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LAMPIRAN

Lampiran 1. Nilai MOE pada kayu akasia (D3)

No.	Sampel	Mean Tebal (cm)	Mean Lebar (cm)	$\Delta P/\Delta Y$ (kg/cm)	MOE (kg/cm ²)	Kode
1	A1	2.041	2.113	183.51	56059	1
2	A2	1.9845	2	207.74	72938	2
3	A3	1.961	2	185.21	67393	3
4	A4	1.9785	1.9605	188.88	68269	4
5	A5	1.968	1.9945	222.18	80207	5
6	A6	2.0095	1.994	246.2	83505	6
7	A7	1.9845	1.9775	228.2	81033	7
8	A8	1.9785	2.024	213.52	74754	8
9	A9	1.9595	1.9915	196.93	72129	7
10	A10	2.001	2.007	192.7	65767	6
11	A11	1.892	1.996	174.48	70833	5
12	A12	1.915	1.986	201.96	79468	4
13	A13	2.0165	1.913	176.96	61913	3
14	A14	2.007	1.953	207.06	71972	2
15	A15	2.054	2.01	306.25	96492	1
16	A16	2.137	1.9615	199.7	57252	1
17	A17	2.0005	2.142	228.07	72987	2
18	A18	2.0285	2.178	253.54	76538	3
19	A19	1.973	2.181	224.87	73673	4
20	A20	2.0455	2.1155	223.93	67876	5
21	A21	2.0065	2.1245	243.72	77935	6
22	A22	1.9735	2.01	197.12	70022	6
23	A23	2.031	2.023	204.82	66322	5
24	A24	1.965	2.028	192.26	68572	4
25	A25	2.0135	2.0125	241.34	80622	3
26	A26	1.996	1.969	314.24	110141	2
27	A27	1.979	1.963	229.8	82891	1
Minimal					110141	
Maksimal					56059	
Rata-rata					74354	
SD					11122	

Ket: D3= D 35. Kode 1,2,3 urutan angka dari pith ke kulit



Lampiran 2. Nilai MOE pada kayu akasia (D2)

NO.	SAMPEL	TEBAL (cm)	LEBAR (cm)	$\Delta P/\Delta Y$ (kg/cm)	MOE (kg/cm ²)	Kode
1	B1	2.125	2.0925	218.01	59587	1
2	B2	2.057	2.0945	227.75	68563	2
3	B3	2.1035	2.0925	203.12	57237	3
4	B4	2.126	2.078	184.25	50639	4
5	B5	2.0635	2.0895	225.18	67311	3
6	B6	2.1215	2.0405	192.16	54127	2
7	B7	2.104	2.0535	217.84	62506	1
8	B8	2.085	1.952	195.19	60544	1
9	B9	2.086	1.9785	209.24	63941	2
10	B10	1.9695	2.0685	227.97	79171	3
11	B11	2.0725	2.0765	217.52	64580	4
12	B12	2.0065	2.087	180.07	58616	5
13	B13	2.065	2.057	167.48	50744	5
14	B14	2.0565	2.0955	227.55	68520	4
15	B15	1.998	2.089	214.59	70680	3
16	B16	1.9475	2.0845	171.72	61207	2
17	B17	2.061	1.914	185.73	60830	1
Maksimal					79171	
Minimal					50639	
Rata-Rata					62283	
SD					7310	

Ket: D2= D 25; kode=1,2,3 urutan angka dari pith ke kulit



Lampiran 3. Nilai MOE pada kayu akasia D1

NO.	SAMPEL	TEBAL (cm)	LEBAR (cm)	$\Delta P/\Delta Y$ (kg/cm)	MOE (kg/cm ²)	kode
1	C1	2.112	2.022	187.36	53979	1
2	C2	2.0285	2.113	190.04	59134	2
3	C3	2.0315	2.109	167.11	51867	3
4	C4	2.0955	2.048	165.87	48305	4
5	C5	2.096	2.0565	180.55	52325	3
6	C6	2.0645	2.02	215.43	66516	2
7	C7	2.1155	2.059	264.74	74531	1
8	C8	1.9795	2.03	184.06	64152	1
9	C9	2.008	2.104	177.53	57194	2
10	C10	1.9415	1.958	257.14	98482	3
11	C11	2.1135	2.0075	174.01	50388	2
12	C12	1.956	1.946	274.98	103625	1
Maksimal					103625	
Minimal					48305	
Rata-rata					65041	
SD					9230.654423	

Keterangan: D1= D 17; kode 1,2,3 urutan angka dari pith ke kulit



Lampiran 4. Nilai Berat Jenis kayu akasia (A)

No.	Sampel	Volume (cm ³)	Massa (gram)	Berat Jenis	MOE (kg/cm ²)
1	A1	9.42	7.45	0.79	56059
2	A2	8.18	5.84	0.71	72938
3	A3	8.45	6.16	0.73	67393
4	A4	8.02	5.55	0.69	68269
5	A5	8.05	5.3	0.66	80207
6	A6	8.44	5.34	0.63	83505
7	A7	7.99	4.7	0.59	81033
8	A8	8.3	4.48	0.54	74754
9	A9	8.07	4.7	0.58	72129
10	A10	8.32	5.14	0.62	65767
11	A11	7.75	5.25	0.68	70833
12	A12	7.94	5.51	0.69	79468
13	A13	8.71	5.46	0.63	61913
14	A14	8.48	6.15	0.73	71972
15	A15	9.2	6.49	0.71	96492
16	A16	9.08	6.87	0.76	57252
17	A17	9.9	6.32	0.64	72987
18	A18	9.52	6.63	0.70	76538
19	A19	9.2	5.86	0.64	73673
20	A20	9.21	5.85	0.64	67876
21	A21	8.69	5.17	0.59	77935
22	A22	8.05	5.05	0.63	70022
23	A23	8.05	5.66	0.70	66322
24	A24	8.39	5.52	0.66	68572
25	A25	8.47	5.89	0.70	80622
26	A26	8.2	5.64	0.69	110141
27	A27	8.38	6.33	0.76	82891
Maksimal				0.79	110141
Minimal				0.54	56059
Rata-rata				0.67	74354
SD				0.06	11122.89

Keterangan: A= D 35; n=1,2,3 (urutan angka jumlah sampel)



Lampiran 5. Nilai Berat Jenis kayu akasia (B)

No.	Sampel	Volume (cm ³)	Massa (gram)	Berat Jenis	MOE (kg/cm ²)
1	B1	9.1	6.56	0.72	59587
2	B2	9.24	6.7	0.73	68563
3	B3	9	5.79	0.64	57237
4	B4	9.08	6.1	0.67	53388
5	B5	8.99	5.96	0.66	67311
6	B6	9.16	6.03	0.66	61732
7	B7	8.75	6.02	0.69	63367
8	B8	8.95	6.25	0.70	63646
9	B9	9.01	6.12	0.68	63941
10	B10	8.92	6	0.67	79171
11	B11	8.98	5.95	0.66	64580
12	B12	8.8	5.9	0.67	61871
13	B13	8.98	6.02	0.67	50744
14	B14	8.91	5.97	0.67	69423
15	B15	8.44	5.59	0.66	70680
16	B16	8.8	6.33	0.72	71900
17	B17	8.68	6.13	0.71	67381
Maksimal				0.73	79171
Minimal				0.64	50744
Rata-rata				0.68	64384
SD				0.02	6943.75

Keterangan: B= D 25; n=1,2,3 (urutan angka jumlah sampel)



Lampiran 6. Nilai Berat Jenis kayu akasia (C)

No.	Sampel	Volume (cm ³)	Massa (gram)	Berat Jenis	MOE (kg/cm ²)
1	C1	9.07	5.6	0.62	53979
2	C2	9.05	5.07	0.56	52910
3	C3	8.78	4.78	0.54	51867
4	C4	8.44	5.22	0.62	48305
5	C5	9.08	5.25	0.58	52325
6	C6	9.13	5.78	0.63	66516
7	C7	9.02	5.57	0.62	74531
8	C8	9.12	5.33	0.58	57181
9	C9	8.33	5.39	0.65	57194
10	C10	7.98	5.95	0.75	86993
11	C11	9.41	4.75	0.50	50388
12	C12	8.4	5.58	0.66	103625
Maksimal				0.75	103625
Minimal				0.50	48305
Rata-rata				0.61	62985
SD				0.06	17149.23

Keterangan: C= D 17; n=1,2,3 (urutan angka jumlah sampel)



Lampiran 7. Nilai MFA kayu akasia pada berbagai diameter

KODE SAMPEL	MFA (deg)
A1#A22	15.22
A2#A7	16.14
A3#A6	14.74
A4#A26	12.93
B1#B13	15.73
B2#B2	16.83
B3#B10	14.74
C1#C4	17.43
C2#C6	14.42
C3#C7	16.03
Maksimal	17.43
Minimal	12.93
Rata-rata	15.37
SD	1.45

Keterangan: A= D 5; B= D25; C=D17; n=1,2,3 (urutan angka dari pith)



Lampiran 8. Dimensi kristalit (lebar panjang kristalit) pada diameter kayu akasia.

Lebar Kristalit								
SAMPEL	FWHM (deg)	2 θ (deg)	K	λ (nm)	β (rad)	θ (deg)	COS θ	LEBAR KRISTALIT (nm)
A1. #A22	2.7314	22.22	0.9	0.154	0.0477	11.11	0.9812	2.9631
A2. #A7	3.4266	21.68	0.9	0.154	0.0598	10.84	0.9821	2.3598
A3. #A6	3.5778	21.94	0.9	0.154	0.0624	10.97	0.9817	2.2610
A4. #A26	3.2734	22	0.9	0.154	0.0571	11	0.9816	2.4715
B1. #B13	4.0534	21.58	0.9	0.154	0.0707	10.79	0.9823	1.9944
B2. #B2	3.64	21.76	0.9	0.154	0.0635	10.88	0.982	2.2216
B3. #B10	3.8978	21.82	0.9	0.154	0.0680	10.91	0.9819	2.0749
C1. #C4	4.232	21.32	0.9	0.154	0.0739	10.66	0.9827	1.9095
C2. #C6	2.885	22	0.9	0.154	0.0504	11	0.9816	2.8042
C3. #C7	2.7734	22.24	0.9	0.154	0.0484	11.12	0.9812	2.9182
Rata-rata								2.3978

Panjang Kristalit								
SAMPEL	FWHM (deg)	2 θ (deg)	K	λ (nm)	β (rad)	θ (deg)	COS θ	PANJANG KRISTALIT
A1. #A22	0.71	34.03	1	0.154	0.01239	17.018	0.9562	12.9968
A2. #A7	0.6867	33.99	1	0.154	0.01199	16.998	0.9563	13.4364
A3. #A6	0.7066	34.02	1	0.154	0.01233	17.010	0.9562	13.0593
A4. #A26	0.93	34.16	1	0.154	0.01623	17.080	0.9558	9.9264
B1. #B13	0.8866	34.12	1	0.154	0.01547	17.060	0.9559	10.4113
B2. #B2	0.7521	34.05	1	0.154	0.01313	17.029	0.9561	12.2706
B3. #B10	1.32	34.76	1	0.154	0.02304	17.380	0.9543	7.0046
C1. #C4	0.6489	34.02	1	0.154	0.01133	17.013	0.9562	14.2206
C2. #C6	0.86	34.88	1	0.154	0.01501	17.440	0.9542	10.7524
C3. #C7	0.6644	34.00	1	0.154	0.0116	17.004	0.9562	13.8888
Rata-rata								11.7967



Lampiran 11. Nilai Korelasi pearson antara MOE dengan berat jenis dan nano struktur (MFA, lebar dan panjang kristalit, serta derajat kristalinitas) pada kayu akasia D3

Korelasi		MOE	BJ	MFA	Lebar Kristalin	Panjang Kristalin	Derajat Kristalin
MOE	Pearson Correlation	1	.867*	-.792	-.397	-.904	.861*
	Sig. (2-tailed)		.133	.208	.603	.096	.139
	N	4	4	4	4	4	4
BJ	Pearson Correlation	.867*	1	-.947	-.377	-.887	.797
	Sig. (2-tailed)	.133		.053	.623	.113	.203
	N	4	4	4	4	4	4
MFA	Pearson Correlation	-.792	-.947	1	.061	.942*	-.578
	Sig. (2-tailed)	.208	.053		.939*	.058	.422
	N	4	4	4	4	4	4
Lebar Kristalin	Pearson Correlation	-.397	-.377	.061	1	.031	-.805
	Sig. (2-tailed)	.603	.623	.939*		.969*	.195
	N	4	4	4	4	4	4
Panjang Kristalin	Pearson Correlation	-.904	-.887	.942*	.031	1	-.613
	Sig. (2-tailed)	.096	.113	.058	.969		.387
	N	4	4	4	4	4	4
Derajat Kristalin	Pearson Correlation	.861*	.797	-.578	-.805	-.613	1
	Sig. (2-tailed)	.139	.203	.422	.195	.387	
	N	4	4	4	4	4	4

garuh pada tingkat signifikansi 5% (2-tailed)



Lampiran 12. Nilai Korelasi pearson antara MOE dengan berat jenis dan nano struktur (MFA, lebar dan panjang kristalit, serta derajat kristalinitas) pada kayu akasia D2

Korelasi		MOE	BJ	MFA	Lebar Kristalin	Panjang Kristalin	Derajat Kristalin
MOE	Pearson Correlation	1	.145	-.341	.481	-.519	.813*
	Sig. (2-tailed)		.907*	.779	.680	.652	.395
	N	3	3	3	3	3	3
BJ	Pearson Correlation	.145	1	.881*	.937*	.770	-.458
	Sig. (2-tailed)	.907*		.314	.227	.440	.697
	N	3	3	3	3	3	3
MFA	Pearson Correlation	-.341	.881*	1	.660	.980*	-.824
	Sig. (2-tailed)	.779	.314		.541	.126	.383
	N	3	3	3	3	3	3
Lebar Kristalin	Pearson Correlation	.481	.937*	.660	1	.499	-.119
	Sig. (2-tailed)	.680	.227	.541		.668	.924*
	N	3	3	3	3	3	3
Panjang Kristalin	Pearson Correlation	-.519	.770	.980*	.499	1	-.920
	Sig. (2-tailed)	.652	.440	.126	.668		.257
	N	3	3	3	3	3	3
Derajat Kristalin	Pearson Correlation	.813*	-.458	-.824	-.119	-.920	1
	Sig. (2-tailed)	.395	.697	.383	.924*	.257	
	N	3	3	3	3	3	3

*. Berpengaruh pada tingkat signifikansi 5% (2-tailed)



Lampiran 13. Nilai Korelasi pearson antara MOE dengan berat jenis dan nano struktur (MFA, lebar dan panjang kristalit, serta derajat kristalinitas) pada kayu akasia D1

korelasi		MOE	BJ	MFA	Lebar Kristalin	Panjang Kristalin	Derajat Kristalin
MOE	Pearson Correlation	1	.145	-.588	.962*	-.230	.920*
	Sig. (2-tailed)		.907*	.600	.175	.852	.257
	N	3	3	3	3	3	3
BJ	Pearson Correlation	.145	1	-.885	.408	-.996	-.255
	Sig. (2-tailed)	.907*		.308	.732	.055	.836
	N	3	3	3	3	3	3
MFA	Pearson Correlation	-.588	-.885	1	-.786	.922*	-.223
	Sig. (2-tailed)	.600	.308		.425	.252	.857
	N	3	3	3	3	3	3
Lebar Kristalin	Pearson Correlation	.962*	.408	-.786	1	-.486	.779
	Sig. (2-tailed)	.175	.732	.425		.677	.432
	N	3	3	3	3	3	3
Panjang Kristalin	Pearson Correlation	-.230	-.996	.922*	-.486	1	.170
	Sig. (2-tailed)	.852	.055	.252	.677		.891
	N	3	3	3	3	3	3
Derajat Kristalin	Pearson Correlation	.920*	-.255	-.223	.779	.170	1
	Sig. (2-tailed)	.257	.836	.857	.432	.891	
	N	3	3	3	3	3	3

*. Berpengaruh pada tingkat signifikansi 5% (2-tailed)



Lampiran 13. Nilai MOE dengan berat jenis dan nano struktur (MFA, lebar dan panjang kristalit, serta derajat kristalinitas) pada berbagai diameter kayu akasia.

SAMPEL	KODE	MOE	BJ	MFA	PANJANG KRISTALIT	LEBAR KRISTALIT	DERAJAT KRISTALINITAS
D3	A1. #A22	70022	0.63	15.22	13.00	2.96	47.98
	A2. #A7	81033	0.59	16.14	13.44	2.36	57.91
	A3. #A6	83505	0.63	14.74	13.06	2.26	59.33
	A4. #A26	110141	0.69	12.93	9.93	2.47	64.04
D2	B1. #B13	50744	0.67	15.73	10.41	1.99	53.31
	B2. #B2	68563	0.73	16.83	12.27	2.22	53.84
	B3. #B10	79171	0.67	14.74	7.00	2.07	63.23
D1	C1. #C4	48305	0.62	17.43	14.22	1.91	56.45
	C2. #C6	66516	0.63	14.42	10.75	2.80	57.18
	C3. #C7	74531	0.62	16.03	13.89	2.92	59.15

