LAMPIRAN

Lampiran 1. Hasil Analisis Laboratorium Unsur Hara N, P dan K serta pH

KEMENTERIAN PERTANIAN
BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN
BALAI BESAR PENELITIAN DAN PENGEMBANGAN SUMBERDAYA LAHAN PERTANIAN
BALAI PENELITIAN LINGKUNGAN PERTANIAN
JL. RAYA JAKENAN - JAKEN KM 05 KOTAK POS 5 JAKENAN – PATI 59182
TELEPON / FAX : (0295) 4749044 / 4749045
WEBSITE : www.balingtan.litbang.pertanian.go.id, EMAIL : balingtan@litbang.pertanian.go.id

Nomor : 160/LHP-Bal/TPD/2022 6 Juli 2022
Lampiran : 2 (Dua) Lembar
Perihal : Laporan Hasil Pengujian

Yth.
Sdri. **Auliya Kahfi**
Poltek Negeri Cilacap - Jl. Dr. Soetomo No. 1 Sidakaya,
Kec. Cilacap Selatan, Kab. Cilacap Jateng 5321
Di
Tempat

Bersama ini kami sampaikan Laporan Hasil Pengujian (LHP) sampel Saudari. Jenis dan jumlah sampel terdiri dari 15 (Lima belas) sampel pupuk organik padat dengan analisa seperti yang terlampir pada hasil / *result*.

Demikian LHP ini sampaikan, atas perhatiannya kami haturkan terima kasih.

Plh. Kepala Balai,

Sudarto, SE
NIP. 196507091993031004

KEMENTERIAN PERTANIAN
BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN
BALAI BESAR PENELITIAN DAN PENGEMBANGAN SUMBERDAYA LAHAN PERTANIAN
BALAI PENELITIAN LINGKUNGAN PERTANIAN

LABORATORIUM BALAI PENELITIAN LINGKUNGAN PERTANIAN
Jl. Raya Jakenan – Jakenkm. 05 Kotak Pos. 5 Jakenan - Pati 59182
E-mail :balingtan@litbang.pertanian.go.id;balingtan@yahoo.com
Website :www.balingtan.litbang.pertanian.go.id
Telp.: 62-(0295) - 4749044
Fax. : 62-(0295) - 4749045

FORMULIR		
F.07 LAPORAN HASIL PENGUJIAN *RESULT OF ANALYSIS*	No. Dokumen Edisi/Revisi Tanggal Halaman	: F. 07 : 03/0 : 1 Maret 2022 : 1 dari 2

NOMOR/ *NUMBER*: 159/LHP-Bal/TPD/07/2022

No. dan tanggal SP *Number & Date of Sample*	093/TPD/2022, 30 Mei 2022
Nama/Instansi Pemilik Contoh *Name/Principal of sample owner*	**Auliya Kahfi**
Alamat *Address*	Poltek Negeri Cilacap - Jl. Dr. Soetomo No. 1 Sidakaya, Kec. Cilacap Selatan, Kab. Cilacap Jateng 5321
No.dan Tanggal Surat Pengiriman *Number and Date of expedition*	-
Keterangan Contoh (Jenis dan Jumlah) *Sample remark (properties & total of sample)*	15 (lima belas) sampel pupuk organic padat
Bobot. Wadah dan Kondisi Contoh *Weight. packing. & condition of sample*	500 gram, plastik, Baik
Tujuan Pengujian / *The objective of analysis*	Analisa N,P,K total
Tanggal Penerimaan Contoh *Date of sample receipt*	30 Mei 2022
Tanggal Pengujian *Date of analysis*	6 Juni – 5 Juli 2022

HASIL / *RESULT:*

Terlampir/*attached*

*Ruang Lingkup Akreditasi

√	Hasil Pengujian hanya berlaku untuk contoh yang diuji *The test result is only valid for the tested sample*
	Hasil Pengujian berlaku untuk kelompok (Lot) *The test result is valid for the group sample*

KEMENTERIAN PERTANIAN
BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN
BALAI BESAR PENELITIAN DAN PENGEMBANGAN SUMBERDAYA LAHAN PERTANIAN
BALAI PENELITIAN LINGKUNGAN PERTANIAN

LABORATORIUM BALAI PENELITIAN LINGKUNGAN PERTANIAN
Jl. Raya Jakenan – Jakenkm. 05 Kotak Pos. 5 Jakenan - Pati 59182
E-mail :balingtan@litbang.pertanian.go.id;balingtan@yahoo.com
Website :www.balingtan.litbang.pertanian.go.id
Telp.: 62-(0295) - 4749044
Fax. : 62-(0295) - 4749045

FORMULIR		
F.07 LAPORAN HASIL PENGUJIAN *RESULT OF ANALYSIS*	No. Dokumen Edisi/Revisi Tanggal Halaman	: F. 07 : 03/0 : 1 Maret 2022 : 2 dari 2

Hasil Pengujian/*Result of Analysis*

Nomor/ *Number*	Kode Distribusi/ *Distribution cod*	Kode Sampel/ *Sample code*	Hasil Pengujian/*Result of Analysis*			
			*pH H_2O	*N-Total	*P-Total	*K-Total
			-		%	
1	093.14.001	01/AK/2022	7,23	1,61	1,50	0,30
2	093.14.002	02/AK/2022	7,39	1,72	1,35	0,31
3	093.14.003	03/AK/2022	7,46	2,18	1,64	0,44
4	093.14.004	04/AK/2022	7,27	2,66	1,89	0,51
5	093.14.005	05/AK/2022	7,48	1,21	1,41	0,52
6	093.14.006	06/AK/2022	6,56	2,63	1,23	0,43
7	093.14.007	07/AK/2022	6,94	2,37	2,89	0,46
8	093.14.008	08/AK/2022	7,73	1,80	4,47	0,30
9	093.14.009	09/AK/2022	7,98	1,53	3,16	0,35
10	093.14.010	10/AK/2022	6,94	2,26	2,36	0,34
11	093.14.011	11/AK/2022	6,86	2,64	2,35	0,36
12	093.14.012	12/AK/2022	7,35	2,35	2,70	0,60
13	093.14.013	13/AK/2022	7,60	2,18	3,38	0,50
14	093.14.014	14/AK/2022	7,19	1,70	2,94	0,40
15	093.14.015	15/AK/2022	6,55	2,52	2,38	0,14

Metode Pengujian:

*pH H2O : SNI 7763:2018 butir 6.4
*N-Total : SNI 7763:2018 butir 6.6.1
*P- total : SNI 7763:2018 butir 6.7.4.2.1
*K-Total : SNI 7763:2018 butir 6.7.4.2.2

Pati, 6 Juli 2022
Manajer Teknis/ *Technical Manager*

Fitra Purnariyanto, A.Md.,A.K
NIP. 19810801200604 1 001

*Ruang Lingkup Akreditasi

√ Hasil Pengujian hanya berlaku untuk contoh yang diuji
The test result is only valid for the tested sample

Hasil Pengujian berlaku untuk kelompok (Lot)
The test result is valid for the group sample

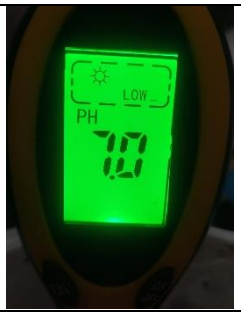
Lampiran 2. Pembuatan MOL

			
MOL 1:2	MOL 1:1	MOL 2:1	Fermentasi

Lampiran 3. Pengumpulan Bahan Pengomposan

			
Pengambilan sampah sayuran	Pengambilan sampah daun tanjung	Tanaman tanjung	Daun tanjung kering

Lampiran 4. Pengukuran pH, Suhu dan Kelembaban

			
Pengecekan pH			

Pengecekan suhu dan kelembaban

Lampiran 5. Peta Lokasi Penelitian

Peta lokasi Politeknik Negeri Cilacap

Peta Lokasi Balai Penelitian Lingkungan Pertanian

Lampiran 6. Perhitungan Kadar Air

a) Penimbangan dan pemanasan

Perlakuan	Cawan Kosong (g)	Sampel (g)	Sebelum Oven (g)	Setelah Oven (g)	Kadar Air (%)	Fk
A1	74.28	5	79.28	76.18	62	2.63157895
B1	48.06	5	53.06	50.05	60.2	2.51256281
A2	70.21	5	75.21	72.35	57.2	2.3364486
B2	85.84	5	90.84	87.91	58.6	2.41545894
A3	101.5	5	106.5	103.22	65.6	2.90697674
B3	120.99	5	125.99	123.38	52.2	2.09205021
A4	67.62	5	72.62	69.72	58	2.38095238
B4	135.23	10	145.23	138.58	66.5	2.98507463
A5	101.49	5	106.49	103.59	58	2.38095238
B5	135.23	5	140.23	137.18	61	2.56410256
A6	120.95	10	130.95	124.65	63	2.7027027
B6	67.69	5	72.69	69.26	68.6	3.18471338
A7	67.38	5	72.38	69.36	60.4	2.52525253
B7	48.07	5	53.07	49.81	65.2	2.87356322
P15	48.07	5	53.07	52.7	7.4	1.07991361

b) Perhitungan

Kadar air $= \frac{B_1 - B_2}{B} \times 100\ \%$

dengan :

B = Berat sampel (gram)

B_1 = Berat (sampel dan cawan) sebelum dikeringkan (gram)

B_2 = Berat (sampel dan cawan) sesudah dikeringkan (gram)

Faktor koreksi kadar air (fk) $= \frac{100}{100 - Kadar\ Air}$

1) Sampel 1 (A1)

   Kadar air

   Kadar air = $\frac{79.28-76.18}{5} \times 100\% = 62\%$

   Faktor koreksi

   Fk = $\frac{100}{100-62} = 2.63$

2) Sampel 2 (B1)

   Kadar air

   Kadar air = $\frac{53.06-50.05}{5} \times 100\% = 60.2\%$

   Faktor koreksi

   Fk = $\frac{100}{100-68.8} = 2.51$

3) Sampel 3 (A2)

   Kadar air

   Kadar air = $\frac{75.21-72.35}{5} \times 100\% = 57.2\%$

   Faktor koreksi

   Fk = $\frac{100}{100-57.2} = 2.33$

4) Sampel 4 (B2)

   Kadar air

   Kadar air = $\frac{90.84-87.91}{5} \times 100\% = 58.6\%$

   Faktor koreksi

   Fk = $\frac{100}{100-58.6} = 2.41$

5) Sampel 5 (A3)

   Kadar air = $\frac{106.5-103.22}{5} \times 100\% = 65.6\%$

   Faktor koreksi

   Fk = $\frac{100}{100-65.6} = 2.9$

6) Sampel 6 (B3)

   Kadar air = $\frac{125.99-123.38}{5} \times 100\% = 52.2\%$

   Faktor koreksi

   Fk = $\frac{100}{100-52.2\%} = 2,09$

7) Sampel 7 (A4)

   Kadar air = $\frac{72.62-69.72}{5} \times 100\% = 58\%$

   Faktor koreksi

   Fk = $\frac{100}{100-58} = 2.38$

8) Sampel 8 (B4)

Kadar air

Kadar air = $\frac{145.23-138.58}{5} \times 100\% = 66.5\%$

Faktor koreksi

Fk = $\frac{100}{100-66.5} = 2.98$

9) Sampel 9 (A5)

Kadar air

Kadar air = $\frac{106.49-103.59}{5} \times 100\% = 58\%$

Faktor koreksi

Fk = $\frac{100}{100-58} = 2{,}38$

10) Sampel 10 (B5)

Kadar air

Kadar air = $\frac{140.23-137.18}{5} \times 100\% = 61\%$

Faktor koreksi

Fk = $\frac{100}{100-61} = 2.56$

11) Sampel 11 (A6)

Kadar air

Kadar air = $\frac{130.95-124.65}{5} \times 100\% = 63\%$

Faktor koreksi

Fk = $\frac{100}{100-63} = 2.7$

12) Sampel 12 (B6)

Kadar air

Kadar air = $\frac{72{,}69-69{,}26}{5} \times 100\% = 68{,}6\%$

Faktor koreksi

Fk = $\frac{100}{100-68{,}6} = 3{,}18$

13) Sampel 13 (A7)

Kadar air

Kadar air = $\frac{72.38-69.36}{5} \times 100\% = 60.4\%$

Faktor koreksi

Fk = $\frac{100}{100-60.4} = 2{,}52$

14) Sampel 14 (B7)

Kadar air

Kadar air = $\frac{53.07-49.81}{5} \times 100\% = 65.2\%$

Faktor koreksi

Fk = $\frac{100}{100-65,2}$ = 2,87

15) Sampel 15 (P15)

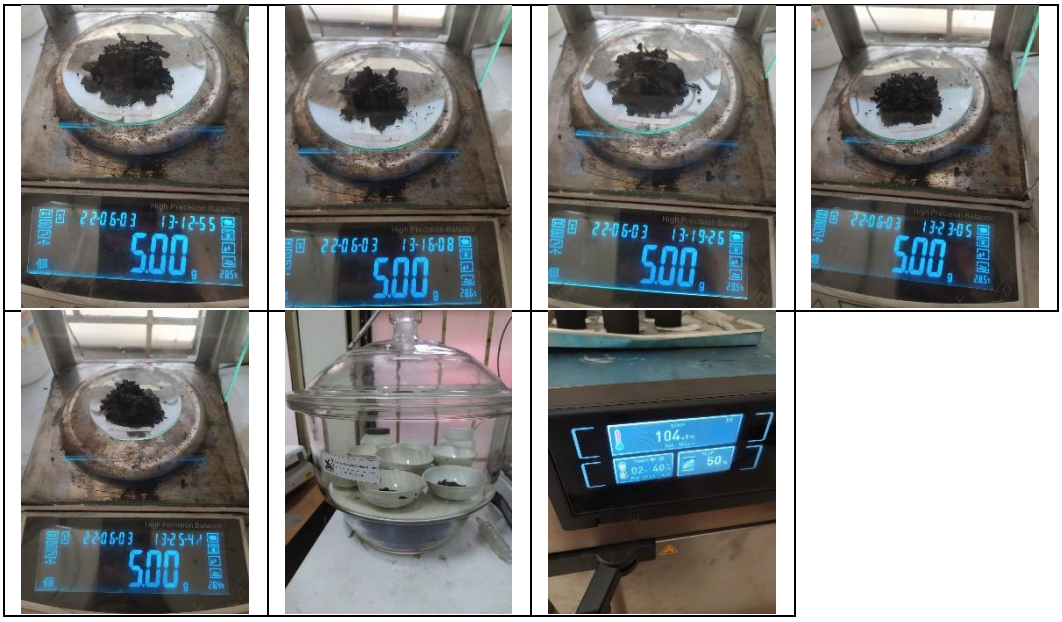
Kadar air

Kadar air = $\frac{53.07-52.07}{5} \times 100\%$ = 7.4%

Faktor koreksi

Fk = $\frac{100}{100-7.4}$ = 1.07

c) Dokumentasi



Lampiran 7. Persentase Penyusutan Bahan

a) Perhitungan

No	Perlakuan	Komposisi Sampah (g)		Massa Bahan Pengomposan (g)		Penyusutan (%)
		Sayuran	Daun Kering	Sebelum	Sesudah	
1	A1	500	250	750	494	34.1
2	B1	750	250	1000	494	50.6
3	A2	500	250	750	504	32.8
4	B2	750	250	1000	452	54.8
5	A3	500	250	750	438	41.6
6	B3	750	250	1000	483	51.7
7	A4	500	250	750	435	42.0
8	B4	750	250	1000	480	52.0
9	A5	500	250	750	515	31.3
10	B5	750	250	1000	555	44.5
11	A6	500	250	750	489	34.8
12	B6	750	250	1000	509	49.1
13	A7	500	250	750	483	35.6
14	B7	750	250	1000	510	49.0

b) Dokumentasi

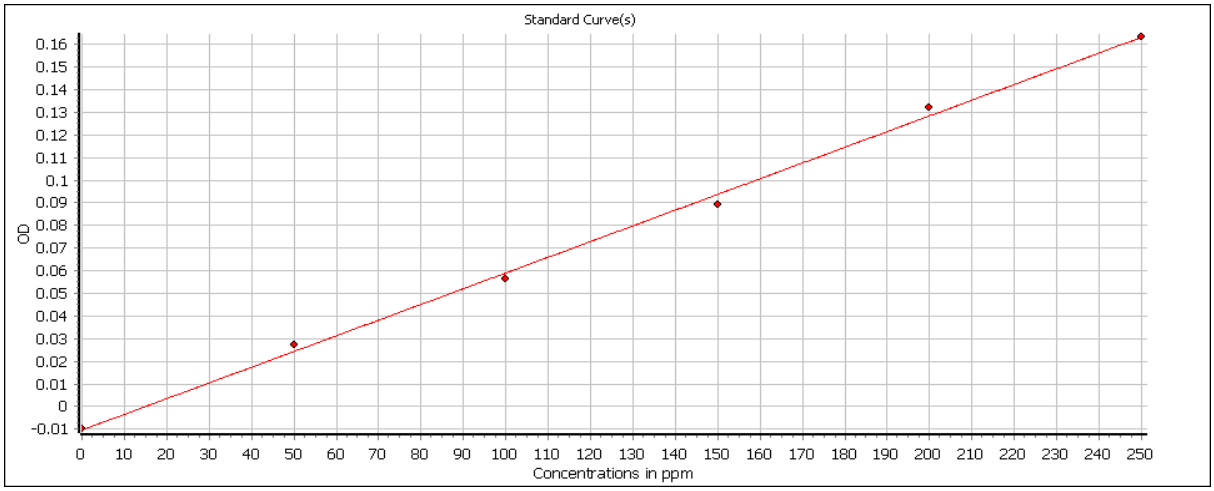



Sampel 2 | Sampel 3

			
Sampel 4		Sampel 6	
			
Sampel 13		Sampel 8	
			
Sampel 9		Sampel 10	

Lampiran 8. Perhitungan C-organik

a) Kurva standar



b) ppm kurva

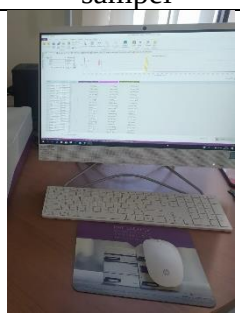
Sampel	ppm kurva	Volume Ekstrak	Massa contoh (mg)	fk	C-organik	N-total	C/N rasio
A1	531.176	50	250	2.631579	27.96	1.61	17.35
B1	556.186	50	250	2.512563	27.95	1.72	16.23
A2	518.003	50	250	2.336449	24.21	2.18	11.08
B2	546.831	50	250	2.415459	26.42	2.66	9.93
A3	399.274	50	250	2.90698	23.21	1.21	19.11
B3	636.942	50	250	2.09205	26.65	2.63	10.12
A4	645.724	50	250	2.38095	30.75	2.37	12.95
B4	426.272	50	250	2.98507	25.45	1.80	14.14
A5	628.351	50	250	2.380953	29.92	1.53	19.60
B5	422.094	50	250	2.564103	33.21	2.26	14.68
A6	440.824	50	250	2.7027	23.83	2.64	9.02
B6	421.517	50	250	3.18471	26.85	2.35	11.43
A7	588.832	50	250	2.52525	29.74	2.18	13.63
B7	340.832	50	250	2.87356	19.59	1.70	11.55
P15	336.62	50	250	1.07991	7.27	2.52	2.89

c) Perhitungan

$$\text{C–organik} = \text{ppm kurva} \times \frac{100}{\text{mg sampel}} \times \frac{\text{ml ekstrak}}{1000\ \text{ml}} \times \text{fk}$$

- A1 = $531.176 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.63$ = 27.96%
- B1 = $556.186 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.51$ = 27.95%
- A2 = $518.003 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.33$ = 24.21%
- B2 = $546.831 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.41$ = 26.42%
- A3 = $399.274 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.90$ = 23.21%
- B3 = $636.942 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.90$ = 26.65%
- A4 = $645.724 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.38$ = 30.75%
- B4 = $426.272 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.98$ = 25.45%
- A5 = $628.351 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.38$ = 29.92%
- B5 = $422.094 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.56$ = 21.65%
- A6 = $440.824 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.70$ = 23.83%
- B6 = $421.517 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 3.18$ = 26.85%
- A7 = $588.832 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.52$ = 29.74%
- B7 = $340.832 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 2.87 = 19.59\%$
- P15 = $336.62 \times \frac{100}{250} \times \frac{50}{1000\ \text{ml}} \times 1.07 = 7.27\%$

d) Dokumentasi

			
Pembuatan larutan standar	Pembuatan sampel	Penyaringan sampel	Pengujian sampel
			
Spektrofotometer UV-Vis	Pembacaan data sampel		

Lampiran 9. Perhitungan Rasio C/N

Sampel	C-organik (%)	N-total (%)	C/N rasio
A1	27.96	1.61	17.35
B1	27.95	1.72	16.23
A2	24.21	2.18	11.08
B2	26.42	2.66	9.93
A3	23.21	1.21	19.11
B3	26.65	2.63	10.12
A4	30.75	2.37	12.95
B4	25.45	1.80	14.14
A5	29.92	1.53	19.60
B5	21.65	2.26	9.57
A6	23.83	2.64	9.02
B6	26.85	2.35	11.43
A7	29.74	2.18	13.63
B7	19.59	1.70	11.55
P15	7.27	2.52	2.89

Rasio C/N = % C-organik / % N-total

- A1 = 27.96 / 1.61 = 17.35
- B2 = 27.95 / 1.72 = 16.23
- A2 = 24.21 / 2.18 = 11.08
- B2 = 26.42 / 2.66 = 9.93
- A3 = 23.21 / 1.21 = 19.11
- B3 = 26.65 / 2.63 = 10.12
- A4 = 30.75 / 2.37 = 12.95
- B4 = 25.45 / 1.80 = 14.14
- A5 = 29.92 / 1.53 = 19.60
- B5 = 21.65 / 2.26 = 9.57
- A6 = 23.83 / 2.64 = 9.02
- B6 = 26.85 / 2.35 = 11.43
- A7= 29.74 / 2.18 = 13.63
- B7 = 19.59 / 1.70 = 11.55
- P15 = 7.27 / 2.52 = 2.89

Lampiran 10. Biodata Penulis

Nama	: Auliya Kahfi
NIM	: 180107003
Tempat/ Tanggal Lahir	: Pekalongan, 06 Oktober 1999
Alamat	: Villa Gading Harapan Blok AF 5 No. 20 RT/RW 06/022 Kecamatan Babelan, Kabupaten Bekasi, Jawa Barat
Email	: auliyakahfi26@gmail.com
No Telp	: 0851-5693-8640

Riwayat Pendidikan :

1. SMA Negeri 1 Babelan (2015 – 2018)
   Jurusan : IPA
2. Politeknik Negeri Cilacap (2018 – 2022)
   Jurusan : Teknik Pengendalian Pencemaran Lingkungan

Penghargaan :

Palang Merah Indonesia (PMI) Kabupaten Cilacap – Oktober 2020
Relawan Tim Dapur Umum dalam Rangka Respon Tanggap Darurat Bencana Banjir di Wilayah Desa Gentasari, Kecamatan Kroya, Kabupaten Cilacap