

Problem Set II – IR Spectroscopy

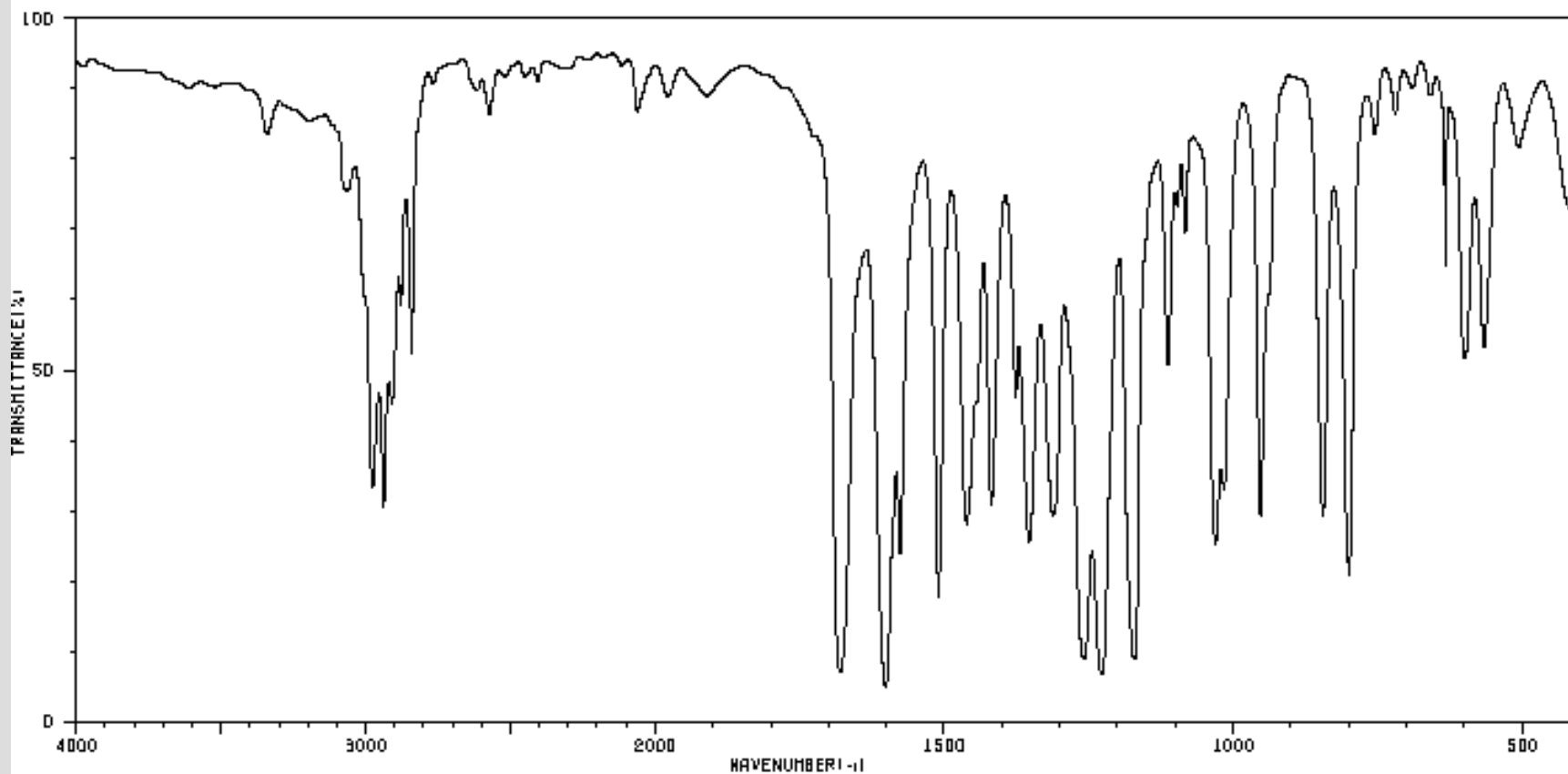


CHMBD 449 – Organic Spectral Analysis

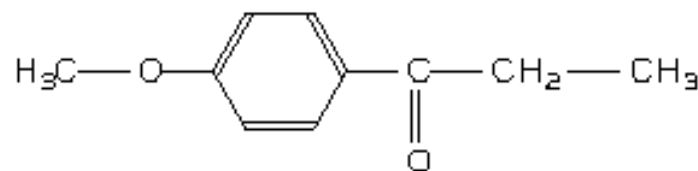
HIT-NO=6471 SCORE= () SDBS-NO=22894 IR-NIDA-2943D : LIQUID FILM

4'-METHOXYPROPIOPHENONE

$C_{10}H_{12}O_2$



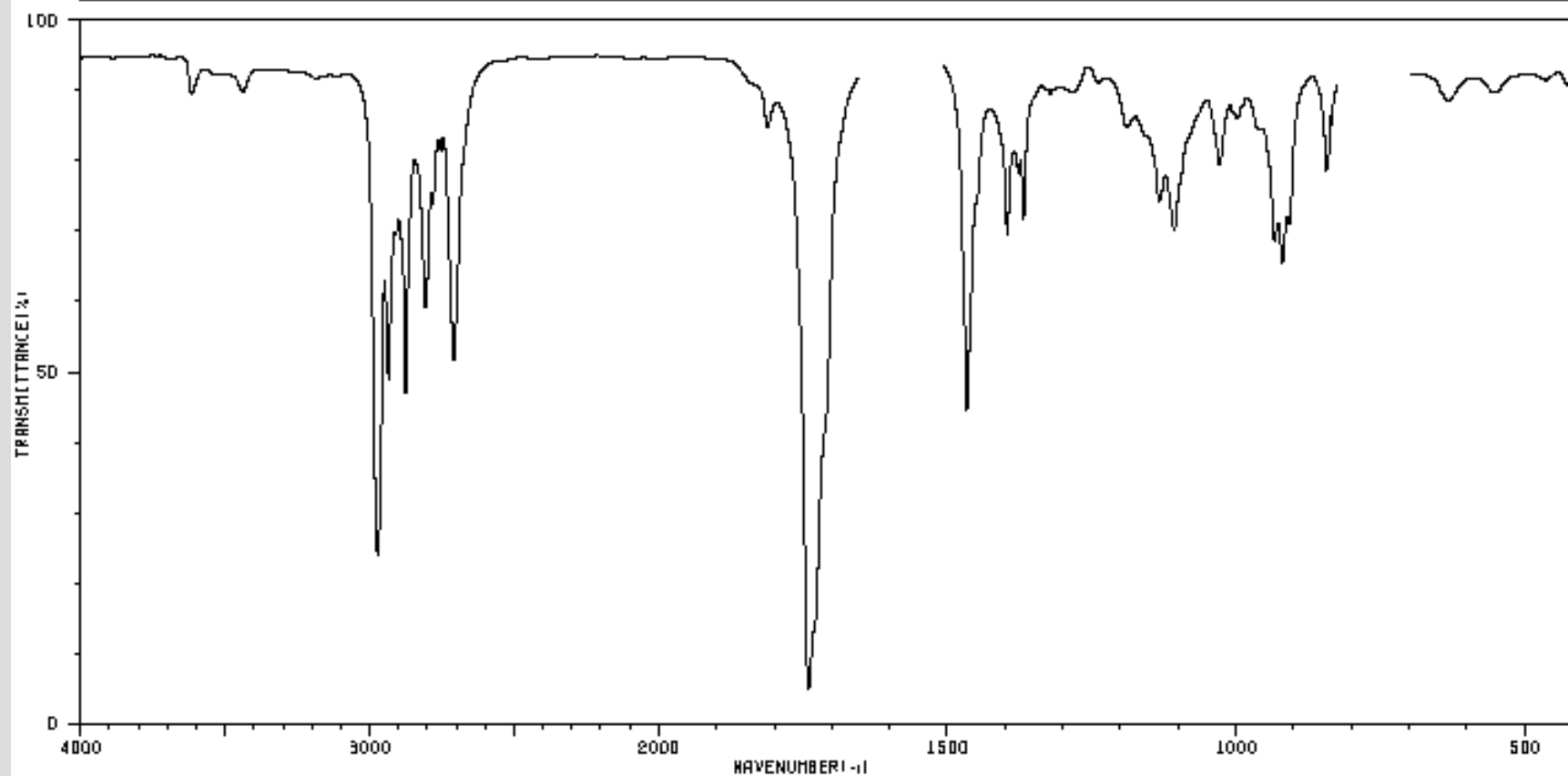
3341	79	2841	60	1377	44	1097	70	766	81
3076	72	1680	7	1353	24	1083	68	720	84
3065	72	1602	4	1312	28	1031	24	633	62
2976	32	1576	29	1268	8	1016	32	699	60
2938	29	1509	17	1228	6	953	28	586	52
2909	43	1461	26	1171	8	845	28	514	61
2878	67	1419	30	1113	49	800	20	607	79



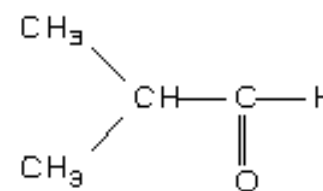
HIT-NO=1490 SCORE= () SDBS-NO=1926 IR-NIDA-06497 : CCL4 SOLUTION

ISOBUTYRALDEHYDE

C₄H₈O



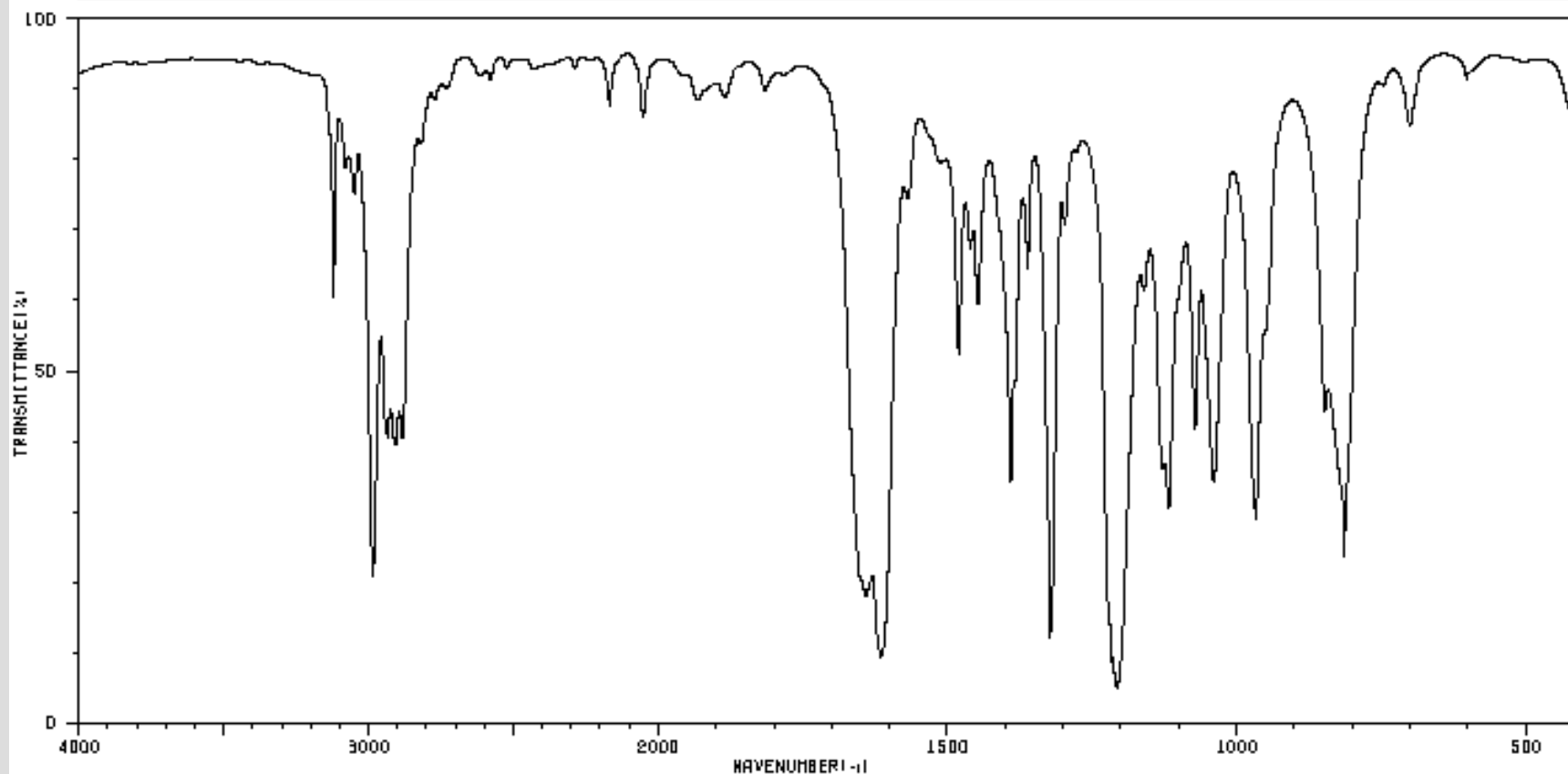
3616	86	2763	79	1368	68	920	62
3437	86	2709	50	1189	81	843	74
2973	23	1811	81	1132	72	834	81
2934	47	1740	4	1107	68	634	84
2875	44	1467	42	1028	77	552	86
2806	57	1397	66	999	81		
2780	70	1378	74	933	66		



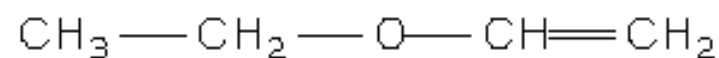
HIT-NO=1758 SCORE= () SDBS-NO=2152 IR-NIDA-02887 : LIQUID FILM

ETHYL VINYL ETHER

C₄H₈O



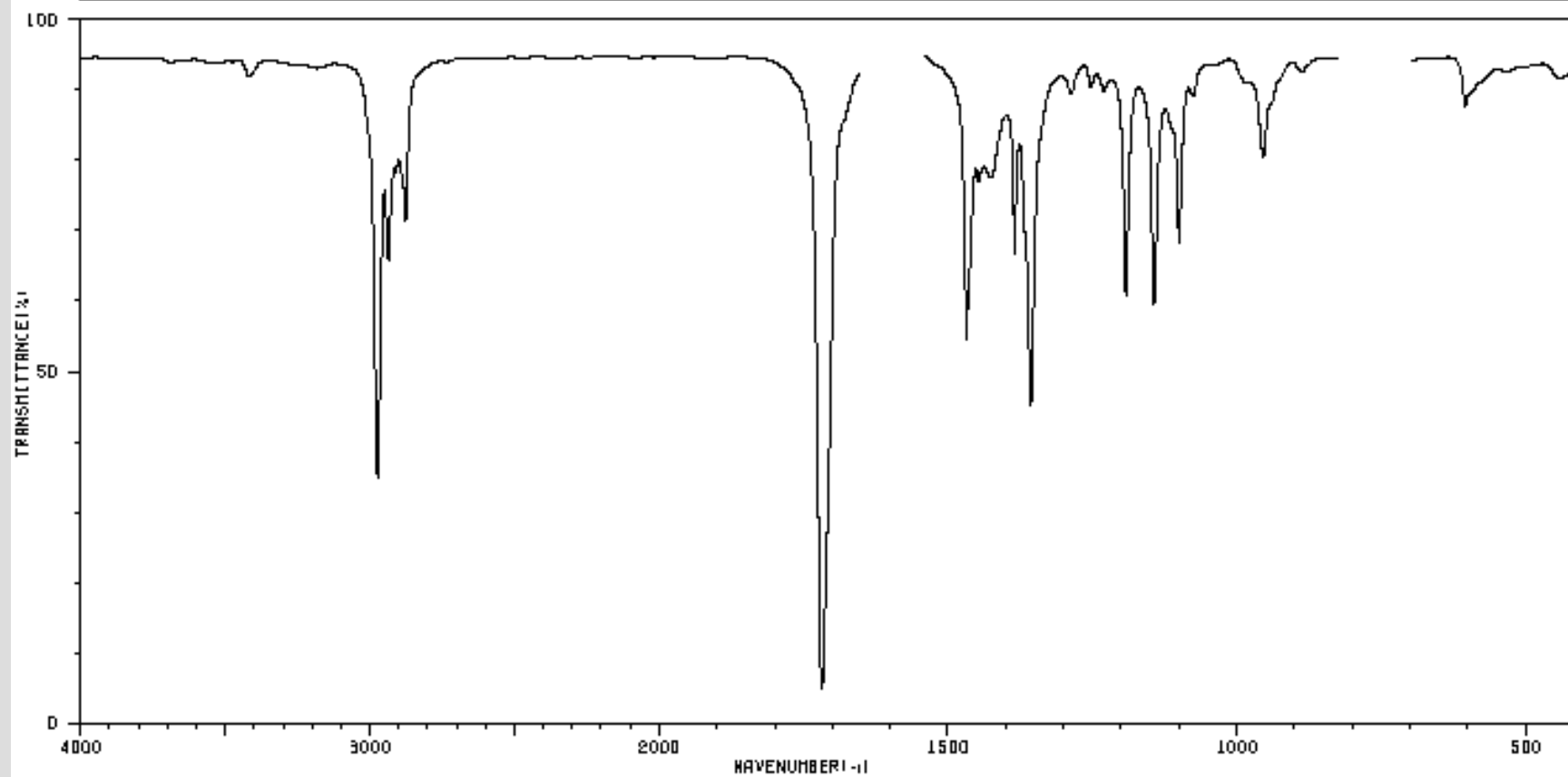
3136	79	2883	38	1614	9	1362	62	1117	29
3121	58	2168	84	1568	72	1322	12	1072	39
3080	77	2052	81	1481	50	1298	68	1039	33
3049	72	1932	84	1461	64	1218	8	966	27
2984	20	1884	86	1447	57	1207	4	848	42
2934	38	1818	86	1391	33	1160	58	814	22
2907	37	1641	17	1383	46	1128	36	700	81



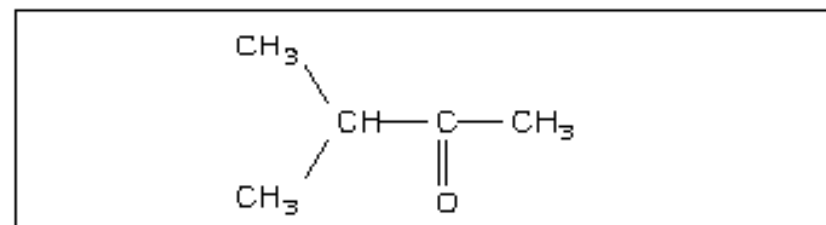
HIT-NO=945 SCORE= () SDBS-NO=528 IR-NIDA-06858 : CCL4 SOLUTION

3-METHYL-2-BUTANONE

C₅H₁₀O



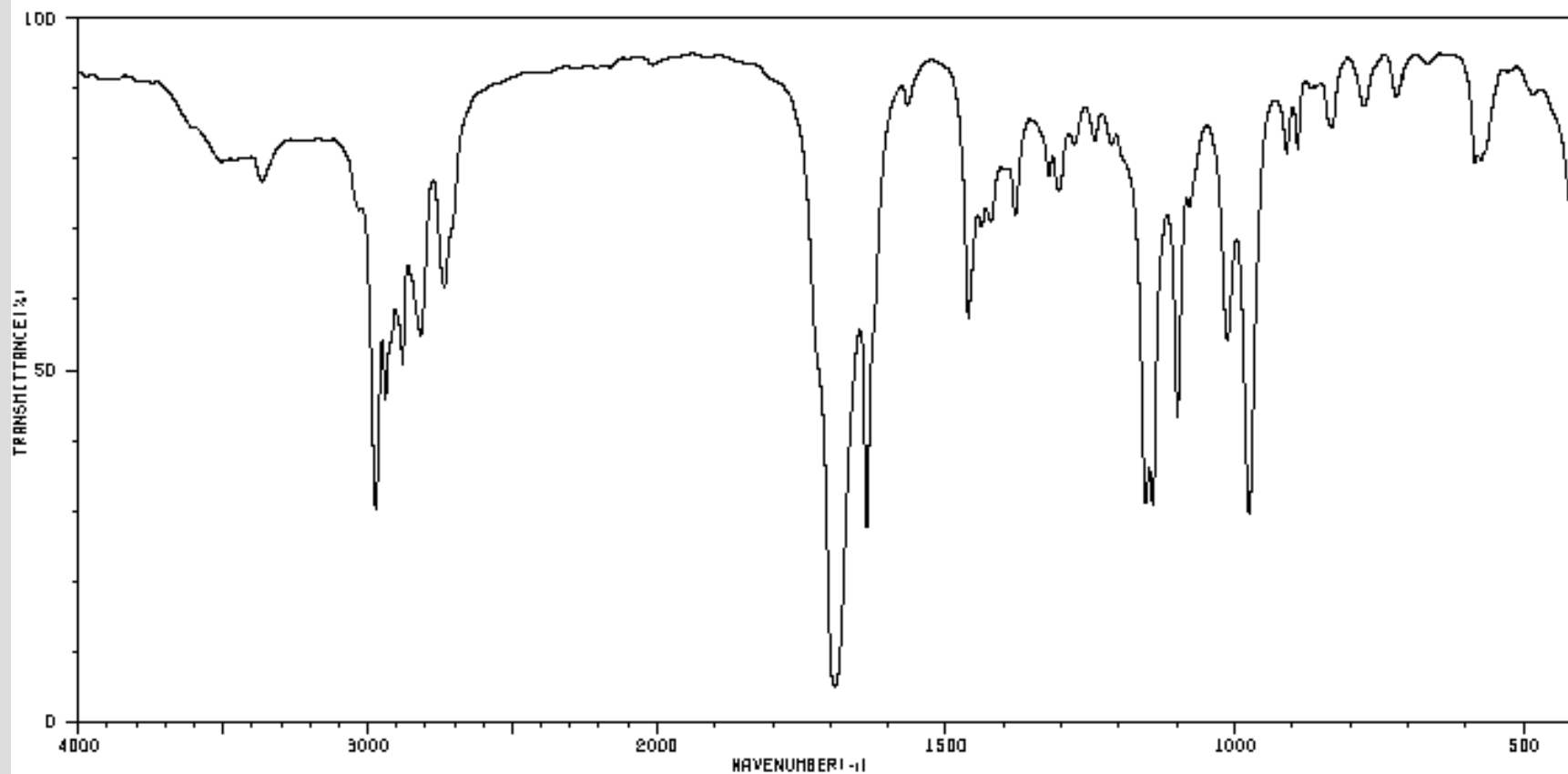
2973	33	1386	64	1076	86
2936	64	1357	43	955	77
2877	88	1287	85	805	84
1718	4	1230	86	594	86
1468	52	1192	58		
1447	74	1144	57		
1426	74	1100	68		



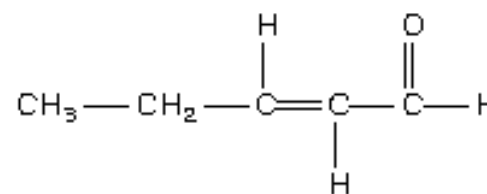
HIT-NO=6429 SCORE= () SDBS-NO=22747 IR-NIDA-26937 : LIQUID FILM

TRANS-2-PENTENAL

C₅H₈O



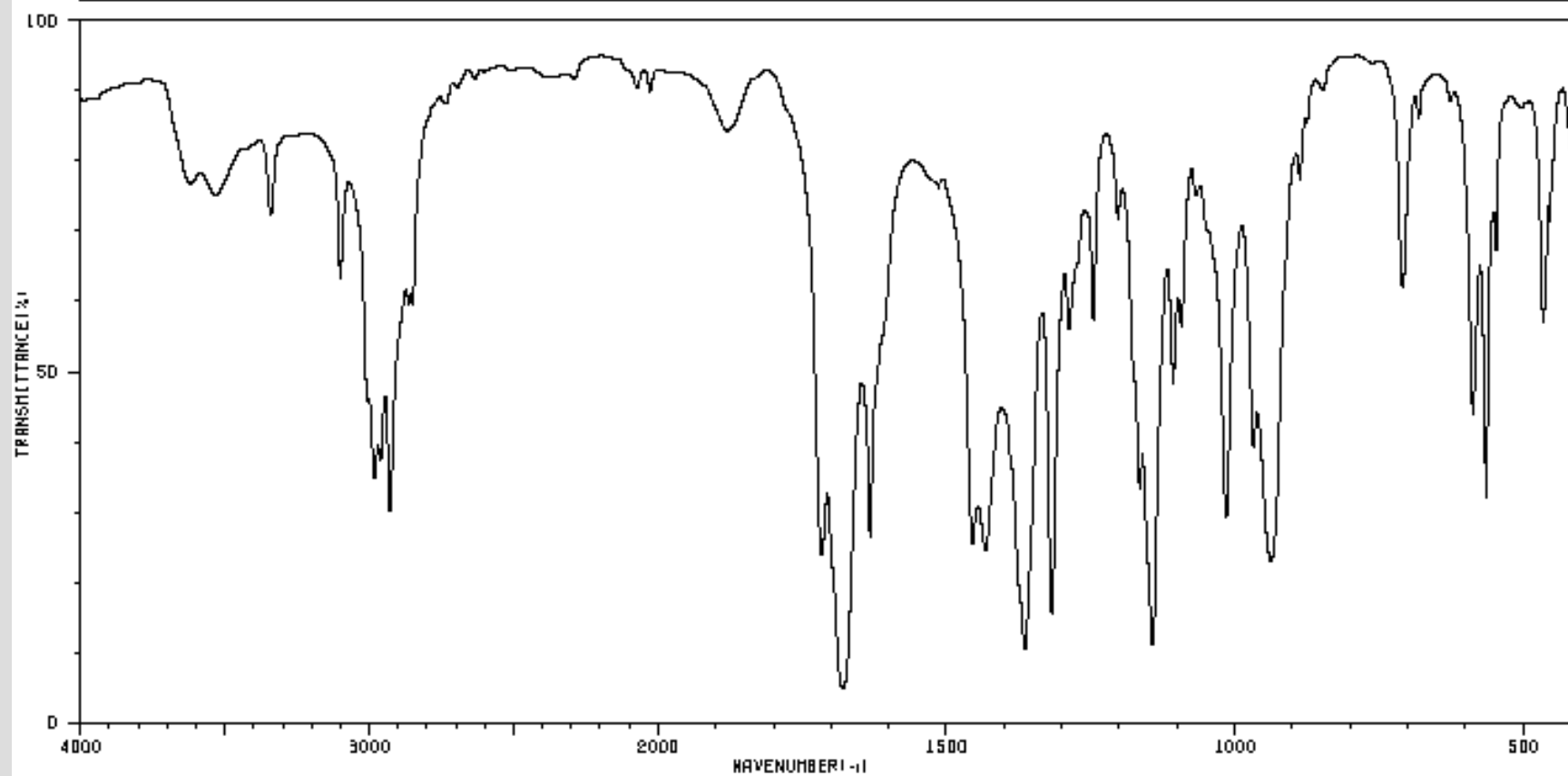
3366	74	1637	26	1306	72	1078	70	776	84
2972	29	1567	84	1277	79	1019	52	721	86
2939	44	1461	55	1243	79	975	28	585	77
2880	49	1438	68	1214	79	910	77	575	77
2817	52	1423	68	1154	29	891	79		
2735	56	1380	70	1142	29	842	84		
1692	4	1322	74	1099	41	834	81		



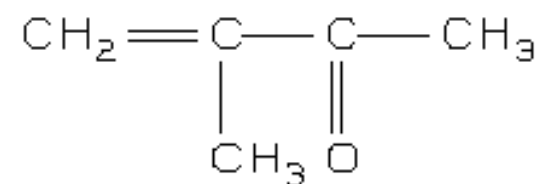
HIT-NO=2945 SCORE= () SDBS-NO=5390 IR-NIDA-09629 : LIQUID FILM

3-METHYL-3-BUTEN-2-ONE

C₅H₈O



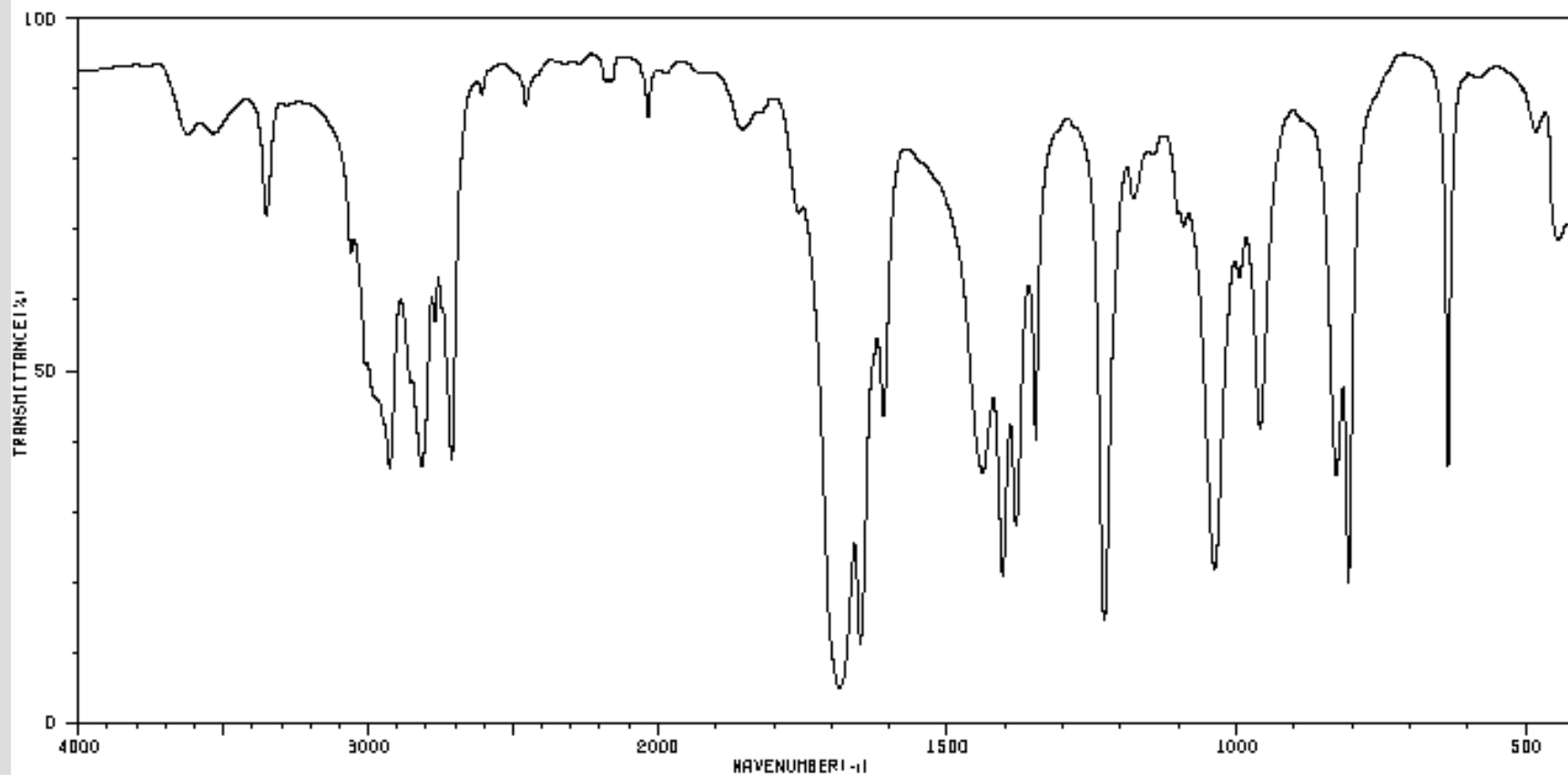
3620	74	2863	67	1432	23	1143	10	687	74
3532	72	2849	57	1364	10	1107	46	710	60
3341	70	1718	25	1318	14	1093	59	588	42
3100	60	1680	4	1288	63	1068	72	565	31
2981	33	1633	25	1246	55	1015	27	547	64
2961	35	1513	72	1203	88	968	37	466	55
2928	29	1466	24	1166	32	938	21	459	66



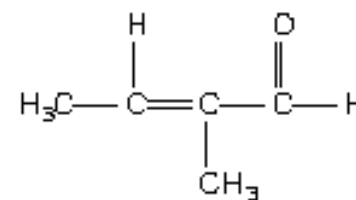
HIT-NO=5924 SCORE= () SDBS-NO=19912 IR-NIDA-74557 : LIQUID FILM

(E)-2-METHYL-2-BUTENAL

C₅H₈O



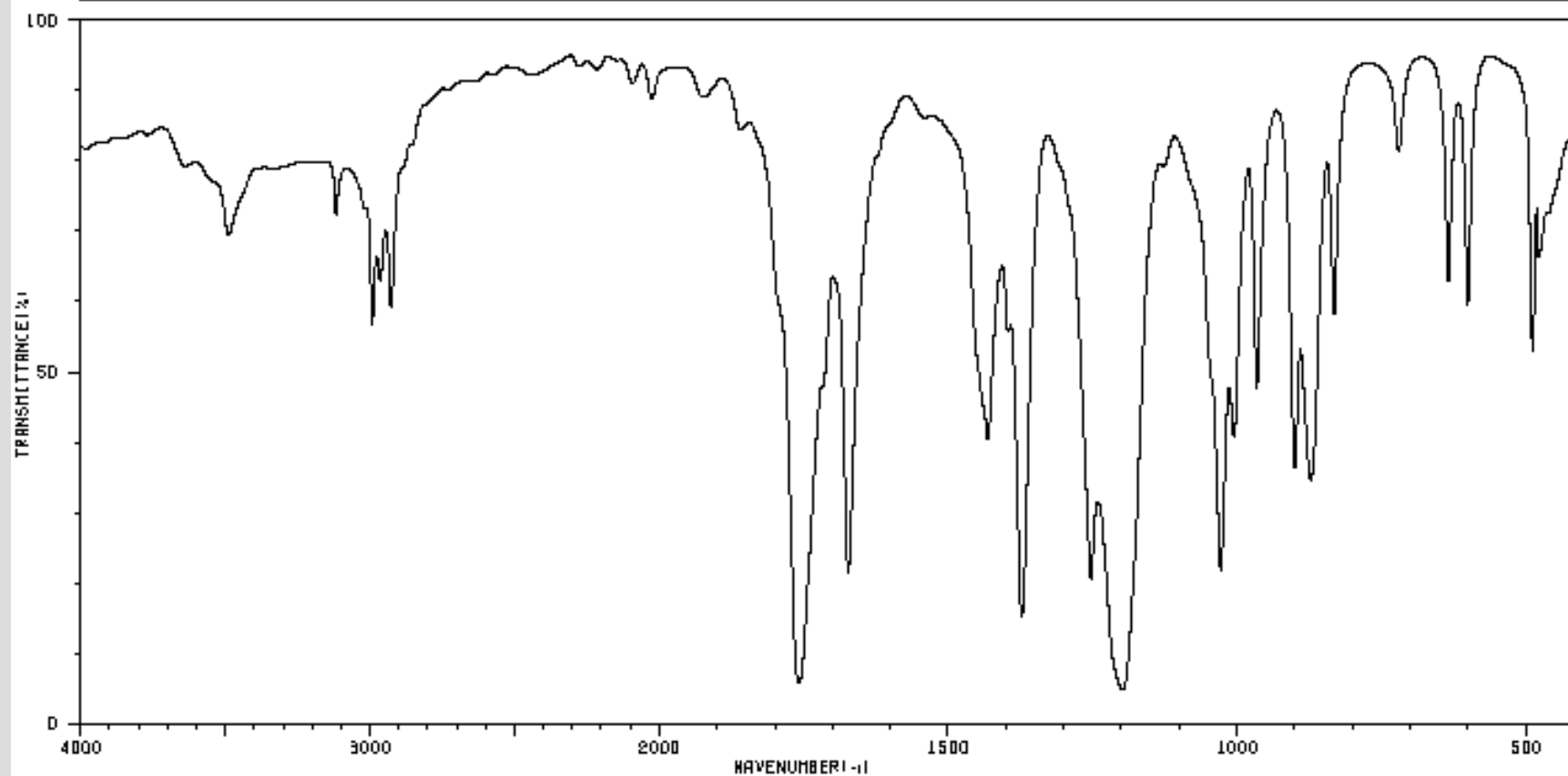
3664	84	1778	8	1288	31	962	36	620	44
2987	32	1471	18	1270	62	929	7	596	13
2964	53	1462	31	1226	79	879	4	483	74
2944	50	1460	38	1168	77	811	9		
2876	70	1432	46	1124	72	749	13		
1811	6	1391	27	1020	46	680	60		
1791	6	1371	31	973	16	639	62		



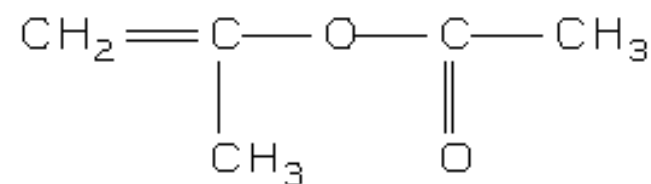
HIT-NO=1427 SCORE= () SDBS-NO=1423 IR-NIDA-01628 : LIQUID FILM

ISOPROPENYL ACETATE

$C_5H_8O_2$



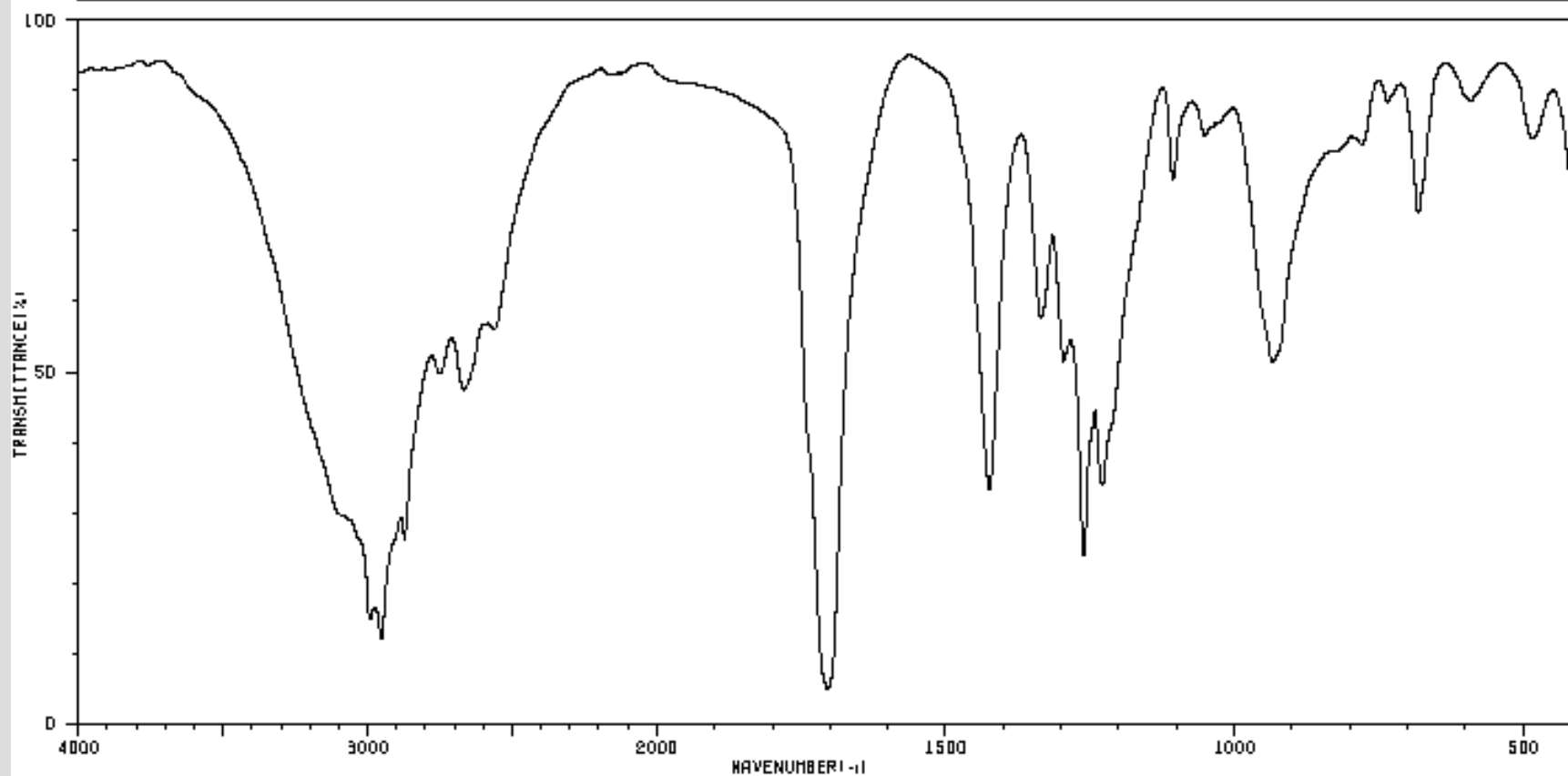
3489	66	1869	81	1198	4	720	79
3118	70	1758	5	1028	21	635	60
2991	55	1673	20	1005	39	601	57
2966	60	1431	38	966	46	489	50
2927	57	1396	53	900	35	479	64
2027	84	1372	14	872	33		
1924	86	1263	20	832	67		



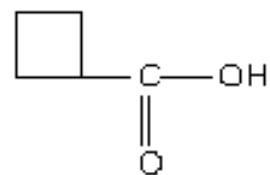
HIT-NO=2949 SCORE= () SDBS-NO=5396 IR-NIDA-58278 : LIQUID FILM

CYCLOBUTANECARBOXYLIC ACID

$C_5H_8O_2$



2991	14	1426	32	1061	81	483	79
2974	16	1335	55	1035	81		
2952	11	1298	50	935	49		
2872	26	1261	29	779	79		
2750	47	1229	33	735	84		
2667	46	1112	79	682	70		
1704	4	1106	74	592	84		



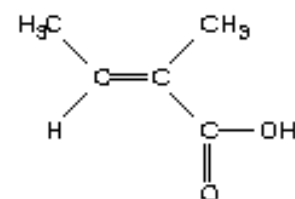
HIT-NO=2916 SCORE= () SDBS-NO=4079 IR-NIDA-60249 : KBR DISC

(E)-2-METHYL-2-BUTENOIC ACID

$C_5H_8O_2$



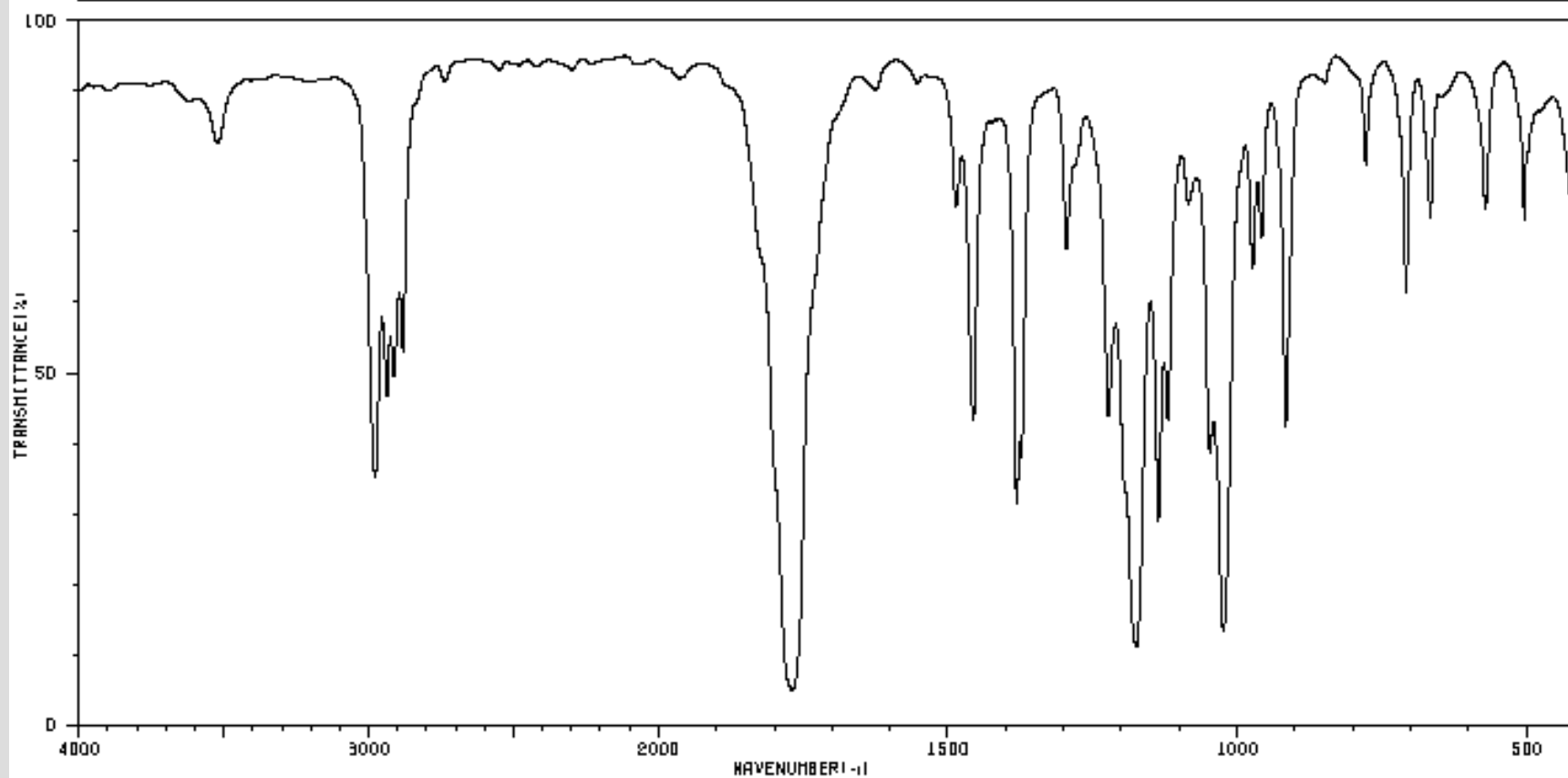
2960	47	1644	26	1082	68	568	60
2945	47	1638	27	1022	68		
2932	47	1430	35	935	47		
2861	47	1383	66	873	72		
2645	55	1348	62	790	62		
2547	55	1295	15	737	44		
1675	4	1161	46	653	66		



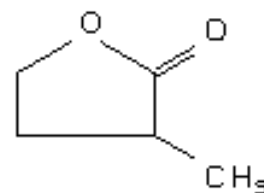
HIT-NO=2 | SCORE= () | SDBS-NO=22966 | IR-NIDA-37490 : LIQUID FILM

ALPHA-METHYL-GAMMA-BUTYROLACTONE

$C_5H_8O_2$



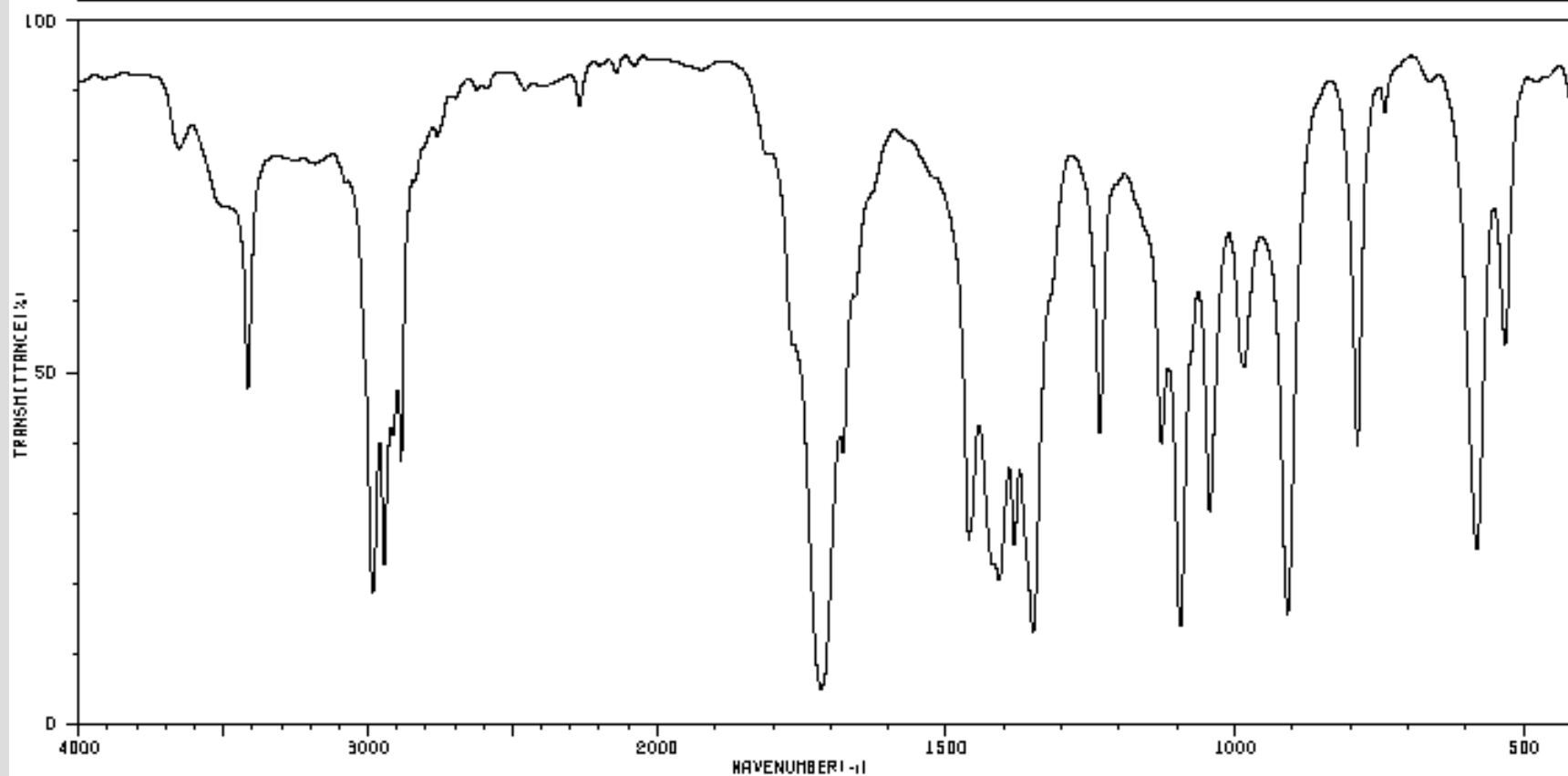
3621	79	1466	41	1137	27	916	41
2977	34	1381	30	1120	41	778	77
2937	44	1373	36	1084	70	709	58
2913	47	1296	64	1047	37	666	68
2882	50	1281	77	1023	13	571	70
1769	4	1223	42	973	82	505	68
1486	70	1176	10	958	66	496	78



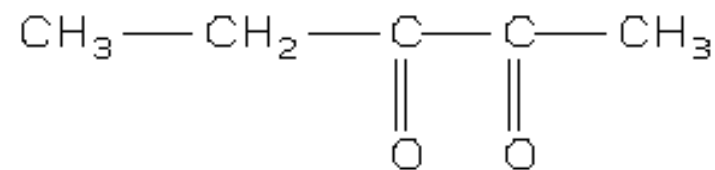
HIT-NO=2950 SCORE= () SDBS-NO=5398 IR-NIDA-10730 : LIQUID FILM

2,3-PENTANEDIONE

$C_5H_8O_2$



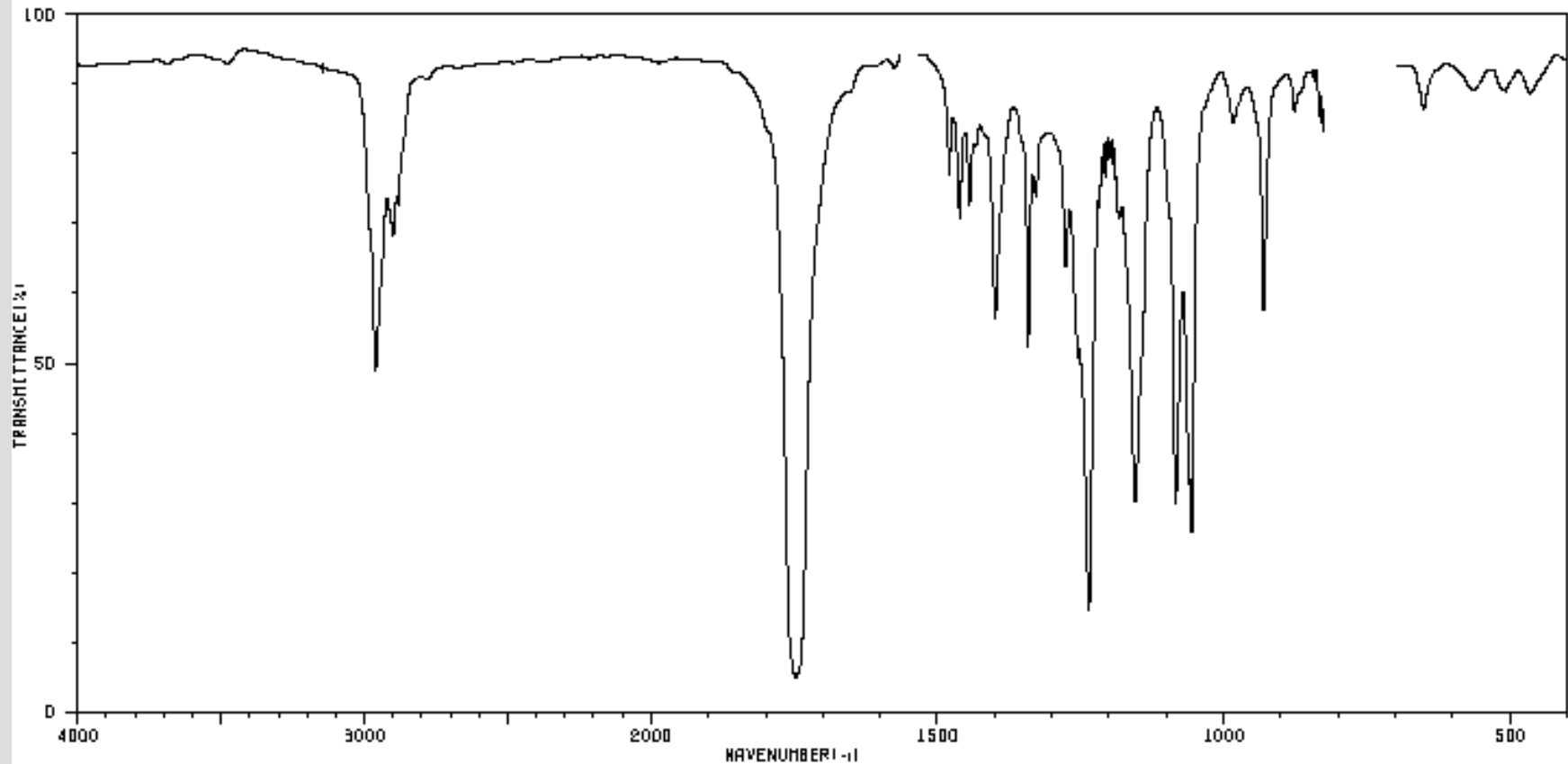
3654	79	1716	4	1234	39	741	84
3416	46	1678	37	1127	38	582	29
2983	17	1461	25	1095	13	533	52
2944	21	1419	21	1044	29		
2885	36	1408	19	984	49		
2761	79	1382	24	909	15		
2269	84	1360	12	788	38		



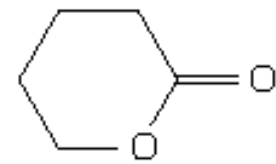
HIT-NO=390 SCORE= () SDBS-NO=10602 IR-NIDA-07896 : CCL4 SOLUTION

DELTA-VALEROLACTONE

C₅H₈O₂



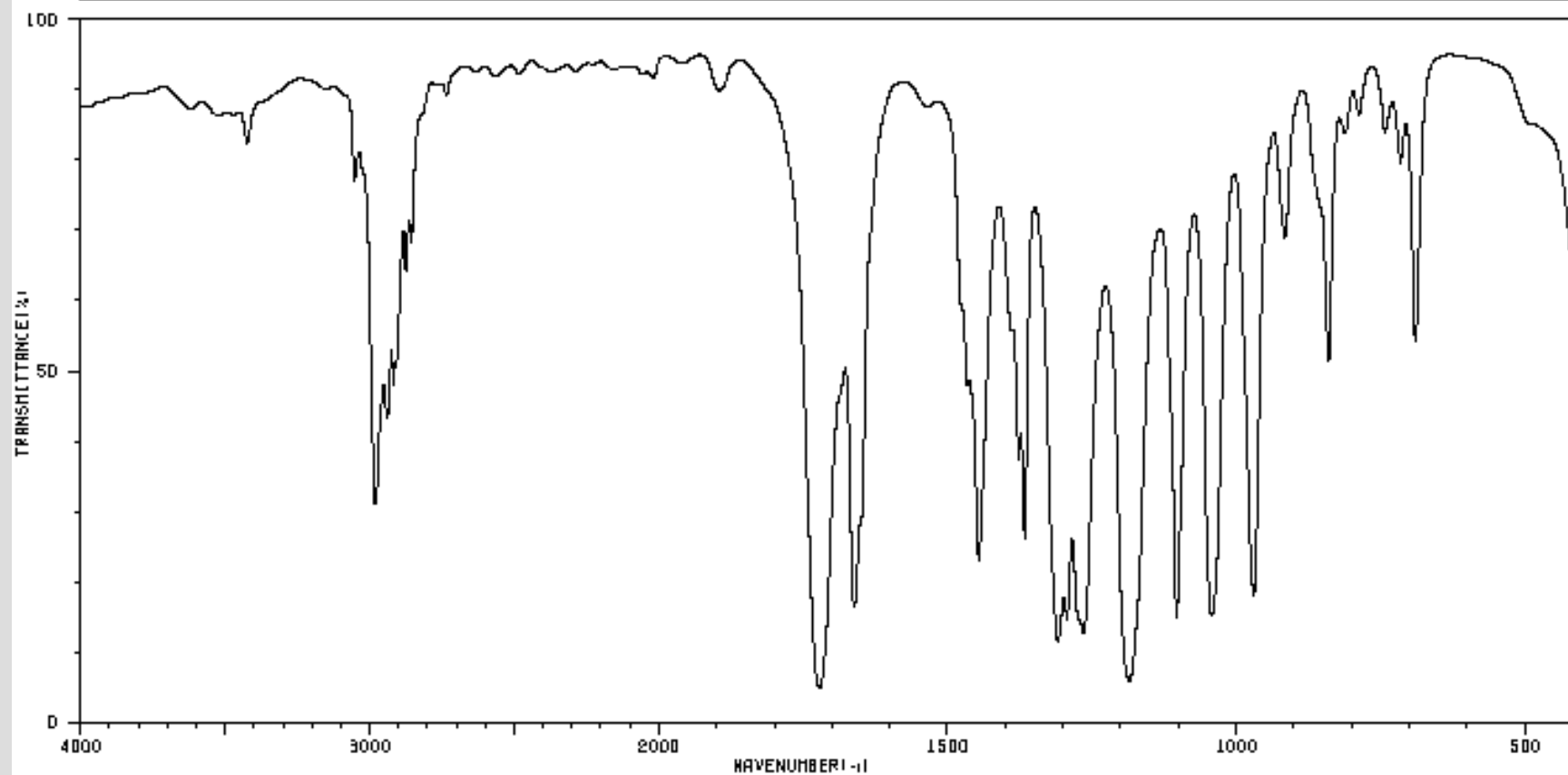
2961	47	1433	77	1236	13	1166	28	930	66
2900	66	1399	53	1213	74	1143	50	877	81
2862	70	1342	50	1206	74	1084	28	832	61
1747	4	1329	70	1203	77	1071	68	827	79
1480	74	1276	62	1197	77	1061	31	651	84
1461	66	1254	49	1191	74	1056	24	563	66
1444	70	1248	44	1184	68	984	81	464	84



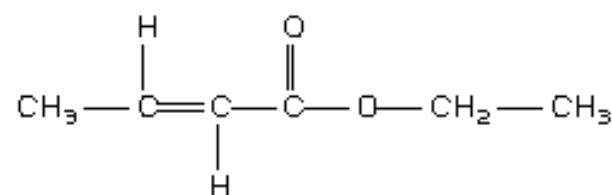
HIT-NO=1913 SCORE= () SDBS-NO=2456 IR-NIDA-00058 : LIQUID FILM

ETHYL CROTONATE

C₆H₁₀O₂



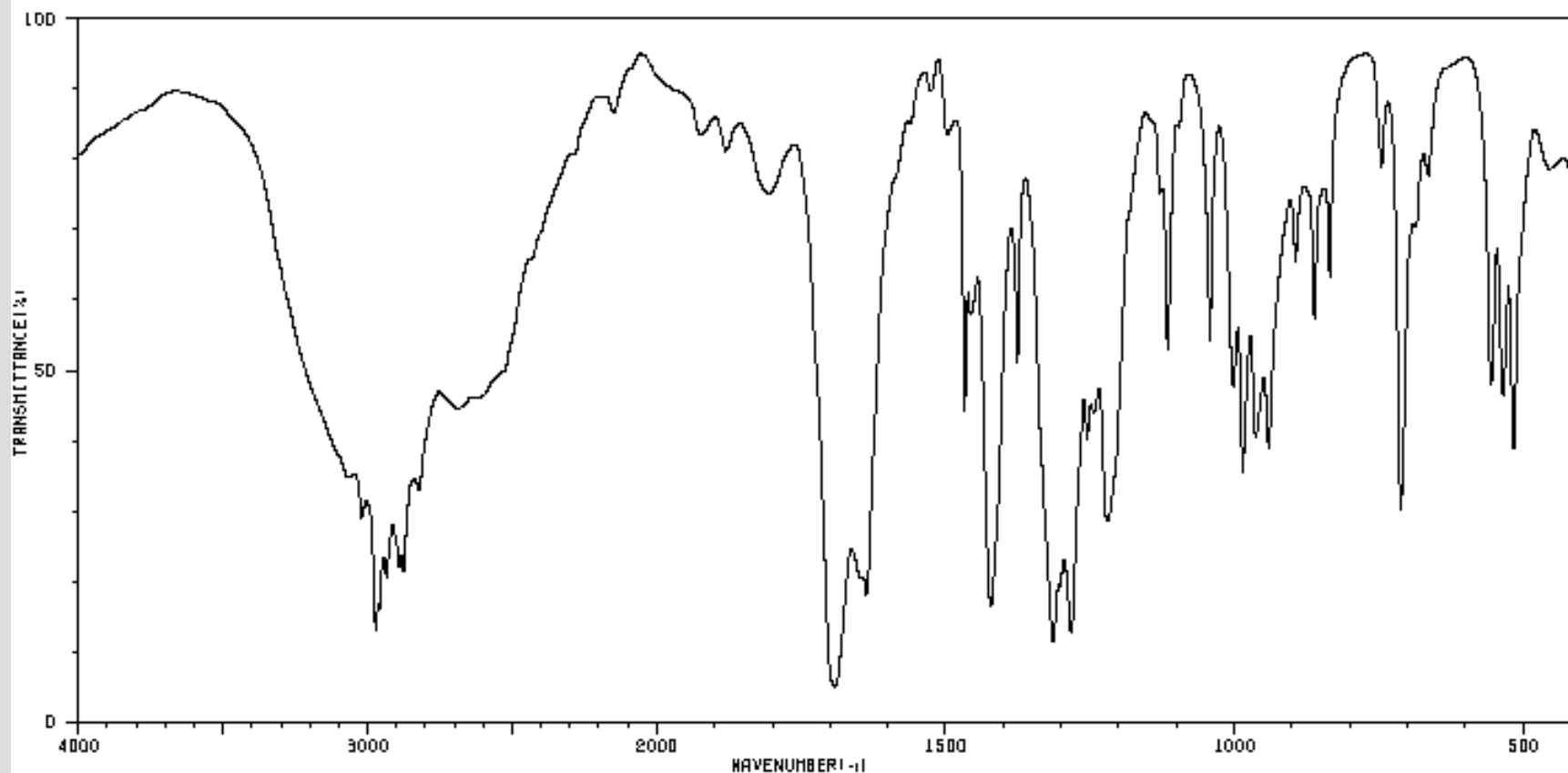
3617	84	2876	62	1446	21	1186	6	787	84
3424	79	2856	66	1377	36	1103	14	743	81
3052	74	2733	86	1367	25	1042	14	716	77
2980	30	1894	86	1309	10	970	17	690	52
2940	41	1722	4	1294	13	915	66		
2918	46	1662	15	1273	13	840	49		
2908	49	1649	26	1264	12	811	81		



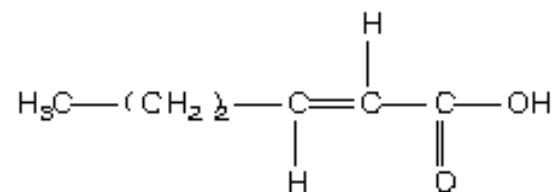
HIT-NO=4061 SCORE= () SDBS-NO=10264 IR-NIDA-02594 : LIQUID FILM

TRANS-2-HEXENOIC ACID

C₆H₁₀O₂



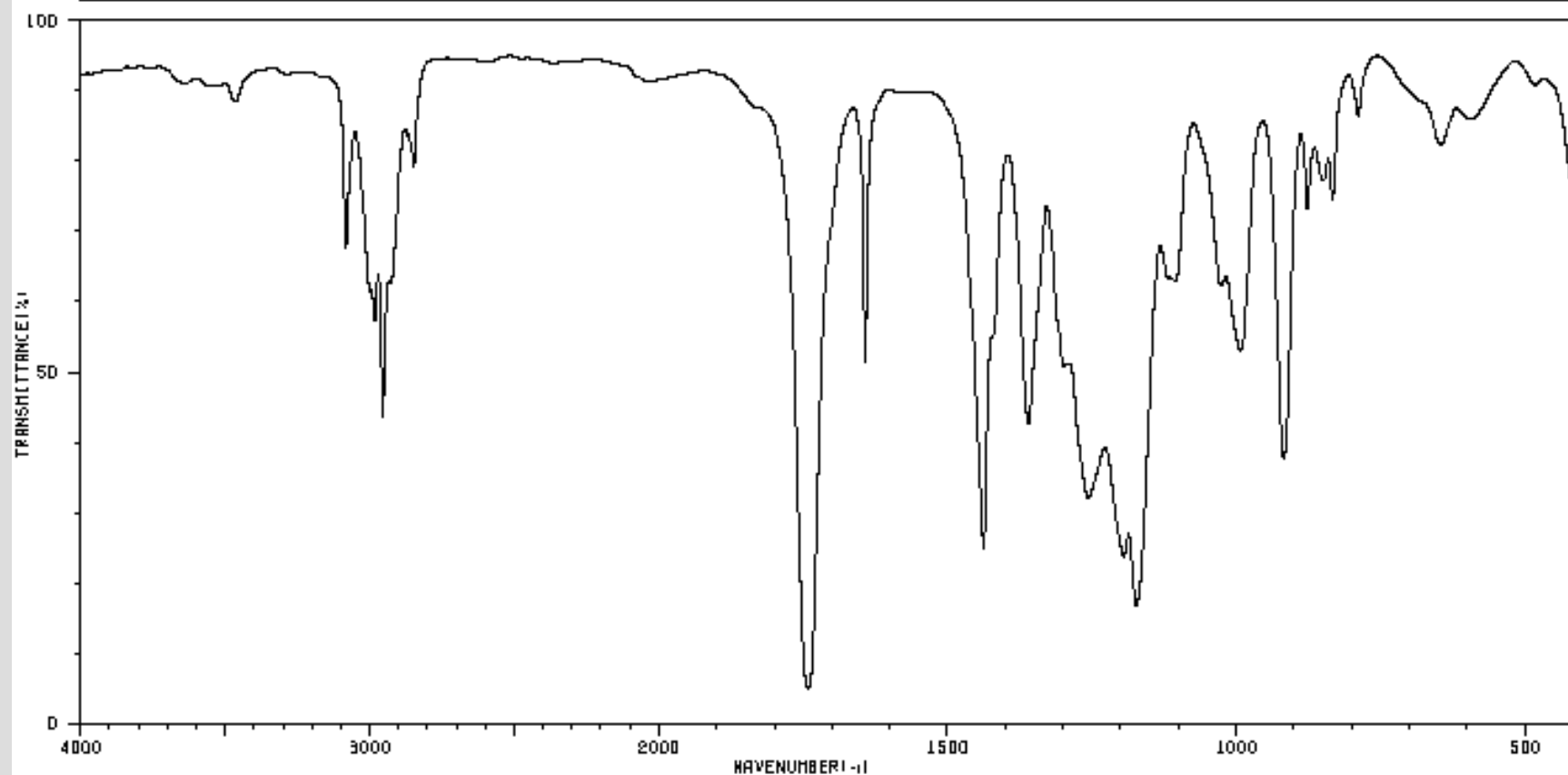
3020	27	2687	42	1422	16	1128	72	894	62
2972	12	1806	72	1376	49	1115	50	862	55
2959	15	1692	4	1314	10	1042	52	835	60
2934	20	1647	20	1283	12	1002	46	712	29
2892	21	1637	17	1255	38	986	34	556	46
2876	20	1467	42	1244	42	963	38	535	44
2822	31	1467	66	1220	27	941	37	617	37



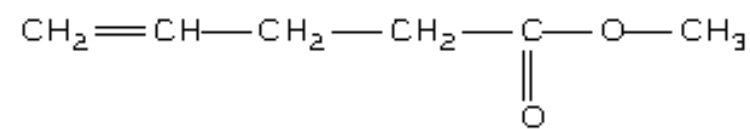
HIT-NO=529 SCORE= () SDBS-NO=36114 IR-NIDA-56986 : LIQUID FILM

METHYL 4-PENTENOATE

$C_6H_{10}O_2$



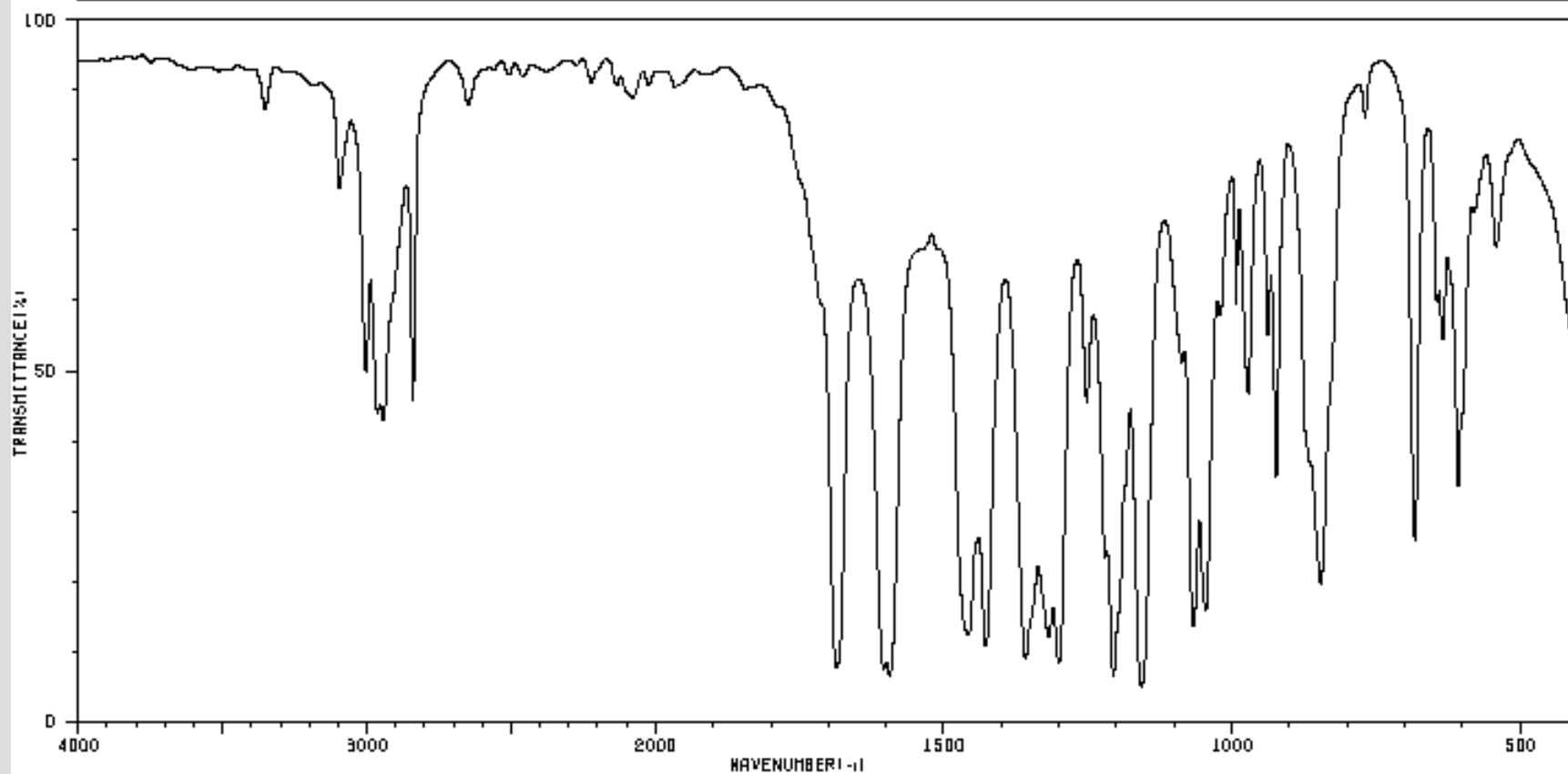
3466	84	1741	4	1119	60	848	74
3082	66	1643	49	1111	60	834	72
3000	58	1438	25	1106	80	789	84
2982	66	1361	41	1026	60	646	79
2954	42	1257	31	992	50	595	81
2926	60	1195	22	918	36		
2846	77	1173	16	877	70		



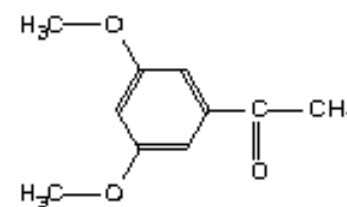
HIT-NO=4650 SCORE= () SDBS-NO=13071 IR-NIDA-58259 : LIQUID FILM

3',5'-DIMETHOXYACETOPHENONE

C₁₀H₁₂O₃



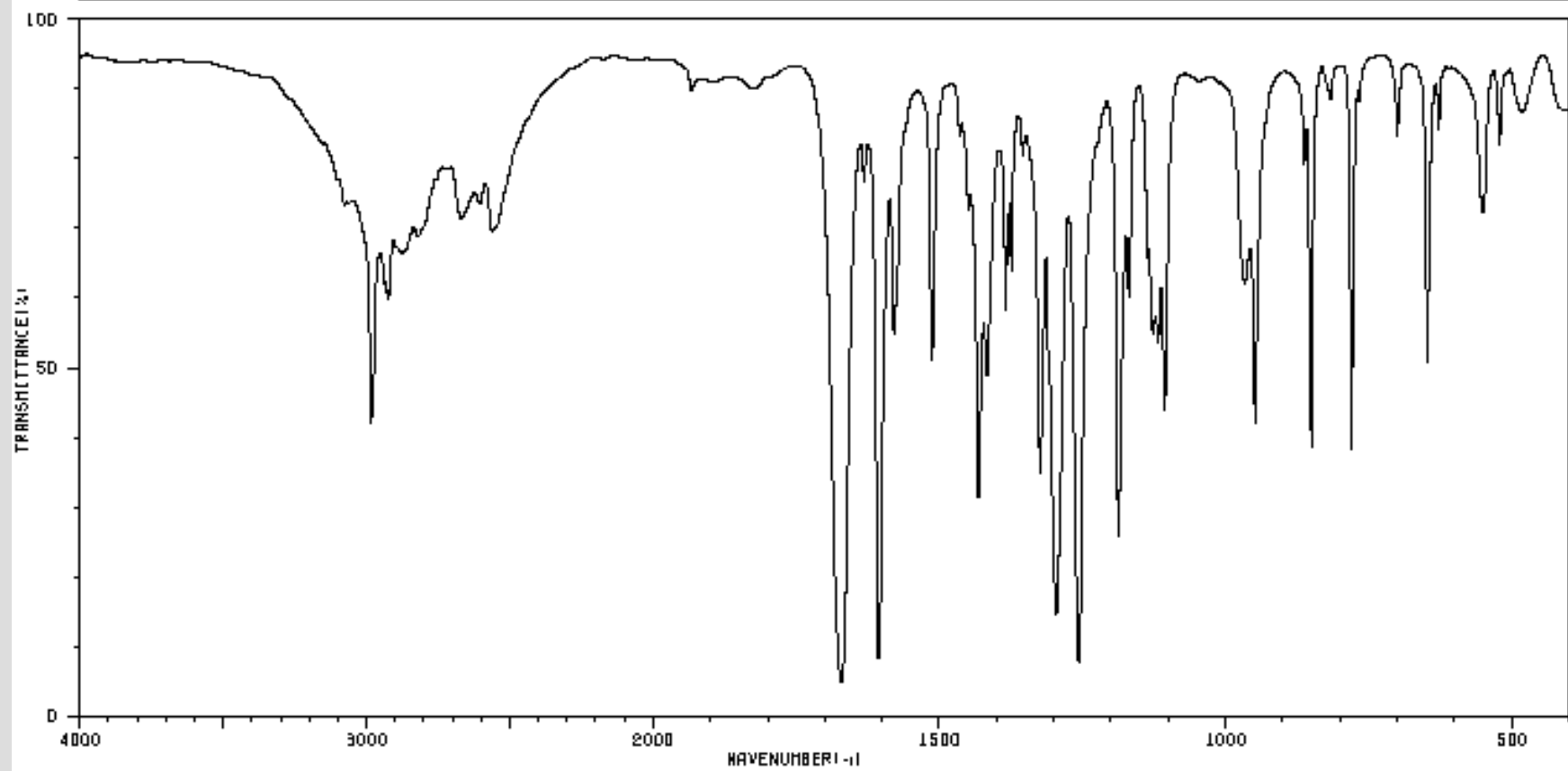
3363	84	1604	7	1262	43	1020	66	683	26
3095	72	1594	6	1206	6	993	57	645	57
3004	47	1458	12	1197	14	972	44	635	52
2963	42	1427	10	1167	4	938	63	608	32
2942	41	1358	8	1087	49	923	33	601	42
2840	43	1318	11	1068	13	846	18	542	64
1685	7	1301	7	1046	16	769	84	534	70



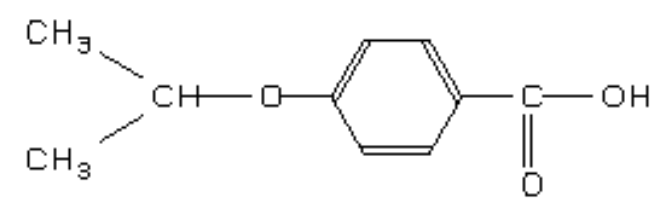
HIT-NO=8500 SCORE= () SDBS-NO=19226 IR-NIDA-62585 : KBR DISC

P-ISOPROPOXYBENZOIC ACID

C₁₀H₁₂O₃



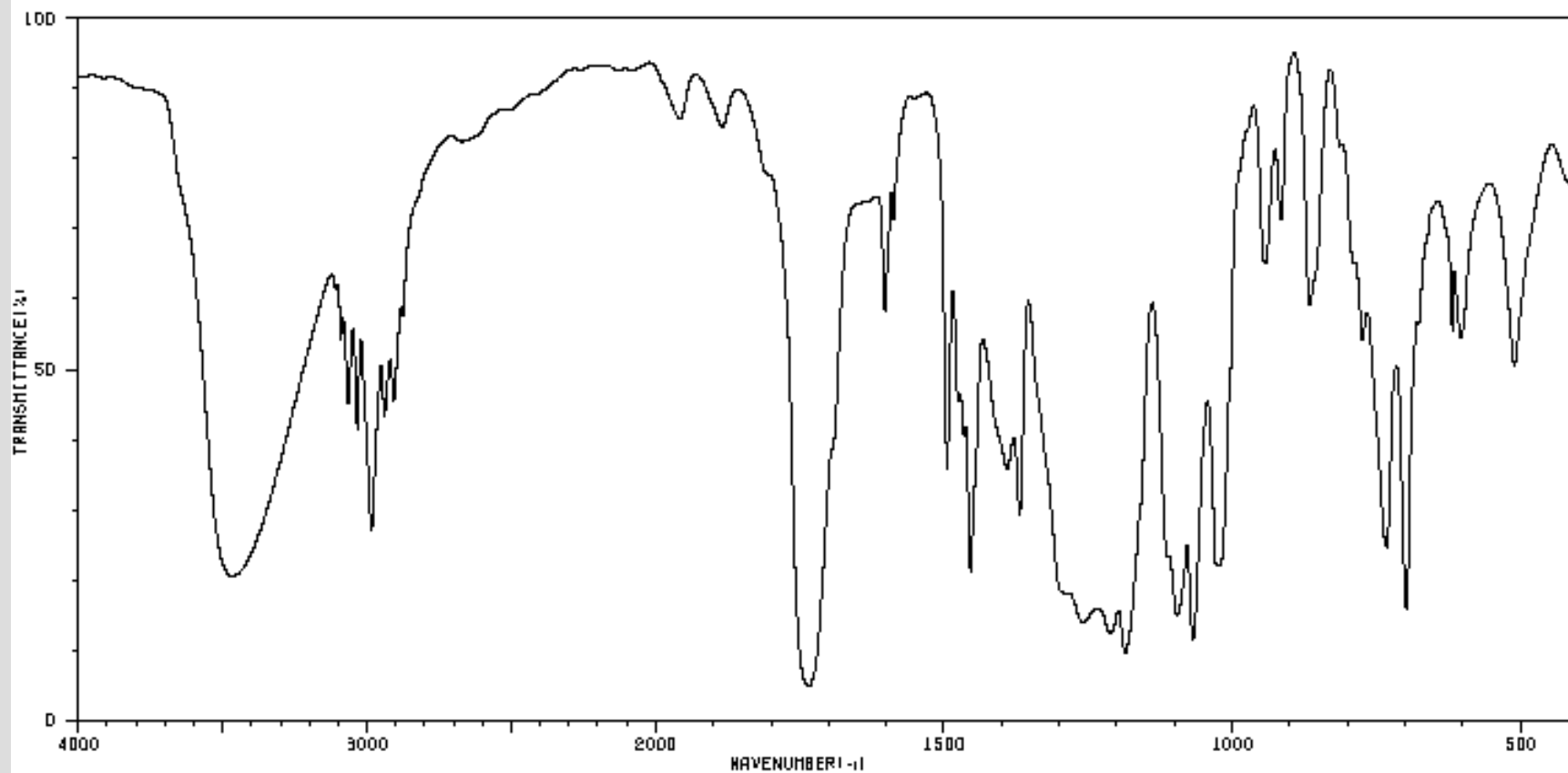
2982	41	2604	70	1448	70	1296	19	1107	42
2955	64	2563	66	1432	30	1257	7	966	58
2938	80	1672	4	1417	47	1187	24	948	41
2924	57	1631	74	1385	55	1169	58	850	37
2872	64	1606	7	1375	62	1137	62	780	37
2823	66	1579	52	1324	33	1127	52	648	49
2668	68	1513	48	1309	46	1118	62	560	70



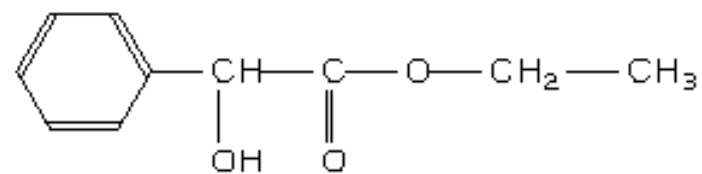
HIT-NO=2072 | SCORE= () | SDBS-NO=2836 | IR-NIDA-09240 : LIQUID FILM

ETHYL DL-ALPHA-HYDROXYPHENYLACETATE

$C_{10}H_{12}O_3$



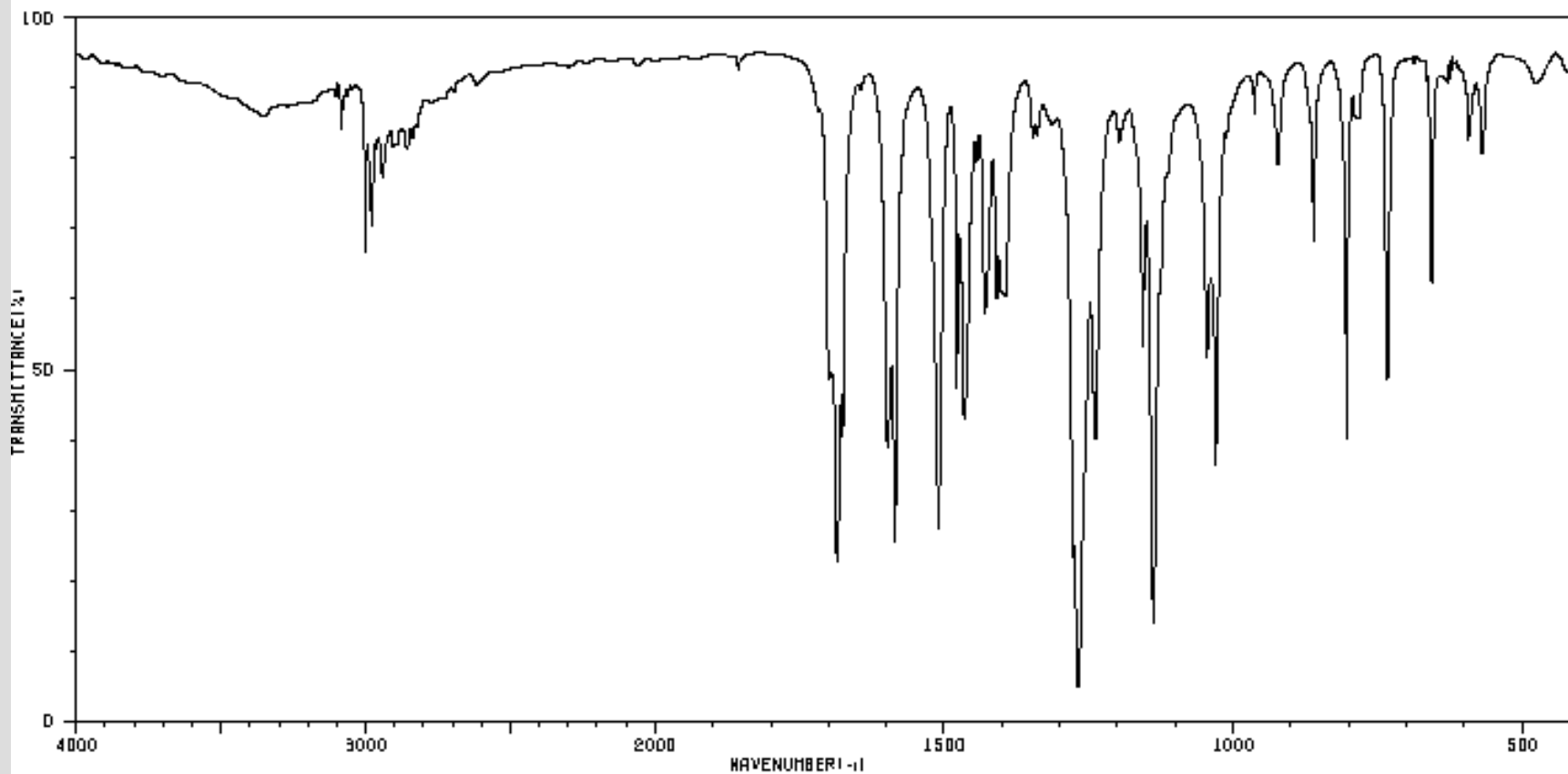
3464	20	2876	66	1466	39	1186	9	776	62
3090	52	1958	81	1454	20	1095	14	733	23
3065	43	1884	81	1391	34	1068	10	698	15
3034	39	1736	4	1369	28	1024	21	619	63
2983	26	1603	57	1259	13	943	62	604	52
2939	42	1588	68	1251	14	916	68	510	49
2907	43	1496	34	1211	12	866	67		



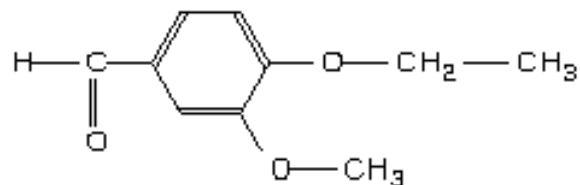
HIT-NO=10059 SCORE= () SDBS-NO=23332 IR-NIDA-42568 : KBR DISC

4-ETHOXY-3-METHOXYBENZALDEHYDE

C₁₀H₁₂O₃



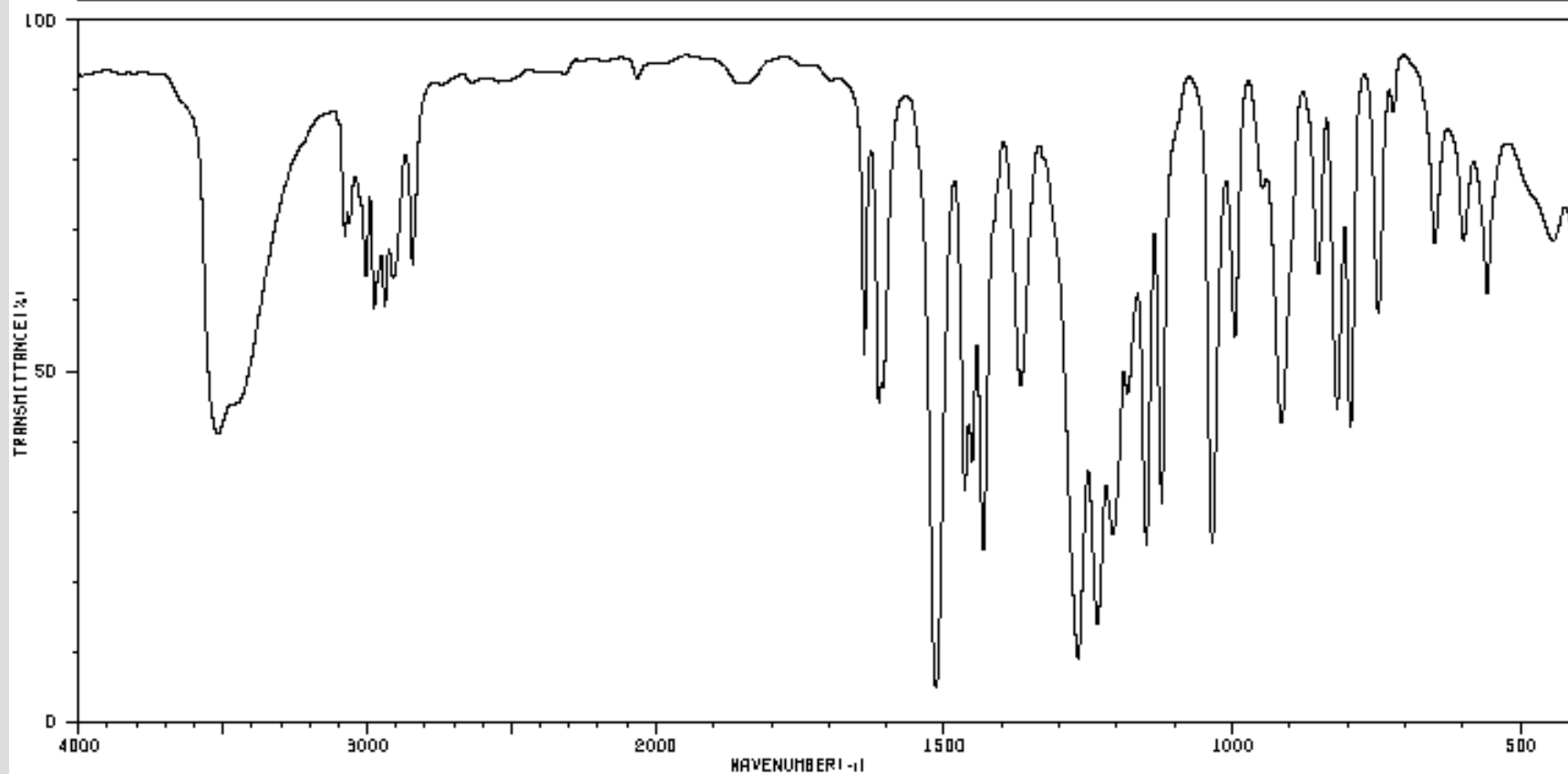
3001	64	1686	21	1444	77	1277	22	1030	36
2979	68	1676	38	1429	55	1269	4	923	77
2963	79	1598	37	1410	58	1239	38	861	66
2942	74	1586	24	1400	68	1198	79	804	38
2857	79	1510	26	1394	58	1157	50	734	46
2836	79	1479	46	1347	79	1138	19	657	60
1699	46	1466	41	1339	79	1046	48	670	77



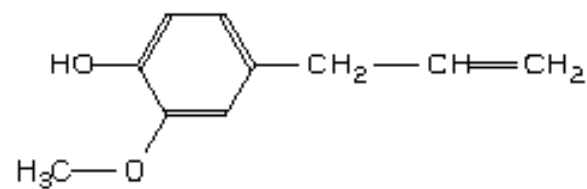
HIT-NO=853 SCORE= () SDBS-NO=91 IR-NIDA-64866 : LIQUID FILM

EUGENOL

C₁₀H₁₂O₂



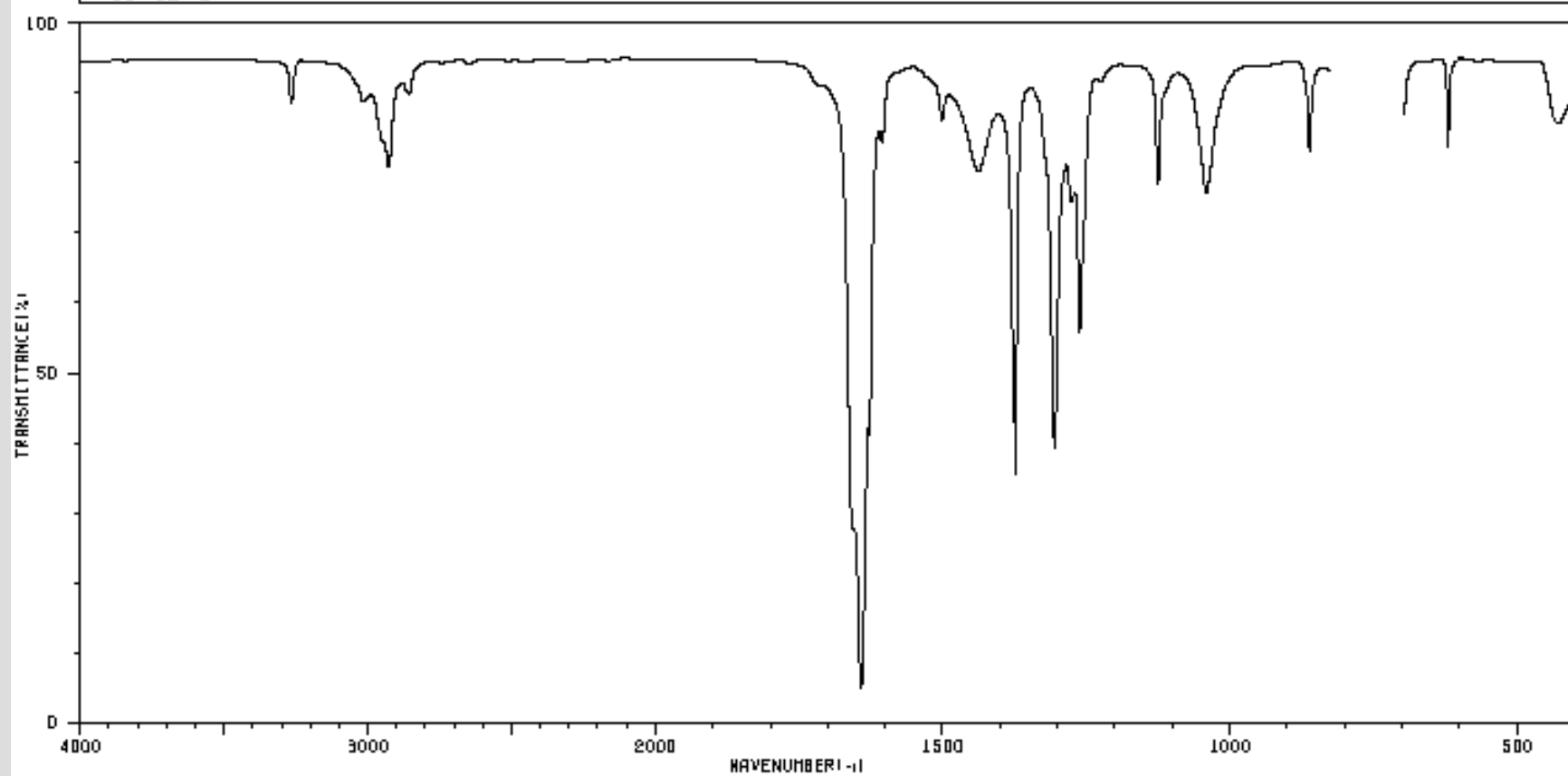
3618	39	2843	62	1462	36	1160	24	796	41
3077	66	1638	50	1432	23	1122	30	747	55
3061	88	1613	45	1367	46	1035	24	649	66
3004	60	1607	46	1268	8	996	62	599	66
2976	57	1514	4	1235	13	915	41	592	70
2939	57	1464	31	1208	26	851	60	558	58
2910	60	1467	41	1182	44	819	43	444	66



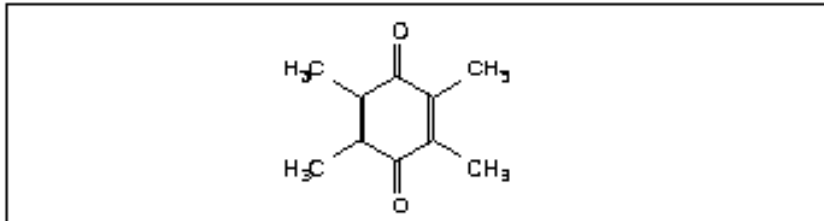
HIT-NO=1433 SCORE= () SDBS-NO=2123 IR-NIDA-08592 : CCL4 SOLUTION

DUROQUINONE

C₁₀H₁₂O₂



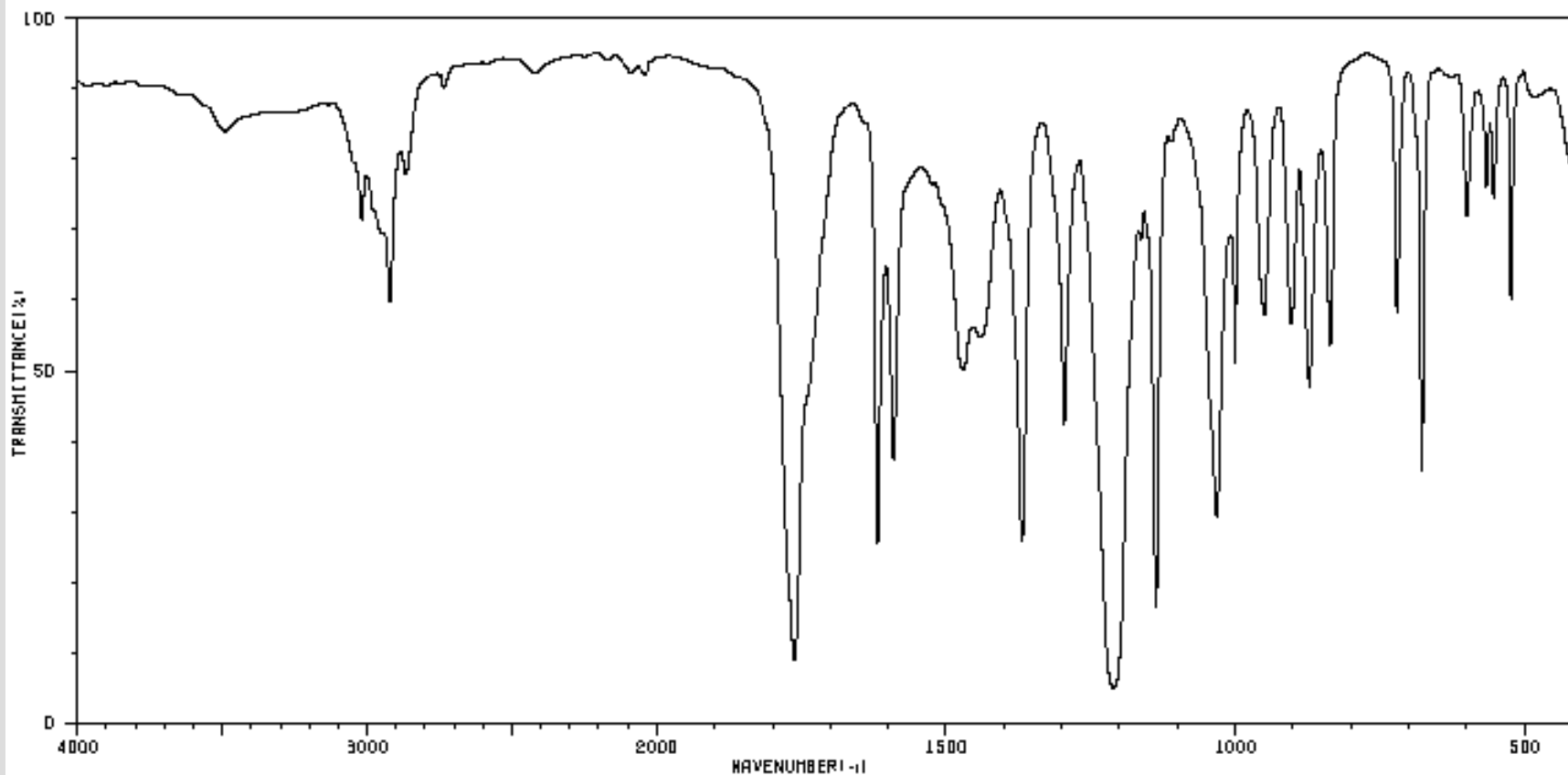
3266	84	1606	79	1262	63
3015	84	1559	95	1125	74
2927	77	1501	81	1041	72
2867	86	1438	77	861	79
1655	26	1373	34	820	79
1642	4	1308	37	429	81
1628	39	1276	72		



HIT-NO=352 | SCORE= () | SDBS-NO=27118 | IR-NIDA-37287 : LIQUID FILM

3,5-XYLYL ACETATE

$C_{10}H_{12}O_2$



3492	81	1691	36	1137	16	721	66	486	86
3018	68	1470	47	1032	28	678	34	480	86
2948	86	1439	52	1001	49	600	70		
2922	57	1369	24	960	66	567	72		
2865	74	1296	41	903	55	560	81		
1762	6	1210	4	872	46	554	72		
1619	24	1164	66	836	62	524	68		

