

## DAFTAR PUSTAKA

- Alimsyah, A, Damasyanti, A. 2013. *Penggunaan Arang Tempurung Kelapa dan Enceng Gondok Untuk Pengolahan Air Limbah Tahu dengan Variasi Konsentrasi*. Jurnal Teknik POMITS Vol 2. No.1
- Aliyenh, A. Napoleon, Bambang Yudono. 2015. *Pemanfaatan Limbah Cair Industri Tahu Sebagai Pupuk Cair Organik Terhadap Pertumbuhan dan Produksi Tanaman Kangkung Darat (*Ipomoea reptans Poir*)*. Jurnal Penelitian Sains Vol. 17 No. 3 September 2015.
- Amanatie, Eddy Sulistyowati. 2015. *Structure Elucidation Of The Leaf Of *Tithonia diversifolia* (Hemsley) A.Gray*. Jurnal Sains dan Matematika Vol. 23(4): 101-106.
- An-Nur, F. 2015. *Peningkatan Kadar P dan K Pupuk Cair Organik Menggunakan Batuan Fosfat Alam dan Sabut Kelapa*. Universitas Negeri Semarang, Semarang
- Asrina Naibaho. 2019. *Pengaruh Lama Fermentasi Pupuk Organik Cair Kombinasi Kipahit, Daun Kelor Dan Jerami Padi Terhadap Kandungan Nitrogen Dan Kalium*. Yogyakarta : Program Studi Pendidikan Biologi Jurusan Matematika Dan Ilmu Pengetahuan Alam Fakultas Keguruan Dan Ilmu Pendidikan Universitas Sanata Dharma
- Astuti. 2007. *Petunjuk Praktikum Analisis Bahan Biologi*. Yogyakarta: Jurdik Biologi FMIPA UNY.
- Auliana. 2012. *Manfaat Bekatul dan Kandungan Gizinya*. Yogyakarta: Kegiatan Dharma Wanita, FT UNY.
- Basuki, Sulisty. 2009. *Metode Penelitian*. Jakarta: Wedatama Widya Sastra.
- Bintoro. 2008. *Teknologi Pengolahan Daging dan Analisis Produk*. Semarang : Universitas Diponegoro.
- Budiarti, 2015. *Karakteristik industri tahu di Desa Trimurti Kecamatan Srandakan Kabupaten Bantul*. Yogyakarta : Fakultas Ilmu Sosial Universitas Negeri Yogyakarta.
- Budaarsa, K, G. E. Stradivari, I.P.G.A.S Kencana Jaya, I.G. Mahardika A.W.Puger, I M. Suasta, dan I P. Ari Astawa. 2012. *Pemanfaatan Ampas Tahu Untuk*

*Mengganti Sebagian Ransum Komersial Ternak Babi*. Denpasar: Fakultas Peternakan Universitas Udayana

- Badan Pengkajian dan Penerapan Teknologi. 2014. *Petunjuk teknis edisi 2: Analisis kimia tanah, tanaman, air dan pupuk*. Bogor: Balai Penelitian Tanah, Departemen Pertanian.
- Central Data Mediatama Indonesia. 2017. *Studi Potensi Bisnis Industri Pupuk di Indonesia, 2013-2017*. www.cdmione.com.
- Damayanti, I.P. 2015. *Panduan Lengkap Keterampilan Dasar kebidanan II*. Yogyakarta: Deepublish.
- Djamarah, Syaiful Bahri. 2006. *Strategi Belajar Mengajar*. Jakarta : PT Rineka Cipta.
- Faisal, M., Gani, A., Maulana, F., Daimon, H. 2016. *Treatment and utilization tofu waste in Indonesia*. Asian Journal of Chemistry 28(3):501–507. DOI:10.14233/ajchem.2016.19372.
- Fitria. 2008. *Pembuatan Pupuk Organik cair dari Limbah Cair Industri Perikanan Menggunakan Asam Asetat dan EM4 (Effective Microorganism 4)*. Bogor : Program Studi Teknologi Hasil Perikanan Fakultas Perikanan dan Ilmu Kelautan.
- Hadisuwito. 2007. *Membuat Pupuk Kompos Cair*. Jakarta: PT. Agromedia Pustaka.
- Hartati. 2007. *Tithonia Diversivolia Sumber Pupuk Hijau*. *Warta Penelitian dan Pengembangan Pertanian*. Jurnal Pertanian Vol. 29, No. 5
- Hapsari, Nur dan Tjatur Welasih. (2012). *Pemanfaatan Limbah Ikan Menjadi Pupuk Organik*. Surabaya, FTI, UPN.
- Indah, Lutfiana Sari, Boedi Hendarto, Prijadi Soedarsono. 2014. *Kemampuan eceng gondok (Eichhornia sp.), kangkung air (Ipomea sp.), dan kayu apu (Pistia sp.) dalam menurunkan bahan organik limbah industri tahu (skala laboratorium)*. Journal Of Maquares 3 (1) : 1-6.
- Indriani, Y.H. 2003. *Membuat Kompos Secara Kilat*. Jakarta: Penebar Swadaya.
- Jama, Palrq C.A., Bures, R.J., Niang, A., Gachengo, C., Nzigrheba, G., and Amadalo, B. 1999. *Tithonia dfeolia Green Manure Improvement of Soil Fertilit*. Kenya: A. Review from Wesfern

- Kementerian Lingkungan Hidup. 2003. *Panduan Produksi Bersih dan Sistem Manajemen Lingkungan untuk Usaha/ Industri Kecil dan Menengah*. Jakarta: Kementerian Lingkungan Hidup.
- Kusumawati, K., Muhartini, S., dan Rogomulyo, R. 2015. *Pengaruh konsentrasi dan frekuensi pemberian limbah tahu terhadap pertumbuhan dan hasil bayam (*Amaranthus tricolor L.*) pada media pasir pantai*. Jurnal Vegetalika, Vol. 4 No. 2 pp. 48-62.
- Koswara, 2009. *Respons Pertumbuhan Dan Produksi Tanaman Jagung Manis (*Zea mays saccharata Sturt*) Terhadap Pemberian Pupuk Cair Tnf Dan Pupuk Kandang Ayam*. Yogyakarta: Balai Penelitian Tanah.
- Lestari, 2016. *Pemanfaatan Paitan (*Tithonia diversifolia*) sebagai Pupuk Organik pada Tanaman Kedelai*. Malang : Balai Penelitian Tanaman Aneka Kacang dan Umbi.
- Lihannoor. 2010. *Proses pembuatan Tahu Sumedang*. Jakarta: Penebar Swadaya.
- Liandari, Nandita Putri. 2017. *Pengaruh Bioaktivator EM4 dan Aditif Tetes Tebu (*Molasses*) Terhadap Kandungan N, P, dan K dalam Pembuatan Pupuk Organik Cair dari Limbah Cair Tahu*. Universitas Muhammadiyah Surakarta, Surakarta
- Matilda, Filomena, Danang Biyatmoko, Akhmad Rizali, Abdullah. 2016. *Peningkatan kualitas efluen air limbah industri tahu pada sistem lumpur aktif dengan variasi laju alir menggunakan arang aktif kayu ulin (*Eusideroxylon zwageri*)*. Enviro scienteae 12 (3) : 207-215.
- Makiyah, Mujiatul. 2013. *Analisis Kadar N, P Dan K Pada Pupuk Cair Limbah Tahu Dengan Penambahan Tanaman Matahari Meksiko (*Thitonia Diversivolia*)*. Semarang : Jurusan Kimia Fakultas Matematika Dan Ilmu Pengetahuan Alam Universitas Negeri Semarang
- Mastar, S. dan Kusnayadi, H. 2016. *Kualitas Kompos Berbahan Baku Lokal yang Diaplikasikan dengan Substrat Mikroorganisme Lokal (MOL)*. Jurnal Ilmu Pertanian Vol. 9(1): 101-112.
- Musthofa. 2013. *Rekayasa teknologi untuk perbaikan proses produksi tahu ramah lingkungan*. Surakarta : Fakultas Teknik Universitas Muhammadiyah Surakarta.

- Mokodompit, T.A., Koneri R., Siahaan P., & Tangapo A. M. 2013. *Uji Ekstrak daun Tithonia diversifolia Sebagai Penghambat Daya Makan Nilaparvata lugens Stal. pada Oryza sativa L.* Jurnal Bios logos. 3(2): 50-56.
- Otusanya , Olasupo. 2012. *Phytochemical Screening and the Phytotoxic Effects of Aqueous Extracts of Tithonia diversifolia (Hemsl) A. Gray.* International Journal of Biology; Vol. 4, No. 3.
- Pangestika, W. and Saksono, N. 2018. *A Tofu Wastewater Treatment Using Combination of Plasma Electrolysis and Coagulation-Flocculation Method.* International Journal of Technology and Engineering Studies, 4(2), pp. 42–49.
- Parnata, dan Ayub.S. 2004.. *Pupuk Organik Cair.* Jakarta:PT Agromedia Pustaka.
- Prasetyo, Bambang, Lina Miftahul Jannah. 2008. *Metode Penelitian Kuantitatif: Teori dan Aplikasi.* Jakarta: PT Raja Grafindo Persada.
- Prasetyo, Joko. 2020 *Pupuk Organik Cair Dari Limbah Industri Tempe.* Jurnal Teknik WAKTU Volume 18 Nomor 02 – Juli 2020 – ISSN: 1412:1867. Suraabaya : Universitas PGRI Adi Buana Surabaya
- Peraturan Menteri Pertahanan Nomor : 01/Permentan/SR.140/10/2019 Tentang Persyaratan Minimal Teknis Pupuk Organik, Pupuk Hayati, dan Pembenah Tanah.
- Rachman. 2006. *Efektivitas Kombinasi Filtrat Daun Tembakau (Nicotiana tabacum) dan Filtrat Daun Paitan (Tithonia diversifolia) Sebagai Pestisida Nabati Hama Walang Sangit (Leptocorisa oratorius) pada Tanaman Padi.* Jurnal Lentera Bio. 4(1): 25-31.
- Raja. 2013. *Pedoman Gizi Pengkajian dan Dokumentasi.* Jakarta: Buku Kedokteran EGC.
- Ratnaningsih, Nani, Mutiara Nugraheni, Fitri Rahmawati. 2009. *Pengaruh Jenis Kacang Tolo, Proses, Pembuatan dan Jenis Inokulum Terhadap Perubahan Zat- Zat Gizi pada Fermentasi Kacang Tolo.* Yogyakarta: Fakultas Teknik, Universitas Negeri Yogyakarta.
- Resti, Putri Dwi Hastari. 2019. *Pengaruh Pemberian Ekstrak Rumput Paitan (Tithonia Diversifolia) Terhadap Pertumbuhan Bawang Merah (Allium Ascalonicum L.) Pada Konsentrasi Yang Berbeda.* Riau : Prodi

Agroteknologi, Pertanian dan Peternakan Universitas Islam Negeri Sultan Syarif Kasim Riau.

Robitul ,Nisa Mardiyah, Yayok Suryo. 2017. *Pemanfaatan Unsur Makro (Npk) Limbah Cair Tahu Untuk Pembuatan Pupuk Cair Secara Aerobik*. Surabaya: Program Studi Teknik Lingkungan, Universitas Pembangunan Nasional Veteran Jawa Timur.

Samekto ,R. 2008. *Pemupukan* . Yogyakarta : PT.Aji Cipta Pratama

Santoso. 2005. *Pembuatan tempe dan tahu kedelai bahan makanan bergizi*. Yogyakarta: Penerbit Kanisius.

Septa, Tantra , Rahardian, Titin Sumarni , Agus Suryanto. 2013. *Pemanfaatan Pupuk Hijau Paitan (Tithonia Diversifolia) Dan Krinyu (Chromolaena Odarata) Dalam Peningkatan Hasil Tanaman Brokoli (Brassica Oleracea)*. Malang: Jurusan Budidaya Pertanian, Fakultas Pertanian, Universitas Brawijaya.

Simatupang.2014. *Pengaruh Dosis Kompos Paitan (Tithonia diversifolia) Terhadap Pertumbuhan dan Hasil Kol Bunga pada Sistem Pertanian Organik*. Bengkulu : Program Studi Agroekoteknologi Jurusan Budidaya Pertanian Fakultas Pertanian Universitas Bengkulu.

Syamsu, Ida. 2013. *Manfaat Penggunaan Pupuk Organik Untuk Kesuburan Tanah*. Tulungung: Fakultas Pertanian Universitas Tulungung.

Tjitrosoepomo, Gembong. 1988. *Taksonomi tumbuhan (Spermathopyta)*. Yogyakarta: Gajah Mada University Press

Utomo. 2010. *Pembuatan Kompos Dengan Limbah Organik*. Jakarta: CV Sinar Cemerlang Abadi.

Wahyudin dan Nurhidayatullah. 2010. *Pengomposan Sampah Organik Rumah Tangga Menggunakan Mikroorganisme Lokal Bonggol Pisang Sebagai Bioaktivator* . Agriovet Vol.1 No.1 Oktober 2018 ISSN 2654-4792

Warmada, I.W & Titisari, A.D. 2004. *Agromineralogi (Mineralogi untuk ilmu pertanian)*. Yogyakarta. Jurusan Teknik Geologi, Fakultas Teknik UGM.

Yuliarti, Nugraherti. 2009. *1001 Cara Menghasilkan Pupuk Organik*. Yogyakarta : Lyli Publisier.

- Yulipriyanto, H. 2010. *Biologi Tanah dan Strategi Pengolahannya*. Yogyakarta: Graha ilmu.
- Yuwono. 2007. *Kompos dengan Cara Aerob maupun Anaerob untuk Menghasilkan Kompos yang Berkualitas*. Jakarta.: Penebar Swadaya.



# UNIVERSITAS PGRI ADI BUANA SURABAYA

## FAKULTAS TEKNIK


Program Studi : Teknik Lingkungan – Perencanaan Wilayah Kota  
Teknik Industri – Teknik Elektro - PVKK

KAMPUS II: Jl. Dukuh Menanggal XII/4 ☎ (031) 8281181 Surabaya 60234

Website : [www.ft.unipasby.ac.id](http://www.ft.unipasby.ac.id) E-mail : [ft@unipasby.ac.id](mailto:ft@unipasby.ac.id)

### BERITA ACARA BIMBINGAN SKRIPSI


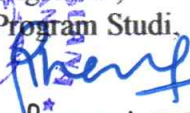
Form Skripsi-03

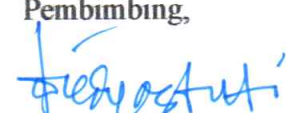
Nama	: Agung Widiyanto	
NIM	: 193809002	
Program Studi	: Teknik Lingkungan	
Pembimbing	: Dra. Sri Widyastuti, M.Si	
Periode Bimbingan	: Gasal/Genap*) Tahun 2020 / 2021.	
Judul Skripsi	Pengaruh Penambahan Tanaman Matahari Meksiko ( <i>Thitonia Diversivolia</i> ) pada Proses Pembuatan Pupuk Organik Cair Limbah Tahu Secara Anaerobik	

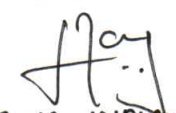
#### KEGIATAN KONSULTASI / BIMBINGAN

No	Tanggal	Materi pembimbingan	Keterangan	Paraf
1.	30 Oktober 20	Melengkapi BAB Tinjauan pustaka	Aee	
2.	2 November 20	Metode Penelitian - Perancangan alat	Aee	
3.	11 November 20	Variabel, Sampel, Populasi, dan Output	Aee	
4.	24 November 20	Konsultasi Hasil Penelitian	Aee	
5.	2 Desember 20	Analisa data	Aee	
6.	8 Desember 20	Pembahasan & Grafik Hasil	Aee	
7.	16 Desember 20	Perbaikan Penuisan BAB IV	Aee	
8.	22 Desember 20	Perbaikan BAB V Kesimpulan & Saran	Aee	
9.	4 Januari 21	Perbaikan tabel & Analisa Data	Aee	
10.	8 Januari 21	Perancangan Power Point Ujian	Aee	

Dinyatakan selesai tanggal : ...16... Januari ..... 2021

  
 Mengetahui,  
 Ketua Program Studi,  
  
 Dr. Rhenny Ratnawati, S.T., M.T.

Pembimbing,  
  
 Dra. Sri Widyastuti, M.Si

Surabaya, 11 Januari 2021  
 Mahasiswa,  
  
 AGUNG WIDIYANTO





# UNIVERSITAS PGRI ADI BUANA SURABAYA

## FAKULTAS TEKNIK

Program Studi : Teknik Lingkungan – Perencanaan Wilayah Kota  
Teknik Industri – Teknik Elektro - PVKK

KAMPUS II: Jl. Dukuh Menanggal XII/4 ☎ (031) 8281181 Surabaya 60234

Website : [www.ft.unipasby.ac.id](http://www.ft.unipasby.ac.id) E-mail : [ft@unipasby.ac.id](mailto:ft@unipasby.ac.id)

### FORM REVISI SKRIPSI

Nama Mahasiswa : AGUNG WIDIANTO  
NIM : 193809002  
Fakultas / Progdi : FT - TEKNIK LINGKUNGAN  
Judul Skripsi : Pengaruh Penambahan Tanaman Matahari Meksiko  
(Thitonia Diversivolia) pada Proses Pembuatan Pupuk Organik  
Cair Limbah Tahu Secara Anaerobik  
Ujian Tanggal : 26 Januari 2021

No Bab.	Tanggal	Materi Konsultasi	Keterangan Catatan	Tanda Tangan Penguji
I	1 - 2 - 2021	Perbaikan Rumusan masalah	ACC	
II	1 - 2 - 2021	Melengkapi diagram alir	ACC	
III	3 - 2 - 2021	Variabel, populasi, Sampel	ACC	
IV	3 - 2 - 2021	Penelitian lain & Interpretasi	ACC	
V	5 - 2 - 2021	Kesimpulan	ACC	

Disetujui Dosen Penguji  
Pada Tanggal, 5 - 2 - 2021.....

Penguji I,

( Ir. Joko Sutrisno, M.Kom )

Penguji II,

(Muhammad Al Kholif, ST., M.T)

- a. Penyelesaian Revisi paling lambat 2 minggu dari pelaksanaan Ujian Skripsi.  
b. Pengetikan, penjilidan, penandatanganan Skripsi dan mengumpulkan Skripsi paling lambat 2 minggu dari revisi.
- Apabila sampai batas waktu tersebut ( point 1,a dan b ) mahasiswa belum menyelesaikan revisi dan tanda tangan, maka **Ujian dinyatakan Gugur**.
- a. Foto copy Form Revisi diserahkan ke Program Studi.  
b. Skripsi yang sudah direvisi diserahkan ke Fakultas tiga eksemplar untuk dijilid.



Lampiran 1. Surat Ijin Penelitian



**UNIVERSITAS PGRI ADI BUANA SURABAYA**  
**FAKULTAS TEKNIK SIPIL DAN PERENCANAAN**  
Program Studi : Teknik Lingkungan – Perencanaan Wilayah dan Kota  
KAMPUS II: Jl. Dukuh Menanggal XII/4 (031) 8281181 Surabaya 60234

Nomor : 160 /FTSP/IV/2020  
Lamp. : -  
Hal : Permohonan Ijin Penelitian

Surabaya, 22 April 2020

**Kepada Yth.**

**Kepala Bidang Pengujian dan Konsultansi**

**M. A Yani No. 315**

**Dl -**

**Surabaya**

Untuk memenuhi tuntutan Kurikulum Jurusan Program Studi Teknik Lingkungan Fakultas Teknik Sipil dan Perencanaan Universitas PGRI Adi Buana Surabaya, dimana mahasiswa diwajibkan untuk menempuh mata Perancangan Proposal Skripsi, maka dengan ini kami mengajukan permohonan ijin, agar mahasiswa dibawah ini dapat melakukan penelitian dan mengambil data. Adapun mahasiswa tersebut adalah :

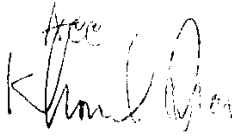
Nama : Agung Widiyanto  
NIM : 193809002  
Prodi : Teknik Lingkungan

Dengan penelitian yang berjudul "Pengaruh Penambahan Tanaman Matahari Meksiko (*Thuonia Diversivolia*) pada Proses Pembuatan Pupuk Organik Limbah Cair Tahu"

Demikian permohonan ini atas perkenan dan kerjasamanya disampaikan terima kasih.



**Drs.H.Sugito.ST.MT.**  
**NIP. 196805101992031006**

  
Khoiril Anam

## Lampiran 2. Hasil Analisa Laboratorium

PERUSAHAAN PERGERAKAN (PERBERG) PT SUPERINTENDING COMPANY OF INDONESIA



### REPORT OF ANALYSIS

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, and C/N Ratio

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
LIMBAH CAIR TAHU

DATE OF RECEIVED : June 01, 2020

DESCRIPTION OF SAMPLE : Form : Liquid  
Volume received : 1 L (approx)  
Packing : Plastic Jerrican

PERIOD OF ANALYSIS : June 01 up to 15, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
Nitrogen (N)	%	0.10	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	0.02	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.09	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.25	SNI 02-4956-2006
C/N Ratio	%	2.41	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testing & Eco-Framework



Khoiril Anam

### Lampiran 3. Hasil Analisa Laboratorium (Lanjutan)

PERUSAHAAN PERSEROAN (PERSERO) PT SUPERINTENDING COMPANY OF INDONESIA



#### REPORT OF ANALYSIS

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, and C/N Ratio

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
SERBUK MATAHARI MEKSIKO

DATE OF RECEIVED : June 01, 2020

DESCRIPTION OF SAMPLE : Form : Solid  
Volume received : 100gr  
Packing : Plastic

PERIOD OF ANALYSIS : June 01 up to 15, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
Nitrogen (N)	%	0.70	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	1.47	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.14	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.47	SNI 02-4958-2006
C/N Ratio	%	0.68	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testing & Eco-Framework

  
SUCOFINDO  
Khoiril Anam

**Lampiran 4. Hasil Analisa Laboratorium (Lanjutan)**

PERUSAHAAN PERSERDAN (PERSERO) PT SUPERINTENDING COMPANY OF INDONESIA



**REPORT OF ANALYSIS**

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, C/N Ratio and Bacteriological

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
POC LIMBAH TAHU + 9gr MATAHARI MEKSIKO

DATE OF RECEIVED : June 01, 2020

DESCRIPTION OF SAMPLE : Form : Liquid  
Volume received : 1 L (approx)  
Packing : Plastic Jerrican

PERIOD OF ANALYSIS : June 01 up to 15, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
<b><u>BACTERIOLOGICAL :</u></b>			
Salmonella Sp.	cfu/100 mL	0	SNI ISO 6579-1 : 2017
<b><u>CHEMICALS :</u></b>			
Nitrogen (N)	%	0.24	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	0.92	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.11	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.32	SNI 02-4958-2005
C/N Ratio	%	1.33	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testing & Eco-Framework



## REPORT OF ANALYSIS

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, C/N Ratio and Bacteriological

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
POC LIMBAH TAHU + 6 gr MATAHARI MEKSIKO (HARI 4)

DATE OF RECEIVED : November 01, 2020

DESCRIPTION OF SAMPLE : Form : Liquid  
Packing: Plastic Jerrican

PERIOD OF ANALYSIS : November 01 up to 15, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
<b><u>BACTERIOLOGICAL :</u></b>			
Salmonella Sp.	MPN/ml	0	SNI ISO 6579-1 : 2017
<b><u>CHEMICALS :</u></b>			
Nitrogen (N)	%	0.18	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	0.31	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.18	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.13	SNI 02-4958-2006
C/N Ratio	%	0.72	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testing & Eco-Framework



**Khoiril Anam**

Member Of IFIA

AN INSPECTION, SUPERVISION  
ASSESSMENT & TESTING COMPANY

OPERATION :

Jl. Kalibutih No. 215  
Surabaya 60173  
Telp. : (031) 5469123 (Hunting)  
Fax. : (031) 5469144  
E-mail : [scisba@sucofindo.co.id](mailto:scisba@sucofindo.co.id)  
[areasba@sucofindo.co.id](mailto:areasba@sucofindo.co.id)

LABORATORY :

Jl. A. Yani No. 315, Surabaya 60234



## REPORT OF ANALYSIS

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, C/N Ratio and Bacteriological

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
POC LIMBAH TAHU + 6 gr MATAHARI MEKSIKO (HARI 8)

DATE OF RECEIVED : November 5, 2020

DESCRIPTION OF SAMPLE : Form : Liquid  
Packing: Plastic Jerrican

PERIOD OF ANALYSIS : November 05 up to 20, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
<b><u>BACTERIOLOGICAL :</u></b>			
<i>Salmonella Sp.</i>	MPN/ml	0	SNI ISO 6579-1 : 2017
<b><u>CHEMICALS :</u></b>			
Nitrogen (N)	%	0.35	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	0.37	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.24	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.17	SNI 02-4958-2006
C/N Ratio	%	0.48	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testing & Eco-Framework



**Khoiril Anam** Member Of IFIA

AN INSPECTION, SUPERVISION  
ASSESSMENT & TESTING COMPANY

OPERATION :

Jl. Kalibutih No. 215  
Surabaya 60173  
Telp. : (031) 5469123 (Hunting)  
Fax. : (031) 5469144  
E-mail : [scisba@sucofindo.co.id](mailto:scisba@sucofindo.co.id)  
[areasba@sucofindo.co.id](mailto:areasba@sucofindo.co.id)

LABORATORY :

Jl. A. Yani No. 315, Surabaya 60234

## REPORT OF ANALYSIS

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, C/N Ratio and Bacteriological

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
POC LIMBAH TAHU + 6 gr MATAHARI MEKSIKO (HARI 12)

DATE OF RECEIVED : November 10, 2020

DESCRIPTION OF SAMPLE : Form : Liquid  
Packing: Plastic Jerrican

PERIOD OF ANALYSIS : November 10 up to 25, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
<b><i>BACTERIOLOGICAL :</i></b>			
<i>Salmonella Sp.</i>	MPN/ml	0	SNI ISO 6579-1 : 2017
<b><i>CHEMICALS :</i></b>			
Nitrogen (N)	%	0.42	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	0.48	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.55	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.26	SNI 02-4958-2006
C/N Ratio	%	0.61	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testing & Eco-Framework



**Khoiril Anam**

Member Of IFIA

AN INSPECTION, SUPERVISION  
ASSESSMENT & TESTING COMPANY

OPERATION :

Jl. Kalibutih No. 215  
Surabaya 60173  
Telp. : (031) 5469123 (Hunting)  
Fax. : (031) 5469144  
E-mail : [scisba@sucofindo.co.id](mailto:scisba@sucofindo.co.id)  
[areasba@sucofindo.co.id](mailto:areasba@sucofindo.co.id)

LABORATORY :

Jl. A. Yani No. 315, Surabaya 60234



## REPORT OF ANALYSIS

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, C/N Ratio and Bacteriological

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
POC LIMBAH TAHU + 9 gr MATAHARI MEKSIKO (HARI 4)

DATE OF RECEIVED : November 01, 2020

DESCRIPTION OF SAMPLE : Form : Liquid  
Packing: Plastic Jerrican

PERIOD OF ANALYSIS : November 01 up to 15, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
<b><u>BACTERIOLOGICAL :</u></b>			
Salmonella Sp.	MPN/ml	0	SNI ISO 6579-1 : 2017
<b><u>CHEMICALS :</u></b>			
Nitrogen (N)	%	0.22	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	0.44	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.22	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.18	SNI 02-4958-2006
C/N Ratio	%	0.81	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testina & Eco-Framework



SUCOFINDO  
Khoiril Anam

Member Of IFIA

AN INSPECTION, SUPERVISION  
ASSESSMENT & TESTING COMPANY

OPERATION :

Jl. Kalibutih No. 215  
Surabaya 60173  
Telp. : (031) 5469123 (Hunting)  
Fax. : (031) 5469144  
E-mail : [scisba@sucofindo.co.id](mailto:scisba@sucofindo.co.id)  
[areasba@sucofindo.co.id](mailto:areasba@sucofindo.co.id)

LABORATORY :

Jl. A. Yani No. 315, Surabaya 60234

## REPORT OF ANALYSIS

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, C/N Ratio and Bacteriological

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
POC LIMBAH TAHU + 9 gr MATAHARI MEKSIKO (HARI 8)

DATE OF RECEIVED : November 05, 2020

DESCRIPTION OF SAMPLE : Form : Liquid  
Packing: Plastic Jerrican

PERIOD OF ANALYSIS : November 05 up to 20, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
<b><u>BACTERIOLOGICAL :</u></b>			
<i>Salmonella Sp.</i>	MPN/ml	0	SNI ISO 6579-1 : 2017
<b><u>CHEMICALS :</u></b>			
Nitrogen (N)	%	0.47	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	0.48	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.31	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.21	SNI 02-4958-2006
C/N Ratio	%	0.44	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testing & Eco-Framework



**Khoiril Anam**

Member Of IFIA

AN INSPECTION, SUPERVISION  
ASSESSMENT & TESTING COMPANY

OPERATION :

Jl. Kalibutih No. 215  
Surabaya 60173  
Telp. : (031) 5469123 (Hunting)  
Fax. : (031) 5469144  
E-mail : [scisba@sucofindo.co.id](mailto:scisba@sucofindo.co.id)  
[areasba@sucofindo.co.id](mailto:areasba@sucofindo.co.id)

LABORATORY :

Jl. A. Yani No. 315, Surabaya 60234



## REPORT OF ANALYSIS

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, C/N Ratio and Bacteriological

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
POC LIMBAH TAHU + 9 gr MATAHARI MEKSIKO (HARI 12)

DATE OF RECEIVED : November 10, 2020

DESCRIPTION OF SAMPLE : Form : Liquid  
Packing: Plastic Jerrican

PERIOD OF ANALYSIS : November 10 up to 25, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
<b><u>BACTERIOLOGICAL :</u></b>			
<i>Salmonella Sp.</i>	MPN/ml	0	SNI ISO 6579-1 : 2017
<b><u>CHEMICALS :</u></b>			
Nitrogen (N)	%	0.59	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	0.63	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.62	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.31	SNI 02-4958-2006
C/N Ratio	%	0.52	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testing & Eco-Framework



**Khoiril Anam**

Member Of IFIA

AN INSPECTION, SUPERVISION  
ASSESSMENT & TESTING COMPANY

OPERATION :

Jl. Kalibutih No. 215  
Surabaya 60173  
Telp. : (031) 5469123 (Hunting)  
Fax. : (031) 5469144  
E-mail : [scisba@sucofindo.co.id](mailto:scisba@sucofindo.co.id)  
[areasba@sucofindo.co.id](mailto:areasba@sucofindo.co.id)

LABORATORY :

Jl. A. Yani No. 315, Surabaya 60234

## REPORT OF ANALYSIS

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, C/N Ratio and Bacteriological

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
POC LIMBAH TAHU + 12 gr MATAHARI MEKSIKO (HARI 4)

DATE OF RECEIVED : November 01, 2020

DESCRIPTION OF SAMPLE : Form : Liquid  
Packing: Plastic Jerrican

PERIOD OF ANALYSIS : November 01 up to 15, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
<b>BACTERIOLOGICAL :</b>			
<i>Salmonella Sp.</i>	MPN/ml	0	SNI ISO 6579-1 : 2017
<b>CHEMICALS :</b>			
Nitrogen (N)	%	0.24	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	0.48	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.24	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.23	SNI 02-4958-2006
C/N Ratio	%	0.95	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testing & Eco-Framework



**Khoiril Anam**

Member Of IFIA

AN INSPECTION, SUPERVISION  
ASSESSMENT & TESTING COMPANY

OPERATION :

Jl. Kalibutih No. 215  
Surabaya 60173  
Telp. : (031) 5469123 (Hunting)  
Fax. : (031) 5469144  
E-mail : [scisba@sucofindo.co.id](mailto:scisba@sucofindo.co.id)  
[areasba@sucofindo.co.id](mailto:areasba@sucofindo.co.id)

LABORATORY :

Jl. A. Yani No. 315, Surabaya 60234



## REPORT OF ANALYSIS

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, C/N Ratio and Bacteriological

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
POC LIMBAH TAHU + 12 gr MATAHARI MEKSIKO (HARI 8)

DATE OF RECEIVED : November 05, 2020

DESCRIPTION OF SAMPLE : Form : Liquid  
Packing: Plastic Jerican

PERIOD OF ANALYSIS : November 05 up to 20, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
<b><u>BACTERIOLOGICAL :</u></b>			
<i>Salmonella Sp.</i>	MPN/ml	0	SNI ISO 6579-1 : 2017
<b><u>CHEMICALS :</u></b>			
Nitrogen (N)	%	0.53	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	0.56	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.62	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.26	SNI 02-4958-2006
C/N Ratio	%	0.41	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testing & Eco-Framework



**Khoiril Anam**

Member Of IFIA

AN INSPECTION, SUPERVISION  
ASSESSMENT & TESTING COMPANY

OPERATION :

Jl. Kalibutih No. 215  
Surabaya 60173  
Telp. : (031) 5469123 (Hunting)  
Fax. : (031) 5469144  
E-mail : [scisba@sucofindo.co.id](mailto:scisba@sucofindo.co.id)  
[areasba@sucofindo.co.id](mailto:areasba@sucofindo.co.id)

LABORATORY :

Jl. A. Yani No. 315, Surabaya 60234

## REPORT OF ANALYSIS

CLIENT : AGUNG WIDIANTO  
UNIVERSITAS PGRI ADIBUANA SURABAYA

THE FOLLOWING SAMPLE(S) WERE/ WAS SUBMITTED AND IDENTIFIED BY CLIENT AS :

TYPE OF SAMPLE : FERTILIZER

TEST REQUIRED : Nitrogen (N), Total P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Carbon (C) Organik, C/N Ratio and Bacteriological

SAMPLE IDENTIFICATION : Following statement were stated by Client and not verified by SUCOFINDO  
POC LIMBAH TAHU + 12 gr MATAHARI MEKSIKO (HARI 12)

DATE OF RECEIVED : November 10, 2020

DESCRIPTION OF SAMPLE : Form : Liquid  
Packing: Plastic Jerrican

PERIOD OF ANALYSIS : November 10 up to 25, 2020

We have tested the sample(s) submitted and the following results were obtained :

Parameter	Unit	Result	Methods
<b><u>BACTERIOLOGICAL :</u></b>			
Salmonella Sp.	MPN/ml	0	SNI ISO 6579-1 : 2017
<b><u>CHEMICALS :</u></b>			
Nitrogen (N)	%	0.62	AOAC 20 <sup>th</sup> Ed., 2016, Method 978.02
Total P <sub>2</sub> O <sub>5</sub>	%	0.68	AOAC 20 <sup>th</sup> Ed., 2016, Method 957.02
K <sub>2</sub> O	%	0.72	AOAC 20 <sup>th</sup> Ed., 2016, Method 965.09
Carbon (C) Organik	%	0.32	SNI 02-4958-2006
C/N Ratio	%	0.51	Calculation

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

Dept. Of Commercial 3 – Testing & Eco-Framework



**Khoiril Anam**

Member Of IFIA

AN INSPECTION, SUPERVISION  
ASSESSMENT & TESTING COMPANY

OPERATION :

Jl. Kalibutih No. 215  
Surabaya 60173  
Telp. : (031) 5469123 (Hunting)  
Fax. : (031) 5469144  
E-mail : [scisba@sucofindo.co.id](mailto:scisba@sucofindo.co.id)  
[areasba@sucofindo.co.id](mailto:areasba@sucofindo.co.id)

LABORATORY

Jl. A. Yani No. 315, Surabaya 60234



## Lampiran 5 Dokumentasi Kegiatan Penelitian



a. Cacahan Matahari Meksiko



b. Pengeringan Matahari Meksiko



c. Memblender Sampel



d. Menimbang Sampel



e. Mengukur EM4



f. Menyiapkan Media Mikroba



g. Titrasi Sampel



h. Sampel akan diuji