

LAMPPIRAN



## Lampiran 01

## Komposisi medium

## a. Medium maserasi

Komponen	Konsentrasi g/L
Sorbitol	100,00
Vitamin C	0,06
K <sub>2</sub> SO <sub>4</sub>	2,20
Macerozyme R-10	10,00
pH = 6,0	

## b. Medium purifikasi

Komponen	Konsentrasi g/L
KNO <sub>3</sub>	0,50
Ca (NO) <sub>2</sub>	0,50
MgCl <sub>2</sub>	0,20
Sorbitol	100,00
Sukrosa	30,00
pH = 8,4	

Lampiran 02  
Analisa data hasil penelitian

Tabel 04. Data Uji Pendahuluan (Perbedaan waktu sterilisasi eksplan)

Perlakuan	Sel hidup	Sel mati	Total	Jml sel hidup (sel/mL)	Jml total (sel/mL)	Viabilitas (%)
P1 (5 menit)	1064	11	1075	$5,32.10^7$	$5,38.10^7$	98.98
	1040	7	1047	$5,20.10^7$	$5,26.10^7$	99.33
	1270	8	1278	$6,35.10^7$	$6,39.10^7$	99.37
	1250	4	1254	$6,25.10^7$	$6,27.10^7$	99.68
	1223	9	1232	$6,16.10^7$	$6,16.10^7$	99.27
P2 (10 menit)	1160	22	1182	$5,80.10^7$	$5,91.10^7$	98.14
	1054	18	1072	$5,27.10^7$	$5,36.10^7$	98.32
	1205	22	1227	$6,03.10^7$	$6,14.10^7$	98.21
	1200	11	1211	$6,00.10^7$	$6,06.10^7$	99.09
	1056	10	1066	$5,28.10^7$	$5,33.10^7$	99.06
P3 (15 menit)	1091	23	1114	$5,46.10^7$	$5,57.10^7$	97.94
	986	13	999	$4,93.10^7$	$4,99.10^7$	98.70
	1202	33	1235	$6,01.10^7$	$6,18.10^7$	97.33
	1002	15	1017	$5,01.10^7$	$5,09.10^7$	98.53
	1169	7	1176	$5,85.10^7$	$5,88.10^7$	99.40

Tabel 05. Perhitungan anova perbedaan waktu sterilisasi eksplan terhadap jumlah sel viabel

Perlakuan	Kelompok					Total	Rerata
	I	II	III	IV	V		
P1	5,32.10 <sup>7</sup>	5,20.10 <sup>7</sup>	6,35.10 <sup>7</sup>	6,25.10 <sup>7</sup>	6,16.10 <sup>7</sup>	2,92.10 <sup>8</sup>	5,85.10 <sup>7</sup>
P2	5,80.10 <sup>7</sup>	5,27.10 <sup>7</sup>	6,03.10 <sup>7</sup>	6,00.10 <sup>7</sup>	5,28.10 <sup>7</sup>	2,84.10 <sup>8</sup>	5,68.10 <sup>7</sup>
P3	5,46.10 <sup>7</sup>	4,93.10 <sup>7</sup>	6,01.10 <sup>7</sup>	5,01.10 <sup>7</sup>	5,85.10 <sup>7</sup>	2,73.10 <sup>8</sup>	5,45.10 <sup>7</sup>
Total @	1,64.10 <sup>8</sup>	1,62.10 <sup>8</sup>	1,66.10 <sup>8</sup>	1,77.10 <sup>8</sup>	1,79.10 <sup>8</sup>		
Total (G)						8,49.10 <sup>8</sup>	
Rerata							5,66.10 <sup>7</sup>

### 1. FAKTOR KOREKSI

$$\text{Faktor Koreksi (FK)} = \frac{(8,49 \cdot 10^8)^2}{15} = 4,80 \cdot 10^{16}$$

### 2. JUMLAH KUADRAT (JK)

$$\begin{aligned} \text{JK Total} &= (5,32 \cdot 10^7)^2 + (5,20 \cdot 10^7)^2 + \dots + (5,85 \cdot 10^7)^2 - \text{FK} \\ &= 3,08 \cdot 10^{14} \end{aligned}$$

$$\begin{aligned} \text{JK Perlakuan} &= \frac{(2,92 \cdot 10^8)^2 + (2,84 \cdot 10^8)^2 + (2,73 \cdot 10^8)^2}{5} - \text{FK} \\ &= 1,85 \cdot 10^{13} \end{aligned}$$

$$\begin{aligned} \text{JK Kelompok} &= \frac{(1,64 \cdot 10^8)^2 + (1,62 \cdot 10^8)^2 + (1,66 \cdot 10^8)^2 + (1,77 \cdot 10^8)^2 + (1,79 \cdot 10^8)^2}{3} - \text{FK} \\ &= 8,36 \cdot 10^{13} \end{aligned}$$

$$\begin{aligned} \text{JK Galat} &= \text{JK Total} - (\text{JK Perlakuan} + \text{JK Kelompok}) \\ &= 3,08 \cdot 10^{14} - (1,85 \cdot 10^{13} + 8,36 \cdot 10^{13}) \\ &= 1,85 \cdot 10^{14} \end{aligned}$$

### 3. KUADRAT TENGAH (KT)

$$\begin{aligned} \text{KT Perlakuan} &= \frac{\text{JK Perlakuan}}{2} \\ &= \frac{1,85 \cdot 10^{13}}{2} = 9,25 \cdot 10^{12} \end{aligned}$$

$$\begin{aligned} \text{KT Kelompok} &= \frac{\text{JK Kelompok}}{4} \\ &= \frac{8,36 \cdot 10^{13}}{4} = 2,09 \cdot 10^{13} \end{aligned}$$

$$\begin{aligned} \text{KT Galat} &= \frac{\text{JK Galat}}{8} \\ &= \frac{1,85 \cdot 10^{14}}{8} = 2,31 \cdot 10^{13} \end{aligned}$$

$$\begin{aligned} \text{4. F hitung perlakuan} &= \frac{\text{KT Perlakuan}}{\text{KT Galat}} \\ &= \frac{1,98 \cdot 10^{13}}{2,31 \cdot 10^{13}} \\ &= 0,856216 \end{aligned}$$

$$\begin{aligned} \text{5. F hitung kelompok} &= \frac{\text{KT Kelompok}}{\text{KT Galat}} \\ &= \frac{2,09 \cdot 10^{13}}{2,31 \cdot 10^{13}} \\ &= 0,903784 \end{aligned}$$

$$\text{6. Nilai F tabel (5\% perlakuan)} = 4,46$$

$$\text{7. Nilai F tabel (5\% kelompok)} = 3,84$$

F hitung < F tabel

Kesimpulan : Perbedaan perlakuan tidak berpengaruh terhadap jumlah sel.

Pengelompokan tidak berpengaruh terhadap jumlah sel

Tabel 06. Anova jumlah sel viabel *Pegagan (Centella asiatica (L.) Urban)* pada perlakuan perbedaan waktu sterilisasi

SK	db	JK	KT	F hit	F tabel
kelompok	4	$8,36.10^{13}$	$2,09.10^{13}$	0,903784	3,84
Perlakuan	2	$3,96.10^{13}$	$1,98.10^{13}$	0,856216	4,46
Galat	8	$1,85.10^{14}$	$2,31.10^{13}$		
Total	14	$3,08.10^{14}$			

Tabel 07. Perhitungan anova perbedaan waktu sterilisasi eksplan terhadap viabilitas sel

Perlakuan	Kelompok					Total	Rerata
	I	II	III	IV	V		
P1	98,98	99,33	99,37	99,68	99,27	496,63	99,33
P2	99,06	98,21	98,32	99,09	98,04	492,72	98,54
P3	99,40	98,70	98,53	97,94	97,33	491,90	98,38
Total ®	297,44	296,24	296,22	296,71	294,64		
Total (G)						1481,25	
Rerata							98,75

### 1. FAKTOR KOREKSI (FK)

$$\text{Faktor Koreksi (FK)} = \frac{(1481,25)^2}{15} = 146273,4$$

### 2. JUMLAH KUADRAT (JK)

$$\begin{aligned} \text{JK Total} &= (98,98)^2 + (99,33)^2 + \dots + (97,33)^2 - \text{FK} \\ &= 6,2472 \end{aligned}$$

$$\begin{aligned} \text{JK Perlakuan} &= \frac{(496,63)^2 + (492,72)^2 + (491,9)^2}{5} - \text{FK} \\ &= 2,55556 \end{aligned}$$

$$\begin{aligned}
 \text{JK Kelompok} &= \frac{(297.44)^2+(296.24)^2+(296.22)^2+(296.71)^2+(294.64)^2}{3} - \text{FK} \\
 &= 1,4069 \\
 \text{JK Galat} &= \text{JK Total} - (\text{JK Perlakuan} + \text{JK Kelompok}) \\
 &= 6,2472 - (2,55556 + 1,4069) \\
 &= 2,285588
 \end{aligned}$$

### 3. KUADRAT TENGAH (KT)

$$\begin{aligned}
 \text{KT Perlakuan} &= \frac{\text{JK Perlakuan}}{2} \\
 &= \frac{2,55556}{2} = 1,27778
 \end{aligned}$$

$$\begin{aligned}
 \text{KT Kelompok} &= \frac{\text{JK Kelompok}}{4} \\
 &= \frac{1,4069}{4} = 0,351733
 \end{aligned}$$

$$\begin{aligned}
 \text{KT Galat} &= \frac{\text{JK Galat}}{8} \\
 &= \frac{2,285588}{8} = 0,285699
 \end{aligned}$$

$$\begin{aligned}
 \text{4. F Hitung perlakuan} &= \frac{\text{KT Perlakuan}}{\text{KT Galat}} \\
 &= \frac{1,27778}{0,285699} \\
 &= 4,4725
 \end{aligned}$$

$$\begin{aligned}
 \text{5. F Hitung kelompok} &= \frac{\text{KT Kelompok}}{\text{KT Galat}} \\
 &= \frac{0,351733}{0,285699} \\
 &= 1,231134
 \end{aligned}$$

6. Nilai F tabel (5%) perlakuan = 4,46

7. Nilai F tabel (5%) kelompok = 3,84

F hitung perlakuan > F tabel

F hitung kelompok < F tabel

Kesimpulan : Perbedaan perlakuan berpengaruh terhadap viabilitas sel.

Pengelompokan tidak berpengaruh terhadap viabilitas sel

Tabel 08. Anova viabilitas sel Pegagan (*Centella asiatica* (L.) Urban) pada perlakuan perbedaan waktu sterilisasi

SK	db	JK	KT	F hit	F tabel
Kelompok	4	1,406933	0,351733	1,231134	3,84
Perlakuan	2	2,555556	1,27778	4,472477	4,46
Galat	8	2,285588	0,285699		
Total	14	6,2472			

Koefisien Koreksi =  $\sqrt{0,285699} \times 100\% = 0,54\%$   
98,75

**8. Perhitungan Uji beda Nyata Jujur (BNJ) viabilitas sel mesofil Pegagan (*Centella asiatica* (L.) Urban) pada perlakuan konsentrasi sterilan 5% dengan waktu yang berbeda.**

1. Urutan nilai tengah perlakuan menaik

<u>P3</u>	<u>P2</u>	<u>P1</u>
98,38	98,54	99,33

2. Perhitungan galat baku nilai tengah perlakuan

$$S_y = \sqrt{\frac{KTG}{n}} = \sqrt{\frac{0,285699}{5}} = 0,239$$



### 3. Perhitungan BNJ

$$DB \text{ Galat} = 8$$

$$\begin{aligned} BNJ_{0,05} &= Q_{0,05(3; 8)} \times S_y \\ &= 3,26 \times 0,239 \\ &= 0,78 \end{aligned}$$

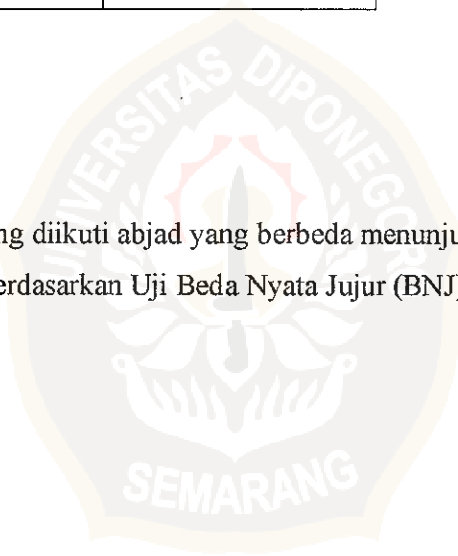
Tabel 09. Selisih rerata viabilitas sel berdasarkan Uji BNJ

Perlakuan	Rerata viabilitas sel (%)	Notasi atas BNJ <sub>0,05</sub>
P3	98,38	b
P2	98,54	b
P1	99,33	a
BNJ <sub>0,05</sub>	0,78	

#### Hasil perbandingan

P3      P2      P1  
98,38<sup>b</sup>   98,54<sup>b</sup>   99,33<sup>a</sup>

Keterangan : angka-angka yang diikuti abjad yang berbeda menunjukkan hasil yang berbeda nyata berdasarkan Uji Beda Nyata Jujur (BNJ)



Tabel 10. Data perbedaan konsentrasi sterilan

Perlakuan	Sel hidup	Sel mati	Total	Jml sel hidup (sel/mL)	Jml sel total (sel/mL)	Viabilitas (%)
P1	1242	5	1247	$6,21.10^7$	$6,24.10^7$	99,59
	1159	9	1168	$5,79.10^7$	$5,84.10^7$	99,23
	1053	8	1061	$5,27.10^7$	$5,31.10^7$	99,25
	1039	7	1046	$5,19.10^7$	$5,23.10^7$	99,33
	1184	4	1188	$5,92.10^7$	$5,94.10^7$	99,66
P2	1181	17	1198	$5,91.10^7$	$5,99.10^7$	98,58
	1045	8	1053	$5,23.10^7$	$5,27.10^7$	99,24
	960	7	967	$4,80.10^7$	$4,84.10^7$	99,28
	950	8	958	$4,75.10^7$	$4,79.10^7$	99,16
	1016	12	1028	$5,08.10^7$	$5,14.10^7$	98,83
P3	1141	14	1155	$5,71.10^7$	$5,78.10^7$	98,79
	1026	8	1034	$5,13.10^7$	$5,17.10^7$	99,27
	965	12	977	$4,83.10^7$	$4,89.10^7$	98,77
	996	13	1009	$4,98.10^7$	$5,05.10^7$	98,71
	946	5	951	$4,73.10^7$	$4,76.10^7$	99,47
P4	994	19	1013	$4,97.10^7$	$5,07.10^7$	98,12
	966	11	977	$4,83.10^7$	$4,89.10^7$	98,87
	1004	22	1026	$5,02.10^7$	$5,13.10^7$	97,86
	990	17	1007	$4,95.10^7$	$5,06.10^7$	98,31
	1040	21	1061	$5,20.10^7$	$5,31.10^7$	98,02
P5	932	23	955	$4,66.10^7$	$4,78.10^7$	97,59
	1093	19	1112	$5,47.10^7$	$5,56.10^7$	98,29
	1067	22	1089	$5,34.10^7$	$5,45.10^7$	97,98
	935	16	951	$4,68.10^7$	$4,76.10^7$	98,32
	894	17	911	$4,47.10^7$	$4,56.10^7$	98,13

Tabel 11. Perhitungan anova untuk perbedaan konsentrasi sterilan terhadap jumlah sel hidup

Perlakuan	Kelompok					Total	Rerata
	I	II	III	IV	V		
P1	6,21.10 <sup>7</sup>	5,79.10 <sup>7</sup>	5,27.10 <sup>7</sup>	5,19.10 <sup>7</sup>	5,92.10 <sup>7</sup>	2,84.10 <sup>8</sup>	5,68.10 <sup>7</sup>
P2	4,75.10 <sup>7</sup>	5,23.10 <sup>7</sup>	4,80.10 <sup>7</sup>	5,91.10 <sup>7</sup>	5,08.10 <sup>7</sup>	2,58.10 <sup>8</sup>	5,15.10 <sup>7</sup>
P3	4,82.10 <sup>7</sup>	5,13.10 <sup>7</sup>	5,71.10 <sup>7</sup>	4,98.10 <sup>7</sup>	4,73.10 <sup>7</sup>	2,54.10 <sup>8</sup>	5,07.10 <sup>7</sup>
P4	4,97.10 <sup>7</sup>	4,83.10 <sup>7</sup>	5,02.10 <sup>7</sup>	4,95.10 <sup>7</sup>	5,20.10 <sup>7</sup>	2,50.10 <sup>8</sup>	4,99.10 <sup>7</sup>
P5	4,66.10 <sup>7</sup>	5,47.10 <sup>7</sup>	5,34.10 <sup>7</sup>	4,68.10 <sup>7</sup>	4,47.10 <sup>7</sup>	2,46.10 <sup>8</sup>	4,92.10 <sup>7</sup>
Total ®	2,54.10 <sup>8</sup>	2,64.10 <sup>8</sup>	2,61.10 <sup>8</sup>	2,57.10 <sup>8</sup>	2,54.10 <sup>8</sup>		
Total (G)						1,29.10 <sup>9</sup>	
Rataan							5,16.10 <sup>7</sup>

### 1. FAKTOR KOREKSI

$$\text{Faktor Koreksi (FK)} = \frac{(1,29.10^9)^2}{25} = 6,67.10^{16}$$

### 2. JUMLAH KUADRAT

$$\begin{aligned} \text{JK Total} &= (6,21.10^8)^2 + (5,79.10^8)^2 + \dots + (4,47.10^8)^2 - \text{FK} \\ &= 4,75.10^{14} \end{aligned}$$

$$\begin{aligned} \text{JK Perlakuan} &= \frac{(2,84.10^8)^2 + (2,58.10^8)^2 + \dots + (2,46.10^8)^2}{5} - \text{FK} \\ &= 1,80.10^{14} \end{aligned}$$

$$\begin{aligned} \text{JK Kelompok} &= \frac{(2,54.10^8)^2 + (2,64.10^8)^2 + (2,61.10^8)^2 + (2,57.10^8)^2 + (2,54.10^8)^2}{5} - \text{FK} \end{aligned}$$

$$= 1,67.10^{13}$$

$$\begin{aligned} \text{JK Galat} &= \text{JK Total} - (\text{JK Perlakuan} + \text{JK Kelompok}) \\ &= 4,75.10^{14} - (1,80.10^{14} + 1,67.10^{13}) \\ &= 2,92.10^{14} \end{aligned}$$

### 3. KUADRAT TENGAH

$$\begin{aligned}
 \text{KT Perlakuan} &= \frac{\text{JK Perlakuan}}{4} \\
 &= \frac{1,80 \cdot 10^{14}}{4} = 4,5 \cdot 10^{13} \\
 \text{KT Kelompok} &= \frac{\text{JK Kelompok}}{4} \\
 &= \frac{1,67 \cdot 10^{13}}{4} = 4,18 \cdot 10^{12} \\
 \text{KT Galat} &= \frac{\text{JK Galat}}{16} \\
 &= \frac{2,92 \cdot 10^{14}}{16} = 1,83 \cdot 10^{13}
 \end{aligned}$$

$$\begin{aligned}
 \text{4. F hitung perlakuan} &= \frac{\text{KT Perlakuan}}{\text{KT Galat}} \\
 &= \frac{4,50 \cdot 10^{13}}{1,83 \cdot 10^{13}} \\
 &= 2,465753
 \end{aligned}$$

$$\begin{aligned}
 \text{5. F hitung kelompok} &= \frac{\text{KT Kelompok}}{\text{KT Galat}} \\
 &= \frac{4,18 \cdot 10^{12}}{1,83 \cdot 10^{13}} \\
 &= 0,228767
 \end{aligned}$$

$$\text{6. Nilai F tabel (5\% perlakuan)} = 3,01$$

$$\text{7. Nilai F tabel (5\% kelompok)} = 3,01$$

Tabel 12. Anova untuk jumlah sel hidup *Pegagan (C. asiatica (L.) Urban)* pada perlakuan perbedaan konsentrasi sterilan

SK	db	JK	KT	F hit	F tabel
kelompok	4	$1,67.10^{13}$	$4,18.10^{12}$	0,228767	3,01
Perlakuan	4	$1,80.10^{14}$	$4,50.10^{13}$	2,465753	3,01
Galat	16	$2,92.10^{14}$	$1,83.10^{13}$		
Total	24				

F hitung < F tabel

Kesimpulan : Perbedaan perlakuan tidak berpengaruh terhadap jumlah sel hidup.

Pengelompokan tidak berpengaruh terhadap jumlah sel hidup.

Tabel 13. Perhitungan anova untuk perbedaan konsentrasi sterilan terhadap viabilitas sel

Perlakuan	Kelompok					Total	Rerata
	I	II	III	IV	V		
P1	99,60	99,23	99,25	99,33	99,66	497,07	99,41
P2	99,16	99,24	99,28	98,58	98,83	495,09	99,02
P3	98,77	99,23	98,79	98,71	99,47	494,97	98,99
P4	98,12	98,87	97,86	98,31	98,02	491,18	98,24
P5	97,59	98,29	97,98	98,32	98,13	490,31	98,06
Total ®	493,24	494,86	493,16	493,25	494,11		
Total (G)						2468,62	
Rerata							98,74

### 1. FAKTOR KOREKSI

$$\text{Faktor Koreksi (FK)} = \frac{(2468,62)^2}{25} = 243763,4$$

25

### 2. JUMLAH KUADRAT

$$\begin{aligned} \text{JK Total} &= (99,60)^2 + (99,23)^2 + \dots + (98,13)^2 - \text{FK} \\ &= 8,492824 \end{aligned}$$

$$\begin{aligned}
 \text{JK Perlakuan} &= \frac{(497.07)^2 + (495.09)^2 + \dots + (490.31)^2}{5} - \text{FK} \\
 &= 6,548304 \\
 \text{JK Kelompok} &= \frac{(493.24)^2 + (494.86)^2 + (493.16)^2 + (493.25)^2 + (494.11)^2}{5} - \text{FK} \\
 &= 0,443304 \\
 \text{JK Galat} &= \text{JK Total} - (\text{JK Perlakuan} + \text{JK Kelompok}) \\
 &= 8,492824 - (6,548304 + 0,443304) \\
 &= 1,501216
 \end{aligned}$$

### 3. KUADRAT TENGAH

$$\begin{aligned}
 \text{KT Perlakuan} &= \frac{\text{JK Perlakuan}}{4} \\
 &= \frac{6,548304}{4} = 1,637076 \\
 \text{KT Kelompok} &= \frac{\text{JK Kelompok}}{4} \\
 &= \frac{0,443304}{4} = 0,110826 \\
 \text{KT Galat} &= \frac{\text{JK Galat}}{16} \\
 &= \frac{1,501216}{16} = 0,093826
 \end{aligned}$$

$$\begin{aligned}
 \text{4. F hitung perlakuan} &= \frac{\text{KT Perlakuan}}{\text{KT Galat}} \\
 &= \frac{1,637076}{0,093826} \\
 &= 17,448
 \end{aligned}$$

$$\begin{aligned}
 5. F \text{ hitung kelompok} &= \frac{KT \text{ Kelompok}}{KT \text{ Galat}} \\
 &= \frac{0,110826}{0,093826} \\
 &= 1,181186
 \end{aligned}$$

$$6. \text{ Nilai } F \text{ tabel (5\%)} = 3,01$$

F hitung perlakuan > F tabel

F hitung kelompok < F tabel

Kesimpulan : Perbedaan perlakuan berpengaruh terhadap viabilitas sel.

Pengelompokan tidak berpengaruh terhadap viabilitas sel.

Tabel 14. Anova untuk viabilitas sel mesofil Pegagan (*C. asiatica* (L.) Urban) pada perlakuan konsentrasi sterilan yang berbeda

SK	db	JK	KT	F hit	F tabel
kelompok	4	0,443304	0,110826	1,181186	3,01
Perlakuan	4	6,548304	1,637076	17,448	3,01
Galat	16	1,501216	0,093826		
Total	24	6,492824			

$$\begin{aligned}
 \text{Koefisien Koreksi} &= \sqrt{\frac{0,093826}{98,74}} \times 100 \% = 0,31\%
 \end{aligned}$$

### 7. Perhitungan Uji Beda Nyata Jujur (BNJ) viabilitas sel mesofil Pegagan (*Centella asiatica* (L.) Urban) pada perlakuan perbedaan konsentrasi sterilan

1. Urutan nilai tengah perlakuan menaik

<u>P5</u>	<u>P4</u>	<u>P3</u>	<u>P2</u>	<u>P1</u>
98.06	98.24	98.99	99.02	99.41

## 2. Perhitungan galat baku nilai tengah perlakuan

$$S_y = \sqrt{\frac{KTG}{n}} = \sqrt{\frac{0.093826}{5}} = 0.13698613$$

## 3. Perhitungan BNJ

DB Galat =16

$$\begin{aligned} \text{BNJ}_{0,05} &= Q_{0,05(5; 16)} \times S_y \\ &= 4,34 \times 0.13698613 \\ &= 0,59 \end{aligned}$$

Tabel 15. Selisih rerata viabilitas sel berdasarkan Uji BNJ

Perlakuan	Rerata viabilitas sel (%)	Notasi atas BNJ <sub>0,05</sub>
P5	98.06	b
P4	98.24	b
P3	98.99	a
P2	99.02	a
P1	99.41	a
BNJ <sub>0,05</sub>	0,59	

Hasil perbandingan

P5	P4	P3	P2	P1
98.06 <sup>b</sup>	98.24 <sup>b</sup>	98.99 <sup>a</sup>	99.02 <sup>a</sup>	99.41 <sup>a</sup>

Keterangan : angka-angka yang diikuti abjad yang berbeda menunjukkan hasil yang berbeda nyata berdasarkan Uji Beda Nyata Jujur (BNJ)