

LAMPIRAN

Lampiran 1. Surat keterangan hasil determinasi daun kepel



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.04.02/2/575/2022

07 Maret 2022

Lampiran : -

Hal : Keterangan Determinasi

Yth. Dekan Fakultas Farmasi Universitas Setia Budi
Jalan Letjend. Sutoyo Mojosongo Solo 57127

Merujuk surat Saudara nomor: 273/D3-04/14.02.2022 tanggal 14 Februari 2022 hal permohonan determinasi, dengan ini kami sampaikan bahwa hasil determinasi sampel tanaman sebagai berikut:

Nama Pemohon : Pipit Putri Pratiwi
Nama Sampel : Kepel
Sampel : Tanaman Segar
Spesies : *Stelechocarpus burahol* (Blume) Hook.f. & Thomson
Sinonim : *Uvaria burahol* Blume
Familia : Annonaceae
Penanggung Jawab : Nina Kurnianingrum, S.Si.

Hasil determinasi tersebut hanya mencakup sampel tanaman yang telah dikirimkan ke 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.

Tembusan :

-

Lampiran 2. Surat keterangan *ethical clearance*

4/11/22, 2:19 PM

KEPK-RSDM

**HEALTH RESEARCH ETHICS COMMITTEE
KOMISI ETIK PENELITIAN KESEHATAN****Dr. Moewardi General Hospital
RSUD Dr. Moewardi****ETHICAL CLEARANCE
KELAIKAN ETIK****Nomor : 475 / IV / 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

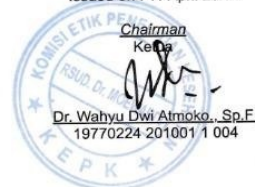
**UJI AKTIVITAS TABLET HISAP EKSTRAK DAUN KEPEL (*Stelechocarpus burahol* Hook F.&Th) DALAM MENURUNKAN
KADAR ASAM URAT PADA MENCIT PUTIH JANTAN (*Mus musculus*)**

Principal investigator : PIPIT PUTRI PRATIWI
Peneliti Utama : 24185618A

Location of research : UNIVERSITAS SETIA BUDI SURAKARTA
Lokasi Tempat Penelitian

Is ethically approved
Dinyatakan layak etik

Issued on : 11 April 2022



Dr. Wahyu Dwi Atmoko, Sp.F.
19770224 201001 1 004

Lampiran 3. Pengolahan simplisia



Tanaman kepel



Daun kepel



Pengeringan daun kepel



Penyerbukan



Pengayakan



Proses maserasi



Diapkan dengan *rotary evaporator*



Ekstrak kental daun kepel

Lampiran 4. Perhitungan rendemen ekstrak etanol daun kepel

% rendemen ekstrak daun kepel

$$\text{Rendemen} = \frac{\text{bobot ekstrak}}{\text{bobot serbuk simplisia}} \times 100\%$$

$$= \frac{133,3 \text{ g}}{1000 \text{ g}} \times 100\% \\ = 13,36 \%$$

Lampiran 5. Foto susut pengeringan serbuk daun kepel

Replikasi 1



Replikasi 2



Replikasi 3



Lampiran 6. Perhitungan susut pengeringan serbuk daun kepel

Replikasi 1 = 6,5%

Replikasi 2 = 6,5%

Replikasi 3 = 6,5%

Rata-rata susut pengeringan = $\frac{6,5\%+6,5\%+6,5\%}{3} = 6,5\%$

Lampiran 7. Foto penetapan kadar air ekstrak etanol daun kepel metodegravimetri

Krus



Oven



Desikator



Lampiran 8. Perhitungan kadar air metode gravimetri

$$\% \text{ kadar air} = \frac{\text{Bobot awal sebelum dikeringkan} - \text{bobot setelah dikeringkan}}{\text{Bobot awal sebelum dikeringkan}} \times 100\%$$

Formula 1

$$\text{Replikasi 1} = \frac{10,0205 \text{ g} - 9,059 \text{ g}}{10,0205 \text{ g}} \times 100\%$$

$$= 9,23\%$$

$$\text{Replikasi 2} = \frac{10,0205 \text{ g} - 8,8452 \text{ g}}{10,0205 \text{ g}} \times 100\%$$

$$= 11,73\%$$

$$\text{Replikasi 3} = \frac{10,0205 \text{ g} - 8,7028 \text{ g}}{10,0205 \text{ g}} \times 100\%$$

$$= 13,15\%$$

$$\text{Replikasi 4} = \frac{10,0205 \text{ g} - 8,5394 \text{ g}}{10,0205 \text{ g}} \times 100\%$$

$$= 14,78\%$$

$$\text{Replikasi 5} = \frac{10,0205 \text{ g} - 8,5072 \text{ g}}{10,0205 \text{ g}} \times 100\%$$

$$= 15,10\%$$

$$\text{Rata-rata} = \frac{9,23\% + 11,73\% + 13,15\% + 14,78\% + 15,10\%}{5}$$

$$= 12,80\%$$

Formula 2

$$\text{Replikasi 1} = \frac{10,0490 \text{ g} - 9,0946 \text{ g}}{10,0490 \text{ g}} \times 100\%$$

$$= 9,50\%$$

$$\text{Replikasi 2} = \frac{10,0490 \text{ g} - 8,9391 \text{ g}}{10,0490 \text{ g}} \times 100\%$$

$$= 11,04\%$$

$$\text{Replikasi 3} = \frac{10,0490 \text{ g} - 8,7842 \text{ g}}{10,0490 \text{ g}} \times 100\%$$

$$= 12,59\%$$

$$\text{Replikasi 4} = \frac{10,0490 \text{ g} - 8,5734 \text{ g}}{10,0490 \text{ g}} \times 100\%$$

$$= 14,68\%$$

$$\begin{aligned}\text{Replikasi 5} &= \frac{10,0490 \text{ g} - 8,3919 \text{ g}}{10,0490 \text{ g}} \times 100\% \\ &= 1,49\%\end{aligned}$$

$$\begin{aligned}\text{Rata-rata} &= \frac{9,50\% + 11,04\% + 12,59\% + 14,68\% + 16,49\%}{5} \\ &= 12,86\%\end{aligned}$$

Formula 3

$$\begin{aligned}\text{Replikasi 1} &= \frac{10,0713 \text{ g} - 9,2132 \text{ g}}{10,0713 \text{ g}} \times 100\% \\ &= 8,52\%\end{aligned}$$

$$\begin{aligned}\text{Replikasi 2} &= \frac{10,0713 \text{ g} - 9,0816 \text{ g}}{10,0713 \text{ g}} \times 100\% \\ &= 9,83\%\end{aligned}$$

$$\begin{aligned}\text{Replikasi 3} &= \frac{10,0713 \text{ g} - 8,7455 \text{ g}}{10,0713 \text{ g}} \times 100\% \\ &= 13,16\%\end{aligned}$$

$$\begin{aligned}\text{Replikasi 4} &= \frac{10,0713 \text{ g} - 8,5946 \text{ g}}{10,0713 \text{ g}} \times 100\% \\ &= 14,66\%\end{aligned}$$

$$\begin{aligned}\text{Replikasi 5} &= \frac{10,0713 \text{ g} - 8,4072 \text{ g}}{10,0713 \text{ g}} \times 100\% \\ &= 16,52\%\end{aligned}$$

$$\begin{aligned}\text{Rata-rata} &= \frac{8,52\% + 9,83\% + 13,16\% + 14,66\% + 16,52\%}{5} \\ &= 12,54\%\end{aligned}$$

Lampiran 9. Foto identifikasi kandungan kimia ekstrak daun kepel**Flavonoid**

Tabung 1 tidak mengandung antrakuinon



Tabung 2 positif mengandung antrakuinon

Kumarin

Lampiran 10. Foto uji sudut diam granul



Lampiran 11. Perhitungan sudut diam granul

$$\tan \alpha = \frac{h}{r}$$

Formula 1

Replikasi 1

$$\tan \alpha = \frac{4,1}{6,925}$$

$$\tan \alpha = 0,592$$

$$\alpha = 30,625$$

Replikasi 2

$$\tan \alpha = \frac{4}{6,775}$$

$$\tan \alpha = 0,590$$

$$\alpha = 30,541$$

Replikasi 3

$$\tan \alpha = \frac{4}{6,85}$$

$$\tan \alpha = 0,584$$

$$\alpha = 30,285$$

$$\text{Rata-rata sudut diam} = \frac{30,625+30,541+30,285}{3} = 30,484$$

Formula 2

Replikasi 1

$$\tan \alpha = \frac{4,2}{7,075}$$

$$\tan \alpha = 0,594$$

$$\alpha = 30,710$$

Replikasi 2

$$\tan \alpha = \frac{4,2}{7,05}$$

$$\tan \alpha = 0,596$$

$$\alpha = 30,795$$

Replikasi 3

$$\tan \alpha = \frac{4,5}{7,05}$$

$$\tan \alpha = 0,638$$

$$\alpha = 32,538$$

$$\text{Rata-rata sudut diam} = \frac{30,710+30,795+32,538}{3} = 31,348$$

Formula 3

Replikasi 1

$$\tan \alpha = \frac{4,5}{7,025}$$

$$\tan \alpha = 0,640$$

$$\alpha = 32,619$$

Replikasi 2

$$\tan \alpha = \frac{4,8}{7,75}$$

$$\tan \alpha = 0,678$$

$$\alpha = 34,137$$

Replikasi 3

$$\tan \alpha = \frac{4,8}{7,025}$$

$$\tan \alpha = 0,683$$

$$\alpha = 34,333$$

$$\text{Rata-rata sudut diam} = \frac{32,619+34,137+34,333}{3} = 33,696$$

Lampiran 12. Foto uji waktu alir granul



Lampiran 13. Perhitungan uji waktu alir granul

Formula 1

Replikasi 1 = 6,73 detik

Replikasi 2 = 6,78 detik

Replikasi 3 = 6,76 detik

Rata-rata waktu alir = $\frac{6,73+6,78+6,76}{3} = 6,76$ detik

Formula 2

Replikasi 1 = 7,66 detik

Replikasi 2 = 7,64 detik

Replikasi 3 = 7,61 detik

Rata-rata waktu alir = $\frac{7,66+7,64+7,61}{3} = 7,64$ detik

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Formula 3

Replikasi 1 = 8,70 detik

Replikasi 2 = 8,63 detik

Replikasi 3 = 8,69 detik

Rata-rata waktu alir = $\frac{8,70+8,63+8,69}{3} = 8,69$ detik

Lampiran 14. Foto uji pengetapan granul



Lampiran 15. Perhitungan uji pengetapan granul

$$\% \text{ Pengetapan} = \frac{V_o - V_t}{V_o} \times 100\%$$

Formula 1

$$\text{Replikasi 1} = \frac{100-94}{100} \times 100\% = 6\%$$

$$\text{Replikasi 2} = \frac{100-94}{100} \times 100\% = 6\%$$

$$\text{Replikasi 3} = \frac{100-93}{100} \times 100\% = 7\%$$

$$\text{Rata-rata pengetapan} = \frac{6\%+6\%+7\%}{3} = 6,67\%$$

Formula 2

$$\text{Replikasi 1} = \frac{100-93}{100} \times 100\% = 7\%$$

$$\text{Replikasi 2} = \frac{100-94}{100} \times 100\% = 6\%$$

$$\text{Replikasi 3} = \frac{100-93}{100} \times 100\% = 7\%$$

$$\text{Rata-rata pengetapan} = \frac{7\%+6\%+7\%}{3} = 6,667\%$$

Formula 3

$$\text{Replikasi 1} = \frac{100-92}{100} \times 100\% = 8\%$$

$$\text{Replikasi 2} = \frac{100-92}{100} \times 100\% = 8\%$$

$$\text{Replikasi 3} = \frac{100-94}{100} \times 100\% = 6\%$$

$$\text{Rata-rata pengetapan} = \frac{8\%+6\%+8\%}{3} = 7,33\%$$

Perhitungan *Hausner ratio*

$$\text{Hausner ratio} = \frac{V_o}{V_f}$$

Keterangan =

V_o = Bobot volume yang belum dimampatkan

V_f = Bobot volume setelah pengetukan

1. Formula 1

Replikasi 1

V_o = 100 mL

V_f = 94 mL

$$\text{Hausner ratio} = \frac{V_o}{V_f} = \frac{100 \text{ mL}}{94 \text{ mL}} = 1,064$$

Replikasi 2

V_o = 100 mL

V_f = 94 mL

$$\text{Hausner ratio} = \frac{V_o}{V_f} = \frac{100 \text{ mL}}{94 \text{ mL}} = 1,064$$

Replikasi 3

$$V_o = 100 \text{ mL}$$

$$V_f = 93 \text{ mL}$$

$$\text{Hausner ratio} = \frac{V_o}{V_f} = \frac{100 \text{ mL}}{93 \text{ mL}} = 1,075$$

$$\text{Rata-rata} = \frac{1,064 + 1,064 + 1,075}{3} = 1,067$$

2. Formula 2

Replikasi 1

$$V_o = 100 \text{ mL}$$

$$V_f = 93 \text{ mL}$$

$$\text{Hausner ratio} = \frac{V_o}{V_f} = \frac{100 \text{ mL}}{93 \text{ mL}} = 1,075$$

Replikasi 2

$$V_o = 100 \text{ mL}$$

$$V_f = 94 \text{ mL}$$

$$\text{Hausner ratio} = \frac{V_o}{V_f} = \frac{100 \text{ mL}}{94 \text{ mL}} = 1,064$$

Replikasi 3

$$V_o = 100 \text{ mL}$$

$$V_f = 93 \text{ mL}$$

$$\text{Hausner ratio} = \frac{V_o}{V_f} = \frac{100 \text{ mL}}{93 \text{ mL}} = 1,075$$

$$\text{Rata-rata} = \frac{1,075 + 1,064 + 1,075}{3} = 1,071$$

3. Formula 3

Replikasi 1

$$V_o = 100 \text{ mL}$$

$$V_f = 92 \text{ mL}$$

$$\text{Hausner ratio} = \frac{V_o}{V_f} = \frac{100 \text{ mL}}{92 \text{ mL}} = 1,087$$

Replikasi 2

$$V_o = 100 \text{ mL}$$

$$V_f = 92 \text{ mL}$$

$$\text{Hausner ratio} = \frac{V_o}{V_f} = \frac{100 \text{ mL}}{92 \text{ mL}} = 1,087$$

Replikasi 2

$$V_o = 100 \text{ mL}$$

$$V_f = 94 \text{ mL}$$

$$\text{Hausner ratio} = \frac{V_o}{V_f} = \frac{100 \text{ mL}}{94 \text{ mL}} = 1,064$$

$$\text{Rata-rata} = \frac{1,087 + 1,087 + 1,064}{3} = 1,079$$

Lampiran 16. Foto uji kadar air granul



Lampiran 17. Perhitungan uji kadar air granul

Formula 1

Replikasi 1 = 2%

Replikasi 2 = 2%

Replikasi 3 = 2%

Rata-rata = $\frac{2\%+2\%+2\%}{3} = 2\%$

Formula 2

Replikasi 1 = 2%

Replikasi 2 = 2%

Replikasi 3 = 2%

Rata-rata = $\frac{2\%+2\%+2\%}{3} = 2\%$

Formula 3

Replikasi 1 = 4%

Replikasi 2 = 2,5%

Replikasi 3 = 3%

Rata-rata = $\frac{4\%+2,5\%+3\%}{3} = 3,17\%$



Lampiran 19. Perhitungan uji keseragaman bobot tablet hisap

No	Keseragaman bobot (mg)								
	Formula 1			Formula 2			Formula 3		
	1	2	3	1	2	3	1	2	3
1	1012	1092,2	1027,8	1015	1011,9	1097,1	1089,2	1014,5	1084,4
2	1071,4	1066,2	1036,6	1049,5	1076,5	1027,8	1038,3	1082,6	1065,3
3	1119,9	1047,5	1107,8	1050,7	1089,2	1082,1	1037,1	1088,3	1001,3
4	1019,6	1016,9	1013,9	1089,4	1106,1	1041,7	1044,8	1086,2	1062,1
5	1088	1073,7	1012,3	1099,4	1087,3	1081,7	1043,5	1004,3	1094,5
6	1017,3	1004,3	1085,6	1004,7	1065,3	1025,5	1082,7	1075,4	1019,3
7	1044,4	1057,1	1050,4	1050,1	1092,4	1022,9	1073,6	1095,7	1026,8
8	1038,2	1083,1	1075,8	1029,4	1080,2	1047,6	1012,7	1034,7	1055,2
9	1081,7	1039,5	1089,2	1073,2	1036,8	1014,5	1005,6	1059,4	1075,4
10	1044,3	1040,2	1011,3	1005,9	1031,1	1046,3	1059,7	1003,8	1095,8
11	1098,8	1027,9	1063	1104,3	1094,7	1085,2	1055,3	1068,4	1047,6
12	1016,1	1041,6	1085,5	1078,1	1041,3	1087,4	1043,2	1063,8	1004,2
13	1013,4	1104,2	1061,2	1088,6	1078,2	1047,9	1019,4	1011,5	1019,3
14	1026,4	1085,8	1059,6	1067,1	1040,7	1057,2	1070,9	1009,6	1046,7
15	1019,6	1087,8	1055,8	1040,5	1056,9	1040,9	1013,1	1098,3	1094,5
16	1014,1	1086,9	1033,4	1033,7	1093,6	1011,6	1045,8	1027,8	1031,9
17	1093,6	1065,4	1084,5	1039,2	1069,4	1020,3	1032,4	1092,7	1077,5
18	1027,2	1020,8	1057,3	1015,8	1037,5	1032,8	1069,3	1076,3	1016,4
19	1151,7	1102,8	1055,4	1095,4	1062,7	1042,1	1079,2	1083,5	1002,8
20	1094,7	1051,7	1045,6	1051,6	1047,2	1055,3	1048,1	1069,2	1040,1
Hasil rata-rata	1054,62	1059,78	1055,6	1054,08	1064,95	1048,395	1048,195	1057,3	1048,06
SD	41,93	29,63	27,46	31,68	25,99	26,05	24,38	33,86	32,17
CV	3,98%	2,80%	2,60%	3%	2,44%	2,48%	2,32%	3,20%	3,07%
Rata-rata	1056,67			1055,81			1051,18		
5%	1109,50 mg - 1003,84 mg			1108,60 mg - 1003,02 mg			1103,74 mg - 998,62 mg		
10%	1162,34 mg - 951,0 mg			1161,39 mg - 950,23 mg			1156,30 mg - 946,06 mg		

Formula 1

$$\text{Rata-rata} = \frac{1054,7\text{mg} + 1059,78\text{mg} + 1055,6\text{mg}}{3} = 1056,67 \text{ mg}$$

$$\text{Kolom A (5\%)} = \frac{5}{100} \times 1056,67 = 52,8335 \text{ mg}$$

$$\text{Batas atas} = 1056,67 + 52,8335 = 1109,50 \text{ mg}$$

$$\text{Batas bawah} = 1056,67 - 52,8335 = 1003,84 \text{ mg}$$

Jadi bobot yang memenuhi syarat kolom A adalah tablet dengan bobot antara 1109,50mg - 1003,84 mg.

$$\text{Rata-rata} = \frac{1054,7\text{mg} + 1059,78\text{mg} + 1055,6\text{mg}}{3} = 1056,67 \text{ mg}$$

$$\text{Kolom A (10\%)} = \frac{10}{100} \times 1056,67 = 105,667 \text{ mg}$$

$$\text{Batas atas} = 1056,67 + 105,667 = 1162,34 \text{ mg}$$

$$\text{Batas bawah} = 1056,67 - 105,667 = 951,0 \text{ mg}$$

Jadi bobot yang memenuhi syarat kolom B adalah tablet dengan bobot antara 1162,34 mg - 951,0 mg.

Formula 2

$$\text{Rata-rata} = \frac{1054,08\text{mg} + 1064,95\text{mg} + 1048,395\text{mg}}{3} = 1055,81 \text{ mg}$$

$$\text{Kolom A (5\%)} = \frac{5}{100} \times 1055,81 = 52,7905 \text{ mg}$$

$$\text{Batas atas} = 1055,81 + 52,7905 = 1108,60 \text{ mg}$$

$$\text{Batas bawah} = 1055,81 - 52,7905 = 1003,02 \text{ mg}$$

Jadi bobot yang memenuhi syarat kolom A adalah tablet dengan bobot antara 1108,60mg - 1003,02 mg.

$$\text{Rata-rata} = \frac{1054,08\text{mg} + 1064,95\text{mg} + 1048,395\text{mg}}{3} = 1055,81 \text{ mg}$$

$$\text{Kolom A (10\%)} = \frac{10}{100} \times 1055,81 = 105,581 \text{ mg}$$

$$\text{Batas atas} = 1055,81 + 105,581 = 1161,39 \text{ mg}$$

$$\text{Batas bawah} = 1055,81 - 105,581 = 950,23 \text{ mg}$$

Jadi bobot yang memenuhi syarat kolom B adalah tablet dengan bobot antara 1161,39mg - 950,23 mg.

Formula 3

$$\text{Rata-rata} = \frac{1048,195\text{mg} + 1057,3\text{mg} + 1048,06\text{mg}}{3} = 1051,18 \text{ mg}$$

$$\text{Kolom A (5\%)} = \frac{5}{100} \times 1051,18 = 52,559 \text{ mg}$$

$$\text{Batas atas} = 1051,18 + 52,559 = 1103,74 \text{ mg}$$

$$\text{Batas bawah} = 1051,18 - 52,559 = 998,62 \text{ mg}$$

Jadi bobot yang memenuhi syarat kolom A adalah tablet dengan bobot antara 1103,74mg - 998,62 mg.

$$\text{Rata-rata} = \frac{1048,195\text{mg} + 1057,3\text{mg} + 1048,06\text{mg}}{3} = 1051,18 \text{ mg}$$

$$\text{Kolom A (10\%)} = \frac{10}{100} \times 1051,18 = 105,118 \text{ mg}$$

$$\text{Batas atas} = 1051,18 + 105,118 = 1156,30 \text{ mg}$$

$$\text{Batas bawah} = 1051,18 - 105,118 = 946,06 \text{ mg}$$

Jadi bobot yang memenuhi syarat kolom B adalah tablet dengan bobot antara 1156,30mg - 946,06 mg.

Lampiran 20. Foto alat uji kekerasan tablet hisap



Lampiran 21. Perhitungan uji kekerasan tablet hisap

No	Kekerasan (Kg)								
	Formula 1			Formula 2			Formula 3		
	1	2	3	1	2	3	1	2	3
1	8,3	7,7	8	7,3	8,3	8,8	8,7	8,4	9,8
2	8,9	8,6	8,5	8,2	8,7	9,3	7,8	8,5	7,2
3	7,2	9,4	8,9	9,5	8,4	8,2	8,4	7,1	8,5
4	8,5	7,6	9,4	8,3	7,6	7,8	9,3	7,3	8,7
5	8	8,1	7,5	8,5	9	7,5	9,7	9	8,4
6	9,2	8,7	8	8,2	9,6	8,9	7,2	8,2	9,1
7	7,5	8,3	8,5	7,8	8,1	9,2	8,1	8,3	7,8
8	7,4	7,2	7,9	8,2	8,3	9,4	8,3	9,3	7,4
9	9,1	9,1	8,1	8,4	7,8	8,3	8,2	7,5	8,1
10	8,9	7,2	9,1	7,1	7,3	8,2	8,4	8,8	8,3
Rata-rata	8,3	8,19	8,39	8,15	8,31	8,56	8,41	8,24	8,33

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Formula 1

$$\text{Rata-rata kekerasan} = \frac{8,3 \text{ kg} + 8,19 \text{ kg} + 8,39 \text{ kg}}{3} = 8,29 \text{ kg}$$

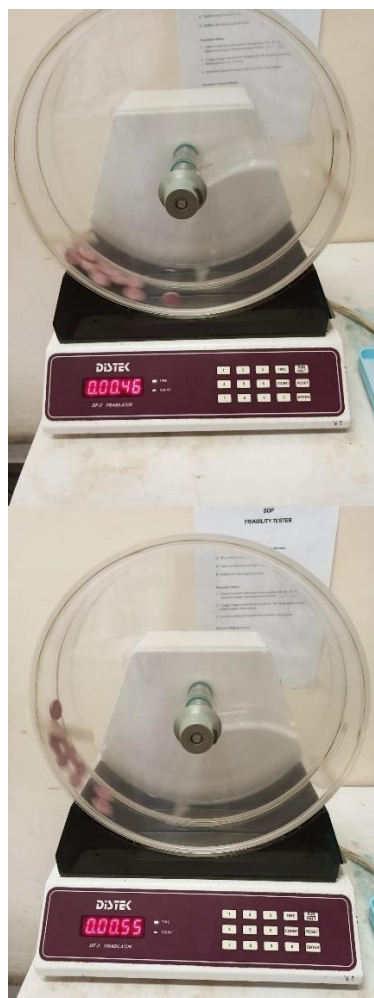
Formula 2

$$\text{Rata-rata kekerasan} = \frac{8,15 \text{ kg} + 8,31 \text{ kg} + 8,56 \text{ kg}}{3} = 8,34 \text{ kg}$$

Formula 3

$$\text{Rata-rata kekerasan} = \frac{8,41 \text{ kg} + 8,24 \text{ kg} + 8,33 \text{ kg}}{3} = 8,33 \text{ kg}$$

Lampiran 22. Foto uji kerapuhan tablet hisap



Lampiran 23. Perhitungan uji kerapuhan tablet hisap

$$\% \text{ Kerapuhan} = \frac{W_0 - W_1}{W_0} \times 100\%$$

Keterangan: W0 = Bobot awal

W1 = Bobot setelah uji

Formula 1

Replikasi 1: W0 = 10,8577 mg

W2 = 0,8425 mg

$$\% \text{ Kerapuhan} = \frac{10,8577 - 10,8425}{10,8577} \times 100\%$$

$$= 0,14\%$$

Replikasi 2: W0 = 10,3745 mg

W1 = 10,3610 mg

$$\% \text{ Kerapuhan} = \frac{10,3745 - 10,3610}{10,3745} \times 100\%$$

$$= 0,13\%$$

Replikasi 3: W0 = 10,7371 mg

W1 = 10,7260 mg

$$\% \text{ Kerapuhan} = \frac{10,7371 - 10,7260}{10,7371} \times 100\%$$

$$= 0,10\%$$

$$\text{Rata-rata} : \frac{0,14\% + 0,13\% + 0,10\%}{3} = 0,12\%$$

Formula 2

Replikasi 1: W0 = 10,3714 mg

W1 = 10,3586 mg

$$\% \text{ Kerapuhan} = \frac{10,3714 - 10,3586}{10,3714} \times 100\%$$

$$= 0,12\%$$

Replikasi 2: W0 = 10,5826 mg

W1 = 10,5708 mg

$$\% \text{ Kerapuhan} = \frac{10,5826 - 10,5708}{10,5826} \times 100\%$$

$$= 0,11\%$$

Replikasi 3: W0 = 10,9361 mg

W1 = 10,9173 mg

$$\% \text{ Kerapuhan} = \frac{10,9361 - 10,9173}{10,9361} \times 100\%$$

$$= 0,17\%$$

$$\text{Rata-rata} : \frac{0,12\% + 0,11\% + 0,17\%}{3} = 0,13\%$$

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Formula 3

Replikasi 1: W0 = 10,7826 mg

W1 = 10,7648 mg

% Kerapuhan = $\frac{10,7826 - 10,7648}{10,7826} \times 100\%$

= 0,16%

Replikasi 2: W0 = 10,6628 mg

W1 = 10,6512 mg

% Kerapuhan = $\frac{10,6628 - 10,6512}{10,6628} \times 100\%$

= 0,11%

Replikasi 3: W0 = 10,2794 mg

W1 = 10,2631 mg

% Kerapuhan = $\frac{10,2794 - 10,2631}{10,2794} \times 100\%$

= 0,16%

Rata-rata : $\frac{0,16\% + 0,11\% + 0,16\%}{3} = 0,14\%$

Lampiran 24. Uji statistik granul dan tablet

1. Sudut diam

Tests of Normality

	formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
sudutdiam	formula 1	.299	3	.	.915	3	.433
	formula 2	.371	3	.	.783	3	.074
	formula 3	.349	3	.	.832	3	.194

Test of Homogeneity of Variances

sudutdiam	Based on Mean	5.109	2	6	.051
	Based on Median	.408	2	6	.682
	Based on Median and with adjusted df	.408	2	3.964	.690
	Based on trimmed mean	4.166	2	6	.073

ANOVA

sudutdiam

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.621	2	8.310	12.593	.007
Within Groups	3.959	6	.660		
Total	20.580	8			

Multiple Comparisons

Dependent Variable: sudutdiam
LSD

(I) formula	(J) formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
formula 1	formula 2	-.86667	.66327	.239	-2.4896	.7563
	formula 3	-3.21667*	.66327	.003	-4.8396	-1.5937
formula 2	formula 1	.86667	.66327	.239	-.7563	2.4896
	formula 3	-2.35000*	.66327	.012	-3.9730	-.7270
formula 3	formula 1	3.21667*	.66327	.003	1.5937	4.8396
	formula 2	2.35000*	.66327	.012	.7270	3.9730

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

2. Waktu alir

Tests of Normality

	formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
waktualir	formula 1	.219	3	.	.987	3	.780
	formula 2	.314	3	.	.893	3	.363
	formula 3	.238	3	.	.976	3	.702

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene	df1	df2	Sig.
		Statistic			
waktualir	Based on Mean	1.405	2	6	.316
	Based on Median	.632	2	6	.564
	Based on Median and with adjusted df	.632	2	4.095	.577
	Based on trimmed mean	1.344	2	6	.329

ANOVA

waktualir

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.621	2	2.810	1901.692	.000
Within Groups	.009	6	.001		
Total	5.629	8			

Multiple Comparisons

Dependent Variable: waktualir
LSD

(I) formula	(J) formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
formula 1	formula 2	-.88333	.03139	.000	-.9601	-.8065
	formula 3	-1.93333	.03139	.000	-2.0101	-1.8565
formula 2	formula 1	.88333	.03139	.000	.8065	.9601
	formula 3	-1.05000*	.03139	.000	-1.1268	-.9732
formula 3	formula 1	1.93333	.03139	.000	1.8565	2.0101
	formula 2	1.05000*	.03139	.000	.9732	1.1268

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

3. Kekerasan

Tests of Normality

	formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kekerasan	formula 1	.193	3	.	.997	3	.890
	formula 2	.224	3	.	.984	3	.759
	formula 3	.182	3	.	.999	3	.935

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
kekerasan	Based on Mean	1.356	2	6	.327
	Based on Median	.781	2	6	.500
	Based on Median and with adjusted df	.781	2	3.491	.524
	Based on trimmed mean	1.316	2	6	.336

ANOVA

kekerasan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.003	2	.002	.087	.918
Within Groups	.120	6	.020		
Total	.123	8			

4. Kerapuhan

Tests of Normality

	formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kerapuhan	formula 1	.292	3	.	.923	3	.463
	formula 2	.328	3	.	.871	3	.298
	formula 3	.385	3	.	.750	3	.133

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Kerapuhan	Based on Mean	.642	2	6	.559
	Based on Median	.057	2	6	.945
	Based on Median and with adjusted df	.057	2	5.039	.946
	Based on trimmed mean	.537	2	6	.610

ANOVA

kerapuhan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.001	2	.000	.391	.692
Within Groups	.005	6	.001		
Total	.005	8			

Lampiran 25. Surat 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 USB Ska

Yang bertanda tangan di bawah ini:

Nama : Sigit Pramono

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

Nama : Pipit Putri Pratiwi

NIM : 24185618A

Institusi : Universitas Setia Budi Surakarta

Merupakan hewan uji dengan spesifikasi sebagai berikut:

Jenis hewan : Mencit Swiss

Umur : 2-3 bulan

Jumlah : 30 ekor

Jenis kelamin : Jantan

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, 24 Mei 2022

Hormat kami



Sigit Pramono

"ABIMANYU FARM"

Lampiran 26. Perhitungan dosis

1. Perhitungan kafein

300 mg/KgBB tikus.

$$\text{Tikus (200 g)} = \frac{200 \text{ g}}{1000 \text{ g}} \times 300 \text{ mg} = 60 \text{ mg}/200\text{gBB tikus.}$$

Konversi tikus ke mencit = $0,14 \times 60 \text{ mg} = 8,4 \text{ mg}/20\text{gBB mencit.}$

Larutan stock = 100 mg/10 ml.

$$\text{Volume pemberian} = \frac{8,4 \text{ mg}}{100 \text{ mg}} \times 10 \text{ ml} = 0,84 \text{ ml.}$$

2. Perhitungan kontrol negative (Tablet hisap tanpa ekstrak)

Melarutkan satu tablet hisap tanpa ekstrak kedalam 100 ml aquadest.

Volume pemberian = 0,5 ml/mencit.

3. Perhitungan kontrol positif (Allopurinol)

Dosis aloopurinol adalah 200 mg/70KgBB manusia dengan faktor konversi manusia kemencit 0,0026 maka :

$$\text{Dosis allopurinol} = 0,0026 \times 200 \text{ mg} = 0,52 \text{ mg}/20\text{gBB mencit}$$

Larutan stock = 0,1%

Ditimbang 100 mg allopurinol diencerkan dan ditambah dengan CMC-Na sampai 100ml.

$$\text{Volume pemberian untuk mencit } 20 \text{ g} = \frac{0,52 \text{ mg}}{100 \text{ mg}} \times 100 \text{ ml} = 0,52$$

ml/20gBB mencit.

4. Perhitungan dosis 1 (100 mg/KgBB mencit)

$$\text{Mencit (20 g)} = \frac{20 \text{ g}}{1000 \text{ g}} \times 100 \text{ mg} = 2 \text{ mg}/20\text{gBB mencit}$$

Larutan stock = 100 mg/10 ml

1 tablet hisap formula 1 dilarutkan dalam 10 ml aquadest.

Kemudian dimasukkan dalam labu takar 10 ml.

$$\text{Volume pemberian} = \frac{2 \text{ mg}}{100 \text{ mg}} \times 10 \text{ ml} = 0,2 \text{ ml}$$

5. Perhitungan dosis 2 (150 mg/KgBB mencit)

$$\text{Mencit (20 g)} = \frac{20 \text{ g}}{1000 \text{ g}} \times 150 \text{ mg} = 3 \text{ mg}/20\text{gBB mencit.}$$

Larutan stock = 150 mg/10 ml.

1 tablet hisap formula 2 dilarutkan dalam 10 ml aquadest. Kemudian dimasukkan dalam labu takar 10 ml.

$$\text{Volume pemberian} = \frac{3 \text{ mg}}{150 \text{ mg}} \times 10 \text{ ml} = 0,2 \text{ ml}$$

6. Perhitungan dosis 3 (200 mg/KgBB mencit)

$$\text{Mencit (20 g)} = \frac{20 \text{ g}}{1000 \text{ g}} \times 200 \text{ mg} = 4 \text{ mg}/20\text{gBB mencit.}$$

Larutan stock = 200 mg/10 ml.

1 tablet hisap formula 3 dilarutkan dalam 10 ml aquadest. Kemudian dimasukkan dalam labu takar 10 ml.

$$\text{Volume pemberian} = \frac{4 \text{ mg}}{200 \text{ mg}} \times 10 \text{ ml} = 0,2 \text{ ml}$$

Lampiran 27. Hasil pengukuran asam urat

Kelompok	Perlakuan				
	Hari ke-0	Hari ke-6	Hari ke-9	Hari ke-12	Hari ke-15
Kontrol (-) tablet hisap tanpa ekstrak	0,5	2,7	2,4	2,5	2,6
	0,6	2,1	2,1	2	2,3
	0,4	2,6	2,1	2,4	2,5
	0,7	2,4	2,2	2,6	2,3
	0,7	2,8	2,6	2,5	2,7
Rata-rata	0,58	2,52	2,28	2,4	2,48
SD	0,13038	0,27749	0,216795	0,2345208	0,1788854
Kontrol (+) allopurinol	0,3	2	1,5	1,2	0,8
	0,1	2,1	1,4	1,1	0,6
	0,6	2,2	1,6	1,3	0,6
	0,8	2	1,5	1	0,4
	0,4	2,3	1,6	1	0,3
Rata-rata	0,44	2,12	1,52	1,12	0,54
SD	0,27019	0,13038	0,083666	0,130384	0,1949359
Tablet hisap ekstrak daun kepel dosis 10%	0,7	1,8	1,5	1,3	1,1
	0,4	2,3	1,6	1,3	0,8
	0,9	2,2	1,9	1,5	0,9
	0,6	1,9	1,4	1,1	0,7
	0,3	2,1	1,7	1,3	0,8
Rata-rata	0,58	2,06	1,62	1,3	0,86
SD	0,23875	0,20736	0,192354	0,1414214	0,1516575
Tablet hisap ekstrak daun kepel dosis 15%	0,9	2,1	1,8	1,5	1
	0,5	1,9	1,4	1,3	0,9
	0,4	2,1	1,6	1,4	0,9
	0,7	2,3	1,9	1,1	0,7
	0,6	1,8	1,5	1,2	0,8
Rata-rata	0,62	2,04	1,64	1,3	0,86
SD	0,19235	0,19494	0,207364	0,1581139	0,1140175
Tablet hisap ekstrak daun kepel dosis 20%	0,9	2,2	1,4	1,2	0,9
	0,5	2	1,6	1,3	0,8
	0,8	2,5	1,5	1,3	0,9
	0,3	1,8	1,4	1,1	0,7
	0,6	2	1,5	1,2	0,6
Rata-rata	0,62	2,1	1,48	1,22	0,78
SD	0,23875	0,26458	0,083666	0,083666	0,130384

Lampiran 28. Perhitungan % penurunan kadar asam urat

$$\% \text{ penurunan} = \frac{\text{kadar pada saat hiperurisemia} - \text{kadar sampel (hari)}}{\text{kadar pada saat hiperurisemia} - \text{kadar normal}} \times 100\%$$

Keterangan :

Kadar normal = kadar asam urat darah normal pada hari ke-0

Kadar pada saat hiperurisemia = kadar asam urat darah pada hari ke-6

Kadar sampel (hari) = kadar asam urat darah pada hari ke-9, 12, dan 15

Kontrol positif Hari ke-9

$$1. \% \text{ penurunan} = \frac{2-1,5}{2-0,3} \times 100\% = 29\%$$

$$2. \% \text{ penurunan} = \frac{2,1-1,4}{2,1-0,1} \times 100\% = 35\%$$

$$3. \% \text{ penurunan} = \frac{2,2-1,6}{2,2-0,6} \times 100\% = 38\%$$

$$4. \% \text{ penurunan} = \frac{2-1,5}{2-0,8} \times 100\% = 42\%$$

$$5. \% \text{ penurunan} = \frac{2,3-1,6}{2,3-0,4} \times 100\% = 37\%$$

$$\text{Rata-rata} = \frac{29\%+35\%+38\%+42\%+37\%}{5} = 36\%$$

Hari ke-12

$$1. \% \text{ penurunan} = \frac{2-1,2}{2-0,3} \times 100\% = 47\%$$

$$2. \% \text{ penurunan} = \frac{2,1-1,1}{2,1-0,1} \times 100\% = 50\%$$

$$3. \% \text{ penurunan} = \frac{2,2-1,3}{2,2-0,6} \times 100\% = 56\%$$

$$4. \% \text{ penurunan} = \frac{2-1}{2-0,8} \times 100\% = 83\%$$

$$5. \% \text{ penurunan} = \frac{2,3-1}{2,3-0,4} \times 100\% = 68\%$$

$$\text{Rata-rata} = \frac{47\%+50\%+56\%+83\%+68\%}{5} = 61\%$$

Hari ke-15

$$1. \% \text{ penurunan} = \frac{2-0,8}{2-0,3} \times 100\% = 71\%$$

$$2. \% \text{ penurunan} = \frac{2,1-0,6}{2,1-0,1} \times 100\% = 75\%$$

$$3. \% \text{ penurunan} = \frac{2,2-0,6}{2,2-0,6} \times 100\% = 100\%$$

$$4. \% \text{ penurunan} = \frac{2-0,4}{2-0,8} \times 100\% = 133\%$$

$$5. \% \text{ penurunan} = \frac{2,3-0,3}{2,3-0,4} \times 100\% = 105\%$$

$$\text{Rata-rata} = \frac{71\%+75\%+100\%+133\%+105\%}{5} = 97\%$$

Formula 1 Hari ke-9

1. % penurunan = $\frac{1,8-1,5}{1,8-0,7} \times 100\% = 27\%$
2. % penurunan = $\frac{2,3-1,6}{2,3-0,4} \times 100\% = 37\%$
3. % penurunan = $\frac{2,2-1,9}{2,2-0,9} \times 100\% = 23\%$
4. % penurunan = $\frac{1,9-1,4}{1,9-0,6} \times 100\% = 38\%$
5. % penurunan = $\frac{2,1-1,7}{2,1-0,3} \times 100\% = 22\%$

$$\text{Rata-rata} = \frac{27\%+37\%+23\%+38\%+22\%}{5} = 30\%$$

Hari ke-12

1. % penurunan = $\frac{1,8-1,3}{1,8-0,7} \times 100\% = 45\%$
2. % penurunan = $\frac{2,3-1,3}{2,3-0,4} \times 100\% = 53\%$
3. % penurunan = $\frac{2,2-1,5}{2,2-0,9} \times 100\% = 54\%$
4. % penurunan = $\frac{1,9-1,1}{1,9-0,6} \times 100\% = 62\%$
5. % penurunan = $\frac{2,1-1,3}{2,1-0,3} \times 100\% = 44\%$

$$\text{Rata-rata} = \frac{45\%+53\%+54\%+62\%+44\%}{5} = 52\%$$

Hari ke-15

1. % penurunan = $\frac{1,8-1,1}{1,8-0,7} \times 100\% = 64\%$
2. % penurunan = $\frac{2,3-0,8}{2,3-0,4} \times 100\% = 79\%$
3. % penurunan = $\frac{2,2-0,9}{2,2-0,9} \times 100\% = 100\%$
4. % penurunan = $\frac{1,9-0,7}{1,9-0,6} \times 100\% = 92\%$
5. % penurunan = $\frac{2,1-0,8}{2,1-0,3} \times 100\% = 72\%$

$$\text{Rata-rata} = \frac{64\%+79\%+100\%+92\%+72\%}{5} = 81\%$$

Formula 2 Hari ke-9

1. % penurunan = $\frac{2,1-1,8}{2,1-0,9} \times 100\% = 25\%$
2. % penurunan = $\frac{1,9-1,4}{1,9-0,5} \times 100\% = 36\%$
3. % penurunan = $\frac{2,1-1,6}{2,1-0,4} \times 100\% = 29\%$
4. % penurunan = $\frac{2,3-1,9}{2,3-0,7} \times 100\% = 25\%$
5. % penurunan = $\frac{1,8-1,5}{1,8-0,6} \times 100\% = 25\%$

$$\text{Rata-rata} = \frac{25\%+36\%+29\%+25\%+25\%}{5} = 28\%$$

Hari ke-12

1. % penurunan = $\frac{2,1-1,5}{2,1-0,9} \times 100\% = 50\%$
2. % penurunan = $\frac{1,9-1,3}{1,9-0,5} \times 100\% = 43\%$
3. % penurunan = $\frac{2,1-1,4}{2,1-0,4} \times 100\% = 41\%$
4. % penurunan = $\frac{2,3-1,1}{2,3-0,7} \times 100\% = 75\%$
5. % penurunan = $\frac{1,8-1,2}{1,8-0,6} \times 100\% = 50\%$

$$\text{Rata-rata} = \frac{50\%+43\%+41\%+75\%+50\%}{5} = 52\%$$

Hari ke-15

1. % penurunan = $\frac{2,1-1}{2,1-0,9} \times 100\% = 92\%$
2. % penurunan = $\frac{1,9-0,9}{1,9-0,5} \times 100\% = 71\%$
3. % penurunan = $\frac{2,1-0,9}{2,1-0,4} \times 100\% = 71\%$
4. % penurunan = $\frac{2,3-0,7}{2,3-0,7} \times 100\% = 100\%$
5. % penurunan = $\frac{1,8-0,8}{1,8-0,6} \times 100\% = 83\%$

$$\text{Rata-rata} = \frac{92\%+71\%+71\%+100\%+83\%}{5} = 83\%$$

Formula 3 Hari ke-9

1. % penurunan = $\frac{2,2-1,4}{2,2-0,9} \times 100\% = 62\%$
2. % penurunan = $\frac{2-1,6}{2-0,5} \times 100\% = 27\%$
3. % penurunan = $\frac{2,5-1,5}{2,5-0,8} \times 100\% = 59\%$
4. % penurunan = $\frac{1,8-1,4}{1,8-0,3} \times 100\% = 27\%$
5. % penurunan = $\frac{2-1,5}{2-0,6} \times 100\% = 36\%$

$$\text{Rata-rata} = \frac{62\%+27\%+59\%+27\%+36\%}{5} = 42\%$$

Hari ke-12

1. % penurunan = $\frac{2,2-1,2}{2,2-0,9} \times 100\% = 77\%$
2. % penurunan = $\frac{2-1,3}{2-0,5} \times 100\% = 47\%$
3. % penurunan = $\frac{2,5-1,3}{2,5-0,8} \times 100\% = 71\%$

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$$4. \% \text{ penurunan} = \frac{1,8-1,1}{1,8-0,3} \times 100\% = 47\%$$

$$5. \% \text{ penurunan} = \frac{2-1,2}{2-0,6} \times 100\% = 57\%$$

$$\text{Rata-rata} = \frac{77\%+47\%+71\%+47\%+57\%}{5} = 60\%$$

Hari ke-15

$$1. \% \text{ penurunan} = \frac{2,2-0,9}{2,2-0,9} \times 100\% = 100\%$$

$$2. \% \text{ penurunan} = \frac{2-0,8}{2-0,5} \times 100\% = 80\%$$

$$3. \% \text{ penurunan} = \frac{2,5-0,9}{2,5-0,8} \times 100\% = 94\%$$

$$4. \% \text{ penurunan} = \frac{1,8-0,7}{1,8-0,3} \times 100\% = 73\%$$

$$5. \% \text{ penurunan} = \frac{2-0,6}{2-0,6} \times 100\% = 100\%$$

$$\text{Rata-rata} = \frac{100\%+80\%+94\%+73\%+100\%}{5} = 89\%$$

Lampiran 29. Hasil uji statistik

Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
hari0	negatif	.221	5	.200 [*]	.902	5	.421
	positif	.159	5	.200 [*]	.990	5	.980
	dosis 10%	.141	5	.200 [*]	.979	5	.928
	dosis 15%	.175	5	.200 [*]	.974	5	.899
	dosis 20%	.175	5	.200 [*]	.974	5	.899
hari6	negatif	.213	5	.200 [*]	.939	5	.656
	positif	.221	5	.200 [*]	.902	5	.421
	dosis 10%	.221	5	.200 [*]	.953	5	.758
	dosis 15%	.180	5	.200 [*]	.952	5	.754
	dosis 20%	.247	5	.200 [*]	.942	5	.679
hari9	negatif	.244	5	.200 [*]	.871	5	.272
	positif	.231	5	.200 [*]	.881	5	.314
	dosis 10%	.180	5	.200 [*]	.952	5	.754
	dosis 15%	.141	5	.200 [*]	.979	5	.928
	dosis 20%	.231	5	.200 [*]	.881	5	.314
hari12	negatif	.300	5	.161	.813	5	.103
	positif	.221	5	.200 [*]	.902	5	.421
	dosis 10%	.136	5	.200 [*]	.987	5	.967
	dosis 15%	.300	5	.161	.883	5	.325
	dosis 20%	.231	5	.200 [*]	.881	5	.314
hari15	negatif	.243	5	.200 [*]	.894	5	.377
	positif	.221	5	.200 [*]	.953	5	.758
	dosis 10%	.237	5	.200 [*]	.961	5	.814
	dosis 15%	.254	5	.200 [*]	.914	5	.492
	dosis 20%	.221	5	.200 [*]	.902	5	.421

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
hari0	Based on Mean	.670	4	20	.621
	Based on Median	.519	4	20	.722
	Based on Median and with adjusted df	.519	4	16.976	.723
	Based on trimmed mean	.680	4	20	.614
hari6	Based on Mean	.814	4	20	.531
	Based on Median	.327	4	20	.856
	Based on Median and with adjusted df	.327	4	14.564	.855
	Based on trimmed mean	.776	4	20	.554
hari9	Based on Mean	2.480	4	20	.077
	Based on Median	1.218	4	20	.334
	Based on Median and with adjusted df	1.218	4	13.672	.348
	Based on trimmed mean	2.342	4	20	.090
hari12	Based on Mean	.733	4	20	.580
	Based on Median	.357	4	20	.836
	Based on Median and with adjusted df	.357	4	9.441	.833
	Based on trimmed mean	.681	4	20	.614
hari15	Based on Mean	.628	4	20	.648
	Based on Median	.340	4	20	.848
	Based on Median and with adjusted df	.340	4	16.355	.847
	Based on trimmed mean	.640	4	20	.640

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
hari0	Between Groups	.110	4	.028	.573	.686
	Within Groups	.964	20	.048		
	Total	1.074	24			
hari6	Between Groups	.794	4	.199	4.053	.014
	Within Groups	.980	20	.049		
	Total	1.774	24			
hari9	Between Groups	2.134	4	.534	18.922	.000
	Within Groups	.564	20	.028		
	Total	2.698	24			
hari12	Between Groups	5.538	4	1.385	55.831	.000
	Within Groups	.496	20	.025		
	Total	6.034	24			
hari15	Between Groups	12.178	4	3.044	123.756	.000
	Within Groups	.492	20	.025		
	Total	12.670	24			

Multiple Comparisons

LSD

Dependent Variable	(I) kelompok	(J) kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
hari6	Negative	positif	11.20000	4.54753	.023	1.7140	20.6860
		dosis 10%	4.60000	4.54753	.324	-4.8860	14.0860
		dosis 15%	4.80000	4.54753	.304	-4.6860	14.2860
		dosis 20%	11.40000	4.54753	.021	1.9140	20.8860
	Positif	negatif	-11.20000	4.54753	.023	-20.6860	-1.7140
		dosis 10%	-6.60000	4.54753	.162	-16.0860	2.8860
		dosis 15%	-6.40000	4.54753	.175	-15.8860	3.0860
		dosis 20%	.20000	4.54753	.965	-9.2860	9.6860
	dosis 10%	negatif	-4.60000	4.54753	.324	-14.0860	4.8860
		positif	6.60000	4.54753	.162	-2.8860	16.0860
		dosis 15%	.20000	4.54753	.965	-9.2860	9.6860
		dosis 20%	6.80000	4.54753	.150	-2.6860	16.2860
	dosis 15%	negatif	-4.80000	4.54753	.304	-14.2860	4.6860
		positif	6.40000	4.54753	.175	-3.0860	15.8860
		dosis 10%	-.20000	4.54753	.965	-9.6860	9.2860
		dosis 20%	6.60000	4.54753	.162	-2.8860	16.0860
	dosis 20%	negatif	-11.40000	4.54753	.021	-20.8860	-1.9140
		positif	-.20000	4.54753	.965	-9.6860	9.2860
		dosis 10%	-6.80000	4.54753	.150	-16.2860	2.6860
		dosis 15%	-6.60000	4.54753	.162	-16.0860	2.8860
hari9	Negative	positif	7.60000	1.06207	.000	5.3846	9.8154
		dosis 10%	6.60000	1.06207	.000	4.3846	8.8154
		dosis 15%	6.40000	1.06207	.000	4.1846	8.6154
		dosis 20%	8.00000	1.06207	.000	5.7846	10.2154
	Positif	negatif	-7.60000	1.06207	.000	-9.8154	-5.3846
		dosis 10%	-1.00000	1.06207	.358	-3.2154	1.2154
		dosis 15%	-1.20000	1.06207	.272	-3.4154	1.0154
		dosis 20%	.40000	1.06207	.710	-1.8154	2.6154
	dosis 10%	negatif	-6.60000	1.06207	.000	-8.8154	-4.3846
		positif	1.00000	1.06207	.358	-1.2154	3.2154
		dosis 15%	-.20000	1.06207	.853	-2.4154	2.0154
		dosis 20%	1.40000	1.06207	.202	-.8154	3.6154
	dosis 15%	negatif	-6.40000	1.06207	.000	-8.6154	-4.1846
		positif	1.20000	1.06207	.272	-1.0154	3.4154
		dosis 10%	.20000	1.06207	.853	-2.0154	2.4154
		dosis 20%	1.60000	1.06207	.148	-.6154	3.8154
	dosis 20%	negatif	-8.00000	1.06207	.000	-10.2154	-5.7846
		positif	-.40000	1.06207	.710	-2.6154	1.8154
		dosis 10%	-1.40000	1.06207	.202	-3.6154	.8154
		dosis 15%	-1.60000	1.06207	.148	-3.8154	.6154
hari12	Negative	positif	12.80000	3.44442	.001	5.6151	19.9849
		dosis 10%	7.40000	3.44442	.044	.2151	14.5849
		dosis 15%	7.40000	3.44442	.044	.2151	14.5849
		dosis 20%	8.20000	3.44442	.027	1.0151	15.3849
	Positif	negatif	-12.80000	3.44442	.001	-19.9849	-5.6151
		dosis 10%	-5.40000	3.44442	.133	-12.5849	1.7849
		dosis 15%	-5.40000	3.44442	.133	-12.5849	1.7849
		dosis 20%	-4.60000	3.44442	.197	-11.7849	2.5849
	dosis 10%	negatif	-7.40000	3.44442	.044	-14.5849	-.2151
		positif	5.40000	3.44442	.133	-1.7849	12.5849

	dosis 15%	dosis 15%	.00000	3.44442	1.000	-7.1849	7.1849
		dosis 20%	.80000	3.44442	.819	-6.3849	7.9849
		negatif	-7.40000	3.44442	.044	-14.5849	-.2151
		positif	5.40000	3.44442	.133	-1.7849	12.5849
	dosis 10%	dosis 10%	.00000	3.44442	1.000	-7.1849	7.1849
		dosis 20%	.80000	3.44442	.819	-6.3849	7.9849
		negatif	-8.20000	3.44442	.027	-15.3849	-1.0151
		positif	4.60000	3.44442	.197	-2.5849	11.7849
	dosis 20%	dosis 10%	-.80000	3.44442	.819	-7.9849	6.3849
		dosis 15%	-.80000	3.44442	.819	-7.9849	6.3849
		positif	19.40000	1.33267	.000	16.6201	22.1799
		dosis 10%	16.20000	1.33267	.000	13.4201	18.9799
hari15	Negative	dosis 15%	18.00000	1.33267	.000	15.2201	20.7799
		dosis 20%	17.00000	1.33267	.000	14.2201	19.7799
	Positif	negatif	-19.40000	1.33267	.000	-22.1799	-16.6201
		dosis 10%	-3.20000	1.33267	.026	-5.9799	-.4201
		dosis 15%	-1.40000	1.33267	.306	-4.1799	1.3799
		dosis 20%	-2.40000	1.33267	.087	-5.1799	.3799
	dosis 10%	negatif	-16.20000	1.33267	.000	-18.9799	-13.4201
		positif	3.20000	1.33267	.026	.4201	5.9799
		dosis 15%	1.80000	1.33267	.192	-.9799	4.5799
		dosis 20%	.80000	1.33267	.555	-1.9799	3.5799
	dosis 15%	negatif	-18.00000	1.33267	.000	-20.7799	-15.2201
		positif	1.40000	1.33267	.306	-1.3799	4.1799
		dosis 10%	-1.80000	1.33267	.192	-4.5799	.9799
		dosis 20%	-1.00000	1.33267	.462	-3.7799	1.7799
	dosis 20%	negatif	-17.00000	1.33267	.000	-19.7799	-14.2201
		positif	2.40000	1.33267	.087	-.3799	5.1799
		dosis 10%	-.80000	1.33267	.555	-3.5799	1.9799
		dosis 15%	1.00000	1.33267	.462	-1.7799	3.7799

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