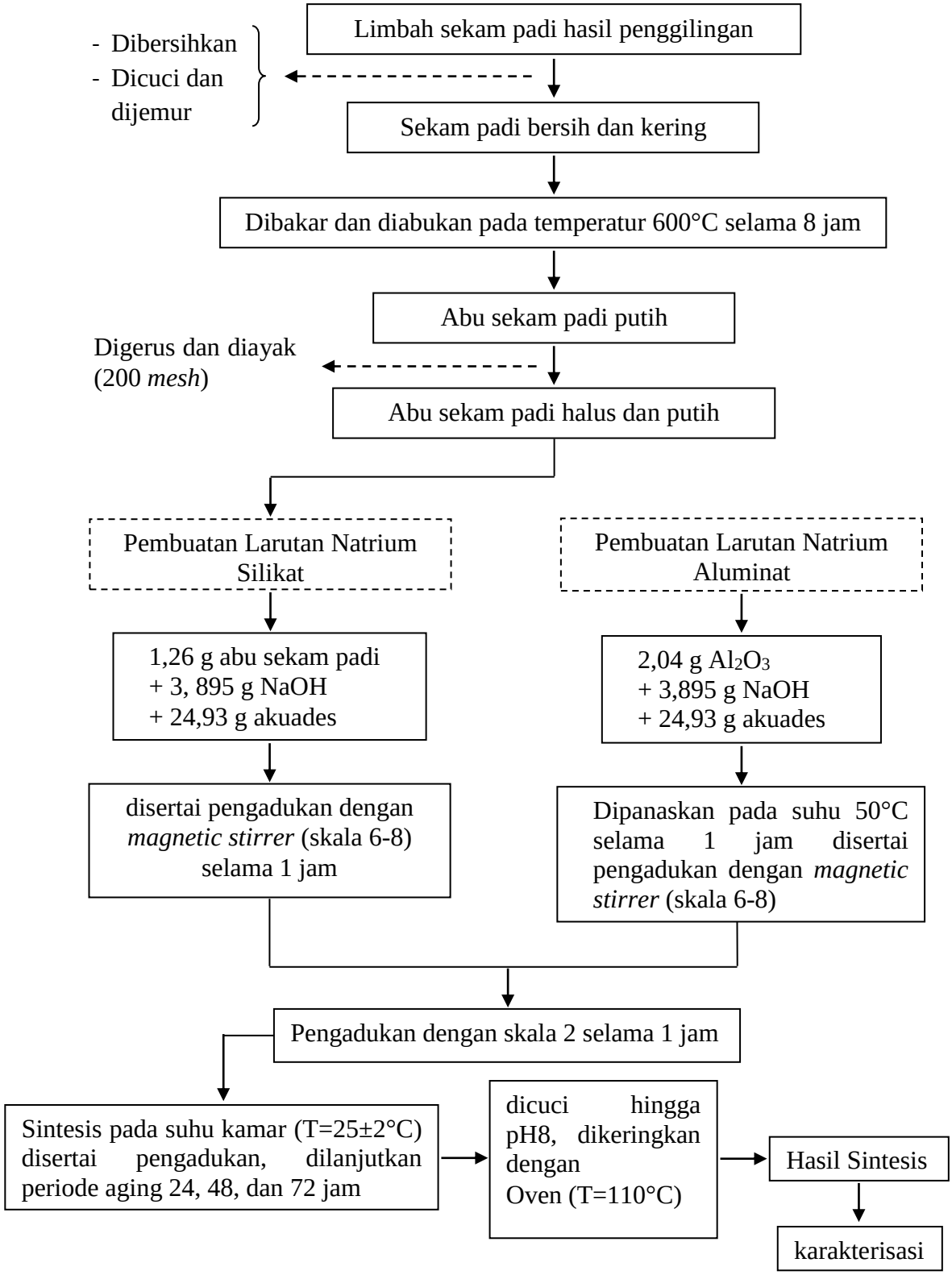
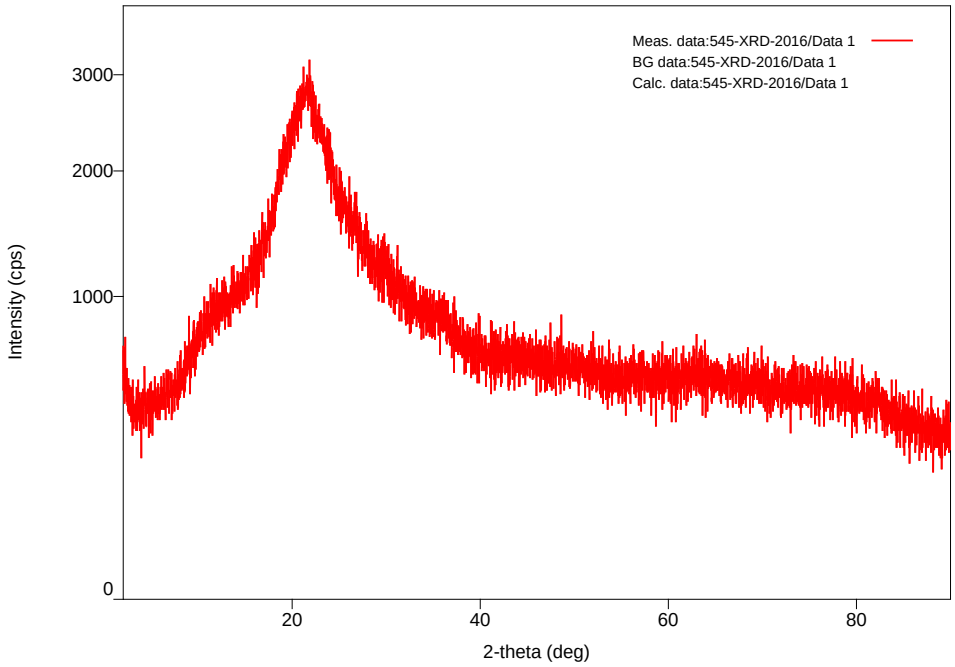
Lampiran 1.

Diagram Kerja



Lampiran 2.

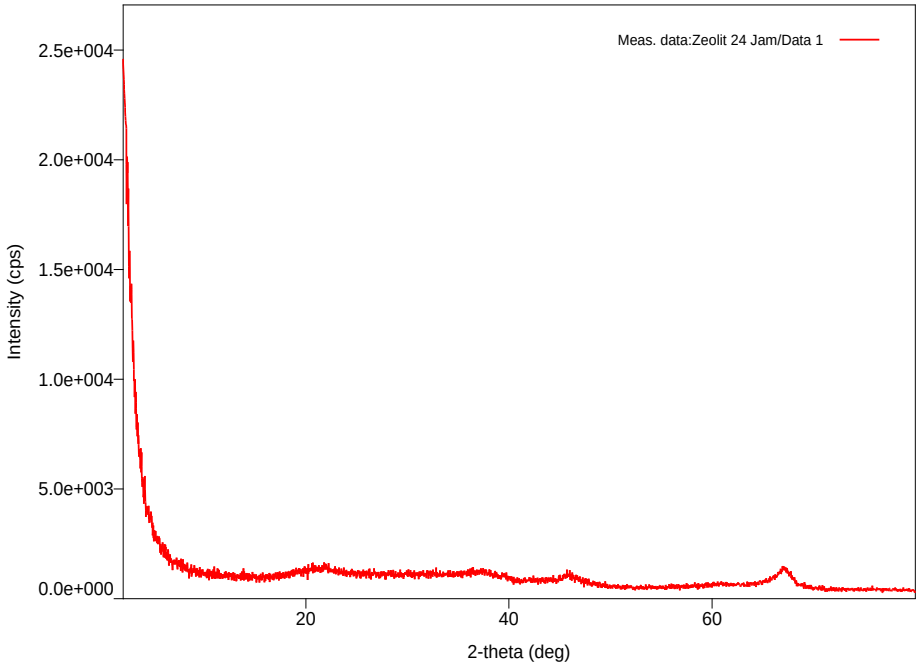
Difraktogram Abu Sekam Padi



No.	2-theta (deg)	d (ang.)	Height (cps)	FWHM (deg)	Int. I (cps deg)	Int. W (deg)	Asym. factor
1	21.16(6)	4.194(12	1587(115)	8.69(13)	26511(386)	16.7(1	0.75(3)

Lampiran 3.

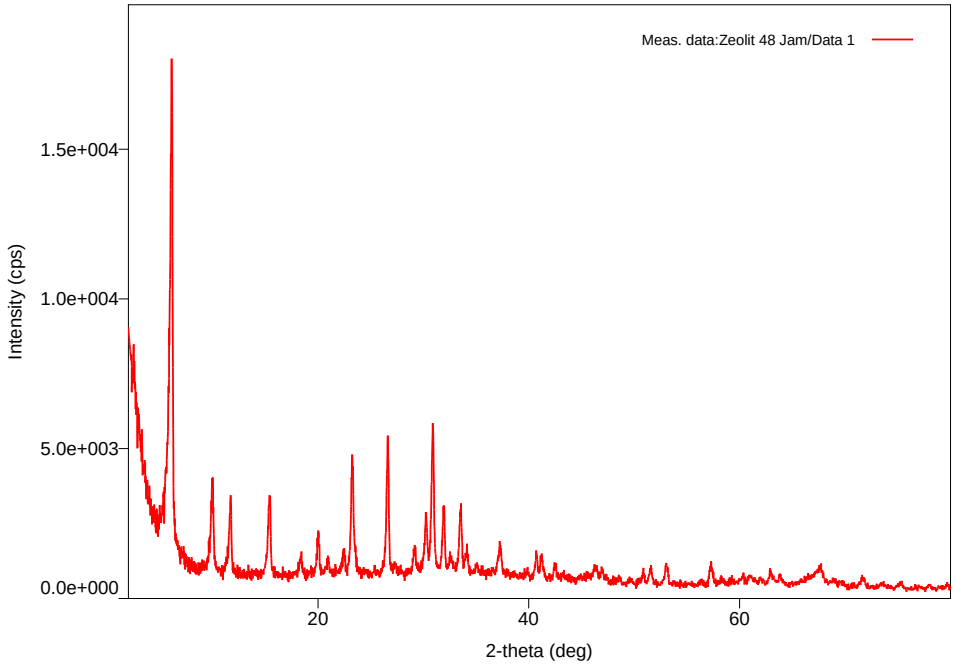
Difraktogram Serbuk Hasil Sintesis dengan Waktu *Aging* 24 Jam



No.	2-theta(deg)	d(ang.)	Height (cps)	FWHM(deg)	Int. I (cps deg)	Int. W(deg)	Asym. factor
1	45.84(15)	1.978(6)	224(43)	2.06(17)	622(39)	2.8(7)	0.7(2)
2	67.23(7)	1.3913(13)	426(60)	3.71(12)	2912(50)	6.8(11)	2.8(3)

Lampiran 4.

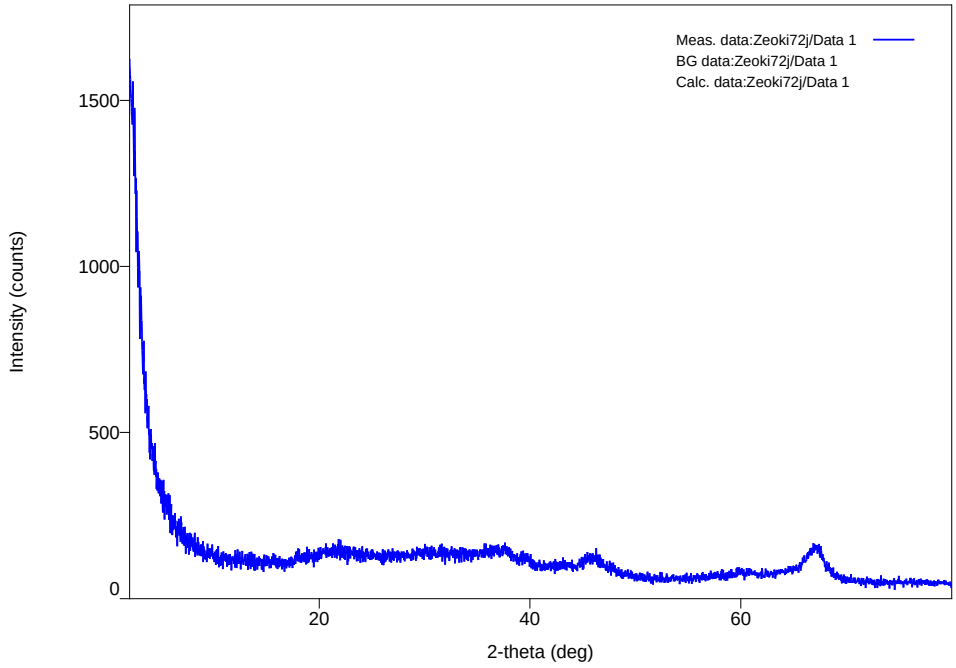
Difraktogram Serbuk Hasil Sintesis dengan Waktu *Aging* 48 Jam



No.	2-theta (deg)	D (ang.)	Height (cps)	FWHM(deg)	Int. I (cps deg)	Int. W(deg)	Asym. factor
1	6.133(7)	14.400(17)	11359(308	0.261(11)	5054(69)	0.445(18)	2.0(3)
2	10.011(13)	8.829(11)	1806(123)	0.303(11)	605(26)	0.34(4)	2.2(4)
3	11.741(13)	7.531(8)	1534(113)	0.253(11)	443(21)	0.29(3)	3.2(8)
4	15.435(13)	5.736(5)	1811(123)	0.280(12)	702(18)	0.39(4)	2.5(7)
5	20.06(3)	4.424(6)	814(82)	0.24(2)	215(23)	0.26(5)	2.4(14)
6	20.95(2)	4.237(4)	326(52)	0.16(3)	77(11)	0.23(7)	0.6(3)
7	22.49(3)	3.950(6)	465(62)	0.26(4)	145(16)	0.31(8)	4(5)
8	23.279(9)	3.8180(15)	2640(148)	0.249(13)	934(22)	0.35(3)	2.0(5)
9	26.638(11)	3.3437(13)	3096(161)	0.228(9)	913(18)	0.29(2)	2.5(6)
10	29.16(4)	3.060(4)	490(64)	0.24(3)	127(16)	0.26(7)	1.4(8)
11	30.270(14)	2.9503(13)	1162(98)	0.267(15)	392(15)	0.34(4)	2.1(5)
12	30.917(7)	2.8900(7)	3383(168)	0.226(8)	946(23)	0.28(2)	2.9(6)
13	31.928(18)	2.8008(16)	1384(107)	0.224(14)	344(19)	0.25(3)	1.8(6)
14	33.534(17)	2.6702(13)	1411(108)	0.242(14)	387(15)	0.27(3)	1.6(4)
15	34.117(12)	2.6259(9)	402(58)	0.26(4)	119(12)	0.30(7)	2.2(16)
16	37.28(3)	2.410(2)	649(74)	0.33(3)	256(16)	0.39(7)	2.1(11)
17	40.71(5)	2.215(3)	525(66)	0.24(4)	141(15)	0.27(6)	1.2(9)
18	41.16(5)	2.191(2)	491(64)	0.27(4)	148(16)	0.30(7)	0.6(5)
19	46.18(9)	1.964(4)	195(40)	0.92(13)	220(27)	1.1(4)	0.2(2)
20	51.58(6)	1.770(2)	302(50)	0.44(9)	251(20)	0.8(2)	3(2)
21	53.025(18)	1.7256(6)	600(71)	0.21(3)	188(9)	0.31(5)	1.0(4)
22	57.23(4)	1.6084(11)	471(63)	0.27(3)	137(14)	0.29(7)	0.8(5)

Lampiran 5.

Difraktogram Serbuk Hasil Sintesis dengan Waktu *Aging* 72 Jam



No.	2-theta(deg)	d(ang.)	Height(cps)	FWHM(deg)	Int.I(cps deg)	Int. W(deg)	Asym. factor
1	20.5(6)	4.32(12)	45(7)	8.9(5)	448(39)	10(2)	1.2(3)
2	46.01(18)	1.971(7)	20(4)	2.03(16)	43(5)	2.2(7)	0.9(3)
3	67.12(8)	1.3934(15)	48(7)	3.33(13)	282(6)	5.9(10)	2.1(3)

Lampiran 6.

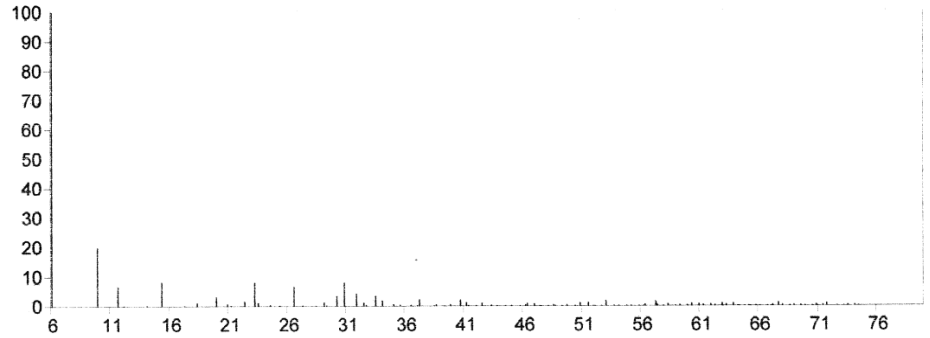
Data Standar Analisis XRD

PDF Card No.: 01-073-9586 Quality:B

Sub-File Name:	Inorganic, Zeolite, ICSD Pattern
Formula:	Na88 (Al88 Si104 O386) (H2 O)194.54
Name:	Zeolite X (Na), Sodium tecto-alumosilicate hydrate I/Ic (RIR)= 7.20
Crystal System:	Cubic Space Group: Fd-3(203) Dmeas:
Cell Parameters:	a= 25.0310 b= 25.0310 c= 25.0310
	Alpha= 90.000 Beta= 90.000 Gamma= 90.000
	Volume= 15683.197 Z= 1
Reference:	Calestani, G., Bacca, G., Andreetti, G.D. Zeolites7(1987)54.
Radiation:	CuKalpha1 Wavelength= 1.54060
2Theta range:	6.11 - 74.51

Database comments: Analysis: H389.08 Al88 Na88 O580.54 Si104. Formula from original source: Na88 (Al88 Si104 O386) (H2 O)194.54. ICSD Collection Code: 65500. Test from external database: Deviation of the charge sum from zero tolerable. Minor Warning: Minor test comments from ICSD exist. Significant Warning: Density calculated using chemical formula and reported structure differ by 8.2824%. Reported displacement parameters on non H atoms are outside the range 0.001<U<0.1. Ueq=0.012 used in the calculation. Wyckoff Sequence:

Relative Intensity



No.	2Theta	d-Value	Intensity	h	k	l	No.	2Theta	d-Value	Intensity	h	k	l
1	6.11	14.452	100.0	1	1	1	21	29.40	3.035	0.2	6	4	4
2	9.99	8.850	19.8	2	2	0	22	30.27	2.950	3.4	8	2	2
3	11.72	7.547	6.5	3	1	1	23	30.91	2.890	7.9	1	5	7
4	12.24	7.226	0.1	2	2	2	24	31.95	2.799	4.2	0	4	8
5	14.14	6.258	0.2	4	0	0	25	32.56	2.748	1.1	3	5	7
6	15.42	5.743	8.1	3	3	1	26	32.76	2.731	0.3	8	4	2
7	17.34	5.109	0.1	4	2	2	27	33.56	2.668	3.4	6	6	4
8	18.40	4.817	1.0	5	1	1	28	34.14	2.624	1.7	1	3	9
9	20.05	4.425	3.1	4	4	0	29	35.10	2.555	0.5	8	4	4
10	20.98	4.231	0.6	1	3	5	30	35.66	2.516	0.3	9	3	3
11	21.28	4.172	0.1	4	4	2	31	36.58	2.454	0.2	8	6	2
12	22.45	3.958	1.5	0	2	6	32	37.12	2.420	0.2	1	5	9
13	23.28	3.817	7.9	5	3	3	33	37.30	2.409	2.2	6	6	6
14	23.66	3.774	1.0	6	2	2	34	38.54	2.334	0.1	9	5	3
15	24.62	3.613	0.3	4	4	4	35	38.71	2.324	0.4	8	6	4
16	25.39	3.505	0.2	7	1	1	36	39.40	2.285	0.1	2	4	10
17	26.63	3.345	6.6	2	4	6	37	39.91	2.257	0.5	11	1	1
18	27.35	3.259	0.2	5	5	3	38	40.75	2.212	2.0	8	8	0
19	28.50	3.129	0.1	8	0	0	39	41.25	2.187	1.2	1	3	11
20	29.18	3.058	1.2	7	3	3	40	41.41	2.179	0.2	8	8	2

Note: 2theta are calculated with wavelength = 1.54059

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PDF Card No.: 01-073-9586 Quality:B

No.	2Theta	d-Value	Intensity	h	k	l	No.	2Theta	d-Value	Intensity	h	k	l
41	42.06	2.146	0.2	0	6	10	101	69.61	1.350	0.3	2	12	14
42	42.55	2.123	1.0	11	3	3	102	69.95	1.344	0.2	13	13	3
43	43.34	2.086	0.3	12	0	0	103	70.53	1.334	0.1	12	12	8
44	43.82	2.065	0.2	1	5	11	104	70.88	1.329	0.3	3	11	15
45	44.59	2.030	0.1	4	6	10	105	70.99	1.327	0.1	4	12	14
46	45.06	2.011	0.2	11	5	3	106	71.45	1.319	0.3	0	6	18
47	45.82	1.979	0.1	12	4	0	107	71.79	1.314	0.9	5	7	17
48	46.27	1.961	0.4	9	9	1	108	72.70	1.300	0.1	1	3	19
49	46.42	1.955	0.8	2	4	12	109	73.27	1.291	0.1	18	6	4
50	47.02	1.931	0.7	2	8	10	110	73.61	1.286	0.3	17	9	3
51	47.46	1.914	0.1	9	9	3	111	74.18	1.277	0.3	16	8	8
52	47.61	1.909	0.1	10	6	6	112	74.51	1.272	0.1	15	9	9
53	48.19	1.887	0.1	12	4	4							
54	48.63	1.871	0.4	9	7	7							
55	48.77	1.866	0.1	4	8	10							
56	49.35	1.845	0.1	12	6	2							
57	49.77	1.830	0.4	13	3	3							
58	50.48	1.806	0.2	8	8	8							
59	50.90	1.793	1.0	5	7	11							
60	51.60	1.770	1.1	0	2	14							
61	52.01	1.757	0.1	11	9	1							
62	52.15	1.753	0.1	14	2	2							
63	52.70	1.736	0.1	12	8	0							
64	53.10	1.723	1.6	3	9	11							
65	53.78	1.703	0.2	12	6	6							
66	54.18	1.691	0.2	13	5	5							
67	54.85	1.672	0.2	12	8	4							
68	55.25	1.661	0.2	3	7	13							
69	55.90	1.643	0.1	14	6	0							
70	56.30	1.633	0.1	1	3	15							
71	56.43	1.629	0.5	2	6	14							
72	57.33	1.606	1.5	11	11	1							
73	57.46	1.602	0.4	6	8	12							
74	57.98	1.589	0.1	14	6	4							
75	58.36	1.580	0.6	7	9	11							
76	58.99	1.564	0.2	16	0	0							
77	59.37	1.555	0.3	15	5	3							
78	60.00	1.541	0.3	16	2	2							
79	60.38	1.532	0.8	11	11	5							
80	61.00	1.518	0.7	0	4	16							
81	61.37	1.509	0.4	5	9	13							
82	61.99	1.496	0.5	12	10	6							
83	62.36	1.488	0.3	11	9	9							
84	62.97	1.475	0.8	12	12	0							
85	63.33	1.467	0.5	17	1	1							
86	63.91	1.455	0.8	14	10	0							
87	64.30	1.448	0.1	3	11	13							
88	64.42	1.445	0.1	2	10	14							
89	64.90	1.436	0.1	12	12	4							
90	65.26	1.429	0.1	15	9	1							
91	65.38	1.426	0.1	16	6	4							
92	65.85	1.417	0.1	4	10	14							
93	66.21	1.410	0.1	17	5	1							
94	66.80	1.399	0.1	0	8	16							
95	67.16	1.393	0.1	3	5	17							
96	67.27	1.391	0.3	16	8	2							
97	67.74	1.382	1.1	0	2	18							
98	68.09	1.376	0.4	5	9	15							
99	68.68	1.366	0.2	4	8	16							
100	69.03	1.360	0.4	17	5	5							

Note: 2theta are calculated with wavelength = 1.54059

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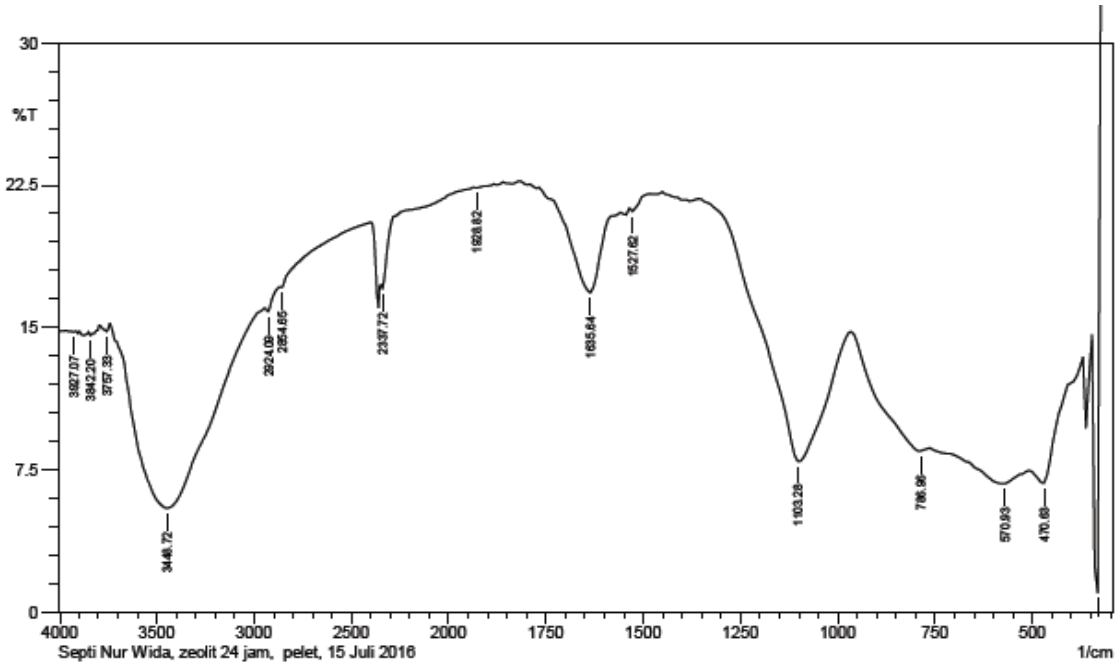
Lampiran 7.

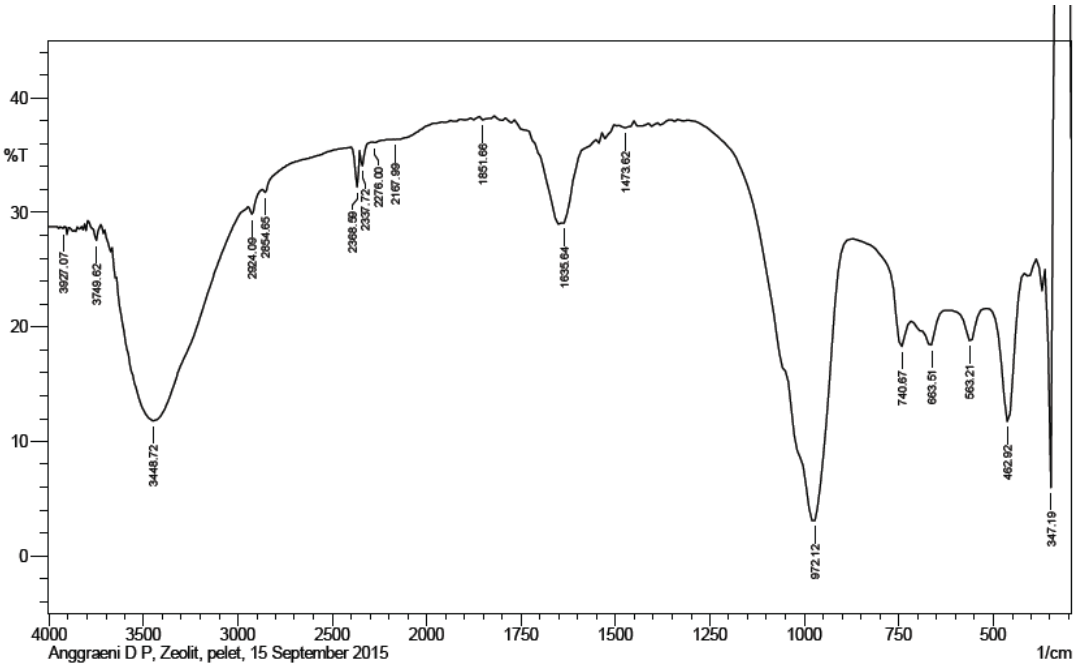
Spektrum Serbuk Hasil Sintesis dengan Waktu *Aging* 24 Jam



	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	331.76	1.018	30.971	347.19	316.33	33.881	18.295
2	470.63	6.789	1.975	501.49	378.05	126.315	3.293
3	570.93	6.741	0.998	763.81	509.21	285.437	6.175
4	786.96	8.474	0.619	964.41	771.53	189.452	5.713
5	1103.28	7.933	9.215	1350.17	972.12	326.921	43.983
6	1527.62	21.1	0.311	1535.34	1489.05	30.795	0.112
7	1635.64	16.821	4.736	1789.94	1558.48	161.947	8.683
8	1928.82	22.352	0.034	1936.53	1882.52	35.048	0.031
9	2337.72	17.029	0.326	2345.44	1936.53	276.089	0.061
10	2854.65	17.098	0.125	2870.08	2399.45	336.498	0.034
11	2924.09	15.833	0.395	2939.52	2870.08	54.314	0.21
12	3448.72	5.449	9.917	3734.19	2947.23	799.332	162.212
13	3757.33	14.767	0.385	3788.19	3741.9	38.232	0.277
14	3842.2	14.573	0.249	3849.92	3795.91	44.879	0.316
15	3927.07	14.749	0.046	3965.65	3919.35	38.438	0.026

Lampiran 8.

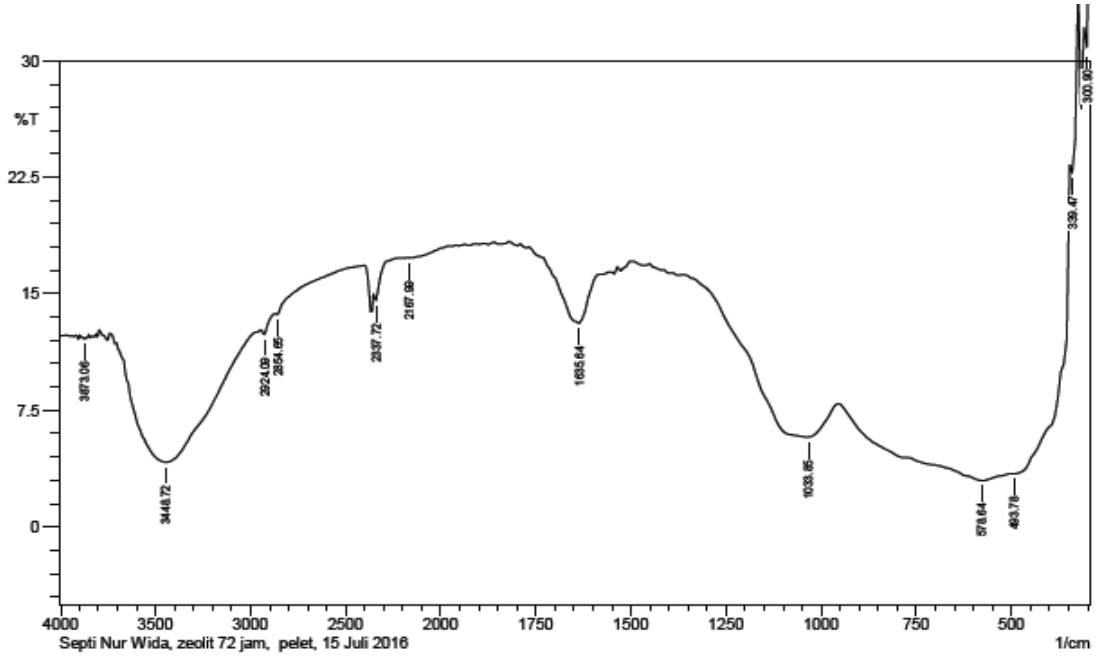
Spektrum Serbuk Hasil Sintesis dengan Waktu *Aging* 48 Jam



	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	347.19	5.95	48.5	362.62	316.33	20.7	10.55
2	462.92	11.72	11.35	509.21	424.34	64.23	10.11
3	563.21	18.79	2.73	609.51	516.92	63.63	1.87
4	663.51	18.4	2.57	709.8	632.65	54.37	1.93
5	740.67	18.27	3.3	871.82	717.52	95.25	1.63
6	972.12	3.07	26.85	1303.88	879.54	295.71	88.37
7	1473.62	37.37	0.37	1489.05	1450.47	16.41	0.12
8	1635.64	29.05	7.8	1766.8	1558.48	98.2	8.37
9	1851.66	38.08	0.3	1859.38	1820.8	16.12	0.09
10	2167.99	36.35	0.07	2175.7	1982.82	83.61	0.51
11	2276	36.06	0.07	2283.72	2191.13	40.79	0.01
12	2337.72	34.07	1.5	2353.16	2291.43	27.85	0.33
13	2368.59	32.18	3.31	2399.45	2353.16	21.65	0.83
14	2854.65	31.72	0.24	2862.36	2399.45	213.78	0.03
15	2924.09	29.84	0.88	2939.52	2870.08	35.32	0.28
16	3448.72	11.76	16.21	3664.75	2947.23	518.72	129.17
17	3749.62	27.55	1.25	3788.19	3734.19	29.59	0.45
18	3927.07	28.57	0.17	3965.65	3919.35	25.12	0.05

Lampiran 9.

Spektrum Serbuk Hasil Sintesis dengan Waktu *Aging* 72 Jam



	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	300.9	30.889	14.949	324.04	293.18	14.494	3.294
2	339.47	22.764	4.33	347.19	324.04	13.165	1.192
3	493.78	3.404	1.018	501.49	347.19	189.038	30.407
4	578.64	2.969	1.226	948.98	501.49	615.366	39.231
5	1033.85	5.765	3.747	1357.89	956.69	414.596	35.318
6	1635.64	13.083	3.681	1766.8	1581.63	150.636	8.488
7	2167.99	17.306	0.036	2175.7	1959.68	162.843	0.494
8	2337.72	14.552	0.653	2353.16	2191.13	126.092	0.27
9	2854.65	13.669	0.145	2870.08	2399.45	377.297	0.052
10	2924.09	12.385	0.448	2939.52	2870.08	61.26	0.289
11	3448.72	4.135	8.364	3734.19	2947.23	889.541	179.816
12	3873.06	12.086	0.168	3888.49	3849.92	35.28	0.148