

Spectroscopy Handout
HW and Lab Activity

Name: _____

IR Spectra

Directions: For the following spectra

1. List the absorptions you would expect based on functional groups
2. Pick which compound you feel that it is based on the absorptions present (has to be one of the compounds in the list)
3. Brief summary of why you think you have made the correct choice.

Compounds

Hexanal

Phenol

Hexane

Ethanol

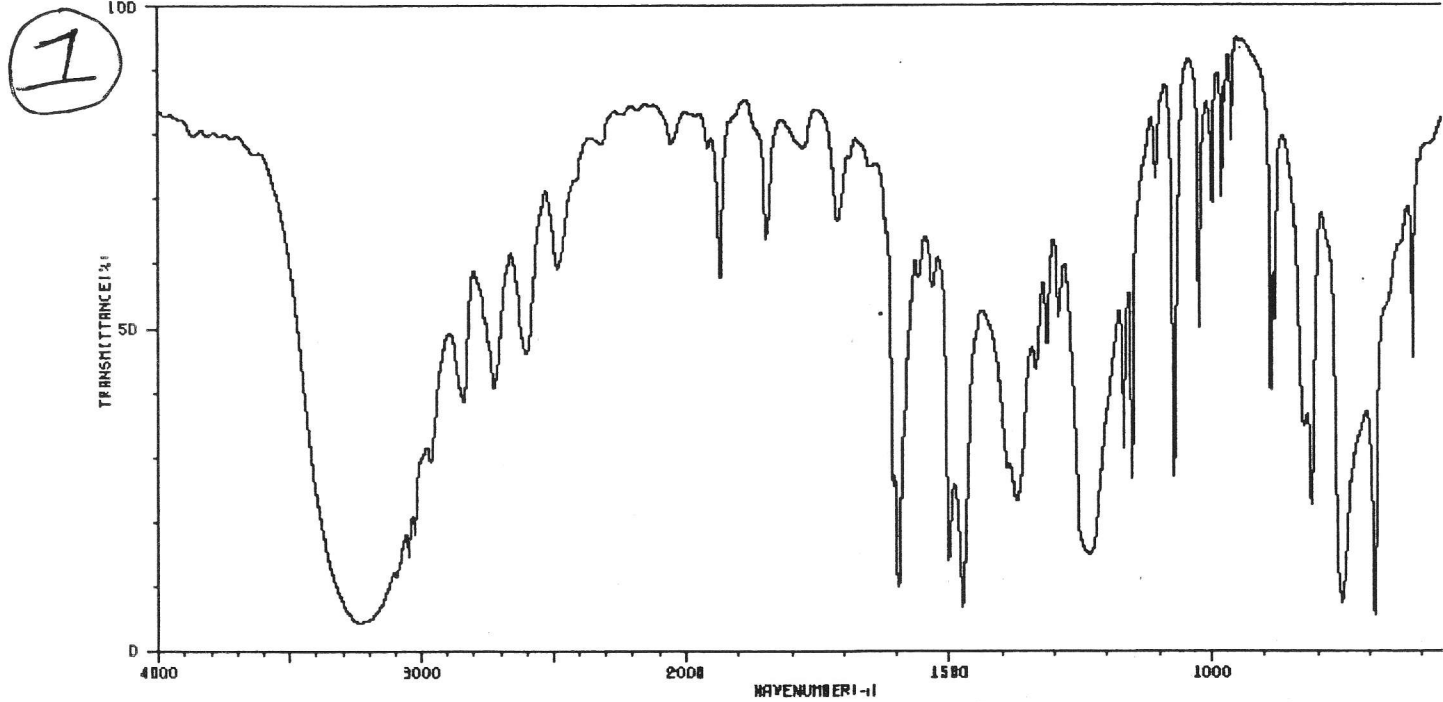
Hexanamide

Hexanoic acid

3-hexanone

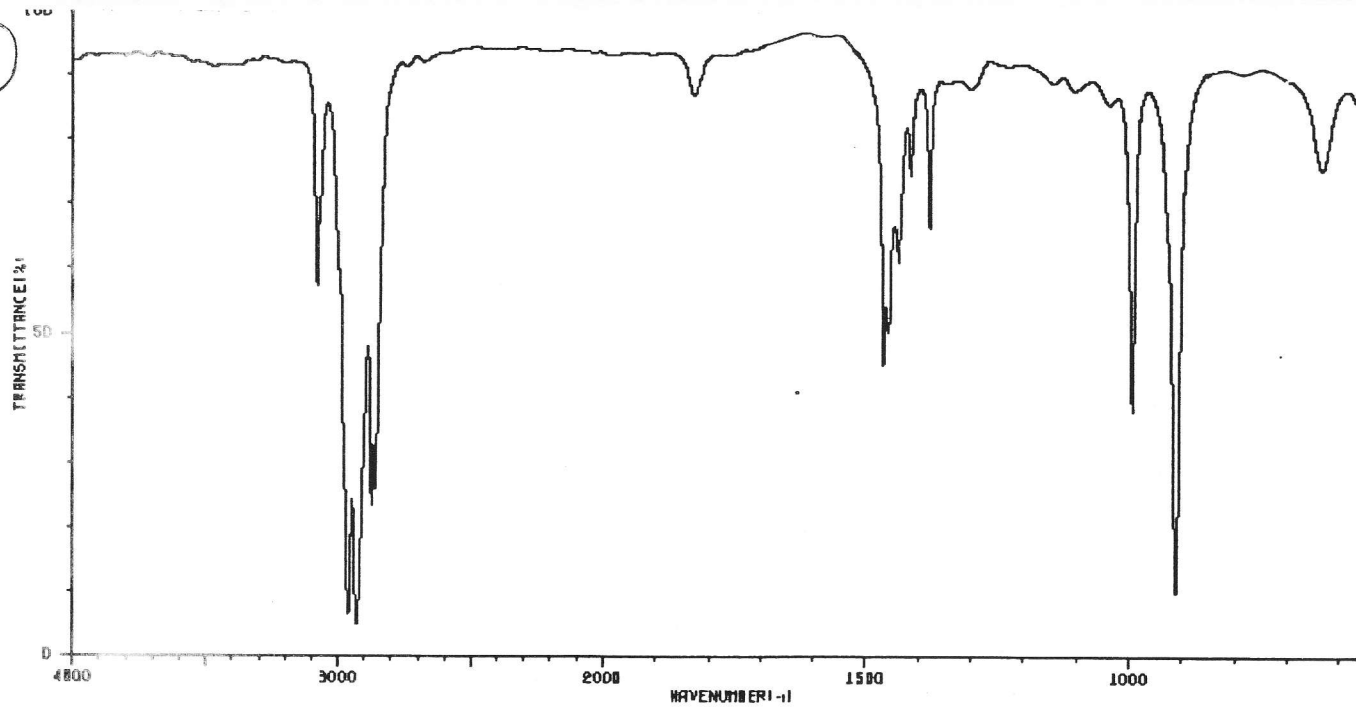
hexylamine

1-hexene



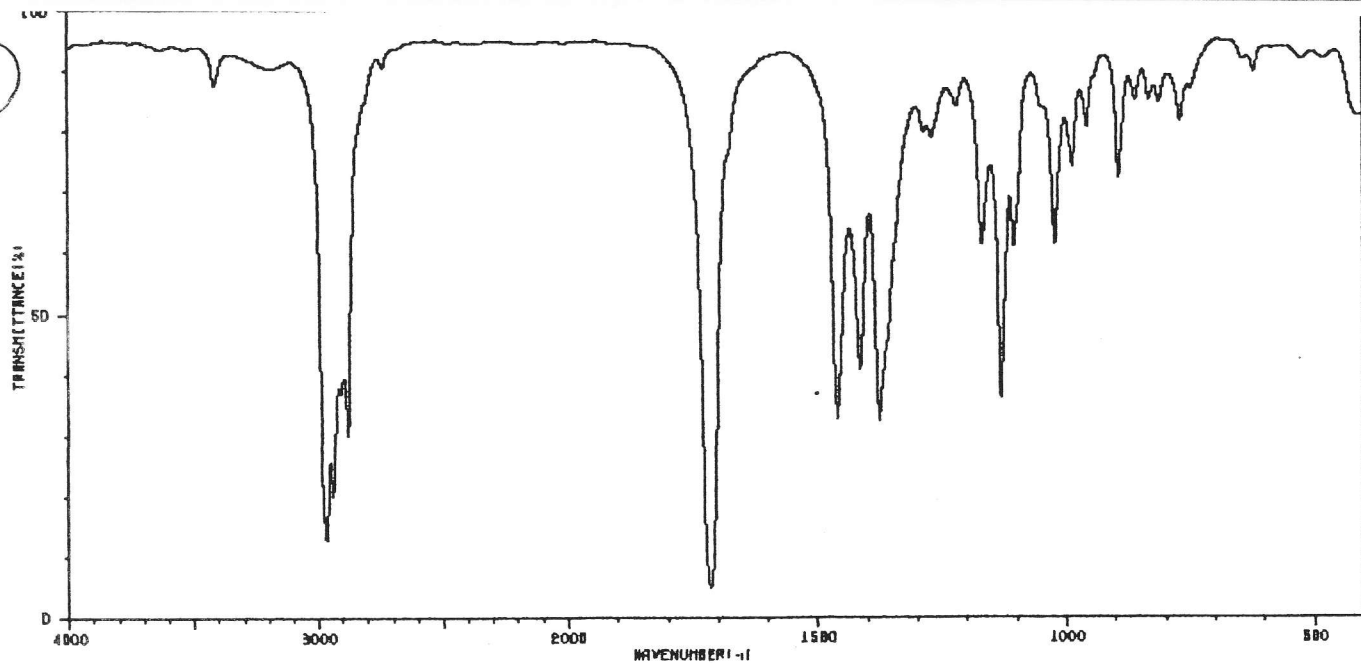
3229	4	2484	68	1632	66	1234	16	826	36
3048	15	1933	57	1501	14	1169	31	812	23
3023	18	1847	62	1474	7	1153	26	754	8
2962	29	1711	64	1372	23	1072	27	691	6
2837	38	1606	26	1336	43	1024	49	617	44
2723	41	1598	10	1315	47	889	41	535	18
2699	46	1669	67	1293	60	881	60	502	20

2



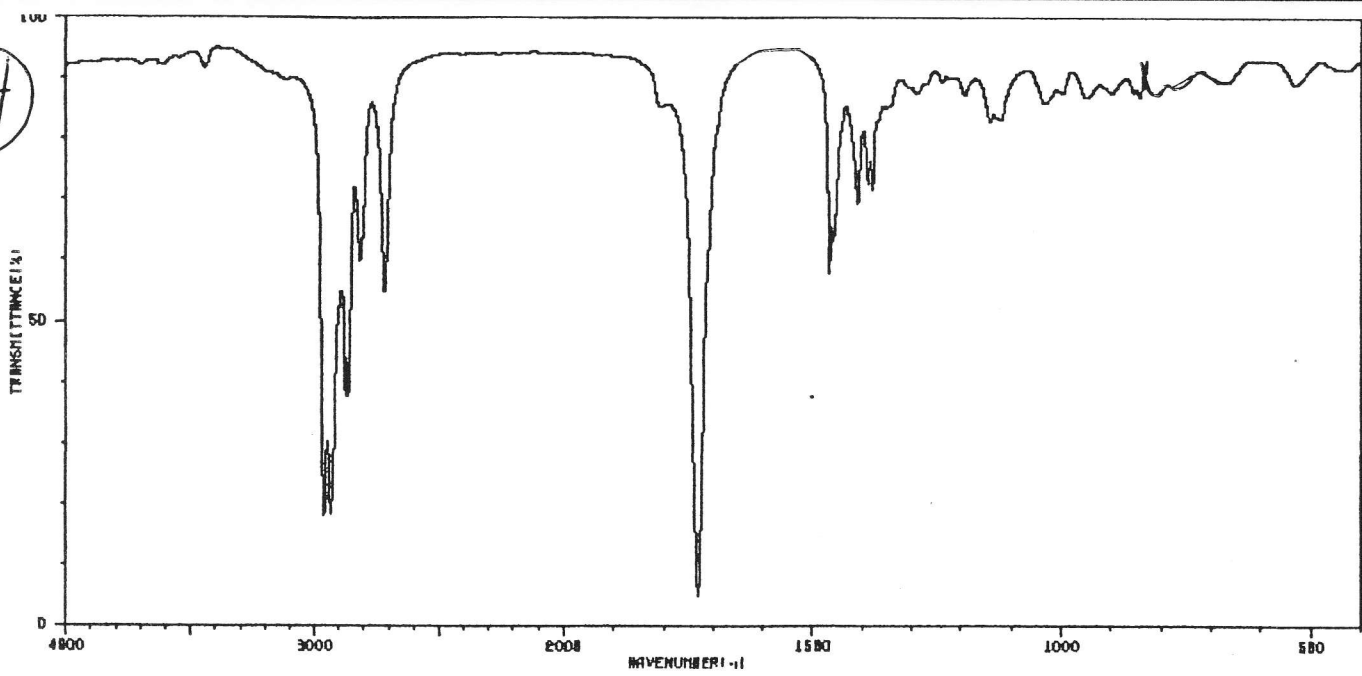
3079	66	1467	49	1103	84	461	84
2961	6	1446	64	1038	81		
2929	4	1438	58	994	36		
2874	22	1416	72	912	9		
2861	25	1379	64	836	72		
1627	84	1300	84	558	61		
1467	43	1144	86	466	84		

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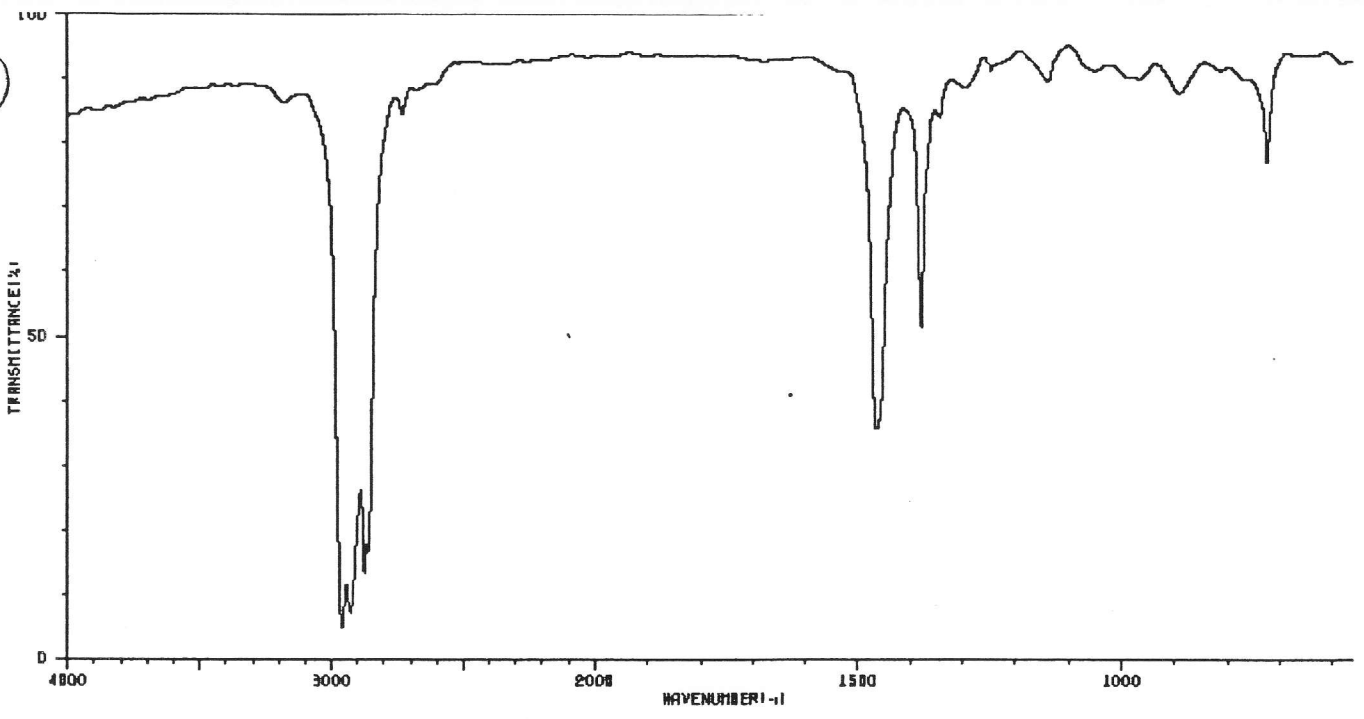
3414	84	1414	39	1131	34	833	81
2965	12	1377	31	1105	58	812	81
2939	19	1287	77	1022	58	770	79
2907	35	1281	77	986	72	620	86
2878	28	1270	77	957	77		
1715	4	1221	81	894	70		
1460	31	1170	59	860	81		

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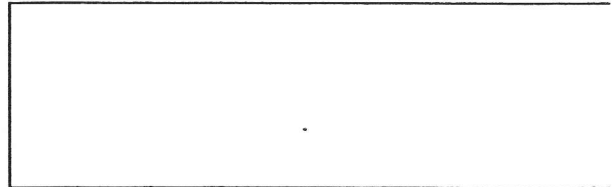


2960	17	1458	65	1194	84	947	84
2933	17	1461	60	1144	79	899	84
2875	36	1410	65	1157	81	855	84
2862	36	1389	70	1132	79	849	84
2817	57	1380	68	1125	79	844	84
2716	52	1295	84	1033	81	834	84
1730	4	1288	84	952	84	531	88

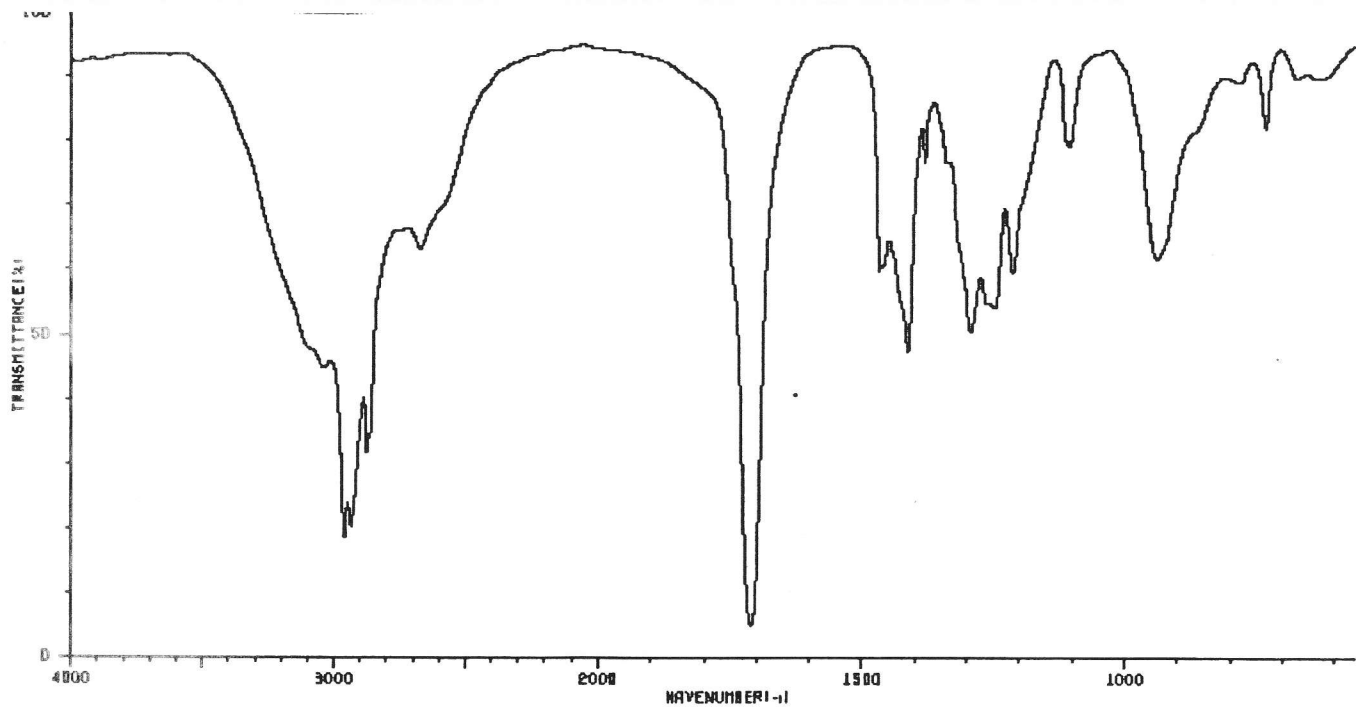
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3187	84	1466	34	726	74
3176	84	1379	49		
2959	4	1300	84		
2928	7	1294	84		
2875	13	1138	86		
2862	15	891	84		
2734	81	884	84		

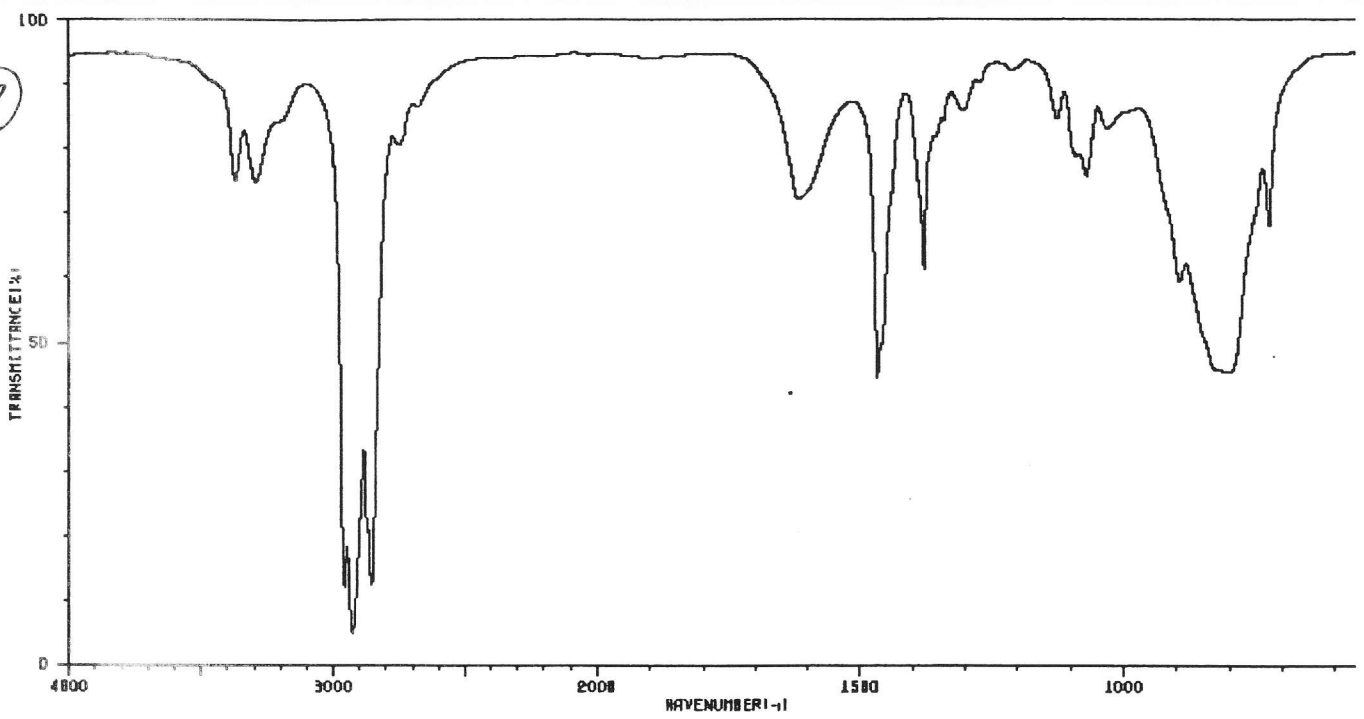


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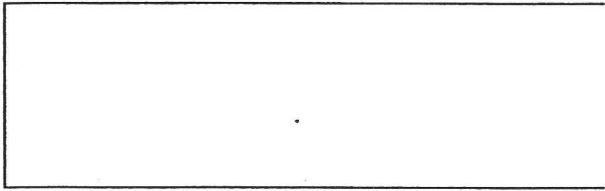


2969	17	1463	58	1213	57
2935	19	1414	46	1114	77
2875	30	1380	74	1107	77
2864	32	1293	49	937	58
2673	60	1262	52	732	79
1711	4	1255	52	472	81
1468	57	1247	52		

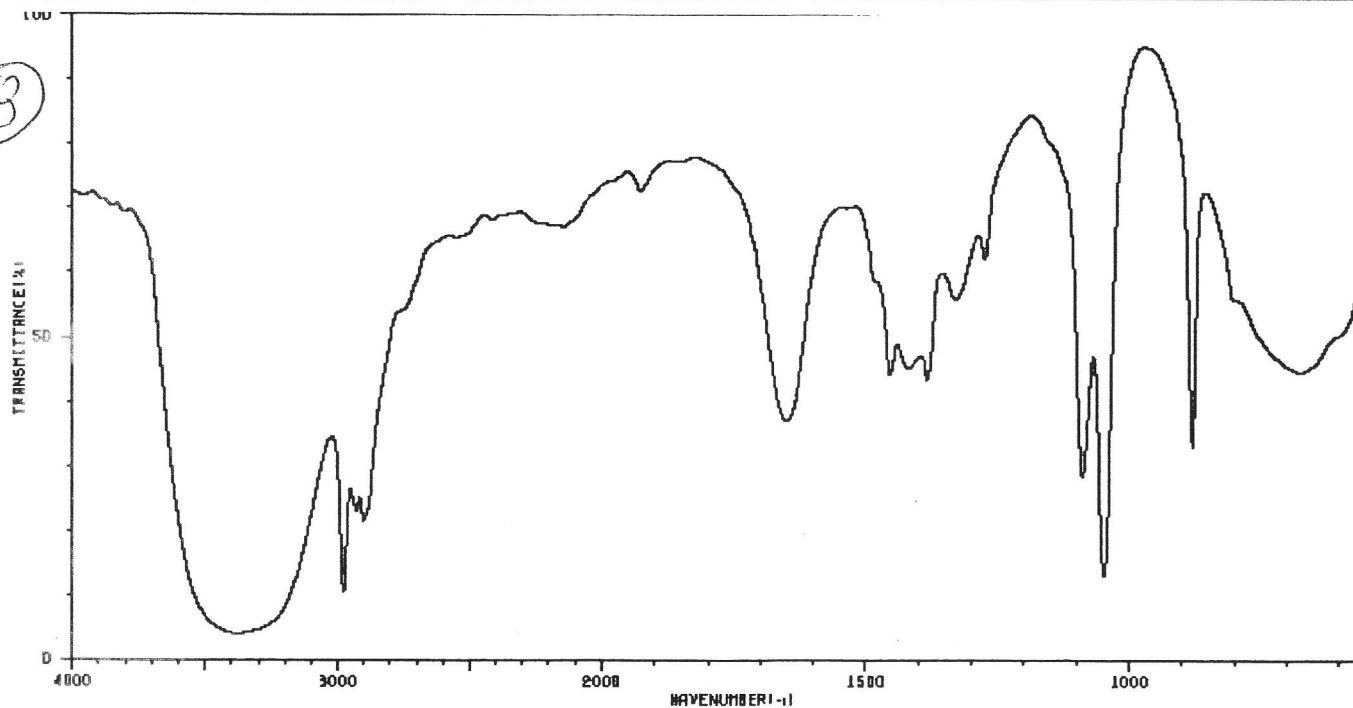
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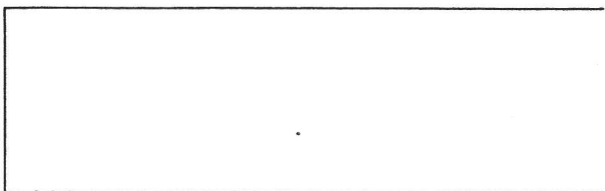
3369	72	1617	70	1070	72
3091	72	1468	42	1031	79
2956	11	1461	47	895	57
2927	4	1379	58	812	43
2873	19	1303	84	726	66
2656	12	1128	81		
2753	77	1086	77		



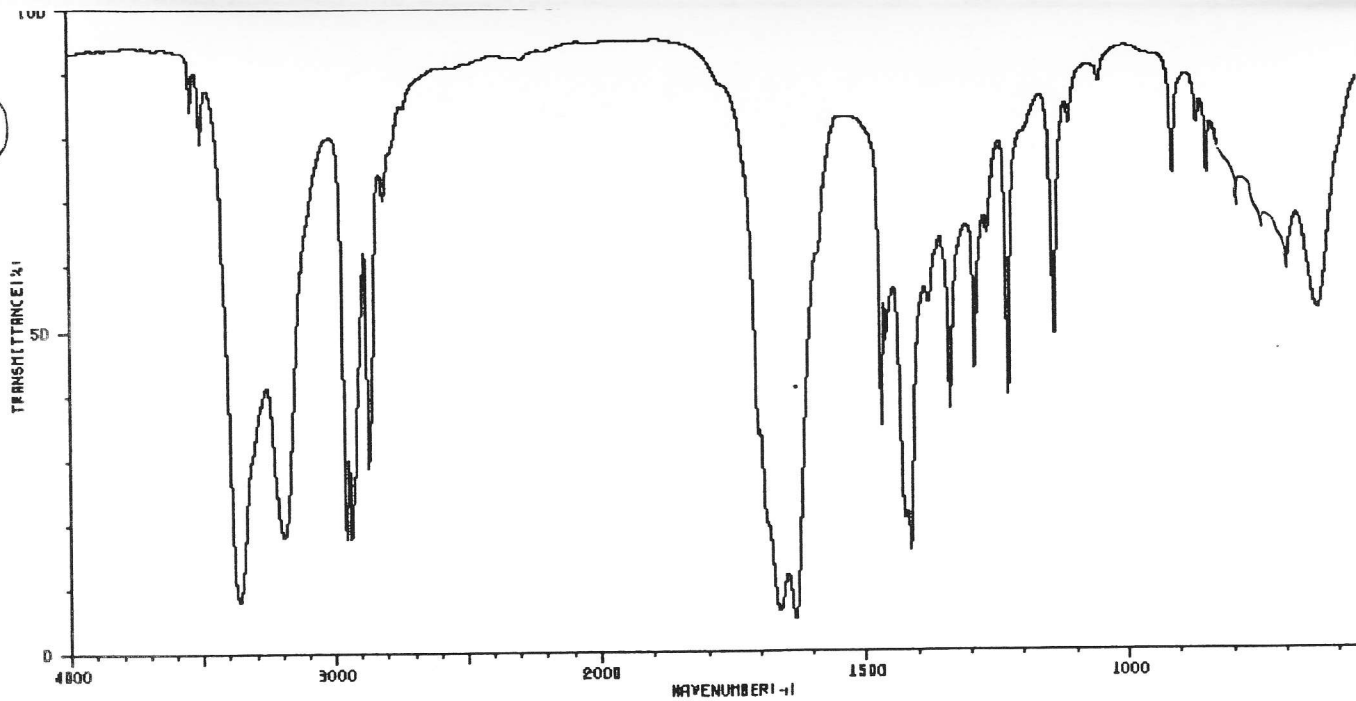
8



2977	4	1384	32
2930	13	1329	44
2899	12	1275	52
1926	62	1099	18
1650	26	1048	6
1454	33	880	22
1418	33		



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3539	81	2811	68	1379	52	1052	84
3501	77	1663	5	1339	36	911	70
3363	7	1633	4	1292	42	856	79
3193	17	1469	39	1267	62	846	70
2957	17	1460	46	1228	38	639	50
2937	17	1424	20	1140	47	517	72
2870	27	1414	14	1110	79	460	84