

LAMPIRAN

Lampiran 1 CoA (Certificate of Analysis)

Eksipien CoA Asam Sitrat

SHANDONG ENSIGN INDUSTRY CO.,LTD.				
NO.1567,CHANGSHENG STREET,CHANGLE,WEIFANG,262499,SHANDONG PROVINCE,CHINA				
Tel: +86-536-6298125 Fax: +86-536-6234587				
Certificate of Analysis				
Report NO.:YXITCR-20221102085-01		Date:OCT.28,2022		
Product:CITRIC ACID MONOHYDRATE 8-40 MESH		Invoice No.:FLI1220331A3		
Molecular Formula:C ₆ H ₈ O ₇ ·H ₂ O		CAS No.:5949-29-1	Quantity:104MT	
Batch No.:6MT2210036		Production Date:OCT.2022	Shelf Life:36months	
Item	Unit	Quality Standards	Analysis Results	Test Method
Characters	-	White or almost white, crystalline powder, colourless crystals or granules. Odorless, has a strongly acid taste. Very soluble in water, freely soluble in ethanol,very slightly soluble in diethyl ether.	Pass	BP
Identification	-	Pass Test	Pass	ENSIGN
Appearance of solution	-	Pass Test	Pass	BP
Assay	%	99.5-100.5	100.0	ENSIGN
Water	%	7.5-8.8	8.58	BP
Readily Carbonisable Substances(T@470nm)	%	≥30	70.3	BP/FCC
Readily Carbonisable Substances(A@470nm)	-	≤0.52	0.154	BP/FCC
Sulphated Ash (Residue on Ignition)	%	≤0.05	0.02	ENSIGN
Sulfate	mg/kg	≤50	<50	ENSIGN
Oxalate	mg/kg	≤50	<50	ENSIGN
Chloride	mg/kg	≤5	<5	ENSIGN
Lead	mg/kg	≤0.1	Not detected (<0.02)	ENSIGN
Arsenic	mg/kg	≤0.1	0.048	ENSIGN
Mercury	mg/kg	≤0.1	Not detected (<0.01)	ENSIGN
Aluminium	mg/kg	≤0.2	<0.2	ENSIGN
Heavy Metals	mg/kg	≤5	<5	ENSIGN
Bacterial endotoxins	IU/mg	<0.5	<0.5	BP
Calcium	mg/kg	≤75	<1	E330
Iron	mg/kg	≤5	<0.1	E330
Volatile Organic Impurities	-	Pass Test	Pass	E330
Conclusion:The product is in conformity with BP/USP/FCC/E330/ENSIGN and other standard of customer requirements.				
Approved by: 		Reviewed by: 		Prepared by: 
Authorized signatory				Analysis date:2022-10-24

CoA Asam Tartrat

CERTIFICATE OF ANALYSIS**MARKS & NOS.****INVOICE NO.:2022NCRH3078****DATE:SEP 12, 2022****N/M****DL-TARTARIC ACID****BATCH NUMBER****AB2209070****DESCRIPTION****WHITE CRYSTALLINE POWDER****CONTENT****99.89 %****SULPHATE****PASSED****HEAVY METALS****< 0.001 %****ARSENIC****< 0.0003 %****LOSS ON DRYING****0.32 %****RESIDUE ON IGNITION****0.036 %****QUANTITY****21000KGS****CONCLUSION****ACCORDING TO FOOD GRADE(ANHYDROUS) STANDARD****PRODUCTION DATE****SEP 11, 2022****EXPIRY DATE****SEP 10, 2024*****Pt. Duta Kristapa***
JAKARTA

CoA Natrium Bikarbonat

CERTIFICATE OF ANALYSIS

Attn: To whom it may concern

AGC Inc.
Chemicals Company
FAX: 81-436-23-3126
http://www.agc.com/english/mail_box/

Product: Sodium Bicarbonate (Food Additive Grade)		
Ex-Works: 21-Oct-22	Issued: 20-Oct-22	AGC Order No.: 84399763
LotNo. 8220925		Expiry Date: 26-Sep-23

Item	Unit	Specification	Inspection Status	Conformity
			Analysis Results	
1 Sodium Bicarbonate (NaHCO ₃)	%	99.0min	100.0	
2 Sodium Carbonate (Na ₂ CO ₃)	%	1.0max	<0.1	
3 Chloride (as Cl)	%	0.021max	<0.001	
4 Ammonium Salt		Sodium Bicarbonate is heated. No odor of ammonia is evolved	Conformity	
5 Arsenic (As)	μg/g	2max	<0.04	
6 Lead (Pb)	μg/g	2max	Cl	
7 Clarity of solution		Clear	Conformity	
8 Description		Occurs as white crystalline powder or crystalline lumps	Conformity	
9 Contamination		Under Limit	Conformity	
10 Loss on Drying	%	0.25max	<0.01	
11 Identification		Responds to all tests for Sodium Salt and for Bicarbonate	Conformity	
12				
13				
14				
15				
16				
17				
18				
19				
20				

*This specification is under The Japan's Specifications and Standards for Food Additives, (the current edition)

Note: The issue of this analysis shall be recognized as authorized values herein given by the Manager, Quality Assurance Department

CoA PVP K30



安徽山河药用辅料股份有限公司检验报告单
ANHUI SUNHERE PHARMACEUTICAL EXCIPIENTS CO., LTD.
ADD: Economic and Technological Developing Zone, Huainan, Anhui, China

CERTIFICATE OF ANALYSIS

Product: Povidone K30

Batch No.	220405	REP DATE	APR.13,2022
Specifications	25kg/drum	MFG DATE	APR.07,2022
Quantity	2100kg	EXP DATE	APR.06,2024
Tests		Standard USP43	Examinations
Identification A-E		Positive	Complies
Appearance		White or yellowish-white powder	White powder
Solubility		Freely soluble in water, ethanol 96% methanol, very slightly soluble in acetone.	Complies
Appearance of solution		Clear and NMT B ₆ , B ₇ , or B ₈	Complies
pH (5% in water)		3.0~5.0	3.78
K-value		27-32	30.5
Aldehydes		≤500ppm	<500ppm
Peroxides (H ₂ O ₂)		≤400ppm	<400ppm
Formic acid		≤0.5%	0.15%
Hydrazine		≤1ppm	<1ppm
Vinylpyrrolidinone		≤0.001%	<10ppm
2-Pyrrolidone		≤3.0%	1.30%
Heavy metals (CP2010)		≤10ppm	<10ppm
Lead		≤10ppm	<10ppm
Water		≤5.0%	3.57%
Residue on Ignition		≤0.1%	0.01%
Nitrogen content		11.5~12.8%	12.5%
Total Aerobic Plate Count		≤100cfu/g	10cfu/g
Mold and Yeast Count		≤100cfu/g	10cfu/g
E.coli		Not detected	Complies
Staphylococcus Aureus		Not detected	Complies
Pseudomonas aeruginosa		Not detected	Complies
Salmonella Spp		Not detected	Complies
Conclusion		It conforms to USP43.	

Analyst: 孙敏

Checker: 王平艳

QA Manager: 李先明

CoA Xanthan Gum

青島艾伊德生化有限公司
QINGDAO ICD BIOCHEMISTRY CO.,LTD.

CERTIFICATE OF ANALYSIS

Date of analysis: JUN.20,2022		Date of report: JUN.21,2022
Description:Xanthan gum food grade 80 mesh ex qingdao		Packing:In 25kg net drum
Batch no.:202206A-N68		Quantity:3600kgs/144 drums
Production date: JUN.20,2022		Expiry date: JUN.19,2024
		Invoice No.:RICH22154
ITEM	SPECIFICATION	RESULTS
VISCOSITY 1% SOLUTION IN 1%KCL	1200-1600CP5	1500
PH 1% SOLUTION	6.0-8.0	6.2
MOISTURE	MAX 13%	11.3%
ASH	MAX 13%	6.2%
PARTICLE SIZE	100% THROUGH 60 MESH(250MICRO)	100%
	MIN 95%THROUGH 80 MESH(180MICRO)	97.5%
V1/V2	1.02-1.45	1.04
PYRUVIC ACID	MIN 1.5%	3.6%
HEAVY METALS	MAX 20 PPM	1PPM
LEAD	MAX 5 PPM	2PPM
ARSENIC	MAX 3 PPM	0.6PPM
MICROBIOLOGICAL		
TOTAL PLATE COUNT	NOT MORE THAN 2000CFU/G	420 CFU/G
YEAST/MOULD	NOT MORE THAN 100CFU/G	CONFORM
E.COLI	ABSENT/25G	CONFORM
SALMONELLA	ABSENT/25G	CONFORM

Approved by:LIN NA Checked by:JIN FENGHE Edited by:CHEN XIAORONG

For and on behalf of
QINGDAO ICD BIOCHEMISTRY CO., LIMITED
青島艾伊德生化有限公司

.....
Authorized Signature(s)

CoA Maltodekstrin

ORIGINAL


秦皇岛骊骅淀粉股份有限公司
QINHUANGDAO LIHUA STARCH CO., LTD
 检验报告单

CERTIFICATE OF ANALYSIS

LHCO/J-19

PRODUCT NAME	MALTODEXTRIN DE10-12	REPORT NO.	01
BATCH NO.	20221029	PACKING	25KG/BAG
QUANTITY(MT)	55MT	PRODUCING DATE	OCT. 29, 2022
PRODUCTION UNIT	MALTODEXTRIN WORKSHOP	DATE OF EXPIRY	OCT. 28, 2024
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	11.5
WATER, % (m/m)	≤6	5.3
SOLUBILITY	≥98	99.2
PH VALUE	4.0-7.0	5.4
SULPHATE ASH % (g/100g)	≤0.5	0.1
ARSENIC(AS), mg/kg	≤0.5	0.1
PB, mg/kg	≤0.5	0.1
COLIFORM(cfu/g)	≤30	NONE
TOTAL PLATE COUNT(cfu/g)	≤3000	10
SALMONELLA	NAGATIVE	NAGATIVE

CONCLUSION: THE PRODUCT COMPLY WITH THE SPECIFICATION OF GB/T 20882.6-2021

MINISTER: REN AI PING CHECKER: LIU KUN EXAMINANT: YANG JIA LEI

MANUFACTURER: QINHUANGDAO LIHUA STARCH CO., LTD.

CoA 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)	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/5g)	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

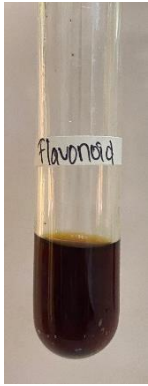
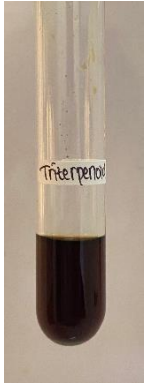
Characteristic	Method of analysis	Unit	Specification	Results
Total Aerobic Micro Count	Pharmacopelia Harmonized Methods	cfu/g	0-100	<100
Total Yeast & Mould Count	Pharmacopelia Harmonized Methods	cfu/g	0-10	<10
Escherichia coli (10 g)	Pharmacopelia Harmonized Methods		Negative	Negative
Salmonella (750g)	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 Escipants GmbH & Co. KG")

Lampiran 2 Hasil Skrining Fitokimia Ekstrak**Hasil Skrining Fitokimia Ekstrak Rimpang Temu Putih**

Flavonoid	Alkaloid	Saponin	Kuinon	Tanin	Triterpenoid
					

Lampiran 3 Pembuatan Sediaan Granul Effervescent Ekstrak Rimpang Temu Putih

Proses <i>Mixing</i>	
	
Proses Masa Kepal	
	
Proses Pengayakan	
	

Proses Pengeringan



Lampiran 4 Dokumentasi Hasil Evaluasi Sediaan Granul Effervescent**Uji Organoleptik**

F1



F2



F3

Uji Loss On Drying (LOD)**Uji Laju Alir**

Uji Kerapatan Nyata, Kerapatan Mampat dan Indeks Kompresibilitas



Uji pH



Uji Tinggi Buih



Lampiran 5 Inform Consent dan Form Penilaian Uji Hedonik

1. Inform Consent

LEMBAR PERSETUJUAN PANELIS (INFORMED CONSENT)

Saya Adinda Khumairani adalah mahasiswa Program Studi Sarjana Farmasi, Fakultas Farmasi Universitas Bhati Kencana, saat ini sedang melakukan pengambilan data untuk uji hedonik pada produk minuman granul *effervescent* dari ekstrak Rimpang Temu Putih. Kegiatan ini dilakukan untuk melengkapi data Laporan Tugas Akhir yang mana menjadi salah satu syarat dalam memperoleh gelar Sarjana Farmasi dengan judul penelitian "**Formulasi dan Evaluasi Granul *Effervescent* Ekstrak Rimpang Temu Putih (*Curcuma zedoaria* (Berg.) Roscoe.) Sebagai Antioksidan**". Oleh karena itu, saya memohon kesediaan waktu rekan-rekan untuk menjadi panelis. Perlu saya informasikan bahwa keikutsertaan rekan-rekan sebagai panelis bersifat sukarela. Oleh karena itu, saya memohon kesediaan waktu rekan-rekan untuk mengisi formulir penilaian kesukaan terhadap produk yang disajikan. Saya akan merahasiakan seluruh informasi yang rekan-rekan berikan. Atas kerja samanya saya ucapkan terimakasih.

Setelah mendapatkan penjelasan mengenai tujuan dan manfaat Pengambilan data tersebut, dengan ini saya:

Nama :
NPM :
Fakultas :

Dengan ini menyatakan bersedia menjadi panelis/responden penelitian dari

Nama : Adinda Khumairani
NPM : 191FF03045
Produk : Sediaan minuman granul *effervescent* dari ekstrak Rimpang Temu Putih

Bandung, Juni 2023

(.....)

2. Form Penilaian Uji Hedonik

Nama :
 Prodi :
 Usia :
 Jenis Kelamin :
 Tanggal Pengujian :

Kuisisioner Uji Hedonik Formulasi dan Evaluasi Granul *Effervescent* Ekstrak Rimpang Temu Putih (*Curcuma zedoaria* (Berg.) Roscoe.) Sebagai Antioksidan

Ket: Nyatakan penilaian anda dengan pernyataan yang sesuai dan berikan tanda ✓

Pengamatan	Formula	Skor Nilai				
		Sangat Tidak Suka (1)	Tidak Suka (2)	Cukup (3)	Suka (4)	Sangat Suka (5)
Warna	F1					
	F2					
	F3					
	F4					
Aroma	F1					
	F2					
	F3					
	F4					
Rasa	F1					
	F2					
	F3					
	F4					

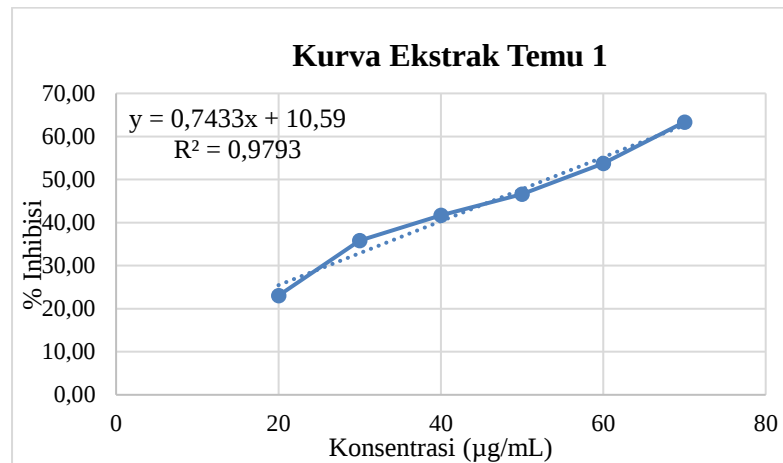
Lampiran 6 Hasil Aktivitas Antioksidan

Konsentrasi (µg/mL)	Abs Kontrol	Abs Sampel			% Inhibisi			IC ₅₀			Rata- rata IC ₅₀	SD
		1	2	3	1	2	3	1	2	3		
Ekstrak Temu Putih												
20	0,85	0,65	0,65	0,65	23,04	22,85	23,00	53,03	53,03	53,06	53,04	0,02
30		0,54	0,54	0,55	35,84	35,80	35,77					
40		0,50	0,49	0,49	41,68	41,77	41,81					
50		0,45	0,45	0,45	46,61	46,64	46,55					
60		0,39	0,39	0,39	53,72	53,68	53,78					
70		0,31	0,31	0,31	63,36	63,38	63,23					
Granul <i>Effervescent</i> Ekstrak Temu Putih												
20	0,85	0,63	0,64	0,63	25,92	25,10	25,51	62,69	62,06	62,36	62,37	0,31
30		0,56	0,55	0,55	33,62	35,74	35,01					
40		0,53	0,52	0,53	37,34	38,27	37,88					
50		0,49	0,49	0,49	41,96	42,54	42,24					
60		0,44	0,44	0,44	47,74	47,89	47,81					
70		0,38	0,38	0,38	55,04	54,93	54,98					

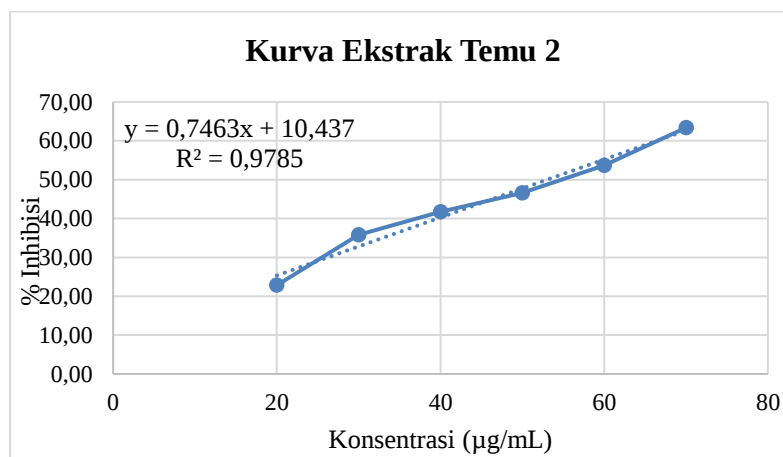
Lampiran 7 Kurva Hubungan Konsentrasi dengan % Inhibisi Ekstrak Rimpang Temu Putih dan Sediaan Granul Effervescent

1. Ekstrak Temu Putih

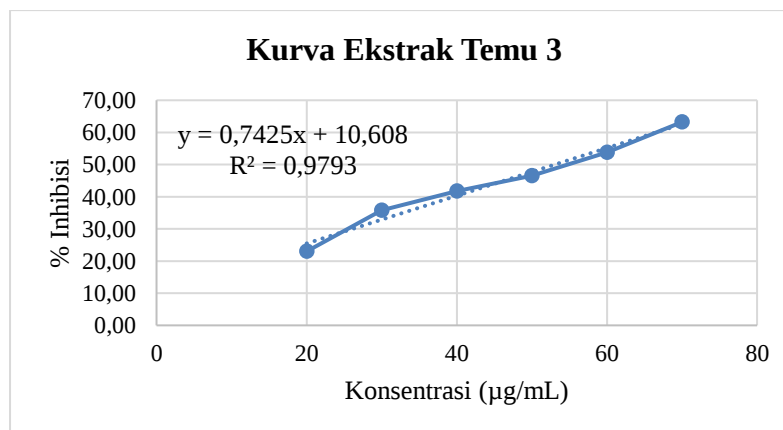
- Pengulangan 1



- Pengulangan 2

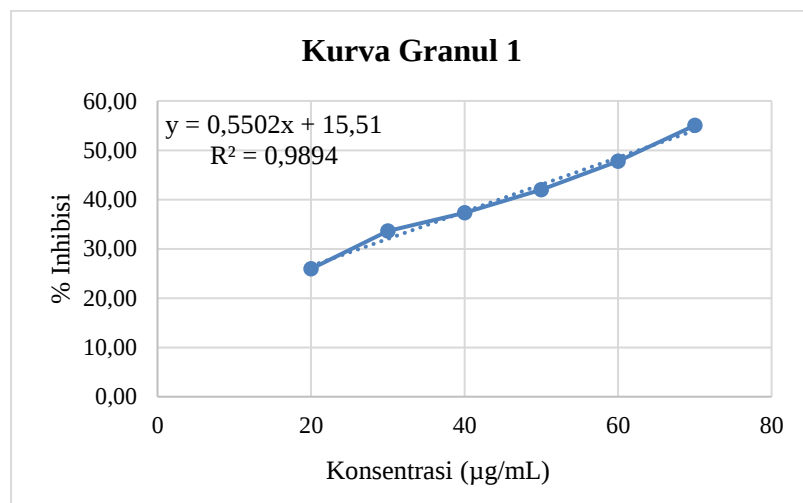


- Pengulangan 3

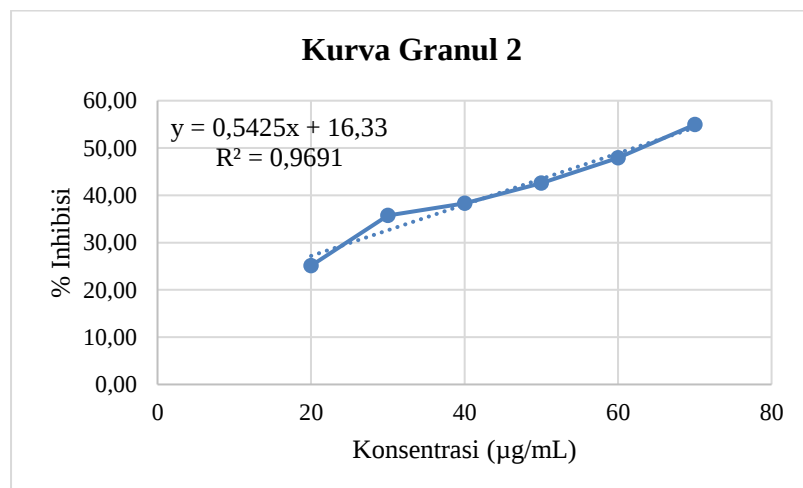


2. Sediaan Granul *Effervescent*

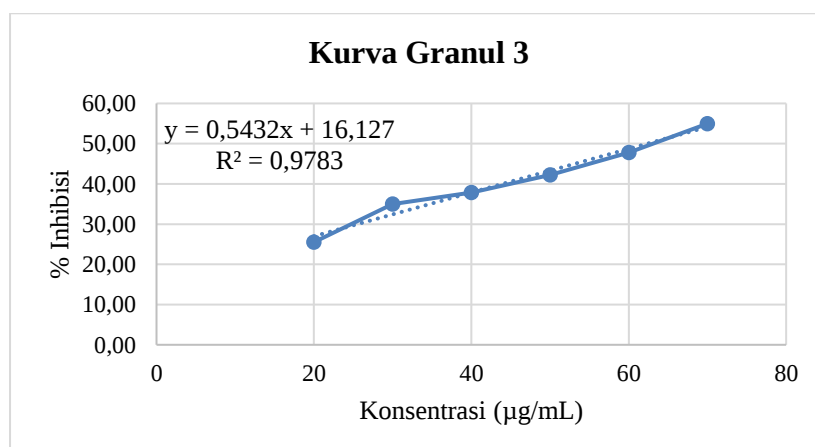
- Pengulangan 1



- Pengulangan 2



- Pengulangan 3



Lampiran 8 Hasil Cek Plagiarisme

35. ADINDA KHUMAIRANI_191FF03045			
ORIGINALITY REPORT			
7%	8%	4%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS
PRIMARY SOURCES			
1	repository.bku.ac.id Internet Source	1	1%
2	repository.usd.ac.id Internet Source	1	1%
3	core.ac.uk Internet Source	1	1%
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6	journal.uniga.ac.id Internet Source	1	1%
7	media.neliti.com Internet Source	1	1%
8	1001makalah.blogspot.com Internet Source	1	1%

Lampiran 9 Kartu Bimbingan



Fakultas Farmasi
Universitas
Bhakti Kencana

No Dok. 02.64.00/FRM-03/AKD-SPMI



KARTU BIMBINGAN TUGAS AKHIR II

Pembimbing Utama	: Pera Pratama, M. Farm
Nama Mahasiswa	: Adinda Khumairani
NPM	: 1911F03045
Bidang Ilmu	: Farmasetika - Teknologi Farmasi

No	Hari/Tanggal	Waktu	Tempat	Materi	Paraf Dosen
1.	Jumat, 3 Maret 2023	10.00	Kampus UBX	Membahas hasil seminar proposal	<i>[Signature]</i>
2.	Kamis, 6 April 2023	11.00	Kampus UBX	Laporan hasil penelitian	<i>[Signature]</i>
3.	Senin, 10 April 2023	07.00	Whatsapp	Pemilihan konsentrasi asam	<i>[Signature]</i>
4.	Jumat, 14 April 2023	10.50	Kampus UBX	Laporan Kemajuan 1	<i>[Signature]</i>
5.	Rabu, 3 Mei 2023	14.30	Kampus UBX	Laporan hasil penelitian	<i>[Signature]</i>
6.	Senin, 8 Mei 2023	14.30	Kampus UBX	Laporan hasil penelitian	<i>[Signature]</i>
7.	Rabu, 10 Mei 2023	09.30	Whatsapp	Pemilihan konsentrasi asam	<i>[Signature]</i>
8.	Rabu, 17 Mei 2023	15.20	Zoom	Seminar KK TA2	<i>[Signature]</i>
9.	Rabu, 24 Mei 2023	12.00	Kampus UBX	Laporan Kemajuan 2	<i>[Signature]</i>
10.	Selasa, 6 Juni 2023	13.00	Kampus UBX	Laporan hasil evaluasi sediaan	<i>[Signature]</i>
11.	Selasa, 20 Juni 2023	10.50	Kampus UBX	Diskusi pengujian antioksidan (KLT)	<i>[Signature]</i>
12.	Selasa, 27 Juni 2023	13.00	Kampus UBX	Hasil pengujian antioksidan	<i>[Signature]</i>
13.	Selasa, 11 Juli 2023	19.00	Rumah Pa Pera	Revisi bab 1 - 6	<i>[Signature]</i>
14.	Rabu, 12 Juli 2023	14.00	Kampus UBX	Revisi bab 4-6, ttd pengesahan	<i>[Signature]</i>

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



KARTU BIMBINGAN TUGAS AKHIR II

Pembimbing Serta	: apt. Denny Puritani Arhany, M Si
Nama Mahasiswa	: Adinda Khumirani
NPM	: 101102045
Bidang Ilmu	: Farmasetika - Teknologi Farmasi

[illegible]

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

☎ 022 7830 766, 022 7830 768

✉ pkv.ac.id ☎ contact@pkv.ac.id

Lampiran 10 Daftar Riwayat Hidup

DAFTAR RIWAYAT HIDUP



Nama	: Adinda Khumairani
Tempat/Tanggal Lahir	: Ciamis, 28 Februari 2001
Jenis Kelamin	: Perempuan
Agama	: Islam
Kewarganegaraan	: Indonesia
Alamat	: Lingk. Tanjungsukur RT/RW. 005/015 Kel. Hegarsari Kec. Pataruman Kota Banjar Jawa Barat
Telepon	: 085798203476
Email	: adindakhumairani34@gmail.com

PENDIDIKAN

TK	: TK YWKA
SD	: SD Negeri 3 Hegarsari
SMP	: SMP Negeri 1 Banjar
SMK	: SMA Negeri 1 Banjar
S1	: Universitas Bhakti Kencana Bandung

