

**L
A
M
P
I
R
A
N**

Lampiran 1. Surat keterangan determinasi daun salam



KEMENTERIAN KESEHATAN REPUBLIK INDONESIA
BADAN KEBIJAKAN PEMBANGUNAN KESEHATAN
 BALAI BESAR PENELITIAN DAN PENGEMBANGAN
 TANAMAN OBAT DAN OBAT TRADISIONAL
 Jalan Lawu No.11 Tawamangu, Karanganyar, Jawa Tengah 57792
 Telepon (0271) 697 010 Faksimile (0271) 697 451
 Laman b2p2toot.litbang.kemkes.go.id Surat Elektronik b2p2toot@litbang.kemkes.go.id

Nomor : KM.04.02/2/1357/2022
 Hal : Keterangan Determinasi

27 Juli 2022

Yth. Dekan Fakultas Farmasi Universitas Setia Budi
 Jalan Let. Jend. Sutoyo, Solo 57127

Merujuk surat Saudara nomor: 844/H6-04/22.07.2022 tanggal 22 Juli 2022 hal permohonan determinasi, dengan ini kami sampaikan bahwa hasil determinasi sampel tanaman sebagai berikut:

Nama Pemohon : Fitriana Novita Sari
 Nama Sampel : Salam
 Sampel : Tanaman Segar
 Spesies : *Syzygium polyanthum* (Wight) Walp.
 Sinonim : *Eugenia polyantha* Wight
 Familia : Myrtaceae
 Penanggung Jawab : Nina Kumianingrum, S.Si.

Hasil determinasi tersebut hanya mencakup sampel tanaman yang telah dikirimkan ke dan/atau dari B2P2TOOT.

Atas perhatian Saudara, kami sampaikan terima kasih.

Kepala Balai Besar Penelitian
 dan Pengembangan Tanaman Obat
 dan Obat Tradisional
 Tawangmangu



Akhmad Saikhu, S.K.M., M.Sc.PH.

Lampiran 2. Ekstraksi enzim SOD

 Pengambilan sampel	 Pencucian
 Pemotongan	 Penimbangan sampel
 Pemblenderan dengan penambahan PBS	 Penyaringan
 Filtrat	 Sentrifugasi
 Supernatan ← → Pelet Hasil sentrifugasi	 Ekstrak kasar/supernatan

Lampiran 3. Pembuatan larutan PBS pH 7,2

NaCl ditimbang sebanyak 4,4 gram, Na_2HPO_4 sebanyak 1,5 gram, dan NaH_2PO_4 sebanyak 0,075 gram. Kemudian dari tiga bahan tersebut dilarutkan dengan aquabidest dalam beaker glass selanjutnya dituangkan pada labu ukur 500 ml.



Lampiran 4. Penimbangan amonium sulfat

Initial concentration of ammonium sulfate (percentage saturation at 0 °C)	Percentage saturation at 0 °C															
	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
	Solid ammonium sulfate (g) to be added to 1 l of solution															
0	136	134	164	194	226	258	291	326	361	398	436	476	516	559	603	650
5	79	108	137	166	197	229	262	296	331	368	405	444	484	526	570	617
10	53	81	109	139	169	201	233	266	301	337	374	412	452	493	536	581
15	26	54	82	111	141	172	204	237	271	306	343	381	420	460	503	547
20	0	27	55	83	113	143	175	207	241	276	312	349	387	427	469	512
25		0	27	56	84	115	146	179	211	245	280	317	355	395	436	478
30			0	26	56	86	117	148	181	214	249	285	323	362	402	445
35				0	26	57	87	118	151	184	218	254	291	329	369	410
40					0	29	58	89	120	153	187	222	258	296	335	376
45						0	29	59	90	123	156	190	226	263	302	342
50							0	30	60	92	125	159	194	230	268	308
55								0	30	61	93	127	161	197	235	273
60									0	31	62	95	129	164	201	239
65										0	31	63	97	132	168	205
70											0	32	65	99	154	171
75												0	32	66	101	157
80													0	33	67	103
85														0	34	68
90															0	34
95																0
100																0

(Dawson *et al.*, 1969)

Penimbangan amonium sulfat adalah sebagai berikut:

1. Konsentrasi 25%

$$= \frac{30 \text{ mL} \times 134 \text{ gram}}{1000 \text{ mL}} = 4,02 \text{ gram}$$
2. Konsentrasi 50%

$$= \frac{30 \text{ mL} \times 291 \text{ gram}}{1000 \text{ mL}} = 8,73 \text{ gram}$$
3. Konsentrasi 75%

$$= \frac{30 \text{ mL} \times 476 \text{ gram}}{1000 \text{ mL}} = 14,28 \text{ gram}$$

Lampiran 5. Foto hasil pelet dan supernatan variasi konsentrasi presipitasi amonium sulfat



(Pelet)



Ekstrak Kasar (Supernatan)

Lampiran 6. Pembuatan reagen Lowry

Bahan yang digunakan untuk pembuatan reagen *Lowry* adalah sebagai berikut:

1. Reagen *Lowry* A = 2% Na_2CO_3 + 0,10 N NaOH
2. Reagen *Lowry* B = 0,5% $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ + 1% Natrium Kalium Tartrat
3. Reagen *Lowry* C = 50 ml reagen A + 1 ml reagen B
4. Reagen *Lowry* D = 10 ml *Folin-Ciocalteu phenol* + 10 ml aquabidest



(Reagen *Lowry* A, B, C dan D)

Lampiran 7. Pembuatan larutan induk

Larutan induk = 50 mg / 50 mL

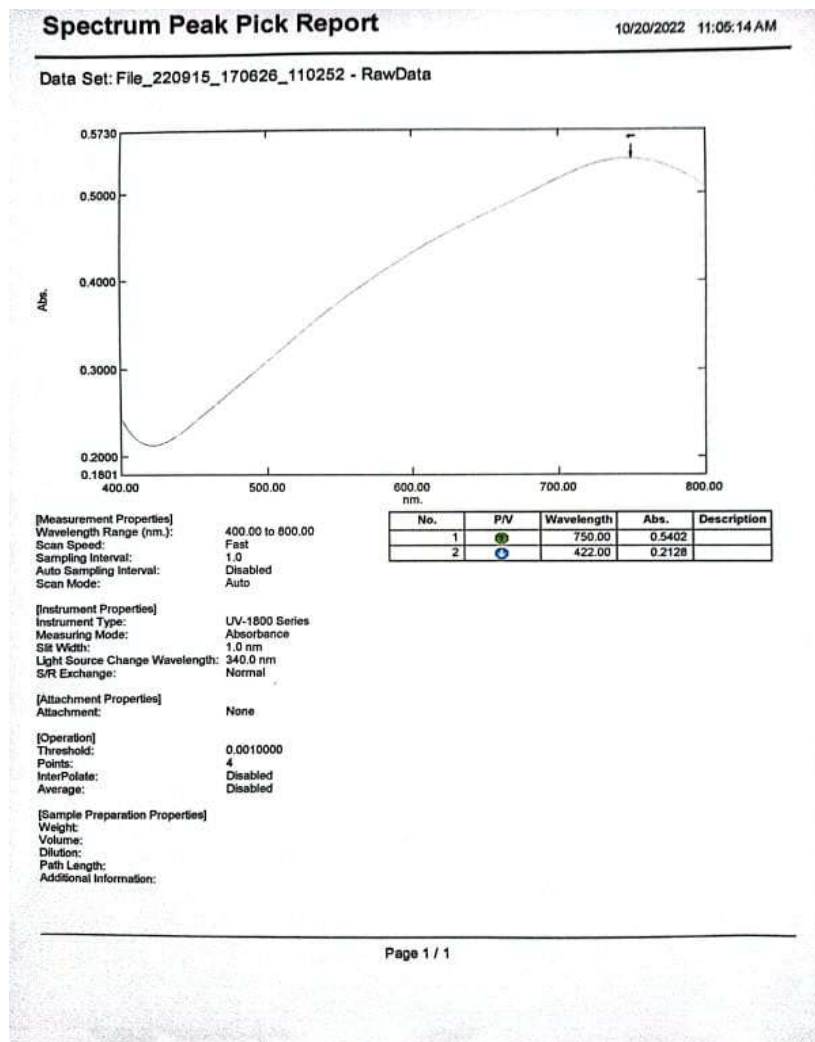
= 50.000 mg / 50.000 Ml

= 1.000 ppm



Lampiran 8. Hasil panjang gelombang maksimum

Panjang gelombang maksimum = 750 nm



Lampiran 9. Hasil *operating time**Operating time* (OT) = 40-45 menit

Time (Minute)	Absorbansi
0,000	0,354
1,000	0,360
2,000	0,367
3,000	0,372
4,000	0,377
5,000	0,381
6,000	0,385
7,000	0,388
8,000	0,391
9,000	0,394
10,000	0,397
11,000	0,400
12,000	0,403
13,000	0,406
14,000	0,409
15,000	0,411
16,000	0,413
17,000	0,415
18,000	0,417
19,000	0,418
20,000	0,420
21,000	0,422
22,000	0,423

Time (Minute)	Absorbansi
23,000	0,425
24,000	0,426
25,000	0,428
26,000	0,429
27,000	0,430
28,000	0,432
29,000	0,433
30,000	0,435
31,000	0,436
32,000	0,436
33,000	0,438
34,000	0,439
35,000	0,440
36,000	0,441
37,000	0,442
38,000	0,443
39,000	0,444
40,000	0,445
41,000	0,445
42,000	0,446
43,000	0,447
44,000	0,448
45,000	0,449

Kinetics Data Print Report

10/21/2022 10:42:51 AM

Time (Minute)	RawData ...	RawData ...
0.000	0.058	0.354
1.000	0.058	0.360
2.000	0.057	0.367
3.000	0.057	0.372
4.000	0.057	0.377
5.000	0.062	0.381
6.000	0.057	0.385
7.000	0.056	0.388
8.000	0.056	0.391
9.000	0.056	0.394
10.000	0.057	0.397
11.000	0.056	0.400
12.000	0.056	0.403
13.000	0.056	0.406
14.000	0.056	0.409
15.000	0.056	0.411
16.000	0.056	0.413
17.000	0.056	0.415
18.000	0.055	0.417
19.000	0.056	0.418
20.000	0.055	0.420
21.000	0.055	0.422
22.000	0.055	0.423
23.000	0.055	0.425
24.000	0.055	0.426
25.000	0.055	0.428
26.000	0.055	0.429
27.000	0.055	0.430
28.000	0.055	0.432
29.000	0.055	0.433
30.000	0.055	0.435
31.000	0.055	0.436
32.000	0.055	0.436
33.000	0.055	0.438
34.000	0.055	0.439
35.000	0.055	0.440
36.000	0.055	0.441
37.000	0.055	0.442
38.000	0.055	0.443
39.000	0.055	0.444
40.000	0.055	0.445
41.000	0.055	0.445
42.000	0.055	0.446
43.000	0.055	0.447
44.000	0.055	0.448
45.000	0.055	0.449
46.000	0.055	
47.000	0.055	
48.000	0.055	
49.000	0.056	
50.000	0.055	

Lampiran 10. Hasil *operating time***1. Larutan induk**

Larutan induk = 1 mg/1 ml
= 1.000 mg/1.000 ml
= 1.000 ppm

2. Pengenceran

$$V_1 \times N_1 = V_2 \times N_2$$

a. 50 ppm

$$V_1 \times 1.000 \text{ ppm} = 10 \text{ ml} \times 50$$

ppm

$$1.000V_1 = 500$$

$$V_1 = 500/1.000$$

$$= 0,5 \text{ mL}$$

b. 75 ppm

$$V_1 \times 1.000 \text{ ppm} = 10 \text{ ml} \times 75$$

ppm

$$1.000V_1 = 750$$

$$V_1 = 750/1.000$$

$$= 0,75 \text{ mL}$$

c. 100 ppm

$$V_1 \times 1.000 \text{ ppm} = 10 \text{ ml} \times$$

100 ppm

$$1.000V_1 = 1.000$$

$$V_1 =$$

$$1.000/1.000$$

$$= 1 \text{ mL}$$

d. 125 ppm

$$V_1 \times 1.000 \text{ ppm} = 10 \text{ ml} \times$$

125 ppm

$$1.000V_1 = 1.250$$

$$V_1 = 1.250/1000$$

$$= 1,25 \text{ mL}$$

e. 150 ppm

$$V_1 \times 1.000 \text{ ppm} = 10 \text{ ml} \times$$

150 ppm

$$1.000V_1 = 1.500$$

$$V_1 = 1.500/1000$$

$$= 1,5 \text{ mL}$$

Lampiran 11. Absorbansi kurva baku BSA

Konsentrasi (ppm)	Absorbansi
50	0,262
75	0,390
100	0,489
125	0,597
150	0,738

Persamaan konsentrasi absorbansi BSA adalah $y = 0,0316 + 0,0046x$

Lampiran 12. Hasil absorbansi ekstrak kasar enzim SOD daun salam

No	Sampel	Absorbansi	Rata-rata Absorbansi
1.	Ekstrak kasar	0,455 0,469 0,465	0,463
2.	Konsentrasi amonium sulfat a. Konsentrasi 25%	0,320 0,327 0,325	0,324
3.	b. Konsentrasi 50%	0,417 0,427 0,424	0,422
4.	c. Konsentrasi 75%	0,563 0,568 0,565	0,565

Lampiran 13. Perhitungan protein total ekstrak kasar enzim SOD daun salam

Tabel absorbansi dari perhitungan protein totak ekstrak kasar enzim SOD

No	Sampel	Replikasi I (mg/mL)	Replikasi II (mg/mL)	Replikasi III (mg/mL)
1.	Ekstrak kasar	9,204	9,508	9,421
2.	Konsentrasi amonium sulfat			
	a. Konsentrasi 25%	6,269	6,421	6,378
3.	b. Konsentrasi 50%	8,378	8,595	8,530
4.	c. Konsentrasi 75%	11,55	11,66	11,59

$$y = a + bx$$

$$y = 0,0316 + 0,0046x$$

1. Ekstrak kasar

a. Replikasi I

$$0,455 = 0,0316 + 0,0046x$$

$$0,455 - 0,0316 = 0,0046x$$

$$0,4234 = 0,0046x$$

$$x = 92,04 \mu\text{g/ml}$$

$$= 92,04 \times \text{fp}$$

$$= 92,04 \times 100$$

$$= 9.204 \mu\text{g/ml}$$

$$= 9,204 \text{ mg/ml}$$

b. Replikasi II

$$0,469 = 0,0316 + 0,0046x$$

$$0,469 - 0,0316 = 0,0046x$$

$$0,4374 = 0,0046x$$

$$x = 95,08 \mu\text{g/ml}$$

$$= 95,08 \times \text{fp}$$

$$= 95,08 \times 100$$

$$= 9.508 \mu\text{g/ml}$$

$$= 9,508 \text{ mg/ml}$$

c. Replikasi III

$$0,465 = 0,0316 + 0,0046x$$

$$0,465 - 0,0316 = 0,0046x$$

$$\begin{aligned}
 0,4334 &= 0,0046x \\
 x &= 94,21 \mu\text{g/ml} \\
 &= 94,21 \times \text{fp} \\
 &= 94,21 \times 100 \\
 &= 9.421 \mu\text{g/ml} \\
 &= 9,421 \text{ mg/ml}
 \end{aligned}$$

2. Konsentrasi 25 %

a. Replikasi I

$$\begin{aligned}
 0,320 &= 0,0316 + 0,0046x \\
 0,320 - 0,0316 &= 0,0046x \\
 0,2884 &= 0,0046x \\
 x &= 62,69 \mu\text{g/ml} \\
 &= 62,69 \times \text{fp} \\
 &= 62,69 \times 100 \\
 &= 6.269 \mu\text{g/ml} \\
 &= 6,269 \text{ mg/ml}
 \end{aligned}$$

b. Replikasi II

$$\begin{aligned}
 0,327 &= 0,0316 + 0,0046x \\
 0,327 - 0,0316 &= 0,0046x \\
 0,2954 &= 0,0046x \\
 x &= 64,21 \mu\text{g/ml} \\
 &= 64,21 \times \text{fp} \\
 &= 64,21 \times 100 \\
 &= 6.421 \mu\text{g/ml} \\
 &= 6,421 \text{ mg/ml}
 \end{aligned}$$

c. Replikasi III

$$\begin{aligned}
 0,325 &= 0,0316 + 0,0046x \\
 0,325 - 0,0316 &= 0,0046x \\
 0,2934 &= 0,0046x \\
 x &= 63,78 \mu\text{g/ml} \\
 &= 63,78 \times \text{fp} \\
 &= 63,78 \times 100 \\
 &= 6.378 \mu\text{g/ml} \\
 &= 6,378 \text{ mg/ml}
 \end{aligned}$$

3. Konsentrasi 50 %

a. Replikasi I

$$\begin{aligned}
 0,417 &= 0,0316 + 0,0046x \\
 0,417 - 0,0316 &= 0,0046x \\
 0,3854 &= 0,0046x \\
 x &= 83,78 \mu\text{g/ml} \\
 &= 83,78 \times \text{fp} \\
 &= 83,78 \times 100 \\
 &= 8.378 \mu\text{g/ml} \\
 &= 8,378 \text{ mg/ml}
 \end{aligned}$$

b. Replikasi II

$$\begin{aligned}
 0,427 &= 0,0316 + 0,0046x \\
 0,427 - 0,0316 &= 0,0046x \\
 0,3954 &= 0,0046x \\
 x &= 85,95 \mu\text{g/ml} \\
 &= 85,95 \times \text{fp} \\
 &= 85,95 \times 100 \\
 &= 8.595 \mu\text{g/ml} \\
 &= 8,595 \text{ mg/ml}
 \end{aligned}$$

c. Replikasi III

$$\begin{aligned}
 0,424 &= 0,0316 + 0,0046x \\
 0,424 - 0,0316 &= 0,0046x \\
 0,3924 &= 0,0046x \\
 x &= 85,30 \mu\text{g/ml} \\
 &= 85,30 \times \text{fp} \\
 &= 85,30 \times 100 \\
 &= 8.530 \mu\text{g/ml} \\
 &= 8,530 \text{ mg/ml}
 \end{aligned}$$

4. Konsentrasi 75 %

a. Replikasi I

$$\begin{aligned}
 0,563 &= 0,0316 + 0,0046x \\
 0,563 - 0,0316 &= 0,0046x \\
 0,5314 &= 0,0046x \\
 x &= 115,5 \mu\text{g/ml} \\
 &= 115,5 \times \text{fp} \\
 &= 115,5 \times 100 \\
 &= 11.550 \mu\text{g/ml} \\
 &= 11,55 \text{ mg/ml}
 \end{aligned}$$

b. Replikasi II

$$0,568 = 0,0316 + 0,0046x$$

$$0,568 - 0,0316 = 0,0046x$$

$$0,5364 = 0,0046x$$

$$x = 116,6 \mu\text{g/ml}$$

$$= 116,6 \times \text{fp}$$

$$= 116,6 \times 100$$

$$= 11.660 \mu\text{g/ml}$$

$$= 11,66 \text{ mg/ml}$$

c. Replikasi III

$$0,565 = 0,0316 + 0,0046x$$

$$0,565 - 0,0316 = 0,0046x$$

$$0,5334 = 0,0046x$$

$$x = 115,9 \mu\text{g/ml}$$

$$= 115,9 \times \text{fp}$$

$$= 115,9 \times 100$$

$$= 11.590 \mu\text{g/ml}$$

$$= 11,59 \text{ mg/ml}$$

Lampiran 14. Hasil SPSS protein total

Sampel	Kadar (1) mg/ml	Kadar (2) mg/ml	Kadar (3) mg/ml	Rata-rata $\pm$ SD
Ekstrak kasar Konsentrasi amonium sulfat	9,204	9,508	9,421	9,377 $\pm$ 0,156
Konsentrasi 25%	6,269	6,421	6,378	6,356 $\pm$ 0,078
Konsentrasi 50%	8,378	8,595	8,530	8,501 $\pm$ 0,111
Konsentrasi 75%	11,55	11,66	11,59	11,6 $\pm$ 0,055

Tests of Normality

Sampel	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
KadarProtein Ekstrak Kasar	.276	3	.	.943	3	.538
Konsentrasi Amonium Sulfat 25%	.277	3	.	.941	3	.531
Konsentrasi Amonium Sulfat 50%	.269	3	.	.949	3	.566
Konsentrasi Amonium Sulfat 75%	.238	3	.	.976	3	.702

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

KadarProtein

Levene Statistic	df1	df2	Sig.
1.513	3	8	.284

ANOVA

KadarProtein

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	42.407	3	14.136	1225.067	.000
Within Groups	.092	8	.012		
Total	42.499	11			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: KadarProtein

Tukey HSD

(I) Sampel	(J) Sampel	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Ekstrak Kasar	Konsentrasi Amonium Sulfat 25%	3.02167*	.08771	.000	2.7408	3.3025
	Konsentrasi Amonium Sulfat 50%	.87667*	.08771	.000	.5958	1.1575
	Konsentrasi Amonium Sulfat 75%	-2.22233*	.08771	.000	-2.5032	-1.9415
Konsentrasi Amonium Sulfat 25%	Ekstrak Kasar	-3.02167*	.08771	.000	-3.3025	-2.7408
	Konsentrasi Amonium Sulfat 50%	-2.14500*	.08771	.000	-2.4259	-1.8641
	Konsentrasi Amonium Sulfat 75%	-5.24400*	.08771	.000	-5.5249	-4.9631
Konsentrasi Amonium Sulfat 50%	Ekstrak Kasar	-.87667*	.08771	.000	-1.1575	-.5958
	Konsentrasi Amonium Sulfat 25%	2.14500*	.08771	.000	1.8641	2.4259
	Konsentrasi Amonium Sulfat 75%	-3.09900*	.08771	.000	-3.3799	-2.8181
Konsentrasi Amonium Sulfat 75%	Ekstrak Kasar	2.22233*	.08771	.000	1.9415	2.5032
	Konsentrasi Amonium Sulfat 25%	5.24400*	.08771	.000	4.9631	5.5249
	Konsentrasi Amonium Sulfat 50%	3.09900*	.08771	.000	2.8181	3.3799

* The mean difference is significant at the 0.05 level

Homogeneous Subsets

KadarProtein

Tukey HSD^a

Sampel	N	Subset for alpha = 0.05			
		1	2	3	4
Konsentrasi Amonium Sulfat 25%	3	6.3560			
Konsentrasi Amonium Sulfat 50%	3		8.5010		
Ekstrak Kasar	3			9.3777	
Konsentrasi Amonium Sulfat 75%	3				11.6000
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 15. Tanda bukti uji aktivitas SOD

		UNIVERSITAS GADJAH MADA PUSAT STUDI PANGAN DAN GIZI Gedung PAU Universitas Gadjah Mada Jl. Teknika Utara, Berek, Yogyakarta 55281 - Telp. (0274) 649 2 282, 589 242 Fax. (0274) 589 242 e-mail : cfn@ugm.ac.id - website : www.cfn.ugm.ac.id
Nomor : PS/ <u>6751 XI/2022</u>		
Telah terima bahan/contoh untuk dianalisa :		
Nama	:	<u>Fitriana Novita Sari</u>
Alamat	:	<u>Jl. Pembangunan RT.30 Loa Janan Ulu</u> <u>Kalimantan Timur</u>
Nomor Telepon/HP	:	<u>082223422388</u>
Macam Bahan	:	<u>Cairan</u> Padatan/Pasta/Gas* (coret yang tidak perlu)
Untuk Dapat Dianalisa	:	1. <u>SOD</u>
	:	2.
	:	3.
	:	4.
	:	5.
	:	6.
Pengirim,		Yogyakarta, <u>21/11</u> - 2022
		Penerima, 
<u>Fitriana Novita Sari</u>		
Keterangan : 1. Lembar 1 (putih) untuk Bendahara 2. Lembar 2 (biru) untuk Penerima 3. Lembar 3 (merah muda) untuk Arsip		

Lampiran 16. Hasil uji aktivitas SOD

Daun Salam

USB

PS / 676 / XI / 2022

No	Kode	Abs	SOD %
1	K (+).1	0,046	82,09
	K (+).2	0,045	83,58
	K (+).3	0,044	85,07
2	K (-).1	0,099	2,99
	K (-).2	0,099	2,99
	K (-).3	0,097	5,97
3	Ex Kasar.1	0,051	74,63
	Ex Kasar.2	0,053	71,64
	Ex Kasar.3	0,052	73,15
4	25%.1	0,079	32,84
	25%.2	0,078	34,33
	25%.3	0,077	35,82
5	50%.1	0,055	68,66
	50%.2	0,057	65,67
	50%.3	0,059	62,68
6	75%.1	0,049	80,59
	75%.2	0,048	79,10
	75%.3	0,046	82,09
		1	0,168
		2	0,034
		3	0,101



Lampiran 17. Perhitungan persen inhibisi daun salam

$$\% \text{ Inhibisi} = \frac{(A_{\text{blanko 1}} - A_{\text{blanko 3}}) - (A_{\text{sampel}} - A_{\text{blanko 2}})}{(A_{\text{blanko 1}} - A_{\text{blanko 3}})} \times 100\%$$

1. Kontrol positif

a. Replikasi I

$$\begin{aligned} \% \text{ Inhibisi} &= \frac{(0,168 - 0,101) - (0,046 - 0,034)}{(0,168 - 0,101)} \times 100\% \\ &= \frac{0,067 - 0,012}{0,067} \times 100\% \\ &= 82,089\% \end{aligned}$$

b. Replikasi II

$$\begin{aligned} \% \text{ Inhibisi} &= \frac{(0,168 - 0,101) - (0,045 - 0,034)}{(0,168 - 0,101)} \times 100\% \\ &= \frac{0,067 - 0,011}{0,067} \times 100\% \\ &= 83,582\% \end{aligned}$$

c. Replikasi III

$$\begin{aligned} \% \text{ Inhibisi} &= \frac{(0,168 - 0,101) - (0,044 - 0,034)}{(0,168 - 0,101)} \times 100\% \\ &= \frac{0,067 - 0,01}{0,067} \times 100\% \\ &= 85,074\% \end{aligned}$$

2. Kontrol negatif

a. Replikasi I

$$\begin{aligned} \% \text{ Inhibisi} &= \frac{(0,168 - 0,101) - (0,099 - 0,034)}{(0,168 - 0,101)} \times 100\% \\ &= \frac{0,067 - 0,065}{0,067} \times 100\% \\ &= 2,985\% \end{aligned}$$

b. Replikasi II

$$\begin{aligned} \% \text{ Inhibisi} &= \frac{(0,168 - 0,101) - (0,098 - 0,034)}{(0,168 - 0,101)} \times 100\% \\ &= \frac{0,067 - 0,064}{0,067} \times 100\% \\ &= 4,687\% \end{aligned}$$

c. Replikasi III

$$\begin{aligned} \% \text{ Inhibisi} &= \frac{(0,168 - 0,101) - (0,097 - 0,034)}{(0,168 - 0,101)} \times 100\% \\ &= \frac{0,067 - 0,063}{0,067} \times 100\% \\ &= 5,970\% \end{aligned}$$

3. Ekstrak kasar

a. Replikasi I

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,051-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,017}{0,067} \times 100\% \\
 &= 74,626\%
 \end{aligned}$$

b. Replikasi II

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,053-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,019}{0,067} \times 100\% \\
 &= 71,641\%
 \end{aligned}$$

c. Replikasi III

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,052-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,018}{0,067} \times 100\% \\
 &= 73,134\%
 \end{aligned}$$

4. Konsentrasi amonium sulfat

a. Konsentrasi 25%

a) Replikasi I

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,079-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,045}{0,067} \times 100\% \\
 &= 32,835\%
 \end{aligned}$$

b) Replikasi II

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,078-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,044}{0,067} \times 100\% \\
 &= 34,328\%
 \end{aligned}$$

c) Replikasi III

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,077-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,043}{0,067} \times 100\% \\
 &= 35,820\%
 \end{aligned}$$

b. Konsentrasi 50%

a) Replikasi I

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,055-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,021}{0,067} \times 100\% \\
 &= 68,656\%
 \end{aligned}$$

b) Replikasi II

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,057-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,023}{0,067} \times 100\% \\
 &= 65,671\%
 \end{aligned}$$

c) Replikasi III

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,059-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,025}{0,067} \times 100\% \\
 &= 62,686\%
 \end{aligned}$$

c. Konsentrasi 75%

a) Replikasi I

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,047-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,013}{0,067} \times 100\% \\
 &= 80,597\%
 \end{aligned}$$

b) Replikasi II

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,048-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,014}{0,067} \times 100\% \\
 &= 79,104\%
 \end{aligned}$$

c) Replikasi III

$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{(0,168-0,101)-(0,046-0,034)}{(0,168-0,101)} \times 100\% \\
 &= \frac{0,067-0,012}{0,067} \times 100\% \\
 &= 82,089\%
 \end{aligned}$$

Lampiran 18. Hasil SPSS uji aktivitas SOD

Sampel	%Inhibisi (1)	%Inhibisi (2)	%Inhibisi (3)	Rata-rata ± SD
Kontrol Positif	82,089	83,582	85,074	83,581 ± 1,492
Kontrol Negatif	2,985	4,678	5,970	4,544 ± 1,496
Ekstrak Kasar	74,626	71,641	73,134	73,133 ± 1,492
Konsentrasi Amonium Sulfat				
Konsentrasi 25%	32,835	34,328	35,820	34,327 ± 1,492
Konsentrasi 50%	68,656	65,671	62,686	65,671 ± 2,985
Konsentrasi 75%	80,579	79,104	82,089	80,590 ± 1,492

Tests of Normality

Sampel		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
SOD	Kontrol Positif	.175	3	.	1.000	3	1.000
	Kontrol Negatif	.203	3	.	.994	3	.847
	Ekstrak Kasar	.175	3	.	1.000	3	.989
	Konsentrasi Amonium Sulfat 25%	.175	3	.	1.000	3	1.000
	Konsentrasi Amonium Sulfat 50%	.175	3	.	1.000	3	1.000
	Konsentrasi Amonium Sulfat 75%	.253	3	.	.964	3	.635

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

SOD

Levene Statistic	df1	df2	Sig.
.448	5	12	.807

Oneway**Descriptives**

SOD

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Kontrol Positif	3	83.5800	1.49000	.86025	79.8786	87.2814	82.09	85.07
Kontrol Negatif	3	4.5490	1.49479	.86301	.8357	8.2623	2.99	5.97
Ekstrak Kasar	3	73.1400	1.49503	.86315	69.4262	76.8538	71.64	74.63
Konsentrasi Amonium Sulfat 25%	3	34.3300	1.49000	.86025	30.6286	38.0314	32.84	35.82
Konsentrasi Amonium Sulfat 50%	3	65.6700	2.99000	1.72628	58.2424	73.0976	62.68	68.66
Konsentrasi Amonium Sulfat 75%	3	80.5957	1.49500	.86314	76.8819	84.3095	79.10	82.09
Total	18	56.9774	29.33782	6.91499	42.3881	71.5668	2.99	85.07

ANOVA

SOD

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14453.244	5	2890.649	752.287	.000
Within Groups	46.110	12	3.842		
Total	14499.354	17			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SOD

Tukey HSD

(I) Sampel	(J) Sampel	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Kontrol Positif	Kontrol Negatif	79.03100 [*]	1.49387	.000	74.0132	84.0488
	Ekstrak Kasar	10.44000 [*]	1.49387	.000	5.4222	15.4578
	Konsentrasi Amonium Sulfat 25%	49.25000 [*]	1.49387	.000	44.2322	54.2678
	Konsentrasi Amonium Sulfat 50%	17.91000 [*]	1.49387	.000	12.8922	22.9278
	Konsentrasi Amonium Sulfat 75%	2.98433	1.49387	.397	-2.0335	8.0021
Kontrol Negatif	Kontrol Positif	-79.03100 [*]	1.49387	.000	-84.0488	-74.0132
	Ekstrak Kasar	-68.59100 [*]	1.49387	.000	-73.6088	-63.5732
	Konsentrasi Amonium Sulfat 25%	-29.78100 [*]	1.49387	.000	-34.7988	-24.7632
	Konsentrasi Amonium Sulfat 50%	-61.12100 [*]	1.49387	.000	-66.1388	-56.1032
	Konsentrasi Amonium Sulfat 75%	-76.04667 [*]	1.49387	.000	-81.0645	-71.0289
Ekstrak Kasar	Kontrol Positif	-10.44000 [*]	1.49387	.000	-15.4578	-5.4222
	Kontrol Negatif	68.59100 [*]	1.49387	.000	63.5732	73.6088
	Konsentrasi Amonium Sulfat 25%	38.81000 [*]	1.49387	.000	33.7922	43.8278
	Konsentrasi Amonium Sulfat 50%	7.47000 [*]	1.49387	.003	2.4522	12.4878
	Konsentrasi Amonium Sulfat 75%	-7.45567 [*]	1.49387	.003	-12.4735	-2.4379
Konsentrasi Amonium Sulfat 25%	Kontrol Positif	-49.25000 [*]	1.49387	.000	-54.2678	-44.2322
	Kontrol Negatif	29.78100 [*]	1.49387	.000	24.7632	34.7988
	Ekstrak Kasar	-38.81000 [*]	1.49387	.000	-43.8278	-33.7922
	Konsentrasi Amonium Sulfat 50%	-31.34000 [*]	1.49387	.000	-36.3578	-26.3222
	Konsentrasi Amonium Sulfat 75%	-46.26567 [*]	1.49387	.000	-51.2835	-41.2479
Konsentrasi Amonium Sulfat 50%	Kontrol Positif	-17.91000 [*]	1.49387	.000	-22.9278	-12.8922
	Kontrol Negatif	61.12100 [*]	1.49387	.000	56.1032	66.1388
	Ekstrak Kasar	-7.47000 [*]	1.49387	.003	-12.4878	-2.4522
	Konsentrasi Amonium Sulfat 25%	31.34000 [*]	1.49387	.000	26.3222	36.3578
	Konsentrasi Amonium Sulfat 75%	-14.92567 [*]	1.49387	.000	-19.9435	-9.9079
Konsentrasi Amonium Sulfat 75%	Kontrol Positif	-2.98433	1.49387	.397	-8.0021	2.0335
	Kontrol Negatif	76.04667 [*]	1.49387	.000	71.0289	81.0645
	Ekstrak Kasar	7.45567 [*]	1.49387	.003	2.4379	12.4735
	Konsentrasi Amonium Sulfat 25%	46.26567 [*]	1.49387	.000	41.2479	51.2835
	Konsentrasi Amonium Sulfat 50%	14.92567 [*]	1.49387	.000	9.9079	19.9435

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

Homogeneous Subsets

SOD

Tukey HSD^a

Sampel	N	Subset for alpha = 0.05				
		1	2	3	4	5
Kontrol Negatif	3	4.5490				
Konsentrasi Amonium Sulfat 25%	3		34.3300			
Konsentrasi Amonium Sulfat 50%	3			65.6700		
Ekstrak Kasar	3				73.1400	
Konsentrasi Amonium Sulfat 75%	3					80.5957
Kontrol Positif	3					83.5800
Sig.		1.000	1.000	1.000	1.000	.397

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.