

LAMPIRAN

Lampiran 1. CoA (*Certificate of Analysis*) Bahan Aktif dan Eksipien Maltodekstrin

 ORIGINAL		DATE: AUG. 08, 2023	
QINHUANGDAO LIHUA STARCH CO., LTD ADD: NO. 89 LIHUA STREET, FUNING DISTRICT, QINHUANGDAO CITY, HEBEI PROVINCE CHINA.			
CERTIFICATE OF ANALYSIS			
PRODUCT NAME	MALTODEXTRIN DE 10-12	REPORT NO.	1
BATCH NO.	20230729	PACKING	25KG/BAG
QUANTITY(MT)	55000KGS	PRODUCING DATE	JUL. 29, 2023
PRODUCTION UNIT	MALTO DEXTRIN WORKSHOP	DATE OF EXPIRY	JUL. 28, 2025
TEST BASE	GB/T 20882.6-2021	TEST OBJECT	ALL
TEST ITEM	TEST BASE	TEST RESULT	
CHARACTER	SLIGHT HYGROSCOPIC POWDER, NO VISIBLE IMPURITIES BY NORMAL EYESIGHT, WHITE OR SLIGHT YELLOW, POSSESS MALTODEXTRIN ODOR, NOT SWEET OR SLIGHT SWEET, NO ABNORMAL TASTE	SLIGHT HYGROSCOPIC POWDER, NO VISIBLE IMPURITIES BY NORMAL EYESIGHT, WHITE OR SLIGHT YELLOW, POSSESS MALTODEXTRIN ODOR, NOT SWEET OR SLIGHT SWEET, NO ABNORMAL TASTE	
DE VALUE, % (M/M)	10-12	11.7	
DPI, %	≤5	<5	
DP2, %	≤15	<15	
WATER, % (M/M)	≤6	5.3	
SOLUBILITY	≥98	99.2	
PH VALUE	4.0-7.0	5.5	
SULPHATE ASH % (M/M)	≤0.5	0.1	
ARSENIC(AS), MG/KG	≤0.5	0.1	
SO ₂ MG/KG	≤10	0.1	
PB, MG/KG	≤0.5	0.1	
COLIFORM(CFU/G)	≤10	NONE	
TOTAL PLATE COUNT (CFU/G)	≤3000	10	
E. COLI	NONE	NONE	
SHIGELLA (/25G)	NONE	NONE	
STAPHYLOCOCCUS AUREUS(/25G)	NONE	NONE	
SALMONELLA	NEGATIVE	NEGATIVE	
CONCLUSION: THE PRODUCT COMPLY WITH THE SPECIFICATION OF GB/T 20882.6-2021			
MINISTER: CONG WEI		CHECKER: LIU KUN	EXAMINANT: SONG LI LI
MANUFACTURER: QINHUANGDAO LIHUA STARCH CO., LTD.			

Laktosa



DFE Pharma GmbH & Co. KG / PO Box 20 21 20 / D-47568 Goch

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0811342880-900001-20221010-133649-2006-3420_FONT_01-000001

Certificate of Analysis

Customer number	: 160560	Lot/ Batchnumber	: 23174701
Delivery number	: 811342880	Date of production	: 03.06.2022
Delivery Date	: 24.10.2022	Expiry date	: 01.06.2025
Material number	: 0743826	Order number	: 15452851
Material description	: HMS Impalpable (NZ)		
	Milled lactose monohydrate		
	USP-NF, Ph.Eur., JP		
	Bag, PE liner, 25 kg net		

Analysis**Chemical & Physical**

Characteristic	Method of analysis	Unit	Specification	Results
Infrared absorption spectrum / Id A	USP-NF; Ph.Eur.; JP		Conforms to reference	Pass
Water / Id D Ph.Eur.	USP-NF; Ph.Eur.; JP	%(m)	4.5-5.5	5.1
Appearance of solution	Ph.Eur.		Not more intensely coloured than ref BY7	Pass
Lactose colour of sol.	USP-NF; JP		Nearly colourless	Pass
Lactose clarity of sol.	USP-NF; Ph.Eur.; JP		Clear	Pass
UV-Abs. 1% sol. 210-220 nm	USP-NF; Ph.Eur.; JP		0.00-0.25	0.02
UV-Abs. 1% sol. 270-300 nm	USP-NF; Ph.Eur.; JP		0.00-0.07	0.00
UV-Abs. 10% sol. 400 nm	USP-NF; Ph.Eur.; JP		0.00-0.04	0.00
Acidity (0.1N NaOH/6g)	USP-NF; Ph.Eur.; JP	ml	0.0-0.4	0.2
Specific optical rotation (anhydrous bas	USP-NF; Ph.Eur.; JP	Degree	54.4-55.9	55.1
Heavy Metals	USP-NF; Ph.Eur.; JP		max 5 ppm	Pass
Loss on Drying (2 hrs, 80°C)	USP-NF; JP	%(m)	0.0-0.5	0.1
Residue on ignition / Sulfated ash	USP-NF; Ph.Eur.; JP	%(m)	0.0-0.1	<0.1

Microbiological

Characteristic	Method of analysis	Unit	Specification	Results
Total Aerobic Micro Count	Pharmacopela Harmonized Methods	cfu/g	0-100	<100
Total Yeast & Mould Count	Pharmacopela Harmonized Methods	cfu/g	0-10	<10
Escherichia coli (10 g)	Pharmacopela Harmonized Methods		Negative	Negative
Salmonella (750g)	equal to ISO 6579		Negative	Negative

OTHERS

Characteristic	Method of analysis	Unit	Specification	Results
Particle size <75 µm	Internal, ATM sonic sifter	%(m)	78-86	81
Particle size <180 µm	Internal, ATM sonic sifter	%(m)	>=98	99

Manufacturer: DFE Pharma GmbH & Co. KG, Goch, Germany (formerly named "DMV-Fonterra Excipients GmbH & Co. KG")

Sukralosa



Shandong Kanbo Biochemical Technology Co., Ltd

Add: No.1016 Liba Road, Lijin County, Dongying City, Shandong Province, 257400, P.R.China

CERTIFICATE OF ANALYSIS

Product Name: Sucralose

[56038-13-2]

Test Date:

September 24, 2023

Batch NO.:

202309032

Manu.Date:

September 18, 2023

Quantity:

4000kg

Expiry Date:

September 17, 2025

Item	FCC12, EP10, USP43, E955, GB25531 and GB4789	Result
Appearance	White or almost white powder	Complies
Solubility	Freely soluble in water, methanol and ethanol, Slightly soluble in ethyl acetate	Complies
Ident IR	The IR absorption spectrum conform the reference spectrum	Pass
Ident HPLC	The retention time of the principal peak in the chromatogram of the Assay preparation corresponds to that in the chromatogram of the Standard preparation	Pass
Ident TLC	The Rf value of the major spot in the thin-layer chromatogram of the Sample solution is the same as that of the Standard solution obtained in the test for Related Substances.	Pass
Assay	98.0%~102.0% , calculated on the anhydrous basis.	99.58%
Specific Rotation	+84.0 ~+87.5°	+85.78°
Clarity of solution	—	Clear
PH (10% aqueous solution)	5.0~7.0	6.34
Water	≤2.0%	0.12%
Methanol	≤0.1%	Not detected
Ignited Residue (Sulfated ash)	≤0.7%	0.06%
Arsenic(As)	≤1ppm	<1ppm
Heavy metals	≤0.2ppm	<0.2ppm
Lead	≤0.25ppm	Not detected
Related substances (Other chlorinated disaccharides)	≤0.5%	<0.5%
Hydrolysis products (Chlorinated monosaccharides)	≤0.1%	Complies
Triphenylphosphine oxide	≤150ppm	<150ppm
Total aerobic count	≤250CFU/g	<20CFU/g
Yeast & Moulds	≤50CFU/g	<10CFU/g
Coliforms	Negative	Nf
E.coli	Negative	Nf
S.aureus	Negative	Nf
Salmonella	Negative	Nf

Particle size

95% pass through 100 mesh

Storage condition:Store in well closed container, dry and cool place

Shelf Life: 2 years while stored in original packing under above stated condition.

Conclusion: The product complies with FCC12, EP10, USP43, E955, GB25531 and GB4789 standards.

Approved: Xu Songbo

Inspector: Liu Shilong

Lampiran 2. Determinasi Tanaman Sambiloto, Sembung Dan Meniran

1. Sambiloto

HERBARIUM JATINANGOR
LABORATORIUM TAKSONOMI TUMBUHAN
JURUSAN BIOLOGI FMIPA UNPAD
 Gedung D2-212, Jl. Raya Bandung Sumedang Km 21 Jatinangor
 Telp. 089689992695, email: phancrogamac@yahoo.com

LEMBAR IDENTIFIKASI TUMBUHAN
 No.28/HB/04/2024.

Herbarium Jatinangor, Laboratorium Taksonomi Tumbuhan, Jurusan Biologi FMIPA UNPAD, dengan ini menerangkan bahwa:

Nama : Nurul Aini
 NIM/NIP : 221FF04023
 Instansi : Universitas Bhakti Kencana.
 Lokasi : Bandung.

Telah melakukan identifikasi tumbuhan, dengan No. Koleksi: -
 Tanggal Koleksi : 24 April 2024.

Hasil Identifikasi

Nama Ilmiah : *Andrographis paniculata* (Burm.f.) Nees
 Sinonim : *Andrographis paniculata* var. *glandulosa* Trimen
 Nama Lokal : Sambiloto
 Suku/Famili : Acanthaceae

Klasifikasi (Hirarki Taksonomi)

Kingdom : Plantae
 Divisi : Magnoliophyta
 Class : Magnoliopsida
 Ordo : Lamiales
 Famili : Acanthaceae
 Genus : *Andrographis*
 Species : *Andrographis paniculata* (Burm.f.) Nees

Referensi:

Backer, C. A. and Bakhuizen v/d Brink R. C Jr. 1963. Flora of Java. Wolter-Noordhoff NV, Groningen.
 Cronquist, Arthur. 1981. An Integrated System of Classification of Flowering Plants. Columbia University Press, New York
 The Plant List Website DuniaTumbuhan. <http://www.theplantlist.org/tp1.1/record/kew-158489>.

Jatinangor, 25 April 2024.

Identifikator,

LABORATORIUM TAKSONOMI TUMBUHAN
 JURUSAN BIOLOGI FMIPA-UNPAD

Drs. Joko Kusmoro, M.P.
 NIP. 19600801 199101 1 001

2. Sembung

HERBARIUM JATINANGOR
LABORATORIUM TAKSONOMI TUMBUHAN
JURUSAN BIOLOGI FMIPA UNPAD
 Gedung D2-212, Jl. Raya Bandung Sumedang Km 21 Jatinangor
 Telp. 089689992695, email: phanerogamae@yahoo.com

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No.29/HB/04/2024.

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Nama : Nurul Aini
 NIM/NIP : 221FF04023
 Instansi : Universitas Bhakti Kencana.
 Lokasi : Bandung.

Telah melakukan identifikasi tumbuhan, dengan No. Koleksi: -
 Tanggal Koleksi : 24 April 2024.

Hasil Identifikasi

Nama Ilmiah : *Blumea balsamifera* (L.) DC.
 Sinonim : *Blumea appendiculata* DC.
 Nama Lokal : Sembung
 Suku/Famili : Asteraceae

Klasifikasi (Hirarki Taksonomi)

Kingdom : Plantae
 Divisi : Magnoliophyta
 Class : Magnoliopsida
 Ordo : Asterales
 Famili : Asteraceae
 Genus : *Blumea*
 Species : *Blumea balsamifera* (L.) DC.

Referensi:

Backer, C. A. and Bakhuizen v/d Brink R. C Jr. 1963. Flora of Java. Wolter-Noordhoff NV. Groningen.
 Cronquist, Arthur. 1981. An Integrated System of Classification of Flowering Plants. Columbia University Press. New York
 The Plant List. Website Dunia Tumbuhan. <http://www.theplantlist.org/tp1.1/record/kew-158489>.

Jatinangor, 25 April 2024.

Identifikator,

LABORATORIUM TAKSONOMI TUMBUHAN
 JURUSAN BIOLOGI FMIPA-UNPAD

Drs. Joko Kusnoro, M.P.
 NIP. 19600801 199101 1 001

3. Meniran

HERBARIUM JATINANGOR
LABORATORIUM TAKSONOMI TUMBUHAN
JURUSAN BIOLOGI FMIPA UNPAD
 Gedung D2-212, Jl. Raya Bandung Sumedang Km 21 Jatinangor
 Telp. 089689992695, email: phanerogamae@yahoo.com

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 No.29/HB/04/2024.

Herbarium Jatinangor, Laboratorium Taksonomi Tumbuhan, Jurusan Biologi FMIPA UNPAD, dengan ini menerangkan bahwa:

Nama : Nurul Aini
 NIM/NIP : 221FF04023
 Instansi : Universitas Bhakti Kencana.
 Lokasi : Bandung.

Telah melakukan identifikasi tumbuhan, dengan No. Koleksi: -
 Tanggal Koleksi : 24 April 2024.

Hasil Identifikasi
 Nama Ilmiah : *Blumea balsamifera* (L.) DC.
 Sinonim : *Blumea appendiculata* DC.
 Nama Lokal : Sembung
 Suku/Famili : Asteraceae

Klasifikasi (Hirarki Taksonomi)
 Kingdom : Plantae
 Divisi : Magnoliophyta
 Class : Magnoliopsida
 Ordo : Asterales
 Famili : Asteraceae
 Genus : *Blumea*
 Species : *Blumea balsamifera* (L.) DC.

Referensi:
 Backer, C. A. and Bakhuizen v/d Brink R. C Jr. 1963. Flora of Java. Wolter-Noordhoff NV. Groningen.
 Cronquist, Arthur. 1981. An Integrated System of Classification of Flowering Plants. Columbia University Press. New York
 The Plant List Website Dunia Tumbuhan <http://www.theplantlist.org/tp11.1/record/kew-158489>.

Jatinangor, 25 April 2024.

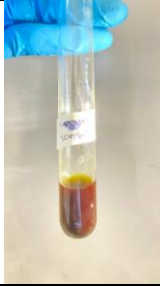
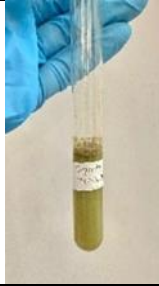
Identifikator,

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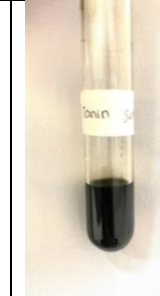
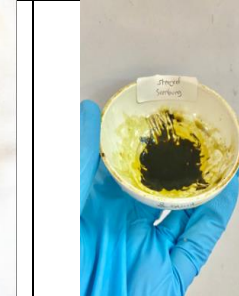
Drs. Joko Kusmoro, M.P.
 NIP. 19600801 199101 1 001

Lampiran 3. Hasil Skrining Fitokimia Ekstrak

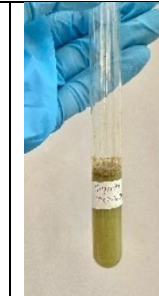
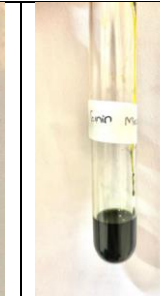
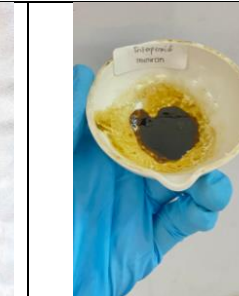
1. Hasil Skrining Fitokimia Ekstrak Sambiloto

				
Alkaloid	Flavonoid	Saponin	Tanin	Steroid/triterpenoid

2. Hasil Skrining Fitokimia Ekstrak Sembung

				
Alkaloid	Flavonoid	Saponin	Tanin	Steroid/triterpenoid

3. Hasil Skrining Fitokimia Ekstrak Meniran

				
Alkaloid	Flavonoid	Saponin	Tanin	Steroid/triterpenoid

Lampiran 4. Proses Pembuatan sediaan Mikrokapsul

Proses Pencampuran

Proses Masa Kepal

Proses Pengayakan

Proses Ekstruder


Proses Pengeringan**Proses Penyalutan**

Lampiran 5. Hasil Formula Mikrokapsul

Formula Basis (F0)



Formula 1



Formula 2



Formula 3



Formula 4



- F1 = Sambiloto : Sembung : Meniran (6 : 2,7 : 2,7)
F2 = Sambiloto : Sembung : Meniran (2,7 : 2,7 : 6)
F3 = Sambiloto : Sembung : Meniran (2,7 : 6 : 2,7)
F4 = Sambiloto : Sembung : Meniran (3,8 : 3,8 : 3,8)

Lampiran 6. Hasil Statistik Evaluasi Sediaan Mikrokapsul

1. Uji LOD

Tests of Normality

	FORMULA	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
LOD	F1	.253	3	.	.964	3	.637
	F2	.364	3	.	.800	3	.114
	F3	.346	3	.	.837	3	.206
	F4	.333	3	.	.862	3	.273
	F5	.347	3	.	.835	3	.202

a. Lilliefors Significance Correction

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
LOD	Based on Mean	5.947	4	10	.010
	Based on Median	.566	4	10	.693
	Based on Median and with adjusted df	.566	4	5.833	.698
	Based on trimmed mean	4.944	4	10	.018

ANOVA

LOD

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7106.933	4	1776.733	.330	.852
Within Groups	53922.000	10	5392.200		
Total	61028.933	14			

Test Statistics^{a,b}

LOD	
Kruskal-Wallis H	3.500
df	4
Asymp. Sig.	.478

2. Laju Alir

Tests of Normality

	FORMULA	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
LAJU_ALIR	F1	.222	3	.	.986	3	.771
	F2	.314	3	.	.893	3	.363
	F3	.380	3	.	.763	3	.030
	F4	.384	3	.	.753	3	.006
	F5	.200	3	.	.995	3	.862

a. Lilliefors Significance Correction

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
LAJU_ALIR	Based on Mean	11.152	4	10	.001
	Based on Median	.714	4	10	.601
	Based on Median and with adjusted df	.714	4	4.007	.624
	Based on trimmed mean	8.822	4	10	.003

ANOVA

LAJU_ALIR

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	326289.733	4	81572.433	1.676	.231
Within Groups	486770.000	10	48677.000		
Total	813059.733	14			

Multiple Comparisons

Dependent Variable: LAJU_ALIR

		Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval		
	(I) FORMULA	(J) FORMULA			Lower Bound	Upper Bound	
Tukey HSD	F1	F2	-103.33333	180.14254	.976	-696.1972	489.5306
		F3	161.66667	180.14254	.891	-431.1972	754.5306
		F4	178.33333	180.14254	.854	-414.5306	771.1972
		F5	-201.00000	180.14254	.795	-793.8639	391.8639
	F2	F1	103.33333	180.14254	.976	-489.5306	696.1972
		F3	265.00000	180.14254	.601	-327.8639	857.8639
		F4	281.66667	180.14254	.549	-311.1972	874.5306
		F5	-97.66667	180.14254	.981	-690.5306	495.1972
	F3	F1	-161.66667	180.14254	.891	-754.5306	431.1972
		F2	-265.00000	180.14254	.601	-857.8639	327.8639
		F4	16.66667	180.14254	1.000	-576.1972	609.5306
		F5	-362.66667	180.14254	.326	-955.5306	230.1972
	F4	F1	-178.33333	180.14254	.854	-771.1972	414.5306
		F2	-281.66667	180.14254	.549	-874.5306	311.1972
		F3	-16.66667	180.14254	1.000	-609.5306	576.1972
		F5	-379.33333	180.14254	.289	-972.1972	213.5306
	F5	F1	201.00000	180.14254	.795	-391.8639	793.8639
		F2	97.66667	180.14254	.981	-495.1972	690.5306
		F3	362.66667	180.14254	.326	-230.1972	955.5306
		F4	379.33333	180.14254	.289	-213.5306	972.1972
Bonferroni	F1	F2	-103.33333	180.14254	1.000	-748.4969	541.8303
		F3	161.66667	180.14254	1.000	-483.4969	806.8303
		F4	178.33333	180.14254	1.000	-466.8303	823.4969
		F5	-201.00000	180.14254	1.000	-846.1636	444.1636
	F2	F1	103.33333	180.14254	1.000	-541.8303	748.4969
		F3	265.00000	180.14254	1.000	-380.1636	910.1636
		F4	281.66667	180.14254	1.000	-363.4969	926.8303
		F5	-97.66667	180.14254	1.000	-742.8303	547.4969
	F3	F1	-161.66667	180.14254	1.000	-806.8303	483.4969
		F2	-265.00000	180.14254	1.000	-910.1636	380.1636
		F4	16.66667	180.14254	1.000	-628.4969	661.8303
		F5	-362.66667	180.14254	.718	-1007.8303	282.4969
	F4	F1	-178.33333	180.14254	1.000	-823.4969	466.8303
		F2	-281.66667	180.14254	1.000	-926.8303	363.4969
		F3	-16.66667	180.14254	1.000	-661.8303	628.4969
		F5	-379.33333	180.14254	.615	-1024.4969	265.8303
	F5	F1	201.00000	180.14254	1.000	-444.1636	846.1636
		F2	97.66667	180.14254	1.000	-547.4969	742.8303
		F3	362.66667	180.14254	.718	-282.4969	1007.8303
		F4	379.33333	180.14254	.615	-265.8303	1024.4969
Games-Howell	F1	F2	-103.33333 ^a	14.28675	.046	-202.8358	-3.8309
		F3	161.66667	205.00027	.914	-1398.9955	1722.3289
		F4	178.33333	198.15959	.878	-1329.1346	1685.8013
		F5	-201.00000 ^a	14.70450	.008	-293.4182	-108.5818
	F2	F1	103.33333 ^a	14.28675	.046	3.8309	202.8358
		F3	265.00000	204.54747	.724	-1308.0036	1838.0036
		F4	281.66667	197.69112	.673	-1238.5555	1801.8888
		F5	-97.66667 ^a	5.54777	.001	-124.4169	-70.9164
	F3	F1	-161.66667	205.00027	.914	-1722.3289	1398.9955
		F2	-265.00000	204.54747	.724	-1838.0036	1308.0036
		F4	16.66667	284.43414	1.000	-1248.5778	1281.9111
		F5	-362.66667	204.57707	.546	-1934.8525	1209.5191
	F4	F1	-178.33333	198.15959	.878	-1685.8013	1329.1346
		F2	-281.66667	197.69112	.673	-1801.8888	1238.5555
		F3	-16.66667	284.43414	1.000	-1281.9111	1248.5778
		F5	-379.33333	197.72175	.500	-1898.7094	1140.0428
	F5	F1	201.00000 ^a	14.70450	.008	108.5818	293.4182
		F2	97.66667 ^a	5.54777	.001	70.9164	124.4169
		F3	362.66667	204.57707	.546	-1209.5191	1934.8525
		F4	379.33333	197.72175	.500	-1140.0428	1898.7094

*. The mean difference is significant at the 0.05 level.

Test Statistics^{a,b}

LAJU_ALIR

Kruskal-Wallis H	11.233
df	4
Asymp. Sig.	.024

3. Sudut Diam

Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	FORMULA	Statistic	df	Sig.	Statistic	df	Sig.
SUDUT_DIAM	F1	.207	3	.	.992	3	.833
	F2	.244	3	.	.971	3	.675
	F3	.363	3	.	.803	3	.121
	F4	.187	3	.	.998	3	.914
	F5	.318	3	.	.887	3	.344

a. Lilliefors Significance Correction

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
SUDUT_DIAM	Based on Mean	2.738	4	10	.090
	Based on Median	.659	4	10	.634
	Based on Median and with adjusted df	.659	4	3.805	.653
	Based on trimmed mean	2.527	4	10	.107

ANOVA

SUDUT_DIAM

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1346.400	4	336.600	.263	.895
Within Groups	12819.333	10	1281.933		
Total	14165.733	14			

Test Statistics^{a,b}

SUDUT_DIAM	
Kruskal-Wallis H	1.862
df	4
Asymp. Sig.	.761

4. Waktu Melarut

Tests of Normality

	FORMULA	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
WAKTU_MELARUT	F1	.224	3	.	.984	3	.762
	F2	.200	3	.	.995	3	.862
	F3	.175	3	.	1.000	3	1.000
	F4	.257	3	.	.960	3	.618
	F5	.276	3	.	.942	3	.537

a. Lilliefors Significance Correction

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
WAKTU_MELARUT	Based on Mean	.944	4	10	.478
	Based on Median	.365	4	10	.828
	Based on Median and with adjusted df	.365	4	6.230	.826
	Based on trimmed mean	.897	4	10	.501

ANOVA

WAKTU_MELARUT

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1508.400	4	377.100	2.504	.109
Within Groups	1506.000	10	150.600		
Total	3014.400	14			

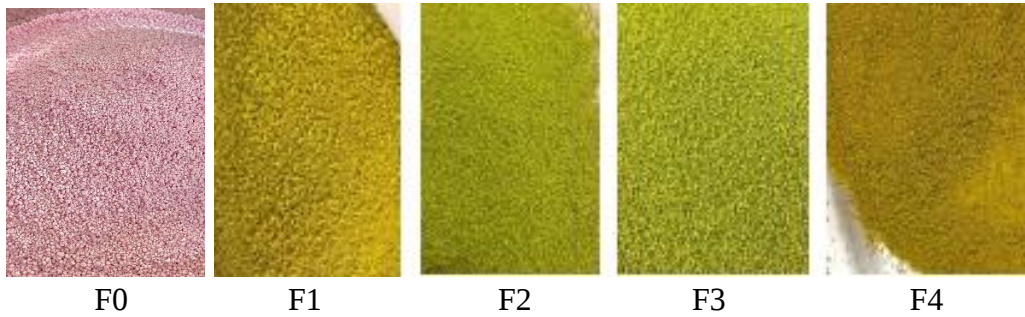
Test Statistics^{a,b}

WAKTU_MEL
ARUT

Kruskal-Wallis H	6.470
df	4
Asymp. Sig.	.167

Lampiran 7. Dokumentasi Hasil Evaluasi Sediaan Mikro kapsul

1. Organoleptik



2. Susut Pengerinan



3. Laju Alir



4. Sudut Istirahat



5. Distribusi Ukuran Partikel



6. Waktu Melarut



Lampiran 8. Data Hasil Evaluasi Sediaan Fisik Mikrokapsul

1. Organoleptik

Sebelum Penyalutan				
Formula	Bentuk	Warna	Rasa	Bau
F0	Sferis	Putih	Manis	Aroma khas
F1	Sferis	Hijau	Sedikit pahit	Sambiloto
F2	Sferis	Hijau kecoklatan	Manis	Meniran
F3	Sferis	Hijau kecoklatan	Manis	Meniran
F4	Sferis	Hijau kecoklatan	Manis	Meniran

Setelah Penyalutan				
Formula	Bentuk	Warna	Rasa	Bau
F0	Sferis	Merah muda	Manis	Aroma khas
F1	Sferis	Hijau	Sedikit pahit	Sambiloto
F2	Sferis	Hijau kecoklatan	Manis	Meniran
F3	Sferis	Hijau kecoklatan	Manis	Meniran
F4	Sferis	Hijau kecoklatan	Manis	Meniran

2. Susut Pengeringan/Lod

Sebelum Penyalutan				
Formula	Kadar LoD (%)			Rata-rata/SD
	1	2	3	
F0	1,41	1,13	1,15	1,23 ± 0,157
F1	1,47	1,88	1,48	1,61 ± 0,233
F2	1,23	1,33	1,38	1,31 ± 0,078
F3	1,41	1,53	1,46	1,49 ± 0,059
F4	1,57	1,57	1,41	1,52 ± 0,089

Setelah Penyalutan				
Formula	Kadar LoD (%)			Rata-rata/SD
	1	2	3	
F0	1,51	1,33	1,45	1,43 ± 0,092
F1	1,97	1,85	1,7	1,84 ± 0,139
F2	1,84	1,69	1,86	1,80 ± 0,095
F3	1,54	1,6	1,79	1,64 ± 0,131
F4	1,91	1,71	1,8	1,81 ± 0,097

3. Laju Alir

Sebelum Penyalutan				
Formula	Laju Alir (g/detik)			Rata-rata
	1	2	3	
F0	6,49	6,57	7,20	$6,75 \pm 0,039$
F1	7,09	7,08	7,12	$7,09 \pm 0,020$
F2	6,18	6,16	6,13	$6,15 \pm 0,025$
F3	6,38	6,39	6,36	$6,37 \pm 0,015$
F4	7,35	7,28	7,30	$7,31 \pm 0,036$
Setelah Penyalutan				
Formula	Laju Alir (g/detik)			Rata-rata
	1	2	3	
F0	6,13	6,42	6,61	$6,39 \pm 0,239$
F1	7,36	7,46	7,44	$7,42 \pm 0,053$
F2	6,80	6,87	6,76	$6,81 \pm 0,056$
F3	6,50	6,59	6,57	$6,55 \pm 0,047$
F4	8,39	8,32	8,48	$8,40 \pm 0,080$

4. Sudut Diam

Sebelum Penyalutan				
Formula	Sudut Diam (°)			Rata-rata
	1	2	3	
F0	30,23	30,98	30,97	$30,72 \pm 0,430$
F1	30,30	33,84	30,46	$31,53 \pm 0,199$
F2	29,58	29,95	30,87	$30,13 \pm 0,664$
F3	29,43	30,85	30,45	$30,24 \pm 0,732$
F4	30,57	30,43	30,73	$30,57 \pm 0,150$
Setelah Penyalutan				
Formula	Sudut Diam (°)			Rata-rata
	1	2	3	
F0	30,15	30,48	30,29	$30,30 \pm 0,166$
F1	30,27	30,14	30,51	$30,30 \pm 0,187$
F2	29,78	29,85	30,77	$30,13 \pm 0,552$
F3	29,80	30,82	30,35	$30,32 \pm 0,510$
F4	30,19	29,98	30,15	$30,10 \pm 0,111$

5. Waktu Melarut

Setelah Penyalutan

Formula	Waktu Melarut (Menit)			Rata-rata/SD
	1	2	3	
F0	4,28	4,37	4,14	4,27 ± 0,11
F1	4,50	4,41	4,57	4,49 ± 0,08
F2	4,51	4,42	4,60	4,51 ± 0,09
F3	4,15	4,27	4,52	4,31 ± 0,18
F4	4,43	4,37	4,58	4,46 ± 0,10

Lampiran 9. Data Hasil Aktivitas Antioksidan

Vitamin C

Konsentrasi (µg/ml)	Abs. Kontr	Abs. Sampel			% inhibisi			IC50			Rata-rata	SD
		1	2	3	1	2	3	1	2	3		
3	0.421	0.309	0.306	0.305	26.6033	27.3159	27.5534	11.1364	11.0862	10.8273		
4	0.421	0.29	0.288	0.289	31.1164	31.5914	31.3539					
6	0.421	0.266	0.264	0.263	36.8171	37.2922	37.5297					
7	0.421	0.255	0.253	0.254	39.4299	39.905	39.6675				11.0166264	0.165862
8	0.421	0.247	0.247	0.243	41.3302	41.3302	42.2803					
9	0.421	0.239	0.237	0.235	43.2304	43.7055	44.1805					

Sambiloto

Konsentrasi µg/mL	Final konsentrasi µg/mL	Absorbansi			% Inhibisi			IC50 (µg/mL)			Rata-rata IC50 (µg/mL)	±SD
		1	2	3	1	2	3	1	2	3		
1000	10	0.31644	0.31859	0.31911	24.097	23.581	23.456	69.765	72.844	70.038	70.882	1.704
1000	20	0.29114	0.28951	0.29295	30.166	30.556	29.731					
1000	30	0.27917	0.277725	0.28003	33.037	33.383	32.830					
1000	40	0.25362	0.2561	0.25598	39.165	38.570	38.599					
1000	50	0.24579	0.24756	0.24521	41.043	40.619	41.183					
1000	60	0.2271	0.23338	0.2289	45.527	44.020	45.095					
Kontrol		0.4169										

Sembung

Konsentrasi µg/mL	Final konsentrasi µg/mL	Absorbansi			% Inhibisi			IC50 (µg/mL)			Rata-rata IC50 (µg/mL)	±SD
		1	2	3	1	2	3	1	2	3		
1000	10	0.31644	0.31859	0.31911	20.890	20.353	20.223	74.631	78.001	74.822	75.818	1.893
1000	20	0.29114	0.28951	0.29295	27.215	27.623	26.763					
1000	30	0.27917	0.277725	0.28003	30.208	30.569	29.993					
1000	40	0.25362	0.2561	0.25598	36.595	35.975	36.005					
1000	50	0.24579	0.24756	0.24521	38.553	38.110	38.698					
1000	60	0.2271	0.23338	0.2289	43.225	41.655	42.775					
Kontrol		0.4										

Meniran

Konsentrasi asi µg/mL	Final konsentr asi µg/mL	Absorbansi			% Inhibisi			IC50 (µg/mL)			Rata-rata IC50 (µg/mL)	±SD
		1	2	3	1	2	3	1	2	3		
1000	10	0.31644	0.31859	0.31911	24.097	23.581	23.456	74.631	72.844	70.038	72.504	2.315
1000	20	0.29114	0.28951	0.29295	30.166	30.556	29.731					
1000	30	0.27917	0.277725	0.28003	33.037	33.383	32.830					
1000	40	0.25362	0.2561	0.25598	39.165	38.570	38.599					
1000	50	0.24579	0.24756	0.24521	41.043	40.619	41.183					
1000	60	0.2271	0.23338	0.2289	45.527	44.020	45.095					
Kontrol		0.4169										

Formula 1

Konsentra si $\mu\text{g/mL}$	Final konsentra si $\mu\text{g/mL}$	Absorbansi			% Inhibisi			IC50 ($\mu\text{g/mL}$)			Rata-rata IC50 ($\mu\text{g/mL}$)	$\pm\text{SD}$
		1	2	3	1	2	3	1	2	3		
1000	80	0.309	0.306	0.305	22.750	23.500	23.750	83.191	83.113	80.656	82.320	1.442
1000	90	0.29	0.288	0.289	27.500	28.000	27.750					
1000	100	0.266	0.264	0.263	33.500	34.000	34.250					
1000	110	0.255	0.253	0.254	36.250	36.750	36.500					
1000	120	0.247	0.247	0.243	38.250	38.250	39.250					
1000	130	0.239	0.237	0.235	40.250	40.750	41.250					
Kontrol		0.4										

Formula 2

Konsentrasi asi µg/mL	Final konsentr asi µg/mL	Absorbansi			% Inhibisi			IC50 (µg/mL)			Rata-rata IC50 (µg/mL)	±SD
		1	2	3	1	2	3	1	2	3		
1000	10	0.34	0.339	0.312	-2.440	-2.139	5.996	87.185	86.960	94.224	89.456	4.131
1000	20	0.273	0.267	0.269	17.746	19.554	18.951					
1000	30	0.254	0.26	0.256	23.471	21.663	22.868					
1000	40	0.253	0.251	0.252	23.772	24.375	24.074					
1000	50	0.238	0.233	0.24	28.292	29.798	27.689					
1000	60	0.229	0.23	0.221	31.003	30.702	33.414					
Kontrol		0.3319										

Formula 3

Konsentra si $\mu\text{g/mL}$	Final konsentra si $\mu\text{g/mL}$	Absorbansi			% Inhibisi			IC50 ($\mu\text{g/mL}$)			Rata-rata IC50 ($\mu\text{g/mL}$)	$\pm\text{SD}$
		1	2	3	1	2	3	1	2	3		
1000	10	0.309	0.306	0.305	28.140	28.837	29.070	72.614	72.136	70.100	71.617	1.335
1000	20	0.29	0.288	0.289	32.558	33.023	32.791					
1000	30	0.266	0.264	0.263	38.140	38.605	38.837					
1000	40	0.255	0.253	0.254	40.698	41.163	40.930					
1000	50	0.247	0.247	0.243	42.558	42.558	43.488					
1000	60	0.239	0.237	0.235	44.419	44.884	45.349					
Kontrol		0.43										

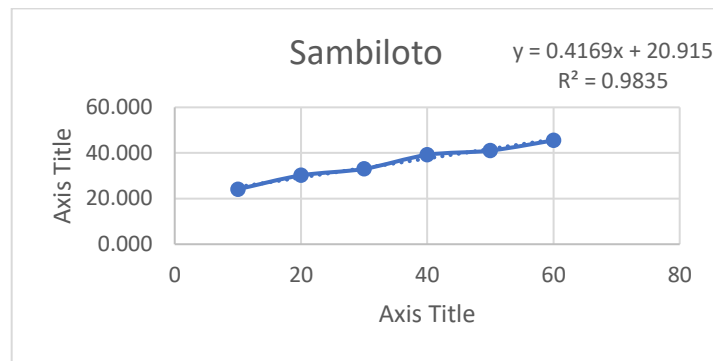
Formula 4

Konsentrasi asi $\mu\text{g/mL}$	Final konsentrasi asi $\mu\text{g/mL}$	Absorbansi			% Inhibisi			IC50 ($\mu\text{g/mL}$)			Rata-rata IC50 ($\mu\text{g/mL}$)	$\pm\text{SD}$
		1	2	3	1	2	3	1	2	3		
1000	10	0.314	0.312	0.318	26.977	27.442	26.047	116.512	113.088	24.109	84.570	52.388
1000	20	0.304	0.301	0.305	29.302	30.000	29.070					
1000	30	0.298	0.296	0.297	30.698	31.163	30.930					
1000	40	0.288	0.287	0.289	33.023	33.256	32.791					
1000	50	0.275	0.272	0.276	36.047	36.744	35.814					
1000	60	0.268	0.265	0.269	37.674	38.372	37.442					
Kontrol		0.43										

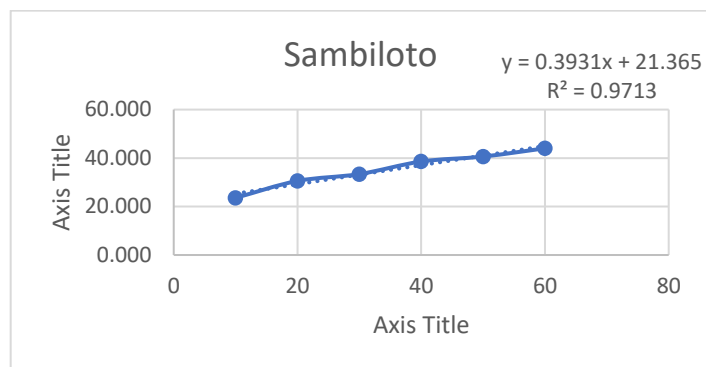
Lampiran 10. Kurva Hubungan Konsentrasi dengan % Inhibisi Ekstrak Sambiloto, Sembung, Meniran dan Sediaan Mikrokapsul

1. Ekstrak Tunggal Sambiloto

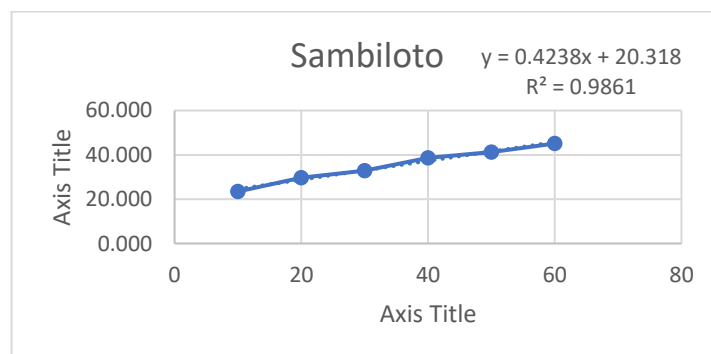
• Percobaan 1



• Percobaan 2

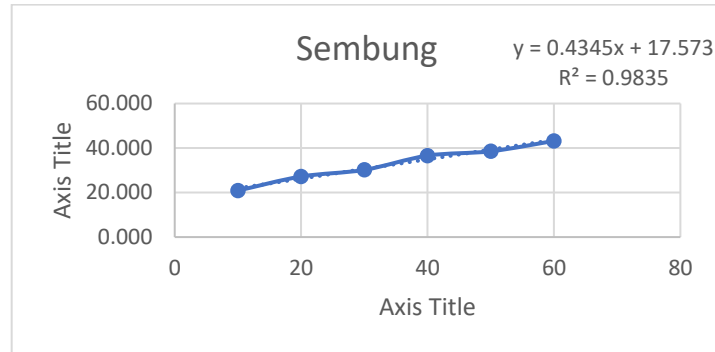


• Percobaan 3

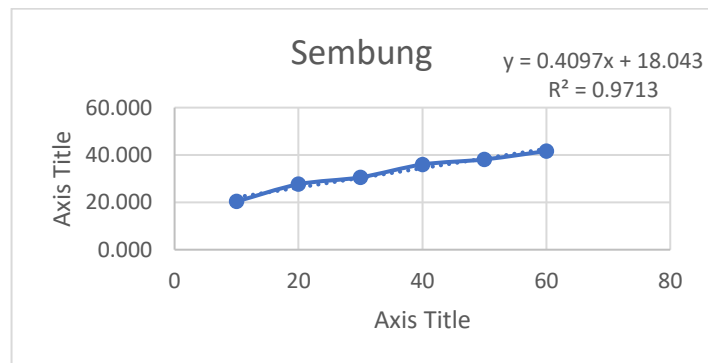


2. Ekstrak Tunggal Sembung

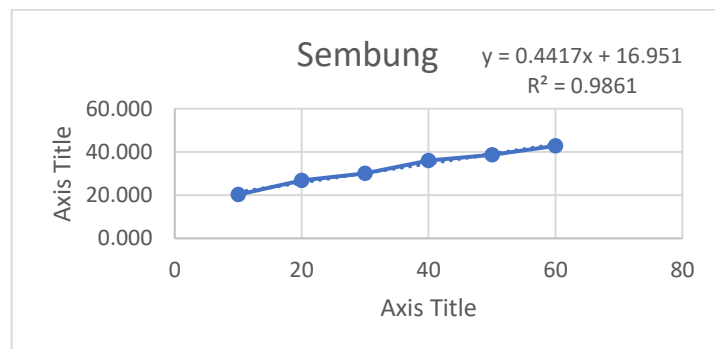
- Percobaan 1



- Percobaan 2

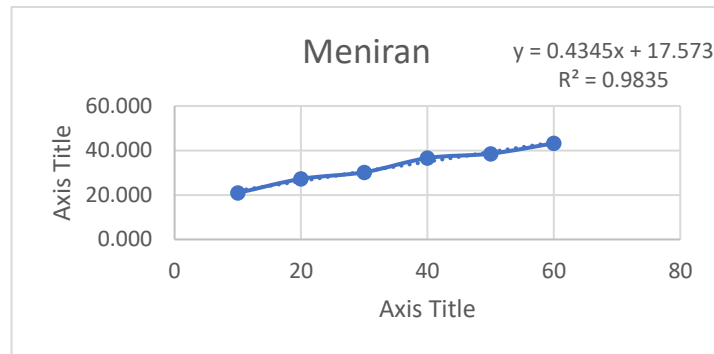


- Percobaan 3

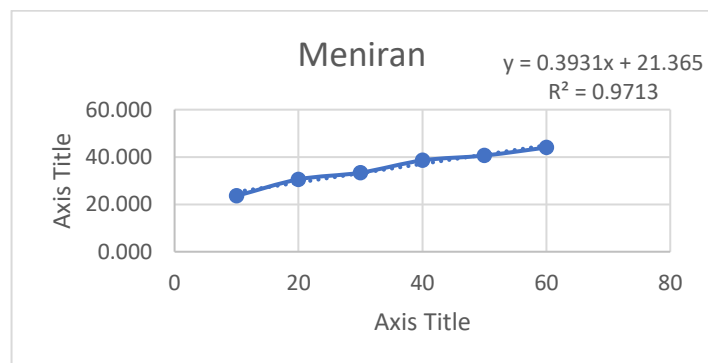


3. Ekstrak Tunggal Meniran

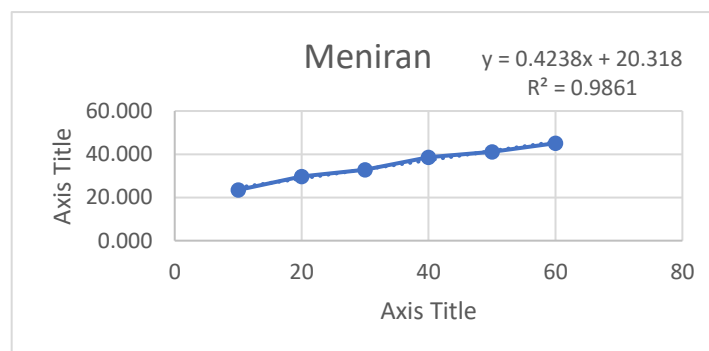
- Percobaan 1



- Percobaan 2

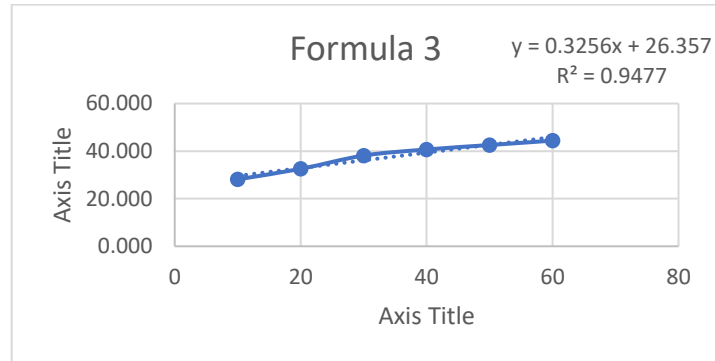


- Percobaan 3

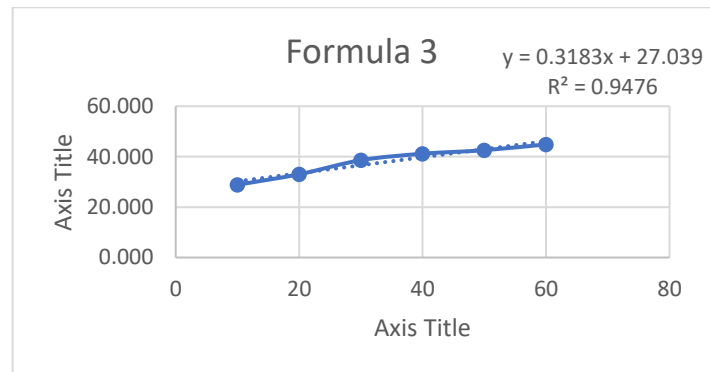


4. Sediaan Mikrokapsul

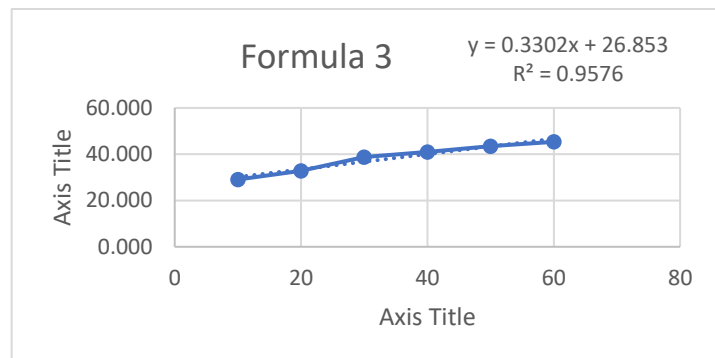
- Percobaan 1



- Percobaan 2



- Percobaan 3



Lampiran 11. Hasil Cek Plagiarisme

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PAGE 1			

Lampiran 12. Kartu Bimbingan (Pembimbing Utama)

Pembimbing Utama	: apt. Drs. Rahmat Santoso, M.Si., MH.Kes.
Nama Mahasiswa	: Nurul Aini
NPM	: 221F04023
Bidang Ilmu	: FTF

No	Hari/Tanggal	Waktu	Tempat	Materi	Paraf Dosen
1.	Sabtu 27 / 01 / 2024	10.00	Kampus UBK	Revisi proposal penelitian	/
2.	Rabu 07 / 02 / 2024	12.00	Kampus UBK	Ulasan seminar proposal	/
3.	Jumat 23 / 02 / 2024	10.00	Kampus UBK	Diskusi terkait formula	/
4.	Kamis 29 / 02 / 2024	16.00	Kampus UBK	Review artikel tahunan	/
5.	Sabtu 23 / 03 / 2024	10.00	Kampus UBK	Diskusi formula Cfkksasi)	/
6.	Sabtu 30 / 03 / 2024	10.00	kampus UBK	Diskusi formula (revisi)	/
7.	Sabtu 30 / 04 / 2024	10.00	kampus UBK	Diskusi hasil percobaan(FI)	/
8.	Senin 01 / 07 / 2024	13.00	Kampus UBK	Diskusi alat dan bahan	/
9.	Kamis 10 / 07 / 2024	13.00	kampus UBK	Diskusi tugas akhir 2	/
10.	Rabu 17 / 07 / 2024	13.30	kampus UBK	Revisi dan Ttd pengesahan	/

Catatan : Kartu ini harus dibawa setiap kali melakukan bimbingan dan harus diisi oleh dosen pembimbing.

Lampiran 13. Kartu Bimbingan (Pembimbing Serta)

Dok. No. 02.64.00/FRM-03/AKD-SPMI
Jl. Sekeloa Utara No 754 Bandung
022 7830 760, 022 7830 768
bkua.ac.id contact@bkua.ac.id

KARTU BIMBINGAN TUGAS AKHIR

Pembimbing Serta	: Reza Pratama, M. Farm				
Nama Mahasiswa	: Nurul Aini				
NPM	: 221FF04023				
Bidang Ilmu	: FTF				

No.	Hari / Tanggal	Waktu	Tempat	Materi	Paraf Dosen
1.	Senin 29/04/2024	13.00	Kampus UBK	Kemajuan 1 dan diskusi	<i>[Signature]</i>
2.	Selasa 30/04/2024	09.30	Kampus UBK	Kemajuan 1 dan Revisi	<i>[Signature]</i>
3.	Senin 06/05/2024	13.30	Kampus UBK	Diskusi ttg maltodekstrin 2%	<i>[Signature]</i>
4.	Rabu 22/05/2024	13.15	Kampus UBK	Diskusi formula II	<i>[Signature]</i>
5.	Jumat 30/05/2024	19.00	Kampus UBK	Kemajuan II TA 2	<i>[Signature]</i>
6.	Selasa 07/07/2024	13.00	Kampus UBK	Revisi pembahasan	<i>[Signature]</i>
7.	11/07/2024	10.30	Kampus UBK	Revisi kesimpulan, abstrak	<i>[Signature]</i>
8.	12/07/2024	10.30	Kampus UBK	TTD pengesahan, revisi	<i>[Signature]</i>
9.	16/07/2024	13.00	Kampus UBK	Revisi Bab 4	<i>[Signature]</i>
10.	15/07/2024	13.00	Kampus UBK	Revisi abstrak, Bab 1 - 9	<i>[Signature]</i>

Catatan : Kartu ini harus dibawa setiap kali melakukan bimbingan dan harus diisi oleh dosen pembimbing.

Lampiran 14. CV

**BIODATA**

Nama Lengkap	: Nurul Aini
Nama Panggilan	: Aini
Tempat/Tanggal Lahir	: Bima, 11 Maret 2000
Jenis Kelamin	: Perempuan
Agama	: Islam
Alamat	: Lingkungan Lewirowa RT/RW 05/02 Kec. Mpunda Kel. Monggonao Kota Bima Nusa Tenggara Barat
Email	: ayiniarina1103@gmail.com
Nama Ayah	: Arinah
Nama Ibu	: Nurlailah