

Lampiran

Lampiran 1. CoA Zat Aktif dan Eksipien

CoA Ekstrak

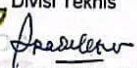


SERTIFIKAT HASIL UJI

Nomor : 250533219
Nama Sampel : Ekstrak Daun Kirinyuh (*Chromolaena odorata* L.)
Uji : Total Flavonoid Content
Metode : Spectrophotometry
Tanggal : 27 Mei 2025
Permintaan : Lukman Jayadi
NIM : 211FF03038
Institusi : Fakultas Farmasi Universitas Bhakti Kencana Bandung

Hasil Uji

Parameter Uji	Hasil Uji	Metode
Total Flavonoid Content	392,96 mgQE/g	Spectrophotometry

Divisi Teknis

Pradekatiwi, S.Si.

PVP K-30

COA Code: JHNHPK30PG(USP41)0002



JH Nanhang Life Sciences Co., Ltd.

Certificate of Analysis

Product Name	Povidone K30	Batch No.	PK30-220428F22	Date of Mfg	20220428
Quantity	4900KG	Packaging	25KG/ Fibre Drum	Expiry Date	20260427
Source	PVP Workshop	Reference	USP41		
No.	Items	Specification			Test Results
1.	Appearance	White or yellowish-white, hygroscopic powder			Complies
2.	Solubility	Freely soluble in water, ethanol 96%, methanol, very slightly soluble in acetone			Complies
3.	Identifications A、B、C、D、E	Positive			Complies
4.	Appearance of solution	Clear and NMT B ₆ , BY ₆ , or R ₆			Complies
5.	pH	3.0-5.0			3.5
6.	K-value	27.0-32.4			29.7
7.	Aldehydes, ppm	≤ 500			21.6
8.	Peroxides, ppm	≤ 400			207
9.	Formic acid, %	≤ 0.5			0.3
10.	Hydrazine, ppm	≤ 1			<1
11.	Impurity A(1-vinylpyrrolidin-2-one), ppm	≤ 10			0.090
12.	Impurity B (2-pyrrolidone), %	≤ 3.0			1.1
13.	Heavy metals, ppm	≤ 10			<10
14.	Lead, ppm	≤ 10			<10
15.	Water, %	≤ 5.0			2.5
16.	Sulphated ash, %	≤ 0.1			0.08
17.	Nitrogen content, %	11.5 - 12.8			11.9
18.	* Total Aerobic Plate count, CFU/g	≤100			<10
19.	* Total Mold/Yeast count, CFU/g	≤100			<10
20.	* E.coli, CFU/g	Not detected			Complies
21.	* Staphylococcus Aureus, CFU/g	Not detected			Complies
22.	* Pseudomonas Aeruginosa, CFU/g	Not detected			Complies
23.	* Salmonella, CFU/g	Not detected			Complies

Note: The above tests with * are performed randomly.

Conclusion: Material meets the requirement for Povidone in USP41.

Completed by: Yang zhimin

Signature: Yang zhimin

Date: 19/5/2022

QC Manager: Tong Mengxin

Signature: Tong Mengxin

Date: 19/5/2022

Released by QA Manager: Zhang Ming

Signature: Zhang Ming

Date: 19/5/2022

Factory address: No.16 Luyin Road, Hi-Tech Industrial Zone, Quzhou, Zhejiang, 324004 P. R. China

Website: www.jh-nh.com E-mail: info@jh-nh.com

Contact person: Zhang Ming

Tel: +86-0570-3883574

Natrium Benzoat

武汉有机实业有限公司
WUHAN YOUJI INDUSTRIES CO., LTD
(AN ISO-9002 CERTIFICATED COMPANY)

CERTIFICATE OF ANALYSIS

NAME OF PRODUCT: SODIUM BENZOATE BP GRADE POWDER
BATCH WEIGHT: 26MT
BATCH NO: 20210621
PRODUCTION DATE: JUN.21, 2023
EXPIRY DATE: JUN.21, 2026
PACKED: IN 25KG PAPER BAG

JL.HAYAM WURUK 111A JAKARTA 11160, INDONESIA

	SPECIFICATION	RESULT OF ANALYSIS
PURITY%:	99.00%MIN, 100.5MAX	99.9
CHLORIDE ppm:	200MAX	190
HEAVY METAL ppm:	10MAX	5
TOTAL CHLORIDE ppm:	300MAX	280
MOISTURE:	1.5MAX	0.2
CALRITY OF SOLUTION:	CLEAR	PASSED
COLOUROF SOLUTION:	Y6	PASSED
ACIDITY OF ALKALINITY ml/g:	0.2MAX	PASSED
ZINC	3PPM MAX	PASSED
ARSENIC	3PPM MAX	2

CONCLUSION: UP TO THE SPECIFICATIONS

MANAGER OF INPECTION DEPARTEMENT : HUANG ZHENGWANG

Laktosa



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

Page nr. 1/2

0811342880-900001-20221010-133649-Z006-3420_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)	Your order number	: PH220517
	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")

Mannitol

REPORT/LAB-D-12 The first Version Version Number:01

REPORT NO.1353

Shijiazhuang Huaxu Pharmaceutical CO., LTD Laboratory
CERTIFICATE OF ANALYSIS

Commodity	Mannitol	Batch NO	2403057 ✓
Packing	25kg/Drum	MFG. date	Mar. 25.2024
Quantity	3000kg	Expiry date	Mar. 24. 2026
Basis	Correspond to USP 43		
ITEM	STANDARD	RESULT	CONCLUSION
Appearance	White or almost white crystals or powder	White crystals	Conformity
Identification : Infrared absorption spectrophotometry	Conformity	Conformity	Conformity
Assay	97.0% ~ 102.0%	99.8%	Conformity
Related substances	Sorbitol $\leq 2.0\%$	0.2%	Conformity
	Sum of Maltitol and Isomalt $\leq 2.0\%$	Not detected	
	Unspecified impurities $\leq 0.10\%$	Not detected	
	Total impurities $\leq 2.0\%$	0.3%	
Reducing sugars	$\leq 0.1\%$	$< 0.1\%$	Conformity
Nickel	$\leq 1\mu\text{g/g}$	$< 1\mu\text{g/g}$	Conformity
Melting point	165 °C ~ 170 °C	166 °C ~ 168 °C	Conformity
Appearance of solution	Clear and colourless	Conformity	Conformity
Loss on drying	$\leq 0.5\%$	0.1%	Conformity
Conductivity	$\leq 20\mu\text{S/cm}$	2.9 $\mu\text{S/cm}$	Conformity
Microbial contamination	TAMC $\leq 100\text{ CFU/g}$	30CFU/g	Conformity
	TYMC $\leq 100\text{ CFU/g}$	$< 10\text{CFU/g}$	
	Absence of Escherichia coli	Negative/g	
Bacterial endotoxins	$\leq 2.5\text{ IU/g}$	$< 2.5\text{ IU/g}$	Conformity
Residual solvents	The raw materials, manufacturing process and product do not contain any of the solvents listed in Residual Solvents		
Conclusion	Conformity		

Director 谭立勇

Address: No.33 Industrial Street, Economic Development Zone, Shijiazhuang City, Hebei, Chi

Lampiran 2. Hasil Determinasi Daun Kirinyuh

HERBARIUM JATINANGORIENSE
LABORATORIUM BIOSISTEMATIKA DAN MOLEKULER
DEPARTEMEN BIOLOGI, FMIPA UNPAD
 Gedung D2-212, Jl. Raya Bandung Sumedang Km 21 Jatinangor
 Telp. 022-7796412

LEMBAR IDENTIFIKASI TUMBUHAN
 No.479/LBM/TT/XII/2024

Herbarium Jatinangor, Laboratorium Biosistematika dan Molekuler, Departemen Biologi FMIPA UNPAD, dengan ini menerangkan bahwa:

Nama : Lukman Jayadi
 NPM : 211FF03038
 Instansi : Universitas Bhakti Kencana
 Telah melakukan identifikasi tumbuhan, dengan No. Koleksi: 598
 Tanggal Koleksi : 2 Desember 2024
 Lokasi : Sumedang, Jawa Barat.

Hasil Identifikasi,

Nama Ilmiah : *Chromolaena odorata* (L.) R.M. King & H. Rob
 Sinonim : *Eupatorium odoratum* L.
 Nama Lokal : Kirinyuh
 Suku/Famili : Asteraceae

Referensi:

Cronquist, Arthur. 1981. *An Integrated System of Classification of Flowering Plants*.
 Columbia University Press. New York
 World Flora Online(2021): <https://powo.science.kew.org/>.

Jatinangor, 20 Desember 2024

Mengetahui,
Kepala Laboratorium



Annisa, M.Si., Ph.D.
NIP. 197802042006042001

Identifikator,



Dr. Budi Irawan, M.Si
NIP. 197312281999031003

Lampiran 3. Kode Etik Penelitian



KOMISI ETIK PENELITIAN KESEHATAN UNIVERSITAS BHAKTI KENCANA

Jl. Soekarno - Hatta 754. Bandung
Telp : 022-7830 760 / 022-7830-768
Email : komisi.etik@bku.ac.id



KOMISI ETIK PENELITIAN KESEHATAN
HEALTH RESEARCH ETHICS COMMITTEE
UNIVERSITAS BHAKTI KENCANA
BHAKTI KENCANA UNIVERSITY

KETERANGAN LAYAK ETIK
DESCRIPTION OF ETHICAL APPROVAL
"ETHICAL APPROVAL"
150/09.KEPK/UBK/VI/2025

Protokol penelitian yang diusulkan oleh :
The research protocol proposed by :

Peneliti Utama : Lukman Jayadi
Principal in investigator

Nama institusi : Universitas Bhakti kencana
Name of institution

Dengan judul :
Title

**Preparasi Dan Evaluasi Fisik Granul Instan Dari Ekstrak Daun Kirinyuh (Choromolaena Odorata)
Sebagai Antioksidan**

*Preparation and Physical Evaluation of Instant Granules from Kirinyuh Leaf Extract (Choromolaena Odorata)
as Antioxidants*

Dinyatakan layak etik sesuai (tujuh) standar WHO 2011, yaitu 1) Nilai Sosial, 2) Nilai Ilmiah, 3) Pemerataan Beban dan Manfaat, dan 4) Risiko, 5) Bujukan atau eksploitasi, 6) Kerahasiaan atau Privacy, 7) Persetujuan Setelah Penjelasan, yang merujuk pada Pedoman CIOMS 2016. Hal ini seperti yang ditunjukkan oleh terpenuhinya indikator setiap standar.

Declared to be ethically appropriate in accordance to 7 (seven) WHO 2011standards, 1) Social Value, 2) Scientific Value, 3) Equitable Assessment and Benefits, 4) Risks, 5) Persuasion/Eksplotation, 6) Confidentiality and Privacy, and Informed Consent, referring to the 2016 CIOMS guidelines. This is as indicated by the fulfillment of the indicators of each standards.

Pernyataan Laik Etik ini berlaku selama kurun waktu 18 Juni 2025 sampai dengan tanggal 18 Juni 2026.

This declaration of ethics applies during the period 18 th June 2025 until 18 th June 2026.

18 Juni 2025
Professor and Chairperson

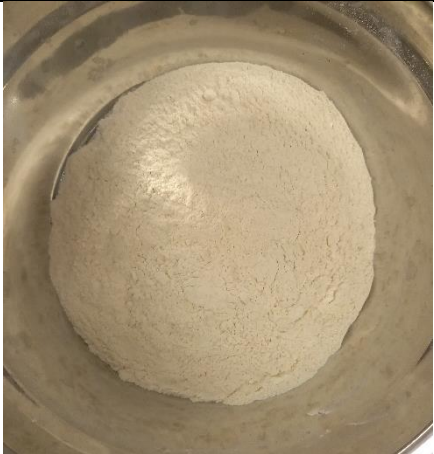
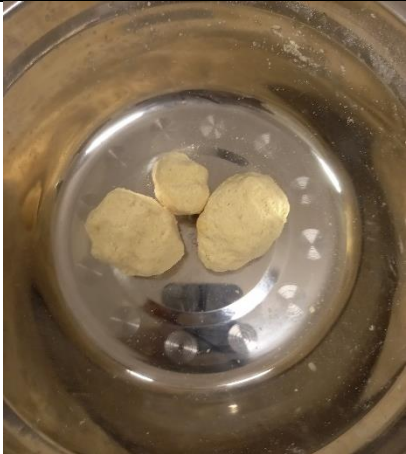
R. Nety Kustikayanti, S.Kp., M.Kep
NIK. 02019010336

Lampiran 4. Hasil Skrining Fitokimia Ekstrak

Hasil Skrining Fitokimia Ekstrak Kirinyuh

Hasil Skrining Fitokimia Ekstrak Kirinyuh					
 					
Alkaloid	Flavonoid	Kuionon	Tannin	Saponin	Steroid/Terpenoid

Lampiran 5. Pembuatan Granul Instan

	
Pencampuran bahan	Masa kepal
	
Proses granulasi	Pengerinan

Lampiran 6. Evaluasi Sediaan Granul**LOD****Laju Alir****Sudut diam****kompresibilitas**

pH



Lampiran 7. Hasil uji statistik evaluasi fisik Granul instan

1. Laju Alir

Descriptives

Laju Alir

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	5.3000	.09644	.05568	5.0604	5.5396	5.23	5.41
Formula 2	3	5.7433	.13868	.08007	5.3988	6.0878	5.59	5.86
Formula 3	3	6.4800	.10817	.06245	6.2113	6.7487	6.36	6.57
Total	9	5.8411	.52584	.17528	5.4369	6.2453	5.23	6.57

Tests of Normality

	Formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Laju_Alir	Formula 1	.328	3	.	.871	3	.298
	Formula 2	.271	3	.	.948	3	.559
	Formula 3	.276	3	.	.942	3	.537

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

Laju Alir

Levene Statistic	df1	df2	Sig.
.299	2	6	.752

ANOVA

Laju Alir

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.132	2	1.066	79.472	.000
Within Groups	.080	6	.013		
Total	2.212	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Laju_Alir

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-.44333*	.07995	.004	-.6887	-.1980
	Formula 3	.46333*	.07995	.003	.2180	.7087
Formula 2	Formula 1	.44333*	.07995	.004	.1980	.6887
	Formula 3	.90667*	.07995	.000	.6613	1.1520
Formula 3	Formula 1	-.46333*	.07995	.003	-.7087	-.2180
	Formula 2	-.90667*	.07995	.000	-1.1520	-.6613

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

2. kompresibilitas

Descriptives

Kompresibilitas

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	13.3600	.19287	.11136	12.8809	13.8391	13.22	13.58
Formula 2	3	9.4333	.19655	.11348	8.9451	9.9216	9.21	9.58
Formula 3	3	8.2800	.07000	.04041	8.1061	8.4539	8.20	8.33
Total	9	10.3578	2.31076	.77025	8.5816	12.1340	8.20	13.58

Tests of Normality

	Formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Kompresibilitas	Formula 1	.328	3	.	.871	3	.298
	Formula 2	.318	3	.	.886	3	.342
	Formula 3	.333	3	.	.862	3	.274

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

Kompresibilitas

Levene Statistic	df1	df2	Sig.
2.445	2	6	.167

Oneway

ANOVA

Kompresibilitas

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	42.555	2	21.278	790.664	.000
Within Groups	.161	6	.027		
Total	42.717	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Kompresibilitas

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	3.92667*	.13394	.000	3.5157	4.3376
	Formula 3	5.08000*	.13394	.000	4.6690	5.4910
Formula 2	Formula 1	-3.92667*	.13394	.000	-4.3376	-3.5157
	Formula 3	1.15333*	.13394	.000	.7424	1.5643
Formula 3	Formula 1	-5.08000*	.13394	.000	-5.4910	-4.6690
	Formula 2	-1.15333*	.13394	.000	-1.5643	-.7424

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

3. Waktu Larut

Descriptives

Waktu larut

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for		Minimum	Maximum
					Mean			
					Lower Bound	Upper Bound		
Formula 1	3	1.1567	.04041	.02333	1.0563	1.2571	1.12	1.20
Formula 2	3	1.3667	.04163	.02404	1.2632	1.4701	1.32	1.40
Formula 3	3	1.5300	.03000	.01732	1.4555	1.6045	1.50	1.56
Total	9	1.3511	.16534	.05511	1.2240	1.4782	1.12	1.56

Tests of Normality

	Formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Waktu_larut	Formula 1	.232	3	.	.980	3	.726
	Formula 2	.292	3	.	.923	3	.463
	Formula 3	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

Waktu larut

Levene Statistic	df1	df2	Sig.
.323	2	6	.736

Oneway

ANOVA

Waktu larut

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.210	2	.105	73.883	.000
Within Groups	.009	6	.001		
Total	.219	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Waktu_larut

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-.21000*	.03079	.001	-.3045	-.1155
	Formula 3	-.37333*	.03079	.000	-.4678	-.2789
Formula 2	Formula 1	.21000*	.03079	.001	.1155	.3045
	Formula 3	-.16333*	.03079	.004	-.2578	-.0689
Formula 3	Formula 1	.37333*	.03079	.000	.2789	.4678
	Formula 2	.16333*	.03079	.004	.0689	.2578

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

4. Sudut Diam

Descriptives

Sudut_diam

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	27.8433	.11060	.06386	27.5686	28.1181	27.74	27.96
Formula 2	3	27.2867	.04509	.02603	27.1747	27.3987	27.24	27.33
Formula 3	3	26.8800	.12288	.07095	26.5747	27.1853	26.74	26.97
Total	9	27.3367	.42749	.14250	27.0081	27.6653	26.74	27.96

Tests of Normality

	Formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Sudut_diam	Formula 1	.215	3	.	.989	3	.800
	Formula 2	.196	3	.	.996	3	.878
	Formula 3	.325	3	.	.876	3	.312

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

Sudut_diam

Levene Statistic	df1	df2	Sig.
1.634	2	6	.271

ANOVA

Sudut_diam

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.403	2	.702	71.677	.000
Within Groups	.059	6	.010		
Total	1.462	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Sudut_diam

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	.55667*	.08078	.001	.3088	.8045
	Formula 3	.96333*	.08078	.000	.7155	1.2112
Formula 2	Formula 1	-.55667*	.08078	.001	-.8045	-.3088
	Formula 3	.40667*	.08078	.006	.1588	.6545
Formula 3	Formula 1	-.96333*	.08078	.000	-1.2112	-.7155
	Formula 2	-.40667*	.08078	.006	-.6545	-.1588

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

5. pH

Descriptives

pH

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	5.8233	.03215	.01856	5.7435	5.9032	5.80	5.86
Formula 2	3	6.0100	.01000	.00577	5.9852	6.0348	6.00	6.02
Formula 3	3	6.0267	.01528	.00882	5.9887	6.0646	6.01	6.04
Total	9	5.9533	.09950	.03317	5.8769	6.0298	5.80	6.04

Tests of Normality

	Formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
pH	Formula 1	.328	3	.	.871	3	.298
	Formula 2	.175	3	.	1.000	3	1.000
	Formula 3	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pH

Levene Statistic	df1	df2	Sig.
3.525	2	6	.097

ANOVA

pH

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.076	2	.038	83.927	.000
Within Groups	.003	6	.000		
Total	.079	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: pH

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-.18667*	.01743	.000	-.2401	-.1332
	Formula 3	-.20333*	.01743	.000	-.2568	-.1499
Formula 2	Formula 1	.18667*	.01743	.000	.1332	.2401
	Formula 3	-.01667	.01743	.628	-.0701	.0368
Formula 3	Formula 1	.20333*	.01743	.000	.1499	.2568
	Formula 2	.01667	.01743	.628	-.0368	.0701

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

6. LoD

Descriptives

LOD

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	2.1433	.02517	.01453	2.0808	2.2058	2.12	2.17
F2	3	2.1867	.02082	.01202	2.1350	2.2384	2.17	2.21
F3	3	2.1867	.01528	.00882	2.1487	2.2246	2.17	2.20
Total	9	2.1722	.02819	.00940	2.1506	2.1939	2.12	2.21

Tests of Normality

	FORMULA	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
LOD	F1	.219	3	.	.987	3	.780
	F2	.292	3	.	.923	3	.463
	F3	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

LOD

Levene Statistic	df1	df2	Sig.
.373	2	6	.703

ANOVA

LOD

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.004	2	.002	4.333	.068
Within Groups	.003	6	.000		
Total	.006	8			

Lampiran 8. Surat persetujuan responden dan kuisioner

**LEMBAR PERSETUJUAN PANELIS
(INFORMED CONSENCT)**

Saya Lukman Jayadi merupakan mahasiswa Program Studi Sarjana Farmasi Universitas Bhakti Kencana Bandung, saat ini sedang melakukan pengambilan data untuk uji hedonik pada produk minuman granul instan dari ekstrak daun kirinyuh. Kegiatan ini dilakukan untuk melengkapi data Laporan Tugas Akhir yang mana menjadi salah satu syarat akademik memperoleh gelar Sarjana Farmasi dalam judul penelitian **“Preparasi dan Evaluasi Fisik Granul Instan dari Ekstrak Daun Kirinyuh (*Chromolaena odorata*) sebagai Antioksidan”**. Oleh karena itu, saya memohon kesediaan untuk rekan-rekan untuk menjadi panelis. Perlu saya informasikan bahwa sebelum rekan-rekan mengisi formulir evaluasi hedonik terhadap produk yang disajikan, saya akan menjelaskan seluruh informasi yang rekan-rekan butuhkan. Atas kerja samanya saya ucapkan terimakasih.

Informed Consent

Setelah mendapat penjelasan mengenai tujuan dan manfaat pengambilan data tersebut, dengan ini saya menyatakan:

Nama:

NIM

Umur:

Jenis Kelamin:

Dengan ini menyatakan bersedia menjadi panelis penelitian dari:

Nama:

NIM:

Produk;

Preparasi dan Evaluasi Fisik Granul
Instan dari Ekstrak Daun Kirinyuh
(*Chromolaena odorata*) sebagai
Antioksidan

Bandung, 2025

(Panelis)

1. Kuisioner uji hedonik

Nama :
 NPM :
 Tanggal Pengujian :
 No. Telp/WA :
 Produk Sediaan : Granul

FORMULIR UJI HEDONIK

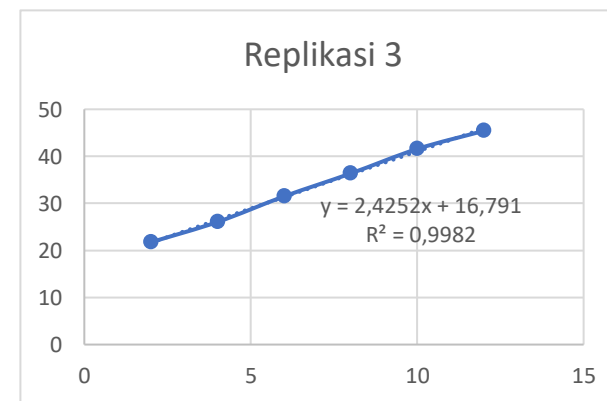
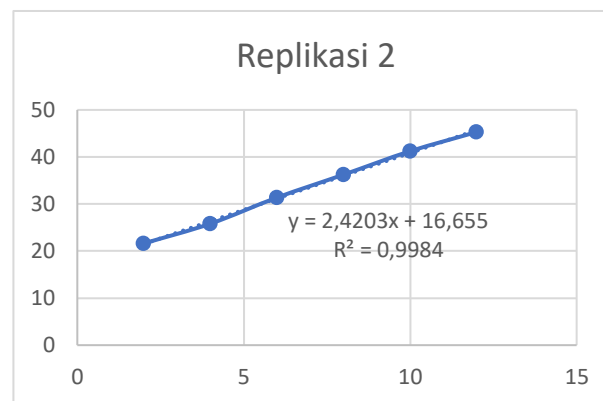
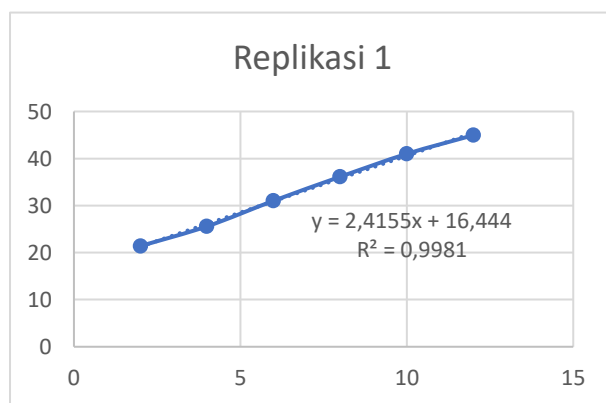
Note : Nyatakan penilaian anda dengan pernyataan yang sesuai dan berikan tanda √

Pengamatan	Formula	Penilaian				
		Sangat Suka	Suka	Cukup	Tidak suka	Sangat tidak suka
Warna	F1					
	F2					
	F3					
Aroma	F1					
	F2					
	F3					
Rasa	F1					
	F2					
	F3					

Lampiran 9. Tabel uji perhitungan Antioksidan

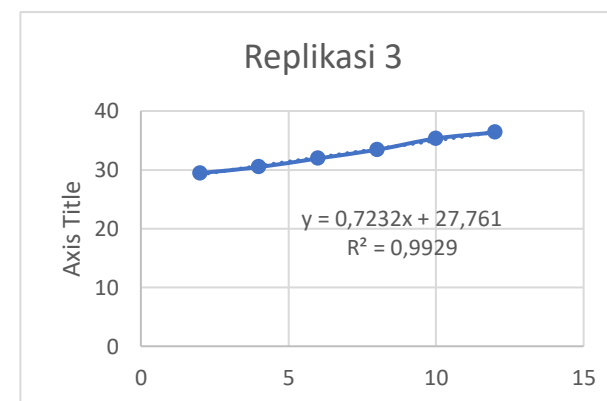
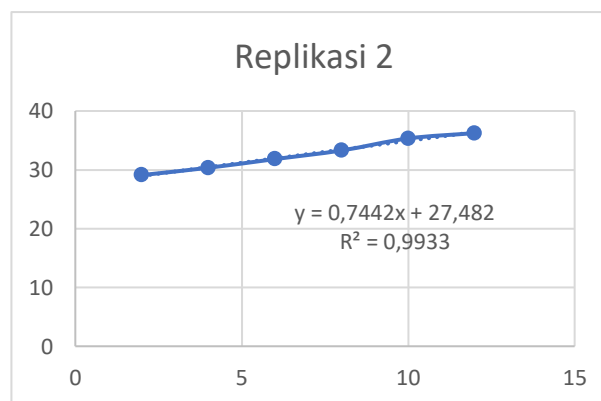
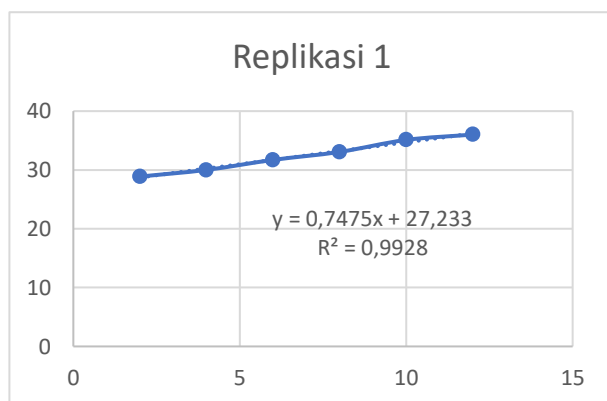
Vitamin c

Konsentrasi ($\mu\text{g/mL}$)	Abs kontrol	Abs sampel			% Inhibisi			IC50			Rata-rata $\pm$ SD
		1	2	3	1	2	3	1	2	3	
2	0,883	0,694	0,692	0,691	21,4043	21,6308	21,7441	13,89195	13,88045	13,6933	13, 8219 $\pm$ 0,11
4	0,883	0,657	0,655	0,653	25,5946	25,8211	26,0476				
6	0,883	0,609	0,606	0,605	31,0306	31,3703	31,4836				
8	0,883	0,564	0,563	0,562	36,1268	36,2401	36,3533				
10	0,883	0,521	0,519	0,516	40,9966	41,2231	41,5629				
12	0,883	0,486	0,483	0,482	44,9604	45,3001	45,4134				



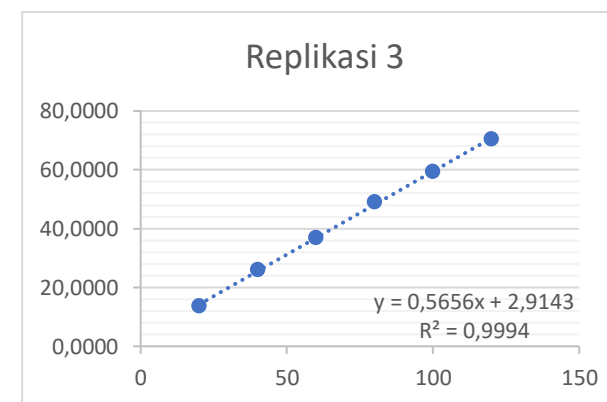
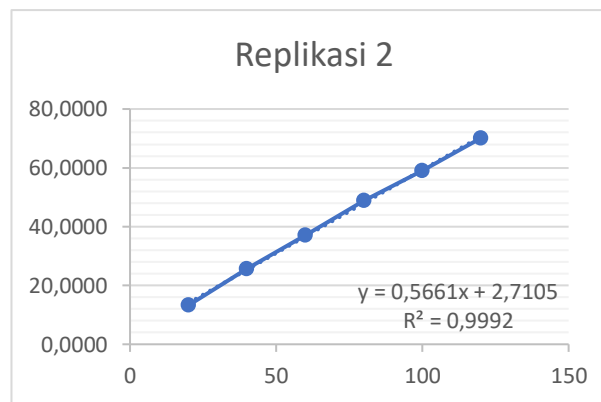
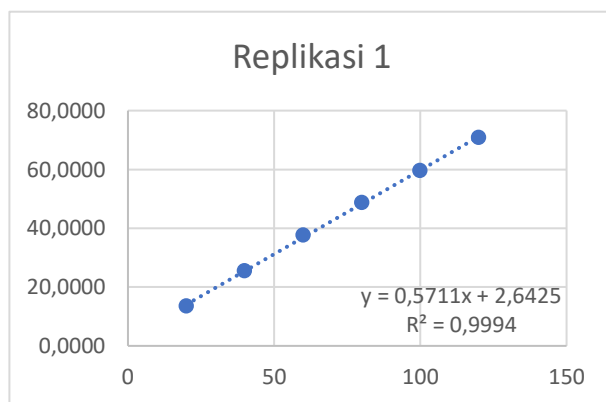
Ekstrak Daun Kirinyuh

Konsentrasi ($\mu\text{g/mL}$)	Abs kontrol	Abs sampel			% Inhibisi			IC50			Rata-rata $\pm$ SD
		1	2	3	1	2	3	1	2	3	
2	0,883	0,628	0,626	0,623	28,8788	29,1053	29,4451	30,4575	30,2580	30,7508	30,4888 $\pm$ 0,24
4	0,883	0,618	0,615	0,614	30,0113	30,3511	30,4643				
6	0,883	0,603	0,602	0,601	31,7101	31,8233	31,9366				
8	0,883	0,591	0,589	0,588	33,0691	33,2956	33,4088				
10	0,883	0,573	0,571	0,571	35,1076	35,3341	35,3341				
12	0,883	0,565	0,563	0,562	36,0136	36,2401	36,3533				



Granul Formula Terbaik

Konsentrasi ($\mu\text{g/mL}$)	Abs kontrol	Abs sampel			% Inhibisi			IC50			Rata-rata $\pm$ SD
		1	2	3	1	2	3	1	2	3	
20	0,883	0,764	0,766	0,763	13,4768	13,2503	13,5900	82,9233	83,5356	83,2491	83,2360 $\pm$ 0,30
40	0,883	0,658	0,656	0,654	25,4813	25,7078	25,9343				
60	0,883	0,550	0,556	0,557	37,7123	37,0328	36,9196				
80	0,883	0,453	0,452	0,451	48,6976	48,8109	48,9241				
100	0,883	0,357	0,361	0,359	59,5696	59,1166	59,3431				
120	0,883	0,258	0,264	0,262	70,7814	70,1019	70,3284				



Lampiran 10. Hasil Cek Plagiarisme

DRAFT SKRIPSI_211FF03038_Lukman Jayadi.docx

ORIGINALITY REPORT

8 %	7 %	7 %	5 %
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Sriwijaya University Student Paper	1 %
2	Siti Jamilah, Yustin Ari Prihandini, Sari Wahyunita. "Uji Aktivitas Ekstrak Metanol Daun Kirinyuh (<i>Chromolaena Ododrata</i> L.) Terhadap Bakteri <i>Staphylococcus Epidermidis</i> ", <i>Malahayati Nursing Journal</i> , 2024 Publication	1 %
3	Submitted to fptijateng Student Paper	1 %
4	media.neliti.com Internet Source	1 %
5	journal.umpalangkaraya.ac.id Internet Source	1 %
6	ojs.stfmuhammadiyahcirebon.ac.id Internet Source	1 %
7	repository.stikesdrsoebandi.ac.id Internet Source	1 %

8	Submitted to Doral Academy High School Student Paper	1%
9	ejurnal.universitas-bth.ac.id Internet Source	1%
10	ejournal.istn.ac.id Internet Source	1%

Exclude quotes On

Exclude matches < 1%

Exclude bibliography On

Lampiran 11. Daftar Bimbingan

No	Tanggal	Dosen Pembimbing	Topik	Disetujui	Aksi
1	5 April 2025	IRA ADIYATI RUM	Membuat logbook untuk penelitian	✓	 
1	20 Februari 2025	DENY PURIYANI AZHARY	Melakukan diskusi terkait saran dan masukan dari penguji saat seminar proposal	✓	 
2	26 Februari 2025	DENY PURIYANI AZHARY	Mengkonfirmasi penggunaan Essen	✓	 
2	17 April 2025	IRA ADIYATI RUM	Progres penelitian	✓	 
3	27 April 2025	IRA ADIYATI RUM	Diskusi dan meminta tanda tangan untuk kode etik	✓	 
3	20 Maret 2025	DENY PURIYANI AZHARY	Progres penelitian	✓	 
4	4 Mei 2025	IRA ADIYATI RUM	Kemajuan 1 TA2	✓	 
4	10 April 2025	DENY PURIYANI AZHARY	Konsultasi pH sediaan	✓	 
5	4 Mei 2025	IRA ADIYATI RUM	Kemajuan 1 TA2	✓	 
6	25 April 2025	DENY PURIYANI AZHARY	Meminta tanda tangan untuk kode etik	✓	 
6	7 Mei 2025	IRA ADIYATI RUM	Hasil uji antioksidan	✓	 
7	27 April 2025	DENY PURIYANI AZHARY	Konsul data hasil evaluasi sediaan	✓	 
7	22 Mei 2025	IRA ADIYATI RUM	Bab 4	✓	 
8	4 Mei 2025	DENY PURIYANI AZHARY	Laporan kemajuan 1	✓	 
8	22 Mei 2025	IRA ADIYATI RUM	Meminta tanda tangan persetujuan	✓	 

Lampiran 12. Daftar Riwayat Hidup**Data Pribadi**

Nama	: Lukman Jayadi
Alamat	: Kp. Cisampih RT/RW 02/02 Desa. Cimenteng Kec. Curugkembar Kab. Sukabumi Jawa Barat
Kode pos	: 43182
Nomer Telepon	: 0856-4095-3511
Email	: lukmanjy664@gmail.com
Jenis kelamin	: Laki-laki
Tempat, Tanggal Kelahiran	: Sukabumi, 17 Januari 2003
Warga Negara	: Indonesia
Agama	: Islam
Pendidikan	: MI CIBITUNG SDN 1 CURUGKEMBAR SMPN 1 SAGARANTEN SMAN 1 SAGARANTEN UNIVERSITAS BHAKTI KENCANA