

Problem Set I – IR Spectroscopy

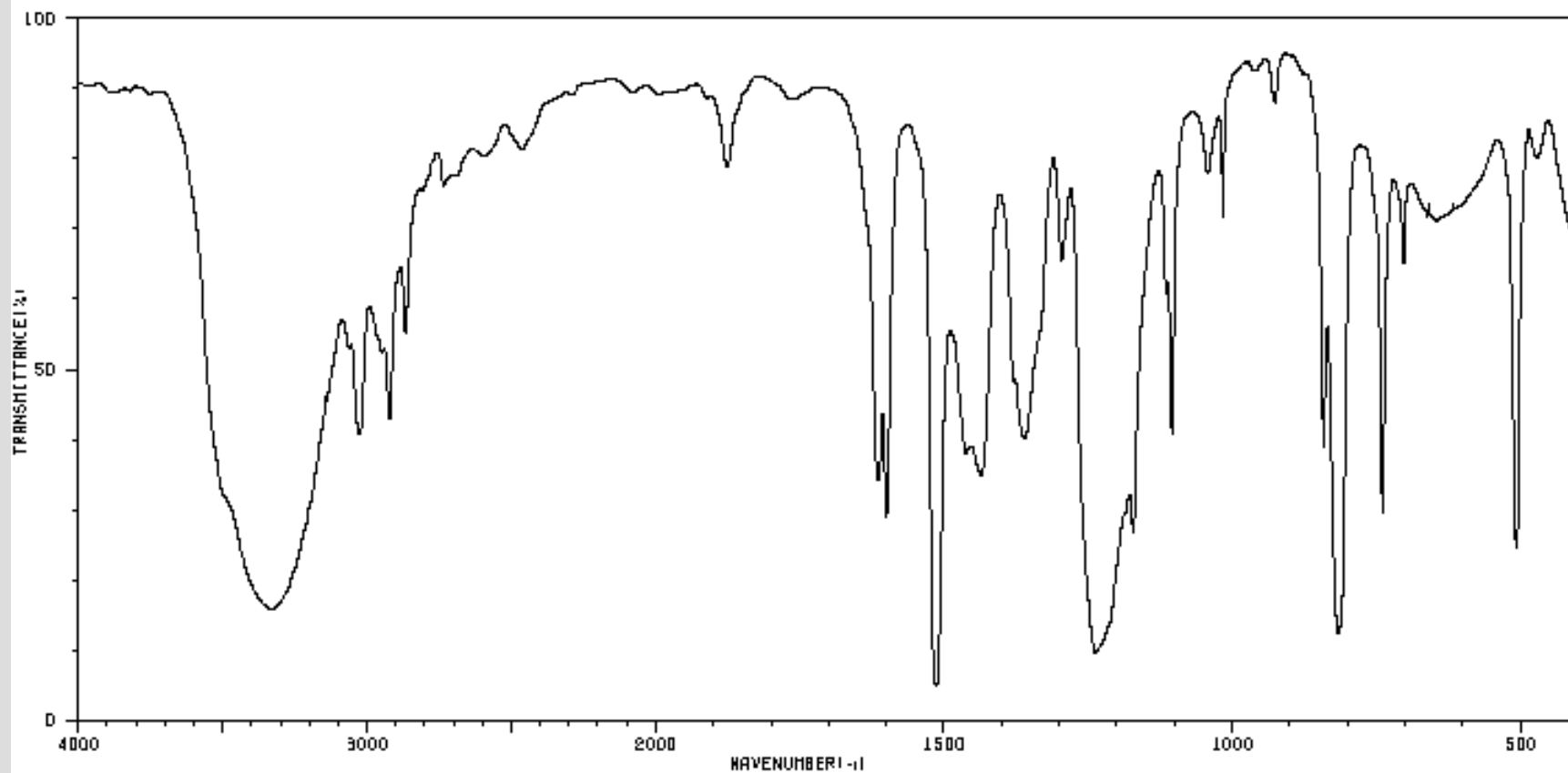


CHMBD 449 – Organic Spectral Analysis

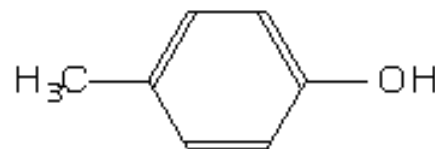
HIT-NO=1684 SCORE= () SDBS-NO=1982 IR-NIDA-60881 : LIQUID FILM

P-CRESOL

C₇H₈O



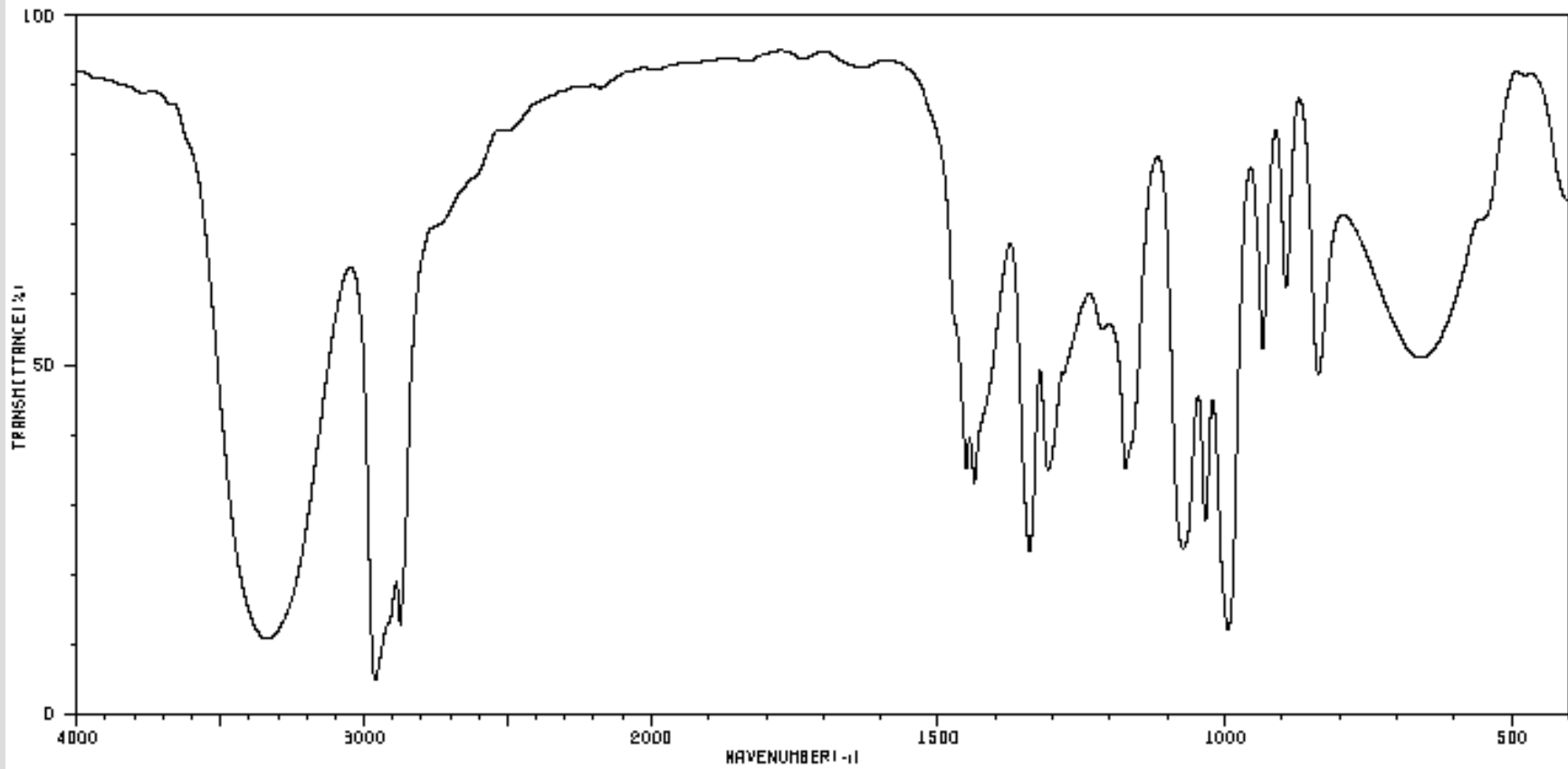
3333	16	2736	72	1614	33	1237	9	616	12
3322	15	2724	74	1600	28	1172	26	740	28
3036	41	2707	74	1514	4	1115	58	703	62
3026	39	2694	74	1463	37	1105	39	648	68
2948	50	2594	77	1436	34	1042	74	640	68
2922	42	2462	79	1361	36	1016	68	506	23
2867	63	1876	77	1296	64	841	38	472	77



HIT-NO=4177 | SCORE= () | SDBS-NO=10527 | IR-NIDA-03148 : LIQUID FILM

CYCLOPENTANOL

C5H10O



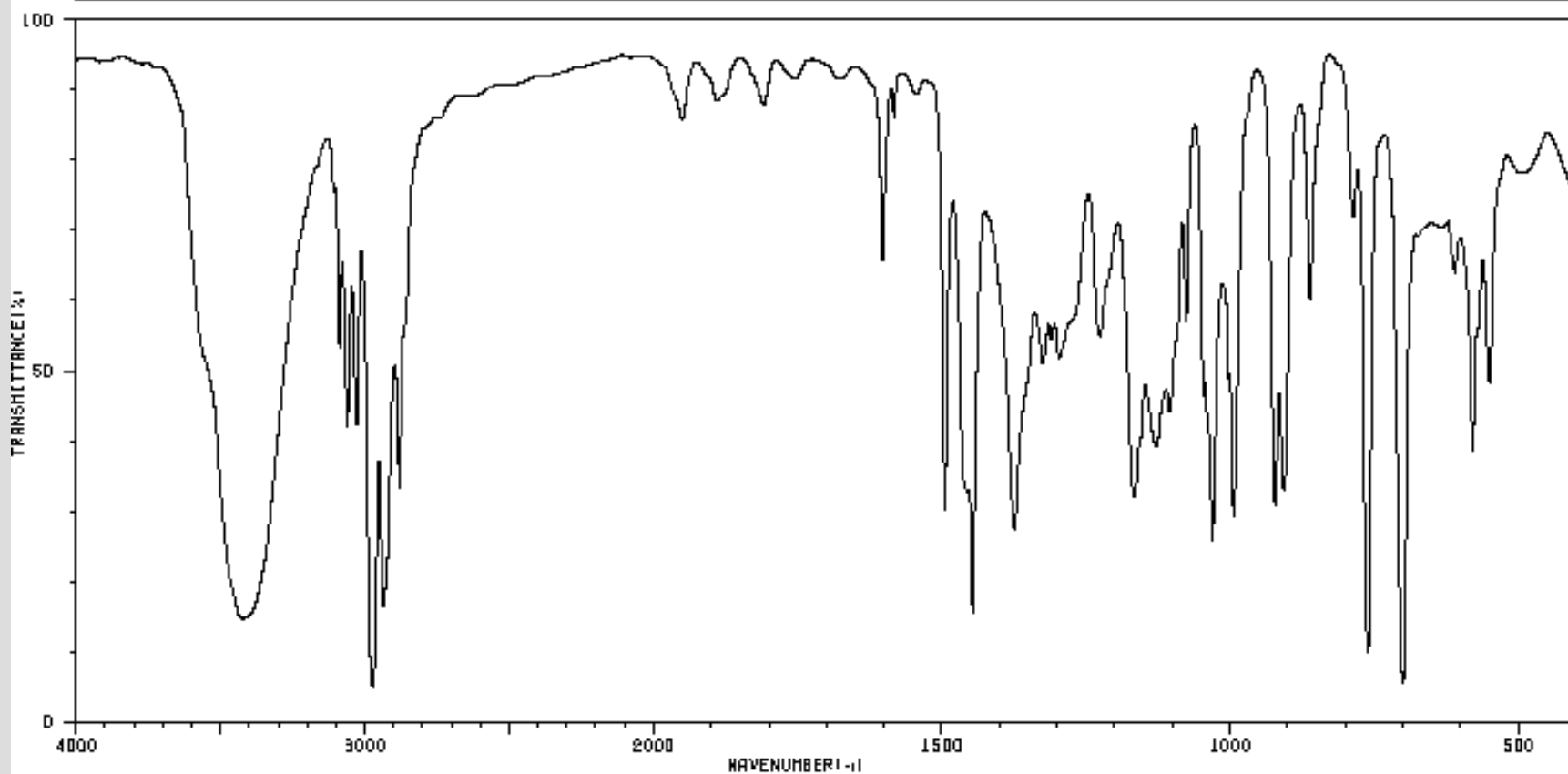
3346	10	1308	34	837	47
3335	10	1174	34	854	49
2961	4	1073	25	858	49
2873	12	1034	26		
1451	34	994	12		
1438	32	934	50		
1341	23	894	68		



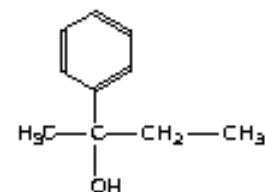
HIT-NO=6191 SCORE= () SDBS-NO=21803 IR-NIDA-26192 : LIQUID FILM

(+)-1-2-PHENYL-2-BUTANOL

C₁₀H₁₄O



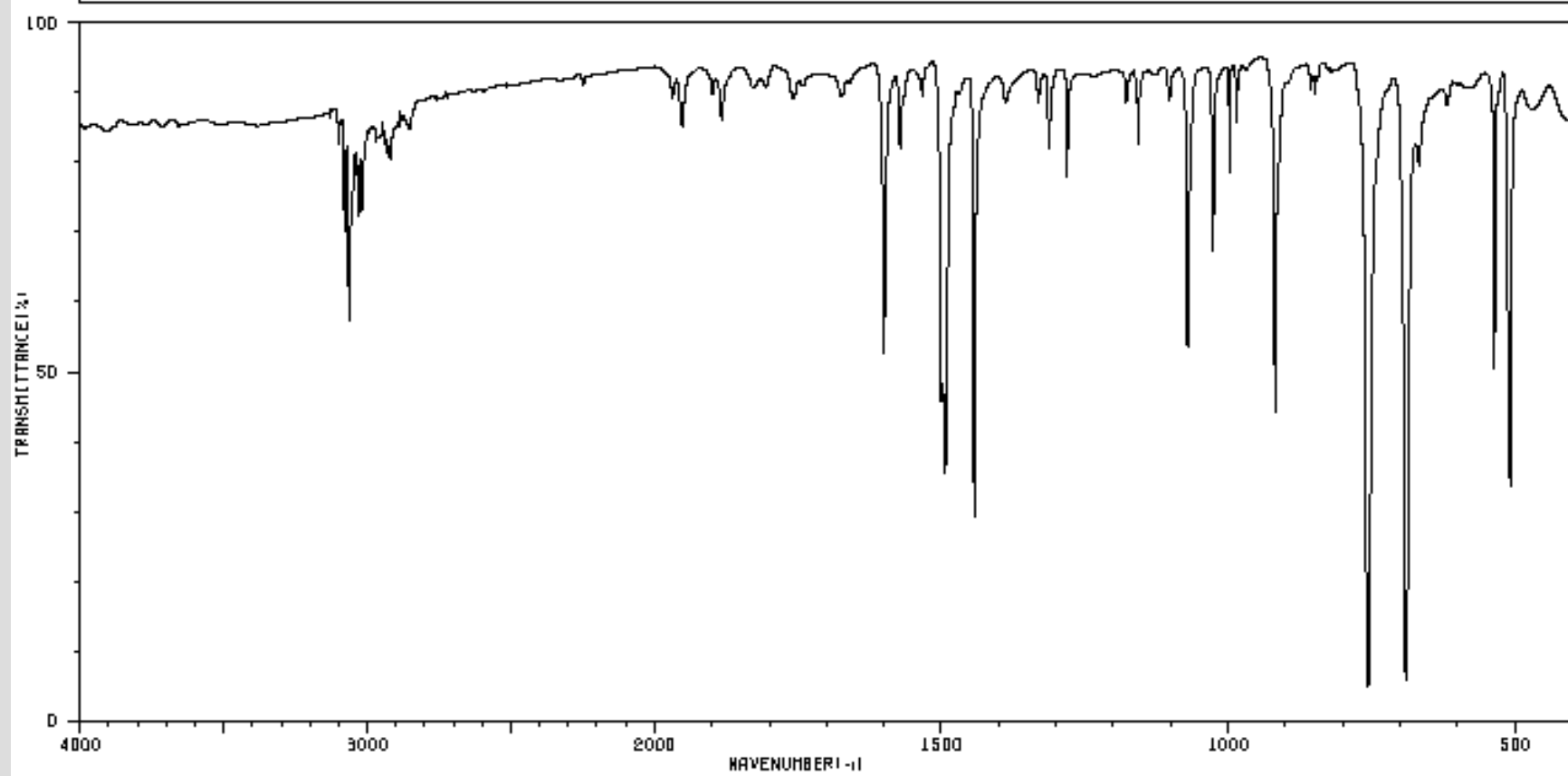
3423	13	2880	32	1310	52	1076	56	862	58
3407	14	1603	62	1297	49	1046	44	787	70
3087	50	1495	26	1226	53	1031	24	761	9
3060	41	1466	31	1168	31	1002	46	700	6
3027	41	1446	14	1155	38	994	27	610	62
2973	4	1374	26	1128	37	922	29	579	37
2937	16	1326	48	1104	42	906	31	551	46



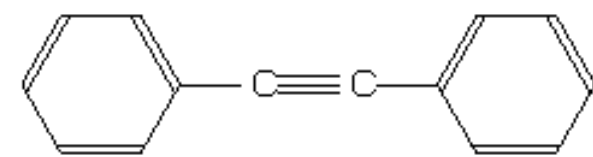
HIT-NO=1829 SCORE= () SDBS-NO=2112 IR-NIDA-62135 : KBR DISC

DIPHENYLACETYLENE

C₁₄H₁₀



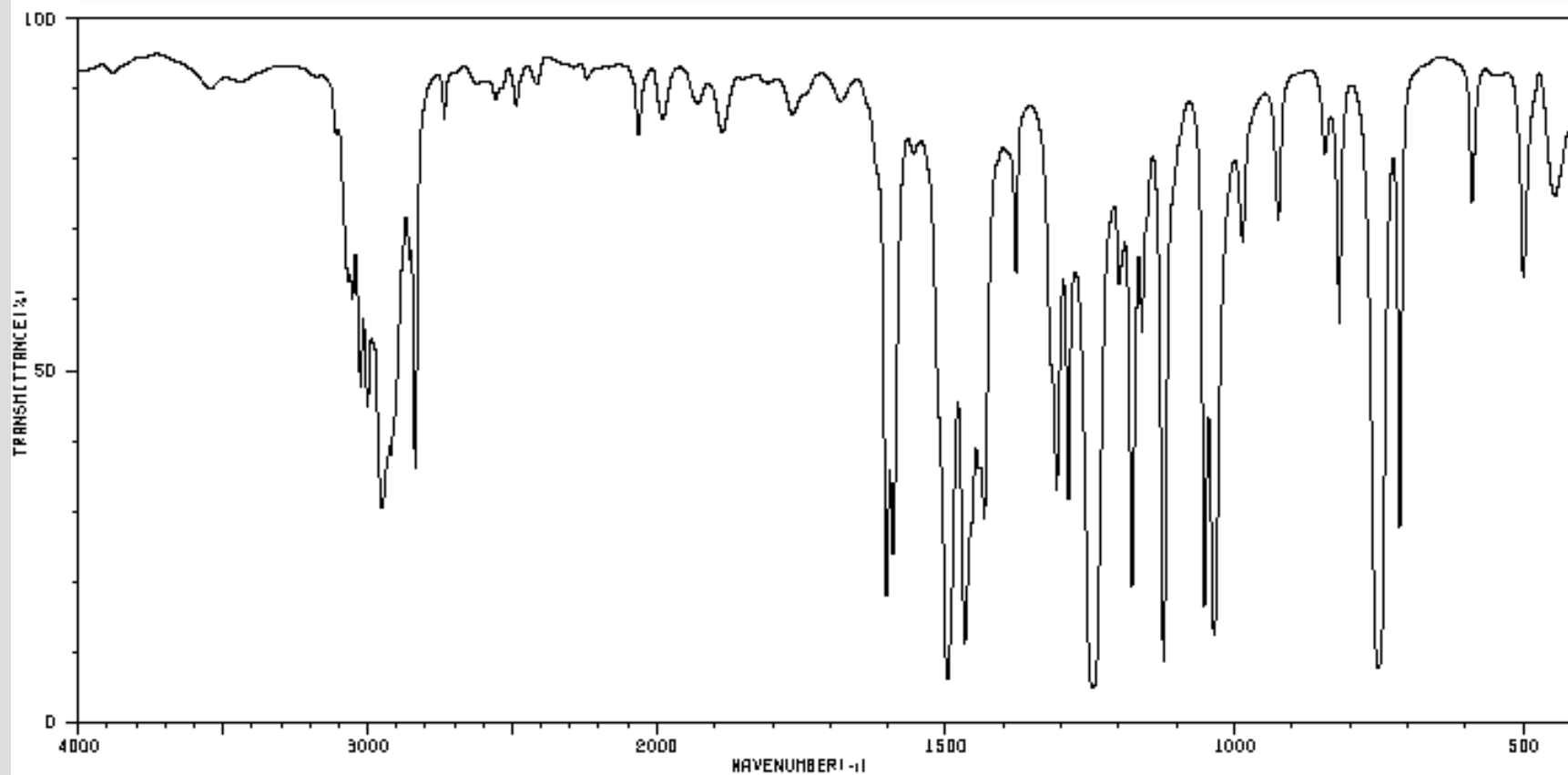
3908	81	3020	70	1951	81	1434	81	986	81
3099	79	2969	79	1882	81	1319	79	918	42
3079	88	2934	79	1800	50	1281	74	757	4
3064	66	2921	77	1672	79	1167	79	691	6
3053	68	2885	81	1500	43	1071	52	667	77
3042	74	2855	81	1494	34	1026	64	536	49
3032	70	2853	81	1443	28	998	74	509	32



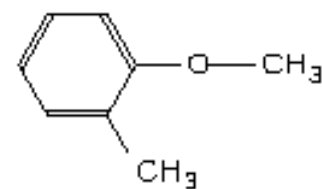
HIT-NO=1568 SCORE= () SDBS-NO=1798 IR-NIDA-04883 : LIQUID FILM

O-METHOXYTOLUENE

$C_8H_{10}O$



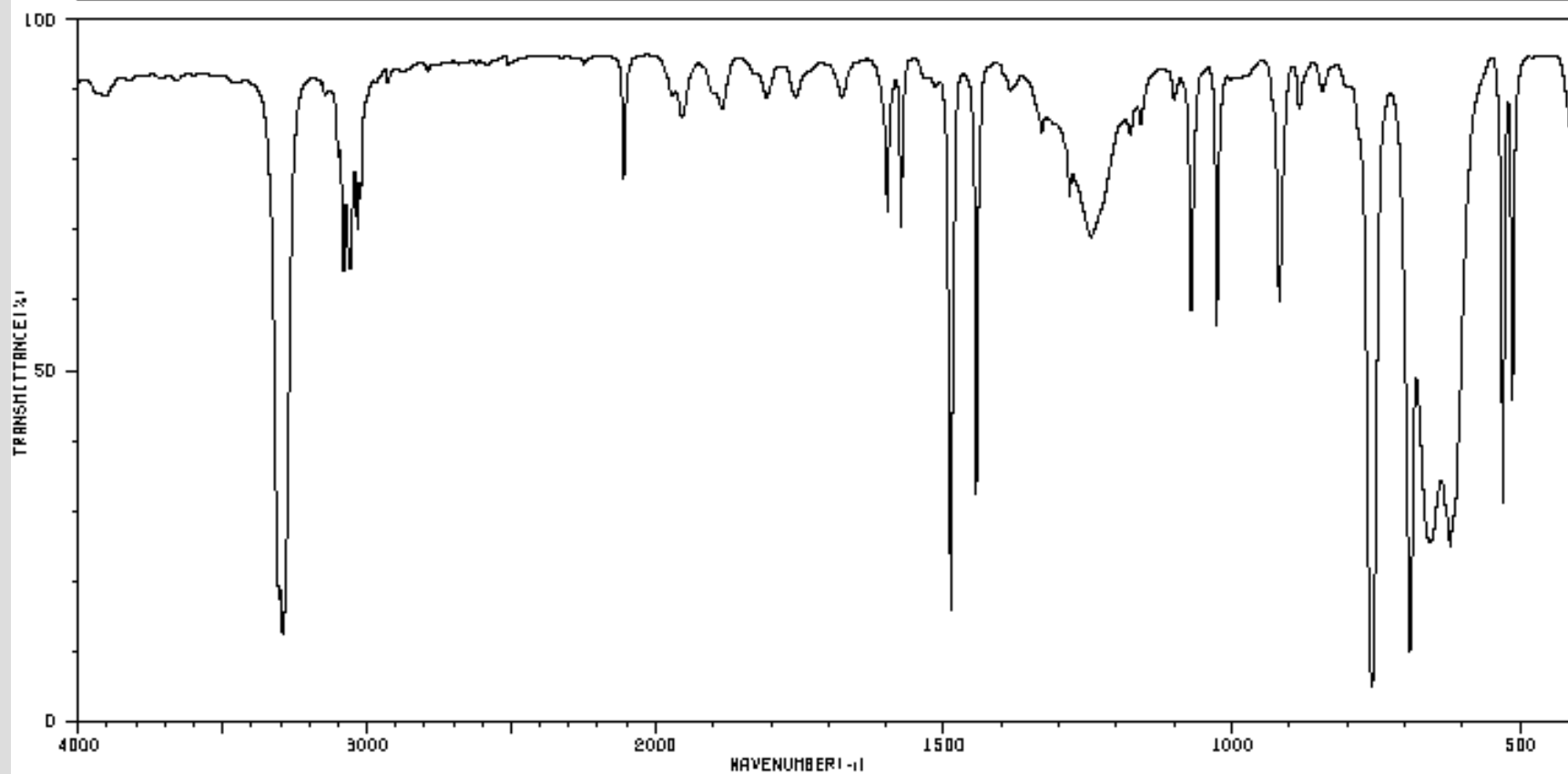
3066	60	2836	34	1467	10	1178	18	844	77
3053	58	2063	79	1433	27	1161	53	819	55
3025	46	1990	81	1379	82	1123	8	751	7
3000	43	1603	17	1308	32	1052	16	716	26
2950	29	1591	23	1288	30	1035	12	590	70
2919	36	1555	77	1246	4	986	66	500	60
2856	62	1497	6	1200	60	924	68	446	72



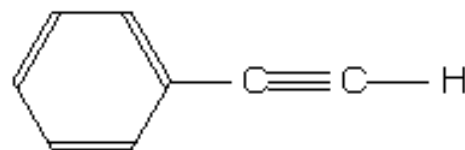
HIT-NO=1445 SCORE= () SDBS-NO=1444 IR-NIDA-63379 : LIQUID FILM

PHENYLACETYLENE

C_8H_6



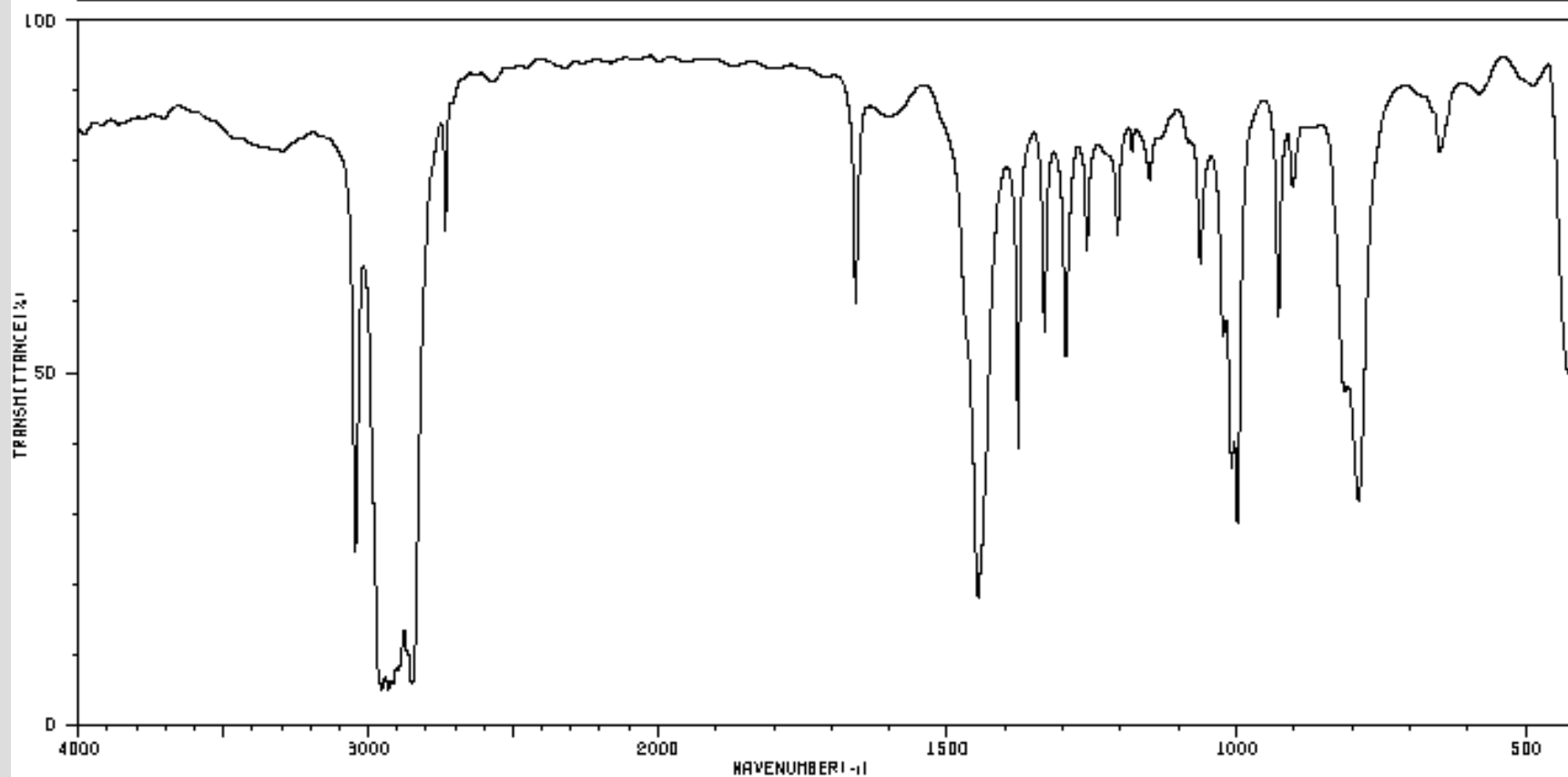
3906	86	2110	74	1674	68	1176	81	843	86
3306	16	1954	84	1488	15	1159	81	757	4
3291	12	1900	86	1444	31	1100	84	692	9
3081	62	1886	84	1386	86	1071	67	666	24
3058	62	1808	86	1331	81	1026	53	621	23
3034	66	1757	86	1262	72	918	57	530	30
3022	72	1698	70	1246	66	883	84	514	43



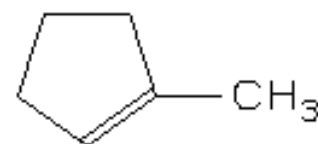
HIT-NO=2994 SCORE= () SDBS-NO=5507 IR-NIDA-09761 : LIQUID FILM

1-METHYL-1-CYCLOPENTENE

C_6H_{10}



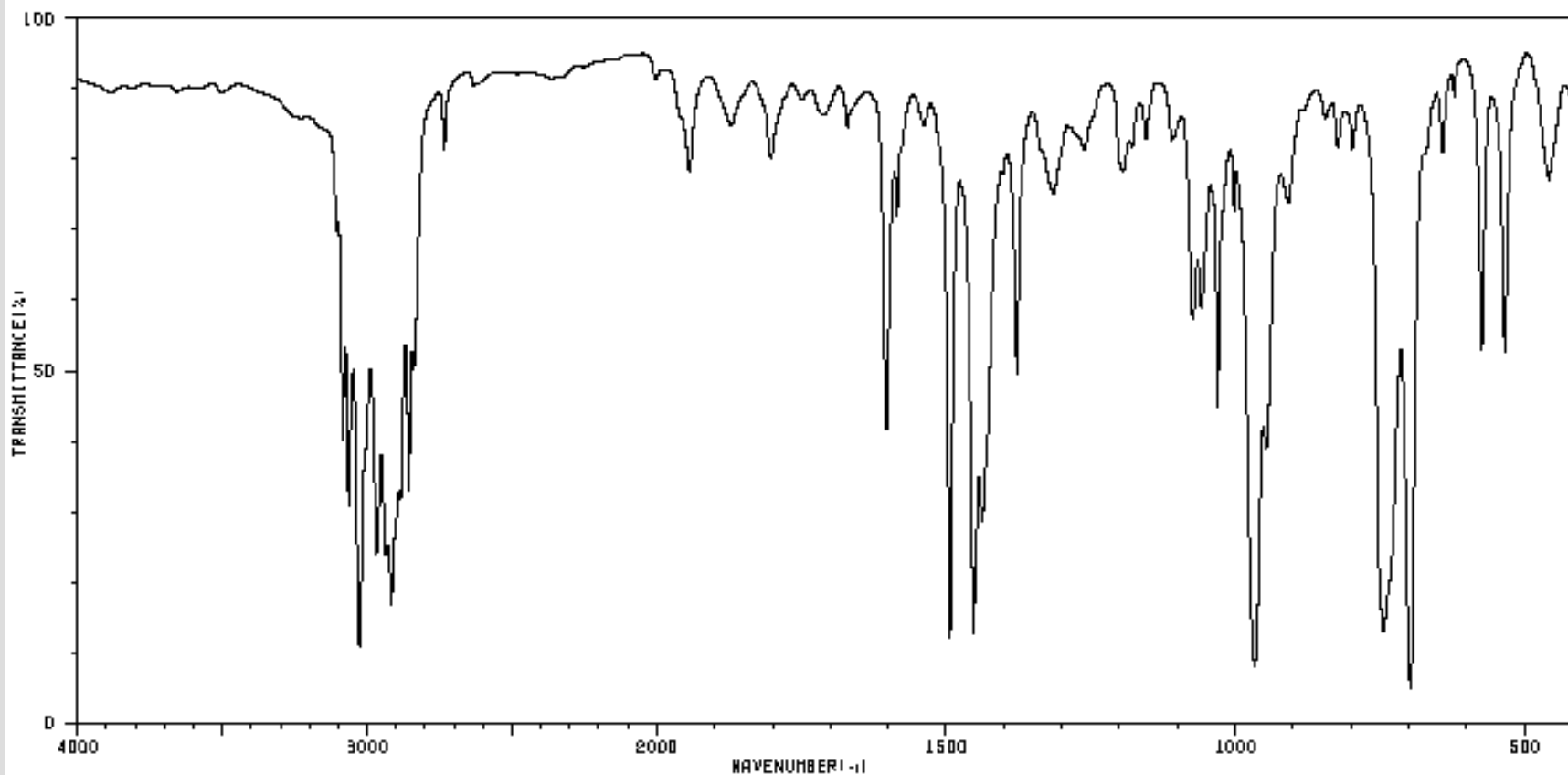
3044	23	1600	84	1206	66	928	66
2953	4	1446	17	1181	79	903	72
2931	4	1378	37	1151	74	789	30
2914	6	1332	69	1063	62	649	79
2849	5	1296	50	1023	53	581	86
2733	88	1259	64	1009	35	426	47
1668	67	1221	77	999	27		



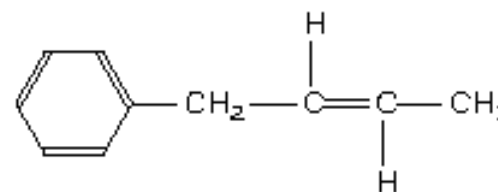
HIT-NO=3470 SCORE= () SDBS-NO=6685 IR-NIDA-10523 : LIQUID FILM

TRANS-1-PHENYL-2-BUTENE

C₁₀H₁₂



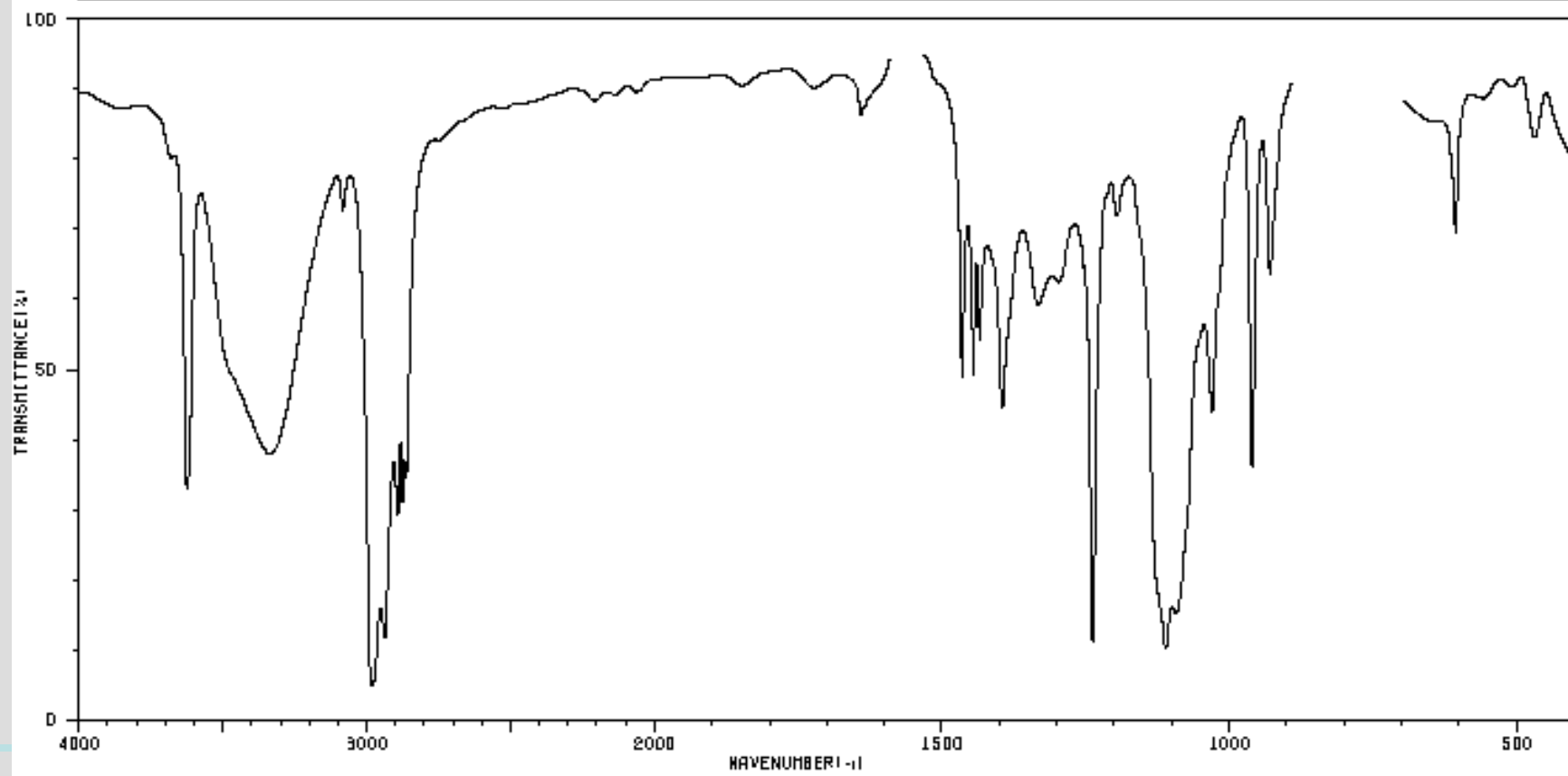
3106	66	2886	30	1493	11	1074	66	798	79
3084	38	2856	31	1453	12	1059	57	745	12
3064	29	2838	49	1436	27	1031	49	696	4
3027	10	1943	74	1378	47	1003	70	642	77
2967	23	1803	77	1315	72	966	7	575	50
2935	23	1603	39	1194	74	947	37	535	50
2917	16	1586	70	1179	79	909	70	457	74



HIT-NO=392 SCORE= () SDBS-NO=10603 IR-NIDA-07884 : CCL4 SOLUTION

CYCLOBUTANOL

C₄H₈O

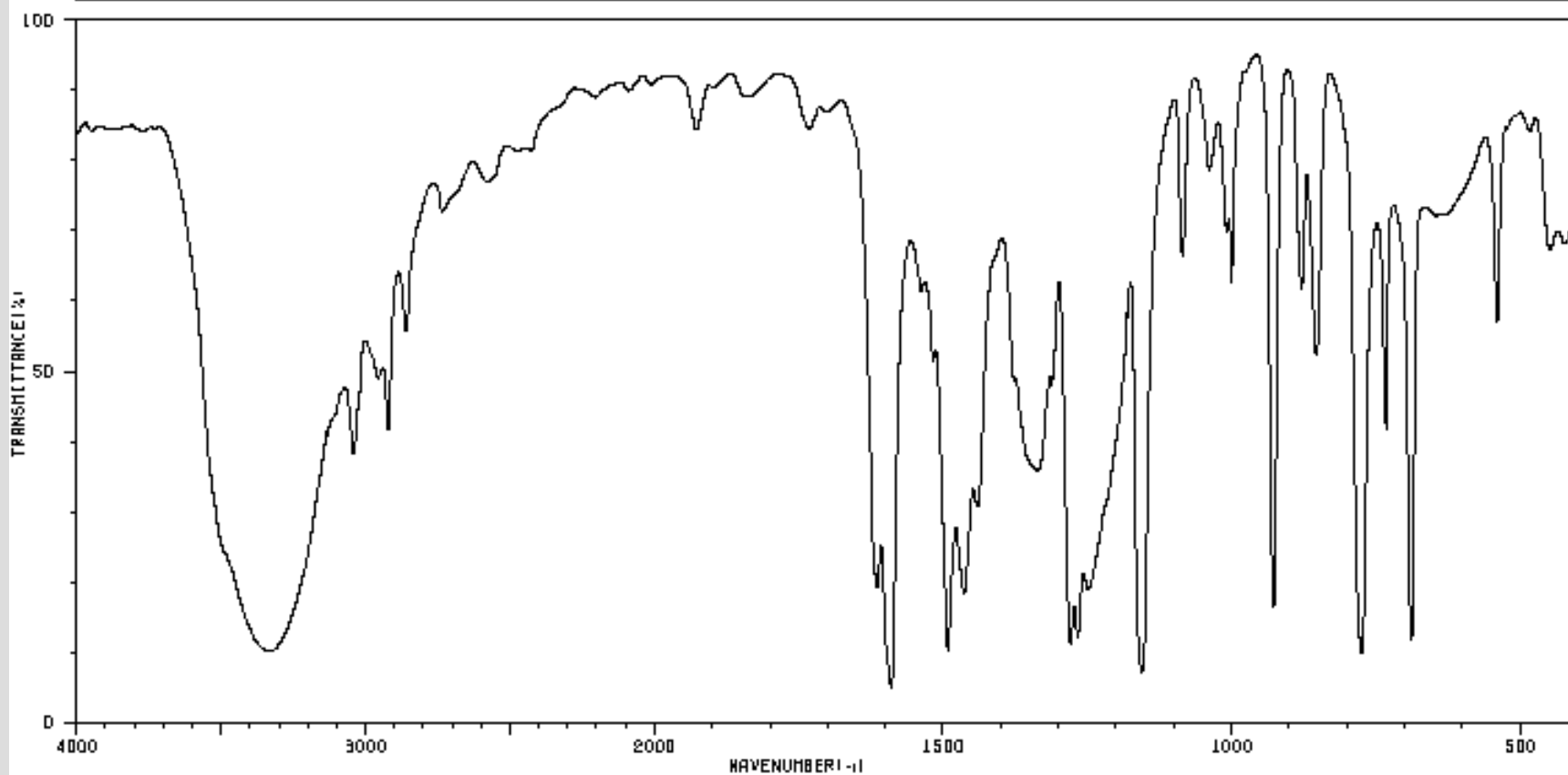


3626	32	2862	34	1396	43	929	62
3335	37	2207	84	1333	57	607	68
3083	70	1641	84	1236	10	469	79
2983	4	1634	84	1196	70		
2937	11	1465	47	1111	10		
2893	26	1445	47	1030	42		
2876	30	1436	62	960	36		

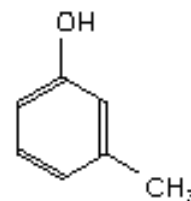
HIT-NO=1126 SCORE= () SDBS-NO=686 IR-NIDA-67217 : LIQUID FILM

M-CRESOL

C₇H₈O



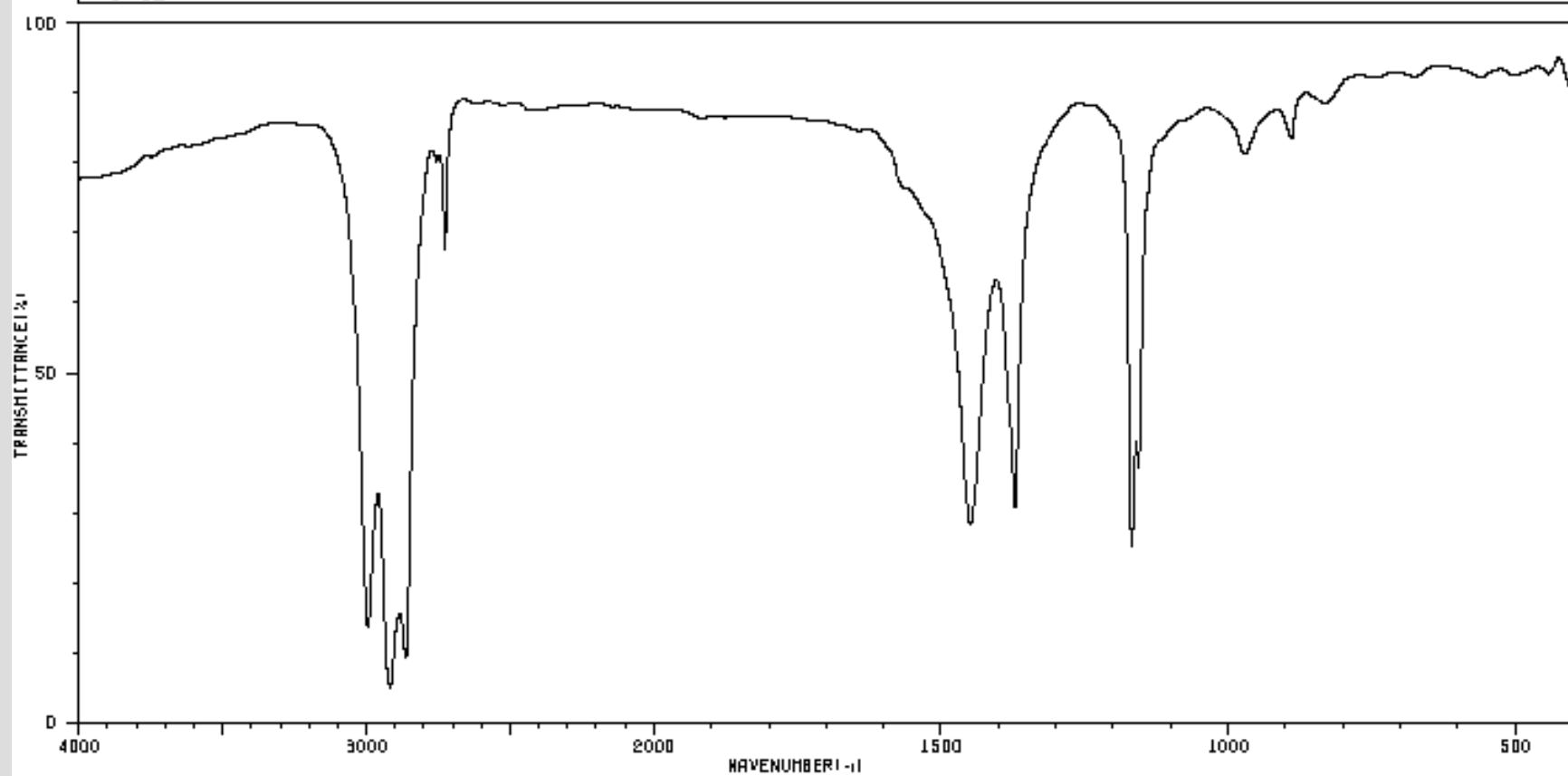
3340	10	2860	69	1463	18	1166	7	776	9
3329	9	2735	70	1440	29	1085	64	732	39
3127	39	1614	18	1337	35	1009	68	689	11
3041	37	1590	4	1313	46	1000	60	643	70
2954	47	1539	58	1279	10	927	15	540	55
2940	49	1517	49	1267	11	879	58	449	64
2922	41	1492	10	1249	18	864	60	433	68



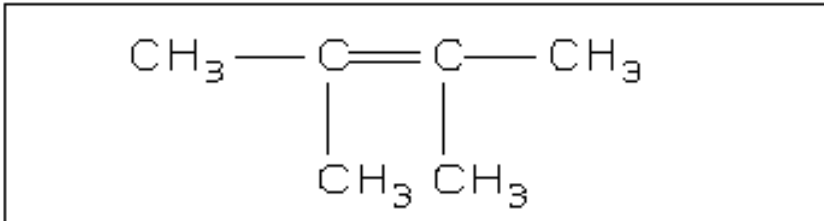
HIT-NO=2802 SCORE= () SDBS-NO=4816 IR-NIDA-03378 : LIQUID FILM

2,3-DIMETHYL-2-BUTENE

C₆H₁₂



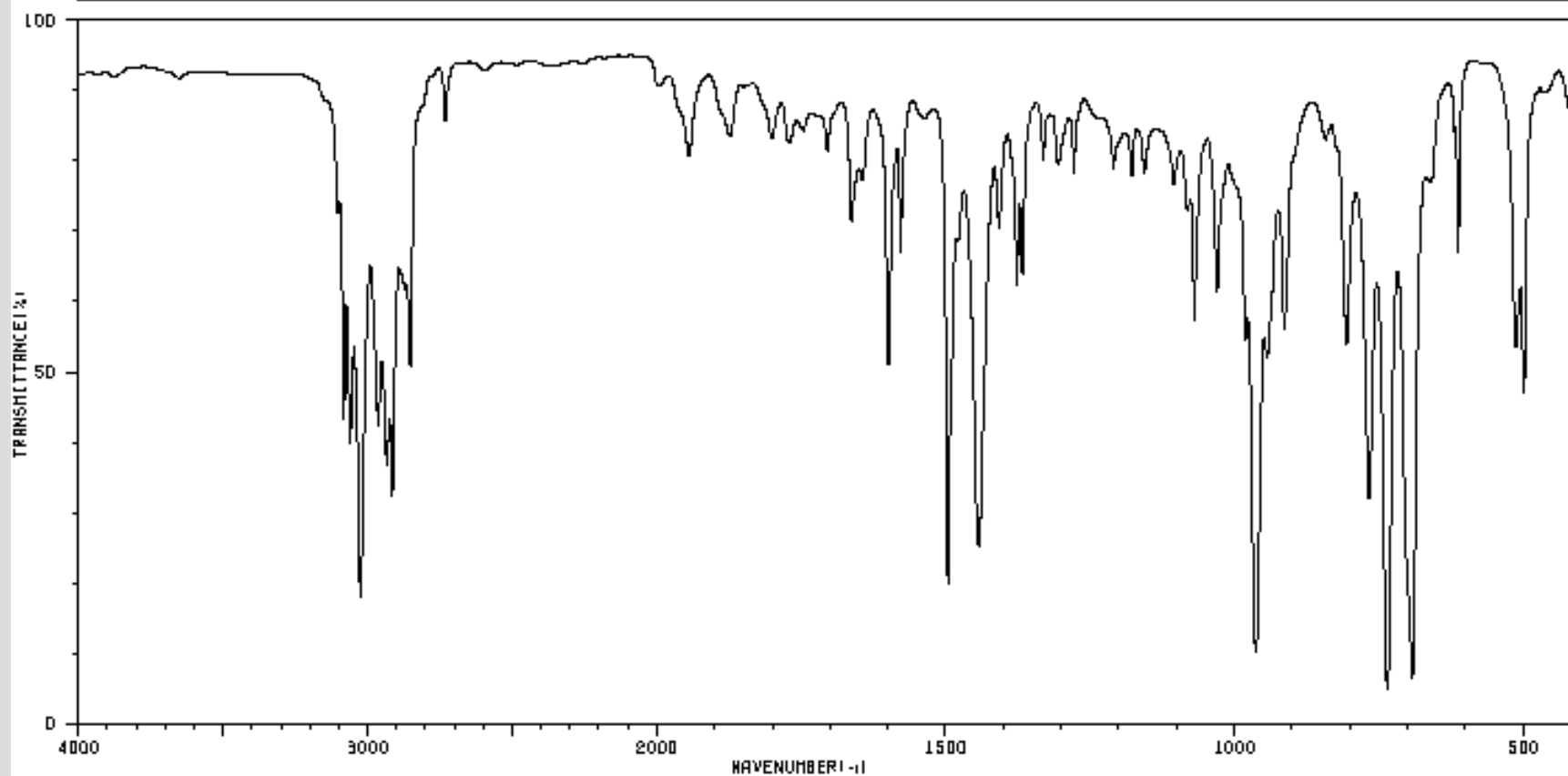
2994	13	1167	36
2918	4	972	79
2863	6	900	81
2726	66	890	79
1449	26	836	84
1371	29	831	84
1169	23		



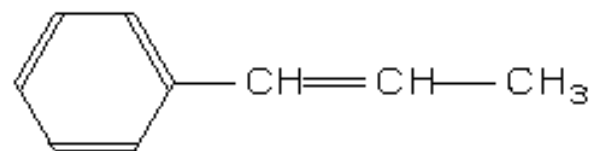
HIT-NO=3321 SCORE= () SDBS-NO=6329 IR-NIDA-10025 : LIQUID FILM

(1-PROPENYL)BENZENE

C₉H₁₀



3103	70	2862	49	1408	68	1081	70	806	52
3083	41	1663	68	1377	60	1069	55	767	31
3061	36	1644	74	1367	80	1030	58	735	4
3026	17	1599	49	1278	74	981	52	692	6
2963	41	1578	64	1178	74	963	9	613	64
2934	35	1498	18	1156	74	943	50	513	52
2916	31	1443	29	1106	74	913	53	499	44



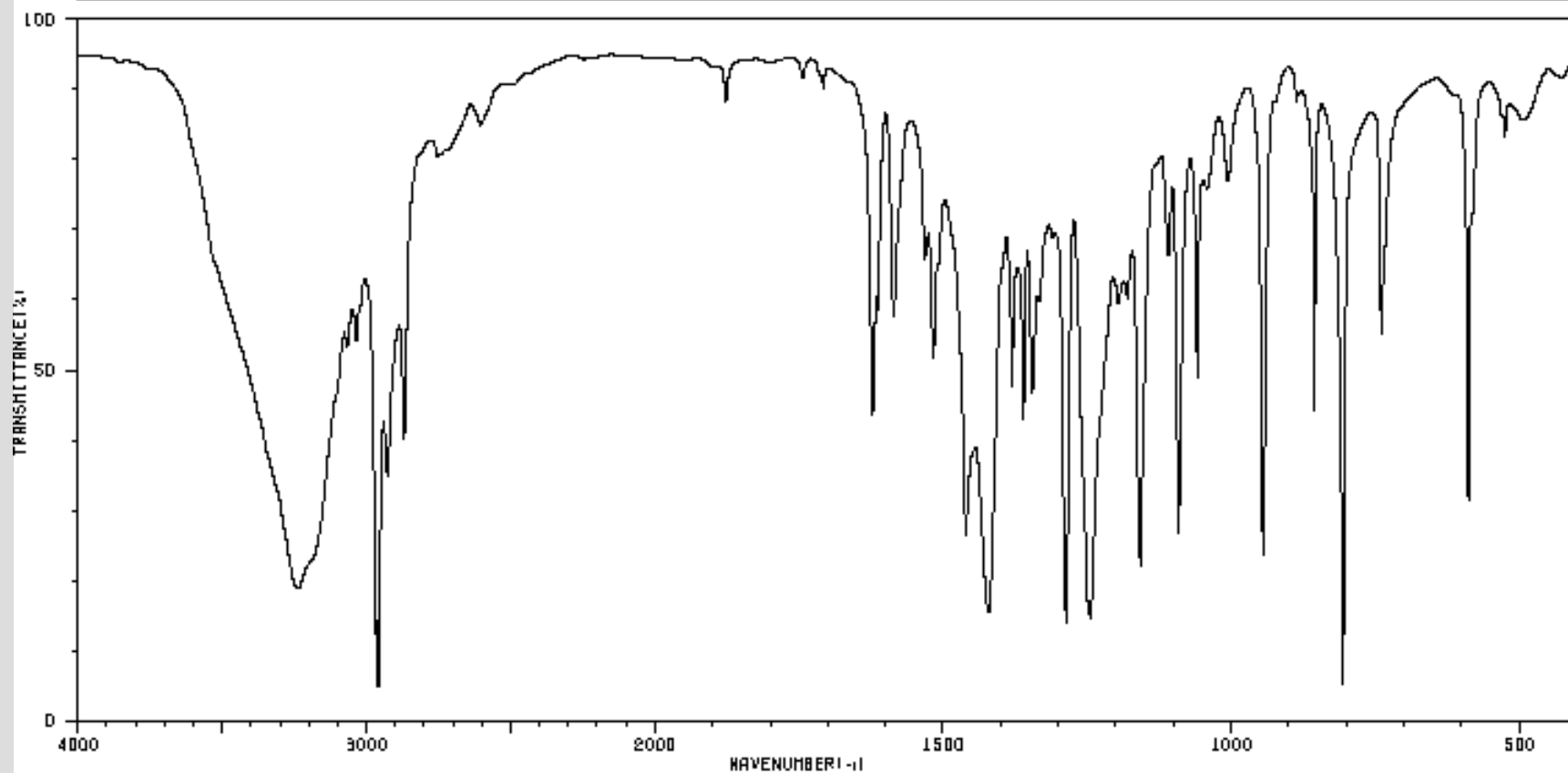
HIT-NO=1961

SCORE= ()

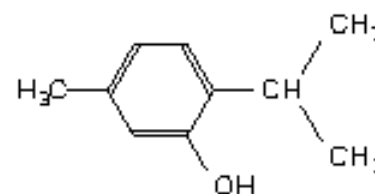
SDBS-NO=2404

IR-NIDA-00242 : KBR DISC

THYMOL

 $C_{10}H_{14}O$ 

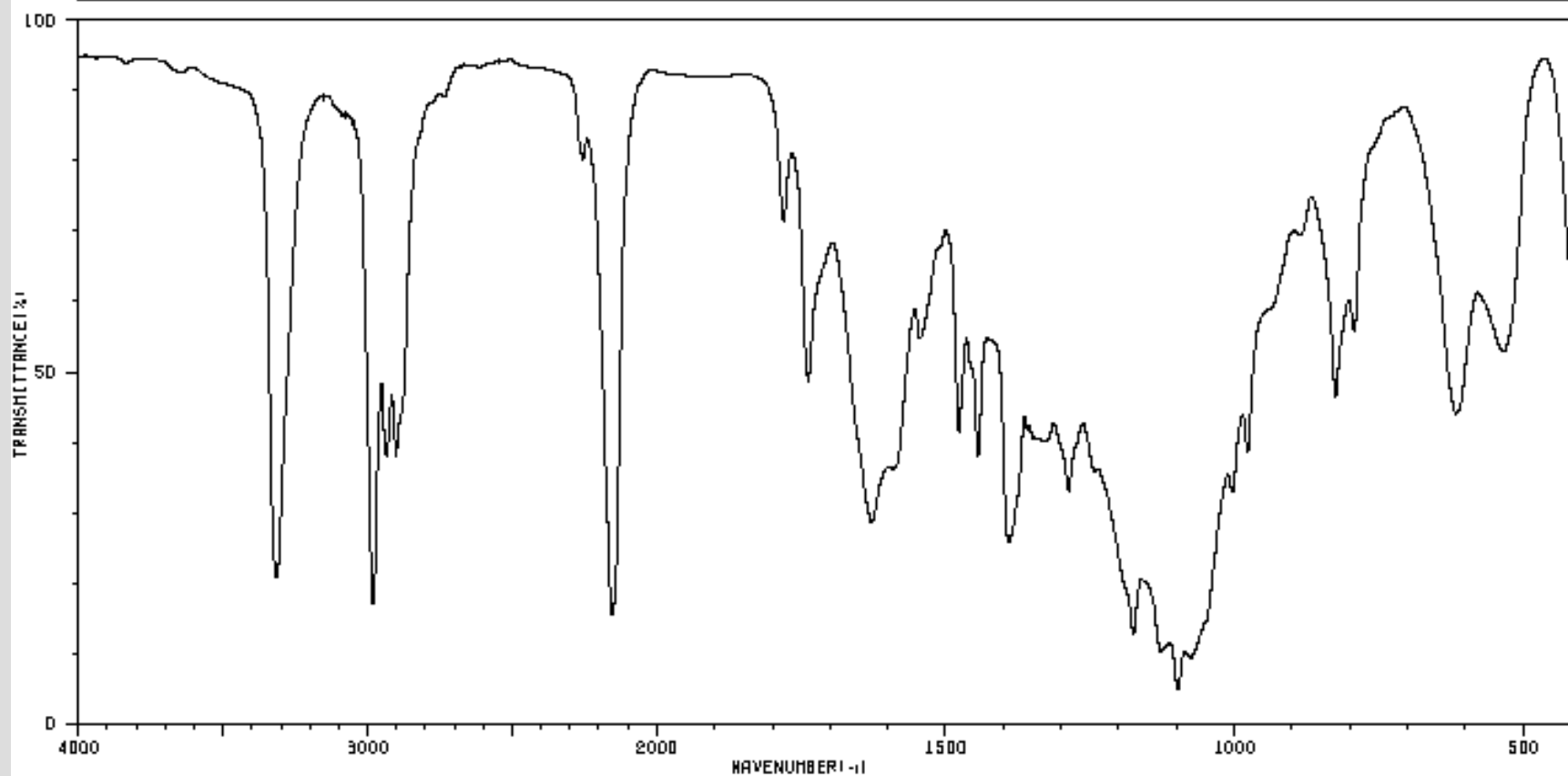
3236	18	1622	42	1422	14	1196	67	1006	74
3067	52	1613	57	1380	46	1180	58	945	22
3036	52	1588	55	1361	41	1158	21	855	44
2959	4	1532	64	1346	44	1109	64	807	6
2927	33	1516	49	1333	57	1091	25	739	53
2869	36	1509	62	1287	13	1059	46	734	64
2766	77	1461	26	1246	13	1042	72	689	31



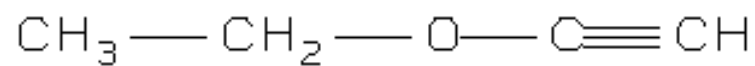
HIT-NO=4547 SCORE= () SDBS-NO=12491 IR-NIDA-15173 : LIQUID FILM (5

ETHOXYACETYLENE

C₄H₆O



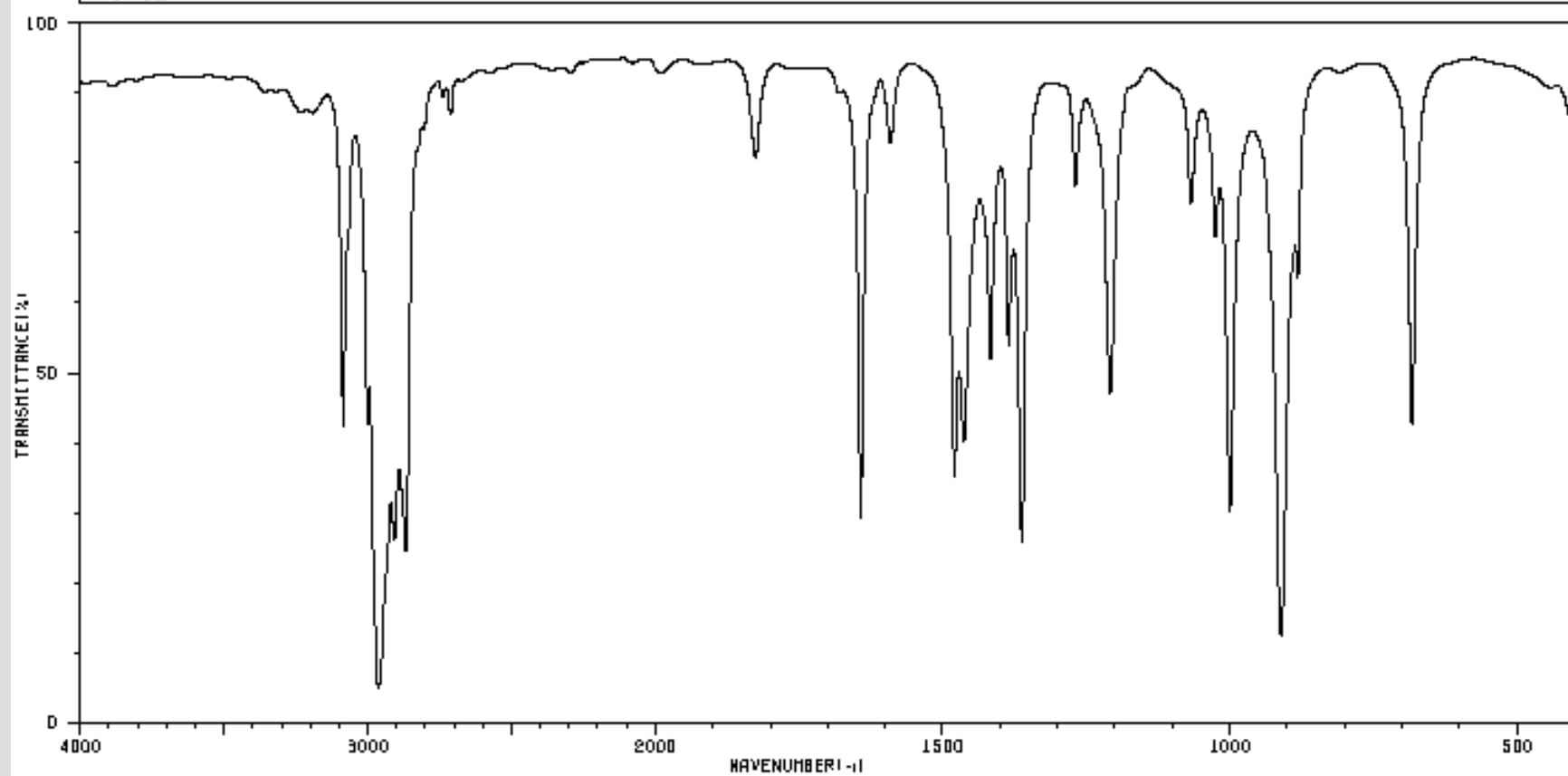
3316	20	1781	68	1339	38	1003	31
2981	16	1738	46	1334	38	977	37
2960	42	1628	27	1329	36	825	44
2939	36	1644	62	1287	31	793	69
2901	36	1477	39	1176	12	616	42
2256	77	1444	36	1126	10	535	50
2163	14	1391	24	1098	4		



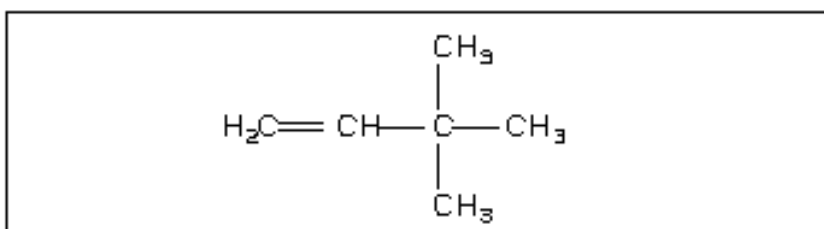
HIT-NO=904 SCORE= () SDBS-NO=222 IR-NIDA-05820 : LIQUID FILM

3,3-DIMETHYL-1-BUTENE

C₆H₁₂



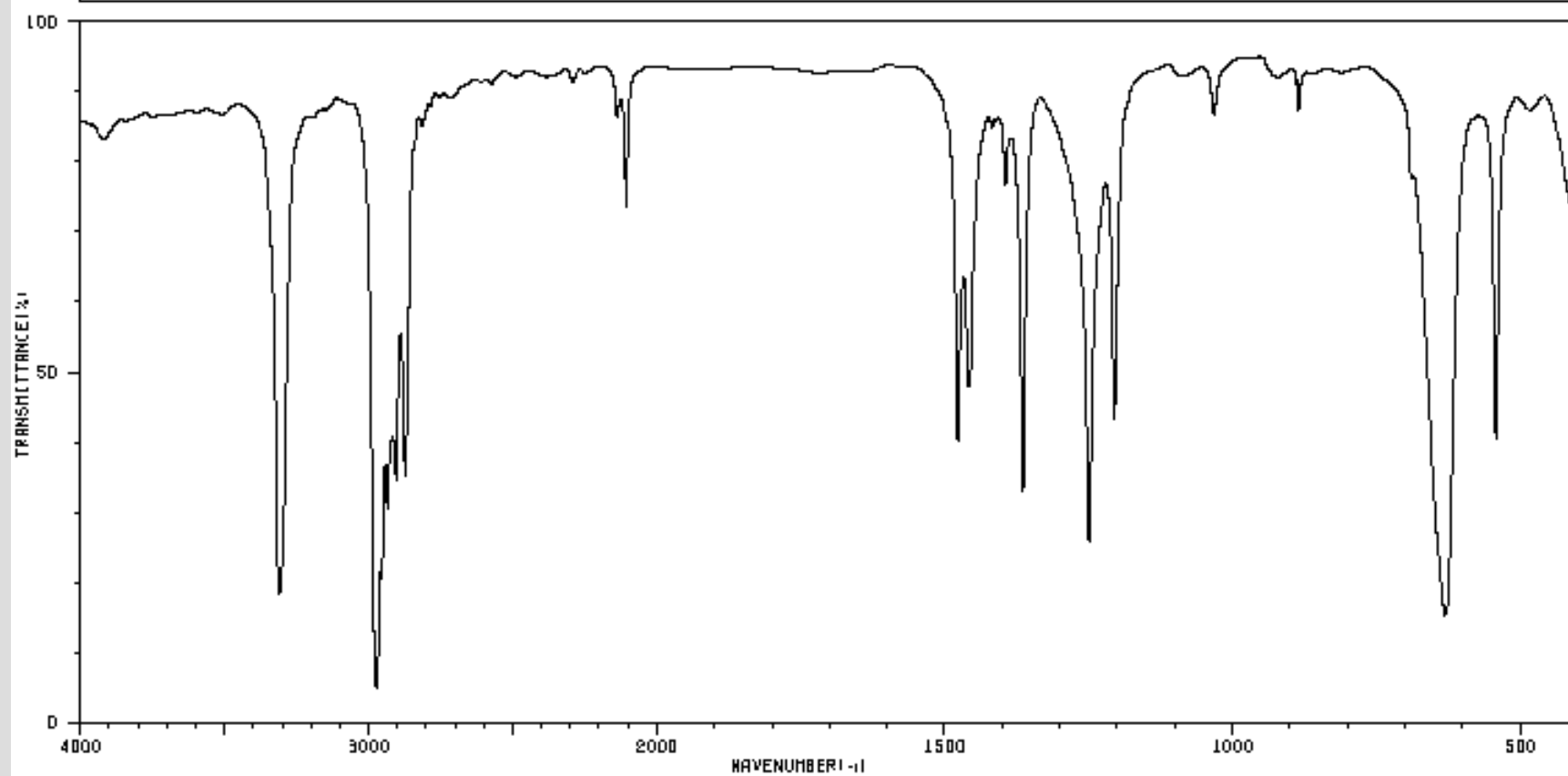
3211	84	2711	84	1385	62	911	12
3085	41	1825	77	1362	24	882	60
3001	41	1643	28	1270	74	683	41
2964	4	1591	79	1209	44		
2907	25	1480	34	1068	72		
2868	23	1463	38	1026	86		
2740	86	1417	60	1000	29		



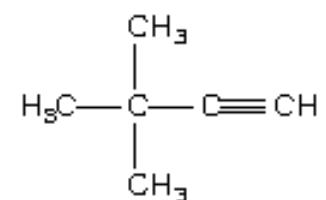
HIT-NO=6387 SCORE= () SDBS-NO=22638 IR-NIDA-30148 : LIQUID FILM

3,3-DIMETHYL-1-BUTYNE

C₆H₁₀



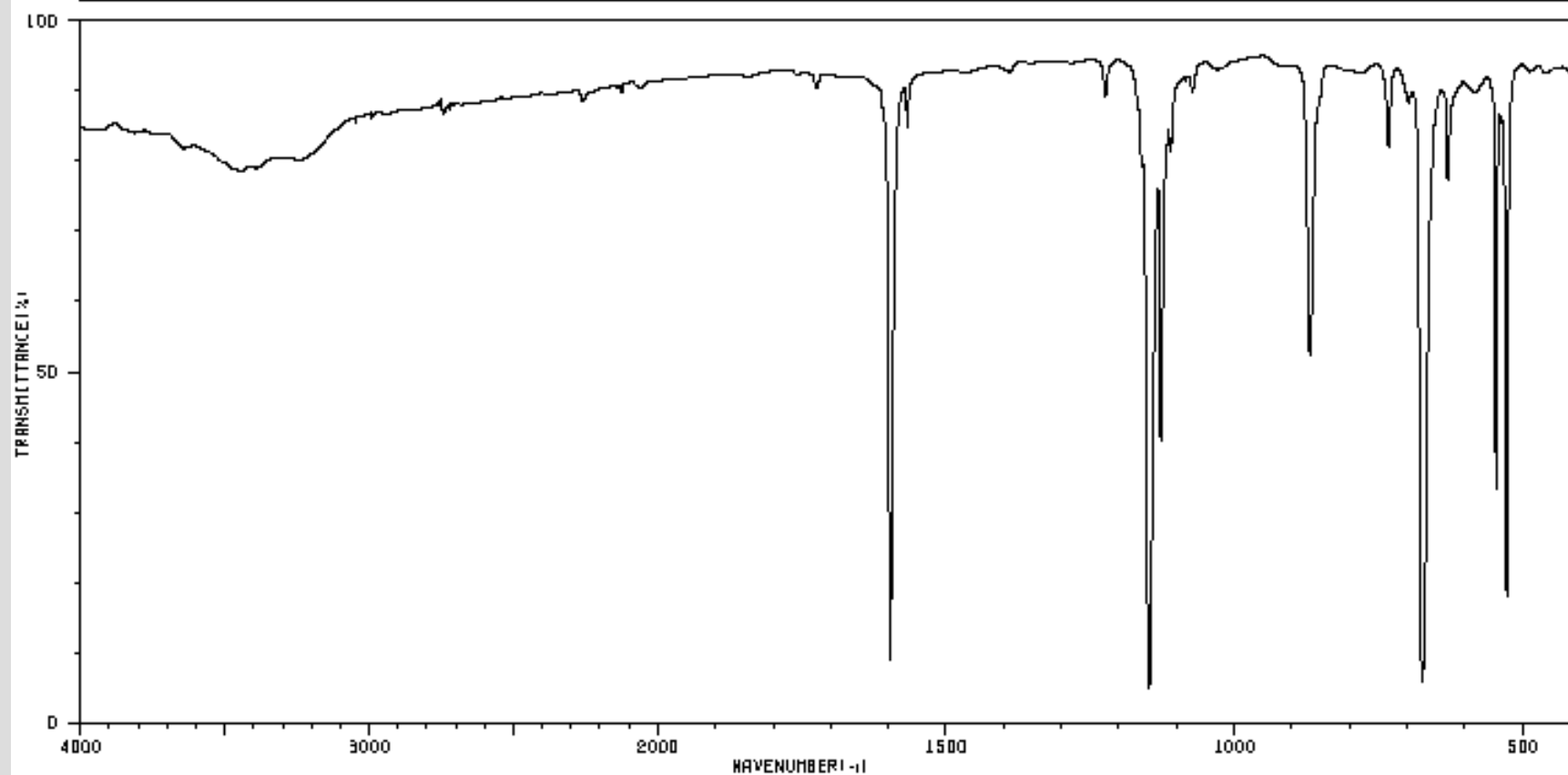
3920	79	2811	81	1364	32	483	84
3311	18	2138	84	1249	25		
2973	4	2108	70	1206	42		
2964	20	1477	38	1033	84		
2934	29	1457	46	885	84		
2904	33	1418	81	831	14		
2873	34	1396	74	643	39		



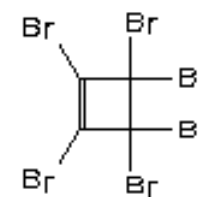
HIT-NO=14106 SCORE= () SDBS-NO=28294 IR-NIDA-39651 : KBR DISC

HEXABROMOCYCLOBUTENE

C₄Br₆



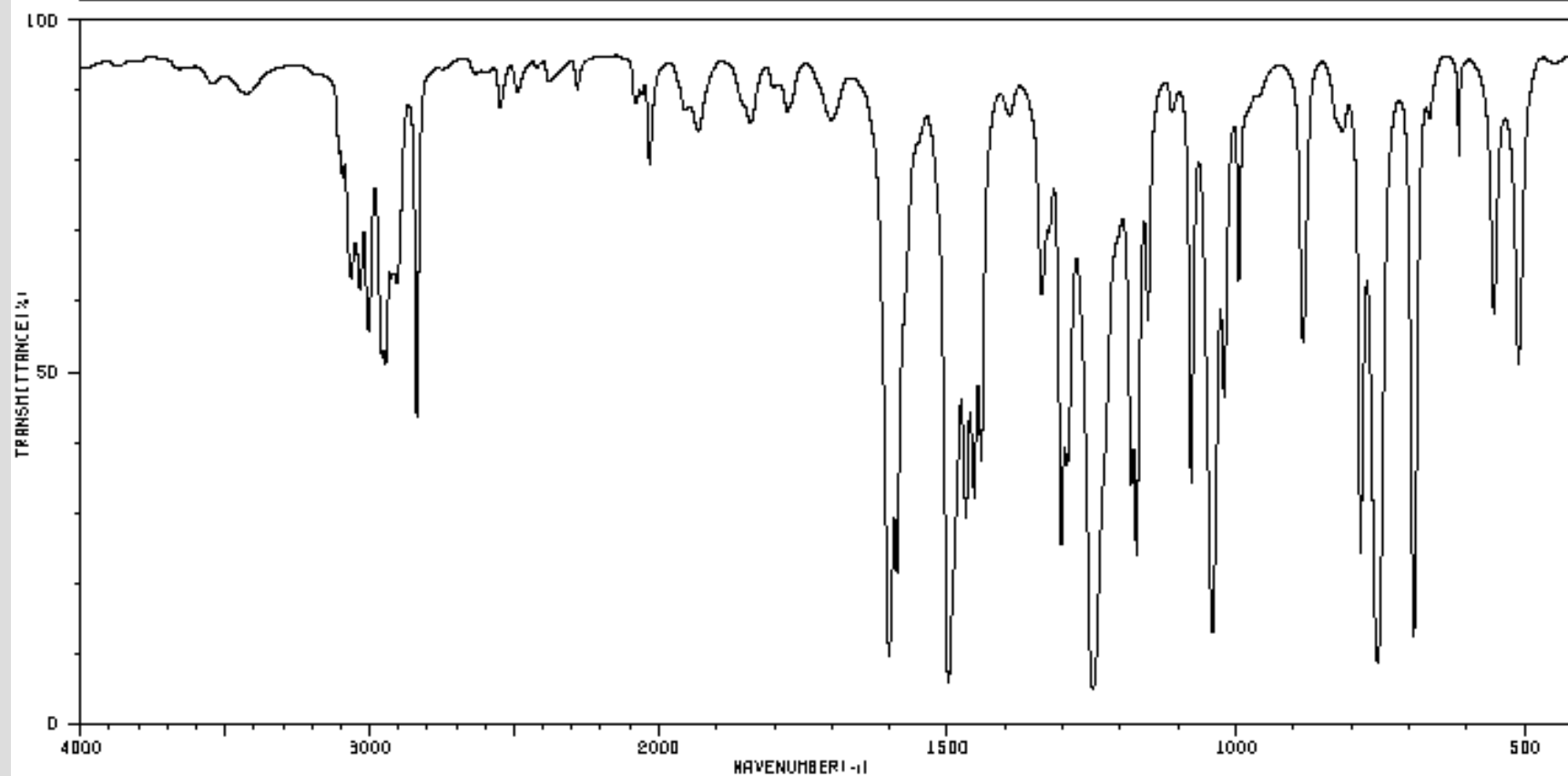
2743	84	1149	4	674	6
2733	84	1127	38	630	74
2260	84	1110	79	582	86
2125	86	1072	86	547	32
1597	8	869	50	537	81
1567	81	733	79	526	17
1226	86	699	84		



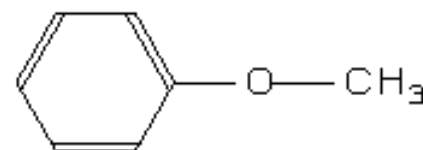
HIT-NO=1296 SCORE= () SDBS-NO=1154 IR-NIDA-05057 : LIQUID FILM

ANISOLE

C₇H₈O



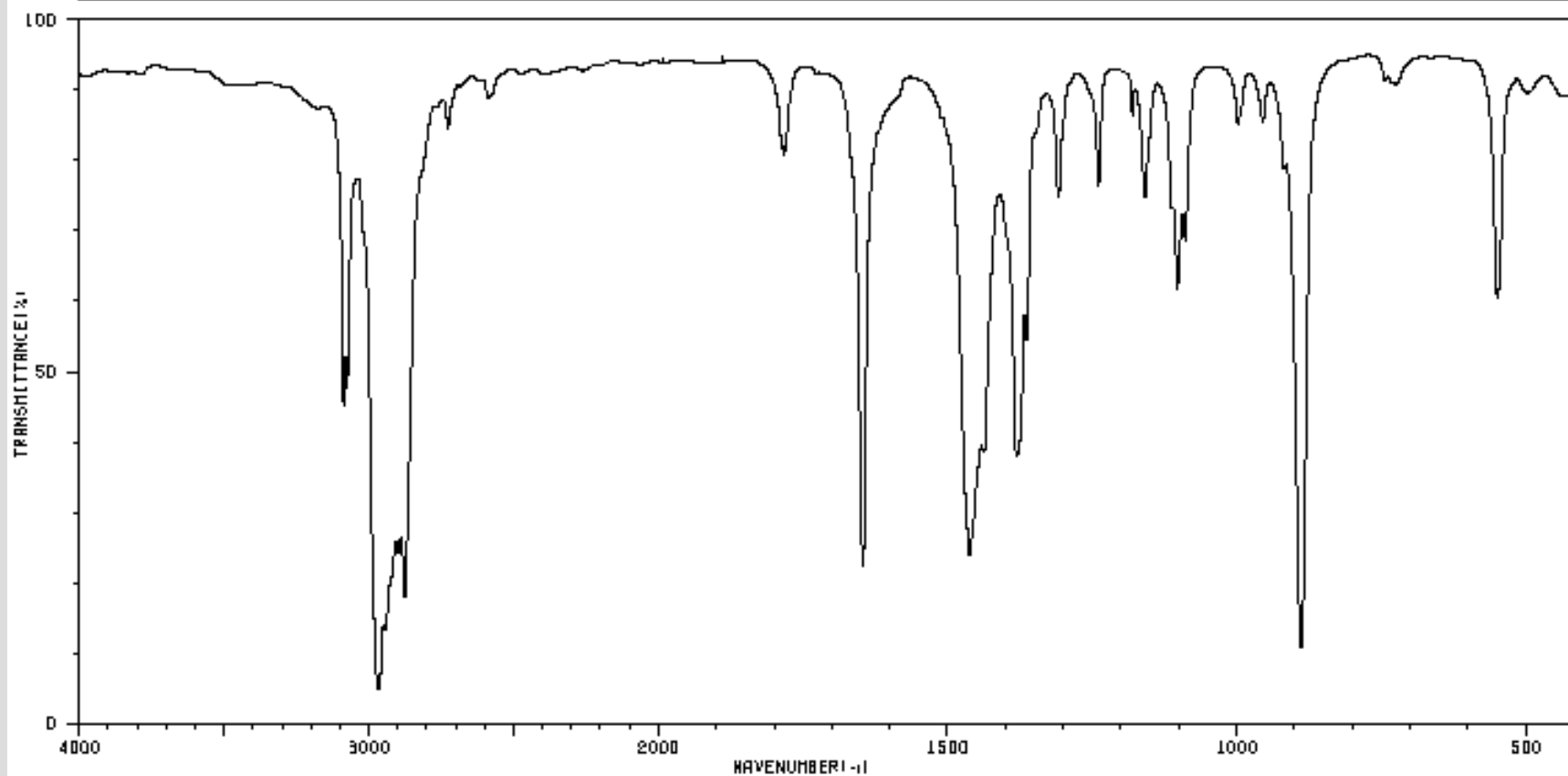
3094	74	2906	60	1468	27	1182	32	884	52
3063	60	2836	42	1454	31	1173	23	784	23
3033	58	2031	77	1442	36	1153	55	755	8
3003	53	1702	81	1337	58	1078	39	692	12
2957	50	1601	9	1303	24	1041	12	614	77
2945	49	1588	20	1293	35	1021	44	553	57
2925	60	1498	5	1248	4	996	60	511	49



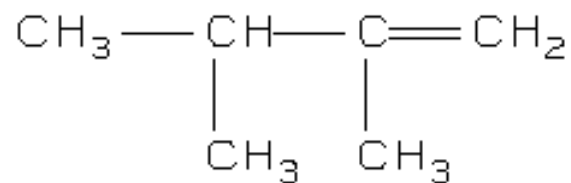
HIT-NO=2801 SCORE= () SDBS-NO=4815 IR-NIDA-03377 ; LIQUID FILM

2,3-DIMETHYL-1-BUTENE

C₆H₁₂



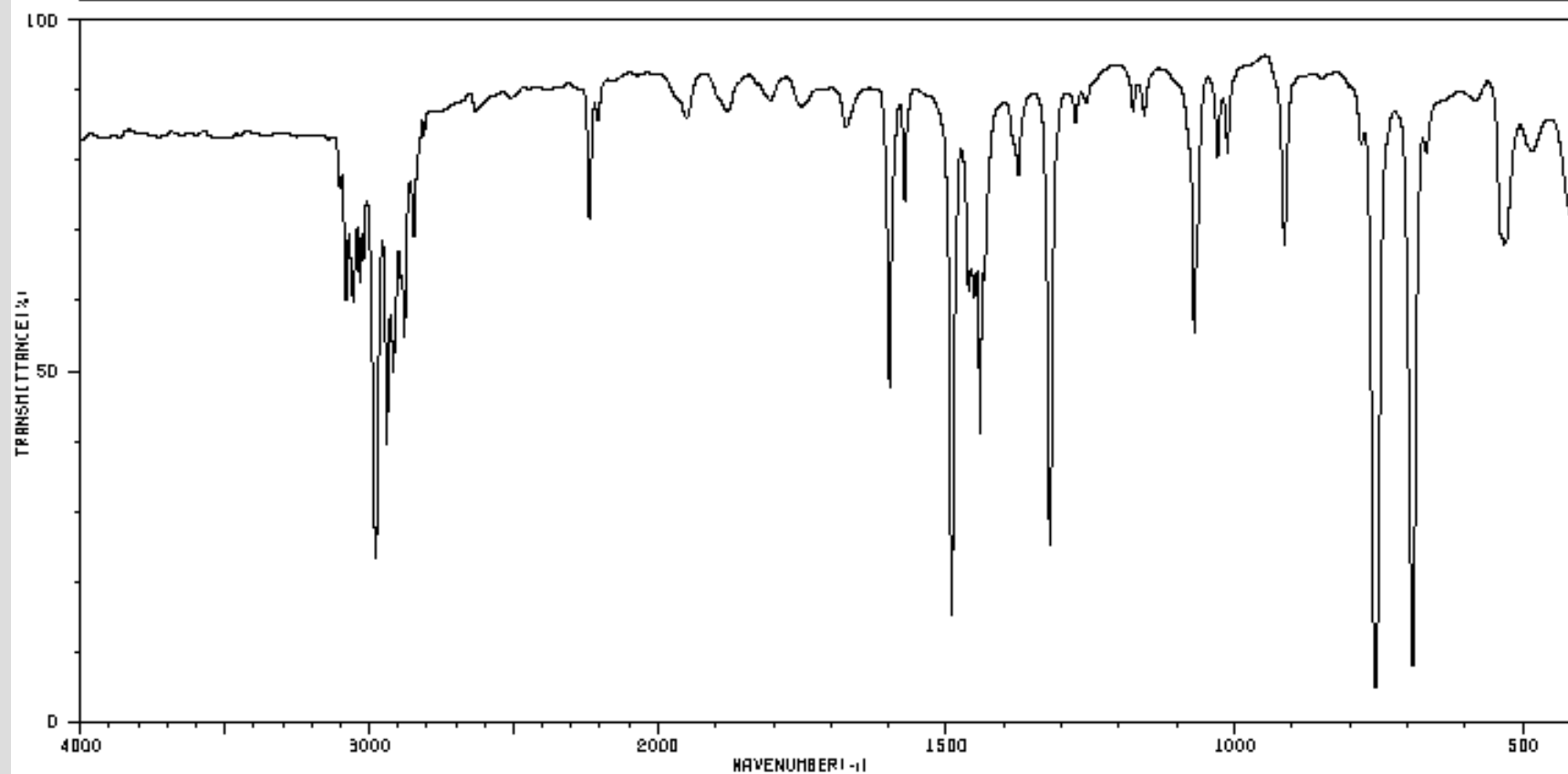
3087	43	2588	86	1308	72	966	81
3075	46	1794	84	1239	74	888	10
2966	4	1783	77	1181	84	550	58
2944	13	1645	21	1169	72	497	86
2898	23	1462	23	1102	58		
2875	17	1380	36	1089	86		
2727	81	1363	62	998	81		



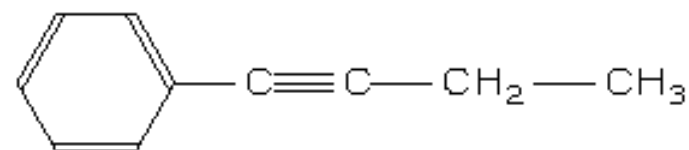
HIT-NO=911 SCORE= () SDBS-NO=258 IR-NIDA-32913 : LIQUID FILM

1-PHENYL-1-BUTYNE

C₁₀H₁₀



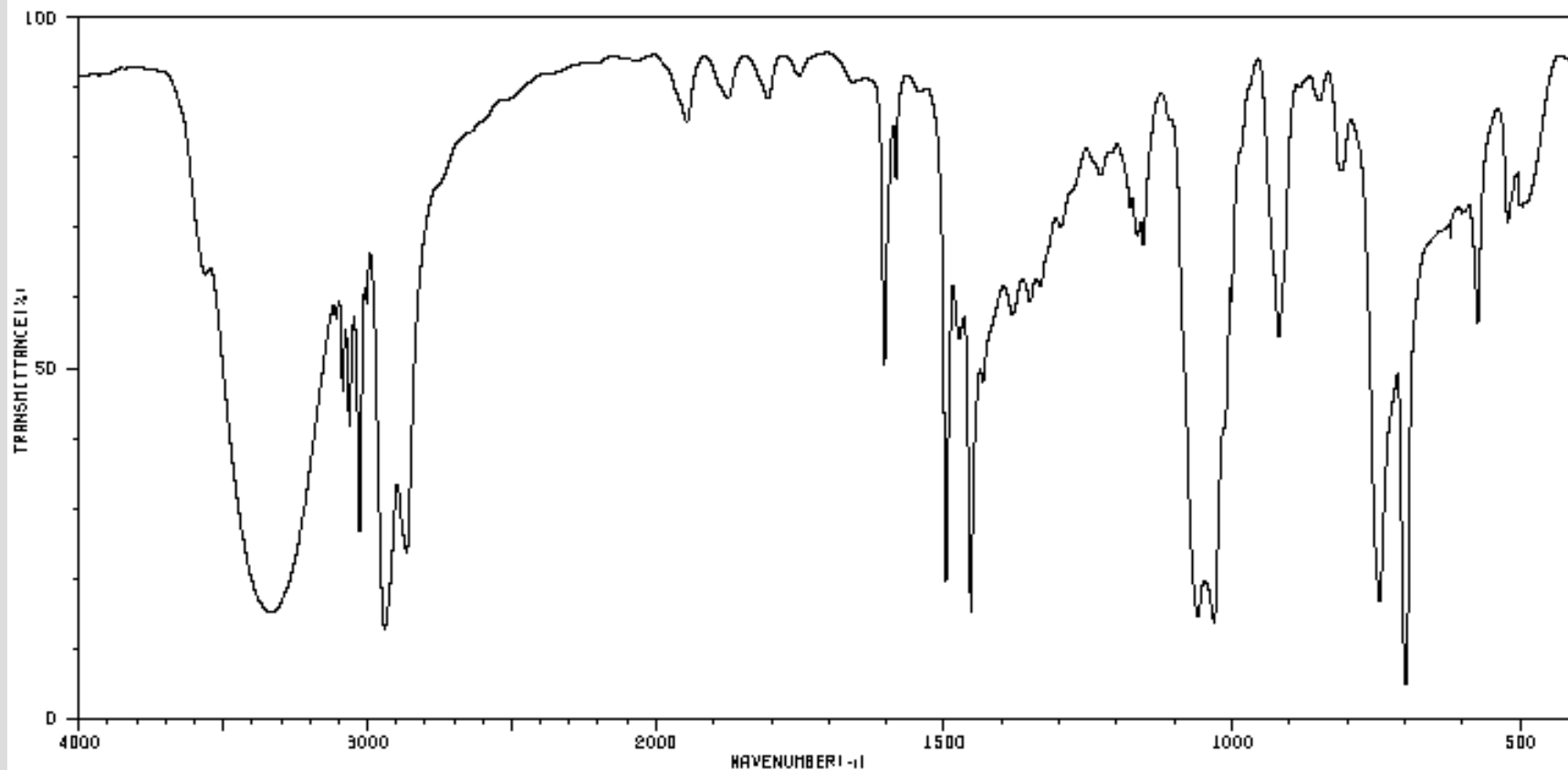
3101	72	2917	47	1699	46	1376	74	766	4
3081	58	2878	52	1573	72	1321	24	692	7
3055	58	2845	66	1492	14	1070	59	668	79
3034	60	2809	81	1462	58	1030	77	539	66
3021	64	2237	70	1452	58	1012	79	533	66
2978	22	2208	81	1442	39	914	66	522	72
2939	38	1673	81	1434	60	781	78	485	79



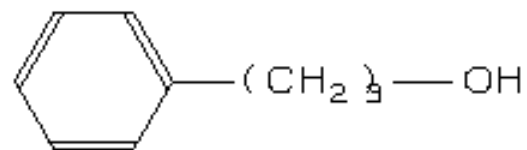
HIT-NO=1983 SCORE= () SDBS-NO=2671 IR-NIDA-00429 : LIQUID FILM

3-PHENYL-1-PROPANOL

$C_9H_{12}O$



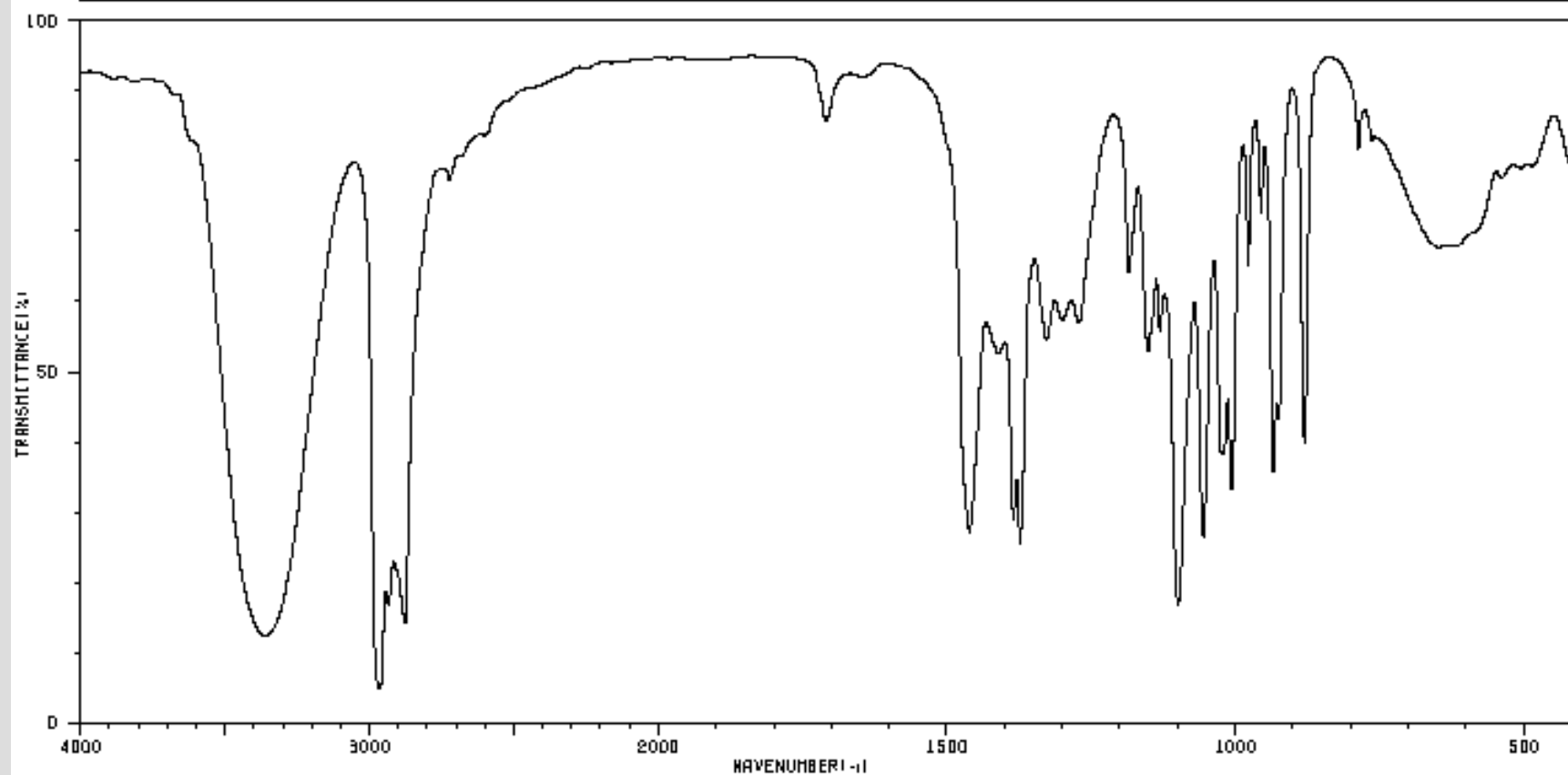
3336	14	2864	22	1382	66	1060	13	699	4
3108	55	1604	49	1351	57	1048	18	621	66
3086	44	1584	74	1297	88	1031	19	574	53
3063	39	1497	18	1229	74	1001	67	623	68
3027	25	1475	52	1178	70	918	52	505	70
3003	57	1454	14	1165	86	811	74	497	70
2941	12	1433	46	1154	64	746	16	492	70



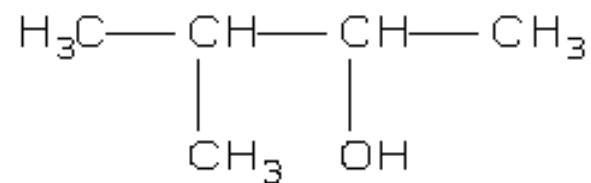
HIT-NO=4057 SCORE= () SDBS-NO=10240 IR-NIDA-63357 : LIQUID FILM

3-METHYL-2-BUTANOL

C₅H₁₂O



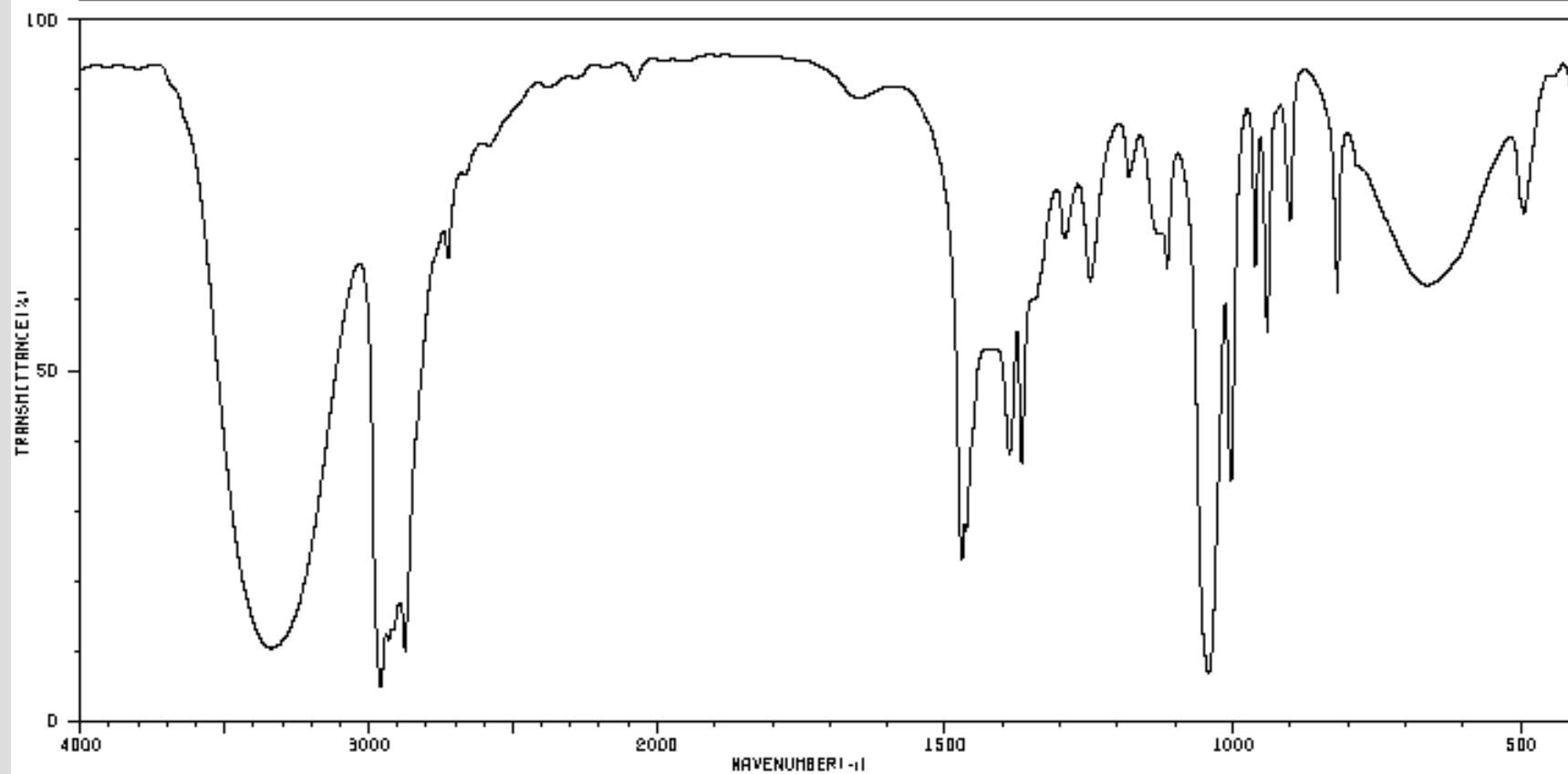
3358	12	1410	50	1162	60	966	70
2963	4	1385	27	1131	53	934	34
2934	16	1373	24	1099	16	925	42
2877	13	1327	52	1066	26	880	38
2722	74	1300	55	1024	36	787	79
1709	81	1272	55	1006	32		
1460	26	1186	62	977	62		



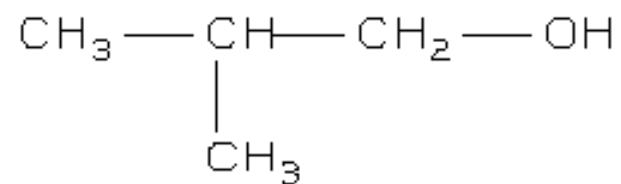
HIT-NO=1036 SCORE= () SDBS-NO=508 IR-NIDA-05128 : LIQUID FILM

2-METHYL-1-PROPANOL

C₄H₁₀O



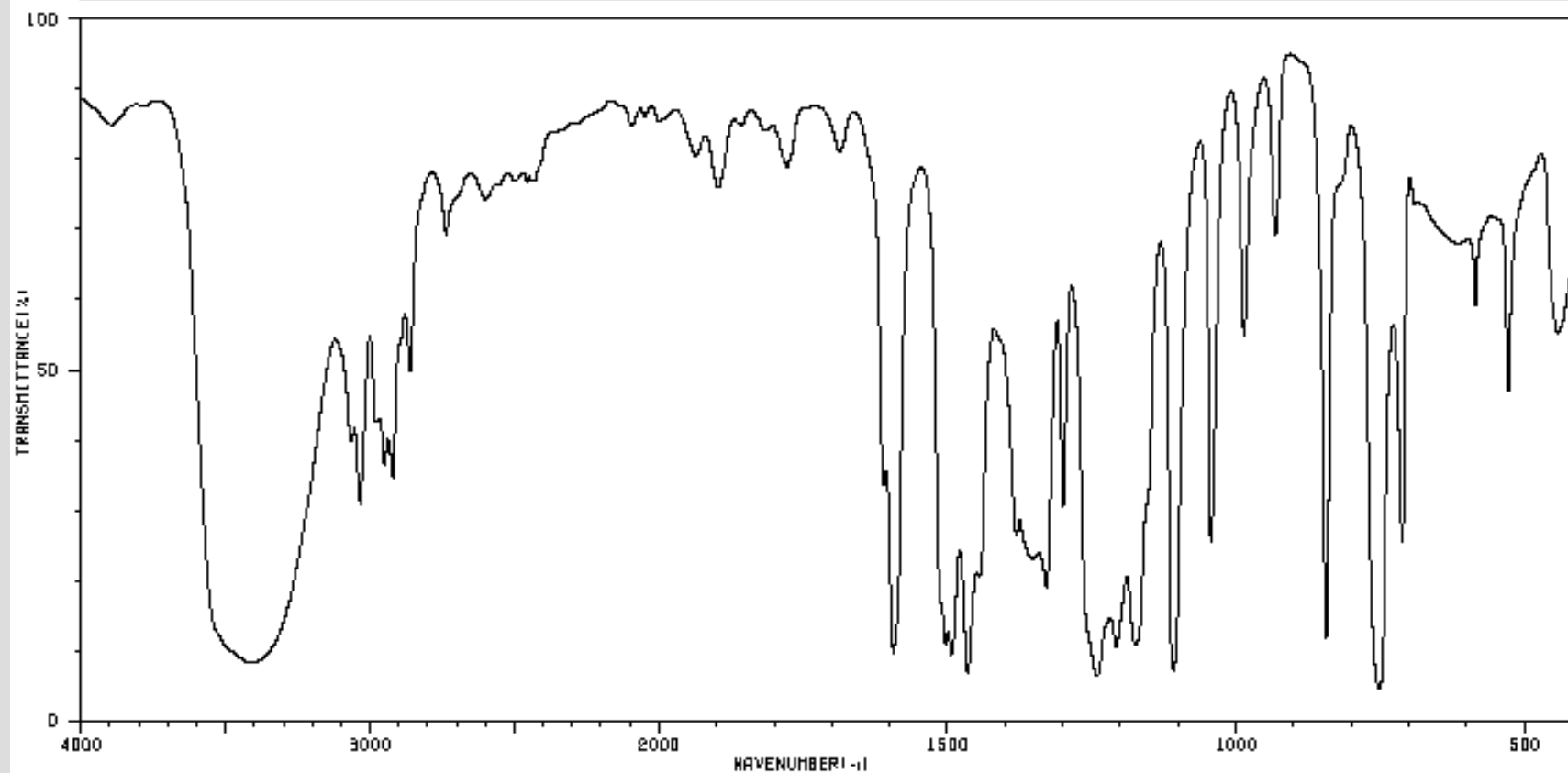
3347	10	1646	86	1182	74	941	63
3337	10	1471	22	1128	66	901	68
3326	10	1453	26	1123	86	819	58
2958	4	1389	36	1114	62	661	60
2931	10	1367	35	1042	6	495	70
2874	9	1293	66	1004	33		
2724	64	1248	60	961	62		



HIT-NO=1416 SCORE= () SDBS-NO=1368 IR-NIDA-05134 : LIQUID FILM

O-CRESOL

C₇H₈O



3408	6	2600	72	1694	9	1300	30	931	66
3063	38	2497	74	1503	10	1241	6	844	12
3033	30	2434	74	1494	9	1208	10	752	4
2950	36	1936	77	1466	7	1174	10	712	26
2920	34	1897	74	1381	26	1109	7	585	57
2861	49	1778	77	1342	23	1044	25	528	46
2736	66	1611	39	1329	18	986	63	442	63

