

Chemistry 283g- Experiment 5
Electrophilic Aromatic Substitution: A Friedel-Craft Acylation Reaction

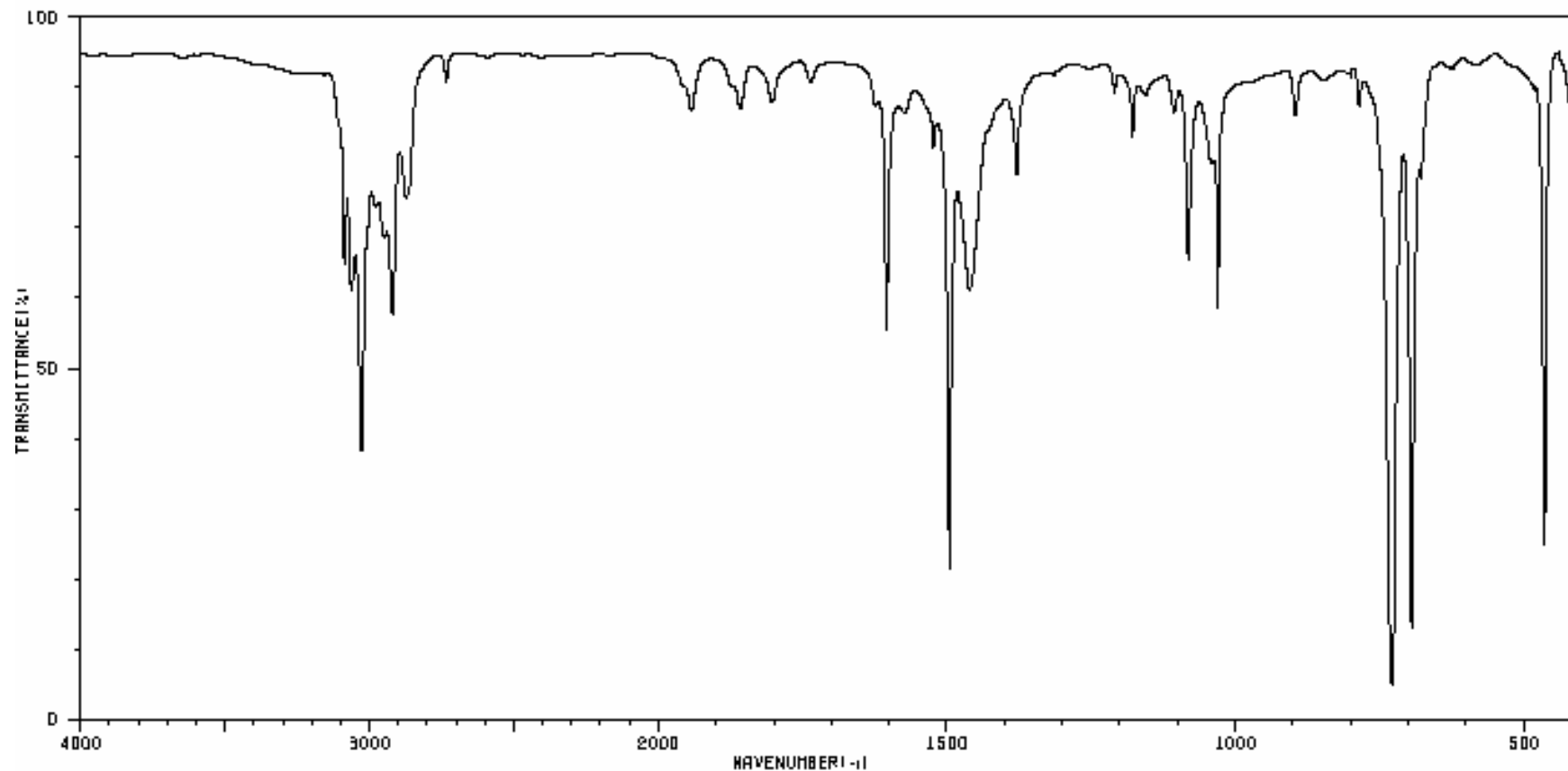
IR Spectral Data of the Unknowns A-D

Mass of the Products from Unknowns A-D

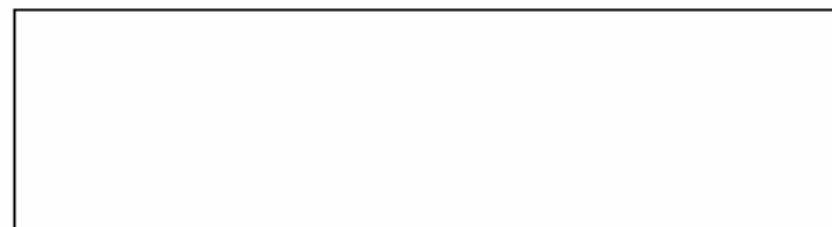
Data obtained from SDDBS

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IR Spectrum of Unknown A

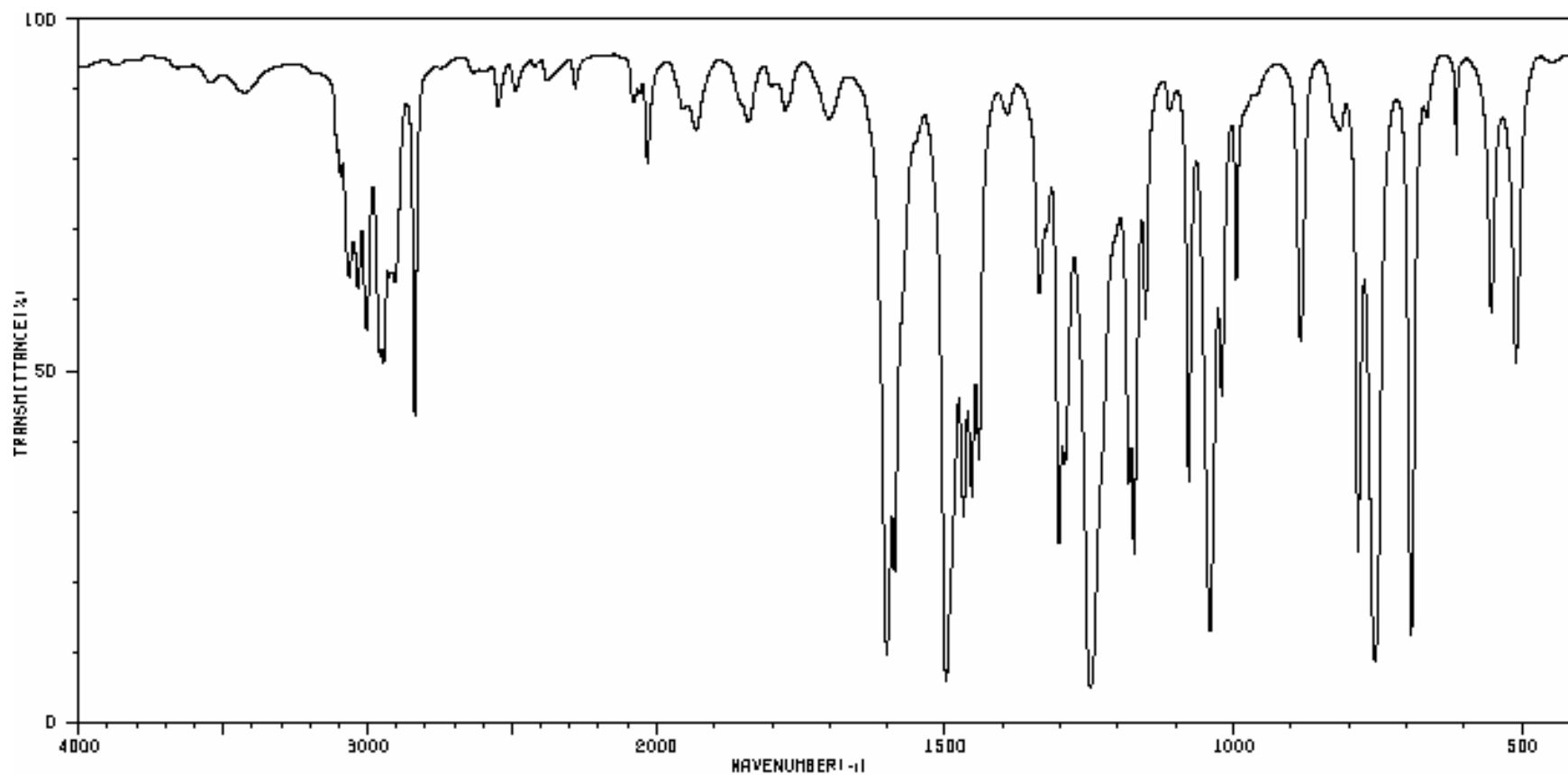


3087	62	1868	84	1210	86	896	81
3062	58	1803	84	1179	79	786	84
3028	37	1605	55	1156	86	729	4
2948	66	1624	79	1107	84	696	12
2920	55	1496	20	1082	82	678	74
2873	70	1461	58	1042	77	465	29
1942	84	1379	74	1030	67		



Molecular Mass after Friedel-Crafts acylation: 134

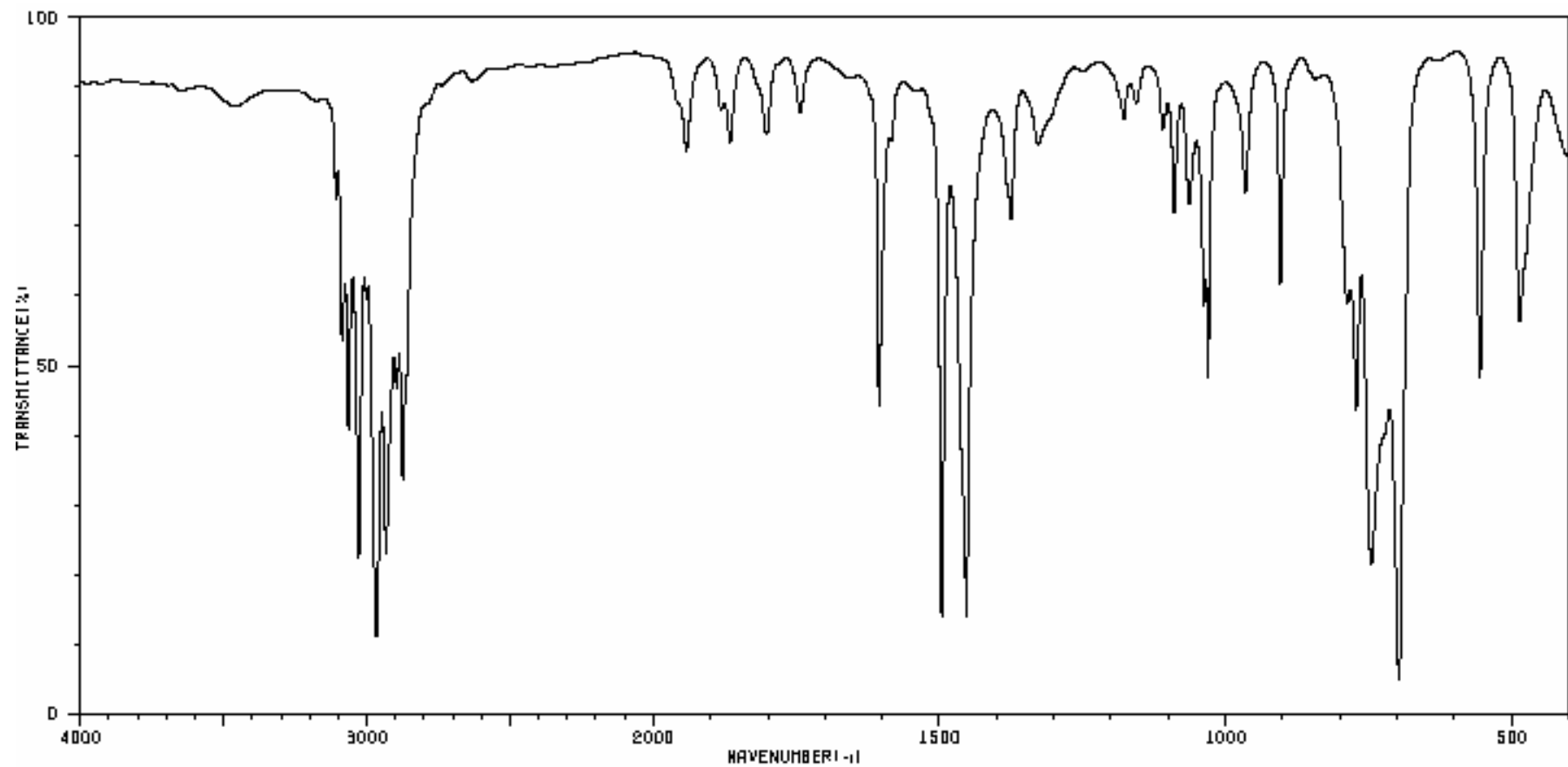
IR Spectrum of Unknown B



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

Molecular Mass after Friedel-Crafts acylation: 150

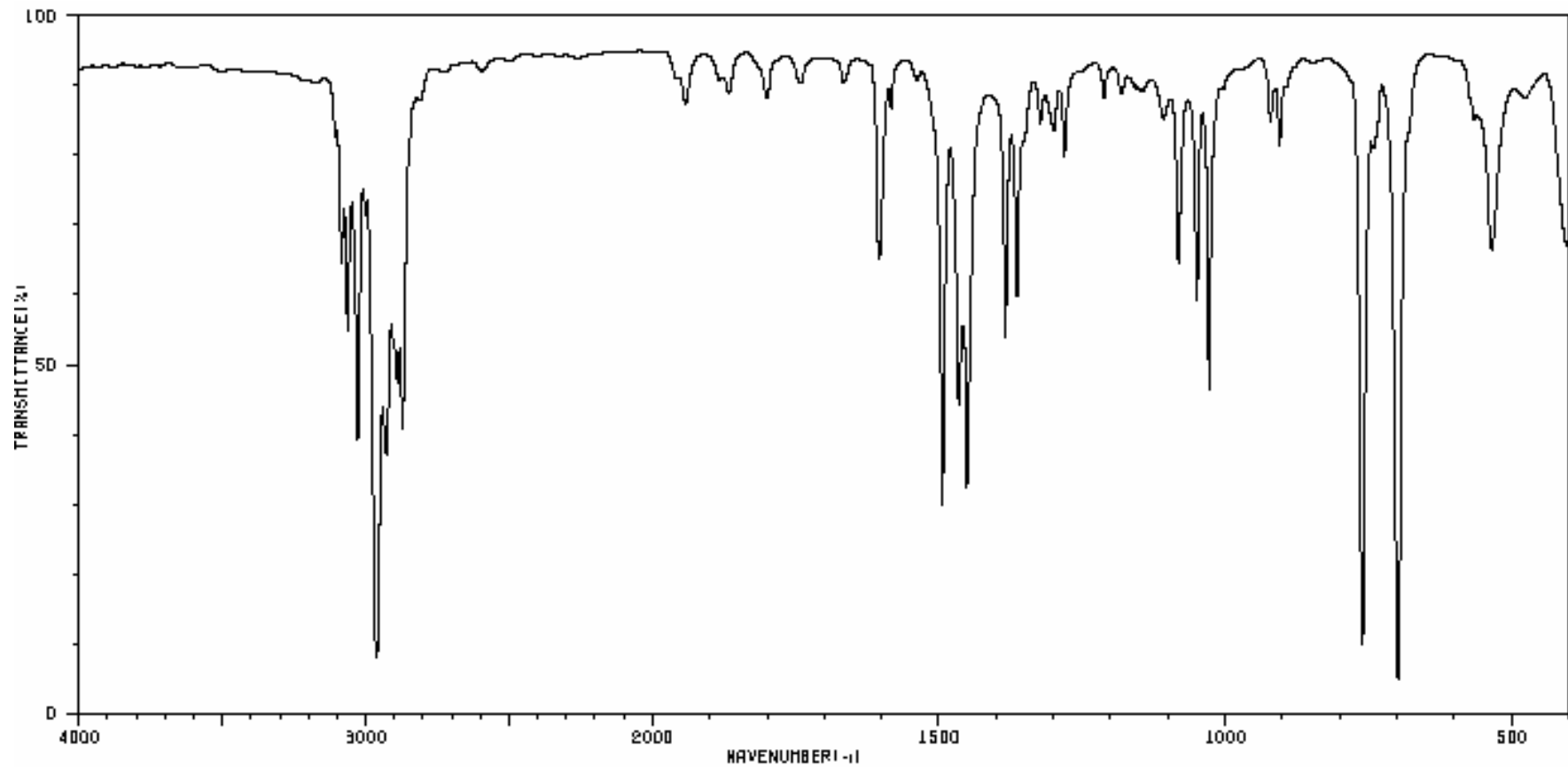
IR Spectrum of Unknown C



3468	84	2933	21	1802	79	1178	81	904	58
3108	70	2896	44	1744	84	1110	81	788	57
3087	52	2875	32	1806	42	1090	70	772	42
3066	39	1966	84	1496	13	1064	70	746	20
3028	21	1942	77	1453	13	1037	57	697	4
3003	57	1881	84	1376	88	1030	46	556	46
2967	10	1866	78	1329	79	966	72	486	53

Molecular Mass after Friedel-Crafts acylation: 148

IR Spectrum of Unknown D



3084	62	2871	39	1466	42	1281	77	1028	44
3064	53	1942	84	1458	53	1213	84	922	81
3028	37	1868	86	1452	31	1150	86	905	79
3002	68	1800	84	1384	62	1144	86	761	9
2961	7	1604	62	1364	57	1108	81	699	4
2927	35	1583	84	1323	81	1082	62	535	64
2890	46	1494	28	1300	81	1060	67	478	84

Molecular Mass after Friedel-Crafts acylation: 162