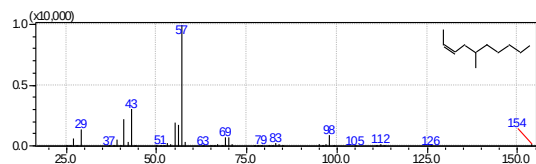
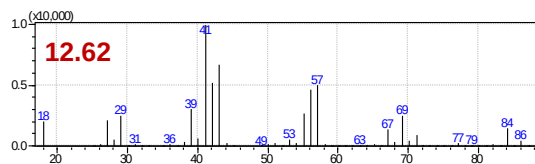
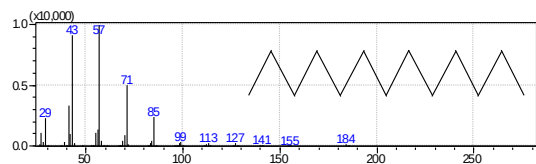
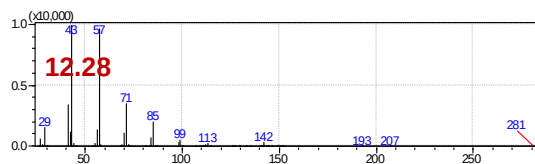
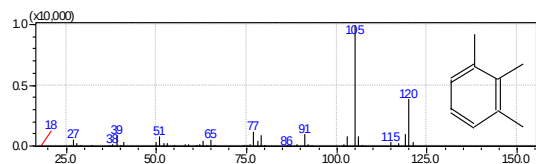
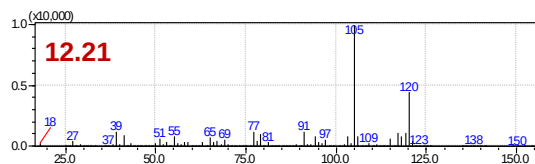
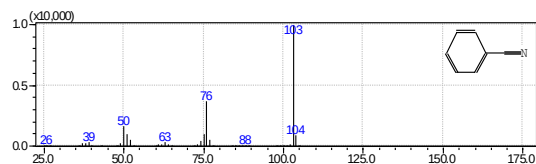
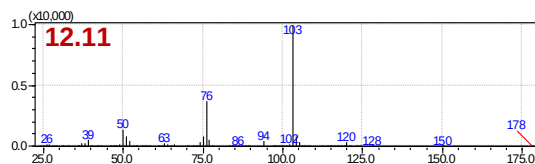
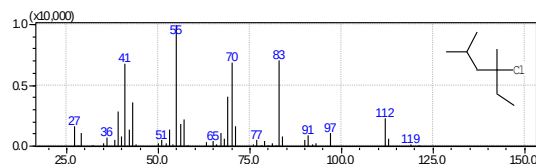
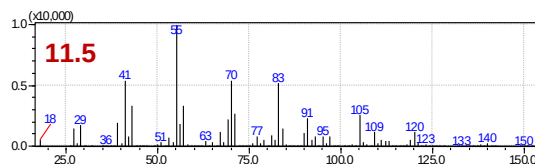
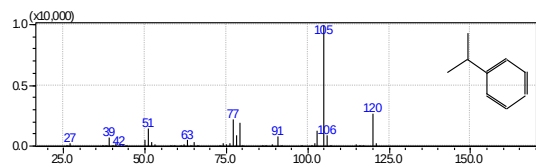
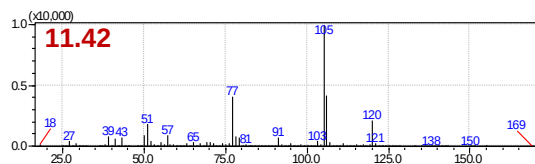
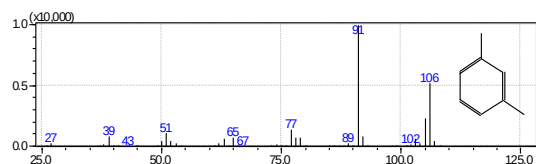
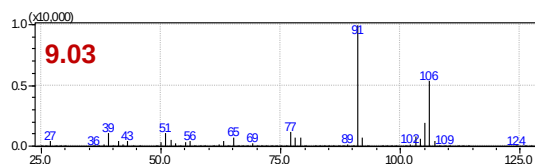
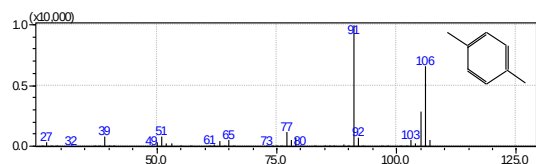
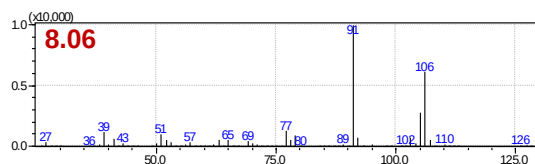
13.54	13.43	13.57	0.87	Acetic acid, 2-ethylhexyl ester
13.59	13.57	13.65	0.79	Benzene, 1-ethenyl-4-ethyl-
14.20	14.16	14.27	1.01	Azulene
14.34	14.27	14.38	0.65	Octane, 3,4,5,6-tetramethyl-
14.41	14.38	14.46	0.72	Benzene, 1-methyl-4-(1-methyl-2-propenyl)-
14.87	14.80	14.91	1.54	Bicyclo[3.1.1]heptane, 6,6-dimethyl-3-methylene-
15.62	15.58	15.65	0.49	n-Butyric acid 2-ethylhexyl ester
16.36	16.22	16.38	1.61	Phthalic anhydride
17.61	17.58	17.65	0.44	Pentanoic acid, 2-ethylhexyl ester
18.17	18.13	18.21	0.50	3-Chloropropionic acid, 2-ethylhexyl ester
18.32	18.28	18.35	1.16	3-Hexanol, 3,5-dimethyl-
18.98	18.97	19.01	0.35	3-Heptanone, 2-methyl-
21.45	21.40	21.48	0.86	Benzoic acid, 2-ethylhexyl ester
26.39	26.21	26.58	0.18	Dodecanoic acid, isooctyl ester
27.40	26.58	28.11	1.80	1,2-Benzenedicarboxylic acid, mono(2-ethylhexyl) ester

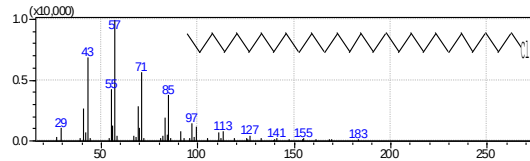
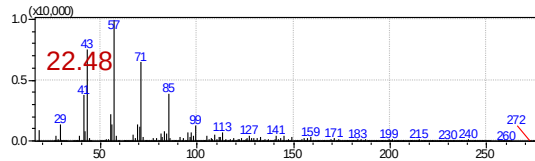
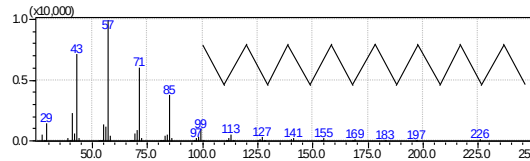
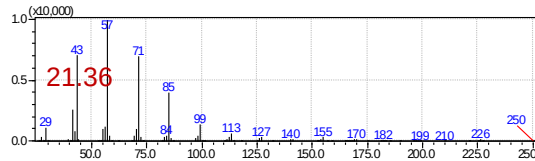
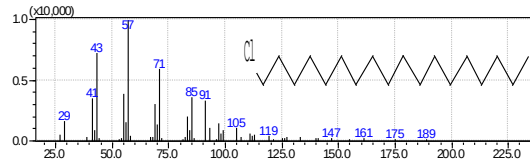
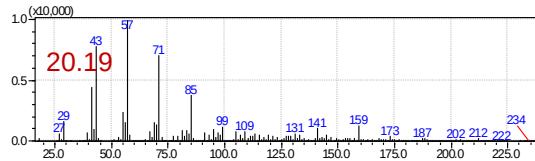
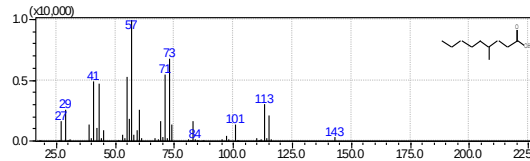
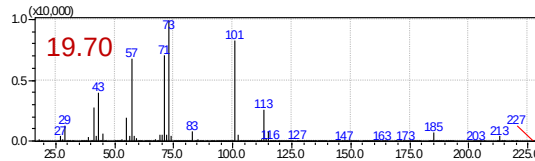
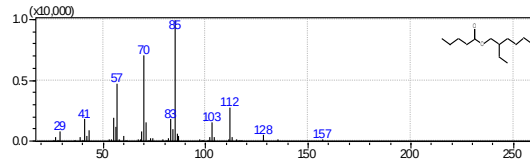
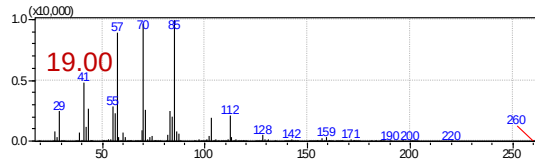
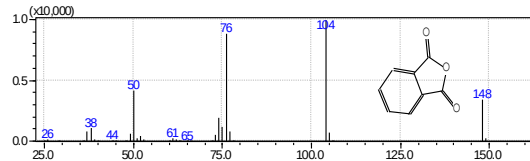
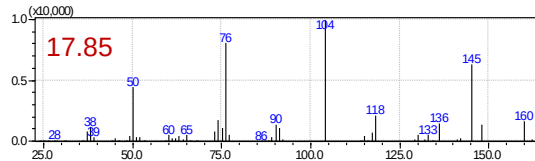
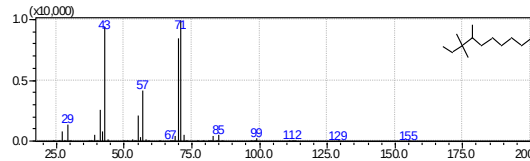
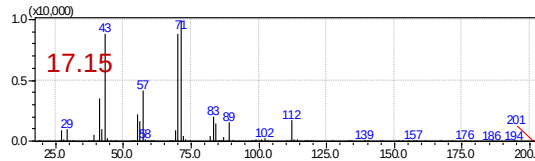
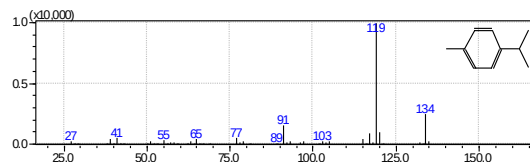
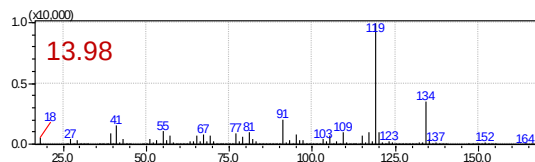
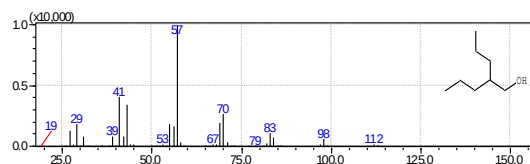
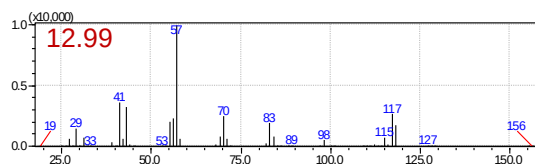
Table 8. 50 major chemicals identified in the liquid obtained by the pyrolysis of LEG sample 3

Retention Time	Start Time	End Time	Area %	Name
1.18	1.14	2.80	40.00	Hydrogen chloride
4.02	3.67	4.19	0.63	3-Heptene, 3-methyl-
4.22	4.19	4.28	0.13	1,7-Dichloroheptane
4.50	4.28	4.78	1.05	4-octane
5.12	4.78	5.15	2.33	3-Heptene, 3-methyl-
5.43	5.15	5.69	10.03	3-Heptene, 3-methyl-
6.43	6.27	6.87	0.29	Cyclohexene, 3,5-dimethyl-
7.00	6.87	7.32	0.04	4,6-di-tert-Butylresorcinol
8.14	7.97	8.27	0.18	Ethylbenzene
8.42	8.27	8.79	0.50	o-Xylene
8.94	8.79	8.99	0.02	4-Nonene
9.62	9.42	9.74	0.10	3-Tridecene
10.13	9.99	10.42	0.18	2-Ethyl-4,6-dimethyltetrahydropyran
10.52	10.42	10.74	0.36	Furan, 2,5-diethyltetrahydro-
10.83	10.74	10.99	0.16	1,3-Hexadiene, 2,3,5-trimethyl-
11.47	10.99	11.69	0.79	Heptane, 3-chloro-3-methyl-
11.84	11.69	11.92	0.23	Bicyclo[4.1.0]heptane, 3,7,7-trimethyl-
12.19	12.14	12.37	0.29	Octane, 2-chloro-
12.54	12.37	12.59	1.89	Pentane, 3,3-diethyl- or 2,3,5-trinethlyheptane

12.97	12.84	13.24	2.56	2-Propyl-1-pentanol
13.63	13.54	13.79	0.09	Benzoic acid, 4-isopropenylcyclohexenylmethyl ester
13.89	13.79	13.94	0.21	Chloroacetic acid, 2-ethylhexyl ester
14.24	14.14	14.29	0.08	Bicyclo[4.1.0]heptane-7-methanol, 7-bromo-.alpha.-ethyl-, (1.alpha.,6.alpha.,7.alpha.)-
14.85	14.59	14.99	0.19	1-Decene, 10-bromo-
15.12	14.99	15.29	0.25	Acetic acid, 2-ethylhexyl ester
15.72	15.47	15.82	0.42	Benzoic acid
16.14	16.07	16.22	0.05	Bicyclo[2.2.1]heptane-1-carbonitrile, 4,7,7-trimethyl-3-oxo-
16.52	16.22	16.57	0.12	Trichloroacetic acid, 2-ethylhexyl ester
17.24	16.94	17.29	0.25	Benzene, (2-propynyloxy)-
17.43	17.29	17.52	0.11	Naphthalene, 2-methyl-
17.81	17.52	18.04	1.39	1,2-Benzenedicarboxylic acid
18.24	18.19	18.29	0.09	1(3H)-Isobenzofuranone
18.77	18.72	18.82	0.06	1-Iodo-2-methylundecane
19.24	18.87	19.37	0.38	Naphthalene, 1,7-dimethyl-
19.85	19.62	19.99	1.12	Phthalimide
20.85	20.72	20.92	0.07	Bis(2-(2-chloroethoxy)ethyl)ether
21.52	21.47	21.92	0.12	Fluorene, 2,4a-dihydro-
22.04	21.92	22.09	0.05	Benzene, 1,1'-(1,3-propanediyl)bis-
22.64	22.39	22.77	0.26	Benzoic acid, 2-ethylhexyl ester
23.12	23.07	23.17	0.04	1-Adamantanecarboxylic acid, 3-tetradecyl ester
23.19	23.17	23.22	0.02	Benzene, (1-ethyldodecyl)-
23.72	23.64	23.84	0.08	Pentafluoropropionic acid, dodecyl ester
24.52	24.37	24.74	0.23	Hexanedioic acid, dioctyl ester
25.67	25.54	25.82	0.14	6,7-Dimethyl-3,4-dihydro-1H-[1,4]diazepino[3,2,1-hi]indol-2-one
26.32	26.19	26.49	0.13	Xanthophyll
26.87	26.49	26.97	0.28	Dodecanoic acid, isooctyl ester
31.01	30.27	31.82	5.51	1,2-Benzenedicarboxylic acid, mono(2-ethylhexyl) ester







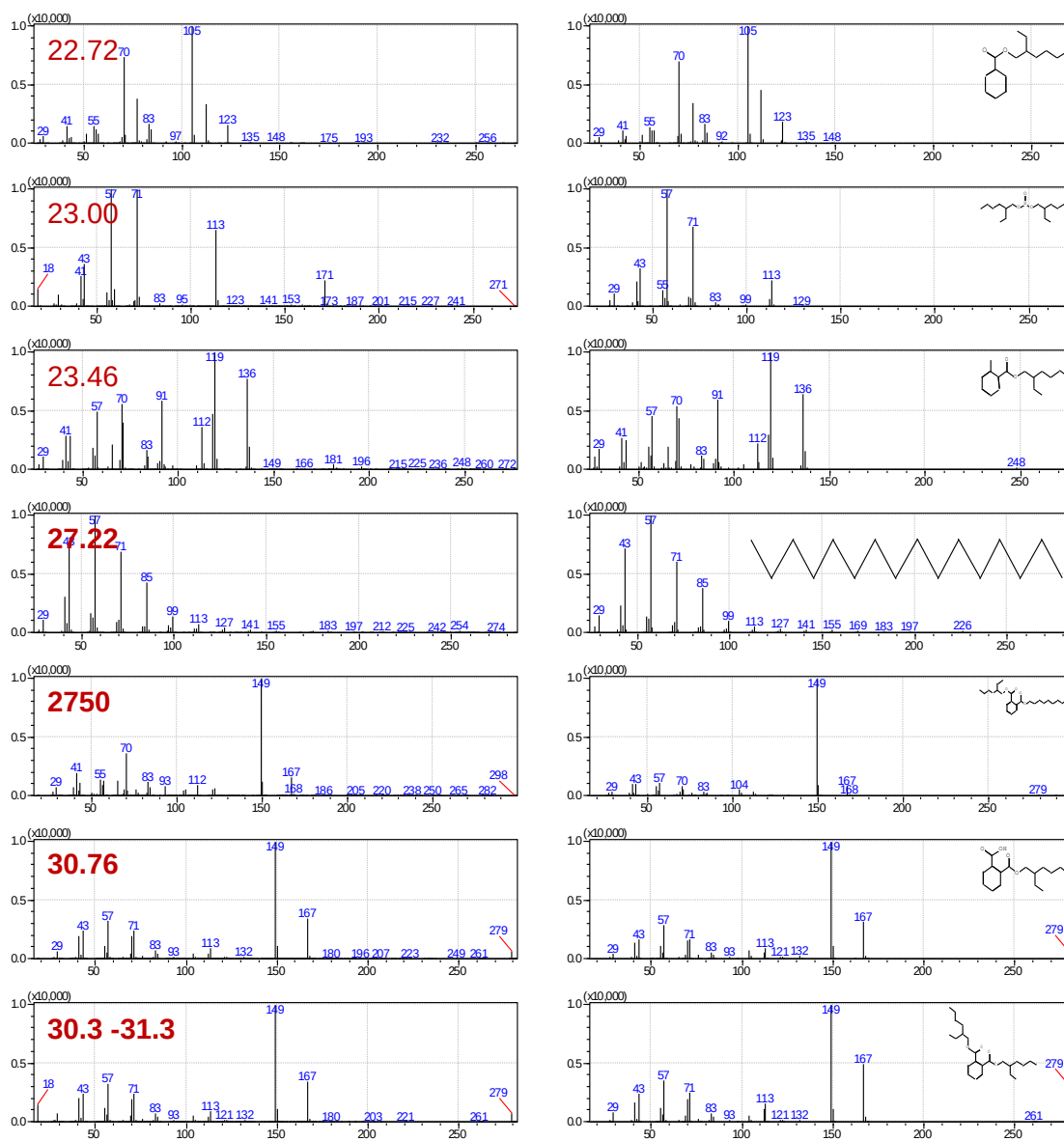


Fig13. Mass spectrum of some picks of sample 15 identified with their retention time (min) (first column) and the most similar MS from NIST library (second column) corresponding to the MS of first column.

Table 9. 50 major chemicals identified in the liquid obtained by the pyrolysis of LEG sample 15

1.45	1.11	1.59	0.60	HCl
1.62	1.59	1.65	0.09	Butane, 2,3-dimethyl-
1.77	1.65	1.80	0.25	Pentane, 2,3-dimethyl-
1.82	1.80	2.16	0.47	Cyclopropane, 1,2,3-trimethyl-
2.19	2.16	2.23	0.05	Cyclopentene, 1-methyl-
2.42	2.23	2.74	2.92	Benzene
2.81	2.74	3.09	0.56	Oxalic acid, allyl nonyl ester
3.13	3.09	3.32	0.19	Cyclopentane, 1-ethyl-2-methyl-
3.34	3.32	3.43	0.05	Cyclopentane, ethyl-
3.48	3.43	3.63	0.09	Cyclohexene, 4-methyl-
3.99	3.63	4.03	0.33	Cyclopentane, 2-isopropyl-1,3-dimethyl-
4.30	4.03	4.79	3.61	Toluene
5.45	4.79	5.74	5.82	3-Heptene, 3-methyl-
5.86	5.74	6.24	2.13	2,3-Dimethyl-1-hexene
6.34	6.24	6.49	0.21	1,3-Dimethyl-1-cyclohexene
6.54	6.49	6.77	0.16	Heptane, 2,6-dimethyl-
6.93	6.77	7.32	0.22	Dichloroacetic acid, 2-ethylcyclohexyl ester
8.07	7.32	8.19	0.91	Ethylbenzene
8.44	8.19	8.94	1.74	p-Xylene
9.31	8.94	9.99	2.28	Benzene, 1,3-dimethyl-
10.29	9.99	11.04	1.40	cis-1,4-Dimethyl-2-methylenecyclohexane
11.48	11.04	11.74	3.67	Acetophenone
12.11	11.74	12.49	3.69	Benzonitrile
12.63	12.49	12.74	1.50	Pentane, 3,3-diethyl-
13.10	12.74	13.64	5.56	2-Propyl-1-pentanol
13.79	13.64	13.89	1.49	Benzhydrazide, N2-(2-methoxy-5-nitrobenzylideno)-
13.99	13.89	14.59	4.10	1,4-Cyclohexadiene, 3-ethenyl-1,2-dimethyl-
14.69	14.59	14.94	1.64	Benzene, 1,2,3,5-tetramethyl-
15.29	14.94	15.69	4.49	2,4-Dimethylstyrene
16.06	15.69	16.39	4.72	Naphthalene, 1,2,3,4-tetrahydro-1-methyl-
17.54	16.39	17.74	9.75	Benzoic acid
17.98	17.74	18.24	3.42	Phthalic anhydride
18.95	18.24	19.34	7.27	Tetradecane
19.55	19.34	19.79	2.90	2-Oxabicyclo[2.2.1]heptan-3-one-1-carboxylic acid, 4,7,7-trimethyl-, 8-oxo-8a-methyldecalin-1-yl ester
19.84	19.79	19.94	0.93	Naphthalene, 2,3-dimethyl-
20.05	19.94	21.09	6.58	1H-Isoindole-1,3(2H)-dione, N-ethyl-
21.24	21.09	22.24	4.86	5-(4-Methylphenyl)cyclohexane-1,3-dione

22.30	22.24	22.59	1.21	Undecyl heptafluorobutyrate
22.73	22.59	23.14	1.68	Benzoic acid, 2-ethylhexyl ester
23.52	23.14	24.94	3.17	Hexadecane
24.99	24.94	27.04	1.46	2H-1-Benzopyran-3-ol, 3,4-dihydro-5,7-dimethoxy-2-(3,4,5-trimethoxyphenyl)-, (2R-cis)-
27.47	27.04	28.04	0.54	Phthalic acid, decyl 2-ethylhexyl ester
28.19	28.04	28.94	0.21	1,2-Benzenedicarboxylic acid, diisooctyl ester
29.04	28.94	29.14	0.04	Dimethyl 1,2-diisopropenyltricyclo[3.1.0.0(2,4)]hexane-3,6-dicarboxylate
29.34	29.14	29.44	0.06	1,1-Diphenyl-2-propanol
29.53	29.44	30.04	0.12	Indan-2-one, 1-[2-chlorobenzylidene]-
30.76	30.04	31.84	0.86	1,2-Benzenedicarboxylic acid, mono(2-ethylhexyl) ester

Table 10. 50 major chemicals identified in the liquid obtained by the pyrolysis of LEG sample E.

R T (min)	Start T	End Time	Area %	Name
1.12	1.09	1.13	0.03	Unknown mixture
1.15	1.13	1.17	0.06	Water
1.19	1.17	1.23	0.12	Methyl Alcohol
1.29	1.23	1.33	0.17	Ethanol
1.34	1.33	1.38	0.22	Acetone
1.40	1.38	1.53	0.18	Ethyl hydrogen oxalate
1.57	1.53	1.59	1.70	Pentane, 2-methyl-
1.64	1.59	1.68	4.86	Pentane, 3-methyl-
1.86	1.68	1.88	15.55	Hexane
1.92	1.88	1.97	14.46	Trichloromethane
2.01	1.97	2.14	15.14	Hexane, 2-chloro-
2.16	2.14	2.68	7.36	Cyclopentane, methyl-
2.63	2.56	2.66	0.01	1-Hexene
2.73	2.71	2.98	0.01	Heptane
3.00	2.98	3.07	0.04	n-Propyl acetate
4.45	4.03	4.60	6.25	Toluene
4.62	4.60	4.69	0.03	Pentane, 3-chloro-3-methyl-
4.93	4.88	5.04	0.04	Cyclopentane, 1-ethyl-3-methyl-, cis-
5.22	5.04	5.34	0.07	3-Octene, (Z)-
5.48	5.34	5.53	0.03	2-Octene, (E)-
5.59	5.53	5.68	0.03	1,6-Heptadiene, 2,3,6-trimethyl-
7.93	7.87	8.06	0.06	Ethylbenzene
8.27	8.20	8.41	0.15	o-Xylene

8.45	8.41	8.54	0.03	Octane, 3-methyl-
9.14	9.08	9.33	0.14	o-Xylene
9.49	9.43	9.58	0.04	Nonane
11.00	10.97	11.04	0.03	Benzene, propyl-
11.08	11.04	11.15	0.11	1-Pentanol, 4-methyl-2-propyl-
11.25	11.15	11.36	0.22	Benzene, 1-ethyl-3-methyl-
11.41	11.36	11.57	1.74	Heptane, 3-chloro-3-methyl-
11.67	11.57	11.71	0.08	Benzene, 1-ethyl-3-methyl-
11.78	11.71	11.88	0.91	Benzonitrile
11.93	11.88	11.96	0.03	Carbonic acid, phenyl undec-10-enyl ester
11.99	11.96	12.09	0.23	Benzene, 1,3,5-trimethyl-
12.18	12.09	12.28	0.11	Octane, 2,7-dimethyl-
12.45	12.28	12.49	0.16	Pentane, 3,3-diethyl-
12.52	12.49	12.57	0.05	Cyclopropane, 1,2-dimethyl-3-pentyl-
12.64	12.57	12.78	0.29	Benzene, 1,2,3-trimethyl-
12.86	12.78	12.98	0.30	2-Propyl-1-pentanol
13.02	12.98	13.07	0.02	2-Tridecen-1-ol, (E)-
13.10	13.07	13.17	0.06	Indene
13.26	13.17	13.30	0.10	Benzene, 1-methyl-3-propyl-
13.35	13.30	13.38	0.07	1,2,3,4,5,8-Hexahydronaphthalene
13.41	13.38	13.44	0.06	Benzene, 4-ethyl-1,2-dimethyl-
13.47	13.44	13.50	0.02	3a,6-Methano-3aH-indene, 2,3,4,5,6,7-hexahydro-
13.59	13.50	13.68	0.40	Benzeneacetonitrile, .alpha.-acetyl-
13.81	13.68	13.89	0.18	Benzene, 1-ethyl-2,3-dimethyl-
13.93	13.89	13.98	0.11	1,3-Cyclopentadiene, 1,2,3,4-tetramethyl-5-methylene-
14.04	13.98	14.09	0.12	5-Chloropentanoic acid, 2-octyl ester
14.19	14.09	14.24	0.17	Undecane
14.32	14.24	14.35	0.08	Benzene, 4-ethyl-1,2-dimethyl-
14.38	14.35	14.41	0.03	Benzene, 1-methyl-4-(1-methylpropyl)-
14.49	14.41	14.53	0.05	Spiro[3.5]nona-5,7-dien-1-one, 5,9,9-trimethyl-
14.57	14.53	14.63	0.05	Benzene, 1,2,4,5-tetramethyl-
14.68	14.64	14.71	0.03	Decane, 3,7-dimethyl-
14.91	14.83	14.95	0.09	1H-Indene, 2,3-dihydro-5-methyl-
14.99	14.95	15.03	0.05	Benzene, 1,4-diethyl-2-methyl-
15.10	15.03	15.16	0.23	1-Phenyl-1-butene
15.18	15.16	15.24	0.11	2-Methylindene
15.30	15.24	15.33	0.06	Benzene, 2,4-diethyl-1-methyl-
15.35	15.33	15.42	0.08	1-Butanone, 1-phenyl-

15.45	15.42	15.48	0.26	Benzoic acid, ethyl ester
15.73	15.48	15.78	0.39	1H-Indene, 2,3-dihydro-1,6-dimethyl-
15.90	15.78	15.95	0.67	1H-Indene, 2,3-dihydro-1,6-dimethyl-
17.05	15.95	17.14	3.51	Benzoic acid
17.22	17.14	17.25	0.28	1H-Indene, 2,3-dihydro-1,3-dimethyl-
17.41	17.25	17.48	0.72	Naphthalene, 2-methyl-
17.52	17.48	17.55	0.30	Benzene, 4-(2-butenyl)-1,2-dimethyl-, (E)-
17.60	17.55	17.63	0.31	1H-Inden-1-one, 2,3-dihydro-2-methyl-
17.80	17.63	17.82	2.18	Phthalic anhydride
17.89	17.82	17.94	0.53	1H-Indene, 2,3-dihydro-1,1,5-trimethyl-
17.96	17.94	18.01	0.10	3-(4-Cyanomethyl-1H-pyrrol-3-yl)-propionitrile
18.03	18.01	18.08	0.13	3-Hydroxymethyl-4-(1-hydroxy-2-methylprop-2-enyl)toluene
18.13	18.08	18.18	0.38	Naphthalene, 1,2,3,4-tetrahydro-2,7-dimethyl-
18.21	18.18	18.26	0.21	1(3H)-Isobenzofuranone
18.31	18.26	18.34	0.26	Naphthalene, 1,2,3,4-tetrahydro-1,1,6-trimethyl-
18.42	18.34	18.49	0.28	2-Buten-1-one, 2-methyl-1-phenyl-
18.54	18.49	18.57	0.38	Benzene, 2-(2-butenyl)-1,3,5-trimethyl-
18.61	18.57	18.68	0.31	Biphenyl
18.76	18.68	18.78	0.46	Silane, trichlorooctadecyl-
18.82	18.78	18.84	0.42	Naphthalene, 2-ethyl-
18.87	18.84	18.92	0.27	Naphthalene, 1-ethyl-
18.97	18.92	19.05	0.48	Naphthalene, 2,6-dimethyl-
19.09	19.05	19.13	0.31	7-Isopropylidenebicyclo[2.2.1]hept-5-en-2-one p-toluenesulfonylhydrazone
19.23	19.13	19.26	2.04	Naphthalene, 2,6-dimethyl-
19.31	19.26	19.40	0.63	Diphenylmethane
19.45	19.40	19.58	0.49	Benzene, 2-chloro-1,3,5-trimethyl-
19.64	19.58	19.67	0.40	Naphthalene, 1,2,3,4-tetrahydro-1,1,6-trimethyl-
19.76	19.67	19.79	0.63	o-Cyanobenzoic acid
19.86	19.79	19.88	0.58	1H-Isoindole-1,3(2H)-dione, N-ethyl-
19.96	19.88	19.98	0.27	Hexadecane, 1,16-dichloro-
20.05	19.98	20.08	0.71	Pentadecane
20.11	20.08	20.19	0.39	1,2-Naphthalenediol, 2-ethyl-1,2,3,4-tetrahydro-1-methyl-, cis-
20.25	20.19	20.36	0.37	Hexanoic acid, 2-ethylhexyl ester
20.38	20.36	20.42	0.21	11-Dodecen-1-ol, 2,4,6-trimethyl-, (R,R,R)-
20.49	20.42	20.55	0.26	Naphthalene, 1,4,6-trimethyl-
20.60	20.55	20.65	0.56	Azulene, 4,6,8-trimethyl-
20.67	20.65	20.68	0.16	Benzenebutanoic acid, 2,5-dimethyl-

20.70	20.68	20.75	0.16	Benzyl alcohol, .alpha.-isobutyl-2,4,5-trimethyl-
20.80	20.75	20.90	0.28	3-(2-Methyl-propenyl)-1H-indene
20.98	20.90	20.99	0.20	Benzene, 1,1'-[3-(3-cyclopentylpropyl)-1,5-pentanediy]bis-
21.01	20.99	21.07	0.21	Azulene, 4,6,8-trimethyl-
21.11	21.07	21.13	0.28	2,3,4-Trifluorobenzoic acid, 3-phenylpropyl ester
21.17	21.13	21.19	0.20	Cycloeicosane
21.26	21.19	21.28	0.49	Pentadecane
21.32	21.28	21.37	0.38	3-(2-Methyl-propenyl)-1H-indene
21.42	21.37	21.53	0.16	1,1'-Biphenyl, 2,4'-dimethyl-
21.68	21.53	21.72	0.70	Phthalic acid, di-(1-hexen-5-yl) ester
21.78	21.72	21.81	0.22	.gamma.-Chlorobutyrophenone
21.83	21.81	21.88	0.13	Heptacosane, 1-chloro-
21.93	21.88	21.98	0.11	Naphthalene, 1-methyl-7-(1-methylethyl)-
22.01	21.98	22.09	0.23	Benzene, 1,1'-(1,3-propanediy)bis-
22.18	22.09	22.21	0.16	N-n-Butylphthalimide
22.25	22.21	22.29	0.10	7-Heptadecene, 1-chloro-
22.32	22.29	22.38	0.10	Naphthalene, 1,6-dimethyl-4-(1-methylethyl)-
22.40	22.38	22.43	0.34	Hexadecane
22.50	22.43	22.56	0.08	Hexane, 2-phenyl-3-propyl-
22.62	22.56	22.66	0.81	Benzoic acid, 2-ethylhexyl ester
22.69	22.66	22.73	0.06	1,1'-Biphenyl, 2,4'-dimethyl-
22.77	22.73	22.83	0.12	1,2-Diphenyl-1-isocyanoethane
22.92	22.83	22.96	0.10	1,2-Diphenylcyclopropane
22.99	22.96	23.05	0.04	Azulene, 7-ethyl-1,4-dimethyl-
23.15	23.05	23.19	0.02	Benzene, 1,1'-(1-methyl-1,3-propanediy)bis-
23.41	23.38	23.46	0.08	o-Toluic acid, 2-ethylhexyl ester
23.49	23.46	23.59	0.14	Pentadecane
23.82	23.79	23.90	0.05	Benzene, 1,1'-(1,3-butadienyldiene)bis-

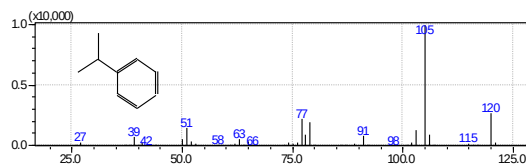
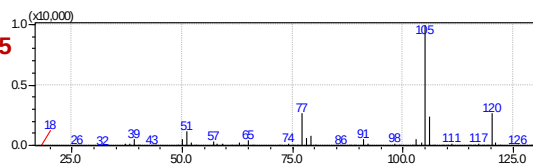
Table 11. Major chemicals in the solids precipitated inside of the condenser.

RT (min)	Start	End	% Area	Name
4.93	4.88	5.04	0.02	Cyclopentane, 1-ethyl-3-methyl-, cis-
5.22	5.04	5.34	0.06	3-Octene, (Z)-
5.48	5.34	5.53	0.02	2-Octene, (E)-
5.59	5.53	5.68	0.01	1,6-Heptadiene, 2,3,6-trimethyl-
7.93	7.87	8.06	0.03	Ethylbenzene
8.27	8.20	8.41	0.09	o-Xylene
8.45	8.41	8.54	0.01	Octane, 3-methyl-
9.14	9.08	9.33	0.08	o-Xylene
9.49	9.43	9.58	0.02	Nonane
11.00	10.97	11.04	0.01	Benzene, propyl-
11.08	11.04	11.15	0.04	1-Pentanol, 4-methyl-2-propyl-
11.25	11.15	11.36	0.15	Benzene, 1-ethyl-3-methyl-
11.41	11.36	11.57	0.55	Heptane, 3-chloro-3-methyl-
11.67	11.57	11.71	0.02	Benzene, 1-ethyl-3-methyl-
11.78	11.71	11.88	0.29	Benzonitrile
11.93	11.88	11.96	0.01	Carbonic acid, phenyl undec-10-enyl ester
11.99	11.96	12.09	0.08	Benzene, 1,3,5-trimethyl-
12.18	12.09	12.28	0.04	Octane, 2,7-dimethyl-
12.45	12.28	12.49	0.05	Pentane, 3,3-diethyl-
12.52	12.49	12.57	0.01	Cyclopropane, 1,2-dimethyl-3-pentyl-
12.64	12.57	12.78	0.11	Benzene, 1,2,3-trimethyl-
12.86	12.78	12.98	0.13	2-Propyl-1-pentanol
13.02	12.98	13.07	0.01	2-Tridecen-1-ol, (E)-
13.10	13.07	13.17	0.02	Indene
13.26	13.17	13.30	0.03	Benzene, 1-methyl-3-propyl-
13.35	13.30	13.38	0.03	1,2,3,4,5,8-Hexahydronaphthalene
13.41	13.38	13.44	0.02	Benzene, 4-ethyl-1,2-dimethyl-
13.47	13.44	13.50	0.01	3a,6-Methano-3aH-indene, 2,3,4,5,6,7-hexahydro-
13.59	13.50	13.68	0.14	Benzeneacetonitrile, .alpha.-acetyl-
13.81	13.68	13.89	0.08	Benzene, 1-ethyl-2,3-dimethyl-
13.93	13.89	13.98	0.04	1,3-Cyclopentadiene, 1,2,3,4-tetramethyl-5-methylene-
14.04	13.98	14.09	0.04	5-Chloropentanoic acid, 2-octyl ester
14.19	14.09	14.24	0.05	Undecane
14.32	14.24	14.35	0.03	Benzene, 4-ethyl-1,2-dimethyl-
14.38	14.35	14.41	0.01	Benzene, 1-methyl-4-(1-methylpropyl)-

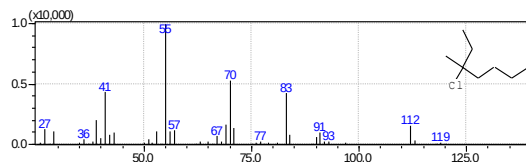
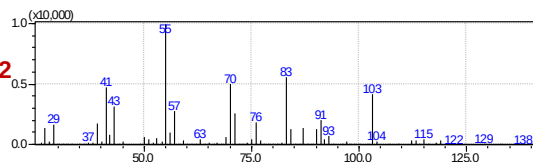
14.49	14.41	14.53	0.01	Spiro[3.5]nona-5,7-dien-1-one, 5,9,9-trimethyl-
14.57	14.53	14.63	0.02	Benzene, 1,2,4,5-tetramethyl-
14.68	14.64	14.71	0.01	Decane, 3,7-dimethyl-
14.91	14.83	14.95	0.03	1H-Indene, 2,3-dihydro-5-methyl-
14.99	14.95	15.03	0.02	Benzene, 1,4-diethyl-2-methyl-
15.10	15.03	15.16	0.10	1-Phenyl-1-butene
15.18	15.16	15.24	0.05	2-Methylindene
15.30	15.24	15.33	0.03	Benzene, 2,4-diethyl-1-methyl-
15.35	15.33	15.42	0.04	1-Butanone, 1-phenyl-
15.45	15.42	15.48	0.06	Benzoic acid, ethyl ester
15.73	15.48	15.78	0.42	1H-Indene, 2,3-dihydro-1,6-dimethyl-
15.90	15.78	15.95	0.58	1H-Indene, 2,3-dihydro-1,6-dimethyl-
17.05	15.95	17.14	14.49	Benzoic acid
17.22	17.14	17.25	0.12	1H-Indene, 2,3-dihydro-1,3-dimethyl-
17.41	17.25	17.48	0.49	Naphthalene, 2-methyl-
17.52	17.48	17.55	0.10	Benzene, 4-(2-butenyl)-1,2-dimethyl-, (E)-
17.60	17.55	17.63	0.12	1H-Inden-1-one, 2,3-dihydro-2-methyl-
17.80	17.63	17.82	1.27	Phthalic anhydride
17.89	17.82	17.94	0.21	1H-Indene, 2,3-dihydro-1,1,5-trimethyl-
17.96	17.94	18.01	0.04	3-(4-Cyanomethyl-1H-pyrrol-3-yl)-propionitrile 3-Hydroxymethyl-4-(1-hydroxy-2-methylprop-2-enyl)toluene
18.03	18.01	18.08	0.06	
18.13	18.08	18.18	0.15	Naphthalene, 1,2,3,4-tetrahydro-2,7-dimethyl-
18.21	18.18	18.26	0.09	1(3H)-Isobenzofuranone
18.31	18.26	18.34	0.11	Naphthalene, 1,2,3,4-tetrahydro-1,1,6-trimethyl-
18.42	18.34	18.49	0.20	2-Buten-1-one, 2-methyl-1-phenyl-
18.54	18.49	18.57	0.13	Benzene, 2-(2-butenyl)-1,3,5-trimethyl-
18.61	18.57	18.68	0.21	Biphenyl
18.76	18.68	18.78	0.21	Silane, trichlorooctadecyl-
18.82	18.78	18.84	0.13	Naphthalene, 2-ethyl-
18.87	18.84	18.92	0.13	Naphthalene, 1-ethyl-
18.97	18.92	19.05	0.26	Naphthalene, 2,6-dimethyl- 7-Isopropylidenebicyclo[2.2.1]hept-5-en-2-one p- toluenesulfonylhydrazone
19.09	19.05	19.13	0.13	
19.23	19.13	19.26	0.67	Naphthalene, 2,6-dimethyl-
19.31	19.26	19.40	0.31	Diphenylmethane
19.45	19.40	19.58	0.39	Benzene, 2-chloro-1,3,5-trimethyl-
19.64	19.58	19.67	0.16	Naphthalene, 1,2,3,4-tetrahydro-1,1,6-trimethyl-
19.76	19.67	19.79	0.29	o-Cyanobenzoic acid

19.86	19.79	19.88	0.27	1H-Isoindole-1,3(2H)-dione, N-ethyl-
19.96	19.88	19.98	0.17	Hexadecane, 1,16-dichloro-
20.05	19.98	20.08	0.25	Pentadecane
20.11	20.08	20.19	0.22	1,2-Naphthalenediol, 2-ethyl-1,2,3,4-tetrahydro-1-methyl-, cis-
20.25	20.19	20.36	0.31	Hexanoic acid, 2-ethylhexyl ester
20.38	20.36	20.42	0.08	11-Dodecen-1-ol, 2,4,6-trimethyl-, (R,R,R)-
20.49	20.42	20.55	0.20	Naphthalene, 1,4,6-trimethyl-
20.60	20.55	20.65	0.21	Azulene, 4,6,8-trimethyl-
20.67	20.65	20.68	0.04	Benzenebutanoic acid, 2,5-dimethyl-
20.70	20.68	20.75	0.08	Benzyl alcohol, .alpha.-isobutyl-2,4,5-trimethyl-
20.80	20.75	20.90	0.21	3-(2-Methyl-propenyl)-1H-indene
20.98	20.90	20.99	0.10	Benzene, 1,1'-[3-(3-cyclopentylpropyl)-1,5-pentanediy]bis-
21.01	20.99	21.07	0.10	Azulene, 4,6,8-trimethyl-
21.11	21.07	21.13	0.10	2,3,4-Trifluorobenzoic acid, 3-phenylpropyl ester
21.17	21.13	21.19	0.07	Cycloeicosane
21.26	21.19	21.28	0.17	Pentadecane
21.32	21.28	21.37	0.13	3-(2-Methyl-propenyl)-1H-indene
21.42	21.37	21.53	0.15	1,1'-Biphenyl, 2,4'-dimethyl-
21.68	21.53	21.72	0.48	Phthalic acid, di-(1-hexen-5-yl) ester
21.78	21.72	21.81	0.10	.gamma.-Chlorobutyrophenone
21.83	21.81	21.88	0.05	Heptacosane, 1-chloro-
21.93	21.88	21.98	0.07	Naphthalene, 1-methyl-7-(1-methylethyl)-
22.01	21.98	22.09	0.11	Benzene, 1,1'-(1,3-propanediyl)bis-
22.18	22.09	22.21	0.07	N-n-Butylphthalimide
22.25	22.21	22.29	0.05	7-Heptadecene, 1-chloro-
22.32	22.29	22.38	0.05	Naphthalene, 1,6-dimethyl-4-(1-methylethyl)-
22.40	22.38	22.43	0.07	Hexadecane
22.50	22.43	22.56	0.05	Hexane, 2-phenyl-3-propyl-
22.62	22.56	22.66	0.17	Benzoic acid, 2-ethylhexyl ester
22.69	22.66	22.73	0.03	1,1'-Biphenyl, 2,4'-dimethyl-
22.77	22.73	22.83	0.05	1,2-Diphenyl-1-isocyanoethane
22.92	22.83	22.96	0.04	1,2-Diphenylcyclopropane
22.99	22.96	23.05	0.02	Azulene, 7-ethyl-1,4-dimethyl-
23.15	23.05	23.19	0.01	Benzene, 1,1'-(1-methyl-1,3-propanediyl)bis-
23.41	23.38	23.46	0.02	o-Toluic acid, 2-ethylhexyl ester
23.49	23.46	23.59	0.03	Pentadecane
23.82	23.79	23.90	0.01	Benzene, 1,1'-(1,3-butadienylidene)bis-

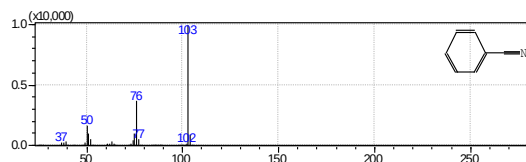
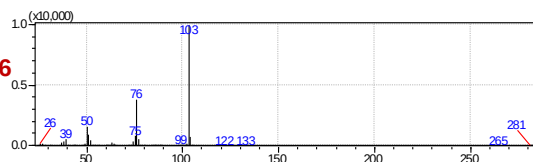
11.25



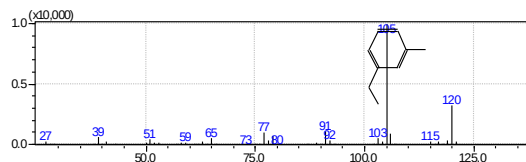
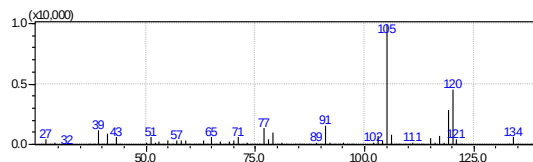
11.42



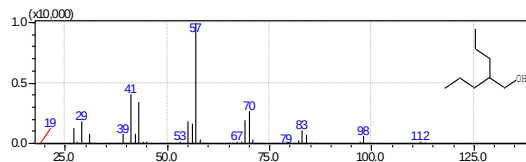
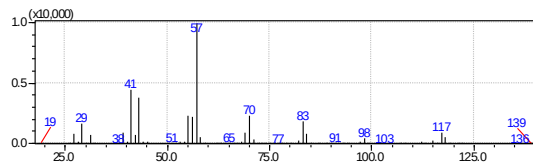
11.86



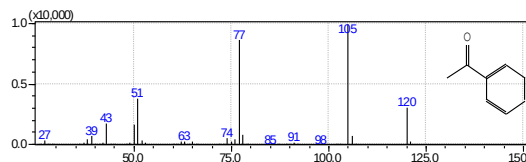
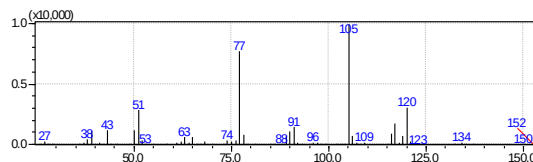
12.66



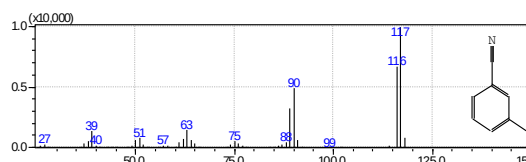
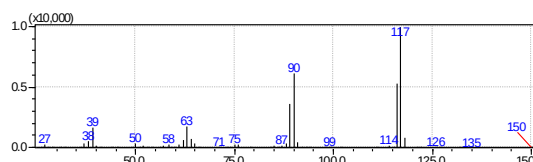
12.89



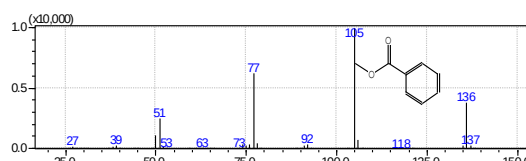
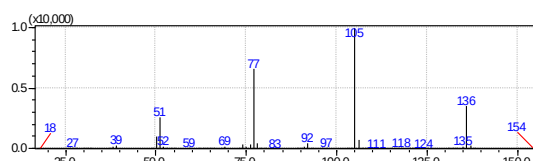
13.6



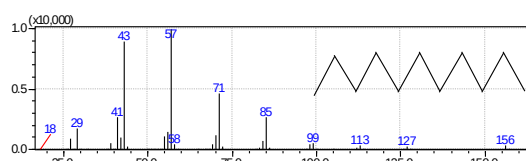
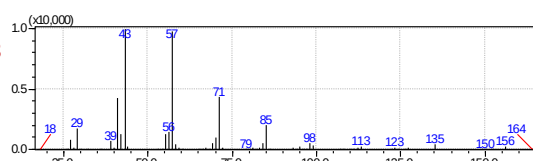
13.63

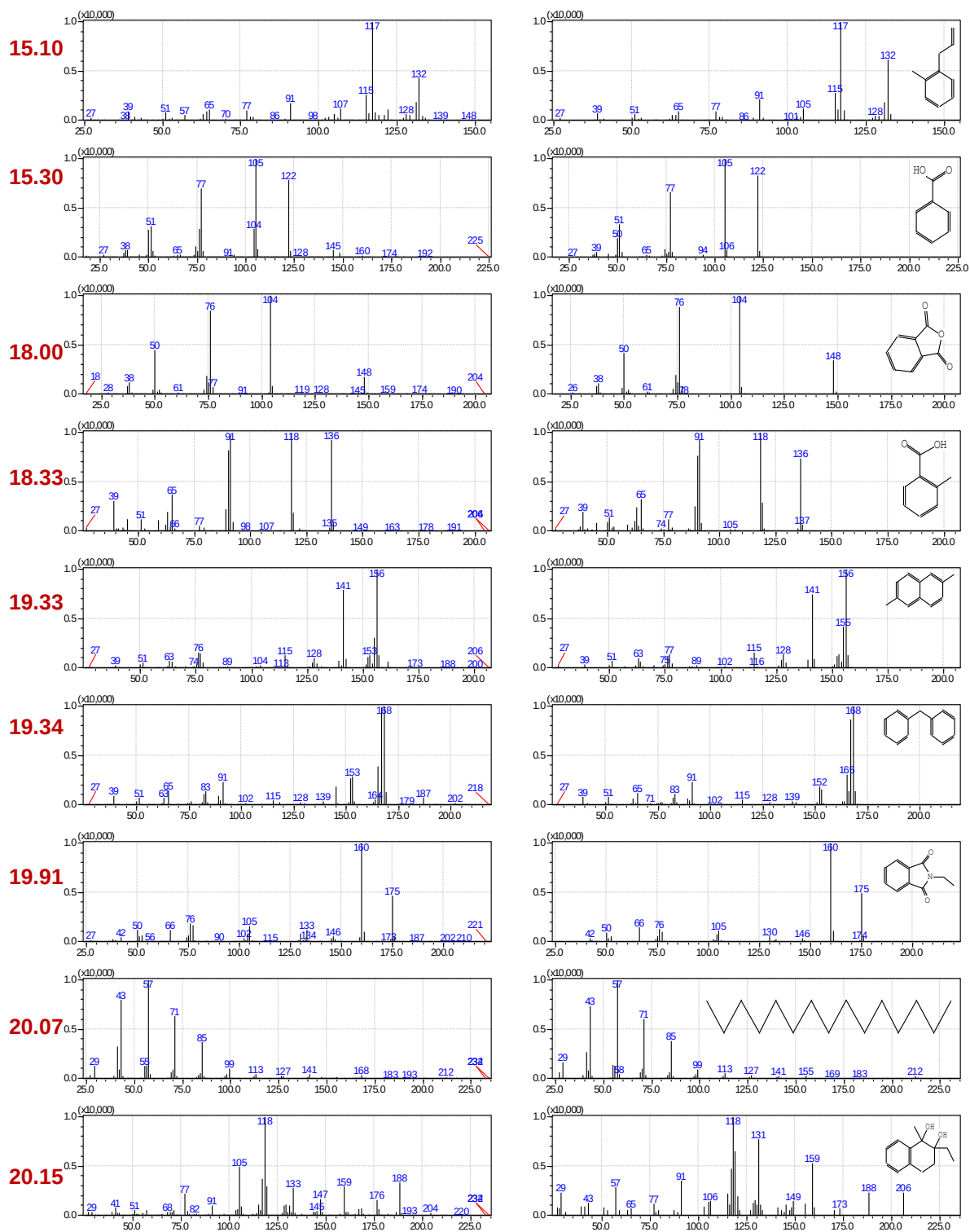


14.13



14.18





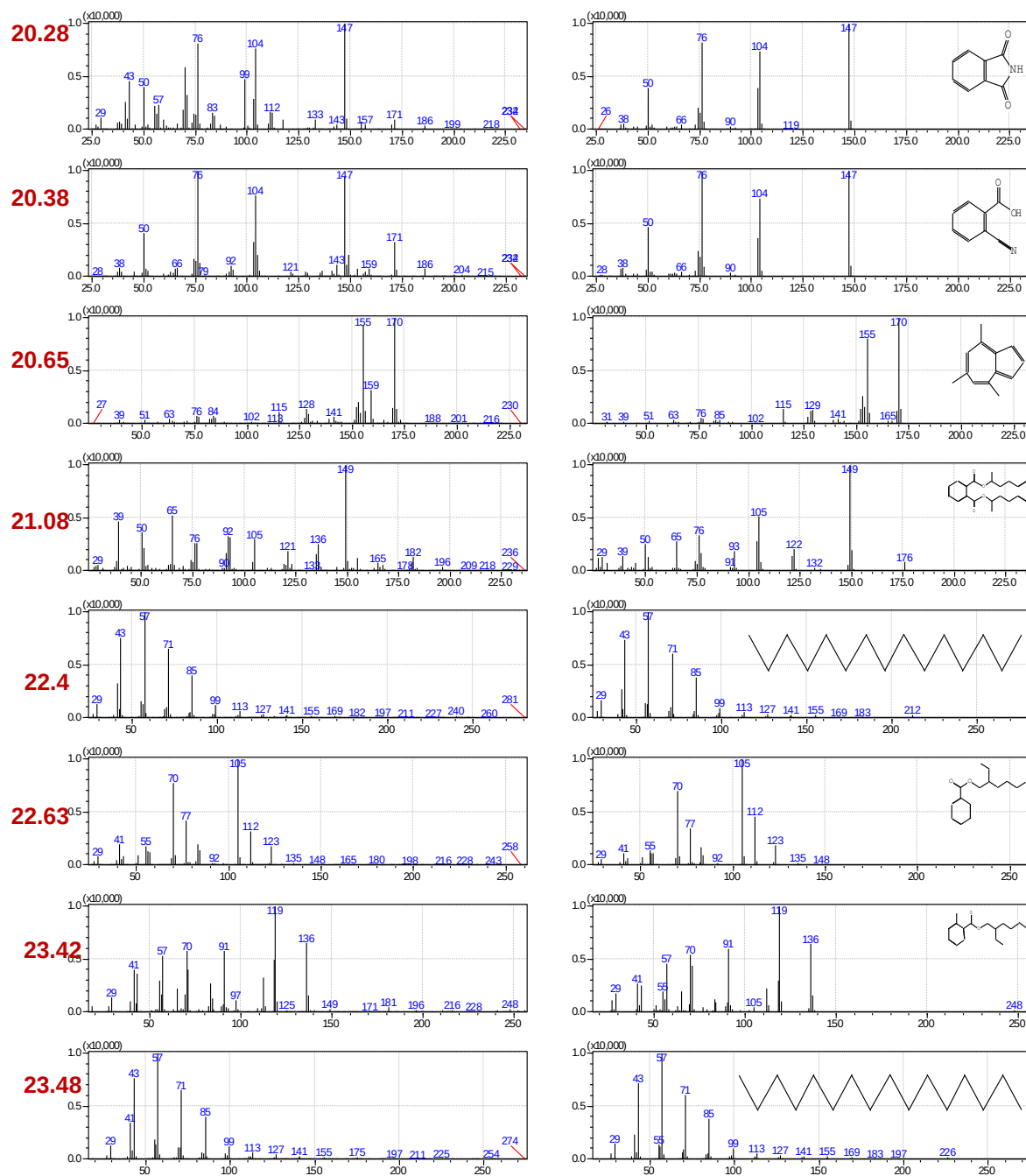


Fig17. Mass spectrum of some picks of crude solids deposited in the condenser identified with their retention time (min) (first column) and the most similar MS from NIST library (second column) corresponding to the MS of first column.