

LAMPIRAN 1

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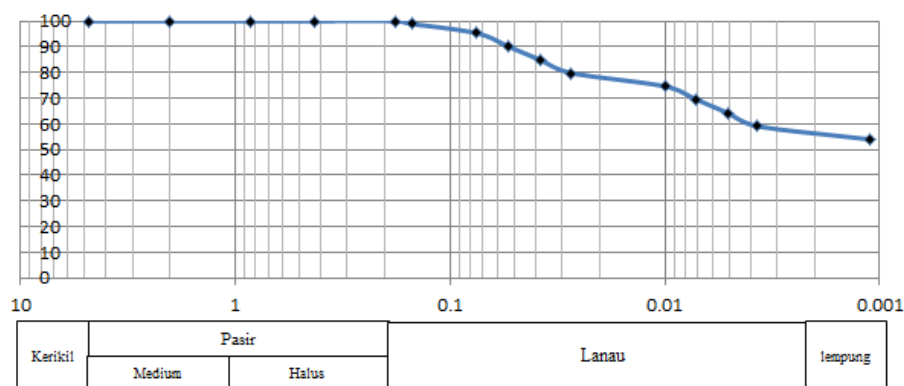
1. Analisa Saringan dan hidrometer

Saringan		Tertahan saringan (gram)	Jumlah Tertahan (gram)	% Jumlah Tertahan	% Lolos Saringan
No.	Diameter (mm)				
4	4.750	0	0	0.0000	100.0000
10	2.000	0	0	0.0000	100.0000
20	0.850	0	0	0.0000	100.0000
40	0.425	0	0	0.0000	100.0000
50	0.300	0	0	0.0000	100.0000
80	0.180	0	0	0.0000	100.0000
100	0.150	5.4	5.4	1.0887	98.9113
200	0.075	17.9	23.3	4.6976	95.3024
Pan	-	472.7	496	100.0000	0.0000
Total		496			

t (minute)	C (°C)	Rh	Cr	Rc (Rh+Cr)	a	Finer (%)	Prosentase Finer (%)	R	L (cm)	L/t	K	D (mm)	persentase sampel keseluruhan
0.5	26	1.0290	1.65	2.6790	1.01	5.4212	94.5788	30.0000	8.608	17.216	0.0129	0.0535	90.1359
1	26	1.0285	1.65	2.6785	1.01	5.4202	89.1586	29.5000	8.7437	8.7437	0.0129	0.0381	84.9703
2	26	1.0280	1.65	2.6780	1.01	5.4192	83.7395	29.0000	8.8794	4.4397	0.0129	0.0272	79.8058
15	26	1.0275	1.65	2.6775	1.01	5.4181	78.3213	28.5000	9.0151	0.60101	0.0129	0.0100	74.6421
30	26	1.0270	1.65	2.6770	1.01	5.4171	72.9042	28.0000	9.1508	0.30503	0.0129	0.0071	69.4795
60	26	1.0260	1.65	2.6760	1.01	5.4151	67.4891	27.0000	9.4222	0.15704	0.0129	0.0051	64.3187
120	26	1.0240	1.65	2.6740	1.01	5.4111	62.0780	25.0000	9.965	0.08304	0.0129	0.0037	59.1619
1440	26	1.0210	1.65	2.6710	1.01	5.4050	56.6730	22.0000	10.7792	0.00749	0.0129	0.0011	54.0108

Rh = Actual hydrometer reading
 Cr = Temperature Correction Factor
 Rc = Correction Hydrometer Reading
 R = Hydrometer correction only for miniscus
 L = Effective Depth

Grafik Gabungan Analisa Saringan dan Hidrometer

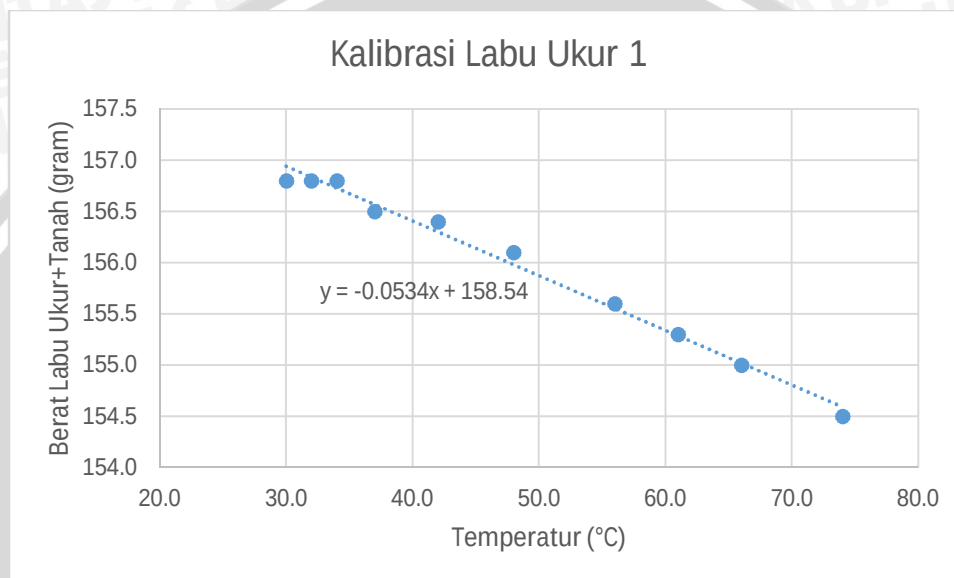


2. Specific Gravity

2.1. Kalibrasi Picnometer

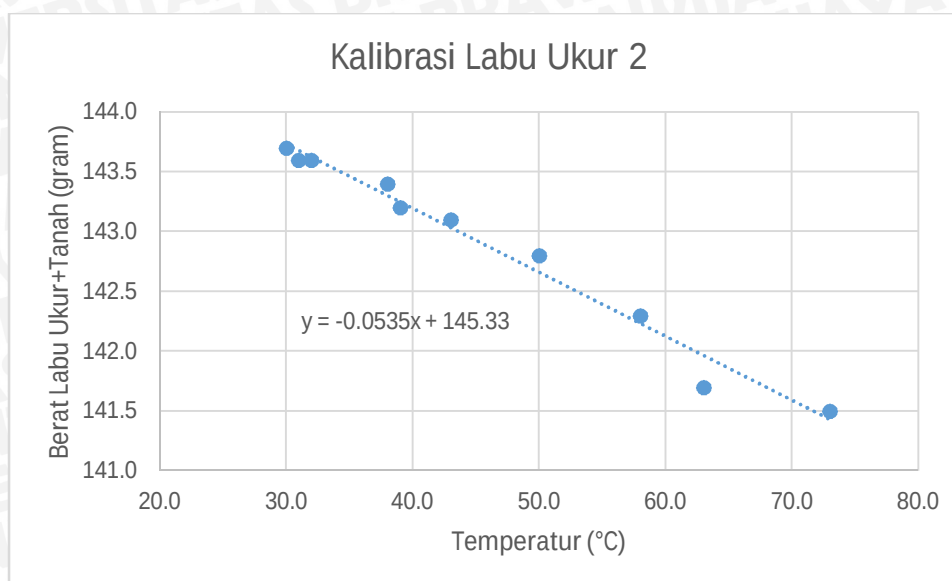
Picnometer 1

No. Pemeriksaan	1	2	3	4	5	6	7	8	9	10
Temperatur (°C)	74.0	66.0	61.0	56.0	48.0	42.0	37.0	34.0	32.0	30.0
Berat Labu Ukur + Air (gram)	154.5	155.0	155.3	155.6	156.1	156.4	156.5	156.8	156.8	156.8



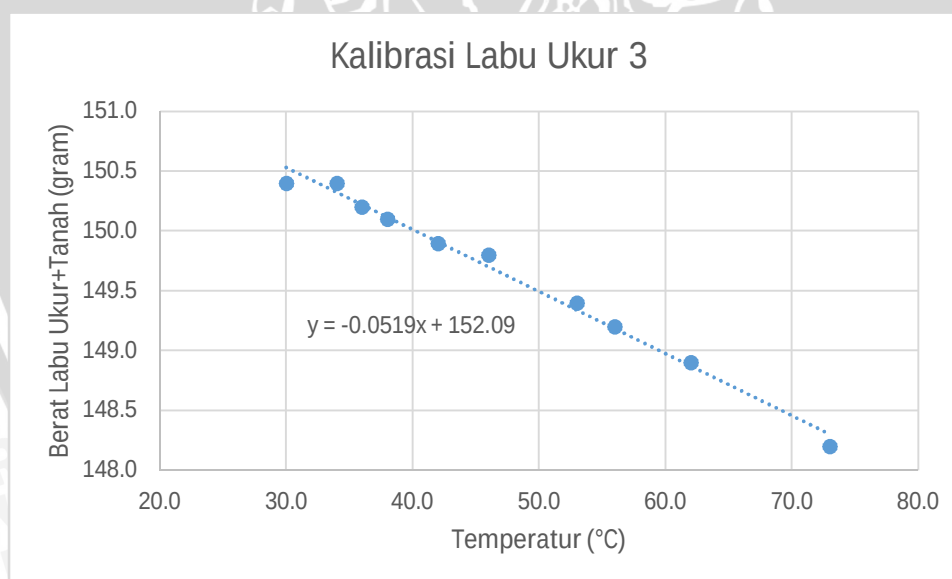
Picnometer 2

No. Pemeriksaan	1	2	3	4	5	6	7	8	9	10
Temperatur (°C)	73.0	63.0	58.0	50.0	43.0	39.0	38.0	32.0	31.0	30.0
Berat Labu Ukur + Air (gram)	141.5	141.7	142.3	142.8	143.1	143.2	143.4	143.6	143.6	143.7



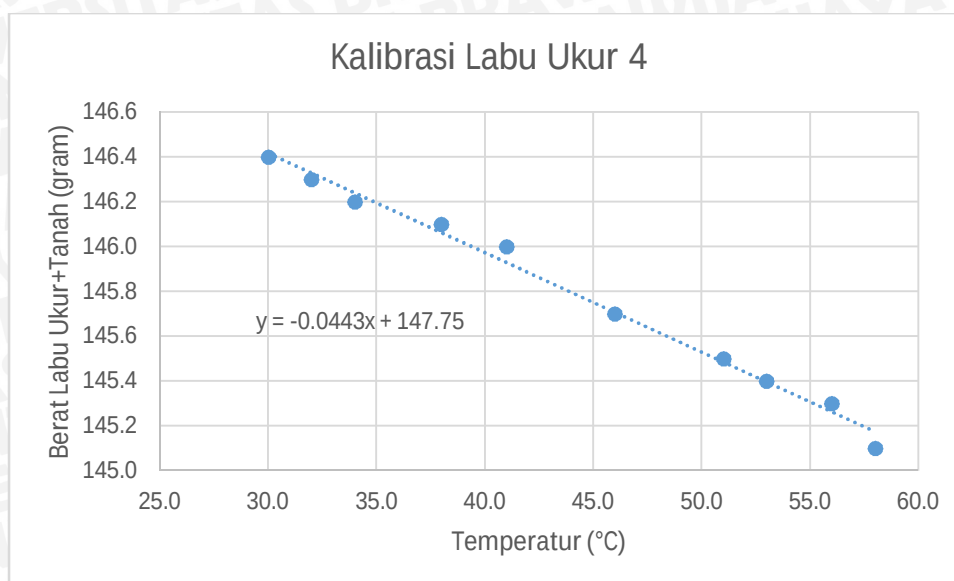
Picnometer 3

No. Pemeriksaan	1	2	3	4	5	6	7	8	9	10
Temperatur (°C)	73.0	62.0	56.0	53.0	46.0	42.0	38.0	36.0	34.0	30.0
Berat Labu Ukur + Air (gram)	148.2	148.9	149.2	149.4	149.8	149.9	150.1	150.2	150.4	150.4



Picnometer 4

No. Pemeriksaan	1	2	3	4	5	6	7	8	9	10
Temperatur (°C)	58.0	56.0	53.0	51.0	46.0	41.0	38.0	34.0	32.0	30.0
Berat Labu Ukur + Air (gram)	145.1	145.3	145.4	145.5	145.7	146.0	146.1	146.2	146.3	146.4



2.2. Specific Gravity Campuran

2.2.1. Abu Sekam Padi

Percobaan I

Labu Ukur		1									
Berat Labu Ukur	gram	58.20									
Berat Tanah Kering (Ws)	gram	20.00									
Berat Labu Ukur + Air + Tanah (W1)	gram	165.30	165.70	166.10	166.40	166.60	166.80	167.20	167.50	167.70	167.90
Suhu	(°C)	66.00	60.00	54.00	50.00	48.00	46.00	40.00	36.00	33.00	30.00
Berat Labu Ukur + Air (W2)	gram	155.02	155.34	155.66	155.87	155.98	156.08	156.40	156.62	156.78	156.94
Specivic Gravity (Gs)		2.06	2.08	2.09	2.11	2.13	2.15	2.17	2.19	2.20	2.21
Rata-rata GS		2.14									

Percobaan II

Labu Ukur		2									
Berat Labu Ukur	gram	43.90									
Berat Tanah Kering (Ws)	gram	20.00									
Berat Labu Ukur + Air + Tanah (W1)	gram	152.40	152.70	152.90	153.00	153.20	153.40	153.70	154.00	154.20	154.50
Suhu	(°C)	55.00	50.00	48.00	47.00	44.00	43.00	39.00	36.00	33.00	30.00
Berat Labu Ukur + Air (W2)	gram	142.39	142.66	142.76	142.82	142.98	143.03	143.24	143.40	143.56	143.73
Specivic Gravity (Gs)		2.00	2.01	2.03	2.04	2.05	2.08	2.10	2.13	2.14	2.17
Rata-rata GS		2.06									

Percobaan III

Labu Ukur		4									
Berat Labu Ukur	gram	43.90									
Berat Tanah Kering (Ws)	gram	20.00									
Berat Labu Ukur + Air + Tanah (W1)	gram	155.00	155.40	155.60	155.70	156.10	156.30	156.40	156.60	156.70	157.00
Suhu	(°C)	65.00	63.00	57.00	53.00	48.00	45.00	41.00	37.00	35.00	30.00
Berat Labu Ukur + Air (W2)	gram	144.87	144.96	145.22	145.40	145.62	145.76	145.93	146.11	146.20	146.42
Specivic Gravity (Gs)		2.03	2.09	2.08	2.06	2.10	2.11	2.10	2.10	2.11	2.12
Rata-rata GS		2.09									

Rata-rata GS = 2,10

2.2.2. Tanah Asli

Percobaan I

Percobaan II

Percobaan III

Rata-rata GS = 2,60

Percobaan I

Percobaan III

Labu Ukur		2							
Berat Labu Ukur	gram	43.90							
Berat Tanah Kering (Ws)	gram	20.00							
Berat Labu Ukur + Air + Tanah (W1)	gram	154.50	154.90	155.20	155.40	155.60	155.80	155.90	156.00
Suhu	(°C)	57.00	50.00	42.00	38.00	35.00	33.00	31.00	30.00
Berat Labu Ukur + Air (W2)	gram	142.28	142.66	143.08	143.30	143.46	143.56	143.67	143.73
Specivic Gravity (Gs)		2.57	2.58	2.54	2.53	2.55	2.58	2.57	2.59
Rata-rata GS		2.56							

Percobaan III

Labu Ukur		3							
Berat Labu Ukur	gram	50.80							
Berat Tanah Kering (Ws)	gram	20.00							
Berat Labu Ukur + Air + Tanah (W1)	gram	160.90	161.30	161.50	161.60	161.70	162.10	162.20	162.30
Suhu	(°C)	66.00	58.00	49.00	45.00	41.00	36.00	32.00	30.00
Berat Labu Ukur + Air (W2)	gram	148.66	149.08	149.55	149.75	149.96	150.22	150.43	150.53
Specivic Gravity (Gs)		2.58	2.57	2.49	2.45	2.42	2.46	2.43	2.43
Rata-rata GS		2.48							

Rata-rata GS = 2,54

2.2.5. Tanah Asli + 6,5% Abu Sekam Padi

Pecobaan I

Labu Ukur		1							
Berat Labu Ukur	gram	58.20							
Berat Tanah Kering (Ws)	gram	20.00							
Berat Labu Ukur + Air + Tanah (W1)	gram	167.10	167.60	167.90	168.20	168.40	168.80	169.00	169.50
Suhu	(°C)	65.00	52.00	49.00	44.00	40.00	37.00	34.00	31.00
Berat Labu Ukur + Air (W2)	gram	155.07	155.76	155.92	156.19	156.40	156.56	156.72	156.88
Specivic Gravity (Gs)		2.51	2.45	2.49	2.50	2.50	2.58	2.59	2.62
Rata-rata GS		2.56							

Percobaan II

Labu Ukur		2							
Berat Labu Ukur	gram	43.90							
Berat Tanah Kering (Ws)	gram	20.00							
Berat Labu Ukur + Air + Tanah (W1)	gram	154.70	154.80	155.00	155.40	155.60	155.70	155.80	156.00
Suhu	(°C)	65.00	51.00	44.00	40.00	37.00	36.00	34.00	32.00
Berat Labu Ukur + Air (W2)	gram	141.85	142.60	142.98	143.19	143.35	143.40	143.51	143.62
Specivic Gravity (Gs)		2.80	2.56	2.51	2.57	2.58	2.60	2.59	2.63
Rata-rata GS		2.61							

Percobaan III

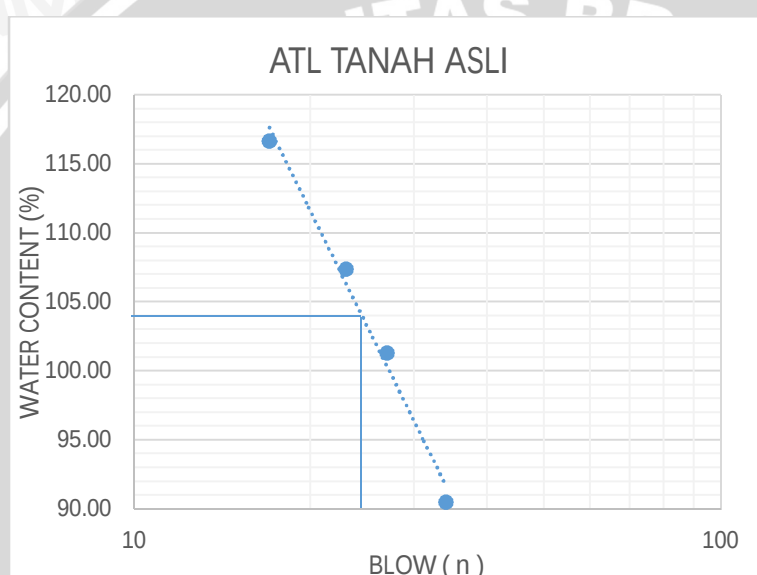
Labu Ukur		3							
Berat Labu Ukur	gram	50.80							
Berat Tanah Kering (Ws)	gram	20.00							
Berat Labu Ukur + Air + Tanah (W1)	gram	161.00	161.20	161.40	161.50	161.70	161.80	162.00	162.20
Suhu	(°C)	61.00	51.00	42.00	40.00	37.00	36.00	34.00	32.00
Berat Labu Ukur + Air (W2)	gram	148.92	149.44	149.91	150.01	150.17	150.22	150.33	150.43
Specivic Gravity (Gs)		2.52	2.43	2.35	2.35	2.36	2.37	2.40	2.43
Rata-rata GS		2.40							

Rata-rata GS = 2,52

3. Atteberg Limit

3.1. ATL Tanah Asli

Can no.	I	II	III	IV
Berat tanah basah + cawan (gr)	19.70	20.70	22.80	21.30
Berat tanah kering + cawan (gr)	13.00	13.20	14.10	12.90
Berat cawan (gr)	5.60	5.80	6.00	5.70
Berat tanah kering (gr)	7.40	7.40	8.10	7.20
Berat air (gr)	6.70	7.50	8.70	8.40
Kadar air %	90.54	101.35	107.41	116.67
Jumlah Ketukan	34	27	23	17



Can no.	I	II	III	IV
Berat tanah basah + cawan (gr)	10.90	12.60	12.80	13.40
Berat tanah kering + cawan (gr)	8.70	10.50	10.70	11.20
Berat cawan (gr)	4.30	6.10	5.70	5.40
Berat tanah kering (gr)	4.40	4.40	5.00	5.80
Berat air (gr)	2.20	2.10	2.10	2.20
Kadar air (%)	50.00	47.73	42.00	37.93
Rata-rata kadar air (%)	44.41			

BATAS SUSUT (SL)		
Nomor Cetakan		1
Berat Cetakan	gr	19.2
Berat Cawan + Tanah Basah	gr	58.2
Berat Cawan + Tanah Kering	gr	44.0
Berat Tanah Basah (m_1)	gr	39.0
Berat Air	gr	14.2
Berat Tanah Kering (m_2)	gr	24.8
Volume Tanah Basah (V)	ml	25.5
Volume Tanah Kering (V_s)	ml	12.0
Kadar Air (W_s)	%	57.3
$SL = (W_s - ((V - V_s)/m_2)) * 100\%$	%	2.8

Liquid Limit = 104%

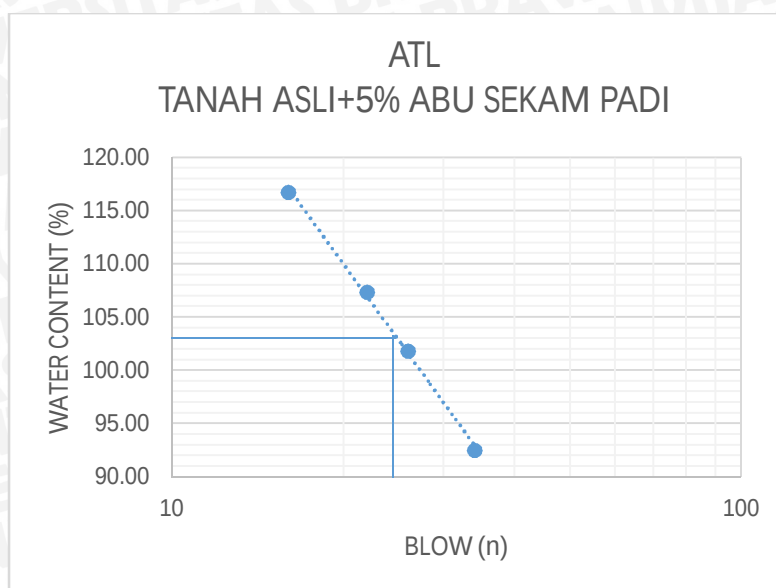
Plastic Limit = 44,41%

Indeks Plastis = 59,59%

Shrinkage Limit = 2,80%

3.2. ATL Tanah Asli+5% Abu Sekam Padi

Can no.	I	II	III	IV
Berat tanah basah + cawan (gr)	39.1	26.00	28.00	34.2
Berat tanah kering + cawan (gr)	23	15.00	16.40	18.9
Berat cawan (gr)	5.6	4.20	5.60	5.8
Berat tanah kering (gr)	17.40	10.80	10.80	13.10
Berat air (gr)	16.10	11.00	11.60	15.30
Kadar air %	92.53	101.85	107.41	116.79
Jumlah Ketukan	34	26	22	16



Can no.	I	II	III	IV
Berat tanah basah + cawan (gr)	11.20	12.40	12.70	12.50
Berat tanah kering + cawan (gr)	9.10	10.60	10.80	10.60
Berat cawan (gr)	4.30	5.70	5.80	5.80
Berat tanah kering (gr)	4.80	4.90	5.00	4.80
Berat air (gr)	2.10	1.80	1.90	1.90
Kadar air (%)	43.75	36.73	38.00	39.58
Rata-rata kadar air (%)	39.52			

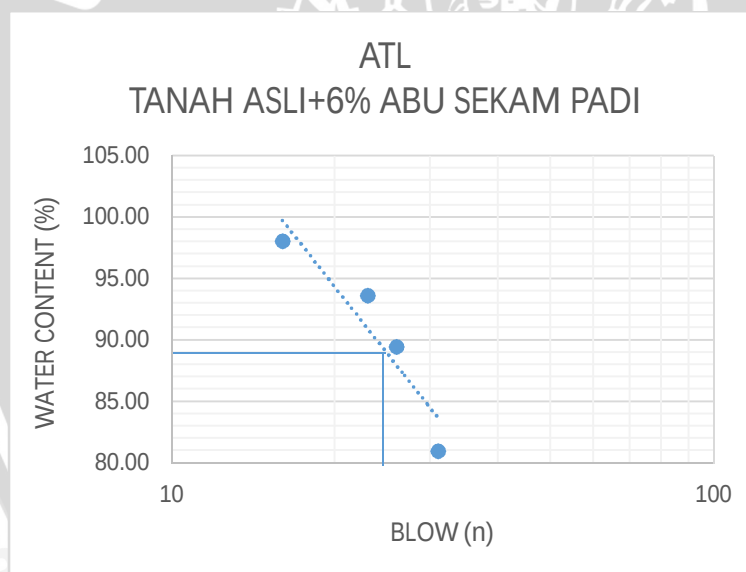
BATAS SUSUT (SL)		
Nomor Cetakan		2
Berat Cetakan	gr	19.1
Berat Cawan + Tanah Basah	gr	56.7
Berat Cawan + Tanah Kering	gr	44.3
Berat Tanah Basah (m_1)	gr	37.6
Berat Air	gr	12.4
Berat Tanah Kering (m_2)	gr	25.2
Volume Tanah Basah (V)	ml	23.7
Volume Tanah Kering (V_s)	ml	12.1
Kadar Air (W_s)	%	49.2
$SL = (W_s - ((V - V_s)/m_2)) * 100\%$	%	3.2

Liquid Limit	= 103,00
Plastic Limit	= 39,52
Indeks Plastis	= 63,48
Shrinkage Limit	= 3,20

Liquid Limit = 103,00
 Plastic Limit = 39,52
 Indeks Plastis = 63,48
 Shrinkage Limit = 3,20

3.3. ATL Tanah Asli+6% Abu Sekam Padi

Can no.	I	II	III	IV
Berat tanah basah + cawan (gr)	27.40	15.10	21.10	25.90
Berat tanah kering + cawan (gr)	17.60	10.00	13.70	15.80
Berat cawan (gr)	5.50	4.30	5.80	5.50
Berat tanah kering (gr)	12.10	5.70	7.90	10.30
Berat air (gr)	9.80	5.10	7.40	10.10
Kadar air %	80.99	89.47	93.67	98.06
Jumlah Ketukan	31	26	23	16



Berat tanah basah + cawan (gr)	12.20	12.90	13.00	12.80
Berat tanah kering + cawan (gr)	10.20	10.70	10.90	10.70
Berat cawan (gr)	5.70	5.60	5.80	5.80
Berat tanah kering (gr)	4.50	5.10	5.10	4.90
Berat air (gr)	2.00	2.20	2.10	2.10
Kadar air (%)	44.44	43.14	41.18	42.86
Rata-rata kadar air (%)	42.90			

BATAS SUSUT (SL)		
Nomor Cetakan		1
Berat Cetakan	gr	19.2
Berat Cawan + Tanah Basah	gr	54.8
Berat Cawan + Tanah Kering	gr	40.8
Berat Tanah Basah (m_1)	gr	35.6
Berat Air	gr	14.0
Berat Tanah Kering (m_2)	gr	21.6
Volume Tanah Basah (V)	ml	25.5
Volume Tanah Kering (V_s)	ml	12.3
Kadar Air (W_s)	%	64.8
$SL = (W_s - ((V - V_s)/m_2)) * 100\%$	%	3.7

Liquid Limit = 89,00

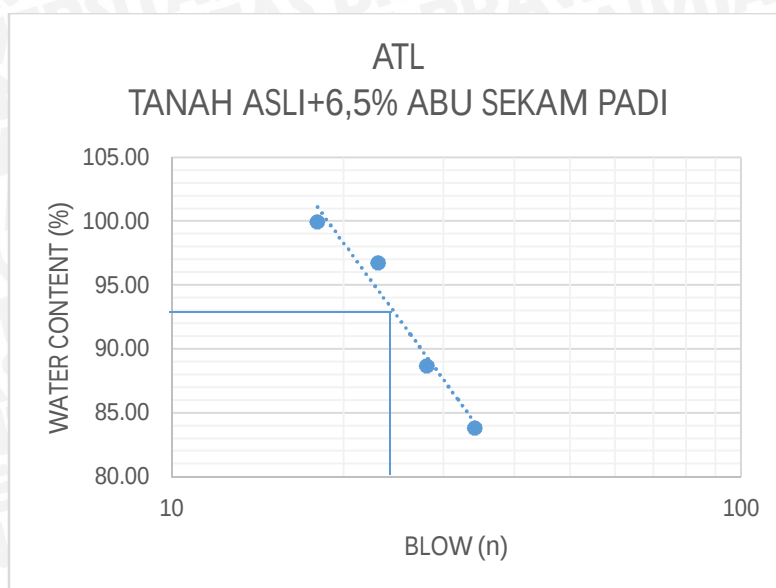
Plastic Limit = 42,90

Indeks Plastis = 46,10

Shrinkage Limit = 3,70

3.4. ATL Tanah Asli+6,5% Abu Sekam Padi

Can no.	I	II	III	IV
Berat tanah basah + cawan (gr)	28.30	19.30	18.10	25.70
Berat tanah kering + cawan (gr)	17.90	13.00	12.10	15.60
Berat cawan (gr)	5.50	5.90	5.90	5.50
Berat tanah kering (gr)	12.40	7.10	6.20	10.10
Berat air (gr)	10.40	6.30	6.00	10.10
Kadar air %	83.87	88.73	96.77	100.00
Jumlah Ketukan	34	28	23	18



Can no.	I	II	III	IV
Berat tanah basah + cawan (gr)	13.90	12.10	12.20	12.10
Berat tanah kering + cawan (gr)	11.40	10.00	10.30	10.20
Berat cawan (gr)	5.70	4.50	4.20	4.20
Berat tanah kering (gr)	5.70	5.50	6.10	6.00
Berat air (gr)	2.50	2.10	1.90	1.90
Kadar air (%)	43.86	38.18	31.15	31.67
Rata-rata kadar air (%)	36.21			

BATAS SUSUT (SL)		
Nomor Cetakan	1	
Berat Cetakan	gr	19.2
Berat Cawan + Tanah Basah	gr	53.6
Berat Cawan + Tanah Kering	gr	41.2
Berat Tanah Basah (m ₁)	gr	34.4
Berat Air	gr	12.4
Berat Tanah Kering (m ₂)	gr	22.0
Volume Tanah Basah (V)	ml	25.5
Volume Tanah Kering (Vs)	ml	14.0
Kadar Air (Ws)	%	56.4
SL = (Ws-((V-Vs)/m ₂))*100%	%	4.1

Liquid Limit = 93,00

Plastic Limit = 36,21

Indeks Plastis = 56,79

Shrinkage Limit = 4,10