

LAMPIRAN

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Lampiran 1.

Perhitungan kadar vanilin dan aseton yang digunakan dalam sintesis GVT-0

$$\rho \text{ Aseton} = 0,791 \text{ gr/Cm}^{-3} \dots\dots\dots \text{Cm}^{-3} = \text{ml}$$

$$\rho \text{ Aseton} = 0,791 \text{ gr/ml} \dots\dots\dots \text{penggunaan aseton} = 1\text{ml}$$

$$1 \text{ ml aseton} \times 0,791 \frac{\text{gr}}{\text{ml}} = 0,791 \text{ gr} \dots\dots\dots \text{kandungan aseton 1ml} = 0,791 \text{ gr}$$

$$\text{mol} = \frac{\text{Massa}}{\text{Bobot Molekul (BM)}}$$

$$\text{mol aseton} = \frac{0,791}{58,08} = 0,0136 \text{ mol}$$

Jika perbandingan vanilin dan aseton adalah 2:1 maka,

$$2 \times 0,01361 = 0,02722 \text{ mol}$$

$$\text{Massa vanilin} = \text{mol vanilin} \times \text{BM vanilin}$$

$$\text{Massa vanilin} = 0,02722 \times 152,15 = 4,1415 \text{ gram}$$

Lampiran 2.

Perhitungan R_f Kromatografi lapis tipis. Rumus yang digunakan dari persamaan 2

$$R_f = \frac{\text{Jarak tempuh senyawa}}{\text{jarak eluen yang akan ditempuh}} \dots\dots\dots \text{Persamaan 2}$$

Nilai R_f GVT-0 :

$$R_f \text{ GVT} - 0 = \frac{3,5 \text{ cm}}{7 \text{ cm}} = \mathbf{0,5}$$

Nilai R_f Vanilin

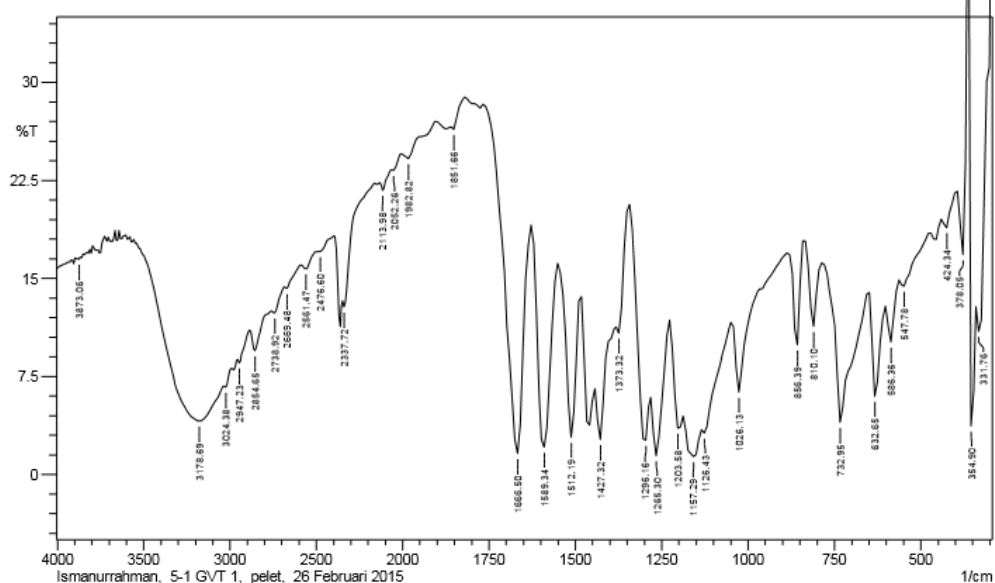
$$R_f \text{ Vanilin} = \frac{5 \text{ cm}}{7 \text{ cm}} = \mathbf{0,73}$$

Lampiran 3.

Hasil FTIR GVT-0



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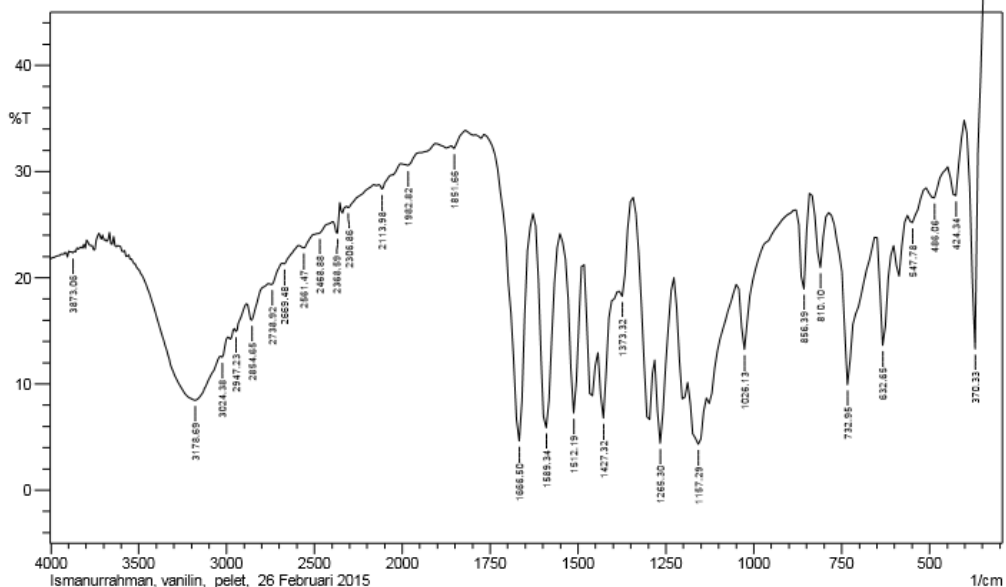
	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	331.76	10.946	8.917	339.47	293.18	29.784	5.581
2	354.9	3.703	35.26	362.62	339.47	27.143	11.19
3	378.05	16.81	6.393	393.48	370.33	16.292	1.595
4	424.34	18.866	1.46	439.77	401.19	26.946	0.558
5	547.78	14.374	1.13	563.21	478.35	66.94	0.986
6	586.36	10.091	3.573	601.79	563.21	35.04	2.133
7	632.65	5.982	7.138	648.08	609.51	40.755	6.175
8	732.95	3.96	11.217	779.24	655.8	126.233	23.748
9	810.1	11.3	5.689	833.25	786.96	39.347	3.522
10	856.39	9.885	7.545	879.54	840.96	33.648	4.373
11	1026.13	6.273	5.553	1041.56	887.26	137.169	5.831
12	1126.43	3.124	1.023	1134.14	1049.28	98.151	1.164
13	1157.29	1.343	2.499	1188.15	1134.14	90.607	13.959
14	1203.58	3.506	3.873	1226.73	1188.15	50.097	4.451
15	1265.3	1.427	6.035	1280.73	1234.44	63.763	13.723
16	1296.16	2.581	4.736	1342.46	1288.45	63.528	8.341
17	1373.32	10.787	2.69	1381.03	1350.17	25.638	1.23
18	1427.32	2.661	5.196	1442.75	1388.75	63.354	6.771
19	1512.19	2.815	11.361	1543.05	1489.05	60.881	14.994
20	1589.34	2.052	14.897	1620.21	1550.77	81.454	27.603
21	1666.5	1.58	20.156	1759.08	1627.92	123.088	39.131
22	1851.66	26.395	1.72	1897.95	1820.8	43.652	1.004
23	1982.82	24.133	0.944	2005.97	1905.67	59.54	0.554
24	2052.26	23.255	0.375	2067.69	2013.68	33.744	0.237
25	2113.98	21.727	0.822	2129.41	2067.69	39.982	0.413
26	2337.72	12.802	0.878	2345.44	2167.99	127.075	0.412
27	2476.6	17.021	0.214	2492.03	2399.45	69.79	0.177
28	2561.47	15.733	0.528	2584.61	2492.03	72.839	0.575
29	2669.48	14.211	0.401	2684.91	2592.33	76.038	0.344
30	2738.92	12.345	0.509	2754.35	2684.91	60.933	0.464
31	2854.65	9.461	1.766	2877.79	2762.06	110.337	2.756
32	2947.23	8.523	0.521	2954.95	2885.51	70.208	0.755
33	3024.38	6.659	0.344	3032.1	2993.52	43.675	0.39
34	3178.69	4.055	5.684	3556.74	3039.81	575.579	79.283
35	3873.06	16.448	0.195	3888.49	3849.92	30.094	0.126

Lampiran 3.

Hasil FTIR Vanilin



Lab. Kimia Organik FMIPA - UGM



	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	370.33	13.26	71.23	393.48	324.04	25.13	20.94
2	424.34	27.7	4.92	447.49	401.19	23.9	1.56
3	486.06	27.49	1.69	509.21	455.2	29.3	0.59
4	547.78	25.18	1.47	563.21	516.92	26.79	0.63
5	632.65	13.6	9.51	648.08	609.51	28.96	4.16
6	732.95	9.93	15.22	786.96	655.8	94.87	15.57
7	810.1	20.96	5.56	833.25	794.67	24.15	1.9
8	856.39	18.94	8.37	879.54	840.96	24.58	2.83
9	1026.13	13.25	6.41	1041.56	887.26	101.83	3.33
10	1157.29	4.31	7.86	1188.15	1049.28	138.39	20.88
11	1265.3	4.39	10.04	1280.73	1234.44	46.92	9.73
12	1373.32	18.24	2.59	1381.03	1350.17	20.11	0.77
13	1427.32	6.78	7.8	1442.75	1388.75	47.68	4.93
14	1512.19	7.25	14.78	1543.05	1489.05	45.81	10.29
15	1589.34	5.86	18.7	1620.21	1550.77	60.98	18.53
16	1666.5	4.6	23.59	1759.08	1627.92	95.37	25.36
17	1851.66	32.16	1.21	1897.95	1820.8	37.42	0.57
18	1982.82	30.56	0.62	2005.97	1905.67	50.27	0.3
19	2113.98	28.32	0.69	2129.41	2013.68	61.4	0.51
20	2306.86	26.6	0.21	2314.58	2167.99	81.68	0.11
21	2368.59	24.19	2.17	2391.73	2353.16	23.08	0.72
22	2468.88	24.12	0.11	2476.6	2399.45	46.71	0.01
23	2561.47	22.82	0.48	2584.61	2492.03	58.38	0.36
24	2669.48	21.27	0.35	2684.91	2592.33	60.66	0.21
25	2738.92	19.35	0.49	2754.35	2684.91	48.11	0.29
26	2854.65	15.98	1.85	2877.79	2762.06	86.43	1.71
27	2947.23	14.92	0.56	2954.95	2885.51	54.81	0.44
28	3024.38	12.51	0.43	3032.1	2993.52	33.6	0.26
29	3178.69	8.46	6.66	3556.74	3039.81	461.49	58.2
30	3873.06	22.31	0.26	3888.49	3849.92	25.01	0.13