

Lampiran 1

Perhitungan Kadar Abu Serbuk Daun Poko

Perhitungan kadar abu menggunakan rumus sebagai berikut:

$$\% \text{ kadar abu} = \frac{100 \{W \text{ konstan (k + s)} - W \text{ konstan (k)}\}}{W(s)} 100$$

Keterangan:

k : bobot krus porselen

s : bobot serbuk (gram)

No	Berat serbuk (g)	Krus kosong konstan (g)	Krus + abu (g)	Hasil (%)	Rata-rata	Syarat
1.	2,0000	21,0164	21,1566	7,01		
2.	2,0003	19,4770	19,6165	6,97	7,04	<10,8 %
3.	2,0004	19,4772	19,6199	7,13		

Perhitungan Kadar Sari Larut Dalam Etanol

No	Berat ekstrak (g)	Cawan kosong konstan (g)	Cawan + abu (g)	Hasil (%)	Rata-rata	Syarat
1.	5,0003	82,0595	82,7065	12,94		
2.	5,0001	82,0605	82,7092	12,97	12,96	<10,8 %
3.	5,0004	82,0599	82,7089	12,98		

Lampiran 2

Perhitungan Anava untuk uji efek jumlah jengukan kepala mencit ke dalam lubang

$$\begin{aligned}\Sigma X_T &= \Sigma X_1 + \Sigma X_2 + \Sigma X_3 + \Sigma X_4 + \Sigma X_5 \\ &= 30 + 203 + 243 + 299 + 209 \\ &= 984\end{aligned}$$

$$\begin{aligned}\Sigma X_T^2 &= \Sigma X_1^2 + \Sigma X_2^2 + \Sigma X_3^2 + \Sigma X_4^2 + \Sigma X_5^2 \\ &= 188 + 8299 + 11989 + 17901 + 9027 \\ &= 47404\end{aligned}$$

$$\begin{aligned}N_T &= n_1 + n_2 + n_3 + n_4 + n_5 \\ &= 5 + 5 + 5 + 5 + 5 \\ &= 25\end{aligned}$$

$$\begin{aligned}FK &= \frac{(\Sigma X_T)^2}{N_T} \\ &= \frac{(984)^2}{25} \\ &= 38730,24\end{aligned}$$

$$JK_T = \sum X_T^2 - \frac{(\sum X_T)^2}{N_T}$$

$$= 47404 - 38730,24$$

$$= 8673,76$$

$$JK_P = \left(\sum \frac{(\sum X_P)}{N_P} - \frac{(\sum X_T)^2}{N_T} \right)$$

$$= \frac{900 + 41209 + 59049 + 89401 + 43681}{5} - 38730,24$$

$$= 46848 - 38730,24$$

$$= 8117,76$$

$$JK_d = JK_T - JK_P$$

$$= 8673,76 - 8117,76$$

$$= 556$$

$$Db_T = N - 1$$

$$= 25 - 1$$

$$= 24$$

$$Db_P = n - 1$$

$$= 5 - 1$$

$$= 4$$

$$Db_d = Db_T - Db_P$$

$$= 24 - 4$$

$$= 20$$

$$\begin{aligned}
 MK_p &= \frac{JK_p}{Db_p} \\
 &= \frac{8117,76}{4} \\
 &= 2029,44
 \end{aligned}$$

$$\begin{aligned}
 MK_d &= \frac{JK_d}{Db_d} \\
 &= \frac{556}{20} \\
 &= 27,8
 \end{aligned}$$

$$\begin{aligned}
 F_{hitung} &= \frac{MK_p}{MK_d} \\
 &= \frac{2029,44}{27,8} \\
 &= 73,00
 \end{aligned}$$

$F_{hitung} : 73,00 \geq F_{tabel} = 2,87 (\alpha = 0,05)$ dan $F_{tabel} = 4,43 (\alpha = 0,01)$. Jadi H_0 ditolak berarti terdapat perbedaan yang bermakna terhadap jumlah jengukan mencit ke dalam lubang antar kelompok.

$F_{hitung} : 73,00 \geq F_{tabel}$, maka perhitungan dilanjutkan dengan uji HSD 5% dan HSD 1%.

Lampiran 3

Perhitungan Anava untuk uji efek jumlah aktivitas mencit menaiki dan menuruni papan

$$\begin{aligned}\Sigma X_T &= \Sigma X_1 + \Sigma X_2 + \Sigma X_3 + \Sigma X_4 + \Sigma X_5 \\ &= 12 + 56 + 67 + 84 + 74 \\ &= 293\end{aligned}$$

$$\begin{aligned}\Sigma X_T^2 &= \Sigma X_1^2 + \Sigma X_2^2 + \Sigma X_3^2 + \Sigma X_4^2 + \Sigma X_5^2 \\ &= 32 + 720 + 913 + 1414 + 1134 \\ &= 4213\end{aligned}$$

$$\begin{aligned}N_T &= n_1 + n_2 + n_3 + n_4 + n_5 \\ &= 5 + 5 + 5 + 5 + 5 \\ &= 25\end{aligned}$$

$$\begin{aligned}FK &= \frac{(\Sigma X_T)^2}{N_T} \\ &= \frac{(293)^2}{25} \\ &= 3433,96\end{aligned}$$

$$\begin{aligned}JK_T &= \Sigma X_T^2 - \frac{(\Sigma X_T)^2}{N_T} \\ &= 4213 - 3433,96 \\ &= 779,04\end{aligned}$$

$$\begin{aligned}
 JK_p &= \left(\sum \frac{X_p}{N_p} - \frac{(\sum X_T)^2}{N_T} \right) \\
 &= \frac{144 + 3136 + 4489 + 7056 + 5476}{5} - 3433,96
 \end{aligned}$$

$$= 4060,2 - 3528,36$$

$$= 626,24$$

$$\begin{aligned}
 JK_d &= JK_T - JK_p \\
 &= 779,04 - 626,24 \\
 &= 152,8
 \end{aligned}$$

$$\begin{aligned}
 Db_T &= N - 1 \\
 &= 25 - 1 \\
 &= 24
 \end{aligned}$$

$$\begin{aligned}
 Db_p &= n - 1 \\
 &= 5 - 1 \\
 &= 4
 \end{aligned}$$

$$\begin{aligned}
 Db_d &= Db_T - Db_p \\
 &= 24 - 4 \\
 &= 20
 \end{aligned}$$

$$\begin{aligned}
 MK_p &= \frac{JK_p}{Db_p} \\
 &= \frac{626,24}{4} \\
 &= 156,56
 \end{aligned}$$

$$\begin{aligned}
 MK_d &= \frac{JK_d}{Db_d} \\
 &= \frac{152,8}{20} \\
 &= 7,64
 \end{aligned}$$

$$\begin{aligned}
 F_{hitung} &= \frac{MK_p}{MK_d} \\
 &= \frac{156,56}{7,64} \\
 &= 20,49
 \end{aligned}$$

Fhitung : $20,49 \geq F_{tabel} = 2,87$ ($\alpha = 0,05$) dan $F_{tabel} = 4,43$ ($\alpha = 0,01$). Jadi H_0 ditolak berarti terdapat perbedaan yang bermakna terhadap jumlah aktivitas mencit menaiki dan menuruni papan antar kelompok.

Fhitung : $20,49 \geq F_{tabel}$, maka perhitungan dilanjutkan dengan uji HSD 5% dan HSD 1%.

Lampiran 4

Perhitungan Anava untuk uji efek stimulan dengan uji ketangkasan mencit pada alat rotarod dihitung berdasarkan detik

$$\Sigma X_T = \Sigma X_1 + \Sigma X_2 + \Sigma X_3 + \Sigma X_4 + \Sigma X_5$$

$$= 337 + 1179 + 1351 + 1583 + 1487$$

$$= 5937$$

$$\Sigma X_T^2 = \Sigma X_1^2 + \Sigma X_2^2 + \Sigma X_3^2 + \Sigma X_4^2 + \Sigma X_5^2$$

$$= 26581 + 288815 + 373731 + 533971 + 459247$$

$$= 1682345$$

$$N_T = n_1 + n_2 + n_3 + n_4 + n_5$$

$$= 5 + 5 + 5 + 5 + 5$$

$$= 25$$

$$FK = \frac{(\Sigma X_T)^2}{N_T}$$

$$= \frac{(5937)^2}{25}$$

$$= 1409918,76$$

$$JK_T = \Sigma X_T^2 - \frac{(\Sigma X_T)^2}{N_T}$$

$$= 1682345 - 1409918,76$$

$$= 272426,24$$

$$\begin{aligned}
 JK_p &= \left(\sum \frac{X_p}{N_p} - \frac{(\sum X_T)^2}{N_T} \right) \\
 &= \frac{113569 + 1390041 + 1825201 + 2505889 + 2211169}{5} - 1409918,76 \\
 &= 1609173,8 - 1409918,76 \\
 &= 199255,04 \\
 JK_d &= JK_T - JK_p \\
 &= 272426,24 - 199255,04 \\
 &= 73171,2 \\
 Db_T &= N - 1 \\
 &= 25 - 1 \\
 &= 24 \\
 Db_p &= n - 1 \\
 &= 5 - 1 \\
 &= 4 \\
 Db_d &= Db_T - Db_p \\
 &= 24 - 4 \\
 &= 20 \\
 MK_p &= \frac{JK_p}{Db_p} \\
 &= \frac{199255,04}{4} \\
 &= 49813,76
 \end{aligned}$$

$$\begin{aligned}
 MK_d &= \frac{JK_d}{Db_d} \\
 &= \frac{73171,2}{20} \\
 &= 3658,56
 \end{aligned}$$

$$\begin{aligned}
 F_{hitung} &= \frac{MK_p}{MK_d} \\
 &= \frac{49813,76}{3658,56} \\
 &= 13,62
 \end{aligned}$$

$F_{hitung} : 13,62 \geq F_{tabel} = 2,87$ ($\alpha = 0,05$) dan $F_{tabel} = 4,43$ ($\alpha = 0,01$). Jadi H_0 ditolak berarti terdapat perbedaan yang bermakna terhadap efek stimulan dengan uji ketangkasan mencit dengan alat rotarod.

$F_{hitung} : 13,62 \geq F_{tabel}$, maka perhitungan dilanjutkan dengan uji HSD 5% dan HSD 1%.

Lampiran 5

Perhitungan Anava untuk uji efek stimulan dengan uji ketahanan berenang pada mencit dihitung berdasarkan detik

$$\Sigma X_T = \Sigma X_1 + \Sigma X_2 + \Sigma X_3 + \Sigma X_4 + \Sigma X_5$$

$$= 233 + 433 + 504 + 595 + 465$$

$$= 2230$$

$$\Sigma X_T^2 = \Sigma X_1^2 + \Sigma X_2^2 + \Sigma X_3^2 + \Sigma X_4^2 + \Sigma X_5^2$$

$$= 10873 + 37663 + 50920 + 75875 + 43363$$

$$= 218694$$

$$N_T = n_1 + n_2 + n_3 + n_4 + n_5$$

$$= 5 + 5 + 5 + 5 + 5$$

$$= 25$$

$$FK = \frac{(\Sigma X_T)^2}{N_T}$$

$$= \frac{(2230)^2}{25}$$

$$= 198916$$

$$JK_T = \Sigma X_T^2 - \frac{(\Sigma X_T)^2}{N_T}$$

$$= 218694 - 198916$$

$$= 19778$$

$$\begin{aligned}
 JK_p &= \left(\sum \frac{(\sum X_p)^2}{N_p} - \frac{(\sum X_T)^2}{N_T} \right) \\
 &= \frac{54289 + 187489 + 254016 + 354025 + 216225}{5} - 198916
 \end{aligned}$$

$$= 213208,8 - 198916$$

$$= 14292,8$$

$$\begin{aligned}
 JK_d &= JK_T - JK_p \\
 &= 19778 - 14292,8 \\
 &= 5485,2
 \end{aligned}$$

$$\begin{aligned}
 Db_T &= N - 1 \\
 &= 25 - 1 \\
 &= 24
 \end{aligned}$$

$$\begin{aligned}
 Db_p &= n - 1 \\
 &= 5 - 1 \\
 &= 4
 \end{aligned}$$

$$\begin{aligned}
 Db_d &= Db_T - Db_p \\
 &= 24 - 4 \\
 &= 20
 \end{aligned}$$

$$\begin{aligned}
 MK_p &= \frac{JK_p}{Db_p} \\
 &= \frac{14292,8}{4} \\
 &= 3573,2
 \end{aligned}$$

$$\begin{aligned}
 MK_d &= \frac{JK_d}{Db_d} \\
 &= \frac{5485,2}{20} \\
 &= 274,26
 \end{aligned}$$

$$\begin{aligned}
 F_{hitung} &= \frac{MK_p}{MK_d} \\
 &= \frac{3573,2}{274,26} \\
 &= 13,03
 \end{aligned}$$

$F_{hitung} : 13,03 \geq F_{tabel} = 2,87$ ($\alpha = 0,05$) dan $F_{tabel} = 4,43$ ($\alpha = 0,01$). Jadi H_0 ditolak berarti terdapat perbedaan yang bermakna terhadap efek stimulan dengan uji ketahanan berenang pada mencit.

$F_{hitung} : 13,03 \geq F_{tabel}$, maka perhitungan dilanjutkan dengan uji HSD 5% dan HSD 1%.

Keterangan:

JK_T = Jumlah kuadrat total

JK_p = Jumlah kuadrat antara

JK_d = Jumlah kuadrat dalam

Db_T = Derajat bebas total

Db_p = Derajat bebas antara

Db_d = Derajat bebas dalam

- n = Jumlah hewan per kelompok
- N = Jumlah hewan seluruh kelompok
- MK_p = Rata-rata jumlah kuadrat perlakuan
- MK_d = Rata-rata jumlah kuadrat dalam



Lampiran 6

Hasil Perhitungan HSD Jumlah Jengukan Kepala Mencit ke Dalam Lubang

No	Perlakuan	Mean	HSD 5%	Kesimpulan	HSD 1%	Kesimpulan
1.	K vs A	34,6	9,97	B	12,47	SB
2.	K vs B	42,6	9,97	B	12,47	SB
3.	K vs C	53,8	9,97	B	12,47	SB
4.	K vs P	35,8	9,97	B	12,47	SB
5.	A vs B	8	9,97	-	12,47	-
6.	A vs C	19,2	9,97	B	12,47	SB
7.	A vs P	1,2	9,97	-	12,47	-
8.	B vs C	11,2	9,97	B	12,47	-
9.	B vs P	6,8	9,97	-	12,47	-
10.	C vs P	18	9,97	B	12,47	SB

Keterangan:

B : Bermakna = Perbedaan bermakna, karena selisih 2 mean > HSD 5%

SB : Sangat bermakna = Perbedaan sangat bermakna, karena selisih 2 mean > HSD 1%

TB : Tidak bermakna = Perbedaan tidak bermakna, karena selisih 2 mean < 5%.

$$\text{HSD } 5\% = q_{0,05} (p; Dbd) \sqrt{\frac{MKd}{n}}$$

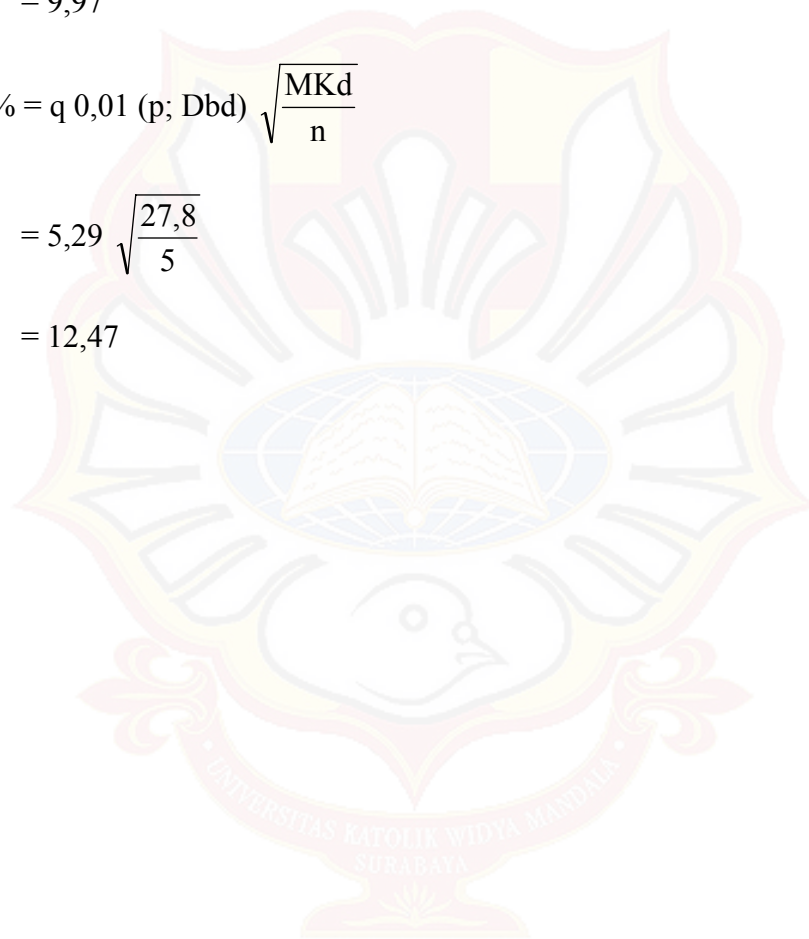
$$= 4,23 \sqrt{\frac{27,8}{5}}$$

$$= 9,97$$

$$\text{HSD } 1\% = q_{0,01} (p; Dbd) \sqrt{\frac{MKd}{n}}$$

$$= 5,29 \sqrt{\frac{27,8}{5}}$$

$$= 12,47$$



Lampiran 7

Hasil Perhitungan HSD Jumlah Aktivitas Mencit Yang Menaiki dan Menuruni Papan

No	Perlakuan	Mean	HSD 5%	Kesimpulan	HSD 1%	Kesimpulan
1.	K vs A	8,8	5,23	B	6,54	SB
2.	K vs B	11,0	5,23	B	6,54	SB
3.	K vs C	14,4	5,23	B	6,54	SB
4.	K vs P	12,4	5,23	B	6,54	SB
5.	A vs B	2,2	5,23	-	6,54	-
6.	A vs C	5,6	5,23	B	6,54	-
7.	A vs P	3,6	5,23	-	6,54	-
8.	B vs C	3,4	5,23	-	6,54	-
9.	B vs P	1,4	5,23	-	6,54	-
10.	C vs P	2	5,23	-	6,54	-

Keterangan:

B : Bermakna = Perbedaan bermakna, karena selisih 2 mean > HSD 5%

SB : Sangat bermakna = Perbedaan sangat bermakna, karena selisih 2 mean > HSD 1%

TB : Tidak bermakna = Perbedaan tidak bermakna, karena selisih 2 mean < 5%.

$$\text{HSD } 5\% = q_{0,05} (p; Dbd) \sqrt{\frac{MKd}{n}}$$

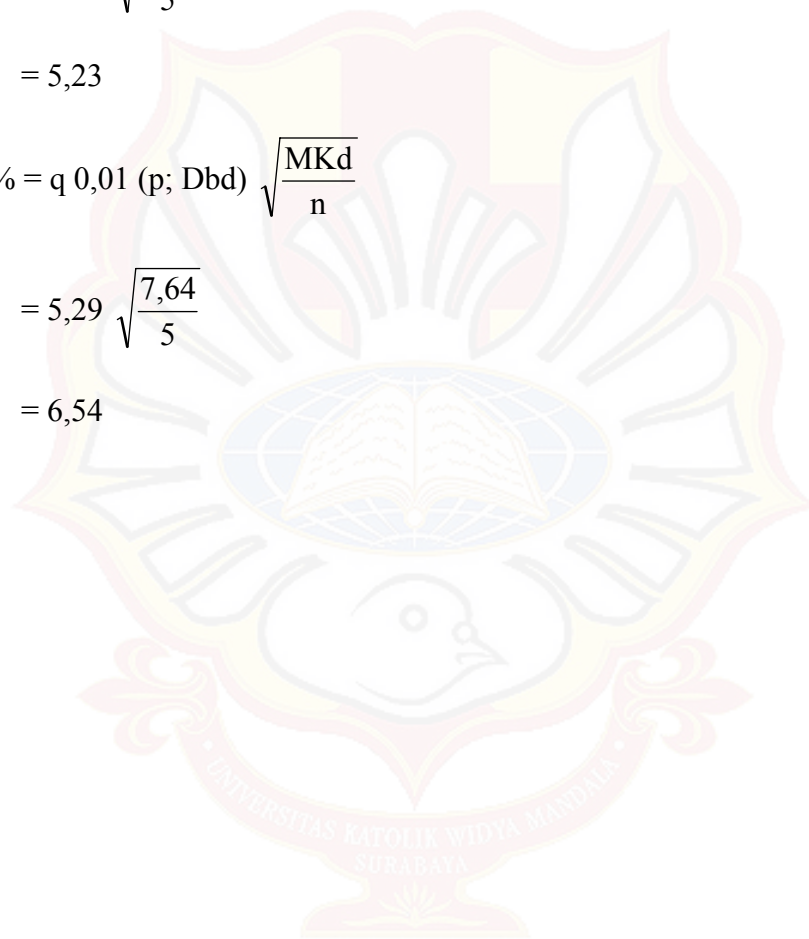
$$= 4,23 \sqrt{\frac{7,64}{5}}$$

$$= 5,23$$

$$\text{HSD } 1\% = q_{0,01} (p; Dbd) \sqrt{\frac{MKd}{n}}$$

$$= 5,29 \sqrt{\frac{7,64}{5}}$$

$$= 6,54$$



Lampiran 8

Hasil Perhitungan HSD Jumlah Ketangkasan Mencit Dengan Alat Rotarod

No	Perlakuan	Mean	HSD 5%	Kesimpulan	HSD 1%	Kesimpulan
1.	K vs A	168,4	114,42	B	143,10	SB
2.	K vs B	202,8	114,42	B	143,10	SB
3.	K vs C	249,2	114,42	B	143,10	SB
4.	K vs P	230	114,42	B	143,10	SB
5.	A vs B	34,4	114,42	-	143,10	-
6.	A vs C	80,8	114,42	-	143,10	-
7.	A vs P	61,6	114,42	-	143,10	-
8.	B vs C	46,4	114,42	-	143,10	-
9.	B vs P	27,2	114,42	-	143,10	-
10.	C vs P	19,2	114,42	-	143,10	-

Keterangan:

B : Bermakna = Perbedaan bermakna, karena selisih 2 mean > HSD 5%

SB : Sangat bermakna = Perbedaan sangat bermakna, karena selisih 2 mean > HSD 1%

TB : Tidak bermakna = Perbedaan tidak bermakna, karena selisih 2 mean < 5%.

$$\text{HSD } 5\% = q_{0,05} (p; Dbd) \sqrt{\frac{MKd}{n}}$$

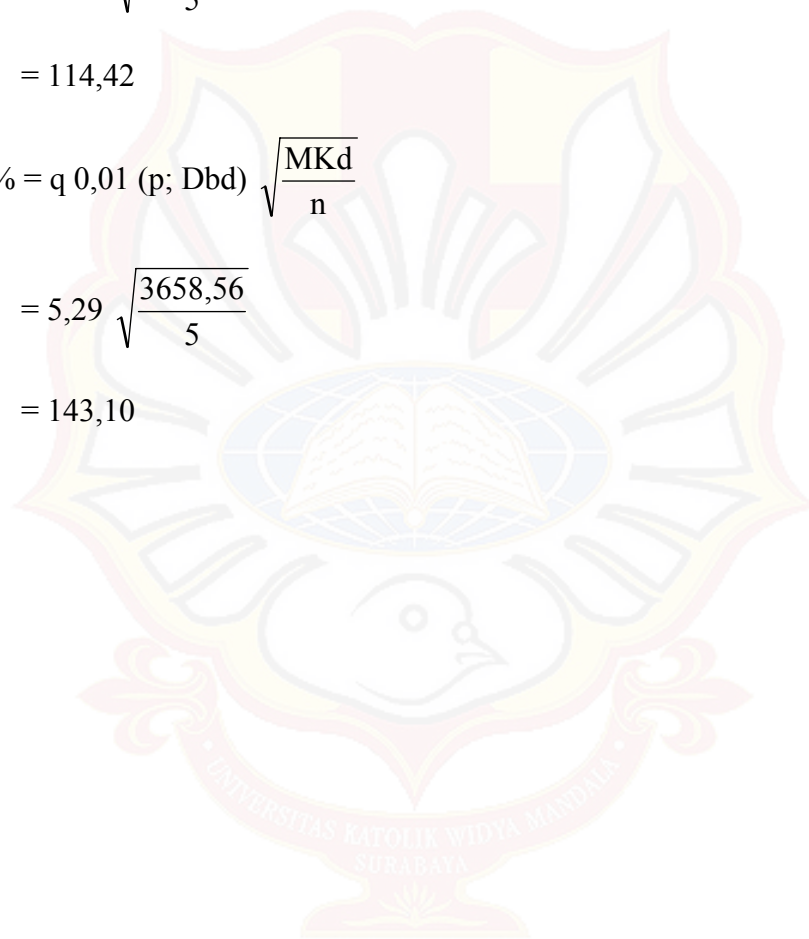
$$= 4,23 \sqrt{\frac{3658,56}{5}}$$

$$= 114,42$$

$$\text{HSD } 1\% = q_{0,01} (p; Dbd) \sqrt{\frac{MKd}{n}}$$

$$= 5,29 \sqrt{\frac{3658,56}{5}}$$

$$= 143,10$$



Lampiran 9

Hasil Perhitungan HSD Waktu Berenang Mencit

No	Perlakuan	Mean	HSD 5%	Kesimpulan	HSD 1%	Kesimpulan
1.	K vs A	40	31,33	B	39,18	SB
2.	K vs B	54,2	31,33	B	39,18	SB
3.	K vs C	72,4	31,33	B	39,18	SB
4.	K vs P	46,4	31,33	B	39,18	SB
5.	A vs B	14,2	31,33	-	39,18	-
6.	A vs C	32,4	31,33	B	39,18	-
7.	A vs P	6,4	31,33	-	39,18	-
8.	B vs C	18,2	31,33	-	39,18	-
9.	B vs P	7,8	31,33	-	39,18	-
10.	C vs P	26	31,33	-	39,18	-

Keterangan:

B : Bermakna = Perbedaan bermakna, karena selisih 2 mean > HSD 5%

SB : Sangat bermakna = Perbedaan sangat bermakna, karena selisih 2 mean > HSD 1%

TB : Tidak bermakna = Perbedaan tidak bermakna, karena selisih 2 mean < 5%.

$$\text{HSD } 5\% = q_{0,05} (p; Dbd) \sqrt{\frac{MKd}{n}}$$

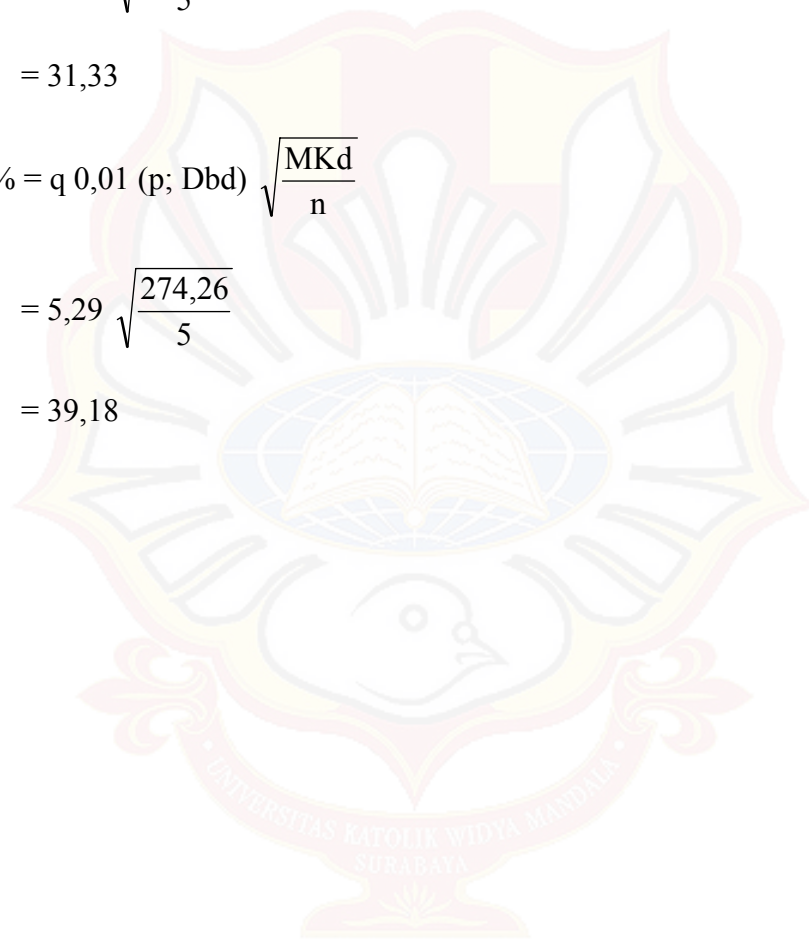
$$= 4,23 \sqrt{\frac{274,26}{5}}$$

$$= 31,33$$

$$\text{HSD } 1\% = q_{0,01} (p; Dbd) \sqrt{\frac{MKd}{n}}$$

$$= 5,29 \sqrt{\frac{274,26}{5}}$$

$$= 39,18$$



Lampiran 10

Perhitungan Linieritas rata-rata jumlah jengukan kepala mencit ke dalam lubang

$$R = \frac{\sum XY - \frac{(\sum X)(\sum Y)}{n}}{\sqrt{\left[\sum (X^2) - \frac{(\sum X)^2}{n} \right] \left[\sum (Y^2) - \frac{(\sum Y)^2}{n} \right]}}$$

$$R = \frac{382,1 - \frac{(7,5)(149)}{5}}{\sqrt{\left[19,25 - \left(\frac{56,25}{5} \right) \right] \left[7586,36 - \left(\frac{22201}{5} \right) \right]}}$$

$$R = 0,9997$$

Perhitungan Linieritas rata-rata jumlah aktivitas mencit menaiki dan menuruni papan

$$R = \frac{\sum XY - \frac{(\sum X)(\sum Y)}{n}}{\sqrt{\left[\sum (X^2) - \frac{(\sum X)^2}{n} \right] \left[\sum (Y^2) - \frac{(\sum Y)^2}{n} \right]}}$$

$$R = \frac{106,3 - \frac{(7,5)(41,4)}{5}}{\sqrt{\left[19,25 - \left(\frac{56,25}{5} \right) \right] \left[587,24 - \left(\frac{1713,96}{5} \right) \right]}}$$

$$R = 0,9995$$

Lampiran 11

Perhitungan linieritas rata-rata jumlah aktivitas mencit dengan alat rotarod dihitung berdasarkan detik

$$R = \frac{\sum XY - \frac{(\sum X)(\sum Y)}{n}}{\sqrt{\left[\sum (X^2) - \frac{(\sum X)^2}{n} \right] \left[\sum (Y^2) - \frac{(\sum Y)^2}{n} \right]}}$$

$$R = \frac{2096,9 - \frac{(7,5)(822,6)}{5}}{\sqrt{\left[19,25 - \left(\frac{56,25}{5} \right) \right] \left[228845,24 - \left(\frac{676670,76}{5} \right) \right]}}$$

$$R = 0,998$$

Perhitungan linieritas rata-rata waktu berenang mencit dihitung berdasarkan detik

$$R = \frac{\sum XY - \frac{(\sum X)(\sum Y)}{n}}{\sqrt{\left[\sum (X^2) - \frac{(\sum X)^2}{n} \right] \left[\sum (Y^2) - \frac{(\sum Y)^2}{n} \right]}}$$

$$R = \frac{782,2 - \frac{(7,5)(306,4)}{5}}{\sqrt{\left[19,25 - \left(\frac{56,25}{5} \right) \right] \left[31821,2 - \left(\frac{93880,96}{5} \right) \right]}}$$

$$R = 0,999$$

Lampiran 12

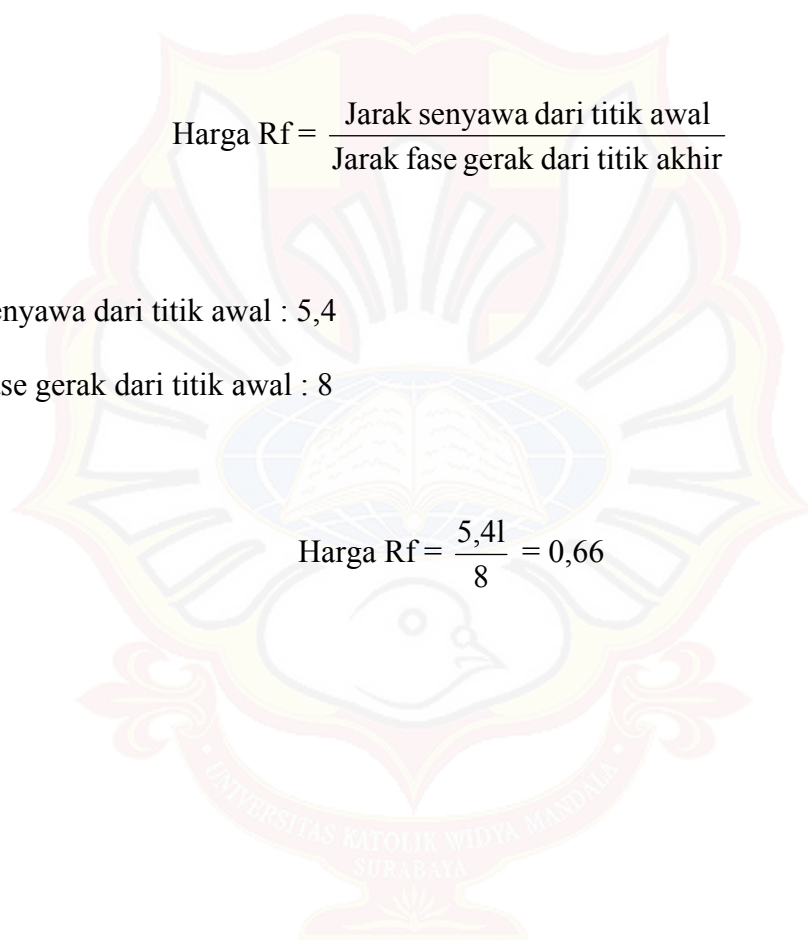
Contoh perhitungan harga Rf

$$\text{Harga Rf} = \frac{\text{Jarak senyawa dari titik awal}}{\text{Jarak fase gerak dari titik akhir}}$$

Jarak senyawa dari titik awal : 5,4

Jarak fase gerak dari titik awal : 8

$$\text{Harga Rf} = \frac{5,41}{8} = 0,66$$



Lampiran 13

Tabel Uji F

Baris pertama pada setiap pasangan baris adalah titik pada distribusi F untuk aras 0.05; baris kedua untuk aras 0.01.

		Derajat kebebasan untuk rataan kuadrat yang lebih besar																									
		1	2	3	4	5	6	7	8	9	10	11	12	14	16	20	24	30	40	50	75	100	200	300	∞		
Derajat kebebasan untuk rataan kuadrat yang lebih kecil.	16	4.49 8.53	3.43 6.23	3.24 5.29	3.01 4.77	2.85 4.44	2.74 4.20	2.61 4.13	2.59 3.89	2.54 3.78	2.49 3.69	2.45 3.61	2.42 3.55	2.37 3.45	2.33 3.37	2.28 3.23	2.24 3.18	2.20 3.10	2.16 3.01	2.13 2.96	2.09 2.89	2.07 2.84	2.04 2.80	2.02 2.77	2.01 2.75		
	17	4.45 8.40	3.39 6.11	3.20 5.18	2.96 4.67	2.81 4.34	2.70 4.10	2.62 3.93	2.55 3.77	2.50 3.68	2.45 3.59	2.41 3.52	2.38 3.45	2.33 3.35	2.29 3.27	2.23 3.14	2.19 3.08	2.15 3.00	2.11 2.92	2.08 2.86	2.04 2.79	2.02 2.76	1.99 2.70	1.97 2.67	1.96 2.65		
	18	4.41 8.36	3.35 6.01	3.16 5.09	2.93 4.58	2.77 4.25	2.66 4.01	2.58 3.85	2.51 3.71	2.46 3.60	2.41 3.51	2.37 3.44	2.34 3.37	2.29 3.27	2.25 3.19	2.19 3.07	2.15 3.00	2.11 2.91	2.07 2.83	2.04 2.78	2.00 2.71	1.98 2.68	1.95 2.62	1.93 2.59	1.92 2.57		
	19	4.38 8.18	3.32 5.93	3.13 5.01	2.90 4.50	2.74 4.17	2.63 3.94	2.55 3.77	2.48 3.63	2.43 3.52	2.38 3.43	2.34 3.36	2.31 3.30	2.26 3.19	2.21 3.12	2.15 3.00	2.11 2.92	2.07 2.84	2.02 2.76	2.00 2.63	1.96 2.60	1.94 2.54	1.91 2.51	1.90 2.49	1.88 2.47		
	20	4.35 8.10	3.29 5.85	3.10 4.94	2.87 4.43	2.71 4.10	2.61 3.87	2.52 3.71	2.45 3.56	2.40 3.43	2.35 3.37	2.31 3.30	2.28 3.23	2.23 3.13	2.18 3.00	2.12 2.94	2.08 2.86	2.04 2.77	2.00 2.69	1.96 2.63	1.94 2.56	1.92 2.53	1.87 2.47	1.85 2.44	1.84 2.42		
	21	4.32 8.02	3.27 5.78	3.07 4.87	2.84 4.37	2.68 4.04	2.57 3.81	2.49 3.65	2.42 3.51	2.37 3.40	2.32 3.31	2.28 3.24	2.25 3.17	2.20 3.07	2.15 2.99	2.09 2.88	2.05 2.80	2.00 2.72	1.96 2.63	1.93 2.58	1.90 2.51	1.87 2.47	1.84 2.42	1.82 2.38	1.81 2.36		
	22	4.30 7.94	3.24 5.72	3.05 4.82	2.82 4.31	2.66 3.99	2.55 3.76	2.47 3.59	2.40 3.45	2.35 3.35	2.30 3.26	2.26 3.18	2.23 3.12	2.18 3.02	2.13 2.94	2.07 2.83	2.03 2.75	2.00 2.67	1.96 2.58	1.93 2.53	1.91 2.46	1.87 2.42	1.84 2.37	1.81 2.33	1.80 2.31		
	23	4.28 7.88	3.22 5.64	3.03 4.76	2.80 4.26	2.64 3.94	2.53 3.71	2.45 3.54	2.38 3.41	2.32 3.30	2.28 3.21	2.24 3.14	2.20 3.07	2.14 2.97	2.10 2.89	2.04 2.78	2.00 2.70	1.96 2.62	1.94 2.53	1.91 2.48	1.88 2.41	1.84 2.37	1.82 2.32	1.79 2.28	1.77 2.26		
	24	4.26 7.82	3.20 5.61	3.01 4.72	2.78 4.22	2.62 3.90	2.51 3.67	2.43 3.50	2.36 3.36	2.30 3.25	2.26 3.17	2.22 3.09	2.18 3.03	2.13 2.93	2.09 2.85	2.02 2.74	1.98 2.66	1.94 2.58	1.91 2.49	1.88 2.44	1.84 2.36	1.82 2.33	1.78 2.27	1.76 2.23	1.74 2.21		
	25	4.24 7.77	3.18 5.57	2.99 4.68	2.76 4.18	2.60 3.86	2.49 3.63	2.41 3.46	2.34 3.32	2.28 3.21	2.24 3.13	2.20 3.05	2.16 2.99	2.11 2.89	2.06 2.81	2.00 2.70	1.96 2.62	1.94 2.54	1.92 2.45	1.87 2.40	1.84 2.32	1.80 2.27	1.77 2.23	1.74 2.19	1.72 2.17		
	26	4.22 7.72	3.17 5.53	2.89 4.64	2.74 4.14	2.59 3.82	2.47 3.59	2.40 3.42	2.32 3.29	2.27 3.17	2.22 3.09	2.18 3.02	2.15 2.94	2.10 2.86	2.05 2.77	1.99 2.64	1.95 2.58	1.90 2.50	1.85 2.41	1.82 2.36	1.78 2.28	1.76 2.25	1.72 2.19	1.70 2.15	1.69 2.13		
	27	4.21 7.68	3.15 5.49	2.96 4.60	2.73 4.11	2.57 3.79	2.46 3.56	2.37 3.39	2.30 3.26	2.25 3.14	2.20 3.06	2.16 2.98	2.13 2.93	2.08 2.83	2.03 2.74	1.97 2.63	1.93 2.53	1.88 2.47	1.84 2.38	1.80 2.33	1.76 2.25	1.74 2.21	1.71 2.14	1.68 2.12	1.67 2.10		
	28	4.20 7.64	3.14 5.45	2.95 4.57	2.71 4.07	2.56 3.76	2.44 3.53	2.36 3.36	2.29 3.23	2.24 3.11	2.19 3.03	2.15 2.95	2.12 2.90	2.06 2.80	2.02 2.71	1.96 2.60	1.94 2.52	1.91 2.44	1.87 2.35	1.81 2.30	1.78 2.22	1.75 2.18	1.72 2.13	1.69 2.09	1.67 2.06		
	29	4.18 7.60	3.13 5.52	2.93 4.54	2.70 4.04	2.54 3.73	2.43 3.50	2.35 3.32	2.28 3.23	2.22 3.08	2.18 3.00	2.14 2.92	2.10 2.87	2.05 2.77	2.00 2.68	1.94 2.57	1.90 2.49	1.85 2.41	1.80 2.32	1.77 2.27	1.73 2.19	1.71 2.15	1.68 2.10	1.66 2.06	1.64 2.03		
	30	4.17 7.56	3.12 5.39	2.92 4.51	2.69 4.02	2.53 3.70	2.42 3.47	2.34 3.20	2.27 3.17	2.21 3.06	2.16 2.98	2.12 2.90	2.09 2.84	2.04 2.74	1.99 2.64	1.93 2.55	1.89 2.47	1.84 2.38	1.79 2.29	1.76 2.24	1.72 2.16	1.69 2.13	1.66 2.07	1.64 2.03	1.63 2.01		

Lampiran 14

Tabel Uji HSD (0,01)

$k \backslash d. k.$	2	3	4	5	6	7	8	9	10	11
5	5.70	6.98	7.80	8.42	8.91	9.32	9.67	9.97	10.24	10.48
6	5.24	6.33	7.03	7.56	7.97	8.32	8.61	8.87	9.10	9.30
7	4.95	5.92	6.54	7.01	7.37	7.68	7.94	8.17	8.37	8.55
8	4.75	5.64	6.20	6.62	6.96	7.24	7.47	7.68	7.86	8.03
9	4.60	5.43	5.96	6.35	6.66	6.91	7.13	7.33	7.49	7.65
10	4.48	5.27	5.77	6.14	6.43	6.67	6.87	7.05	7.21	7.36
11	4.39	5.15	5.62	5.97	6.25	6.48	6.67	6.84	6.99	7.13
12	4.32	5.05	5.50	5.84	6.10	6.32	6.51	6.67	6.81	6.94
13	4.26	4.96	5.40	5.73	5.98	6.19	6.37	6.53	6.67	6.79
14	4.21	4.89	5.32	5.63	5.88	6.08	6.26	6.41	6.54	6.66
15	4.17	4.84	5.25	5.56	5.80	5.99	6.16	6.31	6.44	6.55
16	4.13	4.79	5.19	5.49	5.72	5.92	6.08	6.22	6.35	6.46
17	4.10	4.74	5.14	5.43	5.66	5.85	6.01	6.15	6.27	6.38
18	4.07	4.70	5.09	5.38	5.60	5.79	5.94	6.08	6.20	6.31
19	4.05	4.67	5.05	5.33	5.55	5.73	5.89	6.02	6.14	6.25
20	4.02	4.64	5.02	5.29	5.51	5.69	5.84	5.97	6.09	6.19
24	3.96	4.53	4.91	5.17	5.37	5.54	5.69	5.81	5.92	6.02
30	3.89	4.45	4.80	5.05	5.24	5.40	5.54	5.65	5.76	5.85
40	3.82	4.37	4.70	4.93	5.11	5.26	5.39	5.50	5.60	5.67
60	3.76	4.28	4.59	4.82	4.99	5.13	5.25	5.36	5.45	5.53
120	3.70	4.20	4.50	4.71	4.87	5.01	5.12	5.21	5.30	5.38
∞	3.64	4.12	4.40	4.60	4.76	4.88	4.99	5.08	5.16	5.23

Lampiran 15

Tabel Uji HSD (0,05)

k d.k.	2	3	4	5	6	7	8	9	10	11
5	3.64	4.60	5.22	5.67	6.03	6.33	6.58	6.80	6.99	7.17
6	3.46	4.34	4.90	5.30	5.63	5.90	6.12	6.32	6.49	6.65
7	3.34	4.16	4.68	5.06	5.36	5.61	5.82	6.00	6.16	6.30
8	3.26	4.01	4.53	4.89	5.17	5.40	5.60	5.77	5.92	6.05
9	3.20	3.95	4.41	4.76	5.02	5.24	5.43	5.59	5.74	5.87
10	3.15	3.88	4.33	4.65	4.91	5.12	5.30	5.46	5.60	5.72
11	3.11	3.82	4.26	4.57	4.82	5.03	5.20	5.35	5.49	5.61
12	3.08	3.77	4.20	4.51	4.75	4.95	5.12	5.27	5.39	5.51
13	3.06	3.73	4.15	4.45	4.69	4.88	5.05	5.19	5.32	5.43
14	3.03	3.70	4.11	4.41	4.64	4.83	4.99	5.13	5.25	5.36
15	3.01	3.67	4.08	4.37	4.59	4.78	4.94	5.08	5.20	5.31
16	3.00	3.65	4.05	4.33	4.56	4.74	4.90	5.03	5.15	5.26
17	2.98	3.63	4.02	4.30	4.52	4.71	4.86	4.99	5.11	5.21
18	2.97	3.61	4.00	4.28	4.49	4.67	4.82	4.96	5.07	5.17
19	2.96	3.59	3.98	4.25	4.47	4.65	4.79	4.92	5.04	5.14
20	2.95	3.58	3.96	4.23	4.45	4.62	4.77	4.90	5.01	5.11
24	2.92	3.53	3.90	4.17	4.37	4.54	4.68	4.81	4.92	5.01
30	2.89	3.49	3.85	4.10	4.30	4.46	4.60	4.72	4.82	4.92
40	2.86	3.44	3.79	4.04	4.23	4.39	4.52	4.63	4.73	4.82
60	2.83	3.40	3.74	3.98	4.16	4.31	4.44	4.55	4.65	4.73
120	2.80	3.36	3.68	3.92	4.10	4.24	4.36	4.47	4.56	4.64
∞	2.77	3.31	3.63	3.86	4.03	4.17	4.29	4.39	4.47	4.55

Catatan kaki: Dari *Annals of mathematical statistics*. Diulang cetak seizin penerbit, The Institute of Mathematical Statistics.

Sumber: Scheffler (1987).

Lampiran 16

Tabel Uji r

DEGREES OF FREEDOM (DF)	5 PERCENT	1 PERCENT	DEGREES OF FREEDOM (DF)	5 PERCENT	1 PERCENT
1	.997	1.000	24	.388	.496
2	.950	.990	25	.381	.487
3	.878	.959	26	.374	.478
4	.811	.917	27	.367	.470
5	.754	.874	28	.361	.463
6	.707	.834	29	.355	.456
7	.666	.798	30	.349	.449
8	.632	.765	35	.325	.418
9	.602	.735	40	.304	.393
10	.576	.708	48	.288	.372
11	.553	.684	50	.273	.354
12	.532	.661	60	.250	.325
13	.514	.641	70	.232	.302
14	.497	.623	80	.217	.283
15	.482	.606	90	.205	.267
16	.468	.590	100	.195	.254
17	.456	.575	125	.174	.228
18	.444	.561	150	.159	.208
19	.433	.549	200	.138	.181
20	.423	.537	300	.113	.148
21	.413	.526	400	.098	.128
22	.404	.515	500	.088	.115
23	.396	.505	1000	.062	.081

Sumber: Soedigdo & Soedigdo (1977).

04 JUL 2007

JILIN SHULAN SYNTHETIC PHARMACEUTICAL CO., LTD.



CERTIFICATE OF ANALYSIS

吉林省舒兰合成药业股份有限公司检验报告单

Name 品名	Caffeine Anhydrous 无水咖啡因	Certificate No. 检验编号	20070984
Batch No. 批号	200706040	Test Date 检验日期	2007年6月9日
Manufacture Date 生产日期	2007年6月9日	Expiry Date 有效日期	2011年5月
Batch Size 批数量	1000kg	Package 包装	25kg/drum 25千克/桶
Specification 检验依据	BP2005、USP29 英国药典2005版、美国药典29版		
Items 分析项目	Specifications 质量标准		Results 分析结果
Characters 性状	A white,crystalline powder 白色结晶性粉末		Satisfactory 符合规定
Identifications 鉴别	Positive reaction 呈正反应		Confirmed 符合规定
Acidity 酸度	10ml of solution S consumes 0.01mol/l NaOH≤ 0.2ml 10ml溶液S耗0.01mol/l NaOH≤ 0.2ml		Complies 符合规定
Appearance of solution 溶液的外观	Clear, Colorless 澄清,无色		Complies 符合规定
Readily Carbonizable Substance 易炭化物	No more color than Matching Fluid D 不深于对照液体D		Complies 符合规定
Other Alkaloids 其它碱类	No precipitate is formed 不得有沉淀		Complies 符合规定
Organic Volatile Impurities 有机挥发杂质	Meets the requirements 应符合规定		Undetected 未检出
Heavy Metals 重金属	≤10ppm		< 10 ppm
Sulphates 硫酸盐	≤500ppm		< 300 ppm
Related Substances 有关物质	≤0.5%		< 0.5%
Chromatographic Purity 色谱纯度	≤0.1%		0.07%
Loss on Drying 干燥失重	≤0.5%		0.08%
Sulphated Ash 硫酸化灰份	≤0.1%		0.03%
Melting Point 熔点	235-239℃		235-236℃
Assay 含量	98.5-101.0%		99.6%
Conclusion: The product complies with BP2005、USP29 结论: 本品符合英国药典2005版、美国药典29版			

Stamp:
印章:Q.C.:
质检:

韩喜英

Analyst:
检验人:

安立波

Checker:
复核人:

李立平

Lampiran 18



DINAS KESEHATAN PROPINSI JAWA TIMUR
BALAI MATERIA MEDICA

Jalan Lahor No.87 Telp. (0341) 593396 Batu (65313)

KOTA BATU

Nomor : 074 / 64 / 111.14 / IV / 2007
 Sifat : Biasa
 Perihal : **Determinasi Tanaman Daun Po'o**

Memenuhi permohonan saudara
 Nama : Ellyn
 N I M : 2443003187
 Fakultas : Fakultas Farmasi Universitas Widya Mandala

Perihal determinasi tanaman Daun Po'o
 Divisi : Spermatophyta
 Sub divisi : Angiospermae
 Kelas : Dicotyledonae
 Bangsa : Labiate
 Suku : Lamiaceae
 Marga : Mentha
 Jenis : *Mentha arvensis*

Demikian determinasi ini kami buat untuk dipergunakan sebagaimana mestinya.

Batu, 5 April 2007

An. Kepala Balai Materia Medica Batu
 Seksi Penyuluhan Tanaman Obat



Unik Perwaningtyas, SKM
 Nip. 140 189 603