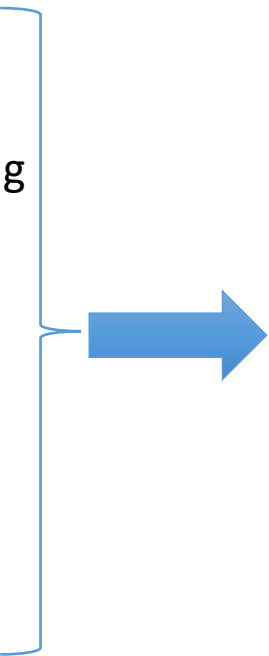
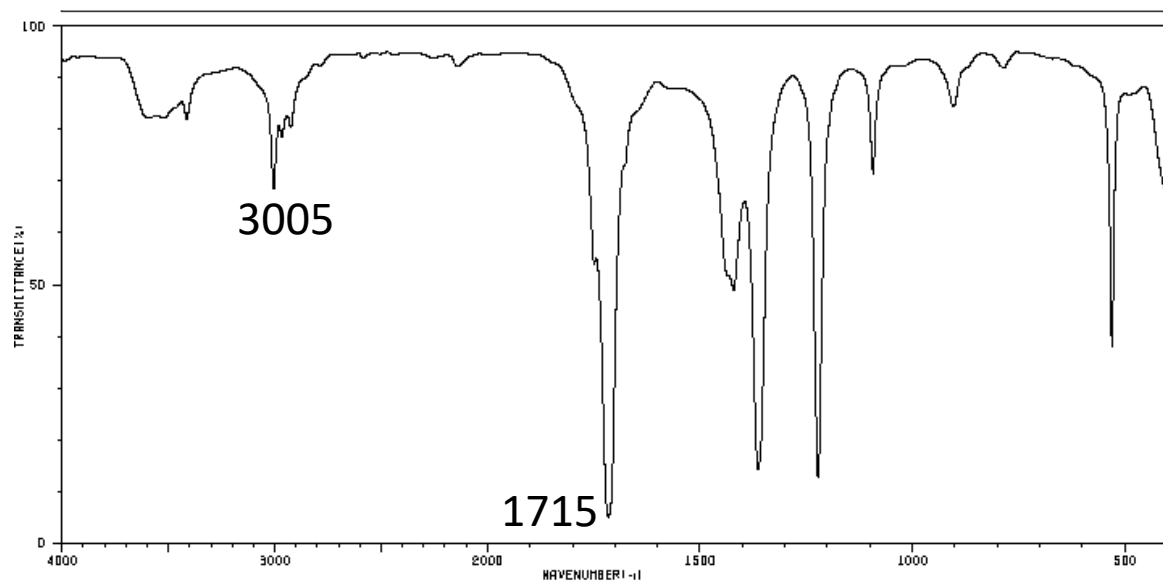


Spectral Problems

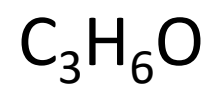
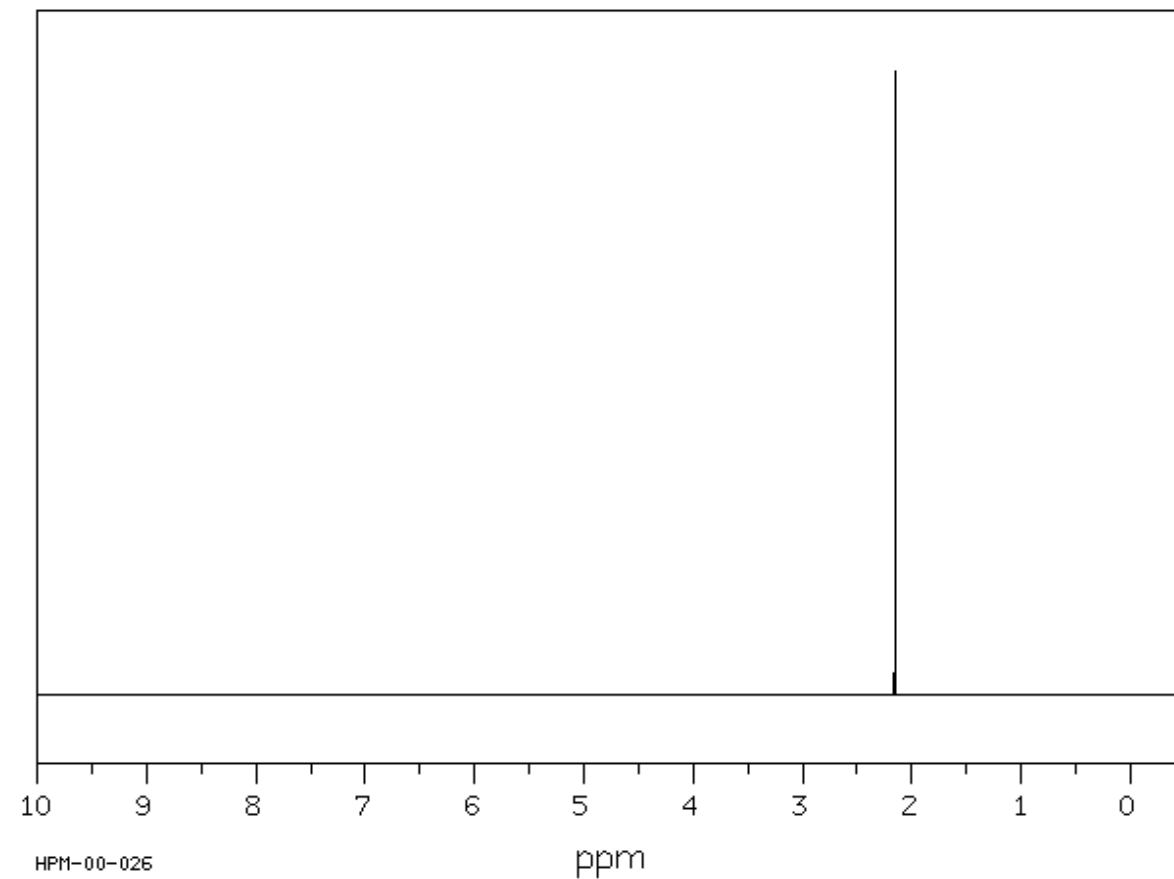
NMR Spectral Problems:

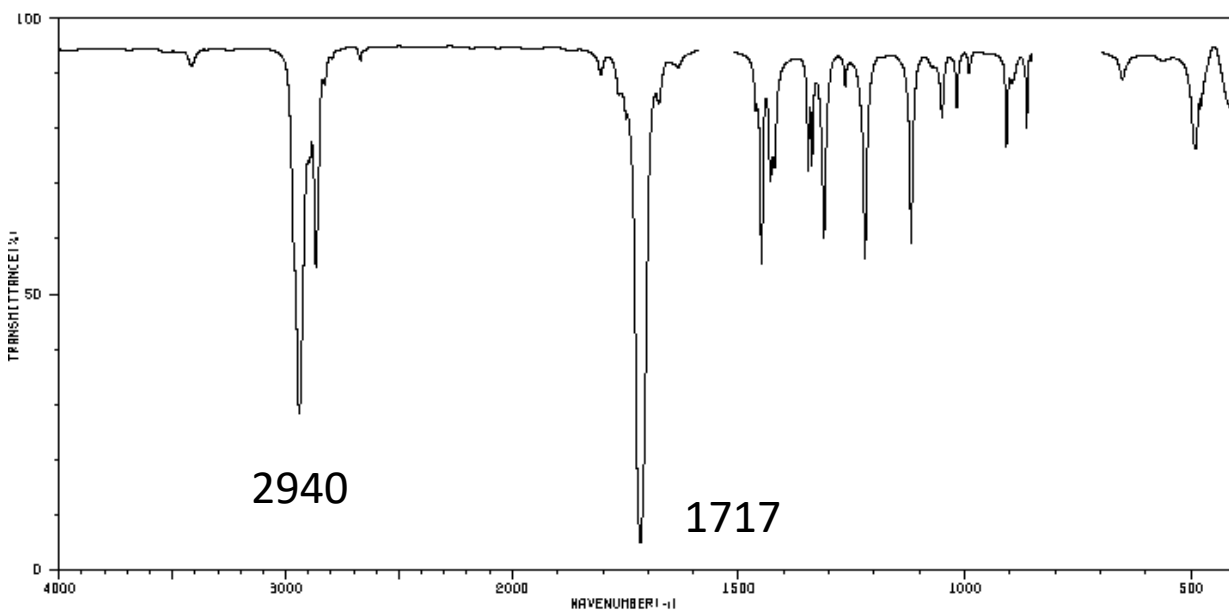
- 1. Number of signals – Information on symmetry
 - 1. Nature of the peak – Information on relaxation/hydrogen bonding
 - 2. Splitting pattern (multiplicity) – Neighboring group
 - 1. Integral values – Number of protons or proton ratios
 - 1. Chemical Shift – Local environment around the proton
 - 2. Coupling constant – Geometrical position of coupling partner
- 

Solving structure of molecules

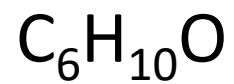
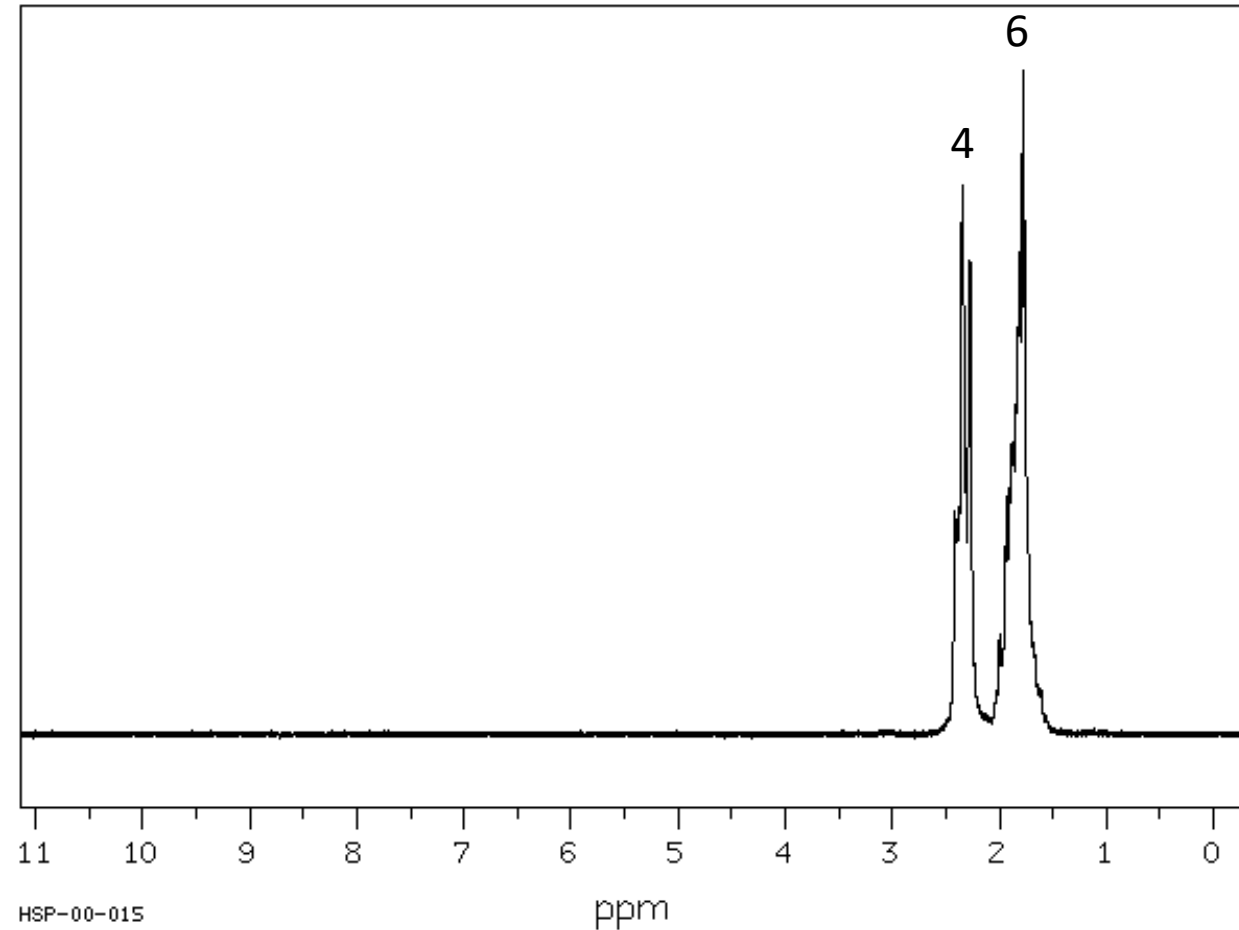


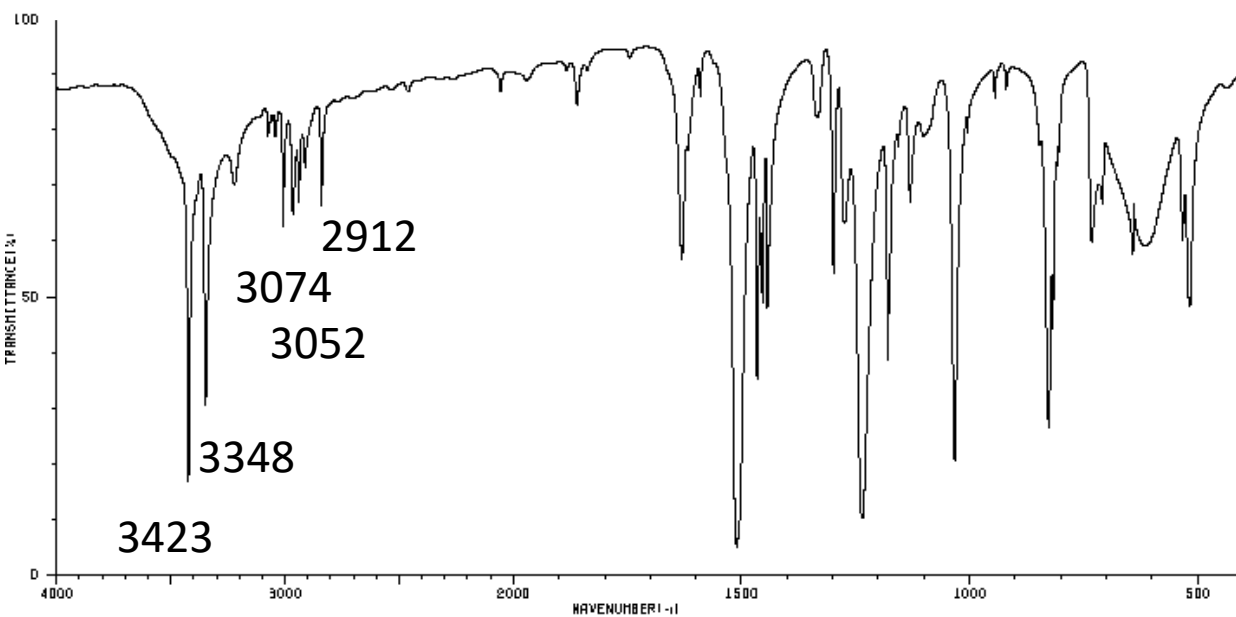
3414	79	1421	47
3005	66	1363	13
2966	74	1223	12
2926	77	1093	68
1749	52	903	81
1715	4	531	36
1434	49		



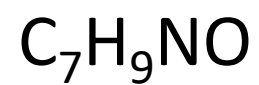
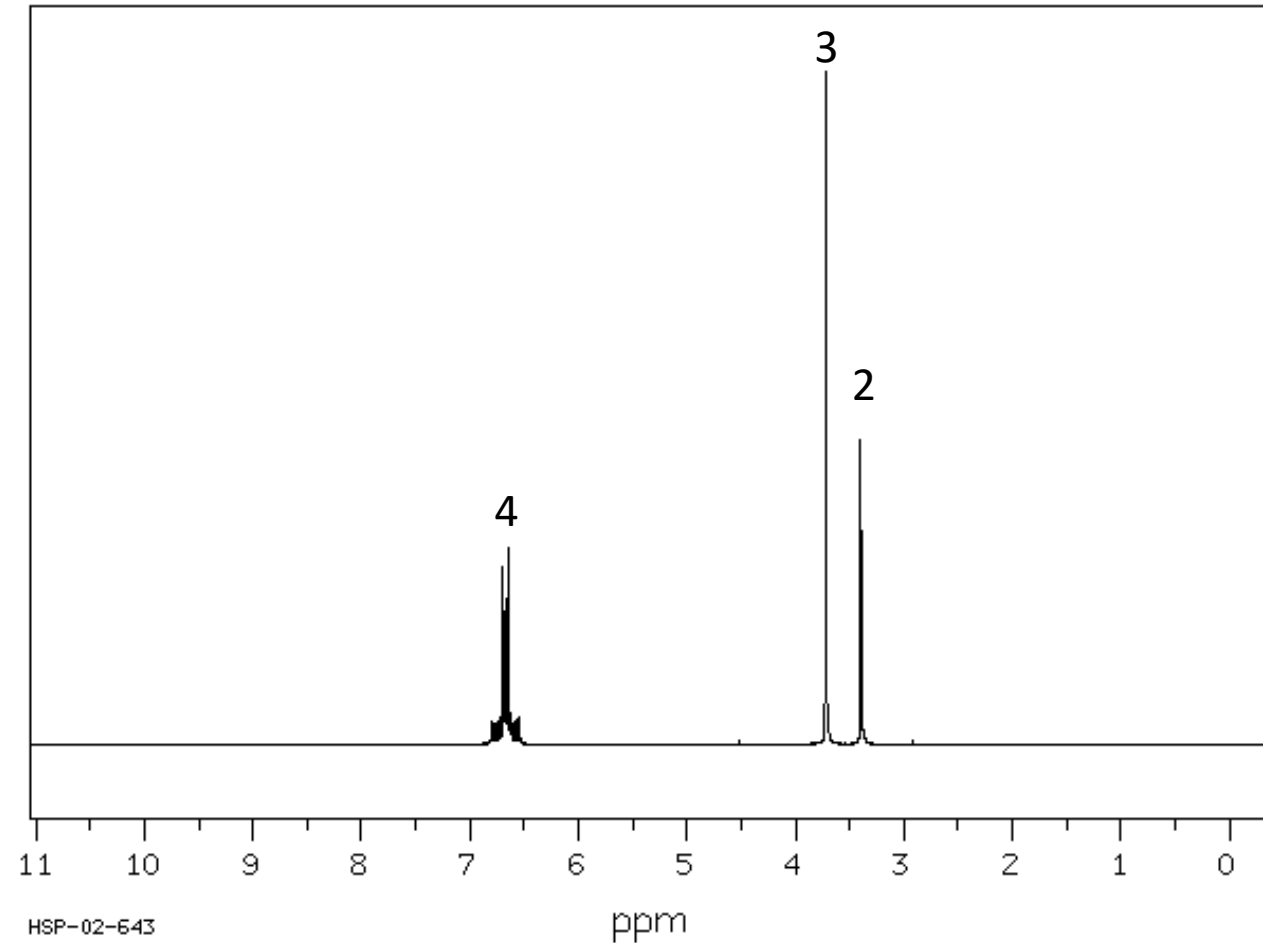


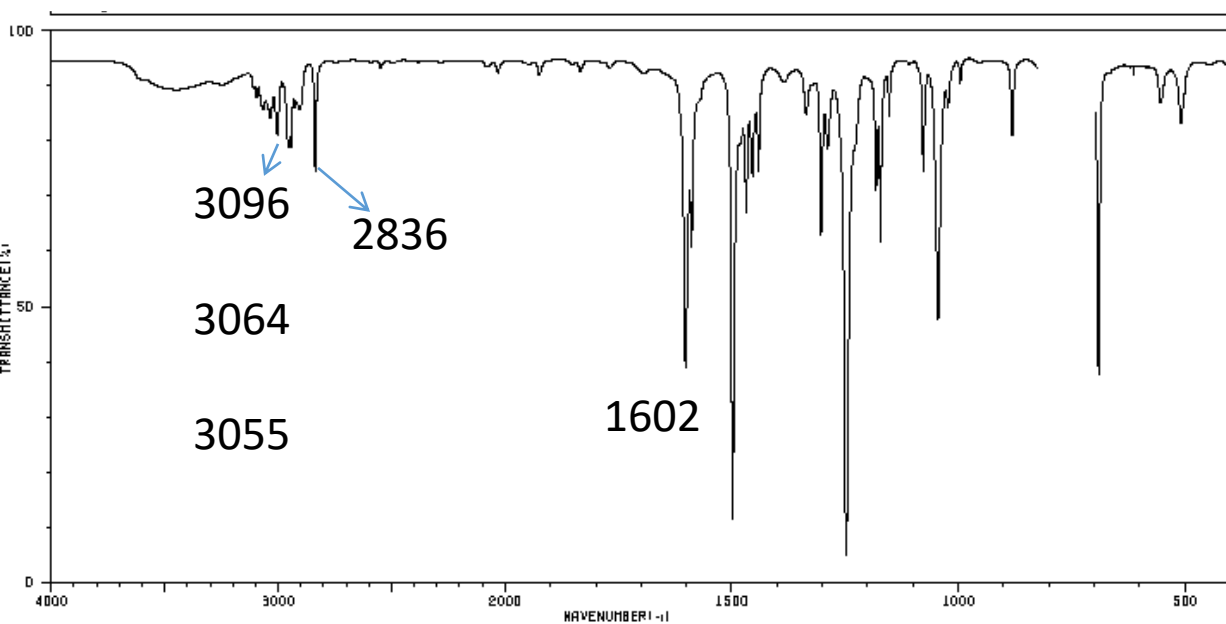
2940	26	1430	68	1119	57	491	72
2867	52	1422	70	1050	79	485	79
1804	86	1347	70	1018	81		
1717	4	1338	70	908	74		
1677	81	1311	58	896	84		
1463	79	1265	84	863	77		
1449	53	1221	59	652	86		



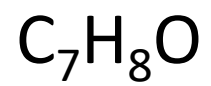
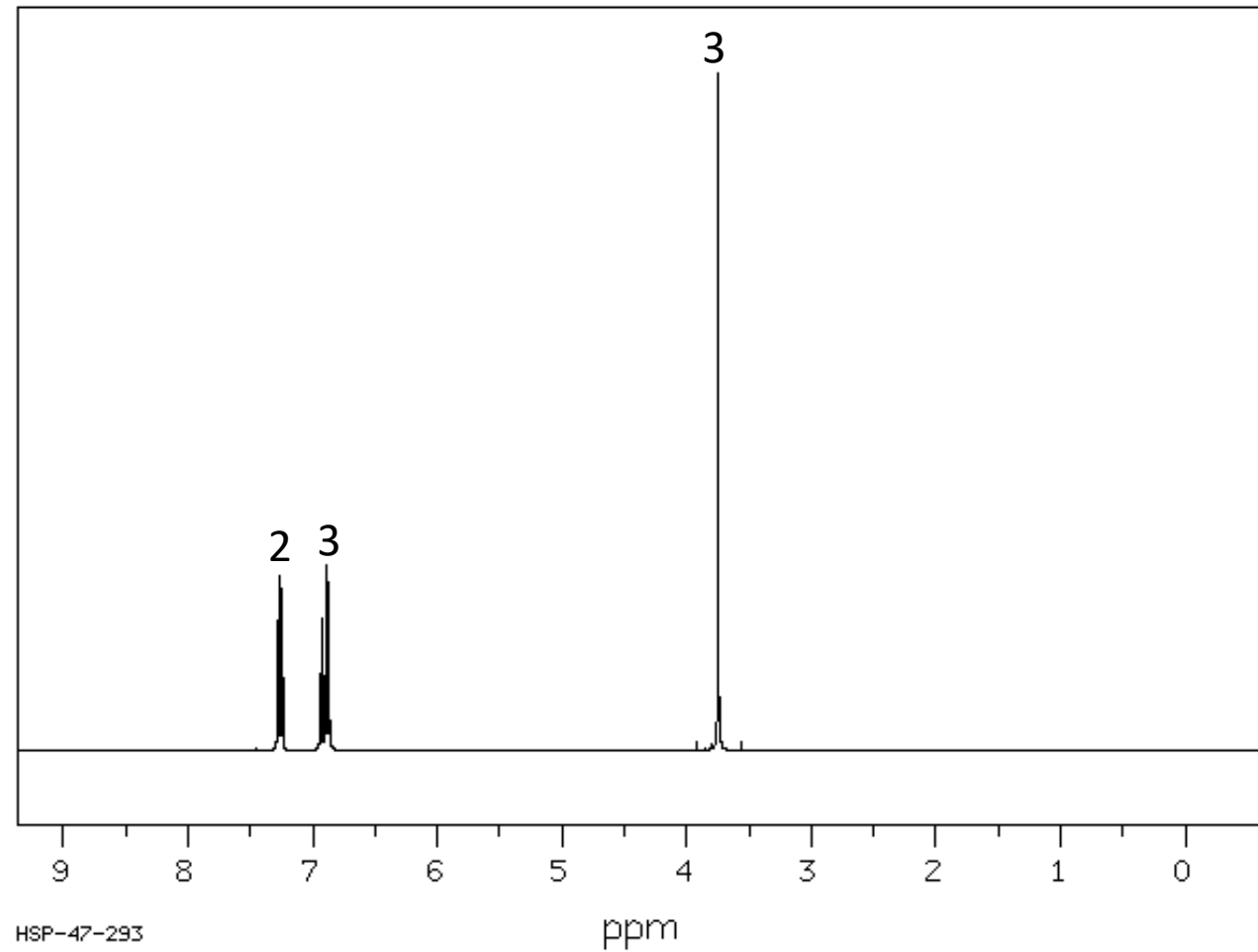


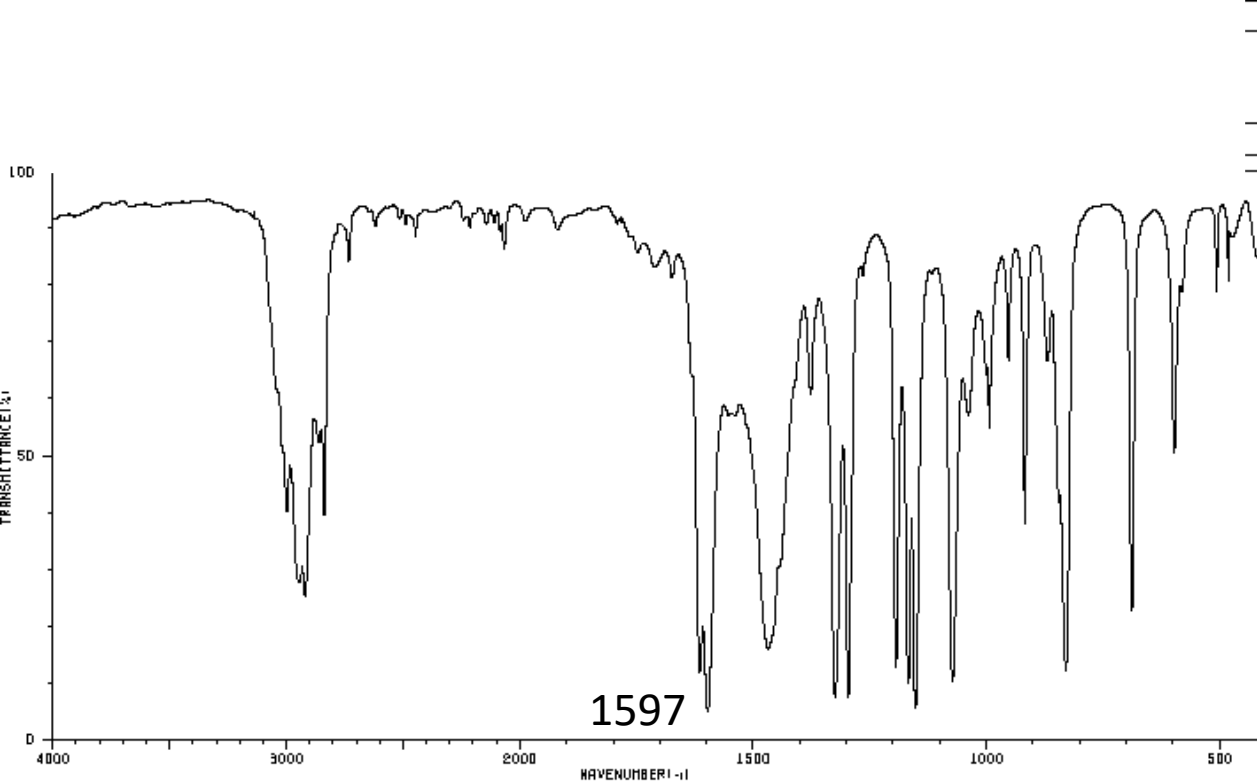
3423	16	2956	62	1466	34	1180	37	818	42
3348	29	2939	64	1455	47	1157	74	733	57
3221	88	2912	70	1443	46	1130	64	709	64
3074	77	2898	64	1333	79	1101	77	643	66
3052	79	1631	55	1299	52	1033	20	614	57
3042	77	1618	74	1274	80	1005	77	534	58
3008	60	1611	4	1236	9	827	26	618	46



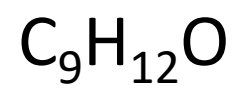
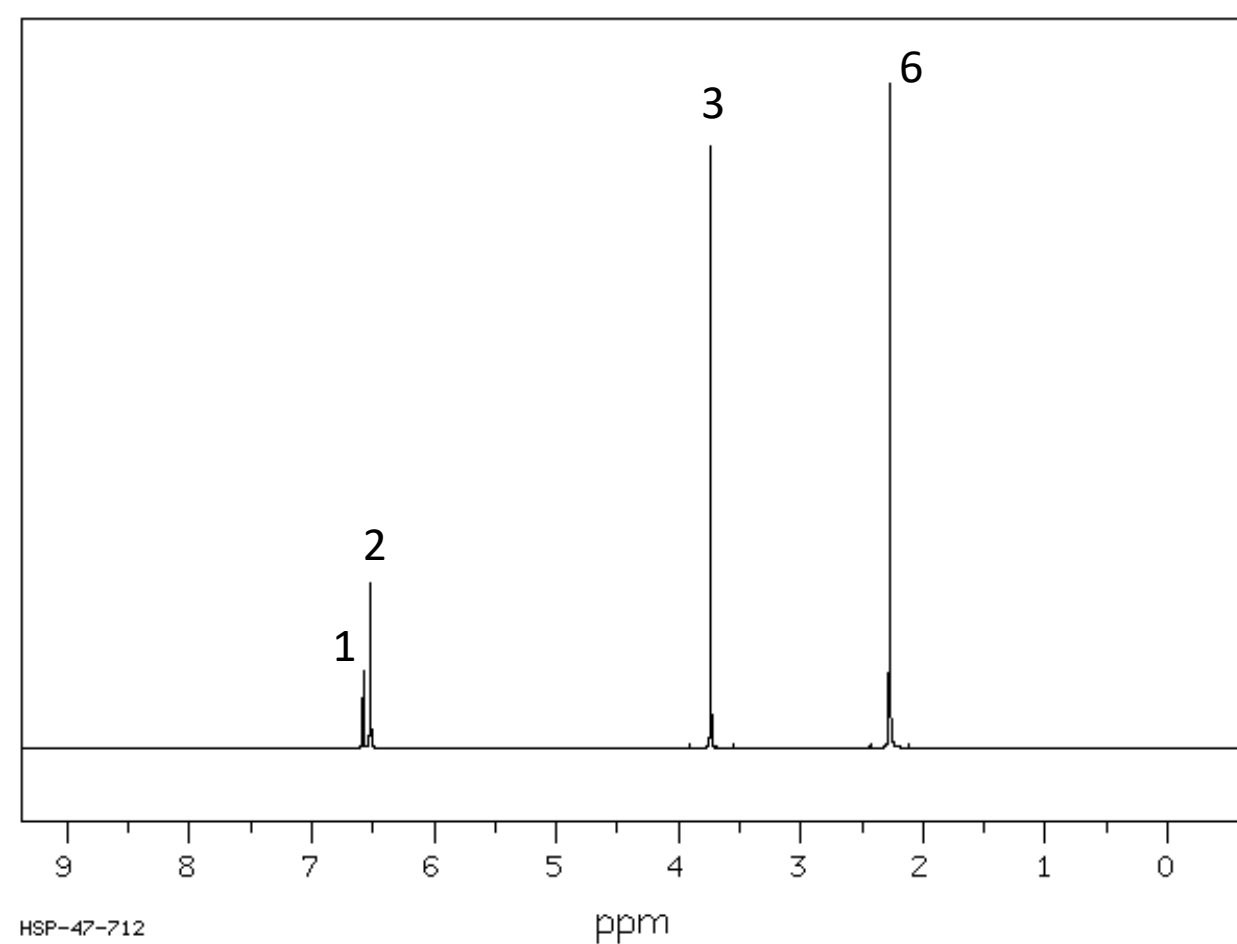


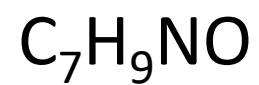
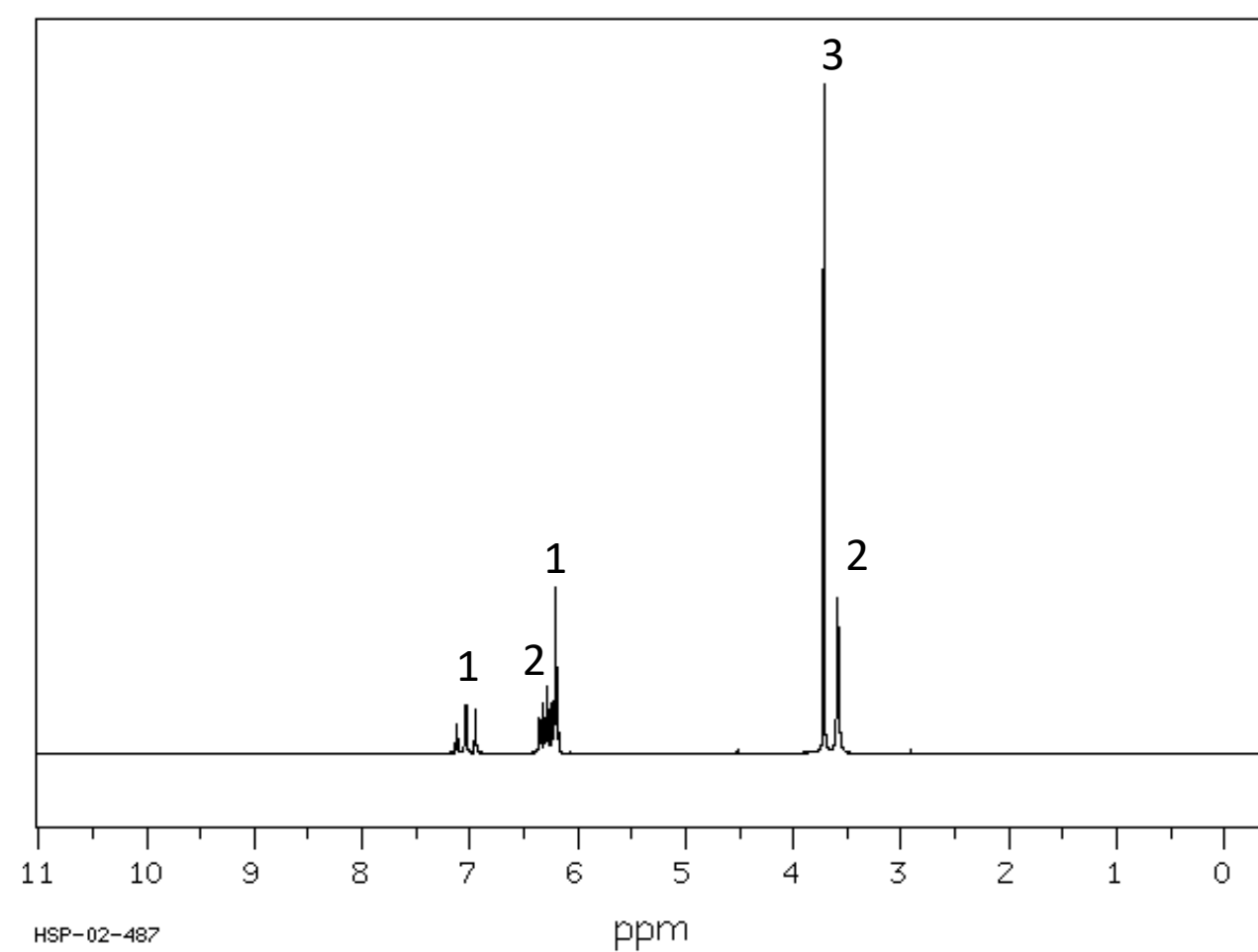
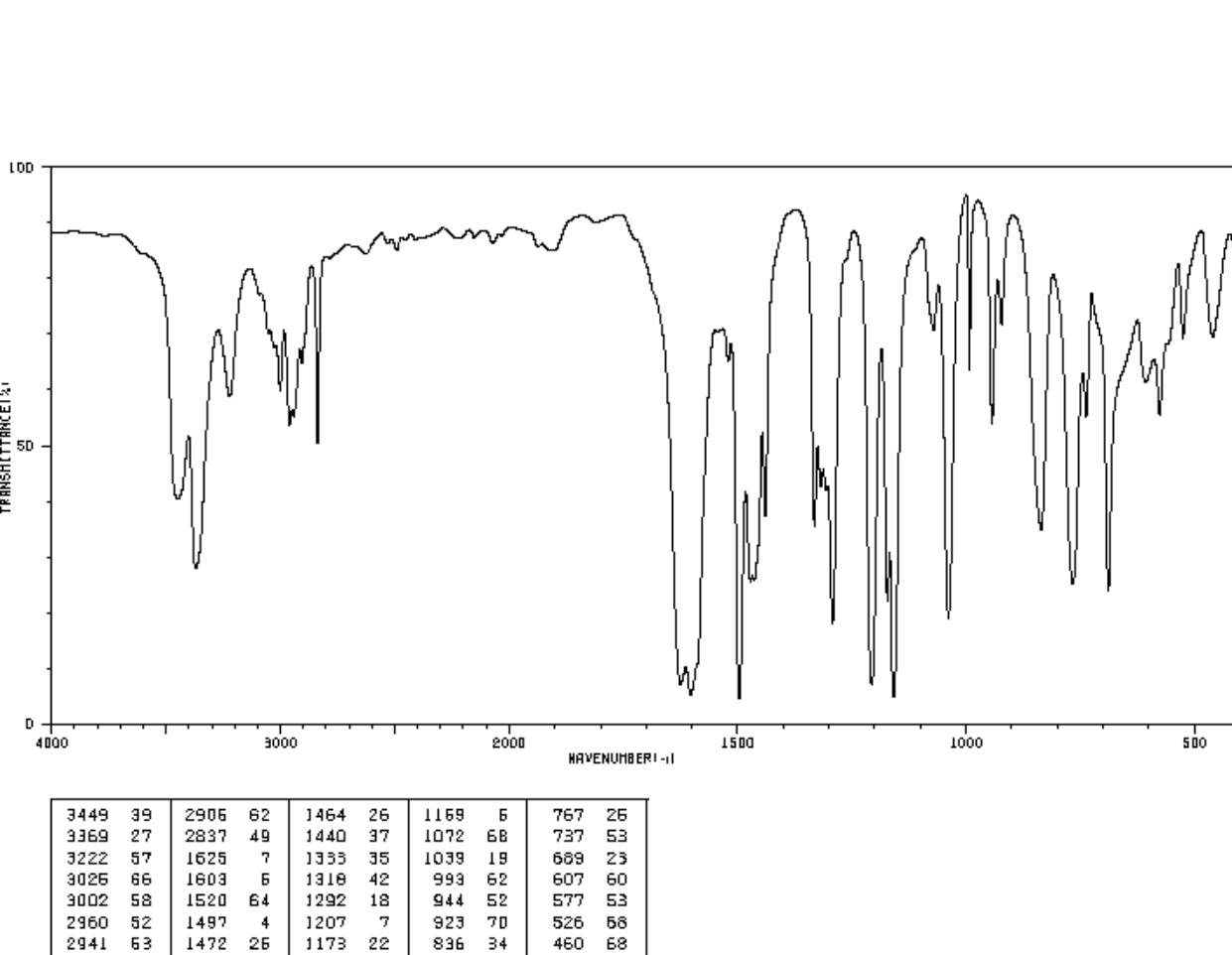
3096	84	2903	81	1466	70	1172	68	554	84
3064	81	2836	72	1441	72	1153	81	509	79
3035	81	1602	57	1336	81	1078	72	504	64
3004	79	1589	68	1304	60	1046	46		
2955	77	1498	10	1289	74	1023	84		
2944	77	1484	77	1248	4	882	78		
2926	84	1468	64	1182	68	691	36		

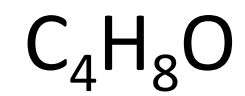
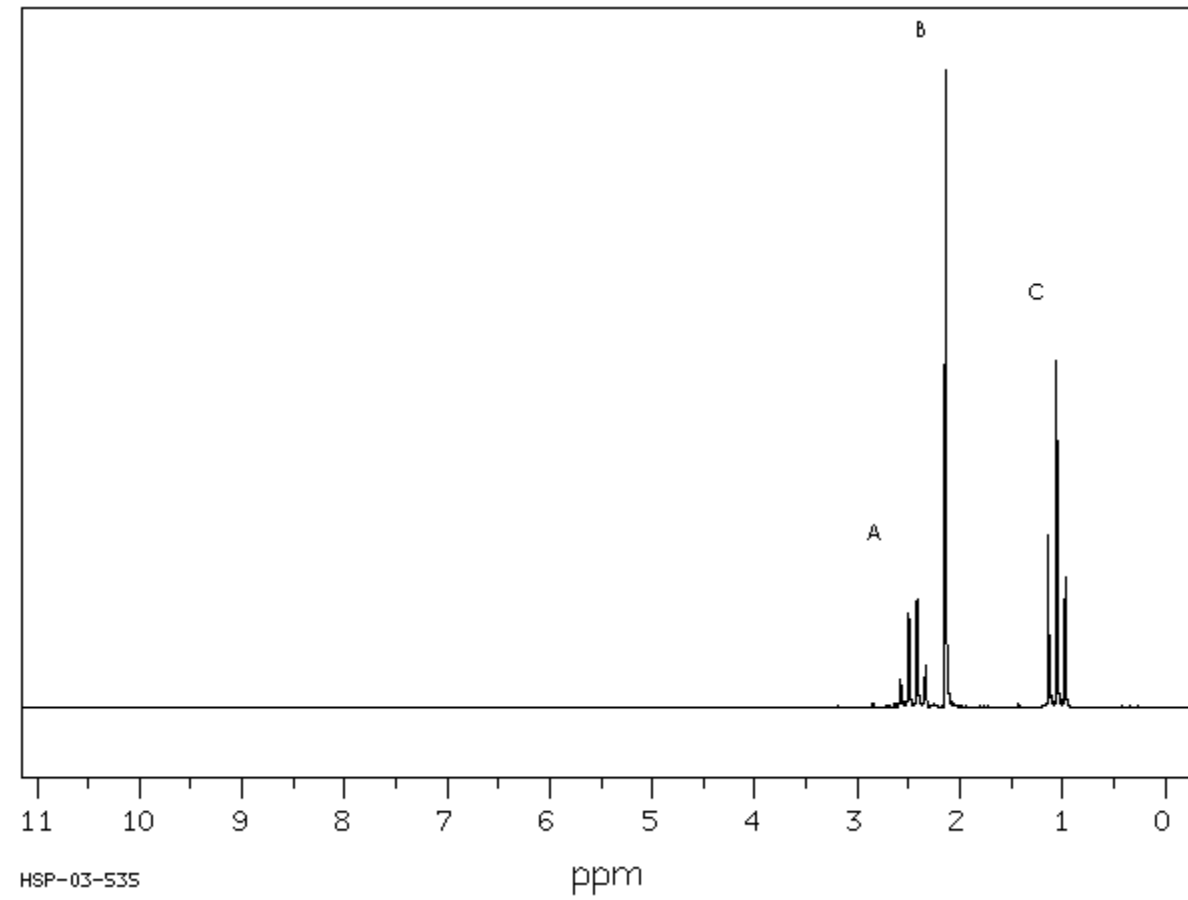
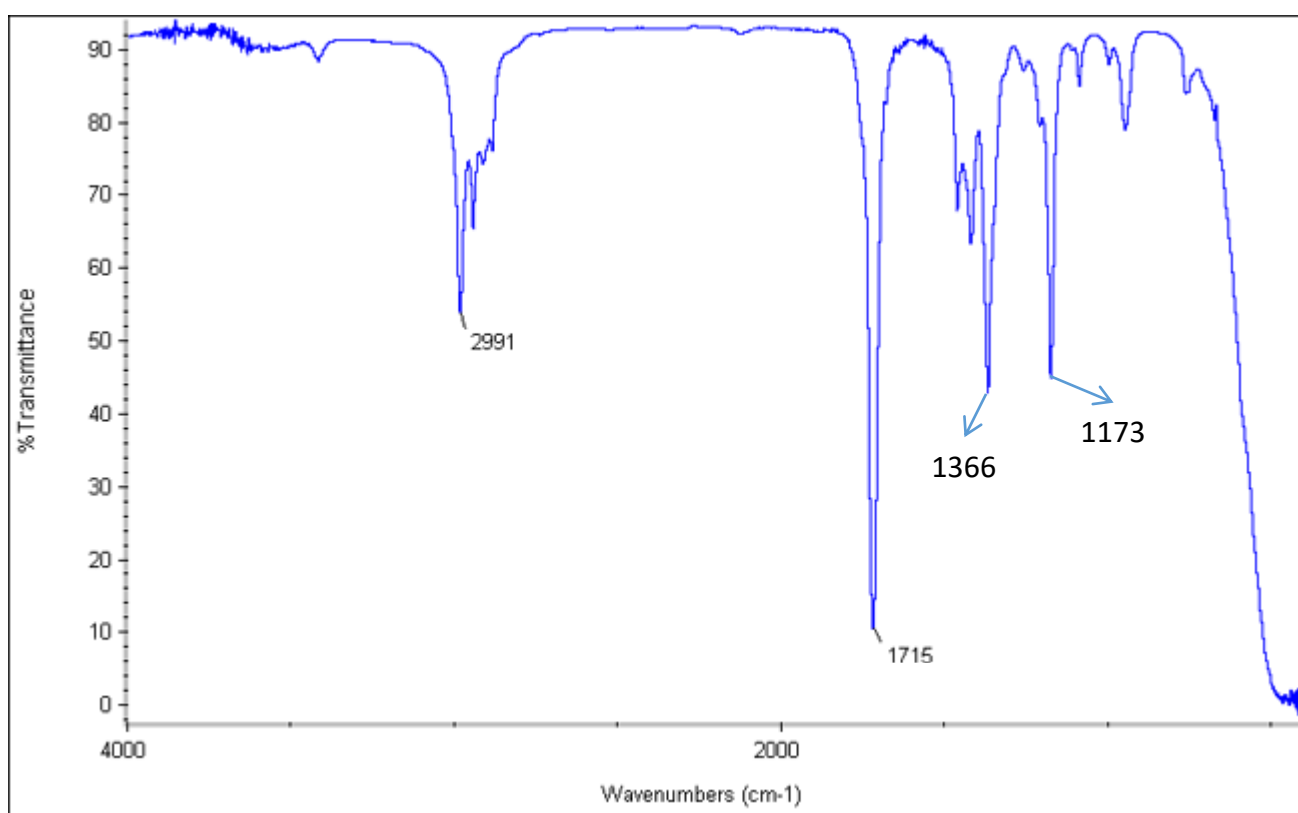


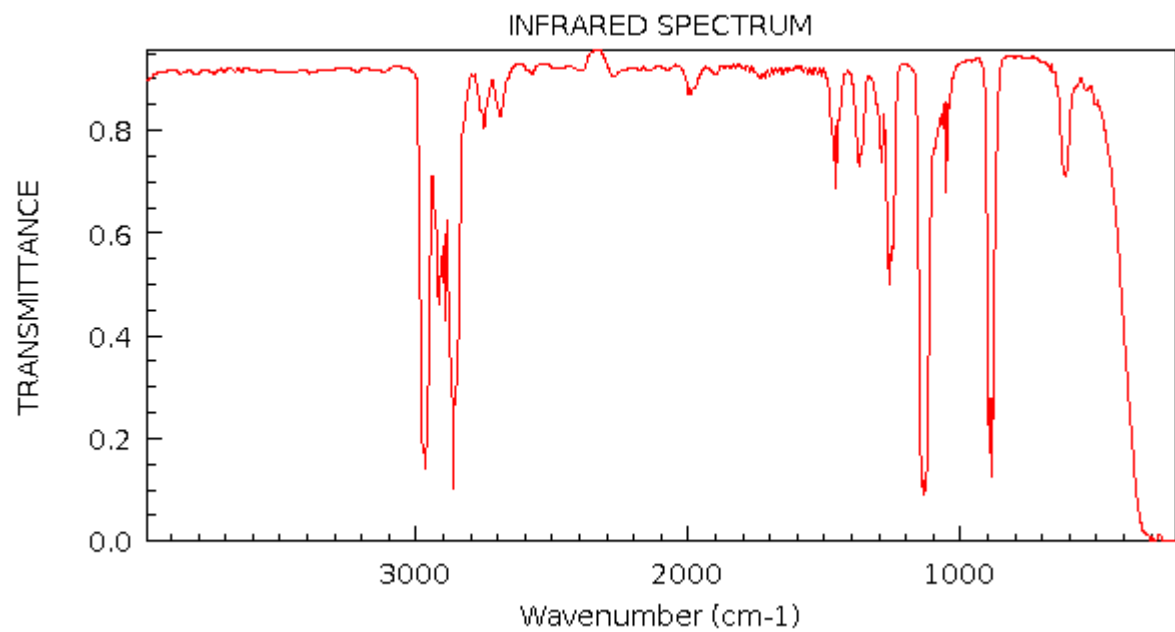


2998	36	1749	81	1469	15	1163	6	869	64
2944	26	1710	79	1377	58	1072	10	845	39
2919	23	1674	78	1324	7	1038	55	830	12
2862	50	1616	11	1296	7	1000	62	808	21
2837	37	1597	4	1265	79	994	52	598	49
2732	81	1545	55	1194	12	953	64	507	77
2447	84	1540	55	1168	9	918	36	482	77

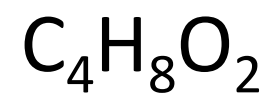
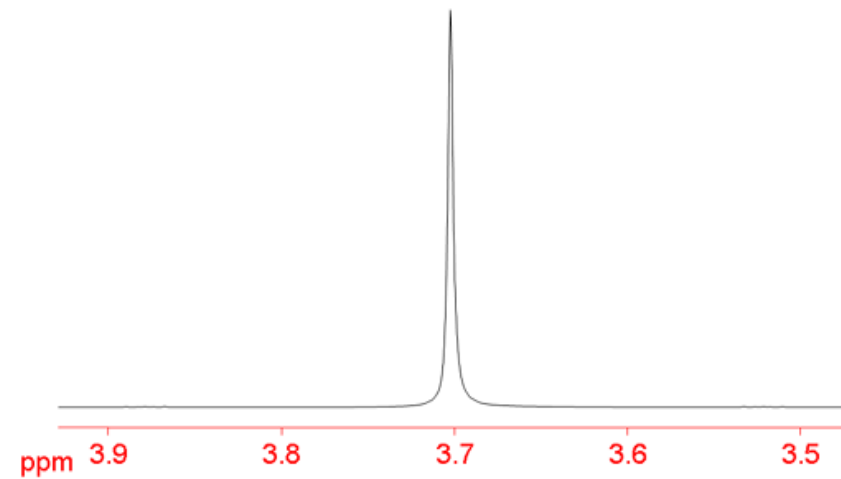


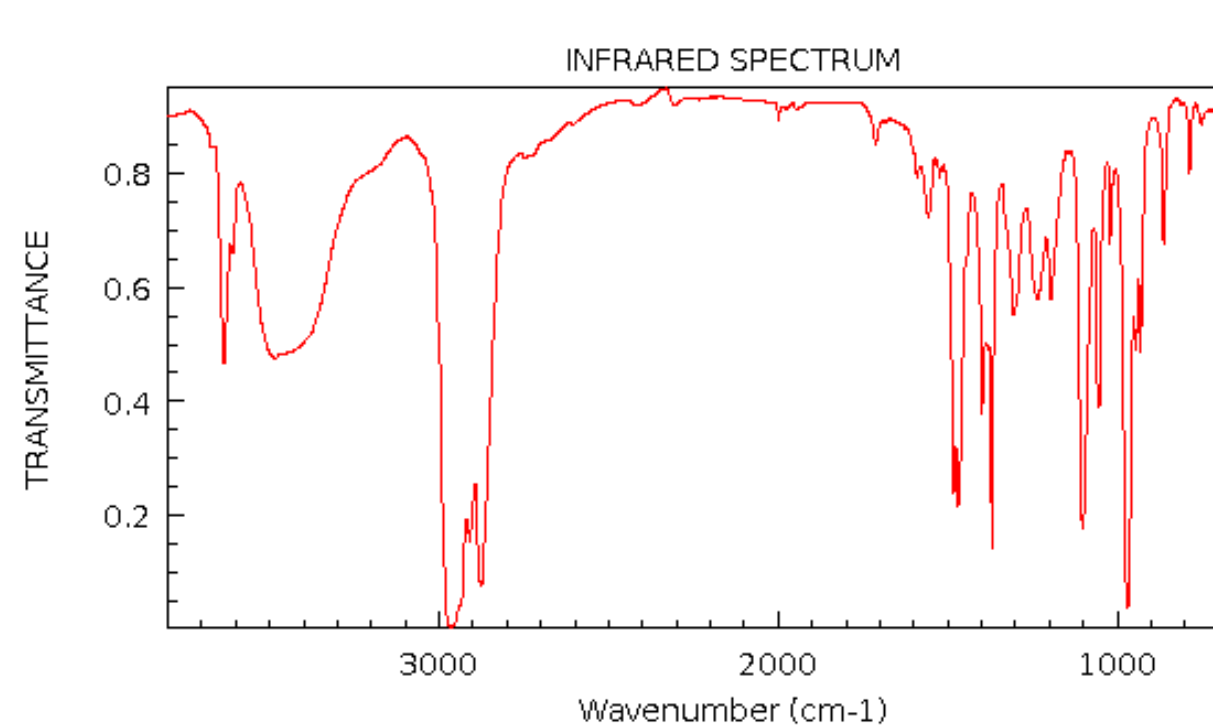




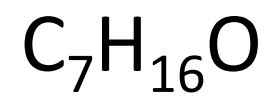
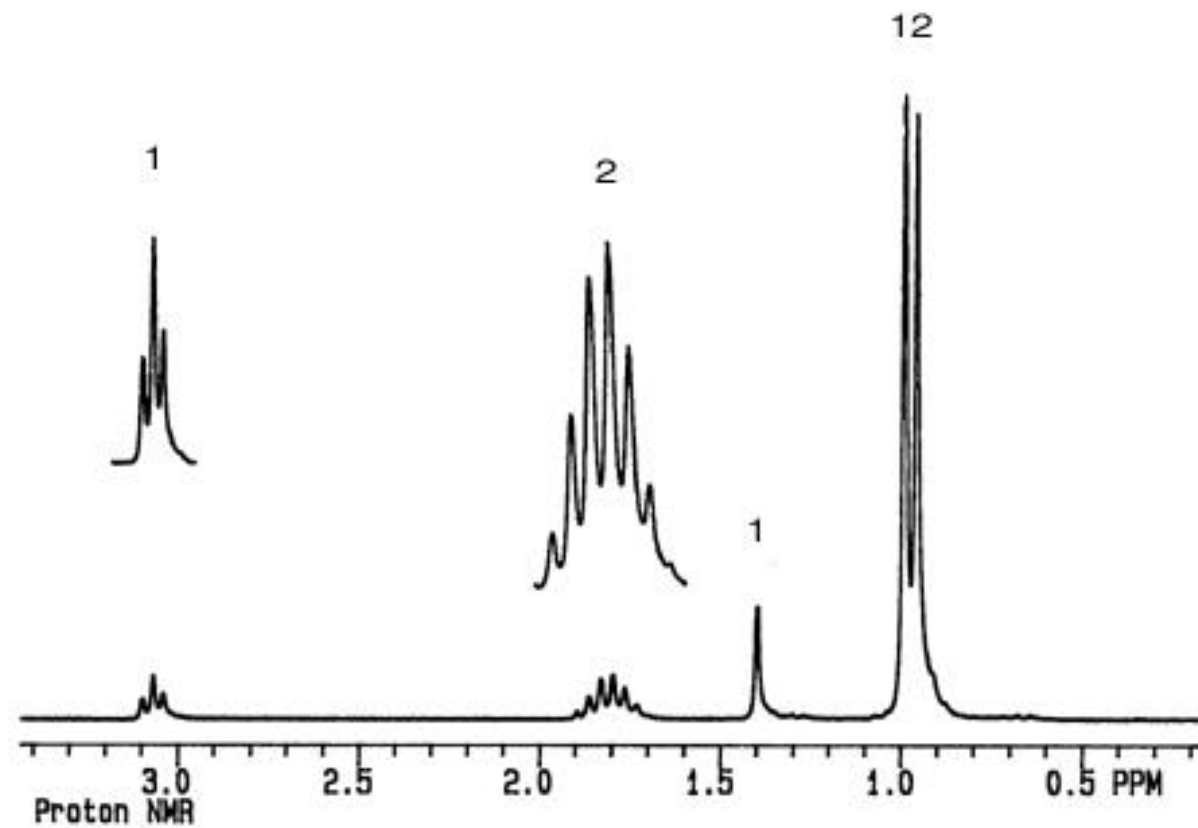


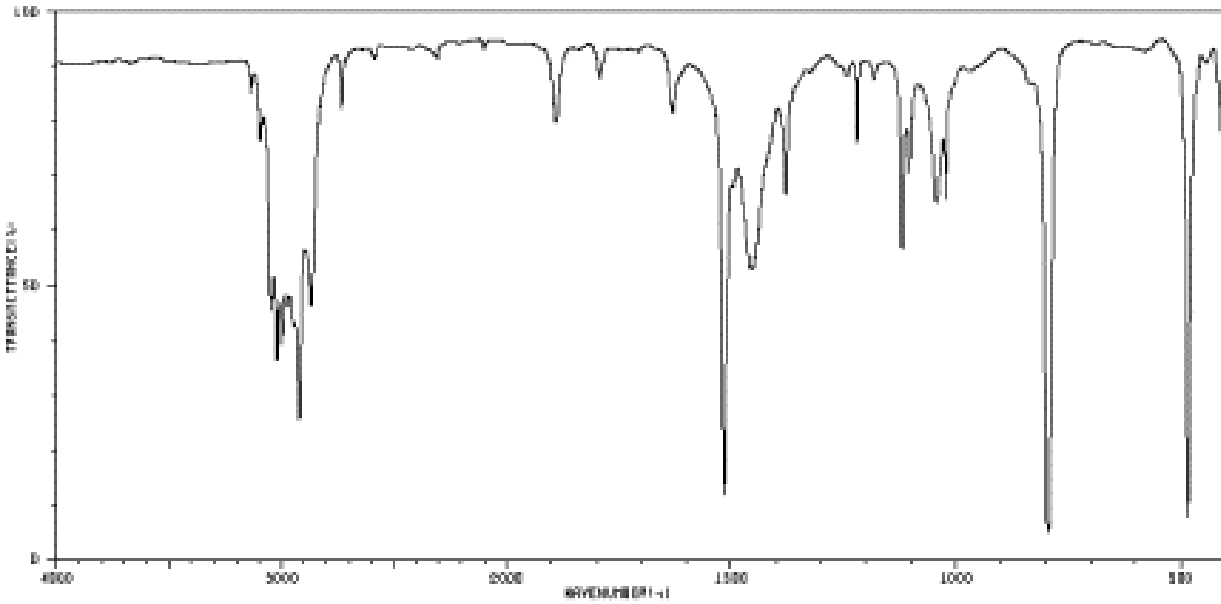
NIST Chemistry WebBook (<http://webbook.nist.gov/chemistry>)





NIST Chemistry WebBook (<http://webbook.nist.gov/chemistry>)





3156	61	2923	24	1484	60	1043	62
3086	14	2868	44	1370	64	1023	64
3047	45	2783	79	1245	84	788	4
3020	16	1660	77	1220	72	404	7
3000	17	1793	84	1183	84		
2976	44	1630	79	1120	85		
2945	41	1516	11	1103	68		

