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Lampiran 1. Surat *Ethical Clearance*

3/30/22, 11:41 AM

KEPK-RSDM



**HEALTH RESEARCH ETHICS COMMITTEE  
KOMISI ETIK PENELITIAN KESEHATAN**

***Dr. Moewardi General Hospital***  
**RSUD Dr. Moewardi**

**ETHICAL CLEARANCE**  
**KELAIKAN ETIK**

Nomor : 343 / III / HREC / 2022

The Health Research Ethics Committee Dr. Moewardi  
Komisi Etik Penelitian Kesehatan RSUD Dr. Moewardi

after reviewing the proposal design, herewith to certify  
setelah menilai rancangan penelitian yang diusulkan, dengan ini menyatakan

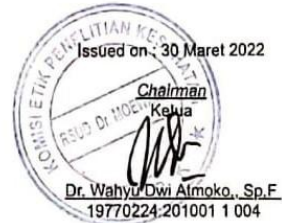
That the research proposal with topic :  
Bahwa usulan penelitian dengan judul

**AKTIVITAS EKSTRAK DAUN SALAM (*Syzygium polyanthum* (Wight.) Walp) UNTUK MENURUNKAN KADAR GULA DARAH PADA MENCIT (*Mus musculus*) DENGAN METODE GOD-PAP**

Principal investigator : Denata Intan Sukmaning  
Peneliti Utama 24185482A

Location of research : Universitas Setia Budi Surakarta  
Lokasi Tempat Penelitian

Is ethically approved  
Dinyatakan layak etik



## Lampiran 2. Surat Izin Hewan Uji

### "ABIMANYU FARM"

√ Mencit putih jantan    √ Tikus Wistar    √ Swis Webster    √ Cacing  
 √ Mencit Balb/C    √ Kelinci New Zealand

Ngampon RT 04 / RW 04, Mojosongo Kec. Jebres Surakarta, Phone 085 629 994 33 / Lab US8 Ska

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Yang bertanda tangan di bawah ini:

Nama : Sigit Pramono

Selaku pengelola Abimanyu Farm, menerangkan bahwa hewan uji yang digunakan untuk penelitian, oleh:

Nama : Denata Intan Sukmaning  
 Nim : 24185482A  
 Institusi : Universitas Setia Budi Surakarta

Merupakan hewan uji dengan spesifikasi sebagai berikut:

Jenis hewan : Mencit Swiss  
 Umur : 2-3 bulan  
 Jenis kelamin : Jantan  
 Jumlah : 25 ekor  
 Keterangan : Sehat  
 Asal-usul : Unit Pengembangan Hewan Percobaan UGM Yogyakarta

Yang pengembangan dan pengelolaannya disesuaikan standar baku penelitian. Demikian surat keterangan ini dibuat untuk digunakan sebagaimana mestinya.

Surakarta, 14 Juni 2022

Hormat kami



Sigit Pramono

"ABIMANYU FARM"

## Lampiran 3. Determinasi



PEMERINTAH PROVINSI JAWA TIMUR  
DINAS KESEHATAN  
UPT LABORATORIUM HERBAL  
MATERIA MEDICA BATU

Jl. Lahor 87 Kota Batu  
Jl. Raya 228 Kejayan Kabupaten Pasuruan  
Jl. Kolonel Sugiono 457 – 459 Kota Malang  
Email : materiamedicabatu@jatimprov.go.id



Nomor : 074/ 208/ 102.20-A/ 2022  
Sifat : Biasa  
Perihal : **Determinasi Tanaman Salam**

Memenuhi permohonan saudara :

Nama : DENATA INTAN SUKMANING  
NIM : 24185482A  
Fakultas : FARMASI, UNIVERSITAS SETIA BUDI

1. Perihal determinasi tanaman salam

Kingdom : Plantae (Tumbuhan)  
Divisi : Magnoliophyta (Tumbuhan berbunga)  
Kelas : Magnoliopsida (berkeping dua / dikotil)  
Ordo : Myrtales  
Famili : Myrtaceae (suku jambu-jambuan)  
Genus : Syzygium  
Spesies : *Syzygium polyanthum* (Wight) Walp.  
Sinonim : *Eugenia polyantha* Wight; *Eugenia lucidula* Miq.  
Nama Daerah : Gowok (Sunda); manting (Jawa); kastolam (Kangean); meselangan, ubar serai (Melayu); Salam (Indonesia, Sunda, Jawa, Madura).  
Kunci Determinasi : 1b-2b-3b-4b-6b-7b-9b-10b-11b-12b-13b-14b-16a-239b-243b-244b-248b-249b-250a-251b-253b-254b-255b-256b-261a-262b-263b-264b:Mytaceae-2b:Syzygium-1b-7b-8b-11a-12b:*S.polyanthum*.

2. Morfologi : Habitus: Pohon besar, menahun. Batang: Bulat, permukaan licin, diameter  $\pm$  25 cm, putih kecoklatan. Daun: Majemuk, menyirip genap, permukaan licin, tepi rata, ujung meruncing, pangkal runcing, panjang 10-14 cm, lebar 4-8 cm, tangkai panjang  $\pm$  1 cm, pertulangan menyirip, permukaan atas hijau tua, permukaan bawah hijau muda. Bunga: Majemuk, tumbuh di ujung batang, kelopak bentuk piala, diameter 4 mm, hijau, mahkota panjang 2-3,5 mm, putih, putik panjang 1,5-2 mm, hijau keputih-putihan. Buah: Buni, bulat, diameter  $\pm$  1,2 cm, masih muda hijau setelah tua coklat kehitaman. Biji: Bulat, diameter  $\pm$  1 cm, coklat. Akar: Tunggang, coklat muda.

3. Bagian yang digunakan : Daun.

4. Penggunaan : Penelitian (Skripsi).

5. Daftar Pustaka

- Van Steenis, CGGJ. 2008. *FLORA: untuk Sekolah di Indonesia*. Pradnya Paramita, Jakarta.

Demikian surat keterangan determinasi ini kami buat untuk dipergunakan sebagaimana mestinya.

Batu, 14 Maret 2022

KEPALA UPT LABORATORIUM HERBAL  
MATERIA MEDICA BATU  
ACHMAD MABRUR, SKM, M.Kes.  
PEMBINA  
NIP. 19680203 199203 1 004

**Lampiran 4. Hasil Rendemen Serbuk Daun Salam**

<b>Simplisia</b>	<b>Bobot basah (kg)</b>	<b>Bobot kering (kg)</b>	<b>Rendemen (%)</b>
Daun salam	14	7	50

$$\text{Rendemen ekstrak} = \frac{7 \text{ kg}}{14 \text{ kg}} \times 100\% = 50\%$$

**Lampiran 5. Perhitungan Rendemen Ekstrak Daun Salam**

<b>Simplisia</b>	<b>Bobot serbuk (g)</b>	<b>Bobot ekstrak (g)</b>	<b>Rendemen (%)</b>
Daun salam	500,0	149,0	29,8

$$\text{Rendemen ekstrak} = \frac{149 \text{ gram}}{500 \text{ gram}} \times 100\% = 29,8\%$$

**Lampiran 6. Proses pembuatan serbuk dan ekstrak daun salam**

foto	keterangan
 A photograph showing a cluster of fresh, vibrant green salam leaves with prominent veins, resting on a reddish-brown soil surface.	Daun salam segar
 A photograph of a large, colorful woven sack (green, red, and white) being weighed on a circular mechanical scale. The sack is filled with green leaves.	Berat daun salam sebelum di jadikan serbuk
 A photograph showing two trays of dried, brownish-green salam leaves laid out on a white cloth on a concrete surface, likely for drying.	Proses pengeringan
 A photograph of a stainless steel electric grinding machine with a red power button and a black power cord, used for grinding the dried leaves into powder.	Proses penggilingan

foto	keterangan
	Serbuk di blender
	Berat serbuk daun salam
	Ekstrak kental daun salam



**Lampiran 7. Hasil Perhitungan Susut Pengerinan**

<b>Replikasi</b>	<b>Berat serbuk (g)</b>	<b>Susut Pengerinan (%)</b>
1	2,00	9,50
2	2,00	9,50
3	2,00	8,50
Rata-rata ± SD		9,2 ± 0,6

$$\text{Rata-rata} = \frac{9,5+9,5+8,5}{3} = 9,2$$

Lampiran 8. Susut pengeringan



### Lampiran 9. Hasil Perhitungan Kadar Air

Replikasi	Berat serbuk (g)	Volume air (ml)	Kadar (%)
1	20,00	1,10	5,50
2	20,00	1,20	6,00
3	20,00	1,30	6,50
Rata-rata ± SD			6 ± 0,5

Perhitungan :

$$\% \text{ kadar air} = \frac{\text{air (ml)}}{\text{berat serbuk}} \times 100\%$$

Replikasi 1 :

$$\% \text{ kadar air} = \frac{1,1}{20} \times 100\% = 5,5\%$$

Replikasi 2 :

$$\% \text{ kadar air} = \frac{1,2}{20} \times 100\% = 6\%$$

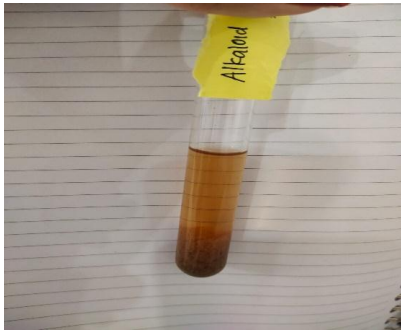
Replikasi 3 :

$$\% \text{ kadar air} = \frac{1,3}{20} \times 100\% = 6,5\%$$

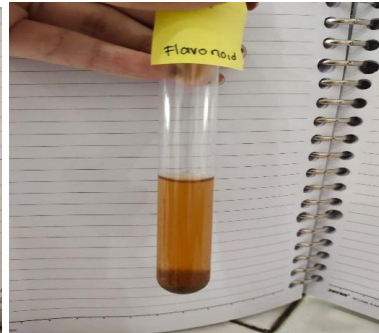
$$\text{Rata-rata} = \frac{5,5+6+6,5}{3} = 6$$

**Lampiran 10. Kadar air**



**Lampiran 11. Identifikasi senyawa bioaktif daun salam**

Alkaloid replikasi 1



Flavonoid



Saponin



Tanin

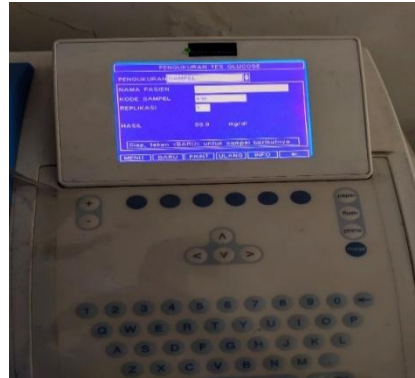


Alkaloid replikasi 2



Alkaloid replikasi 3

### Lampiran 12. Perlakuan hewan uji dan pemeriksaan metode GOD-PAP



### Lampiran 13. Hasil analisis statistik kadar glukosa darah T0,T1,T2

T0

kelompok		Tests of Normality					
		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
dosis		Statisti c	df	Sig.	Statisti c	df	Sig.
dosis	kontrol positif metformin	.167	5	.200*	.954	5	.766
	kontrol negatif CMC-Na 0,5%	.242	5	.200*	.904	5	.433
	dosis 200 mg/kg BB	.266	5	.200*	.905	5	.441
	dosis 400 mg/kg BB	.148	5	.200*	.986	5	.965
	dosis 800 mg/kg BB	.189	5	.200*	.986	5	.964

#### Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
dosis	Based on Mean	.489	4	20	.744
	Based on Median	.263	4	20	.898
	Based on Median and with adjusted df	.263	4	17.516	.898
	Based on trimmed mean	.492	4	20	.741

#### ANOVA

dosis	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	203.840	4	50.960	.605	.663
Within Groups	1683.600	20	84.180		
Total	1887.440	24			

T1

kelompok		Tests of Normality					
		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
dosis		Statisti c	df	Sig.	Statisti c	df	Sig.
dosis	kontrol positif metformin	.320	4	.	.776	4	.066

kontrol negatif CMC-Na 0,5%	.236	5	.200*	.902	5	.419
dosis 200 mg/kg BB	.339	5	.061	.757	5	.035
dosis 400 mg/kg BB	.354	5	.040	.728	5	.018
dosis 800 mg/kg BB	.228	5	.200*	.936	5	.639

kelompok	N	Subset for alpha = 0.05 1
dosis 800 mg/kg BB	5	191.80
dosis 200 mg/kg BB	5	201.60
kontrol negatif CMC-Na 0,5%	5	203.40
dosis 400 mg/kg BB	5	203.40
kontrol positif metformin	4	203.75
Sig.		.874

### ANOVA

dosis

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	510.183	4	127.546	.338	.849
Within Groups	7175.150	19	377.639		
Total	7685.333	23			

T2

		Tests of Normality					
		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
kelompok		Statisti c	df	Sig.	Statisti c	df	Sig.
dosis kontrol positif metformin		.303	4	.	.818	4	.140
kontrol negatif CMC-Na 0,5%		.245	5	.200*	.863	5	.238
dosis 200 mg/kg BB		.284	5	.200*	.860	5	.228
dosis 400 mg/kg BB		.224	5	.200*	.865	5	.246
dosis 800 mg/kg BB		.249	5	.200*	.892	5	.365



## ANOVA

dosis

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7975.333	4	1993.833	11.920	<,001
Within Groups	3178.000	19	167.263		
Total	11153.333	23			

kelompok	N	Subset for alpha = 0.05	
		1	2
dosis 400 mg/kg BB	5	75.40	
dosis 800 mg/kg BB	5	78.20	
dosis 200 mg/kg BB	5	79.80	
kontrol positif metformin	4	83.00	
kontrol negatif CMC-Na 0,5%	5		123.40
Sig.		.891	1.000

**Lampiran 14. Penimbangan Berat Badan Hewan Uji**

<b>Kelompok</b>	<b>kontrol positif metformin</b>	<b>kontrol negatif CMC-Na 0,5%</b>	<b>dosis 200 mg/ kg BB</b>	<b>dosis 400 mg/kg BB</b>	<b>dosis 800 mg/kg BB</b>
Hari ke-0	23	23	22	23	22
	24	24	22	22	23
	23	22	24	23	22
	23	22	23	23	24
	24	23	23	24	24
<b>Rata-rata</b>	<b>23,4</b>	<b>22,8</b>	<b>22,8</b>	<b>23</b>	<b>23</b>
Hari ke-7	24	24	23	24	23
	25	24	23	23	24
	24	23	25	24	23
	23	23	24	24	25
	25	24	24	25	25
<b>Rata-rata</b>	<b>24,2</b>	<b>23,6</b>	<b>23,8</b>	<b>24</b>	<b>24</b>
Hari ke-12	23	23	22	23	22
	24	23	22	22	23
	23	22	24	23	22
	22	22	23	23	24
	23	23	23	24	24
<b>Rata-rata</b>	<b>23</b>	<b>22,6</b>	<b>22,8</b>	<b>23</b>	<b>23</b>
Hari ke-19	24	23	23	24	23
	25	24	23	23	24
	24	22	25	24	23
	23	23	24	24	25
	24	24	24	25	25
<b>Rata-rata</b>	<b>24</b>	<b>23,2</b>	<b>23,8</b>	<b>24</b>	<b>24</b>

**Lampiran 15. Hasil pemeriksaan kadar gula darah**

kelompok perlakuan	T0	T1	T2	T3	AUCtotal	%KGD	
1	1	0	71	203	75	320	74,93
	2	0	65	267	72	972,4	45,63
	3	0	81	201	75	352	32,03
	4	0	74	201	89	498	9,53
	5	0	67	210	93	35	164,79
	Rata-rata	0	71,6	216,4	66,8	435,48	65,38
	SD	0	6,31	28,53	9,49	343,83	60,41
2	1	0	63	223	131	313,5	0
	2	0	70	176	98	915	0
	3	0	65	200	150	633,5	0
	4	0	84	223	182	597	0
	5	0	72	195	154	315,5	0
	Rata-rata	0	70,8	203,4	143	554,90	0
	SD	0	8,23	20	25,73	251,60	0,00
3	1	0	80	223	88	300	81,31
	2	0	61	219	78	1138,5	63,78
	3	0	75	222	80	357	31,24
	4	0	57	175	78	614,5	9,98
	5	0	63	169	75	52,5	159,24
	Rata-rata	0	67,2	210,6	79,8	492,5	69,11
	SD	0	9,81	27,14	4,92	412,68	57,51
4	1	0	66	187	78	329,5	71,9
	2	0	78	231	76	1122,5	62,03
	3	0	74	186	78	336	34,55
	4	0	86	228	72	586	5,21
	5	0	60	185	73	6	1,74
	Rata-rata	0	72,8	203,4	75,4	476	35,09
	SD	0	10,16	23,86	2,79	415,94	31,96
5	1	0	73	186	75	338	69,19
	2	0	81	197	85	860	33,34
	3	0	90	204	89	350,5	32,26
	4	0	61	183	70	518,5	6,10
	5	0	75	189	72	10	172,71
	Rata-rata	0	76	191,8	78,2	415,4	62,72
	SD	0	10,68	8,58	8,35	309,37	59,88

**Lampiran 16. Perhitungan AUC**

$$AUC_{t_{n-1}}^{t_n} = \frac{Vt_{n-1} + Vt_n}{2} (t_n - t_{n-1})$$

Kontrol positif metformin

Replikasi 1

$$AUC_{t_0}^1 = \frac{0+70}{2} (1-0) = 35$$

$$AUC_{t_1}^2 = \frac{70+64}{2} (2-1) = 67$$

$$AUC_{t_2}^3 = \frac{64+80}{2} (3-2) = 72$$

$$AUC_{t_3}^4 = \frac{80+73}{2} (4-3) = 76,5$$

$$AUC_{t_4}^5 = \frac{73+66}{2} (5-4) = 69,5$$

AUC total = 320

Replikasi 2

$$AUC_{t_0}^1 = \frac{0+62}{2} (1-0) = 31$$

$$AUC_{t_1}^2 = \frac{62+69}{2} (2-1) = 65,5$$

$$AUC_{t_2}^3 = \frac{69+64}{2} (3-2) = 66,5$$

$$AUC_{t_3}^4 = \frac{64+83}{2} (4-3) = 73,5$$

$$AUC_{t_4}^5 = \frac{83+71}{2} (5-4) = 77$$

AUC total = 313,5

Replikasi 3

$$AUC_{t_0}^1 = \frac{0+79}{2} (1-0) = 39,5$$

$$AUC_{t_1}^2 = \frac{79+60}{2} (2-1) = 69,5$$

$$AUC_{t_2}^3 = \frac{60+74}{2} (3-2) = 67$$

$$AUC_{t_3}^4 = \frac{74+56}{2} (4-3) = 65$$

$$AUC_{t_4}^5 = \frac{56+62}{2} (5-4) = 59$$

AUC total = 300

Replikasi 4

$$AUC_{t_0}^1 = \frac{0+65}{2} (1-0) = 32,5$$

$$AUC_{t_1}^2 = \frac{65+77}{2} (2-1) = 71$$

$$AUC_{t_2}^3 = \frac{77+73}{2} (3-2) = 75$$

$$AUC_{t_3}^4 = \frac{73+85}{2} (4-3) = 79$$

$$AUC_{t_4}^5 = \frac{85+59}{2} (5-4) = 72$$

AUC total = 329,5

Replikasi 5

$$AUC_{t_0}^1 = \frac{0+72}{2} (1-0) = 36$$

$$AUC_{t_1}^2 = \frac{72+80}{2} (2-1) = 76$$

$$AUC_{t_2}^3 = \frac{80+89}{2} (3-2) = 84,5$$

$$AUC_{t_3}^4 = \frac{89+60}{2} (4-3) = 4,5$$

$$AUC_{t_4}^5 = \frac{60+74}{2} (5-4) = 67$$

AUC total = 338

Kontrol negatif CMC-Na 0,5%

Replikasi 1

$$AUC^1_0 = \frac{0+202}{2} (1-0) = 101$$

$$AUC^2_1 = \frac{202+266}{2} (2-1) = 234$$

$$AUC^3_2 = \frac{266+200}{2} (3-2) = 233$$

$$AUC^4_3 = \frac{200+200}{2} (4-3) = 200$$

$$AUC^5_4 = \frac{200+209}{2} (5-4) = 204,5$$

205,6

AUC total = 972,4

Replikasi 2

$$AUC^1_0 = \frac{0+222}{2} (1-0) = 111$$

$$AUC^2_1 = \frac{222+175}{2} (2-1) = 198,5$$

190,5

$$AUC^3_2 = \frac{175+199}{2} (3-2) = 187$$

199,5

$$AUC^4_3 = \frac{199+222}{2} (4-3) = 210,5$$

192,5

$$AUC^5_4 = \frac{222+199}{2} (5-4) = 208$$

AUC total = 915

Replikasi 3

$$AUC^1_0 = \frac{0+222}{2} (1-0) = 111$$

$$AUC^2_1 = \frac{222+218}{2} (2-1) = 220$$

$$AUC^3_2 = \frac{218+221}{2} (3-2) = 3439$$

$$AUC^4_3 = \frac{221+174}{2} (4-3) = 197,5$$

$$AUC^5_4 = \frac{174+163}{2} (5-4) = 71$$

AUC total = 1138,5

Replikasi 4

$$AUC^1_0 = \frac{0+186}{2} (1-0) = 93$$

$$AUC^2_1 = \frac{186+230}{2} (2-1) = 208$$

$$AUC^3_2 = \frac{230+185}{2} (3-2) = 415$$

$$AUC^4_3 = \frac{185+227}{2} (4-3) = 206$$

$$AUC^5_4 = \frac{227+184}{2} (5-4) =$$

AUC total = 1122,5

Replikasi 5

$$AUC^1_0 = \frac{0+185}{2} (1-0) = 92,5$$

$$AUC^2_1 = \frac{185+196}{2} (2-1) =$$

$$AUC^3_2 = \frac{196+203}{2} (3-2) =$$

$$AUC^4_3 = \frac{203+182}{2} (4-3) =$$

$$AUC^5_4 = \frac{182+188}{2} (5-4) = 185$$

AUC total = 860

Dosis 200 mg/kg BB

Replikasi 1

$$AUC^1_0 = \frac{0+74}{2} (1-0) = 37$$

$$AUC^2_1 = \frac{74+71}{2} (2-1) = 72,5$$

$$AUC^3_2 = \frac{71+73}{2} (3-2) = 72$$

$$AUC^4_3 = \frac{73+88}{2} (4-3) = 80,5$$

$$AUC^5_4 = \frac{88+92}{2} (5-4) = 90$$

AUC total = 352

Replikasi 2

$$AUC^1_0 = \frac{0+130}{2} (1-0) = 111$$

$$AUC^2_1 = \frac{130+97}{2} (2-1) = 113,5$$

$$AUC^3_2 = \frac{97+149}{2} (3-2) = 123$$

$$AUC^4_3 = \frac{149+181}{2} (4-3) = 165$$

$$AUC^5_4 = \frac{181+153}{2} (5-4) = 167$$

AUC total = 633,5

Replikasi 3

$$AUC^1_0 = \frac{0+87}{2} (1-0) = 43,5$$

$$AUC^2_1 = \frac{87+77}{2} (2-1) = 82$$

$$AUC^3_2 = \frac{77+79}{2} (3-2) = 78$$

$$AUC^4_3 = \frac{79+77}{2} (4-3) = 78$$

$$AUC^5_4 = \frac{77+74}{2} (5-4) = 75,5$$

AUC total = 357

Replikasi 4

$$AUC^1_0 = \frac{0+77}{2} (1-0) = 38,5$$

$$AUC^2_1 = \frac{77+75}{2} (2-1) = 76$$

$$AUC^3_2 = \frac{75+77}{2} (3-2) = 76$$

$$AUC^4_3 = \frac{77+71}{2} (4-3) = 74$$

$$AUC^5_4 = \frac{71+72}{2} (5-4) = 71,5$$

AUC total = 336

Replikasi 5

$$AUC^1_0 = \frac{0+74}{2} (1-0) = 37$$

$$AUC^2_1 = \frac{74+84}{2} (2-1) = 79$$

$$AUC^3_2 = \frac{84+88}{2} (3-2) = 86$$

$$AUC^4_3 = \frac{88+69}{2} (4-3) = 78,5$$

$$AUC^5_4 = \frac{69+71}{2} (5-4) = 70$$

AUC total = 350,5

Dosis 400 mg/kg BB

Replikasi 1

$$AUC^1_0 = \frac{0+131}{2} (1-0) = 65,5$$

$$AUC^2_1 = \frac{131+201}{2} (2-1) = 166$$

$$AUC^3_2 = \frac{201+119}{2} (3-2) = 160$$

131,5

$$AUC^4_3 = \frac{119+126}{2} (4-3) = 122,3$$

$$AUC^5_4 = \frac{126+142}{2} (5-4) = 134$$

132,5

AUC total = 498

Replikasi 2

$$AUC^1_0 = \frac{0+159}{2} (1-0) = 79,5$$

$$AUC^2_1 = \frac{159+105}{2} (2-1) = 132$$

113,5

$$AUC^3_2 = \frac{105+134}{2} (3-2) = 119,5$$

$$AUC^4_3 = \frac{134+138}{2} (4-3) = 136$$

117,5

$$AUC^5_4 = \frac{138+122}{2} (5-4) = 130$$

117,5

AUC total = 597

Replikasi 3

$$AUC^1_0 = \frac{0+142}{2} (1-0) = 71$$

$$AUC^2_1 = \frac{142+157}{2} (2-1) = 149,5$$

$$AUC^3_2 = \frac{157+146}{2} (3-2) = 151,5$$

$$AUC^4_3 = \frac{146+117}{2} (4-3) = 131,5$$

$$AUC^5_4 = \frac{117+105}{2} (5-4) = 111$$

AUC total = 614,5

Replikasi 4

$$AUC^1_0 = \frac{0+120}{2} (1-0) = 60$$

$$AUC^2_1 = \frac{120+152}{2} (2-1) = 136$$

$$AUC^3_2 = \frac{152+111}{2} (3-2) =$$

$$AUC^4_3 = \frac{111+141}{2} (4-3) = 126$$

$$AUC^5_4 = \frac{141+124}{2} (5-4) =$$

AUC total = 586

Replikasi 5

$$AUC^1_0 = \frac{0+112}{2} (1-0) = 56$$

$$AUC^2_1 = \frac{112+115}{2} (2-1) =$$

$$AUC^3_2 = \frac{115+113}{2} (3-2) = 114$$

$$AUC^4_3 = \frac{113+122}{2} (4-3) =$$

$$AUC^5_4 = \frac{122+113}{2} (5-4) =$$

AUC total = 518,5

Dosis 400 mg/kg BB

Replikasi 1

$$AUC^1_0 = \frac{0+131}{2} (1-0) = 65,5$$

$$AUC^2_1 = \frac{131+201}{2} (2-1) = 166$$

$$AUC^3_2 = \frac{201+119}{2} (3-2) = 160$$

131,5

$$AUC^4_3 = \frac{119+126}{2} (4-3) = 122,3$$

$$AUC^5_4 = \frac{126+142}{2} (5-4) = 134$$

132,5

AUC total = 498

Replikasi 2

$$AUC^1_0 = \frac{0+159}{2} (1-0) = 79,5$$

$$AUC^2_1 = \frac{159+105}{2} (2-1) = 132$$

113,5

$$AUC^3_2 = \frac{105+134}{2} (3-2) = 119,5$$

$$AUC^4_3 = \frac{134+138}{2} (4-3) = 136$$

117,5

$$AUC^5_4 = \frac{138+122}{2} (5-4) = 130$$

117,5

AUC total = 597

Replikasi 3

$$AUC^1_0 = \frac{0+142}{2} (1-0) = 71$$

$$AUC^2_1 = \frac{142+157}{2} (2-1) = 149,5$$

$$AUC^3_2 = \frac{157+146}{2} (3-2) = 151,5$$

$$AUC^4_3 = \frac{146+117}{2} (4-3) = 131,5$$

$$AUC^5_4 = \frac{117+105}{2} (5-4) = 111$$

AUC total = 614,5

Replikasi 4

$$AUC^1_0 = \frac{0+120}{2} (1-0) = 60$$

$$AUC^2_1 = \frac{120+152}{2} (2-1) = 136$$

$$AUC^3_2 = \frac{152+111}{2} (3-2) =$$

$$AUC^4_3 = \frac{111+141}{2} (4-3) = 126$$

$$AUC^5_4 = \frac{141+124}{2} (5-4) =$$

AUC total = 586

Replikasi 5

$$AUC^1_0 = \frac{0+112}{2} (1-0) = 56$$

$$AUC^2_1 = \frac{112+115}{2} (2-1) =$$

$$AUC^3_2 = \frac{115+113}{2} (3-2) = 114$$

$$AUC^4_3 = \frac{113+122}{2} (4-3) =$$

$$AUC^5_4 = \frac{122+113}{2} (5-4) =$$

AUC total = 518,5



Dosis 800 mg/kg BB

Replikasi 1

$$AUC^1_0 = \frac{0+3}{2} (1-0) = 1,5$$

$$AUC^2_1 = \frac{3+6}{2} (2-1) = 4,5$$

$$AUC^3_2 = \frac{6+-6}{2} (3-2) = 0,5$$

$$AUC^4_3 = \frac{-6+14}{2} (4-3) = 9$$

$$AUC^5_4 = \frac{14+25}{2} (5-4) = 9,5$$

AUC total = 35

Replikasi 2

$$AUC^1_0 = \frac{0+67}{2} (1-0) = 33,5$$

$$AUC^2_1 = \frac{67+27}{2} (2-1) = 47$$

$$AUC^3_2 = \frac{27+84}{2} (3-2) = 55,5$$

$$AUC^4_3 = \frac{84+97}{2} (4-3) = 90,5$$

$$AUC^5_4 = \frac{97+81}{2} (5-4) = 89$$

AUC total = 315,5

Replikasi 3

$$AUC^1_0 = \frac{0+7}{2} (1-0) = 3,5$$

$$AUC^2_1 = \frac{7+16}{2} (2-1) = 11,5$$

$$AUC^3_2 = \frac{16+4}{2} (3-2) = 10$$

$$AUC^4_3 = \frac{4+20}{2} (4-3) = 12$$

$$AUC^5_4 = \frac{20+11}{2} (5-4) = 15,5$$

AUC total = 52,5

Replikasi 4

$$AUC^1_0 = \frac{0+11}{2} (1-0) = 5,5$$

$$AUC^2_1 = \frac{11+-1}{2} (2-1) = 5$$

$$AUC^3_2 = \frac{-1+3}{2} (3-2) = 1$$

$$AUC^4_3 = \frac{3+-13}{2} (4-3) = -5$$

$$AUC^5_4 = \frac{-13+12}{2} (5-4) = -0,5$$

AUC total = 6

Replikasi 5

$$AUC^1_0 = \frac{0+1}{2} (1-0) = 0,5$$

$$AUC^2_1 = \frac{1+3}{2} (2-1) = 2$$

$$AUC^3_2 = \frac{3+-1}{2} (3-2) = 1$$

$$AUC^4_3 = \frac{-1+8}{2} (4-3) = 3,5$$

$$AUC^5_4 = \frac{8+-2}{2} (5-4) = 3$$

AUC total = 10

**Lampiran 17. Perhitungan %KGD**

Kontrol positif metformin

$$\text{Replikasi 1} = \frac{554,90 - 320}{313,5} \times 100\% = 74,93$$

$$\text{Replikasi 2} = \frac{554,90 - 972,4}{915} \times 100\% = 45,63$$

$$\text{Replikasi 3} = \frac{554,90 - 352}{633,5} \times 100\% = 32,03$$

$$\text{Replikasi 4} = \frac{554,90 - 498}{597} \times 100\% = 9,53$$

$$\text{Replikasi 5} = \frac{554,90 - 35}{313,5} \times 100\% = 164,79$$

Dosis 200 mg/kg BB

$$\text{Replikasi 1} = \frac{554,90 - 300}{313,5} \times 100\% = 81,31$$

$$\text{Replikasi 2} = \frac{554,90 - 1138,5}{915} \times 100\% = 63,78$$

$$\text{Replikasi 3} = \frac{554,90 - 357}{633,5} \times 100\% = 31,24$$

$$\text{Replikasi 4} = \frac{554,90 - 614,5}{597} \times 100\% = 9,98$$

$$\text{Replikasi 5} = \frac{554,90 - 52,5}{313,5} \times 100\% = 159,24$$

Dosis 400 mg/kg BB

$$\text{Replikasi 1} = \frac{554,90 - 329}{313,5} \times 100\% = 71,9$$

$$\text{Replikasi 2} = \frac{554,90 - 1122,5}{915} \times 100\% = 62,03$$

$$\text{Replikasi 3} = \frac{554,90 - 336}{633,5} \times 100\% = 34,55$$

$$\text{Replikasi 4} = \frac{554,90 - 586}{597} \times 100\% = 5,21$$

$$\text{Replikasi 5} = \frac{554,90 - 6}{313,5} \times 100\% = 1,74$$

Dosis 800 mg/kg BB

$$\text{Replikasi 1} = \frac{554,90 - 338}{313,5} \times 100\% = 69,19$$

$$\text{Replikasi 2} = \frac{554,90 - 860}{915} \times 100\% = 33,34$$

$$\text{Replikasi 3} = \frac{554,90 - 350,5}{633,5} \times 100\% = 32,26$$

$$\text{Replikasi 4} = \frac{554,90 - 518,5}{597} \times 100\% = 6,10$$

$$\text{Replikasi 5} = \frac{554,90 - 10}{313,5} \times 100\% = 172,71$$

**Lampiran 18. Hasil Uji Statistik %KGD****Case Processing Summary**

AUC	Kelompok_perlakuan	Valid		Cases Missing		Total	
		N	Percent	N	Percent	N	Percent
	Kontrol positif (Metformin)	5	100.0%	0	0.0%	5	100.0%
	Kontrol negatif (CMC-Na 0,5%)	5	100.0%	0	0.0%	5	100.0%
	Dosis ekstrak 200 mg/Kg BB	5	100.0%	0	0.0%	5	100.0%
	Dosis ekstrak 400 mg/Kg BB	5	100.0%	0	0.0%	5	100.0%
	Dosis ekstrak 800 mg/Kg BB	5	100.0%	0	0.0%	5	100.0%

**Tests of Normality**

AUC	Kelompok_perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
	Kontrol positif (Metformin)	.237	5	.200*	.883	5	.325
	Kontrol negatif (CMC-Na 0,5%)	.	5	.	.	5	.
	Dosis ekstrak 200 mg/Kg BB	.216	5	.200*	.936	5	.638
	Dosis ekstrak 400 mg/Kg BB	.225	5	.200*	.891	5	.363
	Dosis ekstrak 800 mg/Kg BB	.273	5	.200*	.835	5	.153

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

**Test of Homogeneity of Variances**

		Levene	df1	df2	Sig.
		Statistic			
AUC	Based on Mean	2.183	4	20	.108
	Based on Median	1.085	4	20	.390
	Based on Median and with adjusted df	1.085	4	11.355	.409
	Based on trimmed mean	2.044	4	20	.127

## ANOVA

AUC

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17116.758	4	4279.190	1.745	.180
Within Groups	49048.767	20	2452.438		
Total	66165.525	24			

## AUC

Tukey HSD<sup>a</sup>

Kelompok_perlakuan	N	Subset for alpha = 0.05 1
Kontrol negatif (CMC-Na 0,5%)	5	.0000
Dosis ekstrak 400 mg/Kg BB	5	35.0860
Dosis ekstrak 800 mg/Kg BB	5	62.7200
Kontrol positif (Metformin)	5	65.3820
Dosis ekstrak 200 mg/Kg BB	5	69.1100
Sig.		.218

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

**Lampiran 19. Hasil perhitungan pemberian volume uji****Aloksan**

$$\rightarrow \frac{22 \text{ g}}{20 \text{ g}} \times 3,36 = 3,696$$

$$V_p = \frac{3,696}{500} \times 100 = 0,74 \text{ ml}$$

$$\rightarrow \frac{23 \text{ g}}{20 \text{ g}} \times 3,36 = 3,86$$

$$V_p = \frac{3,86}{500} \times 100 = 0,7 \text{ ml}$$

$$\rightarrow \frac{24 \text{ g}}{20 \text{ g}} \times 3,36 = 4,032$$

$$V_p = \frac{4,032}{500} \times 100 = 0,8 \text{ ml}$$

$$\rightarrow \frac{25 \text{ g}}{20 \text{ g}} \times 3,36 = 4,2$$

$$V_p = \frac{4,2}{500} \times 100 = 0,8 \text{ ml}$$

**Metformin**

$$\rightarrow \frac{22 \text{ g}}{20 \text{ g}} \times 1,3 = 1,43$$

$$V_p = \frac{1,43}{500} \times 100 = 0,3 \text{ ml}$$

$$\rightarrow \frac{23 \text{ g}}{20 \text{ g}} \times 1,3 = 1,50$$

$$V_p = \frac{1,50}{500} \times 100 = 0,3 \text{ ml}$$

$$\rightarrow \frac{24 \text{ g}}{20 \text{ g}} \times 1,3 = 1,56$$

$$V_p = \frac{1,56}{500} \times 100 = 0,3 \text{ ml}$$

$$\rightarrow \frac{25 \text{ g}}{20 \text{ g}} \times 1,3 = 1,63$$

$$V_p = \frac{1,63}{500} \times 100 = 0,3 \text{ ml}$$

**Ekstrak daun salam dosis 200 mg**

$$\rightarrow \frac{22 \text{ g}}{20 \text{ g}} \times 0,52 = 0,65$$

$$Vp = \frac{0,65}{500} \times 100 = 0,13$$

$$\rightarrow \frac{23 \text{ g}}{20 \text{ g}} \times 0,52 = 0,598$$

$$Vp = \frac{0,598}{500} \times 100 = 0,12$$

$$\rightarrow \frac{24 \text{ g}}{20 \text{ g}} \times 0,52 = 0,624$$

$$Vp = \frac{0,624}{500} \times 100 = 0,12$$

$$\rightarrow \frac{25 \text{ g}}{20 \text{ g}} \times 0,52 = 0,65$$

$$Vp = \frac{0,65}{500} \times 100 = 0,13$$

**Ekstrak daun salam dosis 400 mg**

$$\rightarrow \frac{22 \text{ g}}{20 \text{ g}} \times 1,04 = 1,144$$

$$Vp = \frac{1,144}{500} \times 100 = 0,23$$

$$\rightarrow \frac{23 \text{ g}}{20 \text{ g}} \times 1,04 = 1,196$$

$$Vp = \frac{1,196}{500} \times 100 = 0,24$$

$$\rightarrow \frac{24 \text{ g}}{20 \text{ g}} \times 1,04 = 1,248$$

$$Vp = \frac{1,248}{500} \times 100 = 0,25$$

$$\rightarrow \frac{25 \text{ g}}{20 \text{ g}} \times 1,04 = 1,3$$

$$Vp = \frac{1,3}{500} \times 100 = 0,26$$

**Ekstrak daun salam dosis 800 mg**

$$\rightarrow \frac{22 \text{ g}}{20 \text{ g}} \times 2,08 = 2,288$$

$$V_p = \frac{2,288}{500} \times 100 = 0,46$$

$$\rightarrow \frac{23 \text{ g}}{20 \text{ g}} \times 2,08 = 2,392$$

$$V_p = \frac{2,392}{500} \times 100 = 0,48$$

$$\rightarrow \frac{24 \text{ g}}{20 \text{ g}} \times 2,08 = 2,496$$

$$V_p = \frac{2,496}{500} \times 100 = 0,5$$

$$\rightarrow \frac{25 \text{ g}}{20 \text{ g}} \times 2,08 = 2,6$$

$$V_p = \frac{2,6}{500} \times 100 = 0,52$$